QK1
.G298
1911
v.54

THE

GARDENERS' MAGAZINE

FOR AMATEUR CULTIVATORS AND EXHIBITORS OF PLANTS, FLOWERS AND FRUITS: FOR GENTLEMEN'S GARDENERS, FLORISTS, NURSERYMEN, AND SEEDSMEN: FOR NATURALISTS, BOTANISTS, BEEKEEPERS, AND LOVERS OF THE COUNTRY.

> "There are no ancient gentlemen but gardeners . They hold up Adam's profession."
> *Hamlet*, v. 1.

VOLUME LIV.

JANUARY TO DECEMBER.

Mo. Bot. Garden
1912

B

LONDON:
GARDENERS' MAGAZINE OFFICE, ALDERSGATE STREET, E.C.

1911.

PRICE TWOPENCE.

INDEX TO VOLUME LIV.

◆

PAGE
ABERDEEN BOTANIC GARDENS 259
Aberdeen Chrysanthemum Society 115 923
Aberdeen Forestry Degree 877
Aberdeen Horticultural Society 337 652, 847
Aberdeen Sweet Pea Show 616
Abies Engelmanni 427
Abutilon megapotamicum variegatum, 261; A. Triomphe ... 646
Acacia dealbata 661
Acacia, False 606
Acænas 352
Acalypha hispida as Standards ... 662
Acer macrophyllum, 606; A. platanoides Schwedleri 451
Acetylene Gas, Residue from Manufacture of 508
Achillea argentea 363
Achimenes 644
Achimenes coccinea 819
Aconitum cœruleum 765
Ada aurantiaca, Hybrid from ... 985
Adhatoda cydoniæfolia 877
Adiantum Farleyense Gloire van Moordrecht 120
Æschynanthus Lobbianus 781
Afforestation and the Home Timber Outlook 113
Afforestation in Scotland 518
Ailanthus glandulosa 895
Airedale, Lord, The Late 259
Ajuga Brockbanki 828
Alder, Cut-leaved 787
Allan, Mr. W. 238
Allwood, Mr. M. C. 951
Almanac, GARDENERS' MAGAZINE 2
Almond, The Prussian 375
Almond Tree 131
Alnus glutinosa laciniata 787
Alpine Flowers, Among the ... 105, 248, 382, 413, 519, 588, 626, 800
Alpine Flowers, The Earliest ... 6
Alpine Scenery, Charms of 638
Alpines, A Beautiful Exhibit of... 243
Alpines, Pleasing Group of 285
Alyssum saxatile fl. pl. 363
Amaryllis 61
"Amateur Gardening" Christmas Number 912
Amelanchier canadensis 815
America, Dahlias in 919
American Apple Crop 717
American Blight 982
American Medal of Honour to Horticulturists 15
American Sweet Pea Society ... 410
Ampelopsis Lowi 794
Amphicome Emodi 838
Ancient Society of York Florists 875
Androsaces 344
Anemone angulosa major, 165; A. nemorosa The Queen, 665; A. ranunculoides plena, 476; A. St. Brigid 841
Anemones and Ranunculuses ... 534
Anemones, Poppy 682
"Annual and Biennial Plants"... 273
Annual Flowers at Reading 585
Annuals, 205; as Bedding Plants, 166; Californian, 292; for Cutting, 13; Gardens of 205
Anoiganthus brevifolius 241
Anomatheca cruenta alba 494
Anthemis cupaniana 415
Antirrhinum Rose Dore 665
Antirrhinums 155, 863
Anthurium splendidum 940, 872
Aphelandra Chamissoniana, 166; A. tetragona 819
Aphelandras 893
Aphyllanthus monspeliensis 476
Aplin, Mr. J. 833
Appian Way, Proposal to Plant the 638
Apple and Pear Trees 890
Apple Blossom, Defective 390
Apple Crop, American 717
Apple Orchard Competition in Ulster 638
Apple Orchards, Manuring 24
Apple Sucker, New Remedies for the 474
Apple Tree, Blister-Canker of ... 593
Apple Trees, Bush 758
Apple Trees, Effect of Grass on 584
Apple Twigs, Diseased 332
"Apples and Pears" 794
Apples, 872; Best Varieties of, 874; Bitter Rot in, 694; Cider, 894, 957; Cider, The Best, 986; Crab, 724; Fertilisers for, 440; for Cider, Culinary and Dessert, 872; Late Dessert, 828; Scab on 670; Some Newer Culinary, 755; Spotted, 788; Varieties of, 836
Apples, Varieties of —Annie Elizabeth, 960; Beauty of Kent, 124; Benoni, 821; Bow Hill Pippin, 367; Claygate Pearmain, 80; Coronation, 896; Cox's Orange Pippin, 774, 972; Crimson Bramley's Seedling 760; Encore, 797; Gascoigne's Scarlet,

PAGE
Apples, Varieties of (continued)— 118; James Grieve, 29; King Edward VII., 822, 848; Lady Henniker, 797; Lane's Prince Albert, 102; Lord Suffield, Canker in, 730; Newtown Pippin, 920; Norfolk Beauty, 937; Paroquet, 979; Roundway Magnum Bonum, 319; Seedling, 868; Winter Peach 118
Apples, Weight of 771
Aquatics 258
Arabis albida fl. pl. 362
Arabises 936
Araucaria excelsa from Cuttings 102
Arbutus, Species of 920
Arototis aureola 241
Ardisia crenulata 246
Arenaria balearica 382
Arisarum proboscidium 643
Aristolochia Sipho 332
Aristolochias, Hardy 483
Armillaria mellea 747
Artichokes, Jerusalem 111
Artindale and Son, Messrs. W. ... 156
Arum, Double-spathed 216
Arum Lilies, Potting 581
Ashes 109
Ashford, Fruit Conference at ... 930
Ash, White 570
Asparagus 37, 703
Asparagus Beds, 408, 446; Planting 210
Asphodelus ramosus 126
Aspleniums, Hardy 352
Aster Amellus 765, 839
Asters, 146; Perennial 221
Astilbes, Arend's 304
Astrantia carniolica 309
Asystasia scandens 352
Atherstone Horticultural Society 616
Aubrietia Purple Robe 795
Aubrietias 391
August Bank Holiday 584
"Australian Plants" 389
Australia, Importation of Potatoes into 620
Autumn Flowers in the Rock Garden 220
Avenue of Yews and Acers ... 141
Azalea Anthony Koster, 436; A. balsaminæflora, 696; A. Deutche Perle 142
Azaleas, Hardy, 435; Indian, 272; Standard Indian 206

BABIANAS 423
Bacteria on Plant Roots 948
Bacterial Disease of the Cherry 735
Bacterial Plant Diseases 655
Bacteriosis in the Tomato 926
Bacteriosis of the Potato and Tomato 640
Bagatelle, New Roses at 458
Baker, Mr. R. N. G., The Late ... 312
Balmoral, Spring-time at 336
Balsams, 166; as Pot Plants ... 283
Bamboos, 284; Hardy, 130; Transplanting 32
Banks, Sir Joseph 239
Barbados, Gardening in 177
Barbados Fruits 297
Barcombe Horticultural Society... 120
Barium Carbonate as Rat Poison 80
Barker, Mr. G. 892
Barker, Mr. J. T. 734
Barnard, Mr. Harry A. 354
Barnsley Chrysanthemum Society 100
Barr, Mr. P. Rudolph 257
Basingstoke Summer Show 614
Bath and Western Counties Agricultural Society 440
Bath Summer Show 544
Battersea Park, Rose Garden at ... 893
Bean, St. Ignatius 699
Beans, Dwarf 428
Beans, Forcing French 881
Beans, Runner, Red Spider on ... 636
Beans, Waxpod or Butter 705
Beckenham Horticultural Society 40, 95, 233, 272, 786
Bedding Out, Completion of ... 397
Bedding Plants, Dwarf 269
Bedding Plants Grown as Annuals 151
Beddome, Col. R. H., The Late ... 178
Bedford Chrysanthemum Show ... 907
Beds, Large Summer 267
Bee Disease, Isle of Wight 465
Bees, Lack of 472
Beetroot 242
Begonia coccinea, 398; B. Dregei, 653; B. Froebelli, 877; B. Gloire de Lorraine, 640, 948; B. Gloire de Lorraine under Cool Treatment, 42, 96; B. Gloire de Sceaux, Bud Dropping in, 118; B. Lucerna, 589; B. Mrs. Heal, 940; B. polyantha, 103; B. Rex, 463; B. scabrida, 242; B. undulata 398

PAGE
Begonias, 165, 818, 876; Failure with, 948; Sporting in, 64; Tuberous, 142, 205, 808; Tuberous, for Bedding, 266; Winter Flowering 917
"Beginner's Book on Gardening" 389
Bentley, Alderman J. W., J.P., C.C., 441; Presentation to ... 354
Belvoir Castle, Spring Flowers at 314
Berberis stenophylla Irwini, 112; B. Thunbergi, 112; B. verruculosa 816
Berlin, Rural Amenities of 64a
Bernese Oberland, Flora of the... 64b
Berried Plants under Glass 942
Berries, Red, for Christmas ... 954
Berry-bearing Shrubs 935
Betula lenta, 606; B. lutea, 606; B. nigra, 606; B. papyrifera ... 606
Biarritz Chrysanthemum Show and Conference 844
Biennials 294, 435
Big Bud Mite 982
Bignonia venusta 984
Bilbergia rhodocyanea 540
Bilberries 869
Birch, Black, 606; Paper, 606; Red, 606; Yellow 606
Birch Trees, Witches Broom on... 370
Birds, Caught in Nets 456
Birmingham Chrysanthemum Show 845
Birmingham Gardeners' Association ... 94, 134, 176, 215, 256
Birmingham Horticultural Society 455
Blackburn Chrysanthemum Show 907
Black Currant Mite... 2, 104, 176, 982
Black Currants 136
Blairgowrie Fruit Crops 490
Blairgowrie Raspberry Harvest ... 657
Blechnum spicant 960
Bloemhof Nurseries, Centenary of the 475
Bolton Chrysanthemum Show ... 925
Boltonia asteroides 557
Bone Meal 979
"Book of Herbs" 472

BOOKS, NEW:—
  Annual and Biennial Plants ... 273
  Apples and Pears 794
  Australian Plants 389
  Beginner's Book on Gardening 389
  Book of Herbs 472
  British Ferns and their Varieties 472
  Feeding Crops and Stock 389
  Garden Annual, 1911 78
  Horticultural Directory, 1911 ... 78
  How to Cook Vegetables 794
  Manures for Farm and Garden Crops 794
  Practical School Gardening ... 294
  Regent's Park and Primrose Hill 830
  Rock Garden and Alpine Plants 985
  Rhododendrons and Azaleas ... 389
  Salads and their Cultivation ... 294
  Who's Who for 1911 78
Borders, Mixed 840
Boskoop Jubilee Flower Show 218, 239
Boston Public Parks 118
Botanical Lectures at University College 49
Botanical Magazine, 2, 24, 297, 584, 734
Botanical Staffs 912
Botany at the British Association 584
Botany, Handbook on British ... 79
Botany, Teaching 355
Bouquet, Queen Mary's Coronation 372
Bournemouth Chrysanthemum Show 843
Bournemouth Gardeners' Association ... 40, 95, 135, 175, 216, 252, 332, 366, 471, 599, 767, 808, 885, 985
Bournemouth Public Gardens, Spring Flowers in the 377
Bournemouth Spring Show 290
Bourne, Mr. Christopher 764
Box 875
Boxwood, South African 101
Brachycome iberidifolia ... 305, 599
Bracken, Eradication of 315
Brambles, White-stemmed 256
Branches Park, Roses at 569
Brent Valley Bird Sanctuary ... 258
Brick Measurements 618
Bridger, Mr. F. 490
Bridlington, Summer Flowers at 530
Brighton Chrysanthemum Show 825
Bristol Gardeners' Association 40, 60, 116, 176, 235, 272, 366, 581, 747, 786, 847, 868, 966
British Association 530, 584
British Columbia, Nursery Industry in 620
"British Ferns and their Varieties" 472
British Gardeners' Association, 24, 42, 44, 61, 78, 82, 100, 120, 235, 373, 971; A Garden for the 183; London Branch of the 176, 310, 423
British Gardeners' Dinner 930
British Horticultural Traders in America 276

PAGE
British Pteridological Society 530, 674
British Woodlands 851
Broad Beans Seeds, Weevils in ... 312
Broccoli Crops in Scotland 324
Broccoli, Winter Mammoth 69
Bromley Chrysanthemum Society 120
Brooms 111
Brotherston, Mr. R. P. 638
Broughty Ferry Horticultural Association 78, 175, 272, 330, 423, 580, 598, 808, 984
Browallia viscosa 877
Brown, Mr. A. R. 410
Brussels Sprouts, 370; in Cabbage Crop 747
Bryanthus empetriformis 391
Bryce, Mr. Thos., The Late ... 370
Bryophyllum calycinum 669
Budding 514
Buddleia variabilis magnifica ... 590
Bulbous Plants in the Rock Garden 704
Bulbs, 589; Feeding Spring, 32; Forced, 177; for Rock Gardens, 742; Planting, 926; Spring-flowering, by the Waterside... 686
Bull and Sons, Messrs. William, Jubilee of 388
Bunyard and Co., Messrs. G., Award to 873
Burgess, Mr. A. E. 716
Burial Ground, Posthumous Care of 584
Burton Flower Show 832
Bury Flower Show 596
Bury St. Edmunds Rose and Sweet Pea Society 200
Bushey Park, Allotments in ... 952
Bushey Park Avenue 768
Bushey Park, Chestnut Sunday in 390
Butcher's Broom 876
Buxton, Sir T. F. 893

CABBAGE 665
Cabbages, Tally of 828
Cæsalpinia Gilliesi 718
Calanthes 881
Calceolaria Burbidgei, 726; C. chelidonoides, 108; C. deflexa, 32; C. Golden Glory, 698; C. integrifolia, 687; C. violacea 343
Calceolarias, 149; Herbaceous ... 574
Callicarpa purpurea 796
Cambridge Horticultural Society 865
Camellia reticulata, 279; C. Sesanqua 877
Camellias, Single-flowered 272
Campanula Hendersoni, 918; C. pulloides, 126; C. pusilla, 466; C. pyramidalis, 642; C. turbinata Dicksoni, 476; C. Vidali 654
Campanulas, 141; Dwarf, 663; for the Herbaceous Border, 305; for the Rockery 286
Canada, Plant Importation into 551
Canadian Fruit Crop 771
Canary Islands, Seeds from the 312
Canker in Melons 494
Cannas, 644; Flowering 607
Cantua dependens 876
Cape Primroses 246
Carberry Towers 445
Cardiff Chrysanthemum Show ... 888
Carbon-bisulphide as a Sterilising Agent 314
Carmichaelia australis 762
Carnation Conference, A Northern 100
Carnation Disease 394
Carnation Illustrations 358
Carnation Year Book 218
Carnations, 721; American, 22; Border, 165, 497, 600, 721, 798; by the Sea, 798, 835; Damage to, 312; Diseased, 177, 488; Exhibiting, 986; Fancy, 572; Layering, 602; Malmaison, 513; Marguerite, 85, 628, 768; White Ground Fancy 588
Carnations, Perpetual, 30, 314, 336, 353, 359, 390, 418, 918; American, 22, 915; and Summer Pests, 647; as Bedding Plants, 358; Best Pink, 206; Best Scarlet, 4; Best White, 89; Feeding, From a Florists' Standpoint, 357; Housing, 694; New, 279, 531; Outdoors, 390, 575; Rust and, 703; Stigmonose in 302, 361; Stopping, 461; Rust on, 848.
Carnations, Varieties of:—Baroness de Brienen, 918; Cambria, 816; Carola, 245; Duchess of Devonshire, 305; Lady Alington, 792; Lord Steyne, 611; Scarlet Glow, 817; Wivelsfield Wonder, ... 918
Carpinus polyneura 816
Carrots, 496; All the Year Round, 152, 188
Carter and Co., Messrs. James, 37; New Premises of 110
Cattleya, A Fine Specimen, 185; C. citrina, 869; C. Iris, 599; C. labiata, A Fine, ... 892

PAGE
Cattleyas, Secondary Growth in 719
Cattleyas, Unhealthy ... 527
Cauliflowers, 188; Black Rot in, 488; Good Early ... 527
Cavendishea acuminata ... 798
Ceanothuses, 590; Spring-flowering 356
Celery, 150; Culture of, 463; Diseased, 694; Transplanting 285
Celmisias ... 609
Celsias ... 920
Centaureas ... 156
Centranthus ruber ... 495
Centropogon Lucyanus ... 932
Cephalotaxus Fortunei ... 74
Cercis siliquastrum ... 374, 890
Cercospora circumscissa ... 218, 508
Cestrums ... 96
Chalky Soil ... 712
Chambers, Mr. B. C., The Late ... 274
Chard Nurseries ... 184
Cheal and Sons, Messrs. J., Successes of ... 449
Cheiranthus alpinus ... 415
Chelmsford Chrysanthemum Society 140
Chelsea Hospital Gardens ... 591
Cherita speciosa ... 494
Cherries, 762; Not Cropping, 713; Ornamental ... 336
Cherry, Black ... 605
Cherry Disease, Bacterial ... 735
Cherry Stem Borer ... 326
Chestnut Sunday in Bushey Park 390
Chicory, 719; Culture of ... 160
Chinese Trees and Shrubs for Kew ... 426
Chinese Trees and Shrubs, new ... 816
Chorizemas ... 223
Christmas Roses, Planting ... 236
Christy, Mr. E. H. ... 276
Chrysanthemum Caprice du Printemps ... 983
Chrysanthemum Swinburne ... 978
Chrysanthemum Culture ... 770
Chrysanthemum, Decline of the Big 973
Chrysanthemum Parthenium fl. pl., 494; C. prealtum ... 467
Chrysanthemums, Sportive ... 890
Chrysanthemums, Annual, 156; Self-sown ... 768
Chrysanthemums, 571; Anemone-flowered, 942; at Harrogate, 893; Dwarf, in Small Pots, 177; Early-flowering, 21, 177, 191, 723, 873; Early-flowering in South-west Scotland, 740; Exhibition Stands for, 408; Feeding and Top-dressing, 497; Fine Vase of, 835; for Market, 940; January, 96; Japanese, Late Struck, for Exhibition, 38; Newer Japanese, 5; King's Prize for, 238; Naturally Grown, 955; on Walls, 361; Red Grubs in, 890; Seasonable Notes on, 803; Soil Preparation for, 913; Summer Flowering ... 68, 207, 436
Cider Apples, ... 872, 894, 957
Cider Sickness ... 893
Cineraria, A Yellow ... 440
Cinerarias, 149, 241, 363; Double 21
Cistuses ... 346
Clandon Park, Guildford ... 341
Clarkias as Pot Plants ... 624
Clark, Mr. W. G. P. ... 99
Clematis ... 236, 585, 787
Clematis Davidiana, 822; C. Durandi, 592; C. indivisa, 972; C. integrifolia, 782; C. montana rubens ... 168, 399
Clematises for the Greenhouse ... 798
Clematises, Herbaceous ... 66
Clerodendron myrmecophilum, 497; C. Ugandense ... 717
Clerodendrons, Standard ... 191
Clianthus Dampieri ... 399
Climate, Variable English ... 390
Climber for Old Tree ... 22
Climbers, 370; and Clingers, 409; Deciduous Shrubby, 897; Evergreen, for Conservatory Wall, 768; Quickly Growing ... 370
Clipped Trees at Condover Hall ... 961
Clorophytum elatum as a Basket Plant ... 548
Club Root ... 391
Clusia grandiflora ... 584
Coccocypsilum hirsutum ... 346
Codlin Moth ... 182
Cœlogyne, Fungus on ... 548
Colchester Oyster Feast ... 787
Colchicum hydrophilum, 105; C. speciosum album ... 556
Colchicums, Giant ... 799
Cole, Mr. Silas ... 119, 258
College Garden, The First, in Scotland ... 698
Colonial and Indian Garden Appointments ... 238
Colley Hill, Reigate ... 970
Colour Charts ... 15
Colour Range in a Genus ... 79
Colour, Rich, The Glory of ... 376
Columbines ... 141
Columnea glabra major ... 398
Condover Hall, Clipped Trees at 961
Conifers, 74; Dwarf, for the Rockery, 223; Past History of, 410; Picturesque, 977; Some Interesting ... 74, 209, 283
Conservatory, A Skilfully Renovated ... 173
Cooling, Mr. W. F. ... 182
Coomber, Mr. Thomas, V.M.H. 200
Coral Tree ... 72
Cornwall County Fruit Plot ... 244
Cornwall Daffodil Show ... 289
Coronation, The ... 442
Coronation Floral Gifts ... 458
Coronation Flower ... 174
Coronilla glauca ... 499
Corydalis bulbosus, 90; C. tuberosus alba ... 248
Corylus colurna chinensis ... 816
Costus igneus ... 876
Cotoneaster angustifolia ... 26, 705
Cotoneasters ... 876
Cottage Garden Shows ... 624
Cotyledon fulgens ... 172
Crab Apples, 724; Ornamental ... 718
Crambe orientalis ... 241
Cratægus Crus-galli 976; C. pyracantha ... 705
Crawley Gardeners' Visit to Headley Park ... 459
Crinum Johnstoni, 465; C. Powelli alba ... 760
Crocus Species, Some Spring ... 896
Crocus Boryi, 800; C. versicolor ... 645
Crop Reports ... 564
Crossandra undulæfolia ... 700
Cross Fertilisation ... 217
Cross, Mr. R. M., The Late ... 216
Crotolaria capensis ... 718
Crotons and Dracænas ... 679
Crowea saligna ... 327
Crown Flower Bed at Wolverhampton ... 625
Crown Gall Disease ... 434
Croydon Gardeners' Association, 64a, 196, 290, 354, 388, 423, 656, 824, 984
Crystal Palace, Future of the ... 792
Crystal Palace Rose Show ... 460
Crystal Palace, Sale of the ... 458
Cucumber Belle Vue ... 42
Cucumber Culture ... 118
Cucumber Leaves, Pallid ... 808
Cucumbers, 205, 294, 801; Awards to, 510; Diseased, 712; Mildew on ... 548
Cultivation, Deep ... 34, 69
Cunninghamia sinensis ... 209
Cyclamen, 145; Hardy ... 245
Cymbidium insigne, 890; C. longifolium, 472; C. Traceyanum, Home of ... 162
Cymbidiums ... 96
Cynorchis compacta ... 166
Cypripedium Leaves, Insects on ... 909
Cypripedium callosum, 408; C. caudatum, 985; C. Chrysotoxum, 497, C. Lucifer, 839; C. Saundersianum, 966; C. W. J. Miles ... 6
Cytisus ... 111
Cytisus racemosus, 384; C. filipes, 948; C. proliferous, 343; C. Shipkaensis ... 514

DAEDALACANTHUS WATTI ... 819
Daffodil Show for London ... 892
Daffodil Show in Piccadilly ... 309
Daffodil Society, Proposed National ... 64, 139
Daffodils, 638; Awards for New, 373; Awards to, 160; from Seed, Raising, 684; in Pleasure Grounds, 683; in the Grass, 627; Lifting 370; Notable, of 1911, 679; Planting Choice, 527; Planting Forced 390
Dahlia Conference ... 178, 182
Dahlias, 542; Cactus, New Exhibition, 263; Decorative, for the Garden, 234; Exhibition and Garden, 238; for Garden Effect, 62; for Garden Decoration, 264; Handsome Vase of, 725; in America, 919; Pæony-flowered, 262; Pompon, 233, 284; Single, 233, 260, 301; Trial of Decorative ... 752
Dahlias, Varieties of:—Brentwood Yellow, 792; Kaiseren Augusta Victoria, ... 261
"Daily Mail" Sweet Pea Show 580
Daisies in Garden Decoration ... 939
Dalkeith Palace ... 429
Damsons not Fruiting ... 472
Damson, The Merryweather ... 795
Dandelion ... 281
Daniels, Mr. George, The Late ... 136
Daphne mezereum ... 287
Daphnes ... 205
Davidson, Mr. A., Retirement of 930
Davis, Mr. J. E. ... 812
Davis, Mr. Norman ... 458
Days, Lengthening ... 81
Dianthus petræus plenus ... 519
Debregeasia velutina ... 274
De Graaf, Mr. Simon, The Late 352
Dendrobium Growths, Old ... 256
Dendrobium nobile ... 96
Devon Daffodil Show ... 329
Dickson and Robinson, Messrs. 603; Vegetable Show ... 712
Dickson, Mr. John ... 425
Diploma for Horticulture ... 930
Diplacus glutinosus ... 494
Disa grandiflora ... 608
Disqualification, 617; at Winnipeg ... 908
Dissotis plumosa ... 644
Dixon, Mr. James ... 769
Dogwoods, Variegated ... 249
Dominica Botanic Station ... 239
Douglas, Mr. James, V.M.H., The Late ... 908
Drought ... 583
Drumwhindle School Garden ... 500
Dry Walls, Decorative Use of ... 479
Dry Weather Jottings ... 482
Dumfries, Gardeners' Dinner at ... 162
Dundee Bulb Show ... 195
Dundee Chrysanthemum Society ... 925
Dundee Flower Show ... 656, 770
Dundee Horticultural Association, 78, 176, 215, 310, 387, 471, 580, 808

EARLEY, MR. W., THE LATE ... 748
Earthworms ... 210
East Anglia, Garden Notes from 720
East Anglian Horticultural Club, 60, 64, 134, 252, 310, 388, 471, 547, 710, 785, 926
Eastbourne Sweet Pea Show ... 581
Easter Holidays ... 296
Eccremocarpus scaber ... 316
Echinocytis lobata ... 138
Echium fastuosum ... 868
Edgeworthia chrysantha at Leonardslee ... 182
Edgware Horticultural Society ... 547
Edinburgh Botanic Gardens, Wages of Employees at ... 953
Edinburgh Chrysanthemum Show 872, 883
Edinburgh, Floral Decorations in 550
Edinburgh Gardens 410, 429, 445, 930
Edinburgh Market Gardeners' Association ... 116
Elder Stem, Fungus on ... 634
Electricity in Plant Culture ... 277
Electro-Chemical Culture of Plants 930
Elliottia racemosa ... 873
Elm Tree Injured by Lightning... 456
Elm Tree on Fire ... 44
Elms, Dangerous ... 474
Elstree and Boreham Wood Horticultural Society ... 175, 216, 272
Englemann's Spruce ... 427
English Forestry Association ... 64
Enkianthus japonicus ... 343
Epigæa repens, Propagation of ... 273
Episcia fulgida ... 399
Epping Forest ... 140
Eranthemum Teysmanni, 398; E. tuberculatum ... 494
Erica carnea, 936; E. hyemalis ... 118
Eriostemons ... 755
Erlangea tomentosa ... 959
Erodium cheilanthifolium, 589; E. trichomanefolium ... 627
Erythrina crista-galli, 72; E. Humei ... 669
Erythronium giganteum ... 382
Escallonia Langleyensis ... 18
Eulophiella Peetersiana ... 399
Euonymus Mildew ... 238
Eupatorium Raffili ... 242
Euphorbia fulgens, 533; E. jacquinæflora ... 300, 564
Evergreen Shrubs, Variegated ... 327
Evesham in April ... 340
Exacum macranthum ... 721
Examination in Gardening, 734; School Teachers ... 736
Examination in Horticulture 24, 510, 527; Public Parks ... 22
Experimental Culture in Staffordshire ... 297
Experimental Results, Interpretation of ... 854

FABIANA IMBRICATA ... 395
Farm Weeds ... 809
Farquharson, M.C.O., B.Sc. ... 912
February in the North ... 182
"Feeding of Crops and Stock" ... 389
Felton, Mr. R. Forester ... 81
Fern, Finest Male ... 828
Fern, Fossil, An Interesting ... 602
Fern Spore Arrangement ... 124
Fern Spore Pods ... 297
Fern Spores, Erratic ... 540
Ferns, 634; for the Rock Garden, 280; Inexpensive Hardy, 617; Names of Hardy, 440; Varieties of British ... 634
Fertilisers, Purchase of ... 868
Festival of Empire, Horticulture at the ... 370
Festival of Empire Rose Show...502, 602, 620, 638, 674, 745
Fig Culture in Pots ... 55, 636, 669, 756, 832
Fig Tree, Diseased ... 508
Figs, 55; Early, 281; not Ripening, 694; Outdoor ... 196
Fittonias ... 412
Finsbury Park, New Superintendent for ... 408
Fire Station, A Private ... 559
Fitzroza patagonica ... 210
Flame Flower ... 451
Floral Decorations at Drury Lane 355, 374
Floral Decorations at the Gala Opera ... 442
Floral Decorations in Edinburgh 550
Floral Form ... 791
Floral Selection ... 43
Floral Ship's Model ... 852
Flora of the Bernese Oberland ... 64b
Flora of the Jurassic Period ... 25
Floricultural Societies' Publications ... 62
Flower Beds ... 138, 273
Flower Borders, Clearing up ... 972
Flower Garden, Fruit Trees in ... 751
Flower Show at Norwich ... 458
Flower Shows, Summer ... 509
Flower? What is a ... 257
Flowering Shrubs for Lawn Specimens ... 859
Flowering Trees and Shrubs at Kew 354
Flowers, 246; Early, from the South of France, 373; Evolution of, 425; for Charity, 277; for January, 332; in Masses, 246; Preservation of Cut ... 952
Fokienia Hodginsi ... 707, 816
Foliage Plants for Summer Bedding 268
Forbes' Nurseries, Harwich ... 131
Forest of Auchnacary ... 426
Forestry, 64, 869; and Ornamental Trees, 832; at the Highland Show, 580; Degree of, at Aberdeen University, 877; Development of 550; Exhibition in Sweden, 442; Experimental Trees Suitable for, 605; in Scotland, 314, 462, 608; Scottish and German Methods of, 853; Trees and Shrubs for Experimental ... 570
Forget-me-not, A New ... 381
Formby Summer Show ... 547
Forsythia intermedia spectabilis... 374
Forsythias ... 280
Foster, Mr. Chas., The Late ... 158
Foster, Mr. Harry ... 752
Foxgloves, Variation in ... 971
Freesia Chapmani ... 91
Freesias, Pink-flowered ... 184
French Gardening ... 618
French Horticultural Society of London ... 77
Friar Park Rock Garden ... 641
Fritillaria contorta ... 737
Fritillaria imperialis chitralensis 682
Fruit Bottling for Small Holders 629, 646
Fruit Bushes, Spring Protection of 90
Fruit Conference at Ashford ... 930
Fruit Crop, The Canadian ... 771
Fruit Crops of 1911. ... 442
Fruit Crops, 371; Blairgowrie, 490; Hardy ... 249
Fruit Culture in West Perthshire 566
Fruit Show, Great British ... 753
Fruit from Ireland, Export of ... 892
Fruit Growing, Proposed Research for ... 873
Fruit Market, Glasgow ... 717
Fruit Packing in British Columbia 620
Fruit Plot, Cornwall County ... 244
Fruit Prospects in the North ... 410
Fruit Trees, 86; Concerning, 204; Grafting, 98; in Grass Land, 567; in the Flower Garden, 751; Late Planting of 71; on Lawns, 86; on Walls, Protecting, 190; Pruning 553, 717; Fruit Trees, Spraying, 10; Standard ... 799
Fruiting Trees and Shrubs, Ornamental ... 858, 956
Fruits, 957; and Seeds, 473; and Vegetables for Market, Packing, 852; from a New Garden, 821; from Barbados, 297; Hardy, in Pots, 28; Hardy, Thinning, 477; Seedless, 951; Summer Pruning Hardy ... 542
Fuchsias, 265; Florists', Outdoors, 840; for Bedding, 265; Variegated-leaved ... 670
Fumitory, Bulbous ... 90
Fungicide, A Sulphur ... 216
Fungus Forays ... 674
Fungus Foray in Somersetshire... 716
Fungus on Leaves ... 332
Fungus on Poplar Branch ... 582
Fungus on Tree Roots ... 747
Funkia grandiflora ... 743
Funkias ... 875
Furze, The Double ... 378
Fusicladium dendriticum ... 332

GAILLARDIAS ... 920
Galega officinalis compacta ... 478
Garden, A Cosy ... 975
Garden, A Valleyed ... 515
Garden Beauty, Shade as ... 548
Garden City at Walton ... 530
Garden Design, New Theory of ... 68
Garden Directory ... 926
Garden Features, Good ... 480
Garden Flowers ... 275
Garden, Fruit from a New ... 821
Garden Notes from East Anglia... 720
Garden Patent ... 62
Garden, Paved, at Powis Castle 573
Garden Pictures ... 568
Garden Reconstruction ... 793
Garden Trellises ... 669
Garden, Value of the ... 574
Garden Walks ... 383
Garden Woman, The ... 38
Gardener Suffocated, A Musselburgh ... 239
Gardeners, Certificated ... 931, 952
Gardeners' Company, 354, 852, 912; Presentation to the Lord Mayor, 474; Visit to Holland 182
GARDENERS' MAGAZINE Almanac 952
GARDENERS' MAGAZINE Bulb Number ... 656
GARDENERS' MAGAZINE Fruit Number ... 734
GARDENERS' MAGAZINE Gold Medal at Harrogate ... 584
GARDENERS' MAGAZINE Rose Number ... 752

PAGE
GARDENERS' MAGAZINE Spring Number ... 120
Gardeners' Notice to leave ... 433
Gardeners' Royal Benevolent Institution, 24, 195, 258, 372, 392, 640; and the King ... 200
Gardeners, Young ... 273
Gardening Dictionary, Handy ... 508
Gardening Examination, 734; School Teachers ... 450
Gardening Excursions ... 549
Gardening for House Adornment 817
Gardening for Soldiers ... 971
Gardening, Natural Idea in ... 898
Gardening Year Book 770, 792, for 1912 ... 971
Gardens in Winter, Bare ... 102
Gardens of Shade ... 378
Gardens, Underground ... 410
Garrya elliptica ... 326
Genetic Science, Modern ... 657
Genistas, Three Useful ... 493
Gentiana septemfida ... 500
George, Mr. James, The Late, 216, 231
Geranium argenteum, 535; G. lancastriense, 800; G. l. varieties ... 588
Geraniums, Hardy, Dividing ... 928
Gerbera Jamesoni ... 718
German Methods of Forestry ... 853
Gesnera Orange King ... 772
Genetics ... 472
Geum Mrs. Bradshaw ... 618
Gibbins, Mr. S., The Late ... 136
Gingell, Mr. W. B. ... 970
Ginkgo biloba ... 74
Gladioli, 118, 966; and Montbretias, 231; in America ... 337
Gladiolus gandavensis ... 634
Glasgow Fruit Market ... 717
Glasnevin Botanic Gardens ... 892
Gloriosa Rothschildiana, 397; G. superba, 160; G. virescens grandiflora ... 856
Gloxinias ... 142, 657
Godfrey, Mr. W. J. ... 161
Golden Flower, Season of the ... 811
Gonioma Kamassi ... 101
Gooseberries, 548; Cordon, 581; Loss of Buds on, 21; More About ... 282
Gourds in the Garden ... 475
Gooseberry, Berry's Early Kent 167
Gooseberry Culture, Mistakes in 30
Gooseberry Disease, The Sclerotinia ... 528, 547
Gooseberry Mildew, American, 377; Notification of, ... 734
Gooseberry Pruning, Experiments in ... 458
Gooseberry Trees, Age of ... 65
Grafting, 98; Trees and Shrubs ... 127
Grapes, Fungus on ... 21, 118
Grapes, Ripe ... 863
Grapes, Varieties of:—Alicante, 928; Black Hamburgh, 136, 926; Lady Hutt, 935; Muscat of Alexandria ... 96
Grasses, Ornamental ... 256, 642, 916
Grass Land, Fruit Trees in ... 567
Greenaway, Mr. W., The Late ... 352
Greenhouse Climbers ... 538
Greenhouse, The Amateurs' ... 669
Greenwich Park, New Superintendent for ... 390
Grevilleas ... 318
Grew, Nehemiah ... 82
Grix, Mr. W., Legacy to ... 259
Grubb, Mr. Albert ... 565
Grubs in Soil ... 160, 828
Gumbleton, Mr. W. E., The Late 312
Gunnera manicata ... 101, 647
Gunneras ... 763
Gunnersbury House, Heliotropes at 662
Gunnersbury House, Salvia Glory of Zurich at ... 734
Gypsophila repens rosea ... 519

HABROTHAMNUS NEWELLI ... 396
Hæmanthus Katherinæ ... 494
Hales, Dr. Steven ... 63
Halley, Mr. R. S. ... 295
Half-hardy Plants ... 385
Hamamelis and Cornus ... 242
Hampton Court, Fall of an Elm at 314
Hampton Court Notes ... 558
Hampton Court Vine ... 566
Handsworth Floral Fête ... 579
Hanley Horticultural Fête ... 218, 522
Hanson, Mr. F. ... 335
Harborne Gooseberry Show ... 615
Hardy Flowers, Grouping ... 494
Hardy Fruits, Storage of ... 715
Hardy Plant Chat, 67, 126, 304, 457, 476, 557, 765, 783
Hart's Tongue Ferns, 558; Variegated ... 765
Harrogate's Open Spaces ... 617
Hay, Mr. Thomas ... 390
Hayward's Heath Horticultural Society ... 578
Hawthorns in the Garden ... 428
Heat and Cold ... 24, 529
Heat and Drought ... 426, 602
Heath and Forest Fires ... 296, 584
Heaths, Cornish ... 656
Heaths, Miniature ... 110
Hedgerow Timber ... 853
Hedges, Evergreen ... 857, 875
Helianthemums ... 800, 978
Hellebore Wash ... 654
Hellebores ... 218
Helleborus guttatus ... 73
Heleniums ... 587
Helenium Riverton Gem ... 790

PAGE
Heliophila scandens ... 877
Heliotropiums, Lawn Group of ... 662
Hemel Hempstead, New Park for 585
Hemerocallis, Choice ... 320
Henderson, Mr. James, Presentation to ... 931
Hepaticas ... 248
Herbaria ... 161
Herbaceous Border, Campanulas for the ... 305
Herbaceous Borders, Early-flowering Subjects for ... 899
Herbaceous Borders, Seasonal ... 225
Herbs, 302; Three Bitter ... 932
Hereford Fruit and Chrysanthemum Show ... 824
Hereford Spring Show ... 350
Heucheras, Among the ... 434
Hibbertia dentata ... 75
Hibiscus, Hardy ... 273
Hibiscus rosea sinensis, 914; H. syriacus ... 577, 720
Higgie, Mr. W., Legacy to ... 474
Highgate, Mr. J. ... 619
Hippeastrum pardinum ... 385
Hippeastrums, 108; at Christmas, 86; Repotting ... 189
Hippophæ rhamnoides ... 110
Hitchin Rose Society ... 140
Hobday, Mr. E. ... 78
Hoeing ... 292
Holland, Plant Diseases in ... 373
Hollies, 321, 339; Choice, in English Nurseries ... 326
Holly ... 858
Holly, Golden ... 837
"Homestead" ... 423
Honey Harvest in the North ... 698
Honey Sections, Glazing ... 808
Hooker, Sir J. D., The Late, 931; Funeral of ... 952
Hopetoun House ... 431
Hops, Spent, as Manure ... 389
Horticultural Charities ... 314
Horticultural Club, 24, 157, 182, 252, 309, 336, 387, 564, 785, 812, 892, 947
Horticultural Education, 736, 902, 904; in Scotland ... 698
Horticultural Examinations, 510, 527, 985; Papers for ... 809
Horticultural Leaflets ... 654
Horticultural Press and Exhibitions ... 564
Horticultural School at Wisley 100
Horticultural Societies and Secretaries ... 79
Horticultural Sundries ... 657
Horticultural Teaching, Women and ... 100
Horticultural Trade and Undeveloped Land Duty ... 550
Horticultural Trades Association ... 668
Horticulture and Oysters at Colchester ... 787
Horticulture, 930; at the Festival of Empire, 238; at Turin, 162; Examination in, 510; in Edinburgh, 44; New School of, 832; Proposed National Diploma in ... 930
Hot water as an Insecticide ... 332
Hot Water, Use of, for Forcing ... 602
Houseleeks, Cobweb ... 937
Hovea Celsi ... 272
"How to Cook Vegetables" ... 794
Hyacinth, City of Haarlem ... 803
Hyacinths, 678; Culture of, 685; Good Bedding, 681; Roman and Italian ... 678
Hybridisation of Orchids ... 852
Hybrids, Variation in ... 496
Hydrangea, Climbing ... 848
Hydrangea hortensis, 571; H. paniculata grandiflora ... 30
Hydrangeas, 959; New ... 436, 472
Hypericums ... 555
Hypericum coris, 519; H. patulum Henryi ... 699
Huckleberries ... 869
Hudson, Mr. J., Honour to ... 892
Huntingdon Daffodil Show ... 310

IBIS HORTICULTURAL SOCIETY ... 530
Impatiens Herzogi, 398; I. Kewensis ... 717
Impatiens, Indian Species of ... 912
Importation of Plants into Canada 551
Incarvillea grandiflora brevipes ... 126
Insect Stings ... 669
International Horticultural Exhibition at Florence ... 454
Ireland, Export of Fruit from ... 892
Iris bucharica ... 227
Irises, 126; Bulbous, Under Glass, 280; Diseased, 481; Flag, 126, 503
Isle of Wight Bee Disease ... 465
Isolema hirsuta ... 585
Ivies, 713; Book on, 160; in Garden Decoration, 318, 377; in Pots or Tubs, 388; Tree ... 957
Ivy on Walls, Trimming... ... 196
Ivy on Young Tree ... 713
Ixias and Sparaxis in Pots ... 679
Ixora congesta ... 399

JACKSON T. DAWSON, MR., HONOUR TO ... 182
Jacobinia chrysostephana, 307, 861, 926; J. suberecta ... 644
January in the North ... 100
Japanese Garden, Miniature, at Shepherd's Bush ... 218

PAGE
Japanese Ideal in Practice ... 498
Japanese Maples ... 536
"Jardinage" ... 893
Jasmine, Winter, as a Specimen 129
Jasmines, Greenhouse ... 960
Jasmines, Hardy Yellow ... 730
Jennings, Mr. F. ... 832
Jersey Potato Crop, Damage to the 276
Judas Tree ... 396
July Weather ... 566
June Flowers ... 462

KILGOUR, MR. W., PRESENTATION TO ... 638
Kalanchoe Dyeri, 294; K. flammea ... 682, 638
Kalmia glauca ... 438
Keith, Mr. Edward ... 583
Kelway and Sons, Messrs., Successes of ... 852
Kent, Surrey, and Sussex Daffodil Show ... 351
Kerria japonica fl. pl. ... 472
Kew Bulletin ... 100, 200, 532
Kew Gardens, 792; Additions to, 140; Alterations in Rock Garden at, 770; and the Empire, 64; Flowering Trees and Shrubs at, 354; Foremen at, 218; Guides for, 792; Japanese Gate at, 297; Notes from, 165, 241, 343, 398, 494, 585, 644, 717, 818, 876; Roses at, 476; Seeds of Chinese Trees and Shrubs for, 426; Spring Flowers at, 370; Visitors to in 1910 ... 100
Kew Guild, 440; Annual Dinner, 354; Journal of the ... 120
Kilgour, Mr. W., Presentation to 638
Kings Acre Nursery Company ... 657
King's Walden Bury, Fire Station at ... 559
Kirkbride Nurseries ... 75
Kitchener, Lord, and his New Garden ... 296
Kochia trichophylla ... 400

LABURNUM FLOWERING IN SEPTEMBER ... 712
Lachenalias ... 605, 738
Lactuca alpina ... 459
Lælia anceps, A Fine White ... 203
Ladds, Mr. F. W. ... 930
Laird, Mr. Robert, The Late ... 658
Lamb, Mr. Robert ... 697
Landscape Effects, Plantations for 856
Lantanas ... 398
Lapageria rosea ... 352
Larbalestier, Mons. C. du Bois, The Late ... 312
Larch Branch, Diseased ... 848
Larch Canker ... 79
Larkspur Fanny Stormonth ... 476
Larkspurs, Annual ... 309
Lasiandra macrantha ... 848, 880
Lavender Growing ... 802
Lawn, Dressing for ... 848
Lawn Rolling on a Sunday ... 182
Lawn Specimens, Flowering Shrubs for ... 859
Lawns, 360; and Greens from Seeds, 155; and Greens, Preparing Ground for, 187; Fruit Trees on, 86; Improvement of, 360; Weeds on ... 42
Lawrence, Mr. F. C., Presentation to ... 182
Leaf, Life of a ... 872
Leak, Mr. G. W. ... 43
Leaves, Evaporation from ... 698
Lee and Blackheath Horticultural Society ... 116, 216, 843
Leeds Professional Gardeners ... 196
Leeks ... 211
Leicester Flower Show ... 595
Lemoine, M. Victor, The Late, 986; Honour to ... 952
Lenten Roses ... 218
Leptospermum Nicholli ... 494
Leschenaultia bilobâ major ... 378
Lettuce ... 229
Lettuce, Carter's Harbinger ... 282
Lettuces and Endive... ... 639
Lettuces, Winter, at Hutton ... 337
Leucojum vernum Vagneri ... 557
Leucophyta Browni ... 564
Levelling Ground ... 261
Lewis, Gardening in ... 218
Libocedrus decurrens ... 209
Lilium auratum, 256; L. Burbanki, 273; L. candidum, 669; L. Harrisi, 720; L. longiflorum giganteum, 772; L. tigrinum Fortunei, 794; L. umbellatum ... 33
Liliums and Anemones, Combination of ... 703
Lily of the Valley, 282; Forced, 610; Pink ... 424
Lilies, Propagation of ... 29
Lily Pool, An Attractive ... 533
Lime, 763; in the Garden, Value of, 420; Need of, 848; and Sulphur Wash, Spraying with, 238; Uses of ... 517
Lindley Library ... 160
Ling ... 611
Linnean Society, Officers and Council of the ... 426
Lister Park, Bradford ... 296
Lithospermums ... 539
Liverpool Horticultural Association ... 116, 271, 564, 866
Llanishen Horticultural Society... 634
Lobelia cardinalis ... 52, 800

PAGE
Lobjoit, Mr. Wm. C. ... 792
Lockerbie Public Park ... 200
Lockerbie Sweet Pea Society 467, 616
Loganberries ... 564, 694
London Parks and Gardens ... 581
London's Window Gardens ... 833
Lonicera sempervirens ... 724
Luculia gratissima ... 577
Lupinus Somerset ... 67
Lyndhurst Gardeners' Association 833

MACKENZIE, MR. D., PRESENTATION TO ... 458
Madresfield Court, Sundial Garden at ... 659
Magnolia Soulangeana nigra, 262; M. stellata ... 281
Magnolias ... 27
Maintaining the Balance ... 247, 307
Manettia bicolor ... 211
Manchester and North of England Orchid Society, 633, 729, 746, 867, 925
Mangham, Mr. S. ... 893
Mansfield Horticultural Society... 716
Manure, Compound ... 424
Manure, Seaweed as ... 827
Manures, 424; Artificial, 440; for Tomatoes, 456; Nitrogen, in Animal ... 582
"Manures for Farm and Garden Crops" ... 794
Manuring Meadow Land ... 872
Maple, Oregon ... 606
Maples, Japanese ... 256, 536
Market Gardeners' Compensation 952
Marliac, Mons. B. Latour, The late ... 314
Marlow, Mr. W. J. ... 656
Massie, Mr. W. H. ... 64
Mawley, Mr. E., V.M.H., Illness of ... 872
May, Mr. H. B. ... 200
Meconopsis integrifolia ... 67
Medinilla magnifica ... 242
Medinillas ... 306
Melville, Mr. J., The late ... 312
Melon and Marrow Seeds ... 618
Melons, 146, 399, 771; and Manure, 210; Canker in, 494; Early, 83, 243; Flavour of, 108; in Frames, 380; Old Varieties of, 152; Planting Out ... 147
Mendel's Law ... 831
Merodon equestris ... 793
Mesembryanthemum pyropeum ... 299
Metropolitan Public Gardens Association ... 292, 259
Midland Carnation Society ... 596
Midland Daffodil Show ... 349
Midsomer Norton Horticultural Association ... 716
Mignonette ... 286
Mildew, Sulphide of Potassium for 456
Mimulus Burneti ... 588
Mitosis, Mechanism of ... 602
Moore, Sir F. W., V.M.H. 510, 529
Morphology ... 911
Mosses ... 370
Moths, Gypsy and Brown-tail ... 44
Montacute, Topiary Walk at ... 70
Montbretias ... 231
Moschosma riparia ... 986
Mowing Machine ... 408
Muir, Mr. J., The late ... 274
Mulching ... 495
Murray, Mr. G. R. M., The late ... 986
Musas in the Summer Garden ... 375
Museums, Teaching ... 674
Mushrooms ... 483
Myosotis alpestris Maggie Raphael 381
Myrtle Jeanny Reitchenbach ... 797

NARCISSUS, A NEW POET'S ... 705
Narcissus Committee, Change of Chairman of the ... 200
Narcissus, Dyed ... 292
Narcissus Fly ... 793
Narcissus, Two Poet's ... 410
Narcissus, Varieties of:—
Incognita, 300; Poetaz, 370; Socrates, 721; Sonata ... 705
National Amateur Gardeners' Association ... 116, 162
National Auricula Society ... 218, 329
National Auricula Society, Midland Section ... 365
National Auricula Society, Northern Section ... 368
National Carnation and Picotee Society ... 276, 551
National Chrysanthemum Society 78, 82, 114, 354, 709, 716, 746, 807, 813, 832, 924, 948, 953; Chrysanthemum Conference, 698, 913; Fixtures for 1911, 218; Outing ... 459
National Daffodil Society, Proposed, ... 64, 100, 134, 139, 213
National Dahlia Society, 620, 691, 700, 906; Conference, ... 233, 953
National Gladiolus Society 474, 546
National Hardy Plant Society, 61, 162, 195, 248, 455, 602, 669, 865; Conference at Shrewsbury ... 667
National Rose Society, 71, 258, 330, 474, 521, 709, 912, 963; at Ulverston, 561; Autumn Show, 656; Catalogue of Roses ... 812
National Sweet Pea Society, 23, 24, 58, 60, 82, 100, 104, 336, 408, 422, 511, 716, 730, 767, 812, 944; Floral Committee, 530; Work of the ... 58

PAGE
National Trust ... 510, 602
National Tulip Society ... 422, 440
National Vegetable Society, 120, 471, 620, 651, 670, 852, 888; Rules of the, 256; Trials, 577; Trials of Beetroots ... 630
Natural History Museum, Site of the ... 354
Nature's Lead ... 306
Nematodes in the Midlands, Plague of ... 276
Nemesias, 408; Sowing ... 216
Nephrolepis exaltata, 450; Variation of ... 209
Nerines ... 756
Nerine crispa ... 877
Nether Green Nurseries, Sheffield 156
Nettles, Destruction of ... 869
Newcastle Chrysanthemum Show 884
Newcastle Flower Show ... 562, 894
Newcastle Fruit Show and Congress ... 884, 852
Newmarket, New Open Space for 656
New Year, First Issue of the ... 970
Niagara Falls Park, The Queen Victoria, ... 240
Nicotine ... 603
Nitrogen in Animal Manures ... 582
Norfolk and Norwich Chrysanthemum Society ... 887
Norfolk and Norwich Horticultural Society ... 366, 485, 524
North-east of Scotland Horticultural Association ... 710, 984
Northern Fruit Congress, 490, 872, 904
North of England Horticultural Society, 2, 24, 82, 140, 162, 183, 232, 237, 390, 458, 613, 653, 964
North of Scotland Horticultural Association ... 785
Notes from Here and There, 208, 702, 725
Nursery Inspection in New York 297
Nurserymen and Poisonous Insecticides ... 930
Nurserymen's Convention at St. Louis ... 410
Nuttalia cerasiformis ... 242
Nyssa aquatica ... 742

OAK, THE CYPRESS ... 436
Obituary:—
  Baker, Mr. R. N. G. ... 312
  Beddome, Colonel R. H. ... 178
  Bryce, Mr. Thomas ... 370
  Chambers, Mr. B. C. ... 274
  Cross, Mr. R. M. ... 216
  Daniels, Mr. George ... 136
  De Graf, Mr. Simon ... 352
  Douglas, Mr. James, V.M.H. ... 908
  Earley, Mr. William ... 748
  Foster, Mr. Charles ... 158
  George, Mr. James ... 216, 231
  Gibbins, Mr. Samuel ... 136
  Greenaway, Mr. William ... 352
  Gumbleton, Mr. W. E. ... 312
  Hobday, Mr. E. ... 78
  Hooker, Sir J. D. ... 931
  Laird, Mr. Robert ... 658
  Larbalestier, Mons. C. du Bois 312
  Lemoine, M. Victor ... 986
  Marliac, Mons. B. Latour ... 314
  Melville, Mr. J. ... 312
  Muir, Mr. J. ... 274
  Murray, Mr. G. R. M. ... 986
  Rawlings, Mr. A. ... 198
  Service, Mr. R. ... 370
  Sutton, Mrs. Martin J. ... 114
  Thyne, Mr. Thomas ... 178
  Tranter, Mr. J. R. ... 334
  Walker, Mr. James ... 136
  Walker, Mrs. S. ... 967
  Weeks, Mr. A. W. ... 136
  Willis, Mr. J. J. ... 582
  Woodgate, Mr. G. ... 548
Observation ... 577
Ochna multiflora ... 480
October in the North ... 832
October Notes ... 837
Odontodenia speciosa ... 818
Odontoglossum ardentissimum, 926; O. crispo-Harryanum, 599; O. splendidissimum Oakwood variety ... 279
Odontoglossums ... 69
Œnothera, Mutation in ... 912
Œnotheras, Dwarf ... 972
Olearia Haasti ... 518
Olearia semidentata ... 653
Oliver, Dr. Daniel ... 120
Olympia Flower Show, 101; Gardeners' Admission to the ... 273
Omphalodes verna ... 256
Oncidium concolor ... 548
Oncoba Routledgei ... 410
One Tree Hill, Purchase of ... 162
Onion, Ailsa Craig ... 193
Onion Culture ... 384
Onions, 173; Autumn Sown, 653; Diseased, 527; Winter ... 593
Orchard, Harvest of the ... 761
Orchard House Trees ... 75
Orchard, Mixed, Yield of ... 530
Orchard, The Old Farm ... 72
Orchard Trees, Pruning ... 42
Orchards, Cleanliness of... 10, 75
Orchards in the Teme Valley ... 734
Orchid, The Amateurs' ... 96
Orchids, 2; Fibre for, 352; Hybridisation of, 852; New Genus of, 182; Used in Hybridisation, list of ... 2
Origanum hybridum ... 585
Orontium aquaticum ... 247

PAGE
Ourisia coccinea ... 273
Oxalis Bowieana, 718; O. corniculata, 626; O. rosea ... 626
Oxenford Castle ... 447

PACKING FRUITS AND VEGETABLES FOR MARKET .. 852
Pæonies, Tree ... 123
Pansies ... 127
Papaver alpinum ... 460
Paris Autumn Show ... 866
Paris Chrysanthemum Committee 930
Paris, English Exhibitors in ... 832
Parkstone Gardeners' Association 786
Parks in America ... 44
Parrotia persica ... 837
Parsley ... 167, 226
Pastures, Improvement of Old ... 603
Paul, Mr. G. L. ... 140
Pea Trial, Culinary, at Wisley ... 567
Pea, White Everlasting ... 400
Peas, 31; Beautiful Everlasting, 398; Blue-flowered, 508; Composition of, 582; Culinary, 449, 548; Culinary, in 1911, 796; for Small Gardens, 84; from June to October, 88; Late, 152; Record Price for, 550; Some New Culinary ... 91
Peas, Varieties of:— G. F. Wilson, 285; The Pilot, 247; Webb's Stourbridge Marrow 131
Peach Culture, Outdoor ... 339
Peach House, Cool or Late ... 203
Peach Leaves, Holes in ... 508
Peach Tree, Diseased ... 292
Peach Trees, 564; on Open Walls, 517, 573; Transplanting, ... 778
Peaches, 273; Aphis on, 390; at Woburn Place, 286; Best Outdoor, 768; Double-flowered, 318; Early Outdoor, 11; on Walls, 617; Silver-leaf in, 273, 303; Successional, on Open Walls ... 757
Peaches, Varieties of:— Libra, 44, 129, 165; Royal George, 352; Wenatchee ... 717
Pear Tree, Climber for Old ... 730
Pear Trees not Fruiting ... 669
Pears, 66; Cordon, on Arches, 129; Good Late Dessert, 756; October, 66; Suggested New Stock for, ... 585
Pears, Varieties of—Beurre Baltet Pere, 206; Beurre Hardy, 66; Beurre Fouqueray, 125; Beurre Superfin, 111; Doyenne du Comice, 841; Durondeau, 66; Emile d'Heyst, 118; Fondante de Thirriott, 7; Marie Louise d'Uccle, 193; Marie Louise, for Stewing, 772; Monarch, 204; Pitmaston Duchess, 244, 292; Riha's Coreless, 966; Seckle, 768; Triomphe de Vienne, ... 187
Pelargonium Clorinda, Sport from, 390; P. L'Elegante, 699; P. Maxime Kovalevski, 479; P. Salmon Paul Crampel, 790; P. Stapletoni, 494; P. tetragonum ... 686
Pelargoniums, 398; Cape and Scented, 627; in the Flower Garden, 268; Nomenclature of 812
Pentas carnea ... 914
Pentstemon cœruleus, 377; P. Menziesi ... 459
Pentstemon, Revival of the ... 304
Pentstemons, 155; from Hawick, 735; The Florists' ... 347
People's Palace Horticultural Society ... 531
Perennial Borders, Preparing and Planting ... 32
Perennials, Choice of Hardy ... 130
Perennials, New Ways of Growing 971
Pergolas ... 317
Periploca græca ... 839
Pernettyas ... 20
Perpetual Flowering Carnation Society ... 26, 338, 892, 946
Persimmons ... 532
Perthshire, Fruit Culture in ... 566
Perthshire Sweet Pea Society, 633, 893
Petunias ... 151
Philadelphus Lemoinei Virginal, 536; P. purpurea maculatus ... 535
Phragmites communis ... 713
Phlomis fruticosa ... 701
Phlox, Comtesse de Jarnac ... 840
Phlox Drummondi ... 151
Phloxes, Dividing ... 160
Phloxes, Herbaceous ... 228
Photographs of Garden Scenes ... 276
Photography, Colour ... 82
Physalis, Propagation of ... 869
Pieris japonica ... 268, 383
Pineapples with Rotten Core ... 64
Pinks, Rock ... 493
Pinus Bungeana ... 874
Pittosporum Tobira ... 449
Plagianthus Lyalli ... 724
Plane Trees in the Mall ... 637
Plant Diseases, Bacterial ... 655
Plant Diseases in Holland ... 373
Plant Distribution ... 258
Plant Food ... 136
Plant Food, Available, 362, 373, 451, 536
Plant Growth, Control of ... 975
Plant Houses ... 170
Plant Mites ... 793

PAGE
Plant Physiology at South Kensington ... 140
Plant Study ... 370
Plantain Lilies ... 875
Plantations for Landscape Effects 856
Planting Notes ... 797
Plants, Drought Resisting ... 623
Plants, Dwarf, for Banks ... 5
Plants for South Walls ... 123
Plants, New ... 565
Plants Poisonous to Live Stock ... 277
Plants, Removal of ... 820
Plums, Varieties of:—Early Prolific, 28; President ... 900
Plums, 28; Choice Dessert, 838; Culinary, 759; Pollination of 372
Plumbago rosea, 33, 356, 875; P. Larpentæ ... 756, 800
Podocarpus alpina ... 74
Poinsettias ... 917
Poisonous Insecticides, Sale of, by Nurserymen ... 930
Polyanthus, Fasciated ... 424
Polygonum Baldschuanicum ... 787
Polypodium vulgare as a Basket Plant ... 87
Pond Weeds ... 787
Poplar Branch, Large Fungus on 582
Poppies ... 286
Portsmouth Chrysanthemum Show 844
Potato, Bacteriosis of the ... 640
Potato Crop, 510; in Scotland, 661; of 1911, ... 970
Potato Culture, Experimental ... 44
Potato Diggers and Sorters, Trial of ... 656, 735
Potato Disease, Spraying for ... 458
Potato Sprayer, A New ... 508
Potatoes, 985; Immune from Wart Disease, 332; Importation of into Australia, 620; Importation of into Jersey, 258; Importation of into South Africa, 771; Lime and Corky Scab in, 985; Mid-Season, 148; Production of, in Cellars, 771; Scab in, 417; Wart Disease in, 912; Wart Disease in Cheshire ... 699
Potentilla atrosanguinea, Gibson's Scarlet, 765; P. Tonguei 626
Potentillas ... 798
Poterium tenuifolium ... 730
Powis Castle, Paved Garden at 573
"Practical School Gardening" ... 294
Prain, Lieut.-Colonel D. ... 200, 458
Prime, Mr. H. ... 852
Primula floribunda, 984; P. capitata, 574; P. farinosa, Change of Colour in, 852; P. Forbesi, 398; P. Kewensis, 105; P. Lindsayi, 683; P. malacoides, 150; P. Munroi, 415; P. obconica, 29; P. obconica and Skin Disease ... 389
Primula Seeds, Hardy ... 236
Primulas, 145; at Clandon Park, 218; at Reading, 171; Chinese, 747; Chinese at Forest Hill 287
Princes Street Flower Garden ... 930
Privet ... 876
Prizes, Action for Payment of ... 953
Preston Hall, 446; Rose Pergola at 815
Prescot Summer Show ... 598
Propagating Frame ... 908
Property Owners, Advice to ... 620
Prudential Assurance Company ... 198
Prumnopitys elegans ... 74
Pruning, 307; Fruit Trees, 553, 717; Hardy Fruits, Summer, 542; in Frosty Weather, 61; Orchard Trees, 42; Summer ... 449
Prunus nana, 375; P. Pissardi, 918; P. triloba in Pots ... 292
Psoralea pinnata ... 344
Pyracantha angustifolia ... 705
Pyrethrums ... 440, 554
Pyrus Niedwetzkyana ... 681

QUASSIA DRESSING FOR GREEN-FLY ... 456
Queenswood, Englefield Green 537, 551
Quercus pedunculata fastigiata ... 436

RADISHES, MILDEW ON ... 292
Railway Gardens in Birmingham 970
Railway Station Gardens in Scotland ... 639
Railway Station Gardens in Yorkshire ... 771
Rain and Sunshine in 1910 ... 24
Rain, The Boon of ... 442
Rainfall at Woolton in 1910 ... 98
Ramondias from Seeds ... 496
Ranunculuses ... 828
Raspberries ... 378
Raspberry Harvest at Blairgowrie 657
Rat Poison ... 80
Rawlings, Mr. A., The Late ... 198
Raynes Park, Messrs. J. Carter and Co.'s New Premises at ... 110
Reading Gardeners' Association, 96, 135, 175, 214, 252, 291, 366, 639, 710, 729, 786, 808, 845, 890
Redhill and Reigate Gardeners' Association ... 157, 271
Regent's Park and Primrose Hill ... 830
Regent's Park, 716; Spring Flowers in, 336; Summer Bedding in, 716; Tulips in, 380; Victoria regia at ... 716
Rehmannias and Celsias ... 920
Reproduction ... 769

PAGE
Rhododendron Glory of Littleworth, 541; R. Kæmpferi, 378; R. Kewense, 79; R. Luscombei, 440; R. Maddeni, 494; R. Pink Pearl, 436; R. præcox, 191; R. Prince Camille de Rohan, 165; R. racemosum, 344; R. Shilsoni ... 972
Rhododendron Show at Vincent Square ... 258
Rhododendrons, 324, 394; and Azaleas, 389; at Vincent Square, 410; from Leonardslee, 218; Himalayan ... 316, 343
Rhubarb ... 244
Richardia Leaves with Brown Edges ... 312
Richmond Horticultural Society ... 503
Rigby, Mr. W. ... 893
Rivers, Mr. Thomas A. H. ... 602
Robinia neo-mexicana, 575; R. pseudacacia ... 606
Rock and Water Gardening ... 958
Rock Garden, 89; Around the, 345; at Derwent Hill, 551; Friar Park, 641; at Kew, 770; Bulbous Plants for, 704; Bulbs for the, 742; Choice Campanulas for the, 286; Dwarf Conifers for the, 223; Ferns for the, 280; in Autumn, 220; Jottings, 936; Notes, 298, 542; Plants from Seeds, 185; Spring Planting in the ... 224
"Rock Gardens and Alpine Plants" ... 985
Rock Plants, Protecting ... 790
Rockwork, Bold ... 83
Rodgersia pinnata ... 592
Rollit, Sir Albert K., 584; Honour to ... 100
Romneya trichocalyx ... 186
Roof Gardens, Value of ... 299
Rosa Alberti, 978; R. hemispherica, 458; R. Pernettiana ... 16, 107, 168
Rose Annual for 1911 ... 200
Rose, Banksian, not Flowering 564
Rose Beds, Preparation of ... 774
Rose-bowl, The Clay ... 936
"Rose, Bravest of Flowers" ... 181
Rose Cuttings ... 794
Rose Garden, A Simply Arranged 143
Rose Garden Features, Some ... 536
Rose Garden for Battersea Park 893
Rose Garden Gleanings ... 657
Rose Grouping for Colour ... 953
Rose History ... 531
Rose Leaves, Disfigured ... 508
Rose Leaves, Grubs in ... 634
Rose Leaves, Rolled-up ... 456
Rose Notes ... 109, 498, 818
Rose Pergola at Preston Hall ... 815
Rose, Reversion of ... 893
Rose Society's Rules ... 42
Roses, 118, 208, 417, 697, 900; Few of the Newer, 775; Among the 183, 464, 645; at Branches Park, 569; at Kew, 476; at the Coronation Exhibition, 752; at the Durbar Camp, 892; at the White City, Messrs. W. Paul and Son's, 587; Beautiful Bowl of, 541; Climbing, 593; Climbing and Pillar, 35; Dwarf Polyantha, 243; for Forcing, 773; for House Walls, 780; for the Garden, 337, 356; How and When to Feed, 781; Hybrid Rugosa, 340; in Baskets, Exhibiting, 773; in Pots, 603; Judging New, 828; New, 564; New, at Bagatelle, 458, 971; New, Awards to, 770; Notes on Grouping, 783; of Distinctive Colouring, 298; Own Root, 285, 592; Propagation of, by Grafting, 772; Pruning, 292; Rampant Climbing, 782; Slug Worms on, 653; Some of the Newer, 393; Supports for, 65; Three New, 779; Twelve Good Climbing, 933; Unreliable, 87; Varieties of, that are doing well, 534; Wichuraiana as Standards, 3; Wichuraiana, Twelve Best, 776; Work among Maiden ... 359
Roses, Varieties of:—Aimee Vibert, 933; Alice Cory Wright, 355; Allister Stella Gray, 933; American Pillar, 461; Ards Rover, 934; British Queen, 779; Cinderella, 779; Climbing Caroline Testout, 934; Climbing Papa Gontier, 934; Elsie, 109; Juliet, 176; Macartney, 787; Mdme. Abel Carriere, 933; Magnolia, 779; Marechal Niel, 933; Milky Way, 42; Old Crested Moss, 508; Papillon, 934; Pernettiana, 206; Reine Olga de Wurtemberg, 934; Richmond, 747; The Lyon, 848; Wichuraiana ... 936
Rothamsted, Weather at, in 1910 70
Royal Agricultural Society ... 833
Royal Botanic Society ... 238
Royal Caledonian Horticultural Society ... 289, 675
Royal Gardeners' Orphan Fund, 82 133, 369, 410
Royal Horticultural Gardens Club 24, 239

PAGE
Royal Horticultural Society, 18, 58, 93, 116, 121, 157, 163, 195, 201, 234, 253, 272, 277, 291, 315, 351, 367, 387, 438, 469, 490, 545, 562, 578, 594, 614, 649, 667, 689, 727, 767, 805, 826, 833, 865, 886, 923, 947, 963; Annual Meeting, 100; Apples and Pears at, 812; Awards of Committees, 372; Bulb Exhibition, 674; Committees' Outings, 442; Daffodil Committee, 238; Examinations, 736; Floral Committee, Co-Chairmen of the, 120; Fruit Show, 753; Journal of the, 752; Olympia Flower Shows, 474, 490; Parks Examination, 183; Report of the, 99; Temple Flower Show, 389, 401, 402, 403, 404, 405, 406, 407, 421; Temple Show, Crush at the, 442; Temple Show, Success of the 410
Royal Horticultural Society of Ireland ... 806
Royal International Horticultural Exhibition of 1912, 61, 79, 158, 235, 296, 336, 370, 566, 584, 601, 714, 771, 792, 793, 827 852, 872, 901; Charges of Admission to the, 655; King's Cup for the, 426; The King to Open ... 812
Royal Scottish Arboricultural Society, ... 77, 115, 598, 807, 965
Royal Warrants and Seedsmen, 118, 136
Rubber Seeds ... 808
Rubus bambusarum ... 482

SAGE, JERUSALEM ... 701
Saintpaulia ionantha ... 472
Salading, 98, 153, 281; in Winter 836
Salads, 342; "Salads and their Cultivation," 294; Autumn, 756; Winter ... 639
Salisburia biloba ... 895
Salpiglossis ... 151
Salsola soda ... 768
Saltwort ... 768
Salvia argentea, 304; S. patens, 86; S. splendens Pride of Zurich, 416; S. s. Pride of Zurich at Gunnersbury House 734
Salvias ... 876
Samuel, Sir Marcus, Bart. ... 390
Sandgate Arbor Day ... 875
Sandy Soils ... 916
Sandy Summer Show ... 668
Sanvitalia procumbens ... 581
Sargent, Prof. C. S. ... 15
Saxegothæa conspicua ... 74
Saxifraga Aizoon No. 3, 415; S. Bathonensis, 382; S. Cherry Trees, 248; S. cymbalaria, 571; S. exavata, 555; S. peltata ... 28
Saxifragas, 320; Early Flowering 103
Scab in Potatoes ... 417
Schizanthuses ... 332, 574
Schizocodons ... 35
School Gardening, 893; in Oxfordshire ... 474
School Gardens in Staffordshire 566
School Gardens, Utility of ... 716
School of Horticulture at Wisley 566
School of Horticulture, Imperial British ... 832
Sciadopitys verticillata ... 209
Scilla bifolia rubra, 248; S. siberica ... 284
Scillas ... 795
Scolopendriums ... 558
Scotland, Afforestation in ... 518
Scotland, Forestry in ... 314, 462
Scotland, Notes from, 74, 380, 452, 739
Scotland, The Tomato in ... 143
Scottish Broccoli Crop ... 324
Scottish Horticultural Association 77, 134, 199, 214, 259, 292, 365, 455, 524, 597, 634, 691, 698, 767, 868, 965; Future of the, 172 192, 210
Scottish Methods of Forestry ... 853
Scottish School Garden, Visit to a 500
Seabrook, Mr. W. ... 572
Seakale ... 420
Seaweed as Manure ... 827, 983
Seed Dispersion ... 673
Seeds, Insect-infested ... 190
Selborne Society's Conversazione 297
Senecio clivorum ... 557
September in the North ... 770
September Sunshine ... 735
Service, Mr. Robert, The Late ... 370
Shade in the Garden ... 548
Shadwell Market as an Open Space 458
Shadwell, New Park for ... 584, 952
Shakespearian Flower Border ... 550
Shallots ... 196
Shoreditch Beauty Spot ... 970
Shot-hole Fungus ... 218, 508
Shrewsbury Floral Fete, 276, 621; Messrs. Webb and Sons' Gold Medal Exhibit at ... 665
Shrubberies ... 467
Shrubs, 190; Autumn and Winter-flowering, 921; Berry-bearing, 935; flowering in Winter, 952; for Forcing, 880; for Walls, Evergreen, 73; Hardy, for Forcing, 7; on North Wall, 514; out of Season, 14; Spring-flowering, 286; Spring Pruning of, 190; Variegated Evergreen 327
Sidalcea candida ... 557
Silsbury, Mr. Martin ... 34
Silver Wattle ... 661

PAGE
Sisyrinchium grandiflorum ... 304
Slug Hunting ... 373
Slugs and Snails ... 128
Slug Trapping, Success in ... 410
Small Gardens, Ornamental Trees for ... 860
Small Holders, Education of ... 912
Small Holders, Fruit Bottling for 629, 646
Small Holdings, 162, 373; Congress on, 752; in the United States, 2; Problem of ... 698
Smithfield Show ... 926
Snail, Great African ... 238
Snowdrops ... 105, 703
Snowdrops, Rare ... 140
Soil Cultivation ... 338
Soil Fertility, Liebig and ... 770
Soil Sterilisation ... 905, 961, 970
Solanum Wendlandi, 98, 669; S. aviculare, ... 644
Soldanellas ... 937
Solidago Golden Wings ... 783
Solihull Horticultural Society ... 616
Sollya heterophylla ... 494
Sophora viciifolia ... 516
Sophoras ... 895
Southampton Carnation Show ... 581
Southampton Chrysanthemum Show 889
Southampton Flower Show ... 504
Southampton Gardeners' Society 135, 272
Southampton Horticultural Society ... 35, 60
Southampton Horticultural Society, Jubilee of the ... 872
Southern Counties (Scotland) Gardeners' Association ... 200, 366
Sparmannia africana ... 78
Sparkhill Narcissus and Auricula Society ... 351
Species and their Differentiation... 335
Spinach ... 190
Spiræas for Forcing ... 84
Spraying, 238; for Potato Disease, 458; Fruit Trees, 10; Machinery for, 385; Solution ... 669
Spring Bedding Suggestions ... 797
Spring Flowers at Belvoir Castle 314
Spring Flowers at Bournemouth 377
Spring Flowers at Kew ... 372
Spring Work ... 200
Staffordshire School Gardens ... 566
Staffurth, Mr. S. F. ... 572
Starlings in Orchards ... 183
Stauntonia latifolia ... 488
Sternbergia lutea ... 790
Stevenson, Mr. Thomas ... 832
St. George's Day ... 314
St. James' Park, 258; Alterations in ... 239
Stocks ... 146
Stomata, Aperture of ... 550, 718
Strawberries, 123, 643; Forced, 206; for Market, Cost of Planting, 21; for Pot Culture, 541; Influence of Soil on, 436; Late Pot, 125; on Light Soils, 530; Outdoor, 168; Pot, 725; Protecting, 385; Straw for ... 372
Strawberry Culture, Modern 586, 625
Strawberry Leaf-spot ... 35
Strawberry Leaves, Spotted ... 236
Strawberry Runner Experiments ... 474
Streptocarpus ... 246
Strichnos Ignati ... 699
Subtropical Gardening ... 381
Sulphate of Ammonia ... 25
Sulphide of Potassium for Mildew 456
Sulphur Fumigation ... 488
Summer Bedding ... 267, 268, 269, 662
Summer Flowers at Bridlington... 530
Summer Flower Shows ... 509
Summer Weather ... 674
Sunbeams, 733; Surplus ... 619
Sundials ... 157
Sundial Garden at Madresfield Court ... 659
Sunshine and Rain in 1910 ... 24
Sunshine, Inherited ... 119
Sutherlandia frutescens ... 644
Sutton, Mrs. Martin J., The Late 114
Sutton, New Pleasure Ground for 44
Sutton Place, Guildford ... 8
Sweet Pea Annual ... 120
Sweet Pea Book, A Useful ... 100
Sweet Pea Button-holes, Coronation, at Blackburn ... 490
Sweet Pea Cultivation ... 54
Sweet Pea, Cult of the ... 929
Sweet Pea Enthusiasm in Scotland 47
Sweet Pea, Future of the ... 46
Sweet Pea Jottings ... 192, 260
Sweet Pea Notes, 373, 416, 467, 479, 500
Sweet Pea Number, "Gardeners' Magazine" ... 24
Sweet Pea Outings ... 490, 531
Sweet Pea Prize, The "Daily Mail" ... 258
Sweet Pea, The Fragrant ... 770
Sweet Pea Trainers ... 352
Sweet Pea Trial at Wisley ... 566
Sweet Peas, 118, 128, 166, 256, 541, 768; and Their Cultivation, 198; as Articles of Commerce, 50; Autumn Sowing, 738; Classification of 772; Decorative Value of, 53; Double Standards in 196; Evolution and Pollination of, 735; for Garden Decoration, 971; in Small Gardens, 48; in the North, 218; Judging, 297; Mulching and Watering, 435; New, 581;

PAGE
Sweet Peas (continued)—
Orange and Scarlet, 55; Packing, 954; Packing and Staging, 488; Planting, 196, 292; Retarding, 472; Some New, 45; Sowing, 136; Staking, 396; Streak in 488; The Most Useful, 57; The Newer, 52; Three Good New, 737; Under Glass 706
Sweet Peas, Varieties of:—Mrs. Henry Bell, 71; Prince of Orange, 144; Sunproof Crimson, 144; Winter-flowering ... 216
Sweet Peas, Watering Newly-planted, 332; Voss Cup for ... 530
Sweet Williams, Diseased ... 216
Sweet Williams, Maggots in ... 136
Swanage Horticultural Society ... 162

TAGG'S ISLAND, FINE EXHIBIT AT ... 463
Tamarisk, Fruiting of the ... 584
Tamarix pentandra ... 585
Tate, Mr. Herbert ... 911
Taunton Flower Show ... 604
Taylor, Mr. Will ... 473
Tecoma Smithi ... 954
Tecophilæa cyanocrocus ... 67
Teme Valley Orchards ... 734
Temple Show, Impressions of the 411
Templetonia retusa ... 338
Teneriffe, Pride of ... 868
Tennis Lawn, Rolling ... 62
Thalictrum dipterocarpum ... 783
Thames Flower Show ... 391, 427
Thorn, Cockspur ... 976
Thoughts about Things ... 874
Thrum Eye and Pin Eye ... 634
Thunbergia fragrans, 953; T. grandiflora ... 818
Thunias, Compost for ... 273
Thyne, Mr. Thomas, The Late ... 178
Thyrsacanthus rutilans ... 241
Timber, Hedgerow ... 853
"Times" Experimental Station 258, 752
Tillandsia Lindeni ... 918
Tobacco Culture for Nicotine ... 239
Tomato, Bacteriosis of the ...640, 926
Tomato Leaves ... 599
Tomato Plants for Outside Culture 186
Tomato Seeds, Infection of ... 908
Tomato Seeds, Saving ... 617
Tomatoes, 29, 177, 535, 723; Black Rot of, 617; Diseased, 508; Scotland, 143; Manure for, 456; Outdoors ... 384
Topiary, Walk at Montacute ... 70
Torenias ... 606
Torquay Gardeners' Association ... 843
Town Trees ... 489
Trachelium cœruleum ... 730
Tranter, Mr. J. R., The Late ... 334
Tree Culture on Links ... 382
Tree Pruning in London Parks ... 620
Tree Roots, Fungus on ... 747
Trees, 313; Age of, 391; for North Wall, 118; for Parks and Gardens, Specimen, 895; for Small Gardens, Ornamental, 860; in Towns, 489; in Towns, Preservation of, 277; Overhanging, Damage from, 296; Purposes and Poetry of, 26; Second Flowering of, 833; Specimen, 855; Suitable for experimental Forestry ... 570
Trees and Shrubs, 737; Evergreen, 313; for July and August Flowering, 644; Grouping Hardy, 862; New, 16; New Chinese, 816; Subject to Sunburn, 569; with Ornamental Foliage, 737; with Ornamental Fruit ... 956
Tricuspidaria lanceolata ... 398
Tropæolums, Annual ... 79
Tropæolum speciosum, 451; T. tricolorum ... 472
Trochodendron aralioides ... 542
Trowbridge Horticultural Society 410
Tsuga yunnanensis ... 70
Tulip Leaves, Damaged ... 352
Tulip Names, Proposed List of ... 354
Tulip Tree ... 548, 570
Tulips, 678; Darwin, Best Dozen, 390; Darwin, Origin of, 490; Darwin, Value of, 677; Diseased, 370; Failure with, 62; Good Bedding, 687; in Regent's Park, 380; Lifting 472
Turin, Horticulture at ... 162
Turneria ulmifolia elegans ... 494
Turnip Fly ... 642
Turton, Mr. T. ... 510

United Horticultural Benefit and Provident Society, 214, 251, 293, 388, 710, 985; and the National Insurance Bill ... 426, 442

VALLEYED GARDENS ... 515
Varieties, Origin of ... 182
Vegetable Culture, Foundation of Success in ... 12
Vegetable Leather ... 64a
Vegetable Marrows ... 172, 347
Vegetable Physiology, Founder of 63
Vegetables, 553; Bottling, 568; Certificates for, 138; Gold Medal, 553; Quaint ... 424
Vegetation, 466; Activity of ... 371
Verbascum A. M. Burnie ... 476
Verbenas, 151; in Pots ... 738

PAGE
Veronica gentianoides, 575; V. Hulkeana, 343; V. Silver Queen, 896; V. Veitchi ... 801
Veronicas, 876; New Zealand, 937; Shrubby ... 736
Viburnum tomentosum, 65; V. utile 412
Viburnums ... 934
Victoria Regia at Regent's Park 716
Vinca rosea ... 585
Vine Border, Soil of ... 62
Vine Borders, Watering ... 645
Vine Eyes ... 50
Vine Leaves, Brown ... 582
Vine Leaves, Discoloured ... 581
Vine, The Hampton Court ... 566
Vineries, Moisture in ... 483
Vinery, An Amateur's ... 915
Vinery, Woodlice in ... 548
Vines, Starting ... 136
Vines in Unheated House ... 548
Vines, Unsatisfactory ... 408
Viola gracilis ... 382, 554
Violas, 472; Bedding, 229; Renovating ... 582
Violet Marie Louise ... 200
Violets, 263, 496; in Frames, 512; Injured ... 948
Vitis heterophylla humulifolia ... 839

WALKER, MR. JAMES, THE LATE ... 136
Walker, Mrs. S., The Late ... 966
Walks, Garden ... 383
Wallace, Mr. R. W. ... 217
Wallflowers, 362; Early Raised ... 534
Wall Gardening ... 743
Walls, Plants for South ... 123
Walnut, Black ... 570
Walton, Garden City at ... 530
Wandsworth Common ... 426, 510
Wart Disease in Potatoes ... 912
Warwick Flower Show ... 140
Water Gardening ... 282
Water Gardens, Simple ... 226
Water Lilies, 607; Planting 236, 312
Water Supply of Gardens ... 457
Waterproof Cotton for Frames ... 472
Waterside in May ... 395
Waterside Plants ... 219
Waverley Market, Heating the ... 812
Weather at Rothamsted in 1910 ... 70
Weather, Break in the ... 620
Weather, Cold ... 276
Weather in Glasgow ... 258
Weather in July ... 566
Weather in the North ... 699
Weather, The Hot ... 550
Weather, Variable ... 295
Webb and Sons', Messrs., Gold Medal Exhibit at Shrewsbury 665
Webb and Sons', Messrs., Seed Trial Grounds ... 801
Webb, Mr. Wilfred Mark ... 313
Weeds and Weed Seedlings ... 24
Weeds, Farm ... 809
Weeds of Ontario ... 638
Weeds on Lawns ... 42
Weeks, Mr. A. W., The Late ... 136
Weeping Trees ... 896
Weevils in Broad Beans ... 312
Weigela Eva Rathke ... 462
West of England Chrysanthemum Show ... 887
Weymouth Flower Show ... 315
White City, Roses at ... 587
Whitewash, Permanent ... 948
Whitsuntide Holidays ... 426
Who Shall Rule? ... 796
Wild Flowers, Preservation of ... 354
Wild Garden in August ... 642
Wild Plants, Protection of ... 872
Wilkinson, Mr. T. ... 2
Williams, Mr. D. ... 550
Willis, Mr. J. J., The Late ... 582
Willow, Yellow-stemmed ... 966
Willows, Galls on ... 424
Wimbledon Common Extension 44, 120, 585
Winchester Chrysanthemum Show 906
Window Gardens, London's ... 833
Windsor Chrysanthemum Show ... 867
Winter-flowering Shrubs ... 921, 952
Winter Greens, Planting ... 527
Winter Planting, New Schems for 976
Winter Salads ... 639, 836
Wisley, Culinary Pea Trial at ... 567
Wisley Diploma ... 617
Wisley School of Horticulture 100, 566
Wisley, Sweet Pea Trial at ... 566
Witches' Broom ... 370
Woburn Place, Primulas at ... 286
Woburn Wash ... 11
Wolverhampton Floral Fête ... 524
Women's Agricultural and Horticultural Union ... 873
Woodgate, Mr. George, The Late 548
Woodlands, Profitable ... 854, 879
Woodlice in Vinery ... 548
Woolton Chrysanthemum Society 116
Woolton Gardeners' Association ... 196
Worden, Mr. R. M., Presentation to 182
Workmen's Compensation Act ... 908
Wright, Mr. Frank ... 408
Wychall Nurseries, King's Norton 707
Wye College ... 390, 550

YEAR, THE NEW ... 1
Year, The past ... 969
Yew ... 858
Yews and Acers, Avenue of ... 141
Yorkshire Fête and Gala 443, 470, 475
Young, Mr., Dinner to ... 752
Yucca gloriosa ... 532
Yuccas ... 936
Zephyranthes candida ... 718, 848
Zinnias ... 166, 835

NEW PLANTS.

PAGE
Acineta Moorei 777
Adiantum Farleyense Gloire van Moordrecht 106, 222
Amaryllis Parkeri alba 701
Asplenium decorum 379
Aster Falconeri 428
Azalea sublanceolata 414

Betula Maximowiczi 188
Berberis verruculosa 820
Brasso-cattleya Euterpe, 106; B.-c. Digbyano-Mossiæ Holford's var., 899; B.-c. Leucothœa, 900; B.-c. Senateur de Bast 169
Brunsdonna Sanderæ alba 701
Buddleia officinalis 974

Cæsalpinia pulcherrima 900
Calanthe Cooksonæ 878
Catasetum Cliftoni 593
Cattleya Ashtoni alba, 878; C. Dupreana, 516; C. Mossiæ alba Queen Mary, 516; C. Mossiæ Aureola, 452; C. Mossiæ var. S. M. Hale, 413; C. Mrs. Frederick Sassoon, 741; C. Rex, 660; C. Rhoda illuminata, 623; C. Venus lutescens 878
Cladothamnus pyrolæflorus ... 477
Clematis chrysocoma 777
Clerodendron Fargesi 819
Clusia grandiflora 777
Cœlogyne Burfordiense 414
Columnea gloriosa 660
Columnea Oerstediana 260
Cornus paucinervis 593
Corylopsis Veitchiana ... 31, 379
Crinum Johnstoni 452
Cucumis metuliferus 701, 777
Cymbidium Alexanderi, 222; C. Gottianum, 222; C. Lawrenceanum, 169; C. Veitchi 188

PAGE
Cypripedium Actæus Durbar, 974; C. aureum Laekenense, 169; C. Carola, 169; C. Chapmani Westonbirt var., 899; C. Charles Sladdin, 75; C. Draco Westonbirt var., 937; C. Duke of Connaught, 106; C. Elatior Shrubbery var., 900 ;C. Elizabethæ Vogelsang, 75; C. Gaston Bulteel, 31; C. insigne Gatton Park var., 974; C. Lord Wolmer, Westonbirt var., 974; C. Lucifer, 777; C. Royal George, 777; C. Royal Sovereign, 974; C. speciosum, 660, 777; C. Sybil superbum, ... 878

Davidia involucrata 414
Deinanthe cærulea 623
Dendrobium Dartoisianum, 477; D. Sanderæ, 31, 352, 428; D. Victoria Regina 556
Dracæna Deremensis Warnecki ... 516
Dracocephalum argunense ... 693, 719
Epidendrum Laucheanum 741
Eremurus Olgæ alba 556
Fokienia Hodginsi 556

Gongora leucochila 623
Grevillea robusta compacta ... 452

Haberlea Ferdinandi Coburgi ... 414
Houlletia Wallisi 660

Impatiens Herzogi 778
Iris Wilsoni 188
Itea ilicifolia 593

Jacobinia suberecta 31, 379

Lælio-cattleya Cranstounæ Westonbirt var., 31; L.-c. Dengani, 900; L.-c. Dominiana Monkend var., 222; L.-c. Germania, 413; L.-c. luminosa aurea, 819; L.-c. Martinetti King George V., 535; L.-c. Morningtoniæ, 413; Lælio-cattleya Nella, 974; L.-c. Price of Orange, 899; L.-c. St. Gothard, McBean's var., 819; L.-c. Sylvia, 516; L.-c. W. J. Biggs 900
Landolphia Petersiana 778
Lewisia Cotyledon 414
Lonicera Henryi 660
Lonicera nitida 819
Miltonia Bleuana Hyeana inversa, 379; M. B. var Laeken, 301; M. Warscewicxi leucochila, 31; M. Warscewiczi leucochi a, 31;
Mormodes revolutum 777
Mussaenda erythrophylla 593
Mutisia Clematis 777

Nephrolepis Marshalli campacta 301
Nerine Veitchi 741
Neoglaziova concolor 31, 379
Nymphæa Listeri 777

Odontioda Bradshawæ Sander's var., 516; O. Bradshawæ Gatton Park var., 413; O. Cooksoniæ, 31; O. Euterpe, 777; O. ignea, 260; O. Lambeauiana, 413; O. Rosefieldiense, 379; O. Rosefieldiensis Crawshayana, 477; O. Vuylstekeæ Coronation, 413; O. Vuylstekeæ var. Lady Colman 260
Odontocidium Fowlerianum ... 878
Odontoglossum amabile Empress of India, 413; O. amabile The Queen, 516; O. ardentissimum Queen Mary, 516; O. Black Prince, The Dell var., 413; O. Chione, 900; O. crispum Alcyone, 975; O. c. Peacock, 106; O. Europa, 477; O. eximeum King George, 516; O. Godmani, 75; O. Halseyanum, 75; O. Harvengtense Crawshayana, 379; O. Harwoodi, 106; O. Harwoodi Shrubbery var., ... 741; Odontoglossum illustrissimum Queen Mary, 379; O. Jeanette, 222; O. Marie, 106; O. Merum Bruggense, 222; O. Olympia, 516; O. Ossulstoni Shrubbery var., 301; O. ramos-Edwardi, 352; O. Rosefieldiense, 75; O. Swieteni-color, 260; O. Thais 900
Oncidium Claesi, 413; O. Cybele, 452; O. Mulleri, 413; O. Sanderæ 660
Oncoba spinosa Routledgei 301

Phædranassa Cormioli 428
Pinus Armandi 31, 379
Plagianthus Lyalli 556
Pleiocarpa mutica 260
Primula Littoniana, 188; P. Winteri 188
Prostanthera pulchella 660
Pteronia incana 693
Pyracantha angustifolia 260

Rhododendron lacteum, 623; R. Pengaer 352
Rosa Moyesi 188

Saxifraga Petrachi 222
Senecio saxifragoides 795
Sophro-cattleya Lotte Muller ... 937
Sophro-lælio-cattleya Goodsoni, 623; S.-l.-c. Jeanette 701
Spiræa Veitchi 693, 719
Styrax Hemsleyanus 188

Torenia atropurpurea 777
Trichopilia Gouldi, 937; T. Lehmanni 623

Vanda Kimballiana alba 819
Viburnum Henryi, 778; V. rhytidophyllum 660
Villararesia mucronata 630
Xeronema Moori 260
Zephyranthes aurea 937

ILLUSTRATIONS.

PAGE
Acalypha hispida as Standards ...663
Acer negundo and Irish Yews, Avenue of at Elvethan Park 141
Achillea argentea at Kew 363
Adiantum Gloire van Moordrecht 105
Aira cæspitosa 916
Aldenham House:—Cornus alba sibirica variegata at, 249;
Alderham House, Michaelmas Daisies at 221
Alpine Plants, Pleasing Arrangement of 285
Alpines, Beautiful Group of ... 243
Amaryllis, Messrs. Ker and Sons' Gold Medal 259
Androsace sarmentosa on a Wall 479
Antirrhinum Rose Dore 605
Apples, Mr. Alexander's Prize ... 881
Apples, Varieties of:—Annie Elizabeth, 960; Bow Hill Pippin, 307; Coronation, 896; Crimson Bramley's Seedling, 761; Encore, 798; Foster's Seedling, 754; James Grieve, 29; James Welsh, 755; Lady Henniker, 797; Lord Suffield, 753; Paroquet, ... 979
Aquilegia Stuarti, Messrs. Ware's Exhibit of 416
Arbutus Unedo at Kew 921
Aristolochia Sipho, Formally Trained 483
Ash, The Flowering 860
Asters at Hampton Court ... 147
Auricula Mrs. Gardiner 302
Avenue at Elvetham Park 141
Azalea, Duchess of Portland, 414; A. Professor Wolters, Standard of 206

Beetroot, Sutton's Black 242
Begonia, Good Strain of 142
Begonia Exquisite, 833; B. Lucerna, 589; B. Miss Ethel Gill, 398; B. Mrs. Heal ... 941
Branches Park, Roses at 569, 570, 571
Brasso-cattleya Digbyano-Mossiæ Holford's var 899
Brickendon Grange, Picea excelsa monstrosa at 976

PAGE
Broccoli Sutton's Winter Mammoth 69
Bryophyllum calycinum 669
Buxted Park, Conservatory at ... 173

Calanthe Cooksonæ 879
Calceolarias and Cinerarias, Messrs. Sutton and Sons' Gold Medal 392
Campanula garganica, 665; C. Hendersoni, 919; C. pusilla alba 466
Carberry Towers 445, 446, 447
Carnations, Varieties of:—Baroness de Brienen, 918; Cambria, 816; Coronation, 121; Daffodil, 552; Duchess of Devonshire, 305; Elizabeth Shiffner, 551; Empire Day, 239; Lady Alington, 403; Lord Steyne, 611; Mrs. C. W. Ward, 360; Mrs. Elliott Douglas, 557; Paquin, 572; R. F. Felton, 357; Scarlet Glow, 4; The Nijam, 588; White Wonder, 701; Wivelsfield Wonder ... 917
Carnations, Messrs. Young and Co.'s Gold Medal 361
Carnations, Mrs. Hammond's Prize Basket of 358
Carnations, Packed for Market ... 362
Carrot, Good Short Horn 152
Carrots, Scarlet Perfection 12
Cattleya Mossiæ alba, Queen Mary, 513; C. Mrs. Frederick Sassoon, 741; C. Rhoda Illuminata, 603; C. Skinneri alba, 399; C. Trianæ Hydra ... ...
Cedar of Lebanon at Addington Park 855
Celery Well, Well Grown 150
Celmisias at Kew 609
Cineraria, Fine Type of Star ... 395
Chelsea Hospital Gardens ... 590, 591
Chrysanthemum prealtum 467
Chrysanthemums, 827; Dulwich Society's Display of, 813; Early-flowering at Queen's Park, Glasgow, 740; Early-flowering at Southwark Park, 191; Fine Exhibit of Early-flowering, 723; Fine Vase of, 835; Mr. Honeyman's Prize, 876; Mr. Iggulden's Prize Japanese, 845; Mr. Norman Davis' Gold Medal, 863; Mr. Thomas Lunt's Prize, 877; Mr. W. Mease's Twelve Japanese 827
Chrysanthemums, Varieties of:—Bronze Goacher's Crimson, 821; Ernest G. Mocatta, 5; Godfrey's Perfection, 873; Isabel Gray, 938; Josephine, 898; Merstham Jewel, 956; Mrs. Gilbert Drabble, 847; Mrs. Hubert Williams, 955; Swinburne, 978; Yellow Cap ... 897
Clandon Park, Guildford, 341, 342, 343, 344
Clandon Park, Herbaceous Borders at 225
Clematis montana rubens at Kew 168
Clerodendron Fargesi 817
Clipped Trees, Messrs. J. Piper and Son's 419
Colchicums, Messrs. J. Backhouse and Son's 799
Condover Hall, Hedges at, 857, 961
Conifers at Dalkeith 429
Conservatory at Buxted Park ... 173
Cornus alba sibirica variegata at Aldenham House 249
Cornus paucinervis 593
Coreopsis Drummondi 13
Crambe orientalis at Kew 241
Crinum Johnstoni 465
Crocus versicolor 645
Crown Flower Bed at Wolverhampton 625
Cyclamen Mrs. Buckston 31
Cyclamens, Hardy, at The Elms 245
Cymbidium longifolium, 472; C. Veitchi 189
Cypripedium aureum Laekenense 169; C. chrysotoxum Victor, 497; C. Draco Westonbirt var., 913; C. Duke of Connaught, 106; C. Gaston Bulteel, 30; C. Lord Wolmer, Westonbirt var., 974; C. Lucifer, 839; C. W. J. Miles 6
Cypripediums, Hardy 394

PAGE
Daffodils in the Grass 683
Daffodils, Messrs. Cartwright and Goodwin's 345
Daffodils, Mr. E. M. Crosfield's New 347
Daffodils, Mr. F. S. Staffurth's Prize 346
Dahlias, Varieties of: Brentwood Yellow, 265; Diadem, 719; Kaiserin Augusta Victoria at Kew, 261; Maurice Rivoire, 702; Mrs. Landale, 264; Olivia, 262; Queen of Whites, 284; Salome, 725; White Ensign 263
Dalkeith Palace Gardens, 429, 430, 431, 432
Damson, The Merryweather ... 795
Dandelion, Large-leaved 281
Delphinium Primrose Queen ... 477
Dendrobium Victoria Regina ... 556
Dessert Table, Mr. Galloway's Prize 675
Disa grandiflora 608
Dracæna Deremensis Warneckl ... 523
Dry Wall Garden at Walmsgate 480
Dutch Garden at Carberry Towers 445
Dwarf Plants at Hampton Court 269

Eleagnus pungens aurea-variegata 327
Elvetham Park, Avenue at 141

Ferns, Tree, at Clandon Park ... 342
Fig White Ischia, Pot Specimen of 760
Figs at Gunnersbury House ... 759
Fire Station at Kings Walden Bury 559
Floral Decorations at Drury Lane 374
Flower Bed at Hampton Court, An Attractive 151
Flower Garden at Dalkeith Palace 432
Flower Garden at Hopetown House 433
Flower Garden at Preston Hall... 449
Flowers and Fruits at Olympia, Messrs. Webb and Sons' ... 567
Foliage Plants, Messrs. J. Cypher and Sons' 525
Fraxinus ornus 861
Friar Park Rock Garden 641, 643
Fritillaria imperialis chitralensis 682

PAGE

- Fruit at Edinburgh, Messrs. G. Bunyard and Co.'s ... 692
- Fruit at Norwich, Mr. J. Gibson's Prize Display of ... 475
- Fruit Trees on Arches ... 129
- Fruits and Vegetables, Mr. Hathaway's Silver Cup Collection of 615
- Fruits, Flowers, and Vegetables at Shrewsbury, Messrs. Webb and Sons' Gold Medal ... 665
- Furber's Illustration of a Sweet Pea ... 51

- Gardener's Cottage at Oxenford Castle ... 450
- Gatton Park, Saxifragas in the Rock Garden at ... 224
- Gerberas and Roses ... 404
- Gladiolus Yellow Beauty ... 639
- Gloxinia Her Majesty ... 400
- Grafting ... 98
- Grape Lady Hutt ... 935
- Grapes, Black Hamburgh, Fine Crop of ... 915
- Grapes, Mr. J. Dixon's Champion... 676
- Grevillea robusta compacta ... 452
- Gunnera manicata at Leonardslee 647
- Gunnera manicata at Talygarn 101
- Gunnersbury House, Figs at ... 759
- Gunnersbury House, Heliotropuims at ... 662
- Gunnersbury Park, Pergola at ... 317

- Hampton Court, Asters at ... 147
- Hampton Court, Bed of Dwarf Plants at ... 269
- Hardy Flower Garden at Norwich Show, Messrs. R. Wallace and Co.'s Gold Medal ... 486
- Hardy Flowers at Norwich, Mr. Davison's First Prize ... 487
- Hardy Flowers, Messrs. W. Artindale and Son's, at York ... 443
- Hardy Fruits, Mr. J. Cocker's Prize ... 881
- Hartley Grange, Standard Roses at 3
- Hedera helix canariensis ... 319
- Hedera helix maderensis variagata 320
- Hedges at Condover Hall ... 961
- Heliotropiums at Gunnersbury House ... 662
- Helleborus guttatus ... 73
- Herbaceous Borders at Carberry Towers ... 446
- Herbaceous Borders at Clandon Park ... 225
- Herbaceous Border at Hopetown House ... 434
- Herbaceous Borders at Preston Hall ... 448
- Herbaceous Plants, Messrs. Gibson and Co.'s Gold Medal Arrangement of ... 613
- Hippeastrums, Group of ... 86
- Holland House, 498, 499; Rock Garden at ... 555
- Home Place, 975; Rose Garden at 143
- Hopetown House Gardens ... 433, 434
- Hopetown House, Roses and Violas at ... 229
- Houlletia Wallisi ... 661
- Houseboat, A Florally Decorated 427
- Hyacinths, Varieties of:—City of Haarlem, 803; Corregio, 685; La Victoiré ... 684
- Hyde Park, Bed of Lantana elegantissima in ... 267
- Hydrangea Hortensis Mdme. E. Montiere ... 283
- Hydrangeas, Specimen ... 959

- Ilex altalarensis, 321; I. aquifolium argentea regina, 323; I. a. aurea regina, 322; I. a. Mdme. Briot, 837; I. dipyrena 339
- Irises at Clandon Park ... 343
- Irises, Flag, Beautiful Bank of ... 383
- Iris bucharica, 704; I. florentina, Bed of, at Kew, 127; I. variegata aurea, at Kew ... 126
- Irises, Waterside, at Kew ... 219
- Itea illicifolia ... 567
- Ivy Irish, at Kew ... 957
- Ivy on Terrace Margin at Kew ... 319
- Ivy, Pillar ... 318

- Japanese Garden at Holland House 499

- Kew Gardens, 977; Achillea argentea at, 363; Arbutus Unedo at, 921; Clematis montana rubens, 168; Crambe orientalis at, 241; Dahlia Kaiserin Augusta Victoria at, 261; Darwin Tulips at, 677; Holm Oak at, 895; Irises at, 126, 127, 219; Irish Ivy at, 957; Lilium Hansoni at 703; Lilium umbellatum at, 33; Lily Pool at, 227; Pinus muricata at, 977; Rose Dorothy Perkins at, 783; Tulips at 687
- Lælio - cattleya Cranstonnæ Westonbirt var., 20; L.-c. Germania, 413; L.-c. Martinetti, King George V., 535; L.-c. Morningtoniæ, 411; L.-c. Nella, 973; L.-c. St. Gothard McBean's var. ... 819
- Lælia anceps Schröderiana ... 203
- Lantana elegantissima in Hyde Park ... 267
- Lavender Walk at Sutton Place ... 9
- Leeks, Prizetaker ... 211
- Leonardslee, Gunnera manicata at 647
- Lettuce Sutton's Golden Ball ... 153
- Lilium Burbanki, 273; L. Hansoni and Anemone japonica at Kew, 703; L. umbellatum at Kew ... 33
- Liliums and Carnations, Messrs. Dickson and Robinson's Gold Medal Group of, at Shrewsbury 631
- Lily Pool at Kew ... 227
- Lily Pool, Messrs. G. Bunyard and Co.'s, at Olympia ... 533
- Lonicera sempervirens ... 725

- Madresfield Court, Sundial Garden at ... 659
- Magnolia grandiflora at Maple-Durham House ... 27
- Maple-Durham House, Magnolia grandiflora at ... 27
- Marigolds, French ... 166
- Medal of Honour, The George Robert White ... 15
- Mesembryanthemum pyropæum ... 299
- Michaelmas Daisies at Aldenham House ... 221
- Miltonia Warscewiczi leucochila 25
- Montacute House, Topiary Walk at 70
- Musa ensete in a Lincolnshire Garden, 375; M. japonica in Pots ... 376

- Narcissus, Varieties of:—Incognita, 300; Marie Louise, 681; Miss Willmott, 680; Queen of Hearts, 679; Socrates, 721; Sonata ... 705
- Nephrolepis exaltata, Varieties of 209
- Nerine, Mrs. F. R. Balfour, 818; N. Veitchi ... 742
- Norwich Flower Show ... 486, 487
- Nymphæa Listeri, 777; N. Mrs. Richmond ... 660

- Oak, The Holm, at Kew ... 895
- Oak, The Scarlet ... 856
- Odontioda Vuylstekeæ Coronation 391
- Odontocidium Fowlerianum ... 878
- Odontoglossum ardentissimum Queen Mary, 493; O. crispum Peacock, 107; O. Europa, 478; O. Halseyanum, 59; O. Harwoodi, 93; O. Ossulstoni Shrubbery var., 301; O. spectabile, 599; O. splendidissimum Oakwood var. ... 279
- Olympia Show 491, 492, 493, 507, 533
- Oncidioda Cybele ... 439
- Oncoba speciosa Routledgei ... 277
- Onions, Ailsa Craig, A Dozen Fine 193
- Orchids, Messrs. Sander and Sons' Gold Medal ... 417
- Orontium aquaticum ... 247
- Oxenford Castle ... 450, 451
- Pæonies, Tree ... 123

- Parsley at Aldenham House ... 167
- Parsnips and Onions ... 11
- Paved Garden at Powis Castle ... 573
- Peas, Culinary, Varieties of:—Hundredfold, 85; Lancastrian, 84; Latest Giant, 89; Lord Leicester, 91; Newtonian, 90; Webbs' New Leader, 88; Webbs' Stourbridge Marrow... 131
- Peach Libra, Tree of ... 165
- Pears, Varieties of:—Beurre Baltet Pere, 207; Beurre Fouqueray, 125; Beurre Hardy, 66; Beurre Superfin, 111; Doyenne du Comice, 841; Duchesse de Bordeaux, 757; Durondeau, 67; Fondante de Thirriott, 7; Glou Morceau, 758; Triomphe de Vienne, ... 187
- Pelargoniums at York Gala ... 464
- Pelargonium artemesioides, 629; P. Blandfordianum, 626; P. cordatum, 627; P. Maxim Kovalensky, 303; P. multibracta ... 628
- Pentstemon cæruleum ... 377
- Pergola at Gunnersbury Park ... 317
- Philadelphus Lemoinei Virginal 459
- Phloxes at Regent's Park ... 228
- Picea excelsa monstrosa, 976; P. e. Ramonti ... 222
- Pinks, Alpine, at Walmsgate ... 481
- Pinus muricata ... 977
- Plums, Varieties of:—Coe's Golden Drop, 838; Coe's Violet, 793; President ... 900
- Polypodium vulgare, Varieties of, in a Basket ... 87
- Portraits:—
  - Allan, Mr. W. ... 237
  - Allwood, Mr. M. C. ... 951
  - Barker, Mr. G. ... 891
  - Barker, Mr. J. T. ... 733
  - Barnard, Mr. Harry A. ... 353
  - Barr, Mr. P. Rudolph ... 257

PAGE

- Portraits (continued)—
  - Bentley, Alderman J. W., J.P., C.C. ... 441
  - Bourne, Mr. Christopher ... 673
  - Bridger, Mr. F. ... 489
  - Brotherston, Mr. R. P. ... 637
  - Brown, Mr. A. R. ... 409
  - Burgess, Mr. A. E. ... 715
  - Christy, Mr. E. H. ... 276
  - Clark, Mr. W. G. P. ... 99
  - Cole, Mr. Silas ... 119
  - Cooling, Mr. W. F.... 181
  - Coomber, Mr. Thos., V.M.H. ... 199
  - Davis, Mr. J. E. ... 811
  - Davis, Mr. Norman ... 457
  - de Graaff, Mr. Simon, the Late 352
  - Dickson, Mr. J. ... 425
  - Dickson, Mr. Jas. ... 769
  - Felton, Mr. R. Forester ... 81
  - Foster, Mr. Chas., The late ... 158
  - Gaut, Mr. A. ... 871
  - George, Mr. J., The late ... 231
  - Gingell, Mr. W. B.... 969
  - Godfrey, Mr. W. J.... 161
  - Grubb, Mr. A. ... 565
  - Halley, Mr. R. S. ... 295
  - Hanson, Mr. F. ... 335
  - Highgate, Mr. J. ... 619
  - Hooker, Sir Joseph Dalton, The late ... 931
  - Jennings, Mr. F. ... 831
  - Keith, Mr. Edward ... 583
  - Ladds, Mr. F. W. ... 930
  - Lamb, Mr. Robt. ... 697
  - Leak, Mr. G. W. ... 43
  - Lobjoit, Mr. W. E. ... 791
  - Marlow, Mr. W. J. ... 655
  - Massie, Mr. W. H. ... 63
  - Moore, Sir F. W., M.A., V.M.H. 530
  - Paul, Mr. G. Laing ... 139
  - Prime, Mr. H. ... 851
  - Rivers, Mr. Thos. A. H. ... 601
  - Samuel, Sir Marcus, Bart. ... 389
  - Seabrook, Mr. W. ... 751
  - Silsbury, Mr. Martin ... 23
  - Staffurth, Mr. S. F. ... 371
  - Tate, Mr. Herbert ... 911
  - Tayler, Mr. Will ... 473
  - Turton, Mr. T. ... 509
  - Wallace, Mr. Robt. ... 217
  - Webb, Mr. Wilfrid Mark ... 314
  - Wilkinson, Mr. J. ... 1
  - Williams, Mr. D. ... 549
- Potatoes, Varieties of:—Up-to-Date, 148; Windsor Castle ... 149
- Potatoes, Rev. A. Turner's Prize... 651
- Potatoes, Sprouting ... 149
- Powis Castle, Paved Garden at... 573
- Powis Castle, Yew Hedge at ... 875
- Preston Hall ... 448, 449
- Preston Hall, Rose Pergola at ... 815
- Primula Dell at Clandon Park... 344
- Primula sinensis Raynes Park White, 287; P. Winteri ... 163
- Primulas, Messrs. Sutton and Sons' ... 171
- Pyrethrums, Effective Arrangement of ... 939
- Pyrus Scheideckeri ... 861

- Queenswood ... 538, 539, 540
- Quercus coccinea, 856; Q. Ilex ... 895

- Radish, A Knotted ... 424
- Regent's Park, Early Flowering Tulips at ... 381
- Regent's Park, Phloxes at ... 228
- Rhododendron Glory of Littleworth, 415; R. Pink Pear, at Queenswood, 539; R. Rosa Mundi ... 325
- Rock Garden, An East Anglian ... 958
- Rock and Water Garden at Holland House ... 498
- Rock and Water Garden Exhibit at Shrewsbury, Messrs. Gunn and Son's ... 621
- Rock Garden at Gatton Park ... 224
- Rock Garden at Friar Park 641, 643
- Rock Garden at Holland House ... 554
- Rose Garden at Home Place ... 143
- Rock Garden at Swaylands House 83
- Rock Garden, Messrs. W. Artindale and Son's ... 418
- Rodgersia pinnata ... 592
- Romneya trichocalyx ... 186
- Roses, Varieties of:—Alice Cory Wright, 345; American Pillar, 461; A. R. Goodwin, 393; British Queen, 778; Capt. Christy at Branches Park, 571; Cinderella, 781; Countess of Shaftesbury, Basket of, 707; Danæ, 521; Dorothy Perkins at Kew, 783; Dorothy Perkins, Standards of, 3; Elsie, 109; Ethel, 515; Francis Chartres Seton, 495; Frau Karl Druschki, Gold Medal, 503; Gloire de Chedane Guinoisseau, Gold Medal, 743; Kaiserin Augusta Victoria, Basket of, 706; Lyon, Basket of, 773; Mdme. Abel Carriere, 933; Magnolia, 779; Mrs. Draper, 518; Mrs. S. Ross, 619; Seabird, Basket of, 775; Sylvia, 401; The Orleans ... 379

PAGE

- Rose Beds at Hopetoun Houes ... 229
- Rose Bowl, Messrs. Clay and Son's ... 936
- Rose Garden at Sutton Place ... 8
- Rose Garden at the White City... 587
- Rose Pergola at Preston Hall ... 815
- Rose Show, Festival of Empire, Cups for the ... 560
- Roses at Dalkeith Palace ... 430
- Roses, Beautiful Bowl of ... 541
- Roses by the Waterside at Branches Park ... 569
- Roses, Festoon of, at Branches Park ... 571
- Roses, Messrs. Clay and Son's Cup for ... 370

- Salading, Tasteful Collection of 763
- Saxifraga Burseriana, 103; S. Bursiculata, 188; S. exarata, 555; S. Petrachi ... 201
- Saxifragas at Gatton Park ... 224
- Shrewsbury Show ... 621, 631, 665
- Sophro-lælio-cattleya Jeannette ... 689
- Southwark Park, Early-flowering Chrysanthemums at ... 191
- Southwark Park, Stocks at ... 146
- Spraying Machinery, Messrs. Merryweathers' ... 385
- Stocks, Mont Blanc, at Southwark Park ... 146
- Streptocarpus, Hybrid ... 246
- Sundial Garden at Madresfield Court ... 659
- Sunk Garden at Clandon Park ... 341
- Sutton Place ... 8, 9, 10
- Sweet Peas, Varieties of:—Afterglow, 739; Barbara, 512; Bertha Massey, 737; Charles Foster, 50; Cherry Ripe, 49; Colleen, 46; Dobbies' Sunproof Crimson, 145; Dobbies' Thomas Stevenson, 511; Maori Belle, 55; Marion Cuthbertson, 48; Mrs. Henry Bell, 71; Paradise Apple Blossom, 45; Prince of Orange, 144; Stirling Stent, 53; Thomas Stevenson ... 47, 739
- Sweet Pea, First Illustration of a, Offered for Sale ... 51
- Sweet Pea Trials at Guildford ... 531
- Sweet Peas at Olympia, Messrs. Dobbie and Co.'s Gold Medal 492
- Syringa Rubra de Marley ... 859

- Talygarn, Gunnera manicata at ... 101
- Temple Show, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 403, 411, 413, 414, 415, 416, 417, 418, 419, 420
- Thames Flower Show, Mr. T. Page's Group at the ... 463
- Thuia occidentalis dumosa ... 223
- Topiary Walk at Montacute House 70
- Trees and Shrubs Effective Arrangement of ... 862
- Trees and Shrubs, Messrs. J. Cheal and Sons' ... 420
- Trichopilia Lehmanni ... 623
- Tulips, Varieties of:—Beauty of Bath, 397; Keizerkroon, at Kew, 687; Mon Tresor, Bed of, 687; Moonlight, 396; Yellow Murillo ... 202
- Tulips at Kew ... 677
- Tulips, Early - flowering, at Regent's Park ... 380

- Vanda cærulea, Fine Exhibit of 722
- Vegetables, Messrs. Sutton and Sons' Gold Medal ... 717
- Vegetables, Messrs. Sutton and Sons' Silver Cup Collection of 491
- Vegetables, Mr. Beckett's Gold Medal ... 553
- Vegetables, Mr. J. Gibson's Prize 650
- Veronica gentianoides variegata, 575; V. Silver Queen, 820; V. Veitchi ... 801
- Viburnum rhytidophyllum ... 858
- Viburnum tomentosum ... 65
- Viola gracilis at Holland House 554
- Violas as Carpet Plants ... 229
- Violas at Queenswood ... 540

- Walmsgate Gardens ... 479, 480, 481
- Water Garden at Carberry Towers 447
- Water Garden at Sutton Place ... 10
- Water Lilies at Gunnersbury House ... 607
- Wellingtonia Avenue at Oxenford Castle ... 451
- Winter Garden, Messrs. William Bull and Sons ... 388
- Wolverhampton, Crown Bed at ... 625

- Yew Hedge at Powis Castle ... 875
- Yew Hedges at Condover Hall ... 857
- Yews, Irish, at Elvetham Park ... 141
- Yorkshire Floral Fête ... 443, 464

- Zephyranthes aurea ... 937

Printed by W. H. and L. COLLINGRIDGE, City Press, 148 and 149, Aldersgate Street, London, E.C.

FLORAL ALMANACK FOR 1911—A NEW ROSE (Printed in Colours.)

THE GARDENERS' MAGAZINE.

No. 2,984. Vol. LIV.
Reg. at the G.P.O. as a Newspaper.

SATURDAY, JANUARY 7, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) Twopence

BARR'S SEED GUIDE, now ready, contains a select list of the best Vegetables, and the most beautiful Flowers for Garden and Greenhouse, including many novelties of sterling merit. Free on application: BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, is this winter keeping a large staff of hot-water men in the shops, in order that they may attend immediately to any breakdown of Boilers or Hot-Water Piping in any part of the country. In case of emergencies please telephone 201 Western, or wire "Gray, Chelsea, London."

KING'S ACRE FRUIT TREES, ROSES, AND ORCHARD-HOUSE TREES.

AWARDED 24 GOLD MEDALS SEASONS 1909-10.

160 acres to select from of the finest Trees that natural conditions and the skill of man can produce.

ILLUSTRATED CATALOGUES FREE ON APPLICATION.

KING'S ACRE NURSERIES, LTD., HEREFORD.

1,000,000 BORDER AND ROCK Plants. Unique collection of all that is good.
50,000 HARDY FERNS, over 100 varieties. See Catalogue.
10,000 FLOWERING SHRUBS must be cleared.
30,000 LILIES NOW IN STOCK, Other consignments arriving.
DELPHINIUMS, 9 GOLD MEDALS IN 2 years, a record. Unique collection, both plants and seeds.
PERENNIAL SEEDS, UNIQUE COLLECTION.
All Catalogues Free.
PERRY'S HARDY PLANT FARM, Enfield, Middx.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

AMERICAN and BRITISH TREE CARNATION.—Leading varieties from 3s. per doz.; 17s. 6d. per 100; carriage and packing free for cash. Ask ill. price list. C. F. A. VAN DER SLUYS, F.R.H.S., Ramee, Guernsey.

WEEKS'S DUPLEX UPRIGHT TUBULAR BOILERS, for full advertisement see back page.

CONSERVATORIES AND WINTER GARDENS, Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue free.—BOULTON and PAUL, Lim., Norwich.

AUTO SHREDS FUMIGANT kills Leaf-mining maggot, and all insects under glass. For 1,000 cubic ft., 6d.; 10,000, 3/6. No apparatus. Patentees, WM. DARLINGTON and SONS, Hackney, N.E.

CLAY'S MANURES, CRUSHED BONES
(See page xi.)
CLAY'S FERTILIZER is UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

NOVELTIES FOR 1911.
NEW VARIETIES OF VEGETABLES OF SPECIAL MERIT.

WEBBS' "EARLY FAVOURITE" PEA, 3s. 6d. per quart.

WEBBS' MAINCROP PEA, "KING GEORGE," 1s. per packet.

WEBBS' "CONQUEROR" TOMATO, 1s. 6d. and 2s. 6d. per packet.

WEBBS' "FREEDOM" CUCUMBER, 1s. 6d. and 2s. 6d. per packet.

WEBB AND SONS, The Royal Seedsmen, WORDSLEY, STOURBRIDGE.

BUNYARD'S FRUIT TREES.—All intending planters of Fruit Trees, whether for garden or market culture, are invited to inspect our Nurseries. Advice freely given by letter.
GEORGE BUNYARD and CO., Ltd.,
Royal Nurseries, Maidstone.

"FOUR OAKS" GOLD MEDAL SYRINGES.
The only syringes ever awarded a Gold Medal. Unequalled for Spraying. In numerous sizes, from 8s 6d. Bends, 1s. 6d. Used and recommended by all leading authorities. Insist upon having "Four Oaks." Supplied by all Seedsmen, Ironmongers, etc. Full particulars from Sole Makers—
THE FOUR OAKS UNDENTABLE SYRINGE and SPRAYING MACHINE CO., SUTTON COLDFIELD.

BEGONIAS, awarded 24 Gold Medals.—Double Seed, 2s. 6d. and 5s. per pkt.; Frilled, Crested, or plain Single, 1s., 2s. 6d., and 5s. per pkt. For price of Begonia tubers, Carnations (Border and Perpetual flowering), Cannas, Cyclamen, Blue Primroses, Delphiniums, Pansies, Polyanthus, Lily of the Valley, Violets, etc., please send postcard for copy of our Illustrated Catalogue, free on application.
BLACKMORE AND LANGDON,
Twerton Hill Nursery, Bath.

FERNS.—Beautiful Greenhouse varieties, 12 for 1s. 3d.; Maidenhair Ferns, 2s. doz.; New Nephrolepsis Todeoides, 9d. each; Palms, 9d. each. HEAD GARDENER, 22, Charlton Road, Blackheath.

ORCHIDS.—Lowest Cash Prices. Fine selection of six assorted Orchids at 5s. 6d. and 10s. 6d. Odonto. crispum, 5s. 6d. per doz. RICHARD MOORE and CO., Eldon Place, Bradford.

SEED POTATOES.—Irish-grown seed beats Scotch on trial. I offer best leading varieties (awarded two Silver Medals, London, 1910). Lists Free. WM. E. SANDS, F.R.H.S., Specialist in Potato Growing, Hillsborough, Co. Down, Ireland.

C. HIGHT, Cranleigh, Surrey, has Millions of autumn-sown Cabbage Plants now ready. Early Offenham, First and Best, Wheeler's Imperial, Daniel's Defiance, Flower of Spring, Meins No. 1, 3s. 1,000; or 10,000 25s., on rail; any above 1s. 100 post free.

POULTRY AND KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

PORTABLE IRON AND WOOD BUILDINGS, Stables, Loose Boxes, Pavilions, Open-air Shelters, Motor Houses, Poultry Houses, Larders, Potting Sheds, Greenhouses, Sheep Troughs, Dog Kennels. Send for Free Catalogue. J. T. HOBSON and CO., Timber Importers, Bedford. Established 65 years.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

SOW NOW, UNDER GLASS.
SUTTON'S PIONEER PEA.
Mr. T. VICKERS, gardener to W. H. RAWNSLEY, Esq., writes: "I consider your Pioneer to be the finest of all the dwarf-growing section. It was ready for use before anything else, and is a splendid cropper. The flavour left nothing to be desired." Per pint, 2s. 6d., post free.

SUTTON AND SONS, THE ROYAL SEED ESTABLISHMENT, READING.

"Colour is meant for the perpetual comfort and delight of the human heart."—RUSKIN.

KELWAY'S "COLOUR BORDERS" (Regd.)
Artistic and permanent—arranged for continuous bloom and colour effect.
These Borders can be purchased BY THE SQUARE YARD for any position all ready arranged for planting.
"I am thinking of planting a few borders with perennials. I am tired of continually planting bedding plants. Mrs. ——."
Write now stating your area, position, soil, etc., for planting in the Autumn, to
KELWAY AND SON, The Royal Horticulturists, LANGPORT.

NOW IS THE TIME TO PLANT Kelway's Lovely New Pæonies, for a fine show in the spring and summer. Kelway's Pæonies are more beautiful than ever. Choice named varieties from strong country-grown stocks: 15s. and 21s., 27s., 30s., 54s., and 70s. a dozen. Single plants, 1s. 6d. to 10s. 6d.
"Some Pæonies I had from you a few years ago are quite a show when they are in bloom, and are greatly admired. ———, Shipston-on-Stour."
IT IS NECESSARY TO OBTAIN KELWAY'S.
KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

FIDLER'S NEW ILLUSTRATED CATALOGUE OF CHOICE GARDEN SEEDS will be sent, post free, to any address on receipt of postcard. Write at once for a copy. It may help you to save 50% on your seed bill this season. FIDLER and SONS, Royal Berks Seed Stores, Reading.

WELLS' CHRYSANTHEMUMS.—List of Novelties now ready; also descriptive general list. Wells' Phlox and Michaelmas Daisies, Hardy Herbaceous Plants, and Perpetual Flowering Carnations. Catalogues post free. Wells' book, "The Culture of the Chrysanthemum," post free, 1s. 6d. W. WELLS, Merstham, Surrey.

CHRYSANTHEMUMS.—Mrs. Frank Hill, A.M., R.H.S.; Brightness, A.M., R.H.S., Singles. Send for lists. GEO. WILLIAMS and SONS, Chrysanthemum Specialists, Canton, Cardiff.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

ORDER MATS NOW!—To prevent disappointment and loss by early frosts, order Norfolk Reed Mats now. 50 per cent. more protective than straw. Made to any size, 1d. per square foot.—BOULTON and PAUL, Lim., Norwich.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page xii.

XL ALL FOR AUTUMN AND WINTER CLEANSING. When growth is finished, stronger solutions may be used. XL ALL NICOTINE INSECTICIDE WASH, for syringing, dipping, and dressing Fruit Trees under glass. Mealy Bug, Scale, etc., cannot exist where this is used. For sponging use XL ALL SPONGING WASH (sine Nicotine), it wonderfully brightens up the foliage. XL ALL CAUSTIC WINTER WASH for dormant Fruit Trees stamps out American Blight and all other pests. Other XL ALL preparations of great renown are XL ALL LAWN SAND, XL ALL FERTILISER, XL ALL NICOTINE GREASE for banding Fruit Trees. Ask your N.S. or F. for my small pink list. G. H. RICHARDS, Manufacturer, 234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

SEEDS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Select Seeds.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS.
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

H. A. TRACY,
Orchid Nursery, Twickenham.
Orchids of Every Species.

STANLEY & CO., Southgate, London N.
(Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

RHODODENDRONS.

DICKSONS & CO.,
1, Waterloo Place, Edinburgh.
Pink Pearls, Ponticums, choice Hybrids. Write.

ROSES.

R. H. BATH, Ltd.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

ALEX. DICKSON & SONS, Ltd.,
Hawlmark, Newtownards, Ireland.
The World-famed Champion Rose Growers and Raisers of Irish Pedigree Seedling Roses. Lists Free.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 1st Prizes, 3 2nds. at N.R.S. Shows, 1910. Ctlg. Free.

SAMUEL M'GREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
Illustrated Catalogue free.

TURF LOAM.

A. B. JOHNSTON, New Park, Cranleigh, Surrey.
Very Fibrous Loam, for Carnations, Roses, Vine Borders, Melons, Fruits under Glass, &c., &c.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

FRUIT TREES

We have 50 acres of young Fruit Trees in perfect condition to offer this season. Our **Specialities** are Cordons, Bushes, and Pyramids, and Trained Trees worked on selected **Fruiting Stocks.**

Fully Illustrated Catalogue Post Free.

W. SEABROOK & SONS,
The Nurseries, CHELMSFORD.

BRITISH COLUMBIA

A most desirable Country for British People to settle in.

INCREASING PROSPERITY. DECREASING TAXATION.

Climate and Land well adapted for FRUIT GROWING, DAIRYING and MIXED FARMING, HORSE, HOG, and POULTRY RAISING.

MARKETS ARE NEAR AT HAND, AND GOOD PRICES OBTAINABLE.

Population increasing. Good Laws well administered. Free Education.

Full particulars free of charge on application to

J. H. TURNER, Agent General,
SALISBURY HOUSE, FINSBURY CIRCUS, LONDON.

"GOOD is not good enough,
the BEST is not too good."

SWEET PEA SEED.

My **CATALOGUE** is **NOW READY**, and will be sent on application.

Awarded Silver Medal by the Royal Horticultural Society,

W. R. HAMMOND,
Grovelands, BURGESS HILL, SUSSEX.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices. Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

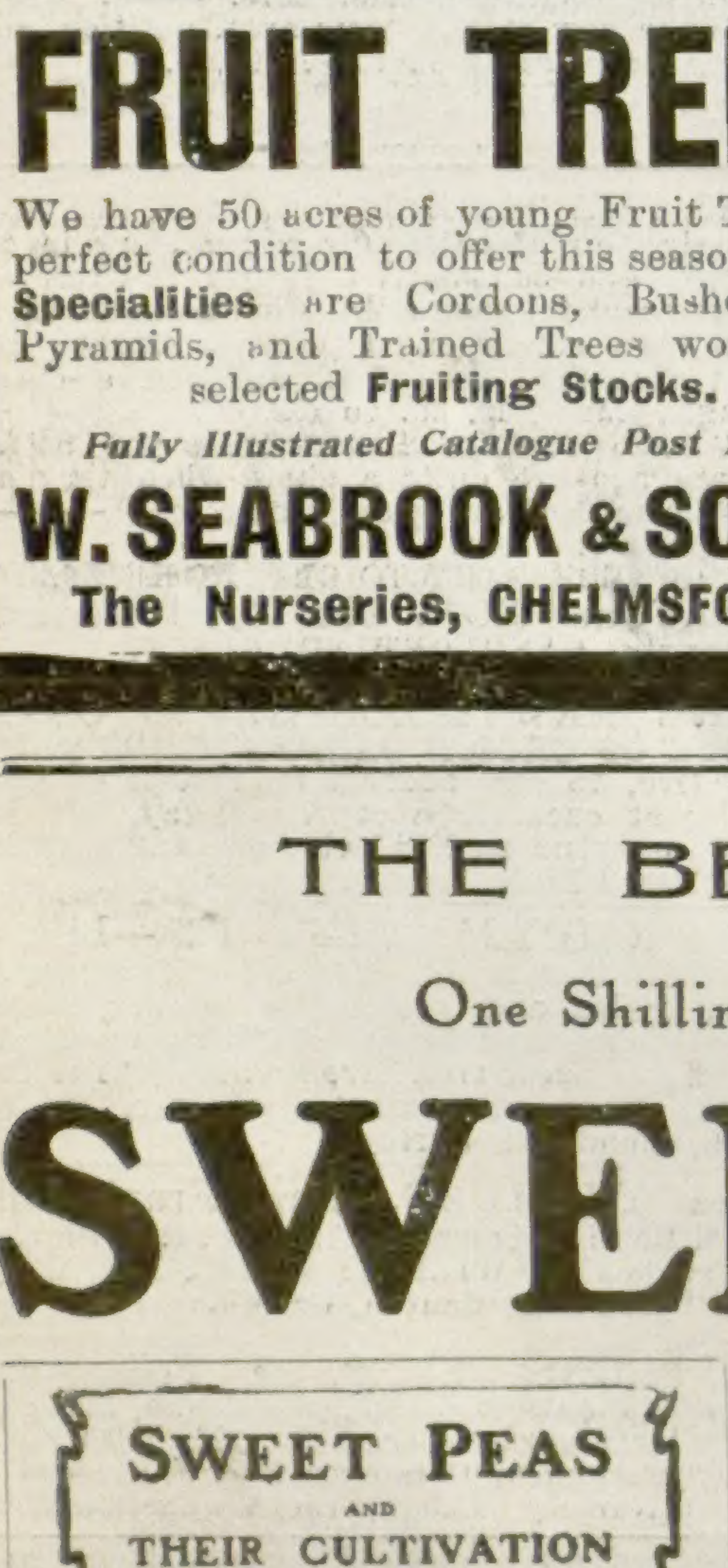
PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

THE BEST BOOK ON THE SUBJECT.

One Shilling: free by post, 1/2. Bound in cloth, 1/6; by post, 1/8.

SWEET PEAS AND THEIR . . CULTIVATION.



SWEET PEAS
AND
THEIR CULTIVATION
For Home and Exhibition.

By CHARLES H. CURTIS, F.R.H.S.,
[illegible]

LONDON
The "Amateur Gardening" Office, 148 & 149, Aldersgate St., E.C.

ONE SHILLING NET

FOR HOME AND EXHIBITION.

By CHARLES H. CURTIS, F.R.H.S.,
Hon. Secretary National Sweet Pea Society.

PREPARATION OF SOIL.
SEEDS AND SEED SOWING.
WATERING AND MANURING.
GENERAL MANAGEMENT.
HOW GROWN IN TUBS AND POTS.

WINTER-FLOWERING SWEET PEAS.
STAKING AND TYING.
SWEET PEAS FOR SCREENS AND WINDOWS.
THE BEST SWEET PEAS.
RAISING NEW VARIETIES.

CULTURE IN CONSERVATORY.
CUPID AND BUSH SWEET PEAS.
VASES AND STANDS.
POINTS FOR EXHIBITORS.
DEVELOPMENT OF SWEET PEAS.
DISEASES AND PESTS.
ETC., ETC.

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE,"
148 and 149, Aldersgate Street, E.C.

Please send me "SWEET PEAS AND THEIR CULTIVATION" *by Post, for which I enclose remittance of* 1s. 2d. *(if bound in cloth,* 1s. 8d.*).*

Name ....

Address ....

BY APPOINTMENT. BY APPOINTMENT.

CHEAP OFFER TO CLEAR.

We beg to inform our numerous clients that we have secured a large tract of land adjoining one of our principal Nurseries, and that it is our intention to clear the Stocks off some of our outlying branch Nurseries at a sacrifice.

Everything has been grown with our usual care, and offered in Lots, subject to being unsold; we guarantee the numbers and quality of each Lot offered.

Particulars of above, together with our General Catalogue, will be sent on application.

JAMES SMITH & SONS (Nurserymen to H.M. THE KING), **DARLEY DALE NURSERIES, near MATLOCK.**

Inspection cordially invited. Visitors met by appointment at Darley Dale or Matlock Stations.

Sales by Auction.

ROSE TREES.

SHRUBS. BULBS.

SALES BY AUCTION
are held every
MONDAY and WEDNESDAY, at 12.30.

STEVENS' AUCTION ROOMS,

Established 150 Years,
38, King St., Covent Garden, London, W.C.
Catalogues on Application.

SALES NEXT WEEK.

MONDAY and FRIDAY NEXT, Jany. 9th and 13th, at 12 o'clock.—200 lots of choice Herbaceous Plants, Japanese Lilies, Flowering Shrubs, Begonias, Gloxinias, Gladiolus, Montbretias, Anemones, Lily of Valley, and Dutch Bulbs in variety.

At 1.30 o'clock.—1,000 Roses, Dwarf, T., H.T., and Climbing, Fruit Trees in variety, Azaleas and Rhododendrons, Retarded Plants and Bulbs.

WEDNESDAY NEXT, Jany. 11th, at 12 o'clock.—Japanese and other Lilies, Begonias, Gloxinias, Montbretias, Gladiolus, Spiraeas, Iris, Dielytras, Hydrangeas, 300 lots of choice Herbaceous Plants, Flowering Shrubs, Fibre, Peat, and Leaf-mould, Retarded Bulbs and Plants, Dutch Flower Roots, etc.

At 1.30 o'clock.—Roses, 3,500 Standard, Dwarf, T. H.T., H.P., and climbing, lotted to suit all buyers; Carnations, Pinks, etc.

At 5 o'clock.—450 Azaleas in variety, Rhododendrons, Aspidistras, and Camellias; 100 lots of Ornamental Palms, and other greenhouse plants.

FRIDAY NEXT, Jany. 13th, at 12.45 o'clock. An Importation of 300 Phalænopsis grandiflora aurea, 1,000 clumps, Cypripedium niveum, and others: cool, intermediate, hot-house Orchids in variety: Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, London, E.C. On view morning of sale, and catalogues had.

SALES BY AUCTION DAILY at 12.30.

Hyacinths, Tulips, Daffodils, Narcissi, Crocus, Snowdrops, Lilies, &c., &c.

JOHNSON, DYMOND & SON

Palms, Azaleas, Rose Trees

Catalogues of Auctioneers.

City Auction Rooms (Est. 1793),
38 & 39, Gracechurch St., London, E.C.

---

100 NURSERIES, MARKET GARDENS, FLORIST AND SEED BUSINESSES TO BE DISPOSED OF.

MESSRS. PROTHEROE and MORRIS'S HORTICULTURAL REGISTER contains full particulars of the above, and can be obtained gratis at 67 and 68, Cheapside, E.C.

RAMBLER ROSES ON OWN ROOTS, extra fine staked plants, 2 and 3 years old, with numerous branches, leading varieties, six for 4s. 6d., 12 for 8s. 6d., carr. paid.—J. J. MARRIOTT, Sutton Coldfield.

CHAMPAGNE RHUBARB ROOTS FOR SALE, suitable for forcing or for planting out.

H. WADDINGTON, 42, Cank Street, Leicester.

PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J.R. PEARSON & SONS.
LOWDHAM, NOTTS.

ANTHONY WATERER,

Knap Hill Nursery, Woking, Surrey,

Has a Fine Stock of well-rooted
EVERGREENS, TREES and SHRUBS
In all sizes.

RHODODENDRONS, AZALEAS, and other American Plants a speciality. The Rhododendrons planted annually in Hyde Park are supplied from Knap Hill.

Inspection of Nursery invited Catalogue on application

ORCHIDS

EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

NEW GARDEN PEA FOR 1911.

MASSEY'S RELIANCE, per packet 1s. post free.

Mr. W. A. COOK, Head Gardener to Sir E. G. LODER, Bart., writes: "I am very pleased to inform you it proved a great success, especially as it was such a cold wet time for early peas. Sown on the same day as several other varieties, it was not one day behind, and is equal in bulk to anything I have ever grown. Haulm about three feet, with especially long pods for so early a Pea."

GEO. MASSEY & SONS, Seedsmen, SPALDING.

CURRANTS.—Fay's Prolific Red, Long-bunched Red (Wilmot's), Black Champion, clean, healthy, fruiting trees, 18s. 100; 3s. dozen. WILL TAYLER, Hampton, Middlesex.

SEAKALE, ASPARAGUS, RHUBARB, Tarragon, and Mint for forcing; well ripened on warm soil. WILL TAYLER, Hampton, Middlesex

FIGS.—This delicious fruit crops freely in pots. Bearing Trees, 2s. 6d., 3s. 6d., 5s., and 7s. 6d. each. Grape Vines for fruiting or planting. Catalogues free. WILL TAYLER, Hampton, Middlesex.

TRAINED PLUMS. — Large, well-transplanted, fruiting trees. Measurements supplied; but an inspection at Nursery is preferable. WILL TAYLER, Hampton, Middlesex.

R. D. BLACKMORE'S PEACH, "LIBRA." —Award of Merit R.H.S. Mid-season, very large and heavy, of high quality and goodly appearance; large trained trees and pyramids with well-ripened fruiting wood, 10s. 6d., 15s., and 21s. each. WILL TAYLER, Hampton, Middlesex.

RIVERS'

Fruit Trees, Roses, Vines, Figs, Oranges,
AND
Orchard House Trees.

A LARGE AND SELECT STOCK ALWAYS ON VIEW.

Illustrated & Descriptive Catalogue
POST FREE 3d.

THOMAS RIVERS & SON

Sawbridgeworth, Herts.
Station: HARLOW, G.E.R.

FOURTH EDITION thoroughly Revised.

THE BOOK OF THE ROSE.

BY THE
Rev. A. Foster-Melliar, M.A.

Fourth Edition thoroughly revised by the REV. F. PAGE-ROBERTS (President, National Rose Society) and HERBERT E. MOLYNEUX (Vice-President, National Rose Society). With 62 (of which 25 are new) Illustrations of specimen Roses, etc.

CROWN 8vo. 5/- NET.

MACMILLAN & CO., LTD., LONDON.

LOVELY SWEET-SCENTED PÆONIES.

We have a fine Collection of these charming hardy flowers; the colours range from pure white through all the shades of cream and pink to crimson; they are perfectly hardy, and increase in beauty yearly. Strong clumps for present planting. 6, in 6 named sorts, 3/6; 12, in 12 named sorts, 6/6; 20, in 20 named sorts, 10/-; unnamed, choice mixed, 5s. dozen. All carriage paid. With each order we add a copy of our beautifully illustrated Catalogue of Roses, etc., with Booklet, "How to Grow Roses."

ISAAC TITTERINGTON, Ribbleton Nurseries, PRESTON

PAINT & GLASS.

NICHOLLS & CLARKE, LTD.
SHOREDITCH, LONDON.

GLASS. When sending for Catalogue please cut out this advt.

22 Gold and Silver Medals now awarded.

REGISTERED TRADE MARK
THE FOUR OAKS.

When ordering your seeds, don't forget the "Four Oaks" Gold Medal Specialities.

SUPPORT BRITISH INDUSTRY.

All Gardeners are now discarding the old-fashioned foreign-made Knapsacks and buying THE LATEST AND BEST IN SPRAYING MACHINES.

The "FOUR OAKS" KNAPSACK SPRAYER.

(Protected by Royal Letters Patent.)

Weight, 14 lbs.
Capacity, about 3½ gallons.

Acknowledged by all who have seen same to be

THE SIMPLEST and yet the BEST KNAPSACK SPRAYER ever produced.

A CHILD CAN WORK IT.

THE ONLY MACHINE WITH FORCE BEHIND THE SPRAY.

This one point alone places the "FOUR OAKS" KNAPSACK right in front of all other Knapsack Machines, yet this is only one improvement out of many.

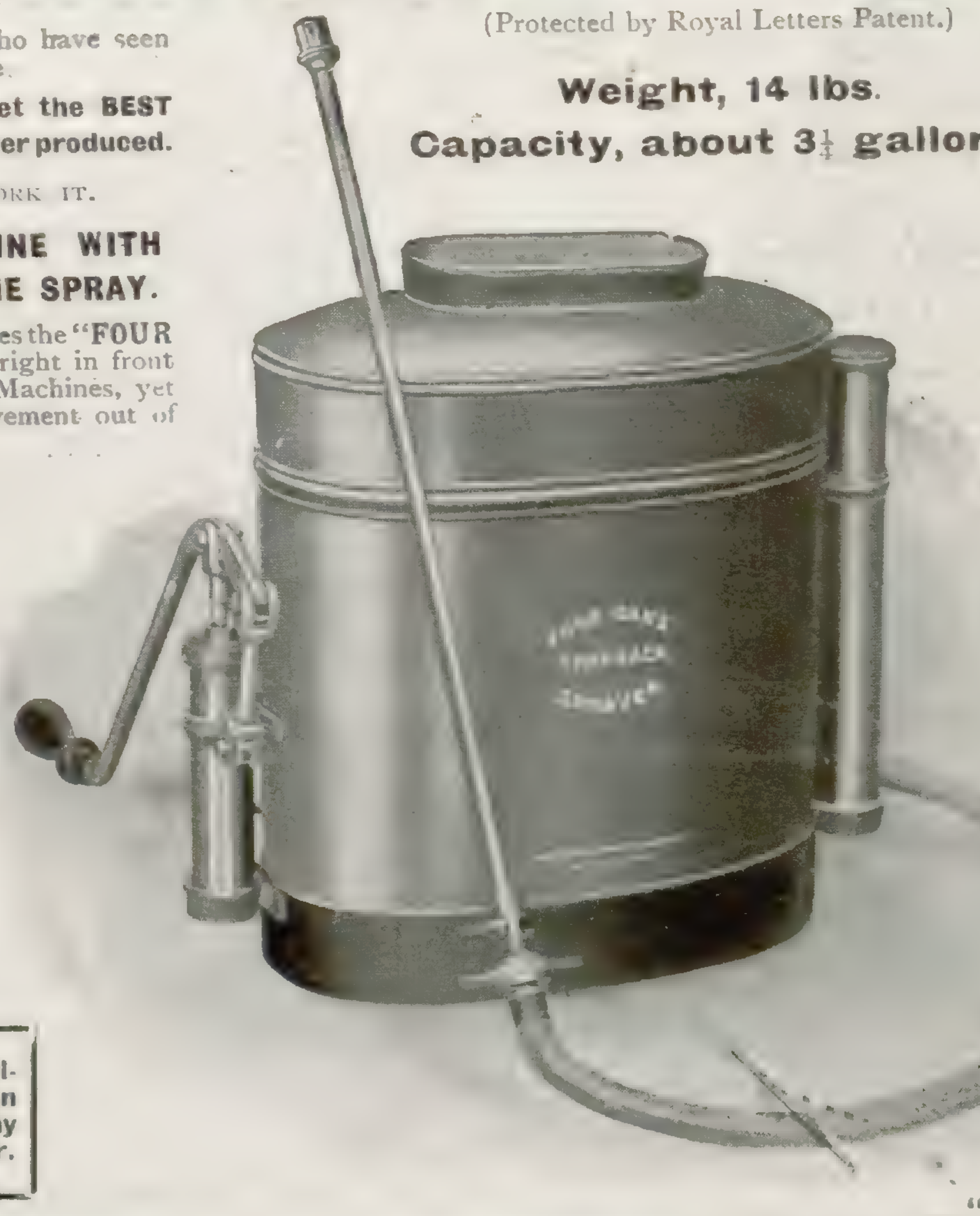
DURABILITY & SIMPLICITY THE GREAT FEATURE.

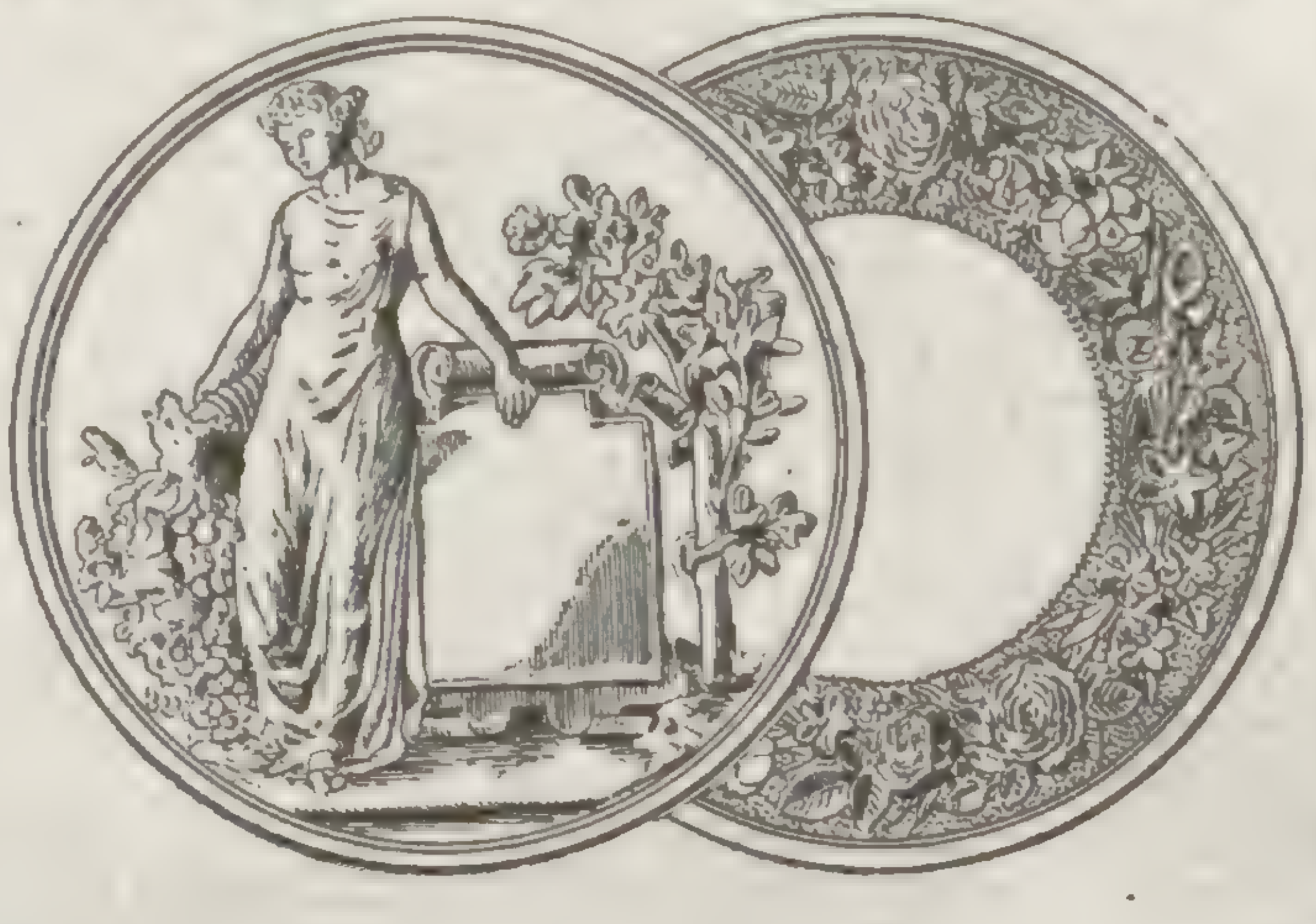
No Rubber Valves.

All Working Parts Outside.

Powerful Brass Pump giving great force behind Spray.

☞ **A Machine willingly sent on approval to any head Gardener.**





The "Four Oaks" Knapsack won **First Prize** (Silver Gilt Medal) at Wisbech Spraying Demonstration **AFTER EXHAUSTIVE TESTS** in competition with the world.

This Victory repeated at Bath and West Show, Rochester, 1910.

Also awarded **First Prize,** Silver Medal, by the Welsh National Agricultural Society, at Aberystwyth, 1909, for being Best New Implement in Show; **Silver Flora Medal,** Royal Horticultural Society, Holland Park Show, 1910; **Diploma** at Hayes Spraying Demonstration; **Certificate of Merit.** Altrincham; and dozens of others.

"THE KING OF KNAPSACKS."

PRICE, complete with Single "Four Oaks" Patent Spraying Nozzle, also Single Swivel Spraying Nozzle and Short Brass Tube, with Stopcock, together with 3 feet length of India-rubber Tube, as illustrated above ... ... **45/-** Net Cash. Carriage Forward

Double Swivel Nozzle can be supplied in lieu of Single Swivel at **2/-** extra.

The Swivel Nozzles are for Spraying in any direction, either in front, or to the right hand or left hand, or up or down as desired by user, who can change direction instantaneously.

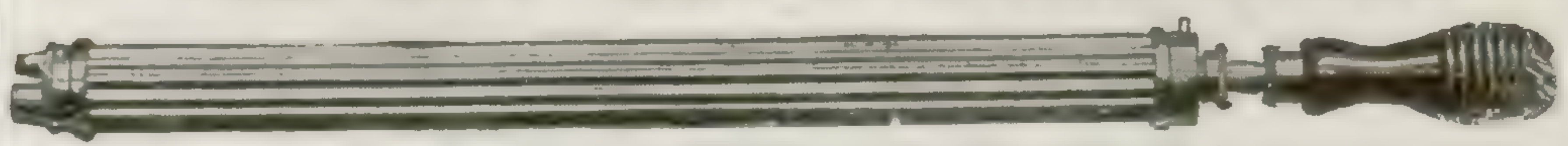
☞ **The "Four Oaks" Marvellous Nozzles give a finer Spray than any other ever made.** Price **3/6** extra.

Long Tubes for Spraying Tall Trees:

Patent "Four Oaks" Bamboo Lance, 10 ft. 6 in. long in one piece, with Interior Brass Tube, complete with Stopcock and all necessary Brass Fittings for spraying tall trees ... ... **17/6** extra.
6 ft. 6 in. ditto in 1 piece ... ... **12/6** ,,

The ordinary length of **India-Rubber Tubing,** as supplied with the machine, being too short for the management of the long lance by two men, ought to be replaced with an India-Rubber Tubing of 8 ft. in. length. Price, with union, **7/-** extra.

The "FOUR OAKS" Syringes ARE THE ONLY SYRINGES EVER AWARDED A GOLD MEDAL.



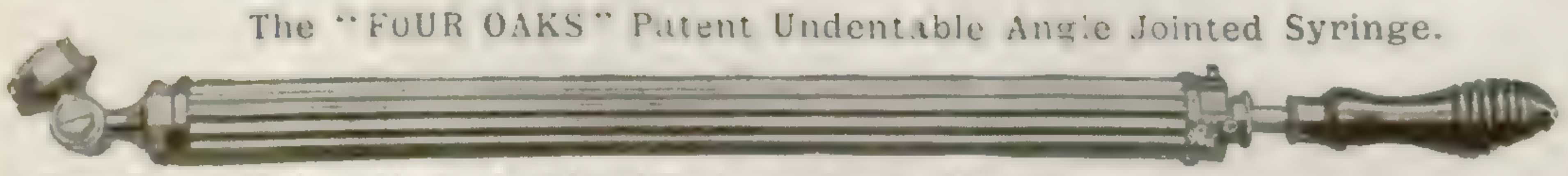
THE "FOUR OAKS" Patent Undentable Syringe.

"Four Oaks" Undentable Syringe, the Gardener's Ideal Syringe, complete with Jet as illustrated, also fine and coarse roses,

		Standard size.
No. 1.	Best quality, with teak handle Large size, 1¾ by 20 in., **25/-**	1½ by 20 in., **21/-**
No. 2.	Good quality, rosewood handle Large size, 1¾ by 18 in., **21/-**	1½ by 18 in., **17/6**

Standard sizes strongly recommended.

The "FOUR OAKS" Patent Undentable Angle Jointed Syringe.



"Four Oaks" Undentable Angle Jointed Syringe. Invaluable for syringing the undersides of leaves and branches which cannot be reached by the ordinary syringe. Is the Undentable Syringe illustrated above, with the addition of an Angle Joint.

		Standard size.	Large size.
No. 5.	Best quality, teak handle ...	1½ by 20 in., **27/-**	1¾ by 20 in., **32/-**
No. 6.	Good quality, rosewood handle	1½ by 18 in., **23/6**	1¾ by 18 in., **28/-**

Standard sizes strongly recommended.

The "FOUR OAKS" Patent Undentable Spraying Syringe.

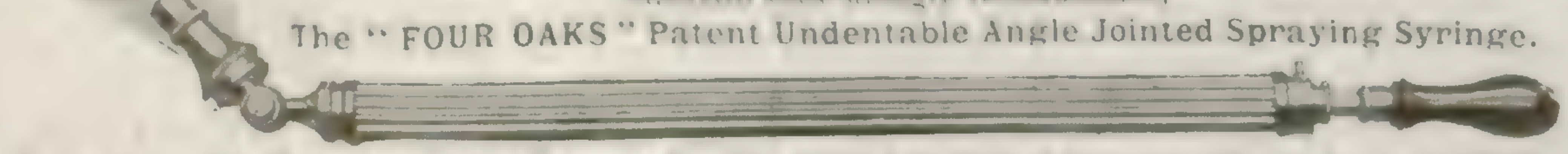
The "Four Oaks" Undentable Spraying Syringe. The most useful Syringe it is possible to have in a garden. Gives a fine vapour or mist like spray. Invaluable for ordinary spraying or for distributing Insecticides.

No. 9. 1⅛ in. by 20 in., **12/6** 1½ in. by 20 in., **16/6**

Is fitted with quick filling ball valve.

The 1½ in. by 20 in. size strongly recommended.

The "FOUR OAKS" Patent Undentable Angle Jointed Spraying Syringe.



The "Four Oaks" Gold Medal Undentable Angle Jointed Spraying Syringe. This is the same Syringe as No. 9 illustrated above, but with the addition of an Angle Joint for spraying the undersides of leaves and branches. An invaluable syringe.

No. 9 AJ. 1⅛ in. by 20 in., **18/-** 1½ in. by 20 in., **22/6** The 1½ in. by 20 in. size strongly recommended.

Sole Patentees and Manufacturers—

The "Four Oaks" Undentable Syringe and Spraying Machine Co.,

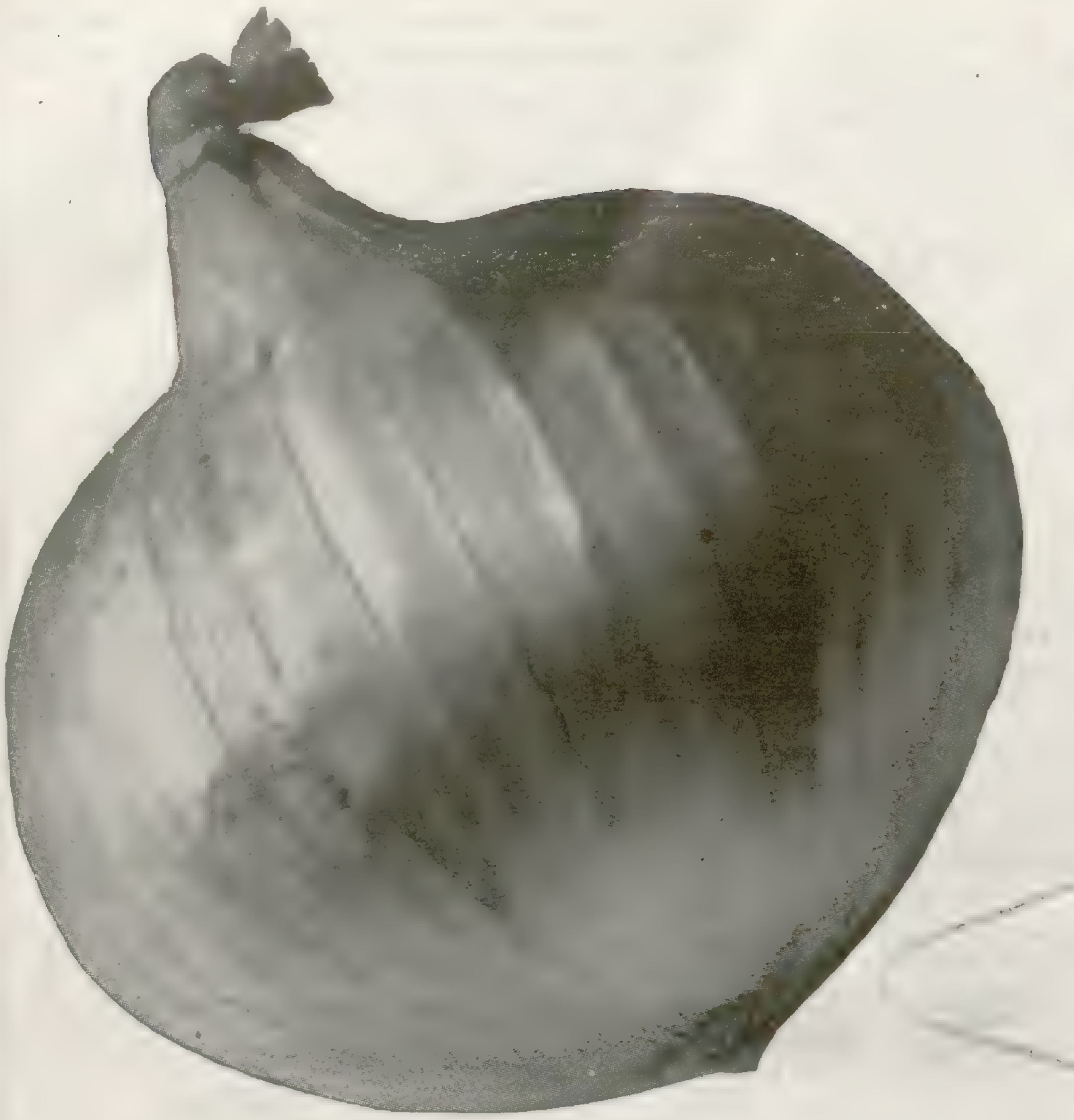
No. 5, SUTTON COLDFIELD, BIRMINGHAM, ENGLAND.

Special Spraying Nozzles for all purposes. **Send for Complete Catalogues—free on application.**

We Manufacture Spraying Machines and Pumps, Large and Small, of every type.

Can be ordered through your Seedsman, Nurseryman or Ironmonger, or will be sent direct if desired.

☞ **Latest Awards: Two Gold and Two Silver Medals, Hexham Fruit Congress, 1910.**



Premier

¶ "PREMIER" IS UNDOUBTEDLY a very fine type of onion. ¶ Your "Premier" Onion is by far the best I have grown for the past three years, both in shape and weight. ¶ Your "Premier" Onion is an excellent one. It attains a large size and keeps sound longer than any other variety grown here. ¶ I have been an onion grower for 20 years, and I must say "Premier" is the best I have come on yet. ¶ The bulbs are large and of fine globular shape, so much prized by exhibitors, which ensures its keeping qualities. These are a few of the unsolicited opinions of our customers. It is an excellent maincrop and exhibiting variety. Its general good qualities have made it exceptionally popular.

THE SEEDS TO GROW FOR OUR 1911 PRIZES. WE are giving £44 in Manchester (Sept. 13th); £22 in London (Aug. 30th); £24 at Shrewsbury (Aug. 23rd and 24th); and at many other Shows. See our new Seed Catalogue. It is free.

Onion, Premier		per pkt.	1/6
Tomato, Moneymaker		,,	1/6
Pea, Hercules		per pint	2/6
Pea, Lancastrian (new)		per pkt.	1/-
Beans, Exhibition Runner		per qrt.	2/6
Beet, Market Favourite	per pkt. 6d.	per oz.	1/-
Cabbage, Selected Sugar Loaf	,, 6d.	,,	1/-
,, Savoy, Early Favourite	,, 6d.	,,	1/-
Carrot, Scarlet Perfection	,, 6d.	,,	1/-
Carrot, Matchless	,, 6d.	,,	9d.
Cauliflower, Snowdon		per pkt.	1/6 and 2/6
Celery, Prize Pink		per pkt.	1/-
Cucumber, Imp. Telegraph		,,	1/-
Lettuce, Lord Kitchener	per pkt. 9d.	per oz.	1/3
Leek, Exhibition		per pkt.	1/6
Parsnip, Selected Hollow Crown		per oz.	6d
Turnip, Manchester Market		,,	4d.

—Pkt. 1/6—

Prizes open to Customers in the United Kingdom.		Prizes open only to Customers North of Birmingham, Birmingham Borough included.	
1st Prize	£4 0 0	**1st Prize**	£2 10 0
2nd Prize	£3 0 0	**2nd Prize**	£2 0 0
3rd Prize	£2 0 0	**3rd Prize**	£1 5 0
4th Prize	£1 10 0	**4th Prize**	£1 0 0
5th Prize	£1 0 0	**5th Prize**	£0 15 0
6th Prize	£0 15 0	**6th Prize**	£0 10 6
7th Prize	£0 10 0	**7th Prize**	£0 7 6

20/- for the Heaviest Bulb.

This is a distinct class. The bulb must NOT be included in any competing four bulbs of the foregoing two classes.

Full particulars in our new Seed Catalogue.

Dickson & Robinson

CATHEDRAL ST. **Manchester**

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head); life's practical experience in all branches, Inside and Out. Grapes, Peaches, Melons, Stove and Greenhouse Plants, Malmaison and Tree Carnations, Orchids, Chrysanthemums, Landscape, and Rock Garden, Vegetables and Hard Fruits; nearly eight years as head of six; excellent references; age 35. F. SMITH, 4, Mellish Terrace, Morden, Surrey.

GARDENER (Head).—Mrs. HERBERT MORRELL highly recommends F. HARRIS; been head of five the past four years; thorough experience, gained in good establishments, including Headington Hill Hall, Buscot Park, Waddesdon Manor; age 34, no family. Apply HARRIS, Writtle Road, Chelmsford.

GENTLEMAN recommends GARDENER (Head of two or three); life experience in all branches; understands formation of new or renovating old gardens; married, one boy 10 years; age 45. PENNELLS, Phoenix Green, Winchfield, Hants.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; grapes, peaches, melons, stove and greenhouse plants; four and a-half and eleven years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head, or good Single-handed) seeks SITUATION, 23 years' experience; 8 years' last situation; knowledge of intensive methods of cultivation; also poultry; excellent references. G. TURNER, 5, Heslington Terrace, Fulford, York.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Closes Hall, Gisburn, Clitheroe

GARDENER (Head Working); age 44; life experience; 21 years' excellent references from first-class establishments; thorough knowledge in all branches; leaving own request; no young children, youngest 14. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (Head Working); life good practical experience in all branches, Inside and Out, Early and Late Forcing; excellent references. H. TURNER, 62, Star Road, Peterborough.

GARDENER (Head Working, where two or more are kept); experienced in all branches; 12 years' excellent reference as Head, left own request; age 45; two in family, youngest 15. HUNT, 9a, Bridewell Street, Devizes, Wilts.

GARDENER (Head Working), requires SITUATION; experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants; Flower and Kitchen Garden, Hardy Fruit, etc.; good references; married, no family. W. S., 73, Allen Street, Maidstone, Kent.

GARDENER. (Head Working, where one or more are kept); life practical experience, Inside and Out; good references. J. BOLTON, Hadlow Down, near Uckfield, Sussex.

GARDENER (Head Working) requires SITUATION; experienced Vines, Peaches, Melons, Fruit, Flowers, Vegetables; 5 years' good character; married. C. N., Clarence Cottage, Broadbridge Heath, Horsham.

GARDENER (Head Working, where one or more are kept, or good Single-handed); experienced Inside and Out; good references; abstainer; married; age 29. W.S., Office of this Paper.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here 5½ years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Single-handed or otherwise); good all round man in all branches, or handy man on gentleman's estate; good at either; willing to be useful, active and reliable; good character; age 45; married, one child. OSBORNE, 48, Bradshaw Road, Watford.

WORKING MANAGER or FOREMAN.—Advertiser seeks engagement in Market Nursery or otherwise for either of the above; Bulbs and Root Forcing, Ferns and Chrysanthemums a speciality, also Cut Flowers in quantities (both Inside and Out), and Bedding Stuff; good Wreath, Cross, etc., Hand; over 20 years' practical experience in the general routine; highest references; age 36 years. T. J. COOK, 97, Llanover Road, Wembley, N.W.

C. W. CATT, Esq., will be pleased to recommend his SECOND GARDENER to any lady or gentleman; a thoroughly trustworthy and energetic Man, as Head Working Gardener, where 3 or 4 are kept; his credentials are of the highest order. Full particulars on application. Outwoods Gardens, Duffield, Derby.

JOURNEYMAN (Inside and Out); 2½ years last place, in flower garden and pleasure ground; leaving through death; age 24. Apply Mr. J. ALDER, Starston, nr. Harleston, Norfolk.

MR. J. R. TOOLEY would be pleased to recommend B. COLEMAN, as JOURNEYMAN, Inside, Fruits, or Plants; age 22. Apply B. COLEMAN, c/o Mr. Spencer, Chapel Street, Wellesbourne, nr. Warwick.

UNDER GARDENER, YOUNG MAN, seeks SITUATION as above; age 26; good references; 11 years' experience; disengaged; married when suited. W. SAVAGE, Paulerspury, Towcester, Northants.

GARDENER (Under) seeks SITUATION, Inside and Out; 2 years' good character, and 3 previous; leaving through place changing hands; disengaged; age 22. A. WORSFOLD, Benenden, Cranbrook.

MAN (43) seeks SITUATION in Nursery (Outside or In); experience in chrysanthemums, tomatoes, roses, ornamental trees, shrubs; clerical work if required; 3 years' experience; good references. B. S., The Laurels, Rock Terrace, Durrington, Worthing.

HON. F. G. WOLSELEY (Principal of the School for Gardening, Glynde, Sussex) highly recommends Lady Under-gardener who has completed her two years' training. Apply to H. WEARING, Castle House, Cirencester.

GENTLEMAN recommends YOUNG MAN, age 22, as Second of four or five; Inside and Out; 7 years' experience; good reference. Apply T. ROGERS, Michelmersh, Romsey, Hants.

IMPROVER (Inside or Inside and Out). Young Man seeks employment in garden; age 19; 6 years good reference. L. TYLER, Great Dalby, Melton Mowbray.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For JANUARY 14, 1911.

Please Repeat my Advertisement.

Name..

Address..

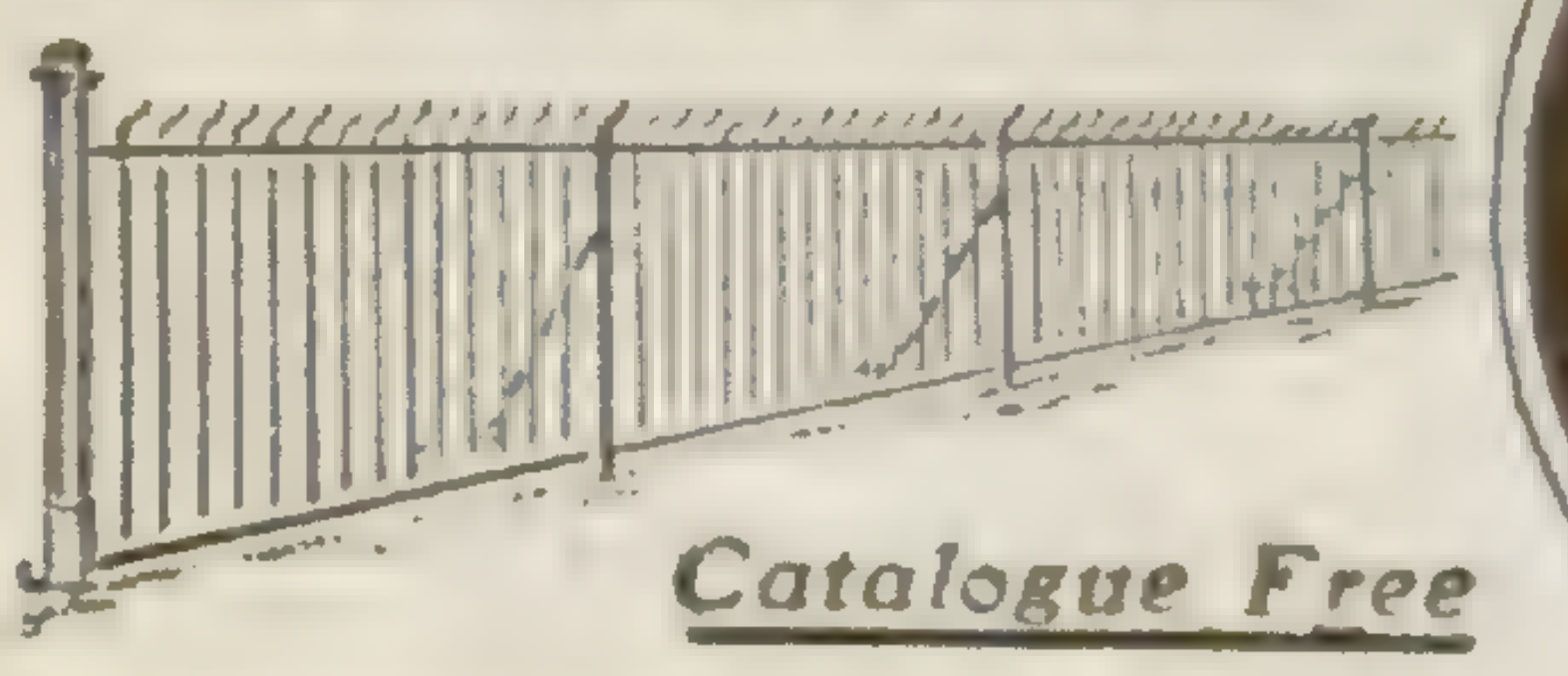
....

Date............................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

BAYLISS, JONES AND BAYLISS, LIMITED.

MFRS. OF IRON RAILING



Catalogue Free

PARK ENTRANCE GATES

IRON FENCING

on Request.

WOLVERHAMPTON AND 139 & 141 Cannon Street, LONDON, E.C.

SEEDS THAT GROW.

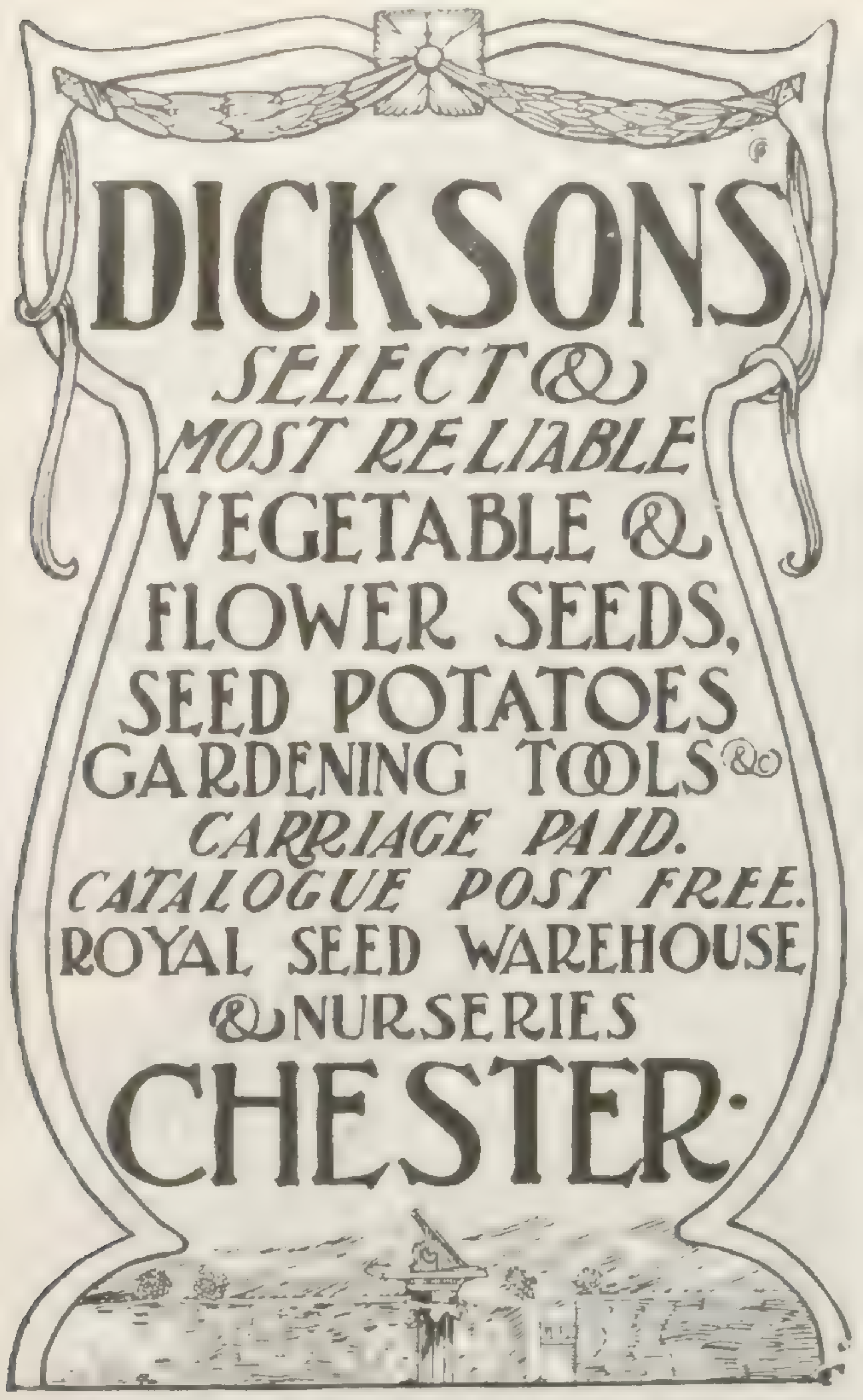
Harding's Illustrated Catalogue of Vegetable and Flower Seeds, with full particulars of his

GREAT PRIZE COMPETITION & FREE GIFT

Post Free on Application.

JOHN HARDING, F.R.H.S.,
(Late Letts and Harding),
Seedsman (Dept. A), WEST HADDON, RUGBY.

AMERICAN PERPETUAL CARNATIONS. Everyone interested in PERPETUALS should write for our 1910 Illustrated Catalogue, FREE. Read our "TREATISE ON CULTURE," 1s., post free. YOUNG and CO., Carnation Specialists, HATHERLEY, CHELTENHAM.



DICKSONS
SELECT &
MOST RELIABLE
VEGETABLE &
FLOWER SEEDS,
SEED POTATOES
GARDENING TOOLS &c
CARRIAGE PAID.
CATALOGUE POST FREE.
ROYAL SEED WAREHOUSE
& NURSERIES
CHESTER.

NEW CHRYSANTHEMUMS.

It gives us much pleasure to announce that we have secured several of the finest seedling Chrysanthemums of the year. Each raiser considers these the best of their productions, and when we remember that Master David, Master James, Sir Frank Crisp, George Hemming, Mrs. F. C. Stoop, Mrs. R. Brown, Miss Lillian Hall, etc., were raised by these gentlemen, no further comment is necessary.

Raised by Mr. T. STEVENSON.—Ernest G. Mocatta, yellow sport from Edith Jamieson.

varieties raised by Mr. H. PERKINS.—Harry Wood, 1911, J. H. Cocken, Lady Francis Ryder, Margaret Smith, Mrs. G. W. Ridgewell.

Varieties raised by Mr. G. MILEHAM.—A. G. Rodwell, G. F. Richardson, John B. Meakins, Miss Nellie Brockman, H. W. Meadows, Thos. Figg, R. C. Pulling, 1911.

Varieties raised by Mr G. CARPENTER.—Miss Elspeth King Clarke, Miss Nellie Hoar.

Varieties raised by Mr. A. H. HALL.—Incurved varieties: Master Albert Hall, Master Chas. Hall.

In addition good Novelties in Decorative Japanese varieties, Early Garden Japanse varieties, and Early Garden Single varieties.

Full descriptive Catalogue will be ready shortly, free on application.

H. J. JONES' NURSERIES, Ltd.,
RYECROFT, LEWISHAM.

HAWS'S IMPROVED WATERING CANS

ARE the most dependable for Garden or Greenhouse work. Their handiness, freedom from drip, perfect roses, and special finish, which ensures **longer wear**, are all that can be desired.

Genuine only with this Trade Mark from all High-class Seedsmen, Sundriesmen, or from the Original Patentee and Manufacturer—

J. HAWS, CLAPTON, LONDON, N.E.

Please name this paper.

SEED CATG. NOW READY.—56-page Catg. of Seeds, Bulbs, Choice Liliums, Tree Carnations, Ferns, etc. ELLISON, 57, West Bromwich.

AMARYLLIS (HIPPEASTRUMS).—Flowering-size bulbs, 10s.; extra selected, 15s.; mammoth, 20s. doz. ELLISON, 57, West Bromwich.

CANNAS, 10 different, 4s.; Gloxinias, 6 different, 2s.; Begonias, Tuberoses, Montbretias, Arums, etc. ELLISON, 57, West Bromwich.

AMERICAN TREE CARNATIONS, 12, all different, named, strong, healthy plants, 5s. 6d., cg. pd. List free. ELLISON, 57 W. Bromwich.

Do you wish to grow BIG ONIONS?

THEN YOU MUST HAVE

CRANSTON'S EXCELSIOR
— or AILSA CRAIG —

quite a waste of time to grow anything else. They are synonymous, although you may not believe it, and perhaps you fancy one name more than another. One thing, however, is certain; that I hold the best-selected stock of seed in the world. Guaranteed new, pure, and grown by the raiser. The original and proper name is "Cranston's Excelsior."

SEED—per packet, **1/-**
3 packets, **2/6** 12 packets, **9/-**

JOHN WILSON,
SEED MERCHANT,
HEREFORD.

Perpetual-Flowering Carnations.

Two Grand Novelties for 1911.

"R. F. FELTON," rosy-pink, 3 to 4 inch flowers. Awarded 3 Awards of Merit and 3 F.C.C.'s. And

"MRS. C. F. RAPHAEL," soft rose-red 5 inch flowers. Awarded 3 Awards of Merit and 2 F.C.C.'s.

Send for Illustrated List Free, describing the above and all best American and other Novelties for 1911.

H. BURNETT,
Carnation Specialist, **GUERNSEY.**

Awarded 15 Gold Medals, 3 Silver Cups, 10 Silver-Gilt, and 29 Silver Medals, 190 -1910.

TOMATO PLANTS (6 to 8 ins high). Ready for Fruiting Quarters. **Grown in Steam sterilised soil.** Very carefully packed and protected.
Price £3 per 1,000, Cash with order, carriage paid.
per 100, 7/-; 65 plants, 5/-; 50 plants, 4/-; 25 plants, 3/-; 12 plants, 2/-
Carter's Sunrise, Winter Beauty, Beauty of Wales, etc

W. & F. POAT, TOMATO GROWERS, **ST SAMPSON'S GUERNSEY, C.I.**
Cheques, Postal Orders, etc., should be crossed "Guernsey Banking Co., Ltd."
Booklet and Testimonials free on application.

LAVENDER, Old English, 2s. per doz., 10s. per 100. Dutch ditto, dwarfer than English, 2s. 6d. doz., 15s. 100; 50 at 100 price; free on rail for cash with order. Sample doz., postage free, 4d. extra. CHILVERS and SON, Hunstanton.

Please mention
THE GARDENERS' MAGAZINE
when writing to Advertisers.

100,000 FREE COPIES.

Dobbie's New Catalogue
and Guide to Horticulture.
224 PAGES. 210 ILLUSTRATIONS.

A COPY WILL BE SENT WITH PLEASURE GRATIS TO ANY ONE APPLYING FOR SAME, WHO ENCLOSES 3d. IN STAMPS TO DEFRAY COST OF POSTAGE, AND MENTIONS "GARDENERS' MAGAZINE."

DOBBIE & CO.,
The Royal Seedsmen, EDINBURGH

ROCK GARDENS,

Small or Large,

DESIGNED
by Experts;

CONSTRUCTED
by thoroughly competent men.

PLANTED
in the most economical and effective manner.

ROCKERY STONE
supplied in any size blocks.

CATALOGUE OF ALPINE AND ROCK PLANTS, FREE ON APPLICATION.

R. WALLACE & CO.,
Kilnfield Gardens, COLCHESTER.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

Perpetual-Flowering CARNATIONS.

This year's Novelties and all the Leading Varieties.

Send for descriptive Catalogue of 80 varieties with particulars when to stop them.

C. ENGELMANN, CARNATION GROWER,
SAFFRON WALDEN.

STOP! WHY PAY MORE?

YOU will notice the very, very high prices of many seeds this year if you look through the catalogues you receive; but mind, you need not pay it unless you like. I can supply you at the old price. Peas, 1s. quart; Broad Beans, 5d. quart; Kidney Beans, 10d. quart; Onion Seed, 4d. oz.; Early Potatoes, 1s. 3d. peck. Flower Seeds very cheap. Send your address on a post card before placing your order. GEO. F. LETTS, F.R.H.S., Seed Grower, 2, Hadleigh, Suffolk.

Orchids! Orchids!! Orchids!!!

The undersigned begs to announce to the Public that he is in a position to supply, whole ale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application.—**J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

AMERICAN TREE CARNATIONS, best varieties, including Britannia, White Perfection, etc., strong young plants from 2in. pots, 3s. doz., 20s. 100, flowering plants, 5in. pots, 8s. per doz. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

WHY BUY FOREIGN DOORS? — We make all kinds of woodwork to compete against foreign. Timber, portable houses, woodwork supplied for United Kingdom or export. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

Brilliant Honours, 1910.

WEBBS'

Vegetables and Flowers

Gold Medal Collection of Webbs' Vegetables at the R.H.S. Show, Holland House, London, 1910.

Exhibited by The Hon. Vicary Gibbs.

Cardener: Mr. Edwin Beckett

Gold Medal Collection of Webbs' Vegetables at the R.H.S. Show, Holland House, London, 1910.

Exhibited by The Hon. Vicary Gibbs.

Cardener: Mr. Edwin Beckett

19 GOLD MEDALS AND SILVER CUPS IN 1910

Awarded to the Produce of Webbs' Celebrated Vegetable and Flower Seeds.

LONDON (R.H.S.)	Gold Medal
SHREWSBURY	Gold Medal
LIVERPOOL	Gold Medal
BIRMINGHAM	Gold Medal
NORTHAMPTON	Gold Medal
OXFORD	Gold Medal
KENILWORTH	Gold Medal
HANLEY	Silver Cup and Gold Medal

(Cup won for 3rd year in succession).

EDINBURGH	Gold Medal
GLASGOW	Gold Medal
CARDIFF	Gold Medal
WOLVERHAMPTON	Gold Medal
RICHMOND	Gold Medal
YORK	Gold Medal
BURTON-ON-TRENT	Gold Medal
LEAMINGTON	Silver Cup

(Cup value 30 Guineas for best Exhibit).

PREMIER AWARDS FOR COLLECTIONS OF VEGETABLES IN 1910

Won in Open Competition by Messrs. Webbs' customers with Vegetables grown from their Seeds.

LONDON (N.V.S.)	6 kinds	First Prize
SHREWSBURY	12 kinds	First Prize
LEICESTER	6 kinds	First Prize
WINDSOR	9 kinds	First Prize
COVENTRY	6 kinds	First Prize
PORTSMOUTH	9 kinds	First Prize
LONDON (R.H.S.)	6 kinds	First Prize
CARDIFF	9 kinds	First Prize
NORTHAMPTON	9 kinds	First Prize
HANLEY	9 kinds	First Prize
LEAMINGTON	12 kinds	First Prize
RICHMOND	12 kinds	First Prize

(Also many First Prizes for Single Dishes of Vegetables, and Highest Honours for Flowers).

For the Newest and Best Vegetables, Flowers, Potatoes, etc.,
see
WEBBS' SPRING CATALOGUE FOR 1911. NOW READY.

WEBB & SONS, The Royal Seedsmen, WORDSLEY, STOURBRIDGE.

VOL. LIV.—No. 2,984. SATURDAY, JANUARY 7, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

The New Year.

MR. T. WILKINSON.

In referring to the possibilities of the year on which we have entered in its relations to horticultural activities, we would first express our high appreciation of the generous support we received during the past year from business friends, readers, and contributors, and assure them that we hope the present year may be both pleasant and prosperous. While we do not venture to indulge in prophecy as to what the year has in store for those who are engaged in gardening or in the various activities associated therewith, we are impressed with the conviction that there is full justification for anticipating the future with a spirit of hopefulness. There can be no doubt that the Coronation of the King and Queen in June next will have a highly beneficial influence upon horticultural enterprise, and especially upon that section of commercial horticulture devoted to the production of supplies of plants, flowers, and fruit for market purposes. This great function, and the festivities associated therewith will, it may be safely assumed, give rise to a largely-increased demand for the choicer products of the garden, and the endeavour to meet increased requirements will not only necessitate greater activity on the part of the market growers and nursery firms generally, but in large numbers of private gardens. This increased effort will, let us hope, have the effect of bringing somewhat larger returns to those engaged in commercial horticulture, and prove advantageous to those who are in charge of private gardens by the greater interest that will be aroused in the garden and its productive capacities. In some cases the resources of the garden may be heavily taxed, but with our knowledge of the gardeners of this country we feel that there need be no apprehension as to their being otherwise than fully equal to the most exacting demands that may be made upon them. The stimulus that will be given to the affairs of the garden by the Coronation and its festivities will be supplemented by activities in other directions. The Council of the Royal Horticultural Society have, as usual, arranged a comprehensive and otherwise excellent programme for the year, and in one direction a distinct new departure will be made. This year the summer exhibition will be held at Olympia, instead of in the grounds of Holland House, which are no longer available for the purpose, and it will be a matter of considerable interest to see whether it will prove financially successful. Many Fellows and others who fully appreciate the charm of flower shows held under canvas in beautiful grounds, will probably regret the change. But it must be remembered that the great building at Addison Road is conveniently situated near a railway station in connection with all parts of London and its suburbs, and has so large an area as to afford ample space for an immense display of the products of the gardens and for many thousands of visitors. Moreover, the building is so well lighted as to admit of the exhibition remaining open during the evening, and, taking advantage of this, the Council have arranged to keep it open until ten o'clock on the evening of the first and second days at a low fee, and thus afford an opportunity to those who are unable to leave their ordinary avocation during the day to participate in the pleasure an exhibition of the first class is so well able to give. The Temple Show will have additional interest from the fact that, in view of the great International Horticultural Exhibition at Chelsea in May, 1912, the Royal Horticultural Society will not hold an exhibition in the gardens of the Inner Temple next year. The mention of the International Horticultural Exhibition of 1912 reminds us of the necessity of urging upon all who are jealous of the prestige of British horticulture and have the means, the importance of their showing their practical sympathy with the arduous labours of the Executive Committee by at once contributing liberally to the funds that will be necessary to carry out the exhibition and the various functions associated therewith. It is not less necessary that the local committees which have been formed or are in process of formation should bestir themselves, because on their efforts will the financial support materially depend. A large sum will be required to provide the prizes in the four or five hundred classes that have a place in the provisional schedule, the exhibition houses, the bands, to entertain the foreign guests in a manner befitting so important an occasion, and to meet the multitudinous other expenses, and every penny of this should be in the hands of the treasurer by the end of this year. The sum required, although large, is well within the compass of the great flower-loving community of this country, and if there is united effort an amount fully equal to the requirements, if not in excess of them, will be readily forthcoming. It is well known from the announcements we have made that the National Rose Society will hold three exhibitions during the year, but it may be that the activities of the society will not be limited to these, for the members of the Council possess abundant fertility of resource, and are quick to make such variations in its work as are likely to quicken the interest in the society and increase its usefulness. The trials carried out by the National Chrysanthemum Society during last year were so successful as to justify the anticipation that other trials will be included in this year's programme, and, assuming this will be done, we would suggest as worthy of the consideration of the committee the question of organising visits to nurseries and gardens in which the trials are being conducted, and also to trade and private establishments wherein chrysanthemums form an important feature. Such visits should be not less pleasurable, and certainly more useful than the excursion annually made. Possibly the National Rose Society might with advantage arrange for one or two visits to famous rose gardens and rose nurseries in the course of the season of roses. Another event of considerable importance in what promises to be an eventful year is the commencement of the work of the National Hardy Plant Society, which was formed last year. There is abundant scope for such society, and there are cultivators innumerable of hardy plants, and if the latter will give the support to the society it should receive from them it will at once be placed in a position to exercise an important influence for good upon hardy plants and their cultivation.

Mr. T. Wilkinson, who has had charge of the Tyntesfield gardens, Flax Bourton, during the past nine years, illustrates in a marked manner the great advantage of a varied and thorough training early in life, and especially in the case of those who are fortunate in possession of natural abilities of a high order. The gardens of Tyntesfield are properly regarded as of exceptional interest for their high keeping, and Mr. Wilkinson occupies a foremost position among the practical horticulturists in the district of which Bristol is the centre. A native of Midlothian, Mr. Wilkinson commenced his gardening career at Pennycuick House, the seat of the late Sir George Clerk, Bart., under a Scotch gardener of the old-fashioned type, but a man of ability. After a stay of four years he went to Mavisbank, where heaths and hard-wooded plants formed a great feature: thence he moved to Blythswood, and subsequently to Castlemilk, Lanarkshire, where great improvements were being effected. Here Mr. Wilkinson was made indoor foreman, and after two years' service he came to London for a similar period, and obtained a good insight into gardening in the Metropolis. Mr. Wilkinson's first position as head gardener was at Weymouth with the Rev. Talbot Greaves. Here he remained until twelve years later, when the place was sold. Thence he went to Cedars Wells, Somerset, the residence of C. C. Tudway, Esq., and, encouraged by his employer, he commenced the exhibition of fruits and chrysanthemums, and achieved much success. Resuming the position of head gardener to Mr. Greaves, Mr. Wilkinson spent some years with him at Torquay and Bristol, and achieved much success at the former as an exhibitor of chrysanthemums, and at the latter in showing fruit, and especially grapes. Subsequently he was appointed head gardener to Anthony Gibbs, Esq., father of the present owner of Tyntesfield, who was keenly interested in his gardens, and ever ready to effect whatever improvements were desirable. During the five years that elapsed previous to his death the gardening staff was kept busily engaged with rearranging and planting, and Mr. Wilkinson acknowledges with gratitude the valuable assistance he received from the Hon. Vicary Gibbs. The grape vines at Tyntesfield were not in accordance with Mr. Wilkinson's ideas when he assumed charge, and his first endeavour was to lift them all, and as the vineries are one hundred and eight feet long, lofty, and of a proportionate width, this was a big undertaking. The results have fully justified the endeavour, for the crops are such as to give Mr. Wilkinson a high position as a grape grower.

"Gardeners' Magazine" Almanack.—With this issue we have the pleasure of presenting our readers with a double-page almanack for the current year, which is equally remarkable for its attractiveness and utility. In the calendar for the twelve months will be found entries of all the important exhibitions and meetings that will be held in London and the provinces during the year, and the almanack has much value for purposes of reference. The beautiful rose Juliet, the subject of the illustration in colours, is one of the most noteworthy introductions of recent years, and has the promise of attaining to a high degree of popularity. This fine hybrid briar, as our readers have been already informed, was raised by Messrs. William Paul & Son, Waltham Cross, Lim., in their nurseries, and has received the exceptional distinction of a First Class Certificate from the Royal Horticultural Society. When the firm first exhibited blooms at the Horticultural Hall, in the summer of 1909, the R.H.S. Floral Committee unanimously conferred an Award of Merit upon the variety, and last year, when exhibited at the Holland House Show, the same committee was so impressed with its distinctness and beauty that the award of a First Class Certificate was made. Juliet has the merit of blooming during the summer and autumn, and the flowers are delightfully fragrant.

List of Orchids Used in Hybridisation.—With a generosity and thoughtfulness that was very highly appreciated by the R.H.S. Orchid Committee, Mr. J. Gurney Fowler, the chairman, presented each member on January 3, with a "List of Orchids Used in the Fertilisation of Hybrids which have received either First Class Certificates or Awards of Merit from the Royal Horticultural Society." The list is brought down to December 31, 1909, and is a work of fifty-one pages, interleaved with ruled paper to receive additions. Mr. Gurney Fowler has produced this extremely useful publication at his own cost, and it is for private circulation only. The arrangement is very simple, three columns to a page; for instance, under Cattleya, the first entry reads: "Acklandiæ—C. Forbesi C. quinquecolor," which means that Cattleya Acklandiæ crossed with Cattleya Forbesi has produced a hybrid named C. quinquecolor. This system is followed all through, and where one parent is itself a hybrid, the parentage is given in brackets just below its name. Needless to say the members accorded their chairman a very hearty vote of thanks. Mr. Fowler also proposes to bring the list right up to date immediately in a supplement that can be cut up and pasted into the list proper.

North of England Horticultural Society.—On Friday afternoon of this week the inaugural meeting of the North of England Horticultural Society is being held at the Town Hall, Leeds, with J. Hastings Duncan, Esq., M.P., in the chair. For some time past it has been felt by Northern horticulturists that the excellent work that is being done by the Royal Horticultural Society could not be participated in by horticulturists in the North to the extent that could be desired, owing to the great distance from London, and the consequent difficulty of attending the fortnightly meetings. It was therefore decided in October last to form a horticultural society, in affiliation with the Royal Horticultural Society, with headquarters at Leeds. A provisional committee was formed to prepare the necessary rules and regulations. The society will be under the management of a council, and there will be a Floral Committee, a Fruit and Vegetable Committee, and a Scientific Committee. The idea is to promote and encourage every branch of horticulture in the North of England by means of periodical meetings and exhibitions. It is intended that the work should be of a distinctly educational character, and that it shall not devote its efforts exclusively to the holding of exhibitions. The object of the meeting that is being held on Friday is to confirm what has been done by the Provisional Committee. The society has been fortunate in securing as secretary the Rev. J. Bernard Hall, of Dalston, Cumberland, who, as hon. secretary of the Northern Counties Fruit Congress, held at Hexham in October last, gave practical proof of his remarkable ability in the organisation of horticultural bodies.

Black Currant Mite.—With reference to an article which recently appeared in these pages, on the difficulties with which fruit growers have to contend, Messrs. J. R. Pearson and Sons, Lowdham, Notts, write: "Surely Mr. Hammond's pessimistic observations on the black currant mite are rather out of date. We have conclusively proved that the mite is as easily dealt with as aphis, if only taken in hand at the proper time. The bushes should be sprayed with the old-fashioned quassia and soft soap mixture at the end of March, twice in April, and again early in May. We have heard good reports from growers who have tried Professor Collinge's recommendation of dusting with unslaked lime and sulphur, but, the spraying having been found absolutely efficacious, and more cleanly and easily applied, we have recommended its general adoption. This information is not new, having been published several times, and in our catalogue for the last six years, but Mr. Hammond's remarks seems to show a need for its repetition."

"The Botanical Magazine."—The plants figured and described in the current issue of this publication are: Dendrobium Dartoisianum, a handsome species, discovered in Indo-China five years since, and introduced to cultivation by Mr. G. Brouckart; the flowers are yellow, with purple tips to the petals and sepals. Cladothamnus pyrolæflorus, a neat-growing shrub producing small red and yellow flowers; it is a native of Alaska, and thrives under the same conditions as Rhododendron hirsutum. Aquilegia flabellata nivea, a white-flowered form of this Japanese species, possessing much beauty. Aster Falconeri, a handsome species, which has its home on the mountains that surround the Valley of Kashmir. This species was introduced to cultivation by Messrs. Barr and Sons, and the illustration in the "Botanical Magazine" has been prepared from material supplied by Mr. William Marshall, V.M.H. Phædranassa Carmioli, an interesting species, with bright red and yellow flowers, and thriving in an intermediate house.

A Small Holding in the United States.—Mr. Martin Arnold, a Swiss, farms 20 acres in Nebraska, and has been so successful in cultivating land that was almost barren to begin with, that the Department of Agriculture has published a bulletin giving his methods and achievements. It is said that Mr. Martin makes 2,000 dollars, or about £400 a year from his holding, and yet, so poor was the land that he only paid £250 for it a few years ago.

WICHURAIANA ROSES AS STANDARDS.

Until the advent of Rosa Wichuraiana and its many hybrids roses in standard form had fallen out of favour in many gardens, but at present we have few more charming features than well-grown specimens of this comparatively new class, or section. Being so hardy, and free in growth, they are just right for standards, a form of culture that needs vigour and hardiness in the varieties used, for without these characteristics they fail to draw sufficient sap through the briar stem to keep the whole head in a healthy and thriving condition. At present the Wichuraiana hybrids are much grown upon stems of extra height, and their naturally drooping habit thus shows off to great advantage, producing perfect cascades of blossom. Nor are there any roses more certain of blooming than these, and now that we are securing a perpetual-flowering strain they promise to be increasingly useful

[Photo: F. Mason Good.

STANDARD SPECIMENS OF DOROTHY PERKINS

In the gardens of Hartley Grange, Winchester, the residence of F. Walkinshaw, Esq.

As standards in pots they have, during the last few years, been in general use at the exhibitions, while few subjects are more suitable for the conservatory, the erect stems carrying the head high enough to show it off to advantage. Upon the lawn or by carriage drives they make a noble feature early in the season, and if not so perpetual as some other roses, they produce an immense crop of flowers on their long stems. Another advantage is the extreme cleanness of foliage and the absence of mildew and red rust. Frequently, too, there is a fairly good display of bloom in the autumn. Then, again, we have such a grand range of colours, and with the numbers of hybrids coming upon the market the hues are certain to be increased.

Dorothy Perkins, illustrated herewith, is one of the very best, and most reliable, and so, too, is the white sport from this. Dorothy Perkins has also sported in blush and other forms, such as Lady Godiva, Christian Curle, and, I believe, Dorothy Dennison. I find, however, that these sports have a decided tendency to revert, even the same truss sometimes showing more than one distinct form. A new hybrid, Aviateur Bleriot, promises to be one of our finest yellow climbers, with a more constant yellow shading than is found in William Allen Richardson. It is an excellent grower, and freer in blooming than many. Shower of Gold is another new yellow, but this does not bloom in such large trusses as most. One of the sweetest scented roses is Gardenia, another golden-yellow, when quite young, but lighter as it expands. The foliage of this variety is very handsome. Minnehaha I prefer to Dorothy Perkins in some respects. It lasts longer, and has fine pyramidal-shaped trusses of large size.

One of the brightest of all is Excelsa: almost a deep scarlet, double, lasting well, and with very thick, glossy foliage. Réné André is a great favourite with me, as it continues in bloom a long time, has beautiful blendings of copper, orange, peach, and rosy-pink, while its delicate perfume rivals that of L'Ideal, which was one of its parents. It is also one of the earliest to flower. Ernest Grandpierre is another of extra fragrance, but a late bloomer, with clear yellow buds and almost white flowers. A yellow that opens early, and is also one of the best autumn bloomers is Francois Foucard. Coquina is a single, pale pink tipped with rose, and very pleasant. Perhaps one of the most popular is Hiawatha, a deep crimson, with an almost white centre, and very showy golden anthers. This variety, and Delight, which favour one another, except that the latter is a clear carmine, are both rather late flowering, and continue bright much longer than the rest. Elisa Robichon is a small, perfectly shaped flower of salmon-buff, with a yellow base; this, and Evergreen Gem, have very slender, graceful growth, that droops rather more than most. The last is an early bloomer.

Jersey Beauty is also an early pale yellow, fairly large, but single, and with very showy stamens. Being so hardy, it might well be used in place of the Macartney rose in exposed positions. Another good single is Joseph Billiard, a bright crimson, tinted with yellow, beautiful with its long buds, and very effective when fully open. Leontaine Gervais is peculiar, with its deep nasturtium-red flowers, intermingled with carmine and salmon. I find a new variety in Madame Alice Garnier, quite perpetual. This is pervaded with the orange-copper found in Ophrie. It is small, very double, and has good-sized trusses. After White Dorothy Perkins, Schneeball is a good snow white, the blooms neat, and borne in trusses. My favourite white, however, is the old type or species, from which this valuable section originated. It blooms about the middle of July, and continues until after the first frosts. The flowers are single, with yellow stamens that go quite black with age; it flowers in trusses, and has long trailing growths of handsome shining green foliage, and is as nearly evergreen as any rose we have. But this list does not contain half of the excellent varieties available, though my space will allow of no more being mentioned.

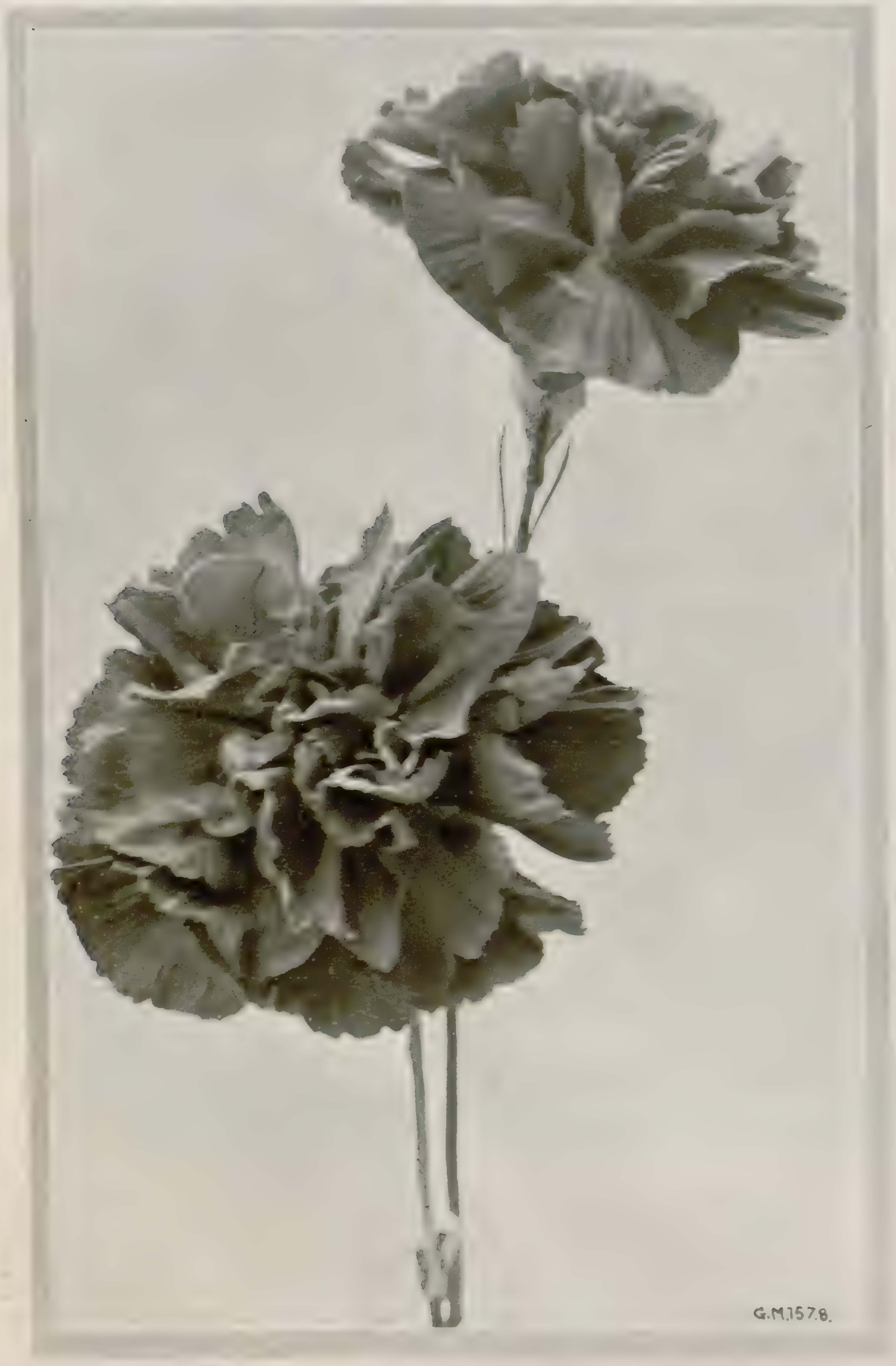
When growing these roses as standards it is advisable to prune hard the first year after planting in order to have matured and sound growth upon established roots. Afterwards they simply need to have the flowering shoots trimmed out and younger wood encouraged.

I have seen these roses upon eight feet to nine feet stems (and even higher), when they drooped over and spread so widely as to form a little arbour, after the fashion of the weeping ash and willows. There is more than one contrivance on the market now to keep the growths in umbrella-like form, and spread them out effectively, even so much as to allow of a small seat beneath.

A. Piper.

THE BEST SCARLET PERPETUAL CARNATION.

In every flower certain colours are much harder to obtain in perfectly clear shade and tone than others; hereditary traits make it so. In perpetual carnations the rule is, after yellow, red. All of us have had red and scarlet seedling carnations, and watched them reveal some short-comings. Four years ago I sowed some three thousand perpetual carnation seeds, all from what we termed "red blood," that is, red being the predominating colour of their ancestors. From this large number I selected some twenty scarlet seedlings for further test, some of them most glorious in form and colour, but to-day we have not a single member of that scarlet army left. All have been discarded, owing to some defect or the other. Old Flamingo was the parent of many, and certainly it did produce some very fine offspring; Adonis was another, and also Elizabeth, a seedling from Winter Cheer.



NEW PERPETUAL CARNATION SCARLET GLOW.
A valuable addition to its class; the colour of the flowers is rich scarlet.

It is difficult to get a bright clear colour in scarlet seedlings, often they become dull and slaty in mid-winter, but, worst of all, as a rule, all red varieties are very prone to fungoid diseases, and it is this which checkmates the grower, often destroying years of hard work.

Looking at some of the old varieties which have gone before, in England, Winter Cheer is the only parent which has produced worthy children. William Robinson, Christmas Cheer, and Elizabeth are a few, and Mr. A. Smith obtained for us that grand variety Britannia by crossing Mrs. T. W. Lawson on to Winter Cheer. But beyond these we have none of note. One of the best reds which ever came from the United States was the old variety America, that grand old pathfinder of years ago, which was a great red in its day, and deserved to be popular; we all liked that dull coral shade in England. Old Portia was very bright, but very small. Vesper never quite received the attention it deserved. G. H. Crane certainly was good, and it is from this variety that some of the best seedlings have come. Flamingo will always live in my memory. It was, and always will be, my model flower for form.

Adonis reached the high-water mark for a rich bright pure colour, but the disease! oh! what a trouble it was in those days. Crusader, with its poor colour and soft growth could not survive, but Cardinal made a great stride, giving us a glorious rich deep scarlet, a real winter shade, but disease killed the Cardinal. Then came that battle royal between Robert Craig and Victory. They fought for supremacy at nearly every show in America, and their triumphs were narrated in the horticultural press. But where are those varieties to-day? Robert Craig was not free enough commercially, and the colour failed in mid-winter, while Victory, undoubtedly the better of the two, was, as a rule, defeated at the shows by its contemporary, which has only just died. None of us grow Victory now on account of it being so subject to rust disease. We have also freer flowering varieties. Defiance was an utter failure over here, and the more modern variety, O. P. Bassett, is not adapted to our climate, though it is still considered good in America.

So we have only three scarlet varieties left from which to select the winner—Britannia, Beacon, and the new aspirant to fame, Scarlet Glow. Britannia you all know, and undoubtedly have pleasure in its acquaintance. Beacon is certainly more productive than Britannia, and pays a commercial grower better. It is not subject to any disease, but, of course, does not make quite so noble-looking a plant, and the flowers are of orange-scarlet shade, and, according to the British idea, not so well formed, but Beacon grows much freer than Britannia in mid-winter. To my idea, however, the new variety, Scarlet Glow, of which a characteristic illustration is given herewith, is head and shoulders the best scarlet perpetual carnation to-day. The colour is the whole thing, and is a glorious shade. The flowers have a refined appearance and are of average size. The habit of growth is clean and healthy, and its productive power is up to any other variety, if, indeed, it could not lead on Beacon, certainly its closest rival.

Montagu C. Allwood.

CANARY GUANO

"THE BEST IN THE WORLD."

There is no Fertilizer that gives such good all round results as CANARY GUANO. It is used in the King's Gardens, and by leading Amateurs and Trade Growers all over the Country. A post card to the Manufacturers will ensure full particulars.

SOLD IN BAGS AND TINS BY SEEDSMEN, NURSERYMEN, ETC.

Manufactured by — **THE CHEMICAL UNION, LTD., IPSWICH.**

118 YEARS REPUTATION.

JOHN K. KING & SONS'

"PEDIGREE"

SEEDS.

These world-renowned Seeds are grown on Messrs. John K. King & Sons' great Essex Seed Farms, and are forwarded carriage free by post or rail.

Manual of Gardening for 1911.

The Best Seed Book of the Season.

Beautifully Illustrated and full of Practical Information.

Now Ready, post free for 3 stamps.

JOHN K. KING & SONS,

Seed Growers to H.M. the King,

COGGESHALL, ESSEX;

Also READING.

BUNYARD'S FRUIT TREES

The Best Quality and Largest Selection at Moderate Prices.

WRITE FOR CATALOGUE.

GEO. BUNYARD & CO., LTD.,

Royal Nurseries,

MAIDSTONE.

HILLIERS' HARDY HAMPSHIRE TREES

OF ALL KINDS

FROM EXPOSED CHALK HILLS,

350 to 400ft. ABOVE SEA LEVEL.

APPLES Free from AMERICAN BLIGHT.

PEARS, PLUMS, PEACHES, CHERRIES,

Sound and Hard.

CARRIAGE PAID. QUOTATIONS BY RETURN POST.

Catalogues Free.

HILLIER & SONS (Dept. B),

Nurserymen, Seedsmen, &c.,

WINCHESTER.

AMERICAN TREE CARNATIONS AND MALMAISONS.

My Season's Catalogues of the Choicest Collection of these flowers are NOW READY, and will be sent gratis and post free to all applicants.

E. J. WOOTTEN,

Fairoak, EASTLEIGH.

STOVE AND GREENHOUSE PLANTS,

FOLIAGE AND FLOWERING

SPECIMEN ORCHIDS! RARE ORCHIDS!

CHEAP ORCHIDS!

ROSES, SHRUBS, and Everything for the Garden.

Kindly send for New Illustrated Catalogue.

JAMES CYPHER and SONS, EXOTIC NURSERIES, **CHELTENHAM.**

NEW PRIMULA:

"QUEEN OF THE NORTH."

This is quite a new break in Primulas, and for decorative purposes is sure to become popular. It is the result of a cross between "Avalanche" and Stellata "The Lady," and has the size and substance of flower of the former, with the deep, almost black, foliage and stems of the latter.

Per Packet, 1/6 & 2/6

NEW CATALOGUE FOR 1911 NOW READY, FREE ON APPLICATION.

DICKSON, BROWN & TAIT,
CORPORATION STREET, MANCHESTER.

Chester Nurseries
Over 500 Acres in Extent.

GRAPE VINES.
Strong and perfectly ripened.

Strong and Extra Strong Canes for planting out, **5/-** and **7/6** each.
Extra Strong Canes for fruiting in pots, **10/6** and **12/6** each.

FIGS IN POTS.

Strong Bushes, **3/6, 5/-,** and **7/6** each.
Extra Strong Bushes, **10/6** to **15/-** each.
Fan-trained for walls, **5/-, 7/6, 10/6,** and **15/-** each.

SEAKALE
(Forcing).
LILY WHITE, SOLID IVORY, & PURPLE,
Extra Strong, **14/-** and **18/-** per 100.
Extra Extra Strong, **21/-** per 100.

ASPARAGUS
(Forcing).
Extra Strong, **20/-** per 100.

New Illustrated Catalogues of all Departments free on application.

DICKSONS,
Royal Nurseries, CHESTER.

1810 *SEND FOR OUR* 1910
Centenary Catalogue
OF
Ornamental Trees and Shrubs, Roses, Rhododendrons, Climbers, Fruit Trees, Forest Trees, Herbaceous and Alpine Plants;
ALSO
LANDSCAPE GARDENING.

GEO. JACKMAN & SON,
Woking Nurseries, SURREY.
(Nurseries 200 acres.)

JARMAN & CO.,
Chard, SOMERSET.

SWEET PEA NOVELTIES.

MRS. TOWNSEND, white ground, shaded and flaked with deep heliotrope blue, flowers large and beautifully waved.
Per Packet, 1s., 12 Seeds.
Award of Merit Royal Horticultural Society, July 6th, 1909, and First-Class Certificates at York Gala and Wolverhampton Floral Fete.

IDA TOWNSEND, a grand deep waved mauve; very large bold flowers.
Per Packet, 1s., 12 Seeds.

MRS. CAWTHORNE, blush white; flowers of immense size; both standards and wings wavy, of the most advanced Spencer type.
Per Packet, 1s., 12 Seeds.

PRIMROSE KING, the deepest yellow yet sent out; flowers of immense size.
Per Packet, 1s., 12 Seeds.

ROSES. FRUIT TREES.
A grand collection of these in stock.
Descriptive Catalogue post free on application.

TAKE NOTICE.
Intending planters should send for the
STANCLIFFE CATALOGUE OF TREES, &c.

Our Stocks, which are grown on the highest and most exposed hills of Derbyshire, are in fine condition, and are sure to give satisfaction. Note the prices before ordering elsewhere.

Rockery Stone, 1/- per ton.
THE STANCLIFFE ESTATES CO., LTD.,
DARLEY DALE, DERBYSHIRE.

ORCHIDS.

Amateurs interested in Orchids should write for our
Amateur's Guide,
2nd Edition, free.
Giving Treatment, Soils, Description of Flowers; Illustrated.

MANSELL & HATCHER, Ltd.,
Rawdon, Yorkshire.

A SPECIALITY FOR MORE THAN 50 YEARS.
POT VINES
Strong well-ripened Canes, clean and healthy, for planting and fruiting. Descriptive List FREE.
ALSO FIGS AND PEACHES.
J. R. PEARSON & SONS, LOWDHAM, Notts.

THE MOST UNIQUE
SWEET PEA LIST
In the World
IS NOW READY.
PLEASE SEND POSTCARD FOR SAME.

My ANGLO-AMERICAN COLLECTION, 5/-

15 Varieties (including Roosevelt, Nightingale, Perkin, Mrs. H. Dickson, Sunpf. Crimson) is the best value in the Sweet Pea world. Will make a very appreciative present. My stocks are the truest humanity can produce! My aim is to oblige!

G. H. MACKERETH,
The Sweet Pea Clearing House,
ULVERSTON

Note my special offer of Mr. W. P. Wright's most interesting Sweet Pea Note Book.

THE NEWER JAPANESE CHRYSANTHEMUMS.

It is, I believe, generally agreed that competition in the Japanese classes at the late shows was keener and the awards more closely contested than has been the case for several seasons past. Numerous instances have come under my notice where valuable prizes, first and second, have been won by the narrow majority of one point, and in one case but half a point separated first and second exhibits. This close competition goes to prove conclusively that any new and improved variety is a distinct gain. As an illustration I would mention the introduction of that charming variety the Hon. Mrs. Lopes two years ago. Compare this with General Hutton, Mrs. W. Knox, or even Bessie Godfrey, and it will be found that an exhibitor who has Mrs. Lopes instead of either of this trio would add at least two points to his aggregate. I do not, of course, say this because the variety is new, but because it is an improvement on existing varieties of a similar character. With a view of assisting exhibitors who have not an opportunity of seeing the new varieties I give below a selection of those deserving of a trial.

Foremost in the list is Ernest G. Mocatta (Jones), named after the employer of one who can safely be termed this season's champion in the Japanese section—Mr. T. Stevenson, of Woburn Place, Addlestone. The newcomer was obtained as a sport from Edith Jameson, itself quite one of the best of Japanese varieties in shape and refinement, and as so well represented in the present illustration, E. G. Mocatta possesses these characteristics in an eminent degree, and the blooms are fully as large as those of the parent. In colour it is clear bright canary yellow, and it has rather a wider and thus a better petal than its parent. D. B. Crane (Silsbury) has extra long drooping petals, which build up a full-sized shapely bloom. In colour and shape it is, perhaps, best described as a bronze form of the Hon. Mrs. Lopes; F.C.C., N.C.S., and is of large size.

Countess of Granard (Herbert) is in form between F. S. Vallis and General Hutton, therefore quite desirable. In colour it is a rich yellow, with an emphasised centre, at times tinted bronze.

Mrs. G. C. Kelley (Wells) is a broad-petalled incurving variety of large size, displaying more of the silver reverse than the rosy amaranth of its surface. Mrs. George Hartman (Jinks), F.C.C., N.C.S., is a large, full flower, made up with narrow florets of a rich crimson terra-cotta hue.

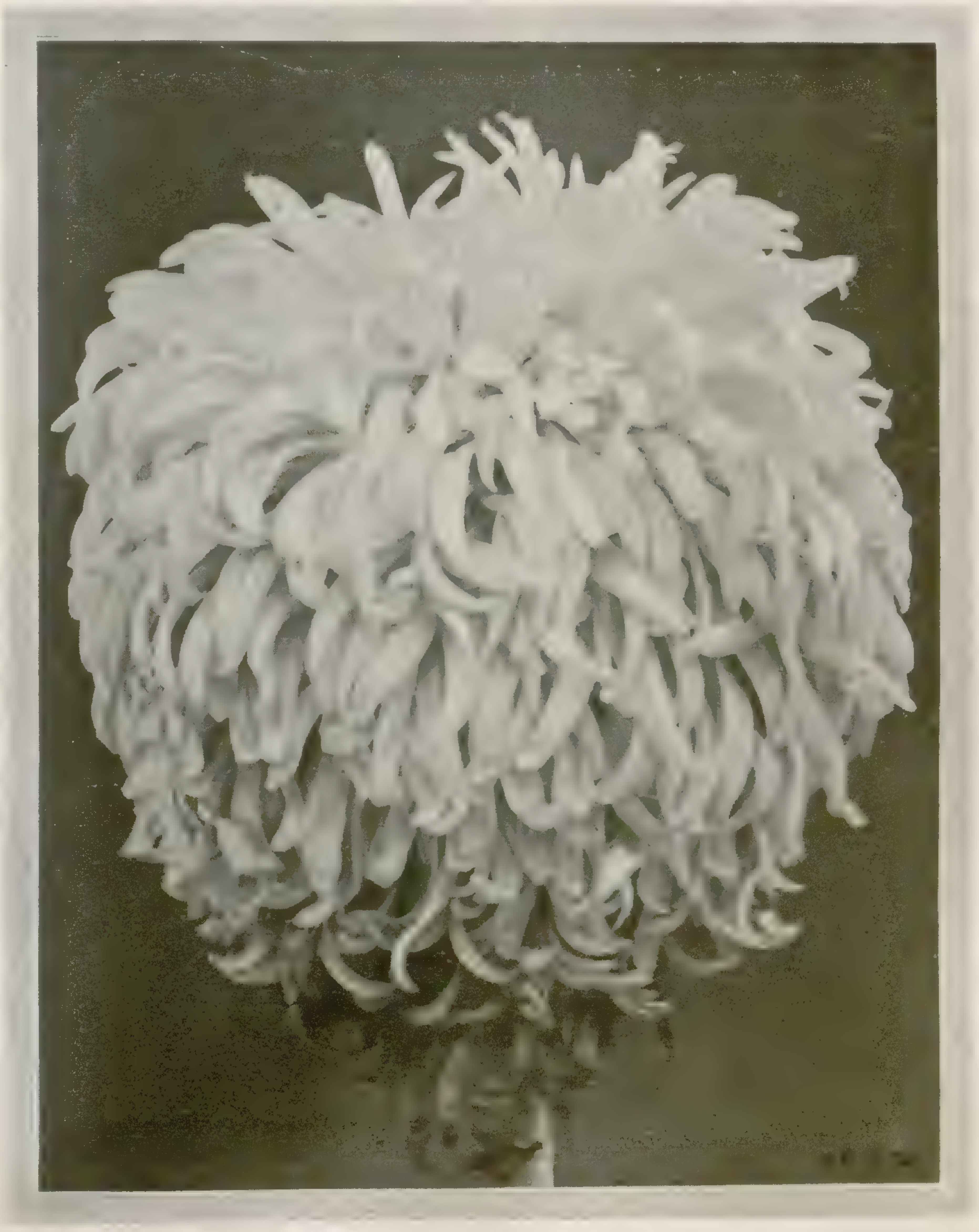
Mrs. F. C. Stoop (Davis), F.C.C., N.C.S., reminds one somewhat of Belle Paule in its formation, and is therefore quite a desirable variety. The colour is silvery-white flushed with rose-pink. Henry Poulton (Poulton), F.C.C., N.C.S., gives quite a striking colour—an intense crimson blood-red—with a buff reverse. It is, however, the surface colour we especially need, as varieties of that type are becoming fewer. Mrs. A. Herbert (Herbert) was commended by the N.C.S. on October 24. The creamy-white florets are broad, reflex evenly, and build up a full-sized flower of high quality. F. Chandler (Silsbury) has long, wide petals building up a deep bloom that is red on the surface and has a golden reverse.

Mrs. R. A. Witty (Wells), F.C.C., N.C.S., is a full-sized flower, with broad florets; chestnut-crimson on the surface, with a bright buff reverse. Mary Poulton is a large, full flower, with reflexing florets of a shell-pink colour. Fred Green (Silsbury), is a striking variety in colour—rich velvety purple; though not so large as some would wish, the reflexing curling florets make up a shapely bloom. Queenie Chandler (Silsbury) has prettily curling florets of a soft primrose colour. Leviathan has a creamy-white ground, striped and suffused with lilac-pink. This variety requires good cultivation to obtain blooms of its fullest capacity and of a high standard of merit.

Frances Joliffe, although not one of the newest varieties, is so striking in its colour and so shapely that it should not be omitted from a selection. In colour it is creamy-yellow, edged and tinted light pink. Empress, lemon-yellow, is a full large bloom of desirable shape. In growth it is rather delicate, and does not require a large pot. In Evangeline we have two colours at variable seasons; in October it is white, and later we have a suffusion of lavender; quite an interesting variety, and its only fault is that it is a little early for the November exhibitions. White Queen (Silsbury); as white-flowering varieties of the highest class are becoming more scarce, this charming variety cannot be overlooked, although it may not be so large as some would desire. In form it is superb, and its pure white florets have a semi-drooping character, making up quite an elegant flower. Purity is another variety I would like to see much more common on the exhibition tables, for whether in vases, on boards, or in a mass in one large vase, it is a superb variety, so shapely, so full, and not in the least bit coarse.

Marie Loomes (Wells) is a large, yet flat variety, with florets which droop and curl at the tips. In colour it is rosy-crimson with a buff reverse. W. Mease was well staged during the season at various shows; blooms developed from late-formed buds give the real colour, rosy cerise, so that I must recommend the variety to those who have not previously grown it, but with the caution not to attempt to flower it from early buds. Lady F. Ryder (Perkins) is an exceptionally deep flower, with medium-sized strap-like florets of a glistening white. Harry Wood (Perkins) is quite a gem in colour, rich crimson, and is full size when seen at its best. William Turner (Wells) is a promising pure white variety, with incurving florets, occasionally curling and building up a solid full-sized bloom; F.C.C., N.C.S. Thorp's Beauty has medium-sized petals, rosy-red with a buff reverse.

E. Molyneux.



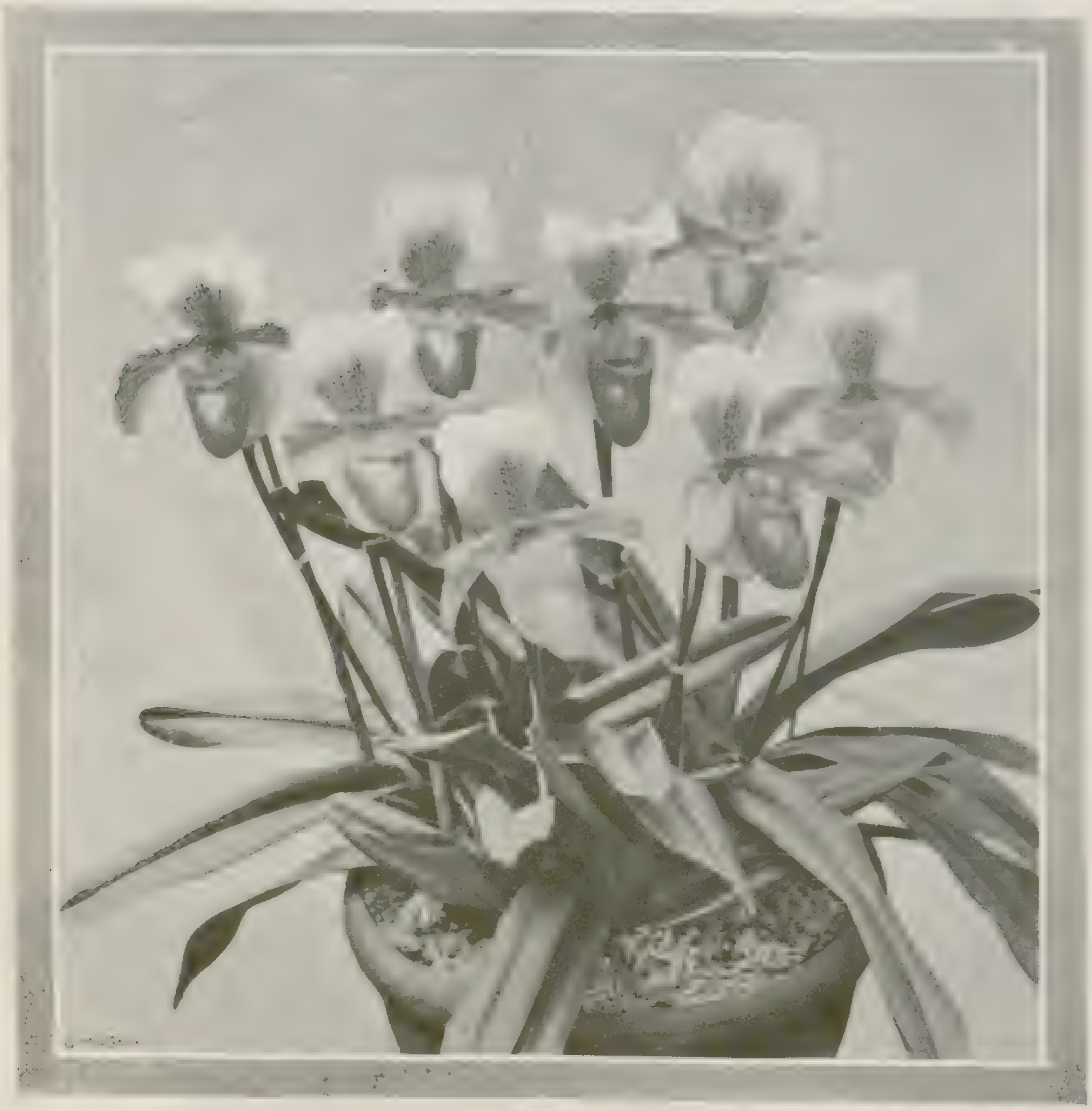
CHRYSANTHEMUM ERNEST G. MOCATTA.

A beautiful new variety which originated with Mr. T. Stevenson as a sport from Edith Jameson. Flowers much reduced, and of a rich yellow colour.

Dwarf Plants for Banks.—You will sometimes have a steep bank that is a perpetual worry to you; grassed down it is always difficult to work, and never looks well, or it may be loose in nature, and want holding together, and, above all, it must be kept low. In this direction Genista hispanica and Berberis dulcis nana have great merit; in growth they are very compact, developing into ball-like masses, that, when in flower, appear like masses of gold. In positions like that indicated above these subjects grow with absolute freedom, and, in company with them, we may have all the dwarf kinds of cistus, a group of shrubs that are always most lavish with their flowers. Where greater variety than this is called for add Cotoneaster congesta and adpressa, with Cytisus kewense, and genistas like tinctoria fl.-pl., radiata, pilosa, and prostrata.—Thomas Smith.

THE EARLIEST ALPINE FLOWERS.

Few flowers appeal to us so much as do the harbingers of the spring—flowers which venture to brave the inclemencies and the austerities of the early days of the year and serve as the heralds of the great procession of their sisters which are on the way to gladden us in the later seasons. They seem to entwine themselves round our affections, and we welcome them as we do no other flowers, partly because of their earliness, but largely because of their own intrinsic beauty, modest though it often is. Born in adversity, cradled in the midst of hardships, they appear sweetened by their trials, and give us greater delight than their still fairer sisters, which are so plentiful in the later months.



CYPRIPEDIUM W. J. MILES.
A beautiful hybrid, raised by F. Wellesley, Esq.; the flowers are white and yellow.

Many of these earliest flowers have bulbous or tuberous roots, and constitute a large proportion of the advance guard which ushers in the later flowers. They are generally familiar enough, and need only be mentioned now to show that they have not been forgotten, and to serve as a reminder to those who have not utilised them sufficiently for the adornment of the alpine garden.

Thus we have the snowdrop, the virgin flower of the winter days, lovely in clumps by themselves on the rockery, but more lovely still in sheets among the helianthemums and other low-growing evergreen shrubs. Then we have the earliest irises, such as the reticulata group, including histrioides, Krelagei, and even the lovely Actor iris, itself, I histrio, although it is a little too tender for many gardens.

Iris alata, a lovely thing, is not hardy enough for many places either, and the exquisite I. stylosa requires either a frame or a dry, sunny nook in the rock garden, among stones and in poor soil, if we are to delight in plenty of its exquisite flowers, winter-flowering species though it is. I. Bakeriana and I. Bornmuelleri are perfect gems, and in I. Willmottiana we have another beauty of the first rank.

Crocus species furnish us with dainty flowers, beginning with the winter C. hyemalis, the little C. vitellinus, and others which may be found in the bulb lists, but of which lack of space forbids detail. Scillas also supply us with some flowers, and the bright blue Hyacinthus azureus is a gem of the first water for our garden of the earliest flowers.

The charming little Cyclamen coum affords its crimson or white blooms and little rounded leaves, followed a little later by C. ibericum. In the moister nooks of the rougher parts we have the golden flowers of the winter aconite, which, common though it is, must never be despised. Very early also a clump of the exquisite early form of the spring snowflake, Leucojum vernum carpathicum, droops white, green-tipped flowers, and supplies a foretaste of its later sisters' beauties.

Leaving these bulbous and tuberous plants, we come to others which appeal to us in other ways, and give us little cushions of verdure and dainty flowers, or plants of more upright habit of growth.

Of the latter is the exquisite Adonis amurensis, of which we have now several varieties. Either the double or the single form is charming, with its dainty foliage and its fine yellow flowers, which come very early in the year in a sunny nook of the rock garden. Common though it may appear, there is yet much value in a mass of the white arabis, especially in the dwarf variety, that passes by the name of Arabis albida compacta, which I have ofttimes had in flower in January, although there was but a sprinkling of bloom at that time compared with the sheet of white later in the spring. Of aubrietias we may, in favourable seasons, have a spangle of flower from several, but the earliest of all seems to be a bright little one sold as A. Wallacei.

Two rare little flowers which are very charming in their way, are the dwarf plants called Helionopsis breviscapa and H. japonica. Their evergreen leaves, close to the ground, and their rosy-coloured flowers on short spikes, are charming in their season; they delight in a half-shady, peaty place, and are acquisitions of recent years.

Our old friends the hepaticas should always be remembered, and of all the varieties none will be found better for early bloom than Hepatica, or Anemone, angulosa major, although the other varieties of the same species, in blue, lilac, rose, or white, are lovely a little later. A modest little plant is Noccæa, or Iberis stylosa, with pale purple flowers in midwinter, if the season is a mild and sunny one.

Ofttimes, too, very early in the spring, we have the bright little yellow flowers of Morisis hypogæa, an exquisite alpine, with shining, pretty leaves.

Saxifrages, too, supply us with flowers, though they also vary according to the season. S. apiculata, S. Burseriana in variety, especially Burseriana major, S. Boydi and S. Boydi alba are among the most useful for the opening days, and in the megasea section S. Stracheyi and S. ciliata are the earliest with me. Nor should the lovely satin flower, Sisyrinchium grandiflorum, be left out of sight with its purple or white drooping bells and grassy leaves.

Such are some of the earliest alpine flowers. With the addition of the exquisite Erica carnea and E. carnea alba, together with E. hybrida, a few small mezereons, and violas and other plants which occasionally give blooms early, we may have the enjoyment derived from seeing our rock gardens brightened by lovely flowers at a time when these are generally scarce in the open ground.

S. Arnott.

A BEAUTIFUL CYPRIPEDIUM.

The cypripediums with flowers of varying shades of yellow, of which C. Sanderæ is one of the best known forms, have much to recommend them to the general body of cultivators, and their claims are so fully recognised that they enjoy a high degree of popularity. They, in common with many other of the lady's slippers, bloom at a season of the year when flowers are none too plentiful in the orchid houses, their flowers possess a degree of refinement that is not surpassed by those of other of the handsome cypripediums, now so numerous, and in colour they are quite distinct. One of the most beautiful of the yellow-flowered forms that have yet been submitted to public notice is C. W. J. Miles, a distinct hybrid, raised by F. Wellesley, Esq., Westfield, Woking, who has accomplished much excellent work as a hybridist of orchids. This variety originated as the result of a cross between C. Actæus Langleyense and C. Sallieri Westfield variety, and has large, finely formed flowers. The dorsal sepal is white, except at the base, where it is marked with a few purple spots; the petals and lip are rich yellow. The plant herewith illustrated was exhibited by Mr. Wellesley at the first of the two meetings held by the Royal Horticultural Society in December last, and attracted much attention.

HARDY SHRUBS FOR FORCING.

The cultivation of hardy flowering shrubs under glass is rapidly increasing in popularity, and their great value is becoming so widely recognised that they are extensively grown in most gardens where large quantities of flowers are required for decorative purposes during the early part of the year. There are so many kinds and varieties suitable for forcing purposes that it is possible to obtain varied and charming colour effects that could hardly be obtained at such an early season without a selection of hardy flowering shrubs. There is no difficulty in keeping the conservatory and corridor gay with flowers from the commencement of the year until the plants come into bloom naturally out of doors.

Most shrubs enjoy a liberal amount of root room, but when they are required for decorative purposes in the mansion it is often necessary to put them in pots as small as possible. It is important, however, that the plants be well furnished with fibrous roots, and well set with flower buds, and there will then be no difficulty in obtaining a good show of lovely blossoms. A good way to begin is to plunge the pots in a hotbed of leaves in a house where a temperature of from 60 degrees to 65 degrees can be maintained, keeping the plants well moistened with the syringe, while at no time must they be allowed to become dry at the roots. To have Azalea mollis in bloom at Christmas it is necessary to start them in the manner recommended six or seven weeks beforehand, but before the blossoms are fully expanded it is advisable to remove the plants to a cooler house to open, as they will then continue longer in perfection.

As soon as plants are obtained from the nursery they should be potted up and plunged in ashes in the open, for after they have been exposed to the elements they will force into flower more readily. With the advent of the new year shrubs may easily be brought into flower by standing them in an early vinery if it is not convenient to make up a hotbed for them.

Several lilacs are very useful for forcing, and of these Charles X., Madame Lemoine, and Marie Legraye are especially good. The pure white blooms of the last two varieties are always admired. Azalea mollis and its varieties are much appreciated, Anthony Koster being one of the best of these. Among cherries the lovely blossoms of Cerasus pseudo-cerasus fl.-pl. and C. pseudo-cerasus James H. Veitch, are highly ornamental. Prunus triloba is desirable for forcing, and is very telling when associated with white lilacs. Deutzia gracilis and D Lemoinei are worthy of extensive culture Pyrus malus floribunda is very popular, while P. Scheideckeri and P. spectabilis are also very fine. There are some lovely forms of philadelphus, and of these P. Lemoinei and P. Boule d'Argent are both valuable.

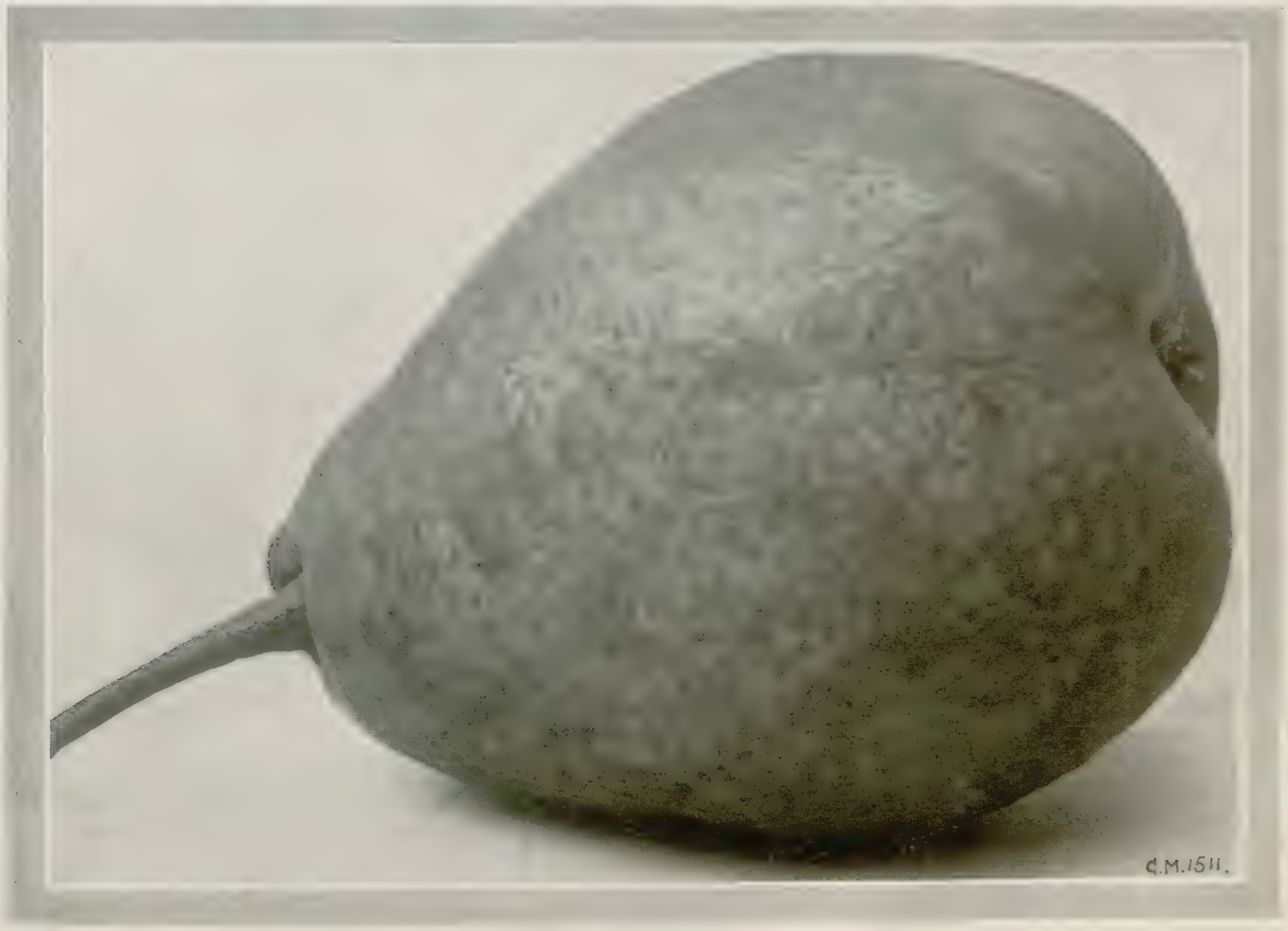
Several of the shrubby spiræas are very pretty and effective, S. confusa and S. arguta being especially so. Staphylea colchica makes a lovely standard, and its sweetly scented wax-like blossoms are always admired. Some of the viburnums should be included, and of these V. plicatum and V. opulus sterile are two of the most useful. Magnolia conspicua, M. stellata, and M. Soulangeana are all handsome, and valuable for conservatory decoration, but I do not recommend these for very early forcing. Wistaria sinensis is seen to advantage in standard form, as its heads of bloom project over the dwarfer subjects in a very graceful and pleasing manner. Standard specimens of Hydrangea paniculata grandiflora and Laburnum vulgare are also effective, when arranged in groups with deutzias and spiræas to hide the pots.

There are various other shrubs suitable for forcing purposes, but those mentioned above include most of the best, and will be found sufficient to furnish a regular supply of bloom during the early months of the year.

J. GARDNER.

PEAR FONDANTE DE THIRRIOTT.

Although there is no dearth of good dessert pears ripening during the months of October and November, it appears desirable that prominent attention should be directed to Fondante de Thirriott, with a view to it being more largely represented in gardens than is at present the case. It is certainly one of the finest pears in its season, and for that reason it should be included in selections of pears for gardens of moderate dimensions, as well as in those of large extent. The tree has a good constitution, is upright in growth, and forms an excellent pyramid or bush. It is also admirable for cordons and espaliers, and on walls it may be successfully grown as a fan-shaped or horizontally-trained tree. The adaptability of the variety to the various forms of training that now find favour is a strong recommendation, and not less important is the fact that it may be depended upon to produce a heavy crop in whatever form it is grown. The fruits are comparatively large, handsome in appearance, and rich in flavour; the shape of the fruit is shown in the accompanying illustration; the skin is yellow, tinged with orange, and the flesh is firm, rich, and juicy.



PEAR FONDANTE DE THIRRIOTT.

SUTTON PLACE, GUILDFORD.

The beautiful county of Surrey contains many a goodly garden, and one of the newest, though at the same time one of the oldest, is at Sutton Place, near Guildford, the residence of Lord and Lady Northcliffe. The garden is new in that its largest and most interesting feature has been developed within the last eight years. The garden is old, for here are magnificent Cedars of Lebanon that must have been planted soon after this grand tree was introduced into England. Indeed, the garden is older than the giant cedars, as Sutton Place was built in 1521, the year after Henry VIII. of England and Francis I. of France met at the Field of the Cloth of Gold. No doubt some of the garden walls on the western side of the mansion are of the same age, and the tough old bricks, riddled with nail holes, may possibly have served to shelter some of the earliest peach trees that reached this country.

[Photo., H. N. King.

THE NEW ROSE GARDEN AT SUTTON PLACE.

The house itself occupies three sides of a square, and the garden side is chiefly occupied by a grand old banqueting hall and the long ladies' gallery. Fine old tapestries adorn the walls, while the furniture includes a table at which Henry VIII. and Cardinal Wolsey dined, a couch that belonged to Charles I., and a desk at which Charles Dickens did much of his writing. Works of art and articles of vertu from many lands, and belonging to many times, have been gathered here by Lady Northcliffe, and a mere catalogue of them would fill much space. The great library is a place in which one could linger long, but its most striking feature is the remarkable contrast it affords between the early part of the sixteenth and the early part of the twentieth centuries. Here, where it is quite easy to people the place with courtiers of the time of Wolsey and his master —for the builder was a great man with the King—Lord Northcliffe directs and controls the huge publishing business that includes the vivacious "Daily Mail" and the stately "Times," as well as countless magazines. From here, by way of London, an enormous influence is exerted upon the nation, the empire, and the world. His Lordship's operations circle the globe, he is in daily communication with those who in far Newfoundland are converting the forests into paper for his publications, and yet he is as keenly interested in "The Times" Experimental Station, where Mr. Foster is proving for him that intensive culture may provide us with much of the choice garden produce we now import. Great affairs of state, in this and other lands, are soon known in this quiet room, but they do not blot out his Lordship's desire and endeavour to naturalise the American robin in British gardens. The contrasts are extraordinary, and probably it is due to them, and the garden surroundings, as much as to his capacity for finding the right man or woman for each of his many ventures, that Lord Northcliffe is able to control such a vast business without being overwhelmed.

The Wild Garden.

A great deal of the "wild gardening" of to-day is an excuse for neglect. In some instances the naturalisation of hardy exotics or the spread of the choicer native plants is taken in hand, and with charming results; these also come under the heading of wild gardens. But we want a new title for such a garden feature as that so splendidly expressed at Sutton Place. It is a natural garden wherein deciduous and evergreen flowering shrubs, and hardy perennials are planted in colonies, in irregular beds and borders cut out of the grassy slopes that descend to the River Wey. There are about eleven acres so cultivated, and the garden extends rather more than a quarter of a mile along the valley. Large numbers of trees, elm and birch and poplar, grow close to the river's brim, while magnificent old oaks grow at intervals higher up the slopes. The trees give shelter from keen winds, there is abundant moisture at all seasons of the year, and as the aspect is due south the garden has the full advantage of all available sunshine.

Everything is kept clean and tidy in this garden. The grass pathways are closely mown, and weeds are not allowed to compete with the cultivated plants. The whole place is "gardened"; it is of immense interest at all seasons of the year, and never lacks the beauty of flower and leaf from January to December. Even at Christmas and the New Year the colonies of hardy heaths are beautiful, the spreading cotoneasters have not lost quite all their brilliant berries, a few primroses anticipate the spring, Christmas roses raise their pure white blossoms, andromedas are beautiful, encrusted saxifragas glisten in the winter sunshine, and the deep glossy green of the rhododendrons yields a cheery note.

In the springtime myriads of bulbous flowers bloom, to be quickly followed by a wonderful range of flowering shrubs. Summer finds the floral pageant at its height, while in the autumn time great breadths of liliums yield beauty and fragrance, and the Japanese maples, cornus, and oaks presently light up the valley with their glowing leaf colours. Lady Northcliffe is herself an enthusiastic and clever gardener, with a great love for hardy plants, and the development of this valley into a glorious natural garden is due chiefly to her.

[Photo: H. N. King.

THE LAVENDER WALK IN THE SUTTON PLACE GARDENS.

In the space at command it is quite impossible to mention even a tithe of the subjects planted in this happy valley, but among shrubby plants are included heaths and rhododendrons, spiræas, cotoneasters, Japanese maples, Ghent and mollis azaleas, roses, lilacs, philadelphus, andromedas, prunus, pyrus, ceanothus, tree lupins, lithospermums, helianthemums, Buddleia Veitchi, bamboos, and Romneya Coulteri, the latter growing finely close to the retaining wall at the top of the slope. Primulas grow splendidly, and in addition to fine strains of primroses, polyanthuses, cowslips, and border auriculas, there are colonies of P. japonica, P. pulverulenta, P. Veitchi, the brilliant P. Cockburniana and its hybrid descendant, P. Unique, with P. rosea, P. viscosa, P. capitata, P. denticulata, and many others. P. japonica extends beyond the garden proper, and has taken possession of the banks of numerous rivulets farther along the valley. Many beautiful combinations have been worked out, and they may be easily copied in other gardens. Muscaris and double white arabis, various thymes under dwarf Japanese maples, Primula rosea and Lilium pardalinum, are three of them. The low-growing plants are not only beautiful themselves, but they hold the light soil together, and form an admirable setting for their taller companions. Heucheras, sidalceas, and hemerocallis thrive splendidly and occupy large areas. Large sheets of hardy cyclamen spread under and close to the big oaks. Iris Kæmpferi is freely planted by the waterside, and in favoured sites are to be found colonies of Cypripedium spectabile, C. calceolus, Orchis foliosa, Meconopsis Wallichi, and M. integrifolia. Shortia galacifolia is a great success halfway up the slope, and the new and pretty Thalictrum diptérocarpum is quite at home.

One portion of the slope takes the form of a rock garden; this has been replanted recently, and already the saxifragas, primulas, choice aubrietias, alpine pinks, violas, and phloxes show their appreciation of the new soil. New work is in progress near by, and big boulders are being placed in position to keep up the soil in a ravine, where alpine shrubs and other delightful things will find a comfortable home.

Rose and Water Gardens.

There are two rose gardens at Sutton Place. The old one is sheltered by ancient walls, and on the wall that faces south beautiful roses bloom long before those in the open begin to flower. A stout pergola down the centre carries Wichuraiana and other roses, as well as clematis and a few other climbers, and, clustering round the roots of each climber are groups of the lovely Lilium candidum. Beds and borders of free flowering H.T. and H.P. roses are planted in the grass plots on either side of the pergola, and such violas as Archie Grant, Lord Elcho, Maggie Mott, etc., are closely planted beneath the roses to form a charming carpeting for them.

The new rose garden is well in front o the cedars, and is surrounded by a neatly clipped yew hedge. In the summer it was gay with masses of Captain Christy, Caroline Testout, Frau Karl Druschki, Joseph Low—which does very well in the beds, Madame Abel Chatenay, Auguste Rivoire, Gustave Regis, Hugh Dickson, Mrs. W. J. Grant, and a few others. This garden is of quite formal design; there are roses on arches as well as those in the beds, and a pretty fountain fills the centre of the scene. This autumn all the roses have been lifted and laid in elsewhere, and all the beds have been deeply trenched and manured, and now wait for a favourable opportunity to be replanted. In the light soil at Sutton Place it is necessary to manure heavily to obtain success, and Mr. Goatley, the able gardener, with nine years' experience of the ground, adds manure with a freedom that would appal most growers, but in due season he uses lime freely also.

In addition to the water gardening that necessarily forms part of the scheme in the fine natural valley garden already referred to, there is a formal, hedge-encircled water garden not far from the new rose garden, and only separated therefrom by an orchard of young standard fruit trees that was planted chiefly for the sake of the blossom display in springtime, though, of course, there is no objection taken to the fruit that may follow. Some large trees of the

Libra peach out in the open here look in first-rate condition, but Mr. Goatley suggests that a good turnip is better eating than a Libra peach from these trees. Bamboos cluster near the water edge in the water garden proper, and big groups of the choicest varieties of the gorgeous Iris Kæmpferi have been planted.

The Flower Borders.

A very fine feature of the older part of the garden is the arrangement of flower borders. These are everywhere. They intersect the fruit and kitchen garden squares, and extend along under the outer walls. They yield enormous quantities of flowers, and in several instances the planting is very cleverly done, and there is a continuous display from spring to late autumn. In most cases the planting is in groups, and each group may consist of two or three subjects, that will follow each other in the floral calendar, and yet not interfere with each other's development. Heavy manuring, deep trenching, frequent transplanting, and rather close planting are the chief points observed, and the result is first-rate. Bulbs are planted everywhere among the herbaceous plants, but there are also borders devoted largely to them. One long border of Darwin and May-flowering tulips, fifty bulbs or so of a variety, and the varieties of the best, ought to be a grand sight in the coming May. Yet another border is occupied by choice herbaceous pæonies, and when their bright red, bronze, and purple growths rise well above the soil they will have an accompaniment of Golden Spur, Albicans, Cynosure, Sir Watkin, and other daffodils. A border of pink aquilegias is thickly planted with Darwin tulips; another border is devoted to perennial asters, another to blue delphiniums and pink Canterbury bells, and another, the blue border, is shared by Delphinium Belladonna and the Dropmore variety of Anchusa italica.

In the western border, that is in a line with the garden front of the mansion, close planting is the order, and it provides a fine object-lesson in the art of producing a continuous display without recourse to big stocks of reserve plants. The bowling green is in front of this border, and it has a long hedge of lavender, while not far away is a long border filled with this fragrant shrub. There remains at least one other border, and it runs at right angles to the mansion, separating the lawns and garden proper from the finely timbered park beyond. This is the iris border, and I fancy it is unique; 700 feet long, ten feet wide, and backed by a hedge of Paul Transom and Dorothy Perkins roses, it contains thousands of plants of the finest irises that come within the Germanica group.

Other Features.

My story is not ended, but my space is, so the details of kitchen and fruit gardens, of the fruit and plant houses, the orchid collection, the chrysanthemums, etc., must be omitted, though I cannot close without a reference to the sweet peas in the cold frames, sturdy little plants that will, all being well, provide a beautiful display of dainty and sweet flowers all the summer long, and be of unusual interest to Lady Northcliffe, for her Ladyship is this year the president—the first lady president—of the National Sweet Pea Society.

CHARLES H. CURTIS.

[Photo: H. N. King.

THE WATER GARDEN AT SUTTON PLACE.

CLEANLINESS OF ORCHARDS

The treatment of insect pests and fungoid diseases in fruit orchards has never received so much attention as at the present time. Doubtless this is due, in a larg measure, to the more intimate and correct knowledge of the nature of these attacks and the means of checking them. And not a little credit is due to the Board of Agriculture, whose efforts in this direction, and particularly with regard to the eradication of gooseberry mildew, have opened the eyes of many growers to the possibilities of preserving their orchards from disease and destruction.

Spraying Fruit Trees.

The thorough cleanliness of fruit orchards is a point of vast importance to the grower, for an unkempt or neglected plantation is a sure resting place for myriads of insect pests and resting spores of fungoid diseases. These find a safe harbourage in the odd corners of the garden, in the cracks and crevices of trees, on lichen and mossy growths, and in other suitable hiding places. Many of the best-managed gardens seem, for some obscure reason, to be incomplete without a few cankered and neglected fruit trees. The hand of the sprayer must not be raised against them, for in their picturesque dilapidation they presumably find favour in the eyes of the owner. This is to be regretted, for the chances of securing good fruit crops in other parts of the garden are by no means so good as they might be were these old and worthless trees cleared away or thoroughly cleansed. Spraying or winter washing is certainly the sole means of keeping them clean and free from insect attack, for when properly prepared caustic spray fluids are employed, the winter haunts of these pests may be cleared away, and their chances of surviving the winter season are then remote. Needless to say,the efficacy of winter washes depends in a great measure upon the ingredients composing them, the manner in which these ingredients are mixed together or emulsified, the method adopted in applying the mixture, and the fineness or force of the spray. Mistakes made in any of these various points often lead to serious loss, and waste of time, money, and materials. This, of course, will be much greater where the spraying is conducted on a large scale, but in a small plantation of fruits it will not be so considerable. It is certainly better not to spray at all unless the spraying can be done well, and with the best materials.

Winter Washing.

Young trees, such as standard or bush apples or pears, and espaliers or cordons, are very quickly ruined if allowed to fall into neglect. Of late we have noted that there has been a great increase in the spread of the woolly aphis, or American blight (Schizoneura lanigera). It is in the summer time that one can visit many orchards, especially in the Western districts, where the trees are covered with these woolly growths. The neglect of them is a serious menace to the surrounding fruit growers, for by means of the wool-like covering, which is exuded at the approach of warmer weather by the young lice or aphis, the latter can easily be transported on the feathers or feet of birds, by wind, or by other agencies, to fruit trees growing around. For the American blight winter washing is the most effective remedy, and now is the time to commence operations. Among the different ready-made materials that may be recommended are Cooper's VI., and the Woburn Wash. A very fine multi-needle jet nozzle, and the greatest possible pressure, are two of the principal essentials in treating this pest, for ordinary light sprayings are incapable of penetrating into all the haunts of the hibernating aphis. In addition to the woolly aphis, the apple blossom weevil, the earwig, codlin moth caterpillar, etc., are hibernating pests which shelter under the rough bark of fruit trees, and especially in mossy or lichenous growths.

Formula for New Alkali Wash.

The modified form of the old alkali wash consists of caustic soda (98 per cent.), sulphate of iron, lime, paraffin, and water. The proportions in which these various ingredients are mixed together, as recommended by Mr. S. U. Pickering, F.R.S., Director of the Woburn Experimental Fruit Farm, and given in these columns on several occasions, is as follows: Iron sulphate, $\frac{1}{2}$lb.; lime, $\frac{1}{4}$lb.; caustic soda, 2lb.; paraffin (solar distillate), 5 pints; and water to make up 10 gallons. To prepare the wash, the iron sulphate should be dissolved in about 9 gallons of water; the lime should then be slaked in a little water and well stirred, a little more water being afterwards added to form milk of lime. The latter must then be strained through a fine sieve or piece of coarse sacking into the iron sulphate solution, so as to remove grit or coarse particles that may be suspended in the liquid. The paraffin should then be added, and the mixture churned thoroughly. When all is in readiness, and the washing is about to commence, the caustic soda, in powdered form, should be added in order to complete the wash. Care must, of course, be exercised in handling this wash, as it has a caustic effect on the hands and clothes.

Spraying Machines.

For ordinary purposes, and in a small orchard or plantation, I have found that a knapsack sprayer answers extremely well, provided that a fine enough spray can be secured. The Alpha, the Abol, and the Four Oaks knapsack sprayers and syringes are all useful kinds.

EARLY OUTDOOR PEACHES.

The fact that early outdoor peaches ripen at a season when choice hardy fruits are none too plentiful considerably enhances their value, and this especially to those who have not the necessary conveniences for peach culture under glass, or, to speak more to the point, the convenience of cool or late peach houses. This being so, these fruits are therefore, in many instances, especially useful when grown in small gardens; and yet it is invariably in this description of garden, though they are much more numerous than are large ones, that outdoor peaches are not so frequently met with as they deserve to be.

HOLLOW-CROWN PARSNIPS AND AILSA CRAIG ONIONS.

These finely developed specimens are illustrated for the purpose of showing the advantages of deep and otherwise good cultivation.

The reason for this in many cases, probably is, the want of sufficient hands to give them proper attention, or the lack of other needful aids to insure success. There is not in outdoor peach culture, provided the necessary requirements are forthcoming, so many difficulties to surmount as is somtimes imagined, and, moreover, it could without doubt be successfully undertaken in many situations that are considered totally unsuited to it. It may here, as a recommendation, be said that peaches have, to my knowledge, in more than one instance, been successfully cultivated where the apricot, owing to damp atmospheric conditions failed.

As early peaches are valued, and cultivated chiefly on account of their precocity in ripening, they should, with a view to the further advancement of this desideratum be given the warmest position suitable to its culture, viz., a position on a south wall, or, failing this, the nearest available aspect from south to west should be selected. In situations of this kind, other things being favourable, the fruit will not fail to ripen as early as it can possibly be had from outdoor trees, and relative to this it may be observed that full exposure to the sun facilitates both the ripening and colouring of the fruit.

It may be observed that early outdoor peaches are deserving of special recommendation to those placed in late or otherwise unfavourable localities, where difficulty is found in properly ripening the fruit of late varieties, for in such cases the one may be had in good condition, while the other is flavourless. The wood of early varieties, in such instances, has also a better opportunity of maturing than has that of late ones, as, owing to their fruit being gathered comparatively early, the trees can likewise be sooner relieved of surplus wood, and thus permit the fruit buds to become ripened.

Another point relative to the proper ripening of the wood is the necessity of keeping the roots from penetrating deeply into the soil, which, when allowed to happen, surely promotes the growth of sappy and unfruitful wood. Other points of management that should be strictly acted upon are those of avoiding the crowding of shoots by timely attention to disbudding, careful attention to the protection of the blossom from frosts, spraying with a specific to prevent leaf curl, and to syringing the trees with water and insecticides in order to both keep them clean, and also free from injurious insects

The following can be depended upon as first early outdoor varieties: Amsden June, Duke of York, Hale's Early, River's Early York, and Waterloo, and as second early, Early Grosse Mignonne, Dr. Hogg, Dymond, Crimson Galande, Bellegarde, and Grosse Mignonne.

Thomas Coomber.

FOUNDATION OF SUCCESSFUL VEGETABLE CULTURE.

Probably no branch of gardening has made such rapid strides during the past twenty-five years as the cultivation of vegetables. Not only is this noticeable in relation to improved varieties, but also in culture. Much of this advance is due, I am fully convinced, to the encouragement given at the great majority of our horticultural shows. The newly-formed National Vegetable Society, which held its first exhibition during the past season, and of which the Duke of Portland is the honoured president, is doing a great work, not only by carrying out successful trials in various parts of the country, but by offering substantial prizes. Probably the late show brought together the finest array of vegetables of a very high standard ever seen. Not only were these largely exhibited by the professionals and the trade, but the amateurs and cottagers staged specimens of a high degree of excellence.

At one time it was generally supposed that only those in favoured positions, with the best possible soil, could ever hope to successfully compete for the valuable prizes offered, but this has been proved erroneous, for when the proper methods of cultivation are understood even the most uncongenial soils may be brought into such a state of fertility that almost any kind of vegetables can be successfully cultivated thereon.

Preparation of the Land.

This must always be the initial effort of anyone who is bent on attaining the best result, for unless it is persistently and properly carried out success is impossible. I may, perhaps, appear to hold extreme views on this point, but having had to deal with various kinds of soil, including sandy, chalky, and heavy clay, I have always persistently put into practice that which I have frequently expounded. My contention is that the ground generally devoted to vegetable culture is expected to do duty as such for a great number of years. Consequently it is of the highest importance that the whole of the soil to the depth of at least three feet should be brought into a fertile condition as speedily as possible.

I therefore strongly advise in all cases that extreme measures should be taken at the earliest possible moment, and the subsoil brought to the surface, instead of allowing it to remain where the beneficial effects of the air and weather cannot reach it. It is most essential that a proper system of drainage below the depth to which I have referred is always carried out. Many an old garden which has been in use for a number of years may still be found with only a comparatively thin layer of workable soil—surely a great mistake, and one which should be remedied at all costs. We should hear much less of the failure of many crops, especially during extreme spells of drought, if this was rectified.

Manuring.

Although it is impossible to continue producing first-class vegetables without the aid of suitable manures, it is possible to apply too much manure, particularly for some kinds of vegetables, and especially in old gardens. Good farmyard manure is still, in my opinion, the most suitable for the majority of crops. On light lands nothing is better than good cow manure, and on still retentive soils London or stable manure is certainly the best. For the majority of root crops, such as, for instance, beetroot, carrots, parsnips, salsify, and the like, no manure of any kind should be added for the current crop. Where the land is deficient in lime free applications of this should be added to the surface as the trenching proceeds.

Another most valuable ingredient for all kinds of land is the remains of burnt garden refuse, and soot should be freely used on crops during the growing season, while, in addition, many of the patent vegetable manures are highly beneficial, systematically applied whilst the crops are in active growth.

Rotation of Crops.

This is another point which requires most careful study, and cannot be too strongly emphasised. Generally speaking, the site should be changed annually for the various kinds of vegetables, and it is most essential that none of the brassica tribe be grown successively on the same piece of ground. A few crops may be successfully grown on the same plot for many years, and I refer here to onions, potatoes, carrots, and Jerusalem artichokes, providing, of course, suitable ingredients are incorporated annually, and a system of deep culture is carried out.

INTERMEDIATE CARROT SCARLET PERFECTION.

A fine intermediate type introduced by Messrs. Dickson and Robinson, and illustrated for the purpose of showing the advantages of careful selection and good cultivation.

Mulching.

This is another important factor, and applies equally to all sorts and conditions of soil, and nearly every crop is much improved, especially during the hot days of summer, by a thorough dressing of good material. It not only prevents the cracking of the surface, but it does a great deal to conserve the moisture and keep the roots cool. Long stable litter is preferable for the larger-growing crops, which will include peas, beans of sorts, the various brassicas, globe artichokes, etc. Old hotbed or mushroom bed manure may be advantageously applied to the smaller-growing crops.

Watering.

This should be carried out in no half-hearted fashion during spells of drought, and, as far as possible, it should be applied late in the afternoon. Properly diluted sewage is of great value to the majority of kitchen garden crops, and means should always be taken, wherever practicable, to conserve some of this for such purposes. Syringing the growth during the evening after a hot day is much to be commended, taking care to use water which has been exposed during the day, which should, of course, be as clean as possible.

Seeds.

It is of the utmost importance that good seeds and reliable stocks should always be sown, for it is well to remember that just as much trouble is needed to grow a bad variety as a good one. Another point which is worthy of consideration is that the seeds should not be sown too thickly. It is always a good plan to endeavour, as far as possible, to sow just twice as thickly as is necessary, and thin the seedlings to the required distance before any harm is done. Ample room should always be allowed for each specimen to freely mature: overcrowding, in far too many cases, is the cause of failure.

Transplanting.

This should always be carried out with care. The land must be properly prepared, and the various plants should be put out when quite small, disturbing the roots as little as possible; make them very firm, and give a good watering in whatever the weather may be, and take care that the young plants feel their removal as little as possible.

Sowing at the Right Time.

More thought should be given to this than is generally the case. Though there are several kinds of vegetables which may be sown at intervals during the year, and, indeed, it is necessary to do so to keep up an unbroken supply, there are others of the utmost importance which can only be successful when sown at the right time. Especially does this apply to winter and spring vegetables; for instance, if cabbage, cauliflowers, or autumn-sown onions be sown either too early or too late, even a few days, failure is inevitable. One frequently sees the spring cabbages prematurely running to flower when they should be turning in good heads; cauliflowers heading in when the plants are quite small, and the autumn-sown onions throwing up flower spikes instead of bulbing. To illustrate another case, celery, if only sown a few days too soon in the spring of the year, will frequently commence to throw up its flower spike prematurely in the autumn, which renders the crop practically worthless. In the past year this has been very noticeable, as I have frequently observed when judging at various exhibitions.

EDWIN BECKETT.

There is no better guide to the kitchen garden than VEGETABLES AND THEIR CULTIVATION, by T. W. Sanders. It is a complete treatise on the general management of the garden, and the successful culture of vegetables, saladings, and herbs for home use. Price 5s. net, by post, in box 5s. 6d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

CLAY'S FERTILIZER

OFFERS YOU GREETING AND A YEAR OF PROSPERITY IN THE GARDEN.

"'Tis not in mortals to command success;"
But he this human gift supreme displays,
Who forms a garden from a wilderness,
Aided with forces vitalised by **CLAY'S.**
Such fructifying power the soil obtains
That Flowers and Fruits profuse and fair appear;
And he that has this potent factor gains

The Glowing Promise of a GLAD NEW YEAR.

Sold in Tins at 6d. and 1/-; and in Branded and Sealed Bags:

7 lbs.,	**2/6**
14 lbs.,	**4/6**
28 lbs.,	**7/6**
56 lbs.,	**12/6**
112 lbs.,	**20/-**

Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d** Tins).

CLAY'S LONDON FERTILIZER
TRADE MARK.

CLAY & SON, Manure Manufacturers and Bone Crushers,
STRATFORD, LONDON, E.

EVERY-TIN-BAG-AND-SEAL-BEARS-THE-TRADE-MARK-AS-AT-SIDE

THE BEAUTIFUL NEW TEA ROSE

'LADY HILLINGDON,'

Raised by Messrs. LOW & SHAWYER, Ltd., Uxbridge,

IS THE FINEST YELLOW ROSE IN EXISTENCE.

Has been the centre of attraction at every Exhibition where blooms have been shown; particularly admired because of its perfect form, its glorious colour, and

ITS APRICOT SCENT.

PRICES: 5/- per plant for quantities of less than six plants: 4/6 per plant by the half-dozen; 4/- per plant by the dozen or more.

GEORGE MOUNT & SONS, Ltd.,
The Nurseries, CANTERBURY.

HESSLE PEAR TREES.

A grand lot of 3-year Half Standards to offer. Price per dozen, 100, or 1,000 on application.

S. SPOONER & SONS,
The Nurseries,
HOUNSLOW.

CATALOGUE FREE ON APPLICATION.

Phytobroma

Barr's New Plant Food
For Flowers Vegetables and Fruit
of highest quality & guaranteed analysis

Per cwt., **20/-**; ½ cwt., **12/6**; 28lb., **7/6**; 14lb., **4/6**; 7lb., **2/6**; Sample Tins, **1/-**.

Prepaid orders for 28lbs. and upwards, Carriage Paid. Circular, with full particulars, on application.

BARR and SONS,
11, 12, and 13, KING STREET, COVENT GARDEN, LONDON

Rhododendrons.

Crimson, White, Pink. 250 Choice Named Varieties, fine foliage, well budded, for potting or planting. 1 to 1½ ft., 1½ to 2 ft., 2 to 2½ ft., 2½ to 3 ft., 3 to 4 ft., 4 to 5 ft., 5 to 6 ft., 6 to 7 ft. List of sorts and prices on application; many thousands to offer. Standards in all sizes.

All Home-grown. Inspection Invited.

F. STREET, Heatherside Nurseries, CAMBERLEY.

BROOKLANDS NURSERY.

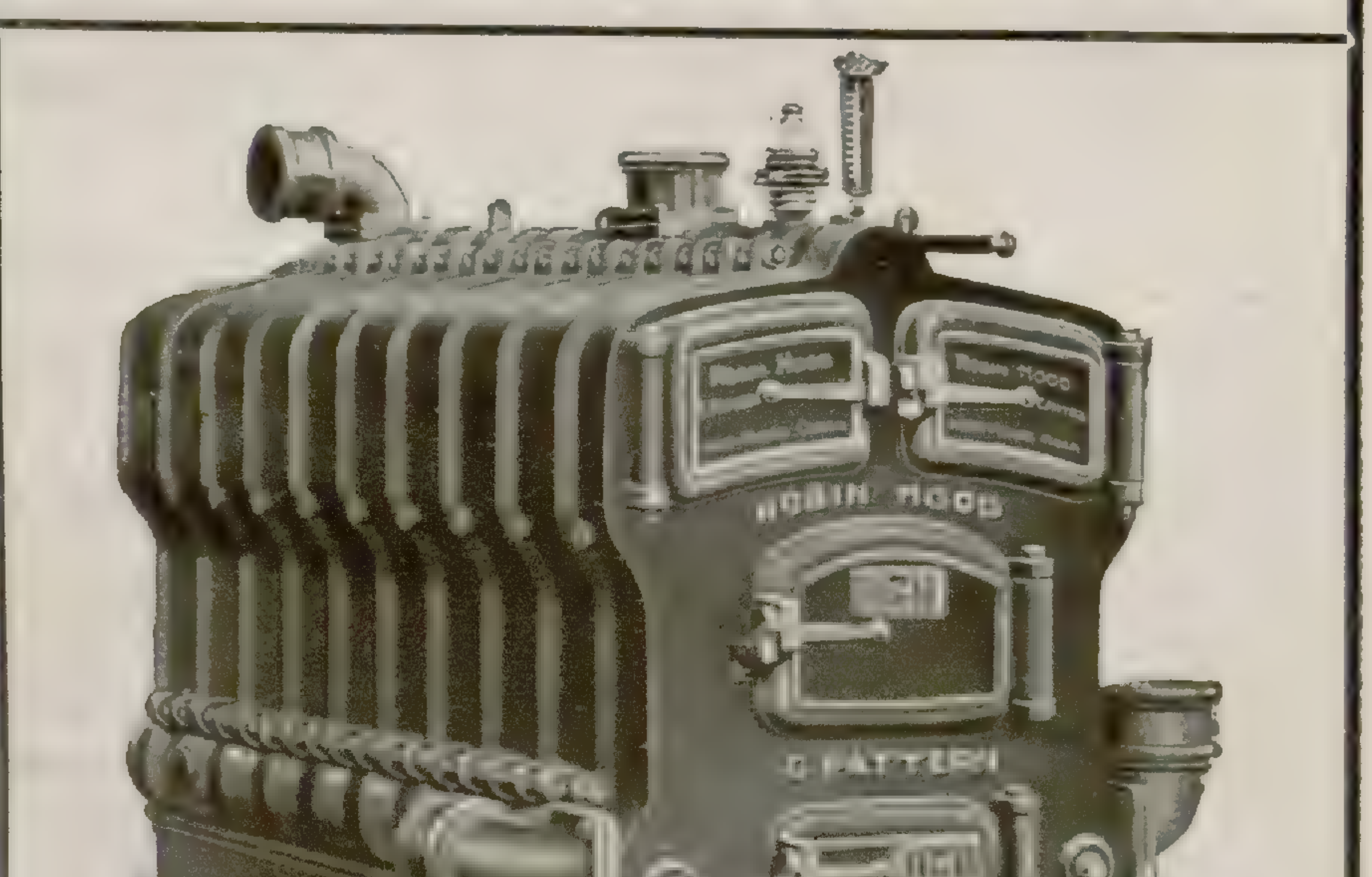
Specially Choice Hybrid Rhododendrons on own Roots.

The Manager, **BROOKLANDS NURSERY.** Weybridge.

THOMSON'S Celebrated
VINE·PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES
UNRIVALLED FOR ALL PURPOSES
THE RESULT OF MANY YEARS
PRACTICAL EXPERIENCE
SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE.
SOLE MAKERS:
Wm Thomson & Sons, Ltd Clovenfords, N.B.

FOSTER AND PEARSON
LTD.
BEESTON, NOTTS.

We were building Greenhouses in 1841.
We are building Greenhouses in 1911.
We only build good Greenhouses. . .
Good Greenhouses last:
Others do not.
Catalogue on application.



THE "ROBIN HOOD," C Pattern.

ANNUALS FOR CUTTING.

No matter what the season may be, annuals always play an important part in the adornment of our gardens, and as suitable subjects for maintaining a supply of cut flowers during the greater part of the summer and autumn months. True it is, in the opinion of some persons, they are considered but second-rate, when compared with herbaceous or choice greenhouse flowering plants, but to some extent this may be accounted for from the fact of their having been neglected, or grown under adverse circumstances, or their management not fully understood. Experience teaches us, however, that with care and good culture most annuals will hold their own against other rivals, and at a considerable reduction in the cost of production, an item nowadays seldom lost sight of either by amateur or professional.

The object of these notes is not so much the provision of a detailed list of suitable kinds or varieties for the purpose named, as to recommend this useful class of flowering plants, and so raise them to a higher position in our gardens generally. Take, for instance, the coreopsis family. No annuals are more useful, or acceptable, than these, where the various shades of yellow and bronzes are admissible. Arranged with their own foliage they form a simple, but pleasing decoration, second to none of our long-stemmed annuals. Generally speaking, it is better to grow annuals in separate beds, borders, or rows, for by so doing fresh ground can be allotted each season for the various kinds that may be grown, which is essential if the best results are desired, besides which they are more decorative as growing plants when seen in groups or masses. Cornflowers, scabious, marigolds—perhaps a too old-fashioned flower for some tastes, but valuable none the less—godetias, gaillardias, lupins, sweet sultans, poppies, lavateras, and larkspurs, besides a host of others too numerous to name, are invaluable as adjuncts to the garden for cutting purposes.

A point too frequently overlooked is the choice of foliage when arranging these flowers for room decoration. Nature has made the right selection without a doubt, and the foliage of each kind of flower is the proper kind to use. How often do we see maidenhair fern intermixed with asters, stocks, and such-like flowers—an incongruous mixture. Better by far arrange such flowers without any greenery whatever if the natural foliage of the flower be insufficient, or unprovided for, unless a more suitable form of foliage is at hand.

Two important points connected with the successful culture of annuals are sufficient space for the perfect development of each plant, and the prompt removal of all seed vessels as soon as they are formed, or, better still, the removal of the blossoms as soon as they begin to fade. By this means all the energies of the plant are concentrated in perfecting a fine specimen, as well as prolonging its flowering period.

The majority of really useful annuals may be successfully grown without the aid of glass—a recommendation seldom lightly passed over either by rich or poor. The lighter the soil the earlier in the season should the seeds be sown, thus giving the seedlings a better chance of becoming fully established before hot dry weather sets in. When the seedlings are peeping through the ground a sharp lookout should be kept for slugs and other vermin, as much damage is often done by these depredators.

W. HEDLEY WARREN.

CORFOPSIS DRUMMONDI.
An annual species bearing bright yellow flowers marked with crimson-brown round the disc, and of much value for the supply of cut flowers.

WORK FOR THE WEEK.

◆

WARM ORCHIDS.

DENDROBIUMS.—Many of the early-flowering deciduous dendrobiums will now be developing their flower buds. Where flowers are desired early in the year the most forward plants should be selected and removed to warmer conditions than those to which the plants at rest are subjected. Care must be observed to inure the plants gradually to the higher temperature, for if they are transferred direct to the hothouse it will be found that instead of flowers young growths will be produced. It is a safe plan to see the flower buds before removing the plants to quarters where they may be more liberally treated. The quality of the flowers is considerably influenced by the conditions under which they expand. It is impossible to obtain flowers of high quality in the months of January and February, even in the most favourable positions. Both substance and colour are inferior as compared with those of the same plant when opened later or when the light is stronger. It is therefore advisable to retard rather than accelerate the flowering season, unless the plants are really required to flower early in the year.

SEEDLING DENDROBIUMS should be kept under careful observation, and as soon as young growths appear any repotting necessary should be attended to. All such work that can safely be done now should be proceeded with.

IMPORTED DENDROBIUMS.—The season has now arrived when importations of D. Wardianum, D. nobile, D. crassinode, D. aureum, D. Falconeri, D. Finlayanum, etc., arrive. It is really remarkable how large a number of plants of some of these species annually reach this country. They are readily sold when they arrive in anything like condition, and one almost wonders what can become of so many. If the early importations are in sound condition it is advisable to secure the plants required. I find it a good plan when they are first received to examine them carefully and cut away any dead or decaying matter, and otherwise prepare them for potting. This done, I prefer to delay their restarting into growth if possible until the end of February or the beginning of March. If a position on the stage in the resting house can be obtained, or even if they can be suspended from the wires of a trellis in a vinery in which the vines are at rest and the frost is excluded, it will suit the purpose. No water will be required, but as soon as they commence to produce new growths they should be potted, providing good drainage and using a compost of equal portions of fibrous peat, leaf-soil, and sphagnum moss. Refrain from watering if the compost is in a moderately moist state. As soon as potting is completed place the plants under slightly warmer conditions, but do not encourage a very rapid growth. As soon as the new roots are emitted more moisture both about the roots and in the atmosphere is required, and when the rays of the sun have obtained considerable power, growth will proceed rapidly, and must have every encouragement.

DENDROBIUM WARDIANUM has of late years been greatly sought after for the supply of cut flowers. I have noticed in prominent West End florists' shops during the past year innumerable quantities of bulbs covered with flowers cut short off at the base. I personally cannot regard this otherwise than as an undesirable method, as it results in the destruction of the plants. With D. nobile the case is different, as it blooms generally from the second bulb, but the flowers of D. Wardianum are produced on the leading growth. It may suit the cut-flower trade and trade growers to cut the bulbs with the flowers, but in private establishments it should not be countenanced unless ample means are at command for securing annually a stock of imported plants.—H. J. CHAPMAN, Oakwood Gardens.

STOVE PLANTS.

CALADIUMS.—These highly ornamental foliage plants are always appreciated; and they are of great value for decorative purposes early in spring. For this purpose select the earliest ripened corms, and place them in boxes about an inch apart over a thin layer of cocoa fibre and coarse Bedfordshire sand. Put them in a light position where they will have a temperature ranging from 60 to 65 deg. They will not require much water beyond a daily spraying. Protect the young foliage by shading from bright sunshine, and as soon as the corms have formed roots about half-inch in length they should be potted singly, using 60's and peat with a liberal addition of silver sand. Do not press the soil very firmly about the roots, and extreme care must be exercised in watering, as dryness at the roots during the early stages is liable to cause premature flowering, which, of course, is very detrimental to the foliage. Caladiums seldom suffer from an excess of moisture. When required for indoor decorations the best course is to grow them exclusively in small pots, and when such root restriction has to be practised they must be regularly supplied with weak liquid manure.

POINSETTIA PULCHERRIMA.—Many of the poinsettias will have had their scarlet bracts used up in Christmas and New Year's decorations, and attention must now be devoted to ripening off the stock plants for the supply of cuttings. I would advise a good length of stem to be left on these plants, and if the foliage is already ripened off they may be placed in a dry position where the temperature does not fall below 55 deg. If convenient lay the pots on their sides to prevent drip reaching the roots. Should, however, the leaves still remain green after the bracts are used up, the plants must be given a light position with ventilation, and gradually dried at the roots until the ripening of the wood is complete.

EUPHORBIA JACQUINIÆFLORA. — Where the early displays of bloom have been cut or used up for house decoration a second supply of flowers may be obtained by placing the plants in a genial temperature and regularly syringing them until a successional crop of flower buds appear. The secondary flower sprays are always smaller, and generally inferior in quality to the first, but are of value for the pleasing colour of the flowers.

PLANTS AT REST, such as allamandas and similar subjects, ought to be examined at regular intervals, with a view to watering any that show signs of the bark shrivelling. When such specimens are allowed to suffer from excessive dryness they do not start so freely into growth. The temperature which during the past month has been reduced to 65 deg. may be continued for a few more weeks, and during severe weather it may fall to a minimum of 63 deg. for night temperatures, with about 5 deg. higher during the day.—JOHN DONOGHUE, Bardon Hill Gardens.

THE FLOWER GARDEN.

SHRUBS.—Although mid-winter is not the best time for planting, yet the work may be carried out safely during mild weather, and it is much better done now than deferred until March. All beds or borders should have a liberal top-dressing of decayed manure, old hotbed material being excellent for the purpose. This may be wheeled on during hard weather and lightly forked in when the opportunity occurs. Rhododendrons and azaleas will derive great benefit from a top-dressing of peat. Failing peat, leaf-soil will be found an excellent substitute. All newly-planted trees and shrubs should be securely staked to prevent the wind blowing them about and loosening the roots. Rabbits are in many gardens a great nuisance during frosty weather, and measures must be taken to guard against their injuring the bark of choice trees. The safest plan in the case of dwarf shrubs is to enclose them with wire netting.

HERBACEOUS BORDERS. — Providing the weather is suitable, the work of thinning and rearranging the various plants in these borders may proceed. The system of lifting every plant the border contains is altogether wrong, for whilst some require dividing every second year, others strongly resent disturbance. Strong growing subjects, such as phloxes, Michaelmas daisies, helianthuses, etc., ought to be lifted every second year, and heucheras, hellebores, pyrethrums, Gentiana acaulis, delphiniums, aconitums, and many others should be allowed to remain in the same position for a longer period. In lifting those that require dividing care must be taken to avoid mixing the several forms of the different kinds, as if this is done the confusion will be great when replanting. The ground must have a liberal dressing of well-decayed manure, and be deeply dug. In dividing the roots, the sides of the clumps should in the case of asters and phloxes be retained, and the centres discarded, as the shoots at the sides are invariably the strongest. When the replanting is concluded a top-dressing should be given to prevent the frosts penetrating to the roots, old hot-bed material being in every way suitable. Where the delphiniums require dividing the operation is best deferred till March, as mid-winter is not a good time to disturb them. A covering of ashes should be placed over the crowns of eremuri and ostrowskia. Iris susiana and I. Bucharica also need some protection, and handlights are most suited for the two latter. All liliums should receive a top-dressing of leaf-soil. The young growths of pyrethrums and delphiniums which are under the surface will require some protection from slugs.

HARDY ANNUALS.—In places where there is a large demand for cut flowers the hardy annuals will be most useful for maintaining a supply during the summer months. Good culture is essential, and thinning, staking, etc., must be attended to at the right time. Now is the time to select a piece of ground intended for their cultivation. A liberal dressing of well-decayed manure should be given, and the ground deeply dug, leaving the surface in a rough state, to allow the frosts to act upon it. Where there is any difficulty in growing mignonette a small quantity of mortar rubble, mixed with the soil will prove beneficial. Now that the ordering of the new stock of seed is being considered, a few that are specially suitable for supplying cut flowers may be mentioned. Sweet peas, Shirley poppies, annual chrysanthemums, cornflowers, scabious, large-flowering sweet sultans, double godetias, clarkias, mignonette, Gypsophila elegans, and annual mallows.—E. C. POOLEY, Gnaton Gardens, Plymouth.

FRUITS UNDER GLASS.

EARLY VINERY.—Where grapes are desired early in June no time should be lost in preparing the house for starting the vines. The vines should at once be pruned, and if the wood is thoroughly ripe, as it should be for early forcing, prune to one strong bud. Leave two if there is any doubt of the vines breaking satisfactorily, but it should be borne in mind that the longer you leave the spur the sooner the vines will become ungainly. When the vines have been pruned clean the rods thoroughly with one of the many preparations now available, but the old-fashioned mixture of soft soap, nicotine, and sulphur is a good one. Pull off any loose bark that may be hanging, but do not injure the vines by scraping. When this is done tie up the vines, and thoroughly clean the glass and woodwork, using a strong solution in warm water of soft soap and petroleum, taking the precaution of searching every crevice, for it is in these that the insects hibernate. If any are left they increase at a rapid rate as soon as heat is applied. Thoroughly cleanse the walls, especially behind the pipes, where it is most troublesome to get at, and, finally, with a stiff brush wash the wall with a mixture of lime, sulphur, and paraffin. This having been done, the vines should be tied in position, with the tops bent down to equalise the flow of sap and ensure the growth being regular throughout the canes. Assuming the border is in fair condition, about an inch of good loam, with a mixture of bonemeal and some approved fertiliser, should be spread over the surface.

EARLY PEACH HOUSE.—By the time these notes appear it will be necessary to close the house from which the early crop is obtained. The trees should be cleaned, painted, or sprayed with an approved insecticide, and then pruned and tied. In pruning it is a mistake to have the wood crowded. Lay the shoots in at a distance of not less than five inches apart, or the foliage will not have sufficient room to develop. Tie the shoots in straight as possible from the base to the apex. Use fairly strong matting, and twist it and cut the ends off neat and tidy, and, above all, make secure the end of the shoot, as it is quite possible that a fruit will be on the extreme end, and will want support.

RIPE GRAPES.—Look over these as often as is necessary, and cut out all decaying berries, as they contaminate the sound ones. Where a good grape room, or any dry room is provided, all grapes should be at once cut, and placed with the end of the laterals in bottles. Cut with as long a stem as possible, and fill the bottles with soft water if obtainable.—W. A. COOK, Leonardslee Gardens, Horsham.

Shrubs Out of Season.—Because we cannot have the outdoor garden as lively with colour in winter as at midsummer is no reason why we should not enjoy the flowers of many hardy plants indoors at this season. Shrubs are most important subjects, and extremely easy to manage, once their requirements are understood, but to have them in flower at Christmas necessitates the use of retarded plants, as these respond more evenly to artificial conditions. Even up till the end of Janaary retarded plants are most economical to use, as they are most certain in results, and invariably give a good crop of flowers. Much may be done with home supplies to brighten indoor apartments during winter, and so maintain interest among the flowers, but in this, as other branches of gardening, early preparation is necessary to obtain the requisite number of plants, potting them up, and selecting the earliest and best ripened subjects for the first display.—THOMAS SMITH.

A NEW MEDAL OF HONOUR TO HORTICULTURISTS.

An important event in the horticultural world of America during the past year was the establishment of the George Robert White Medal of Honour for the maintenance of which a suitable fund has been given to the Massachusetts Horticultural Society, and the medal is to be awarded by the executive management of that organisation. Mr. George Robert White, of Boston, in his deed of trust accompanying the fund, states that he has long thought that there was an opportunity for broadening the field of influence of the Massachusetts Horticultural Society, and of extending the interest in its work if some suitable recognition were made of those persons who have accomplished important results in horticulture; the award to be made independently of or in addition to any prizes or certificates of merit that may be bestowed by the society in the course of its regular schedule of premiums.

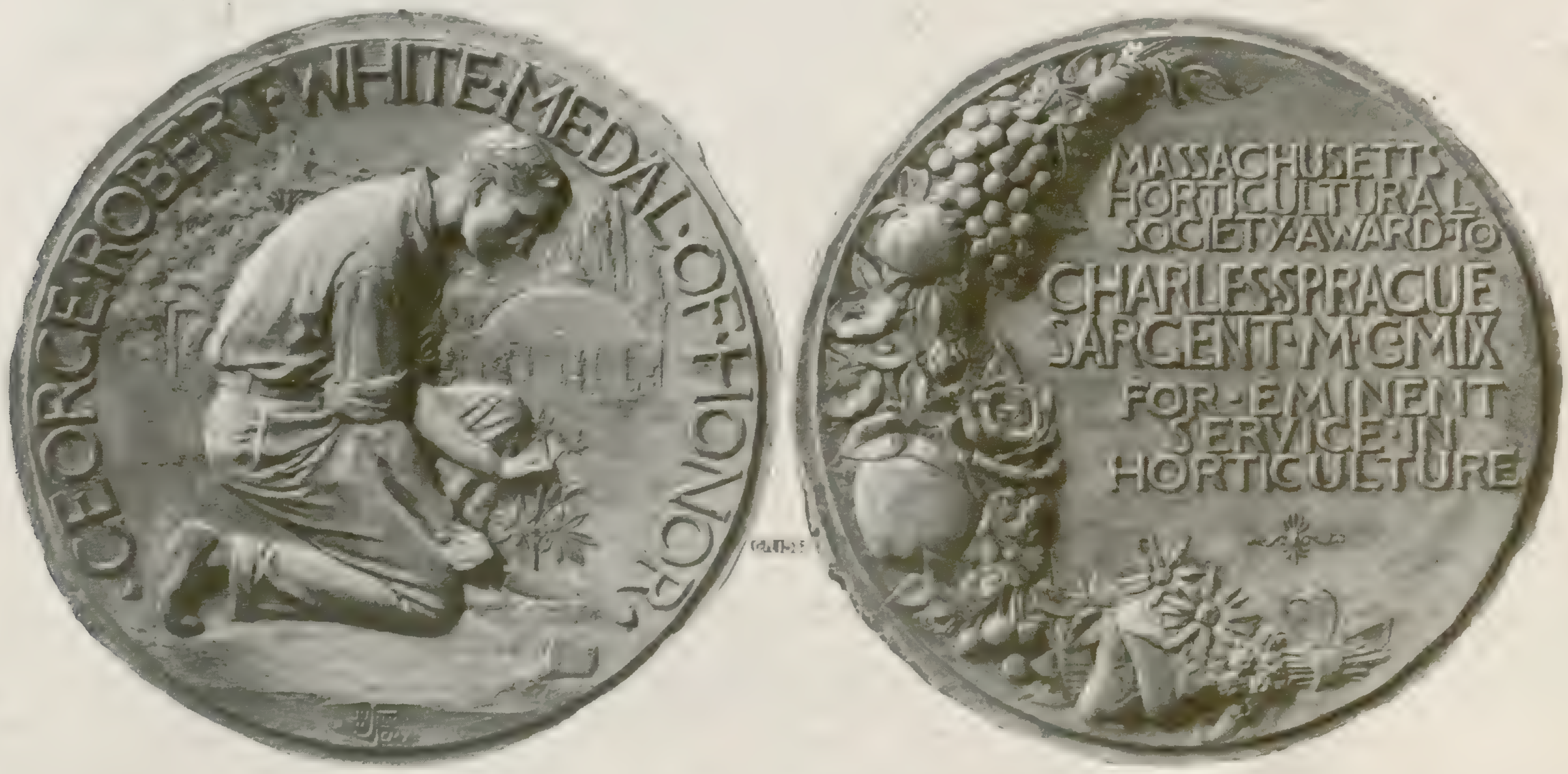
He has therefore founded the George Robert White Medal of Honour Fund, the income of which is to be devoted annually for the specific purpose of providing a substantial gold medal to be awarded to the man or woman, commercial firm or institution, that has done the most during the year or in recent years to advance the interest in horticulture in its broadest sense. While the medal is intended principally to recognise work done by a resident of the United States in advancing the interest in horticulture, it may be awarded to a person, commercial firm, or institution of some other country, the results of whose work in horticulture may be of direct benefit to the horticultural interests in the United States.

The first award of the medal has just been made to Professor Charles S. Sargent, director of the Arnold Arboretum, whose eminent service in horticulture is generally recognised both in the United States and abroad. His great work has been the introduction of many desirable ornamental trees and shrubs, and the testing of their hardiness in New England.

The George Robert White Medal of Honour will take rank in its own field with other medals offered by scientific institutions in recognition of important results attained, and it is expected that it will have a strong influence in promoting the horticultural activities of the United States. The medal, which is illustrated herewith, was struck at the United States Mint in Philadelphia, from twenty-four carat gold; is two and three-fourths inches in diameter, five thirty-seconds of an inch thick, and weighs between seven and eight ounces.

On the face, the figure symbolises, not so much the ordinary horticulturist as the scientific intellect, whose aim is to improve nature. The trees in the background represent the allied branch of arboriculture. On the reverse, in the inscription, the name is so designed that it can be replaced by another name each time the medal is awarded.

The George Robert White Medal was executed by Mr. John Flanagan, a native of Newark, N.J., and a student, first of Augustus St. Gaudens, later, in Paris, at the Academy Julien under Chapu, and the Atelier Falguiere, at the Ecole des Beaux Arts. During the course of these years of study Mr. Flanagan was awarded many prizes, and acted as an assistant to MacMonnies on his fountain for the Chicago World's Fair in 1893. Since then, he has received commissions for many medals, portrait busts, and other works. Several of Mr. Flanagan's medals have been acquired by the Musée du Luxembourg, the Metropolitan Museum, New York, and recently by the Museum of Fine Arts at Ghent.


GEORGE ROBERT WHITE MEDAL OF HONOR
MASSACHUSETTS HORTICULTURAL SOCIETY AWARD TO CHARLES SPRAGUE SARGENT MCMIX FOR EMINENT SERVICE IN HORTICULTURE

THE GEORGE ROBERT WHITE MEDAL OF HONOUR.
Awarded to Professor C. S. Sargent by the Massachusetts Horticultural Society.

COLOUR CHARTS.

The recent remarks by Mr. Harman Payne on "The Repertoire des Coleurs," will be echoed by all who have given this work a practical test. Even when using it in the quiet of the study the loose leaves and the consequent chances of their transposition make it extremely inconvenient.

A colour chart, which I have found very useful in field work, is the "Code des Coleurs," of Klingksieck and Valette. This chart was published to meet the needs of students of fungi, and is constructed on a plan which renders possible very quick reference. Standard colours are taken, and are arranged spectrum-wise from red to deep violet. On the two pages presented wherever the book may be opened, one standard tint is shown at the top left-hand corner on a small slip, roughly one inch by ¾-inch. Let us assume we commence with the pure red. Ranging in the horizontal line the same colour is shown on identical slips, but darkened with a definite amount of a black pigment. This gives, of course, the same effect as a strong concentration of the pigment shown in the standard tint. Four darkened slips are thus shown. The perpendicular line under the standard colour slip is a dilution of the original colour, ½, ¼, ⅛, etc.; four of these are also given. Under each of the darkened slips on the top line are similar dilutions, but the black pigment added makes them, of course, very sensibly different from the weaker edition of the standard colour.

This process is followed on the next page with a standard tint with slightly more yellow in it, and so on till orange, yellow, green, ultramarine, etc., are given. Twenty-three standard tints are shown, this, of course, being equivalent to dividing the spectrum into a similar number of parts, and with the various dilutions and darkening, there are some 720 different colours.

To sum up, the advantages of the "Code" over the "Repertoire" are as follows:

1. A small 8vo. book, which will go into the pocket.

2. Colours found instantly.

3. Slips being pasted on page are always in the same space.

4. The colours represent a nearer approach to the conditions of natural pigments. For instance, the red pigment (authocyan) of Sweet Peas is found in varying states of dilution and concentration from the lightest pink to dark chocolate. This is well imitated by dilution and addition of black (giving the effect of concentration of pigment by reason of greater light absorption), and it is thus shown that many varying colours can be produced by the same pigment.

5. A great advantage is that no attempt is made to name the colours, so the difficulty which occurs, when half a dozen people all have their own (and different) ideas of what a colour name should represent, is avoided. The tints are referred to by number only.

Its disadvantages are:

1. A rather small colour surface, as compared with the "Repertoire."

2. A lack of the many varying lilac, rose, and pale mauves which are met so often in flowers. This could probably be remedied, and the "Repertoire," though greatly ahead in this respect, is not entirely above this charge. The writer, in colour-naming rhododendrons and azaleas, has found many natural tints beyond its resources.

Should any revision or adaptation of the "Repertoire" be undertaken, it would be regrettable if the advantages of its rival were not considered, and the good points of both, so far as possible, combined.

EDWARD A. BUNYARD.

TRADE NOTE.

Mr. A. Hassall, trading as Stanley and Co., orchid growers, Southgate, London, N., informs us that in future the firm will be known as Hassall and Co., late Stanley and Co., and also that Mr. H. Stanley left the firm on Dec. 19, and that Mr. John Cowan, jun., will take over the management on the 23rd inst.

ROSA PERNETIANA I.

Let no one for one moment imagine that Rosa Pernetiana has anything to do with a new botanical rose species recently discovered, say, in China or Thibet, although one must confess the name suggests such inference. Not at all. It refers to a new class of perpetual-flowering hybrids, as distinguished from the hybrid perpetual, hybrid tea, and tea-scented varieties. For some time efforts have been made by hybridists, but hitherto unsuccessfully, to bring the influence of Rosa lutea to bear upon perpetual-flowering roses in general in order to produce a hardy yellow rose. By Rosa lutea we mean such roses as Austrian Yellow, Austrian Copper, and their hybrids, Harrisoni, and Persian Yellow. At last the hybrid was obtained, and just ten years ago a new rose was presented to the rose world by Monsieur Pernet-Ducher, of Lyons, called Soleil d'Or.

But Soleil d'Or came out in advance of public taste. Ten years ago no new rose had much of a chance of an immediate and favourable reception unless it was one of the so-called "exhibition roses" or a pillar variety. Soleil d'Or was neither. It is true that it possessed a shade of colour hitherto unobtainable among the perpetuals, but lacking the currently accepted qualification of a good rose in form and size, and not being very free flowering. Whilst it interested the few it failed to captivate the many. Since it was not useful for purposes of exhibition, nor specially adapted for bedding purposes, it was regarded solely as a novelty in colouring.

Not so the raiser; he realised it as a step in the right direction; he, as did others, saw in it possibilities as the progenitor of a new race, a new break, which he describes in the following terms:

"Pernet Roses, 'Rosa Pernetiana,' perpetual-flowering. This new family of roses is the result of a cross between 'Persian Yellow' (Rosa lutea) and 'Antoine Ducher' (hybrid tea). We were fortunate in being able to create this entirely distinct class, which we have named after our firm, 'Rosa Pernetiana.' It retains somewhat of the character of Rosa lutea, the wood being reddish, but the foliage of a deep green, is a great improvement on that of the parent."

It is not the first time, be it remembered, that a new class of roses has borne the name of its originator. The noisette rose was said to be obtained by Monsieur Philippe Noisette in 1817 by crossing Rosa muscosa with the common Blush China. From this other varieties were produced, hardy and vigorous. Most of them have now dropped out of cultivation, but Aimée Vibert, sent out by M. Vibert in 1828, still remains. Later on the noisette was crossed with tea-scented varieties, which gave us Lamarque in 1830; Ophirie, 1841; Celine Forestier, 1858. These three retain the characteristic arrangement of the clusters of blooms on the stem to be seen in the original species, where the flowers are produced in corymbs. As time advanced the influence of the tea-scented parent has preponderated over the musk, the number of flowers on each corymb has consequently decreased, and it is now difficult to detect the difference between the tea and the noisette. Nevertheless, the nomenclature remains, and the National Rose Society, with other kindred societies, allots a section of the exhibition schedules to "tea and noisette."

Now history repeats itself. As in the early years of the nineteenth century a new race of roses was called "noisette," after the name of its originator, so now in the beginning of the twentieth century another race of roses is springing up bearing the name of its originator, M. Pernet-Ducher, in the term Rosa Pernetiana.

If it were a question of one or two varieties only the distinctive name might be disregarded. It was so at first when hybrid teas came in, and when, at that time the term and distinction met with great opposition, but the force of circumstances was too much for those who desired to class them as hybrid perpetuals. Now the hybrid teas class is the predominant partner in the family of perpetual roses, and one ventures to think that in like manner Rosa Pernetiana will before long be recognised; in the next edition of the catalogue of roses issued by the National Rose Society we shall expect to see these roses in a class by themselves, and what was done for M. Philippe Noisette will likewise be done for M. Pernet-Ducher.

Of some of the roses of the Pernetiana group we may have more to say later on, but as an example of how other raisers are following on the lines laid down by M. Pernet-Ducher we may point to the new rose Juliet, raised by Messrs. William Paul and Son, an illustration of which appears in the GARDENERS' MAGAZINE Almanack for 1911. Juliet is a strong-growing and apparently hardy variety, bearing certain characteristics of Rosa lutea, especially in the prickles. The flowers are of medium size, cupped, petals soft yellow suffused with rosy-red, foliage dark green.

JOSEPH H. PEMBERTON.

NEW TREES AND SHRUBS.

Public attention in trees and shrubs has within the last few years been greatly stimulated by the number of species and varieties that have been introduced, many of which have been already put into commerce. Of late the most successful hunting ground has been Central and Western China, where, in 1899, Mr. E. H. Wilson went collecting on behalf of Messrs. Veitch. Some of his earlier introductions are already exceedingly popular, while others are, from their slow rate of increase, not yet sent out. In a subsequent journey, in which the Hon. Vicary Gibbs and Professor Sargent were interested, Mr. Wilson sent home a number of good things, and he is now in China at the expense of the Harvard University. Many of his introductions have already proved their worth in the Arnold Arboretum, whose director, Professor Sargent, has an unrivalled knowledge of the trees and shrubs of the Far East, as well as those of the Western continent.

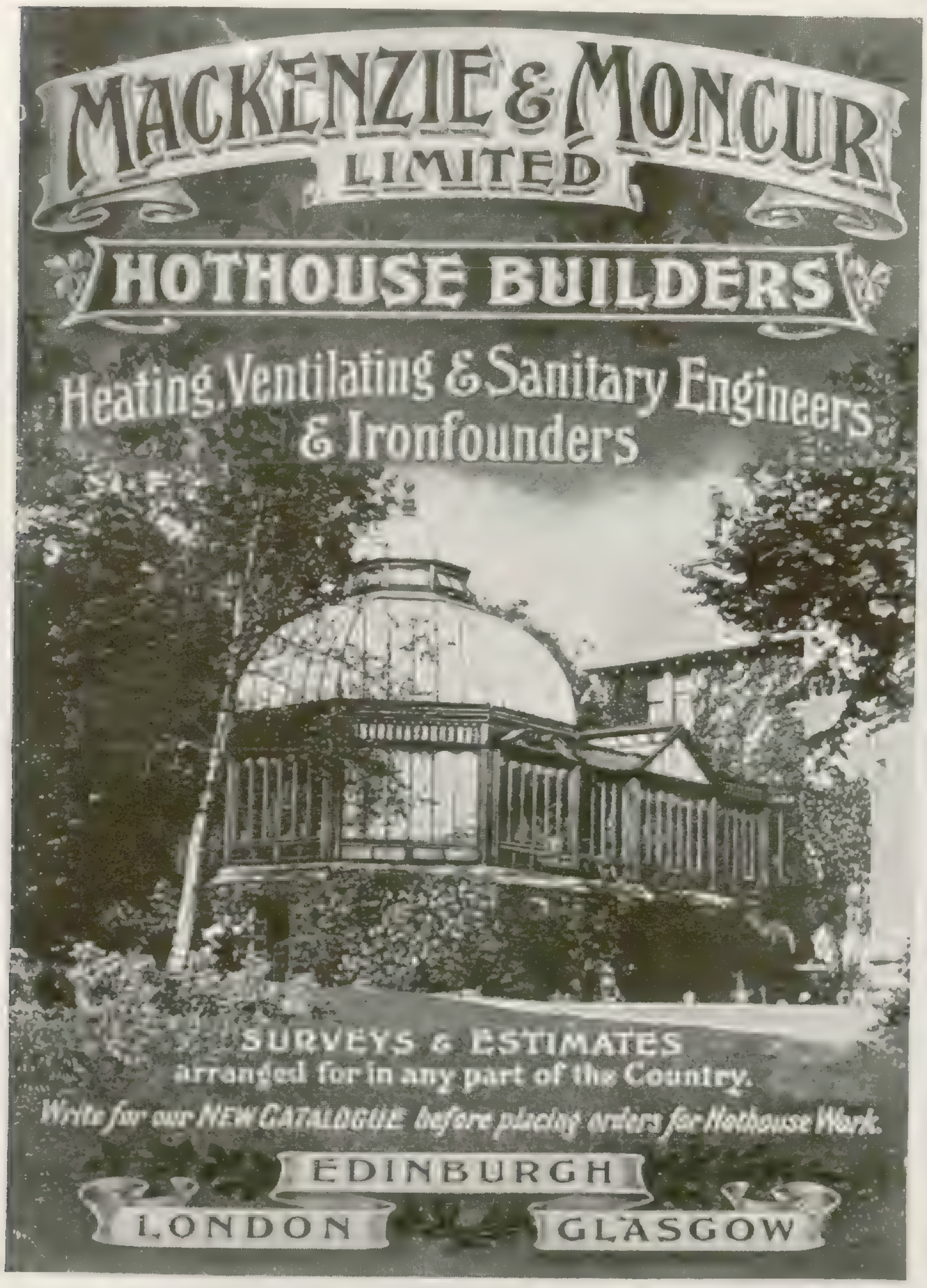
In reviewing these new Chinese trees and shrubs it is necessary to mention that a prominent feature is the number of new genera that occur among them, while some popular classes have received great acquisitions. This is, among others, particularly noticeable in the case of the rhododendrons, of which, till within the last decade or so, comparatively few species were known. Now those recognised by botanists are very numerous, and some are of high ornamental value. This is shown by the fact that in 1907 Rhododendron nigro-punctatum, afterwards changed to R. intricatum, was given a First Class Certificate by the Royal Horticultural Society, and the dwarf-growing, yet large-flowered Rhododendron Souliei gained a similar distinction in 1909. In 1910 an Award of Merit was given to Rhododendron primulinum.

The viburnums of recent introduction are also very numerous. One of the most notable is Viburnum rhytidophyllum, a very attractive and most distinct evergreen, but having been so freely distributed within the last two or three years it is perhaps a little out of place to refer to it as a new shrub. Viburnum Henryi, given a First Class Certificate on September 27, 1910, is a choice evergreen shrub with lanceolate leaves of a bright glossy green colour, and panicles of white flowers, which are succeeded by berries, bright coral-red when ripe. Other species are V. phlebotrichum, a large-growing shrub, somewhat after the manner of our native V. opulus, and, like it, bears a profusion of scarlet fruits in autumn. Viburnum theiferum is somewhat in the same way, while the evergreen V. utile is decidedly promising as a white-flowered shrub in spring, but at present its merits in this respect have not been fully tested.

Barberris are also freely represented among these Chinese introductions, but though pretty and interesting, it is questionable if, with one exception, any of them will prove of very high ornamental value. This exception is Berberis Wilsonæ, a dwarf-growing shrub, with golden flowers and a profusion of coral-red berries, while the decaying leaves are also richly coloured. Other interesting species are B. Gagnepaini, an evergreen shrub with blackish berries; B. polyantha, a bold-growing deciduous kind, with drooping clusters of roundish red berries; and B. brevipaniculata, remarkable for its glaucescent character. The Chinese region would appear to abound with cotoneasters, for we have had several introduced of late years. Among them are C. applanata, a curious growing shrub with scarlet berries; C. humifusa, quite a trailing little evergreen; C. rugosa Henryi, with curious drooping foliage; and C. reflexa, with a profusion of white berries in spring.

Space does not admit of enumerating in detail the other different flowering shrubs that we have received from China within recent years, but included among them are buddleias, deutzias, spiræas, clematis, loniceras, etc., while of evergreens mention must be made of the delightful little Ilex Pernyi, which has been figured in the GARDENERS' MAGAZINE; Pinus Armandi, one of the Cembra section; Sarcococca ruscifolia, a butcher's broom-like shrub with shining green leaves; Ligustrum Henryi, given an Award of Merit on October 11, 1910, a neat evergreen bush with glossy dark green ovate leaves; Magnolia Delavayi, a promising species with large creamy-white flowers; Stranvæsia undulata, nearly related to the photinias; and Sycopsis sinensis, a neat evergreen, and the only hardy member of the genus.

The new Chinese trees are, of course, not so much in evidence as the shrubs, as they take so much longer to develop their character and show their worth. Perhaps one of the most remarkable of all is Davidia involucrata, the showy portion of whose inflorescence consists of large white bracts, which form a marked contrast to the dark green of the lime-like leaves, but up to the present it has not, as far as I know, flowered in this country. Populus lasiocarpa, with its huge heart-shaped leaves veined with red, has already gained many admirers. Other trees that may be looked upon as yet in the probationary stage are the Chinese Tulip Tree (Liriodendron chinense), which bears smaller flowers than its North American relative; Decaisnea Fargesi, a deciduous tree with handsome pinnate leaves and greenish-yellow flowers,



MACKENZIE & MONCUR
LIMITED
HOTHOUSE BUILDERS
Heating, Ventilating & Sanitary Engineers & Ironfounders

SURVEYS & ESTIMATES
arranged for in any part of the Country.
Write for our NEW CATALOGUE before placing orders for Hothouse Work.
EDINBURGH
LONDON GLASGOW

"Practical and prettily illustrated."
—*The Scotsman.*

Sixth Edition, Including New Features and Illustrations, and Revised List of 1,666 Different Roses.

ROSES
AND THEIR
CULTIVATION

198 Pages.
16 Plates.
Frontispiece and
64 Illustrations.

2/6
Net ;
By post, 2/10.

By T. W. SANDERS, F.L.S.

A Complete Guide to the Selection and Culture of

- STANDARD ROSES.
- PILLAR ROSES.
- GREENHOUSE CLIMBERS.
- RAMBLING ROSES.
- ROSES FOR TRELLISES.
- CLIMBERS FOR PERGOLAS.
- POT ROSES.
- DWARF ROSES.
- ROSES FOR EXHIBITION.
- &c., &c.

LIST OF 1,666 CULTIVATED ROSES:
Showing Variety, Section or Class, Date Introduced, Colour, Habit of Growth, How Best Grown, Mode and Time of Pruning, Description of Flower.

ORDER FORM.

To the Publishers of "The Gardeners' Magazine,"
148 & 149, ALDERSGATE STREET, LONDON, E.C.

Please send me a copy of **"ROSES AND THEIR CULTIVATION"** by post, for which I enclose remittance of **2/10.**)

Name..

Address..

HAVE YOU GOT A SEED SOWING TIME TABLE?

It would be just as useful to you when you want to sow seeds as a railway time table is when you want to catch a train, and would help you to make sure of sowing your seeds at the proper time to ensure

THE BEST POSSIBLE RESULTS.

It would also enable you to have your plants in bloom or your vegetables ready for table just when wanted. If you are an exhibitor it would tell you the correct time to sow in order to have your produce in the best possible condition for the show. So far as we know, Stormonths' Catalogue of

WARRANTED BEAU-IDEAL SEEDS IN 1d. PACKETS

is the only reliable source whence this information may be obtained. A copy will be sent, post free, on receipt of your name and address on a postcard.

STORMONTHS,
8, KIRKBRIDE, CARLISLE.

The Gardener & his Family must have Dry, Comfortable, Easy Going BOOTS.

THE Gardener in whatever capacity must have foot comfort, the first necessity of an active mind and body. If the feet are wrong then all's wrong. We recommend our special footwear to old and young for outdoor wear.

The Stout Chrome Calf Greenhouse wear **11/9** | The Nailed Gardener Boot **10/6**

We make special quality Boots for the whole family. Write for free illustrated price list No. 14 and select what you fancy. We know you'll come again and again.

NORWELL'S BOOT FACTORY, **PERTH, Scotland.**
Established over 100 years.

THE
APRON
That has Come to Stay.
WORN BY ALL THE LEADING GARDENERS.
LOOK AT THE PRICE.
In Dark Blue Ponicus Twills,
1/9, Postage 3d. extra.
Or in Dark Blue Ponicus Serge,
3/9, Postage 3d. extra.
WRITE FOR ONE TO-DAY.
SHAW & MONTGOMERY
(PENMAN'S),
628, Argyle St., Glasgow, W.

REMEMBER TO ORDER
BARNES' NITRIC DIET
THE VERY KEYSTONE OF THE MOST SUCCESSFUL CULTURE.

Sold in Tins at 6d. and 1/-: in Bags, 7 lbs., 2/6; 14 lbs., 4/6; 28 lbs., 7/6; 56 lbs., 12/6; 1 cwt., 20/-.

Nitric Diet is a **complete** Manure; prepared only by

R. J. BARNES & SON, Malvern,

who also supply Pure Bone-Meals, Crushed Bones, Steamed Bone Flour, Unadulterated Fish Guanos, and every other Fertilizer of known value.

these latter being succeeded by pendulous fruits, which, when ripe, are of a pleasing blue colour; Tilia Oliveri, whose heart-shaped leaves are clothed underneath with a whitish tomentum; acers of different kinds; a paulownia; Tetracentron sinense, a large tree somewhat like Cercidiphyllum japonicum, and Carrieria calycina, a deciduous tree with bluish-white flowers.

So much space has been taken up with even these imperfect notes on Chinese trees and shrubs that but little space remains for the new kinds which we owe to the hybridist's skill. A delightful broom is Cytisus Dallimorei, with reddish-purple flowers. It is a seedling from Cytisus Andreanus pollinated with C. albus. M. Lemoine, of Nancy, still continues to raise new lilacs, deutzias, and philadelphuses. Among these last is one variety, Œil de Pourpre, which is described as having the white flowers marked in the centre with blackish-purple. It is thus an addition to the purpureo-maculatus type, and should be of much value. W. T.

Escallonia Langleyensis.—Intending planters will do well to take a note of this, one of the most beautiful of all the escallonias. It is of hybrid origin, and was obtained by crossing the white-flowered Escallonia Philippiana with the deepest-coloured form of Escallonia macrantha. It inherits the hardiness of its first-named parent, and is, in many respects, intermediate between the two kinds. Escallonia Langleyensis is of a spreading, semi-scandent habit of growth, and is seen to great advantage when the main branches are secured to stout upright stakes, leaving the minor ones to dispose themselves at will. The flowers are of a bright carmine-rose colour, and borne in great profusion about midsummer.—W. T.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

Royal Horticultural Society.

The exhibition at Vincent Square on January 3 was a smaller one than usual, and there was only a moderate attendance. Orchids, especially cypripediums, were very much to the front, and begonias, carnations, and cyclamens were other prominent subjects.

FLORAL COMMITTEE.

A splendid lot of finely-grown cyclamen were brought all the way from Etwall, Derby, by the Rev. H. Buckston. The ordinary forms were good, but the chief attraction lay in the papilio forms, which have been largely improved and reproduced true to colour. One of these, a charming salmon-pink, with rich crimson centre, was a lovely variety, and it had flowers over three inches across, prettily frilled, and with the segments charmingly fimbriated; this variety gained an A.M. Some of the flowers were very double in appearance owing to the frilling. Mr. G. Reuthe, Keston, showed Hamamelis Zuccarini, Berberis Bealei, Helleborus lividus, pernettyas, saxifragas, hardy cyclamens and primulas. Phœnix Roebelini was well shown by Messrs. William Cutbush and Son, Highgate, this firm contributing attractive groups of Iris Bakeriana, I. histrioides major, I. alata, Helleborus niger, and perpetual carnations, the latter shown in large numbers.

Very bright were the cut pelargoniums so finely staged by Messrs. H. Cannell and Sons, Swanley; Arabic, Saxonia, Umbria, Lucania, Jupiter, Carmania, and Hibernia were strikingly brilliant and shapely varieties. The camellias, cut flowers, and small bushes sent up by Messrs. William Paul and Son, Waltham Cross, proved very interesting, and the single and semi-double varieties Vesta, Apollo, Tricolor, Mars, Minerva, and Tokayana was a great attraction. A collection of veronicas and heaths from the Guildford Hardy Plant Company was another interesting contribution. Moschosma riparia, Indian azaleas, Gesnera Aurora, a set of their winter-flowering begonias, the new variety of B. Gloire de Lorraine, named Mrs. Bedford, and a few plants of Buddleia officinalis were staged by Messrs. James Veitch and Sons. Cyclamens, daphnes, and some charming perpetual carnations, in goodly numbers and the best varieties. Cyrtomium Rochfordi, the fimbriated form of C. falcatum, was again shown well by Messrs. Thomas Rochford and Sons, Broxbourne, who had also on view their fine and persistent variety of Begonia Gloire de Lorraine, named Amabilis.

Carnation White House was well represented by Messrs. W. Wells and Co., Earlswood. Messrs. H. B. May and Sons, Edmonton, contributed a display of the newer ferns, especially the better and plumose forms of nephrolepis, Adiantum Fergussoni, and Davallia tenuifolia Veitchi. Mr. L. R. Russell, Richmond, showed a collection of attractive ivies, eleagnuses, etc.

ORCHID COMMITTEE.

Messrs. Charlesworth and Co., Haywards Heath, exhibited a few plants only, but all were good ones: there were Odontioda Charlesworthi, Odontoglossum crispum var. xanthotes, O. Aireworth (crispum and Lambeauianum), Cypripedium Priam, very fine; Lælio-cattleya Artemus, rich orange-gold;

An interesting group was provided by Mr. Black, gardener to R. G. Thwaites, Esq., Chessington, Christchurch Road, Streatham. The larger part of the exhibit consisted of young flowering plants of cattleya hybrids. Other good

Eckford's
SWEET PEAS

SWEET PEA PERFECTION.

A flower garden without Eckford's Sweet Peas can only be compared to a house without furniture.

Sweet Peas are requisite to the small, medium, or large garden, and if you wish to have colour, effect, prize specimens, and tall plants, then send to Eckford's for your seeds.

The time to buy is NOW. The firm to buy from is Eckford's. No other seed specialist in the world can rival Eckford's for Sweet Peas.

Larger flowers, longer stems, brighter colours, and a profusion of bloom is the result of growing Eckford's seeds.

Remember, Genuine Eckford's Seeds can only be obtained direct from Wem. No Agents are employed.

A specially written booklet on Sweet Pea Growing given with every order. Send to WEM to ensure satisfaction.

SPECIAL NOVELTY OFFER FOR 1911.

LUMINOSA.—This variety will be appreciated for its deep coral colour, which for decoration is unexcelled, having the quality of giving off greater brilliance in artificial light than any other variety. Very scarce. In sealed packets, [illegible] seeds, **3d.**; [illegible], **1s.**

VICOMTE DE JANZE. A fine bold flower of exquisite shape, the standard being splendidly erect; in colour it is deep bright rose, perfectly distinct, a charming flower. In sealed packets, 5 seeds, **3d.**; 10, **6d.**; 20, **1s.**

DODWELL F. BROWNE (WAVED).—This is a very beautiful intense bright crimson, three and four flowered, almost a self; a true Giant Waved variety of intense King Edward VII. colour. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

SAINT GEORGE.—Light orange pink standard with slightly lighter wings; almost a self; good sizes; slightly waved. In sealed packets, 20 seeds, **3d.**; 40, **6d.**; 80, **1s.**

ASTA OHN (WAVED).—A pretty waved lavender overlaid with rose; a very charming flower of good size and substance. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

MAGGIE GERRING.—This is a decided acquisition with a bold standard of perfect shape, and beautifully balanced wings. In colour it is a soft cream overlaid with a delightful shade of pink which rather deepens towards the edges. It is exquisitely rich in tone when bunched. In sealed packets, 5 seeds, **3d.**; 10, **6d.**; 20, **1s.**

APPLE BLOSSOM (WAVED).—This, as its name implies, is a beautiful flower of apple blossom colour, of giant size, and, like most of the waved varieties, is a very strong grower. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

MRS. E. GILMAN.—A fine bold flower, with expanded standard. It has a creamy ground suffused with bright rose, and almost pure cream wings. In sealed packets, 5 seeds, **3d.**; 10, **6d.**; 20, **1s.**

PICOTEE (WAVED).—This is one of the very finest introductions, being a giant waved flower, pure white, with a beautiful picotee edge of carmine; in most cases the flowers are borne in fours on a long, strong stem. In sealed packets, 5 seeds, **3d.**; 10, **6d.**; 20, **1s.**

EVELYN HEMUS (WAVED).—A warm cream, shading to yellow, with a picotee edge of terra-cotta pink; of great size and refinement; standard and wings beautifully waved, and nearly always four-flowered. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

MRS. HENRY BELL (WAVED).—A beautiful rich apricot ground overlaid with a soft pink, which deepens towards the edges of both standards and wings. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

MID BLUE.—A medium-sized erect flower of deep sky blue. It is a strong grower, very free, and frequently four flowered, quite distinct. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

OTHELLO (WAVED).—A beautiful self-coloured giant chocolate, of splendid substance and robust habit. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s**

CERISE (WAVED).—A fine, bold, beautifully waved, true cerise, a very strong grower, giving generally four flowers on long, strong stems. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

SPECIAL OFFER. One full-sized packet of each of the foregoing 14 charming and Novel Sweet Peas, **12 6** post free for cash with order.
One half-sized packet of each of the foregoing 14 charming and Novel Sweet Peas, **6 6** post free for cash with order.

SPECIAL COLLECTIONS FOR 1911.

Villa (A) Collection. [illegible] very choice varieties, suitable for villa garden, excellent giant flowered sorts, most suitable for cutting and exhibition, 25 seeds of each, **10s.**

Villa (B) Collection. 24 splendid varieties, suitable for exhibition, 50 seeds of each, **5s. 6d.**

Half-Villa (B) Collection. 24 splendid varieties, suitable for exhibition, 25 seeds of each, **3s.**, post free for cash

FREE. Send a postcard to-day for large illustrated and coloured catalogue: It gives full particulars of all novelties in Sweet Peas for 1911, and contains full list of all flower and vegetable seeds.

HENRY ECKFORD, F.R.H.S. (Dept. 221), WEM, SHROPSHIRE.

BY SPECIAL APPOINTMENT

BOULTON & PAUL, L^TD
MAKERS. NORWICH

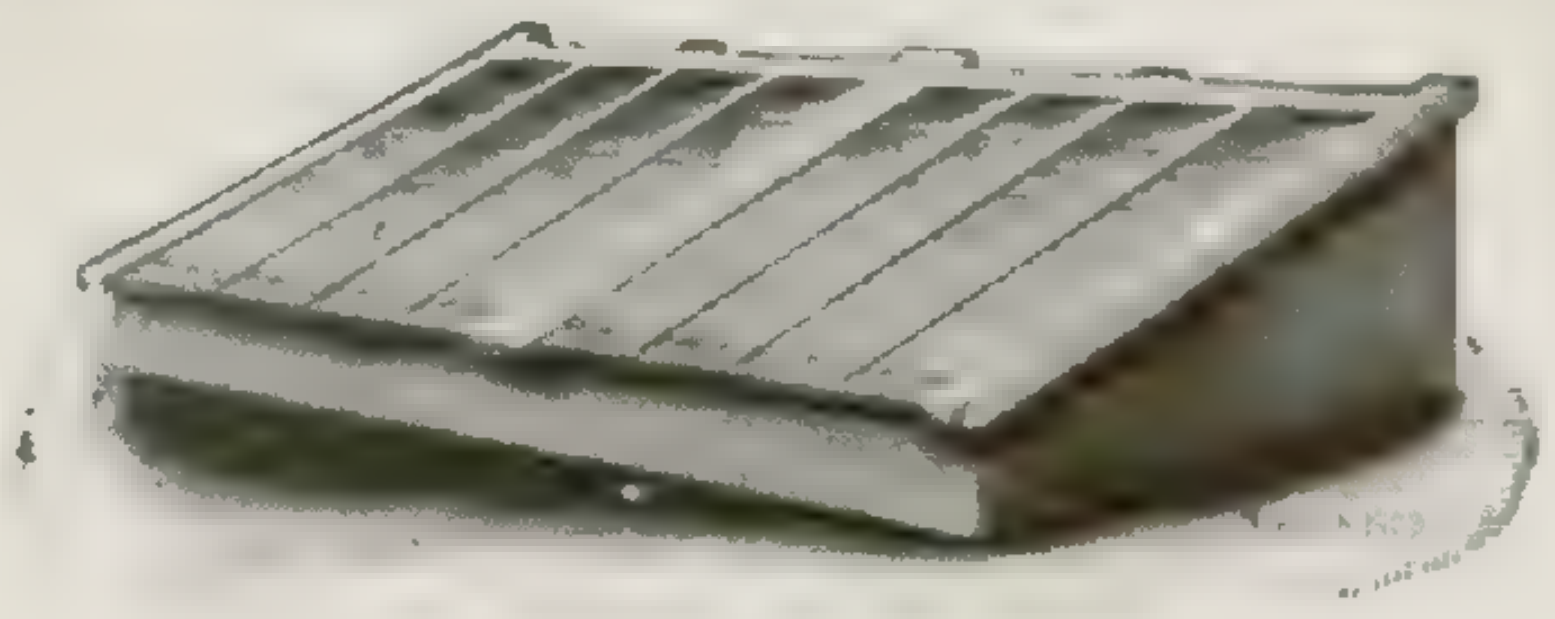
MODERN GLASSHOUSES

Designed and Built by us, comprising the Latest Improvements in Construction, Ventilation, Heating, etc., will give continued satisfaction and profit.

Enquiries invited for
WINTER GARDENS, CONSERVATORIES, VINERIES, PEACH HOUSES, MELON HOUSES, GLAZED PORCHES.
Representatives sent to take particulars in any part of the Country.

HEATING APPARATUS installed in Country Houses, Churches, and Horticultural Buildings in the most economical manner.

GARDEN FRAMES in great variety, always in stock.



Send for latest Illustrated Catalogues, free on Application.

ARCHITECTS DESIGNS CAREFULLY CARRIED OUT.

REGISTERED TRADE MARK
THE FOUR OAKS

ANOTHER "FOUR OAKS" Machine which will appeal to EVERY GARDENER.

THE FOUR OAKS "FALMOUTH" PATTERN.

3 MACHINES IN ONE.

A COMBINED Garden Engine, Spraying Machine, AND Limewashing Machine.

PRICE:
£8 10
Complete with all fittings to make it a TRIPLE MACHINE.

Indispensable even in the smallest Garden.

Complete Catalogues Free on application to the Sole Manufacturers
The Four Oaks Spraying Machine Co., No. 5, Sutton Coldfield.

FUMIGATE WITH

M^c DOUGALL'S FUMER.

Mc.DOUGALL'S "FUMER"
NO SPIRIT OR LIQUID POISON.
READY FOR USE. CHEAP & HANDY.

GREAT REDUCTION IN PRICES
Mc.DOUGALL'S Celebrated "SHEETS" & "FUMERS."
Sold by NURSERYMEN, SEEDSMEN, & FLORISTS THROUGHOUT THE WORLD.
M^c DOUGALL BROS., MANCHESTER.

WINTER SPRAYING OF FRUIT TREES.
VERMOREL'S KNAPSACK SPRAYERS
Have Won over 500 First Prizes and Medals.
ECLAIR No. 1. Price 35/6.
Sole Agents, COOPER, PEGLER & CO.,
24/26, Christopher Street,
Finsbury Square, London, E.C.

things were Odontioda Charlesworthi and Sophro-lælia Saxa.

Lælia anceps in variety was presented by Messrs. Stuart Low and Co., Bush Hill Park, Enfield, who also staged a number of cypripediums, Cymbidium insigne, C. Traceyanum, C. Wiganianum, Oncidium varicosum Rogersi, O. bicallosum, O. crispum, O. raniferum, Odontioda Charlesworthi, Renanthera Imschootiana, and some odontoglossums.

Messrs. James Veitch and Sons, Chelsea, showed a collection of cypripediums, the hybrids and varieties being represented by well-grown plants: C. insigne Harefield Hall, C. Lathamianum, C. Hera Euryades, C. Actæus, C. Ville de Paris, C. Clionea, C. Elatior, and C. Thalia were a few of the good things. Lælio-cattleya Cranstounæ Westonbirt var., a hybrid between C. Harrisonæ and Lælia tenebrosa Walton Grange variety was shown from Westonbirt—it carried six big creamy flowers, with a purple-marked lip—a striking subject from such parentage. Mr. Alexander, Lt.-Colonel Sir G. Holford's able grower, also showed Cypripedium Nydia in good form. Messrs. James Cypher and Sons, Cheltenham, contributed a group of very finely-grown cypripediums, the flowers being of excellent size; here were C. Beekmanni, C. Alcibiades superbum, C. triumphans, C. Mr. F. Sander, C. Mrs. Mostyn, C. William Lloyd, C. Charlesianum, C. Fascinator, C. Curtmani, and C. Leeanum Chardwar var.; there were also a few masdevallias and calanthes from Cheltenham. Mr. M. Mertens, Ghent, showed a few very attractive, unnamed hybrid odontoglossums. Cypripedium Riordan, very bold; C. Cupid, and C. Miss Alice Wallace were shown by Mr. Hopkins, gardener to F. Wellesley, Esq., Westfield, Woking. Cypripedium Goliath, of unknown parentage and of large size, as its name suggests, was submitted by Messrs. Sander and Sons, St. Albans.

LÆLIO-CATTLEYA CRANSTONÆ WESTONBIRT VARIETY.

A distinct and beautiful variety, bearing medium-sized flowers; the sepals and petals pale yellow, and the lip white marked with purple. A.M., R.H.S., January 3. Lieut.-Colonel Sir George Holford.

Right across the top of the hall Messrs. Armstrong and Brown, Tunbridge Wells, arranged a very fine collection of cypripediums; there were altogether several hundred plants, set in a sloping bank among maidenhair ferns. It was a rare display of long-lasting winter-flowering orchids, and finely demonstrated the usefulness of these flowers. C. insigne was represented by the varieties Chantini, Lindeni, Cobbianum, Orchidhurst var., Dormani, Sanderæ, Berryanum, Sanderianum, Aberdeen, Amesiæ, Monarch, Jas. Renwick, and Harefield Hall. There were numerous varieties of the useful C. Leeanum and C. nitens, while C. Zeno, C. triumphans, C. aureum, C. Niobe Westonbirt var., C. Arthurianum Charlesworth's var., C. The Sultan, C. Beekmani, C. Thalia Mrs. Francis Wellesley, C. Mrs. Mostyn, C. King Edward VII., C. Dauphine, C Venus, C. Helen II. var. Armstrongæ, a lovely thing; C. Fascinator, C. Actæus, C. Hitchinsæ, etc. The range of insigne varieties and hybrids from that species was wonderful, and all through the plants were finely grown, and the flowers large and bright. The display was a splendid one, and gave evidence, among other things, of the resources of this Tunbridge Wells firm.

Goodson's variety of Odontoglossum Wiganianum, with bright yellow-green colouring, was shewn by Mr. H. S. Goodson, Fairlawn, Putney. From Glebelands, South Woodford, Mr. Davis, gardener to J. Gurney Fowler, Esq., brought up Cypripedium Leeanum J. Gurney Fowler, a big flower; C. chrysotoxum Victor, a fine plant with nine flowers, and Cymbidium Glebelandense, a curious cross between C. Schroderianum and C. insigne Glebelands var.

FRUIT AND VEGETABLE COMMITTEE.

Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby, gained a silver Hogg medal for an exhibit of Muscat of Alexandria, Appley Towers, and Alicante grapes, fourteen bunches in all. Mr. Goodacre also showed Elvaston Winter and Selected Sunbeam tomatoes. Mr. Wm. Poupart, Twickenham, put up a beautiful lot of bottled fruits, chiefly plums, in grand condition.

Mr. Gentle, gardener to Mrs. Dennison, Little Gaddesden, showed that his hand has not lost its cunning in connection with onion growing, for he staged grand bulbs of Carter's Record, Ailsa Craig, White Spanish, and Holborn varieties. Christmas and New Year vegetables from Messrs. Sutton and Sons, Reading, were a further attraction, and they included Sutton's New Year savoy, Christmas Salad chicory, and Christmas White broccoli, the latter represented by about four dozen beautiful heads.

A collection of apples from Messrs. J. Peed and Son, West Norwood, S.E., was interesting, and the bright fruits of Annie Elizabeth, Lewis's Incomparable, Tyler's Kernel, Hollandbury, Hoary Morning, Betty Geeson, Queen, Emperor Alexander, and Dumelow's Seedling. Mr. W. E. Sands, Hillsborough, co. Down, Ireland, showed potatoes grown as a catch crop; they were planted at the end of June, 1910, following a crop of either early potatoes or cabbage, and were the fourth crop taken from the land in two years, the sample was fairly good, especially considering the circumstances.

AWARDS.

No certificates were granted on this occasion.

Award of Merit.—To Cyclamen Mrs. Buckston, from Rev. H. Buckston, Etwall, Derby; to Odontioda Cooksoniæ, from J. Gurney Fowler, Esq., Glebelands, South Woodford; and to Lælio-cattleya Cranstounæ Westonbirt var., from Lt.-Colonel Sir G. Holford (grower Mr. H. Alexander), Westonbirt, Gloucester.

MEDALS.

Gold.—To Messrs. Armstrong and Brown, Tunbridge Wells, for cypripediums.

Silver-gilt Flora Medal.—To R. G. Thwaites, Esq., Streatham Hill, for orchids.

Silver Flora.—To Rev. H. Buckston, Etwall, Derby, for cyclamens; to Messrs. Stuart Low and Co., Enfield, for orchids; to Messrs. James Cypher and Sons, Cheltenham, for orchids; to Messrs. W. Cutbush and Son, Highgate, for carnations, etc.

Silver-gilt Knightian.—To Mr. Gentle, gardener to Mrs. Dennison, Little Gaddesden, Herts, for onions.

Silver Hogg.—To Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, for grapes.

Silver Knightian.—To Messrs. J. Peed and Sons, West Norwood, for collection of apples.

Silver Banksian.—To Messrs. Sutton and Sons, Reading, for vegetables; to Messrs. James Veitch and Sons, Chelsea, for orchids; to Messrs. H. B. May and Sons, Edmonton, for ferns, etc.; to Messrs. Thomas Rochford and Sons, Broxbourne, for begonias and ferns; to Messrs. James Veitch and Sons, Chelsea, for greenhouse flowering plants; and to Mr. W. E. Sands, Hillsborough, co. Down, for potatoes.

FORTHCOMING ENGAGEMENTS.

MONDAY, January 9.—Leeds Gardeners' Association, lecture, "Recent Work in Soil Fertility," by Professor Galt.
MONDAY, January 16.—Royal Horticultural Society. Examination of Employees in Public Parks.
TUESDAY, January 17.—Royal Horticultural Society. Meeting of Floral, Fruit, and Orchid Committees, 12 noon; General Meeting, 3 p.m.; Lecture by Mr. H. C. Long on "Weeds and Weed Seedlings"; Scientific Committee, 4 p.m.
THURSDAY, January 19.—Linnean Society, 8 p.m.
SATURDAY, January 21.—Société Française d'Horticulture de Londres, Annual Dinner, 6.30 p.m.
British Gardeners' Association, Meeting at Cobden Café, Corporation Street, Birmingham, 7.30 p.m.

Pernettyas.—From the ornamental qualities of their fruits, either out of doors or in the greenhouse, the different forms of Pernettya mucronata are very beautiful. In the open ground it should be borne in mind that the conditions favourable to many ericaceous plants, such as azaleas and rhododendrons, are equally suitable to the pernettyas, these last being members of the same order. The roots are, as in many of their allies, of a dense fibrous nature, owing to which the berried plants may be lifted with but little check, and potted for greenhouse decoration. Under these conditions the fruits will remain fresh and bright for a considerable time.—W. T.

ANSWERS TO CORRESPONDENTS.

FUNGUS ON GRAPES.—W. H. P., Winscombe: A matter of this kind cannot be decided off-hand; it has to be investigated, and sometimes this occupies a long time, often, indeed, necessitating the culture of the fungus for a sufficient length of time to determine its life history. We are doing our best for you, and any information you can give us as to position of house, cultivation, manuring, etc., will be useful, in prescribing a remedy. Have any signs of attack ever appeared on the leaves on shoots of the vines?

DOUBLE CINERARIAS.—M. S. F. H., Antrim: There are double cinerarias in cultivation, but they are not popular, and consequently not largely grown. They are usually of close habit, and do not possess the elegance of the modern large-flowered single varieties, and their culture offers a little difficulty inasmuch as basal cuttings have to be taken each year to ensure stock for the following season. The flowers sent represent a vigorous semi-double variety, and no doubt you will be able to save seeds from such a plant. If you are satisfied with a fair amount of doubling you will be able to retain freedom of habit and bloom, but the farther the doubling process is carried by selection the fewer will be the seeds ripened and the more compact will the plants become. It is quite possible that there is a fair share of popularity in store for an elegant free race of cinerarias with good semi-double flowers.

LOSS OF BUDS ON GOOSEBERRIES.—H. L., Bristol: The loss of buds on the gooseberry shoots is due to the depredations of birds; in town districts sparrows are a very great plague, robbing both gooseberries and currants of innumerable fruit buds during the winter. The bushes must be made distasteful to the birds, and this can be managed by several means. A slightly adhesive quassia, petroleum, or nicotine mixture will serve, but an easy method is that of dusting the bushes with either lime or soot occasionally while they are damp, always repeating the operation soon after a rainy period.

EARLY CHRYSANTHEMUMS.—D. L. E., Chesterfield: Lift the old stools at once, shake the soil from them, and take care that slugs and worms are not allowed to remain among the roots. Then pot or box up the plants, keeping them carefully labelled, and using a somewhat light compost to which a good dusting of soot or lime is added. After potting place the plants in a frame from which severe frost can be excluded; no heat is necessary, only protection from severe cold, wet, and slugs. In the spring, about March, numerous growths should appear, and these must be removed as soon as large enough, and as most of them will have roots attached they will quickly establish themselves as individual plants if placed in sandy soil in a frame. Meanwhile trench and manure the ground as soon as possible, leaving it rough on the surface.

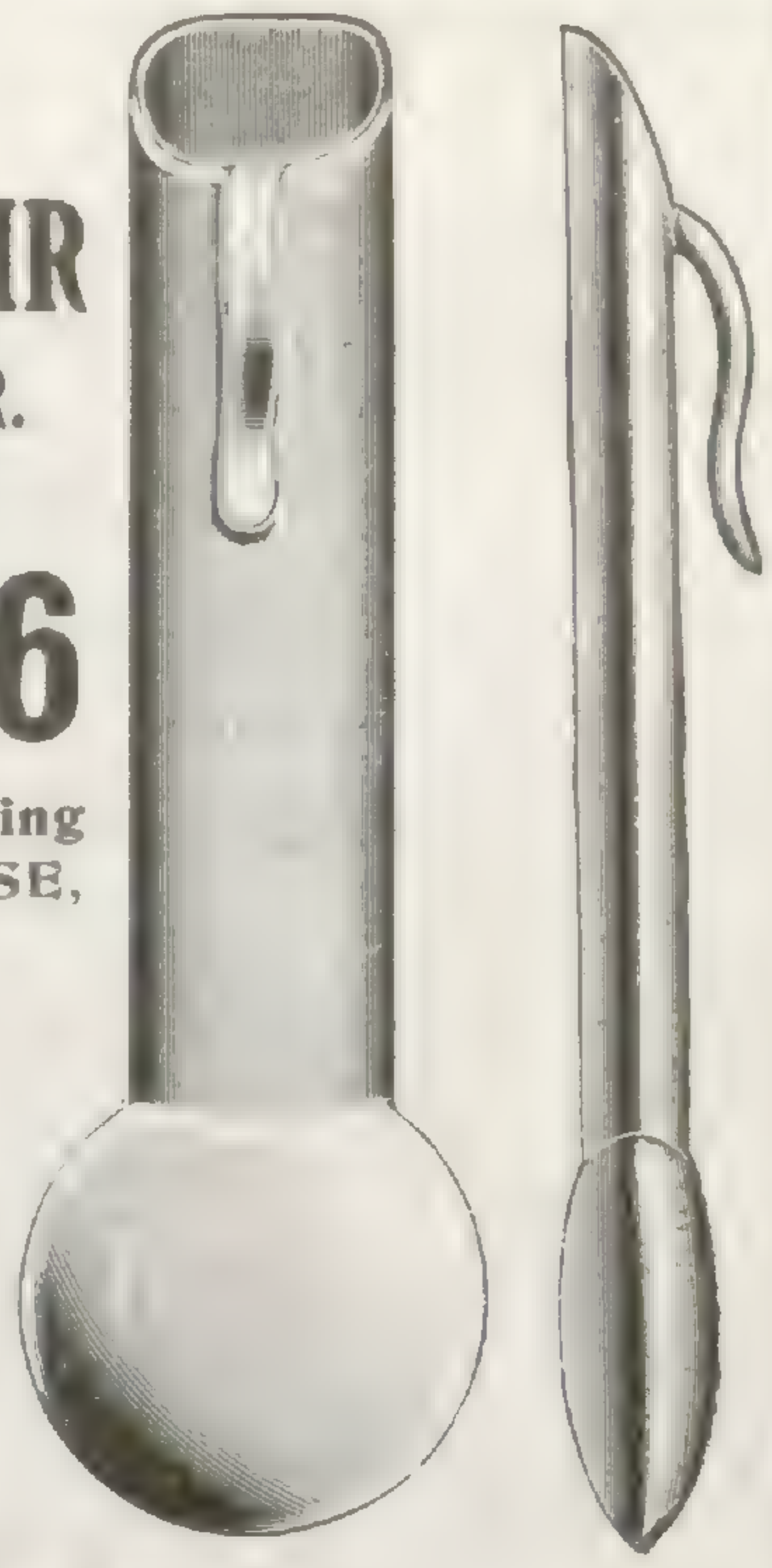
COST OF PLANTING STRAWBERRIES FOR MARKET SUPPLIES.—A. C. H., Bray: Failing an opportunity of planting in September or October, February and March are the best planting months. In some districts runners can be purchased more cheaply than in others. The cost varies also according to variety and quality, especially layered plants costing from 10s. to 15s. per 1,000, while "runabouts" (ordinary runners), may be bought for 5s. per 1,000. Assuming that there is less waste entailed in the purchase of stocky runners, and that weaklings are often planted in pairs, the average cost of plants per acre is from £4 to £8, 12,500 to 16,000 plants being required for each acre of ground. If planted two feet apart each way, nearly 11,000 plants are required per acre, but the distances between the rows and between the plants in the rows may vary considerably; for instance, rows 30 inches apart, and 12 to 15 inches from plant to plant, are common, while, on the other hand, "Paxtons" and "Nobles" are planted two feet from row to row, and one foot from

ROWE'S
PATENT
RESERVOIR
FLOWER-HOLDER.
Rd. No. 558235.

Solid Silver 2/6

With Brooch Fitting FOR LADIES' USE,
3/6
— Post Free.—

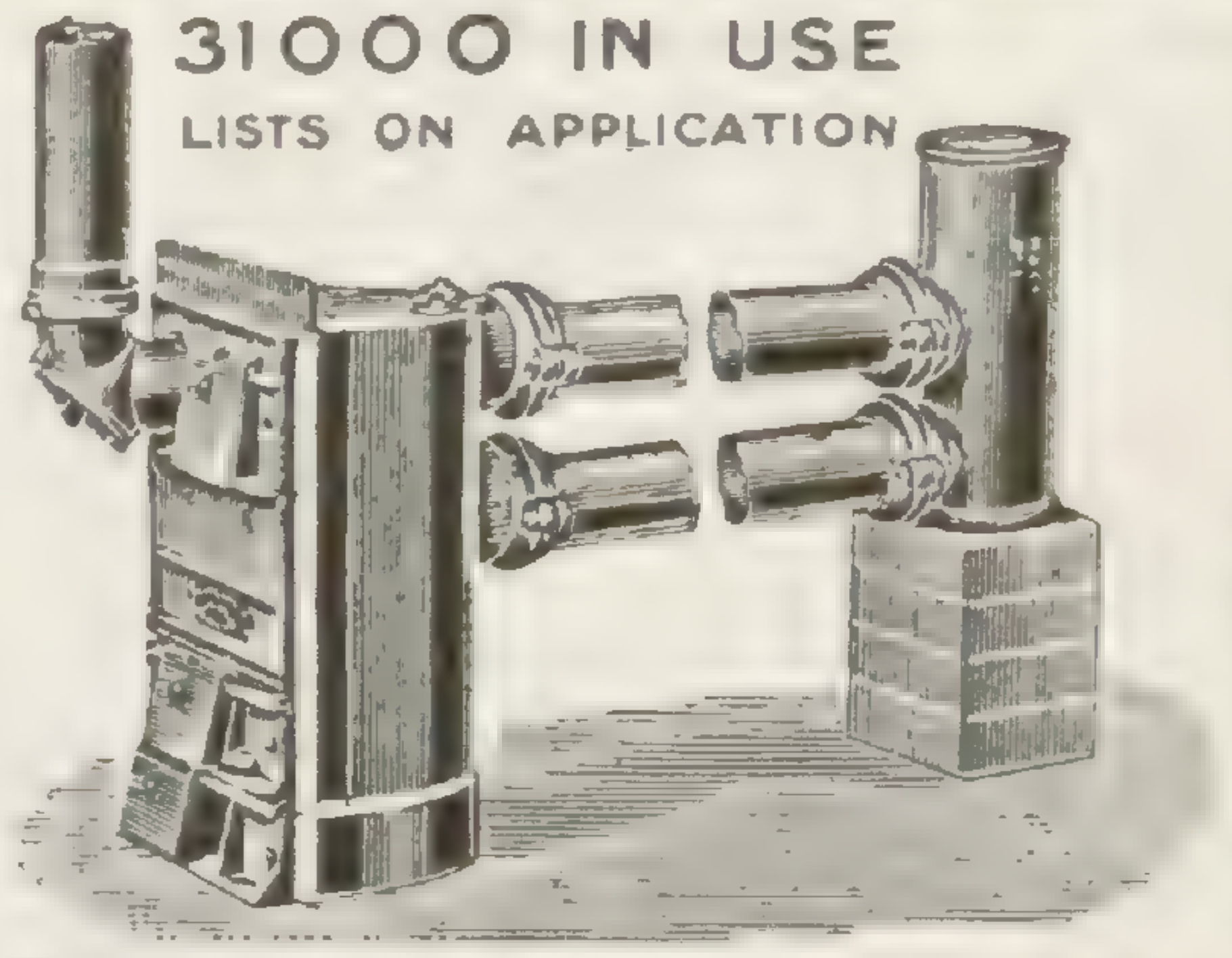
Made Expressly for Sweet Peas.
Takes all Flowers.
Holds Large Supply of Water.
Well and Substantially Made.
Quite Different to the Ordinary Flimsy Article.
"THE PRESENT" FOR A MAN,
SOLID SILVER AND GOLD.
Designed and Patented by a Member of the National Sweet Pea Society.
Obtainable only of Maker and Patentee—
ROWE, Jeweller, MARLOW.



The Loughborough BOILER
31000 IN USE
LISTS ON APPLICATION

The pioneer of cheap, simple and effective heating for small greenhouses. Complete Apparatus from £3. 19. 6. The immense sale of this boiler, and its numerous imitations are the best testimony of its undoubted success

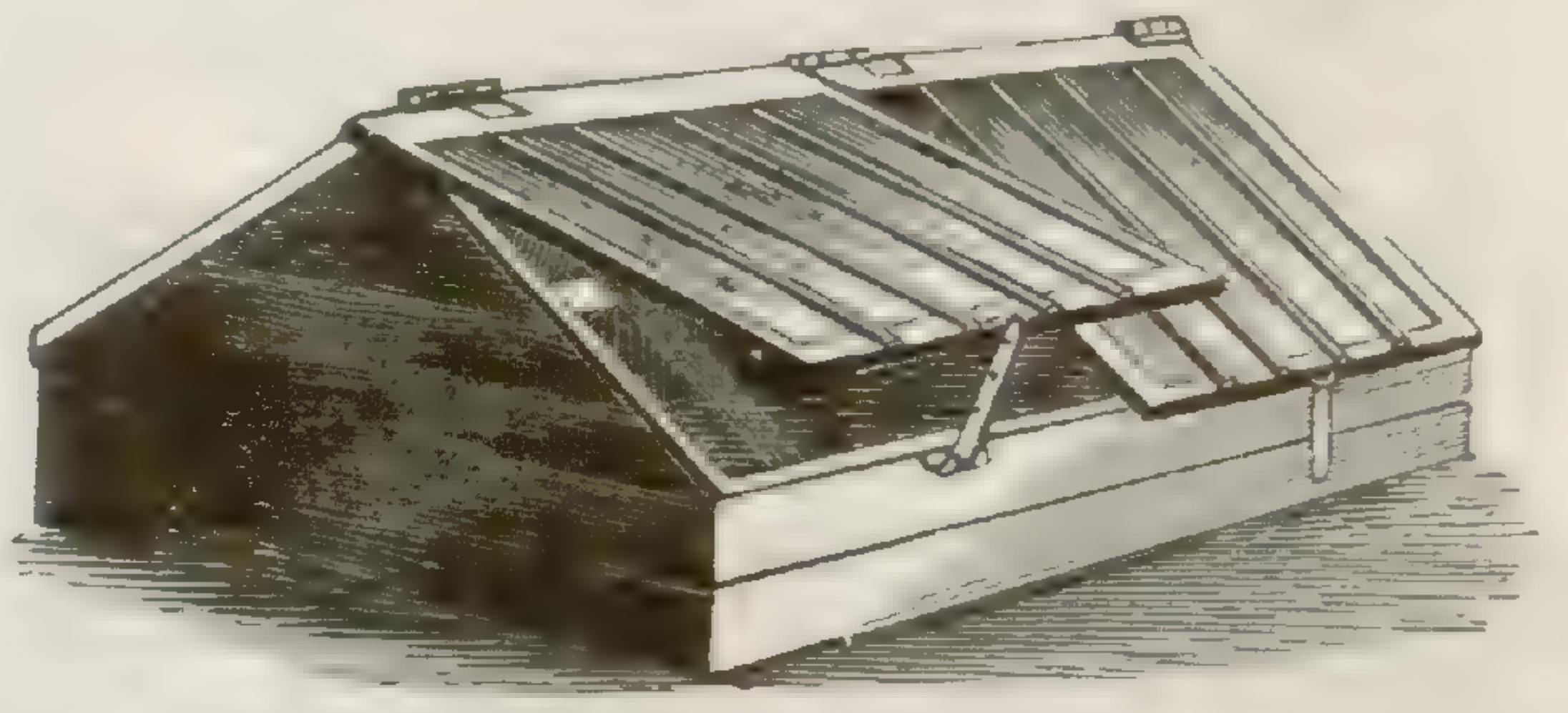
MESSENGER & CO. LTD.
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH · LEICESTERSHIRE
London Office, 122 VICTORIA ST · S · W



Destroy Wireworms
etc., in the most badly infested ground by the use of Vaporite the original soil insecticide. Vaporite is a powder which requires to be worked evenly into the soil (1lb. to 8 sq. yds.) before planting, to entirely destroy all trace of wireworms, leather-jackets, slugs, etc. Our instructive booklet, No. 45, tells you how to use Vaporite. Send a postcard for it to-day.—**Vaporite-Strawson Co., Ltd.**, Dept. E, Spencer House, South Pl., E.C.
VAPORITE

800 Loads of the very finest TURF LOAM for immediate Sale at a **Bargain Price.** Single truck load put on rail.
TURF LOAM
Send for Price—
HY. POTTER & SON,
Fairfield Wks., CHELMSFORD, Essex.

PORTABLE PLANT FRAMES
OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices.	Glazed and Painted.	£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. ,, 4ft. ,,		2	5	0
6ft. ,, 5ft. ,,		2	15	0
12ft. ,, 4ft. ,,		4	0	0
12ft. ,, 5ft. ,,		4	15	0
12ft. ,, 6ft. ,,		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
ROYAL HORTICULTURAL WORKS,
MIDDLETON, MANCHESTER.

SUBSCRIBER'S ORDER FORM

Every Saturday THE GARDENERS' MAGAZINE. Twopence.

To W. H. AND L. COLLINGRIDGE,
148 AND 149, ALDERSGATE STREET, LONDON, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose______ for______ months in advance.

Name______

Address______

Date______

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

*** If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.

plant to plant, in which case nearly 22,000 plants per acre are required. Some useful varieties of strawberries are: Bedford Champion — a large, handsome, richly-coloured mid-season fruit. In much favour with growers, as the flesh is firm, and the fruit bears packing and travelling well. Givon's Late Prolific—a valuable dark crimson-skinned variety for the last crop. A vigorous and free cropper. Royal Sovereign—a large and early variety, of good flavour; excellent for market and forcing. Sir Joseph Paxton—a large and prolific mid-season variety, having a good flavour and standing packing well. Noble—a large early variety, selling well until others are ready, but soft and bearing packing badly. The Laxton—a large, handsome, oval fruit, having a good flavour, but not packing so well as some varieties.

CLIMBER ON AN OLD TREE.—B. N., Effingham: Numerous climbers are suitable for covering an old and dying tree, but before they are planted it is essential that a place should be prepared for them. The soil at the base of an old tree is usually inert and poor; therefore some of it must be removed and suitable compost be put in its place: a site two feet wide and deep should be prepared, larger if possible. Clematis flammula, C. vitalba, C. montana, and C. Jackmanni are all suitable, while most of the strong-growing roses will be a success provided the tree is not a very high one. Polygonum Baldschuanicum we can strongly recommend for the purpose. Most of the newer ornamental vines, such as Vitis Coignettiæ, V. armata, V. Thunbergi, V. Henryi, etc., will also serve provided floral beauty is not an essential requisite.

AMERICAN CARNATIONS. — J. F. S., Chelmsford: There is an extensive list of names of American varieties of tree or perpetual carnations in "The Carnation Year Book" for 1910 the official publication of the Perpetual Flowering Carnation Society. In this list the names only are given, and the list is as compiled by the American Carnation Society in March, 1909; no descriptions are given, nor are the raisers' names attached.

PUBLIC PARKS EXAMINATION. — M. E. J., Hampstead: The Royal Horticultural Society's "Book of Arrangements" for 1911 has not yet been issued, but we imagine the general principles of the Public Parks Examination for the year will be on similar lines to those of 1910. At any rate it will help you to know that candidates in 1910 were expected to have a knowledge of:—

1. Trenching, digging, and draining; and the purposes of each.
2. Variety of soils and manures; their effect and suitability to various purposes.
3. Grass land: Renovation, turfing, relaying; grass edges; grass under trees.
4. Various methods of propagating trees and shrubs, herbaceous, greenhouse, and subtropical plants.
5. Trees, plants, and shrubs specially suitable for town growth, and their correct nomenclature.
6. The general structure of plants.
7. Such elementary drawing as will assist in the formation of beds and their laying out.
8. Works and estimated expenditure on roads, paths, stonework, rockwork, fences, lakes, bridges, seats, etc.
9. Candidates will also be expected to display evidence of general knowledge and observation and to be able to write an intelligent report on any subject connected with their work.

NAMES OF PLANTS

Tobias, Byfleet.—1, Dendrobium Ainsworthi; 2, Lælia anceps; 3, Oncidium sphacelatum.

M. B., Leicester.—1, Oncidium divaricatum; 2, Odontoglossum concinnum; 3, Cypripedium Leeanum; 4, C. Cardosoanum.

P. W. R., Iver.—1, Hippeastrum aulicum; 2, Pavetta borbonica; 3, Calanthe Veitchi, 4 Primula Kewense.

C. E. R., Skipton.—1, Viburnum Tinus; 2, Jasminum nudiflorum; 3, Cedrus atlantica; 4, Abies Douglasi; 5, Pinus Laricio.

S. J. M., Aston.—1, Euphorbia splendens; 2, Luculia gratissima; 3, Selaginella Emileana; 4, S. Kraussiana aurea; 5, Pilea muscosa.

R. S. E., Scarborough.—1, Santolina incana; 2, Helxine Solierolii; 3, Asplenium trichomanes; 4, A. bulbiferum; 5, Woodwardia radicans; 6, Moschosma riparia.

MARKETS.

◆

COVENT GARDEN.

Flowers.

Flowers of good quality are in brisk demand at late prices.

		s. d.		s. d.
Acacia	per pad	6 0	to	7 6
Azaleas, white	per doz. bun.	4 0		5 0
Adiantum cuneatum	per doz. bun	4 0		6 0
Anemones, French	per doz. bun.	3 0		4 0
Arums	per doz.	4 0		6 0
Asparagus	per doz. bun.	9 0		12 0
Bouvardia	per doz. bun.	4 0		5 0
Camellias	per doz.	1 6		3 0
Cattleyas	per doz.	9 0		12 0
Carnations	per doz.	3 0		4 6
,,	per doz. bun.	12 0		15 0
Chrysanthemums	per doz. bun.	6 0		12 0
,,	per doz. blms.	3 0		5 0
Croton leaves	per bun.	1 0		2 6
Cypripediums	per doz. blooms	2 0		3 0
French fern	per doz. bun.	2 6		4 0
Gardenias	per doz.	2 0		3 6
Hyacinths, Roman	per doz. bun.	9 0		12 6
Lapagerias	per doz.	2 0		3 0
Lilium auratum	per bun.	3 0		4 0
,, speciosum	per bun.	2 0		2 6
,, longiflorum	per bun.	2 0		2 6
Lily of the Valley	per doz. bun	9 0		15 0
Marguerites	per doz. bun.	2 0		3 0
Mignonette	per doz. bun.	1 0		2 0
Narcissus, Paper White	per basket	7 0		9 0
,, Soleil d'Or	per doz. bun.	3 0		6 0
Odontoglossums	per doz. blms.	2 6		3 0
Pelargoniums	per doz. bun.	5 0		8 0
Physalis	per doz. bun.	2 0		4 0
Poinsettias	per doz.	5 0		10 6
Roses	per doz.	2 0		5 0
Smilax	per doz. trails	2 0		3 0
Tuberoses	per doz.	0 5		0 6
Violets	per doz. bun.	1 6		2 6
,, Parma	per bun.	2 6		3 0

Fruits.

The market is now largely dependent upon foreign supplies.

		s. d.		s. d.
Apples, English	per bush.	6 0	to	21 0
,, American	per barrel	10 0		31 6
,, Californian	per box	8 6		12 6
,, Columbian	per case	9 0		14 0
,, Nova Scotian	per barrel	20 0		23 0
Bananas	per bun.	3 6		12 0
Cobnuts	per lb.	0 10		1 0
Chestnuts	per bag	10 0		15 0
Cranberries	per case	9 0		10 0
Grapes, English	per lb.	1 0		4 6
,, Guernsey	per lb.	0 9		1 3
,, Almeria	per barrel	10 0		15 0
Lemons	per case	15 0		20 0
Oranges	per case	10 0		20 0
Pears, French	per crate	5 0		10 6
,, Californian	per case	10 0		20 0
Pineapples	each	2 0		4 0

Vegetables.

Supplies are liberal and the demand good.

		s. d.		s. d.
Artichokes, Globe	per doz.	1 6	to	3 6
,, Jerusalem	per ½ sieve	1 0		2 0
Asparagus	per bundle	4 0		6 0
Beans, Jersey	per lb.	1 6		2 6
Beet	per bush.	1 6		2 0
Brussels sprouts	per ½-bush.	1 3		2 6
Cabbages	per tally	2 6		4 6
Carrots (French)	per doz. bun.	4 0		5 0
Cauliflowers	per basket	2 0		3 6
Celery	per doz. rolls	6 0		12 0
Chicory	per lb.	0 4		0 5
Cucumbers	per doz.	8 0		10 0
Endive	per doz.	0 9		1 6
Lettuce, Cabbage	per doz.	1 0		2 0
Mint	per doz. bun	1 0		2 0
Mushrooms	per doz. lb.	8 0		14 0
Onions	per bag	4 0		4 6
Parsnips	per bag	2 0		3 0
Parsley	per ½-sieve	1 3		2 0
Radishes	per doz. bun	1 0		1 6
Seakale	per bun.	1 4		1 6
Spinach	per bush.	1 6		2 6
Tomatoes, Canary	per 4 cases	10 0		12 6
Turnips, French	per doz. bun.	2 0		3 0
Watercress	per doz. bun.	0 4		0 6

LONDON POTATO MARKETS.

Markets are well supplied without any material change in demand or prices.

		s. d.		s. d.
British Queen	per ton	75 0	to	90 0
Epicure	per ton	70 0		75 0
Evergood	per ton	70 0		75 0
King Edward	per ton	75 0		80 0
Maincrops	per ton	95 0		100 0
Up-to-Date	per ton	80 0		90 0

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above sea level 150 feet.

Date. 1910. December 25 to December 31.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	Temperature of the Air. At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Dec. 25—Sunday	4 36	39	38	46	40
,, 26—Monday	—	39	37	45	37
,, 27—Tuesday	3 30	34	31	37	33
,, 28—Wednesday	3 0	27	27	42	26
,, 29—Thursday	4 54	38	37	48	26
,, 30—Friday	0 12	38	37	44	37
,, 31—Saturday	—	35	35	43	28
Means	(total) 16 12	36	34	43	32

Date. 1910. December 25 to December 31.	Rain.	Temperature of the Soil at 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
Dec. 25—Sunday	—	42	43	46	34
,, 26—Monday	0 02	41	43	46	32
,, 27—Tuesday	—	40	42	46	27
,, 28—Wednesday	0 02	37	41	45	18
,, 29—Thursday	—	37	40	45	28
,, 30—Friday	trace	37	40	45	30
,, 31—Saturday	—	37	41	43	22
Means	(total) 0 04	39	41	45	27

CONTENTS.

PAGE
A Beautiful Cypripedium ... 6
A New Medal of Honour ... 15
Annuals for Cutting ... 13
Answers to Correspondents ... 21
Cleanliness of Orchards ... 10
Colour Charts ... 15
Early Outdoor Peaches ... 11
Exhibitions and Meetings ... 18
Foundation of Successful Vegetable Culture ... 12
Hardy Shrubs for Forcing ... 7
New Trees and Shrubs ... 16
Notes of the Week ... 1
Pear Fondante de Thirriott ... 7
Rosa Pernetiana.—I. ... 16
Sutton Place, Guildford ... 8
The best Scarlet Perpetual Carnation ... 4
The earliest Alpine Flowers ... 6
The Newer Japanese Chrysanthemums ... 5
Wichuraiana Roses as Standards ... 3
Work for the Week ... 13

NICOTICIDE (FUMIGANT.) Kills all Greenhouse Insects in one Application.
Cubic ft. each
Half-gallon Tin, contains sufficient for 160,000 60/-
No. 1 size Tin 1 pint ,, ,, 40,000 15/-
No. 2 size Tin ½ pint ,, ,, 20,000 7/6
No. 3 size Bottle 6 oz. ,, ,, 12,000 4/6
No. 4 size Bottle 4 oz. ,, ,, 8,000 3/-
No. 1½ size Bottle 2 oz. ,, ,, 4,000 1/8
No. 5 size Bottle—1 oz. ,, ,, 2,000 10d.
Carriage Paid.
Fumigators, 1/- each for 5,000 cubic ft.
Nicoticide Plant Spray.
Half-pint, 1/2; Pint, 2/-; Qrt., 3/6; Half-gall., 5/-; Gallon, 10/-
Use 1 part to 40 parts for green fly, etc. Carriage paid.
Ask your Seedsman for our Goods.
HUNTER & GOW,
45, THOMAS STREET, LIVERPOOL.

PERGOLAS.
Larch Poles at 1d. per foot. Lists Free.
PATRICK'S, Otley, Yorks.

OAK CRAMBLES.
Peeled and dry at ½d. per foot.
PATRICK'S, Otley, Yorks.

ROSE ARCHES.
Larch Poles at 1d. per foot.
PATRICK'S, Otley, Yorks.

TREE STAKES AND GARDEN RODS.
Lists free.
PATRICK'S, Otley, Yorks.

Dr. J. Collis Browne's

Chlorodyne

THE ORIGINAL
. . and . .
ONLY GENUINE.

Refuse imitations, and insist on having

Dr. J. Collis Browne's

Chlorodyne.

Every bottle of genuine Chlorodyne bears the name on the stamp.

Convincing Medical Testimony accompanies each bottle.

OF ALL CHEMISTS,
1/1½, 2/9, and **4/6.**

The Best Remedy
known for

COUGHS, COLDS,

ASTHMA, BRONCHITIS,

Effectually cuts short all attacks of SPASMS, HYSTERIA & PALPITATION.

The only Palliative in NEURALGIA, GOUT, TOOTHACHE, RHEUMATISM.

Acts like a Charm in DIARRHŒA, CHOLERA, and DYSENTERY.

The MOST VALUABLE MEDICINE ever discovered.

A Good Book to Start the New Year With!

ONE SHILLING NET, by post, 1/3.

THE . .

GARDENING YEAR BOOK for 1911

A COMPLETE GUIDE TO THE GARDEN FOR THE YEAR.

53RD YEAR OF PUBLICATION.

CONTENTS:—

- The Year's Work in the Garden, Greenhouse, Flower Garden: Fruit and Vegetables.
- The Best Plants, Flowers, Fruits and Vegetables for the Garden.
- Insect Pests—Prevention and Eradication clearly described.
- Unusual Annuals and Biennials
- Beautiful Flowering Shrubs.
- Late Flowering Tulips.
- Early Vegetables.
- Raspberries and Loganberries.
- New Plants and Flowers of 1910.

ALSO . .

A DIRECTORY of Horticultural Societies of the United Kingdom, and List of Public Parks and Gardens, giving full Information relating to the Authorities controlling them, names of Superintendents, etc.

ORDER FORM.

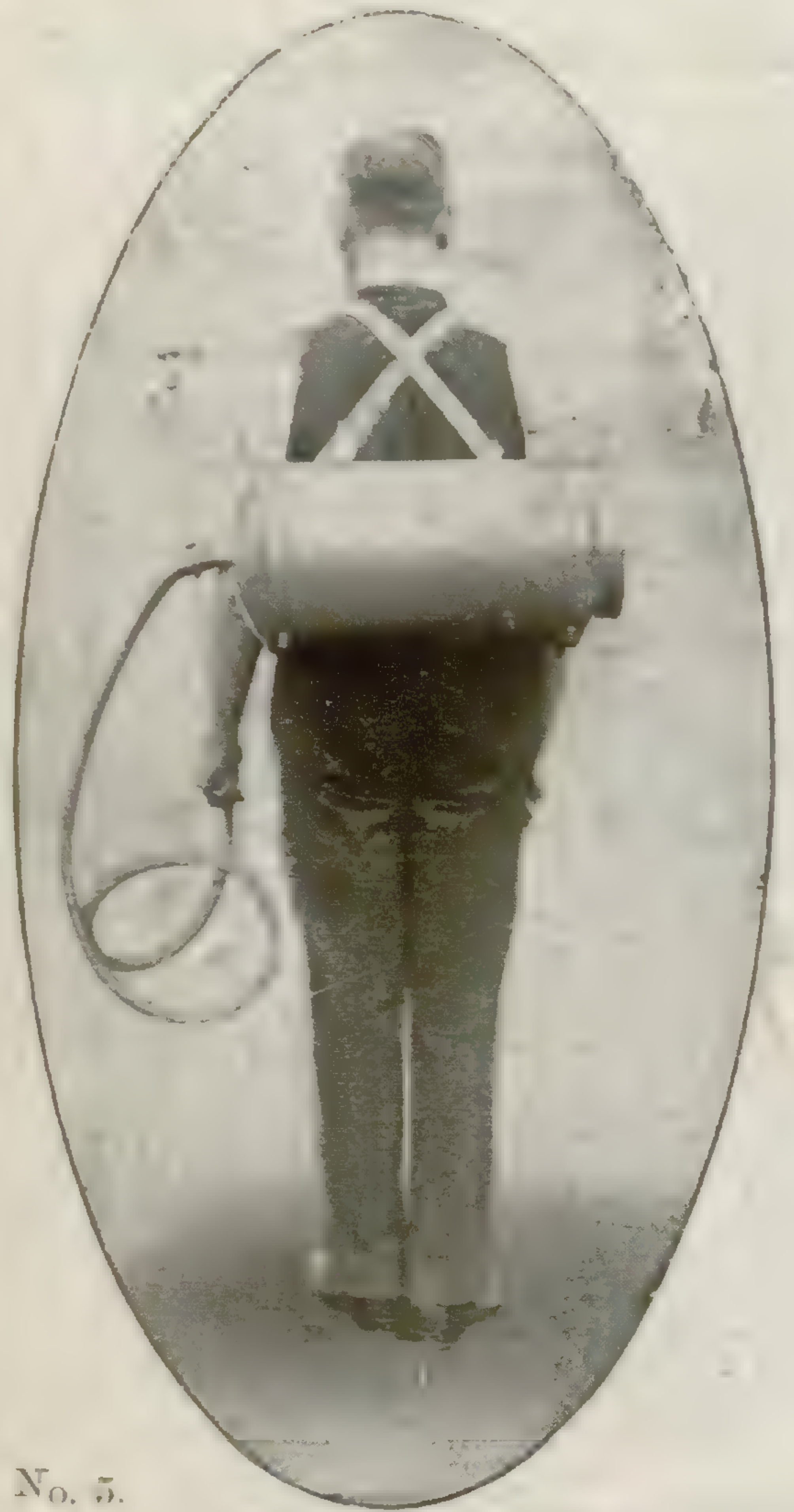
To the Publishers of "THE GARDENERS' MAGAZINE," 148 & 149, Aldersgate St., London, E.C.

Please send me a copy of "THE GARDENING YEAR BOOK," 1911, for which I enclose 1/3.

Name ....

Address ....

THE ALPHA SPRAYING MACHINE


No. 5.
Knapsack. 3½ galls. Price **60/-** complete.

was the only Knapsack Machine
which was awarded a

GOLD MEDAL

AT THE

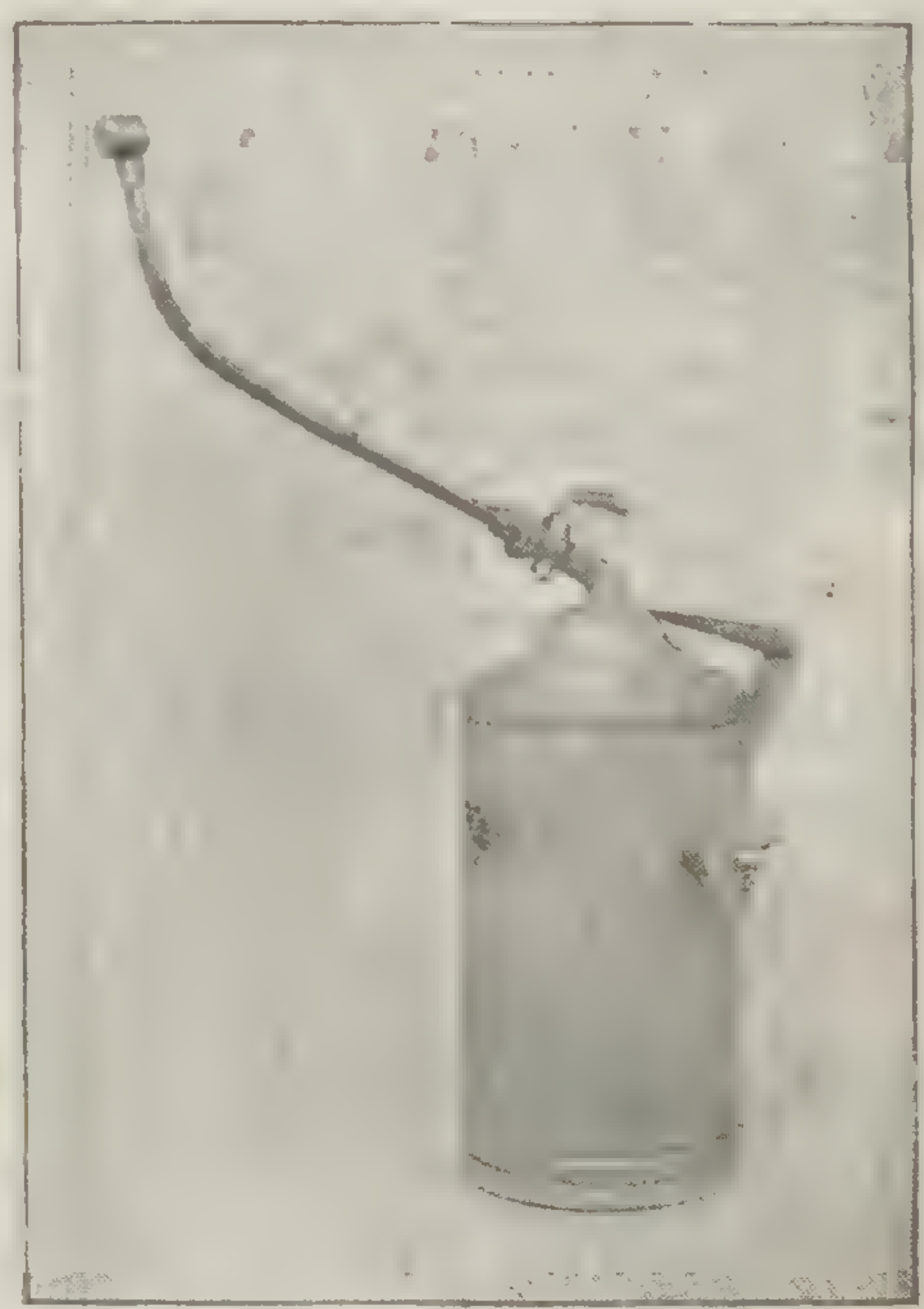
Northern Counties' Fruit Congress, Oct. 1910.

THE SIX JUDGES AT HEXHAM commented upon Alpha Sprayers as being Simple, Reliable, and Effective, there being no working parts to get out of order.

15 GOLD AND SILVER MEDALS AND DIPLOMAS AWARDED AT LEADING SHOWS SINCE SEPT. 1909.

MACHINES MADE IN ALL SIZES TO SUIT ALL PURPOSES.

Full Particulars and Illustrated Catalogue Post Free.


No. 3. Three-Quart Hand Rose Sprayer. Price **17/6**

BLAKE BROS., Ltd., (with which is incorporated ALPHA EXTINGUISHER, Ltd.) Ross, HEREFORDSHIRE.

"Anglian" Boilers

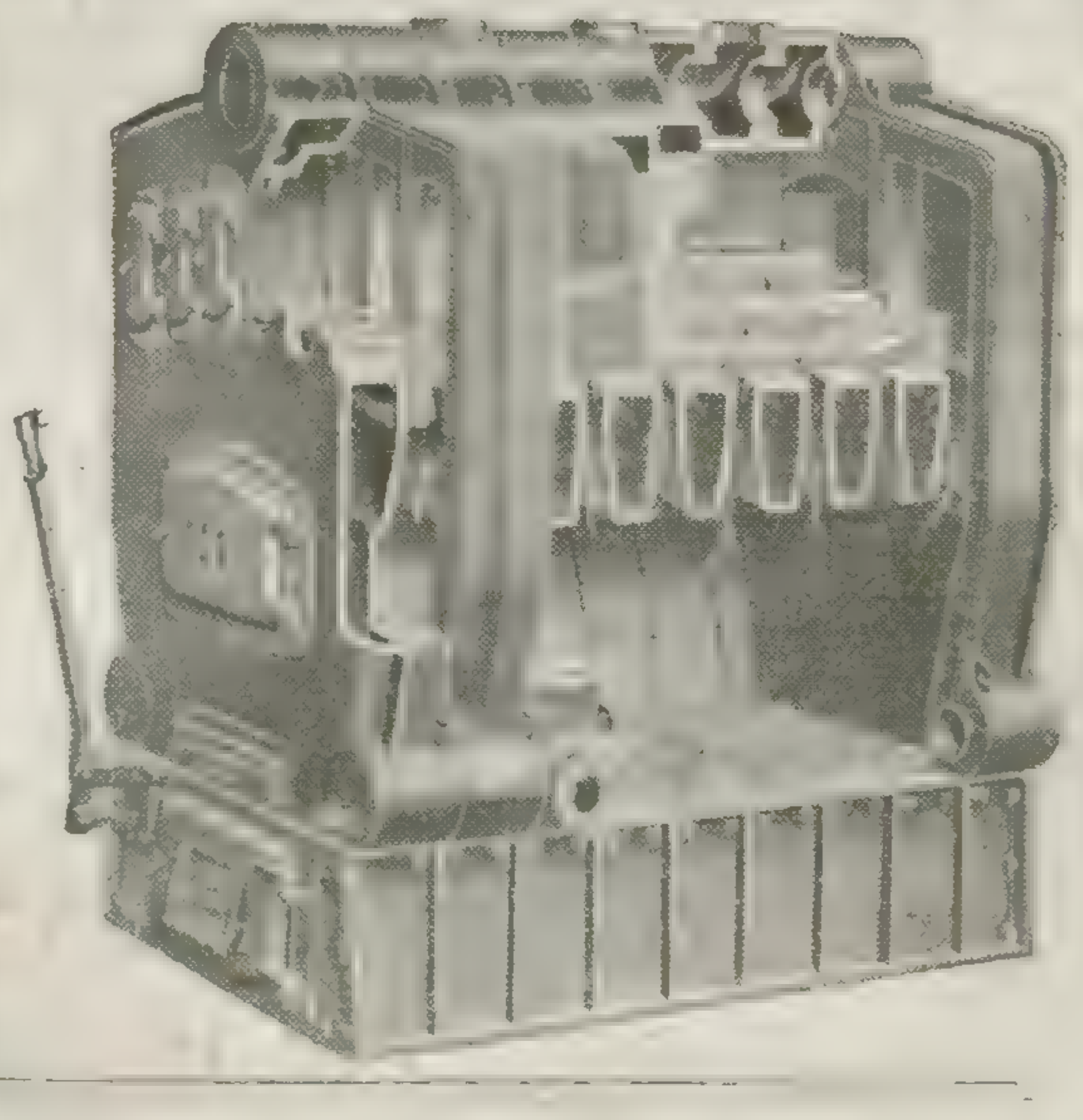
ARE A REVELATION IN
Heating Efficiency. Fire Surface . .
Fuel Economy. . . Ease in Stoking.
And Great Durability.

Boilers to Heat 600 to 7,500 feet of 4-inch Pipe in Stock.

Immense Stock of every Requisite for Heating and Ventilating the Greenhouse.

WRITE FOR LIST
No. 45 OR CALL AT
OUR SHOWROOMS.

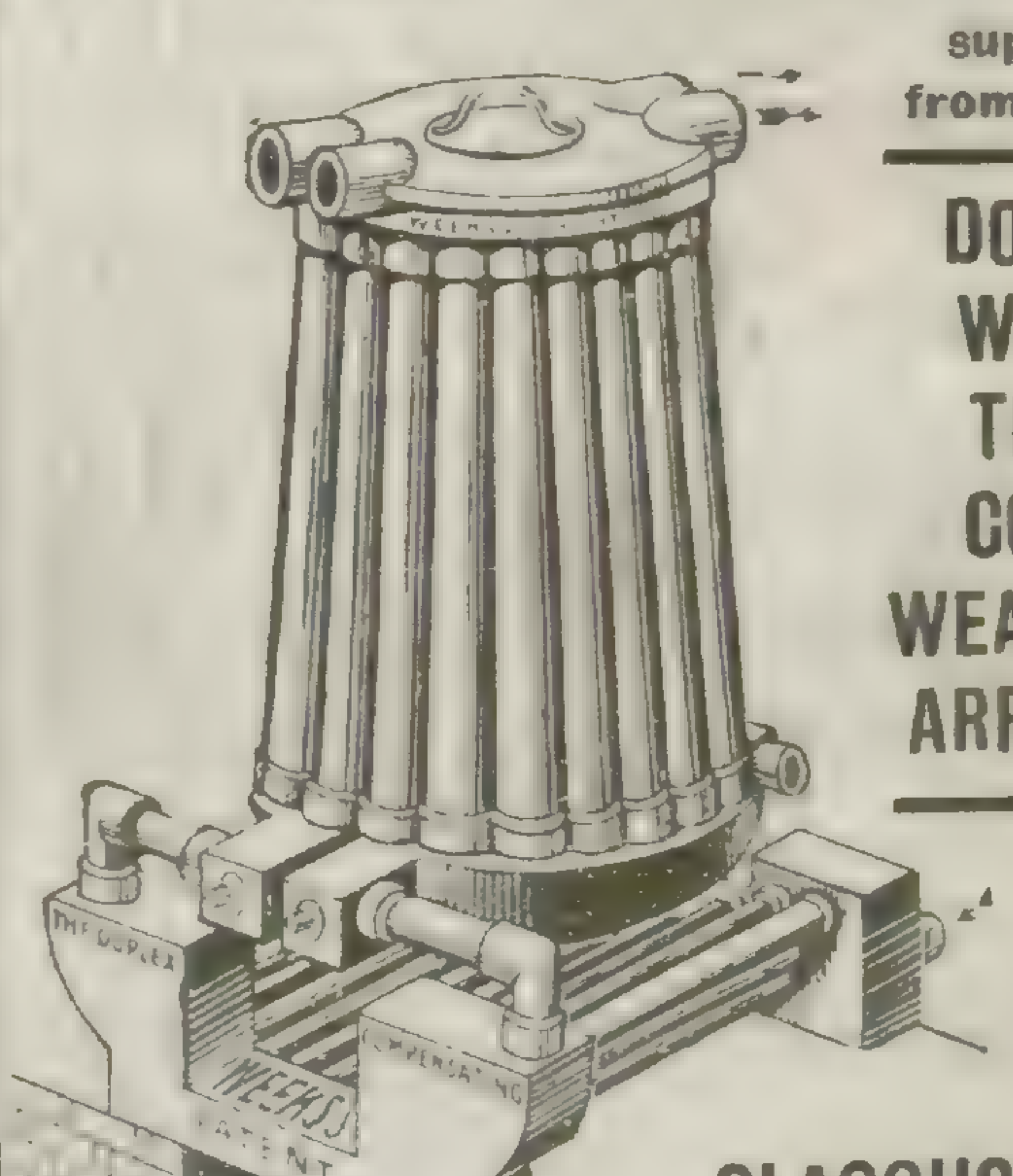
CHAS. P. KINNELL & CO., Ltd.,
65, 65a, Southwark St.,
(PHONE, HOP 372.) **LONDON, S.E.**



WEEKS'S BOILERS

supplied from stock.

DON'T WAIT TILL COLD WEATHER ARRIVES.

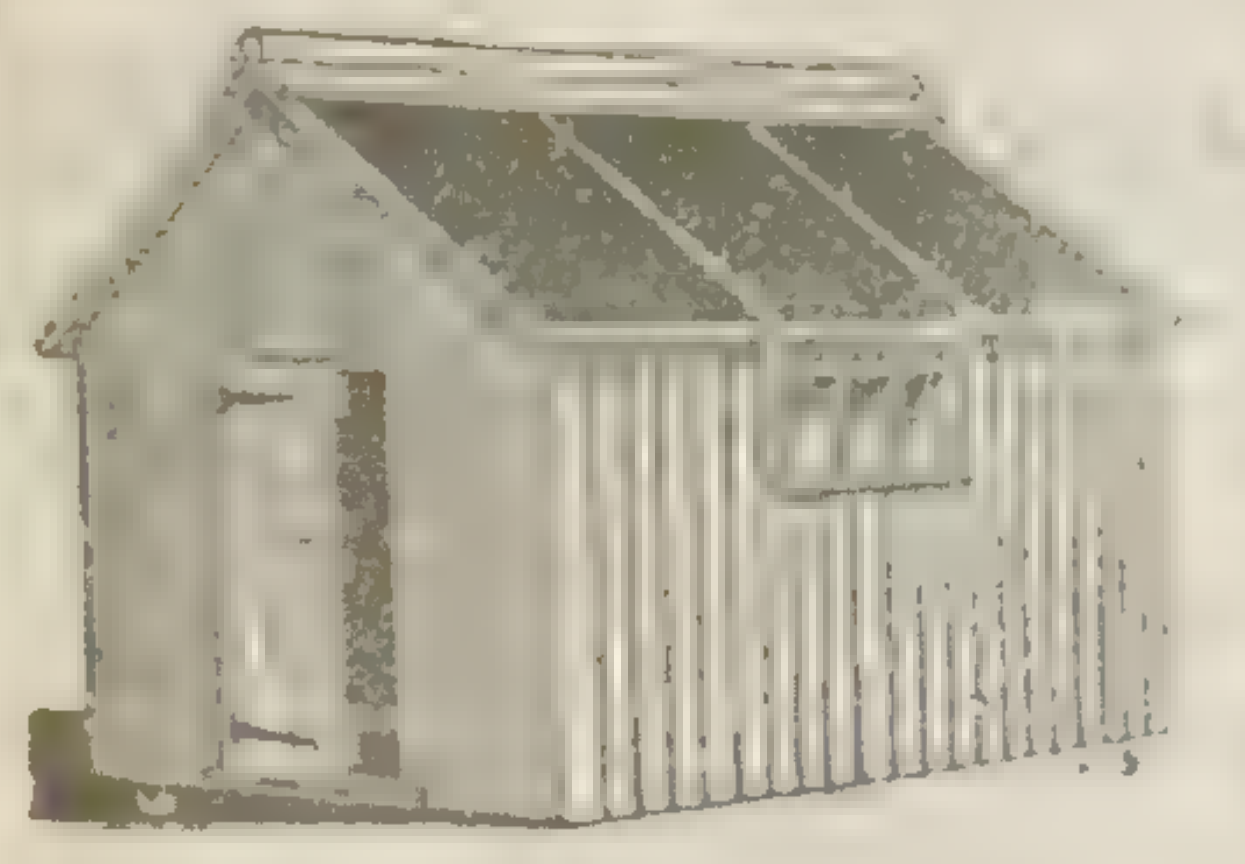


GLASSHOUSES
Of Every Description.

J. WEEKS & CO.,
72, Victoria Street,
WESTMINSTER, S.W.

The CHEAPEST in ENGLAND

THE "POPULAR."


Copyright Registered.

Made in complete sections, sides and end from ¾-inch **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

Cash with Order Prices.

SIZES.		FLOOR MADE FROM ⅞-INCH TONGUED BOARDS
6 ft. x 4 ft. x 6 ft.	£1 10 0	5/0
6 ft. x 5 ft. x 6½ ft.	£1 15 0	6/9
7½ ft. x 5 ft. x 6½ ft.	£1 17 6	7/9
8 ft. x 6 ft. x 7 ft.	£2 4 0	9/9
9 ft. x 6 ft. x 7 ft.	£2 9 0	11/0
10 ft. x 6 ft. x 7 ft.	£2 14 0	12/6
10 ft. x 8 ft. x 8 ft.	£3 10 0	16/6
12 ft. x 8 ft. x 8 ft.	£4 0 0	19/6

Carriage paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & CO.,
Largest Makers of Portable Buildings.
Established 70 years. **BEDFORD.**
Works 6 acres. Stock of Wood in Sheets [illegible] tons.

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity. Carriage Free.

Appointed by Royal Warrant — **Makers to His Majesty the late King.**

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to

EPPS & CO., Ringwood, HANTS.

PLEASE MENTION
THE GARDENERS' MAGAZINE
when writing to Advertisers.

Printed and Published by W. H. & L. COLLINGRIDGE, City Press, 148 & 149 Aldersgate St. London. E.C., and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 2,985. Vol. LIV.
Reg. at the G.P.O. as a Newspaper.

SATURDAY, JANUARY 14, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S SEED GUIDE, now ready, contains a select list of the best Vegetables, and the most beautiful Flowers for Garden and Greenhouse, including many novelties of sterling merit. Free on application. BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, is this winter keeping a large staff of hot-water men in the shops, in order that they may attend immediately to any breakdown of Boilers or Hot Water Piping in any part of the country. In case of emergencies please telephone 201 Western, or wire "Gray, Chelsea, London."

KING'S ACRE FRUIT TREES, ROSES, AND ORCHARD-HOUSE TREES.

AWARDED 24 GOLD MEDALS SEASONS 1909-10.

160 acres to select from of the finest Trees that natural conditions and the skill of man can produce.

ILLUSTRATED CATALOGUES FREE ON APPLICATION.

KING'S ACRE NURSERIES, LTD., HEREFORD.

1,000,000 BORDER AND ROCK Plants. Unique collection.
50,000 HARDY FERNS, over 400 varieties. See Catalogue.
10,000 FLOWERING SHRUBS must be cleared.
30,000 LILIES NOW IN STOCK, Other consignments arriving.
DELPHINIUMS, 9 GOLD MEDALS IN 2 YEARS.
A record. Unique collection. Seed, 3d., 6d., and 1s. pkt.
PERENNIAL SEEDS, UNIQUE COLLECTION.
All Catalogues Free.
PERRY'S HARDY PLANT FARM, Enfield, Middx.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

AMERICAN and BRITISH TREE CARNATION.—Leading varieties from 3s. per doz.; 17s. 6d. per 100; carriage and packing free for cash. Ask ill. price list. C. F. A. VAN DER SLUYS, F.R.H.S., Ramee, Guernsey.

IRON and WIRE FENCING for GARDENS, Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free. BOULTON and PAUL, Ltd., Manufacturers, Norwich.

RICHARDSON'S for GLASSHOUSES and HEATING APPARATUS, for full advertisement see back page. Darlington.

AUTO SHREDS FUMIGANT kills Leaf-mining maggot, and all insects under glass. For 1,000 cubic ft., 6d.; 10,000, 3/6. No apparatus. Patentees, WM. DARLINGTON and SONS, Hackney, N.E.

CLAY'S MANURES, CRUSHED BONES
(See page x.)
CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

SOW NOW UNDER GLASS,
WEBBS' SELD. AILSA CRAIG ONION,
1s. and 2s. 6d. per packet.

WEBBS' CHAMPION PRIZE LEEK.
1s. 6d. and 2s. 6d. per packet.

WEBBS' NEW CLUSTER DWARF BEAN, 3s. per quart.

WEBBS' NEW EARLY FRAME CAULIFLOWER, 1s. 6d. per packet.

WEBB AND SONS, The Royal Seedsmen,
WORDSLEY, STOURBRIDGE.

BUNYARD'S FRUIT TREES.—All intending planters of Fruit Trees, whether for garden or market culture, are invited to inspect our Nurseries. Advice freely given by letter.
GEORGE BUNYARD and CO., Ltd.,
Royal Nurseries, Maidstone.

"FOUR OAKS" GOLD MEDAL SYRINGES.
The only syringes ever awarded a Gold Medal. Unequalled for Spraying. In numerous sizes, from 8s 6d. Bends, 1s. 6d. Used and recommended by all leading authorities. Insist upon having "Four Oaks." Supplied by all Seedsmen, Ironmongers, etc. Full particulars from Sole Makers—
THE FOUR OAKS UNDENTABLE SYRINGE and SPRAYING MACHINE CO., SUTTON COLDFIELD.

BEGONIAS, awarded 24 Gold Medals.—Double Seed, 2s. 6d. and 5s. per pkt.; Frilled Crested, or plain Single, 1s., 2s. 6d., and 5s. per pkt. For price of Begonia tubers, Carnations (Border and Perpetual flowering), Cannas, Cyclamen, Blue Primroses, Delphiniums, Pansies, Polyanthus, Lily of the Valley, Violets, etc., please send postcard for copy of our Illustrated Catalogue, free on application.
BLACKMORE AND LANGDON.
Twerton Hill Nursery, Bath.

LAXTON'S NEW SEED CATALOGUE for 1911. Descriptive and fully illustrated, including grand new "Laxtonian Pea" and many other novelties, gratis on application.—LAXTON BROS., Seed Merchant, Bedford.

FERNS.—Beautiful Greenhouse varieties, 12 for 1s. 3d.; Maidenhair Ferns, 2s. doz.; New Nephrolepsis Todeoides, 9d. each; Palms, 9d. each. HEAD GARDENER, 22, Charlton Road, Blackheath.

CHRYSANTHEMUMS.—Mrs. Frank Hill, A.M., R.H.S.; Brightness, A.M., R.H.S., Singles. Send for lists. GEO. WILLIAMS and SONS, Chrysanthemum Specialists, Canton, Cardiff.

ORCHIDS.—Lowest Cash Prices. Fine selection of six assorted Orchids at 5s. 6d. and 10s. 6d. Odonto. crispum, 5s. 6d. per doz. RICHARD MOORE and CO., Eldon Place, Bradford.

SEED POTATOES.—Irish-grown seed beats Scotch on trial. I offer best leading varieties (awarded two Silver Medals, London, 1910). Lists Free. WM. E. SANDS, F.R.H.S., Specialist in Potato Growing, Hillsborough, Co. Down, Ireland.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page xi.

PORTABLE IRON AND WOOD BUILDINGS, Stables, Loose Boxes, Pavilions, Open-air Shelters, Motor Houses, Poultry Houses, Larders, Potting Sheds, Greenhouses, Sheep Troughs, Dog Kennels. Send for Free Catalogue. J. T. HOBSON and CO., Timber Importers, Bedford. Established 65 years.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

SOW NOW UNDER GLASS.
SUTTON'S PLENTIFUL DWARF FRENCH BEAN.
Mr. G. H. Wright, The Gardens, Beauworth, writes: "Plentiful Bean is a splendid cropper; the plants are so heavy with pods that they need sticks to keep them from breaking down; flavour excellent."
Per pint, 2s.; quart, 3s. 6d., post free.

SUTTON AND SONS, THE ROYAL SEED ESTABLISHMENT, READING.

"Colour is meant for the perpetual comfort and delight of the human heart."—Ruskin.
KELWAY'S "COLOUR BORDERS"
(Regd.)
Artistic and permanent—arranged for continuous bloom and colour effect.
These Borders can be purchased BY THE SQUARE YARD for any position all ready arranged for planting.
"I am thinking of planting a few borders with perennials. I am tired of continually planting bedding plants. Mrs. ——."
Write now stating your area, position, soil, etc., for planting in the Autumn, to
KELWAY AND SON, The Royal Horticulturists, LANGPORT.

NOW IS THE TIME TO PLANT Kelway's Lovely New Pæonies, for a fine show in the spring and summer. Kelway's Pæonies are more beautiful than ever. Choice named varieties from strong country-grown stocks: 15s. and 21s., 27s., 36s., 54s., and 70s. a dozen. Single plants, 1s. 6d. to 10s. 6d.
"The excellent condition in which the goods arrived, shows that your firm are past-masters in the fine art of skilful packing. ———, Esq., Shepherd's Bush."
IT IS NECESSARY TO OBTAIN KELWAY'S.
KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

FIDLER'S NEW ILLUSTRATED CATALOGUE OF CHOICE GARDEN SEEDS will be sent, post free, to any address on receipt of postcard. Write at once for a copy. It may help you to save 50% on your seed bill this season. FIDLER and SONS, Royal Berks Seed Stores, Reading.

WELLS' CHRYSANTHEMUMS.—List of Novelties now ready; also descriptive general list. Wells' Phlox and Michaelmas Daisies, Hardy Herbaceous Plants, and Perpetual Flowering Carnations. Catalogues post free. Wells' book, "The Culture of the Chrysanthemum," post free, 1s. 6d. W. WELLS, Merstham, Surrey.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

FRENCH GARDENING REQUISITES.—Send for our new List, giving full particulars of the Double Glazed System, and numbers of new Labour-saving Appliances. Frames, Cloches, Reed Mats, and every requisite supplied. BOULTON and PAUL, Lim., Norwich.

XL ALL FOR WINTER AND SPRING CLEANSING.
Before growth commences stronger solutions may be used.
XL ALL NICOTINE INSECTICIDE WASH (poisonous) for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. Agents, write for particulars.
XL ALL CAUSTIC WINTER WASH (non-poisonous) for dormant Fruit Trees, stamps out American Blight, and all other pests.
Other XL ALL Preparations of great renown are XL ALL NICOTINE VAPORISING COMPOUND, XL ALL FERTILISER, XL ALL LAWN SAND, etc.
Ask your Nurseryman, Seedsman, or Florist for my small Pink List.
G. H. RICHARDS, Manufacturer, 234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

SEEDS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Select Seeds.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS.
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

H. A. TRACY,
Orchid Nursery, Twickenham.
Orchids of Every Species.

STANLEY & CO., Southgate, London N.
(Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

RHODODENDRONS.

DICKSONS & CO.,
1, Waterloo Place, Edinburgh.
Pink Pearls, Ponticums, choice Hybrids. Write.

ROSES.

R. H. BATH, Ltd.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers

ALEX. DICKSON & SONS, Ltd.
Hawlmark, Newtownards, Ireland.
The World-famed Champion Rose Growers and Raisers of Irish Pedigree Seedling Roses. Lists Free.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 1st Prizes, 3 gnas. at N.R.S. Shows, 1910. Cat. Free.

SAMUEL M'GREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
Illustrated Catalogue free.

TURF LOAM.

A. B. JOHNSTON, New Park, Cranleigh, Surrey.
Very Fibrous Loam, for Carnations, Roses, Vine Borders, Melons, Fruits under Glass, &c., &c.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

AMERICAN TREE CARNATIONS AND MALMAISONS.

My Season's Catalogues of the Choicest Collection of these flowers are NOW READY, and will be sent gratis and post free to all applicants.

E. J. WOOTTEN,
Fairoak, EASTLEIGH.

"GOOD is not good enough, the BEST is not too good."

SWEET PEA SEED.

My **CATALOGUE** is **NOW READY,** and will be sent on application.

Awarded Silver Medal by the Royal Horticultural Society.

W. R. HAMMOND,
Grovelands, BURGESS HILL, SUSSEX.

A POPULAR WORK.

By T. W. SANDERS, F.L.S.,
Editor of "Amateur Gardening."

WINDOW . AND . INDOOR GARDENING.

194 PAGES.
16 PLATES.
50 ILLUSTRATIONS.

2/6 Net.
By Post, 2/10.

A Complete Guide to the Cultivation of Foliage and Flowering Plants in Rooms, Balconies, Window Boxes, &c.; Floral Decoration, &c.

A Reader writes :—

"I have a copy of your 'Window and Indoor Gardening Book,' and must say that it is first-class; it will supply a long-felt want, and so clearly is it written and described that the mere novice will be able to manage a few house plants after reading same."

WINDOW & INDOOR GARDENING

WINDOW BOXES.—The best plants and flowers for different seasons—Various types of boxes—Soil—Drainage, &c.

BALCONY GARDENS.—Boxes—Climbers—Flowers and arrangement.

VERANDAH GARDENS.—Plants for sun and shade—Porches, &c.

ROOF GARDENS.—Suitable sites—What to grow—General treatment.

WINDOW CASES.—Plans for construction—Fixing brackets, &c.

INDOOR PLANTS.—A descriptive list of the best kinds—Roses—Bulbs—Ferns—Fragrant plants, &c. Novel plant culture—Watering—Potting—General treatment.

HANGING BASKETS.—Suitable plants for good display.

WALL GARDENING.—Best plants for various aspects—Climbers—Shrubs, &c.

SICKLY PLANTS.—Treatment—Cleansing foliage—Insect pests, &c.

FLORAL DECORATION IN ROOMS.—Arrangement of cut flowers in bowls and glasses—Colour and character—Wild flowers.

FIREPLACE DECORATIONS.—Plants that make a good display—Hints for arrangement.

TABLE DECORATION.—Selection of flowers for effect—Floral arrangement for luncheon and dinner tables, children's parties, &c.

ORDER FORM.

The Publishers of "THE GARDENERS' MAGAZINE," 148 & 149, Aldersgate Street, London, E.C.

Please send me a copy of **"WINDOW AND INDOOR GARDENING,"** *by Post, for which I enclose remittance of* **2/10.**

Name ....

Address ....

Sales by Auction.

ROSE TREES.

SHRUBS. BULBS.

SALES BY AUCTION
are held every
MONDAY and WEDNESDAY,
at 12.30.

STEVENS' AUCTION ROOMS,
Established 150 Years,
38, King St., Covent Garden, London, W.C.
Catalogues on Application.

SALES NEXT WEEK.

MONDAY and FRIDAY NEXT, January 16th and 20th, at Twelve o'clock.—Choice Herbaceous and Border Plants, Liliums, Begonias, Gladiolus, Gloxinias, Anemones, Lily of Valley, and numerous other Bulbs and Plants.

At Half-past One o'clock.—1,000 ROSES, Dwarf, T., H.T., and Climbing, Fruit Trees in variety, Azaleas, Rhododendrons, Retarded Plants and Bulbs.

WEDNESDAY NEXT, January 18th, at Twelve o'clock.—Gladiolus, Montbretias, Begonias, Gloxinias; Japanese and other Lilies, Spiræas, Iris, Dielytras, Hydrangeas, etc.; 300 lots of Herbaceous Plants, Flowering Shrubs, Fibre, Leaf-mould, and Peat, Retarded Bulbs, etc.

At Half-past One o'clock.—ROSES, 4,500 Standard, Dwarf, Climbing, T., H.T., and H.P., lotted to suit all buyers; Carnations, Pinks, etc.

At Half-past Two o'clock.—An importation of 1,250 Cases Japanese Lilies as received; preceded at Twelve o'clock by Thousands of miscellaneous Roots and Bulbs.

At Five o'clock.—450 Azaleas in variety, Rhododendrons, Aspidistras, and Camellias, 100 lots of Ornamental Palms, and other Greenhouse Plants, Standard Bays, etc.

FRIDAY NEXT, January 20th, at a Quarter to One o'clock.—Choice Imported and Established Orchids in variety, Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view morning of sale, and catalogues had.

SALES BY AUCTION DAILY at 12.30.

Hyacinths, Tulips, Daffodils, Narcissi, Crocus, Snowdrops, Lilies, &c., &c.

JOHNSON, DYMOND & SON

Palms, Azaleas, Rose Trees

Catalogues of Auctioneers.

City Auction Rooms (Est. 1793), 38 & 39, Gracechurch St., London, E.C.

PERGOLAS.
Larch Poles at 1d. per foot. Lists Free.
PATRICK'S, Otley, Yorks.

OAK CRAMBLES.
Peeled and dry at ½d. per foot.
PATRICK'S, Otley, Yorks.

ROSE ARCHES.
Larch Poles at 1d. per foot.
PATRICK'S, Otley, Yorks.

TREE STAKES AND GARDEN RODS.
Lists free.
PATRICK'S, Otley, Yorks.

SASH BARS.—Special lines in certain lengths only, 1½ by 1, 2s. 6d. 100ft.; 3 by 1½, 5s. 9d. 100ft.; quotations for special lengths or for any kind of timber, garden lights, greenhouses, and woodwork. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

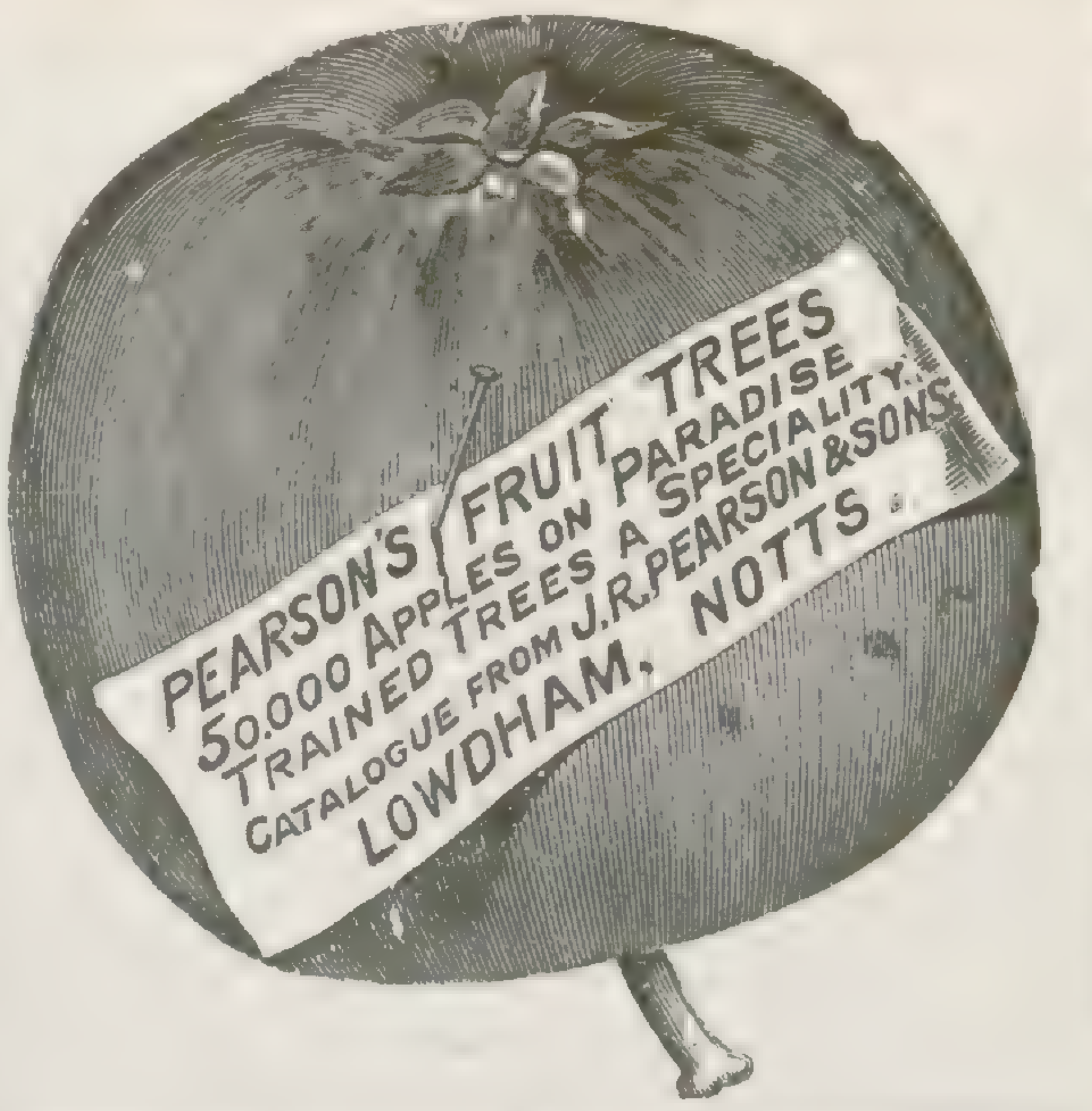
TURF, suitable for Lawns, Bowling Greens, etc.; a quantity of splendid old Turf for Sale, cheap, on rail, sample and price. HOLMES, Station Road, Letchworth.

Crown 8vo., bound in cloth, 508 pages, 150 illustrations. 8 Photo Plates and 5 Coloured Plates.
Price, 5s. net; by post, packed in box, 5s. 6d.

VEGETABLES AND THEIR CULTIVATION.

An Up-to-Date Practical Treatise on the Formation of the Kitchen Garden, and the Cultivation and Forcing of Vegetables, Salading, and Herbs for Home Use; Manures and their Uses; Pests and Diseases, with Remedies for their Prevention and Eradication, etc., etc. By T. W. SANDERS, F.L.S., F.R.H.S., Editor of "Amateur Gardening" and "Farm and Garden."

Published by
W. H. and L. COLLINGRIDGE, 148 and 149,
Aldersgate Street, London.


PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J. R. PEARSON & SONS,
LOWDHAM, NOTTS.

BENTLEY'S Concentrated Alkali.

THE IDEAL WINTER SPRAY.

For Fruit Trees and Forest Trees of every kind.

Destroys **INSECTS** (whether in the active or dormant state), **spores of fungi, lichens, mosses.** Cleanses the bark from **vegetable growths.** Detaches loose and decayed bark, thereby exposing the harbouring places of the insects, and having on these a most deadly effect without injuring the trees.

For Apple, Pear, and Plum Trees, Bush Fruits, and Forest Trees. 1 tin dissolved in 11 gallons of water.

For Apricot, Peach, Nectarine, and Cherry Trees. 1 tin dissolved in 16 gallons of water.

PRICES:—

1 to 8 tins, **1/3** each; 8 tins, **1/2** each; 12 tins, **1/1** each; 20 tins, **11d.** each; 40 tins, **10d.** each.

BENTLEY'S INSECTICIDE.

This valuable **NON-POISONOUS Plant Wash** has for the last thirty years held the highest position in the Horticultural World as a most effectual **Destroyer of all Forms of Filth,** including

MEALY BUG, SCALE, AND THRIP,

without risk to the foliage. It also possesses cleansing properties, and leaves the foliage clean and bright.

PRICES:—

6 galls., **7/6** per gall.; 3 gall., **8/-** per gall.; 1 gall., **9/-**; ½ gall., **5/-**; 1 quart, **3/6**; 1 pint, **2/-**. **Carriage paid on 7/6 orders and upwards to any railway station.**

WHOLESALE MANUFACTURERS—
JOSEPH BENTLEY, LIMITED,
Chemical Works, Barrow-on-Humber, HULL.

ANTHONY WATERER,

Knap Hill Nursery, Woking, Surrey,
Has a Fine Stock of well-rooted
EVERGREENS, TREES and SHRUBS
In all sizes.

RHODODENDRONS, AZALEAS, and other American Plants a speciality. The Rhododendrons planted annually in Hyde Park are supplied from Knap Hill.

Inspection of Nursery invited. Catalogue on application

ORCHIDS

EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

SEED CATG. NOW READY.—56-page Catg. of Seeds, Bulbs, Choice Liliums, Tree Carnations, Ferns, etc. ELLISON, 57, West Bromwich.

AMARYLLIS (HIPPEASTRUMS).—Flowering-size bulbs, 10s.; extra selected, 15s.; mammoth, 20s. doz. ELLISON, 57, West Bromwich.

CANNAS, 10 different, 4s.; Gloxinias, 6 different, 2s.; Begonias, Tuberoses, Montbretias, Arums, etc. ELLISON, 57, West Bromwich.

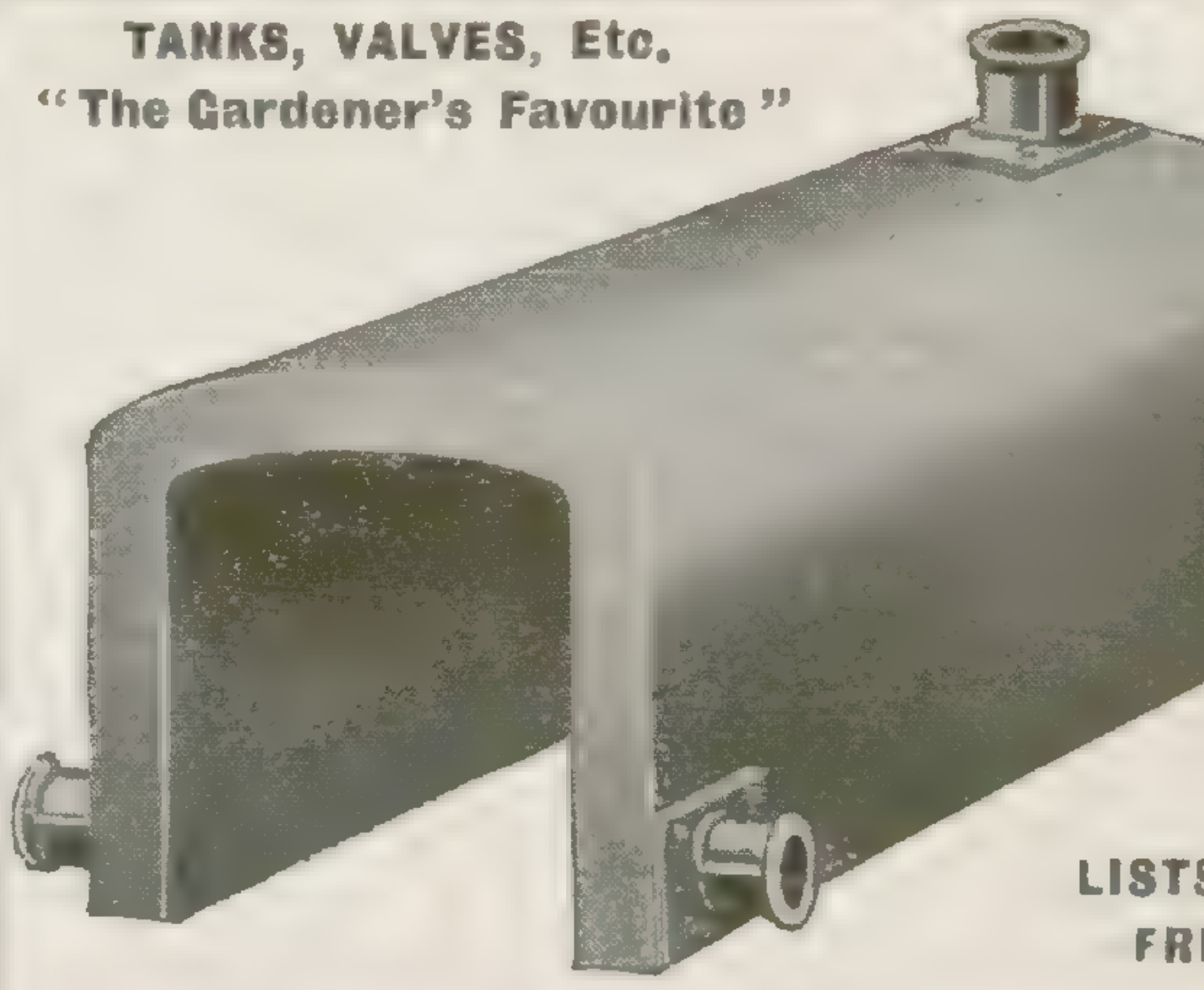
AMERICAN TREE CARNATIONS, 12, all different, named, strong, healthy plants, 5s. 6d., cg. pd. List free. ELLISON, 57 W. Bromwich.

LAVENDER, Old English, 2s. per doz., 10s. per 100. Dutch ditto, dwarfer than English, 2s. 6d. doz., 15s. 100; 50 at 100 price; free on rail for cash with order. Sample doz., postage free, 4d. extra. CHILVERS and SON, Hunstanton.

HEATING APPARATUS

fixed by experienced workmen in any part of the country.

TANKS, VALVES, Etc.
"The Gardener's Favourite"



LISTS FREE.

Our celebrated No. 4 Check End Saddle Boiler, to heat from 300 ft. to 3,000 ft. of 4 in. Piping.

BOULTON & PAUL, Ltd.,
***Manufacturer,* NORWICH.**

RIVERS'

Fruit Trees, Roses, Vines, Figs, Oranges, AND Orchard House Trees.

A LARGE AND SELECT STOCK ALWAYS ON VIEW.

Illustrated & Descriptive Catalogue
POST FREE 3d.

THOMAS RIVERS & SON

Sawbridgeworth, Herts.
Station: HARLOW, G.E.R.

STALKER'S Forest Trees, Fruit Trees, Roses, Bulbs, and Seeds
Are known all over the world, and cannot be surpassed for hardiness and quality.

Famous for Quality and Cleanliness.

D. STALKER & SON,

Government Contractors,

Catalogues Free. **NAIRN, N.B.**

NEW GARDEN PEA FOR 1911.

MASSEY'S RELIANCE, per packet 1s. post free.

Mr. W. A. COOK, Head Gardener to Sir E. G. LODER, Bart., writes: "I am very pleased to inform you it proved a great success, especially as it was such a cold wet time for early peas. Sown on the same day as several other varieties, it was not one day behind, and is equal in bulk to anything I have ever grown. Haulm about three feet, with especially long pods for so early a Pea."

GEO. MASSEY & SONS, Seedsmen, SPALDING.

AMERICAN TREE CARNATIONS, best varieties, including Britannia, White Perfection, etc., strong young plants from 2in. pots, 3s. doz., 20s. 100, flowering plants, 5in. pots, 8s. per doz. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

GLASS. | GLASS. | GLASS.

NICHOLLS & CLARKE, LTD.

Shoreditch, LONDON.

PAINT. Our List of PAINTS, COLOURS, VARNISHES and BRUSHES on Application.

When sending please cut out this advt.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head).—Mrs. HERBERT MORRELL highly recommends F. HARRIS: been head of five the past four years; thorough experience, gained in good establishments, including Headington Hill Hall, Buscot Park, Waddesdon Manor; age 34, no family. Apply HARRIS, Writtle Road, Chelmsford.

GENTLEMAN recommends GARDENER (Head of two or three); life experience in all branches; understands formation of new or renovating old gardens; married, one boy 10 years; age 45. PENNELLS, Phœnix Green, Winchfield, Hants.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out, grapes, peaches, melons, stove and greenhouse plants; four and a-half and eleven years' excellent references as head, married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here 5½ years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working); life good practical experience in all branches, Inside and Out, Early and Late Forcing; excellent references. H. TURNER, 62, Star Road, Peterborough.

GARDENER (Head Working), requires SITUATION; experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants; Flower and Kitchen Garden, Hardy Fruit, etc.; good references; married, no family. W. S., 73, Allen Street, Maidstone, Kent.

GARDENER (Head Working) requires SITUATION; experienced Vines, Peaches, Melons, Fruit, Flowers, Vegetables; 5 years' good character; married. C. N., Clarence Cottage, Broadbridge Heath, Horsham.

GARDENER (Head Working, where one or more are kept, or good Single-handed); experienced Inside and Out; good references; abstainer; married; age 29. W.S., Office of this Paper.

GARDENER (Head Working, where two or more are kept); good all round; can be well recommended; married when suited; age 30. PEARCE, 10, Roxwell Road, Shepherd's Bush.

GARDENER (Head Working); age 44; life experience; 21 years' excellent references from first-class establishments; thorough knowledge in all branches; leaving own request; no young children, youngest 14. W. BLOOMFIELD, Staplehurst, Kent.

J. F. G. BANNATYNE, Esq., Haldon House, Exeter, wishes to highly recommend H. NICHOLSON, as GARDENER (Head Working), to any Lady or Gentleman requiring a good all-round gardener, life experience in under glass and outdoor work; age 30. Address, NICHOLSON, Haldon House Gardens, Exeter, Devon.

GARDENER (Head Working). — Mr. BLACKWOOD Gardener, Hethersett, Reigate, will be pleased to recommend his FOREMAN, ALFRED RUSSELL, age 28, who has been four and a half years here, as good all-round man, well versed under glass and outside, married when suited.

WORKING MANAGER or FOREMAN.—Advertiser seeks engagement in Market Nursery or otherwise for either of the above; Bulbs and Root Forcing. Ferns and Chrysanthemums a speciality, also Cut Flowers in quantities (both Inside and Out), and Bedding Stuff; good Wreath, Cross, etc., Hand; over 20 years' practical experience in the general routine; highest references; age 36 years. T. J. COOK, 97, Llanover Road, Wembley, N.W.

C. W. CATT, Esq., will be pleased to recommend his SECOND GARDENER to any lady or gentleman; a thoroughly trustworthy and energetic Man, as Head Working Gardener, where 3 or 4 are kept; his credentials are of the highest order. Full particulars on application. Outwoods Gardens, Duffield, Derby.

AS GARDENER (Single-handed, or with help); good experience with Grapes, Peaches, Melons, Cucumbers, Tomatoes, and Plants under Glass; also Hardy Fruit, Kitchen Garden, and Pleasure Grounds; good references; age 27; married when suited. J. CLARKE, Eastcourt House Gardens, Malmesbury, Wilts.

GARDENER (Single-handed, or with help), 4 years' good reference from last situation, and used to cows if required; married, two children; age 30. G. WHITEHEAD, 97, Queen's Road, Upper Norwood.

GARDENER (Single-handed or with help) seeks SITUATION as above; 15 years' experience in all branches Inside and Out; good references (single). Apply H. M., Alma Cottage, Little Bookham, Surrey.

GARDENER Wants Place (Single-handed, or with help), single, abstainer; good references, age 28 years, life experience, 8 years last place. P. BUTTONS, 137, Victoria Road, Barking, Essex.

GARDENER (Single-handed or otherwise), 12 years' experience, Inside and Out, good references. F. WILLIAMS, Broadbridge Heath, near Horsham, Sussex.

ADVERTISER seeks SITUATION.—Market Nursery, Tree Nursery, Rose Grower, or Orchard; 3 years' experience. Chrysanthemums, Tomatoes, Roses, Ornamental Trees, Shrubs; good references; age 43; single. B. S., The Laurels, Rock Terrace, Durrington, Worthing.

MR. J. R. TOOLEY would be pleased to recommend B. COLEMAN, as JOURNEYMAN Inside, Fruits, or Plants; age 22. Apply B. COLEMAN, c/o Mr. Spencer, Chapel Street, Wellesbourne nr. Warwick.

GENTLEMAN recommends YOUNG MAN, age 22, as Second of four or five; Inside and Out; 7 years' experience; good reference. Apply F. ROGERS, Michelmersh, Romsey, Hants.

GARDENER (Under).—E. BATCHELOR, The Gardens, Woodlands, Addlestone, Surrey seeks SITUATION, Outside or Inside, good establishment; three years' references; left through death; age 21, abstainer; willing and obliging. Apply as above.

UNDER GARDENER, Young Man, seeks SITUATION as above; age 19-20; good refs.; 3 years 9 months last place. C. T. COLE-HILL, 7 Wolsey Road, Hampton Hill, Middlesex.

IMPROVER (Inside or Inside and Out), Young Man seeks employment in garden; age 19; 6 years good reference. L. TYLER, Great Dalby, Melton Mowbray.

Situations Vacant.

GARDENER WANTED, must thoroughly understand growing Grapes, Peaches, Strawberries, etc., for Market under glass. Apply by letter, to Messrs. W. and E. WELLS, Hounslow.

WANTED, FOREMAN, with one and a boy under him, to take charge of houses and outside fruit trees; must thoroughly understand his work, be quick and obliging; wages, 18s. per week Bothy, milk, vegetables. G. DEADMAN, Cowbridge House Gardens, Malmesbury, Wilts.

WANTED, MIDDLE-AGED COUPLE, without encumbrances. Man good all-round Gardener, single-handed; Wife to do Washing for very small family. Good cottage provided. Apply giving references and stating wages required, to H. POTTER, Fairfield, Chelmsford, Essex.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For JANUARY 21, 1911.

Please Repeat my Advertisement.

Name ....

Address ....

....

Date..

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

NEW ROSES

WM. PAUL & SON, WALTHAM CROSS, Ltd.,

Beg to offer strong plants of the following New Roses raised by them at the Waltham Cross Nurseries:—

Varieties of 1910.

Alice Cory Wright (H.T.), Dwarfs, **7/6** and **10/6** each.

Elsie (Wichuraiana, Rambler), Dwarfs, **7 6** each.

Juliet (Hybrid Briar), Dwarfs, **10 6** each; Standards and Half-Standards, **10 6** each.

Portia (H.T.), Dwarfs, **7/6** each.

Varieties of 1909.

Althea (H.T.), Dwarfs, **3 6** each; **36 -** per dozen.

Cynthia (H.T.), Dwarfs, **3 6** each; **36 -** per dozen; Standards, **5 -** each.

Fairy (Multiflora Rambler), Dwarfs, **2 6** each; **24/-** per dozen.

Margaret (H.T.), Dwarfs, **3 6** each; **36/-** per dozen.

For full descriptions of the above, and for New Roses of other raisers and general collection of Roses, see Rose Catalogue, post free on application.

Pauls' Royal Nurseries and Seed Warehouse,

WALTHAM CROSS, HERTS.

FRUIT TREES

We have 50 acres of young Fruit Trees in perfect condition to offer this season. Our **Specialities** are Cordons, Bushes, and Pyramids, and Trained Trees worked on selected **Fruiting Stocks.**

Fully Illustrated Catalogue Post Free.

W. SEABROOK & SONS,

The Nurseries, CHELMSFORD.

TOMATO PLANTS (6 to 8 ins. high). Ready for Fruiting Quarters. **Grown in Steam sterilised soil.** Very carefully packed and protected. **Price £3 per 1,000, Cash with order, carriage paid.** Per 100, 7/-; 65 plants, 5 -; 50 plants, 4/-; 25 plants, 3 -; 12 plants, 2/-

Carter's Sunrise, Winter Beauty, Beauty of Wales, etc.

W. & F. POAT, TOMATO GROWERS, **ST. SAMPSON'S** **GUERNSEY, C.I.**

Cheques, Postal Orders, etc., should be crossed "Guernsey Banking Co., Ltd."

Booklet and Testimonials free on application.

CURRANTS.—Fay's Prolific Red, Long-bunched Red, Wilmot's(?), Black Champion, clean, healthy, fruiting trees, 18s. 100; 3s. dozen. WILL TAYLER, Hampton, Middlesex.

SEAKALE, ASPARAGUS, RHUBARB, Tarragon, and Mint for forcing; well ripened on warm soil. WILL TAYLER, Hampton, Middlesex.

FIGS.—This delicious fruit crops freely in pots. **Bearing Trees, 2s. 6d., 3s. 6d., 5s., and 7s. 6d. each.** Grape Vines for fruiting or planting. Catalogues free. WILL TAYLER, Hampton, Middlesex.

TRAINED PLUMS.—Large, well-transplanted, fruiting trees. Measurements supplied; but an inspection at Nursery is preferable. WILL TAYLER, Hampton, Middlesex.

R. D. BLACKMORE'S PEACH, "LIBRA." Award of Merit R.H.S. Mid-season, very large and heavy, of high quality and goodly appearance; large trained trees and pyramids with well-ripened fruiting wood, 10s. 6d., 15s., and 21s. each. WILL TAYLER, Hampton, Middlesex.

Chester Nurseries

Over 500 Acres in Extent.

GRAPE VINES.

Strong and perfectly ripened.

Strong and Extra Strong Canes for planting out, **5/-** and **7/6** each.

Extra Strong Canes for fruiting in pots, **10 6** and **12 6** each.

Fruit Trees in Pots.

Strong Pyramids, established.

Apples, Pears, Plums, **3 6** and **5 -** each.

Nectarines, Peaches, **5 -**, **7 6**, and **10 6** each.

Apricots, Cherries, **5 -** and **7 6** each.

SEAKALE

(Forcing).

LILY WHITE, SOLID IVORY, & PURPLE,

Extra Strong, **14 -** and **18 -** per 100.

Extra Extra Strong, **21 -** per 100.

ASPARAGUS

(Forcing).

Extra Strong, **20 -** per 100.

New Illustrated Catalogues of all Departments free on application.

DICKSONS,

Royal Nurseries, CHESTER.

CHRYSANTHEMUMS.

Decorative Varieties: Pink, White, Bronze, Yellow; Strong, Healthy, Cool Grown; Good Succession, Sept.-Christmas.

Cuttings, **1/6** per doz.; Plants, **3/6** per doz.

List on application.

New Varieties: H. W. Thorp, white, incurved; John Thorp, bronze; Xmas Rose, pink. Cuttings, **4**d. each. Plants, **9**d. each.

Mary Thorp, pink. Cuttings, **8**d.; Plants, **1**/- each.

PERPETUAL FLOWERING CARNATIONS.

Enchantress, White Enchantress, Mrs. Burnett, Victory, Harlowarden, **9**d. each. Rose Dorée, Black Chief, **1 6** each. *Plants in Spring.*

HERBACEOUS PLANTS.

Chrysanthemum Maximum Kenneth (Moon Daisy), light, decorative; good for cutting, **6**d. each.

Double Michaelmas Daisy, Beauty of Colwall, pale mauve; splendid for cutting, **1/-** each.

Physalis Franchetti Bunyardii (Winter Cherry, improved variety), **4**d. & **6**d. each. *Cash with order; Carriage Paid.*

MISSES PRICE & FYFE, Grove Park Nursery, LEE, S.E.

Please mention this Magazine when writing.

SEED POTATOES & GARDEN SEEDS

Customers wishing to save

50 PER CENT.

When Purchasing

BULBS, GARDEN SEEDS, AND POTATOES,

Should send AT ONCE for Illustrated List

J. W. CROSS,

OLD GRAMMAR SCHOOL, **WISBECH**

25 STRONG CHRYSANTHEMUM CUTTINGS, Exhibition, Decorative, Single or Early, 1s. 6d.; 50, 3s.; 100, 5s. 6d.; by return. List.—RICHMOND'S CHRYSANT. NURSERIES, Ossett, Yorks.

100,000 FREE COPIES.

DOBBIE

Dobbie's New Catalogue and Guide to Horticulture.

224 PAGES. 210 ILLUSTRATIONS.

A COPY WILL BE SENT WITH PLEASURE GRATIS TO ANY ONE APPLYING FOR SAME, WHO ENCLOSES 3d. IN STAMPS TO DEFRAY COST OF POSTAGE, AND MENTIONS "GARDENERS' MAGAZINE."

DOBBIE & CO.,

The Royal Seedsmen, EDINBURGH

.. A ..

GREAT FLORAL NOVELTY.

GERBERA HYBRIDS

(Dr. Jameson).

A most attractive table decoration, a flower of exquisite colouring and great variety of shades, from snow white, yellow, salmon, vermilion to crimson, purple, scarlet, and many other beautiful tints, with long stalks from 12in. to 25in. Very effective for wreaths.

Seeds, plants, and cut flowers for sale. Payment on delivery.

For Terms apply to

Etablissements Horticoles Du Littoral,

CAP d'ANTIBES

(Alpes-Maritimes)

FRANCE.

Lettres et Telegrammes:

Villa Joyeuse, Antibes.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

Perpetual-Flowering CARNATIONS.

This year's Novelties and all the Leading Varieties.

Send for descriptive Catalogue of 80 varieties with particulars when to stop them.

C. ENGELMANN, CARNATION GROWER,

SAFFRON WALDEN.

STOP! WHY PAY MORE?

YOU will notice the very, very high prices of many seeds this year if you look through the catalogues you receive; but mind, you need not pay it unless you like. I can supply you at the old price. Peas, 1s. quart; Broad Beans, 5d. quart; Kidney Beans, 10d. quart. Onion Seed, 4d. oz.; Early Potatoes, 1s. 3d. peck. Flower Seeds very cheap. Send your address on a post card before placing your order. GEO. F. LETTS, F.R.H.S., Seed Grower, 2, Hadleigh, Suffolk.

AMERICAN PERPETUAL CARNATIONS. Everyone interested in PERPETUALS should write for our 1910 Illustrated Catalogue, FREE. Read our "TREATISE ON CULTURE," 1s., post free. YOUNG and CO., Carnation Specialists, HATHERLEY, CHELTENHAM.

PLEASE MENTION

THE GARDENERS' MAGAZINE

when writing to Advertisers.

SUTTON'S

VEGETABLE SEEDS

for forcing. . . .

See SUTTON'S SEED CATALOGUE now ready

THE CHOICEST VARIETIES FOR SOWING NOW UNDER GLASS.

ONION. Sutton's Selected Ailsa Craig, per packet, **1/6** and **2/6**
PEA. Sutton's Pioneer, per pint **2/6**
Sutton's Reading Wonder, per pint, **2/-**; per quart, **3/6**
BEAN (dwarf). Sutton's Superlative, per pint **2/6**
CARROT. Sutton's Inimitable Forcing, per packet **1/-**
CAULIFLOWER. Sutton's First Crop, per packet **1/6** and **2/6**
CUCUMBER. Sutton's Every-day, per packet **2/6**
LETTUCE, (cabbage). Sutton's Commodore Nutt, per pkt. **1/-** and **1/6**
MELON. Sutton's Ringleader, per packet **2/6**
Sutton's Universal. per packet **1/6** and **2/6**
RADISH. Sutton's Forcing French Breakfast ... per ounce **8d.**
TOMATO. Sutton's Satisfaction, per packet **1/6** and **2/6**
Sutton's Winter Beauty, per packet **1/6** and **2/6**

for Price Lists of all the best varieties of Vegetable and Flower Seeds.

The Record Crop of Onions.

"I have grown your Selected Ailsa Craig Onion for several years, but never before [illegible] to such perfection. I [illegible] this to be the finest type of Onion in cultivation. **The two heaviest bulbs weighed 8 lbs. 12 heaviest bulbs 42½ lbs., and the 100 heaviest bulbs 300 lbs. The 600 bulbs in the bed weighed 1,405 lbs.—an average of 2 lbs. 5 oz. per bulb.**" (Grown in the Gardens at Culham [illegible] from the late Gardener [illegible]

SUTTON & SONS THE KING'S SEEDSMEN READING.

VOL. LIV.—No. 2,985. SATURDAY, JANUARY 14, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

National Sweet Pea Society.

Societies, like individuals, have their periods of prosperity and depression, and usually difficulties that are really of importance arise at a time when apparently everything appears to be in the most satisfactory condition, and from quarters whence they are least likely to be expected. The National Sweet Pea Society is a remarkable proof of this. Founded some ten or eleven years since, this society has enjoyed a very high degree of prosperity, both as regards its finances and its work. Beyond meeting with a few trifling difficulties at an early period in its career, such as are incidental to a young society in a vigorous state of development, nothing has occurred to hinder its progress or to interfere with the pleasure which all who have been responsible for its management must have derived from the splendid results of their strenuous endeavours in the cause of the sweet pea and its cultivation. As in the case of another society devoted to flowers remarkable for their fragrance, the National Sweet Pea Society has—if we may be excused for indulging in metaphor—been sailing in a smooth sea, without a cloud on the horizon, and with sufficient wind to fill its sails and carry it briskly along on its mission of usefulness. There may have been a few discordant sounds in the breeze, but what of them? They were low, and they arose in quarters from which no danger could well have been anticipated. But during the past few weeks a great change has occurred, a cloud has spread itself over the scene, and the good ship has been diverted sufficiently from its pleasant course to render skilful navigation necessary to prevent a serious mishap. Dropping metaphor, and avoiding anything likely to give rise to unnecessary alarm, we feel it desirable to direct the attention of the members of the society to the disastrous results that must follow the failure to rescind the ill-judged instruction relating to the status of the amateur that was passed at the annual meeting. We know not whether the committee has come to any decision as to the course that will be taken should its proposal be rejected; but we assume that the members would take exactly the same course as any other body of high-minded men under similar circumstances. We do not anticipate the rejection of the proposal, but we would remind members that to prevent this happening, with its far-reaching consequences, they should make a point of being present at the general meeting, which, as will be seen from the notice we publish elsewhere in this issue, will be held at the Hotel Windsor on the 18th inst. for the purpose of dealing with the matter. It is difficult to understand the cause of the opposition that has arisen in some quarters to the Floral Committee, which, we venture to assert, has done its work in a manner that is deserving of the highest praise, and has thereby contributed materially to the high position and influence of the National Sweet Pea Society. There has been a little criticism here and there on the Floral Committee and its work, but it is not surprising that disappointment should now and again be felt by raisers, for the committee has been very sparing in its awards to novelties, and it has paid constant attention to the classification of too-much-alike varieties. But it must be remembered that had this work been done less thoroughly the nomenclature of varieties would have been in hopeless confusion, and a serious check would have been imposed upon the sweet pea industry, which has now assumed enormous proportions. It was not, however, the disappointed raisers who brought forward the question of the efficiency of the Floral Committee, but it had its origin in a motion submitted by a member of that body who has occupied the position of chairman for some two or three years past. The motion was to the effect that the number of the members should be increased from twelve to eighteen, and we gathered from the somewhat lengthy speech with which it was submitted, that the proposal was made because the work of the committee as originally constituted had given rise to much criticism. We were under the impression that one of the functions of the chairman of a committee is to defend the body over which he presides from attack, or, if no defence is possible, to retire from the position. Were any other course to be generally adopted, the conduct of public business would soon become impossible. There is not, perhaps, any serious objection to the increase in the number of members of the committee, but there was a grave objection to the manner in which the proposal was made. As proved by the results, it was subsequently an easy matter to carry an instruction to the committee to the effect that no one who sells sweet pea seeds should be allowed to sit on the Floral Committee as an amateur. Had this instruction been moved with a view to exclude dealers in sweet peas from the amateur side of the committee, no objection could have been raised, except that it would be superfluous, as the dealers in seeds are already given their proper place. It was done, obviously, to exclude those who are successful in raising new varieties of sufficient merit to justify their distribution through the usual channels, and who sell the stocks to members of the seed trade. Custom and common sense have long since decreed that an amateur, so far as relates to the garden, is one who grows, with or without assistance, plants, flowers, fruits, or vegetables for his pleasure and the use of his household, and does not habitually sell the produce; and custom and common sense have also determined that an amateur may dispose of the stock of

MR. MARTIN SILSBURY.

any novelty he raises. To adopt any other course would be absurd, a fact which evidently the committee fully appreciates, judging from the course they have taken. As this is the right, and, indeed, the only one that could be taken, we reiterate the hope that the general body of members will make a point of being present at the meeting to support the committee.

Mr. Martin Silsbury, whose portrait we have the pleasure of giving herewith, has for some years past devoted a considerable portion of his leisure to the interesting work of raising new chrysanthemums, and has achieved so high a degree of success as to place him in the front rank of those engaged in the improvement of this important class of flowers. A member of a firm of printers engaged in business at Shanklin, Mr. Silsbury has taken full advantage of the favourable climatic conditions that obtain for cross-fertilisation of chrysanthemums and the ripening of seed in that part of the Isle of Wight, and thereby succeeded in materially enriching the Japanese section, to which he has specially devoted his attention. The meritorious varieties that he has raised would form a somewhat lengthy list, but for our present purpose it will suffice to mention the Hon. Mrs. Lopes, Reginald Vallis, Purity, Magnificent, Lady Isabel, Valerie Greenham, White Queen, J. H. Silsbury, and Splendour. The remarkably fine D. B. Crane, that we had the pleasure of illustrating a few weeks since is also of Mr. Silsbury's raising, and will, unless we are much mistaken, greatly enhance his reputation. Fred Green, F. Chandler, and Millie Chandler, are other varieties of great merit that received distinction from the National Chrysanthemum Society in the autumn of last year.

"Gardeners' Magazine" Sweet Pea Number.—In view of the immense popularity of the sweet pea, and the continued increase in the demand for information on the selection of varieties and their cultural requirements, we shall devote our next issue (January 21) chiefly to these fragrant flowers. We shall give illustrations of a considerable number of the newer varieties, and the contents will include articles on "The Newer Sweet Peas," "Sweet Peas in Small Gardens," "The Future of the Sweet Pea," "Orange and Scarlet Sweet Peas," "The Decorative Value of Sweet Peas," "The Most Useful Sweet Peas," and "The Work of the National Sweet Pea Society."

Horticultural Club.—The next house dinner of the club will take place on Tuesday, 17th inst., at the Hotel Windsor, when Canon Horsley will lecture on the "Scenery and People of the Bernese Oberland and Swiss Plants." The lecture will be illustrated by original lantern slides, and the dinner will, as usual, commence at 6 p.m.

North of England Horticultural Society.—The meeting, to which we made reference in a previous issue, was held at Leeds on January 6, and the North of England Horticultural Society was successfully launched. The chairman, Mr. J. Hastings Duncan, M.P., said they wanted by means of this new organisation to link up the various Northern horticultural societies and make them into one large body, which, in its exhibitions, lectures, and educational work, would be worthy of the North of England. Scientific, Fruit and Vegetable, and Flower and Plant Committees were appointed, and Messrs. D. Roy Appleton, Major J. W. Dent, Reginald Farrer, Claude Reathem, T. E. Hodgson, G. W. Jessop, Hastings Wheeler, A. R. Crossley, R. B. Ker, and W. Mathieson were appointed members of council. The Rev. J. Bernard Hall was appointed secretary, and he agreed to serve for three years, provided the members would back him up in educational work.

Heat and Cold, 1910.—According to the summary of the weather for the past year just issued by the Meteorological Office the mean temperature for the several districts of the United Kingdom did not anywhere differ materially from the average. The highest temperature in the British Isles was 83 degrees, which occurred in the East of England and in the Midlands, and the lowest was 10 degrees below zero in the East of Scotland. At Greenwich the mean temperature was 50.4 degrees, or 0.3 degrees in excess of the average. The highest monthly mean was 62.2 degrees in August, the lowest monthly mean 38.7 degrees in November, the highest temperature 82 degrees in June, and the lowest 20 degrees in January. In July the mean temperature was 4 degrees below the average, and in November the mean temperature was 4.7 degrees below the average. On the other hand it was 3.5 degrees in excess of the average in October, and 5 degrees in excess of the average in December. In November there were fifteen frosty nights.

Weeds and Weed Seedlings.—At the meeting of the Royal Horticultural Society, to be held on Tuesday, 17th inst., a lecture on "Weeds and Weed Seedlings" will be given by Mr. H. C. Long. The chair will be taken at 3 p.m.

National Sweet Pea Society.—A notice has been issued convening a special general meeting of the members of the National Sweet Pea Society for Wednesday next, January 18, at the Hotel Windsor, Victoria Street, Westminster, at 2.30 p.m. The meeting has been called to consider the following proposals, having reference to the Floral Committee. The General Committee, strongly objecting to the definition of an amateur as stated in the instruction carried at the annual general meeting, i.e., "That no member on the amateur side of the Floral Committee be in any way connected with the selling of sweet peas," proposes that such instruction be rescinded. And further proposes that the society shall define an amateur in accordance with the regulations of the Royal Horticultural Society, viz.: "15. No person shall be allowed to compete as an amateur who sells plants (except when giving up possession of the place where they grow, or in the case of new seedlings or sports), grafts, cuttings, or buds for budding, nor any person in the employ of a nurseryman. An 'amateur,' therefore, is a person who grows plants, fruits, or vegetables (either personally or by paid labour) solely for the enjoyment, or for the domestic use, of the produce, and not with the object of pecuniarily benefiting by it. This rule does not necessarily exclude a person who occasionally sells surplus produce arising from an overabundant crop, or from an exuberant natural increase, but who does not intentionally grow for sale."

Gardeners' Royal Benevolent Institution.—The seventy-first annual meeting of the members and subscribers of this institution will be held at "Simpson's," 101, Strand, London, on Thursday, January 19, commencing at 2.45 p.m., for the purpose of receiving the report and financial statement, electing officers for the ensuing year, and the election of annuitants. Mr. H. J. Veitch, F.L.S., V.M.H., will preside, and the poll will open at three o'clock, and remain open one hour. It is proposed to elect twenty annuitants, a number which, we regret to say, is not much in excess of 25 per cent. of the approved candidates. Of these there are 73, 48 of whom are men and 25 women, all of whom are well deserving of the benefits of this excellent charity, the greater proportion having been subscribers or the widows of subscribers, some for upwards of a quarter of a century. Seeing that 53 candidates will have to bear the disappointment inseparable from the failure to obtain a place on the pension list, no one will be prepared to question the judgment of the committee in giving prominence in the notice convening the meeting to the fact that "An increased annual income is urgently needed."

Examination in Horticulture.—With a view to raise the status of the professional gardener, and to promote a better technical knowledge of horticultural matters, the Executive Council of the British Gardeners' Association have arranged to hold an examination in horticulture on Wednesday, April 26, at 7 p.m. The examination will be based on a syllabus comprising fruits, vegetables, plants, trees, and shrubs, plant structure, and essentials for growth, soils and manures, and diseases of plants. Twelve questions, one at least from each section will be set, and eight must be answered to secure marks from the examiners. A fee of 3s. will be charged for each candidate, and applications from gardeners wishing to be examined must be made to the secretary, Mr. J. Weathers, Talbot Villa, Isleworth, at least fourteen days before the date of the examination.

Sunshine and Rain, 1910.—Our readers will not be surprised to learn that there was a deficiency in the bright sunshine recorded during the past year. At Greenwich it was deficient by about 115 hours. May had the highest record with 219 hours, and December the lowest, the duration of bright sunshine having extended over about 30 hours. The summary of the Meteorological Office shows a considerable variation in the duration of bright sunshine in different districts in the United Kingdom. In the North-west of England there was an excess of 63 hours, and in the North of Scotland of 74 hours, while there was a deficiency of 103 hours in the East of England, and 159 hours in the Channel Islands. The aggregate rainfall recorded at Greenwich was 28 inches, or 4 inches above the average, and, excepting 1903, it was the heaviest rainfall during the past 30 years. The rainfall was also over the average in all parts of the United Kingdom, with the exception of the North and West of Scotland, the greatest excess being 9.12 inches in the Channel Islands. The highest aggregate measurement was 49.74 inches in the North of Scotland, and the lowest 25.24 inches in the North-east of England. There were 257 rainy days in the South of Ireland, 195 in the North-east of Ireland, and 195 in the South-east of England.

"Botanical Magazine."—The volume of this publication for 1910 is dedicated to Harry J. Veitch, Esq., F.L.S., V.M.H., "to whose generosity," the Editor states, "the 'Botanical Magazine' is deeply indebted for material assistance from the resources of the establishment of which he is the head."

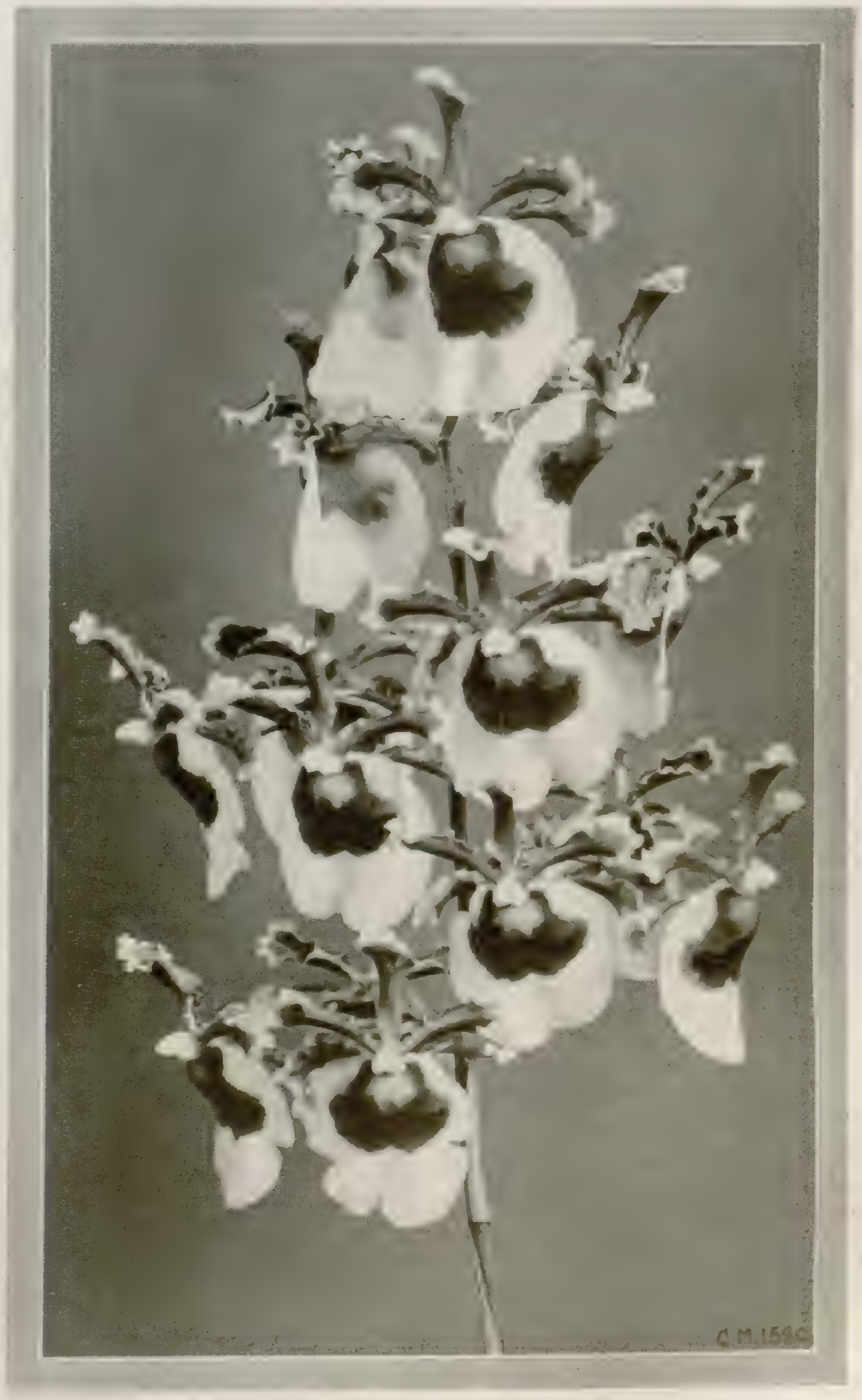
R.H.S. Gardens Club.—This club, which consists of past and present students and employees of the Royal Horticultural Society, has published No. 3 of its "Journal," and the issue is in some respects an improvement upon the two numbers by which it was preceded. Of special interest are the contributions by Mr. F. L. Chittenden, F.L.S., Mr. A. Simmonds, and Mr. W. D. Cartwright on the Wisley flora, and the contribution by Mr. J. Fraser on "The Old Chiswick and the New."

Manuring of Apple Orchards. —In a bulletin recently issued by the Pennsylvania Agricultural Experiment Station some interesting particulars are given of a series of experiments in the manuring of apple orchards in Pennsylvania. The experiments, which extended over three years, were conducted in eleven orchards, with an aggregate area of 91 acres, and comprising ten soil types and twelve varieties of apples. It is pointed out by the authors of the bulletin that no recommendation can be made that will be exactly adapted to all circumstances, but as the results of the experiments they are in a position to state that where a fertiliser is needed good results may be obtained from a dressing of artificial manure containing 30lb. nitrogen, 60lb. to 75lb. phosphoric acid, and 50lb. potash per acre. Young trees require smaller, old trees heavier dressings. Nitrate of soda should be given after the blossoms fall; other manures during winter or spring. Nitrogen may also be profitably supplied by growing and digging or ploughing in some leguminous crop, such as clover. It is mentioned that the quantities of plant food recommended may be made up as follows per acre: 100lb. nitrate of soda (15½ per cent. nitrogen), 100lb. dried blood (12 per cent. nitrogen), 250lb. to 300lb. steamed bonemeal (24 per cent. phosphoric acid), and 100lb. sulphate of potash (50 per cent. potash).

My Garden Diary for 1911 is a dainty publication we have had the pleasure of receiving from Messrs. Sutton and Sons, and is not less welcome than the issues for previous years. On the covers is depicted a charming garden scene, in which weeping standard roses, herbaceous plants, and annual flowers are admirably represented. Between the covers are reminders of the work to be done in each month of the year, monthly notes, and spaces for memoranda. There are also selections of annuals and other plants usually grown from seed.

Sulphate of Ammonia.—From the report of the Chief Inspector of Alkali Works we learn that there are 536 works or separate processes for the manufacture of sulphate, or muriate, of ammonia in the United Kingdom, or an increase of nearly 100 during the past five years. Sulphate of ammonia is chiefly obtained as a bye-product from coal. When this is treated for the production of coal gas, or for the manufacture of coke used in iron smelting, an ammoniacal liquor results, which forms the raw material for the manufacture of ammonium salts. The quantity of sulphate of ammonia produced in the United Kingdom during 1909 was 349,000 tons, of which 264,000 tons were exported. The balance of 85,000 tons for home use was 6,000 tons less than in 1908.

Floras of the Jurassic Period. —Professor A. C. Seward, F.R.S., devoted his presidental address at the recent annual meeting of the Yorkshire Naturalists' Union to a consideration of the Jurassic flora of the East of Yorkshire in relation to the Jurassic floras of the world, and gave much interesting information relating to these floras. Having described the estaurine beds of East Yorkshire as being among the most important strata of the world as regards their fossils, and passed under review the work of William Bean, J. Williamson, W. C. Williamson, and other investigators, Professor Seward proceeded to give a general sketch of the flora. The fossil flora of the Yorkshire coast is, he stated, remarkable for the abundance of ferns and cycads and certain types of conifers, but it is not possible to determine the relative abundance of the different groups. It is regarded as probable that the Ginkgoales occupied a prominent position in the composition of the vegetation. With regard to the ferns of the Jurassic period, it is a point of some interest that their nearest living allies are to be found in the southern hemisphere. Comparison with recent genera of cycads is rendered difficult by the great gulf between recent members of the group and those which flourished in Jurassic times. There is, however, no reasonable doubt that the cycads of the present day are derived from an ancient stock, which produced also Williamsonia and other Jurassic genera. In this case also the recent plants most nearly akin to those of the Meozoic floras are chiefly characteristic of southern regions, and this general statement is applicable to the relation of some of the Jurassic conifers to recent types. In the genus Ginkgo of the Jurassic world we have a member of a group which would probably have ceased to be represented among living plants had not the recent species long been held in veneration in the Far East as a sacred tree. During the Rhætic and Jurassic eras and in the succeeding Cretaceous and Tertiary epochs, the genus Ginkgo was widely distributed in Europe. As late as the Lower Tertiary period it existed in what is now the West of Scotland in a form not differing materially from the well-known maiden-hair tree. In discussing the relation of the Yorkshire Jurassic flora with that of other parts of the world, Professor Seward said it was remarkable to find that almost precisely similar plants to those occurring in the Yorkshire rocks are also found in strata of about the same age at places so far distant as America, Australia, Greenland, India, Japan, Siberia, and Turkestan. This wide distribution seemed, in Professor Seward's opinion, to indicate that the climate in Jurassic times must have been much more uniform over the world than is at the present time the case.



MILTONIA WARSCEWICZI LEUCOCHILA.

Flowers rose, crimson-purple, and white. A.M., R.H.S., December 20, 1910. Messrs. Charlesworth and Co., Haywards Heath.

THE PURPOSES AND POETRY OF TREES.

A tree is but a plant possessed of a woody stem; a shrub is but a small tree; there are diminutive plants, such as the heather, that might claim to be classed among the trees, so sturdy are their stalks, and there are trees, of which the silver birch is an example, whose slender trunks bend more than do some blossoms before a gale.

From time immemorial the laws of symbolism have given meanings to our forest, plain, and mountain giants: from farthest ages they have had their purposes as elements in manufactures, at first rude uses in the formation of rough tools, then gradually to serve the aims of art; clothing, food, medicines came also from the trees. The ancient Britons are known to have had some kind of oak-built navy, even before they lived in houses made by hands but sheltered in natural caves; the lavish harvest of acorns constituted their daily bread, and immense tracts of our land were covered by dense oak forests. So great was the vigour imparted by this diet that a poet described how these hardy warriors,

"Fed with the oaken mast,
The aged trees themselves in age surpassed,"

which must be surely an example of literary license, since another rhymer, Dryden, has stated,

"The monarch oak, the patriarch of trees,
Shoots rising up, and spreads by slow degrees;
Three centuries he grows, and three he stays
Supreme in state, and in three more decays."

In many of our world-famous ancient churches the carvings that have survived until the present day are those that were carried out in the native oak: attention may especially be drawn to the wondrously beautiful shrine of St. Edward the Confessor, in Westminster Abbey. It has been interestingly recorded that the Bible has many mentions of this tree. When Gideon saw the Lord's messenger he was beneath an oak, Jacob buried the strange idols and ornaments of his household "under the oak that was by Sechem; near "the oak of weeping" Deborah, Rebekah's nurse, was interred, and it was through branches of oaks that Absalom, the son of David, met his death.

In pagan lore the oak possesses unique renown as having formed the Donean groves of Greece, where spake the oracles, for which reason the wreaths of heroes were made of its leaves. We have all pictured in fancy those vast woods wherein clustered

"The sacred oaks,
Among whose awful shades the Druids strayed,
To cut the hallowed mistletoe, and hold,
High converse with their gods."

Under the figure of an oak, Baal, the Celtic god of fire, was worshipped, his festival being held at Yule-tide, our present Christmas; all the fires of the people were extinguished, in order to be lighted again from the sacred fires kept burning by the priestly Druids.

Probably the grandest tree, next to the oak, is the pine; it lives where winds would sweep away all weaker species, it clears vegetation out of its path, spreading only a carpet of cones and spines, with occasionally a group of fungi, brilliant as blossoms, and quaint of form. As the national tree of Scotland it has the heaths for its subjects, and no beauty in all Nature is perhaps dearer to the eye and heart of artist than the colours taken by its ruddy bark beneath the rays of the setting sun. See it in moonlight, too; note how each trunk becomes a warm sepia shadow between shafts of silver light; listen to the peculiar music of its boughs as they clash together beneath a gale, and an understanding will gradually arise in the mind why it is that the Highlander can imagine no scene more fair than a lonely wood of pine. Pity is its symbol, while the heather signified solitude. Of the value of its wood there is no need to speak; but the millions of planks of deal among which we live come to us from Norway.

Lime wood is of the greatest service to Art.

"Smooth linden best obeys
The carver's chisel, best his curious work
Displays in nicest touches."

It is of a cream shade naturally, and, as it does not warp with changes of temperature, it is used for the sounding-boards of pianos, and the panels of carriages and cabinets. The masterpieces of Grinling Gibbons, at Windsor and Chatsworth, St. Paul's Cathedral, and elsewhere, are executed in this wood. We may also recall with gratitude that the blossom makes a refreshing cordial, helps in medicine and cosmetics, that the famous Lithuanian honey owed its excellence to being gathered directly the bees had stored it from odoriferous forests of the lime, while a humble use for a portion of its inner bark is the manufacture of bast matting. In the language of flowers the linden tree signifies conjugal love.

The horse chestnut is said not to have been imported into England until about the middle of the sixteenth century, and came from the far distant mountains of Thibet. No records seem to explain why its motto is "Do me justice." The blossom has been compared, not unjustly, to a hyacinth, and it is a fact that if the flowers are used, without any leaves, among fern fronds, for table decoration, they give a marvellously beautiful effect. The bud of this chestnut contains wonders indeed; pluck one when not larger than a pea, in earliest spring, unfurl its cover, noting how this consists of seventeen scales, underneath which is a bed of down; below lie four leaflets, surrounding a miniature flower spike; naturalists have brought the microscopic lens to bear upon this gem, and so have counted the individual flowerets, to the number of sixty-eight. Luxury is its symbolic meaning. Spanish chestnut wood is the best of all for making casks for rare wine, as it has no tainting odour or juice, and quite arrests evaporation.

The elm was brought to us by the Crusaders, or earlier by the Romans, we are told, though it was first thought to be a native. Its wood made the wheels of most of the water mills that are passing out of use in our land; it was also used greatly in shipping and cart building. The famous diarist, Evelyn, tells us that the leaves were formerly much valued as food for pigs and cows, which would eat them in preference to oats, and thrive well upon them, for which reason elms were planted in quantities in meadows. This tree often towers from ninety to one hundred feet high, and is symbolical of "dignity."

Of hornbeam wood were always made the yokes for the oxen that used to plough our soil; the ploughs themselves were, too, of this extra-firm timber. Hornbeam hedges of quaint devices still exist in many old-world gardens, clipped into strange forms of birds and beasts, and built up to great height. A kinder meaning than "ornament" might, however, have been found for a tree so wise that it often keeps its old leaves as a protection until the new ones push them away.

An authority on the beech has written, "By the union of grace and nobility it may claim precedence over every other member of our sylva. The autumnal hues are rich and glowing in the extreme, and when a beech grove has assumed the intense orange-yellow that it displays at a certain season, the effect is most striking; the radiance overhead being repeated by the fallen leaves below, till earth and air seem saturated with golden light." He added the interesting information, "There is an extraordinary variety of the beech, called the purple beech, which has its leaves when quite young of a cherry-red colour, and at midsummer, when quite matured, of such an intense purple as to look almost black." The original tree from which all purple beeches are said to have been derived, was found by accident in a wood in Germany about ninety years ago, but what gave rise to such a remarkable and permanent deviation from the ordinary colour of the foliage it is impossible to say. The copper-coloured beech is merely a sub-variety, with the purple element less developed. Oil used to be extracted from the kernels of the beech-mast. Ancient writers call it the tree "of all prosperity," a blessing to the house it guards.

Proverbs dealing with trees include the following:

"An oak is not felled with one blow."

"It's a gude tree that has neither knap nor gaw."

"No tree but has rotten wood enough to burn it."

"Remove an auld tree an' it'll sune wither."

"As a tree falls, so it lies."

M. H.

THE PERPETUAL FLOWERING CARNATION SOCIETY.

At the recent exhibition of the Perpetual Flowering Carnation Society a noticeable feature, in spite of the excellence of the display as a whole, was the reluctance or shyness of the amateur cultivator in coming forward with his exhibit. This is regrettable, because the perpetual flowering carnation is a flower from which an amateur with a slightly heated greenhouse can obtain more pleasure and profit probably than from any other flower. The Perpetual Flowering Carnation Society exists for the encouragement and interests of this flower, and, although the prizes offered in the amateurs' section are not large ones, they are well worth the attention of amateur growers, and even those who only grow a few plants. Turning to the section for amateurs and gardeners possessing more plants, many valuable prizes are offered. The President's (Lord Howard de Walden) fifty-guinea cup, and such money prizes as 20s. for one bloom, are well worth attention. Those intending to exhibit at the next show, to be held at the Royal Botanic Gardens, should become members at once, and proceed with the needful preparations. The subscription is only 5s., but, of course, members may pay a larger amount, and those subscribing 10s. 6d. or 21s. have additional privileges.

LAURENCE J. COOK.

Mapledene, Wellington Road,
Bush Hill Park, Middlesex.

Cotoneaster angustifolia.—Half a dozen years ago some branches of this cotoneaster, absolutely laden with bright orange coloured berries, were shown at one of the winter meetings of the Royal Horticultural Society by M. Maurice Vilmorin, and a First Class Certificate was awarded it. Though so fine at Les Barres, it has not proved to be a great success in this country, being too tender for many districts. In general appearance Cotoneaster angustifolia bears a considerable resemblance to the pyracantha, and it is now in the "Botanical Magazine" figured as Pyracantha angustifolia, a change of name which should be taken note of.—W. T.

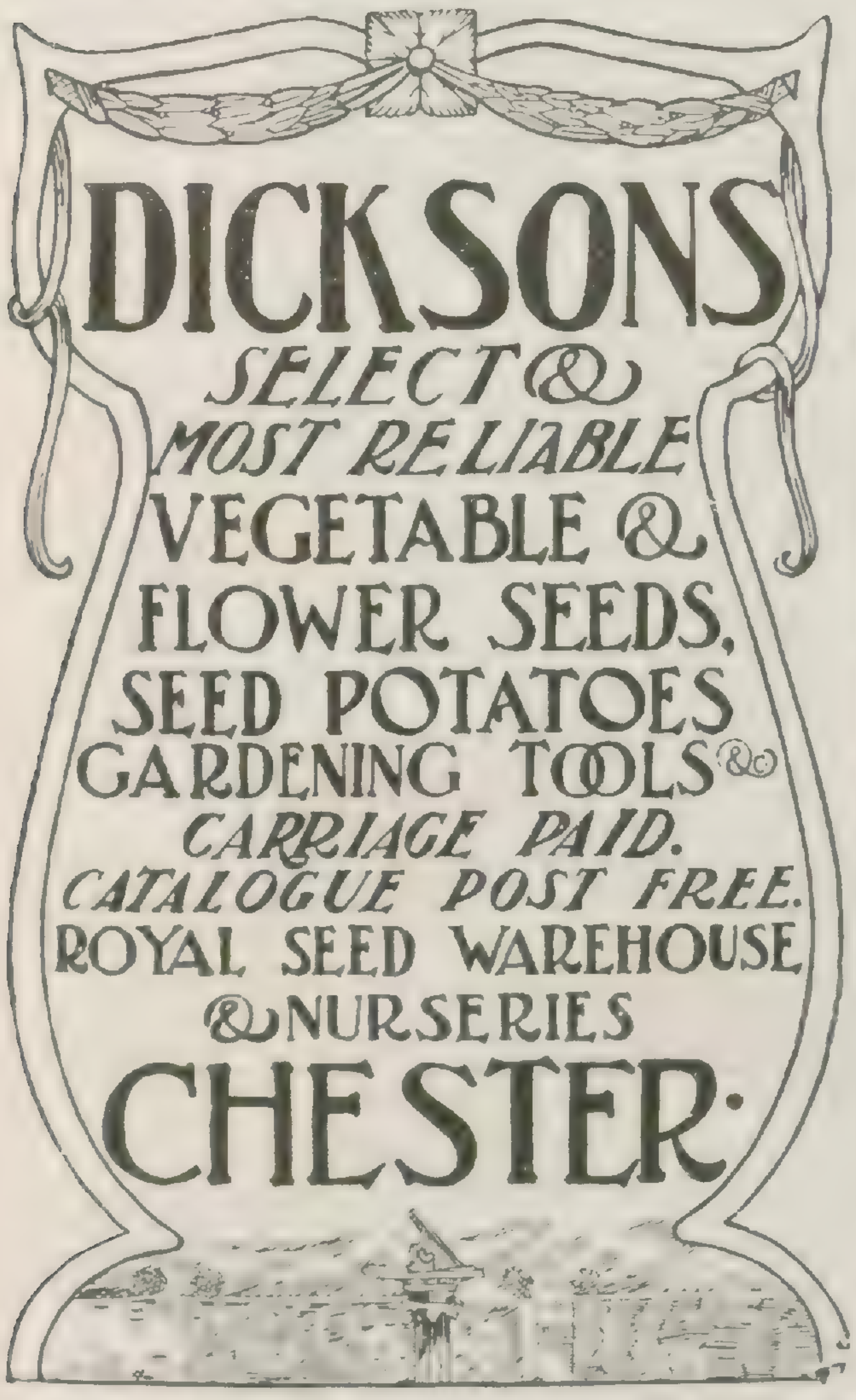
CANARY GUANO

"THE BEST IN THE WORLD."

There is no Fertilizer that gives such good all round results as CANARY GUANO. It is used in the King's Gardens, and by leading Amateurs and Trade Growers all over the Country. A post card to the Manufacturers will ensure full particulars.

SOLD IN BAGS AND TINS BY SEEDSMEN, NURSERYMEN, ETC.

Manufactured by **THE CHEMICAL UNION, LTD, IPSWICH.**



DICKSONS
SELECT & MOST RELIABLE
VEGETABLE & FLOWER SEEDS,
SEED POTATOES
GARDENING TOOLS &c
CARRIAGE PAID.
CATALOGUE POST FREE.
ROYAL SEED WAREHOUSE & NURSERIES
CHESTER.

HAVE YOU GOT A SEED SOWING TIME TABLE?

It would be just as useful to you when you want to sow seeds as a railway time table is when you want to catch a train, and would help you to make sure of sowing your seeds at the proper time to ensure

THE BEST POSSIBLE RESULTS.

It would also enable you to have your plants in bloom or your vegetables ready for table just when wanted. If you are an exhibitor it would tell you the correct time to sow in order to have your produce in the best possible condition for the show. So far as we know, Stormonths' Catalogue of

WARRANTED BEAU-IDEAL SEEDS IN 1d. PACKETS

is the only reliable source whence this information may be obtained. A copy will be sent, post free, on receipt of your name and address on a postcard.

STORMONTHS,
8, KIRKBRIDE, CARLISLE.

Orchids! Orchids!! Orchids!!!

The undersigned begs to announce to the Public that he is in a position to supply, whole ale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application.—**J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

ANT ROOZEN & SON'S SEEDS, BULBS, AND PLANTS

For Spring, 1911.

THE CATALOGUE of above is NOW READY, and will be sent, post free, on application to their Offices at . . .

OVERVEEN, HAARLEM, HOLLAND;

Or to their General Agents,

MERTENS and CO.,
3, Cross Lane, LONDON, E.C.

ORCHIDS.

Amateurs interested in Orchids should write for our

Amateur's Guide,
2nd Edition, free.

Giving Treatment, Soils, Description of Flowers; Illustrated.

MANSELL & HATCHER, Ltd.,
Rawdon, Yorkshire.

BROOKLANDS NURSERY.

Specially Choice Hybrid Rhododendrons on own Roots.

The Manager, BROOKLANDS NURSERY, Weybridge.

BUNYARD'S FRUIT TREES

The Best Quality and Largest Selection at Moderate Prices.

WRITE FOR CATALOGUE.

GEO. BUNYARD
& CO., LTD.,
Royal Nurseries,
MAIDSTONE.

HESSLE PEAR TREES.

A grand lot of 3-year Half Standards to offer. Price per dozen, 100, or 1,000 on application.

S. SPOONER & SONS,
The Nurseries,
HOUNSLOW.

CATALOGUE FREE ON APPLICATION.

A SPECIALITY FOR MORE THAN 50 YEARS.

POT VINES

Strong well-ripened Canes, clean and healthy, for planting and fruiting. Descriptive List FREE.

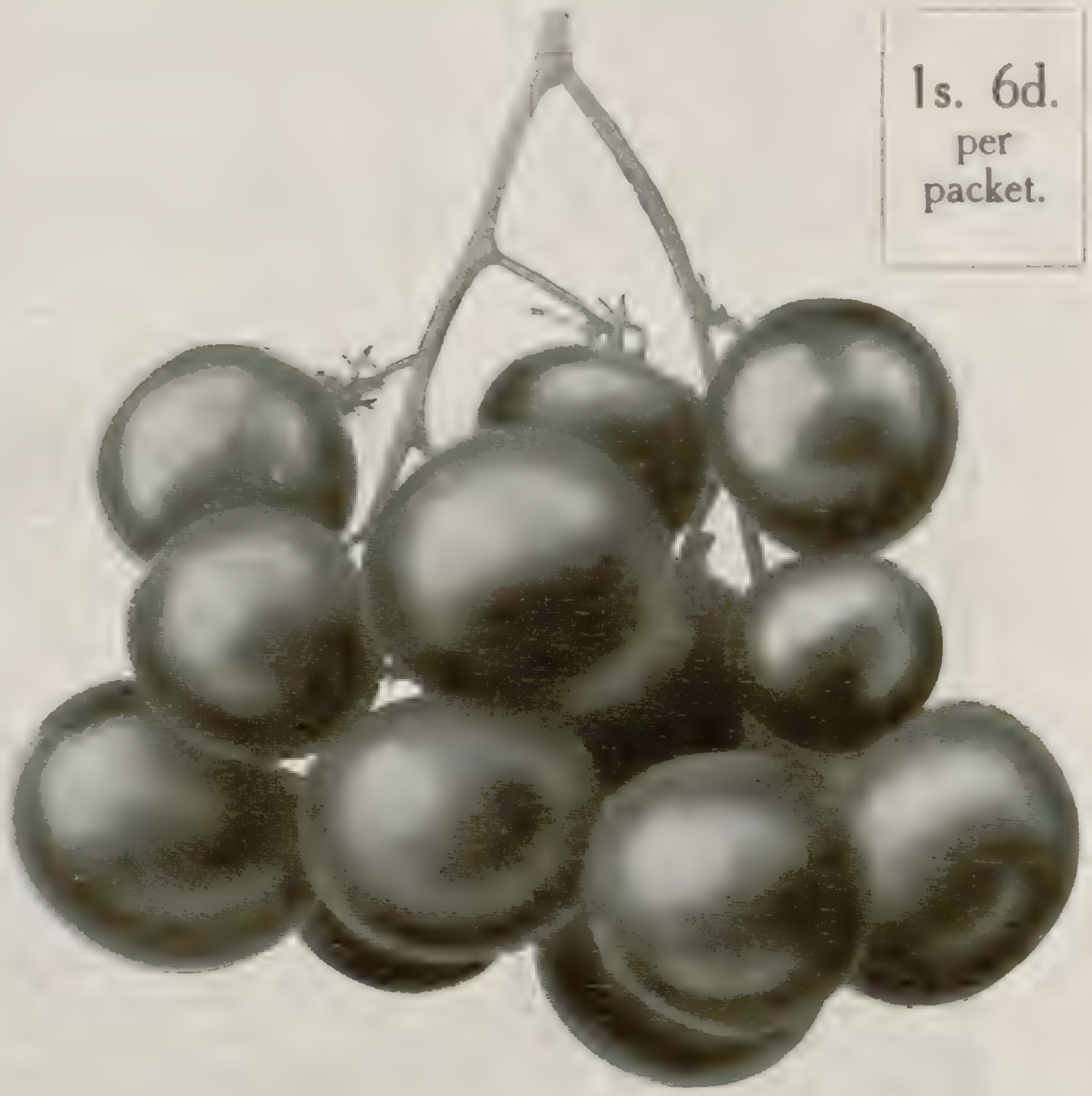
ALSO FIGS AND PEACHES.

J. R. PEARSON & SONS, LOWDHAM, Notts.

Moneymaker Tomato

¶ A WONDERFUL CROP—from 12 to 20 fruits in a bunch, even in size, handsome solid flesh, excellent flavour, very free. The most useful tomato I have ever grown. ¶ REMARKABLY FREE CROPPER, excellent flavour, serviceable size, good colour, smooth and attractive appearance. ¶ SPLENDID ACQUISITION. Have grown it alongside other well-known varieties, and have found nothing to compare with it. For cropping, shape, colour, and flavour unequalled. ¶ SPLENDID VARIETY, and rightly named. A tremendous cropper, carrying bunches of from 18 to 24, and often more fruits, very fine, and of excellent flavour. ¶ GRAND CROPPER. Have a fine show of them—from 12 to 18 in a bunch. Free setter, disease resisting, and rightly named.

All this is unasked-for testimony. "Moneymaker" carries its fruits in clusters of 10 to 18—and more, the fruits weighing 6 and 7 to the pound, and remarkably uniform. Colour a bright red, skin very thin, flesh deep, flavour delicious. The plant has a fine constitution; bears at nearly every joint, and ripens its fruits early. Well adapted for inside or outside cultivation, **1/6** *per pkt.*



1s. 6d.
per
packet.

Our 1911 Prizes—the Vegetables to grow for them.

Our Show in Manchester (Sept. 13th)	prizes £44
National Vegetable Show (Aug. 30th)	,, £22
Shrewsbury Show (Aug. 23rd)	,, £24

And Prizes at many other Shows.
See our Garden Seed Catalogue. It is free.

Onion, Premier	**per pkt.**	**1/6**
Tomato, Moneymaker	**,,**	**1 6**
Pea, Hercules	**per pint**	**2/6**
Pea, Lancastrian (new)	**per pkt.**	**1 -**
Beans, Exhibition Runner	**per qrt.**	**2 6**
Beet, Market Favourite	**per oz**	**1/-**
Cabbage, Selected Sugar Loaf	**,,**	**1 -**
,, Savoy, Early Favourite	**,,**	**1 -**
Carrot, Scarlet Perfection	**,,**	**1 -**
Carrot, Matchless	**,,**	**9d.**
Cauliflower, Snowdon	**per pkt.**	**1 6 & 2 6**
Celery, Prize Pink	**per pkt.**	**1 -**
Cucumber, Imp. Telegraph	**,,**	**1 -**
Lettuce, Lord Kitchener	**per oz.**	**1 3**
Leek, Exhibition	**per pkt.**	**1/6**
Parsnip, Selected Hollow Crown	**per oz.**	**6d.**
Turnip, Manchester Market	**,,**	**4d.**

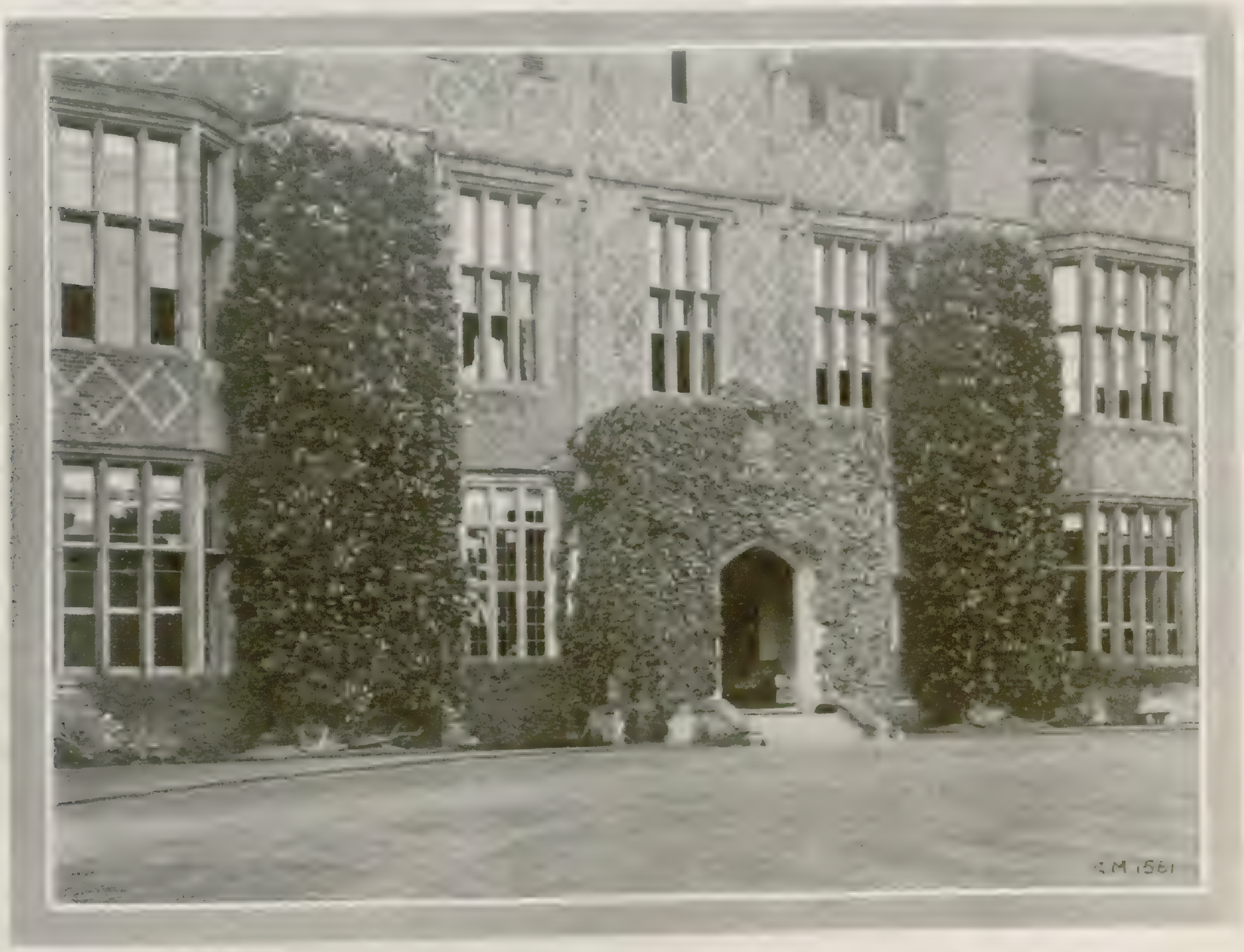
Dickson & Robinson

CATHEDRAL ST. **Manchester**

MAGNOLIAS.

In the GARDENERS' MAGAZINE of December 31, 1910, I had the pleasure of describing some of the magnolias of special value for beautifying the garden, and I now purpose referring to a few others that are equally well deserving the attention of the planter.

M. grandiflora.—This is probably the best known of all the magnolias, especially in the south. It is a native of the Southern United States, and has been given the name of "Bull Bay." Its large, handsome evergreen foliage and immense white fragrant flowers are familiar objects, and it is difficult to imagine a more ornamental evergreen tree when it is well grown. Unfortunately, it is somewhat tender, and, except in the south and south-west counties, it must be planted against a wall, while in very cold localities it cannot be called a success, even in such a position. In southern gardens trees have been noted 20 to 35 feet high, with trunks a foot in diameter. In the Southern United States it sometimes attains a height of 100 feet. It varies somewhat in character, and a number of distinct forms have been given varietal names. Of these angustifolia is distinguished by its narrow leaves: ferruginea by the undersides of the leaves being covered with a dense reddish felt: lanceolata, sometimes called exoniensis, by reason of its small, lance-shaped foliage: and undulata, which is recognised by the undulated margins of the leaves. There is, however, still another variety, M. g. gloriosa, which is the most beautiful of all, its flowers being very large and globular.



MAGNOLIA GRANDIFLORA ON THE WALLS OF MAPLE-DURHAM HOUSE.

This illustration of the fine specimens of Magnolia grandiflora at Maple-Durham House, Reading, the residence of the Hon. A. Mills, is of special interest as showing a system of training by which the walls of houses may be beautified with vegetation without having their structural features hidden, a point of much importance in the case of mansions representing distinct styles of architecture.

M. hypoleuca.—Very few really good examples of this species exist in the country, for it is only of late years that it has become well known. In his "Forest Flora of Japan," Sargent describes it as a very beautiful species, and, though it has flowered but a few times in England, it promises to justify what has been said in its favour. In addition to its flowers, it is said to be very beautiful in its home in Japan when covered with its bright red cones of fruit in autumn. It most closely resembles M. tripetala in appearance, so far as leaves are concerned. They are sometimes 15 to 18 inches in length, and 6 to 7 inches wide. The flowers are white and fragrant, about 6 inches across, and borne in summer. It forms a large tree in Japan, and appears as if it will attain to the dimensions of a tree in this country.

M. Kobus.—This is a large-growing tree in Japan, for it attains a height of 70 feet with a trunk 2 feet in diameter. It is perfectly hardy, and of vigorous constitution. There appears to be close relationship between this species and M. stellata, for it is difficult to tell the leaves apart and the flowers are white and similar in size, but single, while those of M. stellata have an abnormal number of petals. Like other magnolias it thrives best in moist, rich ground.

M. macrophylla.—Unfortunately, this Southern United States species is not very hardy, and it is only here and there that really good examples are seen. A few years ago a good specimen which flowered freely was to be seen in the Coombe Wood Nursery, whilst a fine one exists at Claremont, the estate of H.R.H. the Duchess of Albany. It is recognised by its large, obovate, or oblong leaves, which are sometimes 2½ or 3 feet long, and by its large yellowish flowers, which are 8 to 9 inches across. The glaucous colouring of the underside of the leaves is another good distinguishing feature.

M. obovata.—This is perhaps the hardiest of all the magnolias. It is a native of China, and grows into a widespreading bush 8 or 10 feet high. It blossoms in April, the flowers being purplish or reddish-purple. With M. conspicua it has been the means of providing a number of ornamental varieties, which have been previously alluded to. There is, however, a widely-grown form, which is often used for forcing, called rustica, which differs from most of the other kinds by its high colour. It most closely resembles Lennei, and may not really be an obovata hybrid, though its origin has been given as obovata x conspicua. It has also been thought to be a hybrid from Lennei.

M. parviflora is an exceedingly beautiful summer-flowering magnolia, and one of our choicest flowering shrubs. Unfortunately, it does not appear to possess a very good constitution, but where good specimens exist it is really charming. It is a deciduous species, with oval leaves. The flowers are borne during May and June, and are white in colour, with a central mass of crimson stamens. When fully expanded they are about 3 inches across.

M. stellata.—Now one of the commonest magnolias in the country. This species was practically unknown twenty years ago, and what few plants existed were accommodated in greenhouses. No doubt, however, now exists as to its hardiness, except that the flowers are sometimes damaged by late frosts, hence the necessity for giving it a sheltered position. It grows naturally into a shapely bush, and will attain a height of at least 12 feet. Each year its blossoms are borne with the greatest freedom, the flowering time being April. The flowers are semi-double, 3 inches or so across, star-like, and glistening white in colour. When at its best it is difficult to picture a more charming shrub. Its native country is Japan.

M. salicifolia is a distinct small-leaved species from Japan. So far sufficient time has not elapsed since its introduction to allow us to judge of its hardiness and merits. It is of slender growth and has small flowers.

M. Thompsoniana is stated to have originated as a seedling in the Mile End Nursery of Mr. Thompson as long ago as 1820, according to London. Its parents are said to be M. glauca and M. tripetala, but this can be supposition only. It has closer affinities with the former than with the latter species, but the leaves and flowers are larger, whilst it is of stronger growth.

M. tripetala is known under the common names of "Umbrella Tree" and "Elkwood." It is a native of the United States, where it forms a tree up to 40 feet in height. It has been in cultivation in England for a century and a-half, but it is by no means common. Its most striking features are its large obovate-lanceolate leaves, which sometimes measure 2 to 3 feet in length, and the red cones of fruits which succeed the white flowers. The flowering time is summer.

M. Watsoni resembles M. parviflora in many respects, but is of stronger habit, with larger foliage and flowers. It is a native of Japan, and was introduced 18 or 20 years ago. A very fine specimen exists at Stevenstone, in North Devon, which in June last year carried about 100 open and unopen flowers. In colour the flowers are similar to those of parviflora.

W. Dallimore.

PLUM EARLY PROLIFIC.

The recent reference to the merits of Early Prolific plum afforded me considerable pleasure, as I have long regarded it as the best early variety in cultivation. It readily adapts itself to almost any kind of soil which contains a fair percentage of lime, and any form of training. It succeeds equally well as a bush, pyramid, standard, or wall tree, and is a sure cropper in seasons that are at all favourable. Its wood is of a twiggy nature, is easily ripened, and, being a prolific bearer, it does not require root-pruning. In fact the usual difficulty with this plum is to induce it to make wood, and so ensure an increase in the size of the tree. But, although it is a slow grower, it soon pays for its cost in the first instance, and room afterwards, by its annual yield of fruit at a season when plums are scarce, even in a plum year. It comes into use about the end of July, and is useful for both dessert and culinary purposes.

For market purposes Early Prolific has no rival, and will always command good prices. In spite of all these many good points, it is seldom met with in private establishments, and yet it is the one plum that should be in every garden. Of course, as in the case of other plums, it likes a soil rich in phosphates, potash, and lime, and not too much organic matter, as the latter has a tendency to foster the production of succulent wood in seasons when spring frosts, or cold winds, have destroyed the crop. Where there is a choice of a position for a plum on a wall I would advise a western aspect, and Early Prolific if a useful black early plum is desired.

Pedestrian.

POT CULTURE OF HARDY FRUITS.

The cultivation of fruit trees in pots is becoming of considerable importance in many gardens, and is a valuable addition to the older and more general system of planting permanent trees. By this method of cultivation early crops can be more easily produced, and these invariably prove very useful until the general crops of fruit are ripe. In the case of peaches and nectarines one is able with pot trees to grow a greater variety of fruit in one house.

A good house for fruit trees in pots is a span-roof running north and south, but for very early supplies a lean-to facing due south is preferable. If a lean-to house is not available the trees may be started in an early vinery, and when the foliage of the vines develops move the trees to another structure, it being important for them to have as much light as possible. When commencing the cultivation of fruit trees in pots it must not be assumed that a tree can be lifted from the open ground, potted up, and immediately cropped, as such assumption will result in disappointment. Trees that are three or four years old, and have been grown in pots from maidens are the best to purchase.

It is important to repot the trees every year, and this operation should be commenced during October. See that they are not dry at the roots when repotted, as the wood is liable to shrivel when that is the case. Pots from ten inches to twelve inches in diameter are the most suitable, and these are large enough for the majority of trees. It is necessary to reduce the ball sufficiently to allow plenty of new soil to be worked around it. Make the soil quite firm, as this encourages the production of fibrous roots, and a more fruitful condition of the wood. A good compost for trees consists of rich fibrous loam, a fair proportion of half-inch bones, some crushed charcoal, and old mortar rubble. The latter not only helps to keep the soil open, but it adds to the soil the calcareous matter essential to stone fruits. Water well after potting, and syringe the trees on bright days. It is better to leave them in the open until the time arrives for starting them in the forcing house, in the meantime protecting the pots by plunging them in ashes or leaves. Pot-grown trees require very little pruning, but what is necessary should be done before they are started.

Peaches and nectarines for very early forcing must be placed under glass in November, but other trees can stay out until January or February, according to the time that ripe fruit is wanted. They will not require much water at the roots until growth becomes active, it being a good rule to keep the soil moderately moist. The trees should be syringed overhead several times daily in bright weather. It is important not to subject them to a high temperature at the commencement, 45 degrees by night, with a rise of five degrees in the daytime being quite sufficient. As in the case of other fruits under glass, it is necessary to artificially pollinate the flowers. Some gardeners prefer to keep a hive of bees in their orchard house, and so ensure the flowers being fertilised naturally.

When the fruits are set, and commencing to swell, begin to feed the trees with liquid manure; also maintain a moist atmosphere, and admit air freely on favourable occasions by means of the top ventilators. Mildew is often troublesome in some varieties during the early stages of growth. To avoid this vaporise with sulphur, and fumigate occasionally with nicotine compound to keep down aphis. Thinning the fruit must be carefully attended to; the number that should be allowed to remain will depend on the variety and the vigour of the tree. Finally, in the case of apples, when the fruit has almost done swelling, the pots may be plunged in the open on a south border, as this greatly assists the fruit to colour. Shade lightly during periods of bright sunshine, spray overhead two or three times daily, and guard against birds by protecting the trees with netting when necessary. Dessert varieties of apples and pears grown in pots are much appreciated before the outdoor fruit is ripe. It is not worth while growing culinary varieties unless they are required for exhibition. Peaches, nectarines, cherries, plums, and figs succeed well in pots, and are better finished under glass altogether.

J. Gardner.

SAXIFRAGA PELTATA.

Those who are only acquainted with the smaller saxifrages which are such choice ornaments of the rock garden, can hardly realise the immense void which separates them in appearance from the great Californian saxifrage, as Saxifraga peltata is sometimes called. It stands alone, and seems to have no real connecting link with the others of the genus; but, in point of its cultural needs, and also, to a slight degree, in the appearance of the inflorescence, it approaches such species as S. pennsylvanica, another of the few American species of saxifrages.

But it is almost as far apart as the poles in every way, even from its compatriot, and is a plant which appeals to us on quite different grounds from its compeers.

It is when at rest a mass of creeping rhizomes, quite thick, and rather flattened, from which arise in spring great clusters of white or pale pink flowers, on thick stalks some two feet or so high, and covered with short white hairs. These do not last very long, and when they have faded the massive leaves, which are the most ornamental parts of the plants, are produced. They are on petioles about two feet high, but this depends upon the treatment the plant receives. The leaves are circular, and rather deeply cut at the edges, are what is called peltate, or shield-like, from the stalk being set in the middle of the leaf. The leaf is a little funnel-shaped, and water lodges in its centre during rain. The colour is of a deep rich green, passing off in autumn through fine reds and browns, and is at that season especially attractive. A good plant sends up a mass of these fine leaves, which are as much as fifteen or eighteen inches across, and are most handsome when of the latter size.

To obtain the best results, and to give the plant the treatment it requires to do it justice, S. peltata should be planted in a moist and cool place. By the side of a stream, river, or pond it flourishes best, and will send its rhizomes into the bed of the water. At Mount Usher the thick rhizomes are to be seen running along the rocks which form the bed of the little River Vartry, which flows through the grounds, and there the plants are very fine indeed. Where these places are not available, S. peltata will thrive in a moist, shady part of an ordinary garden, but in a poor dry soil it is quite robbed of its beauty by the absence of vigour. It is increased by division or by seeds. A native of California, S. peltata, which is the sole representative of the peltiphyllum section of the saxifrages, was introduced about the year 1873.

S. Arnott.

APPLE JAMES GRIEVE.

Of late years this fine Scotch-raised dessert apple has received a considerable share of attention from cultivators of hardy fruits, and we hope that at no distant period it will be planted more largely than has yet been the case. It is certainly not represented in gardens in accordance with its merits, more particularly in Scotland and the Northern counties of England, where but few of the choice dessert apples succeed. The history of this variety has been told in these pages on more than one occasion, and need not now be recapitulated. Neither does it appear desirable to institute comparisons between James Grieve and Cox's Orange Pippin, as some writers have done, for the two apples do not come into competition with each other. Both are remarkably handsome, and of high quality, but James Grieve ripens much earlier, and succeeds in Northern gardens where Cox's Orange Pippin cannot be grown successfully without shelter. In those counties of England and Ireland that are favourable to apple culture both these excellent varieties should be planted for the purpose of obtaining a supply of dessert apples of high quality over the longest possible period. In the counties that are not favourable, and throughout Scotland, James Grieve should be grown.

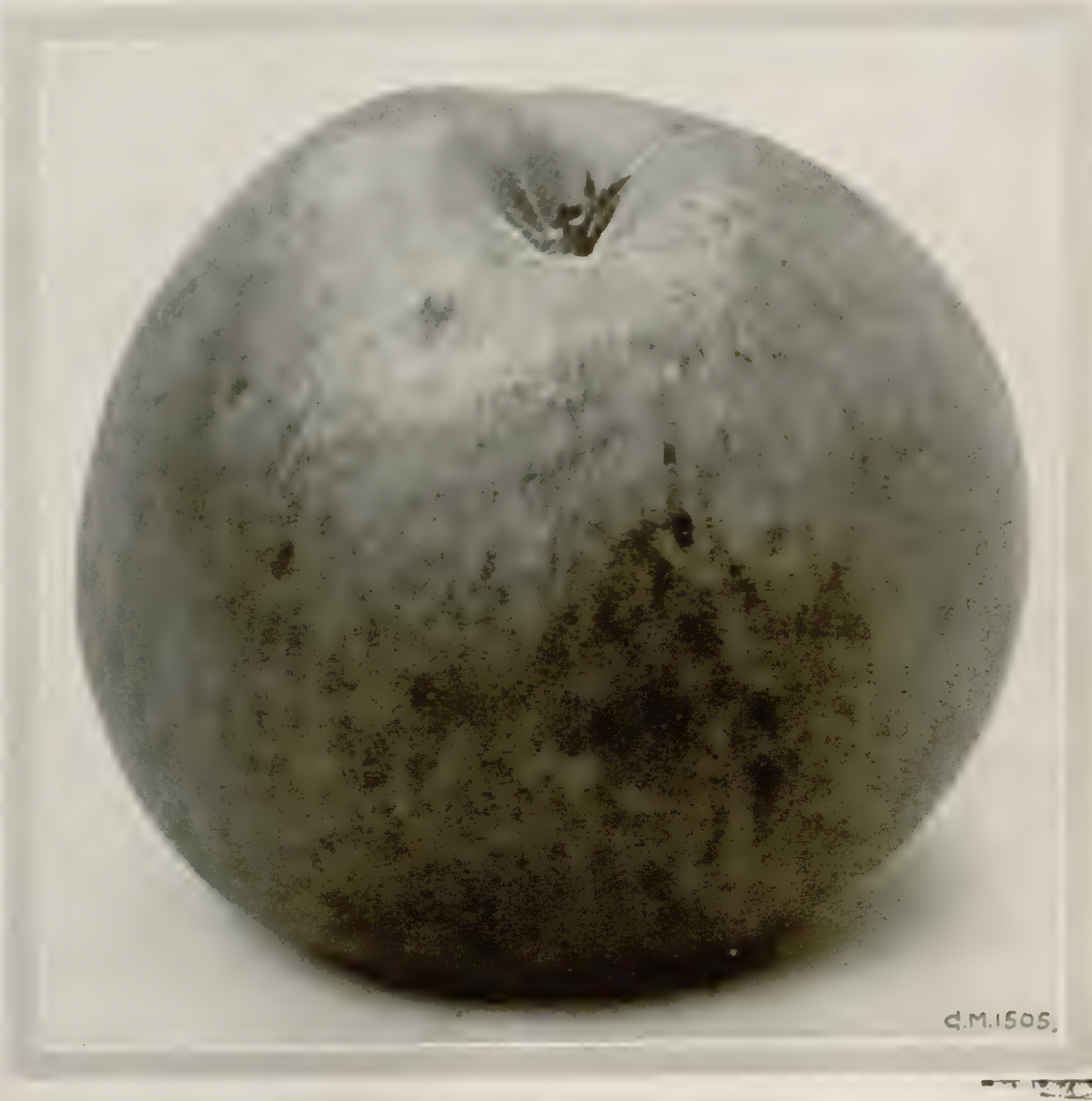
A short time since Mr. J. Day, the able chief of the Galloway House Gardens, Garlieston, wrote in a contribution to these pages in highly appreciative terms of James Grieve, and at the Northern Counties Fruit Congress, held at Hexham in October last, there was a remarkable consensus of opinion as to the great value of the variety for Northern gardens, and it was described as one of the best of the dessert apples that have a place in the experimental plots formed by the respective educational authorities of Cumberland, Northumberland, and Westmorland. The form of the fruit when at its best, is well shown in the accompanying illustration. The skin is pale yellow, marked with deep red, and the flesh is tender, juicy, and richly flavoured. The fruit is in season during September and October, but, as in the case of other varieties, the period of ripening is greatly influenced by soil and climate. The tree is of upright growth, and makes a fine bush on the paradise stock, and is thus specially adapted to garden culture.

Tomatoes.—To raise plants for the production of fruit in May and June a sowing of seed should be made now, in pots; the soil should be of a light porous character. Place them in a forcing house, and, after germination has taken place, keep the young plants near the roof glass to ensure a stout, short-jointed growth. Pot off singly as they show their rough leaf, using sweet loam, lightened with sand and old mushroom bed manure to encourage active rooting. Sunrise is an excellent variety for this purpose.—C F.

Primula obconica.—When this primula, which had been sent home from China by Charles Maries, first flowered in 1880, few could have been prepared for the improvement that has taken place in it. At first it was a poor little starry flower, of not a particularly attractive lilac shade, and now the flowers are large and bold, while the colour ranges from white to a kind of carmine-red. Furthermore, it proves to be continuous flowering, or nearly so, and for greenhouse decoration it has but few equals. The one drawback is that in some persons it sets up an irritation of the skin, but as a set off there are many that are not troubled by it. In my own case it never causes the least inconvenience.—W. T.

PROPAGATION OF LILIES.

Lilies are propagated by scales and bulblets, and although rather a slow process, requiring three or more years to bring the young bulbs to a flowering size, we have the satisfaction of knowing that they are vastly more enduring than the imported bulbs, and that if correctly treated the majority of species will prove of permanent interest and value. Amongst those that produce bulblets in the axils of the leaves are the old tiger lily, and its altogether more refined and handsome varieties, splendens and flore pleno. L. canadense and the Bermuda lily are also well known species bearing bulblets, which almost invariably appear upon the whole length of stem. Towards the end of the summer they assume a very dark colour, and as soon as they separate very readily from the axils of the leaves they should be collected, and stored in sand until the following spring.



DESSERT APPLE JAMES GRIEVE.

Some species and varieties do not produce bulblets, but we have a ready means of increase by detaching a few of the outer and mature scales, and laying them horizontally upon a mixture of sand, cocoanut-fibre, and charcoal dust, and then covering them lightly with the same material. In the course of six weeks roots will appear on the basal part, and often on the edges of the scales, and when it is seen that a few have been formed, they should be placed a couple of inches apart in boxes or deep pans filled with a compost consisting of equal parts peat and loam, with a small quantity of leaf-soil and sand added. Their winter quarters will be the greenhouse shelf, and from spring onwards an unheated frame, and this also applies to the first-named. It may be explained that the Continental growers obtain huge supplies of bulblets by lacerating the basal part of inferior bulbs. These are partially cut through in various directions, and are then planted in a light and sandy soil. Having experimented in this direction, I can testify that it is simply astonishing to see the behaviour and efforts of the bulbs to perpetuate their species, each crevice becoming literally a mass of small bulbs. I commend this practice to amateurs who may wish to propagate lilies, and a single bulb of each species will be sufficient to commence with. In dealing with the bulblets I would advise that they be grown in boxes for a couple of years, as they require far less attention than when placed in small pots, and when they have developed to the size of a billiard ball they should be potted, and it will be found that pots four and a-half inches in diameter will be none too large for them.

The more hardy, robust, and accommodating species may be planted in the open garden to form permanent colonies; in fact, almost without exception lilies can be successfully grown in this way, and failures that are recorded may invariably be traced to mismanagement, or to imported bulbs having been planted, and it is well known that the most popular lily, namely, L. auratum, is of little use after flowering. Under the most careful treatment only a very small percentage bloom the second year, and it seems a great pity that the bulbs should be mutilated and denuded of every vestige of basal root prior to exportation by the Dutch and Japanese growers.

By far the most successful colonies of lilies will be seen in close proximity to, or between, shrubs, such as rhododendrons, etc., and we gather from this that the shrubs throw just the requisite amount of shade on the surface; also that the masses of thread-like roots emanating from the shrubs effectually prevent saturation in winter, a combination of favourable circumstances which has much to do with the eminently satisfactory results obtained under these conditions.

Walter H. Aggett.

MISTAKES IN GOOSEBERRY GROWING.

It is doubtful if any fruit tree or bush is so remunerative, and that within such a short time after planting, as the gooseberry, when properly managed. A mistake that is often made is the retention of old and worn-out bushes, the gooseberry cropping very heavily in a young state, and often being past its best after twelve or fifteen years. When bushes have their buds picked out much by the birds they are often becoming unprofitable in a less period than this, owing to the scantiness or even absence of fruit spurs on the inner parts of the branches. As soon as the crops begin to show any signs of falling off, or the vigour declines, in spite of liberal manuring, it is a good plan to make a new plantation, choosing fresh ground which has previously been deeply cultivated and well manured with animal manure, the gooseberry and the black currant being the only hardy fruits that cannot be too liberally dealt with. After two years, or at the most three, the old bushes may be destroyed, the young trees after that time producing good crops of fine fruits if they have been well grown. Young bushes planted early during the winter in good soil, with the current year's growth shortened to one-third, and not allowed to bear any fruit the first season, will often make shoots a yard long the first summer, and if this is shortened to one-half in the autumn, a nice crop of fruit may be gathered the next year, and a fine healthy bush obtained.

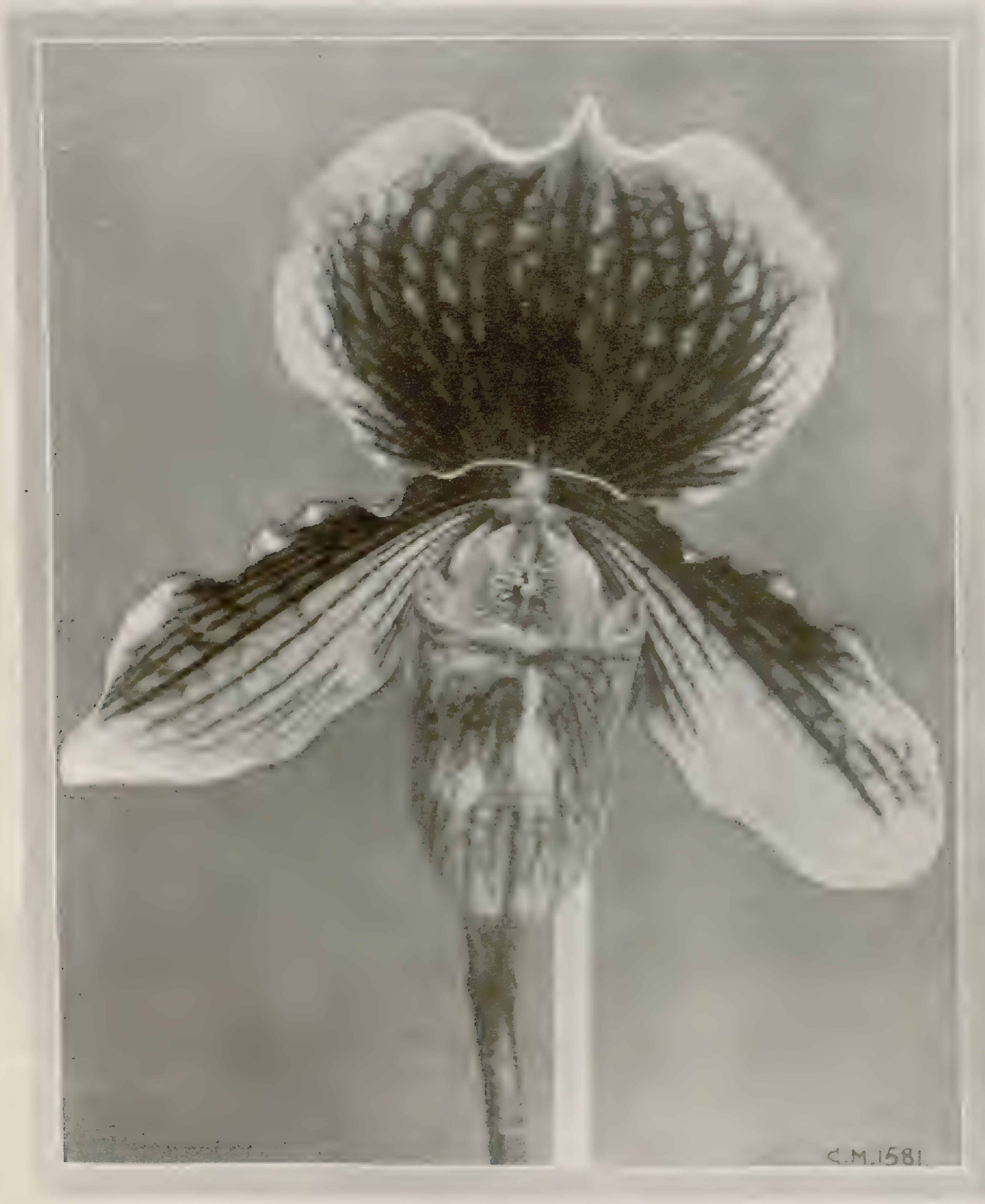
Another mistake often made with gooseberry bushes is to let them carry their whole crop till it is ripe. This practice not only permanently impairs the vigour of the tree but means a loss in the total weight of fruit obtained. If the fruit is thinned in the green state for kitchen use the remaining fruits swell up to a much greater size, while at the same time the tree is relieved of the strain of ripening such a large quantity of seed—the really exhausting part of the crop. A further advantage is that the branches are not weighed down to such an extent, especially if the thinning is most vigorously done on those branches least able to support the weight of the full crop, that the fruit becomes splashed, and the branches permanently depressed as is so often the case.

A third mistake lies in the neglect of proper feeding. The Woburn experiments go to show that, no matter what chemical manures are given, the gooseberry, after a few years, fails to give the best results unless animal manures are applied. If the soil is a light one potash is no less essential, and it is probably to the richness of stable manure in this constituent, when made with straw, that the benefit derived from it is most largely due.

A good system of manuring on a heavy soil would be a quarter of a pound of basic slag to each bush in the winter, followed by an ounce of nitrate of soda in the spring, both the lime in the former and the soda in the latter setting free some of the stores of potash in the clay. On a light soil it would be better to substitute for the basic slag the same amount of bonemeal in the autumn or superphosphate in February, supplemented by an ounce of kainit in the winter or an ounce of sulphate of potash at the same time as the nitrate of soda. If the soil is poor in lime a dressing of slaked lime at the rate of ten to fifteen pounds to the forty square yards, or chalk at twice this rate, should be applied before superphosphate or kainit are used, as they are both lime destroyers. The manures should always be applied at least as far as the spread of the branches, and beyond them is better, and it is a good practice to lightly work them in with a hoe. Whatever the soil or the manures applied, some good rotted manure should be turned under the surface soil early in the spring, and the bushes will be all the better for a mulch in the summer, either of manure or grass cuttings, weeds, and the like. To those who have grown gooseberries on the laissez faire method, and been content with two or three quarts of fruit, or less, to the bush, the results of liberal manuring will be surprising. Anyone can experiment for himself if he doubts it.

A final mistake to be alluded to is pruning. The fruit spurs on the inner parts of the branches cannot be expected to remain healthy and vigorous if the tree is such a thicket of growth that the sun never reaches them during the summer. In the middle of May, or even earlier in some seasons, all the shoots for which there will be no room inside the tree another year should be pinched to three or four leaves, thus keeping the tree fairly open during the summer, for the gooseberry, unlike the apple and pear, rarely makes much secondary growth after being pinched. This openness of the tree should be carried a step further by giving it the final pruning for the year as soon as the fruit is gathered, adopting the principle of leaving as much as possible of the young growth on the outside of the tree its full length, and doing the necessary thinning to prevent congestion the following spring, by cutting out some of the older and less vigorous branches right from the centre.

ALGER PETTS.



CYPRIPEDIUM GASTON BULTEL.

Flowers large, rose-purple, green, and white. A.M., R.H.S., December 20, 1910; Mr. E. V. Low, Haywards Heath.

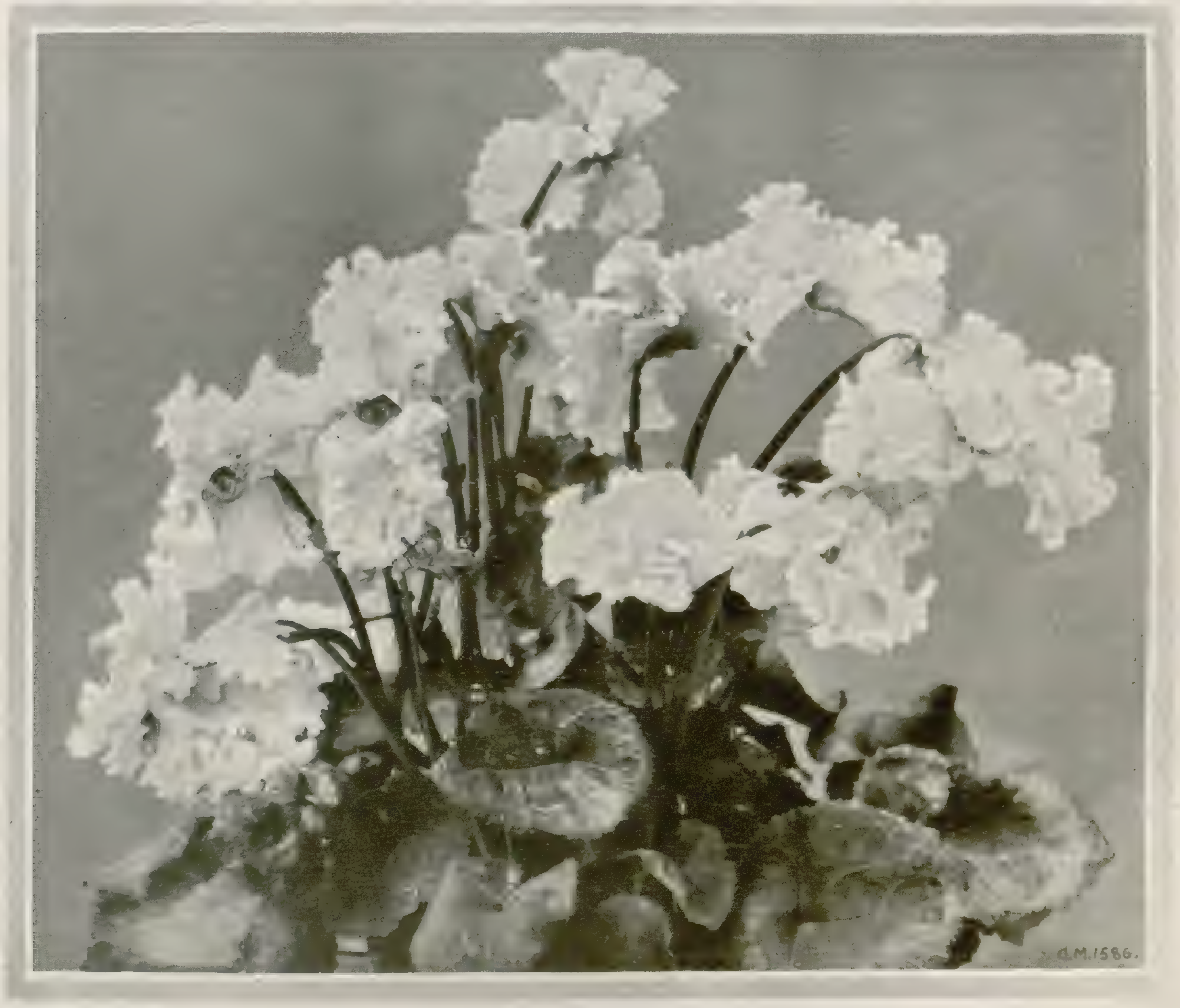
Hydrangea paniculata grandiflora.—Make a selection of the strongest and most forward of the plants that were struck last autumn. Shift them into 54's and 48's, and place in an early fruit house that has been started, so that they may receive frequent syringings. By this means an early supply of good flower heads will be obtained for house and table decoration.—A. GRUBB.

Perpetual Carnations that are carrying a quantity of blooms should have an application of some approved fertiliser with soot water at intervals. Maintain the temperature of these houses at 50 to 55 degrees, and keep up a regular circulation of fresh air by means of the ventilators. This last point cannot be too strongly advised, for it is one of the most essential points in the successful culture of carnations. When artificial heat is necessary the staging may be damped in the morning to prevent red-spider.—A. GRUBB.

NEW PLANTS, ETC.

LÆLIO-CATTLEYA CRANSTOUNÆ WESTONBIRT VARIETY.

A distinct and beautiful hybrid obtained from a cross effected between Cattleya Harrisoniana and the Walton Grange variety of Lælia tenebrosa. The flowers are of medium size, and borne on rather tall pseudo-bulbs, the sepals and petals pale soft yellow, and the lip white with red-purple markings at the apex. An illustration of this fine form was given in our issue of the 7th inst. A.M., R.H.S., January 3; Lieut.-Colonel Sir George Holford, Westonbirt, Tetbury (grower, Mr. H. G. Alexander).



CYCLAMEN MRS. BUCKSTON.
Flowers large, finely fringed, and of a rich salmon-rose colour. A.M., R.H.S., January 3; Rev. H. Buckston.

ODONTIODA COOKSONIÆ.

An attractively-coloured hybrid raised from a cross between Cochlioda Noetzliana and Odontoglossum ardentissimum. The flowers are comparatively large, of fine form, and borne in a good spike, and are rich red-scarlet, shaded rose on the lip. A.M., R.H.S., January 3; J. Gurney Fowler, Esq., Glebelands, South Woodford (gardener, Mr. J. Davis).

MILTONIA WARSCEWICZI LEUCOCHILA.

A distinct and handsome variety of one of the oldest of the species included in the genus, having been discovered on the Peruvian Andes, near Cuchiro, in 1830. The flowers are rather larger than those of the species, the petals and sepals are deep rose, edged with white, and the large lip has a crimson-purple base, and a broad margin of pure white. It was well shown by Messrs. Charlesworth and Co., Haywards Heath, at the meeting of the Royal Horticultural Society held on December 20, 1910, when, as stated in our issue of December 24, an Award of Merit was made in its favour.

CYCLAMEN MRS. BUCKSTON.

A remarkably fine form, belonging to the Papilio section of the Persian cyclamen. The plants are of excellent habit, and the flowers are large and the segments are of great breadth and finely fringed; the colour bright salmon-rose. A.M., R.H.S., January 3; the Rev. H. Buckston, Etwall, Derby.

CYPRIPEDIUM GASTON BULTEL.

A remarkably handsome hybrid with flowers of large size; the dorsal sepal is of great breadth, purple-rose, with white margin, and having crimson veinings; the petals are green tinted chestnut colour, and marked with crimson lines. A.M., R.H.S., December 20, 1910; Mr. E. V. Low, Haywards Heath.

PINUS ARMANDI.

A distinct species, which has the promise of proving one of the most handsome of the pines yet introduced to this country. There are several young trees at Kew which were raised from seeds sent to the Royal Gardens by Mr. A. Henry, who collected them at Mengtze in Yunnan, in 1897. "Bot. Mag.," t. 8,347.

CORYLOPSIS VEITCHIANA.

An interesting and attractive shrub, producing a profusion of nodding spicate flowering branches, from one to two inches in length, and bearing from ten to fifteen flowers each; the latter are pale yellow, and possess a grateful perfume. This species was collected at Chang-Yang in Western Hupeh, by Mr. E. H. Wilson, in 1900, and seeds were sent to Messrs. J. Veitch and Sons, in whose Coombe Wood Nursery it has proved quite hardy, and flowered regularly for some years past. "Bot. Mag.," 8,349.

NEOGLAZOVIA CONCOLOR.

A distinct stove plant not without attractions, although hardly of sufficient merit from the horticultural point of view to justify its cultivation otherwise than on a small scale. It is of erect growth, has narrow leaves, and bears purplish flowers set in salmon-red calyces. "Bot. Mag.," t. 8,348.

JACOBINIA SUBERECTA.

A distinct species differing chiefly from those already in cultivation in having prostrate stems, these forming a dense mass from which rise numerous erect-flowering branches. It is described as a very suitable plant for suspended baskets. The flowers are bright scarlet, and the leaves and stems are clothed by a velvety pubescens. It was introduced to cultivation in 1899 by Mr. J. Sallier. "Bot. Mag.," t. 8,350.

DENDROBIUM SANDERÆ.

A charming species, which is most nearly allied to D. Dearei, and thriving under much the same conditions as that species. It grows to a height of two or three feet, and the flowers are produced in short racemes, near the apex of the pseudo-bulbs, and are large, white with purple markings on the lip. "Bot. Mag.," t. 8,351.

Peas.—In the raising of the first outside crop a beginning may be made by sowing seed in either sixty-sized pots or wooden troughs. Many prefer small pots, sowing sufficient seed to avoid disappointment from faulty germination, attack from mice, etc. A cool frame will bring the plants along sufficiently rapid for planting out in March.—C. F.

FEEDING SPRING BULBS.

When choice bulbs are grown it is not sufficient to plant them and watch them flower, however well the ground may have been prepared before planting, for unless the soil is an ideal one for the purpose we cannot obtain the best results in this way. We should have two objects in view, the production of flowers of the largest size, firmest texture, and deepest colour, and at the same time the growth of fine bulbs for next season's display. Soils are so various that no uniform recommendations will meet all circumstances.

We will deal first with a heavy clay soil, which is one of the worst for most bulbs, notwithstanding its welcome supply of moisture and stores of potash. Its closeness of texture is one of the things bulbs dislike most, and this is accentuated by the surface running together after a heavy rain. If basic slag was not applied in the autumn it should be applied at the rate of three ounces to the square yard as soon as the tips of the leaves appear in February, and lightly worked into the surface soil. Some like to apply sulphate of potash to deepen the colour of the blossoms, but it is doubtful if this is often necessary on a clay soil, especially if it has been under cultivation for some years. When it is desired there will be no harm in applying an ounce of sulphate of potash to the square yard in the early spring. After each heavy rain the surface should be gently stirred, a pointed stick being as good as anything in a closely planted bed, and within two or three weeks of flowering half an ounce of nitrate of soda to the square yard should be given, taking care not to drop any on the leaves, and if the weather sets in dry immediately it should be lightly watered in. This will increase the size of the flowers and the depth of green in the leaves, while the soda will also set free some potash and intensify the colour of the flowers. If nitrate of soda is not at hand so early in the season good guano at double the rate will answer the same purpose, and be even better, as it supplies a complete plant food. It should always be watered in unless rain is imminent.

To soil that is light and sandy bonemeal at the rate of two ounces to the square yard should be given as early in the winter as possible, if it was not given in the autumn, and sulphate of potash at the rate of an ounce to the square yard in February, the latter being especially valuable on such soils, not only for its plant food, but for increasing the water-holding capacity of the soil. As soon as the leaves appear superphosphate of lime should be given at the rate of two ounces to the square yard, unless the soil is deficient in lime, when it is better to rely upon the bonemeal previously applied, the dressing of which may in that case be increased to three ounces to the square yard. Later, nitrate of soda should be given as recommended for heavy soils.

On a chalky soil it is of little use applying slowly-acting substances like basic slag and bonemeal, but superphosphate should be given when the shoots appear, avoiding the growing points, and lightly working it in; sulphate of ammonia at the rate of half an ounce to the square yard being given a week or two later. For such soils a mixture may be made so as to supply all needed substances at once, and should consist of two parts each of superphosphate of lime and fine bonemeal, and one part each of sulphate of potash and sulphate of ammonia, always remembering not to put nitrate of soda and superphosphate in the same compound, nor basic slag and sulphate of ammonia together. The mixture may be applied at the rate of four ounces to the square yard, as soon as the growth appears, and lightly worked in. It will keep indefinitely, and is a very useful one for general garden purposes, the action of the acid superphosphate rendering some small part of the bonemeal immediately available.

The increased vigour of growth will last the whole of the season, and, accompanied as it will be by a lasting supply of well-balanced plant-food, will enable the bulbs to store up a rich reserve for next season's growth. For bulbs in pots there is nothing superior to a solution of a good guano—a half-ounce to the gallon of water—given twice a week after the leaves are well greened.

ALGER PETTS.

PREPARING AND PLANTING PERENNIAL BORDERS.

In all parts of the country in which I find myself a keen interest in perennial plants is manifest. In the smaller establishments, the space devoted to the cultivation of these being limited, fewer plants are employed to form the groups, now so common in borders containing perennials, but in the larger places, fine bold masses are frequently met with. So pronounced is the demand for borders of this kind that shrubs are at times uprooted to give place to the more useful, and, undoubtedly, more effective, hardy herbaceous plants. These borders have been exhausted of plant food by the growth of shrubs and inattention in the way of feeding them, consequently, as is sometimes the case, if the soil is merely turned over and the herbaceous plants stuck in, the result is everything but encouraging.

As the plants are intended to remain in their positions for a number of years, ample provision should be made at the time the border is prepared to ensure a liberal and lasting supply of food for them. Much will depend upon the kind of soil to be dealt with, but in treating an ordinary loam the one aim to keep in view is to secure a good depth of a rich well-drained medium. Provided the ground has been periodically cultivated about two feet deep it is advisable to trench it, and incorporate a liberal supply of well decomposed stable manure and bonemeal, or basic slag, as the work proceeds. These should be well mixed with the soil from top to bottom, and the border allowed to stand a month or so before proceeding with the planting. In the April following the planting an application of four ounces of slaked lime and one and a-half ounces sulphate of potash should be applied to the square yard, as a surface dressing. In after years feeding can be effected by mulches of manure in autumn and early in winter, and similar dressings of lime and sulphate of potash in spring to those advised above.

To arrange the plants according to height, colour, and times of flowering, so that the border slopes from front to back, and there is an equal amount of bloom over the whole of its length throughout the spring, summer, and autumn months, it is necessary to have a plan to work from. This can easily be prepared by planning the border on paper to a scale of eight feet to one inch, and drawing lines in pencil from end to end the distance apart the plants are desired in the rows. These lines can then be measured off to any distance, and dots in ink made where the plants are to be. The pencil lines can then be removed, and lines run round the groups, and the groups numbered. By a completed plan of this sort it can be seen at a glance the relative position of each group. The first row, or line, should be one foot from the front edge of the border, the second one and a-half feet from the first, the third one and a-half feet from the second, and all other rows two feet apart. For a border that is over one hundred feet in length and seven feet in width I would allow seven plants to each group in the front row of groups, and four in the second, and four in the third. The front row of groups is formed by including six plants of the front row and one of the second. The second row of groups by including two plants of the second row and two of the third, and the back lot of groups by including one plant of the third row and three of the back one. In this arrangement the plants in the front row are only half the distance apart they are in the others, and instead of planting the front row in a straight line every alternate plant is placed three inches further into the border, to secure a better effect. Again, regarding plants, I never employ any very dwarf growing subjects in the front row, as something to cut from is what is wanted, and I find few things under one foot useful for this purpose. Where a perennial border is near the windows of the mansion it is advisable to have an edging of violas, so that a constant display of colour may be maintained from spring till autumn. Where this is carried out the violas should be planted one foot from the edge, and the first row of perennials one foot from it, with the others as stated. If the groups are allotted so that every fourth repeats itself in the time of flowering it will be found a good arrangement—thus spring, early summer, late summer, and autumn. Sometimes the display is only required for one or two of those periods of the year, and plants to bloom then only need be employed.

Perennial borders prepared and planted on these lines by one who knows his plants cannot fail to yield quantities of desirable flowers to cut from, and at the same time form an attractive, interesting, and most useful feature of the garden.

PEDESTRIAN.

Transplanting Bamboos.—The autumn and winter months being so generally recognised as the best time for transplanting most hardy subjects, it is as well to bear in mind that it is the worst period for moving bamboos. If transplanted at the above-named season the coldness of the ground militates against quick root action, and the more delicate kinds especially are apt to fall into a state of stagnation, from which they take some time to recover. The best time to transplant bamboos is when the harsh winds of spring are past, as the roots are active and the plants quickly recover from the check of removal. A very necessary point to bear in mind is that they are not allowed to suffer afterwards from want of water.—W. T.

Calceolaria deflexa.—This calceolaria is valuable for its winter-flowering qualities, as in the greenhouse its rich golden-yellow blossoms are produced for a long period during the dullest season of the year. The leaves are simple, and not unlike those of a fuchsia; indeed, the specific name of fuchsiæfolia has been applied to it. It is essentially of bushy habit, and neat flowering examples may be grown in five or six-inch pots. It is a native of Peru, and introduced by William Lobb, flowered for the first time in 1849. After that, however, it would appear to have become lost, or nearly so, till public attention was directed to it about thirty years later. It is generally recognised as one of the parents of the popular Calceolaria Burbidgei.—W. T.

LILIUM UMBELLATUM.

Although possibly not equal in beauty to some other of the lilies that could be mentioned, Lilium umbellatum and its varieties have strong claims upon cultivators, and especially upon those who for various reasons are unable to provide special positions and composts for the hardy plants to which they devote their attention. The umbellate lilies have the advantage of possessing a robust constitution, as well as being perfectly hardy, and, consequently, can be planted without apprehensions as to growth or flower production, provided the beds or borders occupy a fairly open position, and the soil is moderately deep and rich. In other words, they may be planted where herbaceous plants generally are known to thrive, with the full assurance of their making a satisfactory growth, and producing finely developed flowers. They have also the advantage of being distinct and effective in colour.

AN EFFECTIVE BED OF UMBELLATE LILIES AT KEW.

This being the case, there is no occasion to dwell upon their merits, or to refer otherwise than briefly to their cultural requirements. They may be successfully grown in beds and borders, but in private gardens, and particularly those of moderate size, the preferable course is to plant them in borders, because when so grown the blanks that occur when they have passed out of bloom are not conspicuous. They are immensely attractive when grown in large beds, as in the case of the fine bed herewith illustrated, that is annually so effective at Kew. But in these great gardens there are so many features that a bed which has lost its season's charm does not specially attract attention. If it is desired to grow these lilies in beds they may be planted much less thinly than in the bed illustrated, and the intervening spaces be filled with some other plant ranging from twenty-four to thirty inches in height, and producing flowers that in colour will harmonise with the lilies. In border culture the best results are obtained by arranging the lilies in groups, each containing from four to six bulbs, and consisting of one variety. The front row will be the best position for them, and from six to eight feet will be a good distance at which to put the groups apart.

It will be an advantage if the soil is sufficiently rich to render manurial applications unnecessary. Should it be somewhat exhausted add a liberal dressing of leaf-mould or other well-decomposed vegetable refuse, and bone superphosphate, the last-named to be applied at the rate of two or three ounces to the square yard. Then dig deeply, and in the process well mix the fertilising materials with the soil.

The following comprise a few of the finest forms: Erectum, bright red, shading to yellow; Incomparable, rich crimson, freely spotted; Sappho, orange-scarlet marked with a few spots; and Tottenhami, yellow, spotted with crimson. The bulbs may be successfully planted at midwinter, but there must not be any unnecessary delay.

G.

Plumbago rosea.—While most of the species of plumbago have flowers either white or of some shade of blue, this warm house species has bright rosy-scarlet blossoms. It is a very old plant in gardens, having been introduced from the West Indies as long ago as 1777. Its decorative value is enhanced from the fact that it may be so grown as to flower during the autumn and winter months, at which time it is particularly valuable. There is a variety, coccinea, with larger and brighter coloured flowers. Both can be readily struck from cuttings of the young growing shoots in the spring, and they grow away freely afterwards.—W. T.

JUDGING SWEET PEAS.

The following is the text of the paper read by Mr. Walter P. Wright, F.R.H.S. (chairman of the N.S.P.S. Floral Committee), at the recent conference held by the National Sweet Pea Society:

A judge of sweet peas has a different, and in my opinion a more difficult task, as compared with a judge of roses, chrysanthemums, dahlias, carnations, or indeed any other popular florists' flower.

In the first place, it is customary to set up sweet peas in vases, each variety being represented by a number of stems. In the case of the other flowers named it is usual to show one flower only of each variety. It is true that sprays of garden varieties are sometimes shown, but they are in minor classes, and as a rule the number of specimens is so small, and the arrangement such, that all the flowers can be seen at a glance.

There is certainly no parallel amongst other leading florists' flowers to the sweet pea, with its twenty or so stems per vase, and its three or four flowers on each stem. For this reason, we who specialise in what from the exhibition point of view is a new flower cannot turn for guidance to the rules or principles of other florists; we have to work out our own salvation.

There is another reason why the judging of sweet peas is different from that of other flowers. In practically all the principal colours we have two types: the plain or grandiflora, and the waved or Spencer. Many of the varieties are identical in colour; they only differ in form.

Given twenty-four varieties of roses or chrysanthemums, a judge has twenty-four specimens to examine in order to make sure that there are no duplicates. Given twenty-four varieties of sweet peas he has, in the ordinary way, 480 specimens to inspect. Any one of the twenty sprays in any one of the twenty-four vases may be a plain where it should be a waved, and if there is one the exhibit is liable to disqualification.

The difficulty of giving correct awards is increased by the absence of guiding principles as to (1) length of stem, (2) allowance of haulm or otherwise, (3) disposition of the flowers on the stem, (4) size, (5) freshness. Judges follow a go-as-you-please course, and are swayed by individual tastes and preferences. One attaches paramount importance to length of stem and size of bloom, another to freshness. Others never trouble to see whether there are plain and waved flowers in the same vase. One of our friends told me that on disqualifying a competitor for mixing plain and waved flowers the latter smiled sweetly, and, quite unabashed, remarked that as he had "tried it on" successfully with several judges previously, he thought he might as well take his chance again!

The greater the difficulty in judging sweet peas, and the greater the confusion as to principles, the more necessary it is that the problem should be faced, and I think that the time has come for the National Sweet Pea Society to take action, with the object of establishing an authoritative code. In order to further this, I propose to set out the principal points, and give opinions thereon, with a view to inciting discussion. I suggest that when the debate closes a set of rules for judging be drawn up, representing the collective wisdom of the society, and that they be printed in the society's publications and pressed on the attention of affiliated societies.

(1) **Haulm.**—In my opinion, one of the first rules laid down should be that stems are really to be flower stems, and not haulm. The inclusion of haulm attached to the stems should disqualify.

(2) **Number of Stems.**—In exhibiting a given number of roses, chrysanthemums, or carnations, it is usual to use perforated boards, so that it is a simple matter to get in the right number of blooms and no more. It is wholly different with sweet peas. The use of movable vases on tables or stages makes the task of counting more onerous, and if to this is added the obligation of counting, say, twenty sprays into each vase, the task is a serious addition to that of choosing stems and arranging vases. For this reason I believe in stating twenty sprays as an approximate number, with the warning that crowded vases will be passed over. Few, if any, judges pretend to count the contents of vases. In judging a show it is my custom to state at the outset that I do not intend to count, as this would waste valuable time that ought to be given to judging alone. Time devoted to counting is time taken from judging. As things are, if a mistake is discovered it is generally at the instance of another competitor, and inasmuch as it is almost impossible to count the contents of a vase without handling the stems, the way is open for substitution, subtraction, or addition. For these reasons I am opposed to a fixed number being stated. Nor do I think that a rigid rule is necessary in order to prevent awards being influenced by quantity rather than quality. A judge who has a good code to work upon, and a mind of his own, is not likely to be influenced by mere numbers.

(3) **Wiring.**—The use of wire to mount the stems should disqualify.

(4) **Mixed Types.**—Judges should be warned to look out for cases of plain and waved flowers being mixed in a vase of one variety, and to disqualify when found.

(5) **Length of Stem.**—Inasmuch as stems are sometimes staged 2 feet long, with the flowers straggling along them, and showing wide gaps, it might be wise to consider a suggestion that stems 18 inches in length are quite long enough to make an effective vase.

(6) **Number and Disposition of the Flowers.**—The stems should carry threes or fours, the flowers should face one way, and should be near enough together to form a homogeneous set. Long stems, with large flowers widely separated, should be discountenanced. This is not a case for disqualification, but for showing, by the choice of neater, more refined specimens for the prizes, that coarse examples are not appreciated. At present judges differ widely in this particular, and many, who at heart disapprove of coarseness, are afraid to ignore the giants because of the criticisms of the crowd. The public, however, would soon become educated up to an appreciation of genuine quality.

(7) **Freshness.**—Great stress should be laid on staging young, fresh flowers. Judges should be instructed that old flowers, however large, ought to be passed. If some vases are young, and some old, points should be deducted from the latter.

(8) **Spotted Flowers.**—Speaking broadly, clean flowers are desirable, but I think that young flowers which are merely spotted by a shower should be penalised less severely than blooms that are curling and discolouring from age.

(9) **Blending of Colours.**—Judges might be taught with advantage that as the artistic arrangement of colours is desirable, a stand in which the colours are well blended might, other things being equal, carry the award over one in which the colours are not well arranged. Colour-blending should not, however, carry inferior flowers to victory.

(10) **Double Standards.**—I think that double standards should be regarded as defective, on the ground that they mar the symmetry and harmony of the flower.

Procedure for Judges.—I think that the following might be suggested as good procedure for judging sweet peas:—

(a) When starting, count the exhibits in each class with the secretary's assistant, to make sure none is omitted.
(b) Count the number of vases.
(c) See that the exact number of varieties specified in the schedule are present in each exhibit.
(d) Make a preliminary survey, and rule out those stands that are palpably defective, in order to be able to concentrate attention on the eligibles.
(e) Look through the vases in the selected stands for mixed types.
(f) Make the awards on freshness, number of flowers per stem, size of flowers, disposition, and blending of colours. Compare vases of the same varieties side by side.
(g) Take a final look over, to make sure that there is no oversight.
(h) Mark 1st, 2nd, or 3rd on the back of the exhibitor's card.
(i) Be blandly unconscious of the subsequent decisions of the defeated competitors and "the Man from the Street," but give courteous attention and explanation to any inquiry made through the executive.
(j) Invest your fees in new varieties for the following year.

As a concise summary, I would suggest the following scale of points:—

Qualities.	Points.
Freshness and good colour	6
Number of flowers per stem (three to four)	4
Length of stem (approximately 18 inches)	4
Arrangement of flowers on stem ...	4
Size of bloom (approximate width of standard 1¾in.)	4
Colour-blending	2
Total	24

What Vegetables to Grow.—With the beginning of the year, one of the first matters to be seen to by the kitchen gardener is to select and purchase the seeds for the season, both the quantities required, and the varieties of the various crops that it is intended to grow. Seedsmen, and hybridists in general, are very progressive, and improvement is seen each year, both in the selection of stock and in new varieties. Beginners will do well to keep mainly to the well-tried kinds and experiment only with novelties as supplementary sowings to the main crops. If the new arrivals prove worthy of an entry to the main list, they can be included next year.—C. F.

DEEP CULTIVATION.

My thanks are due and freely given to Mr. Beckett for the tone of his remarks on this subject in answer to my criticisms of the methods adopted by some of the exponents of the "turn out the bottom" method, as opposed to the opposite system.

My contention is that so great a depth of good soil is not required as from three to five feet; not for vegetables even, and certainly not for fruit trees. It would, indeed, be a step in the wrong direction, because in the latter case the roots should be nearer the surface for the purpose of wood ripening, as is generally admitted. This is a strong point in my argument against placing the better-prepared soil at the bottom of the trench as an encouragement to the roots to go down in quest of nutriment. The more we discuss the method of trenching the more we shall learn of other people's ideas, and at the outset I would say I am writing for the information of beginners, who have had no previous experience. I know how difficult a subject this is to the great army of amateurs and cottagers; the former, who live in the suburbs of a town, and the latter with their few rods of allotment ground where it is not possible to collect materials for improving the surface soil, no matter how small a quantity is required. If I had simply in view Messrs. Beckett, Gibson, Ellwood, and other growers of vegetables of a similar rank, I should write differently. I have seen rose beds trenched on Mr. Beckett's plan, and in stiff, cold soil, and I have seen as the result most unsatisfactory growth. The leaves quite yellow all the summer, and the plants in a most deplorable condition for a whole season, because the subsoil brought to the top was of such an ungenial character that the roots could not make progress in it, the condition of the roses being aggravated by a spell of dry weather during the summer. I have also seen plots in which winter greens absolutely refused to grow for the first season.

If it were possible this trenched land could lie for a whole season and become ameliorated by the weather, then all might be well. But where the land that is trenched must of necessity be cropped at once, then the method is altogether wrong.

I do not dispute that Mr. Beckett can prove he can produce satisfactory results. I know well enough, as indeed do all readers of the GARDENERS' MAGAZINE, that he can, and indeed does, obtain results which I feel justified in describing as little short of marvellous. But that is not my point; it is not what he does with supplies of burnt refuse, etc., but it is what those who are not so well situated can do. It is in these I am the most interested. In Mr. Beckett's case he takes steps to improve the soil to its full depth at once. I advise a similar improvement by degrees, at the same time not hindering any crop or entailing much trouble or expense in arriving at that end. Mr. Beckett aims at improving the subsoil at once by bringing it to the surface and adding foreign matter to it for the purpose of sustaining the growth during the earlier stages. I complain because he and others who adopt the same practice give no reason for their method of manipulation beyond the desirability of getting the soil into working order as soon as possible. They should know that the classes of cultivators whom I have in view are powerless to carry out such practice. I tell my pupils that the deep-stirring or moving of the hard pan of subsoil a yard below the surface affords a means of quick percolation for the surplus water from heavy rains, which in the autumn and winter is most detrimental to broccoli, etc. Again, deep cultivation renders the soil so much warmer by the ingress of air, and what is of much importance this deeply-moved soil conserves moisture so much more readily during a spell of dry weather. All of these advantages my method obtains, and what is of supreme importance, the existing crops are not handicapped by ungenial soil conditions on the surface.

E. MOLYNEUX.

BOULTON & PAUL, LTD., HORTICULTURAL BUILDERS, Norwich.

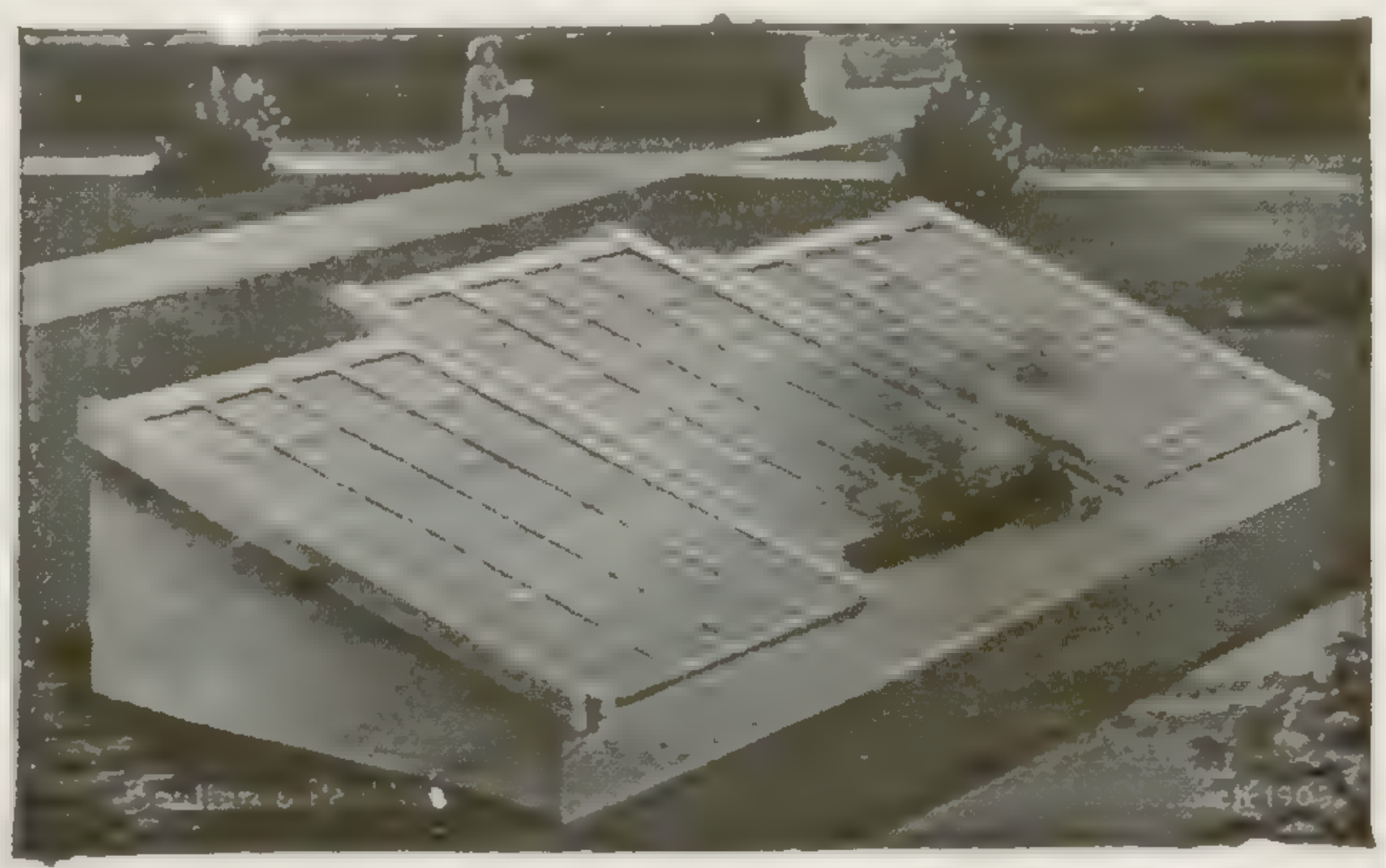
EFFECTIVE, PRACTICAL CONSERVATORIES.

Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of **40**/- value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.

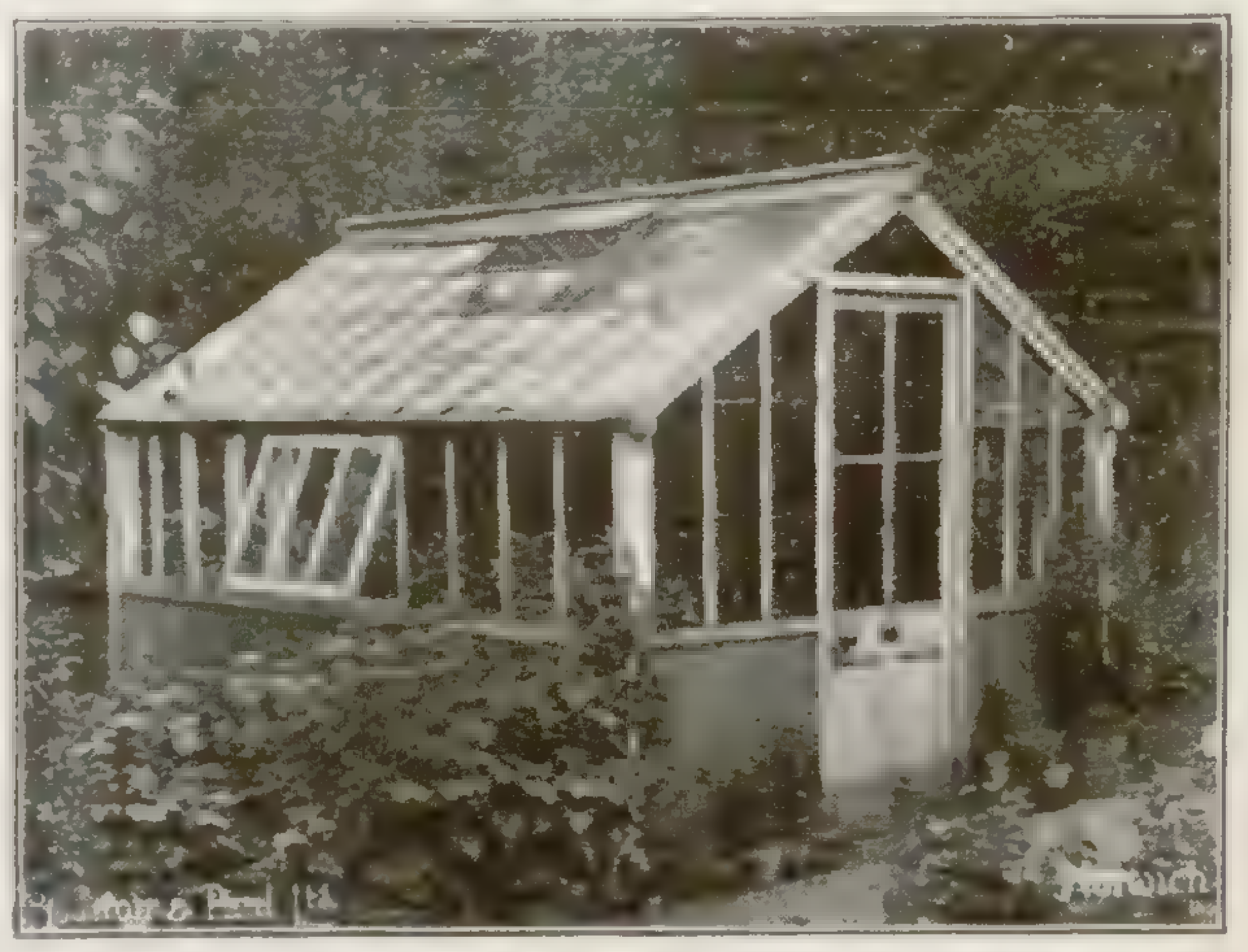


4ft. by 6ft. ... £2 0 0 | 8ft. by 6ft. ... 3 0 0
Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft. Similar to No. 75, with Two Lights... **35/-**

SEND FOR ILLUSTRATED CATALOGUES.

Every part of these Houses is thoroughly well made, painted three coats, GLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.



No. 49a.—Span, 10ft. by 8ft. £11 10 0
No. 47a.—Lean-to, 10ft. by 7ft. £9 10 0

All parts are numbered ready for easy re-erection by any handy man.

118 YEARS REPUTATION.

JOHN K. KING & SONS' "PEDIGREE" SEEDS.

These world-renowned Seeds are grown on Messrs. John K. King & Sons' great Essex Seed Farms, and are forwarded carriage free by post or rail.

Manual of Gardening for 1911.

The Best Seed Book of the Season.

Beautifully Illustrated and full of Practical Information.

Now Ready, post free for 3 stamps.

JOHN K. KING & SONS,
Seed Growers to H.M. the King,
COGGESHALL, ESSEX;
Also READING.

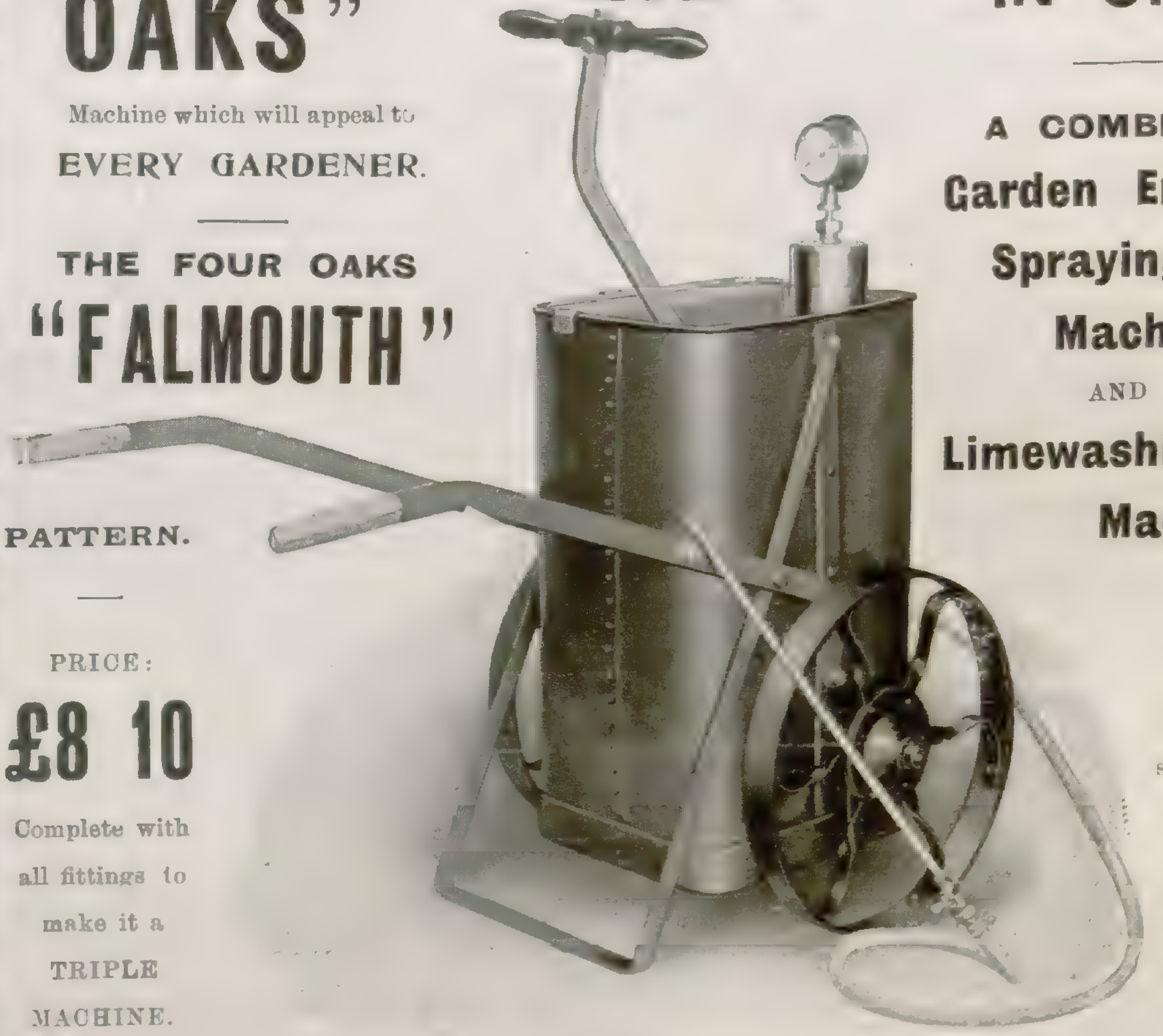
REGISTERED TRADE MARK.
THE FOUR OAKS.

ANOTHER "FOUR OAKS" Machine which will appeal to EVERY GARDENER.

THE FOUR OAKS "FALMOUTH" PATTERN.

PRICE: **£8 10**

Complete with all fittings to make it a TRIPLE MACHINE.



3 MACHINES IN ONE.

A COMBINED Garden Engine, Spraying Machine, AND Limewashing Machine.

Indispensable even in the smallest Garden.

Complete Catalogues Free on application to the Sole Manufacturers—
The Four Oaks Spraying Machine Co., No. 5, Sutton Coldfield.

THE MOST UNIQUE SWEET PEA LIST In the World IS NOW READY.

PLEASE SEND POSTCARD FOR SAME.

My ANGLO-AMERICAN COLLECTION, 5/-

15 Varieties (including Roosevelt, Nightingale, Perkin, Mrs. H. [illegible], Sunproof Crimson) is the best value in the Sweet Pea world. Will make a very appreciative present. My stocks are the finest humanity can produce. My aim is to oblige!

G. H. MACKERETH,
The Sweet Pea Clearing House,
ULVERSTON.

Note my special offer of Mr. W. P. Wright's most interesting Sweet Pea Note Book.

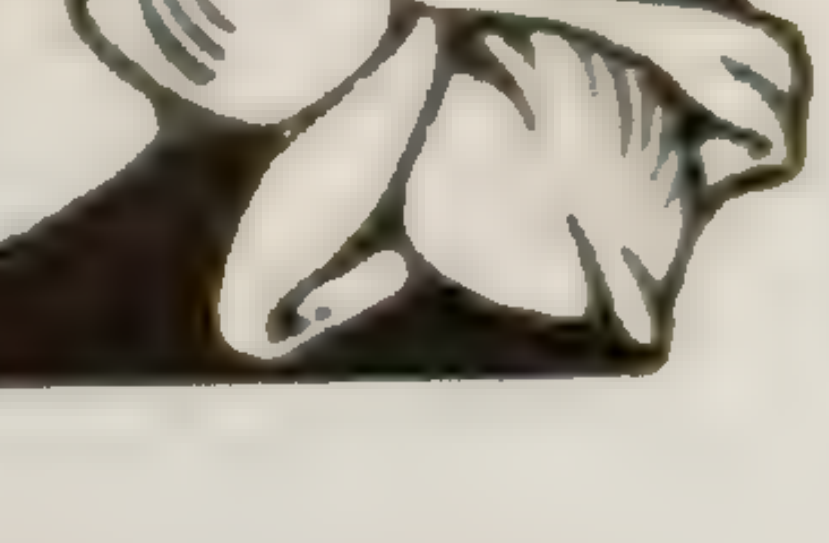
HALLAM'S GOLD MEDAL SWEET PEAS

All 'Waved' Varieties.

Selected by specialists, and guaranteed *English grown.* Finest value seeds sold.

Send to-day for our List

HALLAM'S (Dept. 5), Moseley, Birmingham



1810 SEND FOR OUR 1910

Centenary Catalogue

OF

Ornamental Trees and Shrubs, Roses, Rhododendrons, Climbers, Fruit Trees, Forest Trees, Herbaceous and Alpine Plants;

ALSO

LANDSCAPE GARDENING.

GEO. JACKMAN & SON,
Woking Nurseries, SURREY.
(Nurseries [200] acres.)

A New Year's Honour.

SAFE
PRODUCTIVE
CLAY'S LONDON FERTILIZER
ECONOMICAL
LASTING

AN ORDER FOR

CLAY'S

Sold everywhere in **6d.** and **1s. Tins**; and in **Branded and Sealed Bags**:—7 lbs., **2s. 6d.**; 14 lbs., **4s. 6d.**; 28 lbs., **7s. 6d.**; 56 lbs., **12s. 6d.**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

Every Genuine Tin, Bag & Seal bears the Trade Mark as in Centre of Cross.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication, 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers, as under:—

CLAY & SON,
Stratford, London, E.

Do you wish to grow

BIG ONIONS?

THEN YOU MUST HAVE

CRANSTON'S EXCELSIOR
— or AILSA CRAIG —

quite a waste of time to grow anything else. They are synonymous, although you may not believe it, and perhaps you fancy one name more than another. One thing, however, is certain; that I hold the best-selected stock of seed in the world. Guaranteed new, pure, and grown by the raiser. The original and proper name is "Cranston's Excelsior."

SEED—per packet, **1/-**
3 packets, **2/6** 12 packets, **9/-**

JOHN WILSON,
SEED MERCHANT,
HEREFORD.

Rhododendrons.

Crimson, White, Pink. 250 Choice Named Varieties, fine foliage, well budded, for potting or planting. 1 to 1½ ft., 1½ to 2 ft., 2 to 2½ ft., 2½ to 3 ft., 3 to 4 ft., 4 to 5 ft., 5 to 6 ft., 6 to 7 ft. List of sorts and prices on application; many thousands to offer. Standards in all sizes.

All Home-grown. Inspection Invited.

F. STREET, Heatherside Nurseries, CAMBERLEY.

TAKE NOTICE.

Intending planters should send for the STANCLIFFE CATALOGUE OF TREES, &c.

Our Stocks, which are grown on the highest and most exposed hills of Derbyshire, are in fine condition, and are sure to give satisfaction. Note the prices before ordering elsewhere.

Rockery Stone, 1/- per ton.

THE STANCLIFFE ESTATES CO., LTD.,
DARLEY DALE, DERBYSHIRE.

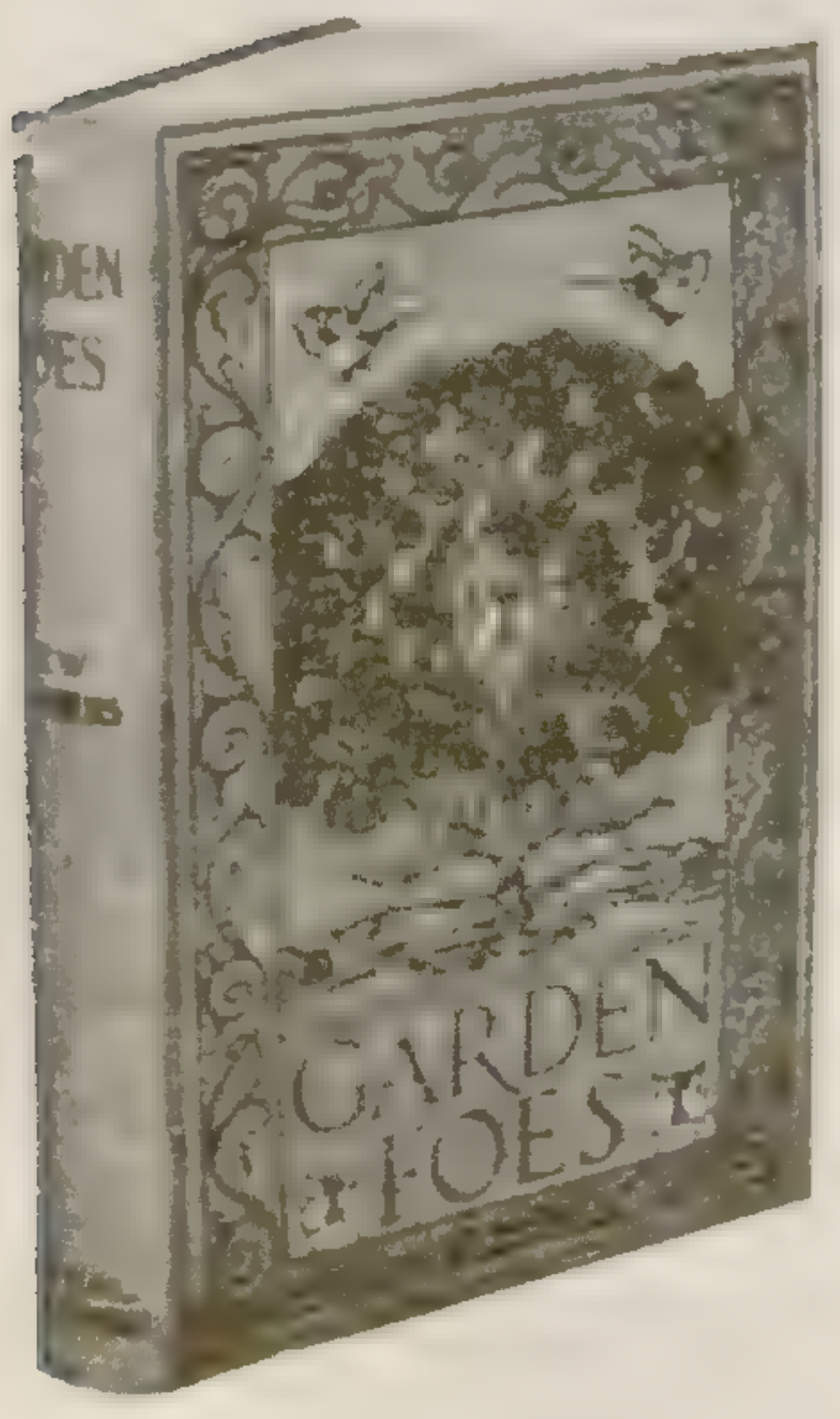
A New Work of the Greatest Value to Fruit Growers.

PRICE
2/6 net.
By Post, 2/10.

GARDEN FOES.

336 PAGES.
150 Illustrations

By T. W. SANDERS, F.L.S. (Editor of "Amateur Gardening.")



A description of Insect, Animal and Fungoid Pests injurious to Fruit and Vegetable Crops, Hardy Plants, Trees, Shrubs, and Greenhouse Plants, with all the latest Remedies for their Eradication, etc.

CONTENTS:

- Fruit Pests and Diseases.
- Vegetable Pests and Diseases.
- Flower Garden Pests and Diseases.
- Greenhouse Pests and Diseases.
- Forest Tree Pests and Diseases.
- Rose Pests and Diseases.
- Miscellaneous Pests, etc.
- Insecticides and Fungicides.
- Insecticide Formulas.
- Proprietary Insecticides and Fungicides
- Spraying Apparatus.
- Powder Distributors.
- How and When to Spray.
- Fumigating.
- Cyaniding, etc., etc.

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE," 148 & 149, Aldersgate Street, London, E.C.

Please send me a copy of **"GARDEN FOES"** *by Post, for which I enclose remittance of* **2/10**

Name..

Address..

SCHIZOCODONS.

In the GARDENERS' MAGAZINE of December 31, 1910, Mr. S. Arnott writes graphically and sympathetically concerning Schizocodon soldanelloides, which has not as yet established itself in any great degree in our English gardens. Notwithstanding this, I hope in the near future to meet ample colonies of it in those gardens where it is possible to devote the maximum of time and attention in the naturalising of this most charming subject. We have the shortias establishing themselves freely, and as the plants are closely allied (the synonym of the schizocodon being Shortia soldanelloides), surely with a little closer study of its needs we ought to have the schizocodon doing likewise. Mr. Arnott's description of the failure of a host of healthy plants to withstand the summer heats of Yokohama suggests that importations should be made during the cool months of the year. This exactly corresponds with the "modus operandi" of the best Japanese nursery firms, who forward practically all goods during the winter and earliest spring months.

In dealing with the schizocodon one should realise that it is essentially a mountain plant, and, consequently, it should do better in a bracing hilly district than in the more humid lowlands. It occurs abundantly in Central and Northern Japan, both in the tree, shrub, and grass regions, ranging in altitude from 5,000 to 8,000 feet. The fact that it inhabits both tree and shrub regions on the Japanese hills points to the fact that a sunny exposure is not necessary for successful culture, but in connection with this point may I add that it is stated to grow freely on exposed hillsides in Yamashiro and others districts.

I would venture the opinion that for English gardens root protection is a greater necessity than an ultra-shady position. Could we but reproduce the natural environment of this little plant with its roots protected by the carpet of grasses and small plants, thus guarding both against drought and excessive moisture, we should possibly make greater cultural advances in its favour. This leads one to the suggestion that a grassy bank in the wild garden might suit it better than many rock garden positions, though even then it would need watching lest it should be overgrown by strong grasses.

If grown in the rock garden the soil bed should be deep enough to retain moisture during summer, and a light carpeting growth of some fairly small creeping plant should be permitted to wander among the schizocodons. Its flowering season in Japan is June and July, and in addition to the form under discussion there is the variety alpina, which possesses foliage more deeply serrated than the type, and is usually found on higher levels. In addition one may note Schizocodon ilicifolia, which is probably a varietal form of soldanelloides. This is readily distinguishable from the foregoing, as the foliage is hardly as broad, or as rounded, and the indentations around the margins are deeper, giving the foliage a miniature holly-like appearance. The blossoms are like those of soldanelloides in form, but are usually white, though occasionally one may note reddish-hued flowers upon some plants, showing that ilicifolia is subject to a diversity which is not unpleasing.

It may be mentioned that the plant under notice is apparently more restricted in its distribution, for it seems to be practically confined to the wooded hillsides of Central Japan, and this fact may account for its rarity in gardens at the present day. The fact that there are hosts of good rock plants awaiting the collector on the uplands of Japan will perhaps be better appreciated in a few years' time than at the present moment. P. S. HAYWARD.

STRAWBERRY LEAF SPOT.

In a recent issue of the "Journal" of the Board of Agriculture, attention is once more drawn to the fact that both cultivated and wild strawberries are often severely injured by a fungus called Sphærella fragariæ, Tul., better known in this country as Ramularia Tulasnei, Rab., a conidial form of the Sphærella, and for a long time the only known condition of the fungus. The foliage is the part attacked, and the symptoms are unmistakable. Small reddish-brown spots appear on the leaves; these often encroach on each other and form irregular patches. By degrees the centre of each patch assumes an ashy-grey or whitish colour, bounded by a reddish border, which becomes bright red later in the season. This peculiar arrangement of a whitish spot bounded by a red ring has given origin to the local name of "Birds' Eye Spot" in some parts of the country. The central whitish portion of the patch soon becomes studded with minute tufts of the conidial or Ramularia condition of the fungus. These continue to infect healthy leaves throughout the season. When the infected leaves begin to languish the conidial condition is followed by the higher or Sphærella condition of the fungus, the spores of which remain on the dead leaves until the following spring, when they are liberated and infect the young leaves.

This pest is everywhere present in this country, and is also well known on the Continent and in the United States. None of the cultivated varieties escape the disease, but some are more severely attacked than others. The variety called "Royal Sovereign" is especially susceptible to the disease. When the injury is severe the crop of fruit is much reduced both in quantity and in quality; the plants are also weakened for the following season.

If spraying is commenced at a sufficiently early stage (in fact, where the disease has previously existed spraying should commence when the leaves are quite young) an epidemic may be prevented. The plants should be sprayed with a solution of potassium sulphide (liver of sulphur) in the proportion of one ounce to three gallons of water. This treatment will also arrest the possible appearance of strawberry mildew, Sphærotheca humuli. Spraying should be continued at intervals until the flowers begin to open.

The following method of combating the disease has proved highly satisfactory when strawberry beds are badly rusted. The beds should be mown soon after the fruit is gathered, covering the dry leaves with a sprinkling of straw or dry litter and burning them. This may seem harsh treatment for the plants, but everyone who has tried burning over a strawberry bed has been surprised by the vigorous and healthy appearance of the new foliage.

Southampton Horticultural Society.—The report of this society that was presented by the council to the members assembled in annual meeting on Monday afternoon was of much interest as evidence of the excellent work that was accomplished during the past year. The society held three exhibitions, all of which were of a high order of excellence, but unfortunately the attendance of the public at each of them was disappointing, with the result of the council being compelled for the first time for some years to bring forward a few liabilities into the current year. The number of members has, we are pleased to learn, been increased, notwithstanding the unusually large number of losses from deaths and removals.

CLIMBING AND PILLAR ROSES

There are very few purposes to which roses can be put that are more pleasing and effective than as climbers or the clothing of pillars. Over arches and arbours, also, few subjects are more suitable and charming. But one must select the right varieties and have properly prepared ground for their growth. With so much to support this is even more essential than when cultivating the dwarfs of normal growth. It often happens also that the ground near to and around porches, etc., is used as a pathway. Although we often see plants doing remarkably well under such conditions, it will generally be found they are naturally strong-constitutioned varieties, but with a little attention to preparing the soil many of our more chaste and somewhat delicate roses might be used to advantage.

It is not so much the individual flowers as the general effect of the whole. Nor is it well to aim too much as to uniformity of growth, or to tie them in too closely. A looser and more rambling style is often the most pleasing, and nature has a happy way of placing the branches and trusses in the most artistic manner, so that the control absolutely necessary to make things secure is all that need be given. The beautiful effects frequently seen upon porches over cottage doors in the country are not often aimed at by the occupiers, but come naturally through the plants being allowed more freedom of growth than is often the case in gardens of some pretensions, and I think there are few instances where naturally-grown plants are seen to more advantage. In either case anything formal detracts from the effect.

Oftentimes the pruning knife is at fault, cutting away straggling shoots of young growth, instead of thinning out indifferent wood and removing all that is dead or declining. This would give more room for the healthy maiden growths that are the most valuable part of the climbing and pillar roses. Overcrowding and tying the growths in a mass cannot prove satisfactory, and there is far more bloom, as well as better quality and effect from maiden growths that have room to develop. If allowed to become crowded much dead wood results, and there is a greater tendency to become bare towards the lower part. It is not climbers upon walls or fences that I am alluding to in this note; but those used to cover outbuildings or the corners of some such structures as the hen or wood house may be treated similarly, while the same varieties recommended for arches and porches are suitable, and may be of some little service as regards this season's planting. A few of the best of the tried roses are mentioned below.

Whites.—Aimée Vibert, Felicité Perpetué, and White Dorothy Perkins. Pinks.—Dorothy Perkins, Minnehaha, Pink Roamer, and Cheshunt Hybrid. Crimsons.—Reine Olga de Wurtemberg, Ards Rover, Crimson Rambler, and Delight. Yellows.—Alister Stella Gray, Gardenia, William Allen Richardson, and Claire Jacquier. Buff and Salmon-orange.—Gloire de Dijon, Bouquet d'Or, Rêve d'Or, Réné André, Evergreen Gem, and Elisa Robichon. These are more suited for arches and porches. For pillars I would prefer Papillon, Climbing Caroline Testout, Gruss an Teplitz, Wallflower, Purity, Frau Karl Druschki, Crimson Rambler, and Ards Rover. The last two are equally suitable in either position, while Madame Alfred Carriere is one of the all round roses it is difficult to misplace. A. P.

WORK FOR THE WEEK.

◆

THE ORCHID HOUSES.

SEED SOWING.—With reference to the sowing of orchid seed, it has been considered advisable to defer the sowing of a portion of the seeds from the capsules that have ripened during the closing months of the year until after the turn of the days. In the case of odontoglossums and allied cool house genera it will generally be found that germination is exceedingly slow during the closing months of the year, but it is remarkable how rapid is germination of early-sown seed during the present month, and later on. The examination of the seed beds will enable the cultivator to determine the desirability as to whether further sowings are necessary, and if they are, they should be made without delay. Some of the seed may be thinly sprinkled over the old seed beds of previous sowings, but if the germination on these seed beds has not proved satisfactory, it is desirable to select some fresh ones. There is an unexplainable fact that we may sow on a number of seed beds and find, in the majority of cases, that it is only on a limited number that germination is satisfactory. It is therefore advisable that, however limited the quantity of seed may be, we should endeavour to sow it on two or more seed beds.

SELECTION OF SEED BEDS.—There is more in selecting suitable seed beds than in anything else, to successfully raise odontoglossums and their allied genera. If fresh-potted plants are selected, we find that a considerable settlement takes place, and as the plants in the pots have to be considered in the application of root moisture the surface of the material does not lead to the most satisfactory germination. On the other hand, where the compost is much decomposed, we find that, after stripping the surface of any growing substances, it quickly becomes close, and ultimately turns sour and unsuitable. The most satisfactory seed beds in my experience are the surfaces of the material in which plants of their own kind are growing, preferably plants which were potted some weeks previously, or surfaces that were prepared some weeks before they were required for seed sowing. Care must be observed to remove any robust growing heads of sphagnum moss, or the growth of algæ on the surface of the potting compost. This is most important, as the seedlings are naturally slow growing, and any mossy growth on the surface will have a tendency to outgrow the young orchids, and seriously interfere with their development. It is a most difficult matter to remove anything from the surface of the seed bed without disturbing the germinating seedlings. Previous to sowing water thoroughly with rain water, and, after allowing them to drain for a few hours, sprinkle the seeds thinly and evenly over the surface, taking care that goodly numbers fall about the base of the pseudo-bulbs and exposed roots, where the germination is usually more rapid.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

CLEANING CONSERVATORY. — The majority of chrysanthemums are over, and it will be found very convenient to give the house a thorough cleaning before introducing fresh plants. Pay careful attention to the staging. Whatever material is used for covering the stage, either granite chippings, shells, or gravel, it should all be removed and thoroughly washed to ensure a perfect drainage from the stage. Prune, clean, and topdress all creepers as required, paying attention to the drainage if in pots.

CHRYSANTHEMUMS. — Cuttings in frames should have a little air for an hour or so each day when possible to prevent damping. On bright days spray the plants lightly with tepid water and close early.

CINERARIAS.—The most forward of the large-flowered varieties may be removed into a slightly warmer house. If specimen plants of the stellata type are required, the best should be shifted into larger pots, using a compost of good loam, leaf-soil, sand, and mortar-rubble, adding some manure from an old mushroom bed. Pot firmly to ensure sturdy plants. At all times keep a strict watch for greenfly, always remembering that "prevention is better than cure." Water carefully, but do not let the plants become dry at the roots.

FREESIAS AND LACHENALIAS are making steady growth and may with advantage be given a little weak liquid manure. Place a few of the most forward in a gentle heat for successive flowering.

MALMAISON CARNATIONS.—The main batch of these plants is still practically dormant, so that strict attention must be paid to the watering. It is far safer to keep the plants on the dry side until the days become warmer and root action is more vigorous. Carefully examine the foliage for rust, and keep down thrip and spider by fumigating at intervals.

BULBS AND FORCED SHRUBS.—A regular supply of flowers may be obtained by placing batches of these in heat at intervals of ten days or a fortnight. Lilacs, Azalea mollis, Deutzia gracilis, Prunus triloba, and Boronia megastigma and B. heterophylla are among the many hardy and greenhouse shrubs that force readily, and make fine subjects for the conservatory if placed in a cooler house just before coming into flower.

TUBEROUS BEGONIAS. — Sow seed of these, using a compost of loam, peat, and leaf-soil, with a good sprinkling of sand. This should be passed through a fine sieve, and well watered before sowing. After sowing cover the seed pan with a square of glass, and put in a structure with a temperature of 60 deg. Do not allow the soil to become dry, or failure will result.—A. Grubb, Porter's Park Gardens.

HARDY FRUITS.

RENOVATION OF OLD FRUIT TREES. —Moss on fruit trees may be caused by the soil being poor and exhausted, and a good dressing of farmyard manure will be highly beneficial to such trees, with a spraying with caustic soda wash some time during the next month or so. This dressing will do much towards bringing the trees back to a healthy state. The best method is to clear the soil three or four inches deep from around the trees, and apply the manure three or four inches thick. It will not matter if the latter is a little fresh, provided it does not come in direct contact with the roots. In the application of manure at any time always aim at spreading it well over the area occupied by the roots. If this method were adopted more frequently in the management of old fruit trees throughout the country, and a little more readiness shown in grafting trees of useless varieties, we should soon be able to largely increase the supplies and hold our own as fruit-growers.

GRAFTING.—Old trees may be headed back any time now, ready for grafting when the bark runs freely in March. In heading back large standards it is not advisable to cut the branches off very close to the stem of the tree. The main branches may be left from five to seven feet in length, as more grafts can be put on, the wounds are not so large, and consequently heal over sooner. Moreover a large head is formed, and naturally a larger yield of fruit in the same given time. Scions that are being saved for use later on should be carefully labelled, tied in bundles with their base quite even, and plunged six inches deep under a north wall or hedge, where they will remain quite dormant until required.

NAILING AND TYING. — All trained trees in the open quarters and on walls, excepting peaches and figs, should be tied or nailed in after the pruning is finished at this time of year. In tying the larger branches use good stout string, and wind it round the wire, two or three times, from underneath. This procedure will prevent the bark coming in contact with the wire. All unnecessary wires should be removed from wirework in the open, as they frequently cause chafing and wounds, and severely impair the health of the trees.

ROOT PRUNING.—It often happens that fruit trees produce an enormous lot of wood and leaves, and comparatively little, if any, fruit. Where that is the case, and root pruning will be advantageous, providing the soil is still workable there is yet time for it to be successfully carried out. A trench two feet wide should be taken out round the tree, and from two to four feet from the stem, according to size of the tree. Cut all roots about six inches from the ball, and undermine as much as possible for the purpose of cutting the tap roots. Then return the soil in thin layers, and ram as tightly as possible. A good mulch of stable manure should be applied in May or June. Some varieties of apples only fruit every alternate year, so it is well to know the trees for at least a couple of years before commencing to root prune them. I find that if naturally shy bearers have all their side growths pruned as soon as the fruit is gathered, many of them will fruit the following year, but not heavily.—J. Whittle, Cheveney Gardens.

THE KITCHEN GARDEN.

FORCING.—If the forcing ground is in order, and the fermenting material in readiness, proceed to make up hotbeds for potatoes, carrots, radishes, etc. The main point in carrying out this work is to use thoroughly shaken-out and sweetened manure, and incorporate plenty of leaves with it, treading the mixture evenly and very firmly as the bed is formed, this being necessary for the purpose of retaining a mild and lasting heat. After fermentation has well set in, the beds should be soiled over. Use rather light and porous soil for these early crops to the depth of nine to twelve inches. Brick-pits are much to be preferred for these beds, but if not at command, with care good results can be obtained from garden frames.

CUCUMBERS.—Sow seeds of these singly, using a light compost in thumb-sized pots, and plunge them in bottom heat of 75 to 80 deg. A rather low light house is the most suitable for the growing of cucumbers, as an equable and humid atmosphere can be maintained much better than in loftier houses. Shift on the plants as they require root space, and grow them near the glass with a humid atmosphere and a temperature of 70 to 75 deg. to a suitable size for planting. Lockie's Perfection is a very suitable variety to grow for a private establishment.

CAULIFLOWERS. — Make a sowing at once to secure early plants, using pans or boxes filled with sandy soil. The young plants are subject to damping off in their seed receptacles, hence the need of sandy soil and also early pricking off into small pots as soon as possible after they attain their proper leaves. A position in an early vinery or peach house is suitable until the plants are established. Afterwards they are best in a cool frame, well up to the glass with air admitted according to the outside weather conditions. On no account give the young plants a check to their growth.

LETTUCE. — A small sowing should be made of an early cabbage variety, such as Golden Queen or Early Paris Market. The young plants should have a temperature of about 50 deg., and, when they are large enough, prick them out in a frame over a mild hotbed in sandy soil. Very little air will be necessary until the plants commence active growth, and then more may be admitted according to circumstances.

MANURING AND DIGGING.—The wheeling on of manure, trenching, and digging, owing to the wet condition of the land, will, in many cases, be much in arrears. There is nothing gained in working, stiff ground especially, when charged with heavy rains, and it is better to push on other work necessary, and leave the digging until suitable weather arrives. — C. Flack, Cholmondeley Castle Gardens.

ASPARAGUS.

Asparagus is a favourite crop in this country; it is one of the earliest of spring vegetables, and presents little cultural difficulties to the grower in ordinary soils and localities, provided careful attention is paid to detail. Indeed, a plantation of "grass" may be made in most kitchen gardens if one is willing to exercise some care in planting, supplying liberal nourishment, and keeping the crop as clean as possible. Naturally, the first important essential is a friable and well-drained soil, otherwise the crop is a difficult one to manipulate. At the same time, its special requirements seem to be very well suited in a variety of soils; in the strong rich soils common to the lias formation in the Vale of Evesham, for instance, asparagus is a particularly successful crop. The methods adopted in this locality are generally confined to row culture, the rows being from three feet to three feet six inches apart; occasionally the crop is grown in narrow beds containing two rows, with a wide path or trench between them.

Sometimes the seeds are sown where the plants are to remain, which method saves time, but generally results in variation in the strength of the plants and the size or quality of the asparagus produced. Some growers prefer to sow the seed very thinly in a bed in April, planting out in the following April the best plants secured from these sowings. Subsequently the after-cultivation consists of manuring, earthing-up, cutting, and re-earthing during the season of cutting, keeping the beds free from weeds and insect pests, cutting the sticks level in November, and levelling down the ridges. The season of plenty is usually reached about the early part of June, and at that time the grass is allowed to run a little, and become green, when it is then bunched.

Permanent Beds.

Autumn work among the asparagus beds consists of cutting down all the growth and clearing it away; this work should be performed as soon as the growths have changed colour. The thorough weeding and cleansing of the beds must then be commenced, and as soon as this has been completed, the roots should be protected from winter frosts by a well-laid covering of short strawy litter. To keep this protective covering in place it is a good plan to pack up the edges of the bed to the level of the top of the litter.

Forming New Beds.

Efforts are sometimes made to rejuvenate old beds by scattering berries over them at the time of cutting or clearing off the heads of the plants in November. It is much preferable, however, to form a new bed where the old one has become exhausted or played out, as the former method only results in the growth of a lot of "sprue," which cannot be compared to the marketable "grass." For the purpose of forming a new bed a suitable piece of ground should be selected, thoroughly and deeply trenched, and supplied with a liberal dressing of partly decayed stable manure. Bonemeal is a very useful fertiliser when making up a bed. Asparagus beds that are properly prepared and well manured at the outset give a prolific crop for at least twelve years; while beds formed on the old system of cultivation have lasted well for twenty years or more. The permanency of this crop can therefore be well secured where suitable soil conditions exist, for often the exhaustion of the crop, after a limited period of time is not due to any failing on the part of the plants themselves, but rather to a rotting away or decay at the roots, due to excessive moisture or unsuitable soil conditions.

It is well to commence the preparation of a new bed as early as possible, so that the soil may have settled down comfortably for planting in April, or seed sowing in March. At all events, at least a month should elapse before finishing the bed and planting it. Plants may, of course, be purchased if the gardener is anxious to make a start immediately, while in the following March seeds may be sown to secure sets for a future year. He will in this way be forwarder with his purchased plants, while the sets secured from his own raising will be ready in the following spring for a future extension of the plantation. A very productive and fine flavoured variety of asparagus is Sutton's Perfection, which is an improved type of Reading Giant. Giant French is a large-sized variety, as also are Argenteuil Early Purple, Connover's Colossal, and Palmetto. For general purposes the first three mentioned varieties are to be recommended.

Sowing and Transplanting.

Seeds sown in good ground between the middle of February and the first week in April generally form the most robust and best cropping plants, provided they are allowed to grow and establish themselves permanently. Too thick or too thin sowings must be avoided: the former entails a great deal of work in thinning (which, by the way, must be done early and boldly, so that the seedlings are from fifteen to eighteen inches apart in the rows), and the latter may produce too small a crop after due thinning, thus necessitating transplanting, which is undesirable. When the practice of sowing in their permanent position is adopted, the seeds should be inserted, fairly thinly, in shallow drills, and covered with about half an inch of fine soil. The seed may also be drilled or dibbled in on raised beds three feet wide, with a space of about two feet between each bed. For transplanting purposes the usual practice is to select yearling plants, placing them on ridges, with the thin roots spread down the sides, and to the lower level at the bottom of the ridges. Freshly dug plants are most desirable where the crowns are purchased for this purpose, as if allowed to get dry they lose much of their initial vigour, and the mounded parts become very subject to decay when replanted.

After Culture.

This consists of thinning out the seedlings, weeding, and protecting the beds from injury by bad weather. Blanching is effected by earthing up to a slight extent with leaf-mould, and much good can be done by giving occasional dressings of salt, soot, and guano during hot weather. When the growths commence to assume an autumnal tint, the plants should be cut down and the beds tidied up for the winter. Not until the third year of growth can asparagus be cut. The best plan is to snap the sticks squarely and as deeply as possible, the tops then showing about two inches above the surface soil, and the scales on the head unopened. Good quality "grass," fit for the best tables, should be about seven inches long, of handsome appearance, with four or five inches of white stem, and the remainder of a nice purple colour.

Forcing.

Asparagus may be forced either in frames over hotbeds of manure, or in heated glasshouses. The roots for forcing should be quite three, or preferably four, years old, and may be dug up late in autumn and stored in a cool cellar or shed under straw. In hot houses a bed should be prepared with a covering of manure and leaf-mould, the clumps of grass packed closely together, and a temperature of from 55 to 65 degrees maintained. Excessive heat gives an earlier result, but the produce is slender, and very spindly as a rule. When a hotbed and frame is employed the roots should be laid closely together on the manure, and covered with a little soil. Edible shoots will be ready in about two or three weeks, and a supply will be available for five or eight weeks onwards. Fresh beds may be prepared at intervals of about three weeks from November to April in order to secure a constant supply

J. C. NEWSHAM.

A GREAT SEED HOUSE.

Messrs. James Carter and Co., who still retain their seed shop in High Holborn, and another in Queen Victoria Street, E.C., have moved their immense business centre from High Holborn to Raynes Park, a western suburb of Wimbledon, in the beautiful county of Surrey, and by so doing they have given splendid evidence of the great and ever-increasing importance of horticulture in this country.

Probably nothing in recent times has so distinctly shown the wonderful advances horticulture is making, as this change of address from High Holborn to Raynes Park. Change of address may mean many things. In this case it means new and enlarged premises to meet the growing needs of a great business; it means more room to develop the business and ability to cope more quickly with the increasing demand; it means up-to-date buildings, and altogether better conditions of light and air for the employees, and the last word in machinery for cleaning and preparing seeds; it also means ample space for the conduct of seed trials and tests under the eyes of the members of the firm, and a more direct control of every department of the firm's work than was possible in the City warehouses; it also means a magnificent advertisement for the firm, and a splendid object-lesson of what British pluck, enterprise, and honesty can accomplish.

It was in 1836 that the founder of Messrs. Jas. Carter and Co. commenced business at 237, High Holborn, and made a special feature of supplying seeds true to name, and of tested germinating quality. Since that time the premises have had to be enlarged many times, and about eighteen years ago the firm took over 97, High Holborn, opposite their original home, but, notwithstanding their grounds in Essex, and their nursery at Forest Hill, it became very evident some two or three years ago that an altogether larger place was needed to cope with the seed and bulb trade, a trade that ranges throughout the United Kingdom, and extends to our Indian Empire, the United States, and all the British Colonies. The need was urgent, and a site occupying about 22 acres was selected at Raynes Park, where there are ample frontages to the London and South-Western Railway Company's main and branch lines, along which pass about 800 trains per diem—a fine advertisement. A large business encourages big ideas, and it is not beyond the mark to say that Messrs. Jas. Carter and Co.'s magnificent warehouses and offices at Raynes Park are the finest of their kind in Europe, splendidly built, wonderfully convenient, finely appointed, and lighted, warmed, and ventilated in a manner beyond all praise.

GARDENING APPOINTMENT.

Mr. J. Wright, for two years foreman at Bear Wood, Wokingham, has been appointed head gardener to G. H. Williams, Esq., St. Donat's Castle, Llantwit Major, Glamorgan, and enters upon his duties on January 14.

THE GARDEN WOMAN.

It has often been remarked that reminiscences are of little value and interest, and that in these go-ahead times there is plenty of food for thought in watching everyday life and trying to keep pace with events as they are, instead of pondering over things that have been. This may be so, but we cannot help being reminiscent sometimes: indeed, life would be shorn of one of its pleasures if we did not now and then tell an old tale. I well remember an old friend, who used to remark about any good tale that was told in passing, "Ah! that will just do for you to tell when you get an old fellow."

The subject of these few notes was suggested by an article I read in a daily newspaper a short time ago, entitled "The Lady Gardener." The antithesis to the lady gardener is the "garden woman." This person is, or rather was, usually a garden labourer's or farm labourer's wife, who had usually brought up a family of children and sent them from home to get their living in various ways, and had time to spare to earn a little money to help keep the household together, and was also a person of great respectability and integrity, and withal clean and industrious. She was rather removed from her compeers, women in like circumstances being glad to work in the fields, stone picking, turnip hoeing, haymaking, harvest work, potato digging, or any field work which presented itself. Now, the garden woman's work was regular, and these other operations on the farms were intermittent, there being periods when their services were not required. The garden woman's work consisted of attending to the young gardeners in the bothy, cooking for them, making their beds, fetching the clean linen, etc., on alternate Saturdays from the mansion, cleaning the bothy, giving a little attention to the labourers, as far as tea making, etc., in their mess room, also doing rough work at the head gardener's house, and making up all spare time weeding, repairing blinds, cutting shreds for nailing wall trees, etc.

The hours were from eight o'clock in the morning till five o'clock at night, and the wages four shillings per week.

These are, as I have said, reminiscences, for to-day in this country it is very difficult to find a woman to perform some, or any of these duties at a very much enhanced rate of wages; indeed, a friend of mine had to pay ten shillings per week, and the hours of work were very much shorter, and when one woman retired from the work he had very great difficulty in filling the vacancy. Now one very great point with the garden woman was that she was not supposed to know anything about gardening: possibly she might have a very large garden cultivated in the best style at her cottage home, but when she went to the garden at the manse, domesticity had to be her forte. Womanly knowledge of horticulture was not required; indeed, it would have been thought presumption on her part to have suggested anything not exactly in her line of business. Her position in the garden social scale was lower than the garden boys, inasmuch as her name was at the bottom of the weekly pay sheet. Of course, I do not wish to say this is as it should be, and I should be sorry to write anything to detract in any way from the right of women to be gardeners, as now, in many cases, for instance in the textile trades, women compete on equal terms with men in some departments of manufacturing woollen and cotton goods.

The real difference between a garden woman and a lady gardener seems to be a matter of wages, combined with the facilities the lady gardener has of being trained at various colleges for indoor work, but for outdoor gardening the old-fashioned garden woman will take a lot of beating, if she was only allowed to exercise her knowledge of gardening to the full instead of being confined to the somewhat narrow channel I have described. W. M.

LATE-STRUCK JAPANESE CHRYSANTHEMUMS FOR EXHIBITION.

The following is the text of the paper read by Mr. Thos. Stevenson at the recent N.C.S. Conference:—

As the title of my paper suggests, I only propose to give here a very brief outline of the cultivation of Japanese chrysanthemums for exhibition from late-struck cuttings. Not that this is a new method, but I think it may somewhat explode the generally-accepted theory that chrysanthemums require a very long season of growth, and that the growth requires hardening to the consistency of a walking stick before it can be induced to give a thoroughly well-developed flower that is fit to take its place on an exhibition board.

That some varieties do give the best results when grown very hard I am quite prepared to admit, and the best example of a variety of this kind that I can think of at the moment is Duchess of Sutherland, and, speaking generally, all the very tall, and consequently faster-growing varieties, are best struck fairly early; but a very great many of our best Japanese chrysanthemums will give flowers equally as good, or even better, when struck later than if rooted in late November or early December. During the few years that I have been exhibiting I can assert that I have cut a greater percentage of first-rate exhibition flowers from plants rooted in March and April than I have from those rooted early and grown on in large 16's or No. 12 pots; but, as with every other system, there are certain points in connection with their cultivation that must be rigidly observed, or the flowers may not quite come up to one's standard of excellence.

ADVANTAGES OF LATE-ROOTED PLANTS.

Almost every season we hear rumours of the waning popularity of the large exhibition blooms, and many employers are undoubtedly averse to their being cultivated, but very often this is because they are grown to such a height that it is necessary to mount a pair of steps to see the full beauty of the flowers, but could they be grown dwarfer and arranged nicely where the full beauty of the flowers could be seen and admired, I feel convinced a great many grumbles would cease. Further, the plants would serve a double purpose, as most gardeners have to keep a conservatory or winter garden furnished; and what look nicer or are more easy of arrangement with other plants than good chrysanthemums, grown on single stems and in small pots.

I find that to obtain really good blooms the plants must be kept growing freely from the time of rooting, never allowing them to receive a check or become pot-bound in the intermediate stages of growth, and always aiming to get them in their flowering pots as early as possible, of course taking into consideration the date of striking. This is one of the main points to be observed, and another is the watering. From the outset the plants will take more water in proportion than will the earlier-rooted ones, without it in any way tending to make them sappy or gouty, due no doubt to the drier and warmer atmosphere at the time of striking. I also find that taking the buds may be done from seven to ten days later than the older plants, as they develop their blooms rather more quickly, and it is astonishing with what accuracy one can time the buds of these single-stemmed plants.

Some of the varieties may be grown straight away, the natural break occurring at just the right time for one to take the resulting first crown bud, while others will require stopping (in most instances some time during June) to ensure the buds being secured about the right time. If the plants are growing freely, which they should be during June or early in July, the stopping will not be much check to them, as they break into fresh growth within a very few days. I have practised stopping the plants twice, once immediately after they are established in 60-sized pots, and again as may be necessary for the timing of the buds; this double stopping keeps the plants very dwarf, but it certainly is at the expense of the flower. The first stopping tends to check root action, and the plants never recover the lost ground, and this is why I am so much opposed to the much-advised March stopping of plants (in this instance, early struck) to secure second crown buds.

In the past season I purposely stopped some of the strongest plants of several varieties in March for the sake of comparison, and though the weaker plants of the same varieties were stopped in June for the purpose of timing the buds, they simply grew right away from the early-stopped ones in every instance, and produced very much finer flowers.

Another point: These late-struck plants, if kept in fairly small pots, say, large 32's and 24's, will take a great deal more manure than the others right up to the time the florets begin to hang down, without showing any signs of damping in the florets, and this late feeding ensures the flowers opening quickly and finishing well, without any indication of staleness, so that these late-struck plants have several points to recommend them. First, their short season of growth, as compared with those struck in December, and the small amount of frame room required till the middle or end of April. Secondly, the greater accuracy of timing the buds and the subsequent easy opening of the same; and thirdly, by their dwarfness, which enables them to be housed in smaller structures, where they can be easily seen and handled, and also by their greater adaptability for grouping and other decorative purposes, so that this system of cultivation should especially commend itself to amateurs.

PROPAGATION.

From the last week in March to the end of April is the best time for propagating, and stock plants should be specially looked after for the purpose. Very early in the season all cuttings should be removed to the surface of the soil, and after growth begins to break up again they may be at once removed to the cold frame, and should be given all the light and air possible to keep the cuttings quite sturdy. Strong, sappy cuttings always take longest to root, and never make as many roots as do the finer and harder ones. The stock plants must be kept free from fly by syringing with soft soap or some other approved insecticide, but must not be fumigated or all the edges of the leaves will turn yellow or brown, and thus early spoil the appearance of the plants. Also, if the plants the year previous have been infected with the rust fungus, they should be syringed, or the cuttings dipped in a solution of sulphide of potassium, ½oz. to one gallon of water, previous to being inserted in the pots or boxes.

At this season of the year, if the cuttings are fairly hard, they will root well in almost any kind of glass structure, but as the aim should be to root them quickly with as little flagging as possible, it is advisable to place the boxes or pots, whichever you are using (I prefer boxes), in a house or frame, where a fairly humid atmosphere is maintained, [illegible] in such a position that they have a little shade during the hottest part of the day, and [illegible] where they will not commence running [illegible] before making roots. As soon as rooting commences, gradually inure the plants [illegible] little air, and lose no time in potting [illegible] into middle 60's, and replace them in a frame where they may be kept moderately close [illegible] a few days. Should the weather be warm [illegible] should not hesitate to give air at night [illegible] immediately after potting, but would [illegible] them fairly close during the drying part the day. Keep lightly sprayed, and in a very few days hardening in earnest may be commenced, so that in a fortnight or so after potting the lights may be entirely removed on all favourable occasions. Use the syringe to prevent them flagging during the hottest part of the day. From now onwards the treatment will be very similar to that accorded the earlier rooted plants, except that the former are in 60's, whilst the latter are in 32's. Keep a sharp eye on the watering, as these small pots soon dry under the influence of wind and sun. As soon as the roots have reached the sides of the 60's, a shift will be necessary, this time into 54 or 48 sized pots, according to the size of pot one is using for flowering them in. Use a fairly rich open compost at this potting, making the soil as firm as you can without using a rammer, and should the weather be favourable they may not require the shelter of a frame, but be placed straight out of doors; preferably pot thick for a few days, spacing them out as soon as the roots begin to run into the new soil. Keep the plants well syringed twice daily, using well diluted soot water, and look well after the watering, though at no time must water be given to excess. As soon as ready they may be given their last shift, this time into large 32's, or some of the stronger growers into 24 sized pots.

DATES OF ROOTING CUTTINGS, ETC.

It may be of interest to give the dates of inserting the cuttings, and of the several pottings. On looking up my diary I find the cuttings this year were inserted on March 26, potted into 60's on April 20, on May 9 into 54's, and into their flowering pots on June 4. In 1909 the dates were March 29, April 19, May 12, and June 5. From this it will be gathered that dates vary very little from year to year, and certainly not more than a few days at the most. It also shows that the plants are shifted along quickly in the young state, and this quick shifting tends to keep them stocky and prevents the wood getting hard, which it is very apt to do once they are allowed to become pot-bound. To ensure good flowers I like to see the wood swelling up gradually as the plants grow, and not thin at the base, with stronger wood further up; in plants of the latter type the flow of sap cannot possibly be so free as when the stem is of good even thickness all the way up.

Of course, the cuttings may be inserted later than the date stated, and for grouping may be put in as late as the first week in May, the plants will give good flowers, but it is hardly possible to secure really heavy blooms suitable for showing. Further, these plants have to be shifted into their flowering pots much later than I have mentioned, but from my own experience late potting is not to be recommended, as where a variety is at all likely to damp this will accentuate the evil in a remarkable degree. As an instance of this, I had several plants of a new variety struck very late this season, and as they made such good plants, I gave them an extra potting, but the results were terribly disappointing—not one flower opened without damping seriously; and, though I rather anticipated this from past experience, and consequently gave them the best position to try and avoid the damping, yet I could do nothing with them, hence my advice to pot as early as possible.

COMPOST AND REPOTTING.

It is not necessary for me to go into details of compost, it being sufficient to say that this should be moderately rich, not too heavy, but sufficiently porous to allow of the free passage of water at all times, even in the event of very wet stormy weather: and you may be sure there is something radically wrong with the compost if water is found to stand for any length of time in the pots, either after watering or after a storm, and I would strongly advise growers to err on the light rather than on the heavy side with their compost. This may mean a little more labour in watering, but this is quite counterbalanced by the plants keeping up a steady growth during a very wet time, should such be experienced during July or August. A point I should have mentioned is to crock the pots well, as this will save much anxiety towards the end of the season.

Pot firmly, using a rammer, but do not make the soil so hard that the roots cannot ramify through and through it, and leave sufficient room for a small top-dressing or two of soil as the season advances. After potting, I again prefer to stand the plants closely together for the convenience of spraying, and this also keeps them from drying quite so much, which is a distinct advantage with freshly-potted plants.

So far I have dealt with the cultivation up to the time of shifting into their flowering pots. As soon as the roots begin to take to the new soil the plants should be stood out in their permanent quarters for the summer, and this, for preference, should be on an open piece of ground, with a good ash base, and as free from trees as possible, with, perhaps, a little shelter from north and east winds, but this is not imperative, as after this date we have very little wind from such directions. The plants should be placed about 18 inches apart in the rows, and the rows a yard apart, which will give them ample light and air. To prevent damage by wind the tops of the stakes should be tied to a wire running from end to end of the rows, a bit of advice which may be considered unnecessary.

After this the work is very straightforward; tying must be regularly attended to, as also must be the removal of all side shoots; watering is an important matter, and the soil must not on any account be allowed to dry. Syringing is also very necessary, and on all fine days should be done both morning and afternoon, though not after from 3.30 to 4 p.m., or, if the situation is somewhat low-lying, it might be conducive to mildew. During dull weather syringing should be discontinued, and towards the end of the season it should be gradually lessened, the days, as well as the nights, being so much more moist.

FEEDING.

This is also an item in the cultivation which must be carefully looked after, and I have seen it recommended that feeding should commence as soon as the buds are taken. Personally, I prefer to commence feeding much earlier than this, in fact, as soon as the plants are in good growth and the pots fairly full of roots I like to give them a little liquid manure. Remember, I put but very little manure in the potting soil, and certainly nothing the plants are likely to take up for some time, bonemeal being the chief addition to the soil. As soon as the plants require it, and before they show any signs of suffering, I give them a little artificial manure, and continue this every week or ten days until the flowers are expanding nicely. Two or three times during the growing season I give a slight top-dressing of soil, which is watered in with a rose, and not pressed down, and I find this watering with a rose keeps the surface soil firm right through the season, and is much to be preferred to watering with the spout of the can, which is bound, at times, to expose some of the surface roots if used at all carelessly

TREATMENT UNDER GLASS.

The treatment the plants are accorded after housing is made the same as advised by the other growers. I think it very much benefits the plants, and certainly lessens the tendency to damp, if they are housed before the florets actually show colour, as we usually find the few early blooms we are in the habit of leaving out of doors as long as we can are the most subject to damping, and I would strongly advise early housing, as I am sure the flowers will not be any earlier in opening. Give all the air possible during fine weather, but as soon as the flowers begin to open a little fire heat must be given to keep the air inside the house dry and circulating. During very wet or foggy weather it is wise to stretch tiffany over the ventilators to prevent the moisture driving in, but never under any circumstances take off all the top air. As the flowers develop cold draughts must be avoided, as I have often found that all one side of a bloom will damp where it has been exposed to the cold draught of a front ventilator. Discretion is very necessary in this matter of airing and heating, and though no hard and fast rule can be laid down as to the temperature that the chrysanthemum house should be kept at, yet it should at all times feel dry and comfortable on entering, and even on cold nights ought not to drop below from 48 to 50 degrees.

STOPPING.

As pointed out earlier in the paper, the buds on these plants may be timed fairly accurately, and most of the varieties will need to be stopped to get them out for a given date. There are just a few, such as Edith Jameson and its sports, that require pinching in April, i.e., as soon as they are established in 60's. I have grown these varieties right away without stopping when propagated in March, but they are usually a few days early, so it is best to stop them. There are also a few varieties, such as Madame Paolo Radaelli, Hon. Mrs. Lopes, Mrs. D. Thornton, and Captain Mitford, that require stopping during the early part of May to get really good exhibition blooms; after this there are very few but what may be left until after they are in their flowering pots before being stopped.

Bessie Godfrey, Frank Payne, Chrysanthemiste Montigny, Madame G. Rivol, Mrs. W. Iggulden, W. Gee, Mrs. C. Penford, Duchess of Sutherland, and Master David are among the varieties that should be stopped during the first ten days of June, whilst most of the other popular varieties, such as F. S. Vallis, Reginald Vallis, James Lock, Sir Frank and Lady Crisp, Mrs. G. Mileham, Lady Talbot, Valerie Greenham, Master James, Superbe, Walter Jinks, Miss A. Nichols, Algernon Davis, Rose Pockett, Purity, W. Mease, Sir A. Rollit, Harry Wood, Bessie G. Payne, Francis Jolliffe, etc., give the best flowers when stopped between the 10th and 20th of the month. There

Eckford's Giant SWEET PEAS

The Finest Blooms

that blossom on the Sweet Pea Plant are grown from Eckford's famous seeds. Eckford, the Sweet Pea Specialist, supplies only seeds that are bound to give good results. Eckford's seeds flower brilliantly, give brighter colours, longer stems, larger flowers, and succeed even in the most difficult soils.

Villa (B) Collection.
24 splendid varieties, suitable for exhibition, 50 seeds of each, 5/6

Villa (C) Collection.
12 splendid varieties, suitable for exhibition, 50 seeds of each, 2/9

For full list of Special Novelties see next week's issue.

FREE Send a postcard to-day for large Illustrated and Coloured Catalogue. It gives full particulars of all novelties in Sweet Peas for 1911, and contains full list of all Flower and Vegetable Seeds.

HENRY ECKFORD, F.R.H.S.,
(Dept. 221),
WEM, SHROPSHIRE.

Eckford's Giant SWEET PEAS

are a few that may be stopped even later than this, such as White Queen, J. H. Silsbury, Mrs. W. Knox, O. H. Broomhead, Miss H. Rowley, Maud Jefferies, Mrs. L. Thorne, and Splendour, etc., etc. Though I recommend these dates for stopping, should the natural breaks occur at any time within a few days of the dates mentioned, I should let this suffice, as the less check given to the plants the better they will do. Of course, if anyone thinks of following these dates, due regard must be given to the locality, but for anyone south of London they should at least prove a very serviceable guide, always bearing in mind that the plants should be very liberally treated from the time they are well rooted in their flowering pots.

There are, I know, many minor points not touched upon, but I have confined myself as much as possible to what is really essential in the production of good exhibition blooms from late-struck plants, and I can only hope that the advice may prove interesting and useful.

MARKETS.

◆

COVENT GARDEN.

Flowers.

The demand continues to be fairly good, and prices are steady; forced flowers are now beginning to arrive in quantity.

		s.	d.		s.	d.
Acacia	per pad	5	0	to	7	6
Azaleas, white	per doz. bun.	4	0		5	0
Adiantum cuneatum	per doz. bun.	4	0		6	0
Anemones, French	per doz. bun.	2	6		3	0
Arums	per doz.	3	0		6	0
Asparagus	per doz. bun.	9	0		12	0
Bouvardia	per doz. bun.	4	0		5	0
Camellias	per doz.	2	0		3	0
Cattleyas	per doz.	9	0		12	0
Carnations	per doz.	2	6		4	0
,,	per doz. bun.	12	0		15	0
Chrysanthemums	per doz. bun.	6	0		12	0
,,	per doz. blms.	1	6		3	[illegible]
Croton leaves	per bun.	1	0		2	6
Cypripediums	per doz. blooms	2	6		4	0
French fern	per doz. bun.	2	6		4	0
Gardenias	per doz.	2	0		4	0
Hyacinths, Roman	per doz. bun.	9	0		12	0
Lapagerias	per doz.	2	0		3	0
Lilac	per bun.	3	0		5	0
Lilium auratum	per bun.	3	0		4	0
,, speciosum	per bun.	2	0		3	0
,, longiflorum	per bun.	2	6		3	6
Lily of the Valley	per doz. bun.	8	0		15	0
Marguerites	per doz. bun.	2	0		3	0
Mignonette	per doz. bun.	1	0		2	0
Narcissus, Paper White	per basket	7	0		10	0
,, Soleil d'Or	per doz. bun.	2	0		3	6
,, Golden Spur	per doz. bun.	10	0		12	0
Odontoglossums	per doz. blms.	2	6		3	0

Fruits.

There is a good demand for imported apples, while oranges and grapes meet a fair request.

		s.	d.		s.	d.
Apples, English	per bush.	6	0	to	12	0
,, American	per barrel	10	0		31	6
,, Californian	per box	8	6		12	6
,, Columbian	per case	9	0		14	0
,, Nova Scotian	per barrel	10	0		23	0
Apricots, Cape	per case	6	0		10	0
Bananas	per bun.	3	6		12	0
Cobnuts	per lb.	0	10		1	0
Chestnuts	per bag	10	0		15	0
Cranberries	per case	9	0		10	0
Grapes, English	per lb.	1	0		6	6
,, Guernsey	per lb.	0	9		1	3
,, Almeria	per barrel	12	0		17	6
Lemons	per case	15	0		20	0
Oranges	per case	10	0		21	0
Pears, French	per case	3	0		4	0
,, Californian	per case	10	0		20	0
Pineapples	each	2	0		4	0

Vegetables.

Greenstuffs are abundant and cheap; supplies are good all round, and the demand steady.

		s.	d.		s.	d.
Artichokes, Globe	per doz.	1	6	to	3	6
,, Jerusalem	per ½-sieve	1	0		2	0
Asparagus	per bundle	4	0		6	0
Beans, Jersey	per lb.	1	6		2	6
Beet	per bush.	1	6		2	0
Brussels Sprouts	per ½-bush.	1	3		2	6
Cabbages	per tally	2	6		4	0
Carrots, French	per doz. bun.	3	[illegible]		4	0
Cauliflowers	per tally	6	0		10	0
Celery	per doz. rolls	5	0		10	0
Chicory	per lb.	0	4		0	[illegible]
Cucumbers	per doz.	8	0		10	0
Endive	per doz.	0	9		1	6
Lettuce, Cabbage	per doz.	1	0		2	0
Mint	per doz. bun.	1	0		2	0
Mushrooms	per doz. lb.	6	0		12	0
Onions	per bag	4	0		4	6
Parsnips	per bag	2	0		3	0
Parsley	per ½-sieve	1	3		2	0
Radishes	per doz. bun.	1	0		1	6
Savoys	per tally	3	0		5	0

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at sixpence per line, the minimum charge being Two shillings and Sixpence. Offices, 148 and 149 Aldersgate street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

Beckenham Horticultural Society.

On Friday, the 6th inst., Mr. J. A. Watson, B.Sc., of Elmside, Redhill, Surrey, gave a lecture before the above society on "The Life Stories of a few of our Common Weeds" (illustrated with lantern slides). There was a fair attendance considering the unpropitious weather. The plantain, dandelion, groundsel, thistle, etc., were discussed. An invitation was given to some boys of the council's schools to attend the lecture, the object in view being to present a certificate to the boy who should write the best account of the lecture. Several lads attended. Mr. Watson dealt with the subject from a botanical standpoint, but pointed out the time of flowering, the adaptation to secure cross-fertilisation, whether annual or perennial, etc. Hearty thanks were accorded Mr. Watson.

Mr. F. W. Price secured a special award for an oncidium, with finely-developed spikes of flower. Mr. Libbiter showed a dish of seedling tomatoes.

Bournemouth Gardeners' Association.

The first lecture of the New Year was given by Mr. C. Pearce, of Astney Firs Gardens, on January 3. The subject of the lecture being "The Cineraria."

At the fortnightly meetings exhibitions of fruits, flowers, or vegetables have been held, and prizes awarded during the last session, and in the future it is proposed to hold exhibitions at all meetings, and to award good prizes. Honorary exhibits will be a feature in the future as in past years, and points will be awarded according to the merit of each exhibit. At the meeting just held prizes were awarded for three gentlemen's buttonholes (any flowers), to be shown on a board.. Some extremely beautiful exhibits were staged, the judge being Mr. R. Chamberlain, florist, Bournemouth. The first prize was awarded to Mr. C. King, whose exhibits were made up of bouvardias, tuberoses, and carnations, with suitable greenery. Mr. Heath was second prizewinner, Mr. Nippard third, and Mr. Dowell fourth.

Mr. Pearce showed three very fine plants of cinerarias, for which he was awarded a first-class certificate. The lecturer first dealt with sowing the seeds, advocating very thin sowing, and also under cool conditions, as in a cold frame, where late sowing was the rule. But if early-flowering plants were required then he advised cultivators to sow the seeds in a gentle heat. The earliest sowings, the lecturer said, should be made in April; but for general purposes, sowings in June were early enough. He referred to the hundreds of strong seedlings that had come up in the open borders in his own garden from self-sown seeds, the latter shed by old plants placed outside. Mr. Pearce strongly advocated growing cinerarias under cool conditions throughout the summer months, and in positions where there would not be any occasion to apply shadings against strong sunshine. Overcrowding should be avoided, as plants so grown possessed long-stemmed leaves, and were, generally, much drawn up. He said the plants must have abundance of air, and also plenty of moisture around them. He did not favour the use of thumb pots for seedlings, but preferred to transplant the latter around the edges of shallow pans, and afterwards to place them in large pots. Two parts fibrous loam and an equal quantity of sweet leaf-soil, with a sprinkling of old mortar rubble, formed the compost for the final potting, and he, the lecturer, always used a small quantity of rotted manure

Having referred to the causes of the white leaf maggot, and other insect pests, the lecturer answered a number of questions from the members present. The discussion was a lengthy and interesting one, the feeding, pinching, and other matters of cultural interest, being dealt with. Hearty votes of thanks to the lecturer and Mr. Reeves, the chairman, brought to a close a very profitable evening.

Bristol Gardeners' Association.

A meeting was held on December 29, at St. John's Parish Rooms, when Dr. Shaw occupied the chair. A lecture on "Protective Colouring of Insects" was given by Mr. Stafford, the master of Caerleon Schools, Newport. The lecturer gave a brief life-history of the Lepidoptera family by way of introduction, with black-board demonstration, stating that he had made this a special study for twenty years, and during this period had collected most of the British moths and butterflies, and a large number of foreign specimens, several cases of which were set out along each side of the room. Particularly noticeable were the gorgeous colours of the specimens from India and Brazil. Mr. Stafford said insects owe their colour to pigments embedded under the skin; different food caused different colours; and colour was both for aggressive and defensive purposes. Most wonderful was the protective mimicry of some insects, while others emitted a nasty fluid as protection from their enemies. The Indian leaf butterfly (specimen on view) has veins and ribs similar to that of a leaf. The Atlas moth, he said, was the largest in the world, some examples measuring eleven inches across. A good discussion followed.

For two zonal pelargoniums, Mr. Bastin was awarded first prize; seven points going to Mr. Springham for parsnips and Apple Scarlet Pearmain; three to Mr. Scott for Newton Wonder apple; and five to Mr. Woodward for Cypripedium Countess of Carnarvon and C. Œdippe.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above sea-level, 150 feet.

DATE.	SUNSHINE.	TEMPERATURE OF THE AIR.			
1911. JANUARY 1 TO JANUARY 7.		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Jan. 1—Sunday	—	42	41	46	35
,, 2—Monday	0 24	36	33	38	31
,, 3—Tuesday	2 24	35	34	39	33
,, 4—Wednesday	—	38	36	40	34
,, 5—Thursday	—	36	35	40	35
,, 5—Friday	—	39	38	41	35
,, 7—Saturday	5 6	32	31	47	31
Means	(total) 7 54	37	35	41	33

DATE.	RAIN.	TEMPERATURE OF THE SOIL AT 9 A.M.			LOWEST TEMPERATURE ON GRASS.
1911. JANUARY 1 TO JANUARY 7.		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
Jan. 1—Sunday	0·03	39	40	43	33
,, 2—Monday	0·13	37	40	43	22
,, 3—Tuesday	0·02	36	39	42	30
,, 4—Wednesday	0·01	37	39	42	31
,, 5—Thursday	0·01	37	40	42	33
,, 6—Friday	0·18	38	40	42	30
,, 7—Saturday	0·01	37	40	42	25
Means	(total) 0·39	37	39	42	[illegible]

Snow fell on Monday, Jan. 2nd.

LONDON POTATO MARKETS.

Prices are firm, and supplies steady.

		s.	d.		s.	d.
British Queen	per ton	75	0	to	90	0
Epicure	per ton	70	0		75	0
Evergood	per ton	70	0		75	0
King Edward	per ton	75	0		85	0
Maincrops	per ton	95	0		100	0
Up-to-Date	per ton	80	0		105	0

NOW IS THE BEST TIME TO USE.... **WOOD & SON'S**

CAUSTIC ALKALI WINTER WASH

REMOVES Loose bark, slime, lichens and all Fungus Growths and Spores from Trees, Bushes, Walls, etc.

KILLS Winter Moths, Caterpillars, Weevils, Mussel Scale, Apple Sucker, Earwigs, Woolly Aphis, Mealy Bug, and all Aphides, Spiders and Mites.

READ THE LATEST REPORT

Easton Neston, Towcester.

"Your **Caustic Alkali Wash** I can highly recommend as a good all-round wash for fruit trees in general. I have used it extensively here both on young and old trees, on walls, espalier and others, with excellent results. Old trees that were literally smothered with mosses and lichens being left after the dressing with the heart quite clean of anything. It might also interest you to know that I find the best means to apply the wash is by the aid of the **National Knapsack Sprayer** you supplied me with in the spring of last year, a most excellent article, enabling the operator to more thoroughly distribute the wash, with the minimum of waste."

(Signed) G. HALLETT.

Prices: 40 tins, **37/6**; 20 tins, **20/-**; 10 tins, **11/-**; 5 tins, **7/-**; single tins, **1/6**. Carriage Paid. One tin makes 10 gallons of wash.

The FINEST GRAPES in ENGLAND

those winning the First Prize in the Premier Grape Class at SHREWSBURY,

were fed entirely with "LE FRUITIER."

See letter below.

£100

IN PRIZES AT SHOWS.

ORFORD HOUSE GARDENS,
NR. MARKET RASEN, LINCS.

Gentlemen,

As I have this season used only your "Le Fruitier" on all my Vines and Fruit Trees, I thought you would be interested in my success. I have taken over £100 in prizes at five shows, in addition to carrying off the first prize in the Premier Grape Class for 12 bunches of grapes at Shrewsbury Show. I won 5 other first awards.

The above results confirm my opinion that your "Le Fruitier" is the best Manure I know of to grow and finish grapes and other fruits for exhibition. Yours truly,

W. PARKER.

BONES Specially Prepared, 1in. to ½-in. and Meal. Quotations to your Station.

CHARCOAL Pure Vegetable, 3/- per Bushel.

LOAM Prime Yellow, Full of Fibre.

PEAT-ORCHID All Pure Fibre, no Waste. Prepared ready for use. 12/6 per large cask.

PEAT Selected Turves in Prime condition for Stoves and Greenhouse Plants.

RHODO. PEAT 15/- per Ton, Free on Rail, Hants.

Send for 1911 Illustrated Catalogue, giving full particulars of every requisite for the garden, post free, from

Wm. WOOD & SON, Ltd., Dept. M., THE ROYAL HORTICULTURISTS, **Wood Green, LONDON.**

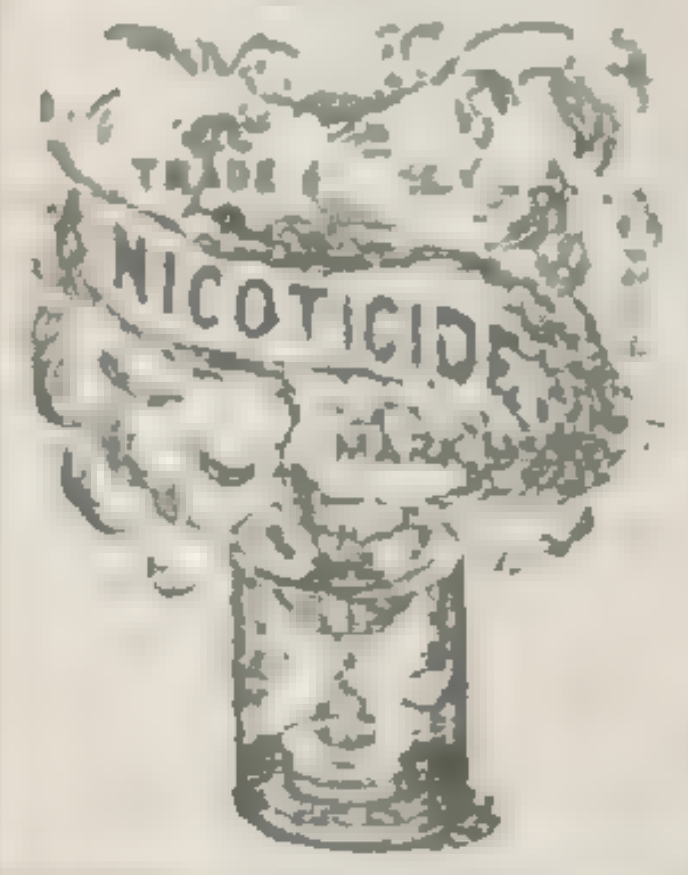
Telegrams and Cable—"FUNGHETO, LONDON." Telephone—PALMER'S GREEN 377 and 378.

NICOTICIDE Kills all Greenhouse Insects in one Application.

(FUMIGANT.)

		Cubic ft.	each.
Half-gallon Tin, contains sufficient for		100,000	60/-
No. 1 size Tin—1 pint	,, ,,	40,000	15/-
No. 2 size Tin—½ pint	,, ,,	20,000	7/6
No. 3 size Bottle—6 oz.	,, ,,	12,000	4/6
No. 4 size Bottle—4 oz.	,, ,,	8,000	3/-
No. 4½ size Bottle—2 oz.	,, ,,	4,000	1/8
No. 5 size Bottle—1 oz.	,, ,,	2,000	10d.

Carriage Paid.



Fumigators, 1/- each for 5,000 cubic ft.

Nicoticide Plant Spray.

Half-pint, **1/2**; Pint, **2/-**; Qrt., **3/6**; Half-gall., **5/-**; Gallon, **10/-**

Use 1 part to 40 parts for green fly, etc. Carriage paid.

Ask your Seedsman for our Goods.

HUNTER & GOW,
45, THOMAS STREET, LIVERPOOL.

HAVE YOU A GARDEN?

If so Don't Risk Catching Cold when you can avoid doing so by wearing our celebrated "**G" BRAND GRAINED CLOGS** Lined with Fine White Felt Only **4/6** Postage Paid.

Any size, Men's or Women's, all ready for posting off.

Our No. 688 in List.

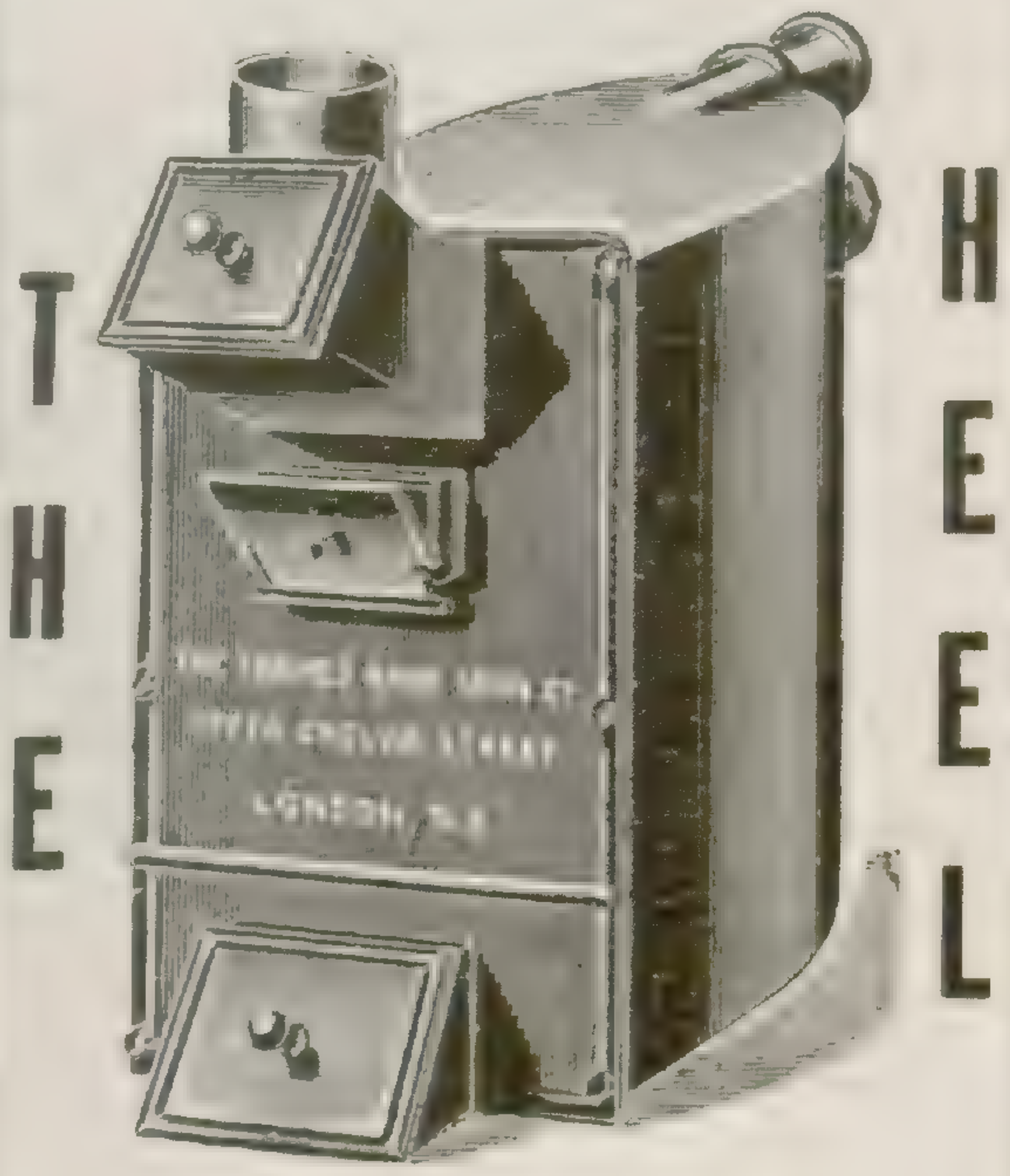
Note.—All sizes are as ordinary Boots. If you forget your size draw a pencil round your stocking foot and send to us. **THE GARDEN BOOT WAREHOUSE,**
6, Wellington Street, GLASGOW.

Please mention
THE GARDENERS' MAGAZINE
when writing to Advertisers.

'Phone: Hop. 763.

When next a Small Boiler you require

TRY



NONE TO BEAT IT.

THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.

4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

CHARGES FOR ADVERTISEMENTS

THE GARDENERS' MAGAZINE.

Five Lines and under	£0 2 6
Per Line beyond	0 0 6
,, Inch	0 6 0
,, Half Column	1 10 0
,, Column	3 0 0
,, Page	9 0 0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

All Advertisements should be Received by 5 o'clock on Tuesday.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— & Co.

Telephone Numbers:
Editorial and Printing Depts. ... ... 831 Holborn.
Advertising and Publishing Depts. ... 2140 Holborn.

Offices: 148 and 149, Aldersgate Street, London.

PUBLISHERS' ANNOUNCEMENTS.

THE GARDENERS' MAGAZINE may be obtained by order from all Newsagents, price Twopence, every Saturday. If any difficulty be found, a copy will be posted weekly direct from the Publisher, 148 and 149, Aldersgate Street, London, on the following terms: Twelve Months, 10s. 6d.; Six Months, 5s. 6d.

INDEX and Title Page to Vol. LIII. (comprising the weekly numbers from January to December, 1910), price 2d., by post 2½d.

BINDING CASES for binding the 12 months' numbers, green cloth, ornamented in gold, price 2s., post free.

VOLUME LIII., bound in green cloth, containing the 52 weekly numbers, 1910. Price 12s. 6d.; by post, 13s. 1d.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

GRAFTING.—A. F., Weston-super-Mare: Yes, certainly.

CUCUMBER BELLE VUE.—A correspondent wishes to know the raiser and distributor of Cucumber Belle Vue.

BRITISH GARDENERS' ASSOCIATION.—F. E. W., Wrexham: This association is steadily gaining strength, but we do not know the exact number of its members at the present time. The secretary of the B.G.A. is Mr. John Weathers, and his address is Talbot Villa, Isleworth, W.

WEEDS ON LAWNS.—R. W. B., Leamington: If the weeds are very numerous indeed the best plan will be to re-turf or sow the lawns, but if there is upwards of 50 per cent. of grass among the weeds, a good dressing of one of the lawn sand preparations, followed in due course by a rich surface dressing, and the application of good lawn grass seeds, will work wonders. You can obtain lawn sand for the destruction of weeds in lawns from any of the sundriesmen or seedsmen who advertise in our columns.

BEGONIA GLOIRE DE LORRAINE UNDER COOL TREATMENT.—The following interesting letter comes from a Nottingham correspondent, and, as to our knowledge, the famous Begonia Gloire de Lorraine is grown under, apparently, widely differing methods with fair success, we publish the letter in the hope that our readers will send us quite brief accounts of their methods, with special reference to temperature. "What do you consider the lowest possible temperature in which Begonia Gloire de Lorraine can be propagated and grown well? I have grown a few on several occasions, and my experience is that they appear to need a fairly high and moist temperature during the season of growth. I have visited gardens and seen them growing, and in most cases they have been cultivated in mixed stove collections or cucumber pits. In several large gardens I have seen a span-roof house devoted to the begonias, and in each case the house was kept very warm and humid. I have also seen attempts made to grow B. Gloire de Lorraine in cool, airy houses, with miserable results. One person told me recently that he had seen this begonia growing and flowering in a house heated only by two rows of four-inch pipes—a flow and return; I could quite believe they might be flowering in such a house then (October), but I could not believe they were wintered and propagated in a structure heated only for a cool greenhouse. Probably they may have been bought in the spring and kept until flowering time, but this is only surmise. The few plants I have grown have had a temperature seldom lower than 60 degrees, and yet they never become large, and always seem to grow slowly. Perhaps the soil makes some difference. Some time ago I visited a noted garden not far from here, and one of the young men told me B. Gloire de Lorraine could hardly be grown in a certain establishment where he had been employed, while in a neighbouring garden specimens 2ft. to 3ft. high were easily produced. I have a house that was originally a vinery, but has been reconstructed for a warm house. It has open lattice staging, painted a dirty green colour, which gets terribly hot on sunny days. In my opinion this is not a suitable staging for a house where moisture is needed. The dimensions of the lean-to are 15 feet long, 16 feet wide, 13 feet 6 inches high, and 5 feet to the sill. A gable runs two-thirds the sill and meets in the centre of the roof, giving more air space than a flat roof would. There are about 100ft. of 4-inch pipes, and I wonder whether this is sufficient to maintain a temperature high enough to enable me to grow Begonia Gloire de Lorraine well?"

ROSE MILKY WAY.—Mr. M. H. Walsh, Woods Hole, Mass., U.S.A., sends the following letter, which we gladly publish, as we were quite under the impression that this rose was raised at Waltham Cross: "My attention has been called to your issue of July 9, 1910, under heading of new single rose Milky Way, and in which it states Milky Way is a new seedling rose raised by Messrs. Wm. Paul and Son, Waltham Cross. This is misleading. The new single rose Milky Way is one of my productions, and not Messrs. W. Paul and Son's. Kindly make this correction, and oblige."

ROSE SOCIETY'S RULES.—J. B., Gourock: If you accept the society's rules you can scarcely alter them to suit your own convenience without first submitting the matter to the society. Your best course will be to write to Mr. Edward Mawley, V.M.H., Rosebank, Berkhamsted, stating your case, and the reasons for wishing to make the alteration. Mr. Mawley will then tell you how far the rules are binding on societies in affiliation with the N.R.S.

PRUNING ORCHARD TREES.—S. F. K., Malvern: The matter is dealt with as follows by the Board of Agriculture, and the leaflet to which you refer is No. 70: When young standard trees are properly pruned for the first five or six years after planting, they require very little attention in that respect later. They should be gone over each year, all surplus wood being thinned out, and interlacing or diseased branches cut away. Non-observance of this practice will result eventually in the development of a head of densely tangled and diseased branches, examples of which are to be found in nearly all old orchards. The extent to which this condition may be remedied by careful pruning depends very largely upon the individual trees. If, for example, a tree is very old, the amount of wood which ought to be cut out is generally so great that its removal seriously weakens the tree, and frequently even kills it. In dealing with old trees it is necessary that the greatest care be taken not to remove too much wood at one time. It is better to spread the operation over two or even three seasons than to cripple the trees by too severe pruning. Many full-grown trees do not lend themselves at all well to the purposes of pruning. The requisite thinning-out of the wood frequently cannot be accomplished except by the removal of many of the larger branches, with the result that a very large portion of the head, and especially of the fruiting wood, is lost. When pruning is being done, therefore, these facts should not be overlooked. As much surplus wood and interlacing and diseased branches as can be spared should be cut out, and particular attention should be given to thinning in such a manner that the fruiting wood is exposed as far as possible to a free supply of air and sunlight. Extra time spent in removing dead and diseased twigs will be profitably occupied, for it is on such parts that some of the most serious fungoid pests, such as the brown rot and apple scab fungi, pass the winter stages of their life-history, and in the following spring break out into active growth and produce another epidemic of infection. All prunings should be burnt immediately, in order to destroy insect and fungoid pests; the ashes should be distributed over the soil as manure.

NAMES OF PLANTS.

Under this heading we can only undertake to name species and well marked varieties of plants, and not florists' flowers. Specimens should be packed in stout boxes with damp (not wet) moss or soft leaves, as packing material, to ensure their reaching us in a fresh state. It is essential that flowers must accompany specimens of flowering plants, that fern fronds be fertile, and that numbers be firmly attached to the specimens so that they can be seen without any untying. We cannot promise to name more than six specimens at one time from any one correspondent.

M. B. J., Merton.—1, Justicia calycotricha; 2, Begonia Haageana; 3, Lithospermum prostratum.

W. M., Hale.—1, Cypripedium Œdippe; 2, C. Leeanum; 3, C. Hera Euryades; 4, Cœlogyne cristata; 5, Selaginella uncinata.

L. N. S., Sandgate.—1, Fittonia Pearcei; 2, Curculigo recurvata; 3, Cyperus papyrus; 4, Nephrolepis Duffi; 5, Ardisia mamillata.

P. G., Hereford.—1, Cotoneaster frigida; 2, Quercus Ilex; 3 Ligustrum lucidum; 4, Cupressus Lawsoniana; 5, Abies Nordmanniana.

C. C., March.—1, a beautiful garden variety of Begonia Rex; 2, not recognised, please send when in flower; 3, Amaryllis aulica; 4, Gymnogramma Wettenhalliana; 5, G. Matthewsi.

FORTHCOMING ENGAGEMENTS.

MONDAY, January 16.—Royal Horticultural Society, Examination of Employees in Public Parks.

TUESDAY, January 17.—Royal Horticultural Society, Meeting of Floral, Fruit, and Orchid Committees, 12 noon: General Meeting, 3 p.m.: Lecture by Mr. H. C. Long on "Weeds and Weed Seedlings": Scientific Committee, 4 p.m.

WEDNESDAY, January 18.—National Sweet Pea Society, Special General Meeting at the Hotel Windsor, 2.30 p.m.

THURSDAY, January 19.—Gardeners' Royal Benevolent Institution, Annual Meeting and Election at "Simpson's," Strand, London, 2.45 p.m.

Linnean Society, 8 p.m.

SATURDAY, January 21.—Societé Francaise d'Horticulture de Londres, Annual Dinner, 6.30 p.m.

British Gardeners' Association, Meeting at Cobden Café, Corporation Street, Birmingham, 7.30 p.m.

CONTENTS.

PAGE
Answers to Correspondents 42
Apple James Grieve 29
Asparagus 37
Climbing and Pillar Roses 35
Deep Cultivation 34
Feeding Spring Bulbs 32
Judging Sweet Peas 33
Late-struck Japanese Chrysanthemums for Exhibition 39
Lilium umbellatum 33
Magnolias 27
Mistakes in Gooseberry Growing 30
New Plants, etc. 31
Notes of the Week 23
Pot Culture of Hardy Fruits 28
Preparing and Planting Perennial Borders ... 32
Propagation of Lilies 29
Schizocodons 35
The Purposes and Poetry of Trees 26
Work for the Week 36

ILLUSTRATIONS.

Portrait of Mr. Martin Silsbury, 23; Miltonia Warscewiczi Leucochila, 25; Magnolia grandiflora on the walls of Maple-Durham House, 27; Dessert Apple James Grieve, 29; Cypripedium Gaston Bultel, 30; Cyclamen Mrs. Buckston, 31; An effective bed of Umbellate Lilies at Kew, 33.

Price FIVE SHILLINGS NETT; by post 5s. 6d.

THE AMATEUR'S GREENHOUSE.

By T. W. SANDERS, F.L.S., F.R.H.S.,

Editor of "Amateur Gardening" and "Farm and Garden." Author of "Encyclopædia of Gardening," etc., etc.

A COMPLETE GUIDE TO THE CONSTRUCTION, HEATING AND MANAGEMENT OF GREENHOUSES; PROPAGATION AND CULTIVATION OF GREENHOUSE PLANTS; INSECT, ANIMAL, AND FUNGOID PESTS, AND HOW TO ERADICATE THEM.

To be obtained by order from any Bookseller; or will be sent, post free, packed in box, for 5s. 6d., by the Publishers.

W. H. and L. COLLINGRIDGE, 148 and 149, Aldersgate Street, London.

Fruit Pergola as recently erected.

Why not a Fruit Pergola next year?

Charming effects and excellent results can be obtained by training fruit trees on our improved Arched Espaliers. Order now, and get your fruit trees planted in good time.

No. 103 Arched Espalier, 8ft. high, 5ft. wide, painted, 9/6 per yard.
Cheaper patterns 6/- and 3/- per yard.
Catalogue No 153A of Espaliers, Rose Trainers, Garden Arches, Pergolas, etc., free.
HUTS FOR THE GARDEN, POTTING SHEDS, FRUIT ROOMS, TOOL HOUSES, ETC.

BOULTON & PAUL, Ltd., Specialists, NORWICH.

Dr. J. COLLIS BROWNE'S

THE ORIGINAL AND ONLY GENUINE

Chlorodyne

ADMITTED BY THE PROFESSION TO BE THE MOST VALUABLE REMEDY EVER DISCOVERED.

The Best Remedy known for

COUGHS, COLDS, ASTHMA, BRONCHITIS.

Cuts short all attacks of SPASMS, HYSTERIA, and PALPITATION.

The only Palliative in NEURALGIA, TOOTHACHE, GOUT, RHEUMATISM.

Acts like a Charm in DIARRHŒA and DYSENTERY.

Refuse imitations and insist on having
Dr. J. COLLIS BROWNE'S Chlorodyne.
Convincing Medical Testimony with each bottle.
Of all Chemists, 1/1½, 2/9, 4/6.

VAPORITE

is the only sure destroyer of Wireworms, Leatherjackets, etc., etc.

If you dig it in when your land is idle (1lb to 8 sq. yds.) it entirely destroys all injurious insects, and allows the plants and vegetables to thrive from the start untouched by these pests; it also ensures sound and healthy crops later on. Vaporite is sold by all Seedsmen. Our instructive Booklet No. 45, post free, tells you all about Vaporite and its uses.

VAPORITE-STRAWSON Co., Ltd,
Dept. E,
Spencer House, South Place, E.C.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to
EPPS & CO., Ringwood, HANTS.

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant

Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

THOMSON'S
Celebrated
VINE·PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES
UNRIVALLED FOR ALL PURPOSES
SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE

800 Loads of the very finest TURF LOAM for immediate Sale at a **Bargain Price** Single truck load put on rail.

TURF LOAM

Send for Price—
HY. POTTER & SON,
Fairfield Wks., CHELMSFORD, Essex.

✱ SUBSCRIBER'S ORDER FORM ✱

Every Saturday THE GARDENERS' MAGAZINE. Twopence.

To W. H. AND L. COLLINGRIDGE,
148 AND 149, ALDERSGATE STREET, LONDON, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose ________ for ________ months in advance.

Name ____________________

Address ____________________

Date ____________________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

*** If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.

Price ONE SHILLING net, by post 1s. 2d.
Bound in cloth 1s. 6d., by post 1s. 9d.
FULLY ILLUSTRATED.

LAWNS AND GREENS:

Their Formation and Management.

By T. W. SANDERS, F.L.S., Editor of "Amateur Gardening."

FORMATION OF LAWNS.
Soils and Their Treatment—Preparing and Levelling—Drainage—Turf versus Seeds—Best Seeds for Lawns and Greens—When and How to Sow—Mowing New Grass—Method of Turfing Lawns.
MANAGEMENT OF LAWNS.
How a Lawn should be Mown—Rolling—Watering—Renovating—Manures and Their Application—Lawn Edgings—Moles and Insect Pests—Weeds and Their Eradication.
TENNIS AND CROQUET LAWNS.
Forming a Tennis Court—Site, Size, and Drainage—Plan of Tennis Court and Croquet Ground.
BOWLING GREENS.
"Crown Green" and "Flat Green"—The Ideal Site—Foundation and Drainage—Cost of Forming a Green—General Management.
CRICKET GROUNDS.
Site and Drainage—Grasses and Clovers—Turfing the Pitch—General Up-keep.
GOLF GREENS.
Features of the Course—Obstacles or Bunkers—Holes: Their Position and Distance—Putting Greens and Teeing Grounds
MOWERS, ROLLERS, ETC.
Light and Heavy Machines—Leading Makes Described—Motor Mowers and Rollers—Adjusting the Cutting Blades—Hints on Rolling—Tools and Appliances.

Published by
W. H. and L. COLLINGRIDGE, 148 and 149, Aldersgate Street, E.C.

W. RICHARDSON & CO.,

MANUFACTURERS OF ALL KINDS OF

HORTICULTURAL BUILDINGS. Also HEATING ENGINEERS.

Recent Contracts for Horticultural Buildings and Heating include the following:—

The Rt. Hon. Lord Herbert Vane Tempest, Plas, Machynlleth.
The Rt. Hon. The Earl of Durham, Lambton Castle, Co. Durh m.
The Rt Hon. The Earl of Donoughmore, Knocklofty, Clonmel, Ireland.
The Rt. Hon, The Earl of Sefton, Croxteth Park, Liverpool.
The Rt. Hon. Lord Glanusk, Glanusk Park, Crickhowell.
Lady Hickman, Wightwick, Wolverhampton.
Sir William Eden, Bart., Windlesham Hall, Ferryhill.
Sir Alfred Pease, Bart., Pinchingthorpe Hall, Yorkshire.
Sir Joseph Walton. Bart., M.P., Rushpool Hall, Saltburn-by-the-Sea.
Sir Theodore Peel, Park Gate, Guiseley.
Colonel Scott, Penmaenucha, Dolgelly.
Colonel Napier Clavering, Axwell Park, Northumberland.
Major Tempest, Broughton Hall Skipton in Craven.
Captain Wainman, Otterington Hall, Northallerton.
Royal Horticultural Society, Wi ley, Ripley, Surrey.
Royal Hospital, Kilmainham, per Commissioners of Public Works, Dublin.
David Richardson, Esq., Wheelbirks, Stocksfield-on Tyne.
Richard Hill, Esq., Holly Mount, Buxted, Sussex.
Dewsbury Corporation, Crows Nest Park.
C. Lingford, Esq., Lancelands, Cotherstone.
David Davies, Esq., M.P., Llandinam, Montgomeryshire.
Harrison Benn, Esq., Holcombe Hall, Dawlish, Devonshire.
Mrs. Akenhead, Riseholme, York.
E. Meynell. Esq., The Friarage, Yarm-on-Tees.
E. Shaw Hellier. Esq., The Wombourne Wodehouse, Wolverhampton.
E. W. Parker, Esq., Skirwith Abbey, Penrith.
W. Loudin MacNeill, Esq., Shennaton, Kirkcowan, Wigtownshire.
Miss Watt, Spott House, Dunbar, East Lothian.
B. W. M. Pearson, Esq., Nunhold Grange, Hatton, Warwick.
Alfred Hewlitt, Esq., Haseley Manor, Hatton, Warwick.
G. F. Insole Esq., The Court, Llandaff.
J. Bagwell, Esq., Marefield, Clonmel, Ireland.
Kenneth Wilson, Esq., Butts Garth, Thorner, near Leeds.
Mrs. Love, Hawke Hills, Easingwold, Yorkshire.
Theodore H. Rowntree, Esq., Clifton Lawn, York.
J. J. Hunt. Esq., Grimston Court, York.
Miss Marfleet. Boothby Hall, near Lincoln.
W. D. Cliffe. Esq., Meanwood Tower, Leeds.
C. L. P. Robinson, Esq., Brettanby Manor, near Darlington.
J. Rossiter Hoyle, Esq., Ecclesall, Sheffield.
Mrs. Wright. Morton, near Bingley.
The Rev. W. T. Travis Ripley, Yorkshire.
Hiram Craven, Esq., The Briery, Sunderland.
Mrs. Freville Cookson. Chute Standen, Andover.
W. H. St. Quintin. Esq., Scampston H ll, Rillington, Yorks.
R. Bamford, Esq., Weav's Hall, Uttoxeter.
F. Reynard, Esq., Sunderlandwick Driffield.
New School for Mr. and Mrs. Cooper, Scarborough.
Missionaries Children's Home, Hitchin.
Salvation Army Home, Sydenham Hill, London, S E.
Hampshire House Club, Hammersmith, London, W.
Scarborough Hospital and Dispensary.
Durham Cathedral.
North-Eastern Counties School, Barnard Castle.
Ackworth School, Pontefract.
Skating Rink, Birtley, Durham.
Skating Rink, Philadelphia, Co. Durham.
Lloyds Bank, Darlington,
St. Luke's Church, Cambridge.
Nidd Church, Yorkshire.

LONDON OFFICE:—Belgravia Chambers, Victoria Street, S.W.

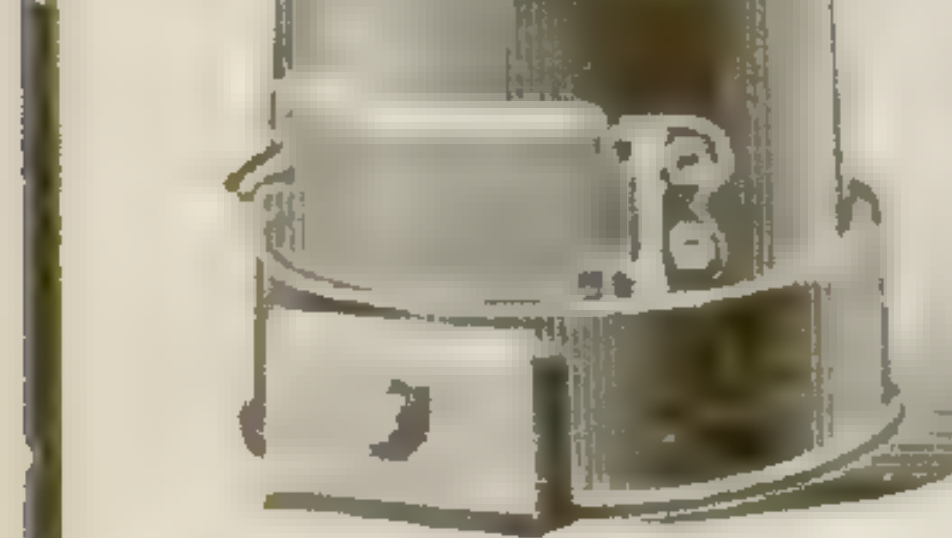
TELEGRAMS { "Richardson," Darlington. / "Horticraft," London. NATIONAL TELEPHONE } 17 Darlington.

Our Book of Designs sent free to those mentioning this paper.

PLANS and ESTIMATES PREPARED FREE of COST. DARLINGTON.

Representatives sent to any part of the Kingdom to advise and take particulars

GREEN'S PATENT HOT WATER BOILERS and HEATING APPARATUS.



For Public and Private Buildings, Greenhouses, Conservatories, etc.

SPECIAL BOILERS MADE TO ORDER.

ESTIMATES GIVEN

Please write for Price List No. 4.

THOMAS GREEN & SON, Ltd.,

Smithfield Ironworks. North St., Leeds. and
NEW SURREY WORKS, SOUTHWARK ST.,
LONDON. S E

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

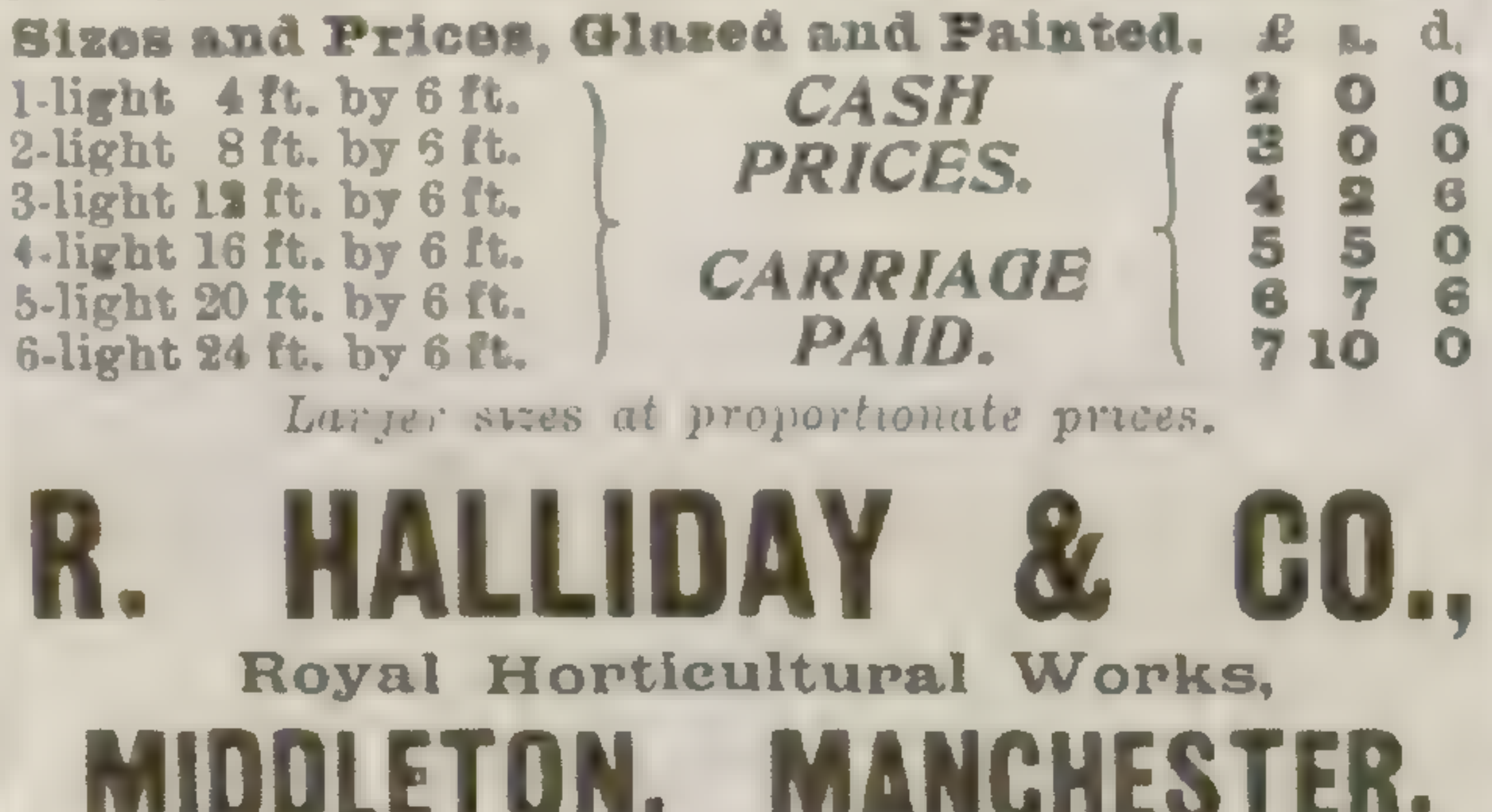
Extracts from 35th annual collection of reports:—
NATIVE GUANO for POTATOES, VEGETABLES, etc.
A. J. BEARD, Erdington: "Potatoes, splendid, free from disease. Best I ever had"—H. CHESTER, Nantwich: "Best onion manure I ever used. Grand for onion fly."

NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc.
J. CANT, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. FRAMPTON, Titchfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED, 29,** New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted

PORTABLE CUCUMBER FRAMES.

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.		£	s.	d.
1-light 4 ft. by 6 ft.	CASH PRICES.	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.	CARRIAGE PAID.	5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON, MANCHESTER.

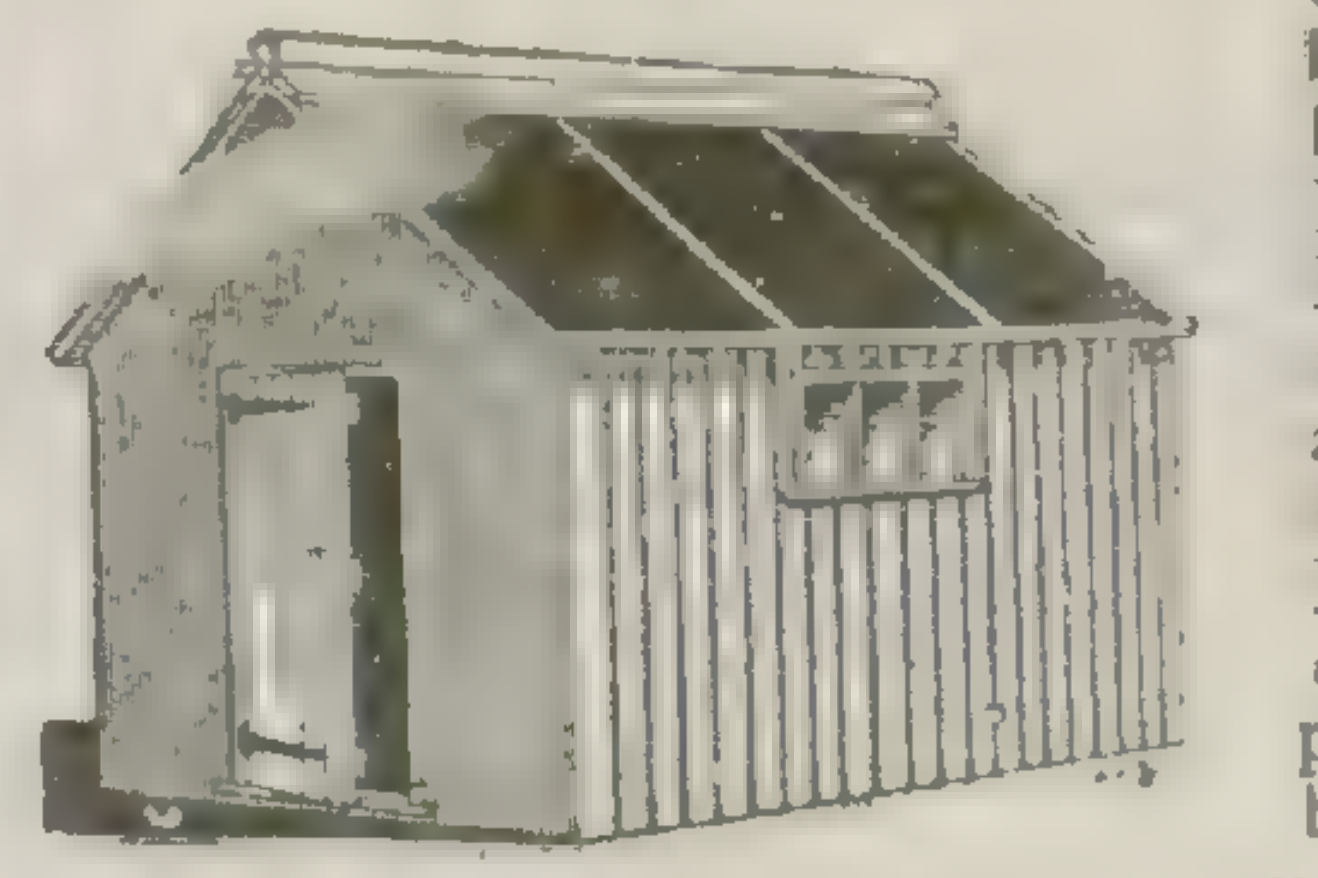
Barr's
Lawn Phytobroma
The best Manure for all Lawns.

The most economical of all artificial manures, 2 oz. to the square yard only being required.
Per cwt., **20/-**; ½-cwt., **12/6**; 28lb., **7/6**; 14lb., **4/6**; 7lb., **2/6**; sample tins, **1/-**.
Prepaid Orders for 28lbs. and upwards, carriage paid.
Circular with full particulars, on Application.

BARR & SONS,
11, 12, & 13 KING STREET, COVENT GARDEN, LONDON.

The CHEAPEST in ENGLAND

THE "POPULAR."



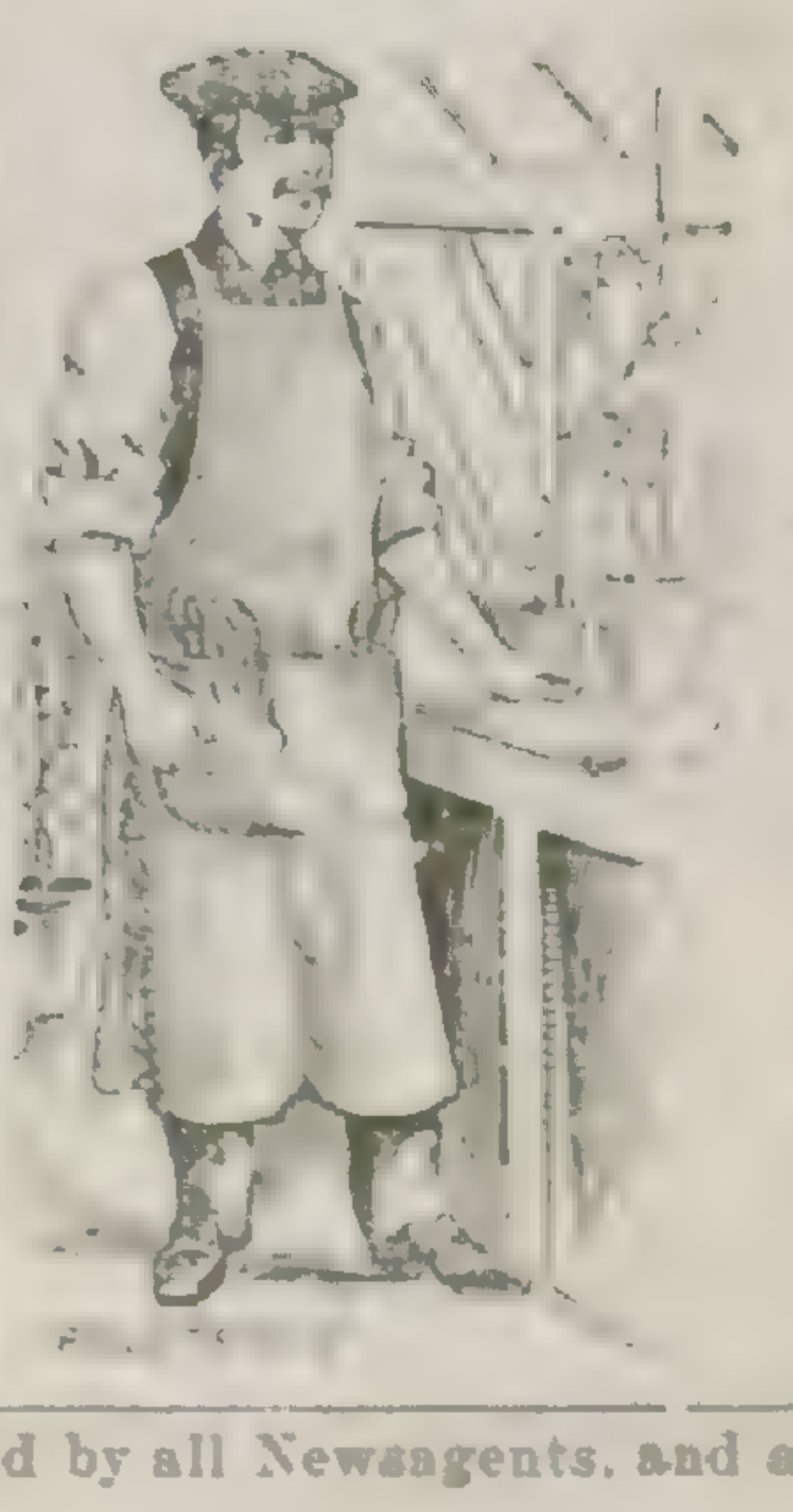
Copyright Registered.

Made in complete sections, sides and end from best quality Red Deal (not inferior Foreign Match Boards as other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

Cash with Order Prices. SIZES.		FLOOR MADE FROM ⅞-INCH TONGUED BOARDS.
6 ft. x 4 ft. x 6 ft.	£1 10 0	5/0
6 ft. x 5 ft. x 6½ ft.	£1 15 0	6/9
7½ ft. x 5 ft. x 6½ ft.	£1 17 6	7/9
8 ft. x 6 ft. x 7 ft.	£2 4 0	9/9
9 ft. x 6 ft. x 7 ft.	£2 9 0	11/0
10 ft. x 6 ft. x 7 ft.	£2 14 0	12/6
10 ft. x 8 ft. x 8 ft.	£3 10 0	16/6
12 ft. x 8 ft. x 8 ft.	£4 0 0	19/6

Carriage paid to any Station in England and Wales.
Catalogue, with Testimonials, Post Free.

J. T. HOBSON & CO.,
Largest Makers of Portable Buildings.
Established 70 years. BEDFORD.
Works, 6 acres. Stock of Wood in Sheds 10,000 tons.



THE APRON

That has Come to Stay.

WORN BY ALL THE LEADING GARDENERS.

LOOK AT THE PRICE!

In Dark Blue Ponieus Twills,
1/9, Postage 3d. extra.

Or in Dark Blue Ponieus Serge,
3/9, Postage 3d. extra

WRITE FOR ONE TO-DAY.

SHAW & MONTGOMERY
(PENMAN'S),
628, Argyle St., Glasgow, W.

Printed and Published by W. H. & L. COLLINGRIDGE, City Press, 148 & 149 Aldersgate St. London. E.C. and sold by all Newsagents, and at all Railway Bookstalls.

SWEET PEAS IN 1911—Illustrated.

THE GARDENERS' MAGAZINE.

No. 2,986. Vol. LIV.
Reg. at the G.P.O. as a Newspaper.

SATURDAY, JANUARY 21, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S SEED GUIDE, now ready, contains a select list of the best Vegetables, and the most beautiful Flowers for Garden and Greenhouse, including many novelties of sterling merit. Free on application. BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, is this winter keeping a large staff of hot-water men in the shops, in order that they may attend immediately to any breakdown of Boilers or Hot-Water Piping in any part of the country. In case of emergencies please telephone 201 Western, or wire "Gray, Chelsea, London."

KING'S ACRE FRUIT TREES, ROSES, AND ORCHARD-HOUSE TREES.

AWARDED 24 GOLD MEDALS SEASONS 1909-10.

180 acres to select from of the finest Trees that natural conditions and the skill of man can produce.

ILLUSTRATED CATALOGUES FREE ON APPLICATION.

KING'S ACRE NURSERIES, LTD., HEREFORD.

1,000,000 BORDER AND ROCK Plants. Unique collection.
50,000 HARDY FERNS, over 400 varieties. See Catalogue.
10,000 FLOWERING SHRUBS must be cleared.
30,000 LILIES NOW IN STOCK, Other consignments arriving.
DELPHINIUMS, 9 GOLD MEDALS IN 2 YEARS.
A record. Unique collection. Seed, 3d., 6d., and 1s. pkt.
PERENNIAL SEEDS, UNIQUE COLLECTION.
All Catalogues Free.
PERRY'S HARDY PLANT FARM, Enfield, Middx.

WELLS' CHRYSANTHEMUMS.—List of Novelties now ready; also descriptive general list. Wells' Phlox and Michaelmas Daisies, Hardy Herbaceous Plants, and Perpetual Flowering Carnations. Catalogues post free. Wells' book, "The Culture of the Chrysanthemum," post free, 1s. 6d. W. WELLS, Merstham, Surrey.

BRUSSELS SPROUT SOLIDITY. The finest and hardiest Sprout in Britain. Only true in our own sealed packets at 1s. Send for a copy of our beautifully illustrated Catalogue, 140 pages, full of novelties and useful information. ALEXANDER and BROWN, Seed Merchants, Perth, N.B.

WEEKS'S DUPLEX UPRIGHT TUBULAR BOILERS, for full advertisement see page xv.

ORDER MATS NOW!—To prevent disappointment and loss by early frosts, order Norfolk Reed Mats now. 50 per cent. more protective than straw. Made to any size. 1d. per square foot.—BOULTON and PAUL, Lim., Norwich.

CLAY'S MANURES, CRUSHED BONES (See page xiii.)
CLAY'S FERTILIZER is UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country

SOW NOW UNDER GLASS.
WEBBS' SELD. AILSA CRAIG ONION. 1s. and 2s. 6d. per packet.
WEBBS' CHAMPION PRIZE LEEK. 1s. 6d. per packet.
WEBBS' CLUSTER DWARF BEAN, 3s. per quart.
WEBBS' EVERBEARING CUCUMBER, 1s. 6d. per packet.
WEBB and SONS, The Royal Seedsmen, WORDSLEY, STOURBRIDGE.

BUNYARD'S NEW CATALOGUES. The following have been recently published, and contain all worthy new varieties. Post free on application.
BUNYARD'S CLIMBING PLANTS. Illustrated.
BUNYARD'S HERBACEOUS PLANTS, Illustrated.
BUNYARD'S HARDY TREES AND SHRUBS. Illustrated.
BUNYARD'S SEEDS, VEGETABLE AND FLOWER, with coloured plates.
GEO. BUNYARD AND CO., LTD., Royal Nurseries, MAIDSTONE.

"FOUR OAKS" GOLD MEDAL SYRINGES.
The only syringes ever awarded a Gold Medal. Unequalled for Spraying. In numerous sizes, from 8s 6d. Bends, 1s. 6d. Used and recommended by all leading authorities. Insist upon having "Four Oaks." Supplied by all Seedsmen, Ironmongers, etc. Full particulars from Sole Makers—
THE FOUR OAKS UNDENTABLE SYRINGE and SPRAYING MACHINE CO., SUTTON COLDFIELD.

BEGONIAS, awarded 24 Gold Medals.—Double Seed, 2s. 6d. and 5s. per pkt.; Frilled, Crested, or plain Single, 1s., 2s. 6d., and 5s. per pkt. For price of Begonia tubers, Carnations (Border and Perpetual flowering), Cannas, Cyclamen, Blue Primroses, Delphiniums, Pansies, Polyanthus, Lily of the Valley, Violets, etc., please send postcard for copy of our Illustrated Catalogue, free on application:
BLACKMORE AND LANGDON, Twerton Hill Nursery, Bath.

LAXTON'S NEW SEED CATALOGUE for 1911. Descriptive and fully illustrated, including grand new "Laxtonian Pea" and many other novelties, gratis on application.—LAXTON BROS., Seed Merchant, Bedford.

CONSERVATORIES AND WINTER GARDENS, Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue free.—BOULTON and PAUL, Lim., Norwich.

THOMSON'S CELEBRATED MANURES. For full advertisement see page xv.

PORTABLE IRON AND WOOD BUILDINGS, Stables, Loose Boxes, Pavilions, Open-air Shelters, Motor Houses, Poultry Houses, Larders, Potting Sheds, Greenhouses, Sheep Troughs, Dog Kennels. Send for Free Catalogue. J. T. HOBSON and CO., Timber Importers, Bedford. Established 65 years.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

SOW NOW UNDER GLASS.
SUTTON'S SELECTED AILSA CRAIG ONION.
Mr. J. Mills, gardener to Capt. H. Heywood-Lonsdale, writes: "I again (1910) won First Prize for Spring Onions at the Shrewsbury Show. This is the eighth year in succession, and each time it has been your Ailsa Craig. I was also First with Autumn Onions, showing Sutton's A1. In the class open to gardeners in Shropshire and Montgomeryshire I was First for both Spring and Autumn Onions, showing the same varieties."
Per packet, 1s. 6d., post free.
SUTTON AND SONS, THE ROYAL SEED ESTABLISHMENT, READING.

"Colour is meant for the perpetual comfort and delight of the human heart."—RUSKIN.
KELWAY'S "COLOUR BORDERS" (Regd.)
Artistic and permanent—arranged for continuous bloom and colour effect.
These Borders can be purchased BY THE SQUARE YARD for any position all ready arranged for planting.
"I am thinking of planting a few borders with perennials. I am tired of continually planting bedding plants. Mrs. ———."
Write now stating your area, position, soil, etc., for planting in the Autumn, to
KELWAY AND SON, The Royal Horticulturists, LANGPORT.

NOW IS THE TIME TO PLANT Kelway's Lovely New Pæonies, for a fine show in the spring and summer. Kelway's Pæonies are more beautiful than ever. Choice named varieties from strong country-grown stocks: 15s. and 21s., 27s., 36s., 54s., and 70s. a dozen. Single plants, 1s. 6d. to 10s. 6d.
"Some Pæonies I had from you a few years ago are quite a show when they are in bloom, and are greatly admired. ———, Shipston-on-Stour."
IT IS NECESSARY TO OBTAIN KELWAY'S.
KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

FIDLER'S NEW ILLUSTRATED CATALOGUE OF CHOICE GARDEN SEEDS will be sent, post free, to any address on receipt of postcard. Write at once for a copy. It may help you to save 50% on your seed bill this season. FIDLER and SONS, Royal Berks Seed Stores, Reading.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

POULTRY AND KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

XL ALL FOR WINTER AND SPRING CLEANSING.
Before growth commences stronger solutions may be used.
XL ALL NICOTINE INSECTICIDE WASH (poisonous) for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. Agents, write for particulars.
XL ALL CAUSTIC WINTER WASH (non-poisonous) for dormant Fruit Trees, stamps out American Blight, and all other pests.
Other XL ALL Preparations of great renown are XL ALL NICOTINE VAPORISING COMPOUND, XL ALL FERTILISER, XL ALL LAWN SAND, etc.
Ask your Nurseryman, Seedsman, or Florist for my small Pink List.
G. H. RICHARDS, Manufacturer, 234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

SEEDS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Select Seeds.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth.
Catalogues post free.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

H. A. TRACY,
Orchid Nursery, Twickenham.
Orchids of Every Species.

STANLEY & CO., Southgate, London N.
Tel.: 59, Palmers Green.
Hybrids in flower, in great variety.

RHODODENDRONS.

DICKSONS & CO.,
1, Waterloo Place, Edinburgh.
Pink Pearls, Ponticums, choice Hybrids. Write.

ROSES.

R. H. BATH, Ltd.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

ALEX. DICKSON & SONS, Ltd.,
Hawlmark, Newtownards, Ireland.
The World-famed Champion Rose Growers and Raisers of Irish Pedigree Seedling Roses. Lists Free.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 1st Prizes, 3 2nds. at N.R.S. Shows, 1910. Ctg. Free.

SAMUEL M'GREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
Illustrated Catalogue free.

TURF LOAM.

A. B. JOHNSTON, New Park, Cranleigh, Surrey.
Very Fibrous Loam, for Carnations, Roses, Vine Borders, Melons, Fruits under Glass, &c., &c.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

ORCHIDS, ORCHIDS.

Clean, healthy, well grown Plants at reasonable prices.
Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

AMERICAN TREE CARNATIONS AND MALMAISONS

My Season's Catalogues of the Choicest Collection of these flowers are NOW READY, and will be sent gratis and post free to all applicants.

E. J. WOOTTEN,
Fairoak, EASTLEIGH.

"GOOD is not good enough, the BEST is not too good."

SWEET PEA SEED.

My **CATALOGUE** is **NOW READY,** and will be sent on application.

Awarded Silver Medal by the Royal Horticultural Society.

W. R. HAMMOND,
Grovelands, BURGESS HILL, SUSSEX.

Full Instructions on Planting and Propagation of Hardy Plants and Flowers.

476 PAGES, AND 255 ILLUSTRATIONS OF PLANTS AND FLOWERS FROM PHOTOGRAPHS.

EASILY-GROWN HARDY PERENNIALS.

By G H. VOS, B.A., Editorially supervised by T. W. SANDERS, F.L.S., Editor of "Amateur Gardening."

Price **5/-** net; Post Free, packed in box, **5/6.**

SOME FEATURES OF THE WORK:

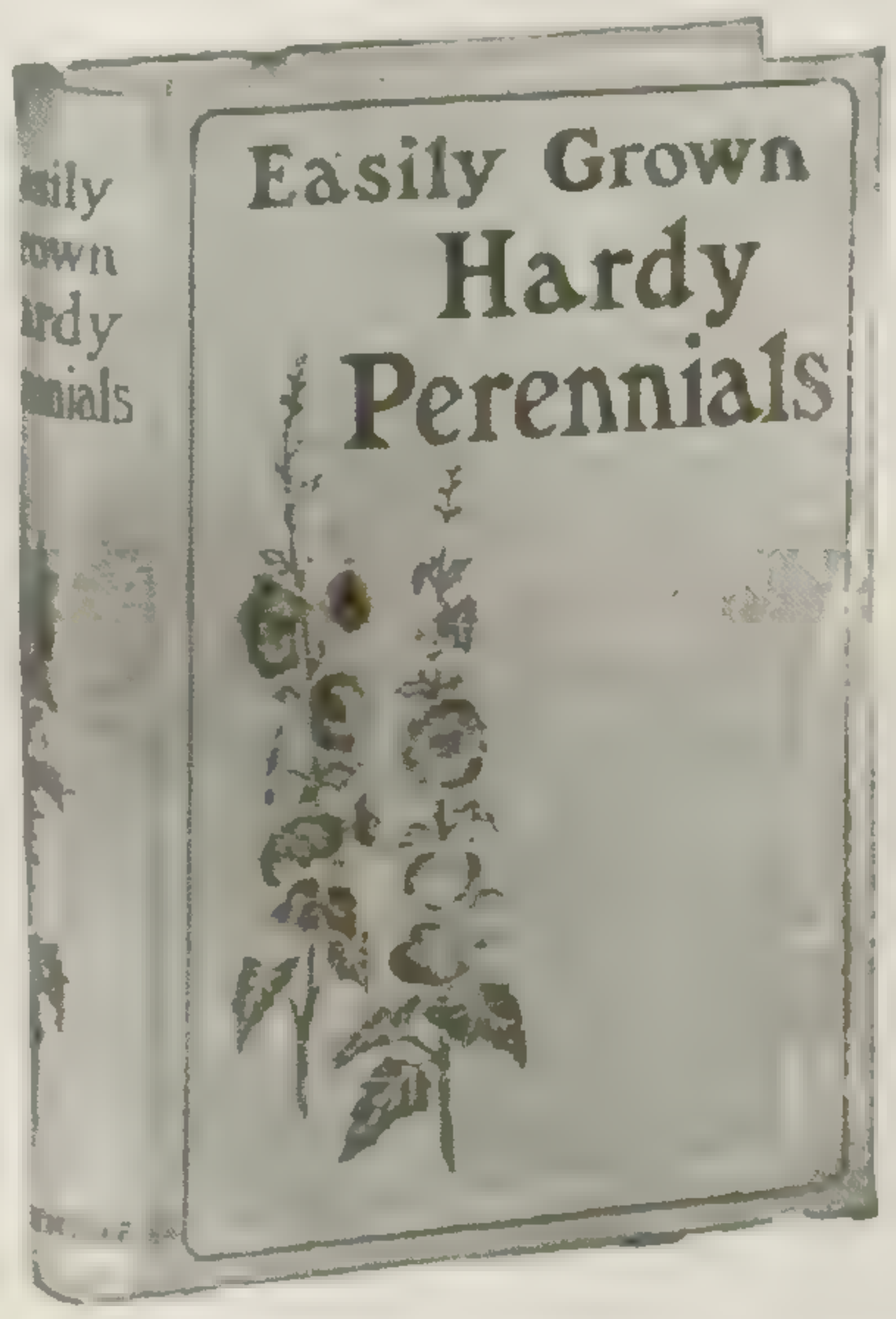
Soil and Position.—The particular soil or compost and position for each genus of plants are very fully and carefully described. Shade and sun-loving plants specially mentioned.

Planting.—The best time and method of planting are also clearly set forth.

Pests.—Special mention is made of any plants likely to be attacked by insect pests, and remedies are given.

Propagation.—The best mode of increasing each family of plants described in detail—seeds, cuttings, and division.

Illustrations.—Two hundred and fifty-five of the most popular species and varieties portrayed, mostly as growing in the garden.



Botanical Name.—Gives the botanical or generic name of each genus of plant described in the book.

Common or Popular Names.—Supplies the common or popular English names of all the plants described.

Natural Order.—The botanical family to which kind belongs.

Habit and Uses.—States whether the plant is fibrous, tuberous, or bulbous rooted, and to what use it can be most effectively put in garden decoration.

Species and Varieties.—Describes the most showy varieties worthy of culture, the colour of their flowers, season of blooming, height and native country.

"The cultural details are very valuable."—*Gardeners' Chronicle.*

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE," 148 and 149, Aldersgate Street, London, E.C.

Please send me a copy of **EASILY-GROWN HARDY PERENNIALS** *by Post, for which I enclose remittance of* **5 6.**

Name..

Address..

ORDER FORM.

Barr's Extra Selected Seeds

A Gold Medal for excellence was awarded us by the National Vegetable Society, 1910

Very Finest Strains of Vegetable Seeds

for all Seasons, all of proven growth.

Collections 5/6 to 105/-

Illustrated Catalogue on application.

Exhibition Group of Barr's Prize Strain Vegetables.

Very Finest Strains of Flower Seeds

including many beautiful novelties.

Collections 5/6 to 63/-

Sweet Peas

A GREAT SPECIALITY.

Special collections for Exhibition & Flower Borders; more than 100 of the finest sorts in cultivation described.

See Barr's Seed Guide Free on Application.

BARR & SONS, 11, 12 & 13, King Street, Covent Garden, LONDON.

TESTING GROUNDS AT SURBITON, SURREY.

BALCH'S SCOTCH GROWN
TOMATO SEED.

BALCH'S FILLBASKET.—A well-known, superb variety, very early, heavy cropper; splendid for outdoor planting.

BALCH'S AILSA CRAIG.—A grand cross between my Fillbasket and Carter's Sunrise.

BALCH'S CARRICK.—A very fine cross between Fillbasket and Victor.

BALCH'S AYRSHIRE.—A cross between Fillbasket and the well-known Lister's Prolific.

The last three varieties—Balch's Ailsa Craig, Balch's Carrick, and Balch's Ayrshire—obtained Awards of Merit, 1910, from the Royal Horticultural Society, London.

Price of each variety, per pkt., 1s.

NOTE.—Every packet of my Scotch seed is sealed at the back with my Registered Trade Mark, "**TAM-O'-SHANTER.**"

Please Mention Paper.

Illustrated circular on application from the raiser

ALAN BALCH,
Nursery, GIRVAN, N.B.

CHARLES TURNER'S
CATALOGUE OF GARDEN SEEDS

for 1911 is **Now Ready,** and can be had on application to

The Royal Nurseries, Slough.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.

H. BURNETT,
Carnation Specialist, Guernsey.

SEVERAL HUNDRED YOUNG ROSE TREES FOR SALE, raised by the late Mr. Thomas Tatham, Wilmslow.

Apply, TATHAM, Wilmslow.

PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J.R. PEARSON & SONS
LOWDHAM, NOTTS.

Rhododendrons.

Crimson, White, Pink. 250 Choice Named Varieties, fine foliage, well budded, for potting or planting. 1 to 1½ ft., 1½ to 2 ft., 2 to 2½ ft., 2½ to 3 ft., 3 to 4 ft., 4 to 5 ft., 5 to 6 ft., 6 to 7 ft. List of sorts and prices on application; many thousands to offer. Standards in all sizes.

All Home grown. Inspection Invited.

F. STREET, Heatherside Nurseries, CAMBERLEY.

SEED CATG. NOW READY.—56-page Catg. of Seeds, Bulbs, Choice Liliums, Tree Carnations, Ferns, etc. ELLISON, 57, West Bromwich

---

AMARYLLIS (HIPPEASTRUMS).—Flowering-size bulbs, 10s.; extra selected, 15s.; mammoth, 20s. doz. ELLISON, 57, West Bromwich.

CANNAS, 10 different, 4s.; Gloxinias, 6 different, 2s.; Begonias, Tuberoses, Montbretias, Arums, etc. ELLISON, 57, West Bromwich.

AMERICAN TREE CARNATIONS, 12, all different, named, strong, healthy plants, 5s. 6d., cg. pd. List free. ELLISON, 57 W. Bromwich.

CHRYSANTHEMUMS.—Mrs. Frank Hill, A.M., R.H.S.; Brightness, A.M., R.H.S., Singles. Send for lists. GEO. WILLIAMS and SONS, Chrysanthemum Specialists, Canton, Cardiff.

ST. EDMUNDSBURY
SWEET PEAS.

SPECIAL EXHIBITORS' COLLECTION FOR 1911.

Nubian (12), a splendid maroon; **Mrs. Hugh Dickson** (20), salmon-pink on cream ground; **King Alfonso** (15), sunproof crimson; **Masterpiece** (15), lavender; **Queen of Norway** (20), heliotrope-mauve; **Maggie Stark** (15), orange-scarlet; **Elsie Herbert** (20), white edged rose; **Princess Juliana** (15), primrose; **Etta Dyke** (20), white; **Mrs. A. Ireland** (20), a grand bicolor; **Kathleen MacGowan** (12), sky blue; **Edna Unwin** (15), orange bicolor.

The above 12 splendid varieties, with a gratis packet of **Earl Spencer** (7), salmon, for **4/-**, post free.

Figure after each name denotes number of seeds in packet. Catalogues free.

W. O. CAUTLEY, F.R.H.S.,
St. Andrew's House, Bury St. Edmund's.

TOMATO PLANTS.

Why send to Guernsey when you can get better acclimatised plants at the same price? Very strong plants of the two best all-round sorts in commerce viz., **HILLSIDE COMET, CARTER'S SUNRISE.** All have been transplanted, and grown in virgin loam (hence are free from disease, extra strong, and vigorous).

READY FOR IMMEDIATE PLANTING OUT or **POTTING,** 12 for **1/3,** 25 for **2/-,** 100 for **5/-.** Carefully packed in damp moss. Seedlings very strong, 2/- 100. Carriage or postage paid.

EDMUNDS and CO.,
Tomato Plant Specialists,
MILTON, CAMBRIDGE.

WANTED. — 150 BLACK HAMBRO STRONG PLANTING CANES, also a few specimens of other sorts. State lowest cash price. Apply 10,449 Office of this Journal.

GLASS & PAINT.

NICHOLLS & CLARKE, LTD.,

15 oz. and 21 oz. Glass,
IN ALL THE USUAL SIZES.
Shoreditch, London.
When sending for list please cut out this advt.

BY APPOINTMENT. BY APPOINTMENT.

CHEAP OFFER TO CLEAR.

We beg to inform our numerous clients that we have secured a large tract of land adjoining one of our principal Nurseries, and that it is our intention to clear the Stocks off some of our outlying branch Nurseries at a sacrifice.

Everything has been grown with our usual care, and offered in Lots, subject to being unsold; we guarantee the numbers and quality of each Lot offered.

Particulars of above, together with our General Catalogue, will be sent on application.

JAMES SMITH & SONS (Nurserymen to H.M. THE KING), **DARLEY DALE NURSERIES, near MATLOCK.**

Inspection cordially invited. Visitors met by appointment at Darley Dale or Matlock Stations.

Sales by Auction.

ROSE TREES.

SHRUBS. BULBS.

SALES BY AUCTION

are held every

MONDAY and WEDNESDAY, at 12.30.

STEVENS' AUCTION ROOMS,

Established 150 Years,

38, King St., Covent Garden, London, W.C.

Catalogues on Application.

SALES NEXT WEEK.

MONDAY and FRIDAY NEXT, January 23rd and 27th, at 12 o'clock.—Choice Herbaceous and Border plants, Japanese Liliums, thousands of Hardy Bulbs and Roots, Lily of Valley, and many other useful things for the garden.

At 1.30 o'clock.—1,000 Roses in variety, Fruit Trees, Azaleas, Rhododendrons, etc.

WEDNESDAY NEXT, January 25th, at 12 o'clock.—Japanese Liliums, Gladiolus, Begonias, 300 lots of Herbaceous plants, Carnations, Pinks, and large quantities of other plants and bulbs.

At 1.30 o'clock.—6,000 Roses, Standard, Dwarf, Climbing, T., H.T., and H.P., lotted to suit all buyers.

At 5 o'clock.—450 Azaleas, Rhododendrons, 350 Aspidistras, and Camellias; 100 lots of Palms and other Greenhouse plants, Standard Bays, etc.

FRIDAY NEXT, January 27th, at 12.45 o'clock.—Choice Imported and Established Orchids in variety. Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view morning of sale, and catalogues had.

SALES BY AUCTION DAILY at 12.30.

Hyacinths, Tulips, Daffodils, Narcissi, Crocus, Snowdrops, Lilies, &c., &c.

JOHNSON, DYMOND & SON

Palms, Azaleas, Rose Trees

Catalogues of Auctioneers.

City Auction Rooms (Est. 1793),

38 & 39, Gracechurch St., London, E.C.

AMERICAN TREE CARNATIONS, best varieties, including Britannia, White Perfection, etc., strong young plants from 2in. pots, 3s. doz., 20s. 100, flowering plants, 5in. pots, 8s. per doz. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

LAVENDER, Old English, 2s. per doz., 10s. per 100. Dutch ditto, dwarfer than English, 2s. 6d. doz., 15s. 100; 50 at 100 price; free on rail for cash with order. Sample doz., postage free, 4d. extra. CHILVERS and SON, Hunstanton.

SEED POTATOES.—Irish-grown seed beats Scotch on trial. I offer best leading varieties (awarded two Silver Medals, London, 1910). Lists Free. WM. E. SANDS, F.R.H.S., Specialist in Potato Growing, Hillsborough, Co. Down, Ireland.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

SEED POTATOES & GARDEN SEEDS

Customers wishing to save

50 PER CENT.

When Purchasing

BULBS, GARDEN SEEDS, AND POTATOES,

Should send AT ONCE for Illustrated List

J. W. CROSS,

OLD GRAMMAR SCHOOL. **WISBECH**

TREES, TREES, TREES.

Now is the Time to Plant.

300 ACRES TO SELECT FROM.

Our LIGHT OAKS and BAGNALL NURSERIES are admitted to be the most exposed in the United Kingdom, ranging up to 1,000 feet above sea-level. Customers may therefore rely on our stock thriving in the coldest or exposed situations.

Catalogues gratis on application.

ISAAC MATTHEWS & SONS, Ltd.,

The Nurseries,

MILTON, STOKE-ON-TRENT, STAFFS.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

CURRANTS.—Fay's Prolific Red, Long-bunched Red (Wilmot's), Black Champion, clean, healthy, fruiting trees, 18s. 100; 3s. dozen. WILL TAYLER, Hampton, Middlesex.

SEAKALE, ASPARAGUS, RHUBARB, Tarragon, and Mint for forcing; well ripened on warm soil. WILL TAYLER, Hampton, Middlesex

FIGS.—This delicious fruit crops freely in pots. Bearing Trees, 2s. 6d., 3s. 6d., 5s., and 7s. 6d. each. Grape Vines for fruiting or planting. Catalogues free. WILL TAYLER, Hampton, Middlesex.

TRAINED PLUMS. — Large, well-transplanted, fruiting trees. Measurements supplied; but an inspection at Nursery is preferable. WILL TAYLER, Hampton, Middlesex.

R. D. BLACKMORE'S PEACH, "LIBRA."—Award of Merit R.H.S. Mid-season, very large and heavy, of high quality and goodly appearance; large trained trees and pyramids with well-ripened fruiting wood, 10s. 6d., 15s., and 21s. each. WILL TAYLER, Hampton, Middlesex.

"THE SHELLEY SWEET PEAS AND THEIR CULTURE,"

Seed List and Growers' Guide, FREE ON APPLICATION.

THE SHELLEY SWEET PEAS.

A CHOICE SELECTION of the Very Best VARIETIES at MODERATE PRICES.

T. H. DIPNALL, F.R.H.S.,

The Shelley Sweet Pea Farm, HADLEIGH, SUFFOLK.

Perpetual-Flowering CARNATIONS.

This year's Novelties and all the Leading Varieties.

Send for descriptive Catalogue of 80 varieties with particulars when to stop them.

C. ENGELMANN, CARNATION GROWER,

SAFFRON WALDEN.

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

STOP! WHY PAY MORE?

YOU will notice the very, very high prices of many seeds this year if you look through the catalogues you receive; but mind, you need not pay it unless you like. I can supply you at the old price. Peas, 1s. quart; Broad Beans, 5d. quart; Kidney Beans, 10d. quart; Onion Seed, 4d. oz.; Early Potatoes, 1s. 3d. peck. Flower Seeds very cheap. Send your address on a post card before placing your order. GEO. F. LETTS, F.R.H.S., Seed Grower, 2, Hadleigh, Suffolk.

AMERICAN and BRITISH TREE CARNATION.—Leading varieties from 3s. per doz.; 17s. 6d. per 100; carriage and packing free for cash. Ask ill. price list. C. F. A. VAN DER SLUYS, F.R.H.S., Ramee, Guernsey.

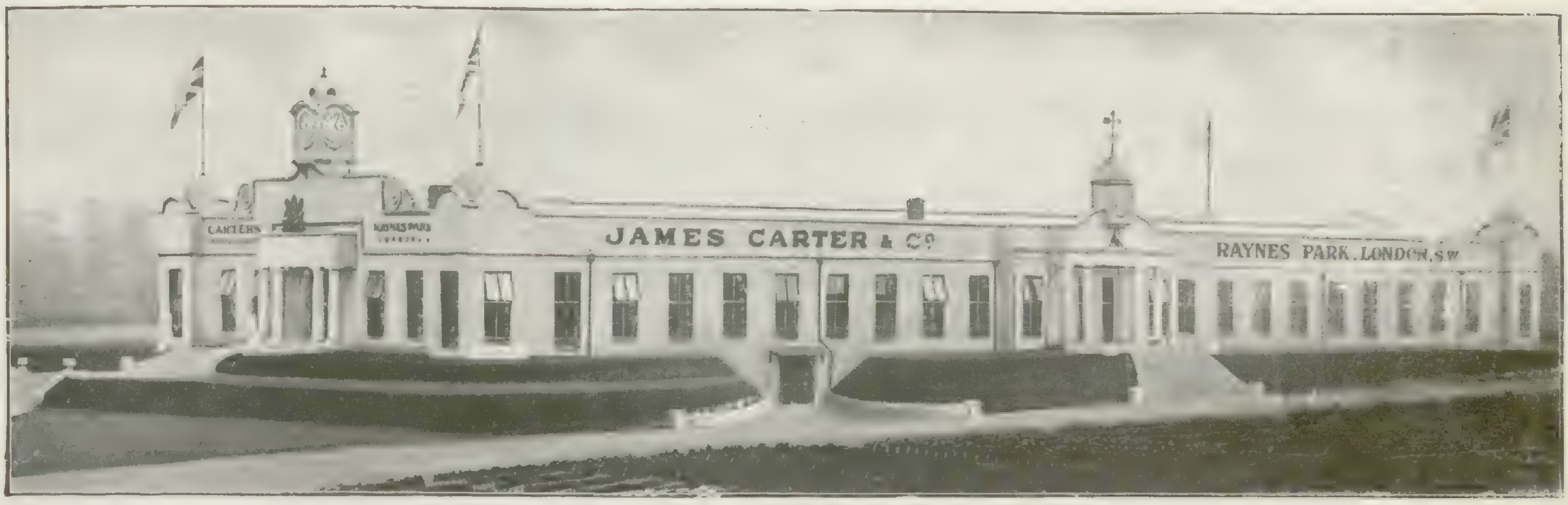
FERNS.—Beautiful Greenhouse varieties, 12 for 1s. 3d.; Maidenhair Ferns, 2s. doz.; New Nephrolepsis Todeoides, 9d. each; Palms, 9d. each. HEAD GARDENER, 22, Charlton Road, Blackheath.

FOR SALE, several Hundred of good strong FLOWERING BULBS of TROPÆOLUM TRICOLORUM. What offers? To

FULFORD,

Hunstanton, Norfolk.

25 STRONG CHRYSANTHEMUM CUTTINGS, Exhibition, Decorative, Single or Early 1s. 6d.; 50, 3s.; 100, 5s. 6d.; by return. List. RICHMOND'S CHRYSANT. NURSERIES, Ossett, York.



CARTERS NEW OFFICES AND SEED TESTING GROUNDS.

RECENT PROMINENT INTRODUCTIONS.

CARTERS

QUITE CONTENT

Tall Maincrop Marrowfat Pea.

The largest, Sweetest, and most Prolific Marrowfat Pea for Exhibition or the Table. Pods 7½ ins. long.

FIRST CLASS CERTIFICATE R.H.S, 1903.

Price **3s. 6d.** per pint, **2s.** per ½ pint, **1s.** per packet. Post free.

CARTERS

SCARLET EMPEROR RUNNER BEAN

The Longest Smooth Exhibition Scarlet Runner, with pods 15½ inches long, hanging in clusters.

Price **4s. 6d.** per quart, **2s. 6d** per pint, **1s.** per packet. Post free.

CARTERS

SUNRISE TOMATO

FIRST-CLASS CERTIFICATE, R.H.S.

AS AN INDOOR AND OUTDOOR VARIETY.

Price **2s. 6d.** and **3s. 6d.** per packet. Post free.

CARTERS LARGE-FLOWERED SWEET PEAS

All the finest and most up-to-date varieties, separate or mixed. Price **3d.**, **6d.**, and **1s.** per pkt. Post free.

ILLUSTRATED CATALOGUE POST FREE.

Carters Tested Seeds
REGISTERED TRADE MARK

Carters
HIGH HOLBORN

RAYNES PARK,
LONDON, S.W.

Seedsmen to H.M. THE KING.

Branches: 237 & 238, HIGH HOLBORN, W.C.
53a, QUEEN VICTORIA ST., E.C.

Carters Tested Seeds
REGISTERED TRADE MARK

THE MOST USEFUL GUIDE.

By T. W. SANDERS, F.L.S., Editor of "Amateur Gardening."

THE FLOWER GARDEN.

THE FLOWER GARDEN

A Complete Guide to Planting and Management of the Flower Garden and the Cultivation of Flowers, Plants, Trees, &c., adapted for Outdoor Culture.

THE CONTENTS INCLUDE—

- Fashioning the Garden.
- Beds and Borders.
- Walks and Paths.
- Lawns and Tennis Courts.
- Rockeries and Ferneries.
- Arbours, Summerhouses, Arches, and Pergolas.
- Edgings.
- Walls and Fences.
- Garden Practice.
- Propagation.
- Colour Arrangement.
- Bedding.
- Annuals and Biennials.
- Bulbs.
- Hardy and Tender Border Plants and Flowers.
- Climbing Plants.
- Trees and Shrubs.
- Pests and Diseases.

480 PAGES, ILLUSTRATED BY 64 PLATES OF BEAUTIFUL GARDEN SCENES, PLANTS AND FLOWERS, AND MANY EXPLANATORY DIAGRAMS.

Price **7/6** net; by post, packed in box, **8/-**

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE," 148 & 149, Aldersgate St, London, E.C.

Please send me a copy of **"THE FLOWER GARDEN,"** *by Post, for which I enclose remittance of* **8/-**

Name..

Address..

FRUIT TREES & ROSES

Grown in the famous fruit-producing district of Cambridge. Best sorts only; ones that will give every satisfaction. Now we offer **FRUIT TREES**, 3 years old—Apples, Pears, Plums, Cherries—as you care to select them, 6 for 4/-, 3 for 2/3. **MAGNIFICENT RAMBLER ROSES**, in 6 best sorts, 5 to 8ft. high, 6 for 4/-, 3 for 2/3. **DWARF AND BUSH ROSES**, leading sorts, same price. Every plant labelled and true to name. Non-perishable aluminium labels used. Well packed and carriage paid

EDMUNDS and CO.,
Fruit Growers and Rose Specialists,
MILTON. CAMBRIDGE.

TOMATO PLANTS

(6 to 8 ins. high). Ready for Fruiting Quarters. **Grown in Steam sterilised soil** Very carefully packed and protected.
Price £3 per 1,000, Cash with order, carriage paid.
Per 100, 7/-; 65 plants, 5/-; 50 plants, 4/-; 25 plants, 3/-; 12 plants, 2/-
Carter's Sunrise, Winter Beauty, Beauty of Wales, etc.

W. & F. POAT, TOMATO GROWERS, **ST. SAMPSON'S GUERNSEY, C.I.**
Cheques, Postal Orders, etc., should be crossed "Guernsey Banking Co., Ltd."
Booklet and Testimonials free on application.

SPECIAL SWEET PEA LIST

including many grand Novelties
POST FREE, ON APPLICATION TO
GEORGE ELSOM, SEED GROWER AND MERCHANT,
SPALDING.
Hundreds of Prizes won with products grown from Elsom's Seeds.

NEW GARDEN PEA FOR 1911.

MASSEY'S RELIANCE, per packet 1s. post free.

Mr. W. A. Cook, Head Gardener to Sir E. G. Loder, Bart., writes: "I am very pleased to inform you it proved a great success, especially as it was such a cold wet time for early peas. Sown on the same day as several other varieties, it was not one day behind, and is equal in bulk to anything I have ever grown. Haulm about three feet, with especially long pods for so early a Pea."

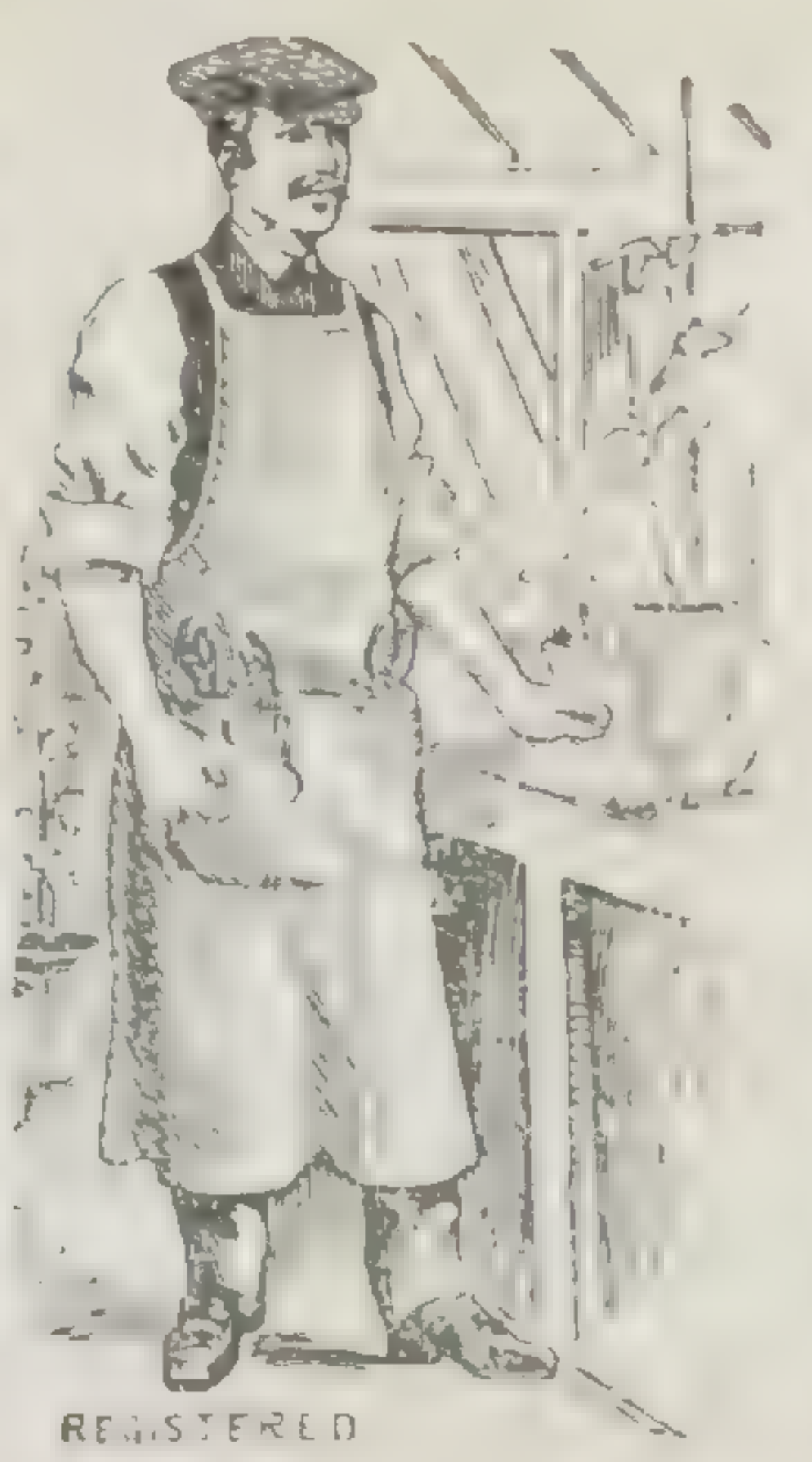
GEO. MASSEY & SONS, Seedsmen, SPALDING.

DICKSONS

SELECT & MOST RELIABLE
VEGETABLE &
FLOWER SEEDS,
SEED POTATOES
GARDENING TOOLS &
CARRIAGE PAID.
CATALOGUE POST FREE.
ROYAL SEED WAREHOUSE
& NURSERIES
CHESTER.

ANTHONY WATERER,

Knap Hill Nursery, Woking, Surrey,
Has a Fine Stock of well-rooted
EVERGREENS, TREES and SHRUBS
In all sizes.
RHODODENDRONS, AZALEAS, and other American Plants a specialty. The Rhododendrons planted annually in Hyde Park are supplied from Knap Hill.
Inspection of Nursery invited, Catalogue on application.



THE
APRON

That has Come to Stay.
WORN BY ALL THE LEADING GARDENERS.
LOOK AT THE PRICE.
In Dark Blue Ponicus Twills,
1/9, Postage **3d.** extra.
Or in Dark Blue Poniceps Serge,
3/9, Postage **3d.** extra.
Write for One To-Day.
SHAW & MONTGOMERY
(PENMAN'S),
628, Argyle St., Glasgow, W.

NICOTICIDE

Kills all Greenhouse Insects in one Application.
(FUMIGANT.)

		Cubic ft.	each.
Half-gallon Tin, contains sufficient for		160,000	60/-
No. 1 size Tin 1 pint	,, ,,	40,000	15/-
No. 2 size Tin ½ pint	,, ,,	20,000	7/6
No. 3 size Bottle—6 oz.	,, ,,	12,000	4/6
No. 4 size Bottle—4 oz.	,, ,,	8,000	3
No. 4½ size Bottle—2 oz.	,, ,,	4,000	1/8
No. 5 size Bottle—1 oz.	,, ,,	2,000	10d.

Carriage Paid.

TRADE
NICOTICIDE
MARK

Fumigators, 1/- each for 5,000 cubic ft.
Nicoticide Plant Spray.
Half-pint, **1/2**; Pint, **2/-**; Qrt., **3/6**; Half-gall., **5/-**; Gallon, **10/-**
Use 1 part to 40 parts for green fly, etc. Carriage paid.
Ask your Seedsman for our Goods.
HUNTER & GOW,
45, THOMAS STREET, LIVERPOOL.

Orchids! Orchids!! Orchids!!!

The undersigned begs to announce to the Public that he is in a position to supply, whole-sale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application.—**J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

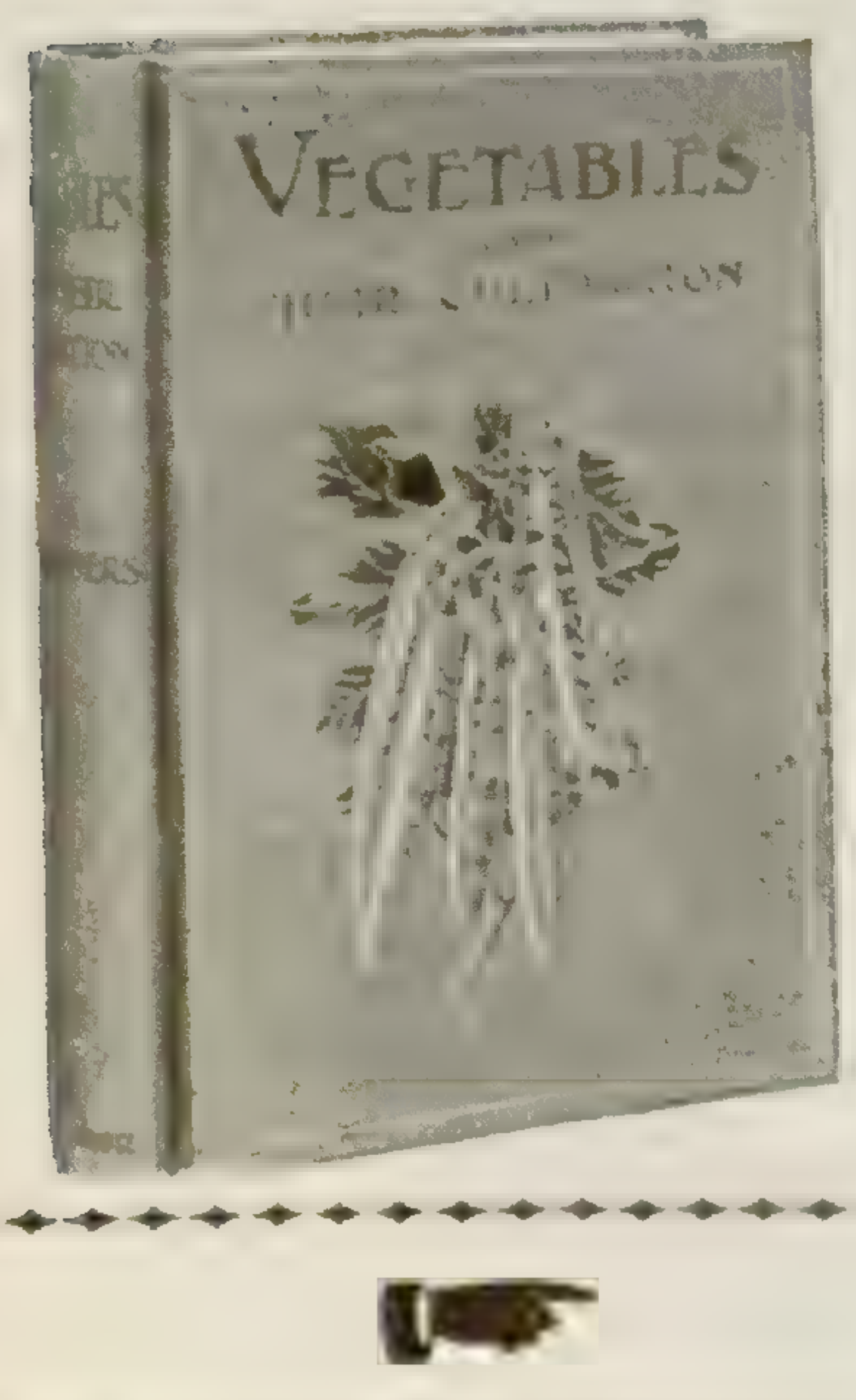
WORK IN THE KITCHEN GARDEN.

READ THE BEST PRACTICAL GUIDE.

Crown 8vo.; Cloth; 498 Pages. **150 ILLUSTRATIONS; 8 PHOTO PLATES and 5 COLOURED PLATES.**

Price **5/-** net; by post, packed in box, **5/6**

VEGETABLES AND THEIR CULTIVATION



By T. W. SANDERS, F.L.S., Editor of "Amateur Gardening," etc., etc.

- **Formation of the Vegetable Garden.**
- **Soils and Their Treatment.**
- **Manures and Their Uses.**
- **Crops and their Rotation.**
- **Calendar of Garden Work.**
- **Cultural Details for Each Vegetable.**
- **Planting, Forcing, etc.**
- **Selection of Best Varieties.**
- **Exhibiting—Packing.**
- **French Gardening.**

Etc., Etc.

"Mr. Sanders has done his work very thoroughly in this book, and his directions are as clear and explicit as they could be."—*Agricultural Gazette.*

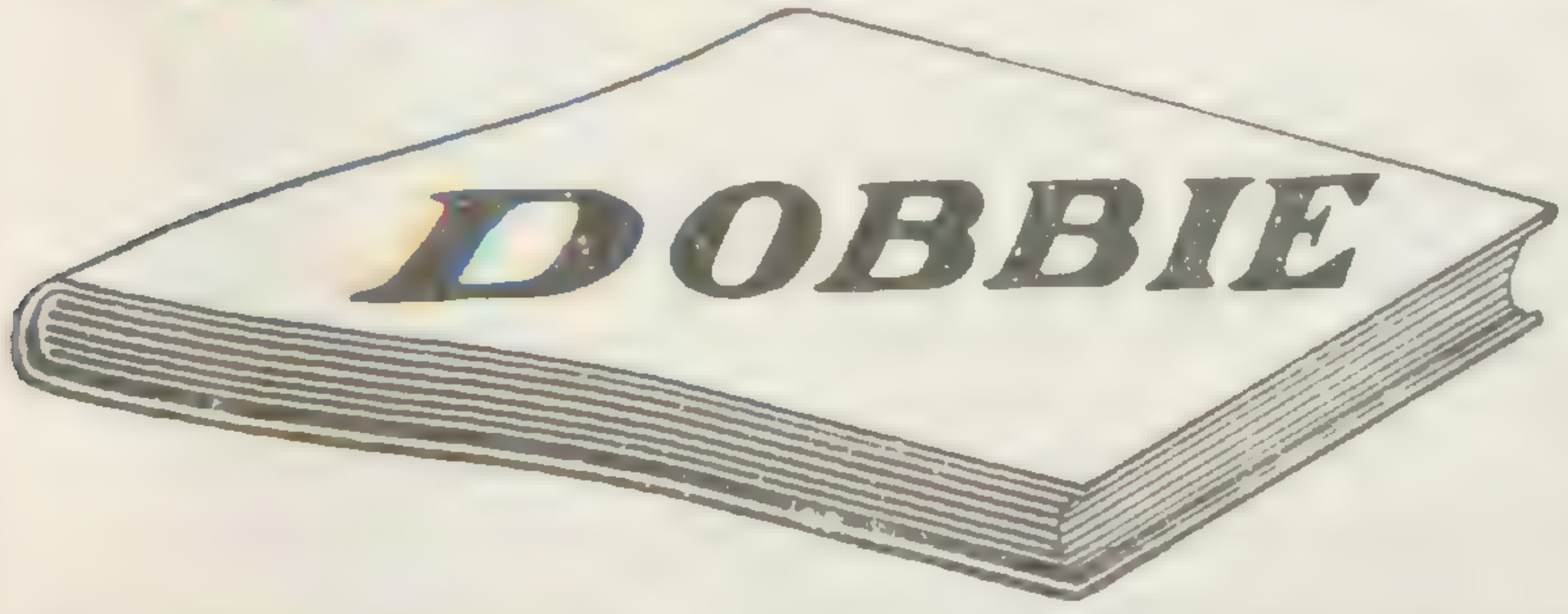
ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE,"
148 and 149, Aldersgate Street, London, E.C.

Please send me a copy of "VEGETABLES AND THEIR CULTIVATION" by Post, for which I enclose remittance of 5/6.

Name..
Address..

100,000 FREE COPIES.



Dobbie's New Catalogue and Guide to Horticulture.

224 PAGES. 210 ILLUSTRATIONS.

A COPY WILL BE SENT WITH PLEASURE GRATIS TO ANY ONE APPLYING FOR SAME, WHO ENCLOSES 3d. IN STAMPS TO DEFRAY COST OF POSTAGE, AND MENTIONS "GARDENERS' MAGAZINE."

DOBBIE & CO.,
The Royal Seedsmen, EDINBURGH

DOBBIE'S FAMOUS
SWEET PEAS.

COLLECTIONS—Home Grown Seed.
(12 to 15 Seeds of Each Variety.)
Except where otherwise stated.

COLLECTION A.—Six Fine Exhibition Varieties.—Countess Spencer, Evelyn Hemus, Helen Lewis, Nora Unwin, the King, The Marquis. **1s. 3d.**

COLLECTION B.—Twelve Fine Exhibition Varieties.—Constance Oliver, Countess Spencer, Evelyn Hemus, Helen Lewis, Marjorie Willis, Menie Christie, Mrs. A. Ireland, Nora Unwin, Paradise Ivory, St. George, The King, The Marquis. **2s. 3d.**

COLLECTION C.—The Best Twelve for Exhibition, including Novelties.—Clara Curtis, Dobbie's Sunproof Crimson (**10** seeds), Earl Spencer (**6** seeds), Edrom Beauty, Elsie Herbert, Etta Dyke, John Ingman (Dobbie's Special Stock), Masterpiece, Mrs. C. W. Breadmore, Mrs. Hugh Dickson, Othello Spencer, Princess Victoria. **4s. 6d.**

COLLECTION D.—Consists of Collections B and C, with Martha Washington and another Novelty added, making splendid value at **6s. 6d.**

No one could start Sweet Pea growing better equipped than with our D Collection.

COLLECTION—Imported Seed.

A large number are not exhibitors, and we find they want fairly large quantities of some varieties at a cheap rate. This demand can only be met by imported seed.

COLLECTION F.—Twelve Varieties (20 to 25 seeds of each).—Apple Blosssom Spencer, Asta Ohn, Clara Curtis, Countess Spencer, Etta Dyke, Evelyn Hemus, John Ingman, King Edward Spencer, Mrs. Henry Bell, Mrs. Routzahn, Othello Spencer, St. George. **1s. 6d.**

DOBBIE'S GIANT WAVED MIXTURE.—The Waved and Spencer forms of Sweet Peas have become so immensely popular that we make up a Special Mixture of these types. **6d.** per packet; **1s.** per ounce.

NOTE.—To those who mention THE GARDENERS' MAGAZINE when ordering we shall present an extra variety **Gratis.**

DOBBIE & CO.,
The Royal Seedsmen **EDINBURGH.**

A SPECIALITY FOR MORE THAN 50 YEARS!
POT VINES
Strong well-ripened Canes, clean and healthy, for planting and fruiting. Descriptive List FREE.
ALSO FIGS AND PEACHES.
J. R. PEARSON & SONS, LOWDHAM, Notts.

TAKE NOTICE.
Intending planters should send for the STANCLIFFE CATALOGUE OF TREES, &c.

Our Stocks, which are grown on the highest and most exposed hills of Derbyshire, are in fine condition, and are sure to give satisfaction. Note the prices before ordering elsewhere.

Rockery Stone, 1/- per ton.
THE STANCLIFFE ESTATES CO., LTD.,
DARLEY DALE, DERBYSHIRE.

1,600 Pecks **Lighton's Lincs Seed Potatoes Free,** as last year.

10 TONS FREE.

Bargain List Seeds, Begonias, Roses, Rock Plants, etc. Flower Seeds gratis.
LIGHTON (53), Kirton, Boston, Lincs.

By Appointment.

SWEET PEAS
OF BEAUTY.

OUR STRAINS
are acknowledged to be about
The World's Best.
Grown on our great Seed Farms.

ROYAL APPRECIATION.

H.R.H. THE DUCHESS OF FIFE was graciously pleased to express her admiration of our display of Sweet Peas at The People's Palace.

PUBLIC RECOGNITION.

We have been awarded Prize Medals for our Sweet Peas by the Royal Horticultural Society, The N.S.P. Societies and leading Horticultural Societies in the Country.

SEND TO-DAY
— FOR OUR —
NEW CATALOGUE
Containing full descriptive particulars.

JOHN K. KING & SONS, The Royal Seed Growers
COGGESHALL, ESSEX, also READING.

Burpee's
The Leading American Seed Catalog for 1911

"THE SILENT SALESMAN" of the World's Largest Mail-Order Seed Trade tells the *plain truth* about the Best Seeds that can be grown—as proved at our famous FORDHOOK FARMS—the largest Trial Grounds in America. Handsomely bound with covers lithographed in nine colours it shows, with the six coloured plates, Seventeen Choicest Vegetables and most Beautiful New Flowers.

It is a SAFE GUIDE to success in the garden, and should be consulted by every one who plants seeds. It is mailed FREE to all who appreciate QUALITY IN SEEDS. Shall we mail YOU a copy? If so, kindly *name this magazine* and write TO-DAY!

W. Atlee Burpee & Co.
Burpee Buildings, Philadelphia

BATH'S
Gold Medal
SWEET PEAS.

Awarded 4 Large Gold Medals National Sweet Pea Society, &c.

We are not merely dealers in and advertisers of Sweet Peas, but grow many acres for seed, and supply most of the large wholesale houses in the trade. In buying from us, you are buying from the grower and not the dealer. The following Collections contain the best varieties in cultivation. Please carefully compare the varieties included in our Collections with those offered by other firms, and we think that such comparison will prove that we give better value than can be obtained from any other source. All seeds are hand-picked and of first-class germinating quality.

COLLECTION No. 21, Price 1/-.
12 Splendid Varieties (50 seeds of each).

Black Knight, deep maroon.
Countess Spencer, blush pink.
Henry Eckford, orange-scarlet.
Helen Pierce, white, veined blue.
Lady Grisel Hamilton, lavender.
Lady Althorp, blush, waved.
Miss Wilmott, salmon pink.
Nora Unwin, pure white.
Phenomenal, white, edged lavender.
Queen Alexandra, intense scarlet self.
Queen of Spain, pale reddish-lilac.
Sybil Eckford, cream, suffused pale pink.

COLLECTION No. 22, Price 1/9.
12 Very Fine Waved Varieties.
The number of seeds and price per packet is indicated after each variety.

Apple Blossom Spencer, rosy-mauve ([illegible]), [illegible]d.
Chrissie Unwin, carmine-lake (30), 3d.
Enchantress, rich rose (50), 3d
Frank Dolby, clear lavender (50), 3d.
James Grieve, creamy-yellow (50), 3d
John Ingman, rosy-pink, shaded carmine (50), 3d.
King Edward VII., rich carmine-scarlet (50), 2d.
Mrs. Bieberstedt, deep heliotrope (50), 3d.
Mrs. Routzahn, primrose, edged rose (30), 3d.
Paradise Ivory, cream, suffused rose (40), 3d.
Purity, pure white ([illegible]), [illegible]d.
St. George, cherry-red and rose-purple (50), 2d.

Collections 21 and 22 together for 2/3, with one packet of Paradise Blue Flake, 3d., gratis.

COLLECTION No. 23, Price, 2/9.
12 Extra Fine Waved Varieties.
The number of seeds and price per packet is indicated after each variety.

Clara Curtis, creamy-yellow (50), 3d.
Constance Oliver, rose, creamy ground (25), 6d.
Elsie Herbert, white, edged rose-pink (25), 3d.
Flora Norton Spencer, Ageratum-blue (40), 3d.
Florence Wright, pure white (25), 6d
Helen Lewis, madder-lake (50), 3d.
King Edward Spencer, crimson, waved (40), 4d.
Marjorie Willis, carmine and rose-red (25), 3d.
Mrs. Wilcox, white, striped crimson (20), 3d.
Olive Ruffell, cream, suffused rose (40), 3d.
Tennant Spencer, violet-mauve (50), 4d
Sweet Lavender, white, watered lavender (25), 6d

Collections 22 and 23, if purchased together, price 3/9, with one packet of Aurora Spencer, rose flaked white, 6d., and Winnie Savage, rosy-lilac, 6d., gratis.

COLLECTION No. 24, Price 4/-.
12 Newest Varieties.
The number of seeds and price per packet is indicated after each variety

Asta Ohn, light lilac and heliotrope (30), 4d.
Etta Dyke, pure white (30), 3d.
George Stark, finest scarlet (40), 6d.
Maud Holmes, waved crimson, sunproof (10), 6d.
Mrs. A. Ireland, mauve-rose, waved (30), 4d.
Mrs. Hardcastle Sykes, pale lilac-rose (40), 3d.
Martha Washington (syn. Eric Harvey), white, flushed rose-red (25), 1/-.
Mrs. Hugh Dickson, cream and pink, waved (12), 6d.
Mrs. Breadmore, cream, edged strawberry (30), 4d.
Othello Spencer, the best dark waved variety (20), 3d.
Winsome, rosy heliotrope (12), 6d.
Zarina, rich peach pink (30), 6d

The four complete collections for 8/-, post paid, and one packet each of Paradise Sunrise, cream, suffused pink, 3d.; Audrey Crier, rose-pink, 4d.; and Sea-foam, ivory-white, 6d., and the three above-named Novelties, together with a copy of the Sweet Pea Note Book, by W. P. Wright (6d.), gratis.

NOVELTIES FOR 1910-11.

Betty Cautley, peach, shaded salmon, a lovely decorative variety; 80 per cent. fixed. 10 seeds, 1/-.
Earl Spencer (cole), a lovely waved shrimp-pink, grand for exhibition; fixed. 10 seeds, 1/-.
Ethel Roosevelt, soft primrose overlaid with dainty flakes of blush crimson, a lovely variety. 10 seeds, 6d

One packet of each of the above 3 Novelties for 2/3, post free.

COMPLETE ILLUSTRATED SEED CATALOGUE SENT ON APPLICATION.

R. H. BATH, Ltd., The Floral Farms, **WISBECH.**

By Appointment.

WEBBS' PEAS.

By Appointment.

By cross-breeding and selection, we have secured wonderful improvements in Garden Peas, and it is now possible, under suitable cultivation, to obtain a supply of delicious Marrowfat Peas for a period extending from early Summer to late Autumn.

WEBBS' GRAND NEW MAIN CROP PEA FOR 1911, "KING GEORGE."

A fine large-podded wrinkled Marrowfat of delicious flavour. Invaluable for table and exhibition purposes. **1/-** per packet. Stock limited.

FOR A CONSTANT SUPPLY OF DELICIOUS MARROWFAT PEAS

THROUGHOUT THE SEASON—SOW;

For First Early.

WEBBS' NEW EARLY FAVOURITE ...	**3/6**	per quart.
WEBBS' NEW LITTLE MARVEL... ...	**2/9**	,,
WEBBS' NEW PIONEER	**3/-**	,,
WEBBS' RE-SELECTED PILOT	**3/-**	,,

For Second Early.

WEBBS' NEW MODEL	**3/6**	per quart.
WEBBS' STOURBRIDGE MARROW .	**2/6**	,,
WEBBS' PARAGON MARROWFAT ...	**3/-**	,,

For Main Crop.

WEBBS' PRIZETAKER MARROWFAT ..	**3/-**	per quart.
WEBBS' NEW DISTINCTION	**3/-**	,,
WEBBS' SENATOR	**3/-**	,,
WEBBS' NEW KAISER	**3/-**	,,

For Late Use.

WEBBS' MASTERPIECE	**3/-**	per quart.
WEBBS' SELECTED GLADSTONE ...	**3/6**	,,
WEBBS' SELECTED NE PLUS ULTRA	**2/6**	,,

For Prices and Particulars of the Newest and Best Varieties of Vegetable and Flower Seeds, ***see***
WEBBS' ILLUSTRATED SPRING CATALOGUE FOR 1911. NOW READY.

WEBB & SONS, The Royal Seedsmen, WORDSLEY, STOURBRIDGE.

VOL. LIV.—No. 2,986. SATURDAY, JANUARY 21, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Floral Selection.

In these days of great floral exhibitions, where the eye is regaled with such a marvellous multiformity of flowers, diversified in make, arrangement, and colouration on apparently infinite lines, we are apt to impute all this to human selection directed to the improvement of normally simple forms. In many cases this idea is correct, as in the chrysanthemum, the begonia, the sweet pea, and even in the rose, but it must not be forgotten that there is a host of most beautiful flowers which have been evolved, and boast both size and colouration equal to the best of man's productions, and yet owe their charm and development entirely to insect selection exercised through the æons which have elapsed since flowers proper first made their appearance. To this class belong many of the choicest orchids, which, in some occult way, have developed their grand and ornate blossoms in tropical forests, where the foot of civilised man had never penetrated until their discovery. The same may be said of many of the finest lilies, so far as their, so to speak, spontaneous development is concerned, while such magnificent blossoms as are displayed by the tropical passion flowers, tacsonias, daturas, and innumerable others, are one and all Nature's unsophisticated productions, so far as man is concerned. What, too, must we say of by far the largest flower of all, the Rafflesia Arnoldi, by the side of which the huge Japanese chrysanthemums must hide their diminished heads, its individual flowers measuring a yard in diameter, mere parasite though it be. The curious feature of this wonderful plant is the fact that it attracts the fertilising insects by a humanly repulsive carrion-like odour, and repays them for their services by inducing them to lay their eggs in it under a misapprehension, the unfortunate carnivorous grubs when hatched being doomed to destruction in the absence of proper aliment. Man, in the course of his evolution, has become undoubtedly the most potent selective factor, but all his work has to be done on lines laid down for him by the insects, in so far as fertilising contrivances and specific floral forms are concerned, and it is in this connection that by far the greatest diversity exists. All he can do is to manipulate these types, and now and again blend them by hybridisation, increase their size and development by selection, take advantage of "sports," or indications of variation of less marked character, work up extra-petalled blooms into double ones, and so on; but he cannot contrive to alter the fundamental generic difference, the dragon's head of the antirrhinum, or the weird forms of the aristolochias he cannot evoke, or the thousand and one other peculiar shapes which, somehow or other, we are forced to assume have arisen through some subtle response to the tastes or habits of the visiting insects, which, in their turn, have become modified as time went on to fit, the long proboscis of the fertilising moth lengthening as the trumpet of its associated flower increased in profundity. It is perhaps in the direction of colour that man is capable of eclipsing the insect predecessors. Here undoubtedly he has managed to introduce within the limits of a single species a gamut of colouration which we are hardly likely to find in natural flowers. In the primrose, for instance, he has contrived to obtain flowers of an almost pure blue from a stock which is normally yellow, an extremely rare association, and in the chrysanthemums and begonias, the range of tints, excluding blue, is almost infinite, embracing many colours which are hardly likely to occur anywhere in normal compositæ. Nevertheless, as we have said, when we come to the fundamental parts of the flower, the fine arrangements and adjustments which secure, as far as may be, cross-fertilisation, and, in any case, fertilisation of the seed, these persist throughout, except where totally eliminated by complete transformation into petals, as in true doubles. In the way of hybridisation man, in most cases, takes a line peculiarly his own, since he has brought together species indigenous to widely distant lands, and managed, in many cases, to mate them to great advantage. The insect, on the other hand, apart from the fact that it usually confines its visits to a limited range of species, is naturally precluded from carrying pollen to plants from one region of the earth to another, while, in any case, unless great precautions against self-fertilisation are taken, Nature sees to it that no cross occurs by subtle antipathies and structural arrangements.

MR. G. W. LEAK,
Chairman of the Committee of the National Sweet Pea Society.

Mr. G. W. Leak, whose portrait is given herewith, has for some years past been prominent among those who take an active interest in the fragrant and exquisitely beautiful flowers to which our present issue is so largely devoted. Mr. Leak, as manager to Messrs. Bath, Lim., Floral Farm, Wisbech, has a thorough acquaintance with sweet peas from the commercial point of view, and his presence on the Executive Committee of the National Sweet Pea Society has unquestionably been highly advantageous to that body. That Mr. Leak's work as a member of the Executive Committee was highly appreciated was proved to demonstration by the fact that at the recent annual meeting the committee submitted his name to the members for election as its chairman. The members accepted the committee's recommendation, and he was unanimously elected. We need hardly say that, while Mr. Leak is a sweet pea enthusiast, he does not by any means limit his attention to these flowers. He enjoys the manifold charms of sweet peas, and it may be assumed, appreciates their commercial importance, but he is not less alive to the attractions and usefulness of other classes of hardy plants in which he has long taken much interest. We heartily join with his many friends in wishing him a successful year of office.

Botanical Lectures in London.—A course of ten lectures on "The History of British Botany" was commenced at University College, Gower Street, W.C., on the 20th inst. This was on Stephen Hales, by Francis Darwin, Esq., F.R.S

The remaining nine lectures will be as follows: January 27, Nehemiah Grew, by Dr. Agnes Arber, F.L.S.; February 3, Morison and Ray, by Professor S. H. Vines, F.R.S.; February 11, Sir William Hooker, by Professor F. O. Bower, F.R.S.; February 17, Robert Brown, by Professor J. B. Farmer, F.R.S.; February 24, William Griffith, by Professor W. H. Lang; March 3, J. S. Henslow, by the Rev. George Henslow, F.L.S.; March 10, W. H. Harvey, by R. Lloyd Praeger, Esq.; March 17, Arthur Henfrey, by Professor F. W. Oliver, F.R.S.; March 24, W. C. Williamson, by Dr. D. H. Scott, F.R.S. The lectures are free, and will be given in the Botanical Department, University College, on Fridays, at 5 p.m., with the exception of that on February 11, which will be at 10 a.m.

Horticulture in Edinburgh.—At the annual general meeting of the Royal Caledonian Horticultural Society, held in Edinburgh on the 12th inst., the Secretary read a report of the joint committee formed of members of the Royal Caledonian Horticultural Society and the Scottish Horticultural Association to consider the question of amalgamation. The committee expressed themselves as being unanimously of opinion that it would be in the interests of horticulture generally to have the work carried on in Edinburgh by one strong society rather than by two, as at present, and they would have no hesitation in advising the Council to proceed with such a scheme. With regard to the suggestion that both associations might be dissolved and a new society formed, the committee were met with difficulty in the case of the Royal Caledonian Society, as under its charter the society had no power to dissolve. The Secretary for Scotland on being consulted said that there was no precedent for assenting to surrender of the charter, and the proposal was open to serious objections. The meeting decided to leave the question open. The report stated that the balance in excess of income over expenditure was £78. Mr. Stewart Clark was elected president for the year.

An English Forestry Association is, at the instance of Mr. M. C. Duchesne, superintendent of Burnham Beeches, in process of formation. A preliminary meeting was held at the Surveyors' Institute on Thursday evening, with Lord Clinton in the chair.

Experimental Potato Culture.—Mr. W. J. Grant, director of agricultural and horticultural education in Monmouthsire, contributed a large collection of potatoes to the meeting of the Royal Horticultural Society on Tuesday, which was of interest as illustrating the experiments that were conducted in Monmouthshire during 1910. At the New House Farm the experiments appear to have been carried out with a view to determine the relative merits of Irish and Scotch seed tubers. In the trial in which artificial manures were used, the heaviest crop was produced by Eldorado from Irish seed; Factor from Scotch seed, and Duchess of Cornwall from Irish seed being second and third. Royal Kidney, owing to its freedom from disease, proved, as in previous years, to be a valuable potato for soils from which it will cook well. Both Eldorado and Royal Kidney were quite free from disease, and this was attributed to the crop having been lifted previous to the wet weather having set in. In the cultivation of potatoes on the same farm without artificial manures it was, according to the report, proved that the flavour, quality, and keeping properties of potatoes grown without artificial manures are better, but less in bulk, than those to which artificial manures were applied. The yield of the potatoes grown without artificials was about two tons less per acre than of those which had their aid. The varieties grown in the comprehensive trials on the White House Farm, Llanvair, were subjected to cooking tests with the following results. The best flavoured varieties were—First earlies: Early Favourite, Eclipse, Edina, Ideal, Veitch's Ashleaf, and Webber's Early; second earlies: Aberlady Early, Conquest, Royalty, Russet Queen, and Supreme; maincrop varieties: Dalhousie Seedling, Goldmine, Mayfield Blossom, Superlative, The Admiral, The Provost, Windsor Castle, Dalmeny Acme, Princess Alexandra, and Dalmeny Regent. The Llanvair crop was practically free from disease, and this was attributed to the potatoes having been sprayed three times and the tubers lifted early.

The Libra Peach.—Mr. Will Tayler, of Hampton, writes: "There is a curious reference to the Libra Peach in Mr. C. H. Curtis's description of the beautiful gardens at Sutton Place, Guildford. If Mr. Goatley finds the fruits are not so good as a turnip, the trees must be starved. All varieties which receive insufficient nutriment or moisture are poor eating, in my opinion, the more so when there is no sustained warmth from the sun until he has dropped to the September angle." We may point out that the reference is to an article that appeared in our issue of January 7. On p. 9 note is made of "an orchard of young standard fruit trees that was planted chiefly for the sake of the blossom display in spring time, though, of course, there is no objection taken to the fruit that may follow. Some large trees of the Libra peach out in the open here look in first-rate condition, but Mr. Goatley suggests that a good turnip is better eating than a Libra peach from these trees." In other words, this peach is not a success at Sutton Place planted out in the open. Planted against a wall in a favourable position the peach is a good one, as evidenced by the Award of Merit it has obtained from the Royal Horticultural Society.

Elm Tree on Fire.—Early in the morning of the 12th inst., one of the large elm trees on the breadth of turf between Rotten Row and the Serpentine at the western end of Hyde Park was found to be on fire. An alarm was given, and as the fire engines were quickly on the spot and a supply of water from the Serpentine readily available, the fire was soon extinguished. As the flames appeared to burst from all parts of the tree, the effect is said to have been very good from the spectacular point of view. We have no information as to the cause of the fire.

Wimbledon and Putney Commons Extension Fund.—The secretary of this fund, Mr. Richardson Evans, The Keir, Wimbledon, writes us as follows: "At the last meeting of the Wimbledon Borough Council, it was proposed to rescind the resolution by which a contribution of £10,000 was voted to the Wimbledon Common Extension Fund. The ground assigned in the motion for revoking the grant was that it had been sanctioned on the understanding that the Surrey County Council would assist, and that the Surrey County Council had, in fact, declined to assist. The Mayor, who presided, said it was his duty to state that the grant had been made unconditionally and without any reference to the course that might or might not be taken by the Surrey County Council. In the course of the debate it was stated that the decision of the Surrey County Council was not final, and that the matter would be reconsidered after a suitable interval. The only division taken was on the motion 'that the question be now put.' The Ayes were 14; the Noes were 4. The supporters of the motion for rescinding the grant formed the minority. The proposer of the motion claimed the right of replying, and, as only five minutes remained, he talked the subject out."

British Gardeners' Association.—During the past year the association has made greater progress than usual. Three hundred and fifty members have been elected, bringing the total up to 1,964 at the beginning of December. It is anticipated that early in the present year over two thousand gardeners will have joined the association since its formation. The monthly journal has been increased in size, and the Executive Council have adopted a scheme for the examination of professional gardeners, the first to be held on Wednesday, April 26, at 7 p.m.

A Trial of Potato Diggers will be held by the Royal Agricultural Society in the autumn of the current year.

Parks in America.—The annual report of the Board of Commissioners of the Parks belonging to the City of Boston is of much interest to those who are engaged in the management of open spaces in populous centres, and indeed to all who appreciate their importance. The Commissioners express regret that the citizens of Boston fail to fully appreciate parks that are not well within the influence of the sea breezes. They say, in the course of their remarks upon this point: "Franklin Park lacks the presence of the ocean, and the sole fact that it is very beautiful seems insufficient to bring people to it in fair proportion." Much attention is devoted to the provision of playgrounds in the Boston parks, and the report contains illustrations of five of the most useful and attractive of the buildings provided for the use of children.

Gypsy and Brown-tail Moths.—These moths are still very abundant in the United States, and their caterpillars are so destructive to tree life in many parts of the country as to render repressive measures essential. Combating the moths and their caterpillars involves a heavy expenditure on labour and materials when the area to be dealt with is large. In his report to the Board of Commissioners, Mr. J. A. Pettigrew, the superintendent of the Boston parks, states: "We have succeeded in combating these pests so successfully that serious damage has been avoided. The cost, however, is a serious tax on our resources, being last year 15,499.21 dollars (one dollar =4s. 2d.); the amount of arsenate of lead used was thirty tons. The whole system was sprayed, and infestations are now only to be found on the borders where pupating larvæ crossed over from neighbouring property."

New Pleasure Ground for Sutton.—Mr. J. W. Hartley, of Sutton Hall, Keighley, Yorkshire, who died in November, 1909, left, under certain conditions, freehold land containing about four and a-quarter acres for the purposes of a public park or recreation ground. He also left a sum of £1,000 for laying out the ground, and £1,000 upon trust for investment and to apply the interest in the upkeep of the ground to the Sutton Parish Council. Mr. Hartley imposed the condition that no public meetings are to be allowed in the park.

SOME NEW SWEET PEAS.

With a view to assist those of our readers who are desirous of including some of the newer varieties in their selections of sweet peas, we herewith illustrate a few of the finest novelties that came under our notice in the course of the summer of 1910. A considerable proportion of them have received awards from the Royal Horticultural Society or the National Sweet Pea Society, and in some cases from both, and they may all be purchased and sown with the full assurance of their proving distinct and in other respects satisfactory. They do not exhaust the list of meritorious varieties of recent introduction, as will be gathered from the articles by Mr. T. Stevenson and other successful cultivators which appear in this issue.

Charles Foster is properly regarded by experts as one of the finest of the many beautiful sweet peas that have been introduced to cultivation within recent years. It is certainly a variety that should be obtained and grown well, for the flowers are of high quality and exquisite in colouring, the colours being best described as pastile pink. It was raised by Mr. R. Bolton, of Warton, Carnforth, who exhibited it remarkably well at the National Sweet Pea Society's exhibition in 1910. In the previous year the variety received an Award of Merit from this society.

Cherry Ripe.—A variety of great beauty and remarkable for its finely-developed flowers and its distinct colour, the latter being a pleasing shade of rich cerise. Raised by Messrs. Gilbert and Son, of Dyke, Bourne, Lincolnshire, it received an Award of Merit from the National Sweet Pea Society in 1910.

Colleen.—A charming bicolor, well deserving hearty commendation. The size and high quality of the flowers are well shown in the accompanying illustration, and it will suffice to say that the standard is bright carmine-red, and the wings blush-pink. Colleen is one of the excellent varieties raised by Mr. W. Deal, Brooklands, Kelvedon, and an Award of Merit was made in its favour by the Royal Horticultural Society in 1909, and last year it was commended by the National Sweet Pea Society in the same year for its value for garden decoration.

Maori Belle.—A variety of considerable interest from the fact that it was raised in New Zealand, and has come to this country with a high recommendation. It is described as "a glorified giant Mrs. Walter Carter, of vigorous growth, very floriferous, and comes with 40 per cent. of fours daintily poised on long stalks." The standard and wings are said to be pale lavender "devoid of purple or metallic sheen. This variety was raised by Mr. C. Trevethick, Wellington, New Zealand, and has been introduced to this country by Mr. G. H. Mackereth, of Ulverstone.

Marion Cuthbertson. — A charming variety remarkable for the large size and fine form of its flowers. The colour is a beautiful shade of rose-pink. Raised by Messrs. Dobbie and Co., of Edinburgh, this variety ranks high among the many fine sweet peas that have been raised and introduced by the firm.

Stirling Stent.—A remarkably fine addition to the orange-coloured section which created much interest at the National Sweet Pea Society's exhibition in 1910, where it was finely shown by Mr. W. E. Alsen, Densmead, Hants, whose arrangement was illustrated in our issue of July 16, 1910. The variety was raised by Mr. J. Agate, of Havant, and the National Sweet Pea Society in 1910 awarded it a First Class Certificate and the silver medal offered for the best sweet pea of the year. The illustration represents two spikes of flowers.

Paradise Apple Blossom.—A variety that claims special attention for the distinct and beautiful shade of colour it affords. The flowers are of full size, with finely waved standards and wings, and the standard is rose-pink and the wings blush-pink. The variety was raised by Miss Hemus, Upton-on-Severn, and received an Award of Merit from the Royal Horticultural Society in 1909.

Thomas Stevenson.—A variety of a high degree of merit, that has the promise of taking a foremost position in the orange-scarlet section. The flowers are large, of fine form, and the colour is brilliant orange-scarlet. It was raised by Mr. R. Holmes, of Norwich, and is being distributed by Messrs. R. Sydenham, Lim., of Tenby Street, Birmingham.

SWEET PEA PARADISE APPLE BLOSSOM.

Raised by Miss Hemus, and received an Award of Merit from the Royal Horticultural Society in 1909. The colour is light rose-pink.

THE FUTURE OF THE SWEET PEA.

"This also will pass away"
—(Persian saying).

We are at present marching towards purity and fixity in sweet peas, and in the future both will be attained. In the future there will not be the insane yearly rush of novelties on to the market which we see at present. The public will have got tired, and for all but a few novelty producing will have ceased to be profitable. I am thoroughly at one with the sentiment so well expressed by Mr. C. H. Curtis in your columns a few years ago, that the future of the sweet pea will rest with those who control the purest and best stocks. We all know what is meant by the purest stocks—stocks true to type and colour. The "best stocks" is an expression not so unequivocal, but the growers who work for size of flower, substance, or quality, uniformity of fours, or even fives, brightness of colour, vigour, and length of stem, are those who are going to extend their reputation.

SWEET PEA COLLEEN.
Raised by Mr. W. Deal, and received an Award of Merit from the Royal Horticultural Society, and a Commendation from the National Sweet Pea Society in 1909. The colour, blush-pink and carmine.

Now that the older varieties are being remade, these desirable qualities are being achieved. Let me explain what I mean by being re-made. Every raiser who is breeding scientifically is raising, say, Etta Dyke, Clara Curtis, and Countess Spencer every year, and he is constantly on the outlook for seedling forms of these and other varieties which are better than the original in some slight way—the very fact of being crossed seedlings presupposes renewed vigour. It is needless to say that one requires to be an expert of the first water to do work of this kind successfully (I am not claiming this for myself, gentle reader).

What about new colours? There are some new colours, and any number of new combinations of present colours yet to be worked out of the sweet pea, as we presently know it, but I do not think any striking new colour, such as bright yellow, will be evolved from Lathyrus odoratus. If, by hybridisation, some new factor can be introduced into its constitution, a new epoch may arise, and a departure come about as valuable and interesting as the advent of the Spencer type. I am in full agreement with Mr. Edwin Molyneux, Mr. Walter P. Wright, and Mr. Thomas Stevenson as to double standards in sweet peas. I think it would have been better if the National Sweet Pea Society's Conference had decided to ignore them, even to discourage them in competitions until they had been developed sufficiently to form a class by themselves. But the Conference did not go very far on the wrong road. It only decided that "double standards shall not be discounted." I don't expect they will be premiated by many judges. I believe double standards will "come to stay" in the future. I have seen some very charming things in them. I saw in London last summer a pure white double standard which was exquisite. I saw at Duns a fine double form of Tortoiseshell, or Nancy Perkin, which, when two or three sprays were bunched together, gave a patch of the most glowing colour I ever saw in sweet peas. At Marks Tey double forms of Countess Spencer and Constance Oliver have been grown for some years, and are apparently quite fixed. I have the opinion of Mr. George Munro that the double standard forms will be very acceptable to market men, and if they take on with the public, through being more lasting when cut than any other type, the popularity of the sweet pea will greatly increase.

This brings me to another most important point, which I hope will not be lost sight of in the future—the preservation of the delightful perfume of the sweet pea. Raisers would be well advised to watch this factor, or should I say element, and see that it is retained. There is yet one more point I think worth considering, and that is the height of the plants. I feel something ought to be done here. A plant beginning to bloom at eighteen inches or two feet, and not growing more than six feet, is surely tall enough—when we get them to twelve, fourteen, and sixteen feet, they are then too tall for human nature's daily food!

I do not see at present what is coming along to eclipse the sweet pea—nothing certainly among annuals—but fashions change, and new men, like new times, bring new manners.

WILLIAM CUTHBERTSON.

Grapes at Tyntesfield.—You do well to emphasise the value of what Mr Wilkinson has done in the renovation of vines and the improved production of grapes since he took charge of the gardens at Tyntesfield. I am certain, too, that much more good of a similar character might be done with vines in many gardens by renovating rather than by removing them entirely and planting new canes. There is a tendency at the present time, especially amongst the younger members of the profession, to root out rather than improve the existing canes. So many instances of the rapid improvement of existing vines can be seen that I am sure gardeners generally would be well advised to consider the probabilities of the future before taking the drastic step of entire removal. When we consider what has been done with the old vine at Hampton Court by renovation, surely such an example should have an influence upon present practice. The vineries at Tyntesfield are lofty, and generally on a large scale, and by a thorough reorganisation of the rooting space and mulching coupled with a judicious method of pruning Mr. Wilkinson has, since my visit there staged many grand examples of grapes which I have seen at the various shows.—E. M.

CANARY GUANO

"THE BEST IN THE WORLD."

There is no Fertilizer that gives such good all round results as CANARY GUANO. It is used in the King's Gardens, and by leading Amateurs and Trade Growers all over the Country. A post card to the Manufacturers will ensure full particulars.

SOLD IN BAGS AND TINS BY SEEDSMEN, NURSERYMEN, ETC.

Manufactured — by — **THE CHEMICAL UNION, LTD, IPSWICH.**

ROSES IN POTS

WM. PAUL & SON

WALTHAM CROSS, LTD.

Respectfully invite attention to their magnificent stock of the above, which they believe to be unrivalled in quality and extent.

Dwarfs or bushes, extra strong, in 8 in. pots, for forcing and greenhouse culture	30/- to 60/- per doz. £12 and upwards per 100.
Climbers and Ramblers in 8 in. pots, for forcing and out-door planting on pergolas, arches, etc., with shoots ...	6 to 12 ft. long, 30/- to 60/- per doz. 12 to 16 ft. long, 72/- to 90/- per doz. Price per 100 on application.
Dwarfs and Climbers, smaller plants, in 5 in. pots	10/6 to 18/- per doz. 75/- to £6 per 100.

Priced List Post Free on application.

Inspection of Stock Invited.

The Nurseries are twelve miles from London, four minutes' walk from Waltham Cross Station, G.E.R.

Sole Postal Address—

PAULS' ROYAL NURSERIES
AND SEED WAREHOUSE,
WALTHAM CROSS, HERTS.

ORCHIDS.

Amateurs interested in Orchids should write for our

Amateur's Guide,

2nd Edition, free.

Giving Treatment, Soils, Description of Flowers; Illustrated.

MANSELL & HATCHER, Ltd.,
Rawdon, Yorkshire.

BROOKLANDS NURSERY.

Specially Choice Hybrid Rhododendrons on own Roots.

The Manager, BROOKLANDS NURSERY, Weybridge.

WARRANTED BEAU-IDEAL SWEET PEAS.

All the best and proved stocks in any quantity from 1d. up.

	No. Seeds for a 1d.
Doris Burt, scarlet, 12 s. **6d.**	1
George Stark, scarlet, 50 s. **9d.**	5
King Ed. Spencer, crimson, ¼oz. **9d.**	10
Maud Holmes, crimson, 10 s. **6d.**	1
Marie Corelli, deep rose, 100 s. **9d.**	10
Clara Curtis, primrose, ½oz **8d.**	20
Flora Norton Spencer, blue, 50 s. **9d.**	5
Mrs. H. Sykes, blush, 100 s. **9d.**	10
Black Knight Spencer, 100 s. **9d.**	10
Elsie Herbert, picotee, 50 s **9d.**	5
Zarina, peach pink, 50 s. **9d.** ...	5
Masterpiece, lavender, 100 s. **9d.**	10
Colleen, carmine and white, 12 s. **6d.**	1

These seeds are **warranted true to name.** Then, if you want small quantities, where's the sense in buying large expensive packets? Another point, Stormonths' Catalogue tells you **beforehand** how many seeds you will get for your money. Send postcard for copy, it is gratis and post free.

STORMONTHS, 8, KIRKBRIDE, CARLISLE.

FRUIT TREES

We have 50 acres of young Fruit Trees in perfect condition to offer this season. Our **Specialities** are Cordons, Bushes, and Pyramids, and Trained Trees worked on selected **Fruiting Stocks.**

Fully Illustrated Catalogue Post Free.

W. SEABROOK & SONS,
The Nurseries, CHELMSFORD.

HESSLE PEAR TREES.

A grand lot of 3-year Half Standards to offer. Price per dozen, 100, or 1,000 on application.

S. SPOONER & SONS,
The Nurseries,
HOUNSLOW.

CATALOGUE FREE ON APPLICATION.

RIVERS'

Fruit Trees, Roses,
Vines, Figs, Oranges,
AND
Orchard House Trees.

A LARGE AND SELECT STOCK ALWAYS ON VIEW.

Illustrated & Descriptive Catalogue
POST FREE 3d.

THOMAS RIVERS & SON
Sawbridgeworth, Herts.
Station: HARLOW, G.E.R.

ALL WHO ASPIRE TO HIGHEST HONOURS
IN THE **SWEET PEA** WORLD MUST GROW

PARADISE SWEET PEAS.

Of highest renown for Quality, Purity, and exquisite charm in Form and Colour.

THE GARDEN BECOMES A PARADISE AND THE GROWER
A SUCCESSFUL EXHIBITOR
WHEN **PARADISE PEDIGREE PEAS** ARE GROWN.

Guy Hemus	10	seeds	1/-
Orange Paradise			Sold out.
Paradise Celestial			Sold out.
Paradise White Pearl ...	5	seeds	1/-
Paradise Dawn	8	,,	1/-
Paradise Apple Blossom ...	12	,,	1/6
Paradise Peach Blossom ...	5	,,	1/-
Prince of Orange ...	12	,,	1/-
Navy Paradise	5	,,	1/-
Purple Paradise	5	,,	1/6

For descriptions see Catalogue.

TAKE NOTE
OF THE
PARADISE NOVELTIES
FOR
1911.

Mrs. Herbert Hemus ...	5	seeds	2/6
Scarlet Paradise	7	,,	1/6
Paradise Cardinalis	7	,,	1/-
Coccinea Paradise	12	,,	1/-
Paradise Cerise	7	,,	1/-
Paradise Brilliant	12	,,	1/-
Paradise Cherry Ripe ...	10	,,	6d.
Paradise Ivory	5	,,	1/-
Lavender Paradise	10	,,	6d.
Paradise Sapphire	7	,,	1/6
Paradise Colossus			Sold out.

For descriptions see Catalogue.

Write for particulars of splendid collections for all purposes.
Illustrated List with beautiful Coloured Plates will be sent Post Free.

Address:— **TERMS: Cash with Order. Post Free on Orders over 1/6 in value.**

MISS HEMUS, F.R.H.S., Holdfast Hall, UPTON-ON-SEVERN.

Chester Nurseries
Over 500 Acres in Extent.

GRAPE VINES.
Strong and perfectly ripened.
Strong and Extra Strong Canes for planting out, **5/-** and **7/6** each.
Extra Strong Canes for fruiting in pots, **10/6** and **12/6** each.

Fruit Trees in Pots.
Strong Pyramids, established.
Apples, Pears, Plums, **3/6** and **5/-** each.
Nectarines, Peaches, **5/-**, **7/6**, and **10/6** each.
Apricots, Cherries, **5/-** and **7/6** each.

SEAKALE
(Forcing).
LILY WHITE, SOLID IVORY, & PURPLE,
Extra Strong, **14/-** and **18/-** per 100.
Extra Extra Strong, **21/-** per 100.

ASPARAGUS
(Forcing).
Extra Strong, **20/-** per 100.
New Illustrated Catalogues of all Departments post free on application.

DICKSONS,
Royal Nurseries, CHESTER.

ANT ROOZEN & SON's
SEEDS,
BULBS,
AND
PLANTS
For Spring, 1911.

THE CATALOGUE of above is NOW READY, and will be sent, post free, on application to their Offices at . . .

OVERVEEN, HAARLEM, HOLLAND;
Or to their General Agents,
MERTENS and CO.,
3, Cross Lane, LONDON, E.C.

BUNYARD'S
FRUIT TREES

The Best Quality and
Largest Selection at
Moderate Prices.

WRITE FOR CATALOGUE.

GEO. BUNYARD
& CO., LTD.,
Royal Nurseries,
MAIDSTONE.

SWEET PEA ENTHUSIASM IN SCOTLAND.

There has been an extraordinary wave of enthusiasm in the culture of sweet peas all over Scotland within the past few years. It started in the Border town of Duns, where Mr. Thomas Duncan and Mr. Alex. Malcolm, well known enthusiasts, whose names are familiar to every sweet pea grower, are still growing and helping to foster the culture of their favourite flower. The former still grows a very large quantity of peas, but has almost given up competing, and the latter is winning as much fame to himself in the raising of new varieties as he did in the past on the show boards, and, along with the Rev. J. M. Simpson, of Edrom, has sent out such varieties as Edrom Beauty, Masterpiece, Mrs. Malcolm, Isobel Malcolm, and there are other good things to follow.

Nowhere in Scotland has enthusiasm burned more brightly than in Perthshire, and the natural result has been the formation of the first Sweet Pea Society in Scotland. The society owes its origin to the hon. secretary, Mr. R. S. Halley and the hon. treasurer, Mr. A. M. Mechie. The former, being in the habit of attending many of the local shows, thought that the time was ripe for the formation of a society to bind the growers together, and, with the assistance of Mr. Mechie, drafted a circular calling a meeting (under the convenorship of the Rev. J. S. Clark, Bridge of Earn) of all interested in the culture of the sweet pea. The meeting was well attended, the society was launched, and officials elected and, after much discussion, the classes were thrown open, and the result justified the decision.

As to the progress of the society one cannot do better than quote part of the report for last year, given at the annual general meeting: "Just a year ago to-day saw the birth of the Perthshire Sweet Pea Society, the first of its kind in Scotland. It was launched with great enthusiasm by a fairly representative gathering of sweet peaists, and we are glad to be able to record an unabated enthusiasm among its members. During the past year no fewer than 144 members have been enrolled in Perthshire and the surrounding counties, from Forres in the north right down to the Borders. Our list of patrons is exceptionally good, there being a total of thirty-eight, and all keenly interested in the society. We have also been very fortunate in having a splendid working committee, gentlemen who have spared neither time nor expense in attending the meetings held in Perth. The society's first schedule was a good one, and many complimentary things were said of it by the foremost growers in Scotland, and the society is much indebted to the president, the Rev. J. S. Clark, and Mr. W. A. Morison, Newburgh, for the help they gave the secretary in compiling the same. The society's first exhibition was held in Perth on Saturday, July 30, 1910. The opening ceremony was performed by the Countess of Moray (in the unavoidable absence of the president) in the presence of a large and fashionable gathering. The exhibition, from a floricultural point of view, was a very great success. The large marquee was taxed to the utmost, and Mr. W. Cuthbertson (who assisted Mr. W. P. Wright by judging the small growers' section) remarked that a marquee half as large again would not have been too large for the beautiful and fragrant display. There were nearly 200 entries, representing close on 1,000 vases, and all the classes were keenly contested. In the small growers' section the class for six vases brought out no less than twenty-three entries. The quality of the exhibits, generally speaking, were of a very high order."

The show brought the cream of Scottish growers together, with the exception of Mr. Gilbert Kerr, of Langton, and Mr. Charles Shaw, of Bogahan. The Borders were represented by Mr. Thomas Duncan, of Fogo, who simply could not stay away. The society's cup was won by Mr. Thomas Fender, of Caltoquhey, Crieff, with a grand lot of flowers, scarcely so strong as the second lot, but what they lacked in strength was more than made up in freshness and colour; the runner-up was Mr. George Reid, of Downfield, Dundee, who is a grower of the first rank, and he has had a wonderful season of successes. He started exhibiting at the N.S.P.S. Show on July 13, and continued right on to September, winning nearly all the honours wherever he exhibited. The Rev. Harold Mayall, Comrie (this year's president of the Perthshire Sweet Pea Society) was remarkably well represented in the prize list; he made a capital début in the large growers' section, and will be a force to be reckoned with in keen competition wherever he exhibits in the future. Another coming grower who did well at Perth is Mr. W. Young, Falkland Palace, Fife; he showed excellent blooms, and ran in third place for twelve vases, and also won honours in other classes. Mr. W. A. Morison, Newburgh, is an enthusiast who grows

SWEET PEA THOMAS STEVENSON.
Raised by Mr. R. Holmes. The colour is rich orange-scarlet.

and exhibits very fine flowers, and he is one of the leading lights of the Perthshire S.P.S. Further north, Mr. J. S. Adams, Brechin, and Mr. D. Milne, Drumald, Montrose, are rapidly coming to the front.

When at the Aberdeen show in August we had the pleasure of seeing some very fine flowers staged, notably by Mr. J. Grigor, Seapark, Forres. Perth Show was rather early for him, but he was in prime condition at Aberdeen, when for length and strength of stem, and substance, combined with colour and freshness of flower, he was fit to win anywhere. Deeside was represented by Mr. R. Petrie, Crathes Castle, who showed capital blooms, although a trifle weather-beaten. Other keen growers on Deeside are Mr. J. Crozier, and Mr. R. Reid, of Durris House. In East Aberdeenshire we have Mr. Robert Gordon, of Ellon, a grand grower, who turns out wonderful blooms: such, in fact, as are not often seen on the exhibition stage. Another keen sweet peaist is the Rev. Mr. McKenzie, Methlick, a grower who, with a little more experience in staging, will prove a tough opponent. Coming into Banffshire, Mr. R. Morton, of Cullen House, is a grower who will shine in any company: we had the pleasure of seeing his plants just coming into bloom in the beginning of July, and were delighted with their strong, healthy appearance. In Inverness-shire the sweet pea is extensively grown, and when at the show in the Highland capital we were not surprised to find that sweet peas were certainly the feature. Mr. W. L. Reid, of Cantray, and Mr. E. G. Fraser Tyler, of Auldewrie, are growers who ought to come down further south and cross swords with the Lowlanders. Miss Burns, of Drummond Hall, obtains fine length of stem and grand substance of flower, fit to take honours in much keener competition. Miss Fraser, of Moorlands also grows very fine flowers, and made a capital runner-up to Miss Burns.

R. S. HALLEY.

SWEET PEA MARION CUTHBERTSON.
Raised by Messrs. Dobbie and Co. The colour is rose-pink.

SWEET PEAS IN SMALL GARDENS.

The sweet pea is without doubt the Queen of Annuals, and its proud position is not so much due to its importance as an occupant of the largest and most efficiently staffed gardens as to the fact that it is a flower that can be easily and successfully grown in any town or suburban garden where flowers will grow at all. The sweet pea calls forth intense enthusiasm from vast numbers who possess only limited opportunities for cultivating it, and it is to these growers that the present notes are addressed.

Many have already sown their seeds in the autumn, and have prepared their sites for next year's display, but the majority have made no such preparations, so that it is not too late to offer advice as to the best positions for sweet peas in small gardens. Where the whole of the plot is devoted to sweet peas, it will be found advisable to grow them in rows about six feet apart, and, preferably, running from north to south but where the peas are grown in borders among other flowers, clumps give by far the finer effect, although they are somewhat more troublesome to attend to. The use of sweet peas for hiding unsightly objects or fences is too well known to need much comment, but I should like to call attention to the frequent mistake of growing a row of sweet peas within a few inches of a fence. The results will be far finer if a space of at least two feet is allowed between the plants and the fence. Growing other flowers close to the sweet peas is another frequent source of comparative failure. If possible, it should be arranged that the neighbouring plants, even when they have made their full growth, do not come within at least two feet of the sweet peas. Shade from the midday sun is not always a disadvantage, especially in the case of varieties that lose colour easily, but sweet peas should not be planted directly under trees.

Very good results can be obtained from soil that has only been dug one spit deep, but it is an advantage to grow the plants in soil that has been dug to a depth of two or three spits. When the soil is trenched, however, it should be trenched all over, and not simply in a narrow strip a foot or eighteen inches wide. In wet seasons especially this latter method frequently does more harm than good. The sweet pea delights in a rich soil, but the manure should be thoroughly mixed with the staple, and not left in layers an inch or so thick. Where sweet peas are grown a dressing of lime is of great value, especially in soils that have been given animal manure for a number of years. The addition of bonemeal is also highly beneficial. Those who are able to trench their soil should work the bonemeal into the top spit, the animal manure being kept below the top eight inches. In the majority of soils it will be wise, when trenching, to keep the old top spit still on the top.

Those who do not trench their soil, and they will be by far the most numerous, should dig it over thoroughly, and remember, especially if they delay their preparations, that on no account must undecayed manure be used so that it comes into close contact with the young roots.

The great aim is that when the planting time comes the soil shall be of good tilth, and ready to fall to pieces at a touch, and be at the same time fairly firm. Good results cannot come from a loose soil, so that any trenching should now be completed as soon as possible to allow the soil to settle. If necessary the ground should be trampled down to make it firm, but only when it is dry. To attempt to work on a clay soil while it is wet is very unwise.

It is the general experience that autumn sowing gives the best results, but good results are also obtainable from spring sowings. If possible, the seeds should be sown under glass, in pots or in boxes about five inches deep, at the rate of about five seeds in a 48-sized pot. It is wise to place the pots in a slightly warmed structure, otherwise there is a liability of the seeds rotting, but as soon as the plants are through the soil they should be placed in a cold frame. While here, the amount of air given them should be gradually increased until the lights are left off altogether, except in frosty or wet weather. In the earliest stages great care is needed to guard against over-watering, which frequently causes seeds to rot, especially the spotted and white seeds.

Provided that the plants have been thoroughly hardened off, they can be planted out as early in April as the soil is in good condition to receive them. A single row, with the plants nine inches apart, will be suitable for most gardens. Some growers raise only one plant in each pot, so as not to disturb the roots, but there is practically no advantage over several in a pot if the roots are carefully shaken apart.

When the seeds are sown in the open ground the great thing is to choose a day when the soil is in good condition. The earlier this can be done in March the better, although there are many who wait until April, or even May. If the seeds are cheap the best plan is to sow two or three inches apart, and thin out to six or eight inches apart when the plants have grown a week or two. The grower must be constantly on guard against birds, slugs, and mice, as either of these will destroy sweet peas altogether, and the danger commences as soon as the seeds are sown.

Hazel or similar boughs are suitable and convenient for the plants to climb up, but are not always obtainable. Wire netting is an efficient substitute, and is not more expensive in the long run, as it can be used several years. Great care should be exercised to ensure that the supports are absolutely firm, so as not to blow down at any time. While the plants are young they will need a little help to enable them to commence climbing. It should be remembered that well grown sweet peas generally reach a height of six feet, and frequently several feet higher, and sufficiently high support should be allowed them.

Throughout the season the hoe should be kept at work near the roots, and early in June a slight mulching with decayed manure should be given, and this can be increased later on. It is unwise to give any extra manure until the plants are in flower, and even then great care must be exercised not to use too much. Soot water and the diluted liquid obtained by soaking horse manure in water are excellent, but, as a general rule, such stimulants as nitrate of soda and sulphate of ammonia are best left alone by the amateur. Liquid manures should not be given when the soil is thoroughly dry, but the ground should be first watered with clear water. It is not wise to commence watering until the soil is fairly dry, and then it should be thoroughly done. Just sufficient water to wet the top three inches is worse than none at all.

SWEET PEA CHERRY RIPE.

Raised by Messrs. Gilbert and Son, and received an Award of Merit from the National Sweet Pea Society in 1910. The colour is a lovely shade of cerise.

Before concluding let me remind the owner of a small garden that a good selection of varieties is most important, and that it is wise to obtain the seed from a reliable source. Good stocks of the following varieties should be obtainable at a reasonable price from most first-class seedsmen, and they can all be thoroughly recommended: Nora Unwin, King Edward VII. Spencer, Asta Ohn, Evelyn Hemus, Countess Spencer, Helen Lewis, Constance Oliver, John Ingman, Princess Victoria, Tennant Spencer, Elsie Herbert, and Mrs. Andrew Ireland. Four good additional varieties, somewhat more expensive, are Mrs. Hugh Dickson, Edna Unwin, Tom Bolton, and Clara Curtis. America Spencer is a very good striped variety, and Maud Holmes or Sunproof Crimson are worth the extra price in place of King Edward Spencer.

G. F. Drayson.

Mo. B. Garden
1912

THE SWEET PEA AS AN ARTICLE OF COMMERCE.

However much the introduction of the commercial element is to be deprecated in connection with the beautiful products of Nature, human environment demands adequate facilities for their distribution amongst the lovers of the beautiful. Hence it follows that intelligence and skill must be applied to the performance of this use and the necessary materials provided for its successful accomplishment. In all honourable work it is a well-established principle that "the labourer is worthy of his hire," and surely no work can be more praiseworthy and honourable or more deserving of reward than helping to develop the love and enjoyment of the beautiful by placing the possibility of its enjoyment within the reach of all, and that is where the true commercial spirit has full right to enter.

The early history of the sweet pea clearly shows that for many years the work was conducted along these lines. It is earnestly to be hoped that this spirit may ever continue to animate those who are engaged in disseminating the seed of this lovely flower, and that the day may never come when the mere money grubbing element will be permitted to prevail.

For many years after its introduction into this country the seed of the sweet pea appears to have had very little interest for seed dealers, and, as a result of my researches into the early history of the flower, I find that it was not offered as an article of commerce until 1730. In that year Robert Furber, gardener, of Kensington, published "A Short Introduction to Gardening, being several useful Catalogues of Fruits and Flowers." At the same time Furber also published, by subscription, a set of twelve very fine engravings under the title of "Twelve Months of Flowers." The work was dedicated to

"H.R.H. Prince William of Cumberland,

"Their R.H. Princess Mary and Louisa."

"The Nobility and Gentry and other subscribers, and amongst the latter are the names of Sir John Evelyn and the Rev. Isaac Watts, D.D."

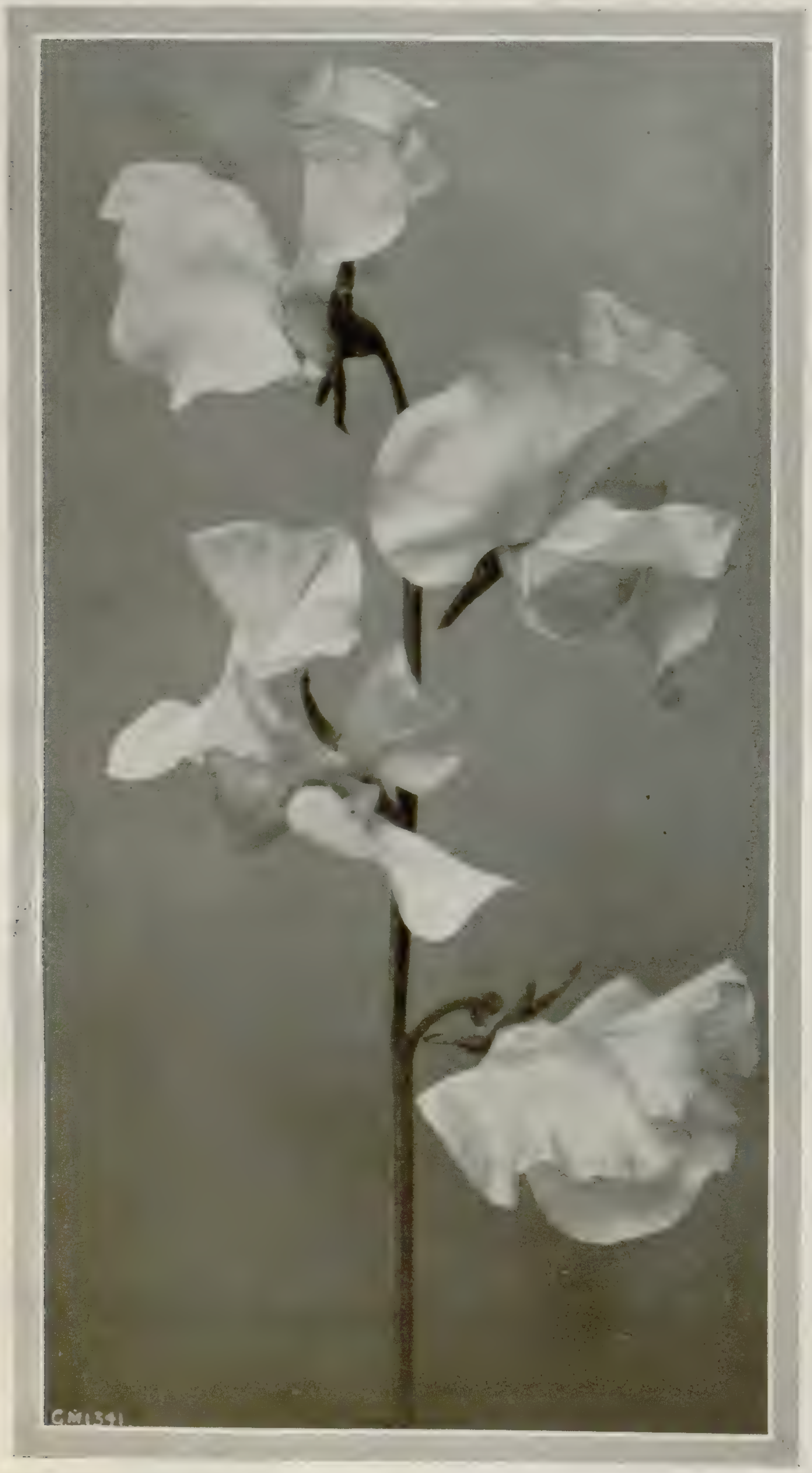
The interesting point in connection with sweet peas is an illustration of the only variety known at that time in the plate for the month of June. A reproduction of the plate appears on page 51, and the sweet pea is No. 33 on the right-hand side. The form is certainly grotesque if judged by twentieth century standards, but it closely resembles Commelin's famous drawing which appeared in 1700.

Looking back over the two centuries that have intervened, I am of opinion that a pardonable feeling of envy of the ease with which Furber could fill his sweet pea orders, having only one variety to provide, will frequently pass through the minds of those whose duty it is to furnish the many hundreds of varieties that exist at the present day.

This naturally leads to the purely commercial side of the question. The Editor of the Gardeners' Magazine has kindly asked me to give, as near as possible, an estimate of the supply of sweet pea seed to-day. The task is one of very great difficulty, but, judging by facts under my personal observation, and the acreage which is annually devoted to their culture, the world's produce must be nearly 500 tons.

The greater part of these are sold in America, where they form the most important item in the flower seed section of the commission seedsmen's boxes. Great Britain and her many Colonies also use immense quantities, for it is as easily grown by the cottager as the prince. In Germany there is a growing demand, especially for the early-flowering section: Scandinavia has also entered the lists; France is much interested in the Cupid section; and some day, perhaps, even Italy will join the ranks of its admirers, and thus remove the reproach which rests upon it while it remains like the prophet, "without honour in its own country."

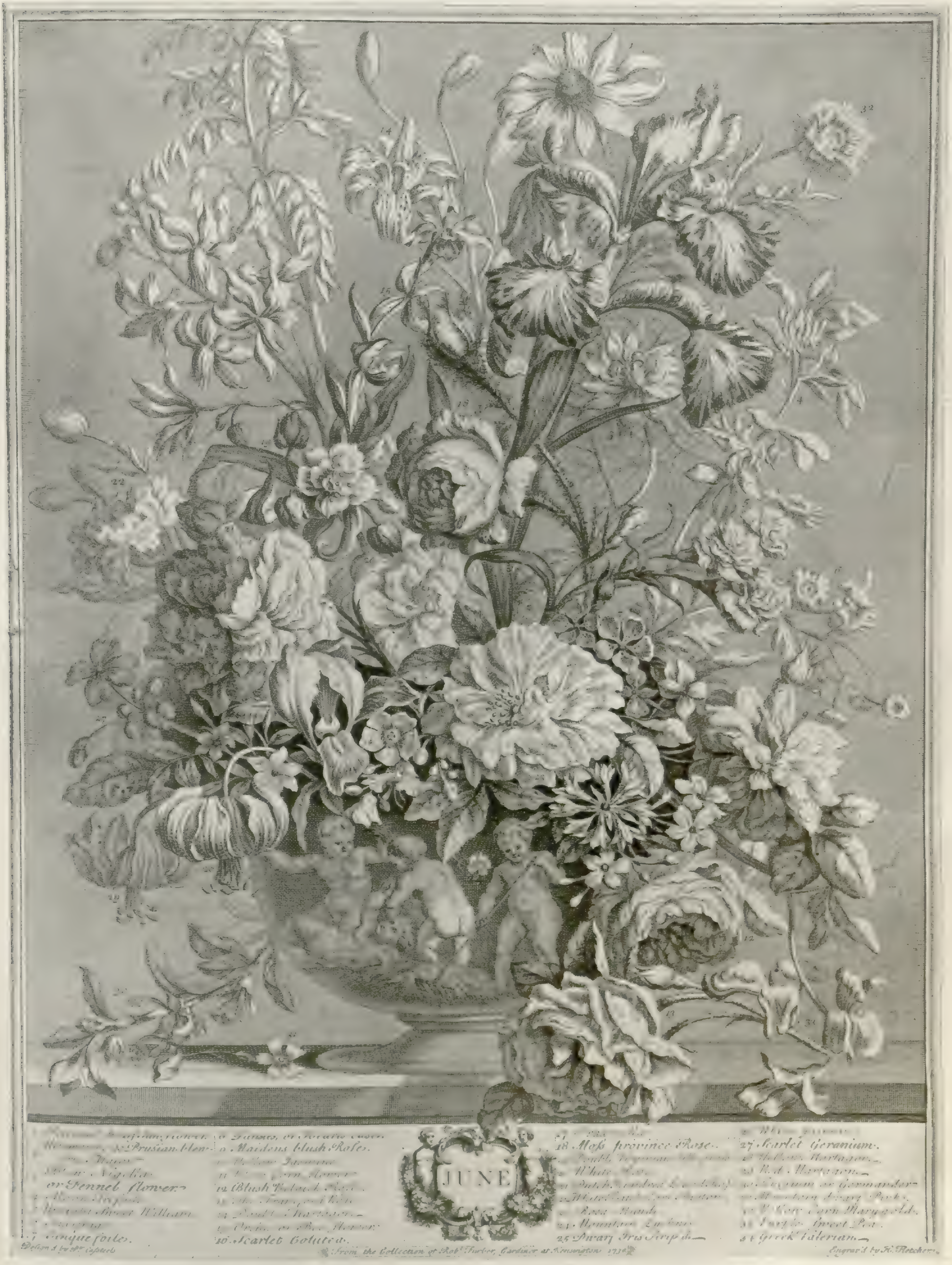
S. B. Dicks, F.R.H.S.



SWEET PEA CHARLES FOSTER.

Raised by Mr. R. Bolton, and received an Award of Merit from the National Sweet Pea Society in 1909. The colour is an exquisite shade of pastile pink.

Vine Eyes.—These may be put in now, or any time during the next month, and the sooner they are started the longer will their season of growth be. Select good plump eyes, and cut them, wedge-shaped, out of the shoot, and place in small pots containing some fine sandy loam and leaf-soil, or, if a quantity be required, they can be put in pans or small seed trays, and placed in a propagating frame with a brisk temperature. But as soon as they begin to grow they must be moved to a more airy place near the glass.—W. A. Cook.


Prusian blew
Maidens blush Roses.
or Fennel flower
12 Blush Belgick Rose
Sweet William
Cinque foile.
10 Scarlet Colutea.
JUNE
18 Moss province Rose.
White Rose
24 Mountain Lychnis
25 Dwarf Iris Persicus
27 Scarlet Geranium.
Red Martagon
Corn Marygold.
Purple Sweet Pea.
Greek Valerian.
From the Collection of Robt. Furber, Gardiner at Kensington 1730
Engrav'd by H. Fletcher.

THE FIRST ILLUSTRATION OF A SWEET PEA OFFERED FOR SALE.

A reproduction of the June plate in "Twelve Months of Flowers," designed by Peter Cassteels, engraved by H. Fletcher, and published by Robert Furber, at his nursery over against Park Gate, Kensington, London. Our reproduction is from a copy in the possession of Mr. S. B. Dicks, F.R.H.S., and the sweet pea is seen at the lower right-hand corner.

THE NEWER SWEET PEAS.

That the sweet pea is still growing in popular favour is amply evidenced by the great demand for new varieties, and so long as raisers can produce those that are actually new and interesting the cult of the sweet pea will move forward.

I am optimistic enough to think that we are a very, very long way from the time when the sweet pea will lose popular favour, and in support of this we only need take a very cursory glance through the present season's list of novelties. All of the varieties will not prove gems of the first water, but there are several which I am quite sure are really great advances on those that are now at the head of their various colour classes, and I should say that better things have been secured, and apparently fixed, than has been the case for the past three or four seasons.

Of many we cannot possibly have seen the best, as the past season was anything but ideal for testing the merits of the peas, though perhaps in the matter of growth it was one of the best on record, but the cold drizzling weather, with an occasional bright day, kept the flowers in the worst possible condition for proper comparison. But even under these conditions many of the varieties under review stood well out from among their neighbours.

From a seedsman's point of view, it could hardly have been worse, and many varieties that early in the season gave every promise of yielding a good crop of seed, failed miserably, and so all enthusiastic amateurs are the sufferers, either by not being able to obtain seed of their pet new varieties at all, or by having to pay much more for what they have, or hope to have, and lucky, indeed, are they who made up their minds early, gave their order in, and thus got first call on what little seed there was. But as many of the varieties offered this season were held over from last year, I hope that everyone will obtain at least the best of the novelties.

In giving a description of some of the newer varieties I do not wish it to be understood that these are all the new varieties that are worth buying, but a description of a few that I know to be really good, at least from my point of view, and were it to include half of those that I think good, or pretty, the list would need to be an extensive one.

As a really new and distinct variety pride of place must be given to Charles Foster (Bolton), and though I had seen this variety two or three times before, the beautiful form in which it was shown at Vincent Square will long impress me, and, I might say, it appealed to me more than any pea I have seen; the delicate shadings of lilac and pink, with that metallic hue on the edges of the wings and standard forming an extremely beautiful combination of colours. I think this variety will need really good and skilful cultivation for the show bench. Another new variety in what I call the lilac shades is Bertha Massey, first shown by Messrs. Bide under the name of Mrs. Ryle. It is of a very pleasing shade of lilac, which appears to stand the weather very well, and the flower is quite up to exhibition size.

Red Chief, another of Mr. Bolton's introductions, is quite a new break in the very dark or maroon shades, and the name under which it was grown at the sweet pea trials—Red Maroon very aptly describes it. The pale yellow keel contrasts well with the standard and wings, which are large, and of good substance; altogether an unique and desirable pea. Scarlet Monarch (W. Deal) promises to stand out well among the numerous varieties in this colour, being a brilliant shade of scarlet, which stands the weather well, and for a scarlet it is of good size. Red Star (Malcolm) is another new scarlet, much in the way of the first-named, perhaps not quite so bright in colour, and the flowers, if anything, are a trifle further apart. It will be interesting to note these two varieties during the coming season.

Maud Holmes (Sydenham and Holmes) is a very fine crimson; indeed, a perfect flower in every way, and though I grew this by the side of the two strains of Sunproof Crimson last year, I should hardly like to say which was the best. The former may be just a trifle the larger.

Compress (W. Deal) is a most beautiful shade of mauve, without that variation of colour we find in the Marquis, and I like this variety very much; the flower is large, and there is a fair percentage of four flowers on a stem. Helio Paradise (Hemus), and Queen of Norway (Bolton) are also two very good mauves, a trifle deeper in colour than Empress, but both produce very fine flowers, borne on good stems, and with high cultivation invariably give fours.

I do not remember a season when there were more varieties of lavender sweet peas being placed on the market. Some of them I have seen, others I have not, so should I appear to have overlooked something that is especially good, readers will know that I have not grown it, or seen it growing. Amongst the many I have seen none has impressed me more than Florence Nightingale (Burpee). I cannot recommend it on the score of being perfectly true this past season, but have great hopes for the future, and the best description I can give of it is that it is a glorified form of Lavender George Herbert, with, perhaps, a little more waving in the standard, and the very mention of Lavender George Herbert should be sufficient guarantee of the colour. Nettie Jenkins, sent out last season by Mr. Unwin, but perhaps not generally known, is a flower of much beauty, the very soft lavender of the flower being strikingly set off by a touch of white at the base of the wings and standard.

Anglian Blue is a pea which I think will be seen in good form this next season, the colour being a clear bright blue, practically the same as Zephyr and Kathleen McGowan, but as growing with me this last summer it was certainly a much larger flower, and of good substance, with the blooms well placed on the stems. What appeared to be a very nice pale blue was Guy Hemus, one of the many that Miss Hemus was exhibiting in these shades during the past summer The colour is about the same as that of Plumbago capensis, and if this is really quite fixed it should prove an acquisition, the flowers being quite up to exhibition size.

Isabel Malcolm (Dobbie) is a pea which will be much in demand for decorative purposes, the colour being practically straw yellow, and I can well imagine what a fine combination this and Guy Hemus would make in a vase—delicate, but none the less beautiful. Ivanhoe, another of the Messrs. Dobbies' varieties, is also a decorative sweet pea, much in the way of Mrs. Bieberstedt, but of quite Spencer form.

I must not forget the much-talked-of variety, Stirling Stent, which created such a sensation in July last on account of its colour. I feel sure, however, that Earl Spencer will beat it both in form and colour. I have no doubt this will be used a good deal for cross-fertilisation, as it is credited with being quite sunproof. Iris, one of Mr. Breadmore's introductions, is a very delicate sweet pea, best described as a very soft salmon, and though it may not prove of extraordinary value as an exhibition variety, it will certainly be much prized for decorative effects. Henry Eckford Spencer (Breadmore) is a variety of much merit, a bunch of it being very effective, and softer in colour than Earl Spencer, so that this, too, will be useful from a decorative point of view.

Afterglow (Bolton) and William Eagle (one of my own raising), are two peas that I should say are quite unique in colouring, the same colours predominating in both of them, viz., mauve and blue. In the former they are more or less mixed in both standard and wings, whilst in William Eagle the standard is a very pale mauve, and the wings of a clear shade of blue, the edges of both wings and standard being just touched with a metallic shade much in the same way as Rosie Adams.

We still have a few more pinks, all are beautiful, and it would be worth something to be able to say which is actually the foremost among Lancashire, Doris Usher, Mrs. R. Hallum, Anglian Pink, Lady Rose, etc., but no doubt we shall be able to judge these during the coming season, and they will, indeed, prove good peas if they oust Mrs. H. Dickson and Gladys Burt from the position these now hold.

The last pea I shall try to describe is the variety Thomas Stevenson, which was named after myself by Mr. R. Holmes, and is being distributed by Messrs. R. Sydenham, Lim.; this, as growing with me this past summer, is quite distinct from all the other varieties in this colour (orange), and though an individual flower may not look so deep as either Dazzler or Edna Unwin, yet in the bunch it is much the richest, having quite a golden glow over the orange. I see in one place it is described as an orange form of Helen Lewis. I cannot thus describe it, as the standard of the flower is broader and more upright, and certainly has more substance. The shape of the flower is very much like that of Mrs. Andrew Ireland, but it is a much stronger grower than this variety, and, I might mention here, that it gains in colour until the flowers are fully expanded.

If growers were limited to this little list alone I feel sure they would be able to exhibit well, but with these, and a good sprinkling of our older friends, such as Evelyn Hemus, Elsie Herbert, Mrs. H. Bell, Mrs. H. Sykes, Countess Spencer, Etta Dyke, John Ingman, Clara Curtis, etc., we ought to be able to put up quite a formidable lot, always providing the weather will treat us a little more kindly than it has done during the past two seasons. Most, if not all, of the varieties mentioned in this list I was able to sow late in October, and am pleased to be able to say that in nearly every instance they have germinated quite 95 per cent., and, in some cases, even more. This, I think, is a striking testimony to the great care our seedsmen are taking with the seed they are sending out, as practically all the leading growers in the sweet pea trade are represented in my collection. I hope all growers are obtaining results as good, or better.

Thomas Stevenson.

Lobelia cardinalis.—In many gardens it is necessary to lift the plants and winter them in frames. The roots may now be placed in a warm greenhouse to induce them to make growth. As soon as this commences they may be pulled to pieces, and each shoot potted singly, three-inch pots being the most suitable, and a mixture of one-third loam, one-third leaf-soil, and one-third sand, thoroughly mixed, will be found an excellent rooting medium.—E. C. P.

THE DECORATIVE VALUE OF SWEET PEAS.

I am glad to have been asked to say a few words from a decorator's point of view upon the many good qualities of sweet peas, and I feel that it would have been well-nigh impossible to have entrusted the subject to a greater admirer of these lovely flowers.

The position I am justified in claiming for the sweet pea is a fairly important one, as during four months of the year I place it well ahead of all other garden flowers except the rose. Speaking as one of the army of floral caterers for our great capital, it is safe for me to say that they form the very backbone of our supply from the time the good forced blooms arrive until the rose season is well advanced. The reason that they are so popular and useful is not difficult to determine, as it lies in three most important particulars. First, they give us an almost perfect range of superb and unaggressive colours; secondly, they are almost the easiest flower in the whole Flora to arrange; and last, but not least, they are not only beautiful when arranged alone, but carefully chosen shades blend with, and add beauty to, almost every other flower, from the choicest orchid to the commonest flower in the herbaceous border.

With a view to illustrating this, I give below a few of many contrasts which have suggested themselves to me, and I have often successfully used.

Clara Curtis is charming in a bowl with Sunset, Sunrise, or Marquise de Sinety rose, or in a table decoration of cattleyas and a few sprays of yellow and brown oncidiums, or in a bouquet of Carnation Mikado, which by itself is rather dull, but which becomes a lovely thing when mixed with this beautiful pea. It also contrasts splendidly with violets.

Evelyn Hemus or Mrs. C. W. Breadmore with Rose Mme. Abel Chatenay or Carnation Fortuna.

Mrs. Hardcastle Sykes or Princess Victoria with Carnations Mayday or Winsor, or Rose Prince de Bulgarie or President Carnot.

Asta Ohn, Frank Dolby, or Lavender George Herbert with yellow carnations or roses, or with cattleyas and Scabiosa caucasica.

Countess Spencer or Paradise with Rose La France or Bridesmaid.

Mrs. Henry Bell, Mrs. Hugh Dickson, or Zarina with Rose Lyon, Lady Pirrie, or Mrs. Alfred Tate.

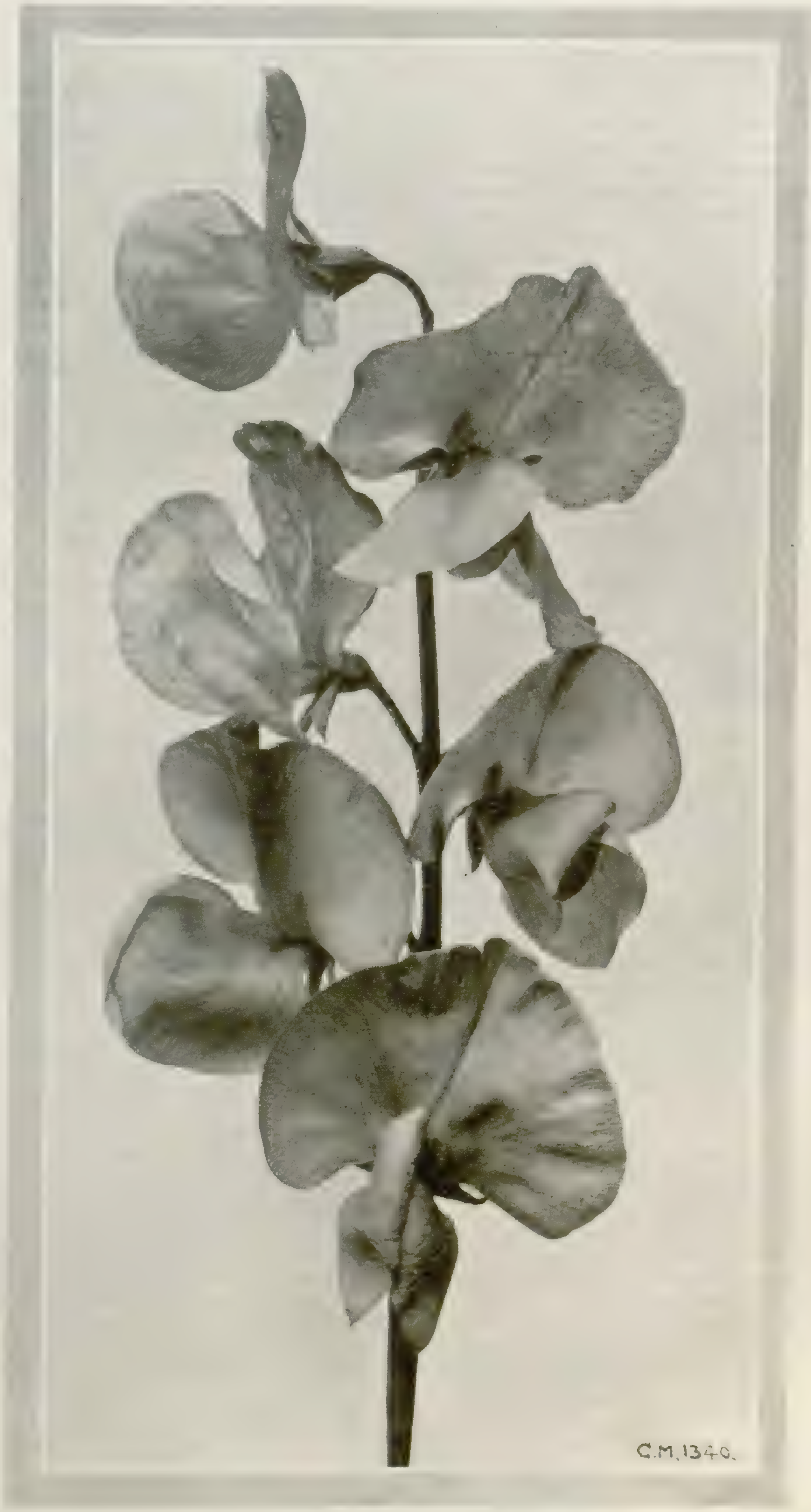
Etta Dyke, Nora Unwin, or Dorothy Eckford help to lighten any floral arrangement in which they are used, and in concluding the list, I should like to suggest Charles Foster with the lovely new rose Juliet. I have never tried them, but I feel certain they will produce a wonderfully effective contrast, and I am longing to use them.

Going from the house to the garden, sweet peas still hold their own from a decorative point of view, as there is nothing so graceful or productive, and nothing so easy to grow.

At every summer show, too, they play a most prominent part, and I venture to say create a more universal interest than any other flower, and they invariably give the brightest bit of decorative colour in the exhibition. If any proof of their value from a florist's point were needed, a visit to the National Sweet Pea Society's Show would more than provide it.

The tables and decorative vases of sweet peas are far more beautiful than those in similar classes at any other of our national shows, except those at the Rose Show, and they are lighter and more elegant even than them, their all-round excellence being far superior. This, I consider, is chiefly due to the fact that they are so much easier to arrange than roses.

As sweet pea foliage is not very suitable for table decoration, I advise the use of the following for that work: Selaginella cæsia, pale green Asparagus plumosus, pale A. Sprengeri, Gypsophila elegans or paniculata, Lonicera japonica variegata, or very light and slender sprays of Rochford's Golden smilax. Never use maidenhair fern, as it makes the arrangement heavy and stiff, as each frond is practically the same shape.



SWEET PEA STIRLING STENT.
Raised by Mr. J. Agate, and in 1910 was awarded by the National Sweet Pea Society a First Class Certificate and Silver Medal. The colour is brilliant orange.

I should like to take this opportunity of impressing upon all growers for market the stern necessity of growing none but the best varieties. I am sorry to say that, although there are quite a good number of really fine standard sorts which can now be bought fairly cheaply, there are, unhappily, many hundreds of boxes of cut flowers of the old hooded varieties daily put upon our market. These flowers do not make enough money to pay for picking and boxing, and it is remarkable that growers should continue their cultivation.

This wretched stuff does a great deal of harm to the sweet pea industry, as it gluts the market, and tires buyers who have to look over stacks of boxes to find a good one. Let me assure growers that a good quality in sweet peas is highly appreciated by the British public.

I now venture to give a list of a few of the very best varieties for decorations: Mrs. Hardcastle Sykes, Etta Dyke, or Nora Unwin, Helen Lewis, Mrs. Henry Bell, Evelyn Hemus (not too many) Paradise (if good stock), Frank Dolby, Mrs. Hugh Dickson, Zarina, Clara Curtis (not in very large quantities), Asta Ohn, Lavender George Herbert, Constance Oliver, Countess Spencer (good stock), Rosie Adams (small quantity), Sunproof Crimson, Masterpiece, Mrs. Andrew Ireland (in small quantities), Mrs. Townshend, and Winsome. May I also suggest a few newer varieties, and some not yet in commerce, which will be welcome additions when they become plentiful: Charles Foster, Stirling Stent, Dazzler, Lancashire, Cherry Ripe, Anglian Pink, Guy Hemus, Iris, and a giant cattleya-coloured one which has been named after me. Neither maroon, magenta, bronze, dark blue, or striped varieties should have much consideration by market growers. A short row of each will be quite enough just to give variety.

It will clearly be seen from the above list that I go only for the Spencer or waved type of flowers, although good stocks of some of the best hooded ones, such as Miss Willmott, Jeannie Gordon, Dorothy Eckford, and Queen Alexandra may also be grown with profit if they are really well done. My last word to all florists is never be afraid of using sweet peas because they are common, as, if properly handled, there is no more beautiful flower.

R. F. Felton.

SWEET PEA CULTIVATION.

The following is the text of the paper on "Sweet Pea Cultivation" read by Mr. George Herbert, at the Conference held by the National Sweet Pea Society:

In the present paper I give what has been my own experience in sweet pea culture, more especially for exhibition purposes. I always consider the secret of success lies in the preparation of the ground. No matter how excellent the variety, or how clever the feeding, if the ground is not well prepared one cannot reasonably expect good exhibition blooms, at least not such as are required to win prizes at the best exhibitions. I have found a fairly heavy soil suits sweet peas best, as they continue flowering for a much longer period, and produce finer blooms, as a rule, than if grown on a light soil.

The whole of the ground intended for sweet peas should be trenched to a depth of 2½ feet to 3 feet, and this should be done as early in the autumn as possible, to allow the soil to settle down during the winter. When trenching, have the two top spits turned from one trench to the other, and the subsoil, whether clay or sand, dug a foot deep, adding to it plenty of good rotten manure, leaves, and bonemeal. If there is a clay subsoil give it a good dressing of lime and ashes previous to turning the two top spits from the next trench on to it. I do not believe in putting in a thick layer of manure, then a layer of soil, and so on, but I do believe in thoroughly mixing the whole of the soil and manure together. This allows the sweet peas abundant and good food from the beginning to the end of their career. Many people put manure a foot thick at the bottom of a trench, and none anywhere near the top, and the consequence is that all the time the plants should be making rapid progress they are at a standstill, and by the end of the season they have just found the manure, and are doing their best when the frost comes.

Trenching should be finished before the New Year if possible, as this allows the soil a good three months to settle down before planting time, and, in my opinion, nothing is so detrimental to sweet peas as loose soil. I always aim at making the soil quite firm, and as the trenching proceeds we slightly tread down each bottom layer as it is put back (provided it is not too wet). The top is left as rough as possible to allow the weather to do its work. Early in the spring, before planting, a thin layer of short manure is spread on the ground and a light dressing of lime and soot over the top, and the whole is forked in; directly the soil is dry enough it is trodden firmly, and it is then ready for planting.

I consider the autumn is by far the best time for sowing sweet peas for all purposes. About the middle of October is a very good date. I prefer to sow in very shallow boxes, let the seeds germinate steadily in a cold frame, and when the seedlings are about three inches high pot them up singly in three-inch pots, using a good loamy soil and potting firmly. They are then transferred to a cold frame, and plunged to the rim of the pot in ashes, and here they remain until they are planted out in their flowering quarters in April. White, lavender, and cream varieties I always sow in very sandy soil; in fact, my best results in the germination of white sweet peas have been from pure sand. The seeds are apt to rot if kept too damp, owing to their very thin skin.

After potting, the seedlings should be kept moderately dry, because from December to February they grow very little. Air should be admitted to the frame freely, and if the weather is open the lights should be taken off altogether; this keeps the plants sturdy and strong. To coddle sweet peas means to ruin them.

The first week in April is a good time to start planting, weather permitting. If the plants have been kept cool through the spring they will suffer no injury whatever from any frost we may have after that date. For exhibition purposes I prefer rows to clumps, and allow at least 18 inches from plant to plant for all the strong-growing varieties. All are planted in double rows, but the individual plants are not placed opposite one another. Twelve inches is allowed between the double row. This allows the air to circulate between the plants as they are growing, and keeps them from becoming sappy through overcrowding. Plant firmly and place small twigs round each plant at once.

A great deal has been written as to the best way of staking sweet peas, and I have tried various methods, but the system adopted last season pleased me most, and certainly was the most satisfactory. Two poles about 12 feet high were put in at the end of each double row of 25 yards' length, and two more halfway between; a thin galvanised wire was then strained from pole to pole on the top another in the centre, and one about 12 inches from the ground. Long hazel sticks were then inserted in the ground outside the wires, on either side of the row, and tied back to the wires, this keeping them in an upright position, and leaving a clear air space of 12 inches down the centre of each double row of plants.

When the plants are growing well three of the strongest shoots on each should be retained and all lateral growths removed; this applies to the stronger-growing varieties, such as Elsie Herbert, John Ingman, etc. Nancy Perkin and Earl Epencer will do better with two stems, or even one stem. If the more vigorous varieties do not have more than one stem, coarse blooms often result, and these badly placed on the stem. The lateral growths should always be removed when young, simply rubbing them out with thumb and finger. This early disbudding saves a great deal of time, besides allowing all the strength of the plant to go to the haulm which has to produce the exhibition blooms. The growths should be trained on the outside of the sticks, and this can easily be managed by an occasional tie.

It is advisable to examine the sweet peas every day, for when about three feet high the plants rapidly increase in strength, and the tops get heavy, so that if there should be a rough wind or a heavy shower, and the tendrils do not happen to be in reach of a stick to cling to, the growths snap off or become so twisted as to spoil them. At this stage of growth, if the weather is warm, an occasional damping over in the evening is a great help to sweet peas. About the middle of June, if the weather is at all dry, give a heavy mulch of long manure on each side of the row. This keeps the ground cool and moist. The Dutch hoe should be worked freely about the rows during the growing season, as this is a great help, more especially if the weather is dry.

With regard to feeding, very little artificial manure is needed if the ground has been well prepared. On light soils more feeding will be needed than on heavy ones. I am a strong believer in soot as a manure, and this is worked round the plants with the Dutch hoe before being watered in. Mackereth's sweet pea manure I have also used with success, more especially in connection with pot culture, but, as I have already said, I depend chiefly on what is put into the ground before planting, and artificials I look upon as stimulants to be used if needed, but they often do more harm than good. I saw an example of this last season at one of our largest shows; there were flower stems considerably over 2 feet in length, but the flowers would have looked a deal better on six-inch stems. I asked the exhibitor how he obtained such long stems, and the answer was "Nitrate of soda." I had guessed as much, for although the flowers had not travelled half the distance others in the show had they were too soft and flimsy to open properly after being put in water; in fact, after the first day scarcely anything but the stem was to be seen. I do not condemn patent manures, but say emphatically they must be used very carefully, and in conjunction with natural manures—and hard work.

Having made experiments with feeding both on heavy and light soils, I have found better results follow on heavy land with very little feeding than on light soil with heavy feeding, the ground being well prepared in each case.

If late flowers are wanted from the same plants it is a good plan to cut them back alternately to one of the strong lateral growths that keep showing at the bottom of the haulm. This should be done about six weeks before the blooms are needed, and by keeping the early buds picked out as they appear the laterals will soon gain strength enough to produce really good blooms.

Sweet peas should be cut freely, and not a single seed pod should be allowed to form so long as flowers are needed for exhibition purposes. This advice has been quite unnecessary during the last two seasons, for it has been a trouble to get seeds to set at all.

A few sweet peas benefit by a slight shading, and I thing this is a point where some growers make a mistake. They endeavour to be extra careful, and put tiffany over all the plants, but what improves one variety spoils another. All the sunproof crimson set, lavender, bronze, and cream varieties, are improved by the sun, and lose their brilliancy or purity of colour if shaded. Such varieties as Nancy Perkin, Earl Spencer, Stirling Stent, and Dazzler are improved if shaded for about three days before they are wanted for show. After the flowers are cut the shading should be removed at once, as it soon causes the plants to become drawn if left in position.

A selection of varieties is best left to the discretion or taste of the grower; if he is a keen sweet pea man he will certainly be a member of the N.S.P.S. (if not it is quite time he was), and being a member, he will be furnished with all the information he desires regarding varieties, and so can make his own choice. Further, if he wishes to see the best and the newer sweet peas growing, he can, by taking a trip to the society's trials at Sutton Green, Guildford, see the cream of varieties, and so can make his own choice.

SPECIAL OFFER **SWEET PEAS** FOR 1911.

IF YOU WANT

REALLY GOOD SWEET PEAS

AT MODERATE PRICES, send to

ROBERT SYDENHAM, LIMITED, 33, TENBY STREET, BIRMINGHAM.

NO ONE WILL SERVE YOU BETTER.

This Firm has the largest Retail Sweet Pea Trade and Retail Bulb Trade in the United Kingdom. The quality of their SEEDS and BULBS is well known all over the WORLD as being equal to anything in the Market.

SPECIAL COLLECTIONS FOR 1911.

The seeds in these collections are all carefully hand picked; only plump, round seeds sent; all small or doubtful ones are taken out, which we do not think is done by any other firm; eighty to ninety per cent. guaranteed to germinate if treated as instructions sent with each collection.

⁂EACH PACKET in Nos. 1 and 2 CONTAINS 50 SELECTED SEEDS. Buyers not wanting any collection complete, may select their own varieties from EITHER COLLECTION at prices mentioned, and have any 3/- worth for 2/6.

COLLECTION No. 1.—12 Useful Grandiflora Varieties, 1/3.

Agnes Johnston, buff pink; **Dainty**, white with light pink edge; **Duke of Westminster**, rosy violet; **Hon. Mrs. Kenyon**, pale primrose; **Janet Scott**, pale pink; **King Edward VII.**, rich crimson; **Lord Nelson**, dark blue; **Phenomenal**, white, with blue picotee edge; **Prince of Wales**, rich deep rose; **Queen of Spain**, salmon pink; **Romolo Piazzani**, medium blue; **Triumph**, rosy salmon and blush bicolor.

COLLECTION No. 2.—12 Best Grandiflora Varieties, 1/9.

Black Knight, rich dark bronzy chocolate; **Dorothy Eckford**, best white self; **Helen Pierce**, pretty marbled blue; **James Grieve**, good pale primrose; **Jeannie Gordon**, carmine and buff bicolor; **Lady Grisel Hamilton**, pale lavender; **Mid Blue** (*syn.* **Zoe**), rich blue; **Miss Willmott**, best salmon red; **Mrs. Walter Wright**, rich rosy mauve; **Prima Donna**, pale blush pink; **Queen Alexandra**, the best crimson scarlet; **Saint George**, rich orange scarlet bicolor.

Single Packets of any variety in Collections Nos. 1 and 2, 2d. each.

COLLECTIONS Nos. 1 and 2 WHEN BOUGHT TOGETHER WILL BE 2/6. And 25 seeds each of the four best striped varieties will be added free of charge, viz.:- **Jessie Cuthbertson, Mrs. J. Chamberlain, Prince Olaf, and Unique.**

COLLECTION No. 3.—12 Good Waved Varieties, 2/-.

SPECIAL NOTICE.—The price of, and number of seeds of each variety in Collections 3 and 4 vary. The number is stated in figures after each name.

America Spencer (30), bright rosy-scarlet flake, **3d.**; **Apple Blossom Spencer (30)**, rosy pink and blush, **4d.**; **Black Knight Spencer (30)**, rich dark maroon, **3d.**; **Chrissie Unwin (30)**, cerise scarlet, **3d.**; **Elsie Herbert (30)**, white, with picotee edge of pink, **4d.**; **Flora Norton Spencer (30)**, pale blue, **3d.**; **Frank Dolby (50)**, lavender, **3d.**; **Gladys Unwin (50)**, pink, **3d.**; **Marjorie Willis (30)**, carmine rose, **4d.**; **Mrs. C. W. Breadmore (30)**, primrose, with picotee edge of pink, **4d.**; **Nora Unwin (50)**, white, **3d.**; **Paradise Ivory (40)**, pale primrose, slightly tinged with pink, **3d.**

COLLECTION No. 4.—12 Best Waved Varieties, 3/-.

Clara Curtis (50), primrose, **3d.**; **Constance Oliver (25)**, creamy buff, flushed deep pink, **6d.**; **Countess Spencer (50)**, large pink, **3d.**; **Etta Dyke (50)**, finest white, **3d.**; **Evelyn Hemus (40)**, primrose, with picotee edge of pink, **4d.**; **Helen Lewis (50)**, orange and rose, **4d.**; **John Ingman (50)**, grown from a true stock, carmine and rose, **4d.**; **Mrs. A. Ireland (30)**, rose and blush bicolor, **4d.**; **Mrs. Charles Foster (30)**, grown from a perfectly true stock, or **Asta Ohn (30)**, best lavenders, **4d.**; **Mrs. Henry Bell** or **Mrs. Routzahn Spencer (30)**, pale pink on cream, **4d.**; **Mrs. Hardcastle Sykes (30)**, blush pink, **3d.**; **Tennant Spencer** or **The Marquis (30)**, large rosy mauves, **4d.**

COLLECTIONS Nos. 3 and 4 MAY BE HAD TOGETHER FOR 4/6, and 100 seeds of the choicest **Spencer Seedlings** free of charge.

COLLECTIONS Nos. 2 and 4 MAY BE HAD TOGETHER FOR 4/6, and 100 seeds of the choicest **Spencer Seedlings** free of charge.

SPECIAL PRICE FOR THE FOUR COLLECTIONS, 6/6,

Which, with the added varieties, will be the best collection ever offered for the money.

NEW VARIETIES.

These novelties we believe to be fairly true, but they are sold without any guarantees.

Thomas Stevenson, orange scarlet, waved (**10** seeds), **1/-**, the gem for colour **(stock limited)**; **Maud Holmes**, the best of the [illegible] crimsons; or **King Edward Spencers**, waved (**25** seeds), **1/-** (**10** seeds) **6d.**; **Helen Grosvenor**, a glorified **Helen Lewis** (**10** seeds), **1/-**; **Amethyst**, the only lilac, waved (**10** seeds), **6d.**; Burpee's **Ethel Roosevelt**, bright rose flake on cream ground, waved, **10** seeds), **6d.**; Burpee's **Florence Nightingale**, lavender Spencer (**10** seeds), **6d.**; **Romani Rauni**, pale pink on cream, waved (**10** seeds), **1/-**; **Seashell**, cream pink, waved, **stock very limited** (**6** seeds), **6d.**; Unwin's **Doris Burt**, a grand bright [illegible], shaded, flushed cerise, waved, highly recommended (**12** seeds), **6d.**; Burpee's **Rose du Barri**, unique and distinct, a charming flower of deep rose, shot or overlaid with terracotta, Grandiflora type, very effective under artificial light (**20** seeds), **6d.**; **Zarina**, pale [illegible] pink, waved (**20** seeds), **4d.**; **Ruby**, an improved St. George (**10** seeds), **6d.**; **Miriam Beaver**, when true very like **Syeira Lee**, one of the most beautiful Sweet Peas yet raised (**10** seeds), **1/-**.

SPECIAL PRICE for this Collection of New Varieties. 7/-.

THE BEST TOMATOES, 3d. per packet of 200 Seeds. **THE BEST CUCUMBERS, 6d.** per packet of 10 Seeds.

THE BEST ONIONS—Excelsior or Ailsa Craig, 6d. per packet of about 1,200 Seeds.

BEET, 8d.; **BRUSSELS SPROUTS, 6d.**; **CABBAGE, 6d.**; **BROCCOLI, 1/-** to **1s. 4d.**; **CARROT** (Cleaned Seed), **6d.**; **PARSNIP, 2d.**; **TURNIP, 3d.**; **LYON LEEK, 1s.**; **LETTUCE, 6d.** to **8d.**; all per ounce.

All Flower and Vegetable Seeds (Peas and Beans excepted) carriage free. *Please compare these Prices with what you are paying.*

ALL OTHER SEEDS EQUALLY CHEAP AND GOOD. FULL LIST POST FREE ON APPLICATION.

DEAL'S CHOICE SWEET PEAS.

For Garden, Home and Exhibition.

COLLEEN—The brightest and best waved bicolor, fragrant and beautiful: Should be in every garden. A.M., R.H.S. and Wolverhampton ... ... 12 seeds **6d.**

SCARLET MONARCH—The brightest and best waved sunproof Scarlet. Brighter than Queen Alexandra; distinct from Sunproof Crimson, Doris Burt, &c. ... ... 12 seeds **2/6**

BERTRAND DEAL—The brightest and best giant rosy lilac; grand exhibition flower, unequalled for size and colouring in this class ... ... 12 seeds **2/6**

EMPRESS—The brightest and best giant rosy purple, far superior to Marquis and Tennant Spencer in size and rich colouring ... ... 12 seeds **2/6**

GIANT CREAM WAVED—The brightest and best cream waved; for depth of colouring and waviness beats all comers ... ... 12 seeds **6d.**

WINSOME—The brightest and best helio pink Spencer. A lovely flower both in form and shade ... ... 10 seeds **6d.**

MY COMPLETE NOVELTY LIST FREE

WILLIAM DEAL, F.R.H.S., "Brooklands," Kelvedon, Essex.

BLACKMORE & LANGDON'S

One of our Double Begonias grown and photographed without a stake to plant or bloom.

BEGONIAS

IN HIGHEST QUALITY FOR EXHIBITION, CONSERVATORY, AND BEDDING OUT.

AWARDED 24 GOLD MEDALS, 12 SILVER CUPS.

SEED IN SEALED PACKETS.

Double, 2/6 and 5/-; Single, 1/-, 2/6 and 5/-; Single also in separate colours. Also frilled and crested Single 1/-, 2/6 and 5/-.

GRAND LARGE TUBERS, TO COLOUR.

Double, 4/-, 12/6, 21/- and 30/- per doz. Single 3/-, 8/-, 15/- and 21/- per doz.
Mixed Doubles, 3/- per doz., 21/- per 100.
Semi-Doubles (cheapest bedders), 10/- per 100.
Mixed Singles, 2/6 per doz., 15/- per 100.

Extra Frilled Single Begonias, A.M., R.H.S., 1908, 4/-, 8/- and 21/- per doz. Mixed 2/6 per doz.

CYCLAMEN, DELPHINIUMS, BLUE PRIMROSES, etc.

American Winter-Flowering and Border CARNATIONS.

1 doz. choice named Border Carnations, 5/- and 7/6. A Grand Collection of all Sections. Our New Illustrated Catalogue, with Cultural Instructions, post free. Special offer of one dozen of Perpetual Flowering Carnations, established in pots, in 12 choice varieties, for 6/-.

TWERTON HILL NURSERY, BATH.

THE MOST UNIQUE

SWEET PEA LIST

In the World
IS NOW READY.

PLEASE SEND POSTCARD FOR SAME

My ANGLO-AMERICAN COLLECTION, 5/-

15 Varieties (including Roosevelt, Nightingale, Persian, Mrs. H. Dickson, Sunset, Ornament) is the best value in the Sweet Pea world. Will make a very appreciative present. My stocks are the finest humanity can produce! My aim is to oblige.

G. H. MACKERETH,
The Sweet Pea Clearing House,
ULVERSTON.

Note my special offer of Mr. W. P. Wright's most interesting Sweet Pea Note Book.

WILLIAM BARRON & SON, Ltd.,

who have recently been appointed
LANDSCAPE GARDENERS
TO THE
ROMFORD GARDEN SUBURB,
MAKE

VILLA GARDENS A SPECIALITY

and Supply all Requisites.

ELVASTON NURSERIES,
BORROWASH, near DERBY.
also ROMFORD, ESSEX.

Do you wish to grow

BIG ONIONS?

THEN YOU MUST HAVE

CRANSTON'S EXCELSIOR — or AILSA CRAIG —

quite a waste of time to grow anything else. They are synonymous, although you may not believe it, and perhaps you fancy one name more than another. One thing, however, is certain; that I hold the best-selected stock of seed in the world. Guaranteed new, pure, and grown by the raiser. The original and proper name is "Cranston's Excelsior."

SEED—per packet, 1/-
3 packets, 2/6 12 packets, 9/-

JOHN WILSON,

SEED MERCHANT,
HEREFORD.

Gilbert's

GOLD MEDAL SWEET PEAS.

GILBERT'S NOVELTY COLLECTION 8/-
The cream of the latest novelties, all wavy varieties

No. of seeds in brackets.

Arthur Green (10), 1/-; Cherry Ripe (6), 1/-; Countess of Ancaster (12), 1/-; Earl Spencer (6), 1/-; Edrom Beauty (12), 1/-; Hyacinth (12), 1/-; Kitty Clive (20), 6d.; Masterpiece (12), 6d.; Maud Holmes (10), 6d.; Mrs. Hugh Dickson (12), 6d.; Mrs. Townshend (12), 6d.; Winsome (10), 6d. We add gratis with above collection a packet Ethel Roosevelt also Gypsophila Elegans.

GILBERT'S "A" COLLECTION 1/6
Contain following 12 good wavy varieties.

A. J. Cook (40), 2d.; Apple Blossom Sp. (15), 2d.; Aurora Spencer (15), 2d.; Captain of the Blues Sp. (20), 2d.; Frank Dolby (40), 2d.; Geo. Herbert (25), 2d.; Gladys Unwin (50), 2d.; King Edward Sp. 2d.; Lady Pollock (30), 2d.; Nora Unwin (50), Othello Sp. (12), 2d.; St. George (25), 2d. A pkt Gypsophila Elegans added gratis with this collection.

GILBERT'S "B" COLLECTION 3/6
The best wavy collection ever offered. 12 varieties

Albert Gilbert (12), 6d.; Asta Ohn (25), 3d.; Black Knight Sp. (20), 3d.; Constance Oliver (15), 4d.; Doris Burt (20), 6d.; Etta Dyke (25), 3d.; Evelyn Hemus (25), 3d.; Mrs. Andrew Ireland (20), 3d.; Mrs. Wilcox (15), 3d.; Paradise Ivory (20), 3d.; Princess Victoria (20), 3d.; Sunrise (25), 6d. A pkt. of Gypsophila Elegans added gratis with this collection.

GILBERT'S "P" COLLECTION 1/6
All plain standards, best 12 varieties. Each variety 50 seeds, 2d.

Black Knight, Bolton's Pink, Dorothy Eckford, F. K., Helen Pierce, Henry Eckford, Hon. Mrs. E. Kenyon, King Edward Improved, Lady Grisel Hamilton, Mid Blue, Mrs. Walter Wright, Queen, Sybil Eckford. A pkt. of Gypsophila Elegans given with this collection.

GILBERT'S GIANT UNNAMED WAVY SEEDLINGS
Result of many crosses. 25 seeds, 6d.

GILBERT'S UNIQUE MIXTURE, **containing over 50 vars.: 1lb. 2/6; ½ lb. 1/4; ¼ lb. 9d.: per oz. 3d.**

N.B. Sweet Pea "Cherry Ripe" was raised by US, and not by Mr. Dipnall, as stated in Catalogue.

Illustrated Catalogue Post Free

GILBERT & SON, Sweet Pea Raisers etc.
DYKE, BOURNE, LINCOLNSHIRE
ESTABLISHED 1860.

ORANGE AND SCARLET SWEET PEAS.

Though probably giving the most striking colours among sweet peas, the orange and scarlet varieties have been, from a cultivator's point of view, the most disappointing, owing to their tendency to burn or scald if cultivated in full sunlight. But this failing has not deterred raisers from doing their best, not only to secure finely-formed flowers in these two sections, but also to secure varieties which will stand the sun, and it says much for their perseverance that they have so far succeeded, inasmuch as we now have varieties in each section which will compare favourably both for size, form, and sunproof qualities with most of those of other colours.

The orange varieties might well be divided into two sections, one consisting of those whose progenitors were probably the old varieties Gorgeous or Evelyn Byatt, both in their day marvels of colour, and I very much doubt whether we have any variety now that will give us such a striking bit of colour as would a bunch of the first-named. Following these two the next one of any real note was St. George, a variety that has failed to keep up its reputation owing to its great tendency to produce tendrils at the expense of flowers; but it has added its quota of colour, size, and waviness to its descendants, and though I have no authority to that effect, it seems quite probable that the three outstanding varieties of the present day are the results of cross-fertilisation with St. George. The three varieties I have in my mind are Edna Unwin, Dazzler, and Thomas Stevenson.

The former is a very fine flower; the standard is a little small, and apt to fall back, after the style of Etta Dyke, but it has real good substance, and the colour is nearly an orange self, with perhaps a suspicion of rose in it during dull weather. It is a very hardy variety, a persistent bloomer, and one which stands the sun fairly well. Dazzler is rather a better-formed flower, with a large standard, but it just lacks that bit of quality in which the former excels, the veinings in the standard showing through the colour, and this at times makes the standard appear thin. Thomas Stevenson is rather a larger flower than either of the preceding, and in the bunch is certainly the best. I have seen it described as like Helen Lewis, but this is not so, the standard being quite different, much plainer, and with more substance, while for an orange shade it stands the sun well.

The other class of orange varieties is the one of which Helen Lewis was the forerunner, and even now, when at its best, this takes a deal of beating. Maggie Stark is certainly a little deeper in colour, but otherwise the exact counterpart of the first-named. Helen Grosvenor, raised by Mr. Aldersly, struck me at the N.S.P.S. trials as being a little in advance of the two preceding varieties, not in colour, but certainly a trifle larger. Edrom Beauty is very close to these, but just a wee bit softer in colour, and I think this is destined to become a very popular decorative sweet pea. There are still several others of this type on the market, but I think those mentioned are quite the best of the orange and rose section. Orange King, raised by Messrs. Bide and Sons, Farnham, has a plain standard, but I have no hesitation in saying that this is the most brilliant of all orange sweet peas, and were it larger and more sunproof it would create no little sensation in the sweet pea world.

Coming to the scarlet varieties the improvement in this colour up to the last two years has not been so marked as in the orange set, but here again perseverance has its reward, and I think the season of 1911 will be marked by the advent of one or two scarlets quite fit to put on the exhibition table—and this has hardly been the case since Queen Alexandra was considered of good exhibition size. The latter Eckfordian variety and Scarlet Gem were grand in colour, and were very telling in collections of the grandiflora type, but not large enough to include with the more up-to-date Spencer type of flower. Undoubtedly the best break in this colour, after Queen Alexandra, was George Stark, and, as seen at Reading, it was indeed a wonderful variety, but, unfortunately, it has not been seen so good since, though at Sutton Green this past summer there were several varieties on trial, including this, which were more or less alike, both in habit of growth and in colour of bloom. The brightest of them all was one from Mr. W. Deal, under the name of Scarlet Monarch, George Stark Improved and Red Star being also very noticeable. Another variety which is very good is Mr. Unwin's Doris Burt: this is not quite such a vivid scarlet, but has, I think, a little more substance in the flower.

SWEET PEA MAORI BELLE.
Raised by Mr. Trevethick. Colour, pale lavender.

Neither of these scarlet varieties should require much shading to show them at their best, but it is certainly advisable to plant them in a position where they receive a little shade in the middle of the day, or if an exceptionally hot spell is experienced a double thickness of fish netting will give all the shading that is required. With the orange varieties it is imperative that some provision be made to shade them before a show, but I would advise that this should not be overdone; three or four days' shading should suffice for the most readily "burned" varieties, and the very thinnest tiffany procurable should be used, keeping it well away from the blooms, so that a good current of air is able to pass beneath it, or the flowers will lose colour from want of air.

Though advising shading as a preventive of scalding or burning, in many districts it may not be necessary, but each one may easily tell by close observation how much sun the flowers will stand, and if the shading can be dispensed with so much the better. Good bunches of any of the varieties mentioned above are so very effective that they amply repay any little extra trouble that is incurred to secure them in the best possible condition.

T. A. S.

Pot Figs may be top-dressed and started at once if required early. See that the roots have a thorough soaking, especially if the plants have been kept indoors. Then sponge the wood with some insecticide, remove the top soil, and mulch with some rich material which has been prepared previously. A good forcing pit is an ideal place to start pot figs in; begin with a temperature of 50 degrees syringing the plants daily.—W. A. C.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

IN THE WARM DIVISION of the orchid houses work will be now confined principally to sponging and cleaning the plants. Vandas, aerides, saccolabiums, and allied genera should be carefully examined for scale and other insect pests that may secrete themselves in the axils of the leaves, and more particularly on the lower sides of the leaves and stems of the plants. A soft, pointed stick is the best means of dislodging them; rubbing with a brush is liable to scratch and disfigure the foliage of the plants. It is scarcely safe to recommend the use of insecticides for sponging purposes as they are dangerous unless one is perfectly familiar with their constituents. While cleaning the plants see that those which have become loose in the pots are secured to fresh sticks, so that they may be held in position and receive no damage when moved about while the glass, etc., is being cleaned.

AMONG CATTLEYAS AND LÆLIAS cleaning should also be proceeded with, and it is surprising how quickly scale increases immediately the plants show signs of renewed vitality. To save considerable work at a later period it is advisable to have a general clean-up, and thoroughly examine every plant. When cleaning the cattleyas and allied genera, particular care is necessary to avoid damage being done, not only to the leading growths of the plants, but also to the dormant buds we commonly term eyes, at the base of the pseudo-bulbs. The careless operator bruises and destroys any prospect of such buds ever breaking into growth. The inside glass should be cleaned as well as the pots, staging, etc., and a rearrangement of the plants will probably be found beneficial to all.

WATERING.—In all the warm houses careful watering is necessary. No hard and fast lines can be laid down for general application, as the conditions are so widely different where orchids are grown. In addition to the surroundings in which the plants are grown, the weather and outside temperature must have due consideration, with reference both to watering and damping down. These matters can only be determined by the enthusiastic cultivator, but I would point out once again that no greater considerations are necessary in the successful cultivation of orchids than are so extensively practised in the cultivation of other stove and warm house plants.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

BEGONIA GLOIRE DE LORRAINE.—The earliest plants of this valuable winter-flowering begonia and its varieties, having completed their flowering period, may be given a few weeks' rest prior to starting them into growth for an early supply of cuttings. This may be brought about by a gradual reduction of moisture to their roots and a moderate lowering of the temperature. The minimum, however, should not be less than 55 degrees. Where the leaves are in a healthy condition insert a number, proportionate to requirements, singly in small pots filled with a sandy compost. The leaves should have about an inch of stem attached to them. Until root action has commenced moisture should not be allowed to reach the leaves, but a small amount of air must be regularly admitted to the propagating case.

GLOXINIAS.—An early display of gloxinias is useful, and sure to be appreciated during the early springtime. Select the earliest ripened corms for this purpose, and allow them to remain in their old pots, which, however, ought to be examined with a view to putting the drainage in order. Remove the loose soil from the surface, and replace with a compost consisting of good loam, peat, and dried sheep manure. As soon as the pots are well filled with roots apply regularly applications of diluted farmyard manure, with an occasional top-dressing of fine bone-meal or other suitable fertiliser.

ALOCASIAS. — These ornamental-leaved plants are always admired in collections of stove plants. A. Sanderi requires, when at rest, somewhat different treatment to the rest. It must not be severely dried off, but given cooler conditions during the shortest days of the year. Alocasias may be repotted ready for starting into growth later in the season. The compost should consist of mellow, good fibrous peat, loam, and sphagnum, in equal parts, with a little silver sand and a few clean broken crocks, lumpy charcoal, etc.

CROTONS.—Every endeavour should be made to thoroughly cleanse crotons before starting them into growth next month. Unsightly specimens that may have lost their lower leaves and have good tops remaining should be notched and mossed up for the increase of stock. These must be kept constantly moist to encourage root action. The larger branches may have pots tied around the stems that have been cut half through. As each pot is firmly secured to the stems it should be filled up with potting compost, consisting of loam, peat, and silver sand.—John Donoghue, Bardon Hill Gardens.

THE FLOWER GARDEN.

BORDER CARNATIONS.—Plants that were put out in the beds last autumn will greatly benefit by having the surface soil slightly stirred with the hoe during mild weather, providing the soil is in a fairly dry condition. In proceeding with this operation each plant should be examined, and if found to be loose it must be made firm again. In many localities it is found necessary to pot up the layers, winter them in cold frames, and plant them out in the early spring. Where this practice is carried out the ground selected for them should be prepared without delay, leaving it in a rough state until required for planting. For heavy soils a good dressing of wood ashes or burnt garden refuse is recommended, or old hotbed material if ashes are not procurable. We always add a good quantity of sea sand to the soil with excellent results, the salt in the sand being an excellent stimulant for them. Plants in frames will require an occasional examination, and if any disease is apparent they should be dusted with flowers of sulphur, which usually checks it; water must be carefully given.

LILY OF THE VALLEY.—A good top-dressing of leaf-soil should be given the beds without delay. Where necessary to lift the roots, owing to their being much crowded, the replanting should be done as early as possible. If fresh beds can be made so much the better, adding plenty of leaf-soil when the ground is dug. When planting is completed spread a layer of decayed leaves over the beds.

VIOLETS.—All decaying foliage, weeds, etc., must be removed from plants growing in frames. In many gardens it is a difficult matter to obtain a good supply of flowers, especially at this season, and it is necessary to take every precaution against damping. Remove all side runners, as if left they will weaken the plants. A dressing of some approved fertiliser should be given, and lightly worked in with a fork. A good watering should be given when the beds are dry. Plants growing outside should be cleaned and top-dressed.

BEDDING PELARGONIUMS.—A commencement may be made with the potting of these. If the soil in the cutting pots is dry well water it a few hours before commencing to repot. Old potting soil and spent mushroom bed material form a good mixture. Large 60's will be the most suitable; no crocks are necessary, merely a small quantity of loose manure or leaves over the drainage hole. When potted place the plants in a warm fruit house to induce fresh root growth.

SWEET PEAS.—The ground where it is intended to grow these should be prepared as early as possible. To obtain good results deep tillage is essential, and the soil should be either trenched or deeply dug, incorporating a good quantity of decayed manure with it, and, allowing the top to lie in a rough condition till required for planting or sowing.

LAWNS.—All bare places should be made good with fresh turf as soon as the weather permits it being laid. Frequent sweeping and rolling is necessary to keep the grass in good condition.—E. C. Pooley, Gnaton Park Gardens, Plymouth.

FRUITS UNDER GLASS.

STRAWBERRIES IN POTS. — Where these are wintered in frames a batch should now be prepared for forcing. Clear off dead leaves, small weeds, or mossy surface, and make sure that there are no worms in the pots. Wash the pots, and well ram the soil if it is loose. I prefer to top-dress when the roots begin to move and the flower stems are pushing up. Stand the pots on shelves in a vinery or peach house, or if a house or span pit can be afforded make a bed of leaves and plunge the pots in this for three weeks. The starting process must be a slow one, and 45 to 50 degrees will be ample to begin with. Royal Sovereign and Noble are still two good reliable varieties for early use.

POT VINES that were started at the end of November will now be breaking fast, and as soon as the shoots are a couple of inches long they may be tied up carefully, maintaining equal distances between the rods. Very little water will be required yet if the pots are plunged, but a sharp look-out is necessary, as once the roots become dry they are practically useless. Keep the temperature of the pit at 70 degrees in fair weather, but in cold weather 65 degrees will be ample, allowing a drop of 5 degrees at night.

VINERIES.—In the second vinery the vines should be pruned and dressed. Let the glass and woodwork be subjected to a thoroughly good scrubbing and washing, as so much depends upon a good clean start. In the successional vineries and muscat houses, if the grapes can be cleared, it would be well to prune the vines now, because this will lessen the tendency of bleeding. On no account permit fire heat at this season. Dress the vines as circumstances permit.

FIG HOUSE.—The fig trees must now be pruned, cleaned, and trained. Remove from the base some of the old wood, and take up some new branches. This should be done each year, but in large and old-established trees it is not so much a question of pruning as it is thinning and regulating the branches, as these trees make sturdy, short-jointed wood, required especially for early forcing. Tie the shoots straight, so that the tree looks smart and workmanlike, and cut the tie ends short. The fig tree does suffer from many ailments, but if any mealy bug and spider has been present the branches should have had a good cleaning previous to tying. Dress the walls with hot lime and sulphur, and fill up all crevices in which insects may lurk.

MELONS.—To raise melons to produce fruit ripening in May seeds should now be sown; prepare some good soil, maiden loam for preference, and mix in a little sand and leaf-soil and a small quantity of spent mushroom bed manure. Pass all through a half-inch sieve. Put one seed in each small pot and press the soil moderately firm. A few extra seeds should be sown at this season, so that the strongest plants may be selected. Raise sufficient plants to allow one for every fifteen inches run of the house. For very early melons the cordon system is the best. Place the pots in a warm corner, with a bottom heat of 80 degrees, and as soon as the plants have made one rough leaf carefully give them a small shift without damaging the roots; again make the soil quite firm, and stand the plants near the glass, where they will have the full benefit of the light, in order to produce dwarf and sturdy plants. We grow Scarlet Seedling, Blenheim Orange, and Hero of Lockinge.—W. A. Cook, Leonardslee Gardens, Horsham.

THE MOST USEFUL SWEET PEAS.

No flower has risen to such high popularity within recent years as the sweet pea. A few years ago it was the custom to mix the seed and to sow it very thickly in rows in spring, often in some out-of-the-way part of the garden, and the result was we were able to gather quantities of indifferent short-stemmed flowers for about a month or six weeks, and after that the row would be covered with seed-pods. The plants were generally pulled up because of their unsightly appearance in the middle of the summer. To many of us sweet peas scarcely appeared to pay for the time and trouble of staking, and no gardener dreamed of trusting to them for making the prominent parts of the garden beautiful during the whole summer.

Yet the change has been so complete that no annual is now held in such high favour. And a garden to-day is considered behind the times unless it has its collection of up-to-date sweet peas. And rightly so, for I maintain there is no plant in existence which will give such an abundance of bloom over so long a period as the sweet pea. The popularity of the flower I attribute to several reasons. The ever-growing demand for cut flowers for the decoration of the home first created a desire to make use of them, as their fragrance and elegance are delightful. Our seedsmen, with ever a keen eye to business, knew the drawbacks; they saw also a great future if the obstacles could be overcome, so they set to work, and lists of new varieties began to appear, and new colours were created. The public, ever on the look-out for new things, purchased them readily. So we advanced each year, from the hooded standard to the plain, and on to the waved Countess Spencer. Yet this was only the beginning of good things to come, and I remember saying at the time, "Oh, if we could only have all the other beautiful colours in waved flowers like Countess Spencer." Now we have them and many other lovely colours added, but I think we are as eager as ever to obtain any novelty that appears.

With the advent of new varieties we found less seed in the packets, and it therefore needed more care, otherwise some busy mouse would eat half the seed of a new variety in a night, and the prowling slug would finish the rest by eating off all the young shoots as soon as they were an inch or two high. Since necessity is the mother of invention, we resorted to the system of sowing the seed in pots and transplanting them to the open ground in spring, naturally sowing each variety in separate pots and planting them separately. Our next desire was to improve the quality of the flowers. We therefore cultivated better, and some of us resorted to what I consider the secret of all success, "deep trenching."

I would like to give my mode of culture as practised at Shotesham Park with sweet peas for nearly ten years. I find the sweet pea plant needs much longer to mature than we used to give it. I therefore sow seeds in pots in the autumn, and find the most suitable times are the first two weeks in October. The novelties often cannot be obtained until well into the new year, and my advice is to sow directly they arrive. I choose 4in. pots, placing five or six seeds in each. The pots must be clean, otherwise the ball of soil will not turn out properly at the time of planting without greatly damaging the roots; place one large piece of crock in the bottom for drainage. The soil should consist of best fibrous loam, with a good sprinkling of coarse sand; on no consideration use leaf-mould. The soil should be fairly moist (not sticky) at the time of sowing. The seeds should be covered with ¼in. of the soil. I find the lavender varieties, which have very poor-looking seeds, often rot if sown deep, and these we scarcely cover at all. The pots are placed close to the glass on a vinery shelf in a house where the grapes have been cut, and the fire not used. If the pots are watered a few days after sowing, no more water will be needed until the seeds have germinated. When the plants are about one inch high we remove them to a cold frame, placing them on an ashbed close to the glass, and removing the lights always, except when it is raining, freezing, or snowing. There is no plant which resents coddling more than the sweet pea, and our aim is to produce a short sturdy plant.

The preparation of the quarters where the plants are to bloom should have been carried out in the winter. The ground should have been trenched to a depth of 3ft. to 4ft., and plenty of farmyard manure worked in all the way from the bottom to the top of the trench as the work proceeds. I am also a great advocate of soot; this I have sown thickly on the top after the trenching is done, and forked in as deeply as possible. Basic slag is used in the same way. There are two ways of growing sweet peas—clumps and rows. I practice both. We have a path 400 yards long, and on each side, 2ft. back from the box edging, the clumps of peas are planted 4ft. apart and paired across the path. If the colours are well chosen this makes a delightfully interesting walk, and one great advantage is, the flowers can be examined by the ladies in almost any weather. Some may suggest that sweet peas cannot be grown in the same position year after year, but here we have grown them in the same place for seven years, and in 1910 they were as good as ever; the clumps of one year are set midway between the sites occupied the previous year.

When all is ready, about the first week in April, and the soil works nicely, we shake the soil away from the plants and plant them singly 9in. apart in the clumps and about six plants in a clump, and as soon as this is done we stick them at once with twiggy bits of hazel about 18in. high, and put a 15in. label to each clump, with the name written clearly and in a large hand. When the sweet peas have grown to the height of the twigs, we stake them finally with hazel branches 12ft. high and make all tidy; we also dust frequently with soot to keep off slugs, and use black cotton if birds are troublesome. In the rows the planting should be done the same way, setting the plants alternately in double rows 2ft. apart. Very little then needs to be done except to see the leaders are not broken by being entangled in the sticks; the hoe is used frequently.

Someone may ask if all this labour is necessary if one does not exhibit and only grows for house decoration. We grow for both, and consider it equally as important to produce flowers of fine quality for house decoration as it is for exhibition. I am not concerned with exhibiting in this article, but in any case quality, with purity of colour, should count before coarseness, and a spike measuring 15 to 18in. in length, with four flowers on a stem, well set, is perfection for house and table decoration. If the directions given are followed flowers will begin to open the first week in June. One can then cut plentifully, with the splendid result that the more one cuts the more will come, and the better it is for the plants. It is not necessary to cut all the flowers as they open so long as none are allowed to form seed pods.

To give some idea of the length of time it is possible to cut flowers from one batch of plants, I may say I kept two large vases on my employer's writing table continually filled with sweet peas, about 30 spikes in a vase, from June 4, without a break until November 2, and even then the plants were covered with bloom, but the frost killed them. Clumps of sweet peas may be used to advantage at the back of herbaceous borders, or any borders or beds where height is required, with telling effect.

Which are the best varieties to grow for house and table decoration is a somewhat difficult question to decide. I find generally the softer shades of pink and orange are most appreciated. The flowers are best cut in the morning after the dew has disappeared, or in the evening when it is cool, and as soon as they are cut they should be placed in water. The flowers improve by being cut 12 hours before they are used. The spikes should be cut the full length, and placed from 12 to 20 spikes in a vase, using their own foliage, but not too much of it; about four leaves round the edge of the vase and about three shoots among the flowers, is sufficient, though gypsophila and light grasses may also be used with telling effect. Sweet peas are always much more effective if one variety is placed in each vase. What can be more lovely than vases filled with Earl Spencer, Evelyn Hemus, Maud Holmes, Mrs. Hardcastle Sykes, Zarina, Elsie Herbert, Etta Dyke, Masterpiece, Mrs. Andrew Ireland, Lady Grizel Hamilton, Syeira Lee, Countess Spencer, or Mrs. Routzahn. If mixed flowers are preferred great care must be used to blend the colours; few can imagine the delightful effect of a lightly-arranged table of Earl Spencer or Evelyn Hemus or Mrs. Hardcastle Sykes. Or if it is preferred to mix them, I should suggest Mrs. Henry Bell, Earl Spencer, and Clara Curtis, or Evelyn Hemus, Mrs. Hardcastle Sykes, and Syeira Lee. The flowers should be set out loosely, and crowding is an unpardonable fault.

Lewis Smith.

THE IVY SAXIFRAGE.

Those who wish a dainty little plant with polished leaves and tiny stars of gold, which look specially delightful in the shady parts of the garden, would do well to purchase a packet of seeds of Saxifraga cymbalaria, the Ivy Saxifrage, a charming annual, which sows itself so freely that once introduced it hardly ever deserts the place again. Indeed, it may sow itself rather too freely for some gardens, but it is such a shallow rooter that it can hardly do injury to anything else, and can be quickly weeded out when necessary. Its value to us is greatly increased by its fondness for a shady and rather damp place, where it will come up from year to year and brighten up a spot hardly ever gay save when this little plant is in bloom, which is for many months of the year. This little saxifrage has glossy, kidney-shaped leaves, and a number of small clear yellow flowers, which are borne for a long time in succession. When the flowers first appear the plant only rises a little above the earth, but the stems gradually lengthen, and form rather sprawly little stalks, with their blooms, yet never ungainly, or rising too much above the soil so as to be out of proportion.

It is an excellent plant for a shady, damp, retaining wall, with plenty of soil between the joints, and with taller plants among it. There it sows itself readily, and clothes the crevices with pretty leaves and bright little flowers from spring until autumn.

S. A.

THE WORK OF THE NATIONAL SWEET PEA SOCIETY.

Rule 2 of the National Sweet Pea Society reads: "That the objects of the society be to encourage the cultivation and improvement of the sweet pea, by exhibitions, trials, conferences, or any other way the committee shall determine." Word for word, this rule is precisely the same as the one made when the society came into being in 1901, and, though its full meaning was not appreciated by everyone in the earlier years of the society's history, successive committees have taken opportunity by the hand, and now all the specified "objects" have been realised.

We began with an exhibition at the old Royal Aquarium, on July 25 and 26, 1901, and that exhibition was notable for the advent of Countess Spencer, the first waved sweet pea, and for the terrific thunderstorm that broke over London on the first day. There were twenty classes for sweet peas and one for varieties of Lathyrus latifolius. All the prizes were provided by the society; there were no classes for specified varieties with prizes offered by interested traders; the classes ranged from thirty-six to two bunches, and "twenty sprays only shall form a bunch" was the original regulation in this matter. The cash turnover of the society in its first year was £95 3s. 4d.; £47 3s. were paid in prizes, and £79 4s. 6d. received as subscriptions. The balance carried forward was £10 6s. 5d., and the total number of members was 117.

During the year just ended the members numbered about 1,000, and the new members alone amounted to 166, while 109 societies were in affiliation. The society's cash turnover was £768 10s. 10d.; subscriptions amounted to £326 16s. 5d., while the cash prizes paid (apart from the value of cups, plate, and medals) amounted to £91. A balance of £126 18s. 9d. was brought forward, in addition to a deposit account of £100 that forms the nucleus of a reserve fund.

It was in 1905 that "The Sweet Pea Annual" was first issued; it was a paper-covered octavo booklet of 60 pages, advertisements included. But information beyond the class specifications was given in the schedule for 1903, and in that publication sweet peas were grouped in their colour classes. This classification was revised the following year, and appeared in the schedule of 1904. In this latter issue appeared also an "Audit of the Sweet Pea Show of 1903." In the spring of 1906 Mr. Horace J. Wright was compelled, for private reasons, to relinquish the secretaryship, a "position he had occupied from the inception of the society with so great advantage to the members and credit to himself." He was succeeded by the present writer.

Although the committee and judges have sat as a Floral Committee on exhibition days, from the first show, it was not until the annual meeting of 1906 that a definite Floral Committee was formed, consisting of Messrs. T. Jones, A. Malcolm, T. Stevenson, P. Waterer, J. Watson, J. M. Bridgford, S. B. Dicks, G. Herbert, A. Ireland, J. Jones, and T. A. Weston, with Mr. Horace J. Wright as chairman. A trial of sweet pea novelties was conducted at Reading by Mr. Charles Foster in 1906, and a large trial in 1907, which was inspected by the Floral Committee before that body proceeded to make awards. When Mr. H. J. Wright entered the seed trade he became ineligible, as a principal, for a seat on the Floral Committee, and Mr. W. P. Wright was elected as the chairman. Trials were conducted at Reading up to 1909, and at Guildford in 1910. "The Sweet Pea Annual of 1908," bound in stiff cloth covers, was a great success, and later issues have followed upon the plan and style then adopted.

The trials are conducted for the purpose of testing novelties by the side of standard varieties; for determining to which colour class the new varieties belong; for comparing varieties and bracketing those considered to be too-much-alike, thus in effect reducing the number of names; for the purpose of granting awards or certificates to varieties of high merit or distinction; and also for the determination of the purity of stocks. No other floral society conducts work of a similar character, and the work done has been eulogised by amateurs and traders in this and other lands. It is necessary work, and work that can only be done to the public satisfaction by a public body like the National Sweet Pea Society.

The foregoing is a brief outline of the work of the National Sweet Pea Society, but it does not include "The Outings," which have become such a popular feature, and are as useful educationally as they are socially. The first conference was held in 1909, and was so great a success that another was held in 1910, and it seems highly probable that a conference will in the future be as much a part of the society's programme as its exhibition and trials.

The National Sweet Pea Society has in a very large degree been the means of creating a great industry, and one has only to look at the leading seed catalogues of 1900 and of 1911 to discover how popular the flower is, and how keen the seedsmen are to obtain as large a share as possible of the immense business now done in sweet peas. Sweet pea specialists have risen in considerable numbers, and yet a dozen years ago we should have laughed at the idea of anyone conducting a business entirely in and wholly of sweet peas. The introduction of new varieties has been checked somewhat by the unkind seed seasons of 1909 and 1910, and also by the public and independent trials conducted by the society, and the work of the Floral Committee. It must always be remembered that the National Sweet Pea Society exists for the advancement of its name flower and not for the particular benefit of either the amateur or the trader. Without the traders we should fare badly in regard to novelties and purity of stocks. Without the amateurs the traders would do badly in regard to sales, because, although market growers need seeds in bulk, they stick to standard varieties, while the amateurs buy the finer stocks and the higher-priced novelties. Amateurs should, I think, exercise a little more patience in regard to novelties, remembering that the difficulties that have attended the fixation of waved sweet peas are being rapidly overcome. Traders might well give more consideration to the sweet pea trade as a whole, and be less anxious as individuals to "get rich quick." New names for varieties showing infinitesimal variation from well-known sorts, petty jealousies and suspicions can only have one end, i.e., disaster to the sweet pea trade as a whole, and consequently to those who are in it. It would appear as though there were a danger at present lest, in our keenness and enthusiasm, we all, amateurs and traders, become overheated, and so, impair the working of the National Sweet Pea Society and check the widespread advance of the sweet pea as a highly developed florist's flower.

Charles H. Curtis.

Adelaide Road, Brentford.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

Royal Horticultural Society.

Orchids provided the predominating feature of the exhibition held at the Royal Horticultural Hall, Westminster, on January 17. They were very beautiful, no fewer than a dozen groups being staged, in addition to small contributions of a few plants each. Fruits were also splendidly shown, the apples vying with the orchids in colouring and effectiveness.

FLORAL COMMITTEE.

Primulas were a great force in the rock garden exhibit made by Messrs. T. S. Ware, Ltd., Feltham, and with these were associated Cyclamen coum album, Lithospermum rosmarinifolium, hellebores, heaths, and saxifrages. Azaleas, oranges, and the berried Debregeasia velutina were largely shown by Mr. L. R. Russell, Richmond. Spiræas and liliums from retarded plants were grouped with fragrant daphnes, rhododendrons, hamamelis, etc., and edged with Iris reticulata, I. Krelagei, I. Dantordi, and the lovely I. histrioides major by Messrs. W. Cutbush and Son, Highgate. Carnations were also displayed in quantity by the Highgate firm, including the new Miss Winnie Hay, a yellow ground fancy, with scarlet markings.

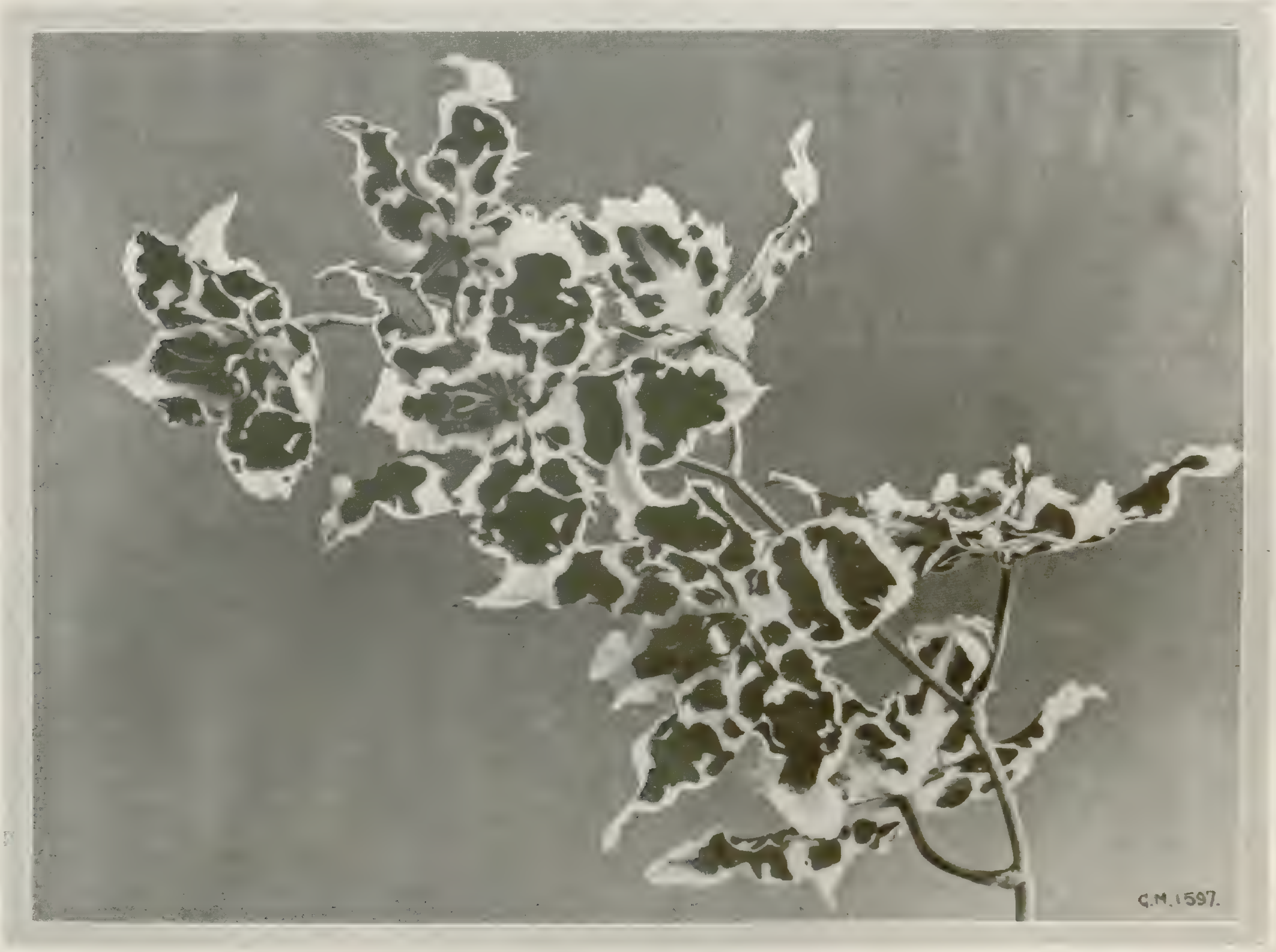
Messrs. Barr and Sons, Covent Garden, exhibited hybrid freesias, lachenalias, crocuses, snowdrops, primulas, and old Japanese trees, and made a very pretty display. Some beautiful carnations were brought over from Guernsey by Mr. H. Burnett, who presented grand examples of Mrs. H. Burnett, Fortuna, Marmion, Mrs. C. F. Raphael, White Enchantress, etc. Messrs. H. B. May and Sons, Edmonton, submitted a collection of ferns, nephrolepis and davallias figuring largely; D. tenuifolia Veitchi and Asplenium Nidus multilobatum were very fine. Mr. G. Reuthe, Keston, showed some charming crocuses, irises, hamamelis, and other interesting things. Shrubby veronicas, encrusted saxifrages and heaths were sent up by the Guildford Hardy Plant Co.

Indian azaleas made up a good part of the group from Messrs. Jas. Veitch and Sons, Chelsea; with these were Coleus thyrsoideus, Eupatorium vernale, Erlangea tomentosa, freesias, and camellias. The group of carnations from Messrs. Stuart Low and Co., Enfield, included good vases of Mrs. M. T. Crook, Baroness M. de Bremen (light pink, new), Fortuna, Royal Purple, Mrs. H. Burnett, Beacon, Regal Mauve, etc. Alpine plants, chiefly mossy and encrusted saxifrages, in pans and pots, with Cyclamen coum, C. ibericum, and Hamamelis arborea, were exhibited by Messrs. J. Peed and Sons, Norwood. A very pretty group of the elegant and useful Primula malacoides was set up by Messrs. S. Bide and Sons, Farnham. Some plants were in quite tiny pots, and others in 48 sizes, and all were producing spikes of rosy lilac flowers in great profusion. For the cool greenhouse this is a charming primula. Mr. Robinson, gardener to Lady Church, Woodside Place, showed a few cyclamen and a couple of flowering plants of Ruellia macrantha.

ORCHID COMMITTEE.

Of great interest was the group of home-raised hybrid orchids brought up by Mr. H. J. Chapman, gardener to Mrs. Norman Cookson, Oakwood, Wylam-on-Tyne. The odontoglossums included O. splendidissimum and O. percultum vars. The odontiodas were several forms of O. Bradshawæ and the cypripediums were C. Chapmani—three forms of it, C. Venus, C. Venus grandiflora, C. Regina Oakwood var., C. hirsuto-Leeanum, C. Kenneth, and in addition there was Cattleya Chapmanni (Hardyana and Trianæ), and C. armainvilliersense Oakwood var. Messrs. Jas. Cypher and Sons, Cheltenham, contributed some finely-grown cypripediums and a few calanthes. Among the former C. Wm. Lloyd, C. Mrs. W. Mostyn, C. Curtmanni punctatum, C. Charlesianum Cypher's var., the big C. Beekmani, and C. Actæus Langleyense were particularly good.

A superb exhibit, and one that entirely filled one long length of tabling, came from Messrs. Charlesworth and Co., Hywards Heath, and it was the most beautiful display in the hall. The whole of the centre was filled with odontoglossums and odontiodas, their many graceful spikes of varied hues attracting general attention and obtaining great admiration. Odontoglossum Phœbe, O. Edward, O. armainvilliersense, O. Lambeauianum, O. percultum, O. concinnum, O. Ernesti, O. Pescatorei, O. crispum, O. Circe, O. eximeum, etc. were grouped with Odontioda Bohnhofiæ, O. heatonensis, O. Bradshawiæ, O. Craveniana, O. Keighleyensis, and O. Cooksoniæ. On either side of these were groups composed of Lælio-cattleya Bella alba, L.-c. Lambeauianum, Cattleya Octave Doin, C. Empress Frederick, and C. Trianæ. At one end were beautiful spikes of Lælia anceps, a new oncidioda (Cochlioda Noetzliana and Oncidium leucochilum), calanthes, Lælio-cattleya Charlesworthi, Zygo-colax Charlesworthi, and Saccolabium bellinum. At the other end was a batch of the lovely Vanda Amesiana and Lycaste Skinneri. A few fine cypripediums, such as C. Helen II. Westonbirt var., C. Lawrebel, and C. Alcimeda (Alcibiades superbum and insigne Harefield Hall), a noble flower.



ODONTOGLOSSUM HALSEYANUM.

Flowers large, spotted with purple-brown. A.M., R.H.S., January 17. J. Gurney Fowler, Esq.

Messrs. Stuart Low and Co., Enfield, had a very pretty and interesting collection, wherein white varieties of Lælia anceps were conspicuous, with fine forms of Oncidium varicosum Rogersi. Some good cypripediums were presented, and of special interest were Sophro-cattleya Saxa Low's var., Odontioda Bradshawiæ, Odontoglossum crispum roseum, Cymbidium Wiganianum, and Lycaste Mrs. Rogerson. Mr. G. W. Miller, Clarkson's Nursery, Wisbech, contributed a group of calanthes, cypripediums, and Lælia anceps, but the pots were so much in evidence that the effect of the flowers was spoiled.

Mr. Hopkins, gardener to Francis Wellesley, Esq., Westfield, Woking, showed Cypripedium Cupid magnificum (very pretty), C. Princess Louise, and Sophro-cattleya Mrs. Francis Wellesley. Another nice group was the one from Messrs J. and A. McBean, Cooksbridge, Sussex, and here Lælia anceps Stella, L. a. Schroderiana, L. a Sanderiana, and L. a. Distinction were beautiful. Cypripedium Euryades, C. Octave Doin, Cattleya Enid, with three big flowers, Odontoglossum Harryano-Halli, and Zygopetalum Perrenoudi were also very fine. From Sir Jeremiah Colman's collection at Gatton Park, Reigate, Mr. Collier brought up the small but graceful Masdevallia polystachys, Pleurothallis Scapha, Bulbophyllum Dayanum, B. auricomum, Zygopetalum Leopardinum Gatton Park var., and Cypripedium Helen II. Mr. de Barri Crawshay staged Odontoglossum Rosefieldiense (Harryanum and Lambeauianum), a handsome hybrid richly hued—a sort of glorified O. Lambeauianum (A.M.)

Mr. R. G. Thwaites, Chessington, Streatham, brought up a number of examples of Cattleya Octave Doin, and also showed C. Blacki and Odontioda Zephyr. Mr. G. Day, gardener to H. S. Goodson, Esq., Fairlawn, Putney, staged Odontioda Lutetia, with bright orange flowers, and O. Royal Scarlet (parentage unknown), with deep crimson scarlet flowers. In the interesting exhibit put up by Messrs. Mansell and Hatcher, Rawdon, Yorks, we noted Vanda Cathcarti, Cypripedium aureum Vine House var., and Vanda Amesiana. Messrs. Heath and Son, Cheltenham, presented a small collection of cool cypripediums.

Messrs. Sander and Sons, St. Albans, brought up the leading white varieties of Lælia anceps, Lælio-cattleya Colmaniana, L.-c. Goldfinch, L.-c. Epicasta, some grand varieties of Cattleya Trianæ, Odontoglossum Ophir, Cypripedium Alfred Statin (A.M.), Brasso-cattleya Thorntoni, Vanda Amesiana, and Cœlogyne pandurata. Mr. W. Carr, gardener to E. Roberts, Esq., Park Lodge, Eltham, had a few good cypripediums, in which C. Sir Redvers Buller was very prominent. Mr. Edward V. Low, Haywards Heath, presented Cypripedium Prospero, C. Ville de Paris, C. Madame Jules Hye, C. auriferum, C. Beckmanni, and other good things.

Mr. J. B. Lowe, gardener to Mrs. Geoffrey Lubbock, Broadoaks, West Byfleet, brought up a small group of dendrobiums, chiefly D. nobile varieties. Mons. Firmin Lambeau, Brussels, sent over a splendid cypripedium named C. Elizabethæ var. Volsang; it was of large size and fine colouring, the deep purple spots on the whitest dorsal sepal making a fine colour effect (F.C.C.). J. Gurney Fowler, Esq., Glebelands, South Woodford, brought forward Odontoglossum Halseyanum (A.M.), which had large flowers, being spotted with purple brown. From South Lodge, Horsham, Mr. Du Cane Godman sent Odontoglossum Godmanni (A.M.), a pretty crimson purple hybrid between O. Edwardi and O. Rolfeæ.

FRUIT AND VEGETABLE COMMITTEE.

Mr. W. Poupart, Twickenham, again showed finely bottled fruits. Mr. W. J. Grant, on behalf of the Monmouthshire Educational Committee, exhibited seventy varieties of potatoes grown in their trials. Eighteen sets were selected in each case, and grown, and attached to the samples of produce shown on this occasion was a card indicating the amount of ware and seed potatoes (by weight) produced, the amount of chats, and also of diseased tubers, and finally the total weight of crops lifted. The name of the society and the source of the seed were given in every instance, and below this information was given as to the flavour of the variety when cooked, and also the colour and the consistency of the potato when cooked. The information is now issued in printed tables, and doubtless can be obtained from the authorities. Such information cannot fail to be of great value to cottagers and allotment holders in the country.

Messrs. Sutton and Sons, Reading, showed some beautiful samples of their superb Early White and Winter Mammoth broccolis, all grown in the open in the Southern counties. Some splendid samples of apples were displayed by Messrs. W. Seabrook and Sons, Chelmsford, and especially attractive were Claygate Pearmain, Blenheim Pippin, Royal Jubilee, Bismarck, The Queen, Newtown Wonder, and Mère de Ménage.

Messrs. Jas. Veitch and Sons, Chelsea, staged a superb collection of brilliantly coloured apples. There were one hundred distinct varieties represented, and these included Northern Greening, Lord Derby, Bow Hill Pippin, Gascoigne's Scarlet, American Mother, King of Tompkins County, Dumelow's Seedling, Bismarck, Alfriston, Paroquet, Annie Elizabeth, Rival, Crown Apple, and King of the Pippins—all splendidly shown. Messrs. George Bunyard and Co., Maidstone, contributed a very fine collection of brightly-coloured apples and a few pears. The fruits were piled in pyramids on plates and baskets, and such varieties as Washington, Newton Wonder, King of Tompkins County, Twenty-ounce, Beauty of Stoke, Swedish Reinette, Baumann's Red Reinette, Mère de Ménage, Farmer's Seedling, and Lord Castlereagh, were immensely attractive.

CERTIFICATES AND AWARDS.

First-Class Certificate.—To Cypripedium Elizabethæ var. Volsang, from Mons. Firmin Lambeau, 42 Square Vergote, Brussels.

Award of Merit.—To Odontoglossum Halsevanum, from J. Gurney Fowler, Esq. (gardener, Mr. Davis), Glebelands, South Woodford; to O. Rosefieldiense, from De Barri Crawshay, Esq. (gardener, Mr. Stables), Rosefield, Sevenoaks; to O. Godmanni, from F. Du Cane Godman, Esq., South Lodge, Horsham; and to Cypripedium Alfred Statin, from Messrs. Sander and Sons, St. Albans.

MEDALS.

Gold.—To Messrs. Charlesworth and Co., Haywards Heath, for orchids; to Messrs. Jas. Veitch and Sons, Chelsea, for collection of apples.

Silver-Gilt Hogg.—To Messrs. George Bunyard and Co., Ltd., Maidstone, for fruit.

Silver-Gilt Flora.—To Messrs. Wm. Cutbush and Son, Highgate, for hardy flowers and carnations; to Messrs. Jas. Veitch and Sons, Chelsea, for flowering plants.

Silver-Gilt Banksian.—To Mrs. Norman Cookson (gardener, Mr. H. J. Chapman), Oakwood, Wylam-on-Tyne, for orchids; to Mr. H. Burnett, Guernsey, for carnations.

Silver Flora.—To Messrs. Stuart Low and Co., Enfield, for orchids; to Messrs. Sander and Sons, St. Albans, for orchids; to Messrs. J. Cypher and Sons, Cheltenham, for orchids; to Messrs. J. and A. McBean, Cooksbridge, for orchids; to Mr. E. V. Low, Haywards Heath, for orchids; to Messrs. H. B. May and Sons, Edmonton, for ferns, etc., to Mr. L. R. Russell, Richmond, for azaleas, etc.

Silver Knightian.—To Messrs. W. Seabrook and Sons, Chelmsford, for apples; to Mr. W. J. Grant, Monmouth Education Committee, for potatoes.

Silver Banksian.—To Mr. G. W. Miller, Wisbech, for orchids; to Messrs. Mansell and Hatcher, Rawdon, Leeds, for orchids; to E. Roberts, Esq., Eltham, for orchids; to Messrs. S. Low and Co. Enfield, for carnations; to Messrs. T. S. Ware, Ltd., Feltham, for alpines, etc.; to Messrs. Sutton and Sons, Reading, for broccoli.

The National Sweet Pea Society.

In accordance with an announcement made in our issue of the 14th inst., a special general meeting was held at the Hotel Windsor, Westminster, for the purpose of rescinding an instruction from the annual meeting to the General Committee, and passing a rule defining the status of an amateur. Mr. G. W. Leak, chairman of committee, presided, and there was a large attendance of members, many coming from distant parts of the country. Mr. C. H. Curtis having read a large number of letters from members who were unable to be present, relating to the questions at issue, the chairman formally moved that the instruction be rescinded, and Mr. W. P. Wright seconded.

Mr. Baker, of Wolverhampton, the author of the instruction, said he was in no way unfriendly to the committee, his only object being to have the status of an amateur as regards the Floral Committee properly defined. He therefore felt that the best course would be, as there were no rules with regard to the appointment of a Floral Committee, to rescind the instruction and request the committee to prepare a new set of rules, and submit them to a general meeting in April next. After some discussion it was decided that the better course would be to pass the original resolution, and then move the request as an amendment to the second resolution. On the resolution being submitted it was carried almost unanimously, only two voting against it. On the motion for adding the R.H.S. rule relating to amateurs to the rules of the National Sweet Pea Society being submitted, Mr. Baker proposed his amendment. After a rather long discussion, in which Mr. C. W. Breadmore, Mr. A. Dean, V.M.H., Mr. R. Sydenham, Mr. E. Molyneux, V.M.H., Mr. S. B. Dicks, Mr. E. F. Hawes, Mr. T. Stevenson, and other members took part, the amendment was carried with three dissentients.

A hearty vote of thanks was, on the motion of the Rev. Joseph Jacob, seconded by Mr. John Collingridge, accorded the chairman. With this the proceedings, which were of the most pleasant character throughout, terminated.

East Anglian Horticultural Society.

The twenty-first annual dinner of this club was held at the Criterion Restaurant, Norwich, on January 11, and was attended by the leading professional and amateur horticulturists of the district. After the loyal toasts had been duly honoured, Mr. J. E. T. Pollard gave "Success to the East Anglian Horticultural Society," and said he was pleased to see that the good work of the club had been well maintained. Its work had gone forward, its position had improved, whilst the finances were in a sound condition. The club had achieved a great success this year by winning the R.H.S. silver cup for fruit, and he thought such a success placed them well in the forefront of similar societies in the kingdom. The President (Mr. Lewis Smith) responded. He referred to the excellent series of lectures, essays, and exhibitions which had been held, and thought that such useful educational work must make itself felt in the career of all young gardeners who attended the meetings. Mr. J. F. Betts proposed, "Success to the Norfolk and Norwich Horticultural Society," and, in the course of his remarks, said he was pleased to learn that this society did not intend to drop its spring show this year. Mr. A. W. Preston responded, and took the opportunity of explaining that this year's Norwich Rose Show would be held in conjunction with the great show of the Royal Agricultural Society, which was holding its meeting this year at Norwich.

Mr. John Clayton, in some well-chosen remarks, gave "Success to the Royal Horticultural Society," to which Mr. Charles Daniels replied, and in so doing Mr. Daniels gave some interesting facts and figures of the great work of this body. Other toasts were, "The Special Prize Donors," proposed by Mr. H. Perry, and responded to by Messrs. E. W. Barnes, J. Forder, and C. Marr. Mr. J. Powley gave "The Norwich Museum Association," responded to by Mr. Edward Peake, its leader. Mr. F. J. Endersby gave "The Press," and extended the thanks of the club to the local and gardening Press for the notices of their meetings. Mr. E. W. Barnes gave "The Health of the Secretary," Mr. W. L. Wallis, which was received with musical honours.

Southampton Horticultural Society.

The annual meeting of the above society was held at the Shaftesbury Hall, Southampton, on Monday, January 9, the Mayor being in the chair.

The report presented by the council stated that the past season had been remarkable for the excellence and extent of the several shows, more especially the rose show and the autumn exhibition. Unfortunately, the attendance of the public at all the shows was disappointing, as a consequence the council is compelled, for the first time for some years, to carry forward a few liabilities to this year. In addition to the usual shows, a garden fête is to be held in 1911, as these have in the past been most successful. The council hope to show a better balance-sheet next year.

The number of subscribers has been well maintained, numbering now about 780, and the total amount subscribed to the several funds, £310 4s. The report records with regret the death of several of its vice-presidents, especially mentioning the late Mr. F. W. Flight, who had been a prominent exhibitor at the society's shows for more than thirty years. The report concludes with expressions of thanks to those patrons who have presented, and promised, cups, and helped the society in other ways.

The statement of accounts shows: Receipts. —From 1909, £24 14s. 11d.; rose show, £294 6s. 3d.; carnation show, £131 5s. 11d.; autumn show, £164 5s. 11d.; other items, £107 19s. 6d.—Total, £722 12s. 6d. Expenses. —1909 items, £2 14s.; rose show, £304 1[illegible] 9d.; carnation show, £130 15s. 10d.; autumn show, £154 16s. 5d.; general account, £10[illegible] 19s. 7d.; new stock, £7 5s. 6d.; cash balance, £20 10s.—Total, £722 12s. 6d. Assets.—Cash, including Cup Fund, £31 16s. Liabilities.—Autumn show accounts, £26 18s. 5d.; other items, £3 12s. 6d.—£30 10s. 11d. Credit balance, £1 5s. 1d.—£31 16s.

The election of officers resulted in the re-election of Lord Swaythling as president, Mr. E. Kemp Toogood chairman of the council, Mr. C. S. Fuidge as secretary, for the twenty-ninth time. All the other officers and retiring members of the council being re-elected, with one exception. The Secretary called attention to the fact that 1912 would be the jubilee of the society, and hoped the event would be celebrated by a special effort.

Bristol Gardeners' Association.

A largely-attended meeting of this association was held on January 12, at St. John's Parish Rooms. The chair was occupied by Mr. Hayball, and a paper on "Perpetual-flowering Carnations" was read by Mr. Wall, of Bath. The lecturer gave full cultural details, as practised so successfully by himself at Melrose Nursery. Cuttings, he said, may be taken during the first three months in the year. In the course of his experience he found the best rooting medium to be cocoanut-fibre and sand, and he placed the boxes over a moderate hotbed, keeping the overhead temperature ten degrees cooler, in order to retard growth until rooted. When potted singly, he placed them on a shelf near the glass, and pinched them when about six or eight inches high. Mr. Wall recommended a compost consisting of four parts loam, one part well-decayed manure, and one part sand and wood ashes, with a sprinkling of bonemeal, the latter to be left out at the final potting. Early in May he stands the plants outside on ashes, but keeps the weaker varieties under glass. The carnations are housed early in September, and given a temperature of about 55 deg., avoiding fluctuations. A useful discussion followed.

For three flowering plants Mr Jenn[illegible] was first, Mr. Springham second. In [illegible] point competition, Mr. Springham [illegible] six, and Mr. Woodward five points.

British Gardeners' Association.

On Saturday, January 21, a public meeting of gardeners in the Birmingham district will be held at the Cobden Café, Corporation Street, Birmingham, at 7.30 p.m. Mr. James Udale will preside, and addresses will be given by the chairman and secretary of the British Gardeners' Association, and other well-known gardeners. It may be stated that a cheap train will run at 2.55 p.m. from Burton-on-Trent to Birmingham, 1s. 9d. return, and tea will be provided, at 1s. each, at 6 p.m., for those coming from a distance.

National Hardy Plant Society.

A meeting of the Council was held at Birmingham on Thursday, January 12, Mr. A. J. Macself presiding. Business transacted included the election of Executive, Scientific, and Publications Committees, consideration of correspondence received from horticultural societies seeking the assistance and co-operation of the National Hardy Plant Society, and the laying of plans for the work of the coming season.

It was arranged that the society shall undertake to grant First Class Certificates and Certificates of Merit to new hardy plants of sufficient merit that may be exhibited at several of the leading shows, or that may be submitted to the Council during 1911. The society is now firmly established, and a goodly number of enthusiastic members are enrolled. Much useful work may be accomplished even during the first year of its existence, and it is sincerely hoped that all lovers of hardy perennial and alpine plants will join without delay, for it is on the number of members and extent of support immediately received that the amount of good work that can be done this year depends. The next meeting of Council will be held in London on Tuesday, February 28. The hon. secretary is Mr. F. Bouskell, Market Bosworth, Nuneaton.

THE NATIONAL SWEET PEA SOCIETY.

To the Editor of The Gardeners' Magazine.

Sir,—As the General Committee have been requested by the special general meeting of the members to formulate rules for the election and conduct of a Floral Committee, is it not a good opportunity to abandon the invidious distinction between "amateur" and "trader," and to elect the best men (and women, if desired) to that committee?

A Member.

FORTHCOMING ENGAGEMENTS.

SATURDAY, January 21.—Société Française d'Horticulture de Londres, Annual Dinner, 6.30 p.m.
British Gardeners' Association, Meeting at Cobden Café, Corporation Street, Birmingham, 7.30 p.m.
WEDNESDAY, January 25.—Irish Gardeners' Association meets.
FRIDAY, January 27.—Lee, Blackheath, and Lewisham Horticultural Society meets.
TUESDAY, January 31.—Committees meet at 12 o'clock; lecture at 3 p.m. on "Colour Photography," by Mr. Wm. Marshall.
THURSDAY, February 2.—Linnean Society.
SATURDAY, February 4.—French Horticultural Society of London.
MONDAY, February 6.—Dorchester Horticultural Society meets.
TUESDAY, February 7.—Scottish Horticultural Association meets.
THURSDAY, February 9.—National Horticultural Society of London, Exhibition in Paris.

International Horticultural Exhibition, 1912. — We are pleased to learn that this exhibition gathers increased patronage from week to week. As we have previously announced, King George V. and Queen Mary have consented to give their patronage to the exhibition, and now we have the satisfaction of announcing that Queen Alexandra, who has always taken an interest in British gardening, has become a patroness.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

PRUNING IN FROSTY WEATHER.—B. M., Bridgnorth: There are two good reasons why pruning should not be done during periods of severe frost. One is that on trees of any size the work is a danger, as well as unpleasant to the operator; the other is that a great deal of damage may result owing to the snapping of twigs and branches when being pruned while frozen hard.

AMARYLLIS.—W. F. C., Hertford.—Now that the plants are fast developing their flower spikes give them just sufficient water to keep them growing steadily; after the dry soil has been once well moistened right through, not much more will be needed. Over-watering is a great mistake as amaryllis have few active roots at this period. After the flowers have faded, shake the old soil from the roots, trim away dead roots, and pot the bulbs in rich substantial loam that has been stacked for some time. Cow manure is a fine and useful addition. Plunge the pots in fibre, tan, or leaves, so as to secure a gentle bottom heat, and provide a moderate stove temperature above until the foliage approaches full develop-

Eckford's
Giant SWEET PEAS

SWEET PEA PERFECTION.

A flower garden without Eckford's Sweet Peas can only be compared to a house without furniture

Sweet Peas are requisite to the small, medium, or large garden, and if you wish to have colour, effect, prize specimens, and tall plants, then send to Eckford's for your seeds.

The time to buy is NOW. The firm to buy from is Eckford's. No other seed specialist in the world can rival Eckford's for Sweet Peas.

Larger flowers, longer stems, brighter colours, and a profusion of bloom is the result of growing Eckford's seeds.

Remember, Genuine Eckford's Seeds can only be obtained direct from Wem. No Agents are employed.

A specially written booklet on Sweet Pea Growing given with every order. Send to WEM to ensure satisfaction.

SPECIAL NOVELTY OFFER FOR 1911.

LUMINOSA.—This variety will be appreciated for its deep coral colour, which for decoration is unexcelled, having the quality of giving off greater brilliance in artificial light than any other variety. Very scarce. In sealed packets, 7 seeds, **6d.**; 15, **1s.**

VICOMTE DE JANZE.—A fine bold flower of exquisite shape, the standard being splendidly erect; in colour it is deep bright rose, perfectly distinct; a charming flower. In sealed packets, 5 seeds, **3d.**; 10, **6d.**; 20, **1s.**

DODWELL F. BROWNE (WAVED).—This is a very beautiful intense bright crimson, three and four flowered, almost a self; a true Giant Waved variety of intense King Edward VII. colour. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

SAINT GEORGE.—Light orange pink standard with slightly lighter wings; almost a self; good sizes; slightly waved. In sealed packets, 20 seeds, **3d.**; 40, **6d.**; 80, **1s.**

ASTA OHN (WAVED).—A pretty waved lavender overlaid with rose; a very charming flower of good size and substance. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

MAGGIE GERRING.—This is a decided acquisition with a bold standard of perfect shape, and beautifully balanced wings. In colour it is a soft cream overlaid with a delightful shade of pink which rather deepens towards the edges. It is exquisitely rich in tone when bunched. In sealed packets, 5 seeds, **3d.**; 10, **6d.**; 20, **1s.**

APPLE BLOSSOM (WAVED).—This, as its name implies, is a beautiful flower of apple blossom colour, of giant size, and, like most of the waved varieties, is a very strong grower. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

MRS. E. GILMAN.—A fine bold flower, with expanded standard. It has a creamy ground suffused with bright rose, and almost pure cream wings. In sealed packets, 5 seeds, **3d.**; 10, **6d.**; 20, **1s.**

PICOTEE (WAVED).—This is one of the very finest introductions, being a giant waved flower, pure white, with a beautiful picotee edge of carmine; in most cases the flowers are borne in fours on a long, strong stem. In sealed packets, 5 seeds, **3d.**; 10, **6d.**; 20, **1s.**

EVELYN HEMUS (WAVED).—A warm cream, shading to yellow, with a picotee edge of terra-cotta pink; of great size and refinement; standard and wings beautifully waved, and nearly always four-flowered. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

MRS. HENRY BELL (WAVED).—A beautiful rich apricot ground overlaid with a soft pink, which deepens towards the edges of both standards and wings. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

MID BLUE.—A medium sized erect flower of deep sky blue. It is a strong grower, very free, and frequently four-flowered; quite distinct. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

OTHELLO (WAVED).—A beautiful self-coloured giant chocolate, of splendid substance and robust habit. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s**

CERISE (WAVED).—A fine, bold, beautifully waved, true cerise; a very strong grower, giving generally four flowers on long, strong stems. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

SPECIAL OFFER. One full-sized packet of each of the foregoing 14 charming and Novel Sweet Peas, **12/6** post free for cash with order.
One half-sized packet of each of the foregoing 14 charming and Novel Sweet Peas, **6/6** post free for cash with order.

SPECIAL COLLECTIONS FOR 1911.

Villa (A) Collection. 50 very choice varieties, suitable for villa garden, excellent giant flowered sorts, most suitable for cutting and exhibition, 25 seeds of each, **10s.**

Villa (B) Collection. 24 splendid varieties, suitable for exhibition, 50 seeds of each, **5s. 6d.**

Half-Villa (B) Collection. 24 splendid varieties, suitable for exhibition, 25 seeds of each, **3s.**, post free for cash.

FREE. Send a postcard to-day for large illustrated and coloured catalogue. It gives full particulars of all novelties in Sweet Peas for 1911, and contains full list of all flower and vegetable seeds.

HENRY ECKFORD, F.R.H.S. (Dept. 221), WEM, SHROPSHIRE.

ment, when more ventilation should be given, and, when growth is complete, cooler, brighter, and airier conditions should be afforded.

FAILURE WITH TULIPS.—S. J., Selby: No matter how skilful the cultivation, the bulbs would not have given good results. The dry bulbs, as well as those cultivated in pots, show that the stock was young and undeveloped, and in no case could we find any trace of a flower within a bulb. Cheap goods are by no means always the best; indeed, they are rarely so, and in matters of this kind, where it is so difficult to prove responsibility, it is always the better plan to deal with a nurseryman of repute, and pay a reasonable price. Such dealers are always prepared to consider any difficulty that may arise, and, in the event of a mistake, they are usually prepared to do their best to remedy it.

ANNUAL PUBLICATIONS OF FLORICULTURAL SOCIETIES.—W. T. L., Medmenham: The floricultural societies that issue an "annual" publication are the National Sweet Pea Society (Hon. Sec., Mr. C. H. Curtis, Adelaide Road, Brentford); National Rose Society (Hon. Sec., Mr. E. Mawley, V.M.H., Rosebank, Berkhamsted); and the Perpetual Flowering Carnation Society (Hon. Sec., Mr. Hayward Mathias, Lucerne, Stubbington, Hants). We refer you to the various secretaries for particulars.

GARDEN PATENT.—P., Rugby: In the first place, you should apply to the Comptroller-General of the Patent Office, 25, Southampton Buildings, London, W.C., for the necessary forms and information as regards charges. You should state that you desire to patent an invention for the improvement of garden frames, or to protect your invention pending the grant of a patent. Should you secure a patent you could sell it outright to a firm of horticultural builders, or sell it for a sum down and a royalty on each frame sold, or for a royalty only. The first thing is to protect your invention.

SOIL OF VINE BORDER.—S. N. C., Devon: The soil is far too light and sandy for vines, and is lacking in organic matter. Thorough improvement can only be effected by the removal of the soil in the upper layers of the border, and the addition of a sufficient quantity of roughly broken fibrous loam, inclined to be heavy, and that has been stacked some time. To the loam there should be added some ashes from burnt vegetable refuse. In other words, renovation of the border is essential for any degree of permanent success; the wood ashes may well constitute a tenth part of the new compost. If the loam is first rate nothing more need be added, but if it is not of the finest quality some bonemeal may be added, though this may be given more advantageously by way of top-dressing during the season of growth. If the vinery is a late one, and you have conveniences for dealing with the matter promptly, the work may be done at once, although the season is full late. As the old soil is removed take great care not to injure the vine roots, but tie these up loosely in bundles, in damp mats, relaying them in position as the new soil is added. Make all quite firm, working the finer soil among the roots, and give a good watering when the work is complete. Cover the surface of the border with long litter—not hot, steamy stuff—when the vines begin to grow.

DAHLIAS FOR GARDEN EFFECT.—C. L. C., Mitcham: With reference to varieties, we have dealt with the subject on several occasions, and shall do so again ere long. The cultivator whose aim is to have a bright display of colour, and a plentiful supply of blooms for cutting, must not trouble much about perfection of form in the flowers; but must select varieties neat in growth, profuse in flowering, and carrying their blooms well above the foliage, on stiff, erect stems. Dahlias grown for garden decoration do not require a very rich soil. A moderate dressing of manure will suffice, but a deep stirring of the soil is desirable. The plants should be bedded out at the end of May, and if they can be shifted into five-inch pots early in that month it will be an advantage. Owing to the comparative shortness of the English summer, it is most important to have strong plants when the time arrives for bedding them out. There will be a gain of several weeks by the use of strong plants in five-inch pots, as compared with small examples in pots three inches in diameter.

ROLLING TENNIS LAWN.—G. P., Buntingford: Sweeping and rolling are excellent for keeping a lawn in good condition, and are quite necessary in the case of a lawn used for tennis, croquet, etc. Sweep the surface lightly, and then roll the lawn, and roll lengthways on one occasion and crossways the next. Do not sweep, roll, or otherwise work on lawns when they are frozen.

GREENHOUSE PLANTS.—S. J. C., Cambridge: You will find excellent lists in "The Gardening Year Book" of 1911, obtainable post free for 1s. 3d. from the GARDENERS' MAGAZINE office, 148, 149, Aldersgate Street, E.C.

SOLANUMS.—W. S., Alresford: Do you mean Solanum Wendlandi? If so, please send us a postcard to that effect.

NAMES OF PLANTS.

G. H., Downe.—A variety of Cypripedium nitens.

F. L., Aberfeldy.—1, Cypripedium Calypso; 2, Sedum Sieboldi.

W. G. F., Salisbury.—Probably Eranthemum cinnabarinum.

M. D. D., Tiverton.—1, Not recognised, poor specimen; 2, Crassula imbricata.

N. D., Jersey.—1, Begonia Martiana; 2, B. Gloire de Sceaux; 3, Eriobotrya japonica.

D. T. S., Exeter.—1, Lælia anceps; 2, Eranthemum pulchellum; 3, Allium neapolitanum.

C. S. L., Farnham.—1, Juniperus virginiana; 2, Arbutus unedo; 3, Hedera dentata; 4, Gaultheria procumbens; 5, Jasminum nudiflorum; 6, Abies Douglasi.

S. O., Swindon.—1, Primula kewensis; 2, a garden variety of amaryllis, or hippeastrum—good colour, but poor form; 3, Odontoglossum Wilckeanum.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above sea-level, 150 feet.

DATE. 1911. JANUARY 8 TO JANUARY 14.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Jan. 8—Sunday	—	46	45	49	32
,, 9—Monday	—	47	47	50	46
,, 10—Tuesday	6 6	35	33	43	34
,, 11—Wednesday..		42	39	45	35
,, 12—Thursday	0 6	38	35	39	33
,, 13—Friday	0 36	35	33	37	31
,, 14—Saturday.....	6 0	30	28	42	26
Means	(total) 12 48	39	37	43	34

DATE. 1911. JANUARY 8 TO JANUARY 14.	RAIN.	TEMPERATURE OF THE SOIL AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS
	ins.	deg.	deg.	deg.	deg.
Jan. 8—Sunday	0·10	39	40	42	27
,, 9—Monday	0·13	42	41	42	45
,, 10—Tuesday	trace	39	41	42	25
,, 11—Wednesday .	0·38	38	41	42	29
,, 12—Thursday	0·02	40	41	42	34
,, 13—Friday	—	37	40	42	24
,, 14—Saturday	—	33	39	42	19
Means ..	(total) 0·63	38	40	42	29

Snow on Thursday, at 5 p.m.

MARKETS.

◆

COVENT GARDEN.

Flowers.

Chrysanthemums are getting scarce, but carnations and forced daffodils are plentiful.

		s. d.		s. d.
Acacia	per pad	5 0	to	7 6
Azaleas, white	per doz. bun.	4 0		5 0
Adiantum cuneatum	per doz. bun.	4 0		6 0
Anemones, French	per doz. bun.	2 6		3 0
Arums	per doz.	3 0		5 0
Asparagus	per doz. bun.	9 0		12 0
Camellias	per doz.	2 0		3 0
Cattleyas	per doz.	9 0		12 0
Carnations	per doz.	2 6		4 0
,,	per doz. bun.	12 0		15 0
Chrysanthemums	per doz. bun.	6 0		12 0
,,	per doz. blms.	1 6		5 0
Croton leaves	per bun.	1 0		2 6
Cypripediums	per doz. blooms	2 0		4 0
French fern	per doz. bun.	2 6		4 0
Gardenias	per doz.	2 0		4 0
Hyacinths, Roman	per doz. bun.	9 0		12 0
Lapagerias	per doz.	2 0		3 0
Lilac	per bun.	3 0		5 0
Lilium auratum	per bun.	3 0		4 0
,, speciosum	per bun.	2 0		3 0
,, longiflorum	per bun.	2 6		3 6
Lily of the Valley	per doz. bun.	6 0		15 0
Marguerites	per doz. bun.	2 0		3 0
Narcissus, Paper White	per basket	6 0		10 0
,, Soleil d'Or	per doz. bun.	2 0		3 0
,, Golden Spur	per doz. bun.	8 0		10 0
Odontoglossums	per doz. blms.	2 6		3 0
Pelargoniums	per doz. bun.	5 0		8 0
Poinsettias	per doz.	6 0		12 0
Roses	per doz.	2 0		5 0
Smilax	per doz. trails	2 0		3 0
Tuberoses	per doz.	0 5		0 6

Fruits.

Grapes are in good demand; pears and first-class eating apples are scarce. Oranges are plentiful.

		s. d.		s. d.
Apples, English	per bush.	7 0	to	24 0
,, American	per barrel	20 0		36 0
,, Californian	per box	6 6		10 6
,, Columbian	per case	9 0		14 0
,, Nova Scotian	per barrel	10 0		26 0
Apricots, Cape	per case	6 0		10 0
Bananas	per bun.	3 6		12 0
Cobnuts	per lb.	0 10		1 0
Chestnuts	per bag	10 0		15 0
Cranberries	per case	9 0		10 6
Grapes, English	per lb.	1 0		6 6
,, Guernsey	per lb.	0 9		1 3
,, Almeria	per barrel	12 0		17 6
Lemons	per case	10 0		15 0
Oranges	per case	10 0		21 0
Pears, French	per case	3 0		4 6
,, Californian	per case	10 0		22 0

LONDON POTATO MARKETS.

There is a distinct improvement in the demand owing to the colder weather.

		s. d.		s. d.
British Queen	per ton	75 0	to	90 0
Epicure	per ton	70 0		75 0
Evergood	per ton	70 0		85 0
King Edward	per ton	75 0		100 0
Maincrops	per ton	95 0		105 0
Up-to-Date	per ton	80 0		

CONTENTS.

	PAGE
Answers to Correspondents	61
Exhibitions and Meetings	58
Notes of the Week	43
Orange and Scarlet Sweet Peas	55
Some New Sweet Peas	45
Sweet Pea Cultivation	54
Sweet Pea Enthusiasm in Scotland	47
Sweet Peas in Small Gardens	48
The Decorative Value of Sweet Peas	53
The Future of the Sweet Pea	46
The Ivy Saxifrage	57
The Most Useful Sweet Peas	57
The Newer Sweet Peas	52
The Sweet Pea as an Article of Commerce ...	56
The Work of the National Sweet Pea Society	58
Work for the Week	56

ILLUSTRATIONS.

Portrait of Mr. G. W. Leak, 43; Sweet Pea Par
dise Apple Blossom, 45; Sweet Pea Coolleen, 46;
Sweet Pea Thomas Stevenson, 47; Sweet Pea
Marion Cuthbertson, 48; Sweet Pea Cherry Ripe,
49; Sweet Pea Charles Foster, 50; The F
Illustration of a Sweet Pea offered for sale,
Sweet Pea Stirling Stent, 53; Sweet Pea M
Belle, 55; Odontoglossum Halseyanum, 59.

PERGOLAS.
Larch Poles at 1d. per foot. Lists Free.
PATRICK'S, Otley, Yorks.

OAK CRAMBLES.
Peeled and dry at ½d. per foot.
PATRICK'S, Otley, Yorks.

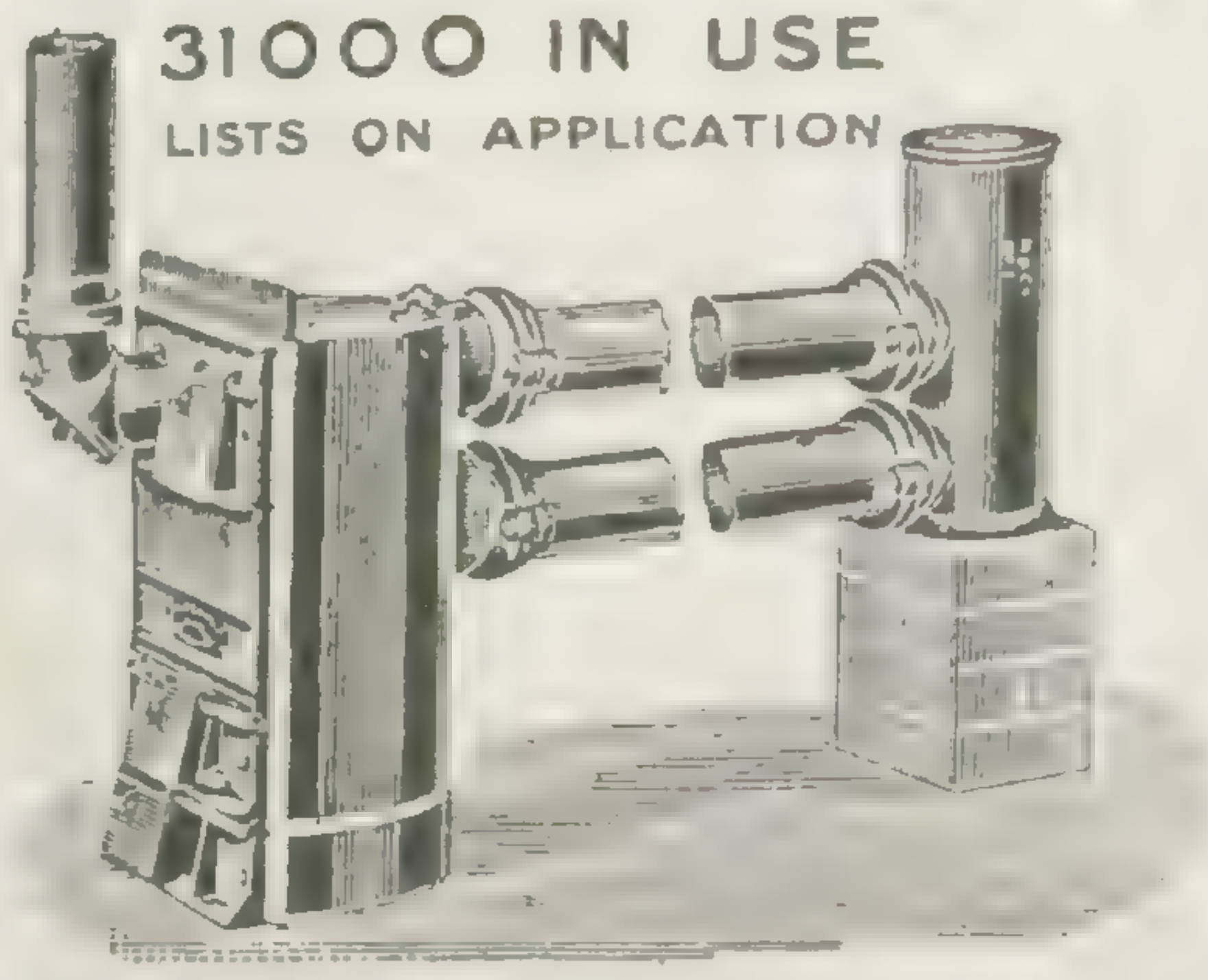
ROSE ARCHES.
Larch Poles at 1d. per foot.
PATRICK'S, Otley, Yorks.

TREE STAKES AND GARDEN RODS.
Lists free.
PATRICK'S, Otley, Yorks.

The Loughborough
BOILER
31000 IN USE
LISTS ON APPLICATION

The pioneer of cheap, simple and effective heating for small greenhouses. Complete Apparatus from £3. 19. 6. The immense sale of this boiler, and its numerous imitations are the best testimony of its undoubted success.

MESSENGER & CO. LTD.
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH · LEICESTERSHIRE
London Office, 122 VICTORIA ST · S · W



FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant

Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

SANKEY'S
FAMOUS
GARDEN
POTS

VAPORITE
MAKES A CLEAN SWEEP OF WIREWORMS, LEATHERJACKETS, SLUGS & ALL OTHER SOIL PESTS.

There is no surer exterminator of soil pests than Vaporite, the original soil [illegible]. Dig it in [illegible] as idle (1 lb. to 8 sq. yds.). [illegible] will be sound and plentiful [illegible] from the ravages of these [illegible] casks by all seedsmen. Vaporite and its uses are fully described in our Illustrated Booklet, No. 45, post free from

VAPORITE-STRAWSON CO., LTD., DEPT. E.
SPENCER HOUSE, SOUTH PLACE, E.C.

PUBLISHERS' ANNOUNCEMENTS.

[illegible] GARDENERS' MAGAZINE may be obtained by [illegible] from all Newsagents, price Twopence, every [illegible]day. If any difficulty be found, a copy will be posted weekly direct from the Publisher, 148 and 149, Aldersgate Street, London, on the following terms: Twelve Months, 10s. 6d.; Six Months, [illegible] 6d.

[illegible] and Title Page to Vol. LIII. (comprising the weekly numbers from January to December, 1910), price 2d., by post 2½d.

BINDING CASES for binding the 12 months' numbers, [illegible] cloth, ornamented in gold, price 2s., post free.

[illegible]ME LIII., bound in green cloth, containing the [illegible] weekly numbers, 1910. Price 12s. 6d.; by post, [illegible] 4d.

A New Year's Honour.

AN ORDER FOR
CLAY'S

SAFE · PRODUCTIVE · ECONOMICAL · LASTING
CLAY'S LONDON FERTILIZER

Sold everywhere in **6d.** and **1s. Tins**; and in **Branded and Sealed Bags**:—7 lbs., **2s. 6d.**; 14 lbs., **4s. 6d.**; 28 lbs., **7s. 6d.**; 56 lbs., **12s. 6d.**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

Every Genuine Tin, Bag & Seal bears the Trade Mark as in Centre of Cross.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers, as under:—

CLAY & SON,
Stratford, London, E.

The Gardener & his Family must have Dry, Comfortable, Easy Going BOOTS.

THE Gardener in whatever capacity must have foot comfort, the first necessity of an active mind and body. If the feet are wrong then all's wrong. We recommend our special footwear to old and young for outdoor wear.

The Stout Chrome Calf Greenhouse wear **11/9** | The Nailed Gardener Boot **10/6**

We make special quality Boots for the whole family. Write for free illustrated price list No. 14 and select what you fancy. We know you'll come again and again.

NORWELL'S BOOT FACTORY, PERTH, Scotland.
Established over 100 years.

SUBSCRIBER'S ORDER FORM

Every Saturday THE GARDENERS' MAGAZINE. Twopence.

To W. H. and L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose ________ for ________ months in advance.

Name ____________________

Address ____________________

Date ____________________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

. If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head).—Mrs. HERBERT MORRELL highly recommends F. HARRIS; been head of five the past four years; thorough experience, gained in good establishments, including Headington Hill Hall, Buscot Park, Waddesdon Manor; age 34, no family. Apply HARRIS, Writtle Road, Chelmsford.

GENTLEMAN recommends GARDENER Head of two or three); life experience in all branches; understands formation of new or renovating old gardens; married, one boy 10 years; age 45. PENNELLS, Phœnix Green, Winchfield, Hants.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; grapes, peaches, melons, stove and greenhouse plants; four and a-half and eleven years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here 5½ years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working); life good practical experience in all branches, Inside and Out, Early and Late Forcing; excellent references. H. TURNER, 62, Star Road, Peterborough.

GARDENER (Head Working), requires SITUATION; experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants; Flower and Kitchen Garden, Hardy Fruit, etc.; good references; married, no family. W. S., 73, Allen Street, Maidstone, Kent.

GARDENER (Head Working, where one or more are kept, or good Single-handed); experienced Inside and Out; good references; abstainer; married; age 29. W.S., Office of this Paper.

GARDENER (Head Working, where two or more are kept); good all round; can be well recommended; married when suited; age 36. PEARCE, 10, Roxwell Road, Shepherd's Bush.

GARDENER (Head Working) seeks SITUATION where three or four are employed; 17 years' experience; excellent references. HICKS, The Gardens, Sundorne Castle, Shrewsbury.

GARDENER (Head Working). — Mr. BLACKWOOD, Gardener, Hethersett, Reigate, will be pleased to recommend his FOREMAN, ALFRED RUSSELL, age 28, who has been four and a half years here, as good all-round man, well versed under glass and outside; married when suited.

GARDENER (Head Working, where several are kept).—Mr. DINSMORE, Head Gardener to Mrs. Blackwell, The Cedars, Harrow Weald, Middlesex, can highly recommend his Foreman, W. PARKER; age 30; life experience in all branches; married when suited.

GARDENER (Head Working) seeks RE-ENGAGEMENT; life experience Inside and Out; excellent testimonials; present situation four years, 10 in last as Head; age 39; two children, age nine and five. HEAD GARDENER, Norman Court, Salisbury.

GARDENER (Head Working, where several are kept); thorough practical experience Inside and Out; excellent testimonials; age 30; married when suited. DAY, Shernfold Park Gardens, Frant, Sussex.

GARDENER (Head); life's practical experience in all branches, Inside and Out. Grapes, Peaches, Melons, Stove and Greenhouse Plants, Malmaison and Tree Carnations, Orchids, Chrysanthemums, Landscape, and Rock Garden, Vegetables, and Hard Fruits; nearly eight years as head of six; excellent references; age 35. F. SMITH, 4, Mellish Terrace, Morden, Surrey.

GARDENER (Head Working): 25 years' experience Inside and Out; Early and Late Forcing; could take charge of Electric Light Plant; married, one child.—SIRL, Brackenhurst, Cobham.

GARDENER (Head Working or Single-handed).—Gentleman whose garden is being cut up for building purposes wishes to recommend his Gardener, T. LITTLE; nine years present service; thoroughly practical and reliable; total abstainer; married; age 37.—T. LITTLE, 23, Wanstead Park Avenue, Manor Park, Essex.

J. F. G. BANNATYNE, Esq., Haldon House, Exeter, wishes to highly recommend H. NICHOLSON, as GARDENER (Head Working), to any Lady or Gentleman requiring a good all round gardener; life experience in under glass and outdoor work; age 30. Address, NICHOLSON, Haldon House Gardens, Exeter, Devon.

WORKING MANAGER or FOREMAN.—Advertiser seeks engagement in Market Nursery or otherwise for either of the above; Bulbs and Root Forcing, Ferns and Chrysanthemums a specialty, also Cut Flowers in quantities (both Inside and Out), and Bedding Stuff; good Wreath, Cross, etc., Hand; over 20 years' practical experience in the general routine; highest references; age 36 years. T. J. COOK, 97, Llanover Road, Wembley, N.W.

MANAGER or FOREMAN; life experience in Growing Tomatoes, Cucumbers, Mushrooms, and all kinds of Bedding Plants; age 49; single. C. A., 9, Herbert Street, Chesterton, Cambridge.

AS GARDENER (Single-handed, or with help); good experience with Grapes, Peaches, Melons, Cucumbers, Tomatoes, and Plants under Glass; also Hardy Fruit, Kitchen Garden, and Pleasure Grounds; good references; age 27; married when suited. J. CLARKE, Eastcourt House Gardens, Malmesbury, Wilts.

GARDENER (Single-handed or Kitchen Garden and Pleasure Ground Foreman); excellent references; 5½ years last place; age 32; married, two children; distance no object. GAISFORD, 5, Market Street, Bradford-on-Avon, Wilts.

GARDENER (Single-handed or with help); 12 years' experience, good references; age 29; married, two children. C. C., 80, Queen's Road, Upper Norwood.

GARDENER (Single-handed or with help) requires SITUATION; life experience; Fruit, Flowers, Vegetables. PIKE, 22, Windmill Street, Bushey Heath, Herts.

GARDENER, practical (Single-handed or with help); 20 years' experience; well up in all branches, good references; married; age 38. A. Z., 6, Church Road, Hersham, Surrey.

GARDENER (Single-handed or with help) seeks SITUATION as above, 15 years' experience in all branches, Inside and Out; good references; single. Apply H. M., Alma Cottage, Little Bookham, Surrey.

GARDENER (Single-handed or Under), disengaged; age 23; good refs.; experienced inside and out; N. and N.W. London districts preferred. H. G., 202, Roslyn Road, S. Tottenham.

GARDENER Wants Place (Single-handed, or with help); single; abstainer; good references; age 28 years; life experience; 8 years last place. P. BUTTONS, 137, Victoria Road, Barking Essex.

GENTLEMAN recommends W. PARFITT as GARDENER (Single or Head of two); life experience in all branches; Outdoor and Glass; married, no family. Apply, care of G. Atkinson, Locksheath, Southampton.

C. W. CATT, Esq., will be pleased to recommend his SECOND GARDENER to any lady or gentleman; a thoroughly trustworthy and energetic Man, as Head Working Gardener, where 3 or 4 are kept; his credentials are of the highest order. Full particulars on application. Outwoods Gardens, Duffield, Derby.

JOURNEYMAN (Inside) requires SITUATION; 8 years' good experience; good references; disengaged. A. ELLIS, Copped Hall, Totteridge, Herts.

MR. T. BENNETT (late Peckforton Castle) would be pleased to recommend P. E. KIRTON as JOURNEYMAN, fruits or plants, age [illegible] years. T. BENNETT, The Hollies, Green Lane, Wavertree, Liverpool.

MR. WATTS, Stargroves, Newbury, wishes to recommend J. CUMMINS as JOURNEYMAN (Second, Inside); strong and willing; height 6 feet; age 19.

GARDENER.—Private Working or Marke Garden Nursery; grower cucumbers, tomatoes, chrys., bedding, mushrooms ridge or flat, vegetables, hardy fruits, budder, grafter, trainer, prize raiser rose cuttings; life experience; good references. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER, where one more is kept; good all-round man; 15 years' practical experience; leaving through place being sold; age 33; single. R. WARD, 1, Albert Cottages, High Road Loughton, Essex.

GARDENER (Under or Single-handed); age 27; two years present situation; 12 years experience, excellent references. R. YOUNG, Hay Cotts., Hayes Lane, Kenley, Surrey.

UNDER GARDENER, Young Man, seeks SITUATION as above; age 19-20; good ref.; 3 years 9 months last place. C. T. COLESHILL, 37, Wolsey Road, Hampton Hill, Middlesex.

ADVERTISER seeks SITUATION.—Market Nursery, Tree Nursery, Rose Grower, or Orchard; 3 years' experience. Chrysanthemums, Tomatoes, Roses, Ornamental Trees, Shrubs; good references; age 43; single. B. S., The Laurels, Ro Terrace, Durrington, Worthing.

GENTLEMAN recommends YOUNG MAN, age 22, as Second of four or five; Inside and Out; 7 years' experience; good reference. Apply T. ROGERS, Michelmersh, Romsey, Hants.

IMPROVER (Inside or Inside and Out) Young Man seeks employment in garden; 19; 6 years good reference. L. TYLER, Great Da Melton Mowbray.

MANAGERESS; expert Wreath Mak Bouquets, Window Dresser, etc., requires engagement. Address, FLORIST, c/o 29, H Gravelly Hill, Birmingham.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE," 148 & 149, Aldersgate Street, London, E.C.

For JANUARY 28, 1911.

Please Repeat my Advertisement.

Name..

Address..

....

Date..

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

Situations Wanted—*continued.*

ORCHID GROWER requires SITUATION; experience under first-class growers; 10 years present situation; excellent references. Apply, S. BURROUGH, Royal Gardens, Sandringham.

SEED TRADE.—Young Man (20. desires SITUATION in Wholesale or Retail Trade; experienced; excellent references; abstainer; wages 15s. a week. Apply VINCHERS, 11, Southgate, Chichester.

YOUNG LADY requires SITUATION in Fruiterers' and Florists' Shop; experience; good saleswoman and reference. A., 84, Two Mile Hill, Bristol.

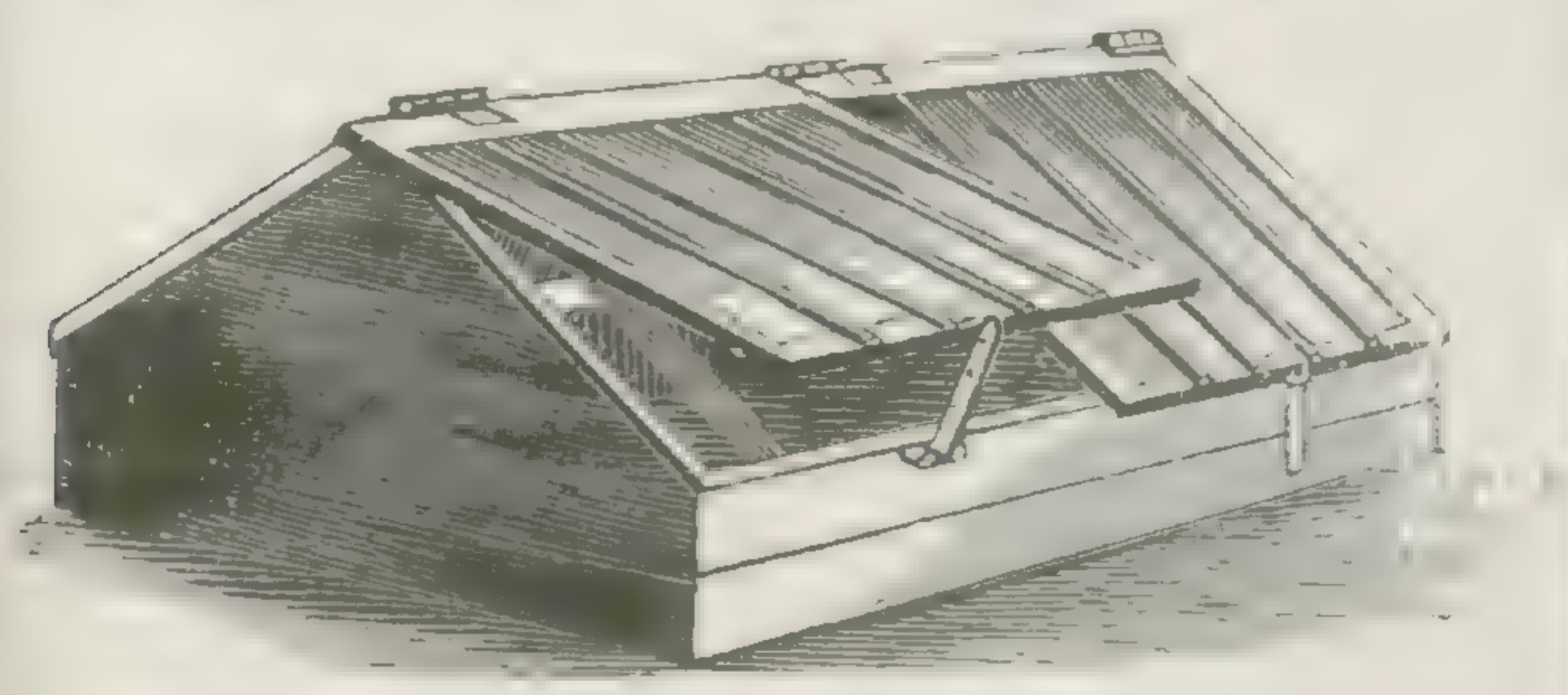
YOUNG MAN, age 22, seeks SITUATION; good experience with Vines, Chrysanthemums, Tomatoes, Cucumbers, etc.; able to take lead. Apply, B. CUTLER, Waylands Nursery, Wraysbury.

YOUNG MAN (20) seeks SITUATION as 3rd, where 4 or 5 are kept; 5 years' experience; good character; prefers Bothy, and down south. JOHN COBB, The Bothy, Norwood Park, Southwell.

YOUTH, aged 18, wants SITUATION in gentleman's garden (chiefly inside), as Improver, where several are kept; good character and reference; three years' experience (apprenticed two); Bothy preferred. PENNINGTON, 49, Victoria Grove, Stoke Newington, London.

PORTABLE PLANT FRAMES

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

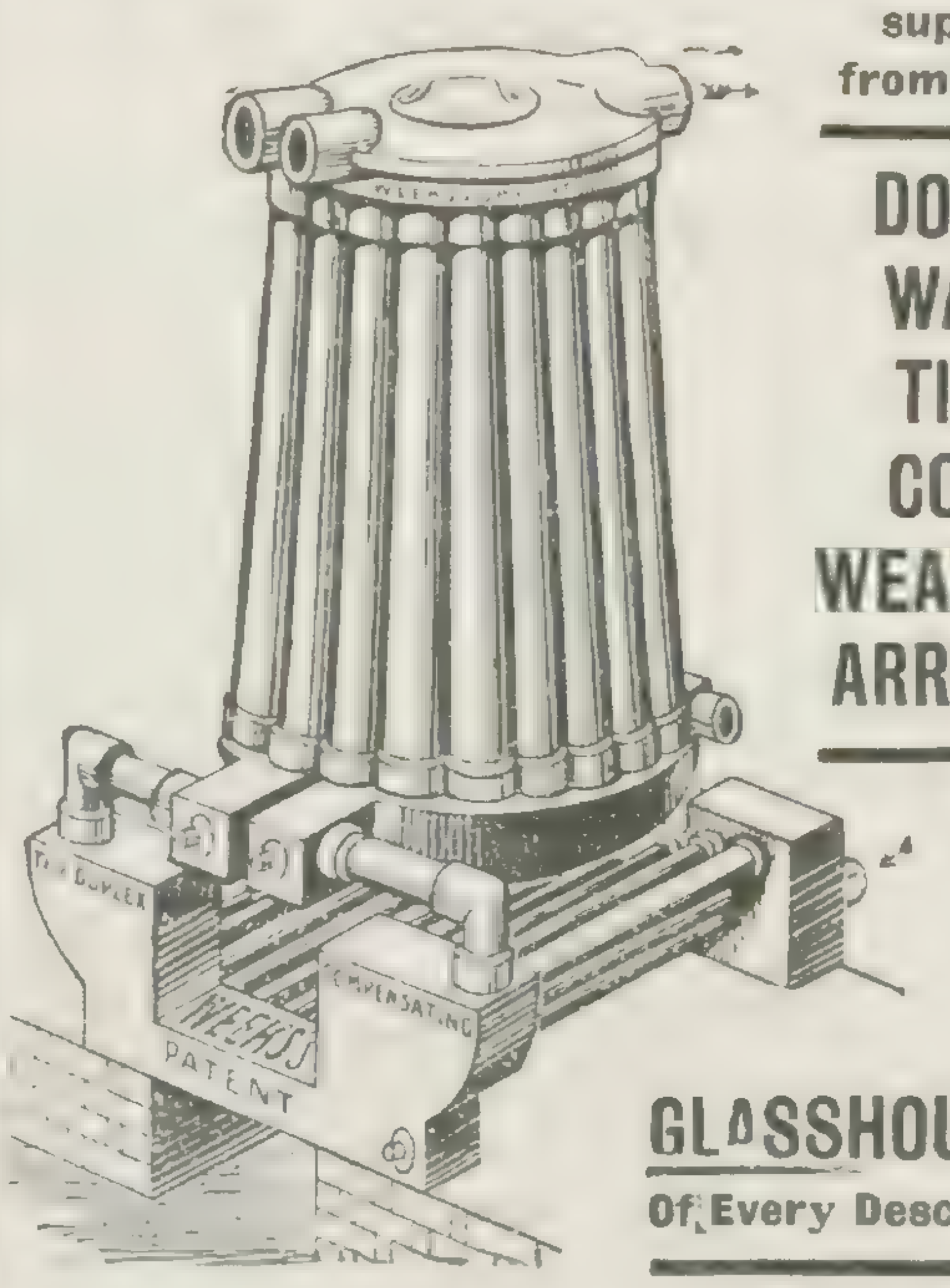
Sizes and Prices. Glazed and Painted.		£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. ,, 4ft. ,,		2	5	0
6ft. ,, 5ft. ,,		2	15	0
12ft. ,, 4ft. ,,		4	0	0
12ft. ,, 5ft. ,,		4	15	0
12ft. ,, 6ft. ,,		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
ROYAL HORTICULTURAL WORKS,
MIDDLETON, MANCHESTER.

WEEKS'S BOILERS

supplied from stock.



DON'T WAIT TILL COLD WEATHER ARRIVES.

GLASSHOUSES
Of Every Description.

J. WEEKS & CO.,
72, Victoria Street,
WESTMINSTER, S.W.

Phytobroma

Barr's New Plant Food
For Flowers Vegetables and Fruit
of highest quality & guaranteed analysis

Per cwt., **20/-**; ½ cwt, **12/6**; 28lb., **7/6**; 14lb., **4/6**; 7lb., **2/6**; Sample Tins, **1/-**.

Prepaid orders for 28lbs, and upwards, Carriage Paid. Circular, with full particulars, on application.

BARR and SONS,
11, 12, and 13, KING STREET, COVENT GARDEN, LONDON

---

800 Loads of the very finest TURF LOAM for immediate Sale at a **Bargain Price** Single truck load put on rail.

TURF LOAM

Send for Price—
HY. POTTER & SON,
Fairfield Wks., CHELMSFORD, Essex.

Dr. J. COLLIS BROWNE'S

THE ORIGINAL AND ONLY GENUINE

Chlorodyne

ADMITTED BY THE PROFESSION TO BE THE MOST VALUABLE REMEDY EVER DISCOVERED.

The Best Remedy known for

COUGHS, COLDS,

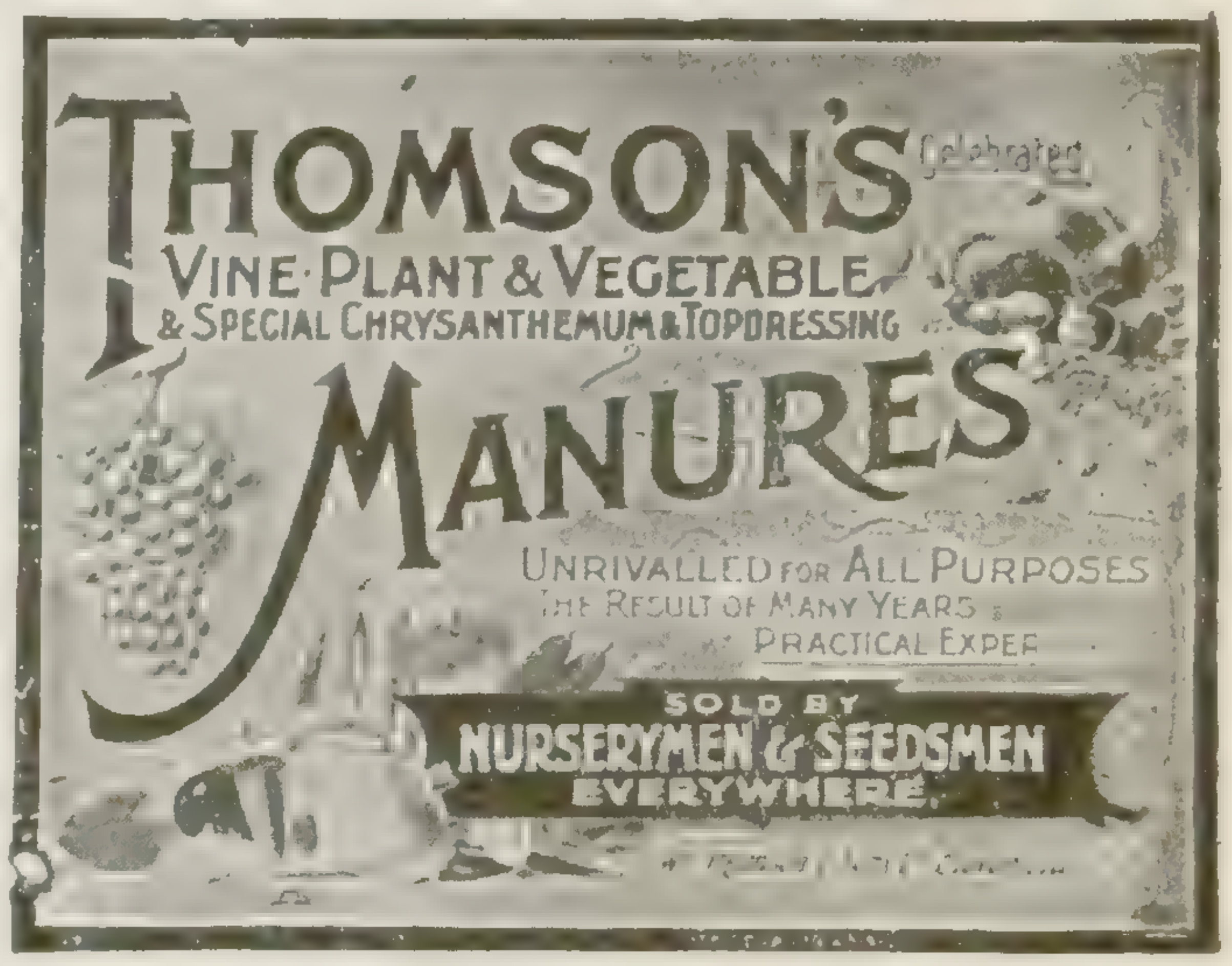
ASTHMA, BRONCHITIS.

Cuts short all attacks of SPASMS, HYSTERIA, and PALPITATION.

The only Palliative in NEURALGIA, TOOTHACHE, GOUT, RHEUMATISM.

Acts like a Charm in DIARRHŒA and DYSENTERY.

Refuse imitations and insist on having
Dr J. COLLIS BROWNE'S Chlorodyne.
Convincing Medical Testimony with each bottle.
Of all Chemists, **1/1½, 2/9, 4/6.**



EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

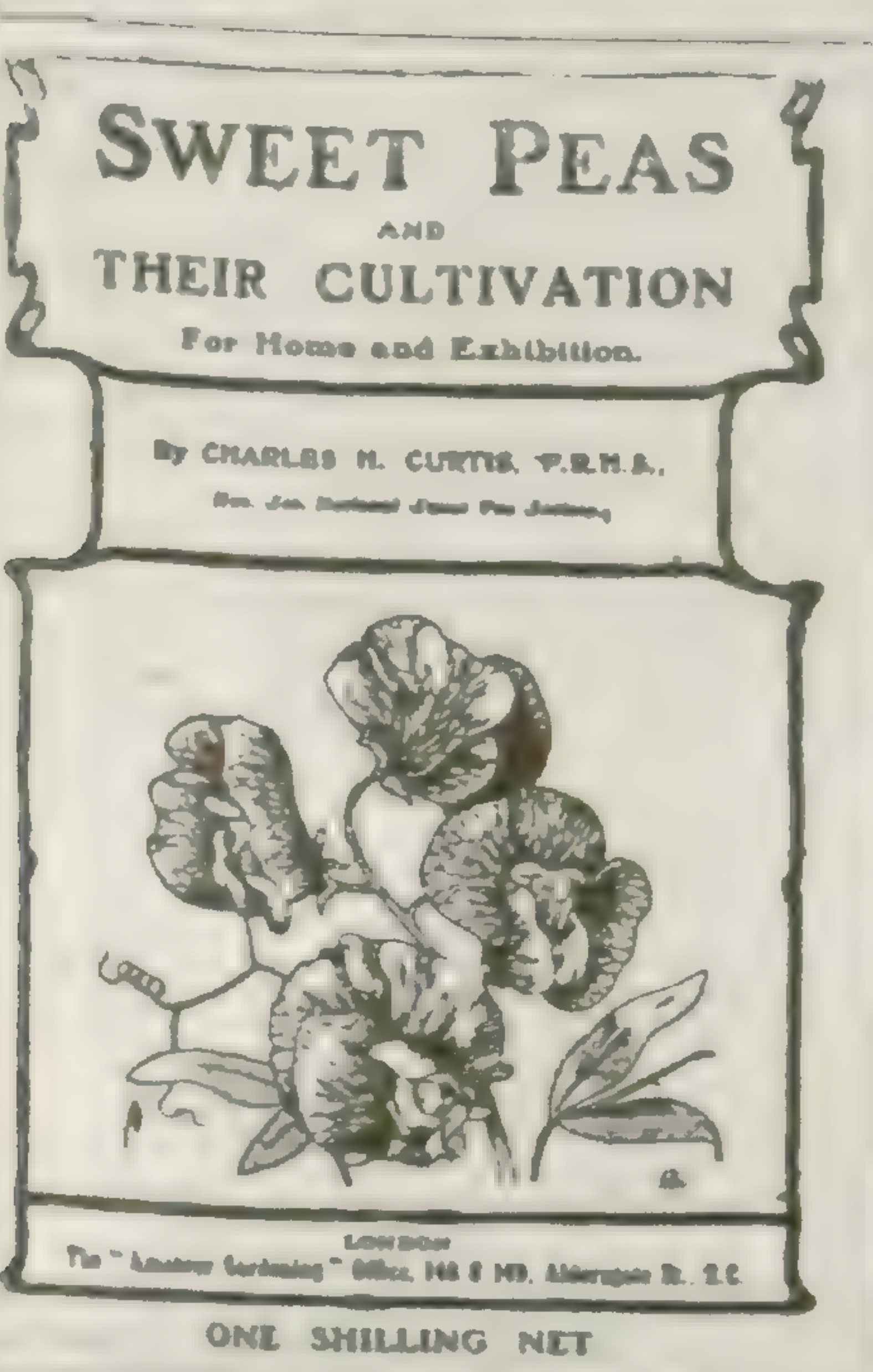
Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to
EPPS & CO., Ringwood, HANTS.

THE BEST BOOK ON THE SUBJECT.

One Shilling: free by post, 1/2. Bound in cloth, 1/6; by post, 1/8.

SWEET PEAS AND THEIR . . CULTIVATION.



SWEET PEAS
AND
THEIR CULTIVATION
For Home and Exhibition.

By CHARLES H. CURTIS, F.R.H.S.,

ONE SHILLING NET

FOR HOME AND EXHIBITION.

By CHARLES H. CURTIS, F.R.H.S.,
Hon. Secretary National Sweet Pea Society.

- PREPARATION OF SOIL.
- SEEDS AND SEED SOWING.
- WATERING AND MANURING.
- GENERAL MANAGEMENT.
- HOW GROWN IN TUBS AND POTS.
- WINTER-FLOWERING SWEET PEAS.
- STAKING AND TYING.
- SWEET PEAS FOR SCREENS AND WINDOWS.
- THE BEST SWEET PEAS.
- RAISING NEW VARIETIES.
- CULTURE IN CONSERVATORY.
- CUPID AND BUSH SWEET PEAS.
- VASES AND STANDS.
- POINTS FOR EXHIBITORS.
- DEVELOPMENT OF SWEET PEAS.
- DISEASES AND PESTS.
- ETC., ETC.

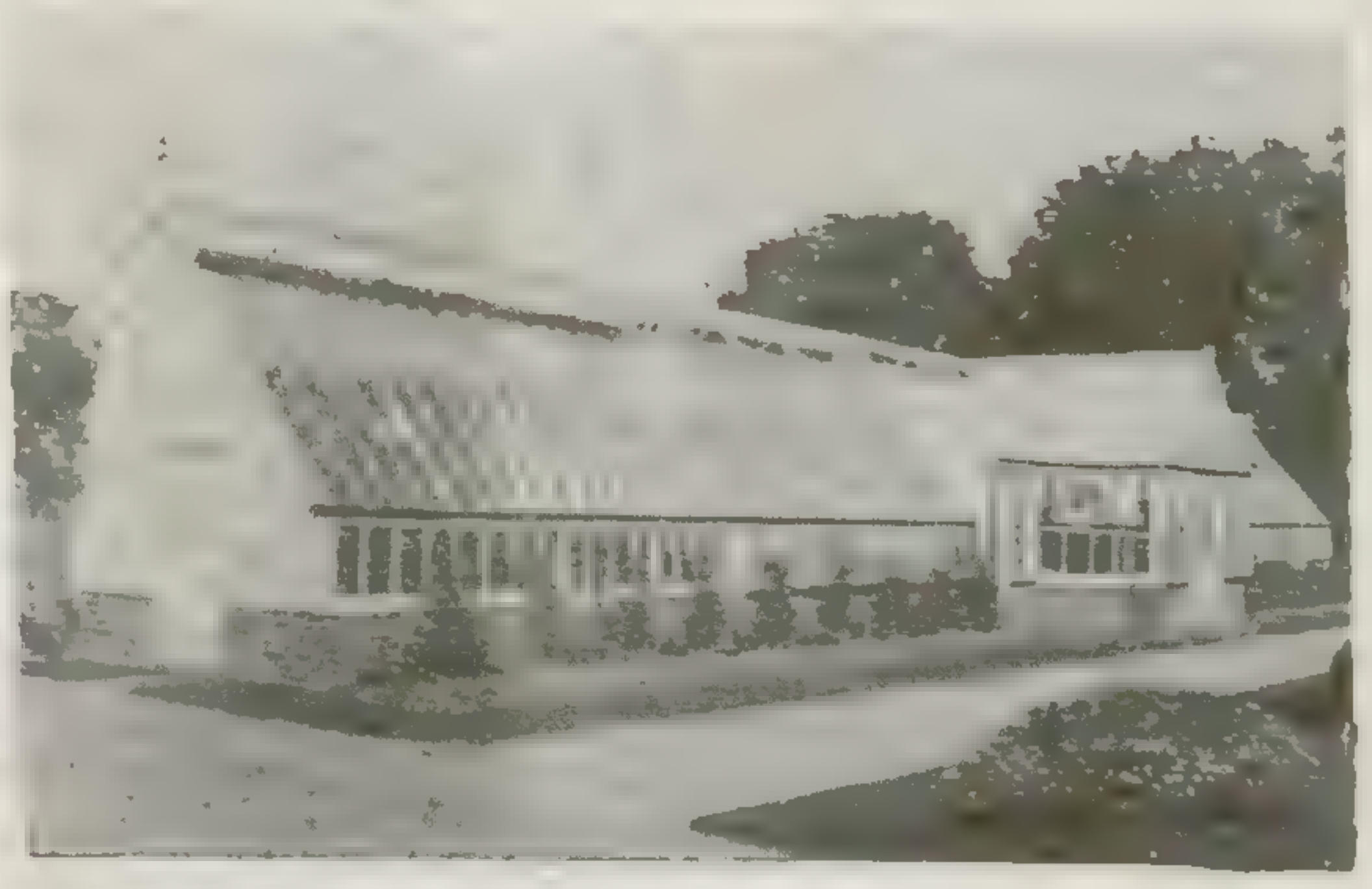
ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE,"
148 and 149, Aldersgate Street, E.C.

Please send me **"SWEET PEAS AND THEIR CULTIVATION"** *by Post, for which I enclose remittance of* **1s. 2d.** *(if bound in cloth,* **1s. 8d.**).

Name ....

Address ....



Catalogues and Estimates Free.

MESSENGER & Co. Ltd
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office 122 VICTORIA St. S.W.

Modern Glasshouses
. . AND . .
Heating Installations

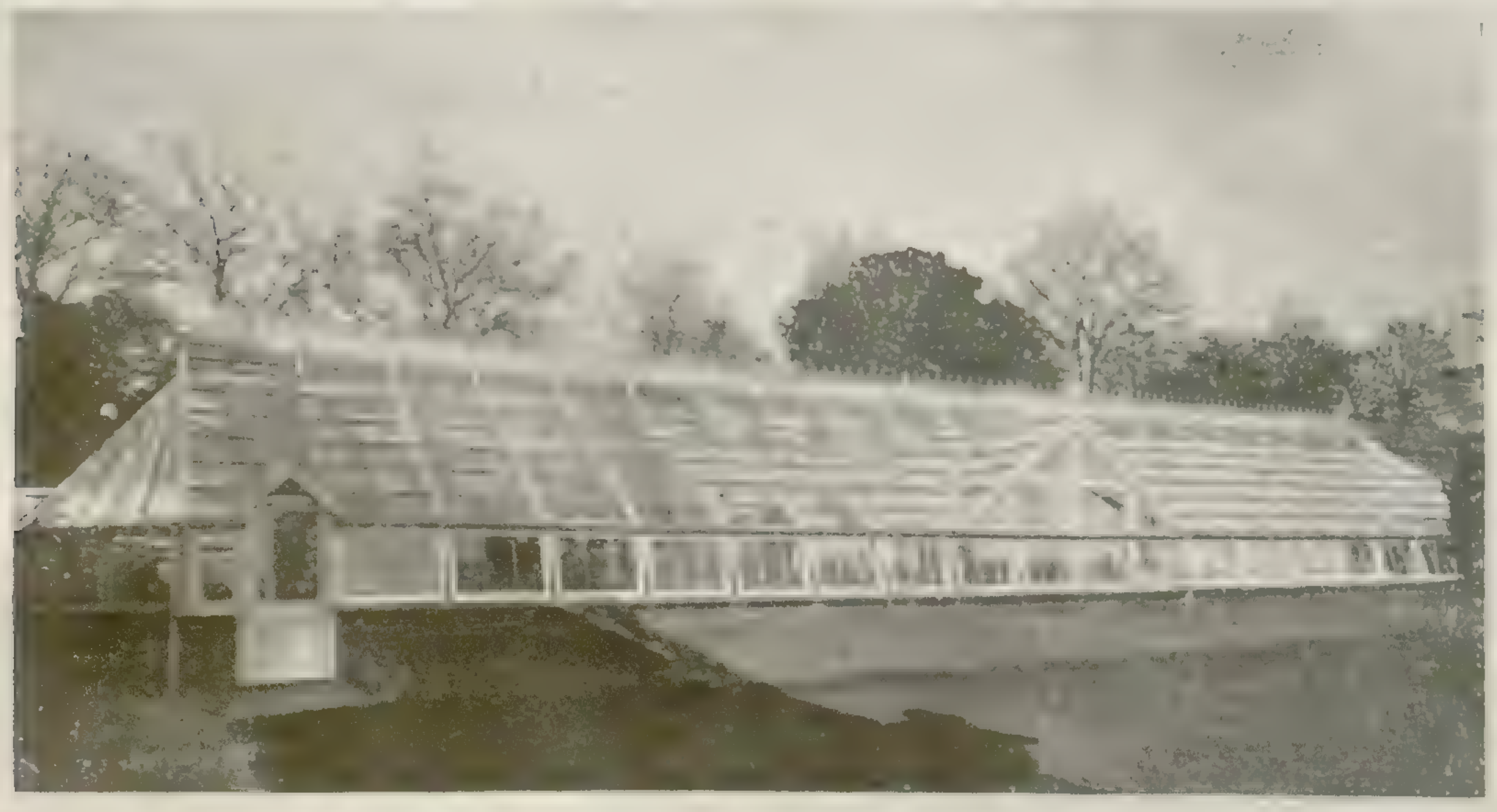
Recent Contracts include the following :—

His Grace the Duke of BEDFORD, Woburn Abbey.
His Grace the Duke of DEVONSHIRE, Beamsley Hall, Bolton Abbey.
His Grace the Duke of PORTLAND, Welbeck Abbey, Worksop.
The Rt. Honble. the Earl of ELLESMERE, Croft Lodge, Brackley.
The Rt. Honble. Earl TEMPLE, Wotton House, Aylesbury.
The Rt. Honble. Lord DIGBY, Minterne, Cerne Abbas.
The Rt. Honble. Lord BELPER, Kingston Hall, Notts.
The Rt. Honble. Lord WINDSOR, Hewell Grange, Redditch.
The Rt. Honble. Lord BOLTON, Bolton Hall, Wensleydale.
The Rt. Honble. Viscount GALWAY, Serlby Hall, Bawtry.
Lady HULSE, Breamore, Salisbury.
Lady MAUD HASTINGS, The Manor, Ashby-de-la-Zouch.
The Rt. Honble. Lord HILLINGDON, Hillingdon Court, Uxbridge.
The Honble. H. CUBITT, Denbies, Dorking.
Lieut.-General Sir ARTHUR PAGET, Coombe Warren, Kingston-on-Thames.
Sir C. SWINFEN EADY, Oatlands Lodge, Weybridge.
Sir E. BLOUNT, Mawley Hall, Cleobury Mortimer.
Sir FRANCIS BURDETT, Ingleby, Derby.
General CLIVE, Perrystone Court, near Ross.
Col. G. N. STARKIE, Huntroyde Park, Padiham.
Col. R. T. GASCOIGNE, Lotherton Park, Aberford, Leeds.
Major MULLINS, Westfield Place, Battle.
Major W. D. WINTERBOTTOM, Aston Hall, Derby.
Rev. EDWARD WARRE, D.D., Eton College, Windsor.
Rev. Dr. BURGE, The College, Winchester.
E. G. PRETYMAN, Esq., M.P., Orwell Park, Ipswich.
CORPORATION OF HANDSWORTH.
CORPORATION OF LINCOLN.
LEICESTERSHIRE and RUTLAND ASYLUM.
ROYAL MASONIC BENEVOLENT INSTITUTION, Croydon.
NEW ZEALAND DEPARTMENT OF AGRICULTURE.
A. R. PILKINGTON, Esq., Rainford, St. Helens.
H. S. LEON, Esq., Bletchley Park, Bletchley.
F. ECKSTEIN, Esq., Ottershaw Park, near Chertsey.
LIBERT OURY, Esq., Holwood House, Walton-on-Thames.
F. M. GRATTON, Esq., F.R.I.B.A., Aspenden House, near Buntingford.
C. DUNCOMBE SHAFTO, Esq., 9, South Bailey, Durham.
S. CHIVERS, Esq., Homefield, Histon, Cambs.
ERNEST DRESDEN, Esq., Hamilton House, Newmarket.
W. G. A. EDWARDS, Esq., The Orchard, Wellgreen, near Leeds.
P. B. COWARD, Esq., Brentwood, Rotherham.
E. G. WRAGG, Esq., Ranmoor Cliff, Sheffield.

Glaze your Greenhouses and Vineries with

ZINC BAR DRY-GLAZING.

No paint or putty ever required. No leaks. No breakages from expansion or contraction. No drip from condensation. Breakages by accident easily repaired. All woodwork covered. Cheap, Durable, and Efficient.



Range of Plant and Peach Houses erected for J. T. Bond, Esq., Mannamead, Plymouth.

Write for Testimonials and Price List,

SAUNDERS (F.R.H.S.) & BISS,

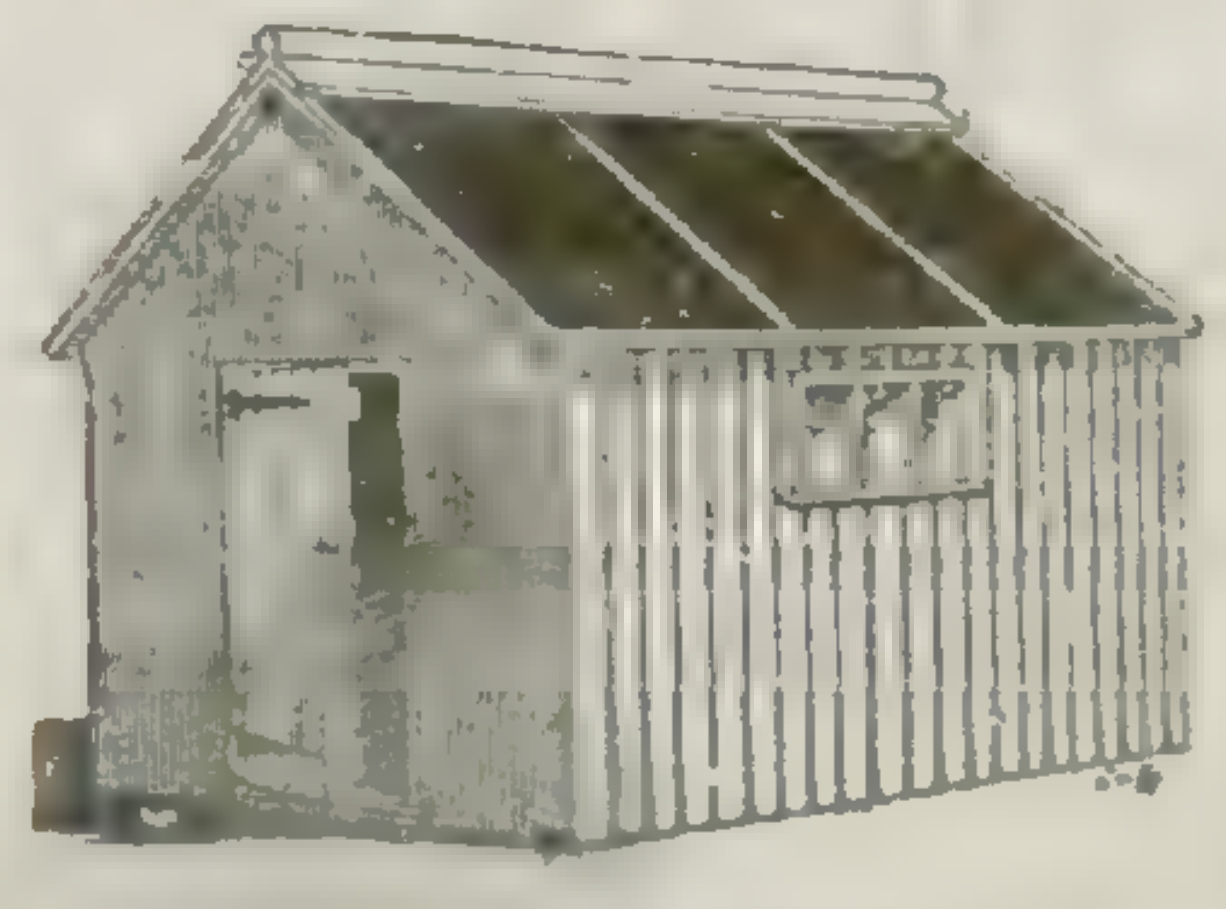
Horticultural Builders and Heating Engineers . . . EXETER.

WHEELBARROWS.—Navvy, for building, 11s 9d each; general purpose, for farm use, 14s. 9d. each. 6 sent together, carriage paid, some stations. Also timber woodwork, all description. C. JENNINGS and CO., Timber Merchants, General Wood-workers, 9/6, Pennywell Road, Bristol.

PLEASE MENTION
THE GARDENERS' MAGAZINE
when writing to Advertisers.

The CHEAPEST in ENGLAND

THE "POPULAR."



Copyright Registered.

Made in complete sections, sides and end from ⅝-inch **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

Cash with Order Prices.

SIZES.		FLOOR MADE FROM ⅝-INCH TONGUED BOARDS.
6 ft. x 4 ft. x 6 ft.	£1 10 0	[illegible]
6 ft. x 5 ft. x 6½ ft.	£1 16 0	5 9
7½ ft. x 6 ft. x 6½ ft.	£1 17 6	7 9
8 ft. x 6 ft. x 7 ft.	£2 4 0	9 9
9 ft. x 6 ft. x 7 ft.	£2 9 0	11 0
10 ft. x 6 ft. x 7 ft.	£2 14 0	[illegible]
10 ft. x 8 ft. x 8 ft.	£3 10 0	16 6
12 ft. x 8 ft. x 8 ft.	£4 0 0	19 6

Carriage Paid to any Station in England and Wales.
Catalogue, with Testimonials, Post Free

J. T. HOBSON & CO.,
Largest Makers of Portable Buildings.
Established 70 years. **BEDFORD.**
Works 6 acres. Stock of Wood in Sheds 10,000 tons.

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

Extracts from 35th annual collection of reports:—
NATIVE GUANO for POTATOES, VEGETABLES, etc.
A. J. BEARD, Erdington: "Potatoes, splendid, free from disease. Best I ever had."—H. CHESTER, [illegible]: "Best onion manure I ever used. Good for onion fly."

NATIVE GUANO for FRUIT, ROSES, TOMATOES, &c.
J. CANT, Ipswich: "Tomatoes excellent [illegible] grand. Cheapest manure in market."—W. [illegible], Lichfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED**, [illegible] New Bridge Street, London, E.C., where [illegible] testimonials, etc., may be obtained. Agents [illegible]

Printed and Published by W. H. & L. COLLINGRIDGE, City Press, 148 & 149 Aldersgate St. London, E.C. and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 2,987. Vol. LIV.
Reg. at the G.P.O. as a Newspaper.

SATURDAY, JANUARY 28, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) Twopence

BARR'S SEED GUIDE, now ready, contains a select list of the best Vegetables, and the most beautiful Flowers for Garden and Greenhouse, including many novelties of sterling merit. Free on application. BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use, it's soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, is this winter keeping a large staff of hot-water men in the shops, in order that they may attend immediately to any breakdown of Boilers or Hot Water Piping in any part of the country. In case of emergencies please telephone 201 Western, or wire "Gray, Chelsea, London."

KING'S ACRE FRUIT TREES, ROSES,
AND ORCHARD-HOUSE TREES.

AWARDED 24 GOLD MEDALS SEASONS 1909-10.

160 acres to select from of the finest Trees that natural conditions and the skill of man can produce.

ILLUSTRATED CATALOGUES FREE ON APPLICATION.

KING'S ACRE NURSERIES, LTD.,
HEREFORD.

1,000,000 BORDER AND ROCK Plants. Unique collection.
50,000 HARDY FERNS, over 400 varieties. See Catalogue.
10,000 FLOWERING SHRUBS must be cleared.
30,000 LILIES NOW IN STOCK, Other consignments arriving.
DELPHINIUMS, 9 GOLD MEDALS IN 2 YEARS.
A record. Unique collection. Seed, 3d., 6d., and 1s. pkt.
PERENNIAL SEEDS, UNIQUE COLLECTION.
All Catalogues Free.
PERRY'S HARDY PLANT FARM, Enfield, Middx.

WELLS' CHRYSANTHEMUMS.—List of Novelties now ready; also descriptive general list Wells' Phlox and Michaelmas Daisies, Hardy Herbaceous Plants and Perpetual Flowering Carnation Catalogues post free. Wells' book, "The Culture of the Chrysanthemum," post free, 1s. 6d. W. WELLS, Merstham, Surrey.

ROYAL GARDENERS' ORPHAN FUND.
THE ANNUAL GENERAL MEETING of the Subscribers to this Fund will be held at "Simpson's," [illegible] Strand, London, W.C., on Friday, February 10th, 1911, for the purpose of receiving the Report of the Committee and Statement of Accounts for the past year; to elect officers for the ensuing year; to elect [illegible] children to the benefits of the Fund; and to transact such other business as may arise. The chair will be taken at Three p.m. The Poll will close at 4.30 p.m., after which time no Votes can be received. By Order, BRIAN WYNNE, Secretary, 35, Surrey Street, London, W.C. Subscriptions are earnestly solicited.

IRON and WIRE FENCING for GARDENS, Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free. BOULTON and PAUL, Ltd., Manufacturers, Norwich.

CLAY'S MANURES, CRUSHED BONES
(See page 76.)
CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint, 8s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

SOW NOW UNDER GLASS.
WEBBS' RE-SELECTED PILOT PEA,
3s. per quart, post free.
Mr. E. Henderson, Head Gardener to the Earl of Northbrook, writes: "Your Re-selected Pilot Pea was 9 days earlier than three other varieties recognised as best first earlies. It is a splendid cropper, of fine flavour, and is an ideal pea for early sowing."

WEBBS' PEERLESS MELON (Green Flesh), 1s. 6d. and 2s. 6d. per packet, post free.
Mr. J. Kemp, Gardener to Gilbert Robinson, Esq., writes:—"Ten plants of your New Peerless Melon bore 50 fruits weighing 180lbs. The flavour is excellent."

WEBB AND SONS, The Royal Seedsmen,
WORDSLEY, STOURBRIDGE.

BUNYARD'S NEW CATALOGUES.
The following have been recently published, and contain all worthy new varieties. Post free on application.

BUNYARD'S
CLIMBING PLANTS, Illustrated.

BUNYARD'S
HERBACEOUS PLANTS, Illustrated.

BUNYARD'S
HARDY TREES AND SHRUBS, Illustrated.

BUNYARD'S SEEDS, VEGETABLE AND
FLOWER, with coloured plates.

GEO. BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.

"FOUR OAKS" GOLD MEDAL SYRINGES.
The only syringes ever awarded a Gold Medal.
Unequalled for Spraying. In numerous sizes, from 8s 6d. Bends, 1s. 6d. Used and recommended by all leading authorities. Insist upon having "Four Oaks." Supplied by all Seedsmen, Ironmongers, etc. Full particulars from Sole Makers—
THE FOUR OAKS UNDENTABLE SYRINGE and SPRAYING MACHINE CO., SUTTON COLDFIELD.

BEGONIAS, awarded 24 Gold Medals.—Double Seed, 2s. 6d. and 5s. per pkt.; Frilled, Crested, or plain Single, 1s., 2s. 6d., and 5s. per pkt. For price of Begonia tubers, Carnations (Border and Perpetual flowering), Cannas, Cyclamen, Blue Primroses, Delphiniums, Pansies, Polyanthus, Lily of the Valley, Violets, etc., please send postcard for copy of our Illustrated Catalogue, free on application.
BLACKMORE AND LANGDON,
Twerton Hill Nursery, Bath.

LAXTON'S NEW SEED CATALOGUE for 1911. Descriptive and fully illustrated, including grand new "Laxtonian Pea" and many other novelties, gratis on application.—LAXTON BROS., Seed Merchant, Bedford.

BRUSSELS SPROUT SOLIDITY.
The finest and hardiest Sprout in Britain. Only true in our own sealed packets at 1s. Send for a copy of our beautifully illustrated Catalogue, 140 pages, full of novelties and useful information. ALEXANDER and BROWN, Seed Merchants, Perth, N.B.

FRENCH GARDENING REQUISITES.—Send for our new List, giving full particulars of the Double Glazed System, and numbers of new Labour-saving Appliances, Frames, Cloches, Reed Mats, and every requisite supplied. BOULTON and PAUL, Lim., Norwich.

"**WEEKS'S GLASSHOUSES and HEATING APPARATUS,** for full advertisement see back page."

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

SOW NOW UNDER GLASS.
SUTTON'S EMERALD GEM MELON.
Mr. A. H. Bellamy, Gardener to the Rev. A. Armitage, writes: "Your Emerald Gem is without doubt one of the best Melons in cultivation, very finely netted, and of delicious flavour. All lovers of Melons should grow it."
Per packet 2s. 6d., post free.

SUTTON AND SONS, THE ROYAL SEED ESTABLISHMENT, READING.

"Colour is meant for the perpetual comfort and delight of the human heart."—RUSKIN.

KELWAY'S "COLOUR BORDERS"
(Regd.)
Artistic and permanent—arranged for continuous bloom and colour effect.
These Borders can be purchased BY THE SQUARE YARD for any position all ready arranged for planting.
"I am thinking of planting a few borders with perennials. I am tired of continually planting bedding plants. Mrs. ——."
Write now stating your area, position, soil, etc., for planting in the Autumn, to
KELWAY AND SON, The Royal Horticulturists, LANGPORT.

NOW IS THE TIME TO PLANT Kelway's Lovely New Pæonies, for a fine show in the spring and summer. Kelway's Pæonies are more beautiful than ever. Choice named varieties from strong country-grown stocks: 15s. and 21s., 27s., 36s., 54s., and 70s. a dozen. Single plants, 1s. 6d. to 10s. 6d.
"The excellent condition in which the goods arrived, shows that your firm are pastmasters in the fine art of skilful packing. ——, Esq., Shepherd's Bush."
IT IS NECESSARY TO OBTAIN KELWAY'S.
KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

FIDLER'S NEW ILLUSTRATED CATALOGUE OF CHOICE GARDEN SEEDS will be sent, post free, to any address on receipt of postcard. Write at once for a copy. It may help you to save 50% on your seed bill this season. FIDLER and SONS, Royal Berks Seed Stores, Reading.

CHRYSANTHEMUMS.—Decorative Varieties: Strong, Healthy, Cool Grown; Good Succession, Sept.-Christmas. Cuttings, 1s. 6d. per doz.; Plants, 3s. 6d. per doz. List on application. PERPETUAL FLOWERING CARNATIONS: Enchantress, White Enchantress, Mrs. Burnett, Victory, Harlowarden, 9d. each. Rose Dorée, Black Chief, 1s. 6d. each. Plants in Spring. Cash with order; carriage paid. MISSES PRICE and FYFE, Grove Park Nursery, Lee, S.E. (Please mention this Magazine when writing).

THOMSON'S CELEBRATED MANURES.
For full advertisement see page ix.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

FERNS.—Beautiful Greenhouse varieties, 12 for 1s. 3d.; Maidenhair Ferns, 2s. doz.; New Nephrolepis Todeoides, 9d. each; Palms, 9d. each. HEAD GARDENER, 22, Charlton Road, Blackheath.

XL ALL FOR WINTER AND SPRING CLEANSING.
Before growth commences stronger solutions may be used.
XL ALL NICOTINE INSECTICIDE WASH (poisonous) for syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B. (sine Nicotine), best non-poisonous Wash on the Market. Agents, write for particulars.
XL ALL CAUSTIC WINTER WASH (non-poisonous) for dormant Fruit Trees, stamps out American Blight, and all other pests.
Other XL ALL Preparations of great renown are XL ALL NICOTINE VAPORISING COMPOUND, XL ALL FERTILISER, XL ALL LAWN SAND, etc.
Ask your Nurseryman, Seedsman, or Florist for my small Pink List.
G. H. RICHARDS, Manufacturer, 234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

SEEDS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Select Seeds.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS.
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

RHODODENDRONS.

DICKSONS & CO.,
1, Waterloo Place, Edinburgh.
Pink Pearls, Ponticums, choice Hybrids. Write.

ROSES.

R. H. BATH, Ltd.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers

ALEX. DICKSON & SONS, Ltd.
Hawlmark, Newtownards, Ireland.
The World-famed Champion Rose Growers and Raisers of Irish Pedigree Seedling Roses. Lists Free.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 1st Prizes, 3 2nds. at N.R.S. Shows, 1910. Ctlg. Free.

SAMUEL M'CREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
Illustrated Catalogue free.

TURF LOAM.

A. S. JOHNSTON, New Park, Cranleigh, Surrey.
Very Fibrous Loam, for Carnations, Roses, Vine Borders, Melons, Fruits under Glass, &c., &c.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

BENTLEY'S
Concentrated Alkali.
THE IDEAL WINTER SPRAY.
For Fruit Trees and Forest Trees of every kind.

Destroys **INSECTS** (whether in the active or dormant state), **spores of fungi, lichens, mosses.** Cleanses the bark from **vegetable growths.** Detaches loose and decayed bark, thereby exposing the harbouring places of the insects, and having on these a most deadly effect without injuring the trees.

For Apple, Pear, and Plum Trees, Bush Fruits, and Forest Trees, 1 tin dissolved in 11 gallons of water.

For Apricot, Peach, Nectarine, and Cherry Trees, 1 tin dissolved in 16 gallons of water.

PRICES:—
1 to 8 tins, **1/3** each; 8 tins, **1/2** each; 12 tins, **1/1** each; 20 tins, **11d.** each; 40 tins, **10d.** each.

BENTLEY'S
INSECTICIDE.

This valuable **NON-POISONOUS Plant Wash** has for the last thirty years held the highest position in the Horticultural World as a most effectual **Destroyer of all Forms of Filth,** including
MEALY BUG, SCALE, AND THRIP,
without risk to the foliage. It also possesses cleansing properties, and leaves the foliage clean and bright.

PRICES:—
6 galls., **7/6** per gall.; 3 gall., **8/-** per gall.; 1 gall., **9/-**; ½ gall., **5/-**; 1 quart, **3/6**; 1 pint, **2/-**. **Carriage paid on 7/6 orders and upwards to any railway station.**

Wholesale Manufacturers
JOSEPH BENTLEY, LIMITED,
Chemical Works, Barrow-on-Humber, HULL.

TOMATO PLANTS (6 to 8 ins high). Ready for Fruiting Quarters. **Grown in Steam sterilised soil** Very carefully packed and protected.
Price £3 per 1 000, Cash with order, carriage paid.
Per 100, 7/-; 65 plants, 5/-; 50 plants, 4/-; 25 plants, 3/-; 12 plants, 2/-
Carter's Sunrise, Winter Beauty, Beauty of Wales, etc.
W. & F. POAT, TOMATO GROWERS, **ST SAMPSON'S GUERNSEY, C.I.**
Cheques, Postal Orders, etc., should be crossed "Guernsey Banking Co., Ltd."
Booklet and Testimonials free on application.

CHARLES TURNER'S
CATALOGUE OF GARDEN SEEDS
for 1911 is **Now Ready,** and can be had on application to
The Royal Nurseries, Slough.

SEED POTATOES
& GARDEN SEEDS
Customers wishing to save
50 PER CENT.
When Purchasing
BULBS, GARDEN SEEDS, AND POTATOES,
Should send AT ONCE for Lists to
J. W. CROSS,
OLD GRAMMAR SCHOOL, **WISBECH**

"GOOD is not good enough, the BEST is not too good."
SWEET PEA SEED.
My **CATALOGUE** is **NOW READY,** and will be sent on application.
Awarded Silver Medal by the Royal Horticultural Society.
W. R. HAMMOND,
Grovelands, BURGESS HILL, SUSSEX.

AMERICAN TREE CARNATIONS
AND MALMAISONS.
My Season's Catalogues of the Choicest Collection of these flowers are NOW READY, and will be sent gratis and post free to all applicants.
E. J. WOOTTEN,
Fairoak, EASTLEIGH.

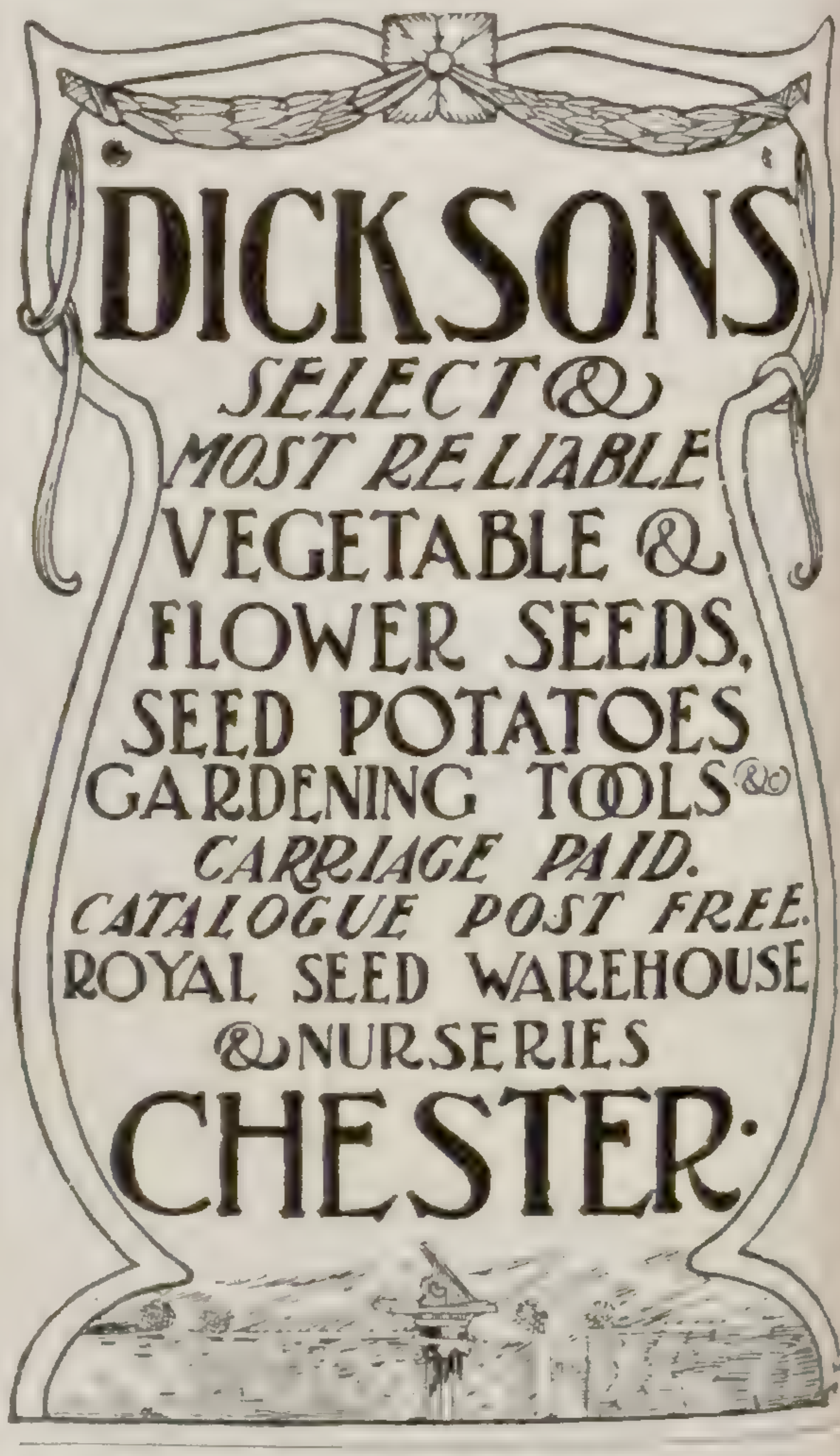
CURRANTS.—Fay's Prolific Red, Long-bunched Red (Wilmot's), Black Champion, clean, healthy, fruiting trees, 18s. 100, 3s. dozen. WILL TAYLER, Hampton, Middlesex.

SEAKALE, ASPARAGUS, RHUBARB, Tarragon, and Mint for forcing; well ripened on warm soil. WILL TAYLER Hampton, Middlesex

FIGS.—This delicious fruit crops freely in pots. Bearing Trees, 2s. 6d., 3s. 6d., 5s., and 7s 6d. each. Grape Vines for fruiting or planting. Catalogues free. WILL TAYLER, Hampton, Middlesex.

TRAINED PLUMS. — Large, well-transplanted fruiting trees. Measurements supplied; but an inspection at Nursery is preferable. WILL TAYLER, Hampton, Middlesex.

R. D. BLACKMORE'S PEACH, "LIBRA."—Award of Merit R.H.S. Midseason, very large and heavy, of high quality and goodly appearance; large trained trees and pyramids with well-ripened fruiting wood, 10s. 6d., 15s., and 21s. each. WILL TAYLER, Hampton, Middlesex



DICKSONS
SELECT & MOST RELIABLE
VEGETABLE & FLOWER SEEDS,
SEED POTATOES
GARDENING TOOLS &c
CARRIAGE PAID.
CATALOGUE POST FREE.
ROYAL SEED WAREHOUSE & NURSERIES
CHESTER.

CHARLESWORTH & CO.,
Hayward's Heath, Sussex,
ORCHID SPECIALISTS,
IMPORTERS, EXPORTERS, RAISERS & GROWERS.
PRICED ILLUSTRATED CATALOGUE FREE.

STALKER'S Forest Trees, Fruit Trees, Roses, Bulbs, and Seeds
Are known all over the world, and cannot be surpassed for hardiness and quality.
Famous for Quality and Cleanliness.
D. STALKER & SON,
Government Contractors,
Catalogues Free. **NAIRN, N.B.**

Sales by Auction.

ROSE TREES.

SHRUBS. BULBS.

SALES BY AUCTION
are held every
MONDAY and WEDNESDAY,
at 12.30.

STEVENS' AUCTION ROOMS,

Established 150 Years,
38, King St., Covent Garden, London, W.C.
Catalogues on Application.

SALES NEXT WEEK.

MONDAY and FRIDAY NEXT, January 30 and February 3, at 12 o'clock, Herbaceous and Border Plants, Liliums, and other Hardy Bulbs and Roots for spring planting.

At 1.30 o'clock, 1,000 Roses in variety, Fruit Trees, Azaleas, Rhododendrons, etc.

WEDNESDAY NEXT, February 1, Japanese Liliums and other Hardy Bulbs for spring planting; Perennials, Herbaceous Plants, Carnations, Pinks, etc.

At 1.30 o'clock, Roses, 6,000 Standard, Dwarf, Climbing, T., H.T., and H.P., in large variety.

At 2.30 o'clock, 950 c/s Japanese Liliums, sold as received; preceded at 12 o'clock by thousands of Miscellaneous Bulbs, Roots, etc.

FRIDAY NEXT, February 3, at 12.45 o'clock, Imported and Established Orchids in large variety. Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above by AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view morning of sale, and catalogues had.

ST. JOHN'S NURSERIES, WORCESTER.

Great Clearance Sale of the eleventh portion of the Nursery Stock, by order of the Receiver for the Debenture Holders, re R. Smith and Co., Ltd., comprising

30,000 FRUIT TREES,

Apples, Pears, Plums, etc., one, two, and three years old, leading varieties, Standard, Bush, and Pyramid.

300 lots of specimen Golden, Silver, and Green Hollies, Yews, and Conifers in variety, being the remaining portion of the well-known specimen border.

400 lots of Herbaceous and Alpine Plants, large clumps in great variety. Bamboos, Vines in pots.

10,000 Clematis, fine plants and varieties.

Tea and Climbing Roses in pots and from open ground. Ampelopsis, Ivies, etc.

10,000 Oval-leaved and Common Privet and other stock. Rhododendrons, best hybrid varieties.

20,000 Planes, Poplars, Elms, Limes, Chestnuts, and other Standard, Ornamental Trees.

MESSRS. PROTHEROE and MORRIS will SELL this stock by AUCTION, at the above Nurseries, on TUESDAY, February 7, and three following days, at 11.30 o'clock each day. In all 2,000 lots. May be viewed. Catalogues had on premises; of Messrs. Pinsent and Co., Solicitors, 6, Bennett's Hill, Birmingham; and of the Auctioneers, 67 and 68, Cheapside, London.

SALES BY AUCTION DAILY at 12.30.

Hyacinths, Tulips, Daffodils, Narcissi, Crocus, Snowdrops, Lilies, &c., &c.

JOHNSON, DYMOND & SON

Palms, Azaleas, Rose Trees

Catalogues of Auctioneers.

City Auction Rooms (Est. 1793).
38 & 39, Gracechurch St., London, E.C.

SEED CATG. NOW READY.—56-page Catg. of Seeds, Bulbs, Choice Liliums, Tree Carnations, Ferns, etc. ELLISON, 57, West Bromwich.

AMARYLLIS (HIPPEASTRUMS).—Flowering-size bulbs, 10s.; extra selected, 15s.; mammoth, 20s. doz. ELLISON, 57, West Bromwich.

CANNAS, 10 different, 4s.; Gloxinias, 6 different, 2s.; Begonias, Tuberoses, Montbretias, Arums, etc. ELLISON, 57, West Bromwich.

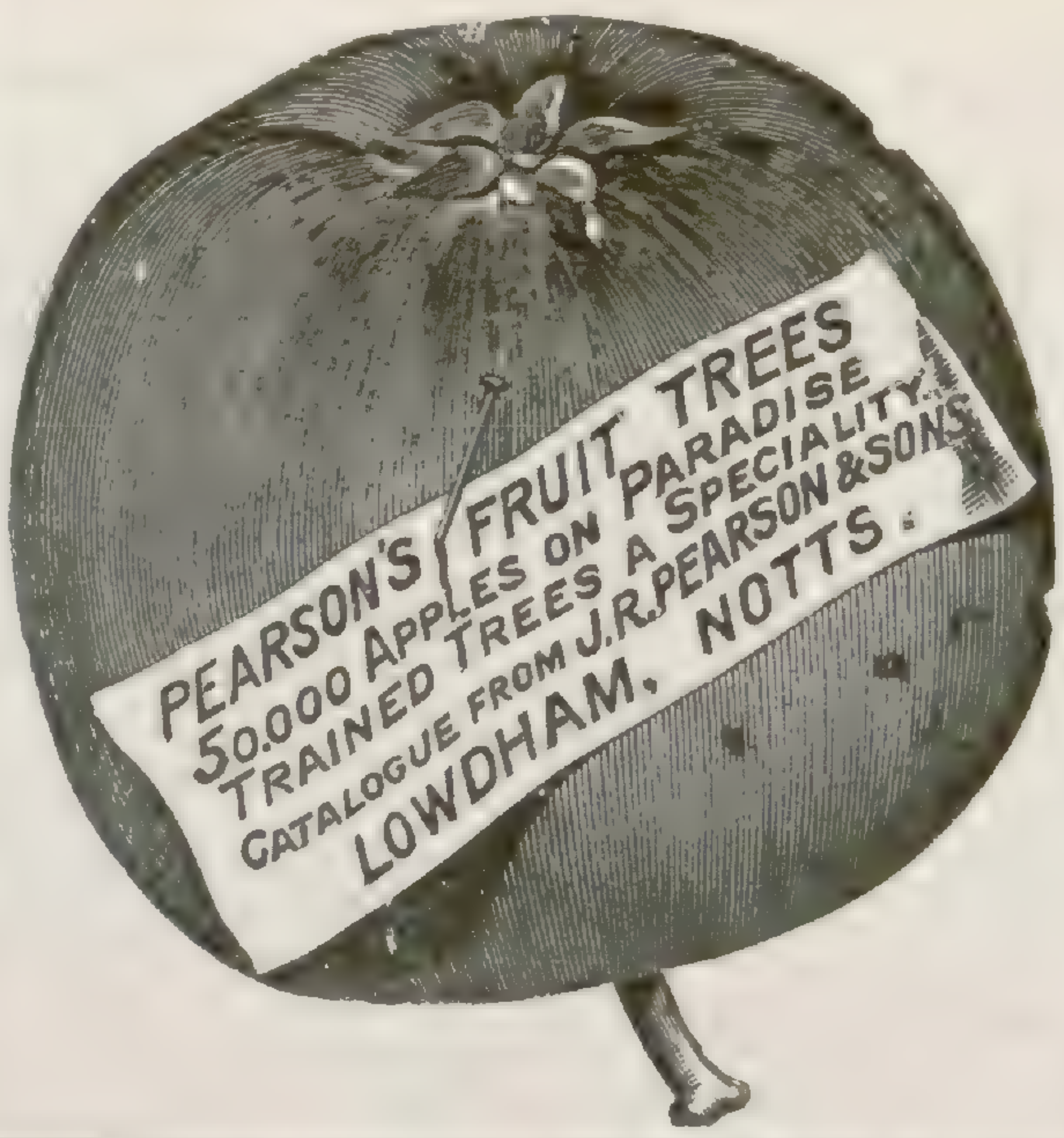
AMERICAN TREE CARNATIONS, 12, all different, named, strong, healthy plants, 5s. 6d., cg. pd. List free. ELLISON, 57 W. Bromwich.

1,600 Pecks **Lighton's Lincs Seed Potatoes Free,** as last year.

10 TONS FREE.

Bargain List Seeds, Begonias, Roses, Rock Plants, etc. Flower Seeds gratis.
LIGHTON (53), Kirton, Boston, Lincs.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.
H. BURNETT,
Carnation Specialist, Guernsey.


PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J.R. PEARSON & SONS
LOWDHAM, NOTTS.

TREES, TREES, TREES.

Now is the Time to Plant.

300 ACRES TO SELECT FROM.

Our LIGHT OAKS and BAGNALL NURSERIES are admitted to be the most exposed in the United Kingdom, ranging up to 1,000 feet above sea-level. Customers may therefore rely on our stock thriving in the coldest or exposed situations.

Catalogues gratis on application.

ISAAC MATTHEWS & SONS, Ltd.,
The Nurseries,
MILTON, STOKE-ON-TRENT, STAFFS.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.

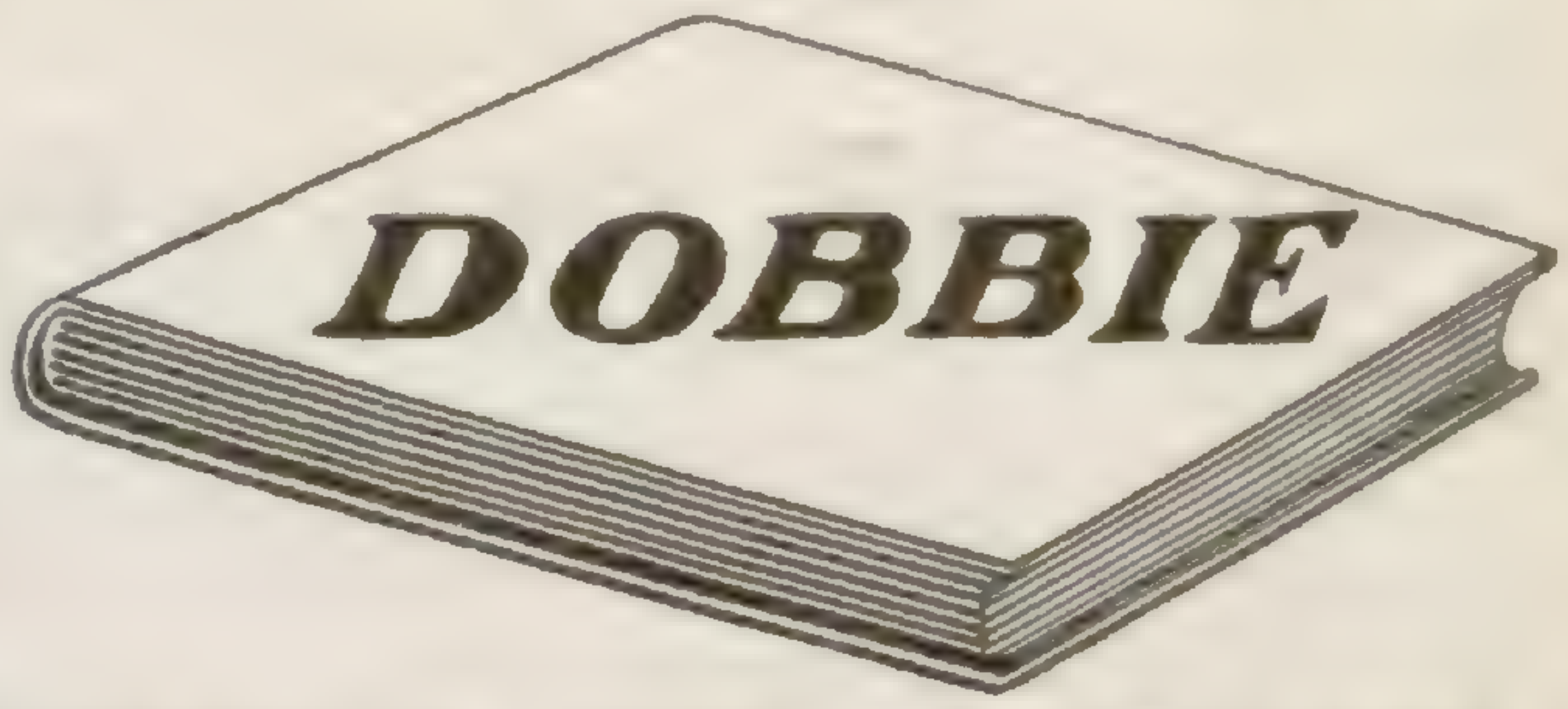
STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery. Cheltenham.

25 STRONG CHRYSANTHEMUM CUTTINGS, Exhibition, Decorative, Single or Early 1s. 6d.; 50, 3s.; 100, 5s. 6d.; by return. List. RICHMOND'S CHRYSANT NURSERIES, Ossett, Yorks.

100,000 FREE COPIES.



Dobbie's New Catalogue and Guide to Horticulture.

224 PAGES. 210 ILLUSTRATIONS.

A COPY WILL BE SENT WITH PLEASURE GRATIS TO ANY ONE APPLYING FOR SAME, WHO ENCLOSES 3d. IN STAMPS TO DEFRAY COST OF POSTAGE, AND MENTIONS "GARDENERS' MAGAZINE."

DOBBIE & CO.,
The Royal Seedsmen, EDINBURGH

Perpetual-Flowering CARNATIONS.

This year's Novelties and all the Leading Varieties.

Send for descriptive Catalogue of 80 varieties with particulars when to stop them.

C. ENGELMANN, CARNATION GROWER,
SAFFRON WALDEN.

ORCHIDS

EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone :—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

TAKE NOTICE.

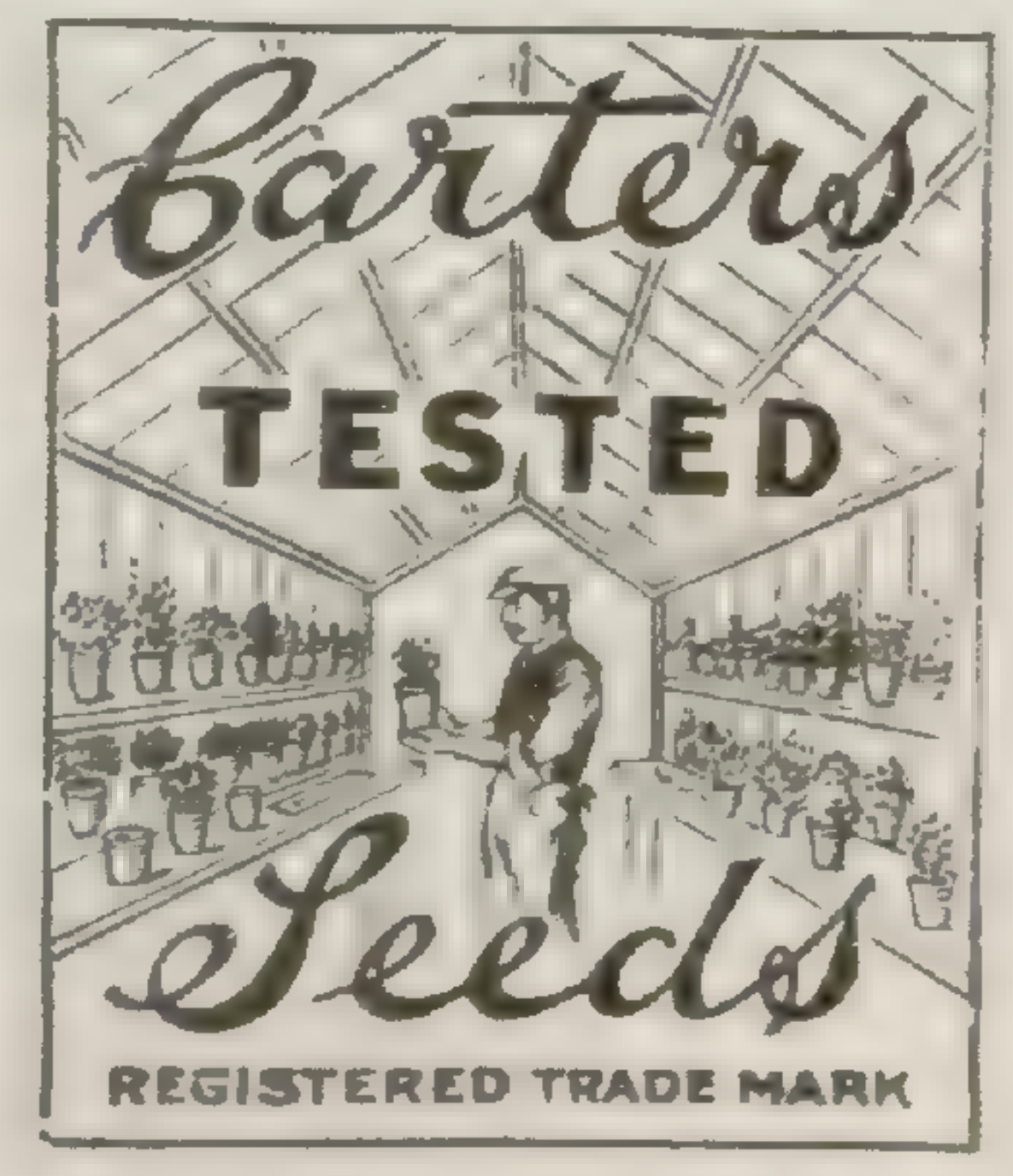
Intending planters should send for the STANCLIFFE CATALOGUE OF TREES, &c.

Our Stocks, which are grown on the highest and most exposed hills of Derbyshire, are in fine condition, and are sure to give satisfaction. Note the prices before ordering elsewhere.

Rockery Stone, 1/- per ton.

THE STANCLIFFE ESTATES CO., LTD.,
DARLEY DALE, DERBYSHIRE.

Write for ILLUSTRATED CATALOGUE POST FREE
from



Carters
HIGH HOLBORN

New Offices and Seed Testing Grounds,

RAYNES PARK, LONDON, S.W.

Branches
237 and 238, High Holborn, W.C.
53a, Queen Victoria Street, E.C.

CARNATIONS, PINKS, AURICULAS.

DOUGLAS for the best old and new varieties in all classes, and the finest quality in the world. Malmaison Carnations, new and old, **7/6** per dozen. Border, **6/-** to **12/-** per dozen. Tree, American, and English, **7/6** to **15/-** per dozen. Auriculas, Show, **21/-** to **30/-** per dozen. Alpine Auriculas, **9/-** to **21/-** per dozen. Carnation, Auricula, Pink, and Polyanthus seed, **1/6** and **2/6** per packet. **CATALOGUE FREE.**

J. DOUGLAS, Bookham, LEATHERHEAD.

ANTHONY WATERER,
Knap Hill Nursery, Woking, Surrey,
Has a Fine Stock of well-rooted
EVERGREENS, TREES and SHRUBS
In all sizes.

RHODODENDRONS, AZALEAS, and other American Plants a speciality. The Rhododendrons planted annually in Hyde Park are supplied from Knap Hill.

Inspection of Nursery invited, Catalogue on application.

PAINT & GLASS.

NICHOLLS & CLARKE, LTD.
SHOREDITCH, LONDON.

GLASS.

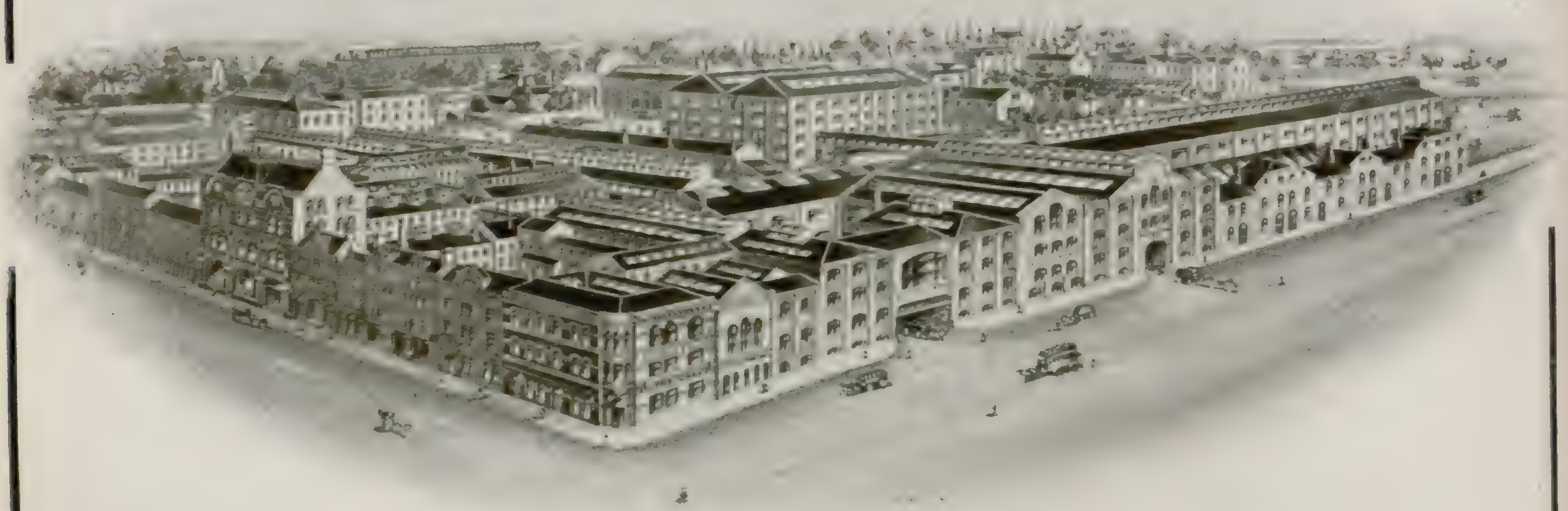
When sending for Catalogue please cut out this advt.

A Century of Seed Improvement.

THE HOME OF PURE SEEDS

Seedsmen by Appointment to
Her Late Majesty
Queen Victoria.

Seedsmen by Appointment to
His Late Majesty
King Edward VII.



Bird's-eye View of

SUTTON'S SEED STORES.

Messrs. Sutton's customers are cordially invited to inspect their premises and experimental grounds at Reading, which are annually viewed by many thousands of visitors. In January and February, Primulas and Cyclamens in the houses are the attraction; in April and May, Cinerarias and Calceolarias; while from July to the end of the summer, Gloxinias, Begonias, Sweet Peas, Annuals, etc., make a magnificent display.

CATALOGUES of all the best FLOWER SEEDS, VEGETABLE SEEDS, SEED POTATOES, :: :: AGRICULTURAL SEEDS and FLOWERING BULBS, post free on application. :: ::

SUTTON & SONS, The King's Seedsmen, READING.

VOL. LIV.—No. 2,987. SATURDAY, JANUARY 28, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

The Founder of Vegetable Physiology.

As briefly announced in our issue of the 21st inst., a course of ten lectures on the "History of British Botany" is being given on Friday evenings at the University College, Gower Street, London, and we are pleased to see that the opportunity for hearing lectures on this interesting subject by scientists of the highest eminence, and free of cost, is being taken full advantage of. The first was given by Mr. Francis Darwin, F.R.S., and his subject was "The Life and Work of the Rev. Stephen Hales, D.D.," who may unquestionably be described as the founder of vegetable physiology in this country, and who has for upwards of two hundred years exercised a considerable influence upon the study of this important subject. His influence has been felt not only in this country, but in all parts of the world where the study of botany is regarded as an essential part of a liberal education. For a long period the results of his experiments in plant transpiration, the flow of the sap, etc., was regarded by botanists as all sufficient, and until within a quite recent period the most important of them were given a prominent position in the leading botanical text-books. This is all the more remarkable from the fact that, unlike later investigators, he had no "finger-posts" to indicate the course he should take. Hales was born on September 17, 1677, at Bekesbourne, a village near Canterbury, and, as his family occupied a good social position, he had the advantage of a university education. He proceeded to Cambridge in 1696, and entered Corpus Christi, and would appear to have been successful in his studies, for he obtained his M.A. degree within a comparatively short period, and was elected a Fellow of his college in 1702. During the time he was at Cambridge he found his relaxation in collecting wild flowers and geological specimens and the study of astronomy and chemistry. Entering the church, Hales was presented about the year 1710 to the perpetual curacy of Teddington, and, although subsequently receiving other appointments, he remained at Teddington until his death, which occurred in 1761. When settled in his new home, Hales entered with zest into his scientific investigations, and evidently with success, for seven years later he was elected a Fellow of the Royal Society. It must, however, be said to his credit that he did not allow his scientific investigations to interfere with his duty to his parishioners, for he made a strenuous effort to combat intemperance, and he was instrumental in providing the village with an abundant supply of pure water. The first contribution to the "Philosophical Transactions" of the Royal Society after his election, was devoted to an account of some experiments he had made on the effect of the heat of the sun in raising the sap of trees, and this was received with much favour by his contemporaries. In 1726 was published Hale's "Vegetable Stactics," which, if but a small 8vo, with a limited number of pages, was sufficient to bring its author enduring fame and to prove of immense value to students of plant physiology during a period of time that may be reckoned by centuries. In this small book were described the experiments by which he had proved to demonstration the rate of the evaporation of moisture from leaves of certain plants, the ascent of the sap by the wood vessels, the force of root pressure, the

MR. W. H. MASSIE.
President of the Scottish Horticultural Association.

lateral motion of sap, and the absorption of air. The publication of this work created an immense amount of interest in scientific circles; and as the result the book soon passed through numerous editions, and was translated into several languages. The experiments therein described were repeated by subsequent investigators, and as the results generally were fully confirmed, the book became the source whence, as briefly mentioned above, authors of botanical text-books turned for trustworthy evidence of some of the more important vital processes of plant life. Hales also devoted a large share of his attention to the invention of a system of ventilation for hospitals, prisons, mines, etc., and, with reference to this, it must suffice to briefly mention the fact that it proved remarkably successful. He was also the first to devise a system of ventilation by which warm air could be introduced to plant houses. He prepared a piece of bent tube of a size suited to the dimensions of the structure. A portion was buried in a bed of fermenting materials within the structure, and one end was taken outside and the other end carried above the bed. The air in passing through the portion of the tube embedded in the fermenting materials was warmed, and by providing small openings at the apex a circulation was maintained without cold air coming into contact with the plants. Hales conducted his experiments in a plant house at Kew that occupied a site not far distant from the structures devoted to the collection of tropical ferns. The old specimen Wistaria trained to the cage-like trellis contiguous thereto was trained over the walls of the plant house, and was carefully preserved when the latter was demolished, and thereby became an attractive memorial to Stephen Hales, who was not less remarkable for his estimable character than for his splendid achievements in the solution of problems relating to the vital processes of plant life.

Mr. W. H. Massie, the new president of the Scottish Horticultural Association is the senior partner of Messrs. Dicksons and Co., of 1, Waterloo Place, Edinburgh, and the Royal Nurseries, Craigmillar, Midlothian, a firm which has now been in existence for over 180 years. Mr. Massie is well known in horticultural and arboricultural circles. He is, besides being president of the Scottish Horticultural Association, a member of council of the Royal Caledonian Horticultural Society, and a vice-president of the Royal Scottish Arboricultural Society, and he is also a Fellow of the Botanical Society of Edinburgh. As a member of the executive, and convener of the Grounds Committee, he did yeoman service in connection with the Scottish National Exhibition of 1908, and recently he was approached by a number of influential citizens with a view to his becoming a candidate for municipal honours, a request to which he could not accede at the time. Unless, however, rumour be a lying jade, the time is not far distant when he will add civic to his other duties; and as we believe give further evidence of his geniality of temperament and commanding ability.

Sporting in Begonias. Mr. J. J. Hudson, V.M.H., sent to a recent meeting of the Royal Horticultural Society Scientific Committee a specimen showing sporting in winter-flowering begonias. Last year a sport had appeared on Begonia Agatha, with flowers larger and of a brighter colour than in the type. Plants were propagated from the sport, and came true, but on one plant one-half had again sported, and produced flowers still larger than in the first sport and with foliage twice as large. The committee expressed the hope that specimens of each of these sports should be kept and dried, so that comparisons could easily be made in the future and the whole history of the sports followed.

English Forestry Association.

At a meeting held at the Surveyors' Institution, on the 19th inst., it was resolved to form a society, to be known as the English Forestry Association, its object being "to organise the market and to encourage the use and demand for English timber." In moving that the association be formed, Lord Clinton, who presided, said those present represented a great many thousands of acres of woodlands, and were all anxious to improve the position of timber growing in this country. There had been a great revival in interest in forestry in recent years, and attempts had been made to get the State to realise the national importance of the timber-growing industry. The extension of the woodland area would have a very beneficial influence on the rural population. At the present time the return on timber growing was not very satisfactory. An exaggerated idea of possible profit was sometimes put before them, but he doubted whether a woodland owner, with woods in tolerably good condition, could expect to see 2 per cent. on his capital invested. They were, to a certain extent, responsible, and were suffering from the neglect of ordinary commercial ideas in the past as applied to forestry. There was in this country, he believed, a lower percentage of land under timber than in the rest of Europe. He believed there were comparatively few woods in England which had reached the limit of productivity. They must stimulate the demand for English timber by local industries, and by showing architects and others that it could be produced, like English oak, of better quality than anywhere else. There had been a falling off in the quality of imported timber as the older woods were becoming exhausted. The society would not compete with or interfere with the existing arboricultural societies, as its work was totally different. They were not going to buy and sell timber, but to try to remove things which at present handicapped the industry. The motion was carried, and Lord Clinton was elected president of the association; Mr. M. C. Duchesne was appointed hon. secretary and treasurer; and the following were elected to the council: Lord Clinton, Lord Shaftesbury, Lord Chichester, Lord Hastings, Mr. Courthorpe, M.P., Mr. Charles Bathurst, M.P., Mr. S. H. Cowper-Coles, Mr. F. G. Burroughes, Mr. Arthur Arnold, Mr. Gerard H. Morgan, Mr. W. Anker Simmons, and Colonel Mostyn.

Proposed National Daffodil Society.—We learn that an effort is about to be made to establish a National Society to do for the daffodil what the National Rose Society does for the rose. The movement has the support of most of those who are in one way or another prominently connected with the flower. Without in any way entrenching on the functions or the utility of local societies, it is believed that there is ample scope for such a body, with London as its headquarters. Two of the many ways in which it might do valuable work would be: (1) The holding of a great annual show in the Metropolis, and, (2) the publication of a Year Book in which everything of general interest might be focussed. We are informed that a public meeting is to be called on one of the days of the Royal Horticultural Society's Spring Bulb Show (March 14-15), when the promoters hope to have definite proposals to submit for consideration.

Kew Gardens and the Empire.

The useful work performed for the Empire by Kew Gardens seldom receives adequate recognition, and it is therefore pleasant to note the handsome tribute paid by Sir Daniel Morris, at a recent meeting at the Colonial Institute, to the famous scientific centre. Not only have the directors of Kew Gardens placed their unrivalled experience at the disposal of the Imperial Government and the Colonies, and trained the scientific staff required in the tropical parts of the Empire, but they have helped to create new industries. Perhaps the most striking service rendered by Kew was the successful introduction of quinine-yielding trees from Peru to India and Ceylon. Also the introduction of the Para and other rubber trees from Brazil and Central America to the East. The latter have made it possible to establish the important rubber industries now existing in India, Ceylon, and the Federated Malay States. Sir Daniel Morris seized the opportunity of bearing testimony to the splendid services rendered by the greatest of living botanists, Sir Joseph Dalton Hooker, who still follows with deep interest the results of his father's and his own efforts to develop the resources of our Indian and Colonial Empire. It would be impossible to overlook, also, the large share taken in similar work by Sir William Thiselton-Dyer, who for more than thirty years ably maintained the traditions of Kew, and ungrudgingly devoted himself to Colonial matters.

Pineapples with Rotten Core.—Some pineapples of excellent flavour, but with a brown rot in the core, were received by the R.H.S. Scientific Committee from Natal. Mr. Fawcett, one of the members of that body, said that the condition was very well known in the West Indies, and was prevalent in the variety shown, which he recognised as the deliciously-flavoured "Ripley," so much so as to render that variety unsuitable for shipment. Whatever the cause, he believed it originated before the pines were cut, i.e., while they were growing. The rot has been attributed to different causes by different investigators. It has been examined in the States, and said to be connected with the growth of a species of fusarium, which, presumably, gains an entrance into the root from the soil, but it does not appear to have been reproduced by inoculation by this fungus (see Jamaica "Botanical Bulletin," ser. ii., vol. viii. (1901), p. 83, vol. ix. (1902), p. 165.). Mr. Massee, in his "Diseases of Cultivated Plants," attributes the disease to physiological causes, pointing out that it is prevalent when the plants are ripening during the rainy season, and associating it with excess of water in the atmosphere. A similar trouble occurs in pine-pits in this country, especially when the plants are subjected to a check through a sudden lowering of the temperature.

East Anglian Horticultural Society, of which Mr. Lewis Smith is the president, has prepared an excellent programme for the current year, and in this the monthly competitions have a prominent place. Classes are provided at each of the monthly meetings for fruits and vegetables, and among the prizes offered is a silver challenge cup which has to be competed for at the May, July, and October meetings, when collections of cut flowers, vegetables, and fruit have to be shown at the respective meetings. Ten meetings for the reading of papers and discussion of matters of interest to horticulturists will be held, and four of these will be devoted to the reading of essays in competition for prizes, and at the meeting for March 8 the subject is "The Cultivation of Vegetables," and the competition is limited to under-gardeners.

Value of a Suburban Garden.—At the London Sheriff's Court, a few days since, a special jury ordered the London County Council to pay Mrs. Helen Pocock, of Mitcham Lane, Streatham, the sum of £282 10s., as compensation for compulsory taking about eight feet of her front garden for the purposes of the tramway that is being constructed.

Croydon Gardeners' Association.—From within a short period of its formation this association has occupied a leading position among kindred societies near the Metropolis, and the report for the past year affords ample evidence of this position being fully maintained. We learn with satisfaction that there has been a considerable increase in the list of members during the past year, that the lectures and papers have been of a high order of merit, that products of good quality have been contributed to the monthly meetings, and that the attendance has been most satisfactory. Several visits to gardens and nurseries were made during the year, and these, we learn from the report, were both pleasant and of high educational value to those members who were able to take part in them. One of the most interesting events of the year was the installation of the electric lantern, which was purchased by subscription. A first-class lantern for the projection of slides is of so much value to a society holding periodic meetings that we heartily congratulate the society on its new possession. The society has, we would add, arranged to have its annual dinner on Wednesday evening, February 15, 1911.

Leather from Vegetables.—According to the "Jewish Chronicle," a process has been discovered whereby a passable imitation of leather can be manufactured from a vegetable product. It is stated that the novelty owes its introduction to the enterprise of certain London vegetarians, who shuddered at the thought of the number of animals killed annually to keep humanity in boots. It is said that the imitation leather is being used for the manufacture of boots, shoes, book covers, and other articles. We have no information as to the vegetable product whence the imitation leather is manufactured, and we shall wait until we know something more about it before abandoning boots made with well-tanned horse, cow, or porpoise hide.

Rural Amenities of Berlin.—At the opening of the Prussian Diet it was intimated that legislative measures would be introduced for the purpose of effecting the union of Greater Berlin in questions relating to town planning. As part of the scheme it is proposed to preserve a belt of forest and meadow land round Berlin, to be administered by the City authorities, and to open up moor and waste land within the belt.

Fruit of Mandevilla suaveolens.—Mr. Chittenden contributed to the meeting of the Scientific Committee of the Royal Horticultural Society, on behalf of Mr Sanderson, of Joanville, Jersey, a pair of fruits of Mandevilla suaveolens which had ripened in the garden there. This plant is able to be grown outdoors only in warmer parts of England, and is not often known to fruit. The fruits, as in so many of the Asclepiadaceæ, are pods about twelve inches in length, and slender, and are produced in pairs.

GARDENERS' ROYAL BENEVOLENT INSTITUTION.

The annual general meeting of this charitable and well-managed institution was held at Simpson's Strand, W.C., at 2.45 p.m., on Thursday, January 19, 1911, under the presidency of Mr. Harry J. Veitch, V.M.H. There were about twenty-six persons present at the opening proceedings. The notice of meeting and the minutes of the previous annual general meeting having been read, the annual report and balance-sheet were read by the secretary, Mr. G. J. Ingram, as follows:

REPORT OF THE COMMITTEE.

Before presenting the report of their work for the year 1910 the committee desire to record their sense of the very great and sad loss the institution sustained in the death of his Majesty King Edward, who, as Prince of Wales, was its president, and who subsequently, as King, honoured it by becoming its patron. His late Majesty had also for many years been a subscriber to its funds. The committee are very gratified to announce that his Majesty King George, who, until he succeeded to the Throne, was president of the institution, has graciously consented to become its patron, her Majesty Queen Mary having also accorded her patronage.

The committee have great pleasure in submitting their seventy-first annual report, together with statement of accounts as audited. They are extremely glad to be able to state that the charity has during the past year more than ever justified its existence by meeting the increased and urgent claims of deserving and needy applicants, who but for the aid thus rendered would have been utterly stranded in their difficulty and distress. It is now seventy-two years since the institution was founded, and during that time it has been able to distribute in relief upwards of £132,000, and at no other period in its history has it been able to do so much in affording timely aid to the necessitous horticulturist and his widow as in the year now closed.

At the beginning of 1910 two hundred and forty persons (one hundred and forty-one men and ninety-nine widows) were in receipt of permanent relief by means of annuities of £20 and £16 respectively, in addition to other applicants financially assisted in other ways. Of this number twenty-two have died during the year—thirteen men and nine women. Five of the men left widows whose circumstances being such as to render them eligible, the committee at once placed them on the funds of the institution without election, under rule III., par. 13, to receive the widow's allowance of £16 a year each. There were therefore at the close of the year two hundred and twenty-five persons receiving permanent relief, and to this number the committee recommend an election this day of twenty candidates from an approved list of seventy-three applicants, which will increase the number of beneficiaries to 250, being the greatest number there will ever have been at any time on the funds. Although this further addition to the permanent liability naturally causes the committee considerable anxiety, they feel assured of the approval of the supporters of the charity, whose interest they confidently hope will be stimulated to still further exertions on its behalf.

With regard to the temporary assistance rendered to applicants it would be impossible to overestimate the importance and value in cases of emergency of the "Victorian Era" and the "Good Samaritan" funds. The former fund provides assistance to those unsuccessful candidates who have been subscribers to the institution and who are awaiting election. The latter fund gives immediate help to deserving applicants, whether they have been subscribers or not, in time of misfortune and distress. It would be difficult indeed to exaggerate the real benefit thus conferred on these poor people, and many are the grateful letters received from those who have been thus helped. In connection with the "Good Samaritan" fund, the committee have much pleasure in acknowledging the receipt of £62 17s., the balance of the "Harry J. Veitch Portrait Fund," which the treasurer, the Rev. W. Wilks, requested might be so utilised. It would perhaps be well to again remind the friends of the institution that the interest only from these funds can be used, and therefore any special contributions to either or both of them would be warmly welcomed and gratefully received.

The committee are pleased to report that the seventy-first anniversary festival dinner, held at the Hotel Metropole in June last, was very successful, and they gladly tender to the Hon. Harry Lawson, M.P., their grateful thanks for presiding on the occasion, and for his eloquent advocacy of the claims of the charity, as well as for his generous personal contribution to the funds. The committee would also express their deep indebtedness to those gentlemen who were good enough to act as stewards or collectors; likewise to the horticultural Press for their gratuitous and invaluable assistance; to the donors of flowers, to those who kindly arranged the floral decorations, and to other friends for extremely useful services, which were very much appreciated.

The Messrs. George Monro, Ltd., Concert Committee again gave a portion of the proceeds derived from their well-known annual concert for the benefit of the funds, and the committee offer them their best thanks. It is sincerely hoped that other friends will emulate these examples.

The death-roll in relation to the charity was a heavy one during the year. In addition to that of H.M. King Edward, to which reference has already been made, the committee have to lament the loss of Baron Schröder, whose death was such a great blow to horticulture. He was a vice-president, and for many years one of the warmest and most generous supporters of the charity, to which he bequeathed a legacy of £1,000, duty free. As a tribute to his memory, and in recognition of his great service in connection with the erection and equipment of the Horticultural Hall and offices, the Royal Horticultural Society have established, in connection with our institution, a permanent annuity to be known as "The Baron Schröder Annuity," the first recipient of which, nominated by the society, is Mrs. Wildsmith, the widow of a very highly esteemed friend of the charity.

The committee have further to regret the loss of two of their valued colleagues, viz., Mr. William Denning, who was a regular attendant at its meetings for many years, and Mr. J. McIndoe, V.M.H., who were always ready to further in every possible way the interests of the institution. Their presence and help are sorely missed. Other sad losses are those of Mr. W. J. Nutting, formerly a member of committee, and for many years a valued subscriber, who passed away full of honours in a ripe old age; Mr. R. Wilson Ker, of Liverpool; Mr. J. L. Woodroffe, of Eastbourne; Mr. E. C. Mott, of Barnet; Mr. R. Blake, of Salisbury; and Colonel Hanbury Barclay, whose places it will be indeed difficult to fill.

A fund inaugurated during the year in memory of the late Mr. David Thomson has been successfully completed, and the amount raised has been added to that previously contributed with the same object to his brother, the late Mr. William Thomson's memory. The total sum has been invested to produce £20 a year, to establish a perpetual annuity in memory of these two distinguished horticulturists, which will henceforth be known as the "William and David Thomson Memorial Fund," and a worthy old Scotch gardener living in Edinburgh in very distressed circumstances has been selected by the Messrs. Thomson's family representatives as the first recipient of the benefits thus established.

In consequence of the partial rebuilding of the offices until recently occupied, the committee have been obliged to seek new premises, and they are glad to state that suitable quarters have been obtained at 92, Victoria Street, Westminster, close to Victoria Station, and not far from the former address.

The seventy-second festival dinner in aid of the funds has been arranged to take place on Tuesday, May 23 next, the first day of the Temple Flower Show, when Sir Marcus Samuel, Bart., has very kindly promised to preside. The dinner will be held, by kind permission of the guild, in the beautiful hall of the Grocers' Company, Princes Street, City, opposite the Bank of England. It is hoped that this function will meet with much success, and that the chairman will be ably supported by every lover of gardening and flowers. Ladies and gentlemen are earnestly solicited to act as stewards on behalf of the festival.

In concluding their brief summary of the year's work, the committee, whilst deeply thankful for what they have been able to accomplish, deplore their inability, from want of funds, to meet the claims of many other deserving applicants that come before them. They would, however, remind the friends of the institution that at each election for the past twenty years the liabilities have been increased, and the number of annuitants on the funds added to. They therefore plead most earnestly that a larger measure of support may be forthcoming in order that the work of this national horticultural charity, which has been carried on with such gratifying results for seventy-two years, may not only be maintained, but may be still further enlarged.

RECEIPTS AND EXPENDITURE FOR 1910.

DR.

	£	s.	d.	£	s.	d.
To balance				1,091	11	8
,, Amount on deposit				3,180	0	0
,, Amount on Miss Wolfe's legacy				1,000	0	0
,, Amount on Mrs. Rylands' legacy				1,031	1	2
,, Annual subscriptions	1,576	17	3			
,, Donations at, and in consequence of Festival Dinner, including special gifts	1,767	17	2			
,, Royal Horticultural Society for "Schröder Annuity"	20	0	0			
Legacies:—						
Baron Schröder	1,000	0	0			
George Thomson, Esq.	309	17	9			
,, Dividends and interest	892	8	7			
,, Return of Income Tax	49	3	4			
,, David Thomson Memorial Fund	317	4	3			
				5,872	18	4
				£12,175	11	2

CR.

	£	s.	d.	£	s.	d.
By Pensions and gratuities, including special gifts from Messrs. Veitch, Sutton, and Monro, and Schröder annuity				4,203	19	8
,, Expenses of annual meeting and election				11	10	6
,, Rent, etc., and salaries of secretary and clerk	[illegible]47	11	0			
,, Printing, stationery, etc. £132 16 3 Less advertisements in list of subscriptions £56 19 0	75	17	3			
,, Expenses of Festival Dinner ...... £212 11 9 Less dinner charges £155 8 0	57	3	9			
,, Postage, including annual reports, appeals, etc., advertisement in "Fry's Charities," carriage, telegrams, etc., and incidental expenses, and bank charges				827	12	8
,, Cost of removal to new offices				78	8	9
,, Investment of William and David Thomson Memorial Fund				347	17	10
,, Placed on deposit				2,430	0	0
,, Placed on Wolfe's legacy				1,000	0	0
,, Placed on Rylands' legacy				1,031	1	2
,, Placed on Schröder legacy				1,000	0	0
,, Balance with treasurer	1,06[illegible]	1	1			
,, Balance with secretary	0	19	6			
				*1,067	0	7
				£12,175	11	2

* Required to meet the quarterly payments on January 1, 1911.

The Chairman, in moving the adoption of the report and balance-sheet, added to his motion, "That the best thanks be tendered to the committee for their services." He felt that the work of the year was the best on record. Many of the applicants had been assisted, but very many would, he was afraid, have to wait many years before they received a pension. If the proposal to add twenty pensioners was carried it would mean that 245 persons would be on the funds. In future newly-elected pensioners would at once receive a half-quarter's pay, which would be, he felt, most acceptable. He referred to the working of the Good Samaritan and Victoria Era funds, and the immense aid they were able to afford applicants awaiting election. Mr. Veitch also referred to the Baron Schröder and the William and David Thomson memorials, which would commemorate well-known horticulturists, and materially assist the Institution.

Mr. A. W. Sutton, V.M.H., moved the re-election of Mr. Harry J. Veitch as treasurer of the Institution, and that he be thanked for his past services, and this was seconded by Mr. P. White, and carried unanimously. Mr. H. J. Veitch suitably responded, and he then proposed in a few very pleasing and eulogistic remarks the re-election of Mr. G. J. Ingram as secretary; Mr. G. Wythes seconded the motion, and it was heartily carried. The re-election of the retiring members of committee, Messrs F. Cooper, C. R. Fielder, W. Iceton, A. W. Paul, William Robinson, Joseph Rochford, Edward Sherwood, H. E. Tilman, and A. Watkins, was proposed by Mr. W. Poupart, and Mr. P. Veitch, and the election of Messrs. James Walker and J. Jacques wa also carried. The old auditors, and also the old Arbitration Committee were re-elected, Messrs. O. Thomas, J. Wheeler, and W. Iceton speaking to the motions. Messrs. E. G. Monro, P. White, and F. Cooper were appointed scrutineers, and the meeting was then adjourned until the declaration of the poll.

The poll was announced about 4.45, and the following were declared to be elected, viz.: Arthur Plummer, 4,062; W. M. Baillie, 3,162; Suzannah Butters, 3,030; Thos. Sutton, 2,943; Thos. C. Gidley, 2,832; George Boothroyde, 2,816; Sarah Chinnery, 2,780; Rebecca Watson, 2,746; Emily Richards, 2,729; John Birch, 2,716; John Gough, 2,656; Fanny Bury, 2,607; John Dallimore, 2,585; Emma Arnold, 2,577; George Bastin, 2,576; Sarah A. Sutton, 2,516; Reuben Cavill, 2,457; Mary Hope, 2,446; William D. Robinson, 2,423; and Anne Seaving, 2,420. In accordance with clause 10 of Rule III., the committee recommended the election of two other pensioners to fill vacancies recently caused by death, and they suggested George Gedge (2,375), who was applying for the fourth time, and totally incapacitated; and Henry J. Rosam (2,073), who last year enjoyed a special allowance contributed by Mr. A. W. Sutton. This was agreed to.

It was announced that Mr. G. Monro would give £10 to a needy unsuccessful widow, and Marie Baillie (455 votes), was selected; it was further announced that Mr. A. W. Sutton would also contribute an allowance to an unsuccessful candidate, and David Dunstall (1,376 votes) was selected to benefit therefrom.

On the motion of Mr. G. Paul, V.M.H., a hearty vote of thanks was accorded the chairman, and the scrutineers. This closed the proceedings.

The total numer of votes polled was 128,850, and there were 450 lost owing to unsigned and otherwise spoiled papers. One candidate polled between 4,000 and 5,000; two polled between 3,000 and 4,000; thirty-one between 2,000 and 3,000; twenty-five between 1,000 and 2,000; and fourteen polled fewer than 1,000 votes.

FRIENDLY SUPPER.

Mr. Joseph Rochford presided in the evening at the friendly supper, and for the first time since its institution the famous "Lark Pudding" was absent from the menu. Most of the members of committee were present to support the chairman, and the party of about three dozen included Messrs. H. J. Veitch, N. N. Sherwood, John Rochford, Edmund Rochford, Edward Sherwood, P. Veitch, G. Bunyard, W. Y. Baker, G. Paul, W. Atkinson, O. Thomas, J. Seegar, J. Vert, W. Iceton, J. F. McLeod, P. R. Barr, G. Barr, E. Monro, A. White, W. Howe, W. T. Anderson, A. W. Paul, A. Monro, etc.

FLORA OF THE BERNESE OBERLAND.

On Tuesday evening, the 17th inst., under the chairmanship of Mr. Charles E. Shea, the usual monthly dinner of the Horticultural Club was held at the Hotel Windsor, and was well attended. As usual, it was followed by a lecture, which on this occasion was delivered by the Rev. Canon Horsley, J.P., on "The scenery and people of the Bernese Oberland, including Swiss plants," and illustrated by a large number of very beautiful lantern slides, some taken by the lecturer himself, but the bulk by Mr. Malby, of Woodford, and Mr. Bell, of the Glasnevin Gardens, Dublin, who recently accompanied the Canon on his annual excursion into the Swiss Alps, which he is accustomed to take in conjunction with a selected body of ladies and gentlemen, to whom he acts as guide and mentor. The slides fell into two categories, or rather three, viz., Alpine scenery on the most stupendous scale; its flowers individually photographed in situ; and, thirdly, and in some respects, the most striking of all, a series of photos taken in Mr. Malby's suburban garden at Woodford within an area of about 160 feet by 60, in which Alpine scenery has been so artistically planned on a miniature scale, and Alpine plants grown under such natural conditions, that resulting photos taken from judicious points of view, and under conditions of haze and hoar frost, were almost indistinguishable in effect from genuine Alpine scenery. Groups of saxifrages and similar evergreen Alpine plants, thickly fringed with hoar frost, afforded some of the prettiest views conceivable, and it was generally admitted that if some of the rockwork slides from this little garden had been judiciously dispersed among the true Alpine views no one present could have discriminated the difference.

Canon Horsley, who takes a particular interest in floriculture for the masses, introduced these as an example of what picturesque effects may be attained within small areas when planned on intelligent and artistic lines.

An interesting point in the Canon's address related to the rapid retreat of the Swiss glaciers up the valleys which they had shaped. Within his own memory the foot of one noted one is now a mile and a-half from the point where he first visited it, and Mr. Shea, who is a member of Alpine clubs both home and foreign, and familiar with all Alpine points of interest, confirmed that this retreat was general, constituting an indication that the great ice-cap which in the so-called glacial period extended from the Pole over all Northern Europe and the greater part, if not the whole, of Britain, and of which the existing glaciers represent but the fringe of the remainder, is very rapidly diminishing, owing to some subtle change of climate. A large number of the Swiss flowers were admirably taken, and each was accompanied by remarks relating to its habit and habitats, constituting zones, so that the Canon had frequently been able to refute accounts of ascent to extraordinary altitudes by examining the flowers there collected, a couple of thousand feet or so being thereby deducted. The curious fact that that little gem, the Soldanella, of which two species were shown, actually thaws the superincumbent snow or even ice by self-engendered warmth, and so projects its charming flowers through the mass into the sunshine, was described. In the subsequent discussion in which Mr. Shea and Mr. Bilney took part, the mountain floras of other regions were compared with the Swiss, and a very cordial vote of thanks was given to Canon Horsley, and also to Mr. Malby, who was present, for the lecture and for the slides presented. An exhibit was also made of a charming series of Swiss postcards depicting the Swiss flora in natural colours, and some independent photos in natural colours were also highly appreciated.

SUPPORTS FOR ROSES.

Many "dwarf" roses require some support quite as much as in the case of pillar and standard-grown plants. For example, we cannot induce Earl of Dufferin and other heavy flowers, that are produced upon long and very slender growths, to hold up. There is, fortunately, a great choice in our dwarf roses, but this is not the case when we come to standards, and more especially those extra high weepers now so popular.

Sticks or stakes may be used for the ordinary standard, but they last only a few seasons if kept below dimensions that can only be called cumbersome. Square lengths of pitch pine are rather expensive, still, I think they are the best in the end among wood supports, and they seem to last longer if placed in the soil the reverse way from which the wood grew.

By far the best permanent support for standard stems that I have found are the hollow galvanised pipes used for gas and water. Though dear at first, they never wear out, and can be used as stakes for other subjects. There is the advantage also of great strength, compared to size, and they are not unsightly. Having no points or sharpened tips there is nothing to rot or decay just at the very point that we need the firmest support, while we can have them in any size, and any desired colour, if one objects to the natural hue. Being galvanised, they do not rust through ordinary exposure.

I am aware there was once a great cry out against the use of any iron stakes or supports because of the supposition they attracted both heat and cold, as well as electricity. This has not been proved by my own experience. So far then for the ordinary standards.

My chief object in these notes is to mention a few suitable supports for our tall standards, and more especially those that are used as weepers. I have seen several very ingenious home-made contrivances for this object, and several are on the market, and have been advertised in the gardening press. These, I need say little of, for they are naturally the best for the purpose, but somewhat expensive; still, they last well.

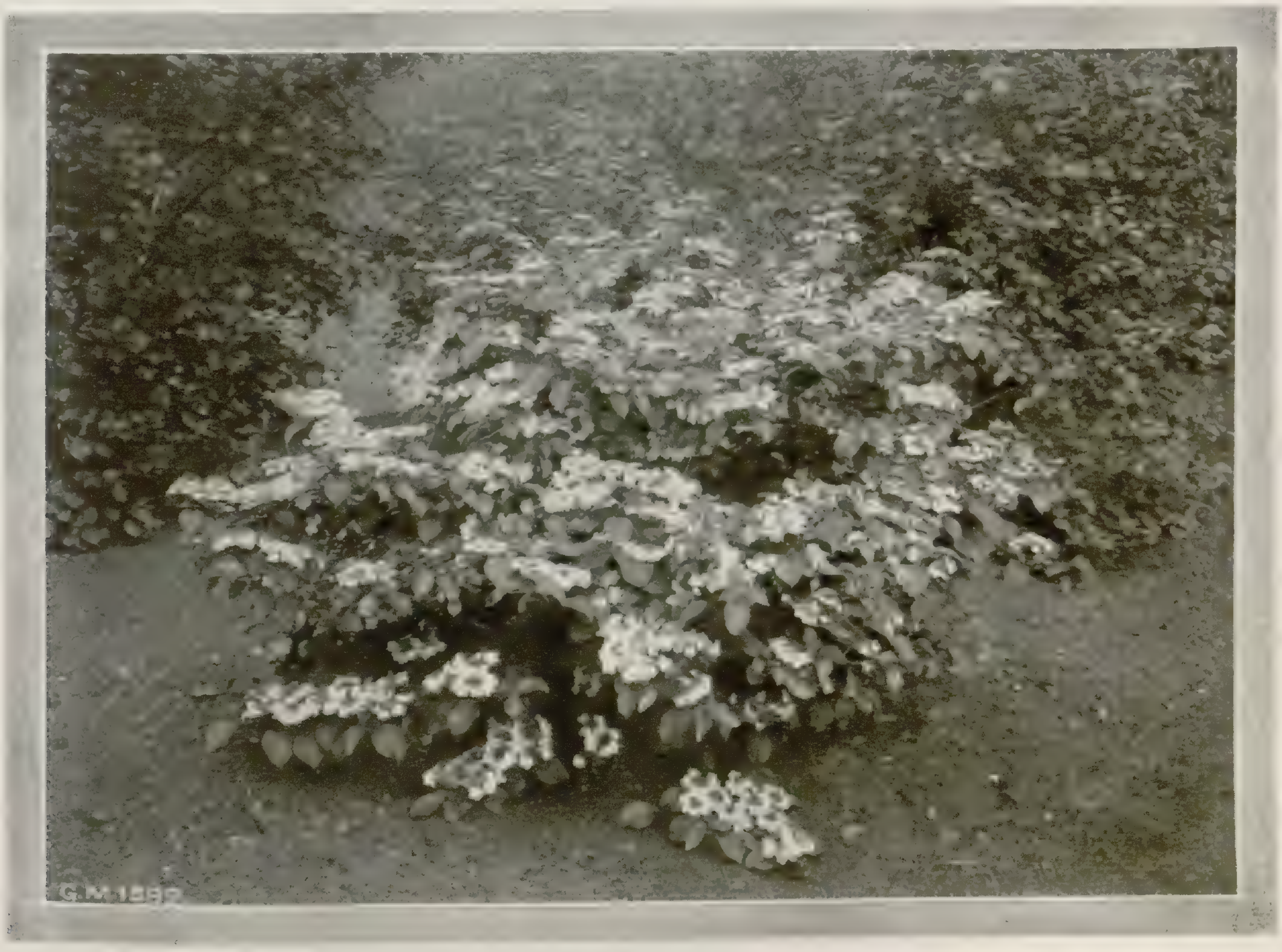
Recently, a reader of these pages wrote me respecting an article on "Wichuraianas as Standards," which appeared in conjunction with a photograph of specimens of Dorothy Perkins. The part that interested me most was his remark about the possession of a certain variety (Robert Craig), which was, unfortunately, upon a rather low stem. A strong shoot had broken out from about the centre of the head, and this he trained up a stout bamboo cane, heading the shoot last August. The result was it broke out into long laterals that promise a good show next summer. It is a cheap, effective, and simple idea of getting additional height where required, and can, of course, be used with any other strong-growing rose. The idea is excellent, and, judging from the sketch he was good enough to send me, might well be adopted among this class of rose.

A. P.

The Age of Gooseberry Trees.—I note, on page 30, that Mr. A. Petts, in dealing with the mistakes made in growing gooseberries, advises, "After two years, or at the most three, the old bushes may be destroyed." To me this seems an expensive method of obtaining gooseberries. Here we have trees that have given full crops for the last thirty-two years, with but two exceptions, and that owing to spring frosts. Red currants, too, are of the same age, and still give good annual returns of fruit. Surely this is an error on the part of Mr. Petts to advise the removal of the trees after three years; one would have thought ten years a brief existence.—E. M.

VIBURNUM TOMENTOSUM.

Until within a comparatively recent period this handsome Japanese viburnum was alone represented in British gardens by its sterile form, which, under the name of Viburnum plicatum, has deservedly enjoyed a high degree of popularity, and been largely planted in gardens where hardy shrubs remarkable for the beauty of their flowers are appreciated. A few years since the species was introduced from Japan, of which country it is a native, to this country; and although not regarded and properly so, as superior to its sterile variety, it has been recognised as a shrub worthy of a place in the shrubbery border, even when of moderate size. It has been freely planted, and in a considerable number of gardens may be seen specimens of a size sufficient to show its distinctive characteristics. The example we have the pleasure of illustrating herewith occupies a place in the viburnum collection at Kew, and, as so well shown, is free flowering and decidedly attractive. It will be seen that the flowers are single, and elegantly disposed along the branches in clusters. These flowers, it should be added, are pure white. There is no occasion to institute comparisons between V. tomentosum and its well-known variety, the correct designation of which is V. tomentosum plicatum, for they are perfectly distinct from each other, and they both possess much beauty. The last-named is the most suitable for lawn groups, because of the greater effect it is capable of producing, but the species is a charming shrub for planting in a mixed shrubbery border, and the aid it is so well able to render in making such borders interesting and attractive should be taken full advantage of by planters.



VIBURNUM TOMENTOSUM.
A beautiful hardy deciduous shrub of Japanese origin and bearing a profusion of white flowers.

HERBACEOUS CLEMATISES.

At one time or another a great deal has been written about various types of clematises, but it has usually been the shrubby types, as represented by the florida, patens, lanuginosa, Viticella, and Jackmani groups which have received attention, and little notice has been taken of the herbaceous kinds. They are, moreover, rarely met with in our gardens, therefore a few words in their favour may not be out of place.

The group contains a rather large number of species and varieties which show a considerable amount of variation in habit and in shape and colour of flowers. Some grow but a foot or two high, whilst others may attain a height of six or eight feet, or even more. The leaves of a certain number of species are divided into numerous finely-cut leaflets, others have them separated into a few large lobes, whilst several bear simple leaves. The flowers also differ considerably in shape, for some species bear blossoms very like those of C. Viticella and others produce tubular or urn-shaped blooms. The strong-growing ones are not difficult to cultivate, and are quite as deserving a place in the herbaceous border as other perennials. In deep loamy soil they may be expected to give a good account of themselves, but care must be taken to stake them before they become too advanced to support their own weight, for if they are once allowed to fall prostrate on the ground they cannot be made to look so well as if they are kept upright from the commencement of their growth. Some kinds may be most successfully dealt with by placing a number of straight stakes round a clump and surrounding them with several rows of string. Others are more satisfactory if surrounded by sticks, such as are used for ordinary garden peas, and the branches trained amongst them. Some kinds are rank feeders, and they are benefited by a top-dressing of rotten manure applied in April, while all enjoy a liberal amount of lime in the soil. Those sorts which form extensive root-stocks may be increased by division, and most kinds can be propagated from seeds which set freely.

Perhaps the best known of the various herbaceous kinds is C. recta, a species from southern Europe, which grows from two to three feet high. It forms a large clump, and produces a considerable number of growths, each one of which bears a head of fragrant white flowers in early summer. There are several varieties which differ in height, strength, and size of inflorescence from the type. A distinct change from this plant is found in C. Hendersoni, a hybrid between the shrubby C. Viticella and the herbaceous C. integrifolia. It grows from four to six feet high, and bears a profusion of blue or purplish flowers over a period of quite two months, which, individually, are as large as those of C. Viticella. It is easily one of the most showy and most worthy of inclusion in the herbaceous border. Closely following the last-named in free flowering is C. Bergeroni, a strong grower, which bears large pinkish flowers. C. Clocheton is another of the same type, which bears large numbers of blue flowers somewhat larger in size than those of the last two sorts. All three look at their best when grown over pea-sticks.

The American scarlet-flowered species, C. coccinea, is fairly frequently met with, for it is used as a wall plant. Its showy, scarlet, urn-shaped flowers and glaucous leaves make it a conspicuous object. Crossed with shrubby garden kinds a set of free-flowering hybrids has been obtained which are of herbaceous character. All are of vigorous habit; good ones are Countess of Onslow, Duchess of Albany, Duchess of York, Grace Darling, and Sir Trevor Lawrence. C. coccinea is rather tender, and these hybrids cannot be recommended for cold parts of the country. C. integrifolia is a rather low-growing species with simple leaves and blue flowers. A variety with white flowers, known as alba, may be obtained. C. intermedia is a tall-growing species, attaining a height of five feet or more. Purple, white and pink-coloured forms may be obtained. The three species, C. Viorna, C. vernalis, and C. Fremonti are not particularly showy kinds, and are more interesting on account of their curiously-shaped flowers than by reason of their decorative character. The same thing may be said of C. globosa, which has glaucous leaves and purple, urn-shaped flowers. C. pseudo-flammula is a dwarf Caucasian species which has small white fragrant blossoms and glaucous leaves.

Another set which might well be included in this class is that made up of C. heracleæfolia and its numerous varieties. Though not of strictly herbaceous character, C. heracleæfolia loses the greater part of its branches each year, and is usually cut down in spring to within nine inches or a foot of the ground. From the lower buds strong branches are produced, which bear small tubular blue flowers throughout the greater part of their length, during August and September. It is a native of China, and has several varieties, of which Stans, Davidiana, Lavallei, Sophia, and Iris are more showy than the type.

W. Dallimore.

PEAR BEURRE HARDY.
An excellent dessert variety ripening in October.

TWO USEFUL OCTOBER PEARS.

Pears ripening in October and the following month are plentiful, and a considerable proportion possess much merit. We need not recapitulate them; but briefly refer to the claims which the two varieties herewith mentioned have upon cultivators.

Beurre Hardy.

This excellent pear has long been in cultivation, and is regarded with much favour by cultivators who are satisfied with moderate crops, provided the fruits are of good appearance and the quality high. Beurre Hardy is not so heavy a bearer as some other varieties that could be mentioned, but in a series of years it will give a good return. The fruits are rather large, and have a yellowish glossy green skin, which is marked with dots and patches of russet; the flesh is white, rich, melting, juicy, and pleasantly perfumed. It is deserving of a wall, but it makes an excellent pyramid, and may be most successfully grown in that form where pears succeed in the open quarters.

Durondeau.

This well known and popular pear may well be described as one of the best of those that under ordinary conditions attain maturity during the second half of October and the early part of November. The fruit is large, and as will be seen from a glance at the illustration, is handsome, its appearance being greatly enhanced by its brightly-coloured skin, which is yellow on the shaded side and crimson on the side exposed to the sun. The fruit is not only attractive to the eye, but is pleasing to the palate, the flesh being rich, sweet, and juicy. The variety succeeds as a pyramid in the open, but it deserves a wall, and should certainly have the shelter of one when grown in districts in which the soil and climatic conditions are not particularly favourable to choice pears. The tree crops freely and regularly, a point of much importance in estimating the merits of choice dessert pears.

GREENHOUSE MANAGEMENT.—The Amateur's Greenhouse, the popular book by T. W. Sanders, not only treats of the selection and cultivation of greenhouse plants and flowers, but gives full instructions how to build a greenhouse and how to heat it, as well as every detail as to the management of the plants and flowers grown in it. The price of this book of 416 pages is 5s. net, or by post 5s. 6d., from W. H. and L. Collingridge, 148, Aldersgate Street, London.

CANARY GUANO

"THE BEST IN THE WORLD."

There is no Fertilizer that gives such good all round results as CANARY GUANO. It is used in the King's Gardens, and by leading Amateurs and Trade Growers all over the Country. A post card to the Manufacturers will ensure full particulars.

SOLD IN BAGS AND TINS BY SEEDSMEN, NURSERYMEN, ETC.

Manufactured — by — **THE CHEMICAL UNION, LTD, IPSWICH.**

2,500 BEAU-IDEAL BLUE BEDDING LOBELIA for 1d.

What is the use paying 1/- or 2/6 for a packet of Lobelia seed when you can get all the plants you require for a 1d. or 2d.? Of course, you have been paying these high prices in order to get the best seed. But you need do this no longer. All the seeds retailed by Stormonths are of the best procurable strains, equal to anything retailed at the old-fashioned prices, and they will supply any quantity, from 1d. worth upwards.

TAKE THIS LOBELIA AS AN EXAMPLE. The seed is warranted pure, of good germination, and true to name, saved only from plants raised from cuttings, propagated from stock plants selected true to type, compact in habit, perfect in colour and flower, and free blooming. In short, the finest improved English strains of Crystal Palace Compact Lobelia.

GARDENERS WHO WISH TO KEEP EXPENSES DOWN, and employers who desire variety as well as quality in their gardens, should send for a copy of Stormonths' Catalogue of warranted Beau Ideal Seeds, free on request.

STORMONTHS, 8, Kirkbride, Carlisle.

RIVERS'

Fruit Trees, Roses,
Vines, Figs, Oranges,
AND
Orchard House Trees.

A LARGE AND SELECT STOCK ALWAYS ON VIEW.

Illustrated & Descriptive Catalogue
POST FREE 3d.

THOMAS RIVERS & SON
Sawbridgeworth, Herts.
Station HARLOW, G.E.R.

SPECIAL SWEET PEA LIST

including many grand Novelties
POST FREE, ON APPLICATION TO
GEORGE ELSOM, SEED GROWER AND MERCHANT.
SPALDING.
Hundreds of Prizes won with products grown from Elsom's Seeds.

ORCHIDS.

Amateurs interested in Orchids should write for our

Amateur's Guide,
2nd Edition, free.
Giving Treatment, Soils, Description of Flowers; Illustrated.

MANSELL & HATCHER, Ltd.,
Rawdon, Yorkshire.

CHEALS'

113 Acres of Ornamental
Trees & Shrubs
Of all kinds.
Fruit Trees
Hardy, Healthy, and true to name.
Roses & Hardy Plants

Descriptive Catalogues Free.

J. CHEAL & SONS,
NURSERYMEN AND LANDSCAPE GARDENERS,
Crawley, Sussex.

NEW ROSES

WM. PAUL & SON,
WALTHAM CROSS, Ltd.,

Beg to offer strong plants of the following New Roses raised by them at the Waltham Cross Nurseries :—

Varieties of 1910.

Alice Cory Wright (H.T.), Dwarfs, **7/6** and **10/6** each.
Elsie (Wichuraiana, Rambler), Dwarfs, **7 6** each.
Juliet (Hybrid Briar), Dwarfs, **10 6** each; Standards and Half-Standards, **10 6** each.
Portia (H.T.), Dwarfs, **7/6** each.

Varieties of 1909.

Althea (H.T.), Dwarfs, **3 6** each: **36**/- per dozen.
Cynthia (H.T.), Dwarfs. **3/6** each; **36**/- per dozen; Standards, **5**/- each.
Fairy (Multiflora Rambler), Dwarfs, **2/6** each; **24**/- per dozen.
Margaret (H.T.), Dwarfs, **3/6** each; **36** - per dozen.

For full descriptions of the above, and for New Roses of other raisers and general collection of Roses, see Rose Catalogue, post free on application.

Pauls' Royal Nurseries and Seed Warehouse,
WALTHAM CROSS, HERTS.

FRUIT TREES

We have 50 acres of young Fruit Trees in perfect condition to offer this season. Our **Specialities** are Cordons, Bushes, and Pyramids, and Trained Trees worked on selected **Fruiting Stocks.**

Fully Illustrated Catalogue Post Free.

W. SEABROOK & SONS,
The Nurseries, CHELMSFORD.

Orchids! Orchids!! Orchids!!!

The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application.—**J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

VEITCH'S GENUINE SEEDS

VEITICH'S AUTOCRAT PEA.

A Few Specialities.

VEITCH'S ACME PEA.

Award of Merit, Royal Horticultural Society. A Fine First Early. Per Quart, **2/-.**

VEITCH'S CRITERION PEA.

A Splendid Main Crop Pea ; medium size ; abundant crop ; excellent flavour. Per Quart, **2/6**.

VEITCH'S AUTOCRAT PEA.

First-Class Certificate, Royal Horticultural Society. The Best Late Pea. Per Quart, **2/6**.

VEITCH'S NEW MAMMOTH WHITE RUNNER BEAN.

Equal to our Hackwood Park Success. Per Packet, **1/6 & 2/6**.

VEITCH'S INVICTA TOMATO.

A further trial has confirmed the high opinion formed of this new variety. Per Packet, **1/6**.

VEITCH'S DEFIANCE VEGETABLE MARROW.

A very distinct Marrow of splendid quality. Per Packet, **1/-.**

VEITCH'S SNOWDRIFT POTATO.

Handsome Tubers and Fine Flavour. Per 14 lbs., **3/-.**

ILLUSTRATED SEED CATALOGUE FREE ON APPLICATION.

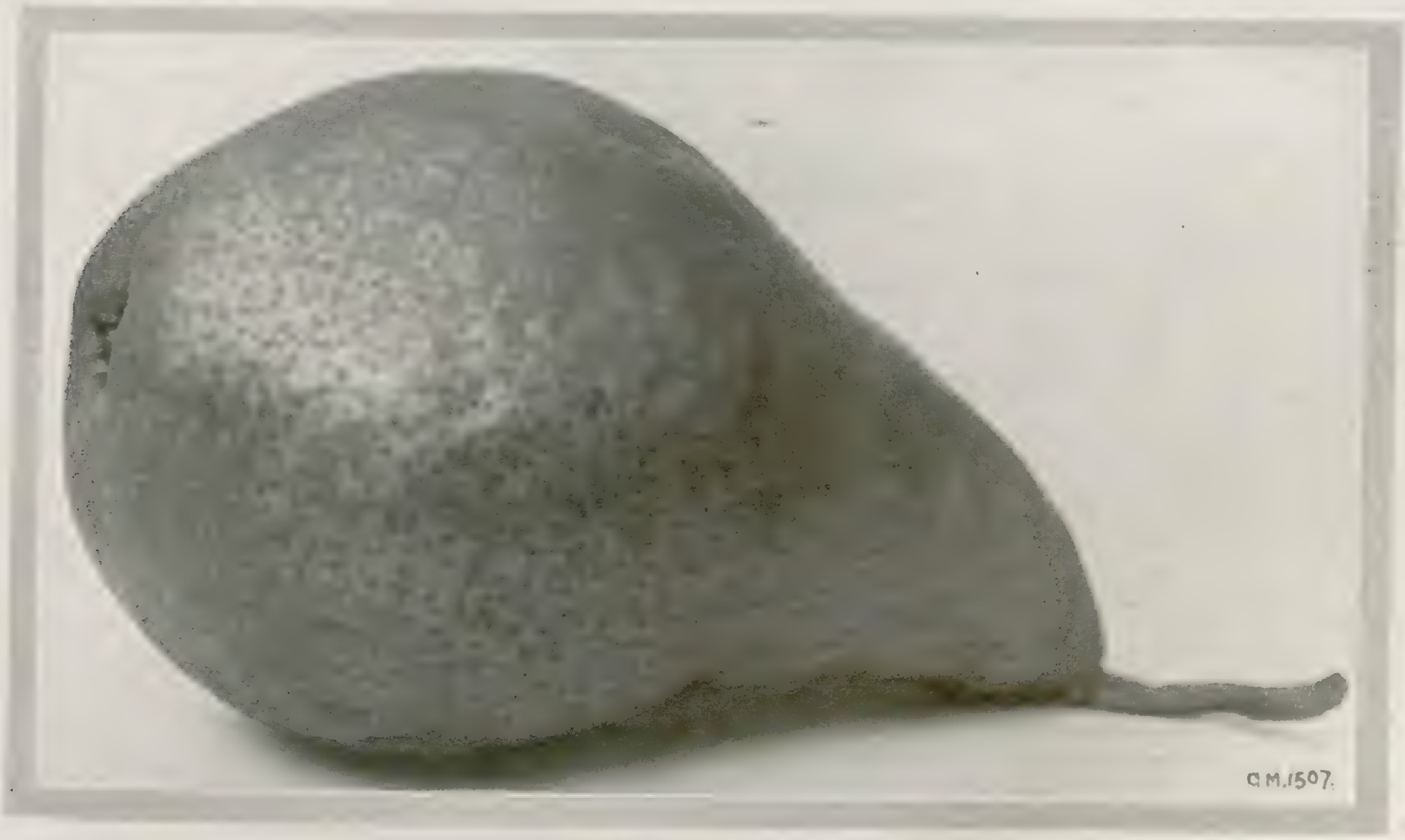
JAMES VEITCH & SONS, Ltd., Royal Exotic Nursery, CHELSEA,
LONDON.

HARDY PLANT CHAT.

◆

Meconopsis integrifolia.

Cultivators of such flowers will generally agree in regretting that this truly handsome meconopsis is only a biennial—a duration of life which is too common among the fascinating flowers of its class. This militates greatly against its popularity, for, so far as one can learn, it has not the powers of propagation from self-sown seeds presented by its ally, M. cambrica, which, as too many experience, is more than a shade too prolific for most gardens, and, once established, and allowed to seed, becomes a weed in very truth, although a very beautiful one. With a view to testing the self-seeding powers of M. integrifolia I have allowed a plant to scatter its seeds, and have given these every opportunity of germinating under natural conditions. Whether it will respond to my consideration is a doubtful question, but I am not at all hopeful.



G.M.1507.

PEAR DURONDEAU.
A valuable dessert variety ripening in October and November.

It would give me the greatest of pleasure could I once naturalise it in my garden. As those who know it are well aware, it is a truly handsome Himalayan poppy, with its fine foliage and its large clear yellow blooms. These are sometimes as much as eight or more inches in diameter, and a clump of good plants is a sight to be long remembered. I believe that the orthodox compost of equal parts of leaf-soil and peat is as good as any, but it is not indispensable, as M. integrifolia can be well grown in light loam and peat or leaf-soil. It grows about a foot and a-half high, in ordinary circumstances but I have seen it both taller and of less stature. I believe in early sowing for this species, and prefer to sow the seeds under glass in March. Self-sown plants left in position would give better specimens, however, and I am desirous of hearing from anyone who has succeeded in raising a stock from self-sown seeds.

Lupinus Somerset.

A good deal of disappointment is often expressed with respect to this lupin, owing, I think, to the fact that seedlings are often sold which have reverted to the tree lupin, which gives the hybrid its yellow colour. The true Somerset, as I knew it at first, was a true herbaceous lupin, but many of the plants called by its name are neither more nor less than plants of Lupinus arboreus. This is not surprising when we understand that plants have been raised from seeds saved from the hybrid, and that many of the seedlings have branched off in the direction of either parent. I had a most interesting talk one day, a year or two ago, with a keen amateur who had been hybridising the tree and herbaceous lupins, and he kindly sent me seeds saved from hybridised plants.

The seed bearer was L. polyphyllus, and the pollen parent L. arboreus. The seedlings came a very mixed lot, and I had a proportion of each class, but the colours were more varied than one would have been likely to secure from either parent unhybridised.

It is unfortunate that L. Somerset has this tendency from seeds, as its clear yellow flowers are nice, and make a good change from the ordinary colours of the many-leaved lupin.

Primula pulverulenta.

One wonders where the new primulas are going to end, and it is in every way likely that China will yet give us several more novelties, although one would almost think that P. Littoniana must have spoken the last word, so far as regards thorough originality among the wild species. What its influence on hybrids may be it is as yet too soon to say. I am merely introducing this unique species by way of remark, for at the present time P. pulverulenta is sure to be a most valuable plant for effect in the garden and for planting in places where P. japonica has hitherto held an almost unrivalled sway. Most of us know what wonderfully fine effects have been produced by P. japonica in the woods and by streamsides, and a great many of us can recall visions of beauty presented by masses of this fine flower. In pulverulenta we have a still nobler primrose, its towering stems, with their whorled flowers, looking more impressive and being capable of making a greater display, especially among rougher undergrowth, than those of P. japonica. Its fine crimson-purple flowers on their powdered stems are most effective, and when we have it in other colours, as we are certain to have some day, we shall have one of the finest of its race for the woods or wild garden, as well as for massing in the border or the rock garden. To grow it well this powdered primrose wants plenty of moisture, and in selecting positions for colonies of it this fact should be kept in mind.

Tecophilæa cyanocrocus.

Tantalus, with all his fruitless toil, had surely never a more disheartening task than that which awaits the owner of a slug-infested garden in endeavouring to grow the lovely "Chilian crocus," which bears the above name, of which it may be said that the more seldom we endeavour to repeat it the better. It is a truly lovely little bulb, with just that soupçon of tenderness which renders it an object of desire to many who cannot grow it. A little crocus-like plant, with flowers of the most charming shade of blue with a whitish throat, and almost gentian-like in the intensity of its colour, makes one long for its happy possession. But, woe is me! This isn't so easy to secure! Slugs travel for many yards to feast upon such a choice morsel, and they seem to brave all obstacles to regale themselves upon such a dainty, with the result that you go out and look for your tecophilæa, and find it cropped to the ground, the hope of the flower and the hope of establishing it in the garden having gone at one and the same time, at the call of a ruthless slimy horror! Still, if we can face the unsightly appearance given by gauze rings and a bell-glass or hand-light over the place where this Chilian crocus grows (which should be a sunny one), and thus give it the needed protection from the slug and rest from rain in summer, we may rejoice in a lovely flower we long to see again in all its beauty in our gardens.

S. Arnott.

THE NEW THEORY IN GARDEN DESIGN.

Progress is the watchword of the gardening community of to-day, and constant change and improvement marks every phase of horticulture. Energy and adaptation are needed by the garden maker at the present time in a far greater degree than ever before. We have noted the predominance of certain ideas in garden design, which, in their turn, have had to surrender the post of honour in public favour to other and newer ideas.

If one looks back and marks how change has followed change, and notes also how far we have advanced in the progress of garden design, he will be constrained to say with me that there is no decadence in garden art, no golden age of perfection to look back upon, nay, rather the golden age of garden art lies before us, a vision clear for the near future. The old English garden was all too rudely swept away by the formalism of the Italian and Dutch garden design. Geometrical patterns, studied stoneware, formal steps, stately fountains were embodied in many English gardens, while the clipped trees and the trim flower beds of the typical Dutch style became necessary adjuncts.

For a certain style of architecture the formal garden is the proper and only effective setting, giving a stately appearance to an imposing mansion. But, mark you, totally unfitted for many styles of residence as built to-day.

The fall of formalism is the direct outcome of the rise of the natural garden. First the herbaceous border, then the rock garden, followed by the water garden and the wild garden, with their relative subportions, the iris garden, the bamboo garden, the fern dell, the heath garden, and the bog garden, have effectively and for ever doomed mere formalism to second place, for never again after enjoying the delights of the more natural garden will the garden lover be beguiled back into the bondage of geometry and rigid lines.

It must, however, be fully understood that all designs for grounds surrounding a residence must be in accordance or harmony with the house; the garden must form a harmonious setting. On the other hand, the tendency to the open-air life is bringing new types of residences into favour. They are smaller, boasting more of the bungalow and country cottage than of the stately palace. This being so, it is easier to bring the natural garden into harmony with such erections, and one can utilise the old-world flagged stone pathway, the bowers of roses, the winding border with its Madonna lilies, pæonies, columbines, irises, etc., to say nothing of honeysuckles, carnations, with a lily pool as a finish. Where one can utilise such schemes in close proximity to the house one can bring the rocks, the running brook, the sloping banks, and valleyed depressions which go to make up the more modern additions to the natural garden.

But what of the "new theory"? It is some time since I emphasised the importance of combining the best features of the Japanese garden with our own natural garden ideas. Now I wish to further promote the ideal combination, the combination of scenic art with floral beauty. There is no need to be afraid of the idea. It is virile, throbbing with life and beauty. The possibilities stretch out beyond the horizon full and free, only waiting for the wit and brain and energy of the younger generation of garden makers to use them to the highest degree.

Examine the idea for yourself. Recognise the importance of studying detail, so that (like the Japanese artist) one can see the whole picture complete before one puts brush to canvas, or spade to ground. The study of proportion in design must be thorough. There must be no incongruous additions, no ultra-heavy schemes, nothing to overbalance or belittle the scheme. Thus it is that the Japanese are so successful in proportionate designs. The rise and fall of mound and valley, the outcrops of rock, the background of pines, the lotus pool, and the iris swamp are correct in their proportions one to another. The work is so carefully performed, the stones and trees chosen, and their abiding places settled, that to the ordinary beholder everything is perfect in arrangement.

There is no jarring note, no protesting incongruities, no rebellious colour designs. Colour may be shown vividly in places, with a background so sombre as to throw the colour into greater relief. Daring contrasts may exist, but there is no clashing of rebel hues, nothing wearying to the eye. All is harmony, peace. My endeavour will be to follow, as far as possible, the Japanese ideals, adapting it to our English surroundings.

Simplicity is the keynote; natural expression is the entire aim. If rocks are used, then let them form a living part of the entire scheme, a few natural outcrops, to be crowned with lowly plants or creeping bush.

If water be in request carry it through the depressions with natural lines and swinging curves.

Shrub plantings should be in good taste, a natural group of any one good subject being better than a bizarre mass. If the land is flat, break it up into waving slopes, graduated depressions, and crowning ridges. In a garden of this description stepping stones are better than gravel paths, and simple rustic bridges than ornate erections.

The backgrounds should, if possible, be dark: herein is mystery revealed. Put your sombre pines, your dark junipers, heavy cedars, stately cupressus, in the background. By so doing you can arrange your foregrounds with more telling effect. That dark cloud-like fringe of firs will throw into greater relief the snowy grace of the cherry or philadelphus. Azaleas like Hinodegiri, Daimio, rosæflora, will gain in fire and intensity. Japanese maples are rendered more charming, and the silvered lines of Acer negundo variegata are pictured in delightful contrast. Although a harmonious whole, the new garden is strikingly individualistic. Individual features will meet the eye at vantage points, and impress themselves upon the memory. It is indeed the ideal pictured garden.

The choice of plants and shrubs must ever be left to individual choice. Too few should be planted, rather than too many. A grand mass of Azalea mollis, or of the rarer Japanese favourites, are charming in their season; anemones and muscari may rove through them in spring with sheets of white and blue. Berberis, or veronicas may be under-run by some of the exquisite smaller violas. Utilise irises, delphiniums, tall campanulas in good positions, but carpet them with cerastiums, linarias, myosotis, and similar subjects. Let carpeting plants cover good breadths to each variety, no intermingled chaos, just simple widespread masses.

Grounds covered with these are quite as restful to the eye as green turf, and of far greater interest. Sedums are ever delightful surfacing subjects, while the showy taller S. spectabile is a fine distance plant, and mirrors grandly in water. Tritomas (the Torch Lilies of late summer) are grand, fiery, inspiring, and picturesque, and at their base can rise pale spring bulbs, followed later by the white blossoms of Saxifrage Wallacei, etc.

Hosts of equally effective combinations cross my mind. Irises and King-cups by the pools, astilbes and lythrums in stately beauty, nymphæas and nuphars on the water-surface. Sulphur, white, and golden brooms upon the dry banks, with waves of ericas beneath, which are a glory in late summer. A fern dell, where ferns mingle with foxglove, asperulas, hyacinths, blue and white anemones, and woodland lilies.

Simplicity must be the great ideal, a perfect harmony. If a garden room or tea house is needed, let the design be as simple, light, and artistic as possible. Cover it with Nature's coverings — wild vines or clematis, polygonums or wistarias, roses or honeysuckles. My few thoughts will, perhaps, be sufficient to convey my ideas. That there is a future for this style of garden I most firmly believe. It will come into far greater prominence, bringing with it a greater appreciation of garden art and artists. The whole survey of garden-work points to this ideal. What is needed is to put this virile, interesting, yet withal simple form of garden adornment into life at its fullest point.

The great days of garden-making are not past. The future is full of promise, and the next generation will witness even greater strides in our cherished horticultural pursuits than the last.

P. S. HAYWARD.

SUMMER-FLOWERING CHRYSANTHEMUMS.

Roots of early varieties which were boxed and placed in cold frames in the autumn for propagation, may now be afforded a little warmth to induce growth for cuttings. A night temperature of 50 deg. Fahr. is quite high enough, for if given too much heat the cuttings become weak and drawn. Boxes may be filled with a mixture of loam, leaf-soil, and sand, to be in readiness for propagating, and when the growths are about two or three inches long they may be taken and dibbled into the boxes, and placed in an early fruit house where they quickly root. When well rooted, and the cuttings commence to grow, the tops may be pinched out, as this will encourage side-growths. About a fortnight after stopping the boxes may be removed to a cold frame. As soon as the cuttings become accustomed to the change of temperature, they should be planted out in the frames, where they will make splendid stuff for spring planting. By following this method of cultivation no great check is experienced, and the plants are kept growing away freely. If allowed to remain in the boxes and become starved they never recover, and when planted out the results are very poor.

The following are useful varieties for bedding or cutting purposes: Horace Martin, yellow; Crimson Queen, Tapis de Neige, and Roi des Blancs, white; Nina Blick, golden bronze; Crimson Marie Masse, Pink Marie Masse, Mrs. W. Sydenham, dark crimson; Robbie Burns, rosy cerise; Ralph Curtis, creamy-white; and Goacher's Crimson. E. C. POOLEY.

CHRYSANTHEMUMS.—For full instructions on the Culture of Early-flowering Chrysanthemums in beds or borders for garden or greenhouse decoration, read the Second Edition of CHRYSANTHEMUMS FOR GARDEN AND GREENHOUSE, by D. B. Crane, price 2s. 6d. net: or by post, 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

WINTER MAMMOTH BROCCOLI.

The value of broccoli in the supply of winter vegetables is very great, and a vast amount of care and patience are expended upon the crops in private and in market gardens. In private gardens no pains are too great if they secure a good crop of neat white cauliflower-like heads, while in market gardens, especially along the south coast, and in the western counties of Cornwall and Devon, the crop is one of the most remunerative when well managed. The right selection of varieties is a point of great importance, and in this connection none are of greater importance than those that come into use at midwinter and the very early spring. One very excellent variety is Sutton's Winter Mammoth, which is highly valued by the Cornish market growers, who send beautiful heads to the London and other large markets during December and January. The heads are of good size and fine texture, while nothing is lacking in the matter of quality when the heads are cooked. At the recent meeting of the Royal Horticultural Society, Messrs. Sutton and Sons, Reading, submitted several dozen heads of this splendid broccoli, as well as a similar number of their slightly earlier variety named Early White.

ODONTOGLOSSUMS.

Being an ardent admirer of odontoglossums generally, and O. crispum in particular, I was much interested in the remarks made by Mr. H. J. Chapman about this class of orchids in the GARDENERS' MAGAZINE of December 31 last. I can fully agree with him, after much experience gained in our leading orchid trade establishments, that the vast improvement seen in the past few years in the cultivation of odontoglossums, and also the facility and ease with which seedlings are raised and grown, is due mainly to the warmer conditions under which the plants are grown in the winter and spring months. As Mr. Chapman points out, it is but a few years ago that we were advised by our leading authorities to grow them in a winter temperature of from 40 to 50 deg. Under such conditions as these, odontoglossums lingered, dwindled, and finally succumbed by the thousand, and the mystery to me now is, that this advice was followed for so long.

But old ideas die very hard amongst gardeners, and I have met with more than one gardener within the past three or four years who still try to grow odontoglossums under the old semi-starvation system. Odontoglossums should not be grown in a temperature which falls below 50 deg. at night, and the nearer this night temperature is to 55 deg. the better, and particularly does this apply to all hybrids descended from O. Harryanum.

Another factor, too which I consider has gone towards the higher cultivation of these plants, is the greater depth of compost used now than was formerly the custom. Under these more liberal conditions of cultivation, odontoglossums are now grown to a degree of excellence that could only have been a dream under the old conditions. And it is also, to my mind, these changed methods that have made possible the production of those fine hybrids which have done so much to beautify and enrich our orchid houses during the past few years. These hybrids are at once most easily grown and managed, and are at the same time highly decorative, and when their merits are more generally known they cannot fail to become appreciated.

A small selection of some of the finest and most easily procurable will include: O. ardentissimum, and its exquisite form O. a. xanthotes, O. Charlesworthi, O. Rolfeæ, O. spectabile, O. Ossulstoni, O. Cooksoni, O. eximium, O. Lambeauianum, and O. Phœbe. But anything written about odontoglossums would be incomplete without allusion to those two grand old species O. crispum and O. Pescatorei. These two most useful decorative plants can now be procured so cheaply, and grown so easily, under similar treatment to that mentioned above, that it is a wonder that they are not grown as plentifully as, say, carnations, in gardens where cut flowers are much in demand. CLYTIE.

BROCCOLI SUTTON'S WINTER MAMMOTH.
A fine winter variety raised and distributed by Messrs. Sutton and Sons, Reading.

DEEP CULTIVATION.

In further reply to Mr. Molyneux's remarks on this important question, page 34, for January 14, I am indeed glad to know that on many points so practical a man as he is and I are agreed. In the first place, I should like to make it quite clear that my advice on trenching entirely referred to vegetable culture, and I have never, to my recollection, advocated the same operations for fruit trees and roses, for the important reason, viz., that whereas the latter two generally remain on the site where planted for many years, in direct opposition the large majority of vegetables are grown and treated as annuals. Consequently the ground requires to be prepared for the same each year.

Mr. Molyneux says the more we discuss the method of trenching the more we shall learn of other people's ideas, and that he is writing for the information of beginners who have had no previous experience. Well, I do not object to this in the least, but whether beginners or not, my advice applies to all, and I say the smaller the garden the more necessary it is to obtain the depth of soil required as speedily as possible, and lose no time in bringing the subsoil into a fertile condition. As in the case of small gardens generally, to meet the requirements the land is invariably overtaxed, and to counteract this trenching should be performed, as far as possible, annually, which means that one practically obtains a fresh soil, which requires less manure, and gives unquestionably a much larger yield.

The advantages that Mr. Molyneux suggets from trenching are quite right, so far as they go, but the principal and main object of having at command a good depth of soil is, that by carrying out a system of trenching annually a fresh and sweet compost is assured, in which the majority of crops will revel. I am fully alive to the fact, and sympathise with those who are not in a position to carry such work into operation, nevertheless, the fact remains that the system I advocate is the right one, though, of course, I may be wrong; but to me it seems absurd to attempt to deal with a stubborn soil buried two or three feet from the influence of the weather, and other agents. I would much rather fight with my enemy in the open than in ambush.

Few great achievements have ever been accomplished without a certain amount of sacrifice, and if trenching is performed at the right season there will be ample time for the beneficial effects of the weather to do much in bringing even the most ungenial soil into a workable condition before the season arrives for sowing or planting. I am bound to admit, and I hope I have always been sufficiently clear, by not misleading anyone, that the first season does necessitate a certain amount of pluck and care, but once having accomplished this the battle is practically won, and the results will more than justify the course adopted. E. BECKETT.

WEATHER AT ROTHAMSTED IN 1910.

The meteorological records of the Rothamsted Experimental Station, Hertfordshire, for 1910 show that the year was characterised by a great excess of rain, even more than that of the year 1909; in fact, the total amount has been equalled or exceeded only about ten times during the past 58 years. This was greatly owing to the enormous quantity which fell in December, viz., 5.36 inches; only once in December since the year 1853 has the rainfall exceeded this amount, namely, in 1876, when 6 inches were recorded. The number of rainy days were 196, being 24 in excess of the average of the past 57 years, and 12 more than in 1908.

The mean temperature of the year was slightly in excess of the average. The most unseasonably warm months were February, October, and December. The last month of the year was 5.4 degrees warmer than November, and only 3 degrees colder than April.

The bright sunshine was 221 hours deficient for the year, there being but four months which showed an excess compared with the average, and eight months of deficiency. March gave the greatest excess of sunshine, namely 42 hours, and July recorded the largest deficiency, namely, 98 hours. The four months of June to September which make up the usual hay and corn harvests in this country, gave a total deficiency of 203 hours of bright sunshine.

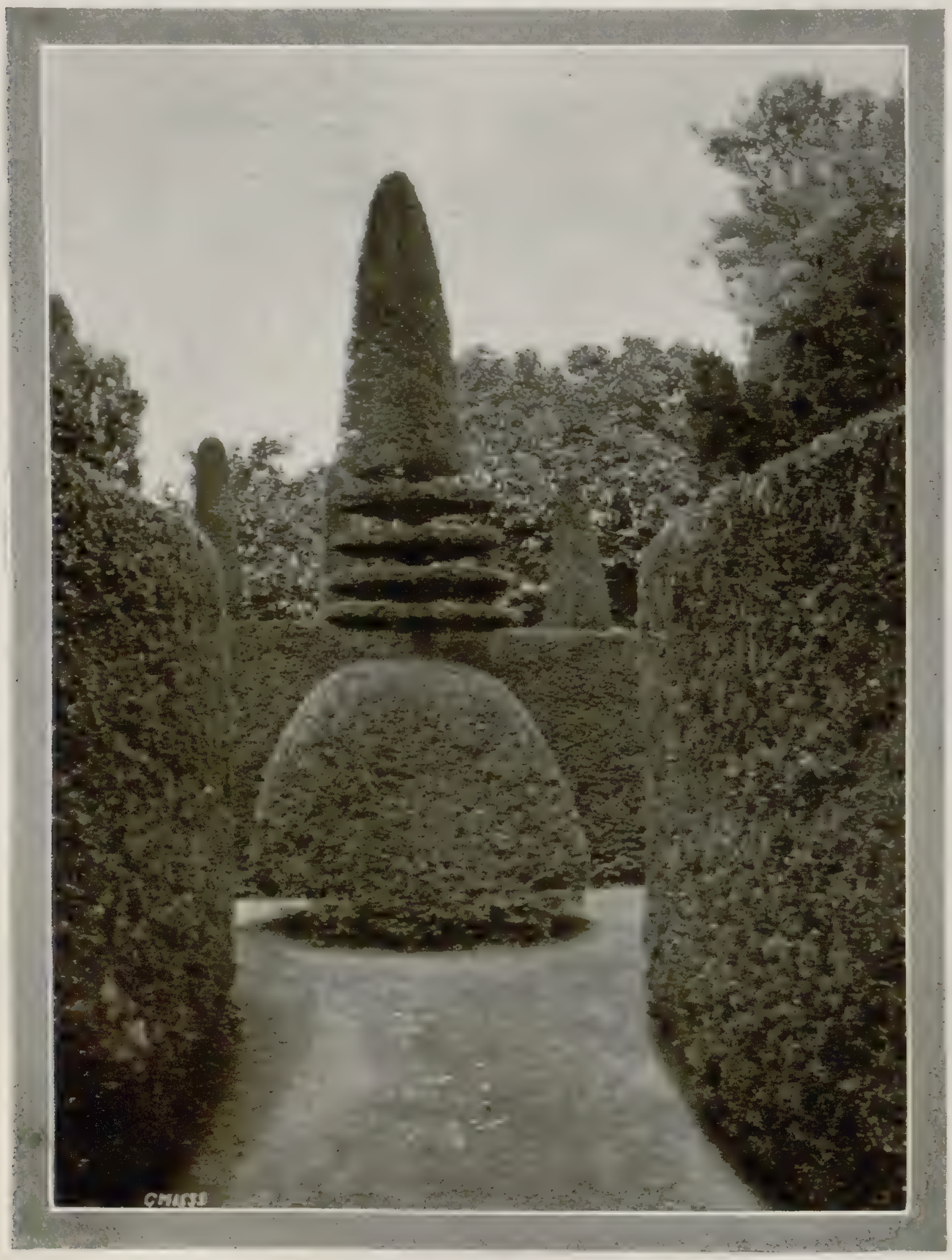
The yearly data shows that the twelve months of 1910 recorded a total rainfall of 32.13 inches, against an average for the previous 57 years, 1853-1909, of slightly over 28 inches, being an excess of a little over 4 inches. Calculating these figures up to the acre, we find that, during the whole year 3,245 tons of water have fallen on each acre of land, which is 406¾ tons of water in excess of the average in this district. The two months of November and December alone gave an excess of rainfall of 445½ tons of water per acre.

The mean temperature, that is the mean of the maximum and minimum temperatures, of each day throughout the year was 48.5 degrees, which is 0.6 degree in excess of the previous 32 years. There were eight months of excess and four months of deficiency, the coldest month of the year being November, which recorded but 37.5 degrees, or 5.1 degrees below normal.

The total of bright sunshine for the year, taken by means of a Campbell-Stokes recorder, was 1,387 hours, against an average of 1,608 hours, showing a deficiency of 221 hours.

The last two months of the year having given an excess of 4.41 inches of rain shows us that our underground water supply is 99,689 gallons of water in excess of the normal quantity on each acre of land in this district.

J. J. Willis.



THE TOPIARY WALK AT MONTACUTE HOUSE.
The residence of W. R. Philips, Esq., Ilminster.

TOPIARY WALK AT MONTACUTE.

The shelter that a well-grown and closely-clipped hedge affords is very welcome, especially during winter and early spring, and such shelters are becoming more and more the rule in gardens now that gardens are being cultivated, used and loved as never before. If the hedge is recessed, buttressed, or carved into other shape than that of a simple wall, an added interest is given, and nothing is lost in the matter of shelter; indeed, a seat may be placed in such recess, and here one may sit in the brighter and warmer days of winter. Where closely clipped hedges run parallel and near each other, the intervening walk provides a pleasant promenade at a time when the wind sweeps coldly across the rest of the garden. Such walks should be planned near the house, though some may well be further away if a dry path leads thereto, and should be so arranged that the coldest and prevailing winds do not sweep down them. If the position is very favourable, a cosy circular or square plot may well occur at the end, or in the centre, of such a walk, and here, away from the wind, with dry stone or brick paving, comfortable and substantial seats, an old sun-dial in the middle and a few quaintly clipped trees around, an hour or two may often be spent pleasantly and in comfort even during the long winter season. All this applies particularly to the southern and western counties, but is equally applicable to the northern counties, except that there the opportunities for enjoying such walks and cosy spots are not so frequent in winter as they are further south. At Montacute House, Ilminster, in Somersetshire, the residence of William R. Philips, Esq., the value of a sheltering topiary walk is understood, and in the present issue an illustration of one end of the walk is given.

K.

TSUGA YUNNANENSIS.

The discovery of this species of tsuga in Yunnan has added another hemlock spruce to our gardens, which is likely to be quite as hardy as the Japanese T. Sieboldi, though it may not thrive in places where the Canadian hemlock spruce would be a success. The species was first described by Franchet in the "Journal de Botanique," 1891, p. 258, from specimens collected by Father Delavay in Yunnan. By Delavay and other collectors it has been met with at an altitude of from 3,000 to nearly 9,000 feet, consequently its hardiness ought to be assured. Seeds were sent home by Mr. E. H. Wilson when collecting in Hupeh, and strong plants have been raised at Coombe Wood. To a casual observer the tree bears a strong resemblance to T. Sieboldi, but the cones are larger than in that species. The branches are spreading, and clothed with small, entire, sessile leaves with slightly revolute margins. The upper surface is channelled, and the under-surface glaucous; the apex is very slightly notched. As is the case with the other Asiatic tsugas this one is likely to form an ornamental bush or small tree, and will be valuable for planting as a change from the yew, the foliage being of a less sombre hue.

W.

LATE PLANTING OF FRUIT TREES.

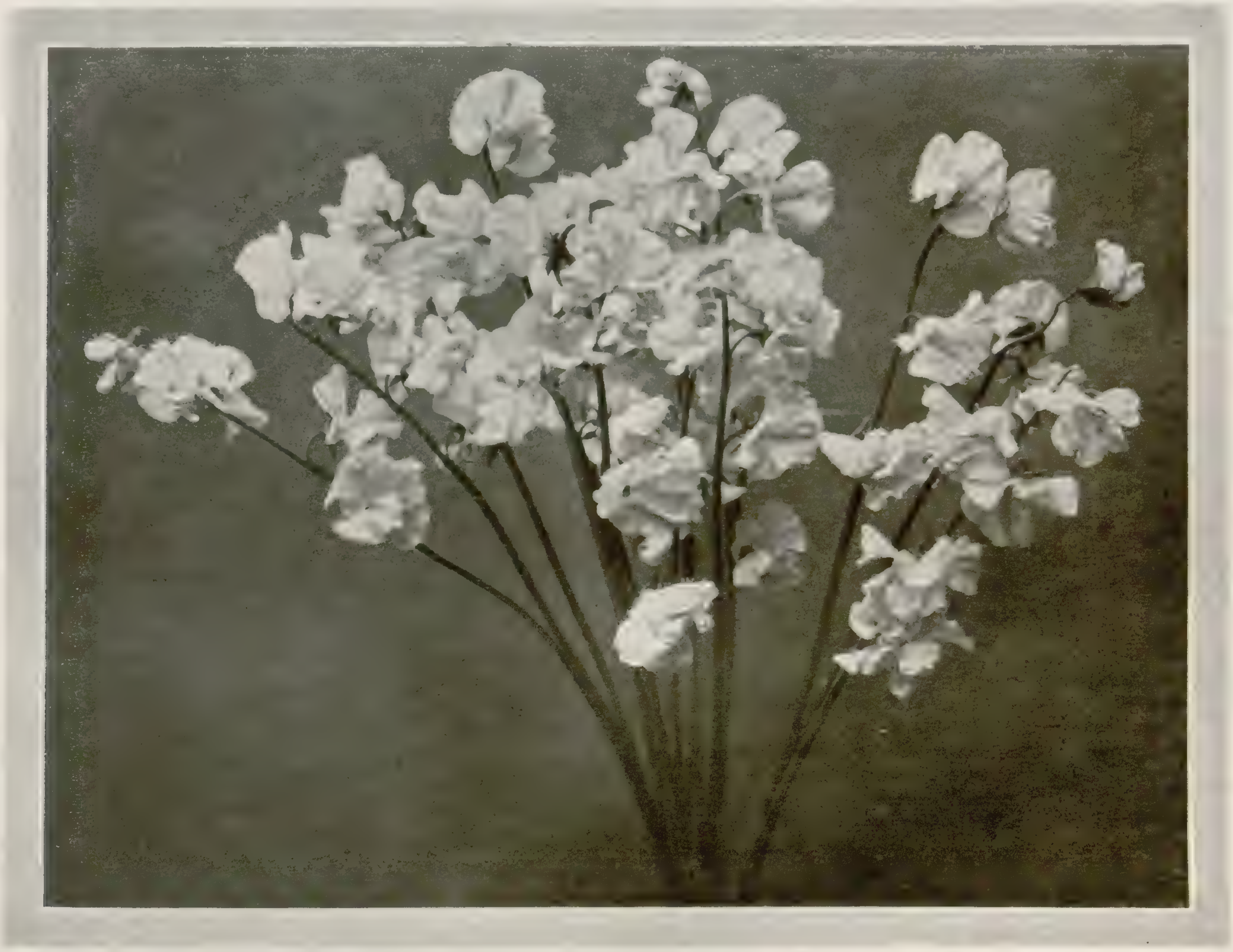
The condition of the weather during the best time for the planting of fruit trees was this season so unfavourable for undertaking these operations, that especially in cases where the soil is heavy, they have been unavoidably delayed, and trees received for the purpose of planting are doubtless, in many instances, as is the case here, laid in to await a suitable planting time. It is, in all cases, best to plant trees as early as is practicable in the planting season, not only because by so doing they are given the best opportunity of making in their new surroundings, before winter sets in, fresh root growth, and by this means they more readily recover from the check occasioned by the operation, but moreover, it is often found difficult, owing to wet or frosty weather, particularly in heavy land, to have, late in the season, a good opportunity of proceeding with the work.

We have before now in wet seasons, surmounted difficulties in planting by making use of specially-prepared soils, and have in this way avoided putting the soil in a pasty condition about the roots, and have thus met with satisfactory results. But according to experiments carried out at Woburn, painstaking in this direction, is, after all, quite unnecessary. Notwithstanding this, and the fact that I have been informed by a practical nursery hand that he has often seen excellent results follow the planting in very wet and pasty soils, I should hesitate before planting trees in our heavy tenacious soils when they are wet and stick. It ought, however, to be remarked that we have no practical proof that, were we to plant under these conditions, they would lead to failure.

Late-planted trees naturally suffer more readily from summer drought than do others, and consequently require extra attention in the way of mulching, watering, and spraying overhead in the evening of hot or dry windy days. Attention to details of management of this description may make all the difference with regard to success and failure, between which there often remains but a very narrow margin. Benefits may likewise be derived from shading the stems, and for this purpose we have sometimes, more particularly in the case of standards, used hay bands, and sections of the bark of larch poles. This calls to mind that I saw many years ago—it must be nearly half a century—either in Hyde Park or the Green Park—large forest trees that had then been recently transplanted, with their trunks and large branches bandaged with hay bands, for the evident purpose of arresting transpiration, and under similar circumstances we have here adopted this plan with evident advantage.

All newly-transplanted trees are the better for having their shoots shortened back when their buds commence to swell, though there was a time when I did not consider pruning trees in the season they were planted an important matter. Further experience has, however, convinced me of the utility of the practice. I have more especially observed its benefits in the case of peaches growing under glass, and if this practice is beneficial in the case of early-planted trees, it is particularly so to those moved late in the season.

T. COOMBER.



SWEET PEA MRS. HENRY BELL.
A beautiful cream-pink variety, as exhibited by Mr. E. A. Broad, Par, Cornwall.

SWEET PEA MRS. HENRY BELL.

This delightful sweet pea belongs to the cream-pink section, and is not only a good variety for exhibition purposes, but is excellent for garden decoration. It was awarded a First Class Certificate by the National Sweet Pea Society in 1908, and was sent out that year by Mr. Robert Bolton, of Warton, Carnforth. The flowers are of good size and finely-waved; the ground colour is creamy, and over this is laid a beautiful rich apricot-pink shade that makes the dainty blossoms very attractive and effective. The accompanying illustration represents a very fine vase of the variety exhibited by Mr. E. A. Broad (gardener, Mr. W. H. Prophet), Par Station, Cornwall, at the exhibition of the National Sweet Pea Society held in July last. The class was for two bunches of waved sweet peas, and Mr. Broad won first prize with Mrs. Henry Bell and Constance Oliver.

The National Rose Society.—At the annual meeting of this popular society there was a divided opinion as to how even a portion of the handsome balance should be spent. I would like to offer a suggestion—a moderate one, too, in point of cash value—and it is that the society improves the ground floor of their show tents so that visitors can inspect with comfort the charming exhibits got together without wading through mud and water, as they have had to do on some occasions at the July show. Surely this could easily be managed, and at a small cost, but with much comfort to the visitors, especially the ladies.—A VISITOR.

THE OLD FARM ORCHARD.

It does not count for much in the world of commercial fruit culture, and very often the old orchards which are attached to dozens of farmsteads in the West Country are held up as objects of scorn and adverse criticism. Unfortunately, many of them deserve it; they are illustrations of what one ought not to do in fruit growing, and neglect is written on every moss-covered tree in the orchard. In the heavy gale which swept over the land a few days before Christmas many an old orchard tree was laid flat on the ground, and while in some cases they will remain where they dropped for many a long day to come, in others they have been sawn up for firewood, but wherever the wind played havoc there is a gap, and one tree the less. Shall another be put in to fill up the vacancy? Perhaps if the farmer put the question to certain experts in the fruit world they would say no, and point to the necessity of planting young trees on fresh land.

If, of course, it were a question of planting a new orchard entirely one would hold them to be right, but it is highly important that the old orchards should not be allowed to drop out, because, in most cases, they are just in the right places for them. When the farmers who are now sleeping in West Country churchyards planted orchards for the prime object of filling cider casks, they did not go a mile away from the homestead to select a site. Not a bit of it: they wanted the orchard close to home. You go into it out of the rickyard, it is a handy place for the poultry, for the ewes and lambs in the spring, for young calves to take their daily exercise, and for the old sow to wander with her young. And all this, by the way, is beneficial for the orchard, because the trees are manured when they are close to the homestead, whereas they get none if they are a distance away, and the contrasts of orchards under these varying conditions proves the point.

We may take it then that the site selected by the original planter is as convenient for the present occupier of the farm as it was for his predecessor; and as the man who planted bestowed a benefit on his successors it is the duty of the farmer and the landlord, jointly, to keep the orchard for present value, and for the sake of those who shall come after. Do they all realise this responsibility? Alas, no. One hears of landlords who are content to see the orchards on their estates become derelict, and will not supply the material for filling them up. What a mistaken policy when one considers that a good orchard is worth fifty pounds an acre or more than the same land would be without the trees. Just so, but the upkeep of an orchard is a dual responsibility shared by landlords and tenants, and in not a few cases it is the latter who are at fault. The story of landlords spending money on trees which farmers have never taken the trouble to look after, and they have died, is only too true, and an orchard can never flourish unless it has the interest of the two parties concerned in it.

But the tale of orchards is not entirely one of neglect of responsibility on part of either landlord or tenant, or both, for in the West Country there are landowners who are proud of the orchards on their estates, as they have good reasons to be, and there are farmers who are also fruit growers that take a delight in their trees.

Let me illustrate a case. It matters not where the farm is situated, nor who it belongs to, and it may suffice to say that it is in a locality where the farms are mostly small, but every one has an orchard attached, everybody grows fruit, everybody makes cider, and most of the members of the local fraternity drink it, some of them after the manner of their fathers, even for breakfast.

Would I come and have a look at his orchard? The invitation came from a farmer who has lived more than half a century, and it was enough to suggest that he, at any rate, took an interest in it, but I learnt to my satisfaction later that he loved it, and one reason for his affection, so he told me, was that no similar area on the farm had paid him anything like his five-acre orchard. We entered the enclosure by way of the stackyard, and before me I beheld what appeared to be a mixed medley of trees, so far as sizes and ages were concerned, but orderly nevertheless, and symmetrical in the rows, just as they were originally planted. As we walked amongst the trees and talked I soon began to realise how much sentiment there was attached to the old orchard, for the man informed me that he was born in the farmhouse on the other side of the stackyard; the holding had been in the occupation of his family for considerably more than a century, and the orchard was originally planted by his grandfather. "There were none of the new-fashioned sorts in those days," said the farmer. "Look, my father grew him from a pip," and he pointed to a big spreading specimen with the dimensions of a forest tree. What was the name of it? Well, he didn't know. They always called them redstreaks, because the apples were striped with red, and though it wasn't a great deal to look at, many a hogshead of cider had been made from that tree. But all the old trees did not possess the vitality of the vigorous specimen referred to, and a few looked as if they had done their life's work. Perhaps they had, the farmer said, but one was a wonderful nice apple to eat when all the others were finished, and he didn't know where he could get another like it, and, besides, it was one the old Dad planted, and he didn't like to do away with it so long as it lived and brought a few apples every other season.

These, however, were the exceptions, and one could see many more years of usefulness in the row of big old trees of Blenheim Pippin, which ran along the end of the orchard, but the lament of the farmer was that "Blemons" didn't come so fine as they used to do, and he went on to recall the size and weight of some notable specimens that the trees had produced in the past. It was easy to observe, however, that he had a great affection for the Blenheim, and, as he put it, he must have a nice apple or two to eat and give to a friend who might come along, and everybody liked a "Blemon."

"Ah! but that Bramley's Seedling is the apple for an orchard," said the farmer, and he went on to tell how a man had brought some into those parts a good many years ago, and he managed to get a few grafts, which he put on a tree, the fruit of which you could neither eat, cook, sell, nor make cider of, and he chose this stock because it was both old and useless. According to my friend's version however, it was the best hit he had ever made in the fruit line, for that old stock is now a splendid tree, which has borne bushels of fine fruit, and specimens of Merryweather's apple of different ages showed how the variety had been chosen before others, not only for grafting, but also for planting in between for filling up vacancies where old trees had dropped out.

"What you want for an orchard," said the man, with the evidence of conviction, "is a sort as 'ull not only bring good fruit, but will grow and make a fine tree, and Bramley 'ull do both. If I'd got five acres of good land close to home, and my own property, I'd plant it with Bramley's tomorrow. Talk about orchards not paying, they'll pay right enough if you look after 'em, and grow the right sorts of fruit."

I broached the subject of pruning, and the farmer waxed eloquent again. He did his own pruning, and the reason was that he engaged a local expert to prune some old trees once that were, as he thought, too thick, and, thinking the professional man knew more about it, he left the job to him, but the man cut the trees about so severely that they were years before they recovered and bore a crop. The instance taught its lesson, however, that the best thing to do is to use old trees gently in the matter of pruning, and to bring up young ones so that when they get old they never want a waggon-load of stuff cutting out of them.

Did space permit I could write a good deal more about this old farm orchard and the man who cares for it, but to me it was an excellent object-lesson, for, in the first place, it was old and contained some trees that were originally planted in it. There were others planted or grafted on existing stocks years later, and now in full bearing, others put in more recently still and becoming established, and others again only planted this season. Will that orchard grow old? Not a bit of it. Need any orchard become derelict, as many unfortunately are? No, because trees do not all drop out at once; the process of degeneration is slow, and if steps are taken to fill up gaps as they occur, if the trees are properly manured and cared for, by the time the oldest drop out others planted since have come into a good state of bearing. Thus the old orchard is made young again, as in the instance described, and as I shook hands with him over the gate the farmer said, "I'm fond of the old orchard, and hope the lads will take care of it when I'm gone."

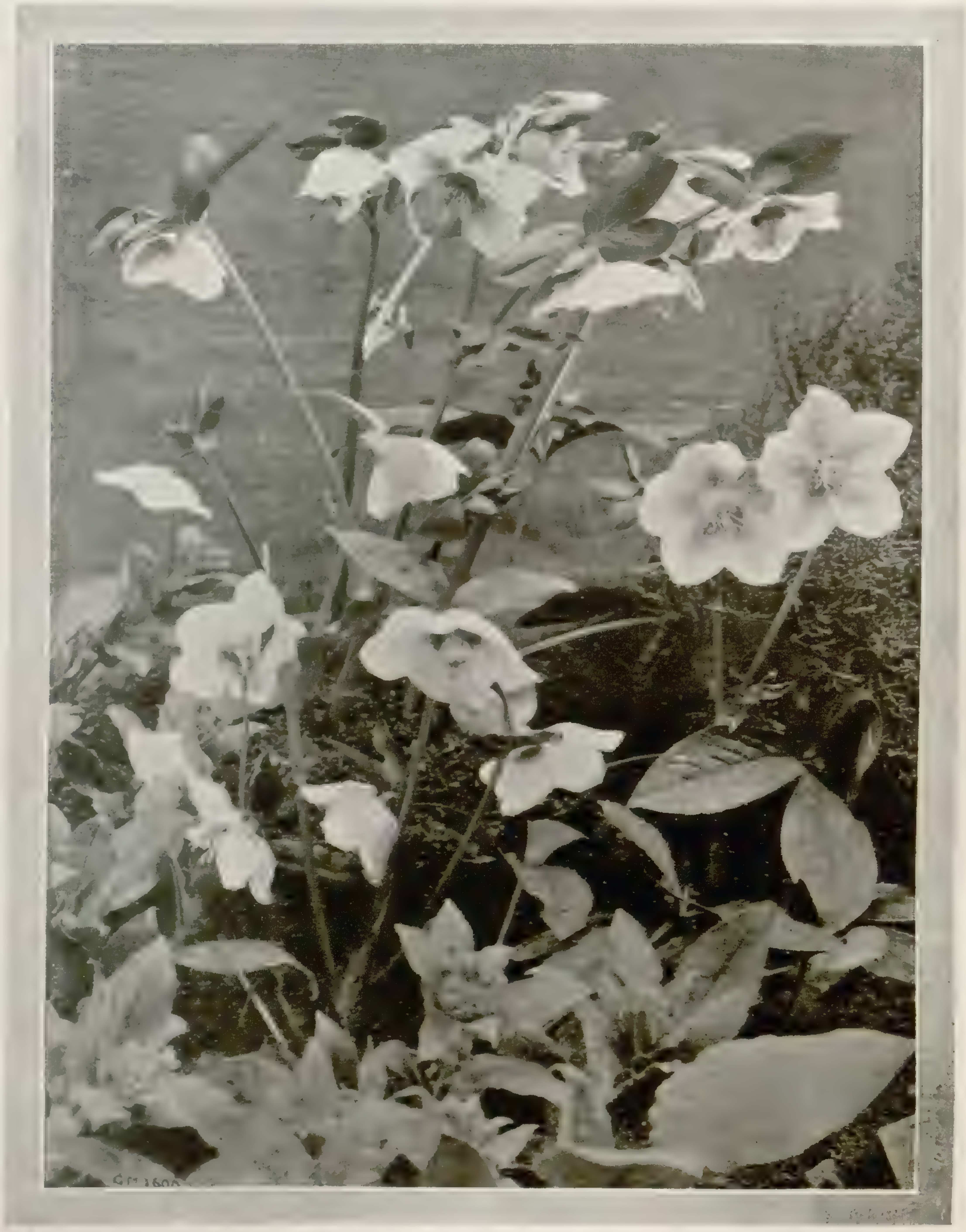
H.

THE COMMON CORAL TREE.

The Common Coral Tree (Erythrina crista-galli) is one of the best known of the many beautiful plants that have a place in the gardens of this country, but we venture to suggest that but few of those who are well acquainted with it have seen a specimen that would compare with the magnificent example that is represented in a photograph that was sent us by Mr. Rundle some time since, but which unfortunately is not suitable for reproduction. The photograph shows the remarkable proportions of the specimen, but the finely-developed flower spikes are not sufficiently clear to admit of their having justice done them in process of engraving. This fine example has a place in the gardens of Bosahan, the Cornish seat of Sir A. P. Vivian, C.B., and is of interest as evidence of the remarkable development of plants from temperate regions in this favoured county, and the high character of the cultural skill that obtains in the interesting and beautiful gardens of Bosahan. As we look at the photograph of the specimen, and admire its immense proportions, it is not difficult to understand that the position it occupies is warm and sheltered, and that Mr. Rundle, the head gardener, is careful to keep the soil about its roots in a fertile condition by the use of rich top dressings when necessary. The books tell us that this erythrina ranges from six to eight feet in height, and this is true enough of specimens usually met with in gardens in counties less favoured than Cornwall, but, as is so readily seen, the Bosahan specimen greatly exceeds the maximum height given.

HELLEBORUS GUTTATUS.

There is some difference of opinion as to whether the Lenten Rose, so frequently referred to as Helleborus guttatus should be regarded as a species or a variety. At Kew it is regarded as a species, but in other directions it is considered to be a variety of H. orientalis, with H. subpunctatus as a sub-variety. It is very distinct from H. orientalis proper, and is a very beautiful and early blooming plant, the flowers opening out of doors in January and February in favourable localities and seasons. As in the case of most Lenten Roses, the blooms last a long time, and are very charming when cut and placed in small specimen glasses. The flowers of H. guttatus are about two inches broad, white, spotted and speckled with purple, and one stem will carry from two to seven flowers. As it is so free flowering a few plants by a sheltered woodland walk, or in a favourable and moist part of the rock garden, will form a pleasing and attractive feature during the first three months of the year. The present illustration represents a plant exhibited by Messrs. T. S. Ware, Lim., Feltham, at the meeting of the Royal Horticultural Society held on January 17. A good deal of work is in progress among hellebores, and many growers, amateurs and traders, are doing their best to improve these winter flowers by cross-fertilisation, hybridisation, and selection, so that before long we may expect finer flowers, greater freedom, and a wider range of colouring.



HELLEBORUS GUTTATUS.
A fine Hellebore, with white, purple-spotted flowers; as exhibited recently by Messrs. T. S. Ware, Lim., Feltham.

EVERGREEN SHRUBS FOR WALLS.

We are reminded at this season of the value of evergreen shrubs for clothing house walls, etc. It is true that many of the more beautiful subjects available for clothing walls are deciduous and innocent of leaves during the dull season, and this leads me to say that, if evergreens were interspersed with deciduous subjects, matters would be improved, and, at any rate, a partially furnished appearance would be ensured the year through.

In favoured parts of the country camellias not only do duty on the house walls, but are employed in sheltered spots in the shrubbery, and good examples may be seen in the Royal Gardens, Kew. The ordinary form, or type plant, C. japonica, is perhaps the best for our purpose, and its ample and glossy leaves have a cheery appearance. It must be given a position on a south wall.

A splendid subject is seen in Magnolia grandiflora, and, apart from the immense pure white and fragrant blossoms, the foliage is of a noble character. When established against a south wall it grows with great freedom, and is capable of covering a very large space in the course of a few years. It cannot be expected to flower satisfactorily unless fairly rich soil is provided, together with annual dressings of manure, and an occasional dose of nitrate of soda from early summer onwards. This plant is sold in pots, and so can be planted in permanent quarters at all seasons with safety. Early spring is the best time as being the season of renewed activity. The plants become established at once. The Fire Thorn, Cratægus (Pyracantha) Lelandi has become widely distributed, and fine examples are seen covering house walls all over the country.

Having in mind the old adage, "Good wine needs no bush," we pass on to notice the more refined and handsome amongst the ivies. Amateurs generally fail to take advantage of the exceeding beauty that is to be found in this family of plants, but, on the other hand, employ the coarse kinds to furnish the wall surface. Hedera madeiriensis variegata is the finest of all variegated forms, and is exceedingly effective. H. palmata aurea has bright yellow leaves, which are edged with green. H. argentea rubra, green, edged with red and white, is very attractive, as is also H. Cavendishi, with distinct silver foliage. H. albo-lutescens, white and yellow, Cripps, green, margined white; Palmata aurea, yellow, edged green; H. canariensis aurea maculata, blotched and streaked yellow; and H. spectralis aurea are a good selection. Ivies are invariably supplied in pots by nurserymen, and care must be taken that the ball of soil is not broken in planting them in permanent quarters. I noted a wall in the public gardens at Guildford some years ago, which contained a number of the choicest kinds, about 2ft. of space being allotted to each, and it proved both an interesting and beautiful feature.

Splendid examples of the Common Myrtle (Myrtus communis) are seen, both in bush form and against house walls in the West of England, and great is the pity that it is not employed upon a more extensive scale in this way, or at least as a wall shrub, in the South of England and the Midlands. Protection could easily be given during severe periods by means of large branches of coarse evergreens, such as the laurel, and while reed and other mats are available, their presence is not to be desired in the dressed portion of the garden. Garrya elliptica clamours for mention and attention, being distinctly ornamental by reason of its deep green leaves and long pendulous catkins, which are freely produced in the early part of the season. Experiments have gone to show and prove that this Californian shrub is sufficiently hardy to come through our winters practically unscathed over the greater part of this country, provided it is given a sheltered position in the shrubbery, or, again, as a wall subject. It is superfluous to dwell upon the merits of Cotoneaster microphylla and other species for the purpose indicated, and it must suffice to say that they contribute in liberal fashion to render the garden bright and attractive when winter is upon us.

Walter H. Aggett.

NOTES FROM SCOTLAND.

◆

The Past Year: A Retrospect.

With the advent of the New Year a turning point in the life and environment of the ardent horticulturist appears to have been passed, as with renewed hope and ambition the individual blessed with good health and a fairly comfortable sphere of duties, can afford to view with a large degree of complacency the petty annoyances and disappointments that, as a cultivator, are almost sure to beset his pathway in due course; and even were it possible to forecast these at the present time it would in most cases be useless to brood over them.

The weather of the past year has been largely commented on in the horticultural press, and other papers, and unfavourably generally. Judging mainly from these sources of what has taken place elsewhere, one would be inclined to think that Scotland, but more particularly the southern and extreme northern districts, had enjoyed comparative immunity from the excess of rainfall and gloomy skies that have so generally prevailed. Apart from this, however, the rainfall here, in the south-west of the country, was approximately the average of previous years, viz., 43 inches; the wettest month being August with 6.50 inches, upon which the totals for November and December approached very closely. The total amount of bright sunshine I am unable to give, as this is not recorded here; but, referring to memory and close observation of the weather for the past thirty years, there have been but very few more genial, and generally propitious for the horticulturist and the various subjects under his charge, than the one just closed.

The Hardy Fruit Crops.

The scarcity of these, but more especially of the larger kinds—apples, pears, and plums, so much deplored throughout the country, finds no echo in this part, as for several years past the crops of the two first-named have not been equalled for bulk; while, owing to the favourable weather that prevailed during the greater part of September and October, whereby thorough maturity of the fruit was assured, the respective varieties have ripened in good succession. Those still undergoing the process give promise of being equally satisfactory in this respect, thus ensuring an ample supply for all necessary purposes until the spring is far advanced. Owing partly to this cause, such high-flavoured, but somewhat unreliable varieties as Blenheim, Ribston, and Cox's Orange Pippins are much superior, both in quality and appearance, than is generally the case with open-air produce in northern gardens. The same remark applies equally to pears, which were fairly plentiful and good, and the later sorts have ripened well, and the very latest, as Easter Beurre, Beurre Rance, and a few other well-known and generally cultivated sorts appear to be following upon the same satisfactory lines. Medlars are not much grown in Scotland owing probably to their uncertainty in fruiting, and the lateness at which the fruit is developed, thus often rendering it useless for dessert. Last year the fruit remained upon the trees until the early part of November, and being then gathered and stored made several quaint but highly-appreciated dishes of fruit at Christmastide.

Green Vegetables and Root Crops.

It may be readily surmised that atmospheric conditions proving so beneficial to the foregoing crops would exercise a like influence upon the humbler, but not less necessary, vegetable products. In respect to this, it is correct to say that the supply of many kinds was abundant and good in quality. The absence of severe frost enabled the late-planted cauliflowers to continue growth almost unchecked, and small but useful heads were available to the end of the year, which, together with broccoli, made daily supplies of these much-prized vegetables possible. Brussels sprouts, celery, and all kinds of root crops, as well as the various green and the blanched forms of salading, made excellent growth until late in the season, so that supplies of this kind are plentiful and will continue so for some time to come.

The mild moist weather of the past two months, while favouring growth and enabling good progress to be made with certain kinds of work, has been inimical to working the soil, and with the season for sowing and planting rapidly approaching a change to drier and more bracing conditions is now much desired. James Day.

SOME INTERESTING CONIFERS.—I.

In the ensuing notes attention is directed to a few interesting and showy conifers which are worth special attention on the part of cultivators.

Ginkgo biloba.

This, the Salisburia, or Maidenhair Tree of some gardens, forms one of the choicest trees we possess, and one of the most distinct. Mature trees are of decidedly ornamental outline, though young examples are inclined to run up slender, with a meagre branch system. With age branches become more numerous, and trees 50 to 80 feet high offer a pleasing aspect. It may be easily distinguished from other trees by reason of its green fan-like leaves, resembling gigantic pinnules of a maidenhair fern. As it is diœcious, fruits are rarely seen in British gardens. Here and there, however, they are borne. They are not like those of other conifers, but resemble a small yellow plum, with moderately thick flesh, and a stone half an inch, or thereabouts across. In China and Japan these fruits are an esteemed article of food, being eaten both raw and roasted. The tree thrives best in good, but comparatively light soil, which may either be of a loamy or a peaty character. The species is said to have been first introduced to this country about 1754. Several varieties are known, but they are of less value than the type. It is increased by means of imported seeds, which germinate readily.

Cephalotaxus Fortunei.

Several species of cephalotaxus are known, but as they are very similar in many respects it is not worth while growing more than one species except where scientific collections of trees and shrubs are encouraged. The different kinds are yew-like in character, but the leaves are very much larger than those of any yew. C. Fortunei is a native of North China, from whence it was introduced by Mr. Fortune about sixty-two years ago. Under cultivation it grows into a large bush, eight feet or more high, and as far through, well clothed with branches from the base. The leaves are 2½ to 3½ inches long, acuminate, dark green above and pale beneath, marked with two silver lines. Oval fruits an inch or more long are borne; they are made up of a fleshy shell enclosing a brownish nut. It is worth planting instead of the yew in the Southern and Midland counties, but is hardly suitable for very cold places. One of the other species, C. pedunculata, possesses a curious variety of fastigiate habit called fastigiata. It does not grow very tall, but is of very distinct appearance.

Podocarpus alpina.

This is perhaps the hardiest of the various species of podocarpus, for, though several thrive in Cornwall and other counties with a similar climate, P. alpina is the only one which can be relied on in the neighbourhood of London. It is found at a fairly high elevation in Tasmania, hence its hardy character. Never reaching a great height, it is a suitable bush for growing on a rockery. The branches are slender, and grow in a confused mass, to form a dense bush two to three feet high. The yew-like leaves are small, linear, about half an inch long, and paler in colour than those of the yew. It is perhaps the smallest growing species of the genus, for many of them form timber trees. P. Totara is one of the most important timber trees of New Zealand.

Prumnopitys elegans.

The Messrs. Veitch, of Chelsea, succeeded in introducing this distinct yew-like bush, or small tree, in 1860. It was sent to them from Chili by their collector, Richard Pearce, who was instrumental in sending home the forerunners of the beautiful race of tuberous begonias which is now so popular everywhere. Under natural conditions it is said to attain a height of 50 feet, but under cultivation it appears as a large-sized bush, evenly clothed with branches from base to summit. Its fruits are said to be large, plum-like, and edible, but they are rarely, if ever, produced here. The colour of the leaves is of a much brighter green than that of any variety of yew, hence the value of the species as a substitute for the yew where a bush of less sombre appearance is desired. Cuttings of half-ripe shoots, taken towards the end of July, root readily either in a warm case or cold frame. The bush thrives in lightish loam, and also in peaty soil.

Saxegothæa conspicua.

This is sometimes spoken of as "Prince Albert's yew," on account of its generic name being given in honour of the late Prince Consort. It is a native of Southern Chili and Patagonia, and was introduced in 1849 by William Lobb. Its introduction created a considerable amount of excitement in scientific circles, for it differed from any other known conifer, though it possessed characters which agreed with those of several other genera. Unfortunately, it is not hardy enough to succeed in any but the most favoured parts of the country, for though it exists out of doors in the neighbourhood of London, it makes very slow progress, and looks quite another species when compared with such free-growing examples as those at Strete Raleigh, in Devonshire. On that estate there are two magnificent specimens, upwards of 40 feet high, clothed to the ground with branches. The trees are of free and graceful outline, and though the leaves are yew-like in shape, they are relieved from the depressing effect of those of that tree by silvery lines on the under surface. The Strete Raleigh trees are reputed to be two of the earliest introductions to this country. They flower well each year. Flowering specimens have also been received from a tree growing on Lord Arthur Brown's estate at Westport, in Ireland. Dr. Lindley, in a description of this species, said that it "has the male flowers of the podocarp, the cone of a dammara, the fruit of a juniper, the seed of a dacrydium, and the appearance of a yew." W.

Chester Nurseries
Over 500 Acres in Extent.

GRAPE VINES.
Strong and perfectly ripened.
Strong and Extra Strong Canes for planting out, **5/-** and **7/6** each.
Extra Strong Canes for fruiting in pots, **10/6** and **12/6** each.

Fruit Trees in Pots.
Strong Pyramids, established.
Apples, Pears, Plums, **3/6** and **5/-** each.
Nectarines, Peaches, **5/-**, **7/6**, and **10/6** each
Apricots, Cherries, **5/-** and **7/6** each.

SEAKALE
(Forcing).
LILY WHITE, SOLID IVORY, & PURPLE,
Extra Strong, **14/-** and **18/-** per 100.
Extra Extra Strong, **21/-** per 100.

ASPARAGUS
(Forcing).
Extra Strong, **20/-** per 100.
New Illustrated Catalogues of all Departments free on application.

DICKSONS,
Royal Nurseries, CHESTER.

Do you wish to grow
BIG ONIONS?
THEN YOU MUST HAVE
CRANSTON'S EXCELSIOR
— or AILSA CRAIG —

quite a waste of time to grow anything else. They are synonymous, although you may not believe it, and perhaps you fancy one name more than another. One thing, however, is certain; that I hold the best-selected stock of seed in the world. Guaranteed new, pure, and grown by the raiser. The original and proper name is "Cranston's Excelsior."

SEED—per packet, **1/-**
3 packets, **2/6** 12 packets, **9/-**

JOHN WILSON,
SEED MERCHANT,
HEREFORD.

ANT ROOZEN
& SON'S
SEEDS,
BULBS,
AND
PLANTS
For Spring, 1911.

THE CATALOGUE of above is NOW READY, and will be sent, post free, on application to their Offices at . . .

OVERVEEN, HAARLEM, HOLLAND;
Or to their General Agents,
MERTENS and CO.,
3, Cross Lane, LONDON, E.C.

Burpee's
The Leading American Seed Catalog for 1911

"THE SILENT SALESMAN" of the World's Largest Mail-Order Seed Trade tells the *plain truth* about the Best Seeds that can be grown—as proved at our famous FORDHOOK FARMS—the largest Trial Grounds in America. Handsomely bound with covers lithographed in nine colours it shows, with the six coloured plates, Seventeen Choicest Vegetables and most Beautiful New Flowers.

It is a SAFE GUIDE to success in the garden, and should be consulted by every one who plants seeds. It is mailed FREE to all who appreciate QUALITY IN SEEDS. Shall we mail YOU a copy? If so, kindly *name this magazine* and write TO-DAY!

W. Atlee Burpee & Co.
Burpee Buildings, Philadelphia

BUNYARD'S
FRUIT TREES

The Best Quality and Largest Selection at Moderate Prices.

WRITE FOR CATALOGUE.

GEO. BUNYARD
& CO., LTD.,
Royal Nurseries,
MAIDSTONE.

THE MOST UNIQUE
SWEET PEA LIST
In the World
IS NOW READY.
PLEASE SEND POSTCARD FOR SAME.
My ANGLO-AMERICAN COLLECTION, 5/-
15 Varieties (including Roosevelt, Nightingale, Perkin, Mrs. H. Dickson, Sunpf. Crimson) is the best value in the Sweet Pea world. Will make a very appreciative present. My stocks are the truest humanity can produce! My aim is to oblige!

G. H. MACKERETH,
The Sweet Pea Clearing House,
ULVERSTON.

Note my special offer of Mr. W. P. Wright's most interesting Sweet Pea Note Book.

HALLAM'S
GOLD MEDAL
SWEET PEAS
All 'Waved' Varieties.
Selected by specialists, and guaranteed *English grown.*
Finest value seeds sold.
Send to-day for our List
HALLAM'S (Dept. 5),
Moseley, Birmingham

NEW GARDEN PEA FOR 1911.
MASSEY'S RELIANCE, per packet 1s. post free.

Mr. W. A. COOK, Head Gardener to Sir E. G. LODER, Bart., writes: "I am very pleased to inform you it proved a great success, especially as it was such a cold wet time for early peas. Sown on the same day as several other varieties, it was not one day behind, and is equal in bulk to anything I have ever grown. Haulm about three feet, with especially long pods for so early a Pea."

GEO. MASSEY & SONS, Seedsmen, SPALDING.

GREEN'S
PATENT
HOT WATER BOILERS
and HEATING
APPARATUS.

For Public and Private Buildings, Greenhouses, Conservatories, etc.

SPECIAL BOILERS MADE TO ORDER.

ESTIMATES GIVEN

Please write for Price List No. 4.

THOMAS GREEN & SON, Ltd.,
Smithfield Ironworks, North St., Leeds, and
NEW SURREY WORKS, SOUTHWARK ST.,
LONDON, S.E.

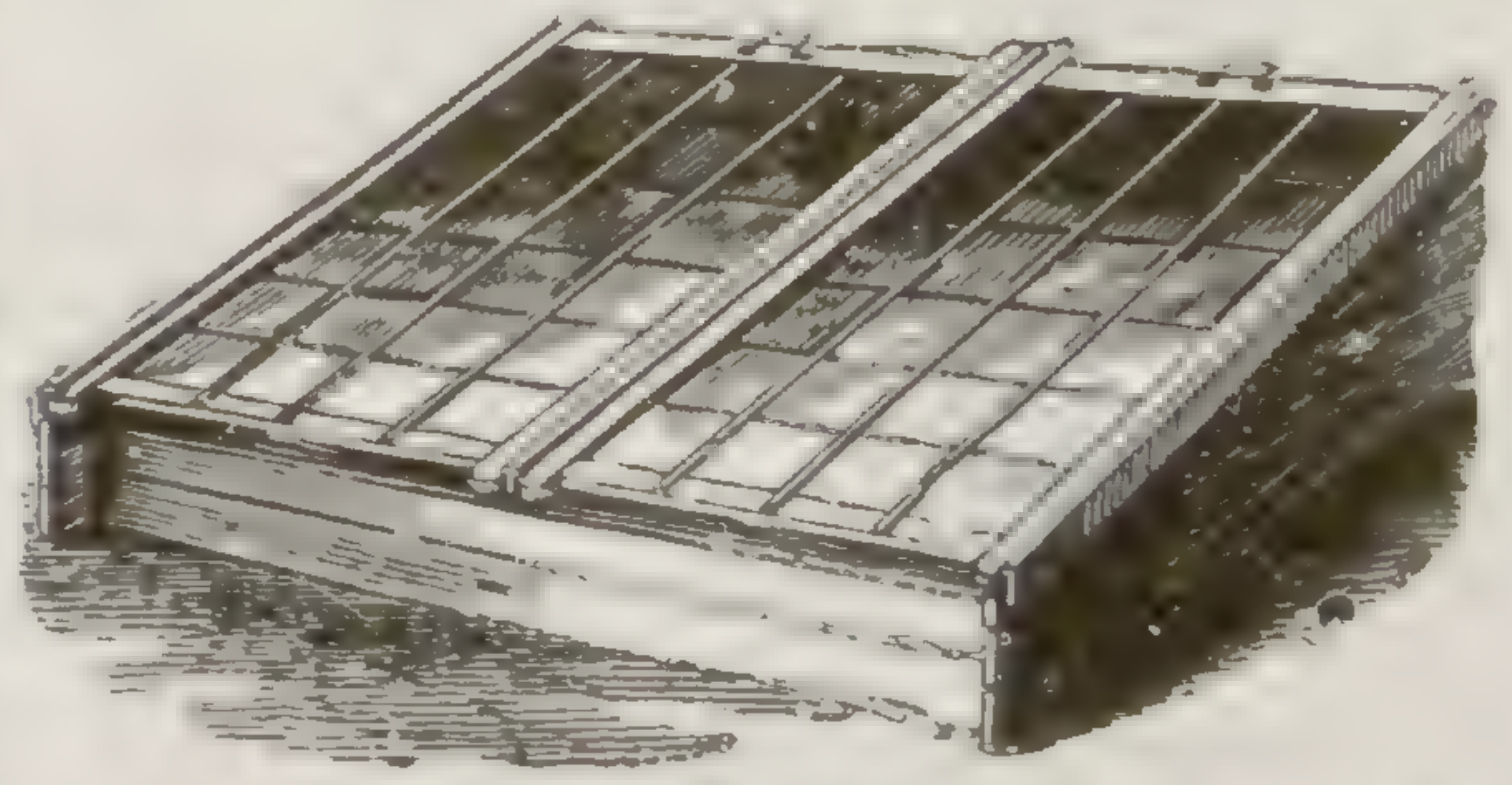
NICOTICIDE Kills all Greenhouse Insects in one Application.
(FUMIGANT.)

	Cubic ft.	each.
Half-gallon Tin, contains sufficient for	160,000	**60/-**
No. 1 size Tin—1 pint ,, ,,	40,000	**15/-**
No. 2 size Tin—½ pint ,, ,,	20,000	**7/6**
No. 3 size Bottle—6 oz. ,, ,,	12,000	**4/6**
No. 4 size Bottle—4 oz. ,, ,,	8,000	**3/-**
No. 4½ size Bottle—2 oz. ,, ,,	4,000	**1/8**
No. 5 size Bottle—1 oz. ,, ,,	2,000	**10d.**

Carriage Paid.

Fumigators, 1/- each for 5,000 cubic ft.
Nicoticide Plant Spray.
Half-pint, **1/2**; Pint, **2/-**; Qrt., **3/6**; Half-gall., **5/-**; Gallon, **10/-**
Use 1 part to 40 parts for green fly, etc. Carriage paid.
Ask your Seedsman for our Goods.
HUNTER & GOW,
45, THOMAS STREET, LIVERPOOL.

PORTABLE
CUCUMBER FRAMES.
OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.		£	s.	d.
1-light 4 ft. by 6 ft.	CASH PRICES.	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.	CARRIAGE PAID.	5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON, MANCHESTER.

Barr's
Lawn Phytobroma
The best Manure for all Lawns.

The most economical of all artificial manures, 2 oz. to the square yard only being required.
Per cwt., **20/-**; ½-cwt., **12/6**; 28lb., **7/6**; 14lb., **4/6**; 7lb., **2/6**; sample tins, **1/-**.
Prepaid Orders for 28lbs. and upwards, carriage paid.
Circular with full particulars, on Application.

BARR & SONS,
11, 12, & 13 KING STREET, COVENT GARDEN, LONDON.

'Phone: Hop. 763.

When next a Small Boiler you require

TRY

THE HEEL

NONE TO BEAT IT.

THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.

4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

A Work that will Guide you the Whole Year round.

ONE SHILLING NET, by post, 1/3.

THE . .
GARDENING YEAR BOOK for 1911
A COMPLETE GUIDE TO THE GARDEN FOR THE YEAR.
53RD YEAR OF PUBLICATION.
The Calendar for the Year interleaved with ruled paper for daily memoranda.

CONTENTS:—

- The Year's Work in the Garden, Greenhouse, Flower Garden: Fruit and Vegetables.
- The Best Plants, Flowers, Fruits and Vegetables for the Garden.
- Insect Pests—Prevention and Eradication clearly described.
- Unusual Annuals and Biennials.
- Beautiful Flowering Shrubs.
- Late Flowering Tulips.
- Early Vegetables.
- Raspberries and Loganberries.
- New Plants and Flowers of 1910.

TWO COLOURED PLATES.

ALSO . .
A DIRECTORY of Horticultural Societies of the United Kingdom, and List of Public Parks and Gardens, giving full Information relating to the Authorities controlling them, names of Superintendents, etc.

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE," 148 & 149, Aldersgate St., London, E.C.

Please send me a copy of "THE GARDENING YEAR BOOK," 1911, for which I enclose 1/3.

Name ....

Address ....

THE KIRKBRIDE NURSERIES.

Away beyond Carlisle, amid the wildly picturesque scenery for which Cumberland is famous, is the quiet, old-world village of Kirkbride. It is from this village that large numbers of the noted Cumberland hams come, and for generations the hardy bordermen round about have earned their living by pig breeding, wild fowling, fruit growing, and other rural pursuits. It is now, however, thirty years or more since the staid inhabitants of this quiet little village witnessed the foundation of a new enterprise in their midst, and we may imagine they looked upon this with astonishment, if not with some contempt. They probably failed to realise that in starting a nursery for the cultivation of alpine and other hardy flowering plants Messrs. Stormonth and Son were laying the foundation of a business that would make their little village known among horticulturists throughout the kingdom. This, however, it has proved, for Messrs. Stormonth have long held a prominent position as specialists of hardy border and rock plants, and now they have added a seed and bulb department to their business, which bids fair in the near future to become equally as important as the nursery itself. It was my privilege awhile since when in the neighbourhood of Carlisle to spend a pleasant hour or so in this interesting nursery, and many were the choice plants for the rockery and the herbaceous border that came under my notice. The nursery is not remarkable for its great extent, but its ten or a dozen acres are exceptionally well stocked, there being no waste space anywhere, and certainly nothing was seen that was not really useful stock. A part of the home nursery is occupied by fruit trees, which bear heavy and profitable crops, but even here it is found possible to utilise the space between the trees by planting judiciously subjects that can best be grown in partial shade. It is very evident as one walks around this nursery that it is under the control of one who thoroughly knows his plants, and indeed a few moments' conversation with Mr. Stormonth reveals the fact that he not only knows but loves plants, and thus it is that everything seems to be accommodated with a position and environment that just suits it.

Near the main entrance is a rockery of fair dimensions on which a varied collection of the best alpines are grown. To begin to name subjects worthy of note that are to be seen at Kirkbride would mean to compile a catalogue, and as Messrs. Stormonth publish a capital catalogue of the plants they grow there is no necessity for me to say more than that whatever rock or bog plant one may require, be it saxifrage, primula, campanula, hardy orchid, or anything else that is in general commerce, I should be much surprised if it could not be procured from Kirkbride. In an open field close by the home nursery the bulk of the border perennials are grown, and here one finds capital collections of phloxes, irises, pæonies, and the host of effective and useful subjects associated with herbaceous borders. The stock of seedling liliums particularly interested me, for included in it are many varieties that are at once distinct and beautiful. Another particularly fine group of plants is that formed by the hybrid gerberas, the strain here embracing most enchanting shades of colour.

The seed and bulb department, as already stated, is of recent introduction, but, judging by the activity in the warehouse when I looked in, it is already a branch of considerable importance. Bulbs for fibre culture, and the bowls and fibre in which to grow them are made a speciality of, and many uncommon tuberous-rooted subjects for both outdoor and indoor culture are handled. The special line adopted with seeds is to supply all kinds in penny packets, not the penny packets of the old type, illuminated with wondrous-coloured representations of nasturtiums, marigolds, and the like, but packets containing seeds of useful subjects, warranted as to quality, the idea being to place within reach of small growers the means of obtaining a variety of plants at a minimum cost.

Visitor.

NEW PLANTS, ETC.

◆

ODONTOGLOSSUM HALSEYANUM.

A large-flowered and attractive hybrid of unknown parentage. The spike carried about a dozen flowers each, white, heavily blotched and spotted with rich brown-purple, the lip showing markings of a more distinctly purple shade. A.M., R.H.S., January 17. J. Gurney Fowler, Esq. (gardener, Mr. J. Davis), Glebelands, South Woodford.

ODONTOGLOSSUM GODMANI.

This interesting and beautiful hybrid has been produced by crossing O. Edwardi with O. Rolfeæ. It has flowers of medium size, and of a shape that at once suggests the O. Edwardi parentage. In colour they are rich velvety crimson-purple, with yellow crest. A.M., R.H.S., January 17. F. Du Cane Godman, Esq., South Lodge, Horsham.

ODONTOGLOSSUM ROSEFIELDIENSE.

This may be well described as a glorified O. Lambeauianum; its parents are the last-named and O. Harryanum. The flowers are of fair size and beautiful shape, while the colouring is a charming combination of red-purple, creamy-white, and yellow, the last colour being very evident on the labellum. A very fine hybrid. A.M., R.H.S., January 17. De Barri Crawshay, Esq. (gardener, Mr. Stables), Rosefield, Sevenoaks.

CYPRIPEDIUM ELIZABETHÆ VAR VOGELSANG.

A magnificent cypripedium, derived from C. Hera Marie and C. Hitchinsæ. The dorsal sepal measures three inches across at its widest, and is white, heavily spotted and blotched with very bright purple, and with a green base. The spreading petals are green and brown, with red-brown shading, and the lip is bright brown. This hybrid was greatly admired for its fine size and colouring. F.C.C., R.H.S., January 14. Mons. Firmin Lambeau, Square Vergote, Brussels.

CYPRIPEDIUM CHARLES SLADDIN.

A very pretty cypripedium, obtained by crossing C. glaucophyllum with C. bellatulum. The neat and shapely flowers are white, freely and delicately veined, and sprinkled with wine-red and rose. On the lip the white ground is almost obliterated by the rich purple spottings. A.M., R.H.S., January 17. Messrs. Sander and Sons, St. Albans.

Hibbertia dentata.—As a climber for a greenhouse of small or moderate dimensions this hibbertia has much to commend it, as the leathery ovate leaves of a bronzy tint, and, when young, with a reddish suffusion, are ornamental at all seasons. Added to this the bright yellow flowers, somewhat suggestive of a hypericum, and about a couple of inches in diameter, are freely borne from the autumn until the spring. There is a second climbing species -H. volubilis, but it does not flower so freely, while the blossoms have an unpleasant smell. All the members of the genus are natives of Australia. —W. T.

Orchard House Trees.—Any trees that require lifting had better be attended to forthwith. Permanent planted trees in borders need lifting about every three years in order to keep down rapid growth made at the expense of fruit. Pears, plums, cherries, apricots, peaches, and nectarines are the usual occupants of this house. When the trees are lifted, and it is found that the soil is nearly used up, procure some fresh loam that has been stacked at least six months; cut this to pieces, and add bone-meal. Cut away any very gross roots and make sure that there are not downward roots, as it is these tap roots that cause the mischief. Well ram the soil as it is added, using about half new soil and half old. When all lifting has been done prune and clean the trees. Open both top and bottom ventilators in order to keep all as cool as possible, until the proper season for starting arrives.—W. A. Cook.

CLEANLINESS OF ORCHARDS

Anyone reading the short article on this subject, page 10, would come to the conclusion, if he had no experience of the various hindrances to successful fruit culture, that it is all plain sailing if the advice there noted is carried out to the letter. If he is the possessor of knowledge gained by experience in the public marketing of his produce he will most likely be not inclined to agree with all that is there written. The whole subject of fruit culture opens up matter for debate, especially as hardly any two authorities agree on many points, and there are very divergent views on winter washing, and all that appertains to cleanliness in orchards.

To illustrate what I mean, a grower of 200 acres of mixed fruit, some few miles from where I write, does not believe in an alkali winter washing at all, but prefers to wash in the spring with lime and salt. Another grower prefers the alkali wash in winter. Another despises grease banding of the trees, while over the next hedge, where some hundreds of acres are under fruit culture, I noted to-day as many as three grease bands on some trees. It is a serious item in material and labour when the trees on 300 acres have to be banded, especially if the bands prove of no value. This same grower for years spurned the idea of its value, but two or three unfavourable seasons set him thinking, with the result that I am satisfied, in his case, the banding is of value.

The writer of the article on page 10 would have us believe that winter spraying will cleanse the trees of American blight. I know, and regret, it is not so, for I have efficiently washed twice during the winter for this pest, painted the affected places during the summer with methylated spirits undiluted, paraffin, and have used gas and Stockholm tar, and yet the trees are still affected. At the same time, I am a strong believer in the use of alkali washings in winter, as I know their value in cleansing the branches from moss and lichen, but that it will clear the trees of American blight and canker I do not agree.

Canker in apple trees is a subject of a most debatable character. Some would have us believe it can be got rid of by pruning the affected parts, covering them with tar, affected parts by means of a powerful painter's lamp, such as employed by them for the removal of old paint from wood previous to repainting. Before we can efficiently apply all or any one of these remedies we must first know the cause of canker. It is all very well for a person to make a broad assertion, and say it is due to mismanagement in not washing the trees winter or summer, wrong pruning, or other cultural defects. What do such critics say about the canker that takes place on the wood made during the current year? It is a common occurrence in some orchards to see, in November, the shoots of that year quite killed by canker, on trees of Cox's Orange Pippin for example. When would spraying have obviated this defect? I firmly believe that a check to root growth by an excess of moisture in an unsuitable subsoil is the primary cause of these attacks of canker in the young shoots, and also in the branches of the trees of such varieties as King of the Pippins, Warner's King, Stirling Castle, and many others that are all too prone to this defect in a cold retentive subsoil, and until the roots are placed in more genial conditions no amount of winter spraying or manipulation of the wounds will eradicate the disease. The easier remedy is to avoid varieties that are well known as prone to canker under such conditions.

E. Molyneux.

Everyone interested in a garden should obtain a copy of the Alphabet of Gardening, by T. W. Sanders. Thoroughly practical information is given as to soils, manures, seed sowing, planting, potting, budding, pruning, grafting, forcing, hybridising, etc., with explanatory diagrams. Price, bound in cloth, 1s. 6d. net, post 1s. 9d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

WORK FOR THE WEEK.

WARM ORCHIDS.

IMPORTED DENDROBIUMS.—At the present season, and during the next two months, the importations of the different deciduous and evergreen dendrobiums arrive. It is really remarkable how many of some of these species annually reach this country, and one wonders what can become of so many plants, yet there is always a demand when they arrive in anything like a satisfactory condition. If the early importations are in good condition, it is desirable to secure plants, as the sunless and all to short summers of recent years must be considered. The sooner the plants start into growth the better chances we afford them of maturing their growth in early autumn. It is a good plan when they first arrive to go carefully over them, cut away any dead or decaying matter about them, and then examine for insect pests when preparing for potting. It is not desirable that the plants should be rushed into growth. It is when they are gradually acclimatised to artificial conditions that the best results are procured. Excessive heat and moisture will have a tendency to develop weakly growth, and should be avoided

POTTING.—When placing the plants in their receptacles only sufficient potting compost should be used to hold them firmly in position; ample drainage must be afforded. No water will be required as the moisture in the atmosphere of the houses will be ample to support the pseudo-bulbs until the new growths arise, after which the necessary encouragement must be afforded. The whole of the dendrobiums enjoy strong light, therefore only sufficient shading is required at any season of the year to prevent the foliage from becoming scorched by the sun.

THE EVERGREEN SPECIES, such as D. thyrsiflorum and its allies, do not commence growing until later. It is advisable that these be potted as soon as possible, and to prevent the leaves falling and the pseudobulbs becoming more or less shrivelled, the plants may be syringed overhead on a fine day; damping between the pots will also be beneficial. —H. J. CHAPMAN, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

PERPETUAL FLOWERING CARNATIONS.—The first batch of cuttings should now be well rooted, and ready for potting. Use small thumb pots, and a very light compost of loam and leaf-soil, with a liberal addition of silver sand. Pot moderately firm, and place them in a house with a temperature of about 55 degrees. After the plants have recovered from the check caused by potting, and have started again into growth, they may be removed into a cooler atmosphere, and placed on a shelf close to the glass to receive all the light possible. Continue to propagate cuttings. The best method is to put a handlight on a stage in a house with a temperature from 55 degrees to 60 degrees; fill in to a depth of three inches or so with silver sand, and make firm. The cuttings may be inserted closely together. After watering through a fine rose place the cover on them, but this should be removed in the evening, and left off all night. Before replacing it on the following morning lightly spray the cuttings. By adopting this method of striking a considerable amount of time and labour is saved than if pots were used.

HIPPEASTRUMS (AMARYLLIS).—A few of the most forward bulbs may now be started into growth; shake some of the old soil away from them, and re-pot firmly, using good fibrous loam, a little peat, leaf-soil, some broken charcoal, and sand. Thoroughly water them in, and place in a temperature of about 60 degrees. Syringe occasionally, but do not give much water until growth has commenced in earnest. If properly cooled off before the flowers expand amaryllis will last a considerable time, and make fine subjects for conservatory and house decoration.

HYDRANGEAS.—In my recent notes there was a slip of the pen. Instead of reading "Hydrangea paniculata" as printed, read "Hydrangea hortensia grandiflora."

GREENHOUSE CALCEOLARIAS.—These should now be brought in from the frames and placed in an airy and light position in a cool house, where they may receive more careful attention. Give them a little artificial manure occasionally, but in applying this be careful not to let it touch the leaves, or they will be injured.

THE CONSERVATORY should now be gay with forced shrubs and bulbs, also primulas in their different varieties, cyclamen, schizanthus, callas and mignonette. Avoid high temperatures by artificial heat, and admit air on all possible occasions. Keep all dead or dying blooms regularly picked off, and renew the plants from time to time, thereby keeping up a fresh appearance. Do not be too liberal in watering.—H. GRUBB, Porter's Park Gardens, Shenley.

HARDY FRUITS.

DIGGING.—Fruit plots should be dug through as soon as all pruning is finished, provided the state of the ground permits, and it is work that requires care if we are to obtain the best results. A very light fork over will be all that is necessary to clean the ground and freshen the soil over the rooting area, otherwise damage may be done to the feeding roots near the surface. A thorough digging of other parts will, through the action of rain, air, and frost, liberate the food, make the soil more fertile, and render good cultivation with the hoe possible through the fruiting season.

MANURES.—It is not advisable to give farmyard manure to apples, pears, or plums that are in a healthy state at this time of the year. If we wait until May or June we shall then know the quantity to give according to the crop, and the trees have then plenty of time to absorb what they require to swell up their fruits to perfection. Then also, the roots will be kept cool during the hot weather by the manure—a very essential point (many gardeners will have noticed that where fruit trees have a partial root run under asphalte walks, brick paving, or other cool situations, they yield the finest fruit), and allow them to carry out their functions to the full in plumping up the flower buds for the following year. Other fruits, such as gooseberries, black currants, loganberries, blackberries, etc., would benefit by a very liberal dressing at any time it is convenient to give it, as, according to the previous year's growth, so may we expect the quality and quantity of the following crop.

RASPBERRIES.—This useful and delicious fruit enjoys a good rich heavy soil, but often where the soil is an ideal one the canes look miserably weak, and this is caused chiefly through neglect at planting time. Most of us have a weakness for gathering a little fruit the first year, but this will most assuredly result in a weakness of canes for many years. Any plantations that were newly made in the autumn should now be cut down to within three or four inches of the ground; the plants will then throw up strong growth, and have a fair start in life. Where established plants are suffering through weakness half of the cane should be sacrificed, and if this is followed up for a few years with proper cultivation the plantation may be brought back to a state of health and vigour. Owing to the creeping and surface rooting nature of the raspberry digging of any description should not be attempted. A good mulch of spent hotbed manure or leaf soil should be given at the present time and it will keep most of the weeds under during the summer.

PLUMS.—The pruning of all bush plums should be finished without delay, so that a good lime and soot wash may be applied, as very often at this time of the year, especially if a long duration of snow or frost occurs, house sparrows, finches, or other birds will play havoc with the flower buds. In making this wash use 2lb. of lime to one gallon of water, and well tone down with soot. This I find checks the birds; it also keeps the trees clear from moss or slime, and acts as an excellent fertiliser. Gooseberries and red and white currants would also benefit by this wash for the same purpose, or, as a quicker method, a good dusting of slaked lime and soot may be dusted on by hand any time when the trees are wet, with the prospects of a fine day.—J. WHITTLE, Cheveney Gardens.

THE KITCHEN GARDEN.

MUSHROOMS.—During the next few months this crop is an important one in most gardens, and a considerable amount of attention is required to keep up a daily supply. The preparation of the manure is of the first importance. Collect the droppings frequently before they are wet, and place them in an airy shed, in not too large heaps, or too rapid fermentation will follow. Turn frequently until the manure is thoroughly sweetened, and make up beds in the mushroom house at intervals of about a month. Avoid spawning the beds at a temperature exceeding 90 degrees. At all times a humid atmosphere should be maintained by damping the walls and paths, and a steady temperature of 55 to 60 degrees should be kept up.

SEAKALE.—The earliest crowns, if lifted and planted in boxes holding about three dozen heads, will force readily, and can be placed in strong heat or retarded at will. The mushroom house is generally suitable for forcing this crop in, and weekly introductions of crowns should be made according to demand. Owing to the uncertainty of the weather at this season it is a good plan to have a quantity of crowns lifted from the main quarters and stored in cinder ashes in readiness as required. Keep the strongest thongs, as these can be made into cuttings for plants in due course.

RHUBARB.—Apples being scarce this year rhubarb will be in greater request than usual. An excellent plan for obtaining good produce is to have plantations of early sorts in the kitchen garden, grown from vigorous seedlings, for the purpose of forcing. When these are at command they will be found valuable, and should be lifted and placed in the mushroom house or warm cellar, in quantities as required. Water the stools with warm water, and syringe the crowns frequently until active growth commences, when less will be necessary.

FRENCH BEANS.—Make sowings of this useful vegetable in pots, and place in the forcing house, where a humid atmosphere and a temperature ranging from 65 to 70 degrees can be maintained. Do not select very large pots: 8in. ones are suitable; crock them rather liberally, and use rich open soil. Leave sufficient space for top-dressing the plants after they are well up, and for the purpose of watering, by only filling the pots about three parts full. Last year Ne Plus Ultra was the most profitable variety with me for early sowings.

LEEKS.—If very early leeks are required for exhibition or other purposes, make a sowing in boxes at once. The seeds will germinate satisfactorily in a newly-started vinery or peach house, but afterwards the seedlings must be kept growing sturdily in a lower temperature, near the glass. A shelf in a comfortable greenhouse—45 to 50 degrees—is suitable. Put the plants singly into thumb pots as soon as ready, using rich soil; water carefully, especially until the roots show round the inside of the pot.

SALADS.—Where plenty of pits or fr are at hand it greatly assists the ki gardener in providing the daily salad. great enemy during the next few weeks be damp. Where frames are filled wi tuce, endive, etc., carefully remove cayed foliage, and ventilate liberally on fine day. Cover the glass and sides of during sharp weather. Mustard and will assist the salading during the se of the next few months.—C. FLACK, mondely Castle Gardens.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

Scottish Horticultural Association.

The annual business meeting of this association was held in the hall of the Young Men's Christian Association, 14, South St. Andrew Street, Edinburgh, on the 17th inst. Mr. Whytock, the president, occupied the chair, and there was an attendance of 140 members. The report by the council for Session 1910 showed that there was a slight decrease in the membership, but that the work was being carried on as vigorously as ever, the average attendance at the ordinary meetings at which papers are read and subjects discussed being 90. There was a surplus of £43 16s. 11d. on the Chrysanthemum Show, and an increase in the funds of the association of £23 11s. 8d.

The following office-bearers were elected in room of those who retire by rotation: Honorary president, Sir John Gilmour, Bart., of Montrave; president, Mr. W. H. Massie, 1, Waterloo Place, Edinburgh; vice-presidents, Messrs. J. Phillips and W. G. Pirie; councillors, Messrs. G. P. Berry, J. Bruce, R. Cairns, J. C. Grieve, J. Hay, W. Smale, and W. Williamson. The secretary and treasurer, Mr. A. D. Richardson, was re-elected.

The following report by the committee of the joint councils of the association and the Royal Caledonian Horticultural Society, which was appointed on February 9, 1910, to enquire into and advise the councils as to the possibility of amalgamating the two societies, was submitted to the meeting. The committee are unanimously of opinion that it would be in the interest of horticulture generally to have the work in Edinburgh carried on by one strong society rather than by two as at present, and if that were possible they would have no hesitation in advising the councils that such a scheme should be proceeded with. On coming to enquire into the possibility of effecting amalgamation, it was found necessary to consider the means to be adopted. There were three possible methods, namely: (1) By the Royal Caledonian Horticultural Society assuming the Scottish Horticultural Association: (2) by the Scottish Association assuming the Royal Caledonian Society; and (3) by dissolving both societies and forming a new one. The committee rejected the first and second methods, but they gave very serious consideration to the third. When, however, they came to consider the dissolution of the Royal Caledonian Society, they were met with difficulty. The charter gives the society no power to dissolve, and dissolution without the authority of the Crown would involve the risk of forfeiture of the funds. A difficulty was also encountered in connection with the Neill Fund, the administration of which, the committee were advised, could not be transferred to a new society without the consent of Dr. Neill's next-of-kin, who, so far, could not be traced. The committee, thereafter approached the Secretary for Scotland to ascertain whether the Crown would assent to a surrender of the charter, and, if so, on what terms, but the reply received was to the effect that there was no precedent for this, and that the proposal was open to serious objections. The committee, therefore, reluctantly came to the conclusion that the only course open to secure the end in view was to obtain from the Crown a new charter incorporating both societies, but they point out that the cost of this would be somewhat serious, and a charter is not so elastic as an ordinary constitution, and tends to hamper the work of the society.

It was intimated that the Honourable Lady Miller had invited the members to visit Manduston in the course of the summer, and on the recommendation of the council, August 19 was selected as the date.

Twelve new members were elected.

The new president, Mr. Massie, will deliver his inaugural address at the meeting on February 7.

French Horticultural Society of London.

Of very great general interest, and of immense value to its members, is the French Horticultural Society of London. For social intercourse and educational advancement it brings together the many young men who come over from the Continent for the purpose of adding to their knowledge of horticulture by a period of employment in the large market establishments and public parks and gardens of the metropolitan area. The ties of friendship thus made are rarely ever relaxed, and the founder of the society, Mr. George Schneider, is regarded with filial affection by young men now in England, and the larger number who have passed on to important positions on the Continent and further afield.

The annual dinner of this institution was held at the Café Royal on Saturday, January 21, when Mons. Philip de Vilmorin presided. He was to have presided in 1910, but the disastrous floods in Paris kept him at home. Happily he was not detained this time. It was unfortunate Mr. Schneider was not present, and still more unfortunate that his absence was due to severe illness.

After dinner the Chairman proposed "The King and Royal Family," and Sir Albert Rollit proposed "The President of the French Republic," both of which toasts were enthusiastically honoured. A letter of sympathy and the signatures of all present were sent to Mr. Schneider, with sincere hopes for his speedy recovery.

M. de Vilmorin proposed "Success to the Société Francaise d'Horticulture de Londres," and in doing so paid a fine tribute to Mr. Schneider's work in connection with it. He referred to the usefulness of the society, and showed how its regular meetings brought the young men together for mutual help and friendship; and he also said that such a society was scarcely possible but for the continued kindness shown to its members by the proprietors of the leading market establishments, and seed and nursery businesses. Mons. Gentil, chief of the Brussels Botanic Gardens, and an old Kewite, responded, and made reference to many old friendships made while in England. Mr. J. McKerchar proposed "Past Presidents," to which Mr. T. Bevan responded.

In eloquent and humorous French Mr. C. Harman Payne proposed the health of "The Committee and Officers." M. Ripard replied, and also presented, on behalf of the members, a set of dessert cutlery for Mr. Schneider. Meanwhile Mr. Hiehle referred to the generous way in which the Britishers present at the previous annual dinner had contributed towards the sum the society then sent to France for the relief of those who were suffering from the effects of the floods in Paris. It had been the society's intention to celebrate its twenty-first anniversary by contributing to the two British horticultural charities, but the needs of Paris prevented them from fulfilling that intention. Now, however, on their twenty-second anniversary, they were able to offer £20 to the Royal Gardeners' Orphan Fund, and £30 to the Gardeners' Royal Benevolent Institution. Prolonged applause greeted this announcement, and Mr. Edward Sherwood gracefully responded on behalf of these charities. Mr. Arthur W. Sutton gave the toast of "The Chairman," and referred to the great work accomplished by the firm of Vilmorin in the past, and the able manner in which M. Phillip de Vilmorin was conducting the huge business at the present time. He also paid a tribute to the personal qualities of the chairman. The toast was accorded musical honours, and M. Vilmorin very pleasantly replied. M. Ripard proposed "The Horticultural Press," to which Mr. R. Hooper Pearson made a very able response.

Messrs. N. N. Sherwood, P. R. Barr, H. Beale, J. Gardiner, D. Ingamells, J. Heal. W. Atkinson, C. Engelmann, P. Aquatias, T. Bevan, Murison, E. Hawes, H. E. Cove, W. Bateson, Gaskell, and Melady were among those present, in addition to the various speakers. There was a long programme of music, sketches, and ventriloquism, and the gathering lasted about five hours.

Royal Scottish Arboricultural Society.

(ABERDEEN BRANCH).

The annual meeting of the Aberdeen branch of this society was held in the Aberdeen University Buildings, Aberdeen, on Saturday, 14th inst., and was attended by a large and representative gathering of county gentlemen, factors, wood merchants, and foresters. Mr. Sydney J. Gammell, of Drumtochty and Countesswells, the president of the branch, occupied the chair, and was accompanied by the Right Hon. Robert Farquharson of Finzean, Sir John Fleming, of Dalmuinzie, Mr. John Michie, M.V.O., factor to his Majesty the King at Balmoral, and the lecturer of the afternoon, Mr. Donald Munro, of the Silverbank Sawmills, Banchory-Ternan, Kincardineshire. A large number of new members having been nominated, and cordially admitted, the secretary, Mr. G. D. Massie, solicitor, Aberdeen, submitted his annual report, which stated that the work of the branch had been conducted on similar lines to those of former years. The membership had increased. The meetings and excursions held during the year had been better attended than formerly, but there was room for improvement regarding the attendance of country members, and suggestions were invited as to how this could be improved.

The Hon. Treasurer submitted his report, from which it appeared that after meeting all outlays there remained a balance of £21 17s. at the credit of the branch. Mr. Irvine,

Eckford's GIANT
SWEET PEAS
THE FINEST BLOOMS IN THE WORLD.
that blossom on the Sweet Pea Plant are grown from Eckford's famous seeds. Eckford, the Sweet Pea Specialist, supplies only seeds that are bound to give good results. Eckford's seeds flower brilliantly, and succeed even in the most difficult soils.
ECKFORD'S are the largest retailers of Sweet Peas in the world, and do not supply the trade.
Villa (B) Collection.
24 Splendid varieties, suitable for exhibition, 50 seeds of each, **5/6**, post free for cash.
Villa (C) Collection.
12 Splendid varieties, suitable for exhibition, 50 seeds of each, **2/9**, post free for cash.
Villa (E) Collection.
12 Extra varieties, suitable for exhibition, 25 seeds of each, **1/6**, post free for cash.
A specially written Booklet on Sweet Pea Growing given with every order.
FREE. Send a postcard to-day for large Illustrated and Coloured Catalogue. It gives full particulars of all novelties in Sweet Peas for 1911, and contains full list of all flower and vegetable seeds.
HENRY ECKFORD, F.R.H.S.
(Dept. 221), Wem, Shropshire.

of Drum, moved the adoption of the report and accounts, and said he thought their finances were in a very satisfactory condition. Mr. C. S. France, Aberdeen, seconded, and the motion was unanimously adopted. Office-bearers were then elected for the ensuing year, Mr. Gammell being cordially re-elected president, and Professor Trail, Mr. John Michie, Mr. A. Forbes Irvine, of Drum, and Mr. France, vice-presidents. A large and representative committee, comprising county gentlemen, factors, wood merchants, and foresters was also appointed. The President then called on Mr. Donald Munro, of Messrs. A. and G. Paterson, Ltd., Silverbank Sawmills, Banchory, to deliver his lecture on "The Home Timber Outlook and the Urgent Need for Afforestation," to which we shall refer in an early issue.

National Chrysanthemum Society.

A meeting of the Executive Committee of the above society was held on Monday evening last, when the chair was taken by Mr. T. Bevan.

The proceedings were chiefly of a routine character, in view of the society's approaching annual meeting on February 6, which will be held at Carr's Restaurant, at 7 p.m. It is expected that Sir Albert Rollit, president of the society, will occupy the chair on that occasion.

The dates of the society's 1911 shows were fixed provisionally, pending final arrangements with the Receiver of the Crystal Palace Company. The accounts for the past year were submitted and approved of, subject to audit. The draft annual report for 1910 was discussed and recommended for presentation at the annual meeting.

The question then arose as to the advisability of holding a conference in 1911, and Mr. Ladds proposed, and Mr. Oliver seconded, that one be held towards the close of the year, which was carried unanimously. The date of the conference and the subjects to be dealt with were left open for further consideration.

The meeting closed with the election of new members.

Dundee Horticultural Association.

The ordinary monthly meeting was held in the Technical College on the evening of the 12th inst. Mr. William Grant presided over a good attendance of members. The essayist was Mr. Findlay Macrae, Linbank, Fossoway, Kinross-shire, and his subject was "The Garden and the Gardener; Past and Present—a Comparison."

Beginning with the Garden of Eden and its gardener, Mr. Macrae traced the rise and fall of gardening down to the Christian era, telling what ancient Greece and Rome had done for the art.

He quoted from ancient writers and historians, showing that these nations had taken their share in broadening the scope of horticulture. Britain owed much that was her's horticulturally to the Romans. Then the monks carried on the work, their gardens being used chiefly for the growing of medicinal herbs for the healing of man. Then the different phases, crazes, and styles of gardening as practised in every era was commented upon, while the gardener of to-day was contrasted with "Capability Brown" and those of his day, who, perhaps, were held in higher esteem than was the former. But there was no gain-saying the fact that gardening and gardens were in a healthier condition at the present time than in Brown's day, and the improving condition would continue much more rapidly a few years hence, when perhaps the craft would be dominated by a State Horticultural Board, with a Minister all its own.

The gardener's lot was criticised to some length in an animated discussion which took place on Mr. Macrae's essay, some of the members being of opinion that gardeners were themselves responsible for many of the so-called grievances which existed; while others contended that under present conditions worth was seldom recognised, and that there were many "lucky ones" who were "pitchforked" into situations through friendship and business, while better qualified men were allowed to go under, through no other cause than that they were without the opportunity of having their worth brought into prominence.

At the close of the discussion Mr. D. C. Hutchison proposed the thanks of the meeting to Mr. Macrae for his very able, instructive, and high-class literary paper. Mr. Macrae suitably replied.

Broughty Ferry Horticultural Association.

The opening meeting of the session was held on the evening of the 17th inst. The hon. president (F. M. Baxter, Esq., Balluniefield) presided, and the president (Mr. James Bethel, The Grange Gardens, Monifieth), gave the opening address, taking as his subject, "Economy in the Garden." The gardener, through force of circumstances, was a qualified economist in home and every-day life. With his usual characteristic humour, Mr. Bethel went on to deal with scientific and practical economy in the working of the garden. The chief points which he took up were economy in manuring, in preparation of the soil, in sowing the seed, and arrangement of the crops, and the economy of time. These afforded scope for logical argument, and he was not slow to take advantage of the opportunity for showing his knowledge of sound, practical work, and up-to-date science.

British Gardeners' Association.

(LONDON BRANCH.)

The January monthly meeting of this branch took place at Carr's Restaurant, and the chair was occupied by Mr. W. H. North. The principal event of the evening was an address by Mr. E. F. Hawes, on "The Importance of Gardeners Combining." To prove the value of combination, the speaker referred to the many advantages enjoyed by other professions which have combined into effective associations for the protection of their own interests, such as doctors, architects, engineers, etc. It is very necessary that gardeners should rouse themselves from the spirit of conservative apathy which has dominated them for so long, if they wish to keep pace with the times. They must take the necessary steps to improve their social status and conditions of employment, and this can best be done by joining an association such as the B.G.A.

Speaking of the difficulties of dealing with private employers, Mr. Hawes considers that everything depends upon the gardeners themselves. They must convince their employers that they are a necessity, and not a luxury, by giving full value in return for the employers' outlay, thereby ensuring his respect and sympathy. After an interesting discussion, in which many members took part, the meeting terminated with a hearty vote of thanks to Mr. Hawes for his interesting address.

Sparmannia africana.—This, the African hemp, so called from the tough fibre extracted from the stems, is a beautiful winter-flowering shrub for the greenhouse, the blossoms being quite unlike those of any other occupant of that structure. Complaints are sometimes made that it does not flower freely, although it grows luxuriantly. This latter is the very reason of the paucity of flowers, for it needs a limit to be placed on the extension of the roots, and, what is more, to undergo a thorough ripening by full exposure to the sun towards the end of July and throughout the month of August. While stood out of doors at that season it must be supplied with water as heretofore. The prominent feature of the flowers is the crowd of long filaments, which are in colour purple at the basal portion and on the upper part of a golden hue.—W. T.

NEW BOOKS.

WHO'S WHO, 1911.

(Messrs. A. and C. Black, Soho Square, London). Price 10s.

For upwards of sixty years "Who's Who" has been held in high estimation as a work of reference, and the edition for the current year, which is now before us, affords ample evidence that those responsible for the production of the work are filled with a desire to maintain the high position it so worthily occupies. There is no occasion to praise a book that is so well-known and highly appreciated, but it should be said in justice to the publishers that it is impossible in looking through the 2,246 pages to repress a feeling of admiration for the skill displayed in the compilation of the biographies of the 17,000 or 18,000 men and women who are included in the book. There is no eulogistic remarks, but the information relating to the antecedents, and the work of those who have distinguished themselves in the arts and sciences, in the learned and other professions, in industrial activities in the world of politics, and of the position occupied by those high in the social scale, is stated in such manner as to leave no doubt upon the reader as to the value of their accomplishments in their several walks of life. As a work of reference "Who's Who" is of immense value, and should be in the hands of all who take an active interest in the various matters that engage public attention.

HORTICULTURAL DIRECTORY, 1911.

("Journal of Horticulture" and "Poultry" Office, 12, Mitre Court Chambers, Fleet Street, London.) Price 1s.

A well-known annual, which is highly popular for its directories of the nursery, seed, and other trades associated with horticultural enterprise, and for its directory of gardeners, this last being specially remarkable for its comprehensiveness.

THE GARDEN ANNUAL, 1911.

("Gardening Illustrated" Office, 17, Furnival Street, London.) Price 1s.

An admirably prepared work, containing a full directory of nurserymen, seedsmen, florists, market gardeners, and fruit growers, in which the names are first arranged in alphabetical order, and afterwards classified under the various towns. It also contains a directory of gardeners and gardens, which is so arranged as to facilitate ready reference.

OBITUARY.

MR. E. HOBDAY.

It is with much regret that we have to record the death of Mr. E. Hobday, which occurred at his residence at Romford on the 17th inst. Mr. Hobday devoted much of his leisure to the products of the kitchen garden, and in connection with them he achieved so high a degree of success that he has long been regarded as one of the foremost amateur cultivators of vegetables in this country. For some years he was one of the principal competitors for the prizes for vegetables offered at the exhibitions and meetings of the National Amateur Gardeners' Association, and many were the challenge trophies and other prizes awarded for his products. Of late years Mr. Hobday has, owing probably to indifferent health, taken a less prominent part at competitive gatherings, but when he has shown, his produce has been presented in his usual high-class style. He was one of the founders of the National Vegetable Society, and at the time of his death was a member of the committee, in which position he rendered valuable services in the cause of vegetable culture, and enjoyed the esteem of his colleagues.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

INTERNATIONAL HORTICULTURAL EXHIBITION.—M. T. M., Hednesford: The International Horticultural Exhibition will be held in the grounds of the Royal Hospital, Chelsea, in May, 1912. The hon. secretary of the exhibition is Mr. Edward White, and his address is 7, Victoria Street, London, S.W.

RHODODENDRON KEWENSE.—S. J. S., Harrow: This beautiful hybrid was raised at Kew in 1874, and flowered first in 1888; its parents were R. Aucklandi and R. Hookeri. It is quite hardy, and grows to a bush of considerable size. The wide flowers are rose-pink, fading to white, but in some forms the flowers are nearly pure white. The hybrid is a very fine one, and very suitable for a cool conservatory or a winter garden. In the open it flowers rather too early, except in very favourable localities, and therefore its blooms often suffer from the effects of late frosts in April and May.

ANNUAL TROPÆOLUMS.—M. W., Exeter: The chief annual species of Tropæolum are T. Lobbianum, T. majus, T. minus, and T. peregrinum, the latter better known in gardens as T. canariense or Canary creeper. Of the three first-named species there are a very large number of varieties, showing a considerable range of colouring. There are double varieties of T. majus.

RANGE OF COLOUR IN A GENUS.—A. S. E., Waterford: At the present moment the genus that occurs to us as showing an unusually wide range of colour is delphinium. Blue, white, and pink, in almost endless shades are found in garden varieties, with violet and purple also. White flowers are found in garden varieties and in D. exaltatum, and D. grandiflorum; in D. intermedium some forms have almost black petals; D. Zalil gives yellowish flowers; D. nudicaule, red, orange, and yellow; and D. cardinale has scarlet flowers. Hyacinths also show a very wide colour range, and so do irises.

HANDY BOOK ON BRITISH BOTANY.—F. E. L., Weymouth: In addition to your "Hooker's Students' Flora" you should obtain "Hayward's Botanist's Pocket Book." (George Bell and Sons, London), which is a particularly handy book for field botany.

HORTICULTURAL SOCIETIES AND SECRETARIES.—S. F., Chester: By far the most complete list of horticultural and botanical societies in the United Kingdom, with name and address of the secretary in each case, is to be found in the "Gardening Year Book for 1911." This handy little volume also contains the name, area, and superintendent of practically all the public parks and open spaces in the United Kingdom, descriptions of the new plants of 1910, and a store of cultural and other useful information. It can be obtained from the GARDENERS' MAGAZINE office, 148, 149, Aldersgate Street, E.C., for 1s. 2d., post free.

LARCH CANKER.—J. B., Trent: When larch is planted in lowland districts, and especially if the atmosphere is generally damp and sluggish, the trees have not that robustness that characterises them when growing at higher altitudes. Canker is more prevalent among larch growing in a damp position than among those growing in a drier and airy one, and in such cases it is also quicker in its effect upon the trees. Do not

A New Year's Honour.

SAFE
PRODUCTIVE
ECONOMICAL
LASTING
CLAY'S LONDON FERTILIZER

AN ORDER FOR

CLAY'S

Sold everywhere in **6d.** and **1s. Tins**; and in **Branded and Sealed Bags**:—7 lbs., **2s. 6d.**; 14 lbs., **4s. 6d.**; 28 lbs., **7s. 6d.**; 56 lbs., **12s. 6d.**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

Every Genuine Tin, Bag & Seal bears the Trade Mark as in Centre of Cross.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers, as under:—

CLAY & SON,
Stratford, London, E.

HEDGING PLANTS.

Myrobella Plum, stout, transplanted, 2 to 3ft., **3/-** 100; 4ft., **4/-** 100. Free on rail, carefully packed, for cash. **Quickthorn and Common Privet,** etc., equally cheap. **Let me quote you!**

ORNAMENTAL TREES.

Fine Standards, Chestnut, Elm, Limes, etc., 8 to 10ft., very fine, only **1/-** each. Cheaper for quantity. **Let me quote!**

STANDARD APPLES.

4 and 5-year-old Standards, transplanted, very fine, best sorts, 5½ to 6ft. stems, good heads, **12/-, 15/-,** and extra large **18/-** dozen. **Free on rail,** carefully packed. 4 and 5-year-old **Bushes and Half-Standards, 10/-** and **12/-** dozen. **Grand Stuff. Enquiries solicited. Pears and Plums** as above. **Crimson Clove, Mrs. Sinkins,** etc., healthy layers, cheap. **Nursery Stock of all kinds.**

ALFRED DAVEY, F.R.H.S.,
LEIGH, Essex.

Rhododendrons.

Crimson, White, Pink. 250 Choice Named Varieties, fine foliage, well budded, for potting or planting. 1 to 1½ ft., 1½ to 2 ft., 2 to 2½ ft., 2½ to 3 ft., 3 to 4 ft., 4 to 5 ft., 5 to 6 ft., 6 to 7 ft. List of sorts and prices on application; many thousands to offer. Standards in all sizes.

All Home grown. Inspection Invited.

F. STREET, Heatherside Nurseries, CAMBERLEY.

TWO GOLD MEDALS

Besides Silver-gilt and Silver Medals

Have been awarded to my **ROSES** during the past season.

Grown near the South Downs, therefore thoroughly hardy.
A large stock of extra strong Climbers, &c., &c.
Prices on application.

FRANK WOOLLARD, F.R.H.S.,
53 & 54, Lewes Road, Brighton.

STOP! WHY PAY MORE?

YOU will notice the very, very high prices of many seeds this year if you look through the catalogues you receive; but mind, you need not pay it unless you like. I can supply you at the old price. Peas, 1s. quart; Broad Beans, 5d. quart; Kidney Beans, 10d. quart; Onion Seed, 4d. oz.; Early Potatoes, 1s. 3d. peck. Flower Seeds very cheap. Send your address on a post card before placing your order. GEO. F. LETTS, F.R.H.S., Seed Grower, 2, Hadleigh, Suffolk.

GREENHOUSES, Conservatories, Summer Houses, constructed for easy self-erection. Collapsible Garden Frames. Speciality: Folding Frames, best for Intensive Gardening. Cat free. **THE HORTICULTURAL BUILDINGS CO.,** (Dept. B), Ashton-in-Makerfield, LANCS.

Vaporite

The ORIGINAL soil insecticide

Safe, certain, satisfactory. Use 1 lb. to [illegible] sq. yds. while digging. Sold by all Seedsmen in tins, from **9d.** to **4 6**; in ½ cwt. casks, **7 6** or **11 6** per cwt. (car. pd.) Booklet No. 45, from **VAPORITE STRAWSON Co., Ltd., Dept. E, Spencer House, South Place, E.C.**

kills soil pests

"HOW TO MAKE YOUR OWN SOIL FUMIGATOR." Save the fabulous profits on secret formulas. Make your own at LESS than ½d. per lb. Precisely as sold at 9d. and 1s. lb. tins. Sell to your neighbours, make 900 per cent. profit. Completely destroys wireworms, snails, woodlice, ants, leather-jackets, etc. Harmless to plants. Supersedes gas-lime. Send 1s. for recipe, and save money.—T. HUGHES, Analyst, Elmhurst, Northwich.

AMERICAN TREE CARNATIONS, best varieties, including Britannia, White Perfection, etc., strong young plants from 2in. pots, 3s. doz., 20s. 100, flowering plants, 5in. pots, 8s. per doz. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

AMERICAN and BRITISH TREE CARNATION.—Leading varieties from 3s. per doz.; 17s. 6d. per 100; carriage and packing free for cash. Ask ill. price list. C. F. A. VAN DER SLUYS, F.R.H.S., Ramee, Guernsey.

CHRYSANTHEMUMS.—Mrs. Frank Hill, A.M., R.H.S.; Brightness, A.M., R.H.S., Singles. Send for lists. GEO. WILLIAMS and SONS, Chrysanthemum Specialists, Canton, Cardiff.

FOR SALE, Nursery Business, in good-class London suburb; long lease; low rent; reason for disposal, ill-health; excellent neighbourhood for jobbing; price £300.—F. JAMES, 11, Belvoir Road, Dulwich, S.E.

TO BE LET, SMALL NURSERY, with Jobbing connection if desired; growing seaside resort, easy distance London, East coast; ingoings, £200—£250; low rent to good tenant. Fuller particulars, apply Box 63 Y, Office of this Journal.

SEED BOXES.—12 x 9 x 2in. timber, 8s. 9d. gross, made, 10s. 3d.; 15 x 9 x 2in., 10s. 3d., made 11s. 9d.; also flower sticks, trellis, greenhouses, garden lights, or timber of all description. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

plant larch in damp, low, heavy soil. To stay the disease steps should be taken to cut away any cankered portion as soon as it is detected, immediately dressing the wound with a strong solution of sulphate of iron, followed by an application of tar. The larch canker is due to a fungus named Dasyscypha calycina.

APPLE CLAYGATE PEARMAIN.—W. C. A., Leicester: This useful winter apple was found by Mr. John Braddick growing in a hedge near his garden at Claygate, near Thames Ditton, in Surrey. Braddick was a keen horticulturist, and he raised the apple named Braddick's Nonpareil. He died at Boughton Mount, near Maidstone, in 1828.

BARIUM CARBONATE AS RAT POISON.—A. L. D., Buscot: Barium carbonate is considered one of the cheapest and most effective poisons for rats and mice. It is without taste or smell, has a corrosive action on the mucus lining of the stomach, and, causing thirst, induces the vermin to seek water in the open, where they die. In the small doses used it is said to be harmless to domestic animals. It may be employed in the proportion of one part of the carbonate to four parts of meal, mixed to a dough with water. A convenient bait is composed of one part by measure of the mineral to eight parts of oatmeal, mixed to a stiff dough. The carbonate may also be spread on fish or moist toasted bread. In 1905 large quantities of a poisonous food were sent out by the Agricultural Botanical Institute at Munich for the purpose of destroying field mice, and it is stated that it chiefly contained barium carbonate.

NAMES OF PLANTS.

T. A. H., Ackworth.—Billbergia nutans.

T., Byfleet.—Odontoglossum pulchellum.

E. G. M., Scarborough.—1, Odontoglossum Wilckeanum; 2, O. concinnum.

F. F. Birkenhead.—1, Cypripedium Calypso; 2, Cœlogyne cristata.

W. H., Marlingford.—1, Chimonanthus fragrans. 2, Helleborus colchicus.

H. L., Tetbury.—1, Ornithogalum lacteum; 2, an eranthemum; 3, not recognised, send when in flower.

J. S. J., Lewes.—1, Reinwardtia tetragina; 2, Sparmannia africana; 3, Hamamelis arborea; 4, Begonia manicta.

S. E. C., Norwich.—1, Begonia Gloire de Sceaux; 2, Cattleya Percivaliana; 3, Hoffmannia refulgens; 4, Lonicera sempervirens.

TRADE NOTES.

From the Hardy Patent Pick Company, Lim., of Sheffield, we have received one of the several sets of garden tools of which the firm makes a speciality. The one that has been submitted to us is that known as the Lady's or Youth's Set, and is in every way suited to the requirements of lady and youthful gardeners. Included in the set are spade, fork, rake, trowel, and weed fork, and the implements are remarkable alike for their lightness and strength.

The business of the late Mr. Robert R. Mawson, of The Nurseries, Windermere, will, we are informed, in future be under the management of Mrs. Mawson's nephews, Messrs. William and Richard Mattocks, who have been in the firm's employ for twelve and ten years respectively.

Messrs. James Carter and Co., Raynes Park, London, have, by special warrant dated January 17, 1911, been appointed seedsmen to the German Emperor.

FORTHCOMING ENGAGEMENTS.

TUESDAY, January 31.—Committees meet at 12 o'clock; lecture at 3 p.m. on "Colour Photography," by Mr. Wm. Marshall.
THURSDAY, February 2.—Linnean Society.
SATURDAY, February 4.—French Horticultural Society of London.
MONDAY, February 6.—Dorchester Horticultural Society meets.
TUESDAY, February 7.—Scottish Horticultural Association meets.
THURSDAY, February 9.—National Horticultural Society of London, Exhibition in Paris.

MARKETS.

◆

COVENT GARDEN.

Flowers.

Tulips, daffodils, and liliums are fairly plentiful; lilac is excellent, as also is lily of the valley from home growers; while violets and roses from the Continent are plentiful.

		s. d.		s. d.
Acacia	per pad	5 0	to	10 0
Azaleas, white	per doz. bun.	4 0		5 0
Adiantum cuneatum	per doz. bun.	4 0		6 0
Anemones, French	per doz. bun.	2 0		2 6
Arums	per doz.	3 0		6 0
Asparagus	per doz. bun.	9 0		12 0
Camellias	per doz.	1 6		2 6
Cattleyas	per doz.	9 0		12 0
Carnations	per doz.	2 6		4 0
,,	per doz. bun.	12 0		15 0
Chrysanthemums	per doz. bun.	6 0		12 0
,,	per doz. blms.	1 6		5 0
Croton leaves	per bun.	1 0		2 6
Cypripediums	per doz. blooms	2 6		4 0
French fern	per doz. bun.	2 6		4 0
Gardenias	per doz.	2 0		5 0
Hellebores	per doz.	1 0		1 6
Hyacinths, Roman	per doz. bun.	8 0		10 0
Lapagerias	per doz.	2 0		3 0
Lilac	per bun.	3 0		4 0
Lilium auratum	per bun.	3 0		4 0
,, speciosum	per bun.	2 0		3 0
,, longiflorum	per bun.	2 0		3 6
Lily of the Valley	per doz. bun.	6 0		14 0
Marguerites	per doz. bun.	2 0		3 0
Narcissus, Paper White	per basket	6 0		10 0
,, Soleil d'Or	per doz. bun.	2 0		3 0
,, Golden Spur	per doz. bun.	8 0		10 0
Odontoglossums	per doz. blms.	2 6		3 0
Pelargoniums	per doz. bun.	5 0		8 0
Poinsettias	per doz.	6 0		12 0
Roses	per doz.	2 0		5 0
Smilax	per doz. trails	2 0		3 0
Tuberoses	per doz.	0 5		0 6
Tulips	per doz. bun.	6 0		12 0
Violets	per doz. bun.	1 6		3 0
,, Parma	per bun.	3 0		4 0

Fruits.

Cape fruits are excellent and sell well; grapes realise good prices, and best dessert apples are in good demand.

		s. d.		s. d.
Apples, English	per bush.	6 6	to	24 0
,, American	per barrel	20 0		36 0
,, Californian	per box	6 6		10 6
,, Columbian	per case	9 0		14 0
,, Nova Scotian	per barrel	10 0		26 0
Apricots, Cape	per case	2 6		5 0
Bananas	per bun.	3 6		12 0
Cobnuts	per lb.	0 10		1 0
Chestnuts	per bag	10 0		15 0
Cranberries	per case	9 0		10 6
Grapes, English	per lb.	1 0		7 6
,, Guernsey	per lb.	0 9		1 3
,, Almeria	per barrel	15 0		20 0
Lemons	per case	10 0		15 0
Oranges	per case	10 0		21 0
Peaches, Cape	per case	8 0		15 0
Pears, French	per crate	7 0		9 6
,, Californian	per case	10 0		22 0
Pineapples	each	2 0		4 0
Plums, Cape	per case	3 0		4 0
Pomegranates	per case	1 9		2 3

Vegetables.

Good supplies are forthcoming, and there is a good general demand.

		s. d.		s. d.
Artichokes, Globe	per doz.	1 6	to	3 0
,, Jerusalem	per ½-sieve	1 0		1 6
Asparagus	per bundle	3 0		6 0
Peas, Jersey	per lb.	1 3		2 0
Beet	per bush.	1 0		1 6
Brussels Sprouts	per ½-bush.	1 0		2 0
Cabbages	per tally	2 0		7 6
Carrots, French	per doz. bun.	3 0		3 6
Cauliflowers	per doz.	2 0		3 0
Celery	per doz. rolls	5 0		10 0
Chicory	per lb.	0 3½		0 4
Cucumbers	per doz.	5 0		12 0
Endive	per doz.	0 9		1 3
Horseradish	per doz. bun.	9 0		18 0
Lettuce	per doz.	1 0		2 0
Mint	per doz. bun.	1 0		2 0
Mushrooms	per doz. lb.	6 0		12 0
Onions	per bag	4 0		6 6
,, Spanish	per case	6 0		7 0
Parsnips	per bag	2 6		3 0
Parsley	per ½-sieve	1 3		2 0
Radishes	per doz. bun.	1 0		1 6
Rhubarb	per doz.	0 10		1 0
Savoy	per tally	3 0		5 0
Seakale	per bun.	0 10		1 6
Spinach, French	per crate	4 0		5 0
Tomatoes, Canary	per crate	12 0		14 0
Turnips, French	per doz. bun.	2 0		3 0
Watercress	per doz. bun.	0 5		0 6

LONDON POTATO MARKETS.

Supplies are rather limited and prices are well maintained.

		s. d.		s. d.
British Queen	per ton	75 0	to	90 0
Epicure	per ton	70 0		75 0
Evergood	per ton	70 0		75 0
King Edward	per ton	75 0		85 0
Maincrops	per ton	95 0		100 0
Up-to-Dates	per ton	80 0		105 0

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above sea-level, 150 feet.

Date.	Sunshine.	Temperature of the Air.			
1911. January 15 to January 21.		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Jan. 15—Sunday	4 18	26	26	42	23
,, 16—Monday	1 48	35	34	42	26
,, 17—Tuesday	0 6	37	37	42	34
,, 18—Wednesday	—	40	39	42	38
,, 19—Thursday	—	36	36	38	37
,, 20—Friday	—	34	33	38	33
,, 21—Saturday	—	37	36	38	33
Means	(total) 6 12	35	34	40	32

Date.	Rain.	Temperature of the Soil at 9 a.m.			Lowest Temperature on Grass.
1911. January 15 to January 21.		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
Jan. 15—Sunday	trace	35	37	42	18
,, 16—Monday	—	34	37	42	18
,, 17—Tuesday	—	34	37	42	32
,, 18—Wednesday	—	36	37	44	35
,, 19—Thursday	—	37	38	42	35
,, 20—Friday	0·01	37	38	42	32
,, 21—Saturday	trace	38	38	42	34
Means	(total) 0·01	36	37	42	29

CATALOGUES RECEIVED.

GEORGE BUNYARD AND CO., LTD., MAIDSTONE. In its catalogue of trees and shrubs the Maidstone firm groups rhododendrons into four colour divisions, describes almost every variety according to the Repertoire de Couleurs, and indicates whether they are early, midseason, or late-flowering; a very useful arrangement.

JAMES CARTER AND CO., RAYNES PARK, LONDON, S.W.—The beautiful and freely illustrated seed catalogue is a work of art, as well as a book of reference. Sweet peas, culinary peas, primulas, eschscholtzias, begonias, asters, and tomatoes receive special attention, and include numerous novelties.

BARR AND SONS, KING STREET, COVENT GARDEN, W.C.—This firm's seed catalogue is very finely arranged. The novelties include rare alpine, hardy perennial and greenhouse plants, and fill nearly ten pages. The lists of popular names of flowers are interesting, and, as on previous occasions, the whole catalogue is arranged alphabetically to facilitate ready reference.

JAMES BACKHOUSE AND SON, LTD., YORK.—In the fully indexed and freely illustrated seed catalogue recently issued, the Messrs. Backhouse make a feature of page portraits of selected vegetables, sweet peas, etc. There are a dozen of these large pictures and they make the catalogue very attractive.

J. STORMONTH AND SON, KIRKBRIDE, CARLISLE.—This very interesting catalogue from "the border" contains a wide range of garden subjects; in most cases penny packets of seeds can be obtained and the number of seeds per packet, whatever the price, is stated. Descriptive and cultural information is abundant—and the illustrations are very numerous. All seeds are "warranted pure, of good germination, and true to name and description."

AMOS PERRY, ENFIELD, MIDDLESEX.—The new lists include a special offer of shrubs, a descriptive one of liliums and other bulbs and tubers, and one of seeds of perennial hardy plants.

R. H. BATH, LIM., FLORAL FARMS, WISBECH.—Though less bulky than many others, this seed catalogue is none the less useful and interesting; descriptions and cultural notes are brief and to the [illegible]; the lists of vegetable and seed novelties show evidence of restraint and selection, and the whole list is under four inches wide, so that it can be slipped into the pocket and used as a garden companion.

HENRY ECKFORD, WEM, SHROPSHIRE.—As M[illegible] comes the originator of modern sweet peas, [illegible] Eckford's seed list is adorned on both covers with coloured portraits of new varieties of these [illegible] annuals. We gather that, whereas twenty years [illegible] the Eckfords grew less than two acres of sweet peas for seed, they had eighty acres under this crop last year. Culinary peas are also a speciality of the firm, and the present catalogue includes a wide range of vegetable and flower seeds.

JAMES VEITCH AND SONS, CHELSEA, S.W.—In this chrysanthemum list the new varieties are described on the first three pages, Japanese and [illegible] varieties being most numerous. The general lists are very well arranged, and the descriptions brief but sufficient.

CONTENTS.

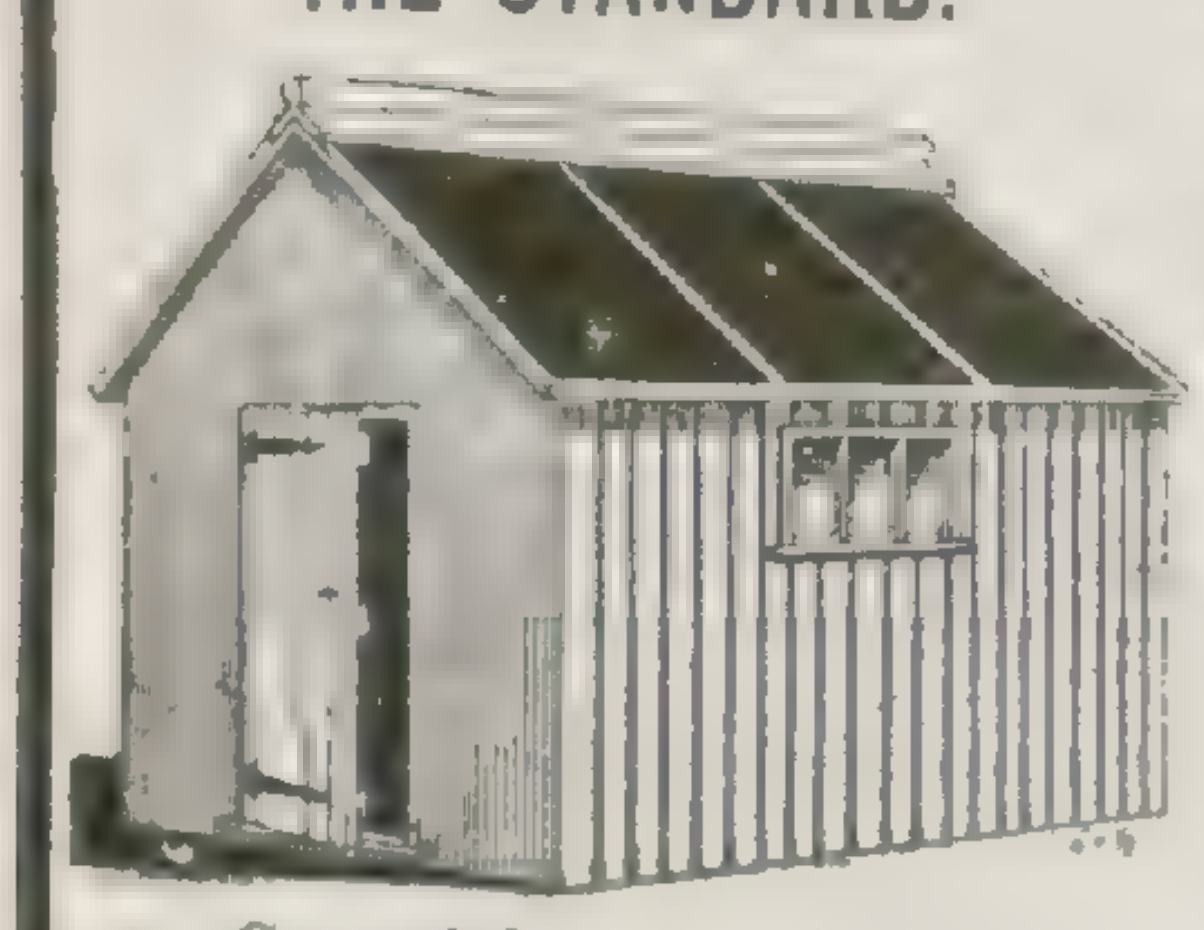
PAGE
Answers to Correspondents 79
Exhibitions and Meetings 77
Hardy Plant Chat 67
Helleborus guttatus 73
Herbaceous Clematises 66
Late Planting of Fruit Trees 71
Notes from Scotland 74
Notes of the Week 63
Some Interesting Conifers 74
Sweet Pea Mrs. Henry Bell 71
The New Theory of Garden Design 68
The Old Farm Orchard 72
Topiary Walk at Montacute 70
Two Useful October Pears 66
Viburnum tomentosum 65
Winter Mammoth Broccoli 69
Work for the Week 76

ILLUSTRATIONS.

Portrait of Mr. W. H. Massie, 63; Viburnum tomentosum, 65; Pear Beurre Hardy, 66; Pear Durondeau, 67; Broccoli Sutton's Winter Mammoth, 69; The Topiary Walk at Montacute House, 70; Sweet Pea Mrs. Henry Bell, 71; Helleborus guttatus, 73.

THE CHEAPEST IN ENGLAND.

"THE STANDARD."



Copyright Registered.

Made in complete sections, sides and ends from ¾in. **Best Quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V**-jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

Cash with Order Prices.

SIZES. Floor made from ⅞-in. Tongued Boards.		
6 ft. by 4 ft. by 6 ft.	£1 12 0	5/0
6 ft. by 5 ft. by 6½ft.	£1 17 0	5/9
7½ft. by 5 ft. by 6½ft.	£2 2 0	7/9
8 ft. by 6 ft. by 7 ft.	£2 9 6	9/9
9 ft. by 6 ft. by 7 ft.	£2 14 6	11/6
10 ft. by 6 ft. by 7 ft.	£2 19 6	13/0
10 ft. by 8 ft. by 8 ft.	£3 14 0	16/3
12 ft. by 8 ft. by 8 ft.	£4 4 0	20/0

Carriage Paid to any Station in England and Wales.

Catalogue with Testimonials POST FREE.

J. T. HOBSON & CO., Largest Makers of Portable Buildings,
ESTABLISHED 70 YEARS. **BEDFORD.**

Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

THOMSON'S
Celebrated
VINE PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES
SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE.

PERGOLAS.
Larch Poles at 1d. per foot. Lists Free.
PATRICK'S, Otley, Yorks.

OAK CRAMBLES.
Peeled and dry at ½d. per foot.
PATRICK'S, Otley, Yorks.

ROSE ARCHES.
Larch Poles at 1d. per foot.
PATRICK'S, Otley, Yorks.

TREE STAKES AND GARDEN RODS.
Lists free.
PATRICK'S, Otley, Yorks.

PUBLISHERS' ANNOUNCEMENTS.

THE GARDENERS' MAGAZINE may be obtained by order from all Newsagents, price Twopence, every Saturday. If any difficulty be found, a copy will be posted weekly direct from the Publisher, 148 and 149, Aldersgate Street, London, on the following terms: Twelve Months, 10s. 6d.; Six Months, 5s. 6d.

INDEX and Title Page to Vol. LIII. (comprising the weekly numbers from January to December, 1910), price 2d., by post 2½d.

BINDING CASES for binding the 12 months' numbers, green cloth, ornamented in gold, price 2s., post free.

VOLUME LIII., bound in green cloth, containing the 52 weekly numbers, 1910. Price 12s. 6d.; by post 13s. 4d

Fruit Pergola as recently erected.

Have a Fruit Pergola this Summer?

Charming effects and excellent results can be obtained by training fruit trees on our improved Arched Espaliers. Order now, and get your fruit trees planted in good time.

No. 103 Arched Espalier, 8ft. high, 5ft. wide, painted, 9/6 per yard.
Cheaper patterns 6/- and 3/- per yard.
Catalogue No. 153A of Espaliers. Rose Trainers, Garden Arches, Pergolas, etc., free.
HUTS FOR THE GARDEN, POTTING SHEDS, FRUIT ROOMS, TOOL HOUSES, ETC

BOULTON & PAUL, Ltd., Specialists, NORWICH.

HAVE YOU A GARDEN?

If so Don't Risk Catching Cold when you can avoid doing so by wearing our celebrated **"G" BRAND GRAINED CLOGS** Lined with Fine White Felt Only **4/6** Postage Paid.

Any size, Men's or Women's, all ready for posting off.

Our No. 688 in List.

Note.—All sizes are as ordinary Boots. If you forget your size draw a pencil mark round your stocking foot and send to us. **THE GARDEN BOOT WAREHOUSE. 6, Wellington Street. GLASGOW.**

Please mention
THE GARDENERS' MAGAZINE
when writing to Advertisers.

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant **Makers to His Majesty the late King.**

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

SUBSCRIBER'S ORDER FORM

Every Saturday **THE GARDENERS' MAGAZINE.** Twopence.

To W. H. AND L. COLLINGRIDGE,
148 AND 149, ALDERSGATE STREET, LONDON, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose ______ for ______ months in advance.

Name ____________________

Address ____________________

Date ____________________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

, If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head).—Mrs. HERBERT MORRELL highly recommends F. HARRIS, been head of five the past four years; thorough experience, gained in good establishments, including Headington Hill Hall, Buscot Park, Waddesdon Manor; age 34, no family. Apply HARRIS, Writtle Road, Chelmsford.

GENTLEMAN recommends GARDENER (Head of two or three); life experience in all branches; understands formation of new or renovating old gardens; married, one boy 10 years; age 45. PENNELLS, Phœnix Green; Winchfield, Hants.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; grapes, peaches, melons, stove and greenhouse plants; four and a-half and eleven years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Closes Hall, Gisburn, Clitheroe

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here 5½ years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working); life good practical experience in all branches, Inside and Out, Early and Late Forcing; excellent references. H. TURNER, 62, Star Road, Peterborough.

GARDENER (Head Working), requires SITUATION; experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants; Flower and Kitchen Garden, Hardy Fruit, etc.; good references; married, no family. W. S., 73, Allen Street, Maidstone, Kent.

GARDENER (Head Working, where two or more are kept); good all round; can be well recommended; married when suited; age 36. PEARCE, 10, Roxwell Road, Shepherd's Bush.

GARDENER (Head Working) seeks SITUATION where three or four are employed; 17 years' experience; excellent references. HICKS, The Gardens, Sundorne Castle, Shrewsbury.

GARDENER (Head); life's practical experience in all branches, Inside and Out. Grapes, Peaches, Melons, Stove and Greenhouse Plants, Malmaison and Tree Carnations, Orchids, Chrysanthemums, Landscape, and Rock Garden, Vegetables, and Hard Fruits; nearly eight years as head of six; excellent references; age 35. F. SMITH, 4, Mellish Terrace, Morden, Surrey.

T. HILL, Cravenhurst Gardens, Eastbourne, seeks SITUATION as GARDENER (Head Working, where three or more are kept); age 29; married, one child; 15 years' experience Inside and Out; Tree Carnations, Malmaisons, Chrysanthemums, Cyclamen, Calceolarias, Vines, Peaches, Melons, Roses, and Bedding a speciality; excellent references present and previous employers.

GARDENER (Head Working or Single-handed).—Gentleman whose garden is being cut up for building purposes wishes to recommend his Gardener, T. LITTLE; nine years present service; thoroughly practical and reliable; total abstainer; married; age 37.—T. LITTLE, 23, Wanstead Park Avenue, Manor Park, Essex.

GARDENER (Head Working); 25 years' experience Inside and Out; Early and Late Forcing; could take charge of Electric Light Plant; married, one child.—SIRL, Brackenhurst, Cobham.

GARDENER (Head Working, where several are kept). Mr. DINSMORE, Head Gardener to Mrs. Blackwell, The Cedars, Harrow Weald, Middlesex, can highly recommend his Foreman, W. PARKER; age 30, life experience in all branches; married when suited.

WORKING MANAGER or FOREMAN.—Advertiser seeks engagement in Market Nursery or otherwise for either of the above; Bulbs and Root Forcing, Ferns and Chrysanthemums a speciality, also Cut Flowers in quantities (both Inside and Out), and Bedding Stuff; good Wreath, Cross, etc., Hand; over 20 years' practical experience in the general routine; highest references; age 36 years. T. J. COOK, 97, Llanover Road, Wembley, N.W.

MANAGER or FOREMAN; life experience in Growing Tomatoes, Cucumbers, Mushrooms, and all kinds of Bedding Plants; age 49; single. C. A., 9, Herbert Street, Chesterton, Cambridge.

MR. C. HARDING, Head Gardener to the Marquis of Hertford, wishes to highly recommend his FOREMAN to any Lady or Gentleman requiring a thorough practical Gardener; age 35; been here seven years. Address, C. HARDING, Ragley Gardens, Alcester.

FOREMAN (Inside or General); 15 years' good experience; first-class testimonials; five years here as Foreman; a member of the B.G.A.—A. DAVIES, The Gardens, Hale Hall, Hale, Liverpool.

GARDENER (Single-handed or Kitchen Garden and Pleasure Ground Foreman); excellent references; 5½ years last place; age 32; married, two children; distance no object. GAISFORD, 8, Market Street, Bradford-on-Avon, Wilts.

GARDENER (Single-handed or with help) seeks SITUATION as above; 15 years' experience in all branches, Inside and Out; good references (single). Apply H. M., Alma Cottage, Little Bookham, Surrey.

GARDENER Wants Place (Single-handed, or with help); single; abstainer; good references; age 28 years; life experience; 8 years last place. P. BUTTONS, 137, Victoria Road, Barking, Essex.

GARDENER (Single-handed or with help); age 33; married, one girl, five; life experience Inside and Out; good references. A. READ, Beechmont Farm, Sevenoaks.

GARDENER (good Single-handed, or where help is given); age 38; married; 25 years' experience in all branches; good references. E. SMITH, 92, Chaplin Road, Willesden Green, N.W.

GENTLEMAN recommends W. PARFITT as GARDENER (Single or Head of two); life experience in all branches; Outdoor and Glass; married, no family. Apply, care of G. Atkinson, Locksheath, Southampton.

MR. J. NICOLL wishes to highly recommend J. FRENCH as GARDENER; good Single-handed, or Head of two or three; age 25; experience in all branches; married when suited. J. FRENCH, Ravenswood, South Wonston, Hants.

GARDENER (Second of three or four); Pleasure Ground work preferred; last place 2 years; age 28; abstainer; good references. H. JENNINGS, Holme Grange Gardens, Wokingham, Berks.

C. W. CATT, Esq., will be pleased to recommend his SECOND GARDENER to any lady or gentleman; a thoroughly trustworthy and energetic Man, as Head Working Gardener, where 3 or 4 are kept; his credentials are of the highest order. Full particulars on application. Outwoods Gardens, Duffield, Derby.

JOURNEYMAN (Inside) requires SITUATION; 8 years' good experience; good references; disengaged. A. ELLIS, Copped Hall, Totteridge, Herts.

JOURNEYMAN (Inside) in good establishment; age 19; five years' experience. EMERY, Hylands Park, Chelmsford, Essex.

MR. T. BENNETT (late Peckforton Castle) would be pleased to recommend P. E. KIRTON as JOURNEYMAN, fruits or plants, age 23 years. T. BENNETT, The Hollies, Green Lane, Wavertree, Liverpool.

GARDENER.—Private Working or Market Garden Nursery; grower cucumbers, tomatoes, chrys. (bedding), mushrooms (ridge or flat), vegetables, hardy fruits, budder, grafter, trainer, pruner, raiser rose cuttings; life experience; good references. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER, where one more is kept; good all-round man; 15 years' practical experience; leaving through place being sold; age 33; single. R. WARD, 1, Albert Cottages, High Road, Loughton, Essex.

GARDENER (Under).—E. BATCHELOR, The Gardens, Woodlands, Addlestone, Surrey, seeks SITUATION, Outside or Inside, good establishment; three years' references; left through death; age 21, abstainer; willing and obliging. Apply as above.

GROOM-GARDENER (Single or Under Gardener), good knowledge, Inside and Out; good references. C. E. STEPHENS, 59, Johnson Road, West Croydon.

UNDER GARDENER, Young Man, seeks SITUATION as above; age 19-20; good refs.; 3 years 9 months last place. C. T. COLESHILL, 37, Wolsey Road, Hampton Hill, Middlesex.

A. DEACON wishes to recommend F. BOWLER as IMPROVER (Inside); four years' experience Inside and Out; age 19. F. BOWLER, The Gardens, Shenstone House, Amersham Common, Bucks.

MR. R. STAWARD, Panshanger, wishes to recommend WALTER MORGAN as IMPROVER (Inside or Out); age 18; three years' experience; Bothy preferred; disengaged. Cole Green, Hertford, Herts.

IMPROVER (18); three years' good character; fair knowledge of Inside work; Bothy preferred. ANSELL, St. George's Gardens, Wakefield Street, London, W.C.

YOUTH (aged 18) seeks SITUATION as IMPROVER, where several are kept; 3 years' experience, chiefly inside; good references. PENNINGTON, 49, Victoria Grove, Stoke Newington, London, N.

YOUNG MAN seeks SITUATION (Inside and Out); 6 years' experience; well recommended; age 22. H. YATES, 82, Crawley Road, Horsham, Sussex.

GENTLEMAN recommends YOUNG MAN, age 22, as Second of four or five; Inside and Out; 7 years' experience; good reference. Apply T. ROGERS, Michelmersh, Romsey, Hants.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For FEBRUARY 4, 1911.

Please Repeat my Advertisement.

Name ....

Address ....

....

Date ....

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

Situations Wanted—*continued.*

YOUNG Man (21) seeks SITUATION in good garden; 6 years' experience; excellent references; in or near London preferred. G. CHANDLER, 58, Westland Terrace, Queen's Road, Alton, Hants.

YOUNG MAN (20) seeks SITUATION as 3rd, where 4 or 5 are kept; 5 years' experience; good character; prefers Bothy, and down south. A. J. C., 10, Office of this Paper.

SITUATION required in Gentleman's garden by Lad, age 16; preferably Glass; willing and anxious to learn; good references; two years in garden. JONES, Highlands, Fownhope, Hereford.

HANDYMAN seeks SITUATION; well up all classes of work; useful in any part of garden; good references. R., 65, Harberton Road, Highgate.

MAN (43) seeks SITUATION in Nursery (Outside or In); experience in Chrysanthemums, Tomatoes, Roses, Ornamental Trees, Shrubs; clerical work if required; three years' experience; good references. B. S., The Laurels, Rock Terrace, Durrington, Worthing.

ORCHID GROWER requires SITUATION; experience under first-class growers; 10 years present situation; excellent references. Apply, S. BURROUGH, Royal Gardens, Sandringham.

YOUNG LADY desires engagement as IMPROVER in Florist's; age 17; two years' experience. D. C. H., care of Messrs. Luff and Sons, Nurserymen, New Malden, Surrey.

Situations Vacant.

WANTED.—Can any Gardener recommend smart YOUNG MAN for Inside; practical knowledge of Fruit and Plants; age not under 22; 18s. and good rooms. HEAD GARDENER, Weston Park, Stevenage, Herts.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

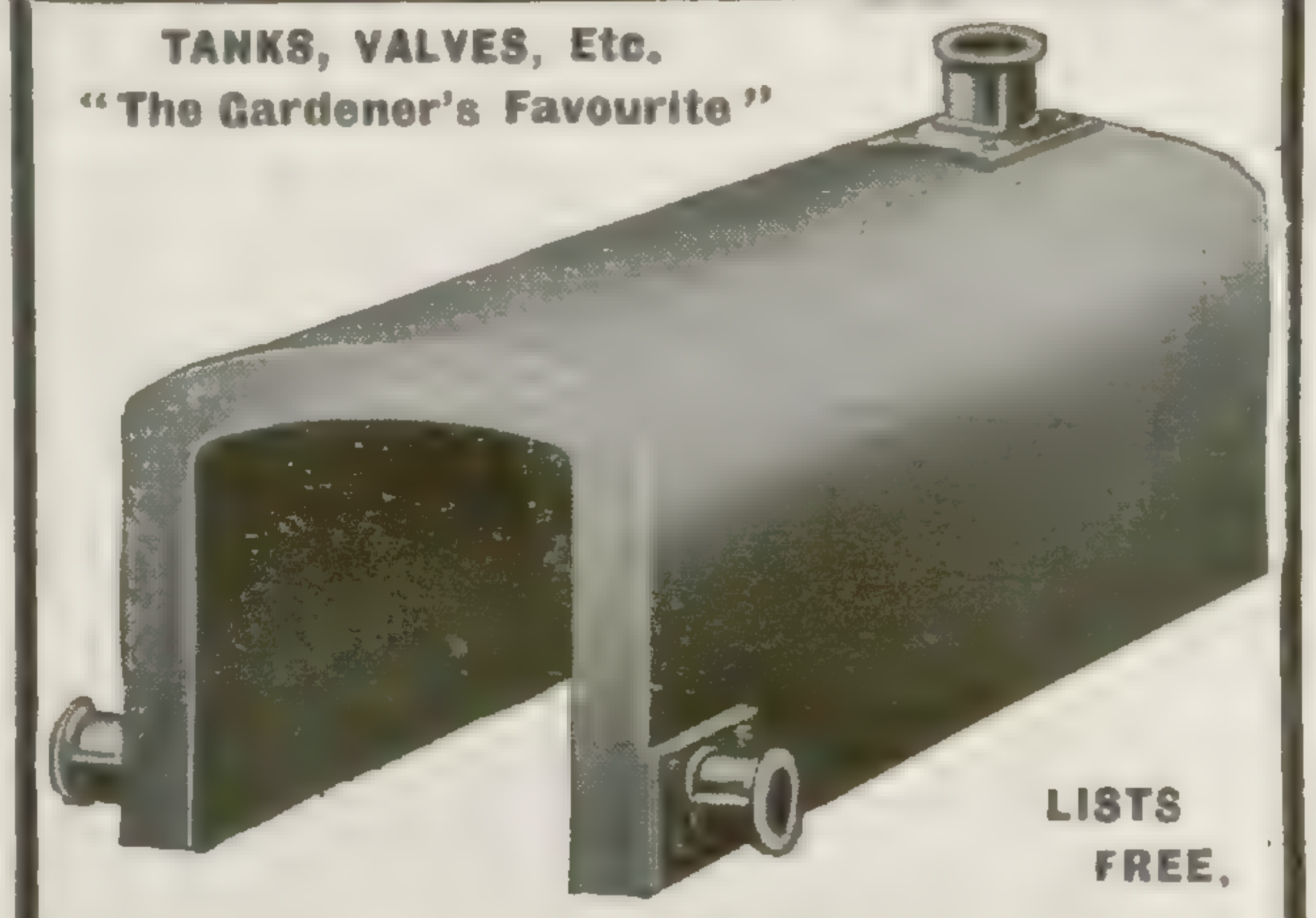
Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to

EPPS & CO., Ringwood, HANTS.

HEATING APPARATUS

fixed by experienced workmen in any part of the country.



TANKS, VALVES, Etc.
"The Gardener's Favourite"

LISTS FREE.

Our celebrated No. 4 Check End Saddle Boiler, to heat from 300 ft. to 3,000 ft. of 4 in. Piping.

BOULTON & PAUL, Ltd.,
***Manufacturer*, NORWICH.**

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

Extracts from 35th annual collection of reports:—

NATIVE GUANO for POTATOES, VEGETABLES, etc.

A. J. BEARD, Erdington: "Potatoes, splendid, free from disease. Best I ever had."—H. CHESTER, Nantwich: "Best onion manure I ever used. Grand for onion fly."

NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc.

J. CANT, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. FRAMPTON, Titchfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED, 29,** New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted

Dr. J. COLLIS BROWNE'S Chlorodyne

THE ORIGINAL AND ONLY GENUINE

ADMITTED BY THE PROFESSION TO BE THE MOST VALUABLE REMEDY EVER DISCOVERED.

The Best Remedy known for

COUGHS, COLDS,

ASTHMA, BRONCHITIS.

Cuts short all attacks of SPASMS, HYSTERIA, and PALPITATION.

The only Palliative in NEURALGIA, TOOTHACHE, GOUT, RHEUMATISM.

Acts like a Charm in DIARRHŒA and DYSENTERY.

Refuse imitations and insist on having

Dr J. COLLIS BROWNE'S Chlorodyne.

Convincing Medical Testimony with each bottle.
Of all Chemists, **1/1½, 2/9, 4/6.**

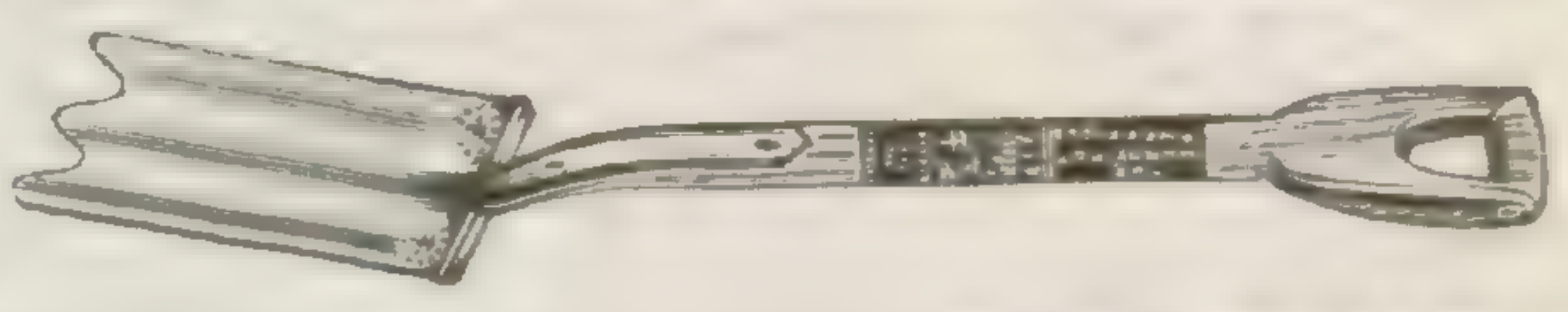
800 Loads of the very finest TURF LOAM for immediate Sale at a **Bargain Price** Single truck load put on rail.

TURF LOAM

Send for Price—

HY. POTTER & SON,
Fairfield Wks., CHELMSFORD, Essex.

A NEW GARDEN SPADE (Carter's Patent).



This is claimed to be the most effective Spade on the market. Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

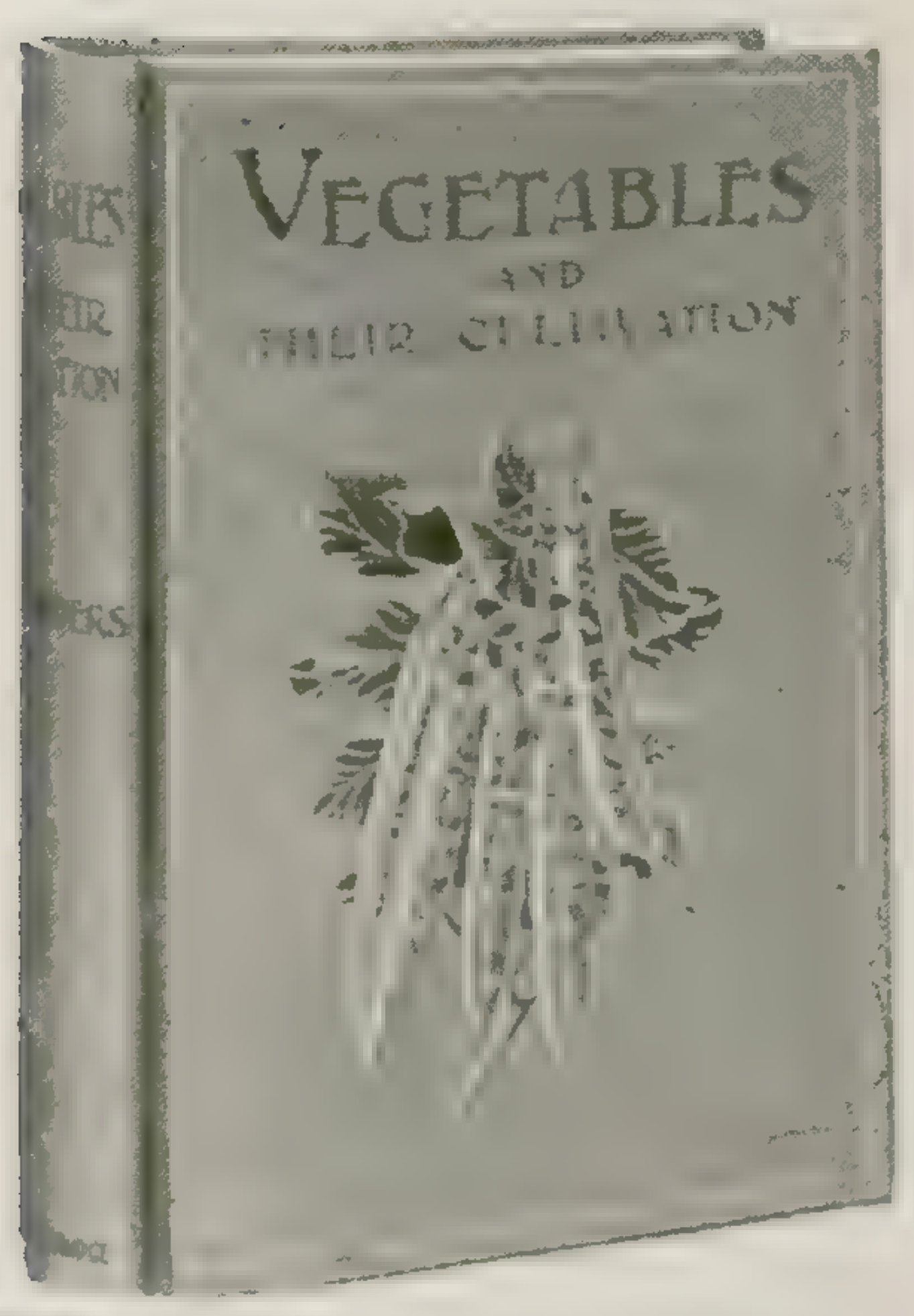
WORK IN THE KITCHEN GARDEN.

READ THE BEST PRACTICAL GUIDE.

Crown 8vo.; Cloth; 498 Pages. **150 ILLUSTRATIONS; 8 PHOTO PLATES and 5 COLOURED PLATES.**

Price **5/-** net; by post, packed in box, **5/6**

VEGETABLES AND THEIR CULTIVATION



By T. W. SANDERS, F.L.S., Editor of "Amateur Gardening," etc., etc.

- **Formation of the Vegetable Garden.**
- **Soils and Their Treatment.**
- **Manures and Their Uses.**
- **Crops and their Rotation.**
- **Calendar of Garden Work.**
- **Cultural Details for Each Vegetable.**
- **Planting, Forcing, etc.**
- **Selection of Best Varieties.**
- **Exhibiting—Packing.**
- **French Gardening.**

Etc., Etc.

"Mr. Sanders has done his work very thoroughly in this book, and his directions are as clear and explicit as they could be."—*Agricultural Gazette.*

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE,"
148 and 149, Aldersgate Street, London, E.C.

Please send me a copy of "VEGETABLES AND THEIR CULTIVATION" by Post, for which I enclose remittance of 5/6.

Name..

Address...

TELEGRAMS:—
"HORTULANUS."

BEST WORKMANSHIP AND LOWEST PRICES.

TELEPHONE:
5947, Westminster.

J. WEEKS & Co., CHELSEA.

ESTABLISHED 1808.

THE OLDEST FIRM IN THE TRADE FOR

CONSERVATORIES, HOT HOUSES, FRUIT HOUSES.

Plans prepared for Glass Houses and Estate Buildings of every Description, Motor Car Houses, etc. Estimates for Painting and Repairs.

MAKERS OF WEEKS' PATENT "DUPLEX" UPRIGHT TUBULAR BOILERS.

CONSULTING ENGINEERS AND SPECIALISTS IN

HEATING AND VENTILATION FOR ANY KIND OF BUILDING.

PLEASE ADDRESS ALL ENQUIRIES TO HEAD OFFICE:

72 VICTORIA STREET, WESTMINSTER, S.W.

PIPERS For Trained Yew and Box Trees.

You are cordially invited to visit our Nurseries at Barnes for the Largest Selection of

TRAINED YEW & BOX TREES.

PIPER'S,

Landscape Gardeners, Nurserymen :: :: and Court Florists. :: ::

London, & Barnes, Surrey.

J. PIPER & SON, Bishops Road, Bayswater, London, and Barnes, Surrey.

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents and at all Railway Bookstalls.

THE
GARDENERS'
MAGAZINE.

No. 2,988. Vol. LIV.
Reg. at the G.P.O. as a Newspaper.
SATURDAY, FEBRUARY 4, 1911. (10/6 per Ann. Post Free.
To Foreign Countries, 15/-.) Twopence

BARR'S SEED GUIDE, now ready, contains a select list of the best Vegetables, and the most beautiful Flowers for Garden and Greenhouse, including many novelties of sterling merit. Free on application. BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, is this winter keeping a large staff of hot-water men in the shops, in order that they may attend immediately to any breakdown of Boilers or Hot-Water Piping in any part of the country. In case of emergencies please telephone 201 Western, or wire "Gray, Chelsea, London."

KING'S ACRE FRUIT TREES, ROSES, AND ORCHARD-HOUSE TREES.

AWARDED 24 GOLD MEDALS SEASONS 1909-10.

160 acres to select from of the finest Trees that natural conditions and the skill of man can produce.

ILLUSTRATED CATALOGUES FREE ON APPLICATION.

KING'S ACRE NURSERIES, LTD., HEREFORD.

1,000,000 BORDER AND ROCK Plants. Unique collection.
50,000 HARDY FERNS, over 400 varieties. See Catalogue.
10,000 FLOWERING SHRUBS must be cleared.
30,000 LILIES NOW IN STOCK, Other consignments arriving.

DELPHINIUMS, 9 GOLD MEDALS IN 2 YEARS.
A record. Unique collection. Seed, 3d., 6d., and 1s. pkt.

PERENNIAL SEEDS, UNIQUE COLLECTION.

All Catalogues Free.
PERRY'S HARDY PLANT FARM, Enfield, Middx.

WELLS' CHRYSANTHEMUMS.—List of Novelties now ready; also descriptive general [illegible]. Wells' Phlox and Michaelmas Daisies, Hardy Herbaceous Plants, and Perpetual Flowering Carnations. Catalogues post free. Wells' book, "The Culture of the Chrysanthemum," post free. 1s. 6d. W. WELLS Merstham, Surrey.

NEW TOMATO, Finefield Gem.—Grand [illegible] [illegible]able for exhibitors and market [illegible] 6d. and 2s. 6d. pkt.—ELLIOTTS, 36, Princes Street, Camberley.

CLAY'S MANURES, CRUSHED BONES
(See page 97.)

CLAY'S FERTILIZER is UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

"HOW TO MAKE YOUR OWN SOIL FUMIGATOR."—Save the fabulous profits on [illegible]. Make your own at LESS than ½d. per [illegible] as sold at 9d. and 1s. lb. tins. Sell to [illegible]hbours, make 900 per cent. profit. Com[illegible] destroys wireworms, snails, woodlice, ants, [illegible]ets, etc. Harmless to plants. Supersedes [illegible]. Send 1s. for recipe, and save money.—T. [illegible], Analyst, Elmhurst, Northwich.

ORDER MATS NOW!—To prevent disappointment and loss by early frosts, order Norfolk Reed Mats now. 50 per cent. more protective than straw. Made to any size, 1d. per square foot.—BOULTON and PAUL, Lim., Norwich.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint, [illegible] per gall. "Plastine" supersedes Putty. [illegible] per [illegible]. Particulars from W. CARSON and SONS, Grove [illegible], Battersea. Agents throughout the country.

THE FINEST CELERY.
WEBBS' ALDENHAM PRIZE PINK (Raised by Mr. Edwin Beckett). Awarded FIRST PRIZE, SHREWSBURY, 1910, open to the Kingdom. 1s. and 1s. 6d. per packet.

Mr. H. TAYLOR, Head Gardener to Lord Hatherton, writes: Your Aldenham Prize Pink Celery is a first-class variety. It won First Prize at the great Birmingham Show against strong competition. I annually grow about 1,700 heads, and in future this will be my main variety.

WEBB AND SONS, The Royal Seedsmen, WORDSLEY, STOURBRIDGE.

BUNYARD'S NEW CATALOGUES. The following have been recently published, and contain all worthy new varieties. Post free on application.

BUNYARD'S CLIMBING PLANTS, Illustrated.

BUNYARD'S HERBACEOUS PLANTS, Illustrated.

BUNYARD'S HARDY TREES AND SHRUBS, Illustrated.

BUNYARD'S SEEDS, VEGETABLE AND FLOWER, with coloured plates.

GEO. BUNYARD AND CO., LTD., Royal Nurseries, MAIDSTONE.

BEGONIAS, awarded 24 Gold Medals.—Double Seed, 2s. 6d. and 5s. per pkt.; Frilled, Crested, or plain Single, 1s., 2s. 6d., and 5s. per pkt. For price of Begonia tubers, Carnations (Border and Perpetual flowering), Cannas, Cyclamen, Blue Primroses, Delphiniums, Pansies, Polyanthus, Lily of the Valley, Violets, etc., please send postcard for copy of our Illustrated Catalogue, free on application.

BLACKMORE AND LANGDON, Twerton Hill Nursery, Bath.

LAXTON'S NEW SEED CATALOGUE for 1911. Descriptive and fully illustrated, including grand new "Laxtonian Pea" and many other novelties, gratis on application.—LAXTON BROS., Seed Merchant, Bedford.

BRUSSELS SPROUT SOLIDITY. The finest and hardiest Sprout in Britain. Only true in our own sealed packets at 1s. Send for a copy of our beautifully illustrated Catalogue, 140 pages, full of novelties and useful information. ALEXANDER and BROWN, Seed Merchants, Perth, N.B.

FERNS.—Beautiful Greenhouse varieties, 12 for 1s. 3d.; Maidenhair Ferns, 2s. doz.; New Nephrolepis Todeoides, 9d. each; Palms, 9d. each. HEAD GARDENER, 22, Charlton Road, Blackheath.

---

25 STRONG CHRYSANTHEMUM CUTTINGS, Exhibition, Decorative, Single or Early, 1s. 6d.; 50, 3s.; 100, 5s. 6d.; by return. List. RICHMOND'S CHRYSANT NURSERIES, Ossett, Yorks.

LOOK! BE PREPARED for the season: Tanned Garden Netting, small mesh, 36 yards long by 1 yard wide, 1s.; 36 by 2, 2s.; 36 by 3, 3s.; either carriage paid.
MOORE and CO., Net Works, Rye.

CONSERVATORIES AND WINTER GARDENS. Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue free.—BOULTON and PAUL, Lim., Norwich.

WEEKS'S DUPLEX UPRIGHT TUBULAR BOILERS, for full advertisement see back page.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

SOW NOW UNDER GLASS.
SUTTON'S DELICACY CUCUMBER.
Mr. A. CARR, Gardener to R. L. Harkness, Esq., writes: "Your Delicacy Cucumber has turned out a grand crop of first-class table fruit, the longest specimen was 27 inches," per packet 2s. 6d., post free.

SUTTON AND SONS, THE ROYAL SEED ESTABLISHMENT, READING.

"Colour is meant for the perpetual comfort and delight of the human heart."—RUSKIN.

KELWAY'S "COLOUR BORDERS" (Regd.)

Artistic and permanent—arranged for continuous bloom and colour effect.

These Borders can be purchased BY THE SQUARE YARD for any position all ready arranged for planting.

"I am thinking of planting a few borders with perennials. I am tired of continually planting bedding plants. Mrs. ——."

Write now stating your area, position, soil, etc., for planting in the Autumn, to

KELWAY AND SON, The Royal Horticulturists, LANGPORT.

KELWAY'S LOVELY NEW PÆONIES, for a fine show in the spring and summer. Kelway's Pæonies are more beautiful than ever. Choice named varieties from strong country-grown stocks: 15s. and 21s., 27s., 36s., 54s., and 70s. a dozen. Single plants, 1s. 6d. to 10s. 6d.

"Some Pæonies I had from you a few years ago are quite a show when they are in bloom, and are greatly admired. ——, Shipston-on-Stour."

IT IS NECESSARY TO OBTAIN KELWAY'S.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

FIDLER'S NEW ILLUSTRATED CATALOGUE OF CHOICE GARDEN SEEDS will be sent, post free, to any address on receipt of postcard. Write at once for a copy. It may help you to save 50% on your seed bill this season. FIDLER and SONS, Royal Berks Seed Stores, Reading.

CHRYSANTHEMUMS.—Decorative Varieties: Strong, Healthy, Cool Grown; Good Succession, Sept.-Christmas. Cuttings, 1s. 6d. per doz.; Plants, 3s. 6d. per doz. List on application. PERPETUAL FLOWERING CARNATIONS: Enchantress, White Enchantress, Mrs. Burnett, Victory, Harlowarden, 9d. each. Rose Dorée, Black Chief, 1s. 6d. each. Plants in Spring. Cash with order; carriage paid MISSES PRICE and FYFE, Grove Park Nursery, Lee, S.E. (Please mention this Magazine when writing).

THOMSON'S CELEBRATED MANURES.
For full advertisement see page ix.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

POULTRY AND KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

XL ALL FOR WINTER AND SPRING CLEANSING.

Before growth commences stronger solutions may be used.

XL ALL NICOTINE INSECTICIDE WASH (poisonous) for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. Agents, write for particulars.

XL ALL CAUSTIC WINTER WASH (non-poisonous) for dormant Fruit Trees, stamps out American Blight, and all other pests.

Other XL ALL Preparations of great renown are XL ALL NICOTINE VAPORISING COMPOUND, XL ALL FERTILISER, XL ALL LAWN SAND, etc.

Ask your Nurseryman, Seedsman, or Florist for my small Pink List.

G. H. RICHARDS, Manufacturer, 234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

CATALOGUE PRINTING.

W. H. & L COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

SEEDS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Select Seeds.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 39, Palmers Green.)
Hybrids in flower, in great variety.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

RHODODENDRONS.

DICKSONS & CO.,
1, Waterloo Place, Edinburgh.
Pink Pearls, Ponticums, choice Hybrids. Write.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers

ALEX. DICKSON & SONS, Ltd.,
Hawlmark, Newtownards, Ireland.
The World-famed Champion Rose Growers and Raisers of Irish Pedigree Seedling Roses. Lists Free.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 1st Prizes, 3 2nds. at N.R.S. Shows, 1910. Ctlg. Free.

SAMUEL M'GREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
Illustrated Catalogue free.

TURF LOAM.

A. B. JOHNSTON, New Park, Cranleigh, Surrey.
Very Fibrous Loam, for Carnations, Roses, Vine Borders, Melons, Fruits under Glass, &c., &c.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

TAKE NOTICE.

Intending planters should send for the STANCLIFFE CATALOGUE OF TREES, &c.

Our Stocks, which are grown on the highest and most exposed hills of Derbyshire, are in fine condition, and are sure to give satisfaction. Note the prices before ordering elsewhere.

Rockery Stone, 1/- per ton.

THE STANCLIFFE ESTATES CO., LTD.,
DARLEY DALE, DERBYSHIRE.

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.
Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

SPECIAL SWEET PEA LIST

including many grand Novelties
POST FREE, ON APPLICATION TO

GEORGE ELSOM, SEED GROWER AND MERCHANT
SPALDING.

Hundreds of Prizes won with products grown from Elsom's Seeds.

All about Winter Spraying and the Destruction of Insect Pests.

PRICE 2/6 net. By Post, 2/10.

GARDEN FOES.

336 PAGES. 150 Illustrations

By T. W. SANDERS, F.L.S. (Editor of "Amateur Gardening.")

GARDEN FOES
T. W. SANDERS
GARDEN FOES

A description of Insect, Animal and Fungoid Pests injurious to Fruit and Vegetable Crops, Hardy Plants, Trees, Shrubs, and Greenhouse Plants, with all the latest Remedies for their Eradication, etc.

CONTENTS:

Fruit Pests and Diseases.
Vegetable Pests and Diseases.
Flower Garden Pests and Diseases.
Greenhouse Pests and Diseases.
Forest Tree Pests and Diseases.
Rose Pests and Diseases.
Miscellaneous Pests, etc.
Insecticides and Fungicides.
Insecticide Formulas.
Proprietary Insecticides and Fungicides
Spraying Apparatus.
Powder Distributors.
How and When to Spray.
Fumigating.
Cyaniding, etc., etc.

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE," 148 & 149, Aldersgate Street, Lond

Please send me a copy of **"GARDEN FOES"** *by Post, for which I*

remittance of **2 10**

Name..

Address..

BY APPOINTMENT. BY APPOINTMENT.

CHEAP OFFER TO CLEAR.

We beg to inform our numerous clients that we have secured a large tract of land adjoining one of our principal Nurseries, and that it is our intention to clear the Stocks off some of our outlying branch Nurseries at a sacrifice.

Everything has been grown with our usual care, and offered in Lots, subject to being unsold; we guarantee the numbers and quality of each Lot offered.

Particulars of above, together with our General Catalogue, will be sent on application.

JAMES SMITH & SONS (Nurserymen to H.M. THE KING), **DARLEY DALE NURSERIES, near MATLOCK.**

Inspection cordially invited. Visitors met by appointment at Darley Dale or Matlock Stations.

Sales by Auction.

ROSE TREES.

SHRUBS. BULBS.

SALES BY AUCTION
are held every
MONDAY and WEDNESDAY, at 12.30.

STEVENS' AUCTION ROOMS,
Established 150 Years,
38, King St., Covent Garden, London, W.C.
Catalogues on Application.

SALES NEXT WEEK.

WEDNESDAY and FRIDAY NEXT, Feb. 6 and 10, at Twelve o'clock.—Herbaceous and Border Plants, Lilies, Hardy Roots and Bulbs in large variety.

At Half-past One o'clock.—1,000 Roses, Dwarf, Climbing, T., H.T., and H.P., Fruit Trees, Azaleas, etc.

WEDNESDAY NEXT, Feb. 8, at Twelve o'clock.—Perennials and Herbaceous Plants, Bulbs for spring planting, Liliums, Carnations, etc.

At Half-past One o'clock.—Roses, 6,000 Standard, Dwarf, Climbing, T., H.T., and H.P., lotted to suit all buyers.

At Five o'clock.—450 Azaleas, Rhododendrons, Aspidistras, Camellias, etc.; also 100 lots of Ornamental Palms, and other Greenhouse Plants, Standard Bays, etc.

FRIDAY NEXT, Feb. 10, at Quarter to One o'clock.—The collection of about 1,500 Established Orchids, in variety, formed by the late Judge Philbrick. Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view morning of sale and catalogues had

100 NURSERIES, MARKET GARDENS, FLORIST AND SEED BUSINESSES TO BE DISPOSED OF.

MESSRS. PROTHEROE and MORRIS'S HORTICULTURAL REGISTER contains full particulars of the above, and can be obtained gratis at 67 and 68, Cheapside, E.C.

STOP! WHY PAY MORE?

YOU will notice the very, very high prices of many seeds this year if you look through the catalogues you receive; but mind, you need not pay it unless you like. I can supply you at the old price. Peas, 1s. quart; Broad Beans, 5d. quart; Kidney Beans, 10d. quart; Onion Seed, 4d. oz.; Early Potatoes, 1s. 3d. peck. Flower Seeds very cheap. Send your address on a post card before placing your order. GEO. F. LETTS, F.R.H.S., Seed Grower, 2, Hadleigh, Suffolk.

SEED CATG. NOW READY.—56-page Catg. of Seeds, Bulbs, Choice Liliums, Tree Carnations, Ferns, etc. ELLISON, 57, West Bromwich.

AMARYLLIS (HIPPEASTRUMS).—Flowering-size bulbs, 10s.; extra selected, 15s.; mammoth, 20s. doz. ELLISON, 57, West Bromwich.

CANNAS, 10 different, 4s.; Gloxinias, 6 different, 2s.; Begonias, Tuberoses, Montbretias, Arums, etc. ELLISON, 57, West Bromwich

AMERICAN TREE CARNATIONS, 12, all different, named, strong, healthy plants, 3s. 6d., cg. pd. List free. ELLISON, 57 W. Bromwich

SEED POTATOES & GARDEN SEEDS

Customers wishing to save
50 PER CENT.
When Purchasing
BULBS, GARDEN SEEDS, AND POTATOES,
Should send AT ONCE for Lists to
J. W. CROSS,
OLD GRAMMAR SCHOOL, **WISBECH**

BOWKETT'S SWEET PEAS.

With greatest confidence I offer my No. 1 Collection as containing the 15 most reliable and beautiful distinct waved exhibition varieties for 1911. All home grown, selected, true stocks, viz., Apple Blossom Spencer, Black Prince, Clara Curtis, Countess Spencer, Elsie Herbert, Etta Dyke, Evelyn Hemus, Helen Lewis, John Ingman, King Edward Spencer, Miss E. F. Drayson, Mrs. H. Sykes, Mrs. C. Foster, The Marquis, Zephyr, 10 seeds of each, packed separate, for 1s. 6d.; 20 seeds each, 2s. 6d.; 40 seeds each 4s. Bowkett's Giant Waved Mixture includes all the above varieties, 150 seeds 6d. All post free.

G. J. BOWKETT, Sweet Pea Specialist, WORCESTER.

AMERICAN TREE CARNATIONS AND MALMAISONS.

My Season's Catalogues of the Choicest Collection of these flowers are NOW READY, and will be sent gratis and post free to all applicants.

E. J. WOOTTEN,
Fairoak, EASTLEIGH.

Perpetual-Flowering CARNATIONS.

This year's Novelties and all the Leading Varieties.

Send for descriptive Catalogue of 80 varieties with particulars when to stop them.

C. ENGELMANN, CARNATION GROWER,
SAFFRON WALDEN.

CURRANTS.—Fay's Prolific Red, Long-bunched Red (Wilmot's), Black Champion, clean, healthy, fruiting trees, 18s. 100; 3s. dozen. WILL TAYLER, Hampton, Middlesex.

SEAKALE, ASPARAGUS, RHUBARB, Tarragon and Mint for forcing; well ripened on warm soil. WILL TAYLER, Hampton, Middlesex

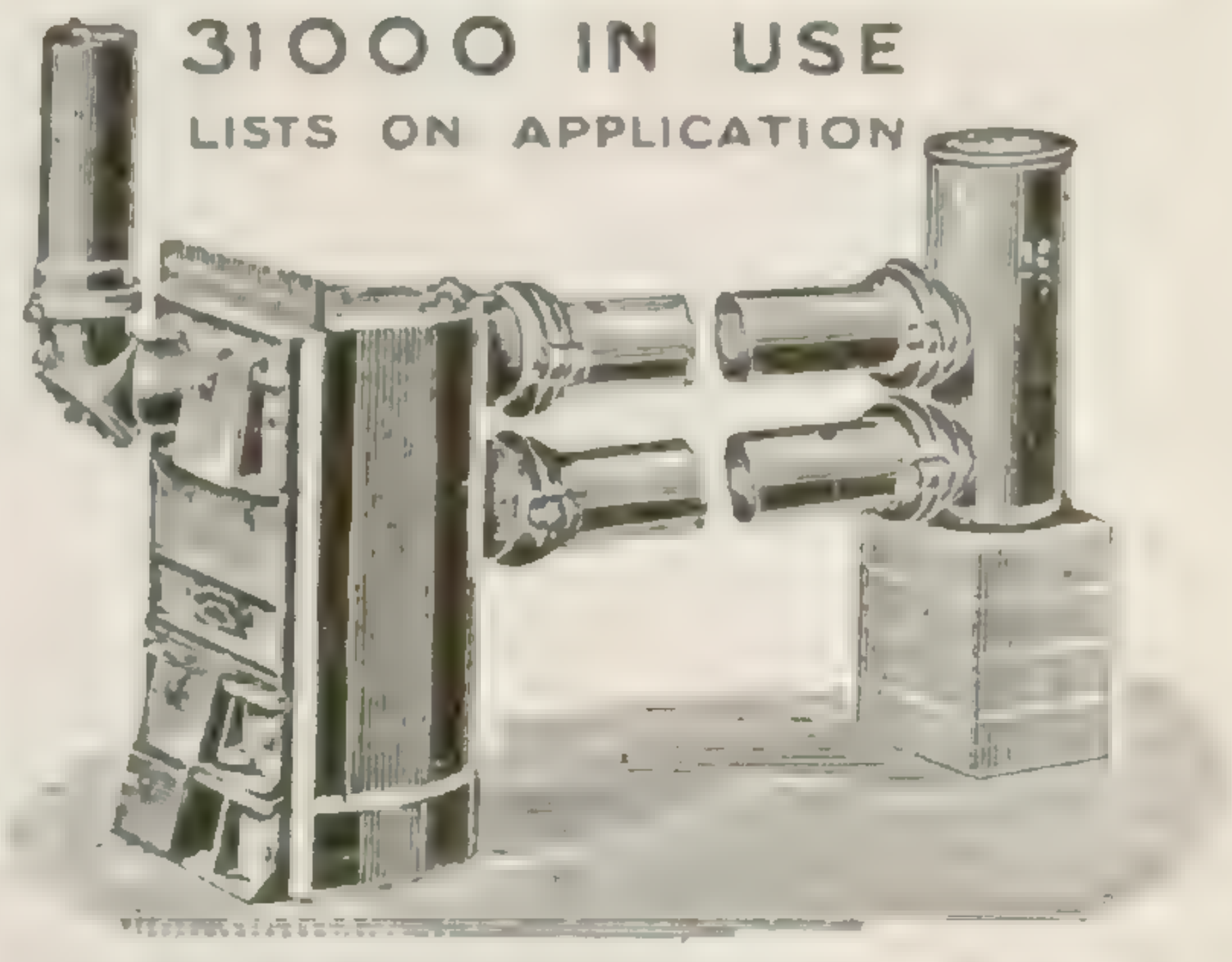
FIGS.—This delicious fruit crops freely in pots. Bearing Trees, 2s. 6d., 3s. 6d., 5s., and 7s. 6d. each. Grape Vines for fruiting or planting. Catalogues free. WILL TAYLER, Hampton, Middlesex.

TRAINED PLUMS. — Large, well-transplanted, fruiting trees. Measurements supplied; but an inspection at Nursery is preferable. WILL TAYLER, Hampton, Middlesex.

R. D. BLACKMORE'S PEACH, "LIBRA."—Award of Merit R.H.S. Mid-season, very large and heavy, of high quality and goodly appearance; large trained trees and pyramids with well ripened fruiting wood, 10s. 6d., 15s., and 21s. each. WILL TAYLER, Hampton, Middlesex

The Loughborough **BOILER**

31000 IN USE
LISTS ON APPLICATION



The pioneer of cheap, simple and effective heating for small greenhouses. Complete Apparatus from £3. 19. 6. The immense sale of this boiler, and its numerous imitations are the best testimony of its undoubted success

MESSENGER & CO., LTD.
LOUGHBOROUGH · LEICESTERSHIRE
London Office, 122 VICTORIA ST · S W

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant

Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

GLASS. | GLASS. | GLASS.

NICHOLLS & CLARKE, LTD
Shoreditch, LONDON.

PAINT. Our List of PAINTS, COLOURS, VARNISHES and BRUSHES on Application.

When sending please cut out this advt.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head).—Mrs. HERBERT MORRELL highly recommends F. HARRIS; been head of five the past four years; thorough experience, gained in good establishments, including Headington Hill Hall, Buscot Park, Waddesdon Manor; age 34, no family. Apply HARRIS, Writtle Road, Chelmsford.

GENTLEMAN recommends GARDENER (Head of two or three); life experience in all branches; understands formation of new or renovating old gardens; married, one boy 10 years; age 45. PENNELLS, Phœnix Green, Winchfield, Hants.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; grapes, peaches, melons, stove and greenhouse plants; four and a-half and eleven years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here 5½ years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working, where two or more are kept); good all round; can be well recommended; married when suited; age 36. PEARCE, 10, Roxwell Road, Shepherd's Bush.

GARDENER (Head Working), requires SITUATION; experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants; Flower and Kitchen Garden, Hardy Fruit, etc.; good references; married, no family. W. S., 73, Allen Street, Maidstone, Kent.

GARDENER (Head Working); married, no family; age 37; life experience in all branches, practical experience with land and stock; good references; disengaged shortly. G. HARE, The Gage Gardens, Little Berkhamsted, Hertford.

GARDENER (Head); life's practical experience in all branches, Inside and Out. Grapes, Peaches, Melons, Stove and Greenhouse Plants, Malmaison and Tree Carnations, Orchids, Chrysanthemums, Landscape, and Rock Garden, Vegetables, and Hard Fruits; nearly eight years as head of six, excellent references; age 37. F. SMITH, 4, Mellish Terrace, Morden, Surrey.

J. F. G. BANNATYNE, Esq., Haldon House, Exeter, wishes to highly recommend H. NICHOLSON, as GARDENER (Head Working), to any Lady or Gentleman requiring a good all-round gardener; life experience in under glass and outdoor work; age 30. Address, NICHOLSON, Haldon House Gardens, Exeter, Devon.

T. HILL, Cravenhurst Gardens, Eastbourne, seeks SITUATION as GARDENER (Head Working); age 29; married, one child; 15 years' experience, Inside and Out; Tree Carnations, Malmaisons, Chrysanthemums, Cyclamen, Calceolarias, Vines, Peaches, Melons, Roses, and Bedding a speciality; excellent references, present and previous employers.

GARDENER (Head Working, where three or four are kept); life experience, including both Inside and Out; good references; age 31. W. R., New Place, Haslemere, Surrey.

THE RIGHT HON. LORD and LADY JOICEY wish to highly recommend J. M. RICHARDS as GARDENER (Head); 16 years' experience in all Fruit, Vegetable, and Plant Culture; 4 years' present situation as General Foreman; excellent testimonials; age 30; single; disengaged when suited. Apply RICHARDS, Gregynog Gardens, Newtown, Mont.

GARDENER (Head or good Single-handed), good all-round Man in all branches, Inside and Out; life experience; or would take a good permanent jobbing situation; highest testimonials; age 46; married, one child. GARDENER, 48, Bradshaw Road, Watford.

GARDENER (Single-handed or with help) seeks SITUATION as above; 15 years' experience in all branches, Inside and Out; good references (single). Apply H. M., Alma Cottage, Little Bookham, Surrey.

GARDENER (Single-handed or with help); age 33; married, one girl, five; life experience Inside and Out; good references. A. READ, Beechmont Farm, Sevenoaks.

GARDENER (good Single-handed, or where help is given); age 38; married; 25 years' experience in all branches; good references. E. SMITH, 92, Chaplin Road, Willesden Green, N.W.

MR. J. NICOLL wishes to highly recommend J. FRENCH as GARDENER; good Single-handed, or Head of two or three; age 25; experience in all branches; married when suited. J. FRENCH, Ravenswood, South Wonston, Hants.

FOREMAN (Inside or General).—Mr. G. DEADMAN, The Gardens, Cowbridge House, Malmesbury, Wilts, can with confidence highly recommend W. PHILLIPS as above; 14 years' experience, Fruits, Stove, Greenhouse Plants, Chrysanthemums, Carnations, Decorating; good references; age 29; disengaged. Rose Cottage, Kingscote, Wotton-under-Edge, Glos.

MANAGER or FOREMAN; life experience in Growing Tomatoes, Cucumbers, Mushrooms, and all kinds of Bedding Plants; age 49; single. C. A., 9, Herbert Street, Chesterton, Cambridge.

MR. C. HARDING, Head Gardener to the Marquis of Hertford, wishes to highly recommend his FOREMAN to any Lady or Gentleman requiring a thorough practical Gardener; age 35; been here seven years. Address, C. HARDING, Ragley Gardens, Alcester.

C. W. CATT, Esq., will be pleased to recommend his SECOND GARDENER to any lady or gentleman; a thoroughly trustworthy and energetic Man, as Head Working Gardener, where 3 or 4 are kept, his credentials are of the highest order. Full particulars on application. Outwoods Gardens, Duffield, Derby.

JOURNEYMAN (Inside) in good establishment; age 19, five years' experience. EMERY, Hylands Park, Chelmsford, Essex.

GARDENER.—Private Working or Market Garden Nursery, grower cucumbers, tomatoes, chrys., bedding, mushrooms (ridge or flat), vegetables, hardy fruits, budder, grafter, trainer, pruner, raiser rose cuttings; life experience, good references. W. BLOOMFIELD, Staplehurst, Kent.

GROOM-GARDENER (Single or Under Gardener), good knowledge, Inside and Out, good references. C. E. STEPHENS, 59, Johnson Road, West Croydon.

UNDER GARDENER, Young Man, seeks SITUATION as above; age 19-20; good refs.; 3 years 9 months last place. C. T. COLESHILL, 37, Wolsey Road, Hampton Hill, Middlesex.

MR. R. STAWARD, Panshanger, wishes to recommend WALTER MORGAN as IMPROVER (Inside or Out); age 18; three years' experience; Bothy preferred; disengaged. Cole Green, Hertford, Herts.

YOUNG MAN, age 23, seeks SITUATION, Single-handed, or where another is kept, Inside and Out; good personal reference from present employer; four years present situation. A. SANDY, 20, New End Square, Hampstead, N.W.

YOUNG MAN (age 25), with 10 years' experience in all branches of horticultural work, including orchid growing, seeks SITUATION in good nursery or private place; highest references. W. BARRETT, Apiaries, Old Bath Road, Cheltenham.

YOUNG MAN seeks SITUATION (Inside and Out); 6 years' experience; well recommended; age 22. H. YATES, 82, Crawley Road, Horsham, Sussex.

YOUNG MAN (21) seeks SITUATION in good garden; 6 years' experience; excellent references; 2 years' last place; left through people giving up; in or near London preferred. G. CHANDLER, 58, Westland Terrace, Queens Road, Alton, Hants.

YOUTH, age 18, seeks SITUATION in gentleman's garden, where two or more are kept; also good milker and total abstainer; good references. H. SMALL, 73, Church Lane, Boxgrove, Chichester.

GENTLEMAN recommends YOUNG MAN, age 22, as Second of four or five; Inside and Out; 7 years' experience; good reference. Apply T. ROGERS, Michelmersh, Romsey, Hants.

YOUNG MAN (20) seeks SITUATION as 3rd, where 4 or 5 are kept; 5 years' experience; good character; prefers Bothy, and down south. A. J. C., 10, Office of this Paper.

SITUATION required in Gentleman's garden by Lad, age 16; preferably Glass; willing and anxious to learn; good references; two years in garden. JONES, Highlands, Fownhope, Hereford.

GARDEN LABOURER wants SITUATION; married, no family; well used to outside work; good spade and scythe hand; well recommended; no circulars. W. LING, Sutton Field, Sutton Bonington, Loughboro'.

HANDYMAN seeks SITUATION; well up in all classes of work; useful in any part of garden, good references. R., 65, Harberton Road, Highgate.

IMPROVER, age 17, seeks SITUATION in Private Gardens (Inside); four years present place; two kept, well recommended, disengaged when suited. Apply, P. DANN, care of [illegible] Hon. R. [illegible], St. Johns, Bishopstoke.

KNIFESMAN, age 25, married; abstainer; 10 years' experience in Budding, Grafting, Training, etc. H. HILL, 17, Poynter Road, Bush Hill Park, Enfield, Middlesex, N.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For FEBRUARY 11, 1911.

Please Repeat my Advertisement.

Name..

Address..

....

Date..........................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

2,500 BEAU-IDEAL BLUE BEDDING LOBELIA for 1d.

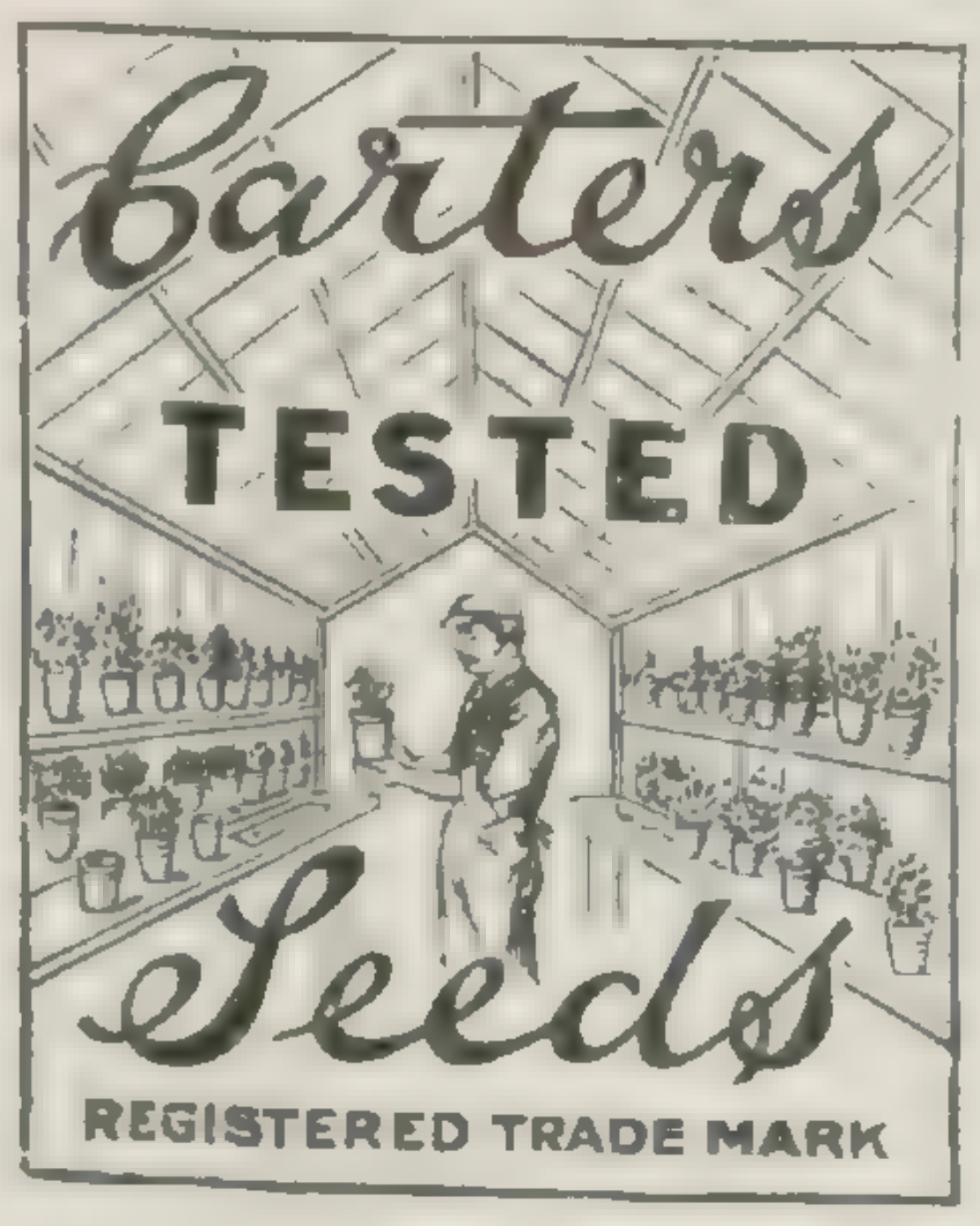
What is the use paying 1/- or 2/6 for a packet of Lobelia seed when you can get all the plants you require for a 1d. or 2d.? Of course, you have been paying these high prices in order to get the best seed. But you need do this no longer. All the seeds retailed by Stormonths are of the best procurable strains, equal to anything retailed at the old-fashioned prices, and they will supply any quantity, from 1d. worth upwards.

TAKE THIS LOBELIA AS AN EXAMPLE. The seed is warranted pure, of good germination, and true to name, saved only from plants raised from cuttings, propagated from stock plants selected true to type, compact in habit, perfect in colour and flower, and free blooming. In short, the finest improved English strains of Crystal Palace Compact Lobelia.

GARDENERS WHO WISH TO KEEP EXPENSES DOWN, and employers who desire variety as well as quality in their gardens, should send for a copy of Stormonths' Catalogue of warranted Beau Ideal Seeds, free on request.

STORMONTHS, 8, Kirkbride, Carlisle.

Write for ILLUSTRATED CATALOGUE POST FREE
from



Carters
HIGH HOLBORN

New Offices and Seed Testing Grounds,

RAYNES PARK, LONDON, S.W.

Branches { 237 and 238, High Holborn, W.C.
53a, Queen Victoria Street, E.C.

CARNATIONS, PINKS, AURICULAS.

DOUGLAS for the best old and new varieties in all classes, and the finest quality in the world. Malmaison Carnations, new and old, **7/6** per dozen. Border, **6/-** to **12/-**. per dozen. Tree, American, and English, **7/6** to **15/-** per dozen. Auriculas, Show, **21/-** to **30/-** per dozen. Alpine Auriculas, **9/-** to **21/-** per dozen. Carnation, Auricula, Pink, and Polyanthus seed, **1/6** and **2/6** per packet. **CATALOGUE FREE.**

J. DOUGLAS, Bookham, LEATHERHEAD.

Situations Wanted—*continued.*

ORCHID GROWER requires SITUATION; experience under first-class growers; 10 years present situation; excellent references. Apply, S. BURROUGH, Royal Gardens, Sandringham.

YOUNG LADY desires engagement as IMPROVER in Florist's; age 17; two years' experience. D. C. H., care of Messrs. Luff and Sons, Nurserymen, New Malden, Surrey.

Situations Vacant.

CANADA.—Wanted, strong, active GARDENERS for large Nurseries; steady work; good wages; sail March; book early. UNION TRANSIT CO., 381, Argyle Street, Glasgow.

WANTED, experienced KITCHEN GARDENER. Frames, Forcing, Fruit, etc., al- [illegible] once a month; Bothy, etc.; wages [illegible]. Apply J. E. DAVIES, The Gardens, Taly- [illegible] Pontyclun, Llantrisant.

Crown 8vo, bound in cloth, 568 pages, 150 illustrations, 8 Photo Plates and 5 Coloured Plates.
Price, 5s. net; by post, packed in box, 5s. 6d.

VEGETABLES AND THEIR CULTIVATION.

An Up-to-Date Practical Treatise on the Formation of the Kitchen Garden, and the Cultivation and Forcing of Vegetables, Salading, and Herbs for Home Use. Manures and their Uses; Pests and Diseases, with Remedies for their Prevention and Eradication, etc., etc. By T. W. SANDERS, F.L.S., F.R.H.S., Editor of "Amateur Gardening" and "Farm and Garden."

Published by
W. H. and L. COLLINGRIDGE, 148 and 149,
Aldersgate Street, London.

BE CAREFUL

where and how you buy

Garden Peas

because good stocks

are scarce and dear.

Buy from actual growers with a *reputation* to preserve.

We have an untarnished record of 147 years, and can supply your needs whether for a quart or a bushel.

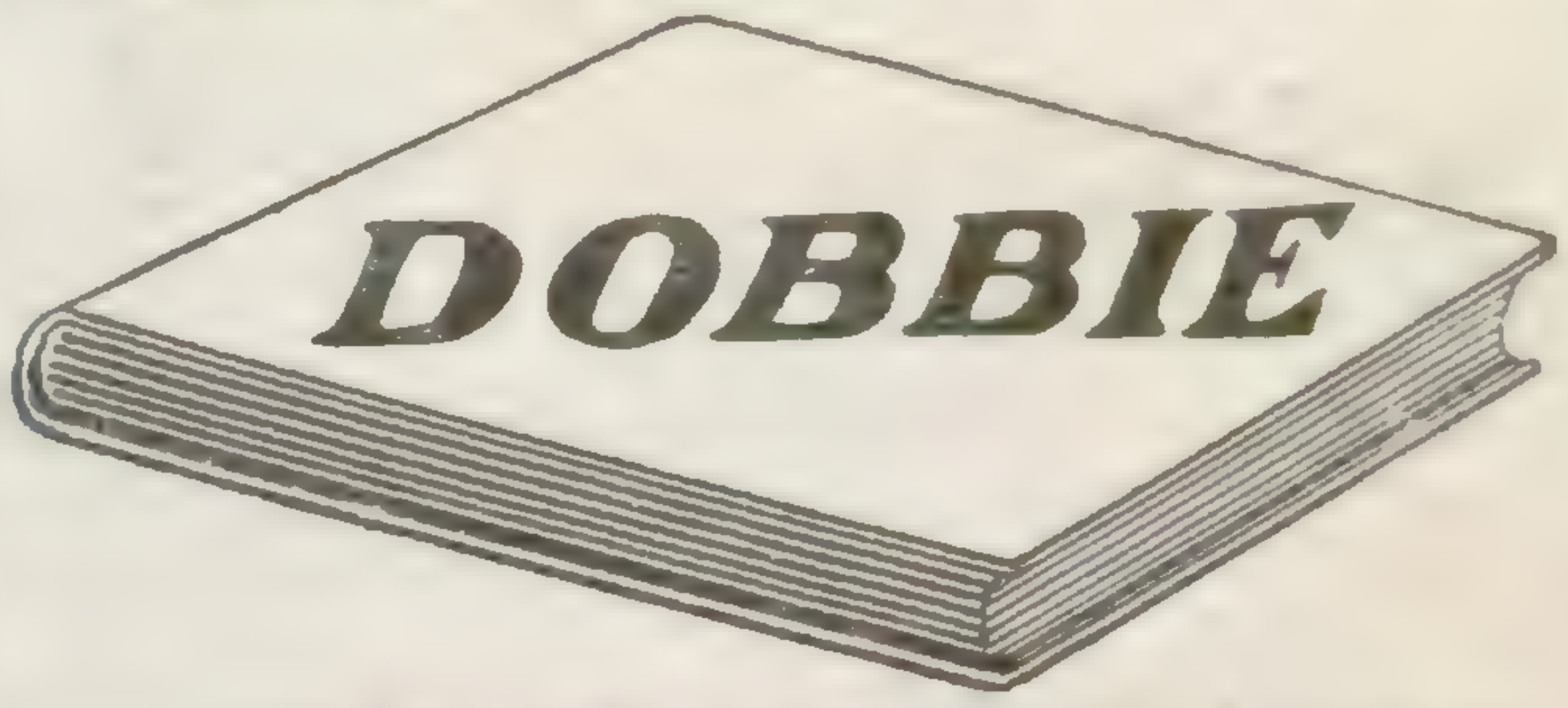
Write for Catalogue No. 26, and Quotations.

HARRISON & SONS,
***33, Market Place,* LEICESTER.**

AMERICAN TREE CARNATIONS, best varieties, including Britannia, White Perfection, etc., strong young plants from 2in. pots, 3s. doz., 20s. 100, flowering plants, 5in. pots, 8s. per doz. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

100,000 SUTTON'S FLOWER OF SPRING CABBAGE PLANTS 2s. 6d. 1,000.
W. HORNE and SONS, Cliffe, Rochester.

100,000 FREE COPIES



Dobbie's New Catalogue and Guide to Horticulture.

224 PAGES. 210 ILLUSTRATIONS.

A COPY WILL BE SENT WITH PLEASURE GRATIS TO ANY ONE APPLYING FOR SAME, WHO ENCLOSES 3d. IN STAMPS TO DEFRAY COST OF POSTAGE, AND MENTIONS "GARDENERS' MAGAZINE."

DOBBIE & CO.,
The Royal Seedsmen, EDINBURGH

DICKSONS

SELECT & MOST RELIABLE VEGETABLE & FLOWER SEEDS, SEED POTATOES GARDENING TOOLS &c CARRIAGE PAID. CATALOGUE POST FREE. ROYAL SEED WAREHOUSE & NURSERIES

CHESTER.

AMARYLLIS (HIPPEASTRUMS).

Unrivalled Collection.

Now is the best time to purchase, as every bulb may be had with flower scape showing. Price list and all information free.

ROBT. P. KER & SONS,
Aigburth Nursery,
LIVERPOOL.

TOMATO PLANTS (6 to 8 ins high). Ready for Fruiting Quarters. **Grown in Steam sterilised soil.** Very carefully packed and protected. **Price £3 per 1 000, Cash with order, carriage paid.** Per 100, 7/-; 65 plants, 5/-; 50 plants, 4/-; 25 plants, 3/-; 12 plants, 2/-.

Carter's Sunrise, Winter Beauty, Beauty of Wales, etc.

W. & F. POAT, TOMATO GROWERS, **ST. SAMPSON'S GUERNSEY, C.I.**

Cheques, Postal Orders, etc., should be crossed "Guernsey Banking Co., Ltd."
ooklet and Testimonials free on application

By Appointment.

WEBBS' SEEDS

By Appointment.

— OF THE —

Choicest Vegetables

FOR PRESENT SOWING—UNDER GLASS.

Gold Medal Collection of Webbs' Vegetables at the R.H.S. Show, Holland House, London, 1910. Exhibited by the Hon. Vicary Gibbs.

PEAS	Webbs' New Early Favourite	3/6	per	quart.
	Webbs' New Dwarf Gem ...	3/-	,,	,,
	Webbs' Pioneer	3/-	,,	,,
	Webbs' Re-selected Pilot ...	3/-	,,	,,
	Webbs' Little Marvel ...	2/9	,,	,,
BEAN, DWARF	Webbs' New Cluster	3/-	,,	,,
	Webbs' New Supreme ...	3/6	,,	,,
CAULIFLOWER	Webbs' New Early Frame ...	1/6	,,	pkt.
	Webbs' Early London ...	1/-	,,	,,
	Webbs' Early Mammoth ...	1/6	,,	,,
CARROT	Webbs' New Wonderful ...	1/3	,,	oz.
	Webbs' Scarlet Short Horn	1/-	,,	,,
CABBAGE ...	Webbs' New Leader... ...	1/6	,,	,,
	Webbs' First of All	1/6	,,	,,
CUCUMBER ...	Webbs' New Freedom ...	2/6	,,	pkt.
	Webbs' Everbearing	1/6	,,	,,
LEEK	Webbs' Champion Prize ...	1/6	,,	,,
LETTUCE, COS	Webbs' New Ideal	1/-	per	pkt.
	Webbs' Exhibition	1/-	,,	,,
LETTUCE, CABBAGE	Webbs' Forcing Gem ...	1/-	,,	,,
	Webbs' Wonderful	1/-	,,	,,
MELON	Webbs' New Peerless ...	2/6	,,	,,
	Webbs' Epicure	1/6	,,	,,
	Webbs' Favourite	1/6	,,	,,
ONION	Webbs' Selected Ailsa Craig	2/6	,,	,,
	Webbs' Improved Banbury ..	1/-	,,	,,
RADISH	Webbs' New Earliest of All	9d.	,,	oz.
	Webbs' Improved Early Frame	6d.	,,	,,
TOMATO ...	Webbs' New Conqueror ...	2/6	,,	pkt.
	Webbs' Emperor	1/6	,,	,,
TURNIP	Webbs' Half-Long Forcing	8d.	,,	oz.
	Webbs' Early Purple Top ...	6d.	,,	,,
POTATO... ...	Webbs' New First Crop ...	4/-	,,	peck
	Webbs' Colonist	3/6	,,	,,

For Particulars of the Newest and Best Varieties of Vegetable and Flower Seeds,
see
WEBBS' ILLUSTRATED SPRING CATALOGUE FOR 1911. NOW READY.

AWARDS in 1910: 19 GOLD MEDALS & SILVER CUPS.

WEBB & SONS, The Royal Seedsmen, WORDSLEY, STOURBRIDGE.

VOL. LIV.—No. 2,988. SATURDAY, FEBRUARY 4, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Lengthening Days.

It is always a great comfort to the garden lover when, after the turn of the year, an appreciable difference in the length of the day indicates that commencing flow of the annual tide of sunshine which is the life and soul of floriculture, as it is of all vitality in this wonderful world of ours. It is the antithesis of the feeling we experience at the slowly commencing ebb which we remark in the late summer months, when the days, as it is said, "commence to draw in." Then, however, we feel, it may be, sated with the floral feast we have enjoyed, and which is still continuing, course after course, as it were, commencing with the hors d'œuvres of the early spring, continuing with the innumerable and exquisite entremets which Nature provides for our delectation in the summer, and soon, as we hope, culminating in the "dessert," represented by the autumnal crops of fruit. Then, as the days become shorter and shorter, as the beneficent sun withdraws more and more his vitalising rays, a period of more or less depression is apt to steal upon us, the garden rapidly loses much of its charm, as flower after flower sinks to rest, and finally we plunge into the gloom of winter, when frost and storm have done their worst and our banquet aforesaid becomes but a memory. Now, however, when the opposite conditions are beginning to indicate the advent of another flood of sunshine, the garden lover is delighted to go round and note the early results of floral awakening. Long before obvious growth above ground, the roots of most perennials are busy preparing for the new campaign. Here and there may be seen the tips of bulb foliage breaking through the soil, and crocus and snowdrops profit by every period of thaw to push their foliage through, and even to display their earliest blossoms where conditions for early development are favourable. The buds of many trees and shrubs are fattening up, and between their protecting sheaths or scales the clean fresh green of newly-exposed surface contrasts strongly with the dull exterior which has served as protection hitherto. In the heart of the fern crown, if we remove the leaves which have filled up its centre as a natural protection, we shall see more fresh surfaces exposed as the incipient fronds have swollen and lifted slightly to make room for themselves, thus exposing the delicate scales with which they are clothed and protected in another and more independent fashion. The paeonies may be seen to be pushing rich crimson spikes through the soil, and in all directions the roses and clematises are probably wasting their substance by precocious shoots, bound almost inevitably to suffer sorely from the winter blasts which have yet to be experienced. It is curious in this connection that many plants appear incapable of thoroughly learning, as it were, the lessons of the seasons. Thus the almond tree, a native of warmer climes, though long introduced, and forming large specimens, will insist upon starting growth and displaying its beautiful rosy flowers long before, in this climate, it is likely to escape a drastic touch of frost, and so lose its labour, so far as fruit production is concerned. Our native trees, on the other hand, are impervious to the blandishments of the warm periods which now and again intervene, and, until the end of January, seemed almost persistent. Doubtless within them the impulses of spring are having their preparative effect, and the sap is accumulating in their cells, and beginning to exert that pressure which, at the proper time, will lead to the bursting forth of bud and blossom, but these experienced natives restrain themselves wisely, and reserve the outburst until there is little risk of a drastic check. From the plant point of view, indeed, our so-called winter must be regarded as tricky and treacherous. Long spells of coaxing warmth and congenial moisture are almost invariably followed by keen frost and drying winds, while very rarely do they enjoy the continued protection of a blanket of snow, which is the salvation of many alpines. In their natural habitats the great majority of these vegetable gems are cosily embedded in snowdrifts, which shelter them both from extreme frost and the wear and tear of wintry storms, the result being that when this blanket is dissolved by the sunshine, they reappear with their vigour unsapped, while their kindred in the rockwork of our alpine collections are too often decimated, or weakened, by exposure to wet and freakish frost and thaw, so that it is really a wonder that they manage to survive and gladden our eyes with their beautiful flowers, as so many of them do, despite these handicaps.

G.M.1601.

MR. R. FORESTER FELTON.

Mr. R. Forester Felton.—Among those who have done so much to popularise the art of floral decoration during the last dozen years or so no one occupies a higher position than the subject of the present note. Mr. Felton is the head of Messrs. R. Felton and Sons, Court Florists, Hanover Square, W., and he is a florist to the finger tips. Not only can he arrange plants and flowers beautifully, but he has a genius for creating new designs, for making quite new features in his larger opportunities, and for producing novel and striking combinations. His skill is at once creative and executive, and this is the reason he has become so renowned. After working in a Birmingham nursery and also as a florist in the Midlands, Mr. Felton came to London and acted as decorator for Messrs. J. Standish and Co., of Ascot and Knightsbridge, presently becoming a partner in that firm. Subsequently he commenced business on his own account at Hanover Square, where his fine premises are familiar to those who know the west-end of London well. Mr. Felton has many medals and prizes to his credit, won at the larger exhibitions in the United Kingdom, and he has recently written a delightful book on "British Floral Decoration." He is florist to Claridge's Hotel, Hotel Cecil, and the New Connaught Rooms. He decorated the British Embassy at Berlin in 1909, when King Edward and Queen Alexandra and the German Emperor were present. He has decorated Messrs. Waring's establishment in Oxford Street on several special occasions; King Edward entrusted him with the decoration of the Albert Hall on the occasion of the Union Jack Concert, and in 1908 he decorated the Royal Box at Olympia, at the great Horse Show, in a way that merited high praise from all who saw it. Mr. Felton has also carried out several large orders for King George V., and he is already weaving new plans for floral decoration in connection with the forthcoming Coronation festivities. Mr. Felton is quick to appreciate the decorative value of any new plant, flower, or variety that appears, and his opinion of the worth of a new introduction as a market plant or flower is eagerly sought after. Undoubtedly Mr. Felton has lifted British floral art to a plane it has never previously occupied, and it is not necessary now to go to Paris to see beautiful flowers arranged with skill and taste.

National Sweet Pea Society's Rules.—The committee of the National Sweet Pea Society is busily engaged in the revision of the rules, in accordance with the arrangement that was made at the recent special general meeting, and much interest is evinced by large numbers of members in what is being done. Some enquiries have reached us as to the lines that will be taken in formulating the rules relating to the Floral Committee, but it should be obvious that we are not in a position to give any information with regard to the matter. We can, however, say that we trust the rules will not require the number of members to exceed twelve, and that there will be no reference to amateur or trade members in the rule governing the constitution of the committee. For this purpose it is not only wholly unnecessary, but harmful to differentiate between amateurs and seedsmen, because of the limitation imposed upon these responsible for making a selection. The members of the Floral Committee should consist of specialists fully qualified for the duties they have to perform, and if care is taken to place none but these on the committee, it matters not whether they be amateurs or traders, for the work will be well done.

The Demonstration of Colour Photography in its relation to the flower garden at the afternoon meeting of the Royal Horticultural Society on Tuesday last, was of exceptional excellence, and the crowded lecture room was sufficient evidence that an immense amount of interest is being taken in the photography of flowers and garden scenes in their natural colours. Mr. William Marshall, of Henley-on-Thames, who was the lecturer, did not enter into the technicalities of the autochrome process by which his slides had been produced, but devoted the time at his disposal, and wisely so, to showing on the screen the remarkable results that with skilful manipulation may be obtained. Altogether Mr. Marshall showed upwards of one hundred and forty slides, all of which were from photographs taken in the garden or woodland, and more or less meritorious. The earlier slides were devoted to cut flowers, and very attractive were the tasteful arrangements of daffodils, roses, chrysanthemums, and other popular flowers. Then followed a series of slides in which roses predominated, and these proved highly popular with the audience, the beautiful Dorothy Perkins, although rather too freely represented, evoking the warmest expressions of approval. Very fine also were the slides representative of the manifold charms of an extensive and skilfully arranged garden devoted to plants from alpine regions, not a few of the photographs having, it may be assumed, been taken in the alpine garden which forms so important a feature of the gardens of Friars' Park, the residence of Sir Frank Crisp. Such commonplace subjects as beds and vases of zonal and ivy-leaf pelargoniums were highly attractive, and it was interesting to observe how admirably the rich colouring of the scarlet zonals, and the soft hues of the ivy-leaf varieties were reproduced. The numerous slides of borders of herbaceous plants, and of woods and specimen trees remarkable for their rich autumn tints, were not less interesting. At the close of the lecture, Mr. George Gordon, who presided, stated, in conveying the thanks of the Fellows to Mr. Marshall for his splendid demonstration of the wonders of colour photography, that the slides shown were the finest set from photographs of plants, flowers, and trees in their natural colours that he had seen, and expressed the hope that the day was not far distant when it would be possible to largely replace the uncoloured lantern slides now in general use by such slides as those shown on that occasion.

Royal Gardeners' Orphan Fund.—The annual meeting and election will be held at Simpson's, Strand, W.C., at 3 p.m. on Friday, February 10. The annual friendly dinner of the committee will follow upon the completion of the business of the day, and the chairman of the committee, Mr. Henry B. May, V.M.H., will preside. Dinner is at 6 for 6.30 p.m. sharp.

Nehemiah Grew.—The second of the course of lectures at the University College, London, on the "History of British Botany" was given on Friday, the 27th ult. The lecturer was Dr. Agnes Arbery, F.L.S., and her lecture was devoted to the life and work of Nehemiah Grew, who may be described as the earliest vegetable anatomist in England. This eminent investigator, who was born in 1628, was the son of Obadiah Grew, a Nonconformist minister of Coventry. At the Restoration, his father being ejected from his living, he went to a foreign university, where he took the degree of Doctor of Medicine, and it may be assumed developed a taste for the study of the structure of plants. Having taken his degree and returned to Coventry, he commenced the study of the anatomy of plants, and this he pursued with so much success that he communicated the results to the Royal Society, and they were received with so much favour that he was induced to take up his residence in London. Here he soon worked up an extensive practice as a physician, and continuing his investigations in plant anatomy, he was in a few years elected a Fellow of the Royal Society, and in 1677 was appointed its secretary. In the year 1672 was published his work entitled "The Anatomy of Plants," which created an immense amount of interest, and brought him much fame. It is difficult at this distant period to fully appreciate the intense interest created by Grew's fine work, but at that time the microscope had reached a state of perfection that enabled those fortunate in the possession of an instrument and able to use it with some amount of skill to pry into the mysteries of plant life that had not previously been possible. Grew used his microscope with great success, and made drawings of the cellular and other tissues of plants. These were engraved for the purpose of illustrating his book, and his readers had practically for the first time an opportunity of studying the structure of the stem, leaf, and fruit of plants. The honeycomb appearance of the cellular tissue proved of special interest to the readers of "The Anatomy of Plants," but it should be mentioned that the resemblance of this tissue to the honeycomb is much closer in the book than in Nature, this being especially marked in the longitudinal section of a young apricot kernel. He died in 1711 in his eighty-third year.

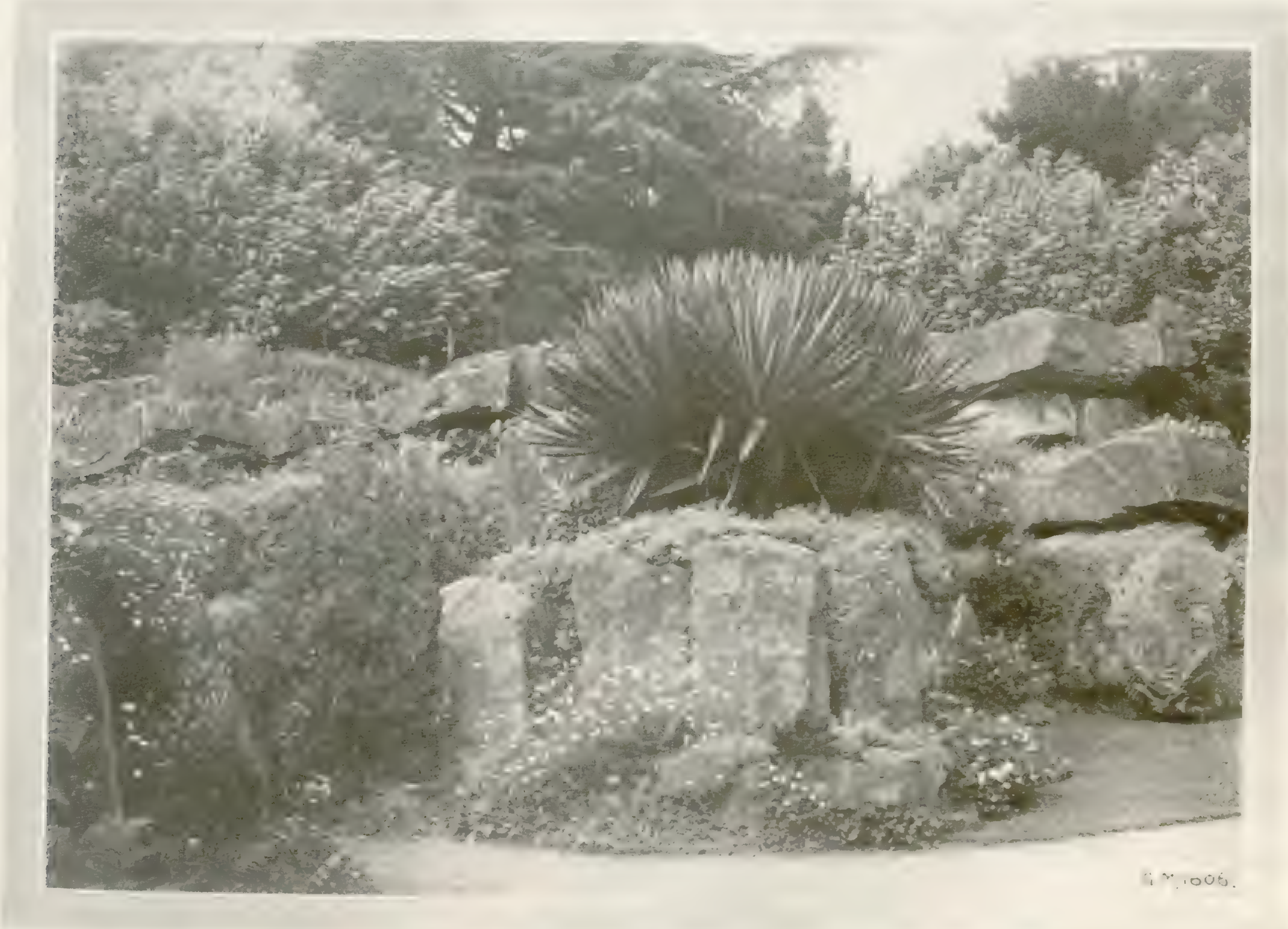
National Chrysanthemum Society. The annual meeting of this society will be held at Carr's Restaurant, 264, Strand, on Monday evening next, at 7 p.m., with Sir Albert Rollit (president) in the chair. The report that will be presented to the meeting is of a satisfactory character. It shows that commendable activity was shown in the conduct of the affairs of the society, that the exhibitions were of a high degree of excellence, and that several interesting and useful trials of single varieties were held. We learn with satisfaction that there was an increase in membership, and the financial position of the society is improving. With regard to the latter, the report states: "The whole of the ordinary liabilities of the society were paid before the books were closed on December 31, 1910. In the early part of the year a sum of £50 was transferred from current account to reserve fund account; and it will be observed from the accounts that at the close of the year a sum of £50 8s. 8d. stood to the credit of the society on current account at the bank. There are other sundry small amounts due for medals and advertisements, and these, together with the various properties at the Crystal Palace and the money at the bank, make the total assets on December 31 last £121 12s. 9d."

North of England Horticultural Society.—The organisation of this newly-constituted society is rapidly approaching completion, and the first meetings of the Scientific, Plant and Floral, and Fruit and Vegetable Committees will be held on Monday next, February 6, at 5 p.m., 6 p.m., and 7 p.m. respectively.

British Gardeners' Association.—At the last meeting of this association held at the R.H.S. Hall, Westminster, 44 new members were elected, bringing the total up to 2,008. An important meeting of the association was held at Birmingham on January 21. Mr. J. Udale presided, and about 90 gardeners attended to hear an address from Mr. J. Weathers, general secretary, and Mr. Raffill. Great enthusiasm was shown, and many present handed in forms of membership. Another meeting will be held at Birmingham on February 18, at the Cobden Café, when the local branch will be reorganised.

BOLD ROCKWORK.

While we have on several occasions made special reference to the fact that the greater proportion of the more beautiful of the alpine plants can be successfully cultivated on rockeries of the most simple description, we have not lost sight of the value of rockwork of bold construction as an aid in the production of scenic effects in the garden, or indeed of its usefulness in displaying the charms of certain plants to the best advantage. So far from this being the case, we have, as opportunities have arisen, described and illustrated some of the more noteworthy of the elaborate rock gardens that have come under our notice within the past few years. In giving prominent attention to the two classes of rockwork here referred to, our object has been to show that those who have gardens of limited size, and are desirous of growing with success plants from alpine regions under conditions of a simple character, may engage in the pleasurable task with the assurance of obtaining satisfactory results. All the alpine plants that have a place in British gardens will thrive in rock gardens of the most elaborate design if they are provided with a soil adapted to their requirements, and are assigned positions that are known to be favourable to their full development. It is not so much a question whether the plants will thrive the most satisfactorily on a simple or an elaborate rockwork, as of adopting a method that has the advantage of simplicity when there are objections to the building of rockeries that involve a considerable outlay, or a difficulty is experienced in providing a suitable site. This last point is of considerable importance, and it should be remembered in connection therewith that, in the case of gardens that are small, and indeed in the case of those of moderate dimensions, special care is necessary in the planning of rockeries possessing boldness to prevent their so predominating in the general scheme as to suggest the want of a proper balance between the several parts.



A VIEW IN THE ROCK GARDEN AT SWAYLANDS HOUSE, TUNBRIDGE WELLS, THE RESIDENCE OF G. J. DRUMMOND, ESQ.

Bold rockwork, and rock gardens in which boldness is a characteristic feature, have their advantages, and should have the fullest consideration when questions relating to the formation of gardens on a comparatively large scale in making additions to old ones are under discussion. Provided the space available is large enough to admit of their being so made as to possess but little, if any, trace of artificiality, they will form a distinct and delightful feature. The bold rockery will be planted in a very different manner to that which is so simple as to be but little more than a series of raised beds, for, instead of being wholly furnished with flowering plants from alpine regions, the subjects used in clothing the slopes should include hardy rock and border plants and trees and shrubs. With care a selection sufficiently comprehensive to produce a series of the most delightful effects and afford abundant interest may be made. As evidence of this we need only refer to the extensive and beautiful rock garden at Swaylands House, Tunbridge Wells, the residence of G. J. Drummond, Esq., which has been created by Mr. R. Hozier, who has long been chief of the important gardens of this charming seat.

This remarkable rock garden has a large area, is situate in one of the lower parts of the extensive grounds, and is so placed that it has been found possible to utilise water in the enhancement of its charms, and is not constantly under observation from the mansion and elsewhere. This is as it should be. Little is seen of the rocks until within a short distance of the garden, and on entering it and proceeding along the walks, visitors have a succession of surprises, and those who do not have also a succession of delights must have a somewhat peculiar temperament. In some parts the walks run through moderately open valleys with gentle slopes on which a host of beautiful plants are at home. In others the walks pass between rocks towering to a great height, and at some points so close together as to necessitate walking in single file. This rock garden was many years in the making, and is remarkable for the huge size of the larger proportion of the blocks of stone used in its construction. It is remarkable also for the skill shown in providing the various subjects with which the slopes are furnished with sufficient soil.

On the slopes and among the rocks trees and shrubs remarkable for the beauty of their flowers, for the distinct colour or form of the leafage, or elegance of habit, have been freely planted, and, as a matter of course, with due regard to general effect. In the more open positions alongside the walks flowering plants of various kinds abound. Higher up arabis, aubrietias, and perennial candytufts have been freely arranged, and spreading over the face of the rocks, these free-growing plants bloom with great profusion and produce in the season of flowering a marvellous display of colour. What has been accomplished at Swaylands House may be carried out in gardens of much smaller size. The rocks have been firmly fixed in position, and with due regard to their presenting a more or less natural appearance. The spaces for the soil are everywhere sufficient to afford an ample root run; trees and shrubs possessing more or less beauty and of moderate size have been selected, and hardy flowers have been planted in the positions adapted to their requirements.

G.

PEAS FOR SMALL GARDENS.

Peas for small gardens should be varieties of the very first quality, and those that grow no higher than four feet. In a small garden one has to utilise the ground so as to secure a full supply of various vegetables. By choosing peas 4ft. high and under the rows can be sown closer together than would be possible with taller varieties. A good guide to sowing is to allow the same distance from row to row as is the height of the variety.

Preparing the Ground.

Good ground work is the chief factor in maintaining a plentiful supply of peas throughout the season. Peas form such an important and favourite crop that no pains should be spared to have the soil in the best possible condition. Peas are deep-rooting subjects; the ground therefore should be trenched during the winter or spring. If heavy, defer the work until the dry, frosty winds arrive early in the year and onwards, leaving the surface in a rough state for the frost and winds to act upon it. Good farmyard manure is the best, digging the coarse or longer manure in the bottom trench, and the best and shorter under the top spit or layer of soil.

It is a great advantage to roughly fork the top soil over again for the weather to sweeten should a dry period follow. This process will take very little time, and the advantage is readily observed in the case with which the drills can be prepared later for sowing.

NEW PEA LANCASTRIAN.
(Messrs. Dickson and Robinson, Cathedral Street, Manchester.)

Sowing the Seeds.

To obtain early peas the first two batches should be sown in boxes. Even if there is only a cold frame at command, it will hasten the crop immensely. Make these two sowings during February, and even another in March, if the weather is unfavourable then for outside sowing. Grow the peas in the frame, and admit plenty of air on all favourable occasions after germination has taken place, finally planting them out during fine weather in March and April.

Early Giant and Early Morn are two excellent varieties for box treatment. When planting them out the soil in the box should be quite moist so that as much as possible remains attached to the roots. The plants can be removed singly, and planted three inches apart, without any harm accruing whatever. If cold weather or cutting winds prevail, protect with boughs or boards set on edge alongside the rows. It is advisable to stake the peas immediately they are planted, and if slugs are troublesome it is a good plan to dust finely-sifted cinder ashes around each row.

Sowings in the open can be made every fortnight from early in March to the middle of June. If the soil is of a retentive nature, burnt garden refuse, or any fine soil that is available, should be in readiness when the drills are drawn to mix with the soil, to cover the seed and to assist future growth. Drills nine inches wide and two inches deep are suitable. Sow rather thickly, and thin the plants just before staking; a fair distance apart would be two inches.

After treatment should be paid strict attention to, particularly for the later sowing, and should consist of regular waterings with soft clear water and liquid manure, syringing on the evenings of hot days. Mulching thoroughly, especially the mid-season and late varieties, using manure, long strawy litter or lawn mowings, which will keep the ground cool, and retain the moisture in the soil.

Varieties.

Well-tried early varieties are Pioneer, 3ft.; Acme, 3½ft.; Early Giant, 3½ft.; Gradus, 4ft.; and Early Morn, 3ft. Mid-season varieties: World's Record, 3ft.; Dwarf Defiance, 3ft.; Model, 4ft.; and Prizewinner, 3ft. Late varieties: Masterpiece, 4½ft.; Autocrat, 4ft.; Sturdy, 3ft.; and Selected Gladstone, 4ft.

G. Ellwood.

Early Melons.—As soon as the roots have touched the sides of the pots some more soil should be prepared and taken into a warm house, and the plants given a shift. The soil should be composed of good fibrous maiden loam mixed with some spent mushroom bed manure.—W. A. Cook.

Spiræas for Forcing.—It is not so very long since that practically the only spiræa employed for forcing purposes was the old Spiræa or Astilbe japonica. Then a dwarfer and more compact form, S. astilbe compacta multiflora by name, made its appearance. It proved, however, to be of too dense a habit to become popular, although it is still grown to a certain extent. About 25 years ago Spiræa astilboides was distributed, and in time crosses between this spiræa and the old A. japonica were put into commerce and soon became favourites. The first was S. astilboides floribunda, and since then others have been sent out, of which Gladstone is one of the best. These hybrids are bolder and looser than the typical A. japonica. The pink forms are wanting in colour when forced early into bloom.—W. T.

CANARY GUANO

"THE BEST IN THE WORLD."

There is no Fertilizer that gives such good all round results as CANARY GUANO. It is used in the King's Gardens, and by leading Amateurs and Trade Growers all over the Country. A post card to the Manufacturers will ensure full particulars.

SOLD IN BAGS AND TINS BY SEEDSMEN, NURSERYMEN, ETC.

Manufactured — by — **THE CHEMICAL UNION, LTD, IPSWICH.**

ROSES IN POTS

Wm. PAUL & SON

WALTHAM CROSS, LTD.

Respectfully invite attention to their magnificent stock of the above, which they believe to be unrivalled in quality and extent.

Dwarfs or bushes, extra strong, in 8 in. pots, for forcing and greenhouse culture	30/- to 60/- per doz. £12 and upwards per100.
Climbers and Ramblers in 8 in. pots, for forcing and out-door planting on pergolas, arches, etc., with shoots ...	6 to 12 ft. long, 30/- to 60/- per doz. 12 to 16 ft. long, 72/- to 90/- per doz. Price per 100 on application.
Dwarfs and Climbers, smaller plants, in 5 in. pots	10/6 to 18/- per doz. 75/- to £6 per 100.

Priced List Post Free on application.

Inspection of Stock Invited.

The Nurseries are twelve miles from London, four minutes' walk from Waltham Cross Station, G.E.R.

Sole Postal Address—

PAULS' ROYAL NURSERIES
AND SEED WAREHOUSE,
WALTHAM CROSS, HERTS.

ORCHIDS.

Amateurs interested in Orchids should write for our

Amateur's Guide,

2nd Edition, free.

Giving Treatment, Soils, Description of Flowers; Illustrated.

MANSELL & HATCHER, Ltd.,
Rawdon, Yorkshire.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and gar- [illegible] 100,000 large garden Ferns, 20s. 100. 5,000 cases [illegible] off yearly. Amateur Catalogue free. J. E. SMITH, [illegible] Fern Nursery, Loughborough Junction, S.W.

BUNYARD'S FRUIT TREES

The Best Quality and Largest Selection at Moderate Prices.

WRITE FOR CATALOGUE.

GEO. BUNYARD
& CO., LTD.,
Royal Nurseries,
MAIDSTONE.

CHEALS'

113 Acres of Ornamental

Trees & Shrubs

Of all kinds.

Fruit Trees

Hardy, Healthy, and true to name.

Roses & Hardy Plants

Descriptive Catalogues Free.

J. CHEAL & SONS,
NURSERYMEN AND LANDSCAPE GARDENERS,
Crawley, Sussex.

ANT ROOZEN & SON'S SEEDS, BULBS, AND PLANTS

For Spring, 1911.

All of the Finest Quality.

THE CATALOGUE of above is NOW READY, and will be sent, post free, on application to their Offices at . . .

OVERVEEN, HAARLEM, HOLLAND;
Or to their General Agents,
MERTENS and CO.,
3, Cross Lane, LONDON, E.C.

FRUIT TREES

We have 50 acres of young Fruit Trees in perfect condition to offer this season. Our **Specialities** are Cordons, Bushes, and Pyramids, and Trained Trees worked on selected **Fruiting Stocks.**

Fully Illustrated Catalogue Post Free.

W. SEABROOK & SONS,
The Nurseries, CHELMSFORD.

AMERICAN and BRITISH TREE CARNATION.—Leading varieties from 3s. per doz.; 17s. 6d. per 100; carriage and packing free for cash. Ask ill. price list. C. F. A. VAN DER SLUYS, F.R.H.S., Ramee, Guernsey.

Chester Nurseries

Over 500 Acres in Extent.

GRAPE VINES.

Strong and perfectly ripened.

Strong and Extra Strong Canes for planting out, **5/-** and **7/6** each.
Extra Strong Canes for fruiting in pots, **10/6** and **12/6** each.

Fruit Trees in Pots.

Strong Pyramids, established.

Apples, Pears, Plums, **3/6** and **5/-** each.
Nectarines, Peaches, **5/-**, **7/6**, and **10/6** each
Apricots, Cherries, **5/-** and **7/6** each.

SEAKALE

(Forcing).

LILY WHITE, SOLID IVORY, & PURPLE.

Extra Strong, **14/-** and **18/-** per 100.
Extra Extra Strong, **21/-** per 100.

ASPARAGUS

(Forcing).

Extra Strong, **20/-** per 100.

New Illustrated Catalogues of all Departments free on application.

DICKSONS,
Royal Nurseries, CHESTER.

RIVERS'

Fruit Trees, Roses,
Vines, Figs, Oranges,
AND
Orchard House Trees.

A LARGE AND SELECT STOCK ALWAYS ON VIEW.

Illustrated & Descriptive Catalogue
POST FREE 3d.

THOMAS RIVERS & SON
Sawbridgeworth, Herts.
Station: HARLOW, G.E.R.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices. Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

Please Write for List.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.

H. BURNETT,
Carnation Specialist, Guernsey.

Do you wish to grow

BIG ONIONS?

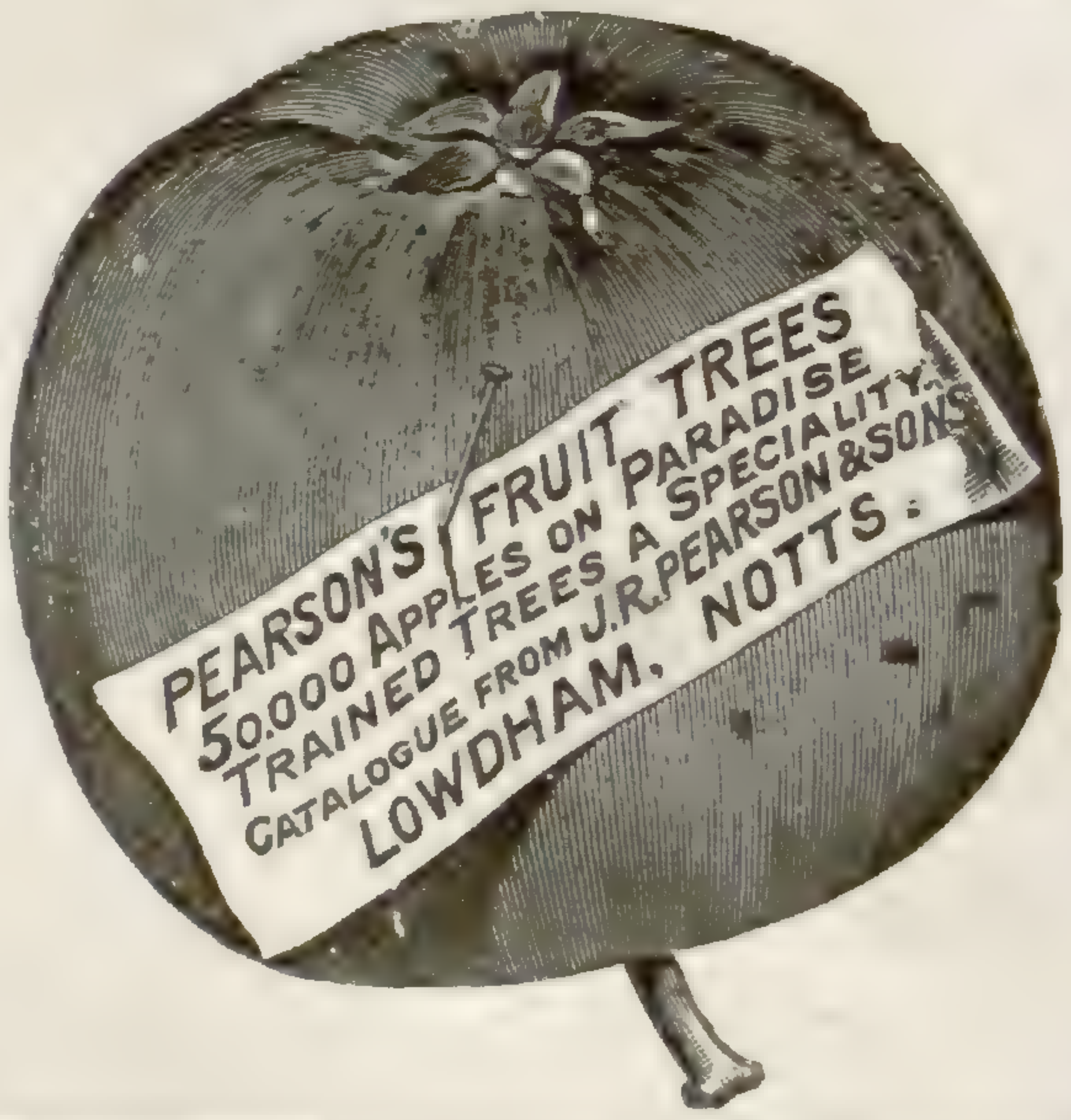
THEN YOU MUST HAVE

CRANSTON'S EXCELSIOR
— or AILSA CRAIG —

quite a waste of time to grow anything else. They are synonymous, although you may not believe it, and perhaps you fancy one name more than another. One thing, however, is certain; that I hold the best-selected stock of seed in the world. Guaranteed new, pure, and grown by the raiser. The original and proper name is "Cranston's Excelsior."

SEED—per packet, **1/-**
3 packets, **2/6** 12 packets, **9/-**

JOHN WILSON,
SEED MERCHANT,
HEREFORD.



PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J.R. PEARSON & SONS
LOWDHAM, NOTTS.

Rhododendrons.

Crimson, White, Pink. **250** Choice Named Varieties, fine foliage, well budded, for potting or planting. 1 to 1½ ft., 1½ to 2 ft., 2 to 2½ ft., 2½ to 3 ft., 3 to 4 ft., 4 to 5 ft., 5 to 6 ft., 6 to 7 ft. List of sorts and prices on application; many thousands to offer. Standards in all sizes.

All Home-grown. Inspection Invited.

F. STREET, Heatherside Nurseries, CAMBERLEY.

TWO GOLD MEDALS

Besides Silver-gilt and Silver Medals

Have been awarded to my **ROSES** during the past season.

Grown near the South Downs, therefore thoroughly hardy. A large stock of extra strong Climbers, &c., &c.

Prices on application.

FRANK WOOLLARD, F.R.H.S.,
53 & 54, Lewes Road, Brighton.

1,600 Pecks **Lighton's Lincs Seed Potatoes Free,** as last year.

10 TONS FREE.

Bargain List Seeds, Begonias, Roses, Rock Plants, etc. Flower Seeds gratis.

LIGHTON (53), Kirton, Boston, Lincs.

Burpee's

The Leading American Seed Catalog for 1911

"THE SILENT SALESMAN" of the World's Largest Mail-Order Seed Trade tells the *plain truth* about the Best Seeds that can be grown—as proved at our famous FORDHOOK FARMS—the largest Trial Grounds in America. Handsomely bound with covers lithographed in nine colours it shows, with the six coloured plates, Seventeen Choicest Vegetables and most Beautiful New Flowers.

It is a SAFE GUIDE to success in the garden, and should be consulted by every one who plants seeds. It is mailed FREE to all who appreciate QUALITY IN SEEDS. Shall we mail YOU a copy? If so, kindly *name this magazine* and write TO-DAY!

W. Atlee Burpee & Co.
Burpee Buildings, Philadelphia

THE MOST UNIQUE

SWEET PEA LIST

In the World
IS NOW READY.

PLEASE SEND POSTCARD FOR SAME.

My ANGLO-AMERICAN COLLECTION, 5/-

15 Varieties (including Roosevelt, Nightingale, Perkin, Mrs. H. Dickson, Sunpf. Crimson) is the best value in the Sweet Pea world. Will make a very appreciative present. My stocks are the truest humanity can produce! My aim is to oblige!

G. H. MACKERETH,
The Sweet Pea Clearing House,
ULVERSTON.

Note my special offer of Mr. W. P. Wright's most interesting Sweet Pea Note Book.

TREES, TREES, TREES.

Now is the Time to Plant.

300 ACRES TO SELECT FROM.

Our LIGHT OAKS and BAGNALL NURSERIES are admitted to be the most exposed in the United Kingdom, ranging up to 1,000 feet above sea-level. Customers may therefore rely on our stock thriving in the coldest or exposed situations.

Catalogues gratis on application.

ISAAC MATTHEWS & SONS, Ltd.,
The Nurseries,
MILTON, STOKE-ON-TRENT, STAFFS.

NEW GARDEN PEA FOR 1911.

MASSEY'S RELIANCE, per packet 1s. post free.

Mr. W. A. Cook, Head Gardener to Sir E. G. Loder, Bart., writes: "I am very pleased to inform you it proved a great success, especially as it was such a cold wet time for early peas. Sown on the same day as several other varieties, it was not one day behind, and is equal in bulk to anything I have ever grown. Haulm about three feet, with especially long pods for so early a Pea."

GEO. MASSEY & SONS, Seedsmen, SPALDING.

MARGUERITE CARNATIONS.

The great improvement effected in recent years in the various annual plants, and those treated as annuals, and grown for border decoration and for cutting, is fully evident in the case of the subjects here referred to. Time was, and that not long since, when the flowers of Marguerite carnations were of very undecided tints of colour, borne on weak stems, and a large percentage of them single. All this is changed, and large fragrant blooms, mostly double, well poised on stout stems may now be assured by sowing seeds of a good strain in spring, and giving the attention usually afforded to young plants of very similar character until the time for planting in the open arrives.

Sowing the Seeds.

This may be done from the middle to the end of February in pans or boxes, using as a rooting medium a compost of fibrous loam and leaf-mould in about equal parts, to which a little sand or burnt ashes may be added according to the texture of the former article. The receptacle having the usual perforations at the bottom, may have an inch depth of coarse leaves or moss placed therein, upon which at least two inches of the prepared soil will then be required, to be made level and firm. As germination is almost certain thin distribution of the seed should be practised to obviate the necessity of very early transplanting, also the risk of damping. Cover the seeds lightly, and, if the soil is fairly moist, watering at this season may with advantage be dispensed with for a few days, more especially if the boxes can be placed within a frame upon a gentle hotbed. Moderate heat in all stages of growth is advisable, keeping the plants as near as possible to the glass to induce a sturdy growth, otherwise an undue weakness in the stems will be manifest.

After Treatment.

When large enough to handle with ease, and some degree of speediness, the seedlings may be transferred to other boxes prepared in much the same way as already described, but the soil may be somewhat coarser, and have a small portion of well-broken up lime rubble added; this inclusion will be appreciated and the decay of the stems, owing to frequent waterings, to which the whole carnation family is more or less liable, will be prevented.

When again established, a night temperature of about 50 degrees will be ample, and soon thereafter a position in a pit or frame where frost can be excluded would be better than that of a house. Planting out may usually be done about the middle of May, depending, of course, upon the season; but should the weather, or any other cause arise to prevent this being done, temporary transference from the boxes to an open air site would assist in the formation of root, and avoid congestion of growth and its attendant evils.

The Flowering Quarters.

Being essentially autumn-flowering, wherein lies their chief usefulness, as they commence to bloom just at the time when the border carnations are declining, a position most suitable to a late display should, as far as possible, be chosen. Though well adapted for beds where gladiolus, hyacinthus, or late-flowering lilies find a place, a single row of plants alongside a walk is perhaps to be preferred. Here the growths are able to spread naturally, and the central growths, if thought necessary, can be readily supported by means of a few short stakes inserted at intervals, the connection between being made with slender twine, thus preventing the flowers being dashed and soiled by rain and wind.

Given fair cultural treatment, so abundantly are the flowers and buds produced, that the least developed of the latter may require removal from the sprays if these are wanted for vase decoration, after which the open and partly-opened flowers remaining are in every way beautiful. Flowering continues until severe frost occurs, which last autumn was in the early days of November, and up to that time flowers, wholly unprotected, were plentiful. Colours in mixture have hitherto ruled, but those distinct, as yellow, crimson, and white are now obtainable at a reasonable cost from the leading seed houses, and, as already stated, a good strain of seed should be procured to ensure the best results.

JAMES DAY.

NEW PEA HUNDREDFOLD.
(Messrs. Sutton and Sons, Reading.)

"CARNATIONS, PICOTEES, AND PINKS" will tell you plainly how to propagate and grow these favourite flowers to perfection. The work is freely illustrated with plates of leading varieties, and explanatory diagrams as to layering, taking cuttings, fertilising blooms, etc. Price 2s. 6d. net, by post, in box, 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

FRUIT TREES ON LAWNS.

In a beautiful old garden in a Hampshire town there are apple, pear, and other kinds of fruit trees growing on the lawn. The latter has a gentle incline from the dwelling-house down to a river, and when the fruit trees are in full blossom the scene is a lovely one indeed.

Quite close to this garden there are abbey ruins and a minster church; the old grey division walls, covered in places with lichen, and the old-fashioned flowers growing in the border beneath, all add great beauty to the scene. A looker-on can readily conjure up in his mind's eyes what real old-fashioned gardens looked like.

A portion of an old orchard and fruit garden was added to the lawn in question, and only the small bush fruits were discarded. The standard apples and pears, and even several espalier trees were allowed to remain, and when the ground had been duly levelled turf was laid down. It is a quite unique sight to see the espalier fruit trees almost in the centre of the lawn.

I have often advocated the planting of fruit trees on a lawn. Of course, there are very few gardens that lend themselves to the planting of fruit trees as the one above referred to does; but there are many lawns that would be improved, and become more interesting if a few fruit trees were judiciously planted on them. Not only are such trees lovely and interesting during their flowering period, but they are equally so in the autumn when the fruits are ripening and the leaves assuming their various autumnal tints. The grass should be eventually allowed to grow right up to the stems of the trees as it is in the case of other kinds, both deciduous and evergreen.

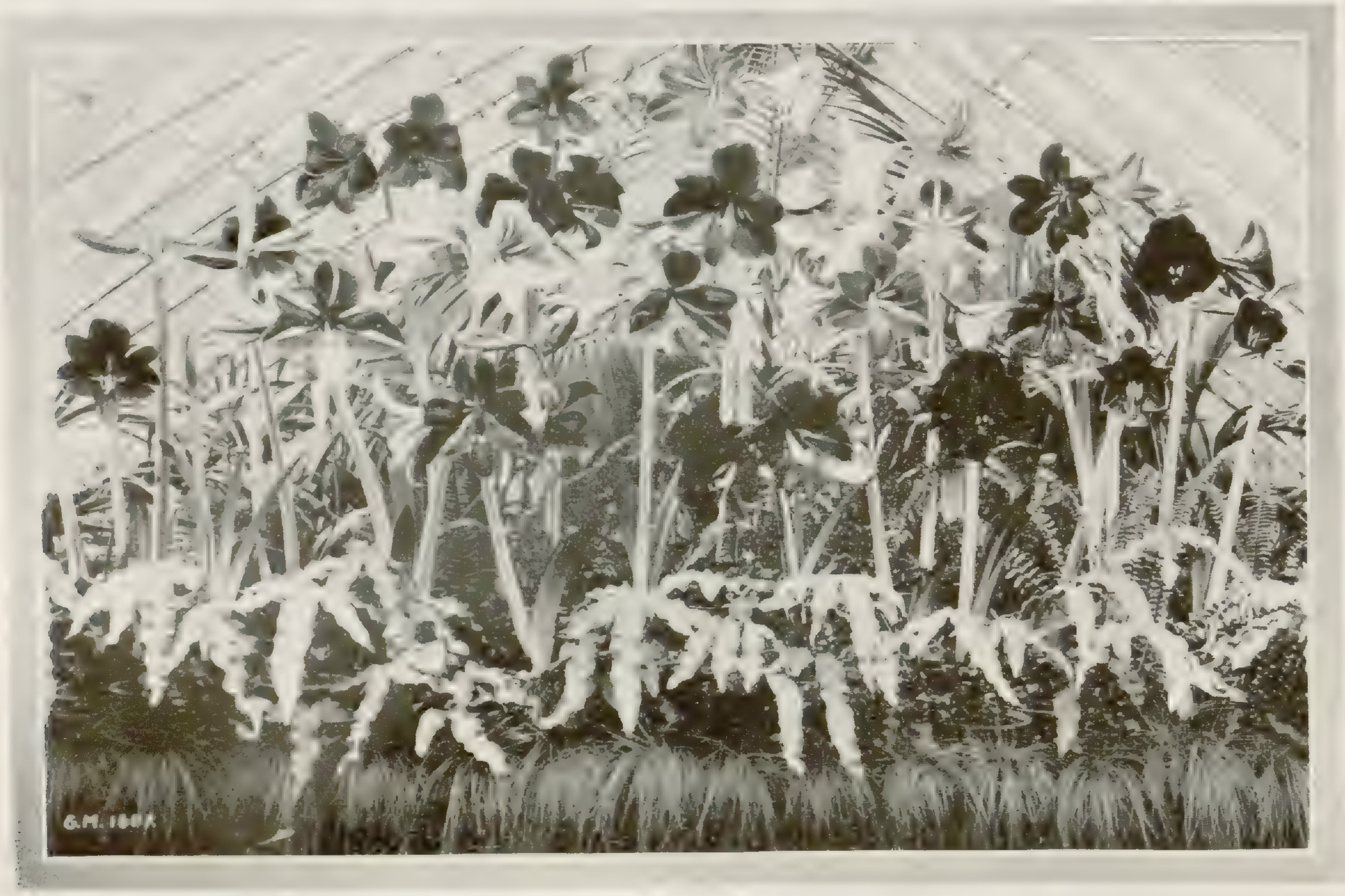
The following kinds and varieties of fruit trees are suitable to plant.

Apples.—Hoary Morning, the fruits are large, bright red, and streaked, and look very nice in the autumn. Devonshire Quarrenden is another good variety for our purpose; its fruits are very showy on the trees, being dark red, and are seen at their best during September and the early part of October. Barnack Beauty makes a perfect standard, and its fruits are very richly coloured on one side. Keswick Codlin must also be included, as it grows freely, and bears abundantly in almost any kind of soil. Red Astrachan bears early fruits, and they are of a rich scarlet colour and most effective. **Pears.**—Jargonelle, Pitmaston Duchess, Marie Louise d'Uccle, Hessle, Swan's Egg, and Williams' Bon Chretien. **Plums.**—Kirke's, Jefferson; and damsons, walnuts, quinces, cherries, medlars, and mulberries should also be planted.

GEORGE GARNER.

HIPPEASTRUMS AT CHRISTMAS.

Hippeastrums are undoubtedly amongst our most showy bulbous plants, and at the festive season of the year they will be found exceptionally useful, as brightly-coloured flowers are so much in demand at that time.



A MIDWINTER GROUP OF HIPPEASTRUMS (AMARYLLIS).

The accompanying illustration is from a photograph taken in Christmas week, 1910, and represents part of a batch of seedlings, most of them flowering for the second time, and they are the result of one cross, between a light and dark variety, and vary considerably both in colour, width of petal, and size, the flowers ranging from 8 to 10 inches in diameter, while some of the stems are 30 inches in length.

As the months of March and April form the usual flowering season of these plants, a few notes on the methods followed by which those illustrated were had in flower earlier, may interest your readers.

Hippeastrums are not at all fastidious, and no one should hesitate to grow them because they lack a special house, tan bed, bottom heat, etc. Personally, I believe they are often given too much heat, and are ripened, or dried off, far more than is necessary or good for them, and so fail to give such good results as they otherwise would do. Many gardeners prefer to pot the bulbs directly the flower spikes show themselves, but in the case of the batch in question, the bulbs were shaken out, and repotted immediately after flowering, my experience being that the flowers do not develop so well if the bulbs are disturbed just before flowering.

The compost used was of a loamy nature, containing a sprinkling of artificial manure, great care being taken to work the soil among the large fleshy roots. The plants were then grown in a light, airy house, where a temperature of 60 deg. was maintained as nearly as circumstances would permit, good sturdy growth being made. At the end of May, the house being required for tomatoes, the hippeastrums were moved to a cold frame, where they remained until the end of October; the frame was unshaded, and during the warmer months, air was admitted night and day. During the last few weeks they were in the frame the water supply was gradually decreased, and the plants were then placed in a cool house, near the pipes, behind chrysanthemums, in fact, and still kept rather dry; water was, however, given occasionally to prevent shrivelling.

Here the spikes soon began to show themselves, and, as they did so, the plants were removed to a warmer house, and placed in a light position near the glass, where they quickly developed, being assisted with weak liquid manure.

During Christmas week when the photograph was taken, about a third of the batch was already over, and the remainder will probably keep up a succession of blooms until February is well advanced.

W. J. JENNINGS.

Salvia Patens.—Tubers should be placed in a warm temperature to produce growths for propagating. Potting is the most suitable plan to adopt, for when sufficient cuttings have been obtained the old plants may be placed in a cooler house, and will serve for planting out again.—E. C. POOLEY.

UNRELIABLE ROSES.

There are a considerable number of roses that are not reliable enough for general cultivation, and thus frequently cause disappointment when planted. Unfortunately, several of these are really good at times, while others are very indifferent growers. The intense colour and grand form of some hybrid perpetuals tempts a second trial after failure. But as we can have really trustworthy varieties of almost equal merit in other respects, it is folly for the average grower to try those that are uncertain. It is my object to name a few that cannot be depended upon in this class. I do not wish to say they are always disappointing, because in some positions and instances these same varieties have succeeded in a surprising manner, but they are uncertain. The intensity of colour in A. K. Williams, Duchess of Bedford, Dr. Sewell, Comtesse de Ludre, Horace Vernet, Xavier Olibo, and Louis Van Houtte is very captivating in the exhibitor's stand, and also when we occasionally have the fortune to have one upon our own plants; but they cannot be depended upon, and have no place in the everyday rose garden. Among the Hybrid Teas we have Lady Mary Fitzwilliam, White Lady, Mildred Grant, Edith D'ombrain, Robert Scott, and Papa Lambert that come under the same category. In Teas and Noisettes there are Cleopatra, Ivory, Golden Gate, Ma Capucine, Comtesse de Nadaillac, Niphetos, and Sunrise that are far from dependable in the open.

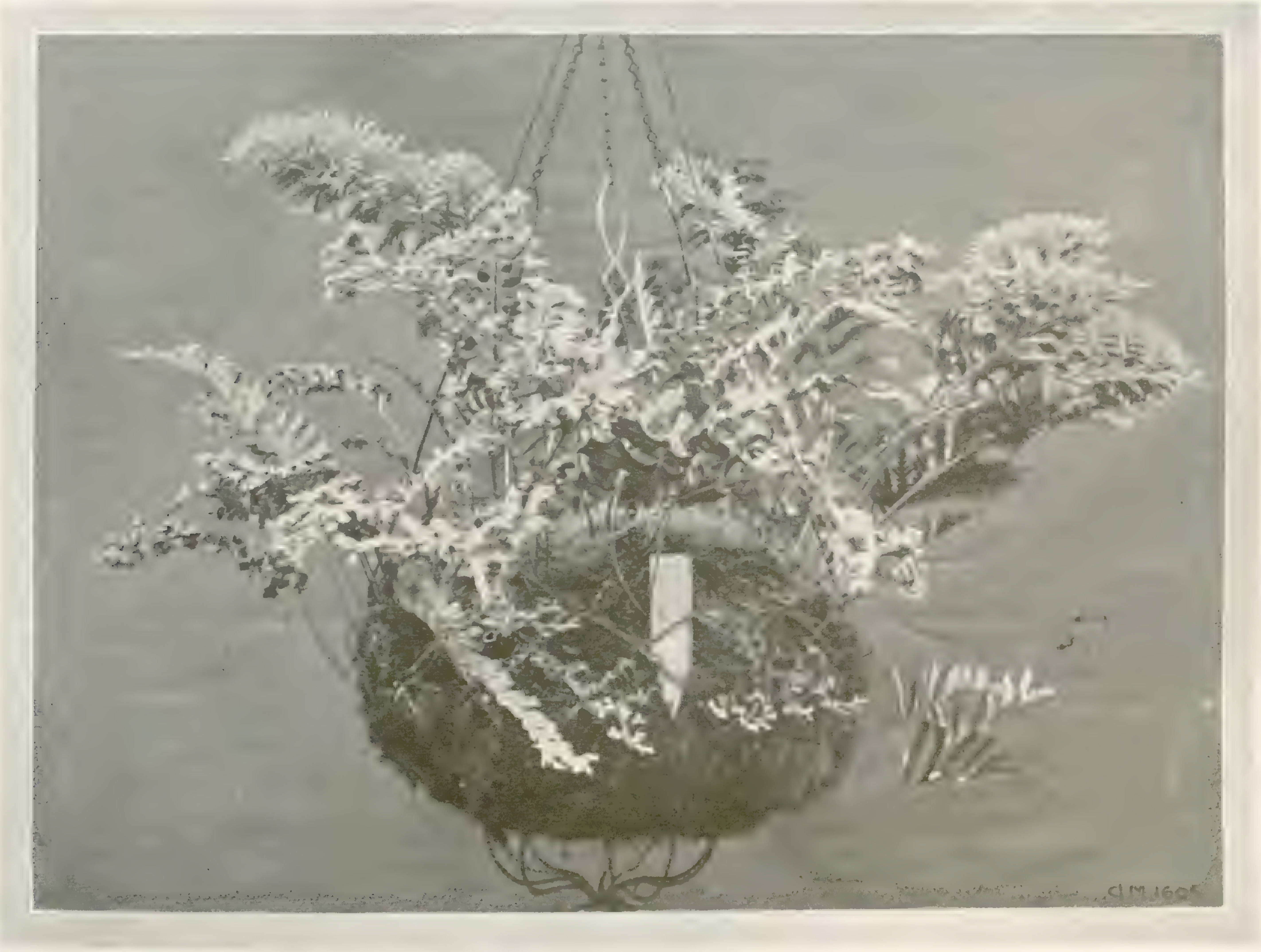
These are beautiful roses, and I do not wish to decry them, but they have caused much disappointment to amateur growers who have seen them at their best at the various exhibitions.

Fortunately, we have heaps of varieties that cannot fail to please, and are as reliable as any other flowering shrub; but we need know a little more about the behaviour of roses before planting, and few catalogues can give fuller information than they do already; hence this warning note.

A. Piper.

POLYPODIUM VULGARE AS A BASKET PLANT.

Herewith I send you a photograph kindly supplied by my neighbour, Mr. C. B. Green, of a group of varieties of the Common Polypody, which, to those who are only familiar with the common form, will probably constitute a revelation. A glance at this basket group suffices to show very wide variation between the forms, some being heavily tasselled, and others very much divided. Among them are P. v. pulcherrimum, the bold divided variety to the upper left and right; P. v. grandiceps Forster, and bifidi-multifidum, lower left and centre, amid which are mingled but somewhat masked, the curious form known as P. v. glomeratum Mullins, no two fronds of which are alike. Projecting lower down to the right are seen fronds of my Killarney form P. v. longipinnatum, and these five really constitute the group.



VARIETIES OF POLYPODIUM VULGARE GROUPED IN A SUSPENDED BASKET.

The size of the fronds may be judged by the fact that the basket is 15 inches wide. The group was installed in soil packed in a lining of moss, some seven or eight years ago at least, and has been mulched from time to time with fresh leaf-mould, but otherwise left undisturbed, and, as will be seen from the creeping root-stocks originally planted on the top, have made their way downwards through the moss, and sent out fronds laterally as well as upwards, to very fine effect. Care, of course, is taken to prevent drought, by frequent supplies of water, but it is happily a characteristic of this species that accidental droughty conditions do no harm, and entire recovery resulting when a thorough watering is subsequently given. The polypody is a denizen of old walls, and has become evolved to withstand the risks of drought thus incurred. The compost used was leaf-mould mainly mixed with some loam and plenty of sand.

A parallel basket might be filled with other varieties of equal beauty, say, with the several forms of P. v. cambricum, the ordinary form, and Prestoni, Burrowi, and Hadwini, while P. v. elegantissimum alone would make a fine specimen when well established, as would any one of the varieties mentioned if strong plants are used to begin with, and proper planting and treatment afforded. It may, indeed, safely be said that no fern is better adapted for basket treatment than this. It is perfectly evergreen, the fronds remaining verdant through the winter, and until the new ones are well in evidence; some of the varieties, too, usually grow very late in the season, July, or even August, and these extend the growing season for several months as a consequence.

The creeping root-stocks should not be embedded deep when planting, since they seek the surface, over which they creep, so as to form dense masses. A few pieces, however, may be packed close to the moss laterally, through which they will push their way, and so hasten the ball formation which adds to the beauty of the group. Copper wire is preferable to galvanised wire, as the latter oxydises, and oxide of zinc is detrimental. Strong suspending wires or chains are necessary, as the weight is considerable; the hooks on which the baskets are suspended must also be stout. With these precautions and preparations and a little care in watering a group of baskets in an unheated conservatory may be made an attractive feature.

Chas. T. Druery, V.M.H., F.L.S.

PEAS FROM JUNE TO OCTOBER.

Peas, when presented at their best, are highly prized. Consequently every pains should be taken to provide an unbroken supply over as long a period as possible, and when all details are considered, there is little difficulty in this matter under ordinary circumstances. Few vegetables have been improved more during recent years, and there are now so many varieties—both early, mid-season, and late—suitable for various parts of the country, that I see no reason why so many of the old and very poor sorts should be sold and cultivated, because as much trouble is incurred in cultivating these as with the better varieties. We seldom have peas at hotels, restaurants, and public dinners of that fine quality which we are in the habit of having at home.

NEW PEA WEBBS' NEW LEADER.
(Messrs. E. Webb and Sons, Wordsley, Stourbridge.)

Preparation of the Land.

This is a very important matter, and must be faced if the best results are to be expected; and here let me point out that there is no soil that I am acquainted with which cannot, when properly cultivated, produce peas in the highest state of perfection. The first item to observe is that the ground must at all costs be deeply broken up, either by a proper system of trenching, or preparing deep trenches, much in the same way as is generally advised for celery culture. For all early and mid-season peas I much prefer trenching the ground to the depth of from 2ft. 6in. to 3ft. during the winter months, and I am fully convinced that the subsoil should be brought to the surface, working in at the same time a dressing of good farmyard manure, placing part at the bottom of the trench, and another part in the middle. Burnt garden refuse is one of the finest additions one can possibly make, and should be strewn over the surface after the trenching is completed. When this work should be carried out will depend to a large extent as to the nature of the soil. On light, porous land I prefer the autumn; but for that of a heavy, retentive nature January and February provide, in my opinion, the best time. No attempt should be made to break down the material taken from the bottom, as this may safely be left to the beneficial effects of the weather which we experience during the early spring months. When the sowing or planting time arrives lightly fork over, and break down the surface.

For successional sowings which are intended to give results during August, September, and October, good trenches should be prepared during the early spring months and filled in with good half-decayed manure, placing sufficient soil over the same in a rough condition, and leaving it until the sowing period arrives. Peas resent being grown on the same site two seasons in succession, and one should always endeavour to choose a fresh position, and allow at least two or three seasons to elapse, is possible, before again growing peas in the same quarter.

Raising the Seedlings.

I am a strong advocate, and have been for many years, of sowing peas in boxes or some other suitable receptacle, raising them under glass in a cool house, pit, or frame, thoroughly hardening them off, and planting them out when about three inches in height. If this work is carefully performed no serious injury will result; but, on the other hand, I have found, when treated in this way, the plants come into bearing earlier, and the results are generally much more satisfactory than when the seeds are sown in the open. In addition to this, one has the seed under much better control, and can combat the many enemies which so frequently attack and do serious damage, both to the seed and the plant, when in a quite young state. Almost any moderately light compost will be suitable for raising the young plants in. Ordinary seed-boxes may be used which should be well drained, and the seed sown carefully and regularly. Avoid sowing and planting too thickly. I am fully convinced that there are more failures and partial failures due to overcrowding this crop than from any other cause, though this is a common mistake, made not only by the amateurs, but by those who are entrusted with the seed sowing in many private gardens.

Planting and Sowing.

This work should be undertaken when the weather is favourable, choosing a dry day if possible. On many kinds of land it will be necessary, and the work will be much more easily and satisfactorily carried out, if light boards are employed for walking on. It will be found a capital plan to remove about three inches of the surface soil, about six inches in width, and place it on either side of the row. This will afford the young plant some slight protection, as well as assist them in keeping an erect position. The staking should be carried out at the same time, and some means must be taken to protect the plants against the ravages of birds, as if these once attack them the growths are never as good. Not only is overcrowding detrimental in the rows, but if the rows are too close together the same defect follows; so as far as possible, except for the earlier and dwarfer kinds, the rows should be wide apart, cultivating other crops between them.

Watering and Mulching.

During spells of drought the value of mulching can hardly be overestimated, and I much prefer long stable litter to anything else I know of for this purpose. This is equally valuable both on light and heavy soils. Watering, too, is of the utmost importance, giving both clear water and liquid manure properly diluted, and during wet, showery weather some approved vegetable manure should be applied as per instructions given with it. On hot days the growth should be syringed in the early evening with tepid water.

It will be sometimes necessary, to induce the crop to mature more quickly, to pinch out the points of growth when a fair crop is assured. This will make many days difference.

Sowings should be made at intervals of about ten days or a fortnight till the end of June, and in some localities till the middle of July; but it will be found that when the plants are allowed sufficient room and plenty of good rooting material, the later-sown varieties will continue to yield over a very long period. Mildew is frequently the cause of unsatisfactory results among late varieties. This, of course, as is well-known, is due to many causes, but the principal one is insufficient moisture at the roots. Some varieties are much more prone to it than others.

The most common pests in relation to peas are rats, mice, birds, slugs, thrips, and mildew; a fairly good list, which goes to prove that peas are appreciated by other than human beings. Means must be taken to prevent serious damage being done, both in the earlier and later stages.

Varieties.

The long lists of varieties are indeed a puzzle to many, and more especially to the inexperienced. Nearly all the seed vendors have a particular variety or varieties they strongly recommend, and there are far too many peas catalogued, though, as I have often said, some varieties fail in one district where others can be relied upon. There are some standard varieties which may safely be recommended for any locality and that are known to possess good constitution, freedom, and, above all, first-rate quality when cooked.

For early supplies I advise either Early Giant, Early Morn, or Edwin Beckett, all improved varieties of the Gradus type. For succession and mid-season, Duke of Albany, Prodigy, and Quite Content, are hard to beat; while for late use, Autocrat (one of the finest peas ever raised), Masterpiece, and Gladstone, are all good. The latter does much better in the North than in the South, and in my opinion, though the pods are very fine, the quality of the peas is not so high as in Autocrat. I do not favour the very dwarf kinds for large gardens, except for frame culture.

E. Beckett.

A ROCK GARDEN NOTE.

Any contemplated addition or alteration in this department should be at once to allow the stones and soil to become properly settled before planting time. In carrying out the work of extension the style of the existing rockery should be strictly adhered to, and the same kind of stones ought to be used. Above all things avoid the practice of mixing old roots or tree stumps with the stones. In a few years time they form a mass of decaying matter, and a harbour for mice, snails, etc. The habits and requirements of the various plants which are to be grown must be borne in mind as the work proceeds. By deciding the question of what is to be planted in each "pocket," crevice, or slope, suitable soils may be used as the stones are placed in position, thus: For ramondias peat will have to be well rammed in between the rocks; the same for Haberlea rhodopensis, ericas, alpine rhododendrons, etc. Most of the dianthus require plenty of old mortar rubble mixed with the soil, and so on. It is far easier to fill in the necessary soils in the first place than to leave this until building is completed. In most cases there is a better facility for working the soil in thoroughly from the back than from the front, and no places are left vacant. It is absolutely imperative for the welfare of the plants that the work should be well done in the first place. Although so hardy, many of the choice rock garden plants are most particular, both as to position as well as soil, and require places specially made to accommodate them. In most instances anything approaching a rich soil should be avoided, as it only induces gross growth, which, in our damp humid autumns becomes so tender that it cannot stand a severe winter. The setting, or background, must be judiciously planted with choice conifers and flowering shrubs, as well as ornamental foliage shrubs. Nothing rank growing and gross feeding should be used, or the roots will rob the plants of all nourishment.

E. C. Pooley.

THE BEST WHITE PERPETUAL CARNATION.

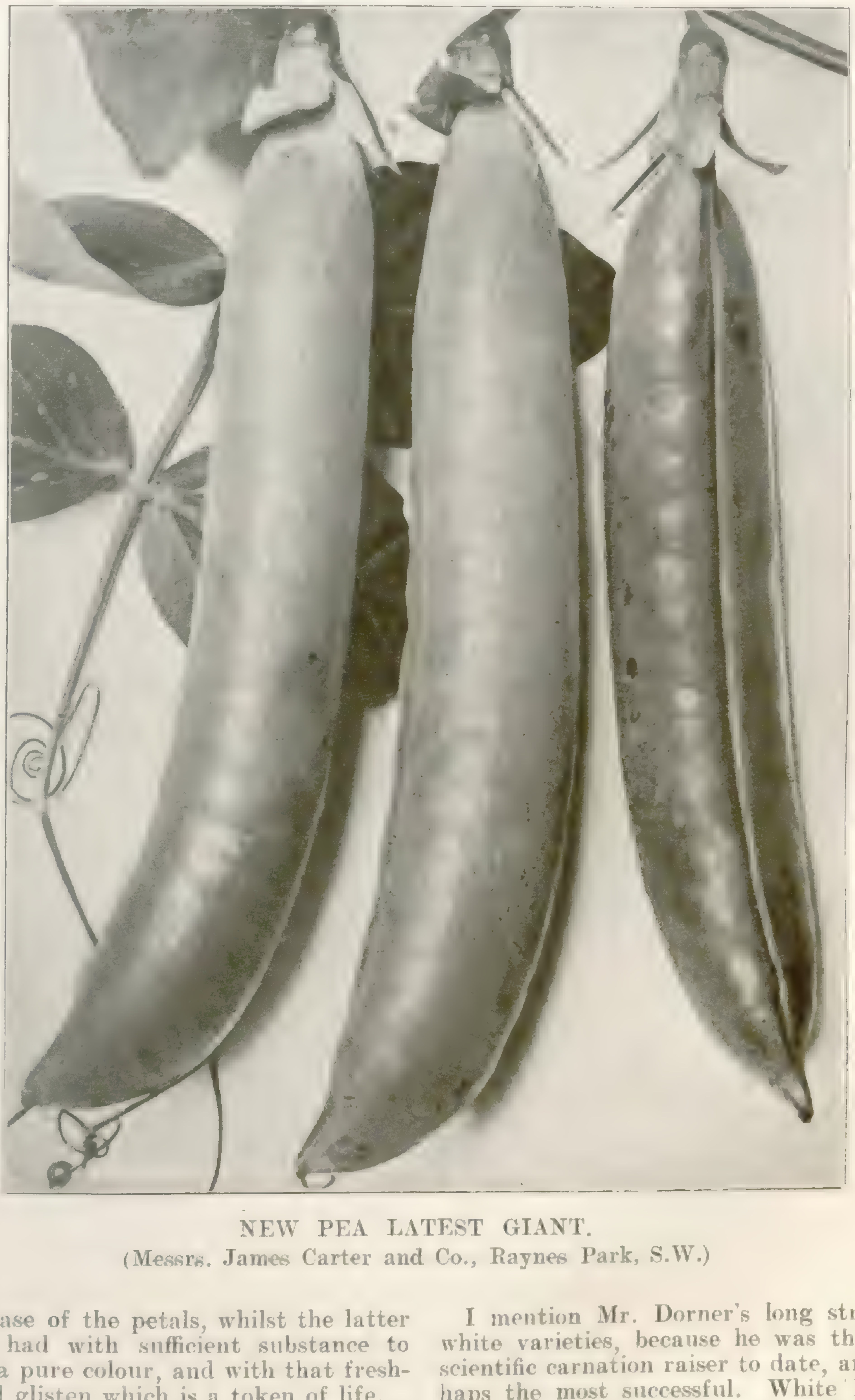
A pure white flower, without shade or shadow, that solid purity, without even the suggestion of any colour, is indeed seldom found in a flower.

Every raiser, no matter what his object may be, is striving earnestly to obtain this prize, this triumph of our craft which is as illusive as a will-of-the-wisp, always in view but never to hand. Few flowers are absolutely white, in fact it is questionable if certain flowers can ever be made to answer that description. But this is not the case with the carnation. There is no yellow throat to conquer, no foreign colour at the base of the petals, whilst the latter can be had with sufficient substance to display a pure colour, and with that freshness and glisten which is a token of life.

The only absolutely pure white perpetual carnation that I know of, and is in commerce to-day, is White Perfection. All too many of our white varieties lack substance in their petals, and lean towards transparency rather than solid whiteness, but even our floral committees apparently fail to recognise this.

I believe that no absolutely pure white carnation can be obtained by any other than scientific methods. Crosses made between coloured varieties do invariably produce white seedlings, but, as I say, not absolutely pure white. The late Mr. Frederic Dorner, whom his many American friends used to love to call "Father" Dorner, is the man who, in 1891, gave the world "White Wings," and climbed up the ladder of success by introducing such grand old-time varieties as White Dove, Sea Gull, Storm King, and White Cloud, that beautiful variety which many will still remember. Then came The Belle, Lady Bountiful, and his crowning triumph, White Perfection; and then, this season, White Wonder, a seedling from White Perfection, which is being disseminated in America by his firm. This, we hope, will do justice to its raiser, who was really a great man, and one worthy of our highest praise.

I mention Mr. Dorner's long string of white varieties, because he was the most scientific carnation raiser to date, and perhaps the most successful. White Perfection is the result of 15 years' work with a set object along definite lines, and it is the direct descendant of White Cloud, which itself once created a standard, and which has some ten white seedlings forming its genealogical tree. That is how White Perfection is the truest and purest white. But colour and form of flower do not constitute everything in the make-up of a first-class perpetual carnation, even if that is the case in the rose, sweet pea, border carnation, etc. We must have freedom of habit, and a plant which grows



NEW PEA LATEST GIANT.
(Messrs. James Carter and Co., Raynes Park, S.W.)

equally well in winter and summer. The colour of flower also must come bright and true under these two extremes, and there are many other points.

So, everything considered, which is the best all-round white perpetual carnation? In the first place, we do not consider such old varieties as Mrs. S. J. Brooks, Queen Louise, The Belle, Lilian Pond, White Lawson, Lieut. Peary, etc.: while of the more recent introductions, Lloyd, President Seely, My Maryland, Mrs. J. C. Vaughan, and Marquis Georgia, are, in the words of the American, "down and out." Lady Bountiful was good and of beautiful form; the colour, however, often had a pink cast or flake, and with the raising of the standard the Lady has proved to be not Bountiful enough, but we appreciate the long term of office she served.

Sarah A. Hill is not a market grower's carnation, because it is not sufficiently free flowering, but it has size, and also a most refreshing scent. The growth is also healthy and strong, and well adapted for pot culture, and it is one which should suit many private growers.

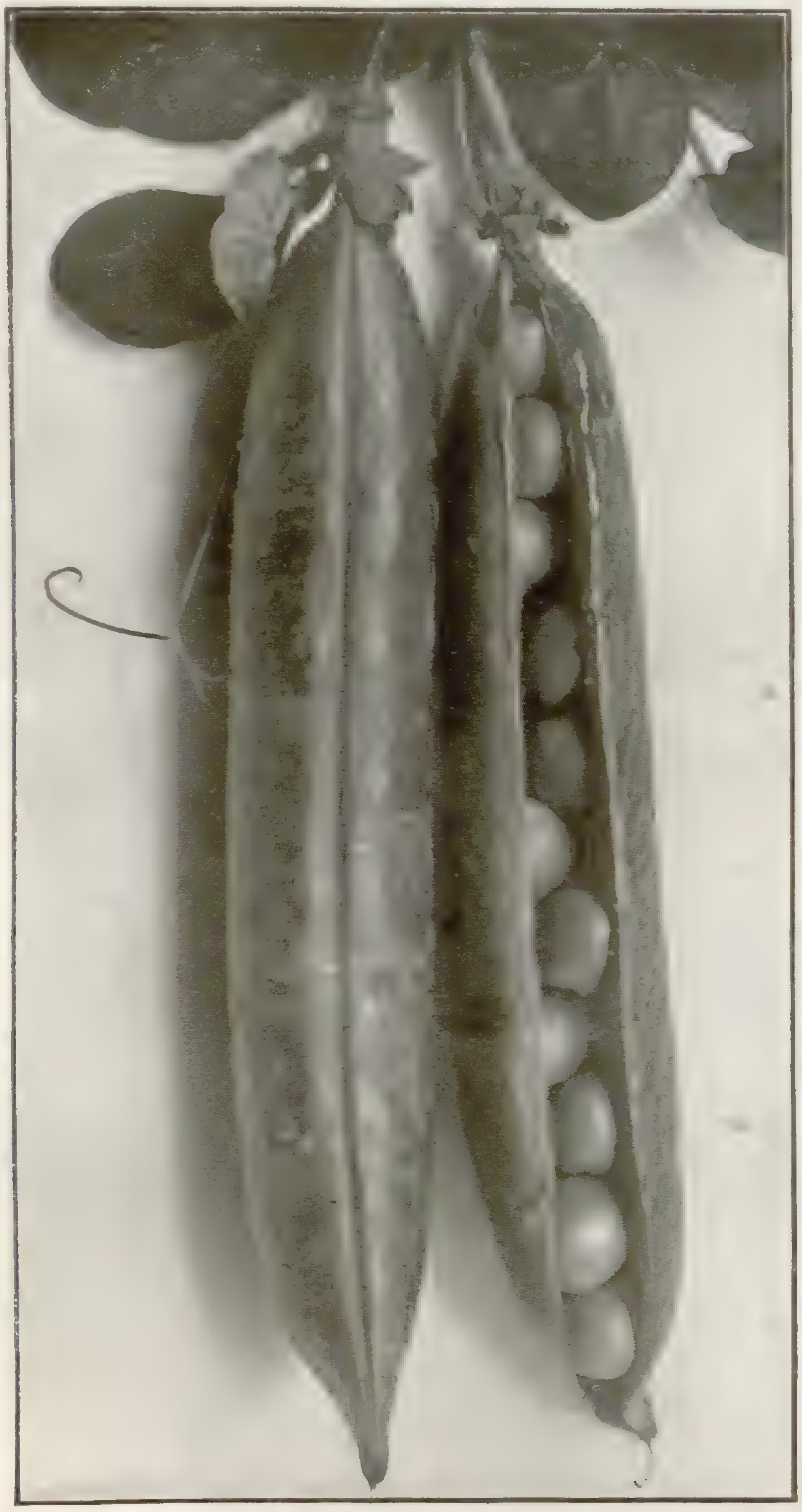
Shasta was sent out in America last season and well received, whilst our own societies have honoured it, but it is not a variety to are enthusiastic over, and, at the shows, it does not appeal to the crowd. The habit is strong, and said to be free. The flowers are deeply fringed and of medium size, but I do not think Shasta will last long in commerce.

Niagara is of good form with rounded petals, but it lacks substance, and while it may be, and indeed is, a good all-round carnation, yet I do not believe Niagara will be grown by many three years hence.

So we have narrowed our list down. We have but White Perfection and White Enchantress, and these do not require introduction to many. I consider White Perfection the best variety for quality of flower, and it is well named "Perfection" in that respect, but the habit of growth is not wholly suitable for pot cultivation, being rather thin. If I could only grow one white variety, I should cultivate White Enchantress as the best all-round white for quantity and quality combined, but it would be necessary to have a good strain of the pure white stock and to grow it cool in a light, airy position, and then it would be quite good enough.

I have not mentioned the new aspirants to fame—White House, White Wonder, and Marchioness of Linlithgow, because I am not in a position to write with equal authority on all three, but I rejoice to think that we have such excellent novelties to select from, and we shall see which of these can stand the test of time.

Montagu C. Allwood.



NEW CULINARY PEA NEWTONIAN.
(Messrs. Dicksons, Chester.)

EARLY SPRING PROTECTION FOR FRUIT BUSHES.

The mild weather of the autumn and winter months is now manifesting itself by the early growth of spring blooming plants. On January 11 Adonis amurensis was nicely in bloom in the rock garden at Westgarth, Pine Walk, Prenton, Cheshire, the residence of F. Thomas, Esq. Snowdrops, too, had been in flower for some time then, and other heralds of spring were in evidence all round. Among shrubs ribes and roses were pushing their growths, the former almost bursting into flower. In fact, everything seemed quite a month before its time. Should the weather continue to be favourable to the development of growth, and our hardy fruit trees and bushes come into bloom a month before their usual time, it is questionable if the grand prospects of a fruit crop this year will be realised.

Very little can be done to retard the blossoming of fruit trees, but perhaps bushes could be helped by leaving them unpruned as long as possible. These, like roses, naturally start at the end of the previous year's wood, so that if they started into growth, and a frost followed, damaging these growths, there is the chance of saving the buds nearer the base of the shoots. In sheltered spots loose straw mixed with the growths would afford a certain amount of protection, and spruce branches on a strong frame of posts and spars would make a good guard against both frosts and cold cutting winds in the more exposed positions. If necessary, these could be left standing till the likelihood of damage from this source was past. As the leaves wither and drop off by degrees the plants would become gradually exposed to the elements and be less liable to suffer from the removal of this protection than from a covering of any closely-woven material.

Of course, much depends on the kind of weather we may have from now till the end of February, as to the early blooming of our fruit bushes, but there can be no harm in being prepared to meet an unprecedented early spring with appliances to at least mitigate the damage, if not to entirely avert it, and I have found the above materials and bracken very useful for this purpose. X. Y. Z.

The Bulbous Fumitory.—There are some flowers which we cannot well place in the first rank, and such is Corydalis bulbosa, also known as C. solida, and in addition as Fumaria. Yet, although not in the premier rank, it has some beauty, and is, I think, a flower which those who are acquainted with hardly care to be without, although they may not consider it valuable enough to put in a prominent place. Yet it is pleasing with its prettily shaped leaves and its clusters of rather dull purplish flowers. These are very numerous, and repay examination because of their shape and the beauty of their form. It only grows from four to six inches high, while it will flourish in both sun and shade, thus affording a pretty plant for some places which are not easily made interesting in April, when it usually flowers. It can be grown in the open parts of the woods and the shrubberies, on rockeries, and in borders. It likes a fairly good and open soil, but will content itself in most gardens with the common fare. It is increased by division, best performed as soon as the plant goes to rest.—S. A.

SOME OF THE NEWER CULINARY PEAS.

It is always an excellent plan, wherever there is available space, to test a few novelties each year. They may or may not be an advance upon standard varieties already grown, but this can only be determined by trial. It may be that among novelties in culinary peas one or more may be especially suitable for our own garden soil and situation, may come into use at a specially desirable time, or may possess hardiness, free cropping, and continuity beyond the common. It must be remembered that some varieties of peas do better in certain districts than in others, and there is always a possibility that one of the novelties tested may prove eminently serviceable. In any case, so great is the care taken in raising and selecting new varieties, there is no risk of loss of crop. The following varieties are all worth consideration.

Hundredfold: A dwarf first early variety that grows about 2ft. high and crops freely. It secured an Award of Merit for Messrs. Sutton and Sons from the Royal Horticultural Society on June 30, 1910. Though of small growth this variety bears pods and peas of the largest size. Lancastrian: A maincrop pea of unusual merit that has been well tested by Messrs. Dickson and Robinson, Cathedral Street, Manchester, in their trial grounds, where it was grown under the provisional title of New Cross. It grows 3½ft. high, and its fine handsome pods carry from eight to ten large, rich green, finely flavoured peas. Webbs' New Leader is a first early variety of great merit. It grows about 3ft. to 3½ft. high and for a first-early variety it produces pods of great size, these containing from eight to ten large peas of fine colour and delicious flavour. Its high quality for table use, together with its splendid appearance for the earlier exhibitions make this introduction from Messrs. E. Webb and Sons highly desirable. Newtonian: Messrs. Dicksons, Chester, who offer this new early maincrop pea, claim for the variety that it is an extraordinary cropper. Its fine large pods contain ten or a dozen large peas of excellent flavour, so that for table or for exhibition purposes it is a fine addition. Height, 4ft. Messrs. Harrison and Sons, of Leicester, who have sent out many splendid new vegetables, are offering a very fine new culinary pea named Lord Leicester. This is a cross between Gradus and Stratagem; it has the growth of the former, and is about 4ft. high, but carries large pods, seven inches long, well filled with large peas that are of grand flavour and colour. This maincrop variety is first-rate alike for table and exhibition purposes. Among the latest of Maincrop varieties Messrs. Jas. Carter and Co. have a novelty in Latest Giant, an exceedingly promising variety obtained by crossing Gladstone with Exhibition. The cross was made in 1903, and since then rigid selection has perfected its fine qualities while severe tests have proved its worth. It grows 4ft. high, and its large, well-filled pods yield peas of the highest quality.

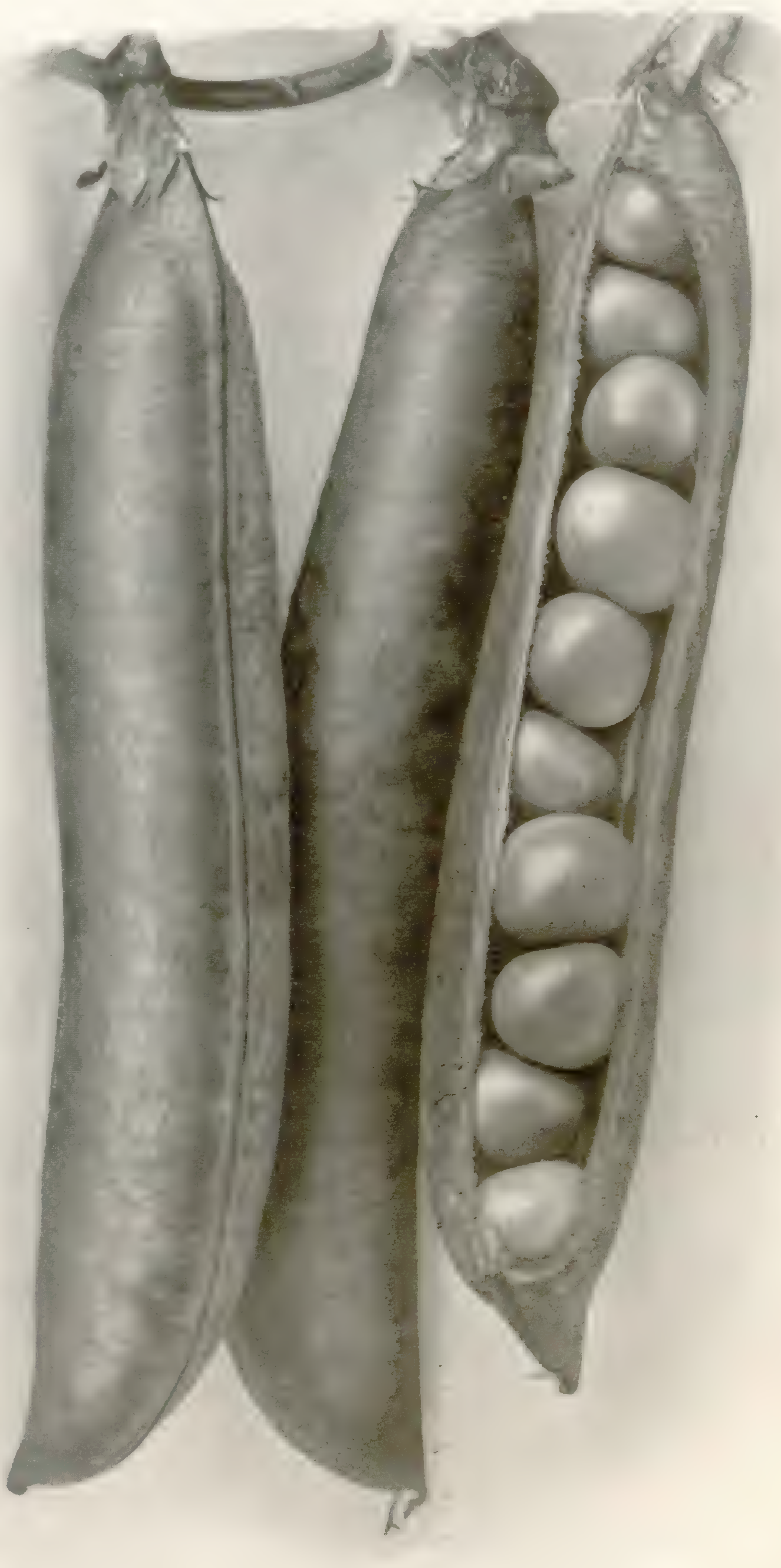
Freesia Chapmani.—This is an exceedingly pretty hybrid freesia, and one that would doubtless be more grown, but for the fact that the bulbs are comparatively expensive. It is the result of a cross between the rich golden-yellow Freesia aurea, whose blossoms are scentless, or nearly so, and the well known F. refracta alba. The flowers of Freesia Chapmani are of a beautiful golden-yellow colour, with a deep bright orange blotch.—W. T.

WORK FOR THE WEEK.

◆

THE ORCHID HOUSES.

MEXICAN LÆLIAS.—The different species and natural hybrids belonging to this winter-flowering section of popular orchids will now be passing out of flower, and will enter upon their prolonged season of rest. Lælia anceps, in its varied and attractive forms, are perhaps the most useful of the whole of this section in gardens where there is a demand for cut flowers in December and early in the new year. The graceful spikes are most serviceable for all cut flower purposes, and if the plants have been standing in a cool dry atmosphere a few days before the flowers are cut, it considerably increases their durability. These, and even the more rare of the white varieties, are now procurable for a modest outlay, and should certainly have the attention of gardeners and amateurs in districts where there is a clear atmosphere. Like many other of our winter-flowering orchids, they are particularly susceptible to the effects of fogs, and should not be grown in unfavourable situations, as there is nothing more distressing than to have the blooms destroyed after all the trouble that has been bestowed on the plants,



NEW PEA LORD LEICESTER.
(Messrs. Harrison and Sons, Leicester.)

and just as they are about to expand and display their charms.

CULTURE.—With these, as well as in the culture of most orchids, methods of treatment will differ, and as one method may be considered equal to another, when the particular situation and circumstances are considered, the cultivator who has succeeded should not be in a hurry to act on the advice of others, as it might lead to less favourable results. Sunless seasons are always more or less unfavourable to the flowering of Mexican lælias, and because a season like the present has not produced the results of previous years, it is not desirable to advise any important departure from the methods generally found successful.

RESTING.—It matters little as to whether the plants are repotted immediately after they have flowered, or whether this be delayed until the plants commence to grow later in the season. The most important item in the successful growing and flowering of L. anceps depends on the proper ripening of the pseudo-bulbs, and this largely depends on the treatment the plants receive during the dormant or resting season, i.e., between the times the flowers are removed from the plants and the commencement of new growth in the early summer. The plants should be placed in a cool, dry atmosphere, with the temperature about 53 to 55 degrees at night, and exposed to all the available light; they require but little root moisture now; only sufficient is necessary to keep the pseudo-bulbs and leaves plump, and damping the house about once a day will be found almost sufficient to secure this desirable condition for the next few weeks. If the plants are to be potted at once a compost such as that previously recommended for cattleyas will be found suitable. Provide ample drainage, as the plants require an abundance of water when in active growth.—H. J. **Chapman**, Oakwood Gardens

STOVE PLANTS.

EUCHARIS AMAZONICA. — Specimens that have been cultivated for winter bloom will by this date have completed their flowering season. If one is desirous of increasing the stock by the division of some of the largest specimens, extreme care must be exercised when carrying out this operation, and when the roots are in a healthy condition the bulbs should be parted so as to keep as much soil as possible about the roots. The pots used will vary according to the size and strength of the plants treated. The following compost will be found suitable: Strong fibrous loam, with the fine particles shaken out, a few lumpy pieces of peat, and a good addition of broken charcoal, Bedfordshire sand, and mortar rubble, so as to render the rooting medium as porous as possible. The pots used must be clean, dry, and thoroughly well drained with clean crocks. Both the compost and pots should be heated to the same temperature as that in which the eucharis are at present growing. Pot firmly, but carefully, avoiding injury to the tender roots. When circumstances permit the plants to be plunged over a moist bottom heat of 70 to 80 degrees, tan bark, or leaves will make a most suitable plunging material. After potting the plants may be watered sufficiently to settle the soil around the bulbs, but extreme care must at all times be exercised to guard against any excess of water; as a rule, a gentle dewing overhead with the syringe will suffice until the roots are thoroughly active again.

EUCHARIS MITE is a most destructive pest, and the cultivator must take every care to guard against an attack, or there will be disastrous results to the whole stock. During repotting the presence of the pest is easily noticed, and if it is present the bulbs and roots must be well cleansed with insecticide, and put into small pots. An occasional fumigation will have beneficial results, and the foliage and bulbs may be sponged at intervals during their growing season. Later in the spring, when the pots have become well filled with roots, an application alternately, of farmyard liquid and clear soot water will greatly improve the quality of the blooms, and impart a healthy green colour to the foliage.

COMPOST FOR POTTING STOVE PLANTS.—A good supply of best loam and peat is indispensable for stove plants. As a liberal supply of water is always required, on account of the high temperatures maintained throughout their growing season, it is essential that the roots at all times remain in a healthy condition, which cannot be maintained unless the rooting medium remains sweet.

WATERING.—Stove plants are at this season liable to injury through excessive applications of water while the roots are comparatively inactive. The soil may be allowed to become moderately dry, and afterwards given a thorough soaking: the water used must not be of lower temperature than the house in which the plants are growing.—**John Donoghue**, Bardon Hill Gardens, Leeds.

THE FLOWER GARDEN.

PROPAGATION of the various plants required for summer bedding must be commenced without delay. Iresine, coleus, alternanthera, lobelia, alyssum, verbenas, ageratum, fuchsias, Agathæa cœlestis, abutilons, and others required for this purpose should receive attention. Plenty of sand mixed with the soil is necessary for propagating purposes.

SUB-TROPICAL BEDS.—Seeds to sow now are those of ricinus, canna, Nicotiana Wigandioides, Datura suaveolens, Centaurea candidissima, Celosia plumosa, Eucalyptus globulus, Acacia lophantha, and A. dealbata. Also sow Begonia semperflorens, dahlias, pansies, pyrethrum, lobelia, Marguerite carnation, Lobelia cardinalis, Salvia Fireball, S. Pride of Zurich, and S. patens.

DAHLIAS.—The tubers which have been retained for providing cuttings may now be introduced into a little warmth, to induce growth. The roots should have all decaying parts cut away, and be placed in boxes deep enough to allow the roots to be covered with leaf-soil. Any labels that have become loose should be retied firmly on the stems.

FUCHSIAS.—Specimen plants which are grown for bedding, and have been given a rest, may now be pruned and started. A recently-closed fruit house is an excellent place for them, removing them to a more airy structure when growth has fairly started. Trained ivy-leaf geraniums should be cleaned, re-tied, and, if necessary, repotted. Should the latter operation not be required top-dressing will prove beneficial.

FLOWERING SHRUBS.—To obtain good results several kinds of flowering shrubs will require pruning at this season, amongst which are Spiræa callosa and varieties, S. Douglasi, S. salicifolia, and S. betulifolia. These flower best on the young wood, and should be cut back to within a few buds of the older growth. Buddleia variabilis, B. Lindleyana, B. Veitchi, and B. V. magnifica should also be hard pruned, and three or four buds will be found quite sufficient to leave on last season's growth. The same advice applies to Hydrangea paniculata, Ceanothus Gloire de Versailles, and C. Marie Simon.

PERGOLAS, PILLARS, AND ARCHES should be examined, and any decaying parts of the structures must be replaced with sound timber. All climbers requiring pruning should be attended to at once, and the growths tied in to give the whole a tidy appearance. The Jackmanni, lanuginosa, and viticella types of clematis may be pruned slightly, as they flower on the young wood. The Florida, montana, and patens sections, which flower on the old wood, should only have some of the weak growths removed. With regard to the rambler class of roses, all that is necessary now is to replace any ties that are broken, for the pruning of these roses should be done immediately the flowering season is past.

FLOWER BEDS remaining vacant throughout the winter should be dug, and the soil left in a rough condition until required for planting. When dressing the beds with manure it will be advisable to turn to the plan of the coming summer's bedding arrangement, or, probably, beds will be dressed which do not require it.—E. C. **Pooley**, Gnaton Gardens, Plymouth.

FRUITS UNDER GLASS.

EARLY VINERY.—Vines that are now ready for disbudding should be attended to as necessary. It is not wise to do all the work on one occasion; begin on the upper half of the rods first, as this will give a slight impetus to growth on the lower half. Do not tie down until the shoots have more substance. See that the borders are not dry near the hot-water pipes, and if symptoms of dryness appear give a good soaking with tepid water. If mealy bug is present it should be sought after very diligently on a sunny afternoon, as they then come out of their hiding places. Never take plants into a vinery that have had mealy bug on them. The temperature of the house should now be raised to 60 degrees by day and 55 degrees by night, allowing a rise to 70 or 75 degrees with sunshine, at the same time opening the top ventilators. Syringe twice daily, about 9 a.m. and 2 p.m., and damp down as often as is requisite.

CHERRY HOUSE. — Cherries cannot be hard forced, but by steady forcing can be had ripe by the middle or end of May. Where a cherry house is not available, these fruits do well in pots, bear very excellent crops, and can be grown in a mixed house; but when a house is devoted to them, the best fruits are taken from cordon trees trained to the roof, with pyramids along the centre, if room is available. Houses used for flowering chrysanthemums make ideal cool pot fruit houses. Special trees for forcing are prepared by fruit-growing nurserymen, and these can be plunged outside till required. Cherries are liable to severe attacks of black aphis, and, therefore, should be fumigated just before they come into bloom, and again directly after.

EARLY PEACH HOUSE.—When the trees are in flower the atmosphere may be kept a little drier, but do not increase the temperature at this stage. As the flowers become ready they should be pollinated to secure a good set. The flowers will not be ready for this operation till about the second day after opening: use a rabbit's or hare's tail fastened on the end of a stick to distribute the pollen. As soon as the flowers have set the fruit will swell rapidly, and young shoots or growths come away with increased rapidity; disbudding should, therefore, commence at the earliest possible moment. I like to do this work as soon as the shoots can be handled, but I do not advise stripping the tree all at once. It will be generally noticed that the tops of the trees require attention first. See that the borders are quite moist, and give a light fumigation at this stage, which will probably stay an attack of aphis. Sometimes ants are troublesome at the flowering stage, and destroy the crop by eating away the anthers: saucers of treacle and honey will entice them, and a grease band put round the tree stem will destroy a good many.

THE SECOND PEACH HOUSE should be closed, as the increasing sunshine will now be sufficient to start growth. Syringe the trees twice daily in fair weather. In later houses all tying and pruning should be brought to a finish as early as possible, and the walls should be limewashed (mixing in plenty of sulphur and petroleum); when this has been done leave the ventilators open day and night, and keep the house as cool as possible.

STRAWBERRIES. — More strawberries should be introduced into cool houses. The early batch now showing bloom should be assisted with weak liquid manure. Keep the soil healthy by regulating the water supply. Syringe both pots and foliage twice daily, excepting when in full bloom, though a gentle spray on a sunny day will not hurt the flowers, but assist pollination.—W. A. **Cook**, Leonardslee Gardens.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

Royal Horticultural Society.

The meeting held at Westminster on Tuesday, January 31, was not a large one, nor was it of special interest; there was a fair display and a moderate attendance, but there was a feeling that exhibitors and visitors were reserving themselves for the show on the occasion of the annual meeting on February 14.

FLORAL COMMITTEE.

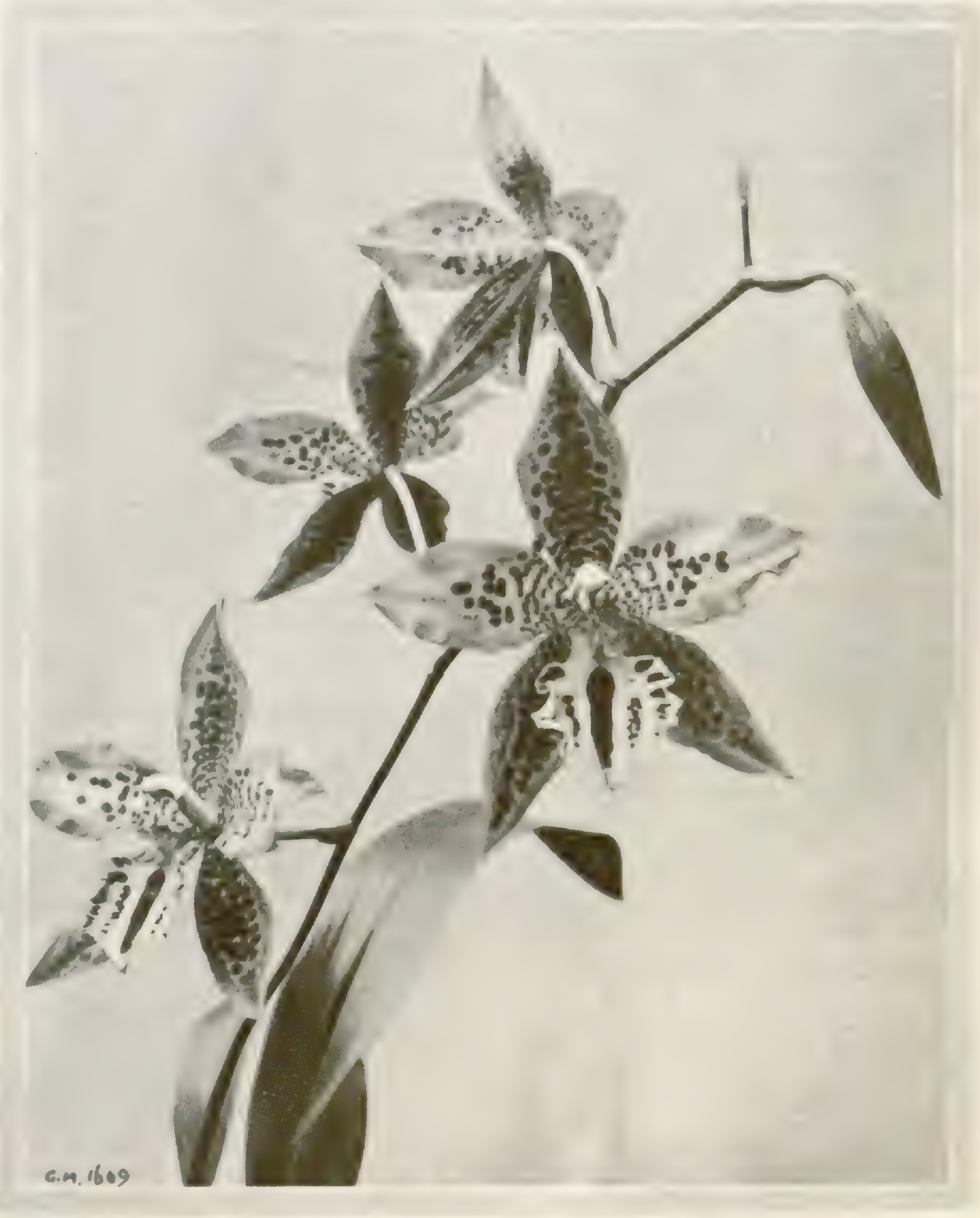
An attractive display made by Messrs. James Veitch and Sons, Chelsea, included a fine batch of Indian azaleas in variety, camellias, early rhododendrons, the new Erlangea tomentosa with bluish-lilac flowers, the fragrant Freesia refracta alba, the yellow greenhouse rhododendron named King Edward VII., and a splendid batch of Primula obconica that showed in their distinct colourings, finely formed and large flowers, the evidence of skilful selection and good culture—it represented a real grandiflora strain. Messrs. Bees, Ltd., Mill Street, Liverpool, exhibited about thirty plants of a pure white-flowered form of Primula malacoides, thus giving further evidence of the variation possible in this new Chinese species.

A very beautiful exhibit of forced flowering shrubs finely arranged by Messrs. R. and G. Cuthbert, Southgate, was the great feature of the meeting, and it once more ably demonstrated the value of so many of our hardy flowering shrubs for forcing and conservatory decoration. Cocos palms formed the background, and pterises the groundwork and margin of this big group. Azaleas of the mollis type gave the bold colouring, and they were finely flowered. In the centre were Magnolia conspicua, arranged with wistarias, and Pyrus malus atrosanguinea. Towards the back were tall standards of lilacs, wistarias, laburnum, Azalea mollis, and Staphylea colchica, and nearer the front were groups of Prunus triloba, staphyleas, and lilacs. The whole formed a brilliant and interesting contribution.

Such fragrant plants as Boronia megastigma, Daphne indica rubra, and varieties of Lilium speciosum were set up with spiræas and azaleas by Messrs. William Cutbush and Son, Highgate. Among early spring flowers this firm had Iris alata, I. sind-pers, I. Danfordi, the charming I. reticulata, I. Krelagei, and I. histrioides major, with blue primroses, Adonis amurensis, and Rhododendron præcox. Carnations formed another group from the Highgate firm, and here Marmion, Afterglow, Frank Galsworthy, Miss Winnie Pryor, Beacon, and the new Lady Elphinstone were well represented. Messrs. J. Cheal and Sons, Crawley, presented a little rock garden crowned with small pines, cupressus, hamamelis, heaths, spiræas, etc., and with saxifragas occupying the niches of the rocks. At the base were pretty groups of Iris reticulata, I. Danfordi, Primula denticulata, and P. d. alba, P. rosea, blue primroses, various tulips, and Iris alata.

Ferns were largely shown by Messrs. H. B. May and Sons, Edmonton, who had platyceriums, gymnogrammas in great variety, some adiantums, plumose nephrolepis, and davallias. Perpetual carnations were delightfully shown by Mr. H. Burnett, Guernsey, who brought over some beautifully bright flowers, and set up large vases of Enchantress, Marmion, White Perfection, Fortuna, Beacon, Rose Pink Enchantress, Mrs. H. Burnett, etc. Although not one of the largest, it was one of the best groups of carnations Mr. Burnett has staged. Mr. A. Fabius, Redlands Nursery, Emsworth, exhibited Adiantum farleyense Gloire Van Moordbrecht (A.M.), a remarkably distinct and handsome form.

In the rock garden display made by Messrs. T. S. Ware, Lim., Feltham, we noticed Helleborus guttatus, Primula cashmeriana alba, P. malacoides, Adonis amurensis, saxifragas, and the pretty little Morisia hypogæa. Messrs. Barr and Sons, Covent Garden, showed hardy heaths in flower, the graceful Garrya elliptica, and colonies of Iris reticulata histrioides, I. reticulata, Crocus balearica, Cyclamen coum, Galanthus Whittalli, and other lovely little early-flowering plants. Messrs. Stuart Low and Co.'s fine salmon-coloured cyclamen was well shown on this occasion by the Bush Hill Park firm; the Messrs. Low also once more set up a group of perpetual carnations, and displayed a considerable range of the popular varieties.



ODONTOGLOSSUM HARWOODI.
The flowers rich yellow freely marked with brown-chestnut. F.C.C., R.H.S., January 31. Messrs. Charlesworth and Co.

Zonal pelargoniums from Messrs. H. Cannell and Sons, Swanley, again proved the usefulness of these brilliant flowers for winter decorations where the skies are clear; the Swanley firm had also some good cinerarias, and some that showed considerable variation from the florists' type, and suggested new departures in the matter of form. Messrs. Phipps and Ireland, Barham, presented a small exhibit of alpines, and Messrs. W., Wells and Co., Merstham, showed their new White House carnation, and Edgar Forbes, a late rose-pink chrysanthemum. Mr. G. Reuthe, Keston, showed various interesting plants.

ORCHID COMMITTEE.

A striking and beautiful batch of Lælia anceps Sanderiana, with a score or more of spikes of lovely white flowers, formed the central feature of Messrs. Charlesworth and Co.'s group of orchids. On either side of these were such lovely things as Brasso-cattleya Queen Alexandra, Lælio-cattleya Bella alba, Cattleya Octave Doin, Odontioda Diana, O. Vuylstekiæ, O. Bradshawiæ, O. heatonense, Odontoglossum ardentissimum, O. Harwoodi (F.C.C.), a new yellow hybrid between O. Wiganianum and O. maculatum auriferum; O. Dora, O. Doris, and some good cypripediums. In Messrs. Armstrong and Brown's exhibit from Tunbridge Wells, the outstanding plant was Cypripedium Duke of Connaught (C. Beryl and C. nitens Ball's var.), which carried two very large bright green, purple-spotted flowers; C. Euryades New Hall Hey var., C. Œdippe, C. Venus Orchidhurst var., C. triumphans, C. Helen II. var. Fascinator, and Odontioda Vuylstekæ were other good things.

A group of cypripediums from Mr. W. Carr, gardener to E. Roberts, Esq., D.S.O., Park Lodge, Eltham, included C. villosum auriferum, C. Œdippe, C. Thompsonianum, C. St. Albans, C. Sir Redvers Buller, C. Miss May Roberts, C. Olivia, C. Victor Cavendish, and other good things. Mr. Hale, gardener to Samuel Larkin, Esq., The Ridgways, Haslemere, staged a small group of cypripediums, odontoglossums, and cattleyas, and Messrs. Heath and Son, Cheltenham, submitted a few cypripediums.

Messrs. Stuart Low and Co., Bush Hill Park, contributed, among other orchids, Cypripedium Sallieri aureum, C. Euryades, C. Victor, C. Œdippe, the pretty Platyclinis glumacea, Cattleya Percivaliana, Vanda Amesiana, Epidendrum Endresio-Wallisi, and the quaint, small, and beautiful Bulbophyllum lemniscatoides. The certificated variety of Cypripedium Beryl was well shown by Messrs. Hassall and Co., Southgate, the plant carrying three fine flowers; Sophro-cattleya Warnhamensis and Odontioda Cecilia were shown by Mr. R. G. Thwaites, Chessington, Streatham.

From the Westonbirt collection, Mr. H. Alexander, grower to Lieut.-Colonel Sir George Holford, brought up a magnificent plant of Lælia anceps Chamberlainianum, carrying twenty-one flowers (cultural commendation), a grand plant of Odontoglossum crispum Peacock (F.C.C.), Brasso-cattleya Euterpe (A.M.), Vanda Watsoni, and three lovely spikes of the rare and chaste Cœlogyne Mooreana. Major Rogerson, Heatherdale, Harpenden, submitted a small group of well-grown cypripediums, and Mr. J. S. Moss, Winter Hill Hall, Bishops Waltham, showed a plant of Odontoglossum nevadense with five spikes. A very fine group of cypripediums from Messrs. J. Cypher and Sons, Cheltenham, contained good specimens of C. Beekmani, C. Euryades, C. aureum Virginale, C. Mrs. Mostyn, C. Van Dyke, and C. Leeanum Clinkaberryanum.

Mr. Day, gardener to H. S. Goodson, Esq., Putney, put up some very handsome orchids that included the beautiful Odontioda Cooksoniæ Royal Scarlet, Odontioda Lutetia, Cymbidium Lowianum grandiflorum, Odontoglossum ardentissimum Herbert Goodson, O. Rolfeæ, Brasso-cattleya Warneri-Digbyana, Sophro-cattleya Psyche, and numerous cypripediums. Messrs. Sander and Sons, St. Albans, had many interesting plants in their group of orchids. Cypripedium Leeanum Thunderer was the most prominent subject, but the new yellow Coryanthes Balfouriana, Cypripedium Maudiæ splendens, the miniature Lælia Lundi, Houlletia Sanderæ, Vanda Watsoni, and Masdevallia polysticta were also notable.

FRUIT AND VEGETABLE COMMITTEE.

Messrs. Sutton and Sons, Reading, exhibited fine samples of their Long Keeping, Ailsa Craig, Improved Reading, and other excellent onions, all large clean bulbs.

A beautiful lot of apples from Messrs. J. Cheal and Sons, Crawley, attracted a great deal of attention, as the fruits were of excellent size, brilliant colour, and well preserved, Newton Wonder, Lord Derby, Bramley's Seedling, Alfriston, Sandringham, Schoolmaster, Atalanta, Barchard's Seedling, Bess Pool, Lane's Prince Albert, Chelmsford Wonder, and King Edward were all remarkably well represented.

CERTIFICATES AND AWARDS.

First-class Certificate.—To Odontoglossum crispum Peacock, from Lieut.-Colonel Sir G. Holford (grower, Mr. H. Alexander), Westonbirt, Tetbury; and to Odontoglossum Harwoodi, from Messrs. Charlesworth and Co., Haywards Heath.

Award of Merit.—To Brasso-cattleya Euterpe, from Lieut.-Colonel Sir G. Holford; to Cypripedium Duke of Connaught, from Messrs. Armstrong and Brown, Tunbridge Wells; to Odontoglossum Mariæ, from Messrs. Charlesworth and Co., Haywards Heath; to Odontoglossum Warscewiczi var Picta, from Messrs. Charlesworth and Co.; and to Adiantum farleyense Gloire Van Moordbrecht, from Mr. A. Fabius, Redlands Nursery, Emsworth.

MEDALS.

Gold.—To Messrs. R. and G. Cuthbert, Southgate, for forced flowering shrubs.

Silver-gilt Banksian.—To Messrs. James Veitch and Sons, Chelsea, for flowering plants; to Messrs. William Cutbush and Son, Highgate, for carnations and hardy flowers.

Silver Flora.—To Mr. H. Burnett, Guernsey, for carnations; to Messrs. Stuart Low and Co., Enfield, for carnations and cyclamen; to Messrs. Charlesworth and Co., Haywards Heath, for orchids; to Messrs. Sander and Sons, St. Albans, for orchids; to H. S. Goodson, Esq. (gardener, Mr. Day), Putney, for orchids.

Silver Banksian. — To Messrs. Barr and Sons, for hardy plants; to Messrs. Joseph Cheal and Sons, for rock garden; to Messrs. H. B. May and Sons, Edmonton, for ferns, etc.; to Messrs. H. Cannell and Sons, Swanley, for pelargoniums and cinerarias; to Messrs. Stuart Low and Co., Enfield, for orchids; to Messrs. Armstrong and Brown, Tunbridge Wells, for orchids; and to Messrs. James Cypher and Sons, Cheltenham, for orchids.

Silver-gilt Knightian.—To Messrs. James Cheal and Sons, Crawley, for apples.

SCIENTIFIC COMMITTEE, January 17.

Present: Mr. E. A. Bowles, M.A., F.L.S. (in the chair), Dr. J. A. Voelcker, Messrs. J. T. Bennett-Pöe, A. D. Michael, C. E. Shea, A. Worsley, W. Hales, H. J. Elwes, J. Fraser, W. C. Worsdell, R. A. Rolfe, and F. J. Chittenden (hon. secretary).

SAP EXUDATION IN ELM TREES.—Mr. J. Fraser, F.L.S., showed a piece of the bark of an elm tree perfectly white, part of a strip extending down the trunk of a tree from a small wound some distance up. He remarked that wounds in elms may bleed for several years, as they often take many years to heal. The white appearance of the strip was due to the death of the green alga which covered the trunk elsewhere, but which, where the sap flowed, had been destroyed. Mr. Fraser thought that possibly the sap of the tree itself had had an injurious effect upon the alga. The death of grass and other plants beneath trees was alluded to by various members of the committee, and it was thought it could not be entirely accounted for by the shade cast by the tree, or by the honeydew which falls from such trees as limes and others in most seasons.

AZALEA GALL.—A galled growth from Azalea indica came from Cheltenham. The whole of the leaves at the tip of a shoot had become greatly and uniformly thickened, and were covered with a whitish "bloom." These galls, which have comparatively recently made their appearance in England, are due to the attack of the fungus Exobasidium japonicum. The only remedy is to pick the galled growths off and burn them.

COLORATION OF BEAN SEEDS.—Mr. Chittenden showed a series of seeds of French bean grown at Wisley in the past summer from seed shown before the Committee last January, when its history was given. The parent seed was the result of an accidental cross in 1907, and the progeny had segregated in 1909. The seeds sown and the seeds produced in 1910 were as follows:—

(a) Parent seeds black: Plant 1 produced 28 black seeds, 25 partly chocolate, partly black, 35 brownish black. Plant 2 produced 52 seeds like parent. Plant 3 produced 285 seeds like parent. Plant 4 produced 46 seeds brownish black.

(b) Parent seeds creamy white: Plant 1 produced 170 seeds purplish, tinted white, with mottling and spots and streaks of black, 55 black or reddish black with small spots of purplish white. Plant 2 produced 100 seeds fleshy white. Plant 3 produced 90 seeds creamy white, 5 flesh white.

(c) Parent seeds tan: Plant 1 produced 25 seeds chamois. Plant 2 produced 22 seeds dead-leaf brown with tiny spots fleshy white; 32 little lighter than foregoing with large number of spots and blotches of fleshy white, the blotches speckled with ground colour; 7 brownish terra cotta with tiny spots of fleshy white; 35 terra cotta with spots and blotches of fleshy white speckled with terra cotta. Plant 3 produced 72 seeds chamois to dark hazel. Plant 4 produced 115 seeds chamois, more or less mottled with black.

(d) Parent seeds maroon: Plant 1 produced 135 seeds bistu to dark tan. Plant 2 produced 25 seeds purple-black to buff. Plant 3 produced 33 seeds dark steel-blue to lighter purplish-blue. Plant 4 produced 195 seeds purple-black to snuff colour. Plant 5 produced 135 seeds like plant 2.

(e) Parent seeds reddish-salmon with streaks of burnt umber. Plant 1 produced 173 seeds yellowish-salmon with many streaks of fawn (like parent); 18 seeds fawn, except for few small spots of pale yellowish-salmon. Plant 2 produced 1[illegible]6 seeds like striped ones of plant 1. Plant 3 produced 170 seeds pale yellowish-salmon with faint grey mottling, striped with burnt umber; 6 wholly burnt umber, except for few small spots of pale yellowish-salmon.

(f) Parent seed pale flesh with streaks of dark neutral tint: Plant 1 produced 85 seeds pale putty to cinnamon. Plant 2 produced 230 seeds pale flesh mottled and more or less streaked with neutral tint (like parent).

(g) Parent seed chocolate: Plant 1 produced 55 seeds Naples yellow more or less mottled with neutral tint. Plant 2 produced 22 milk-white seeds.

(h) Parent seed violet-black with streaks and spots of rosy-white: Plant 1 produced 100 seeds milk-white to creamy-white. Plant 2 produced 9 seeds milk-white; 81 greenish-white. Plant 3 produced 128 seeds with rosy-white ground mottled and streaked with violet-black so that seed appeared purple. Plant 4 produced 195 seeds similar to plant 3, but less mottled

(i) Parent seed rosy-white with more or less ivory-black: Plant 1 produced 45 seeds of rosy-white faintly mottled with dilute black and blotched and streaked with violet-black. Plant 2 produced 11 seeds fleshy-white. Plant 3 produced 175 seeds with rosy-white ground, some half, some almost entirely covered with greenish-black. Plant 4 produced 75 seeds similar to those from plant 2, but faintly mottled with grey. Plant 5 produced 90 seeds with very pale rosy-white ground mottled with much diluted violet-black and with streaks of violet-black. Plant 6 produced 41 seeds violet-black speckled with rosy-white; 48 violet-black more spotted with rosy-white; 20 seeds neutral tint with small spots of rosy-white; 52 neutral tint with large spots of rosy-white; these differences were not clearly marked, however.

(j) Parent seed burnt umber: Plant 1 produced 370 seeds maroon. Plant 2 produced 90 seeds milk white faintly mottled. Plant 3 produced 290 seeds fawn. Plant 4 produced 398 seeds maroon.

(k) Parent seed pale flesh with large spots, streaks and specks of burnt umber: Plant 1 produced 42 seeds pale flesh with streaks of lilac-rose. Plant 2 produced 98 seeds pale flesh, some almost wholly, others half covered with tan. Plant 3 produced 48 seeds milk-white; 90 sulphur-white. Plant 4 produced 225 seeds with pale flesh spotted with diluted umber and more or less covered with burnt umber, as in plant 2.

(l) Parent seed chamois faintly mottled: Plant 1 produced 93 seeds cream-yellow to chamois, more or less mottled with olive-brown. Plant 2 produced 74 similarly-coloured seeds.

(m) Parent seed pale blush with parts reddish-black: Plant 1 produced 195 seeds purplish tinted white, much or only half-covered with darker spots and blotches. Plant 2 produced 200 seeds milk-white to yellowish-white.

(n) Parent seed dark chocolate-brown with patches of dark fawn: Plant 1 produced 305 seeds fleshy-white with more or less chocolate-brown.

(o) parent seed chocolate with small spots of rosy-white: Plant 1 produced 36 seeds chocolate. Plant 2 produced 50 seeds chocolate.

Birmingham Gardeners' Association.

The inaugural meeting of the spring session was held at the Athletic Institute, when the vice-chairman, Mr. C. H. Herbert, presided over a good attendance, including professional lady gardeners, to hear the president, Professor G. S. West, M.A., D.Sc., of the University, Birmingham, lecture on "Peach Leaf-Curl, or Blister, as an Example of How a Plant Disease may be Successfully Treated." Excellent lantern slides were shown, illustrating the affected foliage, and "doctored" peach trees in California, Australia, and other countries. In some introductory remarks, the Professor commented upon the erroneous ideas concerning this disease, which have such a widespread belief among gardeners, pointing out that such ideas were the result of ignorance of the nature of the disease, and of the certain means of prevention. The Professor also said that in some cases it appeared to be wilful ignorance, the English gardener clinging with great persistency to ancient beliefs, and flatly refusing to accept scientific facts based upon experiment. A short account was given of the geographical distribution of the disease, New Zealand being mentioned as the country which has, perhaps, suffered more than any other from peach leaf curl. Special reference was made to the exhaustive investigation of this disease carried out in the United States from 1891 to 1900, largely by the U.S. Department of Agriculture. For some years previous to 1891 the loss to peach-growers from leaf-curl alone was estimated at more than 3,000,000 dollars, and the resulting investigation of the disease shows clearly and conclusively the enormous benefits which can accrue from the proper scientific treatment of a plant disease. The lecturer discussed in detail the nature of peach leaf-curl, pointing out how the development of the parasite which caused it was intimately linked with special physiological phenomena of the peach tree, these in turn being dependent upon such external influences as temperature, moisture, etc.

The direct cause of the disease is a parasite fungus (Exoascus deformans), and too much emphasis cannot be placed upon the fact that the fungus alone is responsible for the injury to the tree; without the parasite not a leaf would curl, nor a peach fall. The life history of the parasite was fully described, and the results of large numbers of experimental investigations were given. The paramount fact, discovered independently in the United States, and in Australia, is that winter treatment of the trees, by the application of copper solution sprays, will effectually control the disease. This is due in a great measure to the fact that most of the spring infections of the peach occur from spores of the fungus, which have wintered on the tree and about the newly-formed buds.

The lecturer gave a history of the treatment of peach-leaf curl, showing how the disease was prevented in many of the United States orchards ten years before its successful treatment in Europe. The different kinds of sprays were dealt with, and also the way in which they were applied, both in small and large orchards. A full account was also given of the beneficial results of winter spraying. In many cases there is enormous gain in the foliage and in the fruit set, the whole realising a net gain of £98 per acre. Where trees are planted 25ft. apart experimental evidence proves clearly that peach-leaf curl may be cheaply and easily prevented.

The lecture was illustrated by numerous slides of the parasite, the diseased parts of the trees, and the methods of spraying in large orchards.

After an interesting discussion, in which Messrs. A. D. Christee, Wm. Gardiner, Wm. Spinks, and Alfred Cryer chiefly took part, the meeting closed with a hearty vote of thanks to Professor West for his instructive address.

Beckenham Horticultural Society.

On Friday, the 20th ult., Mr. H. J. Dudney, of The Nurseries, Erith, lectured to the above society on "Floral Decorations," Mr. W. A. Murrells, in the chair. Owing to counter-attractions the attendance was small, but the enthusiasm of those present somewhat compensated for the lack of numbers. The lecturer began by stating that the subject was a difficult one to teach, and that decorators were born, and not made. He contrasted the present high pitch attained in decorations with the styles in vogue two or three decades past, when short-stemmed flowers were in common use. By the aid of a supply of carnations of differing shades and colours the lecturer was able, by ringing the changes, to clearly demonstrate how to arrange them to produce the greatest possible floral effect. All flowers, he urged, should, as far as possible, be arranged with their own foliage.

The lecturer pointed out that the tone of rooms to be decorated, and the colour of the hostess' gown had to be considered to ensure a satisfactory blend of colour. Lists of carnations, roses, and chrysanthemums were given as suitable to grow.

A hearty vote of thanks was accorded Mr. Dudney for his excellent discourse, and for the ready way the questions put to him during the same were answered.

Bournemouth Horticultural Society.

The annual general meeting of the subscribers to the above society was held on Thursday, January 26. Mr. G. H. Rolls, J.P., chairman of the committee presided. The annual report was read; it referred to both shows held during 1910, namely, the third exhibition of spring flowers, and the twenty-fourth exhibition of chrysanthemums, fruit, vegetables, etc. The exhibitions were of a high order of merit, and attracted a vast attendance, the weather being very favourable. The report and statement of accounts for the year 1910 were adopted.

The committee are always ready to add new and interesting features, so as to have the society quite up to date, and several innovations were suggested which will receive very careful consideration.

Alderman Beale was re-elected president, and nearly all the vice-presidents were re-elected. Sir Daniel Morris, who is well known in the horticultural world, was elected chairman of the committee; Mr. Rolls, who has acted as chairman in that

Eckford's
Giant SWEET PEAS

SWEET PEA PERFECTION.

A flower garden without Eckford's Sweet Peas can only be compared to a house without furniture.

Sweet Peas are requisite to the small, medium, or large garden, and if you wish to have colour, effect, prize specimens, and tall plants, then send to Eckford's for your seeds.

The time to buy is NOW. The firm to buy from is Eckford's. No other seed specialist in the world can rival Eckford's for Sweet Peas.

Larger flowers, longer stems, brighter colours, and a profusion of bloom is the result of growing Eckford's seeds.

Remember, Genuine Eckford's Seeds can only be obtained direct from Wem. No Agents are employed.

SPECIAL NOVELTY OFFER FOR 1911.

A specially written booklet on Sweet Pea Growing given with every order. Send to WEM to ensure satisfaction.

LUMINOSA.—This variety will be appreciated for its deep coral colour, which for decoration is unexcelled, having the quality of giving off greater brilliance in artificial light than any other variety. Very scarce. In sealed packets, 7 seeds, **6d.**; 15, **1s.**

VICOMTE DE JANZE.—A fine bold flower of exquisite shape, the standard being splendidly erect; in colour it is deep bright rose, perfectly distinct; a charming flower. In sealed packets, 5 seeds, **3d.**; 10, **6d.**; 20, **1s.**

DODWELL F. BROWNE (WAVED).—This is a [illegible] intense bright crimson, three and four [illegible], almost a self; a true Giant Waved variety of intense King Edward VII. colour. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

SAINT GEORGE.—Light orange pink standard with slightly lighter wings; almost a self; good sizes; slightly waved. In sealed packets, 20 seeds, **3d.**; 40, **6d.**; 80, **1s.**

ASTA OHN (WAVED).—A pretty waved lavender overlaid with rose; a very charming flower of good size and substance. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

MAGGIE GERRING.—This is a decided acquisition with a bold standard of perfect shape, and beautifully balanced wings. In colour it is a soft cream overlaid with a delightful shade of pink which rather deepens towards the edges. It is exquisitely rich in tone when bunched. In sealed packets, 5 seeds, **3d.**; 10, **6d.**; 20, **1s.**

APPLE BLOSSOM (WAVED).—This, as its name implies, is a beautiful flower of apple blossom colour, of giant size, and, like most of the waved varieties, is a very strong grower. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

MRS. E. GILMAN.—A fine bold flower, with expanded standard. It has a creamy ground suffused with bright rose, and almost pure cream wings. In sealed packets, 5 seeds, **3d.**; 10, **6d.**; 20, **1s.**

PICOTEE (WAVED).—This is one of the very finest introductions, being a giant waved flower, pure white, with a beautiful picotee edge of carmine; in most cases the flowers are borne in fours on a long, strong stem. In sealed packets, 5 seeds, **3d.**; 10, **6d.**; 20, **1s.**

EVELYN HEMUS (WAVED).—A warm cream shading to yellow, with a picotee edge of terra-cotta pink; of great size and refinement; standard and wings beautifully waved, and nearly always four flowered. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

MRS. HENRY BELL (WAVED).—A beautiful rich apricot ground overlaid with a soft pink, which deepens towards the edges of both standards and wings. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s**

MID BLUE.—A medium sized erect flower of deep sky blue. It is a strong grower, very free, and frequently four flowered; quite distinct. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

OTHELLO (WAVED).—A beautiful self-coloured giant chocolate, of splendid substance and robust habit. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s**

CERISE (WAVED).—A fine, bold, beautifully waved, true cerise; a very strong grower, giving generally four flowers on long, strong stems. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

SPECIAL OFFER.
One full-sized packet of each of the foregoing 14 charming and Novel Sweet Peas, **12/6** post free for cash with order.
One half-sized packet of each of the foregoing 14 charming and Novel Sweet Peas, **6/6** post free for cash with order.

SPECIAL COLLECTIONS FOR 1911.

Villa (A) Collection. 24 very choice varieties, suitable for villa garden, excellent giant flowered sorts, most suitable for cutting and exhibition, 25 seeds of each, **10s.**

Villa (B) Collection. 24 splendid varieties, suitable for exhibition, 50 seeds of each, **5s. 6d.**

Half-Villa (B) Collection. 24 splendid varieties, suitable for exhibition, 25 seeds of each, **3s.**, post free for cash.

FREE. Send a postcard to-day for large illustrated and coloured catalogue. It gives full particulars of all novelties in Sweet Peas for 1911, and contains full list of all flower and vegetable seeds.

HENRY ECKFORD, F.R.H.S (Dept. 221), WEM, SHROPSHIRE.

able way which has commended itself so much to members in the past, was elected vice-chairman, and he himself proposed Sir Daniel Morris as the chairman. Mr. Robert Chamberlain was re-elected treasurer, and Mr. C. W. Barrett, secretary.

The retiring members of the committee were re-elected, on the motion of Major Mannsell, J.P., and Dr. Hamilton and Mr. Rayner were added to the committee.

Immediately after the close of the general meeting the committee arranged several matters of urgent importance connected with the shows for the current year. The dates on which the spring show is to be held, namely, April 4 and 5, were fixed in due course last year. The autumn show for 1911 is now fixed to be held on October 31 and November 1. A sub-committee was appointed to deal with the schedule of prizes and make suggestions for improvement.

Reading Gardeners' Association.

The first fortnightly meeting of the Spring Session was held in the Abbey Hall, by kind permission of Messrs. Sutton and Sons, on Monday, January 23. The president, Mr. Alderman Parfitt, occupied the chair, and there was an excellent attendance.

Several new members having been elected and other business settled by the meeting, the President called on Mr. Exler, The Gardens, Bozedown, Whitchurch, to deliver his lecture on "Cyclamen." In a brief but very lucid paper Mr. Exler gave excellent advice as to the treatment of this lovely winter-flowering subject, which just now is to be seen in the conservatory and greenhouse in all its beauty.

Preparing a proper compost, sowing the seed, pricking off the seedlings (a most delicate operation), potting and repotting, were all dealt with in turn. The storing and treatment of old corms was also referred to, but the lecturer expressed himself as being strongly in favour of rearing a new batch of seedlings each year, rather than relying on old plants.

At the conclusion of Mr Exler's remarks an excellent discussion was maintained by the many cyclamen lovers among the members. A vote of thanks to the lecturer and president concluded the meeting.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above sea-level, 150 feet.

Date.	Sunshine.	Temperature of the Air.			
		At 9 a.m.		Day	Night
1911. January 22 to January 28.		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Jan. 22 – Sunday	—	36	35	37	35
,, 23 – Monday	—	36	35	38	35
,, 24 – Tuesday	5 30	34	32	46	29
,, 25 – Wednesday..	—	43	41	48	33
,, 26 – Thursday. ..	1 0	47	46	50	43
,, 27 – Friday.......	—	42	40	44	42
,, 28 – Saturday.....	7 30	36	35	53	34
Means ...	(total) 14 0	39	37	45	36

Date.	Rain.	Temperature of the Soil at 9 a.m.			Lowest Temperature on Grass.
1911. January 22 to January 28.		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
Jan. 22 – Sunday	0·08	38	39	42	35
,, 23 – Monday	—	38	38	42	33
,, 24 – Tuesday	trace	36	38	42	32
,, 25 – Wednesday..	trace	39	38	42	35
,, 26 – Thursday	—	41	39	42	41
,, 27 – Friday	—	43	40	42	40
,, 28 – Saturday	—	40	41	42	26
Means ...	(total) 0 08	39	39	42	34

AN AMATEUR'S ORCHID.

Although I have only been a subscriber to the GARDENERS' MAGAZINE during the last nine months, I have gleaned much useful information from it, especially from the notes in regard to orchids. I was surprised, however, to see the remarks on Dendrobium nobile which recently appeared, to the effect that good flowers could not be obtained during January and February.

I grow about a hundred different kinds of orchids, as an amateur, in one house only, with an average minimum temperature of 50 deg. Fahr., with fair success. Of course, I shift the plants to the position (cool or warm) most suitable to them, and although this particular orchid is grown fairly cool during the winter, flower buds invariably show by Christmas time, and there is plenty of bloom from the middle or end of January onwards. I enclose photograph of a spray of bloom [not suitable for reproduction.—ED., G.M.], taken at the end of January, which will give an idea of its flowers. You will notice the three blooms from one node. It is very rarely I get less than three, whereas plants I have seen blooming in Kew only give one. Is this a particular variety of nobile, or is it on account of vigour?

I grow more dendrobe species than other kinds, but it is puzzling to know their correct season of growth, winter temperature, etc. Would it be troubling Mr. Chapman, or other of your orchid specialists, too much to let me know the code of treatment for the following:—D. thyrsiflorum, flower buds visible, and leaves gradually withering and falling; D. crepidatum, just completing growth; D. primulinum, all leaves off and flower buds visible; D. aureum, ripening nearly completed and nodes swelling for flower; D. formosum giganteum (imported plants bought last spring), growths moved very slowly, and quite decayed last month. Fresh growth eyes visible; D. Jamesianum, leaves turning yellow, flower buds swelling at apices of bulbs.

D. formosum giganteum seems to require a higher temperature than I have available, as the growths made last season moved very slowly and ultimately collapsed. Trusting I am not trespassing too much on your space and kindness, and tendering thanks in anticipation.

HENRY R. STERRETT.

Cestrums.—These, which are better known in gardens as habrothamnuses, are of great service in large greenhouses, where a considerable space of wall, roof, or lofty pillars has to be furnished. In this way they are very rarely without their bright-coloured blossoms. Perhaps the best-known is C. elegans, with purplish-red blossoms, those of C. Newelli being more of a clear deep red. Cestrum aurantiacum is scarcely as continuous flowering as the preceding, for as a rule it commences to bloom early in autumn and continues till mid-winter or later. This has orange-coloured flowers. In C. Smithi, which is less vigorous than the others, the blossoms are pink.—W. T.

Muscat Grapes.—These require a long season of growth in order to finish their fruit satisfactorily. Therefore, the house should be made ready immediately, and at once closed, but no heat applied. If there is an outside border, cover it with dry bracken or similar material. In the case of unfinished inside borders, if it is necessary to enlarge them (i.e., if the roots are coming through), prepare some soil, and keep it in the dry till the vines are well started. It will be found good practise to do this work just before the vines come into flower, when the roots are active, as they immediately catch hold of the soil, and improve in strength. A good mixture will be three parts fibrous loam, not too heavy in texture, and the remaining part made up of bone-meal, lime rubble, and some approved fertiliser. This should be turned over several times, so that the ingredients are thoroughly mixed. The drainage in all cases should be made perfect.—W. A. COOK.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Elesleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

CYMBIDIUM.—G. G., Aberystwyth: You cannot do better than keep the plants in a comfortable intermediate temperature. If the old material is in good condition, and the drainage correct, do not disturb the plants.

BEGONIA GLOIRE DE LORRAINE UNDER COOL TREATMENT.—"H. K.," Edinburgh, writes: With reference to the note under Answers to Correspondents in the issue for January 14, concerning Begonia Gloire de Lorraine under cool treatment, I will state my experience very briefly here, as I propose at a later date to send a full account of this popular begonia, from propagation to the flowering period. I think your correspondent may rest quite assured that to root and to grow this plant in its young stages well (which is the forerunner of perfection later on) is practically impossible with a minimum temperature of less than 65 deg. at night, as with a lower temperature the rooting process is so slow as to cause the cuttings to become hard and thin, after which, the plants never grow away freely. When growing freely in 5in. pots a little less heat from thence onward, with a minimum night temperature of 60 deg., will encourage stouter growth and darker foliage. When flowering commences a temperature of 55 deg. will be ample, and will also put better colour into the blooms, at the same time hardening the plants to some extent for house decoration, and for passing through the winter months better.

JANUARY CHRYSANTHEMUMS.—A.M., Macclesfield: Amateurs will find some difficulty in cultivating January-flowering chrysanthemums successfully because of the tendency on the part of many late varieties to produce blind or flowerless growths. In making a selection, however, this point has been considered, and the varieties mentioned are the best. The finest white is Winter Queen, but it should be disbudded freely during November, and later, retaining but one bud to each shoot; unfortunately it is a tall variety, growing from 6ft. to 8ft. high, but it produces fine flowers well on into February. Madame T. Panckouke is a good, useful white to precede the above. Many growers do well with Heston White: it must be kept in a light, airy house, and three plants grown in 9in. or 10in. pots. It is best undisbudded for the latest blooms. Mrs. Joseph Thompson is a white much grown for market, but it is earlier than the other three, though a good cut may be had up to the middle of January. This last-named variety has produced several sports, among them being two shades of yellow, and both are equally good for late blooming. The old variety, W. H. Lincoln, is successfully flowered by some growers throughout the month. It requires to be stopped in late July. Ophir, a rich golden-yellow sport from Princess Victoria, is very useful: its blooms are fuller than those of the parent. Allman's Yellow is liked by some, and it is very late if stopped during July. For a late crimson chrysanthemum nothing equals W. J. Crossley, and the most popular pink is Winter Cheer. Madame L. Charvet is a good pink for Christmas and New Year: it is in the stem longer than the preceding, but the colour is less bright. It must be remembered that all pink coloured varieties, especially if bloomed late and kept in a close or warm house, will lose very largely in colour; in fact this latter variety is with many growers a dirty white rather than pink. Christmas Rose, which is somewhat

THE LANGUAGE OF FLOWERS
"Feed us, we pray you, with

CLAY'S FERTILIZER

and our rare beauty and fragrance will repay you."

It is SAFE, CERTAIN, QUICK-ACTING and ECONOMICAL.

Flowers Grown with CLAY'S FERTILIZER catch the Judge's eye.

CLAY'S LONDON FERTILIZER
TRADE MARK.

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK AS AT SIDE.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Manure Manufacturers and Bone Crushers, **Stratford, London, E.**

WIREWORMS,
LEATHER JACKETS, &c.
SHOULD BE DESTROYED
by using **NOW**, while digging,

VAPORITE

The Original Soil Insecticide.

The Powder simply requires digging into the soil (1 lb. to 5 sq. yards) when the ground is idle. The result will be sound and healthy plants and vegetables. Sold by all Seedsmen in tins at **9d.**, **2/-**, **3/-** and **4/6.** Casks at **7/6** per ½-cwt. or **11/6** per cwt., carriage paid.

Write for Illustrated Booklet No. 45 to
VAPORITE-STRAWSON CO., Ltd.,
Dept. F. SPENCER HOUSE, SOUTH PLACE, LONDON, E.C.

The Gardener & his Family must have Dry, Comfortable, Easy Going BOOTS.

THE Gardener in whatever capacity must have foot comfort, the first necessity of an active mind and body. If the feet are wrong then all's wrong. We recommend our special footwear to old and young for outdoor wear.

The Stout Chrome Calf Greenhouse wear **11/9** | The Nailed Gardener Boot **10/6**

We make special quality Boots for the whole family. Write for free illustrated price list No. 14 and select what you fancy. We know you'll come again and again.

NORWELL'S BOOT FACTORY, **PERTH, Scotland.**

Established over 100 years.

REGISTERED

THE
APRON
That has Come to Stay.
WORN BY ALL THE LEADING GARDENERS.
LOOK AT THE PRICE.
In Dark Blue Ponicus Twills,
1/9, Postage 3d. extra.
Or in Dark Blue Ponicus Serge,
3/9, Postage 3d. extra.
WRITE FOR ONE TO-DAY.
SHAW & MONTGOMERY
(PENMAN'S),
628, Argyle St., Glasgow, W.

CHARLESWORTH & CO.,
Hayward's Heath, Sussex,
ORCHID SPECIALISTS,
IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

PERGOLAS.
Larch Poles at 1d. per foot. Lists Free.
PATRICK'S, Otley, Yorks.

OAK CRAMBLES.
Peeled and dry at ½d. per foot.
PATRICK'S, Otley, Yorks.

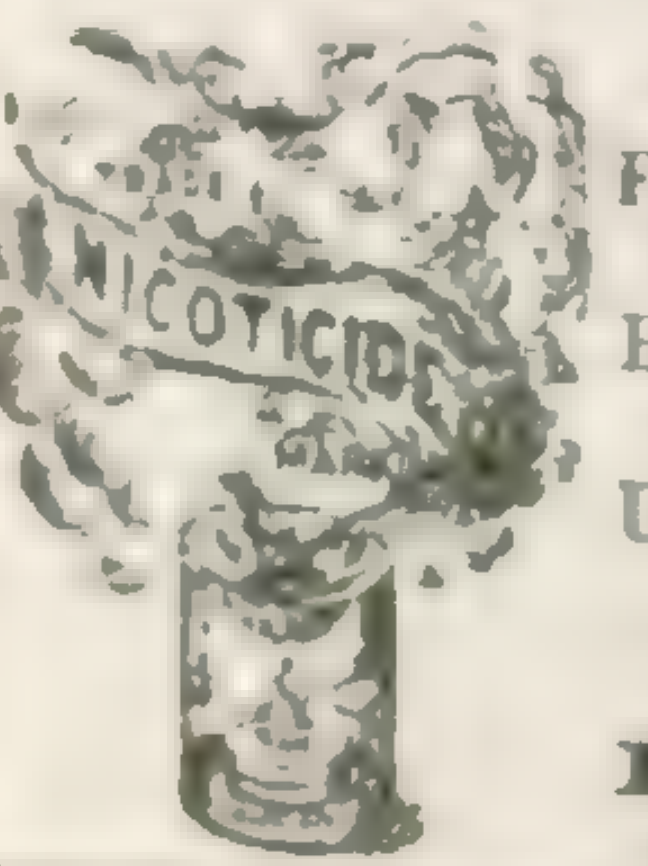
ROSE ARCHES.
Larch Poles at 1d. per foot.
PATRICK'S, Otley, Yorks.

TREE STAKES AND GARDEN RODS.
Lists free.
PATRICK'S, Otley, Yorks.

NICOTICIDE (FUMIGANT.) **Kills all Greenhouse Insects in one Application.**

			Cubic ft.	each.
Half-gallon Tin, contains	sufficient	for	160,000	60/-
No. 1 size Tin—1 pint	"	"	40,000	15/-
No. 2 size Tin—½ pint	"	"	20,000	7/6
No. 3 size Bottle—6 oz.	"	"	12,000	4/6
No. 4 size Bottle—4 oz.	"	"	8,000	3/-
No. 4½ size Bottle—2 oz.	"	"	4,000	1/8
No. 5 size Bottle—1 oz.	"	"	2,000	10d.

Carriage Paid.



Fumigators, 1/- each for 5,000 cubic ft.
Nicoticide Plant Spray.
Half-pint, **1/2**; Pint, **2/-**; Qrt., **3/6**; Half-gall., **5/-**; Gallon, **10/-**
Use 1 part to 40 parts for green fly, etc. Carriage paid.
Ask your Seedsman for our Goods.
HUNTER & GOW,
45, THOMAS STREET, LIVERPOOL.

EPPS'S SELECTED PEAT
For Choice Plants, Ferns, Rhododendrons, &c., &c.
SPECIAL ORCHID PEAT.
Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.
Prices on application to
EPPS & CO., Ringwood, HANTS.

PLEASE MENTION
THE GARDENERS' MAGAZINE
when writing to Advertisers.

SUBSCRIBER'S ORDER FORM

Every Saturday THE GARDENERS' MAGAZINE. Twopence.

To W. H. AND L. COLLINGRIDGE,
148 AND 149, ALDERSGATE STREET, LONDON, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose ______ for ______ months in advance.

Name ______

Address ______

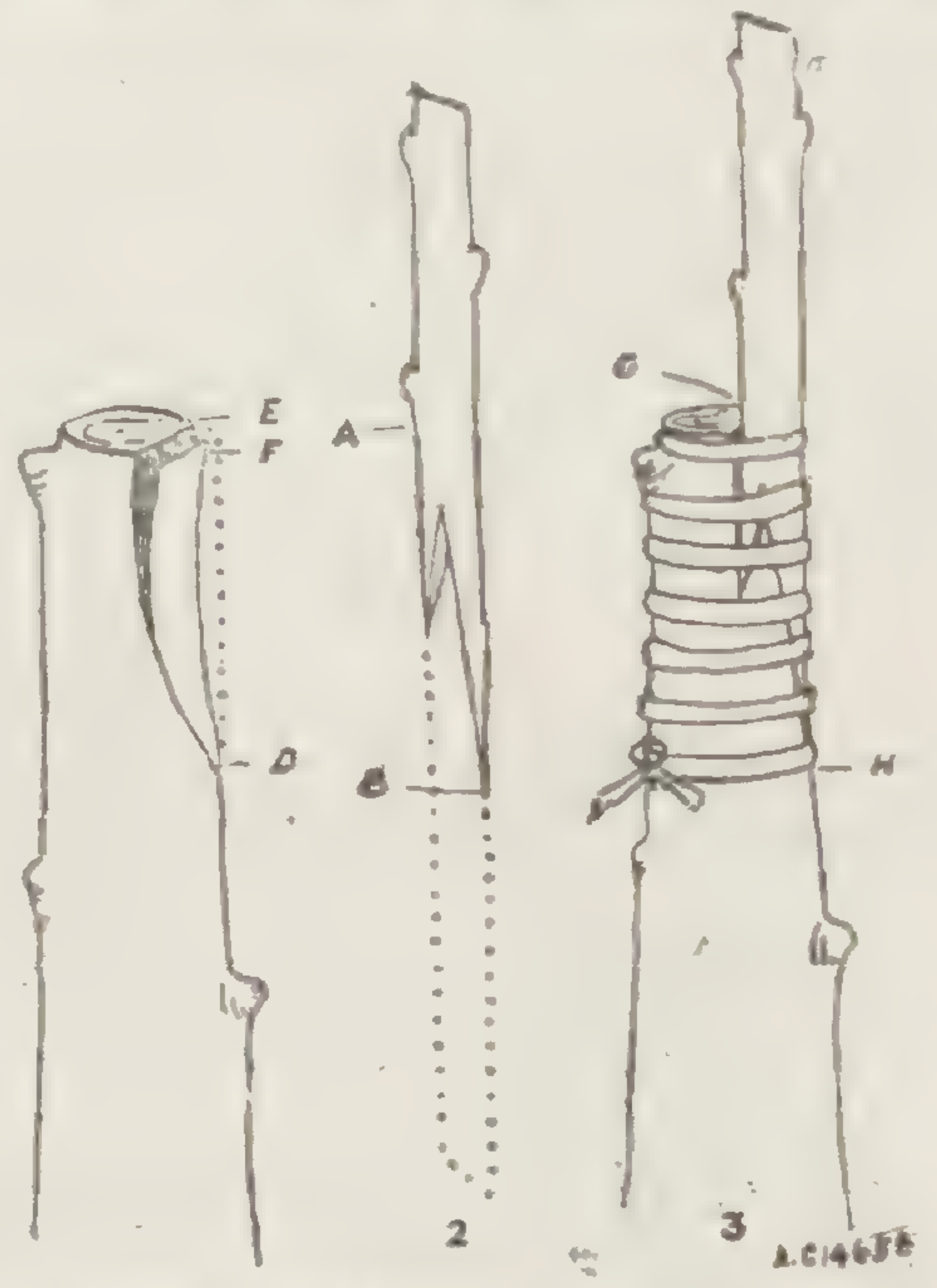
Date ______

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

⁂ If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.

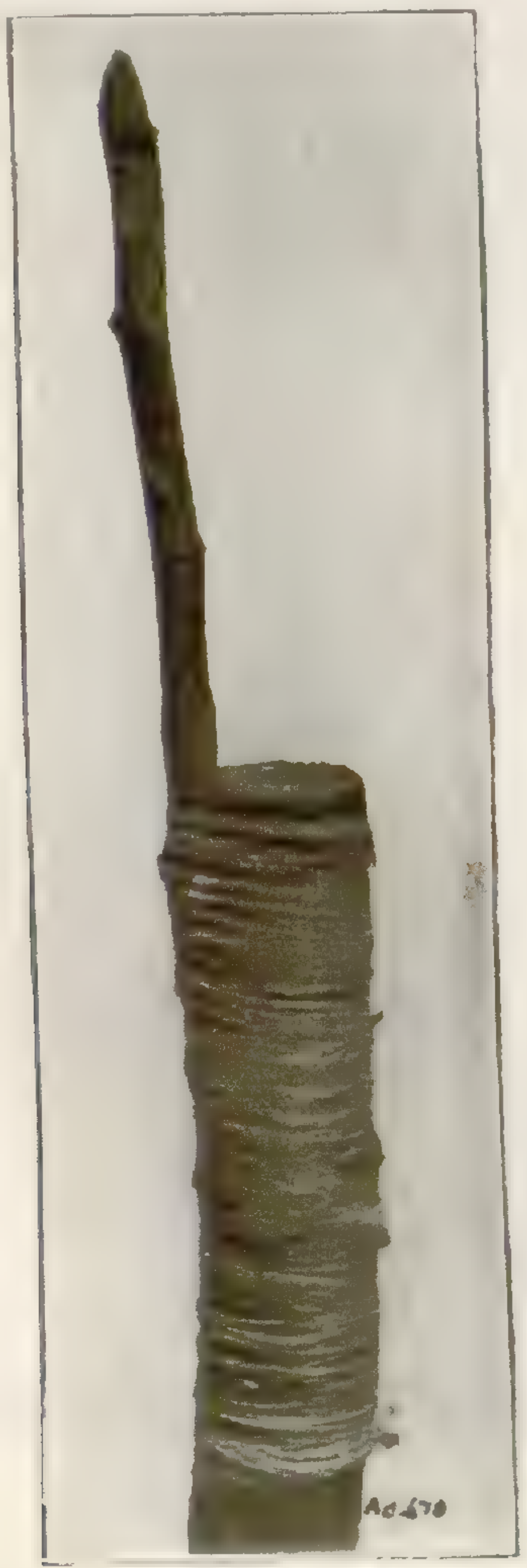
of a novelty, is likely to prove useful. The foregoing make up a baker's dozen, which hardly exhausts the list, but as real January bloomers they are not excelled.

SOLANUM WENDLANDI.—W. S., Alresford: This fine solanum is of easy culture, and may be readily flowered in 4in., 5in., or 6in. pots. Cuttings made of good hard wood of the previous year's growth should be inserted in sandy soil in January or February, and placed in a temperature of 60 deg. In this heat they should be kept until growing freely. When well established 55 deg. will not only suffice, but be a more suitable temperature. When the flower buds are showing, usually in June, the ordinary unheated greenhouse is the best place for the plants, and here they should be given plenty of air and light, and be kept free from red spider, the latter pest being very fond of this solanum. Another plan, and in some measure a better one than the foregoing, is to take plants that were struck the previous season and cut them back to within two or three inches of the base, and start them in a warm house; as soon as growth commences shake away the old soil, pot each plant in new material, and treat as in the case of cuttings.

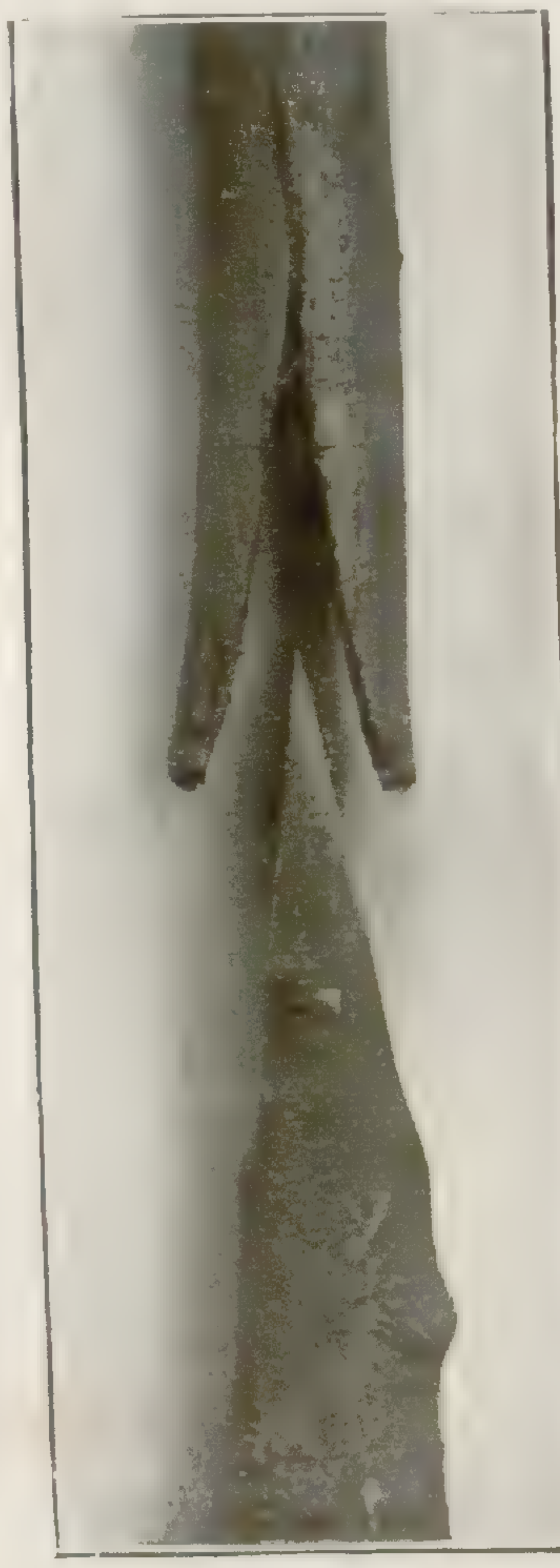


NOTCH GRAFTING FRUIT TREES.

Fig. 1, Stock. Fig. 2, Scion. Fig. 3, Scion fixed to stock.



CROWN GRAFTING FRUIT TREES.



SADDLE GRAFTING FRUIT TREES.

GRAFTING FRUIT TREES.—E. F., Weston-super-Mare.—Grafting is the most satisfactorily accomplished towards the end of March or early in April, but it is necessary that a beginning should be made some time previous to ensure the graft and the stock being in about the same stage of development. The grafts, or scions, as they are variously designated, should be cut from the trees in February, tied in small bundles, correctly named with labels of wood or zinc, and inserted to about two-thirds their depth in a border on the north side of a wall. Two or three weeks later the stocks on which the scions are to be put should be cut back. This should be done whether they are small stocks used for the purpose of increasing the number of trees, or old trees of varieties that are not useful or suitable. The great thing to remember in grafting is that the white sappy wood (known as the inner bark) of the scion should come into as close and continuous contact as possible with the inner bark of the stock. The cut portion of the one should correspond, as far as possible, with the cut portion of the other, so as to ensure a good fit. Make the graft firm by binding with raffia or soft string. The outline illustration here given shows the method known as notch grafting, and it is one very suitable for adoption when the size of the graft or scion is about the same as or a little smaller than the branch it is to be placed upon. Few words are needed to assist the diagram. Where the branches are larger the most general, and, indeed, the best way of grafting established trees with finer varieties is by the process known as crown grafting. To perform this operation successfully the scions should be prepared as for the previous method. About the middle of March, saw or cut off the branch or stock (see second illustration), and be careful not to bruise the bark in doing this. When the saw is used, the top of branch or stock should be cut smooth with a sharp knife. Then cut the scion very thin for two or three inches, and then shave off one edge quite straight, this edge to come in contact with the undisturbed edge of the incision. If too much wood is left, shave it down until nearly all is removed. With the blade of a budding knife make a straight cut where the scion is to be inserted, and with the handle lift the bark on one side of the cut, just sufficient to admit the graft or scion, which is run down, and keep the straight edge of the latter with the undisturbed edge of the cut. Fasten the scions securely with strands of bast, and then cover the junction and top of the stock with one of the preparations for grafting. Cover with a little moss if clay is used, to prevent it cracking and falling off. When growth has commenced, support the new shoots by means of sticks fastened to the stock. The third illustration shows the method of saddle grafting, when stock and scion are of similar size.

SALADING.—S. E. S., Newport, I. of W.: A useful little book dealing with the cultivation of salading in the open or hotbeds, and under glass, and also indicating the French, as well as British, methods, is "Salads and their Cultivation," post free for 1s. 2d. (1s. 9d. cloth) from W. H. and L. Collingridge, 148, 149, Aldersgate Street, E.C.

NAMES OF PLANTS.

L. C. H., Chilworth: 1, Helleborus guttatus; 2, H. colchicus.

B. M., Middleton.—1, Odontoglossum ardentissimum; 2, Cypripedium Leeanum.

G. C., Stratford-on-Avon.—1, Hamamelis arborea; 2, Helxine Solieroli; 3, Adiantum fissum.

F. E. F., Hassocks: 1, Cypripedium aureum virginale; 2, Odontoglossum Warnhamense; 3, probably O. concinnum—a poor flower.

R. S. S., Bebington.—1, Asplenium Richardsoni; 2, Selaginella cæsia; 3, S. Mertensi; 4, Gleichenia Mendeli; 5, G. dicarpa longipinnata; 6, Blechnum brasiliense.

H. A. S., Newbury.—1, Thuya dolobrata; 2, Sequoia sempervirens; 3, Cryptomeria elegans; 4, Juniperus Sabina; 5, Cupressus lusitanica; 6, C. Lawsoniana pendula.

RAINFALL AT ROSELEIGH GARDENS, WOOLTON, LANCASHIRE, IN 1910.

Month.	Total Depth. Inches.	Greatest fall in 24 hours. Inches.	Date.	Number of Days with .01 or more Recorded.
January ...	2.82	.70	23rd	17 days.
February ...	2.75	.36	20th	26 ,,
March	.62	.25	8th	11 ,,
April	3.53	.70	17th	17 ,,
May	2.55	.32	15th	17 ,,
June	3.24	.55	29th	15 ,,
July	4.90	1.24	20th	11 ,,
August	4.20	.60	21st	22 ,,
September ...	.60	.16	1st	10 ,,
October	2.49	.55	31st	12 ,,
November ...	4.95	.60	1st	23 ,,
December ...	3.57	.75	26th	27 ,,
Total	36.22	6.78		*208 ,, †157 ,,

* With rain. † Without rain.

The average fall for the last eight years is 32.50 inches. The heaviest rainfall during the year, in the least time, occurred on Saturday, June 4, when .37 fell in 35 minutes, from 4.5 to 4.40 p.m. The readings are taken each morning at 9 a.m. Rain gauge (Glaisher), funnel, 8 inches in diameter. Height of top above ground, 1ft.; above sea level, 180 feet. Thermometer, 3 feet above ground in the shade.

The 11 hottest days during the year were May 20, 74 deg.; May 23, 72 deg.; June 20, 77 deg.; June 18, 72 deg.; July 14, 74 deg.; July 13, 73 deg.; August 5, 72 deg.; August 11, 75 deg.; August 12, 72 deg.; August 13, 72 deg.; August 14, 72 deg. January 26 was the coldest day during the year, when the temperature did not reach higher than 25 deg., or 7 degrees of frost. The six coldest nights during the year were January 26, with 19 deg. of frost; Jan. 25, 14 deg.; Jan. 21, 9 deg.; November 21, 8 deg.; January 20, 7 deg.; and January 30, 7 deg. During January we had 13 nights with frost and 5 days when the temperature was under freezing point. In February we had 13 nights with frost, in March 12 nights with frost, in April 5 nights, May 1 night, November 15 nights and 1 day under freezing point, in December 3 nights.

J. Stoney.

MARKETS.

◆

COVENT GARDEN.

Flowers.

The supplies are excellent and there is a good general demand; forced bulbous flowers and imported daffodils are abundant.

		s.	d.		s.	d.
Acacia	per pad.	5	0	to	8	0
Azaleas, white	per doz. bun.	3	0		5	0
Adiantum cuneatum	per doz. bun.	4	0		6	0
Anemones, French	per doz. bun.	2	0		2	6
Arums	per doz.	3	0		6	0
Asparagus	per doz. bun.	9	0		12	0
Camellias	per doz.	1	6		2	6
Cattleyas	per doz.	9	0		12	0
Carnations	per doz.	2	6		4	0
,,	per doz. bun.	12	0		15	0
Chrysanthemums	per doz. bun.	8	0		12	0
,,	per doz. blms.	2	0		5	0
Croton leaves	per bun.	1	0		2	6
Cypripediums	per doz. blooms	2	6		4	0
French fern	per doz. bun.	2	6		4	0
Gardenias	per doz.	3	0		6	0
Hellebores	per doz.	1	0		1	6
Hyacinths, Roman	per doz. bun.	8	0		10	0
Lapagerias	per doz.	2	0		3	0
Lilac	per bun.	2	6		4	0
Lilium auratum	per bun.	3	0		4	0
,, speciosum	per bun.	2	0		3	0
,, longiflorum	per bun.	3	0		4	0
Lily of the Valley	per doz. bun.	6	0		12	0
Marguerites	per doz. bun.	2	0		3	0
Narcissus, Paper White	per basket	6	0		10	0
,, Soleil d'Or	per doz. bun.	2	0		3	0
,, Golden Spur	per doz. bun.	8	0		10	0
Odontoglossums	per doz. blms.	2	6		3	0
Pelargoniums	per doz. bun.	5	0		8	0
Poinsettias	per doz.	6	0		12	0
Roses	per doz.	2	0		5	0
Smilax	per doz. trails	2	0		3	0
Tuberoses	per doz.	0	5		0	6
Tulips	per doz. bun.	4	0		12	0
Violets	per doz. bun.	2	0		3	0
,, Parma	per bun.	3	0		4	0

Fruits.

Cape fruits, oranges, grapes, and apples, are plentiful and sell well; the demand is good.

		s.	d.		s.	d.
Apples, English	per bush.	6	6	to	24	0
,, American	per barrel	20	0		36	0
,, Californian	per box	7	6		10	6
,, Columbian	per case	9	0		14	0
,, Nova Scotian	per barrel	12	0		30	0
Apricots, Cape	per case	2	6		5	0
Bananas	per bun.	3	6		13	0
Cobnuts	per lb.	0	10		1	0
Chestnuts	per bag	10	0		15	0
Cranberries	per case	9	0		10	6
Grapes, English	per lb.	1	0		7	6
,, Belgian	per lb.	0	8		1	3
,, Guernsey	per lb.	0	9		1	3
,, Almeria	per barrel	15	0		20	0
Lemons	per case	10	0		15	0
Oranges	per case	10	0		21	0
,, Jamaica	per case	8	0		10	0
,, Californian Navels	per case	12	0		15	0
Peaches, Cape	per case	5	0		15	0
Pears, French	per crate	7	0		9	6
,, Californian	per case	10	0		20	0
Pineapples	each	2	0		4	6
Plums, Cape	per case	5	0		12	0
Pomegranates	per case	1	9		2	3

Vegetables.

Vegetables are in fair supply but business is not over brisk.

		s.	d.		s.	d.
Artichokes, Globe	per doz.	1	6	to	3	0
,, Jerusalem	per ½-sieve	1	0		1	6
Asparagus	per bundle	3	0		6	0
Beans, Jersey	per lb.	1	3		2	0
Beet	per bush.	1	0		1	6
Brussels Sprouts	per ½-bush.	1	0		2	3
Cabbages	per tally	3	0		7	0
Carrots, French	per doz. bun.	3	0		3	6
Cauliflowers	per doz.	1	6		3	0
Celery	per doz. rolls	5	0		10	6
Chicory	per lb.	0	3½		0	4
Cucumbers	per doz.	5	0		12	0
Endive	per doz.	1	0		1	6
Horseradish	per doz. bun.	9	0		18	0
Lettuce	per doz.	1	6		4	6
Mint	per doz. bun.	1	0		2	0
Mushrooms	per doz. lb.	6	0		12	0
Onions	per bag	4	0		6	6
,, Spanish	per case	6	0		7	0
Parsnips	per bag	2	6		3	0
Parsley	per ½-sieve	1	3		2	0
Radishes	per doz. bun.	1	0		1	6
Rhubarb	per doz.	0	8		1	0
Savoy	per tally	3	0		5	0
Seakale	per bun.	0	10		1	6
Spinach, French	per crate	4	0		5	0
Tomatoes, Canary	per crate	12	0		14	0
Turnips	per bag	2	0		3	0
Watercress	per doz. bun.	0	5		0	6½

LONDON POTATO MARKETS.

There is a distinct improvement in the supply, but prices are firm.

		s.	d.		s.	d.
British Queen	per ton	75	0	to	90	0
Epicure	per ton	70	0		75	0
Evergood	per ton	70	0		75	0
King Edward	per ton	75	0		85	0
Maincrops	per ton	95	0		100	0
Up-to-Dates	per ton	80	0		105	0
[illegible]	per ton	60	0		70	0

FORTHCOMING ENGAGEMENTS.

MONDAY, February 6.—Dorchester Horticultural Society meets.

National Chrysanthemum Society.—Annual meeting at Carr's Restaurant, Strand, London, 7 p.m.

North of England Horticultural Society.—Meeting at Leeds of Scientific Committee, 5 p.m.; Plant and Flower Committee, 6 p.m.; Fruit and Vegetable Committee, 7 p.m.

TUESDAY, February 7.—Scottish Horticultural Association meets.

FRIDAY, February 10.—Royal Gardeners' Orphan Fund.—Annual Meeting and Election at "Simpson's," Strand, London, 3 p.m.: Committee Dinner at 6, for 6.30 p.m.

TUESDAY, February 14.—Royal Horticultural Society.—Fruit, Floral, and Orchid Committees meet 12 noon; Annual Meeting, 3 p.m.; Scientific Committee, 4 p.m.

Horticultural Club.—Annual Meeting at Hotel Windsor, 5 p.m., and Annual Dinner, at same hotel, 6 p.m.

CATALOGUES RECEIVED.

C. ENGELMANN, SAFFRON WALDEN, ESSEX.—During 1910 Mr. Engelmann maintained a permanent exhibit of carnations at the Brussels exhibition, and sent over no fewer than 40,000 blooms. Some of his groups, as well as portraits of new perpetual carnations, figure in his catalogue just issued.

JOHN R. BOX, DERBY ROAD, CROYDON.—A handy little catalogue of vegetable and flower seeds, together with choice begonias, liliums, gladioli, etc.

JNO. JEFFERIES AND SON, CIRENCESTER.—Although established over one hundred years this firm is well up-to-date in the matter of seed novelties, particularly among sweet peas and other flowers; vegetable seeds and sundries are included in the new catalogue.

CHAS. W. BREADMORE, WINCHESTER.—Although Mr. Breadmore lists various flower and vegetable seeds, as well as farm crops, chief place is given in his catalogue to sweet peas; he appears to have won seven gold medals for the latter flowers, besides other awards in 1910.

W. ATLEE BURPEE AND CO., PHILADELPHIA, U.S.A.—An interesting seed catalogue in which are listed a large number of varieties of vegetable and flower seeds that do not appear in British catalogues; for instance, water melons, squashes, Indian corn, pumpkins, and spring cucumbers are given a large amount of space and freely illustrated. New waved sweet peas, many of American origin, also figure prominently.

H. CANNELL AND SONS, SWANLEY.—Chrysanthemums are always with us, and one season begins before the last has finished. The descriptive list of varieties from the Messrs. Cannell includes a number of novelties for the present year, and, as showing the popularity of "singles," the list opens with twenty members of this useful section.

GEO. COOLING AND SONS, BATH.—This firm lists a very wide range of flower and vegetable seeds, all of which are described and many illustrated.

RIVOIRE AND SON, RUE D'ALGERIE, FRANCE.—A wholesale catalogue of novelties that includes new cactus and collarette dahlias, miniature geraniums, carnations, gladioli, etc., etc.

CHARLES TURNER, SLOUGH.—A comprehensive catalogue of vegetable and flower seeds, with excellent lists of seed potatoes and garden tools and sundries.

J. R. PEARSON AND SONS, LOWDHAM, NOTTS.—Many of the fine illustrations in this firm's useful catalogue are reproductions from photographs taken by Mr. J. D. Pearson, and they represent fine varieties or novelties in flowers and vegetables.

JOHN K. KING AND SONS, COGGESHALL.—Under the title of "Manual of Gardening," this Essex firm issues a substantial catalogue of vegetable, flower and farm seeds, roses, and sundries. Hundreds of illustrations adorn the 150 pages, and, in addition to descriptions and cultural notes, special attention is devoted to lawns for sports, etc.

G. LETTS, HADLEIGH, SUFFOLK.—Two lists have reached us, one devoted to a selection of vegetable and flower seeds, and one to plants, roses, and fruit trees.

CONTENTS.

PAGE
An Amateur's Orchid ... 96
Answers to Correspondents ... 96
Bold Rockwork ... 83
Early Spring Protection for Fruit Bushes ... 90
Exhibitions and Meetings ... 93
Hippeastrums at Christmas ... 86
Marguerite Carnations ... 85
Notes of the Week ... 81
Peas for Small Gardens ... 84
Peas from June to October ... 88
Polypodium vulgare as a Basket Plant ... 87
Some of the Newer Culinary Peas ... 91
The Best White Perpetual Carnation ... 89
Unreliable Roses ... 87
Work for the Week ... 91

ILLUSTRATIONS.

Portrait of Mr. R. Forester Felton, 81; A view in the Rock Garden at Swaylands House, Tunbridge Wells, 83; New Pea Lancastrian, 84; New Pea Hundredfold, 85; A Midwinter Group of Hippeastrums, 86; Varieties of Polypodium vulgare grouped in a Suspended Basket, 87; New Pea Webbs' New Leader, 88; New Pea Latest Giant, 89; New Culinary Pea Newtonian, 90; New Pea Lord Leicester, 91; Odontoglossum Harwoodi, 93.

Dr. J. COLLIS BROWNE'S
THE ORIGINAL AND ONLY GENUINE
Chlorodyne
ADMITTED BY THE PROFESSION TO BE THE MOST VALUABLE REMEDY EVER DISCOVERED.
The Best Remedy known for
COUGHS, COLDS,
ASTHMA, BRONCHITIS.
Cuts short all attacks of SPASMS, HYSTERIA, and PALPITATION.
The only Palliative in NEURALGIA, TOOTHACHE, GOUT, RHEUMATISM.
Acts like a Charm in DIARRHŒA and DYSENTERY.
Refuse imitations and insist on having
Dr J. COLLIS BROWNE'S Chlorodyne.
Convincing Medical Testimony with each bottle.
Of all Chemists, 1/1½, 2/9, 4/6.

THOMSON'S Celebrated
VINE PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES
SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE.

CHARGES FOR ADVERTISEMENTS IN
THE GARDENERS' MAGAZINE.

Five Lines and under	£0 2 6
Per Line beyond	0 0 6
,, Inch	0 6 0
,, Half Column	1 10 0
,, Column	3 0 0
,, Page	9 0 0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

☛ All Advertisements should be Received by 5 o'clock on Tuesday.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— & Co.

Telephone Numbers:
Editorial and Printing Depts. ... 831 Holborn.
Advertising and Publishing Depts. ... 2140 Holborn.

Offices: 148 and 149, Aldersgate Street, London.

PUBLISHERS' ANNOUNCEMENTS.

THE GARDENERS' MAGAZINE may be obtained by order from all Newsagents, price Twopence, every Saturday. If any difficulty be found, a copy will be posted weekly direct from the Publisher, 148 and 149, Aldersgate Street, London, on the following terms: Twelve Months, 10s. 6d.; Six Months, 5s. 6d.

INDEX and Title Page to Vol. LIII. (comprising the weekly numbers from January to December, 1910), price 2d., by post 2½d.

BINDING CASES for binding the 12 months' numbers, green cloth, ornamented in gold, price 2s., post free.

VOLUME LIII., bound in green cloth, containing the 52 weekly numbers, 1910. Price 12s. 6d.; by post, 13s. 4d.

MACKENZIE & MONCUR
LIMITED
HOTHOUSE BUILDERS
Heating, Ventilating & Sanitary Engineers & Ironfounders
SURVEYS & ESTIMATES arranged for in any part of the Country.
Write for our NEW CATALOGUE before placing orders for Hothouse Work.
EDINBURGH
LONDON
GLASGOW

"Practical and prettily illustrated."
—*The Scotsman.*

Sixth Edition, Including New Features and Illustrations, and Revised List of 1,666 Different Roses.

ROSES AND THEIR CULTIVATION

198 Pages.
16 Plates.
Frontispiece and 64 Illustrations.

2/6 Net; By post, 2/10.

By T. W. SANDERS, F.L.S.

A Complete Guide to the Selection and Culture of

- STANDARD ROSES.
- PILLAR ROSES.
- GREENHOUSE CLIMBERS.
- RAMBLING ROSES.
- ROSES FOR TRELLISES.
- CLIMBERS FOR PERCOLAS.
- POT ROSES.
- DWARF ROSES.
- ROSES FOR EXHIBITION.
- &c., &c.

LIST OF 1,666 CULTIVATED ROSES:
Showing Variety, Section or Class, Date Introduced, Colour, Habit of Growth, How Best Grown, Mode and Time of Pruning, Description of Flower.

◆ ◆ ◆

ORDER FORM.

To the Publishers of "The Gardeners' Magazine,"
148 & 149, Aldersgate Street, London, E.C.

Please send me a copy of **"ROSES AND THEIR CULTIVATION"** by post, for which I enclose remittance of **2/10.**)

Name..

Address..

THE CHEAPEST IN ENGLAND.

"THE STANDARD."

Copyright Registered.

Made in complete sections, sides and ends from ¾in. **Best Quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V**-jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

Cash with Order Prices.

Size.		Floor made from ¾in. Tongued Boards.
6 ft. by 4 ft. by 6 ft.	£1 12 0	5/0
7 ft. by 5 ft. by 6½ft.	£1 17 0	5/9
7½ft. by 5 ft. by 6½ft.	£2 2 0	7/9
8 ft. by 6 ft. by 7 ft.	£2 9 6	9/9
9 ft. by 6 ft. by 7 ft.	£2 14 6	11/6
10 ft. by 6 ft. by 7 ft.	£2 19 6	13/0
10 ft. by 8 ft. by 8 ft.	£3 14 0	16/6
12 ft. by 8 ft. by 8 ft.	£4 4 0	20/0

Carriage Paid to any Station in England and Wales.

Catalogue with Testimonials POST FREE.

J. T. HOBSON & CO., Largest Makers of Portable Buildings, **BEDFORD.**
Established 70 Years.

Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

Extracts from 35th annual collection of reports:—
NATIVE GUANO for POTATOES, VEGETABLES, etc.

A. J. Beard, Erdington: "Potatoes, splendid, free from disease. Best I ever had."—H. Chester, Nantwich: "Best onion manure I ever used. Grand for onion fly."

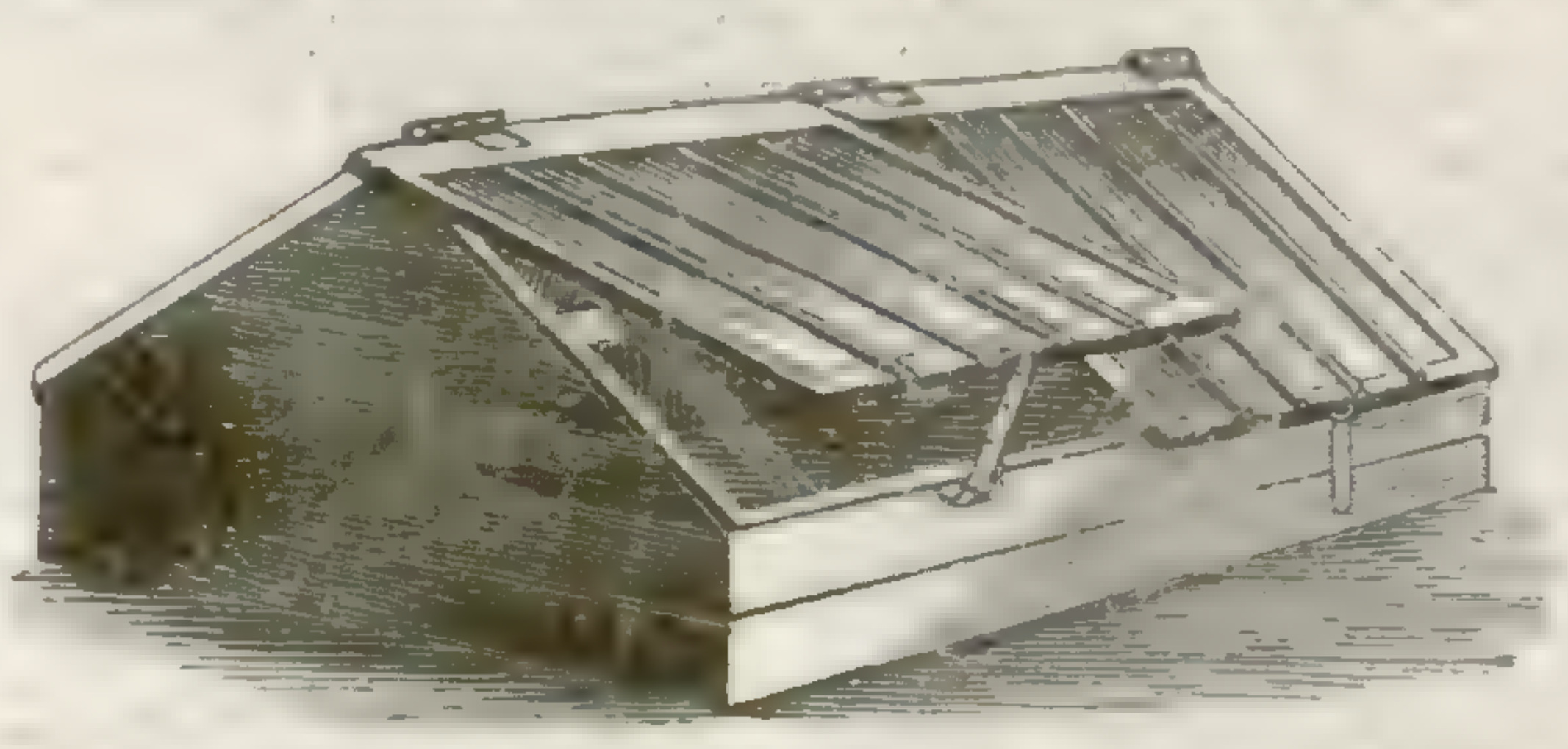
NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc.

J. Cant, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. Frampton, Titchfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED,** 29, New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted

PORTABLE PLANT FRAMES

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices. Glazed and Painted.		£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. " 4ft. "		2	5	0
6ft. " 5ft. "		2	15	0
12ft. " 4ft. "		4	0	0
12ft. " 5ft. "		4	15	0
12ft. " 6ft. "		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,

ROYAL HORTICULTURAL WORKS,
MIDDLETON, MANCHESTER.

Phytobroma

Barr's New Plant Food
For Flowers Vegetables and Fruit
of highest quality & guaranteed analysis

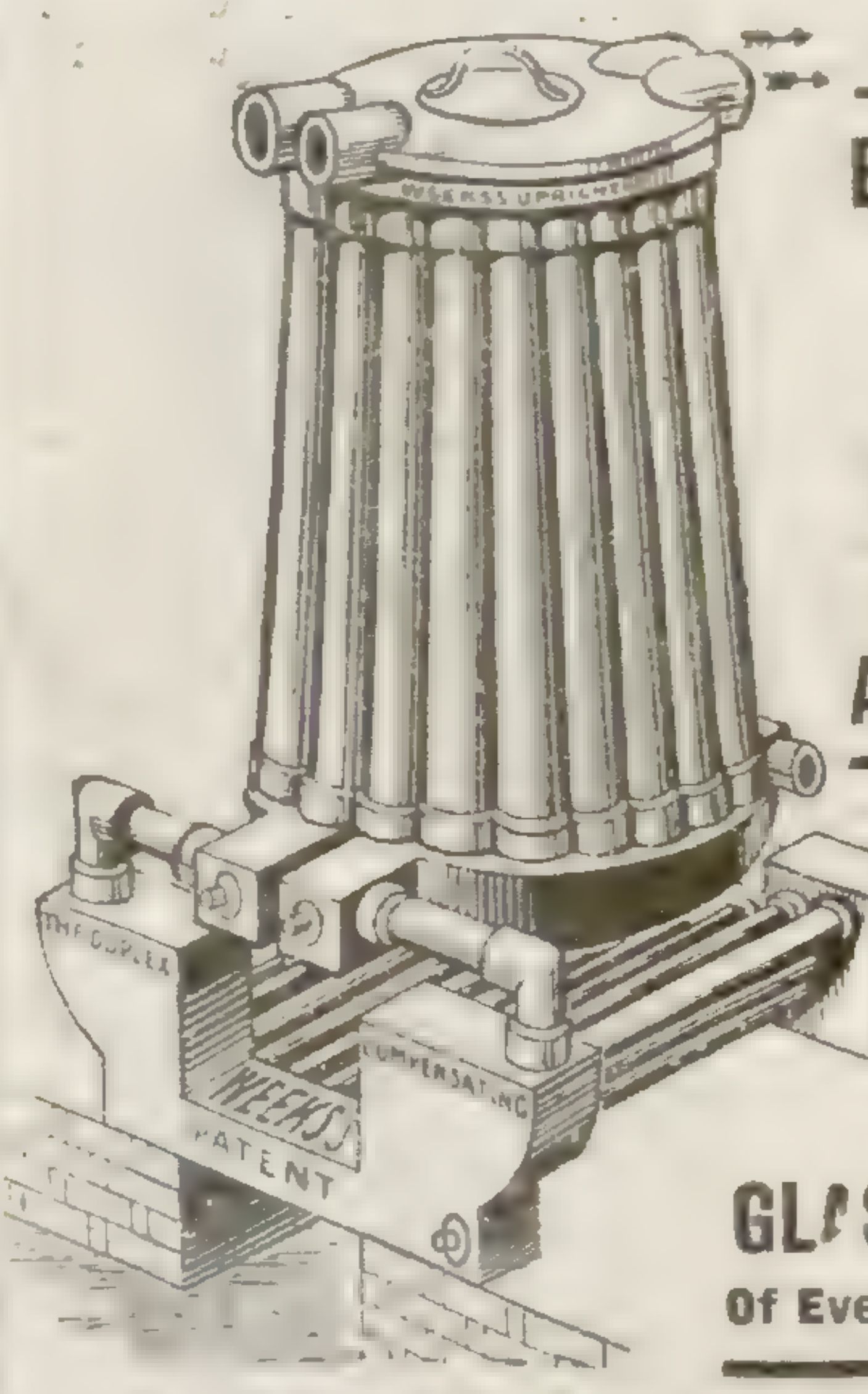
Per cwt., **20/-**; ½ cwt., **12/6**; 28lb., **7/6**; 14lb., **4/6**; 7lb., **2/6**; Sample Tins, **1/-**.

Prepaid orders for 28lbs. and upwards, Carriage Paid. Circular, with full particulars, on application.

BARR and SONS,
11, 12, and 13, KING STREET, COVENT GARDEN, LONDON

WEEKS'S BOILERS

supplied from stock.

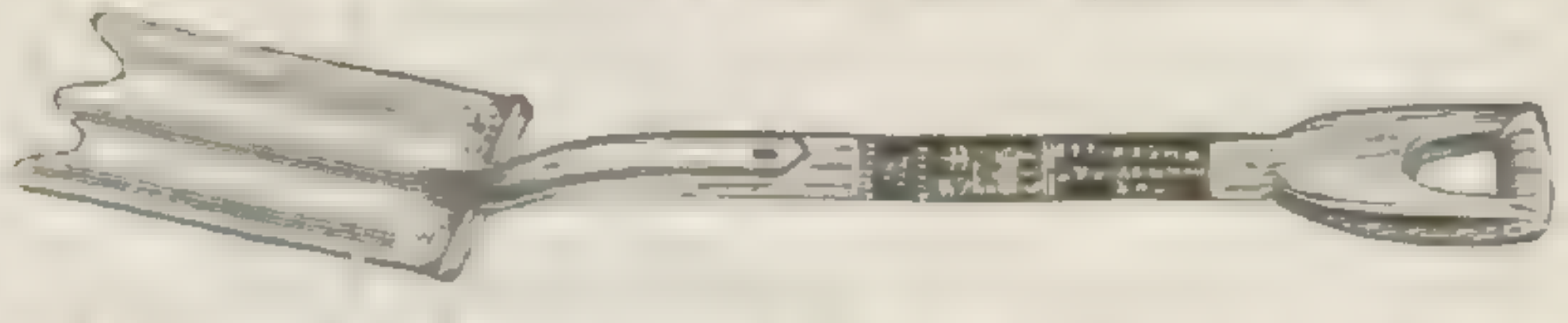


ESTIMATES GIVEN FOR COMPLETE HEATING APPARATUS

GLASSHOUSES.
Of Every Description.

J. WEEKS & CO.,
72, Victoria Street,
WESTMINSTER, S.W.

A NEW GARDEN SPADE (Carter's Patent).



This is claimed to be the most effective Spade on the market. Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

PIGSTYE TIMBER, 1½in., Elm, 1½d. square foot; also 1in. cheap rough shedding boards, 1d. square foot. Portable houses of all kinds. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 2,989. Vol. LIV.
Reg. at the G.P.O. as a Newspaper.

SATURDAY, FEBRUARY 11, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) Twopence

BARR'S VEGETABLE & FLOWER SEEDS of finest selected strains and tested growth. Descriptive Catalogue, with cultural notes, free.

BARR'S BEAUTIFUL LILIES, CANNAS, GLADIOLI, MONTBRETIAS, TIGRIDIAS, ETC., for Spring planting. Catalogue free.

BARR and SONS, 11, 12, and 13, KING STREET, COVENT GARDEN, LONDON.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from

PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, is this winter keeping a large staff of hot-water men in the shops, in order that they may attend immediately to any breakdown of Boilers or Hot-Water Piping in any part of the country. In case of emergencies please telephone 201 Western, or wire "Gray, Chelsea, London."

KING'S ACRE FRUIT TREES, ROSES,
AND ORCHARD-HOUSE TREES.

AWARDED 24 GOLD MEDALS SEASONS 1909-10.

160 acres to select from of the finest Trees that natural conditions and the skill of man can produce.

ILLUSTRATED CATALOGUES FREE ON APPLICATION.

KING'S ACRE NURSERIES, LTD.,
HEREFORD.

1,000,000 BORDER AND ROCK Plants. Unique collection.
50,000 HARDY FERNS, over 400 varieties. See Catalogue.
10,000 FLOWERING SHRUBS must be cleared.
30,000 LILIES NOW IN STOCK, Other consignments arriving.
DELPHINIUMS, 9 GOLD MEDALS IN 2 YEARS.
A record. Unique collection. Seed, 3d., 6d., and 1s. pkt.
PERENNIAL SEEDS, UNIQUE COLLECTION.
All Catalogues Free.
PERRY'S HARDY PLANT FARM, Enfield, Middx.

WELLS' CHRYSANTHEMUMS.—List of Novelties now ready; also descriptive general list. Wells' Phlox and Michaelmas Daisies, Hardy Herbaceous Plants, and Perpetual Flowering Carnations. Catalogues post free. Wells' book, "The Culture of the Chrysanthemum," post free, 1s. 6d. W. WELLS, Merstham, Surrey.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

FRENCH GARDENING REQUISITES.—Send for our new List, giving full particulars of the Double Glazed System, and numbers of new Labour-saving Appliances. Frames, Cloches, Reed Mats, and every requisite supplied. BOULTON and PAUL, Lim., Norwich.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page xi.

"HOW TO MAKE YOUR OWN SOIL FUMIGATOR."—Save the fabulous profits on [illegible] formulas. Make your own at less than 1d. per lb. Formerly we sold at 9d. and 1s. [illegible] tins. Sell to your neighbours, make 900 per cent. profit. Completely destroys wireworms, snails, woodlice, ants, leather-jackets, etc. Harmless to plants. Supersedes gas-lime. Send 1s. for recipe, and save money.—T. HUGHES, Analyst, Elmhurst, Northwich.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

NOVELTIES FOR 1911.
NEW VARIETIES OF VEGETABLES OF SPECIAL MERIT.

WEBBS' "EARLY FAVOURITE" PEA
First early. 3s. 6d. per quart.

WEBBS' "NONSUCH" MARROWFAT PEA
Second early. 3s. 6d. per quart.

WEBBS' PEA, KING GEORGE, Main-crop. 1s. per packet.

WEBBS' CONQUEROR TOMATO.
1s. 6d. and 2s. 6d. per packet.

WEBBS' FREEDOM CUCUMBER,
1s. 6d. and 2s. 6d. per packet.

WEBB and SONS, Seedsmen to H.M. King George V., WORDSLEY, STOURBRIDGE.

BUNYARD'S NEW CATALOGUES.
The following have been recently published, and contain all worthy new varieties. Post free on application.

BUNYARD'S
CLIMBING PLANTS, Illustrated.

BUNYARD'S
HERBACEOUS PLANTS, Illustrated.

BUNYARD'S
HARDY TREES AND SHRUBS, Illustrated.

BUNYARD'S SEEDS, VEGETABLE AND FLOWER, with coloured plates.

GEO. BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.

LAXTON'S NEW SEED CATALOGUE for 1911. Descriptive and fully illustrated, including grand new "Laxtonian Pea" and many other novelties, gratis on application.—LAXTON BROS., Seed Merchant, Bedford.

BRUSSELS SPROUT SOLIDITY.
The finest and hardiest Sprout in Britain. Only true in our own sealed packets at 1s. Send for a copy of our beautifully illustrated Catalogue, 140 pages, full of novelties and useful information. ALEXANDER and BROWN, Seed Merchants, Perth, N.B.

FERNS.—Beautiful Greenhouse varieties, 12 for 1s. 3d.; Maidenhair Ferns, 2s. doz.; New Nephrolepis Todeoides, 9d. each; Palms, 9d. each. HEAD GARDENER, 22, Charlton Road, Blackheath.

---

25 STRONG CHRYSANTHEMUM CUTTINGS, Exhibition, Decorative, Single or Early, 1s. 6d.; 50, 3s.; 100, 5s. 6d.; by return. List. RICHMOND'S CHRYSANT NURSERIES, Ossett, Yorks.

Price FIVE SHILLINGS NETT; by post 5s. 6d.

THE AMATEUR'S GREENHOUSE.

By T. W. SANDERS, F.L.S., F.R.H.S.,
Editor of "Amateur Gardening" and "Farm and Garden." Author of "Encyclopædia of Gardening," etc., etc.

A COMPLETE GUIDE TO THE CONSTRUCTION, HEATING AND MANAGEMENT OF GREENHOUSES; PROPAGATION AND CULTIVATION OF GREENHOUSE PLANTS; INSECT, ANIMAL, AND FUNGOID PESTS, AND HOW TO ERADICATE THEM.

To be obtained by order from any Bookseller; or will be sent, post free, packed in box, for 5s. 6d., by the Publishers.

W. H. and L. COLLINGRIDGE, 148 and 149, Aldersgate Street, London.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

HEATING APPARATUS for GREEN-HOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

SOW NOW UNDER GLASS.

SUTTON'S A1 TOMATO.
Mr. J. Davis, Gardener to W. E. King King, Esq., writes: "Your A1 Tomato has done wonderfully well with me. It has no equal either for table or exhibition."
Per packet, 1s. 6d. and 2s. 6d., post free.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

"Colour is meant for the perpetual comfort and delight of the human heart."—RUSKIN.

KELWAY'S "COLOUR BORDERS"
(Regd.)

Artistic and permanent—arranged for continuous bloom and colour effect.

These Borders can be purchased BY THE SQUARE YARD for any position all ready arranged for planting.

"I am thinking of planting a few borders with perennials. I am tired of continually planting bedding plants. Mrs. ——."

Write now stating your area, position, soil, etc., for planting in the Autumn, to

KELWAY AND SON, The Royal Horticulturists, LANGPORT.

NOW IS THE TIME TO PLANT KELWAY GAILLARDIAS.—They flower in profusion from June to November, even in the driest season. They are unsurpassed for their brilliance and enduring freshness. Choice named collections, 12s. and 18s. a dozen. Carriage and packing paid for remittance with order.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

FIDLER'S NEW ILLUSTRATED CATA-LOGUE OF CHOICE GARDEN SEEDS will be sent, post free, to any address on receipt of postcard. Write at once for a copy. It may help you to save 50% on your seed bill this season. FIDLER and SONS, Royal Berks Seed Stores, Reading.

CHRYSANTHEMUMS.—Decorative Varieties: Strong, Healthy, Cool Grown; Good Succession, Sept.-Christmas. Cuttings, 1s. 6d. per doz.; Plants, 3s. 6d. per doz. List on application. PERPETUAL FLOWERING CARNATIONS: Enchantress, White Enchantress, Mrs. Burnett, Victory, Harlowarden, 9d. each. Rose Doree, Black Chief, 1s. 6d. each. Plants in Spring. Cash with order; carriage paid. MISSES PRICE and FYFE, Grove Park Nursery, Lee, S.E. (Please mention this Magazine when writing).

CLAY'S MANURES, CRUSHED BONES
(See page 117.)

CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

IRON and WIRE FENCING for GARDENS, Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free. BOULTON and PAUL, Ltd., Manufacturers, Norwich.

RICHARDSON'S for GLASSHOUSES and HEATING APPARATUS, for full advertisement see back page. Darlington.

XL ALL FOR WINTER AND SPRING CLEANSING.

Before growth commences stronger solutions may be used.

XL ALL NICOTINE INSECTICIDE WASH (poisonous) for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. Agents, write for particulars.

XL ALL CAUSTIC WINTER WASH (non-poisonous) for dormant Fruit Trees, stamps out American Blight, and all other pests.

Other XL ALL Preparations of great renown are XL ALL NICOTINE VAPORISING COMPOUND, XL ALL FERTILISER, XL ALL LAWN SAND, etc.

Ask your Nurseryman, Seedsman, or Florist for my small Pink List.

G. H. RICHARDS, Manufacturer, 234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Border and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues. Colour Printing for Seedsmen, Florists, &c.

SEEDS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Select Seeds.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

RHODODENDRONS.

DICKSONS & CO.,
1, Waterloo Place, Edinburgh.
Pink Pearls, Ponticums, choice Hybrids. Write.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

ALEX. DICKSON & SONS, Ltd.,
Hawlmark, Newtownards, Ireland.
The World-famed Champion Rose Growers and Raisers of Irish Pedigree Seedling Roses. Lists Free.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 1st Prizes, 3 2nds, at N.R.S. Shows, 1910. Ctlg. Free.

SAMUEL M'CREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
Illustrated Catalogue free.

TURF LOAM.

A. B. JOHNSTON, New Park, Cranleigh, Surrey.
Very Fibrous Loam, for Carnations, Roses, Vine Borders, Melons, Fruits under Glass, &c., &c.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

SWEET PEAS. SWEET PEAS. SWEET PEAS.

OUR NEW DESCRIPTIVE CATALOGUE, containing over **100 distinct** and **beautiful varieties** including all the **latest novelties,** and those of **recent introduction,** has now been posted to our numerous customers.

☞ If you **have not received one send us a postcard at once, it will repay you.** ☜

OUR COLLECTIONS contain the **latest and approved sorts** as recommended by the N.S.P.S. and are **unequalled** for **liberality** and **quality.**
Sweet Pea Plants in Pots ready for **planting out a speciality. Orders** now being booked to avoid disappointment.

HARDY, WELL ROOTED, AND TRUE TO NAME. LIST OF VARIETIES FREE ON APPLICATION.

Wm. FELLS & SON, Sweet Pea Growers, HITCHIN, HERTS.

HORNES' TREES.

SPECIAL CASH OFFER.

200,000 FRUIT TREES & BUSHES OF ALL KINDS.

10,000 MAIDEN APPLES, on English Paradise. The following popular kinds are included:—James Grieve, Ben's Red, Charles Ross, Cox's Orange, Bramley Seedling, Lord Derby, Ecklinville Seedling, Newton Wonder, Norfolk Wonder, Blenheim Orange, Warner's Rival, Quarrenden, Lane's Prince Albert, Beauty of Bath, Lord Suffield, Stirling Castle, Houblon, Grenadier, Annie Elizabeth, Hector Macdonald, Edward VII., Wellington, Peasgood Nonsuch, Potts-Seedling. Price **5/-** per doz.; **38/-** 100.

Also a very fine lot of **20,000 PYRAMID APPLES (2 and 3 years) on English Paradise,** including:—Worcester Pearmain, Cox's Orange Pippin, James Grieve, Allington Pippin, Bramley Seedling, Warner's King, Houblon, Charles Ross, Lane's Prince Albert, Beauty of Bath, Lord Derby, Ecklinville Seedling, Ribston Pippin, Newton Wonder, Ben's Red, Grenadier, Annie Elizabeth, Hector Macdonald, Gladstone, Stirling Castle, Lord Grosvenor, King of Pippin. Price **9/-** per doz.; **60/-** 100.

ABOUT 20,000 HALF-STANDARD APPLES on Crab Stock (2 and 3 years).—Worcester Pearmain, Cox's Orange Pippin, Bramley Seedling, Newton Wonder, Allington Pippin, Lord Derby, Blenheim Orange, James Grieve, Lane, Prince Albert, Gladstone, Ecklinville Seedling, Charles Ross, Stirling Castle, Gascoyne Scarlet, James Grieve. Price **9/-** doz.; **60/-** 100.

PEARS ON QUINCE (2 years).—Doyenne du Comice, Louise Bonne of Jersey, Pitmaston Duchess, Conference, Clapp's Favourite, Marguerite Marillat. All **10/-** per doz.

STANDARD APPLES.—The following popular kinds are included:—Cox's Orange Pippin, James Grieve, Ecklinville, Allington Pippin, Blenheim Orange, Lord Derby, Warner's King, King of Pippin, Wellington, Lord Suffield. Price **17/-** doz.

Victoria Plums, 2 years feathered, **10/-** doz. Black Currants, Lee's Prolific, 2 years, very fine, **2/-** doz.; **10/-** 100. Raspberries, Superlative, **25/-** 1,000. Several thousand Cabbage Plants (Sutton's Flower of Spring and Myatt's Offenham), **2/6** 1,000.

SPECIAL QUOTATIONS FOR LARGE QUANTITIES. NEW ILLUSTRATED CATALOGUE NOW READY, TO BE HAD POST FREE. WORLD-WIDE REPUTATION. ALL THE BEST VARIETIES IN CULTIVATION.

W. HORNE & SONS, Noted Fruit Tree Growers. **CLIFFE, nr. ROCHESTER, Kent.**

AMARYLLIS

(HIPPEASTRUMS).

Unrivalled Collection.

Now is the best time to purchase, as every bulb may be had with flower scape showing. Price list and all information free.

ROBT. P. KER & SONS,
Aigburth Nursery,
LIVERPOOL.

TREES, TREES, TREES.

Now is the Time to Plant.

300 ACRES TO SELECT FROM.

Our LIGHT OAKS and BAGNALL NURSERIES are admitted to be the most exposed in the United Kingdom, ranging up to 1,000 feet above sea-level. Customers may therefore rely on our stock thriving in the coldest or exposed situations.

Catalogues gratis on application.

ISAAC MATTHEWS & SONS, Ltd.,
The Nurseries,
MILTON, STOKE-ON-TRENT, STAFFS.

SEED POTATOES & GARDEN SEEDS

Customers wishing to save
50 PER CENT.
When Purchasing
BULBS, GARDEN SEEDS, AND POTATOES,
Should send AT ONCE for Lists to
J. W. CROSS,
OLD GRAMMAR SCHOOL, **WISBECH**

ELLISON'S BEGONIAS are absolutely the best strain obtainable. 30 Begonias, all different, and named, 10s. 6d.; Bedding Begonias, 9s., 12s., 15s. 100.

LILIUMS. 24 choice Liliums, all different, 10s. 6d. Gloxinias, 6 different, 2s. Cannas, 10 different, 4s. 100 German Iris, 10 sorts, [illegible] 4s.

LILY OF THE VALLEY, 1s. 3d. 100; Amaryllis, 10s., 15s., 20s. doz. Gladioli, early-flowering, 1s. 100; Autumn-flowering, 3s., 4s., 5s., 6s. 100.

IPOMÆA, and hundreds of other choice Seeds, Alstromerias, [illegible] Tuberoses, Achimenes, Arum Lilies, Erythroniums, [illegible] Seed 1s. dozen.

SWEET PEAS, 60 of the very best varieties, from 1d. packet. Tree Carnations [illegible] 100 Montbretias [illegible] each, 10 named sorts [illegible]

ON APPROVAL.—Bulbs and Vegetable Seeds [illegible] Carriage paid. [illegible] Catalogue free. — ELLISON, 57, West Bromwich. Established 1890.

NOVELTIES in Flower Seeds.—[illegible] Gerbera, Hybrid Freesias (quite 20 colours), Nemesia, Dimorphotheca, etc.—ELLISON, 57, West Bromwich.

Sales by Auction.

ROSE TREES.

SHRUBS. BULBS.

SALES BY AUCTION
are held every
MONDAY and WEDNESDAY,
at 12.30.

STEVENS' AUCTION ROOMS,
Established 150 Years,
38, King St., Covent Garden, London, W.C.
Catalogues on Application.

SALES NEXT WEEK.

MONDAY and FRIDAY NEXT, Feb. 13th and 17th, at Twelve o'clock: — Large quantities of Hardy Bulbs and Roots for spring planting, Liliums, Perennials, Herbaceous Plants, etc.

At Half-past One o'clock: 1,000 Roses in variety, Fruit Trees, Azaleas, Rhododendrons, etc.

WEDNESDAY NEXT, Feb. 15th, at Twelve o'clock: Herbaceous, Border, and Alpine Plants, Japanese Liliums, Hardy Roots and Corms, Retarded Bulbs, Peat, Leaf-mould, etc.

At Half-past One o'clock: Roses, 6,000 Standard, Dwarf, Climbing, T., H.T., and H.P., newest and best varieties.

At Half-past Two o'clock: 900 Cases Japanese Liliums in cases, as received. Preceded at Twelve o'clock by thousands of miscellaneous Bulbs, Roots, and Plants.

FRIDAY NEXT, Feb. 13th, at a Quarter to One o'clock: Choice established Orchids from the collection of Eustace F. Clark, Esq., of Teignmouth. Also Orchids in variety from other sources. Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view morning of sale, and catalogues had.

By Appointment to H.M. The King.

1911 FORBES'

Illustrated Plant Catalogue **Nearly 200 Pages.**
GOLD MEDAL SPECIALITIES.

Contains carefully revised **Descriptions, Colour, Height, Time of Flowering, British or Common Names, Prices,** etc., of the **Grandest Collections of ASTERS, BEGONIAS, CALADIUMS, CARNATIONS, DAHLIAS, DELPHINIUMS, PÆONIES, PANSIES, VIOLAS, PELARGONIUMS, PENTSTEMONS, PHLOXES, PYRETHRUMS, HARDY BORDER PLANTS,** carefully-prepared **PLAN** for arranging **HARDY PLANT BORDERS,** etc.

Experts unanimously accord **FORBES' CATALOGUE** the unique distinction of being the **best** and most **reliable** up-to-date **Reference Book** extant.

FREE ON APPLICATION.

JOHN FORBES (HAWICK), LIMITED.
(Dept. I), The King's Nurserymen, **HAWICK, Scotland.**

Perpetual-Flowering CARNATIONS.

This year's Novelties and all the Leading Varieties.

Send for descriptive Catalogue of 80 varieties with particulars when to stop them.

C. ENGELMANN, CARNATION GROWER,
SAFFRON WALDEN.

TO LET.—Facing S.S.W.; on Great Central and Metropolitan Joint Railway, an old-fashioned KITCHEN GARDEN, in excellent and good repair, consisting of four acres, all surrounded, and divided up into compartments by high walls covered with well-matured fruit trees of various kinds. In garden are four large vineries, 1 peach house, 5 plant houses (1 new), 8 pits, and numerous spare lights. Gardener's cottage (6-roomed), bothy, and sheds. Houses heated with hot-water. Adjoining across the road are 5½ acres of orchard, with sheds and cart stable, used in connection with the kitchen garden. Excellent well in garden and an additional water supply if required can be obtained by arrangement. Order to view can be obtained with all particulars from the Agent, Shardelces Estate Office, Amersham.

Please mention
THE GARDENERS' MAGAZINE
when writing to Advertisers.

NEW ROSES

WM. PAUL & SON, WALTHAM CROSS, Ltd.,

Beg to offer strong plants of the following New Roses raised by them at the Waltham Cross Nurseries:—

Varieties of 1910.

Alice Cory Wright (H.T.), Dwarfs, **7/6** and **10/6** each.
Elsie (Wichuraiana, Rambler), Dwarfs, **7/6** each.
Juliet (Hybrid Briar), Dwarfs, **10/6** each; Standards and Half-Standards, **10/6** each.
Portia (H.T.), Dwarfs, **7/6** each.

Varieties of 1909.

Althea (H.T.), Dwarfs, **3/6** each; **36/-** per dozen.
Cynthia (H.T.), Dwarfs, **3/6** each; **36/-** per dozen; Standards, **5/-** each.
Fairy (Multiflora Rambler), Dwarfs, **2/6** each; **24/-** per dozen.
Margaret (H.T.), Dwarfs, **3/6** each; **36/-** per dozen.

For full descriptions of the above, and for New Roses of other raisers and general collection of Roses, see Rose Catalogue, post free on application.

Pauls' Royal Nurseries and Seed Warehouse,
WALTHAM CROSS, HERTS.

GOOD LINES

From our Catalogue are

PEA, Lord Leicester (New).
Unsurpassed for Exhibition or Table.

BEET, Black King.
Perfect in shape and colour.

CARROT, Early Market.
The most economical Carrot for the Garden.

CELERY, Early Rose.
Of wide spread fame.

MANY OTHER GOOD THINGS ARE LISTED.

Write for a Copy of Catalogue No. 26.

HARRISON & SONS,
33, Market Place, **LEICESTER.**

Rhododendrons.

Crimson, White, Pink. **250** Choice Named Varieties, fine foliage, well budded, for potting or planting. 1 to 1½ ft., 1½ to 2 ft., 2 to 2½ ft., 2½ to 3 ft., 3 to 4 ft., 4 to 5 ft., 5 to 6 ft., 6 to 7 ft. List of sorts and prices on application; many thousands to offer. Standards in all sizes.

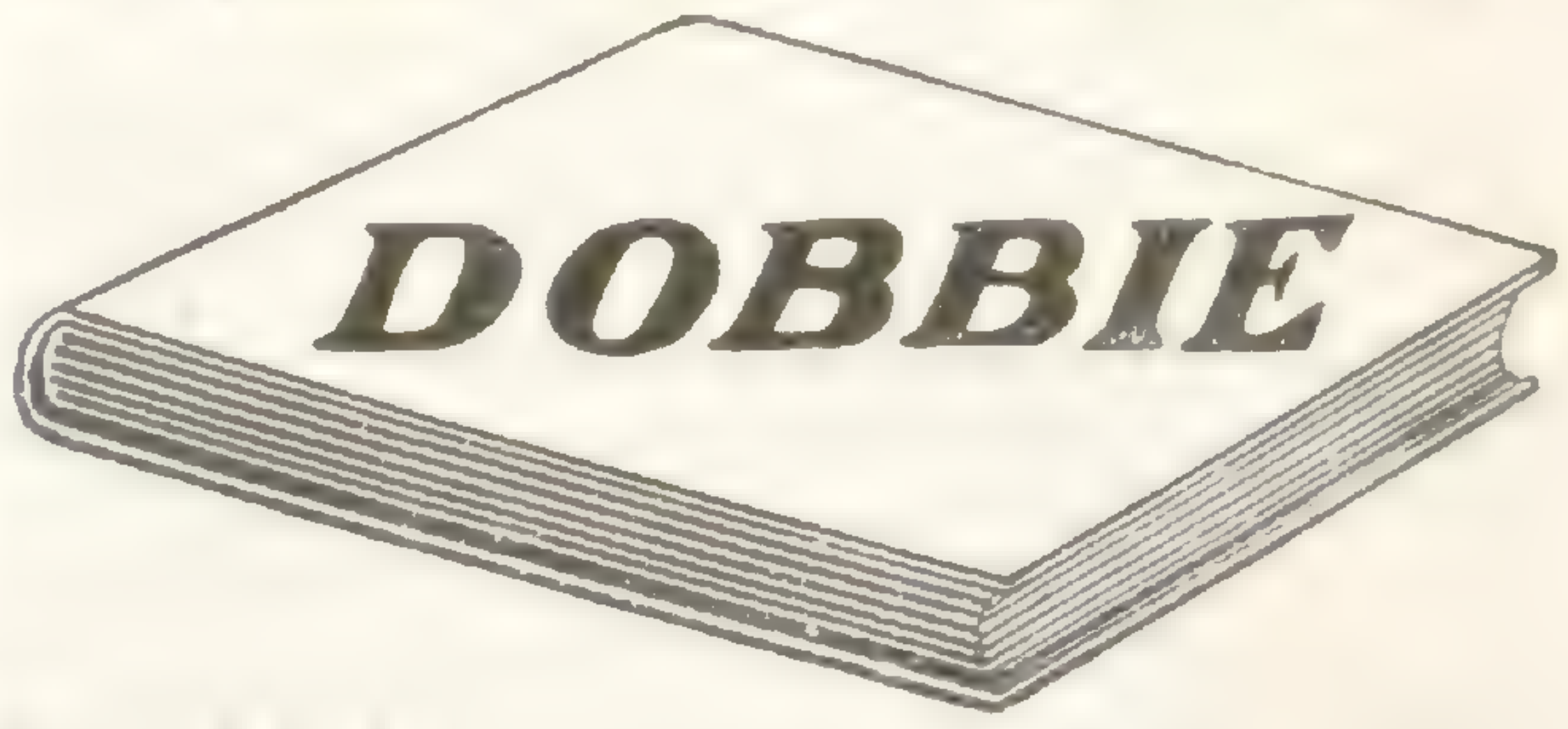
All Home-grown. Inspection Invited.

F. STREET, Heatherside Nurseries, CAMBERLEY.

TOMATO PLANTS (6 to 8 ins high). Ready for Fruiting Quarters. **Grown in Steam sterilised soil** Very carefully packed and protected.
Price £3 per 1 000, Cash with order, carriage paid.
Per 100, 7/-; 65 plants, 5/-; 50 plants, 4/-; 25 plants, 3/-; 12 plants, 2/-
Carter's Sunrise, Winter Beauty, Beauty of Wales, etc.

W. & F. POAT, TOMATO GROWERS, ST SAMPSON'S **GUERNSEY, C.I.**
Cheques, Postal Orders, etc., should be crossed "Guernsey Banking Co., Ltd."
Booklet and Testimonials free on application.

100,000 FREE COPIES



Dobbie's New Catalogue and Guide to Horticulture.
224 PAGES. 210 ILLUSTRATIONS.

A COPY WILL BE SENT WITH PLEASURE GRATIS TO ANY ONE APPLYING FOR SAME, WHO ENCLOSES 3d. IN STAMPS TO DEFRAY COST OF POSTAGE, AND MENTIONS "GARDENERS' MAGAZINE."

DOBBIE & CO.,
The Royal Seedsmen, EDINBURGH

.. A ..
GREAT FLORAL NOVELTY.

GERBERA HYBRIDS
(Dr. Jameson).

A most attractive table decoration, a flower of exquisite colouring and great variety of shades, from snow white, yellow, salmon, vermilion to crimson, purple, scarlet and many other beautiful tints, with long stalks from 12in. to 25in. Very effective for wreaths.

Seeds, plants, and cut flowers for sale. Payment on delivery.

For Terms apply to

Etablissements Horticoles Du Littoral,
CAP d'ANTIBES
(Alpes-Maritimes)
FRANCE.

Lettres et Telegrammes:
VILLA JOYEUSE, ANTIBES

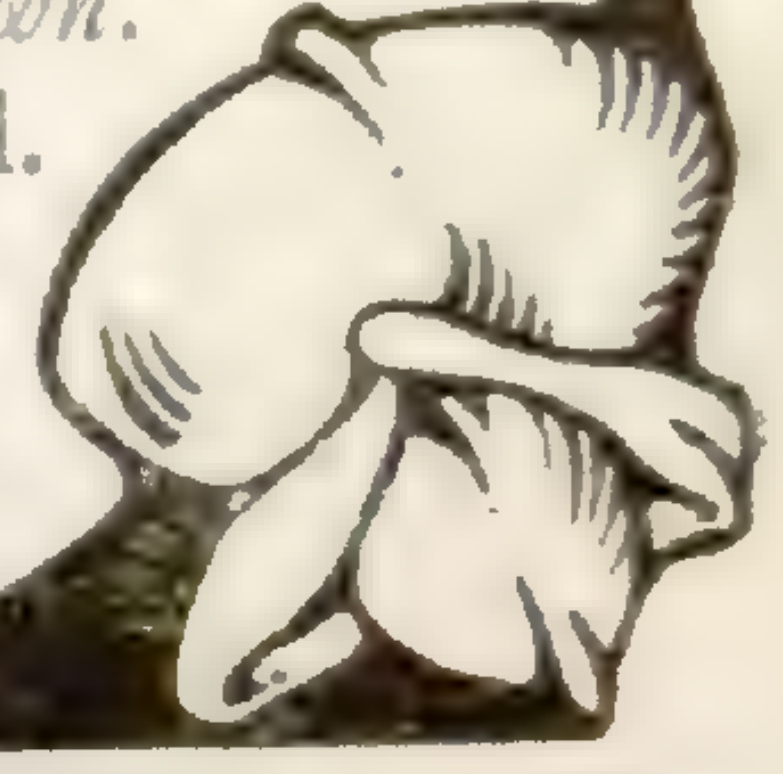
HALLAM'S GOLD MEDAL SWEET PEAS

All 'Waved' Varieties.

Selected by specialists, and guaranteed *English grown.*
Finest value seeds sold.

Send to-day for our List

HALLAM'S (Dept. 5),
Moseley, Birmingham



STALKER'S Forest Trees, Fruit Trees. Roses, Bulbs, and Seeds
Are known all over the world, and cannot be surpassed for hardiness and quality.

Famous for Quality and Cleanliness

D. STALKER & SON,
Government Contractors,
Catalogues Free. **NAIRN. N.B.**

HERE YOU ARE! ! ! — ARTHUR COOMBES, F.R.H.S., offers pick of his Tomato Plants, grown under ideal conditions. Holmes' Supreme, Comet, Up-to-Date, D. of York, Sunrise, 1s. 3d. doz.; 8s. 100, cash. Post free.—ST. MARY'S NURSERY, Hagley, Stourbridge.

GLASS & PAINT.

NICHOLLS & CLARKE, LTD.,
15 oz. and 21 oz. Glass,
IN ALL THE USUAL SIZES.
Shoreditch, London.
When sending for list please cut out this advt.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head).—Mrs. HERBERT MORRELL highly recommends F. HARRIS; been head of five the past four years; thorough experience, gained in good establishments, including Headington Hill Hall, Buscot Park, Waddesdon Manor; age 34, no family. Apply HARRIS, Writtle Road, Chelmsford.

GENTLEMAN recommends GARDENER (Head of two or three); life experience in all branches; understands formation of new or renovating old gardens; married, one boy 10 years; age 45. PENNELLS, Phœnix Green, Winchfield, Hants.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; grapes, peaches, melons, stove and greenhouse plants; four and a-half and eleven years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here 5½ years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working, where two or more are kept); good all round; can be well recommended; married when suited; age 36. PEARCE, 10, Roxwell Road, Shepherd's Bush.

GARDENER (Head Working), requires SITUATION; experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants; Flower and Kitchen Garden, Hardy Fruit, etc.; good references; married, no family. W. S., 73, Allen Street, Maidstone, Kent.

GARDENER (Head Working); married, no family; age 37; life experience in all branches; practical experience with land and stock; good references; disengaged shortly. G. HARE, The Gage Gardens, Little Berkhamsted, Hertford.

GARDENER (Head Working); life good practical experience in all branches, Inside and Out, Early and Late Forcing; excellent references. H. TURNER, 62, Star Road, Peterborough.

GARDENER (Head Working, where three or four are kept); life experience, including both Inside and Out; good references; age 31. W. R., New Place, Haslemere, Surrey.

THE RIGHT HON. LORD and LADY JOICEY wish to highly recommend J. M. RICHARDS as GARDENER (Head); 16 years' experience in all Fruit, Vegetable, and Plant Culture; 4 years [illegible] situation as General Foreman; excellent testimonials; age 30; single; disengaged when suited. Apply RICHARDS, Gregynog Gardens, Newtown, Mont.

GARDENER (Single-handed or Kitchen Garden and Pleasure Ground Foreman); excellent references; 5½ years last place; age 32; married, two children; distance no object. GAISFORD, 8, Market Street, Bradford-on Avon, Wilts.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

MANAGER or FOREMAN; life experience in Growing Tomatoes, Cucumbers, Mushrooms, and all kinds of Bedding Plants; age 49; single. C. A., 9, Herbert Street, Chesterton, Cambridge.

FOREMAN (Inside or General).—Mr. G. DEADMAN, The Gardens, Cowbridge House, Malmesbury, Wilts, can with confidence highly recommend W. PHILLIPS as above. 14 years' experience, Fruits, Stove, Greenhouse Plants, Chrysanthemums, Carnations, Decorating; good references; age 29; disengaged. Rose Cottage, Kingscote, Wotton-under-Edge, Glos.

FOREMAN, age 26; experienced in Fruit and Greenhouse Plants, House and Table Decorations; good references; Bothy preferred. A. CARRINGTON, 118, Stowe Street, Lichfield, Staffs.

GARDENER.—Private Working or Market Garden Nursery; grower cucumbers, tomatoes, chrys. (bedding), mushrooms (ridge or flat), vegetables, hardy fruits, budder, grafter, trainer, pruner, raiser rose cuttings; life experience; good references. W. BLOOMFIELD, Staplehurst, Kent.

JOURNEYMAN (First, Inside).—Mr. O. CATLING, The Gardens, Bayfordbury, Hertford, recommends W. WHEELER as above, age 24; life experience, 2 years present situation; bothy preferred.

JOURNEYMAN (Third), in the Houses, with a chance of good experience; age 18; height 5 feet 10 inches; strong; good references. A. RICHARDSON, Clay Hill, Goudhurst, Kent.

JOURNEYMAN (Inside) in good establishment; age 19; five years' experience. EMERY, Hylands Park, Chelmsford, Essex.

YOUNG MAN, age 21, as JOURNEYMAN (Inside and Out) or on Pleasure Grounds; four years' experience; good reference; cricketer; disengaged.—JONES, Oddingley, near Droitwich, Worcestershire.

YOUNG MAN (20) seeks SITUATION as JOURNEYMAN (Inside); 7 years' experience; well recommended. P. COOPER, Newbold Fields, Chesterfield, Derbyshire.

YOUNG MAN (age 25), with 10 years' experience in all branches of horticultural work, including orchid growing, seeks SITUATION in good nursery or private place; highest references. W. BARRETT, Apiaries, Old Bath Road, Cheltenham.

YOUNG MAN (21) seeks SITUATION in good garden; 6 years' experience; excellent references; 2 years' last place; left through people giving up; in or near London preferred. G. CHANDLER, 58, Westland Terrace, Queens Road, Alton, Hants.

YOUNG MAN (20) seeks SITUATION as 3rd, where 4 or 5 are kept; 5 years' experience; good character; prefers Bothy, and down south. A. J. C., 10, Office of this Paper.

HANDYMAN or GARDEN LABOURER seeks SITUATION, age 27; good references. T. MACE, The Bothy, Cumberland Lodge, Windsor Park, Berks.

HANDY MAN on estate; used to general house repairs; willing to assist in garden; understands Horses, Farm Work. MILES, 80, Loveridge Road, Kilburn.

MR. R. STAWARD, Panshanger, wishes to recommend WALTER MORGAN as IMPROVER (Inside or Out); age 18; three years' experience; Bothy preferred; disengaged. Cole Green, Hertford, Herts.

MR. T. BENNETT, late Peckforton Castle, can highly recommend P. E. KIRTON as JOURNEYMAN in Fruits or Plants; age 22.

MR. DUNKIN, Instructor in Horticulture, Warwickshire C.C., can with confidence recommend a Youth as IMPROVER in a good garden; age 17; tall, strong, and healthy. Address, M. DUNKIN, Mount Pleasant, Emscote, Warwick.

GENTLEMAN recommends YOUNG MAN, age 22, as Second of four or five; Inside and Out; 7 years' experience; good reference. Apply T. ROGERS, Michelmersh, Romsey, Hants.

GARDEN LABOURER wants SITUATION; married, no family; well used to outside work; good spade and scythe hand; well recommended; no circulars. W. LING, Sutton Field, Sutton Bonnington, Loughboro'.

ORCHID GROWER requires SITUATION; experience under first-class growers; 10 years present situation; excellent references. Apply, S. BURROUGH, Royal Gardens, Sandringham.

A NORWEGIAN, aged 23 years, seeks a Position in a Horticultural Establishment in or near London. Has had between two and three years' experience. Apply HENNUM, Ljan-by-Kristiania.

GERMAN (21), 7 years' experience in Tomatoes, Cucumbers, small Fruits, and all kinds of out-of-doors Vegetables, etc., seeks SITUATION in Market Nursery. State wages. E. SGNAR, No. 9, New Street, Carnforth, Lancs.

IMPROVER (18); three years' good character; fair knowledge of Inside work; Bothy preferred. ANSELL, St. George's Gardens, Wakefield Street, London, W.C.

Situations Vacant.

CANADA.—Wanted, strong, active GARDENERS for large Nurseries; steady work; good wages; sail March; book early. UNION TRANSIT CO., 381, Argyle Street, Glasgow.

WANTED, experienced KITCHEN GARDENER, Frames, Forcing, Fruit, etc.; abstainer; duties once a month; Bothy, etc.; wages 18s. week. Apply J. E. DAVIES, The Gardens, Talygarn, Pontyclun, Llantrisant.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For FEBRUARY 18, 1911.

Please Repeat my Advertisement.

Name ……………………………………

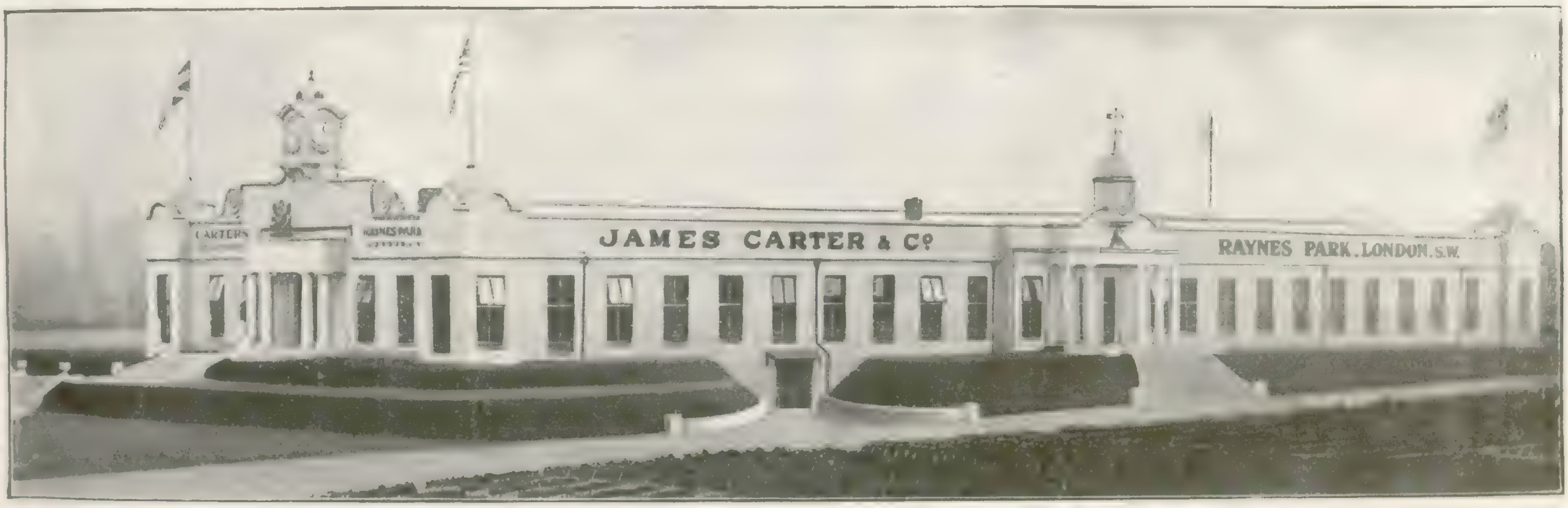
Address ……………………………………

……………………………………

Date……………………

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

HOW
Carters Tested Seeds
ARE TESTED.



Carters New Offices and Seed-Testing Grounds, Raynes Park, London, S.W.

The founder of our Firm, JAMES CARTER, was, we believe, the first to guarantee the germination of his Garden Seeds seventy-five years ago; the practice, as amplified in the following illustrations, is still conducted annually by our firm.

1st Test—Peas Germinating on warm moist felt.

2nd Test Peas Germinating in mould.

3rd Test—Growing to maturity in our Experimental Gardens.

A sample of all Horticultural and Agricultural Seeds is grown in our Testing Grounds to full maturity, so that we may assure ourselves of the quality and trueness of each variety.

By examining our trials from time to time we know exactly how the produce of our Seeds should appear in the gardens of our Customers all over the world, making allowances for the various climates, and by the aid of our comparative tests (we try all British and Continental Seeds of repute) we assure ourselves that our Customers are growing "the best and only the best" and "Tested."

ILLUSTRATED CATALOGUE POST FREE.

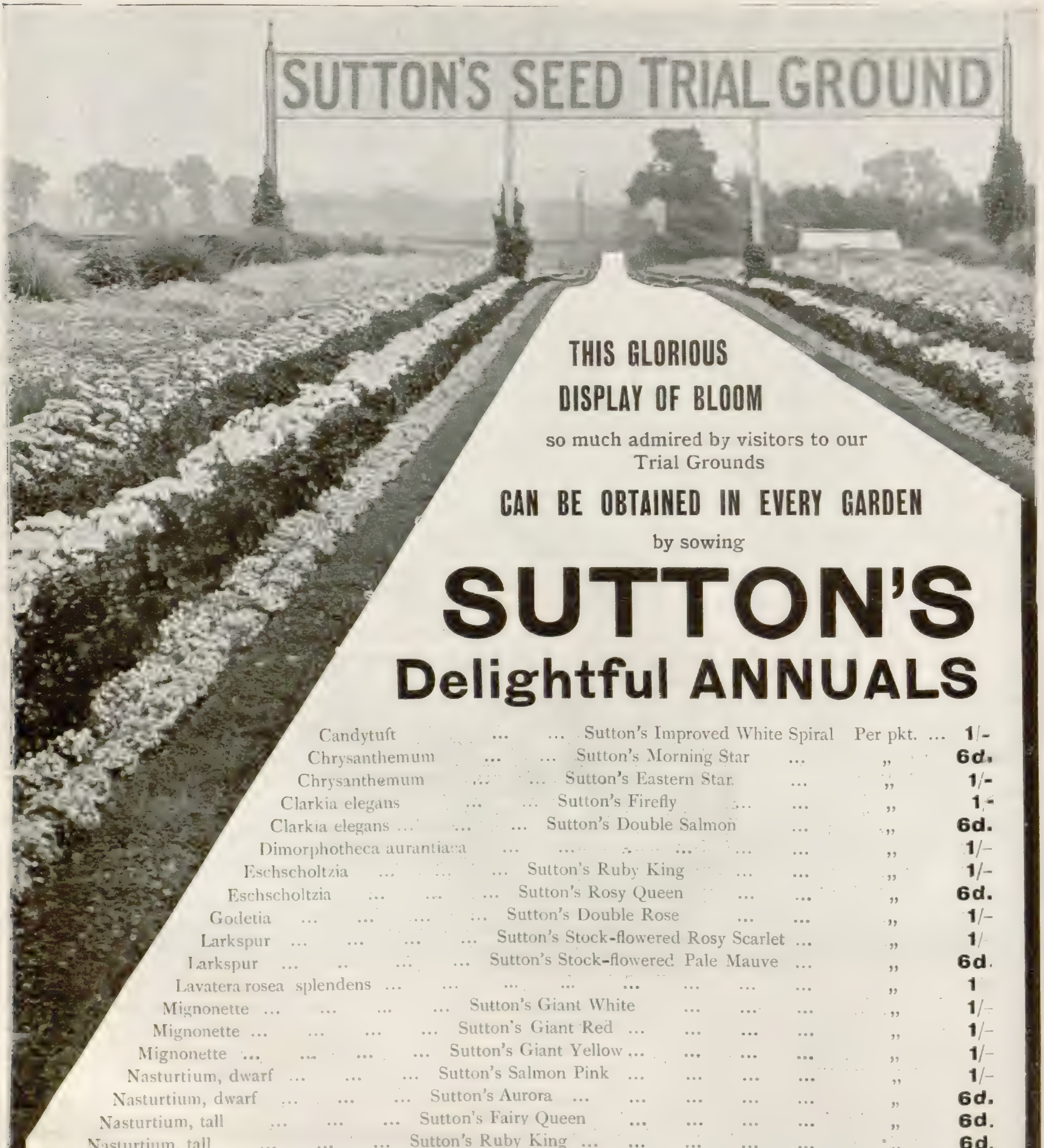
Carters Tested Seeds
Registered Trade Mark

Carters
HIGH-HOLBORN

RAYNES PARK,
LONDON, S.W.

BRANCHES
237 and 238, HIGH HOLBORN, W.C.
531, QUEEN VICTORIA STREET, E.C.

Carters Tested Seeds
Registered Trade Mark



THIS GLORIOUS DISPLAY OF BLOOM

so much admired by visitors to our
Trial Grounds

CAN BE OBTAINED IN EVERY GARDEN

by sowing

SUTTON'S
Delightful ANNUALS

Candytuft	Sutton's Improved White Spiral	Per pkt.	**1/-**
Chrysanthemum	Sutton's Morning Star	,,	**6d.**
Chrysanthemum	Sutton's Eastern Star	,,	**1/-**
Clarkia elegans	Sutton's Firefly	,,	**1/-**
Clarkia elegans	Sutton's Double Salmon	,,	**6d.**
Dimorphotheca aurantiaca		,,	**1/-**
Eschscholtzia	Sutton's Ruby King	,,	**1/-**
Eschscholtzia	Sutton's Rosy Queen	,,	**6d.**
Godetia	Sutton's Double Rose	,,	**1/-**
Larkspur	Sutton's Stock-flowered Rosy Scarlet	,,	**1/**
Larkspur	Sutton's Stock-flowered Pale Mauve	,,	**6d.**
Lavatera rosea splendens		,,	**1**
Mignonette	Sutton's Giant White	,,	**1/-**
Mignonette	Sutton's Giant Red	,,	**1/-**
Mignonette	Sutton's Giant Yellow	,,	**1/-**
Nasturtium, dwarf	Sutton's Salmon Pink	,,	**1/-**
Nasturtium, dwarf	Sutton's Aurora	,,	**6d.**
Nasturtium, tall	Sutton's Fairy Queen	,,	**6d.**
Nasturtium, tall	Sutton's Ruby King	,,	**6d.**
Nemesia	Sutton's Large-flowered, mixed	,,	**1/6**
Nigella	Miss Jekyll	,,	**1/-**
Poppy	Sutton's Selected Shirley, mixed	,,	**1/-**
Salpiglossis	Sutton's Large-flowered, mixed	,,	**1/-**
Scabious	Sutton's Large-flowered, mixed	,,	**1/-**

POST FREE.

Complete Lists and full descriptions of all the best varieties of **Flower Seeds, Vegetable Seeds, Seed Potatoes, etc.**, will be found in **SUTTON'S AMATEUR'S GUIDE IN HORTICULTURE for 1911.**

SUTTON & SONS, The King's Seedsmen, READING.

VOL. LIV.—No. 2,989. SATURDAY, FEBRUARY 11, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Royal Horticultural Society's Report,

In some respects the report that will be presented to the Fellows of the Royal Horticultural Society assembled at the annual meeting on Tuesday next bears a strong resemblance to a considerable number of similar records. It could not well be otherwise, for, as in many previous years, the Council have to record an immense amount of useful work satisfactorily accomplished, a large accession of new Fellows, and financial results that have enabled them to bring the year's work to a close with a substantial profit balance. In an early paragraph the Council refer to the lamented death of King Edward VII., who was a patron of the society, and evinced an active interest in its work, and state that they have subscribed one hundred guineas in the name of the society to the Lord Mayor's Fund for a National Memorial. Reference is also made to the death of Baron Schröder and the splendid services he rendered in connection with the provision of the Horticultural Hall, and to the fact that to perpetuate his memory the Council have established a Schröder Life Pensionship under the rules of the Royal Gardeners' Benevolent Institution. The Council have, we are pleased to learn, established a scheme of annuity pensions for members of the society's staff under which pensions are provided by equal contributions from the salaries of the officers concerned and the funds of the society, such "pensions maturing at the age of 65, or at death, if occurring before." Prominence is given to the Wisley Gardens and the work that is being carried on therein. They were, it is stated, visited by largely increased numbers of Fellows during the year; research and experimental work are being regularly carried on, and the reports on soil sterilisation and on the trial of various plants are promised on an early date. The School of Horticulture at Wisley is described as "one of the most important and beneficial branches of the work done by the society," the tuition given being now much wider in its scope than was possible before the erection of the laboratory. The several exhibitions that were held during the year are passed under review, and with reference to the autumn fruit show, regret is expressed that, with so fine a display of British-grown fruit, such a comparatively small number of Fellows should have visited the exhibition. The general public also attended in small numbers, as indicated by the fact that the sum of £17 19s. only was received for admission during the two days. This year the fruit show will be held on October 10 and 11, the first day being one of the ordinary Tuesday's meetings. Both the Temple and Holland House exhibitions were, as we have already recorded, described as unqualified successes, the number of visitors being in excess of that of any previous year. As the grounds at Holland House are no longer available for the purposes of the society's summer show, the Council have secured Olympia for the purpose, and are making strenuous endeavours to so arrange the details that the exhibition may be a complete success both horticulturally and financially. The Council have for the first time an opportunity of admitting the general public to one of the society's great summer exhibitions in the evening at a popular price; and as they have taken advantage of it, we trust they will receive an ample reward for their enterprise. The numerous awards by which the society recognise merit have been increased by the founding of a card of "Recognition of Diligent Interest in Plants." This card has been provided in response to frequent applications by school authorities for some token of encouragement of work with plants among their scholars, and is to be awarded to the boy or girl who, in the yearly competitions in plant cultivation, garden plot keeping, or Nature study has secured the first prize. This new award is of something more than passing interest, proving, as it does, that the Council, while devoting the closest attention to the advancement of the higher branches of horticulture, fully appreciate the importance of stimulating an interest in gardening among children attending elementary schools in rural districts. The annual progress, as represented by the increase in the number of Fellows, and in the income from subscriptions, is admirably shown in the usual table in the report, and cannot fail to afford satisfaction to those who appreciate the work that is being done by the society. There is no occasion to analyse the figures, as it will suffice to say that the total loss from death and resignation was 495, and that the number of Fellows and Associates elected, and the societies received into affiliation during the year was 1,503, or a net increase of 1,008. The loss of income from deaths and resignations was £687 4s. 6d., and the gain from the Fellows elected £2,292 13s. 6d., or a net increase in income of £1,605 9s. The number of Fellows in December was 12,403, and the amount received as annual subscriptions during the year £16,500. The approximate value of the investments of the society are £41,970 7s., and, in addition, there are the funds belonging to the several trusts that are administered by the society. This will probably appear an enormous sum to many horticulturists, and a few may consider that it would be better were the expenditure to more closely balance the income. The reserve is really none too large, having regard to the responsibilities of the society, and the Council and officers may be heartily congratulated on their prudence as well as the administrative ability they have shown and are showing in the management of the society's affairs.

MR. W. G. P. CLARK.

Mr. W. G. P. Clark, the hon. secretary of the Hitchin Chrysanthemum Society, is a strenuous amateur horticulturist, and, though he has a love for roses, sweet peas, and other beautiful flowers, his great hobby is chrysanthemum culture. For many years he has been a successful competitor, not only staging superb flowers, but also excellent groups. The latter he sets up at Hitchin, and has won premier award for them on several occasions. But Mr. Clark has gone farther afield, and at the National Chrysanthemum Society's great November shows he has time and again come to the front in the amateur's division. As far back as 1899 he won the prize (an oil painting of the flower, presented by Mr. J. T. Simpson) for the best bloom in the show at the Crystal Palace, with a grand example of Mrs. W. Mease. At Hitchin Mr. Clark's worth in a secretarial capacity is well understood and highly appreciated, and he carries out his duties in a very pleasant as well as businesslike manner.

R.H.S. Annual Meeting.—The annual meeting of the Royal Horticultural Society will be held at the Horticultural Hall, Vincent Square, on Tuesday next (February 14) at three o'clock. The list of nominations for election as president, vice-presidents, members of council, and officers is issued in accordance with bye-law 74; but as the number of names proposed does not exceed the vacancies to be filled, there is no need for a ballot. The nominations are as follows: As president, Sir Trevor Lawrence, Bart., K.C.V.O., V.M.H.; as treasurer, Mr. J. Gurney Fowler, J.P.; as secretary, the Rev. W. Wilks, M.A.; as members of council, Sir George Holford, K.C.V.O., C.I.E., Mr. H. B. May, V.M.H., Mr. E. A. Bowles, M.A.; as vice-presidents, the Duke of Bedford, K.G., the Right Hon. Joseph Chamberlain, the Right Hon. the Earl of Ducie, the Right Hon. Lord Rothschild, Leopold de Rothschild, Esq., C.V.O., Sir John T. Dillwyn-Llewelyn, Bart., V.M.H.; as auditor, Mr. Alfred C. Harper.

January in the North.—The exceedingly fine and abnormal weather experienced during January in the North of Scotland, writes our Aberdeen correspondent, has been the subject of not a little comment. Undoubtedly the North-East of Scotland has long been noted for the fine weather that occasionally prevails in the month of January, but, really, it would seem that the opening month of 1911 beats all records in regard to the abnormally high temperature that has prevailed. January, if not the windiest, is, as a rule, our coldest month. Our rainfall has varied in various districts from 1½ to 1¾ inches, but the average for the month during the past 40 years has been about 2in. The lowest record for this month is that of 1880, 0.26in., and the highest (1877) 4.35in. The sunshine experienced in the month under review has been greatly in excess of average, and the evening skies have shown many exquisitely beautiful sunsets and fine displays of the Aurora Borealis. It has, indeed, been a pleasant time for the dead season of the year, and should the same conditions prevail during February and March, we shall have experienced a winter of extreme mildness, but that remains in the lap of the gods.

Honour for Sir Albert Rollit. A Knight Commandership of the first class of the Order of St. Olaf has been conferred upon Sir Albert Rollit by the King of Norway, for services rendered in connection with the Norwegian Chamber of Commerce.

"Kew Bulletin."—The current issue (No. 1, 1911) of this publication has about double the usual number of pages, and is of much interest. The contents include two contributions to the flora of Siam, which occupy sixty pages, and form a substantial part of the contents. The first of these is by Dr. A. F. G. Kerr, who resides at Cheingmai, the capital of Northern Siam, and it includes a sketch of the climatic conditions that obtain, and a description of the characteristic features of the vegetation of Doi Sootep, a mountain which rises to a height of 5,500 feet, and is about two miles distant from Cheingmai. The second contribution is a list of Siamese plants, with descriptions of new species, by Mr. W. G. Craib. Hitherto the only guide to the flora of Siam was the list compiled by Dr. Williams, and published between five and six years since, and in view of the more recent collections, was regarded as incompletely representing the Siamese flora. Within the past few years large collections of plants have been received at Kew from Dr. Kerr and other collectors, and the additional materials now in the Kew Herbarium have rendered it possible for Mr. Craib to prepare a comprehensive list, which includes a considerable number of species not previously described. This list will, it is hoped, be completed during the current year, and is to be regarded as supplementary to that published by Dr. Williams.

Proposed National Daffodil Society.—In connection with the proposal to form a National Daffodil Society, Mr. W. B. Cranfield, Enfield Chase, has convened a meeting of amateur and professional daffodil growers for Tuesday, February 14. The meeting will be held in No. 3 Committee Room at the Royal Horticultural Hall immediately after the annual general meeting of the R.H.S.

National Sweet Pea Society. We are informed that the Sweet Pea "Annual" and the Schedule of Prizes for 1911 will be sent to all members of the N.S.P.S. at the end of the present week. Since the annual general meeting no fewer than 63 new members have joined the society, and several additional local societies have become affiliated. A goodly number of sweet peas have been sent to Guildford by raisers at home and abroad, consequently the society's trials promise to be as interesting as in any previous year. For particulars of membership and affiliation our readers are referred to the hon. secretary, Mr. C. H. Curtis, Adelaide Road, Brentford.

British Gardeners' Association. Mr. J. Weathers, the general secretary, informs us that an important meeting of gardeners will be held at the Cobden Café, Corporation Street, Birmingham, on Saturday, February 18, 1911, at 7.30 p.m., to reorganise the local branch of the British Gardeners' Association. Since the meeting on January 21, a large number of gardeners in the Birmingham district have joined the association, and the branch now promises to be one of the strongest and most enthusiastic in the country, rivalling London, Blackburn, Leeds, etc. The local secretary is Mr. J. D. Jones, 8, Acacia Road, Bournville, Birmingham, from whom forms and all particulars may be obtained.

Visitors to Kew in 1910.—According to the Kew "Bulletin" 3,546,302 visitors to the Royal Botanic Gardens were recorded during the year 1910. These figures show an increase of 186,081 over those of the previous year, and are the largest numbers on record. During the ten years 1900-1909, 20,023,749 persons have visited the gardens, giving an average of 2,002,374. The total number of visitors on Sundays during 1910 was 1,614,085, and on week days 1,932,217. Sunday visitors have increased by the large number of 229,716, while the number of visitors on week days show a decrease of 43,635 from the figures of the previous year, in spite of the fact that there were five Bank Holidays, when as many as 424,010 persons visited the gardens, as against 242,372 persons on the four Bank Holidays in 1909. The largest attendance on any one day was 152,454 on Whit Monday, May 16, being nearly 40,000 in excess of the highest number previously recorded for a single day. The smallest number on any one day was 290 on November 3. The largest Sunday attendance was 91,058 on May 15, and the smallest 251. The former figures are about 20,000 in excess of those recorded for last year.

Barnsley Chrysanthemum Society held its annual meeting a few days since, and, according to the balance-sheet presented, the receipts, including the balance from the previous year amounted to £235 10s. 10d. and the expenditure to £171 0s. 4d., leaving a balance of £64 10s. 6d. This balance showed a falling off of £24 in the receipts as compared with 1909, both subscriptions and the amount taken at the doors being less.

Women and Horticultural Teaching.—Miss Lilian Hamilton, the Warden of the Studley Castle Horticultural College, complains of the difficulty experienced in obtaining highly educated women as heads of departments. She states that in common with others in similar positions she is compelled, at present, to employ men gardeners as teachers, but for various reasons the work could be more appropriately undertaken by women. Miss Hamilton therefore expresses the hope that a larger proportion of the women who wish to follow a career of usefulness, or who find it necessary to earn a living, will qualify to fill posts carrying with them salaries of £300 a year, and perhaps, in future, even more.

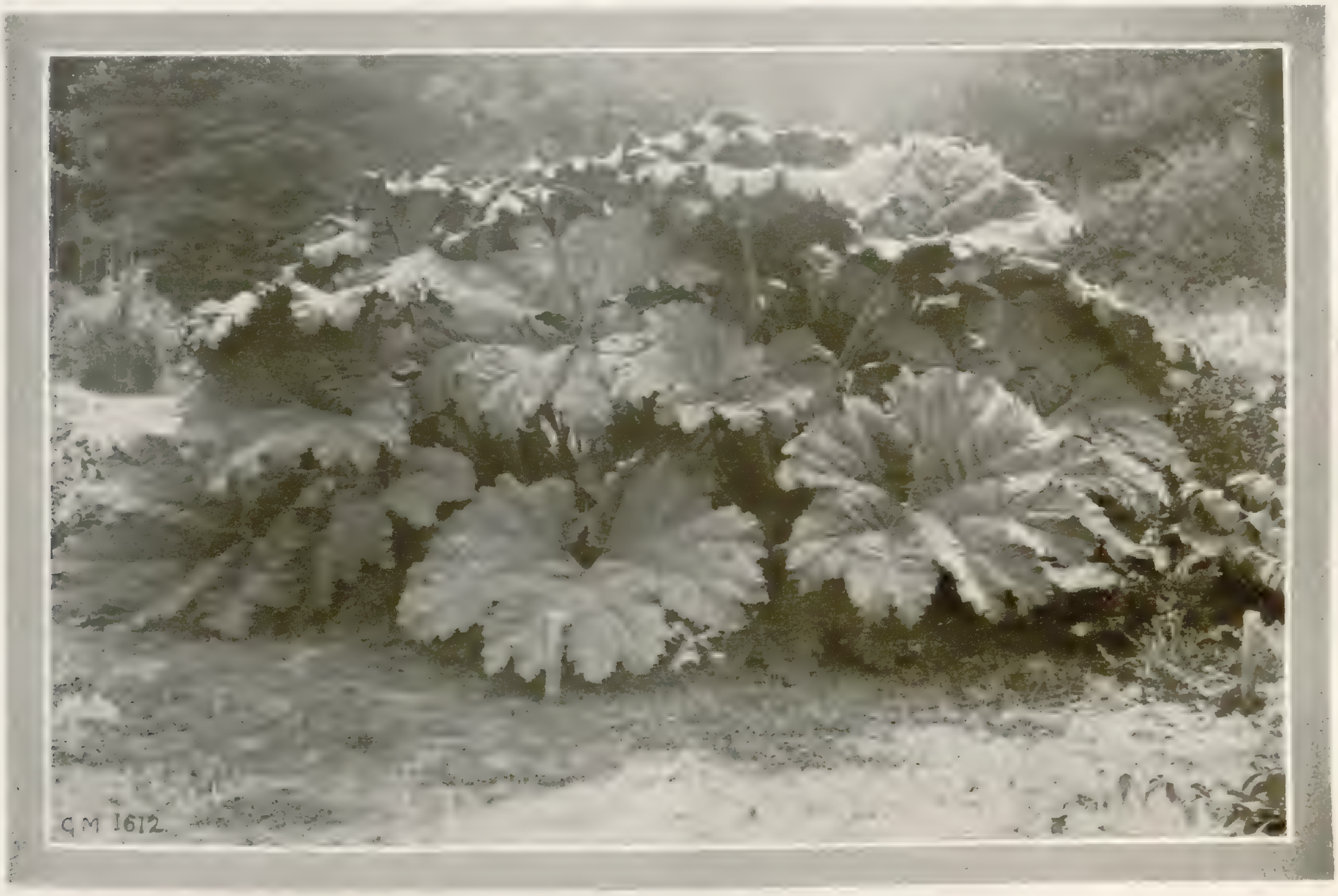
A Northern Carnation Conference will be held in the Imperial Hotel, Manchester, on Saturday, February 18, when the following papers will be read and discussed: "The Florists' Ideal Carnation" and "The Amateur Status." The meeting will be held under the auspices of the Northern Section of the National Carnation and Picotee Society.

Wisley School of Horticulture.—During the past year thirty-eight young men, between the ages of 17 and 22, attended the Royal Horticultural Society's School of Horticulture, and of these eleven were successful in gaining the society's diploma. With the exception of one all have gone into some business or work connected with horticulture or forestry. Some have entered private gardens, others nurseries, others are taking up fruit growing on their own account, either at home or in the Colonies, and so on. The course, which extends over two years, includes a training in the elementary principles of scientific horticulture, and in their practical application to all branches of gardening work. About eleven hours a week are spent in studying scientific principles, and twenty-nine in practical garden work, every student being required to take a share in the ordinary work of the garden. The school terms begin on the last Monday in March and the last Monday in September, and only at these times can new students be admitted. For the two years course an admission fee of five guineas is paid, students boarding and lodging at their own expense. Particulars of the course, with intimation as to when vacancies are likely to occur, may be obtained from the Secretary, Royal Horticultural Society, Vincent Square, S.W.

New Master of the Fruiterers' Company. — We learn that Colonel Vickers Dunfee has been elected Master of the Fruiterers' Company for the present year.

Great Summer Show at Olympia. — The grounds at Holland House, Kensington, being unavailable for an exhibition this year, the Council of the Royal Horticultural Society have secured the great hall at Olympia, Addison Road, Kensington, for July 4, 5, and 6. In this show's arrangements will be manifested the society's latest endeavours to broaden its influence, as the show is to remain open until ten p.m. on the first two evenings (July 4 and 5) at the popular price of admission, 1s., the first time evening shows have been held. So a very large proportion of the friends of the society and public, who cannot attend during the afternoon, will be able to see the flowers and plants, and note favourites to be afterwards purchased and grown in their own gardens. Olympia is an excellent place for such a show, with its glass roof admitting full daylight, and securing dryness underfoot, and having a breadth permitting broad gangways. The hall will be surrounded with a sloping bank of floral groups rising to a height of 15ft. to 20ft. In this hall table exhibits will be placed, including an avenue of orchids, while at the west end rock and water gardens will be surrounded by rose gardens. Several valuable cups are offered, including one of fifty guineas in commemoration of the Coronation of His Imperial Majesty King George V. We have the assurance that the Council are putting forth every effort to make this show an unprecedented success, and a source of gratification to Fellows and friends of the society. The exhibition is receiving the very welcome consideration of the railway companies with regard to special facilities for visitors from a distance; and so it is hoped that it will be made possible for a large number of visitors from the provinces to pay a visit.

South African Boxwood.—At the meeting of the Royal Society, held on the 19th ult., a paper was read on "The Pharmacological Action of the South African Boxwood (Gonioma Kamassi)." The wood of this species of gonioma has been employed occasionally in Lancashire as a substitute for common boxwood in the manufacture of shuttles; it is stated that symptoms of poisoning have occurred in a small proportion of the men engaged in sawing this wood or finishing the chiselled shuttles. From the wood an alkaloid can be obtained to about 0.07 per cent. This has a very characteristic physiological action, which places it in the curare group of drugs. The members of this group may be regarded as possessing three actions in common: (1) Paraylsis of certain nerve cells; (2) increase of spinal and medullary reflexes; (3) paralysis of motor nerve endings. Boxwood exerts all these effects. It paralyses the nerve cells in the brain and medulla, as well as those on the course of the vagus and sympathetic nerves, and therefore after its exhibition to animals the stimulant action of nicotine cannot be obtained. In small doses the reflexes are increased, and if an injection be made into a vein going to the spinal cord of an animal, strychnine-like convulsions are produced. Boxwood causes death by paralysing the respiration; this is central in origin, but it occurs at a time when the phrenics and intercostals are depressed, though not paralysed. It has no direct action on the heart, or on other form of muscle. Reasons were given for believing that the recorded cases of poisoning are not due to the specific action of the drug after absorption, but to its effect in facilitating certain local reflexes, principally of a respiratory nature.



GUNNERA MANICATA.

A fine specimen of this noble plant in the wild garden at Talygarn, 10ft. 6in. high, and 68ft. in circumference.

GUNNERA MANICATA.

I send you herewith a photograph of Gunnera manicata growing in a very cold position in the wild garden at Talygarn. The plants shown were treated liberally as regards food material. A deep, wide hole was made, and the inert clay removed was piled up around the edge of the hole. Several loads of farmyard manure and old potting soil were wheeled in and mounded up, and on this mound three plants of Gunnera manicata were placed in the spring of 1906. Each plant was previously in a 7in. pot. A good watering followed planting. It must be noted that the site is in the wild garden, high up above the lake.

During each winter a heavy dressing of farmyard manure is placed over the roots, and the large conical crowns are covered with some light strawy material, which is kept in position by means of long pegs. As the new growth pushes up in the springtime this covering is released to allow the new leafage to expand, and when all danger from frost is over the protecting material is removed altogether and the heavy manure is rearranged over the rooting area.

Gunnera manicata is a magnificent plant, and far superior, in my opinion, to Gunnera scabra, and quite as hardy. Its mammoth leaves often measure 9ft. across in warm districts, and are borne on thick, rough stalks. A fine specimen produces a distinctly sub-tropical effect, and yet Nicholson tells us that G. manicata is "a majestic plant from the cold and freezing regions known in Southern Brazil under the name of Campos des Lages."

The dimensions of the group represented in the photograph are: Circumference, 68ft.; height, 10ft. 6in.; largest leaf, 7ft. 9in. across. J. E. Davies.

BARE GARDENS IN WINTER.

"I, singularly moved
To love the lovely that are not beloved,
Of all the seasons most
Love Winter. . . . . .
. . . .
Nor is in field or garden anything
But, daily looked into, contains serene
The substance of things hoped for, in the Spring,
And evidence of Summer not yet seen."
—Coventry Patmore.

Most real garden lovers are, or should be, Nature lovers also, and when we look at the country in midwinter, whether it is from the train, the motor, or the more enjoyable footpath through field and wood, we do not find it a desert, but, on the contrary, still full of beauty and interest. We can see into the heart of the woods, and view the mystery and the beauty which the summer foliage concealed—the carpet of rich brown leaves, the varied forms and colours of the tree trunks, and the bracken, still stately, and showing its graceful outlines even more than in the summer—while the banks and waste places are covered with the dry growth of the past season's vegetation, and the hedges are red with berries, and show up the rich and varied colours of the dogwood, spindle-tree, hazel, etc., with festoons of travellers' joy, honeysuckle, and nightshade over all.

But in our gardens, in the less favoured parts of the country, which perhaps constitute seven-eighths of it, what do we see? Every leaf and stick cleared away, roses, clematis, and honeysuckle, if not cut back, at least tied in neatly, with beds and borders presenting a sodden mass, not unlike huge mud piles—a generally depressing sight, of which we may see the most hideous examples in some of the most expensively kept public gardens in London, and our great cities generally. It is not the large private gardens so much as the small ones that one has in mind, the former having availed themselves more fully in recent years of the wealth of exotic shrubs, with their beauty of stem, leaf, and berry, and the gardeners are only too glad to get good breadths of ground so occupied.

But with regard to the small gardens, up to half an acre, let us say, the first and most obvious remedy is the planting of trees and shrubs, berried or otherwise, which are specially attractive, some way or other, during the winter, such as the snowberry, Cratægus Lelandi, barberries of sorts, cotoneasters, hollies, wild and other roses (sempervirens, lucida, etc.), cardinal willow, and shrubby veronicas, to mention only a few of the most popularly known. Even winter-flowering shrubs may be planted, as the witch hazels, winter sweet (on a sheltered wall), Garrya elliptica (where hardy), laurustinus, yellow jasmine, and, very early in the year indeed, Daphne mezereum and Cydonia japonica. Nothing looks better than the yellow jasmine throwing out its thin flower-covered stems from a tree stump, arch, or wall, covered with some of the small-leaved ivies.

There is always the problem of space to be considered, and the objection to sacrificing summer effect for winter, which latter we may minimise in two ways, partly by growing small shrubs only—either small-growing kinds, or larger sorts kept small by judicious pruning, and eventual replacing, and partly by using larger ones as supports for climbers in the summer, such as clematis, rambling roses, eccremocarpus, Tropæolum speciosum (where it succeeds), T. canariensis, and other annual creepers. Forsythia suspensa looks even finer in the spring than Jasminum nudiflorum in the winter, when grown in conjunction with ivy. Cherry, aucuba, and Portugal laurels are not recommended unless space is plentiful, and only then if they can be given their freedom of growth, though it must be admitted that small, freely-grown specimens have a fresh appearance in a moderately open winter.

Then there is the planting of evergreen plants to relieve the bareness of the ground. They are legion, and we have only to begin with iris, rose of Sharon, hart's-tongues and polypody ferns, wallflowers, Jacob's ladder, candytuft, saxifrages, and shrubby subjects like rosemary and lavender, to realise the range of selection. Summer beds, too, whether planted with bulbs or not, should be carpeted with green plants, such as violas, primulas, double arabis, alyssum, myosotis, silene, Limnanthes Douglasi, etc., if only for the winter effect. There are flowering plants, too, for this season, more than is generally recognised, and we might mention Algerian iris (in a dry place in front of a sunny wall), snowdrops, and winter aconite (a pretty combination), Christmas and Lenten roses, winter-flowering wallflowers, winter heliotrope, with hepaticas and primroses very early.

And, lastly, there is one way in which we can relieve the winter desolation of even the smallest garden, and that without expense or sacrifice of summer effect, namely, by leaving the stems of some of the summer plants well into the winter. Judgment must be exercised in this matter or the latter state will be worse than the first; some plants, if left untouched through the winter, only intensifying the dreary aspect of the garden. For instance, a bed of tall phloxes look simply ragged after November is out—they may be left till then—the leaves turning black and the stems a dirty white; but a well-grown clump of Gypsophila paniculata looks scarcely less effective at a little distance than it does in the summer, while a good break of Michaelmas daisies looks like a miniature copse, the stems taking on a nice brown colour, and retaining some of their leaves a good way into the winter. With some subjects the seed pods (as honesty, love-in-a-mist, linums, and poppies) and dead flowers (as Michaelmas daisies and annual chrysanthemums), make it worth while to defer tidying up for the winter. All grasses, too, are specially good. Those who have not tried it will be surprised at the variety of browns, yellows, and greys which may be obtained, and with many herbaceous plants with woody stems there is no need to cut them till the new growths begin to appear in March. On the other hand, nothing looks more deplorable than geraniums, balsams, and bedding plants generally, left out of doors for the winter.

One or two remarks of a general character must close these notes. We should try to make the garden, not only less desolate to look at from the house, but more pleasant to saunter in when the weather is fairly genial during the winter. We too often become strangers to our gardens for four or five months, and thereby lose a good deal of their interest, for if well managed they always have something to show to the sympathetic observer, and their attractiveness during the summer is by no means lessened by an acquaintance with them during the time when mere townsmen think them no more interesting than a bare ploughed field. And it is not with the eye of sense only that we may look. Listen to Coventry Patmore again:

"It is not death, but plenitude of peace;
And the dim cloud that does the world enfold
Hath less the characters of dark and cold
Than warmth and light asleep.
And correspondent breathing seems to keep
With the infant harvest, breathing soft below
Its eider coverlet of snow."

One thing necessary to the enjoyment of the garden, or that part of it which is more especially intended for winter use, is a good dry path, preferably with stone paving down the centre, making a stroll in the garden pleasant when otherwise it would be scarcely worth attempting. Another feature which, if not a necessity, is at least a desideratum, is a good natural shelter from the north and east winds, either in the form of trees, groups of evergreen shrubs, or a hedge of yew or holly. Not only does such a shelter, combined with a good surface for the feet, make a retreat where one may linger outdoors, or even sit, at times, in every month of the year but winter flowers may be so encouraged, and early spring flowers so much accelerated, that the gap between the seasons will be very much lessened, so that, before we have quite lost sight of the last chrysanthemums in the open, winter aconites and snowdrops will be already appearing. The use of such a corner will not be confined to the winter months, for recent years have shown, or reminded, us that we need not be above seeking the warmest part of the garden even in July and August.

Alger Petts.

APPLE LANE'S PRINCE ALBERT.

I was glad to see that Mr. Molyneux strongly recommended this apple. In his recommendation he rightly pointed out the few faults, or drawbacks, that this variety possesses, as any inexperienced cultivator might be induced to do away with young trees because of their stunted growth. I agree with your esteemed correspondent when he says the small grower should always include this variety; and I would add, so should the large grower and that on a large scale. When I first planted young trees I was pleased to see them fruiting so early and so heavily, and then was alarmed a little at their stunted growth; but it was my own fault for allowing so many fruits to mature on them. It was similar to the working of a young horse before he had gained sufficient strength to withstand the strain. The overcropped young tree required several years' careful treatment before it had regained its normal condition. When I again planted young trees of this variety, care was taken that they were cropped very lightly at first, and a decided gain was the result. I fed the trees with copious supplies of liquid manure, and so induced a freer growth, but even then very little pruning was necessary. A top-dressing of soot and a little sulphate of iron, put on in March, intensified the colour of the fruits.

Geo. Garner.

Araucaria excelsa from Cuttings.—That young plants of Araucaria excelsa form very pretty subjects for the greenhouse, while they also do well when treated as room plants, is a fact now generally recognised. Owing to the demand for small plants great numbers of seedlings are sent to this country, and are disposed of at a comparatively cheap rate. These seedlings, even if potted deeply, are always more or less bare at the base, and cannot, for decorative purposes in a small state, be compared with those raised from cuttings. For this purpose, the side shoots, even though they will strike, are useless, as they never form symmetrical plants. Suitable cuttings are obtained by cutting back old plants which will then push up two or three leaders from the top, and it is these leaders, when large enough, which form the best of cuttings.—W. T.

CANARY GUANO

"THE BEST IN THE WORLD."

There is no Fertilizer that gives such good all round results as CANARY GUANO. It is used in the King's Gardens, and by leading Amateurs and Trade Growers all over the Country. A post card to the Manufacturers will ensure full particulars.

SOLD IN BAGS AND TINS BY SEEDSMEN, NURSERYMEN, ETC.

Manufactured — by — **THE CHEMICAL UNION, LTD, IPSWICH.**

Do you wish to grow

BIG ONIONS?

THEN YOU MUST HAVE

CRANSTON'S EXCELSIOR

— or AILSA CRAIG —

quite a waste of time to grow anything else. They are synonymous, although you may not believe it, and perhaps you fancy one name more than another. One thing, however, is certain; that I hold the best-selected stock of seed in the world. Guaranteed new, pure, and grown by the raiser. The original and proper name is "Cranston's Excelsior."

SEED—per packet, **1/-**
3 packets, **2/6** 12 packets, **9/-**

JOHN WILSON,
SEED MERCHANT,
HEREFORD.

ORCHIDS.

Amateurs interested in Orchids should write for our

Amateur's Guide,

2nd Edition, free.

Giving Treatment, Soils. Description of Flowers; Illustrated.

MANSELL & HATCHER, Ltd.,
Rawdon, Yorkshire.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

BUNYARD'S FRUIT TREES

The Best Quality and Largest Selection at Moderate Prices.

WRITE FOR CATALOGUE.

GEO. BUNYARD
& CO., LTD.,
Royal Nurseries,
MAIDSTONE.

CHEALS'

113 Acres of Ornamental

Trees & Shrubs

Of all kinds.

Fruit Trees

Hardy, Healthy, and true to name.

Roses & Hardy Plants

Descriptive Catalogues Free.

J. CHEAL & SONS,
NURSERYMEN AND LANDSCAPE GARDENERS,
Crawley, Sussex.

ANT ROOZEN & SON'S SEEDS, BULBS, AND PLANTS

For Spring, 1911.

All of the Finest Quality.

THE CATALOGUE of above is NOW READY, and will be sent, post free, on application to their Offices at . . .

OVERVEEN, HAARLEM, HOLLAND;

Or to their General Agents,

MERTENS and CO.,
3, Cross Lane, LONDON, E.C.

FRUIT TREES

We have 50 acres of young Fruit Trees in perfect condition to offer this season. Our **Specialities** are Cordons, Bushes, and Pyramids, and Trained Trees worked on selected **Fruiting Stocks.**

Fully Illustrated Catalogue Post Free.

W. SEABROOK & SONS,
The Nurseries, CHELMSFORD.

AMERICAN and BRITISH TREE CARNATION.—Leading varieties from 3s. per doz.; 17s. 6d. per 100; carriage and packing free for cash. Ask ill. price list. C. F. A. VAN DER SLUYS, F.R.H.S., Ramee, Guernsey.

BLACKMORE & LANGDON'S

One of our Double Begonias grown and photographed without a stake to plant or bloom.

BEGONIAS

IN HIGHEST QUALITY FOR EXHIBITION, CONSERVATORY, AND BEDDING OUT.

AWARDED 24 GOLD MEDALS, 12 SILVER CUPS.

SEED IN SEALED PACKETS.

Double, 2/6 and 5/-; Single, 1/-, 2/6 and 5/-; Single also in separate colours. Also frilled and crested Single 1/-, 2/6 and 5/-.

GRAND LARGE TUBERS, TO COLOUR.

Double, 4/-, 12/6, 21/- and 30/- per doz. Single 3/-, 8/-, 15/- and 21/- per doz
Mixed Doubles, 3/- per doz., 21/- per 100.
Semi-Doubles (cheapest bedders), 10/- per 100.
Mixed Singles, 2/6 per doz., 15/- per 100.

Extra Frilled Single Begonias, A.M., R.H.S., 1908. 4/-, 8/- and 21/- per doz. Mixed 2/6 per doz.

CYCLAMEN, DELPHINIUMS, BLUE PRIMROSES, ETC.

American Winter-Flowering and Border CARNATIONS.

1 doz. choice named Border Carnations, 5/- and 7/6. A Grand Collection of all Sections. Our New Illustrated Catalogue, with Cultural Instructions, post free. Special offer of one dozen of Perpetual Flowering Carnations, established in pots, in 12 choice varieties, for 6/-.

TWERTON HILL NURSERY, BATH.

CARNATIONS, PINKS, AURICULAS.

DOUGLAS for the best old and new varieties in all classes, and the finest quality in the world. Malmaison Carnations, new and old, **7/6** per dozen. Border, **6/-** to **12/-** per dozen. Tree, American, and English, **7/6** to **15/-** per dozen. Auriculas, Show, **21/-** to **30/-** per dozen. Alpine Auriculas, **9/-** to **21/-** per dozen. Carnation, Auricula, Pink, and Polyanthus seed, **1/6** and **2/6** per packet. **CATALOGUE FREE.**

J. DOUGLAS, Bookham, LEATHERHEAD.

RIVERS'

Fruit Trees, Roses,
Vines, Figs, Oranges,
AND
Orchard House Trees.

A LARGE AND SELECT STOCK ALWAYS ON VIEW.

Illustrated & Descriptive Catalogue
POST FREE 3d.

THOMAS RIVERS & SON
Sawbridgeworth, Herts.
Station: HARLOW. G.E.R.

ORCHIDS, ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.

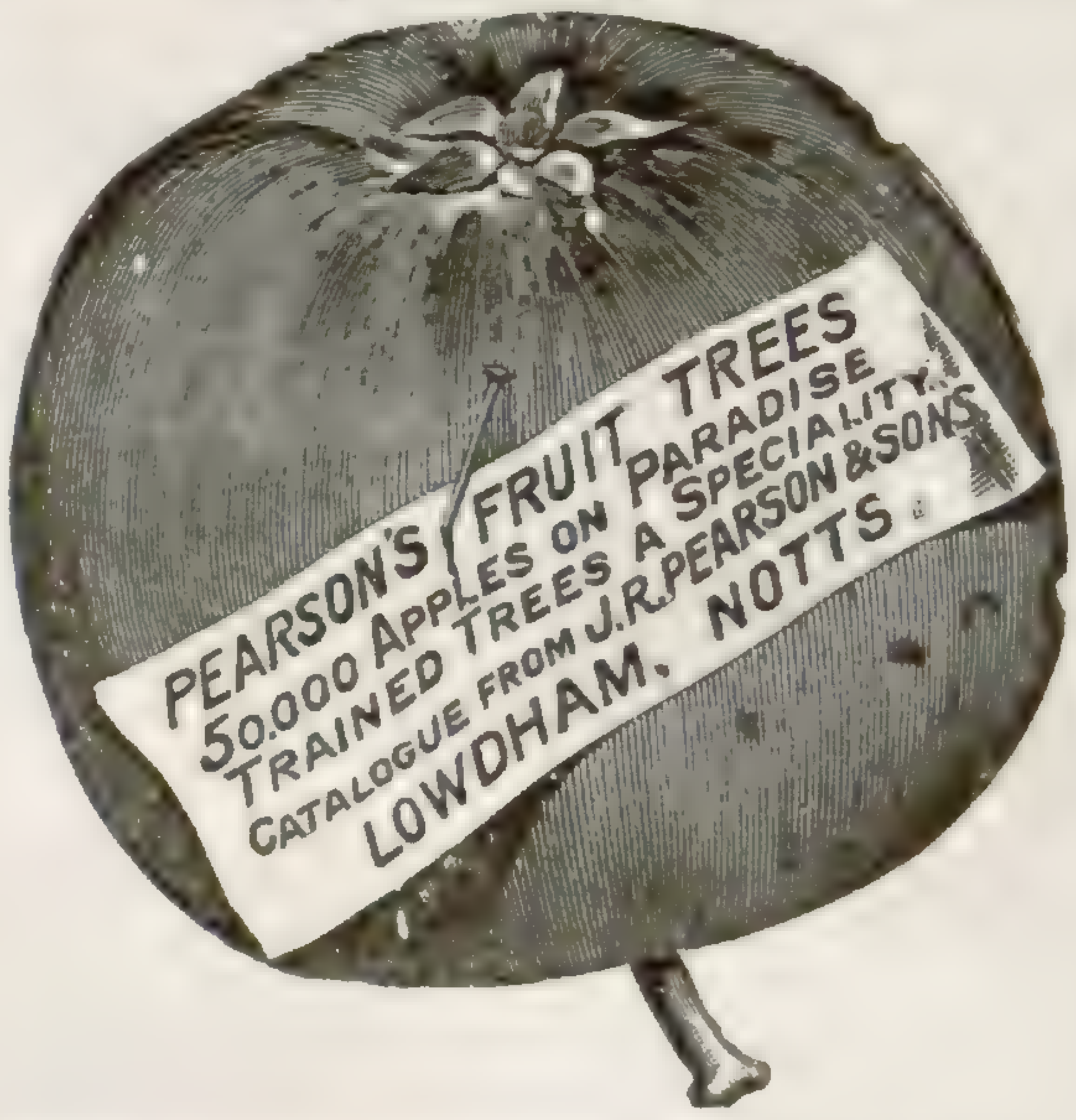
STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

Please Write for List.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.

H. BURNETT,
Carnation Specialist, Guernsey.


PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY
CATALOGUE FROM J. R. PEARSON & SONS
LOWDHAM, NOTTS.

THE MOST UNIQUE

SWEET PEA LIST

In the World
IS NOW READY.
PLEASE SEND POSTCARD FOR SAME.

My ANGLO-AMERICAN COLLECTION, 5/-

15 Varieties (including Roosevelt, Nightingale, Perkin, Mrs. H. Dickson, Sunpt. Crimson) is the best value in the Sweet Pea world. Will make a very appreciative present. My stocks are the truest humanity can produce! My aim is to oblige!

G. H. MACKERETH,
The Sweet Pea Clearing House,
ULVERSTON.

Note my special offer of Mr. W. P. Wright's most interesting Sweet Pea Note Book.

PLEASE MENTION
THE GARDENERS' MAGAZINE
when writing to Advertisers.

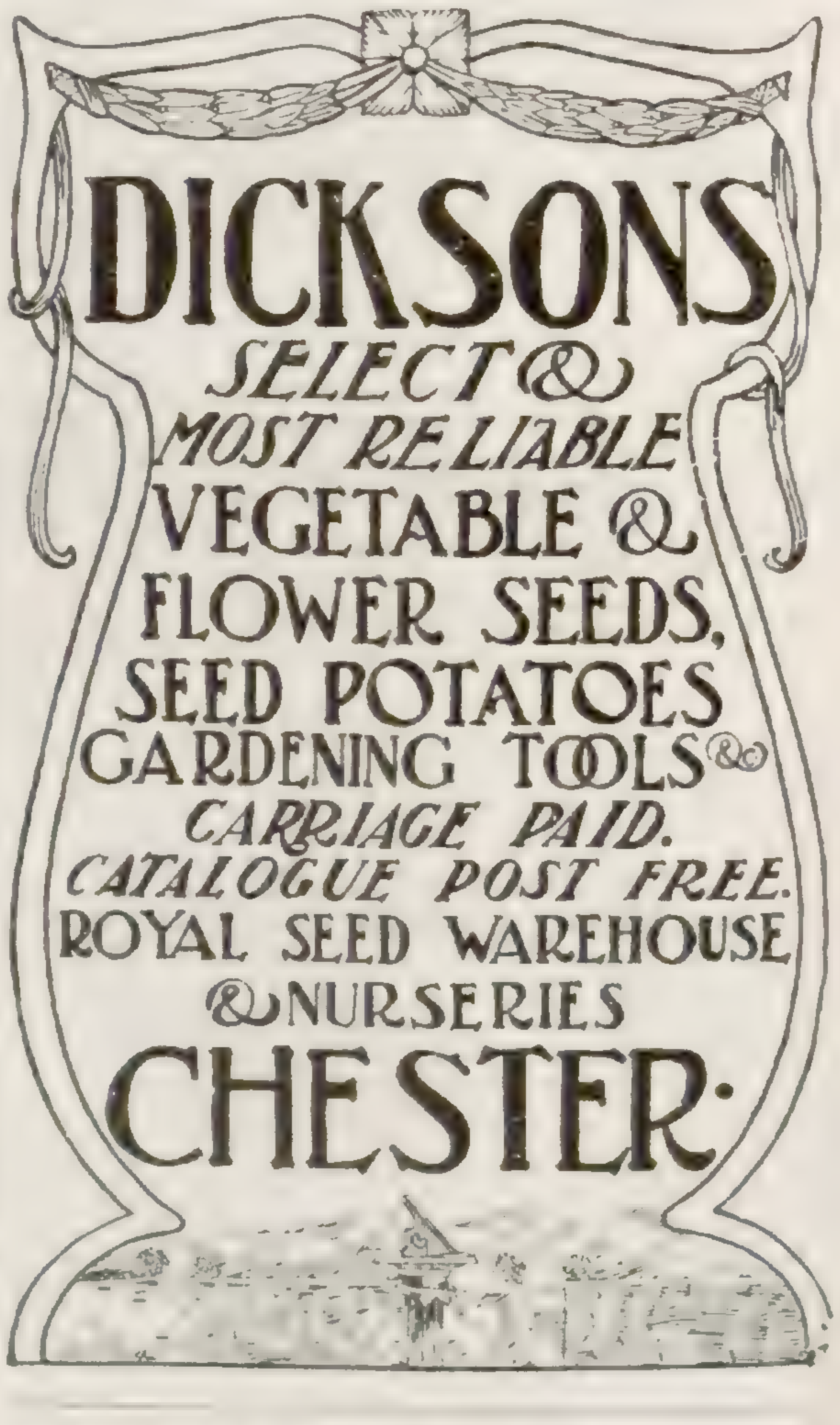
Burpee's

The Leading American Seed Catalog for 1911

"THE SILENT SALESMAN" of the World's Largest Mail-Order Seed Trade tells the *plain truth* about the Best Seeds that can be grown—as proved at our famous FORDHOOK FARMS—the largest Trial Grounds in America. Handsomely bound with covers lithographed in nine colours it shows, with the six coloured plates, Seventeen Choicest Vegetables and most Beautiful New Flowers.

It is a SAFE GUIDE to success in the garden, and should be consulted by every one who plants seeds. It is mailed FREE to all who appreciate QUALITY IN SEEDS. Shall we mail YOU a copy? If so, kindly *name this magazine* and write TO-DAY!

W. Atlee Burpee & Co.
Burpee Buildings, Philadelphia



NEW GARDEN PEA FOR 1911.

MASSEY'S RELIANCE, per packet 1s. post free.

Mr. W. A. Cook, Head Gardener to Sir E. G. Loder, Bart., writes: "I am very pleased to inform you it proved a great success, especially as it was such a cold wet time for early peas. Sown on the same day as several other varieties, it was not one day behind, and is equal in bulk to anything I have ever grown. Haulm about three feet, with especially long pods for so early a Pea."

GEO. MASSEY & SONS, Seedsmen, SPALDING.

EARLY FLOWERING SAXIFRAGAS.

Of early flowering rock-plants none are more generous in their floral harvest than the diminutive saxifragas that bloom in the opening months of the year. Their unquestioned hardiness, freedom of growth, and precocity are forcible arguments that readily appeal to cultivators, while their extreme type of beauty wins for them a place in public favour. They belong to a group that embraces the most select members of this genus, and the Kabschia group of saxifragas will ever claim the attention of those who appreciate beauty in hardy plants. In the early-flowering section the general character of the plants is to form spreading carpets of dense spring growth, differing to some considerable extent in colour, but always evergreen, and even when out of flower each species or variety forms a welcome addition to the rock garden, by reason of the manner in which it clothes the ground.

SAXIFRAGA BURSERIANA.
Dwarf in growth and early in flowering; the blossoms pure white.

In order to realise the great beauty of these early rockfoils it is advisable to plant several together, so that eventually they will meet and form a continuous mass. With kinds like S. Sancta and S. apiculata growth is comparatively fast, and this end is soon secured, but with S. Burseriana and its forms, some years must elapse before this ideal can be attained; its consummation is, however, worthy of strenuous effort on the part of every ardent cultivator. The cultural requirements of the Kabschia saxifragas are not difficult to comply with, so far as soil is concerned, as they succeed in any rich, cool loam, preferably in that containing a good deal of lime, as, with few exceptions, they are limestone plants, and provided the soil is of this quality, they stand abundance of sun, but it is imperative that it should not dry out in summer, and of equal importance is the absence of anything approaching stagnation in winter.

When planting the Kabschia rockfoils it is well to recognise that they succeed best if firmly planted in soil containing an abundance of stone chips with which they can be tightly wedged. In subsequent years the vigour of the plants is readily maintained by top-dressing with finely-sifted soil worked into the masses in autumn, or in spring after the flowers fade.

The most famous of the early saxifragas is S. Burseriana, a species native of Eastern Europe, and introduced to gardens about the year 1826. It is a variable species, though always within well-defined limits. The type forms a low, rounded cushion of tightly-packed stems, only an inch high; the leaves are needle-like, grey-green in colour, and surround the stems after the manner of juniper growths, to which they have a striking resemblance. The flower-buds appear in January and begin to elongate towards the end of the month, being in flower during February, early or late, according to season or locality. The buds are a charming shade of red, a colour that is also present in the stems, and adds to the effect of the group when the big white flowers are unfolded. The form named Major is larger in its parts than the type, and a few days earlier to flower; in the variety Gloria the pure white petals are waved in a very dainty manner.

Saxifraga apiculata is one of the commonest of this section, and also one of the most effective of garden plants, producing lemon-yellow flowers on three-inch stems in clustered heads. The foliage is a rich shade of deep bronze-green, a shade or two lighter in colour than S. Sancta. The last-named species with S. juniperiana is not so conspicuous in flower as the former, giving darker shades of yellow; both are healthy growers, and soon form dense mats of leafage.

Saxifraga Boydi is a variety of garden origin and comparatively rare owing to its slow growth; the flowers are lemon-yellow, on short stems that rise from close-set mounds of spiny leaves. S. Boydi alba is a stronger form that increases freely, and has pure white flowers.

Saxifraga Elizabethæ has the characteristic grey-green needle-like leaves of this group, and its flowers are a rich shade of yellow; it grows freely, and soon makes a good clump. S. Salomoni is a garden form with white flowers, resembling S. Burseriana, but taller and generally with twin flowers to a stem, whereas the latter invariably produces one flower on each stem.

The Kabschia saxifragas that grow in spiny tufts all flower early in spring, generally from the end of January until the beginning of April.

Thomas Smith.

Begonia polyantha.—This Mexican begonia is not much grown, yet it is very useful for flowering during the winter months. It has a free, bushy habit of growth, being plentifully furnished with neat green leaves, and it keeps up a succession of deep pink flowers for a long time. It is true the blossoms are less showy than those of some of the other winter-flowering kinds, but they are bright and cheerful, and the continuous display is greatly in favour of this begonia as a decorative plant. Added to this, it is of very easy culture. —W. T.

PESSIMISM AND BIG BUD.

A Rejoinder.

I have only just seen Messrs. Pearson's letter concerning my remarks on "big bud," otherwise I should have dealt with it before.

In the first place, I would respectfully suggest that the writers of that letter have never seen "big bud" at its worst, as fruit growers see it, particularly here in Kent and Essex, otherwise they would not talk so glibly about it being dealt with "as easily as aphis." It is one thing to deal with a few isolated buds on trees in nursery quarters, where the question of damage to fruit does not arise, and quite another to cope with it on big trees, where hundreds of buds are affected. At the same time, if I am "out of date," at least I am "behind" in good company, since Professor Theobald, of Wye College, one of the greatest scientists in this country, in his book, "Insect Pests of Fruit," published not six years ago, but in 1909, says, p. 244: "Nothing further need be said on this subject; all other methods, such as fumigation, spraying, and greasing the bushes (a thoroughly unpractical method) are of little or no value. The grower must rely on hand picking, the growing of strong varieties, grubbing, and replanting with clean stock when the plantation is so badly infested that it becomes unproductive." Perhaps I may suggest that Messrs. Pearson send Professor Theobald one of their catalogues containing the information which they quote.

May I briefly review the history of the attack, so far as we personally are concerned:

Some fifteen years ago now we had our first sight of it in our own plantations. One tree amongst some Carter's Champion, bought in from a nursery, showing it so plainly that we recognised it. I personally cut down this tree to the ground most carefully, and immediately carried the boughs out to the headland and burnt them.

This did not avail however, for the next year others around the first were affected, till the attack spread to the whole plantation. We were told at that time that nothing could be done for it save hand picking the first affected buds until the disease became too bad, necessitating our pulling the bushes out. Various varieties were declared to be immune, but after a year or two most of them succumbed, and hope did not seem possible in that direction.

Then the cyaniding process of fumigation came to the front, and was emphatically declared as a remedy for big bud, but after a few months was equally emphatically pronounced a failure. So again we were disappointed, though we doubted the possibility of employing cyanide commercially owing to the great cost of material and labour. We read all the literature we could lay our hands on concerning the disease, but to no purpose.

I remember attending a lecture in the old Drill Hall, at Westminster, on "Insect Blights and Blessings," which, I recollect, did not strike me as being very practical at the time, though now, as I read it, I realise its value. Mr. Enoch spoke then of a parasite of the already minute gall mite (1-400 of an inch long the latter is), which might perhaps be bred in sufficient numbers in captivity to become a help in dealing with the attack. The present Director of the Wisley Laboratory was then at the Essex County Council Laboratory, at Chelmsford, and, I fear, was much worried by us to find us a practical cure for "big bud." At length he told us he had heard that dipping the trees in a solution of sulphur and soft soap had been spoken of as efficacious. We made this bath by thoroughly kneading soft soap and sulphur into lumps about the size of a cricket ball, and then dissolving them by boiling in a copper. Into this mixture we dipped the young trees from the nursery beds when we were planting out, roots and all. At first it seemed to work well, but later on the big bud appeared, though whether from original attack or after infection I cannot say.

Some five years ago, in the middle of the summer, there appeared, with a great flourish of trumpets, in a trade paper, this wonderful remedy which Messrs. Pearson quote, viz., lime and sulphur. I recollect that it was too late for use that year, but most fruit growers made a mental resolve to try it the next year. We ourselves tried it, making our own preparation, and slaking our lime, and though we did no damage, we could see but little good result. Throughout that season conflicting reports came in from growers, some ascribing to the system all the virtues, and some speaking of nothing but failure.

The following year we purchased the preparation ready-made from a chemical firm of good repute, and applied it at the suggested time, but, unfortunately, absolutely burnt the crop up, all the berries falling off as if frosted. The following year we again mixed the materials ourselves, again slaking the lime, and with nearly as direful results, as far as the crop was concerned, so that we decided it was preferable to have a few currants and big bud rather than no currants at all.

This happened with slaked lime, so what the effect of the burning is with caustic lime applied when the bushes are moist, to make it adhere, I can but dimly imagine.

Herein, it seems to me, lies the point which I alluded to above; in a nursery no question of burned blossoms arises, and if there is a scorched leaf or two it does not matter, but with a fruit grower, whose business it is to get fruit, the case becomes much more serious. Professor Theobald says, with regard to this (p. 243 : "The writer has never found the least benefit, but two large growers, who can be relied upon, have found it beneficial. On the other hand, we must note the record of hundreds of others who have found little or no use in this treatment." And again (p. 244): "Considerable damage is often done by this treatment, owing to the scorching of the leaves and shanking off of the fruit." So it will be seen we are not alone in our disastrous experience with Professor Collinge's remedy.

I chanced to find in one of the journals a record of Mr. Massee's experiments with big bud when the Wisley Laboratory was first opened, and the success he found he got by greasing the bushes. Following this line of thought, I wondered if some greasy fluid could not be put on with a spraying machine just before the buds burst. I suggested it to a firm of chemical manufacturers, who made numerous chemical investigations, and at length produced a sticky fluid which could be pumped, and which remained tacky for a considerable time, but at present no definite results have been obtained. It seems to me that if there is anything in quassia and soft soap spray it must work somewhat on these lines. Anyone who has microscopically examined "big bud," and seen its teeming population, and watched with what rapidity and agility the mites can move, and, furthermore, understands the manner in which they work, cannot credit that four sprayings in two months (at least) can possibly rid the bushes of the pests.

Consider the period; one spraying at the end of March, two in April, and one at the beginning of May, covering a time in which the bushes are growing very fast, and new buds are being formed in the axils of the leaves. The old affected buds are losing their population gradually, so that there are always mites ready to take up their quarters beneath the scales of the forming bud, and once there they are safe from spray, fumigation, or anything almost that man can do.

I am not going to argue that quassia and soft soap as a contact wash will not kill the mites which are out on the surface of twig or leaf; I believe it will, but I am equally sure that at least once a week the bushes must be sprayed if badly infested, to cope with the pest, and I am not at all easy in my own mind concerning the effect of such spraying upon the opened blossoms.

I hope I have said enough to prove that we have done all in our power to cope with this insect attack, and that, if we are "out of date," it is not for lack of trying to find out the latest remedy, or trying it when found. I have still faith in the greasing method, and I want to see it further worked out in our experimental stations, for I fancy that somehow along those lines the solution of the problem will come.

Fred W. Hammond.

THE NATIONAL SWEET PEA SOCIETY.

Through the columns of the Gardeners' Magazine, which has at all times given much encouragement to this society, I should like to say that, in my opinion, the time has come when the society should have its rules thoroughly revised. Since its inception I have been a member of the society, and for a long period was a member of committee. Consequently I have taken an interest in its work, and should much regret to see it declining in popularity. I would like to offer a few suggestions for the future management. The constitution of the Floral Committee seems to have caused all the recent trouble. From the rules of the society, which, by the way, are arranged at the wrong end of the schedule, I cannot gather that there has been any power to appoint a Floral Committee at all. The practice in the past has been for the General Committee to nominate a Floral Committee from its own members. In my opinion this body should be appointed by ballot at the annual general meeting in the same way as the General Committee. The Floral Committee, instead of consisting of eighteen members, should be nine at the most; seven would be better. This body should elect their own chairman for the year. Instead of stipulating for an equal number of amateurs and traders or their managers, the Floral Committee should be elected simply for their fitness for the office, no matter what their occupation. Apparently a notion has got abroad that by having an equal number of each section one could control the other should either display any partiality during the examination of novelties on trial. All I can say on this point is, that if eight members cannot control the one in his attempted partiality, then they are a weak lot, and not fit for the office they hold.

As to the method adopted in the trials of new varieties, I do not agree with the plan of growing them under number, on the plea that the adjudicators shall not know whose varieties they are examining. If this is the case, then the management do not attach much importance to the integrity of those who adjudicate. Far better would it be for all concerned to label every variety, this label bearing not only the name of the variety, but also the name of the sender, so that the public could see whose varieties were superior in every respect. Such a plan would check the sending of doubtful varieties or stocks, and those who do send the best would obtain due credit. Far better would it be to open out any doubtful channel by giving publicity to all points, and allow the public to judge for themselves, and act accordingly. If such a plan were adopted, we should quickly see a reduction in names, which is an absolute necessity to place the sweet pea on an even higher pinnacle than it now so deservedly commands.

As to the definition of an amateur, which term I gathered at the meeting last week was likely to be adopted as framed by the R.H.S., no one who seriously studies the question at all can accept such a definition as that set forth by the Royal Horticultural Society, and in my opinion is less applicable to the National Sweet Pea Society than to its own Fellows.

E. Molyneux.

HOW TO GROW SWEET PEAS.—"Sweet Peas and their Cultivation," by C. H. Curtis (Secretary of the National Sweet Pea Society), is a complete guide to the successful culture of sweet peas for home or exhibition. Price 1s. net, by post 1s. 3d., or bound in cloth 1s. 6d., by post 1s. 8d., from W. H. and L. Collingridge, 148, Aldersgate Street, London.

AMONG THE ALPINE FLOWERS.

"Silver and gold! The Snowdrop white,
And yellow-blossomed Aconite,
Waking from Winter's slumber cold,
Their hoarded treasures now unfold,
And scatter them from left to right.
Ah, with how much more rare delight
Upon my sense their colours smite
Than if my fingers were to hold
Silver and gold."

Flowers now wake from their winter's trance, and all around are tokens of the dawning of their beauties. Foul weather in plenty we yet shall have, snow and frost, winds and rains, sleet, and the manifold trials of our northern springs. Yet we may enjoy in the present the blossoms we are privileged to own, and for the moment endeavour to drive from our minds the fears of coming disasters to our plants which long experience has warned us to expect ere summer comes with its glorious sunshine, its generous airs and its bounty of blossom. It is for us now to cull from our gardens a little posy of hardy flowers, so that the reader may remember that the open garden may yet bestow upon him some bounty, less lavish, perhaps, than that of the garden under glass, but none the less fascinating or enjoyable, though it may be plucked among rain-showers and in a temperature of ungenial cold. First, as is proper, we come to the

Snowdrops.

Emblems of purity and grace, these chaste flowers grow dearer and dearer to us as the years pass on. Their graces are perfect, and their charms, coming at a time when others of Flora's daughters are at rest, delight us even more than they would if they came to us later in the year. We gaze upon them with unalloyed satisfaction wherever they may grow. Yet the rock garden presents them in a higher degree of beauty than even the grass, and little clumps or great sheets piercing through other plants and drooping their silver bells above them are exquisite there. Probably we have no finer snowdrop in its own modest growth than Galanthus nivalis, the common snowdrop, but we have others of more opulent grace, and these may well be added to the choice rock garden. Here, for example, we have

Galanthus Atkinsi.

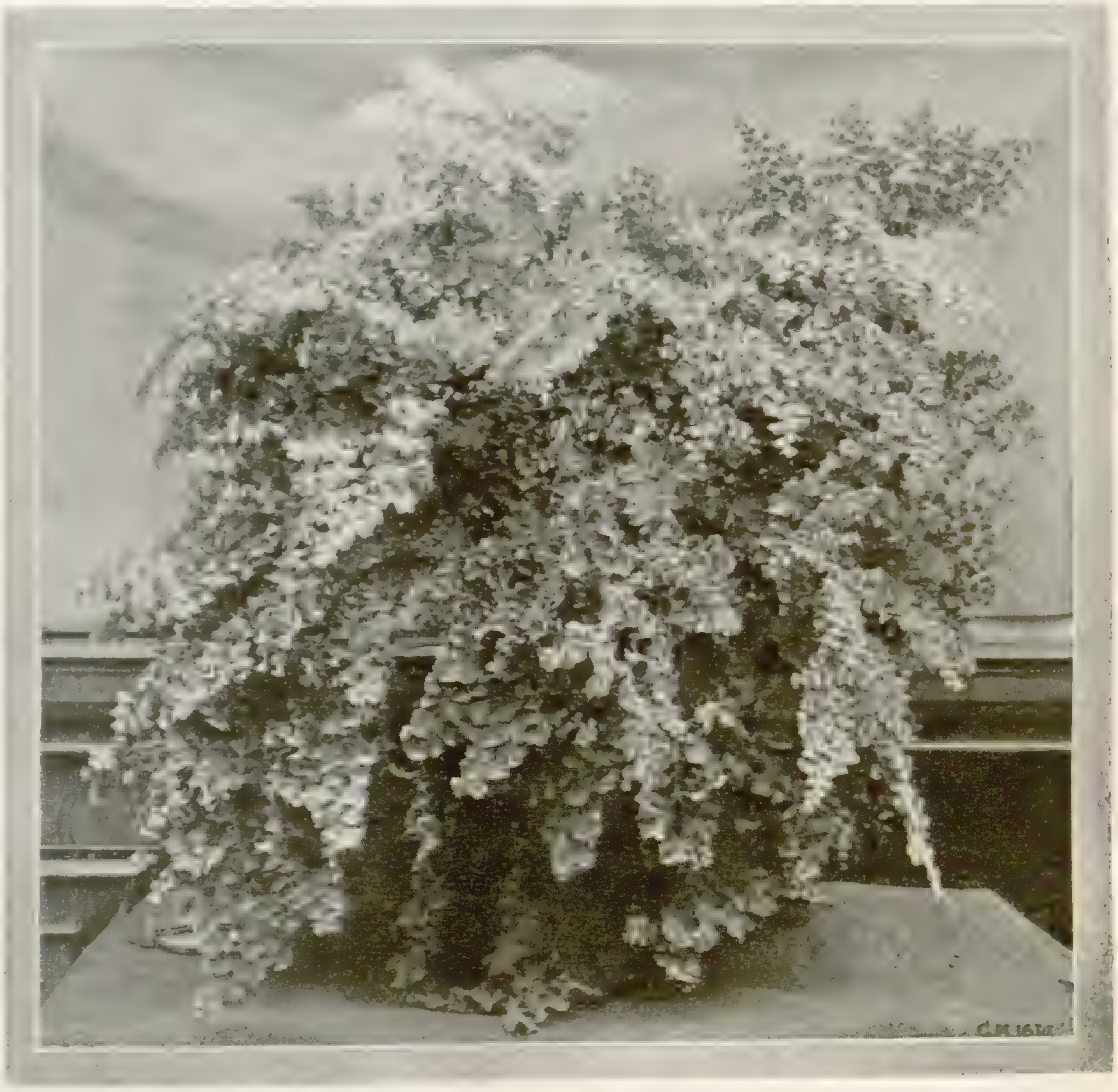
This is a noble form of the Italian G. Imperati, itself only the southern type of our common G. nivalis, but vastly glorified. It is like some tall, willowy maiden of the highest beauty, who stands pre-eminent among her sisters, and whose graces are so manifest that we cannot but admire them. This lovely snowdrop has tall stems, large, well-formed flowers, which are of purest white, save for the green ornamentation which led Robert Buchanan to write the lines:

"Could you understand
One who was wild as if he had found a mine
Of golden guineas, when he noticed first,
The soft green streaks in a snowdrop's inner
leaves?"

A charming flower is this, Atkins' snowdrop, and one, also, which reminds one of the name of a long-departed lover of plants, Mr. Atkins, of Painswick, who enriched our gardens with many good flowers, others of which bear his name, and keep his memory green. Other snowdrops there are in plenty now, but of these the claims of space deny us to tell for the nonce.

The Water-loving Meadow Saffron.

As we pass along, glancing here and there for the opening of some of our favourite flowers, we come upon a few cones of bright rose-purple. These are the flowers of the Water-loving Meadow Saffron, Colchicum hydrophilum, which is one of the few really satisfactory spring meadow saffrons. It reminds one in its colour of the spring Bulbocodium vernum, but it is of better shape, and it seems proof against slugs, the bane of the bulbocodium, which they generally crop remorselessly. It is also earlier, and it is no slight boon, but a generous largesse of nature to give us this meadow saffron as a companion to the silver of the snowdrop and the gold of the winter aconite. As its name would imply, this Colchicum hydrophilum is a lover of moisture, and here I grow it in a little place devoted mainly to moisture-loving primulas, such as P. rosea, P. involucrata, and P. capitellata. A little plant it is, growing some three or four inches high, and giving its leaves when the flowers have passed away.



ADIANTUM FARLEYENSE VAR. GLOIRE VAN MOORDRECHT.
A distinct fertile variety. A.M., R.H.S., January 31. Mr. A. A. Fabius.

Anemone angulosa major.

Lovely, also, is the blue of the great hepatica, Anemone or Hepatica angulosa major, the earliest of the "noble liverworts" to bloom, and also one of the easiest to grow. It is long years ago since in my mother's garden I first knew and loved this flower, with its smaller sisters, the varieties of Hepatica triloba, but never yet have I seen reason to lose my affection for this plant, with its large blue flowers, perhaps not so numerous as one would like, but inexpressibly precious in the dawning of the year. Like others of its race, it grows into generous clumps with me in a shaded part of the rock garden, where a little ravine runs downwards and supplies at the base of the rockwork, but almost on the level ground among loam and leaf-soil, a happy home for these old-fashioned flowers, the hepaticas. This Anemone angulosa major is the first to flower, and very early in January gave us its first open blooms, of a delightful tone of blue. Transylvania is its native place, but it is one of the "aliens" we gardeners welcome to our shores, convinced that they, at least, will not corrupt, but will lend graces to our British gardens.

Other Flowers.

Our tale of alpine and rock flowers in bloom now is not a lengthy or an imposing one. There are lovely little mounds of such heaths as Erica carnea and its variety alba; with E. mediterranea hybrida, or, as some would prefer, simply E. hybrida. There are many blossoms on primroses and polyanthuses, a few snowflakes attempt, with no slight success, to vie with Atkins' snowdrop and its sister flowers.

There are violas, a sweet violet or two, hellebores—both Christmas and Lenten roses; golden aconites, Adonis amurensis, sheltering happily under the bare branches of a dogwood; stray blooms of myosotises, with a few plants of Cyclamen Coum and C. ibericum, looking like little gems amid the other flowers of the time.

S. Arnott.

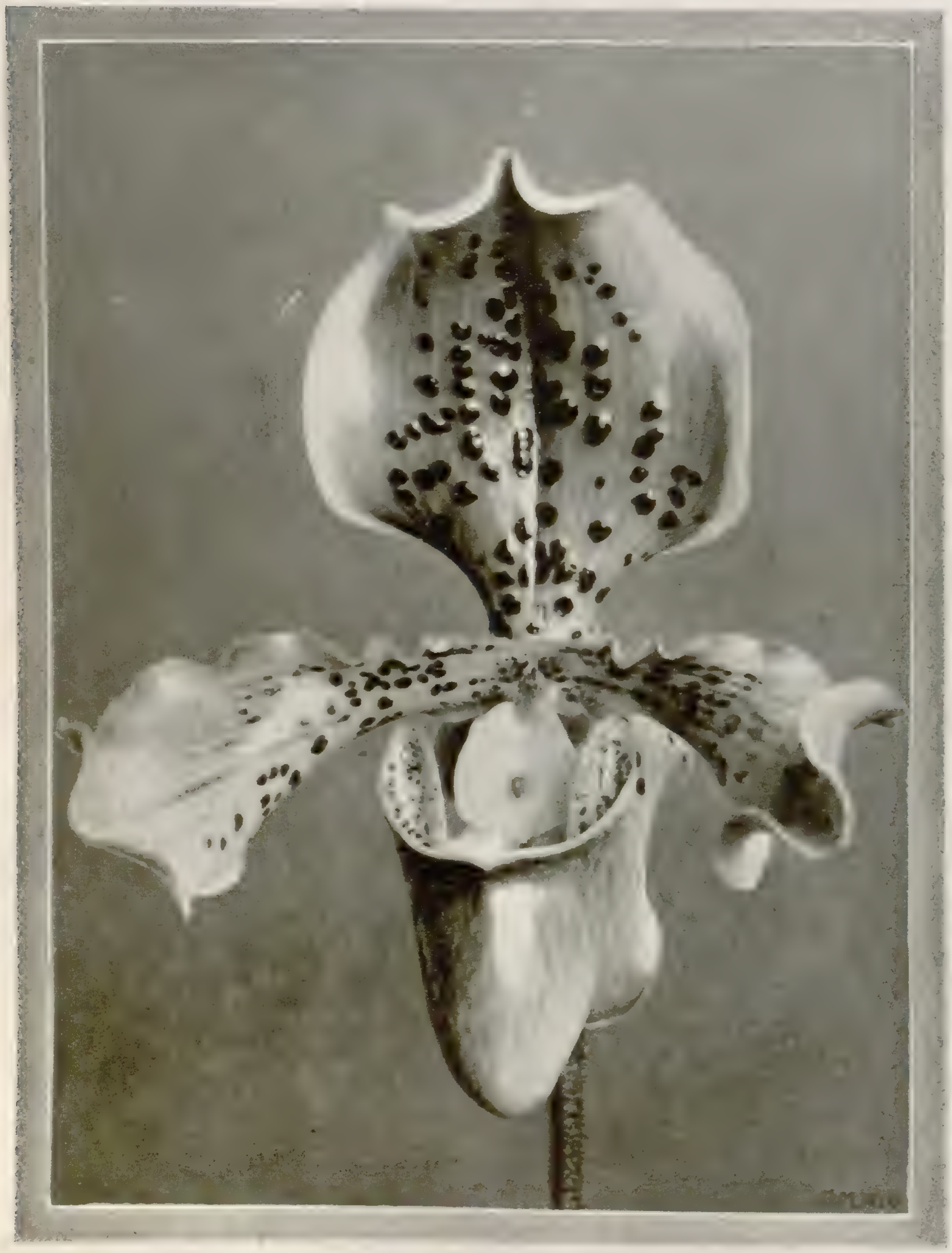
Primula Kewensis. — This is a valuable winter-flowering primula, and one that can be had in bloom by Christmas. It is as is now fairly well known, the result of an accidental cross between the little Himalayan Primula floribunba and the Abyssinian Primula verticillata. For decorative purposes it is superior to either of its parents, and where a greenhouse has to be kept gay with flowers throughout the winter it is of considerable value. It is of easy culture, and established specimens will continue to bloom for a considerable time. At first this primula was increased by division, but now seed is often obtained, and from this young plants can be readily raised.—W. T.

NEW PLANTS, ETC.

◆

ODONTOGLOSSUM HARWOODI.

A new, striking, and beautiful hybrid, which, like several others that have recently appeared, point to immense possibilities from secondary crosses. The parents of O. Harwoodi are O. Wiganianum and O. maculatum auriferum. The flowers are of good size, flattish, and the ground colour is bright orange-yellow; on this colouring are numerous dark rich purple spots, while down the centre of the lip is a straight thick mark or band of this dark contrasting colour. A splendid addition. F.C.C., R.H.S., January 31. Messrs. Charlesworth and Co., Haywards Heath.



CYPRIPEDIUM DUKE OF CONNAUGHT.
Flowers vivid green, the dorsal sepal spotted with black purple, and the petals and lip shaded brown. A.M., R.H.S., January 31. Messrs. Armstrong and Brown.

ODONTOGLOSSUM CRISPUM PEACOCK.

This very beautiful variety of an old favourite orchid has blooms of the largest size and of the finest form and substance. The flowers, beautifully poised on the spike, are pure white, with a few large red-brown blotches, these being grouped, horseshoe fashion, on the broad overlapping petals. It is not only a fine variety, but a very attractive one. F.C.C., R.H.S., January 31. Lieut.-Colonel Sir G. Holford (grower, Mr. H. Alexander), Westonbirt, Tetbury, Gloucester.

MILTONIA WARSCEWICZI VAR. PICTA.

A species that showed practically no variation for a long number of years has now given two distinct varieties within a short period. M. Warscewiczi picta is especially bright in its colouring; the basal half of the lip is purple, and the apical part white, the petals and sepals being yellowish-brown with bright yellow tips. A very showy orchid. A.M., R.H.S., January 31. Messrs. Charlesworth and Co., Haywards Heath.

BRASSO-CATTLEYA EUTERPE.

A pretty hybrid, with flowers of medium size, and with a lip less heavily fringed than in the case of hybrids direct from Brassavola Digbyana. Cattleya Schilleriana and Brasso-cattleya Digbyana-Mossiæ are the parents of B.-c. Euterpe. The new hybrid is rather dwarfer than the original brasso-cattleyas. The lip is rosy-mauve, with a soft yellow throat, while the bronzy-green shading on the rose-pink sepals and petals shows the influence of C. Schilleriana. A.M., R.H.S., January 31. Lieut.-Colonel Sir G. Holford, Westonbirt.

ODONTOGLOSSUM MARIÆ.

A pretty orchid, of which only a quite small plant was shown, therefore older plants should be even more effective when flowering. The parents are Odontoglossum Uro-Skinneri and O. Harryano-triumphans. The lip is veined and shaded with rose-purple over a white ground, and the sepals and petals are pale yellow-green, marked with red-brown. A.M., R.H.S., January 31. Messrs. Charlesworth and Co., Haywards Heath.

CYPRIPEDIUM DUKE OF CONNAUGHT.

This very distinct hybrid is from Cypripedium Beryl crossed with C. nitens G. F. Ball's var. The flowers are large and shapely, the dorsal sepal being broad, brilliant green, spotted with black-purple and edged with white. The petals are vivid green with brown and yellow shading, and the lip is of similar colour. A.M., R.H.S., January 31. Messrs. Armstrong and Brown, Tunbridge Wells.

ADIANTUM FARLEYENSE VAR GLOIRE VAN MOORDRECHT.

This is a beautiful fern, that appears to have been raised from A. farleyense in the nursery of Mr. J. Bier, at Moordrecht, in Holland. A. Farleyense has hitherto been regarded as barren, though possibly it has produced spores here and there, unobserved, but the remarkable thing is that this new variety is abundantly fertile, and its pinnules are prettily crisped. The fronds are larger than those usually found in A. Farleyense, stronger, less dense, and rather more elegant, though not more beautiful. A.M., R.H.S., January 31. Shown by Mr. A. A. Fabius, Redlands Nursery, Emsworth.

Referring to this new fern, Mr. Charles T. Druery writes as follows: That Queen of all the Maidenhair Ferns, Adiantum farleyense, which originated in Barbadoes as a sport from A. tenerum, has long been reputed as perfectly barren, and its true plumose form justified the belief. From time to time, however, vague reports of partial fertility have transpired, but as no results were obtained from the presumed spores they were apparently fallacious. On the 31st ult., however, a very fine variety of farleyense was exhibited at the Royal Horticultural Hall, by Mr. A. A. Fabius, Redlands Nursery, Emsworth, under the above name, it having made its appearance as a sporeling from farleyense in the nurseries of Mr. J. Bier, at Moordrecht, in Holland. The plant shown was very robust, with fronds several feet long, borne more erectly than those of the parent, and with the pinnules prettily crisped, many of which were freely fertile, while the spores, as evidenced by small seedling specimens, produce the "Glorie" form truly. It is claimed by the grower that this form requires far less heat than does Farleyense, the huge specimen shown having been fully developed under the cool culture suitable for A. cuneatum, a feature which adds considerably to its value as a popular contribution to our wealth of decorative ferns. It was given an Award of Merit, but would have fully justified a First Class Certificate.

Cannas.—A well-grown bed of cannas, providing it is in the correct place, is an attractive and striking feature. As good growth is necessary before planting out, it is desirable to commence propagation at once. This may be accomplished either by sowing seeds or by rooting the young growths which are produced by the old plants. If the method of raising a stock from seed is resorted to no time must be lost. The seeds require soaking a few hours before sowing, and when sown should be placed in the cucumber house to germinate. When propagating from old roots these must now be placed in heat, and in about a fortnight or three weeks they will be ready for division. The young growths which will be found coming from the sides of the stems are the parts to select. These very often have roots attached, and should be potted up singly, using a large 60-sized pot for the purpose. The propagating house, or cucumber house, if the former is not available, is a suitable place to grow the plants in, potting them when necessary. When good growth is made they may be removed to a warm greenhouse, eventually hardening them off.—E. C. P.

ROSA PERNETIANA—II.

In the first of these articles we noted that the term Rosa Pernetiana had no reference whatever to any newly-discovered species, but that it was the title given by the originator, M. Pernet Ducher, to a new class of perpetual flowering roses derived in part from Rosa lutea or Austrian Brier. As in 1830 Rosa Noisettiana stood for a new break in roses originated by M. Philippe Noisette, so in 1908 Rosa Pernetiana is the name of a new series of roses raised by M. Pernet Ducher.

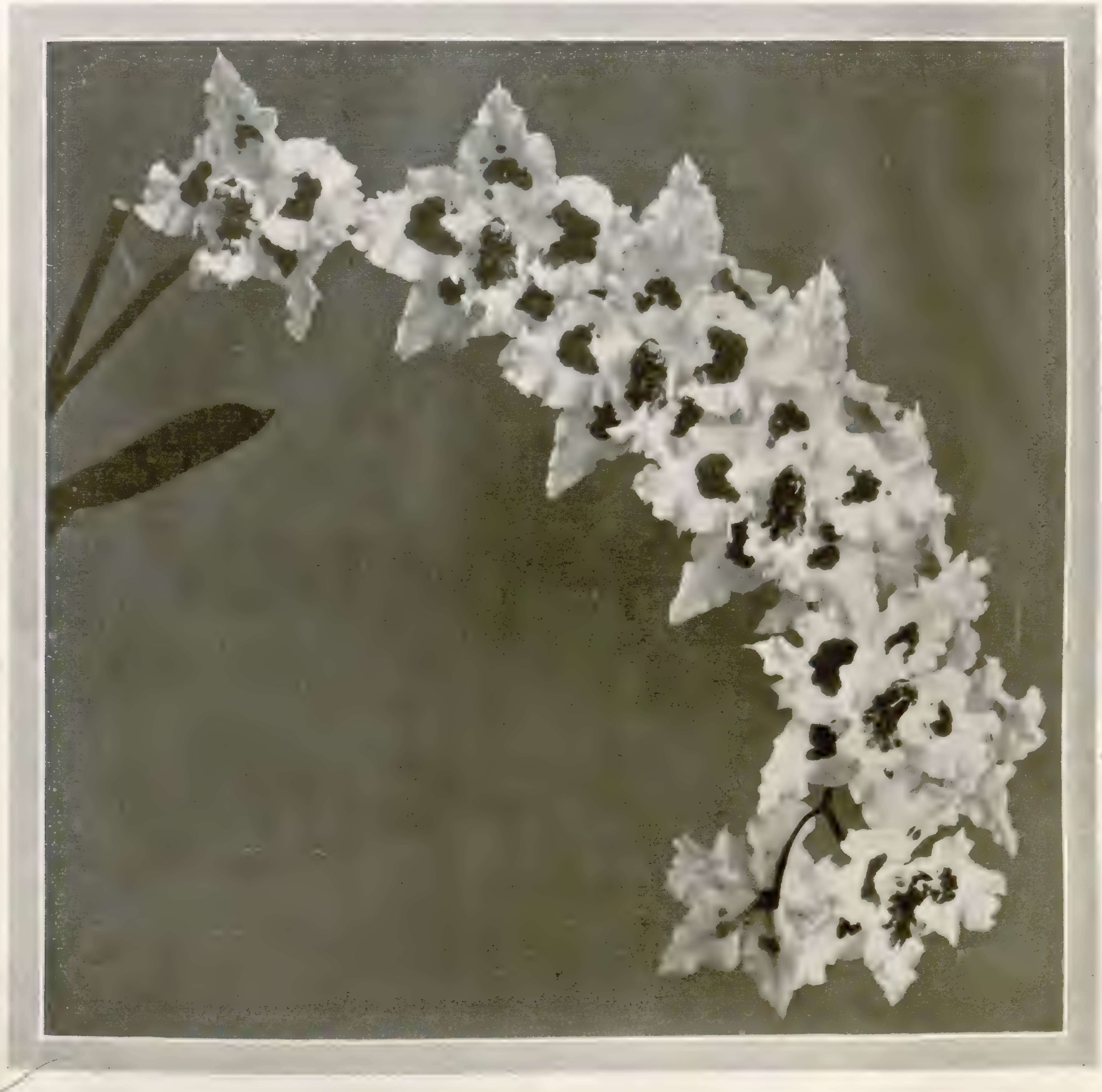
To distinguish varieties of the Pernetiana group from others we should be aware of the special characteristics of Rosa lutea from whence they derive in part their parentage. All at present sent out have some points in common with the species. Perhaps the likeness is more readily seen in the prickles, which are not dog-toothed, hooked, or solitary, but are straight, irregular in length and dense. In some we can see the rich brown wood and lanceolate form of the leaflets, but throughout the entire group a decided deep yellow tint, the dominant colour of the species, more or less prevails. We can see it in the Lyon Rose as well as Soleil d'Or and Rayon d'Or. Now let us glance briefly at some of the leading roses of this race.

Soleil d'Or, 1900 (Pernet Ducher).—Here we have the first of the series. This variety has many features in common with the Austrian brier, Harrisoni, introduced by Mr. Harrison in 1830. We detect this resemblance in wood, prickles, foliage, and deep yellow of the flower. The shape of the blossom, however, is more globular and cupped, and the colour is deeper, inclining to orange. But whereas Harrisoni makes a strong growing bush, and has only one crop of flowers, Soleil d'Or is dwarf and perpetual. It is this last-named quality that has made it a valuable addition to the rose world. It is quite hardy, and of upright habit, growing to about three feet in height.

Lyon Rose, 1907 (Pernet Ducher).—After an interval of seven years the next of the series made its appearance, the Lyon Rose. In some ways it so much resembles a hybrid tea, especially in the shape of the flower, that, its parentage being unrecognised, it was at first classed and exhibited as such. But a closer inspection revealed the Rosa lutea strain. We see it in the prickles, which are scattered, straight, and unequal in length, and the reddish brown wood. The foliage, too, is lanceolate, and has from five to seven leaflets. Few roses have risen into popularity more speedily than this, owing to the novelty of its colouring, a kind of shrimp-pink, suffused with deep orange yellow, difficult to describe, but now well known. It is free-flowering, perpetual, and fragrant. It will soon be a universal favourite.

Arthur R. Goodwin, 1909 (Pernet Ducher).—This rose has a marked relationship with Soleil d'Or. The habit is dwarf, the flower of medium size, cupped globular. Colour variable, from coppery-orange to salmon-pink. It bids fair to be a good decorative variety.

Rayon d'Or, 1910 (Pernet Ducher).—Another step in the evolution of Rosa Pernetiana has been reached in this variety. First Soleil d'Or, then Arthur R. Goodwin, now Rayon d'Or. What will be the next step? The possibilities are great. If for nothing else, the year 1910 will for long be memorable as the year in which this glorious rose was put into the hands of rosarians. At last we have a pure deep



ODONTOGLOSSUM CRISPUM PEACOCK.

Flowers pure white, with brown-red blotches. F.C.C., R.H.S., January 31. Lieut.-Colonel Sir George L. Holford.

yellow free-flowering bedding rose, by the side of which all other yellows, not excepting Maréchal Niel, are pale in comparison. As yellow as the yellowest march marigold or king cup. What the yellow calceolaria was to those who resorted to "bedding out" in mid-Victorian days,that will Rayon d'Or shortly be in the rose garden. Visit a garden where there is a bed of this rose, you descry it at once in the far distance. Many grand new roses were exhibited last year at the National Rose Society's show in Regent's Park, but Rayon d'Or surpassed them all. There it was staged naturally, as cut from the plant. As it was in the garden, so it was in the tent. It had been subjected to no tying, no shading, no wiring. The flower in the bud stage is deep orange streaked with red, opening out to brilliant yellow. Of vigorous habit, branching, bronze-green foliage, apparently mildew proof, and free-flowering.

Beauté de Lyon, 1910 (Pernet Ducher).—For a description of this rose, the progeny of Soleil d'Or, we must, for the present, rest content with that given by the raiser, who states it to be "a robust and very vigorous grower of strong and erect branching habit, with beautiful bright green foliage; the flower is large, full, and globular, expanding always well; superb colour, coral red, slightly shaded with yellow."—"Although perpetual flowering it cannot be qualified as free blooming."

Viscountess Enfield, 1910 (Pernet Ducher).—Another variety having Soleil d'Or as one of its parents. Habit erect, branching, prickles scattered, straight, foliage bronze-green, flower cupped, deep petalled, of medium size. Colour coppery-rose, suffused yellow, free-flowering, distinct.

Rodophile Gravereaux (Pernet Ducher).—This rose is classed by the raiser as a Pernetiana, but is not perpetual. It is described as a semi-climbing Wichuraiana, with flowers of carmine pink with yellow centre.

This completes this list, so far as the writer is aware, of Pernetiana roses sent out by M. Pernet Ducher. Some half-dozen more by other raisers remain to be noted. Joseph H. Pemberton.

Hippeastrums (Amaryllis).—A few of the earliest bulbs may now be started by placing them in a light position, free from drip, with an intermediate temperature of 55 degrees, rising about five to ten degrees during the daytime. Plants so treated should be allowed to remain in the old pots for another season; they should, however, be grown separately from the main stock, be fed more liberally during their growing season, and repotted again during the spring of the next year. During the early part of February the whole batch should be examined, with a view to repotting all those that need it. I strongly advocate the culture of amaryllis in medium-sized pots, as, given regular assistance when the pots are filled with roots, my experience is that a much larger percentage of flowering bulbs is obtained than if too much root room is allowed. The potting compost should consist of best quality fibrous loam, leaf-soil (oak), and coarse silver sand. Previous to repotting the bulbs may be thoroughly cleansed, and all the loose skin removed. The most essential item in the successful culture of these valuable spring and summer blooming bulbs is to retard the growth previous to flowering as much as possible; this is brought about by allowing the bulb to remain dry for as long as possible until the flower spike is well advanced. After blooming the plants are best plunged in beds, and there allowed to remain until the time arrives for ripening the bulbs. — John Donoghue.

FLAVOUR OF MELONS.

That a considerable number of melons grown in private gardens lack the most valuable quality that a fruit can possess—excellent flavour—will, I think, be generally acknowledged by those who have had much experience in judging at ordinary horticultural shows. Of all fruits an inferior flavoured melon is perhaps the most disappointing and distasteful, and as the same expense is incurred in growing a badly flavoured as a highly flavoured one, it is most important that in the culture of the melon everything is done to insure good flavour.

Apart from the fact that he cannot control the weather, and we all know what marked influences this has upon the flavour of melons, the cultivator may have all within his power wherewith to secure fruit of excellent quality. In the first place seeds of the very best varieties can be readily procured, but when this has been done, raisers of their own seeds must endeavour to keep the stock true, for there is no question that inferior melons are to be met with, some of them bearing the names of good varieties, and this owing to carelessness in saving seeds. It is the best plant to obtain each season from a reliable source fresh seeds of valuable varieties, rather than to sow those that have been thoughtlessly saved at home. Relative to this, however, it may be remarked that any good grower may keep his stocks true, for instance we still have Hendre Seedling true to name, having kept it so, since, with Blenheim Orange, it was first distributed by Messrs. Jas. Carter and Co. It may not be remembered, except by those interested, that these varieties before being distributed were exhibited at one of the R.H.S. shows, when in strong competition Blenheim Orange took the leading, and Hendre Seedling the second prize.

New melons are yearly introduced, but for a number of years there has been little, if any, advance in point of flavour. Those who have grown the once popular varieties Turner's Scarlet Gem (which requires skilful management to prevent its fruit splitting), Read's Scarlet Flesh, and the true Golden Perfection, will doubtless concur with this statement.

Of diseases that detrimentally affect the flavour by impairing the plant's vitality canker and gumming are the most prevalent, but these maladies, though aggravated by dull and wet weather, are very much under the cultivator's control, and seldom seriously injure well managed plants. Rich compost, especially if not made firm, is favourable to disease development, as are likewise excessively moist or sluggish atmospheric conditions, more particularly if attended by low temperatures. They may also be caused by keeping the soil too wet, and especially if the soil is kept close up to the stems. Crowding the shoots, and neglect in the early rubbing out or stopping of them, are also liable to promote or increase these evils.

If, however, the best varieties are cultivated and kept free from disease fruit of high flavour cannot be secured unless the leaves are preserved in a healthy state, and to this end it is essential that they are kept free from red spider. Attacks of this troublesome insect quickly injure the leaves and prevent them properly carrying out their functions; the pest abounds in a dry atmospheric condition, or where there is a deficiency in the supply of nourishing root moisture. Relative to this it may be observed that mistakes are sometimes made by diminishing or withholding supplies of root moisture, with a view to advancing the flavour before the fruit reaches maturity. Sufficient water should be given to keep the leaves from flagging up to the time the fruit is ripe and removed from the plant.

Fresh air has a marked influence on the flavour of melons, and unless the fruit is subjected to a fairly free circulation of it during the later stages of its development, it will not possess first-rate quality. This brings to mind an incident that once proved to be both discomposing and amusing to me, which I may be pardoned for alluding to here. Some 30 years ago the Messrs. Daniels, of Norwich, distributed a new melon under the name of "Luscious and Melting," and offered a substantial money prize for the best fruit of it exhibited at a meeting of the Royal Horticultural Society. With the intention of testing the variety and exhibiting it, I raised plants, and for the want, at that date, of a better available place, planted them upon a bed of tree leaves placed in an otherwise unheated pit. I found, on nearing the date of the show, that the fruit was somewhat far advanced towards maturity, and consequently ventilated the pit unusually freely, both by night and day, in fact the lights were left more or less side tilted. My fruit, when staged, presented a rather sorry spectacle as compared with those of the other exhibitors, and it was concluded that I had no chance of pocketing the prize money. After receiving some good-natured banter from some friends about my fruit, I left the hall for the day, and on returning in the evening for the melon, I found nothing of it left but the seeds, and some rind cut in narrow sections, but the prize card bearing my name was there, and I was informed that my fruit was the only full-flavoured one among the several staged. So much for pure air. T. Coomber.

CALCEOLARIA CHELIDONOIDES.

This half-hardy annual is rarely met with in private gardens, and yet it is one that is worthy of extended cultivation. I believe it was introduced to this country in 1852 from Peru, and it is described as growing one foot in height and having small yellow flowers. On very poor soil this may be the case, but given good cultivation it will attain a height of three feet. On looking through the various seed catalogues received I find that Messrs. Webb and Sons, of Wordsley, are offering seed, and the wonder is it has not been offered before.

This notice has induced me to say a word in favour of it. We sow seed of it here with the half-hardy annuals in March, and when large enough to handle prick out the seedlings into boxes, four inches apart, and finally plant out into a bed that has been previously prepared with some good loam, to which has been added some well-decayed manure and leaf-mould. When the plants have attained a height of one foot we place well-branched sticks, about two-feet long, between the plants all over the bed to keep them upright in rough weather, and the sticks are not seen when the plants are in flower.

I had seed given to me some years ago from a garden in Bettws-y-Coed, where it grew about a foot in height on the rockery, and reproduced itself year after year. Apart from its beautiful yellow flowers the foliage is very handsome. We have not used it in a cut state for decorations, preferring to admire its beauty in the beds.

W. H. Shaw.

ROSE NOTES.

By the time these notes appear many will be thinking of pruning roses in very warm and sheltered places. Under any circumstances I would delay until the middle of February, as I am quite sure the majority of roses are pruned too early. I do not propose going into this question fully, for so much has been written that the subject is getting monotonous, but a little more thought and less eagerness to follow on the old orthodox lines are needful, more especially now we have such a vast and wide difference in almost all classes of roses. Nor is sufficient thought given to the quality or quantity of blossoms that are required, and I need scarcely say the plants should be pruned with this point in view.

Buds of last season continue to look promising; so, too, does the wood upon most varieties. But we often have our most trying weather later than the time of writing (end of January). The rather sharp frost of a week ago, when we had 7 to 10 deg. here, occurred when the air was still, and I do not think did any harm. It is the wind accompanying frost, and sharp frosts at night followed by a bright sun, that do most harm so far as I have observed; and I believe our roses could endure double the frost we have, and without more harm, if the weather remained dull and quiet.

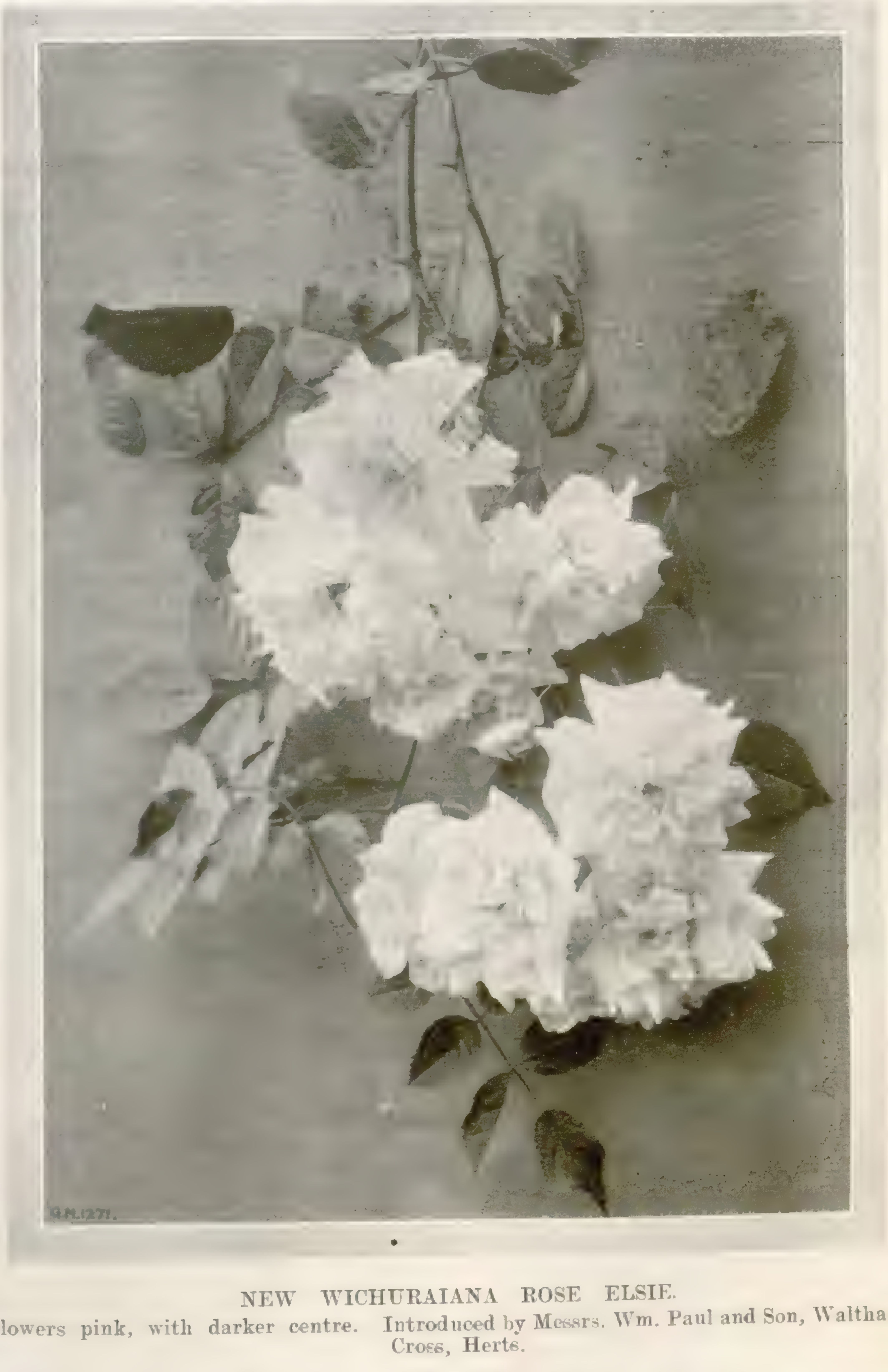
A friend recently called my attention to a considerable amount of wood upon plants that he thought were affected by frost, but upon closer examination it was found that growth was so late during the mild early winter that it had not become matured. Although the plants look a bit distressed at the present time, the whole of that wood will have to come away when pruning is done; the sound, matured wood and eyes are still unaffected.

The frost has drawn up the rose cuttings inserted last autumn, and it will be advisable to press these down as soon as one can work upon the soil. There is almost certain to be a few blanks in the rose beds, or a plant that does not promise well enough to stand another season, and advantage should be taken to thoroughly prepare the ground for a new occupant as soon as convenient; the best plan will be to insert a plant turned out of a pot.

Growth is good on young plants under glass; in fact, as good as I ever remember it, but care should be taken to wage war against insects as soon as they appear—you cannot commence too soon—and to avoid any draughts or checks likely to cause mildew. A. Piper.

ROSE ELSIE.

This charming hybrid Wichuraiana rose, introduced by Messrs. William Paul and Son, Waltham Cross, was remarkably well shown by that firm on several occasions during 1910. We saw some plants of it flowering finely in one of the big rose houses at Waltham Cross last May, and were struck with its grace and beauty. Of free growth, and with shining foliage, this newcomer, Elsie, lacks nothing in respect of vigour. Its flowers are shapely and double, and borne in large drooping trusses. The colour is flesh-pink, with a rather darker shade of pink in the centre. Even in the comparatively small truss illustrated there are a dozen flowers and buds and the individual blooms are invariably of large size for this particular group of hybrid roses.



NEW WICHURAIANA ROSE ELSIE.
Flowers pink, with darker centre. Introduced by Messrs. Wm. Paul and Son, Waltham Cross, Herts.

ASHES.

The beneficial effects that follow upon the application of wood ashes to various crops have been observed for ages, and they were probably the first non-animal manure to be used. The ashes from the garden bonfire and those from wood fires in the house may be regarded as practically the same thing for the purpose of these notes, and an average sample may be regarded as containing from 5 to 9 per cent. of pure potash (equal to 9 to 16 per cent. of sulphate of potash), 5 per cent. of phosphate, and 30 to 40 per cent. of lime. Of these elements the potash is the most valuable, but, being soluble, is very liable to loss if not taken care of. The object of these notes is to point out the best use to which this valuable substance can be put.

If the ashes are left for weeks where the fire goes out, a large part of the potash may be washed into the soil at that one spot, and be to a great extent wasted. They should be gathered up as soon as cool, and either stored away in a dry shed, to be used as wanted, or applied immediately to those parts of the garden where they will do most good. One of the best uses to which they can be put is for dressing the permanent fruit plantations, the soil of which tends to become poor in both potash and phosphates, partly through the exhausting character of the growth and cropping of the trees, and partly because stable manure, though possibly applied in quantities which supply sufficient nitrogen, does not make good the whole loss of the other constituents. Gooseberries especially need potash, and so do strawberries, while all stone fruits, in addition to this, need lime and phosphates no less. The demands of all these, and those of the beds of asparagus, rhubarb, seakale, roses, etc., together with the clematis (lime-loving plants) and choice shrubs and climbers generally, should be satisfied before any is used as a general dressing to the dry ground.

Where, however, wood ashes can be obtained in considerable quantities through the general use of wood as a fuel, it is as well to know that a certain portion of the potash consists of carbonate of potash, a substance which possesses the property of binding soils and making them sticky. Thus, while wood ashes may be a very desirable manure on light soils, not only for supplying the potash in which such soils are usually deficient, but by making them more retentive of moisture, this latter action is detrimental on heavy soils, and on such, therefore, should be used with caution. Where heavy soils are under good cultivation, however, as distinct from being occupied by permanent crops, a potash manure is rarely necessary, as mentioned above.

A word should be said about coal ashes in conclusion. Many soils have been greatly impoverished by the continued use of these over a number of years. They contain but little more mineral plant food than ordinary fertile soil, but they destroy the holding power of soil in time, and should, therefore, only be used to ameliorate very stiff soil. The practice of putting heaps of coal ashes over or around rather tender plants and shrubs in the winter is also one not to be recommended, as it invariably means that they become incorporated with the soil afterwards. Where, however, any wood ashes can be obtained during the winter from occasional wood fires, they should be carefully kept for this purpose, when they will both protect and feed the plants for the following season.

A. P.

MESSRS. JAMES CARTER AND CO.'S NEW PREMISES.

The removal of a large seed or nursery business is a matter not to be undertaken lightly. Increase of trade, and need for more room to deal with it, modern machinery and arrangements, better conditions for employees, and questions of rent and rates, all have their bearing upon the matter, while the advertisement that attaches to a prominent position long held in the busy haunts of men cannot be disregarded. The expense of removal is another considerable item, consequently there are many pros and cons to be discussed before any firm moves its business centre several miles from its old position.

It may be taken for granted that Messrs. James Carter and Co. fully considered this matter from every point of view before they decided to move their business from High Holborn, to Raynes Park, near Wimbledon. We believe they have acted wisely in moving their warehouses, seed stores, machinery, and the whole of the headquarters' staff and work out into the light and air of Wimbledon's western suburb. No expense has been spared to make the new premises as convenient as possible for the handling of a great business in garden and farm seeds, grasses, and bulbs; to make them of handsome appearance and fine proportions so as to bring credit and advertisement to the firm; and to make them as hygienic and comfortable as possible for the three hundred employees. When the splendid new premises were ready, and the great trek began, it was found that no less than 1,200 tons of seeds had to be sent from Holborn to Raynes Park, in addition to machinery, books, correspondence, etc.

The firm has now a freehold site of about twenty-two acres, with a fine frontage on the London and South Western Railway main line. The tram cars that run between Kingston and Wimbledon pass the main entrance, and Raynes Park Station, only a few minutes distant, is also served by the trams. Raynes Park is quite get-at-able, and as it is a large and growing district it is well served in the matter of trains from Waterloo or Clapham Junction. We feel sure that large numbers of interested people will visit the firm in its new home during the coming summer, and see for themselves the extensive trials of varieties and seed stocks that will be conducted there, as well as inspect the most elaborate and up-to-date arrangements for cleaning and sorting seeds, and testing their germinating power. Messrs. James Carter and Co. have no wish to hide any part of their work, and they welcome an inspection of their new premises and grounds.

It may be pointed out that the firm retains its shop at 237, High Holborn, and its newer one in Queen Victoria Street, near the Mansion House, and seeds and sundries are always on view here, but orders that necessitate the use of parcels post, carrier, railway, or ship will be despatched from Raynes Park, and their execution will be even more rapid than was possible when the seeds were kept in bulk at High Holborn.

Now for a few particulars.

The main building is 320ft. long, and 110ft. wide, with a basement 180ft. by 110ft. It covers a little over two acres, and, although the firm only took possession in September last, they find that, large as this building is, it is barely large enough for present needs, and so in the spring a large addition will be made, connected with the main building by a glass-roofed despatching department. It is pleasant to find that all the work is British, and lovers of statistics will be interested to learn that one million bricks, 4,300 tons of ballast, 2,000 tons of sand, 500 tons of Portland cement, and 200 tons of lime were used in the walls and floors. Six hundred tons of the best English steel and 400 tons of asphalt (which, by the way, required 130 chaldrons of coke to melt it), were used on the roof and floor; 12,000 superficial feet of glass were required, in all, a little over a quarter of an acre, and the paint shop worked up and used eight tons of paint and washable distempers.

The heating, a most important point for the comfort of all, called for one mile of four-inch pipes, forty-eight giant radiators, and a boiler with a capacity of 1,250,000 British Thermal units, a smaller boiler being installed for the employees' lavatories. These represent the last word in sanitary engineering, and cost by themselves the substantial sum of £2,500.

The "Tudor oak" panelling and marble flooring for the private offices and entrance hall amounted to 2,200 superficial feet, and the floor of the general offices contains 5,500 superficial feet of parquet flooring. The building is lighted by electricity, and the same power is employed for driving the machinery, for which installation eight and a-half miles of insulated cable were necessary to conduct energy of 300,000 candle-power. From these figures and particulars only a vague idea of the magnitude, beauty, and comfort of the building can be obtained, and to realise it fully one must see it in being.

The warehouse is built after the style of an orangery, with large French windows, is made of brick and finished off with white rough cast; the entrance is gained from the main road by a circular gravel drive, and two bold flights of Portland stone steps, guarded on either side by magnificent marble lions, 7ft. 6in. high, that weigh 25cwt. each. The portico, supported by four Portland stone columns, 14ft. high, and 6ft. in circumference, is decorated with a magnificent wrought copper Royal Arms, which stands 7ft. high, but which looks quite small, as do the four 5ft. dials of the clock (which, by the way, strikes the hours on a bell weighing 16cwt.) in the tower immediately above it, in comparison with the size of the elevation.

One passes from the beautiful entrance hall straight into the brain of the business, the private and general offices. In one office we find the managing senior partner, under whose direction the business has prospered so greatly, the other rooms being occupied by his partners and brothers, who are responsible for the finance, seed-growing, and the contracts of the firm, and the sports and games department. Beyond these offices are the bookkeeping and correspondence departments, with the post office and the seed-testing rooms, and beyond these again is the huge warehouse, where about two-thirds of the staff of 300 persons are at present as busy as they can possibly be executing seed orders that range in value from a few pence up to thousands of pounds. The small order is dealt with as carefully as the big one.

The large seed-cleaning machines are wonders of mechanical ingenuity. In them all dirt and dust is sucked up into a special compartment, all light seeds are blown into another, and the small seeds are separated from the full-sized ones, and delivered into different sacks. All the machinery is worked by electricity with a very modest amount of noise, and a total absence of dust and dirt. Peas, beans, and similar seeds, that have to be hand-picked after passing through the big machines, are fed into hoppers, from which they pass in a regular and steady stream on to an endless band that carries them directly under the hands and eyes of the operator. The seeds are spread thinly on the band so that the expert pickers (all women), can quickly extract all poor and doubtful-looking seeds, leaving the good sample to be carried into the waiting sack. These ingenious machines have each a three-speed gear that can be adjusted according to the kind of seed operated upon, or the rapidity of the picker.

As these pages have so frequently testified to the excellence of Messrs. Jas. Carter and Co.'s specialities in garden seeds, there is no need to discuss the point here, but, as giving some idea of the magnitude of the business in "tested seeds," it may be stated that the Garden Seed, Bulb, and Farm catalogues posted to the firm's 80,000 customers, weigh in the aggregate 86 tons 14cwt. 3 qr. 11lb., and this item does not include the smaller plant catalogues. Further, in the matter of seeds, the firm deals annually with about 50,000 bushels of culinary peas, 51,000 bushels of root crop seeds, 6,500 bushels of beans, 41 tons of seeds of the cabbage family, 1,300 bushels of radish, 25 tons of beet, 1,400 bushels of spinach, 10 tons of onion, 17 tons of carrot, 220 bushels of parsley, 10 tons of parsnip, 15 tons of sweet peas, 14 tons of nasturtium, and 3 tons of mignonette, while 10,000 plants of Chinese primulas are grown annually at Forest Hill to supply the seeds needed for retail orders. In lawn grass seeds the Messrs. Carter do an immense business, and, in addition to private orders, the firm has executed many very large ones for golf and other sports clubs, and in this connection alone upwards of 2,163 acres have been sown with their seeds during the last ten years.

Much more might be written concerning this new hive of British industry, but we hope that enough has been written to indicate its size, beauty, and comfort, and the wonderful business so enterprisingly and successfully carried on in it.

Miniature Heaths.—These, which are often seen in the florists' shops of London, seem to meet with a ready sale, and they must be grown in large quantities. This practice of growing a few kinds of greenhouse heaths, principally the small-flowered ones, as model little specimens in tiny pots, is a quite recent innovation. As these pots contain such a small amount of soil they must take a deal of water during the growing season, and the fact that they are apt to dry very quickly must be taken into consideration when they are used for indoor decoration.—W. T.

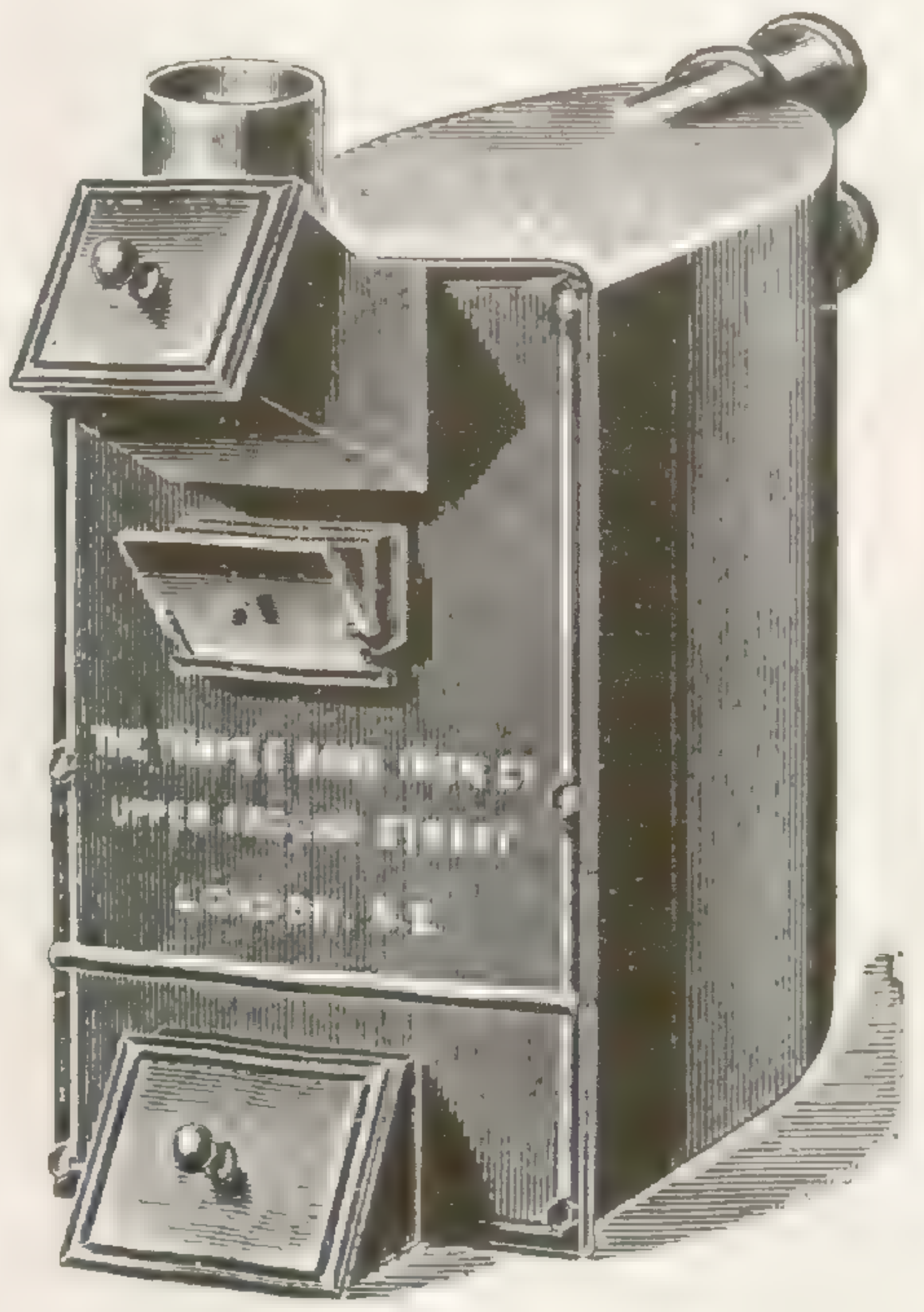
Hippophæ rhamnoides.—Complaints are often made that the sea buckthorn does not bear its pretty berries, and this is doubtless, in many cases at least, owing to the fact that the male and female flower are borne on separate plants. For this reason it is important to grow the two classes in association, the proportion of one to five or six being sufficient to ensure a crop of berries. This hippophæ is well worth a little attention in this respect, as the orange-coloured berries which are borne in great profusion are very ornamental.—W. T.

'Phone: Hop. 763.

When next a Small Boiler you require

TRY

THE HEEL



NONE TO BEAT IT.

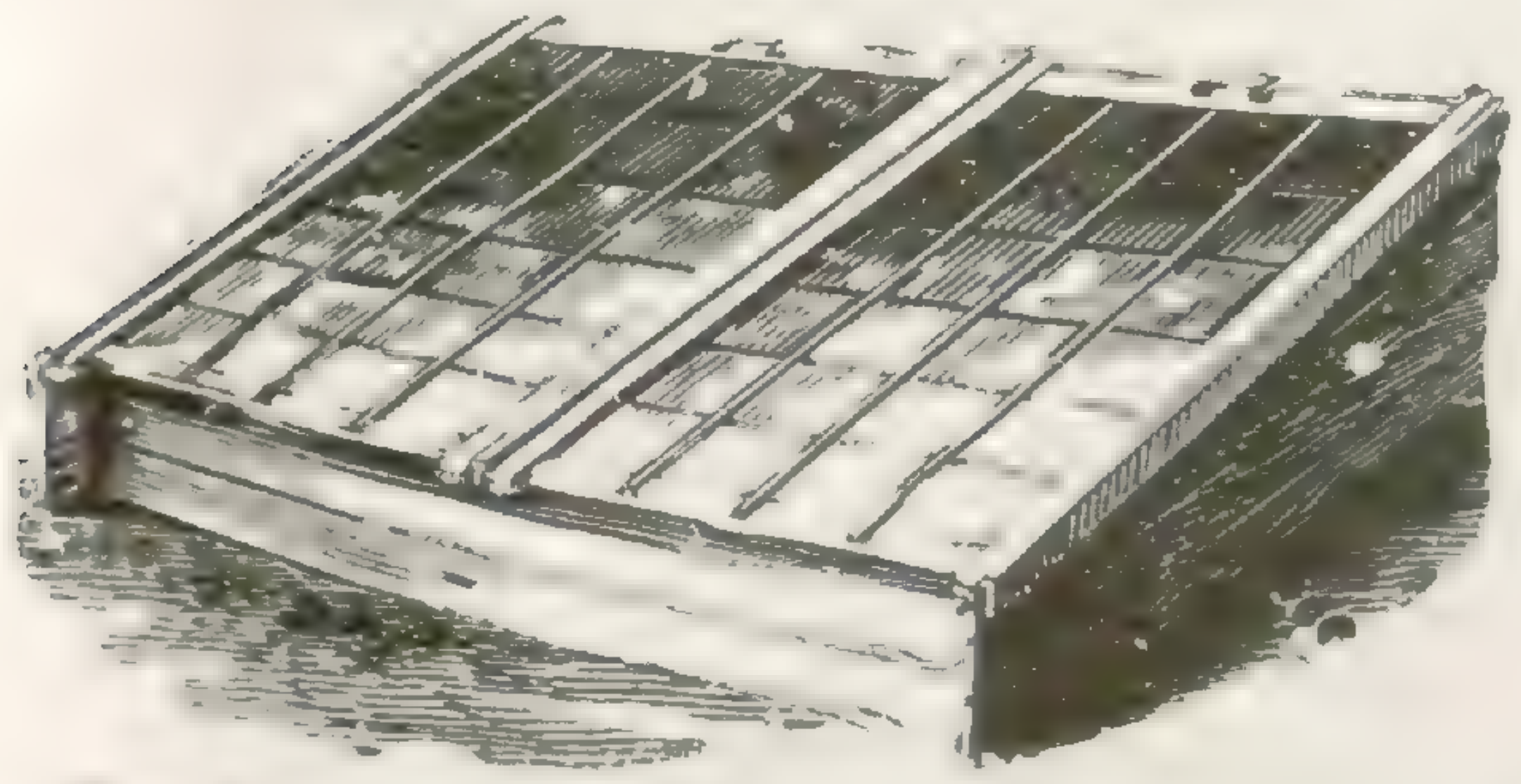
THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.

4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

PORTABLE

CUCUMBER FRAMES.

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.		£	s.	d
1-light 4 ft. by 6 ft.	*CASH PRICES. CARRIAGE PAID.*	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.		5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON, MANCHESTER.

Barr's Lawn Phytobroma
The best Manure for all Lawns.

The most economical of all artificial manures, 2 oz. to the square yard only being required.
Per cwt., **20/-**; ½-cwt., **12/6**; 28lb., **7/6**; 14lb., **4/6**; 7lb. **2/6**; sample tins, **1/-**.
Prepaid Orders for 28lbs. and upwards, carriage paid.
Circular with full particulars, on Application.

BARR & SONS,
11, 12, & 13, KING STREET, COVENT GARDEN, LONDON.

Fruit Pergola as recently erected.

Have a Fruit Pergola this Summer?

Charming effects and excellent results can be obtained by training fruit trees on our improved Arched Espaliers. Order now, and get your fruit trees planted in good time.

No. 103 Arched Espalier, 8ft. high, 5ft. wide, painted, 9/6 per yard.
Cheaper patterns 6/- and 3/- per yard.
Catalogue No 153A of Espaliers. Rose Trainers, Garden Arches, Pergolas, etc., free.
HUTS FOR THE GARDEN, POTTING SHEDS, FRUIT ROOMS, TOOL HOUSES, ETC.

BOULTON & PAUL, Ltd., Specialists, NORWICH.

BENTLEY'S
Concentrated Alkali.
THE IDEAL WINTER SPRAY
For Fruit Trees and Forest Trees of every kind.

Destroys **INSECTS** (whether in the active or dormant state), **spores of fungi, lichens, mosses.** Cleanses the bark from **vegetable growths.** Detaches loose and decayed bark, thereby exposing the harbouring places of the insects, and having on these a most deadly effect without injuring the trees.

For Apple, Pear, and Plum Trees, Bush Fruits, and Forest Trees. 1 tin dissolved in 11 gallons of water.

For Apricot, Peach, Nectarine, and Cherry Trees. 1 tin dissolved in 16 gallons of water.

PRICES:—
1 to 8 tins, **1/3** each; 8 tins, **1/2** each; 12 tins, **1/1** each; 20 tins, **11d.** each; 40 tins, **10d.** each.

BENTLEY'S
INSECTICIDE.

This valuable **NON-POISONOUS Plant Wash** has for the last thirty years held the highest position in the Horticultural World as a most effectual **Destroyer of all Forms of Filth,** including
MEALY BUG, SCALE, AND THRIP,
without risk to the foliage. It also possesses cleansing properties, and leaves the foliage clean and bright.

PRICES:—
6 galls., **7/6** per gall.; 3 gall., **8/-** per gall.; 1 gall., **9/-**; ½ gall., **5/-**; 1 quart, **3/6**; 1 pint, **2/-**.
Carriage paid on 7/6 orders and upwards to any railway station.

WHOLESALE MANUFACTURERS
JOSEPH BENTLEY, LIMITED,
Chemical Works. Barrow-on-Humber, HULL.

NICOTICIDE Kills all Greenhouse Insects in one Application.
(FUMIGANT.)

	Cubic ft.	each.
Half-gallon Tin, contains sufficient for	160,000	**60/-**
No. 1 size Tin—1 pint ,, ,,	40,000	**15/-**
No. 2 size Tin—½ pint ,, ,,	20,000	**7/6**
No. 3 size Bottle—6 oz. ,, ,,	12,000	**4/6**
No. 4 size Bottle—4 oz. ,, ,,	8,000	**3/-**
No. 4½ size Bottle—2 oz. ,, ,,	4,000	**1/8**
No. 5 size Bottle—1 oz. ,, ,,	2,000	**10d.**

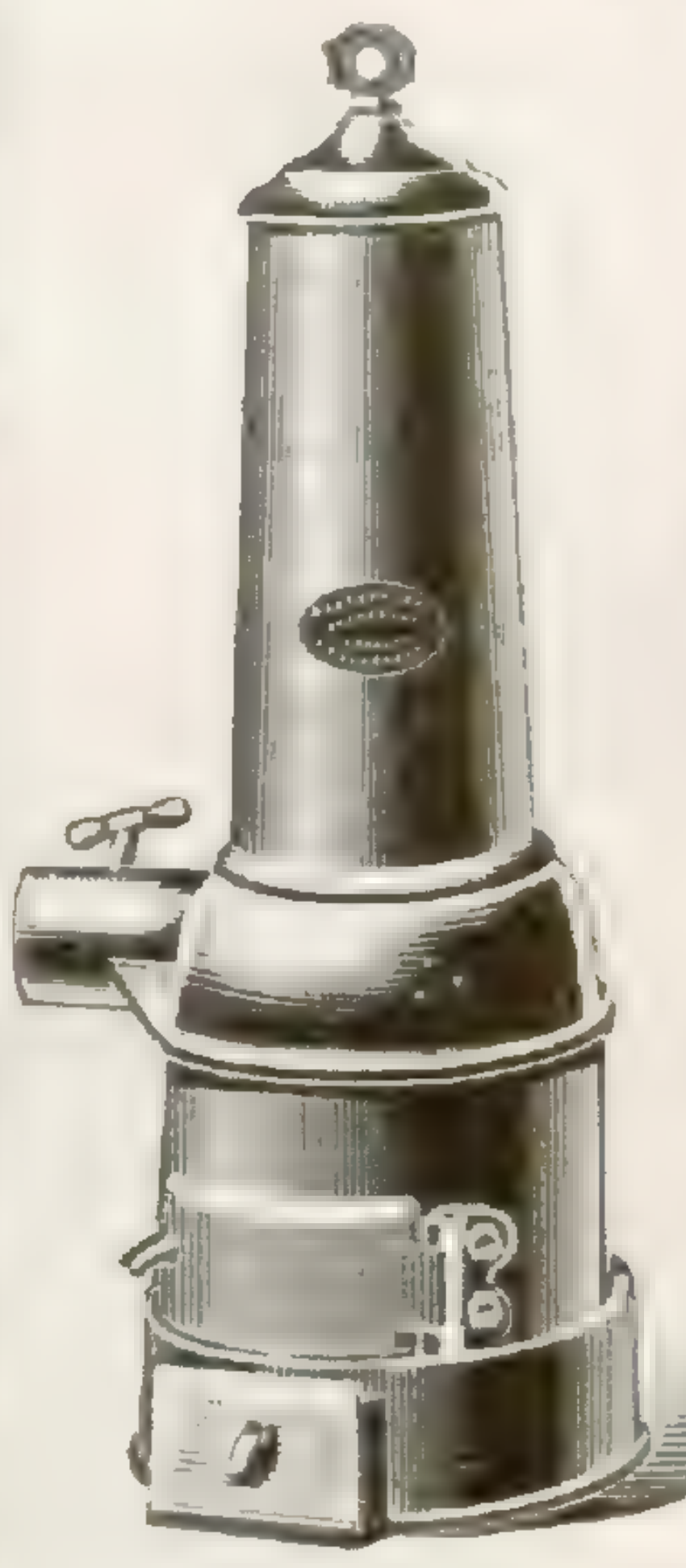
Carriage Paid.

TRADE
NICOTICIDE
MARK

Fumigators, 1/- each for 5,000 cubic ft.
Nicoticide Plant Spray.
Half-pint, **1/2**; Pint, **2/-**; Qrt., **3/6**; Half-gall., **5/-**; Gallon, **10/-**
Use 1 part to 40 parts for green fly, etc. Carriage paid.
Ask your Seedsman for our Goods.
HUNTER & GOW,
45, THOMAS STREET, LIVERPOOL.

WHY BUY FOREIGN DOORS? — We make all kinds of woodwork to compete against foreign. Timber, portable houses, woodwork supplied for United Kingdom or export. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 91b, Pennywell Road, Bristol.

GREEN'S
PATENT
HOT WATER BOILERS and HEATING APPARATUS.



For Public and Private Buildings, Greenhouses, Conservatories, etc.

SPECIAL BOILERS MADE TO ORDER.

ESTIMATES GIVEN

Please write for Price List No. 4.

THOMAS GREEN & SON, Ltd.,
Smithfield Ironworks, North St., Leeds, and
NEW SURREY WORKS, SOUTHWARK ST.,
LONDON, S.E.

FLOWER POTS.

SANKEY'S
FAMOUS
GARDEN
POTS

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant

Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

100,000 SUTTON'S FLOWER OF SPRING CABBAGE PLANTS 2s. 6d. 1,000.
W. HORNE and SONS, Cliffe, Rochester.

Catalogues and Estimates Free.

MESSENGER & Co Ltd
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office 122 VICTORIA St S.W.

Modern Glasshouses
. . AND . .
Heating Installations

Recent Contracts include the following :—

His Grace the Duke of BEDFORD, Woburn Abbey.
His Grace the Duke of DEVONSHIRE, Beamsley Hall, Bolton Abbey.
His Grace the Duke of PORTLAND, Welbeck Abbey, Worksop.
The Rt. Honble. the Earl of ELLESMERE, Croft Lodge, Brackley.
The Rt. Honble. Earl TEMPLE, Wotton House, Aylesbury.
The Rt. Honble. Lord DIGBY, Minterne, Cerne Abbas.
The Rt. Honble. Lord BELPER, Kingston Hall, Notts.
The Rt. Honble. Lord WINDSOR, Hewell Grange, Redditch.
The Rt. Honble. Lord BOLTON, Bolton Hall, Wensleydale.
The Rt. Honble. Viscount GALWAY, Serlby Hall, Bawtry.
Lady HULSE, Breamore, Salisbury.
Lady MAUD HASTINGS, The Manor, Ashby-de-la-Zouch.
The Rt. Honble. Lord HILLINGDON, Hillingdon Court, Uxbridge.
The Honble. H. CUBITT, Denbies, Dorking.
Lieut.-General Sir ARTHUR PAGET, Coombe Warren, Kingston-on-Thames.
Sir C. SWINFEN EADY, Oatlands Lodge, Weybridge.
Sir E. BLOUNT, Mawley Hall, Cleobury Mortimer.
Sir FRANCIS BURDETT, Ingleby, Derby.
General CLIVE, Perrystone Court, near Ross.
Col. G. N. STARKIE, Huntroyde Park, Padiham.
Col. R. T. GASCOIGNE, Lotherton Park, Aberford, Leeds.
Major MULLINS, Westfield Place, Battle.
Major W. D. WINTERBOTTOM, Aston Hall, Derby.
Rev. EDWARD WARRE, D.D., Eton College, Windsor.
Rev. Dr. BURGE, The College, Winchester.
E. G. PRETYMAN, Esq., M.P., Orwell Park, Ipswich.
CORPORATION OF HANDSWORTH.
CORPORATION OF LINCOLN.
LEICESTERSHIRE and RUTLAND ASYLUM.
ROYAL MASONIC BENEVOLENT INSTITUTION, Croydon.
NEW ZEALAND DEPARTMENT OF AGRICULTURE.
A. R. PILKINGTON, Esq., Rainford, St. Helens.
H. S. LEON, Esq., Bletchley Park, Bletchley.
F. ECKSTEIN, Esq., Ottershaw Park, near Chertsey.
LIBERT OURY, Esq., Holwood House, Walton-on-Thames.
F. M. GRATTON, Esq., F.R.I.B.A., Aspenden House, near Buntingford.
C. DUNCOMBE SHAFTO, Esq., 9, South Bailey, Durham.
S. CHIVERS, Esq., Homefield, Histon, Cambs
ERNEST DRESDEN, Esq., Hamilton House, Newmarket.
W. G. A. EDWARDS, Esq., The Orchard, Wellgreen, near Leeds.
P. B. COWARD, Esq., Brentwood, Rotherham.
E. G. WRAGG, Esq., Ranmoor Cliff, Sheffield.

No Garden Library is Complete without this Book.

The Culture of any Flower, Fruit, or Vegetable at a Glance.

THE ENCYCLOPÆDIA OF GARDENING.

Crown 8vo, 482 pages, bound in cloth.
NET 3/6; by Post, 3/10.

By T. W. SANDERS, F.L.S., F.R.H.S.
Editor of "Amateur Gardening."

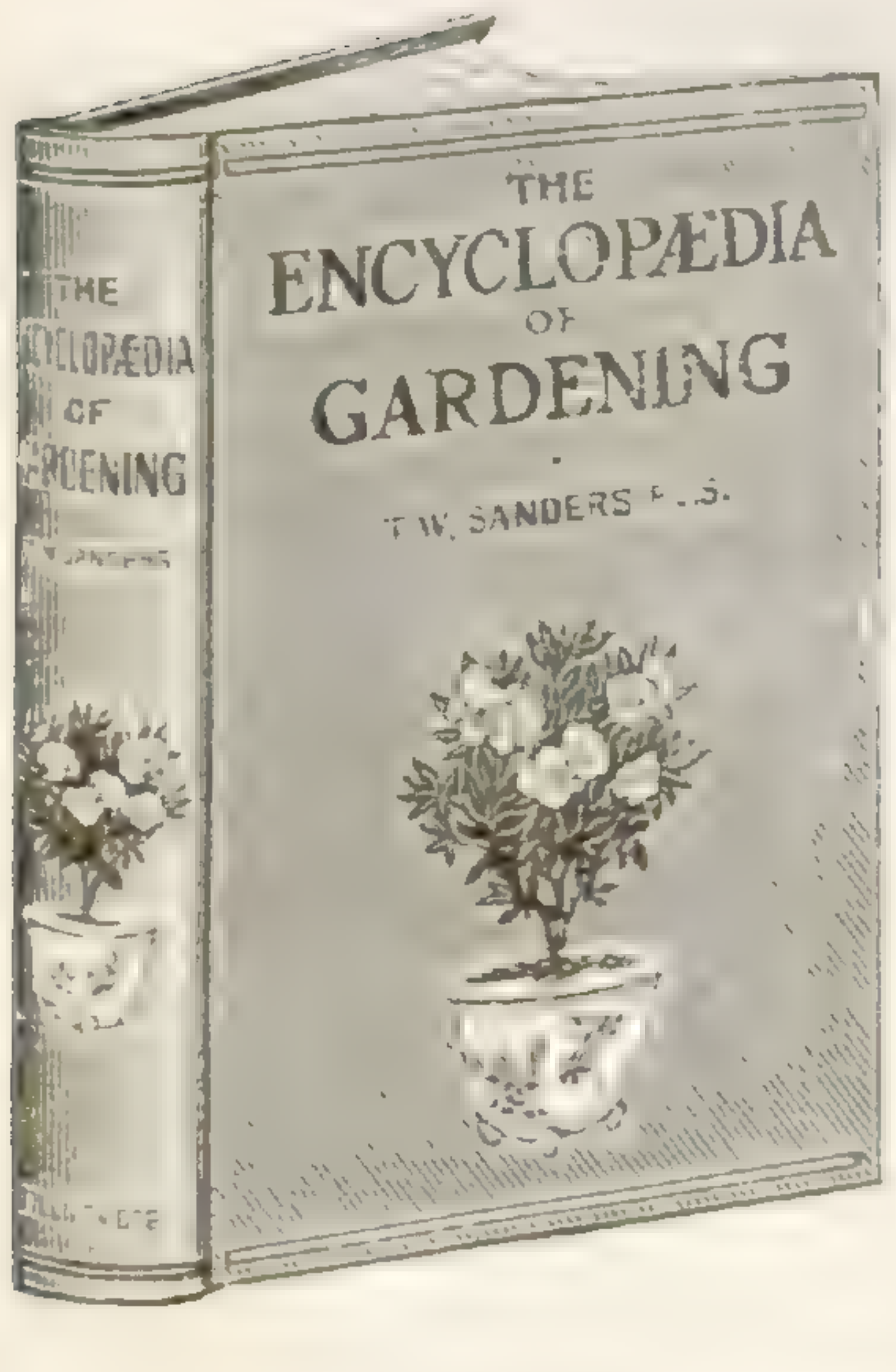
A COMPLETE GUIDE AND DICTIONARY to the Culture, Propagation and Description of Flowers, Fruit, Vegetables, Plants, Trees, Shrubs, etc.

. . . INCLUDING . . .

Time of Planting.
Position.
Soil.
Manures.
Temperatures.
Common or Popular Names.
Botanical Names.
Watering.
Natural Order.
Date of Introduction.
Species Cultivated.
Propagation.
Colour.
Height.
Time of Flowering.
Duration.
Forcing.
Potting.
Pruning.
Cultural Details.

"Gardeners who want a really practical dictionary of their art will find all they need in this work."—*Sheffield Independent.*

☛ *Send Postcard for complete Catalogue of Books on all Garden Subjects.*



FOURTEENTH EDITION.
Revised and Improved.

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE," 148 & 149, Aldersgate St., E.C.

Please send me a Copy of the New Edition of "THE ENCYCLOPÆDIA OF GARDENING," by post, for which I enclose remittance of 3/10.

Name ....

(G.M.) Address ....

BROOMS.

There are at least two things to avoid when planting brooms; first, the specimen system, which consists of sticking in one each of this, that, and the other. A very proper system to follow in forming a collection for botanical purposes, but one that is utterly foreign to good gardening, and one of the readiest ways of destroying the beauty of this lovely genus. Plant if possible always in odd numbers, with three as a minimum, and if the ground can only carry a score of plants comfortably, confine oneself to four or five species at most, and these will add credit to the garden, and form an object-lesson in other directions.

Secondly, having introduced brooms to garden or grounds, continue adding to them at frequent intervals; do not wait till they become decrepit by age or mutilated by accident, but always maintain the vitality of the groups by the infusion of youthful vigour, for with brooms you must get away from the old tradition. "Plant once! Plant for ever," and to be able to always rejoice in the light-hearted loveliness that brooms bring to the garden in their flowering season, we must have plants in the vigour and prime of youth. Under favourable conditions many of the brooms will reproduce themselves from seed, and if carefully fostered in this direction, plants will spring up and group themselves in charming abandonment so characteristic of a child of Nature. And as regards the kinds to plant, one rarely errs in having Præcox, albus, albus durus, Kewense, purpureus incarnatus, and all the coloured forms of Scoparius, with Carlieri as the last in flower. To these add their half-sisters Genista Ætnensis, cinerea, and virgata, and the lovely yellow scented Spanish broom Spartium junceum, that flowers late in summer, and we may fairly claim to have the best.

Thomas Smith.

PEAR BEURRE SUPERFIN.

Raised some seventy-four years since at Angers by M. Goubault, this fine pear may be described as one of the best of the many excellent varieties that ripen during October and November, and as worthy of a place in the smallest garden in which pears are grown. The variety is, indeed, specially suited to gardens of limited size, for it can not only be depended upon to produce good crops but to bear fruit that will be fully appreciated when upon the table. These are two important considerations, and it is certainly not without interest that the fruits are of good appearance when they have reached maturity. The skin is pale green, with large patches of russet, which in some cases extend over the greater part of the surface. The flesh is rich, melting, and juicy, and somewhat resembles that of Marie Louise, but is rather more brisk. The tree is upright and compact in growth, and may be successfully grown in all the forms that find favour with cultivators. In the more favoured districts it makes an excellent standard, and in the Northern Counties of England, and in Scotland, it should have a wall, such shelter being especially desirable in gardens where the soil is naturally heavy and cold, and therefore unfavourable to the ripening of fruit and wood.

PEAR BEURRE SUPERFIN.

Jerusalem Artichokes. — When the soil is in a suitable condition lift the whole of this crop, select some medium-sized tubers, and plant them in a well-manured piece of ground for next season's crop. The remainder, if stored in sand in the root house, will keep satisfactorily until well in the spring. A distance of two feet six inches between the rows, and eighteen inches from plant to plant is not too much for this strong-growing vegetable.—C. Flack.

WORK FOR THE WEEK.

◆

COOL ORCHIDS.

COCHLIODAS.—No orchids in the cool house are more attractive than C. Noetzliana, and, where the plants are induced to grow satisfactorily, their long spikes of orange-scarlet flowers are in striking contrast to the odontoglossums and other orchids flowering in the late spring and summer months, especially so when there are large specimens displaying a number of spikes in bloom at the same time. The flowers are exceedingly durable, and are serviceable for many purposes. There is little variation, and, though one sometimes finds the flower larger and the colours specially brilliant, these slight variations can probably be attributed to robust growth and better ripening of the pseudo-bulbs in some plants.

POTTING.—We find that C. Noetzliana does not care about being repotted frequently, and the plants take some months to recover from a shift, even when attended to at the active rooting season. Provided the compost is in good condition, just remove the moss and surface of the old material and in its place put good new material. Any top-dressing required should be attended to at the present season, as the flower scapes are advancing from the developing pseudo-bulb.

SLUGS AND SNAILS.—Not only is this work more conveniently done now, but the removal of the old and decaying matter about the base of the pseudo-bulbs will give opportunities for the destruction of snell snails, slugs, and other destructive pests which may secrete themselves about the base of the plants. There can be no doubt that the greatest pests we have to contend with are slugs; if there is one in a house it generally finds the flower spikes of cochliodas in an early stage of development, and constant observation is necessary to protect them from these pests.

VARYING SEASON OF GROWTH.—We find that the plants do best when grown several together in the same pot, but those arranged together to make specimens should be at about the same stage of growth. It will frequently occur that a plant is thrown out of its usual season of growth; for instance, it may lose its spike at an early season and it will commence growing much earlier in the season than one that carries a spike of flowers. In the case of those being used for seeding purposes, the growth will be delayed, and so thrown out of its proper season. These items can only be remedied by careful observation at the potting season. We find that the cochliodas do best at the warmest end of the odontoglossum house during winter; and, as they are growing throughout the whole winter, they require liberal treatment, but if exposed to strong light during the spring and summer months the foliage is liable to spot and become disfigured; therefore a shady, moist position suits them best.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

CANNAS.—These plants are most effective subjects for the conservatory, the flower spikes, together with the handsome foliage, making them specially noticeable. Of the various methods of cultivation in practice perhaps the following will be found to be one of the best, producing, as it does, splendid blooms of a gorgeous colour. Make a start immediately by shaking most of the old soil from last season's plants. Place in a shallow box, which has been well drained, keeping each variety separate. Cover with fine soil, taking care that all the roots are well covered. Thoroughly water in, and place in a temperature of 55 to 60 degrees. In a short time the sucker growths will appear. When about two or three inches long these may be taken off with a good heel, and inserted singly in small 60-sized pots, using a light sandy compost. Place them in a propagating pit, when they will be found to root readily. When rooted, remove to a lower temperature. When ready, shift into 48's, in which pots they may be allowed to flower. For this potting use a fairly rich compost, adding a little dried cow manure. As cannas are very accommodating in the time of flowering, they may be worked in batches, and so made to extend throughout a long season.

CHRYSANTHEMUMS. — Cuttings which have been potted, and have recovered from the check, should now be given air freely on all favourable occasions. Continue to pot off others struck later as soon as ready, never allowing the roots to become matted, or a serious check will be the result. Pot moderately firm to induce sturdy growth.

HYDRANGEA HORTENSIA.—A few of the old plants which have been wintered in frames may now be brought in to make specimens. Prune back to a strong bud, and, after top-dressing, place them in an early vinery, where they may be syringed. A batch of Lilium longiflorum and L. Harrisi may also be put into the vineries for early flowering.

ROSES IN POTS.—Continue to introduce relays of roses for forcing. The temperature should not be allowed to go higher than 45 degrees at night, rising five to ten degrees in the day. Avoid draughts and sudden changes in the temperature by careful ventilation. If a little artificial manure is used when the plants are top-dressed further feeding will not be necessary until they are in vigorous growth. As forced roses are very susceptible to attacks from insects and mildew measures must be taken to prevent them.

CONSERVATORY. — Steps must now be taken to procure plants for edging in the conservatory. Isolepis gracilis and Carex japonica should be split up into small portions and put into small pots to allow for a shift later on. Insert cuttings of panicums and tradescantias in variety. These all do well in a conservatory if properly hardened off. It is almost a necessity to have a few plants, other than those flowering, to relieve the colour of flowers and make new features. This may be done without encroaching on the palms, because well-grown plants of Grevillea robusta, Aralia Sieboldi, Ficus elastica, Araucaria excelsa, Aspidistra lurida, and its variegated form are all well suited for conservatory use.—A. Grubb, Porter's Park Gardens.

HARDY FRUITS.

PLANTING.—No time should be lost in finishing the planting of fruit trees, so that the soil will have had time to settle before activity commences. Where the soil has not already been prepared, and it is proposed to plant a row of trees, start by bastard trenching, working a strip six feet wide to the desired length (or six feet square if for one tree); of course, this width would not be necessary for bush fruits. Afterwards dig the holes, according to length and depth of the roots, allowing for the topmost roots to be about four inches from the surface. Work the fine soil among the roots in thin layers, and tread each layer as the work proceeds; well ram with a rammer after the top roots are covered, finish off with three inches of loose soil, and a dressing of about three inches of stable manure. If the soil is very poor this latter may be removed in April, and a dressing of good farmyard manure substituted.

WASHING OR SPRAYING.—The importance of winter washing fruit trees is becoming more recognised by all good fruit growers, for it not only allows gardeners to send clean handsome fruit to the table, but it increases by more than one-half the yield of serviceable fruit. One is often asked: "What is the best wash for fruit trees?" That, of course, depends upon the enemy to be combated.

APPLE AND PEAR SCAB.—This disease is very prevalent throughout the country where apples and pears are grown, and stems and branches should be given a thorough drenching with sulphate of copper, used at the rate of 8lbs. to the 100 gallons of water, and while the trees are quite dormant. Follow this up with two or three applications of Bordeaux mixture during April and May. When using sulphate of copper only wooden receptacles should be used for mixing, and, if possible, for spraying.

APPLE SUCKER.—A great deal of damage is often caused, especially to young trees, by the apple sucker throughout the summer months, and any trees that had an attack last year should now have a good lime and salt wash. I had a great difficulty in keeping this pest under until I tried this excellent remedy. Obtain fresh lime of the best possible quality, and use at the rate of 1cwt. of lime and 40lb. of common salt to 100 gallons of water; dissolve separately, and mix together in the machine; dirty salt can usually be obtained at the butchers or grocers at very moderate cost. This wash is equally good for plum aphis.

SPRAYING MACHINES.—The success of all washing depends a very great deal on the machine and nozzle used for the separate washes. Where a small quantity of fruit only is grown, and a garden engine is at hand, this may be easily adapted to the work if a length of hose is fitted to the top of the pump. A coat of white enamel paint, such as is used for painting baths, should be applied to the inside a few days before being used, or damage will be caused to the machine by the action of the copper on the galvanised iron, not to mention a great weakening of the wash. Two nozzles at least will be required—a fairly coarse one for winter washes, and a fine one for Bordeaux mixture. Clear water should be always pumped through before putting the machine away for the day.—J. Whittle, Cheveney Gardens.

THE KITCHEN GARDEN.

ONIONS.—To secure well-ripened and early crops of onions a sowing of seed should be made in boxes now, and placed under glass in a temperature of about 50 degrees. Do not unduly hasten growth, but bring the plants along steadily near the glass. Prick the young plants off into other boxes as soon as they are large enough, and use a rich soil that is somewhat open. When once established the seedlings may be grown in a cool pit or frame, with a liberal amount of air on fine days.

CELERY.—Where early celery is required a small quantity of seed may be sown; this is somewnat slow to germinate in a low temperature, therefore subject it to about 55 degrees of heat, and cover the top of the box or pan with boards or slate to keep the surface of the soil in darkness, and uniformly moist. After the seedlings begin to grow freely a temperature 10 degrees lower is to be preferred. Avoid checks to growth; move the young plants from the seed receptacle early, and prick them out in boxes filled with rich soil; place out of the way of cold draughts, and at no time permit drought at the roots.

PEAS.—A sowing of an early variety, to form a succession to the pot-sown ones, may be made on a high and warm south border. Draw the drills from north to south, rather deeply, and sprinkle therein a moderate amount of wood ashes and soot, as these will form an aid to growth, and assist in warding off the attacks of slugs. The distance from row to row must be judged by the height of the variety grown, but five feet is sufficient space for all tall early peas, while for the dwarf kinds two feet six inches to three feet is enough. Early Giant, Gradus, and May Queen are all excellent for this sowing.

BROAD BEANS.—Where these vegetables are appreciated make a plantation in a warm aspect to obtain a few early dishes. The main sowing may be made at any time now in a more open quarter of the garden. These vegetables succeed on strong land, and give a longer supply on this than on light soils. Early Mazagan is yet one of the best for early gathering, while the many varieties of the long-podded types are capable of giving heavier yields for the main supply.

SPRING CABBAGE.—On a fine day we run the hoe among this crop, and at the same time sprinkle a little sulphate of ammonia or nitrate of soda round them to encourage growth. If the stock is short, make a sowing in boxes and raise the young plants under glass for pricking out in the open later.

GENERAL REMARKS.—Whenever the weather is favourable the work of manuring and digging should be pushed forward to allow frost and wind to provide sweet and friable seed beds. Where possible land should be brought into a proper condition by lightening heavy soils with rich sandy materials from the rubbish heap, etc., or by adding marl or turf to light quick ground which is so difficult to manage during extreme dry times. Batches of tarragon, mint, chervil, etc., should be forwarded by planting roots in boxes or pots, and placing them in a little heat.—Charles Flack, Cholmondely Castle Gardens.

Berberis Thunbergi minor and B. stenophylla Irwini.—Anyone familiar with the sterling qualities of Berberis Thunbergi will readily appreciate the value of its miniature counterpart. It has all the good qualities of the type, producing cream-white pendulous flowers in spring, and in autumn becoming brilliant in leafage. The contrast in habit between the type and variety is strikingly evident in established plants, as the variety minor rarely attains to a third of the dimensions of the type. In a similar way the well-known Berberis stenophylla has its miniature counterpart in the variety Irwini. These dwarf forms are of inestimable value on rock gardens, where limited space precludes the use of stronger kinds; they also succeed on low banks, and may often be used as edging or carpet plants to shrub beds, in which form they create a distinct change from the usual run of groundwork subjects.—L. O. V.

THE HOME TIMBER OUTLOOK AND THE URGENT NEED FOR AFFORESTATION.

On the occasion of the annual meeting of the Aberdeen branch of the Royal Scottish Arboricultural Association Mr. Donald Munro, of Banchory, delivered an intensely interesting and practical lecture on the above-named subject, and the following is a résumé of his remarks:

Signs of Exhaustion.

After referring to the danger of exhaustion of foreign and Colonial forests, Mr. Munro said: From my own personal experience, I can say that in Scotland we are pretty near the end of our resources. We seem to have been cutting down timber with what I might term a cheerful abandon, never pausing for a moment to consider the question of replanting, and, when one mentions the subject, it is a matter of surprise to find how many people are under the impression that we possess very large resources in the north—resources that, according to them, have not been tapped. This, however, is not the case, for although there is still a good deal of wood in Ross and Cromarty, Inverness, Elgin and Moray, and Banff shires, there is not more than sufficient to keep the mills already working in these counties many years. The same story is also applicable to the once great timber areas in Perthshire, Argyleshire, Forfarshire, Dumfriesshire, and Ayrshire. In our own immediate neighbourhood, namely, in Aberdeenshire and Kincardineshire, the supply is very far from being equal to the demand. It is an easy matter to point out the estates within fifty miles of Aberdeen where any great acreage of woodland exists. Commencing with Deeside, we have Durris, Crathes, Ballogie, Finzean, Craigievar, Glen Tanar, Abergeldie, Invercauld, Mar Lodge, and Balmoral, but it is doubtful whether some of these can be taken into account, as on several of these estates there is every probability of the timber never being sold. On Donside and vicinity there are the Fetternear and Cluny woods, and the woods of Strathdon, while on the north-western part of the county we have the famous Binhill woods at Huntly, and we have still some fine old wood belonging to the Dukes of Fife and Richmond and Gordon in Morayshire, while on the Dowager Countess of Seafield's estates there are some 30,000 acres of wood, of which, however, about 20,000 has been planted during the last 45 years, on ground formerly valued at 8d. per acre.

After reminding his hearers that what is left of our home timber is getting further and further away from our only means of transit, Mr. Munro proceeded to deal with Scotland's suitable forest land, in the course of which he said: I need not remind you, gentlemen, that there are millions of acres lying waste, or bringing in not more than 6d. per acre to the proprietors—acres that could be utilised at very little expense, and turned into the finest timber-bearing land in Europe. In Kincardineshire I know of an area where, I am sure, there is room for a 20,000-acre afforestation scheme, on heath ground, not worth more than 6d. per acre for sheep grazing. I am not posing as an alarmist, but we are not only reaching, but have reached, a crisis which gives cause for serious anxiety. Something must be done, and done quickly, as the evil cannot be remedied in a year or two. If our large landed proprietors could only be made to realise the actual position that must inevitably arise if we take no steps to avert the calamity which is bound to come, they would lay the foundation of wealth, if not for themselves, at any rate for their successors.

Value of Home-grown Timber.

Coming to deal with the value of home-grown timber, the lecturer said that the foreign timber man will tell you that Scots fir cannot now be grown either in size or quality to compare with his importations of red wood, or even with the Scots fir our ancestors used. But these critics almost invariably make an exception of some particular wood of great age in their own district. The Ross-shire man excepts some grand old Lovat or Balnagowan perhaps; the Nairnshire man must, of course, except the magnificent old woods near there, where there are still thousands of firs, which for size and quality are equal to the best foreign importation. The late Provost Mann, of Nairn, offered £13,000 cash down, for some 6,000 of those trees. Then, if you turn to Inverness-shire the critic there excepts the natural-grown forests of Rothiemurchus and Abernethy, skeletons now, however, and he may well do so, for in the latter part of the eighteenth century these were the sources of regular shipments to the Thames for shipbuilding purposes. How does the critic of Scots firs, as grown now, account for all these exceptions, his Ballochbuies, etc.? The fact is that if we could imagine Scotland as it might have been now if afforestation had been ordained 150 years ago, there would now be no critics to argue with, for all round the hillsides of every county we would have had fine timber of every description, and varying in size and quality, according to the soil and climate, and in age from the veteran plantation of 150 years to the seedlings, newly transplanted from the great national or local nurseries. Our German friends, who can give us points in forestry, have made a concession in favour of our soil, and frankly admit that for timber cultivation it is second to none. Seeing then that we have the soil, the men, and the plant, the State ought at once to commence some great national scheme of afforestation.

Rearing of Forest Trees.

After a dip into the future, and a reference to what the condition of Scotland will be 100 years hence, after a great afforestation scheme, and touching on the great value of timber for paper-making, Mr. Munro proceeded to deal with the rearing of forest plants. Too little attention, he said, had been given to a very vital question relative to afforestation—namely, the rearing and supply of forest plants. Apart from the fact that, in many cases, only a superficial knowledge is possessed as to the care and selection of plants, still more unfortunate is the way plants are sometimes dumped into unsuitable soil, and he thought it would be a feasible plan for the state to supply proprietors with trustworthy plants from State nurseries at cost prices, and, in some cases, if desired, a practical man could be sent to advise as to soils, and to give practical instruction in planting where it was required. He had in his mind's eye a case in point, where 1,200 acres were planted indiscriminately. The result was that half had to be cut down and burned about fifteen years ago, and the remainder, now thirty years old, is practically useless. On small estates with nurseries he had occasionally been struck by the haphazard manner in which planting was conducted, little or no regard being given to either soil or exposure; and, in valuing woods, had often felt that if due regard had been paid to the planting of the proper trees adapted to the particular soil, a far better result would have been attained financially.

The trees he would select for planting are the larch, Scots fir, spruce, and Douglas fir. The larch is one of the best trees possible, and produces a wood of the finest quality for a generality of purposes—sleepers, boxwood, staves, heading, etc. Spruce, which has been considerably neglected by most of our foresters and proprietors, can be grown equal to the best Baltic product. He was however, glad to say that this fine timber is now being recognised at its true value. In his opinion, spruce planted in suitable soil and surroundings would give far better returns than any other wood he knew, and, as an instance, he stated that there is an area of this fine wood not many miles distant growing about 550 to the acre, and 50 years of age. The value is £110 per acre as it stands. With regard to Douglas fir, he frankly admitted that he had not much experience in its manufacture, but believed it will be found to be very useful, and, in many instances, will take the place of Scots fir for the manufacture of boxwood, etc. Many people are under the impression that it will ultimately take the place of larch, but such was not his opinion, as the principal use to which larch is put—namely, pole and pit wood—renders Douglas fir unsuitable owing to its shape. That trees can be grown in many districts up to an altitude of 1,400 feet above sea level with success has been amply demonstrated. He mentioned that he examined lately some Scots fir, larch, and spruce, at Auchernach, Strathdon, measuring from 6 feet 9 inches in circumference five feet from the root. He knew that great trouble is being experinced with disease in the larch plants. The reason why some larch plantations have not been a success, he thought arises from the fact that not enough care is exercised in the selection of the seed, which, in many cases, is taken indiscriminately by the cone gatherers. If further proof is necessary that we can grow the trees, he briefly referred to the fine specimens of grand old trees still existent at Monymusk, Breadalbane, Ballochbuie, Gardon Castle, Finzean, etc. Those who visited Monymusk in the summer, through the courtesy of Sir Arthur Grant, had ample opportunity of seeing the far-famed larches in Paradise, giants ranging from 175 to 416 cubic feet, averaging for twelve trees 268 cubic feet.

State and Afforestation.

Coming then to deal with the State and afforestation, Mr. Munro said that if the State is particularly anxious to encourage afforestation, they certainly employ peculiar methods. A case which came under his own notice may very well be quoted. On an estate on Donside, about 30 miles from a railway station, 19 acres of land were planted up, which the assessor promptly assessed at £12. The proprietor had every intention of planting up from two to three hundred acres—as a matter of fact the plants were purchased—but this encouragement on the part of the State effectually precluded any possibility of this being done. Another hardship under which proprietors suffer is in connection with the roads. They may plant up trees and be taxed from anything up to 100 years. As the farmer expects to find the roads in his district strong enough to bear the transport of his produce, so should the forester have the same facilities in taking his timber to market. The result of this negligence is that the expense of haulage is considerably increased, and hence the proprietor has to accept a reduced price.

Squirrels.

Dealing with the vermin foresters have to contend with, Mr. Munro declared that if afforestation is to be a success, a clean sweep all over Scotland must be made of vermin in the woods. It is a curious thing to consider the fascination of the squirrel, but the charm, it seems, is all in the big curly tail. Had squirrels been without their big, pretty tail, they would have been as ugly as their relative, the weasel, and would have been exterminated long ago. Even the laird sometimes forgives their depredations when admiring their gambols, for we are all apt to forgive the sins of beauty. He knew one proprietor, in fact, who rigidly preserved them. Nobody can compute how many hundreds of thousands of pounds the squirrel has cost Scotland. We are supposed to be a practical people, and yet our lairds have never until recently in the far north thought of putting their heads together and making an effort to utterly root out the vermin. But without combination the thing is impossible. Recently he was engaged valuing two woods, each of several hundred acres in extent, and there was not a Scots fir in these woods which had not been more or less destroyed by squirrels. It is pure guesswork, of course, but, considering the age and present small dimensions of the trees, and other circumstances of these particular woods, he believed the damage done by the squirrel must have amounted to more than the present value of the woods—to perhaps as much as £15 per acre, or, say, £9,000 on 600 acres.

Increased Employment.

The lecturer concluded his most interesting and practical paper by pointing out what afforestation would mean in the way of employment. Let us suppose, he said, the possibility occurred during the next few years to plant even ten millions out of the twenty practically waste acres of Britain, this would mean employment for about 100,000 men as foresters and labourers alone, while at least as many more would be employed in subsidiary work. Allowing four dependents to each man, this would mean that a living on the land would be given to about a million of human beings, who otherwise would go to swell the already overcrowded towns. In addition to those actually employed in forestry, there would also be employed the necessary labour for haulage, loading, and sawing, to say nothing of other industries, such as building, shopkeeping, schooling, etc., which would follow, and it may be taken that more men would be employed by the conversion of the timber than by its growth. Think of the vast number of saddlers, blacksmiths, and engineers that would find employment, to say nothing of those engaged in the saw-making industry and the manufacturers of belting. Railway companies would also be greatly benefited by the additional traffic, and our farmers and smallholders would find a ready market for their produce. Surely such a prospect should appeal to the nation at large as a highly desirable thing to attain to. It is a national question, and should not be mixed up with any political party. A further advantage lies in the fact that forestry gives employment at a time of the year—late autumn and winter when country work generally is scarce, and thus, by keeping men fully employed all the year round, there would be a great inducement for them to remain on the land.

The lecture was illustrated by a capital series of lantern and cinematograph views, which greatly added to its enjoyment. On the motion of the President, a most cordial and enthusiastic vote of thanks was awarded Mr. Munro for his admirable and thoroughly practical paper.

OBITUARY.

MRS. MARTIN JOHN SUTTON.

We regret to announce that Mrs. Martin J. Sutton, wife of the senior partner of Messrs. Sutton and Sons, Reading, died on February 2. The funeral took place at St. Andrew's Church, Sonning, on Monday, February 6, amid abundant tokens of the very high esteem in which this gracious and kind-hearted lady was held throughout the district. The little church was crowded with mourners and sympathisers, and almost as many people were in the churchyard to pay their respect to the memory of Mrs. Sutton. All grades of society were present, noble, gentle, and simple; the Mayors of Reading and Henley attended with ministers of the various religious bodies of these towns, heads of Messrs. Sutton and Sons' departments, and representatives of practically every philanthropic movement in the district. The members of the Sutton family were almost all present at the church and the graveside. A noble palm-leaf from Mr. Martin J. Sutton was the only tribute on the coffin, but the floral offerings sent were both numerous and beautiful, and the grave was lined with ivy, and white and salmon-coloured cyclamens. Mrs. Sutton was 57 years of age, and passed away on the thirty-sixth anniversary of her wedding day. We wish to add our sympathy to that already expressed so widely with the bereaved husband and family.

GREENHOUSE MANAGEMENT.—THE AMATEUR'S GREENHOUSE, the popular book by T. W. Sanders, not only treats of the selection and cultivation of greenhouse plants and flowers, but gives full instructions how to build a greenhouse and how to heat it, as well as every detail as to the management of the plants and flowers grown in it. The price of this book of 416 pages is 5s. net, or by post 5s. 6d., from W. H. and L. Collingridge, 148, Aldersgate Street, London.

NATIONAL SWEET PEA SOCIETY.

GREAT EXHIBITION AT ROYAL HORTICULTURAL HALL, WESTMINSTER, July 11 and 12.

Now is the best time to join the Society. Minimum Annual Subscription, 5s. Schedules on application. "Sweet Pea Annual" free to Members; 2s. post free to non-members.

CHARLES H. CURTIS, Hon. Sec.
Adelaide Road, Brentford, Middx.

STRATFORD-ON-AVON FIFTH ANNUAL FLOWER SHOW.
On BANK HOLIDAY, August 7th, 1911.
OPEN TO ALL.
MARIE CORELLI CHALLENGE CUP,
Value 25 guineas,
With Gold, Silver, and Bronze Medals,
For Best Collection of Cut Flowers and Fruit to occupy a stage 12ft. by 4ft.
NUMEROUS OTHER PRIZES.
Schedules to be had of Mr. J. HOWE, Hon. Secretary, Stratford-on-Avon.

EXHIBITIONS AND MEETINGS.

National Chrysanthemum Society.

The annual general meeting of this old and useful society was held at Carr's Restaurant on Monday evening, February 6. There was an excellent attendance, under the presidency of Sir Albert Rollit. After the notice of the meeting, Mr. C. Harman Payne informed the members that Sir Albert had recently had conferred upon him a Knight Commandership of the Order of St. Olaf of Norway. Considerable applause greeted this announcement, and Sir Albert acknowledged the greeting, and said the Order had been conferred upon him for services rendered through the Norwegian Chamber of Commerce.

The minutes of the previous annual general meeting having been read and confirmed, the President moved the adoption of the report and balance-sheet (of which we give an abridgement). He spoke highly of the work of the committee, its chairman, and the secretary, and said the report was a statement which all members should feel extremely gratified with. He was proud to be president, and would always endeavour to do his best to further the society's interests. He thought each member should take a close and personal interest in the society. He referred to the society's friendly associations with other societies at home and abroad. Sir Albert paid a high tribute to the excellent and painstaking work of the Floral Committee, and also pointed out the great value of the conferences to members, and to the chrysanthemum world. He also asked that the members of the society would do all that lay in their power, sparing no effort to make the great International Exhibition of 1912 a huge success. Referring to finance, Sir Albert said the society now had a profound air of respectability in that it had finished the year without a liability, with a balance at the bank, and a reserve fund of £50. The motion was seconded by Mr. Thos. Bevan, and carried unanimously.

REPORT OF THE COMMITTEE FOR 1910.

The Executive Committee have pleasure in submitting to the members their annual report for the year 1910.

Sir Albert Rollit, D.C.L., LL.D., was re-elected president for the third year in succession at the annual general meeting held in February last. During the past year the president has advanced the cause of our society in many directions, and your committee desire to place on record their keen appreciation of his continued activities in keeping the name and work of the National Chrysanthemum Society constantly before the public, both at home and abroad.

The Early Chrysanthemum Show was held at the Crystal Palace on October 5 and 6, and the Grand Autumn Exhibition, also at the Crystal Palace, on November 2, 3, and 4. By common consent both shows marked a great advance on previous years, and in the opinion of many experts the November Show was in point of quality the finest which has ever been held under this society's auspices.

Having in mind the great success which attended the proceedings at the Society's Conference in 1909, your committee arranged for a further conference in 1910, which was held at Essex Hall on December 5. It was decided that the papers to be read should deal with various aspects of the culture and exhibition of large chrysanthemum blooms. The programme finally arranged was as follows: "The Culture of Japanese Chrysanthemums for Exhibition," by Mr. Norman Davis; "The Culture of Incurved Chrysanthemums for Exhibition," by Mr. W. Higgs; "Methods of Exhibiting Japanese and Incurved Chrysanthemums," by Mr. H. J. Jones; "The Use of Large Blooms in Floral Decoration," by Mr. R. F. Felton; "Late-Struck Japanese Chrysanthemums for Exhibition," by Mr. Thomas Stevenson.

The President opened the proceedings at the afternoon session, the chair at the evening session being taken by Mr. T. Bevan. Some seventy members were present at the afternoon and evening sessions, and the whole of the papers and discussions thereon have since appeared in the various organs of the horticultural Press.

The Floral Committee met at Essex Hall and the Crystal Palace on eight occasions for the consideration of new varieties. Two hundred and forty-two novelties were submitted to them, and of these 54 were awarded first-class certificates, 22 were commended, and one received the special award for colour instituted in 1909. Votes of thanks were also passed to Mr. J. H. Witty and Messrs. W. Wells and Co., Lim., for collections of early varieties at the September meeting. The sections to which certificates were awarded were as follows: Decorative, 20; Japanese, 19; Singles, 12; Incurved, 2; Semi-double Decorative, 1. The full list of all the new varieties which received awards will appear in the schedule as heretofore. Difficulties have arisen on more than one occasion during the past season with regard to the sections in which novelties should be classified, and the Floral Committee are now taking into consideration the whole question of classification with a view to revising the list of sections, if thought necessary, and defining the characteristics of the various sections with due regard to the advancement in culture which has been made since the society's catalogue was issued.

In the early part of 1910 the Floral Committee decided to hold trials of single varieties, with a view to drawing up a list of "too-much-alike" varieties, and also of "pointing" the best singles in each shade of colour. They approached various growers for assistance in this direction, and it was ultimately arranged that the trials should be divided as follows: September and October varieties, by Messrs. W. Wells and Co., Lim., Merstham; November varieties, by Messrs. H. J. Jones, Lim., of Hither Green and Keston; December varieties, by Messrs. H. Cannell and Son, of Swanley.

Your committee have again the satisfaction to report that the whole of the ordinary liabilities of the society were paid before the books were closed on December 31, 1910. In the early part of the year a sum of £50 was transferred from current account to reserve fund account; and it will be observed from the accounts that at the close of the year a sum of £50 8s. 8d. stood to the credit of the society on current account at the bank. There are other sundry small amounts due for medals and advertisements, and these together with the various properties at the Crystal Palace, and the money at the bank, make the total assets on December 31 last £121 12s. 9d.

In connection with the International Chrysanthemum Show, which was held at Paris in November last, the President of the society and Mr. T. Bevan and Mr. C. Harman Payne were appointed members of the jury. They attended the show as officials of the National Chrysanthemum Society of England and were treated with the cordial hospitality which is typical of our French neighbours on these occasions. Whilst in Paris the President of the society took the opportunity of presenting this society's medals to the following three gentlemen whose names are household words in the horticultural world of France, viz.: Mons. Viger, president of the National Horticultural Society of France; Mons. A. Truffaut, premier vice-president of the National Horticultural Society of France; and Mons. Maxime de la Rocheterie, president of the French Chrysanthemum Society.

Your committee have had under consideration correspondence from the committee in charge of the arrangements for the International Exhibition to be held in London in May, 1912. The season of the year at which the exhibition will be held will prevent anything like a large display of chrysanthemums, but it is hoped that the "Autumn Queen" will be represented in the schedule, and your committee have offered to give National Chrysanthemum Society medals to be awarded to exhibits of chrysanthemums at the exhibition.

It is interesting to note from the accounts that the subscription income for 1910 shows an increase as compared with the year 1909. Although the strength of a society which has over a hundred affiliated societies on its register must not be judged by the number on the membership roll, still your committee feel that a determined effort upon the part of all existing members to bring forward new supporters would result in a large influx of new members, and it is hoped that this effort will be made during 1911.

The management of the Crystal Palace being still in the hands of a Receiver, acting under the direction of the High Court, it has not yet been possible to complete the arrangements for the holding of the 1911 shows. Negotiations are, however, now proceeding, and the dates for the shows have been provisionally fixed as follows: October 4 and 5, November 1, 2, and 3.

FINANCIAL STATEMENT FOR 1910.

Dr. RECEIPTS.	£	s.	d.
To Balance at Bank brought forward	£70	1	2
Petty Cash	0	7	9
Annual Subscriptions	147	18	3
Donations and Special Prizes	25	3	8
Receiver of the Crystal Palace	150	0	0
Entry Fees	10	5	0
Affiliation Fees	53	0	6
Advertisements in Schedule	13	9	5
Medals, etc., Affiliated Societies	46	16	0
Space Charges at Shows	20	6	0
Sale of Dinner Tickets	23	0	0
Balance of Outing Account	0	19	0
Sale of Catalogues and Conference Tickets	0	11	0
Interest on Deposit	0	12	3
	£562	10	0

PAYMENTS. Cr.	£	s.	d.
By Prize Money, October to November...	£186	4	0
Printing and Stationery	48	9	9
Medals and Engraving	39	9	4
Dinner Account	29	7	11
Hire of Rooms	12	10	0
Premium on Secretary's Guarantee Bond	1	10	0
Advertising	3	0	0
Secretary's Salary	100	0	0
Postage, Telegrams, and Carriage	30	13	2
Sundries	3	18	8
Insurance of Trophies	0	19	6
Crystal Palace Co. (Proportion of Space Charges)	5	1	6
Transfer to Reserve Fund Account	50	0	0
Balance of Petty Cash	0	17	6
Balance at Bank	50	8	8
	£562	10	0

A vote of thanks was accorded the auditors, Messrs. W. H. M. Dean and F. Grice Hackney. On the motion of Messrs. T. Bevan and Mr. D. B. Crane, Sir Albert Rollit was unanimously and heartily re-elected president, an honour to which Sir Albert responded. Mr. John Green was heartily re-elected treasurer, on the motion of Messrs. Ballantine and J. Witty. The President moved, and Mr. Moorman seconded Mr. T. Bevan's re-election as chairman of committee, and this appointment, as well as that of Mr. E. F. Hawes, as vice-chairman, were carried unanimously. Mr. C. Harman Payne was once again re-elected foreign corresponding secretary.

Mr. R. A. Witty was very heartily re-elected as secretary, and his services were warmly eulogised; his sponsors were Messrs. Bevan and J. Green, and several other members spoke in kindly praise, and Mr. R. A. Witty pleasantly responded. Messrs. F. G. Hackney and A. H. Stevens were appointed auditors for 1911, on the motion of Messrs. C. H. Curtis and W. Howe.

On the motion of the President, Mons. Viger, Mons. Truffaut, Mons. Maxime de la Rocheterie, Mr. J. H. Witty, and Mr. D. B. Crane were elected Honorary Fellows of the society, the two latter to receive suitably-engraved medals as mementos of the honour. Mons. Louis Gentil, Curator of the Brussels Botanic Gardens, was elected a corresponding member.

Two of the twelve retiring members of committee were not eligible for re-election, as they had failed to make the requisite number of attendances during their past three years of office. Messrs. Frogbrook and J. Kirkwood were nominated to fill the vacancies, and, as there were no further nominations, there was no need for an election, consequently the President declared Messrs. R. Ballantine, W. Cassidy, P. A. Cragg, C. H. Curtis, D. B. Crane, A. J. Foster, W. Newton, G. Prickett, A. W. Seabrook, Frogbrook, and J. Kirkwood elected for the next three years.

A vote of thanks was heartily accorded the president, which Sir Albert acknowledged in a delightfully humorous fashion. The proceedings terminated at an early hour.

Royal Scottish Arboricultural Society.

The annual business meeting of this society was held in the Goold Hall, 5, St. Andrew Square, Edinburgh, on the 3rd inst. Sir John Stirling Maxwell, Bart., of Pollok, the president, was in the chair, and there was an attendance of about fifty members. The report by the Council stated that there was a net increase in the membership of 17, the total now standing at 1,369. The abstract of the accounts showed a surplus of revenue of £129, and that the funds now amounted to £2,200. Mr. A. D. Richardson criticised the last volume of the transactions, and made some suggestions as to ways in which they might be improved.

In his address, the Chairman referred to the need for a Government Forestry Department, without which a great subject like forestry could not be dealt with effectively. All their difficulties sprang from the fact that they had been unable to persuade the Government that this was necessary. The society had, however, taken up the matter of a sample survey of land that could be afforested, and with the help of Lord Lovat and Captain Stirling, they had obtained results far beyond their expectations. Under the Development Act, money had been devoted by Parliament for forestry purposes, but, as there was no Department of Forestry the Development Commissioners had to be approached through the Education Department for Scotland. The assistance of the society had been asked for, but the Council felt that they could not give it unless some definite assurance were given that, when the grant for the development of forestry was given it would be entrusted to men who were competent to administer it, and that they had a clear assurance that the survey which the society had commenced would be taken up by the Government at once. The object of the society in commencing the survey was to see an advance made in afforestation in Scotland, and he thought they would be fools indeed if at this critical moment they gave their assistance unless they were sure that the policy to be pursued was to be effective. Without such assurance, it would be much better, however unwilling they might be to do so, to relinquish the rôle of willing helpers, and take up that of formidable critics.

Lord Lovat made a statement regarding the sample survey, from which it was learned that 60,000 acres would be capable of afforestation in the Loch Ness Valley.

The convener of the Excursion Committee reported that the excursion, which is to be held in June, would this year be to the Border districts. It was also reported that the society would have an exhibit, free space for which had been granted, at the Scottish Exhibition in Glasgow this year.

Sir John Stirling Maxwell was re-elected president for 1911, and Dr. A. W. Borthwick and Mr. Sydney Gammell, of Drumtochty, were elected to the vacant vice-presidencies.

Mr. A. T. Gillanders, F.E.S., forester, Alnwick Castle, author of "Forest Entomology," was elected an hon. member.

Mr. Wm. Dawson, M.A., B.Sc., lecturer on "Forestry," Marischal College, Aberdeen, afterwards delivered a lecture on "The State and Private Woodlands."

Aberdeen Chrysanthemum Society.

The annual meeting of this society was held in the Young Men's Christian Institute, Aberdeen, on Saturday evening, 4th inst. Mr. Alexander M. Cocker, vice-chairman, presided, and there was a good attendance.

Mr. M. H. Sinclair, the secretary, submitted the annual report, which stated that the society's annual fête was held on November 25 and 26 last, and was attended with a fair measure of success. The weather on the opening day was most inclement and affected the attendance very materially, thereby lessening the gate money. The display of cut blooms was most excellent, the decorative and single chrysanthemums being specially good, and quite the leading feature of the show. Pot plants were better than any shown for several years, while the vegetable and fruit sections were also of much excellence, as was the section devoted to floral art. The financial result is not so good as might have been desired, although somewhat better than last year's. The accounts show a loss on the year's working of £27 15s. 3d., attributable to a variety of causes, but, given more favourable weather next year, the financial results should be more satisfactory. The report also tendered the cordial thanks of the society to the Right Hon. Robert Farquharson, of Finzean, for his genial and willing service in opening the fête, and to all who had helped in any way to further the interests of the society.

The Chairman, in a neat and genial speech,

Eckford's
Giant SWEET PEAS

The Finest Blooms

that blossom on the Sweet Pea Plant are grown from Eckford's famous seeds. Eckford, the Sweet Pea Specialist, supplies only seeds that are bound to give good results. Eckford's seeds flower brilliantly, give brighter colours, longer stems, larger flowers, and succeed even in the most difficult soils

ECKFORD'S are the largest retailers of Sweet Peas in the world, and do not supply the trade.

Villa (B) Collection.
24 Splendid varieties, suitable for exhibition, 50 seeds of each, **5/6,** post free for cash.

Villa (C) Collection.
12 Splendid varieties, suitable for exhibition, 50 seeds of each, **2/9,** post free for cash.

Villa (E) Collection.
12 Extra varieties, suitable for exhibition, 25 seeds of each, **1/6,** post free for cash.

A specially written Booklet on Sweet Pea Growing given with every order.

For full list of Special Novelties see next week's issue.

FREE. Send a postcard to-day for large Illustrated and Coloured Catalogue. It gives full particulars of all novelties in Sweet Peas for 1911, and contains full list of all flower and vegetable seeds.

HENRY ECKFORD, F.R.H.S.
(Dept. 221), Wem, Shropshire.

moved the adoption of the report and accounts. No doubt, he said, they were a little down from the results of 1909, but there were several reasons for that. They must not forget that Aberdeen had a great number of entertainments now, which were bound to detract a little from what they as a society placed before the public, but he hoped, and felt confident, they would be able to make up the leeway this year. Mr. J. Smith seconded, and the motion was carried unanimously.

Lord Provost Wilson was re-elected hon. president. Miss Chalmers, of Ardbeck, and Dr. Farquharson, of Finzean, were added to the list of hon. presidents. Mr. W. J. Middleton was re-elected chairman, and Mr. A. M. Cocker was most cordially reappointed to the post he so worthily holds, of vice-chairman. A committee of twenty was also elected, and Mr. M. H. Sinclair was also unanimously re-elected secretary. The annual show was fixed for November 24 and 25 next, in the Music Hall Buildings.

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, January 31.

Present: Mr. E. A. Bowles, M.A., F.L.S. (in the chair), Dr. A. B. Rendle, Messrs. J. Fraser, A. D. Michael, J. W. Odell, A. Worsley, E. M. Holmes, W. C. Worsdell, W. Fawcett, A. W. Sutton, and F. J. Chittenden (hon. sec.).

CUTTING THE COMMON REED. — A question was raised concerning whether the best practice in cutting the Common Reed (Phragmites communis) was to cut annually or triennially. It was pointed out that in the Norfolk Broads, where this crop is a very valuable one, the practice where the best reeds were grown was to cut annually, for if they were left longer they became very brittle, and otherwise deteriorated, making the sample when cut very irregular.

CEDAR CONES.—Mr. J. Fraser showed cones of Cedrus Libanii and C. Deodara. These cones had been collected in August, when they were both green. The cone of C. Libanii was comparatively small, it became brown a month after gathering, and was hollow at the apex. That of C. Deodara was heavier and full of resin; it became brown only after two months; the apex of the cone was pointed, and each scale, unlike that of C. Libanii, was ribbed near the apex.

DOUBLE RICHARDIA AFRICANA. — Some large and well-marked examples of this well-known phenomenon were sent from Trowbridge.

FASCIATION IN MARSDENIA. — Mr. Bowles showed a fasciated stem of Marsdenia erecta from the Rev. Canon Ellacombe, at Bitton. It is rare for an example of fasciation in a plant belonging to the Asclepiadaceæ to be shown before the committee. Mr. Worsdell remarked that he had observed the phenomenon in a Stapelia in South Africa.

WHITE CROCUS IMPERATII.—Mr. A. E Bowles drew attention to a white form of Crocus imperatii, which had occurred among some imported corms, and was exhibited by Messrs. Barr. The flower showed none of the barring on the outside of the perianth segments usual in this species.

Edinburgh Market Gardeners' Association.

The annual dinner of the association was held in the Royal British Hotel, Princes Street, Edinburgh, on the 3rd inst., when, under the chairmanship of the genial president of the association, Mr. David King, Osborne Nursery, Murrayfield, about fifty of the members and their friends spent a most enjoyable evening. In the course of the evening one of the members, Mr. Morrison, market gardener, Beggarsbush, Musselburgh, was presented with a handsome roll-top desk. Mr. Morrison migrates south to the Birmingham district, and the best wishes of his confrères in the North go with him. The proceedings were much enlivened by songs rendered by some of the younger members.

Lee, Blackheath, and Lewisham Horticultural Society.

At a meeting held on January 27 at the Church Street Schools, a lecture was given by Mr. R. C. Pullen on "Chrysanthemums." He advised all growers to make a good start by selecting cuttings from those plants that had borne the best type of flowers only, but he pointed out the fact that plants which had borne flowers of good quality were often shy in producing cuttings, whilst the plants that had borne inferior blooms had a tendency to throw up strong, vigorous cuttings in abundance. Gardeners anxious to start propagating their stock were very apt to take those vigorous cuttings, irrespective of what the flowers on that particular plant had been. Young plants should have plenty of air when weather conditions were favourable during the dull months, in order to produce that short, sturdy growth which is the foundation of a healthy, vigorous plant. Mr. Pullen advised allowing a little room between the pots in order to enable the air to properly circulate. The potting soil should be prepared several weeks beforehand, in order that the various ingredients might become thoroughly incorporated. Mortar rubble, he considered preferable to sand, as it acts mechanically and chemically. After describing the various details of summer treatment, taking of buds, etc. (laying especial emphasis on the necessity of paying strict attention to detail, in order to ensure success), Mr. Pullen went on to show how many growers made a great mistake after housing their plants, by leaving all ventilators and doors open, ostensibly to give plenty of air, but in reality causing a sharp draught, this was a prolific cause of mildew, and subsequent damping. He advised a light shading if the sun was very strong, as much damage is sometimes done to the plants by after-housing, because, having been outside all the summer, they were not used to strong sunshine through the glass. Mr. Pullen gave a fine selection of the best varieties for various purposes, and at the close of the lecture was accorded a hearty vote of thanks by an appreciative audience.

On February 24 a lecture will be given by Mr. G. E. Dibley, F.G.S., on "The Fertilisation of Flowering and so-called Non-flowering Plants."

Beckenham Horticultural Society.

On Friday, February 3, Mr. Montague C. Allwood, Bush Hill Park, lectured to the above society on "The Perpetual Carnation," R. Murray Hyslop, J.P., presiding. Mr. Allwood's visit had been looked forward to with more than ordinary interest, and the meeting room at the Church House was packed, an evident compliment to the lecturer, who thoroughly held his audience for upwards of an hour in a style peculiarly his own. After a few preliminary remarks on the history of the perpetual carnation, and the American firms and growers, the culture as practised in this country was detailed. Those present were advised that before one can grow carnations satisfactorily good stock must be secured. Always select the very best plants for propagating purposes. The lecturer brought with him material to illustrate the best types of cuttings, showing which to take, and why and how to do so, both as piping and cutting. Sand without any addition is, in Mr. Allwood's opinion, the very best medium in which to root the cuttings. They should not be allowed to grow in the sand, but be potted off into 2in. pots as soon as rooted. A bottom heat of 55 deg. to 60 deg., and top heat 10 deg. less, is desirable. December to March inclusive are the best months for propagation. Stopping the young plants should be done when five or six good joints can be left, and may be practised up to July, only stopping one shoot on a plant at a time. Plunging the pots in ashes when outside was advised to keep the roots cool. House the plants in August, and 45 deg. to 50 deg. at night by fire is the limit, with the usual rise in the day. Always plenty of air. Shade is not required at any time for the plants, but to preserve the blooms it is desirable.

A capital discussion followed. Many questions were asked, and the information sought was given by the lecturer in a pleasant and instructive way. A hearty vote of thanks was accorded Mr. Allwood, who, in reply, said he hoped to pay another visit.

Bristol Gardeners' Association.

The usual fortnightly meeting was held on January 26, at St. John's Parish Rooms, when Mr. Hayball presided over a good attendance.

In order to encourage the young gardeners, prizes were offered for the best papers on "Watering." Six young men entered the competition, and gave highly creditable essays, the composition and delivery of which came as a pleasant surprise to all. Messrs. Ayres, Theday, and Woodward were nominated to adjudicate, and awarded the first, second, and third prizes to Messrs. Extence, Perry, and Sweeting respectively. It was suggested that, with such promising young men among its members, the society need have no fears for the future.

For two table plants, Messrs. Jennings, Grieve, and Bastin won in the order given. In the point competition Mr. Springham received seven points for cyclamen and apples; Mr. Woodward four for a Brasso-cattleya; and Mr. Scott two for a cypripedium.

National Amateur Gardeners' Association.

FEBRUARY 7.

At a Bohemian concert held at the Holborn Restaurant on Tuesday evening, the prizes won by the members during last year were presented. An interesting feature of the proceedings was the presentation of an illuminated address to Mr. T. W. Sanders, F.L.S., who has occupied the position of president since the foundation of the society in 1890. It was at Mr. Sanders' suggestion that the society was formed.

Woolton Chrysanthemum Society.

This society held its twelfth annual meeting at the Mechanics' Institute on February 1, Mr. A. G. Dent in the chair. The report for the year referred to the success of Mr. George Eaton, gardener to W. Tod, Esq., as the winner of two challenge vases for twenty-four Japanese blooms, and one for nine vases of single varieties, the latter being possibly the best yet staged in the fine competitions of the society. Happily, the loss to the society of three challenge cups has been made good by the generous gifts of Mrs. Barr, Mrs. Dent, and W. Tod, Esq., so that the keen interest in the future competitions will be sustained. The balance-sheet showed cash in the bank of £36 2s. 11d., a slight margin in favour of the year's work. Mr. A. G. Dent, hon. treasurer; Mr. R. G. Waterman, assistant hon. treasurer; and Mr. W. D. Skinner, hon. secretary, were re-elected in their respective positions.

Liverpool Horticultural Association.

This society held its thirty-second annual meeting recently in the Common Hall, Mr. W. Mercer in the chair. The report stated that three shows had been held during the year, with satisfactory results so far as the exhibits were concerned, although the attendance in each case was only moderate. The balance-sheet gave the subscriptions as £292 10s.; admissions to the spring, rose and sweet pea, and autumn shows, £143 4s. 11d.; special prizes and entry fees, £50 17s. The prize money totalled £220 3s. 6d., leaving a balance in hand of £172 10s. 8d., or a loss on the year's working of £47 17s. 10d. Three shows will be held during the current year. Spring, rose and sweet pea, and chrysanthemums, fruit, etc. The following officers were re-elected: Chairman, Mr. W. Mercer; hon. treasurer, Mr. W. F. Rogers; sub.-treasurer, Mr. G. Blackmore; secretary, Mr. H. Sadler, 31, North John Street, Liverpool

THE LANGUAGE OF FLOWERS
"Feed us, we pray you, with
CLAY'S FERTILIZER
and our rare beauty and fragrance will repay you."
It is SAFE, CERTAIN, QUICK-ACTING and ECONOMICAL.
Flowers Grown with CLAY'S FERTILIZER catch the Judge's eye.

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**: —7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK AS AT SIDE.

CLAY'S LONDON FERTILIZER
TRADE MARK.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Manure Manufacturers and Bone Crushers, **Stratford, London, E.**

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS**, and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.
Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

SPECIAL SWEET PEA LIST
including many grand Novelties
POST FREE, ON APPLICATION TO
GEORGE ELSOM, SEED GROWER AND MERCHANT
SPALDING.
Hundreds of Prizes won with products grown from Elsom's Seeds.

STOP! WHY PAY MORE?

YOU will notice the very, very high prices of many seeds this year if you look through the catalogues you receive; but mind, you need not pay it unless you like. I can supply you at the old price. Peas, 1s. quart; Broad Beans, 5d. quart; Kidney Beans, 10d. quart; Onion Seed, 4d. oz.; Early Potatoes, 1s. 3d. peck. Flower Seeds very cheap. Send your address on a post card before placing your order. GEO. F. LETTS, F.R.H.S., Seed Grower, 2 Hadleigh, Suffolk.

VAPORITE
THE ORIGINAL SOIL INSECTICIDE, SHOULD BE USED NOW WHILE DIGGING, TO DESTROY WIREWORMS, LEATHERJACKETS, ETC.

Vaporite has built up its reputation by consistently good results. To protect your plants and vegetables from soil insects this year, 1 lb. Vaporite to 8 sq. yds. should be dug in now while the ground is idle. Sold by all seedsmen in tins at **9d., 2/-, 3/-, 4/6**: or in casks (carr. paid) **7/6** per ½ cwt: **11/6** per cwt. Illustrated Booklet No. 45 free on request to the

VAPORITE-STRAWSON CO., LTD., Dept. E.,
Spencer House, South Place, London, E.C.

TAKE NOTICE.
Intending planters should send for the STANCLIFFE CATALOGUE OF TREES, &c.

Our Stocks, which are grown on the highest and most exposed hills of Derbyshire, are in fine condition, and are sure to give satisfaction. Note the prices before ordering elsewhere.

Rockery Stone, 1/- per ton.
THE STANCLIFFE ESTATES CO., LTD.,
DARLEY DALE, DERBYSHIRE.

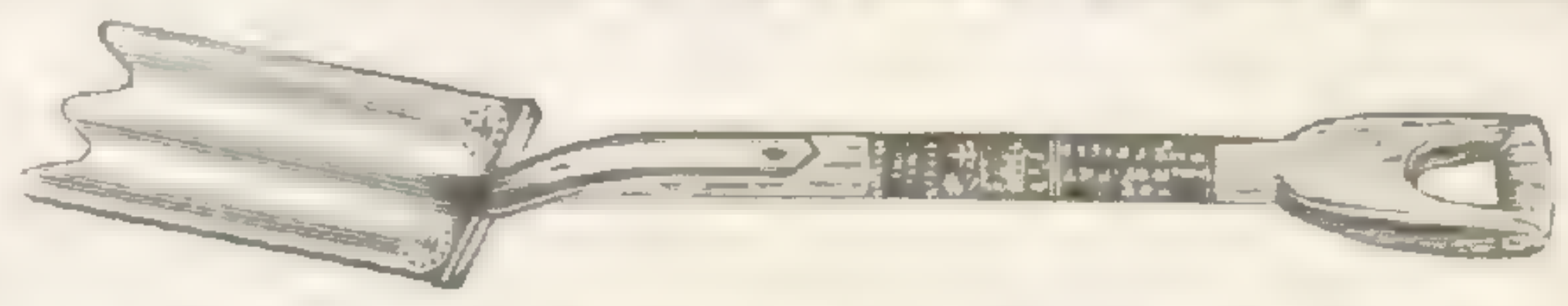
THE "GLORY" FERN.

Sport of the famous ADIANTUM FARLEYENSE, A.M., R.H.S. **The Finest Maidenhair existing.** Will grow in ordinary greenhouse. Beautiful pale coloured foliage borne on wiry stems. **SINGLE PLANTS 5/- each.**

A. A. FABIUS, REDLANDS NURSERY, **EMSWORTH,**

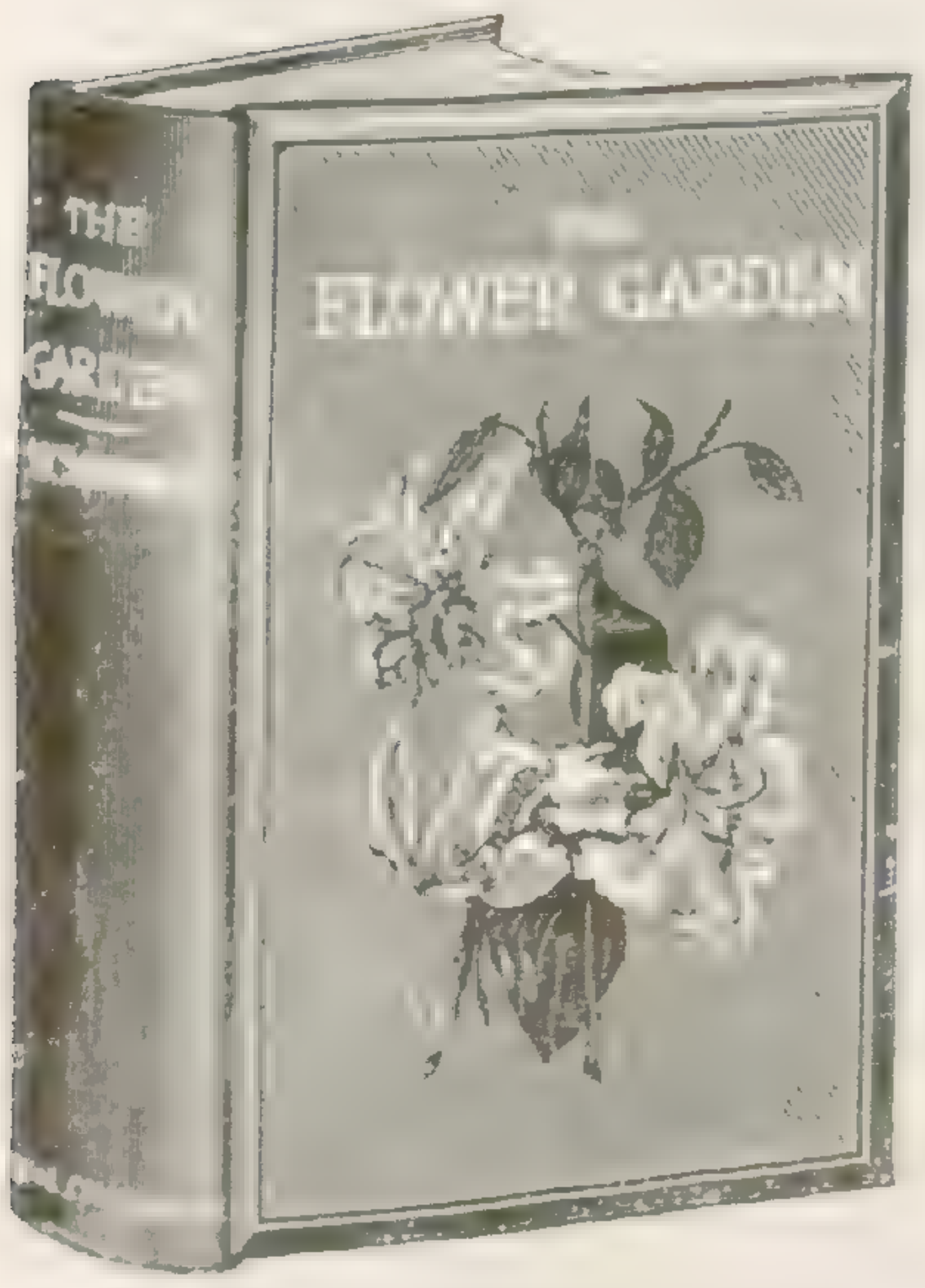
AMERICAN TREE CARNATIONS
AND MALMAISONS.
The Newest and Best Varieties.
Strong, healthy and well-rooted plants only supplied.
Catalogues free.
E. J. WOOTTEN, Fairoak, EASTLEIGH.

A NEW GARDEN SPADE (Carter's Patent).



This is claimed to be the most effective Spade on the market. Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.
THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

THE MOST USEFUL GUIDE.
THE FLOWER GARDEN,
By T. W. SANDERS, F.L.S., Editor of "Amateur Gardening."



A Complete Guide to Planting and Management of the Flower Garden and the Cultivation of Flowers, Plants, Trees, &c., adapted for Outdoor Culture.

THE CONTENTS INCLUDE—

Fashioning the Garden.
Beds and Borders.
Walks and Paths.
Lawns and Tennis Courts.
Rockeries and Ferneries.
Arbours, Summerhouses, Arches, and Pergolas.
Edgings.
Walls and Fences.
Garden Practice.
Propagation.
Colour Arrangement.
Bedding.
Annuals and Biennials.
Bulbs.
Hardy and Tender Border Plants and Flowers.
Climbing Plants.
Trees and Shrubs.
Pests and Diseases.

480 PAGES, ILLUSTRATED BY 64 PLATES OF BEAUTIFUL GARDEN SCENES, PLANTS AND FLOWERS, AND MANY EXPLANATORY DIAGRAMS.

Price **7/6** net; by post, packed in box, **8/-**

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE," 148 & 149, Aldersgate St, London, E.C.

Please send me a copy of **"THE FLOWER GARDEN,"** *by Post, for which I enclose remittance of* **8/-**

Name ....
Address ....

ANSWERS TO CORRESPONDENTS.

ROSES.—A. L., Knutsford: The particular kind of information you require is to be found is the National Rose Society's "Rose Annual for 1910." This may be obtained post free for 2s. 6d. from Mr. Edward Mawley, Rosebank, Berkhamsted.

SWEET PEAS.—J. E. C., Chesterfield: You will find "Sweet Peas and their Cultivation" a most useful book for your purpose. It can be obtained post free for 1s. 2d. (or 1s. 8d. cloth) from the Gardeners' Magazine office, 148 149, Aldersgate Street, London. E.C.

BUD DROPPING IN BEGONIA GLOIRE DE SCEAUX.—J. C., Leeds: Bud dropping is generally due to one of three causes; lack of moisture, over-watering, and bad light. If you think neither of these is the cause in your case, please let us have a few particulars concerning the conditions under which the plants are grown during winter.

EMILE D'HEYST PEAR.—H. P., Lincoln: From many growers and widely-separated districts we have received information as to the curious effect of the past season upon the ripening of pears, and we can quite understand that you had Emile d'Heyst in good condition at Christmas time, although this is generally listed as an October and November pear. On the other hand, some varieties came into use earlier than usual. In Middlesex we this week helped to finish the last few fruits of a small crop of Beurre Rance, a pear that Dr. Hogg says is in use from February till May. Seasons, soils, and aspects have a very decided influence upon the ripening of pears; more so than upon apples.

FUNGUS ON GRAPES. — W. H. P., Winscombe: We are much obliged to you for the further information, and much regret that its delay was due to illness. So far as we are able to judge, the whole of the cultural details are excellent, and the only advice we can offer here is that the front ventilators should be arranged only to open outwards from the bottom. From the evidence submitted, we are inclined to believe that the attack is due to a fungus known as Sclerotinia Fuckeliana, which sometimes appears in the earlier stages of growth, but which also affects growths and fruit and leaves. Spraying with potassium sulphide checks the disease. If all the affected portions of leaf, growth, and fruit are removed and burned as soon as the attack is seen, the trouble may be overcome with the aid of the potassium sulphide. Use the latter as a preventive, and directly signs of an attack are noticed this year send a sample specimen for investigation.

TREES AGAINST A NORTH WALL.—F. V. M., Barnet: The wistaria loves sunshine, and, therefore, would not be a success on a wall having a north aspect. The Victoria plum would be moderately successful, and much would depend upon the light obtainable, and the shelter from east and north winds. You would find Morello cherries, gooseberries, and red currants do very well against a north wall, and here they would provide late and useful crops of fruit.

CUCUMBER CULTURE.—G. H., Liverpool: Sow the seeds singly in small pots, in light soil, water them in, and then place them in the stove or warm pit. Plunge the pots, and give no more water than is really necessary until germination takes place. Directly the third leaf has formed pot each plant in a large 48 or a 32-sized pot, and still keep in the warm house, well up to the light. In a light pit or house make everything perfectly clean, and limewash the walls; if you have command of good oak leaves use these to make up a bed two feet thick where the cucumbers are to grow. On this put a small quantity of good loam mixed with road grit and leaf-soil, and let this become warm before planting the cucumbers in it. Allow two feet between the plants, and when plants and soil have settled down tie the cucumbers to wires strained about twelve inches from the glass. Syringe freely on all favourable occasions, see that there is no lack of moisture, and when the roots show through the soil add a small dressing of rich material. When in full bearing give liquid manure freely. The temperature for cucumbers should not fall below 60 degrees, and under the action of sunshine it may well rise to 100 degrees or more without harm, so long as the paths and walls are thoroughly and frequently damped down. Unless needed for seed purposes there is no need to fertilise the flowers. Superfluous growth should be regularly removed, but new growths should be tied in to take the place of those that have been fruiting for some time.

APPLE WINTER PEACH.—E. F., Weston-super-Mare: This is a useful late-keeping culinary apple, but it is not now regarded as a foremost variety. The fruits are of medium size, and ribbed; skin, creamy-yellow and brightly polished. The white flesh is juicy, and has a brisk acidity. Winter Peach is an apple rarely catalogued by the leading nurserymen.

APPLE GASCOIGNE'S SCARLET.—E. F., Weston-super-Mare: This is a very fine and useful apple, a free grower, and fine cropper. Its fruits are large, and very handsome, and good alike for dessert or kitchen use. It was raised in Kent, and is one of the most beautiful apples we have. The growth is spreading, and has a slight inclination to weep. Grown on the Paradise stock this handsome apple rarely fails to yield fruit. Many thanks for your congratulatory letter.

BOSTON PUBLIC PARKS.—Parkite, S. Wales: So far as we are aware the report of the Board of Commissioners of the Boston Parks is not offered for sale, but printed for the use of the Department. The thirty-fifth report runs to 57 pages, and is well illustrated. Our American friends are usually kindly disposed in these matters, and no doubt if you wrote to Mr. J. A. Pettigrew, Superintendent of Parks, Boston, Mass, U.S.A., and stated your reason for wishing to possess a copy, you would be supplied, if possible. The report is not priced.

GLADIOLI.—M. S. H., Goole: In the production of fine spikes of these subjects a deep, well-stirred, and moderately rich soil is essential. Plant the early-blooming varieties in the autumn or February, and the Gandavensis and Lemoinei hybrids in March or April, according to the condition of the soil; medium-sized corms are preferable, and unbloomed seedlings are of special value for garden decoration, for they are cheap, and seldom suffer from the disease which is sometimes most destructive. For these reasons we advise amateurs to purchase seedlings of the Gandavensis and Lemoinei hybrids, and to order the finest selection. The strong growing and brilliantly coloured Brenchleyensis should be grown in addition to the seedlings, and planted liberally, according to the space at disposal.

ERICA HYEMALIS.—J. W. H., Liverpool: This fine and popular heath should be grown in peat and sand; the pots must be thoroughly well drained. An ordinary greenhouse temperature will suffice, except in the case of cuttings and quite young stock, when slightly warmer conditions are desirable. Established plants, when growing freely, need free ventilation, and at the end of the summer a cold frame will give sufficient protection, the lights being used only to ward off heavy rains. A cool, moist base on which to stand the pots is desirable, such as one formed of ashes. Plants should be cut back somewhat severely after flowering, and they will not need much ventilation until new growth has begun. Repotting is best done early in February or March, and the soil must be made quite firm. Cuttings of firm young growth taken towards the end of the summer, and placed thickly in well-drained pots, in fine sandy peat, will root well enough if placed under a bell-glass in a close pit or intermediate house. The surface of the cutting bed should be of pure sand. The culture of heaths cannot be successfully managed in smoky town districts; good light and pure air are essential.

NAMES OF PLANTS.

G. B., Hendon.—1, Primula Kewensis; 2, P. Forbesi.

J. W. H., Liverpool.—1, Erica hyemalis; 2, send when in flower.

E. S. A., Chelmsford.—1, Coleus thyrsoideus; 2, Cypripedium Actæus.

C. C. H., Alresford.—1, Acacia dealbata; 2, Leucadendron argenteum; 3, Odontoglossum Wilckeanum; 4, Ficus repens minima.

W. G. G., Chippenham.—1, Pernettya mucronata; 2, Gaultheria Shallon; 3, Pelargonium Clorinda; 4, Hibbertia dentata; 5, Pinus pinea; 6, Diplopappus chrysophylla.

C. S. C., Haslemere.—1. A variety of Cotyledon (Echeveria) secunda; 2, Nephrolepis cordifolia; 3, Adiantum setulosum; 4, a seedling A. cuneatum; 5, not recognised, possibly A. æmulum.

TRADE NOTES.

A Royal Warrant of Appointment has graciously been granted by King George V. to Messrs. Sutton and Sons, of the Royal Seed Establishment, Reading, as seed merchants to his Majesty. Messrs. Sutton were also honoured with Royal Warrants by King Edward VII. and Queen Victoria.

Messrs. Edward Webb and Sons, of Wordsley, Stourbridge, who were seedsmen to their Majesties Queen Victoria and King Edward VII., have received the honour of appointment by Royal Warrant as seedsmen to his Majesty King George V.

His Majesty King George V. has been graciously pleased to grant to Messrs. James Carter and Co., of Raynes Park and High Holborn, a Warrant of Appointment as purveyors of seeds to his Majesty.

Messrs. W. Bull and Sons, of King's Road, Chelsea, have been favoured with the Royal Warrant of Appointment to his Majesty King George V.

Messrs. W. Wood and Son, Lim., have been granted a Royal Warrant as horticultural specialists to his Majesty King George V.

A few evenings since the employees of Messrs. Dickson and Co., the Royal Nurseries, Craigmillar, were entertained by the firm at a social gathering in the Hope Park Hall. The chair was occupied by Mr. William McAra, the oldest member of the firm, and Mr. James Welsh, one of the members of the firm, was present, and gave a hearty welcome to the guests. The festivities commenced with a substantial tea, and this was followed by dancing, which our correspondent states, was continued "until an early hour," presumably of the next day.

FORTHCOMING ENGAGEMENTS.

[The Editor will be greatly obliged if Secretaries of Societies will send schedules and dates of exhibitions to him, at Endsleigh, Priory Park, Kew, Surrey.]

TUESDAY, February 14.—Royal Horticultural Society.—Fruit, Floral, and Orchid Committees meet 12 noon; Annual Meeting, 3 p.m.; Scientific Committee, 4 p.m.

Proposed Daffodil Society.—Meeting of Amateur and Trade Growers at the Horticultural Hall, Vincent Square, in Committee Room No. 3, at the close of R.H.S. Annual Meeting.

Horticultural Club.—Annual Meeting at Hotel Windsor, 5 p.m., and Annual Dinner, at same hotel, 6 p.m.

MONDAY, February 20.—National Chrysanthemum Society; Executive Committee.

WEDNESDAY, February 21.—Irish Gardeners' Association Meeting.

CATALOGUES RECEIVED.

BLACKMORE AND LANGDON, TWERTON HILL, BATH.—Tuberous begonias and carnations are the great specialities of this firm, and their exhibits of the former have charmed many thousands of people during the last few summers. They list choice seeds, special seedlings, named begonias of high quality, begonias for bedding, and begonias for baskets.

GEORGE JACKMAN AND SON, WOKING, SURREY.—This firm issues an excellent catalogue of hardy plants and makes a special feature of rho dendrons, clematis, roses, herbaceous, and A plants. The catalogue contains some excellent i trations of the nursery stock.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.
Height above sea-level, 150 feet.

Date. 1911. January 29 to February 4.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	Temperature of the Air. At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Jan. 29—Sunday	3 30	29	28	42	27
" 30—Monday	7 12	36	35	40	29
" 31—Tuesday	7 42	30	27	35	27
Feb. 1—Wednesday	0 48	22	22	31	19
" 2—Thursday	1 18	26	26	36	19
" 3—Friday	—	36	34	40	29
" 4—Saturday	0 18	36	36	42	35
Means	(total) 20 48	30	29	38	26

Date. 1911. January 29 to February 4.	Rain.	Temperature of the Soil at 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
Jan. 29—Sunday	—	38	40	42	23
" 30—Monday	—	39	39	42	30
" 31—Tuesday	—	34	39	42	21
Feb. 1—Wednesday	—	35	38	42	12
" 2—Thursday	—	34	37	41	14
" 3—Friday	0·01	34	36	41	27
" 4—Saturday	trace	34	36	41	30
Means	(total) 0·01	35	38	41	22

MARKETS.

COVENT GARDEN.

Flowers.

Chrysanthemums are almost over; forced daffodils and tulips arrive in increasing quantities and sell readily. Liliums and roses are good and the demand steady.

		s. d.		s. d.
Acacia	per pad.	5 0	to	7 0
Azaleas, white	per doz. bun.	3 0		4 0
Adiantum cuneatum	per doz. bun.	4 0		6 0
Anemones, French	per doz. bun.	2 0		2 6
Arums	per doz.	3 0		6 0
Asparagus	per doz. bun.	9 0		12 0
Camellias	per doz.	1 6		2 6
Cattleyas	per doz.	9 0		12 0
Carnations	per doz.	2 6		3 6
"	per doz. bun.	12 0		15 0
Chrysanthemums	per doz. bun.	6 0		9 0
	per doz. blms.	2 0		4 0
Croton leaves	per bun.	1 0		2 6
Cypripediums	per doz. blooms	2 6		4 0
French fern	per doz. bun.	2 6		4 0
Gardenias	per doz.	3 0		6 0
Hellebores	per doz.	1 0		1 6
Hyacinths, Roman	per doz. bun.	8 0		10 0
Lilac	per bun.	2 6		4 0
Lilium auratum	per bun.	3 0		4 0
" speciosum	per bun.	2 0		3 0
" longiflorum	per bun.	3 0		4 0
Lily of the Valley	per doz. bun.	6 0		12 0
Marguerites	per per doz. bun	2 0		3 6
Narcissus, Paper White	per basket	6 0		10 0
" Soleil d'Or	per doz. bun.	2 0		2 6
" Golden Spur	per doz. bun.	3 0		6 0
Odontoglossums	per doz. blms.	2 6		3 0
Pelargoniums	per doz. bum.	5 0		8 0
Roses	per doz.	1 6		5 0
Smilax	per doz. trails	2 0		3 0

Fruits.

The best grapes now realise high prices; oranges and American apples are excellent. Cape fruits meet a ready sale and bananas maintain their price.

		s. d.		s. d.
Apples, English	per bush.	6 0	to	9 0
" American	per barrel	20 0		36 0
" Californian	per box	7 6		10 0
" Canadian	per barrel	18 0		32 0
Apricots, Cape	per case	2 6		8 0
Bananas	per bun.	3 6		12 0
[illegible]	per lb.	0 10		1 0
[illegible]	per bag	10 0		15 0
Cranberries	per case	9 0		10 6
Grapes, English	per lb.	1 0		10 0
" Belgian	per lb.	0 8		1 6
" Guernsey	per lb.	0 9		1 3
" Almeria	per barrel	15 0		20 0
Lemons	per case	6 6		15 0
Oranges	per case	10 0		21 0
" Jamaica	per case	8 0		10 0
" Californian Navels	per case	12 6		15 0
Peaches, Cape	per case	8 0		18 0
Pears, Californian	per case	10 0		20 0
Pineapples	each	2 0		4 6
Plums, Cape	per case	6 0		10 0
Pomegranates	per case	1 9		2 3

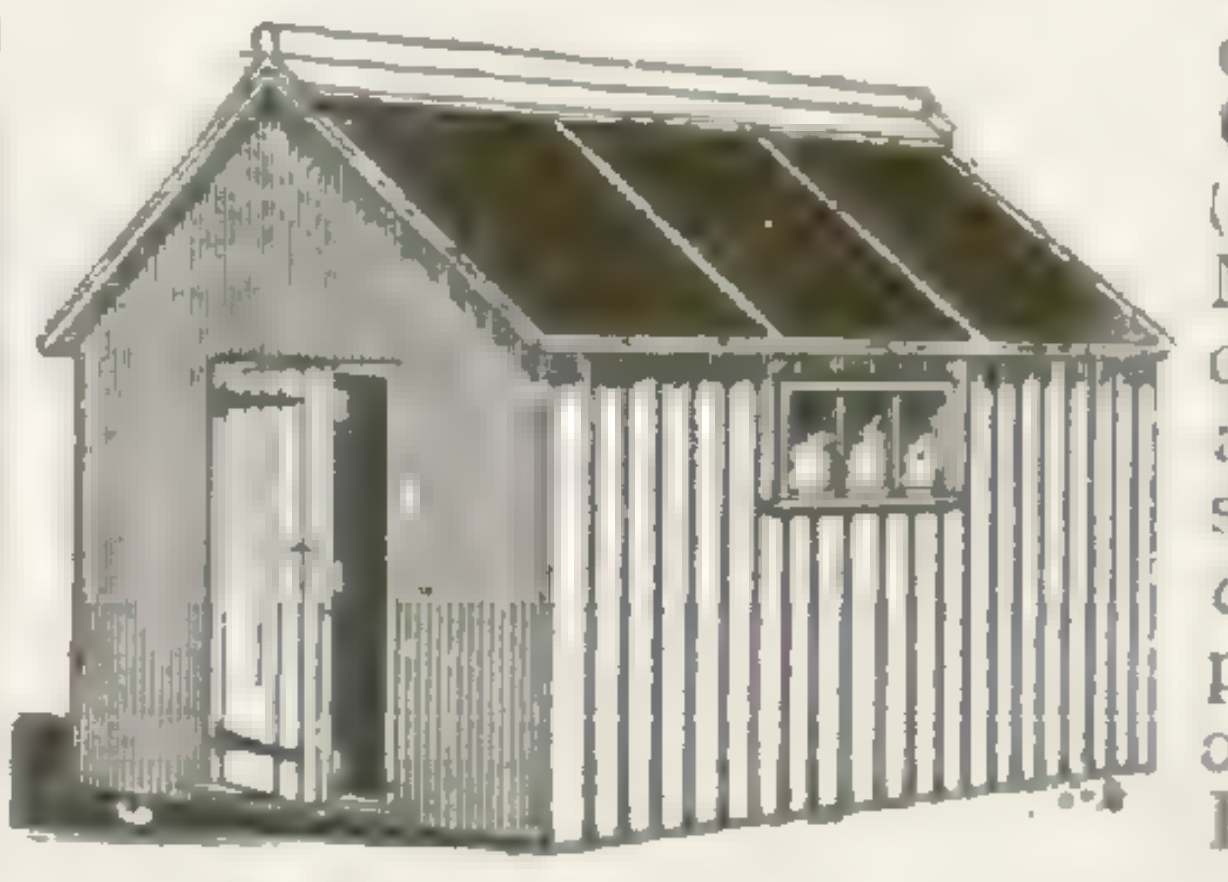
CONTENTS.

PAGE
Among the Alpine Flowers ... 105
Answers to Correspondents ... 118
Apple Lane's Prince Albert ... 102
Ashes ... 109
Bare Gardens in Winter ... 102
Brooms ... 111
Early Flowering Saxifrages ... 103
Exhibitions and Meetings ... 114
Flavour of Melons ... 108
Gunnera manicata ... 101
Messrs. James Carter and Co.'s New Premises 110
New Plants, etc. ... 106
Notes of the Week ... 99
Pear Beurre Superfin ... 111
Pessimism and Big Bud ... 104
Rosa Pernetiana.—II. ... 107
Rose Elsie ... 109
Rose Notes ... 109
The Home Timber Outlook, and the Urgent Need for Afforestation ... 113
The National Sweet Pea Society ... 104
Work for the Week ... 111

ILLUSTRATIONS.

Portrait of Mr. W. G. P. Clark, 99; Gunnera manicata, 101; Saxifraga Burseriana, 103; Adiantum farleyense var. Gloire van Moordrecht, 105; Cypripedium Duke of Connaught, 106; Odontoglossum Crispum Peacock, 107; New Wichuraiana Rose Elsie, 109; Pear Beurre Superfin, 111.

THE CHEAPEST IN ENGLAND.
"THE STANDARD."



Copyright Registered.

Made in complete sections, sides and ends from ¾in. **Best Quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V**-jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

Cash with Order Prices.

Sizes.		Floor made from ⅞-in. Tongued Boards.
6 ft. by 4 ft. by 6 ft.	£1 12 0	5/0
6 ft. by 5 ft. by 6½ft.	£1 17 0	5/9
7½ft. by 5 ft. by 6½ft.	£2 2 0	7/9
8 ft. by 6 ft. by 7 ft.	£2 9 6	9/9
9 ft. by 6 ft. by 7 ft.	£2 14 6	11/6
10 ft. by 6 ft. by 7 ft.	£2 19 6	13/0
10 ft. by 8 ft. by 8 ft.	£3 14 0	16/6
12 ft. by 8 ft. by 8 ft.	£4 4 0	20/0

Carriage Paid to any Station in England and Wales.

Catalogue with Testimonials POST FREE.

J. T. HOBSON & CO., Largest Makers of Portable Buildings, **BEDFORD.**
Established 70 Years.

Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

AMERICAN TREE CARNATIONS, best varieties, including Britannia, White Perfection, etc., strong young plants from 2in. pots, 3s. doz., 20s. 100, flowering plants, 5in. pots, 8s. per doz. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

SEED POTATOES, Scotch, Irish, Midlands, Northerns; largest and best stock in West of England, both earlies and lates. Apply to OLIVER BROS., Importers, Exeter, and Barnstaple.

FOR SALE, NICHOLSON'S DICTIONARY of GARDENING: 12 volumes complete; entirely new and up-to-date; what offers? MOSS, Cefn Glas Road, Bridgend, Glam.

Dr. J. COLLIS BROWNE'S
THE ORIGINAL AND ONLY GENUINE
Chlorodyne
Admitted by the Profession to be the most Valuable Remedy ever Discovered.
The Best Remedy known for
COUGHS, COLDS,
ASTHMA, BRONCHITIS.
Cuts short all attacks of SPASMS, HYSTERIA, and PALPITATION.
The only Palliative in NEURALGIA, TOOTHACHE, GOUT, RHEUMATISM.
Acts like a Charm in DIARRHŒA and DYSENTERY.
Refuse imitations and insist on having
Dr J. COLLIS BROWNE'S Chlorodyne.
Convincing Medical Testimony with each bottle.
Of all Chemists, 1/1½, 2/9, 4/6.

THOMSON'S
VINE PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES
SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE.

HAVE YOU A GARDEN?

If so Don't Risk Catching Cold when you can avoid doing so by wearing our celebrated "G" BRAND GRAINED CLOGS Lined with Fine White Felt. Only **4/6** Postage Paid. Any size, Men's or Women's, all ready for posting off.

Our No. 688 in List.

Note.—All sizes are as ordinary Boots. If you forget your size draw a pencil round your stocking foot and send to us. **THE GARDEN BOOT WAREHOUSE,** 6, Wellington Street, GLASGOW.

SUBSCRIBER'S ORDER FORM

Every Saturday THE GARDENERS' MAGAZINE. Twopence.

To W. H. and L. Collingridge,
148 and 149, Aldersgate Street, London, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose ________ for ________ months in advance.

Name ________________

Address ________________

Date ________________

1 Year, 10/6 post free; 6 months, 5/6 post free; 3 months, 3/- post free; to Foreign Countries, 15/- per annum.

, If a receipt is required for amounts under 10s. a stamped envelope should be forwa

W. RICHARDSON & CO.,

MANUFACTURERS OF ALL KINDS OF

HORTICULTURAL BUILDINGS. Also HEATING ENGINEERS.

Recent Contracts for Horticultural Buildings and Heating include the following:—

The Rt. Hon. Lord Herbert Vane Tempest, Plas, Machynlleth.
The Rt. Hon. The Earl of Durham, Lambton Castle, Co. Durham.
The Rt Hon. The Earl of Donoughmore, Knocklofty, Clonmel, Ireland.
The Rt. Hon, The Earl of Sefton, Croxteth Park, Liverpool.
The Rt. Hon. Lord Glanusk, Glanusk Park, Crickhowell.
Lady Hickman, Wightwick, Wolverhampton.
Sir William Eden, Bart., Windlesham Hall, Ferryhill.
Sir Alfred Pease, Bart., Pinchingthorpe Hall, Yorkshire.
Sir Joseph Walton, Bart., M.P., Rushpool Hall, Saltburn-by-the-Sea.
Sir Theodore Peel, Park Gate, Guiseley.
Colonel Scott, Penmaenucha, Dolgelly.
Colonel Napier Clavering, Axwell Park, Northumberland.
Major Tempest, Broughton Hall, Skipton in Craven.
Captain Wainman, Otterington Hall, Northallerton.
Royal Horticultural Society, Wisley, Ripley, Surrey.
Royal Hospital, Kilmainham, per Commissioners of Public Works, Dublin.
David Richardson, Esq., Wheelbirks, Stocksfield-on-Tyne.
Richard Hill, Esq., Holly Mount, Buxted, Sussex.
Dewsbury Corporation, Crows Nest Park.
C. Lingford, Esq., Lancelands, Cotherstone.
David Davies, Esq., M.P., Llandinam, Montgomeryshire.
Harrison Benn, Esq., Holcombe Hall, Dawlish, Devonshire.
Mrs. Akenhead, Riseholme, York.
E. Meynell, Esq., The Friarage, Yarm-on-Tees.
E. Shaw Hellier. Esq., The Wombourne Wodehouse, Wolverhampton.
E. W. Parker, Esq., Skirwith Abbey, Penrith.
W. Loudin MacNeill, Esq., Shennaton, Kirkcowan, Wigtownshire.
Miss Watt, Spott House, Dunbar, East Lothian.
B. W. M. Pearson, Esq., Nunhold Grange, Hatton, Warwick.
Alfred Hewlitt, Esq., Haseley Manor, Hatton, Warwick.
G. F. Insole Esq., The Court, Llandaff.
J. Bagwell, Esq., Marefield, Clonmel, Ireland.
Kenneth Wilson, Esq., Butts Garth, Thorner, near Leeds.
Mrs. Love, Hawke Hills, Easingwold, Yorkshire.
Theodore H. Rowntree, Esq., Clifton Lawn, York.
J. J. Hunt, Esq., Grimston Court, York.
Miss Martleet, Boothby Hall, near Lincoln.
W. D. Cliffe. Esq., Meanwood Tower, Leeds.
C. L. P. Robinson, Esq., Brettanby Manor, near Darlington.
J. Rossiter Hoyle, Esq., Ecclesall, Sheffield.
Mrs. Wright, Morton, near Bingley.
The Rev. W. T. Travis, Ripley, Yorkshire.
Hiram Craven, Esq., The Briery, Sunderland.
Mrs. Freville Cookson, Chute Standen, Andover.
W. H. St. Quintin, Esq., Scampston Hall, Rillington, Yorks.
R. Bamford, Esq., Weavis Hall, Uttoxeter.
F. Reynard, Esq., Sunderlandwick, Driffield.
New School for Mr. and Mrs. Cooper, Scarborough.
Missionaries Children's Home, Hitchin.
Salvation Army Home, Sydenham Hill, London, S.E.
Hampshire House Club, Hammersmith, London, W.
Scarborough Hospital aud Dispensary.
Durham Cathedral.
North-Eastern Counties School, Barnard Castle.
Ackworth School, Pontefract.
Skating Rink, Birtley, Durham.
Skating Rink, Philadelphia, Co. Durham.
Lloyds Bank, Darlington,
St. Luke's Church, Cambridge.
Nidd Church, Yorkshire.

LONDON OFFICE:—Belgravia Chambers, Victoria Street, S.W.

TELEGRAMS { "Richardson," Darlington. "Horticraft," London. **NATIONAL TELEPHONE** } 17 Darlington.

Our Book of Designs sent free to those mentioning this paper.

PLANS and ESTIMATES PREPARED FREE of COST.

Representatives sent to any part of the Kingdom to advise and take particulars.

DARLINGTON.

BY SPECIAL APPOINTMENT TO HIS LATE MAJESTY KING EDWARD VII.

GREEN'S LAWN MOWERS

THE FIRST, FOREMOST, and BEST in the WORLD. Hundreds of Thousands are in use. Established nearly a Century.

Highest Awards Royal Botanic Society, Royal Horticultural Society, and numerous others

"SILENS MESSOR" LAWN MOWER.

GREEN & SON LEEDS & LONDON
GREENS LEEDS LONDON

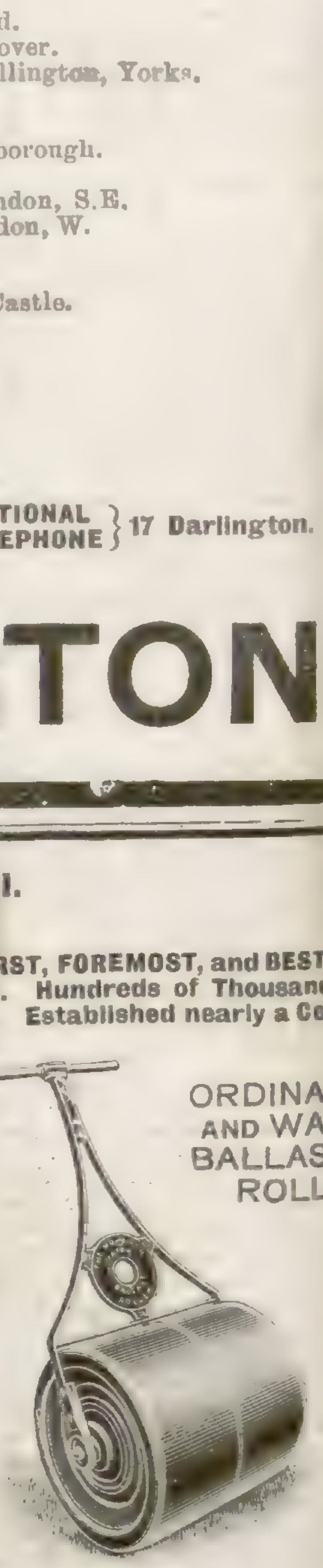
PONY, AND HORSE MOWER
Either "Silens Messor" Pattern or Wheel-Geared.

Telephone Numbers—
Leeds, 3580.
London, 2022 Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London.

They may be had of any Ironmonger or Seedsman in the United Kingdom.

Please write for ILLUSTRATED PRICE LIST No. 1 FREE.

ORDINARY AND WATER BALLAST ROLLERS



MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

Extracts from 35th annual collection of reports:—

NATIVE GUANO for POTATOES, VEGETABLES, etc.

A. J. Beard, Erdington: "Potatoes, splendid, free from disease. Best I ever had."—H. Chester, Nantwich: "Best onion manure I ever used. Grand for onion fly."

NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc.

J. Cant, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. Frampton, Titchfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED**, 29, New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted

LOOK! BE PREPARED for the season: Tanned Garden Netting, small mesh, 36 yards long by 1 yard wide, 1s.; 36 by 2, 2s.; 36 by 3, 3s.; either carriage paid.

MOORE and CO., Net Works, Rye.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

PERGOLAS.
Larch Poles at 1d. per foot. Lists Free.
PATRICK'S, Otley, Yorks.

OAK CRAMBLES.
Peeled and dry at ½d. per foot.
PATRICK'S, Otley, Yorks.

ROSE ARCHES.
Larch Poles at 1d. per foot.
PATRICK'S, Otley, Yorks.

TREE STAKES AND GARDEN RODS.
Lists free.
PATRICK'S, Otley, Yorks.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to

EPPS & CO., Ringwood, HANTS.

PUBLISHERS' ANNOUNCEMENTS.

THE GARDENERS' MAGAZINE may be obtained to order from all Newsagents, price Twopence, every Saturday. If any difficulty be found, it will be posted weekly direct from the Publisher, 148 and 149, Aldersgate Street, London, on the following terms: Twelve Months, 11s. [illegible]; Six Months, 5s. 6d.

INDEX and Title Page to Vol. LIII. [illegible] weekly numbers from January to December, price 2d., by post 2½d.

BINDING CASES for binding the 12 months' numbers, green cloth, ornamented in gold, [illegible] post free.

VOLUME LIII., bound in green cloth, containing 52 weekly numbers, 1910. Price 12s. 6d.; by [illegible] 13s. 4d

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 2,990. Vol. LIV.
Reg. at the G.P.O. as a Newspaper.

SATURDAY, FEBRUARY 18, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) Twopence

BARR'S VEGETABLE & FLOWER SEEDS of finest selected strains and tested growth. Descriptive Catalogue, with cultural notes, free.

BARR'S BEAUTIFUL LILIES, CANNAS, GLADIOLI, MONTBRETIAS, TIGRIDIAS, ETC., for Spring planting. Catalogue free.

BARR and SONS, 11, 12, and 13, KING STREET, COVENT GARDEN, LONDON.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, is this winter keeping a large staff of hot-water men in the shops, in order that they may attend immediately to any breakdown of Boilers or Hot-Water Piping in any part of the country. In case of emergencies please telephone 201 Western, or wire "Gray, Chelsea, London."

KING'S ACRE FRUIT TREES, ROSES, AND ORCHARD-HOUSE TREES.

AWARDED 24 GOLD MEDALS SEASONS 1909-10.

160 acres to select from of the finest Trees that natural conditions and the skill of man can produce.

ILLUSTRATED CATALOGUES FREE ON APPLICATION.

KING'S ACRE NURSERIES, LTD., HEREFORD.

1,000,000 BORDER AND ROCK Plants. Unique collection.
50,000 HARDY FERNS, over 400 varieties. See Catalogue.
10,000 FLOWERING SHRUBS must be cleared.
30,000 LILIES NOW IN STOCK, Other consignments arriving.

DELPHINIUMS, 9 GOLD MEDALS IN 2 YEARS.
A record. Unique collection. Seed, 3d., 6d., and 1s. pkt.

PERENNIAL SEEDS, UNIQUE COLLECTION.
All Catalogues Free.
PERRY'S HARDY PLANT FARM, Enfield, Middx.

WELLS' CHRYSANTHEMUMS.—List of Novelties now ready; also descriptive general list. Wells' Phlox and Michaelmas Daisies, Hardy Herbaceous Plants, and Perpetual Flowering Carnations. Catalogues post free. Wells' book, "The Culture of the Chrysanthemum," post free, 1s. 6d. W. WELLS, Merstham, Surrey.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

CONSERVATORIES AND WINTER GARDENS, Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue free.—BOULTON and PAUL, Lim., Norwich.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page 137.

"**HOW TO MAKE YOUR OWN SOIL** FUMIGATOR."—Save the fabulous profits on [illegible] Make your own at LESS than ½d. per lb. Precisely as sold at 9d. and 1s. lb. tins. Sell to your neighbours, make 900 per cent. profit. Completely destroys wireworms, snails, woodlice, ants, leather-jackets, etc. Harmless to plants. Supersedes gas-lime. Send 1s. for recipe, and save money.—T. HUGHES, Analyst, Elmhurst, Northwich.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

THE BEST MELONS.

WEBBS' EPICURE (Scarlet flesh). Awarded First Prize, Wolverhampton, 1910. 1s. 6d. and 2s. 6d. per packet.

WEBBS' FAVOURITE (Green flesh). Awarded First Prize, Shrewsbury, 1910. 1s. 6d. and 2s. 6d. per packet.

Mr. C. Cox, The Gardens, Weald Hall, writes: "Your New Favourite Melon has done remarkably well, and been greatly admired. I cut one fruit off a plant that bore four, and it turned the scale at 7lb. The flavour was delicious."

WEBB AND SONS, Seedsmen to H.M. King George V., WORDSLEY, Stourbridge.

BUNYARD'S NEW CATALOGUES. The following have been recently published, and contain all worthy new varieties. Post free on application.

BUNYARD'S CLIMBING PLANTS, Illustrated.

BUNYARD'S HERBACEOUS PLANTS, Illustrated.

BUNYARD'S HARDY TREES AND SHRUBS, Illustrated.

BUNYARD'S SEEDS, VEGETABLE AND FLOWER, with coloured plates.

GEO. BUNYARD AND CO., LTD., Royal Nurseries, MAIDSTONE.

BEGONIAS, awarded 24 Gold Medals.—Double Seed, 2s. 6d. and 5s. per pkt.; Frilled, Crested, or plain Single, 1s., 2s. 6d., and 5s. per pkt. For price of Begonia tubers, Carnations (Border and Perpetual flowering), Cannas, Cyclamen, Blue Primroses, Delphiniums, Pansies, Polyanthus, Lily of the Valley, Violets, etc., please send postcard for copy of our Illustrated Catalogue, free on application.

BLACKMORE AND LANGDON, Twerton Hill Nursery, Bath.

LAXTON'S NEW SEED CATALOGUE for 1911. Descriptive and fully illustrated, including grand new "Laxtonian Pea" and many other novelties, gratis on application.—LAXTON BROS., Seed Merchant, Bedford.

WEEKS'S DUPLEX UPRIGHT TUBULAR BOILERS, for full advertisement see back page.

POULTRY AND KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

THE JOHN INNES HORTICULTURAL INSTITUTION.

APPOINTMENT OF EXHIBITIONERS.

Appointments will shortly be made to five exhibitions established in connection with the above-named Institution, at Merton, Surrey. Of these one has been endowed by the Fruiterers' Company. Applicants must be over 19 years of age, and must have been employed not less than four years in good gardens or nurseries. Exhibitioners will be appointed for two years. They will receive 21s. a week, and will be required to take part in the ordinary work of the garden. They will have opportunities for practising most of the operations of horticulture, but plant-breeding is at present the most prominent feature in the Institution's work.

A form of application, and further particulars may be obtained on application to the DIRECTOR, the John Innes Horticultural Institution, Merton, Surrey.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

SUTTON'S EXHIBITION BRUSSELS SPROUTS. Mr. G. R. STILLWELL, Gardener to Mrs. Kincaid Smith, writes: "Your Exhibition Brussels Sprouts are simply perfection, the best I have ever had or seen. The plants are loaded from the ground with large firm Sprouts."
Per packet, 1s., post free.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

"Colour is meant for the perpetual comfort and delight of the human heart."—RUSKIN.

KELWAY'S "COLOUR BORDERS" (Regd.)

Artistic and permanent—arranged for continuous bloom and colour effect.

These Borders can be purchased BY THE SQUARE YARD for any position all ready arranged for planting.

"I am thinking of planting a few borders with perennials. I am tired of continually planting bedding plants. Mrs. ——."

Write now stating your area, position, soil, etc., for planting in the Autumn, to

KELWAY AND SON, The Royal Horticulturists. LANGPORT.

NOW IS THE TIME TO PLANT KELWAY GAILLARDIAS.—They flower in profusion from June to November, even in the driest season. They are unsurpassed for their brilliance and enduring freshness. Choice named collections, 12s. and 18s. a dozen. Carriage and packing paid for remittance with order.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

FIDLER'S NEW ILLUSTRATED CATALOGUE OF CHOICE GARDEN SEEDS will be sent, post free, to any address on receipt of postcard. Write at once for a copy. It may help you to save 50% on your seed bill this season. FIDLER and SONS, Royal Berks Seed Stores, Reading.

CHRYSANTHEMUMS.—Decorative Varieties: Strong, Healthy, Cool Grown; Good Succession, Sept.-Christmas. Cuttings, 1s. 6d. per doz.; Plants, 3s. 6d. per doz. List on application. PERPETUAL FLOWERING CARNATIONS: Enchantress, White Enchantress, Mrs. Burnett, Victory, Harlowarden, 9d. each. Rose Doree, Black Chief, 1s. 6d. each. Plants in Spring. Cash with order; carriage paid. MISSES PRICE and FYFE, Grove Park Nursery, Lee, S.E. (Please mention this Magazine when writing).

FERNS.—Beautiful Greenhouse varieties, 12 for 1s. 3d.; Maidenhair Ferns, 2s. doz.; New Nephrolepis Todeoides, 9d. each; Palms, 9d. each. HEAD GARDENER, 22, Charlton Road, Blackheath.

CLAY'S MANURES, CRUSHED BONES
(See page 137.)

CLAY'S FERTILIZER is UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

ORDER MATS NOW!—To prevent disappointment and loss by early frosts, order Norfolk Reed Mats now. 50 per cent. more protective than straw. Made to any size, 1d. per square foot.—BOULTON and PAUL, Lim., Norwich.

XL ALL FOR WINTER AND SPRING CLEANSING.

Before growth commences stronger solutions may be used.

XL ALL NICOTINE INSECTICIDE WASH (poisonous) for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. Agents, write for particulars.

XL ALL CAUSTIC WINTER WASH (non-poisonous) for dormant Fruit Trees, stamps out American Blight, and all other pests.

Other XL ALL Preparations of great renown are XL ALL NICOTINE VAPORISING COMPOUND, XL ALL FERTILISER, XL ALL LAWN SAND, etc.

Ask your Nurseryman, Seedsman, or Florist for my small Pink List.

G. H. RICHARDS, Manufacturer, 234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Border and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

SEEDS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Select Seeds.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

RHODODENDRONS.

DICKSONS & CO.,
1, Waterloo Place, Edinburgh.
Pink Pearls, Ponticums, choice Hybrids. Write.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

ALEX. DICKSON & SONS, Ltd.,
Hawlmark, Newtownards, Ireland.
The World-famed Champion Rose Growers and Raisers of Irish Pedigree Seedling Roses. Lists Free.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 1st Prizes, 3 2nds. at N.R.S. Shows, 1910. Ctlg. Free.

SAMUEL M'GREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
Illustrated Catalogue free.

TURF LOAM.

A. B. JOHNSTON, New Park, Cranleigh, Surrey.
Very Fibrous Loam, for Carnations, Roses, Vine Borders, Melons, Fruits under Glass, &c., &c.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

HORNES' TREES. SPECIAL CASH OFFER.

200,000 FRUIT TREES & BUSHES OF ALL KINDS.

10,000 MAIDEN APPLES, on English Paradise. The following popular kinds are included:—James Grieve, Ben's Red, Charles Ross, Cox's Orange, Bramley Seedling, Lord Derby, Ecklinville Seedling, Newton Wonder, Norfolk Wonder, Blenheim Orange, Warner's Rival, Quarrenden, Lane's Prince Albert, Beauty of Bath, Lord Suffield, Stirling Castle, Houblon, Grenadier, Annie Elizabeth, Hector Macdonald, Edward VII., Wellington, Peasgood Nonsuch, Potts Seedling. Price **5/-** per doz.; **38/-** 100.

Also a very fine lot of **20,000 PYRAMID APPLES (2 and 3 years) on English Paradise,** including:—Worcester Pearmain, Cox's Orange Pippin, James Grieve, Allington Pippin, Bramley Seedling, Warner's King, Houblon, Charles Ross, Lane's Prince Albert, Beauty of Bath, Lord Derby, Ecklinville Seedling, Ribston Pippin, Newton Wonder, Ben's Red, Grenadier, Annie Elizabeth, Hector Macdonald, Gladstone, Stirling Castle, Lord Grosvenor, King of Pippin. Price **9/-** per doz.; **60/-** 100.

ABOUT 20,000 HALF-STANDARD APPLES on Crab Stock (2 and 3 years).—Worcester Pearmain, Cox's Orange Pippin, Bramley Seedling, Newton Wonder, Allington Pippin, Lord Derby, Blenheim Orange, James Grieve, Lane Prince Albert, Gladstone, Ecklinville Seedling, Charles Ross, Stirling Castle, Gascoyne Scarlet, James Grieve. Price **9/-** doz.; **60/-** 100.

PEARS ON QUINCE (2 years).—Doyenne du Comice, Louise Bonne of Jersey, Pitmaston Duchess, Conference, Clapp's Favourite, Marguerite Marillat. All **10/-** per doz.

STANDARD APPLES.—The following popular kinds are included:—Cox's Orange Pippin, James Grieve, Ecklinville, Allington Pippin, Blenheim Orange, Lord Derby, Warner's King, King of Pippin, Wellington, Lord Suffield. Price **17/-** doz.

Victoria Plums, 2 years feathered, **10/-** doz. Black Currants, Lee's Prolific, 2 years, very fine, **2/-** doz.; **10/-** 100 Raspberries, Superlative, **25/-** 1,000. Several thousand Cabbage Plants (Sutton's Flower of Spring and Myatt's Offenham), **2/6** 1,000.

SPECIAL QUOTATIONS FOR LARGE QUANTITIES. NEW ILLUSTRATED CATALOGUE NOW READY, TO BE HAD POST FREE. WORLD-WIDE REPUTATION. ALL THE BEST VARIETIES IN CULTIVATION.

W. HORNE & SONS, Noted Fruit Tree Growers. **CLIFFE, nr. ROCHESTER, Kent.**

WHEELERS' SEEDS.

160 YEARS' REPUTATION OF UNSURPASSED QUALITY.

Fully Illustrated 96 page List
Free to Horticulturists.

J. C. WHEELER and SON, Ltd.,
Seed Growers. **GLOUCESTER.**

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

TAKE NOTICE.

Intending planters should send for the STANCLIFFE CATALOGUE OF TREES, &c.

Our Stocks, which are grown on the highest and most exposed hills of Derbyshire, are in fine condition, and are sure to give satisfaction. Note the prices before ordering elsewhere.

Rockery Stone, 1/- per ton.

THE STANCLIFFE ESTATES CO., LTD.,
DARLEY DALE, DERBYSHIRE.

SEED POTATOES & GARDEN SEEDS

Customers wishing to save
50 PER CENT.
When Purchasing
BULBS, GARDEN SEEDS, AND POTATOES,
Should send AT ONCE for Lists to

J. W. CROSS,
OLD GRAMMAR SCHOOL, **WISBECH**

Perpetual-Flowering CARNATIONS.

This year's Novelties and all the Leading Varieties.

Send for descriptive Catalogue of 80 varieties with particulars when to stop them.

C. ENGELMANN, CARNATION GROWER,
SAFFRON WALDEN.

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

Extracts from 35th annual collection of reports:—

NATIVE GUANO for POTATOES, VEGETABLES, etc.

A. J. Beard, Erdington: "Potatoes, splendid, free from disease. Best I ever had."—H. Chester, Nantwich: "Best onion manure I ever used. Grand for onion fly."

NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc.

J. Cant, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. Frampton, Titchfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED,** 29, New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

IRISH SEED POTATOES BEAT SCOTCH.

My famous Stocks have secured Leading Honours in many English Public Trials.

Superb Quality. Illustrated Pamphlets Free.

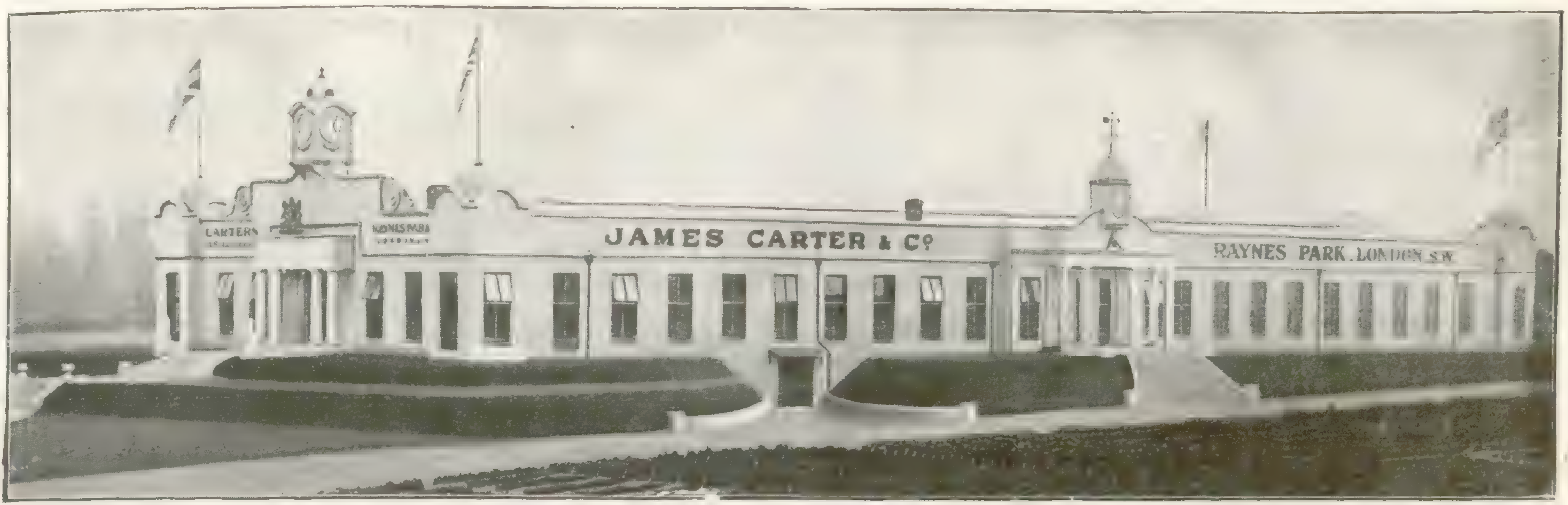
J. F. WILLIAMSON, F.R.H.S.,
Seed Potato Specialist,
MALLOW, CO. CORK.

FERTILISERS for LAWNS, FRUIT TREES, and VINES, and for GENERAL GARDEN PURPOSES. Also Bone Meals, Vitriolised Raw Bones, Superphosphate, Peruvian Guano, Sulphate of Ammonia, Nitrate of Soda, Nitrate of Lime, Potash Salts, etc. Horticultural Price List on application to

HY. RICHARDSON & COMPANY,
Skeldergate Bridge, YORK.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

SEED POTATOES, Scotch, Irish, Midlands, Northerns; largest and best stock in West of England, both earlies and lates. Apply to OLIVER BROS., Importers, Exeter, and Barnstaple.



CARTERS NEW OFFICES AND SEED TESTING GROUNDS.

RECENT PROMINENT INTRODUCTIONS.

CARTERS
QUITE CONTENT
Tall Maincrop Marrowfat Pea.
The largest, Sweetest, and most Prolific Marrowfat Pea for Exhibition or the Table. Pods 7½ ins. long.
FIRST-CLASS CERTIFICATE R.H.S., 1906.
Price **3s. 6d.** per pint, **2s.** per ½ pint, **1s.** per packet. Post free.

CARTERS
SCARLET EMPEROR RUNNER BEAN
The Longest Smooth Exhibition Scarlet Runner, with pods 15½ inches long, hanging in clusters.
Price **4s. 6d** per quart, **2s. 6d** per pint, **1s.** per packet. Post free.

CARTERS
SUNRISE TOMATO
FIRST-CLASS CERTIFICATE, R.H.S.
As an Indoor and Outdoor Variety.
Price **2s. 6d.** and **3s. 6d** per packet.
Post free.

Carters TESTED Seeds
REGISTERED TRADE MARK

CARTERS LARGE-FLOWERED SWEET PEAS
All the finest and most up-to-date varieties, separate or mixed. Price **3d.**, **6d.**, and **1s.** per pkt. Post free.

ILLUSTRATED CATALOGUE POST FREE.

Carters
HIGH HOLBORN

RAYNES PARK,
LONDON, S.W.
Seedsmen to H.M. THE KING.

Branches: 237 & 238, HIGH HOLBORN, W.C.
53a, QUEEN VICTORIA ST., E.C.

Carters TESTED Seeds
REGISTERED TRADE MARK

Sales by Auction.

ROSE TREES.
SHRUBS. BULBS.

SALES BY AUCTION
are held every
MONDAY and WEDNESDAY,
at 12.30.

STEVENS' AUCTION ROOMS,
Established 150 Years,
38, King St., Covent Garden, London, W.C.
Catalogues on Application.

SALES NEXT WEEK.

MONDAY and FRIDAY NEXT, February 20th and 24th, at Twelve o'clock.—Japanese Liliums, Herbaceous, Border, and Alpine Plants; large quantities of hardy bulbs and roots for spring planting.

At Half-past One o'clock.—1,000 ROSES in variety, Fruit Trees, Azaleas, Rhododendrons, etc.

WEDNESDAY NEXT, February 22, at Twelve o'clock. Gladiolus, Montbretias, Begonias, Gloxinias, Liliums and numerous other hardy bulbs for spring planting. 300 lots of Herbaceous and Border Plants. Peat, Leaf mould, etc.

At Half-past One o'clock.—ROSES, 5,000 Standard, Dwarf, Climbing, T., H.T., and H.P.; newest and best varieties.

At Five o'clock.—450 Azaleas of sorts; 300 Aspidistras; also Rhododendrons and Camellias. 100 lots of Ornamental Palms, and other Greenhouse Plants, Standard Bays, etc.

FRIDAY NEXT, Feb. 24th, at Quarter to One o'clock. An importation of 1,100 Cattleya Mossiæ, received direct in fine condition. 400 lots of Established Orchids in variety. Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view morning of sale and catalogues had.

---

25 STRONG CHRYSANTHEMUM CUTTINGS, Exhibition, Decorative, Single or Early, 1s. 6d.; 50, 2s.; 100 3s. 6d.; by return. List. RICHMOND'S CHRYSANT NURSERIES, Ossett, Yorks.

TRY THESE
and you'll be happy.

BROCCOLI,	
Harrison's Victoria, late white.	1/- pkt.
LEEK,	
The Leicester Hero...	... 3d. & 6d. pkt.
LETTUCE,	
Harrison's King XXX.	... 3d. & 6d. pkt.
ONION,	
Leicester Globe	1/- oz.

Our Catalogue, No. 26, offers the finest types of every seed you require.

SEND FOR A COPY.

HARRISON & SONS,
33, Market Place, **LEICESTER.**

TO LET.—Facing S.S.W.; on Great Central and Metropolitan Joint Railway, an old fashioned KITCHEN GARDEN, in excellent and good repair, consisting of four acres, all surrounded, and divided up into compartments by high walls covered with well-matured fruit trees of various kinds. In garden are four large vineries, 1 peach house, 5 plant houses (1 new), 8 pits, and numerous spare lights, 1 gardener's cottage (6 roomed), bothy, and sheds. Houses heated with hot water. Adjoining across the road are 5½ acres of orchard, with sheds and cart stable used in connection with the kitchen garden. Excellent well in garden and an additional water supply if required can be obtained by arrangement. Order to view can be obtained with all particulars from the Agent, Shardeloes Estate Office, Amersham.

SPECIAL to GARDENERS.
ROSES.—How to strike 99 Teas out of every 100, full instructions on receipt of P.O. for 1s.

G. BLAIN and SONS, Acres Lane, Stalybridge.

100,000 FREE COPIES

Dobbie's New Catalogue and Guide to Horticulture.
224 PAGES. 210 ILLUSTRATIONS.

A COPY WILL BE SENT WITH PLEASURE GRATIS TO ANY ONE APPLYING FOR SAME, WHO ENCLOSES 3d. IN STAMPS TO DEFRAY COST OF POSTAGE, AND MENTIONS "GARDENERS' MAGAZINE."

DOBBIE & CO.,
The Royal Seedsmen, EDINBURGH

SPECIAL SWEET PEA LIST
including many grand Novelties
POST FREE, ON APPLICATION TO
GEORGE ELSOM, SEED GROWER AND MERCHANT,
SPALDING.
Hundreds of Prizes won with products grown from Elsom's Seeds.

100,000 SUTTON'S FLOWER OF SPRING CABBAGE PLANTS, 2s. 6d. 1,000.
W. HORNE and SONS, Cliffe, Rochester.

PAINT & GLASS.
NICHOLLS & CLARKE, LTD.
SHOREDITCH, LONDON.
GLASS.
When sending for Catalogue please cut out this advt.

"THE GARDENERS'
MAGAZINE"
SPECIAL
COLLECTIONS
OF

25 Bush Roses for 15/-
50 Bush Roses for 30/-
100 Bush Roses for 50/-

CARRIAGE PAID.

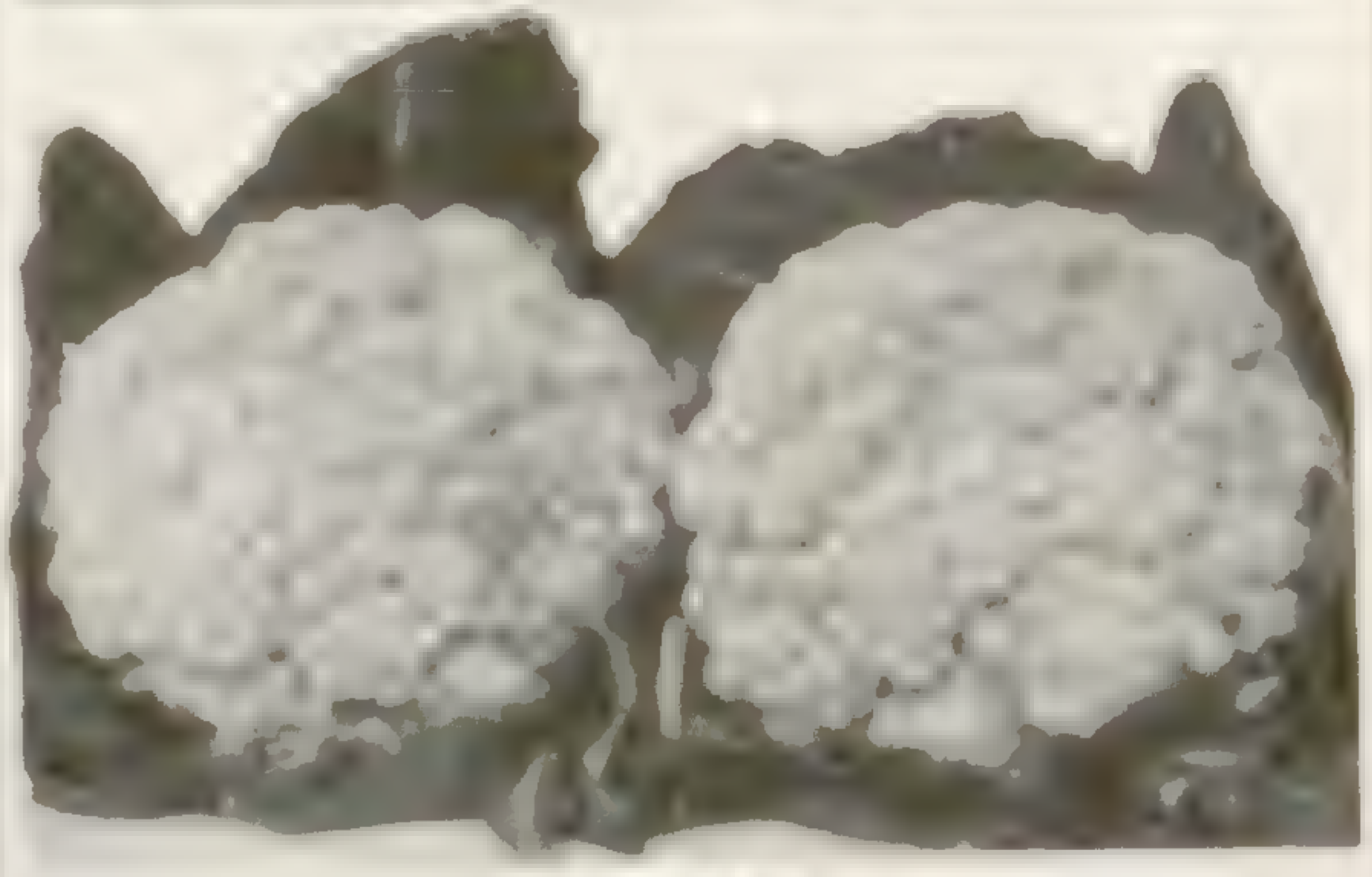
CHAMPION
ROSES

THE FINEST STOCK
IN THE KINGDOM.

FRANK CANT & CO.,
BRAISWICK ROSE GARDENS, COLCHESTER.

☛ *Our Illustrated Catalogue post free on application.* ☚

WEBBS' SEEDS



THE
Best Cauliflowers:
WEBBS' NEW EARLY FRAME (forcing)
WEBBS' EARLY MAMMOTH.
Each 1/6 and 2/6 per packet, post free.

[illegible]

THE
Best Cucumbers:
WEBBS' NEW EVERBEARING.
WEBBS' IMPROVED TELEGRAPH.
Each 1/6 and 2/6 per packet, post free.

[illegible] Mr. G. F. [illegible] Esq., Springfield.

CATALOGUE, Gratis and Post Free.

Seedsmen to H.M. King George V.

WORDSLEY, STOURBRIDGE.

ANT
ROOZEN
& SON'S
SEEDS,
BULBS,
AND
PLANTS
For Spring, 1911.

All of the Finest Quality.

THE CATALOGUE of above is NOW READY, and will be sent, post free, on application to their Offices at . . .

OVERVEEN, HAARLEM, HOLLAND;
Or to their General Agents,
MERTENS and CO.,
3, Cross Lane, LONDON, E.C.

BUNYARD'S
FRUIT TREES

The Best Quality and
Largest Selection at
Moderate Prices.

WRITE FOR CATALOGUE.

GEO. BUNYARD
& CO., LTD.,
Royal Nurseries,
MAIDSTONE.

ROSES IN POTS

WM. PAUL & SON
WALTHAM CROSS, LTD.

Respectfully invite attention to their magnificent stock of the above, which they believe to be unrivalled in quality and extent.

Dwarfs or bushes, extra strong, in 8 in. pots, for forcing and greenhouse culture	30/- to 60/- per doz. £12 and upwards per 100.
Climbers and Ramblers in 8 in. pots, for forcing and out-door planting on pergolas, arches, etc., with shoots ...	6 to 12 ft. long, 30/- to 60/- per doz. 12 to 16 ft. long, 72/- to 90/- per doz. Price per 100 on application.
Dwarfs and Climbers, smaller plants, in 5 in. pots	10/6 to 18/- per doz. 75/- to £6 per 100.

Priced List Post Free on application.

Inspection of Stock Invited.

The Nurseries are twelve miles from London, four minutes' walk from Waltham Cross Station, G.E.R.

Sole Postal Address—
PAULS' ROYAL NURSERIES
AND SEED WAREHOUSE,
WALTHAM CROSS, HERTS.

VOL. LIV.—No. 2,990. SATURDAY, FEBRUARY 18, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

◆

Inherited Sunshine.

When we are admiring the development of the flowers in our gardens, or the wild ones of wood, heath, and the thousand and one other environments which Nature has provided to fit their varied requirements, we are apt to overlook the fact that a large proportion of the vital vigour they now evince is due, not so much to the present conditions of the season, but to those of the previous year. Every fruit grower recognises the fact that it is the sunshine of the previous season which has ripened the wood and rendered it capable of producing flowering and fruiting buds in lieu of mere leaf-producing ones; and every perennial plant profits by that sunshine to lay up a store of root vigour which gives it a fair start when the next growing season arrives. Every bulb or corm of the hyacinth, crocus, tulip, scilla, and any other of the early spring bloomers, thrives or languishes in precise conformity with the amount of sunlight which its foliage of the past year could receive, and under its influence build up at its base a greater or less store of nutriment, the very flower itself being often visible in a cross section, so complete, that all the sunshine of the flowering season is incompetent to add a petal, and can only determine the size of the individual flowers in connection with other favourable or unfavourable factors. What we see, therefore, in our spring radiance and abundance of bloom is really and truly so much sunshine of the previous year inherited by the present one. It is due to the same inherited vigour that so many of the earliest flowers are gifted with the capacity of starting into growth at a time when the conditions of temperature would seem to preclude it, and when indeed the great majority of plants are at rest. For one reason, of course, all such plants have really enjoyed a long rest during the period when the others are active. The tulip bulb, for instance, is the work of late spring sunshine; given but little of this the foliage will make up for its lack by taking longer over its work, but the ideal condition precedent to full-sized vigorous blooms the following year is a period of practical baking in the sun, and in its native habitats in the East we find colonies so exposed that at the ripening season the hand can hardly bear the heat of the soil, the result each season being such compact masses of large and brilliant flowers as to entirely throw into the shade even the splendid tulip effects we see nowadays in our parks and elsewhere.

MR. SILAS COLE.

All this formative work was completed by May or June, and the bulb remains absolutely quiescent and irresponsive to all the blandishments of the summer sun and showers to which the later crowd of flowering plants respond so readily. Late in the autumn, however, they have rested long enough, and despite the ever-lowering temperature, the bottled-up sunshine of the spring begins to animate them, they push forth their roots, and in due course force their spiky foliage to the surface, and eventually display their lovely flowers in all their splendour, as a bequest from the King Sol of a year ago. Since, however, it is the foliage alone which is capable of doing the needful work with the sun's aid, and the quality of this work depends upon such foliage being permitted to complete it, we see the necessity of allowing the foliage of all bulb-forming plants to die completely down before it is cleared away. If removed while still green the bulb, in course of formation will mature, but will be much smaller than it should be, and in all probability will not flower at all the following season, while if exposed to sufficient sun and allowed to run its course throughout, not only will the previous bulb, which has been used up, be replaced by one of equal size, but will, in all probability, be accompanied by others, permitting thus of propagation. It is a curious fact, however, in this connection, that many daffodil bulbs appear hardly to rest at all. Thus it is dangerous to lift them later than August, although their foliage may only have disappeared in July, since already it will be seen that roots have been freely emitted, and to damage these inevitably involves a check. Despite this precocity of root growth, however, no foliage will appear above the soil for nearly six months, and they will not bloom until March, its object, therefore, is rather a puzzle, since without foliage the bulb cannot be increased in size. Tulip bulbs, on the other hand, rest entirely until the late autumn, and may safely be lifted any time between the completion of their growth and that period.

Mr. Silas Cole, who is just retiring from the charge of Earl Spencer's gardens at Athorp Park, Northampton, is famous in horticultural circles for many things. He is a very capable all-round gardener, but of hardy fruits and vegetables—the distinctly utilitarian side of gardening—he has for many years been a foremost cultivator, and eminently successful exhibitor at the leading exhibitions. It was Mr. Silas Cole who gave us the first waved sweet pea, i.e., Countess Spencer, the lovely pink variety that startled the floricultural world when he exhibited it so finely at the first exhibition of the National Sweet Pea Society, held at the old Royal Aquarium in 1901. By the introduction of this variety a marvellous impetus was given to sweet pea culture, because it gave a new form, an added charm, to the popular and fragrant annual. Mr. Silas Cole has been 18½ years at Althorp Park, and succeeded his father as head gardener, the two, father and son, rendering thirty-three years' continuous service between them at this famous Midland establishment. Mr. Cole has a fine physique, long experience, ample skill, and abundant energy, so that, whatever position he takes up we are sure he will do it and himself credit.

Adiantum farleyense var. Gloire van Moordrecht.—In our issue of the 11th inst. we illustrated and described a beautiful adiantum that had been shown at the meeting of the Royal Horticultural Society held on January 31, under the name given above, when an Award of Merit was made in its favour. Although we were in some doubt as to the variety having been derived from Adiantum farleyense, we, as a matter of course, adopted the name under which the plant was shown, and stated that it appeared to have been raised from that well-known and justly popular fern. At the meeting of the Royal Horticultural Society's Floral Committee on Tuesday, the chairman, Mr. H. B. May, stated that since the preceding meeting Mr. J. Bier, the raiser, had visited him at Edmonton, and, in the course of conversation, stated that the new form had appeared as a chance sporeling among a batch of sporelings of Adiantum scutum. This last-named is synonymous with A. Gheisbreghti, a handsome fern that was raised many years ago in the nursery of Mr. B. S. Williams at Upper Holloway. This also sprang up as a chance sporeling, and is undoubtedly a variety of A. tenerum. That the newcomer should have originated in a similar manner may be disappointing to those who thought that at last A. farleyense had produced a fertile spore; but it does not in any way affect the value of the fern from the cultural standpoint. It is remarkably beautiful, free in growth, and evidently readily raised from spores, and has the promise of becoming highly popular.

R.H.S. Floral Committee.—Owing to the arduous work of this committee, the Council have, on the suggestion of Mr. William Marshall, V.M.H., appointed two chairmen, an arrangement by which the awards to novelties and the miscellaneous groups can proceed simultaneously. The co-chairmen are Mr. W. Marshall, V.M.H., and Mr. H. B. May, V.M.H., and, as at present arranged, the former will preside over the section making the awards to groups and the latter to that dealing with novelties.

The Journal of the Kew Guild.—After a rest of one year (there was no issue in 1909) the Journal of the Kew Guild has made a welcome reappearance, and the new issue is Vol. XVII. and XVIII. for 1909 and 1910. Always of unusual interest we cannot remember an issue more interesting than the one now before us, and we imagine every Old Kewite on receiving it will immediately devour its contents from beginning to end. Mr. R. Hooper Pearson, the managing editor of our contemporary, the "Gardeners' Chronicle," looks out from the frontispiece, and his portrait is accompanied by an appreciation from Mr. W. Watson's pen. The reports show a cash balance to date of £55 4s. 11d., plus £300 invested. We are glad to see that the annual general meeting is to be held in London again this year, and followed by a dinner and social evening. The work of the Mutual Improvement Society is reviewed, while the appointments and retirements of Kewites show the important positions "Guilders" are occupying both at home, in Africa, and the Far East. The bright little notes referring to alterations and additions in the Royal Gardens, Kew, and the social and business life of present Kewites will be read with great relish by those "in lands afar," while with equal interest those at home will read the delightful letters from Kewites in Zomba, Wollongong, Marsala (Portuguese East Africa); Youkeos, N.Y., and Singapore, as well as the humorous, descriptive, and instructive letter, telling of an Irish member's tour on the Continent. Kindly tributes are paid to the memory of Messrs. J. Garrett, W. Denning, C.W. Smythe, R. Pantling, J. Murrell, and F. Knowles, who have all passed away since the previous "Journal" was published. The issue concludes with the names and addresses of Old Kewites, these filling sixteen pages. We heartily congratulate the new secretary and editor, Mr. H. Cowley, upon the production of so excellent a "Journal."

Gardeners' Magazine Spring Number.—Our special number associated with the season of spring will be our issue for the 25th inst., and the arrangements we have made enable us to state that it will be one of the most interesting and useful spring numbers we have published. It will be almost exclusively devoted to matters requiring immediate attention, and the several contributions and numerous illustrations will afford valuable assistance in cropping the kitchen garden and making preparations for beautifying the flower garden, the conservatory, and the greenhouse during the summer and autumn months. As there is invariably a largely-increased demand for our spring issues we strongly advise those of our readers who require extra copies to give their orders early, and thus avoid disappointment.

Barcome Horticultural Society.—Mr. Frank Ballard has been elected secretary of this society in succession to Mr. Lademan, who retired in consequence of his leaving the district.

Dr. Daniel Oliver, F.R.S., who celebrated his eighty-first birthday at Kew a few days since, testifies in no uncertain manner to the beneficial effect of the study of botany upon health, and the salubrity of the Royal village. However that may be, his many friends will be glad to know that while he has outlived the greater proportion of his contemporaries in scientific circles, he enjoys excellent health, and takes a keen interest in the science in which he specially distinguished himself. It is now rather more than twenty years since Dr. Oliver retired from the position of keeper of the Herbarium at Kew, which he occupied for a considerable period with much success, and as near as may be half a century since he was appointed Emeritus Professor of Botany at University College, London, a position from which he retired in 1888. It is interesting to recall the fact that Dr. Oliver was awarded in 1884 the medal of the Royal Society, and in 1899 the medal of the Linnean Society. It is not without interest that Dr. Oliver has been followed in the keepership of the Herbarium by three botanists of distinction, all of whom are happily still with us. These are Mr. J. G. Baker, F.R.S., V.M.H., who was keeper of the Herbarium from 1890 to 1899, having previously been first assistant from 1866; Mr. W. B. Hemsley, F.R.S., V.M.H., who, after occupying the post of first assistant nine years, succeeded Mr. Baker in 1899 as keeper; and Dr. Otto Stapf, F.R.S., who succeeded Mr. Hemsley as keeper of the Herbarium on his retirement in 1908, and is busily engaged in maintaining the high reputation this department of the Royal gardens has so long enjoyed.

National Vegetable Society.—Appreciating the importance of taking time by the forelock, the committee of this society have issued the schedule of prizes offered for competition at the exhibition of the society, to be held at the Horticultural Hall on Wednesday, August 30. The schedule is comprehensive and the prizes liberal, and the exhibition should surpass the remarkable display produced last year.

Wimbledon Common Extension.—A further appeal is being made by Mr. Richardson Evans (hon. secretary), on behalf of the Wimbledon and Putney Commons Extension Fund. A sum of nearly £10,000 is needed in all for the acquisition of the 32 acres of land bordering the Beverley Brook, which is the first part of the larger scheme for saving as an open space the land in Kingston Vale. About £8,000 has already been paid, or promised, by private donors. The total area of the land in Kingston Vale which it is hoped to acquire is 172 acres, and the purchase price is £52,771. The Wimbledon Borough Council, the Maldens and Coombe Urban District Council, and the Merton Urban District Council have voted grants of £10,000, £3,500, and £500 respectively, but the grants are subject to the sanction of the Local Government Board, and are not immediately available. A City committee is to be formed with the object of addressing to the larger public of the Metropolis and the nation a more general appeal than has yet been made.

"**The Sweet Pea Annual,**" the official publication of the National Sweet Pea Society, has been issued to members, and a glance through its pages shows that it is a credit both to the society and the co-editors. The visits that were made by the members to Sutton Green, Kelvedon, and Marks Tey are described and illustrated, and other contents of an official character include a full report of the conference held in December last, an audit of the varieties shown at the society's exhibition, a catalogue of sweet pea names, and a report on the diseases of the sweet pea, all of which are both interesting and useful. Especially noteworthy among the contributions from members is the article on "Sweet Peas in British Columbia," from the pen of Mr. G. B. Dicks, showing, as it does, that these fragrant flowers enjoy a high degree of popularity in the Far West.

Bromley Chrysanthemum Society.—The committee of this society were able to submit a highly satisfactory report to the members on the occasion of the annual meeting, it being recorded that "There was a marked increase in the number of entries, and the quality of the exhibits throughout the show was above the average." The financial results of the year's work were also satisfactory. Mr. Patterson, who has been hon. secretary for some years, retired owing to his leaving Bromley, and was accorded a hearty vote of thanks for the services he had rendered the society. Mr. F. Andrews, the hon. assistant secretary, was appointed secretary.

Membership of the B.G.A.—There are now over two thousand members of the British Gardeners' Association. The Council is optimistic, and says: "There is magic in numbers. Small numbers depress; large numbers inspire. Let us therefore continue our efforts to increase our membership this year from 2,000 to 3,000 and then onwards, and the B.G.A. will become an irresistible force for good in the realm of horticulture."

ROYAL HORTICULTURAL SOCIETY.

As usual, on the occasion of the annual meeting of the society, there was a fine display in the Great Hall, and a very large number of Fellows and visitors. Early spring flowers, orchids, primulas, carnations, and camellias were leading features. Novelties were not numerous.

FLORAL COMMITTEE.

A beautiful and attractively arranged groups of forced shrubs, associated with palms and ferns, was set up right opposite the main entrance by Messrs. R. and G. Cuthbert, Southgate. Once more they had tall standard lilacs, laburnums, wistarias, and pyruses rising over standards and bushes of the lovely Prunus triloba, lilacs in great variety, Azalea mollis in lovely shades of colour, magnolias, and Staphylea colchica.

Indian azaleas in standard form, ranging from 3ft. to 5ft. high, and carrying freely-flowered heads, were grouped over ferns by Messrs. Jas. Veitch and Sons, Chelsea. This firm also occupied its usual position, and filled out a good length of tabling with dwarf azaleas, forced lily of the valley, the fragrant and bright yellow Primula Kewensis, a splendid strain of P. obconica, and a few greenhouse rhododendrons.

Perpetual carnations were presented in large numbers by Messrs. W. Cutbush and Son, Highgate, who displayed large vases of Mrs. Fortescue, May Day, Lady Elphinstone, White Enchantress, Rose Doré, Lady F. Waring, etc. In another group the Highgate firm displayed, in rock garden fashion, such charming shrubs as Rhododendron præcox, Hamamelis arborea, H. Zuccarini, and magnolias, with little groups of Iris histrioides major, I. send-pers, I. reticulata, Tulipa Kaufmanniana, Cyclamen coum, Soldanella alpina, Adonis amurensis, etc.

Messrs. H. B. May and Sons, Edmonton, showed a lot of dwarf pillar-shaped specimens of creeping ferns, and these made up a novel group; Drymoglossum spathulatum, D. pilosilloides, D. carnosum, Davallia heterophylla, Asplenium obtusilobum, Polypodium vacciniifolium album, P. repens, and Niphobolus rupestris were the leading kinds. At one end of their group the Messrs. May had placed on a paper-covered board fronds of fifteen varieties of Nephrolepis exaltata, showing in a remarkable manner the development of the species horticulturally during the past ten years. In order of plumose development the varieties were: Fosteri, Piersoni, Barrowsi, elegantissima, e. compacta, todeaoides, Whitmani, Amerpohli, superbissima, magnifica, Scholzeli, lycopioides, Marshalli, and Marshalli compacta.

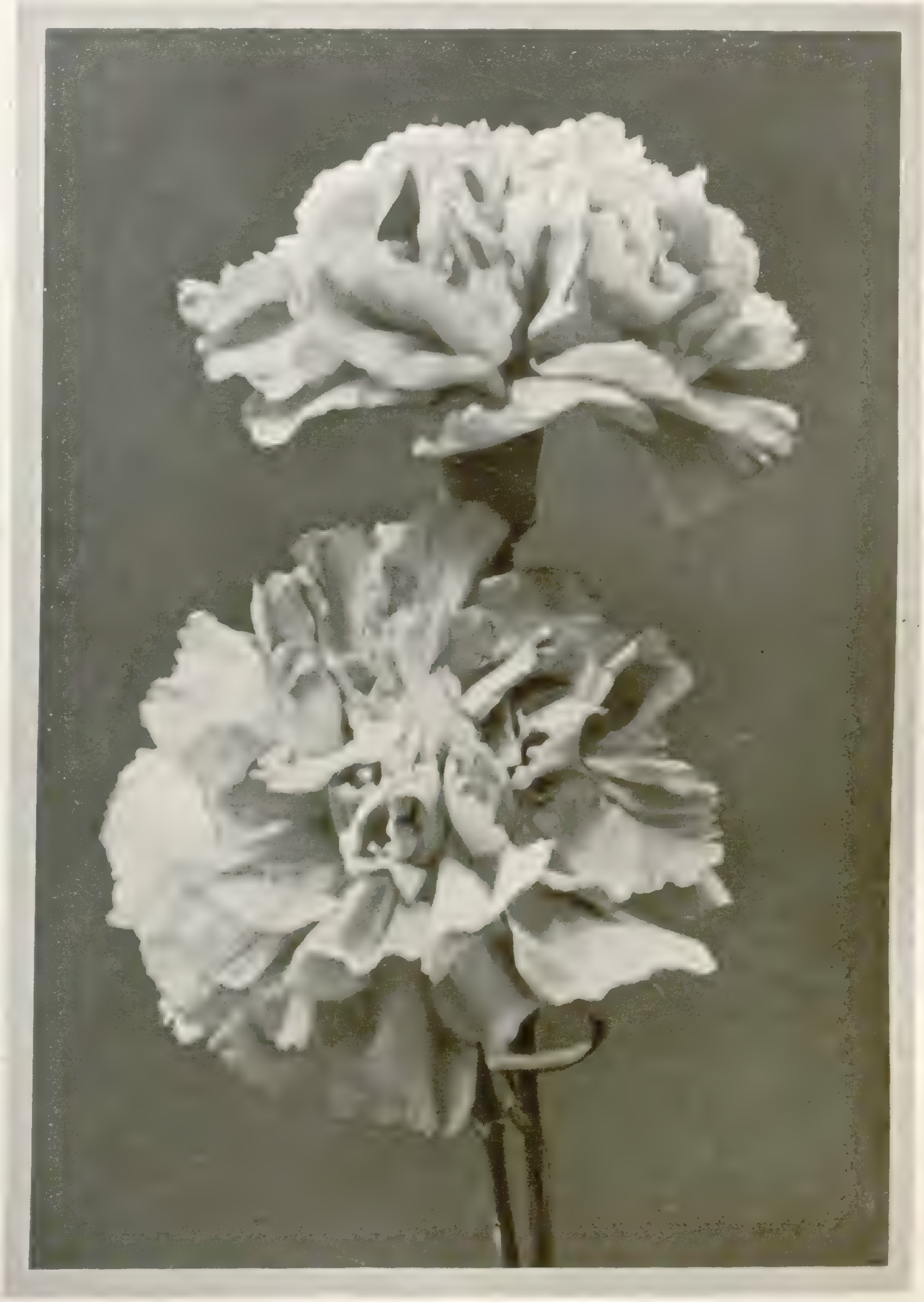
Some beautiful bertolonias and anœctochilus, under bell glasses, were brought up by Mr. L. Russell, Richmond, who also contributed a large number of Indian azaleas and a batch of the blue Francisca calycina.

Dainty irises, and beautiful little groups of hardy cyclamens, early crocuses, hepaticas, saxifragas, and primulas, were grouped among rocks, in front of heaths, rhododendrons, and pernettyas, by Messrs. R. Wallace and Co., Colchester.

A little model rock garden from Messrs. J. Cheal and Sons, Crawley, attracted a good deal of attention. A few flowering shrubs and some small conifers were placed on the higher portions, while along the front were colonies of Primula rosea, P. denticulata, Iris reticulata, some tulips, and Dog's Tooth violets.

Messrs. Wm. Paul and Son, Waltham Cross, filled one corner of the hall with a fine healthy lot of camellias in pots, the plants ranging from 2ft. to 10ft. high. The rich green of the shining leaves served to show up the beauty of the flowers of such fine varieties as Mercury, Mars, Eugenie, Messina, elegans, imbricata, alba plena, etc.

Early spring flowers were prettily shown by Messrs. Barr and Sons, Covent Garden, and these included Adonis amurensis, beautiful crocuses in variety, hardy cyclamen, snowdrops, saxifragas, heaths, and a batch of the elegant Primula malacoides.



NEW PERPETUAL CARNATION CORONATION.
Colour, rich pink; A.M., R.H.S., February 14. Mr. B. Bell, Guernsey.

Messrs. Heath and Sons, Cheltenham, filled the upper corner of the hall with a rock garden, which they somewhat sparingly furnished with saxifragas, hardy primulas, crocuses, hepaticas, cyclamen, etc.

Messrs. Stuart Low and Co., Enfield, showed carnations in variety, and associated these with ferns in stands and bowls; this firm also presented some very fine cyclamens, notably those with salmon-coloured flowers.

Messrs. W. Wells and Co., Merstham, put up a few large vases of the new perpetual carnation named White House.

A large batch of the graceful rosy-lilac-flowered Primula malacoides, from Messrs. Whitelegge and Page, Chislehurst, made a charming display, and further demonstrated the usefulness of this species.

Mr. H. C. Pulham, Elsenham, Essex, brought forward a quite small display of alpine shrubs and flowers.

A bold bank of florists' forms of cinerarias, from Messrs. H. Cannell and Sons, Swanley, showed a fine range of attractive colouring, but even more brilliant were the bunches of zonal pelargoniums, such varieties as Jupiter, St. Louis, King Victor, Naples, and Bombay being especially effective.

Seedlings of the exquisite little Cyclamen ibericum made up a pretty little group, with seedling freesias, chiefly yellow shades, from Mr. F. H. Chapman, Guldeford Lodge, Rye.

Some choice alpine and early spring flowers were displayed by Mr. Maurice Prichard, Christchurch, with hellebores, Morisea hypogæa, Primula denticulata, tiny irises, saxifragas, crocuses, anemones, etc., were all very delightful.

Mr. H. Burnett, Guernsey, put up a lovely lot of carnations again, including Mrs. Burnett, Dorothy Gordon, Britannia, Marmion, Aurora, Mikado, R. F. Felton, Mrs. C. F. Raphael, Sultan, Scarlet Glow, Mrs. W. J. Hunter, and other beautiful varieties.

Messrs. Sutton and Sons, Reading, had a bank of Proserpine, Vermilion Brilliant, Orange Blossom, Montresor, and White Joost van Vondel tulips, and on another table set out a splendid exhibit of their grand strains of Chinese primulas, beautifully grown, and of fine form and colour; Duchess, Giant Pink, Salmon Pink, Crimson King, Giant Crimson, Royal White, and Reading Blue were a few of the leading varieties on view.

Messrs. G. Mount and Sons, Canterbury, put up a lovely lot of beautiful flowers of the charming and brilliant Richmond roses.

Mr. G. Reuthe, Keston, brought forward an interesting lot of choice hardy shrubs, and a collection of beautiful early irises, crocuses, snowdrops, saxifragas, hepaticas, primulas, etc.

Messrs. T. S. Ware, Feltham, had a rock garden, furnished with hellebores, Adonis amurensis, Primula malacoides, Iris reticulata, Corydalis angustifolia, primroses, Morisia hypogæa, etc.

From Mr. B. G. Bell, Castel Nursery, Guernsey, came a beautiful carnation, under the name of Coronation (A.M.), the blooms being of medium size and superb form, and the colour rich pink.

ORCHID COMMITTEE.

A beautiful group of orchids, was put up by Mr. H. G. Alexander, orchid grower to Lieut.-Colonel Sir George Holford, and it consisted almost entirely of a huge Cattleya Trianæ Hydra, and wonderfully well-grown examples of white Lælia anceps, all staged in a groundwork of green moss. The central specimen of Cattleya Trianæ Hydra carried twenty-two spikes, and a total of ninety-six flowers; this was a plant of three leads in 1904, therefore its present condition is high testimony to Mr. Alexander's skill. There were about a score of plants of white varieties of Lælia anceps, carrying a total of 94 spikes and about 330 lovely flowers. Several specimens carried three dozen flowers each. The varieties represented were L. a. Williamsiana, L. a. alba, L. a. Schroderiana, L. a. albida, L. a. Sanderiana, L. a. alba Bull's var., the purest white of all, and L. a. Williamsi.

Messrs. Jas. Cypher and Son, Cheltenham, presented a large group of interesting and beautiful orchids; in the centre they had spikes of Cymbidium insigne with calanthes below them. A few dendrobiums were associated with varieties of Lycaste Skinneri and Cattleya Trianæ, but cypripediums were a leading feature. Among the latter good things were Cypripedium Venus, C. Helen II., C. Mrs. Mostyn, C. aureum virginale, C. Beekmani, C. Curtmanni, and C. Thompsoni.

Messrs. Sander and Sons, St. Albans, exhibited the rare Odontoglossum coronarium brevifolium, carrying eight spikes of flowers, with Odontioda Cooksoniæ, Odontoglossum McNabianum, O. Warscewiczi, O. Thompsonianum, O. Cooksoniæ, Cypripedium Chapmani, and C. Helen II.

Messrs. Charlesworth and Co., Haywards Heath, contributed another beautiful group of orchids, the whole centre of the display being composed of Phalænopsis Schilleriana with a score or more of lovely spikes, odontoglossums in great variety and beauty, Odontioda Bradshawæ, O. St. Lucien, O. Vuylstekeæ, Renanthera Imschootiana, white forms of Lælia anceps, Zygocolax Charlesworthi, numerous finely-fringed and exquisitely beautiful Brasso-cattleyas, the handsome Lælio-cattleya Luminosa, and Sophro-cattleya Marathon—a variable hybrid, some dendrochilums and cypripediums.

From Gatton Park, Mr. Collier, gardener to Sir Jeremiah Colman, Bart., brought up some well-grown specimens of Dendrobium Lady Colman, finely flowered and very attractive.

Mr. Stables, gardener to De Barri Crawshay, Esq., Rosefield, Sevenoaks, exhibited some striking seedling odontoglossums, notably O. Lambeauianum Purple Queen, O. Vuylstekeæ, O. amabile, O. Valeria (Edwardi x Vuylstekei), and O. Verona (Adrianæ x O. Vuylstekei), all of great promise.

The fine Cypripedium Beryl, C. Carola, Cattleya Mendeli (blush variety), and Lycaste Skinneri with rosy flowers.

The group of cypripediums shown by Mr. E. V. Low, Vale Bridge, Haywards Heath, contained many good things, such as Cypripedium aureum Surprise, C. Fulshawense, C. Beekmani, C. Godefroyæ leucochilum, C. Leonides, C. Venus, C. Minos Young's var., and C. Maudiæ.

Mr. Hopkins, gardener to Francis Wellesley, Esq., Westfield, Woking, showed the fine Cypripedium Wellesleyæ, four flowers; C. Little Gem, and C. Nerissa.

Mr. Day, gardener to H. S. Goodson, Esq., Putney, brought up Odontoglossum ardentissimum G. E. Day, finely blotched; O. a. Lamas, heavily spotted, and Cattleya Trianæ Goodsoni.

Messrs. Theodore Pauwels and Co., Meirlebeke, Ghent, sent over the handsome Brasso-cattleya Senateur de Bast (B.-c. Mossiæ Digbyana crossed with B.-c. Mrs. Leeanum); and Cymbidium Lawrenceanum, a new cross between C. insigne and C. Lowianum concolor.

Dendrobiums figured largely in Messrs. Stuart Low and Co.'s group, brought up from Enfield, and with these were cypripediums in variety, good forms of Cattleya Trianæ, Angræcum citratum, Pleurothallis Roezli, Brasso-cattleya Leemanæ, etc.

Messrs. Armstrong and Brown presented Odontioda Bradshawiæ in fine form, Vanda Amesiæ, and some good cypripediums, such as C. Admiral Wilson, C. aureum Hyeanum, C. Mary Beatrice, C. Dauphine, C. Beryl splendens, and C. Venus Orchidhurst var.

Messrs. J. and A. McBean, Cooksbridge, Sussex, showed some good forms of Cattleya Trianæ, a good plant of Cymbidium eburneo-Lowi, beautiful odontoglossum spikes, white varieties of Lælia anceps, and a few good cypripediums.

FRUIT AND VEGETABLE COMMITTEE.

A grand lot of vegetables from Messrs. Sutton and Sons, Reading, showed the range of subjects available at the present season. There were Early White broccoli, leeks, savoys, turnips, carrots, parsnips, artichokes, spinach, winter radishes, Brussels sprouts, celeriac, Stachys tuberosa, celery, A1. kales, and sprouting kales.

About four dozen dishes of well-kept apples from Mr. W. H. Divers, gardener to the Duke of Rutland, Belvoir Castle, Grantham, were greatly admired, especially the dishes of Gascoigne's Scarlet, Lord Derby, Annie Elizabeth, Newton Wonder, Dumelow's Seedling, etc.

Some grandly grown onions, clean, smooth potatoes, fine carrots, beet, parsnips, and turnips, were shown by Mr. A. G. Gentle, gardener to Mrs. Denison, Little Gaddesden, Berkhamsted. It was a splendid exhibit of remarkably well-grown roots.

Oranges growing on bushes of various sizes, and also picked fruits, made a very handsome exhibit from Messrs. T. Rivers and Sons, Sawbridgeworth; St. Michaels, Achilles, and Bijou varieties were very finely shown, the bushes carrying large crops of golden luscious fruits. Limes, lemons, and citrons were also exhibited.

CERTIFICATES AND AWARDS.

First-class Certificate.—To Brasso-cattleya Senateur de Bast, from Messrs. Theodore Pauwels and Co., Meirlebeke, Ghent.

Award of Merit.—To Cypripedium Carola, from Messrs. Hassall and Co., Southgate; to Cymbidium Lawrencianum, from Messrs. Theodore Pauwels and Co., Ghent; to Cypripedium aureum Laekenense, from Mr. E. V. Low, Haywards Heath; to Carnation Coronation, from Mr. B. Bell, Guernsey.

MEDALS.

Silver-Gilt Knightian.—To Messrs. T. Rivers and Son, Sawbridgeworth, for oranges.

Silver-Gilt Flora.—To Messrs. Wm. Cutbush and Son, Highgate; to Messrs. Sutton and Sons, Reading, for primulas and tulips; to Messrs. Charlesworth and Co., Haywards Heath, for orchids.

Silver-Gilt Lindley.—To Lieut.-Col. Sir George Holford (grower, Mr. H. Alexander) for orchids.

Silver-Gilt Banksian.—To Mr. H. Burnett, Guernsey, for carnations; to Messrs. R. and G. Cuthbert, Southgate, for flowering shrubs; to Messrs. Jas. Veitch and Sons, Chelsea, for azaleas, etc.

Silver Flora.—To Mr. C. Engelman, Saffron Walden, for carnations; to Messrs. H. B. May and Son, Edmonton, for ferns; to Messrs. Wm. Paul and Son, Waltham Cross, for camellias; to Messrs. J. Cypher and Sons, Cheltenham, for orchids; to Messrs. Stuart Low and Co., Enfield, for orchids; to Messrs. Armstrong and Brown, Tunbridge Wells, for orchids.

Silver Knightian.—To Messrs. Sutton and Sons, Reading, for vegetables; to Mr. Gentle, gardener to Mrs. Denison, Little Gaddesden, Berkhamsted, for vegetables; to Mr. W. H. Divers, gardener to the Duke of Rutland, Grantham, for apples.

Silver Banksian.—To Messrs. Sander and Son, St. Albans, for orchids; to Mr. E. V. Low, Haywards Heath, for orchids; to Messrs. J. and A. McBean, Cooksbridge, for orchids; to Messrs. H. Cannell and Sons, Swanley, for cinerarias and pelargoniums; to Messrs. G. Mount and Sons, Canterbury, for roses; to Mr. L. R. Russell, Richmond, for azaleas, etc.

Bronze Flora.—To Messrs. J. Cheal and Sons, Crawley, for rock garden; to Mr. Maurice Prichard, Christchurch, for alpine flowers; to Messrs. R. Wallace and Co., Colchester, for hardy plants; to Messrs. T. S. Ware, Ltd., Feltham, for hardy flowers.

Bronze Banksian.—To Mr. G. Reuthe, Keston, for hardy plants.

ANNUAL MEETING.

There was a large attendance in the Lecture Room when Sir Trevor Lawrence, Bart., took the chair at the annual general meeting. After the reading of the minutes and the observance of other formalities, and the election of 76 new Fellows, the President moved the adoption of the council's report and balance-sheet, as circulated, and as referred to recently in our columns. He referred to leading points in the report, notably the death of King Edward VII.; the patronage granted to the society by King George V. and Queen Mary; the development of the work at Wisley, especially the scientific side of it, by Mr. Chittenden; the accommodation for gardeners at Wisley; the forthcoming exhibition at Olympia, which should be the finest exhibition of its kind ever held in London during the summer; the splendid Colonial Fruit Show last autumn; the abundant returns Fellows received for their subscriptions—far more than face value, according to Sir Edward Grey's account; the satisfactory manner in which the Lindley Library had been placed under the care of the R.H.S. Council; the decease of Sir Henry Schröder, and the enormous assistance, financial and otherwise, he had rendered the society. Sir Trevor closed with a eulogy of the services rendered by the Rev. W. Wilks, the whole of the R.H.S. staff, and the various committees.

Mr. J. Gurney Fowler seconded the motion, and pointed out that the surplus of income over expenditure, amounting to £8,370, was an advance of £721 on the previous year; but, had it not been for such special items of expenditure, such as the new bothy at Wisley, the grant to International Exhibition, and the Schröder Memorial Fund, the surplus would have been £2,169 better than in 1909.

Mr. Elwes expressed his gratitude for the prospects of the library, and referred to the great financial success the council had achieved during the year. He thought, however, that some of the surplus funds might well be devoted to the improvement of the "Journal," or to the publication of "Transactions," that would compare favourably with those issued by the society in its earlier years. He contended that the present "Journal" was not as valuable a publication as the society should possess. Mr. Chittenden and Mr. Wilks had already as much work as they could manage apart from this publication, consequently there was need of a Publication Committee, and the expenditure of sufficient money to bring out a quarto issue containing valuable contributions and ample illustrations.

Sir Trevor contended that the "Journal" was a valuable production, and not so bad as Mr. Elwes had made out, and his contention met with a murmur of approval. Sir Trevor promised, however, that the matter would receive consideration from the council. The motion was then put and carried unanimously.

The officers of the society were all re-elected, and the president then presented the Victoria Medal of Honour in Horticulture to Mr. Thos. Coomber, Mr. John Cypher, Mr. C. Fielder, Mr. H. B. May, and Mr. Alfred Pearson, and the Lawrence Medal to Mr. Harry J. Veitch.

Sir John T. D. Llewelyn, Bart., proposed and Mr. A. W. Sutton seconded, a vote of thanks to the president, which was very heartily accorded, and the meeting was brought to a close.

CHOICE PLANTS FOR SOUTH WALLS.

It is surprising what a great variety of plants can be grown on a wall facing south. The following list might be of value and service to intending planters; all the species are grown here:

Daphne japonica, flowers, as a rule, about March 20, and is quite as good and sweet as the indoor D. indica; Rosa fulgida, Bignonia grandiflora Madame Salen, an improved form; Sophora tetraptera, Abutilon vexillarium, which flowers excellently all through the summer and well on towards Christmas; Kadsura chinensis, flowers freely; Mandevilla suaveolens, flowers well, and has seeded outside; Clianthus puniceus var. magnificus, Bridgesia spicata, Callistemon salignus and C. s. alba, both flower well; Acacia longifolia, Cinnamomium Lourei (cinnamon), Edwardsia grandiflora, and Solanum jasminoides, which grows rampantly and flowers profusely all through late summer and autumn.

Lagerstrœmia indica, has also flowered in open quarters; Ceanothus Fendleri, Banksia quercifolia, Crinodendron Hookeri, Magnolia compressa, Jasminium primulinum, Olearia nitida, Leptospermum grandiflora, Senecio Grayi, and S. rotundifolia, Drimys Winteri and D. aromatica, Adenocarpus anagyrus, Melanleuca hypericifolia, Abutilon vitifolium, Azara integrifolia, Myrtus communis, Quillaya saponaria (Soap tree), Bignonia cherere, Acacia trovissima, Leptospermum bullatum, Ceanothus Les Plantiers and C. Gloire des Versailles, Edgeworthia chrysantha—will soon be in bloom; Myrtus Jennie Reitenbach, Camphor officinalis, Dendromecon rigidus, Buddleia Colvillei, Corinella pygmæa, in bloom: Fendlera rupicola, Olea fragrans, Corokea budleoides, Callitrus robusta, Ephedra altissima, Lonicera tragophylla, Ceanothus Veitchianus, Widdringtonia Whytei, camellias, Azara microphylla, Rhyncospermum jasminoides, Freemontia californica, Carpenteria californica, Caryopteris mastacanthus—this also does well on a border, but by growing it on a wall we have a longer succession of its pretty blue flowers; Desmodium pendulum, pittosporums, and Chimonanthus fragrans.

The main points in growing these things satisfactorily are plenty of water in summer, ample root protection during winter, and a slight covering when frosts are of 15 degrees and over. W. A. Cook.

TREE PÆONIES.

While so much progress is being made among herbaceous pæonies, and while these handsome subjects are being so extensively planted, there is a little danger lest the many attractions of the wondrously beautiful Moutan or Tree pæonies be overlooked. Among shrubby plants there are now a veritable host of delightful subjects, with a wide range of form, habit, and colour, as well as season of flowering, consequently almost every taste may be met and every part of the garden glorified by their use. But if we except rhododendrons hardly anything in this wide range is so noble and effective when in bloom as the tree pæony.

TREE PÆONIES—A STUDY.

At this season of the year a reference to tree pæonies is timely, because from now on to April planting may be safely done. The one great drawback in connection with the culture of tree pæonies is that a mild spring hastens the swelling or opening of the bloom buds, and in our treacherous spring times a late frost may spoil the effect that would otherwise be produced. But the same remarks apply to precocious rhododendrons. Some care, therefore, must be exercised in the selection of sites for tree pæonies, and positions be chosen where there is shelter from cold east winds, and where a little protection may be quickly given in the event of severe late frosts. So magnificent are the immense blooms that a little care and attention in this matter is amply repaid.

The flowering season is from early May until well on into the month of June, according to locality and position. Though not fastidious as to soil, it is now generally recognised that tree pæonies are at a distinct advantage when grown in strong loam. Not only are these pæonies splendid for garden adornment, but they are eminently serviceable for conservatory decoration during the early months of the year. Grown in pots or tubs, and carefully looked after when the blooms have faded, they respond readily year by year to very gentle forcing, and their big blooms, white, pink, red, crimson, and purple are a fine contrast to the smaller flowers of the majority of forced shrubs. Varieties are numerous, and large numbers of plants are imported from China and Japan each year, and these often bear quaint and almost unpronounceable names. Some of our leading growers, notably Messrs. J. Kelway and Son, Langport, have raised new varieties at home, and all are beautiful, whether with double or single flowers.

Strawberries.—The earliest batch, as soon as the blooms are over and the fruit well set, should be taken into a warmer house where they can be urged along, for they can be forced quickly at this stage and with success. As soon as it can be seen which fruits are swelling the best, thin out the badly-formed ones, and do not overcrop.—W. A. Cook, Leonardslee Gardens.

FERN SPORE ARRANGEMENT.

Although, as a rule, the arrangement of the spores of a fern frond is by no means conspicuous when the plant is superficially viewed, owing to their being placed generally on the underside of the fronds, and hence are hidden, and although the specific forms of fronds vary greatly both in size and make within the limits of one and the same genus, the character of spore arrangement has been found to be the most persistent of all features upon which botanists can depend for classification purposes.

As all fernists know, the fructification which we see on the frond backs, and sometimes elsewhere, does not consist merely of loose spores, but of collections of almost innumerable pods, or sporangia, attached to the frond by little stalks. In the vast majority of cases these sporangia resemble each other closely, even in widely different genera, and the prevailing type is that of an oval brown capsule supported by a brown stalk, which in a ribbed form passes up one side of the capsule, and over the top of it, and finishes somewhat abruptly half-way down the further side. The top of the capsule thus somewhat resembles a fireman's helmet. Within this capsule there are a score or two of spores, which, under a strong lens, are seen to vary in shape somewhat in different genera, some being smoothly oval, some oval with ridges, others pyramidal, and so on, but all, as a rule, equally minute and dust-like, as very fine snuff.

This description applies to most genera, and, of course, species, but there are exceptions, as in Osmunda regalis, where the pods are unribbed, oval, and of a dull green when ripe, as are the spores themselves, and in Polypodium vulgare, where the pods are comparatively much larger than usual, and with the also larger spores, are of a rich orange-yellow. Assuming that P. vulgare is properly allocated to the same genus as our other polypodies, P. dryopteris, P. phegopteris, and P. calcareum, we have here an instance of extreme divergence within one genus, since the spore heaps of all these three are unusually small, and nearly black, as are the minute spores themselves. This, however, brings us to our point, viz., spore arrangement, and in these last cases the genus common to all four is determined by the fact that the spore heaps are in all cases round or oval, and quite devoid of any such protecting cover or "indusium," as is found in the majority of other genera. The polypodium family is a very large one, and assumes many forms, but wherever we come across a fern in which the spore heaps are round, dot-like, and naked, we are quite safe in assuming it to be a member of the polypodium family, and, as a rule, the heaps will be large, and resemble those of our familiar P. vulgare in shape and size, though hardly in brilliance of colour.

The diversity of arrangement, taking the ferns of the world as a whole, is such that space precludes us from touching fully upon more than our home species. Following on then with the genus of spleenworts, or asplenia, of which we have several species, Asplenium trichomanes, A. viride, Adiantum nigrum, A. lanceolatum, A. marinum, A. ruta muraria, A. ceterach, A. fontanum, A. septentrionale, and A. germanicum; the spore heaps in all of these lie in straight lines along the veins springing from the midribs of the divisions, herring-bone fashion, and although when the spores are fully matured it is difficult to detect the indusium, it is nevertheless there, though buried, and is very obvious when the fronds are young, as a whitish line in the position indicated. Of course, in such short-pinnuled ferns as the wall rue, the lines are so short as hardly to look like lines at all, but the principle is there, and they are not rounded dots, and wherever space permits the straight line presents itself.

In the hart's-tongue, which is undoubtedly a close relative of the spleenworts, though so different in appearance, and so much more variable, we see a curious modification of this linear arrangement. The large sausage-shaped spore heaps which the hart's-tongue produces so abundantly are found, when closely examined, to consist, not of a single line like the asplenia, but of two opposed lines, i.e., with the indusia face to face, so that when the fertile frond first unfolds, we see the future spore heaps as long whitish lines, split in the centre, and as the sporangia develops, they lift these twin indusia, and eventually entirely overlap, and bury them in the mass of brown spore pods produced. This type of twin sori, or spore heaps, is rare, and whenever a fern exhibits it throughout, we may name it a hart's-tongue. Adhering still to the linear type of spore heap, Pteris aquilina, the Common Bracken, presents a native example of a very large family, and the only one indigenous to this country in which the sporangia lie in lines along the edges of the frond segments, which edges are turned over to act as an indusium. Blechnum spicant, by virtue of its narrowed fertile fronds, somewhat resembles this, but is differentiated by having an independent indusium within the margin which is not reflexed, and it is this which differentiates it from lomaria, to which it is often wrongly ascribed, as the latter fern, like pteris, protects its spores by reflexing the edges of the contracted fertile fronds, and has no indusium other than these.

We may now turn to the two families of lastreas (or nephrodiums) and polystichums, popularly termed Buckler Ferns and Shield Ferns, which terms, as a buckler is a shield, do not clearly differentiate the two. There is, however, a distinct difference, since although superficially the round spore heaps and their covers resemble each other, on closer examination we shall find that in the lastreas the spore cover is distinctly kidney-shaped, and is attached to the frond at the indentation of the kidney, while in polystichum it is perfectly circular, and attached to the frond by a rudimentary central stalk, mushroom fashion. This difference is quite constant, and the term nephrodium, implying a kidney form, is, therefore, a good name for the lastreas, and, obviously, cannot embrace the polystichums as does the botanical term "aspidium" which covers (in our opinion wrongly) both genera, despite their difference in this and other characters.

In Adiantum capillus veneris, another solitary member of a large family, we have the spore heaps arranged in broken marginal lines, with the front edges acting as an indusium, like pteris, but broken into short lengths. In the Bladder Ferns we have dot-like heaps, covered with convex indusia resembling little bladders, whence the name. In the Lady Fern we have a rather indeterminate form of fructification, the small spore heaps being more or less horse-shoe shaped, with a rugged indusium springing from the centre, a little on the lines of an imperfect lastrea fructification. In Allosorus crispus the fertile fronds are contracted with the spore heaps in lines along the centre of the frond segments. In Osmunda regalis, the tips of the fronds carry the sporangia in naked clusters, arranged on otherwise bare stalks, but occasionally leafy portions appear with irregular clusters on their edges. As these spore clusters are borne on stalks, which follow the general plan of osmunda frond division, the result is a terminal somewhat resembling a faded spiræa flower panicle, whence the popular, but erroneous, name of the Flowering Fern.

Both in the Adder's Tongue and Moonwort we have the spores borne on specialised fronds, the one a simple spike, and the other a divided one, both having large capsules very different from the usual fire-helmet pattern. The Filmy Ferns bear these spores in a peculiar way. Hymenophyllum Tunbridgense and H. unilaterale having them in little urn-shaped projections on the fronds, and Trichomanes radicans in deep cup-shaped marginal cavities, the sporangia being attached to a central stalk, which projects so far as to resemble a bristle, whence the name of Bristle Fern. Finally, the woodsias have dotlike heaps seated within a peculiarly shaped indusium, like a long-rayed star; while the little annual Gymnogramma leptophylla, to complete our list, has, like all the large family it belongs to, the sporangia distributed in lines along the veins, and without any indusium at all.

To those who possess a microscope we may say that under a good power lens these sporangia and spores are very pretty objects, and the former, if freshly gathered when ripe, readily display their bursting and scattering powers when brought into a warm dry dwelling room, spread loosely on a glass slip under the lens, and viewed by transmitted light.

Chas. T. Druery, V.M.H., F.L.S.

APPLE BEAUTY OF KENT.

This is one of the most showy apples in cultivation when well grown, but varies in appearance more than almost any other in different soils and climates. This variation was strikingly exhibited at the Royal Horticultural Society's great fruit show in 1907, when there was a separate class for this variety, some being green and some coloured, some regular in shape and some strongly ribbed at the crown, but none so large as that mentioned by an American writer who says that it frequently measures sixteen or eighteen inches in circumference. It was introduced more than a century ago, but only received an Award of Merit from the R.H.S. in 1901. It is regarded by many as synonymous with the Flower of Kent, but Dr. Hogg makes them distinct varieties. The Beauty of Kent is a vigorous and spreading grower, with an inclination to droop, and this should be remembered when planting as it wants more room than most, too much, indeed, for small gardens. It makes a large orchard standard, but the finest fruit is produced from dwarf trees on the Paradise in warm soils, when it is really superb, though it suffers greatly, both in appearance and quality, in cold and wet soils.

Dr. Hogg says he always found it subject to canker when grown on the Paradise, as well as on damp and heavy soils, but this has not been my experience. The principal complaint I have to make against the variety is that it is more subject to spottiness than any other sort I know. The fruit will keep till April, but its best season for cooking is from November to January, and, when well grown, it is a fair dessert apple in January and February, being then exceptionally tender and juicy. For baking it is surpassed by few other varieties. Alger Petts.

CANARY GUANO

"THE BEST IN THE WORLD."

There is no Fertilizer that gives such good all round results as CANARY GUANO. It is used in the King's Gardens, and by leading Amateurs and Trade Growers all over the Country. A post card to the Manufacturers will ensure full particulars.

SOLD IN BAGS AND TINS BY SEEDSMEN, NURSERYMEN, ETC.

Manufactured — by — **THE CHEMICAL UNION, LTD, IPSWICH.**

DICKSONS
SELECT & MOST RELIABLE
VEGETABLE &
FLOWER SEEDS,
SEED POTATOES
GARDENING TOOLS &
CARRIAGE PAID.
CATALOGUE POST FREE.
ROYAL SEED WAREHOUSE
& NURSERIES
CHESTER.

RIVERS'

Fruit Trees, Roses,
Vines, Figs, Oranges,
AND
Orchard House Trees.

A LARGE AND SELECT STOCK ALWAYS ON VIEW.

Illustrated & Descriptive Catalogue
POST FREE 3d.

THOMAS RIVERS & SON
Sawbridgeworth, Herts.
Station: HARLOW, G.E.R.

AMERICAN and BRITISH TREE CARNATION.—Leading varieties from 3s. per doz.; 17s. 6d. per 100; carriage and packing free for cash. Ask ill. price list. C. F. A. VAN DER SLUYS, F.R.H.S., Ramee, Guernsey.

£3 WORTH
OF
Best English Tomatoes for 1d.

The illustration at side is an exact reproduction of a photograph, taken in August, 1910, of part of a cold house crop of

STORMONTHS' BRITISH DREADNOUGHT TOMATO.

A first rate new variety of exceptional merit producing huge crops of the heaviest, reddest, roundest tomatoes on the market.

The **Price of the Seed** is 50 Seeds for **9d.,** smaller quantities at the rate of 5 for a **1d.** Five plants wil produce over 120 lbs. of fruit, if grown on the system described in Stormonths' Catalogue of warranted Beau Ideal Seeds, an unique list, which offers for a 1d. small quantities of all kinds of seeds, which you have been accustomed to pay 6d. or 1/- for. The Catalogue is a perfect mine of useful information. Amongst other things it tells the best time to sow all sorts of seeds, how long vegetables take to come to maturity, &c. It also explains the meaning of Latin names and contains a page of "Tips for Exhibitors," which are copyright, and can be found in no other publication. Gratis and post free from

STORMONTHS, 8, Kirkbride, CARLISLE.

Write for ILLUSTRATED CATALOGUE POST FREE
from

Carters TESTED Seeds
REGISTERED TRADE MARK

Carters
HIGH HOLBORN

New Offices and Seed Testing Grounds,
RAYNES PARK, LONDON, S.W.

Branches { 237 and 238, High Holborn, W.C.
53a, Queen Victoria Street, E.C.

CARNATIONS, PINKS, AURICULAS.

DOUGLAS for the best old and new varieties in all classes, and the finest quality in the world. Malmaison Carnations, new and old, 7/6 per dozen. Border, 6/- to 12/- per dozen. Tree, American, and English, 7/6 to 15/- per dozen. Auriculas, Show, 21/- to 30/- per dozen. Alpine Auriculas, 9/- to 21/- per dozen. Carnation, Auricula, Pink, and Polyanthus seed, 1/6 and 2/6 per packet. CATALOGUE FREE.

J. DOUGLAS, Bookham, LEATHERHEAD.

BY APPOINTMENT. BY APPOINTMENT.

CHEAP OFFER TO CLEAR.

We beg to inform our numerous clients that we have secured a large tract of land adjoining one of our principal Nurseries, and that it is our intention to clear the Stocks off some of our outlying branch Nurseries at a sacrifice.

Everything has been grown with our usual care, and offered in Lots, subject to being unsold; we guarantee the numbers and quality of each Lot offered.

Particulars of above, together with our General Catalogue, will be sent on application.

JAMES SMITH & SONS (Nurserymen to H.M. THE KING), **DARLEY DALE NURSERIES, near MATLOCK.**

Inspection cordially invited. Visitors met by appointment at Darley Dale or Matlock Stations.

CHEALS'

113 Acres of Ornamental

Trees & Shrubs

Of all kinds.

Fruit Trees

Hardy, Healthy, and true to name.

Roses & Hardy Plants

Descriptive Catalogues Free.

J. CHEAL & SONS,

NURSERYMEN AND LANDSCAPE GARDENERS,

Crawley, Sussex.

ORCHIDS.

Amateurs interested in Orchids should write for our

Amateur's Guide,

2nd Edition, free.

Giving Treatment, Soils, Description of Flowers; Illustrated.

MANSELL & HATCHER, Ltd.,

Rawdon, Yorkshire.

THE MOST UNIQUE

SWEET PEA LIST

In the World

IS NOW READY.

PLEASE SEND POSTCARD FOR SAME

My ANGLO-AMERICAN COLLECTION, 5/-

15 Varieties (including Roosevelt, Nightingale, Perkin, Mrs. H. Dickson, Sunpf. Crimson) is the best value in the Sweet Pea world. Will make a very appreciative present. My stocks are the truest humanity can produce! My aim is to oblige

G. H. MACKERETH,

The Sweet Pea Clearing House,

ULVERSTON.

Note my special offer of Mr. W. P. Wright's most interesting Sweet Pea Note Book.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices. Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,

Exotic Nursery, Cheltenham.

PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J.R.PEARSON & SONS,
LOWDHAM, NOTTS.

AMARYLLIS

(HIPPEASTRUMS).

Unrivalled Collection.

Now is the best time to purchase, as every bulb may be had with flower scape showing. Price list and all information free.

ROBT. P. KER & SONS,

Aigburth Nursery,

LIVERPOOL.

TOMATO PLANTS (6 to 8 ins. high). Ready for Fruiting Quarters. **Grown in Steam sterilised soil** Very carefully packed and protected.

Price £3 per 1,000, Cash with order, carriage paid. Per 100, 7/-; 65 plants, 5/-; 50 plants, 4/-; 25 plants, 3/-; 12 plants, 2/-

Carter's Sunrise, Winter Beauty, Beauty of Wales, etc.

W. & F. POAT, TOMATO GROWERS, ST SAMPSON'S **GUERNSEY, C.I.**

Cheques, Postal Orders, etc., should be crossed "Guernsey Banking Co., Ltd."

Booklet and Testimonials free on application.

Rhododendrons.

Crimson, White, Pink. 250 Choice Named Varieties, fine foliage, well budded, for potting or planting. 1 to 1½ ft., 1½ to 2 ft., 2 to 2½ ft., 2½ to 3 ft., 3 to 4 ft., 4 to 5 ft., 5 to 6 ft., 6 to 7 ft. List of sorts and prices on application; many thousands to offer. Standards in all sizes.

All Home grown. Inspection invited.

F. STREET, Heatherside Nurseries, CAMBERLEY.

HERE YOU ARE [illegible] ARTHUR [illegible] his Tomato [illegible] ST. MARY'S NURSERY [illegible]

TREES, TREES, TREES.

Now is the Time to Plant.

300 ACRES TO SELECT FROM.

Our LIGHT OAKS and BAGNALL NURSERIES are admitted to be the most exposed in the United Kingdom, ranging up to 1,000 feet above sea-level. Customers may therefore rely on our stock thriving in the coldest or exposed situations.

Catalogues gratis on application.

ISAAC MATTHEWS & SONS, Ltd.,

The Nurseries,

MILTON, STOKE-ON-TRENT, STAFFS.

By Appointment to H.M. The King.

1911 FORBES'

Illustrated Plant Catalogue Nearly 200 Pages.

GOLD MEDAL SPECIALITIES.

Contains carefully revised **Descriptions, Colour, Height, Time of Flowering, British or Common Names, Prices,** etc., of the **Grandest Collections** of **ASTERS, BEGONIAS, CALADIUMS, CARNATIONS, DAHLIAS, DELPHINIUMS, PÆONIES, PANSIES, VIOLAS, PELARGONIUMS, PENTSTEMONS, PHLOXES, PYRETHRUMS, HARDY BORDER PLANTS,** carefully-prepared **PLAN** for arranging **HARDY PLANT BORDERS,** etc.

Experts unanimously accord **FORBES' CATALOGUE** the unique distinction of being the **best** and most **reliable** up-to-date **Reference Book** extant.

FREE ON APPLICATION.

JOHN FORBES (HAWICK), LIMITED.

(Dept. 1), The King's Nurserymen, **HAWICK, Scotland.**

FRUIT TREES

We have 50 acres of young Fruit Trees in perfect condition to offer this season. Our **Specialities** are Cordons, Bushes, and Pyramids, and Trained Trees worked on selected **Fruiting Stocks.**

Fully Illustrated Catalogue Post Free.

W. SEABROOK & SONS,

The Nurseries, CHELMSFORD.

AMERICAN TREE CARNATIONS

AND MALMAISONS.

The Newest and Best Varieties.

Strong, healthy and well-rooted plants only supplied

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.

H. BURNETT,

Carnation Specialist, Guernsey

LATE SUPPLIES OF POT STRAWBERRIES.

Though in many gardens, large ones in particular, a constant supply of both early and late forced strawberries has to be kept up, it is nevertheless the late crops, owing to one or another reason, such as want of conveniences for growing early ones, that are the most generally cultivated. Though much skill has to be exercised in bringing early crops to perfection, there is, perhaps, equally as much required in the production of good late ones. The needs of the plants in preparation are identical, except that in the case of those intended for late supplies, it is advisable to use pots of a larger size than is necessary for early forced plants. The reason for this is obvious when the condition of the weather at the time the plants are growing, and the fruit ripening, is taken into account.

The pots used here for late plants are 6½ inches in diameter, inside measurement, and though larger than is sometimes recommended, we find no difficulty in getting them well filled with active roots. We winter this batch in skeleton frames, with the pots plunged in fine ashes, and protection from severe frosts provided by bracken in early spring, when an opportunity offers, and while the soil is fairly dry, they are top-dressed with fresh compost, to which a good fertiliser is added. The compost is made firm with a rammer.

It is easy, by an oversight, to seriously injure late-fruiting plants immediately before they are introduced to the houses, and the mistake is especially likely to happen if the old practice of stacking the plants on their sides during winter is followed. I refer to the soil being allowed to get very dry after the plants have commenced to grow. Not only should this be avoided, but as soon as active growth commences the plants should be regularly supplied with liquid manure, otherwise, in the case of very late batches, a good portion of the time when the plants most benefit from being carefully fed will be lost, and no after attention will fully compensate for it. Neglect of another kind may occur from want of thought, and be attended by mischief before the plants are housed from leaving them exposed to frost, so that the flower buds become frozen through. This may happen at an early stage of the development of the flower spikes, and before the inexperienced cultivator might realise its possibility. I have known much injury to be done in this way, and, unfortunately, it is invariably the earliest or crown blossoms that perish, and, consequently, those that would have produced the earliest and finest fruits.

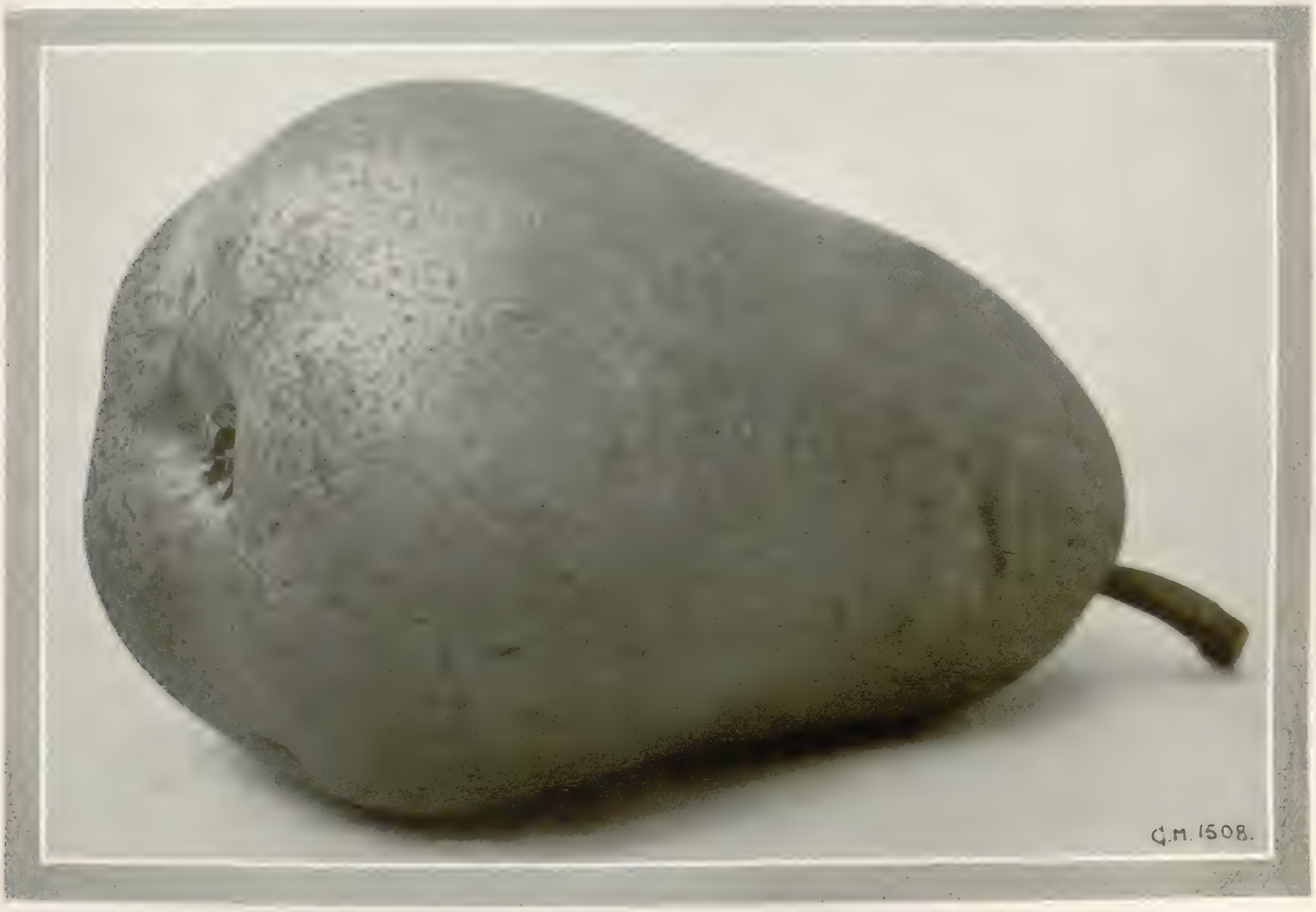
The sun's power being considerably greater at the time these late crops ripen than is the case with early crops, it is not necessary to grow the plants in the most sunny positions; indeed, they can be managed much better in houses or pits that possess eastern or south-eastern aspects than they in those that face due south, and under such conditions. From plants that have been left in open quarters until their flower buds are about to expand, a supply of excellent fruit can be quite easily obtained to couple up the earliest fruits produced under the most favourable conditions outside. Moreover, in houses placed in these positions there is less labour required in watering than is the case under other circumstances, which in itself is a matter of consequence, and red spider is correspondingly less troublesome.

It is a mistake to think that late varieties only are suitable for affording late supplies of strawberries from pots, as at least some of the most early and second early varieties, such as Royal Sovereign, Vicomtesse Hericart de Thury, and President are among the best for the purpose, and, except for the sake of testing new varieties, we have for some years past grown for pot culture no other than Royal Sovereign, and it will take a remarkably good variety to displace it. This variety's only failing is its liability to become somewhat weakened in constitution by attacks of leaf spot, and this we have minimised by changing our stock and securing fresh plants from a considerable distance, and we hope to exterminate the malady by spraying with liver of sulphur solution, or with Bordeaux mixture, as recommended by the Board of Agriculture in these pages.

T. Coomber.

PEAR BEURRE FOUQUERAY.

A pear that does not seem to vary so greatly with season or position as many of the varieties in cultivation is Beurre Fouqueray, and it possesses the additional and very useful merit of being a good grower and cropper under all of the several systems of training adopted for pears. It is an October pear, of good size and attractive appearance, its green skin changing to yellow-green as the fruits ripen. The white, melting flesh is very juicy and refreshing, while the flavour, if not absolutely in the first-class, is very little behind that of the few varieties that stand pre-eminent. An excellent garden pear, its merits were acknowledged some years ago, notably when, in 1895, the Royal Horticultural Society's Fruit Committee granted it a First Class Certificate an honour few pears have received. In the matter of growth Beurre Fouqueray is in no sense gross, and, as the branches form fruiting spurs freely along their length, the variety is especially suitable for small gardens and for amateurs. As in the case of Williams' Bon Chretien, the fruits last over a rather short season, hence many trees are not desirable in a private garden.



PEAR BEURRE FOUQUERAY.
A highly-flavoured October pear, with yellow-green skin.

HARDY PLANT CHAT.

◆

Campanula pulloides.

The pulla-like bellflower is a handsome little plant, which, unfortunately, has some of the "miffiness" of its ally, or, rather, one of its parents, C. pulla. In some gardens this little gem is far from satisfactory, and cannot be persuaded to flourish, and is frequently lost if not propagated annually and a little plant or two kept in a frame for purposes of replacement. The same difficulty presents itself with C. pulloides, and this is probably the cause of its remaining so comparatively high in price, seeing that it has been several years introduced. I believe it first originated with Mr. T. H. Archer-Hind, at Coombe-Fishacre, where so many good hardy plants first saw the light, but there is a Kew variety, in all likelihood of the same parentage, which is even finer than the little Coombe-Fishacre one.

Either is a charming little bellflower, with dark purple bells of a larger size than those of C. pulla, while the habit of the plant is graceful, and, after the fashion of its progenitor, pulla. Of its other parent I have no record, but I imagine that a carpatica variety may have been it.

Flag Irises.

In the olden times we reckoned that we had almost reached the zenith of beauty among the flag irises of the same character of Iris germanica and others of the same habit. But we have long left behind many of the lovely varieties we knew well and thought could not be surpassed, and which it was a pleasure to see catalogued in the lists of good dealers. Many of these are yet to be met with, but we are in the midst of a flood of new varieties raised by hybridising several sections, and those which have been shown in London and elsewhere have given great delight to all who saw them. It would be interesting to know how many of these are the results of the work of Mr. George Yeld, of York, who worked among these irises long before Sir Michael Foster entered the field, and gave us so many lovely flowers which are now finding their way into the market, and thence into the gardens of lovers of the iris. I had once the pleasure of a long chat with Mr. Yeld in his garden at Clifton Cottage, York, and saw some of his work with irises and other flowers, such as lilies. Most of his new irises were sent south to be flowered and grown on, and but few of these have been distributed with his name accredited as that of the raiser.

Other raisers, such as Mr. Caparne and Sir Michael Foster, have sent out many charming things, and I should like to hear more of Mr. Yeld's varieties. As for the Caparne and Foster varieties, it is not too much to say that they are—most of them at least—very lovely, and that they show in the highest degree the beauty inherent in by far the greater number of the irises. Readers who pay a pilgrimage to the next Temple Show may expect to see many of these new irises, such as have charmed a number of us on former occasions.

The illustrations of the bed of Iris florentina in the Iris Garden at Kew and the bold group of the handsome variety of I. variegata in the same garden, indicate in no uncertain manner the effectiveness of the Flag irises during their season of flowering.

GROUP OF IRIS VARIEGATA AUREA IN THE IRIS GARDEN AT KEW.
A beautiful variety of the Germanica group, with large, rich chrome yellow flowers.

Lithospermum prostratum Heavenly Blue.

Personally I don't approve of a varietal name such as "Heavenly Blue," which has too much of the American nurseryman's nomenclature in its sound, but it is for those who are responsible for it to justify its choice. In colour there is certainly much justification for it, and it is in all respects a beautiful plant indeed. It is brighter than the usual prostrate Gromwell, Lithospermum prostratum, and is of a blue which fascinates everybody. For those who have so long loved the old one it seems difficult to brook a rival, and many of us will still cherish the deeper blue of the one we have known for so many years, and which is ever prized as a plant for the rockery.

Incarvillea grandiflora brevipes.

Had we never known the fine Incarvillea Delavayi, or the dwarfer and exquisite Incarvillea grandiflora, we would at once have taken to our bosoms (metaphorically, of course), the fine I. grandiflora variety brevipes, shown first, I believe, as I. Bonvaloti. This has a flower partaking of the style of Delavayi in its shape, and in its habit of growth, but with the foliage of the character of I. grandiflora. The blooms are of a deep, almost crimson hue, and the plant comes intermediate in height between the two other species.

It is a native of a higher region in China than I. grandiflora, and should therefore be hardier than that fine species, although we do not seem to have much to complain of in I. grandiflora with respect to this quality of endurance. A good group of any of the three incarvilleas in cultivation is a feature worth owning a one's garden, but I confess that I do not like either of them on a rockery, where their appearance seems out of harmony with the spirit of a rock garden. But we have not all the same tastes, and, with flowers, as with other things, as the saying goes, "What is one man's meat is another man's poison."

The King's Spear.

There is one plant which I would like to commend to the notice of the seedling raiser and the hybridist, and which, I believe, would eventually yield some excellent results. This is the King's Spear, Asphodelus ramosus, which does not seem as yet to have been the subject of much, if any, consideration by hybridists. There is surely here a field of operation for someone, and they suggest themselves as suitable subjects for use in hybridising with the asphodelines, which are surely close enough to use as pollen or seed bearers to employ with Asphodelus ramosus. Points to be aimed at are variety of colour, length of spike, and size of individual flowers. The king's spears at present appear to have too tall a stem for the shortish spike of flowers, yet it is an effective plant when seen rising among other flowers in the hardy plant border or in the wild garden. We seldom see it planted in quantity, yet a group of a hundred or more spikes rearing their flowers among dwarf shrubs or herbaceous flowers is not to be despised in many ways, old-fashioned though the plant is, and it is not much grown nowadays. It always likes a good soil, and one with a fair share of moisture appears to be preferable.

S. Arnott.

Pansies.—To obtain plants for flowering this season, the seed must be sown without delay. Pots or pans are suitable, and should be filled with a mixture of loam, leaf-soil, and sand. An important point is to sow the seeds thinly, as when the seedlings are very thick damping often occurs. The seeds quickly germinate in a temperature of 65 degrees, and immediately this takes place the pots or pans should be placed as near the glass as possible to induce sturdy growth. After a week's growth they should be removed to a warm greenhouse, transplanting the seedlings into boxes when large enough to handle.—E. C. P.

A FINE BED OF IRIS FLORENTINA AT KEW.

Flowers white, falls tinted blush or lavender, fragrant, a fine iris needing the same care and treatment as the bearded or Germanica varieties.

GRAFTING TREES AND SHRUBS.

Though, whenever it can be avoided, it is better to propagate trees and shrubs by methods other than by grafting, there are instances where other means of increase are out of the question, consequently this branch of propagation requires to be understood by those who are responsible for the upkeep and increase of collections.

In the case of species which cannot be rooted readily from cuttings, and when fertile seeds are not easily obtainable, it is often possible to raise a stock by grafting on to an allied species, while where varieties are concerned which do not come true from seeds there is often no other means of increase available. Weakly plants are sometimes strengthened by union with a strong-growing stock, and it sometimes happens that a shy-flowering species is made more productive of bloom if grafted than when grown on its own roots. The raising of stock in this manner may in many instances be carried on more expeditiously than when other means of propagation are employed, and this results in the plants being put on the market at a cheaper rate than would otherwise be possible.

So much for the advantages attending grafting. Looking in other directions we find that grafting is sometimes carried to excess, and trees and shrubs are increased by this means when there is no necessity for it, and other means of propagation would be attended by results which would, in the long run, be more satisfactory.

A fertile source of complaint is the grafting of various conifers, and the complaints are made with reason, for in the case of certain species, particularly pines, firs, and spruces, it rarely happens that a good example can be grown from a grafted plant. The most satisfactory results are obtained from the use of terminal shoots as scions, but only too often side branches are used. From these it is very difficult to obtain a clean, upright leader with a uniform development of branches, the tendency almost always being for the young trees to grow one-sided, whilst the leader remains weak. The defect may sometimes be remedied by cutting the tree back once or twice to try and induce a strong upright shoot to appear from a dormant bud. Varieties of Cupressus Lawsoniana and other species are frequently raised in the same way. They are usually more satisfactory than the kinds alluded to earlier, but require attention to pruning during their early years or they will not form shapely specimens. The more distinct varieties of the common yew are frequently grafted on to stocks of the type, for plants raised in this manner attain a saleable size more quickly than those raised from cuttings. The chief objection that can be raised to grafted yews is that suckers are very liable to grow from the stock, and if their removal is neglected for a short time the scion is weakened.

The grafting of conifers is usually carried out in a warm propagating house during early spring, the stocks having previously been established in small pots, and placed in heat a fortnight or so before working, in order that growth may be excited and the sap, made to run freely.

The grafting of garden varieties of deciduous trees is practised because there is really no other way in which stocks of some kinds can be raised, for both cuttings and layers are out of the question. Whenever it is possible, however, grafting should give way to another means of propagation. The selection of a suitable stock is often a matter of great difficulty, and it not infrequently happens that the stock increases in girth more rapidly than the scion, or vice versa. This leads to gouty-looking swellings, which are most objectionable to the appearance of the tree, especially when they occur several feet above the ground. As a rule, the best stock for a variety may be considered to be the type of the species to which it belongs, but when one species has to be grafted on another then the cultivator has to take his chance among other species, and find the best stock by experimenting. It is usually objectionable to graft trees several feet above the ground, except when it is for some special purpose; rather let the union occur as low as possible.

When grafting fruit trees it is usual to select scions or grafts from the previous year's wood, but this kind of wood is not always satisfactory in the case of ornamental trees. Two, or even three, year old wood frequently stands a greater chance of success than that which is younger. As a rule, grafting is best done indoors in a close and moist house between February and April, though some kinds of trees may be successfully dealt with out of doors. Anything which takes a period of six or eight weeks to form a good union should be covered with grafting wax or clay over the matting with which scion and stock are bound together. Plants which are grafted indoors, and stood in a close case, however, which take quickly, require no wax. Roses usually take very quickly, but they must be kept in a well-heated and moist structure, and subject to no violent change of temperature. They must likewise be kept shaded from bright sunlight.

Rhododendron grafting forms an important item in many establishments, for many thousands are dealt with annually. The work is done between January and April, and R. ponticum, previously established in small pots, is almost always used as a stock. The saddle graft is generally selected for a safer union is formed than when the side graft is used. When selecting scions it is always advisable to take shoots without flower buds, for a stronger growth appears. To obtain stocky plants it is necessary to prune back the leading shoots during the first two years.

Though it is usual to graft on to stocks formed of young seedling plants, it sometimes happens that pieces of root form a more satisfactory stock. Daphne mezereum roots, for instance, are used for rare kinds of daphne; cytisus and laburnum roots for plants like Cytisus scoparius Andreanus; Clematis vitalba roots serve for garden varieties of clematis; and Wistaria chinensis for the white variety and for W. multijuga. These, of course, cannot be potted up previous to being worked but whenever it is possible the stocks should be established in pots, for it will be found that a great advantage is gained by having them well established and well rooted.

Any stock which appears to have a tendency to produce a large quantity of suckers should be cast aside, for it will always cause annoyance. It is a good plan when potting up the stocks in the first instance to look them carefully over and remove anything which appears like a branch growth, taking care to remove it bodily, and not leave a quarter of an inch of the base.

W. Dallimore.

Box Edgings may be now put in order, filling up all vacancies that occur. Where new edgings are to be made, the work should be carried out thoroughly, making the ground perfectly level, and treading the soil firm.—E. C. P.

SLUGS AND SNAILS.

When making a selection from the various nurserymen's catalogues of flowers or vegetable seeds for sowing, one is wont to speculate on the number of precious seedlings that will fall a victim to the onslaught of the slug or snail. There can be no doubt that if the wet spring seasons experienced during the past two years are followed by a third, equally moist, the ravages of these pests will prove still more serious to garden and field crops; for it is a well-known fact that they increase considerably in numbers in keeping with the number of wet springs and summers which follow in succession. It is no uncommon sight to see acres of seedling mangels totally destroyed in the course of a few days. Growers of sweet peas know only too well how difficult the cultivation of these plants is in small gardens, due solely to the ravages of these pests; they are unfortunately more trouble than birds, as the latter can be scared away by means of a few strands of black cotton or thread.

It is well to note the difference between these two pests, and the representatives of each class. Slugs belong to the Limacidæ, and do not possess any external covering or shell, but there is nevertheless a small, flat, shell-like plate hidden under the skin in the front region of the body. Snails, on the other hand, are readily distinguished by a large protective shell, into which they draw the whole of their body when alarmed or at rest; and further protection is provided by means of a hardened plate which fits securely over the entrance or opening into the shell. As with fungi, it is very difficult for the amateur to distinguish between those which are injurious, and those which possess beneficial qualities, and so the cultivator wages war against every form of animal life resembling the form of a slug or snail.

The common grey field slug is particularly noticeable in many gardens, and usually breeds in large numbers under old rubbish heaps; and for this reason alone—if for no other—it is never a wise plan to allow large quantities of useless garden refuse to accumulate unless it has some direct value as manure, and even then it ought to be specially treated by making it into a compost heap or heating by fermentation so as to destroy as many of the eggs of injurious insects as possible. Rubbish which does not readily decompose is best set fire to and the ashes used. It is estimated that a single slug will lay as many as 500 eggs during one season; thus, it is easy to understand how whole seedbeds can be cleared of their occupants by these dangerous pests. Often a warm shower in spring causes the ground to be literally covered with slugs, and the question occurs, where do they all come from? An examination of the surface soil during the drier parts of the day will reveal them securely nestled away under small stones and the coarser particles of earth.

The root-eating slug is another very destructive species which lies buried under the surface soil during the day time, from whence it makes an exit at night, and feeds freely on any green vegetable that may be within its reach. If one suddenly switches on a light, as from a bull's-eye lantern or an electric torch, these night prowlers can be seen busily at work, and if not too numerous may be collected, although it is wonderful to note the rapidity with which they can make their escape. The remedy usually advocated is that of dusting with freshly-slaked lime or other caustic powder. It is perfectly useless to give a single dressing, as the slimy matter excreted easily resists the burning or drying effects produced by one or two dressings; but if such dressings are repeated the flow of slime becomes lessened, and the animal is taxed beyond its strength, with the ultimate result that the skin becomes parched and inactive, and death follows.

All species of snails are provided with shells, and, as in the case of slugs, they move over the ground by means of a muscular contraction confined to a small area of their bodies. Like slugs they also secrete large quantities of slime, and are very similar in their habits to the former pest, mostly feeding during dusk, except when heavy rains bring them out during day time. Although feeding on the greater variety of plants they have certain preferences, more particularly when there is choice of selection. The large garden snail is most commonly encountered in gardens, and is readily recognised by its large brownish shell, which is covered with a network of closely-woven lines. As cold weather approaches snails, like slugs, make their way towards rubbish heaps or secrete themselves in hedge rows where abundance of shelter is provided. Most of us have watched the industrious thrush searching diligently for these juicy morsels along the hedge-rows or by the sides of garden paths, and when the treasure is secured the bird hastens to the nearest stone, and gives an interesting exhibition in shell cracking, a continuous tapping being indulged in until the desired result is achieved.

The strawberry snail often proves a troublesome pest in strawberry plantations, and seriously damages many of the choicest plants; it also works havoc among violets. The shell is not so conical in shape as in the case of the species mentioned above. There are many other snails that could be enumerated, but as we have already remarked, all slugs and snails are alike in the eyes of the ordinary cultivator, and even the law-abiding snail does not escape the fury of those who may have suffered disappointment and vexation from his harmful brethren.

Apart from dustings of caustic lime and treating rubbish heaps and badly-infested soil with gas lime, I know of no better remedy than that of placing a layer of barley cavings along the rows of peas, and when these become sodden and wet in the course of a week or so provide a fresh dry layer. It is impossible for either slugs or snails to crawl over these finely serrated and saw-like awns. Unfortunately, however, barley awns or "cavings" cannot be readily procured for town gardens. Annuals are often swept off in a wholesale fashion by slugs, and I would advise all growers who are troubled with these pests to sow in pots and plant out; sometimes rings of superphosphate or lime are serviceable in keeping the pests at bay.

J. C. Newsham.

Sweet Peas may now be sown in pots. It is rather a difficult matter to fix exactly on the correct time for sowing, when one wants to exhibit at a particular show, yet the first week in February is usually safe for July exhibitions, and later sowings for later dates. One seed in a small 60-sized pot is ample, or three in a large 60, if grown for planting in clumps. A suitable soil for filling the pots may be made up with half loam and half decayed hotbed material, adding a small quantity of wood ashes, and thoroughly mixing the whole together. A cool greenhouse is a suitable place for them to germinate in, and immediately this takes place they should be removed to a cold frame. Where mice abound a strict watch is necessary to prevent losses.—E. C. Pooley.

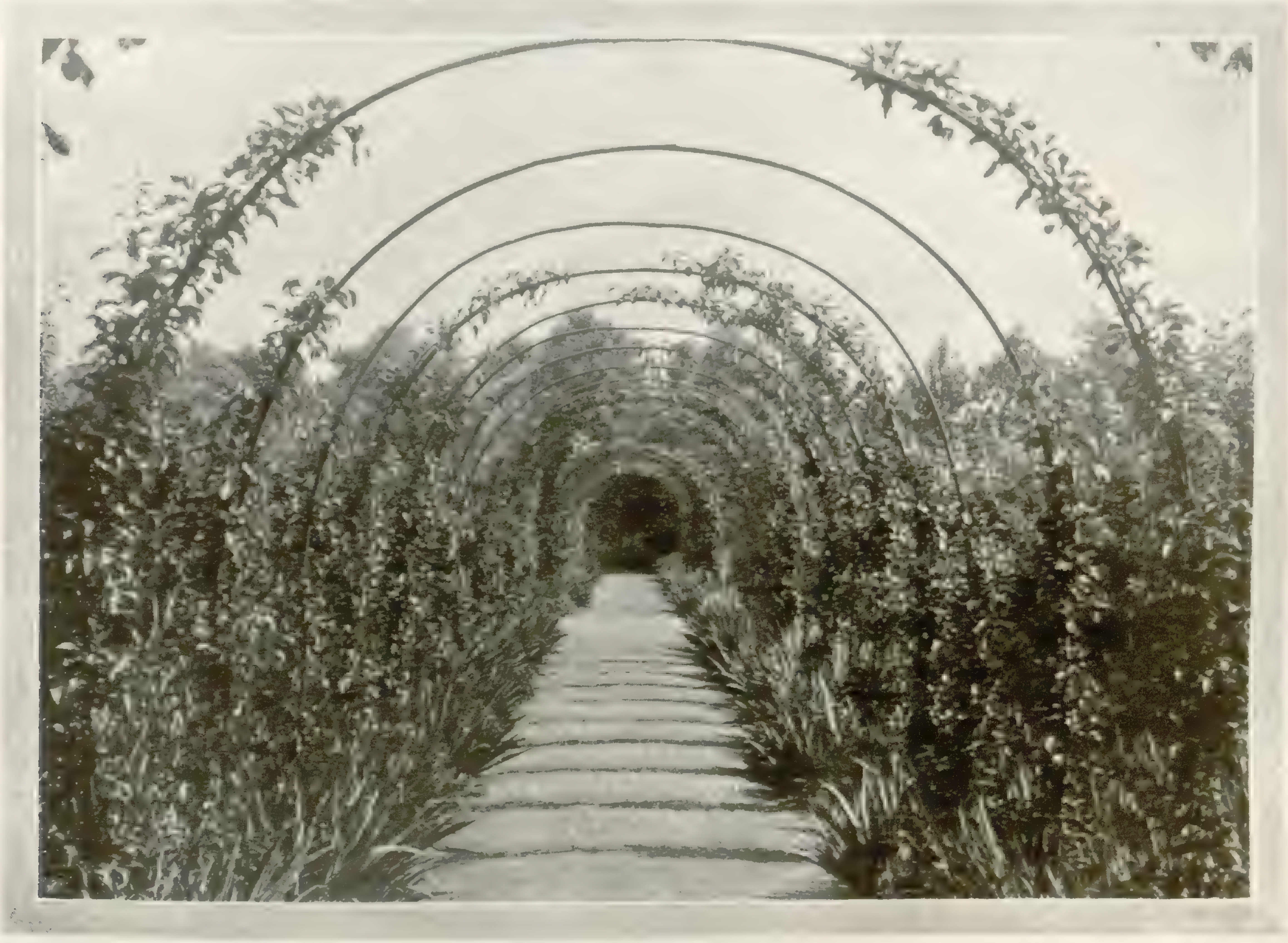
CORDON PEAR TREES ON ARCHES.

The value of cordon pear trees as aids in the maintenance of abundant supplies of choice fruit during the autumn and winter months is recognised by fruit growers generally, and in not a few gardens they form a feature of much interest, and a high degree of utility. They have the advantage of coming into bearing quickly, and as a much larger number of varieties can be grown in a given space than when fan or horizontally trained trees are planted, it is possible to have a supply of ripe fruit extending over a longer period than would otherwise be the case. Usually these trees are trained to the walls enclosing the kitchen garden, and in a general statement of the case it must be said that no better place could be assigned them. The advantages of a sunny wall are great, more particularly in northern districts, because of the assistance the warmth of the wall is able to render in bringing the fruit to maturity and ripening the wood. There are many gardens in which it is not possible to obtain a full measure of success with cordon pear trees unless they can be given the shelter of a wall, but there are unquestionably immense numbers where splendid crops can be obtained from cordons that are grown without such aid, a fact that should be taken advantage of where the wall space is limited, or non-existent. The best indication of the possibility, or otherwise, of growing cordon trees successfully away from a wall is the productiveness of the bush-grown and pyramidal trees in the open quarters. If these thrive, and bear satisfactory crops of fruit, the cordons may be planted with the assurance of their yielding good crops.

This being the case, it appears highly desirable that both amateurs and professional gardeners who are desirous of augmenting the supplies of pears might with advantage consider whether it would not be to their advantage to plant cordons more largely than has yet been the case. It will be readily conceded that there are few establishments where additional supplies of pears of high quality would not be acceptable, and the number of gardens is probably small that would not have their interest and attractiveness enhanced by the judicious planting of cordon trees in the open. There are various methods of training that may be adopted with success, and those who prefer elaborate structures have full opportunities for the exercise of their taste. A simple method of training, such as that herewith illustrated, will appeal to many readers, and not without justification, for it has the advantage of being inexpensive, and of enabling the trees to enjoy to the full the advantages derived from exposure to sun and air. As will be seen, the trees are trained on a series of iron arches, which are of sufficient strength to support the trees and their crops without being unduly heavy. The arches are placed about seven feet apart, and at this distance the trees do not injure by their shade the other subjects growing alongside the walk or interfere with the enjoyment of the walk by visitors. At this distance apart the effect produced by the trees is remarkably good, and widely different from that of the close framework which finds favour in some gardens.

The fruits can, of course, be readily seen, and those who are interested in pears will derive much pleasure in watching their development, more especially during the later stages. The arches, it should be added, are about eight feet high, so that it is possible to pass along the walk without inconvenience, a point of considerable importance to the fruits, as well as to the headgear of visitors

The accompanying illustration depicts a portion of the pear walk in the gardens of The Pleasaunce, Overstrand, the marine residence of Lady Battersea, which are not less noteworthy for their fruit trees than for their many beautiful ornamental features. The iron arches were manufactured and erected by Messrs. Boulton and Paul, the well-known horticultural builders, of Norwich, and afford abundant proof of the great excellence of the firm's work in this branch of its activities.



A SIMPLE AND EFFICIENT METHOD OF TRAINING CORDON FRUIT TREES.

LIBRA PEACH.

Your note to my letter printed in your issue of January 21, generously mentions the A.M. bestowed by the R.H.S. on the Libra Peach, but, nevertheless, calls for reply. The first fruit I ate of Libra Peach was excellent. It was sent to me by the late Mr. R. D. Blackmore, from a standard tree growing in the open in his garden at Teddington. At the time, I noted down: "Rich, brisk flavour, and very juicy." Wherever the soil is of good quality, with sufficient moisture and sun-warmth, I have no doubt this peach comes first-class in any position and in any form of tree—wall or no wall.

Hampton. WILL. TAYLER.

The Winter Jasmine as a Single Specimen.—Apart from its beauty when trained to a wall, the winter jasmine forms a delightful single specimen, either on the grass or in a prominent position in the shrubbery border. If the main branches are secured to a good stout stake until the required height is obtained and then the secondary ones are allowed to dispose themselves at will, they form an exceedingly graceful specimen, which, when thickly studded with yellow flowers, suggests at a little distance a fountain of gold.—W. T.

HARDY BAMBOOS.

During recent years bamboos have been largely planted in numerous gardens in this country, and it has been found that many of them are perfectly hardy in our climate. They are now generally recognised as important subjects for garden decoration, and by careful grouping and arranging they produce a decidedly tropical appearance. Bamboos might appropriately be described as giant grasses of graceful habit, some of them almost reaching twenty feet in height.

Growing here in the gardens at Batsford are some fifty kinds, some of which have been established over twenty years, and are enormous plants, both in height and circumference. Situated on the borders of the Cotswolds, at a height of 800 feet above sea level, our climate is by no means a mild one, but nevertheless the bamboos flourish almost as if they were growing in their native haunts. They will succeed in any locality where there is a good depth of rich loamy soil, and where they are well protected from the cold winds, for they suffer more from the latter than from sharp frosts in winter, which seem to have little or no effect on them. In exposed districts it is necessary to erect screens to protect them from the wind during the winter and spring months, or the foliage will quickly be turned brown round the edges.

Where the soil is sandy, or at all shallow, special treatment is necessary before planting is commenced. In such cases the best plan to adopt is to remove the natural soil to a depth of fully two feet, and in its place put a mixture of good loam and cow manure; then the plants will usually be found to thrive. An annual top-dressing of good manure is beneficial, and should be applied during the spring, especially if the plants are showing signs of exhaustion, as it not only feeds them but helps to guard against the effects of drought later on.

Mention of a few of the best bamboos may be of interest, and of these Arundinaria anceps is one of the most charming for general ornamentation. It grows to a height of fully ten feet, and forms an admirable specimen; overhanging the banks of a stream, associated with such subjects as spiræas, Senecio clivorum, and S. Wilsonæ, it is an object of much beauty. A japonica (Metake) is a vigorous-growing kind, while A. nitida is very graceful, and as a single specimen on the lawn is difficult to surpass. There are two forms of A. nitida in cultivation: one is more erect than the other, but the drooping form is, in my opinion, the finer of the two, as it keeps its foliage better during the winter than the erect one, which at this time of the year is apt to become rather bare. A. aristata does not appear to be so well known as its merits deserve. It is a free grower, of fairly erect habit, and its branching stems are tinted with purple; altogether a desirable bamboo to plant as a single specimen in a prominent situation.

A. Hindsi is tall growing and erect, with dark green foliage. A. metallica, a rather dwarf species with very large leaves is suitable for massing. A. Veitchi and A. pygmæa are both dwarf, and can be planted on the rock garden. A. Fortunei is a free grower, and suitable for the borders of the shrubberies and walks in the wild garden. A. auricoma is a prettily variegated bamboo, which may be effectively utilised in the ordinary flower borders.

Bambusa palmata, with bright green leaves, is very effective for massing. B. quadrangularis is a free grower, and has square stems, with deep green foliage. B. Laydeckeri and B. marmorea are both desirable kinds.

Phyllostachys aurea is a handsome species, with tall branching stems, and makes a very striking bed. P. fastuosa attains a height of fully seventeen feet, and is very striking in appearance. It looks well associated with the more drooping kinds. P. flexuosa is an ornamental species, but not so tall as the foregoing. P. Quilloi is a handsome bamboo, and sometimes reaches nineteen feet in height. It is a very fast grower, and will complete its total height in one season, sometimes growing as much as nine inches in a day. Unfortunately a large clump flowered in these gardens last season, and also a plant of P. nigra, with the inevitable result. P. henonis is a charming bamboo, with slender stems thickly set with small tapering leaves. P. violascens has dark violet stems; it is a very handsome bamboo, and is quite hardy in these gardens, although one hears reports of it being tender in some localities. P. viridi-glaucescens is one of the handsomest bamboos, with tall arching stems, often attaining a height of eighteen feet.

J. Gardner.

THE CHOICE OF HARDY PERENNIALS.

In the modern garden hardy flowers of perennial nature enter largely into almost every scheme. The whole trend of modern gardening away from formalism has been assisted at every point by those same perennial subjects. Many a gardener today can well remember how, during the reign of "summer bedding," hardy plants were relegated to the kitchen garden and shrubbery, or left to the fostering care of the cottage folk of the country villages. Since then all has changed, and the hardy perennials have come to their own, and enjoy to the full the attention of the florist, and the appreciation of the garden lover.

I do not advise indiscriminate planting of any, or all, forms of hardy plants, but would rather advocate a careful study of both positions and plants in every possible case. To secure the best effects is surely an ideal to work for, and nothing should be allowed to detract one's attention from this point. With reference to border planting, one should always endeavour to emphasise certain plants above all others, thus compelling and rivetting attention until the observer is enthused by the attraction of the subject, his mind and eye turn to the lesser plants in the scheme.

If wished for, each of the "flower months" of the year could, in their turn, be devoted to a special flower, and a few which are suited in their season for this particular type of display are May-flowering tulips, delphiniums, irises, kniphofias, lilies, montbretias, campanulas, chrysanthemums (both of the maximum group and the typical chrysanthemums of early autumn), Michaelmas daisies, and phloxes. Then, again, even when one settles upon the groups of perennials to be used, there is the additional care of choosing varieties, and in many classes of plants this is an important detail.

Chrysanthemum maximum, for instance, should be chosen carefully. If a variety is required which is dwarf in growth, and long-lived in blossom, then choose Mrs. Lowthian Bell. If height and bold masses of foliage and bloom is necessary, then King Edward VII. or Moonlight will give fine results. Delphiniums, again, need close attention, for daintiness and continuous blossom let me recommend Persimmon, Bella Donna, Bella Donna semiplena, and others of the same lightsome character. Bold planting calls for bold varieties, and here one can grow so many of those grand new seedlings which are becoming more numerous as the years go by. Varieties with clearly defined colourings and large blossoms, well set upon good stems, should be carefully picked out, and contrasted for effect. Of late years no dark variety has claimed more attention than King of Delphiniums, as in foliage, habit, and colouring it is good.

I might go on to speak of varieties, advising the eradication of certain lilac-purples and slaty shades of Phlox decussata, and the passing over of some of those ultra-dwarf small-flowered montbretias in favour of newer and better varieties, which are far more pleasing. Kniphofias, or torch lilies, should be chosen for colour. If you are going to plant these pick out telling varieties for distant effects. Choose John Benary, R. Wilson-Ker, R. C. Attourtit, and Beacon, Red-cap, and Lemon Queen, and others of similarly characteristic colour shades.

A few words concerning floral combinations may be of interest to readers. Try the effect of a few fine masses of tritomas, or Lilium tigrinum splendens, coming out of a butterfly mass of Gaura Lindheimeri. Or tall scarlet gladioli rising amid the same exquisite subjects. Delphinium Persimmon, or Belladonna, is charming grouped with light-growing forms of Chrysanthemum maximum, pale pink single pyrethrums, or a mass of soft yellow anthemis. German irises should be intersected by drifts of Myosotis sylvestris and M. dissitiflora, or Cerastium tomentosum. Pæonies, phloxes, and other subjects with large heads of blossom should be carpeted with light-growing misty flowers, such as heucheras, tiarellas, Saxifraga umbrosa, Thalictrum anemonoides, and similar dainty subjects. The blue thistles, like Echinops ritro, and the eryngiums are beautiful rising out of a mass of white blossoms. Here again Gaura Lindheimeri or chrysanthemums like Robinsoni are splendid, grouping them thickly enough to cover the ground space.

Tall blue campanulas are delightful companions to the many fine forms of the Foxglove (digitalis), the tall waving flower stems, "daintily bell clad," being common to both, while around could be grouped golden aquilegias or white pyrethrums. Lilies, in some cases, are best grouped alone, save for a few lowly plants for covering the soil at their feet. Madonna lilies are an exception, however, and the tall white blossoms look well coming out above the usual plants of the herbaceous border.

Varieties of Lilium tigrinum can be grouped around with lighter-habited blossoms, preferably either white or blue. Golden asphodels, rising from a bed of cherry-coloured potentillas or blue and white platycodons would make a delightful group. Isatis glauca, with its golden showers of blossom, can be grouped with many plants. Campanulas in any shade of blue or white are good companions, but a better would be a serried mass of Delphinium Belladonna or Persimmon grouped around the isatis. White composite flowers, anything of the daisy type, also blend well with the isatis. The double gypsophila should be included in all plantings, if possible, and as it is so late flowering, it should be grouped near such blue flowers as the delightful Scabiosa caucasica, or Aster bessarabicus, or intermingled with glowing heleniums golden helianthuses.

P. S. Hayward.

A FAMOUS SCOTTISH NURSERY.

Who was better known or more highly esteemed among that class whom we sometimes call "Florists of the Old School" than the late John Forbes, of Hawick? For forty years he carried on his work of love among florists' flowers at the Hawick Nurseries, and the results of his skill as a raiser and grower of phloxes, pentstemons, antirrhinums, pansies, and all the other flowers dear to the hearts of Scottish florists, are seen in every garden, and his name is a household word wherever dwells a true gardener. Hawick, the borough of ancient fame, is more famous to-day by reason of the work of John Forbes, and the nurseries, now under the able control of his son, are annually visited by hosts of horticulturists from far and near, and there is always something worth going to see.

It was just when summer was passing, and autumn approaching, that the writer spent a most enjoyable afternoon looking round and taking a few notes. Phloxes and pentstemons were still masses of floral beauty, and at the first glance I realised that I could do no more than take the names of a few of the very best. In adopting this course, however, I soon found I had made trouble for myself, for, extensive as the collections are, no second-rate varieties find a place, and where all are extra good it is well nigh impossible to select the best.

However, this much may safely be claimed, every one of the varieties noted down is a thoroughly good one, and among the phloxes no grower need hesitate to plant Mrs. Oliver, a beautifully formed flower, clear pink, with white eye; John Forbes, a pink variety, that worthily bears the name of the founder of the nursery; Lady Tate, which bears deep pyramidal trusses of pale lavender flowers; Mounet Sully, distinct orange, with a conspicuous purple eye; Muriel Rogers, soft pink, with carmine eye; and Countess of Dalkeith, a lovely salmon-coloured variety, of rare size and form. These half-dozen are of comparatively recent introduction, and are good as could be wished.

Messrs. Forbes put twenty-one new varieties into commerce last year, and among these are one or two of strikingly distinct colours. Tristran Bernard is a rich purple-violet; Jean Rameau, white, bordered with lilac; and General de Gallifet, fiery scarlet of exceptional intersity. More good things will be distributed this season, one variety worth looking for being named A. J. Macself, rosy-cerise with a deeper eye, fine pyramidal trusses, and flowers of great size.

Pentstemons, needless to say, are grown at Hawick in great quantities, and to the highest possible state of perfection. Every show-goer is familiar with the remarkable spikes exhibited by the firm at the Temple and Holland Park shows, and at York, Shrewsbury, Edinburgh, and other important provincial exhibitions, but one needs to witness the glorious blaze of colour produced by the thousands of plants in the open beds at the nursery to realise the full value of these charming and floriferous plants. Tall, sturdy spikes, clothed with huge bells from near the base to their tips, in every conceivable shade of pink, scarlet, crimson, and purple, were at the time of my visit making a display that could scarcely be surpassed at any season of the year by any plant available for British gardens. King George, a new variety for 1911, is of huge size, and of most intense fiery crimson. Marquis of Linlithgow, although older, is one of the finest rose-pinks, with a pure white throat. Gregor Mendel is probably the darkest pentstemon in cultivation, while Lady Forbes is perhaps the best of the pinks with white throat yet raised. Other fine varieties noted were Comte Zeppelin, Crown Princess of Sweden, Prosperity, and Crimson Gem. Newbury Gems, scarlet, pink, and white, are largely grown, and are in great demand for bedding purposes.

The delphiniums were past their best, but there was sufficient evidence to warrant the statement that these also hold the prominent position at Hawick which their noble form and beauty entitle them to. The pansy fancier could wish for no better occupation for passing a few happy hours than in inspecting the many beds of named show and fancy pansies at Hawick. The collection embraces all the varieties the keenest fancier could desire, whilst anyone who wished to obtain violas by the dozen, hundred, or thousand for either bedding or exhibition could have his wants amply satisfied here.

With reference to border perennials few, if any, worth growing are omitted from the collection at the Hawick nurseries, and there are also alpines, hardy ferns, and rockery shrubs in great variety. On a rockery near the entrance the lovely Dianthus Napoleon III. was flowering in characteristic profusion. Antirrhinums asarina, glutinosa, and sempervirens, Lithospermum prostratum, saxifragas, and other gems were quite at home, and at the back of the rockery was a fine clump of Polygonum spectabile variegatum, a handsome variety, that deserves widespread popularity.

Under glass zonal and fancy pelargoniums are largely grown, the silver-leaved bedding variety Mrs. Nesbitt being exceptionally attractive. The variegation in foliage is good, and there is an added charm in the trusses of double pink flowers which are freely produced. Other houses contained Calla Elliottiana, roses, dracænas, crotons, Begonia Rex, and caladiums, while a good deal of space is given to such things as East Lothian stocks for seed, primulas, begonias, etc. There are some fine old camellias in the big conservatory, which faces the roadway leading to the main entrance.

Over the entrance gates the Royal coat of arms denotes that Messrs. Forbes are florists by Royal Warrant to his Majesty the King, and a glance through their catalogue—a copy of which, by the way, is a publication that every reader of the Gardeners' Magazine ought to possess, and keep for reference—reveals the fact that well over five hundred members of the Peerage are included among the customers of the firm.

Necessarily, much that is of interest in these important nurseries has been left unnoticed, but it is hoped that sufficient has been said to show that the Hawick nurseries fully deserve the high reputation they enjoy, and that they testify to the immense advance that has been made in British floriculture during the past half-century.

Visitor.

WEBB'S STOURBRIDGE MARROW PEA.

Among second early peas Webbs' Stourbridge Marrow deservedly holds a high position, especially throughout the West of England. Not only is it a sturdy growing and vigorous variety, but it crops with remarkable freedom, the fine pods being well filled with from nine to eleven large peas of splendid flavour. The average height is five feet, but under exceptionally good culture it rises much higher, and produces correspondingly larger crops. In the accompanying illustration a magnificent row of this useful culinary pea is depicted. The row was grown by Mr. Ernest Avery, head gardener to J. B. Brooks, Esq., at Finstall Park, Bromsgrove, Worcestershire. Mr. Avery has stated that the peas grew nearly nine feet high, and from top to bottom the haulm carried pods that were in most cases six inches long. This is a fine testimonial to the variety and to Mr. Avery's ability as a cultivator.

A FINE ROW OF WEBB'S STOURBRIDGE MARROW PEA.
Grown by Mr. E. Avery in the gardens of J. B. Brooks, Esq., Finstall Park, Bromsgrove.

The Almond Tree.—In many Bournemouth gardens the almond tree grows very freely indeed. Towards the end of February, and onwards through March, it is possible to see scores of trees full of blossom. In some roads three gardens out of five contain almond trees, and readers can quite realise how very beautiful they look when literally covered, as many of them are, with their delicate pink blossoms.—G. B.

WORK FOR THE WEEK.

◆

WARM ORCHIDS.

EVERGREEN DENDROBIUMS. — The note from a correspondent in a recent issue of the GARDENERS' MAGAZINE (p. 96), has induced me to refer to this section of dendrobiums some weeks earlier than is the usual custom. The species in general cultivation consist of D. thyrsiflorum, D. densiflorum, D. chrysotoxum, D. Farmeri, D. suavissimum, and the more recently introduced D. Bronkharti, are all classed as evergreen kinds, and all require similar conditions of culture. Some of the earlier flowering kinds, such as D. thyrsiflorum and D. densiflorum, are now producing their flower scapes, and may be removed from their resting quarters and gradually brought into the stove or warm house. I do not consider it advisable to subject them to very liberal treatment until the flower spikes can be distinctly seen. Too much heat and moisture early in the season is liable to cause the plants to commence growing, and where this happens it will usually be found to be at the expense of the flowers. The plants may also drop their leaves at this season, and especially is this noticeable where they have been resting in a cool, dry house and suddenly transferred to a hot house, where the outside conditions have necessitated extra fire heat. But as it is the natural season for leaf fall, the loss of foliage does not always infer that a too sudden change in temperature has taken place. When the flower spikes develop it will be some time before the new growths make their appearance, so that the plants should not be afforded too much water at the roots. The extra moisture in the atmosphere will give a good deal of encouragement, and in bright weather the plants may be syringed overhead, which will considerably assist in keeping the foliage and pseudo-bulbs plump, so that very little root moisture will be necessary.

REPOTTING OR TOP-DRESSING.—It is a good plan to attend to these matters as soon as the plants pass out of flower. Annual repotting is unnecessary, and unless a plant has outgrown its receptacle, or the potting compost is in an advanced stage of decomposition, the removal of dead surface moss and the use of good living material in its place is all that will be required. Some of the species resent being disturbed, and when repotted they should not be pulled about much. Where there are many back pseudo-bulbs, the rhizome should be severed between some of the bulbs, as there are generally dormant eyes capable of producing young growths, though these rarely start unless something happens to the leading growth, so, by making these divisions some time before top-dressing or repotting, the size of a specimen may be increased, or new stock formed as may be desired. The potting compost should be of a good lasting quality. Equal portions of tough fibrous peat, osmunda fibre, and chopped sphagnum moss will suffice. This must be made firm about the roots. I should mention that broken crocks and charcoal must be freely intermixed with the potting material. The receptacles should also have free drainage, and this is essential, because these dendrobiums require abundance of root moisture during their growing season. — H. J. CHAPMAN, Oakwood Gardens.

STOVE PLANTS.

FITTONIA ARGYRONEURA is an ideal edging plant for the stages of stoves, its compact habit of growth being combined with ornamental variegated foliage. It is of easy propagation, and roots very readily in a close, shaded pit with a temperature of 70 degrees. From four to six cuttings may be placed near the edge of small 60-sized pots.

PANICUM VARIEGATUM is also a most desirable subject for this class of decorative work, and is indispensable for edging the plant stages, and for house decoration generally. It is also an ideal companion to the fittonias on account of its trailing habit. Place from six to eight cuttings in shallow pans or small pots previously filled with a sandy compost, and put them on a moist base in a propagating case; if kept close for a few weeks they will become thoroughly well established.

ALLAMANDAS.—Although the season is not yet sufficiently advanced for the general routine of repotting of stove specimens, allamandas may be safely dealt with at this stage. Having previously been pruned well back, and all the weak or undesirable wood removed, the specimens should be totally immersed, roots and stems, in a tub or tank filled with tepid water, until the soil has become thoroughly moistened. Allow the soil to drain for a few hours, and then remove the greater part of it from among the roots with a pointed stick, carefully retaining without injury all the fibrous roots. Have in readiness the requisite pots, which must be provided with ample drainage, and use a potting compost of two parts good fibrous loam, one of peat, and the remainder made up of dried sheep manure, with sufficient coarse Bedfordshire sand, mortar rubble, and half-inch charcoal to render the whole sufficiently porous. Potting must be carried out with extreme care, making sure that the rooting medium is moderately firm, as this will produce short-jointed growth which is most desirable for providing a profusion of beautiful yellow trumpet-shaped flowers for as long a season as possible. Allamanda flowers are always welcome, and much appreciated for decorations. After potting, the specimens may be placed in their permanent positions where they will be trained as roof climbers, or should it be desired to treat them as specimen plants for exhibition purposes, they may be trained over the roof on strands of twine until a few weeks before they develop their blooms, when they may be easily removed from the roof and carefully trained around the balloon trellis, or whatever shape is used. During active growth syringe freely, and fumigate immediately any trace of aphis is observed. Avoid overcrowding the shoots, and give ventilation judiciously on all favourable occasions. When placed in rather small pots with a view to repotting later in the season, this latter operation must not be delayed beyond the time when the roots have reached the sides of the pots.—JOHN DONOGHUE, Bardon Hill Gardens.

THE FLOWER GARDEN.

ROSES.—Where possible, it is advisable to complete the planting operations by the end of the month, if the weather is suitable and the soil workable. When filling up gaps in the old beds, it is necessary to use some fresh soil to fill in amongst the roots, but on no account should strong farmyard manure be used, only as a top-dressing when planting is finished.

DECIDUOUS TREES AND SHRUBS should be put out without delay, and securely staked and tied. The supports of autumn-planted trees will require an occasional examination, to make sure that they are in good order. Dwarf shrubs are liable to become loose at their stems, and where this occurs the soil should be made firm again round them. Protection must be afforded tender shrubs aginst the cutting east winds.

PENTSTEMONS. — Rooted cuttings in frames should be potted and kept growing in cold frames. Seeds may also be sown at the present time, and plants be obtained which will flower this season. There are some excellent strains of seeds on the market, and a batch of seedlings is very interesting.

BEDDING CALCEOLARIAS.—The cuttings should have the tops pinched out to induce bushy growth. Abundance of air is necessary on every available occasion during mild weather. When the plants have made fresh growth after stopping, they should be transplanted into other frames, where they will make good examples for bedding out. C. Burbidgei and C. amplexicaulis require potting. The latter makes pretty little standards, if allowed to grow with a single shoot until about two or three feet high, when it should be stopped. It is necessary to "stop" the growths frequently after the desired height is reached to obtain bushy heads. These small standards, used as dot plants in a bed carpeted with the ivy-leaved pelargonium Souv. de Charles Turner, are very effective.

WALKS that have become mossy and dirty will need re-gravelling; others which are not quite so bad will only require turning and rolling down again. The first operation is to trim the edges of the turf with the edging knife, then the surface of the walks which are to have fresh gravel put on should be broken with a fork. These must be raked level, and the gravel spread over, rolling it in as the work proceeds, and using plenty of water to assist in the binding.

GENERAL REMARKS.—During rough weather stakes may be prepared and pegs cut in readiness for layering carnations. Sticks may be trimmed for supporting the sweet peas, as though various plans are adopted for these flowers, yet good hazel sticks are not surpassed for supports. After a heavy fall of snow conifers and shrubs must be relieved of some of the weight by tapping the branches with a pole.—E. C. POOLEY, Gnaton Gardens.

FRUITS UNDER GLASS.

BORDERS FOR YOUNG VINES.—The preparation of the border should be accomplished some few weeks before planting, in order that the soil may have had time to settle and become warm. Those who intend to plant, and have not yet prepared the border, should clear all the old soil and drainage out, and then commence by putting in new drainage, and making sure that all the outlets are in good condition. Place rough stones or brickbats all over the bottom to the depth of six to nine inches—I do not think any benefit is derived from concreting the bottom, as the roots do not get through the layer of drainage materials. On the top of the large stones place about three inches of broken material, and on this place some good loam squares or turves to prevent the soil from finding its way downward and clogging the drainage in years to come. Prepare the material for the first section, and the best is good rich loam from an old pasture or park that has been grazed; it should, however, have been stacked some few months. The soil from a district where lime is present is to be preferred for vines, but lime may be supplied in the artificial form of bones and bone-meal at the rate of 1cwt. to every ton of soil, and a few lbs. of gypsum might also be added. If the loam is of really good quality little manure or other material need be used for the first season.

PLANTING.—The beginning of March is a good time to plant, as the growth should be slow, advancing steadily with increasing sunlight and warmth. Planting canes of one or two years' growth may be used. I always think that nearly a season is gained by using two-year-old plants. Turn the vines out carefully, and then disentangle the roots. I ought to have said that, in case the ball of earth is dry, thoroughly soak it in tepid water so that the greater portion of the soil can be shaken away. Plant as shallow as possible, spreading out the roots evenly, and covering them with soil at once. Make the soil very firm, and when planting is finished give a very light watering.

EARLY VINERY.—Continue to draw down the shoots carefully from the glass, taking care not to pull them down far at a time or they will suddenly snap. Do not allow more than one shoot from a spur, as it is a great mistake to overload or crowd the vines. Damp down the floor several times daily, and syringe the vines twice daily.

PEACHES.—The second house may now be closed in order to form a succession to that started January 1. These will soon be in bloom after closing, and there should be no difficulty in setting, though it will be well to brush over the blooms with a rabbit's tail as soon as the stigma is in condition to receive the pollen.—W. A. COOK, Leonardslee Gardens.

ROYAL SHOW

NORWICH,
June 26th to 30th, 1911.

President - HIS MAJESTY THE KING.

The Regulations and Forms of Entry for IMPLEMENTS are now ready.

Applications for space must be made by MONDAY, MARCH 20th, 1911.

Entries for Trials of Potato Diggers and Potato Sorters close on April 1st.

Live Stock entries close on MAY 20th; Poultry, Produce and Horticulture on May 31st: Cider and Perry entries close on MAY 8th.

THOMAS McROW, Secretary

ROYAL AGRICULTURAL SOCIETY OF ENGLAND,
16, Bedford Square, W.C.
February, 1911.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

Royal Gardeners' Orphan Fund.

The annual meeting of this charity was held at Simpson's, Strand, on Friday, February 10. There were about two dozen subscribers present, when Mr. H. B. May opened the proceedings. The usual initial formalities were observed, and then the report and balance-sheet were taken as read.

REPORT OF THE COMMITTEE.

In presenting their twenty-second annual report, covering a period of public unrest and excitement which involved the managements of all charitable institutions in great anxiety and concern, the committee are much gratified in being able to congratulate the supporters of the Fund on the continued steadiness of its progress and increasing usefulness. With great regret, however, they have to acknowledge that the receipts from annual subscriptions do not show the same amount of expansion as other sources of revenue. The total receipts for the year are satisfactory on the whole, but the committee would be glad indeed to welcome more support in the form of annual contributions, however small, and once more appeal for greater consideration on the part of those for whose children the Fund is designed to benefit in their hour of need.

At the commencement of the year there were one hundred and seventeen orphan children receiving the full benefits of the Fund, and eighteen candidates waiting for election were in receipt of compassionate allowances. Fifteen of them were elected to receive full benefits at the annual meeting, bringing the roll of duly elected beneficiaries up to one hundred and thirty-two. During the year twenty-eight nominations of candidates were carefully examined and accepted, and from this list twenty have been selected to appeal for election. It is with extreme regret that the committee can only recommend the election of fifteen children at the annual meeting, and therefore it has not been considered desirable that the name of more than one child from a family should be placed on the voting list. The total amount disbursed in allowances again exceeded any previous total by some twenty pounds, the increase being largely due to the increasing number of candidates appealing for assistance while waiting for election. Since the Fund was established the total amount disbursed in allowances made to orphans amounts to no less a sum than over £22,958.

The number of children who have received the benefits conferred by the Fund is two hundred and ninety-three, and it has been a deep source of gratification to the committee to know that one of the earliest girls to be elected on the Fund has shown her gratitude for the benefits she received in the past by becoming an annual subscriber, an example which in due time it is sincerely to be hoped others will follow.

Through the deeply lamented death of his most gracious Majesty, King Edward VII., the annual festival was held at the Hotel Cecil in May, under the shadow of a great national calamity, but the committee rejoice in being able to record the fact that under the able presidency of Sir Jeremiah Colman, Bart., the festival was well attended, and the length of the chairman's list of contributions greatly exceeded their expectations, the total, indeed, exceeding all previous collections. Sir Jeremiah Colman's great love for horticulture and the sincerity of his kindly regard for the workers in gardens, was admirably shown on that occasion by his deeply sympathetic appeal for support from those who derive pleasure from their gardens, and by his own munificent donation. The committee are deeply grateful to Sir Jeremiah Colman for all his kindness and encouragement, and they invite the subscribers to share in their gratitude by to-day electing him a vice-president of the Fund.

To the stewards on that occasion, through whose kindly efforts the length of the chairman's list was so greatly extended, and to all who so generously assisted in the floral decoration of the Victoria Hall and the adornment of the dinner tables, the committee tender their grateful acknowledgment with the assurance that the results of their labours greatly contributed to the enjoyment of all present.

Arrangements have been made for the next festival to take place at the Hotel Cecil, on Thursday, May 4, under the presidency of one of the earliest supporters of the Fund—Nathaniel N. Sherwood, Esq. It will be within the recollection of the earlier supporters of the Fund that Mr. Sherwood was one of the first to give the movement for the establishment of the charity a helping hand, and gave proof of the sincerity of his desire to set the new institution on a solid foundation by presiding at the second annual dinner in 1889, and by later undertaking the duties of the responsible office of treasurer. From the first the Fund has had no more generous supporter or more ardent friend than Mr. Sherwood, and the committee feel assured that his occupancy of the chair at the Coronation Festival will give pleasure to every well-wisher of the Fund, and ensure for him their presence and support on that occasion.

The members of the Chislehurst Gardeners' Society, the Scottish Horticultural Association, the Bradford Chrysanthemum Society, the Leeds Gardeners' Lodge and Paxton Societies, the Reading Gardeners' Association, and other gardening bodies are all most cordially thanked for their continued exertions on behalf of the Fund, and the committee would most gladly welcome the support of other combinations of horticultural workers who could give valuable help in the same way.

The various honorary local secretaries are also heartily thanked for their much valued assistance. To Mr. George Carver and his horticultural colleagues in the Leeds district, special thanks are due for having organised amongst themselves a system of monthly collections of small sums from gardeners and under-gardeners, and with the happiest results, the Fund having benefited considerably by their action.

To Mary, Countess of Ilchester, Sir Frank Crisp, Mr. Sherwood and his sons, Mr. Leonard Sutton, the Messrs. Rothschild, Mr. E. Rochford, Mr. J. C. Eno, Mr. Anthony Waterer, Mr. H. J. Veitch, Mr. Thomas Smith, Messrs. Barr and Sons, the Messrs. Cuthbert, and others, who have given most generous support during the year, the committee acknowldged their indebtedness with hearty thanks.

It is again the committee's regrettable duty to record their sense of the heavy loss which the Fund has sustained by the deaths of old and well-proved supporters whose places it will be most difficult to fill. In Baron Schröder, who bequeathed to the Fund a legacy of five hundred pounds, the horticultural charities in particular, and horticulture in general, have indeed suffered a grievous loss. The name of Mr. William J. Nutting will also be sadly missed by all who knew him, so greatly was he esteemed. In Mr. E. C. Mott and Mr. William Denning, the Fund has also lost friends who always had the welfare of the Fund very near to their hearts.

The members of the committee who retire by rotation are Mr. William R. Alderson, Mr. George H. Barr, Mr. George H. Cuthbert, Mr. William Howe, Mr. John Lyne, Mr. William Poupart, Mr. Thomas A. Sanders, and Mr. William P. Thomson, and being eligible, offer themselves for re-election.

The auditors, Mr. M. Rowan and Mr. P. Rudolph Barr, are again most cordially thanked for the great care which they have taken in the examination of the accounts, a duty which yearly becomes more onerous, but always most cheerfully discharged. Mr. Barr is the retiring auditor, and the committee are glad to have received his consent to be nominated for re-election.

CASH STATEMENT FOR 1910.

RECEIPTS.

	£	s.	d.
To Subscriptions: General	295	18	6
Local Secretaries	73	4	6
Donations: General	124	17	0
Local Secretaries	13	0	6
Receipts from Annual Festival	995	0	5
Legacy: Baron Schröder	500	0	0
Advertisements in List of Subscribers ...	30	14	0
Dividends on Stock and Interest on Deposit	370	1	6
Income Tax returned	6	12	6
	2,409	8	11
Balance last Account	505	2	7
	£2,914	11	6

EXPENDITURE.

	£	s.	d.
By Allowances to Orphans	1,565	5	0
Grants in Aid	145	11	8
"Emma Sherwood Memorial"	13	0	0
"Maybud Campbell Grant"	13	0	0
Secretary's Salary	200	0	0
Printing and Posting List of Subscribers	38	11	2
Rent, Insurance, Firing, Lighting, etc.	32	15	6
Printing and Stationery	30	1	11
Advertising	4	0	6
Annual General and Committee Meetings	24	7	7
Postages	26	6	4
Bank Charges	8	17	0
Petty Cash: Sundries	5	6	6
Balances: Cash at Bank...	657	2	7
Cash on Deposit	150	0	0
Cash in hand	0	5	9
	£2,914	11	6

Mr. H. B. May, in moving the adoption of the report, congratulated the subscribers on the steady progress of the society, notwithstanding the political unrest during the year. A number of subscriptions had, however, come in at the New Year, which, in the usual course, would have come in in 1910. He regretted the committee could not see its way to elect more than fifteen children to the benefits of the Fund. Had there been more money forthcoming, more could be done; but remembering the orphans on the Fund, and the urgent need in so many cases of assistance in placing the orphans in the way of gaining a satisfactory livelihood, they could not ignore these claims, and they had not, therefore they could not increase their liabilities by adding more than fifteen orphans this year. He stated that the French Horticultural Society of London had redeemed their promise of a year ago, and sent £20 to the funds, an amount only delayed by the claims of the sufferers from the Paris floods. Mr. Alderson seconded the motion, and it was carried unanimously.

A special case was put forward by the Chairman, who explained the circumstances, and then Mr. Alex. Dean moved, and Mr. Pierce seconded, "That the action of the committee in undertaking on behalf of the Fund the maintenance of George Bailey, a fatherless and motherless boy, aged 14 years, at the School of Handicrafts, Chertsey, for two years at a cost of 5s. per week, be and is hereby confirmed." This was carried unanimously.

Sir J. Colman was thanked for filling the chair at the festival, and was elected a vice-president. Mr. Edward Sherwood was thanked for his services as treasurer and re-elected. Mr. P. Rudolf Barr, the retiring auditor, was re-elected, and Messrs. W. R. Alderson, G. H. Barr, G. H. Cuthbert, W. Howe, J. Lyne, W. Poupart, T. A. Sanders, and W. P. Thomson were re-elected as members of committee, and their services were eulogised by the chairman and Mr. Alex. Dean, the latter pointing out that included among the names were market growers, seedsmen, nurserymen, gardeners in private establishments, and members of the Horticultural Press. The Chairman moved, and Mr. Poupart seconded, the re-election of Mr. B. Wynne as secretary at a salary of £200; Mr. T. A. Sanders supported the motion.

Messrs Bates, Ingamells, Lyne, Moorman, Poupart and Wright were elected scrutineers of the ballot, and the meeting then adjourned until the declaration of the poll.

The poll was announced about 4.30, when the following candidates were declared duly elected: John Herbert Jones (363 votes), William Alfred Bailey (353), William George Wright (341), Samuel Rainey (339), Cyril Mark Foster (316), Monica Aileen Hulks (299), Frederick John Moore (289), Leslie Richard King (288), Victor Powesland (287), Maurice Leslie Johnson (269), Ada Winifred Pearson (257), Mabel Holloway (240), Albert William Whitlock (234), Wiliam Norton Glide (233), John Charles Gould (231).

The poll having been declared the scrutineers were accorded a vote of thanks for their services, and with a similar compliment to the chairman the proceedings terminated.

In the evening the committee and friends, to the number of about thirty, dined together at "Simpson's," with Mr. H. B. May, V.M.H., as chairman.

Proposed National Daffodil Society.

Immediately at the close of the annual general meeting of the Royal Horticultural Society, a meeting of daffodil-lovers was held in the No. 3 Committee Room at the R.H.S. Hall, to consider the question of a National Daffodil Society. The Rev. G. H. Engleheart presided, and Mr. Cranfield, who had unfortunately lost his notes, outlined an idea for the formation of a society. He considered there was a need for such a body, a need for a great London Daffodil Show, a need for a Daffodil "Annual," and a need for the encouragement of daffodil culture among amateur daffodil lovers and growers. He thought the proposed society would not clash with the functions of the R.H.S. Daffodil Committee, or the Midland Daffodil Society. Mr. Engleheart, instead of pressing the needs of a new society, pointed out the great difficulties it would have to encounter, such as the present already largely-organised work among daffodils, the financial question, etc. He thought if a good London show could be provided between the two R.H.S. meetings in April, the chief reason for a society would be met, and he suggested the organisation of such a show in conjunction with the R.H.S. to test the feeling of the public, in so far as a new society was concerned.

Mr. R. Sydenham thought there was hardly need for a society, remembering the work of the Daffodil Committee, and the Birmingham and other societies. The Rev. J. Jacob thought if the Daffodil Committee asked the R.H.S. Council for a two-day show in April, for a subsidy to work it, and for the publication of an "Annual" and portraits of new daffodils, that the Council would probably grant the request. Many present considered the Council would do no such thing, and Mr. Wallace said it would be impossible for the Council to subsidise daffodils and not roses and other flowers. Mr. Jacob's proposal was a sort of red herring drawn across the trail of the proposed new society, and most of the desultory discussion that followed bore some reference to what the R.H.S. might or might not do. Mr. Adams, Mr. Watts, Mr. P. R. Barr, Mr. J. H. Dick, Mr. C. H. Curtis, Mr. E. A. Bowles, and Mr. Darlington all spoke, and Mr. Bowles said he did not think the Council would be prepared to grant a large subsidy for an exhibition, etc., as suggested; but probably, if so desired, the functions of the R.H.S. Daffodil Committee might be broadened. Two motions were before the meeting, but neither of them was put. Mr. Cranfield was evidently disappointed at the result of the meeting, and he seems inclined to go ahead with his project in spite of the "faint praise" received. At present the meeting stands adjourned until March 14, when the members of the R.H.S. Daffodil Committee and others will reconsider the subject, and probably approach the R.H.S. as a preliminary step for or against a new society.

Miss Willmott, Mr. and Mrs. J. Douglas, Messrs. C. Dawson, H. Smith, C. E. Shea, — Crosfield, J. D. Pearson, C. Pearson, C. Bourne, and J. Harvey were among those present, in addition to those already mentioned.

Scottish Horticultural Association.

The February monthly meeting of this association was held in the Goold Hall, 5, St. Andrew Square, Edinburgh, on the 7th inst., when Mr. Whytock, the retiring president, who occupied the chair at the outset of the proceedings, presided over an audience of 120. After the preliminary business of the evening was over, Mr. Whytock vacated the chair in favour of his successor, Mr. Massie, whom he introduced to the meeting, and thereafter the new president delivered his inaugural address, taking as his subject, "Looking Forward; or the Future of Our Association." Mr. Massie gave a long and interesting account of the efforts of the association since its commencement to form a horticultural institution in Edinburgh, and of its accomplishments in other directions, and he laid before the members the following proposals which he commended to their attention, and appealed to them to give them their most serious consideration, namely:

(1) To start a fund to provide for a horticultural institution, to contain at least a library and reading room, hall for meetings, and suitable offices, and other accessories.

(2 To readjust the finances of the association, and of the chrysanthemum exhibition.

(3) To adopt means for the encouragement of the younger members to take a larger share in the work of the association by providing more facilities for the reading of papers, and for discussions amongst themselves, and by offering prizes to those who acquit themselves with most merit; and by instituting examinations, and granting to young gardeners certificates of proficiency in theoretical and practical horticulture.

(4) By instituting a Scottish Benevolent Fund for the behoof of gardeners and others and their wives and children.

Mr. Massie's proposals were very favourably received, and a motion by Mr. McHattie, seconded by Mr. Whytock, and supported by Messrs. Cuthbertson and Todd, to remit them to the council for consideration, was carried unanimously. On the motion of Mr. D. W. Thomson, Mr. Massie received a very cordial vote of thanks.

Two exhibits only were put forward. One was samples of "The Sutton" and "Victoria" rhubarb, to show their relative merits as forcing subjects, "The Sutton" variety being longer and of better quality than the "Victoria" variety. The other was rhubarb from the open ground, from the Edinburgh Distress Committee's farm at Murieston, per Mr. Cairns. The stalks of this were over six inches long.

An interesting item of news conveyed to the meeting by the Chairman was that Mr. Alex. Mackenzie, of Warriston Nurseries, Edinburgh, who is still active and on duty every day, had just completed his eightieth year, and the secretary was instructed to convey to him the hearty congratulations of the members on his becoming an octogenarian.

At the next monthly meeting, on March 7, Mr. Wm. Cuthbertson, J.P., will give a paper, entitled "A Talk About New Sweet Peas."

Thirty-four new members were elected.

East Anglian Horticultural Club.

At the February meeting of this club, before a large gathering of members, Mr. W. Bradbury, Ipswich, gave a most interesting paper upon the subject of "The Non-Setting of Fruit Blossoms." Having first by means of well-prepared drawings, described the physiological characteristics of the flowers, and made the audience conversant with their structure, he went on to attribute the several causes which were responsible for the non-fertilisation of the flowers. Frost damaging the stigma was the greatest cause, for if the stigma was in any way injured, the pollen was unable to perform its function. Then he also said it had been noticed that many of our fruit trees, apples and pears in particular, were self-sterile, and to obviate this trouble care should be taken at planting time to associate trees of different varieties that flowered at the same time, so by the many agencies pollen could be carried from tree to tree, and a "set" of fruit ensured. Excessive wet spoilt the chances of the dry pollen being carried about, as required, and heavy winds smashed the delicate organs of the flowers, and rendered them useless. A keen discussion followed the paper, in which Mr. Lewis Smith (president), and Messrs. J. Powley, H. Perry, Frank Neave, C. H. Fox, J. C. Abel, W. Watson, G. Moore, and F. J. Endersby took part.

Mr. John H. Willis, Norwich, has kindly undertaken to supply each month a report of the weather, temperature, sunshine, and rainfall. This report was read for the first time at this meeting, and proved most useful. The exhibits made a very pretty display. Apples and pears still came in good numbers and quality. Mr. W. Shoesmith, gardener to F. W. Harmer, Esq., Cringleford, staged a beautiful bunch of calanthes. Mr. W. Laws, gardener to G. E. White, Esq., Eaton, had a fine batch of carnations of the leading varieties, and a good cypripedium. Bulbous flowers were very creditably exhibited by Mr. F. Williams, gardener to Louis Tillett, Esq., Catton. Messrs. Daniels Bros., Lim., Norwich, staged a varied assortment of winter-flowering shrubs in pots.

Birmingham Gardeners' Association.

The second fortnightly meeting was held on Monday, February 6, Mr. C. H. Herbert in the chair. There was a large attendance of the members to meet Mr. J. Udale, Droitwich (Instructor of Horticulture to the Worcestershire Education Committee), who gave a demonstration upon "Pruning Fruit Trees" accompanied with lantern slides. This is a branch of fruit tree culture Mr. Udale is eminently qualified to teach, from his long experience as a cultivator and experimentalist in hardy fruit culture. After extemporising upon the needs and objects of fruit production, the theme of the essay was the comparative merits of the seasons for pruning after planting, and which, to some extent is still a vexed question among cultivators, the predominant opinion, however, being in favour of pruning during the springtide when the wood buds are vegetating, or even a little later on, when the foliage is expanding. In regard to the pruning of plums and other "stone" fruits, a sparing use of the knife or sécateurs was urgently recommended, chiefly to avoid as much as possible the inevitable gumming.

Statistics were given of the produce of fruit realised under various experimental prunings, both of which were excellently illustrated by a multiplicity of lantern slides. Mr. Udale's lengthened address left but little time for discussion, and a hearty vote of thanks was accorded him for his instructive and interesting demonstration.

Reading Gardeners' Association.

The usual fortnightly meeting took place in the Abbey Hall on Monday, February 6, when there was again a large attendance, the president, Mr. Alderman Parfitt, occupying the chair. The minutes of the last meeting having been read and confirmed, the President, in a feeling manner referred to the recent death of Mrs. Martin Sutton, and proposed the following resolution: "That this meeting of the Reading and District Gardeners' Mutual Improvement Association tenders to Mr. Martin J. Sutton and family their deep sympathy in the very great bereavement they have sustained, and that the hon. secretary be requested to convey this resolution to Mr. Martin J. Sutton by letter." This was seconded by the vice-chairman, Mr. H. Goodger, and carried sub-silentio, all those present standing.

New members having been elected, the President explained that owing to the illness of Mr. E. J. Dore, who was to have spoken on this occasion on "Begonias," Mr. J. W. Tayleur, B.Sc., of the Reading University College had most kindly brought his lecture on "Soils," which was to have been given on February 20, forward to this evening, and so filled the gap created by the absence of Mr. Dore.

Mr. Tayleur was no stranger to his audience, having lectured to them on "Manures" just about twelve months ago, and then as on the present occasion, he was followed with deep attention and interest.

The lecturer explained that he did not intend to deal with his subject from the practical point of view, his audience being probably better versed on that side of the question than he was. His remarks would deal with soils from their scientific aspect alone. Mr. Tayleur is to be congratulated on handling such a complex subject in a fashion easily intelligible to all present, and his lucid manner in making perfectly plain any little intricacies was much appreciated. The different factors of soil fertility, mechanical analysis of soils, chemical analysis, availability of the plant food, organic matter and lime in soils, effects of manure (nitrogenous, phosphatic and potash) and the essential elements of plant food were in turn dealt with. Mr. Tayleur ably answered the many questions put to him by the inquiring minds. He was warmly applauded, and received a hearty vote of thanks on the proposition of the President, seconded by the Hon. Secretary.

Bournemouth Gardeners' Association.

The annual general meeting of the members of this association was held on Tuesday, February 7, at the Avenue Assembly Room, Town Hall Avenue.

J. H. Ralph Smythe, Esq., J.P., the president, occupied the chair. The annual report and statement of accounts were discussed and adopted. A number of ordinary and honorary members were proposed and elected. The lectures given during the past year were much appreciated; they were of a high order of merit, being very interesting and instructive.

The lectures and papers arranged to be delivered during the first session of the year 1911 are also of a very high order, and embrace a wide range of subjects, including science and plain cultural matters that will be all very instructive to horticulturists.

In connection with a number of the ordinary meetings of the members, exhibitions of cut flowers and plants have been arranged. This is in addition to the usual practice of staging produce for the society's certificates.

Very hearty votes of thanks were passed to the retiring officers and committee. The worthy president was re-elected, also the vice-presidents, several other gentlemen being added to this body. Nearly all the old members of the committee were reappointed, and several new members were elected to fill vacancies, including one made through the death of the late Mr. T. Sprackling. Mr. G. Barge was re-elected librarian. He has filled the post with great satisfaction to the members for some time past. The hon. secretary, Mr. J. B. Stevenson, who has taken a leading part in connection with the society from its birth, was re-elected, and he now commences his twenty-third year of service.

The committee received the resignation of the assistant secretary, Mr. W. Shave, with much regret, as he has filled the post with distinction for a number of years. Mr. C. Nippard was elected as assistant secretary with the good wishes of the members. Prominent residents are now taking a keener interest in the welfare of this association.

The Southampton and District Gardeners' Mutual Improvement Society.

In order to promote the educative side of horticulture and further it's interests the Southampton and District Gardeners' Mutual Improvement Society has been formed, and it is intended to hold periodical lectures and discussions on various matters of interest.

The first lecture will be held in the Highfield Church Institute, Southampton, on Wednesday, 22nd inst., at 8 p.m., when Mr. G. C. Gough, B.Sc., of the Board of Agriculture will give a lecture on "American Gooseberry Mildew and Wart Disease of Potatoes," illustrated by lantern slides. This will be an "open" lecture, and all interested are invited to attend.

Further particulars of the society may be obtained from the hon. secretary, Mr. Charles Reed, Twitton, Highfield, Southampton.

HOW TO GROW SWEET PEAS.—"SWEET PEAS AND THEIR CULTIVATION," by C. H. Curtis (Secretary of the National Sweet Pea Society), is a complete guide to the successful culture of sweet peas for home or exhibition. Price 1s. net, by post 1s. 2d., or bound in cloth 1s. 6d., by post 1s. 8d., from W. H. and L. Collingridge, 148, Aldersgate Street, London.

Eckford's
Giant SWEET PEAS

The Flower for the Coronation.

The Coronation Flower, par excellence, is going to be the Sweet Pea. When "Flaming June" comes everybody will be wearing it and everybody will be talking about it. Its popularity will excel that of any flower of any time—and deservedly so, for what other flower can show such a variety of colour, bear such an abundance of bloom, and continue in flower for such a long period.

Now is the time to begin sowing, and a long succession of bloom can be arranged for by making fresh sowings right through the months of February and March. Seed, however, should be ordered immediately.

Buy your seed NOW, and buy from Eckfords. No other Seed Specialist in the world can rival Eckford for Sweet Peas. Larger flowers, longer stems, brighter colours, and a profusion of bloom are certain if you grow Eckford's Sweet Peas. Every packet of seed which Eckford's sell is put up in a sealed packet bearing their name—a guarantee of excellence—and can only be obtained direct from Wem. No agents are employed.

A specially written booklet on Sweet Pea Growing given with every order. Send to WEM for satisfaction.

SPECIAL NOVELTY OFFER FOR 1911.

LUMINOSA.—This variety will be appreciated for its deep coral colour, which for decoration is unexcelled, having the quality of giving off greater brilliance in artificial light than any other variety. Very scarce. In sealed packets, 7 seeds, **6d.**; 15, **1s.**

VICOMTE DE JANZE.—A fine bold flower of exquisite shape, the standard being splendidly erect; in colour it is deep bright rose, perfectly distinct; a charming flower. In sealed packets, 5 seeds, **3d.**; 10, **6d.**; 20, **1s.**

DODWELL F. BROWNE (WAVED).—This is a very beautiful intense bright crimson, three and four flowered, almost a self; a true Giant Waved variety of intense King Edward VII. colour. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

SAINT GEORGE.—Light orange pink standard with slightly lighter wings; almost a self; good size, slightly waved. In sealed packets, 20 seeds, **3d.**; 40, **6d.**; 80, **1s.**

ASTA OHN (WAVED).—A pretty waved lavender overlaid with rose; a very charming flower of good size and substance. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

APPLE BLOSSOM (WAVED).—This, as its name implies, is a beautiful flower of apple blossom colour, of giant size, and, like most of the waved varieties, is a very strong grower. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

PICOTEE (WAVED).—This is one of the very finest introductions, being a giant waved flower, pure white, with a beautiful picotee edge of carmine; in most cases the flowers are borne in fours on a long, strong stem. In sealed packets, 5 seeds, **3d.**; 10, **6d.**; 20, **1s.**

MAGGIE GERRING.—This is a decided acquisition with a bold standard of perfect shape, and beautifully balanced wings. In colour it is a soft cream overlaid with a delightful shade of pink which rather deepens towards the edges. It is exquisitely rich in tone when bunched. In sealed packets, 5 seeds, **3d.**; 10, **6d.**; 20, **1s.**

MRS. E. GILMAN.—A fine bold flower, with expanded standard. It has a creamy ground suffused with bright rose, and almost pure cream wings. In sealed packets, 5 seeds, **3d.**; 10, **6d.**; 20, **1s.**

EVELYN HEMUS (WAVED).—A warm cream, shading to yellow, with a picotee edge of terra cotta pink; of great size and refinement; standard and wings beautifully waved, and nearly always four-flowered. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

MRS. HENRY BELL (WAVED).—A beautiful rich apricot ground overlaid with a soft pink, which deepens towards the edges of both standards and wings. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

MID BLUE.—A medium-sized erect flower of deep sky blue. It is a strong grower, very free, and frequently four flowered; quite distinct. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

OTHELLO (WAVED).—A beautiful self-coloured giant chocolate, of splendid substance and robust habit. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s**

CERISE (WAVED).—A fine, bold, beautifully waved, true cerise; a very strong grower, giving generally four flowers on long, strong stems. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1s.**

SPECIAL OFFER. One full-sized packet of each of the foregoing 14 charming and Novel Sweet Peas, **12/6** post free for cash with order
One half-sized packet of each of the foregoing 14 charming and Novel Sweet Peas, **6/6** post free for cash with order

SPECIAL COLLECTIONS FOR 1911.

Villa (A) Collection. [illegible] very choice varieties, suitable for villa garden, excellent giant flowered sorts, most suitable for cutting and exhibition, 25 seeds of each, **10s.**, post free, cash with order.

Villa (B) Collection. 24 splendid varieties, suitable for exhibition, 50 seeds of each, **5s. 6d.**, post free, cash with order.

Villa (C) Collection. 12 splendid varieties, suitable for exhibition, 50 seeds of each, **2s. 9d.**, post free, cash with order.

Exhibitor's (D) Collection. 12 Giant Waved varieties, new and up to date; fine for exhibition, [illegible] seeds of each for **2s. 9d.**, post free, cash with order.

FREE. Send a postcard to-day for large illustrated and coloured catalogue. It gives full particulars of all novelties in Sweet Peas for 1911, and contains full list of all flower and vegetable seeds.

HENRY ECKFORD, F.R.H.S (Dept. 221), Sweet Pea Specialist, WEM, SHROPSHIRE.

OBITUARY.

MR. JAMES WALKER, F.R.H.S.

We greatly regret to record the death of Mr. James Walker, which occurred at his residence, Ham, Surrey, on the 12th inst., in his seventy-fourth year. Mr. Walker was a native of Rutherglen, Lanarkshire, and came to England in 1875, and throughout the thirty-five years that have elapsed since he came south he has been one of the leading growers of fruits and flowers for the supply of the London markets. He was not only a leading grower; he was one of the most successful, which is all the more remarkable from the fact that until leaving Scotland he was engaged in a business of a quite different character, and had no experience of gardening, excepting that which he had obtained in a small city garden, in which he evinced much interest. Taking up his abode at Whitton, then one of the most important market garden districts in the Thames Valley, he engaged in the cultivation of flowers, and achieved much success as a cultivator of cyclamen. He also gave attention to daffodils, and by 1884, when the first Daffodil Conference was held under the auspices of the Royal Horticultural Society at South Kensington, he had formed so comprehensive a collection that he was able to stage, in splendid condition, about one hundred varieties. Mr. Walker had travelled much, both at home and abroad, in search of daffodils of merit, and at the conference he was acknowledged to be one of the foremost authorities on these flowers, and this position he maintained until his death. Soon after the year last-named, Mr. Walker purchased a tract of land at Ham, where he built himself a residence, and formed a fruit farm on the most approved method. An important feature of the farm was formed by the fifteen span-roof peach houses, which occupied an acre of ground, and furnished immense supplies of fruit of the finest quality. It is probable that there has been no more successful example of peach culture under glass than was afforded at Ham. The fruit plantations outside consisted chiefly of bush trees, and exclusively of the best varieties of the respective kinds, and the results were such as to show that Mr. Walker was fully conversant with all that is conducive to success in hardy fruit culture. Mr. Walker continued the cultivation of daffodils on a large scale, and it is said that last year he supplied a Dutch firm with nine tons of bulbs of one variety. For thirty years he has been a Fellow of the Royal Horticultural Society, and since 1885 a member of the society's Floral Committee. At the meeting of this body on Tuesday Mr. H. B. May, the chairman, referred in sympathetic terms to the loss sustained by the death of Mr. Walker, and it was unanimously resolved that a vote of condolence should be sent to his family. Mr. Walker was for many years a member of the Committee of the Royal Gardeners' Fund.

Mr. GEORGE DANIELS.

There passed away quietly at his residence at Norwich on Friday, the 10th inst., Mr. George Daniels, a horticulturist, who, through advancing years, has not of late been prominent in horticultural circles, but who in his younger days did much to promote the advance of gardening in East Anglia. Mr. George Daniels was one of the founders of the firm of Messrs. Daniels Brothers, but retired when the business was converted into a limited liability company. He was a supporter of the Norfolk and Norwich Horticultural Society, and one of the founders of the East Anglian Horticultural Club.

MR. SAMUEL GIBBINS.

We regret to learn of the death, on February 1, of Mr. Samuel Gibbins, secretary to Messrs. J. C. Wheeler and Sons, Ltd., of Gloucester. Mr. Gibbins was also secretary to the Gloucester Chamber of Agriculture and the Gloucestershire Rose and Sweet Pea Society. Mr. Conway Jones represented the latter body at the funeral, which was attended by members of the Corporation, Chamber of Agriculture, the office and nursery staffs of Messrs. J. C. Wheeler and Sons, and the church, Sunday school, and Mission, in all of which Mr. Gibbins took a personal interest. Large numbers of floral tributes were sent, including a large cross of white tulips, hyacinths, and lilies, from the employees of the Messrs. Wheeler. Mr. Gibbins was laid to rest amid abundant tokens of the love and respect in which he was held in the city of Gloucester.

MR. ALFRED W. WEEKS.

With much regret we learn that Mr. A. W. Weeks, who has long occupied a prominent position in horticultural circles, died on the 10th inst. As head of the well-known firm of Messrs. J. Weeks and Co., Mr. W. A. Weeks was one of the leading authorities on the erection and heating of horticultural buildings, and was highly esteemed by his many friends. Mr. Weeks was for several years a member of the committee of the Royal Gardeners' Orphan Fund, of which he was a generous supporter. He retired from business some years since.

TRADE NOTES.

Messrs. Hugh Dickson, Royal Nurseries, Belfast, have received an intimation that his Majesty King George V. has been graciously pleased to confer on them the Royal Warrant of Appointment as nurserymen, seedsmen, and florists to his Majesty in Ireland.

Messrs. Joseph Bentley, Lim., of Barrow-on-Humber, have been granted the Royal Warrant of Appointment as horticultural chemical manufacturers to his Majesty King George V.

Messrs. Dickson and Robinson, Cathedral Street, Manchester, have been appointed by Royal Warrant as seedsmen to his Majesty King George V. For many years they held the warrant of appointment to her Majesty the late Queen Victoria, and to his late Majesty King Edward VII. from the time of his accession.

Messrs. Little and Ballantyne, nurserymen and seedsmen, Carlisle, have been granted a Royal Warrant of Appointment as seedsmen and nurserymen to his Majesty King George V.

GARDENING ENGAGEMENTS.

Mr. Frederick Akers, jun., for the last four years in the gardens at Albury Hall, Ware, has been appointed head gardener to E. Martin Smith, Esq., Codicote Lodge, Welwyn, Herts.

Mr. W. Felstead, for seven years assistant superintendent of the Leicester Parks, has been appointed superintendent of the Parks and Open Spaces at Wolverhampton.

FORTHCOMING ENGAGEMENTS.

[The Editor will be greatly obliged if Secretaries of Societies will send schedules and dates of exhibitions to him, at Endsleigh, Priory Park, Kew, Surrey.]

MONDAY, February 20.—National Chrysanthemum Society; Executive Committee.

WEDNESDAY, February 21.—Irish Gardeners' Association Meeting.

TUESDAY, February 28.—Royal Horticultural Society; Committees meet at 12 o'clock; Lecture at 3 p.m. on "Recent Works in Seed Selection," by Mr. G. F. Scott-Elliott, M.A. (Masters' Lecturer for 1911); Scientific Committee at 4 o'clock.

SCHEDULES RECEIVED.

SOUTHAMPTON HORTICULTURAL SOCIETY.—Rose Show at the County Ground, June 27 and 28; Garden Fête at South Stoneham House on July 12; Carnation and Sweet Pea Show, on the Pier, July 28; Chrysanthemum and Fruit Show, on November 7 and 8.

CARDIFF HORTICULTURAL SOCIETY.—Twenty-third annual show in the Sophia Gardens, July 26 and 27.

GRAND YORKSHIRE GALA.—Fifty-fifth annual show in Bootham Park, York, on June 14, 15, and 16.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

LONDON BRANCH OF THE B.G.A.—F. E., Finchley: The London branch of the British Gardeners' Association holds its meetings at Carr's Restaurant, Strand, W.C. The branch secretary is Mr. V. Cockram, 37, Bolan Street, Battersea Park, S.W.

THE FOOD OF PLANTS.—S., Keighley: Useful books other than you have include Sorauer's "Physiology of Plants" (Longman, Green, and Co.); "The Soil," by A. D. Hall (John Murray); and "Fertilisers and Manures" by A. D. Hall (John Murray). Before obtaining these, however, you should have studied the elementary works carefully.

BLACK CURRANTS.—J. W., Exeter: The black currants so familiar to us in puddings, cakes, etc., have nothing whatever in common with the black currants of our gardens. The latter are a species of ribes, while the former are small grapes. "Currant," when used by the grocers, is a corruption of the word Corinth, the corruption being probably due to the resemblance between the dried "currants" of commerce and the black currants of our gardens. The Black Corinth grape is the source of imported currants, and the vines are grown in Greece and the Ionian Islands as low bushes; the fruits are dried in the sun as they ripen, being placed on nets on the ground or in trays.

SOWING SWEET PEAS.—W. J., Feltham: Sow five seeds in a 48-sized pot, placing them half an inch deep in sandy soil. Put the batch in a greenhouse, water them, and let them remain here until the seedlings push through the soil; then shift them into a cold frame, in a sunny position. Keep them close for a few days, and then gradually increase the ventilation until by the time the plants are three or four inches high, air is admitted at all times except in severe frost, while on favourable days the lights may be removed altogether. You will find "Sweet Peas and their Cultivation," post free, 1s. 2d., or in cloth, post free, 1s. 8d., very useful; it can be obtained from the Gardeners' Magazine Office, 148, 149, Aldersgate Street, E.C.

STARTING BLACK HAMBURG VINES.—W. F., Chippenham: You might very [illegible] start the vines before the first week in Ma[illegible] if there is any need for so doing. The [illegible] difficulty in connection with outside borders is that of keeping them from becoming [illegible] and cold during the winter, but if you [illegible] covered the soil with last year's leaves [illegible] foot thick, you have little to fear. Some [illegible] frame lights or sheets of galvanised [illegible] put over the borders would help in keeping them warm, but under such shelter [illegible] become dry rather quickly, hence the need of care in that direction. If a top dressing of good soil is needed this should be [illegible] directly the fruit has been cut and while the leaves are green; remove the inert [illegible] laying the roots bare, and then add a [illegible] of good loam mixed with bone-meal or decayed manure. Give the border a [illegible] mulching of rich manure, several [illegible] thick, as soon as the vines get well [illegible] and, if necessary, add one or more [illegible] dressings as the season advances, and the grapes show colour.

MAGGOTS IN SWEET WILLIAMS.—G. A. W., Chippenham: The trouble is due [illegible] a leaf-mining grub like those which [illegible] celery, marguerites, etc. It is some[illegible] unusual to find a visitation so late [illegible] season, but evidently conditions were fa[illegible] able to the deposition of eggs late in [illegible] autumn. Two or three broods [illegible] hatched in a favourable season. The [illegible] autumn maggots turn to pupæ and remain [illegible] the ground in that state during winter. [illegible] evidently a late brood hatched out during mild weather, and the flies deposited their eggs on the sweet williams. You [illegible]

THE LANGUAGE OF FLOWERS
"Feed us, we pray you, with
CLAY'S FERTILIZER
and our rare beauty and fragrance will repay you."

It is SAFE, CERTAIN, QUICK-ACTING and ECONOMICAL.

Flowers Grown with CLAY'S FERTILIZER catch the Judge's eye.

CLAY'S LONDON FERTILIZER
TRADE MARK.

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK AS AT SIDE.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Manure Manufacturers and Bone Crushers, **Stratford, London, E.**

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

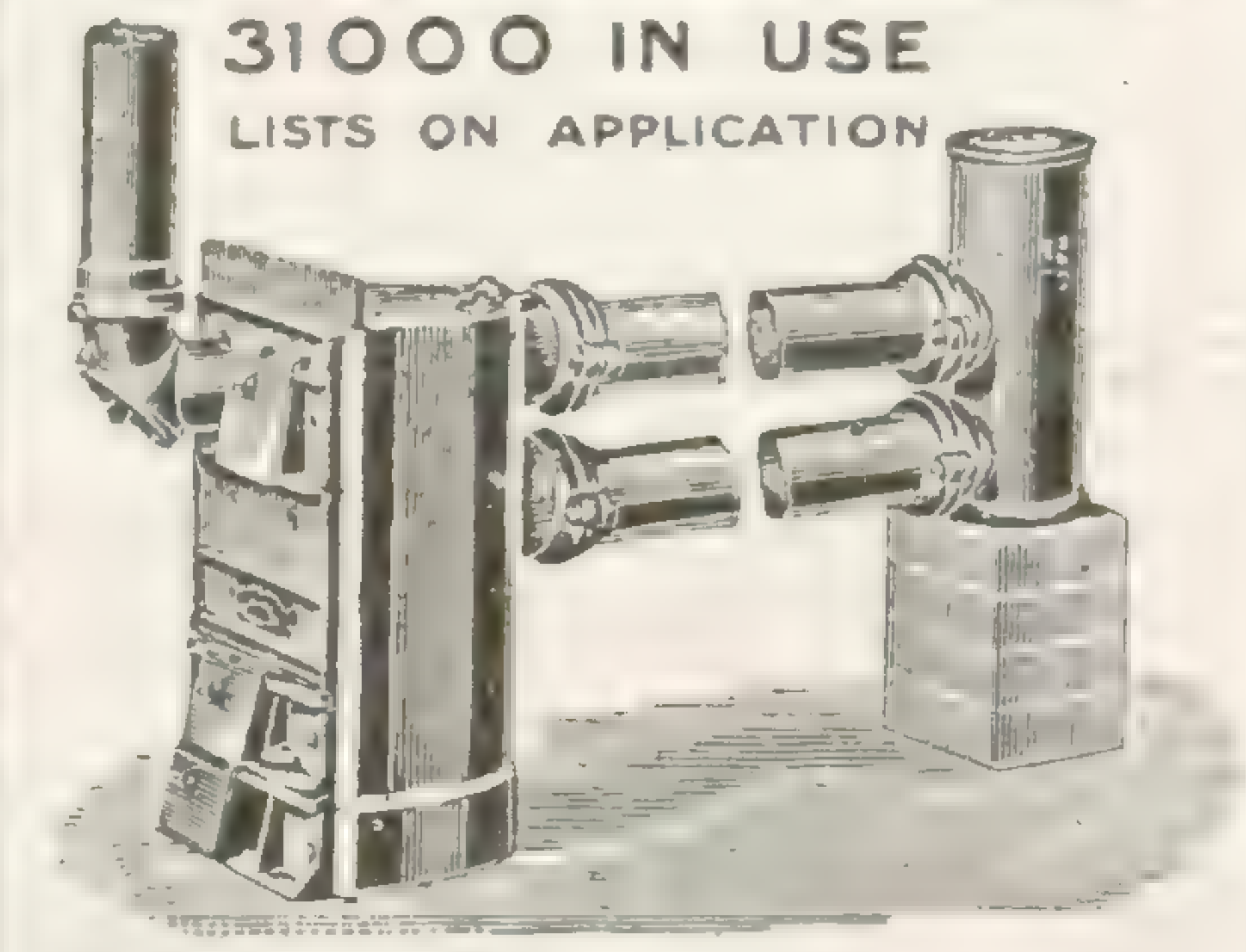
Appointed by Royal Warrant

Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

The **Loughborough**
BOILER
31000 IN USE
LISTS ON APPLICATION



The pioneer of cheap, simple and effective heating for small greenhouses. Complete Apparatus from £3.19.6. The immense sale of this boiler, and its numerous imitations are the best testimony of its undoubted success

MESSENGER & CO. LTD.
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH · LEICESTERSHIRE
London Office, 122 VICTORIA ST · S · W

Vaporite
THE ORIGINAL SOIL INSECTICIDE

Exterminate Wireworms, etc., before planting, by digging in NOW 1 lb. of **Vaporite** to 8 sq. yds. Ensures sound, healthy plants. Sold by all seedsmen in tins, **9d.** up to **4/6**; casks, **7/6** ½ cwt.; **11/6** cwt. Booklet No. 45, free from **VAPORITE-STRAWSON CO., LTD.**, Dept. E., **Spencer House, South Place E.C.**

THOMSON'S
VINE, PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES
UNRIVALLED FOR ALL PURPOSES
THE RESULT OF MANY YEARS
SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE.

REGISTERED

THE
APRON
That has Come to Stay.
WORN BY ALL THE LEADING GARDENERS.
LOOK AT THE PRICE.
In Dark Blue Ponicus Twills,
1/9, Postage **3d.** extra.
Or in Dark Blue Ponicus Serge,
3/9, Postage **3d.** extra.
WRITE FOR ONE TO-DAY.
SHAW & MONTGOMERY
(PENMAN'S),
628, Argyle St., Glasgow, W.

SASH BARS.—Special lines in certain lengths only, 1½ by 1, 2s. 6d. 100ft.; 3 by 1½, 5s. 9d. 100ft.; quotations for special lengths or for any kind of timber, garden lights, greenhouses, and woodwork. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

PERGOLAS.
Larch Poles at 1d. per foot. Lists Free.
PATRICK'S, Otley, Yorks.

OAK CRAMBLES.
Peeled and dry at ½d. per foot.
PATRICK'S, Otley, Yorks.

ROSE ARCHES.
Larch Poles at 1d. per foot.
PATRICK'S, Otley, Yorks.

TREE STAKES AND GARDEN RODS.
Lists free.
PATRICK'S, Otley, Yorks.

Please mention
THE GARDENERS' MAGAZINE
when writing to Advertisers.

SUBSCRIBER'S ORDER FORM

Every Saturday
THE GARDENERS' MAGAZINE.
Twopence

To W. H. and L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose________for________months in advance.

Name________________

Address________________

Date________________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

⁂ If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.

Employment THE GARDENERS' MAGAZINE Register.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; grapes, peaches, melons, stove and greenhouse plants; four and a-half and eleven years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Closes Hall, Gisburn, Clitheroe

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here 5½ years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working, where two or more are kept); good all round; can be well recommended; married when suited; age 36. PEARCE, 10, Roxwell Road, Shepherd's Bush.

GARDENER (Head Working), requires SITUATION; experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants; Flower and Kitchen Garden, Hardy Fruit, etc.; good references; married, no family. W. S., 73, Allen Street, Maidstone, Kent.

GARDENER (Head Working); married, no family; age 37; life experience in all branches; practical experience with land and stock; good references; disengaged shortly. G. HARE, The Gage Gardens, Little Berkhamsted, Hertford.

GARDENER (Head Working).—Gentleman strongly recommends his foreman who has been with him for 5½ years; thoroughly understands the cultivation of first-class fruits, flowers, and vegetables, and the general routine of a well-kept garden; married; age 32. STEVENS, The Lodge, Beeton House, Brentford, W.

GARDENER (Head Working); life good practical experience in all branches, Inside and Out, Early and Late Forcing; excellent references. H. TURNER, 62, Star Road, Peterborough.

GARDENER (Head Working, or good Single-handed), life experience in all branches; good references; abstainer, age 28; married, one child; Head Working in present situation. A. C. STAPLES, 2, Edward Terrace, Chislehurst.

THE RIGHT HON. LORD and LADY JOICEY wish to highly recommend J. M. RICHARDS as GARDENER (Head); 16 years' experience in all Fruit, Vegetable, and Plant Culture; 4 years' present situation as General Foreman; excellent testimonials; age 30; single; disengaged when suited. Apply RICHARDS, Gregynog Gardens, Newtown, Mont.

THE RIGHT HON. VISCOUNT HARDING highly recommends C. CRADDUCK as HEAD WORKING GARDENER, thoroughly experienced, Inside and Out (age 30); married when suited. Apply C. CRADDUCK, The Gardens, South Park, Penshurst.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (good Single-handed, or with help); life experience in good establishments; married, age 30; excellent references. W. HUSSEY, The Gardens, West Woodhay, Newbury.

GARDENER.—Young Man, 25, where one or two are kept; well up in all branches, Inside and Out; 11 years' good experience; can be well recommended; married when suited. H. SMALL, Charlton, Banbury.

MR. GARRATT, Grange Gardens, Alresford, Hants, highly recommends F. FISHER as FOREMAN, Inside, well up in the culture of fruit, chrysanthemums, carnations, and house decorations; age 25; life experience; 2½ years here as Foreman, previously at Chilton Lodge, Pylewell Park, Highclere Castle and Sandleford Priory.

FOREMAN, age 28; experienced in Fruit and Greenhouse Plants, House and Table Decorations; good references; Bothy preferred. A. CARRINGTON, 118, Stowe Street, Lichfield, Staffs.

MANAGER or FOREMAN; life experience in Growing Tomatoes, Cucumbers, Mushrooms, and all kinds of Bedding Plants; age 49; single. C. A., 9, Herbert Street, Chesterton, Cambridge.

MR. E. DYSON highly recommends his GARDENER (Second) as Head Working; life experience Vines, Peaches, Melons, Carnations; close two years here; excellent references; age 27. LEONARD, Cherryhinton Hall, Cambridge.

UNDER GARDENER, Young Man, seeks SITUATION as above; age 19-20; good refs.; 3 years 9 months last place. C. T. COLESHILL, 37, Wolsey Road, Hampton Hill, Middlesex.

GARDENER (Under, where three or four are kept); Kitchen Garden and Pleasure Grounds, or as required; Single-handed place and Poultry not objected to. 4, Caledonian Road, Chichester, Sussex.

GARDENER (Under), age 22, seeks SITUATION in Kitchen Garden or Pleasure Grounds; good references. W. LUNNON, Coves End, Bourne End, Bucks.

GARDENER.—Private Working or Market Garden Nursery; grower cucumbers, tomatoes, chrys. (bedding), mushrooms (ridge or flat), vegetables, hardy fruits, budder, grafter, trainer, pruner, raiser rose cuttings; life experience; good references. W. BLOOMFIELD, Staplehurst, Kent.

JOURNEYMAN (First, Inside).—Mr. O. CATLING, The Gardens, Bayfordbury, Hertford, recommends W. WHEELER as above, age 24; life experience; 2 years present situation; bothy preferred.

JOURNEYMAN, Inside and Out, or Outside; age 20; Mr. PYLE, Head Gardener, Wilmington Hall, will be pleased to recommend C. WISEMAN as above; 6 years' experience; good references; Bothy preferred. Tredegar Road, Wilmington, Dartford.

JOURNEYMAN (Inside, or Inside and Out); age 20; five years' practical experience. Mr. ROBERTS, Leysdinam Gardens, Newbridge-on-Wye, Rads., will be pleased to recommend Arthur Jones as above; tall and strong; abstainer.

JOURNEYMAN, age 21, in Kitchen Garden and Pleasure Grounds; 4 years' practical experience; well recommended; duty if required; abstainer. H. EDMONDS, 3, Lovel Road, Winkfield, near Windsor, Berks.

JOURNEYMAN (Inside or Inside and Out) for plants and fruit; four years last situation; well recommended; good references; age 22; disengaged. R. TAYLOR, Mayfield, Shakespeare Road, Worthing, Sussex. South preferred.

MR. T. BENNETT, late Peckforton Castle, can highly recommend P. E. KIRTON as JOURNEYMAN in Fruits or Plants; age 22.

YOUNG MAN (20) seeks SITUATION as JOURNEYMAN (Inside); 7 years' experience; well recommended. P. COOPER, Newbold Fields, Chesterfield, Derbyshire.

YOUNG MAN (age 25), with 10 years' experience in all branches of horticultural work, including orchid growing, seeks SITUATION in good nursery or private place; highest references. W. BARRETT, Apiaries, Old Bath Road, Cheltenham.

GARDEN LABOURER Wants SITUATION; married, no family; well used to outside work; good scythe and spade hand; well recommended; no circulars. W. LING, Loughboro' Road, Kegworth, near Derby.

HANDYMAN or GARDEN LABOURER seeks SITUATION, age 27; good references. T. MACE, The Bothy, Cumberland Lodge, Windsor Park, Berks.

IMPROVER (19) seeks SITUATION (Inside or Inside and Out); four years' general experience; well recommended by employer, Mrs. Beveridge, Pitfold. Apply, SNELLING, Pitfold Garden, Shottermill, Surrey. No circulars.

IMPROVER (18) seeks SITUATION in good garden; three years in present situation; anxious to learn; good worker. Apply, HEAD GARDENER, Albury Edge, Merstham, Surrey.

MR. R. STAWARD, Panshanger, wishes to recommend WALTER MORGAN as IMPROVER (Inside or Out); age 18; three years' experience; Bothy preferred; disengaged. Cole Green, Hertford, Herts.

MR. HY. CHURCH, Raveningham, Norwich, highly recommends F. ALLISON, who has been with him two years in charge of herbaceous borders, walls, etc., to any gardener wanting a reliable and good working man; age 24; 11 years' experience.

GENTLEMAN recommends YOUNG MAN, age 22, as Second of four or five; Inside and Out; 7 years' experience; good reference. Apply T. ROGERS, Michelmersh, Romsey, Hants.

ORCHID GROWER requires SITUATION; experience under first-class growers; 10 years present situation; excellent references. Apply, S. BURROUGH, Royal Gardens, Sandringham.

A NORWEGIAN, aged 23 years, seeks a Position in a Horticultural Establishment in or near London. Has had between two and three years' experience. Apply HENNUM, Ljan-by-Kristiania.

GERMAN (21), 7 years' experience in Tomatoes, Cucumbers, small Fruits, and all kinds of out-of-doors Vegetables, etc., seeks SITUATION in Market Nursery. State wages. E. SGNAR, No. 9, New Street, Carnforth, Lancs.

YOUNG MAN (20) seeks SITUATION as 3rd, where 4 or 5 are kept; 5 years' experience; good character; prefers Bothy, and down south. A. J. C., 10, Office of this Paper.

YOUNG MAN seeks SIT. as ELECTRICIAN; thoroughly experienced, gas and oil engines; fill up time as required; well recommended. W., c/o Mrs. Bridger, Rose Cottage, King's Road, Haslemere.

YOUNG MAN seeks SITUATION, Inside and Out; 5 years' experience in good establishment; well recommended; age 22. F. MORBY, Charlton Lodge Gardens, Banbury.

YOUNG MAN seeks SITUATION in Kitchen Garden or Pleasure Grounds, willing and obliging; good references. T. E. WEIMER, Dunham Massey, Altrincham, Cheshire.

YOUNG MAN, age 24, seeks SITUATION in Kitchen Garden and Pleasure Grounds; can have good references; disengaged. C. ROLFE, Old School Lane, Lanford, Manningtree, Essex.

Situations Vacant.

CANADA.—Wanted, strong, active GARDENERS for large Nurseries; steady work; good wages; sail March; book early. UNION TRANSIT CO., 381, Argyle Street, Glasgow.

PUPIL Wanted for Chrysanthemums, in all its branches, under an expert; Vines, Tomatoes, Mushrooms if desired; no premium required and no salary given for first twelve months. Address "Z." Office of this paper.

WANTED, experienced KITCHEN GARDENER, Frames, Forcing, Fruit, etc.; abstainer; duties once a month; Bothy, etc.; wages 18s. week. Apply J. E. DAVIES, The Gardens, Talygarn, Pontyclun, Llantrisant.

WANTED AT ONCE, strong, active MAN for Kitchen Garden and Pleasure Grounds; must be well up in kitchen garden; duty every [illegible] week; wages 14s., Bothy and vegetables. Apply, stating particulars, etc., to G. HALLETT, Easton Neston Gardens, Towcester.

WANTED for Cornwall, a good GARDENER as Head of another [illegible]; must be good at fruit, flowers, and vegetables, [illegible] and hard working; able to take charge of [illegible] two cows. Apply, with references, LI[illegible] RAWSON, 96, Piccadilly, London.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For FEBRUARY 25, 1911.

Please Repeat my Advertisement.

Name..

Address..

....

Date..............................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

nothing to save plants so badly affected as those sent, but you can do a good deal to prevent future attacks by burning the infested stock and either burning or very deeply burying the upper three or four inches of soil in which the plants have been growing. Crops likely to be attacked should be frequently sprayed over with a quassia or soot solution, or even a weak nicotine mixture, each having a little soft soap added to make it slightly adhesive. Are the wild parsnip and the several buttercups and crowfoots abundant near your garden? If they are you must be careful with celery, parsnips, ranunculuses, marguerites, and sweet williams, as the maggots frequently flourish among the above-named wild plants.

ECHINOCYSTIS LOBATA.—A. D., Haslemere: This is a rather uncommon but free-growing annual that needs to be treated much in the same way as a gourd or a vegetable marrow, so far as germination and early culture are concerned. But during June the plants should be set out in a sunny and sheltered position in rich soil. This cucurbit is a free-growing climber, and would do very well to run over a garden archway, or up an old tree. The male flowers are freely produced, but the female ones are not so numerous; these latter produce roundish spiny fruits that are very attractive, and which when ripe and dry contain a network of woody tissue, in which are a few blackish seeds that are shaped like vegtable marrow seeds.

FLOWER BEDS.—A. E. S., Broughton: Inasmuch as you do not give the sizes of the beds, their distances from each other, and the general position of the set relative to the house, we are at a disadvantage. Lobelia fulgens would not do in the colour scheme you outline. We suggest that you place a tall palm or bamboo, or other tall graceful foliage plant in the centre of No. 1 bed, and put well-grown castor oil plants and cannas around it, with a few examples of the white Swainsonia galegiflora among them; the edging could be of alyssum or J. B. Riding viola. Beds 2 and 3 should look well filled with rich pink begonias over a ground working of dwarf alyssum. The pink ivy-leaved pelargonium Galilee should suit beds 4 and 5, with an edging of a soft primrose or creamy yellow viola, such as Marchioness or Primrose. Fill beds 10 and 11 with Souv. de Chas. Turner ivy-leaved pelargonium, and Miss Willmott verbena, and swainsonias. Beds 6 and 8 would easily be filled with a groundwork of J. B. Riding viola, under white begonias, while 7 and 9 should by way of contrast be filled with pink begonias over alyssum.

FIRST-CLASS CERTIFICATE FOR VEGETABLES.—M. E. M., Worcester: You are quite right. The regulation is in the "Book of Arrangements for 1911," published by the Royal Horticultural Society; it is as follows: "Such new fruits and vegetables as have received an Award of Merit, and are prima facie considered to be probably worthy of an F.C.C. must be seen growing by a member of the committee and two practical gardeners or amateurs, and their report duly considered by the committee, before an F.C.C. award is recommended to the Council.

NAMES OF PLANTS.

G. H., Downe.—Odontoglossum crispum.

A. D., Haslemere.—A fruit of Echinocystis lobata.

H. I. S., Tarporley. — 1, Primula floribunda; 2, Acacia armata; 3, Dieffenbachia Bausei; 4, Dracæna congesta; 5, D. Goldieana.

S. C. H., Louth.—1, Saxifraga apiculata; 2, Iris reticulata; 3, Chorezema Lowi; 4, Dendrobium aureum; 5, Cupressus lusitanica; 6, C. funebris.

H. T., Swindon.—Dendrobium nobile; there is a good deal of variation in this species, very much more than in the two flowers sent. In some of the hybrids, notably D. Ainsworthi, there is also a good deal of colour variation.

MARKETS.

◆

COVENT GARDEN.

Flowers.

Forced flowers are now fairly plentiful; carnations are excellent, and there is a good demand.

		s. d.		s. d.
Acacia	per pad.	5 0	to	7 0
Azaleas, white	per doz. bun.	3 0		4 0
Adiantum cuneatum	per doz. bun.	4 0		6 0
Anemones, French	per doz. bun.	2 0		2 6
Arums	per doz.	2 0		4 0
Asparagus	per doz. bun.	7 0		10 0
Camellias	per doz.	1 6		2 6
Cattleyas	per doz.	9 0		12 0
Carnations	per doz.	2 6		3 0
,,	per doz. bun.	9 0		12 0
Chrysanthemums	per doz. bun.	6 0		9 0
,,	per doz. blms.	2 0		4 0
Croton leaves	per bun.	1 0		2 6
Cypripediums	per doz. blooms	2 6		4 0
French fern	per doz. bun.	2 6		4 0
Gardenias	per doz.	3 0		6 0
Hellebores	per doz.	1 0		1 6
Hyacinths, Roman	per doz. bun.	6 0		7 0
Lilac	per bun.	2 6		4 0
Lilium auratum	per bun.	3 0		4 0
,, speciosum	per bun.	2 0		3 0
,, longiflorum	per bun.	3 0		4 0
Lily of the Valley	per doz. bun.	6 0		12 0
Marguerites	per doz. bun.	2 0		3 0
Narcissus, Paper White	per basket	6 0		10 0
,, Soleil d'Or	per doz. bun.	2 0		2 6
,, Golden Spur	per doz. bun.	3 0		6 0
Odontoglossums	per doz. blms.	2 6		3 0
Pelargoniums	per doz. bun.	5 0		8 0
Roses	per doz.	1 6		5 0
Smilax	per doz. trails	2 0		3 0
Tuberoses	per doz.	0 5		0 6
Tulips	per doz. bun.	4 0		10 0
Violets	per doz. bun.	2 0		3 0
,, Parma	per bun.	3 0		4 0

Fruits.

Cape fruits continue to sell readily, and apples and oranges are in good demand. Business is fairly good.

		s. d.		s. d.
Apples, English	per bush.	6 0	to	9 0
,, American	per barrel	20 0		36 0
,, Oregon Newtowns	per box	10 0		13 0
,, Canadian	per barrel	18 0		30 0
Apricots, Cape	per case	2 6		5 0
Bananas	per bun.	4 0		12 0
Cobnuts	per lb.	0 10		1 0
Chestnuts	per bag	10 0		15 0
Cranberries	per case	9 0		10 6
Grapes, English	per lb.	1 0		10 0
,, Belgian	per lb.	0 9		1 6
,, Guernsey	per lb.	0 9		1 3
,, Almeria	per barrel	15 0		20 0
Lemons	per case	6 0		15 6
Oranges	per case	10 0		21 0
,, Jamaica	per case	8 0		10 0
,, Californian Navels	per case	12 0		15 0
Peaches, Cape	per case	10 0		15 0
Pears, Cape	per case	5 0		10 0
Pineapples	each	2 0		4 6
Plums, Cape	per case	6 0		15 0
Pomegranates	per case	1 9		2 3

Vegetables.

Good supplies are on offer and business is good.

		s. d.		s. d.
Artichokes, Globe	per doz.	1 6	to	3 0
,, Jerusalem	per ½-sieve	1 0		1 6
Asparagus	per bundle	4 0		6 0
Beans, Jersey	per lb.	1 0		2 0
Beet	per bush.	1 0		1 6
Brussels Sprouts	per ½-bush.	1 3		2 6
Cabbages	per tally	3 0		7 0
Carrots	per doz. bun.	1 3		2 0
Cauliflowers	per doz.	1 6		3 0
Celery	per doz. rolls	5 0		10 6
Chicory	per lb.	0 3½		0 4
Cucumbers	per doz.	6 0		15 0
Endive	per doz.	1 0		2 0
Horseradish	per doz. bun.	9 0		18 0
Lettuce	per doz.	1 6		4 6
Mint	per doz. bun.	1 0		2 0
Mushrooms	per doz. lb.	6 0		12 0
Onions	per bag	4 0		6 6
,, Spanish	per case	6 0		7 0
Parsnips	per bag	2 6		3 0
Parsley	per ½-sieve	1 3		2 0
Radishes	per doz. bun.	1 0		1 6
Rhubarb	per doz.	0 8		1 0
Savoy	per tally	3 0		5 0
Seakale	per bun.	0 10		1 6
Spinach, French	per crate	4 0		5 0
Tomatoes, Canary	per crate	12 0		20 0
Turnips	per bag	2 0		3 0
Watercress	per doz. bun.	0 5		0 6½

LONDON POTATO MARKETS.

There is a steady demand and prices show little variation.

		s. d.		s. d.
British Queen	per ton	75 0	to	90 0
Epicure	per ton	70 0		75 0
Evergood	per ton	70 0		75 0
King Edward	per ton	75 0		85 0
Maincrops	per ton	95 0		105 0
Up-to-Dates	per ton	80 0		105 0
,, Irish	per ton	60 0		70 0

Dr. J. COLLIS BROWNE'S
THE ORIGINAL AND ONLY GENUINE
Chlorodyne
ADMITTED BY THE PROFESSION TO BE THE MOST VALUABLE REMEDY EVER DISCOVERED.
The Best Remedy known for
COUGHS, COLDS,
ASTHMA, BRONCHITIS.
Cuts short all attacks of SPASMS, HYSTERIA, and PALPITATION.
The only Palliative in NEURALGIA, TOOTHACHE, GOUT, RHEUMATISM.
Acts like a Charm in DIARRHŒA and DYSENTERY.
Refuse imitations and insist on having
Dr. J. COLLIS BROWNE'S Chlorodyne.
Convincing Medical Testimony with each bottle.
Of all Chemists, 1/1½, 2/9, 4/6.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.
Height above sea-level, 150 feet.

DATE. 1911. FEBRUARY 5 TO FEBRUARY 11.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Feb. 5—Sunday	—	37	36	41	36
,, 6—Monday	—	35	31	38	35
,, 7—Tuesday	—	34	32	37	32
,, 8—Wednesday	—	36	31	40	30
,, 9—Thursday	—	36	33	38	33
,, 10—Friday	3 18	32	30	42	29
,, 11—Saturday	5 30	35	34	43	32
Means	(total) 8 48	35	33	40	32

DATE. 1911. FEBRUARY 5 TO FEBRUARY 11.	RAIN.	TEMPERATURE OF THE SOIL AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg.
Feb. 5—Sunday	0·01	36	36	41	31
,, 6—Monday	—	36	37	40	32
,, 7—Tuesday	—	34	37	40	29
,, 8—Wednesday	—	36	37	40	21
,, 9—Thursday	—	36	37	40	30
,, 10—Friday	0·15	36	37	40	[illegible]
,, 11—Saturday	—	37	37	40	27
Means	(total) 0·16	36	37	40	27

CONTENTS.

PAGE
A Famous Scottish Nursery ... 131
Answers to Correspondents ... 136
Apple Beauty of Kent ... 124
Choice Plants for South Walls ... 123
Cordon Pear Trees on Arches ... 129
Exhibitions and Meetings ... 133
Fern Spore Arrangements ... 124
Grafting Trees and Shrubs ... 127
Hardy Bamboos ... 130
Hardy Plant Chat ... 126
Late Supplies of Pot Strawberries ... 125
Libra Peach ... 129
Notes of the Week ... 119
Obituary ... [illegible]
Pear Beurre Fouqueray ... 125
Royal Horticultural Society ... 121
Slugs and Snails ... 128
The Choice of Hardy Perennials ... 130
Tree Paeonies ... 123
Webbs' Stourbridge Marrow Pea ... 131
Work for the Week ... 132

ILLUSTRATIONS.

Portrait of Mr. Silas Cole, 119; New Perpetual Carnation Coronation, 121; Tree Pæonies—a Study, 123; Pear Beurre Fouqueray, 125; Group of Iris variegata aurea in the Iris Garden, Kew, 126; A Fine Bed of Iris florentina at Kew, 127; A Simple and Efficient Method of Training Cordon Fruit Trees, 129; A Fine Row of Webbs' Stourbridge Marrow Pea, 131.

BOULTON & PAUL, LTD., HORTICULTURAL BUILDERS, Norwich.

EFFECTIVE, PRACTICAL CONSERVATORIES.

Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of 40/- value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.

4ft. by 6ft. ... £2 0 0 | 8ft. by 6ft. ... 3 0 0
*Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft. Similar to No. 75, with Two Lights... **35/-**

SEND FOR ILLUSTRATED CATALOGUES.

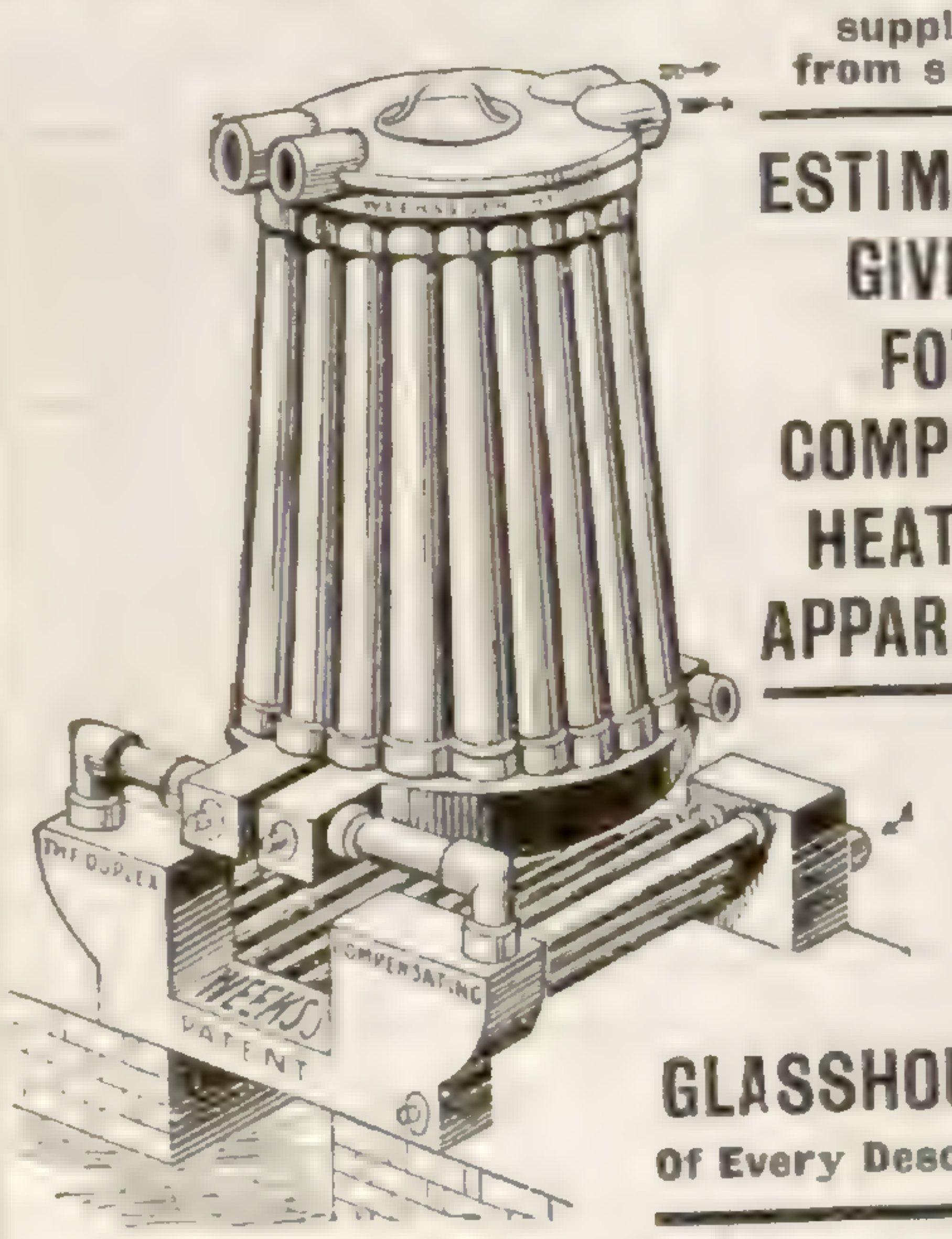
Every part of these Houses is thoroughly well made, painted three coats, CLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.

No. 49A.—Span, 1 ft. by ft. £11 10 0
No. 47A.—Lean-to, 10ft. by 7ft. £9 10 0

All parts are numbered ready for easy re-erection by any handy man.

WEEKS'S BOILERS

supplied from stock.

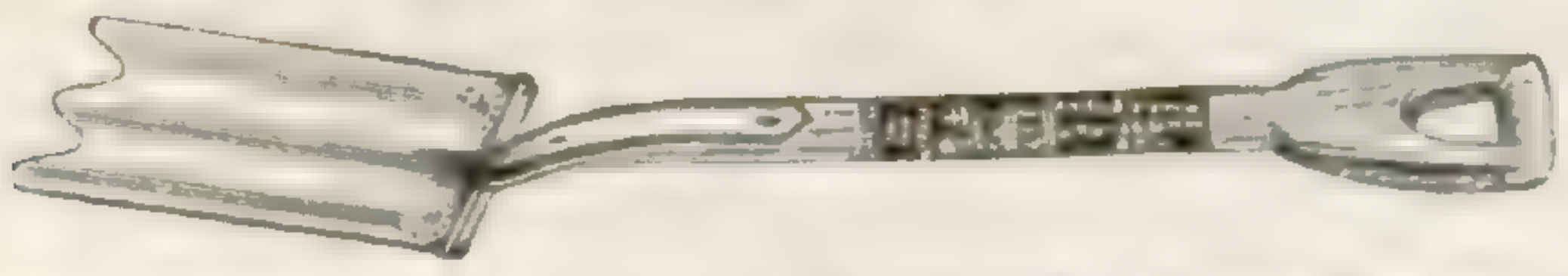


ESTIMATES GIVEN FOR COMPLETE HEATING APPARATUS

GLASSHOUSES.
Of Every Description.

J. WEEKS & CO.,
72, Victoria Street,
WESTMINSTER, S.W.

A NEW GARDEN SPADE (Carter's Patent).

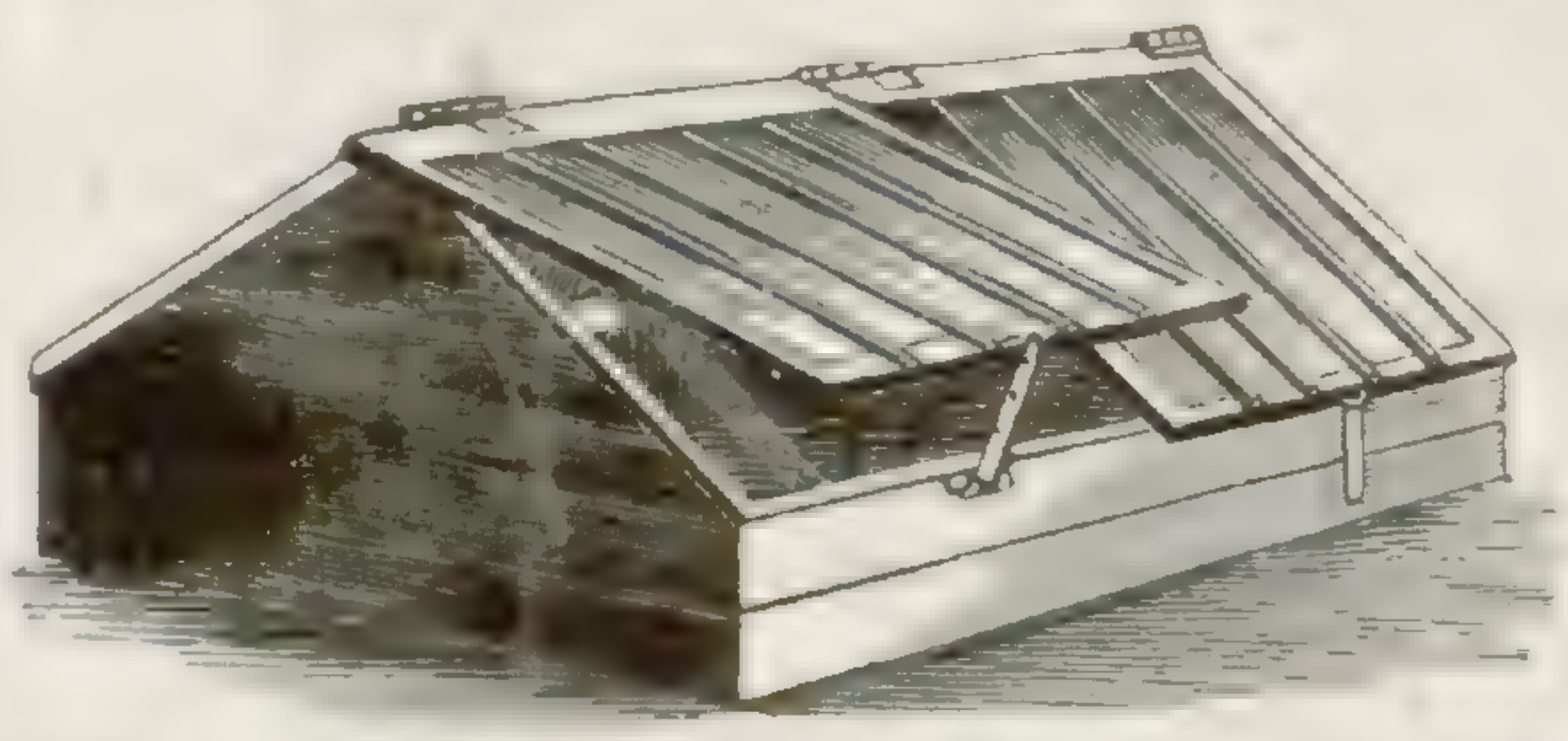


This is claimed to be the most effective Spade on the market. Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD. ENGLAND.

PORTABLE PLANT FRAMES

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices. Glazed and Painted.				£	s.	d.
6ft. long by 3ft. wide			Cash Prices. Carriage Paid.	2	0	0
6ft.	,,	4ft. ,,		2	5	0
6ft.	,,	5ft. ,,		2	15	0
12ft.	,,	4ft. ,,		4	0	0
12ft.	,,	5ft. ,,		4	15	0
12ft.	,,	6ft. ,,		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
ROYAL HORTICULTURAL WORKS,
MIDDLETON, MANCHESTER.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

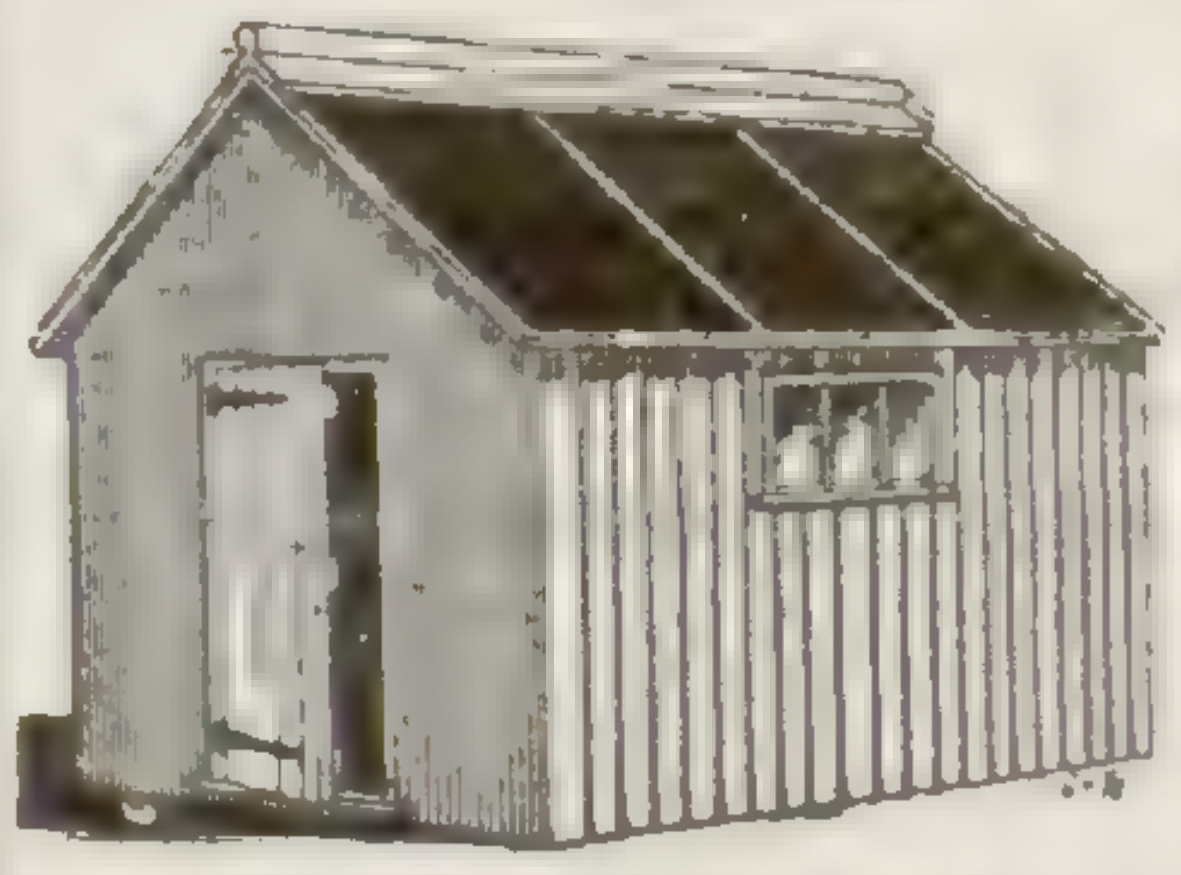
Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to

EPPS & CO., Ringwood, HANTS.

THE CHEAPEST IN ENGLAND.

"THE STANDARD."



Copyright Registered.

Made in complete sections, sides and ends from ⅝in. **Best Quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V**-jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

Cash with Order Prices.

Sizes.		Floor made from ⅝-in. Tongued Boards.
6 ft. by 4 ft. by 6 ft.	£1 12 0	5/0
6 ft. by 5 ft. by 6½ft.	£1 17 0	5/9
7½ft. by 5 ft. by 6½ft.	£2 2 0	7 9
8 ft. by 6 ft. by 7 ft.	£2 9 6	9/9
9 ft. by 6 ft. by 7 ft.	£2 14 6	11/6
10 ft. by 6 ft. by 7 ft.	£2 19 6	13/0
10 ft. by 8 ft. by 8 ft.	£3 14 0	16/6
12 ft. by 8 ft. by 8 ft.	£4 4 0	20/0

Carriage Paid to any Station in England and Wales.

Catalogue with Testimonials POST FREE.

J. T. HOBSON & CO., Largest Makers of Portable Buildings,
ESTABLISHED 70 YEARS. **BEDFORD.**

Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

Phytobroma

Barr's New Plant Food
For Flowers, Vegetables and Fruit
of highest quality & guaranteed analysis

Per cwt., 20/-; ½ cwt., 12/6; 28lb., 7/6; 14lb., 4/6; 7lb., 2/6; Sample Tins, 1/-.

Prepaid orders for 28lbs. and upwards, Carriage Paid. Circular, with full particulars, on application.

BARR and SONS,
11, 12, and 13, KING STREET, COVENT GARDEN, LONDON

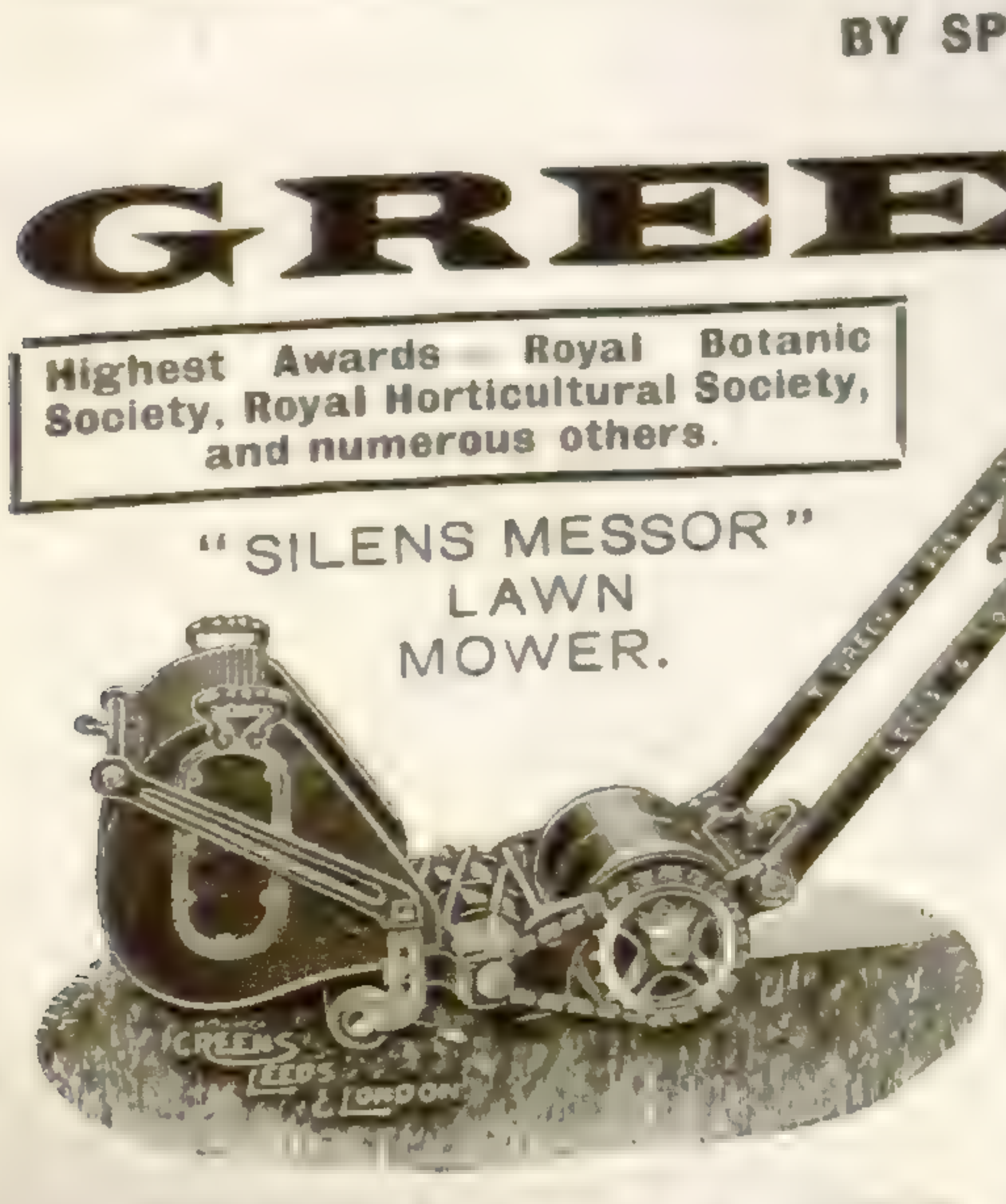
BY SPECIAL APPOINTMENT TO HIS LATE MAJESTY KING EDWARD VII.

GREEN'S LAWN MOWERS

THE FIRST, FOREMOST, and BEST in the WORLD. Hundreds of Thousands are in use. Established nearly a Century.

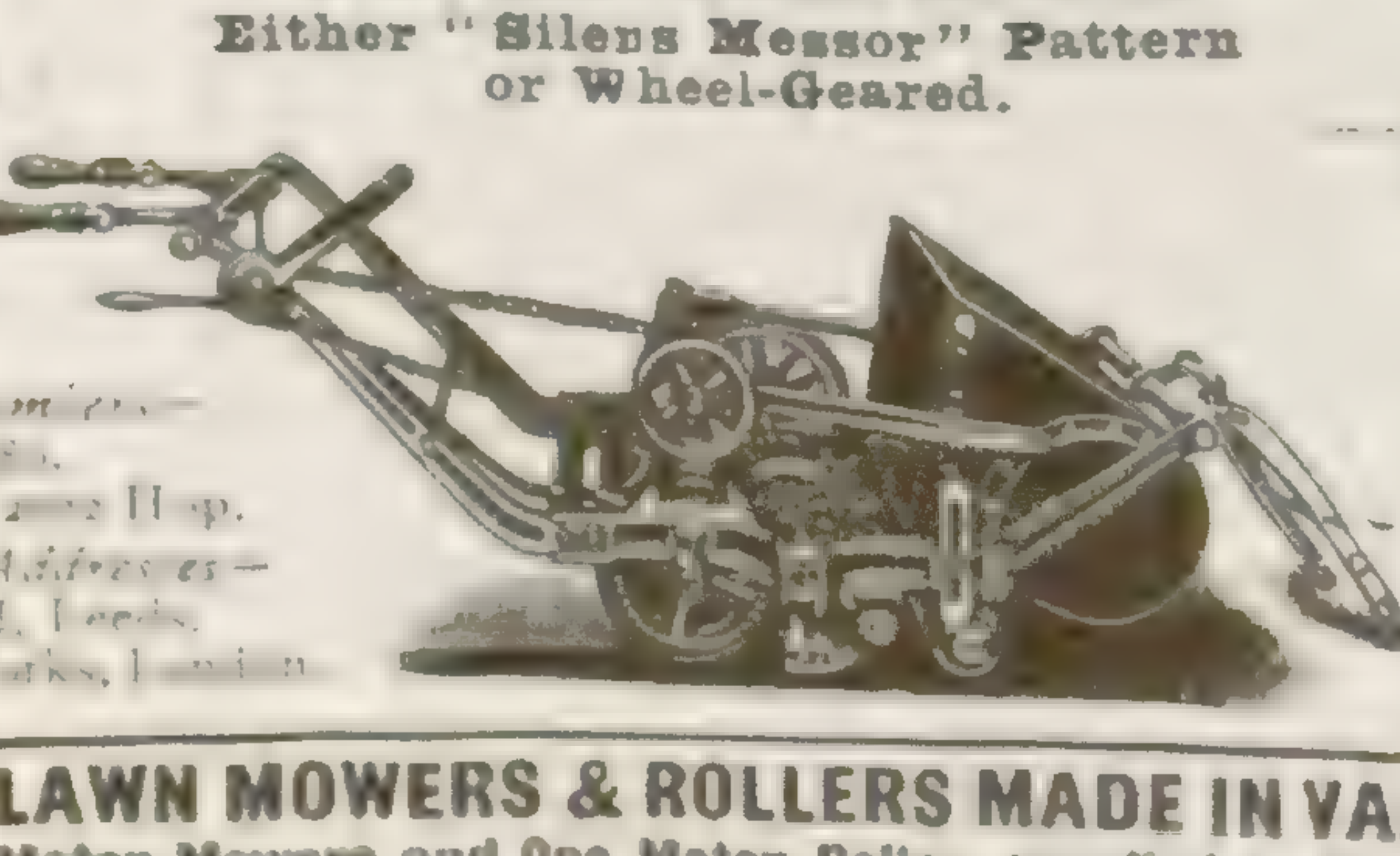
Highest Awards — Royal Botanic Society, Royal Horticultural Society, and numerous others.

"SILENS MESSOR"
LAWN
MOWER.



Telephone Numbers—
Leeds, [illegible].
London, [illegible] Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London.

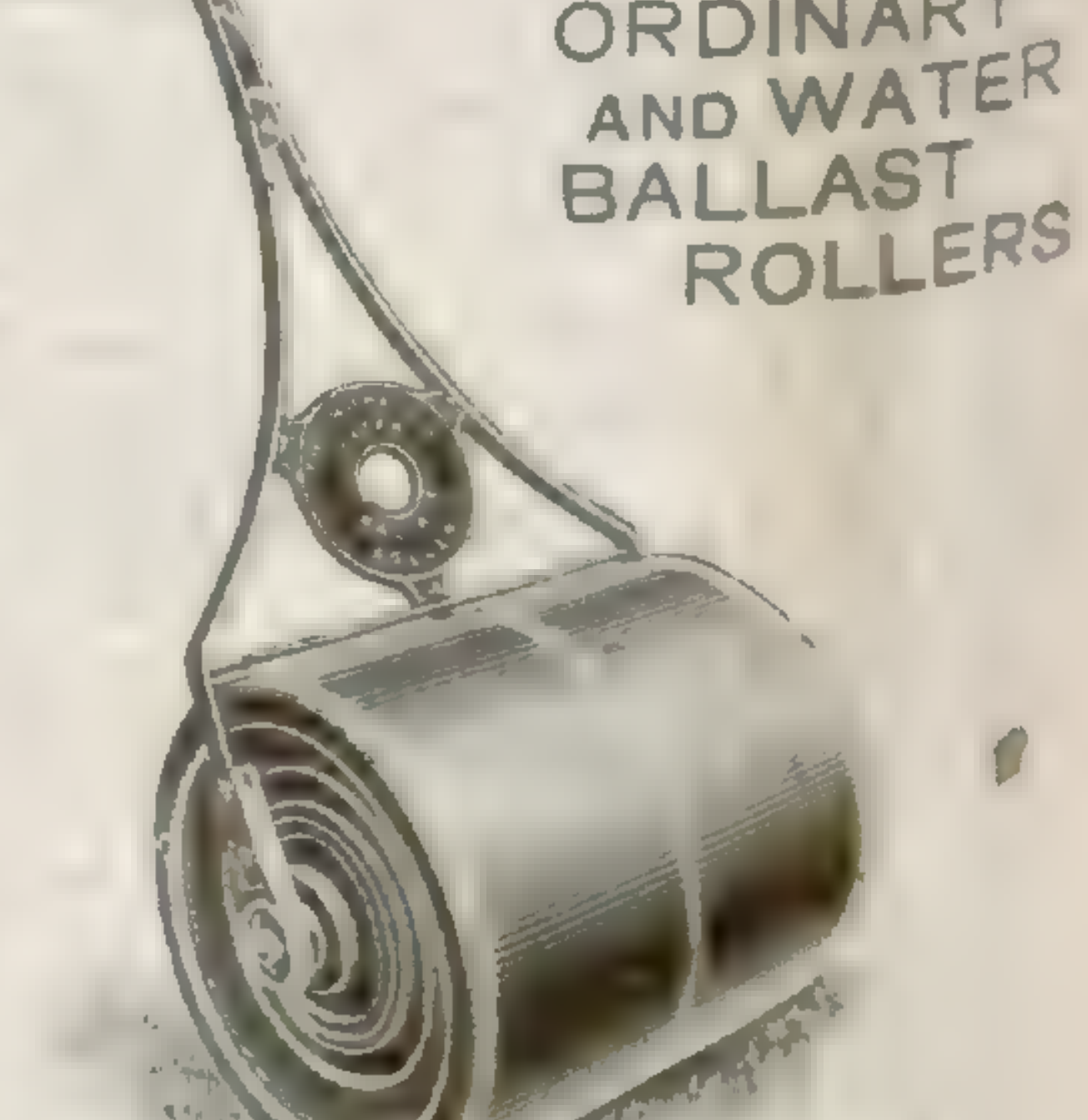
PONY, AND HORSE MOWER
Either "Silens Messor" Pattern or Wheel-Geared.



They may be had of any Ironmonger or Seedsman in the United Kingdom.

Please write for ILLUSTRATED PRICE LIST No. 1 FREE.

ORDINARY
AND WATER
BALLAST
ROLLERS



MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E.

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 2,991. Vol. LIV.
Reg. at the G.P.O. as a Newspaper.
SATURDAY, FEBRUARY 25, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) Twopence

BARR'S VEGETABLE & FLOWER SEEDS of finest selected strains and tested growth. Descriptive Catalogue, with cultural notes, free.

BARR'S BEAUTIFUL LILIES, CANNAS, GLADIOLI, MONTBRETIAS, TIGRIDIAS, ETC., for Spring planting. Catalogue free.

BARR and SONS, 11, 12, and 13, KING STREET, COVENT GARDEN, LONDON.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, is this winter keeping a large staff of hot-water men in the shops, in order that they may attend immediately to any breakdown of Boilers or Hot-Water Piping in any part of the country. In case of emergencies please telephone 201 Western, or wire "Gray, Chelsea, London."

KING'S ACRE FRUIT TREES, ROSES, AND ORCHARD-HOUSE TREES.

AWARDED 24 GOLD MEDALS SEASONS 1909-10.

160 acres to select from of the finest Trees that natural conditions and the skill of man can produce.

ILLUSTRATED CATALOGUES FREE ON APPLICATION.

KING'S ACRE NURSERIES, LTD., HEREFORD.

1,000,000 BORDER AND ROCK Plants. Unique collection.
50,000 HARDY FERNS, over 400 varieties. See Catalogue.
10,000 FLOWERING SHRUBS must be cleared.
30,000 LILIES NOW IN STOCK, Other consignments arriving.
DELPHINIUMS, 9 GOLD MEDALS IN 2 YEARS.
A record. Unique collection. Seed, 3d., 6d., and 1s. pkt.
PERENNIAL SEEDS, UNIQUE COLLECTION.
All Catalogues Free.
PERRY'S HARDY PLANT FARM, Enfield, Middx.

PERRY'S NEW CATALOGUE, containing unique collections of Begonias, Cannas, Chrysanthemums, Delphiniums, Lobelias, Pentstemons, Phlox, Pinks, Pyrethrums, Roses in pots, Violas, Violets, fully described. Previous catalogues can still be had. General Catalogue of Border and Rock Plants, Japanese and other Lilies, Hardy Ferns, etc.
PERRY'S HARDY PLANT FARM, Enfield, Middx.

HAYWARD MATHIAS' SPRING CARNATION CATALOGUE NOW READY.—Excellent plants in all three sections at moderate prices.
Medstead, Hants.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

"WEEKS'S GLASSHOUSES and HEATING APPARATUS, for full advertisement see back page."

FRENCH GARDENING REQUISITES.—Send for our new List, giving full particulars of the Double Glazed System, and numbers of new labour-saving Appliances. Frames, Cloches, Reed Mats, and every requisite supplied. BOULTON and PAUL, Lim., Norwich.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page xiv.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

THE BEST BROAD BEAN.
WEBBS' KINVER MAMMOTH LONGPOD, 2s. 6d. quart; post free.
Mr. H. Ralph, late Head Gardener to H.I.H. Empress Eugenie, writes:—"Webbs' Kinver Mammoth Longpod is a most prolific cropper, producing Beans of great length in abundance, whilst it is extremely early, and for cooking quality cannot be surpassed. The immense size of the pods also makes it a valuable sort for exhibition."

WEBB and SONS, The King's Seedsmen, WORDSLEY, STOURBRIDGE.

BUNYARD'S NEW CATALOGUES. The following have been recently published, and contain all worthy new varieties. Post free on application.

BUNYARD'S CLIMBING PLANTS, Illustrated.

BUNYARD'S HERBACEOUS PLANTS, Illustrated.

BUNYARD'S HARDY TREES AND SHRUBS, Illustrated.

BUNYARD'S SEEDS, VEGETABLE AND FLOWER, with coloured plates.

GEO. BUNYARD AND CO., LTD., Royal Nurseries, MAIDSTONE.

NOW IS THE TIME TO PLANT the rich golden blooms of KELWAY GAILLARDIAS, which are noted for their powers of endurance during the driest season, and as cut flowers retain their freshness and beauty long after they have been gathered. They flourish with a minimum of attention, and give abundant bloom the same year that they are planted. Choice named collections, 12s. and 18s. a dozen.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

LAXTON'S NEW SEED CATALOGUE for 1911. Descriptive and fully illustrated, including grand new "Laxtonian Pea" and many other novelties, gratis on application.—LAXTON BROS., Seed Merchant, Bedford.

WELLS' CHRYSANTHEMUMS.—List of Novelties now ready; also descriptive general list. Wells' Phlox and Michaelmas Daisies, Hardy Herbaceous Plants, and Perpetual Flowering Carnations. Catalogues post free. Wells' book, "The Culture of the Chrysanthemum," post free, 1s. 6d. W. WELLS, Merstham, Surrey.

FERNS.—Beautiful Greenhouse varieties, 12 for 1s. 3d.; Maidenhair Ferns, 2s. doz.; New Nephrolepis Todeoides, 9d. each; Palms, 9d. each. HEAD GARDENER, 22, Charlton Road, Blackheath.

ZONAL PELARGONIUMS.
Catalogue of New and Choicest Varieties.

From V. SLADE, Zonal Specialist,
Staplegrove Nursery, Taunton.

CLAY'S MANURES, CRUSHED BONES
(See page xi.)
CLAY'S FERTILIZER is UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

IRON and WIRE FENCING for GARDENS, Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free. BOULTON and PAUL, Ltd., Manufacturers, Norwich.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

SUTTON'S NEW CUCUMBER, KING GEORGE.
Very handsome form, of good length; dark in colour; slightly ribbed.
Per packet, 2s. 6d. and 3s. 6d., post free.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

NOW IS THE TIME TO PLANT a permanent border of hardy perennials, which is secured by the use of the KELWAY "ARTISTIC" BORDER, which can be planned to fill any space at a cost of 15s. or 25s. for every 10 square yards. It is carefully planned for succession and for colour harmony, and will flourish under almost all conditions of soil and climate. Send for Kelway's "Gardens of Delight," price 6d. post free.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

NOW IS THE TIME TO PLANT KELWAY DELPHINIUMS which have been improved almost out of recognition in the past twenty years. They produce plants ranging in height from four to eight feet, exceptionally hardy, and with a rich profusion of choice blooms in all the shades of blue.
Choice named varieties: 24s. 34s., and 56s. a dozen.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

EVERY Gardener, amateur or professional, will find a large amount of useful information in the new edition of Kelway's "Manual of Horticulture"—the varieties, prices and culture of all sorts of garden plants, particularly those wonderful improvements raised in the Kelway Nurseries at Langport. A copy will be sent post free for 2s., which will be credited on the first order. Now is the time to plant.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

KELWAY GLADIOLI flower freely in the open air through the autumn. Their fine bold blooms make an admirable addition to borders or beds and are invaluable as cut flowers for church or table decoration. Choice named collections, 3s., 4s. 6d., 6s., 7s. 6d., 9s., 12s., and 18s. a dozen.
Order at once.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

FIDLER'S NEW ILLUSTRATED CATALOGUE OF CHOICE GARDEN SEEDS will be sent, post free, to any address on receipt of postcard. Write at once for a copy. It may help you to save 50% on your seed bill this season. FIDLER and SONS, Royal Berks Seed Stores, Reading.

BARNARDS LIMITED, Norwich.—Best House for Fencing, Espaliers, Pergolas, Fruit Enclosures, Iron and Wire Bordering; all descriptions of Training Fittings, Arches, Wire Netting, Stakes, Wire Lattice, Rollers, and all garden requisites. Now is the time to effect improvements in your garden. Catalogues free; inquiries invited.

XL ALL FOR WINTER AND SPRING CLEANSING.
Before growth commences stronger solutions may be used.
XL ALL NICOTINE INSECTICIDE WASH (poisonous) for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. Agents, write for particulars.
XL ALL CAUSTIC WINTER WASH (non-poisonous) for dormant Fruit Trees, stamps out American Blight, and all other pests.
Other XL ALL Preparations of great renown are XL ALL NICOTINE VAPORISING COMPOUND, XL ALL FERTILISER, XL ALL LAWN SAND, etc.
Ask your Nurseryman, Seedsman, or Florist for my small Pink List.
G. H. RICHARDS, Manufacturer, 234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Border and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

SEEDS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Select Seeds.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

RHODODENDRONS.

DICKSONS & CO.,
1, Waterloo Place, Edinburgh.
Pink Pearls, Ponticums, choice Hybrids. Write.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

ALEX. DICKSON & SONS, Ltd.,
Hawlmark, Newtownards, Ireland.
The World-famed Champion Rose Growers and Raisers of Irish Pedigree Seedling Roses. Lists Free.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 1st Prizes, 3 2nds. at N.R.S. Shows, 1910. Ctlg. Free.

SAMUEL M'CREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
Illustrated Catalogue free.

TURF LOAM.

A. B. JOHNSTON, New Park, Cranleigh, Surrey.
Very Fibrous Loam, for Carnations, Roses, Vine Borders, Melons, Fruits under Glass, &c., &c.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

TAKE NOTICE.

Intending planters should send for the STANCLIFFE CATALOGUE OF TREES, &c.

Our Stocks, which are grown on the highest and most exposed hills of Derbyshire, are in fine condition, and are sure to give satisfaction. Note the prices before ordering elsewhere.

Rockery Stone, 1/- per ton.

THE STANCLIFFE ESTATES CO., LTD.,
DARLEY DALE DERBYSHIRE.

SEED POTATOES & GARDEN SEEDS

Customers wishing to save
50 PER CENT.
When Purchasing
BULBS, GARDEN SEEDS, AND POTATOES,
Should send AT ONCE for Lists to
J. W. CROSS,
OLD GRAMMAR SCHOOL, **WISBECH**

WHEELERS' SEEDS.

160 YEARS' REPUTATION OF UNSURPASSED QUALITY.

Fully Illustrated 96 page List
Free to Horticulturists.

J. C. WHEELER and SON, Ltd.,
Seed Growers, **GLOUCESTER.**

AMERICAN TREE CARNATIONS
AND MALMAISONS.

The Newest and Best Varieties.

Strong, healthy and well-rooted plants only supplied.

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

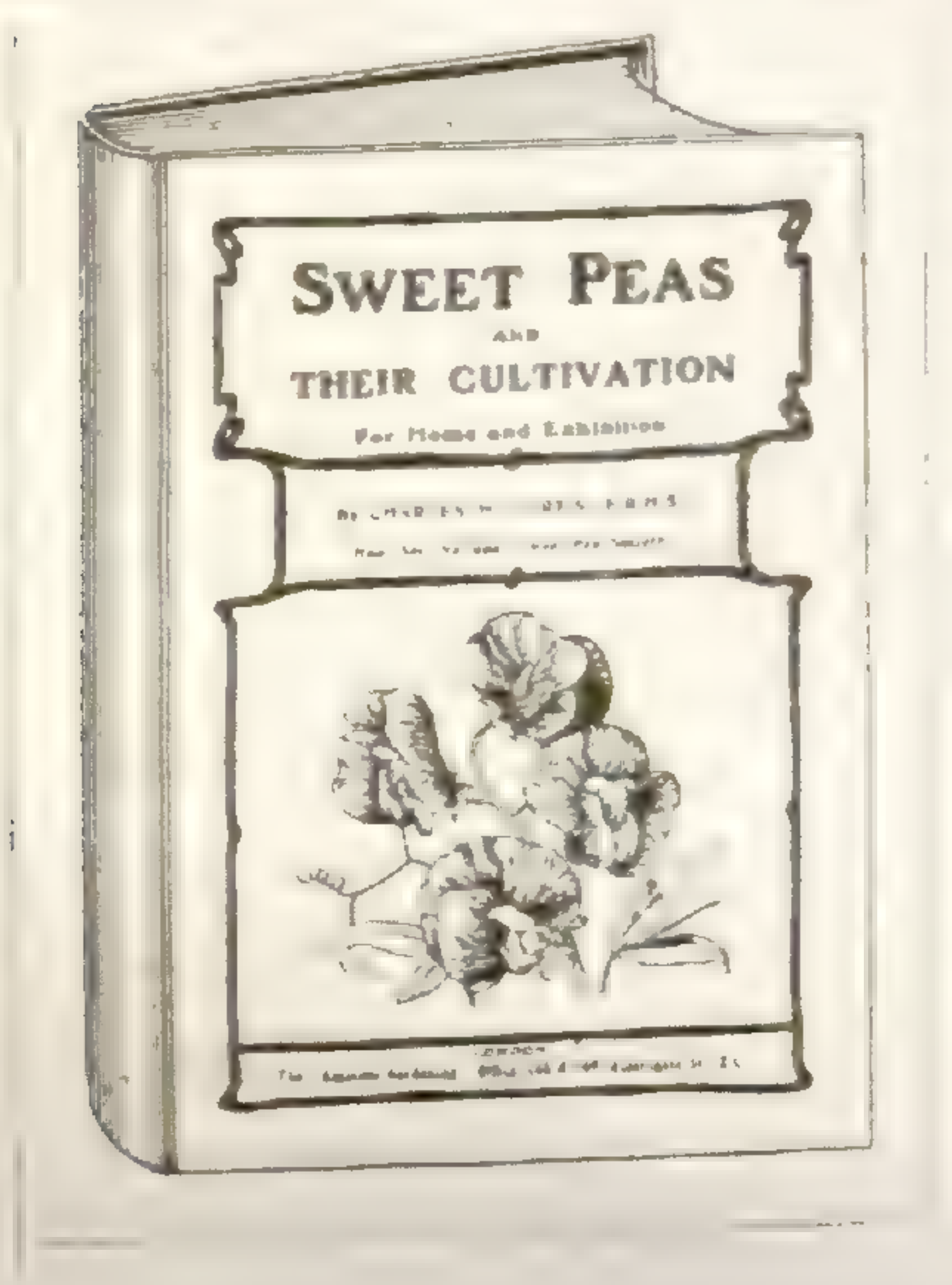
THE BEST BOOK ON THE SUBJECT.

One Shilling; free by post, 1/2. Bound in cloth, 1/6; by post, 1/8.

SWEET PEAS AND THEIR CULTIVATION.

FOR HOME AND EXHIBITION.

By CHARLES H. CURTIS, F.R.H.S.,
Hon. Secretary National Sweet Pea Society.



PREPARATION OF SOIL.
SEEDS AND SEED SOWING.
WATERING AND MANURING.
GENERAL MANAGEMENT.
HOW GROWN IN TUBS AND POTS.
WINTER-FLOWERING SWEET PEAS.
STAKING AND TYING.
SWEET PEAS FOR SCREENS AND WINDOWS.
THE BEST SWEET PEAS.
RAISING NEW VARIETIES.
CULTURE IN CONSERVATORY.
CUPID AND BUSH SWEET PEAS.
VASES AND STANDS.
POINTS FOR EXHIBITORS.
DEVELOPMENT OF SWEET PEAS.
DISEASES AND PESTS.
ETC., ETC.

◆ ◆ ◆

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE,"
148 and 149, Aldersgate Street, E.C.

Please send me "SWEET PEAS AND THEIR CULTIVATION" *by Post, for which I enclose remittance of* 1s. 2d. (*if bound in cloth,* 1s. 8d.).

Name ....

Address ....

Sales by Auction.

SALES NEXT WEEK

BY

PROTHEROE & MORRIS,

AT THEIR

Central Sale Rooms, 67/8, Cheapside, E.C.

MONDAY and FRIDAY NEXT, Feb. 27 and March 3, at Twelve o'clock.—Japanese Liliums, Herbaceous, Border and Alpine Plants, and large quantities of Hardy Bulbs and Roots for spring planting.

At Half-past One.—1,000 Roses in variety, Fruit Trees, Azaleas, Rhododendrons, etc.

WEDNESDAY NEXT, March 1, at Twelve o'clock.—Gladiolus, Montbretias, Begonias, Gloxinias, Liliums, and numerous other hardy Bulbs for spring planting. 300 Lots of Herbaceous and Border Plants, Peat, Leaf-mould, etc.

At 1.30 o'clock.—Roses, 5,000 Standard, Dwarf, Climbing, T., H.T., and H.P., newest and best varieties.

At Half-past Two o'clock. Trade Sale of 1,512 cases Japanese Liliums in cases as received, preceded at Twelve o'clock by thousands of Miscellaneous Hardy Bulbs, Roots, Plants, etc.

At Five o'clock.—450 Azaleas of sorts, 300 Aspidistras, also Rhododendrons and Camellias, 100 lots of Ornamental Palms, and other Greenhouse Plants.

FRIDAY NEXT, March 3, at Quarter to One o'clock.—Choice imported and established Orchids in variety. Orchids in flower and bud.

On view morning of sale and Catalogues had.

ROSE TREES.

SHRUBS. BULBS.

SALES BY AUCTION

are held every

MONDAY and WEDNESDAY, at 12.30.

STEVENS' AUCTION ROOMS,

Established 150 Years,

38, King St., Covent Garden, London, W.C.

Catalogues on Application.

FOR SALE, IN GUERNSEY.—A compact little BULB-GROWING ESTATE of about 4 acres, splendidly situated on the south coast of the island, and well stocked with the best forcing varieties of daffodils, etc.; also a small Orchard of Apple and Pear Trees in bearing. The property contains glasshouse 150 x 18 heated, large shed, pumping mill, and an unlimited supply of water. Write Box 154, c/o Messrs. R. F. White and Son, General Advertising Agents, 33 Fleet Street, London, E.C.

TO LET, genuine NURSERY BUSINESS; 500 feet run Glass; good stock Roses, Ferns, etc.; Stock valuation £250; splendid residence; rent £47. TAPPER, Buckingham Villa, Hampton, Middlesex.

GIANT SWEET PEAS.

SUPERB COLLECTION.

10 seeds each, 9 excellent Exhibition Varieties, post free, **1s. 6d.**

MARVEL COLLECTION.

20 seeds each, 12 fine Varieties, distinct, post free, **1s.**

FROM **GEORGE ELSOM,**

Seedsman, SPALDING.

AMERICAN TREE CARNATIONS, best varieties, including Britannia, White Perfection, etc., strong young plants from 2in. pots, 3s. doz., 20s. 100, flowering plants, 5in. pots, 8s. per doz. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.

H. BURNETT,

Carnation Specialist, Guernsey.

D. LOBELIA, K. Millard, strong, bushy plants to part, 3s.; Y. Calceolarias, 4s.; above per 100. Early-flowering 'Mums, 1s. 6d. per doz. All free for cash. F. CROOK, Botley Nurseries, Hants.

GENTIANA VERNA, 12 first-class clumps, 3s. free; 3 Dryas octopetala, 2s.; 3 Bee orchis, 1s.; 3 Orchis O'Kellyi, new, 5s.; 3 Neotinia intacta, [illegible] Osmunda regalis, 3s.; or 50 for 20s. P. B. O'KELLY, Nurseries, Ballyvaughan, Co. Clare.

AMERICAN and BRITISH TREE CARNATIONS.—Leading varieties from 3s. per doz.; 17s. 6d. per 100; carriage and packing free for cash. Ask ill. price list. C. F. A. VAN DER SLUYS, F.R.H.S., Ramee, Guernsey.

STOVE and GREENHOUSE PLANTS,

Foliage and Flowering

Specimen Orchids!

Rare Orchids!

Cheap Orchids!

RARE CYPRIPEDIUMS

and choice

HYBRID CATTLEYAS,

&c.

Kindly send for New ILLUSTRATED CATALOGUE

JAMES CYPHER and SONS,

Nurseries

Cheltenham.

TRIPLE TESTED SEEDS

Many firms offer seeds: few really test them. It is a long, laborious business and very expensive. But

IT IS ABSOLUTELY ESSENTIAL!

The firm which doesn't test is at the mercy of the grower.

AND THE GROWER KNOWS IT.

WE TEST AND TEST, AND TEST AGAIN.

RESULT—Sales steadily increasing year by year. They are already 20 per cent. ahead of last year! which simple fact speaks volumes about the opinions of our clients. Get our Illustrated Catalogue. IT IS FREE.

BEES L$^{\text{TD}}$. DEPT. 6, MILL ST., LIVERPOOL.

NOVELTY IN THE FLOWER GARDEN.

In these days the keen amateur is always on the look-out for something different from anything possessed by his neighbours. We have no objection to that, on the contrary it is our business to hunt up all the best and newest things in plants and seeds from all parts of the world. A perusal of our New Seed Catalogue, which contains 12 pages of descriptions of novelties, will reveal many choice things not to be found in any other list.

Latest Novelties in Sweet Peas, Hardy Perennials, Annuals, and Miscellaneous Seeds.

These will mostly be found priced lower than by any first-class house, especially the Sweet Peas, of which we are large growers.

THOMPSON & MORGAN,

Seedsmen, IPSWICH.

100,000 WALLFLOWERS, dwarf-grown bushy plants, full of buds. Why plant long, straggly seedlings when you can get plants that will throw from 10 to 20 spikes of flowers so cheaply? These include all the most beautiful colours and shades grown. 50, 1s. 6d.; 100, 2s. 6d.; 500, 11s. 6d.; extra large selected bushy plants, 3s. 6d. per 100. All free, and your money returned if you are not more than satisfied. S. G. LEIGH, Broughton, Hants.

25 STRONG CHRYSANTHEMUM CUTTINGS, Exhibition, Decorative, Single or Early, 1s. 6d.; 50, 3s.; 100, 5s. 6d.; by return. List. RICHMOND'S CHRYSANT NURSERIES, Ossett, Yorks.

ELLISON'S BEGONIAS are absolutely the best strain. 30 Begonias, all different, named, 10s. 6d.; Bedding Begonias, 9s., 100.

LILIUMS.—24 choice Liliums, all different, 10s. 6d. Gloxinias, 6 different, 2s.; Cannas, 10 different, 4s. 100 German Iris, 10 sorts, nmd., 4s.

LILY OF THE VALLEY, 1s. 3d. 100; Amaryllis 10s., 15s., 20s. doz. Gladioli, early-flowering, 1s. 100; Autumn-flowering, 3s. 100.

IPOMÆA, and hundreds of other choice Seeds; Tigridias, Tuberoses, Achimenes, Arum Lilies, Erythronium, 1s. doz.

SWEET PEAS, 60 of the very best varieties, from 1d. packet. Tree Carnations, 5s. 6d. doz. 100 Montbretias, 10 each, 10 named sorts, 2s. 6d.

ON APPROVAL. — Bulbs and Vegetable Seeds on appro. Carriage paid. 56-page Catalogue free. ELLISON, 57, West Bromwich.

NOVELTIES in Flower Seeds.—Adnet's Gerbera, Hybrid Freesias (quite 20 colours), Nemesia, Dimorphotheca, etc. ELLISON, 57.

GLASS. | GLASS. | GLASS.

NICHOLLS & CLARKE, LTD.

Shoreditch, LONDON.

PAINT. Our List of PAINTS, COLOURS, VARNISHES and BRUSHES on Application.

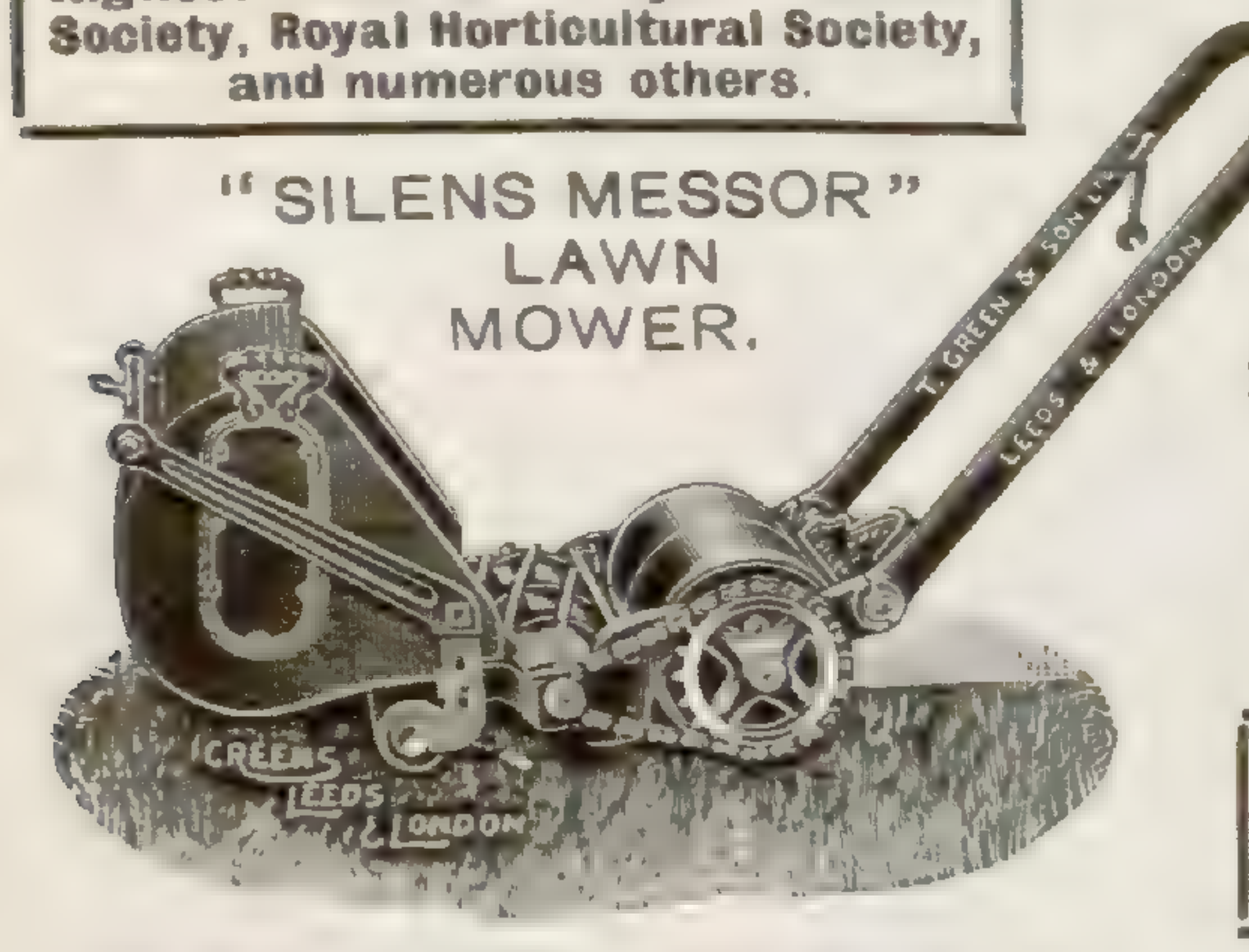
When sending please cut out this advt.

APPOINTED BY ROYAL WARRANT, HORTICULTURAL MACHINE MAKERS TO HIS MAJESTY KING GEORGE V.

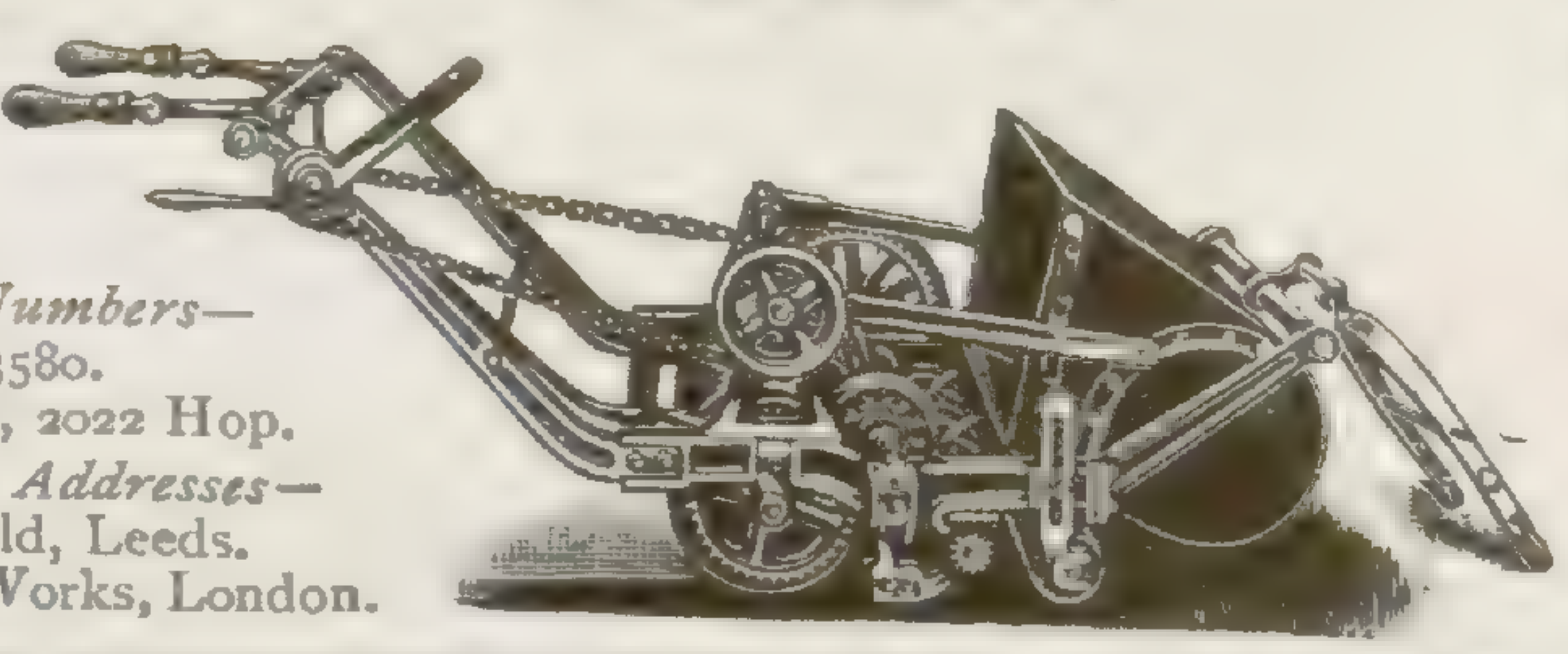
GREEN'S LAWN MOWERS

THE FIRST, FOREMOST, and BEST in the WORLD. Hundreds of Thousands are in use. Established nearly a Century.

Highest Awards — Royal Botanic Society, Royal Horticultural Society, and numerous others.


"SILENS MESSOR" LAWN MOWER.

PONY, AND HORSE MOWER
Either "Silens Messor" Pattern or Wheel-Geared.

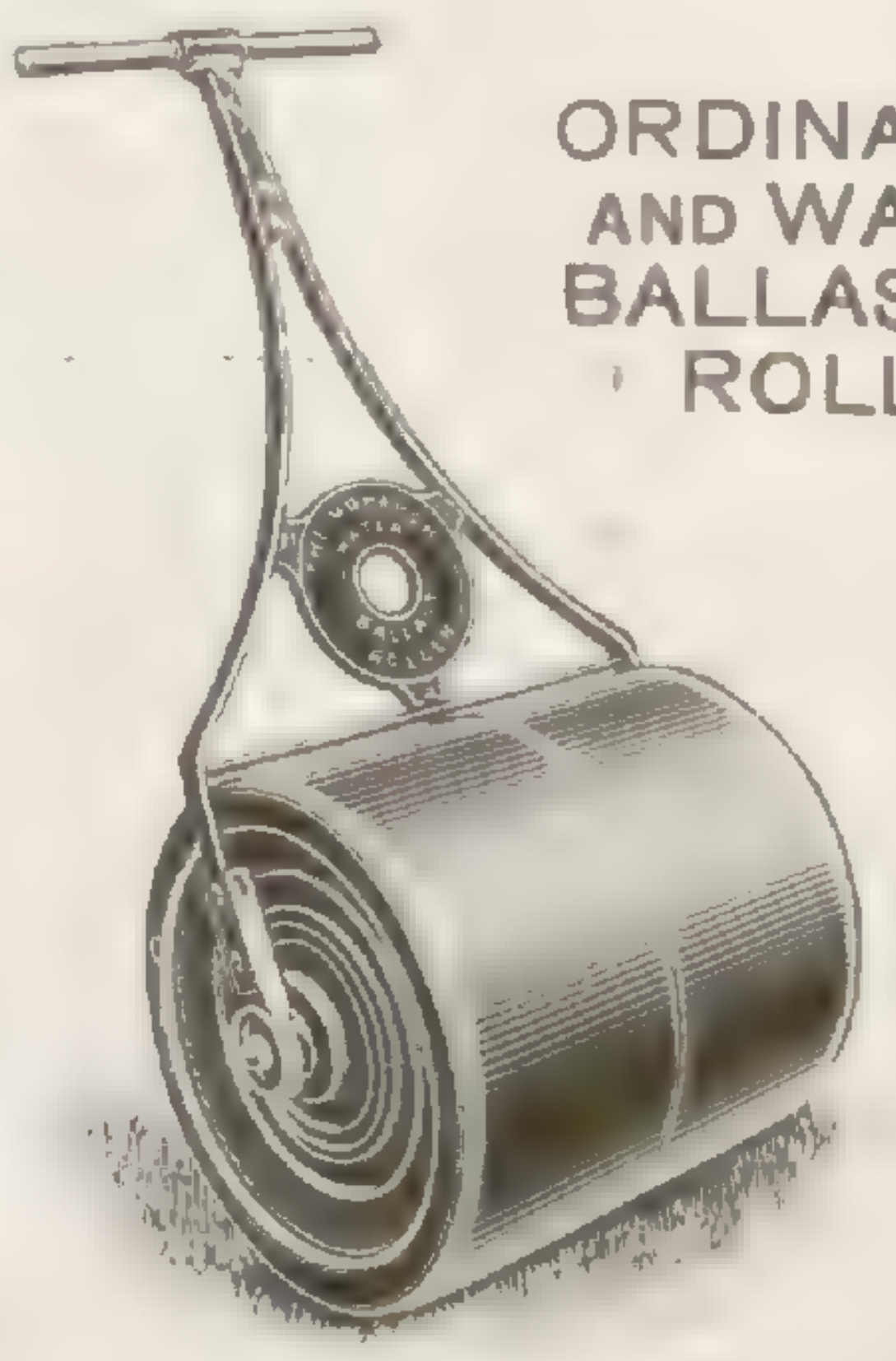


Telephone Numbers—
Leeds, 3580.
London, 2022 Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London.

They may be had of any Ironmonger or Seedsman in the United Kingdom.

Please write for ILLUSTRATED PRICE LIST No. 1 FREE.

ORDINARY AND WATER BALLAST ROLLERS



MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E.

WELL BORING.

MERRYWEATHERS' ECONOMIC SYSTEM.

Merryweathers' men with Steam Tackle boring a well.

Pure and Abundant Supplies.

MEN AND TACKLE SENT AT A MOMENT'S NOTICE.

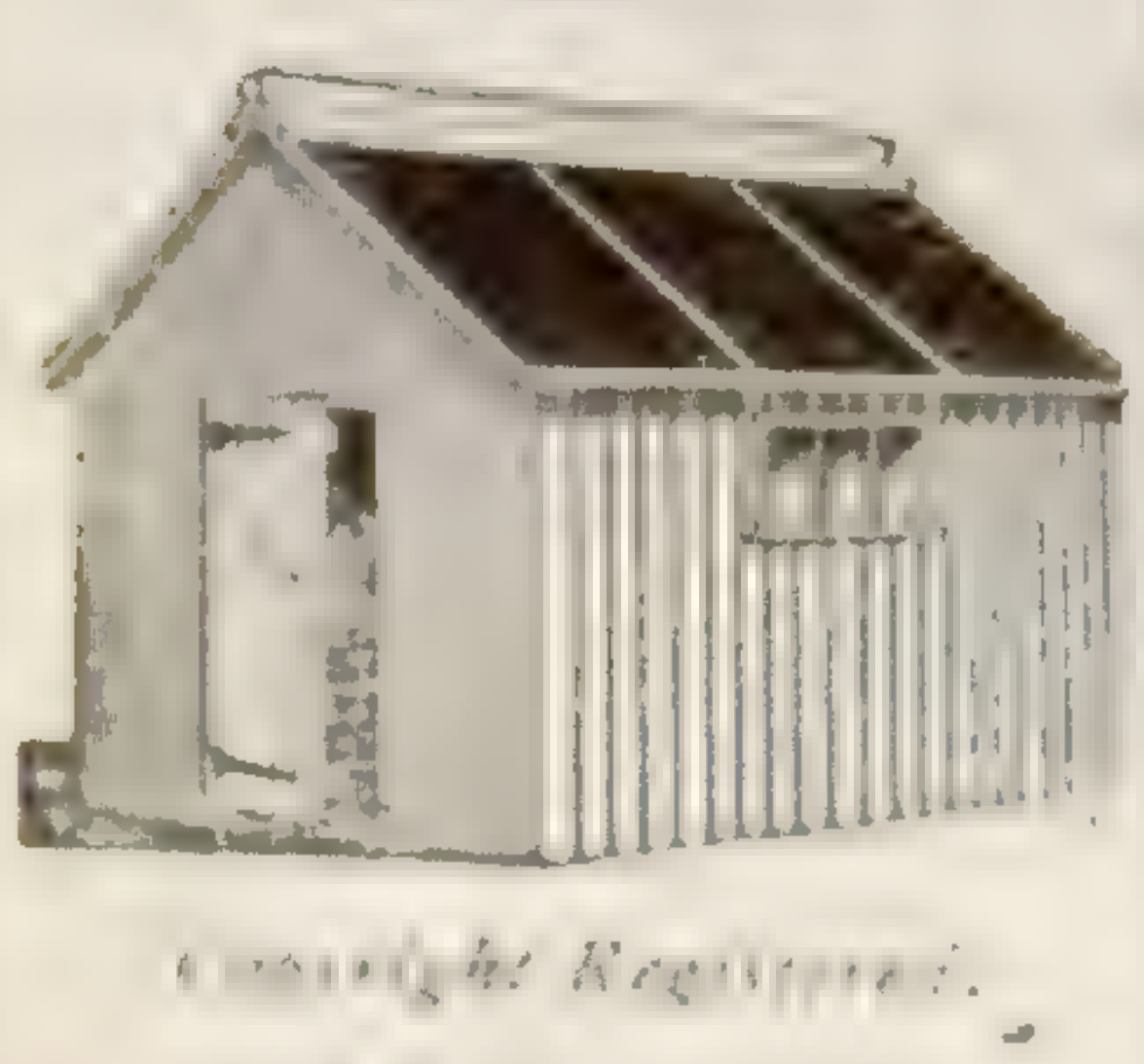
Work Carried Out with Economy and Despatch.

Write for Book on "Water Supply to Mansions."

MERRYWEATHER & SONS,
63, LONG ACRE, LONDON, W.C.

THE CHEAPEST IN ENGLAND.

NO. 50.


Copyright Registered.

PORTABLE BUILDINGS. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boarding as other makers) planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door hinged with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

Sizes.		Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
ESTABLISHED 70 YEARS. ***BEDFORD.***
Works, 6 acres. Stock of Wood in Yards, [illegible]

WHEELBARROWS.—Navvy, for building, 11s 9d each; general purpose, for farm use, 14s. 9d. each. 6 sent together, carriage paid some stations. Also timber, woodwork, all description. C. JENNINGS and CO., Timber Merchants, General Wood-workers, 916, Pennywell Road, Bristol.

BENTLEY'S Concentrated Alkali.

THE IDEAL WINTER SPRAY.

For Fruit Trees and Forest Trees of every kind.

Destroys **INSECTS** (whether in the active or dormant state), **spores of fungi, lichens, mosses.** Cleanses the bark from **vegetable growths.** Detaches loose and decayed bark, thereby exposing the harbouring places of the insects, and having on these a most deadly effect without injuring the trees.

For Apple, Pear, and Plum Trees, Bush Fruits, and Forest Trees. 1 tin dissolved in 11 gallons of water.

For Apricot, Peach, Nectarine, and Cherry Trees. 1 tin dissolved in 16 gallons of water.

PRICES:—

1 to 8 tins, **1/3** each; 8 tins, **1/2** each; 12 tins, **1/1** each; 20 tins, **11d.** each; 40 tins, **10d.** each.

BENTLEY'S INSECTICIDE.

This valuable **NON-POISONOUS Plant Wash** has for the last thirty years held the highest position in the Horticultural World as a most effectual **Destroyer of all Forms of Filth,** including

MEALY BUG, SCALE, AND THRIP,

without risk to the foliage. It also possesses cleansing properties, and leaves the foliage clean and bright.

PRICES:—

6 galls., **7/6** per gall.; 3 gall., **8/-** per gall.; 1 gall., **9/-**; ½ gall., **5/-**; 1 quart, **3/6**; 1 pint, **2/-**. **Carriage paid on 7/6 orders and upwards to any railway station.**

WHOLESALE MANUFACTURERS—

JOSEPH BENTLEY, LIMITED,
Chemical Works, Barrow-on-Humber, HULL.

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

Extracts from 35th annual collection of reports:—

NATIVE GUANO for POTATOES, VEGETABLES, etc.

A. J. BEARD, Erdington: "Potatoes, splendid, free from disease. Best I ever had."—H. CHESTER, Nantwich: "Best onion manure I ever used. Grand for onion fly."

NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc.

J. CANT, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. FRAMPTON, Titchfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED,** 29, New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted

---

Barr's Lawn Phytobroma

The best Manure for all Lawns.

The most economical of all artificial manures, 2 oz. to the square yard only being required.

Per cwt., 20/-; ½-cwt., 12/6; 28lb., 7/6; 14lb., 4/6; 7lb., 2/6; sample tins, 1/-.

Prepaid Orders for 28lbs. and upwards, carriage paid.
Circular with full particulars, on Application.

BARR & SONS,
11, 12, & 13, KING STREET, COVENT GARDEN, LONDON.

FLOWER POTS.

SANKEY'S
FAMOUS
GARDEN
POTS

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant **Makers to His Majesty the late King.**

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

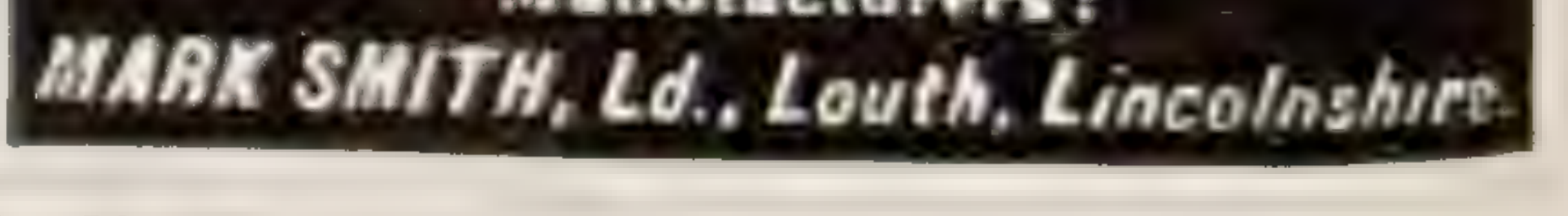
FIRST EVER MADE, FIRST EVER SINCE.

THE "PERFECT" WEED KILLER

Powder: 1/9 per Tin for 25 gallons.
4 Tins for 100 gallons 6/6 car. paid.

Manufacturers:
MARK SMITH, Ld., Louth, Lincolnshire.

A NEW GARDEN SPADE (Carter's Patent).



This is claimed to be the most effective Spade on the market. Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

WINTER SPRAYING OF FRUIT TREES.

VERMOREL'S KNAPSACK SPRAYERS

Have Won over 500 First Prizes and Medals.

ECLAIR No. 1. Price 35/6.

Sole Agents: **COOPER, PEGLER & CO.,**
24/26, Christopher Street,
Finsbury Square, London, E.C.

"HOW TO MAKE YOUR OWN SOIL FUMIGATOR."—Save the fabulous profits of secret formulas. Make your own at LESS than ½d. per lb. Precisely as sold at 9d. and 1s. lb. tins. Sell to your neighbours, make 900 per cent. profit. Completely destroys wireworms, snails, woodlice, ants, leather-jackets, etc. Harmless to plants. Supersedes gas-lime. Send 1s. for recipe, and save money. HUGHES, Analyst, Elmhurst, Northwich

BY APPOINTMENT. BY APPOINTMENT.

CHEAP OFFER TO CLEAR.

We beg to inform our numerous clients that we have secured a large tract of land adjoining one of our principal Nurseries, and that it is our intention to clear the Stocks off some of our outlying branch Nurseries at a sacrifice.

Everything has been grown with our usual care, and offered in Lots, subject to being unsold; we guarantee the numbers and quality of each Lot offered.

Particulars of above, together with our General Catalogue, will be sent on application.

JAMES SMITH & SONS (Nurserymen to H.M. THE KING), **DARLEY DALE NURSERIES, near MATLOCK.**

Inspection cordially invited. Visitors met by appointment at Darley Dale or Matlock Stations.

GEO. COOLING & SONS,
The Nurseries, Bath,
Offer fine stocks of the undermentioned.
Now in splendid condition for removal.

ROSE-TREES.

List Post Free. The Collection is one of the largest and most complete in cultivation. We offer Bush Roses, strong plants, from **6/-** to **10/6** per dozen; **40/-** to **70/-** per 100. Standard Roses, from **18/-** per dozen.

ROSES IN POTS FOR FORCING.

List Post Free. A large Collection prepared for spring flowering of all the most suitable Tea scented and Hybrid Perpetual kinds. Strong plants, in 5in. pots, **15/-** per dozen; in 6in. and 7in. pots, from **18/-** to **30/-** per dozen.

FRUIT-TREES.

List Post Free. Our Fruit Trees have always had a great reputation for clean, well-ripened growth and correctness of naming. The following Collection of Bush Trees is recommended for a small garden, and will be forwarded, packing free, upon receipt of cheque or P.O.O. for one guinea:—Four Bush Apples, including good specimens of Beauty of Bath, the best early apple, Cox's Orange Pippin, etc.; four Bush Pears, including Williams' Bon Chrétien, Marie Louise, etc.; four Bush Plums, including Green Gage, Victoria, etc. These trees come into bearing at once, and, being of compact growth, take up little room in the garden.

GRAPES THE FIRST YEAR.

List Post Free. Strong canes that will bear, with ordinary cultivation, several bunches. May be fruited in pots or planted out. Black Hamburgh, the best variety for a cool greenhouse; Foster's Seedling, the best white variety. Each, **7/6**; or three for **21/-**.

STRAWBERRY PLANTS.

List Post Free. A speciality. Upwards of 50 varieties grown. Strong runners, and established plants in pots, to fruit the first season.

GEO. COOLING & SONS,
The Nurseries, BATH.

CHARLESWORTH & CO.,
Hayward's Heath, Sussex,
ORCHID SPECIALISTS,
IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

CABBAGE PLANTS, extra strong, Ellams, Mein's, Offenham, First and Best, Enfield, Battersea, 3s. 1,000, 12s. 6d. 5,000 lots; Drumheads, 2s. 6d.; Red Cabbage, Cos Lettuce, Tripoli Onion, 1s. 1,000, on rail; or 1s. 100, post free. List free. HIGHT, Cranleigh, Surrey.

RHUBARB ROOTS.

DAWES CHALLENGE has obtained **seven medals and awards.** Price list and cultural directions free. Sample bunch gratis with **10/-** orders. Apply direct. **Champion Rhubarb Grower, Syderstone Nurseries, Norfolk.**

WARE'S HARDY PLANTS

Awarded
"GOLD MEDAL" R.H.S.

Orders Booked Now for Spring Delivery.

Many New Novelties included in our New Catalogue, just published, **post free upon application.**

HERBACEOUS BORDERS
ROCK & WATER GARDENS } **Our Leading Specialities.**

Estimates and Plans submitted.

TERMS MODERATE.

BEGONIAS

55 GOLD MEDALS & SILVER CUPS AWARDED

Our beautifully Illustrated List of Choice Double and Single Begonias for Exhibition, Greenhouse, and Bedding Purposes, including Novelties Exhibited at the various leading shows during last season. NOW READY.

ADDRESS, DEPT. 2,

THOS. S. WARE, Ltd.,
FELTHAM.

GOOD SEEDS.

	Packet
CALCEOLARIA, Golden Glory (Hardy Hybrid)	1/-
REHMANNIA, Pink Perfection	1/-
GAILLARDIA, Veitch's Compact strain	1/-
DAHLIA, Pæony-flowered Dutch Semi-double	1/6
STOCKS, Veitch's Rosy Scarlet Brompton	1/-
DELPHINIUM, Blue Butterfly (Annual)	1/-
GODETIA, Crimson Glow (Murillo-like crimson)	1/-
LETTUCE, Duke of Cornwall (Cabbage var.)	1/-
TOMATO, Veitch's Glory (crimson)	1/-
CABBAGE, Veitch's Earliest of All	1/-
CAULIFLOWER, Veitch's Midsummer Day	1/6
CUCUMBER, Every Day (fine for exhibition)	1/6

SEED AND PLANT CATALOGUES FREE ON APPLICATION.

ROBERT VEITCH & SON,
EXETER.

CAMBRIDGESHIRE :: QUALITY. ::

Why send to Guernsey
when you can get better acclimatised
TOMATO PLANTS
at the same price?

Very strong plants of the **two best all round sorts** in commerce.

HILLSIDE COMET, CARTER'S SUNRISE.—All have been transplanted, and grown in virgin loam (hence are free from disease, extra strong, and vigorous).

READY FOR IMMEDIATE PLANTING OUT or POTTING, 12 for **1/3,** 25 for **2/-,** 100 for **5/-.** Carefully packed in damp moss. Seedlings, very strong, **2/-** 100. Carriage or postage paid.

TO CLEAR OUR LAND FOR REPLANTING

we offer for a few days only, the following Exceptional Bargains:—

6 First-class H.P. and H.T. Roses, 6 sorts, **2/6.** **6 Magnificent Rambler Roses,** 5ft. to 8ft. high, 6 sorts, **3/-.** **6 Good Fruit Trees,** 2 and 3 years old, such as Plums, Apples, Pears, Cherries, etc., 6 for **2/6.** All well packed and free on rail

Now we have a few thousands of Perennials left over. They must be cleared. As long as they last, 100 good strong plants (all transplanted stuff), in 10 sorts, **free on rail, 1/3.** Don't hesitate about these lots. The chance won't occur again when these are cleared. Try a sample lot or two. You'll be more than satisfied. We hold glowing testimonials from delighted customers.

EDMUNDS and CO.,
Alexandra Nurseries,
MILTON, CAMBRIDGE.

BRITISH COLUMBIA

A most desirable Country for British People to settle in.

INCREASING PROSPERITY DECREASING TAXATION

Climate and Land well adapted for FRUIT GROWING, DAIRYING, and MIXED FARMING, HORSE, HOG, and POULTRY RAISING.

MARKETS ARE NEAR AT HAND, AND GOOD PRICES OBTAINABLE.

Population increasing. Good Laws well administered. Free Education.

Full particulars free of charge on application to

J. H. TURNER, Agent General for B.C.
Salisbury House, Finsbury Circus, London.

OUR COLLECTIONS
OF
CHOICE VEGETABLE SEEDS
Provide a whole year's supply.

PRICES RANGE FROM
2/6 for 18 Packets to 42/- for 82 Packets.

Our Catalogue No. 26 (Post Free), contains select lists of Flower and Vegetable Seeds, Lawn Grasses, etc.

HARRISON & SONS,
33, Market Place, LEICESTER.

THE FLOWER FOR ALL SEASONS.

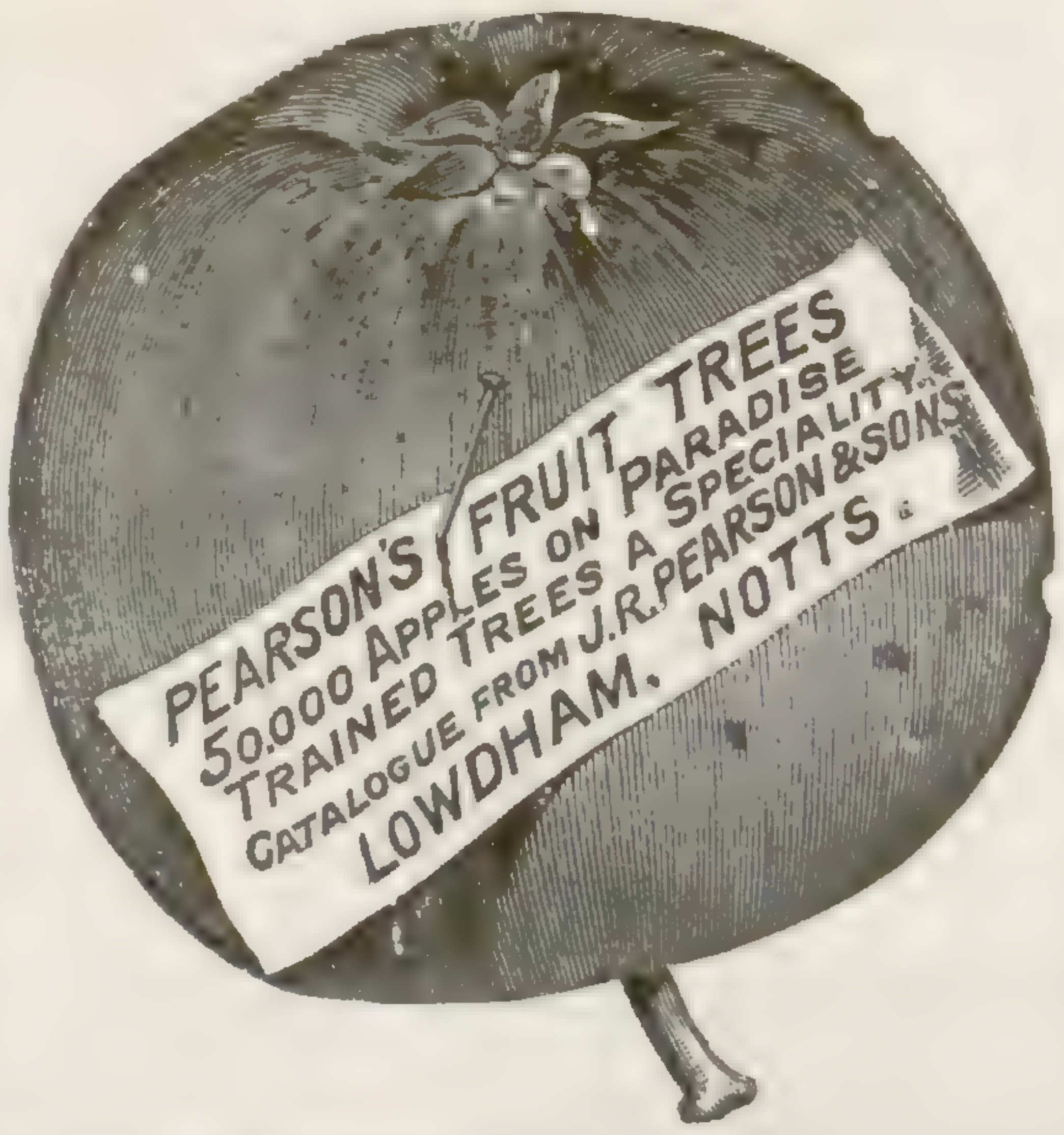
THE PERPETUAL-FLOWERING CARNATION.

The Tangley Nurseries Collection comprises the cream of English and American Varieties.
Strong plants, 1 doz. vars., packing free, for **7s. 6d.**
Descriptive List Post Free,

W. H. PAGE,
Tangley Nurseries, Hampton, Middlesex.
Phone: 166 P.O. Molesey. Tele.: Page, Hampton.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

SEED POTATOES, Scotch, Irish, Midlands, Northerns; largest and best stock in West of England, both earlies and lates. Apply to OLIVER BROS., Importers, Exeter, and Barnstaple.


PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J.R. PEARSON & SONS
LOWDHAM, NOTTS.

FRUIT TREES

We have 50 acres of young Fruit Trees in perfect condition to offer this season. Our **Specialities** are Cordons, Bushes, and Pyramids, and Trained Trees worked on selected **Fruiting Stocks.**
Fully Illustrated Catalogue Post Free.

W. SEABROOK & SONS,
The Nurseries, CHELMSFORD.

STALKER'S Forest Trees, Fruit Trees Roses, Bulbs, and Seeds
Are known all over the world, and cannot be surpassed for hardiness and quality.
Famous for Quality and Cleanliness.

D. STALKER & SON,
Government Contractors,
Catalogues Free. NAIRN, N.B.

PERPETUAL-FLOWERING
CARNATIONS.

This year's Novelties and all the Leading Varieties.
Send for descriptive Catalogue of 80 varieties with particulars when to stop them.

C. ENGELMANN,
Carnation Grower,
SAFFRON WALDEN.

BEGONIAS.

Send a post card at once for Gwillim's beautifully illustrated list, with descriptions of double, single, frilled, and crested, at all prices.

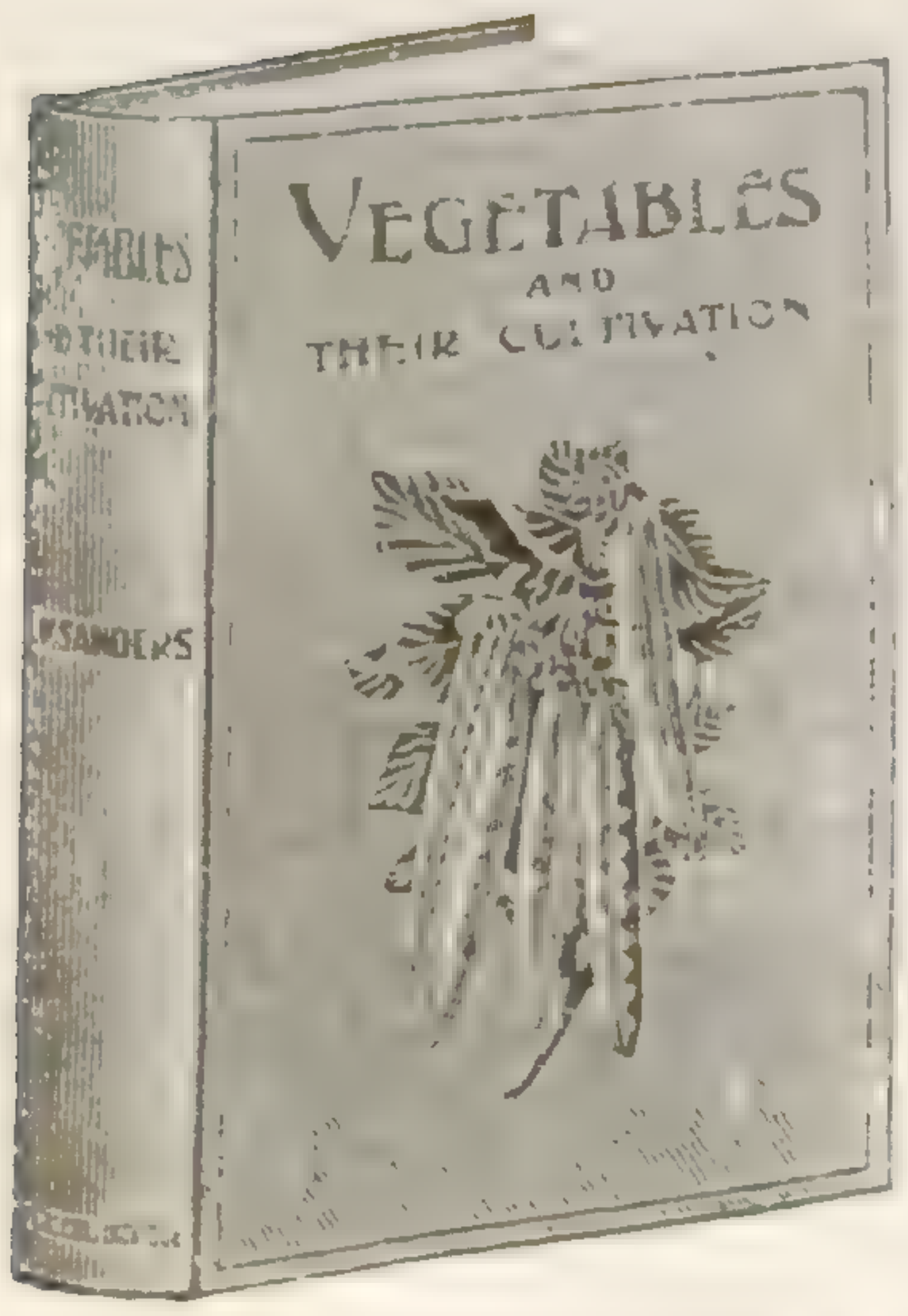
A. LL. GWILLIM,
CAMBRIA NURSERY,
NEW ELTHAM.

IRISH SEED POTATOES
BEAT SCOTCH.
My famous Stocks have secured Leading Honours in many English Public Trials.
Superb Quality. Illustrated Pamphlets Free.

J. F. WILLIAMSON, F.R.H.S.,
Seed Potato Specialist,
MALLOW, CO. CORK.

WORK IN THE KITCHEN GARDEN.
READ THE BEST PRACTICAL GUIDE.

VEGETABLES AND THEIR CULTIVATION


VEGETABLES AND THEIR CULTIVATION
VEGETABLES AND THEIR CULTIVATION
T.W. SANDERS

By T. W. SANDERS, F.L.S., Editor of "Amateur Gardening," etc., etc.

- **Formation of the Vegetable Garden.**
- **Soils and Their Treatment.**
- **Manures and Their Uses.**
- **Crops and their Rotation.**
- **Calendar of Garden Work.**
- **Cultural Details for Each Vegetable.**
- **Planting, Forcing, etc.**
- **Selection of Best Varieties.**
- **Exhibiting—Packing.**
- **French Gardening.**

Etc., Etc.

"Mr. Sanders has done his work very thoroughly in this book, and his directions are as clear and explicit as they could be."—*Agricultural Gazette.*

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE,"
148 and 149, Aldersgate Street, London, E.C.

Please send me a copy of "VEGETABLES AND THEIR CULTIVATION" by Post, for which I enclose remittance of 5/6.

Name..

Address..

100,000 FREE COPIES

DOBBIE

Dobbie's New Catalogue and Guide to Horticulture.

224 PAGES. 210 ILLUSTRATIONS.

A COPY WILL BE SENT WITH PLEASURE GRATIS TO ANY ONE APPLYING FOR SAME, WHO ENCLOSES 3d. IN STAMPS TO DEFRAY COST OF POSTAGE, AND MENTIONS "GARDENERS' MAGAZINE."

DOBBIE & CO.,
The Royal Seedsmen, EDINBURGH

ORCHIDS.

Amateurs interested in Orchids should write for our

Amateur's Guide,

2nd Edition, free.

Giving Treatment, Soils, Description of Flowers; Illustrated.

MANSELL & HATCHER, Ltd.,
Rawdon, Yorkshire.

CHEALS'

113 Acres of Ornamental

Trees & Shrubs

Of all kinds.

Fruit Trees

Hardy, Healthy, and true to name.

Roses & Hardy Plants

Descriptive Catalogues Free.

J. CHEAL & SONS,
NURSERYMEN AND LANDSCAPE GARDENERS,
Crawley, Sussex.

TREES, TREES, TREES.

Now is the Time to Plant.

300 ACRES TO SELECT FROM.

Our LIGHT OAKS and BAGNALL NURSERIES are admitted to be the most exposed in the United Kingdom, ranging up to 1,000 feet above sea-level. Customers may therefore rely on our stock thriving in the coldest or exposed situations.

Catalogues gratis on application.

ISAAC MATTHEWS & SONS, Ltd.,
The Nurseries,
MILTON, STOKE-ON-TRENT, STAFFS.

ORCHIDS, ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices. Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

NEW PLANTS FROM CHINA

In our **HERBACEOUS AND ALPINE PLANT** Catalogue, just issued, we offer for the first time a number of

FIRST CLASS NOVELTIES

secured by our Collector, **Mr. GEORGE FORREST,** in the high **ALPS OF YUNNAN, CHINA.** These plants, of great beauty and variety, can be got

ONLY FROM US,

and they form an introduction to what is probably the **MOST WONDERFUL COLLECTION** of hardy plants at present existing in the country if not **IN THE WORLD.** And yet the prices are quite absurdly low.

— CATALOGUE FREE. —

BEES LTD.. Dept. 6, MILL ST., LIVERPOOL.

HORNES' TREES.

SPECIAL CASH OFFER.

200,000 FRUIT TREES & BUSHES OF ALL KINDS.

10,000 MAIDEN APPLES, on English Paradise. The following popular kinds are included:—James Grieve, Ben's Red, Charles Ross, Cox's Orange, Bramley Seedling, Lord Derby, Ecklinville Seedling, Newton Wonder, Norfolk Wonder, Blenheim Orange, Warner's Rival, Quarrenden, Lane's Prince Albert, Beauty of Bath, Lord Suffield, Stirling Castle, Houblon, Grenadier, Annie Elizabeth, Hector Macdonald, Edward VII., Wellington, Peasgood Nonsuch, Potts Seedling. Price **5/-** per doz.; **38/-** 100.

Also a very fine lot of **20,000 PYRAMID APPLES (2 and 3 years) on English Paradise,** including:—Worcester Pearmain, Cox's Orange Pippin, James Grieve, Allington Pippin, Bramley Seedling, Warner's King, Houblon, Charles Ross, Lane's Prince Albert, Beauty of Bath, Lord Derby, Ecklinville Seedling, Ribston Pippin, Newton Wonder, Ben's Red, Grenadier, Annie Elizabeth, Hector Macdonald, Gladstone, Stirling Castle, Lord Grosvenor, King of Pippin. Price **9/-** per doz.; **60/-** 100.

ABOUT 20,000 HALF-STANDARD APPLES on Crab Stock (2 and 3 years).—Worcester Pearmain, Cox's Orange Pippin, Bramley Seedling, Newton Wonder, Allington Pippin, Lord Derby, Blenheim Orange, James Grieve, Lane Prince Albert, Gladstone, Ecklinville Seedling, Charles Ross, Stirling Castle, Gascoyne Scarlet, James Grieve. Price **9/-** doz.; **60/-** 100.

PEARS ON QUINCE (2 years).—Doyenne du Comice, Louise Bonne of Jersey, Pitmaston Duchess, Conference, Clapp's Favourite, Marguerite Marillat. All **10/-** per doz.

STANDARD APPLES.—The following popular kinds are included:—Cox's Orange Pippin, James Grieve, Ecklinville, Allington Pippin, Blenheim Orange, Lord Derby, Warner's King, King of Pippin, Wellington, Lord Suffield. Price **17/-** doz.

Victoria Plums, 2 years feathered, **10/-** doz. Black Currants, Lee's Prolific, 2 years, very fine, **2/-** doz.; **10/-** 100. Raspberries, Superlative, **25/-** 1,000. Several thousand Cabbage Plants (Sutton's Flower of Spring and Myatt's Offenham), **2/6** 1,000.

SPECIAL QUOTATIONS FOR LARGE QUANTITIES. NEW ILLUSTRATED CATALOGUE NOW READY, TO BE HAD POST FREE. WORLD-WIDE REPUTATION. ALL THE BEST VARIETIES IN CULTIVATION.

W. HORNE & SONS, Noted Fruit Tree Growers. **CLIFFE, nr. ROCHESTER, Kent.**

Write for ILLUSTRATED CATALOGUE POST FREE
from

Carters
TESTED
Seeds
REGISTERED TRADE MARK

Carters
HIGH HOLBORN

New Offices and Seed Testing Grounds,

RAYNES PARK, LONDON, S.W.

Branches { 237 and 238, High Holborn, W.C.
53a, Queen Victoria Street, E.C.

By Appointment to H.M. The King.

1911 FORBES'

Illustrated Plant Catalogue Nearly 200 Pages.

GOLD MEDAL SPECIALITIES.

Contains carefully revised **Descriptions, Colour, Height, Time of Flowering, British or Common Names, Prices,** etc., of the **Grandest Collections of ASTERS, BEGONIAS, CALADIUMS, CARNATIONS, DAHLIAS, DELPHINIUMS, PÆONIES, PANSIES, VIOLAS, PELARGONIUMS, PENTSTEMONS, PHLOXES, PYRETHRUMS, HARDY BORDER PLANTS,** carefully-prepared **PLAN** for arranging **HARDY PLANT BORDERS,** etc.

Experts unanimously accord **FORBES' CATALOGUE** the unique distinction of being the **best** and most **reliable** up-to-date **Reference Book** extant.

FREE ON APPLICATION.

JOHN FORBES (HAWICK), LIMITED.
(Dept. I), The King's Nurserymen, **HAWICK, Scotland.**

THE MOST UNIQUE

SWEET PEA LIST

In the World
IS NOW READY.

PLEASE SEND POSTCARD FOR SAME.

My ANGLO-AMERICAN COLLECTION, 5/-

15 Varieties (including Roosevelt, Nightingale, Perkin, Mrs. H. Dickson, Sunpf. Crimson) is the best value in the Sweet Pea world. Will make a very appreciative present. My stocks are the truest humanity can produce! My aim is to oblige!

G. H. MACKERETH,
The Sweet Pea Clearing House,
ULVERSTON.

Note my special offer of Mr. W. P. Wright's most interesting Sweet Pea Note Book.

BY ROYAL APPOINTMENT.

WEBBS' SEEDS

WEBBS' EPICURE MELON (scarlet flesh), **1/6** and **2/6** per packet.
AWARDED FIRST PRIZE, WOLVERHAMPTON, 1910.

WEBBS' MELONS.

WEBBS' NEW PEERLESS (green-flesh). Perfect flavour ... **2/6** per packet
WEBBS' FAVOURITE (green-flesh). FIRST PRIZE, SHREWSBURY, 1910. **1/6** and **2/6** per packet

WEBBS' TOMATOES.

WEBBS' NEW CONQUEROR (first time offered) **1/6** and **2/6** per packet
WEBBS' EMPEROR. Enormous cropper, excellent for exhibition ... ... **1/6** per packet

WEBBS' CUCUMBERS.

WEBBS' NEW FREEDOM (first time offered) ... **1/6** and **2/6** per packet
WEBBS' EVERBEARING. Prolific and continuous bearer... **1/6** per packet

WEBBS' CAULIFLOWERS.

WEBBS' NEW EARLY FRAME. Best variety for forcing **1/6** and **2/6** per packet
WEBBS' EARLY MAMMOTH. FIRST PRIZE, SHREWSBURY, 1910. **1/6** and **2/6** per packet

WEBBS' GARDEN PEAS.

WEBBS' PIONEER AND WEBBS' DWARF GEM (first early) each **3/-** per quart
WEBBS' STOURBRIDGE MARROW (second early). Fine for exhibition ... ... **2/6** per quart
WEBBS' SENATOR AND WEBBS' KAISER (main crop) each **3/-** per quart

WEBBS' SPRING CATALOGUE
for 1911 is NOW READY.

19 GOLD MEDALS AND CUPS
Awarded to Webb & Sons in 1910.

WEBB & SONS, Seedsmen by Appointment to H.M. King George V., **Wordsley, Stourbridge.**

ANT ROOZEN & SON'S SEEDS, BULBS, AND PLANTS

For Spring, 1911.

All of the Finest Quality.

THE CATALOGUE of above is NOW READY, and will be sent, post free, on application to their Offices at . . .

OVERVEEN, HAARLEM, HOLLAND;
Or to their General Agents,
MERTENS and CO.,
3, Cross Lane, LONDON, E.C.

BUNYARD'S FRUIT TREES

The Best Quality and Largest Selection at Moderate Prices.

WRITE FOR CATALOGUE.

GEO. BUNYARD
& CO., LTD.,
Royal Nurseries,
MAIDSTONE.

NEW ROSES

WM. PAUL & SON, WALTHAM CROSS, Ltd.,

Beg to offer strong plants of the following New Roses raised by them at the Waltham Cross Nurseries :—

Varieties of 1910.

Alice Cory Wright (H.T.), Dwarfs, **7/6** and **10/6** each.
Elsie (Wichuraiana, Rambler), Dwarfs, **7/6** each.
Juliet (Hybrid Briar), Dwarfs, **10/6** each; Standards and Half-Standards, **10/6** each.
Portia (H.T.), Dwarfs, **7/6** each.

Varieties of 1909.

Althea (H.T.), Dwarfs, **3/6** each; **36/-** per dozen.
Cynthia (H.T.), Dwarfs, **3/6** each; **36/-** per dozen; Standards, **5/-** each.
Fairy (Multiflora Rambler), Dwarfs, **2/6** each; **24/-** per dozen.
Margaret (H.T.), Dwarfs, **3/6** each; **36/-** per dozen.

For full descriptions of the above, and for New Roses of other raisers and general collection of Roses, see Rose Catalogue, post free on application.

Pauls' Royal Nurseries and Seed Warehouse,
WALTHAM CROSS, HERTS.

VOL. LIV.—No. 2,991. SATURDAY, FEBRUARY 25, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

A National Society for Daffodils.

Since the Daffodil Conference that was held at South Kensington in 1885, under the auspices of the Royal Horticultural Society, there has been a wonderful advance in daffodils and daffodil culture. The finest of the older varieties have been so largely multiplied that the bulbs have become sufficiently plentiful to admit of all who are fortunate in the possession of a garden to enjoy the varied charms of their flowers without a heavy tax on their resources. With the great increase in the supplies of bulbs there has been an immense extension in the cultivation of the more meritorious forms, not only in the private garden, but in market establishments and on flower farms, where it may be assumed they give a remunerative, if not large, return to the growers. At the present time, as for many years past, they constitute one of the most profitable crops grown in the Scilly Isles; and in Lincolnshire and Cambridgeshire, where the soil and climatic conditions are alike favourable to the development of their flowers and the ripening of the bulbs, immense areas are devoted to them. In other words, the cultivation of daffodils has during the past quarter of a century become an important industry. Concurrently with the increase in the culture of the older daffodils the raising of new varieties has been keenly carried on by amateurs and commercial cultivators, and the success achieved has been so great that the United Kingdom has become the centre of this interesting form of floricultural activity. No longer is there an occasion for those who appreciate the charm of novelty to visit Holland in quest of new daffodils, for their requirements can be amply complied with at home, and indeed, in a manner that is impossible elsewhere. Many hundreds of varieties, all more or less beautiful, have been raised, and large numbers have been distributed in the usual way. This increase in new varieties is gratifying, as evidence of the energy and skill of the raisers, but the novelties are proving somewhat embarrassing to cultivators, who are unable to visit the principal exhibitions of these flowers and become acquainted with the newer introductions. In this connection it may be mentioned that when raisers in different parts of the country are busily engaged in the production of new forms, and probably in some cases making similar crosses, there is a possibility of resemblance between certain of them, and in a few instances of this being sufficiently close to justify their being regarded as too much alike, as in the case of some other flowers. The possibility of this happening, the desirability of bringing into prominence the finest varieties in the several sections, the determination by comparative tests of the relative merits of the moderately priced varieties for various purposes, and other matters of importance have been engaging the attention of some of those who give special attention to daffodils, and it has been felt that a daffodil society, national in its aims and work would be able to render valuable service. In considering the needs for such a society, the admirable work that is being done by many local organisations, such as those at Birmingham, Huntingdon, Plymouth, and Truro, should be remembered. Probably there would be an advantage in their owing allegiance to a central body, so as to co-ordinate the work of judging, making awards to novelties, and the arrangement of competitive classes. It must also be remembered that since 1885 the Daffodil Committee of the Royal Horticultural Society has accomplished excellent work: and the heroic efforts it has made to compile a list of daffodil names, and then to classify varieties, are beyond all praise. The two chief reasons for which a society is needed appear to be a large two-days' show in London midway between the two April meetings of the Royal Horticultural Society, and an annual publication, in which matters of special interest relating to daffodils and their cultivation could be placed on record. For the purpose of considering the advisability or otherwise of forming a National Daffodil Society, a meeting was held at the Horticultural Hall on the 14th inst., but, as stated in our report, no definite conclusions were arrived at. This meeting was unfortunate in some respects, as some of the principal speakers appeared to be desirous of placing the financial responsibility, the formation of a society would involve, upon the Royal Horticultural Society. We do not think for a moment the Council will accept the responsibility and the financial burden such a society would impose. Nor does it appear desirable they should do so. It is impossible for them to give special attention to each of the more important classes of ornamental plants and flowers, and to show exceptional favour to one would certainly not be the best means of maintaining the hearty co-operation that exists between the parent and special societies. We are of the opinion that the daffodil people, if they want a society, must make up their mind to unhesitatingly assume the responsibility of finance, and be prepared for a certain amount of hard work, for unless this be done a strong and useful society is not likely to become an accomplished fact. It is highly desirable for those who attend the adjourned meeting to make up their minds as to the course they intend taking before coming to the Horticultural Hall, and thus avoid a repetition of what was done at the last meeting.

MR. G. LAING PAUL.

Mr. G. Laing Paul, whose portrait we have the pleasure of giving in this issue, is a member of the third generation of a family that for nearly a century has been closely associated with roses, and has rendered splendid service in improving and popularising these fragant flowers. As so well known to all who are actively interested in roses, Mr. G. L. Paul is a son of that genial rosarian, Mr. George Paul, V.M.H., J.P., the head of the Cheshunt firm, and would appear to have inherited in a marked degree a strong affection for the rose, and a not less strong desire to increase the interest and attractions of the flower by the introduction of new and beautiful forms. Mr. Paul had the advantage of an education of an international character, for, after completing his English education, he went to Germany, Holland, and France, which enabled him to become acquainted with Continental methods, and to acquire three languages other than his own, which, it need hardly be said, must be an immense advantage to anyone immediately concerned with the commercial aspects of rose growing. About twenty years have elapsed since Mr. Paul commenced his business career, and from the first he interested himself in roses and trees and shrubs, and, judging from his knowledge of these subjects, he was careful to take full advantage of the opportunities he had for becoming acquainted with the finer kinds. He devoted attention also to the raising of new roses, and, appreciating the importance of increasing the number of varieties specially adapted for garden decoration, he devoted his attention to the development of garden roses. Among others raised by Mr. G. L. Paul, and distributed by the firm, are Wallflower, Tea Rambler, Purple East, and Shower of Gold; the dwarf perpetual flowering Wichuraiana hybrids, such as Iceberg and Agate, and some of the newer varieties. It is now many years since Mr. Paul was elected a member of council of the National Rose Society, and on this body, and the Publications Committee of the society, he has rendered valuable service, and is highly esteemed by his colleagues.

Additions to the Royal Gardens, Kew.—Many additions to the Kew collections were made during the past year by exchanges with other gardens, and the largest consignment of new trees and shrubs received during the year was from the Arnold Arboretum. The assistant curator visited this establishment during the summer with the result that about 500 species and varieties were noted as desirable for the Kew collection. Almost all these were sent by Professor Sargent and arrived in perfect condition early in December. Among the more interesting plants were a set of American amelanchiers, several new species of North American æsculus, a set of dwarf American cratægi, about 160 Chinese trees and shrubs introduced by Mr. E. H. Wilson, a set of American and Asiatic willows, and such rare plants as Leitneria floridanum, Larix Lyalli, Kalmia caroliniana and K. microphylla, Pinus pentaphylla, Pteroceltis Davidiana, Tripetaleia bracteata, and Vaccinium membranaceum. Of special interest was a new and undescribed species of hamamelis from Missouri, remarkable as flowering in spring, like the Asiatic species; the only American species previously known, H. virginica, flowers in autumn.

Plant Physiology at the Imperial College.—The Governors of the Imperial College, South Kensington, have founded a Chair of Plant Physiology and Pathology, with a view to meet the demands of young men who are being trained to act as advisers in matters connected with agriculture and horticulture at home and in distant parts of the British Empire. They have appointed as the first occupant of the Chair Professor V. H. Blackman, M.A., Sc.D., formerly Hutchinson Research Student and Fellow of St. John's College, Cambridge, and Walsingham (Biological) Medallist of the University. In 1907 Professor Blackman was appointed to the Chair of Botany in the University of Leeds, and he has obtained a high position as an authority on rusts and other fungi, and is well known in scientific circles for his investigations of the cytological details of the fertilisation of the pine. For some years past Professor Blackman has devoted special attention to the bio-chemical and the physiological aspects of botanical science, and with these he will be chiefly concerned in the discharge of his duties as Professor of Plant Physiology and Pathology at the Imperial College of Science and Technology at South Kensington.

The Snowdrop was the subject of a most interesting paper read by Miss Philbrick at the recent meeting of the Chelmsford Gardeners' Association.

Epping Forest.—In their report the Epping Forest Committee state that the necessary work of thinning—in other words, of removing inferior and superfluous trees for the purpose of encouraging the development of more valuable specimens has been continued, each block of woodland being treated according to its needs. In 1909-10 some difficulty was experienced in disposing of the thinnings, other than whole stems. Latterly there has been a fair demand for poles, but faggots still remain a drug in the market. Most owners of woodland experience the same difficulty. The Leyton Distress Committee, the report continues, have completed the enlargement of the Hollow Pond, a work which has in many ways proved to the advantage of the general public. It is becoming increasingly difficult, the committee pertinently add, to find work on the Forest for the unemployed. A census of the deer showed an increase in the fallow deer, the approximate number being about 220, compared with 200 last year. Surveying classes were again held during the summer months by the City and Guilds of London Institute, the East London College, and the West Ham Technical Institute.

Warwick Flower Show Society.—The annual meeting of this society was held a few days since, when a report was submitted showing that the year's work had resulted in a loss of £25. There was a rather long discussion as to the advisability of holding a show during the current year, and at the close it was resolved that a committee be appointed, a full statement of the position of the society be drawn up, and an appeal be made to the residents of the town for increased financial support.

North of England Horticultural Society. The following are the members of the several committees at the present time: Scientific Committee — Messrs. A. G. Allsop, C. Crowther, Professor Seton, T. Redington, Alfred Gaut, A. S. Galt, T. G. West, P. Clapham, A. G. Ruston, J. M. Hector, T. H. Taylor, Alf. Hobson, W. H. Dobson, and Dr. Burt. Fruit and Vegetable Committee.—Messrs. J. E. Hathaway, W. E. Hyde, G. P. Bound, H. J. Clayton, E. F. Hazelton, T. Redington, Alf. Gaut, A. S. Galt, A. Cameron, H. Dolby J. P. Leadbetter, J. Easter, B. Ashton, — Gordon, and W. Pattison. Plant and Floral Committee—Messrs. G. P. Bound, W. Daniels, P. Clapham, H. Evans, A. G. Allsop, W. J. Jenning, F. H. Mountain, E. F. Hazelton, W. Mansell, T. Redington, Alf. Gaut, A. S. Galt, B. Ashton, G. Taylor, H. A. Innes, J. Donaghue, Albert Clarke, J. Artindale, G. Gibson, J. T. Barker, W. H. Hatcher, W. Pattison, A. Cameron, and W. H. Dobson. Replies have not yet been received to all the invitations that were sent out, and additions will, we assume, be made to each of the committees later on. The secretary, the Rev. J. Bernard Hall, writes: "The society is established to promote and encourage every branch of horticulture—educational, commercial, and general. This object will be attained by monthly meetings, educational lectures, co-operation with existing horticultural institutions in the North, and such publications as the council shall direct. If sufficient support is forthcoming at once, and if the keen interest already aroused is sustained, the council will immediately take steps to hold their first monthly show, and make arrangements for one or more large shows at Leeds and elsewhere in the North in co-operation with affiliated societies."

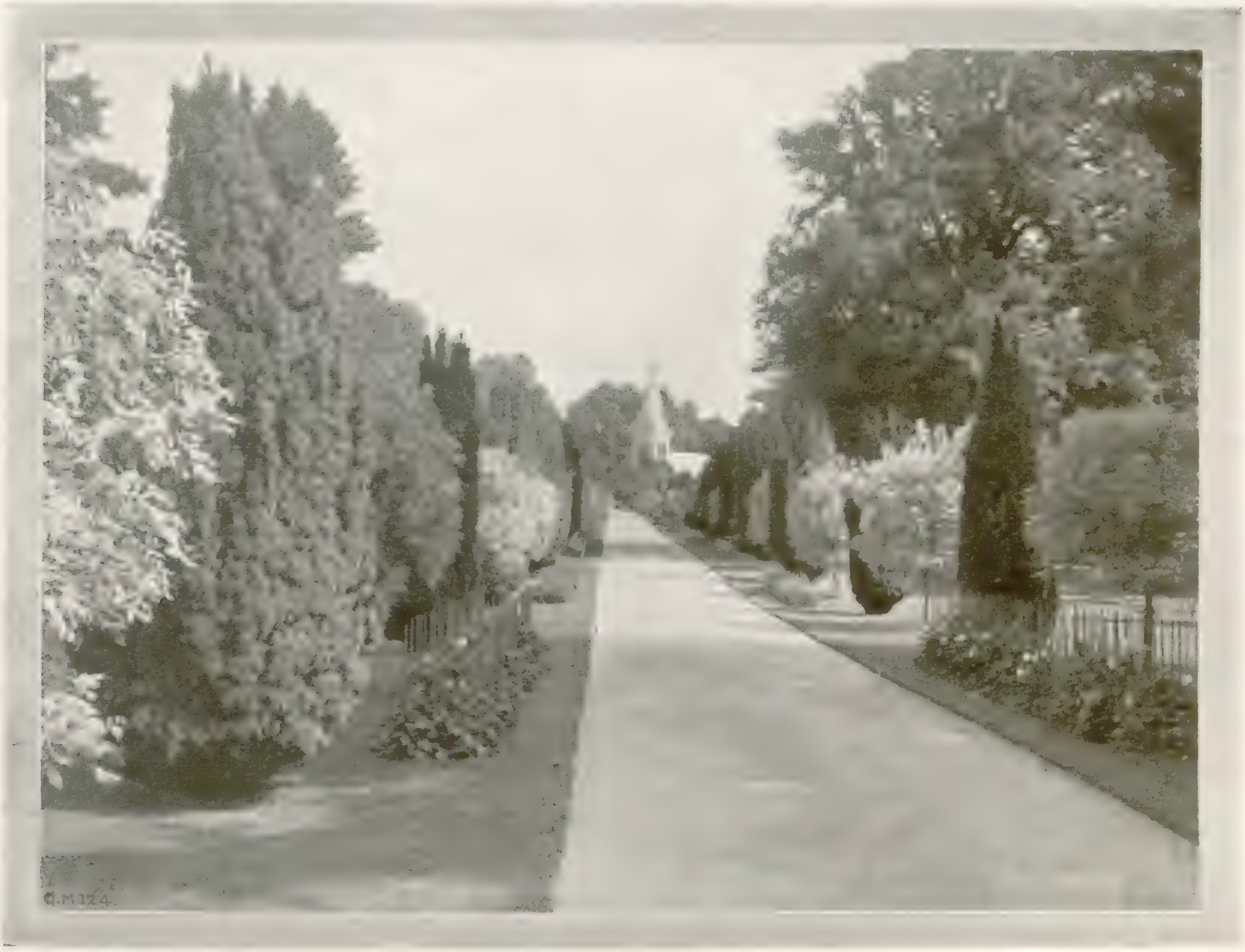
Hitchin Rose Society, which is doing excellent work in promoting the cultivation of roses by amateurs, had last year an excellent exhibition, but, owing to the wet weather, the financial results were disappointing. According to the report, the receipts were, as a consequence of these untoward circumstances, £18 less than the expenditure, but winners of prizes, the tradesmen who had done work for the society, and friends of the society, came to the rescue, and the society was by means of their generosity able to clear off the deficit, and close the year with a small balance.

Rare Snowdrops. By its appearance at a time when the garden presents few attractions, the common snowdrop has gained a special place in the affections of the nature lover, writes a correspondent of the "Scotsman." Of late years, horticulturists have devoted considerable attention to the habits of the plant, with the result that many different varieties have been described. One of these is the autumn-flowering snowdrop. This is found wild in Albania, and on some of the mountains of Greece; but Mr. Boyd, of Faldonside, near Melrose, has shown that it can be successfully cultivated in this country. In these northern latitudes the plant is later in flowering every successive season, and Mr. Boyd attributes this to a tendency to revert to what may be looked upon as the normal period of blossoming. At Fowberry Tower, and one or two other places in Northumberland, yellow spotted snowdrops have been found. In the case of this rare variety, all the parts corresponding to the green markings of the common snowdrop take on a pleasing yellow colour. It is said to require a lighter soil, and to demand much more care and attention than the common variety. A still more curious freak is the green snowdrop. This was first raised in the Botanic Gardens, at Vienna. A few years ago, a plant of this class, which had been grown at Ashiestiel was exhibited in flower at a spring meeting of the Botanical Society of Edinburgh. While it attracted considerable attention, there appears to have been a general consensus of opinion that the flower was curious rather than beautiful.

Chelmsford Chrysanthemum Society. At the annual meeting held the other evening, a highly satisfactory report for the past year was submitted to the members. Mr. W. G. Belcher, the hon. secretary and treasurer, described the exhibition as a record one, and as being especially remarkable for the high quality of the exhibits.

AN AVENUE OF YEWS AND ACERS.

Beautiful as so many of the fine old avenues in British gardens are, there is a great recurrence of the use of a few subjects. Where huge trees are desired the need for shade or for an imposing feature in the park or garden may well outweigh any wish for great variety, but where a long walk gives an opportunity of using some of the smaller-growing trees or the taller shrubs, then there is no need to adhere to the lime, elm, oak, chestnut, sycamore, ash, poplar, and other well known trees—indeed, they would often be quite out of place under such circumstances; nor should hollies, aucubas, laurestinus, rhododendrons, and a few other things be inevitably used where the big trees would be out of court. We want greater variety in these matters, and there is no good reason why two subjects should not be planted. In the present illustration a long walk is shown, and on either side are planted in pairs, the erect, stately, and somewhat sombre Irish yew, and the light-hued, elegant and free-growing Acer Negundo variegata. The two subjects look well together, the acers lighting up the sombre yews, and the yews subduing the summer light that plays so freely among the white and green acer leaves. The picture represents what has been done at Elvetham Park, Winchfield, where Mr. G. Mitchison is head gardener to Lord Calthorpe.



[Photo: F. Mason Good.

AN AVENUE OF ACER NEGUNDO VARIEGATA AND IRISH YEWS AT ELVETHAM PARK.

Leeks.—There is no necessity to coddle this crop. Make a large sowing for the main plantation at any time from now onwards. The Lyon, Musselburgh, and Ayton Castle Giant are good varieties.—C. F.

CAMPANULAS AND COLUMBINES.

Canterbury Bells.

My notes on the campanulas will in this issue be confined to Canterbury bells, as they fully deserve all the space at my disposal. They are varieties of Campanula media, which was introduced from Southern Europe in 1597, and they are popular, handsome biennials, easily grown, taking up but little space, and giving huge quantities of handsome flowers. In addition to the ordinary single-flowered Canterbury bells we have now varieties with double flowers and with semi-double flowers, the last-named being known as the Cup-and-Saucer campanula. Although both the double and the Cup-and-Saucer (Campanula calycanthema) varieties find admirers, none are equal, in my opinion, to the purely single forms of C. media. In addition to those with pink, mauve, white, or blue flowers, striped and spotted varieties are now available.

In addition to their use as border flowers in June and July, Canterbury bells can be grown in pots for an early display in the conservatory, by potting up a sufficient number of the strongest plants from the open border early in October, keeping them in a cold frame for a time, and then removing them to the greenhouse early in the spring.

Cultural details are but few, and can be briefly stated. An open site, ordinary soil well manured, and early planting are the essential conditions; and, with reference to these, it should be said that upon the period of planting depends the measure of success. It frequently happens that the plants are puny and weak, owing to sowing the seed too late or too thickly, or in not transplanting them early from the seed bed. If they are not sturdy and well supplied with leaves in the autumn it will be useless to expect a full crop of the finest flowers when blossoming time comes round.

April is a good time for sowing the seed on deeply-dug and well-prepared soil in the open, sowing thinly, so that the plants can grow vigorously from the commencement, and make a short-jointed growth. When the seedlings are large enough to handle transplant them, putting them 10in. apart in rows, with 15in. spaces between them, choosing showery weather, so that growth starts away vigorously. Keeping the bed free from weeds during the summer is all that is necessary. Early in October the plants should be lifted, with a good ball of earth about the roots, and be planted where they are to flower.

If the site in which they are to bloom is available when transplanting from the seed-bed, they should then be placed in their permanent quarters, as a saving of time is effected, and no check is received. This, however, is not always possible, and, if the plants are well prepared, this extra shift does not interfere with their progress.

Columbines.

The common columbine (Aquilegia vulgaris) is an English plant that is quite plentiful in some parts of the country, and is really handsome when seen in breadths in the woods, where it grows and blossoms annually if unmolested. But even here, in this remote part of the country, we find these beautiful wild flowers less frequent, owing mainly to depredations by flower-lovers, who dig them up for planting in their gardens. But somehow they seldom, if ever, appear to succeed as well as they do in their native habitat.

For early summer flowering, aquilegias raised from seed are much admired, and are extremely useful, giving as they do huge crops of flowers with but a minimum of trouble. Aquilegia glandulosa, or Siberian columbine, introduced in 1822, is extremely pretty, growing from 6in. to 12in. high, with its blue and white flowers; but, unfortunately, it is not sufficiently hardy to withstand our severe winters. The more useful forms are those of A. caerulea and A. chrysantha, with their long spurs, as well as the long-spurred hybrids in selected colours of pink, mauve, pure white, crimson, and gold, which are perhaps the more useful for special effect in masses of one colour. For filling gaps in the herbaceous border aquilegias of all types and colours are most useful.

As with all seedling plants, the main point is to sow early, and obtain increased vigour. Sow the seed thinly in boxes in March in the greenhouse or cold frame, the aim being to start the plants early into growth. If the convenience of glass is not available, select a warm site in the open. Well prepare the soil, and the method is to dig it deeply in the autumn, previously adding some half-decayed manure, and leaving the surface quite rough. The soil should be forked over early in the spring, and at the beginning of April sow the seed thinly, covering it with a sandy compost and shading from hot sun during the middle of the day if the weather is hot and dry. Transplant early into the beds and borders in which they are to bloom, if possible, which is seldom the case. Otherwise give the seedlings ample room to grow sturdily until the early part of October, when they should be replanted where they are to bloom the following summer. E. M.

TUBEROUS BEGONIAS AND GLOXINIAS.

Begonias.

The one great secret of successful begonia culture lies in growing them as cool as possible. Of course, heat is required to germinate the seeds, but once the plants have attained some size it is far better to remove them to cooler quarters. As begonia seeds are slow in germinating an early start should be made. Sow in well-drained pots or pans in very light sandy soil. The seeds, being very small, should be sown on the surface, and not buried. Cover the pan with a sheet of glass, and place in a shady corner of a house with a temperature of 60 degrees. Do not allow the soil to become dry, or failure will result. As soon as large enough to handle prick off the seedlings into boxes or large pans, and when ready again pot them, using a fairly rich compost. As soon as the plants become established in these pots remove them to a cooler temperature.

A SEEDLING BEGONIA FROM A GOOD STRAIN.

The cultivation of begonias from tubers is much simpler. About the end of February, or beginning of March, put the tubers singly in pots, according to their size, and stand them in a cool greenhouse, and water sparingly until growth has commenced; after this the water supply may be increased gradually, so that when in full growth they may receive an abundance. When ready shift them into larger pots, making the soil firm. A mixture of good loam, leaf-mould, and sand, with the addition of manure from an old mushroom bed, forms the best compost. See that the pots are well drained. Abundant air and good light are essential, but begonias should be shaded during the hottest part of the day. An increase of stock may be obtained by cutting tubers which have several eyes, leaving a few eyes on each part. The cut portions should be allowed to dry, preferably in the sun, and the cut surface be thickly coated with powdered charcoal before potting. Afterwards treat the same as whole tubers.

One of the chief enemies of the begonia is a small mite, almost invisible to the eye, but which works havoc on the foliage. Its presence will be made known by rusty marks on the foliage, and it must be checked by frequent fumigation and dusting with tobacco powder.

When the flowering season is over gradually reduce the water supply until the growth dies down, by which time the soil should be dry. Shake out the tubers and store them in a dry, cool place during winter.

Gloxinias.

The range of colour to be obtained in gloxinias makes them most desirable subjects, and well worth growing properly. They succeed best in a warm, moist house, and may be had in flower throughout the greater part of the year. Tubers should be started in boxes in February or March, and when growth has commenced they must be potted, using pots as small as possible. Syringe the plants on all favourable occasions, and maintain a temperature of 65 degrees. As soon as well rooted shift into larger pots. For general use 48's and 32's will be found large enough in which to flower the plants. Use a compost of rich fibrous loam, peat, leaf-soil, and sand, adding some broken charcoal to keep the whole sweet. Shading from sunshine is necessary, and care must be taken to avoid cold draughts.

Plants raised from seed will flower later in the season than those grown from tubers. It is a good plan to make a sowing early in February in a light sandy soil, and place in a temperature of 65 to 70 degrees. When large enough to handle prick off the seedlings into boxes or pans, which have been well drained. When potting the plants from the boxes do not pot them all at one time, but rather make several batches to extend the flowering period.

All plants, when in vigorous growth should receive weak liquid manure occasionally. After flowering gradually reduce the water supply, and when the tubers are dried off store them away in a moderately cool dry place.

A. Grubb.

Azalea Deutsche Perle.—Where white-flowered azaleas are needed early in the season this is one of the best of all to grow, as in a greenhouse temperature of 50 to 55 degrees it may be had in bloom by Christmas. The flowers, too, are of considerable substance, and though semi-double when fully expanded, they are in the bud state just like little rosebuds. This azalea is of rather looser growth than many of the garden varieties, owing to which the trusses of flowers can be cut with longer stems than many of them can. There is no other variety of which such numbers are sent to this country as Deutsche Perle.—W. T.

CHOICE NEW HARDY PLANTS.

ACONITUM WILSONI, immense spikes of pale sky blue flowers, **9d.** each; **7/6** doz.

ACONITUM FISCHERI, violet blue with bright shining foliage. **6d.** each; **4/6** doz.

ANCHUSA OPAL, pale blue. **9d.** each; **7/6** doz.

ARTEMISIA LACTIFLORA, fine plumes of white flowers, almond scented. **9d.** each; **7/6** doz.

ASTILBE ARENDSII SALMON QUEEN, graceful spikes of light salmon pink. **2/6** each.

ASTER BEAUTY OF COLWALL, fine double lavender. **9d.** each; **7/6** doz.

ASTER STAR SHOWER, creamy white form of Hon. E. Gibbs; very decorative. **9d.** each; **7/6** doz.

ASTER NOVELTY, pale lavender, shaded pink, small flowers, completely covering the plant; A.M., R.H.S., 1910. **9d.** each; **7/6** doz.

ASTER CLIMAX, the finest of the Nova Belgii type, flowers measuring fully two inches across. **9d.** each; **7/6** doz.

ASTER ST. EGWIN, a beautiful shade of bright pink, a neat plant. **6d.** each; **4/6** doz.

CHRYSANTHEMUM MAXIMUM, complete collection. 12 fine varieties for **4/6.**

DELPHINIUMS, all the newest and best are grown.

GEUM MRS. BRADSHAW, enormous flowers, dbl. crimson. **1/3** each.

HELENIUM RIVERTON GEM, large flowers of a wallflower red. **6d.** each; **4/6** doz.

HELENIUM RIVERTON BEAUTY, a fine companion to Riverton Gem, but a bright yellow. **6d.** each; **4/6** doz.

LITHOSPERMUM HEAVENLY BLUE, a bright sky blue, a splendid addition for the rock garden or front row of herbaceous border. **1/3** each.

ORIENTAL POPPIES.—
- **MRS. PERRY,** orange apricot. **9d.** each.
- **PRINCESS ENA,** pale salmon. **6d.** each.
- **BOBS,** silvery pink. **9d.** each.
- **MARIE STUDHOLME,** salmon flesh. **6d.** each.

We can supply 12 choice varieties of Oriental Poppies for **4/-.**

LUPINUS MOERHEIMI, the finest and most compact of the pink shades. **6d.** each; **4/6** doz.

GALEGA NIOBE, finest white to date, recommended. **1/-** each.

GALEGA HER MAJESTY, this variety gives flowers of a bright rose colour. **1/-** each.

GALEGA CARNEA PLENA, double rosy carmine. **9d.** each.

PHLOXES.—We have a fine collection, and offer best value in the trade.
- **LINDFIELD BEAUTY,** bright salmon pink of largest size. **1/6** each; **15/-** doz.
- **FRAU ANTONIN BUCHNER,** finest white; A.M., R.H.S., 1910. **9d.** each; **7/6** doz.
- **C. A. STROHLEIN,** orange scarlet, carmine eye, of finest form. **1/-** each; **10/6** doz.
- **GEN. VAN HEUTSZ,** salmon red, white centre, very attractive. **9d.** each; **7/6** doz.

12 choice varieties for **6/-.**

SIDALCEA LISTERI, a beautiful variety of a flesh pink shade. **6d.** each; **4/6** doz.

RUDBECKIA GOLDSTRAHL, very double bright yellow variety, growing only 4ft., and flowering earlier than Golden Glow. **6d.** each; **4/6** doz.

POTENTILLAS. 12 choice named doubles for **3/-.**

SAXIFRAGAS.—We have a good stock of the best new varieties—Decipiens Bathoniensis, Clibrani, Codsall Cream, etc., good plants. **1/-** each; **10/6** doz.

VIOLAS.—A large collection to offer in exceptionally good stuff.

We were awarded Silver Gilt Banksian and Silver Gilt Flora Medals, R.H.S., for Hardy Plants, in Autumn, 1910.

WE HAVE AN IMMENSE STOCK OF HARDY PLANTS AT REASONABLE PRICES.

CATALOGUES FREE ON APPLICATION.

JAMES BOX, F.R.H.S.,
THE NURSERIES,
LINDFIELD, HAYWARDS HEATH, SUSSEX.

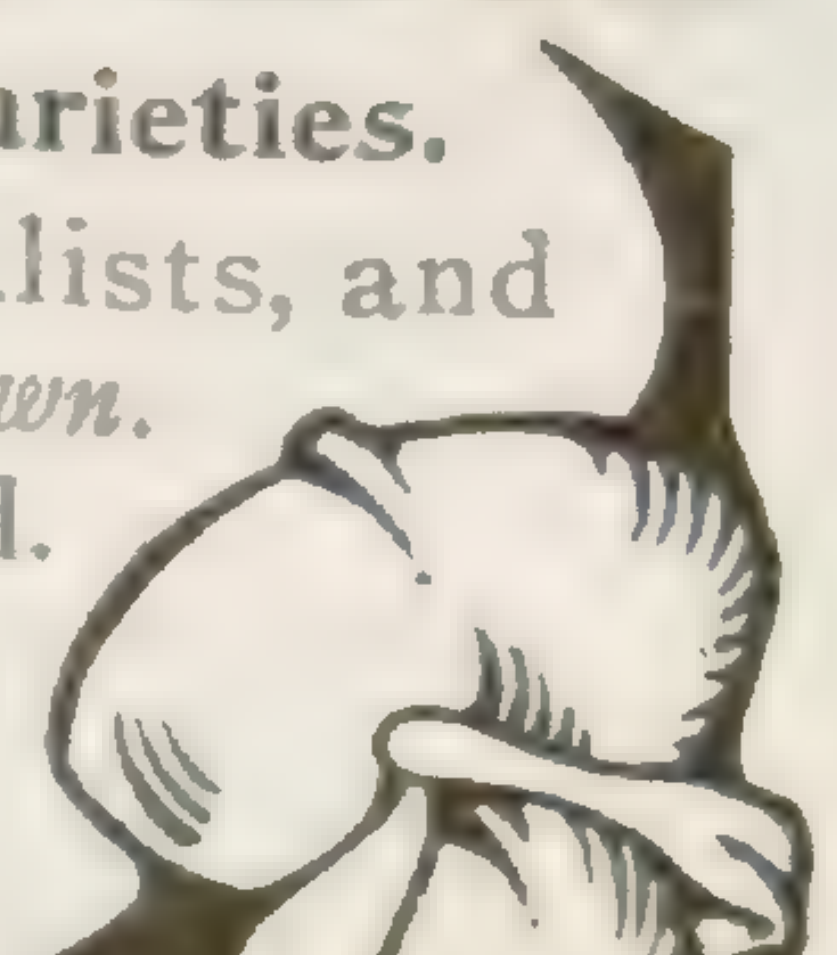
HALLAM'S GOLD MEDAL SWEET PEAS

All 'Waved' Varieties.

Selected by specialists, and guaranteed *English grown.*
Finest value seeds sold.

Send to-day for our List

HALLAM'S (Dept. 5),
Moseley, Birmingham



"THE GARDENERS' MAGAZINE"
SPECIAL COLLECTIONS
OF

25 Bush Roses for **15/-**
50 Bush Roses for **30/-**
100 Bush Roses for **50/-**

CARRIAGE PAID.

CHAMPION ROSES

THE FINEST STOCK IN THE KINGDOM.

FRANK CANT & CO.,

BRAISWICK ROSE GARDENS, COLCHESTER.

Our Illustrated Catalogue post free on application.

DICKSONS

SELECT & MOST RELIABLE
VEGETABLE & FLOWER SEEDS,
SEED POTATOES
GARDENING TOOLS &c
CARRIAGE PAID.
CATALOGUE POST FREE.
ROYAL SEED WAREHOUSE & NURSERIES
CHESTER.

TOMATO PLANTS (6 to 8 ins. high). Ready for Fruiting Quarters. **Grown in Steam sterilised soil.** Very carefully packed and protected.

Price £3 per 1,000, Cash with order, carriage paid.
Per 100, 7/-; 65 plants, 5/-; 50 plants, 4/-; 25 plants, 3/-; 12 plants, 2/-

Carter's Sunrise, Winter Beauty, Beauty of Wales, etc.

W. & F. POAT, TOMATO GROWERS, **ST. SAMPSON'S GUERNSEY, C.I.**

Cheques, Postal Orders, etc., should be crossed "Guernsey Banking Co., Ltd."
Booklet and Testimonials free on application.

RIVERS'

Fruit Trees, Roses,
Vines, Figs, Oranges,
AND
Orchard House Trees.

A LARGE AND SELECT STOCK ALWAYS ON VIEW.

Illustrated & Descriptive Catalogue
POST FREE 3d.

THOMAS RIVERS & SON
Sawbridgeworth, Herts.
Station: HARLOW, G.E.R.

Rhododendrons.

Crimson, White, Pink. **250** Choice Named Varieties, fine foliage, well budded, for potting or planting. 1 to 1½ ft., 1½ to 2 ft., 2 to 2½ ft., 2½ to 3 ft., 3 to 4 ft., 4 to 5 ft., 5 to 6 ft., 6 to 7 ft. List of sorts and prices on application; many thousands to offer. Standards in all sizes.

All Home-grown. Inspection Invited.

F. STREET, Heatherside Nurseries, CAMBERLEY.

HERE YOU ARE! ! ! — ARTHUR COOMBES, F.R.H.S., offers pick of his Tomato Plants, grown under ideal conditions. Holmes' Supreme, Comet, Up-to-Date, D. of York, Sunrise, 1s. 3d. doz.; 8s. 100, cash. Post free.—ST. MARY'S NURSERY, Hagley, Stourbridge.

BLACKMORE & LANGDON'S

One of our Double Begonias grown and photographed without a stake to plant or bloom.

BEGONIAS

IN HIGHEST QUALITY FOR EXHIBITION, CONSERVATORY, AND BEDDING OUT.

AWARDED 24 GOLD MEDALS, 12 SILVER CUPS.

SEED IN SEALED PACKETS.

Double, 2/6 and 5/- ; Single, 1/-, 2/6 and 5/- : Single also in separate colours. Also frilled and crested Single 1/-, 2/6 and 5/-.

GRAND LARGE TUBERS, TO COLOUR.

Double, 4/-, 12/6, 21/- and 30/- per doz. Single 3/-, 8/-, 15/- and 21/- per doz.
Mixed Doubles, 3/- per doz., 21/- per 100.
Semi-Doubles (cheapest bedders), 10/- per 100.
Mixed Singles, 2/6 per doz., 15/- per 100.

Extra Frilled Single Begonias. A.M., R.H.S., 1908. 4/-, 8/- and 21/- per doz. Mixed 2/6 per doz.

CYCLAMEN, DELPHINIUMS, BLUE PRIMROSES, etc.

American Winter-Flowering and Border CARNATIONS.

1 doz. choice named Border Carnations, 5/- and 7/6. A Grand Collection of all Sections. Our New Illustrated Catalogue, with Cultural Instructions, post free. Special offer of one dozen of Perpetual Flowering Carnations, established in pots, in 12 choice varieties, for 6/-.

TWERTON HILL NURSERY, BATH.

CARNATIONS, PINKS, AURICULAS.

DOUGLAS for the best old and new varieties in all classes, and the finest quality in the world. Malmaison Carnations, new and old, 7/6 per dozen. Border, 6/- to 12/- per dozen. Tree, American, and English, 7/6 to 15/- per dozen. Auriculas, Show, 21/- to 30/- per dozen. Alpine Auriculas, 9/- to 21/- per dozen. Carnation, Auricula, Pink, and Polyanthus seed, 1/6 and 2/6 per packet.

CATALOGUE FREE.

J. DOUGLAS, Bookham, LEATHERHEAD.

GEO. GILBERT, F.R.H.S.,

The Rose & Hardy Plant Nurseries,

HAROLD ROAD, HASTINGS.

Established nearly Half a Century.

ROSES, CLIMBERS, 9-14ft.; several well-ripened growths to each plant. Perkins, Crimson Rambler, Hiawatha, Rene Andre, Evangeline, Alberic Barbier, Reve d'Or, Lady Gay, Mrs. Flight, Elisa Robichon, Climbing Capt. Christy, Thalia, Goldfinch, and numerous others. My Selection, 9/- doz.;, 5/- ½-doz.; each labelled and true to name.

PENZANCE HYBRID SWEET BRIARS, in 6 varieties, named, 5/-; 2 of each, 9/-.

BUSH ROSES, 1 doz., named, all different; H.P., H.T., and Moss. These are extra strong, and are grown at our own nurseries. 6/- doz.

DOROTHY PERKINS.—I have a large quantity of extra strong, well-grown plants, 9-14ft.; grand for making a screen covering unsightly walls and buildings; 6/- doz. Worth three times this amount.

HERBACEOUS PHLOX, strong clumps, best varieties, named, 4/- doz.; all different.

MICHAELMAS DAISIES, strong; 12 varieties, named; all different; 4/- doz.

PÆONIES, strong clumps; all different, named, good varieties; 5/- ½ doz.; 9/- doz.

DELPHINIUMS, extra strong clumps, not named, but all splendid varieties, that will continue all the summer until the frost, 4/- doz.

The above lots may be divided to meet purchasers' requirements.

NEW TOMATO, GILBERT'S IMPROVED SUNRISE.

This Tomato is the result of a cross between Lister's Prolific and Sunrise, is the most prodigious cropper, short-jointed, finest shaped, and best-flavoured Tomato ever introduced. An ideal sort for both indoor and outdoor culture.

Sealed packets 2/6 and 1/- each, post free, with a copy of our Up-to-Date Seed Catalogue.

All the above carriage paid for cash with order of above 5/-.

GEO. GILBERT, F.R.H.S.,
HAROLD ROAD, HASTINGS.

A SUN-DIAL MAKES A GARDEN INTERESTING AND ATTRACTIVE.

SUN-DIALS

FORM VERY INTERESTING, USEFUL, AND ORNAMENTAL FEATURES FOR GARDENS, TERRACES, PARKS, ETC.; ALSO SUITABLE FOR COMMEMORATING ANY SPECIAL EVENT. ✤ MOST APPROPRIATE FOR PRESENTS.

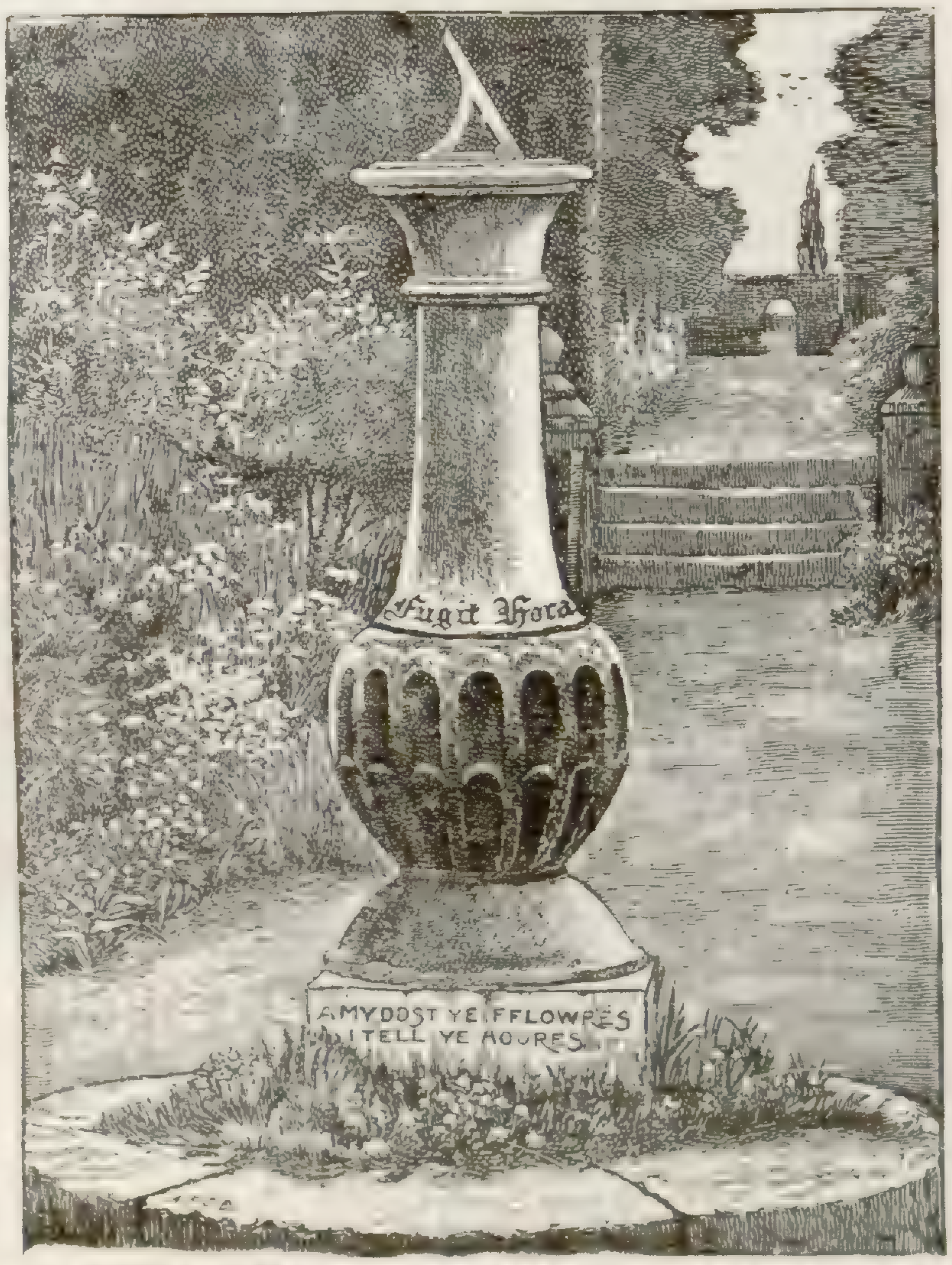
✤ ✤ ✤

ILLUSTRATED BOOKLET,

CONTAINING MOTTOES AND PRACTICAL ARTICLES ON THE SUN-DIAL, MAGNETIC COMPASS, AND ANEROID BAROMETER. POST FREE.

✤ ✤ ✤

A FEW OLD DIALS IN STOCK FOR SALE, SOME FROM HISTORICAL PLACES.



MOTTOES and INSCRIPTIONS

CAN BE ENGRAVED IN ANY LANGUAGE AND STYLE ON DIAL OR PEDESTAL AT AN EXTRA CHARGE.

✤ ✤ ✤

VERTICAL DIALS

MADE IN ALL MATERIALS, FOR WALLS AND PILLARS.

✤ ✤ ✤

MRS. GATTI'S BOOK ON SUN-DIALS, Post Free, 31/6.

THIS BOOK CAN BE SEEN AT THE LIBRARY OF THE ROYAL HORTICULTURAL SOCIETY, WESTMINSTER.

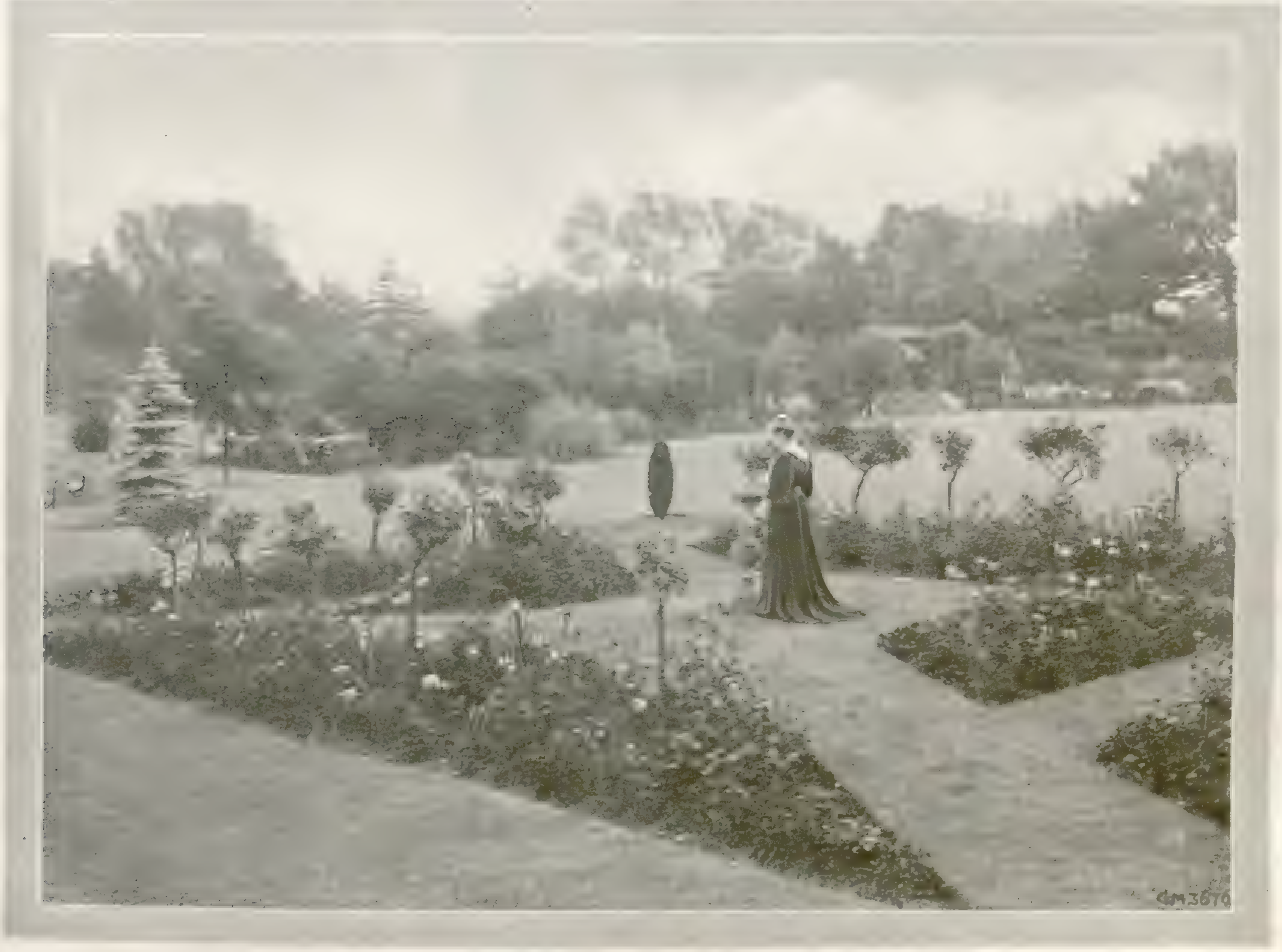
ANTIQUE DESIGN PORTLAND STONE PEDESTAL AND BRASS DIAL, £5 5s. BASE STONE AND MOTTOES EXTRA.

F. BARKER and SON, Sun-dial House, 12, Clerkenwell Road, LONDON, E.C.

A SIMPLY ARRANGED ROSE GARDEN.

In generalising on rose garden design it should be stated that in all cases the plan should be carefully adapted to the environment of the area to be devoted to rose culture, with a view to ensure a proper degree of unity between the several parts. In some cases the surroundings will be such as to necessitate a somewhat elaborate design in which arches, pillars, and, it may be, a pergola, will have a prominent place. In others a design characterised by simplicity will be more appropriate, as in the case of the attractive rose garden at Home Place, Limpsfield. Here, as will be seen from the illustration, is a large breadth of open lawn that is embellished on the margin with borders of hardy flowers. There is nothing ornate, and therefore no design could well have been more appropriate in which quiet beauty is the dominant feature than a geometrical scheme in which the beds are large in size, regular in outline, and have good breadths of turf between them. The design is not only in keeping with the surroundings, but it has the advantage of affording facilities for growing the roses under the best possible conditions and of enabling the mowing machine to be readily used in the grass paths. We have been told again and again by writers of experience that flower beds cut on the grass should have wide alleys between them, and be free from irregularities in outline, and thus admit of the mowing machine being able to do all that is necessary in keeping the grass short. In the design before us we have the value of this advice admirably exemplified. It has another distinct advantage, inasmuch as the beds are of such size as to enable an effective combination of dwarf and standard roses to be grown in association, and to afford ample space for the free extension of the roots in search of the food essential to the production of ample leafage and finely developed blooms. The sun-dial in the centre is an added attraction. We know not what motto the dial bears, but, as we look at the fair scene depicted, we cannot imagine one more appropriate than

> "Let others tell of storms and showers,
> I'll only count your sunny hours."



ROSE GARDEN WITH SUNDIAL, HOME PLACE, LIMPSFIELD. [Photo: F. Mason Good.

THE TOMATO IN SCOTLAND

This eminently useful, and withal easily cultivated subject, class it at will—fruit or vegetable, is almost indispensable, both in its cooked and natural state in many establishments, and unpleasantness is apt to arise if from any cause a greatly diminished supply should occur.

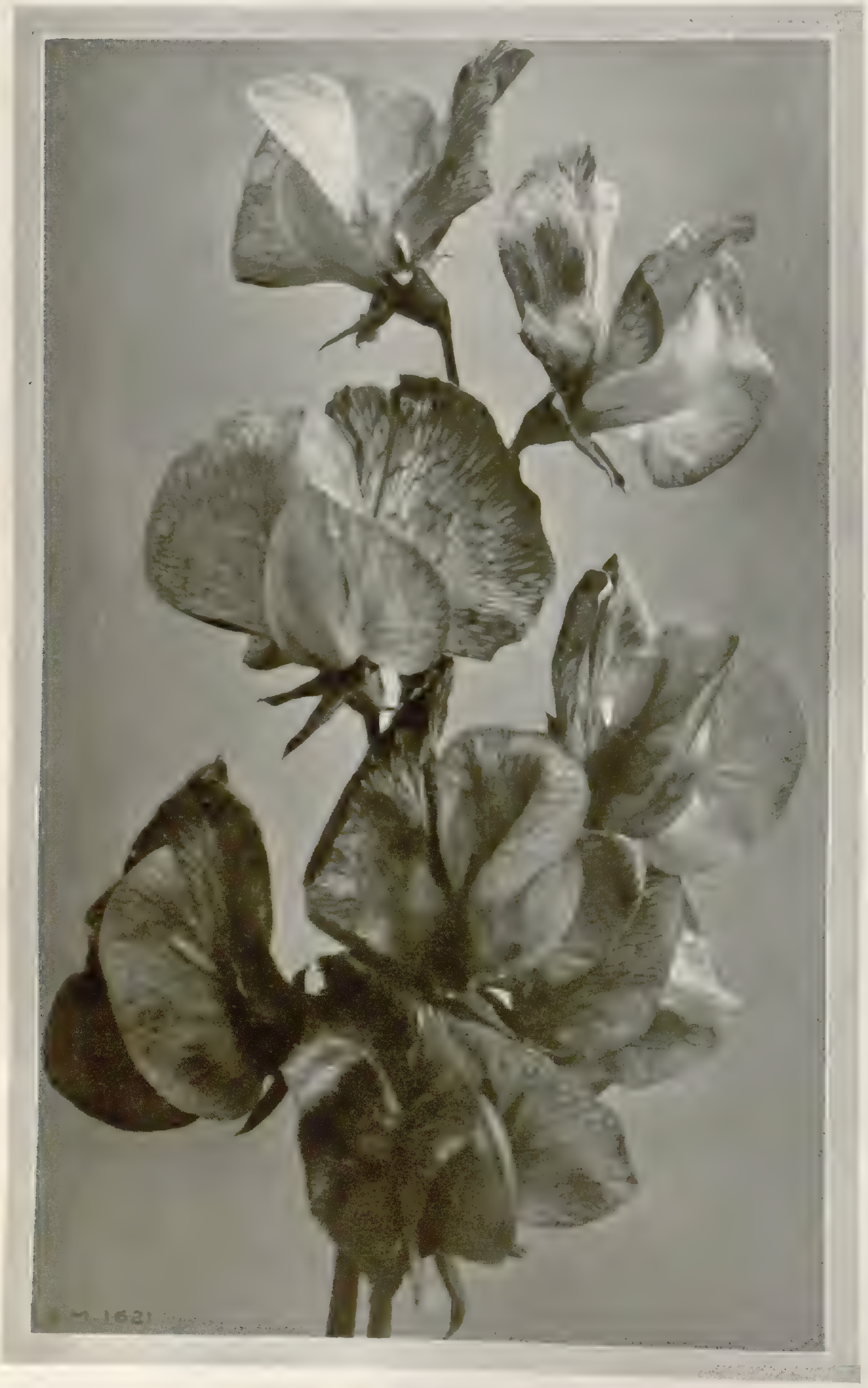
Where well constructed and efficiently heated houses are sufficiently plentiful it is not a difficult matter to maintain the supply of fresh fruit throughout the year, though such, matured in the short and often sunless days of winter, is very inferior in quality to that of midsummer and autumn.

In Scotland the successful culture of the tomato in the open air is not impossible, providing a wall having a south aspect and fully exposed to the sun can be afforded, but even then very much depends upon the season, for although the growth of the plant and the setting of the crop may be all that is desired, the ripening of the greater part of the fruit has to be accomplished after its removal, and by artificial means.

Anyone interested in the horticultural progress, or, for that matter, in the healthiness and prosperity of the Scottish people, cannot fail to have noticed the greatly extended trade that has developed in recent years in connection with the tomato. Extensive ranges, or, rather, plantations, of glass houses, devoted almost entirely to this crop, are now common where nothing of the kind existed before; and although prices are not so high as formerly the demand for the fruit has increased enormously, which, together with better appliances and improved methods of culture adopted, makes this the most remunerative of any fruit crop the market grower at the present time can cultivate. It may also be remarked that Scottish grown produce commands a higher price in retail establishments than any other, but whether the difference in quality is real or merely sentimental I cannot affirm; the advance, however, though at times but fractional, at others more substantial, is a reality all the same, and undoubtedly acts as an incentive to the grower.

General Culture.

To the great majority of private gardeners no specially constructed houses for the culture of the tomato are available, yet excellent crops, extending over a long season, are annually produced in pits, frames, and other structures, that for a good portion of the year do duty for widely diverse subjects. For instance, in vineries, there is often more space upon back walls than is required for the various shade-loving plants, and against such the tomato, if duly prepared, and planted in time may be depended upon to give a better return than most fruits. To do this the seed should be sown in February, and the resultant plants be grown steadily, as near the glass as possible, in a house or pit where the temperature seldom falls below 55 degrees. Repotting, using slightly warmed soil, should be done from time to time as the roots show around the inside of the pot, until pots with a diameter of about six inches are reached. The best soil in all stages is a good fibrous loam, to which a little leaf-mould, lime rubble, or sand may be added, according to its richness and texture. Endeavour to keep the plants sturdy, and flower trusses will appear as the last-named pots get filled with roots, and when these open fertilisation by means of a soft brush should be resorted to. If the permanent position is the back wall of a vinery or peach house the plants should be ready for planting soon after the house is closed to encourage growth upon the fruit trees, so that both advance together. The tomatoes, having the start, will thus make considerable growth, producing flowers and fruit in due order, while the earliest formed will probably ripen before the overhead foliage gets very dense. If plants are sufficiently numerous it is best to place these about twenty inches apart, and train up a single stem, breaking out all side growths as they appear; whether the leader is stopped or not may rest with the cultivator, but in lofty houses a thin attenuated growth may at length be manifest, if allowed to extend, owing to excessive heat and shade, when further upward progress is useless.



SWEET PEA PRINCE OF ORANGE.
A brilliant orange variety, raised and distributed by Miss Hemus.

Pits and Frames.

As these are not generally available until the bedding arrangements are complete, towards the end of May, if tomatoes follow these plants, they must not be raised too early, nor yet in greater numbers than accommodation can be provided for without overcrowding. For planting at the period named the early part of April is sufficiently soon to sow the seeds, as better results are obtained from small sturdy plants than from those double the size, long-jointed and slender. Presuming that the rooting medium is in fairly good condition, manurial stimulant in any form is unnecessary until a full crop of fruit is set, when a slight application of some approved compound is helpful. Water should be sparingly applied during the earlier stages, but plentifully when a full crop is assured.

Insects and diseases are not prevalent, nor yet very troublesome to the plants. Green and white fly may appear, but are easily dispersed by the usual methods of vaporising. Fungoid diseases are much more formidable foes, but ill-effects are almost nullified by removing the affected foliage as soon as an attack is observed.

Varieties are now very numerous, those possessing the deep red tint being most popular, while smoothness of outline is a pleasing feature, particularly for exhibition purposes. For very early use the cluster fruiting, or such moderate-sized varieties as Prolific or Supreme are best, while for main crops a well-selected type of Perfection is perhaps unequalled for general use.

JAMES DAY.

TWO GOOD NEW SWEET PEAS.

Prince of Orange.

Miss Hemus, of Holdfast Hall, Upton-on-Severn, has raised many beautiful sweet peas, and among those of brilliant hue the new Prince of Orange must take a high place. The original stock, distributed in 1910, was not quite fixed, but the new stock now offered is fixed, and Miss Hemus does a rather handsome thing when she states: "I regret the stock of this variety, which was sent out last season, proved unsatisfactory as regards fixity, and I shall be pleased to replace it, free of charge, with the true stock to all those customers who bought it last season, if they will return their last season's invoice with their order for this season." Prince of Orange is a brilliant orange-scarlet variety, giving large, handsome flowers, usually four on a spike. The raiser considers it identical with the variety Thomas Stevenson, consequently comparisons between the two will be looked forward to with great interest.

Sunproof Crimson.

The very fine sweet pea to which reference is here made is Dobbies' Sunproof Crimson, a brilliant sweet pea exhibited by Messrs. Dobbie and Co., of Edinburgh, at the exhibition of the National Sweet Pea Society held in 1908. In the following year the variety was tested in the N.S.P.S. trials, then at Reading, and an Award of Merit was granted, but as so little seed was saved the distribution of seed was not possible in the autumn of that year or in the spring of 1910, but a good crop was secured last autumn, and the variety is now on the market. Meanwhile a sweet pea of similar name has been distributed, but it is only since the autumn of 1910 that the certificated stock has been available. This brilliant crimson variety has, so far as our observation goes, merited its title of "Sunproof." and we can only hope that this Coronation year of 1911 will yield sufficient of what we used to call "Queen's weather" to give the variety a severe test. We may add that Dobbies' Sunproof Crimson sweet pea has not only secured the Award of Merit of the National Sweet Pea Society, but also a similar award from the Royal Horticultural Society, and a First Class Certificate from the Scottish Horticultural Association.

PRIMULAS AND CYCLAMEN.

Undoubtedly primulas and cyclamen rank as two of the leading kinds of flowering plants for the embellishment of greenhouses and conservatories. Not only are the flowers and foliage exquisitely beautiful, but the former continue to appear on the plants over a long period. If some seeds are sown in February or March, and again in May or June, and, in the case of cyclamen, in August or September, a succession of bloom may be had for nearly nine months, commencing in October.

During the past few years a great improvement has been effected by our expert hybridisers in the strains of both kinds of plants. There is a greater range of colour in the flowers; the latter are larger, and the habit of the plants is better.

Primula sinensis.

The first sowing of primulas may be made in February or March, and the resultant plants will begin to flower in October, and, if well managed, continue to do so until the early part of spring. The primula delights in a moderately moist soil, so that pans or pots are better for sowing the seeds in than boxes. Pans should be preferred; put in clean crocks to ensure drainage, and use a compost of old fibrous loam and leaf-soil in equal proportions, with coarse sand to render it all porous. Rub the loam to a rather fine state, but do not sift it; pass the leaf-soil through a half-inch mesh sieve. Three parts fill the pan with the compost, and press it down moderately firm, make the surface quite level, then water through a fine-rosed watering can. One hour afterwards sprinkle some dry silver sand on the soil, and then sow the seeds about one inch apart. Do not water again immediately, but simply scatter a very thin coating of fine compost on the seeds—just covering them.

At this season it will be advisable to place the seed pans in a house with a temperature ranging from 55 to 65 degrees, and to supply all water necessary by dipping the base of the pans in tepid water.

The germination of the seeds is nearly always irregular, therefore care must be taken when lifting forward seedlings so as not to disturb those just breaking through the soil. Transplant the seedlings in pots or pans, placing them two inches apart, near the rim. At this, and the subsequent pottings, some old mortar rubble should be added to the compost, a seven-inch potful to a bushel of the soil. Use clean pots, and always keep the immediate surroundings of the plants clean and sweet. During the summer the plants must be grown in cool frames, and also the seedlings that are raised in May or June. Good light is essential, but the frames should have a north aspect, and be slightly shaded from the sun's rays. The plants do well on a hard, moist bed of ashes. In fine weather, during July, August, and September, the plants should be exposed fully during the night-time, and also on dull days when it does not rain. Clear soot water is beneficial when primulas are well rooted. Stimulants must always be given in a weak state rather than in strong doses.

Primulas and cyclamen do best in low houses, where they can be well grown and flowered if not subjected to cold draughts.

Primula stellata.

This section has a high decorative value, and requires the same treatment as Primula sinensis; but the plants will look better in vases in a dwelling-room, and the cut flowers are lovely in vases, being so light and graceful.

Cyclamen.

These require much the same kind of treatment as primulas, and it always pays to have young stock coming on instead of depending upon old corms. The latter, when quite sound, are very serviceable, and well worthy of good cultivation. Last April I saw a large batch growing in seven-inch pots, nearly every specimen having between seventy and one hundred and twenty blooms—of great size, too.

SWEET PEA DOBBIE'S SUNPROOF CRIMSON.
Flowers large, waved, brilliant crimson.

The first sowing should be made in August or September, and the resultant seedlings kept growing in a structure heated to about 50 degrees. The second sowing must be made in February in a temperature of about 60 degrees. Sow the seeds in pans filled with fibrous loam and leaf-soil, with sand to secure porosity. Allow a distance of one inch between the seeds, and bury the latter half an inch deep. Apply water as suggested in the case of the primulas, and until the seedlings appear keep the surface covered with a thin coating of fine leaf-soil. Cyclamen seeds germinate more irregularly than those of primulas.

The crowns of the corms must always be left clear of the soil. Six-inch pots are large enough for the final potting. Maintain the temperature as evenly as possible, never subjecting the plants to excessive heat. Rotten manure should be mixed with the potting compost, and feeding be done only when the pots are well filled with roots.

Full light is essential both in summer and winter, but the plants must not be fully exposed to the sunshine in summer. Light syringings with clear soot water are good for the growth of the plants, and keep them free from insect pests in summer time. To be successful the cultivator must keep the plants growing freely from the seedling to the flowering stage.

George Garner.

STOCKS AND ASTERS.

The subjects of these notes are unsurpassed for beauty, floriferousness, and general utility among annuals employed for garden decoration. The first-named has ever enjoyed universal popularity, and small wonder, seing that it boasts a combination of great beauty and delicious fragrance. In these days it is given prominent positions in summer bedding arrangements, and when the floral beauty is past, celosias, dwarf dahlias, early flowering chrysanthemums, etc., step in and fill the breach. The cultural requirements of the stock are of a simple order, and, incidentally, few gardeners cultivate them upon a more extensive scale than the writer.

The seeds should be sown in shallow boxes upon a partially spent hotbed, about the middle of March, and when the true leaves are formed, the seedlings must be transferred to fairly deep boxes, put four inches apart, and returned to the warm frame until considerable growth has been made, or the plants meet. It will occur to the cultivator to arrange the plants close to the glass from the outset, and also to harden them off in a gradual manner, always bearing in mind that to achieve a full measure of success continuous growth is essential. In view of the fact that stocks are very impatient of root disturbance, and to prevent premature flowering, a liberal quantity of leaf-soil and cocoanut-fibre refuse should be incorporated with the soil employed in boxes; this ensures a large body of soil being attached to the roots on transference to permanent quarters. It is true the seedlings may be placed in small pots, and it is equally true that time, labour, and space will not allow such a practice in many instances. The best kind of soil is a fairly retentive loam, with lime rubble and manure added, and provided they are mulched with manure, and the ground is saturated occasionally in times of drought the season of beauty is lengthened to a very appreciable extent, while the labour involved in affording the plants a shower bath, preferably in the evenings, while making their growth, will be amply repaid by the creation of extreme vigour.

The foregoing remarks also apply to asters, with the exception that they transplant readily enough, and, it may be added, are very susceptible to attacks of aphis. Failing prompt eradication of aphis on its appearance, all chances of success are thrown to the winds. It may prove of service to those whose space is very restricted, to point out that good results may be had by sowing the seeds upon a very shallow hotbed formed upon a south border, about the end of March. The bed should be surrounded with mats fixed to poles, and if the seeds are arranged at four inches apart in drills, an exceedingly sturdy lot of plants will result without further attention beyond watering.

It is hardly necessary to dwell upon the merits of the various sections found in both stocks and asters, but it may be said that the Giant Branching ten-week stocks are eminently adapted for large beds or great stretches in the borders, while for small beds, the dwarf section is to be preferred. Named varieties of great beauty and merit are found in Carter's Monarch, which produces upon a single 2ft. stem flowers of good size and great purity. Triumph, in brilliant crimson, and wonderfully vigorous growth, is a splendid acquisition, while the popular Princess Alice is a continuous bloomer. The secret of success in bringing the biennial kinds through the winter in the open garden is to grow them in rather poor soil with plenty of lime rubble added.

The single asters supply capital decorative material as cut flowers, and each and all of the double sorts should be represented to demonstrate their value as garden plants.

Walter H. Aggett.

A FINE BED OF MONT BLANC STOCKS AT SOUTHWARK PARK.

BEST PLANTS FOR GREENHOUSE.—Nearly 300 pages are devoted to the description, propagation, and culture of the best flowers and plants for the greenhouse in The Amateur's Greenhouse, by T. W. Sanders, price 5s. net, or by post 5s. 6d., from W. H. and L. Collingridge, 148, Aldersgate Street, London.

MELONS.

The melon is one of the most commonly grown of hothouse fruits, and for some reasons deservedly so. It is by many greatly valued, especially during the warmest season of the year, at which time, fortunately, it can be most easily obtained, and this at its highest degree of perfection. Its crops, moreover, reach the state of maturity in a comparatively short space of time, and are thereby the more easily accommodated, and also produced at a comparatively small cost.

Raising a Stock and Forming Beds.

Being a sun-loving subject its culture may be simplified if the structures devoted to it are in sunny positions, this being particularly important for early and late crops, for which efficiently heated small lean-to houses, having the surface of their beds on the ground level, are the most suitable. Similarly heated small span-roofed houses, running from north to south, are the most serviceable for mid-season crops, though ordinary pits and frames, unheated except by fermenting material for the purpose of affording necessary bottom heat, also answer well for these. Strong turfy loam that has been stacked for a few months before being used is the best soil for this fruit. That which we use is excellent, consisting of turves about three inches in depth, cut from an occasionally overflows, and leaves a deposit old pasture by the side of a rivulet that robbed from strong arable land by heavy storms. This, before being made into ridges or hillocks is well broken up and lightly mixed with crushed mortar rubble and soot, and when the ridges are being formed, it is made quite firm by the aid of a brick or mallet; so firm, indeed, is it made that considerable force has to be exercised in cutting holes in it with a trowel for the young plants.

The best way of raising plants is to sow

"CLAY'S, TRIUMPHANT CLAY'S!"

CLAY'S FERTILIZER

THE STANDARD PLANT FOOD

.. IS A ..

PERFECT DIET

FOR ALL PLANTS.

It produces all **FLOWERS, FRUITS, VEGETABLES** and **FOLIAGE** in Profusion, and in the Highest Excellence.

IT KEEPS THE LAWN GREEN AND BRILLIANT.

CLAY'S FERTILIZER

A perfectly safe and useful manure containing the three chief elements of plant foods, viz., nitrogen, potash and phosphoric acid. It is a proprietary specific in general use, adaptable to all forms of soil preparation, and is applied with advantage to plants in pots, and for the production of flowers, fruits and vegetables grown in the open.

(**Cassell's Dictionary of Gardening, p. 217.**)

CLAY'S FERTILIZER

Used in the Royal Gardens, and in Horticultural and Botanical Establishments throughout the world, as well as by leading Professional and Amateur Growers everywhere.

EXHIBITS grown with **CLAY'S FERTILIZER** catch the **JUDGE'S EYE.**

INDISPENSABLE FOR ALL HORTICULTURAL PURPOSES.

CLAY'S FERTILIZER is ready for immediate use. It imparts to the soil forces that vitalize all growing plants and ensure their successful cultivation. It is safe, sure, quick in action and perfectly reliable. It is also a most economical manure.

The Horticultural Wonderbook—"Clay's Successful Gardening."

A comprehensive, informing, up-to-date and complete Guide to Gardening, including directions as to the use of CLAY'S FERTILIZER. 4th Edition (Reprint), 276 pages. Clear Print. Good Paper. Bound in Cloth. It is published by CLAY & SON, STRATFORD, LONDON, E., at NINEPENCE NET, and may be had of Seedsmen, &c.; or direct from the Publishers, post free, on receipt of the above amount.

CLAY'S
LONDON
FERTILIZER
TRADE MARK.

Sold everywhere in Tins at **6d.** and **1/-** each; and in BRANDED and SEALED Bags, 7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 1 cwt., **20/-**.

Every genuine TIN, BAG and SEAL bears the Trade Mark (as at side), the only Guarantee of Genuineness

CLAY & SON,

Manure Manufacturers and Bone Crushers,

STRATFORD, LONDON, E.

CLAY'S

IN NATU

NEW HARDY PERENNIALS FO

Messrs. Wm. ARTIN

THE MOST UNIQUE COLLECTION OF RARE H

Awarded Four Silver Cups for Hardy Perennials by the Royal Horticultural Society; Four G Premier Gold Medal, Leamington; Premier Gold Medal H

A GLORIOUS NEW LOBELIA.

Gloire de St. Annes.—A greatly improved "Cardinalis," being stronger, and of easy culture in all soils, and not necessarily a lover of damp situations. Its individual flowers are much larger and more orchid-like in form than the type, while the colour has a dazzling brilliancy which is hard to describe, but seen in a mass it presents a wonderful contrast from any of the other Cardinalis varieties. The spikes are long, and retain their flowers for a much longer season than we have ever known any of the other sorts do. The leaves are a dark bronzy green, covered with a woolly substance, which gives the plant great decorative value before flowering. Award of Merit, R.H.S., September 27, 1910. Then shown by Lady Ardilaun, Clontarf, co. Dublin. **5/- each.**

THE FIRST AND ONLY PURE WHITE DELPHINIUM.

Moerheimi Hybrida.—Large flowers of the purest white, with white eye like a white Phlox, and not the slightest shade of creamy, bluish, or greenish, like the so-called "white" Delphiniums, which have been introduced in the last few years, and to which it cannot be compared. It is doubtless the best hardy perennial introduced in the last ten years. Award of Merit, R.H.S., July, 1910. **10/6** each; **£6** doz.

THE FINEST SINGLE SKY BLUE DELPHINIUM.

Capri Hybrida.—Of quite the same growth as "Moerheimi," being a counterpiece of same. It much resembles in colour "Persimmon," but is in every respect an improvement upon this variety. The flowers are larger and the spikes longer, and of a more branching habit. We consider it the best sky blue single Delphinium in commerce. **10/6** each; **£6** doz.

A GREAT ACQUISITION TO THE HERBACEOUS BORDER.

Bidens Dahlioides.—A beautiful plant from the island meadows of Colorado. Rising from a rosette of leaves, each stem produces only one flower, purplish-pink colour. Though the species is hardy, we advise a little protection during winter, by covering with dead bracken fern or long straw manure, removing in early spring. Flowers and foliage both resemble the single Dahlia. **1/6** each; **15/-** doz.

Bidens Dahlioides Albus.—A white form of the above. Perfectly hardy and most free flowering. This was raised in our nurseries, and has been much admired and very much sought after by many leading horticultural experts. **10/6** each.

TWO BEAUTIFUL GOAT'S RUES.

Calega Her Majesty.—A vast improvement on G. Hartlandi. The flowers are much larger, and of a much brighter lilac colour. **1/6** each.

Calega Niobe.—A very fine white variety, flowers large, very free. **1/6** each.

INTERREGNA IRIS.

Quite a new class of Iris. The time of flowering comes between Iris pumila and germanica. This class is a cross between the above two mentioned. They flourish well if planted under ordinary conditions. Flowering season, May and June.

Fritjof.—Upright petals, clear light lavender blue; falls velvety violet.

Halfdan.—Light cream yellow of fine substance; one of the finest Iris, showing up splendidly in full sunshine.

Helge.—Bright lemon yellow, with a pearly reflection; elegant form.

Ingeborg.—Large ivory white flowers, with greeny-yellow net markings; a most beautiful Iris.

Wallhalla.—Uprights light lavender blue, falls velvety wine-red.

Gerda.—Uprights light creamy yellow, falls somewhat darker, shading into golden yellow.

The above collection 2/6 each; 27/6 doz.

GRAND NEW ASTILBES.

Arendsi, Venus.—Spikes of a brilliant rosy purple. A. of M R.H.S., 1910.

Arendsi, Ceres.—Well-branched spikes of flowers, of a brilli rosy lilac colour. Award of Merit, R.H.S., 1908.

Arendsi, Vesta. Light lilac rose, on stout stems of branch habit.

Arendsi, Rose Pearl.—A lovely pink colour, thick pyrami spikes. Award of Merit, R.H.S., 1908.

Arendsi, Salmon Queen.—Very graceful, thin spikes of a light salmon-pink colour. Award of Merit, R.H.S., 191

Arendsi, Juno, brilliant purple rose, pyramidal spikes.

The above collection 2/6 each; 27/6 doz.

Astilbe Grandis.—A new plant, introduced from China. Som what similar in growth to Astilbe Davidi, but rather m vigorous, producing immense panicles of white flow 2 to 2½ft. long. The large leaves are over 2ft. in leng **2/-** each.

Astilbe Thunbergi (rivularis) Moerheimi.—An important provement on Astilbe Thunbergi (rivularis). It is the v finest of this section, with enormous spikes, consisting very small flowers of the purest white. **2/-** each.

BEAUTIFUL SINGLE JAPANESE TREE PÆONY.

Californica.—Very tender flesh colour, shading to white; v free flowering.

Etna.—Silk-like, burning fiery red.

Illinois.—Carmine red, self-coloured flowers, very large.

Missouri.—Tender pink, with cherry red colour in cent fringed flower petals.

New York.—Pure white, with regular ray-like brilliant ch red in centre.

Oregon.—White, with salmon coloured shadings, carmine centre; fine form.

Pennsylvania.—Brilliant salmon red, with silvery reflection.

Wisconsin.—Tender pink, with violet stripe in middle of ea petal.

The above collection, 7/- each; 50/- the Set.

DOUBLE VARIETIES OF TREE PÆONY

Bijou de Chusan.—Pure white, flesh-coloured shadings; l fringed form, dwarf and compact habit. **3/6** each.

Caroline.—Tender salmon colour, shaded cream; sligh fringed; very dense double Saucer form. **3/6** each.

De Bugry.—Exceedingly free flowering, semi-double, sa shaped, pure white, with violet red stripes, with br golden centre. **3/6** each.

Emilia.—Brilliant salmon colour; very dense double flowe **3/6** each.

Jeannie d'Arc.—Tender salmon colour, silvery reflection. **3/6** e

Lactea.—Very fine form, milk-white with cream coloured dwarf. **4/6** each.

Lambertina.—Enormous flowers, white with violet red gr very free. **4/6** each.

La Ville de St. Denis.—Large perfect flowers, white with lil reflection, violet ground. **3/6** each.

Louise Monchelet, very large flowers, silvery salmo **3/6** each.

Madam de Vatry.—Lilac pink, beautifully shaped flowers. **4/6**

Madam Stuart Low.—Brilliant silk-like salmon red with s reflection; semi-double, large flowers. **3/6** each.

Queen Elizabeth. Enormous dense double flowers of a fi rosy red; very conspicuous. **4/6** each.

Regina Belgica.—Salmon pink with flesh-coloured g loose form with feathery tips. **3/6** each.

Remembrance of Browning.—Fringed petals, silky pink, double. **4/6** each.

Roseoleus odorata.—Large flowers, tender salmon pink w flesh-coloured ground. **3/6** each.

Souvenir de Ducher. Ball-shaped flowers, deep reddish with magenta reflection. **3/6** each.

All these Tree Pæonies are sent out in 7in. or 8in. pots

Send for our Catalogue (a book of over 200 pages). This is not merely a price list, but literature which gives the pronuncia

GARDEN.

PRESENT PLANTING offered for the first time by

ALE & SON, Sheffield.

Y PLANTS EVER OFFERED IN ONE SEASON.

lals at the Royal Agricultural Shows; also Premier Award Silver Challenge Cup, Birmingham; lleld; Gold Medal, Sandy; and 15 First Prizes during 1910.

RARE ASTERS (STARWORT).

pinus Nixe.—A charming new variety; thread-like, lilac-coloured petals, which give the flower a fine appearance. **1/6** each; **17/6** doz.

eta-grande speciosus grandiflorus.—One of the best yet raised; quite distinct; large dark blue flowers in great abundance. A. of M., R.H.S. **1/-** each; **9/-** doz.

ompsoni.—The flowers of this variety are beautifully formed, and of an exquisite soft blue colour. **1/-** each; **9/-** doz.

ericus ultramarin.—A brilliant dark blue, flowers forming themselves in large clusters; very free flowering. **1/-** each; **9/-** doz.

Fardell.—Large flowers of a beautiful and quite distinct rose colour with distinct centre; one of, if not the best, variety in cultivation. **1/-** each; **10/6** doz.

Egwin.—Quite a novelty; very densely branched and of bushy habit, producing fine pure pink flowers more than an inch across. A. of M., R.H.S. **1/-** each; **9/-** doz.

RARE SMALL MINIATURE-FLOWERING ASTERS.

nastity.—White, branching habit, very free flowering.

elight—White, changing to pink, with distinct golden centre.

aiety.—Ivory white, branching habit, very effective.

aidenhood.—White, tinted very pale rose.

ovelty.—White, literally covered with flowers.

ingdove.—White, shaded pale mauve.

implicity.—One of the best white varieties.

tar-shower.—White, tinted rose.

enus.—Pale lavender flushed with pink.

The above 1/- each; 7/6 the set.

NEW HARDY PHLOX DECUSSATA.

ll the following are hardy and of robust habit, and decided improvements on the older varieties.

1/- each; 10/- doz. 75/- per 100.

aron van Ledem.—Glistening scarlet blood-red, very attractive.

r. Konigshofer. Brilliant orange-scarlet, dark blood-red eye.

lizabeth Campbell.—Light salmon, changing to pink in the centre; extra.

rau Ant. Buchner.—The finest pure white Phlox; produces flowers of an enormous size and perfect form; A. of M., R.H.S., 1910.

Frühlicht, light pink, early flowering.

C. A. Strohlein, scarlet orange flowers with bright carmine eye; a grand acquisition.

General van Heutsz.—Brilliant salmon red with white centre.

Goliath.—Bright carmine, with dark carmine red centre.

Hanny Pfleiderer.—Cream colour, changing to salmon in the centre, with carmine red.

Hinzpeter.—Dark salmon orange with carmine blood-red eye

Kücken.—Salmon pink with dark eye.

Le Mahdi.—Dark purple violet.

Mad. Paul Dutrie. Soft pink colour suffused with white.

Mrs. John Barker. Dark carmine-pink, self colour, large flower

Reichsgraf von Hochberg.—Brilliant amaranth purple flowers.

Rosenberg. Fiery carmine violet with blood-red eye.

Selma.—Beautiful pink flowers with cherry-red eye.

Souv. de Mad. Paul Leturque. Pink with crimson centre and silvery shade.

SILENE LACINIATA PURPUSI.—Certainly one of the finest introductions of recent years. A very rare species, being found by Mr. Purpus growing on the mountain ranges of Mexico, in a sunny position. A charming rock or border plant, having narrow green leaves, flower stems ranging to a height of about 9 to 12in., producing flowers very freely, of a rich fiery cardinal red, flowers deeply laciniated. This species requires a sunny position, the roots growing deep. Best not disturbed after once planting. A safeguard during winter is a little protection with small branches of dead spruce or shrub; sandy soil is beneficial. A most useful plant for cutting. **1/-** each; **10/6** doz.

ÆTHEOPAPPUS PULCHERRIMUS.—A native of the Caucasus. One of the best plants for cutting purposes as well as the border. Leaves of a greyish colour; produces on slender stems an abundance of flowers from 3in. to 4in. in diameter; colour, tender rose. **2/-** each; **21/-** doz.

ACHILLEA MILLEFOLIA PURPUREA KELWAYI.—A new variety, and quite a novelty, with flowers of a glowing deep carmine red. **1/-** each; **10/6** doz.

PYRETHRUM (DOUBLE) QUEEN MARY.—Quite an acquisition to the double pyrethrums. A very strong grower, with very large double flowers of an exquisite pink colour. Exhibited by us last year for the first time it proved an admiration to all who saw it. **2/-** each; **21/-** doz.

VIOLA GRACILIS.—A lovely Grecian variety. Planted several together in an open position on the rockery or border will soon cover the ground with rich dark-green foliage, covered from spring to autumn with intense violet flowers, and has won admiration wherever shown. Award of Merit, R.H.S., 1908. **6d.** each; **5/-** doz.

CAMPANULA PERSICIFOLIA RIVELIN.—Raised in our Nether Green Nursery. The habit and constitution is better than the well-known Persicifolia Moerheimi. The flowers are semi-double and of a creamy-white colour. They are borne on stout erect stems. What proves this to be a most valuable acquisition is that when the bottommost flowers open the top flowers are still fresh, where with Moerheimi this is not so. **1/6** each; **15/-** doz.

CAMPANULA GLOMERATA SUPERBA.—Erect stems; flowers much deeper in colour than Glomerata. Quite an acquisition to the Campanulas. **1/6** each; **15/-** doz.

GYPSOPHILA PANICULATA FL. PL.—In many cases the doubling process spoils the appearance of the plant, but in this particular case it has altered the appearance entirely, making a new plant quite as characteristic as the old variety, equally as free-blooming, but with flowers snow-white and perfectly double. **1/-** each; **10/6** doz.

PYRETHRUM HYB. ROSEUM NANUM.—A novelty of great beauty with Marguerite-like flowers of a very delicate rosy pink colour. Perfectly hardy, and a most useful plant for the rockery or border; of compact habit, and very free flowering.—This plant will become a great favourite. **1/6** each; **15/-** doz.

VERBASCUM HYBR. MARS (MULLEIN).—Quite a distinct variety of the Mullein, throwing up numerous spikes about 3ft. of a peculiar colour of buff, turning red towards the centre. **1/6** each; **15/-** doz.

CLEMATIS ERECTA FLORE PLENA.—A rare double form of C. erecta, with creamy white flowers on erect stems, 2ft. to 3ft. One of the finest hardy perennials in commerce. **3/6** each; **37/6** doz.

DIANTHUS PLUMARIUS DELICATA.—Novelty of recent introduction, with flowers of exceptionally large size and beautiful form, of a delicate soft pink colour, produced in upright position on stems 12in. to 14in. in height. **9d.** each; **7/6** doz.

DIANTHUS PLUMARIUS GLORIOSA.—One of the best Dianthus recently introduced, with large bright lilac rose flowers on erect stems, 12in. to 14in. **9d.** each; **7/6** doz.

ARTINDALE'S SUPERB STRAIN PRIMULA OBCONICA GIGANTEA GRANDIFLORA.

Seed 1/- to 2/6 per packet.

Plants 3/-, 5/-, 7/6, 10/6, and 15/6 per doz., according to size.

Our A1 Collection of Asters or Michaelmas Daisies, to name, **5/-** doz.; **35/-** 100.

Our A1 Collection of Carnations, Yellow Grounds or Selfs, to name, **7/6** doz.; **50/-** 100.

Our A1 Collection of Early-flowering Chrysanthemums, to name, **3/6** doz.; **25/-** 100.

Our A1 Collection of Cactus, Pompone, Show, Single, Pæony-flowered Dahlias, to name, **5/-** doz.; **35/-** 100.

Our A1 Collection of Delphiniums, to name, **10/6** doz.; **75/-** 100.

Our A1 Collection of Pæonies, to name, **10/6** doz.; **75/-** 100.

Our A1 Collection of Papaver Orientale, to name, **5/-** doz.; **35/-** 100.

Our A1 Collection of Phlox, to name, **5/-** doz.; **35/-** 100.

Our A1 Collection of Pentstemons, to name, **5/-** doz.; **35/-** 100.

Our A1 Collection of Violas, to name, **2/6** doz.; **17/6** 100.

ultural notes of all plants mentioned therein. We have received hundreds of testimonials commenting on the value of this book.

THOMSON'S Celebrated
VINE·PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES

UNRIVALLED FOR ALL PURPOSES
THE RESULT OF MANY YEARS
PRACTICAL EXPERIENCE

SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE.

SOLE MAKERS:
Wm Thomson & Sons, Ltd Clovenfords, N.B.

FOSTER AND PEARSON, LTD.

Estimates on Application for
RANGES,
VINERIES (On Iron Standards),
PEACH HOUSES,
ORCHID HOUSES,
CONSERVATORIES,
IMPROVED FRAMES,
BOILERS,
HEATING APPARATUS,
etc.

"ROBIN HOOD" BOILERS.

Economical in fuel.
No Brickwork setting.
First Cost quickly saved.

To heat from 600 to 5,000 feet of 4-inch piping.
THOUSANDS IN USE.

FOSTER and PEARSON, Ltd., BEESTON, NOTTS.

seeds singly in 2½in. or 3in. pots, using fine moist compost, and imbedding the seeds half an inch deep. The pots should be plunged in a hotbed, placed in a pit, with a night temperature of 65 deg., and covered, until the plants appear, with a sheet of glass, at which time they should be placed near the glass upon a shelf, and be kept carefully watered and syringed until they are sufficiently well rooted to be permanently planted out upon hillocks or ridges of compost. If, however, they are intended for fruiting in pots, they should be shifted into those of 5in. diameter, and be allowed to well fill them with roots before being finally potted.

Training the Growth.

Of modes in training, the single cordon is the most simple and popular, and certainly whether the plants are fruited in pots or planted out, it is the best method to adopt for early crops. In carrying it into practice upon trellises, the plants are planted 2ft. apart, and each leading growth is trained up the trellis, and not stopped until it reaches nearly to the top. Enough of the laterals are secured to clothe the trellis without crowding the leaves, and the remainder are rubbed out as soon as visible. The laterals are stopped at one leaf beyond the fruit, and the sub-laterals at one leaf. Three fruits to each plant is a fair crop if fruit of the best quality is required, and in order to have the fruits symmetrical and even, those upon each plant should be set at the same time.

When the cordon principle is adopted for plants in frames, the plants should be grown up a ridge running through the centre of the frames, and each one be stopped as soon as it has made two rough leaves. Two shoots should be trained from each plant, one towards the back and the other to the front of the frame, the subsequent treatment being similar to that advised for trellis trained plants. To dwell upon the extension system of training would demand too much space; by that method, however, very heavy crops can be commanded, though the fruit would not ripen in so short a time as in the case with single cordons.

AN EFFECTIVE GROUPING OF SINGLE ASTERS, AT HAMPTON COURT.

Feeding and Watering.

With reference to feeding, far better results are obtained by a discreet use of fertilisers at the time they are most needed than by making use of rich composts, and there is nothing required in this way until the fruit is set, and the roots are pushing through the hillocks or ridges of soil. At this time a moderate addition of warm compost should be given, and the operation be repeated with a light top-dressing of short manure once the roots again appear on the surface. As a stimulant diluted farmyard liquid manure answers admirably, and may be given each time the plants are watered from the time the fruit is set until it has completed its swelling, but failing this, periodical light top-dressings should be given of an approved artificial compound. During the time the plants are growing and developing their fruit, plentiful supplies of water are necessary, but they must be considerably lessened when the fruit is ripening, though the custom sometimes followed of letting the compost get quite dry at this period should not be followed, as the results of such practice are invariably more or less unsatisfactory.

Ventilation, etc.

Other items of management that require special attention are atmospheric moisture and ventilation. Melons, during the greater part of their season of growth, require a fairly moist atmosphere. For early and late crops this moisture should be promoted by damping available surfaces in the morning and afternoon, while mid-season crops, in addition to this, should be syringed overhead when the house is closed early on fine days. During the flowering and fruit ripening periods, syringing must be discontinued, and drier conditions maintained. Great care must be exercised in cold and windy weather in ventilating the structures, but in hot weather air may be freely admitted. While the plants are in blossom a more or less gentle circulation must be promoted both by night and day, and throughout the ripening period this should be still increased, but in each case warm temperatures must be upheld. Suitable artificial temperatures during the season of growth are 60 to 65 deg. by night and 10 deg. higher by day, the latter being increased by sun heat to 85 deg., and at such times allowed to reach, if accompanied with ample moisture, 95 or even 100 deg. after the house is closed for the day.

Melons are liable to diseases known as canker and gum, but skilfully managed plants are seldom attacked. These evils may be readily promoted by the maintenance of low temperature, and excessively moist atmosphere, or by keeping the compost too wet. Soft luxuriant growth caused by very rich compost is very liable to attack. Quicklime rubbed on the affected parts as soon as the malady appears, and kept dry, is the best remedy.

T. Coomber.

Planting Out Melons.—As soon as the roots have worked through the soil in the second pots, the border should be prepared. If there is sufficient bottom heat from hot-water pipes a strong hotbed is not necessary, but a small quantity of fermenting material is useful at the bottom if the pit is large, and the pipes are low. I always prefer something over the pipes, especially for the early crop, when fire heat is so largely used. Over this place a layer of turf cut from an old pasture, then add good loam well chopped up, with a little lime, soot, and bone-meal. Thoroughly mix the whole together, and then place on the turf, which should be grass side down, and make the whole as firm as possible. After this has become warm, say, in a couple of days, the plants should be set out, taking the greatest care of the roots. Keep the temperature from 65 to 75 degrees, rising to 80 degrees with sunshine.—W. A. C.

MID-SEASON POTATOES.

The production of crops of mid-season potatoes has been dealt with on previous occasions in these pages, and the details are well understood by the majority of professional men, and, indeed, also by many amateurs and enthusiastic cottagers. Nevertheless, there are many who do not fully understand the details essential to success, and are anxious to learn and benefit from others of wider experience, and this must be my excuse for once more writing on this subject. As with everything else, so it is with the culture of potatoes, there is a right and a wrong method of procedure, and it is equally as easy to go on the right lines as on the wrong when once these are understood.

POTATO UP-TO-DATE.
One of the most extensively grown maincrop varieties.

Few crops that are cultivated in the kitchen garden are more affected by soil and situation than those of potatoes, not only in relation to the production of high-class tubers, but their quality also. A fairly light soil which has been well worked and contains a fair amount of lime is that which will produce potatoes at their best. Nevertheless, even on the most uncongenial soils it is possible, with careful management, to produce a good crop of first-rate quality. One of the most important rules to observe is that the site should be an open one, the land well drained, and the soil stirred to a good depth during the autumn or winter months. Fortunately, potatoes may be grown successfully on the same plot of ground for many consecutive years, providing, of course, it is properly treated, and the right kind of food incorporated annually. Soot, lime, and stable manure may be used freely. The lime should be spread broadcast after the trenching is completed, while the long manure should be trenched in, and soot should be applied as a dressing two or three times during the growing season.

Overcrowding is a common mistake. Nothing is gained by putting the sets or arranging the rows too closely together. As to the distance, this, of course, must be determined by the varieties one cultivates, but the rows should not be less than 24 inches apart, and the sets from 20 to 24 inches from each other. The time of planting will depend very largely on the locality and altitude, but my experience goes to prove that one had better be rather late than too early, as when the growths are injured, be it ever so little, by frost, the after-results are not as satisfactory as they should be. I consider the month of April is quite early enough for general planting.

A point that is essential to success is the proper preparation of the sets, and it is of the utmost importance that these are laid out singly, either on shallow trays made for the purpose or some other suitable receptacle, and placed in a cool, fairly light place, where a sturdy growth can be formed. Previous to the time for planting the growths should be reduced to the strongest one, as shown in the accompanying illustration. Good trenches should be opened out with a spade, and when the soil is not suitable, and good shapely tubers such as are herewith illustrated are required, some well-decayed leaf-soil should be placed along the trench, and the sets covered with the same material. As far as possible choose fine weather, when the land is in a workable condition for planting.

Immediately the growths appear above the soil the surface ground should be stirred two or three times with the draw hoe. This will not only keep down weed life but do much to encourage and stimulate the growth. When about three inches in height the earthing-up process should be carried out in a careful and practical manner. The large lumps of soil should be well broken up, and sufficient fine soil drawn up on either side to keep the growth in an upright position as long as possible, and also protect the tubers from becoming green. On poor soils it will be sometimes necessary to apply stimulants in the form of some approved patent potato manure, of which there are now many good kinds on the market.

When extra fine exhibition tubers are required, it will be distinctly advantageous to keep the haulm in an upright position by placing a few stakes at regular intervals on either side of the rows, and stretching one or two lines of stout cord on either side from stake to stake. This will have a tendency to keep the ground in a warmer and drier condition, and do much to ward off attacks of disease.

Potatoes should always be lifted immediately the crop is perfected, and especially so on wet, retentive soils, and those varieties which are prone to disease. Should any tubers be required for exhibition, they should be selected immediately they are lifted and placed in boxes and covered with a fine, dry soil, or sand, to prevent the light and air discolouring them. Then place them in a dark dry place until required, when they should be washed, this being done at the last possible moment.

With such a large range of varieties now before us, it is somewhat difficult, especially to the inexperienced, to know which to grow. As with many other subjects, soil and climate have a material influence upon them, and some that do particularly well in some localities are of little value in others, but among those which I favour are May Queen, Duke of York, and King Edward the VII. for early supplies; whilst Windsor Castle, one of the finest potatoes ever raised, though somewhat liable to disease, is an excellent mid-season variety, good for any purpose, whilst such well-known varieties as Up-to-Date, The Factor, and New Guardian are invaluable maincrop varieties. There are many excellent handsome coloured varieties, but these are generally lacking in quality unless on the more favoured soils.

E. Beckett.

Callicarpa purpurea. — The bright purple berries of this Indian shrub remain fresh and effective for a very long time through the autumn and winter months. The flowers, borne in flattened clusters, are quite insignificant, but they are succeeded by berries, which when ripe are about the size of small peas, and of a bright purple colour. This callicarpa is seen at its best when the long willow-like shoots are allowed to develop to their utmost extent, as then the blossoms are borne nearly throughout their length, and when crowded with berries they form a very notable feature. The plant is of easy propagation and culture, and may, during the summer, be grown in the greenhouse.—W. T.

CALCEOLARIAS AND CINERARIAS.

These two subjects are among the most showy, and also, at least in the case of the latter, among the most easily cultivated of spring-flowering plants. Neither are thought quite so much of as they were some twenty to twenty-five years ago, when a good batch of each was to be found in almost every garden. I well remember one or two old gardeners who thought more of these two kinds of plants than anything else during the whole year. At that time the practice was much in vogue of propagating from cuttings, and especially was this the case with the cinerarias, and I daresay there are a few gardeners who still stick to some of the old varieties, and propagate them in this way. By propagating cinerarias from cuttings you certainly know what you will have, but the plants need very careful attention after flowering to get them to produce really good suckers or cuttings from the base, but if these can be induced to break away freely they invariably grow well, and I must say that the best cinerarias I have ever seen were from cuttings. Some of the old named varieties of cinerarias were very fine indeed, the colours were all that one could wish.

POTATO WINDSOR CASTLE.
A valuable midseason garden variety. Tuber reduced in size.

Cinerarias.

A little advance may have been made in the size of the individual flowers, but what is most lacking is the free branching habit of the old florists' cineraria; the plants in my early gardening days were anything from two feet to three and a-half feet in height, and bushy in proportion, when well grown, but nowadays they are thought a good deal of if they carry from two to three dozen blooms, and the tendency with the larger flowering strains is towards still dwarfer habit, and with the heads of bloom quite out of proportion to the size of the pot they have to be cultivated in.

Fortunately the newer stellata type has largely taken the place of the old varieties, and certainly the plants are very much to be preferred for decorative purposes, and not only are they useful as pot plants, but if not grown too soft they are not at all bad subjects for cut flowers, at least where they can be used without having to be packed and kept out of water for any length of time. As cinerarias come into bloom at a time when there is a superabundance of yellow flowers, in the way of narcissus, etc., the effects that can be produced with some of the pale mauves, blues, and French greys are indeed very pleasing.

The cactus-flowered type of Cineraria stellata is a more recent production. In most instances these are somewhat more compact in habit than the original form, but they are none the less beautiful, and in one or two of the strains that I have grown the colours of the flowers are quite distinct, the shades of red or magenta being particularly bright and pleasing.

PROPERLY SPROUTED TUBERS FOR PLANTING.

The cultivation of cinerarias is almost too well understood to be worth mentioning here, but I may add the cooler the treatment given the better generally will be the results; during the heat of summer or early autumn the plants may with advantage be cultivated out of doors, with, of course, a little protection from heavy rains, and if a suitable position can be found for them, with plenty of light, but away from direct sunshine in the middle of the day, it is surprising how well the plants will grow, producing foliage that is firm and leathery, and totally different to the weak, long-stemmed foliage that is produced by the plants when confined in frames to which very little air is given.

This mode of cultivation applies to the early batches intended for specimen plants, and is hardly applicable to later batches sown in June, or thereabouts.

Occasionally cinerarias are used as bedding plants for the early summer, and I have seen very good beds of them at Hampton Court and in the public gardens, Bournemouth. For this purpose seeds may be sown early in January, and by keeping the plants growing steadily they will make quite nice stuff in 48's or small 32's by the end of May, and will be throwing up their flower heads; providing they are not too much root bound at the time of planting out (quite early in June), they will soon lay hold of the soil, and produce quite a pleasing display over a considerable period.

Calceolarias.

The calceolaria has not changed so much as the cineraria during the last quarter of a century, and certainly has not grown in popularity during that time. It is one of the plants that has had to give way to such subjects as the carnation and the various flowering shrubs and bulbs that may be had in flower at about the same time, April and May, as the calceolaria is at its best.

Unlike the cineraria, it is not one of the easiest of plants to grow successfully, and there are some places where it cannot be made to do well, no matter what attention is given, whilst in others the plants seem to grow quite easily. The nature of the loam in which calceolarias are potted has much to do with success or failure, and if this is not of the right nature or texture no treatment, however careful, will induce them to grow satisfactorily.

The treatment of calceolarias is very similar to that of cinerarias, though it is safer to keep them a few degrees cooler, and certainly they should never be placed where they will get direct sunlight, except, of course, during the very depth of winter.

I prefer to pot calceolarias only moderately firm, using loam, with a little well-decayed manure and plenty of silver sand, though if I could get the loam of a sufficiently friable nature I would leave this out. Great care must be taken at all times with the watering, as once the plants become too wet the leaves turn yellow, and they will need a good deal of coaxing back again to health. Fumigations must be regularly given to ward off attacks of green-fly, a pest which is particularly troublesome to the calceolarias.

But with a good cool greenhouse, and given ordinary care, the calceolaria is a subject well worth growing, and a good batch from a properly selected strain is a fine sight.

Thomas Stevenson.

Primula malacoides.—This is one of the many comparatively new species of primula that we have in recent years received from China. It is a delightful subject for greenhouse decoration during the winter, while, when one remembers the great improvement that has been effected in Primula obconica since its introduction, great possibilities may be hoped for in the case of P. malacoides. This last-named belongs to the same section as P. Forbesi, but it is altogether larger and bolder.—W. T.

WELL GROWN PINK CELERY.

CELERY.

There are few vegetables that can be used for so many culinary purposes as celery, and consequently it is in great demand for at least half of the year. Its cultivation, although simple, is somewhat exacting, and generous treatment must be given to the plant from the seed pan to the time it has finished its growth if satisfactory results are to be secured. Too early sowing is often the forerunner of failure, as the plants may prematurely run to seed, while a poor soil and an insufficient supply of moisture to the roots are only productive of small and stringy produce.

Sowing for the Main Crop.

About the middle of March is the best time for this work, and the seeds should be sown in boxes or pans filled with rich, sandy soil, and placed in a temperature of about 55 deg. Cover the surface of the soil until germination of the seed has taken place, when it can be gradually exposed to the air and light.

The main object is to build up sturdy and vigorous plants, which is only obtained by a moderate temperature, exposure to strong light, and a sufficient amount of air. As soon as the plants have commenced their growth a temperature of about 45 to 50 deg. is high enough—or, in other words, the temperature of a comfortable greenhouse or frame.

Pricking Out.

This is an important item, and should not be overlooked or delayed, but carried out when the plants have attained their first rough leaf and are about an inch high, as they very soon draw up with weakly stems. A cool frame should be selected, in a light position, and filled with about 9in. of rich compost; manure from an old mushroom bed is particularly palatable to the celery plant, and will serve to lighten the soil and act as a useful food; this, with loam and sand added in proportion, will give a suitable rooting medium. The seedlings should be pricked out from 5in. to 6in. apart, and afterwards receive a good watering through a fine-rosed can. If the frame is kept rather close and moist for a few days it will greatly assist to establish the plants and encourage fresh growth. This must not be prolonged, however, and air should be soon admitted freely to the frame on every favourable occasion, until the outside conditions will permit of full exposure. A plentiful supply of water must be given to the young stock through all stages of growth.

Planting Out.

For special culture the single-row system is undoubtedly the best; but for good, medium-sized heads, that will keep well and be very serviceable, the double rows are better and give a heavier yield from a given piece of ground. The trenches, if made out 2ft. wide, will permit of the plants being placed at 1ft. apart from row to row, and allow space on each side to develop and for earthing-up and watering purposes. The bottom of the trench should be prepared by mixing with the soil some rich manure, but not rank and offensive—many failures can be attributed to this mistake. By the end of June or early in July the celery will be ready for removal to the final quarters. Previous to transplanting, a thorough watering should be given, which will help in retaining a good ball of earth to each plant. If this is carried out, and the plants have been treated as advised, they will grow away without a check.

Manurial help at intervals, and dustings of soot over the plants, will give vigour and help to keep the celery maggot at bay. White varieties are generally admitted to be more suitable for early crops; the pink and red ones, being somewhat more hardy, and consequently less liable to injury from frost, and they keep better.

C. Flack.

Rhus typhina lacinata.—To those who plant with an eye to colour in autumn, this handsome form of the common "Stags-horn" sumach will come as a welcome addition. It rivals R. Osbecki or R. sinica in the brilliancy of colour that develops in the leaves in autumn; it equals R. sinica in vigour and freedom of growth; while nothing in the whole genus can approach it in the elegance of the compound leafage. The leaves are from 18in. to 24in. in length, and are divided into segments, which are again broken into endless sub-divisions, which assume a pendulous habit, and present in effect a fern-like texture. Like the type, Rhus typhina laciniata succeeds in any good garden soil in a position open to the sun; it thrives freely where the majority of shrubs would fail, and in soil of less than average quality the autumn colours are conspicuously bright.—L. O. V.

BEDDING PLANTS GROWN AS ANNUALS.

Annuals have a rather bad name with some people, the reason usually assigned being that they are weedy in growth and last but a little while in flower. This is certainly not true as a generalisation, and though it undoubtedly is the case with some, there are many others to which it can only be applied when they are very badly grown. Regarding as annuals for our purpose any plants which flower the same year as they are sown, there are many which make very good subjects for bedding, and, if given the same care as other bedding plants, will give quite as good results, and will, moreover, be of greater interest during the summer. We sometimes see annuals dibbled out like cabbage plants on dry beds in hot weather, but, apart from the deplorable aspect such plants present for a week or two, they can never be really satisfactory to anyone who knows the potentialities of the same subjects under good conditions. Let us deal with a few which fulfil the first requirement of a bedding plant, that is, make an effective display for at least a couple of months during the summer.

Two perennials which are best treated as annuals are

Petunias and Verbenas,

and they may be dealt with together, owing to the similarity in their cultivation. We must raise the plants ourselves if we want the best results, the plants usually sold being forced into flower prematurely for market purposes, to the permanent weakening of their growth. Seed should be sown in February or very early in March, and that very thinly, so that the seedlings may be taken out of the seed pan and put into thumb pots with as little disturbance of the roots as possible. If seed is not sown till late in March the plants will not be fully in bloom till the middle of July. Any plants which begin to run before showing signs of breaking out just above the seed leaves should be discarded, as they will never make strong bushy plants, and pinching is not recommended. The compost used should consist of two-thirds turfy loam and one-third leaf-mould, with a liberal addition of sand. The plants should be well rooted in large sixties before being hardened off at the end of May, but should never be allowed to become starved.

There are various forms of the petunia, and though the bedding varieties may make a better colour display, the large-flowered kinds are both more beautiful as florists' flowers and more interesting. Seed of the best strains is as expensive as that of good pansies, and for the same reason. The taller varieties may either be pegged down or supported by sticks, but verbenas should always be pegged down to some extent. The purple and red varieties of verbena are not good in mixture unless there is a good proportion of whites to tone down the effect. The beds chosen for these two flowers should be in a sunny position, with a good depth of rich soil, when the hotter the summer the finer will be the display of blossom.

A plant of smaller, and more delicate growth is the

Phlox Drummondi.

It needs all the care that is given to the preceding, and unless grown to the best possible advantage is not satisfactory. At its best the clear bright colours produce a brilliant effect, which is surpassed by few other annuals. It is seldom a success on a close retentive soil, but requires a light warm soil and a good summer, and if the soil is rich in lime it suits it all the better. It needs a little assistance in the way of pegging down to regulate the growth and keep the whole bed evenly covered, and it also assists to withstand storms, which sometimes make havoc with a bed of this slender plant. Seed of selected colours is recommended in preference to a mixture, as some poor colours are generally contained in the latter.

One of the choicest annuals for bedding is the

Salpiglossis,

the rich colourings of some of the varieties being almost peculiar to this flower, while the delicate pencillings of the corolla tubes are scarcely less so. Plants should be raised as recommended above, and they are worth growing to the best advantage. There is one great thing to be said against them however, and that is, they are capricious, especially in a wet soil, or one which is unduly rich in manurial residue, and, presumably in the grubs which are usually a feature of such soils. Plants often reach the flowering stage, and even flower for some time, and then die off in a single night. A kindly soil in a good position suits them best, and under such conditions there will rarely by any complaint of loss of plants. In any case, however, some plants should always be kept in large pots ready for emergencies. It is possible to peg them down, but they are more effective when supported by short sticks, the flowers having a better chance of displaying themselves in this way.

Alger Petts

(To be continued.)

AN ATTRACTIVE FLOWER BED AT HAMPTON COURT.
Showing the annual Alyssum maritimum used as a carpeting plant under pink begonias and the silvery-leaved. Leucophytum Browni.

CARROTS ALL THE YEAR ROUND.

The old method of making one large sowing of carrots in April is, or should be, in private gardens, obsolete, for, though carrots keep well, the stored roots are not equal in quality to young ones, and the large coarser roots have a good deal of core. Carrots force well, and this should not be overlooked, but my remarks refer to the ordinary methods of culture, as without glass of any kind there is no difficulty in having medium-sized or small, sweet roots all the year round. Unless grown specially for exhibition purposes I do not think the large long roots so useful as those of the intermediate section, and the shorthorn or stump-rooted.

In many gardens the soil is not at all suitable, and the roots often fail, but for an early supply it well repays the cultivator to make up the soil for the earliest sowing. This does not entail much labour; for instance, with heavy clay soil, it is an easy matter to incorporate a liberal quantity of burnt refuse—wood ashes or old fine mortar rubble, and this makes up a suitable compost to which may be added some quick-acting fertiliser. The bed should, in heavy soil, be raised above the general level, and be in an open sunny position; sow an early variety, such as Early Nantes, Parisian Forcing, Sutton's Inimitable Forcing, Carter's Golden Ball, or Long Forcing. Cover the beds with dry litter or bracken in severe weather, but more harm than good is done if the beds are not uncovered in fine weather. I have alluded here to heavy soil, but no matter what kind of soil, if there has been failures in the past, I would advise the above additions freely, and the omission of animal manure for a time. This sowing should be made in February as soon as the ground is workable, and gives the earliest outdoor supply.

A GOOD TYPE OF SHORTHORN CARROT.

No note would be complete that omitted what is now termed intensive culture, but as regards carrots, that is nothing new. I have grown carrots for early supplies under glass for very many years, and the procedure is well known. The seeds are sown in frames on a warm bed of heating material, either in January or February, and the roots mature in March or April. Carrot seeds are longer germinating than those of most other vegetables. Early carrots require a fine, light, and porous soil, and under glass should be near the light and in frames kept close until the seedlings appear, but ventilate daily afterwards to get rid of moisture and secure a sweet atmosphere. Many years ago, when I lived in the north, I forced large quantities of vegetables. Fresh leaves were collected in the autumn, and made up into huge beds early in the year; on these was put a good depth of rich soil that had in the year previous grown such crops as melons, cucumbers, etc.; the carrots were sown, and the gentle warmth from the leaves enabled us to have nice roots in April. No glass was employed, but thatched hurdles were used for cover at night. When sowing under glass care should be taken not to sow carrots too thickly, and it is a good plan to use the thinnings for first supplies.

What may be termed the first general open-air crop should be sown early in March, on an open border in well-cultivated soil, and if in previous years there has been any difficulty in growing carrots, the land should have been thoroughly dressed with lime, soot, and wood ashes or burnt refuse; indeed, to be successful I have frequently well dressed the land, and, after sowing, covered the seeds with a prepared compost of the above description. These roots will give a late spring and early summer supply. Use such varieties as Carter's Golden Ball or Long Forcing; these, though not large, are very early; to follow, Sutton's Early Gem or Veitch's Scarlet Model are excellent.

A later sowing of what may be termed the summer and early autumn carrots should be made late in April or early in May, and for this sowing the land should be deeply dug and prepared in the winter, so that it is in good condition for varieties of the intermediate section. Varieties with small core and flesh of a close texture should be selected, such as Sutton's Red Intermediate, Favourite, Matchless Scarlet, Model, and London Market—an improved type of the excellent Guerande, and one of the finest flavoured roots we have.

G. WYTHES.

(To be continued.)

LATE PEAS.

To maintain a regular supply of late peas special care should be taken in the selection of a site, as well as in the preparation of the soil. Ground that is now occupied with broccoli will make a first-rate position for the peas, providing it is open, and well away from the maincrop peas to prevent mildew from gaining a hold on the foliage. A fine sturdy growth must be encouraged at all stages.

Trenches well prepared as for celery are undoubtedly necessary for this crop. As the ground becomes vacant proceed by taking out trenches, and well breaking up the bottom: over this place a good layer of decayed manure, and on it the best of the moved soil, adding a dressing of soot and a six-inch pot of superphosphate to the ten-yard run. If the soil is of a heavy nature add a dressing of burnt garden refuse ashes, and well mix the whole together before sowing. The trenches, or rows, should be quite eight feet apart, and the surface be left as rough as possible until the sowing time arrives, as the action of the weather will greatly benefit the soil and crop.

Choose a fine day for sowing, and to secure a fine tilth well work the whole length of the trench with a garden fork to make the soil fine right down to the manure; then rake level, and tread the whole firmly. Draw drills ten inches wide, and sow the seeds evenly, allowing enough to permit a partial thinning when the plants are well above the soil, previous to staking. Cover the seeds with a good inch of the finer soil, and finish off the trench three inches lower than the surrounding level. The trench will then act as a channel for the applications of water. Sow at intervals of twelve days from the end of April to the end of June.

After treatment will consist of staking securely against autumnal winds; mulching as soon as the stakes are put in; and top-dressing with decayed manure on soils of a light nature. Watering must have regular attention during dry weather, using liquid manure and clear water alternately.

If this advice is carried out very little trouble will ensue in the way of mildew and thrips. The latest sown peas are at times too full of growth to complete the crop of pods, and it is then a good plan to pinch out the points of growth; indeed, all peas should be pinched or stopped by the middle of September.

Excellent late varieties are Michaelmas, Autocrat, Sturdy, and Selected Gladstone.

GEO. ELLWOOD.

Old Varieties of Melons.—Mr. Coomber does well to call the attention of readers to some of the old varieties, which are perhaps still unsurpassed in point of flavour. I remember seeing Turner's Scarlet Gem growing at Hooton Hall, in Cheshire, in 1872, and for years afterwards this melon was most difficult to beat in the Liverpool district. For many years I grew it in cold frames with satisfactory results in the summer; indeed, it was just the sort for frame growth, not being too strong, and yet cropping freely. Blenheim Orange superseded the Scarlet Gem, as the newcomer was more showy in appearance and good in flavour. Golden Perfection I grew in 1880, and for many years afterwards. This was a handsome melon, having a deep golden skin, well netted, and of excellent flavour. This also was a good frame melon, although there were many spurious and inferior forms of it, due to careless saving of seed. I had no difficulty in saving seed and maintaining a true stock of any variety, and always found them true to name, even though they were saved for twenty years.—E. M.

SALADING.

When we consider the very important part our salad plants play in the daily necessaries of life one feels ashamed to admit that cultivators generally do not give them the attention and consideration they deserve.

Importance of Salads.

Nothing in the kitchen garden department is more important or more easily produced than the material for fresh and inviting salads. This being so, our aim should be to have the very best perfect selection as regards variety, and at all times quickly grown. Our chief object should be to maintain a regular supply of fresh and even quality, never at any time to have too much of one thing, as towards the end of a large batch of plants they get a little old and tough, losing that crisp freshness so much appreciated when on the table, and leading to complaints, which a little more thought would certainly avoid.

CABBAGE LETTUCE GOLDEN BALL (SUTTON'S).

As grown in the University College Gardens, Reading. This illustration is of much interest as evidence of the great value of the ordinary garden frame in the production of supplies of lettuce early in spring.

Looking Ahead.

To maintain a good supply we must be continually on the alert and have plenty of variety, and being prepared to give change whenever necessary, for no good cultivator cares to be asked for what he cannot produce. In meeting such a demand the help of glass plays the most important part, as a regular even temperature is at all times required to secure the best quality, and also quick results. Without glass in winter our efforts would almost be vain, for we remember the excessive damp and uncertainty of our climate. This is why the French system is being so generally taken up by those who thoroughly understand the real value of good salads. The climate of France makes it very difficult indeed for us to compete with French produce, but experience certainly proves that by adopting French methods we obtain greater satisfaction. Many quote the French as the only experts when writing and speaking on salads, but in every good garden, where glass is freely used, a good supply of salading can be and is regularly kept up.

There is now a much greater variety of subjects used than is generally supposed. Cooked vegetables, cold, such as new and old potatoes, sliced, with beetroot and apple; cauliflower, peas, beans, and Brussels sprouts are used. Fresh crisp celery is also used with beetroot. Fruit is often used too, and there are orange, apple, banana, and grape salads, with suitable oil and vinegar dressings. Then the more common subjects, lettuces, endive, chicory, and dandelion, after being bleached; cress, lamb's lettuce, or corn salad, mustard, cucumbers, tomatoes, and radishes, and sometimes the young leaves of sorrel, seedling onions, chives, garlic, and tarragon are used, according to taste.

Winter and Spring Supplies.

For winter and spring supplies good batches of well-grown endive, chicory, and dandelion should be housed in a frost-proof shelter, so that a portion of each can be placed in the mushroom house or under stages in warm houses to bleach, according to demand. Beautifully crisp lettuce is easily produced in pots or boxes on shelves near the glass in houses where there is a fair amount of heat and moisture, and then placed in the warm pits as weather allows, while in the frames radishes, fresh young potatoes, cresses, etc., can be had. The great secret of salad supply is always looking ahead, having strong sturdy young plants ready to put out as soon as an opportunity occurs and weather conditions allow, selecting all the warmest and most sheltered positions of the garden in the early season, and then using cool and moist borders during the heat of summer, again seeking the help of glass as soon as we see the least sign of cold damp nights. Experience in private gardens has taught me that no definite rule can be laid down as to how these salad plants should be produced. Individual taste and common sense must alone decide, according to circumstances, the best method by which the best supply can be maintained. It has also many times appeared to me that more unity is necessary between the garden and the kitchen to meet the ever-increasing demand for making wholesome salads.

Skill in Preparation.

When salads are not what they should be some people blame the grower; others blame those whose duty it is to prepare the salad, and both may be right; but whatever the material used, no matter how good, it is nothing without the dressing. To have this correct great skill is required in the mixing, as the ingredients used are naturally meant to unite with our salad plants in helping to digest the other food materials which the different salads are eaten with. This, I fear, is too often never thought about. There is a direct purpose for all Nature gives in the way of food, and it is we who spoil the proper result by not knowing why and how to use the material. Everything used in the preparation of good salads, if properly mixed, is meant to appetise and to help digest and control the more nourishing parts of the other foods we eat.

T. J. Powell.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

SEASONABLE REMARKS.—The lengthening days and increasing power of the sun render it advisable to have the roof blinds put in order. It is a custom with many to remove the canvas blinds as soon as they may be dispensed with in the autumn; this is advisable discretion, because if the blinds are thoroughly dried before being stored their durability is considerably increased. Where this has been done the blinds should be fixed up as soon as possible, so that they may be ready for use at any moment, either for shading purposes or for use on cold nights to diminish the need of artificial heat. We have copings to protect our blinds.

KINDS OF SHADING.—Considerable difference of opinion exists as to the best methods of shading. Many good judges advocate the old canvas shading, while others, who are equally able to advance an opinion, declare in favour of the lath roller blinds or split bamboo shading. The best quality (painted) lath roller blinds have everything to recommend them from the point of durability. They are also a most excellent covering for the houses in exposed positions during the cold periods of winter. It is really remarkable how much protection they afford, frequently making at least five degrees difference in the temperature of the house protected. I must confess that I am not so much in love with them for the summer use. There is always a very sudden drop in the temperature immediately after they have been let down, and this is caused by the air passing between the blinds and the roof, which cools the glass, and causes a lowering of the temperature inside. I merely point this out so that readers who may have adopted lath blinds for shading may keep an eye on the thermometer, and thus be enabled by the discreet use of the ventilation to guard against any possible ill-effects. Another objection raised against lath blinds is that they have a tendency to produce drawn or weakly growths on cypripediums, odontoglossums, etc. There can be no doubt that where shading is heavily done that is to say, when there is no possibility of the sun scorching the plants, these undesirable effects are produced. The majority of orchids will stand, and are benefited by, any amount of strong light, therefore, where shading is used, when it could well be dispensed with, we can only expect weakly growths and unripened pseudo-bulbs.

CLEANING THE GLASS.—It is desirable before fixing the blinds in position to wash down the outside glass, as even under the most favourable conditions a good deal of dirt becomes deposited on the glass, and as it is advisable at this season of the year to afford all the light possible without the risk of scorching or disfiguring the foliage. —H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

SEED SOWING.—In this most important work every care should be given to ensure success. In most cases the soil necessary will be composed of loam, leaf-mould, and sand, and passed through a fine sieve. If very dry it should be damped over and turned a few times. Whatever receptacles are used they should be well drained by half-filling them with crocks. After they have been filled with soil ready for sowing they should be well watered through a fine-rosed can and allowed to stand for an hour or so. Avoid sowing thickly, as this only tends to make the seedlings weak. Use fine soil for covering the seeds, bearing in mind that the smallest seeds require very little or no covering of soil whatever. When sown cover the pan with a sheet of glass, and shade it to prevent evaporation. Whenever watering is necessary it must be done most carefully. A temperature of 60 degrees is a very suitable one at this time of the year for raising seedlings intended for the greenhouse, although exceptions must be made, as in the case of the different varieties of schizanthus, verbenas, and stocks, which succeed better under cooler conditions. As soon as the seedlings appear the pan or pot should be stood on a shelf close to the glass, and shaded from hot sunshine. The grower must be guided by his requirements and accommodation in the choice of various plants.

ZONAL PELARGONIUMS.—Cuttings intended for winter flowering should be taken now, inserting them singly in small pots, in preference to placing five or six in a 60-size pot. Put them on a shelf near the glass in a cool house to make certain of a sturdy growth from the start. Be sparing with water until roots are formed, and when the plants are growing freely pinch out the points of growth to make the plants grow bushy. Give attention to plants intended for summer flowering as regards potting, etc.

HERBACEOUS CALCEOLARIAS.—Where specimen plants are desired the best examples should be placed in larger pots. Dry cow manure broken up finely and mixed with the potting material will be found very beneficial. Water very carefully, never allowing the plants to become dry. Keep green-fly in check by frequent light fumigations.

PERPETUAL - FLOWERING CARNATIONS.—The earliest batch of cuttings will now be ready for a shift into 54-sized pots; pot moderately firm, using a compost of good loam with a liberal addition of silver sand, and a little leaf-mould. Continue to pot up cuttings which are newly struck. Plants that have attained a height of four or five inches in thumb pots should have their points pinched out. This must be done before the plants are repotted to allow them to recover from the check. The main batch of cuttings should now be put in.—A. Grubb, Porter's Park Gardens.

HARDY FRUITS.

CARE OF YOUNG FRUIT TREES.—Many are the mistakes we make in the cultivation of hardy fruits, but none more serious than the neglect of young fruit trees during the first few years. Many still hesitate to use the knife the first year of planting, forgetting that growth always follows pruning; yet through forgetfulness, established and vigorous trees are in many instances annually over-pruned. Considerable care and attention is necessary to ensure good symmetrical, even-balanced fruit trees of all descriptions. All fruit trees should be pruned the first year of planting, not only to balance the check received at the roots, but also to lay a good foundation, as it will be found almost impossible to train a tree into shape after the first few years. A simple rule is, the weaker the growth the severer should be the pruning; and with small stakes here and there, a few ties, and other little attentions through the growing season, trees of good shape are soon obtained.

LIME FOR FRUIT TREES.—Some idea should always be had of the amount of lime contained in the soil in which fruits are grown. Especially is this necessary in the case of stone fruits, and where it is known that the soil is deficient in lime, now is a very good time to apply it. Slaked lime may be distributed over the surface and lightly forked in, or a good application of superphosphate of lime may be given on the surface and allowed to be carried down by the rains. The latter is an excellent manure for all stone fruit. Where other fruit trees have been heavily manured for several years, finer fruit will be obtained by applying slaked or ground lime only for one season; this will liberate all the food that will be required, and it will sweeten and improve the texture of the soil for some years to come.

STRAWBERRIES.—These luscious fruits, coming first as heralds of the many hardy fruits we have at command, are perhaps anticipated with more eagerness than any other kind; therefore every effort should be made to grow them as near perfection as possible. Many gardeners advocate lightly digging the beds in the autumn, and doubtless this method has its advantages on heavy, bad-working soils, but on good loams or light sandy soils it is much safer, and better results may be obtained by trusting only to the hoe. The beds should now be hoed as soon as the state of the ground permits, working in at the same time some approved fertiliser, such as guano, or a thorough dressing of soot and lime. It is quite a general practice to give soot and lime immediately before laying down the straw just before flowering time, and is quite right as a preventive of slugs; but I doubt whether the crop receives any assistance from the application thus late in the season.

ALPINE STRAWBERRIES.—Seeds of these dainty autumn fruits may now be sown thinly in shallow boxes or pans, and if given a brisk temperature and moderate moisture will soon germinate. When the seedlings are large enough to handle they should be pricked off into boxes and kept in a progressive state. Harden them off and plant in their permanent quarters in June. A partially shaded border should be selected, and the soil be well cultivated and manured. Little after-management will be required, excepting picking off the flower spikes, until the middle of July. Alpine strawberries treated as biennials prove much more satisfactory than do those propagated from layers. —J. Whittle, Cheveney Gardens.

THE KITCHEN GARDEN.

EARLY POTATOES.—To permit of the sets being in a proper condition for planting next month have the seed tubers picked over, and the weakly shoots removed, leaving two or three of the strongest and best-placed ones to grow away. Place the tubers in boxes, with a little leaf-mould between them, and, in order to secure green sturdy growth put them in a cool light position, such as a late peach house would afford. The frame-planted potatoes will now require earthing up or top-dressing. About two inches of mould is ample. Select a warm day for the work, as a certain amount of exposure has to take place.

ONIONS.—The sowing forming the main crop may be made at any time from now on whenever the ground is dry enough. Well-manured and deeply stirred positions are necessary for this deeply-rooting plant. A site that has carried celery is good, having been broken up and sweetened by exposure to the air. Before sowing give the ground a dusting of soot, lightly fork it in, and tread firmly. Draw the drills one foot apart. Sow the seeds evenly, and not too thickly, and after covering them leave a firm, even surface to the bed by treading it again and lightly raking. Where the onion maggot is troublesome, and, indeed, in any case, the system of raising the onion crop under glass in boxes has much to recommend it. If it is decided to treat the crop in this way treat as recommended in the last calendar notes, only transfer the young plants direct to the outside bed.

PARSNIPS.—These require a long season of growth, and whenever the weather is suitable make the main sowing. The ground should be rich, and, if possible, trenched to the roots to run easily down. Allow eighteen inches from row to row, and sow a good dusting of wood ashes in the drills with the seed to give vigour to the young plants during their early growth. Hollow Crown and Student are, if saved from good stocks, two of the best varieties. If a quantity of early roots are wanted sow a few drills of the turnip-rooted variety.

ASPARAGUS BEDS.—If lights can be spared and set on a framework over one or two of the main outside beds, and one or two waterings with warm water are given, with a dressing of nitrate of soda every other week, asparagus will be considerably forwarded, and, to some extent, the lifting of plants for forcing inside will be obviated. —C. Flack, Cholmondeley Castle Gardens.

FORMATION OF LAWNS AND GREENS FROM SEED.

It is understood that if a good turf, composed of grasses suitable to the soil and natural conditions, and free from weeds, is obtainable, this is the right thing to employ in the making of new lawns and greens. Such turf, however, is rarely available. The fine, close, grassy turf from the sandy seashore only languishes and dies on our heavy soil inland, and the turf from the heavy medium quickly disappears when placed on soil of a sandy formation. Much might be done to preserve the vigour in the seashore turf by providing a sandy soil for it, and employing kainit as a topdressing several times throughout the year, but this would, in some instances, entail a considerable outlay in finding the sandy soil, and close observation to know when to apply the kainit.

Under these circumstances the simple and much more economical method of sowing down lawns and greens with seeds is now generally adopted in preference to turfing, and the results, when the preparation of the ground and selection and sowing of seeds has been carried out on rational lines, have been everything that could be desired. To secure a good seed-bed the ground should be prepared in autumn or early winter, and left rough on the surface for the frost and air to bring it into fine condition by spring. If the land has been under tillage for some years, and is known to be free from the seeds of bad weeds, the proper levelling and solidifying should be taken in hand after the middle of April. By breaking up the surface with a fork, treading with the heels, and raking, a fine tilth and level surface will be obtained. A roller is useless for solidifying, even although we sometimes see it used, as it does not always find the soft parts. Before sowing, draw a wooden rake lengthways over the ground, about half an inch deep, sow the seed, draw the same rake crossways, and roll. This done, apply a dressing of slaked lime which has been passed through a quarter-inch sieve, at the rate of 4oz. to the square yard. Allow 1lb. of seeds of guaranteed purity, to 30 square yards, and of a mixture to suit soil and situation. I have sometimes seen 1lb. advised for 60 square yards, but this quantity is far too small if a good turf is wanted quickly. Moreover, thin sowings always leave bare spaces for the seeds of weeds to find a home.

In the neighbourhood of woods birds are usually troublesome in picking up the seeds. To prevent depredations of this kind nothing is better than a fairly thick coating of short grass from the mowing machine. It not only prevents the birds from taking the seeds, but it keeps the surface of the soil moist, thereby aiding the germination of the seed, and it eventually decays and feeds the young grasses. Short grass for this purpose should be free from seeds of weeds; otherwise it is likely to prove more harm than good.

In dealing with ground which has not been tilled for a number of years, it is often advisable to fallow it all through the summer, in order to thoroughly clear it of the seeds of obnoxious plants. It should be treated in the same way as that which is to be sown down in April; but, instead of sowing it then, the surface should be left level, and carefully hoed about half an inch deep and raked about once a fortnight until the middle of August. Immediately the soil is moist after this date it should be sown down on the same lines as for April sowing. The end of August is undoubtedly the best period of the year for sowing a lawn. Should climatic conditions be unfavourable for the growth of the young grasses of spring or autumn sowings, a dressing of sulphate of ammonia, at the rate of 1½oz. to the square yard, will prove an excellent stimulant. Once the grasses are in full growth they should be allowed to attain a height of about 4in., and then be cut down with a scythe, and afterwards kept under with the mowing machine. If at any time they show a lack of vitality, an excellent plan of resuscitating lawns will be found in removing the box from the machine and allowing the short grass to fall on the ground. When this method is in practice it is advisable to mow the ground twice weekly, so that the mowings shall be short.

New lawns and greens formed from seeds and maintained in accordance with the foregoing suggestions, cannot fail to give the most satisfactory results under normal conditions, and be pleasant playgrounds to those employing them.

HIBERNIA.

ANTIRRHINUMS AND PENTSTEMONS.

Few garden flowers of their class are so valuable for the large garden as the antirrhinum and pentstemon, while in the small place of the amateur they afford a ready means of rendering his garden bright and well supplied with flowers. For garden decoration, especially in broad masses and lines, they are invaluable, and they supply fine spikes of bloom for cutting for the adornment of the home, although, without a little care, the pentstemon does not retain its freshness long when in a cut state.

Recent Improvements.

Within recent times both flowers have been greatly improved, so that by their aid many brilliant effects can be produced in the garden, and this has been taken advantage of by skilled gardeners, with the result that a considerable number of large gardens owe much of their charm to the use of these flowers in autumn.

Those who, for example, have seen the antirrhinums and pentstemons grown in the princely gardens of Hopetoun House, where broad lines and masses, in contrasting or harmonising colours are employed with the most brilliant effect, will agree that the writer is not overstating the value of these flowers.

Similarly, many a small garden is beautified by these plants, which, in groups or in small beds, are of much effect, and are highly appreciated by all who see them.

The antirrhinum, with its quaintly shaped flowers, presents many features of beauty all its own. The old striped varieties, so long held in the highest esteem by the exhibitor, are practically little cultivated, their place as garden flowers having been taken by self-coloured varieties or those with harmonising or contrasting tints, many of which are exquisite. Seed selection has resulted in the production of varieties, which come to within 10 per cent. of variation in the case of seedlings, and this has practically revolutionised the cultivation of these naturally variable plants, while the colours have been improved, so that the antirrhinum is a much more valuable flower than before.

The pentstemon has been improved also, and the small-flowered named varieties, which were once exhibited with pride as examples of the best of the time, are now relegated to obscurity. The day of the named pentstemon, say for special objects, has greatly waned, and for garden purposes, where mixed varieties will answer, reliance is placed upon seedlings. We are, however, within measurable distance of a race of garden pentstemons which will come almost as true from seeds as the antirrhinums of the present day, and when that time arrives we shall no longer require to trust to cuttings for the maintenance of a stock of certain colours. So far as size and beauty of bloom are concerned the modern pentstemon is a flower far in advance of its predecessor. Greater use, too, is being made of the pretty P. Newberry Gem, said to be P. Hartwegi of botanists, and its sports and seedlings, for the production of new and beautiful varieties.

Propagation by Seeds.

Antirrhinums and pentstemons are easily raised from seeds, and, if sown in spring, both will flower the same autumn, the antirrhinum, in particular, being extremely valuable for autumn bloom if sown at that time. They may also be sown in August for blooming early in the following year, but this necessitates almost as much labour as cuttings, and spring sowing is to be recommended. February and early in March are the best times for this, the seeds being sown under glass in a soil composed of about two parts loam and half a part each of leaf-soil and sand put through a sieve.

The seeds should be sown very thinly, and slightly covered with very fine soil, watering gently afterwards. They can also be sown in a slight hotbed, and in both cases a temperature of about 50 to 60 degrees should be maintained, although one slightly lower will do. In autumn, seeds can be sown in drills in the open in August, wintering the young plants in frames in cold districts.

As soon as the seedlings appear, they should have plenty of air, and when they have made two of their rough, or true leaves, they must be pricked out about three inches apart, and, after growing on, be hardened off to be planted out about fourteen or fifteen inches apart for the tall varieties, ten or twelve inches for the intermediate, and eight or nine inches for the dwarf varieties.

The soil for the antirrhinums may be lighter than for the pentstemons, but they will flourish in the same beds or borders in a good loam, well manured with old manure. A rich soil answers for the pentstemons, and affords finer spikes.

Propagation by Cuttings.

Cuttings of the lower shoots may be made in the end of September or early in October, choosing growths about three or four inches long, preferably with a "heel," and inserting them in frames, in soil composed of two parts loam and one of sand, with a little sand on the surface. The body of soil ought to be three or four inches deep. The cuttings should be inserted with about a third of their length in the soil, and then watered with a fine-rosed watering pan. The lights should then be put on for a few days, and shaded should the weather be bright. After about a week air may be given. In frosty weather the frame should be covered with a mat during the night, but as much air ought to be given as possible at all times.

The young plants may be put out in May, treating them in the same way as those from seeds.

These fine flowers are simply invaluable, and the splendid varieties offered by leading seedsmen under name should be secured, and sown in good time

S. ARNOTT.

CENTAUREAS AND CHRYSANTHEMUMS.

The annual forms of these two flowers make valuable additions to our summer garden display, and are suitable for beds or borders, besides providing an excellent supply of cut bloom for some considerable time. Some of the varieties are especially useful for bouquets, and all adapt themselves wonderfully well to room decoration. A tall vase of the blue cornflower, tastefully arranged with suitable foliage, is very effective, as also is a dinner table furnished with the sweet sultans.

The same culture applies to both groups, and is simple enough for any amateur to undertake, providing proper attention is given to thinning, staking, etc. A common error which often occurs in the culture of annuals is that too much is left to chance; the plants are allowed to remain in the beds too thickly, when, naturally, they cannot develop properly, and the results are poor.

The ground apportioned to their cultivation should be manured and dug early in the year, and the surface allowed to remain in a rough state until it is required for sowing. The first week in March is an excellent time to make the first sowing if the soil is in good working order. Should it be sticky, then it is better to defer the operation for a few days. The best way to sow the seed is in drills, as thinning and cleaning may be then accomplished easily, and a more regular distribution of seed can be made. Beds should be formed four feet wide, with an eighteen-inch alley between each bed. These will hold four rows, one foot apart, and the outside rows will be six inches from the edges of the bed. By adopting this method of cultivation it will be found that all necessary attention may be easily given, the hoe can be used freely, and thinning done without stepping on the beds.

The operations of thinning must be governed by the height and width the various kinds are likely to attain; thus it will be seen that the cornflowers will require more room than the sweet sultans, and so on. Supporting the plants is a perplexing question with many, and the idea should be to provide sufficient support to keep the plants upright, and at the same time afford it in such a manner that no indications of staking can be seen.

Of the annual cornflowers there are three colours, blue, white, and rose; the blue is the most popular colour, and Emperor William is the best representative of it. This is greatly appreciated for vases and bouquets, and its height is three feet. Centaurea depressa is about twelve inches high, and has blue flowers and grey foliage.

The sweet sultans are a little more difficult to grow than the cornflowers, soil of a calcareous nature being necessary to obtain good results. If the soil is deficient in lime a small quantity of old mortar rubble may be worked in with advantage. A great improvement in sweet sultans has taken place during recent years, and there are some grand varieties on the market. The Bride, white; Bridesmaid, lemon; Bridegroom, pink with a paler centre; and Honeymoon, yellow, have larger blooms and longer stems than the older varieties, and are indispensable for decorations. The colours of the older sorts are white, yellow, and purplish-rose, and there is a variety called Margaritæ, with white flowers.

Among annuals chrysanthemums take a foremost place, and are highly prized for cutting, the varieties of carinatum being exceedingly beautiful. Evening Star, yellow, and Morning Star, with creamy-white petals and a yellow centre, are the results of crossing C. carinatum and C. segetum. C. atro-coccineum has dark scarlet petals, with a yellow inner ring and a dark centre. C. Burridgeanum is another beautiful variety. C. segetum, the corn marigold, is well worth growing, if only for cutting, as the rich yellow of the flowers is very effective. The double white and yellow forms of C. coronarium are undoubtedly handsome and valuable for bedding.

As these are all hardy annuals a sowing may be made in the autumn, when an earlier supply of bloom can be obtained than from the spring sowings.

E. C. Pooley.

NETHER GREEN NURSERIES, SHEFFIELD.

Situation has, as everyone knows, much to do with the chances of success in the pursuit of horticulture, and I imagine no one would select as an ideal spot for a garden a plot of ground right within the boundaries of a large manufacturing centre where a cloud of smoke forms a canopy overhead. One can, however, call to mind many places so situated, where enthusiasm, perseverence, and skill contrive to surmount all obstacles, and achieve success that is the more praiseworthy by reason of the difficulties that are confronted and overcome. Messrs. William Artindale and Son may be cited as a noteworthy example. Their Nether Green Nurseries are but a short distance removed from the great works of the manufacturers of cutlery that have made Sheffield famous throughout the world, but as every show goer is well aware, Messrs. Artindale have for some years past held a foremost position among exhibitors of choice hardy flowers, and many silver cups, gold medals, and first prizes have been won during the past few years at the leading shows in the kingdom. The exhibits of the firm are always worthy of inspection, for not only are they attractively arranged, but invariably contain a number of really good things that are of more than ordinary merit, and are in the most robust state of health.

Hardy plantsmen who chance to be in Sheffield with an hour or two to spare, may use the time to advantage by having a look round the Nether Green Nurseries, for they are well furnished with capital stock, and a number of quite new things are to be seen, the head of the firm and the nursery manager being always on the outlook for anything that is worth acquiring. The nursery stands on a hill, and is divided into convenient quarters by beech hedges, which act as screens or wind breaks. Immediately one enters the gateway a boldly constructed rockery comes into view, and here one may obtain a good idea of the extent and variety of the collection of alpine plants, the choicest and most beautiful of dwarf campanulas, primulas, aubrietias, and androsaces being allotted pockets and niches, which they evidently find comfortable. A fine bit of colour was, at the time of my visit, provided by the new and very interesting little plant introduced by Messrs. Artindale to British gardens under the name of Silene laciniata Purpusi. The very first time I saw this plant exhibited it appealed very strongly to me, and further acquaintance has increased my admiration. The plant may be described as equal in brilliancy to the best coloured forms of Delphinium nudicaule or Lychnis fulgens, light and graceful in form, and free flowering as could be wished, and it has proved itself hardy in the Sheffield Nurseries. Another novelty of great interest to be seen here is Bidens dahlioides, which will without doubt become exceedingly popular; it combines in so marked a degree the qualities that go to make a good border flower, and an excellent subject for vase work or table decoration. There is much in the character and appearance of the plant that reminds one of a very slender and gracefully built single dahlia, while it may also be compared with the cosmos, in some varieties of which a similar shade of purplish-pink may be met. A white form has been raised at Nether Green, and it will probably not be long ere other colours are obtained.

It was quite a surprise to me to find that Messrs. Artindale have a fairly large stock of the remarkable new pure white Delphinium Moerheimi hybrida, a plant that has been regarded by all who have seen it in bloom as a most remarkable development among delphiniums, and a valuable addition to the white varieties. It may here be remarked that the general collection of delphiniums is of superb quality, and does Messrs. Artindale much credit. Phloxes, pyrethrums, hollyhocks, and, in fact, all popular border flowers are well grown in thoroughly representative collections. Big beds of seedling astilbes were flowering, and among them I noticed some delightful satiny and rosy shades of pink that will find many admirers. One of the firm's principal lines is a remarkably fine collection of violas, of which immense quantities are grown and despatched to all parts of the country every year. The general collection numbers about 150 varieties, and over half a million plants are propagated annually. As may be imagined, the beds, when in full bloom, are wondrously attractive, and the people of Sheffield come in throngs, in response to a public invitation given by the firm, to see and admire the glorious array of flowers. Another fine feature of the place is a capital herbaceous border some 150 yards long. This is planted in a bold style, so that the plants are seen to great advantage, and the collection is representative of all that is best in the way of border perennials.

There is an extensive frame ground, wherein propagation is carried on, and the immense quantities of young plants in various stages of development afforded ample evidence that the firm's output is very large. Florist flowers, such as dahlias, pentstemons, auriculas, and carnations are all to be seen, and of good quality. A fine smooth-edged rosy-pink carnation, named La Milo, is one of the most vigorous and free-blooming varieties grown here, and it certainly is a splendid flower. In a range of glass houses a magnificent collection of Primula obconica hybrids constitute a great feature. The flowers are large and shapely, and the range of colours is remarkable.

Messrs. Artindale and Son have also a very big market trade, and for this branch of the business cyclamen, Araucaria excelsa, Nephrolepis todeaoides, and other decorative plants are extensively grown. There is, in fact, at Nether Green something to suit all tastes, and at any time of the year the visitor will find much that is of interest. Their business has of late extended so largely that the firm has found it necessary to acquire more land, and with a view to obtaining soil of a different nature a branch nursery was opened at Boston, Lincolnshire. Here, in the wonderfully free and open soil for which the district is well known, a great many choice subjects are growing with a freedom and vigour that prove to demonstration the wisdom in the choice of this locality. Such things as eremurus, crinums, choice gladioli, and montbretias, as well as Darwin tulips, narcissi, and other bulbs are thriving apace. Iris susiana, I. reticulata, tritomas in about forty varieties, and big beds of hepaticas are valuable stocks that are always in demand. The double form of Gypsophila paniculata is grown in thousands, and herbaceous pyrethrums make rare clumps in this beautifully soft soil. Having inspected the two nurseries, and seen the extent of the collection of hardy plants grown, one is not surprised that Messrs. Artindale and Son publish a very full catalogue. This publication is admirably written, and contains copious notes of value to cultivators, and it is worth the while of anyone interested in hardy plants to secure a copy.

Visitor.

NATIONAL SWEET PEA SOCIETY.

GREAT EXHIBITION AT ROYAL HORTICULTURAL HALL, WESTMINSTER, July 11 and 12.

Now is the best time to join the Society. Minimum Annual Subscription, 5s. Schedules on application. "Sweet Pea Annual" free to Members; 2s. post free to non-members.

CHARLES H. CURTIS, Hon. Sec.
Adelaide Road, Brentford, Middx

NATIONAL VEGETABLE SOCIETY.
Schedules of classes and prizes offered at the Society's
GREAT EXHIBITION OF VEGETABLES
To be held in the
ROYAL HORTICULTURAL HALL, WESTMINSTER.
On August 30th next,
Are now ready, and can be had on application to Hon. Sec., E. G. QUICK, Kelmscott, Harrow View. Wealdstone, Harrow.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, February 14.

Present: Mr. E. A. Bowles, M.A., F.L.S. (in the chair), Sir J. T. D. Lleweyln, Bart., Drs. J. A. Voelcker and O. Stapf, Messrs. A. D. Michael, J. Fraser, W. Cuthbertson, W. Hales, G. Gordon, H. J. Elwes, E. M. Holmes, A. Worsley, R. Hooper Pearson, C. T. Druery, J. Douglas, R. A. Rolfe, and F. J. Chittenden (hon. secretary).

VARIATION IN WHEAT.—Dr. J. A. Voelcker showed grains of wheat from plants grown in pots to which had been added successively larger quantities of magnesium oxide. The examples varied much in appearance, from a plump, starchy-looking grain, where the proportion between the calcium and magnesium present in the soil was low, to a hard-looking grain, where the proportion of the two elements was nearly equal. The nitrogen content varied in the same way, so that it was much higher where the calcium and magnesium content of the soil approached equality than where the calcium content was much in excess of the magnesium. The crop also increased with the increased content of magnesium, until the ratio between calcium and magnesium reached unity. Dr. Voelcker exhibited these specimens to illustrate the influence of the chemical composition of the soil upon the character of a variety. The experiments were carried out in triplicate, and with three different varieties, with similar results. Mr. Elwes expressed himself in agreement with Dr. Voelcker's views as to the influence of soil and climate in changing the characters of wheat, and said that his own experience led him to the belief that many of the supposed varieties of wheat were not fixed, and, probably, could not be fixed.

HYMENOCALLIS MACROSTEPHANA.—Mr. H. J. Elwes submitted flowers of this plant (figured in "Botanical Magazine," t. 6436). This plant is reputed to be a hybrid between Ismene calathina and Hymenocallis speciosa. Both species are now included in the genus Hymenocallis. Mr. Hoog, of Haarlem, some time ago, repeated the cross, and raised the fine form Hymenocallis Daphne, very similar to, but finer than the original H. macrostephana. (See note by Mr. Worsley in "Gardeners' Chronicle," XXIX. (1901), p. 72.)

GALANTHUS.—Mr. Elwes also showed a fine and vigorous form of galanthus, which Mr. Bowles thought to be of hybrid origin, and took for further examination.

DASYLIRION GLAUCOPHYLLUM. — Mr. Holmes showed portions of the fodder plant, to which attention was drawn by Dr. Voelcker at a recent meeting, and was then thought to be a species of Hechtia. He was now able to identify it as Dasylirion glaucophylium.

ACHILLEA MILLEFOLIUM VAR. RUBRA.—Mr. Fraser showed a dark red form of achillea, similar to that often grown in gardens, which he had found growing wild at Killir, Perthshire.

POLYPODIUM VULGARE VAR.—Mr. C. T. Druery presented a frond of a Polypodium very nearly approaching the beautiful variety cornubiense, which had been found growing near Barnstaple, N. Devon.

ODONTIODA x CRAVENIANA.—Mr. R. A. Rolfe submitted flowers of this hybrid, raised by Messrs. Charlesworth, between Cochlioda Noetzliana ♀ from Ecuador, and Odontoglossum cordatum ♂ from Mexico, and remarked upon the great differences between the parents. The hybrid was bright scarlet, like the Cochlioda.

FASCIATED WALLFLOWER.—Mr. E. Knowldin sent from Dublin a fasciated wallflower, which had been found growing on a wall. The specimen broadened out and forked at the top of the stem.

The Horticultural Club.

ANNUAL DINNER.

On Tuesday, the 14th instant, the annual dinner of this club was held at the Hotel Windsor, under the presidency of Sir John Llewelyn, Bart., subsequent to the annual meeting of the Royal Horticultural Society, of which the club represents the social centre.

Prior, also, to the club dinner, the members had the pleasure of listening to a very favourable report of its financial position and success, and also of its utility, not merely in the direction of hospitality, but also in that of instruction through the lectures which follow the monthly dinners and give rise to discussions of great interest. The tables were, as usual, beautifully decorated with flowers, by the courtesy and kindness of Messrs. Veitch; numerous ladies and other guests were present. A capital entertainment, humorous and musical, was interspersed between the toasts, and in every respect the function was a pronounced success.

Sir John Llewelyn proposed the loyal toasts, first to the King and then to the Queen. Queen Alexandra, and the rest of the Royal Family. The Rev. Joseph Jacob, M.A., proposed in happy terms the toast of "The Royal Horticultural Society," introducing reminiscences of the old and disastrous times and comparing the present position therewith, and attributing with great justice the great bulk of the merit to the assiduous services and devotion of the President, Sir Trevor Lawrence, the indefatigable Secretary the Rev. W. Wilks, and the members of the council generally. Mr. Harry J. Veitch responded in felicitous terms. The President proposed the toast of "The Horticultural Club," which, as he pointed out, intended to heartily fulfil its social functions on the occasion of the forthcoming great International Horticultural Meeting of 1912, by extending warm hospitality to the visitors which it would bring to our shores. Mr. P. Rudolph Barr responded, and the health of the Chairman, Sir John Llewelyn, was proposed by Mr. W. A. Bilney, and received with all the honours. To the toast of "The Visitors," including the ladies, proposed by Mr. George Paul, V.M.H., J.P. Mr. Chiappini, a visitor from South Africa, responded in a capital humorous speech, interspersed with interesting reminiscences of South African life and experiences, and coupled with the assurance that in these days Boer and Briton were working over there hand in hand, and in absolutely equal loyalty to the King and the Empire; while he was happy to say that trade, which he was here to develop and encourage between Britain and South Africa, was increasing by leaps and bounds to still further cement the friendship.

Redhill and Reigate Gardeners' Society.

This society held its first meeting of the session in the Penrhyn Hall, Redhill. Mr. W. P. Bound occupied the chair, and a paper on "The Preparation of Plants for Spring Bedding" was read by Mr. T. Judd, The Gardens, Hatchgate, Reading. In a clear and able way, the lecturer dealt with the various items of his subject, giving numerous valuable hints on the raising and propagation of the many plants used for the purpose. A very interesting discussion followed, and a hearty vote of thanks to the lecturer closed a largely attended meeting.

SUNDIALS.

When of elegant design, and selected with due regard to the positions they are to occupy, sun-dials contribute so materially to the interest and attractions of the garden that it is very gratifying to know that they continue to enjoy a high degree of popularity. Well has Maurice Maeterlinck written, "The sun-dial gives a centre and successive name to scattered and nameless joys," for when judiciously placed it gives added beauty to the scene; and properly fixed it possesses utility as a means of adjusting the clocks of the house. We are reminded of the continually increasing interest in these important garden accessories by the welcome appearance on our table of the comprehensive catalogue of sun-dials published by the well-known makers, Messrs. Francis Barker and Son, Sun-dial House, 12, Clerkenwell Road, London. This publication is something more than a catalogue, for it contains much information on the selection, fixing, and reading of sun-dials. Large numbers of sun-dials in various designs and materials are described and illustrated, as are aneroid barometers, and several pocket compasses. In a leaflet accompanying the catalogue is an illustration of the sun-dial and pedestal that were set up by the late Charles Dickens in his garden at Gadshill Place, near Rochester. Messrs. Barker are the owners of the original pedestal and dial, and the fac-similes are made by them, and sold under the designation of the "Charles Dickens" memorial sun-dial. Thus lovers of Dickens may have at a moderate cost a lasting memorial of him and also a charming garden ornament.

Eckford's
Giant SWEET PEAS

The Finest Blooms

that blossom on the Sweet Pea Plant are grown from Eckford's famous seeds. Eckford, the Sweet Pea Specialist, supplies only seeds that are bound to give good results. Eckford's seeds flower brilliantly, give brighter colours, longer stems, larger flowers, and succeed even in the most difficult soils.

ECKFORD'S are the largest retailers of Sweet Peas in the world, and do not supply the trade.

Villa (B) Collection.
24 Splendid varieties, suitable for exhibition, 50 seeds of each, **5/6,** post free for cash.

Villa (C) Collection.
12 Splendid varieties, suitable for exhibition, 50 seeds of each, **2/9,** post free for cash.

Villa (E) Collection.
12 Extra varieties, suitable for exhibition, 25 seeds of each, **1/6,** post free for cash.

A specially written booklet on Sweet Pea Growing given with every order.

For full list of Special Novelties see next week's issue.

FREE. Send a postcard to-day for large Illustrated and Coloured Catalogue. It gives full particulars of all novelties in Sweet Peas for 1911, and contains full list of all flower and vegetable seeds.

HENRY ECKFORD, F.R.H.S.
(Dept. 221), Wem, Shropshire.

OBITUARY.

MR. CHARLES FOSTER.

It is with much sorrow and regret that we have to inform our readers of the untimely death of Mr. Charles Foster, one of the most brilliant of our younger horticulturists. After an illness extending over about four months he passed peacefully away at Ladygrove Farm, Sutton Green, near Guildford, on Thursday, February 16, at the age of forty-three.

Mr. Charles Foster was a native of Lincolnshire, and very early in life he gave evidence of his genius for gardening while working under his father. From home he passed to Bloxholme Hall, where, under the tuition of the late Mr. David Lumsden, the solid foundation of practical horticulture was laid. At the early age of twenty-one years he became head gardener at Dowlais House, Glamorgan, and from thence he passed on to take charge of Mr. Morgan S. Williams' gardens at Abergergym, Glyn Neath, South Wales. In 1897 he won the Sutton Jubilee Cup offered for vegetables at the Shrewsbury Show. After a stay at Doddington Hall, Lincolnshire, Mr. Foster went as head gardener to the Earl of Stradbroke, at Henham Hall, Suffolk, where he added considerably to his experience, his skill, and his reputation. In 1903 Mr. Foster was appointed to the charge of the gardens at University College, Reading, and as Horticultural Instructor at that institution. Here he found his opportunity, and under his care the College gardens became a recognised high school of horticulture.

THE LATE MR. CHARLES FOSTER.

In 1907 Mr. Foster was advanced to the position of Assistant Director in Horticulture at the University College, and in 1909 he was made an Associate of the College, in recognition of his excellent work. It was in 1909 that Lord Northcliffe invited Mr. Foster to organise the Times Experimental Station, at Sutton Green, near Guildford. He entered upon his new duties with great enthusiasm, and in a very short time after taking charge he astonished the good people of Guildford and Woking by placing before them supplies of excellent salading, grown under the system of intensive culture he had so satisfactorily established at Reading. He demonstrated that a judicious modification of "French" gardening could be made to pay, and his experiments with farm and garden crops were just beginning to take shape under his hands when in the autumn of 1910 he was taken ill.

While at Reading Mr. Foster conducted extensive trials of sweet peas for the National Sweet Pea Society in a most successful fashion, and he conducted a similar trial at Sutton Green for the society in 1910, and though he was on new ground he achieved a remarkable success. The members of this society subscribed for and presented to him and Mrs. Foster a valuable canteen of table silver, and this was presented to Mrs. Foster on the occasion of the society's annual meeting in December last, Mr. Foster being too unwell to be present. For the National Vegetable Society he also conducted extensive and useful trials at Sutton Green.

Mr. Foster had a seat upon the Royal Horticultural Society's Fruit and Vegetable Committee; he was hon. secretary for Surrey on behalf of the International Horticultural Exhibition of 1912, and he took a keen interest in the British Gardeners' Association, acting as chairman of council in 1907-8.

The funeral took place at Old Woking Cemetery on Monday, February 20, at three o'clock. A service was held in the Parish Church, and among those present were the chief mourners, Mrs. C. Foster and her two sons, and Mr. Horace J. Wright, and Mr. Alex. Dean, V.M.H., representing the National Vegetable Society; Mr. George Gordon, V.M.H., of the GARDENERS' MAGAZINE; Mr. R. Hooper Pearson, of the "Gardeners' Chronicle"; Mr. F. W. Harvey, of "The Garden"; Mr. Chas. H. Curtis, and Mr. Thos. Steverson, representing the National Sweet Pea Society; Messrs. Giles and Macdonald, from Messrs. Sutton and Sons; Messrs. Drew and Mayes, from the University College Gardens, Reading; Mr. Goatley, Lord Northcliffe's head gardener; Mr. J. Weathers and Mr. R. Frogbrook, from the British Gardeners' Association; Mr. E. F. Hawes, from the Royal Botanic Society; Mr. Owen Thomas, of the R.H.S. Fruit and Vegetable Committee; Mr. S. Mortimer, Mr. Thomas Lewis, Mr. Spencer, the station master at Worplesdon; representatives of the Guildford Gardeners' Association. In addition to numerous floral tributes from relatives and personal friends there were those from Lord and Lady Northcliffe, the National Vegetable Society, the British Gardeners' Association, and the National Sweet Pea Society.

ROYAL INTERNATIONAL HORTICULTURAL EXHIBITION, 1912

Scientific and Education Committee.

A Science and Education Committee has been appointed to promote a congress and advance the scientific section of the exhibition. The chairman of this committee is the Hon. A. H. Dyke Acland, P.C., and Mr. F. J. Chittenden will act as hon. secretary. The members include Mr. E. A. Bowles, M.A., chairman of the Royal Horticultural Society's Scientific Committee; Professor William Bateson, F.R.S., Professor Bayley Balfour, F.R.S., Sir Thomas Elliott, K.C.B., Mr. Anderson Graham, Dr. Bretland Farmer, F.R.S., Mr. George Gordon, V.M.H., Mr. H. Rider Haggard, Sir Everard im Thurn, K.C.M.G., Dr. D. Jackson, F.L.S., Dr. F. Keeble, M.A., Mr. Donald MacDonald, Mr. W. Marshall, V.M.H., Mr. Fred W. Moore, M.A., Mr. Spencer Pickering, F.R.S., Lieut.-Colonel D. Prain, C.I.E., F.R.S., Dr. A. B. Rendle, M.A., B.Sc., Mr. A. H. Rivers, Mr. A. G. L. Rogers, Mr. E. S. Salmon, Mr. Arthur W. Sutton, V.M.H., Professor Somerville, Mr. Harry J. Veitch, V.M.H., Professor S. H. Vines, D.Sc., F.R.S., and the Rev. W. Wilks, M.A. Whilst, therefore, this great exhibition will be one of the chief spectacular attractions of the London season of 1912, the unique opportunities afforded by the presence of experts from every country will be utilised to the fullest extent for the advancement of horticultural science.

PRESENTATION CUPS.

We are informed by the hon. press secretary, Mr. R. Hooper Pearson, that already several valuable cups have been presented for competition at the Royal International Horticultural Exhibition to be held next May at Chelsea. Among the donors are: The Treasurer (Sir Jeremiah Colman, Bart., V.M.H.), the Chairman of the Executive Committee (Mr. J. Gurney Fowler), the Worshipful Company of Fruiterers, the Worshipful Company of Gardeners, the proprietors of the "Gardeners' Chronicle, Messrs. Sander and Sons, St. Albans; Messrs. J. Charlesworth and Co., Haywards Heath; Messrs. Dobbie and Co., Edinburgh; Messrs. Barr and Sons, Covent Garden; and Messrs. George Bunyard and Co., Maidstone. Others wishing to contribute cups should communicate with the hon. secretary, Mr. Edward White, 7, Victoria Street, Westminster; or Mr. Harry J. Veitch, chairman of the Schedule Committee.

TRADE NOTES.

Messrs. Wm. Cooper and Nephews, of Berkhamsted, the proprietors of Cooper's Sheep Dipping Powder, have had the honour of receiving a warrant of appointment as purveyors of Sheep Dip to his Majesty the King. Messrs. Cooper held a similar appointment to King Edward VII.

Messrs. Dickson, Brown, and Tait, Corporation Street, Manchester, have been appointed seedsmen to his Majesty King George V. This firm held a similar honour for many years, during the reigns of her late Majesty Queen Victoria and his Majesty King Edward VII.

BOULTON & PAUL, LTD., HORTICULTURAL BUILDERS, Norwich.

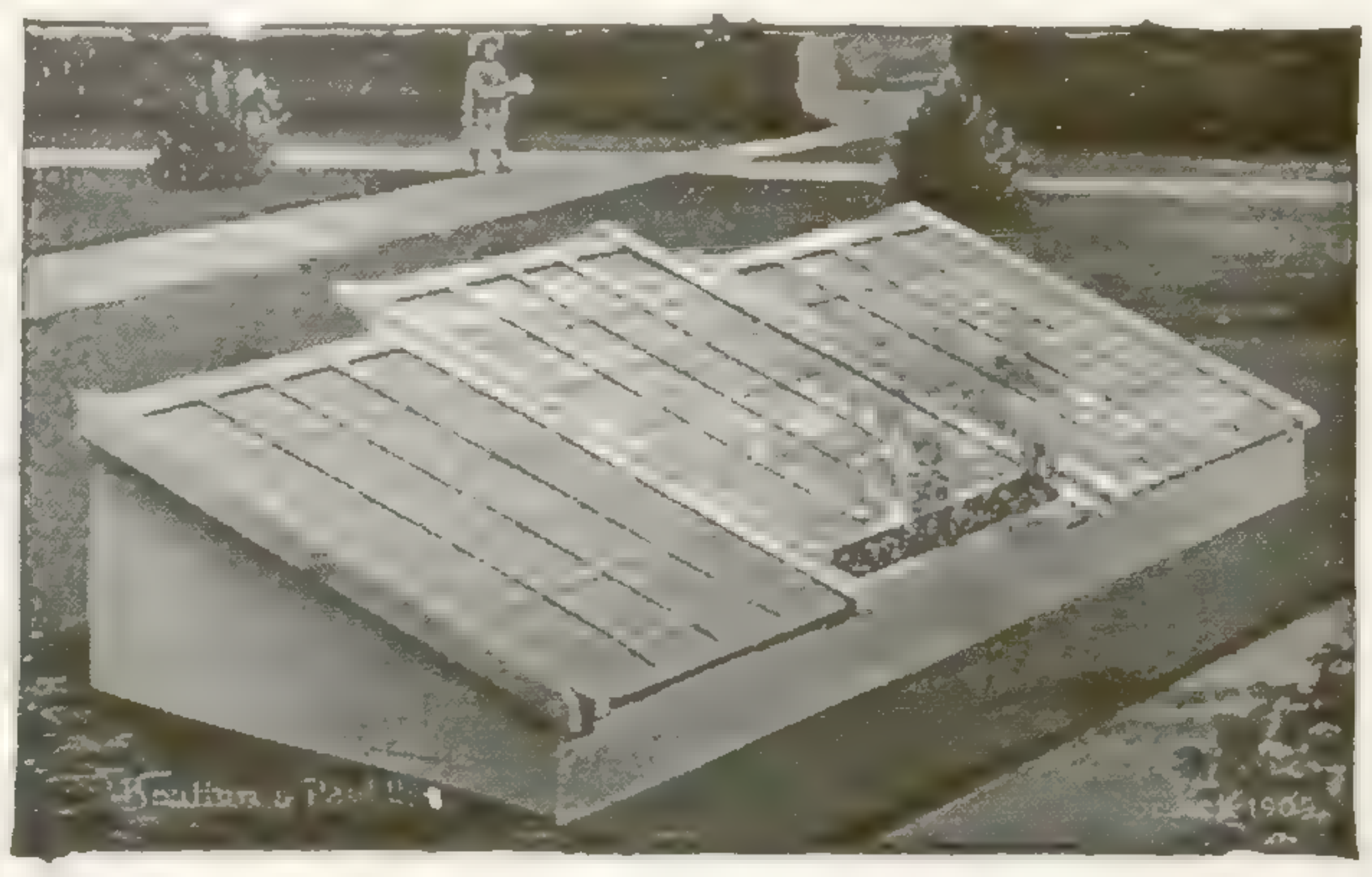
EFFECTIVE, PRACTICAL CONSERVATORIES.

Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of **40**/- value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.



4ft. by 6ft. ... **£2 0 0** | 8ft. by 6ft. ... **3 0 0**
Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft.
Similar to No. 75, with Two Lights... **35/-**

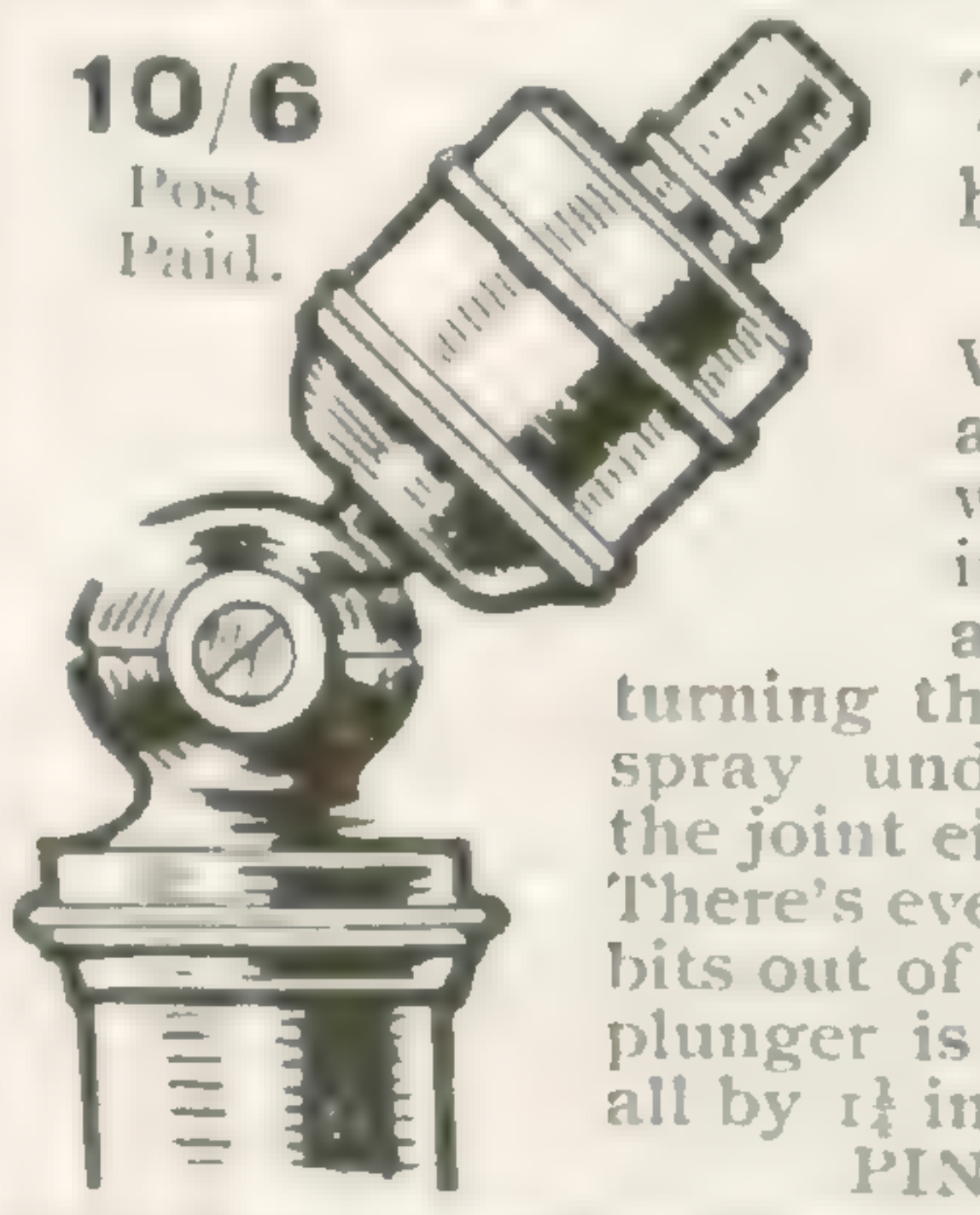
SEND FOR ILLUSTRATED CATALOGUES.

Every part of these Houses is thoroughly well made, painted three coats, GLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.

No. 49A.—Span, 10ft. by 8ft.	... ...	**£11 10 0**
No. 47A.—Lean-to, 10ft. by 7ft.	... ...	**£9 10 0**

All parts are numbered ready for easy re-erection by any handy man.

The manufacture of all Robinson's Preparations is conducted under the strict supervision of a highly trained Laboratory Staff—thus guaranteeing a degree of dependability otherwise unobtainable.



10/6 Post Paid.

The Best Syringe you have ever heard of.

Without removing or adding a single fitment, a rose for watering, or a fine mist-like insecticide spray is immediately obtainable by half turning the Syringe in the hand. To spray under or above foliage, bend the joint either way, up to 45 degrees. There's every precaution taken to keep bits out of the nozzles, and a splendid plunger is fitted. Length, 24 in. over all by 1½ in. diameter.

PINE SPRAY SYRINGE.

WINTER SPRAYING FLUID.

To destroy all Wintering Pests and Fungus Spores on Fruit Trees, Bushes, and Rose Trees, use

CLIFT'S FLUID INSECTICIDE WITH FUNGICIDE.

5 galls., **4/6** gall.; 2 galls., **4/9** gall.; 1 gall., **5/-**; Sample pint, **1/6**

Send for Booklet "Garden Enemies" — and Special Syringe List from —

ROBINSON BROS., LTD., I, WEST BROMWICH.

It is for your benefit

that Clift's Manurial Insecticide is made under the control of highly trained Chemists to assure its unequalled efficiency as a Soil Pest Destroyer, its harmlessness to Plants, and its unvarying standard of quality.

We make all the ingredients ourselves, and know the power of them exactly. From first to last, a permanently retained staff of experienced analytical chemists supervise the manufacture.

In consequence Clift's Manurial Insecticide is the strongest and safest of all soil fumigants, and every pound of powder is dependable.

It is immediately effective, and destroys Wireworms, Leatherjackets, Millipedes, Centipedes, Ants, Slugs, Woodlice, etc., and, in fact, every injurious soil insect.

Use it now. The cost is small—the time and trouble of applying it infinitesimal. The results—clean appetising vegetable crops, and an abundance of fragrant bloom on vigorous, thriving plants.

1 ton, **£9 0 0**	1 cwt., **10/6**	28 lbs., **4/3**
½ ton, **£4 15 0**	½ cwt., **6/6**	7 lb. tin, **2/-**

CLIFT'S MANURIAL INSECTICIDE

KILLS WIREWORMS, LEATHERJACKETS, SLUGS, and in fact every injurious soil insect.

VAPORITE

Ensure sound, healthy plants this season by using **1**lb. of **Vaporite** to [illegible] yds. NOW when digging. No [illegible] trouble with soil [illegible]. [illegible] **Vaporite.** [illegible] **9d.** to **4/6**; casks (carriage paid), ½ cwt., **7/6**; cwt., **11/6.** Of all Seedsmen. Illustrated Booklet, No. [illegible], free.

VAPORITE-STRAWSON CO., Ltd., Dept. [illegible], **Spencer House, South Place, E.C.**

THE ORIGINAL SOIL INSECTICIDE.

FERTILISERS for LAWNS, FRUIT TREES, and VINES, and for GENERAL GARDEN PURPOSES. Also Bone Meals, Vitriolised Raw Bones, Superphosphate, Peruvian Guano, Sulphate of Ammonia, Nitrate of Soda, Nitrate of Lime, Potash Salts, etc. Horticultural Price List on application to

HY. RICHARDSON & COMPANY, Skeldergate Bridge, YORK.

PERGOLAS. Larch Poles at 1d. per foot. Lists Free. PATRICK'S, Otley, Yorks.

OAK CRAMBLES. Peeled and dry at ½d. per foot. PATRICK'S, Otley, Yorks.

ROSE ARCHES. Larch Poles at 1d. per foot. PATRICK'S, Otley, Yorks.

TREE STAKES AND GARDEN RODS. Lists free. PATRICK'S, Otley, Yorks.

MANY YEARS REPUTATION.

EUREKA WEED KILLER

LASTING RESULTS—NO NEW EXPERIMENT.

1/9 TIN FOR 25 GALLONS	**6/-** TIN FOR 100 GALLONS	LARGER SIZES AT LOWER RATES

SOLD BY AGENTS. MANUFACTURERS:— TOMLINSON & HAYWARD LTD LINCOLN. IF ANY DIFFICULTY SENT DIRECT—PAID

PEA TRAINERS, The "Paragon" and "Peatold" (patent), made 4ft., 5ft., and 6ft. high, and any length. Prices from 5s. 6d. per set, carriage paid. Write for leaflet. THE PEA TRAINER CO., Bridge Street, Banbridge.

ANSWERS TO CORRESPONDENTS.

AWARDS TO DAFFODILS.—M. E. J., Cambridge: In the case of ordinary florists' flowers submitted for an award from the Royal Horticultural Society, "three blooms at least must be sent; and in all practicable cases the growing plant will also be required; but cut specimens, if sufficient, will be admissible when the habit of the plant is well known." The R.H.S. Daffodil Committee has, however, a different regulation, which is that, "No Award of Merit will be made to daffodils unless at least eight blooms are shown, and no First Class Certificate unless there are twelve blooms." We believe this regulation was made because, some years ago, flowers of new daffodils secured awards under the Floral Committee's "three bloom" rule, but the varieties were not seen again, or eventually proved so weakly constitutioned that the award was useless. The larger number of daffodil flowers now demanded ensures the culture of a variety for a longer period than if three flowers only were essential.

BOOK ON IVIES.—L. C. J., Malvern: So far as we can remember the only book dealing solely with the ivy and its varieties is "The Ivy—A Monograph," by the late Mr. Shirley Hibberd. It contains numerous coloured and other illustrations, and describes the numerous garden ivies. The price is 5s., post free, from W. H. and L. Collingridge, 148, 149, Aldersgate Street, E.C.

GRUBS IN SOIL.—F. M., Coventry: After examining the sample of soil very carefully for some time we could find no trace of grubs of any kind; there was not even a tiny millepede. If you pick out a few grubs from the soil in which the carnations are growing, and send them to us enclosed in a small tin matchbox, we will do our best to identify them, and advise you what to do to get rid of them. If they are the whitish fat grubs of an otiorhynchus, or vine weevil, you will have some difficulty in getting rid of them.

THE LINDLEY LIBRARY AND THE ROYAL HORTICULTURAL SOCIETY.—F. E., Loughborough: We are not aware that there has ever been a "squabble" in connection with the Lindley Library that is housed at the Royal Horticultural Hall. Mr. Elwes, and others who wish to see the Royal Horticultural Society in possession of a library worthy of its high position, have urged the council at each annual meeting, year after year, to expend money on the purchase of old, as well as new books. Under the original terms of the Lindley Library Trust, the trustees might at any time have removed the books from the custody of the society. As long as that state of uncertainty existed the council never felt justified in spending more than a small sum annually out of the funds of the society, in developing this valuable collection of horticultural and botanical works. The trust deed has at last been modified—the existing trustees have retired, and the Royal Horticultural Society, acting by and through its council, has now been made sole trustee, with the determining voice as to where the books shall be kept. The library having thus become permanently attached to the society, the council have no longer any hesitation in spending the society's funds on the purchase of valuable books; and a committee, consisting of Messrs. H. J. Veitch (chairman), E. A. Bowles, C. Harman Payne, J. T. Bennett-Poe, and Dr. Daydon Jackson, with the treasurer and secretary, ex-officio, has been appointed, to advise and assist the council in the work of strengthening the library.

CHICORY CULTURE.—D. W. W., Brecon: The ground on which chicory is to be grown should be deeply worked and well manured some time before the seeds have to be sown. Sowings should be made during April or May, and it is a good plan to make two or three sowings rather than depend on one large sowing. Draw shallow drills one foot apart, sow thinly and eventually thin out the seedlings to nine inches apart. Beyond frequent hoeings hardly any further attention will be necessary, until in late autumn the roots are lifted for forcing.

DIVIDING HERBACEOUS PHLOXES.—A. L. M., Caterham: The work of dividing and transplanting herbaceous phloxes may be performed at the first suitable opportunity. Weather permitting, when the young growths just appear above the soil surface lift the old stools and break them up into portions consisting of from three to six healthy shoots. These divisions should be from the outer part of the old plant, and the central, hard, and starved portion should be discarded. Everything should be ready so that the divisions may be planted straight away, and then there will be no check. If goodly masses of one colour are needed then place three portions (or young plants) of a variety, two feet apart, in the form of a triangle. With due care in watering, hoeing, and staking, excellent results may be secured this season from the transplanted stock.

GLORIOSA SUPERBA.—M. O., Kington: The present is a very good time at which to pot up the tubers of that fine old stove climber—Gloriosa superba. The size of pot used must depend on the size of the tuber, but for big tubers pots twelve or fifteen inches in diameter will serve. These must be well drained. A very suitable compost consists of two parts rich loam, one part half-decayed leaf-mould, with a little dried sifted manure and a goodly addition of silver sand.

NAMES OF PLANTS.

S. A., West Bromwich.—1, Cœlogyne cristata; 2, Dendrobium nobile.

W. A., Oldham.—1, Phlebodium aureum; 2, Pteris tremula; 3, a form of Polypodium vulgare.

G. T. S., Sidmouth.—1, Drimys Winteri; 2, Leucophyton Browni; 3, Cattleya Trianæ—a very poor variety.

C. B. G., Cambridge.—1, Saintpaulia ionantha; 2, Primula Kewensis; 3, Sparmannia africana; 4, Aloe verrucosa.

A USEFUL SWEET PEA BOOK

In view of the great extension of the interest that is being taken in sweet peas, and the consequent increase in the demand for trustworthy information on the selection of varieties, and the details of successful cultivation, we feel that we shall be doing our readers a service by directing special attention to the assistance "Sweet Peas and their Cultivation" is so well able to render those who are engaged in the culture of these fragrant flowers. The book is not new, as evidenced by the fact that it has reached its second edition; but the publication of the second edition is so recent that it is practically a new book; and the large and continuous demand is evidence that it is fully accomplishing its mission. In the seventeen chapters into which the book is divided, the history and development of sweet peas, the selection of varieties, soil preparation, seeds and seed sowing, propagation by cuttings, staking and tying, growth in pots and tubs, raising new varieties, exhibiting flowers, and fungoid diseases and insect pests are fully dealt with. The price of "Sweet Peas and their Cultivation" is 1s. 6d. net, and may be and L. Collingridge, 148 and 149, Aldersgate obtained from the publishers, Messrs. W. H. Street, London, E.C., post free, 1s. 8d.

FORTHCOMING ENGAGEMENTS.

SATURDAY, February 25.—British Gardeners' Association (London Branch): Bohemian Concert, Carr's Restaurant, Strand, W.C., 7.30 p.m.

TUESDAY, February 28.—Royal Horticultural Society. Committees meet at 12 o'clock; Lecture at 3 p.m. on "Recent Works in Seed Selection," by Mr. G. F. Scott-Elliott, M.A. (Masters' Lecturer for 1911); Scientific Committee at 4 o'clock. National Hardy Plant Society.—Meeting of the Executive Committee, 5 p.m., and Meeting of Council, 6 p.m., at Hotel Windsor, Westminster, S.W.

FRIDAY, March 3.—Gardeners' Royal Benevolent Institution (Liverpool Auxiliary) Concert, at Bear's Paw, Liverpool.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.
Height above sea-level, 150 feet.

Date. 1911. February 12 to February 18.	Sunshine.	Temperature of the Air.			
		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Feb. 12—Sunday	5 48	34	32	45	28
,, 13—Monday	—	37	36	45	34
,, 14—Tuesday......	5 54	30	29	45	27
,, 15—Wednesday..	6 6	44	43	49	39
,, 16—Thursday....	—	45	44	51	35
,, 17—Friday........	5 0	48	45	54	45
,, 18—Saturday.....	0 6	50	49	54	47
Means	(total) 22 54	41	39	49	36

Date. 1911. February 12 to February 18.	Rain.	Temperature of the Soil at 9 a.m.			Lowest Temperature on Grass.
		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
Feb. 12—Sunday	trace	36	37	40	21
,, 13—Monday	—	36	37	40	32
,, 14—Tuesday......	0·06	3[illegible]	37	40	18
,, 15—Wednesday..	0·04	37	37	40	35
,, 16—Thursday....	trace	39	38	40	26
,, 17—Friday........	trace	41	39	40	43
,, 18—Saturday....	0·15	43	40	41	42
Means ...	(total) 0·25	38	38	40	31

CONTENTS.

PAGE
An Avenue of Yews and Acers 141
Antirrhinums and Pentstemons 155
A Simply-arranged Rose Garden 143
Bedding Plants Grown as Annuals 151
Calceolarias and Cinerarias 149
Campanulas and Columbines 141
Carrots all the year round 152
Celery 150
Formation of Lawns and Greens from Seed ... 155
Mid-season Potatoes 148
Notes of the Week 139
Primulas and Cyclamens 145
Salading 153
Stocks and Asters 146
The Tomato in Scotland 143
Tuberous Begonias and Gloxinias 142
Two Good New Sweet Peas 144
Work for the Week 154

HAVE YOU A GARDEN?

If so Don't Risk Catching Cold when you can avoid doing so by wearing our celebrated "G" BRAND GRAINED CLOGS Lined with Fine White Felt Only 4/6 Postage Paid. Any size, Men's or Women's, all ready for posting off.

Our No. 688 in List.

Note.—All sizes are as ordinary Boots. If you forget your size draw a pencil round your stocking foot and send to us. THE GARDEN BOOT WAREHOUSE, 6, Wellington Street, GLASGOW.

PROTECT YOUR GARDENS.—I DO NOT REQUIRE PAYMENT UNTIL YOU HAVE SEEN AND APPROVED OF THE NETTING. Netting, good strong, stout, small mesh, will not rot. THE VERY BEST, as supplied to the ROYAL GARDENS by ME, 25yds. by 1yd., 1s.; by 2yds., 2s.; by 3yds., 3s., and so on; any length or width supplied. Orders over 5s. car. paid. List and samples free. Commoner and tender netting, as sold by others, 60 sq. yds. for 1s. H. J. GASSON, Net Works, Rye. Est. 126 years.

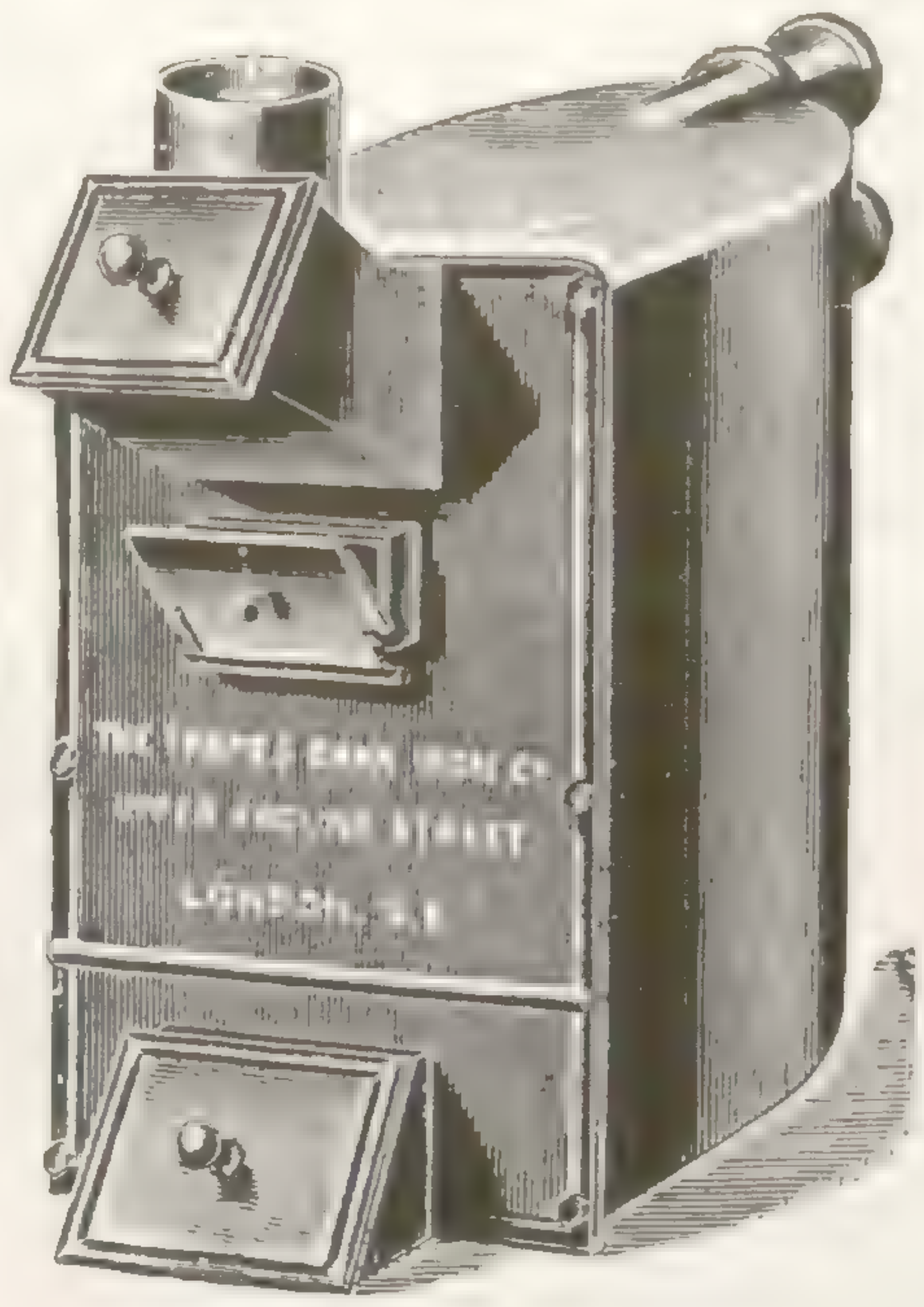
WATSON'S LAWN SAND.
(The Only Original.)
Destroys Daisies, Plantains, Dandelions, &c., and at same time Invigorates the Grass.
34/- per cwt.; 56lb. Kegs, 18/-; 28lb. Tins, 9/6.
Canisters, 5/-, 2/6, and 1/-.
Please see that you get the genuine article.
Sold by Seedsmen and Nurserymen.
A. J. BARBOUR & Co., 8, Upper Fountaine St., LEEDS

'Phone: Hop. 763.

When next a Small Boiler you require

TRY

THE HEEL



NONE TO BEAT IT.

THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.

4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

EPPS'S SELECTED PEAT

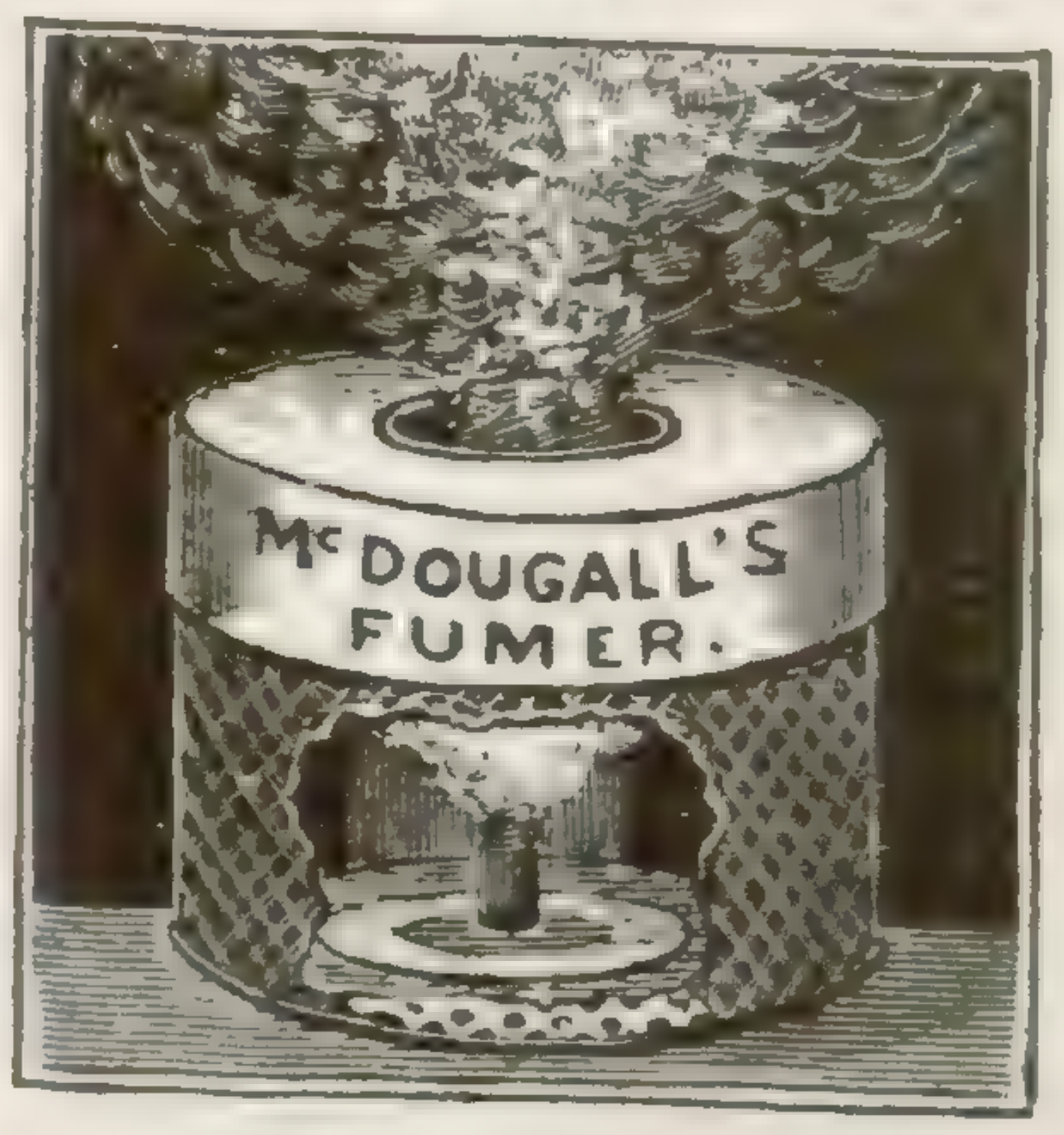
For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to
EPPS & CO., Ringwood, HANTS.

FUMIGATE
WITH



Mc.DOUGALL'S "FUMER"

NO SPIRIT OR LIQUID POISON.
READY FOR USE. CHEAP & HANDY.

GREAT REDUCTION IN PRICES

Mc.DOUGALL'S Celebrated "SHEETS" & "FUMERS."

Sold by NURSERYMEN, SEEDSMEN, & FLORISTS THROUGHOUT THE WORLD.

MC.DOUGALL BROS., MANCHESTER.

Fruit Pergola as recently erected.

Have a Fruit Pergola this Summer!

Charming effects and excellent results can be obtained by training fruit trees on our improved Arched Espaliers. Order now, and get your fruit trees planted in good time.

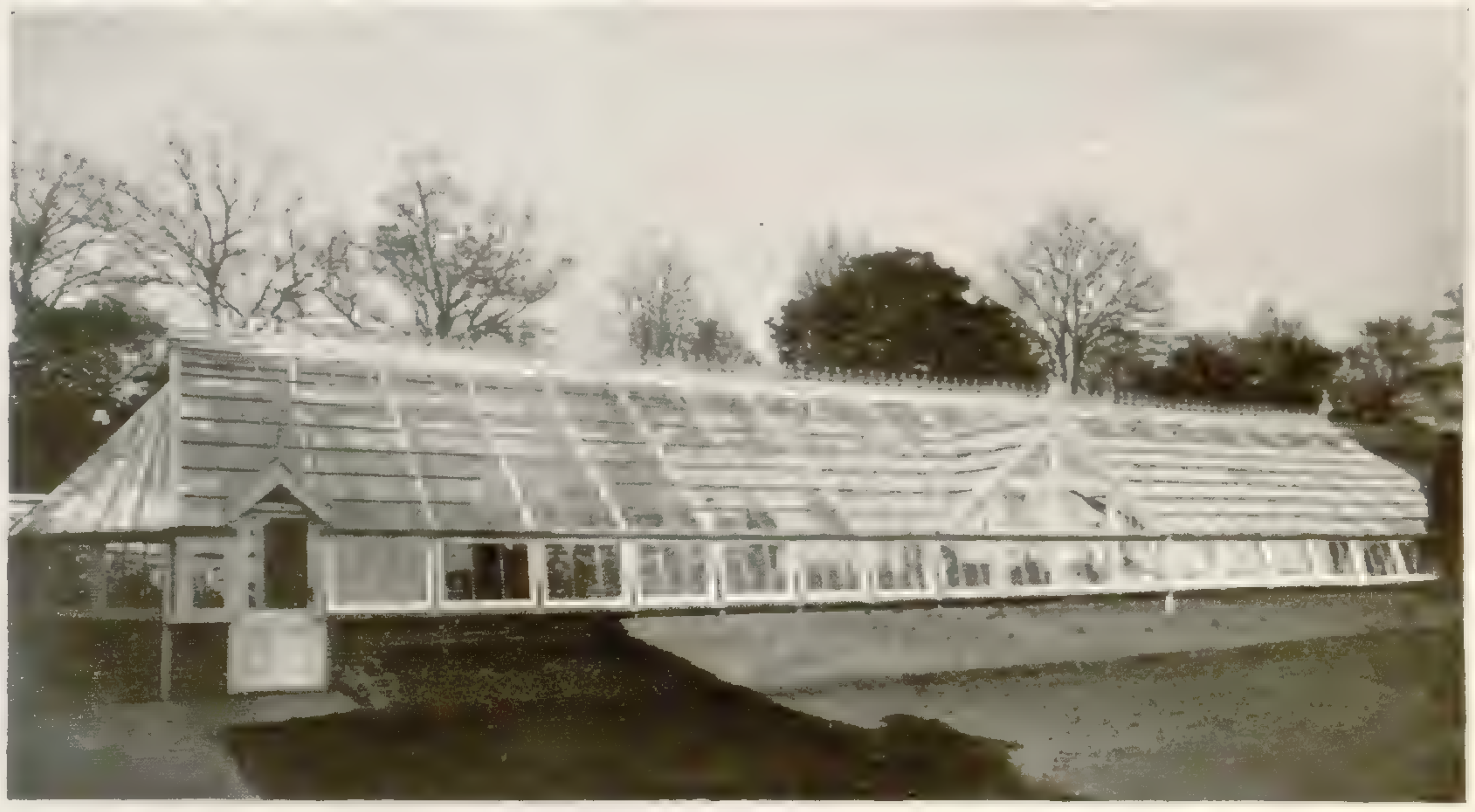
No. 103 Arched Espalier, 8ft. high, 5ft. wide, painted, 9/6 per yard.
Cheaper patterns 6/- and 3/- per yard.
Catalogue No. 153A of Espaliers, Rose Trainers, Garden Arches, Pergolas, etc., free.
HUTS FOR THE GARDEN, POTTING SHEDS, FRUIT ROOMS, TOOL HOUSES, ETC

BOULTON & PAUL, Ltd., Specialists, NORWICH.

Glaze your Greenhouses and Vineries with

ZINC BAR DRY-GLAZING.

No paint or putty ever required. No leaks. No breakages from expansion or contraction. No drip from condensation. Breakages by accident easily repaired. All woodwork covered. Cheap, Durable, and Efficient.



Range of Plant and Peach Houses erected for J. T. Bond, Esq., Mannamead, Plymouth.

Write for Testimonials and Price List,

SAUNDERS (F.R.H.S.) & BISS,

Horticultural Builders and Heating Engineers . . . **EXETER.**

"Horse Shoe" Boilers

Are the most ingenious Fuel & Labour Savers invented. Sale approaching 30,000

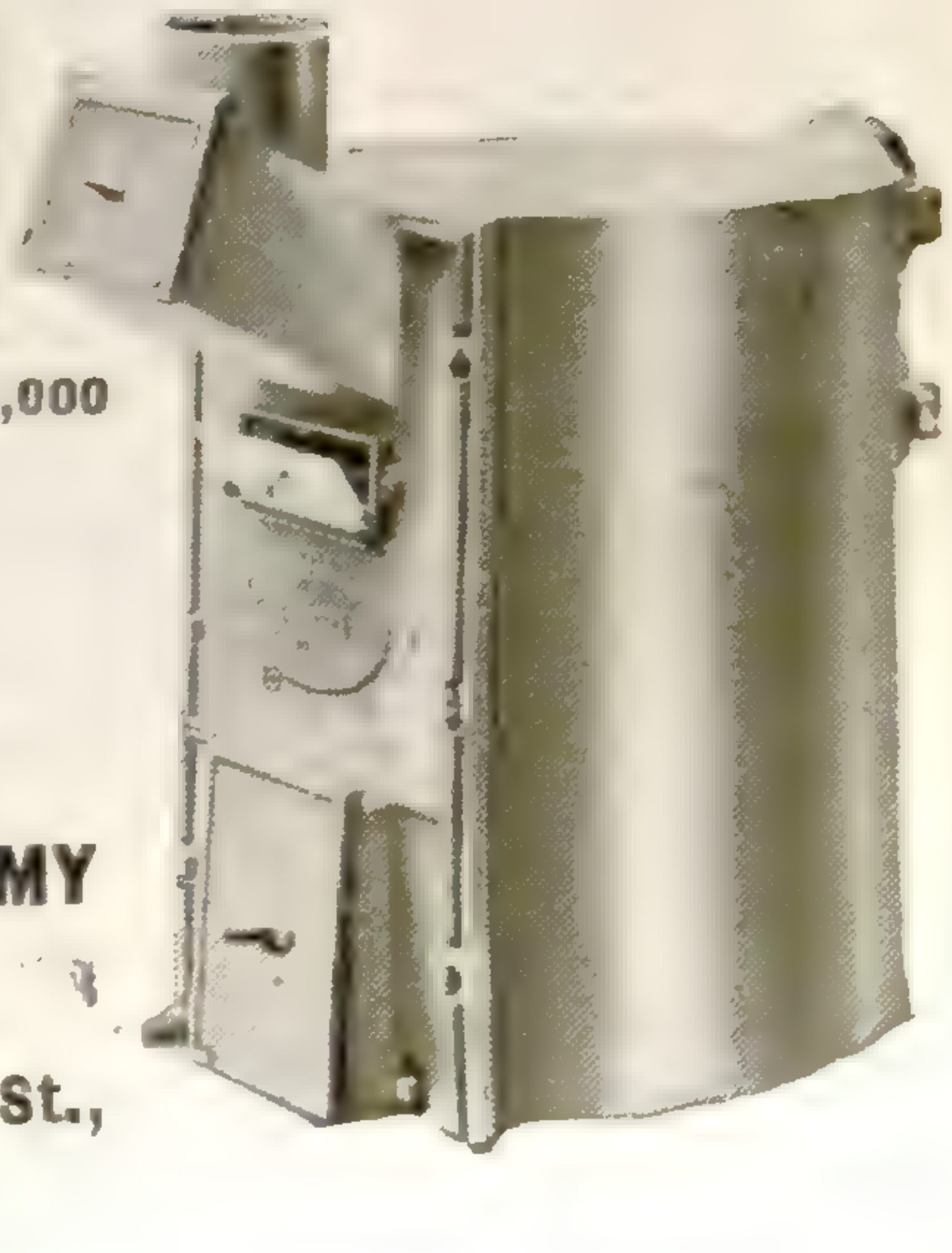
Now Working in the Gardens of:—
Cumberland Lodge, Windsor Park (H.R.H. Prince Christian).
Osborne Cottage, I. of Wight ... (H.R.H. Princess Beatrice).
Royal Botanic Society... ... ... and in thousands of Private and Public Gardens throughout the World.

No.	Actual Power.	£	s.	d.
1	50 ft. 4 in. Pipe	2	12	6
1A	70 ft. ,, ,, ...	3	5	0
2	100 ft. ,, ,, ...	4	0	0
2A	150 ft. ,, ,, ...	4	5	0
3	250 ft. ,, ,, ...	5	15	0

Ask for Book No. 5, Post Free,

"HOW SHALL I HEAT MY GREENHOUSE?"

CHAS. P. KINNELL & CO., Ltd., 65, 65a, Southwark St., LONDON, S.E.



Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; grapes, peaches, melons, stove and greenhouse plants; four and a-half and eleven years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head of two or three, or good Second) seeks SITUATION; age 29, abstainer; good references; disengaged; married when suited. SAUNDERS, care of Morrell, Holly Bush, Ebstree, Wolverhampton.

LADY LUARD strongly recommends C. RUSHEN as Head Gardener, where two or three are kept; life experience; glass and all other branches; most hard working; leaves through break up of establishment. Write LADY LUARD Witham, Essex.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Closes Hall, Gisburn, Clitheroe

GARDENER (Head Working, where two or more kept); married; age 33; life experience, Inside and Out; 4 years' present situation as Outside Foreman; well recommended by past and present employer. A. BACON, The Gardens, Rickmansworth Park, Herts.

GARDENER (Head Working, where two or more are kept); good all round; can be well recommended; married when suited; age 36. PEARCE, 10, Roxwell Road, Shepherd's Bush.

GARDENER (Head Working), requires SITUATION; experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants; Flower and Kitchen Garden, Hardy Fruit, etc.; good references; married, no family. W. S., 73, Allen Street, Maidstone, Kent.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here 5½ years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working); late with W. H. Herbert, Esq., Coventry, previously Millhouse, Halifax; Vines, Peaches (speciality), Early and Late Forcing, Stove, Greenhouse Plants, Herbaceous Rock Plants, Roses, Flower, Kitchen Garden, general upkeep Land, Stock; 18 years Head; references unimpeachable. LOWE, Wylde Green, Birmingham.

GARDENER (Head Working); married, no family, age 37; life experience in all branches; practical experience with land and stock; good references; disengaged shortly. G. HARE, The Gage Gardens, Little Berkhamsted, Hertford.

GARDENER (Head Working, or good Single-handed); life experience Inside and Out; excellent reference from present place as Head; age 37; married when suited. G. HARDING, 48, St. Albans Road, Dartford, Kent.

GARDENER (Head Working), married, no family; age 36; life experience in all branches, Inside and Out; excellent references; Wife dairy, or house, if required. A., 27, Effingham Road, Reigate, Surrey.

THE RIGHT HON. VISCOUNT HARDINGE highly recommends C. CRADDUCK as HEAD WORKING GARDENER, thoroughly experienced, Inside and Out (age 30); married when suited. Apply C. CRADDUCK, The Gardens, South Park, Penshurst.

GARDENER (Head Working).—Gentleman strongly recommends his foreman, who has been with him for 5½ years; thoroughly understands the cultivation of first-class fruits, flowers, and vegetables, and the general routine of a well-kept garden; married; age 32. STEVENS, The Lodge, Boston House, Brentford, W.

THE RIGHT HON. LORD and LADY JOICEY wish to highly recommend J. M. RICHARDS as GARDENER (Head); 16 years' experience in all Fruit, Vegetable, and Plant Culture; 4 years' present situation as General Foreman; excellent testimonials; age 30; single; disengaged when suited. Apply RICHARDS, Gregynog Gardens, Newtown, Mont.

MR. E. DYSON highly recommends his GARDENER (Second) as Head Working; life experience Vines, Peaches, Melons, Carnations; close two years here; excellent references; age 27. LEONARD, Cherryhinton Hall, Cambridge.

GARDENER (Head or Single-handed); age 30; married; life experience, Inside and Out; excellent character; well recommended. S. GANDY, Ponders Lodge, Margaretting, Essex.

GARDENER (good Single-handed or otherwise); life experience; good all round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (good Single-handed, or with help); life experience in good establishments; married; age 30; excellent references. W. HUSSEY, The Gardens, West Woodhay, Newbury.

GARDENER (Single-handed or otherwise); Glass, Kitchen Garden, and Pleasure Grounds, etc.; willing to make himself useful; good references. MILLER, Albury House, Albury, Guildford, Surrey.

GARDENER (Single-handed, or Second of three or four); age 25; single; good experience Inside and Out; excellent references. A. WHITE, Wood Lodge, Shooter's Hill, Woolwich.

FOREMAN, age 28; experienced in Fruit and Greenhouse Plants, House and Table Decorations; good references; Bothy preferred. A. CARRINGTON, 118, Stowe Street, Lichfield, Staffs.

FOREMAN, Working (Inside); 15 years' practical experience in Cucumbers, Tomatoes, Vines, etc.; excellent references; age 33; married. C. C., 21, Roden, Wellington, Salop.

MANAGER or FOREMAN; life experience in Growing Tomatoes, Cucumbers, Mushrooms, and all kinds of Bedding Plants; age 49; single. C. A., 9, Herbert Street, Chesterton, Cambridge.

MARKET NURSERY MANAGER or FOREMAN; good grower Cucumbers, Tomatoes, Grapes, Carnations, Chrysanthemums; Cucumbers a speciality; married; age 38, excellent testimonials. LEA, The Gardens, Nottage Court, Porthcawl.

FOREMAN or good SECOND (Inside or Inside and Out).—Mr. NAILOR, Handcross Park Gardens, Crawley, Sussex, highly recommends C. CREASEY as above; age 26; 11 years' experience; three years here Inside, excellent references.

GARDENER (Second, where three or four kept, or Single-handed); experienced Inside and Out, chiefly Outside; age 25, single, abstainer. ALLEN, 15, North Road, Southall.

GARDENER (Second of two or three, or Single-handed), Inside and Out, 10 years' experience; all-round work; age 24. FUDGE, 22, Markham Road, Winton, Bournemouth.

GARDENER (Second); thoroughly experienced in Kitchen Garden, Pleasure Grounds, Fruit and Plant Houses, Decorating; age 27, single; three years last situation; excellent testimonials; disengaged. W. W. HARRIS, Cornmeadow, Claines, near Worcester.

UNDER GARDENER, Young Man, seeks SITUATION as above; age 19-20; good refs.; 3 years 9 months last place. C. T. COLESHILL, 37, Wolsey Road, Hampton Hill, Middlesex.

GARDENER (Under, where three or four are kept); Kitchen Garden and Pleasure Grounds, or as required; Single-handed place and Poultry not objected to. 4, Caledonian Road, Chichester, Sussex.

GARDENER (Under, Inside and Out); age 20; five years' experience; 18 months present situation; good references. A. PRIOR, Sandhurst Lodge Gardens, Wellington College Station, Berks.

GARDENER (Under), age 22, seeks SITUATION in Kitchen Garden or Pleasure Grounds; good references. W. LUNNON, Coves End, Bourne End, Bucks.

GARDENER.—Private Working or Market Garden Nursery; grower cucumbers, tomatoes, chrys. (bedding), mushrooms (ridge or flat), vegetables, hardy fruits, budder, grafter, trainer, pruner, raiser rose cuttings; life experience; good references. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER, married, seeks SITUATION; handy man, Indoors or Out; Wife help in house if required. BRISSENDEN, Elsing Hall, E. Dereham.

JOURNEYMAN, Inside and Out, or Outside; age 20; Mr. PYLE, Head Gardener, Wilmington Hall, will be pleased to recommend C. WISEMAN as above; 6 years' experience; good references; Bothy preferred. Tredegar Road, Wilmington, Dartford.

JOURNEYMAN (Inside, or Inside and Out); age 20; five years' practical experience. Mr. ROBERTS, Leysdinam Gardens, Newbridge-on-Wye, Rads., will be pleased to recommend Arthur Jones as above; tall and strong; abstainer.

JOURNEYMAN (Inside) in good establishment; age 19; five years' experience. EMERY, Hylands Park, Chelmsford, Essex.

JOURNEYMAN (Inside) requires SITUATION; age 22; seven years' experience; well recommended. E. READ, Hestercombe Gardens, Taunton, Somerset.

JOURNEYMAN (Inside); Fruit or Plant Houses; six years' experience; well recommended; age 20; South preferred. A. ASHMAN, 8, St. Mark's Road, Hanwell, Middlesex.

JOURNEYMAN (Inside or Inside and Out). WM. WOODHOUSE highly recommends E. JARVIS as above; age 23; 8 years' experience. Bothy preferred. Saxlingham Hall, Norwich.

JOURNEYMAN (Inside or Inside and Out), age 21, requires SITUATION; eight years' experience; well recommended. W. DOWNEY, Lunesdale Gardens, Wellwood, Torquay.

MR. C. BRIDGEMAN, Lucas Grange, Haywards Heath, highly recommends J. BAILEY as JOURNEYMAN Inside or Inside and Out; good experience; age 22. BAILEY, Lucas Grange, Haywards Heath.

YOUNG MAN (20) seeks SITUATION as JOURNEYMAN (Inside); 7 years' experience; well recommended. P. COOPER, Newbold Fields, Chesterfield, Derbyshire.

SITUATION COUPON

To the Advertisement Manager of "The Gardeners' Magazine,"
148 & 149, Aldersgate Street, London, E.C.

For MARCH 4, 1911.

Please Repeat my Advertisement.

Name..

Address..

....

Date..

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

Situations Wanted—*continued.*

GARDEN LABOURER Wants SITUATION; married, no family; well used to outside work; good scythe and spade hand; well recommended; no circulars. W. LING, Loughboro' Road, Kegworth, near Derby.

IMPROVER (19) seeks SITUATION (Inside or Inside and Out); four years' general experience; well recommended by employer, Mrs. Beveridge, Pitfold. Apply, SNELLING, Pitfold Garden, Shottermill, Surrey. No circulars.

IMPROVER (18) seeks SITUATION in good garden; three years in present situation; anxious to learn; good worker. Apply, HEAD GARDENER, Albury Edge, Merstham, Surrey.

IMPROVER (Inside or Inside and Out).—Young Man seeks employment in garden; age 19; 5 years' good reference. L. TYLER, Great Dalby, Melton Mowbray.

IMPROVER (Inside and Out); two years and nine months in last situation; age 18; good references. Apply E. MITCHELL, 4, Carlton Terrace, Dawlish, Devon.

GARDENER'S SON seeks a SITUATION as IMPROVER, Inside and Out; age 20; 2½ years in present situation; excellent character; abstainer; Bothy preferred. Address, AYLING, Moor Edge Gardens, Walton Heath, Epsom.

MR. R. STAWARD, Panshanger, wishes to recommend WALTER MORGAN as IMPROVER (Inside or Out); age 18; three years' experience; Bothy preferred; disengaged. Cole Green, Hertford, Herts.

MR. HY. CHURCH, Raveningham, Norwich, highly recommends F. ALLISON, who has been with him two years in charge of herbaceous borders, walls, etc., to any gardener wanting a reliable and good working man; age 24; 11 years' experience.

GENTLEMAN recommends YOUNG MAN, age 22, as Second of four or five; Inside and Out; 7 years' experience; good reference. Apply T. ROGERS, Michelmersh, Romsey, Hants.

KITCHEN GARDEN or HANDYMAN seeks SITUATION; age 27; well recommended. MACE, The Bothy, Cumberland Lodge, Windsor Park.

ORCHID GROWER requires SITUATION; experience under first-class growers; 10 years present situation; excellent references. Apply, S. BURROUGH, Royal Gardens, Sandringham.

A NORWEGIAN, aged 23 years, seeks a Position in a Horticultural Establishment in or near London. Has had between two and three years' experience. Apply HENNUM, Ljan-by-Kristiania.

YOUNG MAN (20) seeks SITUATION as 3rd, where 4 or 5 are kept; 5 years' experience; good character; prefers Bothy. A. J. C., 10, Office of this Paper.

YOUNG MAN, age 24, seeks SITUATION in Kitchen Garden and Pleasure Grounds; can have good references; disengaged. C. ROLFE, Old School Lane, Lanford, Manningtree, Essex.

YOUNG MAN, age 28, pleasure ground and kitchen garden; willing and obliging; good reference; 2 years' last situation; abstainer; prefers Bothy; country experience; duty if required. H. JENNINGS, 4, Glaskin Road, Well Street, Hackney, London.

YOUNG MAN (19), seeks SITUATION; Inside and Out; three years' experience; strong, willing, well recommended; Bothy preferred; near St. Leonards or Eastbourne preferred. GOULD, Stuckton, Fordingbridge, Hants.

YOUNG MAN, age 22, seeks SITUATION (Inside or Inside and Out); six years' general experience in present situation; excellent character. W. RAYMENT, Mill Road, Royston, Herts.

YOUNG MAN, 20, seeks SITUATION in garden; wishes to improve; Bothy preferred; abstainer; references can be had. A. MARTIN, High Street, Ramsbury, Wilts.

Situations Vacant.

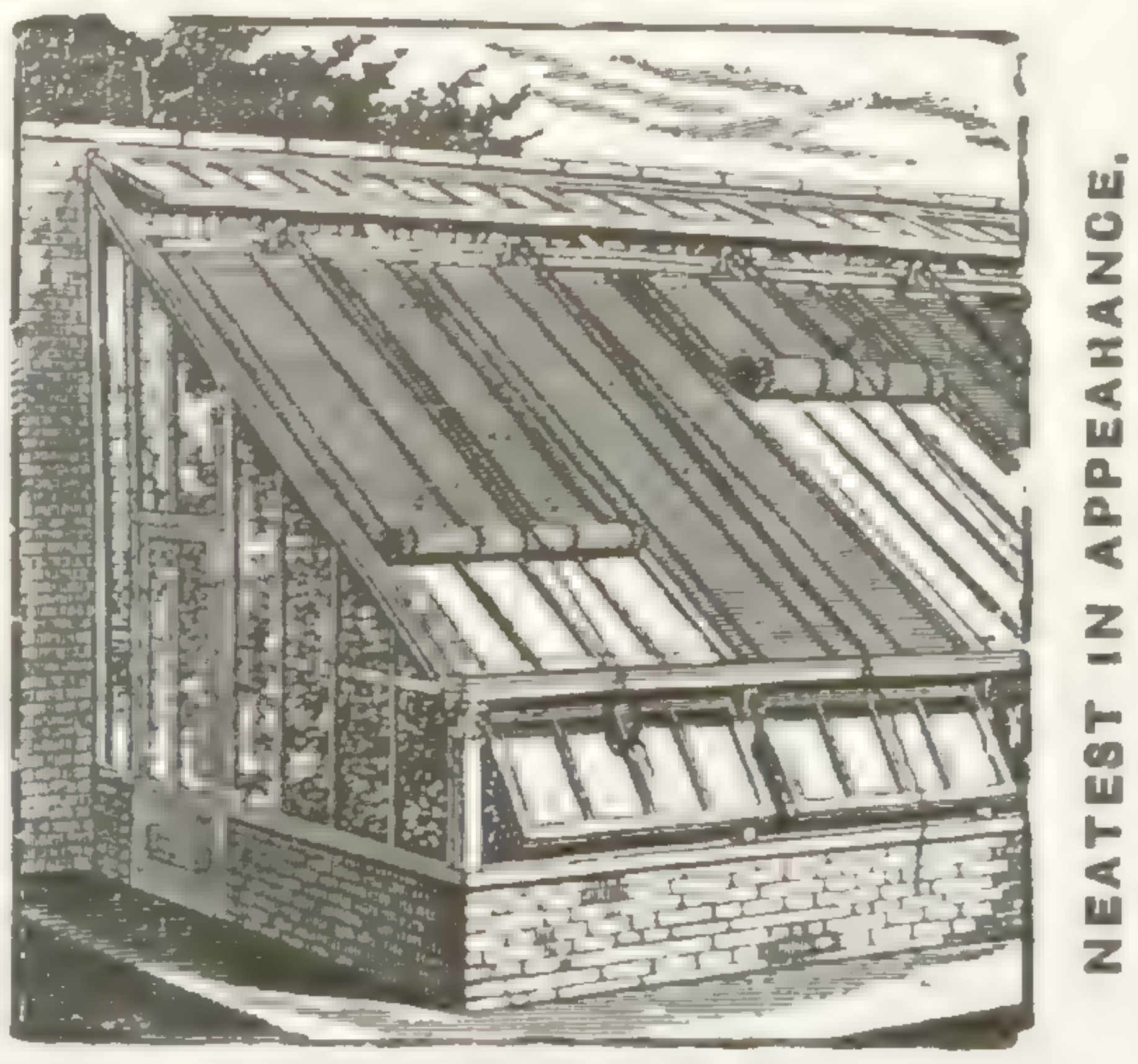
CANADA.—Wanted, strong, active GARDENERS for large Nurseries; steady work; good wages; sail March; book early. UNION TRANSIT CO., 381, Argyle Street, Glasgow.

WANTED, a good experienced GARDENER, Single-handed; live out; single man preferred; to clean motor car; wages, 26s. per week. Apply, with references, DAVID LLEWELLYN, Fairfield, Aberdare.

NETTING. THE VERY BEST. I DO NOT REQUIRE PAYMENT UNTIL YOU HAVE SEEN AND APPROVED OF THE NETTING. OTHERS may try to copy me, but this netting is good, strong, extra stout, small mesh, rot-proof netting, similar to what I supply to the ROYAL GARDENS, 100yds. by 1yd., [illegible]; by 2yds., [illegible]s.; by 3yds., 12s.; any length or width supplied. Orders over 5s car. paid. List and samples free. Commoner and tender netting, as sold by others, [illegible] sq. yds. for 1s. H. J. GASSON, The Net Works, Rye.

PARISIAN {WOOD LATH} BLINDS

MOST DURABLE OUTSIDE SHADING.



NEATEST IN APPEARANCE.

SUPPLIED ONLY BY

W. RICHARDSON & CO.,

HORTICULTURAL WORKS,

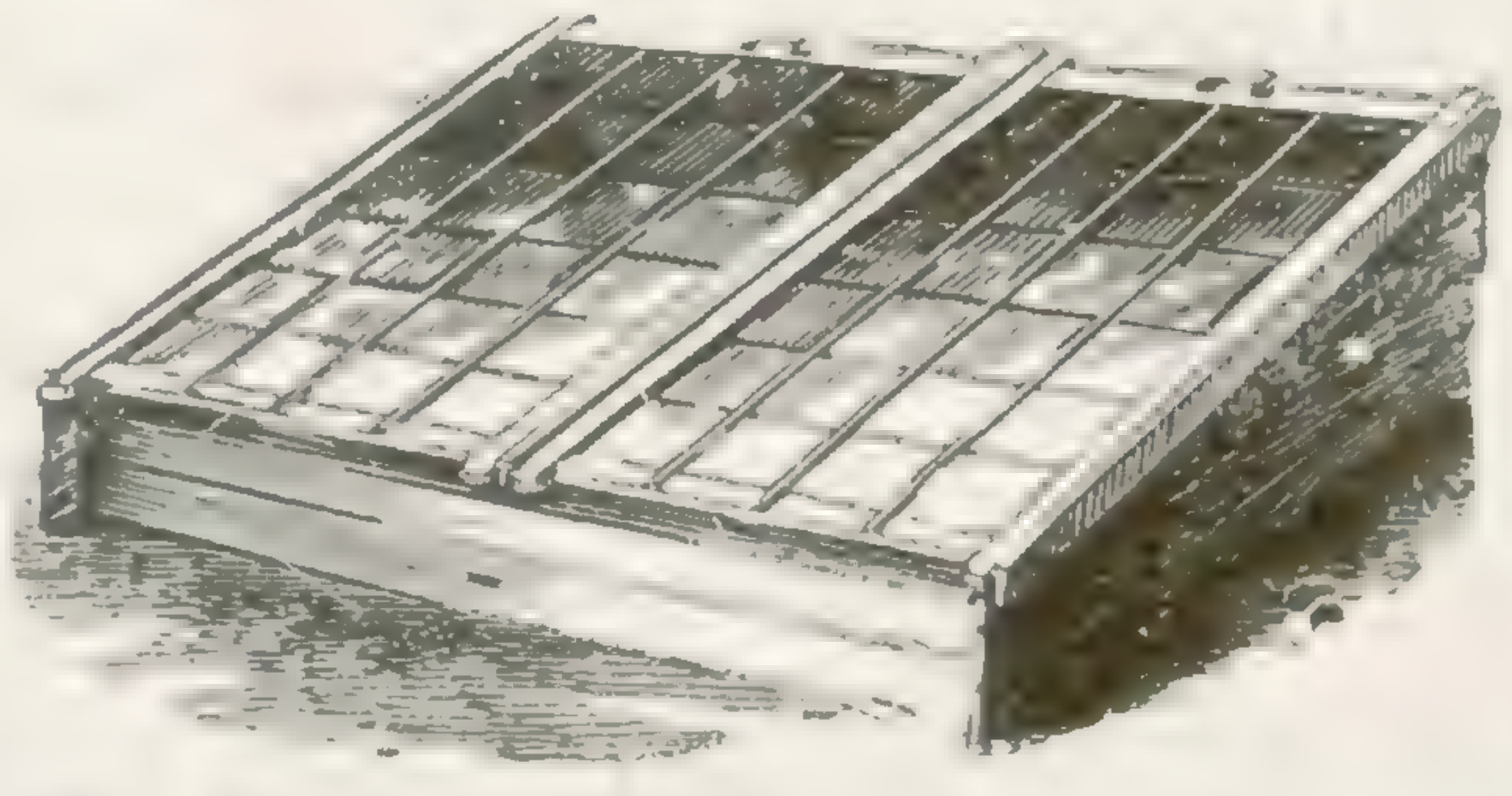
DARLINGTON.

Particulars, Price List, and Testimonials free on application, mentioning "The Gardeners' Magazine."

PORTABLE

CUCUMBER FRAMES.

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.		£	s.	d.
1-light 4 ft. by 6 ft.	*CASH PRICES.*	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.	*CARRIAGE PAID.*	5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,

Royal Horticultural Works,

MIDDLETON, MANCHESTER.

Dr. J. COLLIS BROWNE'S

THE ORIGINAL AND ONLY GENUINE

Chlorodyne

ADMITTED BY THE PROFESSION TO BE THE MOST VALUABLE REMEDY EVER DISCOVERED.

The Best Remedy known for

COUGHS, COLDS,

ASTHMA, BRONCHITIS.

Cuts short all attacks of SPASMS, HYSTERIA, and PALPITATION.

The only Palliative in NEURALGIA, TOOTHACHE, GOUT, RHEUMATISM.

Acts like a Charm in DIARRHŒA and DYSENTERY.

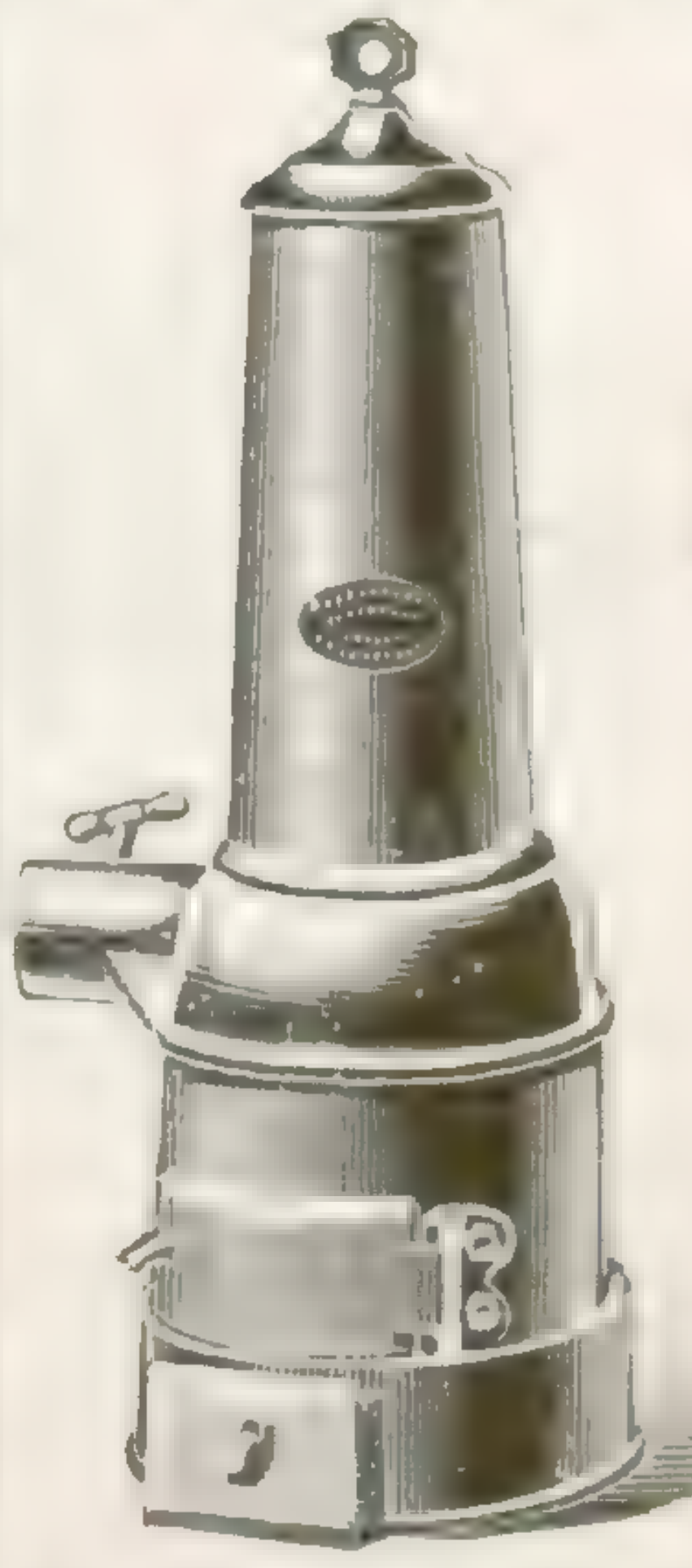
Refuse imitations and insist on having **Dr J. COLLIS BROWNE'S Chlorodyne.**

Convincing Medical Testimony with each bottle.
Of all Chemists, **1/1½, 2/9, 4/6.**

GREEN'S

PATENT

HOT WATER BOILERS and HEATING APPARATUS.



For Public and Private Buildings, Greenhouses, Conservatories, etc.

SPECIAL BOILERS MADE TO ORDER.

ESTIMATES GIVEN

Please write for Price List No. 4.

THOMAS GREEN & SON, Ltd.,

Smithfield Ironworks, North St., Leeds, and
NEW SURREY WORKS, SOUTHWARK ST.,
LONDON, S E.

YELLOW LOAM

(Very Fine).

For Vine Borders and Carnations, Fruits under Glass, &c., **8/6** per ton; also **6/6** per ton.

— **Samples Free.** —

L. G. SIMMONDS & CO.,

Loam and Manure Merchants,

York Road, KETTERING.

SUBSCRIBER'S ORDER FORM

Every Saturday THE GARDENERS' MAGAZINE. Twopence

To W. H. AND L. COLLINGRIDGE,
148 AND 149, ALDERSGATE STREET, LONDON, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose________for________months in advance.

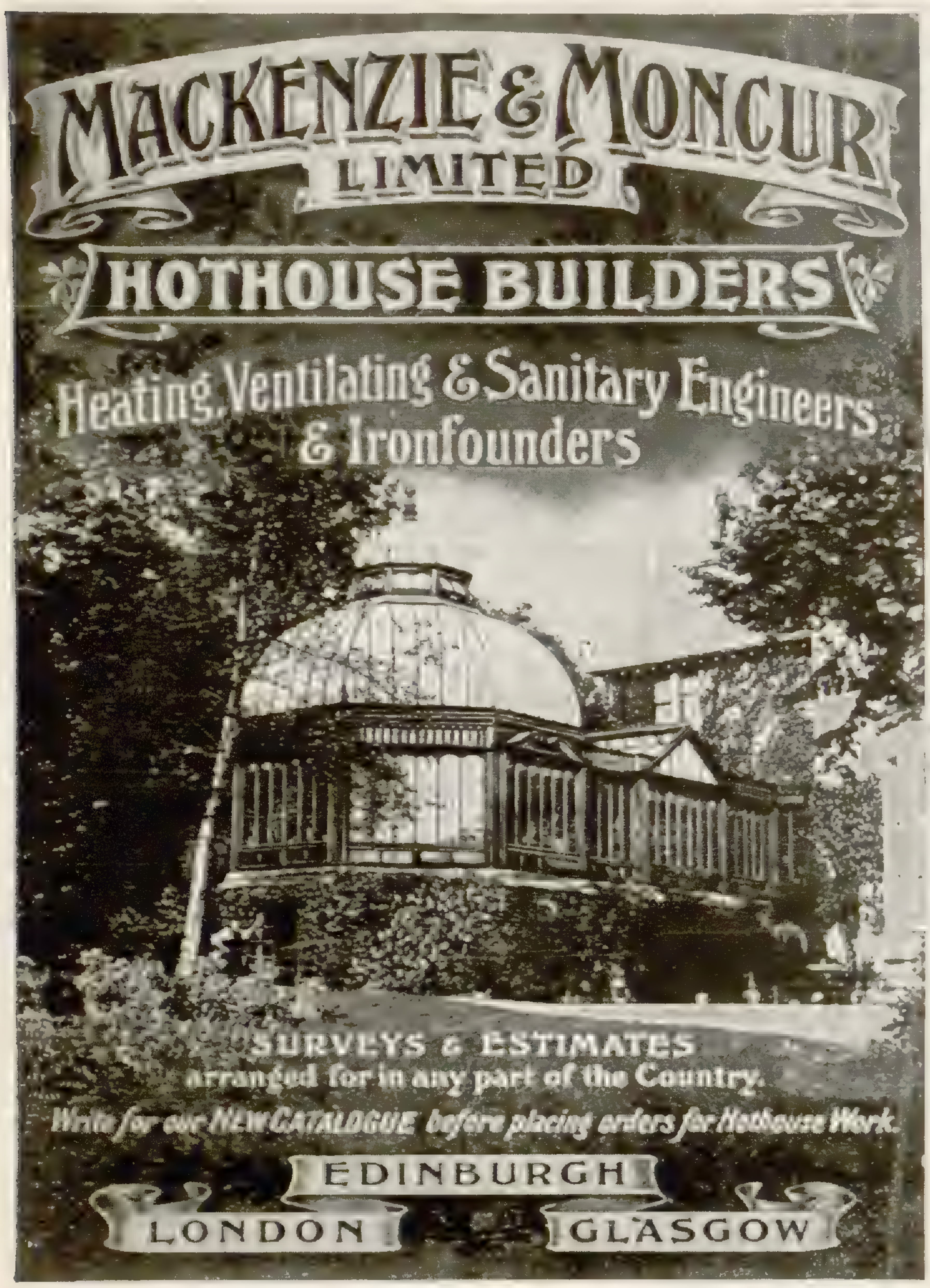
Name____________________

Address____________________

Date____________________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

*** If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.



MACKENZIE & MONCUR
LIMITED
HOTHOUSE BUILDERS
Heating, Ventilating & Sanitary Engineers
& Ironfounders

SURVEYS & ESTIMATES
arranged for in any part of the Country.
Write for our NEW CATALOGUE before placing orders for Hothouse Work.

EDINBURGH
LONDON GLASGOW

H. LANE & SON.
FRUIT TREES · · CONIFERS · · ·
FOREST TREES · RHODODENDRONS
VINES · AND · FIG TREES · · ·
ROSES OF ALL SORTS
GARDENS LAID OUT AND PLANTED BY COMPETENT WORKMEN.
ESTIMATES GIVEN.
THE NURSERIES,
BERKHAMSTED, HERTS.

Telegrams:-LANE, BERKHAMSTED. Telephone.-18, BERKHAMSTED.

Telegrams: "Hortulanus, London."
Telephone: 5947 Westminster.

J. WEEKS & Co. (CHELSEA),

The First Established Horticultural Building Firm in 1808. Foremost in 1911.

UNDER THE DISTINGUISHED PATRONAGE OF

HIS ROYAL HIGHNESS THE LATE PRINCE CONSORT.
HIS MAJESTY'S BOARD OF WORKS.
THE ADMIRALTY.
HER MOST GRACIOUS MAJESTY THE LATE QUEEN VICTORIA.
THE ROYAL HORTICULTURAL SOCIETY.
THE WAR OFFICE.

CONTRACTS FOR **HORTICULTURAL BUILDINGS AND HEATING** INCLUDE THE FOLLOWING:—

The LORDS OF THE ADMIRALTY, Royal Naval Barracks, Chatham.
Her Grace the COUNTESS of WINCHELSEA, Sleaford, Lincolnshire.
The Rt. Hon. VISCOUNTESS GOSCHEN, Seacox Heath, Hawkhurst, Kent
The Rt. Hon. LORD NORTH, Wroxton Abbey, Banbury.
The Rt. Hon. LORD HOWARD de WALDEN, Audley End, Saffron Walden
LADY PHILIPSON-STOW, Fernhurst, Haslemere, Surrey.
The Hon. Mrs. EGERTON, Mountsbridge Court, Robertsbridge.
The Hon. JOHN WARD, Chilton Lodge, Hungerford.
Sir SAMUEL BOULTON, Bart., Copped Hall, Totteridge, Herts.
Sir HY. HARBEN, Bart., Warnham Lodge, Horsham.
Lieut-Colonel LONGSTAFF, Ridgelands, Wimbledon, S.W.
Captain DALGETTY, Lockerley Hall, Romsey.
Captain A. C. THYNNE, Penstowe, Bude, Cornwall.
ROYAL BOTANICAL SOCIETY, Regent's Park, London.
C. S. GORDON CLARK, Esq., Fetcham Park, Leatherhead.
F. J. O MONTAGU, Esq., Mundford Hall, Norfolk.
Mrs. T. DRAKE, The Grove, White Waltham, Berks.
J. W. BENSON, Esq., Knott Park, Oxshott.
ISAAC LEWIS, Esq., Bedgebury Park, Gowdhurst, Kent.
EXORS of the Late H. P. LESCHALLAS, Highams, Windlesham.
A. PARMENTER, Esq., Mount Alwyn, Arkley, Barnet.
A. KINGSMILL, Esq., The Holt, Harrow Weald.
J. W. STEPHENS, Esq., Cuckoo Hill, Pinner.
Mrs. BROCKLEHURST, Sudeley Castle, Gloucestershire.
J. CHARRINGTON, Esq., Shenley, Herts.
FOSTER MACGEAH, Esq., Hadlow Castle, Tonbridge.
JAMES WILLING, Esq., Rock Hall, Teddington.
W. F. H. MELLOR, Esq., Rooklands, Torquay.
Mrs. GOSSITT-HILL, Mill Hill, London, N.W.
J. C. HICKMAN, Esq., Micklefield Green, Rickmansworth.
Mrs. G. H. PHILIPS, Penybout, Radnorshire.
L. HIRSCH, Esq., Littlecote, Hungerford, Berks.
Miss PINCHIN, Springfield, Snaresbrook.
J. W. PARKES, Esq., Grangemuir, Wimbledon, S.W.
W. G. RAPHAEL, Esq., Castle Hill, Englefield Green, Surrey.
Mrs. TEESDALE, Kingsland, Newnham-on-Severn.
T. W. HALL, Esq., Woodcroft, Putney, S.W.
H. THELLUSON, Esq., Brodsworth, Doncaster.
Mrs. HARE, Oakleigh, Edgware, N.W.
L. F. HARRISON, Esq., Orchards, East Grinstead.
E. A. DUFFY, Esq., Middleton Road, Golders Green.
TOWN HALL, Girvan, Scotland.
ST. MARK'S CHURCH, The Boltons, London, S.W.
ST. MARY'S CHURCH, Graham Street, Pimlico.
WITTERSHAM CHURCH, Wittersham, Kent.
BENEFIELD CHURCH, Oundle, Northants.
BRENTWOOD MOTOR WORKS, Ltd., Brentwood.
QUEEN'S HOSPITAL FOR CHILDREN, Bexhill.
CLUB BUILDING, 60, St. James' Street, S.W.

Patentees of Weeks' Patent "Duplex" Upright Tubular Boilers.

(A number of each size of boiler and parts always kept in stock for replacements).

We spare no effort to uphold our reputation for first-class work only, at lowest prices.

Please Address all Letters to HEAD OFFICE } **72, VICTORIA ST., WESTMINSTER, S.W.**

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 2,992. Vol. LIV.
Reg. at the G.P.O. as a Newspaper.

SATURDAY, MARCH 4, 1911.

(**10/6 per Ann.** Post Free.
To Foreign Countries, 15/-.) **Twopence**

BARR'S VEGETABLE & FLOWER SEEDS of finest selected strains and tested growth. Descriptive Catalogue, with cultural notes, free.

BARR'S BEAUTIFUL LILIES, CANNAS, GLADIOLI, MONTBRETIAS, TIGRIDIAS, ETC., for Spring planting. Catalogue free.

BARR and SONS, 11, 12, and 13, KING STREET, COVENT GARDEN, LONDON.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA.—This is a good month for building Conservatories—from the smallest and cheapest to the largest and most expensive. All information can be obtained by writing; by telephone, 201 Western; or by wire to "Gray, Chelsea, London."

KING'S ACRE FRUIT TREES, ROSES,
AND ORCHARD-HOUSE TREES.

AWARDED 24 GOLD MEDALS SEASONS 1909-10.

160 acres to select from of the finest Trees that natural conditions and the skill of man can produce.

ILLUSTRATED CATALOGUES FREE ON APPLICATION.

KING'S ACRE NURSERIES, LTD.,
HEREFORD.

1,000,000 BORDER AND ROCK Plants. Unique collection.
50,000 HARDY FERNS, over 400 varieties. See Catalogue.
10,000 FLOWERING SHRUBS must be cleared.
30,000 LILIES NOW IN STOCK, Other consignments arriving.

DELPHINIUMS, 9 GOLD MEDALS IN 2 YEARS.
A record. Unique collection. Seed, 3d., 6d., and 1s. pkt.

PERENNIAL SEEDS, UNIQUE COLLECTION.
All Catalogues Free.
PERRY'S HARDY PLANT FARM, Enfield, Middx.

PERRY'S CATALOGUES free on application; Hardy Ferns, 400 varieties; Iris, 450 varieties; Delphiniums, 200 varieties; Bulbs and Tubers, Hardy Border and Rock Plants; Pentstemons, unique collection; Florists' Flowers. PERRY'S HARDY PLANT FARM, Enfield, Middx.

BARNARDS LIMITED, Norwich.—Best House for Fencing, Espaliers, Pergolas, Fruit [illegible] Iron and Wire Bordering; all descriptions of Training Fittings, Arches, Wire Netting, [illegible], Wire Lattice, Rollers, and all garden requisites. Now is the time to effect improvements in your garden. Catalogues free; inquiries invited.

WEEKS'S DUPLEX UPRIGHT TUBULAR BOILERS, for full advertisement see page vi.

CONSERVATORIES AND WINTER GARDENS, Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue free.—BOULTON and PAUL, Lim., Norwich.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page ix.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

TWO EXCELLENT POTATOES.

WEBBS' NEW FIRST CROP (FIRST EARLY).—Awarded the maximum number of 3 marks by the National Vegetable Society, 1910. Pebble-shaped, flesh white, and of excellent cooking quality, 4s. per peck; 14s. per bushel.

WEBBS' NEW GUARDIAN (SECOND EARLY).—3s. 6d. per peck; 12s. per bushel.
Mr. E. BECKETT, Head Gardener to the Hon. Vicary Gibbs, writes: "Webbs' New Guardian is unquestionably one of the finest Potatoes yet raised. It proved to be the heaviest cropper by far, and best disease-resister we grew; its keeping qualities are all that can be desired."

WEBB and SONS, The King's Seedsmen,
WORDSLEY, STOURBRIDGE.

BUNYARD'S NEW CATALOGUES.
The following have been recently published, and contain all worthy new varieties. Post free on application.

BUNYARD'S
CLIMBING PLANTS, Illustrated.

BUNYARD'S
HERBACEOUS PLANTS, Illustrated.

BUNYARD'S
HARDY TREES AND SHRUBS, Illustrated.

BUNYARD'S SEEDS, VEGETABLE AND FLOWER, with coloured plates.

GEO. BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.

BEGONIAS, awarded 24 Gold Medals.—Double Seed, 2s. 6d. and 5s. per pkt.; Frilled, Crested, or plain Single, 1s., 2s. 6d., and 5s. per pkt. For price of Begonia tubers, Carnations (Border and Perpetual flowering), Cannas, Cyclamen, Blue Primroses, Delphiniums, Pansies, Polyanthus, Lily of the Valley, Violets, etc., please send postcard for copy of our Illustrated Catalogue, free on application.

BLACKMORE AND LANGDON,
Twerton Hill Nursery, Bath.

LAXTON'S NEW SEED CATALOGUE for 1911. Descriptive and fully illustrated, including grand new "Laxtonian Pea" and many other novelties, gratis on application.—LAXTON BROS., Seed Merchant, Bedford.

ORDER MATS NOW!—To prevent disappointment and loss by early frosts, order Norfolk Reed Mats now. 50 per cent. more protective than straw. Made to any size, 1d. per square foot.—BOULTON and PAUL, Lim., Norwich.

FERNS.—Beautiful Greenhouse varieties, 12 for 1s. 3d.; Maidenhair Ferns, 2s. doz.; New Nephrolepis Todeoides, 9d. each; Palms, 9d. each. HEAD GARDENER, 22, Charlton Road, Blackheath.

TURF, suitable for Lawns, Bowling Greens, etc.; a quantity of splendid old Turf for sale; cheap on rail; sample and price. HOLMES, Station Road, Letchworth.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

CLAY'S MANURES, CRUSHED BONES
(See page 179.)

CLAY'S FERTILIZER is
UNSURPASSED for all horticultural Purposes.
CLAY and SON, Stratford, E.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

SUTTON'S EXHIBITION LONGPOD BROAD BEAN.—Mr. J. A. HALL, Gardener to R. H. C. Harrison, Esq., J.P., writes: "Sutton's Exhibition Longpod Bean is a strong grower, and very prolific. Pods about a foot long, and the beans are delicious when cooked."
Per pint, 1s. 6d.; quart, 2s. 6d.; post free.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

THE KELWAY "ARTISTIC" BORDER makes a garden of enduring beauty, from early spring to late autumn, with a minimum of cultivation, and without the trouble of constant digging or bedding-out. The plants composing the border are from strong country-grown stocks, which will flourish under almost all conditions. Send dimensions of space to be filled, or write for Kelway's "Gardens of Delight" (6d.). The cost of the "Artistic" Border is 15s., or 25s. for 10 square yards.

KELWAY and SON, the Royal Horticulturists, LANGPORT, SOMERSET.

NOW IS THE TIME TO PLANT KELWAY DELPHINIUMS which have been improved almost out of recognition in the past twenty years. They produce plants ranging in height from four to eight feet, exceptionally hardy, and with a rich profusion of choice blooms in all the shades of blue.
Choice named varieties: 24s., 34s., and 56s. a dozen.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

EVERY Gardener, amateur or professional, will find a large amount of useful information in the new edition of Kelway's "Manual of Horticulture"—the varieties, prices and culture of all sorts of garden plants, particularly those wonderful improvements raised in the Kelway Nurseries at Langport. A copy will be sent post free for 2s., which will be credited on the first order.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

NOW IS THE TIME TO PLANT KELWAY'S GAILLARDIAS, the rich golden blooms of which are noted for their powers of endurance during the driest season, and as cut flowers retain their freshness and beauty long after they have been gathered. They flourish with a minimum of attention, and give abundant bloom the same year that they are planted. Choice named collections, 12s. and 18s. a dozen.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

FIDLER'S NEW ILLUSTRATED CATALOGUE OF CHOICE GARDEN SEEDS will be sent, post free, to any address on receipt of postcard. Write at once for a copy. It may help you to save 50% on your seed bill this season. FIDLER and SONS, Royal Berks Seed Stores, Reading.

POULTRY AND KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

XL ALL FOR WINTER AND SPRING
CLEANSING.
Before growth commences stronger solutions may be used.

XL ALL NICOTINE INSECTICIDE WASH (poisonous) for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. Agents, write for particulars.

XL ALL CAUSTIC WINTER WASH (non-poisonous) for dormant Fruit Trees, stamps out American Blight, and all other pests.

Other XL ALL Preparations of great renown are XL ALL NICOTINE VAPORISING COMPOUND, XL ALL FERTILISER, XL ALL LAWN SAND, etc.

Ask your Nurseryman, Seedsman, or Florist for my small Pink List.

G. H. RICHARDS, Manufacturer, 234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Border and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since [illegible].

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen. Florists. &c.

SEEDS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Select Seeds.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

RHODODENDRONS.

DICKSONS & CO.,
1, Waterloo Place, Edinburgh.
Pink Pearls, Ponticums, choice Hybrids. Write.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

ALEX. DICKSON & SONS, Ltd.,
Hawlmark, Newtownards, Ireland.
The World-famed Champion Rose Growers and Raisers of Irish Pedigree Seedling Roses. Lists Free.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 1st Prizes, 3 2nds. at N.R.S. Shows, 1910. Ctlg. Free.

SAMUEL M'GREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
Illustrated Catalogue free.

TURF LOAM.

A. B. JOHNSTON, New Park, Cranleigh, Surrey.
Very Fibrous Loam, for Carnations, Roses, Vine Borders, Melons, Fruits under Glass, &c., &c.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

NEW APPLE, "HOUNSLOW WONDER."

Having grown and marketed this apple in quantity we can confidently recommend it as a most profitable kind for market purposes.

"Almost everyone recognises the great value of 'DUMELOW'S SEEDLING' or 'WELLINGTON' as a cooking apple; anything approaching it is well worthy of consideration. For this reason we call attention to this fine apple, which we have thoroughly proved for several years. It is a seedling from 'WELLINGTON,' and makes fine prolific trees on the Paradise stock. The fruits are large and handsome, roundish, and flattened. The skin is pale yellow, highly coloured on the sunny side, the eye is large and open, while the stalk is set in a shallow cavity. We consider it a first-rate eating apple at Christmas time, rather than a cooker. Its whitish flesh is very juicy, and possesses a rich, aromatic flavour."

Maiden Trees on Paradise Stock, **2 6** each; **24/-** per dozen.
Two-year-old Bushes on Paradise, **3/6** each; **36/-** per dozen.

S. SPOONER & SONS, Nurserymen, Hounslow, Middlesex.

GIANT SWEET PEAS

Choicest Varieties for Exhibition.

Collection of 6 beautiful & distinct varieties 1/9
Collection of 12 - 3/-
" " 18 - 4/-

CATALOGUES POST FREE.

DICKSONS
SEED GROWERS,
CHESTER

R. D. BLACKMORE'S
PEACH LIBRA

Award of Merit, R.H.S.

Midseason; very large and heavy; of high quality and goodly appearance. Large trained Trees and Pyramids, with well-ripened fruiting wood.

10/6, 15/- and 21/- each.

See Illustration page 165.

WILL TAYLER, Hampton, Middlesex.

SEED POTATOES & GARDEN SEEDS

Customers wishing to save
50 PER CENT.
When Purchasing
BULBS, GARDEN SEEDS, AND POTATOES,
Should send AT ONCE for Lists to

J. W. CROSS,
OLD GRAMMAR SCHOOL, **WISBECH**

TOMATO PLANTS

(6 to 8 ins. high). Ready for Fruiting Quarters. **Grown in Steam sterilised soil** Very carefully packed and protected.
Price £3 per 1,000, Cash with order, carriage paid.
Per 100, 7/-; 65 plants, 5/-; 50 plants, 4/-; 25 plants, 3/-; 12 plants, 2/-
Carter's Sunrise, Winter Beauty, Beauty of Wales, etc.

W. & F. POAT, TOMATO GROWERS, **ST. SAMPSON'S** **GUERNSEY, C.I.**

Cheques, Postal Orders, etc., should be crossed "Guernsey Banking Co., Ltd."
Booklet and Testimonials free on application.

Perpetual-Flowering CARNATIONS.

This year's Novelties and all the Leading Varieties.

Send for descriptive Catalogue of 80 varieties with particulars when to stop them.

C. ENGELMANN, CARNATION GROWER,
SAFFRON WALDEN.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS.

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

RHUBARB ROOTS.

DAWES CHALLENGE [illegible] seven medals and awards. [illegible] 10/- [illegible]. **Champion Rhubarb Grower, Syderstone Nurseries, Norfolk.**

THE FLOWER FOR ALL SEASONS.

THE PERPETUAL-FLOWERING CARNATION.

The Tangley Nurseries Collection comprises the cream of English and American Varieties.

Strong plants, 1 doz. vars., packing free, for **7s. 6d.**

Descriptive List Post Free,

W. H. PAGE,
Tangley Nurseries, Hampton, Middlesex.
Phone: 166 P.O. Molesey. Tele.: Page, Hampton.

SEED POTATOES, Scotch, Irish, Midlands, Northern; [illegible] West of England, both early and late. Apply to OLIVER BROS., Importers, Exeter, and Barnstaple.

AMERICAN TREE CARNATIONS

AND MALMAISONS.

The Newest and Best Varieties.

Strong, healthy and well-rooted plants only supplied

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

---

25 STRONG CHRYSANTHEMUM CUTTINGS, Exhibition, Decorative, Single or Earl
1s. 6d.; 50, 3s.; 100, 5s. 6d.; by return. List. RIC
MOND'S CHRYSANT NURSERIES, Ossett, York

Sales by Auction.

SALES NEXT WEEK.

MONDAY and FRIDAY NEXT, March 6 and 10, at Twelve o'clock.—Hardy bulbs and roots in variety for spring planting, Japanese Liliums, Herbaceous, Border and Alpine Plants, etc.

At Half-past One o'clock.—1,000 Roses, in variety, Fruit Trees, Azaleas, Rhododendrons, etc.

WEDNESDAY NEXT, March 8, at Twelve o'clock.—New and rare Perennials, Herbaceous Plants, Liliums, Gladiolus, Begonias, Gloxinias, and numerous other hardy Bulbs, Carnations, Pinks, Peat, Leaf Mould, etc.

At Half-past One o'clock.—5,000 Roses, Standard, Dwarf, Climbing T., H.T., and H.P., newest and best varieties.

At Five o'clock.—450 Azaleas of sorts, 300 Aspidistras, also Rhododendrons and Camellias, 100 lots of Ornamental Palms, Stove and Greenhouse Plants.

FRIDAY NEXT, March 10, at Quarter to One o'clock.—5,000 Calanthe Regneiri, received direct in grand condition; also 2,340 imported Cattleya Mossiæ, Cattleya, and Odontoglossum hybrids, and other Established Orchids.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view morning of sale and catalogues had.

ROSE TREES.
SHRUBS. BULBS.

SALES BY AUCTION

are held every

MONDAY and WEDNESDAY, at 12.30.

STEVENS' AUCTION ROOMS,

Established 150 Years,

38, King St., Covent Garden, London, W.C.

Catalogues on Application.

WHEELERS' SEEDS.

160 YEARS' REPUTATION OF UNSURPASSED QUALITY.

Fully Illustrated 96 page List
Free to Horticulturists.

J. C. WHEELER and SON, Ltd,
Seed Growers, **GLOUCESTER.**

FOR SALE, IN GUERNSEY.—A compact little BULB-GROWING ESTATE of about 4 acres, splendidly situated on the south coast of the island, and well stocked with the best forcing varieties of daffodils, etc.; also a small Orchard of Apple and Pear Trees in bearing. The property contains glasshouse 150 x 18 heated, large shed, pumping mill, and an unlimited supply of water. Write Box 154, c/o Messrs. R. F. White and Son, General Advertising Agents, 33, Fleet Street, London, E.C.

TO LET, Large NURSERY GARDEN, with Seed Shop, Store-room, Greenhouse, and Potting Sheds; successful business carried on for 50 years. Apply A. BAYLIS, Lansdowne Nursery, Bourton-on-the-Water, Glos.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.

H. BURNETT,
Carnation Specialist, Guernsey.

---

100 NURSERIES, MARKET GARDENS, FLORIST AND SEED BUSINESSES TO BE DISPOSED OF.

MESSRS. PROTHEROE and MORRIS'S HORTICULTURAL REGISTER contains full particulars of the above, and can be obtained gratis at 67 and 68, Cheapside, E.C.

AMERICAN TREE CARNATIONS, best varieties, including Britannia, White Perfection, etc., strong young plants from 2in. pots, 3s. doz., 20s. 100, flowering plants, 5in. pots, 8s. per doz. C. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

ZONAL PELARGONIUMS.
Catalogue of New and Choicest Varieties.

From V. SLADE, Zonal Specialist,
Staplegrove Nursery, Taunton.

AMERICAN and BRITISH TREE CARNATION.—Leading varieties from 3s. per doz.; 17s. 6d. per 100; carriage and packing free for cash. Ask ill. price list C. F. A. VAN DER SLUYS. F.R.H.S. Ramee, Guernsey.

PRIMULA OBCONICA GIGANTEA GRANDIFLORA.

The most beautiful Free and Hardy Perpetual Greenhouse Plant grown.

ONCE IN FLOWER ALWAYS IN FLOWER.

We are NOTED for having the most — SUPERB Strain in commerce. —

SEED.

Mixed colours, also Compacta and Fimbriata, mixed, 1s. per packet; separate colours of Purple, Rose, Lilac, Deep Red, Crimson Scarlet, Pale Lilac, and Crimson (fringed petals), **2s. per packet; double flowering, including Pale Mauve and Rose, 2s. per packet. Instructions as to sowing with each packet.**

PLANTS, 3s., 5s., 7s. 6d., 10s. 6d., and 15s. per doz., according to size.

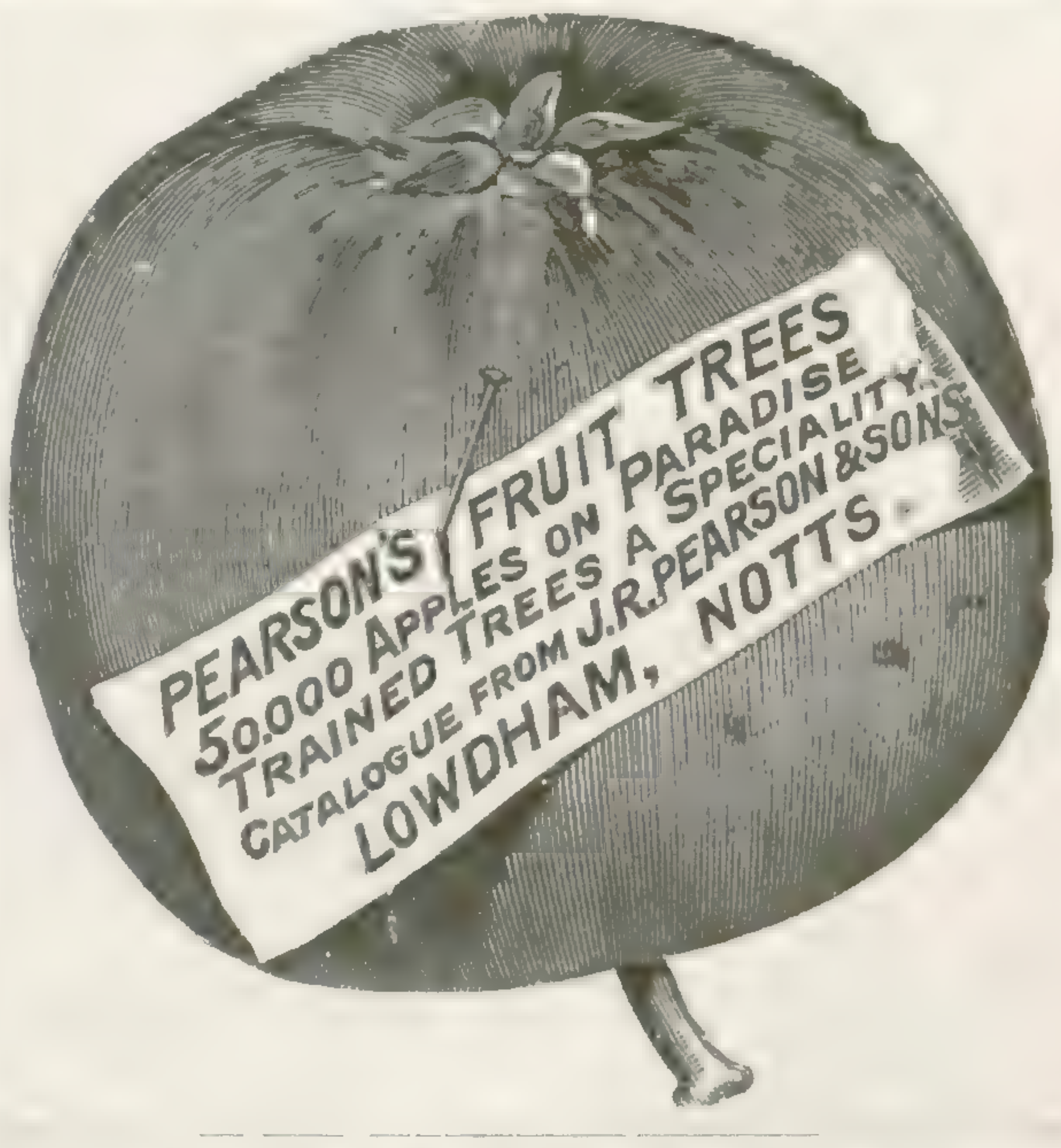
W. A., Esq., Reigate, Surrey, writes:—

I had a packet of seed from you last year, and am pleased to inform you that I have blooms measuring two inches and more across each individual flower. They are the best strain I have ever seen, both for variety of colours, and substance of bloom.

WM. ARTINDALE & SON,
Nether Green Nursery,
SHEFFIELD.

For 3 penny stamps we will send you our Catalogue of Plants, which is not merely a price list, but literature which gives all the cultural notes of plants therein mentioned. We have received hundreds of testimonials commenting on the value of this book.

OUR SEED CATALOGUE WILL BE SENT FREE ON APPLICATION.


PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J.R. PEARSON & SONS
LOWDHAM, NOTTS.

If the "Daily Mail" £1,000 winning bunch of Sweet Peas

BE GROWN WITH

MACKERETH'S SPECIAL
SWEET PEA MANURE,

Sold in Tins, **1/-** (1/4 post free), **2/6** (3/- post free).
Sold in Bags, 14 lbs., **5/-**; 28 lbs., **8/6**; 56 lbs., **14/-**;
112 lbs., **25/-** Carriage Paid.

I will present the winner with **£10**, and if the bunch contains bloom of Earl Spencer, I will present the winner with **£5**.

I have splendid stocks of the most chaste Spencer Sweet Peas. Orders executed the day they are received.

G. H. MACKERETH,
The Sweet Pea Clearing House,
ULVERSTON.

TAKE NOTICE.

Intending planters should send for the STANCLIFFE CATALOGUE OF TREES, &c.

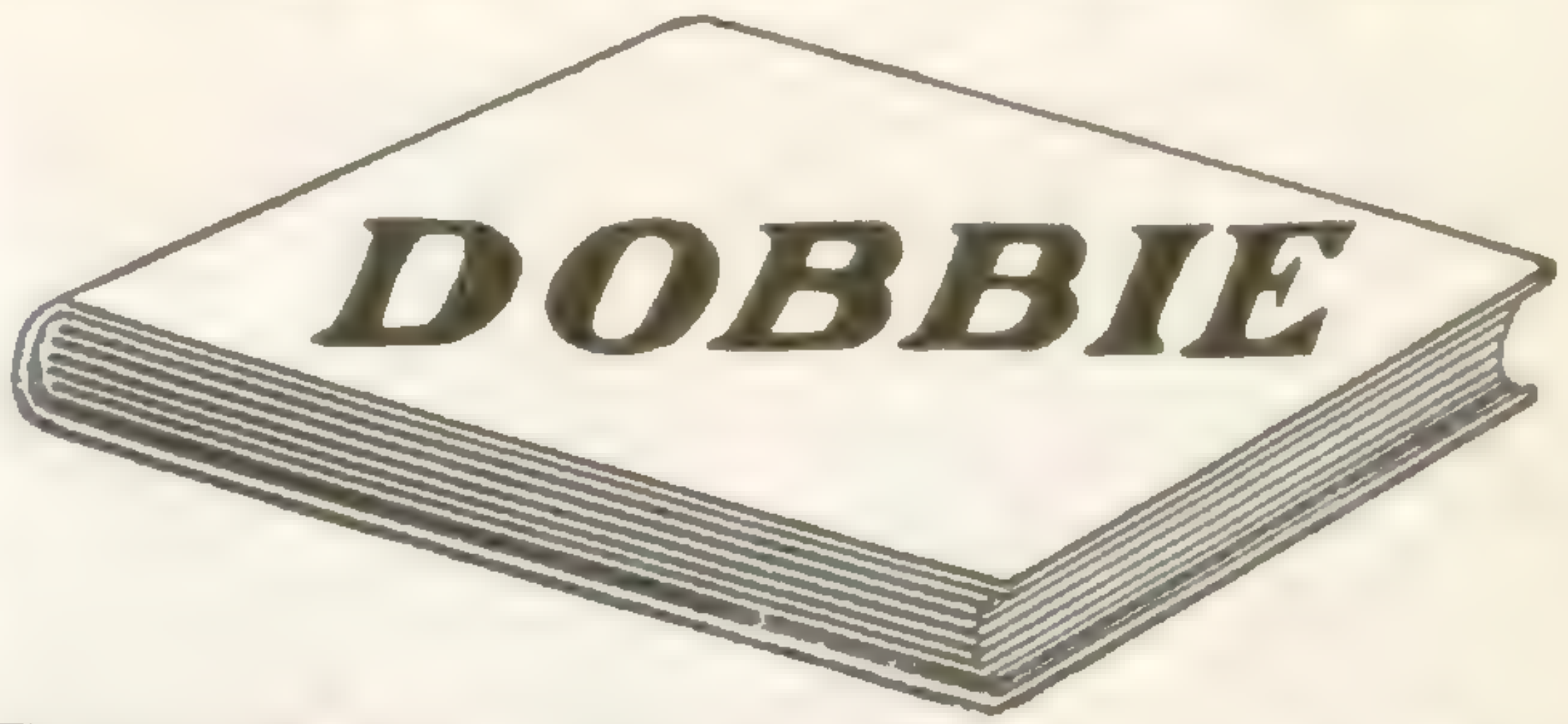
Our Stocks, which are grown on the highest and most exposed hills of Derbyshire, are in fine condition, and are sure to give satisfaction. Note the prices before ordering elsewhere.

Rockery Stone, 1/- per ton.

THE STANCLIFFE ESTATES CO., LTD.,
DARLEY DALE DERBYSHIRE.

100,000 WALLFLOWERS, dwarf-grown bushy plants, full of buds. Why plant long, straggly seedlings when you can get plants that will throw from 10 to 20 spikes of flowers so cheaply? These include all the most beautiful colours and shades grown. 50, 1s. 6d.; 100, 2s. 6d.; 500, 11s. 6d.; extra large selected bushy plants, 3s. 6d. per 100. All free, and your money returned if you are not more than satisfied. S. G. LEIGH, Broughton, Hants.

100,000 FREE COPIES



Dobbie's New Catalogue and Guide to Horticulture.

224 PAGES. 210 ILLUSTRATIONS.

A COPY WILL BE SENT WITH PLEASURE GRATIS TO ANY ONE APPLYING FOR SAME, WHO ENCLOSES 3d. IN STAMPS TO DEFRAY COST OF POSTAGE, AND MENTIONS "GARDENERS' MAGAZINE."

DOBBIE & CO.,
The Royal Seedsmen, EDINBURGH

OUR COLLECTIONS
OF
CHOICE VEGETABLE SEEDS

Provide a whole year's supply.

PRICES RANGE FROM

2/6 for 18 Packets to 42/- for 82 Packets.

Our Catalogue No. 26 (Post Free), contains select lists of Flower and Vegetable Seeds, Lawn Grasses, etc.

HARRISON & SONS,
33, Market Place, **LEICESTER.**

WATER CATALOGUE NOW READY
PERRY ENFIELD, MIDDLESEX

Rhododendrons.

Crimson, White, Pink. 250 Choice Named Varieties, fine foliage, well budded, for potting or planting. 1 to 1½ ft., 1½ to 2 ft., 2 to 2½ ft., 2½ to 3 ft., 3 to 4 ft., 4 to 5 ft., 5 to 6 ft., 6 to 7 ft. List of sorts and prices on application; many thousands to offer. Standards in all sizes.

All Home-grown. Inspection invited.

F. STREET, Heatherside Nurseries, CAMBERLEY.

ORCHIDS
EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS**, and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone :—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

GLASS & PAINT.

NICHOLLS & CLARKE, LTD.,

15 oz. and 21 oz. Glass,
IN ALL THE USUAL SIZES.
Shoreditch, London.

When sending for list please cut out this advt.

"THE GARDENERS' MAGAZINE" SPECIAL COLLECTIONS OF

25 Bush Roses for	15/-
50 Bush Roses for	30/-
100 Bush Roses for	50/-

CARRIAGE PAID.

CHAMPION **ROSES**

THE FINEST STOCK IN THE KINGDOM.

FRANK CANT & CO.,

BRAISWICK ROSE GARDENS, COLCHESTER.

Our Illustrated Catalogue post free on application.

BUNYARD'S FRUIT TREES

The Best Quality and Largest Selection at Moderate Prices.

WRITE FOR CATALOGUE.

GEO. BUNYARD
& CO., LTD.,
Royal Nurseries,
MAIDSTONE.

ANT ROOZEN & SON'S

SEEDS, BULBS, AND PLANTS

For Spring, 1911.

All of the Finest Quality.

THE CATALOGUE of above will be sent, post free, on application to their Offices at . . .

OVERVEEN, HAARLEM, HOLLAND;

Or to their General Agents,

MERTENS and CO.,
3, Cross Lane, LONDON, E.C.

Chester Nurseries

Over 500 Acres in Extent.

GRAPE VINES.

Strong and perfectly ripened.

Strong and Extra Strong Canes for planting out, 5/- and 7/6 each. Extra Strong Canes for fruiting in pots, 10/6 and 12/6 each.

Fruit Trees in Pots.

Strong Pyramids, established.

Apples, Pears, Plums, 3/6 and 5/- each.
Nectarines, Peaches, 5/-, 7/6, and 10/6 each
Apricots, Cherries, 5/- and 7/6 each.

SEAKALE

(Forcing).

LILY WHITE, SOLID IVORY, & PURPLE,

Extra Strong, 14/- and 18/- per 100.
Extra Extra Strong, 21/- per 100.

ASPARAGUS

(Forcing).

Extra Strong, 20/- per 100.

New Illustrated Catalogues of all Departments free on application.

DICKSONS,
Royal Nurseries, CHESTER.

ROSES IN POTS

WM. PAUL & SON
WALTHAM CROSS, LTD.

Respectfully invite attention to their magnificent stock of the above, which they believe to be unrivalled in quality and extent.

Dwarfs or bushes, extra strong, in 8 in. pots, for forcing and greenhouse culture	30/- to 60/- per doz. £12 and upwards per 100.
Climbers and Ramblers in 8 in. pots, for forcing and out-door planting on pergolas, arches, etc., with shoots ...	6 to 12 ft. long, 30/- to 60/- per doz. 12 to 16 ft. long, 72/- to 90/- per doz. Price per 100 on application.
Dwarfs and Climbers, smaller plants, in 5 in. pots	10/6 to 18/- per doz. 75/- to £6 per 100.

Priced List Post Free on application.

Inspection of Stock Invited.

The Nurseries are twelve miles from London, four minutes' walk from Waltham Cross Station, G.E.R.

Sole Postal Address -

PAULS' ROYAL NURSERIES
AND SEED WAREHOUSE,
WALTHAM CROSS, HERTS.

VOL. LIV.—No. 2,992 SATURDAY, MARCH 4, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Herbaria.

Herbaria, in the form of collections of dried specimens of foliage, flowers, etc., are essential to the botanist, and are of immense value for the classification and identification of the innumerable plants which constitute the flora of the world generally. By their means, the species of widely divergent habitats may be brought together and compared, and it is in this way that links are found which practically prove a connection, direct or indirect, between all plants in existence, species merging into species and genera into genera, as, by means of the herbarium, the border forms, as they may be termed, are brought together for comparison. To the true plant lover the herbarium specimen is a very poor substitute for the living plant. In going through the collection of dead and withered remains he feels like a student of mankind who visits a catacomb, and, amid the skulls and dead bones, misses the warm breath of life and the myriad human impulses and differences which animate the crowd without. In the garden, the field, the forest, etc., etc., on the other hand, every leaf and every blosson is athrill with vital energy, and replete with its own special beauty uncrushed and undistorted, a living entity in short, instead of a mummy. Everything however, depends upon the point of view and the purpose involved. In these days of botanical study the professor and the student utilise the herbarium hand in hand with the wonderful living collections at Kew, and in the many other botanical gardens scattered about the world; and in the great herbaria kept in conjunction with such institutions innumerable plants find a place which, for many reasons, climatal and otherwise, it would be impracticable to have in the living form. Hence the one is a sort of complement to the other. There is, however, a side to the herbarium question which is not, to the lover of living plants, a very pleasant one, viz., the collection of rare plants for herbarium purposes only, which, of course, means the death of every complete plant so collected, and, when carried to excess, is only too apt to exterminate the rare plants as effectually as any vandal could do it for merely commercial reasons. In point of fact the commercially-minded vandal is less drastic than the herbarium maker, since, if he sells the plant, there is at any rate a chance of the purchaser cultivating it, while once the poor thing is pasted into the herbarium it is absolutely dead beyond recall. We have seen hosts of specimens of rare plants, rare perhaps in certain districts, or, it may even be rare in the general sense, but in order to have a perfect specimen the roots are lifted entire, and probably the district is given, so that others may confirm the locality of the find and integrity of the record, a process which in time is bound to eliminate the plant altogether. It is within our knowledge that a certain very rare fern was discovered as a solitary plant in late spring; the finder, a herbarium maniac, cut off all the fronds as herbarium prizes. Not content with this, having marked the place, he got a friend to visit the spot in the autumn in order to deprive the unhappy plant of the few fronds it had sent up to replace those removed. Beyond very reasonable doubt that plant was killed, for no fern would be likely to survive such treatment twice in succession. Another case was that of a rare fern reported at a certain spot in Scotland. An immediate visit failed to find a trace of it, and a local resident explained its absence by the fact that a professor of botany and a body of students had visited the habitat shortly before, the presumption being another haul, and another massacre in the interest (?) of science. Whether this really happened or not we cannot say, but undoubtedly there is good reason for deprecating the too heedless sacrifice of plant material for herbarium purposes without taking some steps to secure the survival of the plants concerned by only partial removal of foliage or roots, while, in the case of cultivable plants, the collection of seed or spores for propagative purposes, instead of the plants themselves, would often, with a small sacrifice of time, provide ample material for the purpose in view, while assisting in perpetuating, instead of exterminating.

MR. W. J. GODFREY.

Mr. W. J. Godfrey of The Nurseries, Exmouth, Devon, a well-known raiser and exhibitor of chrysanthemums, began business seriously about thirty years ago. His first introduction, however, was a potato, not a chrysanthemum, and this he named Queen of the Earlies, but it was afterwards sent out in America, and Mr. Godfrey considers it is the variety now known as Puritan. For some years before this Mr. Godfrey had made extensive trials of potatoes at a time when most of the new varieties came from America. The Godfrey calla, or arum, extensively grown at home, in America, and on the Continent, was raised at the Exmouth Nurseries; it has been in general cultivation now for about fifteen years, and is a great favourite, but when it was exhibited before the Royal Horticultural Society its claims to merit were not officially recognised. Mr. Godfrey has long taken an interest in both border and tree carnations, and in our issue of August 16, 1902, he said, "In ten year's time we shall have seen a marvellous change in the extent of winter carnation culture." His prophesy has come true in less than ten years, and, as one of the original members of the Perpetual-flowering Carnation Society, he worked to bring it true. Mr. Godfrey's first introduction among chrysanthemums was Beauty of Exmouth, sent out in 1892, and this was followed two years later by Queen of the Earlies, a variety that long held a high position among market growers. Bessie Godfrey, Sensation, Godfrey's Bride, Mafeking Hero, Mrs. W. J. Bryce, Godfrey's Eclipse, G. T. Evans, are a few of the Exmouth varieties that have brought fame and business to Mr. Godfrey. In other directions this burly Devonian nurseryman has accomplished excellent work, and visitors to the Temple Show in recent years will remember the beautiful huge poppies in a great variety of art colours raised and shown by him, and will hardly need to be reminded that he has also paid more attention than any other modern raiser to the improvement of show and regal pelargoniums. In short, Mr. Godfrey occupies a very high position as a raiser, florist, and cultivator.

Purchase of One Tree Hill.—Some three miles to the south of Sevenoaks is One Tree Hill, the culminating point of a wide area of weald country, which is crowned by an ancient and solitary beech, and is said to be a landmark visible to vessels in the Channel, some fifty miles distant. Whether this be the case or not, the slope is gradual from the north, but on the south the ground, from within a very short distance of the beech, falls precipitously to the wide expanse of weald below, white rocks jutting out between the oaks and yews that cling to the hillside. From the summit the view is remarkable alike for its extent and beauty, as will be readily understood when it is stated that it ranges from the heights of Ashdown Forest and Crowborough, in the west, to the chalk hills of Dover and Folkestone. A short time since Lord Derby put into the market his estates between Sevenoaks and Tonbridge, and when it was found that One Tree Hill was thus placed within reach of the public it was felt that an effort should be made to secure it for public use. Negotiations were entered into with Lord Derby, and, as the result, his Lordship offered to sell to the National Trust the hill and several adjoining fields with an aggregate area of thirty acres, for £1,000. The offer was at once accepted, and two members of the Trust generously contributed the whole amount, and thus preserve One Tree Hill as a memorial to a near relative.

National Amateur Gardeners' Association.—The programme for the current year of this enterprising society has been issued, and this affords evidence that the members will, as in previous years, have ample opportunities for entering into friendly competition with each other, and also for meeting together for the discussion of matters of interest to amateur gardeners. The meetings of the society are held on the first Tuesday in each month, with the exception of July and December, and classes are provided for the more important of the flowers that are then at their best. On July 15 the exhibition will be held in the gardens of the Royal Botanic Society, Regent's Park, and a comprehensive schedule, with liberal prizes, has been prepared. Roses, sweet peas, and violas have numerous classes provided for them, and should form highly attractive features. The hon. secretary is Mr. F. A. Poulton, Rosemount, Park Road, New Barnet.

North of England Horticultural Society.—The council of this society have had two meetings and are able to announce that it is receiving hearty support. They have arranged to hold a monthly meeting and show on every third Wednesday in the month, the dates being March 22, April 19, May 17, June 7, July 19, August 15 (perhaps at Harrogate), September 20, October 18, November 15, and December 20. The council and committees will meet on these dates, and a lecture will be given at each meeting. The council are willing to hold a show in co-operation with local societies anywhere in the North, and they are also prepared to send deputations to award their diplomas for new plants, fruits, flowers, etc., and award cups, if required. As regards educational work, the society is receiving the hearty co-operation of the staff of Leeds University, and it is hoped, also, to receive the full support of the authorities of the Armstrong College of Science, Newcastle-on-Tyne.

Horticulture at Turin.—In connection with the forthcoming International exhibition at Turin, a permanent Horticultural Exhibition will be held from April to November, 1911, and also three temporary shows. The permanent section forms part of the General Exhibition, and includes matters relating to the cultivation of fruits, vegetables, and flowers; garden implements and tools; and teaching and appliances for teaching. The three temporary flower and fruit shows will be held as follows: Spring show, May 15 to 25; summer show, September 16 to 24; and the autumn show, October 25 to November 4. Copies of the regulations and schedules relating to these shows may be obtained from the secretary to the Hortitural Committee, 21, St. James's Square, S.W.

The Home of Cymbidium Tracyanum.—The mystery that for nearly a score of years has surrounded Cymbidium Tracyanum has now been practically solved, as, according to the "Orchid Review," plants have been sent to Trinity College, Dublin, by Dr. Alexander Kerr, who collected them at Chengmai, Siam, therefore Mr. Rolfe assumes with good reason that the home of C. Tracyanum is in the Southern Shan States, part of which are in Burmah and part in Siam. The orchid is evidently found in company with C. Lowianum, as the original plant obtained by the late Mr. H. A. Tracy was purchased as C. Lowianum. When it flowered it was purchased for 75 guineas for the Dell collection. Mr. Prewett, of Hammersmith, flowered another plant in 1895, while yet another appeared in the autumn of 1895, in Mr. Woodhead's collection at Liverpool. The Messrs. Sander and Sons, and Mr. Steel, of Selkirk, flowered the same species or natural hybrid somewhere about the same time, and the very generally expressed opinion has always been that C. Tracyanum is a natural hybrid between C. grandiflorum and C. giganteum. A later acquisition, C. I'Ansoni, also imported with C. Lowianum, is regarded as a hybrid between the last-named and C. Tracyanum, but these questions of parentage have yet to be cleared up by our hybridists.

The Small Holdings Movement.—The remarkable development of the small holdings movement in recent years has led legislators interested in the land problem to consider in what manner the Act of 1892 may be amended to meet the altered circumstances of modern times. Mr. Jesse Collings has within the last few days introduced a Bill, which is influentially backed, to afford further facilities for the creation of small holdings. Chief among its provisions is the power given to County Councils to advance to the purchaser of a small holding any money not exceeding nine-tenths of the cost for the purpose of creating on the small holding a dwelling house and such other buildings, or making such an adaptation of existing buildings as, in their opinion, are desirable for the due occupation of the small holding, provided that the requisite plans and specifications are previously submitted to, and approved by, the County Councils. This applies to the equipping of the small holding when acquired. The Bill, however, deals much more liberally with the man who wants a small holding. It is proposed to substitute for Sub-section 3 of Section VI. of the Act of 1892 the following: "A County Council may advance to any person purchasing a small holding in pursuance of this Act the whole, or any less part, of the price of such holding."

Annual Meeting of the U.H.B.P.S.—The annual meeting of that very excellent institution, the United Horticultural Benefit and Provident Society, will be held at the Royal Horticultural Hall at eight o'clock on Monday, March 13, when the chairman of committee, Mr. Chas. H. Curtis, will preside. We understand that the society has had a considerable accession of members during the past year, and has added no less that £3,000 to its investments. It is hoped that a large number of members will attend, and show their appreciation of the services so ably rendered by the committee, officers, and trustees.

Gardeners' Dinner at Dumfries.—On the evening of February 23 the Southern Counties (Scotland) Gardeners held a dinner in the King's Arms Hotel, Dumfries. This function is intended to be the first of a series of such events, whose object is to bring the local members of the craft into touch with each other, and the success of the first dinner justifies the hope that this purpose will be served. There was a very large attendance of members of the seed and nursery trade, as well as of gardeners, from various parts of the counties included in the scope of the reunion. The chair was occupied by Mr. T. Young, of the Crichton Royal Institution Gardens, who made a short, but able, speech, in which he stated the objects of the meeting, which, in addition to the social element, included the consideration of a proposal to form a Gardeners' Mutual Improvement Association. A number of toasts were proposed, and responded to. A discussion took place on the suggested formation of a society, and it was arranged to hold a meeting on March 4, when a paper will be read by Mr. Hunter, of Messrs. James Service and Sons. The dinner was arranged for by a committee, with Mr. Taylor, Brocklehirst, as secretary.

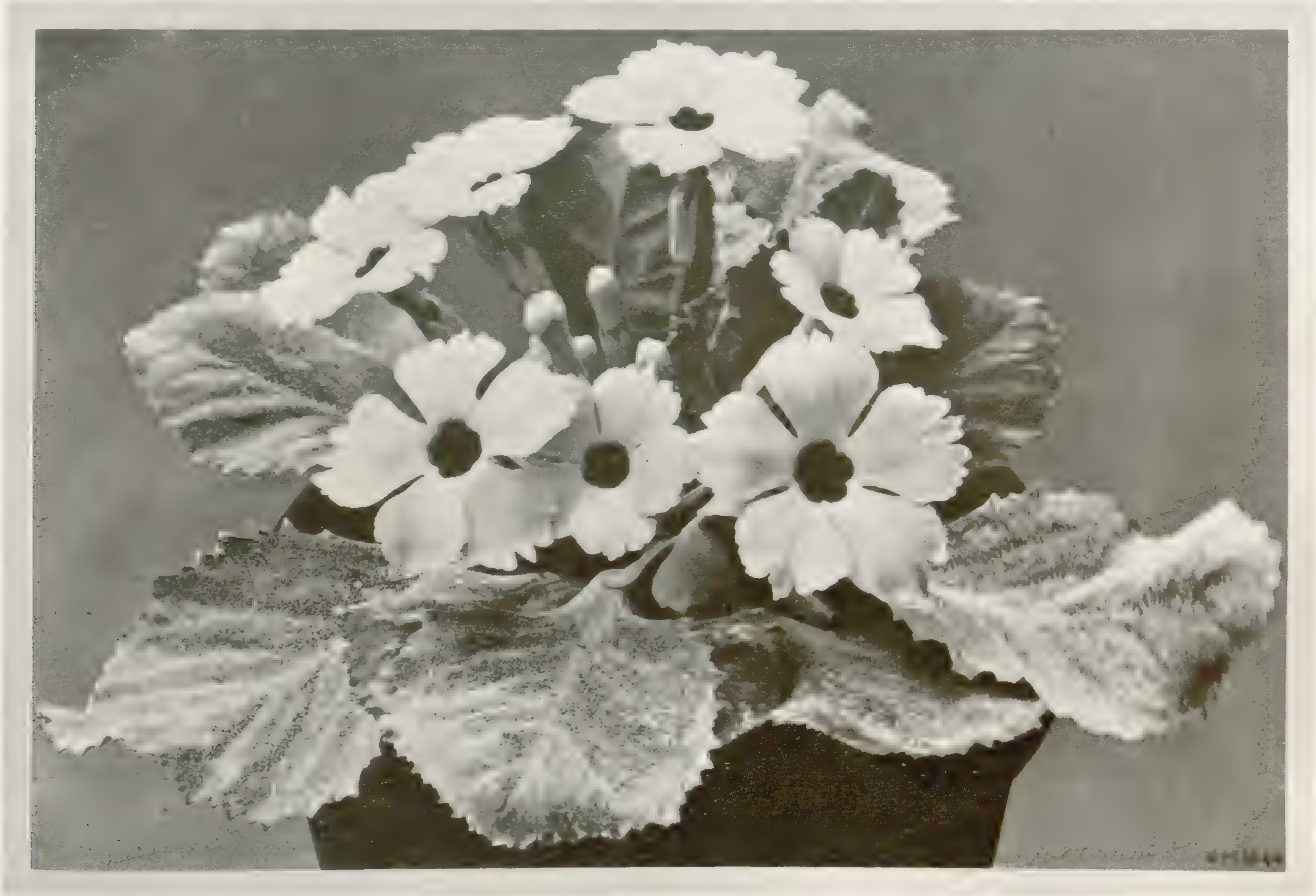
Swanage Horticultural Society, which was founded six years ago, has achieved much success, and accomplished much useful work in the promotion of gardening in the district over which its operations extend. A gratifying feature of the society's activity is the care with which the funds are handled. In looking through the balance-sheet for the past year we observe that the amounts disbursed in prizes and management expenses were about equal, and that the operations during the twelve months resulted in a substantial balance. This year the society is offering at its exhibition, to be held August 7, a challenge cup, of the value of twenty guineas, for a collection of fruit and vegetables, to consist of six dishes of the former and nine varieties of the latter. The schedule also contains eight or nine special classes for sweet peas, so that there should be good displays of these flowers, as well of other subjects.

ROYAL HORTICULTURAL SOCIETY.

There was a very full meeting at the Royal Horticultural Hall on Tuesday, February 28, and the exhibits were both numerous and interesting, while many of them were also beautiful. Novelties were not numerous, but the new hardy Primula Winteri attracted a great deal of attention. The Orchid Committee distributed botanical certificates to four species, but otherwise granted only an Award of Merit. Orchids, hardy plants, forced flowering shrubs, carnations, and cyclamens made up the bulk of the exhibition. Notwithstanding the wind and rain, there was a good attendance of Fellows.

FLORAL COMMITTEE.

Fine big vases of beautiful carnations from Mr. A. F. Dutton, Iver, Bucks, were greatly admired; Dutton's White Lawson, Beacon, Lawson-Enchantress, Mrs. H. Burnett, Mikado, May Day, O. P. Bassett, Harlowarden, and Rose Pink Enchantress were the leading varieties.



PRIMULA WINTERI.

A beautiful Himalayan species bearing lilac-coloured flowers. F.C.C., R.H.S., February 28. Also on same date F.C.C., National Hardy Plant Society. Messrs. R. Gill and Son.

The old Bletia hyacinthina, a hardy orchid in favoured localities, was very well shown by Messrs. Thomas S. Ware, Feltham. This firm had also goodly batches of Iris reticulata, Primula denticulata, P. malacoides, Pulmonaria rubra, saxifragas, Soldanella alpina, and other pretty alpines, etc.

Messrs. R. Gill and Sons brought up a fine lot of their wondrously beautiful rhododendrons from Penryn, Cornwall. There were R. arboreum, R. barbatum, R. Shilsoni, R. Thomsoni, R. cinnamomeum, and R. Duke of Cornwall. Violets and Cyclamen Coum were equally delightful, but the great attraction was Primula Winteri (F.C.C.), a low-growing species with clusters of lilac-coloured, white-centred blooms, surrounded by light green, mealy-powdered leaves; this new primrose comes from an elevation of 12,000ft. on the Himalayas; the plants shown were from seeds sown less than a year ago.

Messrs. J. Hill and Son, Edmonton, displayed a large and beautiful group of ferns.

Messrs. Robert Sydenham Limited, Tenby Street, Birmingham, brought a breath of spring into the hall with their daffodils, crocuses, and lily of the valley. Hilda, Cardinal, Bullfinch, Magpie, Oriflamme, and Evangeline were charming daffodils shown, the first-named being quite new.

Messrs. Joseph Cheal and Sons, Crawley, brought forward a small collection of alpine shrubs and plants, the primulas, Dog's-tooth violets, and anemones being the leading features.

Magnificent carnations were brought over from Guernsey by Mr. H. Burnett, the leading varieties so famously and extensively shown being Mrs. H. Burnett, Scarlet Glow, Snow Queen, J. W. Riley, Mrs. Sutton (pink), R. F. Felton—very fine indeed—Mikado, Marmion, Aurora, Britannia, and Niagara (a fine white).

Mr. C. Engelmann, Saffron Walden, had a bold exhibit of beautiful carnations, the flowers bright and large. Carola stood out conspicuously, and other grand varieties were Vinca, Regina, Harlequin, J. Whitcomb Riley, and La Mode.

Cyclamens were superbly shown by the St. George's Nursery Company, Harlington, Middlesex, and probably finer blooms have never before been seen at the hall.

Rhododendron præcox figured prominently in the group from Messrs. R. Wallace and Co., Colchester. Crocuses, heaths, Tulipa Kaufmanniana, T. Fosteriana, anemones, Primula denticulata, and a glorious colony of Iris reticulata and I. v. Krelagei made up a charming exhibit.

Very brilliant and effective groups of Indian azaleas from Mr. L. R. Russell, Richmond, constituted one of the features of the meeting: these beautiful shrubs were finely grown, smothered with glorious blooms, and were greatly admired. The azaleas were flanked by admirable examples of Jasminum primulinum—showers of golden flowers.

Choice crocuses, irises, and snowdrops, beautiful anemones, and a number of fine rhododendrons were exhibited by Mr. G. Reuthe, Keston, Kent.

The useful lachenalias were very well shown by Messrs. J. Peed and Son, West Norwood, who set up good batches of L. Cami, L. luteola, and L. aurea.

Azalea mollis, as shown by Messrs. R. and G. Cuthbert, Southgate, produced a rare blaze of colour. The freely-flowered plants were grouped in their colours with ferns, and over them all towered standards of Prunus triloba, laburnums, Staphylea colchica, lilacs, and various pyruses. Magnolia Soulangeana nigra was very conspicuous in this group.

The graceful Primula malacoides was unusually well shown by Mr. Harry Ward, Oak House Nursery, Southgate. The plants were in 48-sized pots, and they carried a profusion of many-tiered spikes of deep lilac or lavender flowers.

The bank of cyclamens from Mr. Edwin Beckett, V.M.H., gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree, showed that Mr. Beckett is a capable grower of indoor plants, as well as of shrubs, vegetables, etc.; the white and salmon varieties were well shown.

A very bright exhibit of early spring flowers from Messrs. Barr and Sons, Covent Garden, included a selection of hellebores, a delightful lot of crocuses, Rhododendron præcox, anemones, scillas, snowdrops, a batch of the lowly Cyclamen ibericum, with flowering plants of the graceful Primula malacoides.

The long table, well filled by Messrs. Jas. Veitch and Sons, Chelsea, was gay with freely-flowered Indian azaleas, Azalea amœna Hexe, the typical and the farinose forms of Primula Kewensis, the pretty Erlangea tomentosa, the fragrant Boronia megastigma, and a group of choice amaryllis, these latter including splendid forms in Hermia, Roscrea, Valetta, Jadera, Otanes, Cygnet, and Pavola. Forced flowering shrubs were delightfully and elegantly shown by Messrs. Jas. Veitch and Sons, Chelsea, and the quantity of lilacs shown in the big group added fragrance to colour and grace. Standard wistarias, dwarf rhododendrons, lilacs, pyruses, and Azalea mollis were admirably grouped with a few foliage plants. Amelanchier canadensis, Rosa Hugonis, and Prunus triloba were other fine things in the display. In another part of the hall Messrs. Veitch put up a group of Indian azaleas grown as standards.

A neat rock-garden display from Messrs. Heath and Son, Cheltenham, filled one corner of the hall, and very charming were the little groups of Primula malacoides, P. rosea, P. denticulata, coloured primroses, saxifragas in variety, crocuses, anemones, etc.

Blue primroses, some of very deep colour, were well shown by Messrs. G. and A. Clark, Dover, the firm also contributing white, yellow, crimson, and other varieties, as well as richly-hued polyanthuses and Primula denticulata.

Messrs. H. Cannell and Sons, Swanley, displayed a group of brilliant zonal pelargoniums, showing cut blooms of the choicest varieties; stellate cinerarias, and cyclamens in great variety of colours were also contributed.

Boronia megastigma and acacias, in the group from Messrs. Stuart Low and Co., Bush Hill Park, Enfield, dispensed a sweet fragrance with the help of Daphne indica; Primula malacoides and gerberas, and a bright display of perpetual carnations made up a considerable exhibit from this firm.

The display of forced bulbs set up by Mr. W. Howe, gardener to Lady Tate, Streatham Common, was very much admired. There were daffodils, tulips, and hyacinths, with deutzias and Azalea mollis, but the tulips were exceptionally good, notably such varieties as Keizerkroon, Prince of Austria, Mon Tresor, Sir Thomas Lipton, Lilian Sydenham, Fabiola, Pink Beauty, Rose Gris de Lin, Proserpine, White Joost van Vondel, Le Reve, and Duchesse de Parma.

Such fine carnations as Marmion, Mrs. Fortescue, May Day, Winsor, White Enchantress, Lady Coventry, Edna, and Lady Elphinstone were largely displayed by Messrs. W. Cutbush and Son, Highgate, the same firm also contributing a large collection of alpines and forced shrubs, the latter including forsythias, Corylopsis parviflora, Spiræa confusa, Azalea mollis, magnolias, and laburnum.

Some delightful blooms of Richmond and Lady Hillingdon roses, lovely in colour and form, were shown finely by Messrs. George Mount and Sons, Canterbury.

Lovely seedling irises of the I. reticulata group were sent up by Mr. F. H. Chapman, Guldeford Lodge, Rye, together with new daffodils named Treasure Trove and Lullaby.

Mr. W. Seward, of Hanwell, contributed a large exhibit of finely-grown cyclamens, the pure white and deep crimson forms being particularly good.

The bright exhibit from Messrs. Bakers, Wolverhampton, consisted of alpine flowers backed by bushes of Rhododendron præcox; Adonis amurensis, Anemone hepatica cærulea, Primula denticulata, Anemone ranunculoides, Saxifraga Burseriana, and Androsace coronopifolia were charming among the smaller flowers.

In the group of ferns exhibited by Messrs. H. B. May and Sons, Edmonton, were included the newer nephrolepises and a set of the exquisitely beautiful filmy ferns, such as Todea superba, T. radicans, T. r. cambricum, T. r. dissectum, Trichomanes auriculatum, T. Tunbridgense, T. candiculatum, T. Luschnathianum, T. scandens, T. reniforme, T. intermedia, T. grandipinnula, T. parvulum, and Hymenophyllum demissum.

A long table filled chiefly with semicircular groups of tulips, each group of one colour, was filled by Messrs. Sutton and Sons, Reading, and in this way the colour and value of a variety was emphasised. The tulips thus grouped were Sir Thomas Lipton, Orange Blossom, Apple Blossom, Meteor, American Lac, Pink Pearl, La Remarquable, White Forcing, Radiant Dawn, and Grace Darling. The centre of the display was filled with scarlet cinerarias, and the yellow Primula Kewensis.

Single primula blooms, removed from the trusses and set out on the flat do not look well, as a rule, but when such fine flowers as those shown by Messrs. C. Brooks and Son, Worting, Basingstoke, they are attractive; Giant Crimson, Giant Salmon, the vivid Brilliant King, a lovely Giant Pink, the pretty Orange King—which is rich pink in the open flowers, True Blue, and Ruby Queen were all very beautiful.

The group of early flowers from Mr. Maurice Prichard, Christchurch, was gay with crocuses, saxifragas, anemones, irises, primulas, violets, and other good things.

Messrs. R. H. Bath, Wisbech, showed how daffodils, tulips, crocuses, and hyacinths can be grown in fancy pots or bowls in a fibre and shell mixture; the crocuses, trumpet daffodils, and hyacinths were well represented.

A group of the pale-blue-flowered Eupatorium ianthinum, from Mr. Farmer, gardener to Mrs. Laschelles, Highams, Windlesham, was a reminder of the value of this old plant for winter decorations. Mr. Farmer also presented a noble group of the effective golden-spathed Richardia Elliottiana; there were nearly seventy fine spathes in this group.

ORCHID COMMITTEE.

Messrs. Charlesworth and Co., Haywards Heath, put up a brilliant group of orchids in which odontoglossums and odontiodas were very graceful and beautiful, the former included O. crispum, O. armainvilliersense, O. Rolfæ, O. Edwardi, O. Gladys, O. Wilckeanum, and O. Ardentissimum; while among Odontiodas there were O. Bradshawiæ, O. Lutetia, and O. heatonense. Other things in good form were Phaius Norman aurea, Miltonia Bleuana nobilior, M. Warscewiczi, Lælio-cattleya Doris, L.-c. Luminosa, Brassocattleya Queen Alexandra, and Cœlogyne sparsa.

Some well-grown plants of Cypripedium aureum Surprise, C. villosum auriferum, C. aureum Virginale, C. a. Œdippe, and C. chrysotoxum, from Mr. E. V. Low, Vale Bridge, Haywards Heath, were greatly admired.

A very pretty group of orchids from Messrs. Armstrong and Brown, Tunbridge Wells, contained excellent examples of Odontoglossum Rolfæ, O. crispum, O. Queen Alexandra, Odonitoda Bradshawiæ, Masdevallia Schroderæ, Dendrobium Artemis, Cypripedium aureum, and other good things.

Odontoglossum crispum in variety, from Messrs. J. and A. McBean, Cooksbridge, were greatly admired; with these were Cymbidium insigne, C. Lowio-eburneum, and Epiphronitis Veitchi.

Mr. A. W. Jensen, Lindfield, Haywards Heath, showed a few plants of good varieties of Cattleya Trianæ.

A small group of cypripediums was staged by Mr. Carr, gardener to E. Roberts, Esq., I.S.O., Park Lodge, Eltham; C. Emile Cappe, C. Euryades, C. Sir Redvers Buller, C. Beechense, and C. St. Albans were the best things.

In the corner of one of the annexes Messrs. Mansell and Hatcher, Rawdon, Yorks, had a goodly display of orchids, in which Miltonia Bleuana grandiflora, Dendrobium amethystoglossa, D. nobile, D. n. nobilius, Odontioda Zephyr, Grobya fuscifera, and Eria lanata were represented.

Some grandly grown cypripediums were brought forward by Messrs. J. Cypher and Sons, Cheltenham; C. Bridgei, C. Graciæ, C. Miss L. Fowler, C. aureum Surprise, C. Beekmani, and Lælio-cattleya Cappei were all good.

Mr. Black, gardener to R. Thwaites, Esq., Streatham, sent up numerous hybrid dendrobiums, the yellow D. Chessingtonense showing up well.

The graceful Dendrochilum glumaceum pallidum (B.C.), the pretty Masdevallia Chamberlainiana, and such curious species as Dendrobium delicatum (B.C.), Maxillaria calychroma (B.C.), in the way of M. luteoalba, Catasteum Scurra, and Pleurothallis scapha, were all shown by Mr. W. H. White, orchid grower to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking.

Mr. Chapman, gardener to Mrs. Norman Cookson, Oakwood, Wylam-on-Tyne, sent up a beautiful form of Odontioda Bradshawiæ, a pretty seedling Odontoglossum percultum, and the richly-hued Dendrobium Oakwoodiensis.

Mr. J. Gurney Fowler, Glebelands, South Woodford, sent a fine plant of the brilliant Odontioda Keighleyensis, carrying a spike of about fifty flowers.

Messrs. Sander and Sons, St. Albans, brought up a nice lot of orchids, and here the leading features were Odontoglossum Edwardi, O. excellens, O. percultum, Cypripedium Maudiæ, C. aureum Hyeanum, Phalænopsis Stuartiana, Cattleya Thayeriana, and the graceful Cymbidium Holfordianum.

Dendrobium Wardianum formed the centre of a group of orchids from Messrs. Stuart Low and Co., Enfield; this batch was flanked by Angræcum sesquipedale, Cattleya Trianæ, Lycaste Skinneri, Dendrobium atro-violaceum, masdevallias, etc.

Messrs. Jas. Veitch and Sons, Chelsea, submitted an attractive hybrid between Cymbidium Lowianum and C. Devonianum, named C. Veitchi (A.M.); this had a long spike of brownish-green flowers, and a rich purple-brown lip.

FRUIT AND VEGETABLE COMMITTEE.

Kales, green and coloured, some of great use in the kitchen, and others so gaily coloured that their position seemed to be the flower garden; Arctic Green, A1, Hardy Sprouting, Sutton's Hybrid were all green varieties of great value.

CERTIFICATES AND AWARDS.

First-class Certificate.—To Primula Winteri, from Messrs. R. Gill and Sons, Penryn, Cornwall.

Award of Merit.—To Cymbidium Veitchi, from Messrs. Jas. Veitch and Sons, Chelsea; to Saxifraga Bursiculata, from Mr. E. H. Jenkins, Hampton Hill.

MEDALS.

Gold.—To Messrs. Jas. Veitch and Sons, Chelsea, for miscellaneous flowering plants; to Mr. L. R. Russell, Richmond, for azaleas.

Silver-gilt Flora.—To Messrs. Wm. Cutbush and Son, Highgate, for carnations, hardy flowers, etc.; to Miss Gundry, Foot's Cray, for flower paintings; to the St. George's Nursery Company, Harlington, Middlesex, for cyclamens; to Mr. Howe, gardener to Lady Tate, Streatham Hill, for forced bulbs.

Silver-gilt Banksian.—To Messrs. J. Hill and Sons, Edmonton, for ferns; to Messrs. H. B. May and Sons, Edmonton, for ferns; to Mr. W. Seward, Hanwell, for cyclamen.

Silver Flora.— To Messrs. Armstrong and Brown, Tunbridge Wells, for orchids; to Messrs. Charlesworth and Co., Hayward Heath, for orchids; to Messrs. Sander and Sons, St. Albans, for orchids; to Mr. H Burnett, Guernsey, for carnations; to Messrs. R. and G. Cuthbert, Southgate, fo forced shrubs; to Mr. Farmer, gardener to Mrs. Laschelles, Windlesham, for yellow arums, etc.; to Messrs. Stuart Low and Co., Enfield, for carnations, etc.; and to Mr. G. Reuthe, Keston, for hardy flowers.

Silver Banksian.—To Messrs. Mansell and Hatcher, Rawdon, Leeds, for orchids; to Messrs. Stuart Low and Co., Enfield, for orchids; to Messrs J. and A. McBean, Cooksbridge, for orchids; to E. Roberts, Esq., Eltham, for orchids; to Messrs. Ba and Sons, Covent Garden, for hardy flowers to Mr. A. F. Dutton, Iver, for carnations; to Mr. E. Beckett, gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree, for cyclamen; to Messrs. George Mount and Sons, Canterbury, for roses; to Messrs. J. Peed and Sons, West Norwood, for lachenalias, etc.; to Mr. Maurice Prichard, Christchurch, for hardy flowers; to Messrs. Sutton and Sons, Reading, for tulips; to Messrs. Thomas S. Ware, Feltham, for hardy flowers; to Mr. C. Engelmann, Saffron Walden, carnations.

Bronze Flora.—To Messrs. H. Cannell and Sons, Swanley, for pelargoniums, etc.; to Messrs. G. and A. Clark, Dover, for alp etc.; to Messrs. R. Gill and Sons, Penry for rhododendrons, etc.

Bronze Banksian.—To Messrs. Bakers, Wolverhampton, for hardy plants.

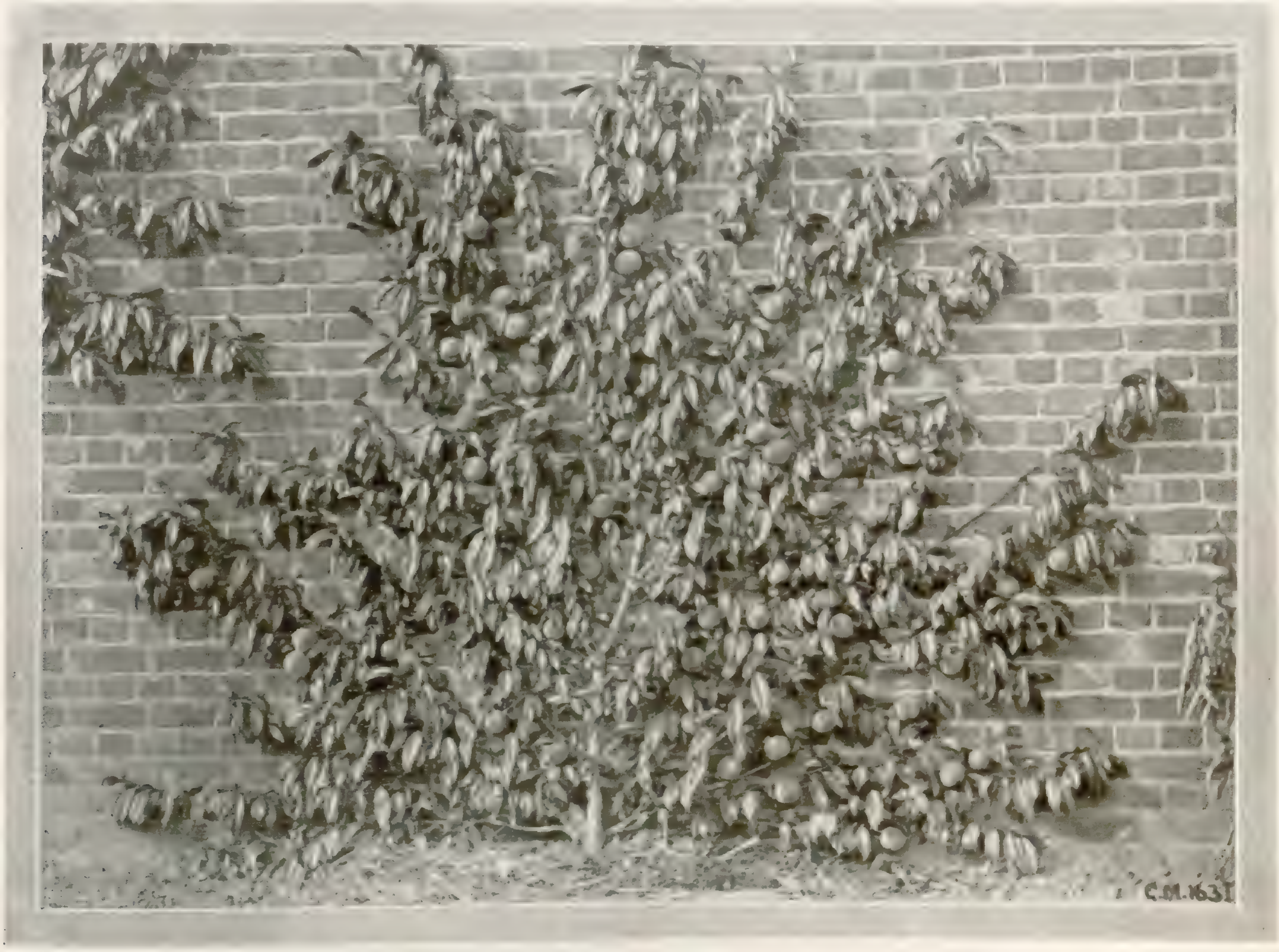
PEACH LIBRA.

I have been very much interested in the several notes on the Peach Libra that have appeared in the Gardeners' Magazine, and was more than surprised to read that this variety was unsatisfactory at Sutton Place, as it has been just the opposite in my own experience.

I was recommended to try this variety several years ago by Mr. Lock, of Oatlands Park Gardens, Weybridge, and, not having room for it indoors at the time, I purchased a young tree, and planted it on a wall facing south-east. Here it did splendidly, and has carried a good crop of fruit every season since. The colour, texture, and flavour of the fruit are all that one could wish for out of doors, and with us the fruits are of more than average size, notwithstanding the fact that the soil in this garden is of a particularly cold and heavy nature, and the roots must be standing in water once or twice during an ordinary winter, or at least as often as the Thames rises above its normal level.

The accompanying photograph shows the tree in question two seasons ago, and it is in a much better condition now than then,

Thomas Stevenson.



A TREE OF LIBRA PEACH
In the gardens of Woburn Place, Addlestone.

Border Carnations may be planted in their flowering quarters, providing the soil is workable. The ground, which has been dug previously, should be made firm and raked level, and the plants put out eighteen inches apart each way. The surface soil of autumn-planted beds should be slightly stirred with the hoe during dry weather, and all blanks should be made good. An occasional dusting with soot is beneficial; it will keep the foliage in good colour and assist in keeping down disease.—E. C. P.

NOTES FROM KEW.

◆

Rhododendron Prince Camille de Rohan.

This has the reputation of being one of the best of all the evergreen rhododendrons for forcing, in which state it is very valuable for decorations. This good name is well borne out by the specimens in the greenhouse at Kew, where some fairly large bushes are freely laden with their attractive blossoms. In the production of this particular variety, R. caucasicum has, I should say, played an important part. It forms a shapely, compact bush, and the flowers are very freely borne. They are white, with a suffusion of blush, while the upper part of the interior is densely freckled with red. In addition to this, the edges of the petals are prettily crisped. These hardy rhododendrons are very valuable for greenhouse decoration during the early months of the year, but many of them will prove unsatisfactory if subjected to hard forcing. In addition to Prince Camille de Rohan, one of the most readily forced is that generally grown as Cunningham's White, but which is, I believe, synonymous with R. caucasicum album.

Begonias.

One can scarcely overestimate the important part played by begonias in our glass houses at all seasons of the year. Throughout the summer months the innumerable tuberous-rooted varieties, with representatives of many species, serve to maintain a bright display, and in autumn a succession to the ordinary tuberous-rooted kinds is formed by the several hybrids with them and B. socotrana. With these come B. Gloire de Lorraine and its forms, which, commencing to bloom in the autumn, are both in the greenhouse and in the intermediate portion of the T-range as bright and effective as ever. These are by no means the only begonias just now in an attractive state, for among the many in bloom may be especially mentioned B. Gloire de Sceaux, a bold, bushy plant, with handsome bronzy leaves and rose-coloured flowers; B. semperflorens gigantea, an old hybrid between B. semperflorens and B. Lynchiana (or Roezli), as it was at first called. This has bright rose-carmine flowers, which are borne nearly, if not quite, throughout the year.

B. manicata, introduced from Mexico as long ago as 1842, is still well worth growing where a display of flowers has to be kept up. This has large, handsome, shining green leaves, the stems and the under-sides of the principal veins being studded with broad red scale-like hairs. The flowers are borne in large branching cymes, and, as they well overtop the mass of handsome leafage, they are seen to considerable advantage. The blossoms are not large, but very numerous, and pale pink in colour. Some of the individuals at Kew appear to me superior to those generally met with. Singularly enough, there are two varieties of B. manicata, remarkable for their distinct leafage, one in which the leaves are freely blotched with yellow, and the other in which they are crested in a peculiar manner, almost suggesting some of the kales. Another species—B. pruinata, from South America—is a good deal like B. manicata, but the leaves are without hairs, and the flowers are pure white. The excessively shiny leaves of B. conchifolia, with its pretty pink blossoms, also attract attention; while B. scabrida, a free-growing, bushy species with comparatively small leaves and a profusion of white blossoms, is very useful.

This note might be considerably extended, but enough has been given to show the great variety that exists among begonias, and the value of many of them for winter blooming.

Cynorchis compacta.

This is the name of a charming little terrestrial orchid, flowering most profusely in the cool orchid house. It is nearly related to the habenarias, and, like them, produces a small tuber, from whence is pushed up the flower-scape, which reaches a height of about 6in., and has one or two partially-unfolded leaves at the base. The flowers are numerous and pure white, and when several bulbs are grouped in a shallow pan they make a goodly show.

Aphelandra Chamissoniana.

Some examples of this pretty aphelandra now in the intermediate portion of the T-range arrest attention by reason of their bright chrome-yellow tint, whereas most of the aphelandras are of some shade of red or scarlet. A. Chamissoniana is a rather tall, slender-growing species, clothed with leaves about 4in. long. These have a broad white band along the midrib, while the greater part of the leaf is freckled with white. The inflorescence consists of a large head of bracts, from whence the flowers are produced. The flowers are, as above stated, yellow, while the bracts are, with the exception of a green tip, of much the same colour. This aphelandra was first distributed under the name of A. punctata, and as such it is still sometimes met with in gardens.

K.

A WELL-MARKED STRAIN OF FRENCH MARIGOLDS.

BEDDING PLANTS GROWN AS ANNUALS.

(Concluded from page 151.)

◆

Balsams

are not much grown nowadays, and those who have only seen half-staved plants can form no idea of the beauty of the best double camellia-flowered forms when well grown on a sunny bed of rich soil. Seed should be sown in February in a compost of turfy loam and spent hotbed in equal proportions, and the seedlings potted up and grown on in sixties till all danger of frost is over, as they are very tender. The plants should be given plenty of space to show up the flowers down the stems under the leaves, the ground between being carpeted with low-growing plants, such as creeping jenny, or white lobelia.

Dianthus and Alonsoa.

Dianthus Heddewigi, both single and double, make good beds. They need a light rich soil in a good position, and when well grown are very effective, the colours ranging from pure white to the richest crimson, while some are laced and striped. Forward plants will keep up a good show from July to late September.

Those who like uncommon beds might grow Alonsoa. It is one of the smallest of plants in the seed-leaf stage, and needs careful raising, but otherwise is not difficult to grow if given good cultivation. Though the flowers are small the effect in the mass is very bright in fine weather. A large proportion of the blossoms, however, are knocked off by even a moderate shower.

Zinnias.

Zinnias must be mentioned, as they are so often grown for the sake of the unusual colours of their blossoms, but they are rarely a success, needing a light rich soil in a good position if they are to do well even with the best treatment. As usually grown they are distinctly lacking in grace. There should always be a border round the bed to conceal a part of their stems. Antirrhinums are specially useful where a spring bed is not ready to take up till June is well advanced, when plants from pots will make a good show from late July till October.

Edging Plants.

Apart from the conventional lobelias and ageratums, one of the best plants is the French marigold, in one of its more beautiful forms of self orange or crimson and yellow striped, and, closely allied to it, Tagetes signata pumila. Like their relative named from Africa they light up the garden in late summer and autumn, though they begin at the end of June. All are very tender. Sanvitalia procumbens is a low-spreading plant with flowers like small sunflowers. In a light rich soil, in a good position, it makes compact tufts covered with small flowers all the summer. Alyssum maritima, with its dwarf habit and white flowers, is most useful both for carpeting beds, as shown in the illustration given in the last issue, and for marginal bands.

Alger Petts

Sweet Peas.—The first sowing in the open may be made at once, providing the ground is in good working order. Should the soil be at all sticky, it will be best to defer the operation for a few days until better conditions prevail. For rows, drills should be drawn out nine inches wide and about three inches deep, sowing the seeds in them thinly. It is a common error with many to grow too thickly; the plants cannot develop properly, the growth becomes stunted, and the flowers are naturally of an inferior quality. Before sowing, it is necessary to dress the seeds to prevent the depredations of mice, birds, etc. Red lead is a very good thing for this purpose, and there is now an excellent preparation on the market, recommended as a seed dressing, not only for sweet peas, but for other seeds.—E. C. P.

Make your Garden a delight by using

CANARY GUANO.

There is nothing like it for producing the best possible results in the garden. For improving Lawns, increasing the size and brilliance of Flowers, and producing heavy yields of Vegetables there is no Fertilizer that has given such excellent results. Canary Guano is sold by practically all Seedsmen throughout the United Kingdom and is used all over the world. TRY IT.

Sold in **6d.**, **1/-** and **2/6** Tins; and in bags from **3/6** to **20/-**.

Further particulars sent post free by the Manufacturers

THE CHEMICAL UNION, LTD, IPSWICH.

ORCHIDS.

Amateurs interested in Orchids should write for our

Amateur's Guide,

2nd Edition, free.

Giving Treatment, Soils, Description of Flowers; Illustrated.

MANSELL & HATCHER, Ltd.,

Rawdon, Yorkshire.

CHEALS'

113 Acres of Ornamental

Trees & Shrubs

Of all kinds.

Fruit Trees

Hardy, Healthy, and true to name.

Roses & Hardy Plants

Descriptive Catalogues Free.

J. CHEAL & SONS,

NURSERYMEN AND LANDSCAPE GARDENERS,

Crawley, Sussex.

By Appointment to H.M. The King.

1911 FORBES'

Illustrated Plant Catalogue **Nearly 200 Pages.**

GOLD MEDAL SPECIALITIES.

Contains carefully revised **Descriptions, Colour, Height, Time of Flowering, British or Common Names, Prices**, etc., of the **Grandest Collections of ASTERS, BEGONIAS, CALADIUMS, CARNATIONS, DAHLIAS, DELPHINIUMS, PÆONIES, PANSIES, VIOLAS, PELARGONIUMS, PENTSTEMONS, PHLOXES, PYRETHRUMS, HARDY BORDER PLANTS**, carefully prepared **PLAN** for arranging **HARDY PLANT BORDERS**, etc.

Experts unanimously accord **FORBES' CATALOGUE** the unique distinction of being the **best** and most **reliable** up-to-date **Reference Book** extant.

FREE ON APPLICATION.

JOHN FORBES (HAWICK), LIMITED,
(Dept. I), The King's Nurserymen, **HAWICK, Scotland.**

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.

Many large specimens and rare varieties.

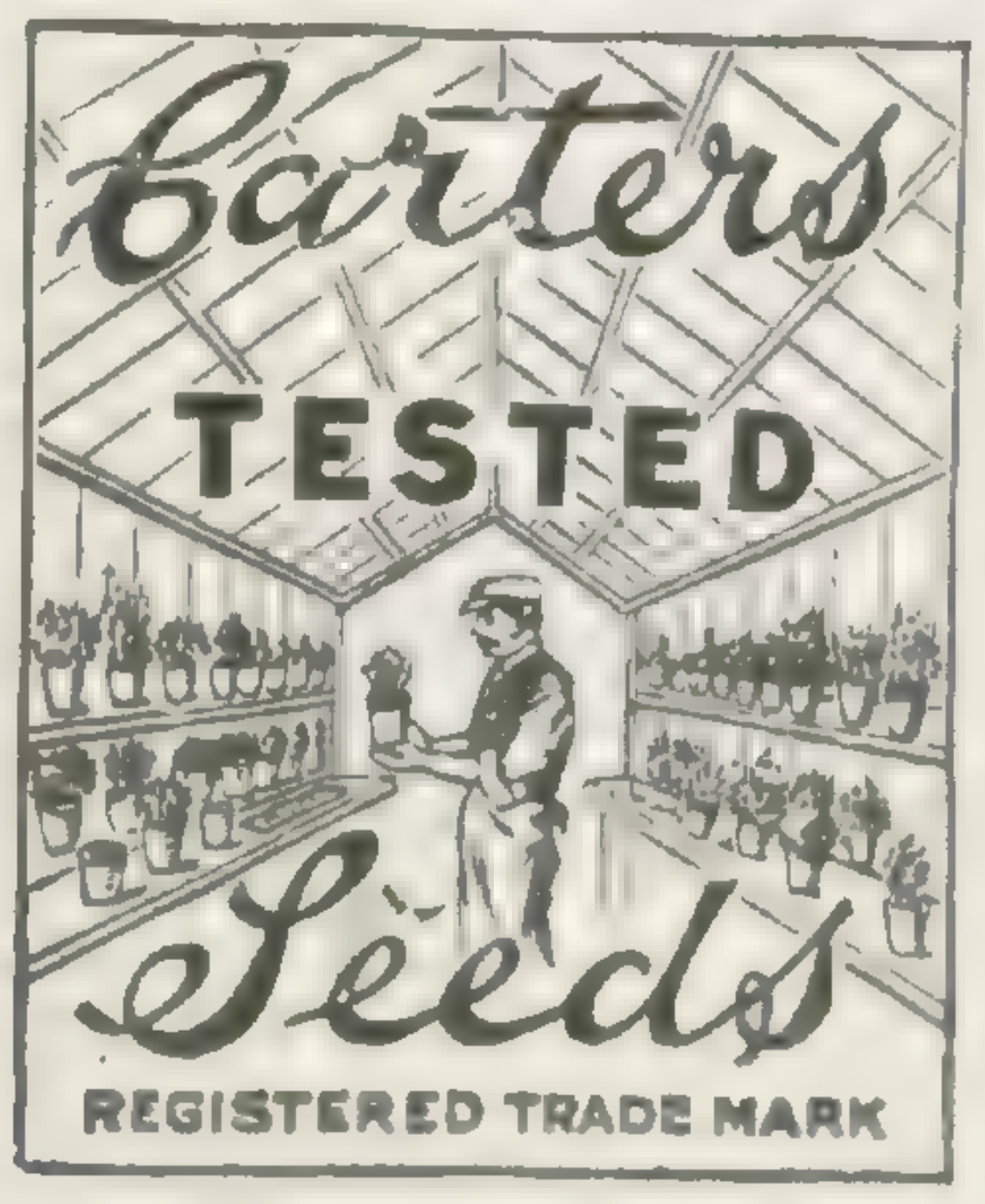
STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

Please Write for List.

JAMES CYPHER & SONS,

Exotic Nursery, Cheltenham.

Write for ILLUSTRATED CATALOGUE POST FREE
from



Carters
HIGH HOLBORN

New Offices and Seed Testing Grounds,

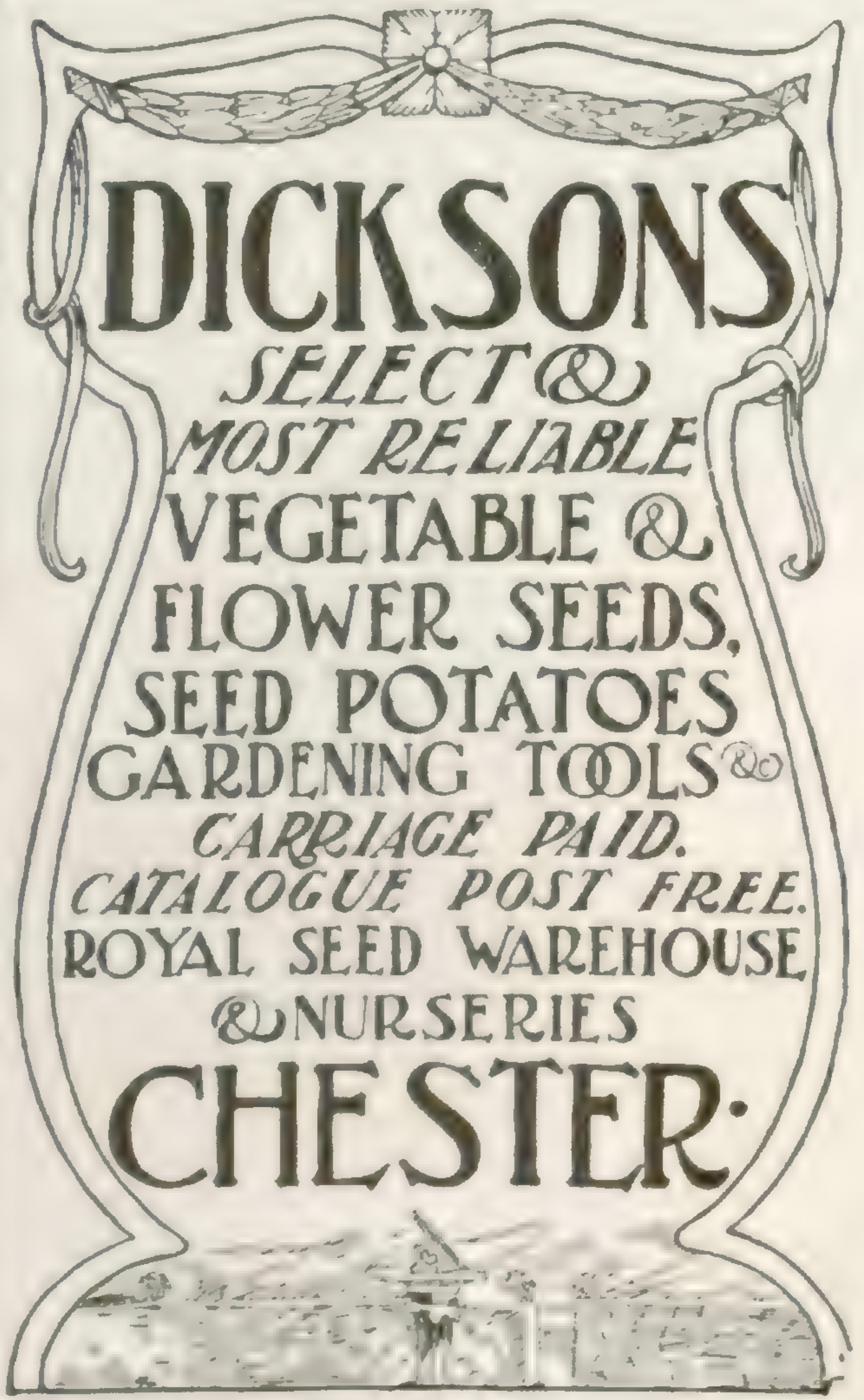
RAYNES PARK, LONDON, S.W.

Branches { 237 and 238, High Holborn, W.C.
53a, Queen Victoria Street, E.C.

CARNATIONS, PINKS, AURICULAS.

DOUGLAS for the best old and new varieties in all classes, and the finest quality in the world. Malmaison Carnations, new and old, **7/6** per dozen. Border, **6/-** to **12/-** per dozen. Tree, American, and English, **7/6** to **15/-** per dozen. Auriculas, Show, **21/-** to **30/-** per dozen. Alpine Auriculas, **9/-** to **21/-** per dozen. Carnation, Auricula, Pink, and Polyanthus seed, **1/6** and **2/6** per packet. **CATALOGUE FREE.**

J. DOUGLAS, Bookham, LEATHERHEAD.



DICKSONS
SELECT &
MOST RELIABLE
VEGETABLE &
FLOWER SEEDS,
SEED POTATOES
GARDENING TOOLS &c
CARRIAGE PAID.
CATALOGUE POST FREE.
ROYAL SEED WAREHOUSE
& NURSERIES
CHESTER.

HERE YOU ARE! ! ! — ARTHUR COOMBES, F.R.H.S., offers pick of his Tomato Plants, grown under ideal conditions. Holmes' Supreme, Comet, Up-to-Date, D. of York, Sunrise, 1s. 3d. doz.; 8s. 100, cash. Post free.—ST. MARY'S NURSERY, Hagley, Stourbridge.

RIVERS'

Fruit Trees, Roses,

Vines, Figs, Oranges,

AND

Orchard House Trees.

A LARGE AND SELECT STOCK
ALWAYS ON VIEW.

Illustrated & Descriptive Catalogue
POST FREE 3d.

THOMAS RIVERS & SON

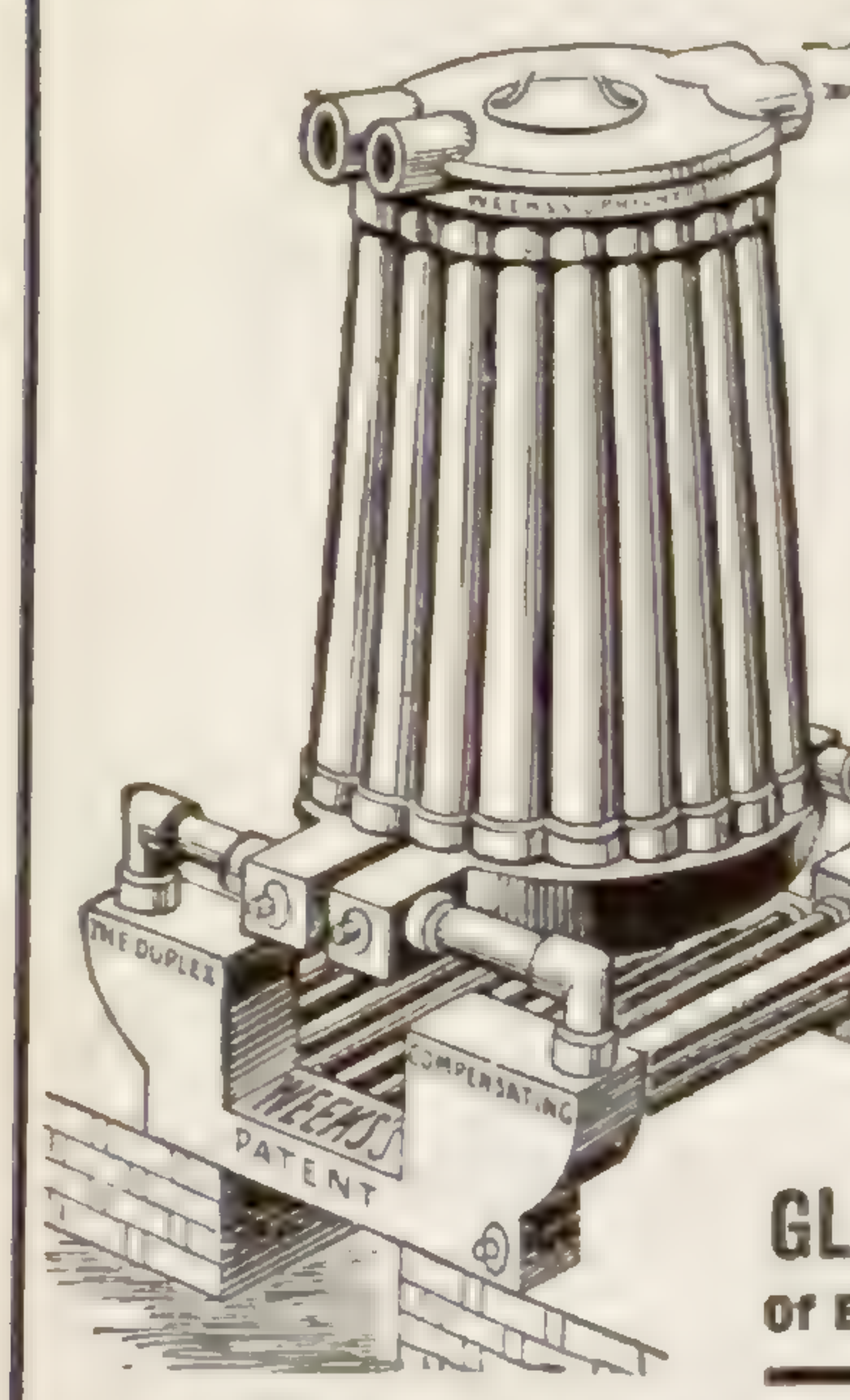
Sawbridgeworth, Herts.

Station: HARLOW, G.E.R.

"HOW TO MAKE YOUR OWN SOIL FUMIGATOR."—Save the fabulous profits on secret formulas. Make your own at LESS than ½d. per lb. Precisely as sold at 9d. and 1s. lb. tins. Sell to your neighbours, make 900 per cent. profit. Completely destroys wireworms, snails, woodlice, ants, leather-jackets, etc. Harmless to plants. Supersedes gas-lime. Send 1s. for recipe, and save money.—T. HUGHES, Analyst, Elmhurst, Northwich.

WEEKS'S BOILERS

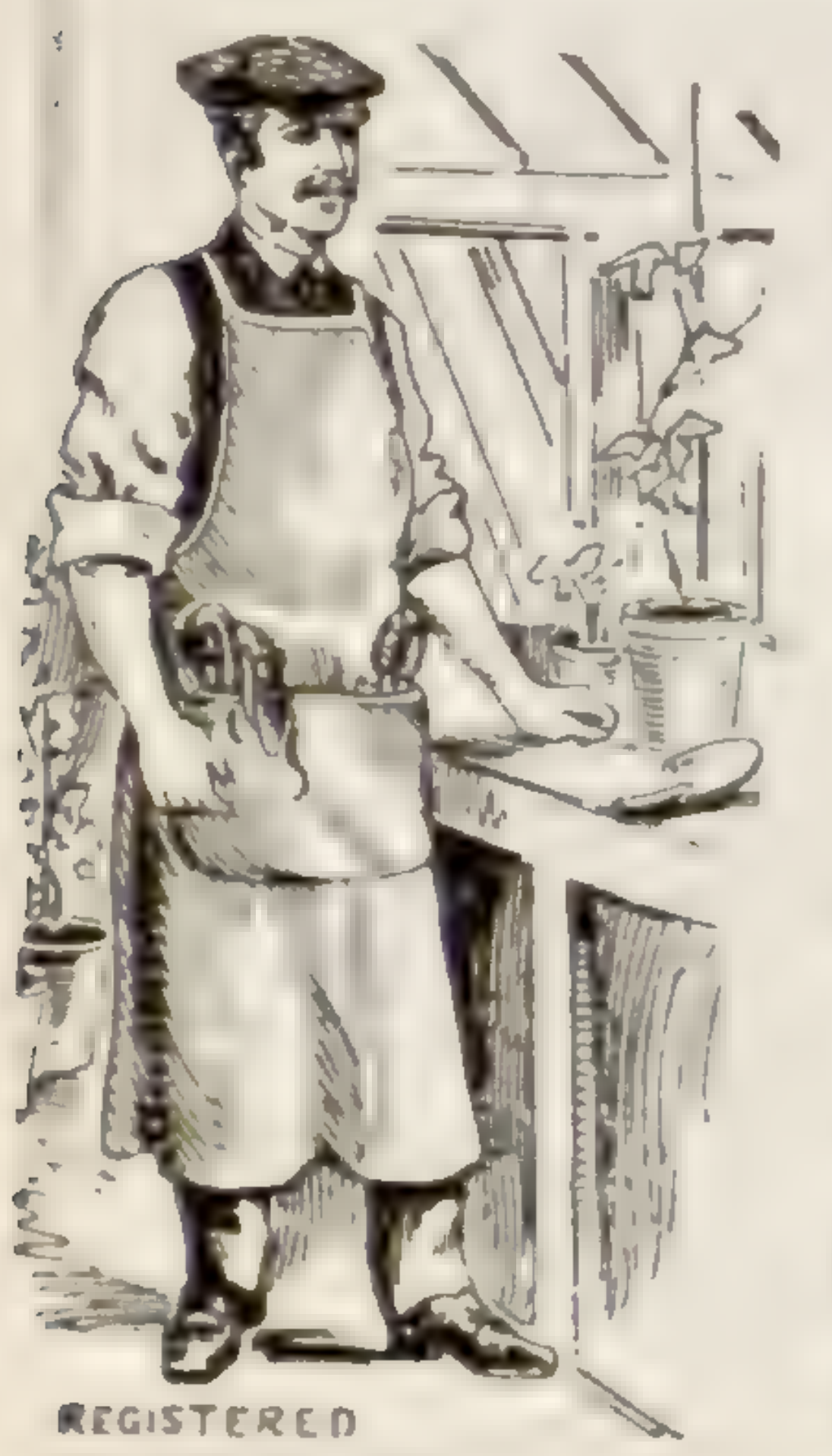
supplied from stock.



ESTIMATES GIVEN FOR COMPLETE HEATING APPARATUS

GLASSHOUSES.
Of Every Description.

J. WEEKS & CO.,
72, Victoria Street,
WESTMINSTER, S.W.



THE
APRON
That has Come to Stay.
WORN BY ALL THE LEADING GARDENERS.
LOOK AT THE PRICE.
In Dark Blue Ponicus Twills,
1/9, Postage 3d. extra.
Or in Dark Blue Ponicus Serge,
3/9, Postage 3d. extra.
WRITE FOR ONE TO-DAY.
SHAW & MONTGOMERY
(PENMAN'S),
628, Argyle St., Glasgow, W.

FRUIT TREES

We have 50 acres of young Fruit Trees in perfect condition to offer this season. Our **Specialities** are Cordons, Bushes, and Pyramids, and Trained Trees worked on selected **Fruiting Stocks.**

Fully Illustrated Catalogue Post Free.

W. SEABROOK & SONS,
The Nurseries, CHELMSFORD.

TREES, TREES, TREES.

Now is the Time to Plant.

300 ACRES TO SELECT FROM.

Our LIGHT OAKS and BAGNALL NURSERIES are admitted to be the most exposed in the United Kingdom, ranging up to 1,000 feet above sea-level. Customers may therefore rely on our stock thriving in the coldest or exposed situations.

Catalogues gratis on application.

ISAAC MATTHEWS & SONS, Ltd.,
The Nurseries,
MILTON, STOKE-ON-TRENT, STAFFS.

CABBAGE PLANTS, extra strong, Ellams, Mein's, Offenham, First and Best, Enfield, Battersea, 3s. 1,000, 12s. 6d. 5,000 lots; Drumheads 2s. 6d.; Red Cabbage, Cos Lettuce, Tripoli Onion 4s. 1,000, on rail; or 1s. 100, post free. List free. ' HIGHT, Cranleigh, Surrey.

WELL BORING.

MERRYWEATHERS' ECONOMIC SYSTEM.

Merryweathers' men with Steam Tackle boring a well.

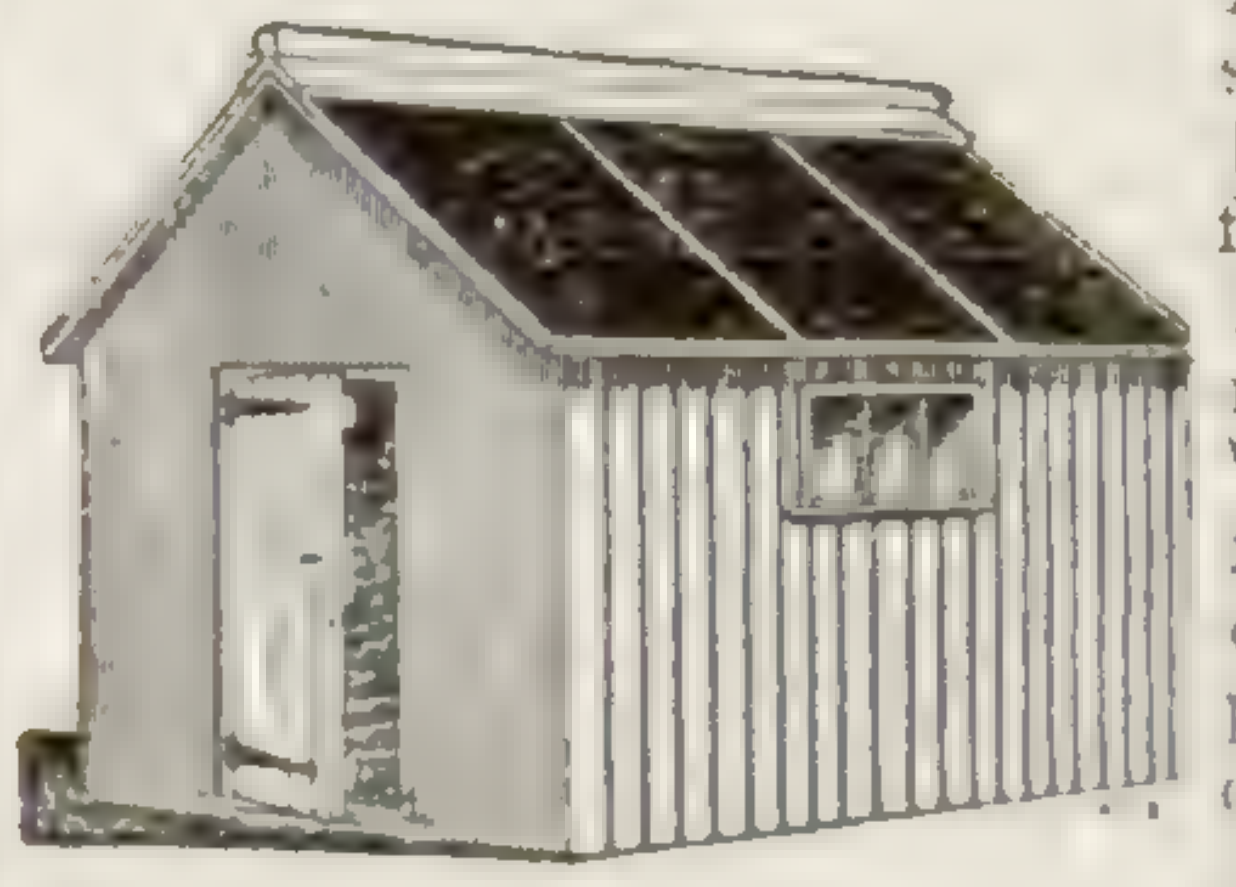
Pure and Abundant Supplies.
MEN AND TACKLE SENT AT A MOMENT'S NOTICE.
Work Carried Out with Economy and Despatch.

Write for Book on "Water Supply to Mansions."

MERRYWEATHER & SONS,
63, LONG ACRE, LONDON, W.C.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

PORTABLE BUILDINGS. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

SIZES.		Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
ESTABLISHED 70 YEARS. BEDFORD.
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

Extracts from 35th annual collection of reports:—

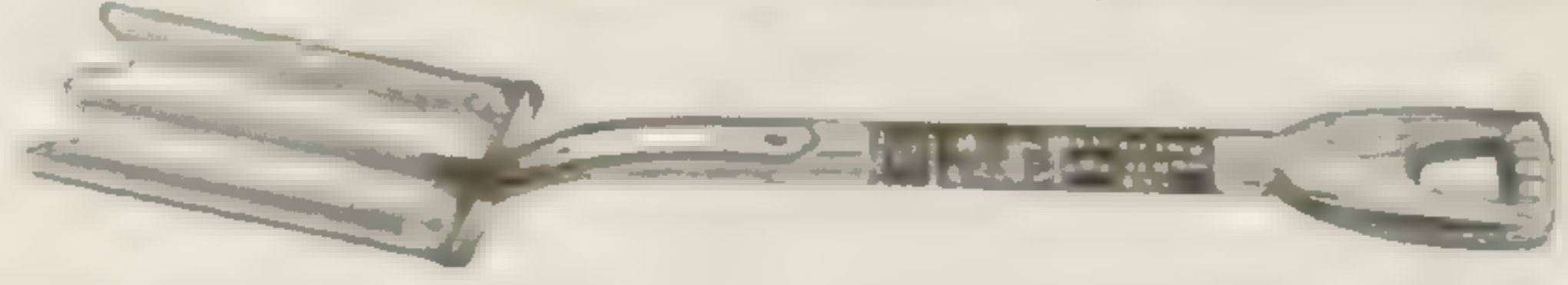
NATIVE GUANO for POTATOES, VEGETABLES, etc.
A. J. BEARD, Erdington: "Potatoes, splendid, free from disease. Best I ever had."—H. CHESTER, Nantwich: "Best onion manure I ever used. Grand for onion fly."

NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc.
J. CANT, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. FRAMPTON, Titchfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED,** 29, New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted

---

A NEW GARDEN SPADE (Carter's Patent).

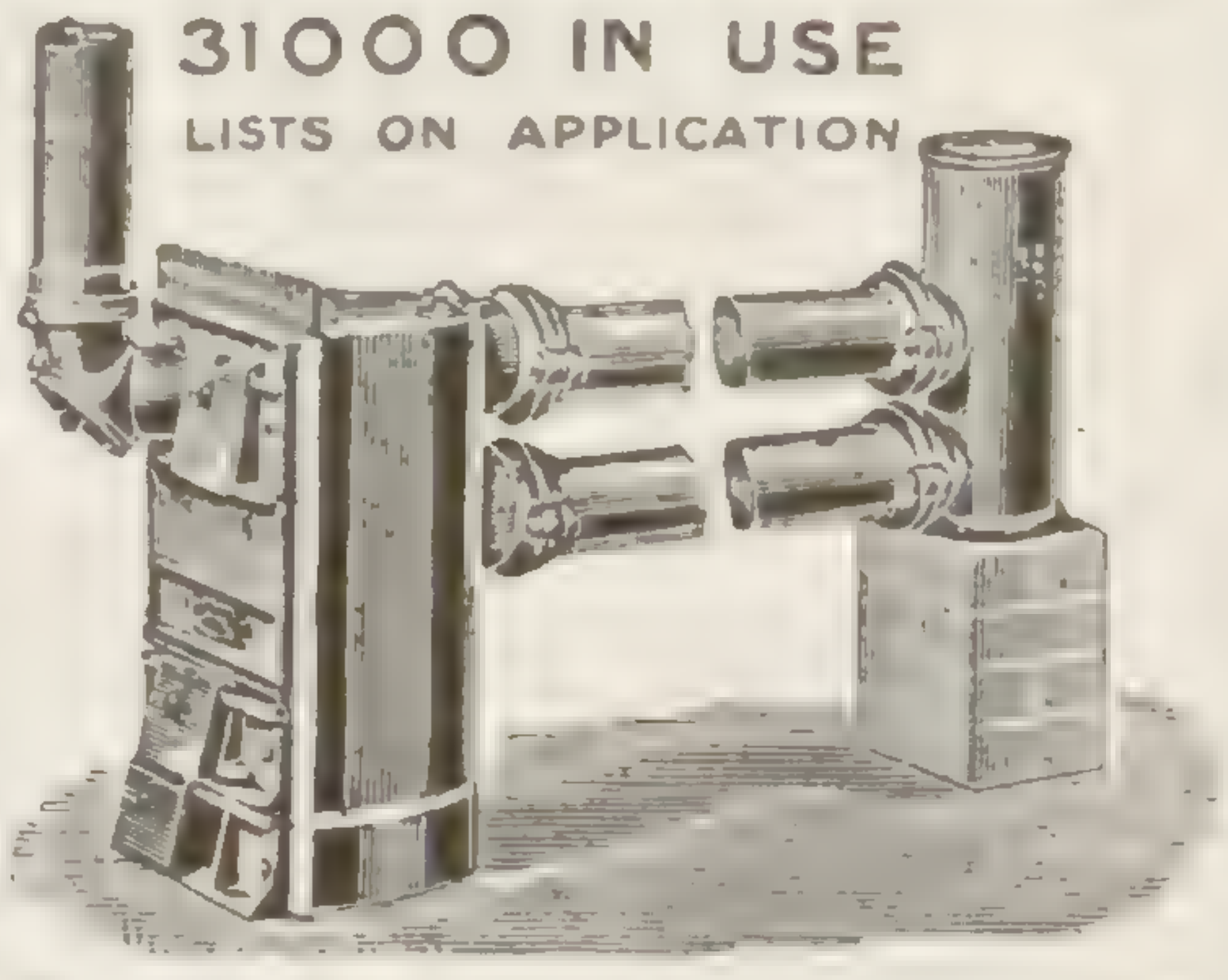


This is claimed to be the most effective Spade on the market. Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

The Loughborough
BOILER

31000 IN USE
LISTS ON APPLICATION

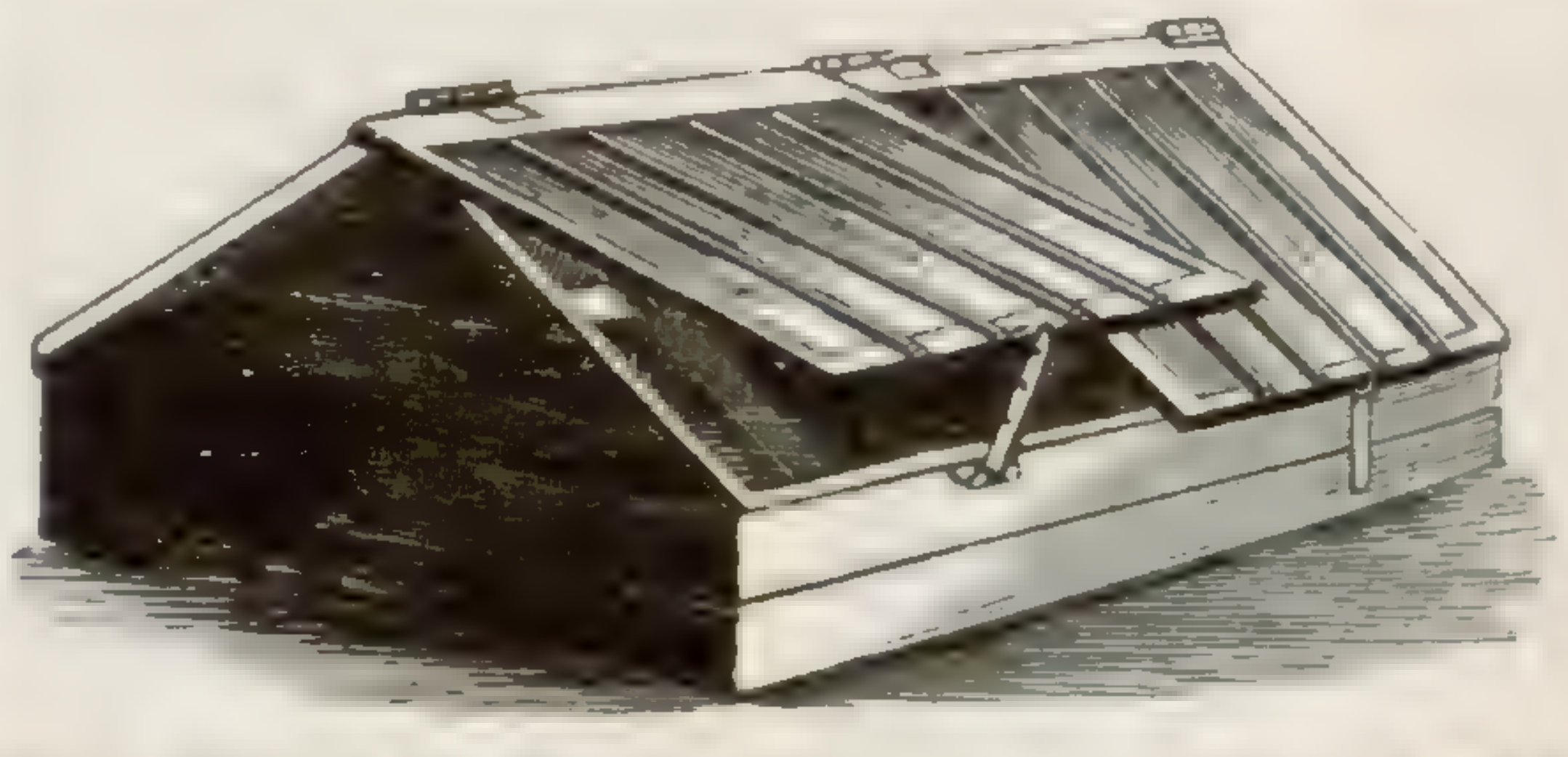


The pioneer of cheap, simple and effective heating for small greenhouses. Complete Apparatus from £3. 19. 6. The immense sale of this boiler, and its numerous imitations are the best testimony of its undoubted success

MESSENGER & CO. LTD.
LOUGHBOROUGH · LEICESTERSHIRE
London Office, 122 VICTORIA ST · S · W

PORTABLE PLANT FRAMES

OUR WELL-KNOWN MAKE.



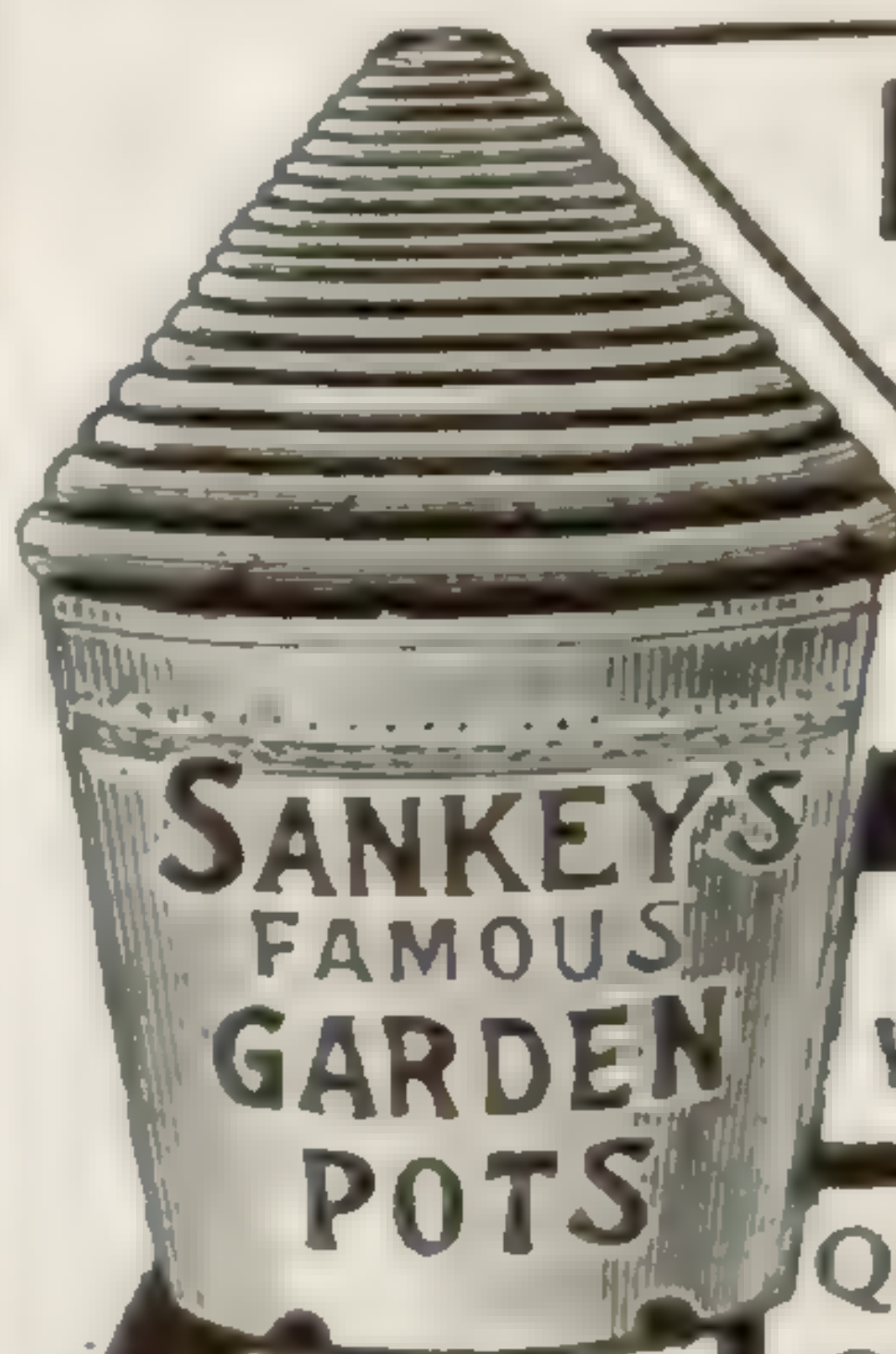
These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices.	Glazed and Painted.	£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. ,, 4ft. ,,		2	5	0
6ft. ,, 5ft. ,,		2	15	0
12ft. ,, 4ft. ,,		4	0	0
12ft. ,, 5ft. ,,		4	15	0
12ft. ,, 6ft. ,,		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
ROYAL HORTICULTURAL WORKS,
MIDDLETON, MANCHESTER.

FLOWER POTS.



The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity. Carriage Free.

Appointed by Royal Warrant

Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

PARSLEY.

Parsley constitutes one of the most important of our kitchen garden crops, and good parsley is needed daily in many establishments. Both summer and winter the demand is almost equally large, as this herb is alike useful for garnishing and flavouring. To those of us who are exhibitors, a good bed of parsley from which to draw a supply is a great boon when staging a collection of vegetables, and when this is of a good variety, perfect in colour and form, it adds that finishing touch unequalled by any other subject. Every effort, therefore, should be made to have a good supply of parsley for particular dates, when it is known to be specially in request; in addition to this endeavour to maintain a good supply at all seasons.

A FINE BREADTH OF PARSLEY,
As grown by Mr. E. Beckett, V.M.H., in the Aldenham House Gardens.

As for all other crops, it is essential that the ground be well worked, or the best results cannot be expected. Trenching or digging should be undertaken during the winter months, and if the ground is poor a liberal dressing of well-decayed manure must be worked in, but an excess of this must be guarded against, or an unduly gross growth will be formed, ugly in appearance, and useless. Parsley prefers a good heavy soil, that is retentive, and a position where it can receive plenty of sun, and, generally speaking, under these circumstances will make a luxuriant growth. On light soils, and especially those that are shallow and well drained, rather choose a position that is shaded.

For planting out of doors the first sowing should be made towards the end of February or at the beginning of this month. Sow in a box filled with a light compost, and stand in a house with a slight heat, such as an early vinery or peach house. Well water in with a fine rose can. Upon germination remove to a cooler structure, and place in full light. On light soils, if the seed was sown thinly, the seedlings may be placed out direct from the seed boxes, but on heavy soil, where it is difficult to obtain a good tilth I prefer to prick out the plants into other boxes, and grow on coolly, giving abundance of air whenever possible. Planting should be carried out as soon as seasonable during the month of April. Choose suitable weather so that the ground may be well raked down. Plant twelve inches apart each way, and when completed give a dusting of soot, as this, besides being invaluable as a fertiliser, does much to repel attacks of slugs. The crop will require but little further attention beyond frequent hoeings with the Dutch hoe, to keep down weeds and aerate the soil. If a dusting of soot is applied at intervals during showery weather this will also do much towards improving the colour.

Later sowings should be made out of doors, and from these one may expect to obtain a supply through the winter months. I usually make three sowings out of doors, one in April, another in June, and the final in August, and from the latter draw my plants when large enough for lifting and planting in frames either cold or on old hotbeds, where protection can be given them during hard and snowy weather. The plants, when treated in this manner, should be put out six inches apart, and, whenever possible, receive abundance of air, and at intervals the surface soil should be stirred and yellow and decaying leaves removed. Failing this, if one has not the convenience of frames, temporary shelter may be erected over the bed by placing some boards round the outside, and using a cover when necessary, and preferably the use of some old lights.

Excellent material, too, can often be procured from plants under a south wall. At all seasons of growth any plants that tend to throw up flower spikes should have these removed. Always cultivate a good variety. It is astonishing what a difference exists in the strains. Select one of a good colour, with large, well-curled leaves. Two of the best varieties with which I am acquainted is Dobbie's Exhibition Curled and Fern-leaved.

E. Beckett, V.M.H.

GOOSEBERRY BERRY'S EARLY KENT.

Soon afer this variety was placed on the market, I planted a number of young trees, and found it to be everything that was claimed for it. But I wish here to particularly refer to the pruning of gooseberries — autumn and spring pruning, and the effect generally of early autumn pruning —as it was with this variety that I experimented a little. Almost before all the leaves had fallen off one autumn, I pruned several bushes; the remainder of this particular variety, and all others making up a large plot, were left unpruned until the spring, birds being so numerous and troublesome in the garden. Well, I found the result of the early autumn pruning to be as follows: The pruned bushes were left severely alone by the birds, I do not know why; the new shoots were ten days earlier than those on the spring-pruned bushes, very much stronger, too; the berries were quite one-fifth larger, and, of course, a week earlier. So I pruned some bushes in the autumn and the remainder in spring afterwards and never regretted doing so, as I secured earlier and larger crops, but in common with other cultivators, lost a few buds through the birds.

Geo. Garner.

OUTDOOR STRAWBERRIES.

Although the fruiting season is the time when the grower reaps the harvest of his labours, the amount of his returns (weather permitting), depends much upon the way he has treated his plantations. It is not my intention, however, to now dwell upon the general management of strawberries, but rather to make some seasonable remarks upon it.

With the lengthening of days, and increase of the sun's power, the strawberry, after having had a season of rest, commences to make fresh growth, and at that time the soil should be surface hoed, and the plants be given a thorough watering with diluted farmyard liquid. To recommend this so early in the year, and at a time when the land is usually quite moist, may appear a wild notion to the inexperienced cultivator, yet it is quite practicable, and if this is doubted, let the sceptic practise it upon a portion of his plants, leave the remainder, and mark results, and I shall be surprised if he does not readily find a marked difference between the two sets, and this to the advantage of those treated with liquid manure.

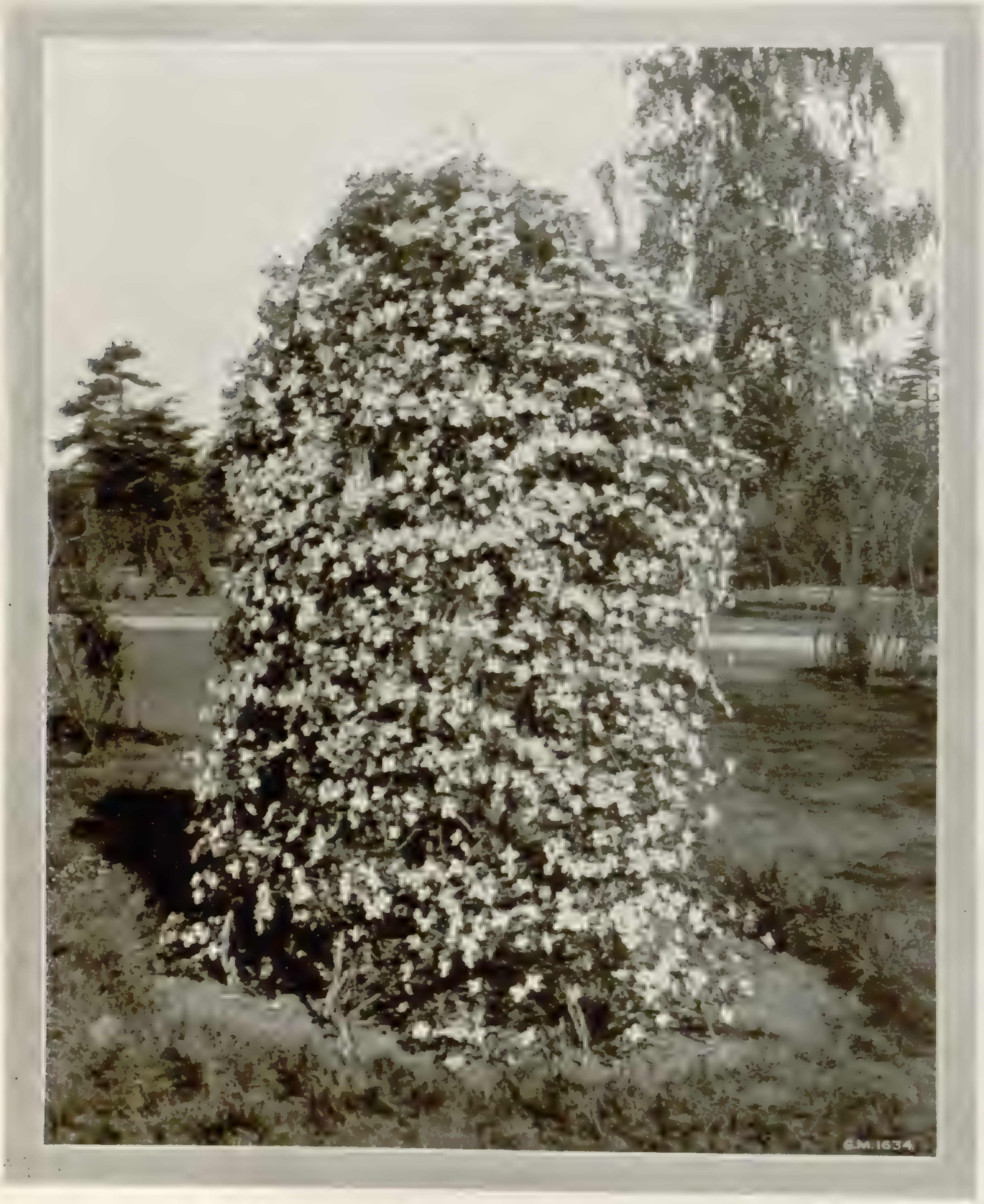
Other similar waterings should be given immediately before the fruit blossoms expand, and again when the fruit commences to swell, while at no time should the plants be allowed to suffer from want of water. If liquid manure of this description is not available, top-dressings of a suitable soluble artificial compound will answer the purpose: nitrate of soda also suits well, and particularly so in the case of light soils, as it is both a valuable quickly-acting stimulant, and a good assistant in keeping the soil moist. Previous to the plants coming into blossom, and at a time when the soil is perfectly moist, with a view to keeping the fruit clean and the land from becoming dry, a mulching of straw should be carefully applied. Preceding this a good dressing of soot should be given, which, apart from affording valuable manurial benefits, acts usefully as a deterrent to slugs.

If the site of the plantation is subject to spring frosts, as is the case here, some efficient means for protecting the blossoms should be adopted, otherwise the best part of the crop will probably be lost. Strips of tiffany answer well for the purpose, and they can be readily placed over and removed from the rows, but even these, is allowed to remain in contact with the flowers, cannot be depended upon as perfectly effectual. This defect can, however, be obviated by placing wooden splints supported by short forked sticks over the rows, and resting the strips of tiffany upon them, thus keeping them clear of the blossoms. It is necessary to take these precautions against the effects of frost as soon as the flower buds become prominent.

Fruit grown for dessert, if wanted large in size, must be well thinned as soon as the best berries can be distinguished, but the extent to which this should be carried out must depend upon the varieties grown, the vigour of the plants, and the way they are supported with manures. Where severe thinning is done, and the most promising fruits only left, the length of time any variety can yield a supply of fruit is, of course, considerably curtailed, and this, especially to growers of a comparatively few varieties only, may incur inconvenience and disappointment, which are not felt by those who grow good collections of early, midseason, and late varieties. In the case of fruit grown for the kitchen mere size is of little moment, and, consequently, thinning is unnecessary.

The fact that a considerable portion of the strawberry crop rests on the ground, unless adequate measures are taken to prevent it, often leads to much loss from the effect of rain, slugs, millipedes, etc., but these evils can, to a great extent, be counteracted by carefully supporting the fruits. This, of course, entails much work, but it well repays those who carry it into practice. Mice also are sometimes very destructive, and the best way of dealing with these is to rid the quarters of them with figure 4 or other traps, before the fruiting season commences. Birds, again, unless efficient means are taken to prevent them, destroy much fruit. A good way of frustrating their efforts is to fix stakes, standing about four feet out of the ground, round, and through the plantations, run lines of strong wire from stake to stake, and upon the framework thus prepared securely fix herring netting.

T. Coomber.



A SPLENDIDLY DEVELOPED SPECIMEN OF CLEMATIS MONTANA RUBENS AT KEW.

A handsome Chinese variety of the Mountain Clematis with rose-red flowers.

CLEMATIS MONTANA RUBENS.

Many hundreds of times have the praises of Clematis montana been sung in the pages of the Gardeners' Magazine, and the merits of the rosy-red counterpart of this beautiful old free-growing climber have also been frequently put before our readers since its introduction from China a few years ago. C. montana rubens grows and flowers as freely as the white Himalayan type, and is a fine companion to it, while under any and every condition that is suitable for the one both will thrive. C. montana is usually planted for the purpose of covering a porch, a house front, a verandah, a balcony, a fence, an archway, or an old tree, and C. montana rubens is of equal value for such purposes. At Kew, clematises are grown to form rounded pyramids, or wigwams, one or more plants being trained round a group of stout poles. In this way they do not fully show off their peculiar grace, but they produce strikingly novel effects, and the masses of floral colour produced by them can be seen from a long distance. Clematis montana rubens has been pressed into service in this way, and last season it was a rare sight so grown. The accompanying illustration of the Kew specimen, from a photo by Mr. C. P. Raffil, may perhaps lead those in charge of large public or private gardens to adopt a similar method of culture for this and other clematises, not, of course, forgetting the other methods.

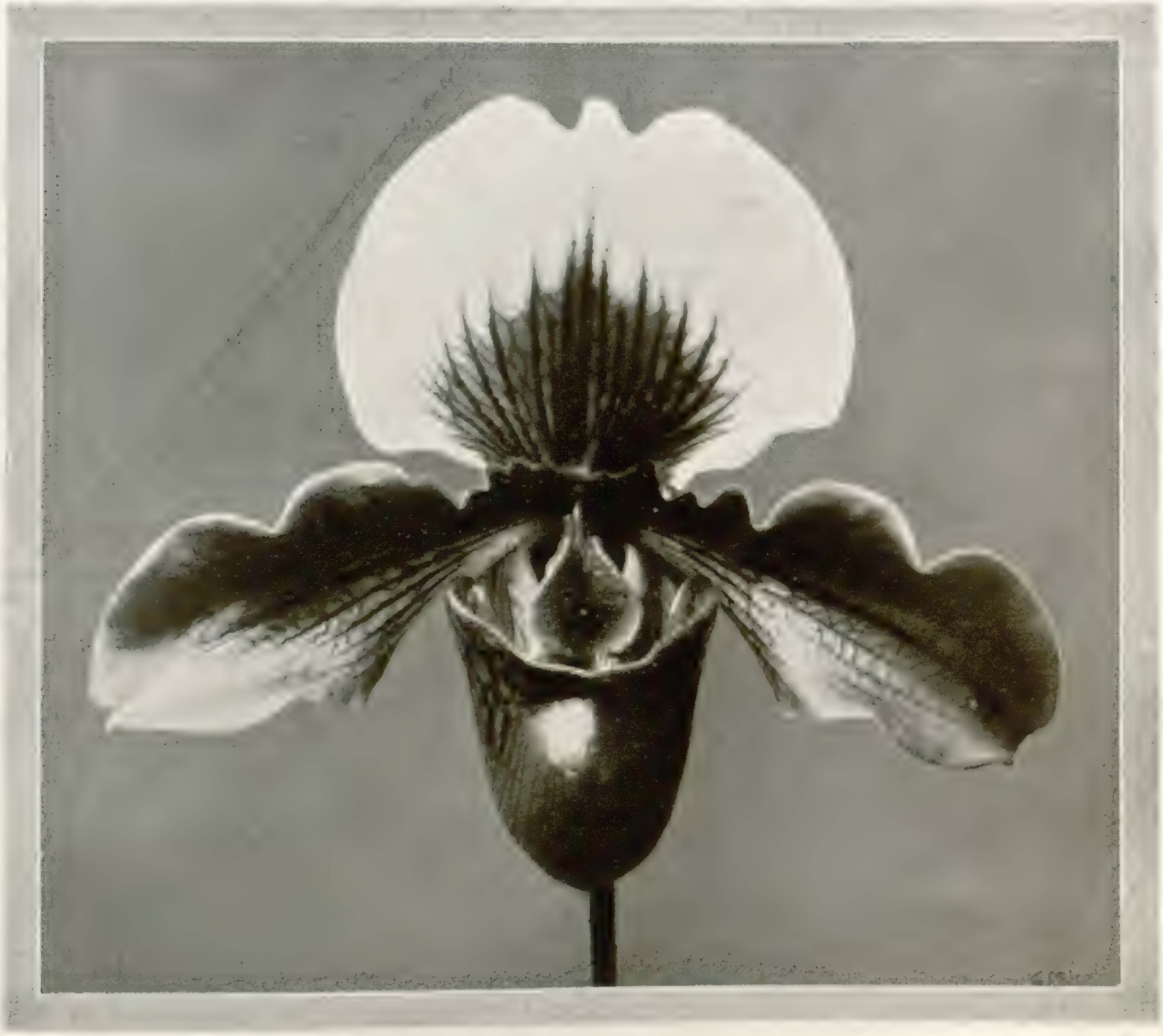
NEW PLANTS, ETC.

BRASSO-CATTLEYA SENATEUR DE BAST.

A very handsome and beautiful hybrid, derived from Brasso-cattleya Digbyano-Mossiæ and B.-c. Mrs. J. Leeman. The flower is of fine size and proportions; the sepals and petals are rich deep purplish-rose colour, and the broad, rounded, and elegantly fringed lip, rosy-purple, freely veined, and shaded with golden-yellow. F.C.C., R.H.S., February 14. Messrs. Theodore Pauwels and Co., Meirlebeke, Ghent.

CYMBIDIUM LAWRENCEANUM.

A new hybrid, bearing its (in this case) single flower on a long stem. The parents are C. insigne and C. Lowianum. The flower has a considerable resemblance to the last-named, but the growth of the plant shows the influence of C. insigne. There is a large deep red blotch on the creamy lip, and the sepals and petals are also cream coloured, shaded with rose. A.M., R.H.S., February 14. Messrs. Theodore Pauwels and Co., Meirlebeke, Ghent.



CYPRIPEDIUM AUREUM LAEKENENSE.
Flowers yellow-green and white. A.M., R.H.S., February 14. Mr. E. V. Low.

CYPRIPEDIUM CAROLA.

An effective and well-proportioned flower. The broad, rounded dorsal sepal has a large white apical area, flushed heavily with rose-purple below, and with a green base. Both in the petals and the lip, the bright glistening yellow-green colour is shaded with deep brown. The parents of C. Carola are C. Fioumsonianum magnificum and C. Euryades splendens. A.M., R.H.S., February 14. Messrs. Hassall and Co., Southgate.

CYPRIPEDIUM AUREUM LAEKENENSE.

A very attractive orchid, obtained by crossing C. Sallieri hyeanum with C. Spicerianum. The general colour is yellowish-green, but there is a broad white band around the dorsal sepal, and some light brown shading on the lip. A.M., R.H.S., February 14. Mr. E. V. Low, Haywards Heath.

CARNATION CORONATION.

This perpetual-flowering carnation has flowers of rich rose-pink hue, and of large size; the calyx is entire, and the stems long and stiff. The variety is fragrant, but not heavily scented. A.M., R.H.S., February 14. Mr. B. E. Bell, Castel Nursery, Guernsey.

ROSA PERNETIANA—III.

The new break in roses derived from Rosa lutea, and originated by M. Pernet Ducher, has been augmented by a few more sent out by other raisers. Messrs. William Paul and Son's Juliet, the premier of the race raised in the British Isles, has received notice in the first of these articles, so we may pass on. With the exception of Gottfried Keller and Entente Cordiale, we possess little knowledge of the varieties which follow, but inasmuch as they are classed as Pernetiana, they claim a passing reference.

Gottfried Keller (Dr. Muller, 1902).—In point of time Gottfried Keller followed closely on the heels of Soleil d'Or. It is a rose which shows closer affinity to the type than any other of the series. We can see it in the wood, prickles, foliage, bloom, and habit. The wood is dark red, inclining to brown, prickles pale buff, scattered, the habit long and straggling. The flowers are almost single, possessing the brilliant yellow of R. lutea slightly suffused with pink, and when staged in a bunch are very attractive. But one has to cut over a great many plants to obtain sufficient flowers to make a bunch. From this it will be perceived that it is not a good garden rose. One has tried various methods to make it free flowering, but hitherto unsuccessfully. Cut hard or left long and pegged down makes no difference, it just flowers here and there at the tips, and has many blind shoots. Nevertheless the colour is very attractive, and it is perpetual and blooms late in autumn.

Entente Cordiale (Guillot, 1908).—Apparently we have here a good variety of the race. The flowers are large, petals loosely put together, semi-double, long buds. Colour, nasturtium red or golden yellow ground, with bright yellow stamens, edges of petals salmon-carmine. Growth dwarf and compact. As seen at exhibitions it is distinctly attractive. There is another rose of the same name, a hybrid tea, with which it must not be confused.

Soleil d'Angers (Ch. Dietricht, 1909).—This rose is stated to be a sport, and is described by the introducer as "a red Soleil d'Or." Colour vermilion-red, base of petals deep yellow.

Louis Barbier (Barbier, 1909). A dwarf pillar decorative variety. Flowers semi-double, produced in clusters, free-flowering, perpetual. Colour, bright coppery rose changing to pink or purple-red. Outside of petals coppery yellow.

Madame Ruau (Gravereaux, 1909).—Long bud opening globular. Colour carmine-pink shaded yellow. Outside of petals tinted yellow. Free flowering through summer and autumn.

JOSEPH H. PEMBERTON.

PLANT HOUSES.

One of the great businesses of modern times is the production of choice exotic and other plants in ever-increasing numbers for brightening the surroundings of home life and social functions of all kinds. The structures now erected for these are ideal homes for the entire process of plant manufacture. Since horticulturists discovered that the health of their plants increased with more light and air, the evolution of plant houses may be said to have made amazing strides.

Perhaps the greatest impetus to improved conditions was the removal of duty from glass, which formerly was a very heavy item, and this, to some extent, explains why all old glass structures had such heavy beams, thick sash bars, and innumerable small panes of glass. The ventilating, too, was very inferior, large loose sashes being let down at the top of the house by pulleys and cord with a heavy weight attached. Practical men may realise what ventilation of this kind meant during stormy periods, and doubtless are thankful for changed conditions. Front ventilation, too, was usually of the same clumsy character, and to crown all, the heating usually consisted of a brick flue carried round the house; it consumed a good deal of fuel, and frequently smoke and sulphur fumes broke through, doing serious harm to the occupants.

Of course, the use of large panes of glass and smaller quantities of wood were not the only conditions that brought about the present healthy surroundings for the occupants of glass structures, for to these must be added the improved heating arrangements, whereby the temperature of the interior may be maintained in accordance with the class of plants housed. Perhaps hot water has helped the gardener to produce a more natural and healthy condition for his plants than the increased size in the panes of glass now used. It may be very truly said that the present-day arrangement of heating glass structures by hot water pipes is well understood by the majority of growers, and in modern systems of heating we very rarely find the mains in the narrow channels in which they were fixed a few years back, but in trenches sufficiently wide to allow for repairs being attended to without inconveniencing the workman or causing excavations of an unnecessary character.

Work well done in the first instance with respect to heating will, in the end, mean the saving of much time and annoyance; and since the system of heating is mostly so arranged that neither space nor heat is wasted, both stoking and fuel consumption are more economically managed. Many of us can remember the time when the best of gardens possessed almost as many boilers as houses.

The boilers of to-day, and the stoke-holes in which they are set, are as important as the structures for the plants. Many of the large sectional boilers are also highly economical as regards the consumption of fuel. Very frequently, too, they are set in pairs, and so arranged that should any mishap occur to one, the work of heating may be easily transferred to the other. A good deal of importance is attached to such an arrangement, especially now that a large area of glass is heated from one centre, and the loss would be a heavy one should mishap occur during severe weather without any means of applying warmth.

Plant houses, both for growing plants and displaying their beauty, are now mainly wooden structures. At one time, when lightness and elegance seemed to be gaining ground, iron structures were, by some, thought superior to wood. In practice, however, serious drawbacks were soon in evidence; if the painting was neglected, rust soon made serious headway, and the drip from rusty bars soon injured choice subjects beneath. Iron houses were also more expensive than wooden ones, and also more expensive to heat, as the warmth passes through iron much quicker than wood. Of course, plant houses cannot be so strongly built, or elegantly made, unless iron is used in some form or other, and present-day builders make good use of brackets and spandrils, with tension rods and light principals for trussing the roof. Nearly all modern builders may be said to aim at strength, with a light and elegant appearance. Thick rafters can safely be dispensed with when the accessories previously named are scientifically employed. The amount of paint required to cover all parts of modern houses, and putty, too, for glazing them, must have greatly diminished, and this improvement must mean less annual expense, both as regards labour and material.

In glass houses the varying temperatures, the large amount of atmospheric moisture, and other conditions, all tend to decay the wood. Houses intended as stoves, ferneries, and for orchids from the more moist climes, cannot be too lightly built; of course, strength must be combined, but the smaller the amount of woodwork used the more quickly it will dry. In glasshouses it is always the thickest and stoutest wood that decays first, as anyone may soon find out by examining a glass structure. The glass used must of necessity be the best, for on the quality of the glass depends the freedom from such blemishes as scalding or burning of the foliage. The best sheet glass should be obtained, and for the roof and exposed ends should be 21oz. The best system of glazing is to bed the glass firmly on a rather thin layer of the best putty, and, providing this part is well done and the panes are cut to fit neatly between the bars, sprigged, and afterwards painted, water will not get in from the outside of the house. Sometimes the glass employed is cut with a curved instead of a square edge, to draw the water from the bars and conduct it down the centre of the pane. Personally, I much preter the specially-grooved bars for drip prevention to curved glass, which quickly becomes very dirty.

For carrying the stages in any house where much moisture and heat are required, iron supports are preferable to any other, and slate slabs on which to place such moisture-holding material as the district provides. Orchid houses are sometimes built of teak, and the stages are also composed of this expensive wood. There are other factors that influence the occupants, such as the careful arrangements for giving air, a requisite amount of piping, an adequate surface for moisture-holding material, and a simple but effective means of giving the necessary shade when required; these few things may be said to embody the secret of successful plant culture. The width of staging, the distance it is arranged from the ground, its proximity to the pipes, and its position as regards ventilation, must all be considered.

The sizes of houses are, or should be mainly regulated by the requirements of the owner. Present-day owners of private gardens are mostly content with a small and free-flowering type of plant, or something that may be grown solely for its flowers in a cut state; and since size with elegance can be had in palms, bamboos, and various grasses for associating with smaller flowering plants and cut flowers, the best of effects can be secured from the artist's standpoint. Span-roofed houses, with their ends north and south, are preferable to others for growing shapely plants; if small plants only are required houses 12ft. wide will meet the requirements, but if larger plants must also have provision made for them, then the houses may vary from 18ft. to 24ft., or even 30ft. wide, which width allows of a good centre stage, with side stages and walk around the centre stage for viewing and giving attention to the plants. The narrow house will, of course, only have a centre path, with the side stages about 4ft. 6in. wide on either side of it. The stages should not be fixed too high, the usual level for the stage on the sides being the same as the height of the wall, which may be from 2ft. 6in. to 3ft. 6in. high; if the former, soil would have to be taken from the house to allow for the stage standing at least 3ft. from the path. For allowing air to enter the house during the coldest period of the year, bottom ventilators 2ft. by 10in. are best fixed in the brickwork at intervals of 6ft., opposite the hot water pipes. The narrower houses will only require pipes on both sides, but larger structures, for tropical plants, will also require heating from the centre bed. Greenhouse plants will be happy enough providing a temperature of 40 deg. can be kept up during the most severe weather. To prevent overheating the pipes, and to keep up warmth, a span house, 12ft. wide, should have three rows of pipes on either side; 18ft. wide, four rows, and wider houses an additional two rows round the centre stage. The warmer structures are best arranged near to the boiler and mains, and those for cooler occupants further away.

Lean-to structures with the wall facing south, or slightly south-east, are, perhaps, more economical as regards heating, because the coldest winds are kept off and the glass is in the best position for receiving all the sunlight possible. The stages in lean-to houses are usually fixed in steps for a portion of their distance, finishing off with a wider flat portion. Ventilation in a lean-to may be continuous both top and bottom, but for span-roofed houses, ventilation should be provided on both sides of the ridge and open alternately, as should also the front lights on either side of the house. Shading is an important item, and for such things as cool orchids the blinds are best so fixed that a current of air can pass between them and the glass.

For giving satisfaction all sills that are not of iron should be of the best well-seasoned pitch pine, as well as the plate to receive the sash-bars and to which the guttering will be fixed. If these sills are well seasoned, properly sloped, and kept well painted, they will never decay.

The walks in the houses may be made to suit the personal convenience of the owner. They vary from sifted gravel to stone slabs, cast-iron grating, and pitch-pine lattice; these latter last well, are easily taken up, are safe if nailed closely together, and always dry to walk over. It is sometimes necessary to provide for climbers to be trained up under the roof; in such cases light pillars are necessary, and they also assist to support the roof of very wide houses. Provision will also be necessary for arranging and placing suitable rooting mediums for stove or other climbers to be planted in. A better finish, too, is often given a house when the soil near the pipes can be covered with small ferns, mosses, tradescantias, panicums, etc.

F.

BULBS. A practical treatise on the cultivation of hardy, hothouse and greenhouse bulbous and tuberous-rooted plants is "BULBS AND THEIR CULTIVATION," by T. W. Sanders, price 2s. 6d. net, or by post 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

GREENHOUSE FLOWERS AT READING.

Two classes of greenhouse flowers, each easily raised from seed annually, have a popularity for winter decoration of the conservatory and the home that is not excelled by any others raised in similar fashion. These two are primulas and cyclamen. When "primulas" are referred to it goes without saying that the beautiful varieties of P. sinensis are understood, all other kinds of primulas having their own special, specific, or popular title under which they are recognised; but when the generic title in its plural form is used, we all know what is meant. Further, "Chinese primulas" means the same thing as "primulas," and yet there are other species than P. sinensis that hail from far Cathay. Everyone who has a warm greenhouse and a cold frame may grow primulas; they are easily managed, and consequently very popular.

ONE OF MESSRS. SUTTON AND SONS' LARGE PRIMULA HOUSES.

During the last quarter of a century a steady improvement has been going on in primula development, and every variation has been tested with a view to future developments. Especially has this kind of development been taken in hand by the Messrs. Sutton and Sons, Reading, who grow their own seeds of these choice flowers in their own establishment. The variation in leaf form has been worked out until now there are stocks of certain varieties that are identical in floral form and colour, and yet one may have fern-like leaves and the other plain leaves. Again, flowers may be identical in size, colour, and shape, and yet one stock will have pale green leaves and foot-stalks, and the other dark leaves and stems.

In cross-breeding, as well as in selection, the Reading firm have carried on a wonderful work, and hundreds of stocks of new cross-bred primulas are tested each year. So carefully have all the records been kept that the firm knows exactly what crosses to make to secure a new stock of any one of their catalogued varieties. Thus The Duchess, or any other beautiful variety, could be reproduced in two or three years if its parents were still available. With this knowledge before them the Messrs. Sutton can easily re-create or re-juvenate a variety, and it is in this way, and by rigid selection, that colour, habit, size, and constitution are kept up to high-water mark. Primulas are divided into four sections at Reading: the florists' type, the giant-flowered, the doubles, and the stellate group; and in all these there is a wide range of colour. One of the latest developments is an eyeless primula, that is, one in which the yellow or orange coloured eye has been eliminated, and a white central mark remains. Efforts are now being made in the case of coloured varieties to fill up the colourless or eyeless centre with the body colour of the flower, and if this can be done a quite new race of Chinese primulas will follow.

The Duchess stands pre-eminent among florists' primulas, and is at once beautiful and striking; the flowers are white with a zone of rosy-carmine round the yellow eye. Royal White, Crimson King, the dark blue Czar, the useful Reading Blue, and the good old White Pearl, make up a fine half-dozen, to which the fern-leaved Snowdrift, pure white, may well be added. The double varieties have pink, scarlet, blue, salmon, and white flowers, while Pink Beauty is flaked with salmon or pale pink, and there is now a double form of The Duchess that is particularly attractive.

The very beautiful "Giant" type is so highly bred that it seeds sparingly; the big substantial flowers with their splendid frilled and overlapping petals, owe their substance to skilful breeding and selection, and not in any degree to cultivation. Giant Royal White, Giant Salmon, Giant Pink, and Giant Crimson are all great favourites with keen lovers and cultivators of primulas, and deservedly so, as their production in first-rate form is evidence of no mean cultural ability. The grace of the stellate varieties is well known and appreciated, and few greenhouse plants are so decorative and generally useful. The Giant Stars are pretty, and their larger flowers appeal to some folks; but we confess to a love for the original form as represented by White Star, Ruby Star, Pink Star, and the Dark and Light Blue Star.

The Messrs. Sutton and Sons' grandiflora strain of Primula obconica is very fine, and just now the houses devoted to it, and the many devoted to primulas and cyclamen, provide a floral feast worth travelling a hundred miles to see. Pure white, pink, crimson, ruby, pale blue, and lilac varieties have been selected out, and are now offered true to colour; the white, light blue, and ruby varieties are exceptionally fine, and the latter has been given the varietal name of Fire King, one it richly deserves on account of its brilliance.

One of the great features in the development of cyclamen at the hands of the Messrs. Sutton is the delicious fragrance found in one of their strains, a fragrance that will, it is devoutly hoped, soon be extended to the ordinary and the giant flowered varieties. This year the fragrance is more marked than ever, and a further pleasure is added to that derived from the purity and richness of the colours, and the elegant forms of the multitude of flowers to be found in the cyclamen houses at Reading. As cut flowers cyclamens are many points ahead of the primulas, therefore a batch of well-grown plants of fine strain is worth a great deal to the gardener who has to provide choice flowers for vases in the home during the winter months, between the time of the chrysanthemum and the early bulbous flowers. The original Salmon Queen has passed away, and its place has been taken by Salmon Pink with large flowers of similar hue, and by Rich Salmon Pink, a brilliant variety that promises to develop still further along the warm salmon or orange-salmon colour line. White and crimson varieties of giant form, as well as mauve, purple, and cherry red selections are all of the highest merit; while White Butterfly is of surpassing elegance, and cannot be surpassed for its free growth and the enormous number of lovely blossoms a well-grown plant will produce.

Houses and pits well filled with cinerarias and herbaceous calceolarias, a queer looking plant that is supposed to be a hybrid between a primula and a cyclamen, frames full of carnations, and great breadths of sweet williams, are additional items of interest at the Messrs. Suttons' trial grounds. At the seed warehouses and the offices work is going full steam ahead to cope with the record crowd of seed orders pouring in from town and country, at home and abroad, and the extensive new seed potato store is a reminder of the fact that on the humble tuber that is so important a food product, the Reading firm has expended the same quality of skill and care that has done so much to make primulas and cyclamen what we find them to-day.

THE FUTURE OF THE SCOTTISH HORTICULTURAL ASSOCIATION.

At the February meeting of the Scottish Horticultural Association the newly-elected president, Mr. W. H. Massie, was inducted into his office, and delivered his presidential address. This was of much interest, as evidence that Mr. Massie fully appreciates the necessity for reform, and has very clear views as to the course that must be taken to place the association in a position to accomplish the work for which it was originally founded. He said,—

There is, I feel, one subject above all others which must be dear to every member of this association who has its real interests at heart, and from the circumstances in which we find ourselves, I have had no hesitation in selecting its future as my subject. Therefore, with your kind indulgence, I propose to lay before you my views on this important matter.

LOOKING BACK.

I will not unduly weary you with any lengthened remarks about the past history of the association. At the December meeting of last year you had, from one of your past presidents, Mr. Todd, an eloquent discourse on that, and in what I have to say regarding its past I will confine myself to what has a legitimate bearing on its future work. It is well to look back at times lest we forget. We learn from the past, the present is ours, and we can, to a large extent, influence the future.

I need not remind you that there have been conferences between this association and the Royal Caledonian Horticultural Society, of which many of us are also members, and of whose past work we feel justly proud, with a view to their amalgamation, and you must not for a moment imagine that any of the proposals which I am about to lay before you are intended to run counter to, or to thwart in any way, the union of the two organisations. Rather is it my intention in any suggestions I have to make to further and foster that union, which you will agree would be the means of strengthening the position of horticulture in the capital of our common country.

There is far too great concentration of interest by our wealthy classes in this country in the society which has its home in the great Metropolis, to the detriment of our own national societies, and if anything I can say or do as your president shall have the effect of giving a stimulus to greater interest in our leading Scottish horticultural societies, I shall feel that my election to this chair has not been in vain. There is no reason why they should not be Fellows of the English society, but do not, therefore, let them overlook their own people and institutions. The Scot is not usually blameworthy in this respect, and probably the fault lies with ourselves in not sufficiently advertising the claims of our association.

CHANGES REQUIRED IN THE ASSOCIATION.

I have for some time been convinced that if this association is to make the headway which, according to its strength, it ought to do, some change must be introduced into its financial arrangements, and into its methods of attaining its objects. We are a democratic body. We are not tied down by any fetters, and we are not reduced to any particular line of conduct. We have an elastic constitution—a constitution which can be altered at any time at the will of the members themselves, and to be able to do so is a great advantage in a progressive society like ours.

When I look into the original constitution of the association I find that one of its objects was the formation of "a museum and library, suitable for the general information and reference of members," and one of the sections of the constitution bears out that "the association may receive, from time to time, donations to its funds, museum, and library." This constitution was drawn up at the first meeting of the association, in March, 1877, and ratified at the annual general meeting in the following year, and all that is involved in this constitution is covered by the revised constitution of three years ago. The first reference to this question of forming a library, etc., occurs in the president's address at the opening of session, 1879-80, when Mr. Dunn, the then president, said that "the establishment of a reading-room and library for gardeners would be an important adjunct to the association, because if the gardening profession was to advance, and higher remuneration to be obtained, the best way to attain this desirable result would be for gardeners to give themselves a greater name and hold in the country, by a more skilled practice, and a higher knowledge of their profession."

From a perusal of the report of 1884-85, one would almost imagine that the library had actually come into existence, for it is there stated that "The association has received from Dr. Masters his work on 'Plant Life,' as a donation to the library, which is in course of formation, and will be opened to members as soon as the necessary room and appliances are obtained." This optimism, however, is soon dispelled, for in the presidential address of the following session we find it stated that "the formation of a museum and library has made slow progress towards its accomplishment, but, like all great works, it must necessarily take time. We have already formed a nucleus of a library, but we cannot do all that is expected of us in one day, therefore, it still remains for the association to persevere and carry to a successful issue the uncompleted parts of its programme," and in the opening paragraph of the report by the Council for the same session it is stated that "The Council of the Scottish Horticultural Association, in presenting their ninth annual report, have to state that, while the various objects of the association continue to receive the careful attention of the Council, they regret that the want of funds has not yet enabled them to open a reading room and library: they would earnestly impress on the members and friends of the association throughout the three kingdoms the necessity of making every effort so as to enable the Council to carry out this desirable object." Notwithstanding this appeal, nothing further seems to have been accomplished so far, and it is not till 1892, seven years afterwards, that we find the matter again referred to. In the opening address of that session, the president, my esteemed friend, the late Mr. Welsh, referred to it thus: "We have by no means exhausted the objects for the attainment of which the association was formed. In fact, we are only now getting into such a financial position as to warrant our looking forward seriously to the possibility of being able to carry out some of the more important proposals which for the last fifteen years have been lying in abeyance." Five years elapsed before any further reference is made to the matter, but in the address from the chair at the opening of session 1897, we find extremely optimistic views put forward. Mr. Todd, the president for that year, took as the subject of his address, "Our Association: Its Achievements and Aims," and, in referring to this matter, he said: "Our achievements in the intellectual and educational spheres we may well be proud of, but they do not exhaust the good work we have done for gardening and gardeners. Successful as these have been, our success in exhibition work has been still greater, and though, perhaps, outside the sphere of the objects we first aimed at, has naturally allied itself with our other work, and has been so conducted that the exhibitions under our auspices have proved object-lessons to every floral society in the kingdom."

Proceeding, Mr. Todd said: "What, then, of our aims? Is our future merely to be a repetition of our past, or rather shall we look upon what we have done as an earnest of the things that we shall do? Our aims, I hope, as an association, will rise yet higher than the reading and discussion of papers, profitable as these have been. A horticultural institute was one of our early dreams, and I see no reason why, by and by, we should not have one. A home of horticulture, where a systematic course of theoretical and technical instruction will be available to all young gardeners, and where an examining body would grant diplomas of fitness that would be a certain passport to all gardeners possessing them to the highest places of preferment in the profession. Why should there not be a faculty of gardeners, admission to which would be a certificate of fitness? It is often said that the remuneration of gardeners, is, as a rule, so low that there is no encouragement to pursue higher attainments. No doubt wages of gardeners are much too meagre for the varied services rendered and expected, but still we find the highly qualified men generally get the few prizes that are going, and I am certain that high attainments will always find some fitting reward, and many an employer would soon see it to be to his best self-interest to retain the services of a really qualified man, even at the cost of a considerable rise in wages. It would be a crowning success to our association to be the means of thoroughly educating and fitting gardeners for the very best positions, and also of effecting the long wished-for improvement in remuneration."

(To be continued.)

Vegetable Marrows.—If convenient frames are at hand sow a few seeds in pots and place in heat. Grow the plants on a mild hotbed in a frame, and they will give a few early cuttings of this useful vegetable before the main crop comes in. Close the frames early during the afternoon, and syringe the plants to ensure active growth. Be careful to fertilise the flowers while they are dry, during the middle of the day.—C. F.

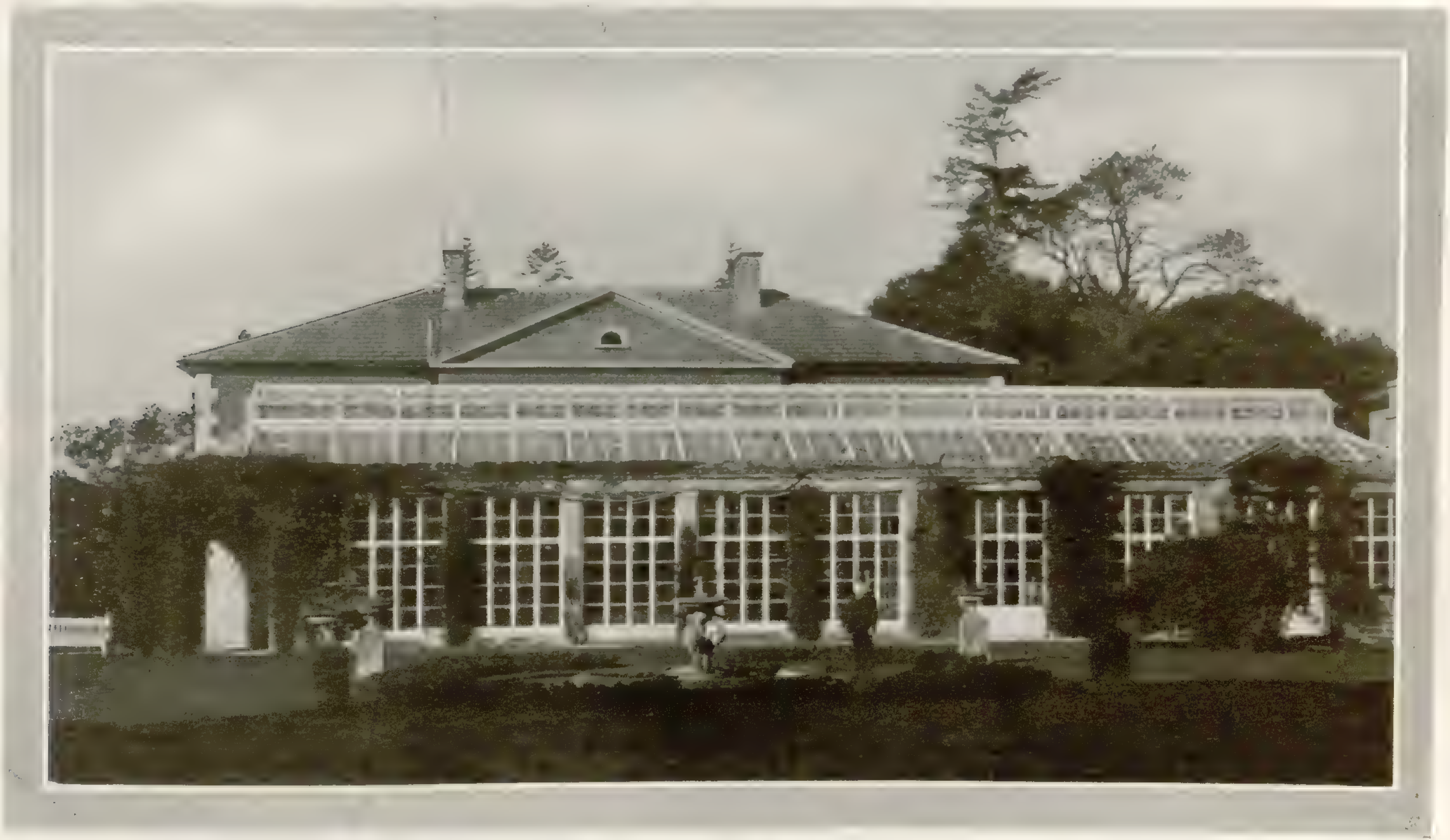
Cotyledon fulgens.—This is far better known in gardens as Echeveria fulgens, but by botanists all the echeverias are now included in the genus Cotyledon. Most of them are grown for the sake of their ornamental leaves, which are of a stout, succulent nature, but this species is well worthy of attention for the sake of its showy blossoms, an additional item of interest being the fact that in the warmest end of the greenhouse they are borne during the winter months. The leaves are somewhat ovate, of a pale glaucous green, and borne on a stout stem about six inches high. The flowering branches, which are often quite a foot in length, bear a number of rather short tubular red and yellow flowers. This species, which is a native of Mexico, is well worthy attention as a winter-flowering plant for the greenhouse.—W. T.

A SKILFULLY RENOVATED CONSERVATORY.

In connection with the series of articles on plant and fruit houses and garden pits and frames that we have published within the past twelve months, we have illustrated numerous structures for the purpose of showing the great advance that has been made in this branch of horticultural activity, and assisting our readers in selecting glass houses specially adapted to their varied requirements. These articles, and the illustrations, have, we are gratified in knowing, proved of much interest and extremely useful to our readers, and we suggest that those who do not bind the year's numbers should preserve the issues in which the articles appear in such manner as to admit of their being readily referred to. There is, of course, another side to the building art in its relation to the garden, and that is the modification of existing structures for the purpose of bringing them more into line with modern ideas, or, it may be, adapting them to the altered conditions that frequently obtain. We have not in view alterations in the ordinary span-roof and lean-to glass-houses, that form so important a feature in a well-furnished garden, but the adaptation to present-day requirements of spacious conservatories and winter gardens, and, it may be, orangeries that were built in accordance with the views that were held in the early days of providing structures for the shelter of tender plants.

This aspect of the builder's art, although necessarily of less importance than of building new houses, is one that requires careful consideration, and imposes a somewhat severe test upon the judgment and taste of those who undertake such work. The conservatory in the gardens of Buxted Park, the residence of the Hon. H. B. Portman, is a case in point. This spacious structure was built many years ago, how many it would be difficult to say, but it is evident that it belongs to the period when lightness in design was not regarded as an essential feature of the conservatory. In its original state it appeared to belong to the transition period of conservatory building, or, in other words, to the time between the old orangery and the modern conservatory. It was spacious, and given a site along one side of the flower garden that is contiguous to the mansion, it served the purpose of accommodating large numbers of flowering and ornamental-leaved plants, and of blocking out some prominent outbuildings, but in the latter respect it was less effective than it now is.

This conservatory is connected with the mansion at the end on the right-hand side of the picture, and the present owner of the Buxted Park estate, when he came into possession, decided to modernise it, with a view to better adapt it to the requirements of plant life, and to admit of it being more fully utilised. The work of making the alterations was entrusted to Mr. J. Gray, the well-known horticultural builder, of Chelsea, and, writing with a full knowledge of the original and present form of the structure, we feel we are fully justified in stating that the manner in which the modifications have been effected is deserving of the highest praise. Originally the roof was a lean-to, with a rather low angle, and it had three defects—it admitted less light than the plants required, it gave the structure a rather flat appearance, and it failed to screen a much smaller part of the building than is at the present the case. By the substitution of a lantern roof for the old lean-to the appearance of both the interior and exterior has been immensely improved. It has also been possible, in making the change in the roof, to greatly improve the system of ventilation, it being now possible to readily adapt the admission of air to the requirement of the plants, and to effect changes in the most expeditious manner. In mentioning the success achieved by Mr. Gray in the renovation of the fine old conservatory at Buxted Park it should be added that, as so well known to many of our readers, his chief business is the building of new houses, and that evidence of his skill may be seen in all parts of the country.



THE CONSERVATORY AT BUXTED PARK
Which has been skilfully renovated by Mr. J. Gray.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

CLEANING THE PLANTS.—It is at this season of the year that insect pests are most troublesome, and close and constant observation is necessary to prevent injury to developing flower scapes and young growths. It is through the winter months that thrips are most troublesome in the cool houses. The developing growths of odontoglossums are a haven of refuge for the pests at a season when it is practically impossible to spray or dip the plants. Vaporising is all very well and most effectual where the pests are to be got at, but when the thrips have established themselves in the enveloping leaves of a new growth there is little prospect of fumigation or vaporising being effectual. With the return of brighter days spraying at regular intervals may be done when the outside conditions are favourable as possible, but the direct rays of the sun must not reach the foliage of the plants before the insecticide has had time to evaporate. In the early season it is desirable to see that all excessive moisture has dried from the new growths before night. If moisture has collected in the centres the plants should be laid on their sides, so that it may drain out on to the leaves, from which it can be removed with a soft sponge. The safest way I find to keep insect pests in check is to commence early in the year and spray at regular intervals; prevention is better than cure, and it is only by following a regular system that we can hope to keep our plants free from trouble. Plants that have been dormant should be carefully examined for scale and other insect pests, which may secrete themselves in the loose, dead leaf scales or outer coverings of the growths. It is surprising how quickly these pests seem to make their appearance as soon as the plants show signs of renewed growth.

RED SPIDER.—After a prolonged use of artificial heat such plants as phaius, cymbidiums, miltonias, sobralias, etc., are generally attacked by red spider. This pest usually attacks the under sides of the leaves, and may be held in check by syringing once or twice a day with rain water. Vaporising destroys the insects, but the safest way is to sponge the foliage and occasionally spray with some safe insecticide.

SLUGS AND SNAILS are disastrous to the advancing flower spikes of the odontoglossums and other cool-house orchids at this season of the year. The spikes may have a small piece of cotton wool wrapped around their base; this does not wholly prevent the slugs attacking them, but it forms an obstacle difficult to surmount. Some bran or brewers' grains laid about the stages, on pieces of glass or broken crocks form traps, and should be examined during the evenings and in the early morning. Hollowed halves of potatoes also form a good feeding ground, and as soon as lettuce leaves are procurable they should be laid about the stages and on plants that slugs frequent, and if these are examined every night and morning it will assist in keeping the pests under. — H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

CLERODENDRON THOMSONÆ. — C. Thomsonæ or C. Balfouriana is a deciduous roof climber of free flowering habit. When cultivated as a pot plant or in a large tub its management becomes very simple, the wood ripening up well and producing abundance of flowers during autumn. When cultivated as a specimen plant it is best trained on strands of twine running over the roof and placed near the glass. The stems may be removed from this position and trained upon a balloon trellis, or whatever shape is required, a few weeks prior to the development of the flower buds. Propagation is easily effected by rooting cuttings in the usual way, plunged in bottom heat and kept close for a few weeks. The cuttings are best inserted during the spring months, selecting shoots three or four inches long, and, if possible, with a heel of the old wood attached. As soon as the pots are filled with roots the plants may be potted singly and grown steadily in a temperature of 55 to 60 degrees. If small decorative stock is desired the growths must be stopped two or three times during the earlier stages, and the roots be restricted to small pots; four-inch or five-inch pots are of useful and serviceable size.

CLERODENDRON FALLAX is of exceptional merit, and most valuable as a winter flowering subject. Its intense scarlet flowers produced over green, healthy, vigorous foliage, have a charming effect during the dull season. It may be propagated during spring, either from seeds or cuttings; seeds may be sown at the present time, and the seedlings potted singly and grown steadily during the summer. Where there is a stock of old plants these may be started into growth immediately, and as soon as the shoots have developed a few leaves they may be removed with a heel of the old wood, placed singly in small pots previously filled with a sandy compost, and be plunged in a brisk bottom heat of 75 to 80 degrees; they will then root in a few weeks. They must be kept close in a propagating case, shaded from the hot sun, and be occasionally sprayed to prevent the foliage from drooping. When rooted, admit air carefully, and repot as required. The compost previously recommended will also be found suitable for C. fallax. During very hot sunshine the plants enjoy a light shade.

ACHIMENES IN BASKETS.—Achimenes are ideal subjects for baskets on account of their natural drooping growth and extremely free flowering habit. Prepare an open compost of rough, lumpy peat and loam, with about one-sixth part of Bedfordshire sand and sheep manure. Line the baskets with green moss and fill up to within an inch of the top with the compost advised; place the tubers about an inch apart evenly over the surface, cover them with rather fine soil, and thoroughly water in. Allow the baskets to drain for a few hours, and afterwards suspend them from the roof of the intermediate plant stove. Very little other attention will be required until the tubers have commenced to grow freely. When the baskets are afforded a light and well ventilated position a strong, short-jointed, free-flowering growth is secured.—John Donoghue, Bardon Hill Gardens.

THE FLOWER GARDEN.

DAHLIA TUBERS which have been started in heat, as advised earlier, will now be making good growths for cuttings. The shoots should be taken off when about four inches long and inserted singly in pots filled with sandy soil, plunging them in a slight bottom heat.

CANTERBURY BELLS, FOXGLOVES, HOLLYHOCKS, PANSIES, SWEET WILLIAMS, PINKS, etc., which have been wintered in nursery beds, should be put into their permanent quarters without delay. The Canterbury bells are valuable for the mixed border, and provide a fine show in early summer. Foxgloves are highly recommended for grouping boldly in the wild garden, when an excellent effect may be obtained. They are equally suited for growing among low shrubs, above which the flower spikes may tower. The single pyrethrums are highly appreciated for cutting early in the season, and a good batch should be grown specially for this purpose. They are easily raised from seed, and good flowering plants may be obtained from a twelve-months' growth; raising a stock from seed is very interesting and useful work. The same may be said of aquilegias, the dwarf, long-spurred varieties providing a selection of lovely colours; for grouping in the mixed borders they are indispensable. Slugs are particularly fond of the young growths of pyrethrums and aquilegias, therefore some preventive measures must be taken. Gladioli may be planted between the aquilegias, and thus a second crop of bloom can be obtained without disturbing the latter. The various pinks are excellent for grouping in the front of the borders, and it is advisable to work a small quantity of sand or wood ashes into the soil when planting. Pansies require liberal treatment, and should be planted in irregular drifts in the foreground of borders, when they give a very pleasing effect. Hollyhocks are noble subjects for the background, and although addicted to disease, good results are usually obtained by raising seedlings annually.

HARDY ANNUALS.—Providing the soil is in a fit condition, the first sowing may now take place. The surface of the beds should be raked down finely, and a calm day is essential for sowing the seeds. Mignonette should be given rich soil, which, if deficient in lime, may have some old mortar rubble added. The very fine seeds, such as those of Shirley poppies, clarkias, godetias, etc., may, with advantage, be mixed with dry sand which ensures a more even distribution of the seeds.

HALF-HARDY ANNUALS.—A slight heat is necessary to raise the first sowing, and a warm greenhouse or a frame on a gentle hotbed will be found a suitable place. Pans or boxes may be used, and these should be filled with a mixture of one-third loam, one-third leaf-soil, and one-third sand, finely sifted, and thoroughly mixed. Water very carefully after sowing and shade from bright sun. Subjects to sow now are asters, nemesia, nicotiana, dianthus, petunia, zinnia, marigold, marguerite, carnation, phlox, Dimorphotheca aurantiaca, perilla, tropaeolum, etc.—E. C. Pooley, Gnaton Gardens.

FRUITS UNDER GLASS.

VINES.—All late vines should be ready for starting, as with increased light and solar heat the sap will be soon on the move. All the houses should be made scrupulously clean. Iron work should be painted over with raw petroleum to kill all insects in hiding, and remove rust; locks, bolts, and hinges should be oiled with good machine oil, and, as a finish, clear the borders of rubbish and top-dress, if necessary, with some prepared loam and bone-meal. If the border is very dry give a thorough soaking of water. It has become an established rule not to disturb the roots of vines after the autumn; but with outside borders I do not think it much matters when this is effected if the roots are in a bad state and in sour, water-logged soil. The existing state of things cannot be altered until the work is done, therefore the sooner it is taken in hand the better the chance of improvement. Alicante and Gros Colmar root far more freely than Muscats and Madresfield Court. In late houses it is not necessary to tie down the rods, as they will break naturally; plenty of air should be given in the early stages.

VINE EYES.—Those growing strongly should have a shift into slightly larger pots, and those that are in pans or boxes should be separated, put into small pots, and again placed in a close frame until established.

POT VINES.—Thin the berries as soon as they are ready, and do all the thinning at once, as a better shaped bunch will result. Keep the temperature of the house or pit at from 70 to 75 degrees, damping down as often as is necessary, and admitting fresh air on all favourable occasions. A little stimulant should be given at this stage, in alternate weeks, and in small doses, taking care not to allow the pots to become really dry, or failure will be an inevitable result.

FIGS.—These will be growing well now, and the temperature of the house may be raised to 65 degrees. Thin the shoots by disbudding when too many are showing, leaving only those wanted to make a well-balanced tree; and as soon as the shoots have made five or six leaves they should be pinched, but do not pinch all the shoots at once, or the sudden check may cause the fruits to drop. Young plants may now be planted in permanent borders with every chance of success. Good varieties that can be relied on to crop regularly should be chosen. The old Brown Turkey is hard to beat for all purposes, and is a very free setter, either in a border or for forcing in pots; it is quite the best for a main crop. Bourjassotte Grise is an abundant and constant bearer, and St. John's and Negro Largo are productive. When making a border I would advise the use of three parts loam and the remainder made up of mortar and brick rubble and bone-meal. Make all very firm by ramming.

EARLY PEACHES.—Continue to disbud shoots and fruits, as the earlier this is done the less will be the strain on the resources of the tree. When the shoots have grown above the wires to their allotted space, the points may be pinched out. The succession house should be slightly fumigated as soon as the trees are out of flower, and this will be found to check aphis. At this period the trees should be well syringed, both morning and evening, taking care not to steam the pipes more than is absolutely necessary. A little air should be admitted by the top ventilators as soon as the temperature begins to rise.—W. A. Cook, Leonardslee Gardens.

THE CORONATION FLOWER.

While the question of a flower for the Coronation has been under review in some of our daily papers, and a choice has been made of the sweet pea, is it not a little odd that a native of Sicily, and not a British subject should have been selected? The sweet pea (Lathyrus odoratus) was introduced, according to the authorities, about 1700, and now has become one of the most extensively cultivated and popular flowers in the United Kingdom. Still, this does not dispel the fact that it is an exotic. On an occasion like the Coronation the aim should be to be British—British in sentiment, British as to the clothes we wear, and British in the selection of a flower to adorn our buttonholes. For that day, and that display, we should allow everything of foreign origin to remain in store, and make use of our own manufactures and native productions for all outside embellishment.

In this case, why should a foreign flower be worn in preference to a truly British one, when we have a choice of such things as roses, carnations, and pinks? These are decidedly more British, and are, at the least, equal, if not more than equal, in point of merit, to sweet peas, and have as much chance of being in bloom at the Coronation as the Sicilian plant. X. Y. Z.

WOLVERHAMPTON
GREAT FLORAL FETE.
July 11, 12, and 13, 1911.
£900 IN PRIZES.
Schedules on application to the Secretary.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

Broughty Ferry Horticultural Association.

The monthly meeting on February 21 was a public one, a number of ladies and gentlemen being present, in addition to the members of the association, to hear a lecture on "Preserving Ripe Fruits and Mature Vegetables" by Mr. George P. Berry, Horticultural Lecturer in the East of Scotland Agricultural College, Edinburgh.

After dealing in a general way with fruit rooms and the storing of apples and pears in such structures, Mr. Berry commended cellars or disused ice-houses as being easily convertible into first-rate fruit-rooms. Whatever the shelves were composed of, a layer of sifted burnt clay ought to be spread on the top to place the apples upon. This seemed to preserve the natural flavour of the fruit in a manner which was not possible with any other substance he knew, and the keeping qualities were considerably prolonged.

In dealing with bottling, the lecturer recommended gathering the fruits in the morning; it did not really matter whether it was wet or not, but care ought to be taken not to break or bruise it. Exhibiting a quart sized bottle, which he recommended as suitable, Mr. Berry explained in a very plain and practical manner the superiority of these over those used in French methods; the price was 4s. 6d. per dozen bottles. Going on to describe the process, he advised thorough cleansing of the bottles with hot water, then packing the fruit as closely as possible, allowing it to stand up to the neck of the bottle, and then adding sufficient clean water to just cover the fruit. This done, adjust the glass stopper and rubber washer, screwing on the tin cover as tightly as possible, and place the bottles with their contents up to the shoulder in water in any cooking utensil which would accommodate them. A spirit lamp or ordinary fire could be brought into requisition to bring the water in the utensil up to 145 degrees, this temperature being maintained for one and a-half hours. At the end of that time it would be found that the lids were slack, and they should be tightened, using a cloth in the hand. When cold, the lids should be rubbed with an oily cloth to prevent rusting, and the bottles be stored away in a cool dark press or cellar.

In the case of ripe fruits to be used for dessert purposes, he thought it an advantage to make a syrup of sugar, using half a pound of pure cane sugar to a quart of water, pouring this over the fruits after filtering it through a flannel cloth.

When dealing with mature vegetables Mr. Berry recommended first boiling peas and beans taken from the pods; this could be done in an ordinary saucepan which contained as much water as would nicely cover them. After allowing them to cool slightly the seeds and water should be poured into the bottles and the cover adjusted, and sterilisation proceed as advised for fruit. Sulphate of copper, which keeps peas, etc., a bright green colour, ought not to be used, because poisonous.

A number of questions were put to Mr. Berry which he answered in a satisfactory manner, after which he was accorded a hearty vote of thanks.

The exhibits consisted of twelve magnificent cyclamen from Mr. George Reid, Invertay Gardens; hyacinths, tulips, and Primula obconica in 6in. pots, as well as a bowl of fine flowers of helleborus from Mr. Wm. Grant, Fernhall Gardens. Mr. D. K. Meston, The Lodge Gardens, set up two pots of exceedingly well forced seakale, White Lily, and also a bundle of thongs which had been removed from the plants, and were just starting into growth. The President spoke highly of the quality of this exhibit, and explained at some length to the audience the method of growing seakale on the one-year system. Mr. George Masson, Ayestree Gardens, showed a malformed arum, while the President showed a flowering plant of Hæmanthus natalensis, vases of narcissus, tulips, Primula obconica grandiflora, etc.

A vote of thanks to exhibitors and to the President, Mr. James Bethel, brought a profitable evening to a close.

Reading Gardeners' Association.

The fortnightly meeting of this association was held in the Abbey Hall on Monday, February 20, the President, Mr. Alderman Parfitt, occupying the chair, and again there was a large attendance.

The minutes of the last meeting were read and confirmed, and the President threw out some useful hints for the benefit of the younger members with regard to self improvement.

On the proposition of the President, it was decided that a resolution of condolence on the death of Mr. Chas. Foster be conveyed to Mrs. Foster by the hon. secretary, by letter. This was carried in silence.

Mr. Dore being still too unwell to give his paper, the hon. secretary had enlisted the sympathies and services of Mr. T. Tunbridge, and he most kindly came forward with a paper on "Winter and Spring Bedding." Mr. Tunbridge is a thorough master of this subject, and dealt with the matter in hand in his usual lucid and practical manner. His remarks with reference to the raising of plants by seed sowing and by propagation, the arrangement of harmonies and contrasts in colours, and the naturalisation of plants and bulbs being followed with deep attention. On resuming his seat Mr. Tunbridge was warmly applauded, and in the lengthy discussion which followed the paper he was heard to advantage in replying to the many questions put to him.

Mr. H. C. Loader, head gardener to M. H. F. Sutton, Esq., Erlegh Park, staged a really splendid group of Lachenalia luteola which were greatly admired, the blooms and growth being of great substance. Several new members were elected.

The annual tea and entertainment in connection with this association took place at the Abbey Hall (by permission of Messrs. Sutton and Sons), on Wednesday, the 15th ult., when, at six p.m., about 100 members and friends sat down to an excellent repast. Mr. Alderman Parfitt presided, and read an expression of regret from the vice-president that he was unable to be present at the tea, but hoped to join the company during the entertainment, later. Mr. Arthur W. Sutton also wrote expressing regret at his enforced absence, and wishing all present an enjoyable evening.

The meal having been despatched, the hall was quickly cleared of tables, etc., and an audience of between 700 and 800 quickly assembled to enjoy the splendid entertainment provided for the evening.

Through the agency of Messrs. Maskelyne and Cooke, of St. George's Hall, London, a particularly talented and high-class party had been engaged, and a fine programme was rendered to the great delight of the large gathering.

Mr. Archie Naish in his humorous sketches at the piano showed his mastership of the instrument, and also provoked the risible qualities of the company in very marked degree. The Appenzellers, by the clever manipulation of their quaint instruments and their delightful rendering of vocal items, won well-merited applause and consequent encores, while Mr. Ernest Sewell, in his clever paper-tearing and subsequent "Living Marionettes" fairly brought down the house.

The entertainment was unanimously voted to be one of the best ever held under the auspices of the association.

The Elstree and Boreham Wood Horticultural Society.

A splendid meeting was held on Tuesday, the 14th ult., in the Church Room, Elstree, and was largely attended. Messrs. Cox and Townsend, of Messrs. Sutton and Sons, were the lecturers, their subject being "Hardy and Half-Hardy Annuals." The former manipulated the lantern, whilst the last-named delivered the lecture. This was of a most instructive and interesting nature, and the many excellent coloured and other slides thrown on to the sheet by Mr. Cox were greatly appreciated, and illustrated the many and great advantages that might be made of this beautiful and interesting class of plants when their cultural details are studied a little. At the close of the lecture several questions were asked of Mr. Townsend, who replied in a prompt and practical manner. At the close a hearty vote of thanks were accorded these gentlemen for their kindness in providing such an enjoyable evening; also to the chairman, H. Shephard, Esq., who so ably filled his office. The society continues to make excellent progress. During the evening thirteen new members were elected.

Bournemouth Gardeners' Association.

The first paper of the new session was one on "Conifers," written by Miss C. Agnes Rooper, Penselwood, Bournemouth, and read by Mr. W Reeves, the hon. treasurer, on February 21.

Miss Rooper takes a great deal of interest in horticultural matters, and does much every year to support the Bournemouth Gardeners' Association. Mr. Reeves brought specimens of more than sixty distinct conifers, nearly all of which were referred to by Miss Rooper in her very interesting paper.

Some grand specimens of cyclamen and cinerarias were staged by Messrs. C. Nippard (the assistant secretary) and C. Pearce respectively, and the highest award was made in both instances.

Miss Rooper said that the conifer family was spread all over the world, some of the finest specimens being found in North America, and especially in California. The conifers are distinguished from any other order of plants by the peculiar structure of their wood, their resinous secretions, the form of their leaves, and the extreme simplicity of their flowers and fruit. Miss Rooper said that some authors include in this family the group of trees and shrubs known as the taxads, of which the yew is the type; but the fruit of the taxads is very different from that of the true conifers, with its leathery scales and numerous seeds. The taxads are considered a distinct order in themselves, but closely associated with the conifers.

The two orders are of the greatest importance to man, in many respects supplying the most valuable timber for constructive purposes. Their resinous secretions and products are important articles of commerce, largely used in many of the arts. No other family of trees and shrubs produces so many ornamental specimens to adorn our gardens and parks; and there is no race of plants of greater ancestry, as traces of conifers and yews have been found in the most ancient rocks near Lulworth. On the side of the cliffs about a mile to the east of Lulworth Cove there is quite a large group of pines to be seen, or rather their petrified stumps. Of yews there is a remarkable grove in Norbury Park, in Surrey, and on the South Downs, near Chichester.

Miss Rooper referred to the great number of distinct species, and to the fact that many specimens of conifers did so well growing in shallow soil on steep, rocky slopes; to the great vitality of the roots, to the considerable differences in the depth to which the tap-roots penetrate the soil, and to the extent and direction of their branching, dependent mainly on soil and other conditions. The writer of the paper referred to the great age to which some species lived, and to the durability of the wood, instancing the old doors of St. Peter's, at Rome, made of cypress wood that lasted eleven hundred years, and which were quite sound when removed to another place by the Pope's orders. References were also made to planting and insect pests.

A discussion followed, and votes of thanks were accorded the chairman, Mr. Cockman, and Miss Rooper.

Dundee Horticultural Association.

At the ordinary monthly meeting, recently held in the Technical College, the President, Mr. William Christeson, presided, and during preliminary business seven new members were elected.

Mr. J. Birse was the essayist, and had for his subject "Insectivorous Plants." Dealing with this matter in a general way, Mr. Birse considered that the plants were more curious than beautiful, and in referring to the natural provisions they possessed for trapping the insects, and afterwards assimilating food from them, he mentioned the sundew, butterwort, Venus's fly-trap, nepenthes, sarracenia, darlingtonia, etc. He gave details as to their habitations, and helpful suggestions for their cultivation. A good discussion ensued.

The annual social and dance was held on the 10th inst. W. S. Melville, Esq., the president, presided at the concert, when an enjoyable programme of music was well sustained. The Chairman gave some excellent advice to the young men present regarding their "birthright" of technical education, urging them to take every advantage offered by the association to improve their knowledge and mode of address. He hoped they would uphold their excellent traditions in 1912, when the British Association would visit Dundee. A dance followed, when the young folks thoroughly enjoyed themselves, Mr. John Campbell making an efficient master of ceremonies.

Birmingham Gardeners' Association.

There was a good attendance of members on February 20, to hear Mr. P. E. Martineau give a lecture on "Afforestation of Waste Land," illustrated with lantern slides. Mr. C. H. Herbert (the vice-chairman) presided.

Mr. Martineau, who is secretary of the Midland Re-afforesting Association, Birmingham, began by drawing a distinction between ornamental sylviculture and forestry —the one decorative and the other commercial. Statistics were given of the trees found to be suitable for afforesting the pit mounds and other waste land in the "Black Country," and of the comparative successes accruing from the practical experiments under the Midland Afforestation Association. Alder, wych elm, ash, and poplars had been proved the most suitable for the purposes indicated, and according to the nature of the soil and position. The extermination of scrubby shrubs and weeds was recommended. Coniferous trees, by reason of their evergreen foliage, are adversely affected by the atmosphere of the "Black Country," more especially when permeated with sulphuric or carbonic impurities. The lecturer, however, opined that the ordinary coal smoke did not materially affect the health of deciduous trees.

A large series of lantern-slide illustrations, showing the comparative growths of several young plantations in various stages of culture, and also of well-formed and ill-formed timber trees, were thrown upon the screen.

The instructive and highly interesting lecture was followed by an animated discussion, and the various questions were satisfactorily answered by Mr. Martineau, an important one being in regard to the chemical nature of the "slag" and the manurial properties of basic slag. Mr. Martineau also incidentally remarked that vast quantities of the slag are being utilised by various leading railway companies for metalling their roads.

A vote of thanks was accorded to Mr. W. Preston, Lawn House, Edgbaston, for three large pots of narcissi, the one of N. poeticus being remarkably large and fine. A cultural certificate was recommended for the whole exhibit.

Bristol Gardeners' Association.

The usual meeting was held on February 23 at St. John's Parish Rooms, Mr. Hayball in the chair. Mr. Edwards, representative of the Bath Society, read a paper on "Asparagus." The lecturer said that in growing asparagus much depended on the nature of the soil, which should be deep sandy loam, and be liberally manured and trenched in the winter in preparation for seed-sowing early in April. He advised thinning out the seedlings to nine inches apart when large enough to handle. In the second year of growth remove each alternate plant, thus allowing a distance of eighteen inches each way in the beds, which should be five feet in width. Commence to cut when the plants are three or four years old, but do not extend the period of cutting any longer than two months. Mr. Edwards recommended seaweed as a manure, used in a decayed condition, placed on the beds after removing part of the soil. This operation is best done in February or March; the lecturer deprecated the use of manure in the winter, affirming that the proper time is when the plants are in full growth, and he advised applying nitrates in May or June. For two orchids Mr. Hunking was first, and Mr. Jennings second. In the point competition, Messrs. Woodward and Jennings received three and two respectively for Dendrobium Wardianum, and Mr. Springham three points for a dish of apples.

B.G.A., London Branch.

On Saturday, February 25, a most successful social evening was held at Carr's Restaurant, in aid of the Royal Gardeners' Orphan Fund. The chair was occupied by Mr. E. F. Hawes, and about 120 members and friends were present. The excellent programme of songs and recitations, arranged by the Concert Committee, was well received. During the evening Mr. Hawes gave a short address, and for the benefit of those present who were not members he summarised the aims and objects of the association, and directed attention to the good work it has already accomplished. The announcement that the membership now well exceeds 2,000 was received with much applause. These encouraging results, continued Mr. Hawes, were the outcome of steady growth, and have not been brought about by spasmodic efforts. A vote of thanks was unanimously accorded to the ladies and gentlemen who had kindly given their services, and the singing of "Auld Lang Syne" and the National Anthem brought a most successful and enjoyable evening to a close.

TRADE NOTES.

His Majesty King George V. has granted to Messrs. John Forbes (Hawick), Lim., Buccleuch Nurseries, Hawick, a Warrant of Appointment as nurserymen to his Majesty, an appointment which the firm previously held to King Edward VII.

His Majesty King George V. has granted to Messrs. James Veitch and Sons, Lim., Chelsea, a Royal Warrant of Appointment as nurserymen and seedsmen to his Majesty.

Messrs. Dickson and Robinson, Cathedral Street, Manchester, who recently received the Royal Warrant of Appointment as seedsmen to King George V., have been appointed by Royal Warrant seedsmen to Queen Alexandra.

Messrs. Hobbies, Lim., Dereham, have been granted the Royal Warrant of Appointment as nurserymen to Queen Alexandra.

BIG BUD IN BLACK CURRANTS.

Mr. Hammond's rejoinder seems, for the most part to relate to a number of methods of attacking the black currant mite to which I did not even allude in the letter referred to, so that I shall not attempt to follow him through the long history of his courageous, but confessedly futile, attempts to rid himself of this destructive pest. I may state briefly that my own observations (and I am a Fellow of the Geographical Society, and have even travelled as far as Kent) would lead me to exactly the same conclusions as to the absolute futility of "bud picking" and most of the other remedies from time to time recommended. I am also at one with him as to the absence of any really immune variety of black currant.

The ground so far cleared, I may pass on to one or two points which seem to require a little further explanation. Mr. Hammond seems to think that nursery and market garden practise differ so widely that there can be no fair comparison. But is this really the case? As regards numbers, we grow and sell many thousands of bushes annually, more, not less, than the average market gardener has on his premises, and, were it otherwise, this would not seriously affect the results obtained, so long as the experimental area were sufficiently large to eliminate such errors as are often induced by experiments upon a very limited number of subjects. Then, too, though the fruiting bushes in a market garden are a foot or so taller than two and three-year-old stock in a nursery, the difference is not sufficient to put them out of the range of an ordinary sprayer. Fruit is, of course, a negligible quantity in a nursery, and is generally left to the birds, but I may reassure those who may be apprehensive on this point by saying that our bushes, which are old enough, crop freely every year. The quassia and soft soap does not injure the young fruit, and the spraying time is over too soon for the edible quality to be affected later on. Mr. Hammond's statement that a little scorched foliage in a nursery "does not matter" is very wide of the real truth, and should not be allowed to pass unchallenged. Scorched foliage means stunted growth, and the well-grown trees can only be produced when growth from start to finish is unchecked by blights or remedies unskilfully applied.

I have no wish to upset Mr. Hammond's faith in greasy and other remedies, but, however these may eventually turn out, the one to which I have called attention certainly holds the field at present. It has been proved absolutely efficacious over a number of years and upon all the leading varieties in cultivation, it is cheap to make, and easy and cleanly in application. With practical growers 1lb. of practice goes further than one ton of theory, and, so far as I am aware, the lime and sulphur treatment (of which I have no personal knowledge) is the only other method for which any practical results whatever have been claimed. I hope, therefore, that Mr. Hammond and his fellow sufferers will make a fresh effort this spring on the lines I have indicated, and that the results will be beneficial to all concerned. Chas. E. Pearson, F.L.S.

Rose Juliet.—The excellent representation of this new rose in the almanack for the current year issued by the Gardeners' Magazine should do much to draw the attention of rose growers to this fine variety. It is a remarkable rose in colour, perfume, form, size, and the extraordinary lasting power which it possesses after being cut. In growth, too, it seems all that is desirable, having a vigorous constitution. Its history is simple: it was raised from a cross between Soleil d'Or and Captain Hayward; it has the colour of both in a remarkable degree, and for a hybrid brier the blooms are of rare solidity. For this rose I predict a great future, as it has all the characteristics that go to make a desirable flower.—E. M.

ANSWERS TO CORRESPONDENTS.

DISEASED CARNATION LEAVES.—J. C., Leeds: The plants are suffering considerably from an attack of Helminthosporium echinulatum, a fungus disease that frequently does a great deal of damage among carnations, especially among Malmaison and tree carnations. All badly-affected leaves should be cut away and burned at once, and the rest be frequently sponged or sprayed with a solution of potassium sulphide. A damp, close atmosphere assists the development of the disease, consequently drier and more airy conditions should be provided to combat it, and also to increase the vigour of the plants.

TOMATOES.—P. A. B., Galway: It would certainly pay you to put hot-water piping in the house, and two rows of 4in. pipes on either side would be ample. Of course, you could grow good crops without artificial heat, but even in such case it would be necessary to have a good stock of plants grown in a warm house ready to put out in the cold house in May. If there is no staging in the house you could plant three rows on each side of the central pathway, fifteen plants in each row; this would give a total of ninety plants. Supposing you obtained a dozen pounds weight of fruit per plant; this would mean a crop of about nine cwts., which, at 4d. per lb., would realise £16 16s. This all looks very well on paper, but everything depends upon your ability as a grower, and the market you can command. Then, again, if the house has a stage on either side, the accommodation will be limited; you would then have a row of plants next the outer walls, trained up near the glass, thirty plants in all, though one row could be grown on each side in pots or boxes. The plants trained near the glass would give relatively larger crops than those set out in rows on the ground; £10 would be a very good return from such a small house. On the outdoor plot probably raspberries would pay better than strawberries, but you would have to wait a whole year before they gave any returns. Potatoes, cauliflowers, or salading could be grown between the rows of raspberries during the first season, and usually a small catch crop could be taken. Where raspberries do well, and are skilfully cultivated, they will yield from three to four tons of fruit per acre, and the average price would probably be about £10 per ton, rather more in most seasons.

GARDENING IN BARBADOS.—M. D., Barbados: We are glad to know that the *Gardeners' Magazine* is of so much use to you in the West Indies. If you can grow pinks, antirrhinums, and pansies you should be able to manage pentstemons, paeonies, Kochia trichophylla, pyrethrums, perpetual carnations, Dimorphotheca aurantiaca, Ranunculus asiaticus, gerberas—on fairly dry places, hemerocallis, and probably montbretias. It appears to us that you will have to do a good deal of experimenting, and while this is extremely interesting work, it is also, at times, disappointing. The superintendents of our colonial botanic stations are usually ready to give every information possible in connection with the acclimatisation of plants and the success or otherwise that has attended the culture in their district of such plants as are familiar in British gardens. We suggest that Mr. J. R. Bovell, I.S.O., superintendant of the Barbados Botanic Station, may be able to put you in possession of information that will save you many disappointments. In the matter of roses you cannot go far wrong if you stick to the best of the tea-scented and hybrid tea varieties. What the grubs are we cannot say: send specimens to Mr. Bovell, or Mr. J. S. Dash, at the Botanic Station. Probably one of the special preparations for clearing the soil of pests would help you, but if the grubs are of good size, as you suggest, trapping with whatever material the pests seem specially fond of should not be difficult, while the regular use of the hoe for surface cultivation will materially help. Sweet peas you cannot hope to grow successfully, but the new [illegible] varieties, raised in Algiers, and supplied through most of the seedsmen, who advertise in our columns, may give you a few flowers, at any rate they are worth trying, and will not prove costly.

FORCED BULBS.—H. H., Chester: The Royal Horticultural Society is holding a two-days' exhibition of forced spring-flowering bulbs at the Horticultural Hall, Westminster, S.W., on Tuesday and Wednesday, March 14 and 15. Numerous cash prizes and medals are being offered. Full particulars may be obtained on application to the Royal Horticultural Society secretary, addressed as above.

DWARF CHRYSANTHEMUMS IN SMALL POTS.—B. P., Devizes: We have dealt with this matter on a previous occasion. For the present we may state the case briefly. Insert the cuttings early in April, either singly or several in pots or boxes; place singly in small three-inch pots as soon as well rooted, and keep in a cold frame. When about six inches high take out the point of growth, and at the end of June, or early in July, put each plant into a six-inch pot, using good and fairly substantial soil, and potting firmly. Only one shoot should be allowed to develop. After the pinching it must be carefully staked. In a dry season it pays to plunge the pots in ashes, but there should be a hard base for the pots to stand on.

EARLY-FLOWERING CHRYSANTHEMUMS.—R. C. H., Coventry: In common with the majority of other hardy herbaceous plants, the early chrysanthemums require a moderately rich soil that has been dug to a depth of not less than twelve inches, or trenched to a depth of two feet or so. Manure from an old hotbed and well-decayed manure from the stable or farmyard are the best to use in soil preparation, but should they not be available, use superphosphate, bone-meal, or some other approved fertiliser, at the rate of about 3ozs. to the square yard.

Eckford's Giant SWEET PEAS

THE FINEST BLOOMS IN THE WORLD.

A flower garden without Eckford's Sweet Peas can only be compared to a house without furniture. Sweet Peas are requisite to the small, medium, or large garden, and if you wish to have colour, effect, prize specimens, and tall plants, then send to Eckford's for your seeds. The time to buy is NOW. The firm to buy from is ECKFORD'S. No other seed specialist in the world can rival Eckford's for Sweet Peas. Larger flower, longer stems, brighter colours, and a profusion of bloom will be the result of growing Eckford's seeds.

REMEMBER GENUINE ECKFORD'S SEEDS CAN ONLY BE OBTAINED DIRECT FROM WEM. No Agents are employed.

SPECIAL NOVELTY OFFER FOR 1911.

LUMINOSA.—This variety will be appreciated for its deep coral colour, which for decoration is unexcelled, having the quality of giving off greater brilliance in artificial light than any other variety. Very scarce. In sealed packets, 7 seeds, **6d.**; 15, **1/-.**

VICOMTE DE JANZE.—A fine bold flower of exquisite shape, the standard being splendidly erect; in colour it is deep bright rose, perfectly distinct; a charming flower. In sealed packets, 5 seeds, **3d.**; 10, **6d.**; 20, **1/-.**

DODWELL F. BROWNE (Waved).—This is a very beautiful intense bright crimson, three and four flowered, almost a self; a true Giant Waved variety of intense King Edward VII. colour. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1/-.**

SAINT GEORGE.—Light orange pink standard with slightly lighter wings; almost a self; good size; slightly waved. In sealed packets, 20 seeds, **3d.**; 40, **6d.**; 80, **1/-.**

ASTA OHN (Waved).—A pretty waved lavender overlaid with rose; a very charming flower of good size and substance. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1/-.**

APPLE BLOSSOM (Waved).—This, as its name implies, is a beautiful flower of apple-blossom colour, of giant size, and, like most of the waved varieties, is a very strong grower. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1/-.**

PICOTEE (Waved).—This is one of the very finest introductions, being a giant waved flower, pure white, with a beautiful picotee edge of carmine; in most cases the flowers are borne in fours on a long, strong stem. In sealed packets, 5 seeds, **3d.**; 10, **6d.**; 20, **1/-.**

MAGGIE GERRING.—This is a decided acquisition with a bold standard of perfect shape, and beautifully balanced wings. In colour it is a soft cream, overlaid with a delightful shade of pink, which rather deepens towards the edges. It is exquisitely rich in tone when bunched. In sealed packets, 5 seeds, **3d.**; 10, **6d.**; 20, **1/-.**

FLORA NORTON (Waved).—This is a well expanded large flower. A pure self. Colour a bright blue, overlaid with faint reddish mauve. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1/-**

EVELYN HEMUS (Waved).—A warm cream shading to yellow, with a picotee edge of terracotta pink; of great size and refinement. Standard and wings beautifully waved, and nearly always four-flowered. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1/-.**

MRS. HENRY BELL (Waved).—A beautiful rich apricot ground, overlaid with a soft pink, which deepens towards the edges of both standards and wings. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1/-.**

MID BLUE.—A medium-sized erect flower of deep sky-blue It is a strong grower, very free and frequently four-flowered. Quite distinct. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1/-.**

OTHELLO (Waved).—A beautiful self-coloured giant chocolate of splendid substance and robust habit. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1/-.**

CERISE (Waved).—A fine, bold, beautifully waved, true cerise; a very strong grower, giving generally four flowers on long, strong stems. In sealed packets, 10 seeds, **3d.**; 20, **6d.**; 40, **1/-.**

SPECIAL OFFER. One full-sized packet of each of the foregoing 14 charming and Novel Sweet Peas, **12/6** post free for cash with order. One half-sized packet of the foregoing 14 charming and Novel Sweet Peas, **6/6** post free for cash with order.

SPECIAL COLLECTIONS FOR 1911.

Villa (C) Collection. 12 splendid varieties, suitable for exhibition, 50 seeds of each, **2s. 9d.**, post free, cash with order.

Villa (E) Collection. 12 splendid varieties, suitable for exhibition. 25 seeds of each **1/6**, Post free, cash with order.

Villa (B) Collection. 24 splendid varieties, suitable for exhibition, 50 seeds of each, **5s. 6d.**, post free, cash with order.

Half-Villa (B) Collection. 24 splendid varieties, suitable for exhibition, 25 seeds of each, **3s.**, Post free, cash with order.

A specially-written booklet on Sweet Pea Growing given with every order. Send to WEM for satisfaction.

FREE. Send a postcard to-day for large illustrated and coloured Catalogue. It gives full particulars of all novelties in Sweet Peas for 1911, and contains full list of all flower and vegetable Seeds.

HENRY ECKFORD, F.R.H.S., Sweet Pea Specialist (Dep. 221), WEM, SHROPSHIRE.

Two feet apart will be a good distance at which to plant them when growing them in beds. The best place in which to grow them in the majority of private gardens is the mixed border, where they should be arranged in groups, three or four plants being put in each. May is the best time for planting. Some good varieties are: Crimson Mdme. M. Masse, Harvest Home, crimson and gold; Ivy Stark, yellow; Mdme. Louise Lionnet, pink; Mdme. M. Masse, lilac; Mytchett Beauty, yellow; Mytchett White, Rabbie Burns, rose-red; Ralph Curtis, creamy white; Carrie, golden-yellow; Goacher's Crimson, rich crimson; Horace Martin, yellow; Mdme C. Perriere, pink; Normandie, pink; Perle Chatillonaise, salmon-pink; Polly, orange; Roi des Blancs, white; and Nina Blick, red.

NAMES OF PLANTS.

W. J. G., Exmouth.—Cardamine hirsuta.

F. L. S., Wokingham.—1, Saxifraga sancta; 2, Anemone hepatica; 3, Cornus mas.

T. I., Byfleet.—Flowers were very much faded and bruised when received. 1 and 2 appear to be Cattleya Percivaliana; 3, Dendrobium speciosum.

F. J. W., Tavistock.—1, Cyclamen Coum; 2, Saxifraga apiculata; 3, Rhododendron præcox; 4, Iris reticulata.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above sea-level, 150 feet.

Date. 1911. February 19 to February 25.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Feb. 19—Sunday	7 24	44	41	47	42
,, 20—Monday	6 18	37	36	48	32
,, 21—Tuesday	—	40	40	51	34
,, 22—Wednesday..	7 54	46	41	51	41
,, 23—Thursday	0 36	45	43	51	43
,, 24—Friday	7 30	44	40	51	42
,, 25—Saturday.....	0 6	50	48	54	42
Means ...	(total) 29 48	43	41	50	39

Date. 1911. February 19 to February 25.	Rain.	Temperature of the Soil at 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
Feb. 19—Sunday	0·01	43	41	41	37
,, 20—Monday	0·03	39	41	42	26
,, 21—Tuesday	0·07	39	40	42	29
,, 22—Wednesday..	trace	42	40	42	42
,, 23—Thursday	0·15	42	41	42	38
,, 24—Friday	0·12	42	41	42	36
,, 25—Saturday	trace	42	41	42	39
Means ...	(total) 0·38	41	40	42	35

FORTHCOMING ENGAGEMENTS.

TUESDAY, March 7.—Scottish Horticultural Association meets.

National Amateur Gardeners' Association; meeting at Winchester House, 7 p.m.

THURSDAY, March 9.—National Horticultural Society of France, Exhibition at Paris.

MONDAY, March 13.—United Horticultural Benefit and Provident Society, Annual Meeting at Royal Horticultural Hall, Westminster, at 8 p.m.

TUESDAY, March 14.—Royal Horticultural Society: Committees meet at 12 o'clock; lecture at 3 o'clock on "The Origin of Varieties," by Mr. G. F. Scott Elliott; Scientific Committee at 4 o'clock. An exhibition of forced bulbs will be held on this occasion and continued on Wednesday.

SCHEDULES RECEIVED.

PERPETUAL FLOWERING CARNATION SOCIETY.—Exhibitions will be held at the Royal Botanic Society's Gardens on May 2 and 3, and on December 5 and 6.

NATIONAL DAHLIA SOCIETY.—Crystal Palace on September 7 and 8; and at the Royal Botanic Society's Gardens on September 20 and 21.

PERTHSHIRE SWEET PEA SOCIETY.—A schedule of twenty-nine sweet pea classes. Exhibition at New City Hall, Perth, on August 4 and 5.

OBITUARY.

◆

COL. R. H. BEDDOME.

In his 81st year there passed away, at the end of last week, a famous botanist, Colonel R. H. Beddome. After joining the Army Colonel Beddome went out to Madras, and in 1856 was appointed Quartermaster and Interpreter to the 42nd Infantry Regiment. In early life he took a keen interest in Nature study, and during his earlier years in India he paid great attention to the subject of forestry, so much so that, when efforts were made to save the forests of Southern India, and a department was formed, he was appointed chief assistant to Dr. Cleghorn. In this work he found very congenial occupation, and in 1860 he became head of the Forestry Department, continuing in that office until his retirement in 1882. Considered from a botanical point of view, his books brought him considerable fame; his most notable works are "The Flora Sylvatica of the Madras Presidency," and "The Ferns of Southern India." In the Icones Plantarum there are about 300 plates and descriptions of new and rare plants found by him in the jungles of Southern India. For a long number of years Colonel Beddome was a regular correspondent with Kew, and since his retirement, and residence at Sispara, West Hill, Putney, he was a regular attendant and worker at the Kew Herbarium. His death was sudden, and few people who knew him as a frequenter of Kew and the Royal Horticultural Society's meetings imagined he had reached three score years and ten.

MR. THOMAS THYNE.

At the age of 75 the oldest Dundee seedsman, Mr. Thomas Thyne, passed away after a brief illness. In the presence of a few invited friends his remains were laid to rest in Barnhill Cemetery on February 18. His career as a seedsman began when as a boy, in 1849, he entered the services of Messrs. John Stewart and Sons. By dint of unrelenting perseverance and a keen grasp of business he rose rapidly in the ranks until he gained a partnership, and for about forty years he controlled the big business. In 1886, along with his life-long comrade, Mr. George Paton, who also held a responsible position in the Stewart firm, he started the business of Messrs. Thyne and Paton, which quickly became a household word with amateurs and gardeners far and near.

The partners and comrades of earlier years worked like Trojans, building up a splendid business, and when family affairs demanded a separate business and estate, by mutual consent the old name was dropped, and new ones substituted four years ago. The deceased, along with his son, Mr. James Thyne, already a partner under the old name, starting under the name of Messrs. Thyne and Son in the old premises, while Mr. Paton elected to remove to another site, and there, along with his son (trained in the business, too), began under the new title of Messrs. George Paton and Son.

The deceased gentleman was held in high esteem by those who knew him intimately, and beneath a retiring and reserved disposition there was a kindly, sympathetic nature and unassuming courtesy of manner which endeared him to those who knew him best. He had little to say, but he spoke with judgment and weight.

Dahlia Conference. — The National Dahlia Society has arranged to hold a conference on dahlias and their cultivation at "Carr's" Restaurant, Strand, London, on Friday, the 17th inst. The proceedings will commence at 6 p.m., and all who are interested in dahlias are invited to attend.

MARKETS.

◆

COVENT GARDEN.

Flowers.

Business is good, due probably to the brighter and dry weather.

		s.	d.		s.	d.
Acacia	per pad	4	0	to	5	0
Azaleas, white	per doz. bun.	3	0		4	0
Adiantum cuneatum	per doz. bun.	4	0		6	0
Anemones, French	per doz. bun.	2	0		2	6
Arums	per doz.	2	0		4	0
Asparagus	per doz. bun.	7	0		10	0
Camellias	per doz.	1	6		2	6
Cattleyas	per doz.	9	0		12	0
Carnations	per doz.	2	0		3	0
,,	per doz. bun.	9	0		12	0
Croton leaves	per bun.	1	0		2	6
Cypripediums	per doz. blooms	2	6		4	0
French fern	per doz. bun.	2	6		4	0
Gardenias	per doz.	3	0		6	0
Hellebores	per doz.	1	0		1	6
Hyacinths, Roman	per doz. bun.	5	0		7	0
Lilac	per bun.	2	6		4	0
Lilium auratum	per bun.	2	6		4	0
,, speciosum	per bun.	2	0		3	0
,, longiflorum	per bun.	3	0		4	0
Lily of the Valley	per doz. bun.	6	0		10	0
Marguerites	per doz. bun.	2	0		3	0
Narcissus, Paper White	per basket	6	0		10	0
,, Soleil d'Or	per doz. bun.	2	0		2	6
,, Golden Spur	per doz. bun.	3	0		6	0
Odontoglossums	per doz. blms.	2	6		3	0
Pelargoniums	per doz. bun.	5	0		8	0
Ranunculus	per doz. bun.	3	0		4	0
Roses	per doz.	1	6		5	0
Smilax	per doz. trails	2	0		3	0
Tuberoses	per doz.	0	4		0	6
Tulips	per doz. bun.	4	0		10	0
Violets	per doz. bun.	2	0		3	0
,, Parma	per bun.	3	0		4	0

Fruits.

Pears and plums from the Cape are very much in evidence, and are fairly cheap. Business is good all round.

		s.	d.		s.	d.
Apples, English	per bush.	6	0	to	9	[illegible]
,, American	per barrel	20	0		26	0
,, Oregon Newtowns	per box	10	0		14	0
,, Canadian	per barrel	20	0		32	0
Bananas	per bun.	4	0		12	0
Chestnuts	per bag	10	0		20	0
Cranberries	per case	9	0		12	0
Grapes, English	per lb.	1	0		12	0
,, Belgian	per lb.	0	9		1	0
,, Cape	per case	4	0		6	0
,, Guernsey	per lb.	0	9		1	3
,, Almeria	per barrel	15	0		[illegible]	0
Lemons	per case	10	0		18	0
Nectarines, Cape	per case	9	0		15	0
Oranges	per case	10	0		21	0
,, Jamaica	per case	8	0		10	0
,, Californian Navels	per case	12	0		15	0
,, Sevilles	per ½-chest	18	0		20	0
Peaches, Cape	per case	4	0		10	0
Pears, Cape	per case	4	0		10	0
,, Californian	per case	10	0		14	0
Pineapples	each	2	0		4	6
Plums, Cape	per case	4	0		13	0
Pomegranates	per case	1	9		2	3
Strawberries	per lb.	15	0		20	0

Vegetables.

There is a good steady demand, which is met by good supplies.

		s.	d.		s.	d.
Artichokes, Globe	per doz.	1	6	to	3	[illegible]
,, Jerusalem	per ½-sieve	1	0		1	[illegible]
Asparagus	per bundle	4	0		6	[illegible]
Beans, Jersey	per lb.	0	10		2	[illegible]
Beet	per bush.	1	0		1	[illegible]
Brussels Sprouts	per ½-bush.	1	3		1	[illegible]
Cabbages	per tally	3	6		[illegible]	[illegible]
Carrots	per doz. bun.	1	3		[illegible]	[illegible]
Cauliflowers	per doz.	1	6		[illegible]	[illegible]
Celery	per doz. rolls	5	0		1[illegible]	[illegible]
Chicory	per lb.	0	3½		0	4
Cucumbers	per doz.	4	0		1[illegible]	[illegible]
Endive	per doz.	1	0		[illegible]	[illegible]
Horseradish	per doz. bun.	9	0		[illegible]	[illegible]
Lettuce	per doz.	1	6		4	[illegible]
Mint	per doz. bun.	1	0		2	[illegible]
Mushrooms	per doz. lb.	6	0		12	[illegible]
Onions	per bag	4	0		[illegible]	[illegible]
,, Spanish	per case	6	0		[illegible]	[illegible]
Parsnips	per bag	2	6		[illegible]	[illegible]
Parsley	per ½-sieve	1	3		[illegible]	[illegible]
Radishes	per doz. bun.	1	0		[illegible]	[illegible]
Rhubarb	per doz.	0	8		[illegible]	[illegible]
Savoy	per tally	3	0		[illegible]	[illegible]
Seakale	per bun.	0	10		5	[illegible]
Spinach, French	per crate	4	0		16	[illegible]
Tomatoes, Canary	per crate	12	0		[illegible]	0
Turnips	per bag	2	0		[illegible]	6
Watercress	per doz. bun.	0	5		[illegible]	[illegible]

LONDON POTATO MARKETS.

Supplies are fairly large, and the demand is good; prices have a tendency to fall in some instances.

		s.	d.		s.	d.
British Queen	per ton	75	0	to	90	0
Epicure	per ton	70	0		75	0
Evergood	per ton	70	0		75	0
King Edward	per ton	75	0		85	0
Maincrops	per ton	95	0		100	0
Up-to-Dates	per ton	80	0		105	0
,, Irish	per ton	60	0		70	0

THE LANGUAGE OF FLOWERS
"Feed us, we pray you, with
CLAY'S FERTILIZER
and our rare beauty and fragrance will repay you."

CLAY'S LONDON FERTILIZER
TRADE MARK.

It is SAFE, CERTAIN, QUICK-ACTING and ECONOMICAL.
Flowers Grown with CLAY'S FERTILIZER catch the Judge's eye.
Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).
EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK AS AT SIDE.
CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:
CLAY & SON, Manure Manufacturers and Bone Crushers, **Stratford, London, E.**

CATALOGUES RECEIVED.

G. S. EVANS, BEXLEY HEATH, KENT.—A small illustrated catalogue of Perpetual and Malmaison carnations, concluding with a priced list of a selection of border carnations.

MANSELL AND HATCHER, LIM., RAWDON, LEEDS.—This firm issues a special catalogue of lily bulbs by way of special offer. Besides auratum and speciosum varieties, the beautiful L. sulphureum and L. nepalense are listed, as well as L. longiflorum varieties, L. Henryi, etc.

J. BURRELL AND CO., HOWE HOUSE NURSERIES, CAMBRIDGE.—The list of new cactus dahlias now issued contains descriptions of six show cactus, and two garden cactus varieties, all seedlings raised at Cambridge; the two latter have been certificated by the National Dahlia Society.

JOHN FORBES, LIM., BUCCLEUCH NURSERIES, HAWICK.—A wonderfully comprehensive plant catalogue, very largely devoted to florists' varieties of hardy flowers, such as pentstemons, phloxes, pansies, violas, early chrysanthemums, pæonies, iris, etc.

W. W. JOHNSON AND SON, LTD., BOSTON, LINCS.—The retail seed list from this firm is before us. It includes a number of new culinary and sweet peas and other vegetable and flower novelties in addition to standard varieties.

VILMORIN-ANDRIEUX AND CO., QUAI DE LA MEGISSERIE, PARIS.—Two small but closely printed lists reach us from Paris; one is devoted to chrysanthemums and the other to dahlias and cannas.

R. WALLACE AND CO., KILNFIELD GARDENS, COLCHESTER.—A thoroughly interesting, descriptive, and useful catalogue of bulbs, tubers, and plants for spring planting. Hardy orchids and the new montbretias are deservedly dealt with at some length.

BARR AND SONS, KING STREET, COVENT GARDEN, W.C.—This new catalogue tells of the approach of spring, and reminds us that the time is almost here for planting gladioli; while liliums, dahlias, early chrysanthemums, montbretias, must all be considered for this season's display.

[illegible] W. CROSS, OLD GRAMMAR SCHOOL, WISBECH.—A very comprehensive list of garden and farm seeds. Seed potatoes are a special line, and there is a double white antirrhinum among the flower novelties.

HALLAMS, MOSELEY, BIRMINGHAM.—A closely printed, freely illustrated seed catalogue comes from Moseley, and it is full of interest. Sweet peas occupy a prominent position, but a separate list of these is now published.

W. WOOD AND SON, LIM., WOOD GREEN, LONDON, send us a comprehensive catalogue of horticultural appliances and sundries.

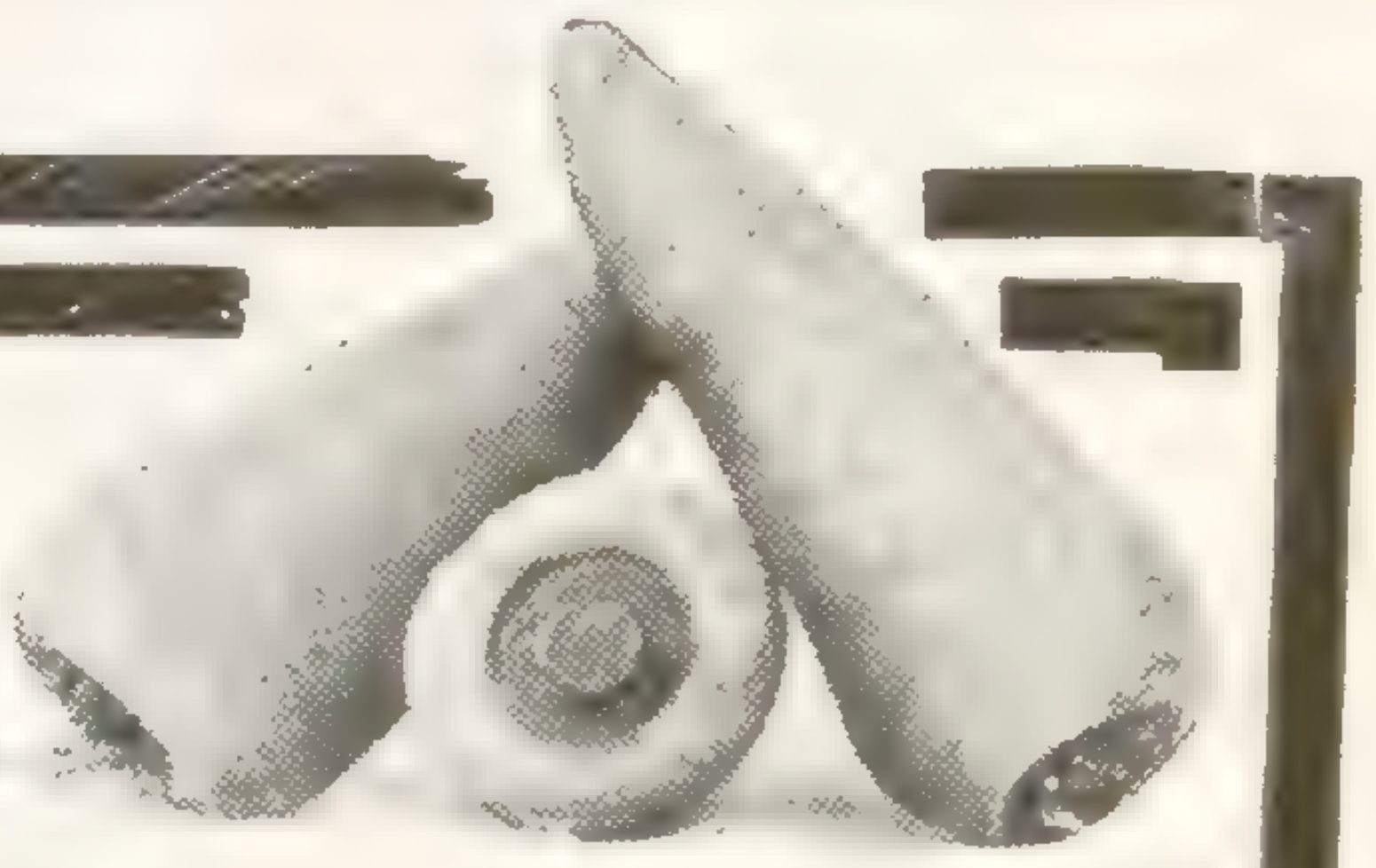
R. H. BATH, LIM., WISBECH.—This firm's spring catalogue is devoted very largely to such popular florists' flowers as dahlias, begonias, pansies, violas, chrysanthemums, and carnations.

CONTENTS.

PAGE
Answers to Correspondents ... 177
A [illegible] Greenhouse ... 173
Bedding Plants grown as Annuals ... 166
Clematis montana rubens ... 168
Exhibitions and Meetings ... 175
Gooseberry Berry's Early Kent ... 167
Greenhouse Flowers at Reading ... 171
New Plants, etc. ... 169
Notes from Kew ... 165
Notes of the Week ... 161
Parsley ... 167
Peach Libra ... 165
Plant Houses ... 170
Royal Horticultural Society ... 163
The Future of the Scottish Horticultural Association ... 172
Work for the Week ... 173

ILLUSTRATIONS.

Portrait of Mr. W. J. Godfrey, 161; A Tree of Libra Peach, 165; A well-marked strain of French Marigolds, 166; A fine Breadth of Parsley, 167; A splendidly developed specimen of Clematis montana rubens at Kew, 168; [illegible] Larkspurs, 169; One of Messrs. Sutton and Sons' large Primula Houses, 171; The Conservatory at Buxted Park, 173.



Vaporite
The ORIGINAL soil insecticide

USE VAPORITE WHEN DIGGING TO DESTROY SOIL INSECTS

If you dig in 1 lb. of Vaporite to 8 sq. yds. NOW, you will see a great improvement in your plants and vegetables this summer. Soil insects do far more damage than most gardeners really appreciate. Vaporite a non-poisonous powder—can only be applied to the soil when digging before the plants are in. It is sold in tins and casks by all seedsmen. Fuller particulars of Vaporite will be sent post free to anyone filling in this coupon.

CARNATIONS.
"I am quite sure Vaporite was the means of saving my carnations last year, as before using it the bed was full of wireworms."
R.A.S., North Devon.

WIREWORMS, Etc.
"I find Vaporite very effectual. It is the only thing I have found that really destroys wireworms, and I am very glad to have found such a good friend for my garden."
L.E.L., Boscombe.

PRICES—In Tins, **9d.**, **2s.**, **3s.** and **4s. 6d.** (of all seedsmen). In Casks, **7s. 6d.** per ½-cwt. (carr. paid), **11s. 6d.** per cwt. (carr. paid).

THE VAPORITE-STRAWSON CO., LTD.,
DEPT E.
Spencer House, South Place, LONDON, E.C.

FILL THIS UP AT ONCE.
Please send, free of charge, your Illustrated Booklet No. 45, describing Vaporite and its uses.
NAME.........................
ADDRESS.........................

The Gardener & his Family must have Dry, Comfortable, Easy Going BOOTS.

THE Gardener in whatever capacity must have foot comfort, the first necessity of an active mind and body. If the feet are wrong then all's wrong. We recommend our special footwear to old and young for outdoor wear.

The Stout Chrome Calf Greenhouse wear **11/9** | The Nailed Gardener Boot **10/6**

We make special quality Boots for the whole family. Write for free illustrated price list No. 14 and select what you fancy. We know you'll come again and again.

NORWELL'S BOOT FACTORY, **PERTH, Scotland.**
Established over 100 years.

PEA TRAINERS. The "Paragon" and "Perfect" (patent), made [illegible] and 6ft. high and any length. Prices from [illegible] per set, carriage paid. Write for leaflet. THE PEA TRAINER CO., Bridge Street, Banbridge.

FERNS, FERNS, FERNS, etc.—Foliage and Flowering Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; grapes, peaches, melons, stove and greenhouse plants; four and a-half and eleven years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon Surrey.

GARDENER (Head of two or three, or good Second) seeks SITUATION; age 29; abstainer; good references; disengaged; married when suited. SAUNDERS, care of Merrell, Holly Bush, Elstree, Wolverhampton.

GARDENER (Head, where three or four are kept); age 29. Mr. WOODFIELD, Head Gardener to His Grace the Duke of Somerset, Maiden Bradley, Bath, would be pleased to recommend his foreman, A. ASHFORD, as above; 12 years' practical experience in all branches.

GARDENER (Head); general all-round knowledge; life experience in large and well-kept establishments; 13 years Head in last situation; age 39; married; gentleman will recommend. T. HARRIS, 2, Mill Lane, Cheshunt, Herts.

GARDENER (Head Working, where two or more are kept); good all round; can be well recommended; married when suited; age 36. PEARCE, 10, Roxwell Road, Shepherd's Bush.

GARDENER (Head Working), requires SITUATION; experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants; Flower and Kitchen Garden, Hardy Fruit, etc.; good references; married, no family. W. S., 73, Allen Street, Maidstone, Kent.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here 5½ years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working, or good Single-handed); life experience Inside and Out; excellent reference from present place as Head; age 37; married when suited. G. HARDING, 48, St. Albans Road, Dartford, Kent.

GARDENER (Head Working), married, no family; age 36; life experience in all branches, Inside and Out; excellent references; Wife dairy, or house, if required. A., 27, Effingham Road, Reigate, Surrey.

GARDENER (Head Working).—Gentleman strongly recommends his foreman, who has been with him for 5½ years; thoroughly understands the cultivation of first-class fruits, flowers, and vegetables, and the general routine of a well-kept garden; married; age 32. STEVENS, The Lodge, Boston House, Brentford, W.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Closes Hall, Gisburn, Clitheroe.

GARDENER (Head or Single-handed); age 30, married; life experience, Inside and Out; excellent character; well recommended. S. GANDY, Ponders Lodge, Margaretting, Essex.

HUGH LEWIS, Esq., wishes to highly recommend his GARDENER (Head); many years' experience in all branches; expert in Hardy and Alpine Plants and all forms of Gardening on natural lines; married, one child. Apply to W. INGWERSEN, Mayfield, Harewood Road, South Croydon.

LADY LUARD strongly recommends C. RUSHEN as Head Gardener, where two or three are kept; life experience; glass and all other branches; most hard working; leaves through break up of establishment. Write LADY LUARD, Witham, Essex.

LADY A. V. CUNLIFFE will be pleased to recommend her GARDENER (Head) to any Lady or Gentleman; 20 years' practical experience; age 34; leaving through giving up place. ELKINS, Ellesborough Rectory, Butler's Cross, Bucks.

MAJOR HOLROYD, Ropley Manor, Alresford, Hants, wishes to highly recommend his late HEAD GARDENER; 18 years' practical experience in all branches of gardening Inside and Out; Single, age 32; excellent references. SCREEN, Coombe Hill Gardens, Butlers Cross, Tring, Bucks.

MR. E. DYSON highly recommends his GARDENER (Second) as Head Working; life experience Vines, Peaches, Melons, Carnations; close two years here; excellent references; age 27. LEONARD, Cherryhinton Hall, Cambridge.

GARDENER (Single-handed) seeks SITUATION; life experience; good, capable, and honest man; age 30; single; excellent references. Apply A. DODD, 139, Nag's Head Road, Ponders End, Middlesex.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (Single-handed); age 37; married; willing to be useful; 5 years last situation; good reference. F. PRIOR, Edgware, Middlesex.

GARDENER (Single-handed or with help); life experience Inside and Out; good references; age 28; married, one child. F. STONE, Combe, Woodstock, Oxon.

GARDENER (Single-handed or where two are kept); good all-round experience; Inside and Out; highly recommended; age 24. T. JACKSON, Bush Court Gardens, Wallingford, Berks.

MR. E. ANDREWS wishes to recommend C. CURD, age 26, as GARDENER (Single-handed, with assistance); 3 years' present situation; thoroughly reliable in good all-round gardening; married when suited. Bell House Gardens, Dulwich.

FOREMAN, married, no family.—I can highly recommend a Man with good references; been here two years; age 25; life experience. TANN, Rookery Gardens, Brixworth, Northants.

FOREMAN or good SECOND (Inside or Inside and Out).—Mr. NAILOR, Handcross Park Gardens, Crawley, Sussex, highly recommends C. CREASEY as above; age 26; 11 years' experience; three years here Inside; excellent references.

FOREMAN or good JOURNEYMAN (Inside); 11 years' experience Chrysanthemums, Carnations, Fruit, Plant Houses; 3 years present situation; age 25; well recommended. PEAN, The Gardens, Grantlands, Uffculme.

FOREMAN, age 28; experienced in Fruit and Greenhouse Plants, House and Table Decorations; good references; Bothy preferred. A. CARRINGTON, 118, Stowe Street, Lichfield, Staffs.

FOREMAN (Inside), age 26; married, one child; 12 years' experience; good references; well recommended; 4 years here. H. W. PEARSON, Sandling Park, Hythe, Kent. (No circulars.)

MANAGER or FOREMAN (Working); age 38; married; 20 years' experience in Market Growing, Tomatoes, Cucumbers, Grapes, Chrysanthemums, Bedding Stuff, Strawberries, etc.; good knowledge of Roses and Hardy Plants. E. JONES, Derby Road, Melbourne, Derbyshire.

MANAGER or FOREMAN; life experience in Growing Tomatoes, Cucumbers, Mushrooms, and all kinds of Bedding Plants; age 49; single. C. A., 9, Herbert Street, Chesterton, Cambridge.

GARDENER (Second); thoroughly experienced in Kitchen Garden, Pleasure Grounds, Fruit and Plant Houses, Decorating; age 25; single; three years last situation; excellent testimonials; disengaged. W. W. HARRIS, Cornmeadow, Claines, near Worcester.

GARDENER (Second of two or three, or Single-handed), Inside and Out; 10 years' experience; all-round work; age 24. FUDGE, 22, Markham Road, Winton, Bournemouth.

MR. BOOTH, The Gardens, Wadhurst Hall, Sussex, wishes to recommend F. PALMER as Second to work Inside; Bothy preferred; disengaged March 11. Apply as above.

JOURNEYMAN (Inside); Fruit or Plant Houses; six years' experience; well recommended; age 20; South preferred. A. ASHMAN, 8, St. Mark's Road, Hanwell, Middlesex.

JOURNEYMAN, age 20, Inside and Out; 6 years' experience. C. WISEMAN seeks SITUATION as above, well recommended by Mr. Pye, Head Gardener, Wilmington Hall; good references; Bothy preferred; abstainer. Tredegar Road, Wilmington, Dartford.

JOURNEYMAN (Inside) in good establishment; age 19; five years' experience. EMERY, Hylands Park, Chelmsford, Essex.

JOURNEYMAN (Inside or Inside and Out), age 21, requires SITUATION; eight years' experience; well recommended. W. DOWNEY, Lunesdale Gardens, Wellwood, Torquay.

MR. C. BRIDGEMAN, Lucas Grange, Haywards Heath, highly recommends J. BAILEY as JOURNEYMAN (Inside or Inside and Out); [illegible] experience; age 22.—BAILEY, Lucas Grange, Haywards Heath.

MR. GILBERT will be pleased to recommend C. GURNEY as JOURNEYMAN, Inside; age 19; six years' experience; used to [illegible]; good references; Bothy preferred. C. GURNEY, Champneys Gardens, Tring, Herts.

MRS. F. F. WOODWARD can recommend a steady Young Man as GARDENER (Under); has been 5 years in her service; age 19; good character. Birlingham, Pershore.

W. RING, Hamels Park Gardens, Buntingford, Herts, would be pleased to recommend a thorough good JOURNEYMAN [illegible] good place; has been with me 5 years Inside [illegible].

W. THEOBALD, Hatchford Park Gardens, Cobham, wishes to recommend A. WEST as JOURNEYMAN (First) Inside; 2 years here; good experience and references. Apply W. [illegible], West Street, Ewell, Surrey.

GARDENER (Under, where three or four are kept); Kitchen Garden and Pleasure Grounds, or as required; Single-handed place; Poultry not objected to. 4, Caledonian Road, Chichester, Sussex.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For MARCH 11, 1911.

Please Repeat my Advertisement.

Name ....

Address ....

....

Date ....

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

Situations Wanted—*continued.*

GARDENER (Under, where three or four are kept); age 21; six years' experience, Inside and Out; three years' good character. R. DOLLIN, Cat Hill, East Barnet, Herts.

GARDENER (Under, Inside and Out); age 20; five years' experience; 18 months present situation; good references. A. PRIOR, Sandhurst Lodge Gardens, Wellington College Station, Berks.

GARDENER (Under, Inside and Out); age 20; 5 years' experience; 18 months present situation; good references. A. PRIOR, Sandhurst Lodge Gardens, Wellington College Station, Berks.

UNDER GARDENER, Young Man, seeks SITUATION as above; age 19-20; good refs.; 3 years 9 months last place. C. T. COLESHILL, 37, Wolsey Road, Hampton Hill, Middlesex.

UNDER GARDENER, age 26, seeks SITUATION as such, or good Single-handed; 13 years' experience in all branches; good references. H. L., c/o H. Parrot, Fairhaven Stables, Putney Heath, S.W.

GARDENER.—Private Working or Market Garden Nursery; grower cucumbers, tomatoes, chrys. (bedding), mushrooms (ridge or flat), vegetables, hardy fruits, budder, grafter, trainer, pruner, raiser rose cuttings; life experience; good references. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER, married, seeks SITUATION; handy man, Indoors or Out; Wife help in house if required. BRISSENDEN, Elsing Hall, E. Dereham.

GENTLEMAN recommends YOUNG MAN, age 22, as Second of four or five; Inside and Out; 7 years' experience; good reference. Apply T. ROGERS, Michelmersh, Romsey, Hants.

IMPROVER.—J. LAWRENCE, The Gardens, Pimley Manor, Shrewsbury, can highly recommend E. JERVIS as above; age 18; four years' experience, inside and kitchen garden; Bothy preferred.

IMPROVER (18) seeks SITUATION in good garden; three years in present situation; anxious to learn; good worker. Apply, HEAD GARDENER, Albury Edge, Merstham, Surrey.

IMPROVER (Inside or Inside and Out).—Young Man seeks employment in garden; age 19; 5 years' good reference. L. TYLER, Great Dalby, Melton Mowbray.

IMPROVER (Inside and Out); two years and nine months in last situation; age 18; good references. Apply E. MITCHELL, 4, Carlton Terrace, Dawlish, Devon.

LAD (17) seeks SITUATION (Inside or Out); 2½ years' experience; excellent references. Apply 2, Woodbine, Lime Grove, New Malden, Surrey.

MARKET NURSERY MANAGER or FOREMAN; good grower Cucumbers, Tomatoes, Grapes, Carnations, Chryeanthemums; Cucumbers a speciality; married; age 38; excellent testimonials. LEA, The Gardens, Nottage Court, Porthcawl.

MR. HY. CHURCH, Raveningham, Norwich, highly recommends F. ALLISON, who has been with him two years in charge of herbaceous borders, walls, etc., to any gardener wanting a reliable and good working man; age 24; 11 years' experience.

MR. HUBBARD, Oak Hill Gardens, Ipswich highly recommends G. JACKSON, as GARDENER (Under); Inside and Out; age 20; 4½ years present place.

MR. TUCKER, The Gables Gardens, Shortland, Kent, with confidence recommends A. THURSTON, age 26; 10 years' good all-round experience, both Inside and Out; to any lady or gentleman requiring good gardener; single handed or with help; 2 years here as Second; first-class references; married when suited.

ORCHID GROWER requires SITUATION; experience under first-class growers; 10 years present situation; excellent references. Apply, S. BURROUGH, Royal Gardens, Sandringham.

YOUNG MAN (20) seeks SITUATION; Inside and Out; three years' experience; strong, willing, well recommended; Bothy preferred, near St. Leonards or Eastbourne preferred. GOULD, Stuckton, Fordingbridge, Hants.

YOUNG MAN, 20, seeks SITUATION in garden, wishes to improve; Bothy preferred, abstainer; references can be had. A. MARTIN, High Street, Ramsbury, Wilts.

YOUNG MAN (20) seeks SITUATION as JOURNEYMAN (Inside); 7 years' experience; well recommended. P. COOPER, Newbold Fields, Chesterfield, Derbyshire.

YOUNG MAN, age 22 (Inside and Out); upwards of 4 years' experience, Bothy preferred. A. HOLLOWAY, Medstead Manor Gardens, Alton, Hants.

YOUNG MAN, age 20; Inside and Out; 2½ years present place; strong, willing; abstainer, Bothy preferred. Apply A. BARNETT, Willoughby Road, Langley, Bucks.

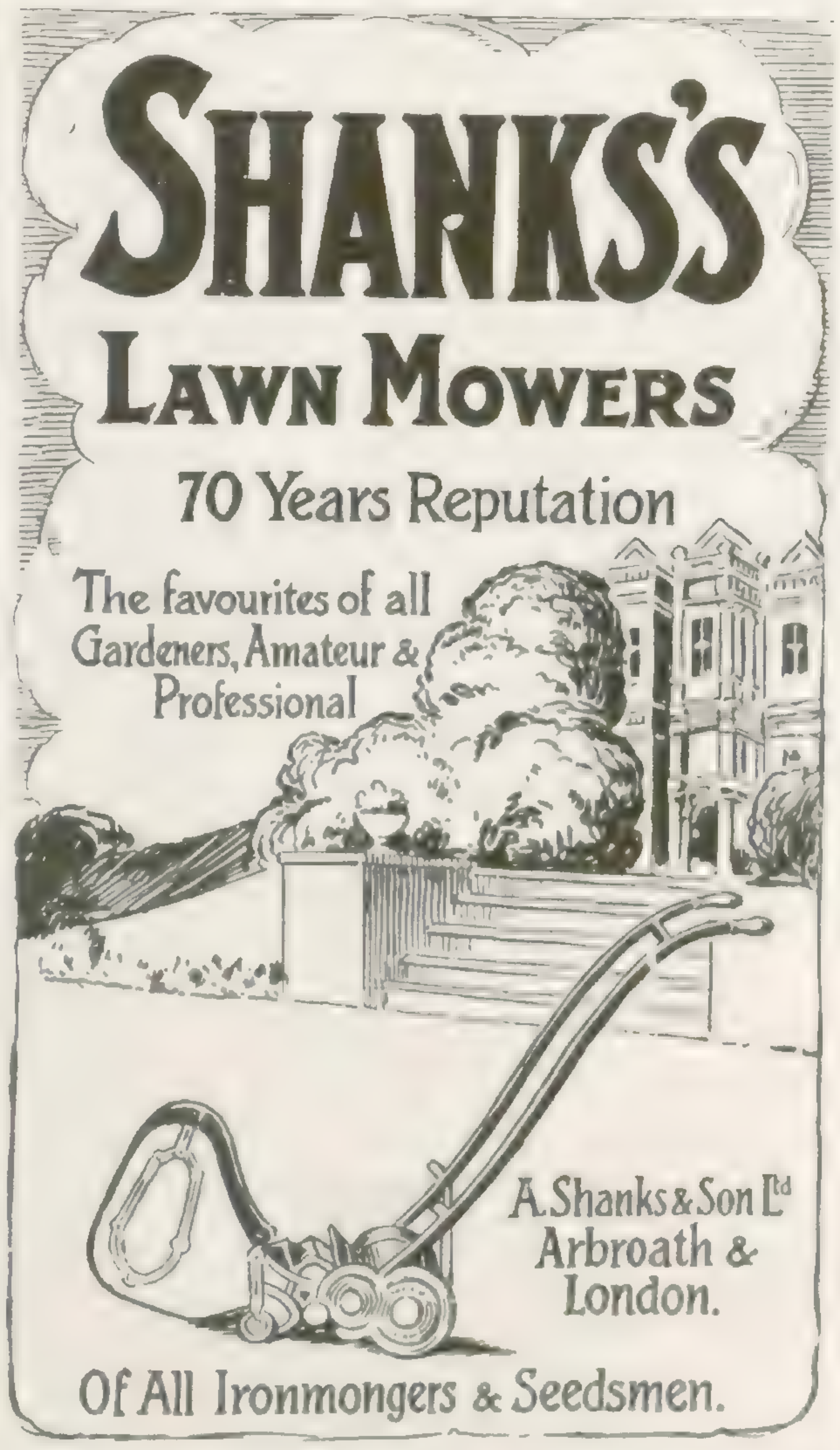
Situations Wanted—*continued.*

YOUNG MAN, age 25, seeks SITUATION as UNDER GARDENER, Inside and Out; 7½ years' experience; South preferred. C. NICHOLLS, 32, Orme Road, Worthing.

Situations Vacant.

CANADA.—Wanted, strong, active GARDENERS for large Nurseries; steady work; good wages; sail March; book early. UNION TRANSIT CO., 381, Argyle Street, Glasgow.

WANTED, UNDER GARDENER, used to General Gardening, and to do boots and knives and coals; state age, experience, and wages required. D. NEWMAN, Murrey's Court, Ashtead, Surrey.


SHANKS'S
LAWN MOWERS
70 Years Reputation
The favourites of all Gardeners, Amateur & Professional
A. Shanks & Son Ltd
Arbroath & London.
Of All Ironmongers & Seedsmen.

THE FAVOURITE WEED KILLER.

SANDWITH'S
PREMIER
WEED
KILLER

As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for 6/-; drum, 2/-. 12 galls. for 16/-; drum, 6/-. 20 galls. for 26/8; drum, 10/-. 40 galls. for 50/-; drum, 20/-.

EITHER LIQUID OR POWDER.

Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,

The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

NETTING. THE VERY BEST. I DO NOT REQUIRE PAYMENT UNTIL YOU HAVE SEEN AND APPROVED OF THE NETTING. OTHERS may try to copy me, but this netting is good strong, extra stout small mesh, rot-proof netting, similar to what I supply to the ROYAL GARDENS. [illegible] by 1yd., 4s.; by 2yds., 8s.; by 3yds., 12s.; any length or width supplied. Orders over 5s. carr. paid. List and Samples free. Commoner and tender netting, as sold by others, [illegible] for 1s. H. J. GASSON, The Net Works, Rye.

Dr. J. COLLIS BROWNE'S

THE ORIGINAL AND ONLY GENUINE

Chlorodyne

ADMITTED BY THE PROFESSION TO BE THE MOST VALUABLE REMEDY EVER DISCOVERED.

The Best Remedy known for

COUGHS, COLDS,

ASTHMA, BRONCHITIS.

Cuts short all attacks of SPASMS, HYSTERIA, and PALPITATION.

The only Palliative in NEURALGIA, TOOTHACHE, GOUT, RHEUMATISM.

Acts like a Charm in DIARRHŒA and DYSENTERY.

Refuse imitations and insist on having

Dr J. COLLIS BROWNE'S Chlorodyne.

Convincing Medical Testimony with each bottle.

Of all Chemists, **1/1½, 2/9, 4/6.**

THOMSON'S Celebrated
VINE, PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES
UNRIVALLED FOR ALL PURPOSES
THE RESULT OF MANY YEAR
EXPERIENCE
SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE.

WATSON'S LAWN SAND.

(THE ONLY ORIGINAL.)

Destroys Daisies, Plantains, Dandelions, &c., and at same time Invigorates the Grass.

34/- per cwt.; 56lb. Kegs, 18/-; 28lb. Tins, 9/6. Canisters, 5/-, 2/6, and 1/-.

Please see that you get the genuine article.

Sold by Seedsmen and Nurserymen.

A. J. BARBOUR & Co., 8, Upper Fountaine St., LEEDS

CHARGES FOR ADVERTISEMENTS IN

THE GARDENERS' MAGAZINE.

Five Lines and under	£0 2 6
Per Line beyond	0 0 6
„ Inch	0 6 0
„ Half Column	1 10 0
„ Column	3 0 0
„ Page	9 0 0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

☞ All Advertisements should be Received by 5 o'clock on Tuesday.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed—& Co.

Telephone Numbers:

Editorial and Printing Depts. ... ... 831 Holborn.

Advertising and Publishing Depts. ... 2140 Holborn.

Offices: 148 and 149, Aldersgate Street, London.

PUBLISHERS' ANNOUNCEMENTS.

THE GARDENERS' MAGAZINE may be obtained by order from all Newsagents, price Twopence, every Saturday. If any difficulty be found, a copy will be posted weekly direct from the Publisher, 148 and 149, Aldersgate Street, London, on the following terms: Twelve Months, 10s. 6d.; Six Months 5s. 6d.

INDEX and Title Page to Vol. LIII. (comprising the weekly numbers from January to December, 1910), price 2d., by post 2½d.

Catalogues and Estimates Free.

MESSENGER & Co. Ltd.
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office 122 VICTORIA St. S.W.

MODERN GLASSHOUSES

as supplied by MESSENGER and CO., Ltd., are made of the best materials, and only capable and reliable workmen are employed in the erection thereof.

The following letter was recently received by us on the completion of a contract for a well-known Member of Parliament.

February, 1911.

"I should not be doing my duty to your workmen if I did not at once tell you, on the completion of your work, how pleased I have been with each and all of them.

"They have been most obliging throughout the whole job, and have endeavoured to do everything in an efficient and thoroughly workmanlike manner, and I must congratulate you upon having such capable employees."

APPOINTED BY ROYAL WARRANT, HORTICULTURAL MACHINE MAKERS TO HIS MAJESTY KING GEORGE V.

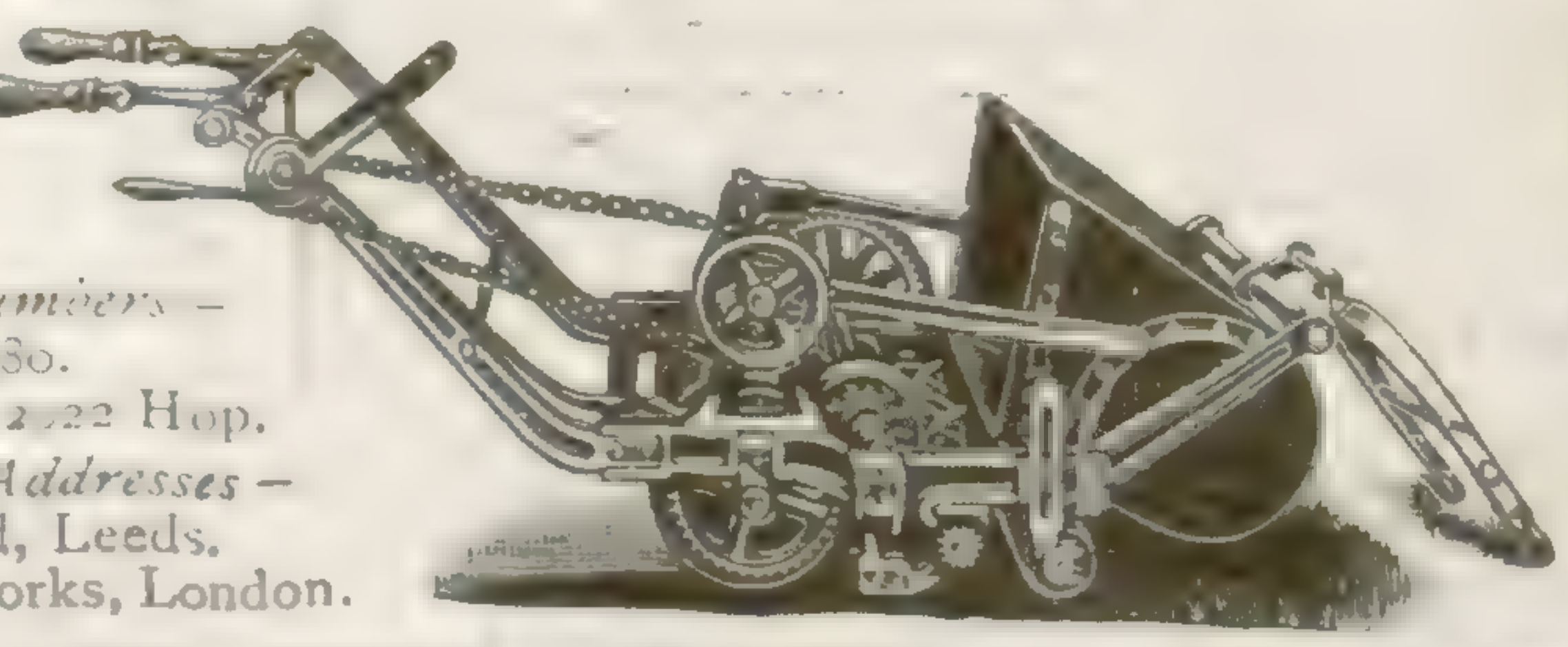
GREEN'S LAWN MOWERS

THE FIRST, FOREMOST, and BEST in the WORLD. Hundreds of Thousands are in use. Established nearly a Century.

Highest Awards — Royal Botanic Society, Royal Horticultural Society, and numerous others.

"SILENS MESSOR" LAWN MOWER.

PONY, AND HORSE MOWER
Either "Silens Messor" Pattern or Wheel-Geared.

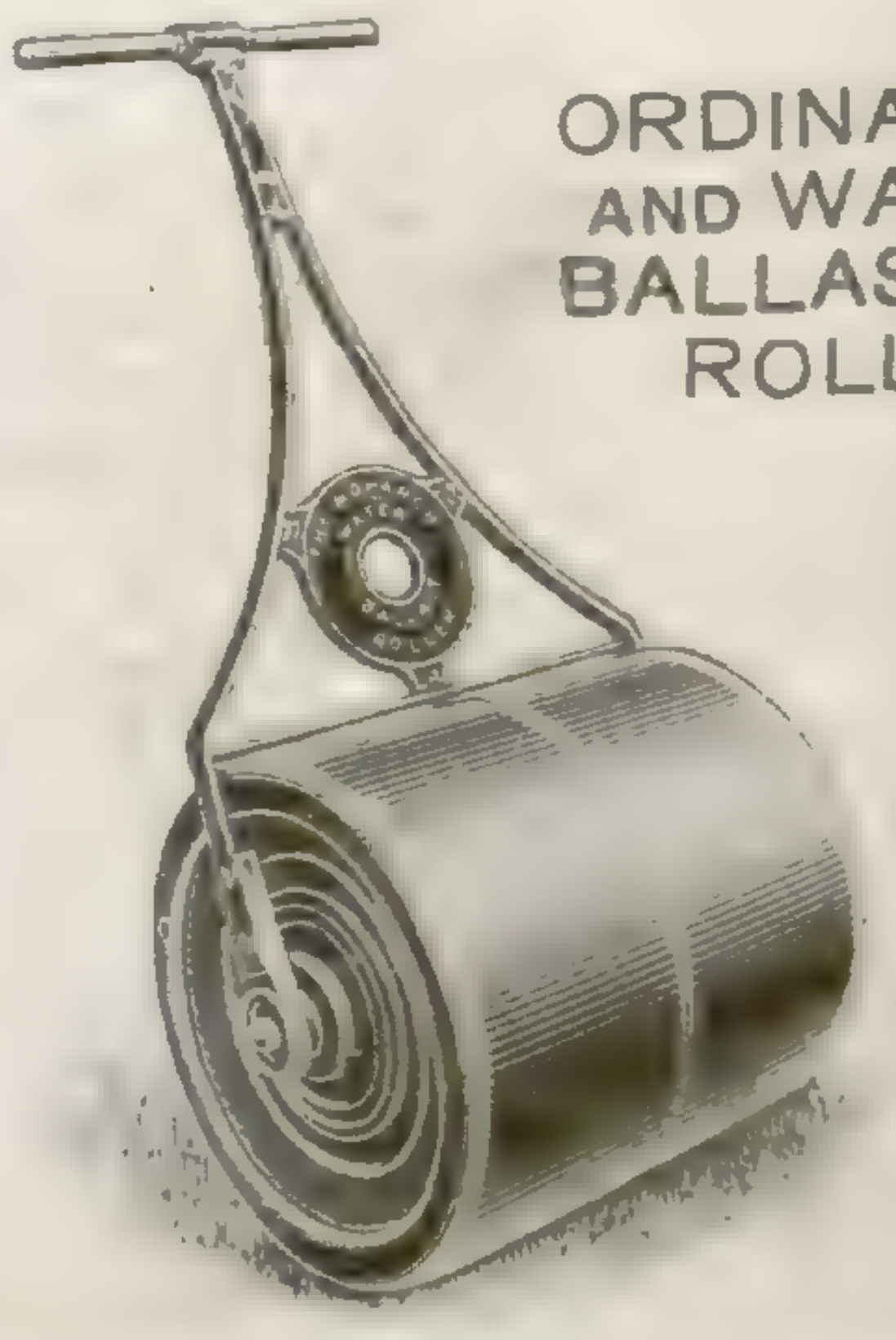


Telephone Numbers —
Leeds, 3580.
London, 2022 Hop.
Telegraphic Addresses —
Smithfield, Leeds.
Surrey Works, London.

They may be had of any Ironmonger or Seedsman in the United Kingdom.

Please write for ILLUSTRATED PRICE LIST No. 1 FREE.

ORDINARY AND WATER BALLAST ROLLERS



MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E.

FERTILISERS for LAWNS, FRUIT TREES, and VINES, and for GENERAL GARDEN PURPOSES. Also Bone Meals, Vitriolised Raw Bones, Superphosphate, Peruvian Guano, Sulphate of Ammonia, Nitrate of Soda, Nitrate of Lime, Potash Salts, etc. Horticultural Price List on application to

HY. RICHARDSON & COMPANY,
Skeldergate Bridge, YORK.

PERGOLAS.
Larch Poles at 1d. per foot. Lists Free.
PATRICK'S, Otley, Yorks.

OAK CRAMBLES.
Peeled and dry at ½d. per foot.
PATRICK'S, Otley, Yorks.

ROSE ARCHES.
Larch Poles at 1d. per foot.
PATRICK'S, Otley, Yorks.

TREE STAKES AND GARDEN RODS.
Lists free.
PATRICK'S, Otley, Yorks.

PLEASE MENTION
THE GARDENERS' MAGAZINE
when writing to Advertisers.

Phytobroma
Barr's New Plant Food
For Flowers Vegetables and Fruit
of highest quality & guaranteed analysis

Per cwt., 20/-; ½ cwt., 12/6; 28lb., 7/6; 14lb., 4/6; 7lb., 2/6; Sample Tins, 1/-.

Prepaid orders for 28lbs. and upwards, Carriage Paid. Circular, with full particulars, on application.

BARR and SONS,
11, 12, and 13, KING STREET, COVENT GARDEN, LONDON

EPPS'S SELECTED PEAT
For Choice Plants, Ferns, Rhododendrons, &c., &c.
SPECIAL ORCHID PEAT.
Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.
Prices on application to
EPPS & CO., Ringwood, HANTS.

ONCE USED. ALWAYS USED. **The 'PATTISSON' LAWN BOOTS**

Fig. 1.

Simplest! Strongest! Most Economical! Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS.
Silver Medal—
Royal Horticultural Society.
HUNDREDS OF TESTIMONIALS.
The Field says: **"As good as anything that could be devised."**
Illustrated Price List from—

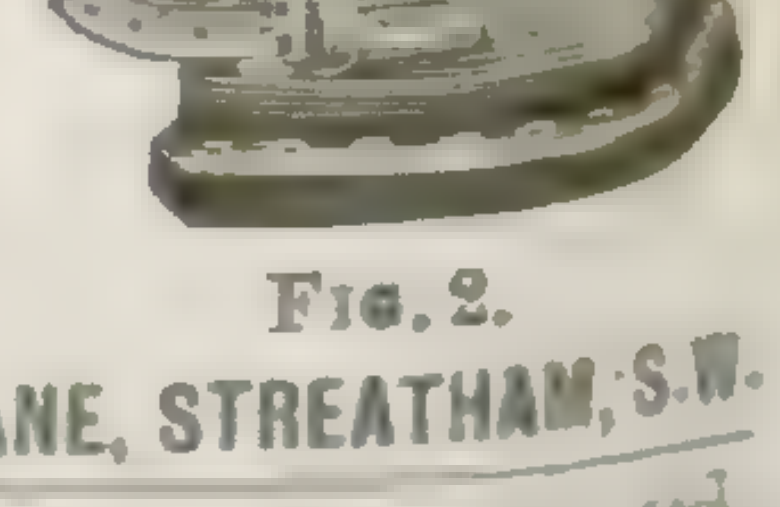


Fig. 2.

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM, S.W.

SEED BOXES.—12 x 9 x 2in. timber, 8s. 9d. gross, made, 10s. 3d.; 15 x 9 x 2in., 10s. 3d., made 11s. 9d.; also flower sticks, trellis, greenhouses, garden lights, or timber of all description. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 2,993. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, MARCH 11, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S VEGETABLE & FLOWER SEEDS of finest selected strains and tested growth. Descriptive Catalogue, with cultural notes, free.

BARR'S BEAUTIFUL LILIES, CANNAS, GLADIOLI, MONTBRETIAS, TIGRIDIAS, ETC., for Spring planting. Catalogue free.

BARR'S Hardy PERENNIALS, ALPINES, AQUATICS, CLIMBERS, ETC., for Spring planting. Descriptive Catalogue, with cultural notes, free.

BARR and SONS, 11, 12, and 13, KING STREET, COVENT GARDEN, LONDON.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA.—This is a good month for building Conservatories—from the smallest and cheapest to the largest and most expensive. All information can be obtained by writing; by telephone, 201 Western; or by wire to "Gray, Chelsea, London."

KING'S ACRE FRUIT TREES, ROSES, AND ORCHARD-HOUSE TREES.

AWARDED 24 GOLD MEDALS SEASONS 1909-10.

160 acres to select from of the finest Trees that natural conditions and the skill of man can produce.

ILLUSTRATED CATALOGUES FREE ON APPLICATION.

KING'S ACRE NURSERIES, LTD., HEREFORD.

PERRY'S CATALOGUES.
Hardy Ferns, 400 varieties.
Iris, 450 varieties. Bulbs and Tubers.
Delphiniums, 200 varieties.
Hardy Border and Rock Plants.
Pentstemons, unique collection.
Florists' Flowers. Free on Application.
PERRY'S HARDY PLANT FARM, Enfield, Middlesex.

AMERICAN TREE CARNATIONS, best varieties, including Britannia, White Perfection, etc., strong young plants from 2in. pots, 3s. doz., 20s. 100, flowering plants, 5in. pots, 8s. per doz. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

VIOLETS, Princess of Wales, Millions, largest, sweetest grown, monster boxes, 1s., 2s., 4s., free; trade supplied; cash orders, over double value. TAYLOR'S VIOLET FARM, Manaccan, Cornwall.

30 PACKETS SHOWY FLOWER SEEDS, 7½d.; 25 packets choice Vegetables (Peas, Beans, etc.), 7½d.; both lots with Coronation Collection Sweet Peas free), 1/3, all post paid. GARDEN SUPPLY CO., 31b, Plough Rd., Rotherhithe, London.

RICHARDSON'S for GLASSHOUSES and HEATING APPARATUS, for full advertisement see back page. Darlington.

BARNARDS LIMITED, Norwich.—Best House for Fencing, Espaliers, Pergolas, Fruit Enclosures, Iron and Wire Bordering; all descriptions of Training Fittings, Arches, Wire Netting, Stakes, Wire Lattice, Rollers, and all garden requisites. Now is the time to effect improvements in your garden. Catalogues free; inquiries invited.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page vii.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

BEST ONION IN CULTIVATION.
WEBBS' SELECTED AILSA CRAIG.
1s. and 2s. 6d. per packet, post free. (First Prize, Reading, 1910, open class.)
Mr. H. E. Milward, Gardener to Mrs. Macdonald, writes: "Your strain of Ailsa Craig Onion is the finest I can grow, being perfectly true to shape and of immense size. For exhibition it is unsurpassed."

WEBB and SONS, The King's Seedsmen, WORDSLEY, STOURBRIDGE.

BUNYARD'S NEW CATALOGUES.
The following have been recently published, and contain all worthy new varieties. Post free on application.

BUNYARD'S
CLIMBING PLANTS, Illustrated.

BUNYARD'S
HERBACEOUS PLANTS, Illustrated.

BUNYARD'S
HARDY TREES AND SHRUBS, Illustrated.

BUNYARD'S SEEDS, VEGETABLE AND FLOWER, with coloured plates.

GEO. BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.

BEGONIAS, awarded 24 Gold Medals.—Double Seed, 2s. 6d. and 5s. per pkt.; Frilled, Crested, or plain Single, 1s., 2s. 6d., and 5s. per pkt. For price of Begonia tubers, Carnations (Border and Perpetual flowering), Cannas, Cyclamen, Blue Primroses, Delphiniums, Pansies, Polyanthus, Lily of the Valley, Violets, etc., please send postcard for copy of our Illustrated Catalogue, free on application.

BLACKMORE AND LANGDON,
Twerton Hill Nursery, Bath.

LAXTON'S NEW SEED CATALOGUE for 1911. Descriptive and fully illustrated, including grand new "Laxtonian Pea" and many other novelties, gratis on application.—LAXTON BROS., Seed Merchant, Bedford.

FERNS.—Beautiful Greenhouse varieties, 12 for 1s. 3d.; Maidenhair Ferns, 2s. doz.; New Nephrolepis Todeoides, 9d. each; Palms, 9d. each. HEAD GARDENER, 22, Charlton Road, Blackheath.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

HERE YOU ARE! ! ! — ARTHUR COOMBES, F.R.H.S., offers pick of his Tomato Plants, grown under ideal conditions. Holmes' Supreme, Comet, Up-to-Date, D. of York, Sunrise, 1s. 3d. doz.; 8s. 100, cash. Post free.—ST. MARY'S NURSERY, Hagley, Stourbridge.

25 STRONG CHRYSANTHEMUM CUTTINGS, Exhibition, Decorative, Single or Early, 1s. 6d.; 50, 3s.; 100, 5s. 6d.; by return. List. RICHMOND'S CHRYSANT NURSERIES, Ossett, Yorks.

FRENCH GARDENING REQUISITES.—Send for our new List, giving full particulars of the Double Glazed System, and numbers of new Labour-saving Appliances, Frames, Cloches, Reed Mats, and every requisite supplied. BOULTON and PAUL, Lim., Norwich.

CLAY'S MANURES, CRUSHED BONES
(See page vii.)
CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

SUTTON'S EXHIBITION BRUSSELS SPROUTS.
Mr. G. R. Stillwell, Gardener to Mrs. Kincaid Smith, writes: "Your Exhibition Brussels Sprouts are simply perfection, the best I have ever had or seen. The plants are loaded from the ground with large, firm sprouts."
Per packet, 1s., post free.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

THE KELWAY "ARTISTIC" BORDER makes a garden of enduring beauty, from early spring to late autumn, with a minimum of cultivation, and without the trouble of constant digging or bedding-out. The plants composing the border are from strong country-grown stocks, which will flourish under almost all conditions. Send dimensions of space to be filled, or write for Kelway's "Gardens of Delight" (6d.). The cost of the "Artistic Border is 15s., or 25s. for 10 square yards

KELWAY and SON, the Royal Horticulturists, LANGPORT, SOMERSET.

NOW IS THE TIME TO PLANT KELWAY DELPHINIUMS which have been improved almost out of recognition in the past twenty years. They produce plants ranging in height from four to eight feet, exceptionally hardy, and with a rich profusion of choice blooms in all the shades of blue.
Choice named varieties: 24s. 34s., and 56s. a dozen.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

EVERY Gardener, amateur or professional, will find a large amount of useful information in the new edition of Kelway's "Manual of Horticulture"—the varieties, prices and culture of all sorts of garden plants, particularly those wonderful improvements raised in the Kelway Nurseries at Langport. A copy will be sent post free for 2s., which will be credited on the first order.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

KELWAY GLADIOLI flower freely in the open air through the autumn. Their fine bold blooms make an admirable addition to borders or beds and are invaluable as cut flowers for church or table decoration. Choice named collections, 3s., 4s. 6d., 6s. 7s. 6d., 9s., 12s., and 18s. a dozen.
Order at once.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

FIDLER'S NEW ILLUSTRATED CATALOGUE OF CHOICE GARDEN SEEDS will be sent, post free, to any address on receipt of postcard. Write at once for a copy. It may help you to save 50% on your seed bill this season. FIDLER and SONS, Royal Berks Seed Stores, Reading.

IRON and WIRE FENCING for GARDENS, Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free. BOULTON and PAUL, Ltd., Manufacturers, Norwich.

XL ALL FOR WINTER AND SPRING CLEANSING.
Before growth commences stronger solutions may be used.
XL ALL NICOTINE INSECTICIDE WASH (poisonous) for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. Agents, write for particulars.
XL ALL CAUSTIC WINTER WASH (non-poisonous) for dormant Fruit Trees, stamps out American Blight, and all other pests.
Other XL ALL Preparations of great renown are XL ALL NICOTINE VAPORISING COMPOUND, XL ALL FERTILISER, XL ALL LAWN SAND, etc.
Ask your Nurseryman, Seedsman, or Florist for my small Pink List.
G. H. RICHARDS, Manufacturer, 234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Border and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

SEEDS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Select Seeds.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

RHODODENDRONS.

DICKSONS & CO.,
1, Waterloo Place, Edinburgh.
Pink Pearls, Ponticums, choice Hybrids. Write.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

ALEX. DICKSON & SONS, Ltd.,
Hawlmark, Newtownards, Ireland.
The World-famed Champion Rose Growers and Raisers of Irish Pedigree Seedling Roses. Lists Free.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 1st Prizes. 3 2nds. at N.R.S. Shows, 1910. Ctlg. Free.

SAMUEL M'GREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

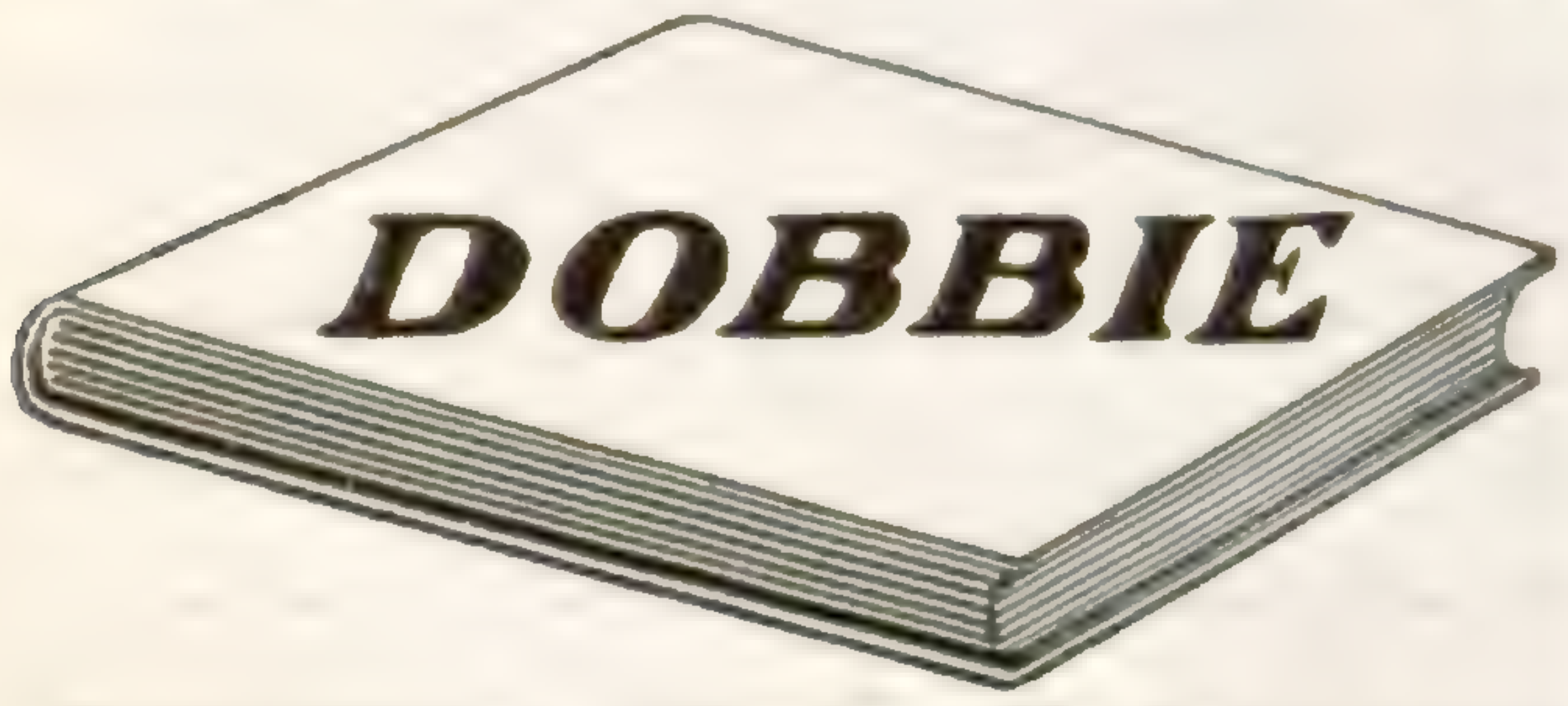
D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
Illustrated Catalogue free.

TURF LOAM.

A. B. JOHNSTON, New Park, Cranleigh, Surrey.
Very Fibrous Loam, for Carnations, Roses, Vine Borders, Melons, Fruits under Glass, &c., &c.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

100,000 FREE COPIES



Dobbie's New Catalogue and Guide to Horticulture.
224 PAGES. 210 ILLUSTRATIONS.

A COPY WILL BE SENT WITH PLEASURE GRATIS TO ANY ONE APPLYING FOR SAME, WHO ENCLOSES 3d. IN STAMPS TO DEFRAY COST OF POSTAGE, AND MENTIONS "GARDENERS' MAGAZINE."

DOBBIE & CO.,
The Royal Seedsmen, EDINBURGH

PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J. R. PEARSON & SONS
LOWDHAM, NOTTS.

TOMATO PLANTS (6 to 8 ins. high). Ready for Fruiting Quarters. **Grown in Steam sterilised soil.** Very carefully packed and protected.
Price £3 per 1,000, Cash with order, carriage paid.
Per 100, 7/- ; 65 plants, 5/- ; 50 plants, 4/- ; 25 plants, 3/- ; 12 plants, 2/-.
Carter's Sunrise, Winter Beauty, Beauty of Wales, etc.
W. & F. POAT, TOMATO GROWERS, ST. SAMPSON'S **GUERNSEY, C.I.**
Cheques, Postal Orders, etc., should be crossed "Guernsey Banking Co., Ltd."
Booklet and Testimonials free on application.

Harrison's Flower Seeds

FOR PRESENT SOWING,

Can be relied upon to produce vigorous plants of choicest strains that will make a glorious show.

ANNUALS. Hardy, half-hardy, and tender.

BIENNIALS. Old and familiar, new and rare.

PERENNIALS. For borders, beds, rockery, or for exhibition.

Our Catalogue No. 26 describes them all: send for a copy, post free, from

HARRISON & SONS,
33, Market Place, **LEICESTER.**

If the "Daily Mail" £1,000 winning bunch of Sweet Peas
BE GROWN WITH
MACKERETH'S SPECIAL
SWEET PEA MANURE,

Sold in Tins, 1/- (1/4 post free), 2/6 (3/- post free). Sold in Bags, 14 lbs., 5/- ; 28 lbs., 8/6 ; 56 lbs., 14/- ; 112 lbs., 25/- Carriage Paid.

I will present the winner with **£10**, and if the bunch contains bloom of Earl Spencer, I will present the winner with **£5**.

I have splendid stocks of the most chaste Spencer Sweet Peas. Orders executed the day they are received.

G. H. MACKERETH,
The Sweet Pea Clearing House,
ULVERSTON.

TAKE NOTICE.
Intending planters should send for the STANCLIFFE CATALOGUE OF TREES, &c.
Our Stocks, which are grown on the highest and most exposed hills of Derbyshire, are in fine condition, and are sure to give satisfaction. Note the prices before ordering elsewhere.

Rockery Stone, 1/- per ton.
THE STANCLIFFE ESTATES CO., LTD.,
DARLEY DALE DERBYSHIRE.

SEED POTATOES & GARDEN SEEDS

Customers wishing to save
50 PER CENT.
When Purchasing
BULBS, GARDEN SEEDS, AND POTATOES,
Should send AT ONCE for Lists to
J. W. CROSS,
OLD GRAMMAR SCHOOL, **WISBECH**

By Appointment to H.M. The King.

1911 FORBES'
Illustrated Plant Catalogue Nearly 200 Pages.
GOLD MEDAL SPECIALITIES.
Contains carefully revised **Descriptions, Colour, Height, Time of Flowering, British or Common Names, Prices,** etc., of the **Grandest Collections of ASTERS, BEGONIAS, CALADIUMS, CARNATIONS, DAHLIAS, DELPHINIUMS, PÆONIES, PANSIES, VIOLAS, PELARGONIUMS, PENTSTEMONS, PHLOXES, PYRETHRUMS, HARDY BORDER PLANTS,** carefully-prepared **PLAN** for arranging **HARDY PLANT BORDERS,** etc.
Experts unanimously accord **FORBES' CATALOGUE** the unique distinction of being the **best** and most **reliable** up-to-date **Reference Book** extant.
FREE ON APPLICATION.
JOHN FORBES (HAWICK), LIMITED.
(Dept. I), The King's Nurserymen, **HAWICK, Scotland.**

THE FLOWER FOR ALL SEASONS.

THE PERPETUAL-FLOWERING CARNATION.

The Tangley Nurseries Collection comprises the cream of English and American Varieties.
Strong plants, 1 doz. vars., packing free, for **7s. 6d.**
Descriptive List Post Free,
W. H. PAGE,
Tangley Nurseries, Hampton, Middlesex.
Phone. 166 P.O. Molesey. Tele.: Page, Hampton.

ZONAL PELARGONIUMS.
Catalogue of New and Choicest Varieties.

From V. SLADE, Zonal Specialist,
Staplegrove Nursery, Taunton.

Sales by Auction.

SALES NEXT WEEK.

MONDAY and FRIDAY, March 13th and 17th at Twelve o'clock.—Choice Herbaceous, Border, and Alpine Plants in variety, Liliums, Gladiolus, Begonias, and numerous other hardy bulbs for spring planting.

At Half-past One o'clock.—1,000 Roses in variety, Fruit Trees, Azaleas, Rhododendrons, etc.

WEDNESDAY NEXT, March 15th, at Twelve o'clock.—Begonias, Gloxinias, Gladiolus, Liliums, Spiræas, Tuberoses, Dahlias, etc., also new and rare Perennials and Herbaceous Plants.

At Half-past One o'clock.—4,000 Roses, Standard, Dwarf, Climbing, T., H.T., and H.P., newest and best varieties.

At Half-past Two o'clock.—A consignment of Japanese Liliums in cases as received, preceded at Twelve o'clock by thousands of miscellaneous Bulbs, Plants, Roots, etc.

At Five o'clock.—100 lots of Ornamental Palms and Plants, 450 Azaleas, 300 Aspidistras, also Camellias and Rhododendrons, Greenhouse Plants, Standard Bays, etc.

FRIDAY NEXT, March 17th, at Quarter to One o'clock.—Choice Imported and Established Orchids in variety. Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Roms, 67 and 68, Cheapside, E.C. On view morning of sale and catalogues had.

ROSE TREES.
SHRUBS. BULBS.

SALES BY AUCTION
are held every
MONDAY and WEDNESDAY, at 12.30.

STEVENS' AUCTION ROOMS,
Established 150 Years,
38, King St., Covent Garden, London, W.C.
Catalogues on Application.

FOR SALE, IN GUERNSEY.—A compact little BULB-GROWING ESTATE of about 4 acres, splendidly situated on the south coast of the island, and well stocked with the best forcing varieties of daffodils, etc.; also a small Orchard of Apple and Pear Trees in bearing. The property contains glasshouse 150 x 18 heated, large shed, pumping mill, and an unlimited supply of water. Write Box 154, c/o Messrs. R. F. White and Son, General Advertising Agents, 33, Fleet Street, London, E.C.

FRUITERER'S and GREENGROCER'S for Disposal; good round and position; fair trial offered; same hands 11 years. 79, Church Road, Teddington.

CHARLESWORTH & CO.,
Hayward's Heath, Sussex,
ORCHID SPECIALISTS,
IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

ELLISON'S BEGONIAS are absolutely the best strain. 30 Begonias, all different, named, 10s. 6d.; Bedding Begonias, 9s., 12s., 15s. 100.

LILIUMS.—24 choice Liliums, all different, 10s. 6d. Gloxinias, 6 different, 2s.; Cannas, 10 different, 4s. 100 German Iris, 10 sorts, named, 4s.

LILY OF THE VALLEY, 1s. 3d. 100; Amaryllis, 10s., 15s., 20s. doz. Gladioli, early-flowering, 1s. 100; Autumn-flowering, 3s. 100.

1,000,000 BEGONIAS.—Single, 1s. 6d. to 7s. 6d.; Dble., 2s. to 15s. doz. Bedding, 9s. to 21s. 100. Tigridias, Tuberoses, Achimenes, Arum Lilies, 1s. doz.

SWEET PEAS.—36 varieties, all recommended by Nat. Sweet Pea Soc., 2s. 6d., free. Tree Carnations, 5s. 6d. doz. 100 Montbretias, 10 named sorts, 2s. 6d.

ON APPROVAL.—Bulbs and Vegetable Seeds on appro. Carriage paid. 56-page Catalogue free. ELLISON, 57, West Bromwich.

NOVELTIES in Flower Seeds.—Adnet's Gerbera, Hybrid Freesias (quite 20 colours), Nemesia, Dimorphotheca, etc. ELLISON, 57, West Bromwich.

PRUDENTIAL ASSURANCE COMPANY, LTD.
Chief Office—HOLBORN BARS, LONDON.
INVESTED FUNDS EXCEED £77,000,000.

Summary of the Report presented at the SIXTY-SECOND ANNUAL MEETING, held on 2nd March, 1911.

ORDINARY BRANCH.—The number of policies issued during the year was **80,311**, assuring the sum of **£7,462,496**, and producing a new annual premium income of **£446,473.** The premiums received during the year were **£4,806,121**, being an increase of **£96,014** over the year 1909. The claims of the year amounted to **£3,240,957.** The number of deaths was **8,465**, and **19,157** endowment assurances matured.

The number of policies in force at the end of the year was **903,896.**

INDUSTRIAL BRANCH.—The premiums received during the year were **£7,426,317**, being an increase of **£254,547.** The claims of the year amounted to **£2,805,069**, including **£222,506** bonus additions. The number of claims and surrenders, including **4,600** endowment assurances matured, was **371,023.** The number of free policies granted during the year to those policyholders of five years' standing and upwards, who desired to discontinue their payments, was **145,187**, the number in force being **1,608,935.** The number of free policies which became claims during the year was **42,660.**

The total number of policies in force in this branch at the end of the year was **18,820,427**; their average duration exceeds eleven and three-quarter years.

The assets of the Company, in both branches, as shewn in the balance-sheet, after deducting the amount written off securities, are **£77,529,226**, being an increase of **£3,327,525** over those of 1909.

In the Ordinary Branch a reversionary bonus at the rate of **£1 14s.** per cent. on the original sums assured has again been added to all classes of participating policies issued since the year 1876.

The Directors are pleased to announce an increase in the rate of bonus in the Industrial Branch of the Company as follows:—

All policies of over five years' duration which become claims either by death or maturity of endowment from the 3rd of March, 1911, to the 7th March, 1912, both dates inclusive, will participate. This bonus will be paid by way of addition to the sums assured of:—

£5 per cent. on all policies becoming claims upon which at least five but less than ten years' premiums have been paid,
£10 per cent. on all policies becoming claims upon which at least ten but less than fifteen years' premiums have been paid,
£15 per cent. on all policies becoming claims upon which at least fifteen but less than twenty years' premiums have been paid, and
£20 per cent. on all policies becoming claims upon which at least twenty years' premiums have been paid.

Messrs. Deloitte, Plender, Griffiths, and Co. have examined the securities, and their certificate is appended to the balance-sheets.

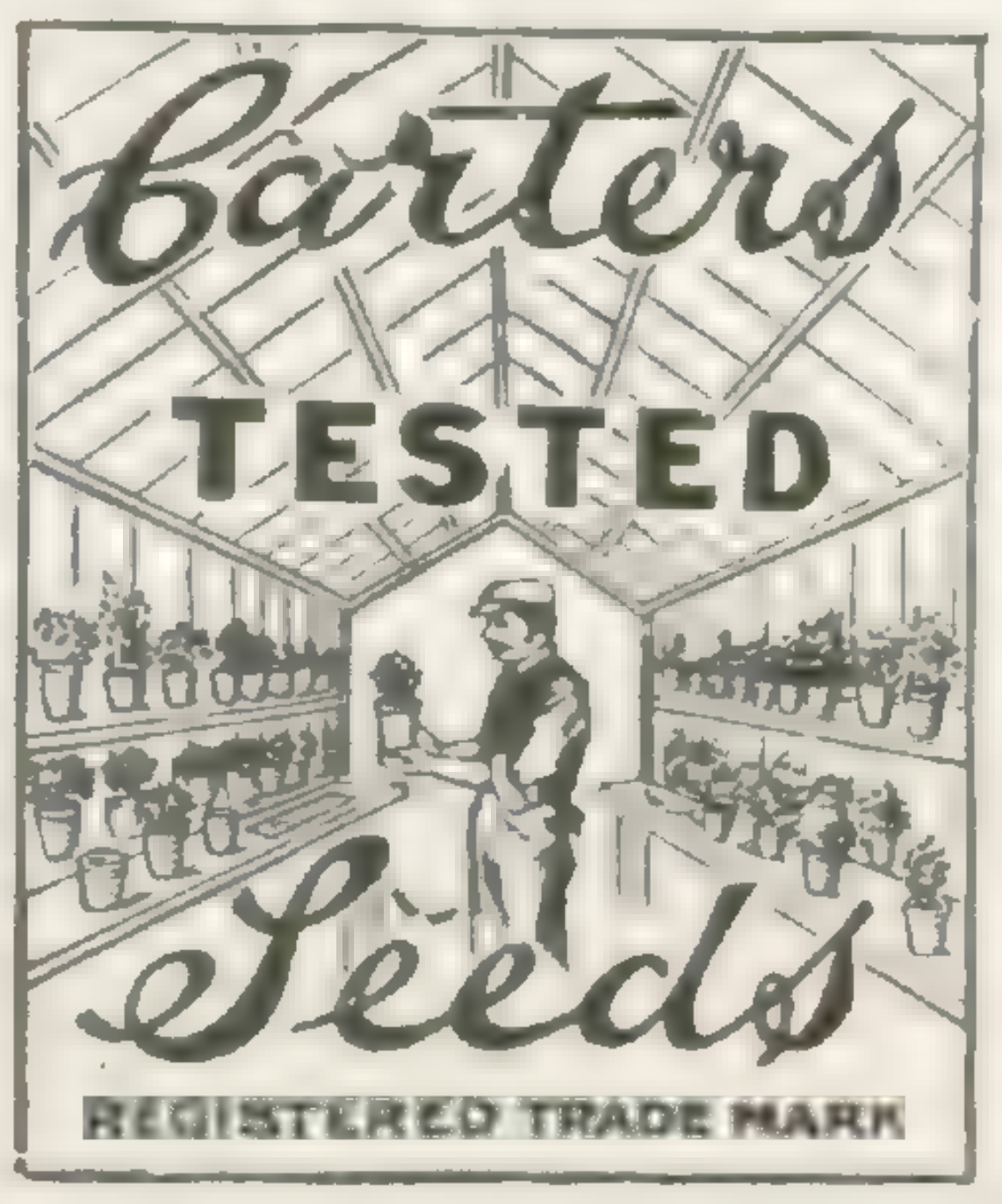
THOS. C. DEWEY, Chairman.
W. J. LANCASTER, } Directors.
J. H. LUSCOMBE, }

D. W. STABLE, } Joint
J. SMART, } Secretaries.

FREDK. SCHOOLING, } Joint
A. C. THOMPSON, } Managers.

The Full Report and Balance Sheet can be obtained upon application.

Write for ILLUSTRATED CATALOGUE POST FREE
from



Carters
HIGH HOLBORN

New Offices and Seed Testing Grounds,
RAYNES PARK, LONDON, S.W.

Branches { 237 and 238, High Holborn, W.C.
53a, Queen Victoria Street, E.C.

CARNATIONS, PINKS, AURICULAS.

DOUGLAS for the best old and new varieties in all classes, and the finest quality in the world. Malmaison Carnations, new and old, **7/6** per dozen. Border, **6/-** to **12/-** per dozen. Tree, American, and English, **7/6** to **15/-** per dozen. Auriculas, Show, **21/-** to **30/-** per dozen. Alpine Auriculas, **9/-** to **21/-** per dozen. Carnation, Auricula, Pink, and Polyanthus seed, **1/6** and **2/6** per packet. **CATALOGUE FREE.**

J. DOUGLAS, Bookham, LEATHERHEAD.

AMERICAN TREE CARNATIONS
AND MALMAISONS.
The Newest and Best Varieties.
Strong, healthy and well-rooted plants only supplied.
Catalogues free.
E. J. WOOTTEN, Fairoak, EASTLEIGH.

SEED POTATOES, Scotch, Irish, Midlands, Northerns; largest and best stock in West of England, both earlies and lates. Apply to OLIVER BROS., Importers, Exeter, and Barnstaple.

SAND (the very best washed) for Bowling Greens, Lawns, Roses, and all gardening purposes. Send 6d. for sample, and lowest quotations, post free. PALMER, White House, Littleboro.

PERPETUAL-FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.
H. BURNETT,
Carnation Specialist, Guernsey.

PAINT & GLASS.
NICHOLLS & CLARKE, LTD.
SHOREDITCH, LONDON.
GLASS.
When sending for Catalogue please cut out this advt.

NEW CENTAUREAS.

THE BRIDE
(WHITE).
Per packet, **6d.** and **1/-**

THE BRIDEGROOM
(HELIOTROPE).
Per packet, **6d.** and **1/-**

THE BRIDESMAID
(LEMON YELLOW).
Per packet, **1/-** only.

HONEYMOON
(GOLDEN YELLOW).
Per packet, **6d.** and **1/-**

THE FOUR VARIETIES, MIXED,
Per packet, **6d.** and **1/-**

Plants of these can be supplied in small pots for bedding out in May and June at 2/6 per dozen.

THE FINEST HARDY ANNUALS EVER SENT OUT, AND NO COTTAGE, VILLA, OR MANSION SHOULD BE WITHOUT THEM.

They flower on long, stout stems, and are most useful for Table Decoration, Wreath Making, and all Decorative Purposes. Should be sown in the open ground from April to June. These beautiful flowers have been awarded more Gold and Silver Medals than any other Hardy Annual, and the ever increasing demand for the Seeds is a proof of their popularity.

H. S. CAIN, Esq., Sheals Crescent, Maidstone, writes:—"I should like to say I was delighted with the **New Centaureas** I had from you last year, and the good results I had."

Sergt. Drum. LAVINGTON, The Barracks, Reading, writes:—"Please send me a packet of **Centaurea** Seed. Those I had last year growing in my allotment were particularly fine, and lasted in bloom a long time."

JARMAN & CO., Chard, Somersetshire.

ANT ROOZEN & SON'S

SEEDS, BULBS, AND PLANTS

For Spring, 1911.

All of the Finest Quality.

THE CATALOGUE of above will be sent, post free, on application to their Offices at . . .

OVERVEEN, HAARLEM, HOLLAND;

Or to their General Agents,

MERTENS and CO.,
3, Cross Lane, LONDON, E.C.

BUNYARD'S FRUIT TREES

The Best Quality and Largest Selection at Moderate Prices.

WRITE FOR CATALOGUE.

GEO. BUNYARD & CO., LTD.,
Royal Nurseries,
MAIDSTONE.

NEW ROSES

WM. PAUL & SON, WALTHAM CROSS, Ltd.,

Beg to offer strong plants of the following New Roses raised by them at the Waltham Cross Nurseries :—

Varieties of 1910.

Alice Cory Wright (H.T.), Dwarfs, **7/6** and **10/6** each.
Elsie (Wichuraiana, Rambler), Dwarfs, **7/6** each.
Juliet (Hybrid Briar), Dwarfs, **10/6** each; Standards and Half-Standards, **10/6** each.
Portia (H.T.), Dwarfs, **7/6** each.

Varieties of 1909.

Althea (H.T.), Dwarfs, **3/6** each; **36/-** per dozen.
Cynthia (H.T.), Dwarfs, **3/6** each; **36/-** per dozen; Standards, **5/-** each.
Fairy (Multiflora Rambler), Dwarfs, **2/6** each; **24/-** per dozen.
Margaret (H.T.), Dwarfs, **3/6** each; **36/-** per dozen.

For full descriptions of the above, and for New Roses of other raisers and general collection of Roses, see Rose Catalogue, post free on application.

Pauls' Royal Nurseries and Seed Warehouse,
WALTHAM CROSS, HERTS.

VOL. LIV.—No. 2,993. SATURDAY, MARCH 11, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

"Rose, Bravest of the Flowers."

Much has of late been said and written about the flowers of the Coronation, and not a few of those who have taken part in the discussion appear to have been under the impression that it was simply necessary to write a letter, anonymously or otherwise, to one of the journals, to ensure some flower being closely associated, to the exclusion of all others, with the great event in June next, which all loyal citizens of the British Empire are anticipating with such keen interest. Several suggestions have been made with regard to the so-called Coronation flower, but they have all been wide of the mark, as might be expected when people are discussing a matter about which they know but little, or have failed to give serious thought to it before proceeding to dogmatise thereon. We have on a goodly number of occasions been asked whether this, that, or the other flower would be selected as the Coronation flower, and whatever the flower about which the enquiry has been made, we have unhesitatingly answered No. Our justification for giving a direct negative to these inquiries is, of course, the fact that there will be no such flower. As a matter of course flowers will be prominent in the functions associated with the Coronation of the King and Queen, and we know that Her Majesty has graciously consented to accept a bouquet from the Gardeners' Company for the ceremony. It may certainly be assumed also that large numbers of those who owe allegiance to King George V. will wear flowers on the day of the Coronation, and there can be no doubt that a considerable proportion will wear the flowers they can the most readily obtain. Hence we shall doubtless see the rose, the carnation, the sweet pea, and it may be the humble but fragrant mignonette with a number of other flowers used for personal adornment in all large assemblies. All the flowers suitable for the purpose may be worn without a violation of good taste; but those whose means place them in a position to exercise a choice in the selection of flowers should undoubtedly give preference to the rose. In selecting the flower which over a thousand years ago a great poet described as the "Rose, bravest of the flowers," they will have the sanction of tradition and good taste. There is no occasion to pass under review the flowers that have been suggested as the "Coronation Flower" for, with the exception of the rose, which has been mentioned by one of our correspondents, they have no claims for pre-eminence, excepting it be their charms of colour and form, and it may be fragrance. The rose possesses all these attributes of beauty in a marked degree; it has also a strong constitution, is profuse in blooming, and in its multiplicity of varieties the flowers evince a remarkable diversity of form and colour and contribute materially to the varied attractions of the garden and hedgerow. The claims of the rose are great if we did nothing more than take into consideration the charms of the cultivated forms in which gardens are now so rich, but the claims of the flower are greatly increased when we consider its close association with the history of the British Isles. For a period long anterior to "the brawl in the Temple Gardens," the rose has been closely associated with one of the most ancient names of England. In a consideration of the etymology of the word Albion, the elder Pliny expressed the opinion that the island may have derived its name from the great abundance of white roses. Whether Pliny was right in his conjecture need not now be discussed; but it is the opinion of the authorities that the White Rose of York was a double form of the field rose, Rosa arvensis, a native species with white flowers, that was then, as now, plentiful in various parts of the country. Long previous to the time of Gerard the double white form of this species was a great favourite in English gardens, and at the time of the Wars of the Roses, which began in 1445, it was undoubtedly as generally cultivated as the Red Damask or Rose of Lancaster, and fully equal to it in significance. This rose was not, however, confined to gardens, if we may trust this old author, for in his "Herbal" he writes: "The double white rose doth grow wilde in many hedges of Lancashire in great abundance, even as briers do with us in these southernly parts, especially in a place of the country called Leyland, and in a place called Roughford, not far from Lathom." The story of the Wars of the Roses as told by Shakespeare is well known, and all that concerns us now is the fact that the feud between the great Houses of York and Lancaster were brought to a close in 1485 by the marriage of Henry VII. with Elizabeth of York, and that the Tudor sovereigns adopted as their badge a red and white rose as a symbol of the union of the two rival Houses. From that distant period until the present time the rose has had a place in the Royal Arms of England, and it has also been fully acknowledged as the floral emblem of the country. Therefore, after a full consideration of the facts, it might with full justification be asked what more fitting flower could be named for close association with the Coronation and its festivities in June next? We might well write with reference to the special claim of the rose for prominence in this connection as did Gerard with regard to the place of the flower in the garden, for no words could be more appropriate in relation thereto than those of this old author: "The Rose doth deserve the cheefest and most principall place among all flowers whatsoever, being not only

MR. W. F. COOLING.

esteemed for his beautie, virtues, and his fragrant and odoriferous smell, but also because it is the honore and ornament of our English Sceptre."

Mr. W. F. Cooling, of the firm of Messrs. George Cooling and Son, Bath, occupies a high position in the world of horticulture, and is especially notable as a rosarian. Mr. Cooling is a strong advocate of garden roses, and especially favours the free-flowering hybrid tea varieties in this connection. He has also devoted considerable attention to climbing roses, and in rose circles he is regarded as one of the leading authorities on them. Mr. Cooling is a regular and successful exhibitor of roses, and as a raiser he is best known for his work among Bourbon varieties, his variety named Purity being one of his great successes, and cne that received the National Rose Society's gold medal as far back as 1898. He is an excellent companion, and his genial good humour has often served to smooth over difficulties such as sometimes arise over a heated discussion. Mr. Cooling takes an active interest in the affairs of the Gardeners' Association in his native town, and also in the management of the National Rose Society, being a member of the Council and of the Publication Committee of the last-named society. As a member of the Council of the National Rose Society over a long number of years, Mr. Cooling has served the rose world ably and consistently for a considerable period—a period that all who know him will hope may not be ended for long years to come.

The Origin of Varieties, like the origin of species, is a matter of immense interest, and any new information cannot fail to be of great value to horticulturists, especially when we remember how much we depend upon varieties, rather than on species, for farm and garden crops, and for the decoration of garden and greenhouse. Mr. G. F. Scott-Elliott, M.A., B.Sc., is to give the sixth Masters' Lecture at the Royal Horticultural Hall on March 14, at 3 p.m., and his subject will be "The Origin of Varieties."

February in the North.—February this year, writes our Aberdeen correspondent, has been finer than usual. We have had very little snow or frost. Whether this is a good sign for the rest of the year is more than doubtful, if we are to believe some popular sayings. For example, "If Candlemas day be clear and fair, the half o' the winter's to come and mair." Little importance, however, can be attached to such sayings, for they are about as often wrong as right. For example, in 1868 we had a mild and dry February, yet the following summer was one of the warmest and driest ever experienced. We had the crops all in the cornyard by August 7, a very early finish. Again, in 1878, February was very dry and mild, and July was also fine, warm, and dry. In many other years also somewhat similar weather has occurred. In 1899, for instance, February was quiet and dry, with little snow but much frost, and the grain crop of that year was about the most productive ever reaped. For quality, that of 1898 excelled it, and nearly came up to it in quantity, but February in 1898 was stormy at times, although there was no heavy snow. The amount of rain and melted snow this year in February was 2.13 inches, which is just about the average quantity for that month during the last 40 years—the largest being 4.39 in February, 1876, and the smallest 0.35 in February 1891. As regards temperature, the average of the 43 years from 1867 to 1909 inclusive for February, as recorded at Aberdeen, is 38.32 degrees, the highest being 43.2 degrees in February, 1882, and the lowest (decidedly) 29.4 degrees in February, 1895, in which year July was fine and mild. Owing to the absence of any severe frost, turnips have been scarcely at all injured, and as they are rather an extra fine crop, they are more plentiful than usual at this season of the year, so that sheep farmers are getting them on easier terms than they generally do.

Conference on Dahlias.—As briefly announced in our issue of the 4th inst., a conference on dahlias will be held by the National Dahlia Society, at Carr's Restaurant, Strand, London, on Friday next, the 17th inst. Mr. Edward Mawley, V.M.H., president of the society, will occupy the chair, and will open the proceedings with a short address on Pompon Dahlias. Mr. Joseph Cheal will read a paper on the Cultivation and Usefulness of Single Dahlias, to which he has devoted much attention for some years past, and Mr. George Gordon, V.M.H., chairman of committee, will contribute a paper on Decorative Dahlias, with special reference to an early and abundant production of flowers. The conference will commence at 6 p.m., and all who are interested in dahlias, whether members of the society or not, are invited. There will be no charge for admission.

Gardeners' Company's Visit to Holland.—The Master and Wardens of the Worshipful Company of Gardeners, together with some members of the Court of the Company, propose to inspect the leading bulb farms of Holland from April 27 to May 1 of the present year.

Lawn Rolling on a Sunday.—At Chertsey, an employer recently gave his head gardener, through the housekeeper, an order to roll the tennis court on a Sunday morning; it appears that the order included the due preparation of the court on the Saturday, the previous day. The lawn was made ready on the Saturday, but the gardener refused to roll it on the Sunday, urging that this part of the order was unreasonable. The employer gave the gardener a fortnight's notice to leave, but the latter required a month's notice, or wages in lieu thereof. This was refused, and so the action of Reeves v. McLaren was heard before Judge Harrington at Chertsey, recently. His Honour gave judgment in favour of the gardener, Mr. T. Reeves, and observed that refusal to perform unnecessary work on Sunday could not be taken as an excuse for instant dismissal, therefore plaintiff was entitled to a month's wages.

Horticultural Club.—The next house dinner of the club will take place on Tuesday next, the 14th inst., at 6 p.m., at the Hotel Windsor, Victoria Street, S.W. Mr. A. D. Cotton (of the Herbarium, Royal Gardens, Kew), will give a lecture on "Fungi," and his lecture will be illustrated by lantern slides.

Presentation to Mr. F. C. Lawrence. — At a recent meeting of the Winchester Gardeners' Association the lecturer for the evening was Mr. F. C. Lawrence, lecturer in horticulture for the Hants County Council. As Mr. Lawrence is leaving Hants for Northampton occasion was taken of his presence at the Winchester Association to show how greatly his services have been appreciated. At the close of the meeting, Mr. W. H. Roberts, on behalf of the members, presented Mr. Lawrence with a beautiful horn-handled, gold-mounted partridge cane walking stick, the inscription on the massive gold band reading, "To Mr. F. C. Lawrence, from the Winchester Gardeners' Association, Feb. 21, 1911."

A New Genus of Orchids.—So great are the advances made in the hybridisation of orchids that new generic titles have to be created occasionally for use in the case of bigeneric or multigeneric hybrids. Odontioda, for hybrids between odontoglossum and cochlioda, we are all quite familiar with, and miltonioda, for hybrids between miltonia and cochlioda has been referred to on several occasions in these columns; but oncidioda is more recent and embraces hybrids between oncidium and cochlioda, while Vuylstekeara is the new and commemorative title now given to hybrids between miltonia and odontioda, and it will embrace all hybrids in which miltonia, odontoglossum, and cochlioda are concerned.

Presentation to Mr. R. M. Worden.—On the occasion of a recent meeting of the Chelmsford Gardeners' Association, held at the County Laboratories, Mr. R. M. Worden, who has proved an extremely capable secretary to the association, was presented with two very sensible presents, i.e., a handsome umbrella and a fine fountain pen—the former to guard him against storms, the latter suggestive of further service. At this meeting, Mr. Andrew Ireland, of Marks Tey, gave a lecture on "Vegetables," and there was an excellent display of forced bulbs.

Edgeworthia chrysantha at Leonardslee.—This interesting and rare shrub, from China and Japan, is generally described as a greenhouse plant, but under favourable conditions it not only survives, but flowers freely out of doors. In Sir Edmund Loder's garden at Leonardslee, Horsham, a specimen planted against a south wall is about three feet high, and is at present carrying a terminal cluster of flowers on almost every shoot. The flowers are small, somewhat like those of the daphne, yellow, and deliciously scented, Mr. W. A. Cook has kindly sent us one of the fragrant clusters. Grown in a greenhouse Edgeworthia chrysantha is said to be evergreen, but out of doors at Leonardslee it is deciduous.

The Codlin Moth (Carpocapsa pomonella) is one of the most destructive of the injurious insects with which the Canadian fruit growers have to contend, and causes, it is estimated, an annual loss in Ontario of about 2,000,000 dollars (one dollar equals 4s. 2d.). Strenuous efforts are being made by the Ontario Department of Agriculture to assist fruit growers in combating the moth, and the bulletin that has been prepared by Professor L. Cæsar, of the Department of Biology, should be a substantial help. Full information is given as to the life history of the Codlin moth, the methods of spraying, spraying machines, and the preparation of spray fluids. The information is throughout remarkable for its fulness of detail, and as it is based on work in the fruit plantations it is trustworthy. We have no knowledge of an English publication containing similar information.

Honour to Mr. Jackson T. Dawson.—Mr. Jackson T. Dawson, who has been associated with the fortunes of the Arnold Arboretum from before the régime of Prof. Sargent, and who has had so much to do with the practical side of affairs, was awarded the George Robert White gold medal a short time since by the Massachusetts Horticultural Society. The society honoured itself by honouring such a splendid worker in horticulture as

Jackson Dawson. The latter is of English birth, but has been in America since his boyhood.

Starlings in Orchards.—In a letter which appeared in a recent issue of the "Times," Mr. T. G. Rogers, of Simkins, Heathfield, Essex, strongly condemns the starling for its destructiveness in orchards and gardens. He writes: "My experience in West Essex, where I have resided thirty years, demonstrates that the starling has a record as a depredator of orchards second to no bird I have observed. I have, in the neighbourhood of Loughton, an orchard of choice pear, apple, plum, and greengage trees. The damage done by starlings, had I not watched and seen, I should have disbelieved. No artificial methods, such as scarecrows, kept these birds away. . . . The damage was worse than the destruction—that is of fruit eaten." We can fully confirm Mr. Rogers with regard to the damage starlings are capable of doing in orchards, and agree with him that their numbers should be kept within reasonable limits. Not only will starlings do much damage in orchards, but they will crowd into gardens during the fruit season and do serious injury to the crop. Last summer we had our attention called to several apple trees bearing good crops that had the principal part of the fruit damaged by these birds. In some districts blackbirds are hardly less destructive to apples when nearly full grown, and they show a nice discrimination in the selection of varieties. They invariably select the best-flavoured varieties of apples first, and when supplies of these are cut off they take the next best, and so on. Appreciating the importance of birds in the economy of Nature, and also their manifold uses, we are strongly opposed to their wholesale destruction, but those kinds known to be capable of inflicting heavy losses to cultivators should have such limitation imposed upon their rate of increase as to prevent excessive multiplication.

The North of England Horticultural Society will hold its first meeting, exhibition, and lecture in the Emmanuel Hall, Leeds, near the University, on Wednesday, March 22. The several committees will meet at 11 a.m., and the Council at 12 o'clock; the show will open at 1 o'clock, and the lecture begin at 6.30 p.m. The lecturer on this occasion is Dr. Russell, of Rothamsted, and his subject is "Soil Sterilisation." The council has decided to grant medals according to merit to the exhibits; the gold-medal standard is to be equal to that of the Royal Horticultural Society. There are to be both large and small medals in gold, silver-gilt, silver and bronze, and for novelties there will be three grades of the Northern Diploma, i.e. Mark I., Mark II., and Mark III. The society will issue a monthly magazine, and hopes to send out the first number soon after the meeting of March 22; in addition to reports of the society's meetings, lectures, etc., the magazine will contain monthly reviews of all weekly horticultural papers.

A Garden for the B.G.A.—A brisk discussion has been carried on for some time in the "Journal" of the British Gardeners' Association concerning the advisability or otherwise of starting a large association garden. The suggestions for the conduct of such a garden have been many and various, but one of the best is that from Mr. Alex. Dean, V.M.H., who writes: Obviously there is no room whatever to create a nursery garden as that special part of horticultural work is far too crowded now. Still further, to enter into competition with the nursery and seed trade would be to kill much of the best support the B.G.A. now secures. Assuming the primary object of a garden to be to provide out of work members with employment, which of course is good, and still further to conduct it on the best practical market lines that it may be to all who work in it a great instructor, and that is good also; then the only course is to embark in purely market work, allied with intensive culture so far as that can be made profitable. But to start a garden of this kind with any prospect of success not less than £5,000 capital would be needed. That needs some getting. Even then how much success would have to depend on really capable management.

AMONG THE ROSES.

Looking at our roses at the end of February, I am agreeably surprised at the way they have come through the winter so far. The majority of buds upon both dwarf and standards look plump and promising. The varied way in which these come through the winter is often surprising. During a wet winter we find buds upon dwarf stocks do not escape so freely as those upon standard briars, while a very dry and cold winter seems to have more effect upon standards. It is the same in my experience whether they are budded stocks of the previous season or established plants, a dry and keen wind doing more harm to standards than dwarfs when accompanied by frost.

I was gratified to find the bulk of the rose wood that I tried the knife upon looking so sound, and the pith clear. Of course, there are, as usual, some varieties more affected than others, our worst being Enchantress and Mrs. Edward Mawley, two grand roses that have frequently disappointed me in their winter behaviour. Others more affected than the majority are Alfred K. Williams, Lady Moyra Beauclerc, Bridesmaid, Perle des Jardins, Ernest Metz, Innocente Pirola, Liberty (always dying back with us), and Comtesse de Nadaillac.

I am surprised to find the frost has cut Madame Abel Chatenay so much, especially upon the standards. On the other hand, George C. Waud is sound, which was far from the case last spring. Claire Jacquier and Climbing Perle des Jardins are rather hard hit, but these are always tender here; American Pillar still carries its foliage, and is, I think, the most nearly an evergreen rose we have at present, and almost worth growing as a hedge for that reason, especially as it gives a beautiful summer and autumn display, followed by deep scarlet hips.

Roses grafted as advised in the issue of the Gardeners' Magazine for November 5 of last year are looking very well, and the most forward have been put into larger pots. Of course, grafting has been more or less continuous up to quite recently, and although those worked early, and now taken out of the case to harden, will enjoy a little sun, much sun should not reach the younger plants for a time, especially towards midday. A gentle syringing helps them much, but should never be given until the plants are out of the case. We leave our last batch in the cases, removing the glass entirely, which is practically the same thing as taking them out. The bulk of the plants will want potting as opportunities occur and the plants progress. I do not like to have roses root bound in such a tiny space, and so shift them on sooner than most folks, believing in a much freer run for the young roots than can possibly be the case otherwise.

Rosarian.

R.H.S. EXAMINATION OF EMPLOYEES IN PUBLIC PARKS.

The following report of this examination has been issued:

The Royal Horticultural Society's sixth examination of employees in public parks was held on January 16, 1911.

As previously, the examination was partly vivâ voce and partly written, occupying three hours and twenty minutes. It was held at the society's hall in Vincent Square, Westminster.

Sixty-eight candidates entered, and of these 16 secured places in the first class, 31 in the second, and 15 in the third, leaving five candidates who failed to satisfy the minimum requirements of the examiners, and one who was absent. The majority of the London parks employees have now obtained passes in this examination, hence the smaller number of the entrances this year.

It is hoped to organise another examination in 1912, not only in Westminster, but in some of the most central towns of the provinces, and the secretary of the society would be glad to hear as early as possible from those public authorities who would like their gardeners to sit for it.

The written papers show this year a greater familiarity with trees and shrubs than formerly. The more general use of the botanical names and terms was most gratifying, indicating as true what has for so long been contended, viz., that it is equally easy to learn and remember the botanical name if its origin and meaning is understood.

Question 3 revealed a very great lack of knowledge of the more recently improved varieties of lilac, spiræa, deutzia, and philadelphus, and coupling this fact with the frequent excuse of candidates that, being stationed in one park only, they have no facility for extending their knowledge, public park gardeners are urged to take every possible opportunity of visiting other public and private gardens, and of studying closely the weekly gardening periodicals. It may even be possible—and it is certainly very desirable—for the local authorities to cause men, who are anxious to extend their knowledge and experience, to work for definite terms of, say, three months in different gardens, according to an arranged cycle. The stimulus of the sight of the new plants and shrubs, and conditions of environment of the varied gardens, added to the encouragement such a procedure would give, must have highly beneficial results.

The questions on manures were fairly well answered, but their nature, and the principles underlying the use of each, are insufficiently understood. Something more definite than the mere mention of a name is wanted. The different characteristics of different manures; their particular and specific uses; their origin and composition; the most practical methods and best times of applying them to the soil, and their relative cost, should be familiarised.

Question 12 was set to test candidates' powers of observation, and to enable them to describe the habits of tree life that come under their notice every day; but the answers were disappointing—even the term "habit of growth" being, in some cases, either not known or not understood. Gardeners must learn the art of seeing, that is of observing, if they would be something more than mere rule-of-thumb tillers of the ground. Again, some candidates confused evergreens, firs, and pines with decidous trees when they were asked to illustrate the latter by common examples.

Most of the examples in freehand drawing of sketches of flower-beds were very poor in execution, and greatly lacking in fertility of thought and ideas. The need for the sense of design has been frequently urged in the reports of previous examinations.

The arithmetic in Questions 13 and 14 was simply deplorable; indeed, in the latter, no two answers agreed!

Candidates are strongly recommended to take the list of questions set on January 16, and work them out at home with the aid of their text-books, committing well to memory facts unknown to them. The object of the examiners, remember, is not to find fault, but to help the candidates to discover their own deficiencies, and to suggest how they may best supply them.

In the vivâ voce questions the candidates on the whole acquitted themselves very well. The questions asked are entirely confined to those matters of which a knowledge is absolutely indispensable to the successful working and management of public parks and town gardens. They are mostly of a simple and practical character, so that any observant worker with a few years' experience behind him should have no difficulty in answering them quite satisfactorily. The candidates were particularly weak on the point of identifying trees and shrubs from specimen twigs—although each specimen represented widely divergent "habits of growth," and quite distinctive features assisting recognition.

So many gardeners having now successfully passed this parks examination, the secretary of the Royal Horticultural Society recommends to them the higher "general examination," which is held annually in April. Do any gardeners regret their successes in the parks employees examination? Has not the result to themselves, mentally, intellectually, and practically, proved fully, and more than fully, "worth the while"? worth the time and effort devoted to secure a pass—not so much as a step to promotion in wages, but rather for the pleasure and happiness resulting from a better understanding of the subjects of their daily care.

Surely the answer cannot be anything but "Yes"; and, therefore, they are asked not to be contented with the progress which they have thus far achieved, but to press on to higher ability and honours, and to that greater knowledge which success in the "General examination" implies.

At the same time it is hoped that all candidates low in the list will not be disheartened, but encouraged, by the greater success of their fellows to work on to higher places next year. With so encouraging a report as only five actual failures there is every hope for those who have only won a third class to work up to the second, and the seconds up to the first class. And with patient endeavour and careful observation, coupled with intelligent inquiry into the reasons and causes for what is done and observed during the coming season, much progress should be made and useful knowledge stored up in readiness not only for the next examination, in January, 1912, but to be put into practice during the whole life's work.

It should perhaps be put on record that there is absolutely no difference of merit whatsoever in being placed in Division A or in Division B. A first class in one is as good as a first class in the other. The two divisions are only kept up for the convenience of certain public authorities.

C. R. Fielder,
Owen Thomas,
John W. Odell,
W. Crump,
Edward White,
E. Beckett,
W. Wilks.
Examiners.

DIVISION A.—Class I.

1. W. H. Thomas, Wandsworth Common.
2. Stephen Watson, Lewisham.
3. J. Hurley, Deptford.

Class II.

1. G. Hodsdon, Brockley.
2. J. Chapman, Brockley.

DIVISION B.—Class I.

1. H. W. Hotten, South Hackney.
2. E. C. Moody, Kennington Park.
3. A. Chipperfield, Rotherhithe.
4. E. A. Duley, Cardiff.
5. R. A. Dummer, Kew.
6. J. Wigg, East Dulwich.
7. G. Baker, South Tottenham.
8. W. H. Radley, Mount Pleasant Lane, N.E.
9. H. Spashett, Battersea.
10. C. E. Lewis, Lewisham.
11. E. Saunders, Sunbury.
12. E. W. Vince, Hither Green, S.E.
13. Ernest Hickford, Highgate Hill.

Class II.

1. C. H. Harris, Kew, and W. G. Knight, East Ham.
3. W. M. Salway, Highgate.
4. R. F. Maythorn, South Hackney.
5. R. Smith, Stoke Newington.
6. F. Longmire, Clapham Common, and E. Staples, Charlton.
8. J. Jepps, Upper Holloway, N.
9. A. Morley, Hackney.
10. H. E. Mitchell, Brixton.
11. C. A. Turner, Enfield.
12. P. J. Thomas, South Hackney.
13. G. Hill, Dulwich; W. J. C. Kemp, East Dulwich; and F. Williams, Lambeth.
16. A. H. J. White, Richmond.
17. G. T. Joiner, South Tottenham, N.
18. W. Power, Victoria Park, N.E.
19. W. Atkey, Finsbury Park, N.
20. A. E. Baggs, Kew, and W. H. Ricketts, Forest Hill.
22. F. C. Love, Merton, and R. W. Boyle, Streatham.
24. R. T. Pike, Camberwell.
25. J. Crombie, Chelsea, and J. Pepper, Battersea.
27. G. T. Wiltshire, Homerton, and W. Good, St. Albans.
29. C. R. Y. Peck, Rotherhithe.

CHARD NURSERIES.

Frequenters of the leading flower shows in various parts of England are familiar with the extremely beautiful centaureas, or sweet sultans, so well grown and extensively shown by Messrs. Jarman and Co., The Nurseries, Chard, Somerset. Often, too, this firm also exhibits zonal pelargoniums, border and perpetual carnations, roses, and hardy perennials, whilst the daintily pretty sweet pea Mrs. Townsend has, during the past season or two, won its way to the hearts of lovers of sweet peas. It was, therefore, full of expectation of finding an establishment of general interest and great excellence that I travelled to the quiet but flourishing town of Chard, towards the end of last summer, on a visit to the nurseries from which so many fine exhibits had been sent to the shows, and it is pleasant to record that my expectations were fully realised.

It was a glorious day, one of the few that merited such adjective during the summer of 1910, and the thought continually recurred to my mind that the employees in these nurseries, situated in so beautiful and peaceful a spot, enjoyed a life far more pleasant than that of the London worker, or, for the matter of that, any City man. It must certainly be a pleasure to grow nursery stock at Chard, the soil, as well as the situation and climate, being most favourable to high development.

The home nursery had scarcely been entered when long rows of sweet pea Mrs. Townsend, some distance away, arrested attention. They were very conspicuous by reason of the fact that the plants had attained a height of nine feet or more, and stood head and shoulders above the other varieties. Before coming to the sweet peas, however, I was attracted by a great "break" of standard apple trees, that were four years old, and certainly one of the finest and most useful breadths of trees it has been my pleasure to see on any nursery. They included excellent trees of Cox's Orange, King of Pippins, Peasgood's Nonsuch, and many other of the finest dessert and culinary varieties. A plan adopted here, and with evident success, is to mulch the ground between the rows with loose branches of furze, etc., the result being that the top soil remains moist during summer, and the roots of the trees are kept quite close to the surface. Trained fruit trees are also a feature, plums, pears, and apples all being exceptionally well grown.

Conifers in variety, and ornamental shrubs of varying character, occupy a considerable area, and the different shades of green afford a pleasing contrast to the blaze of brilliant colours in the great collection of dahlias growing near by. No useful purpose would be served by enumerating the varieties of these and other popular florists' flowers that are grown at Chard; it is sufficient to say that the collections are representative of the best of both standard and new varieties in the several sections. On either side of the main entrance show borders were making a bold display at the time of my visit, with brilliant salvias, golden calceolarias, violas, and other suitable subjects, the valuable Wichuraiana rose Dorothy Perkins, growing vigorously and blooming profusely in the background, and producing a delightful display of colour.

Naturally, I was anxious to see the renowned sweet sultans growing "at home," and the long beds were wondrously attractive. The amount of bloom each plant produces in the course of the season must be prodigious, for, notwithstanding the fact that immense quantities of flowers used at the shows at which Messrs. Jarman and Co. had exhibited had been cut from the same beds, there were, at the time of my visit, shoals of the lovely blossoms in each of the varieties, and any amount of buds still to open.

In the range of glass-houses zonal pelargoniums were the leading feature, but there were also fine batches of Marechal Niel, W. A. Richardson, and other roses in pots, perpetual carnations, and double white primulas also being largely grown. Messrs. Jarman and Co. do a large trade in floral designs, and such useful subjects as stephanotis, Niphetos rose, chrysanthemums, and other subjects of value for the supply of cut flowers are largely grown. In an ingeniously constructed orchard house were heavily laden trees of Coronation and Lady Sudeley apples, with trained peaches at the back.

At the Devonia Nursery, situated some distance from the town, on a hill 600 feet above sea level, the bulk of the roses are grown, and healthy vigorous plants they were; Lyon Rose, Dean Hole, Frau Karl Druschki, and, in fact, the best varieties of all classes, are grown, those which have attained foremost positions, either as exhibition or garden roses, being most in evidence. Rhea Reid has done exceptionally well at Chard, and Betty is also very free.

Gooseberries and currants, especially the black variety Boskoop Giant, are largely and well grown, and of privet tremendous quantities are annually propagated to keep pace with the constantly increasing demand for this useful hedging plant.

Rest and refreshment at the residence of Mr. Townsend, the genial head of the firm, were very welcome after the tour of the two nurseries, and time sped rapidly as we chatted over the many successes of the firm, and the writer learned of the extent of the great seed business that is an important branch of this very comprehensive establishment. The vegetable seed department is, it need hardly be said, thoroughly up-to-date, and the operations of the farm seed department are of an extensive character.

Visitor.

Pink-flowered Freesias.—Since the advent of Freesia Armstrongi, with blossoms of a rosy-lavender tint, we have had several hybrids raised between this and some of the other kinds. In some the flowers are more or less pink, while rose-lilac and lavender tints also occur amongst them. None of these are the equal of F. refracta in fragrance, but they are not quite scentless. They are very pretty, in some cases quite delicately tinted, and afford a pleasing variety from the whites and yellows which go to make up the better-known forms of freesia. Varieties showing the influence of F. Arsmtrongi are Dainty Maid, silvery-pink with a golden centre; Rose Queen, carmine rose; Tubergeni, rose-lilac, light throat; and Amethyst, soft mauve, marked in the throat with yellow.—W. T.

ROCK GARDEN PLANTS FROM SEED.

To maintain a rockery in a well-furnished condition it is always necessary to have a good stock of plants at hand to replace failures and fill up blank spaces, which are bound to occur. Our climate, although very conducive to the growth of the majority of plants suitable for the rock garden during spring, summer, and early autumn, is too damp through the winter and late autumn, consequently many choice subjects succumb to the unnatural conditions.

There are two ways of raising and maintaining a supply, one from seed, the other from cuttings. Of course, when one wants a true stock of any particular variety in most cases it is necessary to propagate by cuttings, which, with many plants, is a very difficult matter. There are, however, large numbers easily grown from seeds, and if sown in April, and carefully attended to, will make good flowering plants for putting out the following spring. All the dianthus family are easy to cultivate, and some beautiful varieties are often obtained, especially of the superbus and sylvestris types. Campanulas, again, lend themselves wonderfully well to this method of propagation, notably C. carpatica, C. fragilis, C. barbata, C. rhomboidalis, C. pusilla, C. muralis, C. pulla, and C. turbinata.

Leontopodium alpinum, the much-sought-after edelweiss, will need two seasons in which to make a good-sized flowering plant, yet it is easily grown from seeds. Aubrietia, erinus, alyssum, arabis, various saxifragas, iberis, cheiranthus, draba, linaria, arenaria, æthionema, œnothera, alpine and Iceland poppies, and many others, can all be easily raised. Some are slower growing than others, and take longer to make suitable material for planting out, but all are of fairly quick germination.

Seeds should be sown in April, in pots, placing them in a cold frame, and covering the pots with paper to prevent too rapid evaporation. When the seedlings are large enough to handle they should be transplanted into boxes, and after they have attained a suitable size be potted. It is much safer to winter them in cold frames, not so much for protection against the frosts, as against wet. Full exposure should be afforded during dry weather, and no coddling must be permitted.

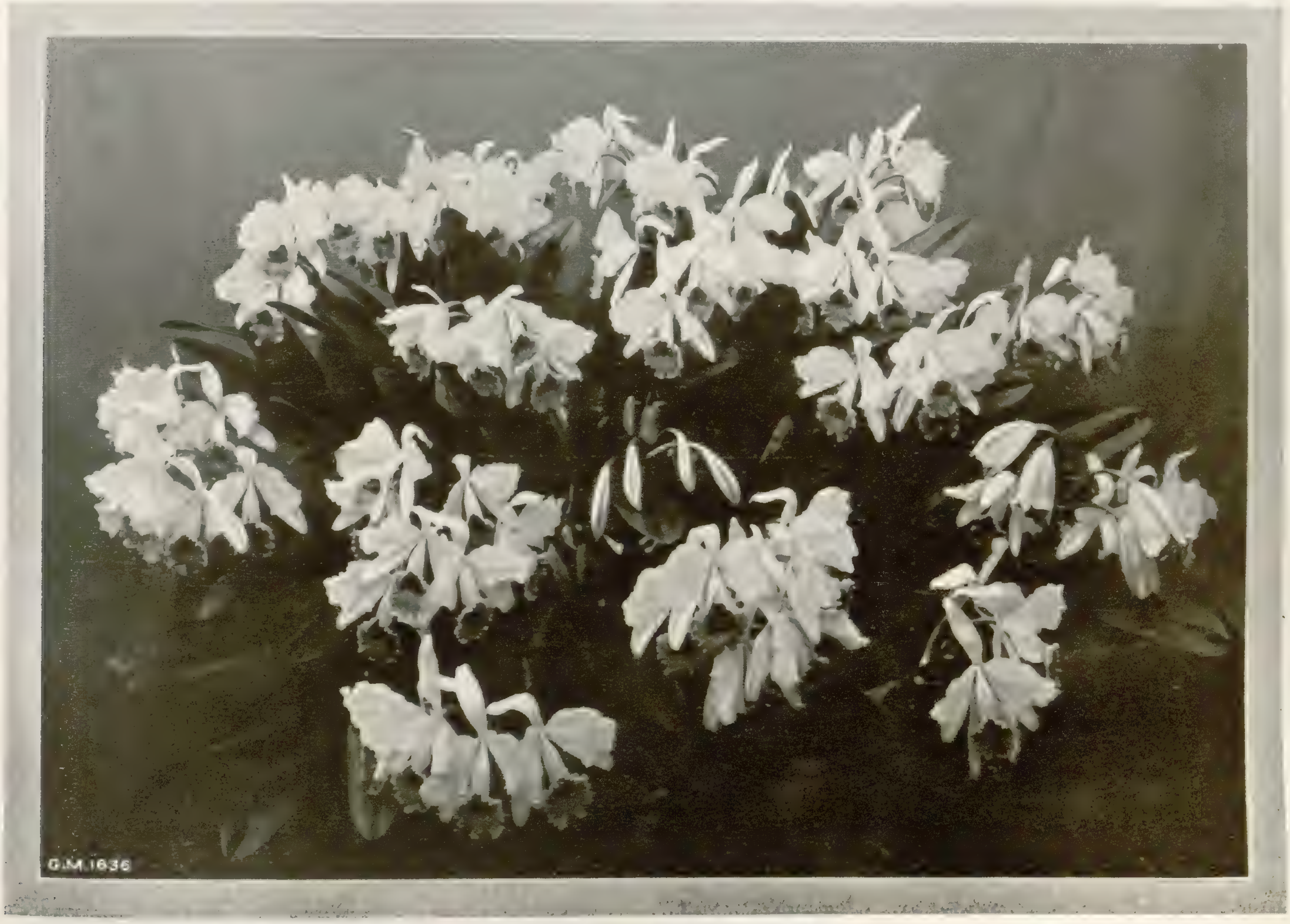
Hardy primulas will require a little more care than the plants already mentioned, as the seeds of many kinds will sometimes remain dormant in the seed pots for a year. When seeds can be saved from one's own plants it should be sown immediately it is ripe, for, as a rule, the newer the seed the quicker the germination. A cold frame in a shady corner is the most suitable place to raise the seedlings in, and the soil must not be allowed to dry. Such species as P. japonica, P. pulverulenta, P. Cockburniana, and P. rosea will reproduce themselves naturally from self-sown seeds, yet it is not wise to leave their perpetuation entirely to chance. Ramondia, androsace, soldanella, and the gentians are all readily grown from seeds, but a longer period of growth is necessary before flowering size is attained.

This work is extremely interesting, and also profitable, when one has a large rock garden to keep in order. A few hundreds of plants go a very little way when planting.

E. C. Pooley.

A FINE SPECIMEN CATTLEYA

It is a fortunate matter that in a few, though very few, collections of orchids, some attempt is made to show what wonderful specimens can be produced if skill and accommodation go hand in hand. Nearly everyone who grows orchids nowadays seems bent on cutting up their plants into the smallest examples, whereas years ago—when Mr. Wm. Marshall, V.M.H., was growing and showing orchids, for instance—the aim was to grow and exhibit specimen plants as large and as freely flowered as possible. There is no lack of cultural skill nowadays, but there does seem to be a lack of pluck on the part of owners and growers. However, for the few who can and do grow fine specimens there is the more praise and glory to-day Lieut.-Colonel Sir George Holford and his able grower, Mr. H. Alexander, have shown time and again that the Westonbirt collection is not only rich in species, varieties, and hybrids, but is rich in grandly grown specimen plants. One superb example is figured in the present issue, and the illustration represents Cattleya Trianæ Hydra, a charming variety with a very rich purple apex to the lip. In 1904 the plant had only three "leads" or growing points, but so skilfully was it managed that on February 14 last, when exhibited at the meeting of the Royal Horticultural Society, it carried no fewer than twenty-two spikes, and a total of ninety-six flowers. It need hardly be added that the Orchid Committee granted a Cultural Commendation as a testimony to Mr. Alexander's skill.



CATTLEYA TRIANÆ HYDRA.
A magnificent specimen orchid, with twenty-two spikes and ninety-six flowers; exhibited by Lieut.-Colonel Sir George Holford (grower, Mr. H. Alexander), Westonbirt, Tetbury, Gloucester.

RAISING TOMATO PLANTS FOR OUTDOOR CULTURE.

It is generally held that plants which are eventually intended to be grown outside should not be raised in too much heat, and most of us have had experience of putting out plants in the open that have been brought on rapidly in a brisk temperature, of being disappointed by their subsequent lack of vigour. Though the tomato is of such a rampant habit that it will generally grow well eventually, no matter how much heat may have been used in the early stages of growth, such plants rarely set much fruit from the first couple of trusses of blossom, a loss for which no later fruitfulness can make up.

The tomato is a tropical plant, and in its earlier stages of growth has its constitution ruined for life by being subjected to a temperature as low as 34 or 35 degrees, though in the autumn it will often stand a degree or two of frost. Hence, unless one has some artificial heat for raising the seedlings there is great risk in a normal season of some one cold night reducing the temperature of the house or frame even below this point, to say nothing of that series of cold days and nights we often get as late as May. Failing a house where the temperature does not fall below 40 degrees, a hotbed is as good a place as can be wished for. Supposing this to be made up in the latter part of February, the seed should be sown in early March, in a pan, and a careful watch kept to avoid the risk of loss of seed or seedlings through overheating during the first two or three weeks. Set the seed pan upon an inverted pan or pot, and give air if there seems any danger. Afterwards, by covering up the frame at night, the temperature will rarely fall below 40 degrees in a normal season.

When the seedlings have their third leaf well developed they should be pricked out into thumb pots, inserting them more deeply than they were in the seed pan. If they show any sign of damping off before this stage they should be pricked out at once into light, sandy soil. When they have become moderately well rooted in these little pots, as they should be in ten days or a fortnight, they will be ready for shifting into 60-sized pots, the potting compost consisting of maiden loam to which has been added some bonemeal or basic slag. It is important that the soil in which the plants are grown, even at this early stage, should be rich in phosphates, as this promotes the development of a sturdy, short-jointed growth, which is favourable to fruitfulness rather than leaf and stem. Though we do not want to encourage unduly vigorous growth, we want to have well-rooted plants. If the plant before being turned out of the thumb pot is examined carefully, there will probably be noticed just below the seed leaves small white spots resembling minute pimples; these are the beginning, or growing points, of new roots, and when the plant is put into a larger pot it should be buried right up to the seed leaves, and then these embryo roots will push out into the surface soil like cucumber roots, and add strength to the plants. When the young tomatoes are shifted into 48 or 32-sized pots they should be potted firmly, using a rammer, firmness being scarcely second to an abundance of phosphates in conducing to fruitfulness. They should not be set so closely together in the frame, or house, that the lower leaves suffer from want of light and air, or even so that the plants are in the least degree drawn up.

Soon after being shifted into 32-sized pots the tomatoes will probably be too tall for the frame, and it is not easy to sink the pots to any extent in a hotbed, even if it were advisable. They must then be put in a cold frame, where the pots can be sunk in the ashes, or in a house to harden off, choosing genial weather for the change if possible, and this is rather an important point. When they have to be taken out of this frame they should have three or four days' shelter from both sun and wind, in order to harden their tissues, placing them under cover on a cold night. At this stage the plants should be stout in stem, with dark foliage, the roots showing both at the top and the bottom of the pot, and after they are planted out even a degree of frost will not seriously harm them.

Alger Petts.

ROMNEYA TRICHOCALYX.
Flowers pure white, with a cluster of rich yellow stamens in the centre.

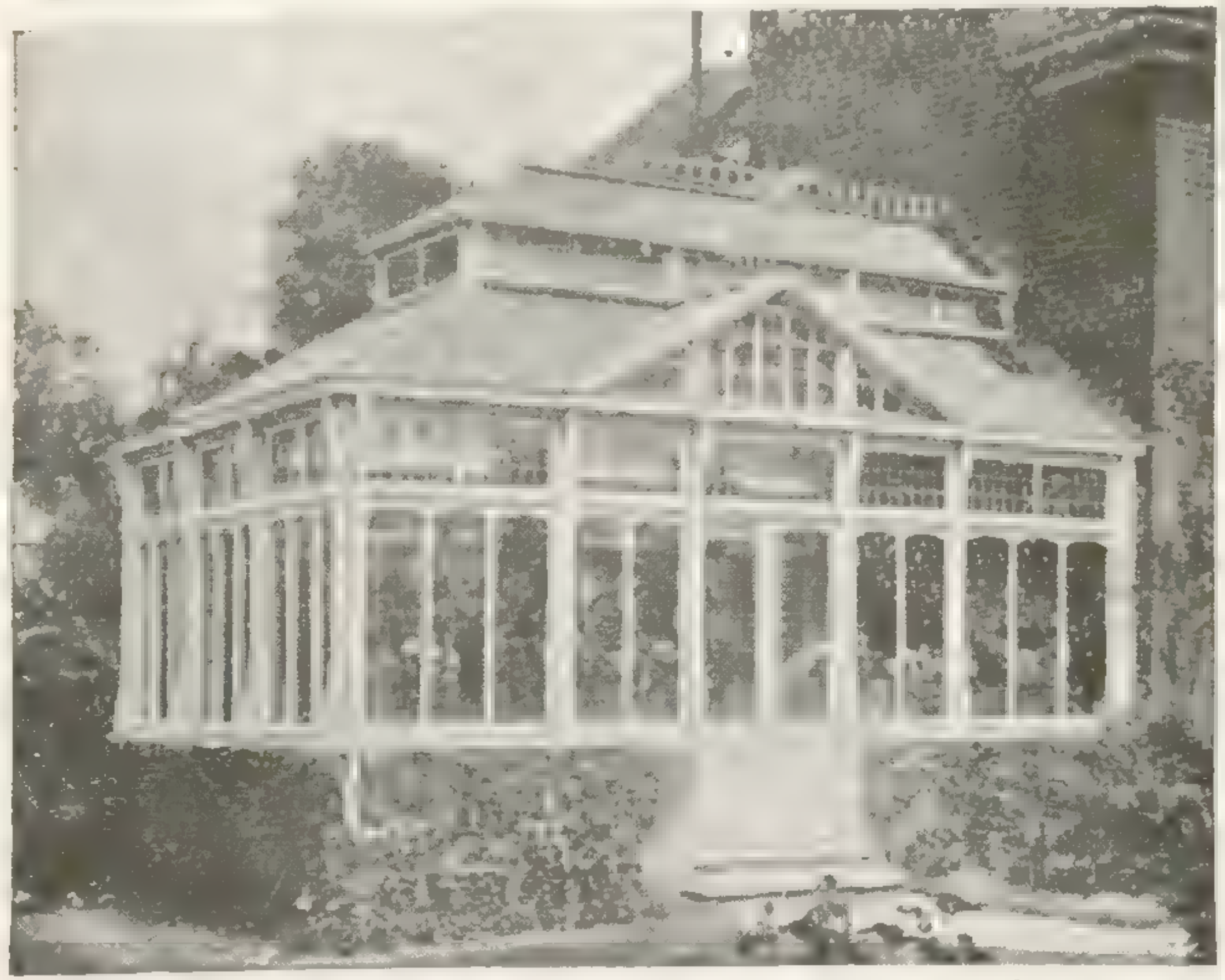
ROMNEYA TRICHOCALYX.

A native of California, this species delights in all the sun it is possible to obtain in this country. It is a near ally of the well-known Californian Tree Poppy (Romneya Coulteri), and on account of a general similarity to that plant has been confused with it. It differs, however, in a marked degree in the calyx, which is oval in shape and covered with a mass of hairs, while in R. Coulteri the calyx is glaucous, devoid of hairs, and each lobe is tipped with a short, spreading awl. The habit of R. trichocalyx is more slender, and the flowers are produced more freely. These latter are usually four to five inches in diameter, occasionally as much as six inches, and are pure white, with delicate crimped edges and with a large cluster of rich yellow stamens in the centre. The foliage is decidedly handsome, and is of a lovely silvery grey colour, in fact, it is well worth growing in any garden as a foliage plant. Whilst in many gardens there is room for both species, if space is limited the new comer is to be preferred on account of its greater display of flowers. The romneyas are notoriously difficult plants to propagate from cuttings, but I have succeeded in doing so with pieces of the short jointed thin stems taken off in autumn and placed in sand under a bell-glass in mild heat. The usual method adopted for increasing them is by cutting up the thicker roots into pieces about three inches long and treating them exactly as cuttings. Adventitious buds are soon formed and they quickly make serviceable plants. Seeds are occasionally produced, but the seedlings are slow of growth in the early stages, and require careful handling, as they damp off very quickly with the least excess of moisture.

C. P. Raffill.

BOULTON & PAUL, LTD., HORTICULTURAL BUILDERS, Norwich.

EFFECTIVE, PRACTICAL CONSERVATORIES.

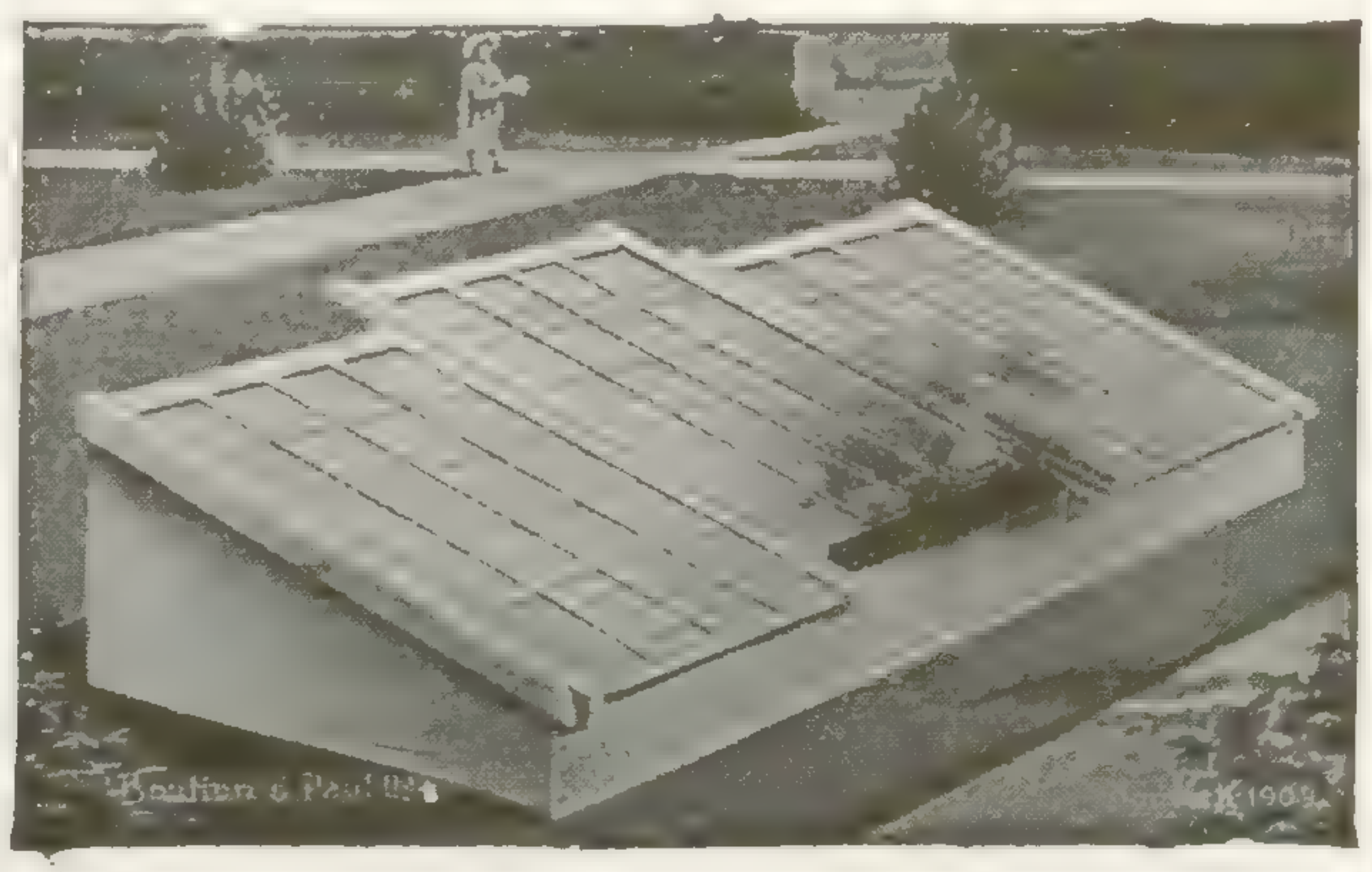


Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of **40**/- value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.

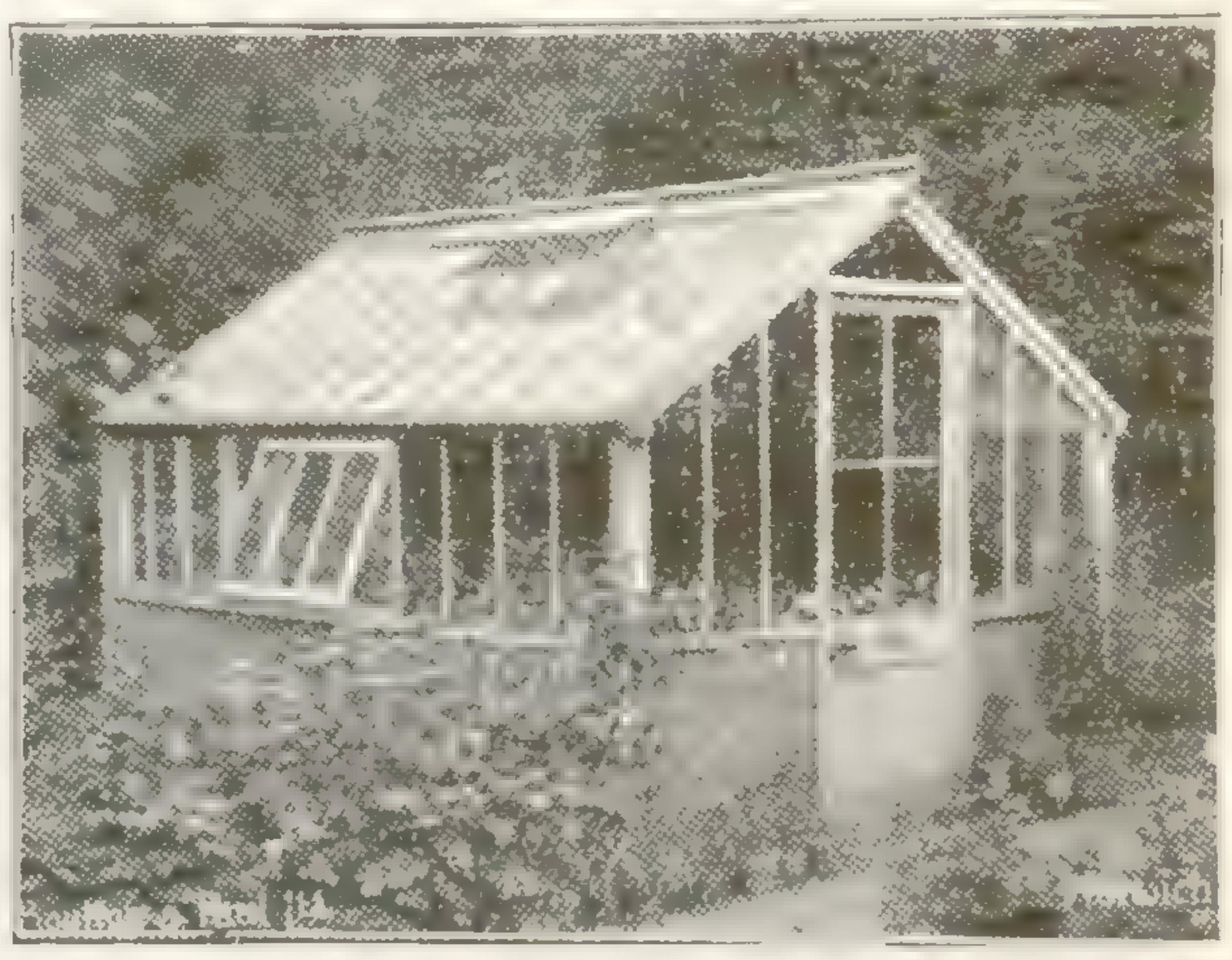


4ft. by 6ft. ... £2 0 0 | 8ft. by 6ft. ... 3 0 0
Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft. Similar to No. 75, with Two Lights... **35/-**

SEND FOR ILLUSTRATED CATALOGUES.

Every part of these Houses is thoroughly well made, painted three coats. **GLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.**



No. 49A.—Span, 10ft. by 8ft. £11 10 0
No. 47A.—Lean-to, 10ft. by 7ft. £9 10 0
All parts are numbered ready for easy re-erection by any handy man.

PRIMULA OBCONICA GIGANTEA GRANDIFLORA.

The most beautiful Free and Hardy Perpetual Greenhouse Plant grown.

ONCE IN FLOWER ALWAYS IN FLOWER.

We are NOTED for having the most — SUPERB Strain in commerce. —

SEED.

Mixed colours, also Compacta and Fimbriata, mixed, 1s. per packet; separate colours of Purple, Rose, Lilac, Deep Red, Crimson Scarlet, Pale Lilac, and Crimson (fringed petals), **2s. per packet; double flowering, including Pale Mauve and Rose, 2s. per packet. Instructions as to sowing with each packet.**

PLANTS, 3s., 5s., 7s. 6d., 10s. 6d., and 15s. per doz., according to size.

W. A., Esq., Reigate, Surrey, writes:—
I had a packet of seed from you last year, and am pleased to inform you that I have blooms measuring two inches and more across each individual flower. They are the best strain I have ever seen, both for variety of colours, and substance of bloom.

WM. ARTINDALE & SON,
Nether Green Nursery,
SHEFFIELD.

For 3 penny stamps we will send you our Catalogue of Plants, which is not merely a price list, but literature which gives all the cultural notes of plants therein mentioned. We have received hundreds of testimonials commenting on the value of this book.

OUR SEED CATALOGUE WILL BE SENT FREE ON APPLICATION.

ORCHIDS.

Amateurs interested in Orchids should write for our

Amateur's Guide,
2nd Edition, free.
Giving Treatment, Soils, Description of Flowers; Illustrated.

MANSELL & HATCHER, Ltd.,
Rawdon, Yorkshire.

ORCHIDS, ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.
STOVE AND GREENHOUSE PLANTS OF ALL KINDS.
Please Write for List.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

DICKSONS
SELECT & MOST RELIABLE
VEGETABLE & FLOWER SEEDS,
SEED POTATOES
GARDENING TOOLS &
CARRIAGE PAID.
CATALOGUE POST FREE.
ROYAL SEED WAREHOUSE & NURSERIES
CHESTER.

CHEALS'
113 Acres of Ornamental
Trees & Shrubs
Of all kinds.
Fruit Trees
Hardy, Healthy, and true to name.
Roses & Hardy Plants

Descriptive Catalogues Free.

J. CHEAL & SONS,
NURSERYMEN AND LANDSCAPE GARDENERS,
Crawley, Sussex.

CABBAGE PLANTS, extra strong, Ellams, Mein's, Offenham, First and Best, Enfield, Battersea, 3s. 1,000, 12s. 6d. 5,000 lots; Drumheads, 2s. 6d.; Red Cabbage, Cos Lettuce, Tripoli Onion, 4s. 1,000, on rail; or 1s. 100, post free. List free. C HIGHT, Cranleigh, Surrey.

RIVERS'

Fruit Trees, Roses, Vines, Figs, Oranges, AND Orchard House Trees.

A LARGE AND SELECT STOCK ALWAYS ON VIEW.

Illustrated & Descriptive Catalogue POST FREE 3d.

THOMAS RIVERS & SON
Sawbridgeworth, Herts.
Station: HARLOW, G.E.R.

.. A ..
GREAT FLORAL NOVELTY.
GERBERA HYBRIDS
(Dr. Jameson).

A most attractive table decoration, a flower of exquisite colouring and great variety of shades, from snow white, yellow, salmon, vermilion to crimson, purple, scarlet, and many other beautiful tints, with long stalks from 12in. to 25in. Very effective for wreaths.

Seeds, plants, and cut flowers for sale. Payment on delivery.

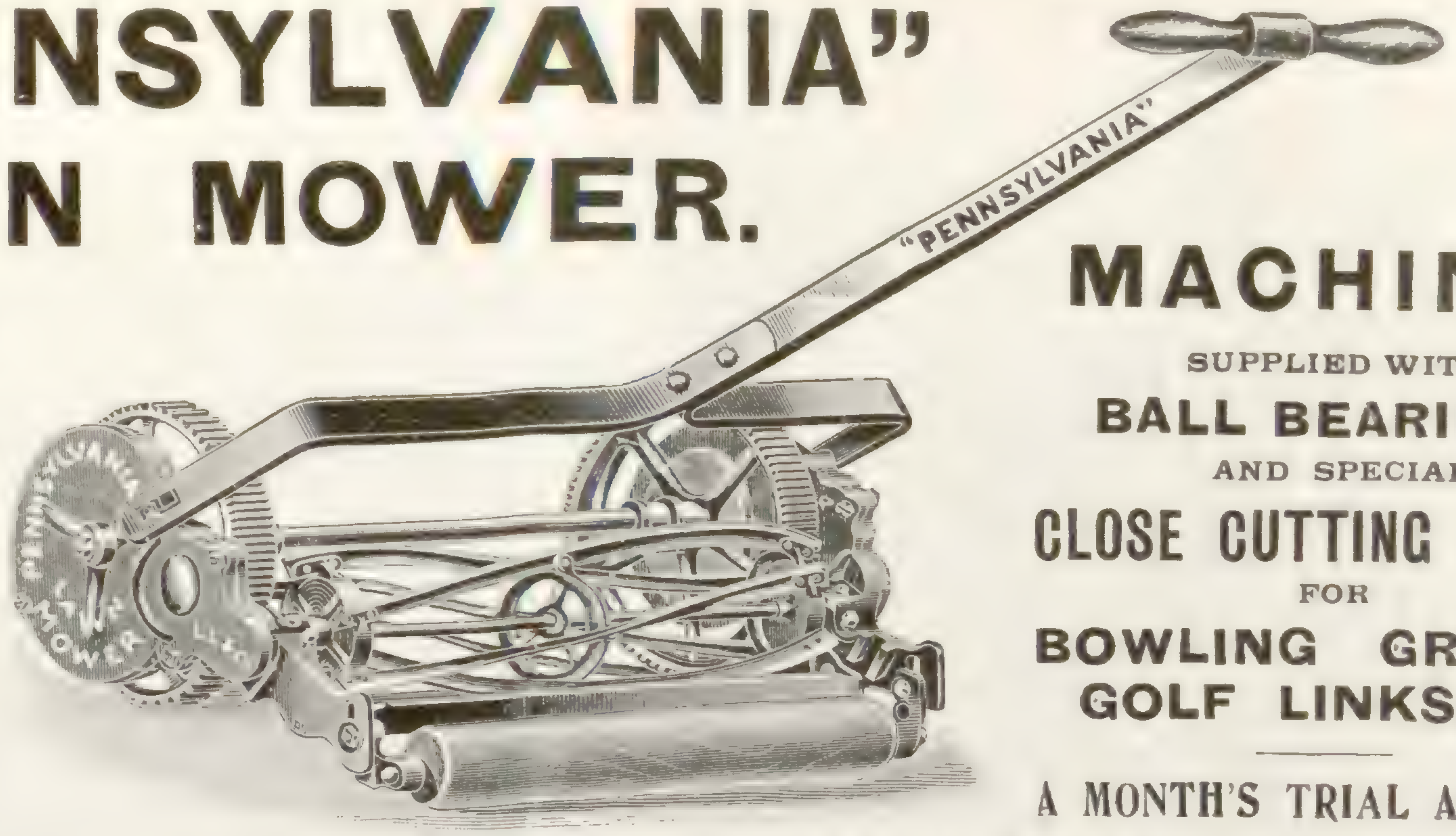
For Terms apply to

Etablissements Horticoles Du Littoral,
CAP d'ANTIBES
(Alpes-Maritimes)
FRANCE.

Lettres et Telegrammes:
Villa Joyeuse, Antibes.

RHUBARB ROOTS.
DAWES CHALLENGE has obtained **seven medals and awards.** Price list and cultural directions free. Sample bunch gratis with **10/-** orders. Apply direct. **Champion Rhubarb Grower, Syderstone Nurseries, Norfolk.**

The "PENNSYLVANIA" LAWN MOWER.



SPECIAL NOTICE.

With this Machine a Lawn can be Mown ONCE A DAY with scarcely more expenditure of time and labour than ONCE A WEEK with the ordinary heavy English Machines.

MACHINES
SUPPLIED WITH
BALL BEARINGS,
AND SPECIAL
CLOSE CUTTING KNIVES
FOR
BOWLING GREENS, GOLF LINKS, &c.

A MONTH'S TRIAL ALLOWED.

Price Lists and Testimonials from—
LLOYD, LAWRENCE & CO. (Dept. C.), 29, WORSHIP STREET, LONDON, E.C.,
And all Ironmongers and Seedsmen.

WELL BORING.

MERRYWEATHERS' ECONOMIC SYSTEM.

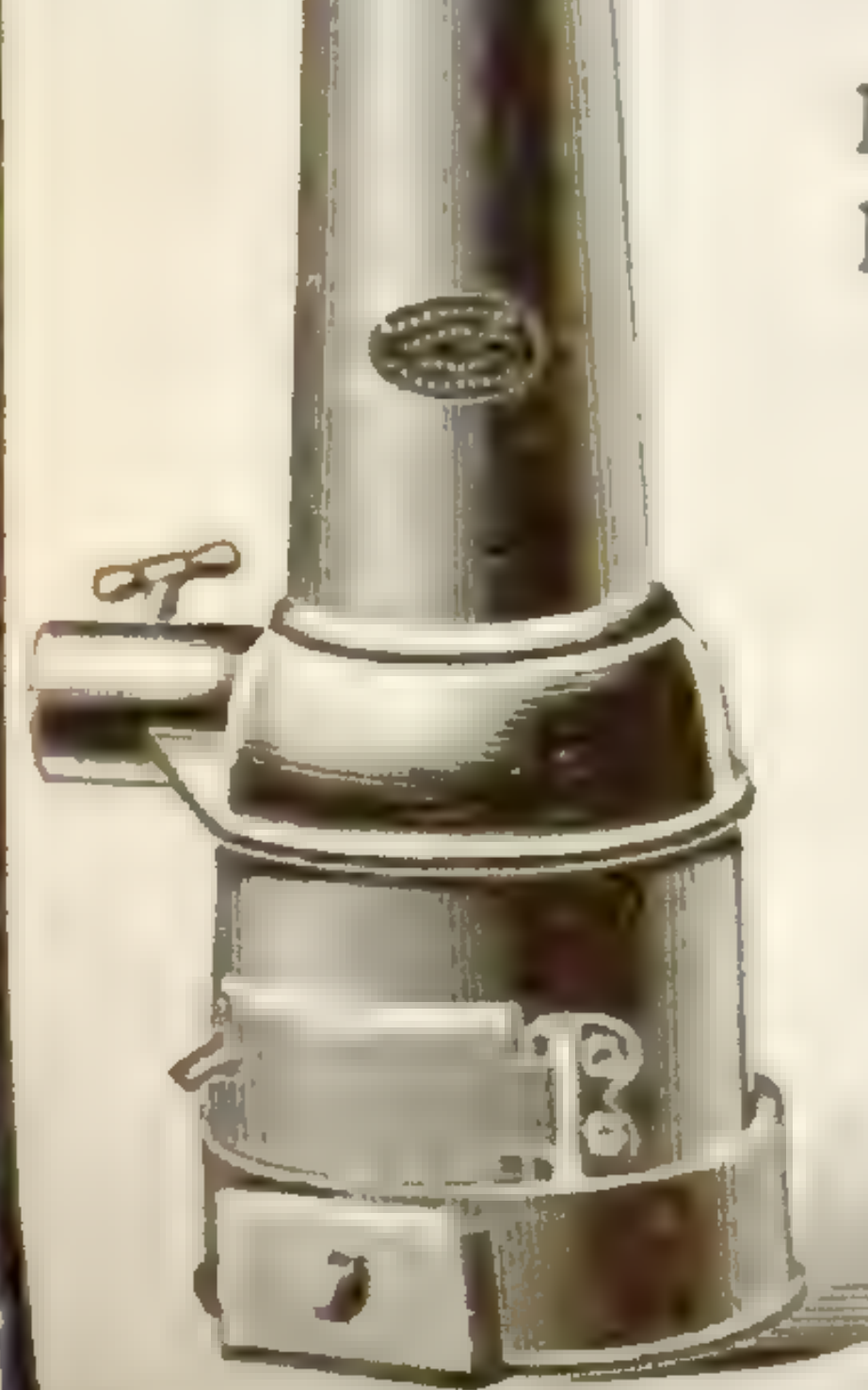
Merryweathers' men with Steam Tackle boring a well.

Pure and Abundant Supplies.
MEN AND TACKLE SENT AT A MOMENT'S NOTICE.
Work Carried Out with Economy and Despatch.

Write for Book on "Water Supply to Mansions."

MERRYWEATHER & SONS,
63, LONG ACRE, LONDON, W.C.

GREEN'S PATENT HOT WATER BOILERS and HEATING APPARATUS.



For Public and Private Buildings, Greenhouses, Conservatories, etc.

SPECIAL BOILERS MADE TO ORDER.

ESTIMATES GIVEN

Please write for Price List No. 4.

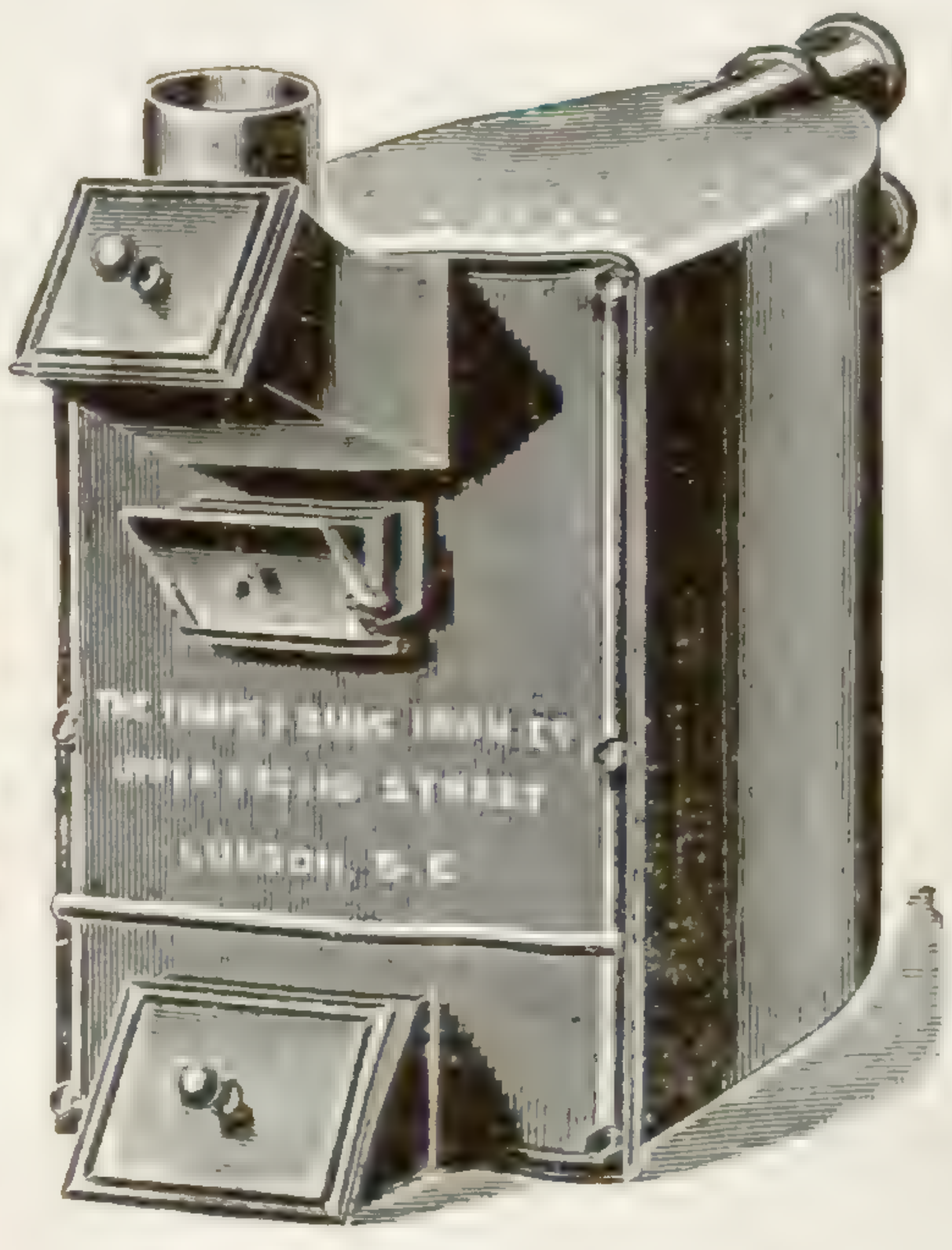
THOMAS GREEN & SON, Ltd.,
Smithfield Ironworks, North St., Leeds, and
NEW SURREY WORKS, SOUTHWARK ST.,
LONDON, S.E.

'Phone: Hop. 763.

When next a Small Boiler you require

TRY

THE



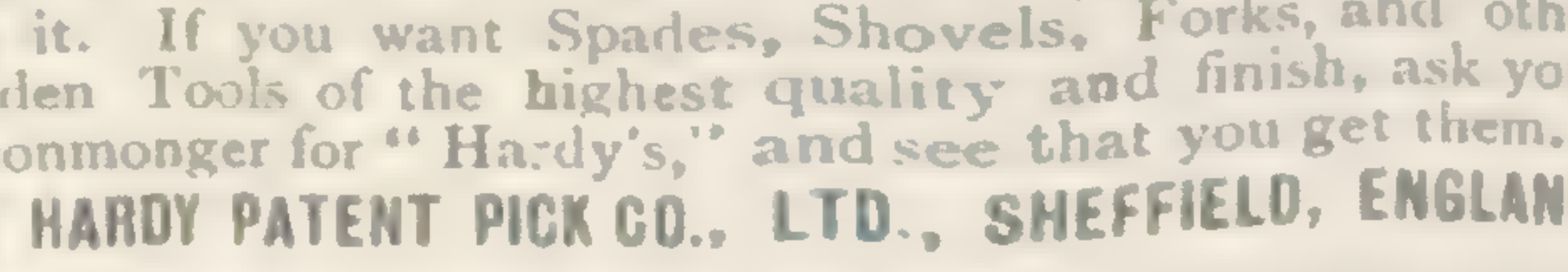
HEEL

NONE TO BEAT IT.

THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.

4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

A NEW GARDEN SPADE (Carter's Patent).



This is claimed to be the most effective Spade on the market. Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

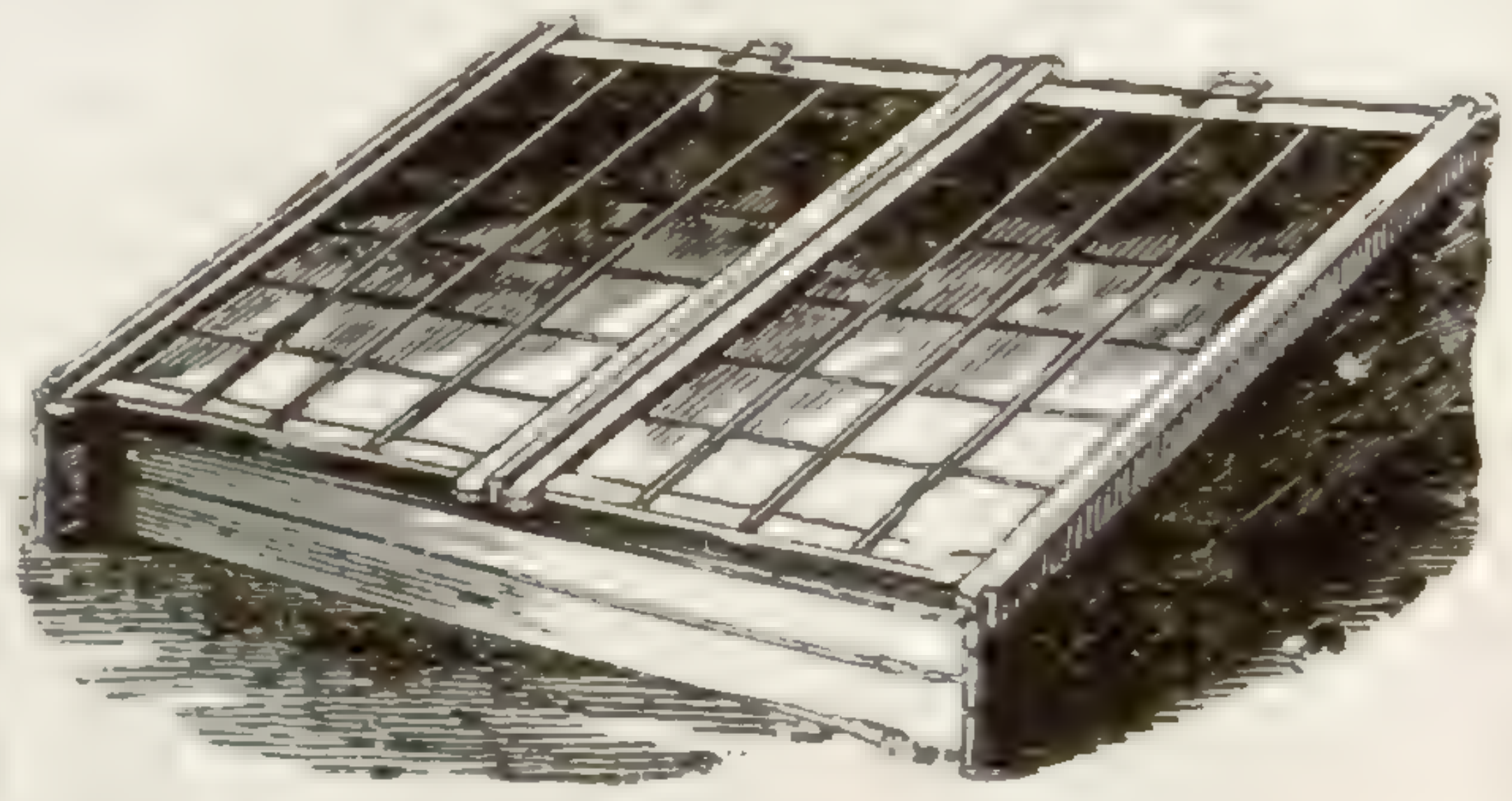
THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

PIGSTYE TIMBER, 1½in., Elm, 1½d. square foot; also 1in. clean rough shedding boards 1d. square foot. Portable houses of all kinds. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

PORTABLE

CUCUMBER FRAMES.

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.		£	s.	d.
1-light 4 ft. by 6 ft.	*CASH PRICES.*	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.	*CARRIAGE PAID.*	5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON, MANCHESTER.

WATSON'S LAWN SAND.
(THE ONLY ORIGINAL.)
Destroys Daisies, Plantains, Dandelions, &c., and at same time Invigorates the Grass.
34/- per cwt.; 56lb. Kegs, 18/-; 28lb. Tins, 9/6. Canisters, 5/-, 2/6, and 1/-.
Please see that you get the genuine article.
Sold by Seedsmen and Nurserymen.
A. J. BARBOUR & Co., 8, Upper Fountaine St., LEEDS

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

Extracts from 35th annual collection of reports:—

NATIVE GUANO for POTATOES, VEGETABLES, etc.

A. J. BEARD, Erdington: "Potatoes, splendid, free from disease. Best I ever had."—H. CHESTER, Nantwich: "Best onion manure I ever used. Grand for onion fly."

NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc.

J. CANT, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. FRAMPTON, Titchfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED,** 29, New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted

PREPARING GROUND FOR LAWNS AND GREENS.

Although either autumn or early winter is the best time to prepare ground for lawns and greens, yet, owing to building operations and other circumstances, this work has sometimes to stand over until spring. At this time of the year the same fine division of soil cannot be expected as would have been the case where the staple had been exposed for a considerable period to sharp frost. Still, there is no reason why excellent results should not be obtained, even at this late date.

Much as autumn operations may contribute to the success of making lawns and greens, this, in itself, is not sufficient to be taken as a guarantee that they will be satisfactory, as soils vary in their physical and chemical fitness, and lawns and greens may have level or sloping surfaces. In all cases they should be well drained in order that superfluous water may be able to escape and the air between the particles of soil become changed in the process, so that a sweet and lasting medium for the roots of grasses is secured. Sandy soils, of course, are apt to suffer from a lack of moisture in dry weather, and instead of providing artificial channels for the water to get away it will be decidedly advantageous to increase the cohesion of the particles by adding soil of a more tenacious nature.

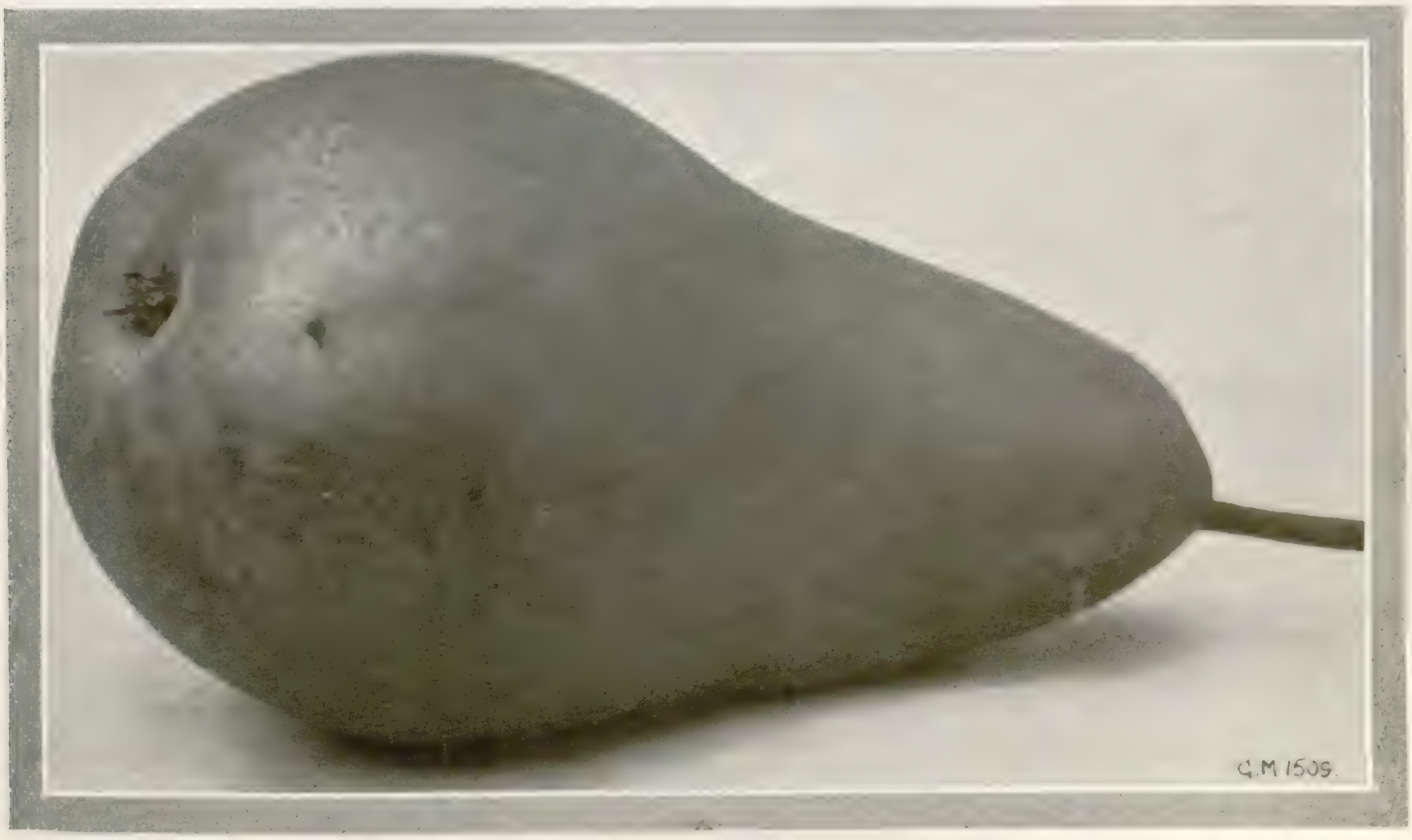
Loams and clays are so retentive of moisture that, with the exception of those resting on a gravel subsoil, within eighteen inches or two feet of the surface, a thorough system of drainage is indispensable to success. The kind of soil, and its situation, should determine the number of drains, but for ordinary purposes I have found ten feet apart a desirable distance to place them. Under normal conditions 2½inch field drain pipes, with a three-inch main, are quite equal to the work. The arterial drains should be from eighteen inches to two feet below the surface, and have about eight inches of cinders, clinkers, stones, or any other porous durable material on the top of them. In dealing with sloping ground the herring-bone system of drainage should be carried out, with the arterial pipes joining the mains at an angle of about 45 degrees. This is the system, too, to employ on bowling greens with a "crown." On level lawns, when there is only the surface water to be provided for, straight drains about fifteen feet apart, and joining a main at a right angle, will be ample for the purpose.

After the drainage operations are completed the next important step to take is to level the ground in accordance with the object aimed at. There are various ways of doing this, all of which have their advantages and disadvantages, but I have always found the most economical has been to take out an opening eight feet wide in the surface soil along two sides, level the subsoil to about the depth of the surface soil, and then finish with the surface soil of the adjoining eight feet. When the ground slopes the openings should be along the highest side, and the work proceed from this to the lowest side. Material from the substratum can then be found along the higher level to make good the lower side, and enable the work to be finished straight away.

Where there is much filling up to be done the soil should be solidified by treading every layer of about six inches in depth till the surface level is reached. This will prevent all shrinkage afterwards, and relieve those responsible for the maintenance of the lawn in good playing order from the trouble of making up deficiencies. Should the soil be deficient in plant food it is advisable to employ about one ton of well decomposed manure to every 100 square yards, and place this six inches below the surface. To distribute this evenly an opening should be taken out at one side, two feet wide and six inches deep, and the manure spread along the bottom. This done, the adjoining two feet by six inches should be placed on the top of the manure, then this trench treated similar to the first, and the whole ground dealt with in this way, and afterwards made solid.

If the ground is intended for seeds, and a grass turf free from weeds is desired, it is often advisable to fallow it all the summer, and sow down in the end of August or beginning of September. During the summer months the surface of the ground should be stirred only about half an inch deep fortnightly, to kill all the weeds which make their appearance, and to get all the seeds in that thin layer to germinate before seed sowing time arrives. In employing this method of lawn and green making it cannot be too strongly emphasised that the most important factor in securing a really good lasting turf lies in keeping the present surface soil on the top. This has taken centuries to attain its fertility, and before the subsoil could be brought up to such a fine state of division and stored with such a quantity of plant food years must elapse.

Hibernia.



PEAR TRIOMPHE DE VIENNE.

PEAR TRIOMPHE DE VIENNE

Triomphe de Vienne is a large and very handsome pear, and one that is good alike for exhibition and dessert. It is of elongated and shapely form, and a tree carrying a good crop, whether in the open or against a wall, is a fine sight. The variety crops freely, and its russety skinned fruits are of excellent flavour. An early pear, coming into use in September and October, it must not be allowed to hang too long or some of the fruits will rot at the core. Owing to its regular and free-cropping habit Triomphe de Vienne is a good pear for a small garden, but as the fruits do not keep well for any great length of time, as a rule, not many trees are needed in a private garden.

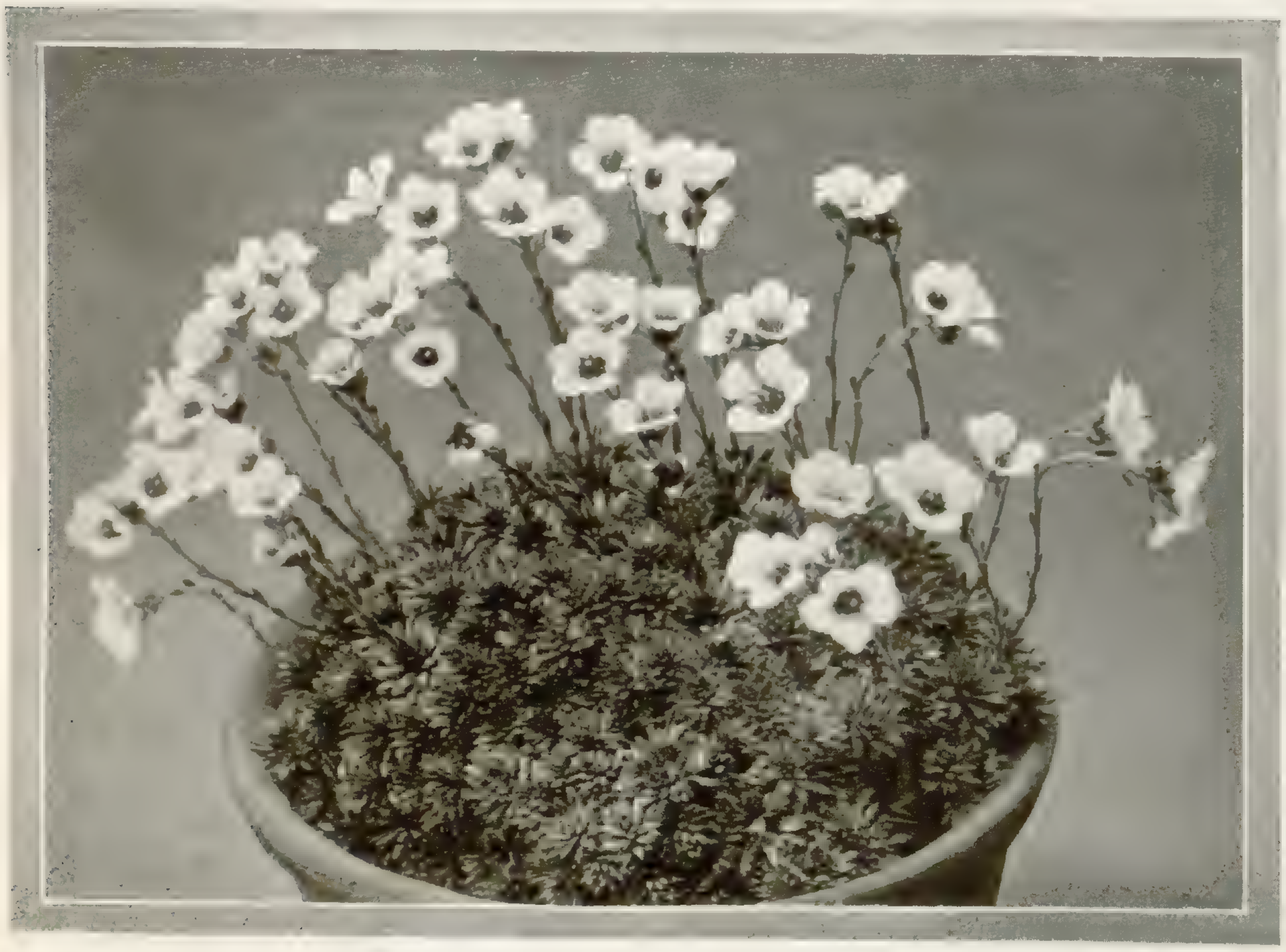
NEW PLANTS, ETC.

CYMBIDIUM VEITCHI.

This striking and interesting orchid is a hybrid obtained by crossing Cymbidium Lowianum with the distinct C. Devonianum. The flowers are of medium size, and shaped very like those of C. Lowianum, but the spike is more lax and pendulous than in the latter species. Sepals and petals are alike pale green, with brownish shading, while the lip has its apical portion coloured very deep and dark brownish-crimson. A.M., R.H.S., February 28. Messrs. James Veitch and Sons, Lim., Chelsea.

PRIMULA WINTERI.

In this new primrose we have another fine addition to a very useful and extensive family. The newcomer is hardy, having been found at an elevation of 12,000 feet on the Himalayas. It is a lowly-growing species, and one that will appeal to lovers of alpines. The growth is somewhat like that of our common primrose, except that the deep green leaves are freely dusted with a white mealy powder. The flowers are on long pedicels, and borne in clusters at the end of a very short spike, so that the blooms do not extend much beyond the leaves. Individually the blooms are like those of an alpine auricula, pale lilac or rose-pink in colour, with a white area round the greenish eye. The species promises to show some amount of variation in colour, and in the size of the flowers, but in any case it will surely become popular if it takes kindly to the conditions in this country. F.C.C., R.H.S., February 28. Messrs. R. Gill and Sons, Penryn, Cornwall.



SAXIFRAGA BURSICULATA.

A pretty, low-growing, dense plant; a hybrid between two popular species. Flowers white. A.M., R.H.S., February 28. Mr. E. H. Jenkins, Hampton Hill.

SAXIFRAGA BURSICULATA.

A dense low-growing hybrid between S. Burseriana and S. apiculata; it is very free-flowering, and the effective blooms are pure white. A.M., R.H.S., February 28. Mr. E. H. Jenkins, Hampton Hill.

BETULA MAXIMOWICZI.

A beautiful birch from Japan and Manchuria, with broad, light green leaves, that have a distinctly serrated margin. The tree is said to attain a height of 100ft. The species was first found by Maximowicz, but seeds were first sent to this country by the late Mr. James H. Veitch. Later, seeds reached Kew from the Arnold Arboretum, in 1893, and young plants raised therefrom. "Bot. Mag.," t. 8,337.

ROSA MOYESI.

This interesting and beautiful rose was figured in our issue of June 20, 1908, p. 478. It was sent home by Mr. E. H. Wilson, and has been found to grow in a position where the majority of garden roses succeed. It can be raised from seeds or increased by cuttings inserted in heat in August. Rosa Moyesi is from Western China, and we owe its introduction chiefly to the efforts of Mr. E. H. Wilson when collecting for the Messrs. J. Veitch and Sons. It makes a shrub about 6ft. or 10ft. high, and not very prickly. The blood-red flowers are two to two and a-half inches broad, the calyx and the outer side of the petals being purplish. "Bot. Mag.," t. 8,338.

STYRAX HEMSLEYANUS.

This flowering shrub, or small tree, from Central China, promises to be quite hardy, and to provide a welcome addition to other good things sent home by Mr. Wilson. It was discovered, however, by Dr. Henry, in 1888. The light green leaves are broadly ovate, with serrate margins. The flowers are about an inch across, white, and borne in short racemes. "Bot. Mag.," t. 8,339.

IRIS WILSONI.

A beautiful iris that resembles I. siberica in habit, and, at Kew, has been found to succeed under conditions suitable to that species. Found in Western China, and also in Central China, by Mr. E. H. Wilson, I. Wilsoni has yellow flowers; the falls are marked with red-purple over the central portion, while the narrower "claw" is veined with purple along the edge. The inner segments are clear yellow. "Bot. Mag.," t. 8,340.

PRIMULA LITTONIANA.

This interesting and curious primula was found by Mr. Forrest in Western China when collecting for the Messrs. Bees. It has so far proved quite hardy. The style of the spike and the way the flowers open suggest a glorified and beautiful plantain. It grows from one to two feet high, and the radical leaves are about seven inches long, and hairy. The erect flower stem rises about eighteen inches high, carrying at its apex a dense spike of small blue flowers, these being set closely together for a distance of from three to five inches; the calyx is pink, and the unopened flower buds show a deeper blue colour than the expanded flowers. The species was figured in the Gardeners' Magazine of July 10, 1909, p. 528. "Bot. Mag.," t. 8,341.

CARROTS ALL THE YEAR ROUND.

(Concluded from page 152.)

The autumn and winter supply is as important as the earlier crops, and provided there is a suitable soil, anyone may have young carrots all through autumn and winter. But there must be genial soil to sow in, for a winter crop in a cold, badly drained soil would be certain to fail. The soil must have been well worked and free from pests of all kinds. It is often thought that carrots are not hardy, but such is not the case. For many years I have allowed the roots to winter in the ground, and though severe weather will often spoil full-grown roots, making them split, the smaller roots, especially in a sandy or light soil, will keep well, if not sown too early. On the other hand, in badly-drained soil it might be well to lift and store the largest-sized roots and leave the smaller ones. Sowings should be made in July; in the south I always sowed early in August, and used such varieties as Sutton's Early Gem, Scarlet Model, Early Nantes, or any of the Short Horn type, and selected an open quarter, and allowed ample room between the rows, so that in severe weather it was an easy matter to draw earth up to the roots. Should protracted frost follow, it is an easy matter to cover a portion of the quarter with litter to allow the roots to be lifted for use. Grown thus there is a supply from the late autumn until the first sowings are ready.

It will thus be seen that a full year's supply may be secured, but those who do not wish to go to this trouble may with advantage sow early as advised. Sow again in March (these are small sowings), and make a larger sowing early in May. This will give roots plenty large enough to store in November, but cool storage is essential, just free from frost, with plenty of soil or sand between the roots to keep them from shrivelling.

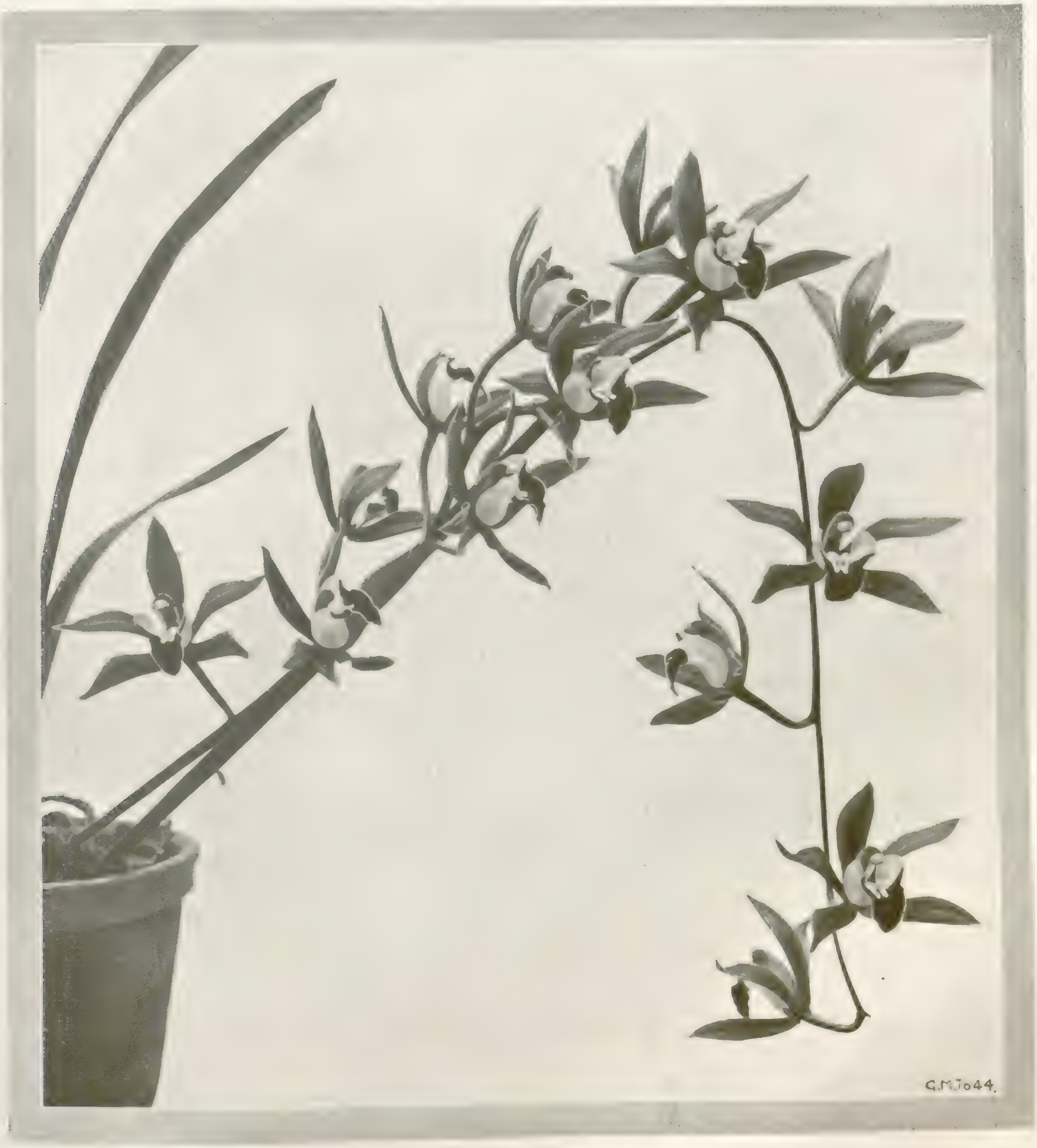
Carrots are frequently attacked by wireworm and carrot maggot, and often the early crop that forms large roots suffers most. Crops sown as advised often escape. In land badly infested with these pests I have found gas lime a splendid help, but the lime should lay on the land early in the autumn for a few weeks, be broken up very finely, then double dug in, and the surface left as roughly as possible until sowing time. Fresh lime and soot used freely are also splendid aids, and can be used almost at any time, and in old garden soils I have often found it advantageous to omit animal manures and give artificials. Fresh animal manure should not be used for carrot crops.

G. Wythes.

Cauliflowers.—Gradually harden off the plants that were pricked out in boxes and frames from the January-sown seeds, for planting out later. Another sowing will be required either in boxes or in a sheltered warm position outside to give a succession to the earlier plants. For this sowing I like Early London, as it has not the same tendency so many varieties have to turn in all together, and often gives a yield over a long time if a cool open position is given the plants.—C. Flack.

REPOTTING HIPPEASTRUMS.

Very diverse opinions are held as to the most suitable season for repotting hippeastrums, and, having tried various experiments in that way, I was pleased to see that the opinion of your correspondent, Mr. W. J. Jennings (page 86) entirely coincided with my own. The generally accepted idea is to shake out and repot early in the year, but I feel confident that the blossoms do not develop so well, nor retain their freshness so long, as in the case of thoroughly established plants. If repotting, when necessary, is carried out directly the flowers have lost their beauty the roots start away freely into the new compost, which serves to build up the bulb for another flowering season. With the assertion made by your correspondent that hippeastrums are often given too much heat I entirely agree, and look upon a cold frame facing due south as a good place for them during the latter part of the summer, until the nights grow cold and damp in autumn.



CYMBIDIUM VEITCHI.

A distinct hybrid, with green, brown-shaded flowers, and a crimson apex to the lip. A.M., R.H.S., February 28.
Messrs. James Veitch and Sons, Chelsea.

One great advantage in dispensing with fire heat during the summer months is that the plants keep much more free from insect pests, as thrips and mealy bug increase rapidly under warmer conditions. What is more, the leaves are of a far sturdier nature, and the bulbs much firmer. When developed under these conditions the hippeastrums may be kept safe and sound during the winter in a minimum night temperature of 45 degrees, rising somewhat during the daytime, that is to say, just such a temperature as is maintained in an ordinary greenhouse. Even where no warmer structure than this is available hippeastrums may be well flowered, though, of course, the blossoms will be a good deal later than if they are brought on in greater heat. In a cool house such as referred to the soil should be kept pretty dry till the end of February, or thereabouts, for if the plants are induced to start earlier a spell of exceptionally cold weather may give a decided check.

This brings one to the question whether the annual repotting of hippeastrums so generally followed is really necessary, my opinion being that it is not so, providing, of course, that the roots are in a good condition. Instead of fresh soil they may be assisted with liquid manure, or some other stimulant, during the growing season. On this point my preference for hippeastrums, and, indeed, for all fleshy rooted plants, is, when a stimulant is necessary, to use a mixture of liquid manure made from sheep or cow droppings and soot water, in preference to any of the chemical manures now so popular. With regard to annual repotting, I know of one successful cultivator who repots half his stock each year, and another who divides his stock into three portions, so that each plant is repotted every third year. Of course, a compost of a lasting nature is very necessary.

W. T.

PROTECTION OF WALL FRUIT TREES.

In most gardens various schemes are devised for the protection from frost of fruit trees growing against walls by the use of nets, tiffany, light canvas, hessian, etc.

Usually the south walls not monopolised by ranges of lean-to glasshouses are used for supporting trees of some of the choicest hardy fruits, and, in many instances, ample arrangements are made to safeguard them during March, April, and May.

The method adopted here in Sussex for protecting peaches, apricots, and pears against south walls is by no means an uncommon one. It consists of a coping made of weather boards, in sections sixteen feet in length; these are temporarily fixed to iron brackets by thumb screws and nuts in a sloping position, and they project out from the top of the wall eighteen inches. The blinds correspond in length to the sections of the coping, and are deep enough to reach within one foot of the ground; the upper edge is tacked to a lath attached beneath the front edge of the coping by screws. The blinds, which are made of thick tiffany, are drawn up and let down by means of pulleys and cords; five pulleys are alloted to each blind, and these are fixed to the underside of the coping. Light poles are placed eight feet apart, with their bases let into the border a few inches, and four feet away from the foot of the wall. These are long enough to reach the coping, and are fixed to the brackets supporting it, so helping to relieve some of the weight of the blinds. The blinds, when let down, are kept taut by tying them to the foot of the supporting poles.

The trees against the walls are planted sixteen feet apart; between them are constructed temporary shallow frames ten feet long, two feet wide, and six inches deep, made with rough boards, which are kept in position by being nailed to short piles driven into the border a few inches. These frames are filled with light soil, usually old potting soil, and when it becomes necessary to protect the expanding flowers on the fruit trees, which, with us, is generally about the second week in March, we commence planting out calceolarias, early-flowering chrysanthemums, etc., in the shallow frames; in others, about the first week in April, such things as dianthus, asters, stocks, Phlox Drummondi, and ageratum, etc., are pricked out thinly, and by the time their summer quarters become vacant in the flower beds and borders they make nice sturdy plants, and lift with good balls of soil attached to the roots.

Here, too, we have an admirable site for bringing on celery plants and early lettuces. If a batch of dwarf beans is raised, by sowing the seed thinly in four-inch pots during the second week in April, and given a gentle heat in which to germinate, they can be planted out early in May in the frames, which will by that time have become vacant, as the chrysanthemums will have been removed to their flowering quarters. These beans will come into bearing quite a fortnight earlier than the most forward sown in a sheltered border. We also find the frames a convenient place for hardening off many varieties of bedding plants grown in pots and boxes.

It will be seen from this that by utilising such a position for the various plants mentioned, much can be done to relieve the limited accommodation of pits and frames at a time when these are so much needed. When the frames become vacant the boards are removed and stored away until required another season. The coping and blinds are taken down when all danger from frost and cold wind is past, which with us is usually the last week in May.

T. B. Field.

THE SPRING PRUNING OF SHRUBS.

The question sometimes arises as to which shrubs ought to be pruned in spring and which not, for it sometimes happens that people with little knowledge of shrubs have pruned away wood in spring which, a month or two later, would have borne flowers had it been left untouched; on the other hand, shrubs may have been left unpruned, which, had the pruning knife been used, would have given a great deal better results. Therefore, in the succeeding notes attention is directed to certain shrubs which may be benefited by pruning during February or March

As a rule, those plants which bloom after the end of June produce their flowers from young wood, consequently any which require pruning may be pruned during early spring, in order that advantage may be taken of a long growing season. Then, with shrubs which blossom early, all necessary pruning must be done as soon as the flowers fade. No better time can be found for evergreen pruning than spring, April being a good month, as new growth commences almost at once and soon obscures unsightly branches.

Taking late-flowering shrubs, we find that the autumn and late summer-flowering spiræas require attention. These must have their branches well thinned out, and those which are left cut back at least half-way. During the thinning care must be taken to remove the older branches, for from these the inflorescences are never so fine as from younger wood. Such kinds as japonica and varieties, salicifolia, Douglasi, Menziesi, Aitchisoni, and Lindleyana may all be pruned. Most species of cytisus and genista do not require pruning until after the flowers have fallen, but there are a couple of kinds, one Cytisus nigricans, and the other Genista elatior, which may be pruned in spring. They may be cut back to within a few buds of the base of the last year's wood, but not into two-year-old wood.

Hypericums require cutting back and thinning out as recommended for the spiræas, while the autumn-flowering ceanothuses must be pruned at this time. Last year's shoots may be cut well back, the weaker ones to within two or three buds of the base, and the stronger ones to within six or nine inches of the bottom. Care must be taken to leave well placed young wood to take the place of older branches which are becoming weak. Buddleia variabilis and its several varieties are all improved by severe pruning, the finest inflorescences usually being obtained from plants which have been cut down to within a few inches of the ground. Vines should be pruned over if they have not been already done, that is the various ornamental kinds of vitis.

Autumn-flowering heaths should have their old flower heads removed, and the same thing may be done with the various forms of Calluna vulgaris. Clematis will probably have been pruned ere this; if not, the various Jackmanni forms may be cut back to within a few eyes of the base of last year's wood. The same may be said of the viticella forms, whilst the varieties of C. lanuginosa need not be cut quite so hard. C. florida and patens must not be pruned at this time. C. heracleæfolia and its many varieties may all be pruned to within a few buds of the base of last year's wood. Where such plants as Paulownia imperialis, Ailanthus glandulosa, and Rhus typhina are grown for the sake of the ornamental effect of their large foliage, the stems should be cut down to within a few inches of the ground without delay. In all cases where severe pruning is practised, it must be remembered that it is an exhaustive method of culture for the plant, hence the necessity of giving a good top dressing of manure occasionally. Coloured stemmed shrubs, such as willows and cornus, may have their branches cut back about the middle of March, whilst coloured foliaged elders are more effective if cut down well in spring.

Turning to subjects which require pruning as soon as the flowers fade, one which requires early attention is Jasminum nudiflorum. By cutting this in well each spring better results are obtained than when it is allowed to grow on year after year unchecked. Forsythia suspensa, when grown as a bush in the open, may be pruned back well as soon as the flowers fade. When grown against a trellis, however, less pruning is desirable, for in such cases slender pendant shoots are more appropriate than the strong upright ones which are encouraged by much pruning. The various brooms may be cut back when the flowers fade, below the flower heads.

Spring-flowering spiræas require very little pruning unless they are outgrowing their positions, when they may be thinned out well, and reduced in size. Lilacs may have the weak wood and suckers cut away, whilst it is a good plan to remove the flower heads as soon as the flowers fade, in order that energy is not wasted on the production of seeds which are not required. Any shrubs which have out-grown their positions may be pruned as the flowers fade. It must, however, be borne in mind that they must be well thinned out as well as cut back.

Evergreens not grown for the sake of their flowers may be pruned in April, as already stated. At that period it is possible to prune severely, and have the shrubs presentable again at an early date, whereas if the pruning were done in autumn they would be unsightly for many months. When rhododendrons have to be cut back, which is not often necessary, the work may be done as soon as the flowers fade, but if severe pruning is necessary it sometimes pays to sacrifice the flowers in order that as long a growing season as possible can be obtained. An item in connection with rhododendron culture which it is as well to note is that the removal of the old flower heads before seeds have time to form is attended with beneficial results.

Bamboos require pruning each spring, and pruning, in their case, takes the form of removing a proportion of the older growths in order that plenty of room for young shoots is found. This thinning out has the effect of keeping the plants open and graceful in outline. It must, however, be observed that it is necessary to remove old shoots right to the base, not leave them six or eight inches long, for such snags seriously interfere with the proper development of the young culms.

W. Dallimore.

Spinach.—Select a warm and sheltered border and make a sowing of the summer variety of spinach, to follow the winter kind. Draw the drills from fifteen to eighteen inches asunder, and sprinkle a quantity of soot on the ground. Thin out the young plants to a foot apart before they become drawn to obtain thick succulent leaves.—C. F.

EARLY-FLOWERING CHRYSANTHEMUMS.

In spite of the fact that the early-flowering chrysanthemums yield their flowers at a time when there is a galaxy of beauty in the garden, and also serve to remind us that the summer is far advanced, they are very welcome, and are of immense value to replace subjects that may have "Ichabod" written upon them.

The accompanying illustration depicts a large bed planted with Goacher's Crimson and Horace Martin, and when it is explained that they were growing in congested Bermondsey (Southwark Park), nothing further need be said as to their value for town gardens.

A GROUP OF EARLY-FLOWERING CHRYSANTHEMUMS, SOUTHWARK PARK.

Few classes of plants are at once more floriferous and accommodating, and the elaborate details, composts, etc., we sometimes read about in connection with their culture is all so much moonshine. Experience shows that to plant in very rich and heavily manured soil is to court comparative failure, and to promote over exuberant growth and consequent paucity of flowers, while on the other hand, if the ground be lightly dressed with short and well-decayed stable manure or leaf-soil, and solidified, a full measure of success is certain.

With respect to propagation, nothing is gained by inserting the cuttings earlier than the end of March, and this season at any rate, thanks to the mild character of the winter, abundance of sturdy rooted plants may be detached from the outer parts of old stools in the garden. These should be put into small pots, and arranged fairly close to the glass in cold frames, preparatory to being planted in permanent quarters about the end of April. An open and sunny position is essential to success, and in the event of long-continued drought the ground should be saturated from time to time. Further, if stopped or pinched twice, we get bushy and symmetrical specimens, and if it is intended to press a number of these plants into service for late summer display in flower beds a colony should be established in the reserve garden. If due care be exercised in lifting and planting, and the plants are watered overhead morning and evening for a few days, no check will be received, and no appreciable difference can be detected as regards their season of beauty from that of pot plants.

Need it be said that these chrysanthemums form delightful pot plants? And in view of the fact that so used we have them under control, a fairly liberal compost may be employed, while the labour involved in artificial watering may be reduced to a minimum by plunging the pots in coal ashes after the final shift. It is superfluous to add that stimulants may be applied with advantage, dating from the time the buds are formed, and, failing animal manure in solution, any approved artificial manure will answer the purpose admirably.

There are a large number of varieties in commerce, and a few reliable sorts for either pots or border are Goacher's Crimson, Vesuve, chestnut-crimson with golden reverse; Harvest Home, Market White, and Mychett White, Doris Peto, and Feu Japonais; Horace Martin, Ethel, Leslie, Elstob Yellow, and Clara are good yellows; Normandie and Provence in pink; Freedom in rosy-purple; Claret, bright claret, with Diana and Ethel Blades, chestnut. The early-flowering single kinds are worth attention.

Walter H. Aggett.

CHRYSANTHEMUMS.—For full instructions on the Culture of Early-flowering Chrysanthemums in beds or borders for garden or greenhouse decoration, read the Second Edition of Chrysanthemums for Garden and Greenhouse, by D. B. Crane, price 2s. 6d. net; or by post, 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

RHODODENDRON PRÆCOX.

This very early-flowering rhododendron brightens up our shrubberies and the rhododendron dell very much thus early in the season. It is an extremely free-flowering shrub, with lilac-purple flowers, and when fully developed a mass of it is very effective. At the end of February we have a great many plants in bloom, and, although we had 8 degrees of frost recently, this does not appear to have damaged them at all. The bushes are very shapely, and flower while in a small state, but when from 3ft. to 6ft. high, they excel, and there is no other shrub so brilliant at this season.

Stock is raised quite easily by layering, and when a plant becomes too tall from age or any other cause, it is quite an easy matter to take it up, plant it obliquely, and layer all the branches. One is thus treated occasionally, and small plants are always available. Rhododendron præcox is the result of a cross between R. dahuricum and R. ciliatum, and most resembles the former. If a little shelter can be afforded it, so much the better; a warm recess, near buildings, or the shelter of larger plants can generally be chosen for such a choice shrub.

W. A. Cook.

Standard Clerodendrons are most effective, but are only produced after two or three years' training. For this purpose cuttings must be put singly in small pots and given every encouragement to grow, by providing ample rooting room, in due course these will produce a stem four to six feet high. The head of the standard, after due stopping, is most easily secured by training the shoots over an umbrella-shaped trellis. For a potting compost use loam and peat in equal parts, with lime rubble and broken charcoal added in sufficient quantities to render the material open and porous.—J. D.

SWEET PEA JOTTINGS.

Sweet peas—purely considered from the seedsman's point of view, are booming this year as they never have boomed before. Stocks of many choice new varieties are already sold out, and still the orders come in. Given good weather from the end of March onward, and a summer that is more like the summer we used to have, sweet peas will achieve a popularity never experienced by any other flower raiser annually from seeds. From my own experience the germination of seeds is particularly good this season, so that the promise is excellent.

In some measure it is unfortunate that we have all gone in so strongly for extremely high culture, because when we talk of trenching the plots three feet deep, and adding cartloads of manure, we rather frighten the man in the street. To obtain the very finest results on the exhibition table great pains must be taken in cultivation, and in raising the seedlings, and, of course, thorough cultivation pays handsomely, even when we consider sweet peas solely for their value in garden decoration and in the home. There is plenty of time yet to sow sweet peas. Sown in pots placed in a cold frame and kept close until the seedlings push through the soil, and then given abundance of air on all favourable occasions, sweet peas come along rapidly, and yet sturdily, at this season of the year, and make capital plants for setting out in early April on the plot where they are to flower.

So much has been said and written about sowing sweet peas in pots to secure strong plants for early planting, that the sowing of seeds out of doors where the flowers are to be produced is being greatly overlooked. We do not care to risk choice and costly varieties by sowing them out of doors, but there are crowds of people whose names are unknown to the enthusiasts, who have no conveniences for raising an early stock, who have an intense love for sweet peas, and who are not desperately anxious to secure the very latest novelties. To these one may suggest that the cheaper varieties may very well be sown, and treated in the same way as culinary peas, except that the seeds should not be so deeply buried, and, to guard against depredations by birds and mice, they should be coated with red lead.

Red-leading is easily managed. Put the seeds in a small tin lid, pour in a little water, and, when the seeds are all moistened, pour off the surplus water. Then dust the seed with a little dry powdered red lead, taking care not to inhale it, and also taking care to use gloves if there are any wounds on one's hands. With a circular motion induce the seeds to roll round and round until each one has a thin coating of red lead; this achieved, let the seeds dry, and when dry sow them about twice as thickly as the plants will be allowed to remain. From now onward right through the month of March, weather permitting, sweet peas may be sown out of doors, and if the ground has been prepared with reasonable care there should be a fine crop of good flowers in due course.

From Helen Lewis, Mrs. Hardcastle Sykes, Clara Curtis, Countess Spencer, Etta Dyke or Nora Unwin, John Ingman, Mrs. C. W. Breadmore or Evelyn Hemus, Constance Oliver, and Asta Ohn or Masterpiece, with one of the crimson varieties, a really excellent selection of six or more sweet peas may be made with the assurance that all are fixed, and that flowers of fine type, giving a good range of colour, will be forthcoming.

Lovers of sweet peas, and those who sell sweet peas, should do all that lies in their power to secure new members of the National Sweet Pea Society. From a business point of view this would be a good move, because the influence and usefulness of the society are great, and increased membership and a strong society are bound to react upon the seed trade by increasing the demand in the immediate future, and by ensuring the popularity of sweet peas for many years to come.

The "Sweet Pea Annual" and schedule, now in the hands of all members of the N.S.P.S., contain rather formidable lists of too-much-alike varieties. No fewer than nine crimson varieties are bracketed together; there are two groups of blush varieties, five in each; there are nine mauve sweet peas, not more than one of which may be shown in a stand at the London show on July 11 and 12 next; of cream-pink varieties there are also nine grouped together as being very like each other; while in the maroon class ten varieties are lumped together as possessing a close resemblance one to the other. Nine seems to be a favourite number in this connection, and we find that number of white varieties, and a similar number of yellow and buff varieties classed as too-much-alike. One turns to the Classification List for help, there to find "an up-to-date selection of varieties in commerce," but one that "does not include novelties first distributed in the autumn of 1910 or spring of 1911." The Classification List is, therefore, an excellent guide for the great body of sweet pea lovers, and they appreciate it.

Chas. H. Curtis.

THE FUTURE OF THE SCOTTISH HORTICULTURAL ASSOCIATION.

(Continued from page 172.)

LOOKING FORWARD.

This concludes my historical references to this subject, which have necessarily been full in order to show those of you whose connection with the association is of somewhat recent date that this question has from the very first been kept in the forefront among the aims and objects of the association, and to show you that what I am about to propose is no innovation, but would merely be the logical outcome of this persistent advocacy. I propose nothing new to you, except that you should exchange a philosophy of words for one of deeds and actions.

It is now nineteen years since Mr. Welsh referred to the formation of a gardeners' institute as being almost within our reach. Three years before that, in 1889, the association had commenced to hold its chrysanthemum shows in the Waverley Market, and, owing to the great success with which these were attended, it may be that the office-bearers and members alike became so obsessed with them that the greater question was completely lost sight of; at any rate, with the exception of the allusion to it by Mr. Todd in his address fourteen years ago, no further reference to it is to be found until four years ago, when it was resuscitated by one of my immediate predecessors in this chair, Mr. D. W. Thomson, who in his presidential address strongly urged the formation of a great horticultural centre for Scotland in this city, and at the present moment an undischarged motion by our friend, Mr. King, to make a commencement by raising a fund for the purpose, stands in our Council minutes.

Well, "Ex nihilo nihil fit" is a classical phrase as trite as it is true. Out of nothing nothing can come, and unless we cease our talk and begin to act we will be no further forward in the next decade than we were in the last, or than we are to-day; if, indeed, we have not retrogressed. Times have changed. There is no reasonable prospect at present of a return to the palmy days of chrysanthemum shows of five to twenty years ago. There is small prospect at present, even with the greatest attractions we can legitimately offer, of drawing £1,200 at the gates, nor of any sum approaching it. In 1908 and 1909 we had a heavy loss. Last year, with a somewhat novel departure in our show procedure, we scraped through with a small surplus, but it was only accomplished by exercising the most rigid economy. The unpleasant fact has to be faced that there is at present a steady decline in the attendances at our shows, and we have no assurance that the decline will not go on. The question, then, comes to be, how far can we go in this direction? There must be a limit to our economy, if there is none to the smallness of our attendances, and if the decline in the latter goes on, what then? I sincerely hope we have reached bed-rock in our attendances, but who can tell? Counter-attractions which ten years ago had no existence, have sprung up—and are still springing up—in all directions. The best military bands can be heard elsewhere in the city almost any season. The Waverley Market, when compared with other up-to-date halls for entertainments, has earned an unenviable notoriety as a kind of refrigerator in the month of November, a fact which cannot be too strongly impressed on the Corporation, to whom the building is a source of very large revenue, most of which is derived from rents for shows and other entertainments.

Flower shows have ceased to attract as they used to do, and as the holding of them was not part of the original work of this association, I think we should pause and reconsider the whole question afresh. As I have said, we cannot hope for an immediate return at present of the palmy days of our chrysanthemum shows of twenty or even five years ago. Our funds are not increasing, but our association is growing, and its work is increasing. But restricted revenue will strangle its efforts to expand. How, then, are we to exist? For years the revenue of the association has not met its expenditure, and the deficit has had to be made up out of show surpluses. But if these, too, are to cease, how is the work to be carried on? It seems to me that we must move, and move at once.

A HORTICULTURAL LIBRARY.

I have already given you a résumé of what has been done since the starting of the association with regard to a library, museum, and reading room, the acquirement of which, according to its original constitution, was one of its principal objects. In the matter of libraries there has been a great change since the association was formed, and we have now in Edinburgh, and many of our other towns, thanks to the munificence of our honoured countryman, Mr. Carnegie, excellent public libraries. In this city, too, we have a museum in connection with the Royal Botanic Garden, and a very excellent botanical collection is now housed in the Royal Scottish Museum; and as the latter institution is open on certain evenings, this collection, being more accessible, is, perhaps, of even greater value to the working gardener than that of the former institution. So far as we are concerned, the formation of a museum seems now not to be so necessary as it formerly was—if it is necessary at all—but it is otherwise with a library. The public libraries are intended chiefly to supply the wants of the great general reading public, and for purposes of reference; but sectional libraries, it seems to me, in these days of technical training, are more urgently required than ever, for the literature on specific subjects is vast, compared with what it used to be. One could not expect to find in, say, the Edinburgh Public Library all the weekly and monthly and other horticultural papers and magazines, but that is what our young men require, and it goes without saying that a reading room is necessary where such literature is provided. This, then, was what was aimed at in the original constitution. In the revised constitution of 1908 the words "Horticultural Institution" are used, and this embraces all that was stipulated for in the original constitution, and more, if necessary. As for the starting of a journal, this, I think, however much the want might be felt at the time the demand was made for it, is in these days unnecessary. But there is no reason why our "Transactions" should not be improved, more especially as they are the only medium by which members living in distant parts of the country are kept in touch with the centre. Not only should they contain the papers read at the meetings, and the proceedings thereat, but they should be made a medium of reference to papers, etc., of outstanding importance published elsewhere, so that the members may know where to lay their hands on what they want.

FINANCES OF THE ASSOCIATION.

Having said so much about the attainment of one of its objects, I now wish to glance at the financial working of the association. As I have already mentioned, the ordinary revenue of the association does not meet its expenditure, and any deficit there is has to be made up out of flower show surpluses. But if there is a loss on the show, as there was in 1908 and 1909, it means that this, plus the deficit on the association account, has to be taken out of the funds. Now this, I think you will admit, is not only unsatisfactory—it is very bad finance. The association ought to, and must, be self-supporting if it is to go on progressing, and should be quite independent of show surpluses, and, of course, it follows that it should not be involved in losses on the show. How is this to be done? Well, I think that show surpluses should be carried to a reserve fund to provide against losses on the show when these occur, and the revenue of the association from members' subscriptions and interest on its investments should be so adjusted as to cover its expenditure. But it is quite apparent to me that it is impossible to make ends meet in the association account on the present basis of a £2 2s. life membership subscription, and an ordinary annual subscription of 2s. 6d. At the rate of interest we at present receive on our invested funds (and it is likely to decrease when we realise the major portion of our stocks and invest them in trust securities), we are getting about 1s. 6d. yearly out of every life member's subscription, and out of this we are paying 1s. in actual cash for the publications they receive, and the postage of them, leaving 6d. as the price of the season ticket which they get for the show, and to help to cover the working expenses of the association. We are in a little better position as regards the ordinary members, for, allowing the same out of pocket expenses in their case (it is a little more), there remains 1s. 6d. as the price of the show ticket, and the covering of the working expenses of the association, but this is too favourable a statement of their case, for it takes no account of expense connected with members who fall into arrear, which has to be met. According to our method of accounting, the show is not credited with any portion of the interest on the life members' subscriptions, or of the ordinary members' annual subscriptions as the price of admission; if it were, how long would it take to exhaust the life members' subscriptions? And where would the revenue from ordinary subscriptions in the association account be? I put the question to any business man present, Is this good finance?

Now, my proposal—there is nothing alarming about it—is that there should be a graduated scale from, say, £2 2s. downwards to 2s. 6d. in the annual subscriptions, but that none but under-gardeners or other horticultural employees, should be admitted at the lowest figure. I recognise, however, that it might be somewhat unfair to compulsorily raise the subscription in the case of the present members, and I would suggest that they should have the option to continue on the present basis, but that anyone resigning or lapsing would be required to pay on the new scale on rejoining. Only in this way do I think it possible to put the finances of the association on a sound basis, and I appeal to you to give the matter your earnest consideration in the best interests of the association, the welfare of which I am sure you all have at heart.

(To be continued.)

Pear Marie Louise d'Uccle.—I planted a number of cordons of this variety some years ago, and trained them to the front portion of huge buttresses which supported garden walls twelve and fifteen feet high. In front of some of the walls herbaceous plants were grown, other borders being devoted to vegetables of dwarf growth, salads, and herbs. The pear trees made strong growth from the first, and their roots were equally healthy. Some root pruning was done, but when the borders in front were trenched every autumn I had all roots found beyond a certain line cut off; and in a few years' time we found a mass of fibrous roots growing at the edge of the trench portion of the border, and they received much nourishment from the manure put in for the benefit of other crops. The trees proved very remunerative, bearing heavy crops of extra-large pears, which coloured well in these favoured positions. The variety is a free bearer in ordinary circumstances, but when grown as cordons, duly root-pruned, and well fed, the trees respond handsomely.—Geo. Garner.

AILSA CRAIG ONION.

A DOZEN FINE SPECIMENS OF AILSA CRAIG ONION.

When a true and reliable stock of the well known and popular Ailsa Craig onion is cultivated it is highly esteemed, not only for its value as an exhibition variety, but also for general purposes. When cooked whole it stands unrivalled, and, in my opinion, is in every way superior to imported onions. It is of the utmost importance that the best possible strain be secured, and there is yet much to learn in the selection and re-selection of the bulbs.

To obtain specimens of large size and good quality it is necessary to allow a long season of growth, and the seeds should be raised in a gentle heat during the month of January in shallow boxes, and the seedlings pricked off when large enough, allowing sufficient room for the young plants to develop, and to ensure sufficient space for lifting when the planting season comes round. The young onions should be grown in a gentle heat in the lightest place available to ensure a sturdy growth. Gradually harden them off in cold frames before planting out in the permanent quarters.

No crop pays for good cultivation more than this. The ground should be deeply trenched and heavily manured during the winter months, and forked over and made fine just prior to planting, which should be accomplished during good weather in April. Nothing is gained by overcrowding; allow at least fifteen inches between the rows and a foot from plant to plant. Make the soil very fine, and apply plenty of water during drought, and also occasional drenchings of well-diluted farmyard sewage. The surface soil should be frequently stirred with the Dutch hoe, and during showery weather light applications, at frequent intervals, of a patent vegetable manure and soot should be given.

To ensure their keeping satisfactorily the bulbs should be lifted immediately they have matured, removing all loose skins, and using the utmost care to prevent bruises. Onions may be cultivated on the same site for many years.

E. Beckett, V.M.H.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

EAST INDIAN ORCHIDS. — Vandas, ærides, saccolabiums, and allied genera, will now be showing signs of renewed vitality: the points of the roots are becoming green, and the new growth and flower scapes will also soon be prominent. In the case of vandas of the V. tricolor section, the plants often lose some of their basal leaves during the autumn and winter months, and where they have become leggy they should be turned carefully out of their pots, the old compost removed, and the bare basal stems be cut asunder with a sharp knife at the most convenient point, which will have to be governed by the situation of the roots on the stem. This shortening will serve to bring the lower leaves nearer the pot, and will ensure a better appearance when the plants are repotted. The size of the pots used must also be governed by the number of stems or plants placed in them, but before repotting each stem should be secured to a stake or cane sufficiently strong to hold it in position.

POTTING.—Place a suitable crock over the hole at the bottom of the pot. The plant should then be placed in position, and the crocks and potting compost worked in, placing as many roots as may be desirable inside the pot as potting proceeds. Chopped sphagnum moss is all the compost required, working it in with plenty of broken crocks to afford free drainage. It is not so much the potting compost used, but the holding of the plants firmly in position that is desirable. After potting, more will depend on the atmospheric conditions provided for the plants than anything else. If a warm, close, humid atmosphere is provided there is little difficulty found in the successful cultivation of vandas, etc. Being purely epiphytal they derive most of their sustenance from the atmosphere, and unless the conditions are suitable it is only a waste of time to attempt to grow them. The temperature of the East Indian house from the present time should not be allowed to fall below 70 degrees at night, with a rise of five to ten degrees according to the outside conditions during the daytime. Shade carefully for a time after potting, but as soon as the plants have become established in their new material more light may be afforded, and the blinds should be drawn from the roof early in the afternoon, so that the sun may assist in raising the temperature and reducing the atmospheric moisture before the cooler evening temperatures are reached.

VANDAS.—It is a great pity that vandas have not been so extensively grown during late years, and it should not be overlooked by those who grow orchids for exhibition purposes that a finely-grown and flowered plant of the V. tricolor section is a most attractive subject in a group of orchids. The smaller-growing vandas, such as V. Kimballiana and V. Amesiana, are best grown in shallow pans or baskets, so that they may be suspended near the roof. They require but little disturbing, so that when potting is done the compost should be of a lasting nature. About equal proportions of fibrous peat, osmunda fibre, and sphagnum moss is generally found suitable.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

MALMAISON CARNATIONS.—The earliest plants are now showing their flower spikes, and will benefit by an application of an approved fertiliser, as well as occasional waterings with soot water. Damp the stages slightly on bright, warm days to prevent attacks from insect pests. On all occasions keep up a free circulation of air by means of the ventilators; even at night the house must not be closed down, as a close atmosphere is very detrimental to the well-being of Malmaisons. Plants from last year's layers, which are now in 32 and 48-sized pots, must have attention given to staking; one neat stake in the centre will be all that is necessary.

FUCHSIAS.—Old plants that have been rested throughout the winter months may now be brought forward and prepared for starting into growth If an increase of stock is necessary, a few may be placed in a brisk heat to produce cuttings. They will require very little pruning, merely removing the tips of the growths. Plants required for specimens should be pruned hard back, and made shapely. Shake away the major portion of the old soil, and repot in good fibrous loam, leaf-soil, and sand, to which may be added some rough charcoal. An early fruit house is a good place in which to stand fuchsias, where they may receive frequent syringings. Water sparingly until growth has commenced.

PROPAGATION of the various plants for winter flowering must now be taken in hand. In the case of libonias and bouvardias these should be cut back, using the tops for cuttings. Reduce the ball of the old plant and repot, using as small a pot as possible. Take cuttings of heliotropiums, Salvia splendens, marguerites, and other plants for summer and autumn flowering. Where a special strain of coleus is kept, these may also be propagated. It is advisable to make a sowing of mixed coleus seeds, as the many different colours thus obtained make a charming display, and often a variety of especial merit is found.

BASKETS FOR CONSERVATORY.—Well-furnished baskets suspended from the roof produce a delightful effect in the conservatory. Asparagus Sprengeri and the different varieties of nephrolepis are very suitable for this kind of decoration. These should be planted in the baskets at once, and suspended in a warm house to encourage new growth before being taken into the conservatory. Another very suitable plant for baskets is the beautiful Lobelia tenuior, its long trails of fine blue and white flowers making it very attractive. It may also be grown in small pots for edging. Seeds should be sown now.—A. Grubb, Porter's Park Gardens.

HARDY FRUITS.

PEACHES.—A cortinuance of unusually mild weather is beginning to tell on the wall fruit. Peaches and nectarines should, of course, be pruned after all fruit is gathered in the autumn, but even then there will still remain a certain amount of surplus wood, which should be cut out with a grim determination to have the growth well thinned, or a lot of time will be wasted in disbudding and thinning of fruits at the most busy time of the year.

WASHING WALL FRUITS.—A good soap and sulphur wash should be given to all stone fruit after the tying or nailing is finished, using about 2oz. of soft soap, and one large handful of sulphur (the sulphur made into a paste with a little water) to one gallon of hot water, as hot as can be used with an ordinary syringe; thoroughly wet all the wood, and driving the moisture with force into cracks and crevices of the walls. This will act as a preventive of aphis and red spider during the earlier time of growth.

MORELLO CHERRIES.—These should receive attention as soon as time will allow: all old shreds and nails should be removed, and, if laid in a small heap, with a little paraffin poured over them, and burnt, many of the nails will be found suitable for use again. Morello cherry trees should be treated somewhat the same as peaches, tying or nailing in the full length of fruiting wood, but avoiding overcrowding, otherwise small and stony fruits will be the result.

WIRING FRUIT WALLS.—Stone fruits will receive many benefits if accommodated on wires set two or three inches from the walls, with, perhaps, the exception of Morello cherries. These, in my opinion, being the only stone fruit adapted to the nailing system, all others, either through habit of growth or mode of fruiting, receiving more or less injury because their fruits come into contact with the nails. Given a quantity of wire, a few strainers, and eyes, any wall may be set in order for a lifetime by a few hours activity, and the cost of the material is soon saved in the quality of the fruit, not to mention the prevention of injury to walls.

A GOOD KEEPING PEAR.—The most useful pear fit for dessert at the present time is Duchess de Bordeaux. Trees of this variety are very hardy, but, like other pears, better results are obtained if a position on a wall can be given, as it is slow to make growth in the open. The fruits are melting, and of excellent quality, and quite unlike others for keeping well after ripe; the season is from late January until the end of March. The size is medium to large, if reasonably thinned; it is a regular cropper, and altogether an excellent pear.—J. Whittle, Cheveney Gardens.

THE KITCHEN GARDEN.

CARROTS.—Make a sowing of the French Shorthorn type on a rather high and warm south border to follow the forced crops. If the seeds are sown somewhat thicker than is usual with the main sowings the larger roots can be selected at each pulling, and so give a lengthy supply. Draw drills from twelve to fifteen inches apart, and if wireworms are troublesome spread soot along the drills before closing them in.

EARLY POTATOES.—Especially in the northern counties, those who are fortunate enough to possess plenty of rough frames for early vegetable culture have excellent opportunities. A quantity of tubers may be planted under these protections to succeed the forced ones, while any narrow south border may be planted with early varieties. These positions can be afforded coverings as necessary on frosty nights at little time and expense for a few weeks until the crop is safe. May Queen, Field's Seedling, or any of the short-topped kidneys, are suitable for this planting. If the ground is light give a dressing of bonemeal and wood ashes along the trench with the tubers.

TOMATOES.—A sowing of seed should be made to provide plants for the principal crop inside, and also for well-established plants with a truss or two of flower upon them for planting outside against walls, or other shelters, in May or early in June. There are many good varieties, but one cannot make a mistake in including Sunrise and Moneymaker in the list. Pot the early plants as they require it, but leave room in the fruiting pots for top-dressing of soil, etc., to assist the plants when they are in full bearing.

TRIPOLI ONIONS.—Whenever the ground can be found in good order for planting make a good bed of these onions, to give a supply until the spring-sown ones are ready for use. Plant firmly, and on some soils a watering may be necessary. About fifteen inches from row to row, and from ten to twelve inches from plant to plant in the row, is sufficient space for them.

CELERY.—The main crop should now be put in. Sow again a fortnight later for supplying plants to succeed these.

TURNIPS.—Make a small sowing of early turnips, such as Milan. These are liable to run to seed, consequently it is preferable to make fortnightly sowings to avoid waste. The autumn-sown bulbs, unless turnip tops are appreciated, may now be pulled and stored in sand in the root house, and the site manured and dug for future cropping.

GENERAL REMARKS.—The greater part of the wheeling of manure, etc., and the rough work on the quarters should by this be near completion. The edgings may now be put in order, where necessary, either by replanting or straightening them, as the case may be. The walks may then be regravelled, or turned and rolled, so as to give the kitchen garden a neat and pleasing appearance. Reduce shelter to plants as far as it is safe to do so as the month advances. Remove old cabbage and broccoli plants as soon as the tops are cut, and deal with arrears of work actively, to give as much time to the sowing and attention of young crops as possible.—C. Flack, Cholmondeley Castle Gardens.

THE LIVERPOOL HORTICULTURAL ASSOCIATION.
SPRING BULB, ETC., SHOW, April 5th and 6th, 1911.
Prize Money, £82.
SWEET PEA, ROSE, CARNATION, ETC., SHOW. July 19th, 1911.
Prize Money £44 and Five Guinea Silver Bowl.
AUTUMN CHRYSANTHEMUM, ETC., SHOW. November 8th and 9th, 1911.
Prize Money £112, and Twenty Guinea Silver Challenge Cup.
The above Shows will be held in the CORN EXCHANGE, BRUNSWICK STREET, LIVERPOOL. Particulars and Schedules from Secretary, HAROLD SADLER (Finney, Son, and Sadler), Chartered Accountant, 31, North John Street, Liverpool. Telephone: Bank 3,957. Telegrams, "Abatement."

WOLVERHAMPTON
GREAT FLORAL FETE.
July 11, 12, and 13, 1911.
£900 IN PRIZES.
Schedules on application to the Secretary.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, FEBRUARY 28.

Present: Mr. E. A. Bowles, M.A., F.L.S. (in the chair), Sir Everard im Thurn, Sir John Llewelyn, Rev. Canon Fowler, Prof. Boulger, Messrs. E. H. Holmes, A. Worsley, J. T. Bennett-Poë, J. Fraser, H. J. Elwes, R. Hooper Pearson, W. C. Worsdell, W. Hales, J. W. Odell, and F. J. Chittenden (hon. secretary).

GALANTHUS HYBRID (?).—Mr. Bowles showed drawings of the galanthus exhibited by Mr. Elwes at the last meeting, and reported that in structure and appearance it approached certain hybrids of G. Elwesi. He thought it might be a hybrid of that species with G. caucasicus, but the characters shown by seedlings which Mr. Elwes said would probably flower next year would throw further light upon the parentage. Mr. Elwes showed a photograph of a group of the form growing in his garden.

HIPPEASTRUM CALYPTRATUM.—Mr. Worsley showed flowers of the unspotted form of this species from his garden.

LOPEZIA RACEMOSA.—Mr. Odell showed flowering shoots of this plant, and commented upon the peculiar method of pollination.

GALL ON WILLOW.—Mr. Fraser brought stem galls upon Salix purpurea Lambertiana similar in appearance and structure to those produced on S. aurita, etc., by the dipteron Cecidiomyia salicis, which he thought had probably been formed by that insect, although they were usually found attacking only sallows.

HYBRID HIPPEASTRUM.—Mr. Elwes showed flowers from plants the result of a cross between Hippeastrum equestre and H. x Sir William The plants flowered at two years of age, and bore red flowers (as usual with equestre crosses), varying, however, in shade and markings. Mr. Elwes undertook to report later upon these hybrids when more plants from the same cross had flowered.

FASCIATED ORCHID.—Mr. Gurney Wilson showed a plant of Brasso-catt-lælia x Fowleri, on which one of the pseudo-bulbs had forked before flowering, and both forks appeared likely to flower. Mr. Wilson remarked that malformations of plant and flower appeared to be much more frequent in trigeneric hybrids than in the species.

NARCISSUS CYCLAMINEUS x N. MINIMUS.—Mr. Bowles showed a plant of this cross raised by Mr. Chapman.

SAXIFRAGA x BURSICULATA.—A hybrid between Saxifraga Burseriana and S. apiculata, came from Mr. E. H. Jenkins. The plant was remarkably vigorous and free flowering. In the length of the peduncle, its greenish colour, and in the form of the calyx, the hybrid resembled S. apiculata. The whiteness of the corolla and the crimped edges of the petals called to mind S. Burseriana, as do the spiny and glaucous characters of the foliage. In the size of the rosettes and the horizontal spreading of the leaves it resembles S. apiculata. The other seedlings raised from the same capsule included two yellows, one poor and weedy looking, and ten plants indistinguishable from S. Burseriana.

BEETLE BORING BARK OF AUSTRIAN PINE.—Canon Ellacombe sent a piece of the bark of Pinus austriaca bored by a beetle, which Canon Fowler reports upon as follows: "The borings of the beetle in the bark of the Austrian pine are very old, and there is no trace of either beetle or larva to be found. I think it, however, probable that the injury was done by Hybastes ater, which attacks various kinds of pine, both roots and trunk; it is a rather common and widely distributed insect in England, but apparently commoner in Scotland. This is, however, surmise, as it is impossible to be certain; the wood looked as if it had been used for a pergola or fence of some sort, and was quite dry and ancient."

DOUBLE ARUM.—Miss Musgrave, of 63, Cadogan Gardens, S.W., sent a specimen of Richardia africana having the leaf next to the inflorescence wholly white, except for a slight green mottling. Miss Musgrave said that the same plant had produced similar growths in former years, and that each shoot upon it behaved in the same way.

FASCIATION IN PRIMULA MALACOIDES.—The Venerable Archdeacon Donne sent a water-colour drawing of Primula malacoides with a fasciated stem.

Ladies' Bulb Show in Dundee.

This most interesting annual exhibition was held on the 28th ult., when the Drill Hall presented a beautiful and spring-like appearance. The bulbs shown on this occasion were chiefly hyacinths and narcissi, and were grown in ornamental bowls amongst stones, and tended by the lady exhibitors through all the stages of development in rooms, without greenhouse or conservatory aid, and the degree of perfection under such conditions that was noticeable in each exhibit was a revelation to many who had not yet attempted this interesting method of growing spring flowers. Beyond the interest of the occupation and the wholesome rivalry for the first prize, there still exists a laudable object, viz., to bring a day of spring fragrance and beauty to the lives of the patients in the Royal Infirmary, to which the exhibits were all consigned at the close of the show. For the most part competitors are restricted to one, six, seven, nine, and twelve bulbs of certain varieties in each bowl, and in each class a first, or a first and second prize are offered, competent gardeners acting as adjudicators. The example set at Dundee might be imitated by other cities and towns with very pleasant results.

Quite a large crowd assembled at the opening, when Mr. R. B. Don presented the prizes to the winning ladies, tea being afterwards served by Mrs. Howard Hill and Mrs. R. L. Watson.

Gardeners' Royal Benevolent Institution.

The Liverpool Auxiliary achieved a great success at their tenth annual concert, held at the Bear's Paw, on the 3rd inst. These successful gatherings do much to keep the institution in touch with the gardening fraternity in the district, and on this occasion, when Mr. Harry J. Veitch, V.M.H., and Mr. G. J. Ingram accepted the invitation, special efforts were made to ensure the event being a memorable one. Mr. Allan H. Bright, J.P., tendered to the London visitors a generous hospitality during their visit to Liverpool, and Messrs. N. F. Barnes, J. J. Guttridge, H. Middlehurst, the committee, and officers were invited to meet them at dinner at the Reform Club previous to the concert. After the patriotic toasts the host referred in sympathetic terms to the absence of the esteemed chairman of the Liverpool Auxiliary owing to the loss of his wife after a long and painful illness.

The large audience gave evidence of their appreciation of the visit of the chairman and secretary of the Gardeners' Royal Benevolent Institution by a great ovation on their entry to the large hall. The decorations, as usual, were ably carried out by the generous help of Messrs. R. P. Ker and Sons, W. Rowlands, B. Webb and Sons, C. A. Young, and others, who provided well-grown plants and cut flowers, and to a member of the committee for buttonholes for the chairman's table.

During the evening Mr. Veitch delivered an admirable address on the objects and work of the institution, and spoke appreciatively of the assistance rendered by the Liverpool auxiliary, which materially helped the London committee in granting help to the needy. On the motion of Mr. Allan H. Bright, seconded by the Auxiliary's secretary, a vote of thanks, accompanied by musical honours, were accorded to Mr. Veitch and Mr. Ingram for their visit and addresses.

The officers of the society, Mr. C. A. Young, chairman; Mr. J. Finnigan, vice-chairman; Mr. A. J. Crippin, treasurer; and Mr. R. G. Waterman are deserving of much credit for their successful efforts.

National Hardy Plant Society.

A meeting of the council of this society was held at the Hotel Windsor, on February 28. The Executive Committee reported that they had been in communication with various societies, and were co-operating with York Gala, Cardiff, and Leamington, and they hoped to co-operate with the new North of England Horticultural Society. They recommend that the GARDENERS' MAGAZINE gold medal and £3 cash be offered as a first prize, a silver-gilt Coronation medal and £2 as second prize, and £1 as third prize, for a special class for an exhibit of hardy plants of not more than three kinds, arranged in

Eckford's
Giant SWEET PEAS

The Finest Blooms

that blossom on the Sweet Pea Plant are grown from Eckford's famous seeds. Eckford, the Sweet Pea Specialist, supplies only seeds that are bound to give good results. Eckford's seeds flower brilliantly, give brighter colours, longer stems, larger flowers, and succeed even in the most difficult soils.

ECKFORD'S are the largest retailers of Sweet Peas in the world, and do not supply the trade.

Villa (B) Collection.
24 Splendid varieties, suitable for exhibition, 50 seeds of each, **5/6**, post free for cash.

Villa (C) Collection.
12 Splendid varieties, suitable for exhibition, 50 seeds of each, **2/9**, post free for cash.

Villa (E) Collection.
12 Extra varieties, suitable for exhibition, 25 seeds of each, **1/6**, post free for cash.

A specially written Booklet on Sweet Pea Growing given with every order.

For full list of Special Novelties see next week's issue.

FREE. Send a postcard to-day for large Illustrated and Coloured Catalogue. It gives full particulars of all novelties in Sweet Peas for 1911, and contains full list of all flower and vegetable seeds.

HENRY ECKFORD, F.R.H.S.
(Dept. 221), Wem, Shropshire.

the form of a circular bed upon ground space of not less than six feet, and not more than eight feet in diameter, to demonstrate the value of herbaceous plants for bedding purposes; an edging of some other hardy plant may, at the discretion of the exhibitor, be used to heighten effect. They recommend also a silver-gilt Coronation medal for the best exhibit of alpines at the June show of the North of England Horticultural Society, if arranged; and that a silver-gilt Coronation medal be offered to the Cardiff Society for the best exhibit of hardy plants or flowers in the show, to be awarded by a deputation appointed to attend.

The report was adopted. A model schedule was considered, and it was decided to take the views of the members of the council not present before settling same.

It was resolved to issue a special circular appealing for members. Designs were submitted for the First Class Certificates and Certificates of Merit, which were adopted.

Mr. Gill, of Penryn and Falmouth, exhibited a new hardy primula (Primula Winteri), from the Himalayan Mountains snowline, 12,000 feet elevation. The species has only been seen previously in herbarium specimens, which were sent over to this country some forty years ago. It will prove a great acquisition to the growers of alpines, and was awarded a First Class Certificate.

The question of pansies and violas was discussed, and it was decided to have a good exhibit of new varieties at a future meeting, and to add a specialist to serve on the council to look after their interests.

A vote of thanks was unanimously accorded the donor of the three silver-gilt Coronation medals.

Leeds Professional Gardeners.

The members of this horticultural society recently held their forty-fourth annual dinner at the Green Dragon Hotel, Leeds. Alderman W. Penrose-Green presided, and was supported by Councillor Leslie Owen in the vice-chair. There was an excellent attendance, and the Chairman referred to the long association of his firm with the society, so long that he felt honoured to continue that support by presiding on this their annual dinner.

The Chairman of the City Parks Committee, Councillor Leslie Owen, in proposing "The Leeds Gardeners' Lodge," referred to the fact that horticulture did not obtain assistance from educational centres such as the gardener could avail himself of, and he heartily congratulated the society upon its very low management expenses. He humorously remarked, viewing the balance-sheet, that the only fault he could find was a vacant space, which he hoped would be filled by honorary members ere long. Mr. Donoghue, responding as the society's president, briefly referred to its progress and difficulties during its earlier history. Unfortunately a great many gardeners gave their sympathy, but when invited to join remarked they would "Wait and see." He never knew anyone get much out of a business until first some money was paid into it. The society, since its inception, had distributed over £3,000 amongst those in need of such assistance. They had much to feel grateful for, as they had benefited from honorary members to the extent of nearly £700, which was a valuable asset to the society, and carried with it no liabilities. He heartily thanked Councillor Owen for his remarks, which, he felt confident, would stimulate members to increase their numbers. To the horticultural Press, which had afforded much valuable assistance by publishing annual reports, he also tendered hearty thanks.

The Rev. Bernard Hall, as representing the North of England Horticultural Society, referred to the necessity for organisation for all branches of horticulture. The Leeds Lodge, amongst others, would, he hoped, entertain a mutual understanding with the N.E.H.S. Referring to the recent appointment by the London County Council of an army officer as their chief of parks, he said that had any sufficiently well-organised body of horticulturists been in existence such an injustice might have been prevented.

Mr. G. W. Jessop, in a few well-chosen remarks, proposed the toast of "Gardeners and Gardening." The society's energetic secretary, Mr. George Carver, was paid a high tribute for the efficient and unselfish work which at all times he has given to the society. It was stated that Mr. John Franklin would this year complete his twenty-one years' service to the lodge as treasurer.

The Professional Gardeners' Society is now an Oddfellows' Lodge. Its income for the year 1910 was £231 4s. 4d., and expenditure £138 4s. 8d. The accumulated funds amount to £1,765 19s. 1½d., of which £1,700 is invested in Leeds Corporation Stock.

Croydon Gardeners' Society.

A lecture on "Pretty Gardens and Flowers" was delivered at the recent meeting of the above society, when the attractiveness of illustrated lectures was again shown by the big attendance at the Sunflower Temperance Hotel, every seat being occupied.

The lecturer, Mr. M. E. Mills, Coombe House Gardens, displayed a capital series of lantern slides, many of them being made from photographs taken by himself. The views were very varied, some being of local gardens and specimen plants found therein. The Royal Gardens, Kew, and the Wisley Gardens of the Royal Horticultural Society also furnished pictures beautiful and impressive. To the gardener these views serve a double purpose, for they are not only a source of recreation, but they serve as a copy in remodelling or improving gardens under their charge. Cultural directions were given, and were listened to with great interest. The art of photography is closely associated with the gardener's life, and he cannot do better than take it up as a hobby, for he is oftentimes the observer of Nature's best pictures, and, being able to record the beauty of these scenes, they serve him in after years, reminding him of the many details connected with it, whether in planning a new garden or reviving the culture of a plant under his charge. Mr. Mills appears to be a student ever mindful of this, and in the gardens at Coombe House he finds plenty of subjects to work upon.

Another item of great interest at this meeting was the portrayal of colour photography undertaken by one of the society's vice-presidents, Mr. J. Noaks. Although an amateur in this work, he showed a dozen or more unique slides from his own photographs, recently taken. The colours were easily distinguished, and one could imagine the real flower border or group of flowering plants in all its glory.

With such an educative and pleasing entertainment the evening was well spent, and the members were unanimous in their praise of the views and cultural instructions so ably given by the lecturer.

Mr. R. Cleveland received a vote of thanks for an exhibit of grafted fruit trees in pots.

Woolton Gardeners' Society.

A meeting of this society was held at the Mechanics' Institute on the 2nd inst., Mr. G. Haigh being voted to the chair.

Mr. Charles G. Girdham, of Hale, selected "Ornamental Plants" for his subject, and this he treated throughout in a most able manner. In dealing with so large a subject the lecturer went out of the beaten track, giving his hearers the credit of knowing the leading requirements of most of the plants, and confining his remarks to those special needs, which, if observed, lead to success, such as the special seasons for transplanting and for pruning.

As usual, questions were asked, which brought out further information of a practical character. A hearty vote of thanks was accorded to Mr. Girdham for his able address.

ANSWERS TO CORRESPONDENTS.

◆

PLANTING SWEET PEAS.—S. B., Colchester: Assuming that you refer to sweet peas raised in pots, and duly hardened in a cold frame, then the first week in April is about the best time for planting the seedlings where they are to grow and bloom. Attention must be paid to the weather, and planting should be deferred a few days if the soil is wet and the weather very cold.

DOUBLE STANDARDS IN SWEET PEAS.—M. E. J., Elstree: We have already pointed out that at the Sweet Pea Conference, held in London last December, the experts defeated a proposal to regard double standards as a defect. A good many present at the Conference did not vote upon the subject, but of those who did vote there were twenty-five for the proposal and thirty against it, hence, if regard is paid to this finding, then double standards will not be regarded with disfavour at the exhibitions of the present year. We may again point out that while, from an exhibitor's and from a florist's point of view, flowers with double standards may not be always regarded with favour, there appears to be a very strong opinion in their favour when considered from the market grower's point of view, the idea being that flowers with double standards will look better when bunched, and last longer than those with but one standard.

TRIMMING IVY ON WALLS.—J. W. G., Derby: You should proceed at once to make the ivy quite tidy, and this may be done in either of two ways. One plan is merely to cut back closely all the shoots that stand out from the wall, and all that have grown up close to the gutters and window frames. Another plan is to closely clip all the leaves and growths hard back to the stems that cling to the wall, following the clipping (with hedge shears) with a good brushing of the whole surface to dislodge dead leaves, birds' nests, and any accumulated rubbish. The chief objection to this method is that the walls look bare, and the stems of the ivy rather ugly for a few weeks, but this is compensated for by the knowledge that everything has been spring cleaned, while the new leaves that presently develop have a delightful appearance; such is never seen when they appear amid the older foliage. No harm appears to result from this drastic method, at least not to old-established ivy, and we have in mind a very pretty house, where it has been carried out annually for thirty years, and where, so far as one can judge, another thirty years of similar annual treatment in March, will do the ivy no harm.

SHALLOTS.—M. C. W., Bury: Planting should be no longer delayed. If the ground was well worked and manured last autumn then it should be broken down, made fine on the surface, and raked level at once, weather permitting. Set out the rows one foot apart, and put the bulbs about ten inches apart in the rows, simply pressing them into the soil to two-thirds of their depth. No attention will be needed afterwards other than hoeing, and if the plantation is made in a warm position the crop will be ready to harvest by the end of June or early in July. If extra fine produce is desired then mulch the bed with half-decayed manure when vigorous growth has commenced.

OUTDOOR FIGS.—B. H., Salisbury: Remove the protecting material and fasten the branches into position. Keep a mat or two handy, so that a little necessary protection may be afforded should cold weather return.

INSECT-INFESTED SEEDS.—F. E. L., Lincs.: Probably the method advocated by the Board of Agriculture for killing insect life in grain would serve for seed generally. It is given as follows: "Fumigation with bisulphide of carbon is a very satisfactory way of ridding grain of the insects. The grain to be treated should be put in a bin

HALLAM'S
GOLD MEDAL
SWEET PEAS

12 Good Waved Varieties 2/-
13 Best " " 3/-

The two collections together 4/6 with Miriam Beaver, re-selected (10), gratis. Other collections, 1/-, 1/3, 1/9 2/3. All Post Free.

All 'WAVED' kinds guaranteed ENGLISH GROWN.

Catalogue free to any address.

HALLAM'S (Dept. 5),
MOSELEY, BIRMINGHAM.

R. D. BLACKMORE'S

PEACH LIBRA.

Award of Merit, R.H.S.

Midseason; very large and heavy; of high quality and goodly appearance. Large trained Trees and Pyramids, with well-ripened fruiting wood.

10/6, 15/- and 21/- each.

See Illustration page 165 in last week's issue.

WILL TAYLER, Hampton, Middlesex.

Perpetual-Flowering CARNATIONS.

This year's Novelties and all the Leading Varieties.

Send for descriptive Catalogue of 80 varieties with particulars when to stop them.

C. ENGELMANN, CARNATION GROWER,
SAFFRON WALDEN.

STALKER'S Forest Trees, Fruit Trees. Roses, Bulbs, and Seeds

Are known all over the world, and cannot be surpassed for hardiness and quality.

Famous for Quality and Cleanliness.

D. STALKER & SON,
Government Contractors,
Catalogues Free. NAIRN, N.B.

Rhododendrons.

Crimson, White, Pink. 250 Choice Named Varieties, fine foliage, well budded, for potting or planting. 1 to 1½ ft., 1½ to 2 ft., 2 to 2½ ft., 2½ to 3 ft., 3 to 4 ft., 4 to 5 ft., 5 to 6 ft., 6 to 7 ft. List of sorts and prices on application; many thousands to offer. Standards in all sizes.

All Home-grown. Inspection Invited.

F. STREET, Heatherside Nurseries, CAMBERLEY.

ORCHIDS
EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS, and an endless variety of Choice ORCHIDS.

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

Large Stock of

HARDY WATER LILIES,

Coloured, delivered in all Countries by Parcels Post.

New beautiful varieties unpublished.

NELUMBIUMS, etc., etc.

B. LATOUR-MARLIAC, Nurseryman
At Temple-sur-Lot (FRANCE).

Catalogue Free on Application.

TO GARDENERS.—WANTED GERANIUM CUTTINGS, Queen of Whites, P. Crampell, King Edward VII., F. of Spring, Jacoby, Denmark, etc. sample and price per 100 or 1,000; or would exchange Palms Tree Carnations. MANAGER, Tresco Nurseries, Ipswich.

HOLLYHOCKS. CHOICE DOUBLE-FLOWERED. Strong plants to bloom this year; White, Yellow, Rose, and Crimson; separate or mixed; per doz., 4s.; six for 2s. 3d. Carriage paid. DANIELS and SON, Wymondham, Norfolk.

Fruit Pergola as recently erected.

Have a Fruit Pergola this Summer!

Charming effects and excellent results can be obtained by training fruit trees on our improved Arched Espaliers. Order now, and get your fruit trees planted in good time.

No. 103 Arched Espalier, 8ft. high, 5ft. wide, painted, 9/6 per yard.
Cheaper patterns 6/- and 3/- per yard.
Catalogue No. 153A of Espaliers, Rose Trainers, Garden Arches, Pergolas, etc., free.
HUTS FOR THE GARDEN, POTTING SHEDS, FRUIT ROOMS, TOOL HOUSES, ETC.

BOULTON & PAUL, Ltd., Specialists, NORWICH.

Wireworms, Etc.

"My gardener is delighted with Vaporite, it kills insects very quickly. The land here is very light, and infested with wireworms."
Mrs. E. A. G., Notts.

Carrots, Onions, Potatoes.

"I find after using Vaporite in the garden I had a much better lot of carrots, also onions, and the potatoes were much better." T. C., Staffs.

VAPORITE ENSURES HEALTHY PLANTS & VEGETABLES

To obtain clean and healthy plants and vegetables apply Vaporite to your Garden, NOW, when digging (1 lb. to 8 square yards). By doing this you ensure having the soil free of wireworms, leatherjackets, etc., before planting. Soil insects do far more damage to plant life than most gardeners realize, until they have seen the great improvement after using Vaporite.

VAPORITE
THE ORIGINAL SOIL INSECTICIDE

CUT OUT THIS COUPON.

Please send, free of charge, your Illustrated Booklet No. 45, describing Vaporite and its uses.

NAME ....

ADDRESS ....

....

PRICES—In Tins, **9d.**, **2s.**, **3s.**, and **4s. 6d.** (of all Seedsmen). In Casks, **7s. 6d.** per ½-cwt. (carr. paid), **12s. 6d.** per cwt. (carr. paid).

THE VAPORITE-STRAWSON CO., LTD.
DEPT. E,
Spencer House, South Place, LONDON, E.C.

PERPETUAL CARNATIONS.

1911 Illustrated Catalogue Ready & FREE.

We have a Wonderful Collection of Novelties this Season, including our

"DUCHESS OF DEVONSHIRE."

The best all-round Perpetual Crimson ever raised.

Read our "TREATISE ON CULTURE" 1/-, Free.

YOUNG & Co., Gold Medallists, **HATHERLEY, CHELTENHAM.**

SPLENDID Pea Bough and Flower Sticks, cheap, in large or small quantities; well adapted for Sweet Pea growers; price and particulars on application. GEORGE DREWITT, Estate Offices, Guildford, Surrey.

PEA TRAINERS, The "Paragon" and "Peafold" (patent), made 4ft., 5ft., and 6ft. high, and any length. Prices from 8s. 6d. per set, carriage paid. Write for leaflet. THE PEA TRAINER CO., Bridge Street, Banbridge.

or air-tight receptacle, and the bisulphide of carbon poured into a saucer or shallow vessel and laid on the top of the grain. The liquid quickly volatilises, and the fumes, being heavier than air, sink down through the grain and kill all insect life; 1lb. of bisulphide of carbon is sufficient for 100 bushels of grain. The air-tight receptable should be kept closed for 24 to 48 hours. A shorter time would do for small quantities of grain. In treating a store or mill, 1lb. of bisulphide of carbon is sufficient for every 1,000 cubic feet of space. Before entering the mill after such fumigation the doors and windows must be thrown open for an hour or two in order that the place may be well ventilated. If necessary a second fumigation might follow the first. Bisulphide of carbon has a very disagreeable odour, and as the fumes are poisonous they should not be breathed, though a little will do no harm. It is also explosive, and must be handled with care. No naked light should be brought near it, nor should the operator smoke."

SWEET PEAS AND THEIR CULTIVATION.—S. E. G., Bedford: Yes, there was a slight error in the announcement on p. 160, concerning "Sweet Peas and Their Cultivation," by C. H. Curtis. A new and third edition was published in 1910, and this, in addition to being up-to-date, both as regards cultural methods and the selection of varieties, is more comprehensive in scope. You could not possibly have a more trustworthy guide to the cultivation and exhibition of sweet peas, and as an aid in the winning of prizes for these fragrant flowers it will be found invaluable. The book can be obtained from the publishers, Messrs. W. H. and L. Collingridge, 148 and 149, Aldersgate Street, E.C., for 1s. 2d., post free; or for 1s. 8d., post free, bound in cloth.

NAMES OF PLANTS.

M. S., Windsor.—Callicarpa purpurea.

P. B., Chertsey.—1, Anemone hepatica; 2, Adonis amurensis.

D. F. J., Plymouth.—1, Dendrobium Wardianum; 2, D. nobile; 3, Cypripedium aureum.

S. V. P., Cromer.—1, Cypripedium Calypso; 2, Odontoglossum Warnhamense; 3, Epiphronitis Veitchi.

H. N. O., Lincoln.—1, Rhododendron præcox; 2, Cornus mas; 3, Erica carnea; 4, Iris stylosa.

H. C. C., Wrexham.—1, Coleus thyrsoideus; 2, Spiræa confusa; 3, a spray of Ribes sanguinea; 4, Primula frondosa.

G. M. K., Harrow.—1, Daphne indica rubra; 2, Azalea amœna Hexe; 3, Begonia Saturne; 4, Boronia megastigma.

M. H. S., Blackwater.—The heath is probably Erica carnea; the other specimen we do not recognise, please send when in flower.

S. C., Malpas.—1, Saxifraga apiculata; 2, Gaultheria procumbens; 3, Pinus strobus; 4, Thuia obtusa; 5, Adiantum Williamsi; 6, Doodia aspera.

OBITUARY.

◆

MR. ARTHUR RAWLINGS.

We regret to learn of the death of Mr. Arthur Rawlings, late of the Dahlia Nurseries, Romford, who passed away after a short illness on February 14, at Grand Forks, British Columbia, in his fifty-fourth year. After the death of his partner, Mr. John Rawlings, who died in June, 1890, Mr. Arthur Rawlings lost interest in the business at Romford, and, like his father, the late Mr. George Rawlings, he did not take kindly to cactus and decorative dahlias, and somewhat resented the high place these were taking in the floricultural world. In the autumn of 1900 he went out to British Columbia, and embarked in fruit growing, but, unfortunately he settled in what proved to be a bleak situation, and it is feared that the disappointment he experienced helped to hasten his end.

TRADE NOTES.

Messrs. William Paul and Son, Waltham Cross, Lim., have received a renewal of their Warrant of Appointment (already held under their late Majesties Queen Victoria and King Edward VII.) as rose growers to his Majesty King George V., and also a Warrant of Appointment as rose growers and nurserymen to her Majesty Queen Alexandra.

The brochure issued by the Native Guano Company, of 29, New Bridge Street, Blackfriars, London, containing the reports from various parts of the country on the use of Native Guano is of much interest for the evidence it contains of the usefulness of the fertiliser in the cultivation of the various garden and farm crops. We have not counted the reports, which are throughout most favourable, but there must be a goodly number, for they occupy over sixty pages, and they are so short that they probably average eight to the page. We would add as a point of practical importance, that this is the thirty-fifth series of reports on Native Guano that have been issued by the company.

GARDENING ENGAGEMENTS.

Mr. F. H. Harris, formerly head gardener to Herbert Morrell, Esq., Streatley House, near Reading, has been appointed head gardener to the Right Hon. Viscount Galway, at Serlby Hall, Bawtry.

Prudential Assurance Company, Lim.—The directors state in their annual report for the year ending December 31, 1910, that in the ordinary branch the number of policies issued during the year was 80,311, assuring the sum of £7,462,496 and producing a new annual premium income of £446,473. The premiums received during the year were £4,806,121, being an increase of £96,014 over the year 1909. The claims of the year amounted to £3,240,957. The number of deaths was 8,465, and 19,157 endowment assurances matured. The number of policies in force at the end of the year was 903,896. In the industrial branch the premiums received during the year were £7,426,317, being an increase of £254,547. The claims of the year amounted to £2,805,069, including £222,506 bonus additions. The number of claims and surrenders, including 4,600 endowment assurances matured, was 371,023. The number of free policies granted during the year to those policyholders of five years' standing and upwards who desired to discontinue their payments, was 145,187, the number in force being 1,608,935. The number of free policies which became claims during the year was 42,660. The total number of policies in force in this branch at the end of the year was 18,820,427; their average duration exceeds eleven and three-quarter years. The assets of the company, in both branches, as shown in the balance-sheet, after deducting the amount written off securities, are £77,529,226, being an increase of £3,327,525 over those of 1909.

CONTENTS.

PAGE
A Fine Specimen Cattleya 185
Ailsa Craig Onion 193
Among the Roses 183
Answers to Correspondents 196
Early-flowering Chrysanthemums 191
Exhibitions and Meetings 195
New Plants, etc. 195
Notes of the Week 188
Pear Triomphe de Vienne 181
Preparing Ground for Lawns and Greens ... 187
Protection of Wall Fruit Trees 190
Raising Tomato Plants for Outdoor Culture 186
Rock Garden Plants from Seeds 185
The Spring Pruning of Shrubs 190
Work for the Week 194

ILLUSTRATIONS.

Portrait of Mr. W. F. Cooling, 182; Cattleya Trianæ Hydra, 185; Romneya trichocalyx, 186; Pear Triomphe de Vienne, 187; Saxifraga Bursiculata, 188; Cymbidium Veitchi, 189; A Group of Early-flowering Chrysanthemums, 191; A [illegible] Fine Specimens of Ailsa Craig Onion, [illegible]

FORTHCOMING ENGAGEMENTS.

MONDAY, March 13.—United Horticultural Benefit and Provident Society, Annual Meeting at Royal Horticultural Hall, Westminster, at 8 p.m.

TUESDAY, March 14.—Royal Horticultural Society; Committees meet at 12 o'clock; lecture at 3 o'clock on "The Origin of Varieties," by Mr. G. F. Scott Elliott; Scientific Committee at 4 o'clock. An exhibition of forced bulbs will be held on this occasion and continued on Wednesday.

Horticultural Club. House dinner with lecture by Mr. A. D. Cotton on "Fungi," at the Hotel Windsor, Victoria Street, S.W., 6 p.m.

THURSDAY, March 16.—Linnean Society meets.

FRIDAY, March 17.—National Dahlia Society, Conference on Dahlias at "Carr's" Restaurant, Strand, W.C., at 6 p.m.

TUESDAY, March 28.—Royal Horticultural Society; Daffodil Committee meets at 11.30 a.m.; Fruit, Floral, and Orchid Committees, at 12 o'clock; lecture at 3 p.m. on "Alpines in their Native Homes," by Mr. R. C. Reginald Nevill; Scientific Committee, at 4 o'clock.

ACCOUNTANT and SEEDSMAN REQUIRED for the FORESTRY DEPARTMENT of the EAST AFRICA PROTECTORATE for a tour of 30 months' residential service with possible extension. Age between 25 and 40 preferably unmarried. Strict medical examination; vaccination if necessary.

Salary £130 a year, rising to £200 by annual increments of £10, with free quarters, or an allowance in lieu thereof. Free second-class passage out and home again on satisfactory termination of engagement. Half-salary on voyage out, full salary from date of arrival in the Protectorate. Three months' leave on full pay after 30 months' tour, to be followed by three months' leave on three-quarter pay if the person engaged is returning to the Protectorate.

Candidates should be thoroughly well versed in accounting, and capable of undertaking the work of Accountant and Seedsman.

Application by letter (no special form required) stating age, whether married or single, giving full particulars of experience, accompanied by copies of testimonials (not originals) with names and addresses of referees of whom enquiries can be made as to capabilities and character, will be received by the Crown Agents for the Colonies, Whitehall Gardens, London, S.W., up to the 20th March.

Quote M 4623 on left-hand top corner of application. This advertisement contains all the information available concerning the appointment.

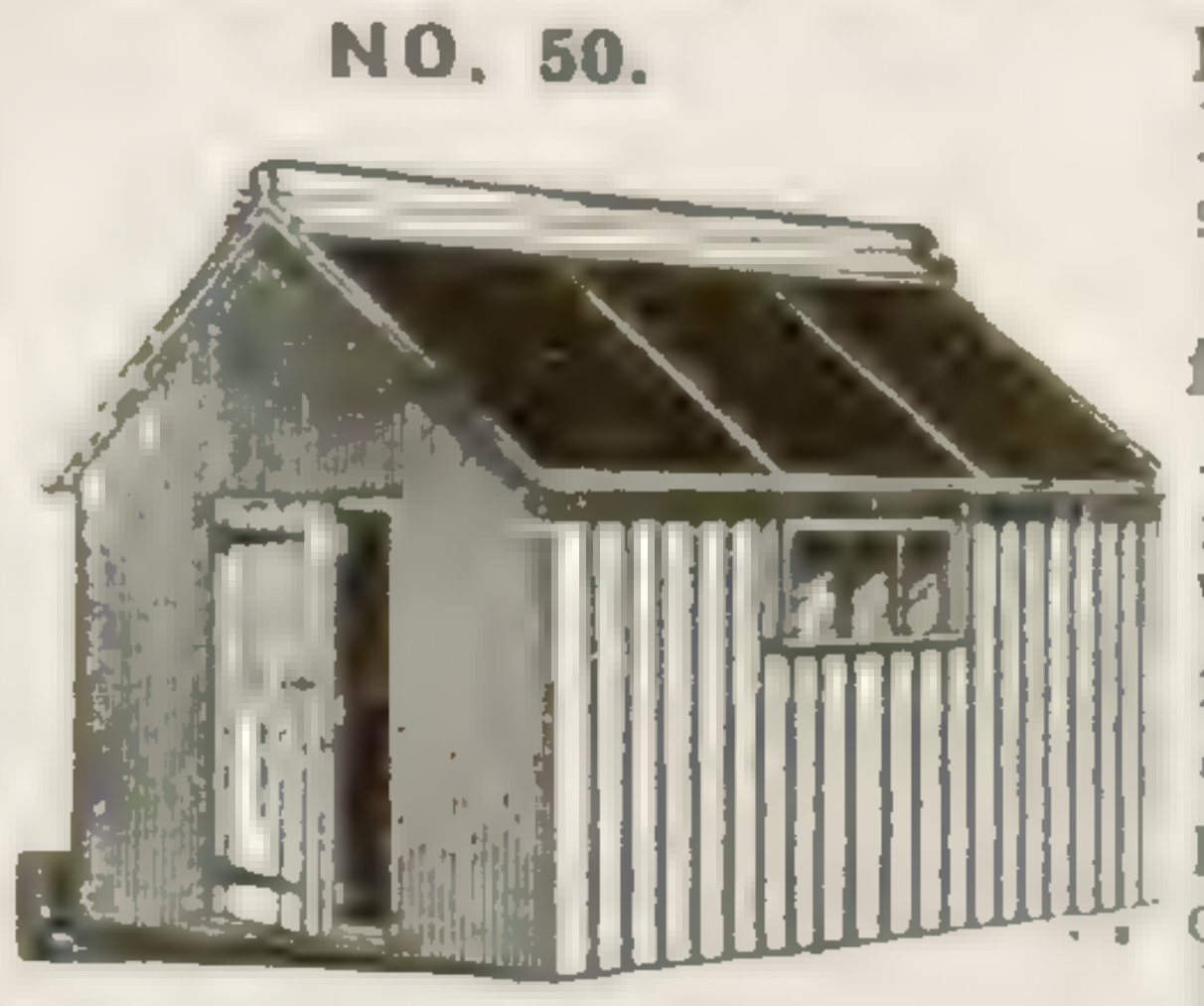
"MILLER'S RED VICTORIA."
Britain's finest coloured apple. F.C.C., R.H.S., 1910.
Large fruit, heavy and continuous cropper.
Maiden Trees, 2/6; few 2 years, 5/- each.

"QUEEN MARY" PYRETHRUM.
A.M. Birmingham, 1910. New Coloured Pink, double, large, distinct, and earliest to bloom. Plants 2/6 each.

G. W. MILLER, F.R.H.S., CLARKSON NURSERIES, WISBECH.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

Portable Buildings. Made in complete sections, best quality Red Deal (not inferior Foreign Match Boards as other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

Sizes.		Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
Established 70 Years BEDFORD.
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

MANY YEARS REPUTATION.
EUREKA WEED KILLER
LASTING RESULTS—NO NEW EXPERIMENT.
1/9 TIN FOR 25 GALLONS
6/- TIN FOR 100 GALLONS
LARGER SIZES AT LOWER RATES
SOLD BY AGENTS.
MANUFACTURERS: TOMLINSON & HAYWARD LTD LINCOLN.
IF ANY DIFFICULTY SENT DIRECT—PAID

THE LANGUAGE OF FLOWERS

"Feed us, we pray you, with

CLAY'S FERTILIZER

and our rare beauty and fragrance will repay you."

It is SAFE, CERTAIN, QUICK-ACTING and ECONOMICAL.

Flowers Grown with CLAY'S FERTILIZER catch the Judge's eye.

CLAY'S LONDON FERTILIZER
TRADE MARK.

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK AS AT SIDE.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

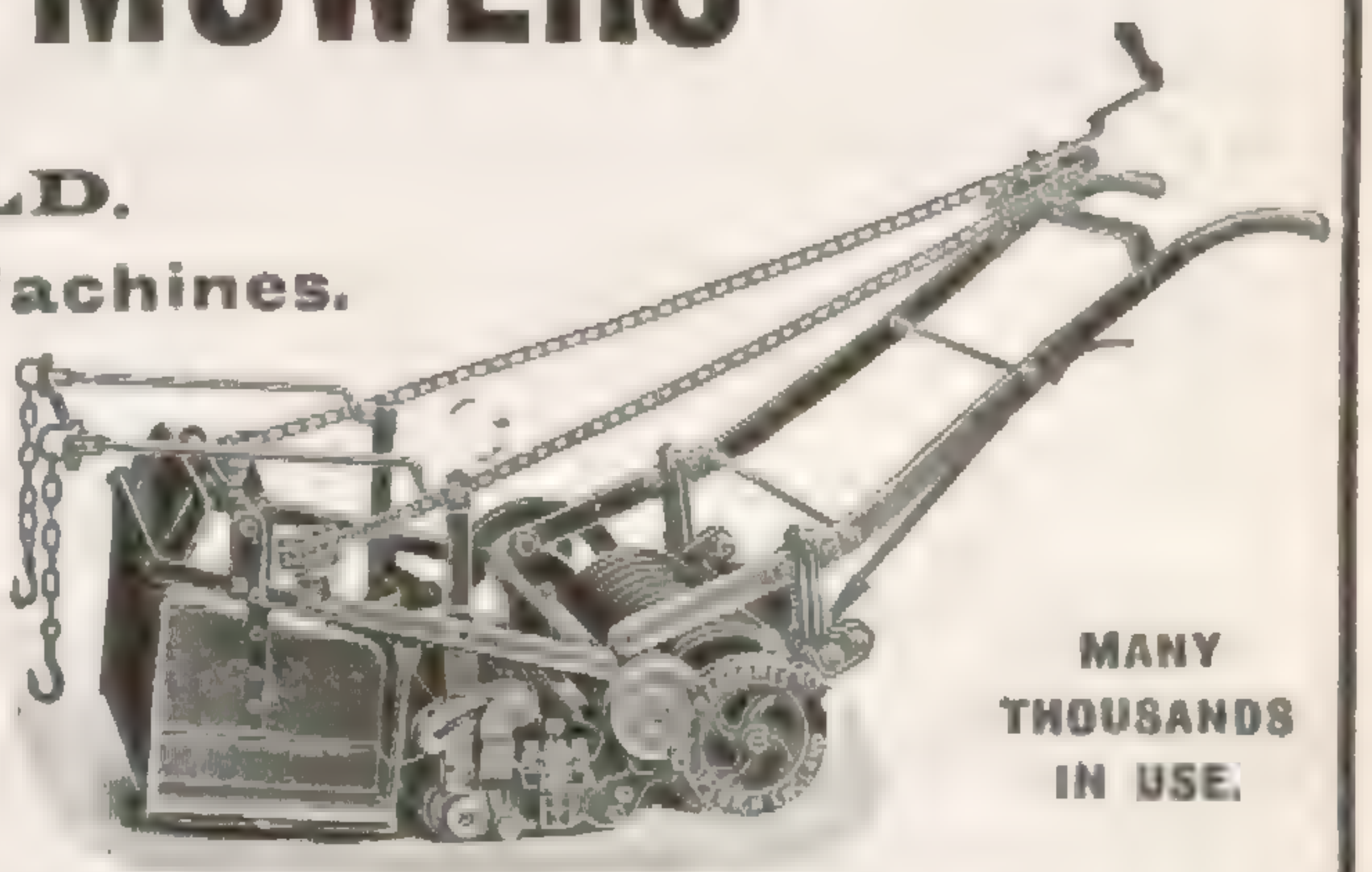
CLAY & SON, Manure Manufacturers and Bone Crushers, **Stratford, London, E.**

RANSOMES' LAWN MOWERS

Appointed by Royal Warrant.

THE BEST IN THE WORLD.

Possess improvements contained in no other Machines.



Recent Awards.

3 GOLD MEDALS.
5 SILVER MEDALS.

SUPPLIED BY ALL IRONMONGERS.

MANY THOUSANDS IN USE.

HAND POWER MACHINES. In all kinds and sizes.

MOTOR LAWN MOWERS. The first brought out. Reputation Established.

HORSE and PONY MOWERS. The best large machines.

ILLUSTRATED CATALOGUES FREE ON APPLICATION TO— **RANSOMES, SIMS & JEFFERIES, LTD., THE ORWELL WORKS, IPSWICH.**

BENTLEY'S
WEED DESTROYERS

Utterly annihilate Weeds, Moss, Dandelions, and all other Weeds on Garden Walks, Carriage Drives etc.

HAVE THE LARGEST SALE IN THE UNITED KINGDOM!
ARE THE MOST POWERFUL MANUFACTURED!
ARE THE MOST PERMANENT IN EFFECT!

LIQUID (Poison).

Double Strength (1 to 50).

		£	s.	d.
3 gallons, to make	153 gallons	£0	10	0
6 " "	306 "	0	18	0
12 " "	612 "	1	13	0
20 " "	1,020 "	2	7	6
40 " "	2,040 "	4	12	6

Special Concentrated Strength (1 to 80).

		£	s.	d.
3 gallons, to make	243 gallons	£0	14	6
6 " "	486 "	1	7	0
12 " "	972 "	2	6	0
24 " "	1,944 "	4	10	0

BENTLEY'S DAISY KILLER.

(Lawn Sand.)

Completely eradicates Daisies, Moss, and other Weeds which infest **Lawns, Tennis Courts, Croquet Grounds, Bowling Greens, Golf Courses, etc.**, and afterwards improves the tone and colour of the sward.

1 ton, **£19**; 10 cwts., **£9 15s.**; 5 cwts., **£5**; 1 cwt., **£1 1s.**; 56 lbs., **12s.**

TINS, **5s.**, **2s. 6d.**, and **1s.** each.

Carriage paid on **7s. 6d.** orders and upwards.

WHOLESALE MANUFACTURERS,
JOSEPH BENTLEY, LIMITED,
Chemical Works,
BARROW-ON-HUMBER, HULL.

WALWYN T. CHAPMAN,
Terra Cotta Works, CLEETHORPES.

For Vases, Sundials, Window Boxes, Lions, Balusters, Arches, Garden Ornaments, &c.

THE FAVOURITE WEED KILLER.

SANDWITH'S
PREMIER
WEED
KILLER

As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for **6/-**; drum, **2/-**. 12 galls. for **16/-**; drum, **6/-**. 20 galls. for **26/8**; drum, **10/-**. 40 galls. for **50/-**; drum, **20/-**.

EITHER LIQUID OR POWDER.

Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,
The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

FLOWER POTS.

SANKEY'S
FAMOUS
GARDEN
POTS

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant

Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

HAVE YOU A GARDEN?

If so Don't Risk Catching Cold when you can avoid doing so by wearing our celebrated "G" **BRAND GRAINED CLOGS** Lined with Fine White Felt Only **4/6** Postage Paid.

Any size, Men's or Women's, all ready for posting off.

Our No. 688 in List.

Note.—All sizes are as ordinary Boots. If you forget your size draw a pencil round your stocking foot and send to us. **THE GARDEN BOOT WAREHOUSE,** 6, Wellington Street, GLASGOW.

THOMSON'S Celebrated
VINE, PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES

UNRIVALLED FOR ALL PURPOSES
THE RESULT OF MANY YEARS

SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; grapes, peaches, melons, stove and greenhouse plants; four and a-half and eleven years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head); general all-round knowledge; life experience in large and well-kept establishments; 13 years Head in last situation, age 39; married; gentleman will recommend. T. HARRIS, 2, Mill Lane, Cheshunt, Herts.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushrooms, ridge or flat, Kitchen, Lawn, Flower Garden. Special Prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (Head Working, where two or more are kept); good all round; can be well recommended; married when suited; age 36. PEARCE, 10, Roxwell Road, Shepherd's Bush.

GARDENER (Head Working), requires SITUATION; experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants; Flower and Kitchen Garden, Hardy Fruit, etc.; good references; married, no family. W. S., 73, Allen Street, Maidstone, Kent.

GARDENER (Head Working), married, no family; age 36; life experience in all branches, Inside and Out; excellent references; Wife dairy, or house, if required. A., 27, Effingham Road, Reigate, Surrey.

GARDENER (Head Working).—Gentleman strongly recommends his foreman, who has been with him for 5½ years; thoroughly understands the cultivation of first-class fruits, flowers, and vegetables, and the general routine of a well-kept garden; married; age 32. STEVENS, The Lodge, Boston House, Brentford, W.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working, where three or more are kept).—Mr. LAST, The Gardens, Homewood, Chislehurst, Kent, can with every confidence recommend his Foreman, W. WAITE, as above; 13 years' experience gained in good establishments; five years present situation.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five, age 30, married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working); late with W. H. Herbert, Esq., Coventry, previously Mill House, Halifax; Vines, Peaches (speciality), Early and Late Forcing, Stove, Greenhouse Plants, Herbaceous Rock Plants, Roses, Flower, Kitchen Garden, general upkeep Land, stock; 18 years Head, references unimpeachable. LOWE, Wylde Green, Birmingham.

GARDENER (Head Working, where two are kept, or good Single-handed), experienced in all branches; age 30. C. WOOD, Manor Cottages, Clayton Road, Hook, Surbiton, Surrey.

GARDENER (Head or Single-handed); age 30, married; life experience, Inside and Out; excellent character, well recommended. S. GANDY, Ponders Lodge, Margaretting, Essex.

HUGH LEWIS, Esq., wishes to highly recommend his GARDENER (Head), many years' experience in all branches; expert in Hardy and Alpine Plants and all forms of Gardening on natural lines; married, one child. Apply to W. INGWERSEN, Mayfield, Harewood Road, South Croydon.

LADY LUARD strongly recommends C. RUSHEN as Head Gardener, where two or three are kept; life experience; glass and all other branches; most hard working; leaves through break up of establishment. Write LADY LUARD, Witham, Essex.

MAJOR HOLROYD, Ropley Manor, Alresford, Hants, wishes to highly recommend his late HEAD GARDENER; 18 years' practical experience in all branches of gardening Inside and Out; Single; age 32; excellent references. SCREEN, Coombe Hill Gardens, Butlers Cross, Tring, Bucks.

MR. E. DYSON highly recommends his GARDENER (Second) as Head Working; life experience Vines, Peaches, Melons, Carnations; close two years here; excellent references; age 27. LEONARD, Cherryhinton Hall, Cambridge.

GARDENER (Single-handed) seeks SITUATION; life experience; good, capable, and honest man; age 30; single; excellent references. Apply A. DODD, 139, Nag's Head Road, Ponders End, Middlesex.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (Single-handed); age 37; married; willing to be useful; 5 years last situation; good reference. F. PRIOR, Edgware, Middlesex.

GARDENER (Single-handed or where two are kept); good all round experience; Inside and Out; highly recommended; age 24. T. JACKSON, Rush Court Gardens, Wallingford, Berks.

GARDENER (Single-handed or otherwise); Glass, Kitchen Garden, and Pleasure Grounds, etc.; willing to make himself useful; good references; single. MILLER, 208, Park Road, Crouch End, London, N.

GARDENER (Single-handed or with help); 12 years' experience Inside and Out; good references. F. C., Shelley Terrace, Broadbridge Heath, Horsham.

GARDENER (married, 39) seeks SITUATION; Single-handed; little or no glass or kitchen; 5 years' excellent character present place. BISHOP, Rockford, Ringwood, Hants.

MR. E. ANDREWS wishes to recommend C. CURD, age 26, as GARDENER (Single-handed, with assistance); 3 years' present situation; thoroughly reliable in good all-round gardening; married when suited. Bell House Gardens, Dulwich.

FOREMAN or good JOURNEYMAN (Inside); 11 years' experience, Chrysanthemums, Carnations, Fruit, Plant Houses; 3 years present situation; age 25; well recommended. DEAN, The Gardens, Grantlands, Uffculme.

FOREMAN, age 28; experienced in Fruit and Greenhouse Plants, House and Table Decorations; good references; Bothy preferred. A. CARRINGTON, 118, Stowe Street, Lichfield, Staffs.

FOREMAN (Inside), age 26; married, one child; 12 years' experience, good references, well recommended; 4 years here. H. W. PEARSON, Saltwood Park, Hythe, Kent. (No circulars.)

MANAGER or FOREMAN (Working); age 38; married; 20 years' experience in Market Growing, Tomatoes, Cucumbers, Grapes, Chrysanthemums, Bedding Stuff, Strawberries, etc.; good knowledge of Roses and Hardy Plants. E. JONES, Derby Road, Melbourne, Derbyshire.

MANAGER or FOREMAN; life experience in Growing Tomatoes, Cucumbers, Mushrooms, and all kinds of Bedding Plants; age 49; single. C. A., 9, Herbert Street, Chesterton, Cambridge.

GARDENER (Second of two or three, or Single-handed), Inside and Out; 10 years' experience, all-round work; age 24. FUDGE, 22, Markham Road, Winton, Bournemouth.

GARDENER (Second, or good Journeyman), Inside; 11 years' experience in all branches; age 25; abstainer. E. JONES, Oakdene Gardens, Holmwood, near Dorking, Surrey.

MR. BOOTH, The Gardens, Wadhurst Hall, Sussex, wishes to recommend F. PALMER as Second to work Inside; Bothy preferred; disengaged March 16. Apply as above.

JOURNEYMAN (First, Inside) in good establishment; age 24; eight years' experience; good references; can be well recommended. T. BLIGH, The Barton, Helland, Bodmin, Cornwall.

JOURNEYMAN (Second, Inside); age 20; five years in present situation; highly recommended by Head Gardener; used to duty; Bothy preferred. P. TRUSSLER, South Woodchester, Stroud, Glos.

JOURNEYMAN (First, Inside); age 23, 8 years' experience; good references; disengaged when suited. T. BROOKMAN, 4, Church Walk, Walton-on-Thames.

JOURNEYMAN (Inside); age 20.—H. FOX wishes to highly recommend A. DRURY as above; three years in present place. Address, A. DRURY, Kenton Grange, Harrow, Middlesex.

MISS MORRIS recommends JOURNEYMAN (Outside) Gardener; age 21; has been five years in her service; good character. J. HIBBERD, "Dibnersh," Shalford, Surrey.

MR. C. BRIDGEMAN, Lucas Grange, Haywards Heath, highly recommends J. BAILEY as JOURNEYMAN (Inside or Inside and Out); good experience; age 22.—BAILEY, Lucas Grange, Haywards Heath.

MR. GILBERT will be pleased to recommend C. GURNEY as JOURNEYMAN, Inside; age 19; six years' experience; used to duty; good reference; Bothy preferred. C. GURNEY, Champneys Gardens, Tring, Herts.

THOMAS PICKERSGILL can recommend ARTHUR MARSHALL as JOURNEYMAN; Kitchen Garden or Pleasure Grounds; 7 years' experience; age 23. Apply The Gardens, Sishes, Stevenage, Herts.

W. RING, Hamels Park Gardens, Buntingford, Herts, would be pleased to recommend a thorough good JOURNEYMAN (Second) in a good place; has been with me 5 years Inside; age 23.

W. THEOBALD, Hatchford Park Gardens, Cobham, wishes to recommend W. WEST as JOURNEYMAN (First); Inside; 2½ years here; good experience and references. Apply WEST, West Street, Ewell, Surrey.

GARDENER (Under, Inside and Out); age 20; 5 years' experience; 18 months present situation; good references. A. PRIOR, Sandhurst Lodge Gardens, Wellington College Station, Berks.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For MARCH 18, 1911.

Please Repeat my Advertisement.

Name……………………………………………

Address……………………………………………

……………………………………………

Date……………………………

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

Situations Wanted—*continued.*

GARDENER, married, seeks SITUATION; handy man, Indoors or Out; Wife help in house if required. BRISSENDEN. Elsing Hall, E. Dereham.

GARDENER, all-round man; married; middle age; no incumbrances; handy man; good personal character; 7½ years. WRIGHT, 29, North Road, Highgate.

GARDENER (Under, where three or four are kept); age 21; six years' experience, Inside and Out; three years' good character. R. DOLLIN, Cat Hill, East Barnet, Herts.

GARDENER (Under, Inside and Out); age 20; 5 years' experience; 18 months present situation; good references. A. PRIOR, Sandhurst Lodge Gardens, Wellington College Station, Berks.

UNDER GARDENER, Young Man, seeks SITUATION as above; age 19-20; good refs.; 3 years 9 months last place. C. T. COLESHILL, 37, Wolsey Road, Hampton Hill, Middlesex.

UNDER GARDENER, age 26, seeks SITUATION as such, or good Single-handed; 13 years' experience in all branches; good references. H. L., c/o H. Parrot, Fairhaven Stables, Putney Heath, S.W.

IMPROVER.—J. LAWRENCE, The Gardens, Pimley Manor, Shrewsbury, can highly recommend E. JERVIS as above; age 18; four years' experience, inside and kitchen garden; Bothy preferred.

IMPROVER (18) seeks SITUATION in good garden; three years in present situation; anxious to learn; good worker. Apply, HEAD GARDENER, Albury Edge, Merstham, Surrey.

IMPROVER (Inside or Inside and Out).—Young Man seeks employment in garden; age 19; 5 years' good reference. L. TYLER, Great Dalby, Melton Mowbray.

IMPROVER (Inside and Out); two years and nine months in last situation; age 18; good references. Apply E. MITCHELL, 4, Carlton Terrace, Dawlish, Devon.

M. A. ORD MACKENZIE, Esq., highly recommends R. FAULKNER as IMPROVER in good establishment; four years present place; age 18. Apply, The Cottage, Walton Heath, Epsom.

MR. HY. CHURCH, Raveningham, Norwich, highly recommends F. ALLISON, who has been with him two years in charge of herbaceous borders, walls, etc., to any gardener wanting a reliable and good working man; age 24; 11 years' experience.

MR. HUBBARD, Oak Hill Gardens, Ipswich highly recommends G. JACKSON, as GARDENER (Under); Inside and Out; age 20; 4½ years present place.

MR. TUCKER, The Gables Gardens, Shortland, Kent, with confidence recommends A. THURSTON, age 26; 10 years' good all-round experience, both Inside and Out; to any lady or gentleman requiring good gardener, single handed or with help; 2 years here as Second; first-class references; married when suited.

ADVERTISER, married (age 30), seeks SITUATION in Private Service; 15 years' nursery experience, chiefly inside; or could take Single-handed place, Inside and Out; South preferred; good references. SHEPHARD, 8, Ivy Street, Savile Park, Halifax, Yorks.

ORCHID GROWER requires SITUATION; experience under first-class growers; 10 years present situation; excellent references. Apply, S. BURROUGH, Royal Gardens, Sandringham.

YOUNG MAN, age 21, seeks SITUATION GARDENER (Under, Inside and Out); seven years' experience in good establishments; good references. L. HAWKER, Ruabon Lodge, Upper Colwall, Malvern.

YOUNG MAN, age 20, seeks SITUATION in large garden (Inside or Out); Kitchen Garden or Pleasure Grounds; 7 years' general experience; excellent refs.; Bothy preferred. H. F. REYNOLDS, Occold, Eye, Suffolk.

YOUNG MAN, age 19; four years' experience in Carnations, Chrysanthemums, Cucumbers, Tomatoes, etc.; one year with C. F. Waters, Balcombe. Apply, STOCKWELL, Church Path, Emsworth, Hants.

YOUNG MAN (20) seeks SITUATION as Third, where 4 or 5 are kept; 5 years' experience; good character; prefers Bothy. A. J. C., 10, Office of this Paper.

LADY FLORIST seeks RE-ENGAGEMENT; four years' experience in high-class Florists' Business; excellent reference from present employers. Miss PITHER, "Socorro," Oxford Road, Guildford, Surrey.

Situations Vacant.

CANADA.—Wanted, strong, active GARDENERS for large Nurseries; steady work; good wages; sail March; book early. UNION TRANSIT CO., 381, Argyle Street, Glasgow.

WANTED, YOUNG MEN for Budding and Grafting. Apply, with references, giving full particulars, experience, and wages required. LE CORNU, Jersey Nurseries, Jersey.

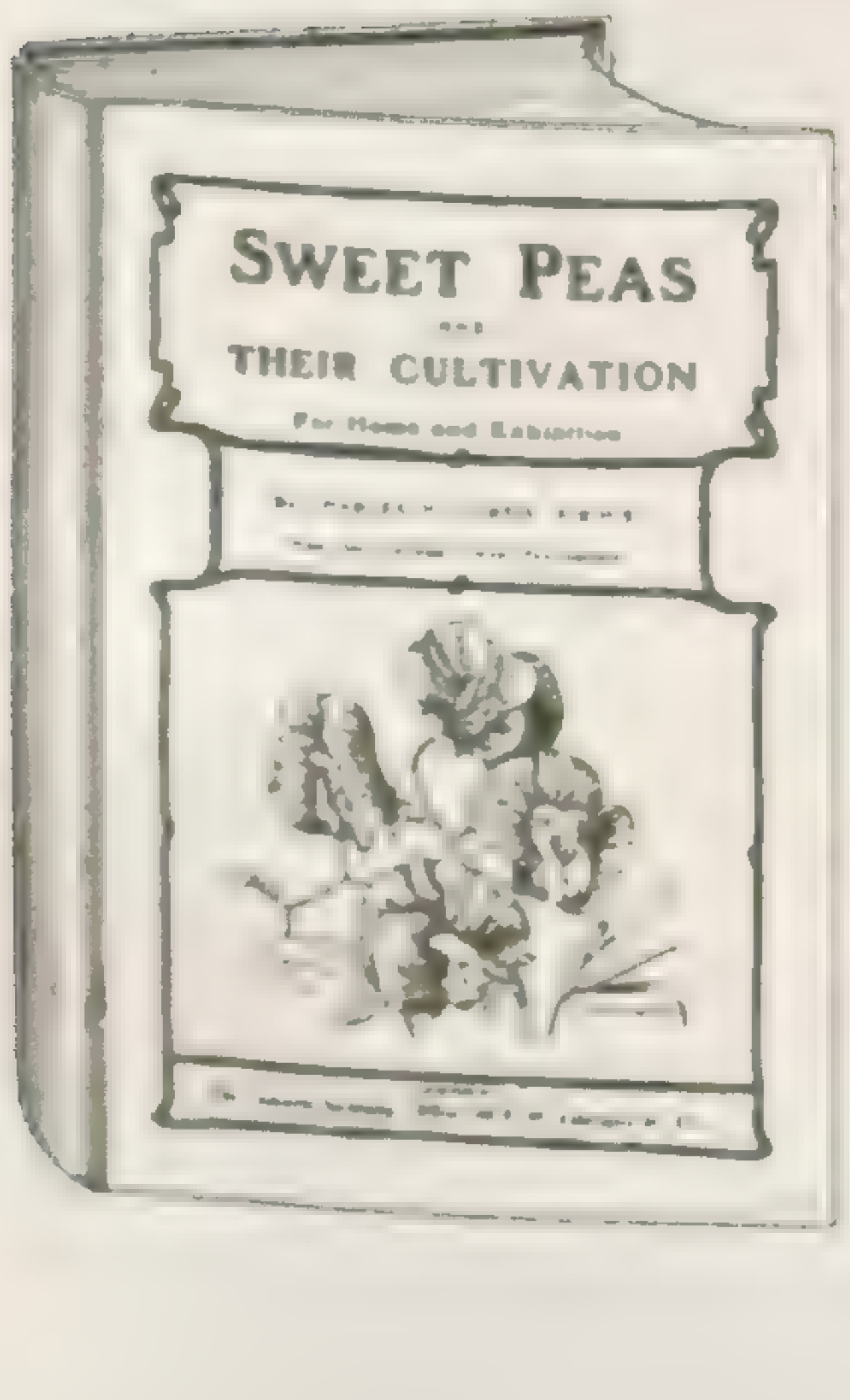
WANTED, UNDER GARDENER, used to General Gardening, and to do boots and knives and coals; state age, experience, and wages required. D. NEWMAN, Murrey's Court, Ashtead, Surrey.

NETTING. THE VERY BEST. I DO NOT REQUIRE PAYMENT UNTIL YOU HAVE SEEN AND APPROVED OF THE NETTING. OTHERS may try to copy me, but this netting is good, strong, extra stout, small mesh, rot-proof netting, similar to what I supply to the ROYAL GARDENS, 100yds. by 1yd., 4s.; by 2yds., 8s.; by 3yds., 12s.; any length or width supplied. Orders over 5s. car. paid. List and Samples free. Commoner and tender netting, as sold by others, 60 sq. yds. for 1s. H. J. GASSON, The Net Works, Rye.

Dr. J. COLLIS BROWNE'S
THE ORIGINAL AND ONLY GENUINE
Chlorodyne
Admitted by the Profession to be the most Valuable Remedy ever Discovered.
The Best Remedy known for
COUGHS, COLDS,
ASTHMA, BRONCHITIS.
Cuts short all attacks of SPASMS, HYSTERIA, and PALPITATION.
The only Palliative in NEURALGIA, TOOTHACHE, GOUT, RHEUMATISM.
Acts like a Charm in DIARRHŒA and DYSENTERY.
Refuse imitations and insist on having
Dr. J. COLLIS BROWNE'S Chlorodyne.
Convincing Medical Testimony with each bottle.
Of all Chemists, 1/1½, 2/9, 4/6.

PARISIAN {WOOD LATH} BLINDS
MOST DURABLE OUTISDE SHADING.
NEATEST IN APPEARANCE.

SUPPLIED ONLY BY
W. RICHARDSON & CO.,
HORTICULTURAL WORKS,
DARLINGTON.
Particulars, Price List, and Testimonials free on application, mentioning "The Gardeners' Magazine."

If you want to win prizes read the best book.
One Shilling; free by post, 1/2. Bound in cloth, 1/6; by post, 1/8.
SWEET PEAS AND THEIR . . CULTIVATION.
FOR HOME AND EXHIBITION.
By CHARLES H. CURTIS, F.R.H.S.,
Hon. Secretary National Sweet Pea Society.


PREPARATION OF SOIL.
SEEDS AND SEED SOWING.
WATERING AND MANURING.
GENERAL MANAGEMENT.
HOW GROWN IN TUBS AND POTS.
WINTER-FLOWERING SWEET PEAS.
STAKING AND TYING.
SWEET PEAS FOR SCREENS AND WINDOWS.
THE BEST SWEET PEAS.
RAISING NEW VARIETIES.
CULTURE IN CONSERVATORY.
CUPID AND BUSH SWEET PEAS.
VASES AND STANDS.
POINTS FOR EXHIBITORS.
DEVELOPMENT OF SWEET PEAS.
DISEASES AND PESTS.
ETC., ETC.
◆ ◆ ◆
ORDER FORM.
To the Publishers of "THE GARDENERS' MAGAZINE,"
148 and 149, Aldersgate Street, E.C.
Please send me "SWEET PEAS AND THEIR CULTIVATION" *by Post, for which I enclose remittance of* 1s. 2d. (*if bound in cloth,* 1s. 8d.).
Name ....
Address ....

W. RICHARDSON & CO.,

MANUFACTURERS OF ALL KINDS OF

HORTICULTURAL BUILDINGS. Also HEATING ENGINEERS.

Recent Contracts for Horticultural Buildings and Heating include the following :—

The Rt. Hon. The Earl of Donoughmore, Knocklofty, Clonmel, Ireland.
The Rt. Hon. The Earl of Durham, Lambton Castle, Durham.
The Rt. Hon. The Earl of Listowel, Convamore, Ballyhooly, Co. Cork.
The Rt. Hon. The Earl of Scarborough, Lumley Castle, Co. Durham.
The Rt Hon. Lord Barnard Raby Castle, Barnard Castle.
The Rt. Hon. Lord Glanusk, Glanusk Park, Crickhowell.
The Rt. Hon. Jonathan Hogg, Stratford, Rathgar, Co. Dublin.
The Hon. Robert James, St Nicholas, Richmond, Yorks.
His Excellency Monsieur Tzokow, 21, Queen's Gate, London, S.W.
Lady Palmer, Grinkle Park, Loftus-in-Cleveland.
Sir William Eden, Bart., Windlesham Hall, Ferryhill.
Sir Lindsay Wood, Bart., The Hermitage, Chester-le-Street.
Sir Reginald Graham, Bart., Norton Conyers, Melmerby.
The Royal Horticultural Society, Wisley, Ripley, Surrey.
Royal Hospital, Kilmainham, per Commissioners of Public Works, Dublin.
Colonel Napier Clavering, Axwell Park, Northumberland.
Colonel Scott, Penmaenuchaf, Dolgelly.
Major Stobart, Spennithorne House, Spennithorne, Leyburn.
Captain Freeman, Coulby Hall, Ormesby.
Captain Wainman, Otterington Hall, Northallerton.
David Davies, Esq., M.P., Llandinam, Montgomeryshire.
David Richardson, Esq., Wheelbirks, Stocksfield-on-Tyne.
C. Lingford, Esq., Lancelands, Cotherstone.
E. W. Parker, Esq., Skirwith Abbey, Penrith.
C. L. B. Robinson, Esq., Brettanby Manor, near Darlington.
G. P. Roddam, Esq., Newtown, Stanhope.
D. D. Macpherson, Esq., Radbrook House, Shrewsbury.
W. J. Cousins, Esq., Webton Court, Leeds.
E. Baring Gould, Esq., Merrow Grange, Guildford.
W. Earle Hodges, Esq., Holme Chase, Weybridge.
H. Costobadie, Esq., Overdale, Mottram, Manchester.
W. W. Carey, Esq., Seaholm, Dunbar.
J. H. Edwards, Esq., Sutton Hall, Thirsk.
Mrs. H. A. Crallan, The Stone House, Hawes.
I. J Dewhurst, Esq., Whinmoor Lodge, Seacroft, Leeds.
J. Chapman Jun., Esq., The Hall, Thornton Rust, Aysgarth.
J. Rossiter Hoyle, Esq., Grange Cliffe, Ecclesall, Sheffield.
W. Brown, Esq., Larne, Co. Antrim.
Mrs. Powell Price, Morganwg, Brecon.
W. W. Sharp, Esq., Bleasdale House, Silverdale, Carnforth.
F. Hartley, Esq., May Lodge, Bridlington.
T. Hutchinson, Esq., Eggleston Hall, Barnard Castle.
J. A. Forster, Esq., Fernlands, Chertsey, Surrey.
W. Robson Hindmarsh, Esq., Ulleskelf.
J. W. Richardson, Esq., Sowerby Grange Thirsk.
John Shaw, Esq., Kirby Moorside.
Hugh C. Fairfax Cholmeley, Esq., Brandsby Hall, Easingwold.
Harrison Benn, Esq., Holcombe Hall, Dawlish.
Miss Watt, Spott House Dunbar.
W. Loudin MacNeill, Esq., Shennanton, Kirkcowan, Wigtownshire.
W. H. St Quintin, Esq., Scampston Hall, Rillington, Yorks.
Dewsbury Corporation, Crows Nest Park.
J. W. Downs, Esq., Thornton, Bradford.
F. B. Mennier, Esq., Heversham School Milnthorpe.
G. F. Insole, Esq., The Court, Llandaff, South Wales.
St. Mary's Convent, Chiswick.
The John Copeland Hospital, Gainsborough.
Ackworth School, Pontefract.
Shaftesbury Theatre, Shaftesbury Avenue, London.
Durham Cathedral, Durham.

LONDON OFFICE:—Belgravia Chambers, Victoria Street, S.W.

TELEGRAMS { "Richardson," Darlington. "Horticraft," London.

NATIONAL TELEPHONE } 17 Darlington.

LOWEST PRICES FOR GARDEN FRAMES AND WOOD LATH BLINDS.

PLANS and ESTIMATES PREPARED FREE of COST.

Representatives sent to any part of the Kingdom to advise and take particulars.

DARLINGTON.

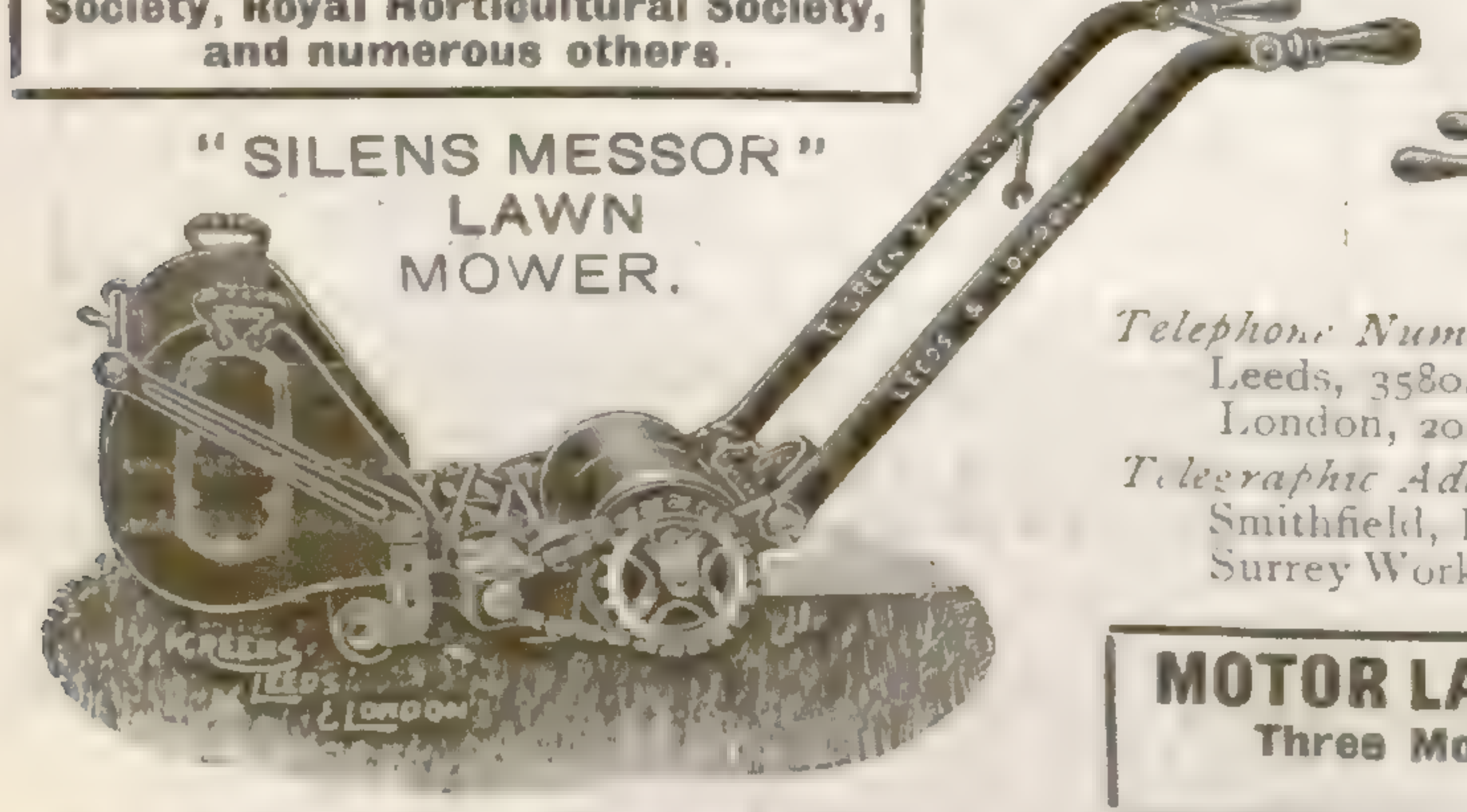
APPOINTED BY ROYAL WARRANT, HORTICULTURAL MACHINE MAKERS TO HIS MAJESTY KING GEORGE V.

GREEN'S LAWN MOWERS

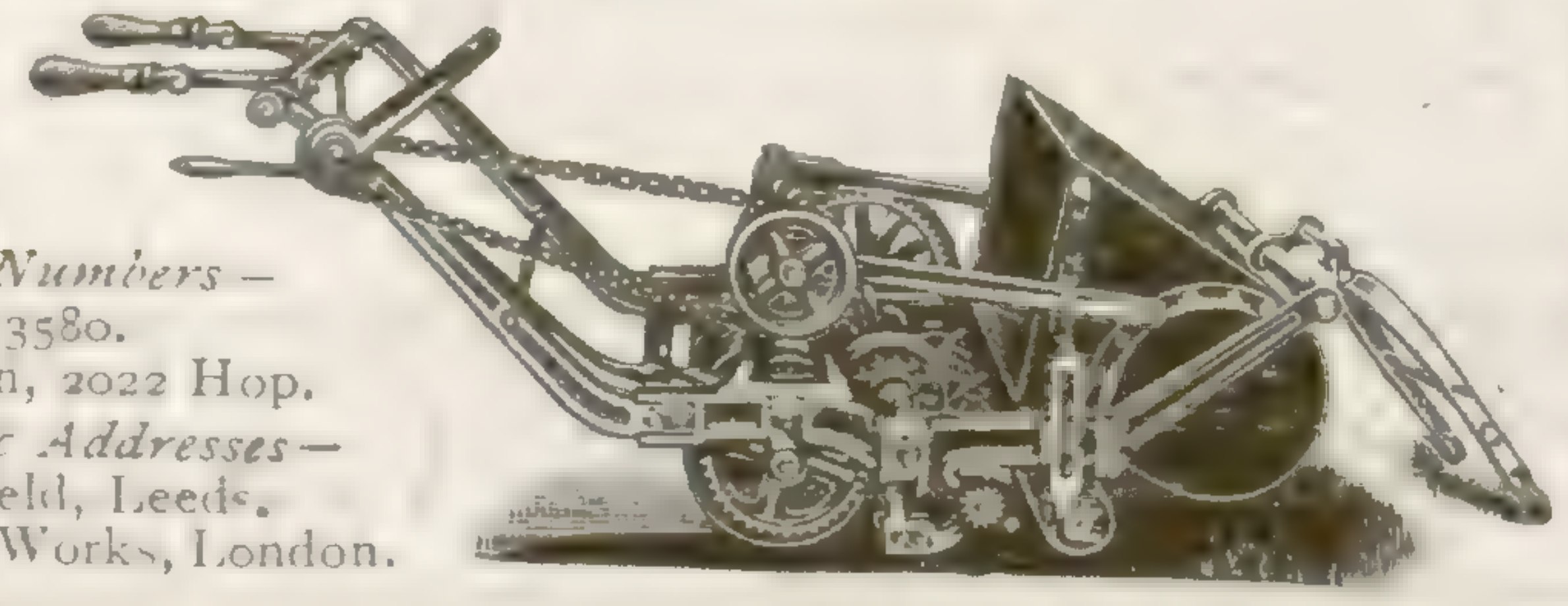
THE FIRST, FOREMOST, and BEST in the WORLD. Hundreds of Thousands are in use. Established nearly a Century.

Highest Awards Royal Botanic Society, Royal Horticultural Society, and numerous others.

"SILENS MESSOR" LAWN MOWER.



PONY, AND HORSE MOWER
Either "Silens Messor" Pattern or Wheel-Geared.

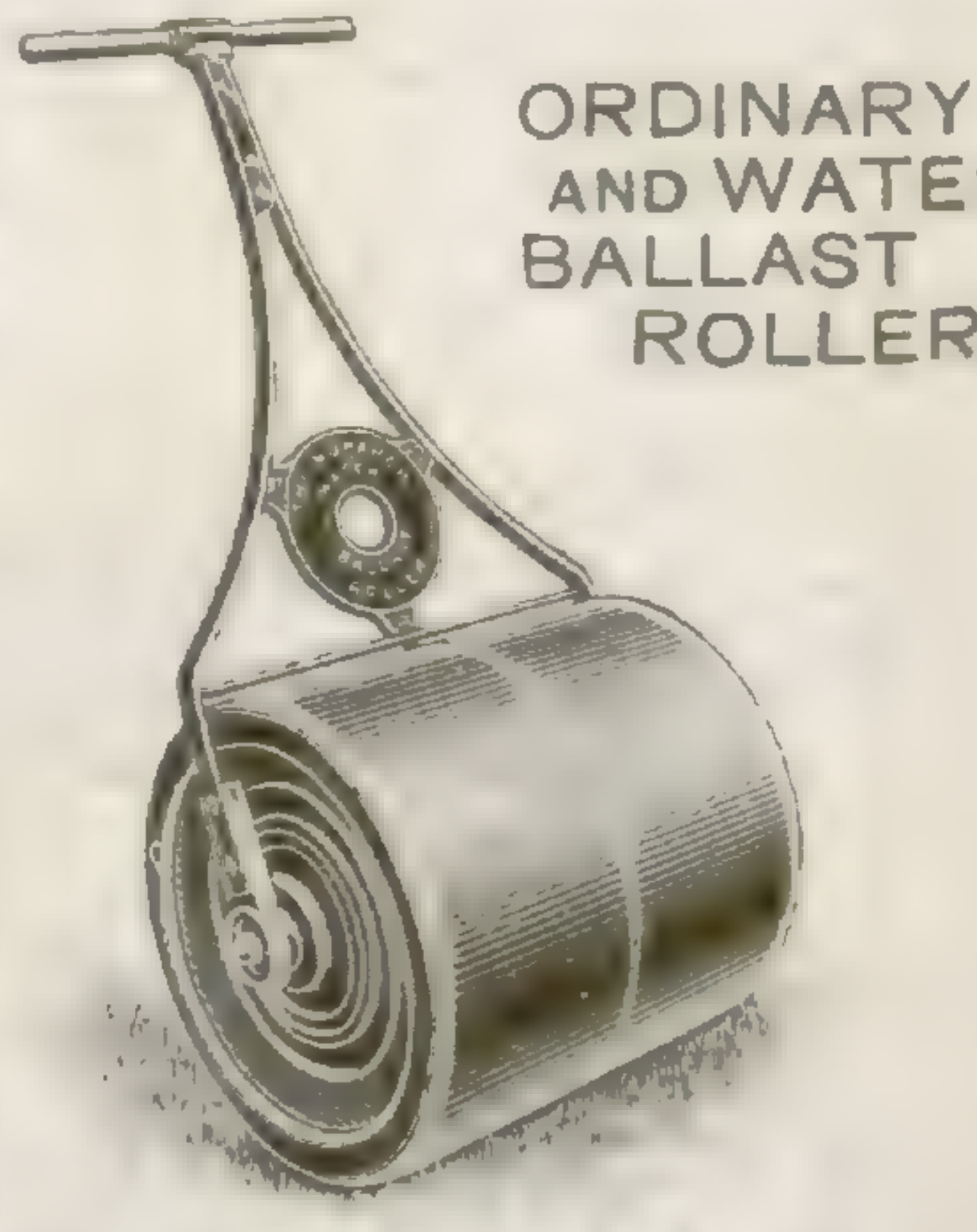


Telephone Numbers—
Leeds, 3580.
London, 2022 Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London.

They may be had of any Ironmonger or Seedsman in the United Kingdom.

Please write for ILLUSTRATED PRICE LIST No. 1 FREE.

ORDINARY AND WATER BALLAST ROLLERS



MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E.

FERTILISERS for LAWNS, FRUIT TREES and VINES, and for GENERAL GARDEN PURPOSES. Also Bone Meals, Vitriolised Raw Bones, Superphosphate, Peruvian Guano, Sulphate of Ammonia, Nitrate of Soda, Nitrate of Lime, Potash Salts, etc. Horticultural Price List on application to

HY. RICHARDSON & COMPANY,
Skeldergate Bridge, YORK.

PERGOLAS.
Larch Poles at 1d. per foot. Lists Free.
PATRICK'S, Otley, Yorks.

OAK CRAMBLES.
Peeled and dry at ½d. per foot.
PATRICK'S, Otley, Yorks.

ROSE ARCHES.
Larch Poles at 1d. per foot.
PATRICK'S, Otley, Yorks.

TREE STAKES AND GARDEN RODS.
Lists free.
PATRICK'S, Otley, Yorks.

PLEASE MENTION
THE GARDENERS' MAGAZINE
when writing to Advertisers.

Barr's Lawn Phytobroma
The best Manure for all Lawns.

The most economical of all artificial manures, 2 oz. to the square yard only being required.
Per cwt., **20/-**; ½-cwt., **12/6**, 28lb., **7/6**; 14lb., **4/6**; 7lb., **2/6**; sample tins, **1/-**.
Prepaid Orders for 28lbs. and upwards, carriage paid.
Circular with full particulars, on Application.

BARR & SONS,
11, 12, & 13, KING STREET, COVENT GARDEN, LONDON.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to

EPPS & CO., Ringwood, HANTS.

ONCE USED. ALWAYS USED. **The 'PATTISSON' LAWN BOOTS**

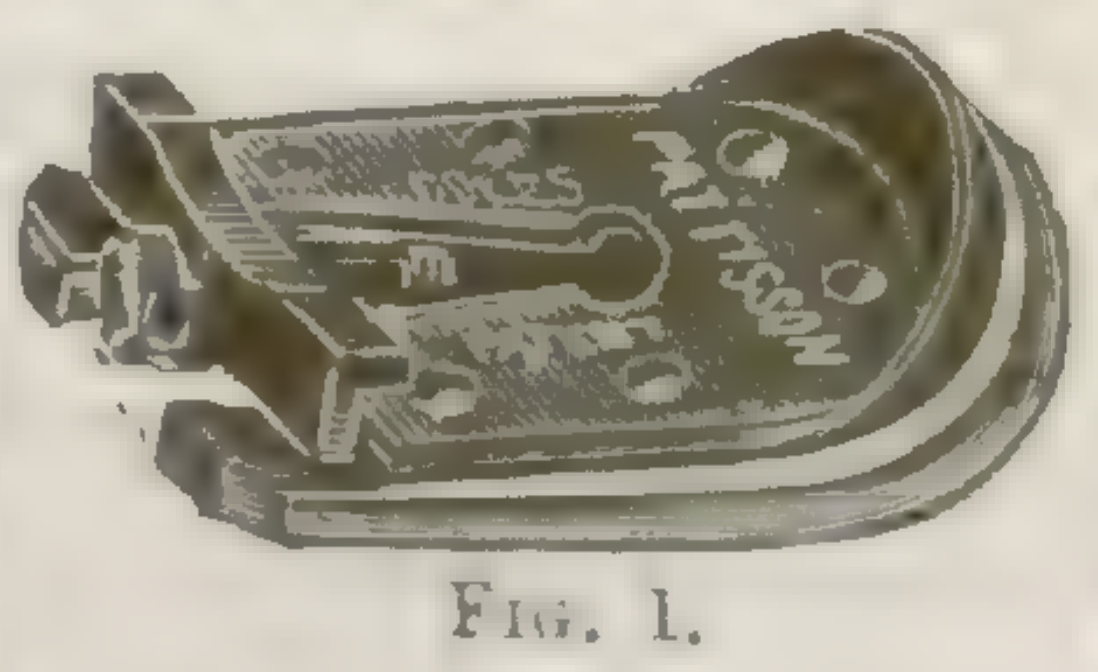


Fig. 1.

Simplest! Strongest! Most Economical!

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS.

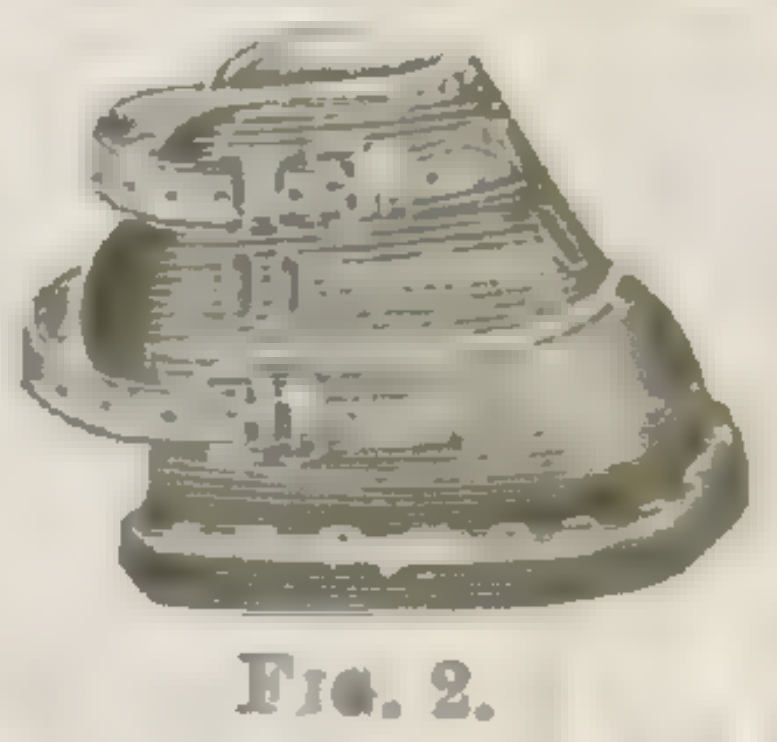


Fig. 2.

Silver Medal—
Royal Horticultural Society.
Hundreds of Testimonials.
The Field says: **"As good as anything that could be devised."**
Illustrated Price List from—
H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM, S.W.

Price 7s. 6d. net. By post, packed in box, 8s

THE FLOWER GARDEN.

The Formation and Management of a Garden, and the Culture of Outdoor Flowers and Plants.

W. H. and L. Collingridge, 149 and 149, Aldersgate Street, London

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 2,994. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, MARCH 18, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) Twopence

BARR'S VEGETABLE & FLOWER SEEDS of finest selected strains and tested growth. Descriptive Catalogue, with cultural notes, free.

BARR'S BEAUTIFUL LILIES, CANNAS, GLADIOLI, MONTBRETIAS, TIGRIDIAS, ETC., for Spring planting. Catalogue free.

BARR'S Hardy PERENNIALS, ALPINES, AQUATICS, CLIMBERS, ETC., for Spring planting. Descriptive Catalogue, with cultural notes, free.

BARR and SONS, 11, 12, and 13, KING STREET, COVENT GARDEN, LONDON.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, has a large body of painters and glaziers working at Busbridge Hall, Godalming. They go on from there to The Cedars, Harrow Weald, but can be secured for other contracts about April 20th, by letter. Telephone: "201, Western," or wire to Gray, Chelsea, London.

KING'S ACRE FRUIT TREES, ROSES,
AND ORCHARD-HOUSE TREES.

AWARDED 24 GOLD MEDALS SEASONS 1909-10.

160 acres to select from of the finest Trees that natural conditions and the skill of man can produce.

ILLUSTRATED CATALOGUES FREE ON APPLICATION.

KING'S ACRE NURSERIES, LTD.,
HEREFORD.

PERRY'S CATALOGUES.
Hardy Ferns, 400 varieties.
Iris, 450 varieties. Bulbs and Tubers.
Delphiniums, 250 varieties.
Hardy Border and Rock Plants.
Pentstemons, unique collection.
Florists' Flowers. Free on Application.
PERRY'S HARDY PLANT FARM, Enfield, Middlesex.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.
H. BURNETT,
Carnation Specialist, Guernsey.

SEED POTATOES, Scotch, Irish, Midlands, Northerns; largest and best stock in West of England, both earlies and lates. Apply to OLIVER BROS., Importers, Exeter, and Barnstaple.

BARNARDS LIMITED, Norwich.—Best House for Fencing, Espaliers, Pergolas, Fruit Enclosures, Iron and Wire Bordering; all descriptions of Training Fittings, Arches, Wire Netting, Stakes, Wire Lattice, Rollers, and all garden requisites. Now is the time to effect improvements in your garden. Catalogues free; inquiries invited.

WEEKS'S DUPLEX UPRIGHT TUBULAR BOILERS, for full advertisement see back page.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page vi.

CONSERVATORIES AND WINTER GARDENS, Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue free.—BOULTON and PAUL, Lim., Norwich.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint, 8s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

LOVELY LAWNS.

WEBBS' LAWN GRASS SEEDS FOR TENNIS, CROQUET, and GARDEN LAWNS, BOWLING GREENS, etc. No. 1 Mixture, 1s. 9d. per lb., 5s. per gallon, 35s. per bushel. No. 2 Mixture, 1s. 6d. per lb., 4s. 6d. per gallon, 30s. per bushel. Carriage paid.

WEBBS' LAWN GRASS SEEDS
T. J. F. Haskoll, Esq., Brandon House, writes:—"Your Lawn Grass Seeds have been an unqualified success. They came up thick and strong within a very short time of sowing, and have stood hard wear well."

WEBB and SONS, The King's Seedsmen,
WORDSLEY, STOURBRIDGE.

BUNYARD'S NEW CATALOGUES.
The following have been recently published, and contain all worthy new varieties. Post free on application.

BUNYARD'S
CLIMBING PLANTS, Illustrated.

BUNYARD'S
HERBACEOUS PLANTS, Illustrated.

BUNYARD'S
HARDY TREES AND SHRUBS, Illustrated.

BUNYARD'S SEEDS, VEGETABLE AND FLOWER, with coloured plates.

GEO. BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.

BEGONIAS, awarded 24 Gold Medals.—Double Seed, 2s. 6d. and 5s. per pkt.; Frilled, Crested, or plain Single, 1s., 2s. 6d., and 5s. per pkt. For price of Begonia tubers, Carnations (Border and Perpetual flowering), Cannas, Cyclamen, Blue Primroses, Delphiniums, Pansies, Polyanthus, Lily of the Valley, Violets, etc., please send postcard for copy of our Illustrated Catalogue, free on application.

BLACKMORE AND LANGDON,
Twerton Hill Nursery, Bath.

LAXTON'S NEW SEED CATALOGUE for 1911. Descriptive and fully illustrated, including grand new "Laxtonian Pea" and many other novelties, gratis on application.—LAXTON BROS., Seed Merchant, Bedford.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

PERENNIALS, UNIQUE COLLECTION.
Including
ALPINES AND AQUATICS.
Also RARER SHRUBS, HIMALAYAN RHODODENDRONS, and Others.
Write for Catalogue. G. REUTHE, Keston, Kent.

25 STRONG CHRYSANTHEMUM CUTTINGS, Exhibition, Decorative, Single or Early, 1s. 6d.; 50, 3s.; 100, 5s. 6d.; by return. List, RICHMOND'S CHRYSANT NURSERIES, Ossett, Yorks.

POULTRY AND KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

CLAY'S MANURES, CRUSHED BONES
(See page vii.)

CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

GARDEN ROLLERS, double cylinders, solid ends, rounded edges 14in. by 14in., 1¾cwts., 24s. 6d.; 16in. by 16in., 2cwts., 26s.; 20in. by 20in., 3cwts., 36s.; 24in. by 24in., 4½cwts., 50s. each; carriage paid any station in Great Britain. Lists free. J. ATTWOOD, Stourbridge.

SUTTON'S MATCHLESS CABBAGE LETTUCE.
Mr. W. A. Cook, Gardener to Sir E. G. Loder, Bart., writes: "A really excellent Lettuce; comes to maturity quickly and lasts in perfect condition for a very considerable time. Quite distinct."
Per packet, 1s. 6d., post free.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

THE KELWAY "ARTISTIC" BORDER makes a garden of enduring beauty, from early spring to late autumn, with a minimum of cultivation, and without the trouble of constant digging or bedding-out. The plants composing the border are from strong country-grown stocks, which will flourish under almost all conditions. Send dimensions of space to be filled, or write for Kelway's "Gardens of Delight" (6d.). The cost of the "Artistic" Border is 15s., or 25s. for 10 square yards

KELWAY and SON, the Royal Horticulturists, LANGPORT, SOMERSET.

NOW IS THE TIME TO PLANT KELWAY DELPHINIUMS, which have been improved almost out of recognition in the past twenty years. They produce plants ranging in height from four to eight feet, exceptionally hardy, and with a rich profusion of choice blooms in all the shades of blue.
Choice named varieties: 24s. 34s., and 56s. a dozen.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

EVERY Gardener, amateur or professional, will find a large amount of useful information in the new edition of Kelway's "Manual of Horticulture"—the varieties, prices and culture of all sorts of garden plants, particularly those wonderful improvements raised in the Kelway Nurseries at Langport. A copy will be sent post free for 2s., which will be credited on the first order.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

KELWAY GLADIOLI flower freely in the open air through the autumn. Their fine bold blooms make an admirable addition to borders or beds and are invaluable as cut flowers for church or table decoration. Choice named collections, 3s., 4s. 6d., 6s., 7s. 6d., 9s., 12s., and 18s. a dozen.
Order at once.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

FIDLER'S NEW ILLUSTRATED CATALOGUE OF CHOICE GARDEN SEEDS will be sent, post free, to any address on receipt of postcard. Write at once for a copy. It may help you to save 50% on your seed bill this season. FIDLER and SONS, Royal Berks Seed Stores, Reading.

ORDER MATS NOW!—To prevent disappointment and loss by early frosts, order Norfolk Reed Mats now. 50 per cent. more protective than straw. Made to any size, 1d. per square foot.—BOULTON and PAUL, Lim., Norwich.

XL ALL FOR WINTER AND SPRING CLEANSING.
Before growth commences stronger solutions may be used.

XL ALL NICOTINE INSECTICIDE WASH (poisonous) for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. Agents, write for particulars.

XL ALL CAUSTIC WINTER WASH (non-poisonous) for dormant Fruit Trees, stamps out American Blight, and all other pests.

Other XL ALL Preparations of great renown are XL ALL NICOTINE VAPORISING COMPOUND, XL ALL FERTILISER, XL ALL LAWN SAND, etc.

Ask your Nurseryman, Seedsman, or Florist for my small Pink List.

G. H. RICHARDS, Manufacturer, 234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Border and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

SEEDS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Select Seeds.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

RHODODENDRONS.

DICKSONS & CO.,
1, Waterloo Place, Edinburgh.
Pink Pearls, Ponticums, choice Hybrids. Write.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

ALEX. DICKSON & SONS, Ltd.,
Hawlmark, Newtownards, Ireland.
The World-famed Champion Rose Growers and Raisers of Irish Pedigree Seedling Roses. Lists Free.

SAMUEL M'CREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

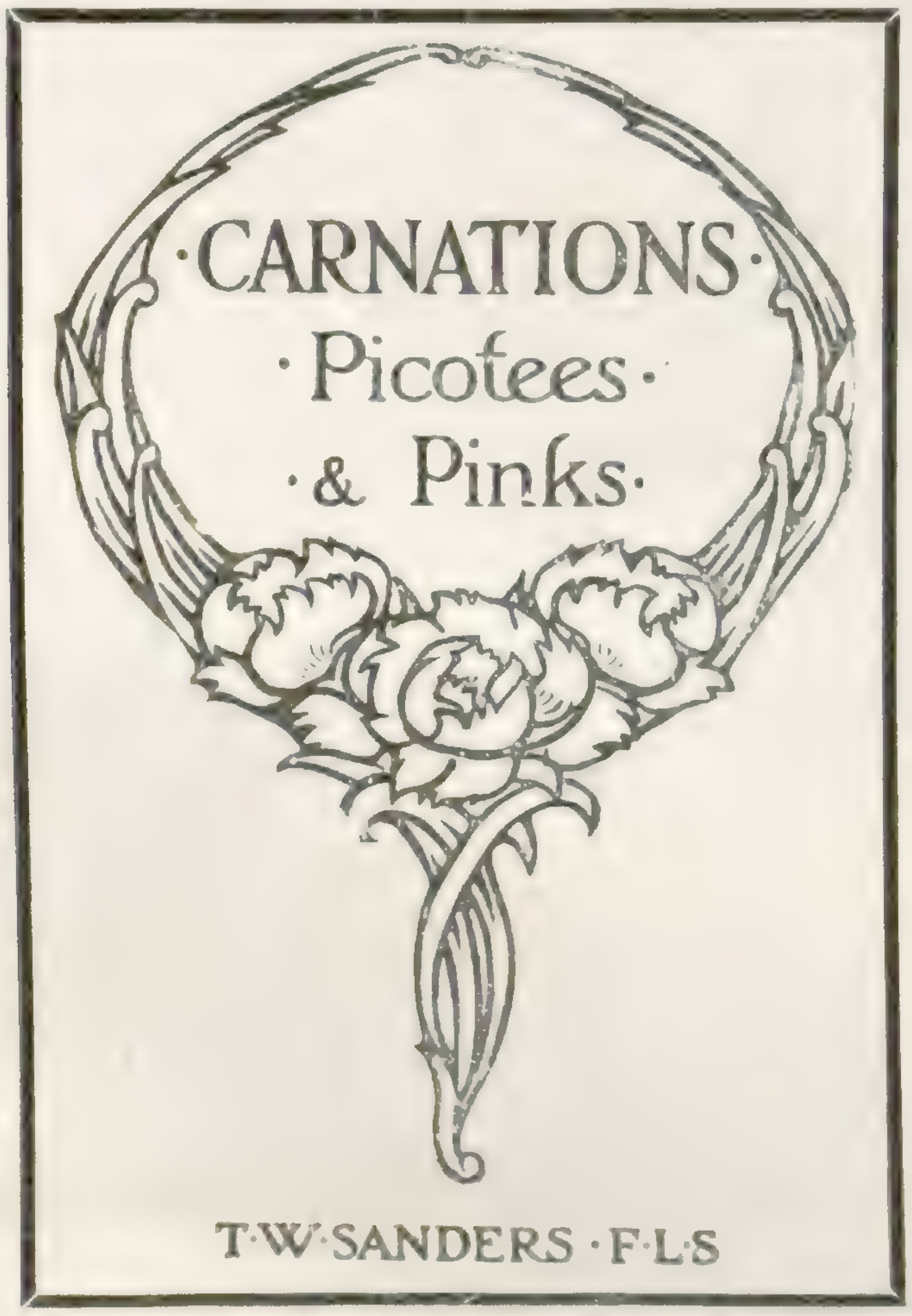
D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
Illustrated Catalogue free.

TURF LOAM.

A. B. JOHNSTON, New Park, Cranleigh, Surrey.
Very Fibrous Loam, for Carnations, Roses, Vine Borders, Melons, Fruits under Glass, &c., &c.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

A PRACTICAL GUIDE TO THE CULTIVATION OF THE QUEEN'S FAVOURITE FLOWER.



Net, 2/6.

Post Free, 2/10.

A Practical Guide to the Cultivation and Propagation of Border, Perpetual and other Carnations, Picotees, Garden and Alpine Pinks, Sweet Williams, Etc.: including Lists of Varieties, and a Description of the various Pests and Diseases thereof.

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

Please send me a copy of **"Carnations, Picotees, and Pinks,"** *by post, for which I enclose remittance of* **2/10.**

Name ....

Address ...

SEED POTATOES.

	56lb.	112lb.		56lb.	112lb.
Myatt's ASHLEAF	4/6	8/-	LANGWORTHY	3/-	5/-
DUKE OF YORK	4/-	7/-	SENSATION	3/-	5/-
EARLY ROSE	4/-	7/-	BRITISH QUEEN	2/6	4/-
Sir J. LLEWELLYN	4/-	7/-	ROYAL KIDNEY	2/6	4/-
EARLY PURITAN	4/-	7/-	FACTOR	2/6	4/-
EPICURE	4/-	7/-	D. of CORNWALL	2/6	4/-
Sharpe's EXPRESS	3/6	6/-	NORTHERN STAR	2/6	4/-
SATISFACTION	3/6	6/-	EVERGOOD	2/6	4/-
MAGNUM BONUM	3/6	6/-	UP-TO-DATE	2/6	4/-
PRESIDENT	3/-	5/-	SCOT. TRIUMPH	2/6	4/-
K. EDWARD VII.	3/-	5/-	ARTICHOKES	1/6 14lb.	

14lbs. of any above for 1/-, bags free. Cash with order.

Send for Illustrated List of Novelties, Sweet Peas, Flower and Garden Seeds, French Gardening, etc.

ADDRESS IN FULL—

J. W. CROSS, Old Grammar School, WISBECH.

Large Stock of
HARDY WATER LILIES,
Coloured, delivered in all Countries by Parcels Post.
New beautiful varieties unpublished.
NELUMBIUMS, etc., etc.

B. LATOUR-MARLIAC, Nurseryman
At Temple-sur-Lot (FRANCE).
Catalogue Free on Application.

THIS DELICIOUS VEGETABLE
can be grown by everyone if planted at the present time.
Connover's Colossal Asparagus
2-year plants, 3s. per 100,
20s. per 1,000.
Early Market Cabbage Plants
2s. 6d. per 1,000. Fruit Tree List free
W. HORNE & SONS,
Cliffe, Rochester, Kent.

AMERICAN TREE CARNATIONS
AND MALMAISONS.
The Newest and Best Varieties.
Strong, healthy and well-rooted plants only supplied.
Catalogues free.
E. J. WOOTTEN, Fairoak, EASTLEIGH.

PERPETUAL FLOWERING CARNATIONS: Britannia, Rose Dorée, White Perfection, Black Chief, Fortuna, Mrs. Burnett, etc. 3s. per doz.; strong plants; post free. Ask list. C. F. A VAN DER SLUYS, F.R.H.S., Ramee, Guernsey.

Sales by Auction.

SALES NEXT WEEK.

MONDAY and FRIDAY NEXT, March 20th and 24th, at Twelve o'clock.—Japanese Liliums, Gladiolus, Begonias, and numerous other hardy Bulbs and Roots for spring planting, Herbaceous, Border, and Alpine Plants in variety.

At Half-past One o'clock.—1,000 Roses in large assortment, Fruit Trees in variety, Rhododendrons, Azaleas, and other flowering plants.

WEDNESDAY NEXT, March 22nd, at Twelve o'clock.—Large quantities of Hardy Bulbs, Roots, and Corms for Spring Planting, New and Rare Perennials and Border Plants, Carnations, Pinks, Tuberoses, etc.

At Half-past One o'clock.—5,000 Roses—Standard, Dwarf, Climbing, T., H.T., and H.P., including the newest and best varieties; lotted to suit all buyers.

At Five o'clock.—450 Azaleas in variety, 300 Aspidistras, also Rhododendrons and Camellias. 100 lots of Ornamental and Decorative Palms, Greenhouse Plants, Standard Bays, etc.

FRIDAY NEXT, March 24th, at a Quarter-to-One o'clock.—A collection of about 1,050 healthy, well-grown Established Orchids in variety formed by H. Nye, Esq., of Worthing. Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view morning of sale, and catalogues had.

ROSE TREES.

SHRUBS. BULBS.

SALES BY AUCTION
are held every
MONDAY and WEDNESDAY,
at 12.30.

STEVENS' AUCTION ROOMS,
Established 150 Years,
38, King St., Covent Garden, London, W.C.
Catalogues on Application.

FOR SALE, IN GUERNSEY.—A compact little BULB-GROWING ESTATE of about 4 acres, splendidly situated on the south coast of the island, and well stocked with the best forcing varieties of daffodils, etc.; also a small Orchard of Apple and Pear Trees in bearing. The property contains glasshouse 150 x 18 heated, large shed, pumping mill, and an unlimited supply of water. Write Box 154, c/o Messrs. R. F. White and Son, General Advertising Agents, 33, Fleet Street, London, E.C.

CHARLESWORTH & CO.,
Hayward's Heath, Sussex,
ORCHID SPECIALISTS,
IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

ELLISON'S BEGONIAS are absolutely the best strain. 30 Begonias, all different, named, 10s. 6d.; Bedding Begonias, 9s., 12s., 15s. 100.

LILIUMS.—24 choice Liliums, all different, 10s. 6d. Gloxinias, 6 different, 2s.; Cannas, 10 different, 4s. 100 German Iris, 10 sorts, named, 4s.

LARGE FLOWERING GLADIOLI, 5s., 5s. 100; Amaryllis, 10s., 15s., 20s. doz. Gladioli, early-flowering, 1s. 100; Autumn flowering, 3s. 100.

1,000,000 BEGONIAS.—Single, 1s. 6d. to 7s. 6d.; Dble., 2s. to 15s. doz. Bedding, 9s. to 21s. 100. Tigridias, Tuberoses, Achimenes, Arum Lilies, 1s. doz.

SWEET PEAS, 36 varieties, all recommended by Nat. Sweet Pea Soc., 2s. 6d., free. Tree Carnations, 3s. 6d. doz. 100 Montbretias, 10 named sorts, 2s. 6d.

ON APPROVAL.—Bulbs and Vegetable Seeds on appro. Carriage paid. 56-page Catalogue free. ELLISON, 57, West Bromwich.

NOVELTIES in Flower Seeds. Adnet's Gerbera, Hybrid Freesias (quite 20 colours), Nemesia, Dimorphotheca, etc. ELLISON, 57, West Bromwich.

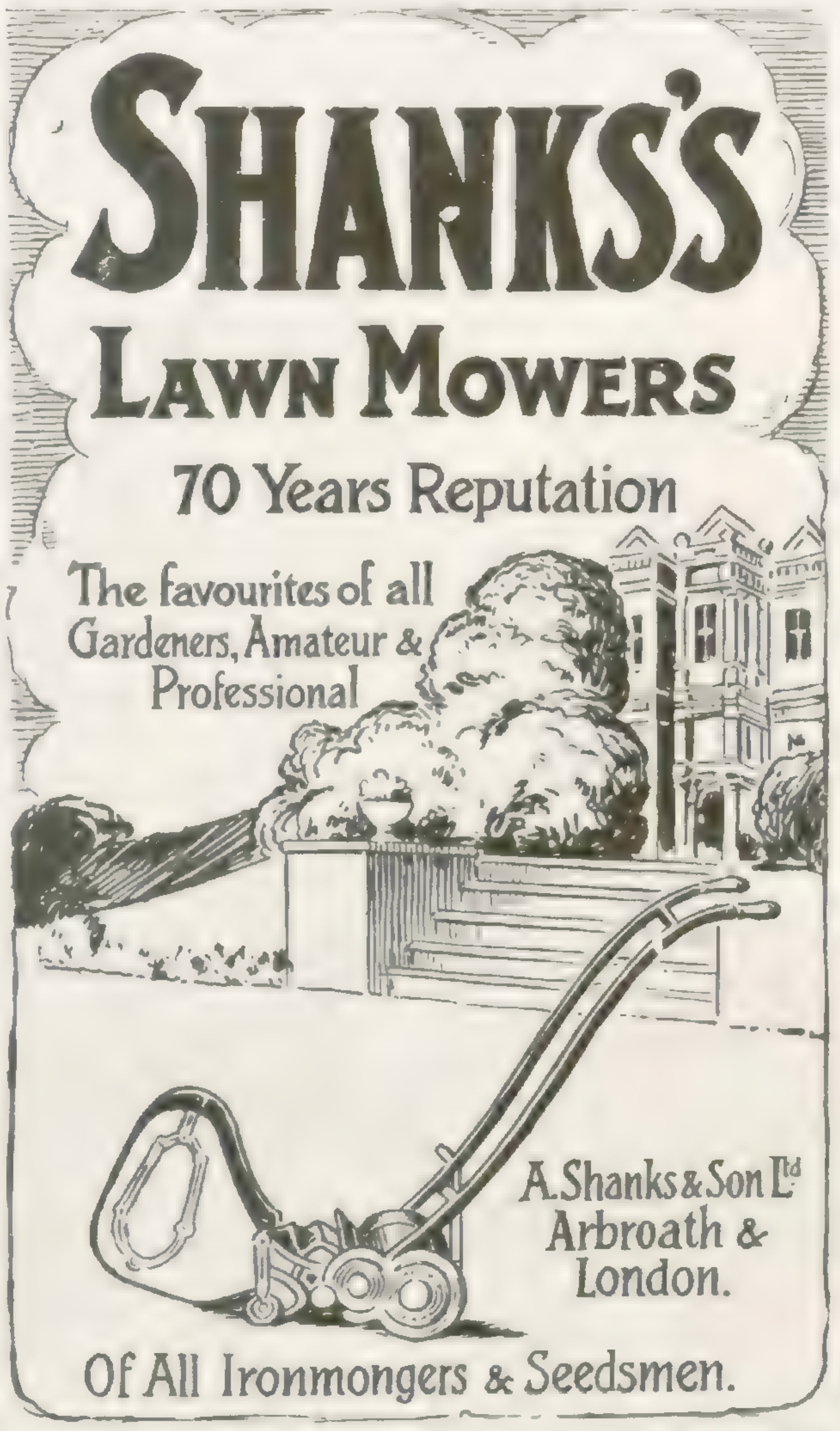
LOOK! TANNED GARDEN NETTING, small mesh, 50yds. long by 1 yd. wide, 1s.; by 2yds. wide, 2s.; by 3yds. wide, 3s., either car. paid, any size made. Odd pieces Netting for protecting bush fruit buds, 14lbs., in bag, 3s. Package free. STANLEY GORDON, Bank House, Rye.

Write for ILLUSTRATED CATALOGUE POST FREE
from

Carters TESTED Seeds
REGISTERED TRADE MARK

Carters
HIGH HOLBORN
New Offices and Seed Testing Grounds,
RAYNES PARK, LONDON, S.W.

Branches { 237 and 238, High Holborn, W.C.
53a, Queen Victoria Street, E.C.


SHANKS'S
LAWN MOWERS
70 Years Reputation
The favourites of all Gardeners, Amateur & Professional
A. Shanks & Son Ltd Arbroath & London.
Of All Ironmongers & Seedsmen.

CABBAGE PLANTS, extra strong, Ellams, Mein's, Offenham, First and Best, Enfield, Battersea, 3s. 1,000, 12s. 6d. 5,000 lots; Drumheads, 2s. 6d.; Red Cabbage, Cos Lettuce, Tripoli Onion, 4s. 1,000, on rail; or 1s. 100, post free. List free. C. HIGHT, Cranleigh, Surrey.

CHARGES FOR ADVERTISEMENTS IN

THE GARDENERS' MAGAZINE.

Five Lines and under	£0	2	6
Per Line beyond	0	0	6
,, Inch	0	6	0
,, Half Column	1	10	0
,, Column	3	0	0
,, Page	9	0	0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

☞ All Advertisements should be Received by 5 o'clock on Tuesday.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— & Co.

Telephone Numbers:
Editorial and Printing Depts. ... ... 831 Holborn.
Advertising and Publishing Depts. ... 2140 Holborn.

Offices: 148 and 149, Aldersgate Street, London.

DO YOU WANT TO KNOW
The best new Chrysanthemums, Michaelmas Daisies, Carnations, Dahlias, Fuchsias, Pelargoniums Zonal and Ivy Geraniums, Sweet Peas and other Seeds,
[*Send for Catalogue free.*]
H. J. Jones' Nurseries, Ltd.,
RYECROFT, LEWISHAM.

TOMATO PLANTS (6 to 8 ins. high). Ready for Fruiting Quarters. **Grown in Steam sterilised soil.** Very carefully packed and protected.
Price £3 per 1,000, Cash with order, carriage paid.
Per 100, 7/-; 65 plants, 5/-; 50 plants, 4/-; 25 plants, 3/-; 12 plants, 2/-
Carter's Sunrise, Winter Beauty, Beauty of Wales, etc.
W. & F. POAT, TOMATO GROWERS, ST. SAMPSON'S **GUERNSEY, C.I.**
Cheques, Postal Orders, etc., should be crossed "Guernsey Banking Co., Ltd."
Booklet and Testimonials free on application.

"CARRUSTICIDE."
The Best and Cheapest Remedy for Carnation Rust and other Fungoid Diseases.

A well-known Carnation Grower writes:

Dear Sir, The Nurseries, March, Cambs.

"During the 27 years I have been growing Carnations (Perpetual and American) I have tried most of the fungicides placed on the market, but yours is the best. It is a pleasure to see how "Carrusticide" catches hold of the Rust and destroys it. I should say your preparation will be extensively used when it is better known." Yours very truly,

GEO. CLARKE.

One gallon makes 25 gallons for spraying purposes —Price 3s. per quart, 7s. 6d. per gallon. Special quotations for larger quantities.

Terms: Cash with order.

H. SAMUEL, Ph C., M.P S., Horticultural Chemist
55, High Street, Leighton Buzzard.

WHY DISCARD YOUR OLD METAL LABELS FOR NEW ONES? Save money. I undertake to remove old name and renovate them just like new by an electrical process for 3s. 6d. per 100, carriage paid one way. Cash with order. Satisfaction guaranteed, or money returned. C. B. WILLIAMS, 46, Mount Pleasant Road, Liscard, Cheshire.

AMERICAN TREE CARNATIONS, best varieties, including Britannia, White Perfection, etc., strong young plants from 2in. pots, 3s. doz., 20s. 100, flowering plants, 5in. pots, 8s. per doz. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

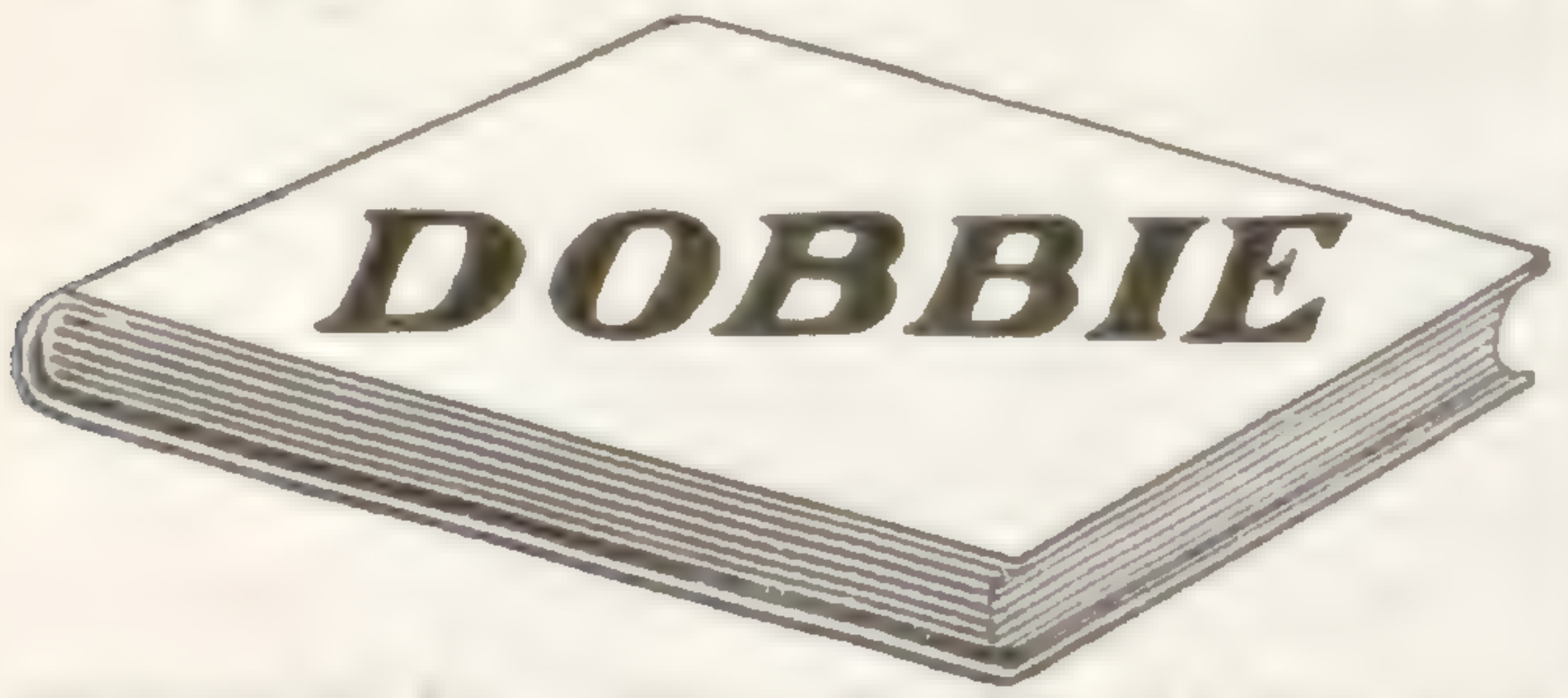
HERE YOU ARE! ! !—ARTHUR COOMBES, F.R.H.S., offers pick of his Tomato Plants, grown under ideal conditions. Holmes' Supreme, Comet, Up-to-Date, D. of York, Sunrise, 1s. 3d. doz.; 8s. 100, cash. Post free.—ST. MARY'S NURSERY, Hagley, Stourbridge.

TO GARDENERS.—WANTED GERANIUM CUTTINGS, Queen of Whites, P. Crampell, King Edward VII., F. of Spring, Jacoby, Denmark, etc. sample and price per 100 or 1,000; or would exchange Palms, Tree Carnations. MANAGER, Tresco Nurseries, Ipswich.

GLASS. | GLASS. | GLASS.

NICHOLLS & CLARKE, LTD.
Shoreditch, LONDON.
PAINT. Our List of PAINTS, COLOURS, VARNISHES and BRUSHES on Application.
When sending please cut out this advt.

100,000 FREE COPIES



Dobbie's New Catalogue and Guide to Horticulture.

224 PAGES. 210 ILLUSTRATIONS.

A COPY WILL BE SENT WITH PLEASURE GRATIS TO ANY ONE APPLYING FOR SAME, WHO ENCLOSES 3d. IN STAMPS TO DEFRAY COST OF POSTAGE, AND MENTIONS "GARDENERS' MAGAZINE."

DOBBIE & CO.,
The Royal Seedsmen, EDINBURGH

PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J. R. PEARSON & SONS
LOWDHAM, NOTTS.

Perpetual-Flowering CARNATIONS.

This year's Novelties and all the Leading Varieties.

Send for descriptive Catalogue of 80 varieties with particulars when to stop them.

C. ENGELMANN, CARNATION GROWER,
SAFFRON WALDEN.

Rhododendrons.

Crimson, White, Pink. 250 Choice Named Varieties, fine foliage, well budded, for potting or planting. 1 to 1½ ft., 1½ to 2 ft., 2 to 2½ ft., 2½ to 3 ft., 3 to 4 ft., 4 to 5 ft., 5 to 6 ft., 6 to 7 ft. List of sorts and prices on application; many thousands to offer. Standards in all sizes.

All Home-grown. Inspection Invited.

F. STREET, Heatherside Nurseries, CAMBERLEY.

ROSES IN POTS

Wm. PAUL & SON
WALTHAM CROSS, LTD.

Respectfully invite attention to their magnificent stock of the above, which they believe to be unrivalled in quality and extent.

Dwarfs or bushes, extra strong, in 8 in. pots, for forcing and greenhouse culture	30/- to 60/- per doz. £12 and upwards per 100.
Climbers and Ramblers in 8 in. pots, for forcing and out-door planting on pergolas, arches, etc., with shoots ...	6 to 12 ft. long, 30/- to 60/- per doz. 12 to 16 ft. long, 72/- to 90/- per doz. Price per 100 on application.
Dwarfs and Climbers, smaller plants, in 5 in. pots	10/6 to 18/- per doz. 75/- to £6 per 100.

Priced List Post Free on application.

Inspection of Stock Invited.

The Nurseries are twelve miles from London, four minutes' walk from Waltham Cross Station, G.E.R.

Sole Postal Address—

PAULS' ROYAL NURSERIES
AND SEED WAREHOUSE,
WALTHAM CROSS, HERTS.

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS**, and an endless variety of Choice **ORCHIDS**.

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

RHUBARB ROOTS.

DAWES CHALLENGE has obtained **seven medals and awards.** Price list and cultural directions free. Sample bunch gratis with 10/- orders.

Apply direct.

CHAMPION RHUBARB GROWER,
Syderstone Nurseries, Norfolk.

PERPETUAL CARNATIONS.

1911 Illustrated Catalogue Ready & FREE.

We have a Wonderful Collection of Novelties this Season, including our

"DUCHESS OF DEVONSHIRE."

The best all-round Perpetual Crimson ever raised.

Read our "TREATISE ON CULTURE" 1/-, Free.

YOUNG & Co., Gold Medallists, **HATHERLEY, CHELTENHAM.**

CARNATIONS, PINKS, AURICULAS.

DOUGLAS for the best old and new varieties in all classes, and the finest quality in the world. Malmaison Carnations, new and old, 7/6 per dozen. Border, 6/- to 12/- per dozen. Tree, American, and English, 7/6 to 15/- per dozen. Auriculas, Show, 21/- to 30/- per dozen. Alpine Auriculas, 9/- to 21/- per dozen. Carnation, Auricula, Pink, and Polyanthus seed, 1/6 and 2/6 per packet. **CATALOGUE FREE.**

J. DOUGLAS, Bookham, LEATHERHEAD.

BUNYARD'S FRUIT TREES

The Best Quality and Largest Selection at Moderate Prices.

WRITE FOR CATALOGUE.

GEO. BUNYARD
& CO., LTD.,
Royal Nurseries,
MAIDSTONE.

ANT ROOZEN & SON'S

SEEDS, BULBS, AND **PLANTS**

For Spring, 1911.

All of the Finest Quality.

THE CATALOGUE of above will be sent, post free, on application to their Offices at . . .

OVERVEEN, HAARLEM, HOLLAND;

Or to their General Agents,

MERTENS and CO.,
3, Cross Lane, LONDON, E.C.

VOL. LIV.—No. 2,994. SATURDAY, MARCH 18, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

◆

The Scottish Horticultural Association.

Taking a keen interest in the various associations that have for their object the advancement of horticulture and the improvement of the position of gardeners, we have felt that the presidential address which Mr. W. H. Massie delivered at the February meeting of the Scottish Horticultural Association is deserving of the fullest consideration. It is especially deserving of attention for the evidence it affords of the difficulty experienced in achieving complete success, even by men of high ability, when the essentials thereof fail to receive the fullest consideration, and the details of the project, whatever it may be, are not thought out from the business point of view. The address is of interest also from the fact that Mr. W. H. Massie has, in his review of the past and future of the association over which he so ably presides, dealt with the problems requiring solution from the business standpoint, and has had the courage of his opinions in suggesting reforms he considers necessary to enable the association to carry out the more important of the objects for which it was founded. It will be admitted, and by no one more readily than by ourselves, that the Scottish Horticultural Association has done an immense amount of good work during the twenty-four years that have elapsed since its foundation. But it made the initial mistake of adopting too low a rate of subscription, a fact which Mr. Massie recognises, and refers to in the concluding part of his address which we publish in this issue. It was, of course, necessary that the rate of subscription should be such as would enable the Scottish gardeners generally to become members; but it ought to have been recognised that it would be quite impossible to do much beyond holding monthly meetings with an annual subscription of half-a-crown. It was no doubt thought that a low subscription rate would ensure a large membership, and it may also have been thought that "mony a mickle mak a muckle." If this was the case, the anticipation has been fully realised, and the old Scotch proverb has come true enough, but in a way different from the one expected. Each member necessarily causes certain expenditure, and if his subscription is not in excess thereof there is no advantage, from a strictly financial point of view, in having large numbers of members. Bearing the fact in mind that the subscriptions of 1,000 members at half-a-crown each only amount to an annual income of £125, it is somewhat surprising that so able a horticulturist as the late Mr. Malcolm Dunn should have spoken in so highly an optimistic manner in the presidential address which he delivered three years after the foundation of the association with regard to the proposed library. During the following ten years other presidents spoke in a similar strain, and successive Councils referred to the desirability of forming a library as soon as the funds would permit, but no suggestion appears to have been made with regard to providing the necessary funds until Mr. Massie recommended the other day the raising of the rate of subscription. We are not certain that Mr. Massie goes quite far enough in his proposal, because a long time must elapse before there will be an appreciable increase in the income if new members only are to pay at a higher rate. We believe that the majority of the members would readily increase their subscriptions if they had evidence of an endeavour being made by the Council to form a comprehensive horticultural library. It was unfortunate that a portion of the profits derived from the earlier chrysanthemum shows was not annually invested for the purpose of purchasing gardening books as opportunities offered, as, if this had been done, a substantial sum would have soon been obtained. So far from this being done, the great success of these exhibitions resulted in the question of a library being lost sight of. We were pleased to find that Mr. Massie effectively disposed of the question of establishing a museum, because its cost would be quite out of proportion to the use that would be made of it, and also of the question of establishing educational classes, which are plentiful in Edinburgh. But his suggestion for the encouragement of the younger members to fully equip themselves for the responsibilities that in due course they will have to bear, is worthy of sympathetic consideration. Should the association undertake the important work of granting certificates for proficiency in horticulture, we trust they will formulate a scheme by which those of a higher grade can only be granted to men who have had several years of practical work in the garden or nursery, and preferably in both. In the training of gardeners there must be practice with science, for only by that means is it possible to obtain a full knowledge of practical details and the scientific principles that underlie them. Space will not admit of our properly discussing the question of the amalgamation of the Royal Caledonian Horticultural Society and the Scottish Horticultural Association, which has so greatly exercised the minds of the members of the Councils of these two great bodies, nor does it appear likely that at the present juncture any useful purpose would be served in doing so. If it be impossible for the two societies to form themselves into one body with advantage to Scottish horticulture, some endeavour should be made to formulate a scheme by which competition between the two societies will, as far as possible, be avoided. The two societies that have their headquarters

MR. THOMAS COOMBER, V.M.H.

in Edinburgh are by no means weak in capacity for good work or in finances, but we should like to see them welded into one strong body, possessing a botanical and horticultural library, and holding exhibitions at such periods of the year as may appear desirable, and monthly meetings at which Scottish horticulturists would have opportunities for becoming acquainted with new and little known plants, fruits, and flowers, and, it may be, hear lectures from the leading authorities.

Mr. Thomas Coomber, V.M.H.—It is with very great pleasure we publish this week a recent portrait of a very old friend and contributor to the pages of the Gardeners' Magazine—Mr. Thomas Coomber, head gardener to Lord Llangattock, The Hendre, Monmouth, and one of the most recent recipients of the Victoria Medal of Honour in Horticulture. Though a Southerner by birth, Mr. Coomber began his gardening career in Aberdeenshire, at Crimmonmogate, subsequently serving for various periods at Knole Park, Sevenoaks; Woburn Abbey, Bedford; Pencarrow, Cornwall; Messrs. James Veitch and Sons' Chelsea Nurseries, and Rendlesham Hall, Suffolk. For thirty-six years Mr. Coomber has been at The Hendre, and he has brought the now famous gardens into a very high state of cultivation. Fruit culture is Mr. Coomber's great forte, though he would be famous in other directions were it not for the fact that he rarely exhibits any other produce than fruit. An orchard entirely enclosed with bird-proof wire netting is one of the features of The Hendre, while peach, pear, and apple culture reach an unusually high position, notwithstanding adverse soil and position. But, though all indoor and outdoor fruits are splendidly managed, Mr. Coomber is perhaps best known for his skill as a cultivator of pineapples, wonderful specimens of which he exhibits once or twice a year in London. Few who saw the display of strawberries from The Hendre at the Holland House Show two years ago will readily forget the splendid fruits staged. The relations between gardener and employer are particularly pleasant at The Hendre, and we well remember a few years ago when Lord Llangattock presided at the festival dinner of the Gardeners' Royal Benevolent Institution, how feelingly he referred to "my friend Coomber." We hope it will be a very long time ere, from any cause, these relations are broken.

The King and the Gardeners' Royal Benevolent Institution.—We are delighted to learn that the King has forwarded his annual subscription of £5 to the above charity, of which his Majesty is patron.

Spring Work Among Hardy Flowers.—In view of the importance of the work now requiring attention at this season of the year in the several departments of the garden set apart to hardy plants, we shall devote our next issue (March 25) chiefly to rock and water gardening, and the hardy plant borders. The principal contents will include articles written by well-known experts on "Seasonal Herbaceous Borders," "Spring Planting in the Rock Garden," "Dwarf Conifers for the Rock Garden," "Autumn Flowers for Rockeries," "The Selection and Planting of Water Lilies," "Waterside Flowers," "Perennial Asters," "Herbaceous Phloxes," "Violas," and "Gladioli and Montbretias." The issue will be profusely illustrated and the numerous illustrations will have special reference to the various subjects dealt with.

Lieut.-Colonel Prain, F.R.S., director of the Royal Botanic Gardens, Kew, has been elected a member of the Athenæum Club under the provisions of the rule which empowers the annual election by the committee of a certain number of persons "of distinguished eminence in science, literature, the arts, or for public services."

The Rose Annual for 1911 has been issued, and as the volume evinces a considerable improvement upon the most successful of its predecessors, the members of the National Rose Society have good cause for being fully satisfied with the budget of information on roses and rose culture with which they have been provided. The "Annual" opens with an article in which the Rev. J. H. Pemberton, president of the society, passes under review the rose season of 1910; and with reference to the development of roses, he states that he cannot remember "a worse exhibition season," and that "never was there such a dearth of specimen blooms." In the following article Mr. H. R. Darlington deals with the characteristics and merits of twenty-five climbing roses selected by the Publications Committee, and, as in the preparation of his notes Mr. Darlington has had the assistance of some of the leading rosarians, the contribution will be found of quite exceptional value. Of a high degree of merit also is the interesting article on the decorative value of roses from the pen of Mr. R. Forester Felton, who is especially well qualified to deal with such a subject. Mr. George Paul, V.M.H., gives his impressions of the roses shown at the Paris International Exhibition in 1910. The series of short articles on the preparation of rose beds on various soils, by Mr. E. J. Holland, Dr. A. H. Williams, Rev. F. Page-Roberts, Mr. V. Rolt, Mr. C. C. Williamson, Rev. J. B. Shackle, Mr. J. T. Strange, Mr. F. Dennison, and other rosarians, contain much useful information on this important detail of rose cultivation. Dr. A. H. Williams deals with the important question of the date of the flowering of roses, and suggests that more attention should be given to this point. There is an interesting communication on the cultivation of roses in Australia, and one certainly not less interesting on their culture in Rhodesia. Mr. E. Mawley, V.M.H., contributes as usual his analysis of roses shown in the previous year. The "Annual" is freely illustrated, but the illustrations are somewhat unequal.

Royal Horticultural Society's Exhibition on Tuesday was remarkable for its extent and interest, and also for the immense number of Fellows and their friends who were present. Throughout the afternoon the whole of the available space was densely crowded, and between three and four o'clock it was extremely difficult to leave the hall. It might be an advantage were arrangements made for providing an exit at the south door, when, as on this occasion, the hall is excessively crowded, for the purpose of relieving the congestion in the entrance hall. There can be no question as to the fine displays provided by the Royal Horticultural Society being fully appreciated by the Fellows.

Gift of a Public Park to Lockerbie. The inhabitants of Lockerbie, N.B., have just received a handsome gift in the shape of a public park, convenient for the town, and in every way suitable for the purpose. It consists of a field of about five acres, which has been generously presented to the burgh by Sir Robert W. Buchanan Jardine, Bart., of Castlemilk, Dumfries-shire. The park is for the purposes of recreation, etc., and is a strong evidence of the interest taken by the donor in the district. The intention of Sir R. Buchanan Jardine is that the park should be called the King Edward Park, and form a memorial of his late Majesty.

R.H.S. Narcissus Committee.—At the first meeting of this body for the present year a very hearty vote of thanks was tendered to Mr. H. B. May, now moved on to the Floral Committee, for his services as chairman during many years, and an equally hearty welcome was accorded to Mr. A. E. Bowles, the newly-appointed chairman. A vote of sympathy to the members of the family of the late Mr. Jas. Walker, was passed; Mr. Walker was one of the original members, and one very highly respected. It was reported that the Duke of Bedford had contributed £100 to the Barr Memorial Fund, the latter now rapidly approaching £300.

Marie Louise Violets from Gainsborough.—From Mr. J. H. Creed, gardener to J. H. Sandars, Esq., North Sandsfield, Gainsborough, we have received a box of exceptionally fine Marie Louise violets, every flower of greater circumference than a half-crown piece. In size, fragrance, substance, and length of stem these charming flowers give evidence of exceptional cultural skill. Mr. Creed wrote, a week ago, "We have had a splendid lot of these violets all through the winter, and now the plants are a mass of blue blossoms."

Southern Counties (Scotland) Gardeners' Mutual Improvement Association. In order to promote the movement in favour of the establishment of a Mutual Improvement Association for the gardeners of the southern counties of Scotland, a meeting was held in the King's Arms Hotel, Dumfries, on March 5, when Mr. Hunter, of Messrs. James Service and Sons, Dumfries, had kindly consented to give a paper on the advantages of such associations. Mr. Hunter's paper was an excellent one, pointing out the many benefits which resulted to those connected with such educational bodies, and giving much useful information and suggestive material on the subject. Mr. Hunter was heartily thanked for his paper. A committee has been appointed to select a suitable meeting-place for the association.

The "Kew Bulletin" for the current month, among other interesting matters, contains communications relating to the beechwood industry of the Chilterns, rubber cultivation in Togoland and German East Africa, Mallet bark, the disease of the lilac caused by the fungus known as Helminthosporium syringæ, the Japanese species of Cerastium, and the park system of the Niagara Falls.

New Sweet Pea and Rose Society at Bury St. Edmunds.—At a meeting held in the Guildhall, Bury St. Edmunds, a few days ago, presided over by the Mayor, the Bury St. Edmunds and West Suffolk Sweet Pea and Rose Society was formed. This new society will not run counter to the Bury St. Edmunds Horticultural Society, as the latter body has decided not to hold a summer show. The Marchioness of Bristol has been invited to become the first president, Mr. Walter Norton will act as secretary, and Mr. W. J. Arnold as treasurer. It is probable that the exhibition in July next will be held in the Town Hall, but if the new society desires to hold its show in private grounds, Mr. C. J. E. Sparke has kindly placed his grounds at the disposal of the committee.

EXHIBITIONS AND MEETINGS.

Royal Horticultural Society.

The ordinary meeting of the R.H.S. was turned into a great two-day exhibition on March 14 and 15, and besides the many and beautiful exhibits coming before the standing committees, there were competitive classes, for prizes offered by the Royal Dutch Bulb Growers' Society. The great hall in Vincent Square was filled to overflowing, and we believe some few exhibits got stowed away upstairs, and were seen by very few folks. Daffodils, alpine flowers, tulips, forced flowering shrubs, and orchids were the great feature of a show that on the first day was so crowded with Fellows and visitors that almost everyone was complaining of the heat and jostle, while, a little later, the nurserymen and their assistants were tired out.

FLORAL COMMITTEE.

A superb exhibit, the most striking in the show, was one entirely of alpine plants, staged splendidly by Mr. J. Grandfield, gardener to Sir Everard Hambro, K.C.V.O., Hayes Place, Kent. It is quite impossible for us to convey to readers the full beauty of this magnificent exhibit. Rhododendrons, kalmias, and a few daffodils, formed a background for superb batches of Primula denticulata, P. malacoides, P. denticulata alba, P. cashmeriana, Saxifraga apiculata, S. Boydi alba, S. Burseriana, S. Petrachi (A.M.), etc., and smaller groups and plants of hardy cyclamen, Primula frondosa, P. Mrs. J. H. Wilson, Rhodothamnus chamæcistus, Muscari Heavenly Blue, Androsace Chumbyi, Iris reticulata, Erica carnea, etc.

Mr. A. A. Fabius, Redlands Nursery, Emsworth, showed again the graceful Adiantum Gloire of Moordrecht.

The alpine garden set up by Mr. H. Hemsley, Brighton Road, Crawley, contained Rhododendron racemosum, Saxifraga sancta, Cytisus Ardoinei, Iris reticulata, Lenten roses, anemones, and primulas.

Finely-grown violets, the varieties being the single Kaiser Wilhelm and La France, came from Mr. Harris, gardener to the Earl of Clarendon, Watford—the flowers were of grand size.

Messrs. R. H. Bath, Ltd., Wisbech, presented a very interesting exhibit, consisting of a large collection of tulips, hyacinths, daffodils, and crocuses, grown in fancy bowls in moss fibre. It was a group that the amateur visitors lingered long over.

Forced flowering shrubs in great variety, from Mr. L. R. Russell, Richmond, were greatly admired for the fine Azalea mollis, lilacs, and the graceful Jasminum primulinum. Mr. Watts, St. Asaph, North Wales, showed a few pans of glorious blue polyanthus primroses, full of flower, and blooms of grand size, colour, and substance.

Messrs. H. Cannell and Sons, Swanley, had a goodly exhibit of cut zonal pelargoniums showing brilliant flowers of the new bedding variety Salmon Paul Crampell, Scarlet King, Lady Roscoe, Lady Warwick, Burford, Amphitrite, and Hibernian.

Coloured primroses, largely of blue shades, and fine as regards size and freedom, were displayed in large round baskets by Messrs. Blackmore and Langdon, Twerton Hill, Bath.

The glorious carnations from Mr. H. Burnett, Guernsey, were a fine feature of the meeting, the blooms being large and of grand colour; very lovely were R. F. Felton, Mikado, Enchantress, Alma Ward, Fortuna, Marmion, Mrs. C. F. Raphael, White Enchantress, Emperor, Mrs. Tatton, Bridesmaid, and Afterglow, and all were shown in large vases.

Messrs. Wm. Paul and Son, Waltham Cross, filled one corner of the hall with camellias, the lovely Prunus triloba, crimson-flowered peaches, and double almonds—a delightful exhibit of forced shrubs.

Pans of hepaticas, double and single, squills, muscaris, anemones, crocuses, hardy heaths, primulas in variety, and saxifragas were presented by Mr. J. Reuthe, Keston, and backed by rhododendons and other shrubs.

Messrs. R. Gill and Sons, Tremough, Penryn, Cornwall, again showed their fine new Primula Winteri, and a lovely lot of trusses of arboreum rhododendrons, these being very fine.

A large display of primulas from Messrs. Sutton and Sons, Reading, just inside the main entrance, attracted a great deal of attention. The group was composed of well-grown and finely selected strains of Primula obconica, showing a fine range of colours, from white to deep rosy-crimson; three little groups of P. Kewensis lent additional brightness to the exhibit.

SAXIFRAGA PETRACHI.

Flowers pure white. A.M., R.H.S., March 14. Sir Everard Hambro, K.C.V.O., Hayes.

Messrs. W. Cutbush and Son, Highgate, contributed a group of forced flowering shrubs, in which lilacs, magnolias, and rhododendrons figured prominently; this firm presented a fine group of hepaticas in various colours, double and single, and they also set up some handsome perpetual carnations, notably Mrs. Fortescue, Lady Coventry, Marmion, Lady Norah Brassey, and the bright Rose Doré.

A very brilliant contribution from Messrs. Jas. Veitch and Sons, Chelsea, embraced a fine lot of Indian azaleas, including the lovely A. amœna Hexe, some fine imantophyllums, the exquisite Camellia reticulata, Primula Kewensis, the fragrant Boronia megastigma, and a number of glorious amaryllis, the varieties being Leda, Ena, Favonius, and Baletus; Cineraria Feltham Beauty, a blue cactus-flowered variety, was very elegant and beautiful.

The exhibit from Messrs. H. B. May and Sons, Edmonton, consisted of neat, freely-flowered Indian azaleas, a selection of the newer plumose nephrolepis, some gymnogrammas, and davallias.

Lenten lilies shown by Messrs. Barr and Sons, Covent Garden, were interesting, and so were the gerbera hybrids, and the lovely little crocuses, squills, hardy heaths, freesias, Primula malacoides, P. denticulata, anemones, and other charming early flowers.

Messrs. T. S. Ware, Feltham, set up a small rock garden exhibit in one of the annexes, and furnished it prettily with Soldanella alpina, Shortia grandiflora, Epigæa repens, Primula denticulata, and P. d. alba, hardy cyclamens, heaths, saxifragas, adonis, etc.

Hardy heaths, alpine shrubs, saxifragas, primroses, and Iris reticulata were the features of the exhibit from the Guildford Hardy Plant Company. The carnations from Messrs. Stuart Low and Co., Enfield, were very bright, and such varieties as Lady Alington, Scarlet Glow, Britannia, Black Chief, and Marchioness of Linlithgow were prominent.

Mr. Maurice Prichard, Christchurch, displayed Primula cashmeriana, and the white form, in splendid style, and presented a miniature rock garden furnished with dainty saxifragas, Primula nivalis, double primroses, Viola gracilis, and Anemone blanda in variety.

Messrs. R. Wallace and Co., Colchester, put up a quite bold rock garden filled with miniature shrubs, and groups of Anemone blanda, muscaris, Fritillaria meleagris, Primula Mrs. J. H. Wilson, Morisea hypogæa, Tulipa Kaufmanniana, Iris reticulata, etc., etc.

Mr. Clarence Elliott, Seven Hills, Stevenage, presented a very pretty rock garden, in which saxifragas were particularly good, notably the beautiful S. Burseriana.

Roses and lilacs, all deliciously fragrant, were shown in some quantity by Messrs. Paul and Son, Cheshunt; the small lilacs were finely flowered, and leading varieties were Alphonse Lavallee, Comtesse H. de Choiseul, alba grandiflora, Madame Abel Chatenay, and Madame Casimir Perier.

Messrs. Bakers, Wolverhampton, had beautiful little batches of Primula Cashmeriana, Trillium grandiflorum, Incarvillea grandiflora, Saxifraga sancta, Adonis amurensis.

Viola gracilis, Androsace sarmentosa, and hepaticas.

Lachenalia Nelsoni was superbly shown by Messrs. R. and G. Cuthbert, Southgate. They were in 48-sized pots, and crowded with spikes of soft yellow flowers.

Mr James Box, Lindfield, put up a big display, consisting of daffodils, tulips, hyacinths, and alpines, presenting these in the form of a decorative group.

Messrs. Heath and Son, Cheltenham, presented some delightful alpine plants, and notable things were Primula lilacina, a hybrid between Primula frondosa and P. rosea, alpine auriculas, heaths, and the beautiful Anemone nemorosa robusta.

Messrs. James Carter and Co., Holborn, covered themselves with glory by displaying a delightful spring garden right opposite the entrance. There was an admiring crowd round the display all the time, and it was difficult to discover whether the lovely green grass or the flowers were most admired. The background was of tall conifers, and below this was some rockwork filled with groups of daffodils, Iris reticulata, and breadths of crocuses, Rhododendron præcox, and snowdrops. There were two trickling fountains each bordered by yellow crocuses. In the centre was a bed of white hyacinths, with a raised ornamental vase of the pink tulip Royal Park. Along the front there were two semicircular beds of hyacinths, and two of tulips, the whole making up a delightful spring flower garden of charming design and great beauty, and all composed of simple subjects.

Mr. H. Ellison, West Bromwich, again brought forward a goodly collection of elegant ferns, and he also displayed among these several vases of beautiful blooms of hybrid gerberas.

The new deep pink rose, Mrs. George Shawyer, placed between several dozen lovely flowers of the yellow Lady Hillingdon, came from Messrs. G. Mount and Sons, Canterbury.

Mr. Prime, gardener to the Marquis of Salisbury, Hatfield, showed his skill with lachenalias by setting up a large batch of well-grown specimens, with a few crotons rising above them.

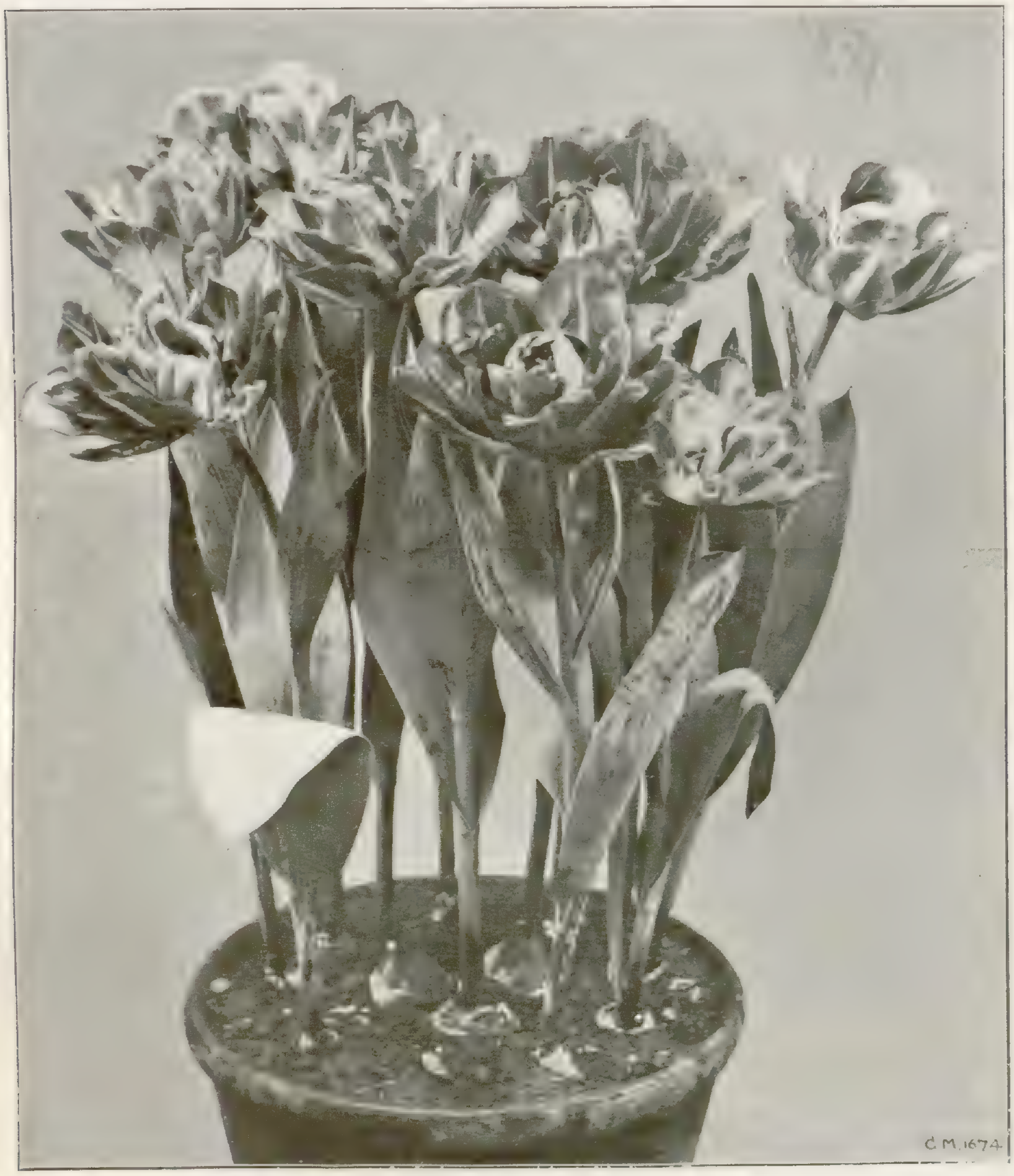
Mr. H. C. Pulham, Elsenham, was responsible for a small rock garden, neatly furnished with popular alpines.

Messrs. R. P. Ker and Son, Liverpool, showed a splendid white amaryllis, named Queen Mary, which gained an A.M.

Mr. C. Engelmann, Saffron Walden, exhibited a collection of perpetual carnations, the varieties most in evidence being Carola, J. Whitcombe Riley, and Mrs. H. Burnett.

Lachenalias were well shown by Messrs. J. Peed and Son, West Norwood, who also sent a small collection of alpines.

Messrs. G. Jackman and Son, Woking, brought up a pretty and interesting lot of saxifragas, anemones, primulas, and other alpines.



EARLY-FLOWERING TULIP YELLOW MURILLO.

Flowers double, and of a rich yellow hue. A.M., R.H.S., March 14.
Mr. Profittlich, Twickenham.

ORCHID COMMITTEE.

A goodly group of orchids from Messrs. J. Cypher and Sons, Cheltenham, included Lælio-cattleya Lady Miller, Cymbidium insigre Sanderæ, some good odontoglossums, Stanhopea eburnea, Leptotes bicolor, the grand Miltonia Bleuana nobilior, Brasso-cattleya Digbyana, Cattleya Mendeli, the fragrant Dendrobium aureum, and other good things.

Messrs. Sander and Sons, St. Albans, presented Cymbidium Gottianum (eburneum and insigne Sanderi), a spike of Schomburgkia undulata, Odontioda Bradshawæ, Phaius Norman, the finely margined Odontoglossum Braggense, Chysis Chelsoni, Renanthera Imschootiana, Odontoglossum Thompsoni, etc., etc.

An extremely beautiful display of orchids from Messrs. Charlesworth and Co., Haywards Heath, was also of considerable extent. The varieties of Odontoglossum crispum were of outstanding merit, though all light coloured. The hybrids included O. Rolfeæ, O. Wilckeanum, O. amabile, O. Sylvia, O. Warnhamense, O. Ossulstoni, Odontioda Bradshawiæ, O. Lutetia, O. Cooksonæ, O. heatonense, and O. Charlesworthi. Other fine things were Phaius Norman, very finely shown and grown; Lælio-cattleya Myra, Zygo-colax, Charlesworthi, Brasso-cattleya Maronæ, Cattleya citrina, and the handsome Brasso-lælia Veitchi var. King Edward VII.

Messrs. J. and A. McBean, Cooksbridge, showed a big Cymbidium Lowio-eburneum, Odontoglossum crispum, Cattleya Trianæ, and C. Schroderæ.

Dendrobiums were splendidly shown by Mr. Collier, gardener to Sir Jeremiah Colman, Bart., Gatton Park, Reigate, who had delightful plants of D. Lady Colman, D. nobile Harefield Hall var., D. rubens, D. signatum aureum, D. Wiganianum, D. Princess Patricia of Connaught, D. melanodiscus, and several charming unnamed hybrids.

Dendrobium Wardianum was the central feature of a group of orchids from Messrs. Stuart Low and Co., Enfield; round this were grouped Cattleya Schroderæ, C. Suzanne Hye, Renanthera Imschootiana, and Miltonia Bleuana nobilior.

Messrs. Armstrong and Brown, Tunbridge Wells, were represented by a large example of Odontoglossum nævium, O. Rolfeæ, O. crispum, O. amabile, Cypripedium Maudiæ, and Brasso-cattleya Lehmanniæ, with numerous and beautiful dendrobiums and masdevallias.

DAFFODIL AND TULIP COMMITTEE.

A remarkably fine exhibit from Messrs. R. and G. Cuthbert, staged along the top end of the hall, was a striking feature of the exhibition. It consisted entirely of tulips in pots, grouped in their varieties so as to make up a large and harmonious display. About forty varieties were on view represented by about nine hundred potsful. The flowers were delightful, and were a foretaste of spring. Leading varieties were Mon Tresor, Nellie, Pink Beauty, Pottebakker White, Prince of Austria, Vesuvius, Coleur Cardinal, Mr. Stanley, Maes, Joost van Vondel, Grace Darling, White Swan, Sir Thos. Lipton, Kaizers Kroon, Proserpine, and Van der Meer.

Messrs. Robert Sydenham Limited, Birmingham, submitted a group of interesting daffodils. The flowers clear and bright; Incognita, Great Warley, Homespun, Lady Margaret Boscawen, Firebrand, Dairymaid, etc.

Messrs. Cartwright and Goodwin presented a goodly collection of daffodils, and set these up well, with Isolepis gracilis between the vases. Very beautiful were the blooms of Leiden Jar, Mrs. H. J. Veitch, Trojan Boy, King Alfred, Ambrosine, Beacon, Castile, Barcarolle, Lulworth, Circlet, Robt. Browning, Mdme. de Graaf, and Libra.

Messrs. J. R. Pearson and Sons, Lowdham, Notts, put up a collection of daffodils, in which the outstanding varieties were Empire White incomparabilis, Blackwell, Heroine, Viga, Florence Pearson, Maximus, Seagull, White Queen, King Alfred, and Duke of Bedford.

Mr. Christopher Bourne, Simpson, Bletchley, put up his first exhibit of daffodils at the hall since joining the ranks of the trade. His effort was a capital one, and he had Whitewell, Tritoma, White Queen, Lullaby,

(Continued on page [illegible]3.)

THE COOL OR LATE PEACH HOUSE.

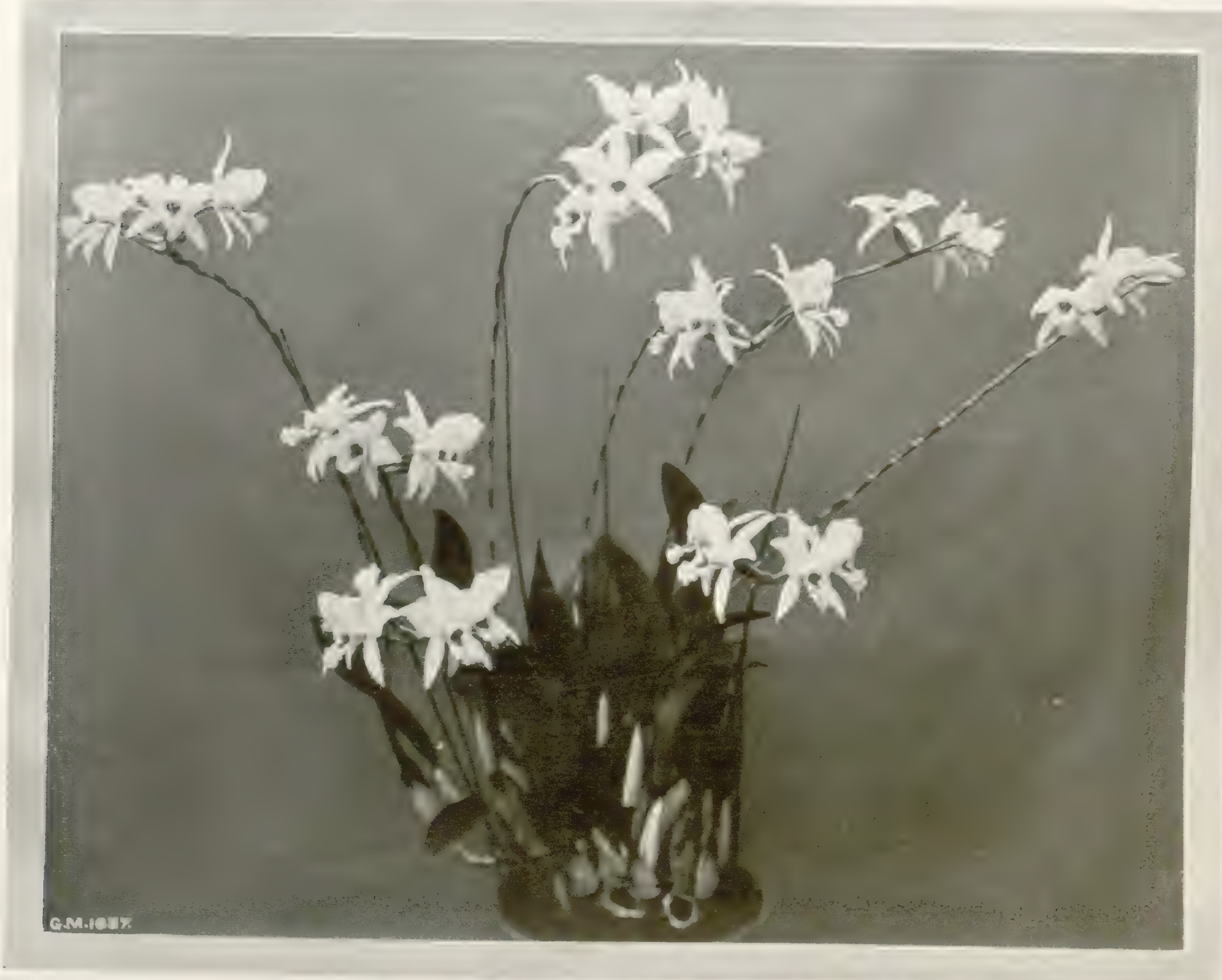
The cool peach house serves very useful purposes in many gardens, especially in those where outdoor peaches and nectarines are not grown, while, as a rule, owing to the comparatively simple and economical way it can be managed, it is the best description of peach house for the amateur, whether he grows his trees as bushes or pyramids, in pots, or as planted out trained specimens.

The houses may be either lean-to, facing south or nearly so, or span-roofed running north and south. In either case fruit of excellent quality can be grown, though, of course, that produced in the former, provided the varieties are the same, will ripen earlier than will those in the latter. I have seen heavy crops of good fruit produced in a somewhat flat-roofed lean-to house facing south-west. The trees were standards, planted along the centre of the house, with their branches trained star fashion upon an overhead trellis. This is by no means referred to as being an ideal case, but rather in order to point out that good results can be obtained by ordinary means, so far as houses are concerned. The necessity, or otherwise, of heating the houses depends upon their position, as though it is necessary in our low situation, as was once proved by a crop being ruined by frosts in March (previous to the house being heated) when the trees were in blossom, yet, it is not so in cases where the houses are situated at a high elevation, and in any case artificial warmth is only required while the trees are in blossom. It is very important, however, that peach houses occupying all positions should be adequately provided with both bottom and top ventilators.

The varieties used must depend in a great measure upon circumstances, for example, if fruit is only required to succeed that obtained from mid-season houses, then late, and the latest, varieties only should be planted, and in this case a house of moderate dimensions may suffice to meet demands. On the other hand, supposing, as in the case of some amateurs, it is the only peach house at command, it would be advisable to plant trees of both early, second early, late, and the latest varieties, with a view to command an unbroken supply of ripe fruit, covering as long a period as possible; and under these circumstances, in order to reap the most satisfactory results, a large house is indispensable. When adopting this course the earliest varieties should be planted at one end of the house, to be followed by the second early, and so forth. By this method the trees in each section of the house are simultaneously cleared of their fruit, and can thereby be the more conveniently and profitably attended to with respect to syringing and other details, and, if growing in borders, to watering also.

Apart from being a very interesting mode of management, there are advantages to be gained from growing the trees in pots, the chief of which is, perhaps, that a greater number of varieties can be grown in a given space than can be done by trained trees planted out; from them, moreover a succession of fruit can be kept up for a greater length of time than is possible from planted trees. Another gain to be reaped from pot culture is the fact that the trees can be cleared from the house during winter, and the house utilised for other purposes. Pot culture, however, it should be understood, enforces a relatively greater amount of labour in watering and manuring than does the planting-out system.

T. Coomber.



A FINELY-FLOWERED SPECIMEN OF LÆLIA ANCEPS SCHRODERIANA.
Recently exhibited at a R.H.S. Meeting by Lieut.-Colonel Sir George Holford.

A FINE WHITE LÆLIA ANCEPS

In our issue of March 11, and on p. 185, we gave an illustration of a fine specimen cattleya from Lieut.-Colonel Sir G. Holford's collection, and we now present our readers with another illustration of Mr. H. Alexander's skill. The Cattleya Trianæ Hydra referred to was the centrepiece in an exhibit of Lælia anceps at the Royal Horticultural Hall last February, and one of the finest of the Lælias, L. anceps Schröderiana, is here figured. It carried eight spikes of lovely flowers, the latter numbering three dozen. As an example of cultural skill, this must take high rank among the many fine specimens from the Westonbirt collection that we have figured in these pages.

CONCERNING FRUIT TREES.

American Blight, or Woolly Aphis, is difficult to get rid of in some places. If "E. M." has used all the remedies stated in his recent note, I strongly suspect that he has the root form of this pest at work, which is so constantly repeopling the tree with its kind as he destroys them. I am perfectly certain that the pest itself can be easily killed with much less drastic measures or crude materials than he suggests. Personally, I like attacking American blight in the summer time—July or August—when the young can be found running over the trees in search of fresh quarters, and also, a point I think most important, very frequently without the characteristic down upon them, which so often throws off the spray fluid.

I have used McDougall's Psylla Wash at a strength of one gallon to fifty gallons of water without doing any appreciable damage to the leaves of the tree, and so effectively as regards the aphis, that it was hardly possible to find one live one.

I have had the root form in another orchard, however, and find that there it is a very different matter to get rid of the pest, for the simple reason I have stated above, that the ground form is continually migrating to the upper part of the tree. One of the many chemicals which kill by means of the noxious gases given off must be used to combat this root louse. Either these in the form of powder or liquid can be used, the latter requiring a special apparatus with which to use them generally. Vermorel makes an apparatus by which any required quantity of the most dangerous liquids, like carbon bisulphide, can be safely and expeditiously injected amongst the roots of the tree. In consists of a reservoir fitted with a strong plunger at the top, and carrying also a pair of stout handles to assist in forcing the point of the tube, which forms the lower part, into the soil. For this purpose, and also to gauge the depth the chemical is being injected a pedal is fitted on to the point. One forces this point into the soil, taking care that no large roots are touched, until the pedal touches the top of the ground, then drives the liquid out by means of the plunger fitted at the top of the reservoir, which automatically measures the dose.

The use of the Northern Spy stock, which has been found both in America and Australia to be immune from the attacks of woolly aphis, does not seem to have taken on in this country. Only very isolated cases of its use in nurseries are to be heard of, though one is somewhat at a loss to understand why; perhaps we are all so concerned to get fruit quickly by the use of surface-rooting stocks as to care little or nothing for anything else.

Like "E. M.," I can hardly understand Mr. Petts' remarks concerning gooseberry trees, as I have known fine large trees which have gone to twenty and twenty-five years of age before being discarded. But I find still more serious fault with him concerning "pinching in May" and "pruning as soon as the fruit is gathered." His remark that gooseberries rarely make secondary growth is quite contrary to experience, I believe.

When the American gooseberry mildew order was first issued the inspectors insisted on the infected bushes in the green state being tipped—practically Mr. Petts' pinching—but soon afterwards such a course was abandoned, as it was found, particularly in the case of young vigorous trees, that the shortened growth almost invariably started again into two or three growths, which became infected with the mildew, and so doubled or trebled the area of attack. The Government inspectors evidently had considerable experience of this "shooting again," since they did not recommend "tipping" last year, but did their best to dissuade growers from carrying it out, at least that was my experience with those I came in contact with.

The question of canker in apple trees is a very wide and far-reaching one, in which it is more easy to make sweeping and dogmatic statements than to find a real reason for the disease. If we admit that neglect, want of pruning and spraying, unsuitable soils and imperfect drainage—each and all of them—help to cause and maintain canker, how is it that some varieties, like Newton Wonder, and Bramley's Seedling, do not appear to be at all affected, even under the most unsuitable conditions. As a matter of fact, all these factors, even including the question of varieties, have an influence on the liability or otherwise of apple trees to canker. Wounds caused by woolly aphis, by carelessness in clambering about the trees when picking the fruit, by the rubbing of two shoots upon each other, are all dangerous, since the spores of the particularly active fungus, Nectria ditissima, can find an entrance thereby.

Spraying, to be effective against canker, must be with a strong fungicide, and at a time when the conidia of the fungus are present, while a lot of force will be needed behind the spray, and careful judgment in directing it, to reach them in the wounds and beneath loose bark and rubbish. I believe some of the damage attributed to canker, that is to Nectria ditissima, is really the work of the Apple Scab fungus and the Brown Rot fungus, both of them chiefly known for their damage to the fruit, which is, alas! only one side of their destructiveness. By bursting open the bark of the young shoots in the spring the former causes ugly blotches, if not wounds, the bark often hanging in scales up the shoot, while the latter is, I think, often responsible for the dying fruit spurs seen on many apple trees. A really cold, unkind subsoil is most frequently blamed for canker, and many are the devices adopted to overcome it, ranging from the use of surface-rooting stocks to artificial methods like planting on top of a layer of brick rubble, or, in very wet soils, even on mounds raised above the ground level.

In this connection I have been very interested in the articles on deep cultivation which have appeared in these pages lately. Though agreeing in the main with it for vegetable culture, I fail to follow the arguments entirely, particularly with regard to fruit. If the idea of deep cultivation is the aeration of the subsoil so as to set free some of the valuable constituents of plant food locked up therein, I agree, but if it is a question of more efficiently getting rid of surface water I differ. With proper underdraining no difficulty of the kind should occur, and, unless there is such a system, deep cultivation only means removing the trouble a foot or two deeper without really remedying it. Then, with regard to fruit, are these deep-rooting trees going to produce fruit or wood? Personally, I fear the latter, unless in the trenching great care was taken to make the manurial contents of the subsoil suitable for fruit production. The wood probably would be healthy, and free from canker, for a time, but I should anticipate that the roots would pretty rapidly penetrate the loosened soil, and commence to take hold of the undisturbed element beneath, tending to set up the old conditions over again.

I am inclined to think that where it is known that the subsoil is unsuitable, for some reason or another, that the steps to be taken should be in the direction of keeping the roots out of it by judicious feeding, pretty much on the surface, to draw them up, and the avoidance of too deeply disturbing the soil, so as not to drive them down. I believe such a course to be possible in this country, where we are not subject to very severe droughts, especially if care is taken to conserve the moisture in the surface soil by maintaining a dust mulch with the hoe. I must admit I have no experience of apples in specially deep cultivated soils, and my premises are principally based on the experience with surface-rooting stocks, which seems to point to the opposite.

I know, however, some soils which are very deep, varying in staple from three to six feet, on which most luxuriant growth is produced, but it is very difficult indeed to induce the trees to fruit. I realise, of course, that exceptional fruitfulness is not everything, especially if it is accompanied by a tendency to unhealthy wood, but of the two evils, I know which, as a commercial grower, I would choose. I should like to see a proper series of experiments carried out with regard to this question of canker and the subsoil. Trees of most of the varieties of apples, particularly those disposed to canker, should be planted (1) in the ordinary way, (2) after deep cultivation, (3) on a medium of some sort which prevented the roots from going down (it would be necessary that the drainage water could get away easily, or trouble would occur). Sufficient of the trees should be planted to enable tests to be carried out in each case concerning the efficacy of spraying to ward off or cure the canker, and, perhaps, of manurial dressings for the same purposes. Only in some such way will the vexed question be solved, and fruit growers be saved much capital now annually lost through the decay and death of their trees.

F. Hammond.

Pear Monarch.—This is a grand pear for use during the months of December, January, and February, where the trees do well. In one garden I found it very disappointing, though other varieties succeeded with only ordinary care bestowed upon them. Monarch did not thrive, and cast its fruits badly, although the trees were carefully watched and given special treatment. The rooting medium was rather clayey, but it was well prepared, and while other varieties made good progress, Monarch grew very slowly, but the slow growth was partially due to the quince stocks. Judging from further experience I am inclined to think that the variety does best on the pear stock if root-pruning be judiciously carried out. Another variety, Fertility, did badly with me in the same circumstances, although in other gardens it was not difficult to grow fine bushes and crops of fruit; in the one I specially refer to the young trees could not be induced to make satisfactory growth; indeed, many branches died annually. This variety was also grafted on the quince stock. Flower buds formed freely enough, but the pears were very small. The roots were quite healthy.—G. B.

SWEET PEAS

Reach the greatest perfection when grown with Canary Guano. This Fertilizer increases the size and brilliance of the blossoms and doubles their number. The Fertilizer may be applied at time of sowing and as a top dressing during the early part of growth. Try it. Canary Guano is used all over the world and is sold by practically all Seedsmen

In Tins, **6d., 1/-, and 2/6,** and in bags from **3/6** to **20/-** each.

FOR GARDEN AND GREENHOUSE USE CANARY GUANO.

Further particulars sent post free by the manufacturers—

THE CHEMICAL UNION, LTD, IPSWICH.

PRIMULA OBCONICA GIGANTEA GRANDIFLORA.

The most beautiful Free and Hardy Perpetual Greenhouse Plant grown.

ONCE IN FLOWER ALWAYS IN FLOWER.

We are NOTED for having the most — SUPERB Strain in commerce. —

SEED.

Mixed colours, also Compacta and Fimbriata, mixed, 1s. per packet; separate colours of Purple, Rose, Lilac, Deep Red, Crimson Scarlet, Pale Lilac, and Crimson (fringed petals), **2s. per packet; double flowering, including Pale Mauve and Rose, 2s. per packet. Instructions as to sowing with each packet.**

PLANTS, 3s., 5s., 7s. 6d., 10s. 6d., and 15s. per doz., according to size.

W. A., Esq., Reigate, Surrey, writes:—

I had a packet of seed from you last year, and am pleased to inform you that I have blooms measuring two inches and more across each individual flower. They are the best strain I have ever seen, both for variety of colours, and substance of bloom.

WM. ARTINDALE & SON,
Nether Green Nursery,
SHEFFIELD.

For 3 penny stamps we will send you our Catalogue of Plants, which is not merely a price list, but literature which gives all the cultural notes of plants therein mentioned. We have received hundreds of testimonials commenting on the value of this book.

OUR SEED CATALOGUE WILL BE SENT FREE ON APPLICATION.

ORCHIDS.

Amateurs interested in Orchids should write for our

Amateur's Guide,

2nd Edition, free.

Giving Treatment, Soils, Description of Flowers; Illustrated.

MANSELL & HATCHER, Ltd.,
Rawdon, Yorkshire.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.

Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

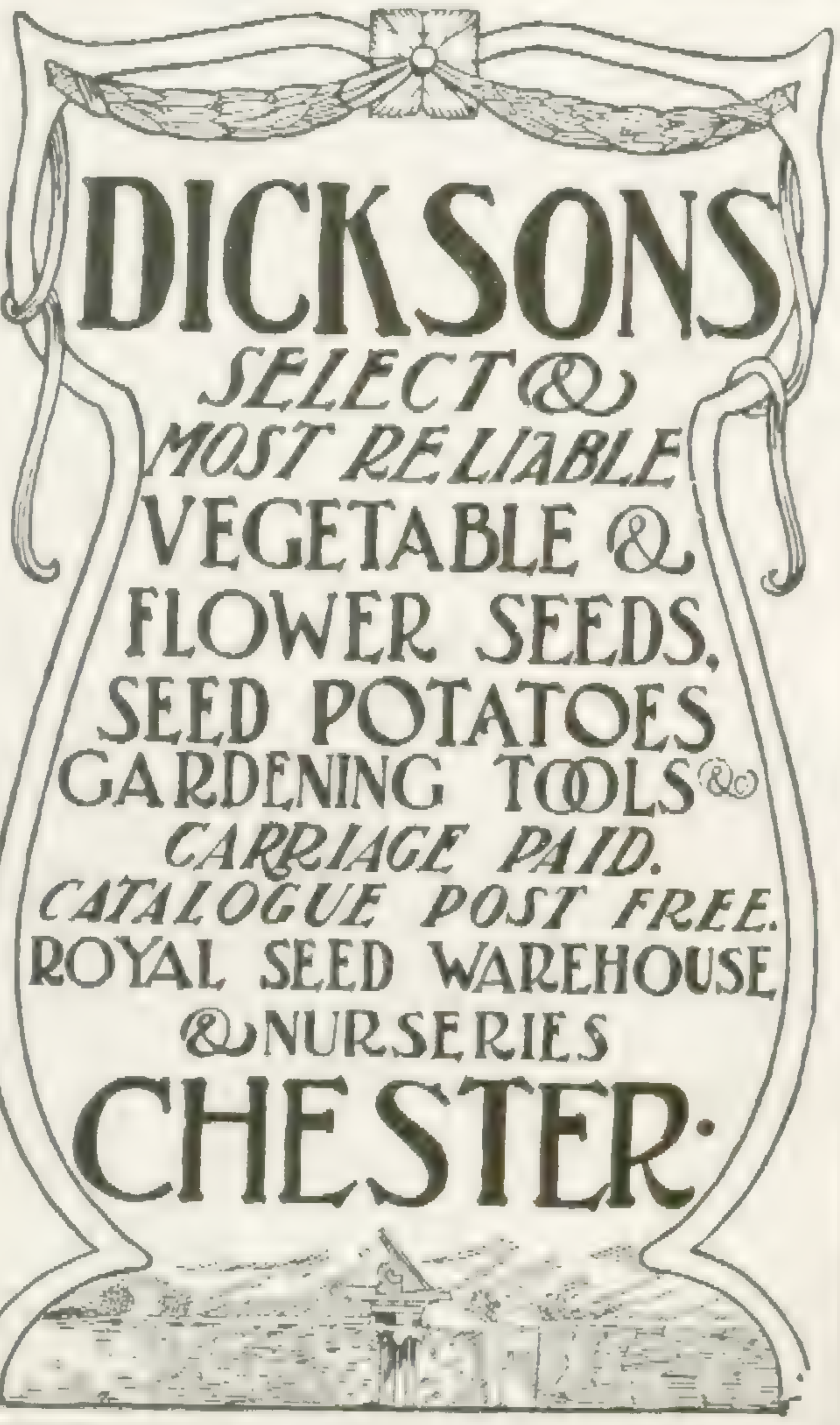
PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery. Cheltenham.

ZONAL PELARGONIUMS.

Catalogue of New and Choicest Varieties.

From V. SLADE, Zonal Specialist.
Staplegrove Nursery, Taunton.



DICKSONS
SELECT & MOST RELIABLE
VEGETABLE & FLOWER SEEDS.
SEED POTATOES
GARDENING TOOLS &c
CARRIAGE PAID.
CATALOGUE POST FREE.
ROYAL SEED WAREHOUSE & NURSERIES
CHESTER.

CHEALS'

113 Acres of Ornamental

Trees & Shrubs

Of all kinds.

Fruit Trees

Hardy, Healthy, and true to name.

Roses & Hardy Plants

Descriptive Catalogues Free.

J. CHEAL & SONS,
NURSERYMEN AND LANDSCAPE GARDENERS,
Crawley, Sussex.

TAKE NOTICE.

Intending planters should send for the STANCLIFFE CATALOGUE OF TREES, &c.

Our Stocks, which are grown on the highest and most exposed hills of Derbyshire, are in fine condition, and are sure to give satisfaction. Note the prices before ordering elsewhere.

Rockery Stone, 1/- per ton.

THE STANCLIFFE ESTATES CO., LTD.,
DARLEY DALE, DERBYSHIRE.

RIVERS'

Fruit Trees, Roses,
Vines, Figs, Oranges,
AND
Orchard House Trees.

A LARGE AND SELECT STOCK ALWAYS ON VIEW.

Illustrated & Descriptive Catalogue
POST FREE 3d.

THOMAS RIVERS & SON
Sawbridgeworth, Herts.
Station: HARLOW, G.E.R.

By Appointment to H.M. The King.

1911 FORBES'

Illustrated Plant Catalogue Nearly 200 Pages.

GOLD MEDAL SPECIALITIES.

Contains carefully revised **Descriptions, Colour, Height, Time of Flowering, British or Common Names, Prices,** etc., of the **Grandest Collections of ASTERS, BEGONIAS, CALADIUMS, CARNATIONS, DAHLIAS, DELPHINIUMS, PÆONIES, PANSIES, VIOLAS, PELARGONIUMS, PENTSTEMONS, PHLOXES, PYRETHRUMS, HARDY BORDER PLANTS,** carefully-prepared **PLAN** for arranging **HARDY PLANT BORDERS,** etc.

Experts unanimously accord **FORBES' CATALOGUE** the unique distinction of being the **best** and most **reliable** up-to-date **Reference Book** extant.

FREE ON APPLICATION.

JOHN FORBES (HAWICK), LIMITED.
(Dept. I), The King's Nurserymen, **HAWICK, Scotland.**

If the "Daily Mail" £1,000 winning bunch of Sweet Peas

BE GROWN WITH

MACKERETH'S SPECIAL
SWEET PEA MANURE,

Sold in Tins, **1/-** (1/4 post free), **2/6** (3/- post free).
Sold in Bags, 14 lbs., **5/-**; 28 lbs., **8/6**; 56 lbs., **14/-**;
112 lbs., **25/-** Carriage Paid.

I will present the winner with **£10**, and if the bunch contains bloom of Earl Spencer, I will present the winner with **£5.**

I have splendid stocks of the most chaste Spencer Sweet Peas. Orders executed the day they are received.

G. H. MACKERETH,
The Sweet Pea Clearing House,
ULVERSTON.

BY APPOINTMENT. BY APPOINTMENT.

CHEAP OFFER TO CLEAR.

We beg to inform our numerous clients that we have secured a large tract of land adjoining one of our principal Nurseries, and that it is our intention to clear the Stocks off some of our outlying branch Nurseries at a sacrifice.

Everything has been grown with our usual care, and offered in Lots, subject to being unsold; we guarantee the numbers and quality of each Lot offered.

Particulars of above, together with our General Catalogue, will be sent on application.

JAMES SMITH & SONS (Nurserymen to H.M. THE KING), **DARLEY DALE NURSERIES, near MATLOCK.**

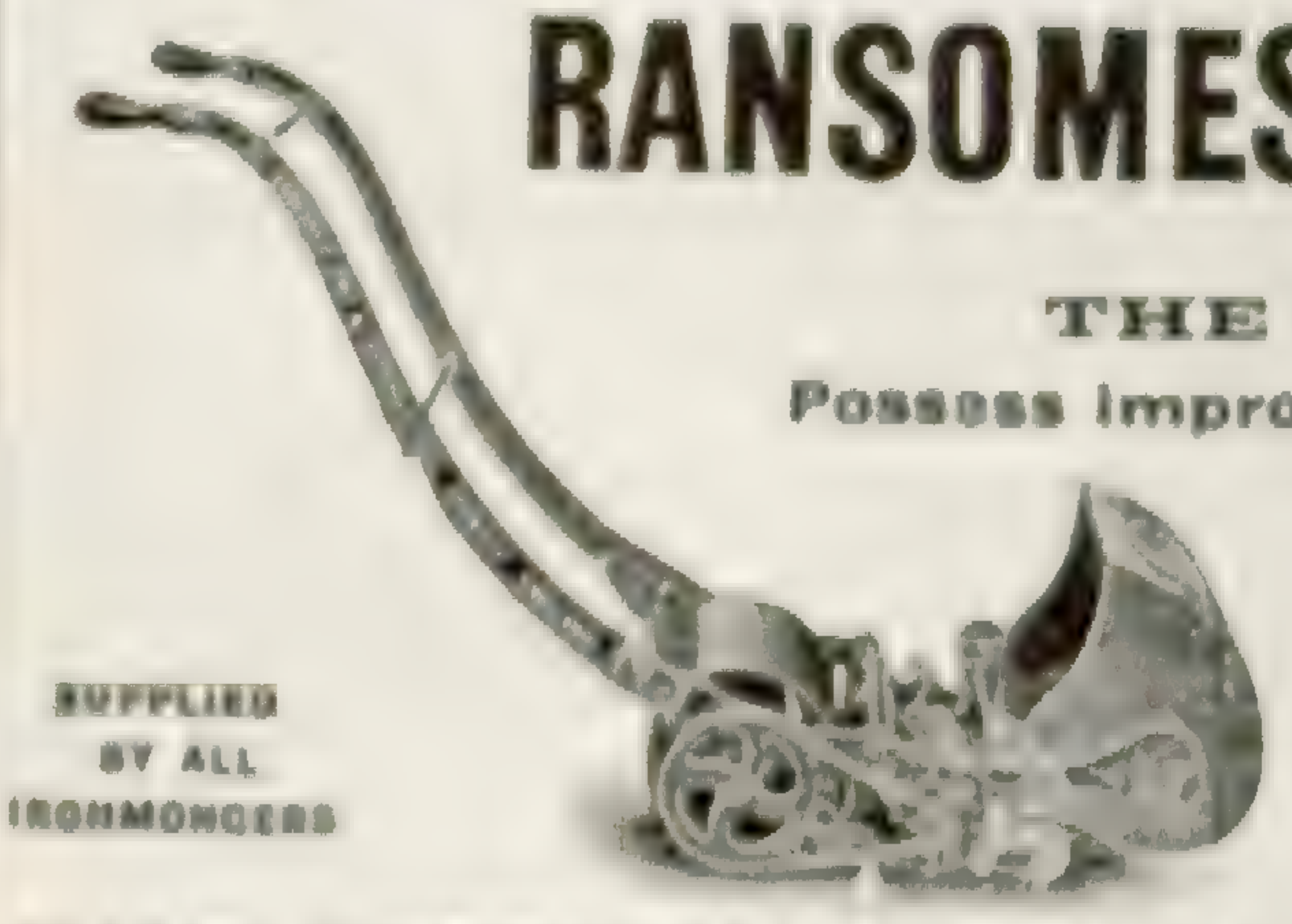
Inspection cordially invited. Visitors met by appointment at Darley Dale or Matlock Stations.

RANSOMES' LAWN MOWERS

Appointed by Royal Warrant.

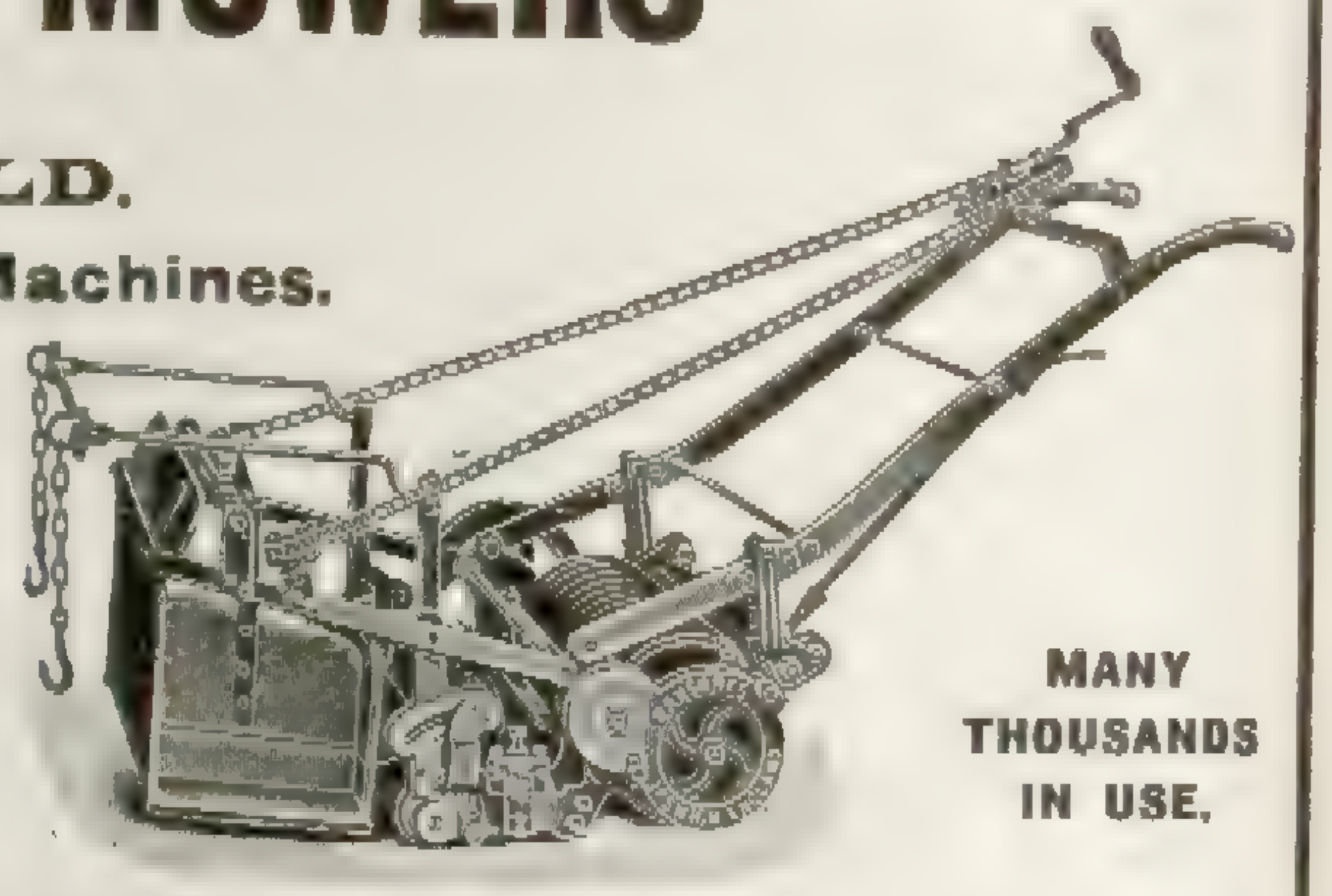
THE BEST IN THE WORLD.

Possess improvements contained in no other Machines.



Recent Awards.

3 GOLD MEDALS.
5 SILVER MEDALS.



SUPPLIED BY ALL IRONMONGERS

HAND POWER MACHINES.
In all kinds and sizes.

MOTOR LAWN MOWERS.
The first brought out. Reputation Established.

HORSE and PONY MOWERS.
The best large machines.

MANY THOUSANDS IN USE.

Illustrated Catalogues Free on Application to—

RANSOMES, SIMS & JEFFERIES, LTD., THE ORWELL WORKS, IPSWICH.

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free

Appointed by Royal Warrant

Makers to His Majesty the late King

Largest Manufacturers in the World

Only Address

RICHARD SANKEY & SON, LD.,
Bulwell Potteries
NOTTINGHAM.

THOMSON'S
VINE PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES
SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE

VAPORITE

1 lb. of Vaporite to 8 sq. yds. is enough if you use it when digging. Vaporite means

DEATH TO WIREWORMS.

Insist on the **original insecticide** and refuse all substitutes.

Certain, safe, harmless to the most delicate plants, if used as per directions in every package.

PRICES:—In Tins, **9d.**, **2s.**, **3s.**, and **4s. 6d.** (of all Seedsmen). In Casks, **7s. 6d.** per ½cwt. (carr. paid). **11s. 6d.** per cwt. (carr. paid).

Booklet No. 45 free from

THE
VAPORITE-STRAWSON CO., LTD.,
DEPT. E,
Spencer House, South Place, LONDON, E.C.

WATSON'S LAWN SAND.

(The Only Original.)

Destroys Daisies, Plantains, Dandelions, &c., and at same time invigorates the Grass.

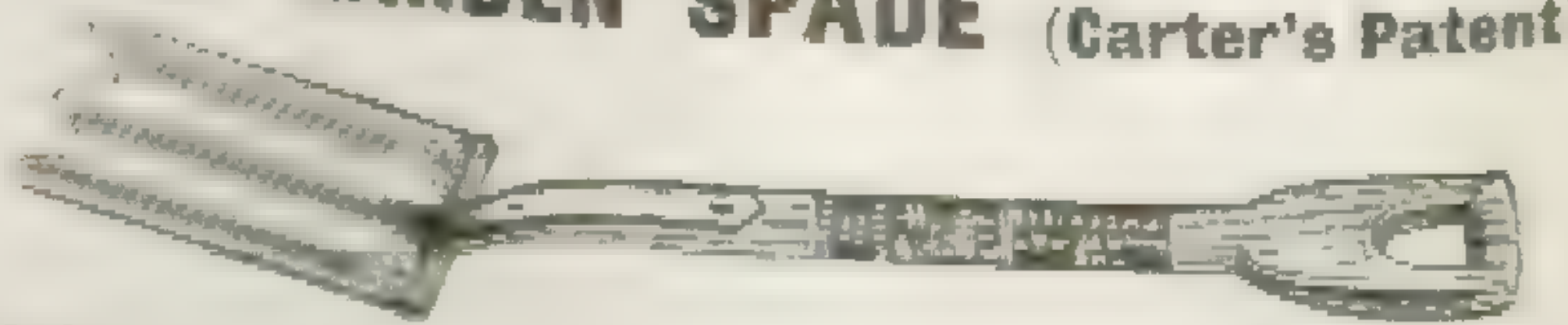
24/- per cwt.; 56lb. Kegs, 15/-; 28lb. Tins, 9/6.
Canisters 6/-, 2/6, and 1/-.

Please see that you get the genuine article.

Sold by Seedsmen and Nurserymen.

A. J. BARBOUR & Co., 8 Upper Fountaine St., LEEDS.

A NEW GARDEN SPADE (Carter's Patent).



This is claimed to be the most effective Spade on the market. Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

GARDENS OF ANNUALS.

"New every year," should be the motto of the maker of a garden of annuals, not only in the sense of providing fresh denizens of the beds and borders each season, but the occupants should also be of kinds not cultivated the previous summer. Originality has its claims upon us, but so, too, has change: a flower that has not been grown for a few years has increased in interest for us, and probably can be represented by a number of new varieties.

The best show of annuals can only be gained by early culture under glass; the kinds that will succeed from later outdoor sowings are, of course, numerous, yet the majority of these never attain the proportions, in plant or bloom, that is reached by similar sorts raised in frames or greenhouse, and kept in development from a much earlier time. Lobelia is a case in point [but it is not an annual, although it may be treated as one with the best possible results.- ED.]; the overcrowded plants, whether sown out or put out from late sowings made in boxes and not pricked off, give colour masses certainly, but to discover what the dwarf bedding lobelia can be it must have been raised in warmth, then transplanted seedling by seedling, not in bunches, an inch apart in larger boxes or frame beds.

Half-hardy annuals when finely cultivated will produce some of the most exquisite bedding displays. Salpiglossis has almost every merit, grace, rich and delicate colourings, beautiful veinings, and will continue in blossom from June until November if relieved of dead flowers as they fade on the stems. The plant needs sunshine, and ordinary, or light soil, responds to a mulch of old manure when producing its flower buds, and should be encouraged by liquid manure while blooming. To sow this late is to spoil it, the seeds should be put into glass-covered pans in a warm greenhouse early in March. Princess Ida, cream, veined with gold, is fit for mingling with Scarlet Salvia or Alonsoa Warscewiczi, or those other half-hardy annuals, Swan River daisies, the charm of the rose, white, or blue hybrids of which is not sufficiently recognised.

For dry gardens special use should be made of Grammanthes gentianoides, one of the gayest orange-vermilion carpet plants, with fleshy foliage; although quite a minute plant it should have the same care as is recommended for lobelia, then will form a dense mat of leaf and bloom as soon as established.

Perhaps the chief charm of an annual garden is its gradual change from the dullness of foliage to the brilliance of bloom; for a week or two after the bulbous plants, long past their beauty, have been removed, the beds and borders of transplanted annuals seem to make no show; then alternate showers and sunshine, and the plants kept from all root constriction and consequent premature budding, will burst into a perfect florescence. There is no comparison between the effect of a well-raised and an ill-grown datura, nicotiana, or cosmos.

Herbaceous plants, valuable though they must always be counted as occupants for large borders and some beds, of necessity fail in trim appearance, because their growth year after year is partly determined by soil and seasons, their height is influenced by their growth, and that height determines whether colour masses or lines shall be in close company with neighbouring colours or tower far above them. Annuals of any sort, grown for symmetry as well as hue, fulfil the purposes for which they were raised, and are then removed before they have time to deteriorate in habit. A sufficiency of bedding and cutting plants for a large garden can only be obtained from seed sowing where the gardener has plenty of greenhouse and frame space at his command, but orders given early to trade growers will be well carried out in May and June, so purchase of seedlings can assist the home efforts; even then the cost will be far less than is often incurred by the use of pelargoniums and marguerites, begonias, and calceolarias. Then the actual work is less than that involved when pelargonium cuttings by the hundred have to be taken and housed.

Hardy annuals so seldom receive justice that to show them at their best is a legitimate reason for pride; the cornflower that is a lank, scanty leafed plant, usually becomes a fully-foliaged shrubby one, covered by blossom under good treatment; Lupinus Hartwegi ruber is a glorious cerise-crimson flower; Gilia coronopifolia, a three-foot biennial, best regarded as a half-hardy annual, gives profuse sprays of salmon-scarlet, while cerise and rose larkspurs of good strain are finer than many a cherished perennial delphinium in their profusion.

Annual climbers add immensely to the charm of the garden, either when used in conjunction with permanent ones or in their stead; the pillars of the verandah can be hung with the rosy-violet blossoms, and ultimately by the maroon seed-pods of the Purple Soudanese Bean, Dolichos Lablab, and convolvuluses of pink, white, and shades of blue. A quaint subject for trellises or clothing summerhouses is the Wild Balsam Apple, Echinocystis lobata, an exceptionally quick annual climber of the Gourd family; warm house-fronts, with wires stretched across, will do for the many-hued Japanese Morning Glories, Ipomæa imperialis, or the feathery-leaved red and white blooming Cypress vine, Ipomæa Quamoclit.

Of foliage plants, to soften bedding displays, or give height, there need be no lack; a choice can be made between the summer Kochia tricophylla, cockscombs, feathered celosias, beets, Atriplex hortensis atro-sanguinea, Ambrosia mexicana, amaranthuses, Lavatera arborea splendens, mesembryanthemums, Cineraria maritima, and cotton thistles, or onopordons that can be treated as annuals, with stately maizes, of heights varying from four to ten feet.

M. H.

Tuberous-rooted Begonias.—The tubers must now be examined and started. They may either be laid out in trays or placed on the border of a warm fruit house. When root action commences potting must be attended to, before growth becomes far advanced. A suitable soil is made up of two-thirds loam and one-third old hotbed material, mixing these together thoroughly. Another plan is to box the tubers in the first place and grow them on in the same boxes for planting. Boxes twelve inches wide, twenty-four inches long, and three inches deep, are used, placing a layer of leaves over the bottom and a layer of soil on this. About twelve tubers are placed in each box, and then soil is filled in, slightly covering the tops of the tubers. They are then stood in a warm house, and covered with paper, to prevent too rapid evaporation. When growtn is evident the boxes are removed to cold frames, eventually hardening the plants off as the time draws near for planting. This method saves a great deal of labour, and answers well. If possible a dull day is preferable for planting when this style of culture is carried out.—E. C. P.

DAPHNES.

Few shrubs are invested with greater interest than daphnes; their charm lies chiefly in their delightful fragrance, and, fortunately, this character is developed in a marked degree in the commonest and hardiest species. The genus embraces both evergreen and deciduous kinds; to the latter belongs D. Mezereum, a winter-flowering species, that blooms from January till March. The flowers are variable in colour, red, pink, and white being represented, the last-named in single and double forms; while in the type plant the flowers are succeeded by an abundant crop of berries that change to a bright red colour in autumn, and so invest it with additional interest at that season.

Daphne laureola and D. pontica are evergreen species, that develop into spreading bushes some three to four feet high; they form excellent undershrubs, and are valuable for making cover under trees where not much else in shrub life would succeed. The flowers in both cases are greenish-yellow, but not showy. Daphne oleoides (Fioniana) forms a small rounded bush some two to three feet in height, with dark green, box-like leaves and reddish-purple flowers, in clustered heads; these also are sweet scented. Daphne Cneorum (the Garland Flower) is one of our choicest rock shrubs, a miniature in growth, the branches being almost prostrate on the ground. The terminal points carry the clustered flowers, which are of the richest shade of pink, and most delicately perfumed, and in rounded heads. The variety major is that most generally grown in gardens.

Daphne Blagyana produces the largest and most conspicuous flowers of the genus; these are ivory-white in colour, and are borne in clustered heads on the terminal points of the previous year's wood. The plant is prostrate in habit, and it succeeds best when the branches are layered and pegged into the ground, so that they form roots, and thereby impart greater vigour to the specimen. Daphne Genkwa is a very rare and lovely deciduous species, only hardy in favoured districts or if grown against a wall and afforded some protection in winter. The flowers are lavender-coloured, and produced along the branches in spring before the leaves; it is one of the most charming shrubs possible to conceive. Daphne petræa (rupestris) is a quite rare plant, of pigmy stature, with scented pink blossoms of wax-like texture; it is quite hardy, but of slow growth, which adversely affects its increase, consequently the plant is generally difficult to procure.

Daphnes indica and odora are dainty evergreen subjects, most suitable for a cold greenhouse, as they are not hardy; both are most highly scented, and quite small plants are capable, when in bloom, of filling a room with perfume. Except the commonest species, which succeed in ordinary soil, daphnes prefer a cool medium made up of loam, peat, leaf-soil, and sand, and should have a sheltered site at planting, and if the position affords some light shade during midday this will favourably influence their free development in summer.

THOMAS SMITH.

Cucumbers.—Keep these well supplied with top-dressing as soon as the roots come through the soil. Keep the shoots regularly tied out and trained, and stop at one joint beyond the fruit. I find Everyday is still one of the best for early use and winter fruiting, the fruits being just the size wanted, and the plants exceedingly prolific. Sow again for succession. I believe in growing new batches instead of keeping old plants dwindling along over a long period.—W. A. COOK.

THE BEST PINK PERPETUAL CARNATIONS.

John Addington Symonds remarks in one of his essays on the "Colour Difficulty" that the range of hues is almost infinite, and that the range of words to describe these colours is strictly limited. It is an old difficulty. The artists have their colour chart, the milliners have theirs, and the florists theirs, all and each claiming to be the standard, so no wonder there is great diversity of opinion. Each thinks the other's chart is hopelessly wrong, and even quite a joke. However, some day we may all agree upon a single international standard.

The carnation is seen at its best in those glorious shades of pink which are unsurpassed in any other flower, for in the carnation we can get a perfectly even art shade of the most delicate tone. Purity of tone counts for so much in these days of colour refinement, and few pink flowers are of an absolutely pure shade, devoid of any magenta. But in carnations we are getting purity of colour, and this, indeed, is a great triumph.

All of us have a soft spot in our hearts for the pink trio—Miss Jolliffe, of England; Daybreak, of America; and Madame Therese Franco of France; and undoubtedly the blood of all three is perpetuated in our modern race. For we have Mrs. T. W. Lawson and Enchantress, as direct descendants of old Daybreak, and few existing varieties have not some Lawson blood in them. All this is the work of one man Mr. Peter Fisher.

It was the pink variety, old William Scott, which first really woke America up to the claim of the carnation, and for pure all-round merit it stood omnipotent until the introduction of Mrs. Lawson in 1900. It is a joy to meditate over the really great varieties which have gone to make the history of our modern flower: Madame Melba, Joost, Mrs. Theodore Roosevelt, Floriana, Ethel Croker, Alpine Glow, and a few American old-time favourites.

England also has some whose memory we are proud to recall. Pride of the Market, Duchess of Portland, Lady de Trafford, etc., have played their part, and it would be interesting to know the raiser's history of some of our old-time British varieties; for instance, who raised Miss Jolliffe?

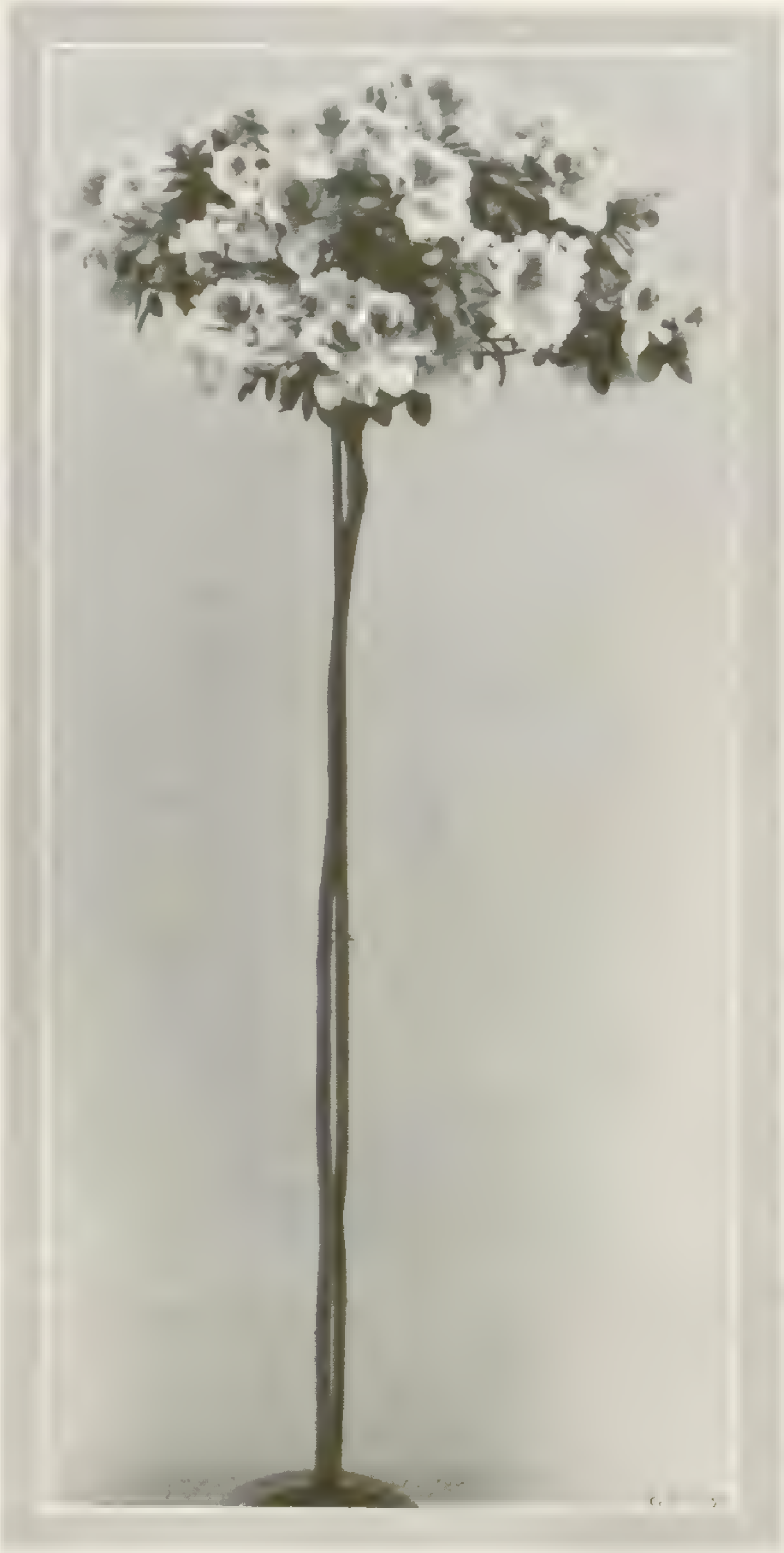
It is difficult to group up our many excellent present-day varieties, but we will deal with the light pinks separately from the dark pinks, and those of a salmon shade from the blue pinks.

Taking the light pinks Enhcantress still reigns supreme for size of flower and all-round quality. But that exquisite new variety, May Day, is to-day its greatest competitor. Yet both these excellent varieties have distinct charms, and the greatness of one does not rest upon the shortcomings of the other. May Day has quite a salmon tint, the flowers have smooth-edged shell petals, and it is undoubtedly the freest-flowering variety under cultivation, but then the blooms are not so large as those of Enchantress, and, alas! all too many count this a defect.

Pink Delight has many favourites, and deservedly so, for the flowers are of exquisite form, and of a delicate shell pink shade of colour, and they certainly catch one's eye at the shows. To my mind, its weakness lies in its habit of growth, which, although it is quick, is long and thin, not branching out and making a bushy plant. This variety is also difficult to propagate, so it is essentially a variety for good growers only. Admiration reminds one very much of Enchantress, except that the colour is several shades deeper. Personally, I believe this variety will be good in England. The variety Mrs. Charles Knopf has generally failed, whilst Fair Maid, Melody, Fiancée, etc., have been superseded.

Practically our only pale salmon-pink is Mrs. H. Burnett, and, while this variety may not be perfect, it is the best we have in this shade of colour, and it has played a very prominent part in popularising the perpetual carnation in England.

Flowers of a dark pink shade are never quite so popular as those of a paler tone, nevertheless they are essential. The best dark pink variety of to-day is Dorothy Gordon, one of last season's novelties. It might be termed an improved Rose-pink Enchantress, indeed some consider that it is simply a selected stock of that variety. That is an open question. It certainly has a more free growth, and flowers of a slightly darker and more even shade. Taking the more cerise shade of pink, Mrs. C. W. Ward, another of last season's varieties, can claim superiority over Afterglow, Aristocrat, Lawson-Enchantress, etc. The colour itself is not perfect, and has a slight magenta tinge, yet this is atoned for by a vigorous, healthy growth, and a perfect stem and calyx. Certainly every market grower should grow Mrs. C. W. Ward.



A STANDARD SPECIMEN OF AZALEA PROFESSOR WOLTERS.

A variety of Azalea indica, with single flowers, rose, bordered with white, and with deep salmon-rose centre.

Winsor, which undoubtedly is a sport from Mrs. T. W. Lawson, still continues in cultivation, and will remain to do so until we get an improved variety of similar shade. We must have this shade of medium pink, and old Florian lived on long past its prime on account of its perfect colour. Winona failed because it lacked size, and its soft growth was not suited to our climate, yet in certain parts it does well, and it still remains a favourite in America. It certainly is of a perfect clear shade. Rose Doré and Rival both have their votaries. The two flowers differ completely in build, but Rival comes a brighter and better colour in dull weather. There are other pink varieties, but we have mentioned the best of them, and how many bad ones we miss really does not matter.

The flood of new English and American pink varieties this season is certainly a heavy one. All cannot be the best, and which will survive out of Washington, Gloriana, R. F. Felton, Lady Alington, Rex, Bright Spot, Colossus, etc., we cannot yet say. Montagu C. Allwood.

STANDARD INDIAN AZALEAS

During late years there has been a very decided extension of the culture of Indian azaleas for conservatory decoration during the early months of the year, and this is not to be wondered at, because now-a-days the immense number of varieties of Azalea indica, chiefly of Continental origin, have given us a wonderful range of colours. Against the wide use of forced deciduous flowering shrubs there is not a word to be said, but their range of colour is comparatively limited, therefore the Indica azaleas possess merits which neither the private nor the commercial gardener can overlook.

In addition to the culture of bushy single-stemmed specimens, such as we are all familiar with, there has of late grown up a demand for, and trade in, tall standard plants. In the old days, when big specimen azaleas were a feature of the early exhibitions, the round-headed and the pyramidal methods of training were mostly followed, but standards, though not absent, were by no means common. Even at the great Continental displays in the springtime standard Indian azaleas have not been numerous until quite recently. In other directions, too, the value of standard flowering shrubs has been amply demonstrated, and there is now a growing annual demand for standard-trained plants of lilacs, Ghent and Mollis azaleas, wistarias, laburnums, staphyleas, prunus, etc. The great value of these standards, whether of Indian azaleas or other subjects, lies in their utility for grouping with totally different subjects, or with lower growing and bushy specimens. In the case of the Indian azaleas, the standards now so frequently seen possess heads of medium size, full of bloom, and born on stout stems, 3ft. to 5ft. high. In the illustration here given, a specimen of the brilliant variety Professor Wolters, is depicted, as exhibited among similar plants of many other varieties by Messrs. J. Veitch and Sons, Chelsea.

Forced Strawberries should be fed with liquid manure water made a little warmer than the temperature of the house. The fruits must be raised as they increase in weight, and this is best done by means of wire supports that are fixed to the pots. These hold up the whole crop, are easily adjusted, and last for years. Syringe well twice daily to keep down red spider. The second batch now coming into flower should be given air on all favourable occasions, especially when the sun is shining, and it should be given early, before the house is stuffy. In the afternoon, at closing time, a gentle spray will benefit them and cause them to set freely and well; all deformed fruits should be removed at once, and the crop thinned to from nine to twelve fruits per plant. Give abundance of air to successional plants, and draw the lights entirely during the day from those in frames.—W. A. Cook.

PERNETIANA ROSES.

The three articles from the pen of the Rev. J. H. Pemberton upon this section of roses have been very instructive, and I hope the following notes may be appropriate.

There have been many disappointments and some serious complaints about the behaviour of Rayon d'Or, the gold medal variety at the Regent's Park Exhibition of the National Rose Society last year. Mr. Pemberton gives us a most graphic description of this marvellous rose on pages 107-8 of the Gardeners' Magazine, and I cannot add to it; except to say the only flowers I have seen were superb in their colouring. But I wish to refer to the great difficulty in propagating this rose. One friend, who has the most up-to-date conveniences, put on over 1,000 grafts, and, in spite of skill and more than usual care, because of the indifferent character of the wood and the expensive variety, he only succeeded in keeping six alive, and these far from flourishing. In some cases all have died.

Keeping to the matter of propagation, I may say we find the wood of all Pernetiana roses (an excellent list of which Mr. Pemberton describes) exceedingly difficult to use successfully for grafting. We experienced that with the older varieties, Austrian Copper and Gottfried Keller, when trying to increase a somewhat depleted stock. Even wood from pot-grown plants is far from satisfactory with any of this section. Nor will they root freely from cuttings. We also find the same difficulty with the Penzance sweet briars, Lady and Lord Penzance, which resulted from crosses with the Austrian Copper and Austrian Yellow roses and the common sweet briar; so that it seems fairly certain this section is impatient of heat, more especially as regards wood for grafting.

Mons. Pernet Ducher wrote me recently that he also had this difficulty, such as he, with all his years of experience, had not hitherto known. A soft, sappy wood, made worse than usual by the wet season of 1910, was unable to stand the winter. We know, too, that Soleil d'Or is much subject to black spot on the foliage, and the raiser writes me it was very bad there last autumn. Then Melaine Soupert, the other parent of Rayon d'Or, is rather a soft grower, and does not stand the winter well. Still, I believe we shall find Rayon d'Or a general favourite when established and some sounder wood made, for even if cut down, the base can be protected, while it is such a glorious colour we must have it, as well as several other varieties difficult to grow.

Budding seems the best form of propagation with this class, and fortunately the growths carry plenty of buds, and generally with a good "seat" to them.

A. Piper.

PEAR BEURRE BALTET PERE.

Comparatively few nurserymen catalogue this particularly large and handsome pear, and yet it is a variety worthy of consideration, especially by those who have to provide fruits during November. Under good cultivation Beurre Baltet Père, whether grown as a pyramid or cordon, produces fruits of great size, so that a well-cropped tree presents a fine picture. In addition to being handsome and large, this pear has the great merit of being a free and heavy bearer, and thus it will appeal to many. Then it also possesses good flavour, indeed, some authorities go further and give its quality as "excellent." Fruits are ripe during November, the specimen figured herewith is one of many fine examples grown by Mr. J. Whittle, gardener to Colonel Barton, Cheveney, Maidstone, and so successfully exhibited by him at the Royal Horticultural Hall last autumn.

PEAR BEURRE BALTET PERE.

Summer-flowering Chrysanthemums.—Assuming the cuttings are well rooted, they may now be transferred from the cutting boxes into cold frames. About six inches of good soil should be placed in the frames, and the plants put out six inches apart each way. The frames should be kept fairly close and shaded, and the plants damped overhead occasionally until they recover themselves. Here they will make excellent stuff for putting out in April.—E. C. Pooley.

NOTES FROM HERE AND THERE.

I do not suppose that knotty question as to whether a young fruit tree should be pruned the same season it is planted or a year later will ever be settled to the satisfaction of everybody, and I do not know of any topic in fruit culture that has been discussed more. Generally speaking, however, I think practical fruit growers decide the matter for themselves as the result of their own experience, and it happens in this way. A man plants trees, prunes them, as advised by our friend Mr. Coomber on page 71, when their buds commence to swell, and gets satisfactory growth as the result. This man becomes a first year pruner at once, and is prepared to argue the wisdom of it as long as you like; but another man prunes his trees the first year, and if they start to grow at all they only push weakly shoots that are entirely unsatisfactory. His faith in first-year pruning is shaken, he leaves his next batch of trees for a year before shortening them back, and gets good heads. From that time henceforth he is convinced that second-year pruning is the best, and it is in this way that the two shades of opinion become so fixed.

What becomes of the thousands of standard apple trees that are propagated in nurseries and distributed every year? A great many of them flourish and become fruitful, and contribute in time to the domestic or commercial fruit supply of the country, but not all, and it would be interesting to know how many of the young trees sent out from nurseries die an ignominious death through sheer lack of attention. Just by way of illustrating what I mean, I happened to be in an orchard the other day where a couple of years ago a matter of fifty young trees were planted to fill up vacant spaces, but the job was only half done, for no proper stakes or means of protection were provided. Cattle rubbed against the trees, horses broke the lower branches, rabbits gnawed the bark from the stems, and to-day I do not suppose there are ten of the fifty trees alive. The trees cost half-a-crown apiece, and to all intents and purposes those half-crowns were simply thrown away because a careless individual did not think it mattered about staking and protecting the specimens until it was too late, and their doom was sealed.

In his article on page 75 Mr. E. Molyneux tells of a fruit grower who does not believe in alkali winter washing at all, but prefers to spray in the spring with lime and salt. Quite so, and it would have been interesting if Mr. Molyneux had also given us the reason why the grower in question prefers lime, having, I presume, tried both, but it may be observed that a great many commercial growers prefer the lime spray to caustic alkali washes, and it is not unusual now to see orchards and plantations in the spring snow-white in appearance as the result of lime-spraying. It will be readily admitted that alkali washes in the winter cleanse trees from moss and lichen, but do they do anything more? Advocates of lime-spraying urge that this material is as effectual as the caustic wash in cleaning trees, and it also seals the eggs of certain injurious pests to the branches so that they cannot hatch out. Lastly, whatever may be said about caustic washes injuring the trees, and there are strong views on the subject, lime is harmless, and every bit that peels off the trees and falls to the ground is beneficial.

One meets with curious instances sometimes of the way difficulties are got over in the gardening world, and successes are achieved by men whose facilities are of a very limited nature; for instance, the other evening I was adjudicating at the monthly meeting of a gardening society composed mostly of working men, where, amongst other things exhibited was a very nice bunch of blanched seakale which would have done credit to a gardener and a forcing pit. No professional man, however, had had any hand in producing it, for the seakale was the property of a labourer, and he told me with some show of pride how he had grown it in a box under the stairs in his cottage. But what does a cottager want with seakale? perhaps some would ask, but surely if a cottager likes to grow a bit of seakale for his own consumption there is no reason why he shouldn't. I may add, however, that in this case the man has other objects in view, and the seakale forced under the stairs brings in a little money which helps to pay for other things.

Years ago, in my early gardening days, I used to read articles from the pens of able men descriptive of the way asparagus beds should be made in order to grow this delicious vegetable satisfactorily, and I thought then what an elaborate process it all was. Since then, however, I have learned that Nature has made certain soils suitable for asparagus which many gardeners, if they inspected it, would condemn as impossible. Business takes me frequently to a district on the borders of Worcester and Gloucester, where the soil is so heavy and retentive that four or five horses are required to draw a plough, and with this strength the pace is slow. The allotment holders turn up the clayey lumps with heavy two-pronged forks, but asparagus is the most profitable crop they can grow on their plots. The crop is grown on ridges or raised beds, with alleys between, soot is the principal fertiliser used, and in the season fine heads of "grass" are obtained. Does not this all go to show how Dame Nature adapts vegetation to varied conditions of soil.

It has been announced by a prominent daily paper that the sweet pea is to be the "Coronation Flower," and whether this proves to be the case or not, it is quite safe to prophecy that it will figure very conspicuously in this auspicious year. I have heard the public fascination of the sweet pea spoken of as a passing craze, like roller skating and ping-pong, but it seems more like lasting than passing, and the taste for the flower is by no means confined to the people who are recognised as leading lights in the sweet pea world. It falls to my lot to move a good bit amongst cottagers and amateurs possessed of limited means and resources, and their keenness to get hold of the best varieties as well as unstinting efforts in labour and trouble to produce first-class flowers are both encouraging. It is true the man who in these days half fills his back garden with sweet peas does not, as a rule, aspire to winning honours at national shows, but there is no village exhibition without its sweet pea classes, and there are no classes in which competition is keener.

We have again arrived at the time of the year when the buds of plums, pears, gooseberries, and currants provide a dainty morsel for various members of the feathered tribe, the worst of which perhaps is the bullfinch, and again the old, old question crops up as to the best means of checking the birds and saving the buds. In private gardens the bird plague is a real one, but it is even more so where the commercial grower is concerned who has to depend on fruit for his living. In that well-known fruit-growing county, i.e., Kent, sparrow clubs are established institutions in many villages, and during the winter season the members of these clubs wage war on the birds that are injurious to fruit crops, but outside Kent organised sparrow clubs are not very general. Nowadays, however, a good many commercial growers are turning their attention to lime-spraying as a means of protecting crops, the idea being that by spraying the tree with lime wash the buds are made distasteful to the birds. If any readers of the Gardeners' Magazine have tried it they might be good enough to recount their experience.

One of the most familiar flowers to be seen about just now is that of the Silver Wattle (Acacia dealbata) which goes by the name of Mimosa in the streets, and is offered for sale by itinerant flower sellers along with bunches of blue violets. There seems to be a connection between the two, and the bright yellow flowers of the Silver Wattle gives reminders of the Riviera where the tree grows profusely, and one wonders where the flowers come from in such quantities as to allow of their being offered by every flower hawker in the street at a figure which is far from being prohibitive. Perhaps if the Silver Wattle flower had not been made as familiar and commonplace by flower-sellers it would be prized more in gardens; but now and then you come across plants furnishing pillars in greenhouses and conservatories, and nothing in the early months of the year could be more attractive, particularly if the main shoots are fastened to the pillars and the growths made last season, which produce the flowers, are allowed to grow in a loose and natural manner.

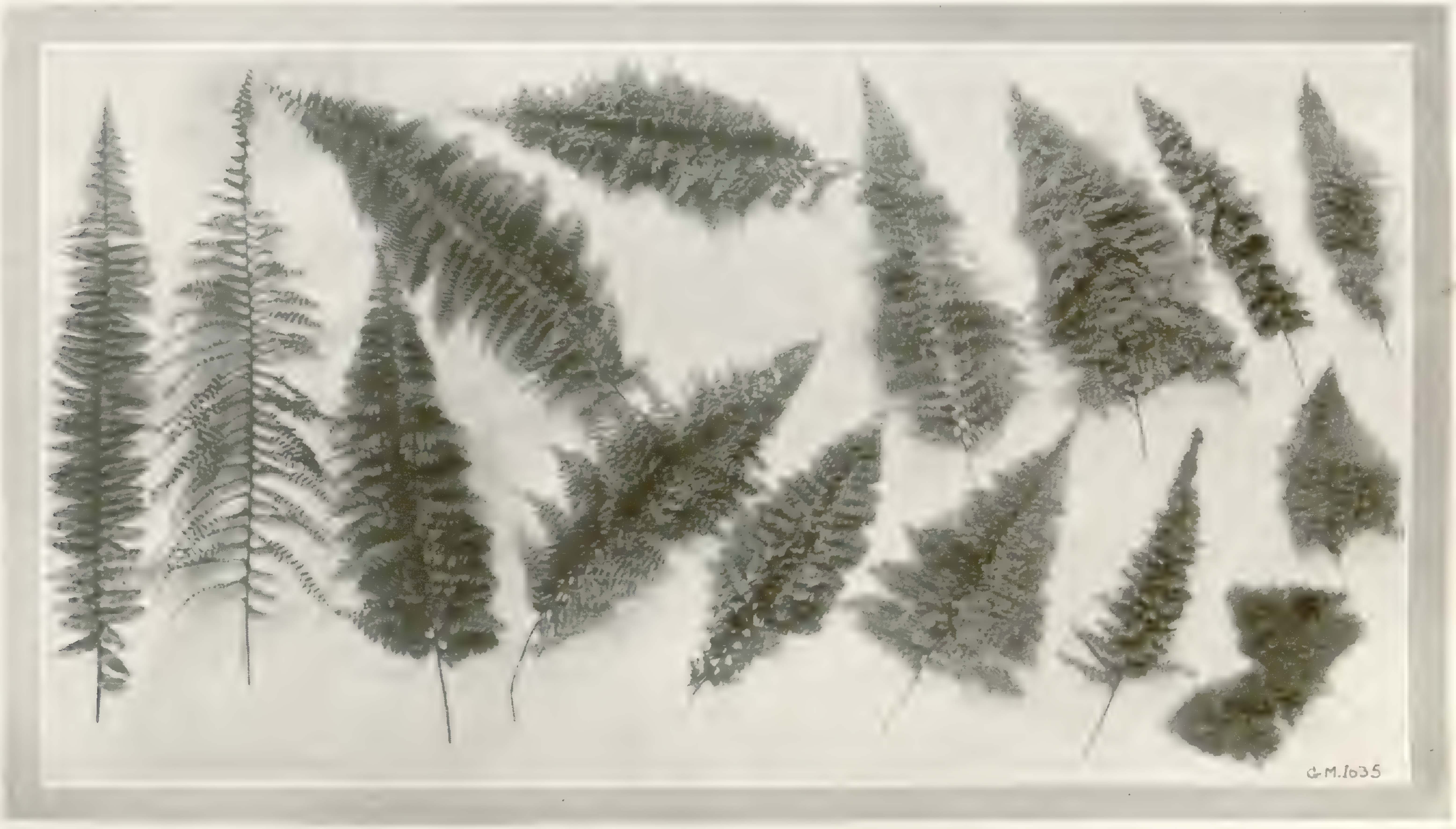
H.

Roses.—In most localities it is quite safe now to commence pruning operations among the hybrid perpetuals. The more tender varieties should be left until the first week in April. These include teas, hybrid teas, Chinas, and noisettes. No hard and fast rule can be made as to the exact dates of pruning; this must be decided according to the district. The weak-growing varieties should be pruned closer than the stronger ones, and the centres of all plants should be kept fairly open. In dealing with the dwarf or bush plants of strong habit about four or five buds should be left, and less on the weaker ones. A sharp knife should be used for the work, and the shoot cut immediately above a bud which will grow outwards. On no account should secateurs be used, for the wood is bruised by the practice, and often decays after pruning. It is advisable when pruning established plants to cut one or two shoots close to the base to prevent the stems from becoming bare. If this is practised annually, a bushy habit will always be retained, otherwise the plants will in time become leggy. The shape of the heads of standard trees must be taken into consideration when pruning, and in other respects the same advice applies as given for the dwarfs. When the practice of pegging down is carried out the maiden wood should be left much longer, and some of the older growth removed. When pruning is completed a mulch of decayed manure should be given the beds, covering it with a layer of soil.—E. C. Pooley.

THE VARIATION OF NEPHROLEPIS EXALTATA.

One of the wonders of horticulture is the manner in which that old and popular fern Nephrolepis exaltata has developed new and varied graces during the last dozen years or so. It is not an easy matter to trace the genesis of some of the exquisitely beautiful forms now before the public, but in the earlier stages of plumose development our American friends were very keen and successful. Every slight variation has been eagerly watched, and the sporelings raised subjected to close scrutiny and selection; so that now there are at least a dozen distinct and beautiful varieties, showing various degrees of sub-division and of plumose or moss-like development.

Very instructive was the exhibit recently made by Messrs. H. B. May and Sons, of Edmonton, at the Royal Horticultural Hall, and herewith illustrated. It consisted of sixteen full-sized fronds of these wonderful ferns attached to a paper-covered board, and so disposed as to show the evolution from N. exaltata proper to the exquisitely elegant variety named Marshalli compacta, seen at the bottom right-hand corner. In order of plumose development, the varieties were: Fosteri, Piersoni, Barrowsi, elegantissima, elegantissima compacta, todeaoides, Whitmani, Amerpohli, superbissima, magnifica, Scholzeli, lycopodioides, Marshalli, and Marshalli compacta. The last two were raised by Messrs. H. B. May and Sons. The extreme elegance of these lovely ferns is one cause of their immense popularity—they are grown by hundreds of thousands for market—while another and very important cause is the fact that these ferns will last a very long time in a dwelling-room if given reasonable attention as to watering; indeed, few ferns are so well suited for home decoration.



THE VARIATION OF NEPHROLEPIS EXALTATA.

This illustration shows in a remarkable manner how, under skilful cultivation and selection, a common greenhouse fern has been developed, through many stages, from the type on the extreme left to the beautiful, much-divided, plumose, and compacted forms on the right.

SOME INTERESTING CONIFERS—II.

◆

Libocedrus decurrens.

Standing sentinel-like amongst other trees, the stiff, columnar outline of this species commands attention, and it is rarely that a well-grown example fails to obtain appreciatory notice. A native of the Southern United States, it is met with in mountainous regions from Oregon to South California, at no great distance from the coastline. Its introduction into English gardens is said to date from 1853, the credit of its introduction being awarded to John Jeffrey, who collected for the Scotch Oregon Association. In various parts of this country fine examples may be found, several very good ones occurring in the grounds at Frogmore. There are, however, no prospects of British-grown trees attaining the magnificent proportions of the finer native specimens, for travellers report them as being from 130ft. to 150ft. high, with trunks 6ft. in diameter near the base. Grown in the open, the branches clothe the trunks from a low point; but under forest conditions clear boles of 60ft. may be obtained. The wood is possessed of moderately good economic properties, and is known as Incense Cedar. For gardens of restricted area this tree offers advantages for it causes little inconvenience to surrounding vegetation. The leaves are of a peculiarly dark shade of green, which alone stamps the tree as distinct. The only other species of libocedrus which approaches it in hardiness is the Chilian—L. chilensis.

Sciadopitys verticillata.

The Parasol, or Umbrella, Pine of Japan is an exceedingly interesting and distinct tree. It cannot be said to possess any features which suggest a close relationship with any well-known conifer, for it is amply distinct in every way from any pine, a family with which its common name might be considered to suggest a close tie. The common name arose on account of the whorls of flattened leaves being considered to bear a resemblance to the ribs of an umbrella. In Japan the tree attains a height of 100ft. or thereabouts, with a considerable girth. According to Veitch's "Manual of the Coniferæ," the first living plant introduced into England was received at the Exeter Nursery in 1853, Mr. Thomas Lobb having obtained the plant from the garden of the Dutch Governor of Java. Subsequently it was sent home about 1861 by Mr. J. G. Veitch and by Mr. Robert Fortune. The tree is of pyramidal outline, with whorls of twenty-five or thirty flattened, dark green leaves, each of which is three or four inches in length. The buds and young bark are of a bright brown colour. The cylindrical cones are usually from 2in. to 3in. long, and 1½in. to 2in. in diameter. They take two years to mature and produce an abundance of fertile seeds. They sometimes have the peculiarity of bearing a leafy shoot from the apex. It is wise, however, in most instances to remove both male and female flowers before they have an opportunity to expand, in order that all possible vitality may be centred on the building up of the tree. Light soil appears to be more suitable than that of a tenacious character, whilst a mixture of peat and sandy loam suits the tree admirably. A position sheltered from cold winds is desirable, whilst shallow planting is to be recommended. Should a number of leaders appear, which is frequently the case, all but one should have their points removed to encourage the central trunk.

Cunninghamia sinensis.

This is only suitable for the Southern Counties, for, though it lives through mild winters further north, it is not to be relied upon, and a spell of severe frost is likely to seriously cripple it or kill it outright. In Devonshire and Cornwall it may form a tree 40ft. to 50ft. high, with a trunk 1ft. to 15in. in diameter. The branches and leaves somewhat resemble those of some of the araucarias, particularly A. brasiliana. The leaves are lance-shaped, up to 2in. long, pale green above, with two silvery stripes on the under-surface. The cones are small and round, and are produced freely in Devonshire. The plant has been in cultivation upwards of a century, for it was introduced from the South of China about 1804.

Fitzroya patagonica.

This is one of several evergreen trees which inhabit the wild, mountainous regions of Western Patagonia, Chili, and Valdivia. Its distribution is said to extend southwards to the Magellanic region, where, however, in the exposed country which is subject to violent storms it forms but a scrubby bush. In its most favoured localities it is said to form a moderate-sized timber tree, but the difficulty of extraction is so great that the timber is not a marketable commodity. For the warmer parts of the country it is an excellent tree to grow, as its slender and more or less pendulous secondary branches, which are clothed with whorls of tiny leaves, are of a peculiarly graceful character, imparting to the tree a most distinct appearance. It thrives in light soil, both loamy and peaty, and appears to have a preference for gardens near the coast, where the atmosphere is humid and the climate fairly equable. The common name of Patagonian Cypress has been given to the tree. A second species of Fitzroya, F. Archeri, is known. This is a native of Tasmania, but is very rarely seen in cultivation.

W. Dallimore.

EARTHWORMS.

It was Darwin who first suggested that wherever the common earthworm (Lumbricus) finds the conditions of existence it exerts a most important influence in the formation of humus in the surface soil layer, and the limitation imposed upon these conditions by the subsoil has doubtless a great deal to do with the sharp demarcation we often find between it and the surface soil. Briefly stated, the earthworm nourishes itself by swallowing successively portions of the surrounding earth, digesting a part of the organic matter, and then ejecting the undigested earth in the form of "casts," such as may be seen by thousands on the surface of the ground during or after a rain.

Darwin calculated, from actual observation, that in humid climates and in a ground fairly stocked with these worms, the soil thus brought up may amount to from one-tenth to two-tenths of an inch annually over the entire surface, so that in half a century the entire upper foot might have been thus worked over. Aside from the mechanical effect thus achieved in loosening the soil, and the access of air and water permitted by their burrows, the chemical effects resulting from the digestive process of worms, and the final return of their own substance to the soil mass, also their habit of drawing after themselves into their burrows leaf stalks, blades of grass, and other vegetable remains, renders their work of no mean importance, both from the physical and chemical point of view. The uniformity, lack of structure, and loose texture of the surface soil, especially of forests, as compared with subsoil layers of corresponding thickness, is doubtless largely due to the earthworms' work. It has frequently been observed, says Professor Hilgard, that when an unusual overflow of water has drowned out the earthworm population of a considerable area of land the surface soil layer remains compacted, and vegetation languishes until new immigration has restocked the soil with them.

Dr. E. J. Russell, of the Rothamsted Experimental Station, has recently been carrying out some investigations on "The Effects of Earthworms in the Productiveness of Soils," from which he considers that previous investigators have been misled by the nitrogen introduced in the bodies of the earthworms themselves, for when this is allowed for they seem to have no particular effect on the decomposition of organic matter and the production of nitrates. They have, however, considerable effect as cultivators, loosening and mulching the soil, and this may ultimately have an action upon its fertility, though experimental demonstrations would be difficult.

J. J. Willis.

MELONS AND MANURE.

I was pleased to see Mr. W. A. Cook recommending the use of mushroom-bed manure as a part of the compost for melons, as I have too often heard persons advocate the none-use of manure for the growth of them. As a rule, the advice is "pure turfy loam, with the addition of some old lime rubble," as a sufficient compost for melons, and even when soiling over the roots on the hillocks loam only is advocated. With this teaching I do not agree, as I know from experience the plants under such conditions do not develop growth nearly vigorous enough to bring out the full merit of many varieties of melons, neither do the plants crop so well, or produce such fine fruit. I do not advocate the growth of huge fruit, but I do like to see representative fruit of all varieties. For instance, Hero of Lockinge, which is perhaps the melon of all others that has stood the test of time, and is to-day more grown than any other variety, does not present the same rich skin, fulness of netting, and general excellence when undersized fruits only are obtained, as compared with the deeply-crinkled exterior and rich flesh and delightful flavour when grown and ripened under generous culture.

Many growers are apt to think the flavour is not of the same richness when manure is employed in the growth of the plants; that, however, is more fanciful than real, because by the time the fruit is finishing the ripening process, the plants are not so dependent upon the root action as they were when in active growth. A small quantity of manure mixed with the loam at the time of sowing the seed in the small pots induces a vigorous growth right away from the start. Weakly grown plants cannot give the same results in growth, crop, and economy of time as those of a more robust character. The sooner the growth is complete the more economy is practised. No one wishes to occupy a house with a melon crop for five months if four is sufficient. A well-managed house will produce three crops in a year.

It is surprising what a filip is given to the growth of melon plants if the surface roots on the hillocks are lightly covered with cow dung, and occasionally watered with weak liquid manure.

E. Molyneux.

BEST PLANTS FOR GREENHOUSE.—Nearly 300 pages are devoted to the description, propagation, and culture of the best flowers and plants for the greenhouse in The Amateur's Greenhouse, by T. W. Sanders, price 5s. net, or by post 5s. 6d., from W. H. and L. Collingridge, 148, Aldersgate Street, London.

THE FUTURE OF THE SCOTTISH HORTICULTURAL ASSOCIATION.

(Concluded from page 193.)

◆

THE YOUNGER MEMBERS.

There is another aspect of our work which, I think, does not receive sufficient attention from us, and that is our interest in the younger members of the association. The young members do not, as it seems to me, take a large enough share in the work. It is to them that we must look to carry on the work of the association after those of us who are now in the seer and yellow leaf have fallen out of its ranks, and I think they should lose no time in buckling on their armour and entering the lists. About a dozen years or so ago, there was in existence in connection with this association what was called the "Junior Horticultural Association." This was composed of young men who were members of our association, who formed themselves into this body for the purpose of reading papers and conducting debates, and the association lasted for several years. I do not advocate the reformation of such a body, but I do think that the young members should have more consideration at our hands, and in order to give them facilities for the reading of short papers, the Council have, at my suggestion, arranged to give up the April meeting this session to their exclusive use, and I appeal to them to come forward and take their legitimate share in the work. Many sermons have been delivered to the youth from this chair. I do not propose to preach at them, but I do invite, nay, urge them to take a fuller advantage of our meetings in training themselves to giving intelligent reasons for the faith that is in them. In order to give a stimulus to the project, I may say that the Council have arranged to offer prizes in books to those who acquit themselves most creditably at the April meeting.

As regards the teaching of horticulture, which is referred to in some of the past president's address from which I have quoted as a thing which this association should take a part in, I am of opinion that, while we no doubt should keep a watchful eye on what is being done in the matter, we should have no active hand in it. The time for this association taking up teaching as part of its work has gone past. We have now an Agricultural College in Edinburgh in which horticulture is taught by an efficient staff, and it would only be waste to overlap the work of the college in any way. There is one thing in connection with the teaching of horticulture in which it seems to me this association might be of use to young gardeners. The time is not far distant, we hope, when the Edinburgh and East of Scotland College of Agriculture, to the governors of which your Council have already made a representation on the subject (which has been courteously responded to), will institute a diploma in horticulture, and this will meet the case of all those who have the time and the means to go through a prescribed curriculum of study in the college. There are many working gardeners who have neither the time nor the means to attend prescribed courses of lectures in the colleges, and who must perforce pick up their technical knowledge in any haphazard way they can, to whom some hallmark would be valuable, and it is in such cases as these that this association might be of some service by granting to them certificates of proficiency. This, of course, would involve an examination by competent examiners in the theory and practice of horticulture, but it would in no way overlap or interfere with the work of the colleges; it would, in fact, benefit them, for many of these young men would be induced thereby to take advantage of the evening classes in these institutions, and this association might also materially assist in this by granting small bursaries to deserving young men, so as to enable them to take advantage of these classes. By instituting lectures on horticulture and allied subjects, this association has done a great deal for the technical training of gardeners in the past, and it would not be at all inappropriate were it now to take up this question of granting certificates such as I have described.

BENEVOLENT FUND.

There is just one other matter to which I wish to refer before I close, and it is one which, I think, deserves serious consideration, as in the case of the other subjects I have touched upon. It is the question of aiding the widow and the fatherless, and those who, through no fault of their own, have met with misfortune amongst the gardening fraternity. I am not prepared now to go into the details of such a scheme, for it would require a great deal of careful thought and consideration before it could be launched, but I for one feel that it is a scheme which should be faced, and I am sure that if it were gone about in the proper way, it would succeed. I have frequently noted a generous spirit amongst you in the voting of doles from the association funds for various benevolent purposes, but I am strongly of opinion that these contributions should come direct from the pockets which we individually control. We have, of course, great charities like the Gardeners' Royal Benevolent Institution, and the Royal Gardeners' Orphan Fund, both of which are doing splendid work, but the sphere of the former is restricted to the relief of the aged, distressed, and disabled gardeners and others, and their necessitous widows; and that of the latter to the relief of the orphans of gardeners and others. In the case of the Gardeners' Royal Benevolent Institution, the only persons who are eligible for the pension are those who have been head gardeners, or their foremen, market gardeners, market growers, nurserymen, and seedsmen, and foremen of nurserymen and seedsmen, and the widows of such persons. To be eligible gardeners must have served in the capacity of head gardeners, or their foremen, in the establishments of ladies or gentlemen for thirty years, and the foremen to nurserymen and seedsmen must have served as such for the same number of years. Market gardeners must have cultivated not less than five acres of land for thirty years, and market growers, nurserymen, and seedsmen must have been regularly engaged in the business for thirty years. Further, unless totally incapacitated through accident or incurable disease, no person is eligible for the pension under sixty years of age. No provision is made for the relief of distress in the case of the large army of younger gardeners and their widows in this charity. In the case of the Royal Gardeners' Orphan Fund, the beneficiaries must be the orphans of gardeners, foremen in gardens, or managers, or departmental foremen in nursery or seed establishments. We have also in operation now a State Old Age Pension scheme, but as no one is eligible under this till he or she is seventy years of age, it, like the Gardeners' Royal Benevolent Institution, of course, does nothing for the young or middle-aged, who may require pecuniary assistance to tide them over a period of distress. Such a fund as would aid the journeyman gardener and those dependent upon him when misfortune overtakes him in early or middle life, is a desideratum, and I think we should make an effort to have a benevolent fund of this sort instituted for Scotland.

To summarise what I have said, I have now to put before you the following definite proposals for your consideration, and I trust you will see your way clear to accede to them.

(1) To start a fund to provide for a horticultural institution, to contain at least a library, and reading room, hall for meetings, and suitable offices and other accessories.

(2) To readjust the finances of the association and of the chrysanthemum exhibition.

(3) To adopt means for the encouragement of the younger members to take a larger share in the work of the association by providing more facilities for the reading of papers, and for discussions amongst themselves, and by offering prizes to those who acquit themselves with most merit; and by instituting examinations and granting to young gardeners certificates of proficiency in theoretical and practical horticulture.

(4) By instituting a Scottish Benevolent Fund for the behoof of the gardeners and others, and their widows and children.

Manettia bicolor.—If any greenhouse climber possesses the merit of continuous flowering it is this little twining plant from the Organ Mountains of Brazil, for under favourable conditions it is very rarely out of bloom, spring, summer, autumn, and winter being all alike to it. The slender shoots twine themselves around any support, and in this way they quickly mount upward. The leaves are small, lanceolate in shape, and of a deep green colour. From their axils the flowers are produced. They are tubular in shape, and in colour bright scarlet tipped with yellow, a combination of colours which is very conspicuous at all seasons, but especially during the dull winter months. For blooming at this season the warm end of the greenhouse suits it best. Though generally known by the above name, it is sometimes met with as M. luteo-rubra and M. inflata.—W. T.

LEEKS.

Leeks require to be sown and treated much in the same way as onions during their early stages of growth, and the same rules should be observed in the selection of good stocks. The leek is a most popular and wholesome vegetable, especially when at its best. The chief point to consider in perfecting good leeks is blanching.

Trenches should be prepared and heavily manured much in the same way as for celery, and the drawing up of the length of stem required should be proceeded with immediately the plants are put out in April. This is best assured by using stout paper collars, which should be drawn up as the growth advances until the desired height is gained, allowing the stems to swell after length is attained. By following this practice the produce will be entirely free from grit, and present a beautiful white appearance. Copious supplies of water, both at the root and overhead, should be given during the summer months.

There are several very distinct and estimable varieties now grown, and among the best are Prizetaker, International, and Improved Lyon. E. Beckett, V.M.H.

SOME SPLENDID EXAMPLES OF PRIZETAKER LEEKS.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

CALANTHES.—The deciduous calanthes will now be producing their new growth, and as soon as these begin to show their roots the plants should be potted without delay, because, if the new roots are permitted to advance far before potting is done, they are the more subject to injury in the process. It is not so difficult where the plants have been turned out of their pots and rested in boxes on a bed of moss and sand, but there is always a possible danger of injury to new roots when the old material has to be removed just before potting.

POTTING MATERIAL.—Different composts are advocated for calanthes, and I would advise successful growers to continue on the lines they have found most suitable. I have found from experience that we are compelled to find out what is likely to be the most suitable compost under different conditions and situations in various parts of the country, and even different modes of treatment are required in certain districts. We find with all the inbred hybrids, where there is a tendency to weakness of constitution, that a lighter potting compost is required than that which is in general use for the more vigorous kinds. For the latter we use a compost of about equal portions of fibrous loam, peat, and sphagnum moss, freely intermixed with sand, broken crocks, and charcoal. For the more weakly ones we discard the loam altogether, and find that a few broken oak or beech leaves suit them better than the heavier compost.

AFTER REPOTTING very little water need by given until the new roots have become established; after this more liberal treatment may be afforded. The plants should have every encouragement to grow freely in a warm, moist atmosphere. It is an advantage to get the plants into growth as early as possible in the spring, as the summers of late have been all too short, and I am convinced that the early matured growths are not nearly so liable to be disfigured as the later ones.

PHAIO-CALANTHES. — The bigeneric hybrids that have been raised from the intercrossing of phaius and calanthe, cannot be regarded as deciduous plants. Some of them are undoubtedly semi-deciduous, and must be treated as such, and these require similar conditions to the calanthes in regard to potting and general treatment. The heavier compost mentioned above is suitable for them. These plants are best treated by growing several together in a pot, as a single scape of flowers is not effective. They are best repotted when they commence to emit roots from the base of the advancing new growths. They require an ample root room, as they are vigorous rooting. The pots should be clean and filled to about one-third their depth with drainage. Pot moderately firm, and if a thin layer of chopped sphagnum is placed on the surface of the potting compost, it adds to the appearance of the plants.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

GARDENIAS.—The present date is a seasonable one for rooting a batch of plants to give autumn and spring flowers. Gardenias revel in abundance of heat and moisture, and from the time the cuttings are rooted until they have completed their season of flowering they should be kept steadily growing. As the pots become filled with roots give an alternate supply of weak soot water and diluted farmyard liquid. The successful cultivation of gardenias is comparatively easy when grown either as pot plants or as planted-out subjects in a permanent bed. Where space is available the latter method may commend itself, as less labour and attention are required. I have a decided preference for growing gardenias in pots, as I think they are more easily kept in a free-flowering stage than when allowed more rooting space. In either case it is essential to employ good fibrous peat and loam, with a liberal supply of mortar rubble and broken pieces of charcoal to render the material open and porous. I must not omit what I consider the most essential item in the successful culture of gardenias, i.e., they must at all times be kept clean, and free from red spider and mealy bug; here the advantage of pot plants is seen, as they can be readily turned upon their sides and given a thorough syringing with an insecticide at weekly intervals.

BOUGAINVILLEAS. — Although many new climbers have from time to time been introduced, I think, for general decorative purposes, the bougainvilleas retain their reputation. Their free habit of growth has much to recommend them as roof climbers for the intermediate plant stove, or they may be found valuable for covering any unsightly back wall. The beautiful drooping floral sprays, where overhead space is available, will have a charming and graceful effect, and show up to better advantage than is possible when plants are trained upon a balloon-shaped trellis. When grown as standards they are also valuable, but it is advisable to train them into umbrella-shaped heads with from four to six feet of clear stem. Bougainvilleas are exceptionally strong-rooting subjects, and gross feeders, therefore they require a fair amount of root room, firm potting, and, as soon as the pots become filled with roots, they should receive liberal applications of some approved fertiliser, and an occasional watering with clear soot water. Plants may now be started into growth, and as soon as the buds have started they should be repotted. As a potting compost I recommend two parts of strong fibrous yellow loam, one of peat, and sufficient charcoal and coarse silver sand to keep the whole porous.

GENERAL REMARKS.—Extreme care must be exercised in watering newly-potted plants; frequent applications of water at this stage, when the roots are inactive, will make the soil sour, and disastrous results are sure to follow. Judicious and careful manipulation of the ventilators is most essential at this season, as the weather is subject to sudden changes. Avoid excessive heating of the hot-water pipes as the sun is becoming powerful, and if the pipes are overheated on a bright day much damage will be caused to the young and tender foliage of caladiums, alocasias, etc.—John Donoghue, Bardon Hill Gardens.

THE FLOWER GARDEN.

SWEET PEAS in pots, standing in cold frames, must be afforded abundant ventilation to promote sturdy growth. The lights should be removed to harden off the plants in readiness for putting out early in April. The growths will require supporting, and if grown singly one stake should be given to each plant; where several plants are raised in each pot a few twigs, with a piece of raffia passed round them, will keep the growths upright. I have never found it necessary to pinch the plants at this stage. They always make sufficient side shoots if allowed to grow naturally.

GLADIOLI should be planted without delay. They are very useful and showy, and highly appreciated for beds or borders. A bed of the old Brenchleyensis planted in conjunction with Anemone japonica alba is very effective, and the same variety goes well with Salvia patens or Calceolaria amplexicaulis. The Gandavensis, Childsi, and Nanceanus types are exceedingly beautiful, and so also is Lemoinei. The corms should be planted about four inches deep, a good loamy soil suiting them best. In the Southern counties they will pass through the winter unharmed if left in the ground, but the corms must be planted a little deeper than when they are lifted annually. Good-sized groups are most effective, and the ground may be carpeted with verbenas, violas, phloxes, or any other approved plants with a suitable habit of growth.

BEDDING PLANTS.—It will be necessary to remove bedding pelargoniums into cooler quarters, otherwise the plants will become weak and leggy. Unheated frames or houses are the most suitable places for them until they may be safely stood outside. If the pots are full of roots a little weak liquid manure may be given them occasionally. Repot any plants that require it, such as marguerites, heliotropes, specimen fuchsias, ivy-leaved geraniums, etc. Lobelias, alternantheras, iresines, and mesembryanthemums may still be propagated if necessary. All seedlings must be transplanted into boxes as soon as they are large enough to handle. These include antirrhinums, dianthus, nicotianas, nemesias, etc. The salvias, centaureas, carnations, Dimorphotheca aurantiaca, ricinus, etc., should be put singly into small pots.

SPRING BEDS.—The hyacinths, daffodils, tulips, and other bulbs likely to require support must be attended to before growth is too far advanced. The decaying leaves should be removed from wallflowers, polyanthus, etc., to give the beds a tidy appearance, and during dry weather the surface of the beds should be slightly stirred with a hoe.

LAWNS.—In many gardens the grass will soon require cutting, and it is important that the lawns are thoroughly swept and rolled beforehand, and the verges trimmed with the edging knife. It is rather late now for laying down fresh turf, but should there be any bare places remaining they may be renovated by sowing seeds, but some protection must be provided to prevent the birds from taking the seeds.—E. C. Pooley, Gnaton Gardens.

FRUITS UNDER GLASS.

MELONS.—The earliest plants are growing rapidly now, and require daily attention in the matter of tying. Put a bamboo stick in to each plant, and it is a good plan to tie another bamboo straight up the wires, as the growths can then be tied as often as required without any fear of breakage. Train up to the top without stopping for the cordon system. A little bone-meal may be given in small doses every week. Shut the house early, with sunshine, and syringe every part of the structure and plants thoroughly. Shift on successional plants as soon as they require it.

EARLY VINERY.—Keep the shoots from touching the glass, and stop when the best bunches can be seen. It is not wise to stop all the shoots at one time. The Black Hamburgh will now be coming into flower. Keep the house a little drier, and with a little air on; this will aid the setting. Examine the borders, and if necessary, give a thorough soaking; but if not dry, wait until the thinning has been done, then give a dressing of approved manure, water in, and apply a mulching.

MUSCATS.—A little heat may now be turned on these to enable the house to be kept at 50 deg. Examine the borders and see if they require water; give it at a temperature of about 60 degrees, but unless ample drainage is secured the chances are that the borders will not require much water at this period. Syringe the rods well at shutting-up time. Close at 2.15 p.m., give plenty of air on all fine days till growth commences, when, of course, the temperature must be kept up and less air given.

LATE GRAPES.—All vines may be started slowly now, as it is imperative that the crop should be reaching maturity by the end of September, therefore close the houses, but give air on all fine days, and maintain an even temperature without the aid of fire heat, except in frosty weather. In most cases it will be necessary to give a good watering to the inside borders, as these have been kept dry. Let the water be at a slightly increased temperature to that of the house.

CHERRIES.—These should be fumigated just before the blooming period. The cherry is very impatient of hard forcing; for this reason the growth must be slow, and this gives aphis a chance of getting a footing unless precautions are taken. A slight syringe with a nicotine preparation is also a good preventive.—W. A. Cook, Leonardslee Gardens.

PRELIMINARY NOTICE.

COUNTY BOROUGH OF STOKE-ON-TRENT.
HANLEY PARK.

THE FIFTEENTH
GREAT ANNUAL FLORAL FETE will take place in the HANLEY PARK on WEDNESDAY and THURSDAY, July 5th and 6th, 1911.

Schedules, which will be ready shortly, may be had on application to
WM. POULSON, Secretary.
Town Hall, Hanley.

THE PERPETUAL FLOWERING CARNATION SOCIETY.—The SPRING SHOW will be held May 2nd and 3rd, and the WINTER SHOW, Dec. 5th and 6th. Schedules and particulars from E. F. HAWES, Royal Botanic Gardens, Regent's Park, London, N.W. THE CARNATION YEAR BOOK, 1911, containing interesting articles, valuable information, and numerous illustrations, now ready, post free, 1s. 3d., from HAYWARD MATHIAS, Lucerne, Stubbington, Fareham, Hants.

THE BOURNEMOUTH HORTICULTURAL SOCIETY EXHIBITIONS.
SPRING FLOWERS, April 4th and 5th.
AUTUMN FLOWERS, etc., Oct. 31st and Nov. 1st, 1911.
C. W. BARRETT, Secretary, "Lucerne," Fenton Road, West Southbourne, Bournemouth.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

(Continued from page 202.)

Dewdrop, Incognita, Queen Sophia, Treasure Trove, White Witch, Topaz, Weardale Perfection, and Amazon, among other good things.

Mr. Frank Lilley, Guernsey, contributed a collection of forced daffodils, and included a considerable number of polyantha varieties in his set, and also a few spikes of Watsonia coccinea.

FRUIT AND VEGETABLE COMMITTEE.

Some capital vegetables from Messrs. Sutton and Sons, Reading, came in for a full share of admiration. Good things were Harbinger cabbage, Sutton rhubarb, seakale, Early Paris lettuce, Superb Early White broccoli, mushrooms, large-leaved dandelion, and Witloof chicory.

We understand that Mr. W. Poupart, Twickenham, exhibited a number of varieties of rhubarb all grown under similar conditions, to show their relative earliness, but we failed to find the exhibit.

CERTIFICATES AND AWARDS.

First Class Certificate.—To Adiantum Glory of Moordrecht, from Mr. A. A. Fabius, Emsworth.

Award of Merit.—To Amaryllis Queen Mary, from Messrs. R. P. Ker and Sons, Liverpool; to Saxifraga Petrachi, from Sir Eric Hambro, Hayes Place, Kent; to Odontoglossum mirum braggense, from Messrs. Sander and Sons, St. Albans; to Tulip Yellow Murillo, from Mr. Profittlich, Twickenham; to Lælia-cattleya Dominiana var., from Messrs. Charlesworth and Co., Haywards Heath.

MEDALS.

Gold.—To Sir Eric Hambro, K.C.V.O. (gardener, Mr. J. Grandfield), Hayes Place, Kent, for alpines.

Silver-gilt Flora.—To Messrs. James Carter and Co., Raynes Park, for ornamental spring flower garden; to Messrs. Charlesworth and Co., Haywards Heath, for orchids; and to Mr. H. Burnett, Guernsey, for carnations.

Silver-gilt Banksian.—To Mr. H. Ellison, West Bromwich, for ferns and gerberas; to Messrs. Cartwright and Goodwin, Kidderminster, for daffodils; to Messrs. R. and G. Cuthbert, Southgate, for tulips.

Silver Flora.—To Mr. J. Box, Lindfield, for display of spring bulbs; to Messrs. William Paul and Son, Waltham Cross, for flowering shrubs; to Mr. G. Reuthe, Keston, for hardy plants; to Mr. L. R. Russell, Richmond, for flowering shrubs; to Messrs. Barr and Sons, Covent Garden, for daffodils; to Mr. Christopher Bourne, Simpson, for daffodils; to Messrs. J. Cypher and Sons, Cheltenham, for orchids; to Messrs. Sander and Sons, St. Albans, for orchids; to Mr. Collier, gardener to Sir J. Colman, Bart., Gatton Park, Reigate.

Silver Banksian.—To Messrs. J. R. Pearson and Sons, Lowdham, Notts, for daffodils; to Messrs. R. H. Bath, Ltd., Wisbech, for bulbs in moss fibre; to Mr. A. W. Jensen, Lindfield, for orchids; to Messrs. Stuart Low and Co., Enfield, for orchids; to Messrs. H. Cannell and Sons, Swanley, for pelargoniums; to Messrs. W. Cutbush and Son, Highgate, for carnations and hardy flowers; to Messrs. R. Gill and Sons, Falmouth, for rhododendrons; to Messrs. H. B. May and Sons, Edmonton, for ferns and azaleas; to Messrs. G. Mount and Sons, Canterbury, for roses; to Mr. Prichard, Christchurch, for hardy flowers; to Mr. Prime, gardener to the Marquis of Salisbury, Hatfield, for lachenalias; to Messrs. Sutton and Sons, Reading, for primulas—and one for vegetables; to Messrs. James Veitch and Sons, Chelsea, for flowering plants; to Messrs. T. S. Ware, Ltd., for hardy flowers.

Bronze Flora.—To the Misses Hopkins, Shepperton, for hardy flowers; to Messrs. R. Wallace and Co., Colchester, for alpine flowers; to Messrs. R. and G. Cuthbert, Southgate, for lachenalias; to Messrs. Paul and Son, Cheshunt, for lilacs; to Messrs. Robert Sydenham, Ltd., Birmingham, for daffodils.

FORCED BULB COMPETITION.

In some classes there was no competition, in some others it was excellent.

For eighteen hyacinths, distinct, Mr. E. Beckett was awarded first prize in a strong competition. The spikes were wonderfully developed, beautifully clean and fresh. The varieties were Koh-i-noor, Lord Derby, Schotel, Queen of the Pinks, Ivanhoe, Garibaldi, City of Haarlem, L'Innocence, Moreno, Electra, La Grandesse, La Victorie, Enchantress, King of the Blues, King Menelik, General Vetter. Mr. J. Gibson was second, having fine examples of Captain Boyton, Czar Peter, City of Haarlem, and Jacques. Mr. A. Hansom, Ivanhoe, Victoria Park, Wavertree, Liverpool, was a fair third; Mr. G. Dyke, gardener to Claude Watney, Esq., Garston Manor, Watford, was fourth. This was the largest class in the show.

For twelve varieties, distinct, there was a strong competition. Mr. H. Prime, however, came out first with a good even display. The varieties employed were Corregio, Koh-i-Noor, King of the Blues, La Grandesse, Ivanhoe, Jaques, Mr. Plimsoll, King Menelik, Schotel, City of Haarlem, Electra, and Le Victorie. Mr. J. W. Barker, gardener to F. R. Dixon Nuttall, Esq., Eccleston Park, Prescot, was a capital second, with clean, well-rounded spikes. Mr. J. Vert, gardener to Lord Howard de Walden, Saffron Walden, was third.

For six hyacinths, distinct, Mr. J. Shelton, gardener to Lord Hillingdon, Wildernesse, Sevenoaks, secured the first prize with really handsome spikes, just in the pink of condition. The second prize fell to Mr. H. Spittle, gardener to Mrs. H. Faudel-Phillips, Edenbridge, Kent; Mr. W. Howe was fourth.

For four pans of hyacinths, ten spikes each, Mr. E. Beckett obtained the first prize with splendid examples of King of the Blues, City of Haarlem, La Victorie, and Corregio; while an equal first was awarded Mr. James Gibson, for very fine pans. Mr. H. Prime, gardener to the Marquis of Salisbury, Hatfield, was a capital third, and Mr. G. Mackinlay, gardener to the Hon. J. Whitelaw Reid, Wrest Park, Ampthill, brought up the rear; there were six entries.

Messrs. R. and G. Cuthbert were the only competitors for 120 hyacinths in twelve pans, ten roots of each variety, and were again awarded a gold medal. The culture was simply superb, the varieties being Perle Brilliant, Jacques, Ivanhoe, Moreno, City of Haarlem, Corregio, L'Innocence, Schotel, La Victoire, Garibaldi, Chas. Dickens, and King of the Blues.

There were again three exhibitors for six hyacinths in moss fibre, Miss C. A. Michell, Oakfield, Cricklewood, gaining the first prize with a moderate exhibit. Mr. W. Howe was second with good close spikes, and Miss E. M. Rawlins, Great Houghton Hall, Northampton, was third.

The class for six vases of tulips, growing in fibre, only brought out three competitors, the first prize being awarded to Mr. W. Howe, gardener to Lady Tate, Park Hill, Streatham Common, who staged splendid vases of Duchess de Parma, La Reve, Queen of the Netherlands, Prince of Austria, Rose Grislin, and Joost Van Vondel. The Hon. Mrs. Guy Baring, St. Cross Mill, Winchester, was second with fine examples of Keiser's Kroon, Rose Grislin, and Fabiola, while Miss Gordon Thompson, The Elms, Potter's Bar, was awarded third prize.

The class for six vases of narcissi, grown in moss fibre, there were four entrants, Miss E. M. Rawlins securing first prize with nice bowls of White Lady, Emperor, C. J. Backhouse, Victoria, Leonie, and Madame de Graaf. Mr. W. Howe was a close second with fine examples of Victoria, Blood Orange, and Emperor. The Hon. Mrs. Guy Baring was third.

Messrs. R. and G. Cuthbert, Southgate, were the only competitors in the trade class for a collection of hyacinths in twenty-five varieties of four blooms each, and were deservedly awarded the gold medal of the General Bulb Growers' Society, Haarlem. The spikes were really fine and beautifully arranged in a bed of maidenhair ferns. The varieties employed were Captain Boyton, Mr. Plimsoll, Lord Balfour, La Grandesse, Charles Dickens, Perle Brilliant, King Alfred, L'Innocence, Ivanhoe, La Victoire, Rose de Merveille, Corregio, Lord Derby, King Menelik, Garibaldi, City of Haarlem, Pink Perfection, Electra, Queen of the Pinks, Jacques, General Vetter, Enchantress, Moreno, and Schotel.

Proposed National Daffodil Society.

The adjourned meeting to consider the question of instituting a National Daffodil Society was held at 2.30 p.m. on Tuesday, March 14, in No. 3 Committee Room at the Royal Horticultural Hall, Westminster. The Rev. G. H. Engleheart presided.

Mr. Cranfield pointed out that there was no need for a lengthy meeting, as that morning the R.H.S. Daffodil Committee had sent a resolution to the R.H.S. Council, asking: "That the Narcissus Committee be empowered to hold a two-days' show in mid April; to issue (through the council) a 'Year Book' annually; to issue a schedule of prizes (committee to find the cash prizes), and to divide itself into sub-committees for special purposes." He understood that the council had practically conceded all these requests, but the committee had not yet had an opportunity of acting. He thought it undesirable at present to move further in the matter of the National Daffodil Society, though he did not propose to abandon the idea of such a society until he and his friends saw how the Narcissus Committee would work under the new conditions. He did not think it would work successfully, but he did not wish to do anything that would hamper their movements, and, therefore, he moved the postponement of the question of a National Society until, at any rate, the Narcissus Committee had had an opportunity of meeting the wants and desires of so many daffodil lovers.

Mr. H. A. Darlington, Mr. F. H. Chapman, the Rev. J. Jacobs, Mr. Welchmann, Captain Parlby, and others spoke, some of them throwing blame upon the Narcissus Committee for not having moved in the matter of popularising daffodils long ago. The Chairman pointed out that such blame was unfair, because the committee was constituted for a specific purpose, and had no powers outside that purpose, until these were given to meet any demand arising from the Fellows of the society. In this particular the chairman appeared to be well supported.

Mr. Cranfield's motion of postponement was put, and carried, and very cordial votes of thanks were accorded him for his keen interest and work in connection with the present movement, and to the Rev. G. H. Engleheart for presiding. The next move is with the Narcissus Committee.

There was an excellent attendance on this occasion, representatives coming from Cornwall, Devon, Somerset, Huntingdon, Birmingham, and other daffodil centres, as well as from the Metropolitan district, while most of the members of the R.H.S. Narcissus Committee were also present.

Scottish Horticultural Association.

The March meeting of this association was held in the Goold Hall, 5, St. Andrew Square, Edinburgh, on the 7th. Mr. Massie, the president, occupied the chair, and there were 150 members present.

Mr. Wm. Cuthbertson, J.P., of Messrs. Dobbie and Co., Edinburgh, delivered a lecture on "Sweet Peas." Prior to 1901, he said, there was no "Spencer" or waved sweet pea. Previous to that time there were two types—one with erect standards, represented by "Triumph" and "Prince Edward of York," and the other with hooded standards, represented by "Lady Grizel Hamilton," and these still appeal to some florists, to whom the "Spencer" forms are anathema, just as the fancy pansies were anathema to the lovers of the old show pansy. At the annual exhibition of the National Sweet Pea Society at the Royal Aquarium, London, in July, 1901, Mr. Silas Cole, gardener to Earl Spencer, at Althorp Park, Northampton, showed a new sweet pea which he named Countess Spencer, and this was awarded a first-class certificate. This variety made possible the modern development of the sweet pea, and it may be of interest to give the narrative which Mr. Cole conveyed to Mr. Cuthbertson as to how it came into existence. "With respect to the origin of Countess Spencer," he wrote, "I will tell you what happened. Being always very fond of sweet peas, I turned my attention specially to them in 1898. That summer I crossed Lovely with Triumph, saved the seed, and the following year, 1899, there were two or three promising things, the rest being rubbish. The good ones I crossed with Prima Donna, and the next season, that was 1900, there was one plant among the seedlings much stronger than any of the others, and flowered much later than the other varieties. That proved to be the original 'Countess Spencer.' I just managed to save five seeds—one pod only. The following spring, after sowing them, I lost three of them in one night, with mice. The stock was thus reduced to two plants, but from these I saved 90 seeds. It was from these plants I exhibited the flowers at the Royal Aquarium for the first time. In 1902 I sowed all the seeds. Every one came true, but owing to it being a wet summer I only managed to save about 3,000 seeds; 2,200 of these were sent in 1903 to America to be grown for stock by Mr. Sydenham. What came back from America was a mixture of all sorts, no more like my true Countess Spencer than day is like night. With me Countess Spencer has never sported to this day. It has thrown reversions, that is, it has reverted back to its parents, Lovely and Triumph, and on rare occasions to Prima Donna, but nothing else. To my mind that is not sporting. That is all there is to tell about the origin of Countess Spencer."

Mr. Cuthbertson gave a brief account of the sweet peas which had been awarded medals and certificates by the National Sweet Pea Society, and then dealt with the purity and fixity of stocks. Last year over 300 trials had been made at Guildford, but only 129 of them had proved true. There were two ways of obtaining new varieties. One was by selecting and fixing a variation, of which "Helen Lewis" was an example, and the other was by cross-fertilising and selecting from the progeny. In the latter the characters of the parents are commingled, but no reliance, as we now know, thanks to Mendel's discoveries, can be placed on the plants of the first generation. They are only unfixed character carriers, and Mr. Cuthbertson gave the following illustration: If Countess Spencer be crossed with King Edward, the progeny are all reds of the King Edward type. Seed saved from these plants, when selfed, will produce many plants of the King Edward type, red and pink in colour, a few true Countess Spencers, and very few of the Spencer type, but red in colour. The last will produce in the next generation some variations, and those which remain true must be bred again, until the stock is homozygous, or breeds true to the desired character. Mr. Cuthbertson strongly deprecated the placing on the market of novelties which were not properly fixed.

On the motion of Mr. Hay, Mr. Cuthbertson received a very cordial vote of thanks for his interesting lecture.

The exhibits were: Twenty-three varieties of wallflower, from Messrs. Dobbie and Co., Edinburgh; hybrid primulas (P. obconica x P. stellata), Galanthus Elwesii, Sisyrinchium grandiflorum, and Helleborus niger major, H. orientalis abschasicus, H. orientalis abschasicus multiflorus grandiflorus, and H. orientalis purpurascens major, from Mr. C. Comfort, Broomfield, Davidson's Mains; flowers of Rhododendron Nobleanum hybrids from Mr. A. Johnstone, Hay Lodge, Edinburgh; Richardia æthiopica, from Miss Burton, Poulton; Dendrobium Nobleanum, from Mr. R. Whannell, The Drum, Gilmerton; spring flowers from Mrs. Algie, Togher House, Co. Mayo; and Brussels Sprout Solidity, from Mr. I. Staward, St. Fort, Newport, Fife.

Eleven new members were elected.

The next monthly meeting, on April 4, will be for the young members, who are asked to read short papers on horticultural or allied subjects.

United Horticultural Benefit and Provident Society.

The annual meeting of this flourishing benefit society was held in the Horticultural Hall, Westminster, on Monday evening, March 13. Mr. Chas. H. Curtis presided. Besides the committee and officers there were very few members present, the small attendance being probably accounted for by the very inclement weather of the afternoon and evening.

The usual formalities were observed, and then, at the suggestion of the Chairman, the report and balance-sheet for the year 1910 were taken as read. We regret that the pressure upon our space prevents us from giving the report in extenso, but possibly we may have an opportunity of giving it in a succeeding issue. In moving the adoption of the report, the Chairman reviewed the chief items of interest, and pointed out that the present number of benefit members was 1,366, including the addition of 70 members during the year. Sick pay for the year was £561 0s. 6d., or £9 less than in the previous year. The management expenses came to £229 9s. 7d., and included the extra expenditure of £21 incurred by the quinquennial actuarial valuation of the society. The Chairman pointed out that £3,000 worth of stock had been purchased in 1910, the largest amount invested in any one year, and now the society's invested capital amounted to £38,800, in addition to £200 on deposit, and a sum of £200 on current account. He paid a tribute to the continuous and excellent work of the committee, the admirable manner in which Mr. Collins fulfilled the duties of secretary, the business capabilities of Mr. W. P. Thomson, the treasurer, and the keenness of the trustees in securing the best possible investments. He also pointed out that while the £38,800 worth of stock held had a present market value of £35,200, yet all was redeemable at par, and was practically all of it purchased considerably below par, and, moreover, there was a surplus fund of £2,623 16s. 2d. to provide for depreciation. Mr. Kendal seconded the motion, and said he thought it would be a gracious act on the part of the private members if they came to the annual meeting in larger numbers to show their appreciation of the committee's services. The motion was then put, and carried.

Messrs. E. Burge, A. Bedford, T. Stanbridge, and W. Weston, the four retiring members of the committee, were re-elected on the motion of Messrs. Kendal and Winter, the former suggesting that the out-of-pocket expenses of committeemen ought to be paid by the society. On the motion of the Chairman, seconded by Mr. J. Wheeler, Mr. W. Collins was heartily re-elected as secretary, and many kindly things said of his work. Messrs. Gunner and Puzy were re-elected auditors, the former for the 23rd successive year. The trustees, Messrs. J. Hudson, Riley Scott, and C. H. Curtis, were heartily thanked for their services, and Mr. W. P. Thomson was also accorded a hearty vote as treasurer. The Press was accorded hearty thanks for many kindnesses to the society, and Mr. J. Harrison Dick acknowledged the vote. A similar vote to the committee was moved by Mr. Collyer and Mr. Kendal, and acknowledged by Mr. A. Bedford. It was suggested by Mr. Collyer that if, in addition to the notices in the Press and in the Annual Report, members could be individually notified of the annual meeting, possibly more would come.

The death of Mr. Chas. Foster, and also of Mr. George, one of the oldest members, were referred to, and votes of condolence and sympathy sent to the bereaved families.

A vote of thanks to the chairman, moved by Mr. Hawes and Mr. Winter, concluded the proceedings.

At a subsequent committee meeting Mr. Chas. H. Curtis and Mr. T. Winter, were again heartily re-elected as chairman and vice-chairman, respectively, of the committee.

Reading Gardeners' Association.

At the fortnightly meeting of this association, held on Monday, March 6, the vice-president, Mr. Leonard Sutton, occupied the chair, and, nothwithstanding the unfavourable weather, there was a good attendance.

The lecturer for the evening was Mr. W. F. Giles, of Messrs. Sutton and Sons, and his subject, "British and Continental Salads." Mr. Giles has made a special study of the culture of saladings, and his lecture, most carefully prepared, was illustrated by an exceedingly interesting collection of lantern slides, many of them from photographs taken by himself in Great Britain and on the Continent. Mr. Giles gave a brief description of practically all the plants used as salads, first dealing with those which may be said to be well known in this country, such as lettuces, endive, radishes, mustard, cress, celery, young onions, cucumbers, tomatoes, etc. Afterwards he described those not so well known to the English cultivator, but which are in constant use in Holland, France, Italy, and other Continental countries.

He expressed the opinion that the increased demand for saladings in our own country was doubtless greatly due to the large number of Britishers who now visit the Continent acquiring the taste for salads as served in Continental hotels and restaurants. Mr. Giles was, however, confident that although the gardeners across the Channel might be a little ahead of us in the production of seasonable salads the British gardener easily led the way in the culture of vegetables generally, as evinced by a comparison between English and Continental exhibitions. The French, or intensive system of cultivation was described in detail, and pictures were thrown on the screen illustrating the methods adopted in some of the largest gardens of Holland, Belgium, and France, as well as of establishments in our own country.

The following is a list of the leading Continental types of saladings, and each was in turn fully described, the method of cultivation being also explained: Chicory, witloof, dandelion, finnochic or Florence fennel, mache or corn salad, rampion, celeriac, purslane, tarragon, chervil, pimpinella, sorrel, chives, mercury, orache, poiree, and winter radishes.

Mr. Giles then dealt with the mode of procedure adopted in the preparation of salads by Continental experts, explaining that the knife for shredding is never used as in this country, lettuce leaves being torn from the plants, the most scrupulous care being also taken that nothing goes into the salad bowl in the slightest degree wet. Oil and vinegar are used as ingredients for flavouring, but the latter only in sufficient quantity to give an appetising relish.

At the conclusion of his remarks Mr. Giles was warmly applauded, and, on the proposition of the vice-president, seconded by Mr. Powell, a hearty vote of thanks was accorded him.

A very beautiful exhibit of Primula obconica was staged by the chairman of committee, Mr. F. Townsend, gardener to Leonard Sutton, Esq., Hillside, Reading.

Birmingham Gardeners' Association.

MARCH 6.

Once again Mr. E. H. Jenkins, of Hampton Hill, Middlesex, essayed to entertain the members of this society, and on March 6 gave a dissertation upon one of his favourite subjects, viz., "Alpine Plants." Mr. C. H. Herbert presided over a large assembly.

In his prefatory remarks Mr. Jenkins intimated that he did not purpose offering practical advice on the ordinary culture of alpines, nor give a catalogue of species and varieties; but to discuss the principles appertaining to the natural habitats of the highly interesting plants, the study of which, beside being interesting, would prove of material assistance to the cultivator. In the course of his remarks, the essayist adverted to the astonishing depths that the roots of even some of the most diminutive species of the plants attain in search of moisture between the fissures of the rocks, whilst their foliage and flowers were luxuriating in the pure, clarified, and cold mountain air above. Wonderful, too, is their power of acclimatisation, ranging from the lofty Alps to the temperate regions.

Naturally, also, advertence was made to a few of the more popular kinds and species of both the "Incrusted" and the "Mossy" sections of saxifrages. Here it will be opportune to remark that Mr. Jenkins drew attention to the small collection of saxifragas brought to the meeting by the chairman, from Acock's Green, especially resplendent being a very fine clump of S. oppositifolia major, which Mr. Jenkins declared was the finest he had ever seen. Another notable specimen being S. apiculata alba. The exposition was listened to with close attention, and Mr. Jenkins encouragingly invited a discussion and questions when expressing thanks for the attention devoted to his necessarily cursory details on so large a subject.

Chief amongst the few discussionists was Mr. James Webb, gardener to Byng Kenrick, Esq., Metchley House, Edgbaston, and who gave a long descriptive list of the saxifrages and other alpines flourishing there in proximity to a smoky region. Mr. Foster, of Acock's Green, when referring to his own comparatively small experience amongst the alpines in Switzerland, remarked that it afforded him very much gratification to be in the presence of Mr. Jenkins that evening for the first time, though during upwards of thirty years he had acquaintance with the latter's contributions to the horticultural Press.

A hearty vote of thanks, proposed by Mr. W. Spinks, and seconded by Mr. A. R. Brown, to Mr. Jenkins, was carried with acclamation.

Dundee Horticultural Association.

The usual monthly meeting was held in the Technical College, on the evening of the 9th inst. The president, Mr. William Christison, presided over a good turnout of members. Mr. Alexander Macrea, assistant superintendent of parks and cemeteries, was the lecturer, and his subject was "Ground Operations." Dealing with this subject in a masterful way, the lecturer lucidly explained the best recognised methods of levelling, trenching, draining, making walks and carriage ways, bowling greens, croquet lawns, and tennis courts, greatly enhancing his remarks by means of diagrams and sketches on the blackboard. The lecture evoked considerable discussion, and the lecturer was plied with a multitude of questions, which he answered to everyone's satisfaction.

In voicing the thanks of the members to Mr. Macrea, Mr. James Bethel said he was surprised to note from the discussion that took place that so many of the speakers thought the operations which the lecturer had so eloquently dealt with were not a part of their work. Apart from the question of remuneration, which had been ventilated by one speaker, his idea was that the average gardener should equip himself with all the general knowledge he could command. Knowledge was power, and it was not to the credit of the present-day gardener if he was unable to successfully perform the work which Mr. Macrea had so ably dealt with.

The exhibits consisted of carnation stems showing aerial roots, from Mr. Thomas Butchort, Rosemount Gardens, Newport; and a bunch of Himalayan rhododendron flowers from Mr. John Campbell, Foggyley Gardens, Lochee.

Eckford's
Giant SWEET PEAS

THE FINEST BLOOMS IN THE WORLD.

A flower garden without Eckford's Sweet Peas can only be compared to a house without furniture. Sweet Peas are requisite to the small, medium, or large garden, and if you wish to have colour, effect, prize specimens, and tall plants, then send to Eckford's for your seeds. The time to buy is NOW. The firm to buy from is ECKFORD'S. No other seed specialist in the world can rival Eckford's for Sweet Peas. Larger flower, longer stems, brighter colours, and a profusion of bloom will be the result of growing Eckford's seeds.

REMEMBER GENUINE ECKFORD'S SEEDS CAN ONLY BE OBTAINED DIRECT FROM WEM. No Agents are employed.

Over 150 Gold and Silver Medals have been Awarded for Eckford's Seeds.

SPECIAL COLLECTIONS for 1911.

Exhibitor's (E) Collection. 24 Giant Waved varieties, new and up-to-date; fine for exhibition, 10 seeds of each, for **5s. 6d.**, post free, cash with order.	**Villa (B) Collection.** 24 splendid varieties, suitable for exhibition, 50 seeds of each, **5s. 6d.**, post free, cash with order.	**Exhibitor's (D) Collection.** 12 Giant Waved varieties, new and up-to-date; fine for exhibition, 10 seeds of each for **2s. 9d.**, post free, cash with order.
Villa (C) Collection. 12 splendid varieties, suitable for exhibition, 50 seeds of each, **2s. 9d.**, post free, cash with order.	**Half Villa (F) Collection.** 24 splendid varieties, suitable for exhibition, 25 seeds of each, **3s.**, post free, cash with order.	**Villa (E) Collection.** 12 splendid varieties, suitable for exhibition, 25 seeds of each, **1s. 6d.**, post free, cash with order.

ECKFORD'S "CORONATION" MIXTURE OF GIANT SWEET PEAS—Red, White, and Blue. This is a mixture specially provided for the Coronation Year, when quantities of flowers of these colours will be needed for all manner of decorations. It consists of equal quantities of fine red, white, and blue Sweet Peas. Per lb., **5s.**; 8oz., **2s. 6d.**; 4oz., **1s. 6d.**; per oz., **7d.** These mixtures are not to be equalled in their respective grades, and are only obtainable direct from Wem. The colours in these mixtures are so carefully blended that they give the most universal satisfaction. Testimony is continually coming to hand which speaks in high praise of their excellence.
A specially written booklet on Sweet Pea Growing given with every order. Send to WEM for satisfaction.

ECKFORD'S IDEAL FLOWER GARDEN SEEDS.

I have great pleasure in placing before gardeners my special collections of Garden Seeds, which I am confident will give the utmost satisfaction. All seeds are carefully selected under my own supervision, and can be relied up to produce an abundance of choice blooms.

ECKFORD'S 5s. IDEAL COLLECTION.

1oz. Eckford's "Matchless" Mixture of Giant Sweet Peas; 3 packets of choice Asters, separate colours; 3 packets of choice Double Ten-week Stocks separate colours; 3 packets of Ornamental Grasses for mixing with cut flowers; 1 packet of each of the following **twelve** Hardy Annuals: Alyssum for edging, Calliopsis, Shirley Poppy, Annual Chrysanthemum, Schizanthus, Eschscholtzia, Godetia, Miniature Sunflower, Larkspur, Mignonette, Nasturtium, and Nigella; 1 packet of each of Half-hardy Annuals as follows: Lobelia, Nicotiana, Marigold, and three Everlastings for Winter Decoration; 1 packet each of Hardy Perennials, as follows: Antirrhinum, Aquilegia, and Canterbury Bells; with one packet of Single Wallflowers.

5s. post free for Cash with order.

FREE. Send a postcard to-day for large illustrated and coloured Catalogue. It gives full particulars of all novelties in Sweet Peas for 1911, and contains full list of all flower and vegetable Seeds.

HENRY ECKFORD, F.RH.S., Sweet Pea Specialist,
(Dept. 221), **WEM, SHROPSHIRE.**

Lee, Blackheath, and Lewisham Horticultural Society.

At the Church Street Schools a lecture was recently given by Mr. G. E. Dibley, F.G.S., on "The Fertilisation of Flowering and So-called Non-flowering Plants."

Mr. Dibley dealt with his subject in a very able manner, illustrating his lecture by means of an excellent series of lantern slides. Starting with the angiosperms, he traced the line of evolution through various groups of plants until he came to the primitive algæ, from which the more highly-developed trees, shrubs, and plants so familiar to us have been gradually evolved. The lecturer divided the angiosperms into the two classes, monocotyledons and dicotyledons; these he then divided up into the various sub-classes, e.g., the dicotyledons into Thalamifloræ, Calyciifloræ, Gamopetalæ, and Incompletæ, and the monocotyledons into the sub-classes Spadicifloræ, Petaloidæ, and Glumiferæ, giving the different characteristics of the various groups, and their mode of pollination, fertilisation, development, and dispersal of fruit or seed.

The gymnosperms next claimed his attention, and, after describing the method of fertilisation, the position of the naked ovules on the cone of pinus, and the long time required for fertilisation to be completed, after pollination had taken place, he passed on to the selaginellas, showing to the audience, by means of specimens, the position of the microspores and macrospores on the tip of the leafy stem.

He next gave the life history of a fern, explaining clearly the two different phases in its life cycle. After this he dealt with the club mosses and liverworts, and these came in for a long discourse, as here was vegetative as well as sexual reproduction to describe. The lecturer then passed on to the Algæ, giving, for examples, the Bladderwrack (Fucus vesiculosus) and Spirogyra, describing how the latter was reproduced by the conjugation of two unicellular plants. He also gave a brief account of a fungus (agaricus) and its method of reproduction by spores, passing on from agaricus to the lichens, and explaining the symbiotic relationship which exists between the fungi and algæ, which go to make up the lichens.

At the close of the lecture Mr. Dibley was accorded a hearty vote of thanks. On March 31, Mr. G. B. Lees, will give a lecture on "Outdoor Roses."

Bournemouth Gardeners' Association.

On March 7, Mr. Bowder, of the Victoria League, gave a most instructive and interesting lecture on the "Different Ways of Farming from East to West, including the Culture of Fruit and Vegetables in Canada." The president (J. H. Ralph Smythe, Esq., J.P.) presided, and introduced the lecturer to an audience of nearly one hundred persons.

The lecture was illustrated by eighty lantern slides, and greatly appreciated. Mr. Bowder dealt chiefly with fruit growing in New Brunswick. He said the cultivation of fruit had been brought to a fine art in British Columbia. He stated that there were 14,000,000 acres suitable for the cultivation of fruit, chiefly apples, and that New Brunswick was just coming to the front. Experts declared that it was the finest part for fruit growing. Apples grown in New Brunswick matured quite fourteen days earlier than they did in Novia Scotia, and thus brought the cultivators a good return for their outlay. One pioneer grew eighty different varieties of apples, and although it was not good policy to have so many, the fact proved that a great variety of apples did remarkably well in the province. Small bush fruits and strawberries did very well between the rows of fruit trees, and a profit of from sixty to one hundred pounds per acre could be realised from strawberry culture. Cabbages and tomatoes also did extremely well in the flat districts. The lecturer said he had never seen finer tomatoes grown under glass in this country than he had in the open air in New Brunswick. Nearly every farmer had fruit orchards attached to his farmstead.

Mr. Bowder said there were "illustration orchards," ranging in size from one to two acres, which were of great value to the fruit growers. These orchards were maintained by the Government for ten years, and the fruit belonged to the owner. The Government replaced trees that died during that period. The lecturer laid much stress on the desirability of spraying fruit trees at stated times during the season. Without this precaution, he said, fine crops of fruit could not be obtained. He said experiments had been made by spraying one side of a tree only, and leaving the other side unsprayed, and the result was most marked in favour of spraying. The machine for the purpose was placed in a cart. A long tube from the machine was attached to a bamboo cane about 10ft. long, and this enabled the operator to get at all parts of the tree with ease and facility. Sweet corn, the lecturer said, was largely grown, and much liked in a cooked state.

Mr. Tompkins, gardener to the Dowager Lady Miller, staged some splendid primulas in pots and violets in vases, and Mr. Heath had a beautifully-flowered white azalea and a large fern. Votes of thanks were heartily accorded both the lecturer and chairman at the close of the meeting.

Elstree and Boreham Wood Horticultural Society.

Mr. E. Beckett, V.M.H., gave an interesting lecture on "Vegetables" on Friday, the 3rd inst., in connection with the above society, at Letchmore Heath. There was a large audience. The lecturer, in his opening remarks, referred to the initial work in connection with vegetable growing that must be done to ensure the best success. He spoke on the selection of a site, cultivation of the ground, manuring, etc., and afterwards took the more important vegetables individually, and touched on the more salient points in their culture. A splendid series of lantern slides added considerable interest to the lecture, and showed the best types of vegetables, as well as many of the collections that have been exhibited throughout the country. J. R. Paul, Esq., was the chairman. A vote of thanks was accorded the lecturer and the chairman.

OBITUARY.

MR. ROBERT MACKENZIE CROSS.

The death is announced at the age of 76 of Mr. R. M. Cross, who in the course of his long and active life, rendered valuable assistance in the introduction of cinchona and rubber plants into India. A native of Dumbarton, Mr. Cross commenced his gardening career in the gardens of Sir James Colquhoun, Bart., of Luss, and subsequently coming to London, he was, on the recommendation of Mr. J. Smith, the Curator at Kew, appointed to make a journey to Ecuador in quest of the red-barked cinchona, in order to establish it in the Neilgherries of Madras, and in this he was successful, and established 500 plants. Later he went, also for the India Government, to Loxa to collect seeds of the Crown Bark (Cinchona officinalis), and in this enterprise also he achieved much success, 80,000 plants having been raised from the seeds he collected. He made five other visits to South America, and collected large quantities of seed of other cinchonas, and of several rubber plants, notably Castilloa elastica, and Hevea brasiliensis.

MR. JAMES GEORGE.

As we are going to press we learn that Mr. J. George died a few days since at his residence at Putney, in his eighty-fifth year. We shall give a short account of the life of this veteran horticulturist in our next issue.

ANSWERS TO CORRESPONDENTS.

WINTER-FLOWERING SWEET PEAS.—M. C. A., Leatherhead: It is quite impossible for you to obtain flowers of the winter-flowering sweet peas during January in houses entirely unheated. It may be possible in South Devon or Cornwall to do so, but we much doubt it.

PLANTING ASPARAGUS BEDS.—S. H., Leicester: For the beds you have made, i.e., those four feet wide, three rows of plants will be necessary, and the plants should be set out fifteen inches apart in the rows. It is an advantage if dull, damp weather can be chosen for the work of planting. The end of March and early April afford the best period in which to plant new beds, and it is always a distinct advantage if good two-year-old plants are obtained. Every care must be taken to prevent undue exposure of the roots, and the more quickly planting is done after lifting, the better. Connover's Colossal is a first-rate variety in every respect, and there is no need to grow any other.

SOWING NEMESIAS.—R. P. S., Exeter: The trouble is probably due to the fact that the seed boxes were placed in considerable heat. The nemesias are half-hardy annuals, but they very much resent artificial heat. The seeds rarely germinate well when sown and placed in moderate stove heat, whereas if sown from now onwards and placed in a cool house or frame they will germinate freely; indeed, if sown out of doors towards the end of April, in a shady position, they germinate quickly and well.

SULPHUR FUNGICIDE.—W. L. C., Chester: No doubt you refer to liver of sulphur, also known as sulphide of potassium. An excellent fungicide is made by dissolving an ounce of the sulphide in a pint or two of hot water, and then adding cold or tepid water sufficient to make up 2½ gallons of mixture.

ICICLE RADISH.—H. J. B., Stroud: This is a capital radish, and one that possesses several virtues. It is very crisp and succulent, of good flavour, and does not deteriorate or run to seed so quickly as many varieties do. For a radish it is rather large, but this is not necessarily a defect. We grew it last summer in a small trial of numerous varieties, and found it very good and useful.

DOUBLE-SPATHED ARUM.—W. P., Bideford: We invariably receive a number of arum freaks during the season, and yours is the first to reach us in 1911. You will have noticed that the lower spathe is not so circular as the upper and true one, and also that it is tinted with green. A spathe is but a modified leaf, and the secondary spathe in your case is the result of an effort on the part of the sheathing leaf to become a spathe. On the whole, it has succeeded very well, but it is not very likely the plant will make the attempt another year.

HOLLAND HOUSE SHOW.—J. J., Selby: There will be no exhibition at Holland House, Kensington, this year, but instead, there will be a very large show at Olympia, close to Addison Road Station, and only a few minutes' walk from where the Holland House Show has been held. The dates of the Olympia Show are Tuesday, Wednesday and Thursday, July 4, 5, and 6.

DISEASED SWEET WILLIAMS.—H. S., Blackwater: The sweet williams are suffering from a very bad attack of a rust fungus, Puccinia arenariæ. This pest attacks numerous weeds and common plants, such as Stellaria media, S. uliginosa, S. Holostea, Sagina nodosa, S. procumbens, Spergula arvensis, and Arenaria trinervia, hence it is very desirable that these, and similar plants likely to be attacked, should not be allowed in the garden. A cure for the disease is practically impossible, but the removal and burning of badly affected leafage, and spraying the plants at intervals with a rose-red solution of permanganate of potassium will probably hold the disease in check, and prevent an increase of the trouble.

THE LANGUAGE OF FLOWERS
"Feed us, we pray you, with
CLAY'S FERTILIZER
and our rare beauty and fragrance will repay you."
It is SAFE, CERTAIN, QUICK-ACTING and ECONOMICAL.
Flowers Grown with CLAY'S FERTILIZER catch the Judge's eye.
CLAY'S LONDON FERTILIZER TRADE MARK.
Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).
EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK AS AT SIDE.
CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:
CLAY & SON, Manure Manufacturers and Bone Crushers, **Stratford, London, E.**

NAMES OF PLANTS.

J. F. W. H., Loughborough.—A. tillandsia, probably T. dianthoidea.

S. F., Farnham.—1, Chionodoxa Luciliæ; 2, Scilla bifolia; 3, Primula Kewensis.

D. M. G., Ipswich.—1, Dendrobium Ainsworthi; 2, Iris bucharica; 3, I. reticulata; 4, Erica carnea.

T. E. J., Birmingham.—1, Odontoglossum Wilckeanum; 2, Cœlogyne cristata alba; 3, Pilea muscosa; 4, Begonia manicata.

A. D., Teignmouth.—1, Saxifraga apiculata; 2, not recognised, send when in flower; 3, Cyclamen Coum; 4, Asparagus Sprengeri.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above sea-level, 150 feet.

DATE. 1911. MARCH 5 TO MARCH 11.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Mar. 5—Sunday	7 0	37	36	47	31
" 6—Monday	—	40	39	45	33
" 7—Tuesday......	0 54	40	39	45	39
" 8—Wednesday..	1 6	35	34	45	29
" 9—Thursday....	4 12	41	41	47	36
" 10—Friday........	3 24	39	38	47	32
" 11—Saturday.....	—	41	40	44	39
Means ...	(total) 16 36	39	38	46	34

DATE. 1911. MARCH 5 TO MARCH 11.	RAIN.	TEMPERATURE OF THE SOIL AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg.
Mar. 5—Sunday	—	42	44	44	24
" 6—Monday	0·14	41	42	44	28
" 7—Tuesday......	—	42	42	44	37
" 8—Wednesday..	0·18	39	41	43	22
" 9—Thursday	0·06	41	41	43	35
" 10—Friday	0·07	39	41	43	24
" 11—Saturday	trace	41	41	43	37
Means ...	(total) 0·45	40	41	43	29

FORTHCOMING ENGAGEMENTS.

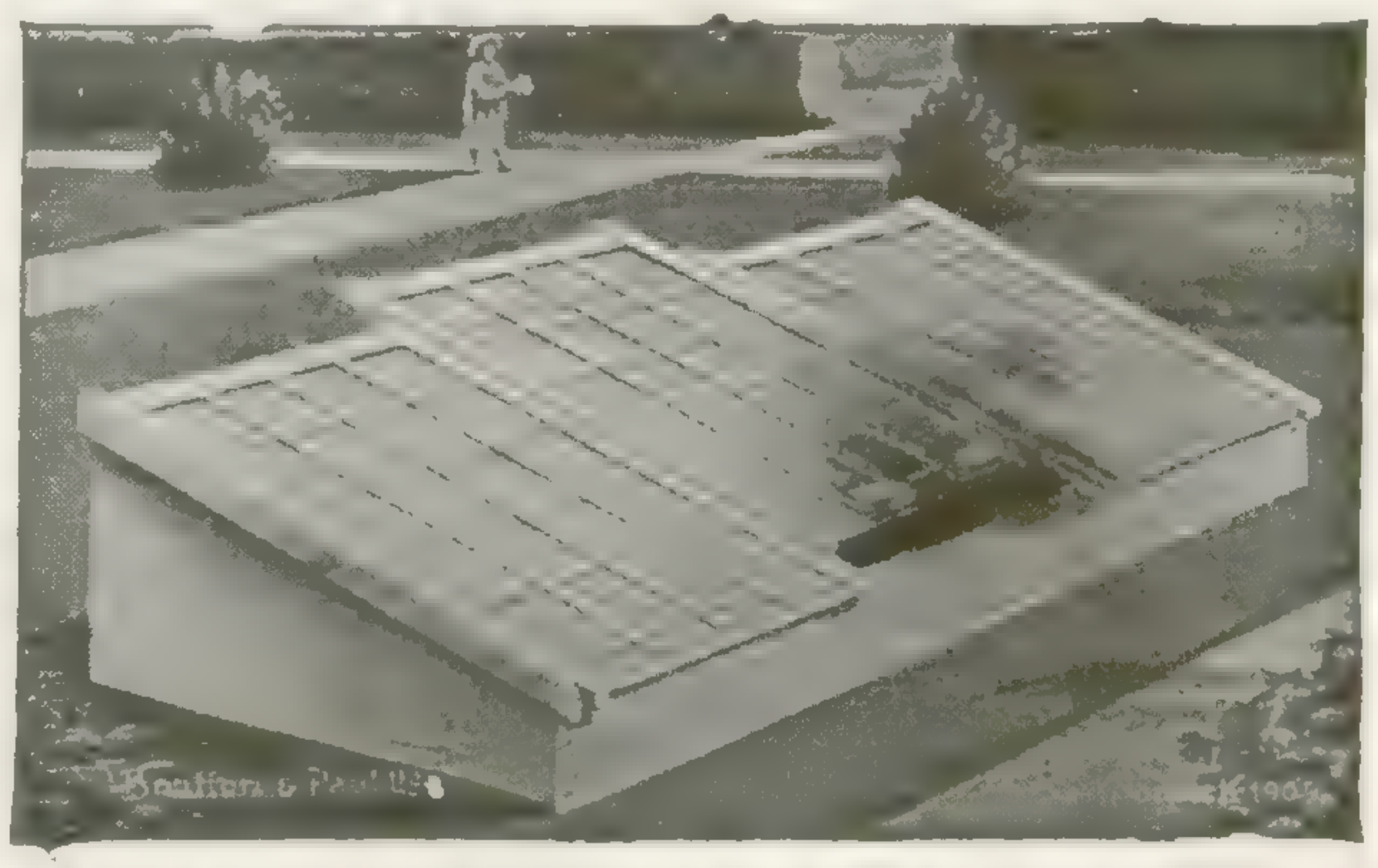
TUESDAY, March 28.—Royal Horticultural Society; Daffodil Committee meets at 11.30 a.m.; Fruit, Floral, and Orchid Committees, at 12 o'clock; lecture at 3 p.m. on "Alpines in their Native Homes," by Mr. R. C. Reginald Nevill; Scientific Committee, at 4 o'clock.

WEDNESDAY, March 29.—Irish Gardeners' Association and Benevolent Society meets.

THURSDAY, March 30.—Torquay Spring Flower Show.

SECURE AN EARLY PRODUCTION OF **FRUIT AND FLOWERS**
by using our well-made
Garden Frames,
in every variety always in stock.

No. 75. MELON AND CUCUMBER FRAME.



4 ft. by 6 ft. ... £2 0 0 | 12 ft. by 6 ft. £3 19 0
8 ft. by 6 ft. ... 3 0 0 | 16 ft. by 6 ft. 4 18 0
Painted three coats, glazed 21 oz. glass.

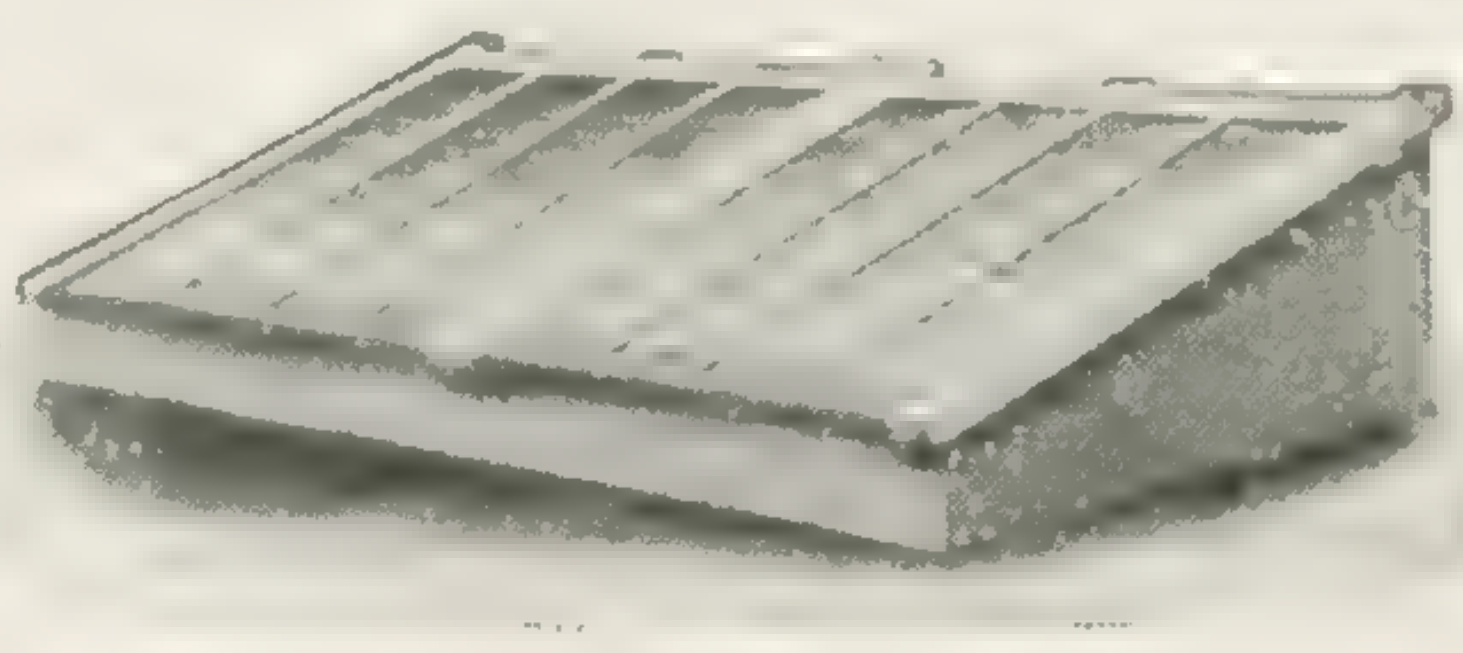
Pit Lights.
6 ft. 1½ in. by 4 ft. Painted and Glazed 14/- each
Unpainted and Unglazed ... ... 5/- "

Double Glazed Lights.
4 ft. 7in. by 4 ft. 3 in. Painted and Glazed, 15/6 each

Improved Fruit Trays.
20 in. by 19 in., 18/- doz.; 24 in. by 15 in., 15/- doz
Carriage Paid on one dozen Trays and over.

Reed Mats. 4 ft. 6 in. square, 20/- doz.

OUR SPECIALITIES.
D FOR PRICE LISTS.



No. 77. VIOLET FRAME,
(as illustrated).
6 ft. by 4 ft. £1 15 0
9 ft. by 4 ft. 2 7 6

No. 60.
PORTABLE PLANT PRESERVER
6 ft. by 3 ft. £1 14 0
6 ft. by 4 ft. £2 5 0
All Frames and lights Painted three coats. Glazed with 21 oz. glass.

Carriage Paid on all Orders of 40/- value to most Goods Stations in England and Wales.
BOULTON & PAUL, LTD., NORWICH.

CONTENTS.

PAGE
A Fine White Lælia anceps 203
Answers to Correspondents 216
Concerning Fruit Trees 204
Daphnes 205
Exhibitions and Meetings 201
Gardens of Annuals 205
Leeks 211
Melons and Manure 210
Notes from Here and There 208
Notes of the Week 199
Pear Beurre Baltet Pere 207
Some Interesting Conifers.—II. 209
Standard Indian Azaleas 206
The best Pink Perpetual Carnations 206
The Cool or Late Peach House 203
The Future of the Scottish Horticultural Association 210
The Variation of Nephrolepis exaltata 209
Work for the Week 212

ILLUSTRATIONS.

Portrait of Mr. Thomas Coomber, V.M.H., 199; Early-flowering Tulip Yellow Murillo, 202; Saxifraga Petrachi, 201; A finely flowered specimen of Lælia anceps Schroderiana, 203; A Standard Specimen of Azalea Professor Wolters, 206; Pear Beurre Baltet Pere, 207; The Variation of Nephrolepis exaltata, 209; Some splendid examples of Prizetaker Leeks, 211.

MANY YEARS REPUTATION.
EUREKA WEED KILLER
LASTING RESULTS—NO NEW EXPERIMENT.
1/9 TIN FOR 25 GALLONS
6/- TIN FOR 100 GALLONS
LARGER SIZES AT LOWER RATES
SOLD BY AGENTS.
MANUFACTURERS: TOMLINSON & HAYWARD LTD. LINCOLN.
IF ANY DIFFICULTY SENT DIRECT—PAID

PUBLISHERS' ANNOUNCEMENTS.

THE GARDENERS' MAGAZINE may be obtained by order from all Newsagents, price Twopence, every Saturday. If any difficulty be found, a copy will be posted weekly direct from the Publisher, 148 and 149, Aldersgate Street, London, on the following terms: Twelve Months, 10s. 6d.; Six Months 5s. 6d.

INDEX and Title Page to Vol. LIII. (comprising the weekly numbers from January to December, 1910), price 2d., by post 2½d.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; grapes, peaches, melons, stove and greenhouse plants; four and a-half and eleven years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head): general all-round knowledge; life experience in large and well-kept establishments; 13 years Head in last situation; age 39; married; gentleman will recommend. T. HARRIS, 2, Mill Lane, Cheshunt, Herts.

GARDENER (Head): good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushrooms, ridge or flat; Kitchen, Lawn, Flower Garden. Special Prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (Head, where three or more kept), strongly recommended; excellent references, 24 years' most thorough experience every department; 12 years Head; age 40 years; married; abstainer. HORTUS, 135, London Road, Brighton.

GARDENER (Head Working, where three or four are kept); thoroughly experienced in all branches, Inside and out; also land and stock if required; age 38; married, no family; disengaged. HARE, Lynton, Bisley, Woking.

GARDENER (Head Working, where two or more are kept); good all round; can be well recommended; married when suited; age 36. PEARCE, 10, Roxwell Road, Shepherd's Bush.

GARDENER (Head Working), requires SITUATION; experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants; Flower and Kitchen Garden, Hardy Fruit, etc.; good references, married, no family. W. S., 73, Allen Street, Maidstone, Kent.

GARDENER (Head Working), married, no family; age 36, life experience in all branches, Inside and Out; excellent references; Wife dairy, or house, if required. A., 27, Effingham Road, Reigate, Surrey.

GARDENER (Head Working).—Gentleman strongly recommends his foreman, who has been with him for 5½ years; thoroughly understands the cultivation of first-class fruits, flowers, and vegetables, and the general routine of a well-kept garden; married; age 32. STEVENS, The Lodge, Boston House, Brentford, W.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches, age 30; married when suited; excellent references. Address Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five, age 30, married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working); late with W. H. Herbert, Esq., Coventry, previously Mill House, Halifax; Vines, Peaches (speciality), Early and Late Forcing, Stove, Greenhouse Plants, Herbaceous, Rock Plants, Roses, Flower, Kitchen Garden, general upkeep Land, stock; 18 years Head, references unimpeachable. LOWE, Wylde Green, Birmingham.

GARDENER (Head Working); life experience in all branches; excellent references from present and past employer; age 27; married when suited. L. BARKER, The Gardens, Manor House, Alton, Hants.

GARDENER (Head Working). Mr. F. BERRILL, of Hall Close, Kettering, wishes to recommend FRANK DAINTY, who is a thoroughly capable Gardener, with life experience Inside and Out; 8 years in present situation; age 36; married, no children. DAINTY, Hall Close, Kettering.

GARDENER (Head Working, where two or more kept); married; age 33; life experience, Inside and Out; 4 years' present situation as Outside Foreman; well recommended by past and present employer. A. BACON, The Gardens, Rickmansworth Park, Herts.

GARDENER (Head Working, where three or more are kept). Mr. LAST, The Gardens, Homewood, Chislehurst, Kent, can with every confidence recommend his Foreman, W. WAITE, as above; 13 years' experience, gained in good establishments; five years present situation. Married when suited.

GARDENER (Head or Single-handed); age 30; married; life experience, Inside and Out; excellent character; well recommended. S. GANDY, Ponders Lodge, Margaretting, Essex.

HUGH LEWIS, Esq., wishes to highly recommend his GARDENER (Head); many years' experience in all branches; expert in Hardy and Alpine Plants and all forms of Gardening on natural lines; married, one child. Apply to W. INGWERSEN, Mayfield, Harewood Road, South Croydon.

LADY LUARD strongly recommends C. RUSHEN as Head Gardener, where two or three are kept; life experience; glass and all other branches; most hard working; leaves through break up of establishment. Write LADY LUARD, Witham, Essex.

MAJOR HOLROYD, Ropley Manor, Alresford, Hants, wishes to highly recommend his late HEAD GARDENER; 18 years' practical experience in all branches of gardening Inside and Out; Single; age 32; excellent references. SCREEN, Coombe Hill Gardens, Butlers Cross, Tring, Bucks.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (Single-handed or where two are kept); good all round experience; Inside and Out; highly recommended; age 24. T. JACKSON, Rush Court Gardens, Wallingford, Berks.

GARDENER (Single-handed or otherwise); Glass, Kitchen Garden, and Pleasure Grounds, etc.; willing to make himself useful; good references, single. MILLER, 208, Park Road, Crouch End, London, N.

GARDENER (Single-handed or with help); life experience, good grower and propagator, Inside and Out, age 38; married, good character. ANDREWS, 28, Rookstone Road, Tooting, S.W.

GARDENER (Single-handed or Second), good practical experience Inside and Out, highly recommended, age 26, married when suited. G. OLIVER, 17, Gravel Road, Bromley Common, Kent.

GARDENER (Single-handed); little or no glass; 10 years experience in present place; single; age 28. W. REEKS, 89, Amwell Street, Hoddesdon, Herts.

FOREMAN or good JOURNEYMAN (Inside); 11 years' experience Chrysanthemums, Carnations, Fruit, Plant Houses; 3 years present situation; age 27; well recommended. DEAN, The Gardens, Grantlands, Uffculme.

FOREMAN (Inside), age 26; married, one child; 12 years' experience; good references; well recommended; 4 years here. H. W. PEARSON, Sandling Park, Hythe, Kent. (No circulars.)

GARDENER (Second, or good Journeyman), Inside; 11 years' experience in all branches; age 25; abstainer. E. JONES, Oakdene Gardens, Holmwood, near Dorking, Surrey.

MR. PERKINS, Gardener to late Mr. Rydon, Prylands, Highbury New Park, can recommend J. ANTHONY as Second of three or four. London Colney, St. Albans, Herts.

JOURNEYMAN (First). F. WILES highly recommends H. BANE as above, or as Journeyman (Second) in very large establishment; age 26; 11 years' experience in Plant and Fruit Houses. Middleton Hall Gardens, King's Lynn.

JOURNEYMAN (First, Inside) in good establishment; age 24; eight years' experience; good references; can be well recommended. T. BLIGH, The Barton, Helland, Bodmin, Cornwall.

JOURNEYMAN (Inside); age 20.—H. FOX wishes to highly recommend A. DRURY as above; three years in present place. Address, A. DRURY, Kenton Grange, Harrow, Middlesex.

JOURNEYMAN (Inside).—YOUNG MAN, age, 20, seeks SITUATION as above; 5½ years' good experience Inside and Out; excellent references; Bothy preferred. J. UNDERWOOD, Manor Farm, Stapleton, near Hinckley.

THOMAS PICKERSGILL can recommend ARTHUR MARSHALL as JOURNEYMAN; Kitchen Garden or Pleasure Grounds; 7 years' experience; age 23. Apply The Gardens, Sishes, Stevenage, Herts.

MR. BEEVERS, Stoke Court Gardens, Slough, wishes to recommend F. PANTON as JOURNEYMAN (Inside); 7 years with him; age 22; South preferred.

W. RING, Hamels Park Gardens, Buntingford, Herts, would be pleased to recommend a thorough good JOURNEYMAN (Second) in a good place; has been with me 5 years Inside; age 23.

W. THEOBALD, Hatchford Park Gardens, Cobham, wishes to recommend W. WEST as JOURNEYMAN (First); Inside; 2½ years here; good experience and references. Apply WEST, West Street, Ewell, Surrey.

H. VOSS, The Gardens, Swanspool, Wellingboro', can with confidence recommend W. BUCKLEY as JOURNEYMAN (Inside and Out); age 22; 3 years present situation; Bothy preferred.

GARDENER, married, seeks SITUATION; handy man, Indoors or Out; Wife help in house if required. BRISSENDEN, Elsing Hall, E. Dereham.

GARDENER, all-round man; married; middle age; no incumbrances; handy man; good personal character; 7½ years. WRIGHT, 29, North Road, Highgate.

GARDENER (Under, where three or four are kept); age 21; six years' experience, Inside and Out; three years' good character. R. DOLLIN, Cat Hill, East Barnet, Herts.

UNDER GARDENER, Young Man, seeks SITUATION as above; age 19-20; good refs.; 3 years 9 months last place. C. T. COLESHILL, 37, Wolsey Road, Hampton Hill, Middlesex.

IMPROVER (Inside or Inside and Out).—Young Man seeks employment in garden; age 19; 5 years' good reference. L. TYLER, Great Dalby, Melton Mowbray.

SITUATION COUPON

To the Advertisement Manager or "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For MARCH 25, 1911.

Please Repeat my Advertisement.

Name..

Address...

....

Date ....

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

Situations Wanted—*continued.*

IMPROVER.—J. LAWRENCE, The Gardens, Pimley Manor, Shrewsbury, can highly recommend E. JERVIS as above; age 18; four years' experience, inside and kitchen garden; Bothy preferred.

IMPROVER (Inside or Inside and Out); age 19; 4½ years present situation; well recommended; Bothy preferred. F. UZZELL, The Gardens, Manor House, West Wickham, Kent.

IMPROVER (Inside or Inside and Out); 3½ years in present place; can be well recommended; Bothy preferred. G. GIBBINS, Warfield Street, Bracknell, Berks.

MR. GALE, Adbury House Gardens, Newbury, Berks, wishes to recommend a strong Youth as IMPROVER; age 18; well up in his work; 3½ years here Inside and Out.

M. A. ORD MACKENZIE, Esq., highly recommends R. FAULKNER as IMPROVER in good establishment; four years present place; age 18. Apply, The Cottage, Walton Heath, Epsom.

YOUNG MAN (20) seeks SITUATION as JOURNEYMAN (Inside); 7 years' experience; well recommended. P. COOPER, Brentwood Villa, Langford, near Biggleswade, Beds.

YOUTH (19) seeks SITUATION as IMPROVER; been with me four years; Bothy preferred. Apply HEAD GARDENER, Witton Park, North Walsham, Norfolk.

MR. TUCKER, The Gables Gardens, Shortland, Kent, with confidence recommends A. THURSTON, age 26; 10 years' good all-round experience, both Inside and Out; to any lady or gentleman requiring good gardener; single handed or with help; 2 years here as Second; first-class references; married when suited.

ADVERTISER, married (age 30), seeks SITUATION in Private Service; 15 years' nursery experience, chiefly inside; or could take Single-handed place, Inside and Out; South preferred; good references. SHEPHARD, 8, Ivy Street, Savile Park, Halifax, Yorks.

ORCHID GROWER requires SITUATION to take charge of collection or small place where Orchids speciality; experience Burford Lodge, etc.; excellent references. Apply S. BURROUGH, Royal Gardens, Sandringham.

KITCHEN GARDENER or Kitchen and Pleasure Ground; 9 years' good experience and references; age 27. G. TURNER, Hanstead House Gardens, Bricket Wood, near St. Albans, Herts.

GENTLEMAN recommends YOUNG MAN, age 22, as Second of four or five; Inside and Out; 7 years' experience; good reference. Apply T. ROGERS, Michelmersh, Romsey, Hants.

YOUNG MAN, age 23; would take charge of glass with one or two under; life experience in all branches; good references. C. C. NEWBURY, Llanwern, Newport, Mon.

YOUNG MAN (20) seeks SITUATION; Inside and Out; 3 years' experience; strong, willing, well recommended. Bothy preferred; near St. Leonards or Eastbourne preferred. GOULD, Stuckton, Fordingbridge, Hants.

YOUNG MAN, 23, requires SITUATION Inside; 7 years' experience; can be highly recommended. R. HAYES, Elmdon, Saffron Walden, Essex.

YOUNG MAN, age 21, seeks SITUATION GARDENER (Under, Inside and Out); seven years' experience in good establishments; good references. L. HAWKER, Ruabon Lodge, Upper Colwall, Malvern.

YOUNG MAN, age 19; four years' experience in Carnations, Chrysanthemums, Cucumbers, Tomatoes, etc.; one year with C. F. Waters, Balcombe. Apply, STOCKWELL, Church Path, Emsworth, Hants.

LAD, 17 in June, seeks SITUATION in Garden or Nursery; good reference; first-class R.H.S. Certificate, 1910; two years' experience. A. H. THOMAS, High Ongar, Essex.

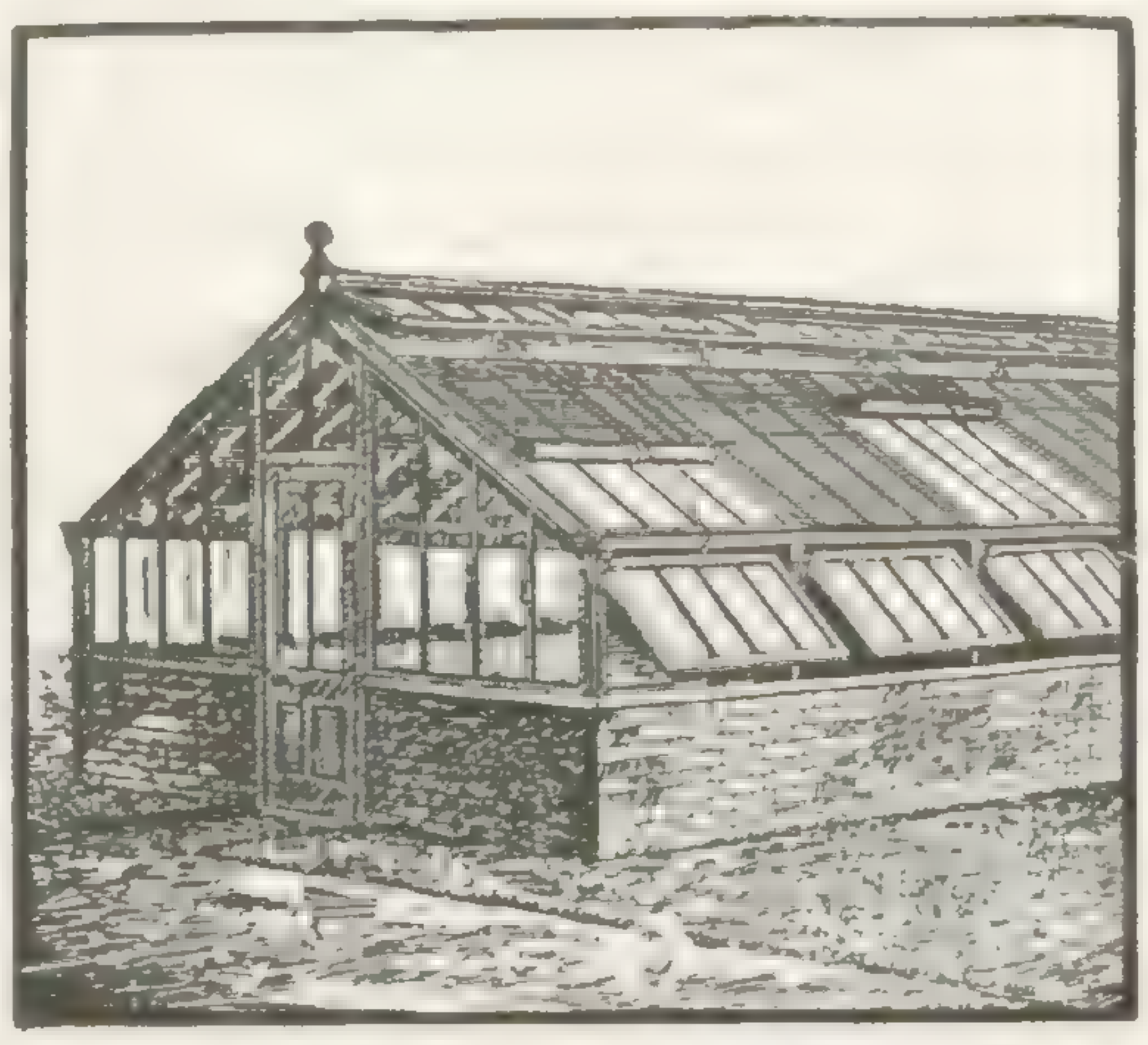
NETTING. THE VERY BEST. I DO NOT REQUIRE PAYMENT UNTIL YOU HAVE SEEN AND APPROVED OF THE NETTING. OTHERS may try to copy me, but this netting is good, strong, extra stout, small mesh, rot-proof netting, similar to what I supply to the ROYAL GARDENS, 100yds. by 1yd., 4s.; by 2yds., 8s.; by 3yds., 12s.; any length or width supplied. Orders over 5s. car. paid. List and samples free. Commoner and tender netting, as sold by others, [illegible] sq. yds. for 1s. H. J. GASSON, The Net Works, Rye.

WHY BUY FOREIGN DOORS? — We make all kinds of woodwork to compete against foreign. Timber, portable houses, woodwork supplied for United Kingdom or export. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

PLEASE MENTION
THE GARDENERS' MAGAZINE
when writing to Advertisers.

PARISIAN (WOOD LATH) **BLINDS**

MOST DURABLE OUTSIDE SHADING.



NEATEST IN APPEARANCE.

SUPPLIED ONLY BY

W. RICHARDSON & CO.,
HORTICULTURAL WORKS,
DARLINGTON.

GARDEN (FROM STOCK) **FRAMES**

WALWYN T. CHAPMAN,
Terra Cotta Works, CLEETHORPES.

For Vases, Sundials, Window Boxes, Lions, Balusters, Arches, Garden Ornaments, &c.

PERGOLAS.
Larch Poles at 1d. per foot. Lists Free.
PATRICK'S, Otley, Yorks.

OAK CRAMBLES.
Peeled and dry at ½d. per foot.
PATRICK'S, Otley, Yorks.

ROSE ARCHES.
Larch Poles at 1d. per foot.
PATRICK'S, Otley, Yorks.

TREE STAKES AND GARDEN RODS.
Lists free.
PATRICK'S, Otley, Yorks.

SPLENDID Pea Bough and Flower Sticks, cheap, in large or small quantities; well adapted for Sweet Pea growers; price and particulars on application. GEORGE DREWITT, Estate Offices, Guildford, Surrey.

PEA TRAINERS, The "Paragon" and "Peafold" (patent), made 4ft., 5ft., and 6ft. high, and any length. Prices from 8s. 6d. per set, carriage paid. Write for leaflet. THE PEA TRAINER CO., Bridge Street, Banbridge.

Dr. J. COLLIS BROWNE'S

THE ORIGINAL AND
ONLY GENUINE

Chlorodyne

ADMITTED BY THE PROFESSION TO BE THE MOST VALUABLE REMEDY EVER DISCOVERED.

The Best Remedy known for

COUGHS, COLDS,
ASTHMA, BRONCHITIS.

Cuts short all attacks of SPASMS, HYSTERIA, and PALPITATION.

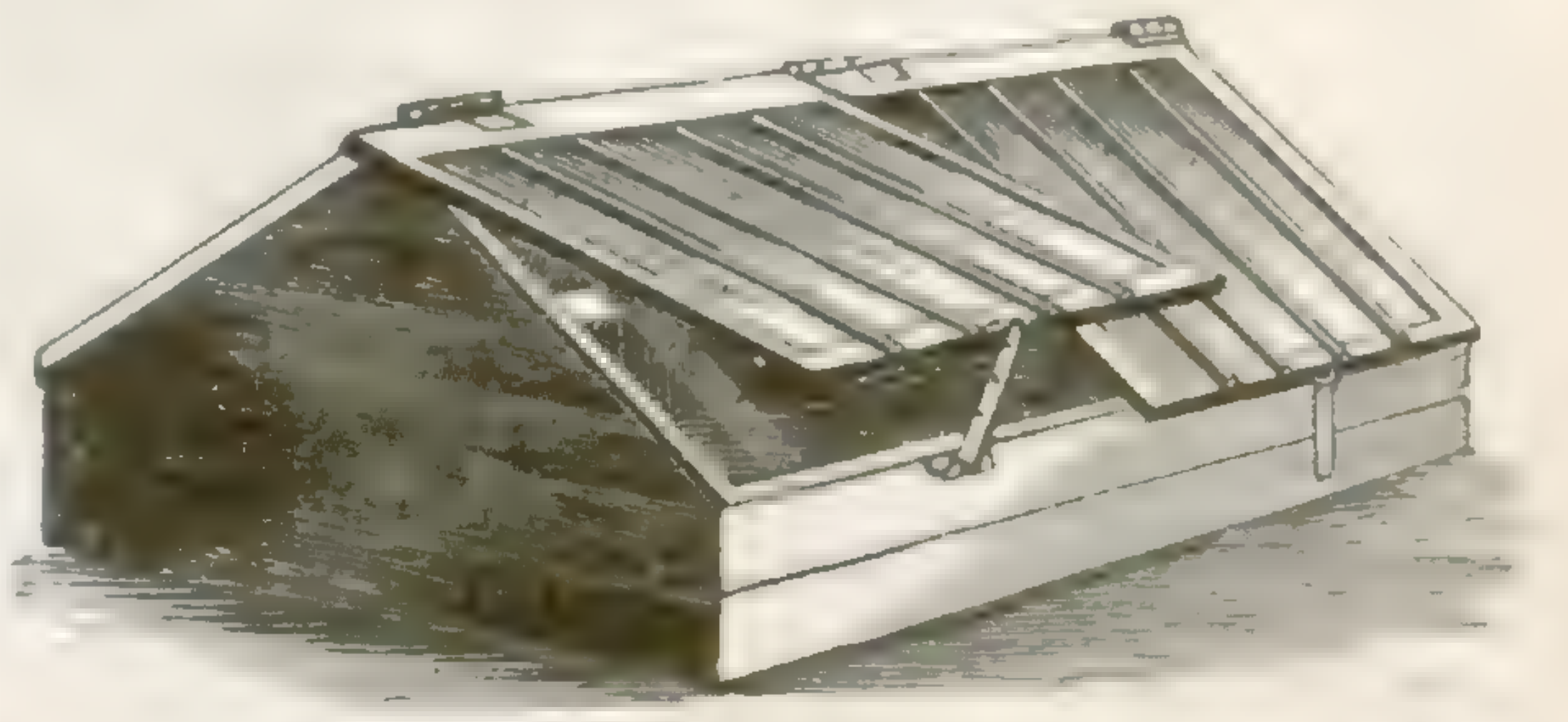
The only Palliative in NEURALGIA, TOOTHACHE, GOUT, RHEUMATISM.

Acts like a Charm in DIARRHŒA and DYSENTERY.

Refuse imitations and insist on having
Dr. J. COLLIS BROWNE'S Chlorodyne.
Convincing Medical Testimony with each bottle.
Of all Chemists, 1/1½, 2/9, 4/6.

PORTABLE PLANT FRAMES

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices.	Glazed and Painted.	£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. „ 4ft. „		2	5	0
6ft. „ 5ft. „		2	15	0
12ft. „ 4ft. „		4	0	0
12ft. „ 5ft. „		4	15	0
12ft. „ 6ft. „		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
ROYAL HORTICULTURAL WORKS,
MIDDLETON, MANCHESTER.

SUBSCRIBER'S ORDER FORM

Every Saturday THE GARDENERS' MAGAZINE. Twopence

To W. H. and L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose ________ for ________ months in advance.

Name ________________________________

Address ________________________________

Date ________________________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

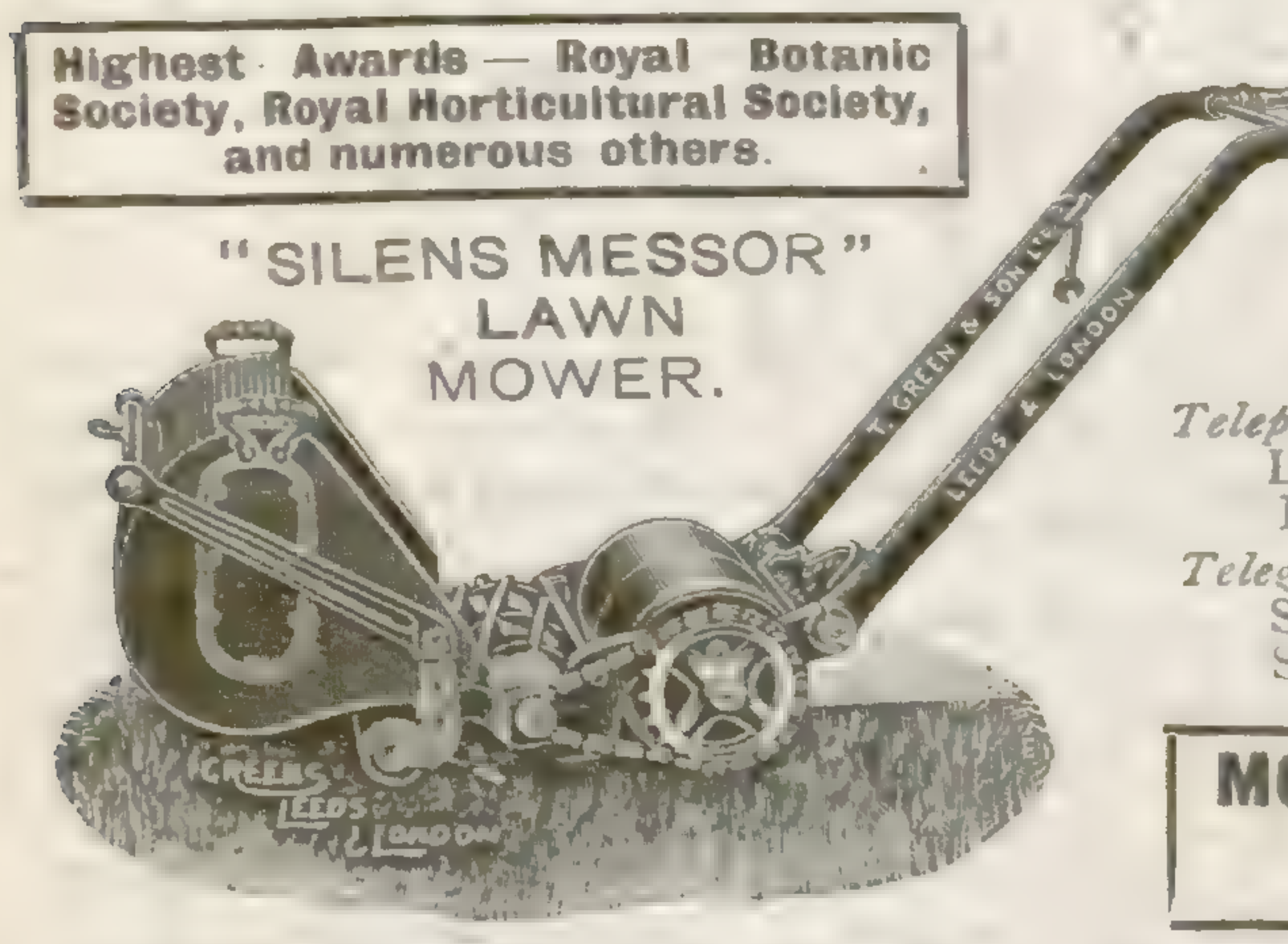
⁂ If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.

APPOINTED BY ROYAL WARRANT, HORTICULTURAL MACHINE MAKERS TO HIS MAJESTY KING GEORGE V.

GREEN'S LAWN MOWERS

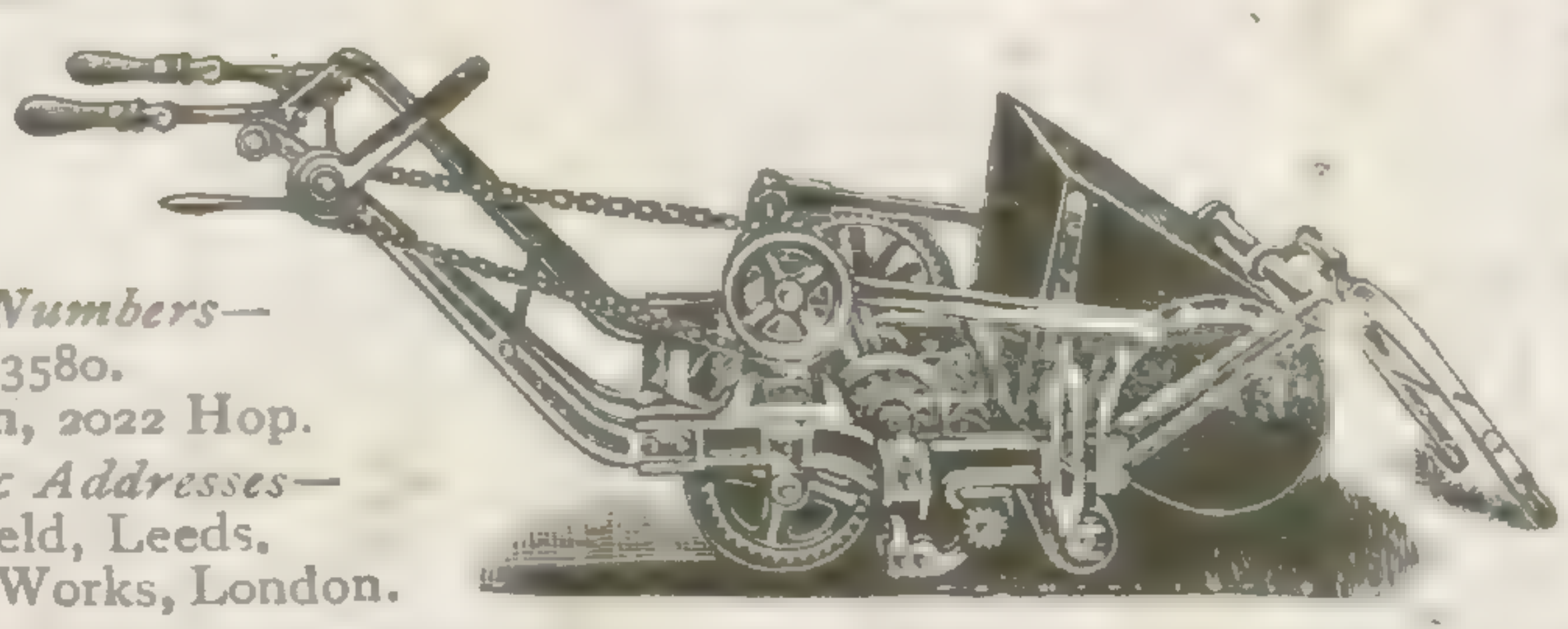
THE FIRST, FOREMOST, and BEST in the WORLD. Hundreds of Thousands are in use. Established nearly a Century.

Highest Awards — Royal Botanic Society, Royal Horticultural Society, and numerous others.



"SILENS MESSOR" LAWN MOWER.

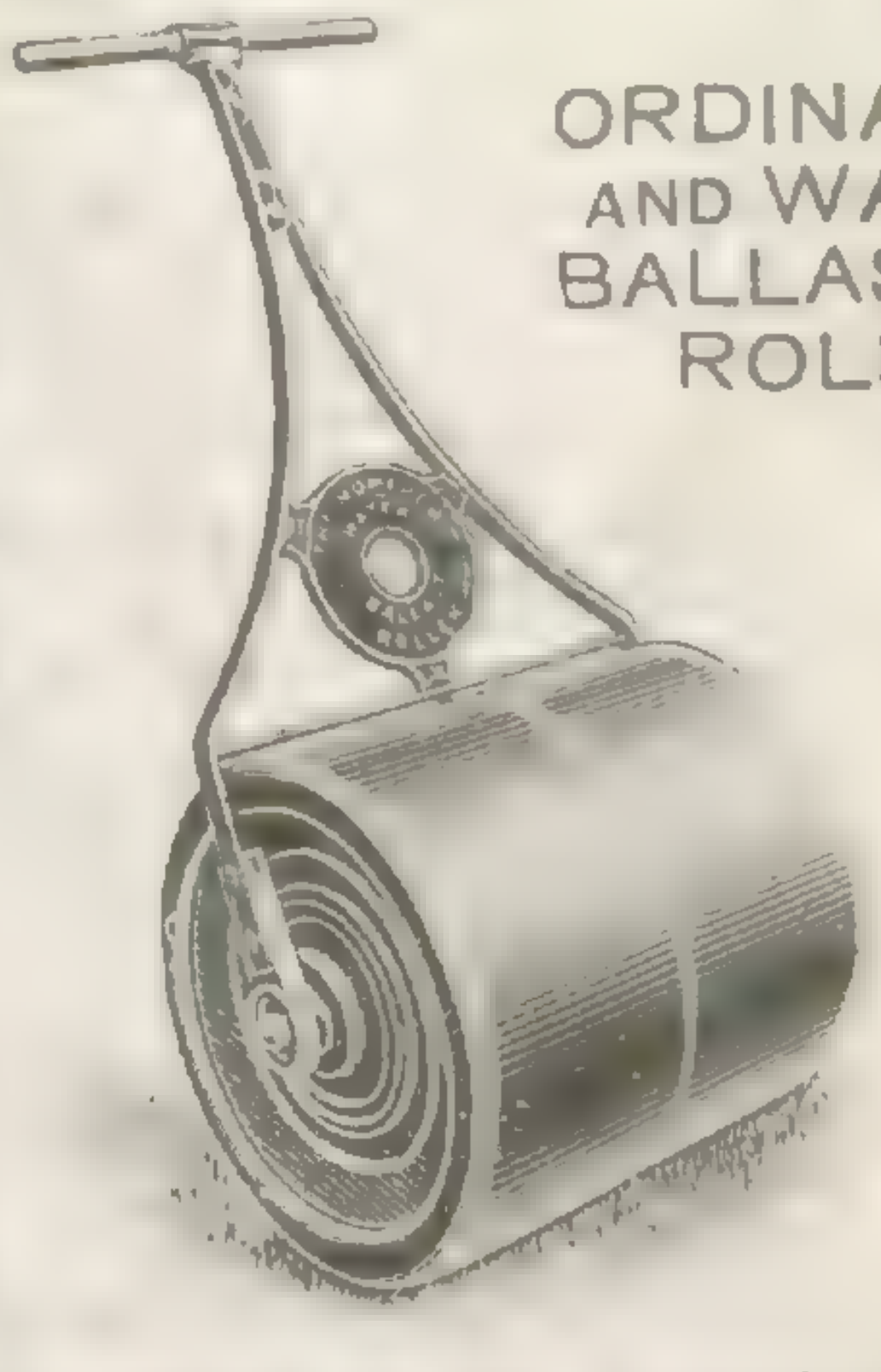
PONY, AND HORSE MOWER
Either "Silens Messor" Pattern or Wheel-Geared.



Telephone Numbers—
Leeds, 3580.
London, 2022 Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London.

They may be had of any Ironmonger or Seedsman in the United Kingdom.

Please write for ILLUSTRATED PRICE LIST No. 1 FREE.



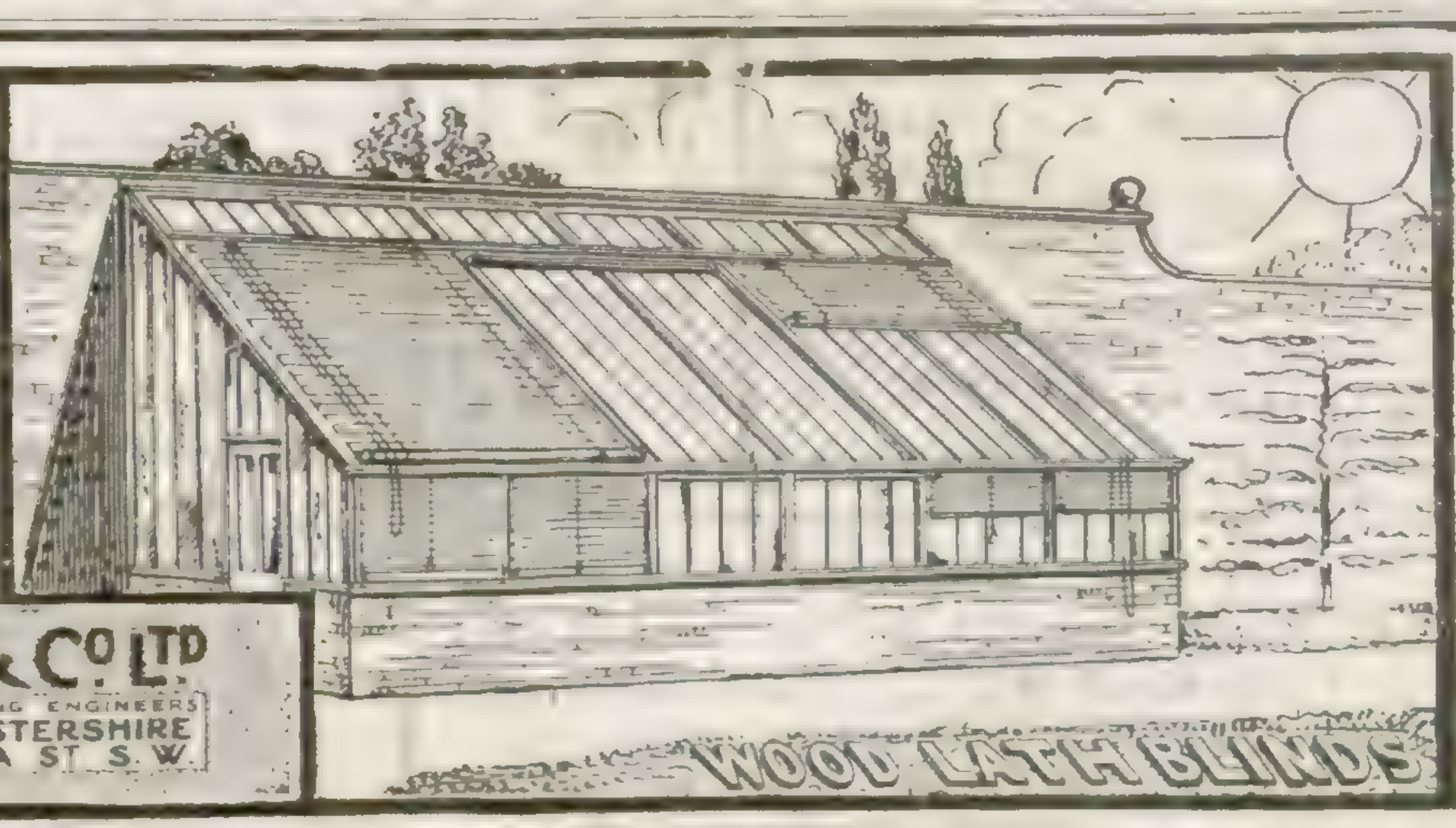
ORDINARY AND WATER BALLAST ROLLERS

MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E.

WOOD LATH BLINDS ADMIT SUFFICIENT SUNLIGHT SO NECESSARY FOR Growing Purposes.

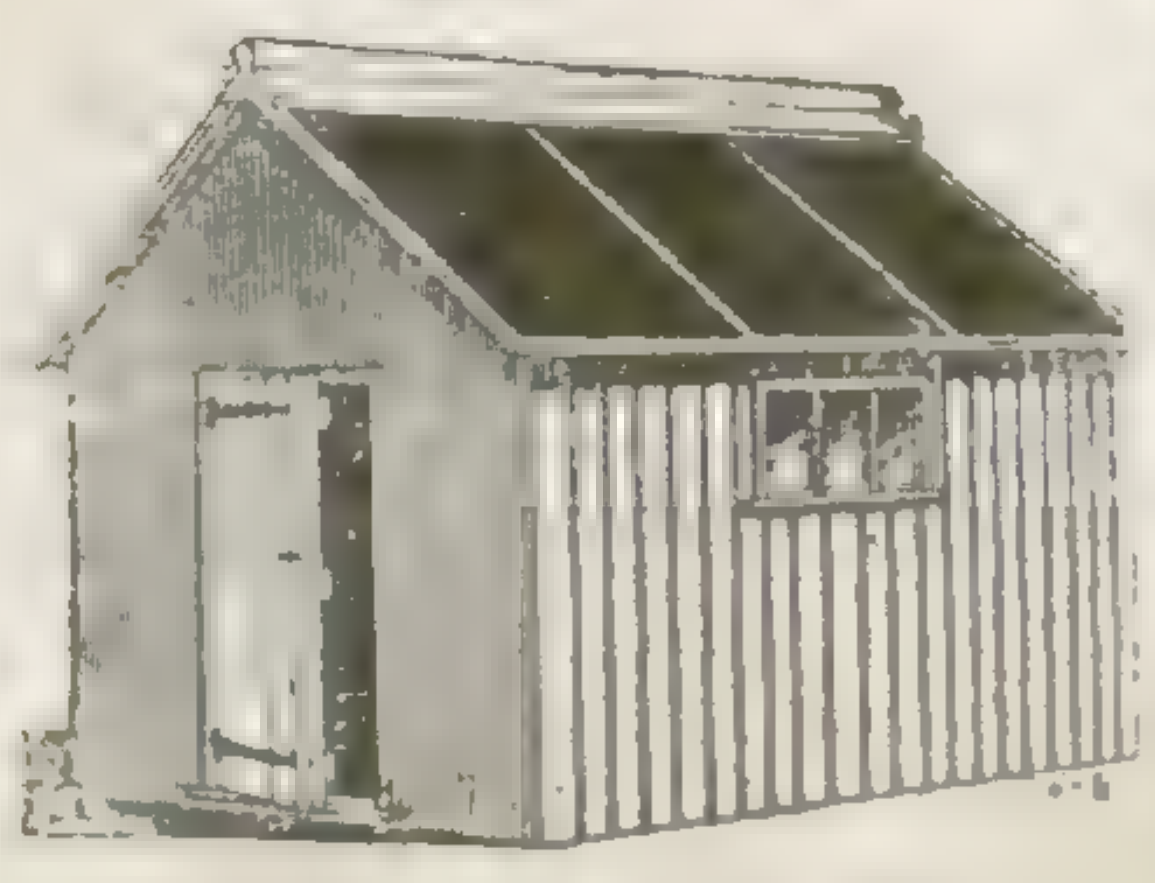
Write for Special Catalogue.



MESSENGER & CO. LTD
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office: 122 VICTORIA ST. S.W.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

Portable Building. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

Sizes.		Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft 6in. high	£3 17 6	19/6

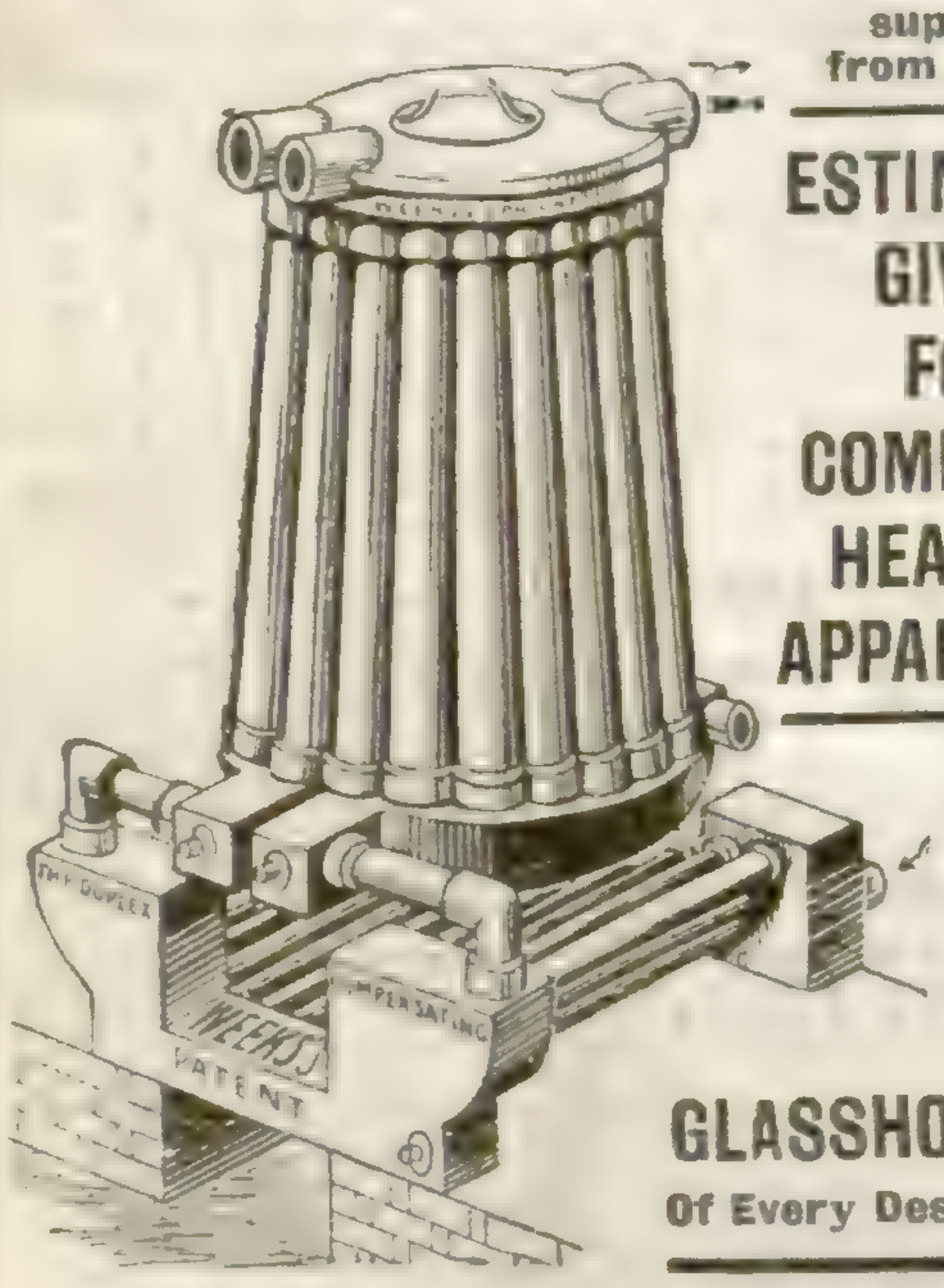
Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
Established 70 Years. **BEDFORD.**
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

WEEKS'S BOILERS

supplied from stock.

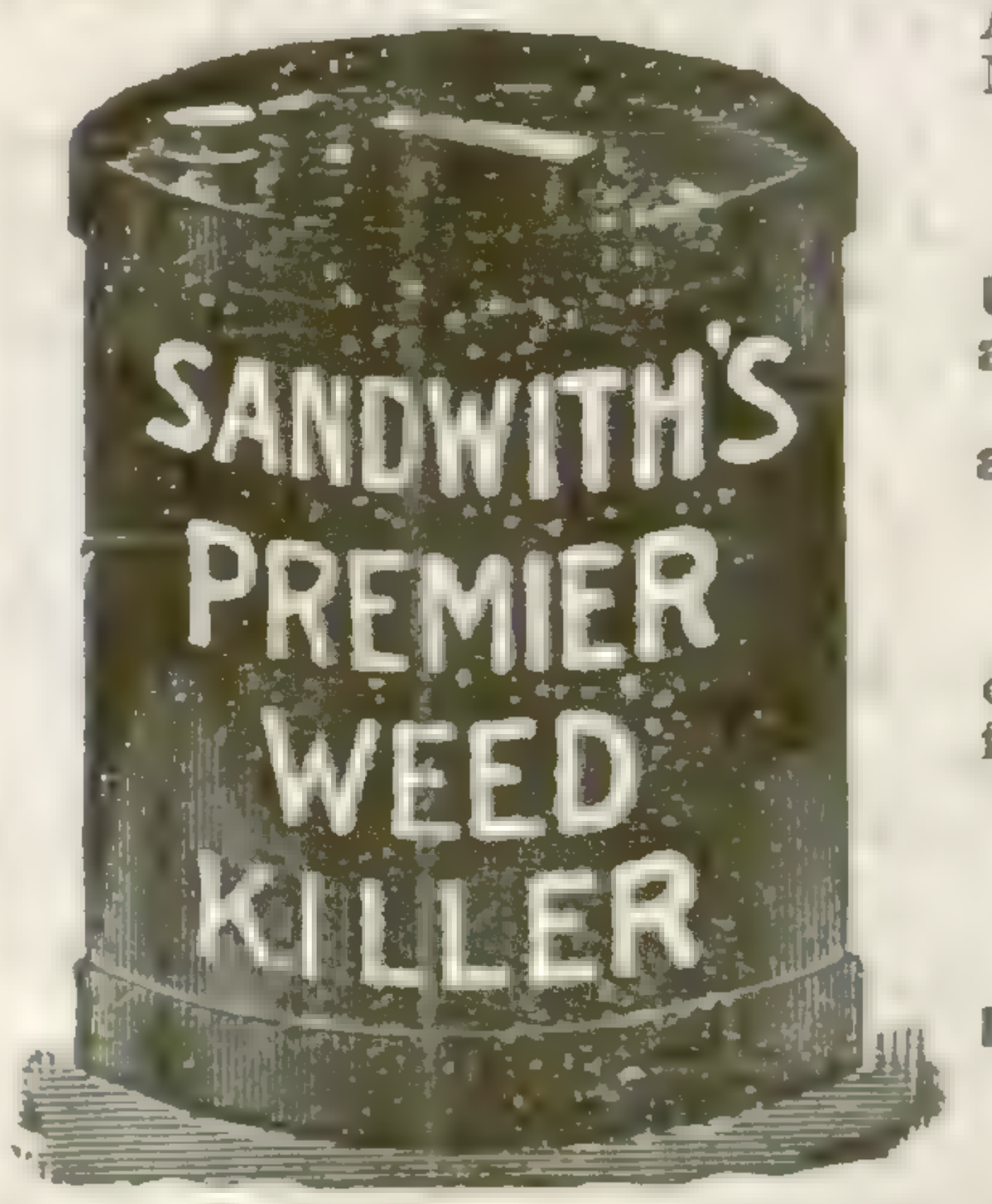


ESTIMATES GIVEN FOR COMPLETE HEATING APPARATUS

GLASSHOUSES.
Of Every Description.

J. WEEKS & CO.,
72, Victoria Street,
WESTMINSTER, S.W.

THE FAVOURITE WEED KILLER.



As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for **6/-**; drum, **2/-**. 12 galls. for **16/-**; drum, **6/-**. 20 galls. for **26/8**; drum, **10/-**. 40 galls. for **50/-**; drum, **20/-**.

EITHER LIQUID OR POWDER.

Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,
The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

Extracts from 35th annual collection of reports:—

NATIVE GUANO for POTATOES, VEGETABLES, etc.

A. J. Beard, Erdington: "Potatoes, splendid, free from disease. Best I ever had."—H. Chester, Nantwich: "Best onion manure I ever used. Grand for onion fly."

NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc.

J. Cant, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. Frampton, Titchfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED,** 29, New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted

---

ONCE USED. ALWAYS USED. **The 'PATTISSON' LAWN BOOTS**

Simplest! Strongest! Most Economical!

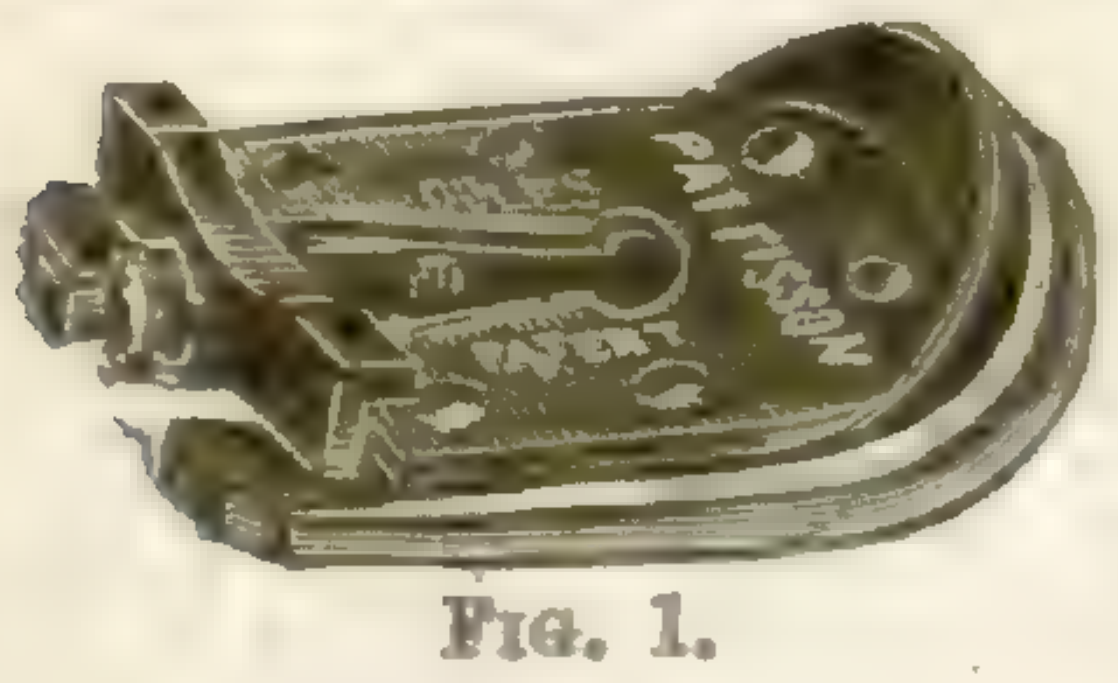


Fig. 1.

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS.

Silver Medal—
Royal Horticultural Society.
Hundreds of Testimonials.
The Field says: **"As good as anything that could be devised."**
Illustrated Price List from—

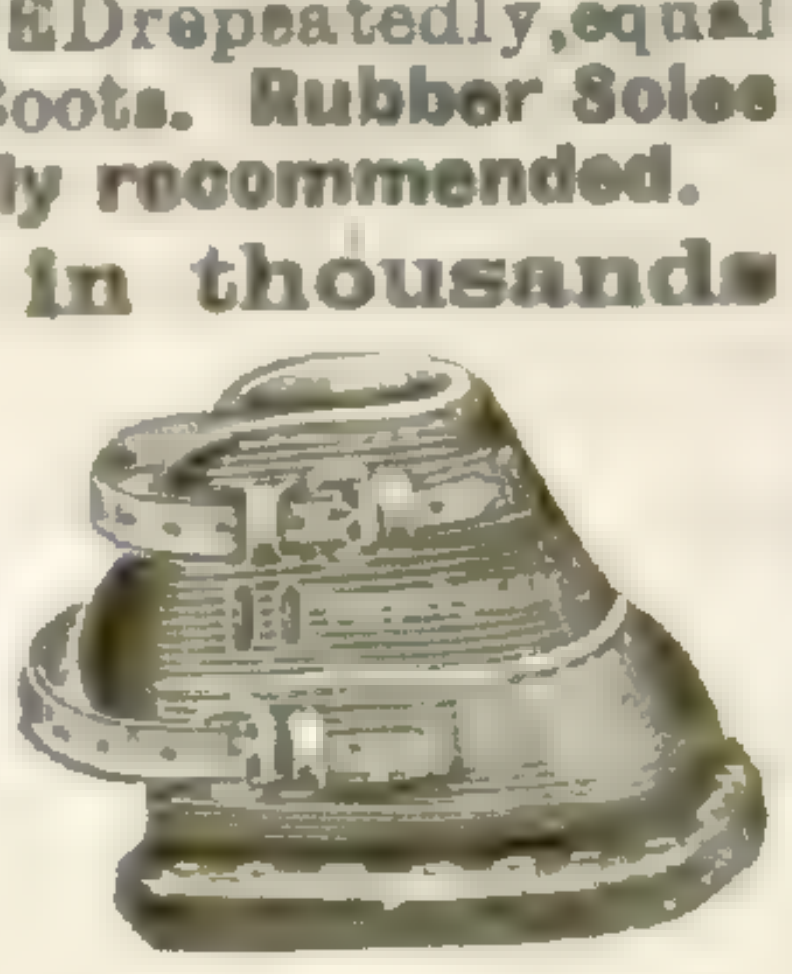
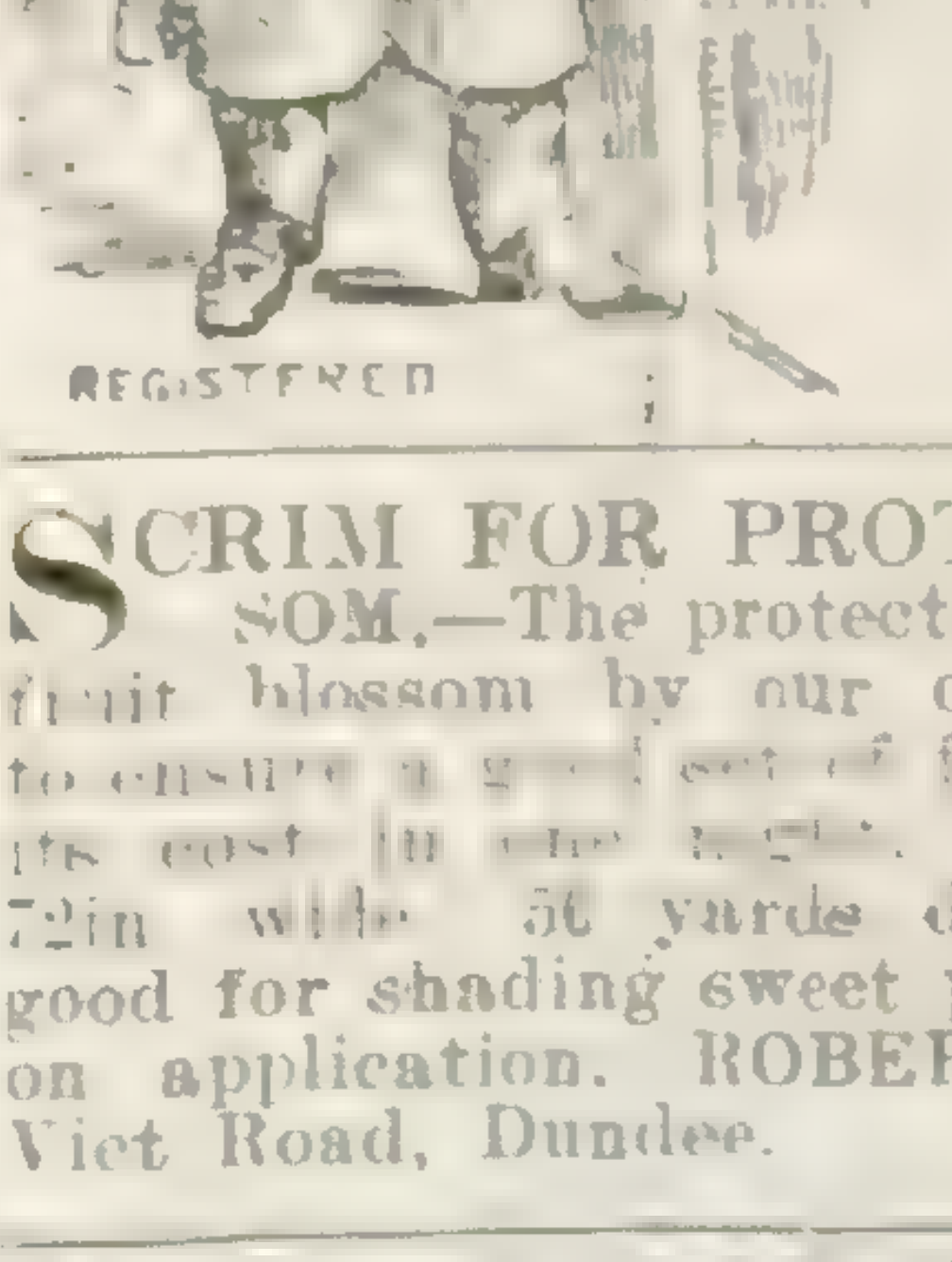


Fig. 2.

H. PATTISSON & CO., 4. GREYHOUND LANE, STREATHAM, S.W.



THE
APRON
That has Come to Stay.

WORN BY ALL THE LEADING GARDENERS.

LOOK AT THE PRICE.

In Dark Blue Ponicus Twills, **1/9,** Postage **3d.** extra.

Or in Dark Blue Ponicus Serge, **3/9,** Postage **3d.** extra.

Write for One To-Day.

SHAW & MONTGOMERY
(PENMAN'S),
628, Argyle St., Glasgow, W.

Phytobroma

Barr's New Plant Food
For Flowers, Vegetables and Fruit
of highest quality & guaranteed analysis

Per cwt., **20/-**; ½ cwt., **12/6**; 28lb., **7/6**; 14lb., **4/6**; 7lb., **2/6**; Sample Tins, **1/-**.

Prepaid orders for 28lbs, and upwards, Carriage Paid. Circular, with full particulars, on application.

BARR and SONS,
11, 12, and 13, KING STREET, COVENT GARDEN, LONDON

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to

EPPS & CO., Ringwood, HANTS.

SAND (the very best washed) for Bowling Greens, Lawns, Roses, and all gardening purposes. Send 6d. for sample, and lowest quotations, post free. PALMER, White House, Littleboro.

SCRIM FOR PROTECTING FRUIT BLOSSOM.—The protection from frosts, etc., afforded fruit blossom by our open-meshed scrim, goes far to ensure a good set of fruit. May repay many times its cost in one night. 2½d. per sq. yd., 36in. and 72in wide. 50 yards delivered. This scrim is also good for shading sweet peas, etc. Descriptive leaflets on application. ROBERTSON, IRELAND and CO., Vict Road, Dundee.

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 2,995. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, MARCH 25, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) Twopence

BARR'S VEGETABLE & FLOWER SEEDS of finest selected strains and tested growth. Descriptive Catalogue, with cultural notes, free.

BARR'S BEAUTIFUL LILIES, CANNAS, GLADIOLI, MONTBRETIAS, TIGRIDIAS, ETC., for Spring planting. Catalogue free.

BARR'S Hardy PERENNIALS, ALPINES, AQUATICS, CLIMBERS, ETC., for Spring planting. Descriptive Catalogue, with cultural notes, free.

BARR and SONS, 11, 12, and 13, KING STREET, COVENT GARDEN, LONDON.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, S.W., has a large body of Painters and Glaziers now working at Busbridge Hall, Godalming. They go from thence to The Cedars, Harrow Weald, but can be secured for other Painting Contracts about April 20th, by letter, telephone "201 Western," or wire "Gray, Chelsea, London."

KING'S ACRE FRUIT TREES, ROSES,
AND ORCHARD-HOUSE TREES.

AWARDED 24 GOLD MEDALS SEASONS 1909-10.

160 acres to select from of the finest Trees that natural conditions and the skill of man can produce.

ILLUSTRATED CATALOGUES FREE ON APPLICATION.

KING'S ACRE NURSERIES, LTD.,
HEREFORD.

AMERICAN TREE CARNATIONS, best varieties, including Britannia, White Perfection, etc., strong young plants from 2in. pots, 3s. doz., 20s. 100, flowering plants, 5in. pots, 8s. per doz. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.
H. BURNETT,
Carnation Specialist, Guernsey.

SEED POTATOES, Scotch, Irish, Midlands, Northerns; largest and best stock in West of England, both earlies and lates. Apply to OLIVER BROS., Importers, Exeter, and Barnstaple.

ASTER "CLIMAX," A.M., R.H.S.
Plants, 4s. per dozen.

A. E. LARKIN,
Gravelly Lane, Erdington, Warwickshire.

BARNARDS LIMITED, Norwich.—Best House for Fencing, Espaliers, Pergolas, Fruit Enclosures, Iron and Wire Bordering; all descriptions of Training Fittings, Arches, Wire Netting, Stakes, Wire Lattice, Rollers, and all garden requisites. Now is the time to effect improvements in your garden. Catalogues free; inquiries invited.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page xi.

FRENCH GARDENING REQUISITES.—Send for our new List, giving full particulars of the Double Glazed System, and numbers of new Labour-saving Appliances. Frames, Cloches, Reed Mats, and every requisite supplied. BOULTON and PAUL, Lim., Norwich.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint, 8s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

WEBBS' GOLD MEDAL PRIMULAS.—
WEBBS' New Avalanche, white, with a greenish-yellow eye.
WEBBS' New Snow Queen, giant white.
WEBBS' New Ruby Queen, rich ruby.
WEBBS' New Meteor, salmon rose.
WEBBS' Scarlet Emperor, scarlet.
WEBBS' Blue Belle, light blue.
WEBBS' Rosy Morn, carmine rose.
WEBBS' Eclipse, purplish crimson.
WEBBS' Firefly, rich crimson.
WEBBS' Modesty, delicate pink.
WEBBS' Exquisite, fine mixed strain.
WEBBS' New Hybrid Stellata, crimson.
WEBBS' Stellata, white, blue, salmon, red, scarlet, and mixed.
WEBBS' Obconica grandiflora, mixed.
Each 1/6 and 2/6 per packet, post free.

WEBB AND SONS, The King's Seedsmen,
WORDSLEY, STOURBRIDGE.

BUNYARD'S NEW CATALOGUES.
The following have been recently published, and contain all worthy new varieties. Post free on application.

BUNYARD'S
CLIMBING PLANTS, Illustrated.

BUNYARD'S
HERBACEOUS PLANTS, Illustrated.

BUNYARD'S
HARDY TREES AND SHRUBS, Illustrated.

BUNYARD'S ASPARAGUS LIST.
Plants now ready for delivery.

BUNYARD'S SEEDS, VEGETABLE AND FLOWER, with coloured plates.

GEO. BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.

LAXTON'S FRUIT TREE, STRAWBERRY, and SEED CATALOGUES, with full illustrations and descriptions. Gratis on application. LAXTON BROTHERS, Bedford.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

PERENNIALS, UNIQUE COLLECTION,
including
ALPINES AND AQUATICS.
Also RARER SHRUBS, HIMALAYAN RHODODENDRONS, and Others.
Write for Catalogue. G. REUTHE, Keston, Kent.

25 EARLY GARDEN CHRYSANTHEMUMS, double or single, truly named, 2s. 6d. List. Exchange for Pyrethrums or Herbaceous Plants. —RICHMOND NURSERY, Ossett, Yorks.

PEA TRAINERS, The "Paragon" and "Peafold" (patent), made 4ft., 5ft., and 6ft. high, and any length. Prices from 8s. 6d. per set, carriage paid. Write for leaflet. THE PEA TRAINER CO., Bridge Street, Banbridge.

"WEEKS'S GLASSHOUSES and HEATING APPARATUS, for full advertisement see back page."

IRON and WIRE FENCING for GARDENS, Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free. BOULTON and PAUL, Ltd., Manufacturers, Norwich.

CLAY'S MANURES, CRUSHED BONES
(See page ix.)

CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

SUTTON'S SUPERB BEDDING ASTERS.
A splendid selection of dwarf varieties, specially adapted for producing masses of colour in beds.
Scarlet, delicate Rose, bright Rose, Blue, Lilac (Mauve), and White, each per packet, 1s.
Collection of the six colours, separate, 5s.

SUTTON'S SUPERB BEDDING STOCKS.
Selected [illegible] great care expressly for bedding purposes.
Scarlet, White, Blue, Pink, Carmine-pink, Yellow, Peach-blossom, Purple, Terra-cotta, Blush Rose, each per packet, 1s.
Collection of the ten varieties, separate, 7s. 6d.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

THE KELWAY "ARTISTIC" BORDER makes a garden of enduring beauty, from early spring to late autumn, with a minimum of cultivation, and without the trouble of constant digging or bedding out. The plants composing the border are from strong country-grown stocks which will flourish under almost all conditions. Send dimensions of space to be filled, or write for Kelway's "Gardens of Delight" (6d.). The cost of the "Artistic" Border is 15s. or 25s. for 10 square yards.

KELWAY and SON, the Royal Horticulturists, LANGPORT, SOMERSET.

NOW IS THE TIME TO PLANT KELWAY DELPHINIUMS which have been improved almost out of recognition in the past twenty years. They produce plants ranging in height from four to eight feet, exceptionally hardy and with a rich profusion of choice blooms in all the shades of blue.
Choice named varieties, 24s., 36s. and 56s. a dozen.

KELWAY and SON, The Royal Horticulturists. LANGPORT, SOMERSET.

EVERY Gardener, amateur or professional, will find a large amount of useful information in the new edition of Kelway's "Manual of Horticulture"—the varieties, prices and culture of all sorts of garden plants, particularly those wonderful improvements raised in the Kelway Nurseries at Langport. A copy will be sent post free for 2s., which will be credited on the first order.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

KELWAY GLADIOLI flower freely in the open air through the autumn. Their fine bold blooms make an admirable addition to borders or beds and are invaluable as cut flowers for church or table decoration. Choice named collections, 3s., 4s. 6d., 6s., 7s. 6d., 9s., 12s., and 18s. a dozen.
Order at once.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

FIDLER'S NEW ILLUSTRATED CATALOGUE OF CHOICE GARDEN SEEDS will be sent, post free, to any address on receipt of post-card. Write at once for a copy. It may help you to save 50% on your seed bill this season. FIDLER and SONS, Royal Berks Seed Stores, Reading.

XL ALL FOR WINTER AND SPRING
CLEANSING.
Before growth commences stronger solutions may be used.
XL ALL NICOTINE INSECTICIDE WASH (poisonous) for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. Agents, write for particulars.
XL ALL CAUSTIC WINTER WASH (non-poisonous) for dormant Fruit Trees, stamps out American Blight, and all other pests.
Other XL ALL Preparations of great renown are XL ALL NICOTINE VAPORISING COMPOUND, XL ALL FERTILISER, XL ALL LAWN SAND, etc.
Ask your Nurseryman, Seedsman, or Florist for my small Pink List.
G. H. RICHARDS, Manufacturer, 234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Border and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

SEEDS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Select Seeds.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

SAMUEL M'GREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
Illustrated Catalogue free.

RHODODENDRONS.

DICKSONS & CO.,
1, Waterloo Place, Edinburgh.
Pink Pearls, Ponticums, choice Hybrids. Write.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

BENTLEY'S
WEED DESTROYERS

Utterly annihilate Weeds, Moss, Dandelions, and all other Weeds on Garden Walks, Carriage Drives, etc.

HAVE THE LARGEST SALE IN THE UNITED KINGDOM!
ARE THE MOST POWERFUL MANUFACTURED!
ARE THE MOST PERMANENT IN EFFECT!

LIQUID (Poison).

Double Strength (1 to 50).

3 gallons, to make 153 gallons	..	£0	10	0
6 ,, ,, 306 ,,	...	0	18	0
12 ,, ,, 612 ,,	...	1	13	0
20 ,, ,, 1,020 ,,	...	2	7	6
40 ,, ,, 2,040 ,,	...	4	12	6

Special Concentrated Strength (1 to 80).

3 gallons, to make 243 gallons	..	£0	14	6
6 ,, ,, 486 ,,	...	1	7	0
12 ,, ,, 972 ,,	...	2	6	0
24 ,, ,, 1,944 ,,	...	4	10	0

BENTLEY'S DAISY KILLER.

(Lawn Sand.)

Completely eradicates Daisies, Moss, and other Weeds which infest **Lawns, Tennis Courts, Croquet Grounds, Bowling Greens, Golf Courses, etc.,** and afterwards improves the tone and colour of the sward.

1 ton, **£19**; 10 cwts., **£9 15s.**; 5 cwts., **£5**; 1 cwt., **£1 1s.**; 56 lbs., **12s.**

Tins, **5s., 2s. 6d.,** and **1s.** each.

Carriage paid on **7s. 6d.** orders and upwards.

WHOLESALE MANUFACTURERS,

JOSEPH BENTLEY, LIMITED,
Chemical Works,
BARROW-ON-HUMBER, HULL.

ELLISON'S BEGONIAS are absolutely the best strain. 30 Begonias, all different, named, 10s. 6d.; Bedding Begonias, 9s., 12s., 15s. 100.

LILIUMS.—24 choice Liliums, all different, 10s. 6d. Gloxinias, 6 different, 2s.; Cannas, 10 different, 4s. 100 German Iris, 10 sorts, named, 4s.

LARGE FLOWERING GLADIOLI, 3s., 5s. 100; Amaryllis, 10s., 17s., 20s. doz. Gladioli, early-flowering, 1s. 100; Autumn flowering, 3s. 100.

1,000,000 BEGONIAS.—Single, 1s. 6d. to 7s. 6d.; Dble., 2s. to 15s. doz. Bedding, 9s. to 21s. 100. Tigridias, Tuberoses, Achimenes, Arum Lilies, 1s. doz.

SWEET PEAS.—36 varieties, all recommended by Nat. Sweet Pea Soc., 2s. 6d., free. Tree Carnations, 5s. 6d. doz. 100 Montbretias, 10 named sorts, 2s. 6d.

ON APPROVAL. Bulbs and Vegetable seeds on appro. Carriage paid. 56-page Catalogue free. ELLISON, 57, West Bromwich.

NOVELTIES in Flower Seeds.—Adnet's Gerbera, Hybrid Freesias (quite 20 colours), Nemesia, Dimorphotheca, etc. ELLISON, 57, West Bromwich.

SEED POTATOES.

	56lb.	112lb.		56lb.	112lb.
Myatt's ASHLEAF	4/6	8/-	LANDWORTHY	3/-	5/-
DUKE OF YORK	4/-	7/-	SENSATION	3/-	5/-
EARLY ROSE	4/-	7/-	BRITISH QUEEN	2/6	4/-
Sir J. LLEWELLYN	4/-	7/-	ROYAL KIDNEY	2/6	4/-
EARLY PURITAN	4/-	7/-	FACTOR	2/6	4/-
EPICURE	4/-	7/-	D. of CORNWALL	2/6	4/-
Sharpe's EXPRESS	3/6	6/-	NORTHERN STAR	2/6	4/-
SATISFACTION	3/6	6/-	EVERGOOD	2/6	4/-
MAGNUM BONUM	3/6	6/-	UP-TO-DATE	2/6	4/-
PRESIDENT	3/-	5/-	SCOT. TRIUMPH	2/6	4/-
K. EDWARD VII.	3/-	5/-	ARTICHOKES	1/6 14lb.	

14lbs. of any above for 1/-, bags free. Cash with order.

Send for Illustrated List of Novelties, Sweet Peas, Flower and Garden Seeds, French Gardening, etc.

ADDRESS IN FULL—

J. W. CROSS, Old Grammar School, **WISBECH.**

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

CHARLES TURNER'S GENERAL CATALOGUE

INCLUDING

CARNATIONS, DAHLIAS, PELARGONIUMS, and other Florists' Flowers,

can be had free on application.

THE ROYAL NURSERIES, SLOUGH.

TOMATO PLANTS (6 to 8 ins. high). Ready for Fruiting Quarters. **Grown in Steam sterilised soil.** Very carefully packed and protected.

Price £3 per 1,000. Cash with order, carriage paid.
Per 100, 7/-; 65 plants, 5/-; 50 plants, 4/-; 25 plants, 3/-; 12 plants, 2/-

Carter's Sunrise, Winter Beauty, Beauty of Wales, etc.

W. & F. POAT, TOMATO GROWERS, **ST. SAMPSON'S GUERNSEY, C.I.**

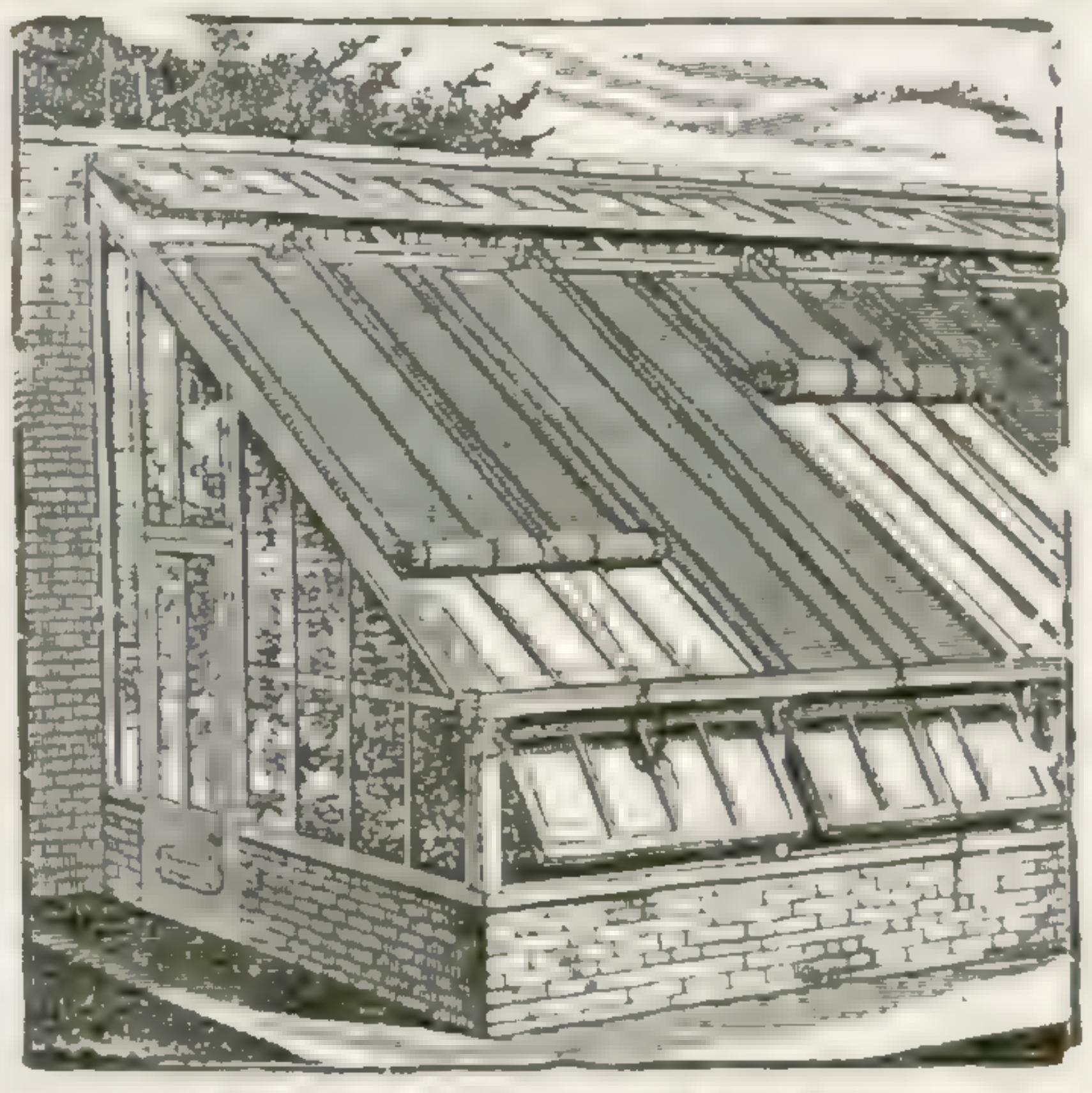
Cheques, Postal Orders, etc., should be crossed "Guernsey Banking Co., Ltd."
Booklet and Testimonials free on application.

4/6 per doz. ROSES

for Coronation. To Include H. Dickson, Wellington, Druschki, Betty, Le Progress, Cochet, G. Regis, others equally good. Packing free. Cash with order.

LAMB, Nursery, BINGHAM, Notts.

PARISIAN {WOOD LATH} BLINDS



MOST DURABLE OUTSIDE SHADING.

SEND FOR ESTIMATE.

SUPPLIED ONLY BY

W. RICHARDSON & CO.,
HORTICULTURAL WORKS,
DARLINGTON.

GARDEN {FROM STOCK} FRAMES

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

Extracts from 35th annual collection of reports:—

NATIVE GUANO for POTATOES, VEGETABLES, etc.

A. J. Beard, Erdington: "Potatoes, splendid, free from disease. Best I ever had."—H. Chester, Nantwich: "Best onion manure I ever used. Grand for onion fly."

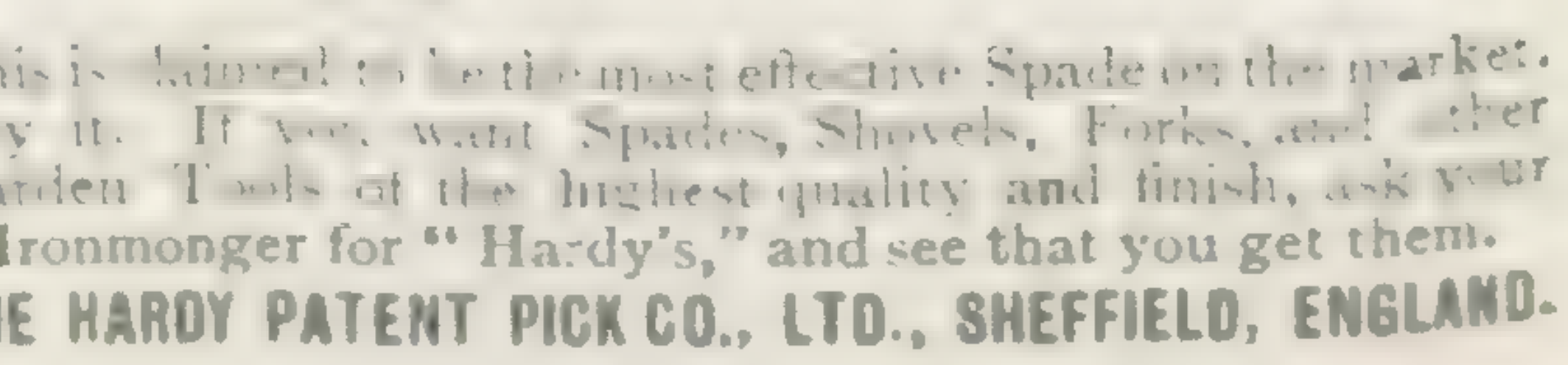
NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc.

J. Cant, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. Frampton, Titchfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED,** 29, New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted

---

A NEW GARDEN SPADE (Carter's Patent).



This is claimed to be the most effective Spade on the market. Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

Sales by Auction.

SALES NEXT WEEK.

MONDAY and FRIDAY NEXT, March 27 and 31, at 12 o'clock. Herbaceous border and Alpine Plants in variety, Liliums, Gladiolus, Begonias, Tuberoses, and numerous other bulbs for spring planting.

At 1.30 o'clock, 1,000 Roses in variety, Fruit Trees, Azaleas, Rhododendrons, etc.

WEDNESDAY NEXT, March 29, at 12 o'clock, Large Quantities of Hardy Bulbs, Roots, and Corms, for spring planting. New and Rare Perennials and Border Plants in variety.

At 1.30 o'clock, 4,500 Roses, Standard, Dwarf, Climbing, T., H.T. and H.P.; newest and best varieties.

At 2.30 o'clock, 620 Cases Japanese Liliums, in cases as received; preceded at 12 o'clock by a Large Quantity of Miscellaneous Bulbs, Roots, Plants, etc.

At 5 o'clock, 100 Lots of Ornamental Palms, Greenhouse Plants and Standard Bays, 450 Azaleas in variety, Aspidistras, Azaleas, Rhododendrons, etc.

FRIDAY NEXT, March 31, at 12.45, a consignment of Cattleya labiata autumnalis, Imported Dendrobiums in variety, together with 250 Lots of Established Orchids in variety, Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view morning of sale, and catalogues had.

ROSE TREES.

SHRUBS. BULBS.

SALES BY AUCTION
are held every
MONDAY and WEDNESDAY,
at 12.30.

STEVENS' AUCTION ROOMS,
Established 150 Years,
38, King St., Covent Garden, London, W.C.
Catalogues on Application.

FOR SALE, IN GUERNSEY.—A compact little BULB-GROWING ESTATE of about 4 acres, splendidly situated on the south coast of the island, and well stocked with the best forcing varieties of daffodils, etc.; also a small Orchard of Apple and Pear Trees in bearing. The property contains glasshouse 150 x 18 heated, large shed, pumping mill, and an unlimited supply of water. Write Box 154, c/o Messrs. R. F. White and Son, General Advertising Agents, 33, Fleet Street, London, E.C.

FRUITERER'S and GREENGROCER'S for Disposal; good round and position; fair trial offered; same hands 11 years. 79, Church Road, Teddington.

NURSERY and FLORIST BUSINESS, near Exeter; ¾ acre, with well-built and heated Glasshouses; town water supply; immediate possession. Particulars T., Avenue House, Crediton, Devon.

NICHOLSON'S "DICTIONARY OF GARDENING," 9 volumes as new, cost £3 16s. 6d., what offers? SUMMERS, Farlands Lodge, Oldswinford, Stourbridge.

VIOLAS. 12 Exhibition varieties, one plant of each; fit for keenest competition. 12 finest for bedding, all named, 1s. 6d. List free. FRED J. BELL, Viola Specialist, Whitley Bay.

18 ALPINE PLANTS, 3s. cash; 50 Alpine plants, 16s. Send for Catalogue (1,000 varieties). Hardy Ferns, named, 100, 10s. "ENGLISH HOME OF ALPINE PLANTS," Hessenford, Cornwall.

100,000 VIOLAS, in all the most lovely varieties grown. These should be grown by all lovers of flowers. 12 in 6 named sorts, 1s. 3d.; 24, 12 sorts, 2s.; 50 in 25 sorts, 3s. 6d.; 100 in 50 named sorts, 6s. 6d., all free. S. G. LEIGH, Broughton, Hants.

CABBAGE PLANTS, extra strong, Ellams, Mein's, Offenham, First and Best, Enfield, Battersea. 3s. 1,000, 12s. 6d. 5,000 lots; Drumheads, 2s. 6d.; Red Cabbage, Cos Lettuce, Tripoli Onion, 4s. 1,000, on rail; or 1s. 100, post free. List free. C. HIGHT, Cranleigh, Surrey.

PERPETUAL FLOWERING CARNATIONS: Britannia, Rose Dorée, White Perfection, Black Chief, Fortuna, Mrs. Burnett etc. 3s. per doz.; strong plants; post free. Ask list. C. F. A. VAN DER SLUYS, F.R.H.S., Ramee, Guernsey.

WALWYN T. CHAPMAN,

Terra Cotta Works, CLEETHORPES.

For Vases, Sundials, Window Boxes, Lions, Balusters, Arches, Garden Ornaments, &c.

BLACKMORE & LANGDON'S

BEAUTIFUL DELPHINIUMS,

IN LOVELY SHADES OF BLUE, MAUVE AND PURPLE.

12 choice named sorts, quite distinct, good strong roots, which will flower freely this year, **£1 0 0.** Also the following four very fine sorts, in good strong roots, to flower well this year. one of each for **10/6**.

ELSIE (New)—Light blue and mauve, with white centre, compact spike.

HARRY SMETHAM (New)—Semi-double, circular flowers of a rich porcelain blue, symmetrical spike, strong, vigorous variety. Awarded First Class Certificate at Shrewsbury Show, and Birmingham Botanical Gardens, Edgbaston.

KING OF DELPHINIUMS—Gentian blue and plum colour, white eye, very large flowers, most imposing variety.

NOVELTY (New)—Sepals, royal blue; petals, royal blue and aniline blue, with a conspicuous yellow and black centre, large circular flower, grand long spike.

BEGONIAS, for BEDDING or POT CULTURE.

GRAND LARGE TUBERS, TO COLOUR.

Double, 4/-, 12/6, 21/- and 30/- per doz. Single, 3/-, 8/-, 15/- and 21/- per doz.
Mixed Doubles, 3/- per doz., 21/- per 100.
Semi-Doubles (cheapest bedders), 10/- per 100. Mixed Singles, 2/6 per doz., 15/- per 100.

CARNATIONS.

A Grand Collection of all Sections. 1 doz. choice named Border Carnations, 5/- and 7/6
ILLUSTRATED CATALOGUE POST FREE.

TWERTON HILL NURSERY, BATH.

PERPETUAL CARNATIONS.

1911 Illustrated Catalogue Ready ✠ FREE.

We have a Wonderful Collection of Novelties this Season, including our

"DUCHESS OF DEVONSHIRE."

The best all-round Perpetual Crimson ever raised.

Read our "TREATISE ON CULTURE" 1/-, Free.

YOUNG & Co., Gold Medallists, HATHERLEY, CHELTENHAM.

CARNATIONS, PINKS, AURICULAS.

DOUGLAS for the best old and new varieties in all classes, and the finest quality in the world. Malmaison Carnations, new and old, **7/6** per dozen. Border, **6/-** to **12/-** per dozen. Tree, American, and English, **7/6** to **15/-** per dozen. Auriculas, Show, **21/-** to **30/-** per dozen. Alpine Auriculas, **9/-** to **21/-** per dozen. Carnation, Auricula, Pink, and Polyanthus seed, **1/6** and **2/6** per packet. **CATALOGUE FREE.**

J. DOUGLAS, Bookham, LEATHERHEAD.

Large Stock of
HARDY WATER LILIES,
Coloured, delivered in all Countries by Parcels Post.
New beautiful varieties unpublished.
NELUMBIUMS, etc., etc.

B. LATOUR-MARLIAC, Nurseryman
At Temple-sur-Lot (FRANCE).
Catalogue Free on Application.

AMERICAN TREE CARNATIONS

The Newest and Best Varieties.

Strong, healthy and well-rooted plants only supplied.

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

CABBAGE LETTUCE, "MASTERPIECE."—This is undoubtedly the best cabbage lettuce in cultivation, grows to an enormous size, often weighing 4lb. to 5lb. and more; hearts white and solid; very sweet. Exceedingly crisp and very slow to run to seed. Awarded numerous first prizes all over the country. In sealed packets at 6d. and 1s., post free, bearing our name, without which none are genuine.—THEODORE J. R. CHALICE and SON, Nurserymen and Seedsmen, Plympton, Devon.

THIS DELICIOUS VEGETABLE
can be grown by everyone if planted at the present time.
Connover's Colossal Asparagus
2-year plants, 3s. per 100,
20s. per 1,000.
Early Market Cabbage Plants
2s. 6d. per 1,000. Fruit Tree List free
W. HORNE & SONS,
Cliffe, Rochester, Kent.

WATER CATALOGUE NOW READY
PERRY, ENFIELD. MIDDX.

GLASS & PAINT.

NICHOLLS & CLARKE, LTD.,
15 oz. and 21 oz. Glass,
IN ALL THE USUAL SIZES.
Shoreditch, London.
When sending for list please cut out this advt.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GENTLEWOMAN desires post as ASSISTANT or COMPANION GARDENER; domesticated; salary. N., 2, Kinver Road, South Peak Hill, Sydenham, S.E.

CAPT. G. H. BARNETT, Glympton Park, Woodstock, Oxon, wishes to very highly recommend his present HEAD WORKING GARDENER; life experience; reducing cause of leaving; 10 years' previous as Gardener and Management small estate; age 39; 1 daughter aged 14. Address E. JACOBS, as above.

GARDENER (Head, "Scotch") desires a change; been in present situation in England 8½ years, where 6 are kept; thoroughly experienced in all branches; married; aged 33. W. S. W., 11, Office of this Paper.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; grapes, peaches, melons, stove and greenhouse plants; four and a-half and eleven years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head); general all-round knowledge; life experience in large and well-kept establishments; 13 years Head in last situation; age 39; married; gentleman will recommend. T. HARRIS, 2, Mill Lane, Cheshunt, Herts.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushrooms, ridge or flat; Kitchen, Lawn, Flower Garden. Special Prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (Head, where three or more kept); strongly recommended; excellent references; 24 years' most thorough experience every department; 12 years Head; age 40 years; married; abstainer. HORTUS, 135, London Road, Brighton.

GARDENER (Head Working, where two or more are kept); good all round; can be well recommended; married when suited; age 36. PEARCE, 10, Roxwell Road, Shepherd's Bush.

GARDENER (Head Working, where several are kept), age 33, disengaged; life experience in all branches, Inside and Out; vines, peaches, stove and greenhouse plants, etc.; excellent references; married. WM. GIBSON, 128, Lansdowne Road, Leicester.

GARDENER (Head Working, where two are kept, or good Single-handed); experienced in all branches; age 30. C. WOOD, Manor Cottages, Clayton Road, Hook, Surbiton, Surrey.

GARDENER (Head Working), requires SITUATION; experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants; Flower and Kitchen Garden, Hardy Fruit, etc.; good references; married, no family. W. S., 73, Allen Street, Maidstone, Kent.

GARDENER (Head Working), married, no family; age 36; life experience in all branches, Inside and Out; excellent references; Wife dairy, or house, if required. A., 27, Effingham Road, Reigate, Surrey.

GARDENER (Head Working).—Gentleman strongly recommends his foreman, who has been with him for 5½ years; thoroughly understands the cultivation of first-class fruits, flowers, and vegetables, and the general routine of a well-kept garden; married; age 32. STEVENS, The Lodge, Boston House, Brentford, W.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working), where three or more are kept); life experience in all branches; excellent reference; age 27. Apply L. BARKER, The Gardens, Manor House, Alton, Hants.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working); late with W. H. Herbert, Esq., Coventry, previously Mill House, Halifax; Vines, Peaches (speciality), Early and Late Forcing, Stove, Greenhouse Plants, Herbaceous Rock Plants, Roses, Flower, Kitchen Garden, general upkeep Land, Stock; 18 years Head; references unimpeachable. LOWE, Wylde Green, Birmingham.

GARDENER (Head Working). Mr. F. BERRILL, of Hall Close, Kettering, wishes to recommend FRANK DAINTY, who is a thoroughly capable Gardener, with life experience Inside and Out; 8 years in present situation; age 30; married, no children. DAINTY, Hall Close, Kettering.

GARDENER (Head Working, where two or more kept); married; age 33; life experience, Inside and Out; 4 years' present situation as Outside Foreman; well recommended by past and present employer. A. BACON, The Gardens, Rickmansworth Park, Herts.

GARDENER (Head Working, where three or more are kept).—Mr. LAST, The Gardens, Homewood, Chislehurst, Kent, can with every confidence recommend his Foreman, W. WAITE, as above; 13 years' experience, gained in good establishments; five years present situation. Married when suited.

GARDENER (Head of two or three).—Mr. A. TOMALIN will be pleased to recommend H. CHERRY as above; life experience in good gardens; all branches; age 28. The Gardens, Oakwood, Crayford, Kent.

LADY LUARD strongly recommends C. RUSHEN as Head Gardener, where two or three are kept; life experience; glass and all other branches; most hard-working; leaves through break up of establishment. Write LADY LUARD, Witham, Essex.

MAJOR HOLROYD, Ropley Manor, Alresford, Hants, wishes to highly recommend his late HEAD GARDENER; 18 years' practical experience in all branches of gardening Inside and Out; Single; age 32; excellent references. SCREEN, Coombe Hill Gardens, Butlers Cross, Tring, Bucks.

GARDENER (Single-handed); little or no glass; 10 years' experience in present place; Single; age 28. W. REEKS, 89, Amwell Street, Hoddesdon, Herts.

GARDENER (Single-handed); age 26; married; one child; 12 years' experience; good references; well recommended; 4 years here. H. W. PEARSON, Sandling Park, Hythe, Kent.

GARDENER (Single-handed) seeks SITUATION; life experience; good, capable, and honest man; age 30; single; excellent references. Apply A. DODD, 139, Nag's Head Road, Ponders End, Middlesex.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (Single-handed or with help); life experience; good grower and propagator; Inside and Out; age 38; married; good character. ANDREWS, 28, Rookstone Road, Tooting, S.W.

MANAGER or FOREMAN (Working); age 38; married; 20 years' experience in Market Growing, Tomatoes, Cucumbers, Grapes, Chrysanthemums, Bedding Stuff, Strawberries, etc., good knowledge of Roses and Hardy Plants. E. JONES, Derby Road, Melbourne, Derbyshire.

FOREMAN (Inside), age 26; married, one child, 12 years' experience; good references; well recommended; 4 years here. H. W. PEARSON, Sandling Park, Hythe, Kent. (No circulars.)

FOREMAN (Inside), age 25; 11 years' experience in Fruit and Plant Houses, House and Table Decorations; good references; disengaged. J. EDWARDS, 3, Rock Road, Oundle, Northants.

NURSERY FOREMAN (Working); experienced in Fruits, Roses, and Ornamentals; fullest particulars given; age 35; married. WM. HALL, 1, Harrishaws, Lightwater, Bagshot.

GARDENER (Second of two or three, or Single-handed), Inside and Out; 10 years' experience; all-round work; age 24. FUDGE, 22, Markham Road, Winton, Bournemouth.

GARDENER (Second, where four or more are kept), good general experience, Inside and Out; excellent testimonials; age 24. T. JACKSON, Rush Court Gardens, Wallingford, Berks.

GARDENER (Second).—MAJOR FOOT, White Hill, Berkhamsted, highly recommends W. COOK, as above, where four are kept; nine years' practical, Inside and Out; age 23 years. Apply W. COOK, White Hill Gardens, Berkhamsted, Herts.

GARDENER seeks SITUATION as Second, Inside or Inside and Out; well recommended; disengaged. F. P., Fircroft Road, Upper Tooting, S.W.

S. PRICKETT can well recommend H. IDDENDEN as GARDENER (Second, where three or four are kept); Inside or Outside work. Apply, The Gardens, Ersham House, Canterbury.

MR. PERKINS, Gardener to late Mr. Rydon, Prylands, Highbury New Park, can recommend J. ANTHONY as Second of three or four. London Colney, St. Albans, Herts.

JOURNEYMAN (Inside).—YOUNG MAN, age, 20, seeks SITUATION as above; 5½ years' good experience Inside and Out; excellent references; Bothy preferred. J. UNDERWOOD, Manor Farm, Stapleton, near Hinckley.

JOURNEYMAN (Inside and Out); 2½ years last place in flower garden and pleasure ground; leaving through death; age 24. J. ALDIS, Starston, near Harleston, Norfolk.

JOURNEYMAN (First, Inside), can be well recommended as above; 10 years' practical experience in Plant and Fruit Houses; excellent references; age 24. Address, W. PEACHEY, Cheveley Park, Newmarket.

JOURNEYMAN (Inside and Out); good references; 1½ years here; age 21; can be highly recommended by employer and Head Gardener; bothy preferred. Apply BEASLEY, 2, Waldron Road, Harrow, Middlesex.

MR. BEEVERS, Stoke Court Gardens, Slough, wishes to recommend F. PAXTON as JOURNEYMAN (Inside); 7 years with him; age 22. South preferred.

MR. SUTTON, Millichope Park Gardens, Craven Arms, Salop, can with every confidence recommend E. BRIDGWATER as JOURNEYMAN (First); has been here two years; age 23.

GARDENER (Under) seeks SITUATION Inside and Out; age 22 years; with seven years' experience and good references. W. BAILEY, 2, Kelsey Road, Salisbury.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For APRIL 1, 1911.

Please Repeat my Advertisement.

Name..

Address..

....

Date..............................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

Situations Wanted—*continued.*

GARDENER, married, seeks SITUATION; handy man, Indoors or Out; Wife help in house if required. BRISSENDEN, Elsing Hall, E. Dereham.

GARDENER (Under); private establishment or Grower Market Nursery; 14 years' experience, Inside and Out, private and nursery; good references. LEWINGTON, 169, High Street, Hampton Hill, S.W.

UNDER GARDENER, Young Man, seeks SITUATION as above; age 19-20; good refs.; 3 years 9 months last place. C. T. COLESHILL, 37, Wolsey Road, Hampton Hill, Middlesex.

MR. HUBBARD will highly recommend A. W. WHAYMAN as GARDENER (Under). Inside and Out, or pleasure ground work; age 21; 7 years' experience; 4 years' present situation. Address, The Gardens, Oakhill, Ipswich

IMPROVER.—J. LAWRENCE, The Gardens, Pimley Manor, Shrewsbury, can highly recommend E. JERVIS as above; age 18; four years' experience, inside and kitchen garden; Bothy preferred.

IMPROVER (18). — Mr. STATHER, F.R.H.S., Arlington Gardens, Cottingham, Yorks, recommends L. BERRIDGE as reliable, willing worker· general knowledge under Glass and Flower Gardens.

IMPROVER (Inside); past three years under glass; used to Watering, Stoking, and Inside work; quick, active, and obliging; highly recommended; age 18. PESTERFIELD, Beedingwood Gardens, Horsham.

MR. LAY, Gardens, Cheriton Rectory, Shorncliffe, Kent, would like to place his Son, age 19, in a good establishment as IMPROVER; three years' experience; Bothy preferred.

YOUTH requires SITUATION as IMPROVER (Inside and Out); age 17; three years' good character; bothy or otherwise. A. COLLICOTT, 30, Primrose Hill, Chelmsford.

MR. TUCKER, The Gables Gardens, Shortland, Kent, with confidence recommends A. THURSTON, age 26; 10 years' good all-round experience, both Inside and Out; to any lady or gentleman requiring good gardener; single handed or with help; 2 years here as Second; first-class references; married when suited.

ADVERTISER, married (age 30), seeks SITUATION in Private Service; 15 years' nursery experience, chiefly inside; or could take Single-handed place, Inside and Out; South preferred; good references. SHEPHARD, 8, Ivy Street, Savile Park, Halifax, Yorks.

ORCHID GROWER requires SITUATION to take charge of collection or small place where Orchids speciality; experience Burford Lodge, etc.; excellent references. Apply S. BURROUGH, Royal Gardens, Sandringham.

SITUATION required by YOUNG MAN; age 22; inside and out; 4½ years present situation; bothy preferred; highly recommended. A. HOLLOWAY, Medstead Manor Gardens, Alton, Hants.

YOUNG MAN, aged 23; would take charge of glass with one or two under; life experience in all branches; good references. C. NEWBURY, Llanwern, Newport, Mon.

YOUNG MAN, 23, requires SITUATION Inside; 7 years' experience; can be highly recommended. R. HAYES, Elmdon, Saffron Walden, Essex.

YOUNG MAN, age 21, seeks SITUATION GARDENER (Under, Inside and Out); seven years' experience in good establishments; good references. L. HAWKER, Ruabon Lodge, Upper Colwall, Malvern.

YOUNG MAN seeks SITUATION on pleasure grounds; 5 years' experience with horse and hand machines; well recommended; age 22; fond of cricket. F. GARDINER, Home Farm, Glympton, Woodstock, Oxon.

YOUNG MAN (21) seeks SITUATION, inside and out; six years' experience; good references. W. JOHNSON, 11, Cottage Row, Forty Hill, N.

YOUNG MAN (aged 19) seeks SITUATION in garden (inside and out); 3 years' experience. F. SALES, 166, Lowfield Street, Dartford, Kent.

COWMAN; life experience with Jersey, Shorthorns; good, clean Milker; good references; age 39; four years' present; willing to make himself useful; wife Dairy or assist in house; no family. J. POTTER, Snatchill, Corby, Kettering.

FLORIST.—Clever designer with high-class West End and Continental experience, seeks SITUATION. E. K., 116, Walton Street, South Kensington.

LADY FLORIST seeks RE-ENGAGEMENT; four years' experience in high-class Florists' Business; excellent reference from present employers. Miss PITHER, "Socorro," Oxford Road, Guildford, Surrey.

Situations Vacant.

GARDENER (Under).—Strong, active Young Man; not under 22; experienced kitchen gardens, walls, and general outside work. J. R. ALLAN, Ashurst Park Gardens, Tunbridge Wells, Kent.

NEW AND CHOICE
HERBACEOUS PLANTS

	each.
ASTILBE GRANDIS, creamy white, similar form to Davidi; tall	1/-
CHRYSANTHEMUM MAXIMUM (or Moon Daisy), Kenneth, the finest and best fringed Daisy in cultivation; ideal for cutting ...	1/-
DELPHINIUM, Rev. E. Lascelles, blue, with very large conspicuous white eye; splendid novelty	5/-
DELPHINIUM, Mrs. F. Eames, a splendid new variety of a very vigorous type, outer petals pale blue, inner mauve; grand spikes ...	5/-
DELPHINIUM, Moerheimi, a splendid pure white branching variety; a grand acquisition	10/6
DELPHINIUM, Bendigo (Eames'), or Bella Donna Grandiflora, quite superseding the well-known Bella Donna by its very vigorous habits, producing quantities of bloom ...	1/6
GYPSOPHILA Paniculata fl. pl., the double white form; should be in every garden; strong ground roots	1/-
IRIS GERMANICA, Iris King, standards bright yellow, falls velvety purple edged gold ...	2/6
IRIS GERMANICA, Princess Victoria Louise, pale yellow standards with bright magenta falls, light edged; very striking	2/6
PHLOX DECUSSATA, for several splendid varieties see catalogue.	
SCABIOSA CAUCASICA PERFECTA, a splendid type of the well-known Caucasica, but much more vigorous	1/-
SCABIOSA CAUCASICA PERFECTA, Mrs. R. F. Felton, a soft silvery blue; perfect shaped blooms	1/6
AQUILEGIAS, long-spurred hybrids, embracing all the art shades; very strong roots ... ... 3/- doz.	0/4
PYRETHRUMS, Double, Queen Mary, a beautiful clear pink variety	2/6
PYRETHRUMS, Double, Lord Rosebery, crimson scarlet, extremely fine	1/-
PYRETHRUMS, Double, Yvonne Cayeux, creamy white, fine for cutting	1/-

The above three varieties are truly grand, being the pick of the double varieties, and the best in cultivation.

FULL LIST OF HARDY HERBACEOUS AND ALPINES FREE ON APPLICATION.

Eames' Floral Nurseries, Frome.

SPECIALISTS IN HARDY PLANTS.

PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J.R.PEARSON & SONS
LOWDHAM, NOTTS.

Perpetual-Flowering CARNATIONS.

This year's Novelties and all the Leading Varieties.

Send for descriptive Catalogue of 80 varieties with particulars when to stop them.

C. ENGELMANN, CARNATION GROWER,
SAFFRON WALDEN.

Rhododendrons.

Crimson, White, Pink. 250 Choice Named Varieties, fine foliage, well budded, for potting or planting. 1 to 1½ ft., 1½ to 2 ft., 2 to 2½ ft., 2½ to 3 ft., 3 to 4 ft., 4 to 5 ft., 5 to 6 ft., 6 to 7 ft. List of sorts and prices on application; many thousands to offer. Standards in all sizes.

All Home-grown. Inspection Invited.

F. STREET, Heatherside Nurseries, CAMBERLEY.

4/6.—RUSTIC ARCHES, 4s. 6d.; biggest and best; 8ft. x 4ft. x 18in. All Trellis and Rustic Work at comparative low price. London address—BRAMBLE WOOD CO., 30, Caroline Place, Bayswater.

100,000 FREE COPIES

Dobbie's New Catalogue and Guide to Horticulture.

224 PAGES. 210 ILLUSTRATIONS.

A COPY WILL BE SENT WITH PLEASURE GRATIS TO ANY ONE APPLYING FOR SAME, WHO ENCLOSES 3d. IN STAMPS TO DEFRAY COST OF POSTAGE, AND MENTIONS "GARDENERS' MAGAZINE."

DOBBIE & CO.,
The Royal Seedsmen, EDINBURGH

PENNICK & CO.,

DELGANY NURSERIES, CO. WICKLOW

OUR NURSERIES

are stocked with the very choicest and most desirable of Hardy Plants.

The Delgany Collection of rarest Shrubs and Ornamental Trees is unique and full of interest.

We can supply you with the Plants that will make your garden a Paradise. Write us.

PENNICK & CO.

DO YOU WANT TO KNOW

The best new Chrysanthemums, Michaelmas Daisies, Carnations, Dahlias, Fuchsias, Pelargoniums, Zonal and Ivy Geraniums, Sweet Peas and other Seeds.

Send for Catalogue free.

H. J. Jones' Nurseries, Ltd.,
RYECROFT, LEWISHAM.

STALKER'S Forest Trees, Fruit Trees. Roses, Bulbs, and Seeds

Are known all over the world, and cannot be surpassed for hardiness and quality.

Famous for Quality and Cleanliness.

D. STALKER & SON,
Government Contractors,
Catalogues Free. **NAIRN. N.B.**

Amaryllis—Hippeastrums

NOW FLOWERING.

INSPECTION RESPECTFULLY INVITED.

Catalogues, and all particulars, free on application.

ROBT. P. KER & SONS,
AIGBURTH NURSERY, LIVERPOOL.

BLUE is a colour of which there is often too little in the garden and

KELWAY DELPHINIUMS

supply it in all its wide range of hues from palest sapphire to deep purple.

THE plants may be arranged in rows, in clumps or as components of a border, they are easily cultivated, and they produce a profusion of stately conspicuous blooms till late in autumn.

Choice named collections!
24/-, 34/- and 56/- a dozen.

NOW IS THE TIME TO PLANT.

KELWAY & SON,
The Royal Horticulturists
LANGPORT, SOMERSET.

ANT ROOZEN & SON'S

SEEDS, BULBS, AND PLANTS

For Spring, 1911.

All of the Finest Quality.

THE CATALOGUE of above will be sent, post free, on application to their Offices at . . .

OVERVEEN, HAARLEM, HOLLAND;

Or to their General Agents,

MERTENS and CO.,
3, Cross Lane, LONDON, E.C.

BUNYARD'S FRUIT TREES

The Best Quality and Largest Selection at Moderate Prices.

WRITE FOR CATALOGUE.

GEO. BUNYARD & CO., LTD.,
Royal Nurseries,
MAIDSTONE.

NEW ROSES

WM. PAUL & SON, WALTHAM CROSS, Ltd.,

Beg to offer strong plants of the following New Roses raised by them at the Waltham Cross Nurseries :—

Varieties of 1910.

Alice Cory Wright (H.T.), Dwarfs, 7/6 and 10/6 each.
Elsie (Wichuraiana, Rambler), Dwarfs, 7/6 each.
Juliet (Hybrid Briar), Dwarfs, 10/6 each; Standards and Half-Standards, 10/6 each.
Portia (H.T.), Dwarfs, 7/6 each.

Varieties of 1909.

Althea (H.T.), Dwarfs, 3/6 each; 36/- per dozen.
Cynthia (H.T.), Dwarfs, 3/6 each; 36/- per dozen; Standards, 5/- each.
Fairy (Multiflora Rambler), Dwarfs, 2/6 each; 24/- per dozen.
Margaret (H.T.), Dwarfs, 3/6 each; 36/- per dozen.

For full descriptions of the above, and for New Roses of other raisers and general collection of Roses, see Rose Catalogue, post free on application.

Pauls' Royal Nurseries and Seed Warehouse,
WALTHAM CROSS, HERTS.

VOL. LIV.—No. 2,995. SATURDAY, MARCH 25, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Cross Fertilisation.

Although every student of living organisms, plant or animal, recognises the great benefit which accrues from the introduction of fresh blood and consequent vigour by cross-fertilisation, as opposed to constant inbreeding, the full value of this and the manifold ways in which Nature contrives to secure it, is less popularly understood. In the plant world these contrivances have revealed themselves to every botanist. innumerable flowers demonstrating by their structure, and the different periods at which the pollen on the one hand and the receptive stigma on the other become capable of performing their mutual offices, that self-fertilisation is rendered either impossible or unlikely. As a result of this the services of the insect world, and even of the wind, become essential for bringing the two potencies together and so effecting the desired end. In other cases, such as the great primrose family, the form and arrangement of the pistils and stigmas differ in otherwise identical flowers, to the same end, and Darwin clearly demonstrated that when primula flowers of different structure were crossed the result was more and better seed than when self-fertilisation, i.e., application of pollen to the ovaries of the same flowers, was effected. In the animal world every breeder knows the evils of constant inbreeding within the range of one and the same strain in which the individuals are practically relatives, and even human laws have had, in the interests of the race, to be formulated, to prevent deterioration. On the other hand it is curious to reflect that all this occurs within more or less definite lines, outside of which Nature imposes distinctions restricting such cross-fertilisation to the limits of the species or closely allied ones, only rarely making exception, and that usually under very artificial conditions, in the case of genera. It is perhaps the selective and hybridising orchid grower of these later days who has most plainly demonstrated this possibility. Nature, unaided, undoubtedly now and again permits crosses between different species, with the result that wild plants are occasionally found which unmistakably display the combined characters of two distinct species, but as a rule these are rare and solitary, and in some cases it is an open question how far the difference and apparent combination may not be due entirely to mutation, or reversion to an ancestral type, which existed prior to the divergence by evolution, which produced the two species concerned from a common progenitor. How far the law of beneficial cross-fertilisation in plants has conduced to bring about the wonderful diversity of form, habit, and colour, which now constitutes our floral and vegetable wealth it is, of course, impossible to say, but there can be little doubt that the constant renewal of vital vigour must have played a material part in stimulating the response to insect influence, which has been the basis of improvement, while the influence of one plant upon another of the same species, but of some characteristic difference, must have contributed largely to varietal changes, and even to the production of definite sports which of late years have become recognised as probable evolutional factors of no mean importance. The slightest difference of structural tendency between pollen and the incipient seed which it fertilises, must of necessity lead to some sort of compromise, so to speak, in the offspring resulting from the conjunction. When we reflect upon the almost infinite complexity of potencies which must exist within the nucleus of every reproductive cell of a highly-organised individual, how it indubitably contains not merely the characters of its immediate progenitor but those of a long line of ancestors, all embodied in a microscopic bundle of filaments, and that the process of fertilisation involves the commingling of two of these of different origin, and therefore with different individualities, it is little wonder if now and again a new type of structure should arise, and that this, in successful hybrids between widely different specific forms or even generic ones, should be marvels of combination such as no human mind could have conceived or planned.

MR. R. W. WALLACE.

Mr. Robert W. Wallace, head of the firm of Messrs. R. Wallace and Co., of Colchester, will be well known to a vast number of our readers by reason of the evidence he has given of his wide knowledge of hardy flowers and the admirable manner in which he has staged the choicer subjects, on the lines of garden design, at the leading London and provincial exhibitions. Mr. Wallace is the son of the late Dr. A. Wallace, of Colchester, who was greatly interested in bulb culture, and made a close study of liliums. Mr. R. W. Wallace is an excellent all-round hardy plantsman, but his personal inclinations have drawn him to specially study Darwin and May-flowering tulips, irises, liliums, daffodils, aquatics, and alpines. Mr. Wallace is a member of both the Floral and Narcissus Committees of the Royal Horticultural Society; he has been a member of the Colchester Borough Council for seven years, and he is a member of the committee of the International Horticultural Exhibition of 1912. Still a young man, Mr. Wallace has many years of energy and usefulness before him, and we hope to see him win many more gold medals with beautiful and finely-designed exhibits of hardy plants and flowers in the years to come.

Foremen of the Royal Gardens, Kew.—From the "Kew Bulletin" we learn that, on the recommendation of the Board of Agriculture, the Lords Commissioners of His Majesty's Treasury have sanctioned the transfer of the foremen and storekeeper in the Royal Botanic Gardens from the temporary to the established staff, and Civil Service certificates have been issued for Messrs. G. Dear, W. Irving, C. P. Raffill, A. Osborn, T. W. Taylor, and J. Coutts.

The Miniature Japanese Garden, which formed an interesting feature of the Japan-British Exhibition, held at Shepherd's Bush, last year, is now installed in Battersea Park. At the close of the exhibition it was presented by the Municipality of Tokyo to the City of London, and the Corporation has handed it over to the London County Council. Briefly described, the garden consists of a miniature lake surrounded by dwarf trees of a type for which the Japanese cultivators have become famous, on ornamental banks, and decked with models of a medieval palace and shrines. None of the trees exceed 3ft. in height, and the majority are less than 1ft. One little juniper tree is stated to be 85 years old, and several other specimens are nearly as old, in spite of their small size. The species include Juniperus rigida and chinensis, Chamæcyparis obtusa nana, Acer pictum (Japanese maple), including one specimen 70 years old, Distylum racemosum, Cryptomeria japonica, a box; and several species of pine. The model garden is raised on a stand, which can be run on rails in and out of a shelter built in imitation bamboo work, according to the weather. The whole is protected by a wire cage. At present the little landscape presents a somewhat weather-beaten appearance, but will no doubt improve under the favourable conditions to which it is now subjected.

Hanley Horticultural Fete.—We are informed that owing to the federation of the six pottery towns, namely, Hanley, Stoke, Burslem, Fenton, and Tunstall (now called the County Borough of Stoke-on-Trent), there has been some delay in the preparatory work of this show, which is held under the direction of the Borough Council. The exhibition will be held on July 5 and 6, and the federation should materially enhance its success from all points of view.

National Chrysanthemum Society's Fixtures.—We learn that the N.C.S. will hold an exhibition at the Crystal Palace on October 4 and 5 of the present year, and its great show at the same place on November 1, 2, and 3. Floral Committee meetings will be held at Essex Hall, Strand, on September 4 and 18, October 23, November 20, and December 4; at the Crystal Palace on October 4 and on November 1; and at Carr's Restaurant, Strand, on December 18. The meetings of the General Committee will be held at Carr's Restaurant on September 18, October 23, November 20, December 18, and January 15 (1912), at 7 p.m.

Lenten Roses.—From the delightful gardens of Woodside, Chenies, the residence of Adeline Duchess of Bedford, Mr. Dickson sends us a gathering of flowers of Lenten roses, which are surprisingly beautiful, and of much interest as evidence of their value for contributing to the attractions of the flower garden thus early in the spring. The flowers, we understand, were gathered from seedlings raised from varieties of Helleborus colchicus, H. guttatus, and H. orientalis, and are remarkable for their large size and fine form, and for the wide range of colour they afford. They certainly represent a fine strain, and testify to Mr. Dickson's skill in their cultivation.

Primulas at Clandon Park.—Hardy primulas have been extensively planted at Clandon Park, near Guildford, during recent years, and with the semi-shaded and moist conditions provided for them they thrive remarkably well. Even at this early date the several large breadths of Primula denticulata cashmeriana and the white variety are full of bloom, and there are hosts of spikes yet to rise and open their flowers. Primroses and polyanthuses are coming into bloom, and already there is a shade of soft red over the breadths of Primula rosea produced by the first blooms. P. japonica follows much later, and by the light of the setting sun it paints the woodland crimson with its multitudes of spikes of brilliant flowers. The Earl of Onslow and his gardener, Mr. H. Blake, have achieved unusual success with hardy primulas and with irises at Clandon Park.

The Sweet Pea in the North.—Our Aberdeen correspondent writes: Much interest is being taken in the sweet pea in the North at the present time, and it is pleasing to learn that an exhibition of the flower is to be held in Aberdeen in August. The arrangements have been set going by an energetic committee, with Mr. James Esslemont as chairman, and Mr. M. H. Sinclair, the worthy secretary of the Aberdeen Chrysanthemum Society, as secretary. There will be competitions for professionals and amateurs, and a special section for ladies. The event is creating very great interest in many quarters, and there is every prospect of the exhibition being a very successful one. It will undoubtedly have the effect of stimulating the culture of the sweet pea locally. The sweet pea is more popular now than ever, and all over the country there is a growing interest in its culture, the Gardeners' Magazine taking no small share in the propaganda by means of the admirable number specially devoted to the flower some time ago, and the many articles and illustrations in other issues.

Alpines in their Native Haunts are always beautiful, and the subject is of great interest now that alpine plants and rock gardens are so much in the foreground of gardening. With such a subject as this to talk about, Mr. R. C. Reginald Nevill should secure a large audience when he lectures before the Royal Horticultural Society on March 28, at 3 p.m.

Royal Horticultural Society of Ireland.—This society has received a contribution of £5 from the Royal Dublin Society towards the prizes at the Winter Fruit and Flower Show, while to the same exhibition the Department of Agriculture will contribute prizes for apples totalling £60.

Rhododendrons from Leonardslee.—A few trusses of exquisitely beautiful and sweetly fragrant rhododendrons from Mr. W. A. Cook, gardener to Sir Edmund Loder, Bart., Leonardslee, Horsham, once more emphasises the value of the early-flowering Himalayan species in sheltered southern gardens, and incidentally reminds us of the extent and comprehensiveness of the rhododendron collection at Leonardslee. Among the flowers received, those of R. ciliatum, R. Dalhousiæ, R. Fosterianum, and the campanulate white-flowered R. Falconeri are exceptionally fine.

Boskoop Flower Show.—We have on several occasions referred to the great exhibition of forced shrubs and plants which will be held at Boskoop from April 5 to 16, and we again refer to it for the purpose of acknowledging the handsome poster that has been sent us. The occasion of the exhibition is the jubilee of the Pomological Society of Boskoop, whose members now devote themselves almost wholly to work other than pomological.

Lord Pentland on Gardening in Lewis.—In the course of an interesting address in connection with the Town Planning Exhibition in Edinburgh, Lord Pentland, the Secretary for Scotland, made a strong appeal for gardens, and stated that even the cottars and crofters of the Island of Lewis had begun to see the benefits of cultivating vegetables and to realise the beauty of flowers. Visitors to Lewis have often remarked upon the sordid appearance of so many of the dwellings of the crofters and cottars caused by the absence of gardens, and they will be glad to learn that a change is in progress.

The Carnation Year Book for 1911 is especially welcome for the evidence it affords of the continued success of the Perpetual-flowering Carnation Society, of which it is the official publication, and the increasing popularity of the flowers to which it gives its attention. It is satisfactory to observe that there is a continuous increase in the membership, and that the society was able to hold two exhibitions, and to close the year's work with a substantial balance in hand. Lists of new carnations registered during the past year by the society and the American Carnation Society are given, and these are of interest as evidence of the continued activity of raisers in the production of new forms. There are numerous articles on the several aspects of carnations written by well-known cultivators, and there is a communication from Mr. C. H. Payne, in which some of the older British and Continental books on carnations are passed under review in his best style.

Shot-hole Fungus (Cercospora circumscissa), to which we have on several occasions directed attention, is dealt with at some length in a leaflet (No. 247), which has just been issued by the Board of Agriculture. This fungus attacks the leaves of the peach, almond, cherry, apricot, and nectarine, and, occasionally, those of the plum. According to the leaflet, Dr. W. M. Scott, of the United States Department of Agriculture, has found that the fungicide known as "self-boiled" lime-sulphur mixture, can be used as a spray on the leaves of peach trees without injury to them. The proportions for a mixture ready for use are 8lb. lime, 8lb. sulphur, and 50 gallons of water. Directions are given for the preparation and application of this fungicide.

National Auricula Society.—The Midland section of the National Auricula Society will hold its annual exhibition in the Botanical Gardens, Edgbaston, on May 3 and 4. The schedule is comprehensive and affords abundant opportunities for cultivators of these beautiful flowers to demonstrate their skill.

WATERSIDE PLANTS.

The divisional line between acquatics and waterside plants is not easily defined, and except in a few that readily occur to everyone, the majority of plants that custom bids us assign to the water proper may equally well be grown as land plants, hence it comes that these terms have chiefly a descriptive value, and cannot be adhered to. A definition of water-side plants would naturally lack consistency for this very reason, so that the subject in its broadest sense admits practically any plant capable of adding to pictorial effect in the general scheme of a water garden.

A narrower limit, however, is more in accordance with accepted ideas as regards what constitutes waterside plants, and, in practice, the results are eminently most satisfactory and altogether pleasing when a few well-chosen subjects are carefully placed, with the idea of securing strong contrasts and broad effects, but the tendency to overload a water garden for the sake of variety alone should be sternly discouraged at all seasons.

[Photo: C. P. Raffill.

WATERSIDE IRISES (I. SIBIRICA) AT KEW.

Waterside plants resolve themselves naturally into two series; those introduced for foliage effect alone and those in which interest centres in the flowers; at the head of the latter group stands Iris Kæmpferi (lævigata) commonly known as the Japanese iris, in which the flowers are of two kinds, and are somewhat erroneously spoken of as single and double, owing to the abnormal development of the inner segments in the latter; in both forms, the colours are rich and varied, and in the duplex form the flowers are of the most sumptuous character. This iris is tufted in habit, with flat leaves that stand erect; it develops an enormous fibrous root system that strikes deep into any rich moist soil; planted with the crowns a foot above water to which the roots have ready access, the maximum development of the plant is assured, and if planted in extensive drifts, this iris is difficult to surpass in beauty when in flower, during July. All the varieties of Iris sibirica succeed under similar conditions, and, in addition, Iris aurea, I. gigantea, I. Monnieri, and the varieties of I. Monspur may also be included, being alike distinct in leaf and flower.

Astilbes are an extensive group, with elegant spiky inflorescences ranging in colour from white to pink, while in Davidi the flowers are rosy-purple, and among the last to open. The leaves of all are compound and much divided, above which the flowers appear in sheaves; they succeed in damp ground, and may be treated as actual wet-ground plants in summer. Dwarf kinds like Silver Sheaf, Queen Alexandra, and Peach Blossom, are charming in masses close to and slightly raised above the water margin, while A. grandis, A. Davidi, A. rivularis major, and A. Thunbergi are effective plants to place in bold positions, planting several together so as to form a group. Spiræas call for similar treatment to astilbes, but the flowers being mostly in flattish heads renders them distinct, while in S. venusta and S. palmata the flowers approach a deeper shade of crimson than at present obtains in astilbes. Spiræa camschatica (gigantea) is a plant of giant stature, frequently attaining a height of 8 to 10ft. when given suitable conditions; the variety rosea is less vigorous, but most desirable owing to the soft pink shade of the flowers. S. Aruncus produces creamy flowers in erect, branched panicles, and is a most effective plant for a bold group. S. ulmaria fl. pl. gives creamy-white double flowers, carried on light stems above mounds of delicately cut leaves.

Senecios are strong growing herbaceous plants, requiring considerable space for development, yet of the highest importance in any waterside scheme. S. japonica has cut leaves and orange-yellow flowers; in S. Clivorum the leaves are rounded, and the orange-yellow flowers are produced in August and September on stout branching stems. S. Wilsonianus has lemon-yellow flowers on erect spikes. Ligularia macrophylla is close related to senecio, and the first of this group to flower, it is also most distinct, owing to the paddle-shaped leaves and their striking colouring of grey-green. Polygonums succeed in any heavy, damp soil, and are valuable as autumn-flowering plants, but, owing to their aggressive character, are best grouped by themselves. P. sachaliense and P. Cooki are giant kinds, reaching a height of 8 to 10ft.; P. oxyphyllum and P. cuspidatum range in height from 5 to 7ft., while P. alpinum and P. virginianum are moderate growers of an average height of 3ft. or so. The flowers, in every instance are white, and produced with utmost freedom in branching cymes.

Calthas or "King Cups" revel in rich mud close to the water edge, and while the single flowers of C. palustris are not without merit, the double form is much more lasting, while C. monstrosa plena and C. polypetala are equally desirable, the latter having exceptionally large leaves. The water Forget-me-not should also be placed along the margin, and Mimulus cupreus Brilliant is a subject of the highest merit for a similar place, as the rich crimson flowers that are borne in July and August completely smother the plant. Lythrum salicaria attains a height of 4 to 5ft., and is also adapted for the water edge, while any wet boggy ground will suit it equally well: roseum superbum is the oldest form producing stout, erect stems with deep red flowers in August and September; there is also a very excellent form with lighter pink flowers, but it is best grouped apart from the darker shade.

A number of primulas are partial to wet ground, and are most effective when grouped in quantity. P. rosea is first to flower, generally unfolding its rich pink flowers in April and May. P. japonica, when of the true crimson form, is superb massed in quantity beside water, and the newer P. pulverulenta has merit in the same direction. P. sikkimensis and P. Cockburniana massed together produce a most pleasing and altogether unique effect with the orange and lemon flowers mingled. Trollius europæus, in all its forms of lemon, yellow, and orange; Ranunculus aconitifolius, dodecatheons, and Primula cortusoides form a group of spring flowering plants capable of the best effects when introduced into waterside planting, and in a choice spot, with some light shade; and where the conditions are not too damp, cypripediums, ferns, and swamp lilies would produce a feature of uncommon interest, and with these one would naturally associate Meconopsis Wallichi and M. integrifolia, alike for their wonderful flowers and charming leafage.

Of waterside plants employed for their foliage effect, bamboos maintain a foremost position on account of their extreme elegance and great hardiness; the kinds that succeed under the greatest variety of conditions include Arundinaria anceps, A. aristata, and A. nitida (Bambusa fastuosa), Phyllostachys aurea, P. flexuosa, P. nigra, P. Quilioi, and P. viridi-glaucescens, while among dwarf kinds Bambusa palmata should be included for its strong, bold leaves. All are most effective in bold groups, and with the tall kinds occasionally coming to the water-edge and overhanging, the effect has somewhat of a tropical character. Gunneras are plants of majestic proportions, and when suitably placed beside water, command instant attention and invest their surroundings with quite a distinct character. G. manicata is the most superb species, and should always have precedence where space admits; G. scabra is also desirable, and has the merit of adapting itself to more restricted conditions; both enjoy a soil of the richest character, and are best planted with the crowns well above water level, yet in such a position that the roots may have ready access thereto.

Rodgersias succeed in rich, moist soil, and rarely exceed 3ft. in height. R. podophylla is the oldest plant, with magnified horse-chestnut-like leaves that are richly coloured purple-crimson in autumn. P. pinnata alba is quite distinct, and has some merit over the former as a flowering plant, but the foliage is less interesting. Saxifraga peltata prefers a wet spot; the characteristic umbrella-like leaves are supported by long footstalks, which spring directly from the rhizome; the flowers are invariably produced early in the year before the leaves appear.

Of foliage plants with compound leaves available for waterside planting heracleum, Oreocome Candollei, and Cynara Scolymus are most ornamental, the latter in particular, on account of the bright silver-grey of the leaves. The first-named succeeds in wet ground, the others in soil that is well drained.

No water garden is complete without its complement of reeds and grasses; of these carex, cyperus, and eulalias include some interesting and desirable kinds, and the free-flowering forms of Cortaderia (Pampas grass) may also be worked in to great advantage. Elymus giganteus glaucus is a low grass, with intense grey-green glaucous leaves, and this striking leaf colouring is also present in the form of the great reed known as Arundo macrophylla glauca.

Thomas Smith.

AUTUMN FLOWERS IN THE ROCK GARDEN.

The rock garden during the autumn months is considered by many to be devoid of interest owing to the few plants flowering there at that season of the year. It is true that many plants may be found that do flower in the autumn, but the majority are of the aster and sunflower type, too large and totally unsuitable for the rock garden.

Flowers, however, are not the sole source of interest in the rock garden, for what could be more attractive and beautiful than the silvery rosettes of many of the saxifrage family, such as S. longifolia, S. cochlearis, S. lingulata var. lantoscana, and the endless forms of S. Aizoon. Then, again, there are the lovely green carpets formed by those of the mossy section of the genus, S. hypnoides, S. decipiens, and S. muscoides. Among those plants having handsome foliage that assumes such lovely shades of colour in the autumn months we have the shade-loving Galax aphylla, Shortia galacifolia, with the various species of Rodgersia, among others.

There is also an infinite variety of form and outline to be seen in the numerous subjects that find a place in the rock garden, so that even when not in bloom they are very attractive at all times. Among the few suitable plants for this purpose that flower in the autumn are: Anemone japonica, which although not usually considered as suitable for this purpose, should always have a place found for it among the taller-growing plants at the back, where it will not look out of place, and help to brighten the dull days with its beautiful flowers of various shades of white and rose. A. vitifolia is a Himalayan species, with leaves of greater substance, but rather smaller white flowers. Aster Thomsoni is one of the few Michaelmas daisies with a dwarf erect habit. It is a most persistent flowering plant, with light purple flowers, produced well into November. Others of the genus worthy of a place on account of their neat appearance are the rich violet coloured A. grandiflorus and the white-flowered A. Porteri, which comes from the Rocky Mountains of Colorado.

Most of the members of the beautiful campanula family are well over by the autumn, only a few prolonging their flowering period so late. C. punctata is an interesting species from China and Japan, with large, drooping white flowers spotted with red. C. sarmatica is a pretty species from the Caucasus with pale blue flowers on stems about a foot in height. Ceratostigma plumbaginoides, belonging to the Plumbago family, is a very desirable subject, and bears its bright cobalt blue flowers very freely during the autumn months. At the same season the leaves, borne on long pendant stems, change to a beautiful red shade, making it additionally attractive. Cimicifuga simplex, a September flowering species, might with advantage be introduced into the shady parts of the rock garden, for its drooping, feathery racemes of white flowers are very elegant. It is a native of Japan, and grows from 2ft. to 3ft. high, with much-divided foliage. A smaller kind, with erect spikes, is C. japonica.

Several species of gentians prolong their flowering season into the autumn, namely, G. Andrewsi, the "Closed Gentian," from North America, with terminal clusters of rich blue flowers. A peculiarity of this species is that the flowers do not open. G. scabra, or G. Fortunei, as it is sometimes called, is a native of Japan, growing over a foot in height, with blue flowers, spotted with white in the throat. Others are G. straminea, with greenish-white flowers; and some of the forms of G. septemfida, which is one of the finest of the gentians, with beautiful blue flowers freely produced. For making a carpet of foliage to cover roots or rocks few things are more suitable than Polygonum affine. During the whole of the autumn the spikes of rosy-crimson flowers are produced in abundance, and form quite an attractive feature, as they last a long time in good condition. Somewhat smaller in foliage, and with long trailing stems, is P. vaccinifolium, also from the Himalayas. It loves to ramble amongst stones, and bears a profusion of slender spikes of rosy-pink flowers. Both should be allowed plenty of room to spread.

Members of the large and beautiful Primula genus commence to flower in March, among which is P. denticulata, while others keep up the succession till the late autumn. Among the later-flowering ones are P. luteola, from the Caucasus, with bright yellow flowers; P. grandis from the same region, with small yellow flowers; P. mollis, hardy in sheltered situations, and bearing rosy dark-eyed flowers in August and September; and the Chinese P. Poissoni, with rich purple flowers in whorls. All these grow well in moist shady situations. The saxifragas, like the primulas, extend their flowering period over the greater part of the year. Only two, however, are autumn-flowering, these being S. Fortunei, from China, with handsome rosettes of glossy leaves, and large panicles of white flowers with unequal petals, the stems growing about one foot high; and S. cortusæfolia, from Japan, which is somewhat similar, but with more deeply notched leaves and rather smaller flowers. They are both very effective, and well worth the little protection they need during the winter.

Many of the sedums prolong their flowering season into the autumn, some of the best for this purpose being S. maximum, a vigorous species with bronzy foliage, S. Sieboldi, and the well-known S. spectabile. Tricyrtis hirta, the "Japanese Toad Lily," bears a curious but interesting flower, speckled with purple on a pale ground, in September and October. Very similar is the Himalayan T. pilosa. Zauschneria californica, the "Californian Fuchsia," is one of the showiest of our autumn flowers, with its brilliant vermilion coloured trumpets. An earlier-flowering form is the variety mexicana. This is more valuable than the type, giving as it does a longer period of blooming before the frost comes.

Many other plants might be added to this list, like Callirhoe lineariloba, Corydalis thalictrifolia, Cyananthus lobatus, Cyclamen neapolitanus, Malvastrum Munroanum, and Silene Fortunei. Among bulbous plants there are Colchicum speciosum, C. variegatum, C. autumnale, Crocus speciosus, C. medius, C. zonatus, and C. longiflorus, among many others. W. Irving.

BOULTON & PAUL, LTD., HORTICULTURAL BUILDERS, Norwich.

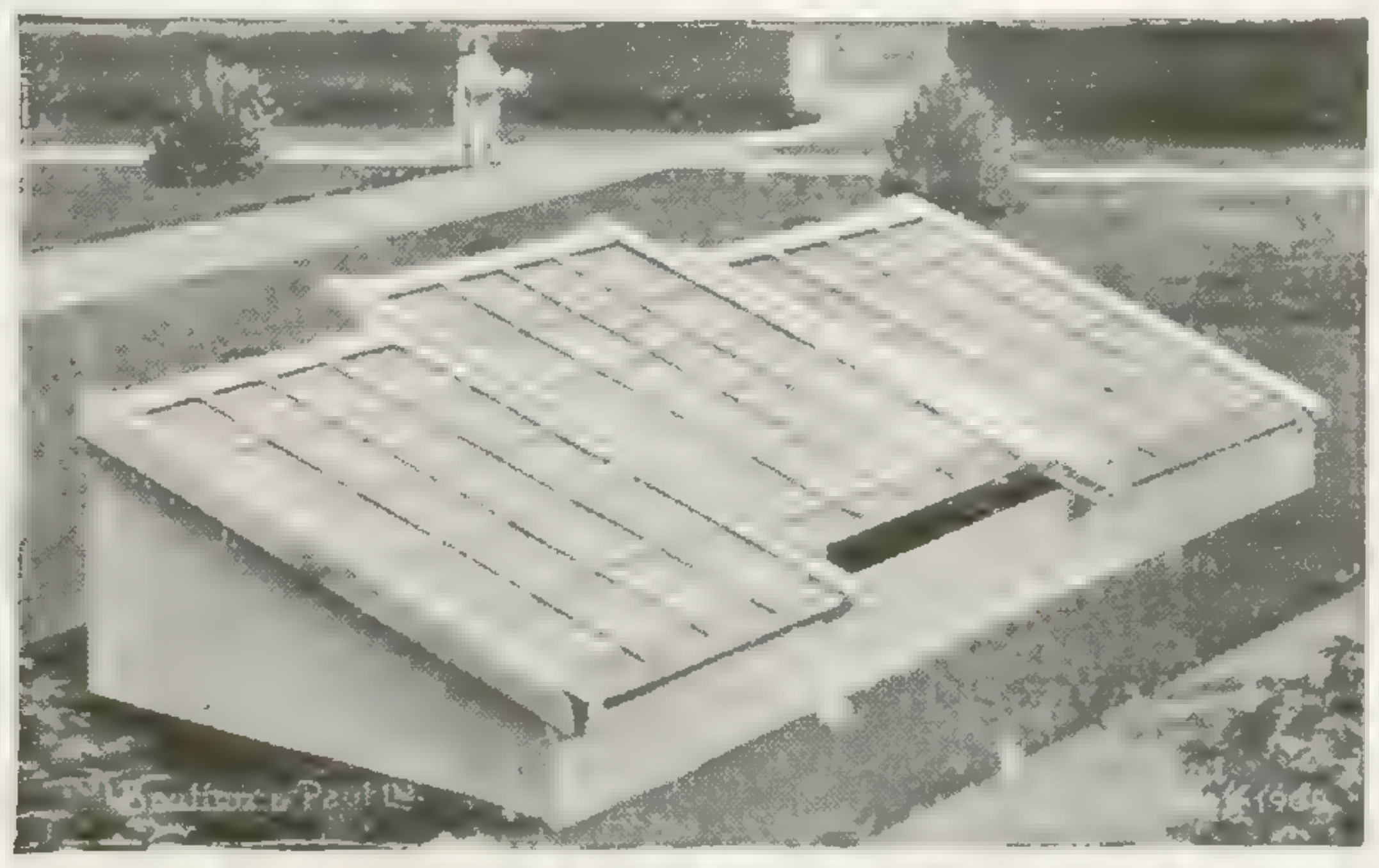
EFFECTIVE, PRACTICAL CONSERVATORIES.

Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of 40/- value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.



4ft. by 6ft. ... £2 0 0 | 8ft. by 6ft. ... 3 0 0
Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft. Similar to No. 75, with Two Lights... 35/-

SEND FOR ILLUSTRATED CATALOGUES.

Every part of these Houses is thoroughly well made, painted three coats, GLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.

No. 49A.—Span, 10ft. by 8ft. £11 10 0
No. 47A.—Lean-to, 10ft. by 7ft. £9 10 0
All parts are numbered ready for easy re-erection by any handy man.

RANSOMES' LAWN MOWERS

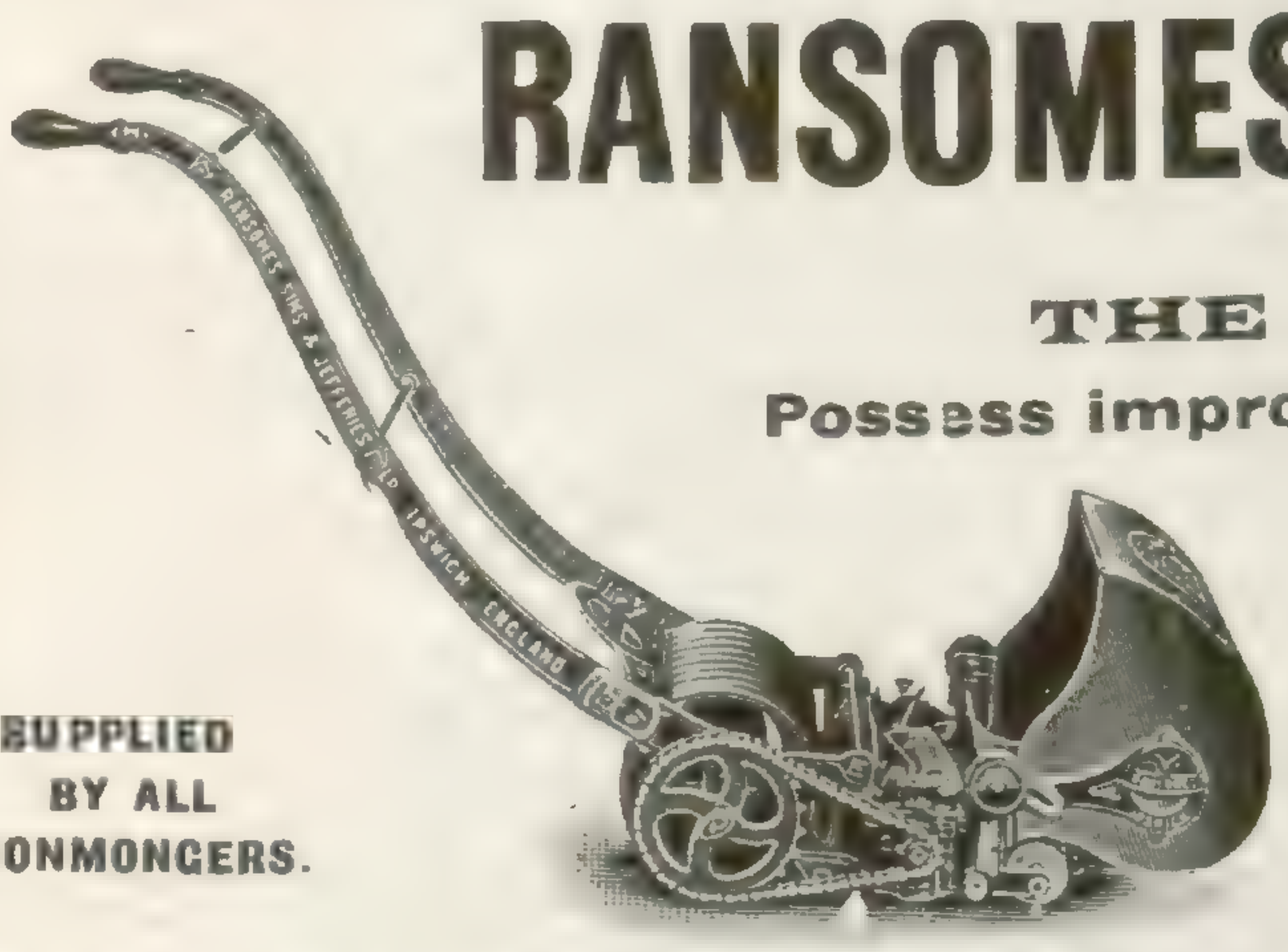
Appointed by Royal Warrant.

THE BEST IN THE WORLD.

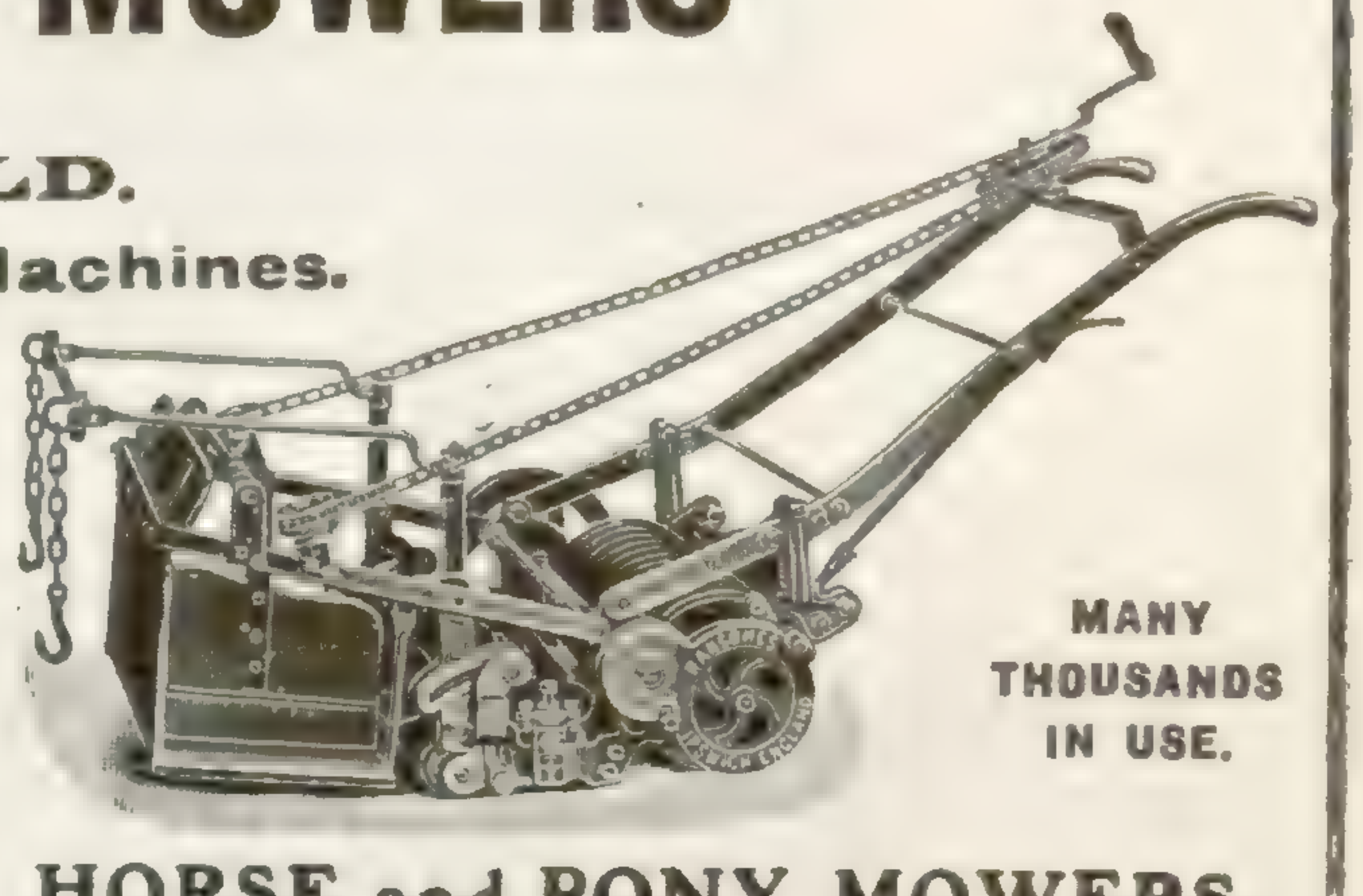
Possess improvements contained in no other Machines.

Recent Awards.

3 GOLD MEDALS.
5 SILVER MEDALS.



SUPPLIED BY ALL IRONMONGERS.



MANY THOUSANDS IN USE.

HAND POWER MACHINES.
In all kinds and sizes.

MOTOR LAWN MOWERS
The first brought out. Reputation Established.

HORSE and PONY MOWERS.
The best large machines.

Illustrated Catalogues Free on Application to— RANSOMES, SIMS & JEFFERIES, LTD., THE ORWELL WORKS, IPSWICH.

PRIMULA OBCONICA GIGANTEA GRANDIFLORA.

The most beautiful Free and Hardy Perpetual Greenhouse Plant grown.

ONCE IN FLOWER ALWAYS IN FLOWER.

We are NOTED for having the most — SUPERB Strain in commerce. —

SEED.

Mixed colours, also Compacta and Fimbriata, mixed, 1s. per packet; separate colours of Purple, Rose, Lilac, Deep Red, Crimson Scarlet, Pale Lilac, and Crimson (fringed petals), 2s. per packet; double flowering, including Pale Mauve and Rose, 2s. per packet. Instructions as to sowing with each packet.

PLANTS, 3s., 5s., 7s. 6d., 10s. 6d., and 15s. per doz., according to size.

W. A., Esq., Reigate, Surrey, writes:—

I had a packet of seed from you last year, and am pleased to inform you that I have blooms measuring two inches and more across each individual flower. They are the best strain I have ever seen, both for variety of colours, and substance of bloom.

WM. ARTINDALE & SON,
Nether Green Nursery,
SHEFFIELD.

For 3 penny stamps we will send you our Catalogue of Plants, which is not merely a price list, but literature which gives all the cultural notes of plants therein mentioned. We have received hundreds of testimonials commenting on the value of this book.

OUR SEED CATALOGUE WILL BE SENT FREE ON APPLICATION.

ZONAL PELARGONIUMS.
Catalogue of New and Choicest Varieties.

From V. SLADE, Zonal Specialist,
Staplegrove Nursery, Taunton.

ORCHIDS.

Amateurs interested in Orchids should write for our

Amateur's Guide,
2nd Edition, free.
Giving Treatment, Soils, Description of Flowers; Illustrated.

MANSELL & HATCHER, Ltd.,
Rawdon, Yorkshire.

CHEALS'

113 Acres of Ornamental

Trees & Shrubs
Of all kinds.

Fruit Trees
Hardy, Healthy, and true to name.

Roses & Hardy Plants

Descriptive Catalogues Free.

J. CHEAL & SONS,
NURSERYMEN AND LANDSCAPE GARDENERS,
Crawley, Sussex.

RIVERS'

Fruit Trees, Roses,
Vines, Figs, Oranges,
AND
Orchard House Trees.

A LARGE AND SELECT STOCK ALWAYS ON VIEW.

Illustrated & Descriptive Catalogue
POST FREE 3d.

THOMAS RIVERS & SON
Sawbridgeworth, Herts.
Station: HARLOW, G.E.R.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

Please Write for List.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

WATER GARDENS.

For **Nymphæas** and **Aquatic Plants,** see my Catalogue, post free.

GLADIOLI and MONTBRETIAS.

For the Best and Newest Varieties, see my Catalogue, post free.

HERBACEOUS PHLOX.

A Splendid Collection, described and priced in my Catalogue, post free.

PERENNIAL ASTERS.

One Hundred Different Varieties. Descriptive Catalogue post free.

BEAUTIFYING DRY WALLS.

All the plants necessary for this special purpose are offered in my New Catalogue.

MAURICE PRICHARD,
Hardy Plant Nurseries, CHRISTCHURCH, HANTS.

A Magnificent New

ZONAL PELARGONIUM

"His Majesty."

Award of Merit, R.H.S.

Of perfect habit, producing flowers of immense size, pips three inches across, trusses sometimes twenty-four inches in circumference.

Its colour is a Glorious Royal Scarlet,

Plants 3/6 each in 3-inch pots,

Being convinced that this is a real advance in Zonal Pelargoniums, I am offering a Silver Cup, value five guineas, a Silver Medal, and a Bronze Medal in open competition for three plants, and also similar awards for twelve trusses, to be exhibited at the National Chrysanthemum Society's November Show.

For particulars see Society's Schedule, or write

W. H. PAGE,
Tangley Nurseries,
HAMPTON, MIDDLESEX.

Telegrams: Page, Hampton.
Telephone: P.O. 166 Molesey.

CHOICE DWARF CAMPANULAS.

The Most Charming Class of Plants for a Shady Border or Partially-shaded Rockwork.

1 doz. named varieties, all different, selected from: Abietina, Erinus, Glomerata acaulis, G. H. Wilson, Isabel, Isophylla alba, Isophylla, Little Gem, Muralis, Pulla, Pulloides, Potenschlagiana, Pusilla alba, Stansfieldi, Turbinata, and White Star; from 60 pots, packed free, by post, for P.O. 5s.; cash with order.

GROVE & SON,
Alpine Specialists,
SUTTON COLDFIELD.

ORCHIDS **EIGHT MILES BY ROAD FROM THE CITY.**

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., **Royal Nurseries, BUSH HILL PARK, MIDDX.**

RHUBARB ROOTS.

DAWES CHALLENGE has obtained **seven medals and awards.** Price list and cultural directions free. Sample bunch gratis with **10**/- orders.

Apply direct.

CHAMPION RHUBARB GROWER,
Syderstone Nurseries, Norfolk.

NEW PLANTS FROM CHINA

In our **HERBACEOUS AND ALPINE PLANT** Catalogue, just issued, we offer for the first time a number of

FIRST CLASS NOVELTIES

secured by our Collector, **Mr. GEORGE FORREST,** in the high **ALPS OF YUNNAN, CHINA.** These plants, of great beauty and variety, can be got

ONLY FROM US,

and they form an introduction to what is probably the **MOST WONDERFUL COLLECTION** of hardy plants at present existing in the country if not **IN THE WORLD.** And yet the prices are quite absurdly low.

— CATALOGUE FREE. —

BEES Lᵀᴰ.. Dept. 6, MILL ST., LIVERPOOL.

HARDY PLANTS
. . FOR . .
HERBACEOUS BORDERS.

ROCK, ALPINE, WALL, AND WATER GARDENS.

Plans and Estimates
FOR
All Classes of Garden Work.

Catalogue of Alpine and Rock Plants Free on Application.

GOLD MEDALS
Holland House Show,
1909 and 1910.

PRESS NOTICE, JULY 14:—

"Messrs. Wallace and Co. took the lead for originality of treatment, though the idea (like all great ones) was delightfully simple, being, just as it were, a slice of an Old-fashioned garden transferred to the show."

R. WALLACE & CO.,
Kilnfield Gardens,
COLCHESTER.

By Appointment to H.M. The King.

1911 FORBES'

Illustrated Plant Catalogue **Nearly 200 Pages.**

GOLD MEDAL SPECIALITIES.

Contains carefully revised **Descriptions, Colour, Height, Time of Flowering, British or Common Names, Prices,** etc., of the **Grandest Collections** of **ASTERS, BEGONIAS, CALADIUMS, CARNATIONS, DAHLIAS, DELPHINIUMS, PÆONIES, PANSIES, VIOLAS, PELARGONIUMS, PENTSTEMONS, PHLOXES, PYRETHRUMS, HARDY BORDER PLANTS,** carefully-prepared **PLAN** for arranging **HARDY PLANT BORDERS,** etc.

Experts unanimously accord **FORBES' CATALOGUE** the unique distinction of being the **best** and most **reliable** up-to-date **Reference Book** extant.

FREE ON APPLICATION.

JOHN FORBES (HAWICK), LIMITED.
(Dept. I), The King's Nurserymen, **HAWICK, Scotland.**

If the "Daily Mail" £1,000 winning bunch of Sweet Peas

BE GROWN WITH

MACKERETH'S SPECIAL SWEET PEA MANURE,

Sold in Tins, 1/- (1/4 post free), **2 6** (3/- post free).
Sold in Bags, 14 lbs., **5**/-; 28 lbs., **8 6**; 56 lbs., **14**/-; 112 lbs., **25**/- Carriage Paid.

I will present the winner with **£10,** and if the bunch contains bloom of Earl Spencer, I will present the winner with **£5.**

I have splendid stocks of the most chaste Spencer Sweet Peas. Orders executed the day they are received.

G. H. MACKERETH,
The Sweet Pea Clearing House,
ULVERSTON.

TAKE NOTICE.

Intending planters should send for the STANCLIFFE CATALOGUE OF TREES, &c.

Our Stocks, which are grown on the highest and most exposed hills of Derbyshire, are in fine condition, and are sure to give satisfaction. Note the prices before ordering elsewhere.

Rockery Stone, 1/- per ton.

THE STANCLIFFE ESTATES CO., LTD.,
DARLEY DALE, DERBYSHIRE.

PERENNIAL ASTERS.

These, popularly known as Michaelmas Daisies or Star Worts, were until a few years ago, generally regarded as amongst the most uninteresting classes of plants cultivated in our English garden, and amongst those who so regarded them was myself. At the same time, I was under the impression that there was a great future for them. if seriously taken in hand, and I resolved at the earliest possible moment to make as complete a collection as I could of all the known varieties. This I did. and made a selection of the best kinds to grow for seed-saving purposes.

At first I met with but little success, very many of the seedlings proving worthless or no better than the existing varieties, but undaunted, I persevered, and am now more than satisfied with the result. Others, too, I am glad to know, have proceeded on the same lines, and introduced many sterling novelties. With the many improved forms these asters make one of the most valuable groups of autumn-flowering plants we possess, and nearly every garden, large and small, cultivates them more or less. With a reasonable amount of care, owing to their hardiness, a wealth of blossom is assured during the autumn when practically the beauty of all else in the open borders is on the wane. They flourish in almost any situation, and on any kind of soil, and may by proper management be successfully grown on the same site for a long number of years. Their delightful and graceful habit and free flowering propensities of many shades of colouring when judiciously arranged, present a glorious picture from the beginning until the end of October. In addition, they are admirably adapted for dinner-table and other forms of house decoration.

PORTION OF BORDER OF MICHAELMAS DAISIES.
At Aldenham House, the residence of the Hon. Vicary Gibbs.

To obtain the best results the Michaelmas daisies should annually be taken up at this season and replanted, and though they are admirably adapted, especially some species and varieties, for dotting about in the herbaceous borders or shrubberies, unquestionably the best plan is to devote either a good border or several beds entirely to their accommodation. Overcrowding must be strictly avoided. This is detrimental to their well-being in several ways, as not only is it impossible to stake them out properly, so that they display their charms to the best advantage, but also when the growth is crowded attacks of mildew are difficult to prevent. We plant at a distance of three feet from plant to plant and four between the rows, and arrange them angle ways in the rows to admit of their having ample space to develop.

Select strong pieces for planting, not too large, and those exhibiting the most promising growth. If the land is very heavy and tenacious, the smallest plants will be benefited by having a sprinkling of finer material about the roots. Plant firmly and label each variety correctly and neatly. After planting fork the border over and leave it in a neat and tidy condition. Where slugs are prevalent they will at times play havoc with the young growth, so that a sprinkling of fine cinder ashes round each will be useful as a protection from them. Staking is an important detail to ensure their producing a pleasing effect when in bloom. Many growers think that one stick suffices, and they put one in the centre and loop the whole of the growths to it, but this completely spoils the effect because the graceful habit is lost.

If time can be spared, and it is not a very large undertaking, three or four, or even five, stakes would be placed to each specimen. They should be inserted in a slanting direction, the tops pointing outwards. Drive them into the ground as near to the base of the plant as can be conveniently done without damaging the roots, and to reduce the risk have the stakes well sharpened. Staking should be done before the growths become too long. If left there is the possibility of some being broken.

Thin out the growths to one or two at the most to a stake, and tie with a piece of raffia.

If any of the shoots are unduly long in comparison to the others these may be stopped, or if the plants are preferred of dwarf habit stop the whole, but, generally speaking, I do not recommend stopping all the growths. Little attention will be required after staking is completed beyond tying the shoots at intervals and loosening the surface with the Dutch hoe. The latter is, of course, quite essential to their well-being, and also checks the weed growth, and in dry weather prevents rapid evaporation of moisture from the ground. On light soils, especially in dry weather, much assistance will be derived from copious supplies of moisture at the roots, and a mulching with manure or long strawy litter. An occasional watering with sewage water will also prove of much benefit, and a sprinkling of artificial manure on the surface in showery weather will prove stimulating.

Asters, as a rule, are not prone to many diseases; their chief enemy is mildew. Some varieties are more liable to attacks of mildew than others, and it is worthy of mention that of all the plants of Climax I have grown, in all positions, I might say, and aspects, I have never once seen the slightest trace of mildew. Syringing during the evening with an approved specific is the best remedy, using a syringe capable of producing a fine spray, and thoroughly moistening the whole of the plant, and give a good syringing in the morning with clear water.

When the growth is completed, just prior to expanding their flowers, remove the tops of the sticks with a pair of cutters; this will greatly enhance the effect. The varieties and species of asters, as I stated before, are various, both in regard to habit of the plant and colour. Their season of flowering, too, may be made to extend over quite a long period, if the various species are planted in the mixed borders, but where grouped to themselves, only those should be used that flower about the same time. The Amellus section include now many shades of colour, and have of recent years been much improved upon. These are invaluable for cutting, and should occupy a position apart from the aster border proper. A. Thomsoni flowers in August, and is well worth a position in the garden. Flowering immediately afterwards is A. acris, a good border plant, usually much admired. Of this, too, there are now many beautiful varieties. A. cordifolius and its several varieties contribute many beautiful plants, principally of blue shades of colour. A. cordifolius elegans, Ideal Diana, and White Diana, Little Boy Blue are all worth growing. Of the A. ericoides section there are many varieties, and these universally find favour, because of their small flowers, so freely produced and of varying shades of colour. To enumerate all the varieties that are of merit would be impossible, but a few well worth a position might include: Bianca, a pure white form of Hon. Edith Gibbs; Delight, white; Enchantress, blush, with yellow centre; Golden Spray, good for the front row; Hon. Edith Gibbs, one of the best, pale blue; King Edward, dwarf, bright mauve in colour; Osprey, another good variety for the front row, pale pink. Perfection is a grand free-flowering aster of perfect growth and medium stature, with pure white flowers. Ringdove is an excellent variety, a seedling from Enchantress, with rose-lavender flowers. Simplicity is a graceful front-row plant, bearing flowers of a pale blue colour. Star Shower is a good creamy-white variety, very free, dwarf to medium in height. Novelty has blue flowers, and is highly meritorious. Desire is one of the most distinct. In habit the plant is pyramidal, and the growth completely covered with small white flowers.

Of the Novæ-Anglæ section there are many useful varieties. Probably one of the best known is Mrs. F. W. Raynor, an indispensable variety on account of its colour—bright red. Lustre is a striking variety hardly so bright in colour as the former, but the flowers are distinctly semi-double in character and quite new. The Novæ Belgi section is a large one. Of this section probably no aster has gained such popularity as Climax. This is of vigorous growth, grand in colour, and invaluable for cutting. St. Egwin is another good dwarf variety of the section, with flowers of a pleasing pink shade. Finchley White, a distinct and good white; Esther, a good late pink variety, makes a good plant for the herbaceous border, as does A. Tradescanti, late; A. vimineus, and varieties compacta, Lovely, nana. A. turbinellus and its white variety are also distinct and worth including.

E. Beckett.

PICEA EXCELSA RAMONTI.

A handsome small-growing variety of the common spruce. The specimen illustrated is about two feet high.

NEW PLANTS, ETC.

ODONTOGLOSSUM JEANETTE

This is a delightful hybrid produced by crossing O. Rossi rubescens with O. amabile heatonense. The flowers are of good size and fine texture, and the prevailing colour is deep vinous purple, the apices of the segments being rosy. The curious lip has a bright rose-coloured apex, and a yellow base and crest. A handsome and distinct orchid. F.C.C., R.H.S., March 14. Messrs. Charlesworth and Co., Haywards Heath.

ADIANTUM GLORY OF MOORDRECHT.

To this graceful adiantum, already described and figured in these pages, the higher award was granted on this occasion. F.C.C., R.H.S., March 14. Mr. A. A. Fabius, Emsworth.

CYMBIDIUM GOTTIANUM.

A very pretty hybrid between Cymbidium eburneum and C. insigne Sanderi. The flowers have a good deal of the substance and form of the first-named parent, and were carried on an erect spike. The ground colour is white, with green tinted sepals and rose-red spots on the yellow crested lip. A.M., R.H.S., March 14. Messrs. Sander and Sons, St. Albans.

CYMBIDIUM ALEXANDERI.

This is another hybrid from the comparatively new Cymbidium insigne, the other parent being C. eburneo-Lowianum. In this case the large flowers were white, tinged with pink, and with lines of a deeper hue, while on the lip were spottings and stripes of deep red. A.M., R.H.S., March 14. Lieut.-Col. Sir G. Holford (grower Mr. H. Alexander), Westonbirt, Gloucester.

ODONTOGLOSSUM MIRUM BRAGGENSE.

A very attractive odontoglossum derived from a heavily blotched O. crispum and O. Wilckeanum. At first sight it could easily be taken for a finely blotched crispum. The white ground colour is almost obliterated by the large blotches of rich red-purple that extend over sepals, petals, and lip. A.M., R.H.S., March 14. Messrs. Sander and Sons, St. Albans.

LÆLIO-CATTLEYA DOMINIANA MONK-END VAR.

This particular variety of L.-c. Dominiana has very large flowers; their sepals and petals are deep lilac and the broad rounded lip is intense and rich purple. A.M., R.H.S., March 14. Mr. H. A. Innes, Croft Spa, Yorks.

TULIP YELLOW MURILLO.

The Murillo set of double tulips is very popular and this new yellow form promises to be of great value for forcing as well as bedding. The flowers are of good size and substance, well doubled, but not heavy, and their colour is bright yellow. A.M., R.H.S., March 14. Mr. W. Profittlich, Twickenham.

SAXIFRAGA PETRASCHI.

A charming little saxifrage, bearing pure white flowers over a close mass of glaucous leafage, and on red-tinted stems. It is a hybrid between S. tombeanensis and S. Rocheliana. A.M., R.H.S., March 14. Sir Everard Hambro (gardener, Mr. Grandfield), Hayes Place, Hayes, Kent.

HIPPEASTRUM QUEEN MARY.

A very fine and altogether beautiful variety, white, with blooms measuring eight inches across. The segments were all broad and rounded, making up flowers of excellent form. A.M., R.H.S., March 14. Messrs. R. Ker and Sons, Liverpool.

DWARF CONIFERS FOR THE ROCKERY.

The various dwarf conifers are excellent subjects to introduce into the rock garden, for they add the necessary touch of greenery and height which is required to relieve the bareness of the garden during winter, while their slow growth and low stature when mature effectually prevents them from offering any serious obstruction to small choice plants in their immediate neighbourhood.

If planted when quite young many of them may be accommodated in small pockets between large stones, for the roots push their way about and manage to obtain sufficient nourishment to keep the plants going. When, however, old plants with a considerable root system have to be introduced, positions must be found where there is a good depth of soil, or they will not establish well, and the result will be an untidy appearance by reason of dead branches and diseased foliage.

The common Spruce, Picea excelsa, provides a number of varieties which are well worth growing, for they form dense green cushion-like masses from nine inches to three feet in height. Some grow very slowly and are many years in attaining a diameter of two feet. Good ones are compacta, diffusa, dumosa, globosa nana, microsperma, pygmæa, Ramonti, and repens. Clanbrassiliana is also of dwarf habit, but is more vigorous than the other kinds. Other species also produce dwarf varieties, and P. orientalis nana, P. o. pygmæa, P. alba compacta, and P. a. echiniformis, are good ones to grow.

Among the pines are several very useful forms. For a group about the back of the rockery the dwarfer forms of the Mountain Pine, P. montana, come in very nicely, while the common Scots Pine, P. sylvestris, gives us low-growing compact varieties in globosa, nana, and pumila. Aurea grows very slowly, and people who like a touch of gold here and there might try that variety. The Weymouth Pine, P. strobus, adds to the number of dwarf, compact-growing kinds, with compacta, densa, and nana, whilst a dwarf type of a distinctly different character is brought to notice in P. s. prostrata. In this the branches are scandent, and they may be made to lie on the surface of rocks or hang over the face of a cliff.

Several species of pinus are so slow growing that they may well be used in the rock gardens. Such kinds as edulis, cembroides, and albicaulis are of the number.

Though the Douglas Fir, Pseudotsuga Douglasi, may be considered as one of the giants amongst conifers, it produces a dwarf compact-growing variety, which is variously known as nana and pumila. It may well be introduced for the sake of variety. Amongst junipers there are several very useful subjects. The common Savin, Juniperus Sabina, may be used on the outskirts of a rockery, especially where the soil is of a chalky nature, while for more prominent places the varieties prostrata, procumbens, humilis, and Knap Hill variety are all available. The variety procumbens is known as the "Waukegan juniper," and is peculiar on account of the curious purplish hue assumed by the foliage during winter. Other junipers which may be used with success are J. communis. and its varieties aurea, fastigiata, and hemisphærica, and J. littoralis, a Japanese species of prostrate habit.

Among the yews are one or two kinds which may well be placed on the rockery, for they rarely grow more than from one to three feet high. The tiny-leaved varieties, epacridioides and ericoides, are neat-growing kinds, while nana is of more or less prostrate habit. Podocarpus alpina, a Tasmanian shrub, may be requisitioned in the southern counties. It grows about three feet high, but as it spreads rather widely, a fair amount of room should be given.

Of Lawson's cypress there are several dwarf varieties of globose habit; the most suitable for the purpose under notice are Cupressus Lawsoniana vars. compacta, minima glauca, and nana. The Japanese Cupressus obtusa provides several varieties of more than general interest, which are suitable for the rock garden, for though they sometimes grow taller than many of the kinds previously mentioned, they are not of very dense appearance, and their peculiarity of habit well fits them for the position. C. o. compacta, C. o. nana, C. o. nana aurea, C. o. nana gracilis, and C. o. pygmæa, are the dwarfer-growing kinds, whilst the taller filicoides, gracilis, lycopodioides, and tetragona aurea, are all worth attention. Cupressus thyoides, the White Cedar of the Eastern United States, produces a very dwarf compact growing variety in leptoclada nana, but it is rare and difficult to obtain.

The American Arborvitæ, Thuya occidentalis, is to the front with a number of dwarf forms, dumosa, globosa, ericoides, Hovei, and Späthi, all being of this class. T. plicata also gives us a low-growing variety in compacta, whilst the Japanese T. dolobrata produces a dwarf form which is called nana. The Chinese Arborvitæ, Thuya orientalis, gives us low compact bushes in the varieties compacta, densa, ericoides, globosa, and minima, while Libocedrus decurrens has two dwarf representatives in compacta and nana. Cryptomeria japonica, the Japanese Cedar, produces several curious dwarf varieties, such as elegans nana, Lobbi nana, and spiralis; they are, however, more curious than beautiful.

Although it is possible to find more dwarf conifers than those contained in the above list, the ones mentioned are sufficient to direct attention to the many plants which may be used for the purpose under notice.

W. D.

THUYA OCCIDENTALIS DUMOSA.

A dwarf, dense-growing variety of the American Abor-vitæ, with brownish foliage. The specimen illustrated is about fifteen inches high.

Chorizemas.—These pretty hard-wooded plants are remarkable for their brightly coloured blossoms, which are borne during the winter and spring months. The pea-shaped flowers are usually of some shade of red or yellow, generally a combination of the two. They are all natives of Australia, and, with one exception, are not at all difficult to cultivate, needing as they do a compost made up of fibrous peat and sand, firm potting, effective drainage, and an ordinary greenhouse temperature. There are several kinds, one of the best being Chorizema Lowi, a garden form distributed about twenty years ago. This has richly-coloured blossoms, and dark green prickly leaves. C. cordata splendens, a stronger grower, is also good, while C. flava has self yellow flowers. C. Henchmanni is now very scarce, being a difficult plant to grow well.—W. T.

SPRING PLANTING IN THE ROCK GARDEN.

Many alpines require the most careful planting, both with regard to method and also to their situation, and the full consideration of these points is necessary if even a moderate measure of success is to be achieved within a reasonable time. It is, for example, a blunder to plant alpines too early, as many are extremely small, and easily disturbed by the late frosts, which work such havoc in our springs, while leaving the process until late autumn is quite as, if not more, risky. It may be said that showery weather from April to September will give these subjects the best chances, and the "month of smiles and tears"—April—is one of the best for our purpose. Some of the earlier alpines will have gone out of bloom; others will still be in flower, and still others have yet to develop their blossoms, but in April and in showery weather in May, all of these may be planted with every confidence of success. It is only necessary to examine a plant which has been put in position in April and to compare it with one set in, say, September, to discern the vast difference in favour of the April one in the following summer. Thus, one would advocate April planting in preference to any other time.

[Photo: H. N. King.

A FINE GROUPING OF SAXIFRAGAS IN THE ALPINE GARDEN AT GATTON PARK, REIGATE,
The residence of Sir J. Colman, Bart.

In planting the alpine flowers, it is necessary to have at hand some suitable compost, as well as to see that the positions the flowers are to occupy are properly prepared. A good compost for the greater number of plants will consist of about equal parts of loam and leaf-soil, with some sharp sand and some grit added. This may form the basis of our planting material, but a little variation in the proportions of each will not matter much. This compost ought to be free and open, so as to admit of its being well rammed in about the roots without becoming unduly stiff for the latter. It ought to be just moist enough to cling together if pressed in the hand, but not so much so as to be clayey and wet when thus handled. In fact, soil such as is used for potting ordinary plants will answer well if in the same condition.

The sites for the alpines must be well drained, and a simple hole in a rock or stone without any drainage will be destructive to the greater number of plants. Where such a hole has to be utilised provision should be made for carrying off the surplus water below the ground line, so that the roots may be in a medium free from stagnant moisture. In such a hole drainage material should also be provided. Then the sites for the plants should be so arranged that the rainfall and the overflow from above should be conducted towards their roots. Many alpines which dislike moisture above revel in this when at the roots, and a little planning of the sites for the individual plants will be found of the utmost value. Such places as pockets or crevices which are overhung by stones should not be planted unless the alpines can receive a sufficient supply of moisture in some way or other. To plant flowers where the earth is always dust-dry is to court failure, and even the most drought-resisting sempervivum will look far from happy in such a place.

Then it is necessary to provide positions suitable for the alpines it is intended to plant. It is hopeless to attempt the cultivation of shade-loving subjects, such as ramondias and haberleas on a dry, sunny rockery, just as sun-lovers will fail to give satisfaction in some gloomy corner overhung by trees. So, also, a lover of moisture ought to have prepared for it some low position with plenty of water, where it can never suffer from drought.

Keeping in view these points and having our plants at hand, we may proceed to put them into position, having also beside us a supply of limestone chips or old broken mortar for the lime lovers, together with some small pieces of stone and some larger bits to lay round the plants. If the plants are in pots they should be turned out, and the ball gently broken up. If filled with roots these may be partially loosened round the sides so as to give the alpines an earlier hold of the earth. A hole of sufficient depth to hold the plant is then made, and the plant inserted, keeping in most cases the crowns a little below the ordinary level so as to allow of top-dressing in future seasons. The earth should then be well rammed in about the roots, and made really firm, though not stiff, and some small stones jammed in about the plants. If the rockery has open spaces of any size about the plants a few stones ought to be placed round about the latter to prevent rapid evaporation.

The question of what to plant is a large one, requiring more space for detail than can now be afforded. Much will depend on the position and nature of the rock garden and upon the exposure or exposures it presents. If it is overhung by trees, it is one of the very worst.

For certain positions, however, certain plants ought to be secured, and with reasonable care these have every prospect of success. Aubrietias are indispensable for spring bloom, and, while many do not care for the arabises, as comparatively common, there are a few choicer species, such as A. Sturi, which will give pleasure. Arenarias, again, must not be forgotten, and A. balearica, for the shadier stones, with A. montana for the sunnier parts, will never come amiss. Such choice geraniums as G. argenteum and G. cinereum, with G. lancastriense, and a few of the choicer erodiums, such as E. guttatum and E. sibthorpianum, will give pleasure in summer.

[Photo: H. N. King.

BEAUTIFUL HERBACEOUS BORDERS AT CLANDON PARK, GUILDFORD.
The residence of the Earl of Onslow.

The little shrubby helianthemums, or sun roses, are delightful shrubs; and a choice broom or two, like Cytisuses Ardoini, C. kewensis, and C. Beani add charm to the rock garden. Androsaces may be represented by A. carnea, A. lanuginosa, and A. sarmentosa, as easy growers. Synthiris reniformis is a good early alpine; and in the dianthus family we have a host of beautiful alpines, D. neglectus and D. petræus may be named at random, together with the choice D. alpinus. Ramondias and haberleas have been alluded to as good for the shady parts, and we may have Galax aphylla and Shortias uniflora and galacifolia for the lower moist places, with the delightful Polygala buxifolia. Then there are the almost myriads of saxifrages of many forms and colours, indispensable everywhere; with sedums, sempervivums, iberises, silenes, soldanellas, saponarias, gypsophilas, and, in fact, a bewildering array of flowers of all kinds.

It is not so much a question of what plants are available as of selecting among so many choice alpine flowers. Properly planted in suitable places, these will give unfailing delight for many years to come.

S. Arnott.

SEASONAL HERBACEOUS BORDERS.

The question of "seasonal herbaceous borders," that is, borders planned to be in full beauty at particular periods, is one that enters largely into garden design at the present day.

Bearing in mind the fact that gardens must be adapted to the needs of the garden-lovers, and that these may be divided into two great groups, namely, those that spend spring and early summer in their country homes and gardens and then migrate to the seaside, and those that remain in town during the London season and turn to the country home during the heats of July. The question is important. This necessitates, on the one hand, herbaceous borders planned to blossom throughout spring until July, and on the other a glow of floral beauty from July until the end of September. Thus it will be my purpose to deal with these two sections separately, and give also a connecting display which shall be suitable for linking the "early" and "late" borders without a break.

I am not in love with "monthly" flower borders, nor with those kaleidoscopic rainbow effects obtained by alternating bright colours with others different but equally bright, a fashion, by the way, which is rapidly dying.

Herbaceous borders should ever be well prepared. Trench well and deeply, and break up the subsoil below. Manure well, keeping this deep enough to be clear of the spade when planting; finally choose, if possible, for planting a time when the ground is dry enough to work well.

For a spring planting, March is undoubtedly the best month, though in forced circumstances I have achieved good results from planting at the end of April. So March let it be, or not later than the first week in April, if a good summer display is to be assured. The reader will bear in mind that exact heights of many herbaceous plants is determined only by the soil and situation of the borders in the district where they are, the variation being great in various districts. Again, varietal forms of many plants differ so much in height and habit (delphiniums, phloxes, Michaelmas daisies being notable cases) that one could not assign exact positions unless acquainted with varieties to be used and ground to be planted.

May and June.

It is not a difficult matter to have a gay border in May and June; it is generally later than this that the border fails to come up to a high standard, but selection will lift the border above the mediocre, and give a character of its own.

The border in May should bear bold defined masses of Darwin and Cottage tulips, of which Clara Butt, Mrs. Moon, King Harold, Claude Gillot, Dream, Pride of Haarlem, Fra Angelico, and many others are wonderfully attractive. In the intervening spaces should spring a wealth of gold and orange trollius, of which Orange Globe, europæus, asiaticus, Fortunei fl. pl., and Newry Giant are worthy of note. Aquilegias are dainty contrast plants, especially the fine long-spurred strains derived from A. cærulea, A. Skinneri, and A. californica, and I must confess to a love of the old English short spurred forms.

Pyrethrums, both single and double, may be utilised. Choose the colours well, pure whites, clear pinks, brilliant scarlets, and rich burnished crimsons are very well. Avoid washy hues, and plant singles in preference to heavy doubles. English, Spanish, German, and other irises should be planted, particularly Germanica varieteis. Here again selection will tell; Edouard Michel, Amas, pallida dalmatica, asiaticus, aurea, flavescens, Maori King, Madame Chereau, and Purple King are among the best. Auriculas, primulas in variety, iberis like corræfolia and superba, saxifrages like Wallacei, ceratophylla, and umbrosa, with masses of Arabis albida fl. pl., and Alyssum saxatile, can be used in the foreground, though if a continuous floral edging be required there is nothing to surpass the best violas.

Doronicums, especially excelsum, Ranunculus aconitifolius plenus, polemoniums in variety, foxgloves, Linum arboreum, L. narbonense, and L. perenne, Dianthus multiflorus, and the floriferous Erigeron speciosum, and its pretty variety Quakeress, assist in filling between bolder subjects.

To continue through June we may bring in Romneya Coulteri, spiræas, and early astilbes, heucheras in variety,the exquisite forms of Pæonia albiflora, Madonna and Orange lilies, and Asphodel lutea, with its yellow spikes, while the glowing Oriental poppies, Prince of Orange, Mrs. Marsh, Lady Roscoe, Beauty of Livermere, and Fringed Beauty are very telling. Eremurus himalaicus, E. robustus, E. Elwesianus, E. Bungei, E. Shelford, and other forms are grand, and these, with thalictrums and delphiniums are fine background subjects. Delphiniums are so good nowadays that a selection is difficult; Persimmon and Belladonna semiplena one must grow, but Rev. E. Lascelles, Lizzie van Veen, Sir Trevor Lawrence, King of Delphiniums, Capri hybrida, and a good white (Nulli Secundus, or something akin to it) will give the basis for a good collection. Incarvillea Delavayi should also be chosen, but I. grandiflora is hardly tall enough for the borders.

With the foregoing one is safe in early summer, the species and varieties named assuring one of a first-rate May-June combination.

Now for the "connective period," which will link up the early and late borders, and carry the whole succession forward without a break.

Connecting Flowers.

Among these connecting flowers we note Verbascum olympicum, V. Choixi, V. Caledonia, etc.; lupins give some fine colours in the polyphyllus group; Chrysanthemum maximum, including Mrs. Lowthian Bell, King Edward, Robinsoni, etc., are fine Gaura Lindheimeri is an unforgettable beauty. Anchusa Dropmore and A. Opal, Japanese irises, Achillea The Pearl, centaureas in many kinds, Gaillardia grandiflora, and Scabiosa caucasica are all good, the latter continuous until the frost. Hemerocallis flava, H. aureole, H. apricot, and H. Dr. Regel, Campanula lactiflora, C. persicifolia, C. macrantha, C. grandis, and C. amabilis are all good,while carnations in approved varieties, Lychnis chalcedonica and many others prove the possibility of continuous beauty.

July to September.

From July to October will be a period of abundant blossom if the selected groups are planted. The main features should be lilies of the speciosum and tigrinum sections, Phlox decussata, such as Coquelicot, Etna, Chardonneret, Pantheon, Helene Vasçeresco, and many others which provide good colouring; montbretias, including the Westwick varieties, and Messidor, Germanica, Vulcan, etc.; tritomas, especially John Benary, R. Wilson Ker, Beacon, Redcap, Cloris, and Lemon Queen. Gladiolus of the primulinus, Childsi, and gandavensis sections are needed, with Lobelia cardinalis, L. fulgens, and L. Nansenciana. Chrysanthemums of the best early florists' forms and helianthuses, omitting the ultra tall forms, must be utilised as well as those ever delightful beauties, the Michaelmas daisies. Of the latter a fair selection would be St. Egwin, Climax, Photograph, Ericoides, Coombe Fishacre, Freedom, Edwin Beckett, Daisy Peters, and the best Amellus varieties.

Pentstemons should be included in all plantings, particularly those of the Newbury "Gem" class, and other first-rate subjects are anemones of the Japonica group, Eryngium amethystinum, E. Oliverianum, and E. giganteum, Linaria dalmatica, and L. repens, Gypsophila paniculata plena, Monarda Cambridge Scarlet, and solidagos like radiata, Golden Wings, and Buckleyi. Echinops Ritro and E. sphærocephalus and Crinums Powelli and Powelli alba must not be omitted.

Furthermore, I would urge the claims (if one has the space for planting) of Artemisia lactiflora, Stenanthium robustum, Aconitum autumnale, A. Wilsoni, and A. Fischeri, Cimicifuga simplex, and C. racemosa, Vernonia arkansana, veronicas in variety, but especially V. subsessilis and V. exaltata, Statice latifolia, S. tartarica, and S. Limonium, heleniums and rudbeckias in a blaze of gold, and the glowing alstrœmerias, of which aurea and aurantiaca are the hardiest.

Lack of space has excluded notes upon arrangement, but in this one must be guided either by one's own particular taste in floral beauty, or else emphasise a few particularly telling subjects in bold groups, and let the more delicate and lighter-growing plants frame the more attractive beauties. Group lightly but freely.

A sufficiency of the first two colours will form a sterling feature, with other shades secondary. Above all, keep the hoe going. A stirred surface gains much both from sun and shower, and with the removal of faded blossoms and timely and careful staking will go far toward securing a fine display of blossom over a long period.

P. S. Hayward.

Parsley.—Make an important sowing to furnish a good supply of plants. On many soils parsley causes anxiety in keeping up a continuous supply, and it is well to err on the side of plenty. Select a sweet soil, and incorporate plenty of wood ashes or soot with it. Parsley lends itself to transplantation; in fact, invariably does better, if planted on a rich piece of ground when the plants are small. Should any sowings have been made in boxes early plantings may forthwith be made of the young plants outside.—C. F.

SIMPLE WATER GARDENS.

The season for nymphæa planting is fast approaching, and those who contemplate making a pool for the culture of aquatics, or already possess a collection and wish to add new varieties or replant some of the old-established clumps which have become overgrown, should lose no time in making preparations, for, although nymphæas may be safely planted from the latter end of April until the beginning of July, the earlier this operation is performed the better, as those planted at the earliest time mentioned will give a good supply of flowers during the coming season, whereas if planting is deferred until a later period, and we experience a cold, sunless season, so that the plants have not the time to make sufficient roots and become established, they may die during the winter.

Another thing to guard against in the planting of new nymphæas, is not to place them in too great a depth of water to commence with; if a weak plant is placed under the surface to the depth of say two or three feet, it will die. Far better to first start it in shallow water,and when it has made sufficient growth it may readily be pushed out into deeper water. Certainly all the hardy nymphæas may be grown in shallow water, but in no case with less than nine inches of water above them, and will flower freely, the only difference in the stronger growing varieties is that the flowers will be somewhat smaller; therefore, by placing them in deeper water they will produce flowers larger and of greater substance.

In the planting of nymphæas I should never advocate a greater depth of water than four feet, although I am well aware our common British water lily, Nymphæa alba, and some of the stronger growing Marliac hybrids and others will flourish in water to a depth of eight to ten feet, and perhaps more. Nymphæas should not be planted so far out in a lake or pond that their beauty cannot be thoroughly enjoyed from the margin, and in no greater depth of water than will admit of their being reached and examined by wearing long fishing boots or waders coming well up underneath the arms. Nor must it be supposed that once nymphæas are planted there they are to remain for years, without any further attention bestowed upon them; they require to be attended to just as much as the plants in our herbaceous borders. Water weeds must not be allowed to grow up and choke them; dead flowers and foliage should be removed occasionally. Sometimes greenfly will be found troublesome on flowers and foliage, and this may be kept in check by spraying with weak insecticide or dusting over with tobacco powder. Again, after growing for some years some varieties increase rapidly and become so crowded that the foliage completely hides the flowers: the Marliacea section require most attention in this respect, therefore it is advisable to raise and divide the plants every sixth or seventh year after planting. On the other hand, some kinds may remain in the same place for years without increasing, but with no loss of vigour or bloom.

As I have previously stated the time for planting nymphæas, and as I only purpose dealing with small pools, and suitable varieties for such, the next consideration will be soil, planting, and plants. Soil for the cultivation of nymphæas should, if possible, be such as can be obtained from the bottom of a natural pond or lake; failing this, a mixture of old loam, the older the better, as I have frequently noticed nymphæa roots do not thrive in fresh loam alone; with the loam mix plenty of half-decayed leaves, road grit, and a little coarse sand or gravel. The use of manure in any form is not advisable, as it only excites rank leaf growth, and predisposes to disease. Where it is possible to drain off the water, small mounds, about nine to ten inches in depth, and two feet or more across, may be made up on the bottom of the pool, laying a few turves round the mound to keep the soil from washing away. When complete place a nymphæa in the centre of each mound, make moderately firm and finish off with a few shingles on top. Just cover the plants with water for the first few days, afterwards adding water gradually until the pool is full.

Where it is not possible to drain the water off, shallow baskets or rounds will have to be employed; these may be eight or nine inches deep, and large enough to accommodate the roots of a plant. Place the nymphæa in the basket in the same manner as if potting any ordinary plant, finishing off the surface with a few shingles, then carry them out and sink them in position in the pool, where, after some time the basket will rot away and the plant become firmly established. Once planted the wants of nymphæas are few; keep the pool as nearly and steadily full of water as possible, and, if it can be arranged to keep the water perpetually fresh, either by stream or jet laid on, this will be found by far the most successful way to good culture. Should scum or any fungoid pest be found troublesome, this may readily be kept in check by occasionally using Bordeaux mixture, which will not injure fish or nymphæas.

[Photo: C. P. Raffill.

THE LILY POOL AT KEW.

From the following list those who contemplate planting a small or medium-sized pool can make a good selection. N. virginalis, of recent introduction, bearing large, pure white, scented flowers; N. Caroliniana nivea, another beautiful white variety; N. pygmæa alba, free-flowering and one of the best for shallow water; and N. odorata minor, another excellent white variety for limited space. Among rose coloured varieties N. Caroliniana, N. Caroliniana perfecta, N. odorata rosea and N. Rosita will be found some of the best. N. atropurpurea, bearing large flowers of a most intense brilliant crimson, with golden yellow stamens; N. William Falconer, also deep crimson; N. Escarboucle, a new variety with very bright vermilion-coloured flowers; N. sanguinea, rich glistening crimson; N. marliacea ignea, also a crimson-flowered variety; and N. Ellisiana, rich currant red, are all excellent. Of the Laydekeri section, which are all suitable for shallow water, N. Laydekeri fulgens, with amaranth-red flowers; N. Laydekeri purpurata, having flowers of a rich rosy crimson, deepening in colour towards the centre, and N. Laydekeri rosea, a fragrant and very profuse bloomer, will be found among the best. N. Brakeleyi rosea, is a free-blooming hybrid of great merit, bearing glistening pink flowers that are very fragrant. Yellow flowering lilies for medium-sized pools are by no means plentiful. Two of the best will be found in N. Mooreana, and N. pygmæa Helvola, the former an introduction from New Zealand bearing flowers not quite so large as the well-known N. marliacea chromatella, but more refined and deeper in colour. N. p. Helvola is one of the smallest of nymphæas, and a gem for tubs or small pools; it has dainty bronzy marbled foliage, and abundance of sulphur-coloured flowers. To those who contemplate planting a small pond, the foregoing list will give ample varieties to make a selection from, and should one part of a pond be somewhat shady, a very delightful plant to introduce would be Aponogeton distachyon, the Cape pond weed, or Water Hawthorn. Although coming to us from such a warm climate it is quite hardy in this country, and if planted in not less than eighteen inches of water it will produce its fragrant white blossoms with jet-black anthers, even well into the dark and dull days of winter.

A. **Bedford.**

IRIS BUCHARICA.

This is a very beautiful species, and a most valuable one for the garden. It belongs to the Orchioides group, and flowers in April. It requires a warm, sunny aspect in well-drained soil, so that the bulbs may be thoroughly ripened during the summer months, when growth has ceased. A hand-light placed over the group during late summer and autumn is beneficial, as the perfect ripening this ensures is essential to the production of good spikes of bloom the following season. Growth commences to show itself early in the year, and should be protected against severe frosts with a little dry bracken lightly laid over the clump; this will prove quite sufficient to prevent any damage being done.

E. C. **Pooley.**

BULBS.—A practical treatise on the cultivation of hardy, hothouse and greenhouse bulbous and tuberous rooted plants is "Bulbs and their Cultivation," by T. W. Sanders, price 2s. 6d. net, or by post 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

HERBACEOUS PHLOXES.

Among herbaceous plants there are few, if any, that provide our gardens with such a wealth of blossom during summer and autumn as the herbaceous phloxes. Such a marked improvement has been made by raisers during recent years that the individual blooms are twice the size of the older varieties, the truss or spike has been considerably enlarged, and the extensive range of colours embraces almost every imaginable shade. There is no doubt whatever as to their popularity, for one rarely finds a cottage garden without its clump of phlox.

These phloxes are divided into two sections, suffruticosa and decussata, the former flowering in June and July, followed by the latter, which prolongs the flowering season into late October. The varieties of the suffruticosa group vary in height from eighteen inches to two feet, while the decussata varieties range from one to four feet. Thus the two classes provide a magnificent display for a considerable period.

A GROUP OF HERBACEOUS PHLOXES, REGENT'S PARK.

Culture.

Cultivation is very easy and simple, for the phlox will adapt itself to almost any position, yet liberal treatment is necessary to obtain the best results. A good depth of stiff loam is the most suitable soil, and this should be trenched and enriched with well decayed manure. The phlox is naturally a gross feeder, and it is essential that the soil should be thoroughly prepared. During dry periods, when the plants are making growth, abundance of water must be given, and mulching proves beneficial as it prevents the rapid evaporation of moisture, and keeps the roots cool. This is especially necessary in dealing with dry soils. The early flowering varieties suffer from the effects of the hot sun, and the flowers quickly wither if the plants are allowed to become dry at the roots. Undoubtedly a cool border is preferable to a hot one, yet one has to meet the case in various ways, and endeavour to remedy whatever evil is likely to occur when a dry border has to be utilised for the purpose of growing them.

Boldly grouping each variety separately is the most effective plan, taking into consideration the colour scheme, so that one colour does not clash with its neighbour. Of course the size of the groups must be governed by the width of the border. When this is twenty feet wide the groups should be larger than when one has only about a six-feet wide border to deal with. The order of the present day is massing, and rightly so, for the beauty of the plants can be more appreciated thus than when they are dotted about singly.

Planting may be done any time from the end of October until March, during mild weather. Autumn planting is preferable as the plants stand a better chance of becoming established before the dry weather sets in. When the planting is deferred until spring more soil should be allowed to remain on the roots, and the clumps must not be pulled about so much as in autumn. The plants should be put out at least two feet apart, to allow the growths sufficient space to develop properly. No benefit is gained by overcrowding, and it is necessary to reduce the number of shoots if the clumps are strong. This operation may be performed in March, when the growths are a few inches high. From six to nine shoots are ample.

Phloxes should not remain undisturbed for more than three years; at the end of this time they will require lifting and dividing. This will allow the ground to be trenched up again, and enriched with manure before replanting. When dividing large clumps the woody centres should be split with a fork, when they may be easily pulled apart with the hand. By no means should a spade be used for the operation, or a great many shoots will be sacrificed.

Propagation.

There are three ways by which this may be carried out, viz.: seeds, cuttings and division of roots, the latter being the most simple. The shoots which are removed during March when thinning provide good cuttings, and should be inserted in pots filled with sandy soil. These root freely in a little heat, and will provide a late supply of bloom, for usually each shoot will flower the same season. When rooted the cuttings should be potted up singly and grown in a cold frame, eventually planting them out, in well prepared soil. Seeds may be sown in March or April, in pans or boxes, and placed in a cold frame, shading them to prevent too rapid evaporation. When the seedlings are large enough to handle they should be transplanted into a frame and kept growing until they are large enough to plant out into nursery beds.

Varieties.

The following will be found to provide a good representative collection: Suffruticosa varieties (early flowering)—Mrs. McClellan, Snowdon, Mrs. Miller, Dr. Hornby, A McKinnon. Decussata varieties, flowering August to October—whites: Tapis Blanc, Mrs. E. H. Jenkins, Henri Murger, and Rheingau. Purple shades: Eclaireur, Le Mahdi, Edmond Rostrand and Reichsgraf von Hochberg. Salmon and scarlet shades: Coquelicot, Etna, Pantheon, George A. Strohlein, and Moliere. Blue and lilac shades: Eugene Danzanvilliers, Pharaon, Esclarmonde, and Iris. Pink and rose: Parthenon, Charles Pfister, Lady de Ramsay, Sergent Lovy, Mrs. Oliver, William Robinson, and Gruppen Konigen.

E. C. Pooley.

THE LANGUAGE OF FLOWERS

"Feed us, we pray you, with

CLAY'S FERTILIZER

and our rare beauty and fragrance will repay you."

It is SAFE, CERTAIN, QUICK-ACTING and ECONOMICAL.

Flowers Grown with CLAY'S FERTILIZER catch the Judge's eye.

CLAY'S LONDON FERTILIZER
TRADE MARK.

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags** :—7 lbs., **2/6** ; 14 lbs., **4/6** ; 28 lbs., **7/6**; 56 lbs., **12/6** ; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK AS AT SIDE.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Manure Manufacturers and Bone Crushers, **Stratford, London, E.**

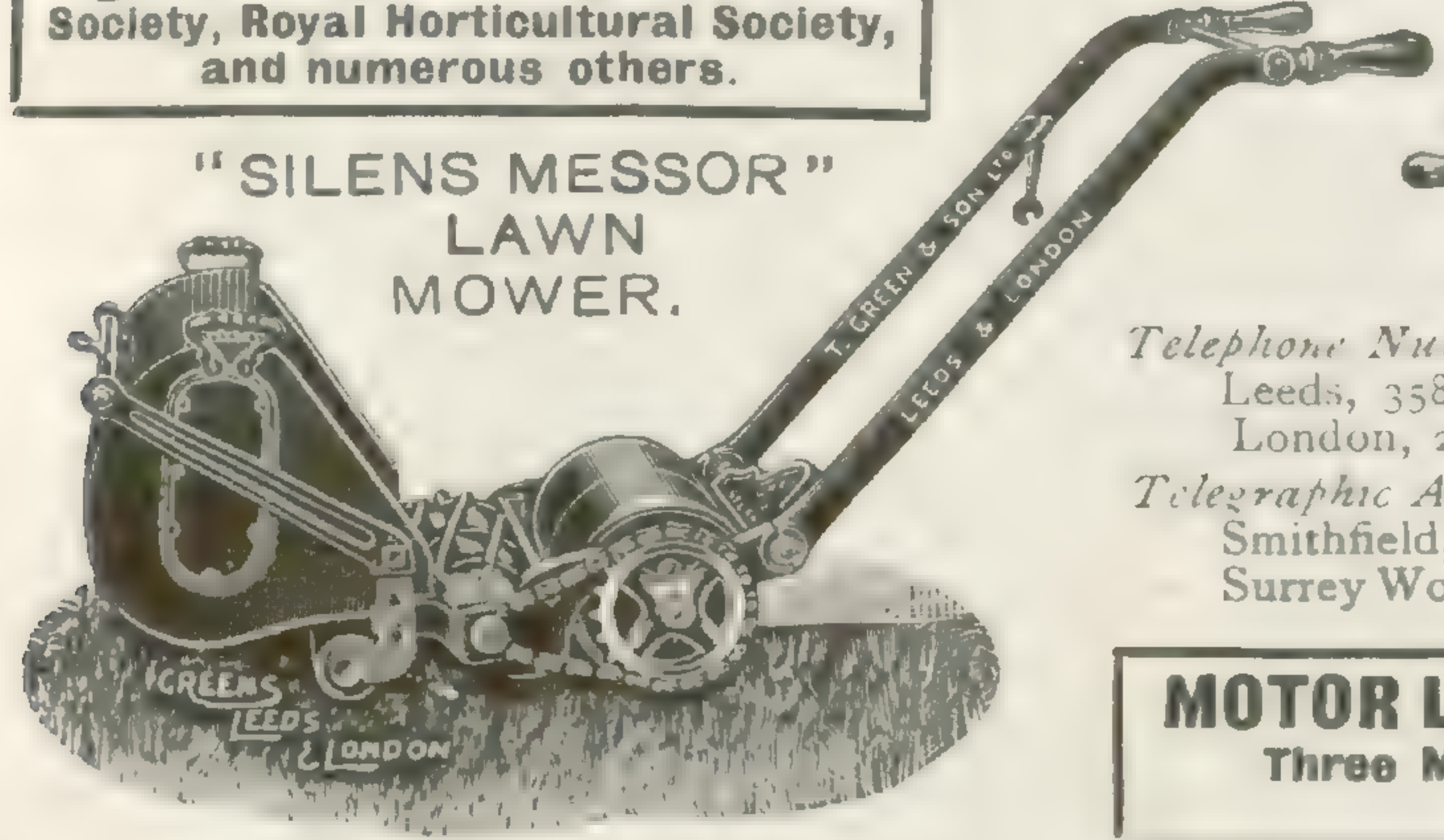
APPOINTED BY ROYAL WARRANT, HORTICULTURAL MACHINE MAKERS TO HIS MAJESTY KING GEORGE V.

GREEN'S LAWN MOWERS

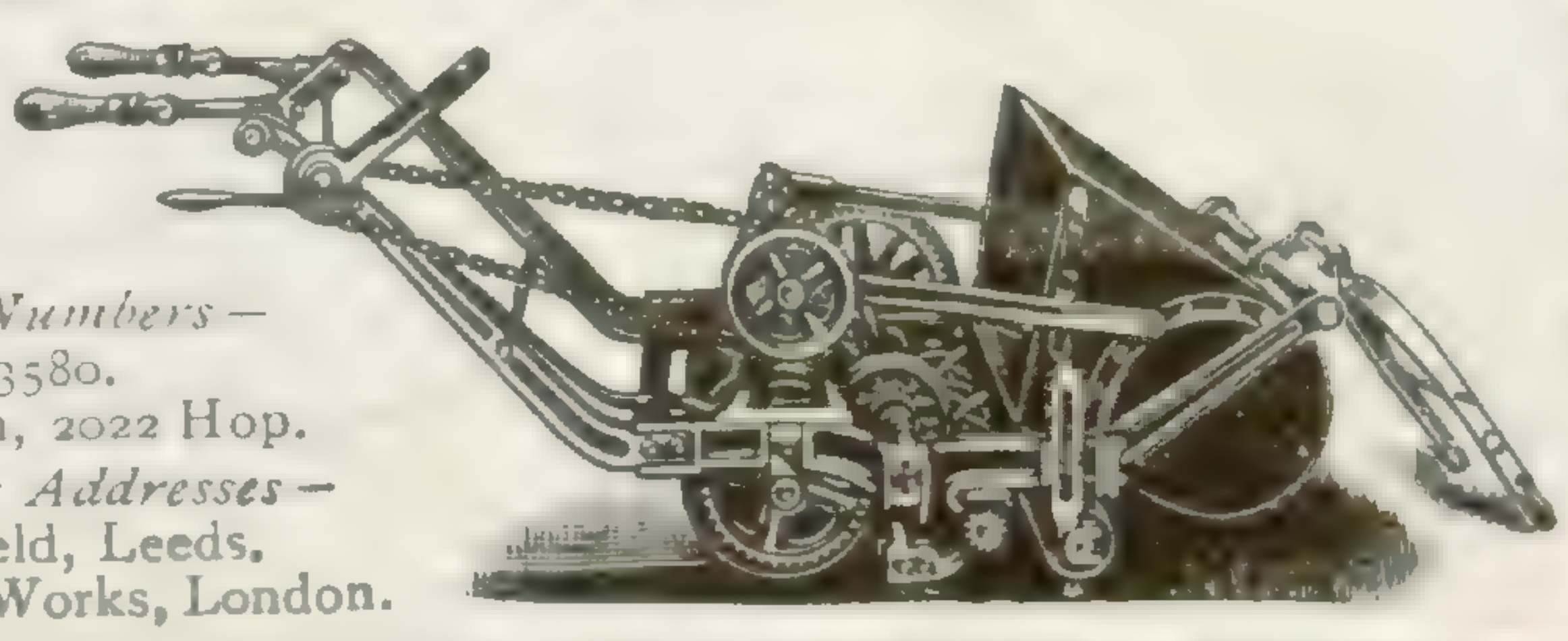
THE FIRST, FOREMOST, and BEST in the WORLD. Hundreds of Thousands are in use. Established nearly a Century,

Highest Awards— Royal Botanic Society, Royal Horticultural Society, and numerous others.

"SILENS MESSOR" LAWN MOWER.



PONY, AND HORSE MOWER
Either "Silens Messor" Pattern or Wheel-Geared.

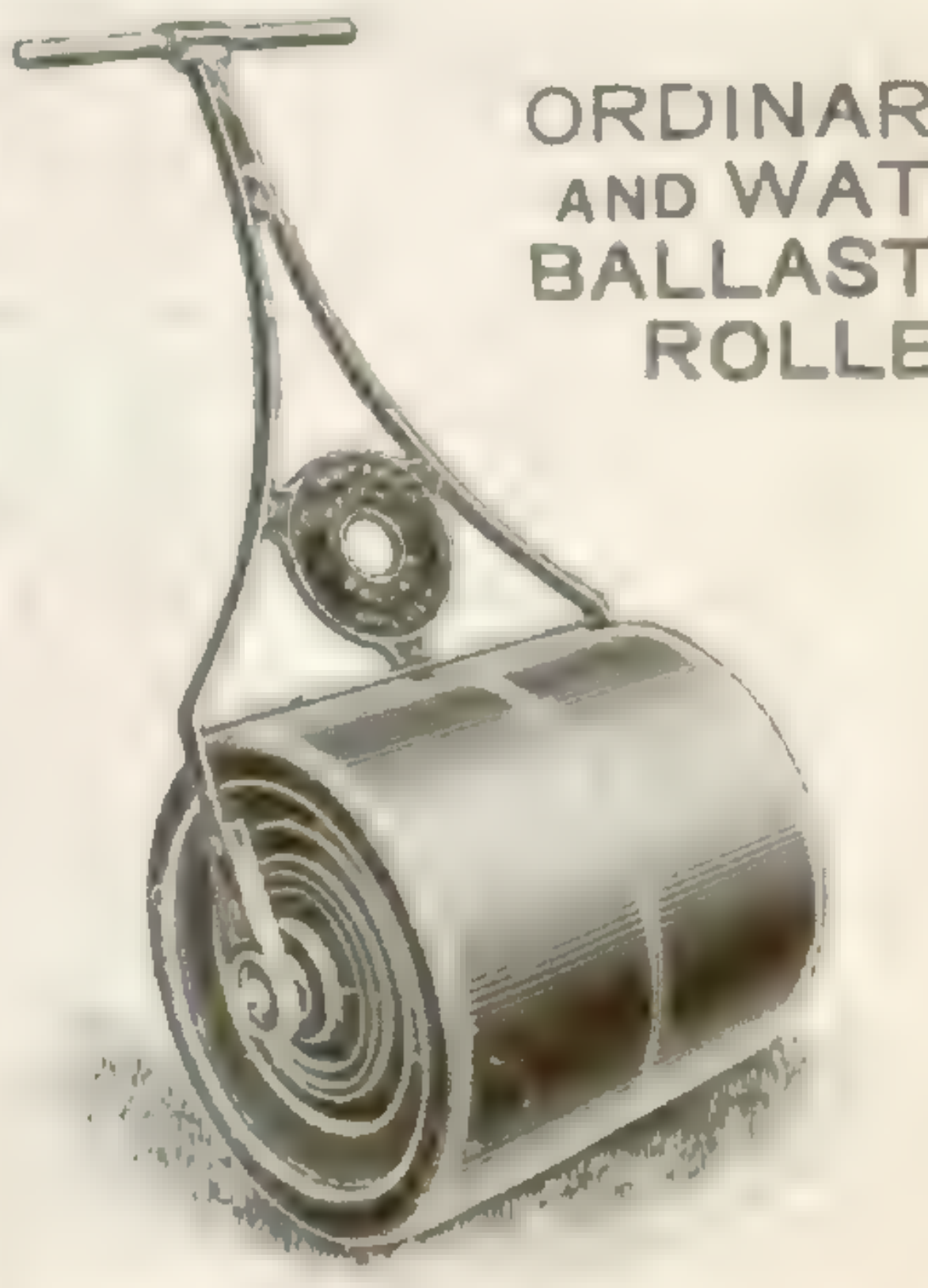


Telephone Numbers—
Leeds, 3580.
London, 2022 Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London.

They may be had of any Ironmonger or Seedsman in the United Kingdom.

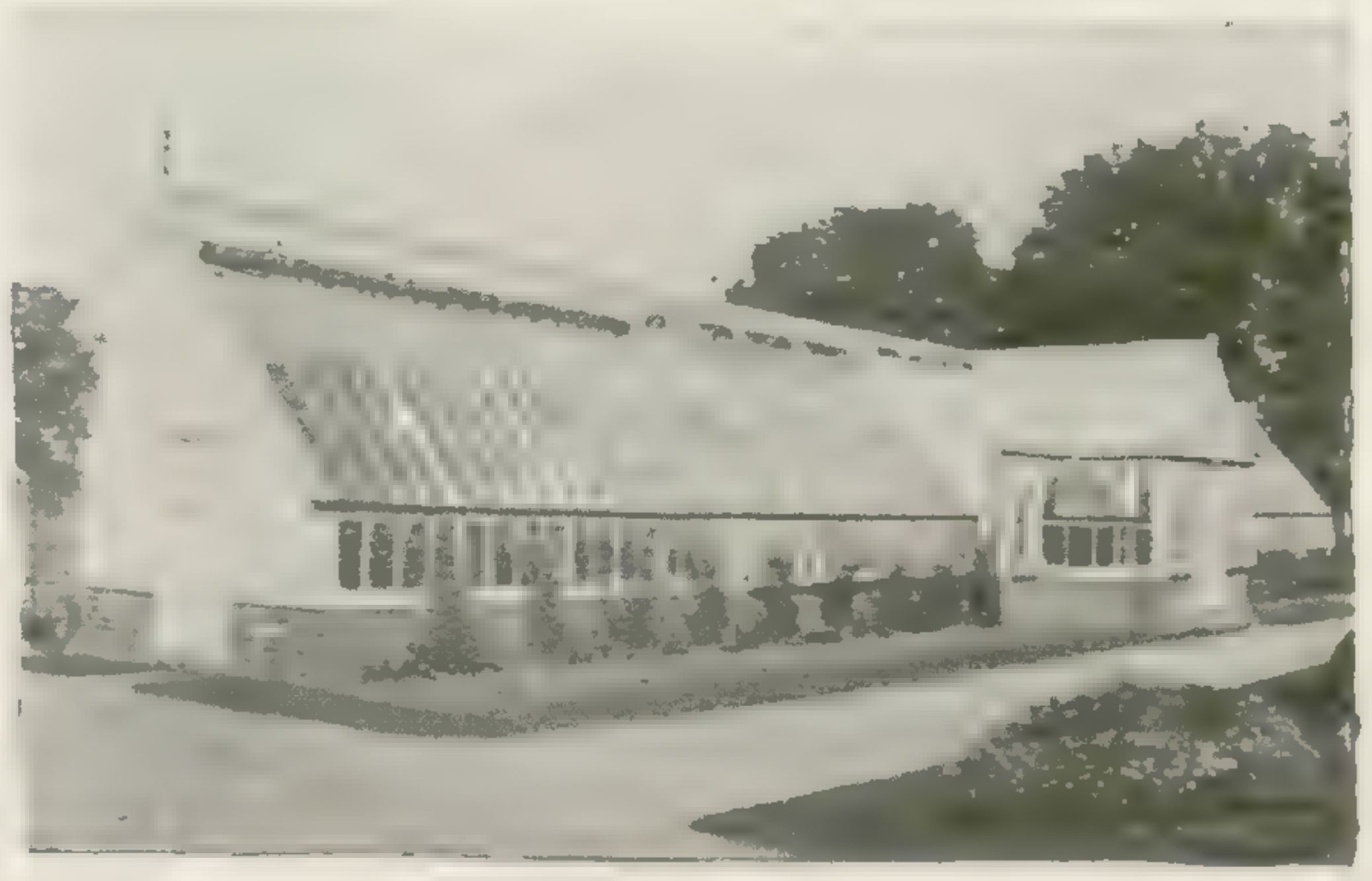
Please write for ILLUSTRATED PRICE LIST No. 1 FREE.

ORDINARY AND WATER BALLAST ROLLERS



MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E.



Catalogues and Estimates Free.

MESSENGER & Co Ltd
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office 122 VICTORIA St S.W.

MODERN GLASSHOUSES

as supplied by MESSENGER and CO., Ltd., are made of the best materials, and only capable and reliable workmen are employed in the erection thereof.

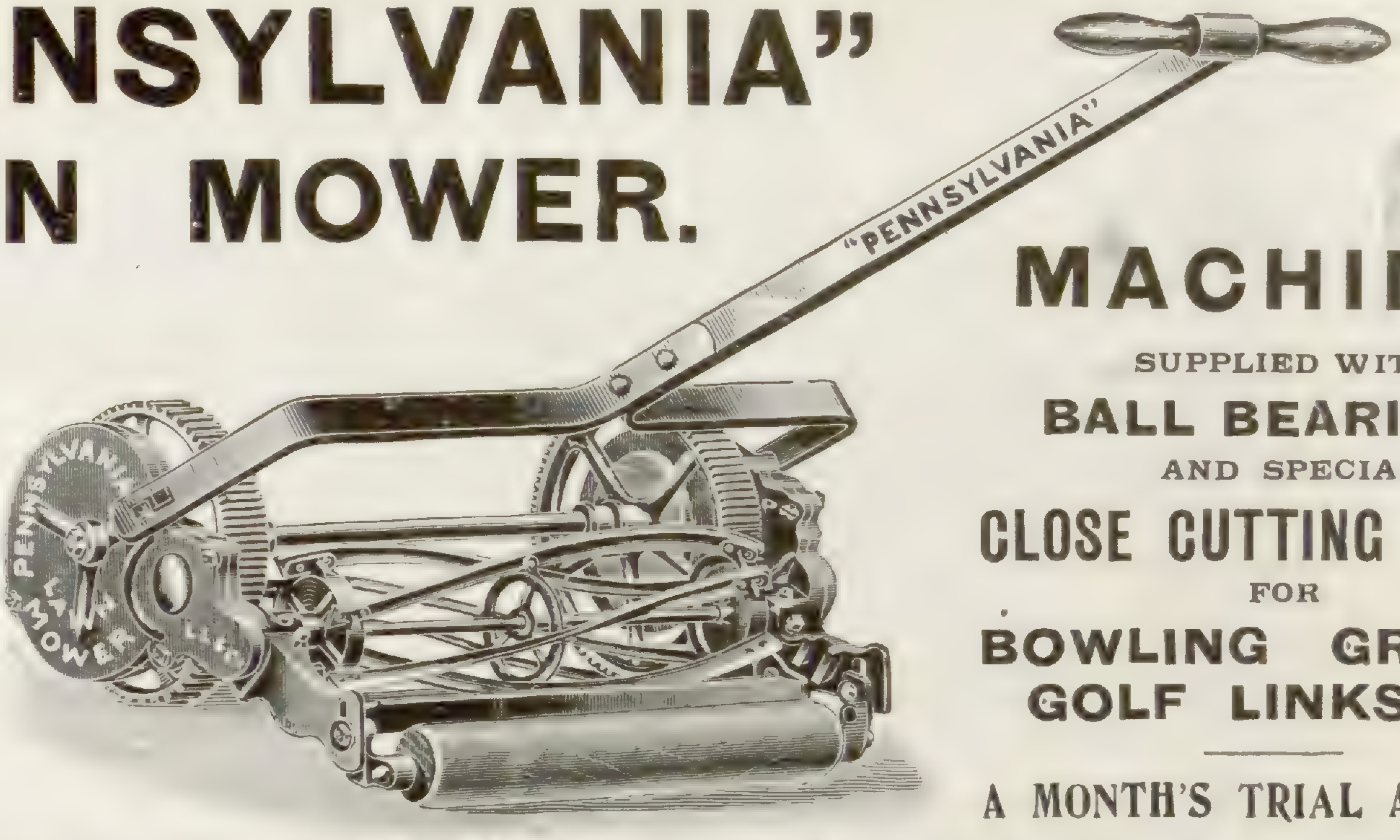
The following letter was recently received by us on the completion of a contract for a well-known Member of Parliament.

February, 1911.

"I should not be doing my duty to your workmen if I did not at once tell you, on the completion of your work, how pleased I have been with each and all of them.

"They have been most obliging throughout the whole job, and have endeavoured to do everything in an efficient and thoroughly workmanlike manner, and I must congratulate you upon having such capable employees."

The "PENNSYLVANIA" LAWN MOWER.



SPECIAL NOTICE.

With this Machine a Lawn can be Mown ONCE A DAY with scarcely more expenditure of time and labour than ONCE A WEEK with the ordinary heavy English Machines,

MACHINES

SUPPLIED WITH
BALL BEARINGS,
AND SPECIAL
CLOSE CUTTING KNIVES
FOR
BOWLING GREENS, GOLF LINKS, &c.

A MONTH'S TRIAL ALLOWED.

Price Lists and Testimonials from—
LLOYD, LAWRENCE & CO. (Dept. C.), 29, WORSHIP STREET, LONDON, E.C.,
And all Ironmongers and Seedsmen.

Glaze your Greenhouses and Vineries with

ZINC BAR DRY-GLAZING.

No paint or putty ever required. No leaks. No breakages from expansion or contraction. No drip from condensation. Breakages by accident easily repaired. All woodwork covered. Cheap, Durable, and Efficient.

Range of Plant and Peach Houses erected for J. T. Bond, Esq., Mannamead, Plymouth.

Write for Testimonials and Price List,

SAUNDERS (F.R.H.S.) & BISS,

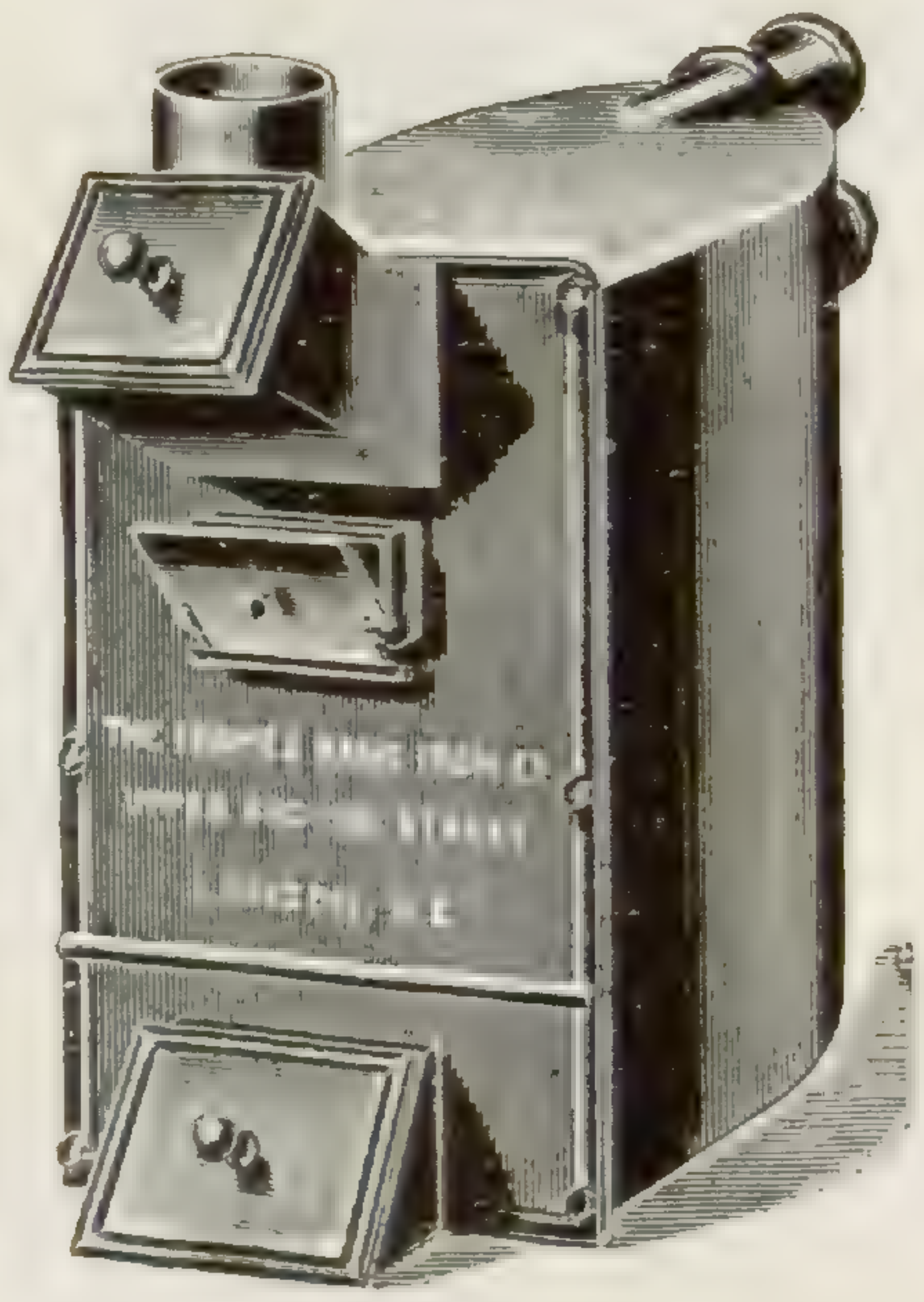
Horticultural Builders and Heating Engineers . . . **EXETER.**

'Phone: Hop. 763.

When next a Small Boiler you require

TRY

THE HEEL



NONE TO BEAT IT.

THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.

4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

Barr's Pure Lawn Grasses
For Lawns, Tennis Courts, etc.

BARR'S STANDARD MIXTURE.
suitable for fine Lawns and Croquet Grounds, containing neither clover nor coarse grasses.
Per lb., **1s. 10d.**; 20 lb., **34s.**

For hints on Making and the Management of Lawns see Barr's Lawn Grass Circular, free on application.

BARR and SONS,
11, 12, and 13, KING STREET, COVENT GARDEN, LONDON.

SCRIM FOR PROTECTING FRUIT BLOSSOM.—The protection from frosts, etc., afforded fruit blossoms by our open-meshed scrim, goes far to ensure a good set of fruit. May repay many times its cost in one night. 2½d. per sq. yd., 36in. and 72in. wide; 50 yards delivered. This scrim is also good for shading sweet peas, etc. Descriptive leaflets on application. ROBERTSON, IRELAND and CO., Vict Road, Dundee.

WATSON'S LAWN SAND.

(THE ONLY ORIGINAL.)
Destroys Daisies, Plantains, Dandelions, &c., and at same time invigorates the Grass.
34/- per cwt.; 56lb. Kegs, 18/-; 28lb. Tins, 9/6. Canisters, 5/-, 2/6, and 1/-.
Please see that you get the genuine article.
Sold by Seedsmen and Nurserymen.
A. J. BARBOUR & Co., 8, Upper Fountaine St., LEEDS

PERGOLAS.
Larch Poles at 1d. per foot. Lists Free.
PATRICK'S, Otley, Yorks.

OAK CRAMBLES.
Peeled and dry at ½d. per foot.
PATRICK'S, Otley, Yorks.

ROSE ARCHES.
Larch Poles at 1d. per foot.
PATRICK'S, Otley, Yorks.

TREE STAKES AND GARDEN RODS.
Lists free.
PATRICK'S, Otley, Yorks.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to
EPPS & CO., Ringwood, HANTS.

SASH BARS.—Special lines in certain lengths only, 1¼ by 1, 2s. 6d. 100ft.; 3 by 1¼, 5s. 9d. 100ft.; quotations for special lengths or for any kind of timber, garden lights, greenhouses, and woodwork. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

BEDDING VIOLAS.

It is advisable in these latter days to always clearly define the purpose violas are intended for, or one may plant out popular varieties that are suitable for exhibition purposes, but which present a sorry display as bedding plants, though they may be very beautiful as individuals.

I take it a bedding variety should be first of all very free flowering, should have a well-defined colour, and last, but not least, should possess a good habit and constitution. All these points, however, are not so easily found in a single variety as one would imagine, for frequently a fine sort, so far as colour and freedom are concerned, has a straggling habit of growth which is very much against its appearance in a mass, although the variety may be useful in other directions. The best method of judging the merits or otherwise of violas is to plant beds of each variety side by side, as one usually does in the case of trials, or on the stock beds at a nursery; then their true habit and effect can be clearly seen.

VIOLAS AS CARPET PLANTS IN ROSE BEDS,
At Hopetoun House, the residence of the Marchioness of Linlithgow.

Colour is, perhaps, the primary consideration, and most violas are planted with the idea of producing some colour scheme. This they do admirably, as their tones, clearly defined as they may be, are soft and pleasing; and if the right colours are selected there is little fear of clashing. The habit of the plant should be dwarf and spreading, so as to cover the entire bed early in the season, while it is a sine quâ non that they should flower unceasingly from May until late in the autumn. Violas have become very popular in large parks and public gardens during the past decade, and no doubt they owe their present-day position largely to this fact. The trade exhibits of violas at our flower shows have not advanced this particular section very much, simply because the nurserymen generally stage the large exhibition sorts, which, in my opinion, give, as a rule, a very poor account of themselves in the garden.

Few plants produce such a fine effect with such a minimum of outlay or trouble as violas, for in most gardens they are perfectly hardy, and pass through severe winters unscathed, but this is not so near large towns, and in smoky, or foggy districts, for in such places the plants must be sheltered in cold frames during the winter months; Here they generally pass safely to the following spring, when they can be put out in their summer quarters. The question of autumn v. spring planting has to be largely settled by local conditions; when the latter period is decided upon, it should be clearly understood that early planting is absolutely necessary if the beds are to prove satisfactory. I should always endeavour to plant out in March or as early as possible in April. This will allow the plants to establish themselves firmly before their flowering season commences. It is surely unreasonable to expect the plants to re-establish themselves and continue to bloom satisfactorily at the same time; yet this often occurs, as, for instance, in May and June planting. Should this be compulsory on the part of the planter then the flowers and buds should be removed for at least a fortnight. After this period they will produce good flowers again, but wherever possible early planting should be the rule.

Elaborate preparation of the soil is unnecessary; if the soil is cultivated well, as for any other crop, that is sufficient, but a firm soil is at all times desirable. Where violas have been growing on the same ground for a number of years, and appear not to be doing well, the addition of a good dressing of loam will soon remedy the evil, and prove far more effectual than any fertilisers that can be utilised. A change of situation will also produce new life and vigour to the plants, but it is not always possible to give a new position, so in such cases I should always rely on the loam. Needless to add that such fibrous-rooted plants require plenty of moisture, especially during a dry spell. Those varieties that seed freely must have the seed pods clipped off as soon as formed, for if left, the flowers produced afterwards are small and poor. It is wise to cut back the old growth as it shows signs of exhaustion, dealing with just a few plants at a time so as not to disfigure the bed; this keeps up the vigour of the plant by encouraging basal growth, which is quickly produced.

As to varieties, there are plenty to choose from, but the followihg are selected for the points mentioned as being desirable: Whites—Queen of Whites, Swan, and Seagull. Blue: Bridal Morn, pale blue; and Admiral of the Blues, deep blue. Purple: Councillor Waters, deep purple; and J. B. Riding, rosy purple. Yellows: Redbraes Yellow, Mrs. E. A. Cade, and Ardwell Gem, pale yellow. Blush: William Neil, Bessie, and Kitty Bell. Many of the edged or bordered kinds are also employed, such as Duchess of Fife and Goldfinch, but their value for bedding purposes I do not consider so great as that of the self colours.

J. B. Riding.

Lettuce.—Give more air to the young plants in cool frames, with a view of placing them out as soon as the weather is suitable. When sufficiently hardy, they may be planted under a south wall. Also make a sowing in a similar position, to follow on. The cos variety Little Gem is satisfactory to sow for this crop, as it turns in quickly, and is of first rate quality; it also travels well when packed.—C. Flack.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

COOL HOUSE ORCHIDS.—The different species and hybrids will help to make the cool houses brilliant with their flowers from now onwards. A very beautiful effect is produced by the varied tints possessed of the recently raised hybrids, and there is nothing more effective than the odontiodas. The bright colours that are produced by the different crosses between odontoglossums and cochliodas is most remarkable, and they provide a long-needed contrast to the white and rosy-tinted flowers that are characteristic of this division. Now that they have become plentiful, and may be procured at a modest outlay, they should be extensively cultivated, as they are worthy of every consideration where there is a demand for cut flowers or plants for decorative purposes in private gardens.

ODONTIODAS we find grow vigorously when treated under the same conditions as that afforded Odontoglossum crispum. For potting purposes we find they are best attended to at the time the young growths have reached that stage of development when the new roots are emitted from the base; but when dealing with young plants that have not previously bloomed repotting at such a period has a tendency to cause the plants to continue growing instead of flowering as soon as the pseudo-bulb has reached maturity, and a season is thus lost in determining its varietal character. Therefore, when dealing with unflowered plants that are sufficiently robust to bloom, it is desirable to defer potting until after the pseudo-bulb has matured and passed out of flower. As soon as the flower scapes have been removed potting must be attended to without delay.

POTTING.—The plants should be carefully turned out of their pots so as to avoid damage to the active roots which may have penetrated to the outside of the potting compost. If the old material is in an advanced state of decay it must be carefully picked away from among the roots, or even washed away in a pail of tepid water, but if it is in a reasonable state of preservation, then remove any decaying matter on the surface, and give the plant more root room without disturbing it more than is absolutely necessary. We find that no compost meets the requirements of the cool-house orchids better than two parts fibrous peat and one part of sphagnum moss and broken oak or beech leaves. The leaves should be sterilised before use to destroy any fungoid or insect pests. This compost is made moderately firm. The pots are drained to about one-third their depths with chopped bracken roots or broken crocks. As soon as repotting is completed water with rain water, taking care to wet the compost through. Shade the plants carefully from bright light for a few weeks after repotting, and keep the atmosphere in a humid state. Lightly spray overhead in the afternoon after warm days.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

CHRYSANTHEMUMS.—Plants intended for the production of large blooms must have due attention given to potting to keep them steadily growing. After potting, replace them in a cold frame, and keep them rather close for a day or two, afterwards increasing the amount of air gradually until they can be fully exposed to sun and air. Syringe the plants when the weather is favourable, and water with care. Keep down insect pests by occasional syringings with insecticide. Plants of the "bush," or decorative type should have the points of growth removed when about six inches high to induce them to break, but this must be done a week before or after potting.

PRIMULAS.—Sow seeds in well-drained pans of fine loam, leaf-soil, and sand. After the seeds are sown cover the pans with glass, on the top of which a sheet of brown paper should be placed. As soon as the seeds have germinated remove the coverings. When the seedlings have become used to the light place them on a shelf near the glass, and shade from hot sunshine. When large enough to handle the seedlings may be potted singly in small thumbs, or pricked out in boxes, from which they may be transferred to 60's. A temperature of 50 degrees is sufficient for raising primulas.

CELOSIAS AND BALSAMS should also be sown now. In the case of the former it is advisable to make a few small sowings at intervals rather than one large one, so that they may be had in flower in succession.

CANTERBURY BELLS.—A batch of the plants which have been plunged outside or in frames during the winter may now be brought inside to make an early display.

SCHIZANTHUSES.—These are among the most useful of plants for decoration, giving, as they do, such a delightful variety of colours. They are of easy culture, requiring no heat, but merely protection from frost. By sowing at intervals schizanthuses may be had in flower the greater part of the year. Except when small seedlings, or when repotted, they should be afforded all the sun and light possible. Those most suitable for conservatory decoration are S. Wisetonensis and S. pinnatus.

FORCED PLANTS. — Rhododendrons, azaleas, and other hard-wooded plants which have been forced, and are wanted for another season, should have their seed pods removed, and be placed in a warm house, where they may receive frequent syringings to induce new growths. Attention must be paid to any that require repotting, as this should be done before the new growth is far advanced.

THE CONSERVATORY. — The flowering plants now furnishing the conservatory are mostly forced ones, so that partial shading should be afforded during hot sunshine. Ventilate the house carefully to prevent sudden changes in the temperature caused by the changeable weather usually experienced at this time of the year.—A. Grubb, Porter's Park Gardens.

HARDY FRUITS.

GRAFTING.—This interesting and progressive work may be proceeded with as soon as the bark runs freely. Old and unfruitful trees of apples and pears may, in the course of three or four years, be made to carry crops of fine fruit if grafted with good vigorous reliable varieties. Much of the success of grafting depends on the constitution of the scions used, much more so than the vigour of the stock, and this is very noticeable on looking through an orchard of mixed varieties of apples. It is surprising how soon the head of a strong-growing apple will develop the stock, and, naturally, the root action must develop accordingly. Such apples as Bramley's Seedling, Newton Wonder, Worcester Pearmain, James Grieve, and Wealthy I find succeed, and give extra-fine fruit; pears, such as Triomphe de Vienne, Margaret Marillat, and Doyenne du Comice, do well, the latter giving very fine fruit and cropping regularly.

DIFFERENT MODES OF GRAFTING.—There are various ways of grafting, but the most simple for large trees, and a very satisfactory one, is crown or rind grafting. The scion is cut obliquely, but a shoulder is made at the base to rest on the top of the stock. The bark of the stock should be slit down about 1½ inches, and if the sap is running freely, the scion (which should not be too large, but the wood firm and green), if given a slight start at the top, may be forced home freely and rapidly; give a firm tie with raffia as near the top of the stock as possible, adding the wax or clay.

GRAFTING WAX OR PUG.—Where it is the intention of the grower to graft a lot of trees time will be saved by using grafting wax, which may be easily home made, but if only a few trees are to be manipulated a good "pug" may be made by mixing clay, loam, and cow manure, in about equal parts, into a thick paste, adding enough chopped hay, about an inch long, to toughen it; the hands should be dipped in water each time before forming the cone of pug round the graft.

AFTER MANAGEMENT.—Standard trees, if much exposed, will require a little care as the growth advances, or much damage will be caused by rough winds blowing the growths clean away from the stock; this will often happen towards the end of the summer, and may be avoided by fixing stakes, about three feet in length, giving two ties to the stock and one to the graft.

PROTECTION.—Protection to wall fruits should now be afforded. This is not a difficult task where glass or wood copings and curtains are provided, but where netting and other makeshift materials have to be requisitioned great care must be exercised, or more harm than good may result, netting having the unfortunate knack of damaging the buds, therefore it should be kept well away from the trees. A double thickness of netting at least will be required to protect the blossoms, and this should not be put up in long stretches, or a draught will be set up along the wall, and will cause leaf blister to peaches, and an unkind condition to the blossom of all fruits.—J. Whittle, Cheveney Gardens.

THE KITCHEN GARDEN.

PEAS.—Harden off the pot-sown peas to full exposure to have them in condition for planting out. The part of the country and condition of the weather should be taken into consideration, but, speaking generally, it will from now be safe to plant them on a warm border. It is advisable to place the sticks to them at the time of planting for the purpose of affording protection, and should sharp cutting winds occur give further shelter by placing spruce or laurel boughs on each side of the rows. A sowing of main crop varieties may also be made to give a succession to those June pickings. Choose an open position, and soil that has been trenched or deeply dug and is in a rich condition. Sutton's Prizewinner, Fertility, and the Duchess are peas of excellent quality, and suitable for this sowing. For further sowings, trenches, where possible, should be made ready. The extra amount of labour is well repaid, as the crops can be more effectually managed, especially at times when the rainfall is light.

CARROTS.—Where the soil is of a light porous character the main crop of carrots may be sown now. A dressing of wood ashes or soot is very helpful if worked in on the surface of the ground when the seed bed is being prepared by forking and raking it down to a fine tilth. Heavy land is usually more or less difficult, and should not be taken in hand until sufficiently dry to crumble down finely. In any case land for this crop is to be preferred that has been laid up to the weather during the winter months. Draw the drills at about fifteen inches apart. A good type of Scarlet Intermediate is the best for this sowing. For rough culinary purposes the old Long Red Surrey gives a heavy yield.

FRENCH BEANS.—If a warm pit with a circulation of hot water running round it is at command, make a good sowing to succeed the pot-sown crop. A rich open soil is essential for a good return. Sow the seed in drills not nearer than 2ft. apart. When the young plants appear grow them sturdily in a humid atmosphere. If properly managed, this will prove a valuable crop before the earliest peas are in. Canadian Wonder and Fulmer's Forcing are both free varieties under this system of culture.

GENERAL REMARKS.—If a suitable site is available for celery, proceed with the making of the trenches. Make further plantations of potatoes during the next few weeks in suitable situations. Lift herbs, such as tarragon, mint, and chervil, and place as required in the forcing house. Stocks of pea and bean sticks should be at hand now to give employment to the staff on wet days.—C. Flack, Cholmondeley Castle Gardens.

OBITUARY.

MR. JAMES GEORGE.

Born at Faringdon, Berks, in 1826, Mr. James George, who died at Putney on Friday, March 10, had lived and worked among horticulturists all his long life, and was as highly respected as he was widely known. His father had a nursery business at Faringdon, where many of the old florists' flowers were cultivated, and where Mr. J. George early became interested in dahlias, pansies, and pelargoniums. After school days and a short sojourn in the home nursery Mr. George was apprenticed to Mr. G. Milne, at Faringdon House, and before he had attained his majority he was appointed head gardener to Lady Warnford, Warnford House, Sevenhampton, Wilts. Here he stayed four years, and then filled a similar position at Lee for two years. Through the aid of the brothers Fraser, of Lea Bridge, Mr. George became head gardener to Miss Nicholson, at Stamford Hill, and here he continued for fourteen years, moving with his employers to Putney Heath, and there serving a further period of sixteen years with the same family. It is to Mr. George we owe the race of dwarf tropæolums, which he raised by a process of selection from the tall kinds. He entered heartily into the work of raising zonal pelargoniums, and in 1872 he won first prize for eighteen and for twelve plants with his own seedlings, in a contest where the flowers were tested by florists' rules; he also secured four First Class Certificates on this occasion. Mr. George, in later years, took abutilons in hand, and by 1883 he was supposed to have the finest collection of these flowers known. Mr. George was one of the oldest of the members of the National Chrysanthemum Society, and he was a foremost prizewinner in the old Stoke Newington days. He was also one of the founders of the United Horticultural Benefit and Provident Society, and was awarded a handsome timepiece for the efficient help he rendered by sending flowers and plants to the exhibition held at the Guildhall (chiefly under the direction of Mr. William Marshall, V.M.H., and the late Mr. Shirley Hibberd), the result of which was £300, wherewith to place the society in a sound financial position to begin with.

THE LATE MR. J. GEORGE.

In later life Mr. George commenced business as a horticultural sundriesman at Putney, and the business will now be continued by his two sons. He was, to all intents and purposes, the inventor of tobacco paper for fumigating, and he carried on a big trade in this material until vaporising became well known and adopted. Mushroom spawn, soils, and manures were special lines of his business, and wood wool for packing fruits, etc., was first brought into notice by Mr. George. Full of years and honour, Mr. James George was laid to rest in Putney Vale Cemetery on Thursday, March 16.

GLADIOLI AND MONTBRETIAS.

These two families of flowers include some of the most beautiful and charming late-flowering outdoor subjects. The ease with which they can be grown, both as regards soil and situation, their value as cut flowers, and as objects for garden ornamentation during the late summer and autumn, render them indispensable, and insure for them a place in every garden. There are numerous varieties of each, all quite dissimilar, and yet in certain respects they bear a striking resemblance.

Gladioli.

Although they are both practically hardy it is necessary to lift the corms in the autumn and replant them in the spring to secure the best results, and this is especially so with gladioli, as they will not withstand the winter in some localities. When they are taken up early in November, dry them off and store away in a frost-proof shed for the winter.

Gladioli are divided into several groups, and to take the early flowering section first we have amongst them some lovely varieties which commence to bloom at the end of June in the open garden. The best time to plant is in March, although in exceptionally warm districts they may be put out during February. To obtain the most pleasing results they should be planted in a border set apart for them, or failing this, they can be planted in groups of one variety in the ordinary mixed flower borders; to be really effective there should be about seven in each group. They succeed best in a medium loam that has been well cultivated and suitably enriched with manure. Plant with a trowel, about four inches deep, and place a little leaf-soil around the corms before replacing the ordinary compost. A space of about six inches should be left between each, but this may be varied according to the vigour of the variety. Such varieties as The Bride, Peach Blossom, Fire King, Mauve Beauty, and Queen of Holland (a white form with rose coloured flakes), are some of the most showy of this section.

In the bedding or Gandavensis group there are many very fine varieties, producing handsome erect spikes of bloom until late autumn. Whole beds can be filled with them if so desired, and where a brilliant show of bloom is required in the autumn they would be hard to surpass. Planted in groups in the front of shrubberies they are very effective, the background of green setting them off to advantage. Eclipse is a lovely white variety; Walmer, rosy scarlet; Lord Byron, a brilliant carmine, with white blotch; Marshal Oyama, rich crimson; and Magnificent a lovely salmon rose. Among the newer varieties, America, a soft lavender-pink, is wonderfully telling, and an altogether very pleasing shade of colour. Princeps is a fine deep scarlet, with a creamy white throat, and Baron Joseph Hulot a very distinct flower that might be described as violet, shaded blue. Selected seedlings, such as are supplied by the leading firms, are of much value for the production of rich displays of colour, and as the corms are moderate in price they should be freely planted.

Montbretias.

There is some difference of opinion as to whether montbretias should be transplanted annually or not. To obtain good flowers, however, it is certainly desirable to transplant pretty frequently, for when clumps remain undisturbed for a considerable length of time they make a quantity of small corms, produce an excessive amount of foliage, and only a few flowers of poor quality; this is especially the case in light sandy soils. Moreover, in some districts montbretias do not always survive the winter, so that in the case of those growing in the ordinary flower borders it is a good policy to lift them annually where the soil is excessively wet and heavy. When lifted they should be tied up in bunches and stored for the winter in a similar place to that recommended for gladioli.

Planted in the herbaceous borders associated with white Japanese anemones, montbretias are very effective, and prolong the display of bloom until frosts come. Growing on the outskirts of shrubberies, near woodland walks, or naturalised in the wild garden, they are very telling, and add a touch of colour to the surrounding beauties of nature. They also look well associated with some of the fine-leaved bamboos when planted as a margin to their beds. The finest varieties are very striking and command attention amongst the most handsome of perennials. Prometheus is one of the best, and is a very vigorous grower with brilliant, rich orange flowers, flushed with crimson at the centre, and they are freely produced on tall, erect stems. Lady Hamilton is a striking variety with a yellow centre, suffused with apricot when fully expanded. Norvic, a distinct plant of rather dwarf growth is late flowering, and has a yellow flower stained with red. Germania is a handsome free-flowering variety, with rich scarlet blooms shading to brilliant orange, and a dark red throat. Koh-i-noor is a pure orange bloom with apricot base. Oriflamme is large, orange scarlet, and George Davidson, an intense golden yellow, is very free-flowering.

J. GARDNER.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above sea-level, 150 feet.

DATE.	SUNSHINE.	TEMPERATURE OF THE AIR.			
1911. MARCH 12 TO MARCH 18.		At 9 a.m.		Day	Night.
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Mar. 12—Sunday	—	39	37	44	34
„ 13—Monday	5 36	37	33	41	32
„ 14—Tuesday......	0 48	36	32	42	32
„ 15—Wednesday..	0 24	35	33	41	33
„ 16—Thursday....	1 54	35	35	44	33
„ 17—Friday........	2 0	35	33	45	29
„ 18—Saturday.....	—	40	37	45	35
Means	(total) 10 42	36	34	43	32

DATE.	RAIN.	TEMPERATURE OF THE SOIL AT 9 A.M.			LOWEST TEMPERATURE ON GRASS.
1911. MARCH 12 TO MARCH 18.		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
Mar. 12—Sunday	0·44	40	41	43	28
„ 13—Monday	0·01	39	41	43	31
„ 14—Tuesday	trace	38	40	43	30
„ 15—Wednesday..	0·10	37	40	43	28
„ 16—Thursday	—	38	40	43	33
„ 17—Friday	0·01	38	40	42	23
„ 18—Saturday ...	—	39	39	42	33
Means	(total) 0·59	38	40	42	29

FALMOUTH SPRING FLOWER SHOW.
THE SHOW OF THE CORNISH RIVIERA.
To be held April 19th and 20th.
To be opened by their Royal Highnesses Prince and Princess Alexander of Teck.
First-class Band and Programme.
Free accommodation to the Trade.
Schedules and full particulars,
R. E. GILL,
Hon. Secretary,
Falmouth.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

North of England Horticultural Society.

Wednesday, March 22, 1911, will be long remembered as a day of great interest, historically, in the horticultural world, and, if hopes are fulfilled, the day will become an important one, for on this date the North of England Horticultural Society held its first exhibition and lecture.

A great deal has been said, and a very great deal written, concerning this new venture, and many fears have been expressed and many hopes entertained as to its success. Much spade work has had to be done, so that the foundations of a successful horticultural society for the North of England might be well and truly laid. The lines followed by these northern enthusiasts are a modification of those that have proved so successful in connection with the Royal Horticultural Society. An ambitious programme has been outlined, including the institution of standing committees to adjudicate upon orchids, flowers, fruits, and vegetables, and to discuss scientific matters, so far as these apply to horticulture. In addition to monthly exhibitions and lectures, a "Magazine," is proposed, and an unusual item in it will be reviews of the regular horticultural weeklies, one page to each journal.

As regards its personnel, the North of England Horticultural Society makes an excellent start, and in its secretary, the Rev. J. Bernard Hall, has one of the most hard-working and enthusiastic men it has been our lot to meet. He possesses organising ability of no mean order, and an enthusiastic optimism that will overcome many difficulties, and be not easily turned aside from the great ideal set before him, i.e., the establishment of a great, strong, permanent, and useful horticultural society for the northern part of England. The Council, with Major J. W. Dent, Ribston Hall, Wetherby, as chairman, and the Hon. Rupert Beckett as treasurer, are going ahead. Mr. Jessop, one of the moving spirits, is to be chairman of the Orchid Committee, and Mr. Martin is chairman of the Floral Committee.

There was not a big attendance, and doubtless there were many absentees owing to the funeral of one of Leeds greatest public men—Lord Airedale—the same day.

Fellows of the R.H.S. may become Fellows of the North of England Horticultural Society at half fees, i.e., 10s. 6d., and arrangements have been made for members of the several R.H.S. standing committees to occupy a seat on the corresponding committee at Leeds when visiting the latter city, and, we may add, from experience, that a very hearty welcome will be extended to all such members.

The exhibition was held in the Emannuel Hall, Leeds, close to the University, and the roomy hall was well filled with exhibits, and there was a goodly and a bright display that promised well for the future, and reminded us of the meeting of the R.H.S. in the early Drill Hall days. The awards of medals, etc., were made with considerable care, and there was not the slightest wish on the part of anyone concerned to make these awards cheap. Everyone was in excellent good humour, the exhibitors were asked to meet late in the afternoon and make suggestions for the conduct of future shows, every officer and committeeman was courtesy personified, and the horticultural press men were treated with a kindness and hospitality that was at once unusual, and very highly appreciated.

During the afternoon the Rev. J. Bernard Hall announced that 120 Fellows and 20 Associates had paid subscriptions, and he thought that if all who had promised to join paid in within a month there would be a thousand Fellows. He suggested that the August show would be held at Harrogate, and on that occasion the R.H.S. was going to send down a deputation to award medals, etc. The autumn show, on November 15, would be held at Newcastle. The society had no intention of becoming a purely local effort. He thanked the exhibitors who had come forward on this occasion, and also the R.H.S. Fellows, who had come to their assistance, and he said that Mr. Gurney Wilson, of Haywards Heath, had promised to act as secretary of the Orchid Committee.

The lecture, held at the University in the evening, was well attended, and there was a very attentive audience to hear Dr. E. J. Russell, of Rothamsted, give his lecture on "Soil Germs and Plant Food." In connection with this lecture a word of thanks in due to Professor Seton, of the University, for very many kindnesses.

FLORAL COMMITTEE.

Messrs. Robert P. Ker and Sons, Liverpool, presented a glorious lot of amaryllis, all finely grown, and representing a remarkably beautiful strain, the result of long years of cross-breeding and selection and high cultivation. The Messrs. Ker have made a great name for their amaryllis or hippeastrums, at home and abroad, and they admirably sustained that reputation on this occasion. The plants carried good spikes, and in some cases there were as many as three spikes from one bulb. The deep crimson varieties like Ajax, Ruby Perfection, Midnight, and Imperial; Ruby King was well named, while Admiral Togo was another fine ruby-coloured variety; and Magenta Queen, Iona, Carminata, Queen of the Netherlands, Princess Ida, and Daybreak were all delightful varieties with magenta, rose or pink shading. Moonlight, Albescens, Andromeda, Silver King, and Fimette, were all nearly white, and they served in admirable fashion to show up the more brilliant members of the group.

Messrs. Wm. Cutbush and Son, Highgate, N., filled one side of the hall with a very interesting display. The major portion consisted of hardy flowers and shrubs, all brought into flower somewhat earlier than their natural season. Here there was a background of bamboos, lilacs, with groups of Ledum compactum, Azalea Yodogama, Andromeda usillaris, Spiræa confusa, Rhododendron Pink Pearl, Magnolia speciosa, and Kalmia glauca, surmounting the rockwork. In the foreground were double and single hepaticas, Tulipa Kaufmanni, Primula denticulata, P. nivalis, Anemone blanda, and Iris bucharica. At one end there were groups of fragrant boronias and Otaheite oranges, and at the other end a fine display of carnations, in which leading varieties, well shown, were Marmion, Lady Elphinstone, Scarlet Glow, Mrs. W. Ward, White Perfection, Admiration, Alma Ward, Lady Coventry, May Day, Mrs. Fortescue, and a new big scarlet perpetual Malmaison variety named King George, a grand variety, as shown, but represented by only one plant.

In front of the platform Messrs. W. Artindale and Son, Nether Green, Sheffield, arranged an undulating group of Primula obconica. The plants were all in the pink of condition, the flowers large, plentiful, and the trusses excellent. Moreover, the colour range was delightful, and some of the rich shades, almost crimson, deservedly attracted a great deal of attention, notwithstanding that at present these deep-hued forms have rather smaller flowers than the lighter coloured varieties of the grandiflora strain yield.

Narcissi and tulips were extensively shown by Messrs. R. H. Bath, Lim., Wisbech, this firm exhibiting a considerable number of tulips grown in fancy bowls in fibre and crushed shell. Among the narcissi leading varieties were Madame de Graaff, the poetaz variety Aspasia (N.D., 2nd), Emperor, Lucifer, Sir Watkin, and Leonie. Tulips included such useful varieties as Village Boy, Rose Gris de Lin, Bartigon, La Reine, Vermilion Brilliant, Yellow Prince, Brunhilde, Queen Wilhelmina, Proserpine, and King Harold. The display was neatly margined with small vases of Chionodoxa Luciliæ and scillas.

The carnation group set up by Messrs. Young and Co., Hatherley, Cheltenham, contained good vases of Rose Pink Enchantress, Marmion, Lady Audley Nield, Britannia, Mrs. H. Burnett, White Perfection, and a handsome new rich crimson perpetual variety named Duchess of Devonshire, and one that promises well.

Robert Sydenham, Lim., Tenby Street, Birmingham, showed excellent bowls of such narcissi as President Harrison, rugilobus, Empress, Madame Plemp, Leonie, and Mrs. Langtry, all grown in moss fibre; a bowl of horse-chestnut seedlings in the same material was a source of great interest.

ORCHID COMMITTEE.

The whole length of one table was occupied by Messrs. Mansell and Hatcher, Rawdon, Leeds, who put up a very interesting and beautiful group of orchids that would have been improved had more of the pots been hidden by ferns. Leading subjects were Odontoglossum loochristiense, O. Adrianæ, O. crispum, O. Manselliæ (N.D. First) from O. Vuylstekæ and O. Harryanum—a striking hybrid, with rich brown-crimson colouring and yellow tips to the segments; O. ardentissimum, O. crispo-Harryanum, Miltonia Bleuana, Brasso-cattleya Mendeli-Digbyana, Dendrobium Brymerianum, Trichopilia suavis, the beautiful Lycaste Mary Gratrix, and a large number of dendrobiums of the nobile and Ainsworthi sections; with a few golden oncidiums enlivening the whole.

Mr. H. A. Inness, Monkend Gardens, Croft Spa, near Darlington, contributed a small collection of odontoglossums, chiefly O. crispum, O. triumphans, Cypripedium aureum, C. Leeanum varieties, C. Chamberlainianum, and C. Io. grande. There were also a few dendrobiums, and the whole made up a pretty group.

A delightful group of orchids set up at the end of the hall by Messrs. Charlesworth and Co., Haywards Heath, had a charming plant of Odontoglossum venilia (pescatorei and cirrhossum) as centrepiece, this carrying two big spikes and scores of elegant flowers. Around this were Phaius Norman, the lovely Brasso-cattleya Queen Alexandra, Odontoglossum eximium, O. Armainvilliersense Xanthotes, O. Warnhamense, O. Adrianæ, Brasso-cattleya Veitchi, Odontioda Bradshawiæ, O. Keighleyensis, O. Lutetia, and O. Charlesworthi, Cypripedium Thompsonianum, C. Lawrebel, and other good things.

Messrs. James Cypher and Sons, Cheltenham, presented a group of orchids, with a fine Cymbidium Lowianum in the centre. Cattleya Mendeli, C. Schroderæ, and C. Trianæ, Odontoglossum crispum, O. triumphans, O. gloriosum, Renanthera Imschootiana, Cypripedium Bridgei magnificum, C. Helen II. Westonbirt var., C. aureum Hyeanum, Sophro-cattleya Wellesleyæ, Dendrobium agregatum majus, and Masdevallia tovarensis were other good things.

Mr. F. Corney, gardener to J. H. Craven, Esq., J.P., Beeches, Keighley, Yorkshire, brought up a group of pretty orchids, in which Odontioda Keighleyensis gloriosa, O. Lutetia, and O. Bradshawæ were especially bright. There was a good assortment of odontoglossums, notably crispum varieties and O. loochristiense, with Cypripedium Euryades, C. aureum, C. Gowerianum magnificum, Lycaste Skinneri alba, Lælia Jongheana, Miltonia Bleuana, and various cattleyas and lælio-cattleyas.

Mr. Alva J. Hall, Parliament Street, Harrogate, showed a few good cypripediums, such as C. aureum G. F. Moore, C. Euryades, C. Goweri, C. Godseffianum, and C. Pitcherianum Williams var.

Mr. Gilchrist, gardener to Wm. Matheson, Esq., Glenburne, Horsforth, presented Odontoglossum Phœbe Glenburne var. (N.D. second)—a handsome plant.

Major Rogerson (gardener, Mr. Price), Harpenden, Herts, sent up Odontoglossum eximium Lily Wilkinson, richly hued (N.D. second), O. xanthotes, and the fine O. crispum Leonard Perfect.

Mr. W. Shackelton, Great Horton, Bradford, showed rosy forms of Odontoglossum crispum.

Messrs. Hassall and Co., Southgate, brought forward a fine Odontoglossum hybrid between O. crispum and O. amabile, O. Dora and Cattleya speciosissima.

Messrs. A. J. Keeling and Sons, Westgate Hill, Bradford, had in their little group of orchids such interesting plants as Dendrobium nobile album, D. Ainsworthi, varieties of Odontoglossum crispum, Cattleya gigas, and a few cypripediums. We suggest that this firm should add to the value of the meetings by labelling their plants, so that the general public could learn their names.

CERTIFICATES.

Northern Diploma, First Class.—To Brasso-cattleya Queen Alexandra, from Messrs. Charlesworth and Co., Haywards Heath; to Odontoglossum Mansellæ, from Messrs. Mansell and Hatcher, Rawdon, Leeds; to Sophro-cattleya Wellesleyæ, from Messrs. Jas. Cypher and Sons, Cheltenham.

Northern Diploma, Second-Class. — To Dendrobium Plumptonense, from Messrs. Mansell and Hatcher, Rawdon; to Lycaste Mary Gratrix (also Cultural Commendation), from Messrs. Mansell and Hatcher; to Odontoglossum eximium Lily Wilkinson, from Major Rogerson, Harpenden; to Odontoglossum Phœbe Glenburne var., from W. Mathieson, Esq., Glenburne, Horsforth; to Cypripedium Bridgei magnificum, from Messrs. Jas. Cypher and Sons, Cheltenham; to Odontioda Keighleyensis gloriosa, from J. H. Craven, Esq., Beeches, Keighley, Yorks; to Narcissus Aspasia, from Messrs. R. H. Bath, Lim., Wisbech; and an azalea, from Messrs. Robert P. Ker and Sons, Aigburth, Liverpool.

MEDALS.

Large Gold.—To Messrs. R. P. Ker and Sons, Liverpool, for amaryllis.

Gold.—To Messrs. Mansell and Hatcher, Rawdon, for orchids; to Messrs. W. Cutbush and Son, Highgate, for carnations and hardy flowers.

Large Silver-Gilt. — To Messrs. Charlesworth and Co., Haywards Heath, for orchids; to Messrs. Jas. Cypher and Son, Cheltenham, for orchids.

Silver-Gilt.—To Messrs. W. Artindale and Sons, Nether Green, Sheffield, for group of Primula obconica; to J. H. Craven, Esq., Keighley, for orchids.

Large Silver.—To Messrs. R. H. Bath, Lim., for narcissi and tulips; and to Mr. H. A. Inness, Croft Spa, Darlington, for orchids.

Silver.—To Messrs. A. J. Keeling and Sons, Bradford, for orchids; and to Messrs. A. Young and Co., Hatherley, for carnations.

Beckenham Horticultural Society.

It must have been highly gratifying to Mr. Horace Wright to face such an audience as attended at the Beckenham Public Hall on Friday, the 17th inst., to hear him discourse on "Sweet Peas." Many friends from the Bromley and Bickley Societies were in the audience, which also included some ladies. Mr. Sherley-Price, one of the vice-presidents, occupied the chair.

National Dahlia Society.

The conference held by this society last year was so successful that another such gathering was quickly arranged for, and the date fixed for March 17. On this date, at Carr's Restaurant, at six o'clock, the meeting was held, under the presidency of Mr. Edward Mawley, V.M.H.

A fair number of dahlia specialists were present, including Mr. W. Cuthbertson, Mr. Holton, Mr. S. Mortimer, Mr. Stredwick, Mr. Jones, Mr. G. Gordon, Mr. Hawes, Mr. J. B. Riding, Mr. H. G. Oliver, Mr. Davison, etc.

The president opened the proceedings by a few remarks upon "Pompon Dahlias," and then invited Mr. S. Mortimer to say what a good pompon should be like. The latter referred to Mrs. Gladstone, a fine show variety, and said that pompons should, on a small scale, be as good in form as it. The bloom should be round, firm, on long stems, and with regular cupped florets, and a properly developed centre. Mr. Holton gave Emily Hopper as an ideal pompon dahlia for exhibition purposes, and he deprecated the fact that many judges gave prizes to the smallest blooms, often when these were only partially developed. He thought the flowers should be fully developed to receive an award. Mr. J. B. Riding said what was wanting was a clear definition of what a pompon dahlia for show purposes should be. He also agreed that half-developed blooms were frequently given a first prize simply because they were small in comparison with the fully-developed ones. In suburban shows, on the other hand, the largest blooms were usually given the prizes. In late years the plants had grown too rampantly, and to steady down the plants growing in this fashion some of the blooms should be allowed to remain and partly seed, so that the extreme vigour would be retarded, and the succeeding flowers would then come about the right size and of good form. When the plant had been steadied in this respect the old flowers should be picked off.

Mr. Mawley asked for further remarks, but as these were not forthcoming he thanked those who had spoken for the information they had given.

He then called upon Mr. Holton, dahlia specialist to Messrs. J. Cheal and Sons, to read a paper on "Single Dahlias," prepared by Mr. Joseph Cheal, who was unavoidably absent owing to indisposition.

SINGLE DAHLIAS.

For display of colour in the garden the single dahlia is unequalled, and this is the original and natural form of flower. By many years of skilful culture and selection, many other wonderful and beautiful forms have been evolved, but the same skill and care brought to bear upon the singles has produced blooms of marvellous forms and beauty of colouring.

The propagation and preparation of plants is precisely the same as with other dahlias. It is quite easy to raise any number from seed, and well-selected seed should produce a large percentage of really good flowers, but where space is limited and definite colours and heights are required, it is not well to rely upon seedlings, but to use those that have been propagated from known varieties so that beds and borders can be planted with definite colours and sizes that have been produced after years of careful hybridisation and selection. If seedlings are planted, some amongst them may prove to be of the best quality, but they will vary much in colour, size, and habit, so that much time will be saved and better results obtained by planting only selected varieties.

For display in the garden they may be planted in borders, either in lines or groups of colour, with tall varieties at the back and grading down to quite dwarf plants in front. They are also most effective if planted in clumps on grass, and they greatly help to enliven shrubbery borders if a few are planted between the shrubs. Between shrubs, however, the soil is usually impoverished, and it is needful to prepare the holes with fresh soil and manure. In the case of new plantations where for several years the shrubs do not cover all the ground it is an excellent plan to fill open spaces with dahlias.

THE BEST VARIETIES.

With the object of ascertaining which were really the most effective and up-to-date varieties for display in the garden, a trial was conducted at the Lowfield Nurseries in 1910, for the National Dahlia Society. A large number were grown in open quarters, where the best varieties from the leading raisers were grown side by side. The committee, after carefully examining the whole of the varieties, selected the following for recommendation as the best for profuse flowering, habit of plant, and quality of flowers combined:

Cardinal
Snowdrop
Peggy
Leslie Seale
Columbine
Lady Bountiful
Rosy Gem
Mrs. Joynson Hicks
Butterfly
Miss Roberts
Kitty
Owen Thomas
Amy
Mrs. W. Wood
Vesuvius
Rosebank Scarlet
Miss Morland
Fugi San
Winona
Ensign
Morning Glow

PREPARATION OF SOIL.

Any ordinary soil will do for the single dahlia, but it should be dug or trenched in autumn with a moderate quantity only of manure, and the surface left rough for winter frosts. The plants may be put out at the usual time with a small quantity of manure on the surface as a mulching.

The plants should be immediately staked, but do not use stakes that are too tall. One often sees tall stakes standing far above the plants after they have attained their full height. It is better to use three or four small stakes, which are covered by the plant, and it is easier to tie out the branches in a more natural way to branching stakes than to one tall one in the centre.

With singles there is no need to disbud, but it is most important to go over the plants every few days and cut off all old flowers. If allowed to go to seed flowering will immediately cease, but if trimmed as above, they will continue to flower profusely until killed by autumn frost.

Black fly will frequently attack the plants during the first few weeks after planting out. To prevent this the plants should be syringed with quassia extract, and this may require to be repeated two or three times to keep the plants clean and healthy.

SINGLES FOR CUTTING.

Many growers have doubtless been disappointed and even disgusted with the singles for cutting purposes because they drop their flowers so soon after cutting.

This fault is entirely avoidable if the flowers are cut young. Always select flowers that have not fully expanded, and before the bees have touched them. Where it is desired to have a stem longer than the flower stalk, immediately cut off all leaves, as those that are left on the stem cause the flowers to drop much sooner than if they are cleared.

The best time to cut is early in the morning, and they should at once be placed in water, and, if possible, allowed to remain for some time in a cool shady place. Flowers cut and prepared in this way will keep fresh for several days.

The flowers may then be arranged in vases, epergnes, or baskets as desired. As to foliage it is always safe to follow nature and arrange with their own foliage and buds, but for this purpose it should always be cut separately. Effective combinations, however, can also be obtained by using other suitable foliage, grasses, and berries.

For exhibition cut and prepare exactly as above described. In arranging bunches it is needful to wire the flowers in order to form a good symmetrical bunch, and for this it is a great saving of time to use the prepared wire frames upon which the flowers can be quickly arranged and fresh foliage and buds placed behind the flowers.

If these simple directions are followed as to cultivation and cutting, the single dahlia will give the greatest satisfaction, both in the garden, the house, and on the exhibition table.

Mr. Holton gave some reminiscences after reading the paper, and said that great improvements had been made in recent years, and now the varieties were excellent for garden decoration and other purposes. He said that every few days the old flowers should be removed, and seed pods not allowed to form, and then very little further attention was needed. He believed there was a great future for single dahlias.

Mr. Mawley referred to the great work of the late Mr. Girdlestone,and said he always used foliage from starved plants of Glare of the Garden for association with his exhibition flowers. He thought his own border of single dahlias was the gayest in the kingdom during the autumn. Single dahlias needed very little attention beyond the removal of old flowers, after planting and staking, and, therefore, deserved extended cultivation. Mr. Holton said he always used foliage from pot-rooted plants.

Mr. W. Cuthbertson said single flowers had always appealed more to him than any others. At Edinburgh last year they had planted hundreds of plants of many kinds of dahlias, but the finest display was made by the single dahlias. He thought the formal setting up of single dahlias, as generally followed, did nothing at all to help forward the popularity of dahlias. He thought many dahlia experts should reconsider their present methods of exhibiting dahlias, so as to present the flowers in a more natural way to the public. He saw a grand hedge of single dahlias at the Earl of Haddington's garden at Tynninghame, all produced from two-year-old plants, set out six feet apart, these making a glorious and continuous display for two months. Mr. Jones, formerly at Rothesay, said he had gone back to the old formal methods of exhibiting because by that means he produced a rare blaze of colour, setting them up in triangular wire frames, ten blooms in a bunch; further, this method permitted easy packing and the dispatch of flowers from long distances, whereas flowers staged loosely were, in his opinion, less effective, and far more difficult to pack and carry. Mr. Holton advised cutting the flowers when three parts developed, and placing them in water in a cool shed before packing them for the show.

Mr. J. B. Riding objected to the use of "gridirons" for the display of single and some other dahlias, and urged the display of the flowers in a more natural manner. Indeed, he urged that the single dahlia was not intended to be an exhibition flower. The single dahlias had lost their popularity because people did not understand them, and they thought that all that was necessary was to sow a packet of seeds, and from the plants pick good single flowers all the season. Too many exhibitors picked their flowers at a too far advanced stage, and he confirmed the remarks of other speakers in this respect, and also in the regular and frequent removal of old flowers.

Mr. J. B. Riding then, by request, made a few remarks anent colarette dahlias, and said that these varieties, of which he had grown the largest possible number obtainable, were more long-lived than singles proper, and quite as free flowering. The set, as at present known, included a good many that are of no use, and, he was sorry to say, the Continental nomenclature of varieties was in hopeless confusion. Mr. Mawley briefly gathered up the main points, and urged that amateurs should leave the raising of single dahlias from seed severely alone.

DECORATIVE DAHLIAS FOR THE GARDEN.

Mr. G. Gordon, V.M.H., then proceeded to deal with dahlias of special value for decorative effect in the garden.

Mr. Gordon said he did not intend speaking of decorative dahlias as usually understood, but of dahlias that, under ordinary good culture would be of value for decorative effect in the garden. They may be tall or dwarf or of medium height; they may be show, fancy, cactus, singles, pompons, pæony-flowered, colarette, or the varieties known as decorative. He was not specially concerned with the section to which they belonged, but he was anxious to avoid exalting one group at the expense of another, for he felt that all the classes should obtain full recognition, and that at least several should be represented in gardens in which dahlias were systematically cultivated. It was essential in the interest of the dahlia and the garden that raisers and growers should carefully consider whether the time had not arrived when a new departure should be made with a view to the creation of varieties specially adapted for beautifying the garden. He did not suggest that dahlias which by reason of the perfection of form of their flowers are specially adapted for exhibition should be in any way neglected, but he regarded it as a serious mistake that raisers should for many years past have concentrated their energies on the production of exhibition varieties and the National Dahlia Society should have failed until within a very recent period to adequately encourage varieties other than those of value for competitive purposes.

What is wanted at the present time is dahlias of good habit; in other words varieties that have a sturdy, free-branching growth, and great freedom of flowering. It was also essential that the flowers be borne on stems of sufficient length to carry them well above the foliage, because freedom of blooming is of little value so far as colour effects in the garden are concerned if the blooms are hidden away among the leaves.

It would appear that dahlia raisers and dahlia fanciers have taken an altogether too narrow view of the dahlia as a generally useful garden flower. For long, long years every effort has, practically speaking, been devoted to the production of exhibition varieties and exhibition blooms, and, unfortunately, societies that have in any way recognised dahlias by providing classes for them in their schedules have given encouragement thereto. This is practically the reason why the National Dahlia Socety became somewhat moribund, and for some time failed to enjoy the prosperity which a society associated with so important a class of flowers should possess. Happily, there had been a change of policy, and this justified the hope that dahlias for all purposes would receive recognition and encouragement. It is quite certain that if the society is to fulfil its mission strenuous endeavour must be made to make the dahlia a popular garden flower, and it is therefore gratifying to know that the executive are beginning to appreciate this important fact.

The history of the National Rose Society, the National Carnation Society, and the National Chrysanthemum Society afforded ample evidence of the importance of a floricultural society taking a broad view of its work, and not losing sight of the fact that the proper place for the flowers with which it is associated is the garden. While the National Rose Society devoted nearly the whole of its attention to exhibition roses it was a small body with a few hundred members; but now, as the result of a change in its policy, and a full recognition of roses for the garden, it had between 4,000 and 5,000 members. Again, the National Carnation Society was for a long time stationary until the late Mr. Martin Smith, at a conference at Chiswick boldly condemned the practice of giving almost exclusive attention to the cultivation of carnations for exhibition, and by methods that necessitated the use of glass. The condemnation had the desired effect. Border varieties and border culture were liberally encouraged, and an immense impetus given to cultivation. The National Chrysanthemum Society in like manner gave itself up wholly to the cultivation of exhibition varieties, and suffered accordingly. But it is once again showing renewed life, and trade growers are benefited, as the result of the attention it has devoted, and is devoting, to improved varieties for the decoration of the garden and conservatory, and the supply of cut blooms for the embellishment of the home.

These historical facts are of special interest as evidence that no floricultural society can flourish when it gets into a groove so narrow as to prevent it seeing more than one side of work that has many aspects. They are evidence also that the flowers suffer from a want of breadth in the policy of the societies associated with them, and that a change of policy by which both decorative and exhibition varieties receive equal encouragement invariably proves beneficial both to the society and the cult it represents.

Besides, said Mr. Gordon, producing varieties of fine habit and with long-stemmed flowers and remarkable for their effective colouring, it was essential strenuous efforts should be made to increase the length of the dahlia season by the production of varieties that come into bloom earlier. It would seem to him that there was room for a new race that would be to the dahlia what the early-flowering chrysanthemums are to the November and exhibition varieties. In other words we must have a longer dahlia season if the flower is to become, in any measure, as popular as the rose, the chrysanthemum, the carnation, and the sweet pea. We must have dahlias that, under ordinary cultivation, will be in full bloom by the beginning of August, and continue to yield up their floral wealth until the frost comes in the autumn. It was not sufficient that dahlias should be at their best in September, for if their season extended over a few weeks only they did not justify the time and space devoted to them. Happily there was a foundation available for such race, and as raisers had of late devoted some of their attention to the creation of garden varieties, and already achieved considerable success, there was full justification for the anticipation that at no distant date an immense improvement will be manifest.

Mr. Cuthbertson thoroughly agreed that the introduction of the show cactus dahlia and the great efforts put forward in its cultivation had kept back the extended growth of dahlias as garden flowers. Probably 90 per cent. of dahlia growers never competed. In America the flower was grown almost solely for garden effect, and little for purely exhibition purposes. The dahlia has three strong competitors—the H.T. rose, the waved sweet pea, and the early chrysanthemum, therefore there was a need for great work in securing earlier and longer-flowering varieties, so that the dahlia might occupy a rightful position in the floricultural world.

Mr. Hawes expressed himself as entirely in favour of dahlias for garden decoration, and said that he considered that the future of the National Dahlia Society depended almost entirely upon the stand it would take in this respect. Some pæony-flowered varieties were good for garden decoration, but there was room for great improvement. Mr. Curtis and Mr. J. B. Riding emphasised the chief points, and gave it as their opinion that there was great need for the evolution of varieties of dahlias that will come fully into flower early in August. Mr. Riding thought the N.D.S. had itself more or less killed the popularity of the dahlia by certificating varieties of value only for exhibition purposes. He thought, however, there was a turn for the better, and he hoped that in time the dahlia for garden decoration would be forthcoming from the raisers. We needed to go back to varieties like Amos Perry, and from these raise new and improved and early varieties.

Mr. W. Cuthbertson brought the proceedings to a close by moving a vote of thanks to those who had contributed papers, and Mr. Mawley for presiding; this was seconded by Mr. S. Mortimer, and carried with acclamation.

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, MARCH 14.

Present: Mr. E. A. Bowles, M.A., F.L.S. (in the chair), Sir Everard im Thurn, Sir John T. D. Llewelyn, Dr. O. Stapf, Dr. J. A.

Voelcker, Messrs. C. T. Druery, J. Douglas, A. Worsley, E. M. Holmes, J. T. Bennett-Poë, W. Cuthbertson, J. Fraser, G. Gordon, and F. J. Chittenden (hon. secretary).

PRIMULA STELLATA, ABNORMALITIES IN.—Mr. A. Worsley showed flowers of P. stellata having two to five antipetalous outgrowths at the throat, the flowers being otherwise normal. The outgrowths were similar in structure to the petals, but only about half the size and reversed, i.e., having the dark red surface opposed to the dark red surface of the petals and the paler surface turned towards the centre of the flower (and similar in colour to the outer surface of the corolla).

GREEN PRIMROSE.—Mr. J. Fitt, of The Frythe Gardens, Welwyn, showed a well-grown plant of the long-known primrose with virescent petals. In the present instance the petals showed rather more of the leaf-like character than usual, the venation being very distinct. The plant had been found growing wild near Welwyn two years ago.

RHODODENDRON GRANDE.—Sir John Llewelyn showed flowers from a seedling Rhododendron grande gathered in the open. The plant, with others, had been raised from seed received from the late Sir George King, from Calcutta, but had never before flowered, the flower-buds having always previously been destroyed by frost. All the other plants raised at the same time came into flower six weeks later. The instance is an interesting one of a persistent and apparently congenital one of variation from the normal time of flowering and quite independent of climatic conditions. Similar instances occur in other species of rhododendron, particularly R. arboreum.

DISEASE OF CELERY.—Mr. Chittenden commented upon the widespread character of, and great loss occasioned by the disease of celery due to the fungus Septoria petroselini var. Apii during the past year. He drew attention to the fact that a considerable amount of celery "seed" on the market, including samples grown in England and on the Continent, showed the perithecia containing ripe spores of the fungus. Klebahn has recently shown that the spores from affected "seed" are capable of reproducing the disease, and as so much of the seed seems likely to contain spores, the desirability of special attention to celery during the coming season is indicated. If the foliage shows the least sign of the disease by the development of small brown spots, the plants should be sprayed with potassium sulphide or with Bordeaux mixture at once, the spraying being repeated if necessary.

CERTIFICATES TO PLANTS OF SCIENTIFIC INTEREST.—Mr. Worsley brought forward a resolution upon the question of granting certificates to plants shown before the committee. The fact that the Botanical Certificate had (erroneously) come to be looked upon as an award to be made to a plant of no decorative or commercial value was commented upon. The actual intention of the Botanical Certificate was to encourage the introduction and cultivation of plants of intrinsic interest or of potential value, and it is, as stated in the "Book of Arrangements," intended to be awarded to "Plants newly discovered or raised, and of botanical interest irrespective of decorative value." After further discussion, a sub-committee was re-appointed to select plants at each meeting for the full committee's consideration, the sub-committee consisting of Messrs. J. T. Bennett-Poë, J. Douglas, C. T. Druery, and A. Worsley. The further discussion of the question was adjourned until the next meeting.

British Gardeners' Association.

The usual monthly meeting of the London branch took place at Carr's Restaurant, on Thursday, March 9. Mr. North presided, and there was an average attendance of forty members present. On the motion of Mr. Hawes, it was resolved to send two guineas as a donation to the Royal Gardeners' Orphan Fund from the proceeds of the concert held on February 25. A very interesting address on "A Young Gardener's Education" was given by Mr. Thomas Bevan, chairman of the Executive Council of the B.G.A. The speaker traced the gardener's career from garden boy to head gardener, and from his long and varied experience in gardening he was able to give much valuable and practical advice to those young gardeners who are desirous of becoming shining lights in their profession.

The following points were strongly emphasised by Mr. Bevan: The power of observation should be carefully cultivated, and a diary kept to note the time of seed sowings, rotation of crops, budding arrangements, and other gardening operations. The study of horticultural knowledge, both practical and theoretical, should be systematically carried out; always endeavour to learn the why and wherefore of all you see done, and never be afraid or too proud to ask questions. Read the horticultural papers regularly, visit gardens of interest in the neighbourhood, and attend flower shows whenever possible. Young gardeners should not confine themselves to one area, but endeavour to gain a varied experience by going to various parts of the country. Above all, learn to work and think.

An interesting and animated discussion followed, which was taken part in by many of those present.

A hearty vote of thanks to Mr. Bevan brought the meeting to a close.

Royal International Horticultural Exhibition, 1912.

For the purpose of assisting in the promotion of this exhibition, the Executive Committee invited prominent horticulturists in the various counties to act as provincial secretaries. The first duty of these secretaries was to get together a committee and chairman for each county. These committees will do what is possible to encourage local cultivators to participate in the exhibition. They will also endeavour to obtain subscriptions and guarantees, and in various ways popularise the exhibition in the counties. At the invitation of the Executive Committee a number of the secretaries, including representatives from Wales and Ireland, attended a meeting on the 14th inst., at the Hotel Windsor, Westminster, for the purpose of conferring as to the best means of carrying out their work, and for the purpose of hearing from the chairman of the Executive Committee, Mr. J. Gurney Fowler, some information upon the progress which has been made since the last meeting. Mr. Fowler first delivered an address, in which he showed that everything was being done to push forward the work of organisation as rapidly as possible, and he described the ways in which the provincial committees could best support the efforts of the Executive Committee. Following the chairman's address, there were speeches from many of the provincial representatives, some of whom sought information. On the whole the reports were of a reassuring character, for whilst some had encountered considerable difficulties in their initial proceedings, others had succeeded in gaining the support of all whom they had approached. On behalf of the Executive Committee, Mr. Fowler promised that certain suggestions advanced by the delegates should be adopted. In the evening of the same day the party joined the members of the Horticultural Club at dinner.

Bristol Gardeners' Association.

This society received its annual visit from the Bristol Amateur Society on March 9 at St. John's Parish Rooms, when Mr. Hayball presided over a large attendance.

A paper on "Rose Culture" was given by Mr. Harris, of the visiting society, and in a brief history of the rose, Mr. Harris went as far back as 600 years B.C. He spoke from an amateur's standpoint throughout his paper. He said a situation should be chosen little liable to severe frost or strong wind; pure air was essential; the soil most suitable is a strong, deep, heavy loam, resting on gravel or chalk. His advice was to trench deeply, and incorporate grit, road-scrapings, burnt clay, and manure; plant early, and cover the point of union. The lecturer strongly recommended the use of liquid manure in May or June when roses are growing freely.

For two pots of narcissus, Mr. Shelton was first, Mr. Ayres second, and Mr. T. Clark third. In the point competition Mr. Woodward received six for Cattleya Trianæ, and three for violets; Mr. Hunking four for Cattleya Schroderæ, and Mr. Scott two for a seedling hellebore.

FORTHCOMING ENGAGEMENTS.

TUESDAY, March 28.—Royal Horticultural Society; Daffodil Committee meets at 11.30 a.m.; Fruit, Floral, and Orchid Committees, at 12 o'clock; lecture at 3 p.m. on "Alpines in their Native Homes," by Mr. R. C. Reginald Nevill; Scientific Committee, at 4 o'clock.

WEDNESDAY, March 29.—Irish Gardeners' Association and Benevolent Society meets.

THURSDAY, March 30.—Torquay Spring Flower

SATURDAY, April 1.—Paisley Florists' Spring Show.

TUESDAY, April 4.—Truro Spring Show; two days.

Bournemouth Spring Show; two days.

Scottish Horticultural Association meeting.

WEDNESDAY, April 5.—Liverpool Spring Show; two days.

Royal Horticultural Society's general examination in Horticulture.

THURSDAY, April 6.—Linnean Society meets.

FRIDAY, April 7.—Kingsbridge Daffodil Society.

MONDAY, April 10.—United Horticultural Benefit and Provident Society, committee meeting.

TUESDAY, April 11.—Royal Horticultural Society; Daffodil Committee meets at 11.30; Fruit, Floral, and Orchid Committees at 12 o'clock; lecture at 3 p.m. on "The Origin and Structure of Aquatic Flowering Plants," by the Rev. Prof. G. Henslow, V.M.H.; Scientific Committee at 4 o'clock.

THURSDAY, April 13.—National Horticultural Society of France; exhibition and meeting in Paris.

WEDNESDAY, April 19.—Royal Horticultural Society of Ireland; Spring Show.

Devon Spring Flower Show, at Plymouth; two days.

THURSDAY, April 20.—Ipswich Spring Show.

TUESDAY, April 25.—Royal Horticultural Society; Daffodil Committee meets at 11.30; Fruit, Floral, and Orchid Committees at 12 o'clock; lecture at 3 p.m. on "The Tulip—Its Problems and History," by Rev. J. Jacob; Scientific Committee at 4 o'clock.

Eckford's Giant Sweet Peas

The Finest Blooms

that blossom on the Sweet Pea Plant are grown from Eckford's famous seeds. Eckford, the Sweet Pea Specialist, supplies only seeds that are bound to give good results. Eckford's seeds flower brilliantly, give brighter colours, longer stems, larger flowers, and succeed even in the most difficult soils.

ECKFORD'S are the largest retailers of Sweet Peas in the world, and do not supply the trade.

Villa (B) Collection.
24 Splendid varieties, suitable for exhibition, 50 seeds of each, **5/6**, post free for cash.

Villa (C) Collection.
12 Splendid varieties, suitable for exhibition, 50 seeds of each, **2/9**, post free for cash.

Villa (E) Collection.
12 Extra varieties, suitable for exhibition, 25 seeds of each, **1/6**, post free for cash.

A specially written booklet on Sweet Pea Growing given with every order.

For full list of Special Novelties see next week's issue.

FREE. Send a postcard to-day for large Illustrated and Coloured Catalogue. It gives full particulars of all novelties in Sweet Peas for 1911, and contains full list of all flower and vegetable seeds.

HENRY ECKFORD, F.R.H.S.
(Dept. 221), Wem, Shropshire.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

PLANTING WATER LILIES.—J. B., Malvern: You will find an article in the present issue giving just the information you require.

HARDY PRIMULA SEEDS.—G. F., Weymouth: As a general rule the best time to sow seeds of the hardy primulas is directly they are ripe. Cold frames will provide ample shelter for the seed beds or boxes, and such shelter as is needed chiefly for the purpose of throwing off heavy rains.

SPOTTED STRAWBERRY LEAVES.—A. C. R., Iping: The leaves sent show a very bad attack of the fungus known as Strawberry Leaf Spot (Sphærella fragariæ). Bordeaux mixture at half the normal strength should be sprayed over and among the plants directly an attack is noticed, and, where the disease has been prevalent the strawberry plants should be sprayed in early spring, when the new leaves appear. More than one spraying may be desirable in the early spring, but spraying must cease just before the flowers open. An excellent method of getting rid of the pest is to adopt somewhat drastic methods in the early autumn. Sprinkle thin layers of straw over the entire bed, and set it on fire; by this means the old infected leaves and all debris holding fungus spores will be burned up. If this is followed by hoeing and light manurial dressings a luxuriant growth of healthy and vigorous foliage will follow. In the succeeding spring a spraying with weak Bordeaux mixture should be given as a preventive.

CLEMATIS.—J. C., Epsom: Clematises may be propagated by the common method of layering, but the branch layered must not be separated from the parent before it is thoroughly well rooted. Pieces of growth cut up into portions, each with at least one eye, will root in brisk heat, in sandy soil, if inserted in spring. Most of the garden varieties are increased by the growers by means of root grafting in spring, in a warm house. The kinds most used as stocks are Clematis vitalba, C. viticella, and C. flammula. Clematises like a rather rich soil, containing a fair proportion of lime, so that lime rubble may, in most cases, be advantageously added to the garden soil. A mulching of rotten manure in the autumn, and a similar dressing in early summer, will materially aid growth and flower production.

PLANTING CHRISTMAS ROSES.—L. E. S., March: Some few years ago we dealt at some length with the preparation of permanent beds for Christmas roses for the purpose of providing an abundance of fine clean flowers during the winter. The work should be carried out without delay. The site for the bed must be marked out according to the size of the frames to be used, and the prospective demand. If the natural soil is at all doubtful, heavy, or over a wet subsoil, it should be removed to the depth of 2ft.; after breaking up the subsoil put in six inches of brick rubble and clinkers, covering this with a good layer of last season's leaves or inverted turves. Then fill up the space with a mixture of turfy loam, peat, leaf-soil, road grit, and a little half-decayed manure. Make all this quite firm, and then plant out the hellebores after carefully pulling the old plants into pieces about six inches in diameter. Press the soil firmly about the roots, only just bury the crowns, and leave six clear inches of space between the plants. Put the frames in position, and keep the lights on for a little while to encourage growth. In May apply a light top-dressing of leaf-mould and old hotbed manure. Ventilate freely after the plants are established, presently removing the lights entirely. Give water as occasion demands, and when the growth for the year has finished remove the frames from the bed, returning them during October, but only putting the lights on in bad weather until the flowers begin to open, when they should remain in position, tilted, to keep the blooms clean.

NAMES OF PLANTS.

Under this heading we can only undertake to name species and well marked varieties of plants, and not florists' flowers. Specimens should be packed in stout boxes with damp moss, or some leaves, as packing material, to ensure their reaching us in a fresh state. It is essential that flowers must accompany specimens of flowering plants, that fern fronds be fertile, and that numbers be firmly attached to the specimens so that they can be seen without any untying. We cannot promise to name more than six specimens at one time from any one correspondent.

W. B. C., Ruabon.—1, Odontoglossum cirrhosum; 2, Fuchsia procumbens.

J. D. L., Warwick.—1, Abies Douglasi; 2, Pinus pinea; 3, Ruscus aculeatus; 4, Viola gracilis.

H. H. S., Dunstable.—1, Saxifraga sancta; 2, Anemone blanda; 3, Adonis amurensis; 4, Saxifraga apiculata.

A. H., Chester.—1, Dendrobium signatum; 2, Eucharis candida; 3, Areca lutescens; 4, Coleus thyrsoideus; 5, Hibbertia dentata.

E. S., Esher.—1, Primula rosea; 2, P. frondosa; 3, Ribes sanguinea; 4, Cornus Mas; 5, Ulmus campestris; 6, Chionodoxa Luciliæ.

L. S. M., Winchcombe.—1, Rhododendron præcox; 2, Primula denticulata Cashmeriana; 3, Kalmia latifolia; 4, Sempervivum arachnoideum.

CATALOGUES RECEIVED.

SUTTON AND SONS, READING.—The Farmers' Year Book and Graziers' Manual, is, as usual, an excellent catalogue of good things in the way of roots and fodder crops of all kinds.

AMOS PERRY, ENFIELD.—Florists' flowers, chiefly hardy kinds, form the contents of Mr. Perry's spring issue; pentstemons figure largely, and a coloured plate of these beautiful flowers is included; phloxes, delphiniums, carnations, pinks, and pyrethrums, are also treated at length.

BEES, LTD., MILL STREET, LIVERPOOL.—A catalogue of 134 pages is devoted mainly to descriptions of hardy herbaceous plants, alpines, and the new hardy primulas (illustrated), but pot roses, dahlias, chrysanthemums, and bedding plants receive a full share of attention.

THOS. S. WARE, LTD., FELTHAM, MIDDLESEX.—Under the title of "Hardy Plants for Herbaceous Borders and Rockeries, Water and Bog Gardens," the Feltham firm has issued a most interesting and descriptive catalogue, the value of which is greatly enhanced by the inclusion of excellent views of rock and water gardens, herbaceous borders, and specimen plants.

CONTENTS.

PAGE
Answers to Correspondents ... 236
Autumn Flowers in the Rock Garden ... 220
Bedding Violas ... 229
Dwarf Conifers for the Rockery ... 223
Exhibitions and Meetings ... 232
Gladioli and Montbretias ... 231
Herbaceous Phloxes ... 228
Iris Bucharica ... 227
New Plants, etc. ... 222
Notes of the Week ... 217
Obituary ... 231
Perennial Asters ... 221
Seasonable Herbaceous Borders ... 225
Simple Water Gardens ... 226
Spring Planting in the Rock Garden ... 224
Waterside Plants ... 219
Work for the Week ... 230

ILLUSTRATIONS.

Portrait of Mr. R. W. Wallace, 217; Waterside Irises at Kew, 219; Portion of Border of Michaelmas Daisies, 221; Picea Excelsa Ramonti, 222; Thuya occidentalis dumosa, 223; A Fine Group of Saxifragas, 224; Beautiful Herbaceous Borders, 225; The Lily Pool at Kew, 227; A Group of Herbaceous Phloxes, 228; Violas as Carpet Plants in Rose Beds, 229; Portrait of the Late Mr. J. George, 231.

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.
The best and the cheapest.
Write for LISTS.
Quotations given for ANY Quantity, Carriage Free.
Appointed by Royal Warrant
Makers to His Majesty the late King.
Largest Manufacturers in the World.
Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

THE FAVOURITE WEED KILLER.

SANDWITH'S
PREMIER
WEED
KILLER

As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.
Use once a year, and your garden paths will be always clean and bright.
4 galls. for 6/-; drum, 2/-. 12 galls. for 16/-; drum, 6/-. 20 galls. for 26/8; drum, 10/-. 40 galls. for 50/-; drum, 20/-.
EITHER LIQUID OR POWDER.
Carriage Paid.
If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.
TIMOTHY & SANDWITH,
The Horticultural Specialists, BRACKNELL, BERKS.
Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

THE CHEAPEST IN ENGLAND.
NO. 50.

Copyright Registered.
PORTABLE BUILDINGS. Made in complete sections, best quality Red Deal (not inferior Foreign Match Boards as other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.
CASH WITH ORDER.

Sizes.		Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.
Catalogue, with Testimonials, Post Free.
J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
ESTABLISHED 70 YEARS. BEDFORD.
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

ELECTRIC FERTILIZER
9d. sample packet. 2/3 7 lbs. 17/6 cwt.
189, BALHAM HIGH ROAD, S.W.

Price 7s. 6d. net. By post, packed in box, 8s
THE FLOWER GARDEN.
The Formation and Management of a Garden, and the Culture of Outdoor Flowers and Plants.
W. H. and L. COLLINGRIDGE, 148 and 149, Aldersgate Street, London.

Fruit Pergola as recently erected.

Have a Fruit Pergola this Summer!

Charming effects and excellent results can be obtained by training fruit trees on our improved Arched Espaliers. Order now, and get your fruit trees planted in good time.

No. 103 Arched Espalier, 8ft. high, 5ft. wide, painted, 9/6 per yard.
Cheaper patterns 6/- and 3/- per yard.
Catalogue No. 153A of Espaliers, Rose Trainers, Garden Arches, Pergolas, etc., free.
HUTS FOR THE GARDEN, POTTING SHEDS, FRUIT ROOMS, TOOL HOUSES, ETC

BOULTON & PAUL, Ltd., Specialists, NORWICH.

DEATH TO WIREWORMS

and therefore great improvement in your plants, results from using VAPORITE. THE

ORIGINAL SOIL INSECTICIDE

in your garden or greenhouse. Dig it in at the rate of 1 lb. to 8 square yards. Easy to use, non-poisonous, economical. Insist on having Vaporite. Many imitations are not only worthless but actually injurious to plants.

PRICES.

1½ lb., **9**d.; 7 lb., **2**/-; 14 lb., **3**/-; 28 lb., **4 6**, of all seedsmen.

Casks, **7 6** ½-cwt., **11 6** cwt., carriage paid from your seedsman or the Company.

Write to-day for interesting Descriptive Booklet, No. 45.

THE VAPORITE-STRAWSON CO., Ltd.,
Dept. E,
Spencer House, South Place, London, E.C.

VAPORITE

MANY YEARS REPUTATION.

EUREKA WEED KILLER

LASTING RESULTS—NO NEW EXPERIMENT.

1/9 TIN FOR 25 GALLONS | **6/-** TIN FOR 100 GALLONS | LARGER SIZES AT LOWER RATES

SOLD BY AGENTS. MANUFACTURERS: TOMLINSON & HAYWARD LTD LINCOLN.
IF ANY DIFFICULTY SENT DIRECT—PAID

PUBLISHERS' ANNOUNCEMENTS.

THE GARDENERS' MAGAZINE may be obtained by order from all Newsagents, price Twopence, every Saturday. If any difficulty be found, a copy will be posted weekly direct from the Publisher, 148 and 149, Aldersgate Street, London, on the following terms: Twelve Months, 10s. 6d.; Six Months 5s. 6d.

INDEX and Title Page to Vol. LIII. (comprising the weekly numbers from January to December, 1910), price 2d., by post 2½d.

ONCE USED. ALWAYS USED. **The 'PATTISSON' LAWN BOOTS**

Simplest! Strongest! Most Economical!

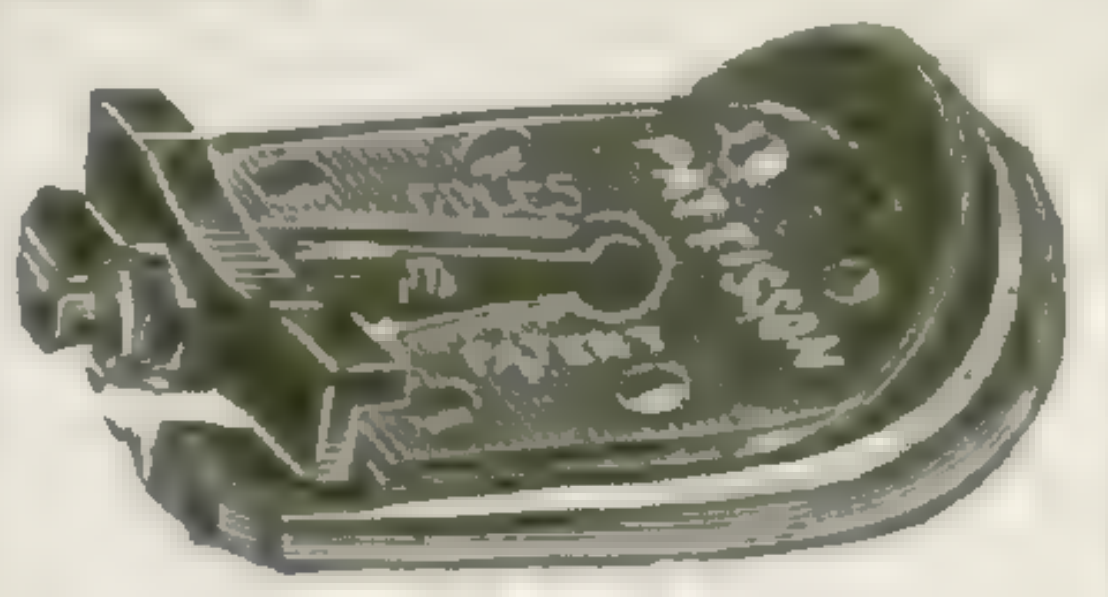


Fig. 1.

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS.

Silver Medal—
Royal Horticultural Society.

HUNDREDS OF TESTIMONIALS.

The Field says: **"As good as anything that could be devised."**

Illustrated Price List from—

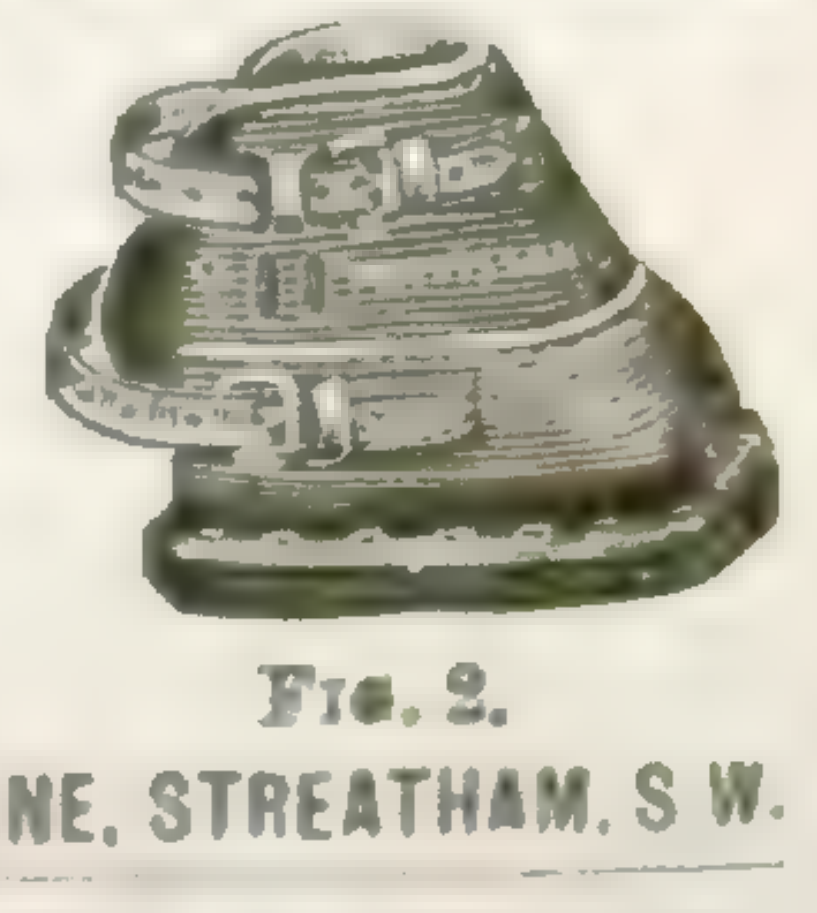


Fig. 2.

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM, S.W.

LOOK! TANNED GARDEN NETTING, small mesh, 50yds. long by 1 yd., wide, 1s.; by 2yds. wide, 2s.; by 3yds. wide, 3s., either car. paid, any size made. Odd pieces Netting for protecting bush fruit buds, 14lbs., in bag, 3s. Package free. STANLEY GORDON, Bank House, Rye.

Dr. J. COLLIS BROWNE'S

THE ORIGINAL AND ONLY GENUINE

Chlorodyne

ADMITTED BY THE PROFESSION TO BE THE MOST VALUABLE REMEDY EVER DISCOVERED.

The Best Remedy known for

COUGHS, COLDS, ASTHMA, BRONCHITIS.

Cuts short all attacks of SPASMS, HYSTERIA, and PALPITATION.

The only Palliative in NEURALGIA, TOOTHACHE, GOUT, RHEUMATISM.

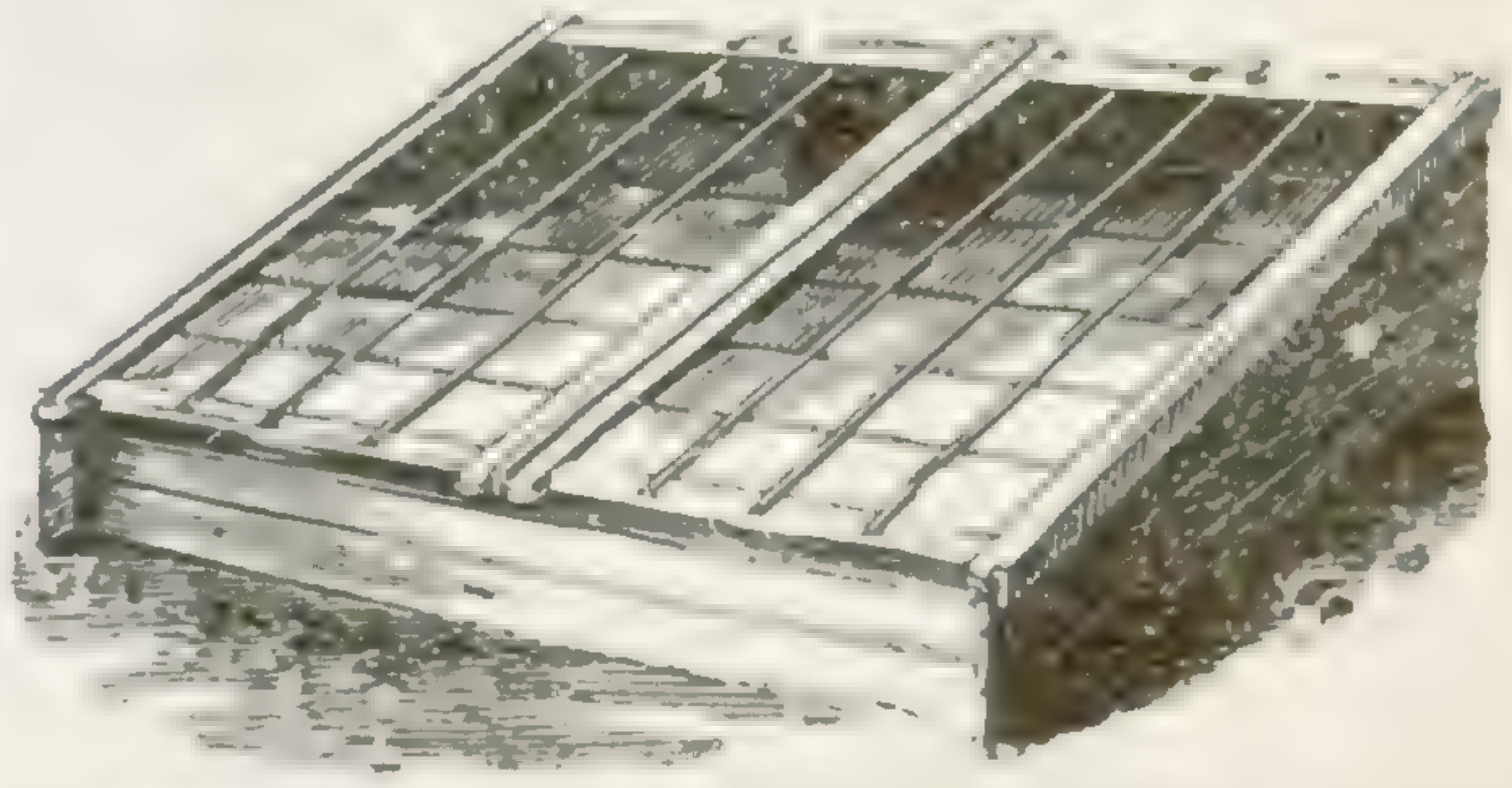
Acts like a Charm in DIARRHŒA and DYSENTERY.

Refuse imitations and insist on having **Dr. J. COLLIS BROWNE'S Chlorodyne.**

Convincing Medical Testimony with each bottle.
Of all Chemists, **1/1½, 2/9, 4/6.**

PORTABLE CUCUMBER FRAMES.

OUR WELL-KNOWN MAKE.



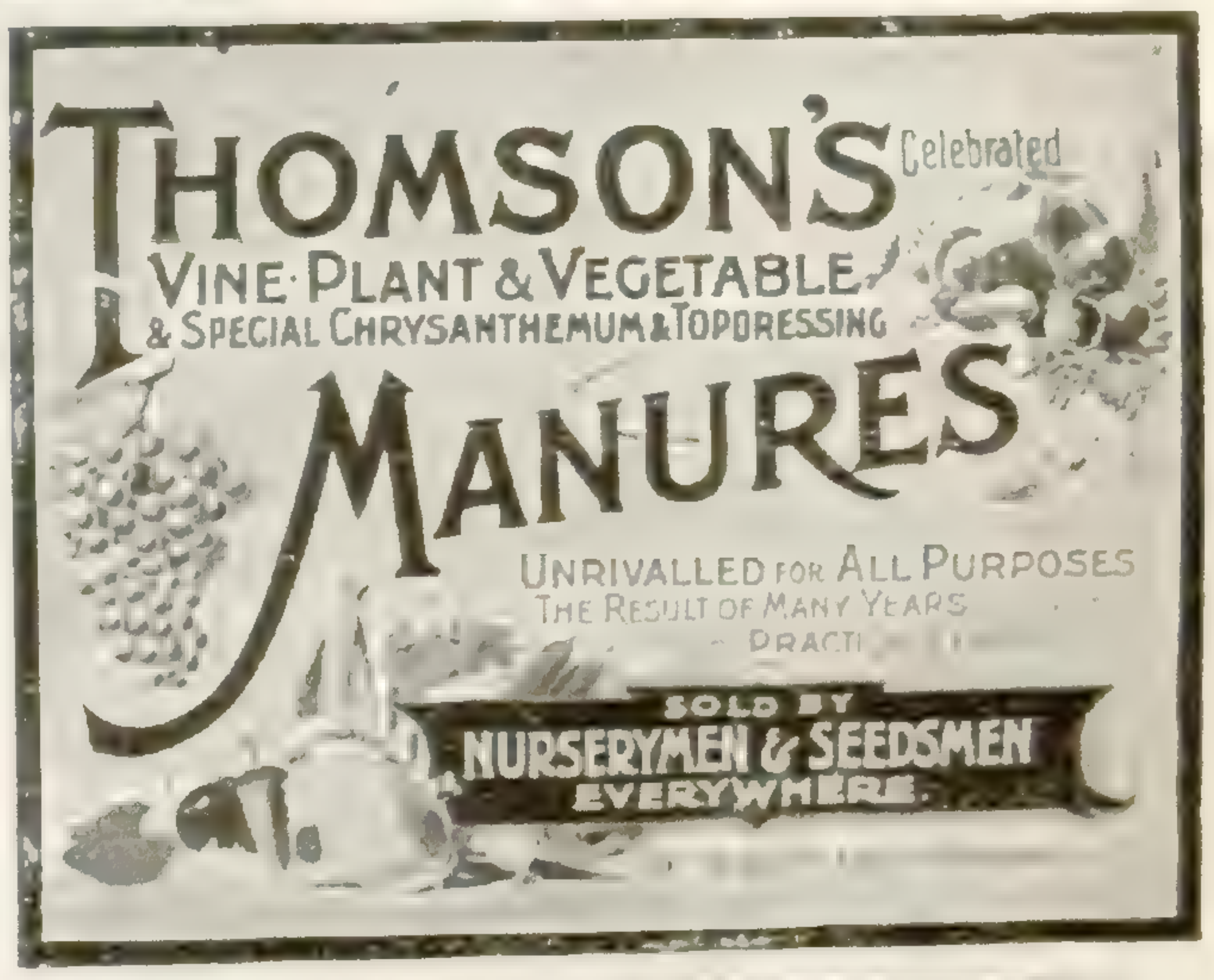
These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.	£	s.	d.
1-light 4 ft. by 6 ft.	2	0	0
2-light 8 ft. by 6 ft.	3	0	0
3-light 12 ft. by 6 ft.	4	2	6
4-light 16 ft. by 6 ft.	5	5	0
5-light 20 ft. by 6 ft.	6	7	6
6-light 24 ft. by 6 ft.	7	10	0

CASH PRICES. CARRIAGE PAID.

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON, MANCHESTER.



"CARRUSTICIDE."

The Best and Cheapest Remedy for Carnation Rust and other Fungoid Diseases.

A well-known Carnation Grower writes:

Dear Sir, The Nurseries, March, Cambs.

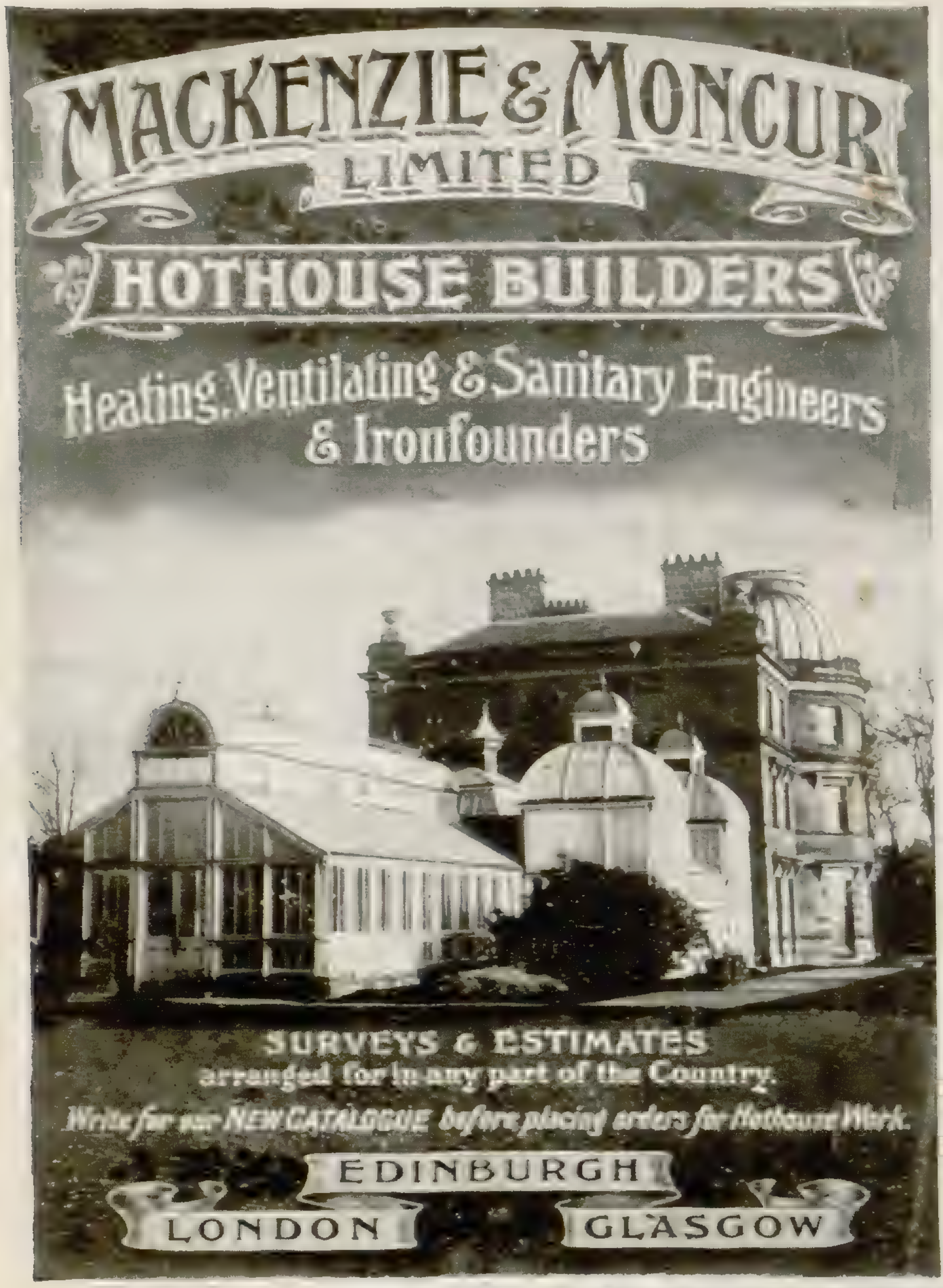
"During the 27 years I have been growing Carnations (Perpetual and American) I have tried most of the fungicides placed on the market, but yours is the best. It is a pleasure to see how "Carrusticide" catches hold of the Rust and destroys it. I should say your preparation will be extensively used when it is better known." Yours very truly,

GEO. CLARKE.

One gallon makes 25 gallons for spraying purposes—Price 3s. per quart, 7s. 6d. per gallon. Special quotations for larger quantities.

Terms: Cash with order.

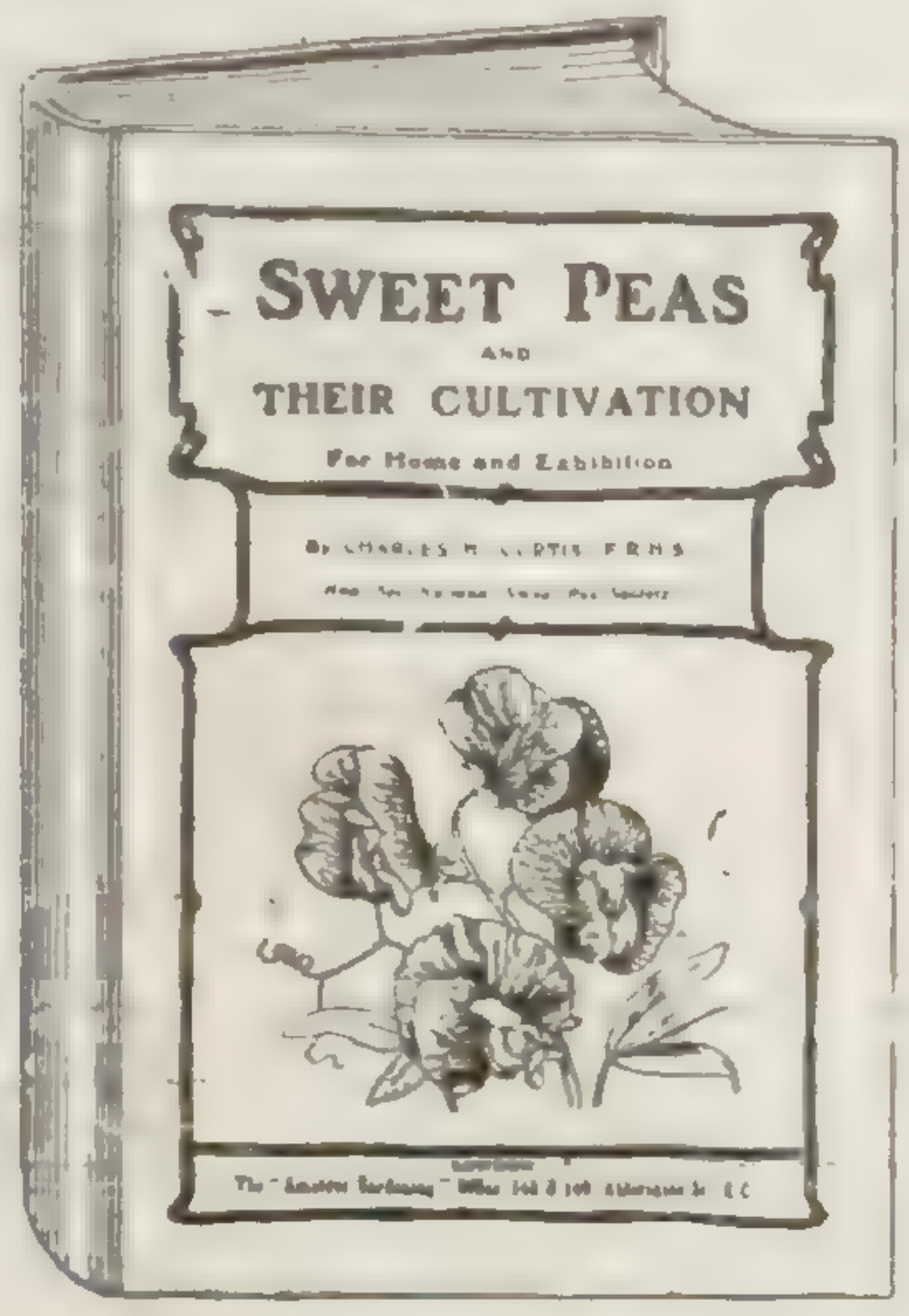
H. SAMUEL, Ph.C., M.P.S., Horticultural Chemist
55, High Street, Leighton Buzzard.


MACKENZIE & MONCUR
LIMITED
HOTHOUSE BUILDERS
Heating, Ventilating & Sanitary Engineers
& Ironfounders

SURVEYS & ESTIMATES
arranged for in any part of the Country.
Write for our NEW CATALOGUE before placing orders for Hothouse Work.
EDINBURGH
LONDON GLASGOW

THE BEST BOOK ON THE SUBJECT.
THIRD EDITION. Price 1/- net, by post 1/2. Cloth 1/6, by post 1/8

SWEET PEAS
AND THEIR
CULTIVATION
FOR HOME AND EXHIBITION.
By
CHAS. H. CURTIS, F.R.H.S.,
Hon. Sec. National Sweet Pea Society.



THE BEST SWEET PEAS.
HOW TO GROW THEM.
MANURING.
WATERING.
STAKING AND TYING.
RAISING NEW VARIETIES.
DISEASES AND INSECT PESTS.
EXHIBITING.
Etc., Etc.

Fully Illustrated.

ORDER FORM.

To the Publishers, "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, LONDON.

Please send me a copy of "SWEET PEAS AND THEIR CULTIVATION" by post, for which I enclose remittance of 1/2 (if bound in cloth, 1/8).

Name ....

Address ....

....

TELEGRAMS:—
"HORTULANUS."

BEST WORKMANSHIP AND LOWEST PRICES.

TELEPHONE:
5947, Westminster.

J. WEEKS & Co., CHELSEA.

ESTABLISHED 1808.

THE OLDEST FIRM IN THE TRADE FOR

CONSERVATORIES, HOT HOUSES, FRUIT HOUSES.

Plans prepared for Glass Houses and Estate Buildings of every Description,
Motor Car Houses, etc. Estimates for Painting and Repairs.

MAKERS OF WEEKS' PATENT "DUPLEX" UPRIGHT TUBULAR BOILERS.

CONSULTING ENGINEERS AND SPECIALISTS IN

HEATING AND VENTILATION FOR ANY KIND OF BUILDING.

PLEASE ADDRESS ALL ENQUIRIES TO HEAD OFFICE:

72 VICTORIA STREET, WESTMINSTER, S.W.

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 2,996. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, APRIL 1, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) Twopence

BARR'S VEGETABLE & FLOWER SEEDS of finest selected strains and tested growth. Descriptive Catalogue, with cultural notes, free.

BARR'S BEAUTIFUL LILIES, CANNAS, GLADIOLI, MONTBRETIAS, TIGRIDIAS, ETC., for Spring planting. Catalogue free.

BARR'S Hardy PERENNIALS, ALPINES, AQUATICS, CLIMBERS, ETC., for Spring planting. Descriptive Catalogue, with cultural notes, free.

BARR and SONS, 11, 12, and 13, KING STREET, COVENT GARDEN, LONDON.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, S.W., has a large body of Painters and Glaziers now working at Busbridge Hall, Godalming. They go from thence to The Cedars, Harrow Weald, but can be secured for other Painting Contracts about April 20th, by letter, telephone "201 Western," or wire "Gray, Chelsea, London."

KING'S ACRE FRUIT TREES, ROSES, AND ORCHARD-HOUSE TREES.

AWARDED 24 GOLD MEDALS SEASONS 1909-10.

160 acres to select from of the finest Trees that natural conditions and the skill of man can produce.

ILLUSTRATED CATALOGUES FREE ON APPLICATION.

KING'S ACRE NURSERIES, LTD., HEREFORD.

EXHIBITION PANSIES, VIOLAS, CARNATIONS, PHLOXES, and CHRYSANTHEMUMS.—12 Superb fancy Pansies, 3s.; newest and best, 5s. 12 Exhibition Violas, 2s. 6d.; newest and best, 4s. 12 Superb Carnations, 6s.; newest and best, 10s. 12 Yellow or white ground Picotees, 6s.; newest and best, 8s. 12 Superb Phloxes, 4s.; very best, 6s. 12 Early-flowering Chrysanthemums, 2s. 6d.; newest and best, 4s. 12 Best bedding Violas, 2s.; 50 in 10 vars., 4s. 6d.; 100 in 10 or 20 vars., 8s.; all post free, except Carnations in pots, which are car. forward. Lists free. S. PYE, Bowgreave Nursery, Garstang.

CONSERVATORIES AND WINTER GARDENS, Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue free.—BOULTON and PAUL, Lim., Norwich.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

POULTRY AND KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

BARNARDS LIMITED, Norwich.—Best House for Fencing, Espaliers, Pergolas, Fruit Enclosures, Iron and Wire Bordering, all descriptions of Training Fittings, Arches, Wire Netting, Stakes, Wire Lattice, Rollers, and all garden requisites. Now is the time to effect improvements in your garden. Catalogues free; inquiries invited.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page v.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

WEBBS' LOVELY ASTERS.—BEDDING, Rose, Dark Crimson, White, Pink, Purple, Light Blue, and mixed colours. Each, 6d. and 1s. per packet; 6 distinct colours, separate, 3s.

OSTRICH PLUME, VICTORIA, COMET, GIANT RAY, and GIANT COMET. Each, mixed colours, 6d. and 1s. per packet, post free.

WEBBS' LOVELY STOCKS.—BEDDING, Scarlet, Canary Yellow, Purple, Light Blue, White, Rose, and mixed colours. Each, 6d. and 1s. per packet. 6 distinct colours, separate, 3s.

IMPERIAL TEN-WEEK, NEW ADMIRATION, LARGE-FLOWERING TEN-WEEK, and BROMPTON. Each, mixed colours, 6d. and 1s. per packet, post free.

WEBB and SONS, The King's Seedsmen, WORDSLEY, STOURBRIDGE.

BUNYARD'S NEW CATALOGUES.
The following have been recently published, and contain all worthy new varieties. Post free on application.

BUNYARD'S CLIMBING PLANTS, Illustrated.

BUNYARD'S HERBACEOUS PLANTS, Illustrated.

BUNYARD'S HARDY TREES AND SHRUBS, Illustrated.

BUNYARD'S ASPARAGUS LIST.
Plants now ready for delivery.

BUNYARD'S SEEDS, VEGETABLE AND FLOWER, with coloured plates.

GEO. BUNYARD AND CO., LTD., Royal Nurseries, MAIDSTONE.

BEGONIAS, awarded 24 Gold Medals.—Double Seed, 2s. 6d. and 5s. per pkt.; Frilled, Crested, or plain Single, 1s., 2s. 6d., and 5s. per pkt. For price of Begonia tubers, Carnations (Border and Perpetual flowering), Cannas, Cyclamen, Blue Primroses, Delphiniums, Pansies, Polyanthus, Lily of the Valley, Violets, etc., please send postcard for copy of our Illustrated Catalogue, free on application.
BLACKMORE AND LANGDON, Twerton Hill Nursery, Bath.

LAXTON'S FRUIT TREE, STRAWBERRY, SEED, ROSE, HERBACEOUS, TREE, BULB, and SMALL FRUIT CATALOGUES, with full illustrations and descriptions, gratis on application.

LAXTON BROTHERS, Bedford.

PERENNIALS, UNIQUE COLLECTION,
including
ALPINES AND AQUATICS.
Also RARER SHRUBS, HIMALAYAN RHODODENDRONS, and Others.
Write for Catalogue. G. REUTHE, Keston, Kent.

WEEKS'S DUPLEX UPRIGHT TUBULAR BOILERS, for full advertisement see back page.

ORDER MATS NOW!—To prevent disappointment and loss by early frosts, order Norfolk Reed Mats now. 50 per cent. more protective than straw. Made to any size, 1d. per square foot.—BOULTON and PAUL, Lim., Norwich.

CLAY'S MANURES, CRUSHED BONES
(See page iv.)

CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

GARDEN ROLLERS, double cylinders, solid ends, rounded edges 14in. by 14in., 1¼cwts., 24s. 6d.; 16in. by 16in., 2cwts., 26s.; 20in. by 20in., 3cwts., 36s.; 24in. by 24in., 4½cwts., 56s. each; carriage paid any station in Great Britain. Lists free. J. ATTWOOD, Stourbridge.

SUTTON'S SUPERB BEDDING ASTERS.
A splendid selection of dwarf varieties, specially adapted for producing masses of colour in beds.
Scarlet, delicate Rose, bright Rose, Blue, Lilac (Mauve), and White, each per packet, 1s.
Collection of the six colours, separate, 5s.

SUTTON'S SUPERB BEDDING STOCKS.
Selected with great care expressly for bedding purposes.
Scarlet, White, Blue, Pink, Carmine-pink, Yellow, Peach-blossom, Purple, Terra-cotta, Blush Rose, each per packet, 1s.
Collection of the ten varieties, separate, 7s. 6d.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

LATEST SUCCESS.

GRAND PRIX AND GOLD MEDAL.
Japan-British Exhibition, White City. (The only Grand Prix awarded for border plants anywhere during 1910.) Unanimous award of the International Jury to Kelway and Son for Pæonies, Delphiniums, Gladioli, Pyrethrums, etc.
Kelway's Manual of Horticulture, 2s., post free, on demand.
LANGPORT, SOMERSET.

THE KELWAY ARTISTIC BORDER ensures a garden of enduring beauty from early spring to late Autumn with a minimum of cultivation, and without the trouble of constant digging or bedding-out. The plants composing the border are selected by experts, and include some of Kelway's improvements in Pæonies, Delphiniums, etc. Send dimensions of spaces to be filled, or for Kelway's "Gardens of Delight," 6d. The cost of this border is 15s. or 25s. for every 10 square yards.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

NOW IS THE TIME TO PLANT KELWAY DELPHINIUMS, which have been improved almost out of recognition in the past twenty years. They produce plants ranging in height from four to eight feet, exceptionally hardy and with a rich profusion of choice blooms in all the shades of blue.
Choice named varieties: 24s., 34s., and 56s. a dozen.
The celebrated present-day Delphiniums, and nearly all the best well-known varieties shown at exhibitions, originated in Kelway's Langport Nurseries.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

FIDLER'S NEW ILLUSTRATED CATALOGUE OF CHOICE GARDEN SEEDS will be sent, post free, to any address on receipt of postcard. Write at once for a copy. It may help you to save 50% on your seed bill this season. FIDLER and SONS, Royal Berks Seed Stores, Reading.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.

XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.

XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown both poisonous and non-poisonous are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N.S. or Florist for Richards' small pink list.

G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Border and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

SEEDS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Select Seeds.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS.
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

SAMUEL M'GREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
Illustrated Catalogue free.

RHODODENDRONS.

DICKSONS & CO.,
1, Waterloo Place, Edinburgh.
Pink Pearls, Ponticums, choice Hybrids. Write.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

PRIMULA OBCONICA GIGANTEA GRANDIFLORA.

The most beautiful Free and Hardy Perpetual Greenhouse Plant grown.

ONCE IN FLOWER ALWAYS IN FLOWER.

We are NOTED for having the most — SUPERB Strain in commerce. —

SEED.

Mixed colours, also Compacta and Fimbriata, mixed, 1s. per packet; separate colours of Purple, Rose, Lilac, Deep Red, Crimson Scarlet, Pale Lilac, and Crimson (fringed petals), **2s. per packet; double flowering, including Pale Mauve and Rose, 2s. per packet. Instructions as to sowing with each packet.**

PLANTS, 3s., 5s., 7s. 6d., 10s. 6d., and 15s. per doz., according to size.

W. A., Esq., Reigate, Surrey, writes:—

I had a packet of seed from you last year, and am pleased to inform you that I have blooms measuring two inches and more across each individual flower. They are the best strain I have ever seen, both for variety of colours, and substance of bloom.

WM. ARTINDALE & SON,
Nether Green Nursery,
SHEFFIELD.

For 3 penny stamps we will send you our Catalogue of Plants, which is not merely a price list, but literature which gives all the cultural notes of plants therein mentioned. We have received hundreds of testimonials commenting on the value of this book.

OUR SEED CATALOGUE WILL BE SENT FREE ON APPLICATION.

AMERICAN TREE CARNATIONS

The Newest and Best Varieties.

Strong, healthy and well-rooted plants only supplied

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

ELLISON'S BEGONIAS are absolutely the best strain; 30 Begonias, all different and named, 10s. 6d.; Bedding Begonias, 9s., 12s., 15s. 100.

GERBERA, Adnets Hybrids, for which I was awarded Silver-gilt Medal R.H.S. March 14th. Seed, 1s. 6d.; Plants, 10s., 15s. doz. ELLISON.

LILIUMS.—24 choice Liliums, all different, 10s. 6d.; Gloxinias, 6, different, 2s.; Cannas, 10, do., 4s.; 100 German Iris, 10 sorts, 4s. ELLISON.

1,000,000 BEGONIAS, Single, 1s. 6d. to 7s. 6d.; Dble., 2s. to 15s. doz.; Tuberoses, Arum Lilies, 1s. doz.

LARGE FLOWERING GLADIOLI, 3s.; 5s. 100; Amaryllis, 10s., 15s., 20s. doz.; Gladioli, early, 1s. 100. ELLISON, 37, West Bromwich.

SEED POTATOES.

	[illegible]	[illegible]		[illegible]	112lb.
Myatt's ASHLEAF	4/6	8/-	LANGWORTHY	3/-	5/-
DUKE OF YORK	4/-	7/-	SENSATION	3/-	5/-
EARLY ROSE	4/-	7/-	BRITISH QUEEN	2/6	4/-
Sir J. LLEWELLYN	4/-	7/-	ROYAL KIDNEY	2/6	4/-
EARLY PURITAN	4/-	7/-	FACTOR	2/6	4/-
EPICURE	4/-	7/-	D. of CORNWALL	2/6	4/-
Sharpe's EXPRESS	2/6	4/-	NORTHERN STAR	2/6	4/-
SATISFACTION	2/6	4/-	EVERGOOD	2/6	4/-
MAGNUM BONUM	2/6	4/-	UP-TO-DATE	2/6	4/-
PRESIDENT	2/-	3/-	SCOT. TRIUMPH	2/6	4/-
K. EDWARD VII.	2/-	3/-	ARTICHOKES	1/6 14lb.	

14lbs. of any above for 1/-, bags free. Cash with order.

Send for Illustrated List of Novelties, Sweet Peas, Flower and Garden Seeds, French Gardening, etc.

ADDRESS IN FULL—

J. W. CROSS, Old Grammar School, WISBECH.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

CHARLES TURNER'S GENERAL CATALOGUE

INCLUDING

CARNATIONS, DAHLIAS, PELARGONIUMS, and other Florists' Flowers,

can be had free on application.

THE ROYAL NURSERIES, SLOUGH.

TOMATO PLANTS (6 to 8 ins. high). Ready for Fruiting Quarters. **Grown in Steam sterilised soil.** Very carefully packed and protected.

Price £3 per 1,000, Cash with order, carriage paid.
Per 100, 7/-; 65 plants, 5/-; 50 plants, 4/-; 25 plants, 3/-; 12 plants, 2/-

Carter's Sunrise, Winter Beauty, Beauty of Wales, etc.

W. & F. POAT, TOMATO GROWERS, **ST. SAMPSON'S, GUERNSEY, C.I.**

Cheques, Postal Orders, etc., should be crossed "Guernsey Banking Co., Ltd."
Booklet and Testimonials free on application.

---

100 ALPINES, 50 sorts, 25s.; 100 Herbaceous plants, 25s.; sorts, 25s. 100; Aubrietia grandiflora, 3s. dozen; Arabis alpina pleno, 3s. dozen; Helianthemums, 6 vars., 3s. dozen; Phloxes, tall, new sorts, 4s. dozen; Saxifraga. Catalogue. W. H. STANSFIELD, Kew, Southport.

By Appointment to H.M. The King.

1911 FORBES'

Illustrated Plant Catalogue **Nearly 200 Pages.**

GOLD MEDAL SPECIALITIES.

Contains carefully revised **Descriptions, Colour, Height, Time of Flowering, British or Common Names, Prices,** etc., of the **Grandest Collections of ASTERS, BEGONIAS, CALADIUMS, CARNATIONS, DAHLIAS, DELPHINIUMS, PÆONIES, PANSIES, VIOLAS, PELARGONIUMS, PENTSTEMONS, PHLOXES, PYRETHRUMS, HARDY BORDER PLANTS,** carefully-prepared **PLAN** for arranging **HARDY PLANT BORDERS,** etc.

Experts unanimously accord **FORBES' CATALOGUE** the unique distinction of being the **best** and most **reliable** up-to-date **Reference Book** extant.

FREE ON APPLICATION.

JOHN FORBES (HAWICK), LIMITED.
(Dept. I), The King's Nurserymen, **HAWICK, Scotland.**

PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J. R. PEARSON & SONS
LOWDHAM, NOTTS.

Rhododendrons.

Crimson, White, Pink. 250 Choice Named Varieties, fine foliage, well budded, for potting or planting. 1 to 1½ ft., 1½ to 2 ft., 2 to 2½ ft., 2½ to 3 ft., 3 to 4 ft., 4 to 5 ft., 5 to 6 ft., 6 to 7 ft. List of sorts and prices on application; many thousands to offer. Standards in all sizes.

All Home-grown. Inspection Invited.

F. STREET, Heatherside Nurseries, CAMBERLEY.

CABBAGE PLANTS, extra strong, Ellams, Mein's, Offenham, First and Best, Enfield, Battersea, 3s. 1,000, 12s. 6d. 5,000 lots; Drumheads, 2s. 6d.; Red Cabbage, Cos Lettuce, Tripoli Onion, 4s. 1,000, on rail; or 1s. 100, post free. List free. C. HIGHT, Cranleigh, Surrey.

PERPETUAL FLOWERING CARNATIONS: Britannia, Rose Dorée, White Perfection, Black Chief, Fortuna, Mrs. Burnett etc. 3s per doz.; strong plants; post free. Ask list. C. F. A. VAN DER SLUYS, F.R.H.S., Ramee, Guernsey.

Sales by Auction.

SALES NEXT WEEK.

MONDAY and FRIDAY NEXT, April 3 and 7, at 12 o'clock.—Large quantities of Hardy Bulbs. Roots, and Corms for Spring Planting. Herbaceous, Border, and Alpine Plants in variety.

At 1.30 o'clock.—1,000 Roses in large assortment, Fruit Trees in variety, Rhododendrons, Azaleas, etc.

WEDNESDAY NEXT, April 5, at 12 o'clock.—New and Rare Perennials, and Border Plants, Carnations. Pinks, Tuberoses, Liliums, and other Hardy Bulbs.

At 1.30 o'clock.—4,500 Roses, including the newest and best varieties.

At 5 o'clock.—100 lots of Ornamental Palms and Greenhouse Plants, Standard Bays, etc., 450 Azaleas, 300 Aspidistras, Araucarias, Rhododendrons, Camellias, and 6,000 Begonias.

THURSDAY and FRIDAY NEXT, April 6 and 7, at 1 o'clock.—A choice assortment of very rare Orchids, from the "West Bank House" collection. By order of J. Leemann, Esq.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view mornings of sale, and catalogues had.

ROSE TREES.

SHRUBS. BULBS.

SALES BY AUCTION

are held every

MONDAY and WEDNESDAY,

at 12.30.

STEVENS' AUCTION ROOMS,

Established 150 Years,

38, King St., Covent Garden, London, W.C.

Catalogues on Application.

FOR SALE, IN GUERNSEY.—A compact little BULB-GROWING ESTATE of about 4 acres, splendidly situated on the south coast of the island, and well stocked with the best forcing varieties of daffodils, etc.; also a small Orchard of Apple and Pear Trees in bearing. The property contains glasshouse 150 x 18 heated, large shed, pumping mill, and an unlimited supply of water. Write Box 154, c/o Messrs. R. F. White and Son, General Advertising Agents, 33, Fleet Street, London, E.C.

100 NURSERIES, MARKET GARDENS, FLORIST AND SEED BUSINESSES TO BE DISPOSED OF.

MESSRS. PROTHEROE and MORRIS'S HORTICULTURAL REGISTER contains full particulars of the above, and can be obtained gratis at 67 and 68, Cheapside, E.C.

SMALL NURSERY TO BE LET ON LEASE: [illegible] acre land; greenhouse, 60ft. by 13ft.; 14 garden lights, and outbuildings; everything for use; very little stock. Good opening for a pushing man. The present owner's interest will be sold very cheap.

Apply 12, Woodside Road, South Norwood, S.E.

SMALL FREEHOLD NURSERY and FLORIST BUSINESS FOR SALE, with well built and heated glasshouses, sheds, and frames; town water supply; immediate possession. Particulars, T., Avenue House, Crediton, Devon.

FRUITERER'S and GREENGROCER'S for Disposal; good round and position; fair trial offered; same hands 11 years. 79, Church Road, Teddington.

ZONAL PELARGONIUMS. Catalogue of New and Choicest Varieties.

From V. SLADE, Zonal Specialist,
Staplegrove Nursery, Taunton.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

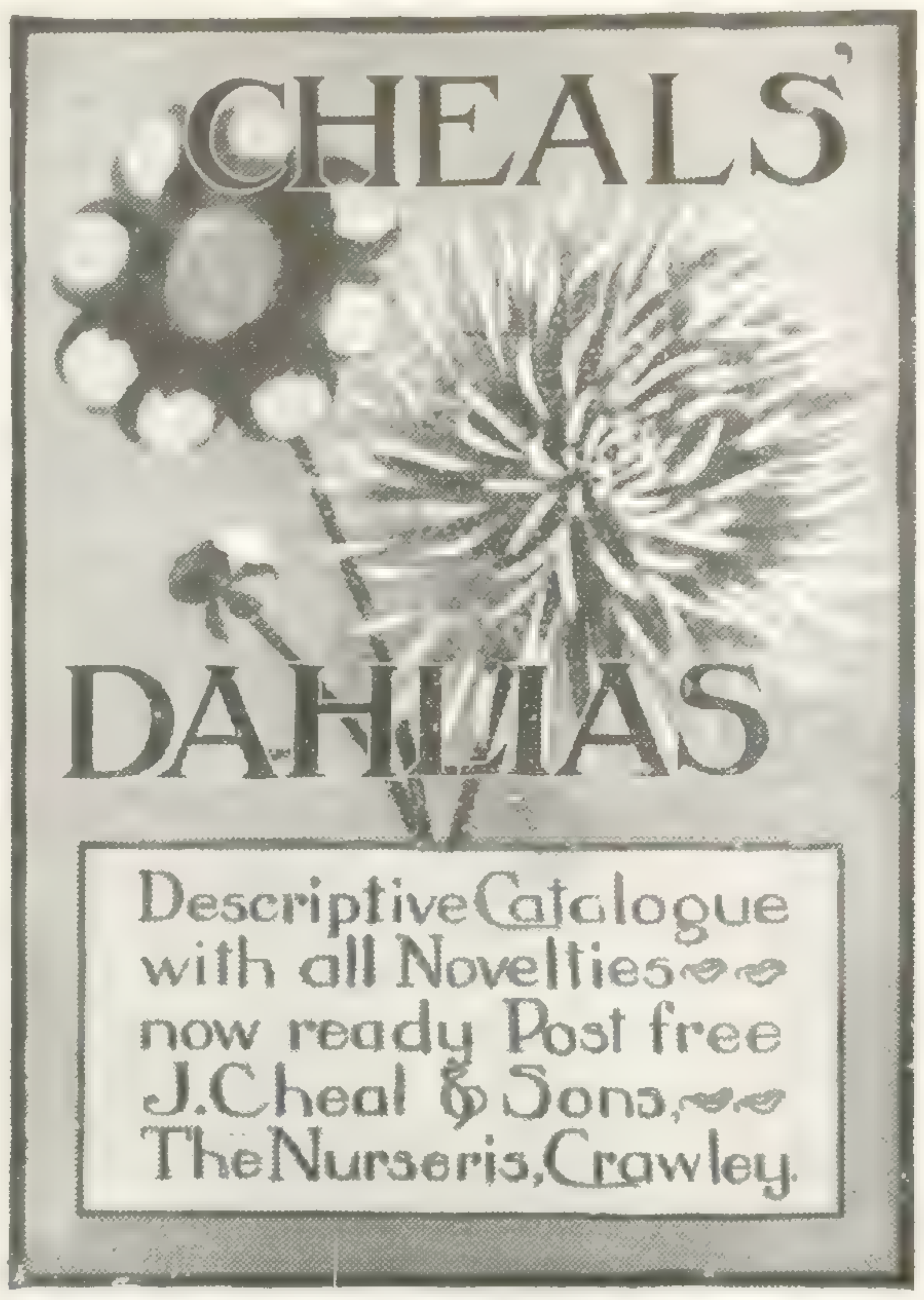
PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.

H. BURNETT,
Carnation Specialist, Guernsey.

20,000 ASPARAGUS PLANTS FOR SALE (Connover's Colossal).—Good strong two-year-old plants, 100, 2s.; 500, 6s.; 1,000, 10s. 6d.; carriage paid. Cash with order.—D. TOWER, Fruit Grower, Pershore.

25 EARLY GARDEN CHRYSANTHEMUMS, double or single, truly named, 2s. 6d. List. Exchange for Pyrethrums or Herbaceous Plants. —RICHMOND NURSERY, Ossett, Yorks.

SEED POTATOES, Scotch, Irish, Midlands, Northerns; largest and best stock in West of England, both earlies and lates. Apply to OLIVER BROS., Importers, Exeter, and Barnstaple.



Large Stock of

HARDY WATER LILIES,

Coloured, delivered in all Countries by Parcels Post.

New beautiful varieties unpublished.

NELUMBIUMS, etc., etc.

B. LATOUR-MARLIAC, Nurseryman
At Temple-sur-Lot (FRANCE).
Catalogue Free on Application.

Amaryllis—Hippeastrums

NOW FLOWERING.

INSPECTION RESPECTFULLY INVITED.

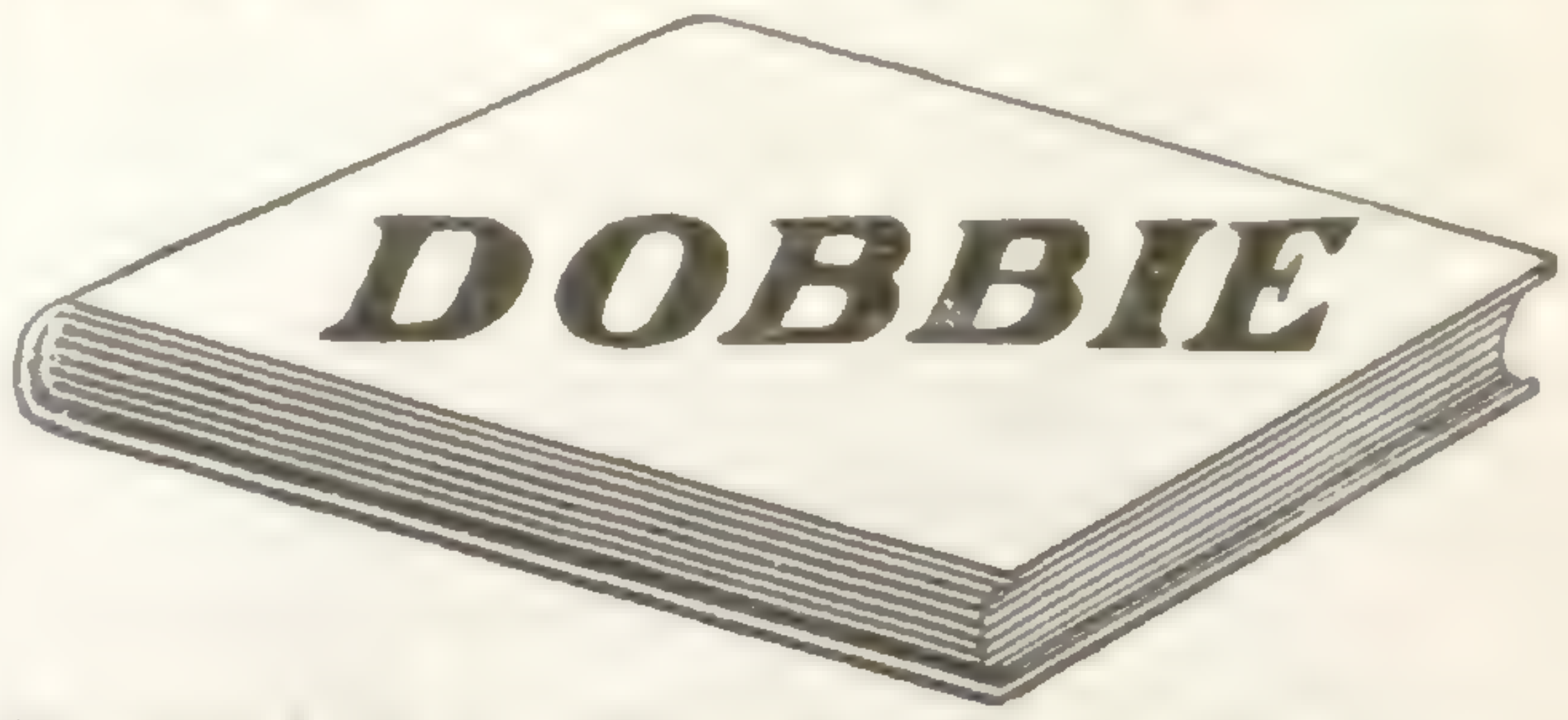
Catalogues, and all particulars, free on application.

ROBT. P. KER & SONS,
AIGBURTH NURSERY, LIVERPOOL.

VIOLAS. The World's Champion Violas, Moseley Perfection, Mother Bastock, Moseley Purple, A. J. Bastock (the Best in Cultivation.) See Press Reports.

BASTOCK & SON, Specialists,
Springfield Road, Moseley, Birmingham.

100,000 FREE COPIES



Dobbie's New Catalogue and Guide to Horticulture.

224 PAGES. 210 ILLUSTRATIONS.

A COPY WILL BE SENT WITH PLEASURE GRATIS TO ANY ONE APPLYING FOR SAME, WHO ENCLOSES 3d. IN STAMPS TO DEFRAY COST OF POSTAGE, AND MENTIONS "GARDENERS' MAGAZINE."

DOBBIE & CO.,
The Royal Seedsmen, EDINBURGH

DO YOU WANT TO KNOW

The best new Chrysanthemums, Michaelmas Daisies, Carnations, Dahlias, Fuchsias, Pelargoniums, Zonal and Ivy Geraniums, Sweet Peas and other Seeds.

Send for Catalogue free.

H. J. Jones' Nurseries, Ltd.,
RYECROFT, LEWISHAM.

WATER CATALOGUE NOW READY
PERRY, ENFIELD. MIDDX.

RHUBARB ROOTS.

DAWES CHALLENGE has obtained **seven medals and awards.** Price list and cultural directions free. Sample bunch gratis with **10/-** orders.

Apply direct.

CHAMPION RHUBARB GROWER,
Syderstone Nurseries, Norfolk.

PERPETUAL CARNATIONS.

1911 Illustrated Catalogue Ready ✠ FREE.

We have a Wonderful Collection of Novelties this Season, including our

"DUCHESS OF DEVONSHIRE."

The best all-round Perpetual Crimson ever raised.

Read our "TREATISE ON CULTURE" 1/-, Free.

YOUNG & Co., Gold Medallists, **HATHERLEY, CHELTENHAM.**

CARNATIONS, PINKS, AURICULAS.

DOUGLAS for the best old and new varieties in all classes, and the finest quality in the world. Malmaison Carnations, new and old, **7/6** per dozen. Border, **6/-** to **12/-** per dozen. Tree, American, and English, **7/6** to **15/-** per dozen. Auriculas, Show, **21/-** to **30/-** per dozen. Alpine Auriculas, **9/-** to **21/-** per dozen. Carnation, Auricula, Pink, and Polyanthus seed, **1/6** and **2/6** per packet. **CATALOGUE FREE.**

J. DOUGLAS, Bookham, LEATHERHEAD.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.

Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

PAINT & GLASS.

NICHOLLS & CLARKE, LTD.
SHOREDITCH, LONDON.

GLASS. When sending for Catalogue please cut out this advt.

THE LANGUAGE OF FLOWERS

"Feed us, we pray you, with

CLAY'S FERTILIZER

and our rare beauty and fragrance will repay you."

CLAY'S ✲ LONDON ✲ FERTILIZER
TRADE MARK.

It is SAFE, CERTAIN, QUICK-ACTING and ECONOMICAL.

Flowers Grown with CLAY'S FERTILIZER catch the Judge's eye.

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK AS AT SIDE.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Manure Manufacturers and Bone Crushers, **Stratford, London, E.**

RANSOMES' LAWN MOWERS

Appointed by Royal Warrant.

THE BEST IN THE WORLD.

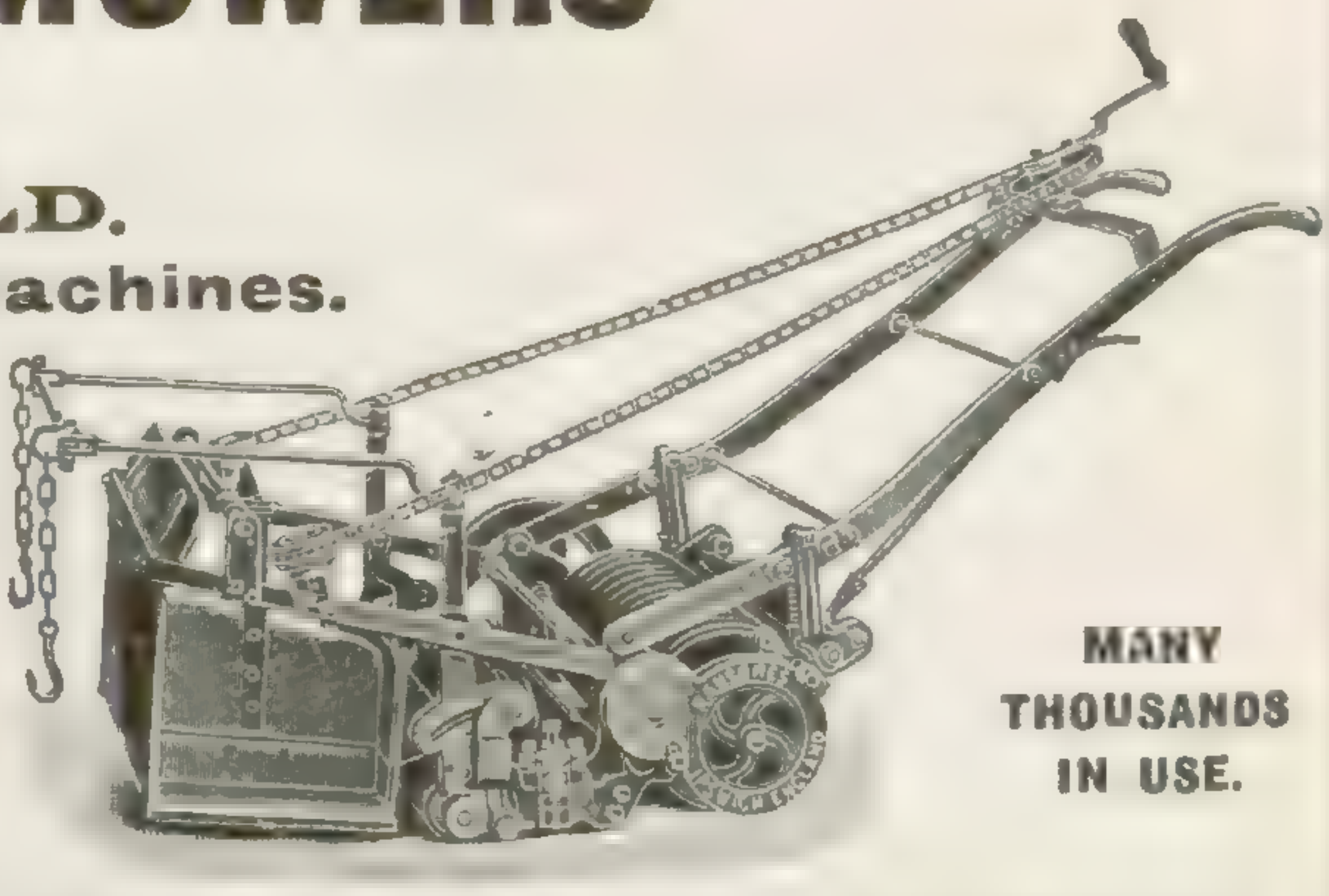
Possess improvements contained in no other Machines.

Recent Awards.

3 GOLD MEDALS.
5 SILVER MEDALS.

SUPPLIED BY ALL IRONMONGERS.

MANY THOUSANDS IN USE.



HAND POWER MACHINES.
In all kinds and sizes.

MOTOR LAWN MOWERS
The first brought out. Reputation Established.

HORSE and PONY MOWERS.
The best large machines.

Illustrated Catalogues Free on Application to— **RANSOMES, SIMS & JEFFERIES, LTD., THE ORWELL WORKS, IPSWICH.**

ANT ROOZEN & SON'S

SEEDS, BULBS, AND PLANTS

For Spring, 1911.

All of the Finest Quality.

THE CATALOGUE of above will be sent, post free, on application to their Offices at . . .

OVERVEEN, HAARLEM, HOLLAND;

Or to their General Agents,

MERTENS and CO.,
3, Cross Lane, LONDON, E.C.

BUNYARD'S FRUIT TREES

The Best Quality and Largest Selection at Moderate Prices.

WRITE FOR CATALOGUE.

GEO. BUNYARD & CO., LTD.,
Royal Nurseries,
MAIDSTONE.

ROSES IN POTS

Wm. PAUL & SON
WALTHAM CROSS, LTD.

Respectfully invite attention to their magnificent stock of the above, which they believe to be unrivalled in quality and extent.

Dwarfs or bushes, extra strong, in 8 in. pots, for forcing and greenhouse culture	30/- to 60/- per doz. £12 and upwards per 100.
Climbers and Ramblers in 8 in. pots, for forcing and out-door planting on pergolas, arches, etc., with shoots ...	6 to 12 ft. long, 30/- to 60/- per doz. 12 to 16 ft. long, 72/- to 90/- per doz. Price per 100 on application.
Dwarfs and Climbers, smaller plants, in 5 in. pots	10/6 to 18/- per doz. 75/- to £6 per 100.

Priced List Post Free on application.

Inspection of Stock Invited.

The Nurseries are twelve miles from London, four minutes' walk from Waltham Cross Station, G.E.R.

Sole Postal Address -

PAULS' ROYAL NURSERIES
AND SEED WAREHOUSE,
WALTHAM CROSS, HERTS.

VOL. LIV.—No. 2,996. SATURDAY, APRIL 1, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

The North of England Horticultural Society.

Having watched with much interest the steps that have been taken within the past few months in founding a society whose object shall be the advancement of horticulture in the Northern counties of England, it was with much pleasure that we were able to record in our last week's issue the fact that the first meeting of the North of England Horticultural Society was attended with a large measure of success. The council of the society have not as yet, perhaps, found the best possible building in Leeds in which to hold the meetings. Emmanuel Hall is rather a long way from the railway station, and, while well adapted to the purpose to which it was put on the occasion of the first meeting, it ought not for any length of time to be big enough to properly accommodate the contributions from the private gardens and nurseries in the North. There was a fair representation of the various classes of plants that now find favour for the season, but the products were chiefly from nurserymen, the Leeds amateurs, as exhibitors, being conspicuous by their absence. This is much to be regretted, for unless the amateurs contribute with some degree of liberality of the choicest products of their gardens and plant houses, and thereby induce their friends to attend the meetings, the nurserymen, and especially those from long distances, will stop away. Nor can it be said that the northern nurserymen supported the council in a manner that might have been expected, having regard to what has been said about the establishment of such a society. Several southern firms came forward in fine style, and showed an excellent spirit in bringing their plants and flowers, but the display could not be regarded in any sense as representative of the spirit and skill of the northern cultivators. To this fact we have felt it desirable to direct special attention because, after all, upon the latter the success or failure of the venture must depend. Further, it cannot be too clearly stated that the public must be educated up to an appreciation of these monthly exhibitions, and thus ensure a good attendance of visitors, because, unless visitors are numerous, exhibitors will not be forthcoming; just as, on the other hand, if the northern growers do not bring the products of their skill it will be useless to endeavour to persuade the public to attend. Trade growers exhibit, and necessarily so, chiefly for the sake of business, and it should be obvious that it would be unreasonable to expect them to incur a heavy outlay in exhibiting if there is but little, if any, return therefrom. It is for this reason that we are anxious to emphasise the great need there is for northern amateurs to support the society, especially at this period of its existence, by their exhibits and their presence, because it is upon the amateurs that the trade growers depend. The lecture given in connection with the exhibition was an unqualified success. The subject of soil sterilisation is one of immense importance to horticulturists, and it was handled in a remarkably interesting and skilful manner by Dr. Russell, who, in the course of his investigations at Rothamsted, has been successful in throwing new light on sterilisation in relation to the fertility of the soil. In the course of his lecture he pointed out the many advantages to be derived from soil sterilisation, and also some of the disadvantages, and he urged the importance of cultivators studying the subject from the practical side, and carefully recording the facts relating thereto that may come under their notice for the purpose of future reference. The animated and extended discussion that followed the lecture was a great compliment to Dr. Russell, and one that he greatly appreciated, as it brought out many points of great practical importance. On this occasion the lecture was given at 6.30 p.m., but it is intended to hold the meeting at which the lectures will be given at 3 p.m., and this will be a convenience, as it will enable visitors who come in the afternoon to hear the lecture without having to wait a considerable period after inspecting the exhibition, or making a second journey thereto. The society's programme is an ambitious one, and, therefore, requires not only substantial contributions to the exhibition, but a considerable amount of money to carry it out. It now remains to be seen whether the northern horticulturists really want such a society, and such a programme, and, if wanting them, are prepared to provide the sinews of war. We hope they really do feel the need of the society, and are prepared to do whatever may be necessary to ensure its complete success. The association with the Royal Horticultural Society should be advantageous to the northern society, more especially as the invitation is extended to the members of the committees of the former society to take part in the business of the corresponding committees at Leeds. This is a good thing, at any rate for the present, because the association of the respective committees should assist in bringing the work at London and Leeds into harmony.

MR. WILLIAM ALLAN.

Mr. William Allan, whose portrait we have the pleasure of giving in this issue, is remarkable alike for his geniality, his cultural skill, and great administrative ability; and by the splendid work he has accomplished during the long period he has had charge of the important gardens of Gunton Park, has fully justified the reputation he enjoys as one of the foremost gardeners of his day. Mr. Allan had the advantage of commencing his gardening career at Rendlesham Hall Gardens, then in charge of his father, who was a gardener of considerable eminence. He had also the advantage of serving during the probationary stage of his career under such men of commanding ability as the late Mr. D. Thomson, the late Mr. D. T. Fish, and the late Mr. J. Shepherd, and evidently the opportunities he had for the acquisition of knowledge of garden management were fully utilised. It is reasonable to infer this, for during the five years he was head gardener at Henham Hall he effected many improvements, and within a short period of his taking charge of the Gunton Park gardens they were generally regarded as among the best-managed in the United Kingdom. This reputation they have maintained to the present day. Where all things have had skill of the highest class brought to bear upon them, it is not easy to single out anything for special mention. At quite an early period Mr. Allan devoted special attention to bulbous plants, and before the beautiful Lachenalia Nelsoni became generally known it might have been seen at Gunton Park in large numbers, and in a state of development that has probably not been surpassed. Mr. Allan is perhaps best known as a cultivator of fruit, and many are his successes at the exhibitions that we have had to record during the past forty years. Especially has he been successful with grapes, pears, and strawberries, and, with reference to the last-named, it may be mentioned that he raised several varieties remarkable for their high quality, notably Gunton Park, Lord Suffield, and Empress of India. One of Mr. Allan's latest achievements has been the introduction of Norfolk Beauty apple, which, by reason of its productiveness and high quality has now taken a prominent position among the culinary apples of quite exceptional excellence. Long successful with border carnations, Mr. Allan has entered with much zest into the cultivation of perpetual-flowering varieties, and, as the result, these beautiful flowers form one of the most interesting of the many fine features of the Gunton Park gardens.

Exhibition and Garden Dahlias.—In our issue for the 8th inst. we shall devote particular attention to dahlias for garden decoration and exhibition. The several articles on these attractive flowers will have special reference to the matters requiring attention at this season of the year, and the illustrations will include portraits of several of the newer varieties that are of great value in the garden. The issue will also contain several articles and illustrations having reference to the preparations for the production of distinct effects in the flower garden during the summer months.

Horticulture at the Festival of Empire.—A great feature of the forthcoming Festival of Empire at the Crystal Palace will be the great beauty of the grounds, in which are now being erected the splendid palaces of our various overseas dominions. The 250 acres of Sydenham's slopes offer a noble field for the operations of the horticulturist, and it is hoped that British nurserymen will do their utmost to demonstrate to the world the charm and infinite variety of the English garden. Millions of people from all parts of the globe will visit the Festival of Empire between May and October, and the King and Queen will grace the gathering on State occasions. Again, the festival is under the patronage of H.M. Government, and all profits will be given to the King Edward VII. Hospital Fund. British horticulturists will have ample room at their disposal, and the presentation of Imperial awards, in the form of cups and medals, should form an extra inducement to our leading nurserymen. In addition to the planted displays in the grounds, two exhibitions of cut roses have been organised, and these will be held in specially erected structures. Full particulars can be obtained from Mr. F. G. W. Henslow, M.A., Empire House, 175, Piccadilly, W.

R.H.S. Daffodil Committee.—We understand that the council of the Royal Horticultural Society have accepted the recommendations of the Daffodil Committee in respect of a two-day show of daffodils and tulips in April, a Year Book, and the preparation of a schedule. The committee will at once proceed to appoint sub-committees for special purposes, and it is hoped when these get to work and complete their arrangements, it will be found there is no need for a National Daffodil Society. At any rate, the matter now lies chiefly with the R.H.S. Daffodil Committee.

Euonymus Mildew.—The progress of a mildew that attacks euonymuses along the South Coast is attracting a good deal of attention, and efforts are being made to stay the disease. At a recent meeting of the Bournemouth Natural Science Society Sir Daniel Morris read a paper on this subject contributed by Mr. G. Massee, F.L.S., V.M.H. Specimens were exhibited, and Sir Daniel explained how the attack spread. The removal of attacked leaves in spring, and spraying with sulphide of potassium, were suggested as remedies. It is hoped that Mr. Massee's paper, with illustrations, will soon be issued in pamphlet form.

Spraying with a Lime-sulphur Wash. To the recent issue of the "Journal" of the Board of Agriculture Mr. E. S. Salmon, F.L.S., contributes an exhaustive report on the experiments that were carried out last year in spraying apples and gooseberries in the plantations at the South-Eastern Agricultural College, Wye, and on two farms in Kent, with the lime-sulphur wash. This wash is largely used in America, and the best formula is considered to be 50lb. quicklime and 100lb. flowers of sulphur, boiled together for an hour in 50 gallons of water. Before using this concentrated solution is diluted according to requirements. In his conclusions with regard to the experiments Mr. Salmon states that no opportunity occurred for testing the value of lime-sulphur as a fungicide against apple "scab" and "black spot." As, however, it has been stated, as the result of experiments carried out in the United States, that it "is about as effective" for this purpose as Bordeaux mixture, the lime-sulphur wash may be recommended for trial in this country on those varieties of apples whose foliage or fruit will not stand spraying with Bordeaux mixture. The experiments show that while the foliage of some varieties, e.g., Worcester Pearmain, show no injury when sprayed with a lime-sulphur wash of sp. gr. 1.01, the foliage of other varieties, e.g., Cox's Orange Pippin, Charles Ross, King of the Pippins, Blenheim Orange, and Besspool (Tower of Glamis) are severely "scorched" by the wash at this strength. For such varieties a lime-sulphur wash of sp. gr. 1.005 should be used when spraying them in June or later—though possible the "full-strength" wash is safe to use in May. In fighting apple "scab" or "black spot" Bordeaux mixture still remains the best fungicide known, and should always be used for this purpose except on those varieties of apples which are liable to "Bordeaux injury." The lime-sulphur wash, as well as the iron sulphide and copper sulphide washes mentioned above, should only be used at present experimentally and on a small scale.

The King's Prize for Chrysanthemums.—His Majesty the King has presented a handsome challenge cup to be competed for at the exhibition of the Windsor, Eton, and District Chrysanthemum Society. The class specification is for eight vases of three blooms each, the cup must be won three times before becoming the absolute property of a competitor, and there must be not fewer than three competitors in any one year. The class is an open one. The forthcoming exhibition will be the twentieth the society has held, and it will take place on November 10, in the Royal Albert Institute, Windsor.

The Royal Botanic Society continues to add to its Fellowship. At the recent monthly meeting one hundred new Fellows were elected, and there were ninety-two nominations for election at the next meeting. Provided there has been no considerable leakage, the membership should now be considerable, and there ought soon to be signs of prosperity in the society's gardens, and evidence of renewed activity in other directions.

The Great African Snail (Achatina fulica), which has recently appeared in immense numbers in Ceylon, is dealt with at some length in an interesting contribution to the February issue of the "Zoologist." This species is a native of East Africa, and was introduced many years ago into Mauritius. It was introduced to Calcutta about half a century ago, and in twenty years it had become abundant in the gardens of the houses in Chominghi, while it had also crossed the Hughli to Howra and Barrakpur. Some ten years ago a collector introduced the species to his estate in the highlands of Central Ceylon, and here it increased so rapidly that very soon efforts were made to exterminate it, and it was believed that these were successful. Some, however, escaped destruction, and two were carried down with vegetables to the lowlands. The increase under warmer conditions was remarkably rapid, and the snails spread over an area of about five square miles. It was conjectured that on this area there were millions, and 227 were found on the stem of a cocoanut palm about six feet in length. The natives were alarmed for the safety of their crops, but comparatively little damage has been done. Now, without the adoption of restrictive measures, the snails are diminishing, owing, probably, to the enemies with which they have to contend in a young state.

Colonial and Indian Gardening Appointments. It is recorded in the "Kew Bulletin" that Mr. Harold Green, a member of the gardening staff of the Royal Botanic Gardens, has been appointed by the Secretary of State for the Colonies, on the recommendation of Kew, assistant superintendent of the Botanical and Forestry Department, Hong Kong.—Mr. Harry Dodd, who was appointed curator of the Botanic Station at Onitsha, Southern Nigeria, in 1906, has been appointed by the Secretary of State for India in Council, on the recommendation of Kew, a probationer gardener for service in India.

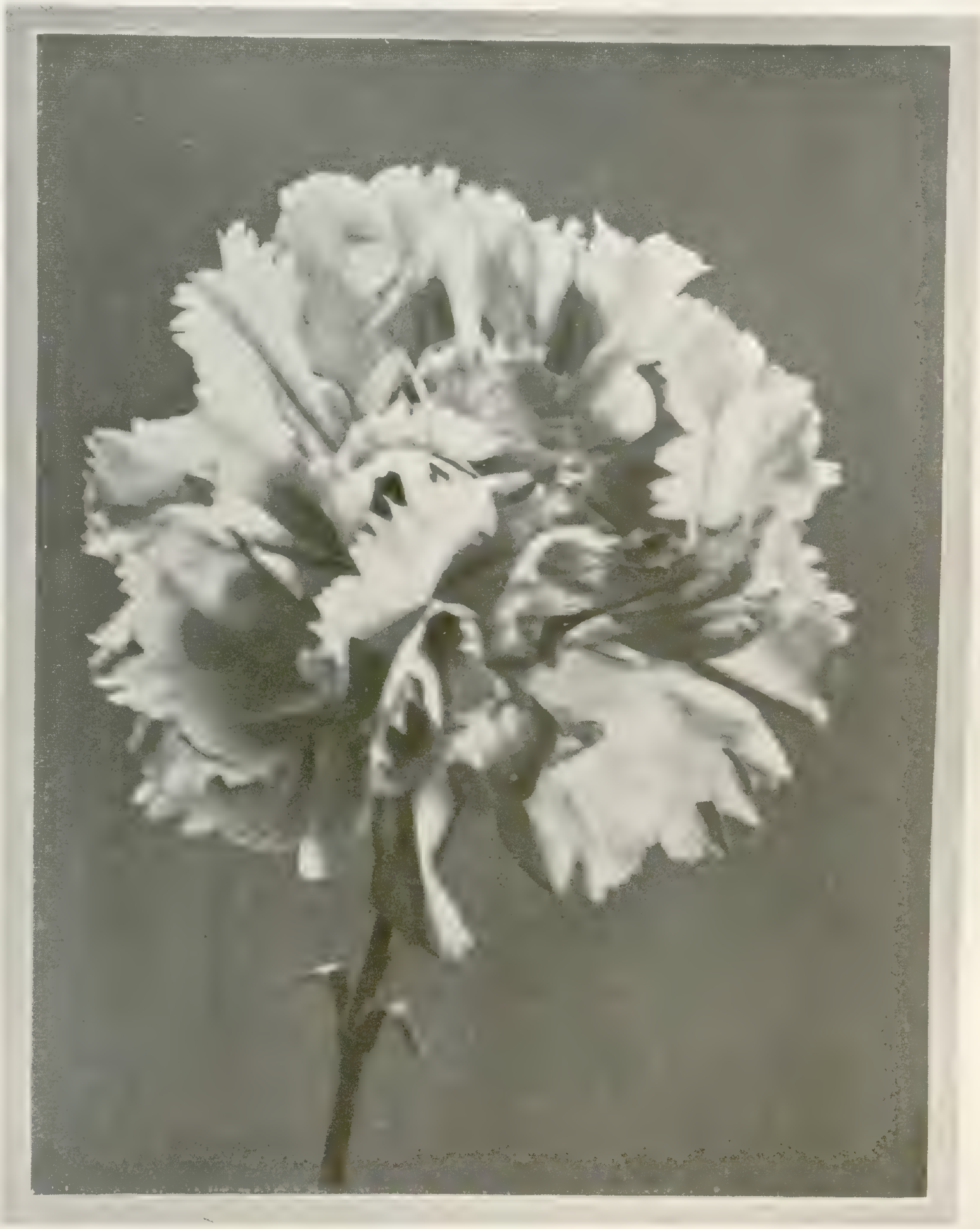
A Musselburgh Gardener Suffocated.—On the afternoon of March 25 the body of Thomas Hogg was discovered in a chair in the little tool-house at the Fever Hospital, Portobello, where he was employed once a week attending to the garden and grounds. Hogg, who lived in Downie Place, Musselburgh, had gone to the hospital as usual on the previous day for his ordinary weekly day's work, and had disappeared. On search being made, it was found that the door of the shed would not open, and, an entrance being made through the window, he was discovered sitting dead in a chair, with a tin of seed potatoes between his knees. It appeared that he had taken a stove into the house to heat it, and, there being no ventilation, had been suffocated.

Boskoop Jubilee Flower Show.—At the great exhibition of forced shrubs and perennials, to be held at Boskoop on April 5 to 16, H.R.H. Prince Henry of the Netherlands is expected to attend the opening ceremony; he has already presented two large medals for competition. His Excellency the Minister of Agriculture will deliver the opening speech. The De Volharding Steamboat Company of Leiden will place a large saloon boat, gratis, at the disposal of the members of the International Jury, officials of the Pomological Society, and the Commissioners of the exhibition, and will make a trip to Rotterdam to inspect the famous harbour works. At Rotterdam the Holland-America Company will entertain the international company at luncheon on one of its large Transatlantic passenger boats.

Sir Joseph Banks' House.—The famous botanist, traveller, and horticulturist, Sir Joseph Banks, after whom one of the Royal Horticultural Society's medals was struck, resided for some years at No. 32, Soho Square, and a tablet notifying such residence has been affixed to the house by the direction of the London County Council.

Dominica Botanic Station.—The work of this important station continues to be carried on with much success. The gardens are maintained in a high degree of efficiency, and the activities during the past year included experiments with spineless limes, grafted cacao, various citrus plants, and Para rubber. According to the annual report Para rubber succeeds admirably in the wet districts of the island, and the lime industry has become well established. About 75,000 economic plants, and large quantities of seed, were distributed during the year.

Alterations in St. James's Park.—The statements that have been made with reference to the construction of a new roadway in St. James's Park, and the building of a stone bridge of a highly ornate character over the ornamental water therein, has given rise to some apprehension and considerable discussion. In the House of Commons on Monday last Mr. Noel Buxton asked Mr. Dudley Ward, as representing the First Commissioner of Works, whether he could give an assurance that no alterations to the width of the bridge across the lake in St. James's Park was in contemplation. In reply, Mr. Dudley Ward said that the statements which had appeared on the subject of the Memorial to King Edward were not authorised by the committee appointed to deal with that matter, and were consequently liable to convey a wrong impression. It is evident that this was the case, for he observed that most of the questions suggested that it is proposed to make a new road and construct a broad bridge across the water in St. James's Park. He had the fullest authority for saying that no proposal to make a roadway and a bridge for vehicular traffic had ever been put forward, much less considered; and could assure the hon. members that the First Commissioner would not for a moment consent to such a scheme, which would be exceedingly detrimental to the amenities of the Park. The suggestion of the Executive Committee was that a statue of King Edward VII. shall be placed on the south side of the Mall, immediately opposite Marlborough Gate; that such rearrangement of the formation of the ground as may be necessary for the surroundings of the statue shall be carried out; and that, in order to give a vista of the statue from the south side of the Park, in Birdcage Walk, a footpath shall be made, which will be carried over the lake on a stone bridge, which will only be of sufficient height to admit of the passage of boats beneath it, and will thus form a distinct improvement upon the present suspension bridge. This suggestion of the Executive Committee was considered by the General Committee at the Mansion House on Monday morning; and, after the misapprehensions caused by the reports had been removed, it was adopted at a full meeting with only four dissentients. The department which he represented would welcome any discussion upon the project, as it could not fail to remove the misapprehensions with which, at present, it appeared to be surrounded. At the meeting of the General Committee of the King Edward Memorial for London held on Monday, the Lord Mayor stated that, in carrying out the proposed scheme, to destroy the rural aspect of the park was never contemplated, and he was assured that in carrying out the scheme only one plane tree would be removed, and that the area of turf would be increased.



PERPETUAL-FLOWERING CARNATION EMPIRE DAY.
Colour, bright pink. A.M., R.H.S., March 28. Raised by Mr. Smith, Enfield Highway, and exhibited by Messrs. R. F. Felton and Son, Hanover Square, W.

Tobacco Culture for Nicotine.—Our contemporary "Farm and Garden" urges that the only reason for growing tobacco in this country would be for the production of nicotine for the use of fruit growers and other horticulturists as an insecticide. It is very valuable for this purpose, but at its present price, 15s. per lb., is out of reach. The possibility of growing tobacco for such a purpose has been the subject of Experiment at the South-Eastern Agricultural College, Wye, and it has been found that nicotine could be produced on the farm at considerably less than the price quoted above. What is wanted now is for the Government to permit fruit growers to cultivate tobacco for this purpose.

R.H.S. Gardens Club.—The annual meeting of this club will be held at the R.H.S. Gardens, Wisley, on Saturday, May 13. Will all members who can possibly attend please communicate at once with the hon. secretary, Mr. R. J. Wallis, Newdigate, Dorking, in order that early arrangements may be made for conveyances and refreshments.

THE QUEEN VICTORIA NIAGARA FALLS PARK SYSTEM.

The following account of the Park system in process of formation at Niagara Falls, in the Dominion of Canada, is part of an interesting communication received at Kew from Mr. H. J. Moore, chief gardener, who was formerly a member of the gardening staff at Kew. The scheme outlined promises to provide the Dominion of Canada with a most important botanical collection of trees, shrubs, and hardy plants, as well as a park system of remarkable beauty, unique in the grandeur of its surroundings. We reprint it, with due acknowledgments, from the "Kew Bulletin."

Many people who have visited the Falls of Niagara associate the name with the cataract only. The district, however, has other claims to fame. In the Niagara peninsula is to be found one of the finest fruit-producing countries in the world. Fruits from this district bring the highest prices, the quality of the peaches, apples, and grapes (outdoor) being unsurpassed. The Niagara district also furnishes much of historical interest, for here were fought some of the bloodiest battles of the fierce conflict of 1812 which has had such an effect upon present-day administration along both sides of the Niagara frontier.

On the Canadian side of the Niagara River, extending about 26 miles, between the villages of Queenston and Bridgeburg, is a strip of land which the Provincial Government of Ontario very wisely purchased and set aside as a national park, the total area of which is just over 800 acres. At one end of this reserve, near Lake Ontario, is the battlefield of Queenston Heights; and at the other end the battlefield of Fort Erie. The city of Niagara Falls, Ontario, is about midway between these two points, and here the Queen Victoria Park Commissioners are doing a splendid work in developing a park system which will undoubtedly rank with the best in the world, both from an æsthetic and an educational standpoint.

Perhaps the most important project the Parks Commission have in hand is the construction of a boulevard extending from a point near the Falls to Bridgeburg 16 miles up the river. I need not enter into details of its construction; suffice it to say that each mile section along its course will be planted with one variety of shade tree, while at several points, where the width is sufficient, small parks will be formed. Along such sections of the boulevard as are somewhat removed from the river, avenues of trees will be planted, but where the river runs parallel with it the trees and shrubs will be grouped in such a manner that they will not obstruct the general view of the river, which is, in many places, over a mile in width.

The park system will undoubtedly be very attractive, enhanced as it is by the beauty of its environment. The proximity of large Canadian and American cities, such as St. Catharine's, Niagara Falls, and Buffalo, renders its construction essential, and in time it will no doubt rank with the best American park systems in point of utility as well as beauty.

The area in the vicinity of the Falls, amounting to two hundred acres, is being transformed and laid out more or less in the nature of a large botanical garden. The southerly portion will form the arboretum. A large range of iron-frame greenhouses and conservatories will be built to accommodate various exotic species and varieties of plants, also to furnish a sufficient space to display the decorative or greenhouse types, such as chrysanthemums, cyclamens, primulas, etc., in their respective seasons.

The northerly portion, in which are situated the herbaceous borders and flower beds, also contains the baseball, football, and cricket grounds, the tennis courts, and bowling greens. In this area many beautiful and valuable specimen trees and shrubs are planted.

Coniferæ are strongly represented, and flourish well under the conditions at the Falls. Thuia occidentalis, Juniperus virginiana, Tsuga canadensis, Pinus Strobus, and Taxus canadensis grow naturally at various points in the park proper, and are also to be found in abundance along the lower Niagara Gorge.

Evergreens other than conifers are rare, very few of the broad-leaved type have up to the present proved hardy enough to stand the rigours of the severe Canadian winters, therefore this class of plants is only represented by such subjects as Rhododendron catawbiense, R. maximum, and Kalmia latifolia.

There are many remarkable specimens of deciduous trees, some of which are growing naturally, while others, perhaps the majority, have been planted. Splendid specimens of Ulmus americana, Æsculus hippocastanum, and Fraxinus americana are to be seen at every turn; Juglans nigra, the Black Walnut, is fairly common, and attains a great height, many specimens in the park are at least 80 feet high.

Catalpa Bungei, C. speciosa, C. bignonoides, Liriodendron tulipifera, Quercus coccinea, Q. palustris, Q. rubra, Tilia europæa, and T. americana are also included among our arboreal specimens. Of the genus Fagus we have three species, namely, F. ferruginea, F. sylvatica, and its variety purpurea.

Nowhere do hardy shrubs flourish better than at Niagara Falls, the spray conditions being such that plant life very rarely suffers from drought, consequently the shrubs are healthy and vigorous, although in the past they have suffered somewhat through lack of proper pruning and thinning; the same is also true of the trees.

Berberis Thunbergi, B. vulgaris, B. aquifolium, and B. canadensis thrive splendidly. Cornus of many species, forsythias, ligustrums, hydrangeas, loniceras, deutzias, including both single and double flowering kinds, such as D. crenata, D. Lemoinei, D. candidissima, D. gracilis, and D. scabra also flourish. There are in addition a few varieties of the above species.

The herbaceous garden has during the past been arranged in the form of a huge border, but steps are being taken to arrange the whole collection botanically after the Kew method. Space forbids a detailed account of the species and varieties of herbaceous plants, but from the fact that the garden covers one acre of ground, the number of plants may be approximately estimated. Liliums, phloxes, and perennial asters flower profusely, each in their respective seasons affording a beautiful sight to the thousands of visitors who annually visit the park.

The proposed arboretum in the southerly portion of the park will be so designed that the trees and shrubs can be planted botanically in groups for educational purposes. There will be a pinetum, an ericaceous garden containing a rhododendron glen, and a collection of lilacs amongst other features. I mention these simply to give the idea of what is contemplated. All trees and shrubs indigenous to temperate North America, and especially to Canada, will be planted in this area, while acclimatised exotic subjects will also be included in the collection.

A better location for an arboretum would be hard to find; on the west the area is flanked by an escarpment 100 feet high covered with beautiful hardwood trees interspersed with a few pines. It is sheltered from violent storms from that quarter, also in some degree from the north, as the escarpment bends round and covers a distance of two and three-quarter miles. At the most southerly point are situated the beautiful Dufferin Islands. The Niagara River borders the entire park system on its eastern side. In both the old and newer portions of the park system the trees and shrubs will be named after the method in vogue in Kew, lead labels being used. One of the objects of the Park Commission is to develop the park system along educational lines, and the Commission and their superintendent, Mr. John H. Jackson, have entered upon the work in the right spirit. What the Ontario Agricultural College is to the province in agriculture, so will the Queen Victoria Park be to the province and to the Dominion of Canada in horticulture and botany. In landscape beauty the park system will undoubtedly rank amongst the best of its kind, for glorious natural features abound on every hand.

There are four power generating stations in the park, the Toronto Power Company's, the Canadian Niagara Power Company's, the International Railroad Company's, and the Ontario Power Company's. The Toronto Power Company's generating station is a magnificent structure, and although it is not quite completed, it has the appearance of a beautiful library or museum. In the immediate foreground are beds sunk in concrete, the whole being arranged in the form of a terrace approached by steps. In these beds are usually planted sub-tropical and ordinary bedding planting plants in spring, and in the autumn bulbous plants, such as tulips, hyacinths, and narcissus.

The Administration Building contains the offices of the Parks Commission and of the superintendent and his staff; the basement is divided into lavatories and constables' headquarters. The second floor serves as a restaurant, while the board-room of the Commission and their bedrooms are on the top or third floor. These rooms are only used when the Board is in session. Standing as it does in proximity to both the American and Canadian Falls, the building has a very desirable location, and from its balconies splendid views can be obtained.

The office staff of the park is composed of the superintendent and his assistant, a landscape gardener, an assistant engineer, and two draughtsmen, an accountant, and assistant stenographer. The number of men employed in the park proper is about 80 in summer, this number being reduced to probably 20 in winter; the greenhouse staff of four men is permanent. The total number of men employed in the entire park system, including the outlying parks and boulevard, is approximately 120. This number of necessity must be greatly increased as the boulevard is extended.

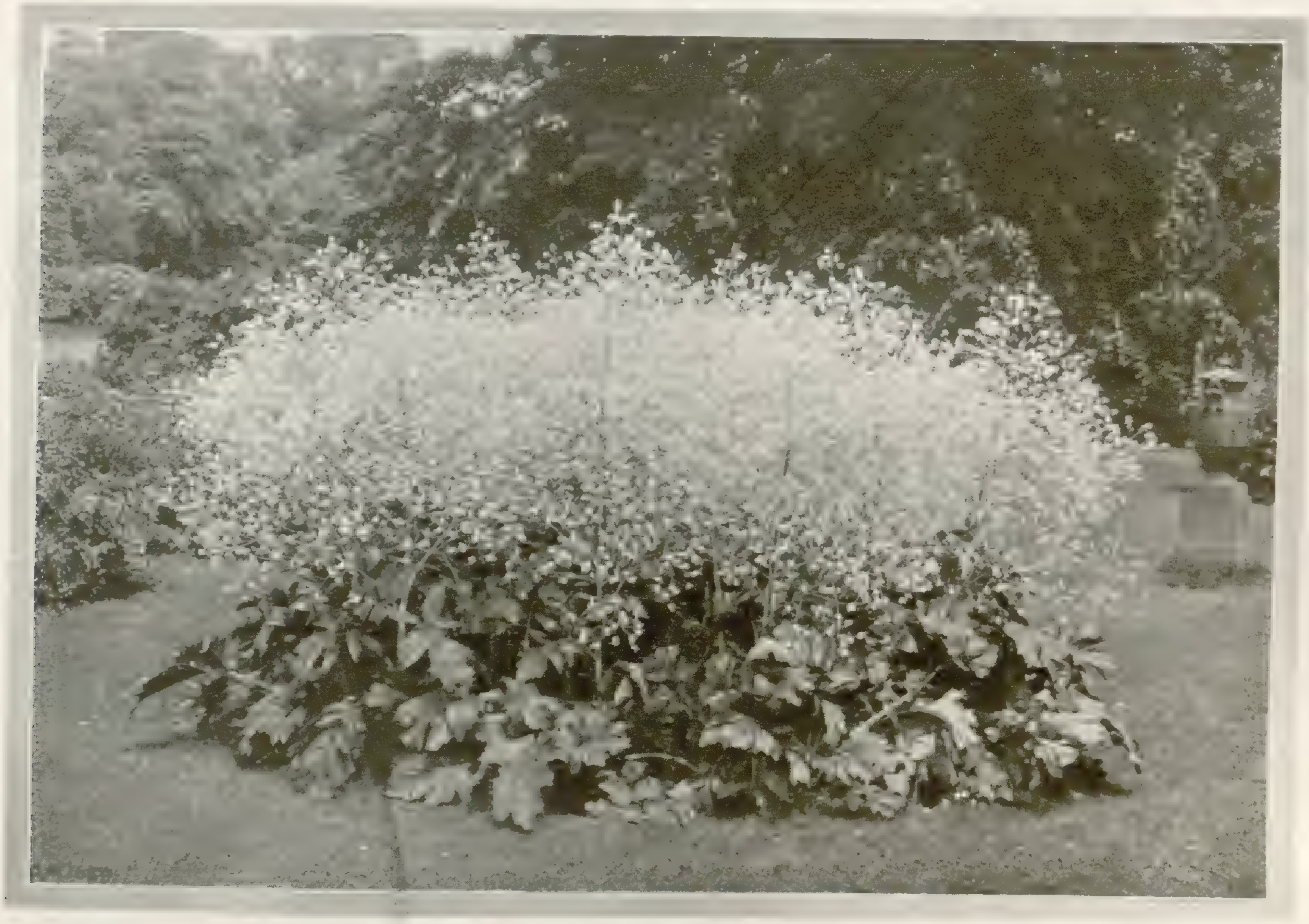
There are only four trained gardeners employed by the Parks Commission, two of them Kew men. I have met many gardeners from Britain, and am glad to say that in nearly every case the best positions are held by old Kewites. I may state that the mere fact of having taken the Kew course places a man in the front rank of horticulturists out here. Let me say that nowhere else is it possible for a gardener to obtain such a training as Kew affords. This fact strikes home to many a Kewite, when Kew to him is a thing of the past.

As an old Kewite I would advise the young fellows in Kew to make the best of their time, not only as far as practical work is concerned, but also in the various courses of lectures. Two years is a very short period, they should therefore crowd all they possibly can into them. The opportunity will never come again, and when they leave they should remember it is their duty wherever they may be to uphold the reputation of Kew. By so doing the chances of their fellow Kewites are materially improved.

Senecio scandens is a welcome addition to climbing shrubs, as it flowers when the majority of this class are over, being at its best from August till October. The flowers are a rich shade of orange-yellow, very freely produced, and are conspicuous at some distance. The plant shows to best advantage when allowed to ramble freely over rough timber, and is effective beside water or grown on poles among other shrubs. It succeeds in ordinary garden soil, provided this is well trenched and manured previous to planting, and, although somewhat slow the first season, growth is extremely rapid once the roots become established. Like the herbaceous members of this genus, the plant under notice is quite hardy in the open.—L. O. V.

CRAMBE ORIENTALIS.

The genus to which the much-appreciated seakale belongs includes several species that are sufficiently attractive to justify their being utilised for beautifying the flower garden and pleasure grounds, and prominent among them is the one herewith illustrated. It has large, deeply lacinated leaves, and elegant, much-branched flower stems, which rise to a height of six or seven feet and bear myriads of fine white flowers. The effect it is capable of producing when grown under conditions favourable to the full development of leafage and flowers is so well shown in the accompanying illustration that there is no occasion to refer otherwise than briefly to its usefulness for enhancing the attractions of the pleasure grounds, and especially those parts that are maintained in a semi-wild state. The Eastern "kale" is highly effective when arranged in a bold group, as at Kew, but in private gardens, where it is desirable that the whole of the beds should be more or less attractive throughout the summer months, the preferable course is to arrange it in groups of moderate size in mixed borders, and thus avoid any appreciable gaps after the plants have yielded of their floral tribute. As in the case of the seakale, this stately species should have a liberally enriched and deeply stirred soil, and plants that have occupied their positions for some time should annually have a rich top-dressing in the course of the winter or early in the spring. C. cordifolia is also highly ornamental, and well deserving of cultivation; C. orientalis, Jacq. is now referred to as C. pinnatifida, and, as in the case of the last-named, is well worth growing where space is available for hardy herbaceous plants of robust habit. When occupying beds C. orientalis may have daffodils and gladioli associated with them for prolonging the attractions of the beds.



CRAMBE ORIENTALIS AS GROWN AT KEW.
A handsome species with white flowers, and possessing much value for the less highly-dressed parts of the pleasure grounds.

NOTES FROM KEW.

Arctotis aureola.

A good deal of confusion exists with regard to the nomenclature of the different species of arctotis, another name for this being A. aspera. In the "Kew Hand List" this last-mentioned name is given as the correct one, but in the greenhouse at the present time several flowering examples have the name of A. aureola applied to them. Whatever is the real name, it is certainly a very beautiful subject for the embellishment of the greenhouse at this season, and not this season alone, for it will continue to bloom for months together. It is a plant of a fairly woody nature, and will flower well when from eighteen inches to four feet in height, or even taller than that. The pinnate leaves are from six to eight inches long, and are covered with a silky white tomentum, more pronounced on the lower than on the upper surface. The composite flowers are a good deal in the way of a single chrysanthemum, and are from three to four inches in diameter, the ray florets being of a rich orange-yellow colour, and the disc dark tinted. In a small mass or group this arctotis is seen to considerable advantage. Another form also in flower in the same structure used to be known as Arctotis aspera arborescens. This is less effective than the preceding, the flowers being of a creamy-white colour with a slight purplish tinge on the reverse of the petals. The different members of the genus are natives of South Africa, and, like the pelargoniums which come from the same region, they are essentially sun lovers. The same kind of potting compost, too, will suit both classes of plants.

Cinerarias.

These contribute largely to the embellishment of the greenhouse, and a vast number of different forms are therein represented. A notable feature is the comparative absence of the massive-flowered florists' varieties, which used at one time to be grown to the exclusion of all others. Now those of a lighter and a looser habit are preferred. The variety Matador, which last season aroused in many places a good deal of interest by reason of its distinct shade of red, stands out in its colouring quite away from any of the others.

Anoiganthus breviflorus.

This South African bulbous plant is quite distinct, and possesses the merit of readily conforming to pot culture. It is not often met with, though flowering examples have been noted at Kew for years, and not always at this season of the year. Just now it is in bloom in the cool portion of the T range. From a firm oval-shaped bulb strap-shaped leaves are pushed up to a height of a foot or a little more, and the flower scapes are often rather shorter than the foliage. They are terminated by a loose umbel of flowers, which individually are about a couple of inches in length and funnel-shaped, their colour being rich yellow. Even when fully expanded the flower presents the appearance of being only partially opened. This anoiganthus needs to be freely supplied with water when growing, but during the dormant period it should be kept almost dry. An ordinary greenhouse temperature is all it needs.

Thyrsacanthus rutilans.

This is an old and well-known plant, but at the same time it makes such a goodly show in the intermediate portion of the T range that it merits at least a passing notice. Unlike many decorative subjects, this thyrsacanthus is seen at the best advantage in the shape of leggy specimens, as then the long pendulous racemes display the scarlet-crimson tubular-shaped blossoms to the fullest extent. This thyrsacanthus belongs to the order Acanthaceæ, and is, therefore, a near ally of the aphelandras, eranthemums, jacobinias, and justicias.

Eupatorium Raffilli.

Some well-flowered specimens of this eupatorium in the intermediate portion of the T range serve to show what a valuable subject it is for decorative purposes at this season. At the same time, though difficult to say without actual comparison, it appears to me very little, if at all, removed from the form which was commonly grown some years ago under the name of Hebeclinium atro-rubens. The genus Hebeclinium is now merged into that of eupatorium, the well known species formerly called H. ianthinum being now Eupatorium ianthinum.

Medinilla magnifica.

A good form of this grand flowering stove plant in the Victoria House is bearing a number of its drooping panicles of clear rose-coloured blossoms. It is justly entitled to be regarded as one of the finest stove plants we have, and in the days when large specimen plants were grown and frequently exhibited it was very popular. This medinilla was found in Manila by Thomas Lobb, when travelling in the Malayan Archipelago on behalf of Messrs. Veitch, in whose nursery in Exeter it first flowered in April, 1850.

Begonia scabrida.

The "Dictionary of Gardening" gives the date of the introduction of this begonia from Venezuela as 1857, but notwithstanding the fact that it is a very desirable species, one rarely meets with it in gardens. In the T range it is just now flowering freely. It is of rather erect growth, clothed with roughened bright green leaves, and bears a great profusion of white flowers.

Nuttallia cerasiformis.

Although this shrub is frequently mentioned in horticultural publications, it is really planted to a very limited extent. It certainly merits further recognition, and some good examples just now at their best in Kew show this shrub in a very favourable light. It forms a dense-growing mass or clump, usually about six feet in height, and the flower racemes, upon which its beauty depends, are drooping, in a manner somewhat suggestive of those of the flowering currant, but white in colour.

Ceanothus rigidus.

The fact that this ceanothus, if protected by a wall, blooms at about the same time as our early-flowering shrubs, is too often overlooked. It is a stiff-growing kind, whose woolly branches are clothed with small, firm-textured leaves. The purplish-lilac flowers are disposed in little clusters, and borne in great profusion in the spring months. As illustrating its early-flowering qualities, it may be noted that a specimen trained to the wall of the herbaceous ground had a few of its blossoms expanded in the middle of March.

K.

A FINE BEETROOT—SUTTON'S BLACK.

BEETROOT.

To ensure perfect specimens of medium-sized high-class beet it will be found necessary on most lands to bore deep holes and fill these in with fine soil which has been sifted, such as old material collected from the potting shed. This soil should be made moderately firm, and the seed not sown too early—a mistake frequently made. The first or second week in May will be quite early enough. Two or three seeds should be sown at each station, and covered to the depth of about a quarter of an inch; thin the seedlings to one at each hole, when large enough. Except for keeping the ground constantly stirred little other attention will be needed until the time for lifting, which should be done immediately the roots are large enough, and, if stored in the usual way, these will keep sound and good until the following year. Care should be taken when lifting the crop not to break the tap roots.

Good and reliable varieties are Dell's Blood Red, Pragnell's Exhibition, Sutton's Black, and Delicacy.

E. Beckett, V.M.H.

HAMAMELIS AND CORNUS.

In these days of interesting and beautiful gardens, is it not rather surprising that plants of Hamamelis or Witch-hazel so rarely find a place among our flowering trees and shrubs? A specimen witch-hazel is very seldom seen, and yet the shrub has many claims of merit to a position in every collection. Its period of blooming—the winter months—and beautiful and quaint flowers, with a charm of their own, commend it for interest, use, and ornament in the pleasure ground. In a cut state it stands well, resembling an odontoglossum, with the parts of the flower cut into segments. It is not particular as to soil, but prefers a moist sandy loam. There are several kinds of witch-hazels, all of which are well deserving of a sheltered corner in a shrubbery. H. mollis is, perhaps, the best, but H. virginica, H. japonica, and H. arborea will also be found useful, effective flowering subjects for winter decoration, and render their position both ornamental and attractive in January and February.

The Cornelian Cherry (Cornus mas) is an old-world plant, which seems to have been lost sight of, or to have lost favour with the present-day planters, as only an odd specimen is met with in the country, and that at some long-established place. It, too, blooms at a time when outdoor flowers are scarce, and forms a very conspicuous object in a shrubbery or margin of a wood. It also fruits freely, and, at one time, the berries were used for tarts. Evidently better things are now available for this purpose, otherwise more cornus would be found in cultivation. Apart from this, however, its greenish-yellow blossoms in March and April give life and beauty to the landscape, mark the coming floral year, and win for itself a claim to be included in all collections of flowering trees and shrubs. It is not fastidious as to soil, but luxuriates in a medium inclined to be heavy and moist, and in this attains a height of something like 20ft.

Both of these neglected shrubs are much more valuable decorative subjects for our pleasure gardens than many species employed in their embellishment at the present time, and, flowering when all else around them is dormant, in keen, cold winds and snow, their value cannot be too highly estimated.

X. Y. Z.

DWARF POLYANTHA ROSES.

The extreme beauty and general usefulness of the dwarfer-growing Polyantha or Multiflora roses cannot well be overestimated. We do not obtain the size and substance found in other classes, but many varieties have perfectly-shaped blossoms, and these are borne in immense trusses, which not only make a good show at once, but continue for a long time. They are also the most perpetual bloomers we have, and certainly the easiest of all to cultivate, there being no necessity for elaborate preparation of beds, staking, tying, and the numerous other work needed to get the "show" roses to perfection. In pruning, too, the work is very simple and consists of merely thinning out some of the centre growths and lightly "tipping" the remainder.

As bedders, very few subjects can surpass them, notwithstanding the immense number of beautiful subjects now available. We have to look down at these beautiful little roses, and thus the whole of their beauty is revealed, and the centres of some are perfect and very pleasing. The roses lend themselves equally well to short standard culture, and, though not often seen in this form, I venture to say that "once grown always grown," applies here. Imagine a bushy and well-flowered plant of Mrs. W. H. Cutbush, Etoile d'Or, Aschenbrodel, Aennchen Muller, Katherine Zeimet, or the newer and very deeply coloured Jessie, raised upon a one and a-half to two feet stem. They far surpass many other varieties grown as half-standards. They flower from June until October, and are so dwarf and sturdy that inclement weather has not the same disastrous effect as in the case of roses of larger growth, and in any case, there are far more buds to open upon each truss, which cannot be said of our larger roses.

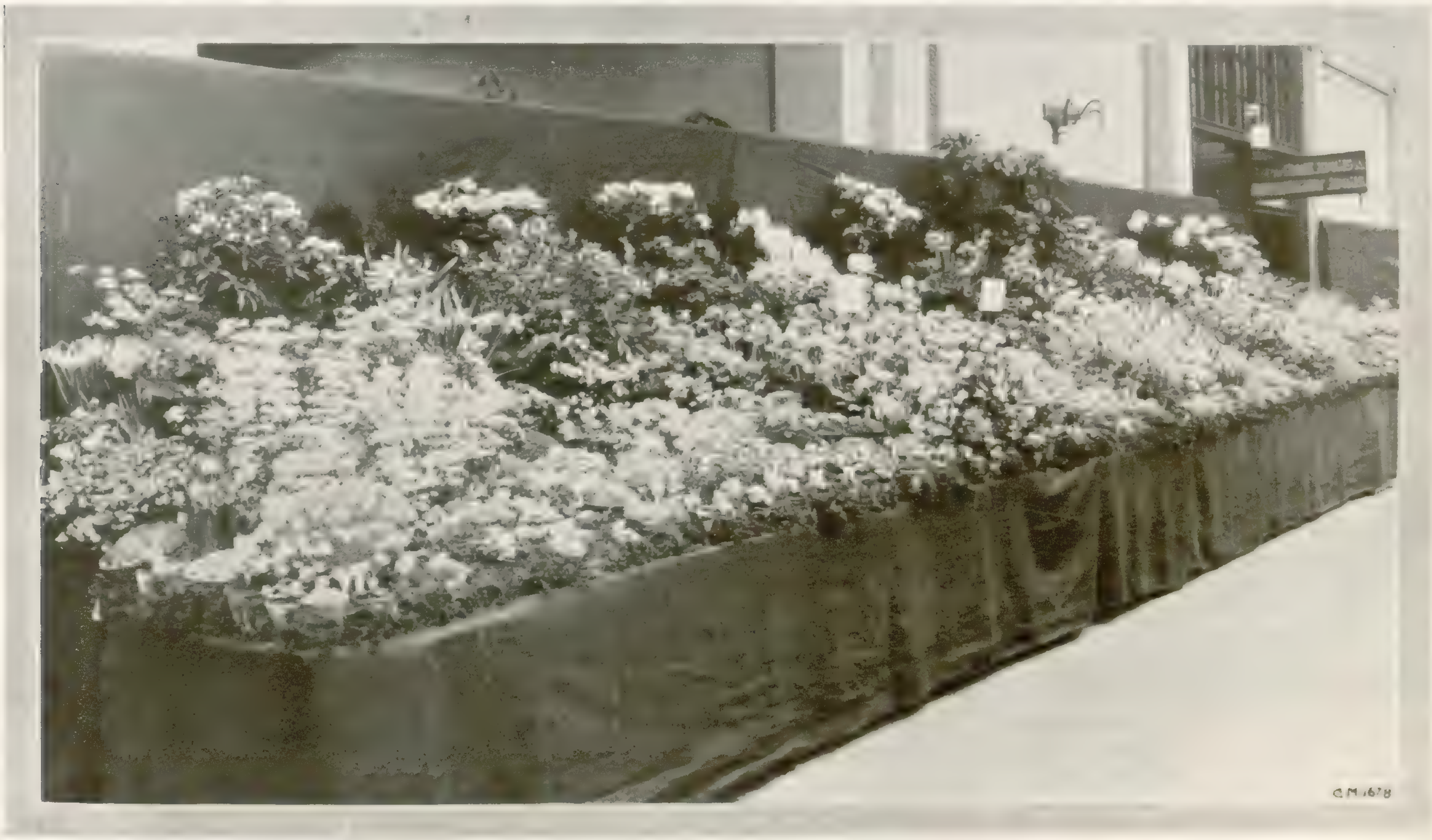
Not only are dwarf Polyantha roses unsurpassed as bedders, and to edge other masses of roses, but we have few more suited for pot culture, while they are much more easily managed than the majority of teas and hybrid teas, never failing to flower. Their large trusses and compact habit render them very useful as decorative roses in pots. True, they are not of much service to cut from, except it be as coat flowers; but they last longer and are more certain than the large flowers generally grown. They possess yet another advantage; they not only force well, but, if afforded a little aftercare when the valuable early crop is over, they will give a second display within six weeks. After the plants have been in pots for a couple of seasons, we find it better to turn them out as soon as the first crop of the season has been realised. The plants then make good growth and flower again during late summer and autumn.

This section yields a large range of colours now; perhaps the best pure whites are Katherine Zeimet, White Pet, Flocon de Neige, and Schneewittchen; blush white, Aschenbrodel, Mignonette, and Gloire des Polyanthas; deep rose, Orleans Rose, Aennchen Muller, Primula, Mrs. W. H. Cutbush, and Phyllis; yellow and orange, Perle d'Or, Canarienvogel, Etoile d'Or, Eugenie Lamesch, and Perle d'Or; deep red, Perle des Rouges and Jessie.

In Kleiner Alfred we have a plant seldom exceeding a foot in height when well established. This is grand when massed thickly, and very showy in quite small pots; red on the outside, suffused with ochre-yellow. Leonie Lamesch is also peculiar, with its bright coppery-red hue, shaded with yellow; the flowers are not borne in trusses so much as the others; indeed, they are generally produced singly, but are very lasting and always accompanied by green and shining foliage. Jessie and Orleans Rose are the only two newer varieties I can speak of from experience, and they are of much value. A. P.

A BEAUTIFUL EXHIBIT OF ALPINES.

There is at the present time a great and growing love for alpine plants, especially for those kinds that may be grown in our gardens with a fair amount of success. This love has led many people to slightly anticipate the spring display in the rock garden by growing a collection of early-flowering kinds and varieties in cold frames, or in a quite cold house. That charming results can be obtained in this way has been amply demonstrated at Kew, where the Alpine House has for very many years been a great source of pleasure during the early months of the year. Exactly how the fine collection of alpines grown in pots and pans by Mr. Grandfield, gardener to Sir Everard Hambro, at Hayes Place, Hayes, is housed we do not know, but we imagine that little beyond protection from rain and snow and the severest frosts is all that is provided. Anyhow, the exhibit staged at the meeting of the Royal Horticultural Society on March 14 was a delightful one, and by its extent and beauty it attracted a vast amount of attention from the visitors, and received a rare meed of praise. As already referred to in these pages, the primulas and saxifrages were mostly in evidence, and they were represented by finely developed specimens. It is not too much to say that this splendid exhibit, to which a gold medal was awarded, did a very great deal to further popularise alpine plants and flowers.



A BEAUTIFUL GROUP OF ALPINES.
Staged at the R.H.S. Meeting on March 14, by Mr. Grandfield, gardener to Sir Everard Hambro, Hayes Place, Hayes, Kent.
A Gold Medal was awarded.

Early Melons.—These will now require much care and attention. Carefully tie in the growths as becomes necessary, and as soon as three or four female flowers are ready they should be pollinated, preferably about the middle of the day. Do not set any till there are sufficient for the crop. Two or three good fruits will be enough on cordon plants, and, as far as practicable, let them all swell away at once. Admit a little air on all balmy days.—W. A. Cook.

CORNWALL COUNTY FRUIT PLOT.

The Cornwall County Council has established an experimental fruit plot at Gulval, near Penzance, for the benefit of market gardeners and smallholders. The plot is not worked solely for financial profit, but chiefly for educational purposes. The grounds are open every working day of the year to anyone requiring information on fruit culture and kindred subjects, and Mr. W. Avis, the head gardener, is instructed by the Council to also deal with questions asked through the post by those who are unable to visit the plot, and needless to say many take this opportunity of obtaining information on the numerous subjects relating to horticulture.

When the Council took charge of the grounds, four years ago, everything was in a backward state, the progress made since that time, however, is an object-lesson for all horticulturists. Every spring a report is issued, stating what progress is being made, and valuable hints are given for the benefit of those who earn their living on the soil. The following account of the various experiments, and the amounts realised from the sale of the produce, will be of interest to your readers.

Apples and Pears.

There are 150 apple trees at the plot, planted 13 years ago, and if there were no vacancies they would cover a half acre of ground. The varieties which produce the best results are Bramley's Seedling, Bismarck, Newton Wonder, Golden Spire, Lord Grosvenor, Beauty of Bath, American Mother, Allington Pippin, Worcester Pearmain, and Lord Derby. Last year the crops realised about £50. A few gooseberries are grown among the trees, but these are being diminished each year. The net returns from the gooseberries was £9. The pear crop was almost a failure, owing to the heavy crop of the previous year, and to the very unfavourable weather while the trees were in flower; in spite of this the average returns for the past two years works out at £75 per acre.

Experimental Salad and Early Vegetable Department.

In this department the past year was a highly successful one, the net returns being £152, compared with £102 in the previous year. With the aid of frames and handlights, which cover about 14 perches of ground, a net return of £47 was realised. Most of the produce was sold to local tradesmen, and the demand was greater than the supply. The crops raised were radish, lettuce, carrots, cauliflowers, marrows, cucumbers, melons, tomatoes, and celery. In the intensive culture garden, after deducting cost of manure and labour, there was a clear profit of £1 9s. 9d. per perch, equal to £238 per acre. Forty perches were devoted to outside intensive culture, and there was a fairly good year in such things as endive, Cos lettuce, broad beans, cauliflowers, early carrots, etc., the bulk of these being sent to London from February to the end of June, after which it was of no use sending to London; the net returns from endive, Cos lettuce, and broad beans were £47.

Methods of Culture.

The endive and lettuce were planted in rows one foot apart, every fourth row being missed. In November broad beans were planted in the vacant rows; the ground was all clear of these crops by the end of June, the beans, of course, being the last. The ground was then planted with cauliflower and broccoli for local trade. Early out-door carrots is a line that any market gardener with early ground might take up, and it would pay him well for his labour. Early Shorthorn carrots were sown on the plot on March 1, and they were pulled on June 1, at 1s. 6d. per doz. bunches; Covent Garden, or any other large market, would take large quantities at this time. Some were sent to Covent Garden from the plot as late as June 16, and they sold at 3s. per doz. bunches of about twelve small carrots in a bunch; these were sown on a south border measuring 26 by 7 yards, and gave a net return of £6 10s. French beans proved another good line; Canadian Wonder was the variety, and seeds were sown in cold frames on April 18, transplanted (three plants to a clump) in four rows, 34 yards long, the first week in May, and covered with hand lights for about a fortnight. The beans were ready for picking on June 27, and sold at 8d. per lb. from that date to August 9. These four rows produced a net return of £3 11s. 8d. Scarlet Runner beans were treated in the same way, and were ready for picking on July 15; they were not covered. Two rows produced £2 7s. 4d. The total returns for the year in this department were £214, as against £191 for 1909.

Broccoli.

Varieties were grown for trial. Two proved of special merit, viz., Watkins and Simpson's Early Feltham, a splendid January and February broccoli; and Sutton's Satisfaction, a February and March broccoli; both of these varieties have large firm white heads, well protected, and stand a long time without flying open. Experiments are being made with two new broccolis, and potatoes are being grown for trial purposes this year.

T. H. Rogers.

PEAR PITMASTON DUCHESS.

In a large garden where the soil was light but deep, this variety grew as freely as willows, and matured immense crops four years out of five. In various positions in the garden the trees, both pyramids and those trained on walls, bore exceptionally well. Cultivators who have to deal with small gardens, where the soil is light, should grow this variety worked on the quince stock.

I had a row of pear trees trained as pyramids in the garden referred to, and during the ten years I had charge of them they bore exceptionally heavy crops, and it was necessary to prop up the branches, and even then the weight of the fruit caused some to break off. A gentleman called to see me when on his way back from the Channel Islands, and he said he had never seen such grand crops of pears, and went repeatedly to look at the trees. The crop that year was the best I had had, and the gentleman was so impressed that he determined to plant many trees in his own garden. All were growing on the quince stock, and, with the exception of two specimens, all made satisfactory growth, and required moderate pruning.

The trees occupied a very warm, sheltered position, the branches were long, sturdy, and well apart; consequently, fruits were freely borne on the lower, or basal part of the branches as well as near the ends. Every autumn a heavy dressing of rotted manure was lightly forked under the surface soil, and applications of diluted manure followed, and while the fruits were swelling freely liquid manure was poured into the soil. I had nothing like such good success with trees generally growing in the lower portion of the garden, where the soil was always very moist and rather cold.

G. B.

RHUBARB.

Few crops in the garden are usually more neglected than rhubarb; the most attention it receives, as a rule, being a top-dressing of stable manure some time between the autumn and the spring. The plants are left in the same place for fifteen or twenty years, even more, while the varieties grown usually leave much to be desired. It is true that by reason of the size of its leaves it will appear to thrive under almost any treatment, and will produce a certain quantity of sticks, but when properly managed the same amount may be obtained from a smaller bed, and that of much finer quality. As a general rule we do not need to grow late kinds, as the main recommendation of rhubarb is its earliness, and we seldom use it much after gooseberries come in. Neither do we want green-stalked kinds, as their appearance on the table is not so nice as that of the red sorts. If we believe in growing the best or nothing, some of us will do away with our old plantations and get fresh plants altogether.

Rhubarb is a very deep rooter, and as it has to occupy the ground for a number of years the site chosen for a plantation should be dug to a depth of three feet, and both animal manure and lasting substances like bone dust or quarter-inch bones well mixed with the whole depth of soil. Of the bone material twelve or fifteen pounds to the forty square yards is not too much to use, looking to future results and the length of time the plants will have to feed upon it. Rhubarb may be planted at any time from September to April, but the early autumn is the best time, and, next to that, March. It will grow in any aspect, in the open or under trees, but as earliness is important, some at least should be put on an early border. Four feet should be allowed between the plants, and even five feet will not be excessive ultimately. If it is intended to remove crowns for forcing, they may be put in two or two and a-half feet apart, and alternate ones taken up two or three years after planting. If the plants for the new bed are to be taken from one's old stock it is not necessary to take up the old stools and divide them, thereby getting nothing from both old plants and new for one season, but pieces may be cut off the old stocks with a spade, or chisel and a hammer, each piece of root with a crown to it making a plant, and the bigger the piece of root which can be removed with it the sooner it will become established.

In the treatment of an established plantation there is one principle to be borne in mind, and that is, we are always preparing for a year ahead. It is the strong and well-developed leaves of the summer which, if the plants are properly fed, will store up plant food in the roots for making large succulent leaf stalks early the following spring. There is nothing better than an annual top-dressing of farmyard manure, and the best time to apply it is in February or early March, for if applied in the autumn much of its soluble nutrients may be washed away beyond the reach of the roots before the growing season comes. But this dressing is not sufficient for securing the best results.

The experiments at Hadlow show that when rhubarb was manured with fifty loads of London dung per acre every year, and nothing else, the crop averaged thirty tons a year, while a plot manured with half this quantity of dung, supplemented with four cwt. each of nitrate of soda and superphosphate of lime, averaged forty tons per acre, the cost in the former case being estimated at £10 per acre, and in the latter £7 10s. Reducing these mineral constituents to the level of the garden, we may apply four pounds of superphosphate to forty square yards, and a pound of nitrate of soda to the same area four times during the growing season. On most soils, after a crop has been growing for several years, it will be benefited by the addition of four pounds of kainit to the same area in the winter, while if the soil is deficient in lime basic slag should be substituted for the superphosphate at the same rate, though six pounds, instead of four, will be better. In garden practice, in fact, the quantities of all the above may be increased from 25 to 50 per cent.

Of varieties we do not need many. Hawke's Champagne is, perhaps, the best, being early, of good flavour, and of fine quality. The same three qualities belong to Johnston's St. Martin and Kershaw's Early Paragon, and though perhaps in flavour they are not equal to the first-named, they are stronger in growth and more prolific, especially Early Paragon, which rarely, if ever, runs to seed. St. Martin does not require so much sugar as some, which may be a consideration on grounds of health, if not of economy. Prince Albert (syn. Early Albert) is also a good early variety, and is one of the best kinds for forcing, it being stated to require less heat than most kinds. Victoria is famous for the quantity and size of the sticks produced, but it is rather a market sort than a choice variety for the earliest supplies.

In the matter of forcing, it is not necessary for moderate earliness to lift the crowns and put them in a house, but it is better for the plants, and gives less trouble, to put large pots, half casks, deep boxes, or large drain pipes over them, and pile round them heaps of stable manure to generate heat. Rhubarb has a decidedly better flavour if it is not too much blanched.

Alger Petts.

PERPETUAL CARNATION "CAROLA."

On several occasions of late I have been asked my opinion regarding the merits of this carnation, and I have no hesitation in at once saying that it is by far the finest crimson variety yet introduced. The plant is of vigorous growth, breaking freely when stopped as a cutting, or, on the older plants, after the flowers have been cut. It is one of the easiest of carnations to propagate, the cuttings rooting quite readily. My experience of last season teaches me that when the plants are stood outside in the summer, it is advisable to erect a portable structure over them, on which frame lights may be placed in case of excessive rains; or, where the space is available, they should be grown in a cool, airy house, throughout the whole season.

The good qualities which this variety possesses far outweigh its few faults. Its one and only fault lies in the splitting of the calyx, but little else can be expected when the size of the bloom is considered. This fault is amply compensated for by the flowers themselves. They are freely borne on long stiff stems, and are of a most beautiful velvety crimson, while the scent is exquisite. In size of bloom Carola has no equal as a perpetual variety.

Last year we grew nearly one hundred plants, and this year we have increased our stock to over five hundred, a fact which should speak for itself. Whatever reward Mr. Engelmann, of Saffron Walden, has received for introducing this most splendid variety, it cannot have been too much. Carola might have been, with justification, named "Incomparable."

A. Grubb.

HARDY CYCLAMENS.

My hardy cyclamens have done so well this year that I am tempted to send you a couple of photographs recently taken, one of which I hope you may be able to reproduce.

Possibly the damp sunless summer of last year suited the corms, followed as it has been by a mild winter. Whatever the cause may have been, the plants have bloomed extraordinarily well; the colours have been, and are still, most brilliant, especially those of the crimson form of C. Atkinsi, and the bed, as seen from the house, is really very beautiful. I wish I could have taken a photograph in colours when the flowers were probably at their best. It is a matter of astonishment and regret to me that so few gardeners really "go in" for these delightful and easily grown plants. Their requirements are most modest, and with a judicious assortment of the spring and autumn flowering species it is possible to keep up an almost constant display of bloom.

HARDY CYCLAMEN IN THE GARDEN OF THE ELMS, YALDING.

I think I may safely say that they will succeed in any garden if the following points be attended to: (i.) Partial or "semi" shade, enough only to moderate the rays of the midday and afternoon summer sun: (ii.) a fairly deep layer, say 9 to 12 inches thick, of good leaf-mould, well mixed with a little old lime rubbish, which should not be dug into the existing soil, but merely laid over the surface; (iii.) the corms to be planted in summer or early autumn, according to time of flowering, originally placed at a depth of 2 inches, and gently pressed down and covered, a handful of sharp sand or grit both above and below the larger ones; (iv.) water to be freely given with a syringe or rose during abnormally hot and dry weather; and (v.) the bed to be kept free from weeds.

A northerly or easterly aspect seems to suit cyclamens best, but my experience of a good many years shows that they do not much mind exposure to high winds. I used to shelter mine from the "north-easters" with green boughs, but have long since given that up. It is better, doubtless, to keep the site free from weeds, but the cyclamen is a sturdy little chap, and in the mêlée of a gigantic struggle for existence with even tall-growing undesirables, I will back him to hold his own and come out "on top." Some seedlings of mine that rashly elected to start life in the heart of a clump of Erica carnea invariably push both leaves and flowers right through, and overtop the heath with a splendidly audacious display of marbled leaves and captivating little flowers.

I grow a few odd plants of other flowers among my pets, but remove them if they become aggressive. And as the cyclamens seed themselves everywhere, often migrating several yards to adjoining beds, I do my best to encourage them by carefully removing the grass and poppies, and various forms of cress that infest my garden everywhere, so as to leave all possible space for additional seedlings.

As to the sorts to grow, I do not think it possible to start a cyclamen bed without a fairly good supply of C. Coum, C. Atkinsi, C. repandum, and C. europæum, with a few C. libanoticum, C. neapolitanum, and C. africanum, but a first attempt might well be made with a small collection of C. Atkinsi (or C. Coum), and C. europæum; the pink, red, or crimson-flowered plants should form the majority, an occasional white form being judiciously introduced. It seems to me that my species have hopelessly interbred and hybridised, and have made "confusion worse confounded," so that what was at all times a difficult genus to diagnose has in my case become absolutely an impossible one. But all are beautiful, and flower just as well without long compound names attached to them, so I thin them out as little as I dare, and leave the rest to their own sweet selves.

I forgot to include in my list of "points" a careful examination every autumn in case any of the corms have became stranded on the surface; these should be gently pressed down and covered with the leaf-mould mixture, and a light sprinkling of this should also be scattered lovingly over the whole bed.

S. G. Reid.

THE CAPE PRIMROSES.

These beautiful Cape Primroses or streptocarpuses form one of the most useful subjects for greenhouse decoration during the summer months. Since their introduction great improvements have been made by crossing the various species and by selection. There are now numerous shades of colour, including blue, lilac, pink, and white. A white form, with a primrose throat is especially lovely, and is very effective arranged in glasses with Dendrobium phalænopsis. The fine variety Royal Purple and forms raised from it are among the best in cultivation, and they are chiefly remarkable for the size of their flowers. The Achimeniflorus group is very pretty and very free flowering.

Although perennials the best results are obtained with streptocarpuses by treating them as biennials; therefore, a stock should be raised annually from seeds sown at the present time. Use well-drained 32-size pots for seed sowing, fill them with a fine sandy compost, give a good watering through a fine-rosed can, and allow the pots to stand for a few hours before sowing the seeds. After the seeds are sown sift a sprinkling of the compost over them, then place the pots in a temperature of 65 deg. with a sheet of glass over them to check evaporation. When the seedlings are large enough to handle prick them off into pans, using a light, peaty soil, and when they become established, remove them to a temperature of 60 deg., and pot separately, using large 60's. At all times they must be shaded from the direct rays of the sun.

By this means good plants will be obtained by August, and these will flower continuously throughout the autumn. Partially dry them off, and allow a rest of several weeks' duration in the winter. The following February the plants should be put into 48-sized pots, which will be large enough for their future requirements; at this potting place a few half-inch bones over the drainage. A compost that suits them well consists of two parts good fibrous loam and one part leaf-soil, with the addition of a little fine charcoal and silver sand. Grow in a temperature of 55 deg. or 60 deg. and maintain a moist atmosphere by damping between the pots. Such plants will commence to flower in May, and furnish a succession of bloom throughout the summer.

If seeds are not required, pick off the pods, as this will assist the plants to continue flowering, besides improving their appearance. Supply with soot water and liquid manure at intervals to the growing plants. It is necessary to fumigate the house occasionally with nicotine compound to keep down greenfly, which soon obtains a hold on the foliage if not kept in check. If mealy bug appears, as it sometimes does on the under side of the leaves, methylated spirit applied with a camel hair brush will eradicate it. Streptocarpuses also succeed planted on indoor rockeries, for which purpose young plants from large 60's should be put out in February or March. Associated with ferns on a conservatory rockery they are both pleasing and effective.

J. Gardner.

A LARGE-FLOWERED HYBRID STREPTOCARPUS.

FLOWERS IN MASSES.

The excellent illustrations on p. 126 and 127 of Iris Beds at Kew prompts me to say how much more handsome and gorgeous are flowers when in masses of one sort than when a few clumps are set out in a border, for example. In a mass we get colour that harmonises with the immediate surroundings, when the planting is carried out with due regard to future effect. A few instances that occur to my mind while I write will serve to emphasise what I mean. For instance, how gorgeous are the beds of scarlet pelargoniums in front of Buckingham Palace each year; it is but a simple scheme, but what a glow of colour is produced! Take, again, the huge beds of shrubs and trees, both flowering and foliage subjects, as seen at Aldenham yearly; spiræas in variety, Forsythia suspensa, the Pearl Bush (Exochorda grandiflora), Hydrangea paniculata grandiflora, brambles, and so forth, all producing masses of decided colours, which create a marked effect in the landscape. Then there are the dogwoods in winter, golden elder, and purple hazel in summer, all attractive.

I need hardly point out, however, that these masses have their drawbacks, the most important being a want of attractiveness when out of season. In large or public gardens this is not noticed to the same extent as it would be in a smaller area. Where a large site is occupied by herbaceous plants a good opportunity exists for creating a rich effect by planting in masses. The double-flowered lychnis is most effective when seen occupying a patch six feet in diameter; Phlox Coquelicot, with at least a dozen plants in a group, rather close together, produces a blaze of colour that cannot fail to be appreciated. No subject shows the advantage of the massing principle better than the Dropmore variety of Anchusa italica, when the plants reach six feet high, as they will do if given good culture. The various heleniums, dwarf and tall, as well as the rudbeckias, all lend themselves to this system of massing.

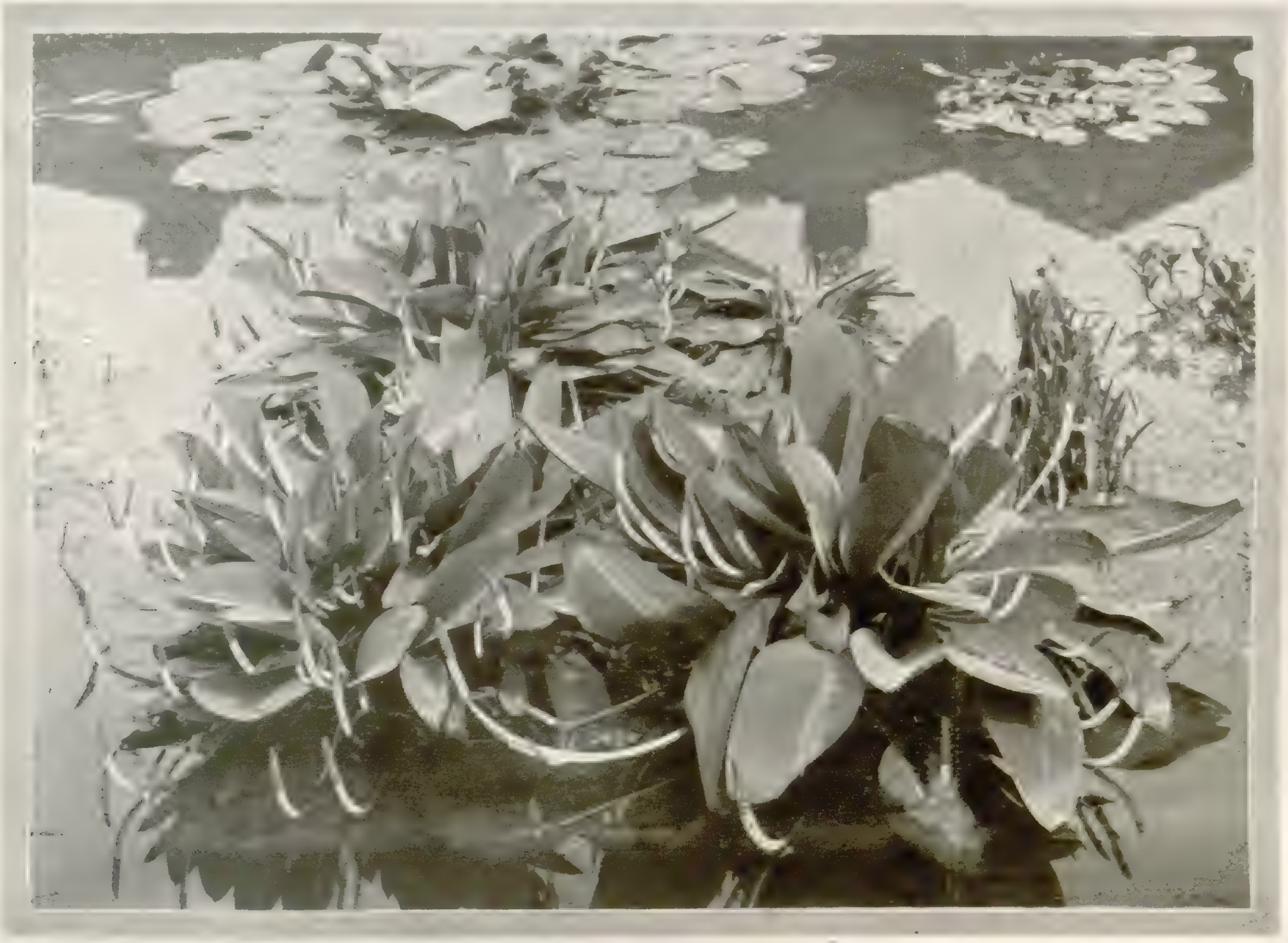
E. Molyneux.

Ardisia crenulata.—This pretty berry-bearing warm house shrub is known by two other specific names—crenata and crispa. It is an old plant in gardens, and forms an upright little shrub, clothed with dark green leaves of a particularly firm texture. The flowers are freely borne on the upper part of the plant, and succeeded by berries that when ripe are of a bright coral-red colour. They remain fresh and bright for months. It forms a very ornamental feature in the warm greenhouse or stove, especially during the winter months. There is a variety with white berries, but it is less effective than the type. Several other species of ardisia are in cultivation, one of them —Ardisia japonica—being almost hardy. This has also bright red berries, but they are not borne as freely as those of A. crenulata.—W. T.

ORONTIUM AQUATICUM OR "GOLDEN CLUB."

Few aquatic plants have such a charming and distinctive appearance as the subject of the accompanying illustration. Yet it is comparatively rare in gardens, although of very easy culture, requiring a square yard or so in an open tank or pond. The plant belongs to the arum lily family (Aroidæ), but is often devoid of the spathe or large bract which is characteristic of that family. The spathe, if present at all, is small, and placed some distance below the spadix. The inflorescences are produced freely on quite small plants in late May and June, and present a remarkable appearance in the distinct combination of the pure white peduncle surmounted by the golden-yellow spadix. The foliage is handsome, and a welcome change to that of nymphæas and other popular water-loving plants. In common with the bulk of aquatics, the plant delights in a rich, greasy loam, to which is added about one-third of its bulk of cow manure, and it thrives best if planted with its crown from nine inches to a foot below the water level, as in this way the stalks of the flowers are sufficiently short and stout to hold the spadix well above the water. It is a native of North America, where it is found in ponds from Massachusetts to Pennsylvania, and is quite hardy in this country.

C. P. Raffill.



A BEAUTIFUL WATER PLANT (ORONTIUM AQUATICUM). [Photo: C. P. Raffill.

Early Pea, The Pilot.—Among so many varieties of culinary peas it is difficult to grow and test all, and also not easy to select some few without any previous experience. I can recommend The Pilot as quite an excellent early pea. In growth it reaches from 3ft. to 4ft. in height, with stout haulm, and bears an abundance of large pods of excellent peas, and in a very short space of time too. I do not know by whom this variety was raised.—E. M

MAINTAINING THE BALANCE

I notice that Mr. J. Whittle, writing on the care of young fruit trees (page 154) observes that "all fruit trees should be pruned the first year of planting, not only to balance the check received at the roots, but also to lay a good foundation." I am not drawing attention to the above remark out of any spirit of hostile criticism, but rather because it seems to be a matter which requires a bit more sifting. Everybody is agreed, of course, as to the desirability of pruning young fruit trees for the purpose, as your correspondent rightly points out, of laying a good foundation, and I fully agree with him that in many cases vigorous established trees are annually overpruned. The point, however, on which I think it is desirable that more light should be shed is that of maintaining the balance; what it really means, and whether there is any necessity for it. There are many expert writers on fruit culture who, like your correspondent, recommend pruning newly-planted fruit trees the first year, and they mostly use as an argument in favour of their methods the desirability, as Mr. Whittle puts it, of balancing the check received at the roots. Just so, but we must remember that there are many fruit growers whose practical ability and experience are above question who advocate the pruning of young trees, not immediately following the planting, but a year later. I make no pretence here of saying, from my own point of view, which is right and which is wrong, but while first-year pruners lay such stress on the importance of maintaining the balance between root and branch, second-year pruners discard the point altogether, apparently not caring a fig whether the balance is maintained or not, and, in face of this, I, like Rosa Dartle, "merely ask" if this maintenance of balance is necessary. Why should the balance be maintained, and what is likely to happen if it is not maintained? These are the questions, and the opinions of some of the readers of the Gardeners' Magazine on the point would not only be interesting, but useful.

I take it that everybody is agreed as to the desirability of pruning young trees, and the object of it is to get growth. Very well then; do we get better growth, and, consequently, a better tree, when we prune the first year, and balance the check received at the roots, than if we leave that tree a year in the ground before pruning it, and never consider the question of balance at all? If the verdict is given in favour of the latter then this concern about balance becomes so much moonshine, and we can well afford to drop it out of fruit-growing literature altogether.

It may be taken for granted that the word of a man who is depending for his living on commercial fruit growing is worth considering in a matter of this kind, and a short time ago I was talking to a market grower on the subject of first and second-year pruning. "What I want," said he, "from my young trees in the first place is growth. I prune for that purpose. I have tried first-year pruning and I have tried second-year pruning, and I get better growth as well as a smaller percentage of stunted trees by the latter method than the first, and these are the reasons why I now adopt it with all the trees I plant." I murmured something about losing time, but the grower wouldn't have it, and contended that any of that valuable commodity which may appear lost in the first place is quickly made up, and, in the majority of cases, the tree that is left intact for a season before being pruned is the best at the end of a period of a few years. Then I played the trump card from the pack of the first-year pruner, "But what about maintaining the balance?" I got no further, for the answer came, "Bother the balance: what I want from my young trees is growth, and I am more likely to get it from a tree that has been in the ground a year, and has got hold at the root, than I am from one that has just been transferred from a nursery, and in the lifting has been subjected to root pruning, the natural result of which is to check growth."

This is the case of a man who is growing fruit, not for pleasure or amusement, but for profit, and he may be depended on to follow the method which, in his judgment, gives the best results. There, gentleman, as the lawyers say, I place the case before you without bias. No first-year pruner can say that a second-year pruner is wrong if the latter gets good results, any more than the latter can justly condemn the methods of the former if they are successful, and the point is, which is the best? Naturally, each partisan will incline to his own view, but what I should like to see made more clear is the rights and wrongs of that oft-repeated phrase, "Maintaining the balance." G. H. H.

THE NATIONAL HARDY PLANT SOCIETY.

As was to be expected, this newly-formed society has been the subject of much comment, and not a little criticism, for, whilst from the very outset a large number of the leading hardy plant specialists have expressed their entire sympathy with the aims and objects of the society, and immediately associated themselves with the movement, there have been some who show signs of misgiving, if not actual disapproval, at this admittedly bold undertaking. It is, however, mainly, if not entirely, on the ground that the multiplication of horticultural societies should not be hastily encouraged that criticism has arisen, and with this view we ourselves are ready to agree. It is, indeed, in the hope that by the formation of one strong society to look after the interests of all classes of hardy herbaceous and kindred plants there will be no need to multiply the number of small societies for separate subjects that the promoters have set themselves to the task. Quite recently proposals have been made to form specialist societies for pansies and violas, for pæonies, and for phloxes, and surely all will agree that it is far more desirable that all lovers of these, and any other hardy-flowering plants, should unite to form one powerful society that shall be able to do really good work on behalf of pansies and delphiniums, phloxes and pyrethrums, alpine and rock plants, as well as the denizens of the herbaceous border. That the field is wide we are fully conscious, and the only reply we can make to the question that has already been often asked as to where we shall define the limits of our sphere of labour is that the extent of our operations will, and must be governed by the amount of support forthcoming. All who have at any time participated in the work involved in getting a new society afloat will realise something of the amount of work that has had to be done before the National Hardy Plant Society could commence real business, but it is gratifying to be able to say that we have been able to arrange, even for the first season, to co-operate with several horticultural societies, and to undertake to render assistance at their summer shows.

Next year we hope to do much more in this direction, and we also intend to collect and disseminate information on all matters relating to hardy plant culture. The society is fortunate in having upon its council and committees many of the foremost cultivators, and eminent scientists, and it is with the utmost confidence that the National Hardy Plant Society will achieve great things, and prove itself in every sense worthy. We hope to receive the support of every lover of hardy plants.

A. J. Macself, Chairman of Council.

AMONG THE ALPINE FLOWERS.

"Oh, who can speak of the joys of spring's young morn,
When wood and pasture open on his view,
When tender green buds blush upon the thorn,
And the first primrose dips its leaves in dew?"
—Clare.

Happy are the poets who can thus idealise the days of spring, which, unfortunately, are not always so halcyon as they would lead us to believe. Those of us who find their delights among their flowers cannot always join so joyously in the acclamation of the bard of these early days of the year. "Early" seems a false term, indeed, now that March has run its course, and when a fourth of the year is gone. But March is early in the garden year, and we can thus look forward to a happy escape from the cold winds and bitter nights which have marked its course this season, and which have retarded some of our favourites and have driven others to an untimely end. Yet we have much to enjoy, though, as we sally into the garden to work among or to enjoy our flowers, we feel the cold winds biting, or observe some bright flower seared as by fire. Yet it is more profitable, as well as more pleasant, now to look at the brighter side, and refresh ourselves with the beauty of the flowers which are in blow.

Hepaticas.

The name of hepatica lingers long, and lovers of our olden names will not readily merge this title in that of anemone, which conveys to the mind a tale of a different class or classes of flowers. We have almost lost the use of the old title of "Noble Liverwort," but methinks that of hepatica will long survive, both for the varieties of Hepatica triloba and acutiloba, and for the great Hepatica, or Anemone, angulosa. Thus we retain it, and love to speak of our flowers by its familiar sound. They are happy who have big groups of some of these, and we have in our mind's eye a broad border in a Sussex garden where there are hundreds of flowers of the lovely single blue form of the common H. triloba, as well as many visions of the others in numberless gardens seen by us when these hepaticas were in bloom. The double red one, ofttimes called the double "peach"-coloured, is a great beauty, and is hard to surpass; while its sister flowers, the double blue and the double white, are both scarce nowadays, the latter, although re-introduced and offered by the trade, being yet scarce, and not giving promise of a long or happy career in our gardens under the conditions in which the double red variety thrives so well. As for the angulosa varieties, they are indispensable with their larger leaves and great flowers, most of which are very beautiful. In very truth, all these hepaticas are lovely flowers, and they are happy who have spreading carpets of them. With the writer they always do best on the cold side of the rock garden and on flat spots on the slopes facing the north and north-west, where they receive but little sun, and where, almost undisturbed, they are steadily growing finer every year. These angulosa varieties in blue, pink, rose, and white, are lovely flowers.

Saxifraga Cherrytrees.

The different saxifrages which had their origin in the garden of the late Mr. Boyd, of Cherrytrees, such as Boydi, Faldonside, and Cherrytrees, have all a certain reputation for delicacy in our gardens—a reputation not unjustly given, inasmuch as they sometimes die off and their owner is left to mourn their departure. Of the trio that called Boydi, one of the finest of all the yellow saxifrages of its class, is the best in colour, and, at the same time the most troublesome to grow. The others are less bright, but are easier to cultivate, yet all will do fairly well if on a raised terrace of sandy soil, and with plenty of grit about them, a top-dressing of fine soil being annually worked in about their tufts. Cherrytrees is a very pretty one, after the fashion of Boydi, but considerably paler in colour.

Scilla bifolia rubra.

A few of us are fortunate enough to own a few bulbs of the old red variety of Scilla bifolia named rubra, which is too scarce to be offered by the bulb dealer, and is hardly ever to be met with. Too frequently the unwary are led into securing the pretty flesh-coloured S. bifolia carnea, which is very pretty, no doubt, but which is far from being so bright and attractive as the true rubra, which is of deep pink or red. A little clump (I cannot call it more) in the rock garden has been, and still is, very beautiful, sheltered from the cold winds by a dark-coloured stone, and holding up its flowers bravely to our admiring glances. There are also here several of Mr. James Allen's pink varieties, but, after all, he would hardly claim that they are finer than this old form, although differing not only in shade but also in period of flowering.

Corydalis tuberosa alba.

A somewhat tantalising search for the correct name of a pretty corydalis, or fumitory, results in discovering that a plant which I have had for a while under several names must bear that given above. Although suitable for the border also, it seems best adapted for the rock garden, where, a little above breast high, it looks much prettier than when on the ground level. It likes, however, a fairly moist soil, so that some consideration is necessary to secure this at the height mentioned. This is one of the prettiest of the older of the hardy corydalises, and with its prettily formed leaves and its clusters of white flowers it forms a rather pleasing feature of the rock garden. My first flowers opened early in March this season, but the cold weather has retarded others, which are only appearing through the soil as this is written. It is thoroughly hardy, and is much prettier than the typical C. tuberosa. It appears to have been known as C. albiflora, in addition to other names.

Other Flowers.

There are also early heaths, in white and purple, and almost pink; there are violas not a few, primroses and polyanthuses in plenty, together with their allies the oxlips and cowslips to bear them company. Then we have little hardy cyclamens, snugly sheltered from the cold winds, a soldanella or two, chionodoxas in several species and in different varieties, scillas, such as S. bifolia and its varieties, with S. sibirica; some late snowdrops, not yet superfluous; a cardamine or two, the dwarf form of Gagea lutea, several early saxifrages, daphnes, daffodils in plenty, including the little cyclamineus, and a variety of other species, besides the big trumpets now so fine, with some chionoscillas, Synthyris reniformis, and various others, which, despite the chill winds, struggle to maintain their beauty. All round we see promise of many other plants which await the more genial weather yet to come, when the rock garden will be brighter still and more joy-giving to all who love the alpine flowers. S. Arnott.

VARIEGATED DOGWOODS.

The inclusion of really good variegated-leaved shrubs in the garden is frequently attended with very happy results, especially when a distinct feature is made of them in one particular place, such as a large mass of varied subjects with different coloured foliage nicely blended, or when beds or groups are given over to one special kind of shrub with silver or gold variegated leaves. The casual dotting about of such shrubs cannot, however, be recommended, for instead of bold colour effects being produced the result is of a weak spotty character. Some discrimination must needs be shown in selecting variegated-leaved shrubs, for although some are very beautiful and keep their colour well throughout the year, others are not worth growing, the colour at the best of times being indifferent, whilst the first week of bright sun spoils the leaves.

In the genus Cornus both kinds may be found, for several variegated-leaved varieties are included amongst the most useful shrubs of this particular character, whilst others are quite worthless. They have the advantage of being easily grown, whilst several are doubly valuable on account of their bright red stems, which are very effective in winter. In the following descriptions the more worthy ones are indicated.

Cornus alba var. sibirica variegata.—This is a silver-variegated variety of the Northern Asiatic species, C. alba, which is so frequently grown for the sake of its red bark for winter effect. The variety forms a dense bush, three to five feet high, with large leaves, green in the centre, with wide irregular margin of silver. It keeps its colour well, and is easily the best silver variety of this species.

C. a. var. Spaethi.—Of golden variegated shrubs this certainly occupies a foremost position, for it is one of the most useful and beautiful foliage shrubs grown. The leaves are similar in size to those of the type, and they are richly variegated with gold, green, and grey. Much of the golden colouring is about the margins, but it passes to the centre of the leaves, and mingles with the green and grey in broad irregularly-shaped bands. From the time the leaves appear until they fall the colour keeps good, and has not been known to burn during the hottest summers. As a rule, both this variety and the first-named may be increased by means of naturally-layered branches, which root readily where they come in contact with the ground.

C. a. var Froebeli.—This also is a golden variegated variety, but the colour is dull in comparison to the last-named, and it is hardly necessary to include it in collections where the former plant appears.

C. a. var. Gouchaulti bears some resemblance to the last-named. It also is golden variegated, but inferior for general work to Spaethi.

C. a. var. variegata has silver variegated leaves. It is showy, but inferior in merit to the silver-leaved kind previously mentioned.

C. brachypoda variegata.—A doubt exists as to the correct nomenclature of this plant, though it is under this name that it is met with occasionally in gardens. At its best, its silver variegated leaves make it a conspicuous object, but unfortunately it is delicate, and cannot be recommended for general planting.

C. candidissima variegata is a silver variegated form of this North American species. The variegation is not very good, and the plant is not recommended for general planting.

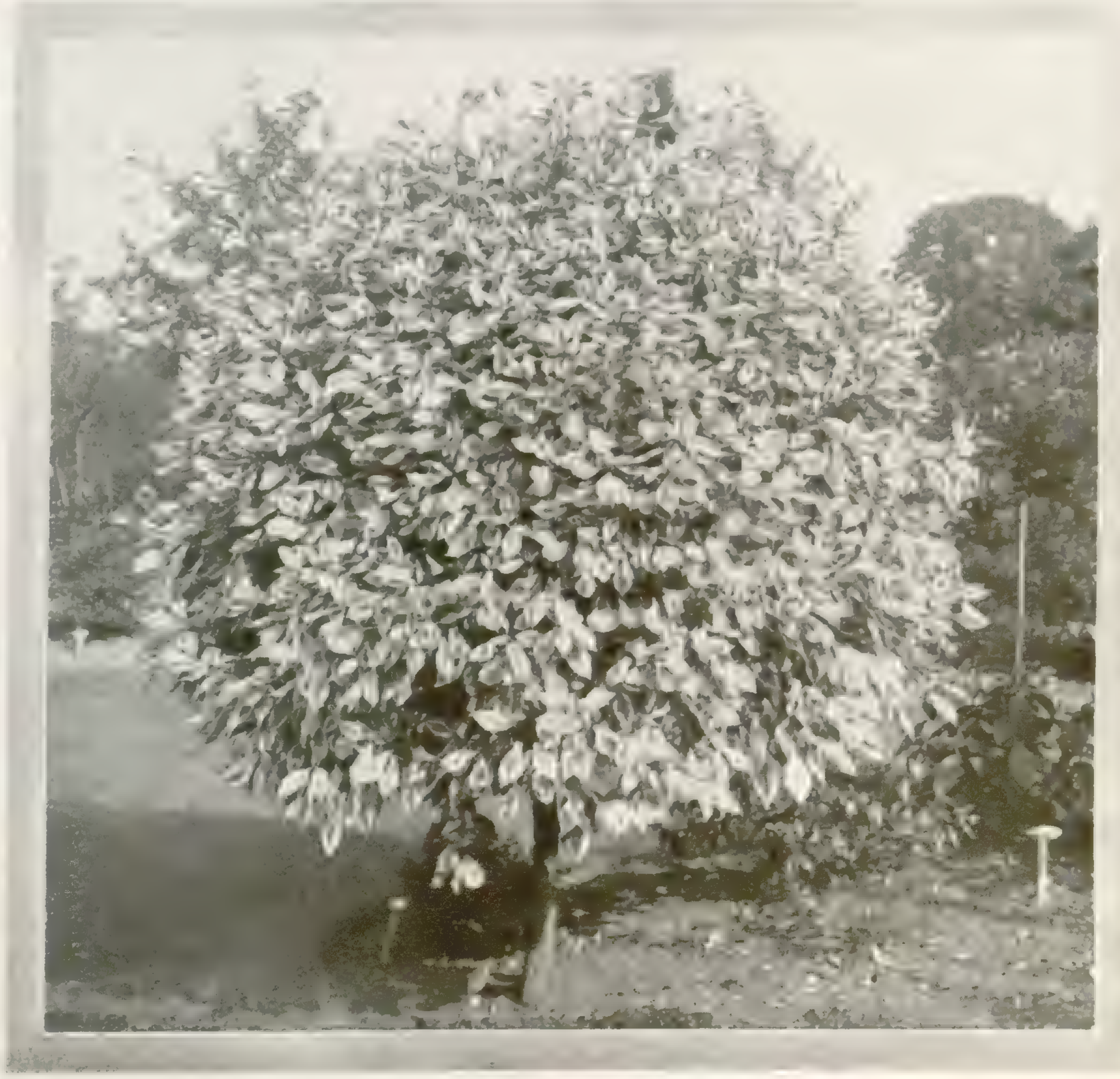
C. Mas, the common Cornelian Cherry, produces a couple of variegated varieties of decidedly ornamental appearance. They are often grafted as standards or half-standards on stocks of the type, and are excellent subjects to use in groups of coloured-leaved shrubs.

C. Mas var. elegantissima forms a head of slender branches, which bear leaves somewhat smaller than those of the type, variegated with gold. In some instances the gold occupies the greater portion of the surface of the leaf, whilst in other cases it may be intermingled with green patches or form an irregular margin round a green centre. It is not so hardy as the type, and ought not to be planted in places subject to late spring frosts.

C. Mas var. variegata is as strong growing as the type. It is of sturdy, upright habit, and bears leaves beautifully margined with silver. Grafted on tall stems, it assumes the habit of a dwarf tree.

C. sanguinea var. variegata is a poor variety of the red osier dogwood. It is of weak habit, and the colour is weak and ill-defined; in fact, it may be described as a representative of the worst form of variegated-leaved shrub.

For use as specimen beds the two best varieties are C. alba sibirica variegata, silver; and C. a. Spaethi, gold. W. D.



A FINE SPECIMEN OF CORNUS ALBA SIBIRICA VARIEGATA AT ALDENHAM HOUSE.

A handsome Dogwood with silvery-white variegation.

Blinds.—The shading of plant stoves is always an important item, and frequently an expensive one. Most readers will agree that lath blinds are by far the best for all purposes, only that they are also the most expensive. The Japanese split bamboo sun blinds are excellent substitutes, and may be fixed at less than half the cost. The vendors supply these blinds with all the necessary fittings, which can be put into position without skilled labour; all these blinds shade the glass exceedingly well, and allow ample light to pass. All blinds may now be fixed into position ready for sudden outbursts of sunshine.—JOHN DONOGHUE.

HARDY FRUIT CROPS.

During the past three years I have closely watched the progress of the trees in several orchards. The soil in one orchard is rather shallow, but of fairly good quality, and the subsoil is a gravelly one. In the other orchards the soil is a rich loam, and very deep, with a sandy subsoil.

In the orchard first referred to the trees have, during the past two or three years, made moderate growth of medium strength, and the flower buds have been plentiful; crops satisfactory. In the other orchard the trees have made much wood of great strength and very few flower buds, many of the latter being on the tips of some branches three feet long in the case of standards. Root pruning has done some good, but still the trees are making too much wood.

In the orchard where the soil is shallow on a gravelly subsoil it has been possible to top-dress and feed with satisfactory results. Of course, we have experienced two summers unfavourable to the ripening of the wood of trees that have been planted in a deep, rich soil. Both pear and apple trees are, this spring, bearing a grand lot of flower buds on the spurs, and well-matured branches, and I notice that those specimens in the hottest position in the gardens are looking the most promising. These trees are all growing in a rather shallow soil.

Gooseberries and currants look very promising, as also do cherries.

GEO. GARNER.

GREENHOUSE MANAGEMENT.—THE AMATEUR'S GREENHOUSE, the popular book by T. W. Sanders, not only treats of the selection and cultivation of greenhouse plants and flowers, but gives full instructions how to build a greenhouse and how to heat it, as well as every detail as to the management of the plants and flowers grown in it. The price of this book of 416 pages is 5s. net, or by post 5s. 6d., from W. H. and L. Collingridge, 148, Aldersgate Street, London.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

PHALÆNOPSIS.—The species, natural hybrids, and garden-raised hybrids will now be showing signs of renewed vitality, and any repotting necessary should be attended to without delay. It is not advisable to disturb the roots more than is absolutely necessary. Where they have become attached to the sides of the receptacles in which they have been growing, the old potting compost, and as much of the drainage as may be desirable, should be carefully picked out and replaced with clean drainage and chopped sphagnum moss. If the plants have outgrown their receptacles, and require more room, the old potting compost and as much of the drainage as possible should be removed, so that the roots may be seen. I have always found that the roots of most orchids may be detached readily when they are in a wet state, and where phalænopsis occupy baskets it is well to immerse the basket, or that portion to which the roots are adhering, in a pail of water, permitting it to remain for a few minutes. Then, by inserting the edge of a thin knife under the roots, with a little care they may be gradually detached. These plants require a copious supply of water at all seasons of the year, and it is essential that ample drainage be provided. This may consist of broken crocks and charcoal. The potting compost I have always found most suitable for phalænopsis consists entirely of clean chopped sphagnum moss intermixed with some silver sand or broken charcoal. This must be pressed moderately firm among the roots. Carefully shade from strong light for a few weeks after repotting, and maintain an even temperature of from 70 to 75 degrees, with plenty of humidity in the atmosphere by frequent damping and spraying the floors, staging, etc.

ANÆCTOCHILUS, and the allied genera, macodes, goodyera, hæmaria, etc., belong to the small section of orchids whose value rests in their beautiful foliage. This section of orchids are not so extensively cultivated as they used to be, or as their merits deserve. At the time when extensive collections of vandas and ærides were cultivated they were often found growing luxuriantly on the surface of the potting compost of the large specimens, but one seldom sees the plants now, unless they are accommodated in propagating pits, or under large bell-glasses. The several species are best propagated from divisions made at the potting season. They are best accommodated in pots or shallow pans provided with ample drainage. The potting compost must be of a very light and open nature, chopped sphagnum moss intermixed with fibrous peat, some broken leaves, finely broken crocks, and silver sand. Make the compost moderately firm. Supply with tepid water as soon as potting is completed. Keep the plants close and well shaded until they have established themselves in the fresh material. The atmosphere about the plants must be practically of a saturated nature at all seasons of the year.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

IXORAS.—These useful decorative flowering plants may be grown for autumn by rooting cuttings singly in thumb pots, and shifting them into other pots four or five inches in diameter. They should be grown on steadily near the glass in a light position where a moist atmosphere and a brisk stove temperature are maintained. Some of the varieties will need the extreme tips removed to induce them to form neat bushes. During the hottest part of the day they may be given a light shade during bright weather, especially immediately after repotting. When the pots are well filled with roots and the growth is vigorous, alternate supplies of clear soot water and weakly diluted farmyard liquid manure will be found beneficial. An occasional syringing with insecticide will be advisable, as a preventive of insect attacks. The syringe may be used twice daily, and as the flower buds begin to develop slightly less moisture will be necessary.

CALADIUMS.—The tubers which were started early in the year are now growing freely and must be given more root room, otherwise their progress will be retarded by the production of spathes instead of leaves. Those required for house or table decoration, and the dwarf or edging varieties, such as C. argyrites or C. minus erubescens, will need to be retained in small pots; the large 60-sized, or four-inch pots are ample for these varieties. Plants to be grown into large specimens for remaining in the stove should be allowed ample rooting space, as the caladium is a gross feeder, the quality of its ornamental foliage being much increased with liberal treatment. For this potting, which in many varieties will be the final, a slightly richer compost may be used by adding some manure from an old mushroom bed, or sheep dung, which has been dried and rubbed fine.

CYPERUS ALTERNIFOLIUS. — The foliage of the cyperus is most serviceable for decorative purposes, and very effective when tastefully associated with cut blooms arranged in vases, it being of exceptional value also for use as a green decorative plant for dark positions in the mansion, thereby saving better foliage plants, such as palms, ferns, etc. It will thrive extremely well in almost any position where an intermediate temperature can be maintained. The variegated form is very handsome when grown well, but unfortunately it is subject to loosing its beautiful variegation, and reverting to the green type. In preparing a compost for the variegated form use equal proportions of silver sand, powdered charcoal, and peat.

STREPTOCARPUS HYBRIDS. — These are extremely valuable, and are much more serviceable for cut bloom than gloxinias, which flowers they closely resemble, but I am certain their profusion in blooming, and the variation in the shades of colour are almost unsurpassed by any other part in cultivation. My experience with streptocarpus is they are best treated almost as annuals, that is, for spring and summer flowering sow the seed about June and July, and for autumn and winter seed may be sown now.

PALMS are almost indispensable for indoor decorative purposes, and need attention to repotting occasionally. I do not advocate repotting of palms until they really are in need of larger pots; systematic feeding at the roots will keep them in a healthy robust condition for two or three years, or even longer under favourable circumstances.—John Donoghue, Bardon Hill Gardens.

THE FLOWER GARDEN.

SWEET PEAS.—providing everything is in readiness, planting may be proceeded with. There is much diversity of opinion with regard to sweet pea culture, but for anyone requiring abundance of good blooms the following method of planting will be found to answer. Assuming the ground has been thoroughly prepared, and well enriched with manure, the plants should be put out from eighteen inches to two feet apart, according to the strength of the variety, and allowed to grow naturally. If grown in clumps then from three to four plants will be ample. When planting is completed short twiggy sticks about eighteen inches high should be placed around the plants, to protect them from the winds, and nurse them along until the permanent supports are given. A strict watch must be maintained for any pests that are likely to injure the growths. Seeds may still be sown in the open ground for providing a late crop of flowers.

ROSES.—The pruning of teas and hybrid teas may be accomplished now with safety. The same advice applies to these as that which was given earlier for hybrid perpetuals. The China, Bourbon, and Provence types will not require such hard pruning; all that is necessary is the thinning out of the weak growths from the centres of the plants, and slightly shortening the strong ones.

ANNUALS, HARDY.—A further sowing may now be made, providing the ground is in good working condition. To maintain a supply of Gypsophila elegans for decorative purposes it is necessary to make several sowings at intervals of three weeks.

POLYANTHUSES.—The improved strains are a welcome addition to our spring gardens and woodlands, and success rests in a great measure on early sowing and careful cultivation during the young stages of growth. Like the majority of the primula family the polyanthuses favour a cool shady position, where the hot sun cannot reach them, especially in the seedling stage. To obtain plants for flowering next spring, it is necessary to sow the seeds now in boxes, placing them in a cold frame, keeping them shaded until germination takes place, after which a little light may be afforded, but still shading from the sun. When the seedlings are large enough to handle they should be transplanted into boxes and allowed to remain in the frames. When they have well filled these they may be planted out in a cool nursery border. This should be enriched with decayed cow manure. —E. C. Pooley, Gnaton Gardens.

FRUITS UNDER GLASS.

EARLY PEACHES AND NECTARINES. —The shoots of these will now require to be tied in regularly, both for neatness and general training, for next season, and also to admit light to the fruits. Before commencing the tying however, remove all the shoots that are not required for next season, or for the well-balancing of the trees. If the trees are young, and have not filled the trellis, train the shoots regularly over as much space as possible, but on no account tie in more than are required. Water thoroughly whenever required, using water at a slightly higher temperature than the normal temperature of the house. If the border is well watered just before stoning commences this should, as a general rule, carry the trees over that period. A good mulching of spent manure from the mushroom bed will keep the roots moist and near the surface.

SUCCESSIONAL PEACH HOUSES.—Trees in these may be now disbudded, as in the same manner as recommended some time since for those in the early houses. Fumigate with nicotine for aphis, which sometimes attack the tips of the young growths when watering, syringing, and airing are not properly attended to.

EARLY VINERY.—Commence thinning the bunches as soon as possible after the berries are formed. Cut away any bunches that are not required, it being better to finish 100 bunches well than double the number indifferently, and in thinning avoid letting the berries come in contact with the hand, unless it is the berry that is held for thinning purposes. To the inexperienced a little crooked twig will be useful for holding the bunch when thinning, or a small piece of matting. An experienced operator will find it best to hold one of the bottom berries, and then cut it away when the thinning of the bunch is finished. In the case of very large bunches that require support these should be looped up carefully with small twisted raffia. When the thinning has been completed give the border a good dressing of some approved fertiliser, and water thoroughly.

FIGS.—The earliest of these in pots will now be swelling freely, therefore make frequent applications of liquid manure, as it is at this stage that much nourishment is necessary. A good top-dressing of thoroughly decomposed cow dung or horse manure will be found of the utmost advantage. Keep the temperature at from 65 to 70 degrees in the day, and from 60 to 65 degrees at night.—W. A. Cook, Leonardslee Gardens.

EXHIBITIONS AND MEETINGS.

◆

United Horticultural Benefit and Provident Society.

We have pleasure in now publishing the report of the committee of this society for 1910, as promised on p. 214.

In presenting its report for the year 1910, together with the balance-sheet for the same period, the committee has much pleasure in recording steady progress in membership and in financial matters.

The committee takes this opportunity of referring to the lamented sudden decease of King Edward VII. At the committee meeting of May 9, it was resolved to convey to her Majesty Queen Alexandra, and to King George V. letters of condolence and sympathy from the United Horticultural Benefit and Provident Society, and to each of these letters the committee received a reply on behalf of their Majesties. The letters have been inserted as a permanent record in the society's minute book.

MEMBERSHIP.

The membership has steadily increased. Seventy new members were elected during the year. Among the deceased members were Mr. W. Bunce, who joined the society forty-two years ago, in 1868, and who had the sum of £72 19s. 7d. to his credit in the society's funds; and Mr. Alexander Clark, who joined in 1885, and left £44 14s. 11d. to his nominee. The total amount paid out to nominees of deceased members was £147 10s. 4d. It is of interest to record that a sum of thirty guineas was paid out to a member who had been lapsed for thirty years. Another lapsed member received the amount of 12s. 7d. due to him. The committee is of opinion that the payment of the sums standing to the credit of its lapsed members when they reach sixty years of age, reflects credit upon the conduct and constitution of the society.

The total amount of sick pay to benefit members during the year was £561 0s. 6d., as against £571 15s. the previous year. The amounts for each month may be set out thus: February, 1910, £75 4s.; March, 1910, £60 5s.; April, 1910, £35 9s.; May, 1910, £43 19s.; June, 1910, £41 16s. 6d.; July, 1910, £27 3s.; August, 1910, £29 17s.; September, 1910, £29 14s.; October, 1910, £34 19s.; November, 1910, £66 5s.; December, 1910, £54 19s.; and January, 1911, £61 10s.

Of the total amount of £561 0s. 6d., £110 was paid out to chronic sick members.

Statistics recording the age at which members joined the society, and the total numbers between certain stated ages, are published in the accompanying actuarial report; but for the sake of convenience the following computations have been extracted from that document. The present age-classification of members shows:—

289	between	ages	20—29
438	,,	,,	29—39
347	,,	,,	39—49
170	,,	,,	49—59
79	,,	,,	59—69
1	who is over the age 69		
1,324			

These figures are regarded as very satisfactory; they do not, however, include non-contributing members who are over seventy years of age.

The net number of benefit members is 1,366.

Only three members have transferred from the lower to the higher scale during the year.

Twenty members have taken advantage of Rule XVIII., par. 3, which enables those who have reached the age of sixty to withdraw "twice the amount credited to their account as interest in the previous year." By such withdrawals they are furnished with a ready means for the payment of their subscriptions, which is a great boon. One member withdrew £6 18s. 2d. under this rule, and, being over seventy, he, by virtue of Par. 4 of the same rule, withdrew £50 from his balance account. Another member over seventy withdrew £54 0s. 11d.

CONVALESCENT FUND.

Very few applications were made for assistance from this source. The subscriptions, including five guineas from N. N. Sherwood, Esq., V.M.H., amounted to £10 0s, 6d., and the payments to £8.

BENEVOLENT FUND.

Subscriptions to the benevolent fund amounted to £238 10s. 1d., and the payments therefrom to £90 16s.; the latter amount including the sums regularly paid to several members over seventy years of age, as well as a few grants made to members or members' widows, in great distress. A payment of £2 was granted to a necessitous member to assist him to pay a doctor's bill: and £3 was granted to a member's widow who was left in very straitened circumstances. In all cases the committee exercises its utmost discretion in making grants from this fund.

In considering the amounts paid out from either the Benefit or Benevolent Funds, the following facts are instructive:

1. From 1898 to October, 1910, inclusive, one member has received the total sum of £177 7s.
2. From 1904 to 1910, another member has received £98 12s.
3. From 1906 to 1910, a third member has received £73 2s.
4. From 1905 to 1910, another received £68 8s.
5. Three other members have had respectively £26 8s., £21 18s., and £20 9s. 6d.

Management Fund.

The strictest economy, consistent with the proper working of the society, has been observed in this department. The total management charges amounted to £222 9s. 7d., as against £195 11s. 10d. in 1909, and £192 19s. 10d. in 1908.

Acting upon a suggestion made by the society's auditors that a card indexing system be adopted to facilitate the secretarial work, a sub-committee was appointed, and after visiting Mr. Collins' office, to examine his books and method of procedure, and after inspecting some of the card-indexing outfits at the office-furniture establishments, it was unanimously decided that there would be no saving of labour, nor any gain whatever, by the adoption of the card-indexing system. The sub-committee was much impressed by the neat, orderly, methodical and detailed methods practised by the secretary, and recorded a hearty expression of appreciation.

Advertisement Account.

The moneys under the Advertisement and Annual Dinner Account have not been allowed to lie idle. A scheme for advertising the benefits of the society was agreed to, and a circular letter was drawn up. Five thousand circulars were printed, and three thousand were sent by post to gardeners in the following eleven counties: Berks, Bucks, Essex, Hants, Herts, Kent, Middlesex, Norfolk, Suffolk, Surrey, and Sussex. In addition, bundles of from sixty to one hundred circulars have been sent to the secretaries of gardeners' debating societies at Bath, Bristol, Birmingham, Edinburgh, Exeter, Isle of Wight, Newport (Mon.), and Stirling; and though the results so far have not been so satisfactory as the committee reasonably expected, the effort has not been fruitless. The total expenditure was £10 8s.

The Annual Dinner.

A successful festival dinner was held at the Waldorf Hotel, Aldwych, W.C., on October 3, when Edward Sherwood, Esq. (of Messrs. Hurst and Son, wholesale seed merchants, Houndsditch, E.C.), occupied the chair. He was supported by his father, N. N. Sherwood, Esq., V.M.H., who is well known to the members of the U.H.B.P.S. as the founder of the society's convalescent fund, and who made a speech in which he promised to continue his annual contributions to that fund, and strongly urged those members who may be recovering from an illness to make use of the provisions of the convalescent fund, as this was the surest way to complete recovery. There were about eighty present, a large number of them being strangers, and the Chairman expounded the benefits of the society in an able manner. He himself became an honorary member, and very generously provided a most excellent and enjoyable musical entertainment. The tables were again tastefully decorated with flowers and plants, which were kindly provided by Messrs. James Veitch and Sons, Lim., Messrs. H. Cannell and Sons, Mr. Riley Scott, and other friends.

This annual function was thoroughly enjoyable.

Widows and Orphans.

Reference was made in the last annual report to the suggestion brought forward at a recent annual general meeting for the establishment of a fund to provide for funeral expenses in case of any member who might have the misfortune to lose his wife by death. Actuarial advice was obtained upon this matter, with the result that as there were so many points of far-reaching importance involved, it would not be wise to lay any propositions before the members at the present time. The matter is, therefore, indefinitely in abeyance.

The committee would again direct attention to the benefits of the Royal Gardeners' Orphan Fund, and begs support wherever possible for the orphans of deceased members of the U.H.B.P.S. Much good can be done by co-operative voting. A subscription of 5s per annum entitles a subscriber to one vote at each election, and if a large number were to subscribe, the election of children of deceased members to the benefits of the fund would be practically assured.

State Insurance.

A keen watch has been kept on all the statements and reports in the Press in regard to the tentative proposals of State insurance against sickness, and the committee has been in communication with the Chancellor of the Exchequer twice on this matter. A report and balance-sheet for 1909 was also forwarded to the Chancellor, with a request that the committee be kept informed of any developments.

Benefits of Membership.

The many benefits attaching to membership of the society are well known to the members themselves, although not all of them, as already pointed out, are taken full advantage of. But if the society is soon to hold that large place in the horticultural world it is meant to fill, then there must be greater effort on the part of private members. In return for a payment of 9d. per week a member receives 18s. per week for six months if continuously ill for that period, and 9s. per week for a further six months if still ill (12s. and 6s. respectively if the subscription is 6d. per week. In cases of chronic sickness, 6s. and 4s. per week respectively are granted, and, should a member be unable to follow his employment after attaining the age of seventy years he receives a sum of not less than 5s. per week. After reaching sixty years of age a member may withdraw a sum equal to double the amount of the interest on his deposit account in any one year, and thus, in times of stress be able, in many cases, to pay his contributions to the society from the amount standing to his personal account in the books of the society.

In short, the society provides for sickness, makes provision for chronic illness, renders aid to the distressed, credits each member with a due proportion of the surplus funds, helps the convalescent, and cares for the feeble and aged. Every member should act as a missionary of the society, and continually preach the gospel of thrift and self-help with intent to secure new members. The financial stability of the society is beyond question, as it has now £38,800 invested.

In conclusion the committee begs once

more to acknowledge the kindness of those who, as honorary or life members, or in other ways, assist the society and help to extend its usefulness and sphere of influence.

TREASURER'S STATEMENT FOR THE YEAR 1910.

RECEIPTS.

Dr.	£	s.	d.	£	s.	d.
1910. March 9th.						
To Balance brought forward...	681	19	8			
Transferred from Secretary	2	11	11			
				684	11	7
1909-10.						
To Subscriptions, etc., per Secretary—						
Benefit Fund	£2,248	12	2			
Benevolent Fund	238	10	1			
Convalescent Fund	10	0	6			
Management Fund	171	9	1			
Advertisement and Dinner Account	10	5	0			
				2,678	16	10
,, Dividends on Investments	1,088	18	5			
,, Bank Interest	3	16	0			
,, Income Tax Returned ...	62	0	5			
				1,154	14	10
				£4,518	3	3

EXPENDITURE.

Cr.	£	s.	d.	£	s.	d.
1909-10.						
By Payments per Secretary—						
Sick Pay to Members......	561	0	6			
Management Expenses and salary	222	9	7			
				783	10	1
,, Payments to Nominees of Deceased Members	149	10	4			
,, Lapsed Members' Account paid out	52	18	6			
,, Withdrawals from Deposit Accounts—						
Members over 70	137	10	2			
Interest Withdrawn	80	18	10			
				420	17	10
,, Grants from Benevolent Fund				90	16	0
,, Grant from Convalescent Fund				8	0	0
,, Advertising				10	8	0
,, Investments				2,803	5	6
				4,116	17	5
,, Balance due from Secretary				2	2	9
,, Balance at Bank—						
On Deposit Account	£200	0	0			
,, Current Account	199	3	1			
				399	3	1
				£4,518	3	3

The Horticultural Club.

"FUNGI."

On Tuesday, the 14th ult., at the Hotel Windsor, the members of the Horticultural Club had their usual monthly dinner, and on this occasion were associated with a considerable number of the provincial secretaries of the International Horticultural Exhibition of 1912, who were entertained in that connection. After the dinner, at which Mr. Gurney Fowler presided on behalf of both bodies, Mr. A. D. Cotton, of the Kew Herbarium, gave a most interesting lecture on "Fungi," illustrated by a large number of lantern slides. At the outset he explained that the three lower classes of non-flowering plants were the algæ or seaweed, the lichens or liverworts, and the fungi with which he proposed to deal. These were divided into an immense number of families, of which the mushrooms or agarics were the best known. These were distinguished by the innumerable spores they produced, being engendered on the surfaces of the thin plates which lined the cap, which was borne upon a stalk of some thickness, the common mushroom being the type of many different species. He threw this on the screen, and followed it up by specimens of many others, some edible and some very poisonous, the visible difference between the two being often only perceptible to experts. Some, as he pointed out, were parasites, deriving their sustenance from living matter, upon which they preyed, while others were content with dead matter (saprophytes), though in some cases these proved themselves capable of acting in both rôles. The parasitical ones were capable of destroying trees to a very great extent. Some of these could only obtain access to the living portion of a tree through a wound in the bark, which suggested the great advisability of covering such wounds as are caused by chopping and pruning with a good coat of tar. Others, however, attacked the roots, and these were much more insidious, being apt to infect neighbouring trees when infected roots reached them through the soil. Mr. Cotton then turned from the easily visible fungi to the immense horde of minute ones which constitute the "moulds," and many of the diseases of plants, and in some cases of animals; while in the case of Stilton and other cheeses they have an attraction for the expert in flavours, which a good microscope might do something to modify. Minute, however, as these fungi are, they are often extremely beautiful when highly magnified, their groups and clusters of spores being charmingly arranged and fashioned. It is a curious fact that with many of these two kinds of spores or reproductive bodies are produced, the one capable of spreading broadcast during the summer and growing into fresh colonies at once, while later on, resting ones are produced, which lie dormant through the winter, and only start into activity when the growing season recurs. Slides were shown of these resting spores on persistent fruit and seed-vessels, and on the wood, and it was demonstrated that a drastic destruction of such "depôts" in the winter would go far to reduce destruction later on. As, however, the lecturer pointed out, the destruction brought about by these minute fungi, and by some of the larger ones has its beneficial side. It is part and parcel of the great compensating scheme of nature, which, when death occurs, restores the materials to the earth for re-use, instead of merely piling it up in a non-utilisable form. Every dead leaf is at once seized upon by fungi, and decomposed into its original elements of carbon and carbonic acid gas, the residue constituting the best possible food for a future generation. The very air teems with the spores of these scavengers, and, given sufficient warmth and moisture and a supply of suitable nourishment, a colony, or colonies, is bound to arise from deposited spores, and in a very short time the ashes of the departed are reconverted into the bodies of the living, and the cycle is recommenced.

A very hearty vote of thanks concluded the meeting.

Bournemouth Gardeners' Association.

On Tuesday, March 21, Sir Daniel Morris, K.C.M.G., gave a very interesting and instructive lecture on "The Royal Horticultural Society," before a good attendance of members, and of the public. The lecture was illustrated by lantern slides; many very excellent photographs of exhibits at the Horticultural Hall, Westminster, and views in the gardens at Wisley were shown and highly appreciated. The president, J. H. Ralph Smythe, Esq., J.P., occupied the chair.

Sir Daniel Morris, in his opening remarks, first made a brief reference to the growth of horticulture during the past fifty years, to the advances made in science all over the world, and to the growth of trade in connection with horticulture. He spoke of the good influence of the Royal Horticultural Society upon associations in the provinces, such as the one at Bournemouth. Sir Daniel reminded his audience that the Royal Horticultural Society was started in 1804, but at that time it did not bear the Royal title. He referred to the work of Mr. Wedgwood, of pottery fame, who, with a few friends, met in a house in Piccadilly to discuss the question of forming a society to encourage the cultivation of plants, etc.; to the charter being granted in 1809; to the first president (the Earl of Dartmouth); to Mr. Andrew Knight, the next president; the late Prince Consort, and others; and to the striking of the Knightian medal, in memory of Mr. Knight. The lecturer dealt with matters connected with the society while it was at Kensington, its sixty years at Chiswick, and now its gardens at Wisley. He paid a tribute to the work done by the Rev. W. Wilkes, and his selection and introduction of the Shirley poppies; and made graphic reference to the struggles of the society in the past, and to its flourishing condition at the present time. The centenary of the society in 1904, the building of the hall at Vincent Square, Westminster, the gardens of Mr. G. F. Wilson at Wisley, and the support given to the society by Sir Thomas Hanbury, who purchased the Wisley gardens for its benefit, were matters ably dealt with by Sir Daniel.

He also referred to the special work of the society in sending out men in the twenties and thirties to collect plants from all parts of the world, the plants being cultivated first at the society's gardens and then distributed through its Fellows to the public generally. The lecturer said the council had instituted examinations for young men in two grades, those under eighteen years of age, and those above that age; also for teachers in charge of schools, and for those employed in public parks and gardens. In the gardens at Wisley every effort was made to establish plants and grow them under conditions as nearly natural as possible, and he urged his hearers to leave the formal and adopt the informal and natural way of growing plants, even in the smallest gardens.

Splendid exhibits of cinerarias and deutzias were staged by Messrs. C. Pearce and G. Heath respectively. One plant of Cineraria stellata, shown by Mr. Pearce, was 4ft. high with a head of flowers 4ft. across; the leaves touched the floor. Both the lecturer and chairman received hearty votes of thanks at the close of the meeting.

Reading Gardeners' Association.

The usual fortnightly meeting of this association took place in the Abbey Hall on Monday, March 20, when Mr. Alderman Parfitt presided over a large gathering of members.

The lecturer for the evening was a former member of the association, Mr. W. P. Bound, one of the chief authorities on orchid growing in the country, his subject being "Potting and Watering Orchids." When it is stated that for many years Mr. Bound had charge of Sir Jeremiah Coleman's world-renowned collection of orchids at Gatton Park, it will be readily understood why the lecturer proved such an attraction. It would be impossible to deal with the subject within the scope of this report, but it will suffice to say that Mr. Bound, in the time at his disposal gave his audience the full benefit of his wide experience in the treatment of these wonderful flowers. First dealing with cattleyas and lælias and their hybrids, the lecturer gave the members the benefit of his valuable advice with regard to potting, stating, too, the ingredients of the compost proved by him to give the most satisfactory results. Watering and the withholding of water, the lecturer declared, was the most important factor of all, and oftentimes the cause of the troublesome diseases to which orchids are subject. Dendrobiums (his favourites) were then taken up by Mr. Bound, odontoglossums following, and finally calanthes as being special favourites in the Reading neighbourhood

In the discussion which followed, Mr. Bound readily answered all questions put to him by the audience.

A vote of thanks, carried with great acclamation, concluded the meeting.

East Anglian Horticultural Club.

At the March meeting of this club a large number of members assembled, Mr. Lewis Smith, Shotesham Hall Gardens, presiding. Reference was made to the death of Mr. George Daniels, one of the founders of the club, and a silent vote of condolence was passed. The main subject for the evening was an essay competition open to under gardeners only, upon "The Cultivation of Vegetables." Four papers were received, each of which dealt with the subject in a practical style. Deep cultivation, rotation of crops, seed sowing, pricking out, etc., all being dealt with. Certain individual methods of culture came out here and there. The judges awarded prizes as follows: First, Mr. E. Hales, Heacham Hall Gardens; second, Mr. G. R. Wright, Wroxham Hall Gardens; and third, Mr. Robt. Graveling, Thorpe, Norwich. The papers were followed by a

FALMOUTH SPRING FLOWER SHOW.
THE SHOW OF THE CORNISH RIVIERA.
To be held April 19th and 20th.
To be opened by their Royal Highnesses Prince and
Princess Alexander of Teck.
First-class Band and Programme.
Free accommodation to the Trade.
Schedules and full particulars,
R. E. GILL,
Hon. Secretary,
Falmouth.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

keen discussion, and many knotty or difficult points in vegetable culture were threshed out.

The weather report for the past month supplied by J. H. Willis, Esq., went to show that the month had been exceptionally mild, with just the exception of the first few days.

The standard of the exhibits was well kept up, and a fine display staged. Mr. W. Sheesmith had a fine cymbidium and a good assortment of Lenten roses from the gardens of F. W. Harmer, Esq., Cringleford, where he is in charge. Mr. F. J. Endersby, gardener to J. H. Gurney, Esq., Keswick Hall, exhibited a grand example of cyclamen, the plant carrying 69 perfect white blooms. Mr. W. Laws, gardener to G. E. White, Esq., Eaton, who is an enthusiast upon winter carnation culture, staged a nice bunch of blooms of leading varieties, and a plant with a profusion of flowers. The Secretary, Mr. W. L. Wallis, 12, Royal Arcade, Norwich, was busy during the evening enrolling new members.

Royal Horticultural Society.

The meeting at Vincent Square on March 28 was a full one. The tables were arranged the full length of the hall, save for spaces at either end for the people to walk, but there was no central cross space on this occasion, so that one had to travel further than usual to reach exhibits half-way down the hall. There was an excellent attendance, and, though the crowd was scarcely so dense as on March 14, the crush was very great. The use of the door under the music gallery, in accordance with the suggestion we made a fortnight since, greatly facilitated the exit of visitors. Daffodils, hardy flowers, and orchids were the feature of the show.

FLORAL COMMITTEE.

Messrs. Heath and Son, Cheltenham, occupied one corner of the hall, filling it with a rock garden. Alpine shrubs formed a background for a very wide range of primulas, saxifragas, heaths, violas, narcissi, and other early spring flowers.

Zonal pelargoniums were finely shown by Messrs. H. Cannell and Sons, Swanley, and the fine spikes of large brilliant blooms made a great blaze of colour.

Mr. H. Hemsley, Crawley, had a rock garden exhibit very daintily set up. Small alpine and flowering shrubs were used as a background for anemones, saxifragas, primulas, aubrietias, etc., etc.; Linaria triornithophora, Viola velutina, Erigeron Roylei, and Rhododendron racemosum were other interesting things.

Messrs. Paul and Son, Cheshunt, contributed a group of roses, chiefly polyantha varieties, in pots: Aennchen Muller, Tip Top, Orleans Rose, Unser Peti, Cyclops, Jeanne d'Arc, Miese, Gustel Meyer, and Excellency von Schubert were the leading varieties shown.

A large cream-ground hippeastrum with red flaming, named The Prior, was shown by Mr. H. Edwards, Norton Priory, Selsey-on-Sea; the flower was of great size.

Ourisia macrophylla, with pale blush-pink flowers, from the New Zealand Alps, was contributed by the Burton Hardy Plant Nurseries, Christchurch, Hants.

A pretty exhibit of perpetual carnations was set up by Messrs. Young and Co., Hatherley, Cheltenham, and leading varieties were the new crimson Duchess of Devonshire, R. Whitcombe Riley, Cheltonia, Enchantress, Hon. Lady Audley Nield, Mikado, and Rose Doré.

A large exhibit of hardy plants from Messrs. Barr and Sons, Covent Garden, W.C., contained a selection of Lenten roses, hardy primulas, Tulipa Kaufmanniana, chionodoxas, lovely crocuses, the exquisite little Anchusa myosotiflora, with blue forget-me-not like flowers, saxifragas, fritillarias, and the brilliant Erica carnea

Gorgeous amaryllis, extra fine varieties of imantophyllums, the cactus-flowered cineraria Feltham Beauty, blue and pink-flowered Indian azaleas, a fine strain of Primula obconica in various colours, and the fragrant Boronia megastigma and freesias, were all staged in quantity by Messrs. Jas. Veitch and Sons, Chelsea, the whole display filling a considerable space, and making a very fine effect. In another part of the hall the Chelsea firm showed their excellent strain of cyclamen, and presented finely-grown batches of the different colours. A glorious group of forced shrubs also came from Messrs. James Veitch and Sons, Lim., Chelsea. The standard wistarias were the leading feature; they were splendidly flowered and the centre of admiration from the visitors. Rhododendron The Countess was also in fine form; while viburnums, Azalea mollis, and Erica Veitchi all added to the beauty of the group.

Messrs. Bakers, Wolverhampton, presented a pretty group of hardy flowers, and notable features of this exhibit were the batches of Primula rosea, P. Mrs J. H. Wilson, Adonis amurensis, Androsace coronopifolia, Incarvillea grandiflora, Cypripedium spectabile, and the rich purple Viola gracilis.

Fortune's Yellow rose was well shown by Mrs. Harvey, Farnham Common, Slough, and the long sprays of flowers were greatly admired.

Mr. James Box, Lindfield, Sussex, contributed a rock garden display, and furnished his bold design with groups of daffodils, blue primroses, aubrietias, Anemone fulgens, Erica carnea, Primula rosea, Tulipa Greigi, crocuses, and azaleas.

Messrs. W. Cutbush and Son, Highgate, presented a large exhibit of perpetual carnations, their vases of Mrs. Fortescue, White Perfection, Lady Coventry, Winsor, and Defiance attracting a great deal of attention. They also put up a large display of forced flowering shrubs, with batches of hepaticas, anemones, iris, primulas, etc.

Polyanthuses and primroses in variety, very free and vigorous, were set up by Messrs. G. and A. Clark, Dover, who also staged Primula rosea, P. malacoides, Viola gracilis, St. Brigid anemones, etc.

An attractive exhibit of hardy flowers came from Messrs. G. Jackman and Son, Woking, and here some of the prettiest things were Erica carnea, Cyclamen ibericum, Erodium pelargonifolium, Megasea crassifolium, Tulipa Griegi, Morisia hypogæa, Draba aizoides, Lithospermum Heavenly Blue, and the white form of Muscari conicum.

A glorious lot of perpetual carnations from Mr. H. Burnett, Guernsey, was a great attraction. The flowers were of superb size and colour, and their arrangement excellent; Marmion, Mrs. H. Burnett, Beacon, Mrs. Tatton, Mikado, R. F. Felton, Mrs. C. F. Raphael, Countess of March, and White Enchantress were varieties that especially attracted our attention.

Small clematises, in 48-sized pots, each with six to eighteen blooms, were very elegant as shown by Messrs. H. B. May and Son, Edmonton; especially good were the varieties Mrs. Quilter, Miss Bateman, and Nellie Moser; choice plumose ferns completed the display.

The hardy flowers from Messrs. T. S. Ware, Lim., Feltham, included such beautiful things as Androsace Laggeri, Soldanella alpina, Iris purpurea grandiflora, Primula muralis, P. denticulata, double primroses, Trillium nivale, Dicentra cucullaria, and other dainty little things.

In the bold rock garden set up by Messrs. J. Cheal and Sons, Crawley, choice things were crimson primroses, Epimedium nivea, Primula japonica, Morisia hypogæa, Gentiana verna, Viola gracilis and Olearia stellata.

Brilliant rhododendrons of the R.arboreum type made a blaze of colour in the group of hardy flowers contributed by Mr. G. Reuthe, Keston. Primulas were good in this exhibit, and so were the saxifragas, Narcissus cyclamineus, Tecophylea cyanocrocus with its bright blue flower, the golden Ranunculus insignis, Soldanella montana, Iris Willmottiana, etc.

In the large group submitted by Messrs. Stuart Low and Co., Enfield, the acacias were a good feature, while the Glory Pea, Clianthus puniceus, was a great attraction. Gerbera hybrids, the white long-flowered hydrangea Madame Moullière (A.M.), and the perpetual carnations added to the merits of the exhibit. Among the latter the best things were Lady Alington, Marchioness of Linlithgow, Black Chief, Colossus, White Perfection, O. P. Bassett, and Roseate Dawn.

Messrs. R. and G. Cuthbert, Southgate, had a splendid group of forced shrubs, the standard specimens of weigelas being especially good, as were also the lilacs and laburnums, the groundwork being formed with well-flowered plants of Viburnum opulus and azaleas of the mollis and rustica type, the whole group being most tastefully arranged.

From Mr. L. R. Russell, Richmond, came a fine group of forced shrubs, which included large plants of Forsythia suspensa, standard Azalea mollis, lilacs in variety, and some well-flowered plants of clematises, which included Nelly Moser, President, Mrs. G. Jackman, and The Queen, all in fine form. Deutzias and Franciscea calycina floribunda were also quite attractive, as were also some dwarf Azalea indica.

The Guildford Hardy Plant Nursery occupied a table with hardy flowers, all displayed in pots. The primulas, Viola gracilis, anemones, and saxifragas were the best features, but mention should also be made of the hellebore hybrids, and Megasea Milesi and M. ligulata var. Leichtlini, which were in fine condition.

A very bright and attractive exhibit of hardy flowers came from Mr. M. Prichard, Christchurch, Hants. The collection was particularly rich in primroses, especially the double-flowering forms, also broad masses of Viola gracilis, aubrietias, and anemones, while the background was filled with suitable flowering shrubs and acers.

The Burton Hardy Plant Nurseries, Christchurch, were represented by a pretty collection of alpines, tastefully arranged with rock and moss. Primulas were beautifully shown, as were also Viola gracilis, saxifragas in variety, and a number of aubrietias. Mr. H. C. Pulham, Elsenham, Stanstead, Essex, also contributed an exhibit of rock plants, which were arranged naturally in a series of stone terraces.

From Messrs. R. Wallace and Co., Kilnfield, Gardens, Colchester, came a charming exhibit of rock and alpine plants. The tulips were very attractive, and included T. Clusiana, T. præstans, T. Kaufmanniana aurea, among others. The aubrietias were well displayed, as were also the saxifragas and Viola gracilis.

A fine bank of roses in a cut state was presented by Mr. G. Prince, Oxford. The flowers were beautifully fresh and bright, the chief varieties being Lady Roberts, Mrs. Alfred Westmacott, Madame Jules Gravereaux, Mrs. W. J. Grant, and Ards Pillar.

Mr. H. N. Ellison, West Bromwich, had a beautiful display of Gerbera hybrids, arranged in bamboo stands with Asparagus plumosus. The colours were exquisite, and attracted much attention from the visitors. The rest of the display was made up with various forms of nephrolepis, all in perfect condition.

Hardy plants from Mr. Clarence Elliott, Six Hills Nursery, Stevenage, were arranged most naturally, the best features being Morisia hypogæa, with its bright yellow flowers, and scillas in variety. Primulas were in fine form, while masses of saxifragas were also quite a feature.

Mr. C. Englemann, Saffron Walden, had another really fine exhibit of carnations. The stands of Carola, Enchantress, and Rex being very fine, while the best vases were Beacon, Rose Doré, and J. W. Riley

Messrs. G. Mount and Sons, Lim., Canterbury, staged splendid examples of the White

Killarney roses, possibly the best examples yet seen of this variety; also Lady Hillingdon in magnificent colour, while the new variety, Mrs. Geo. Mount, was in good condition.

Mr. S. Mortimer, Swiss Nursery, Farnham, staged a large collection of carnations in vases, the most prominent being Mrs. H. Burnett, Carola, Royal Purple, Pink Delight, and Victory.

Messrs. R. F. Felton and Sons, Hanover Square, staged vases of a carnation named Empire Day (A.M.), a delightful pink variety; Britannia, Union Jack, Queen Mary, and British Queen.

From Messrs. William Paul and Sons, Waltham Cross, came an exhibit of roses in pots, which included well-flowered plants of Sylvia, Souvenir de Gustave Prat, L. Chaurè, and good examples of Banksian Yellow.

From Messrs. R. Gill and Sons, Falmouth, came a large collection of Rhododendron arboreum hybrids, which represented a wide range of colours. Some fine specimens of Camellia reticulata were also noted, while the new hardy Primula Winteri was in splendid form, and attracted much attention.

ORCHID COMMITTEE.

Dendrobium Wardianum candidum, smothered in flowers, from which the purple colouring of the type was absent, was well shown by Mr. Jas. Hudson, V.M.H., gardener to Leopold Rothschild, Esq., Gunnersbury House, Acton.

Mr. J. Davis, gardener to J. Gurney Fowler, Esq., Glebelands, South Woodford, sent the beautiful Odontoglossum Wilckeanum J. Gurney Fowler, and Odontioda Lambeauiana Fowler's var.

Odontoglossum Leonidas, with golden, brown-marked flowers, was contributed by Mr. de Barri Crawshay, (gardener, Mr. Stables), Rosefield, Sevenoaks.

Mr. Hale, gardener to S. Larkin, Esq., Haslemere, Surrey, brought examples of Cattleya Trianæ, Phalænopsis Schillerianum, Vanda suavis, and a few odontoglossums and cypripediums.

Mr. G. Cooper, gardener to H. S. Leon, Esq., Bletchley Park, Bucks, sent Cypripedium Deedmanianum, and Mr. G. Day, gardener to H. S. Goodson, Esq., Fairlawn, Putney, exhibited Sophro-cat-lælia Olive, Fairlawn var.

Odontoglossum Clytie, with long, branching spikes of small velvety crimson-purple flowers, was shown by Mr. R. G. Thwaites, Streatham: it is the result of a cross between O. Edwardi and O. Pescatorei.

The new Dendrobium Boltoni and a neat plant of D. speciosum Bancroftianum, were sent by Mr. W. Bolton, Wilderspool, Warrington.

A very interesting display of orchids was made by Mr. Collier, gardener to Sir Jeremiah Colman, Bart., Gatton Park, Reigate. Very conspicuous were the long drooping spikes of Odontoglossum Thompsonianum, the superb solid red Odontioda Vuylstekeæ var. Lady Colman (F.C.C.), Odontoglossum Queen of Gatton, O. Lady Roxburgh, and the white Dia-cattleya Colmanæ.

The bold Odontoglossum facetum Swietenicolor, from Mr. W. H. White, gardener to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking, gained an A.M.; the colour is deep mahogany-red with creamy margins.

Some delightful orchids were brought from Oakwood, Wylam-on-Tyne, by Mr. H. J. Chapman, gardener to Mrs. Norman Cookson, and all were home-raised seedlings. Especially good were Odontioda Cooksoniæ Oakwood var., Odontoglossum splendidissimum, O. percultum, O. Pescatorei Cooksonianum, O. eximium, O. Titania, O. excellens, and Cypripedium Northumbria, the latter a cross between C. Chamberlainianum and C. Godefroyæ leucochilum.

Messrs. Armstrong and Brown, Tunbridge Wells, presented a beautiful group of orchids, consisting largely of Dendrobium nobile virginale, Odontoglossum crispum, O. nævium, O. Adrianæ, O. Wilckeanum, O. ardentissimum, Brasso-cattleya Leemanæ, Lælio-cattleya Myra, Brasso-lælia Veitchi, Lælia Gwennie, and Masdevallia Shuttleworthi.

The orchids exhibited by Messrs. Charlesworth and Co., Haywards Heath, included grand plants of Miltonia spectabilis, Cynorchis Kewensis, Odontioda Bradshawiæ, O. Diana, O. Craveniana, the charming little Zygo-colax Charlesworthi, Lælio-cattleya Dominiana, Cattleya Empress, Odontoglossum ardentissimum, O. crispum, O. Phœbe, Brasso-cattleya Veitchi var. Queen Alexandra, and Phaius Norman, and the beautiful Cymbidium insigne.

Messrs. Stuart Low and Co., Bush Hill Park, Enfield, contributed Dendrobium Wardianum, Oncidium concolor, the fragrant Cattleya Schroderæ, Odontoglossum blandum, O. crispum, Renanthera Imschootiana, and several cypripediums.

A very handsome group of orchids from Messrs. Sander and Sons, St. Albans, was remarkable for the brilliance of the odontoglossums, such as O. ardentissimum, O. eximium Monarch, O. crispum Prince George, O. amandum citrinum, and O. eximium Empress. Brasso-cattleya Thorntoni was superb, and Lælio-cattleya Peetersi, Cattleya Trianæ varieties, the quaint and showy little Odontioda ignea (A.M.), and Scuticaria Hadweni were other good things.

Messrs. Hassall and Co., Southgate, put up some good plants of Oncidium concolor, Cymbidium eburneum, C. eburneo-Lowianum, C. Lowianum concolor, the brilliant Lælio-cattleya G. S. Ball, Dendrobium Brymerianum, and Odontoglossum Rolfeæ.

Mr. E. V. Low, Haywards Heath, sent the beautiful Cattleya Schroderæ The Kaiser—curiously enough a delicate blush variety; Cattleya Trianæ, Brasso-cattleya Langleyense, Dendrobium nobile virginale, D. pallens, and the rich yellow D. Chessingtonense.

DAFFODIL COMMITTEE.

Robert Sydenham, Lim., Tenby Street, Birmingham, contributed a small collection of choice daffodils, flanked by lily of the valley, spiræas, etc., grown in moss fibre. Among the daffodils we noticed such good things as Thos. Baricke, a new cream-white giant Leedsi, Homespun, Ptarmigan, Blood Orange, Tomtit, White Lady, Evangeline, and Firebrand.

Tulips were extensively shown by Messrs. R. H. Bath, Lim., Wisbech, and these were displayed in fancy bowls, in fibre, Brunhilde, Vermilion Brilliant, King of Yellows, Van Roozen, Rose Gris de Lin, and Couleur Cardinal were well shown. The poetaz Narcissus Aspasia was particularly well represented, and there were good flowers also of Mdme. de Graaff and other good things.

Messrs. Cartwright and Goodwin, Kidderminster, put up a delightful exhibit of choice daffodils, arranging these with isolepis, and edging the display with Muscari conicum Heavenly Blue. Very pretty were the flowers of White Nectarine, White Lady, Rising Sun, Alice Knights, Southern Star, Dorothy Pearson, the bold Ajax variety Master of Balliol, Evangeline, Mrs. H. J. Veitch, Barcarolle, Ayacanora Circlet, and Scarlet Eye.

A small group of beautiful daffodils, practically all new seedlings, was submitted by Mr. Alex. Wilson, Shovell, Bridgwater; very few were named, but Beryl, a rich yellow variety, with a round orange cup, exquisitely frilled; we hear that this wonderful variety was obtained by crossing N. cyclamineus with the poet's daffodil. No. 362, a golden cyclamineus hybrid of good size; No. 598, a very big, flattish-crowned incomparabilis variety was another lovely thing, with creamy perianth and golden cup. It was a feast of good things for the daffodil specialist.

Mr. F. Lilley, Guernsey, brought over a small group of daffodils, the leading varieties in his display being Silver Spur, Glory of Nordwyk, King Alfred, Stromboli, Murillo, and Mrs. W. T. Ware, but all the flowers were a trifle small.

From the Lissadell Bulb Farm, Sligo, came some fine daffodils, good in size and in colour. Very fine were the bunches of the white Mrs. Robt Sydenham, Homer, Henry Irving, Judge Bird, Flambeau, Sir Horace Plunkett, Rance, Argent, King Alfred, Golden Bell, and the lovely Whitewell.

Messrs. Barr and Sons, Covent Garden exhibited a quite large collection of daffodils and put up a very bright group. Very charming were the vases of King Alfred, Alice Knights, Fairy Queen, Fireflame, Sunrise, Homespun, White Slave, Lord Roberts, Sir Galahad, Victoria, Queen of the North, and The Sisterhood.

FRUIT AND VEGETABLE COMMITTEE.

Messrs. Sutton and Sons, Reading, exhibited a beautiful lot of cabbages, the heads fresh and of excellent size for the time of year, thus demonstrating the earliness of the varieties which were Sutton's April, Flower of Spring, and Harbinger.

Mr. Wm. Poupart, Marsh Farm, Twickenham, showed rhubarb from the open ground; the varieties named Daw's Champion and Hawkes' Champagne, were well advanced, and had been yielding sticks for about a month, whereas other varieties shown were not yet fit to pull under similar cultural conditions; some excellent sticks of forced Daw's Champion were also contributed.

CERTIFICATES AND AWARDS.

First-Class Certificate. — To Odontioda Vuylstekeæ Lady Colman, from Sir Jeremiah Colman, Bart. (gardener, Mr. Collier), Gatton Park, Reigate..

Award of Merit.—To Odontoglossum facetum Swietenia-color, from Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking; to Odontioda ignea, from Messrs. Charlesworth and Co., Haywards Heath; to Rhododendron Mrs. Fitzgerald, from Miss Mangles, Seale, Surrey; to Carnation Empire Day, from Mr. Smith, Enfield; to Hydrangea Mdme. Moullière, from Messrs. Stuart Low and Co., Bush Hill Park, Enfield.

MEDALS.

Gold.—To Messrs. Jas. Veitch and Sons, Chelsea, for greenhouse plants and forced shrubs.

Silver-Gilt Flora. — To Messrs. Charlesworth and Co., Haywards Heath, for orchids.

Silver-Gilt Banksian.—To Mr. H. Burnett, Guernsey, for carnations; to Messrs. Wm. Cutbush and Son, Highgate, for carnations and hardy flowers; to Messrs. Cartwright and Goodwin, Kidderminster, for daffodils.

Silver Flora.—To Messrs. Armstrong and Brown, Tunbridge Wells, for orchids; to Messrs. Sander and Sons, St. Albans, for orchids; to Mrs. Norman Cookson (gardener, Mr. H. J. Chapman), Oakwood, Wylam-on-Tyne, for orchids; to Sir Jeremiah Colman, Bart. (gardener, Mr. Collier), Gatton Park, Reigate, for orchids; to Mr. Alex. Wilson, Bridgwater, for new daffodils; to Messrs. Barr and Sons, Covent Garden, for daffodils; to Messrs. R. H. Bath, Lim., Wisbech, for tulips and daffodils; to Messrs. Stuart Low and Co., Enfield, for greenhouse plants and carnations; to Messrs. R. and G. Cuthbert, Southgate, for forced shrubs; to Mr. Maurice Prichard, Christchurch, for hardy flowers; to Mr. G. Reuthe, Keston, for hardy flowers.

Silver Banksian.—To Messrs. H. B. May and Sons, Edmonton, for ferns and clematises; to Mr. George Mount, Canterbury, for roses; to Mr. George Prince, Longworth, for roses; to Messrs. Hassall and Co., Southgate, for orchids; to Messrs. Stuart Low and Co., Enfield, for orchids; to S. Larkin, Esq. (gardener, Mr. Hale), Haslemere, for orchids; to Mr. E. V. Low, Haywards Heath, for orchids; to Sir J. Gore Booth, Lissadel, Sligo, for daffodils.

Bronze Flora.—To Messrs. Barr and Sons, Covent Garden, for hardy flowers; to Messrs. G. and A. Clark, Dover, for hardy flowers; to Mr. W. H. Ellison, West Bromwich, for gerberas and ferns; to Mr. C. Engelmann, Saffron Walden, for carnations; to Messrs. R. Gill and Sons, Falmouth, for rhododendrons and primulas; to Messrs. Heath and Son, Cheltenham, for alpines; to Messrs. R. Wallace and Co., Colchester, for hardy plants; to Messrs. T. S. Ware, Lim., Feltham, for hardy flowers.

Bronze Banksian. — To Messrs. J. Cheal and Sons, Crawley, for rock garden; to Mrs. Harvey, Slough, for roses; to Mr. L. R. Russell, Richmond, for forced shrubs, etc.

CANARY GUANO

"THE BEST IN THE WORLD."

There is no Fertilizer that gives such good all round results as CANARY GUANO. It is used in the King's Gardens, and by leading Amateurs and Trade Growers all over the Country. A post card to the Manufacturers will ensure full particulars.

SOLD IN BAGS AND TINS BY SEEDSMEN, NURSERYMEN, ETC.

Manufactured — by — THE CHEMICAL UNION, LTD, IPSWICH.

SHANKS'S
LAWN MOWERS
70 Years Reputation

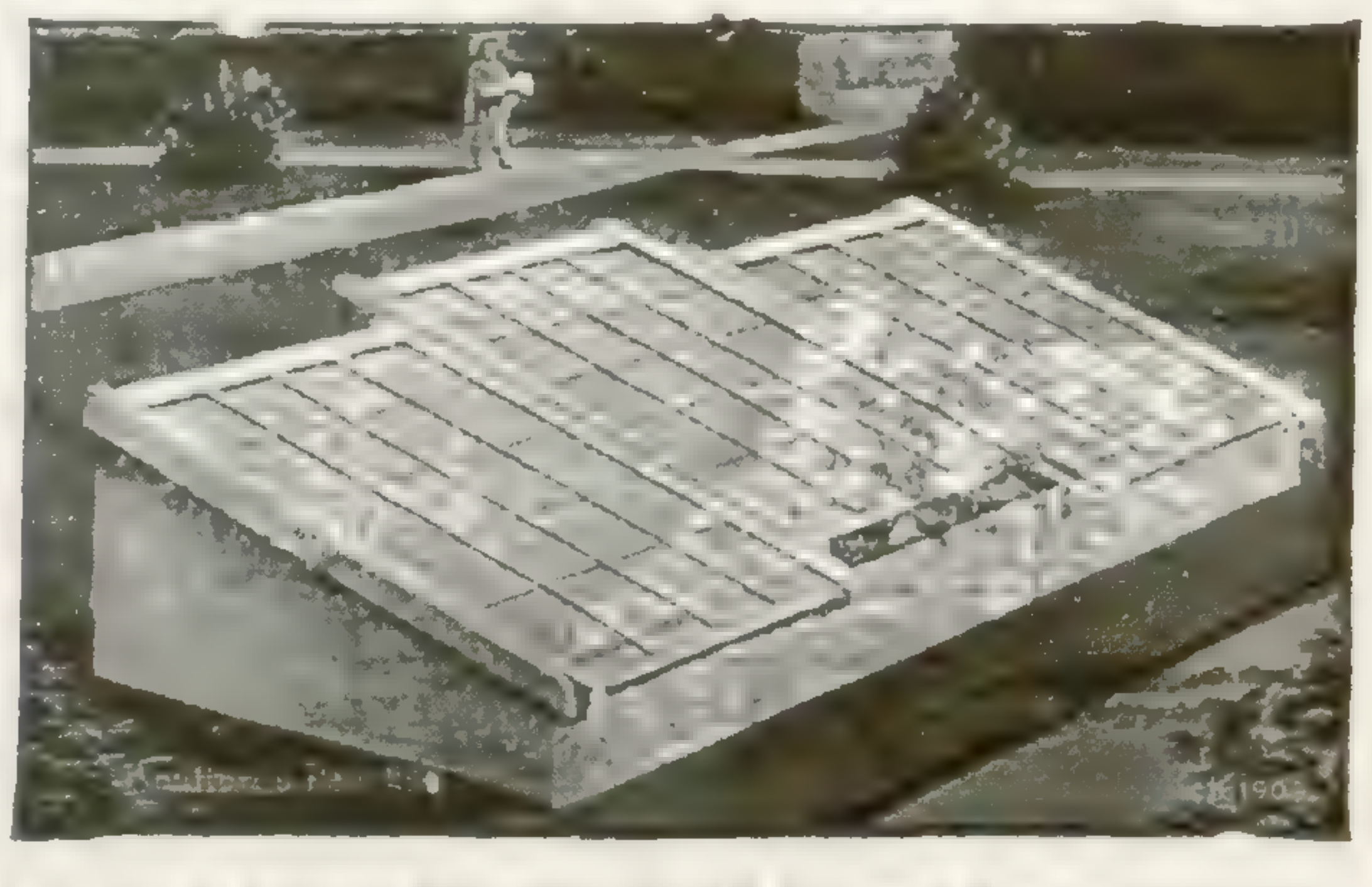
The favourites of all Gardeners, Amateur & Professional

A. Shanks & Son Ltd
Arbroath & London.

Of All Ironmongers & Seedsmen.

SECURE AN EARLY PRODUCTION
of Fruit and Flowers by using our well made

No. 75. MELON AND CUCUMBER FRAME.



4 ft. by 6 ft. ... £2 0 0 | 12 ft. by 6 ft. £3 19 0
8 ft. by 6 ft. ... 3 0 0 | 16 ft. by 6 ft. 4 18 0
Painted three coats, glazed 21 oz. glass.

Garden Frames,
in every variety always in stock.

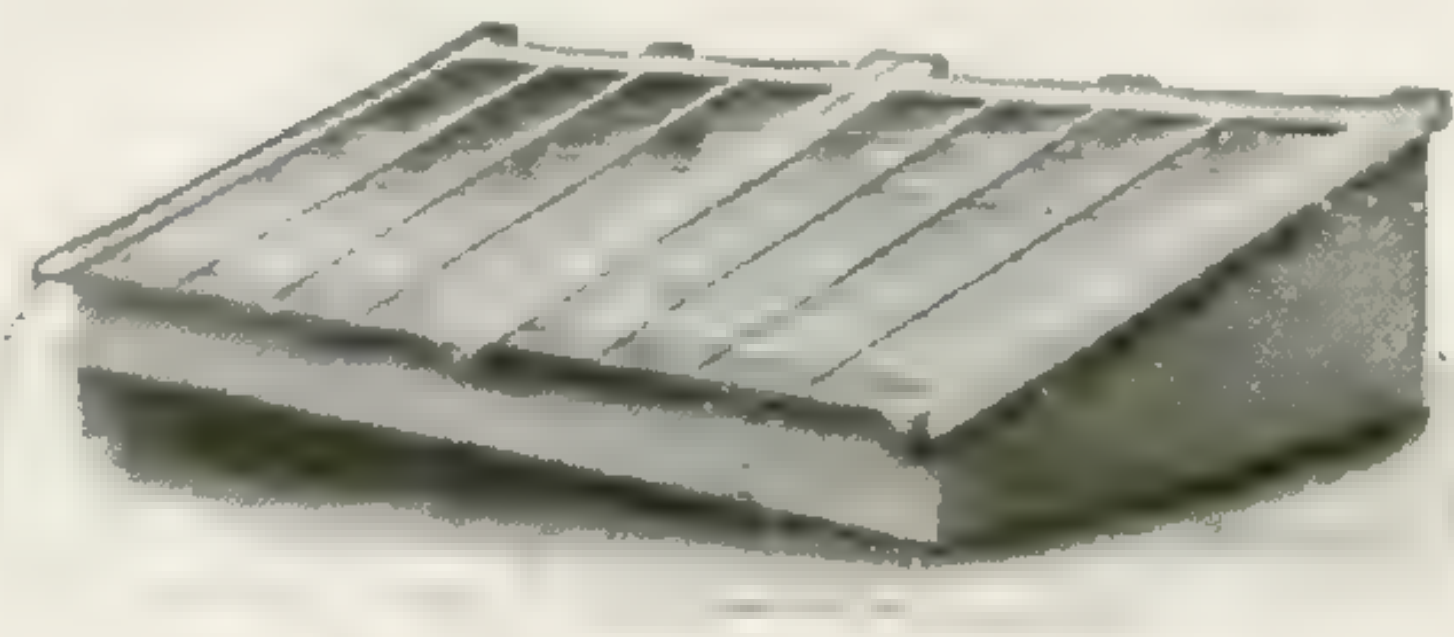
Pit Lights.
6 ft. 1½ in. by 4 ft. Painted and Glazed 14/- each
Unpainted and Unglazed ... ... 5/- ,,

Double Glazed Lights.
4 ft. 7in. by 4 ft. 3 in. Painted and Glazed, 15/6 each

Improved Fruit Trays.
20 in. by 19 in., 18/- doz.; 24 in. by 15 in., 15/- doz.
Carriage Paid on one dozen Trays and over.

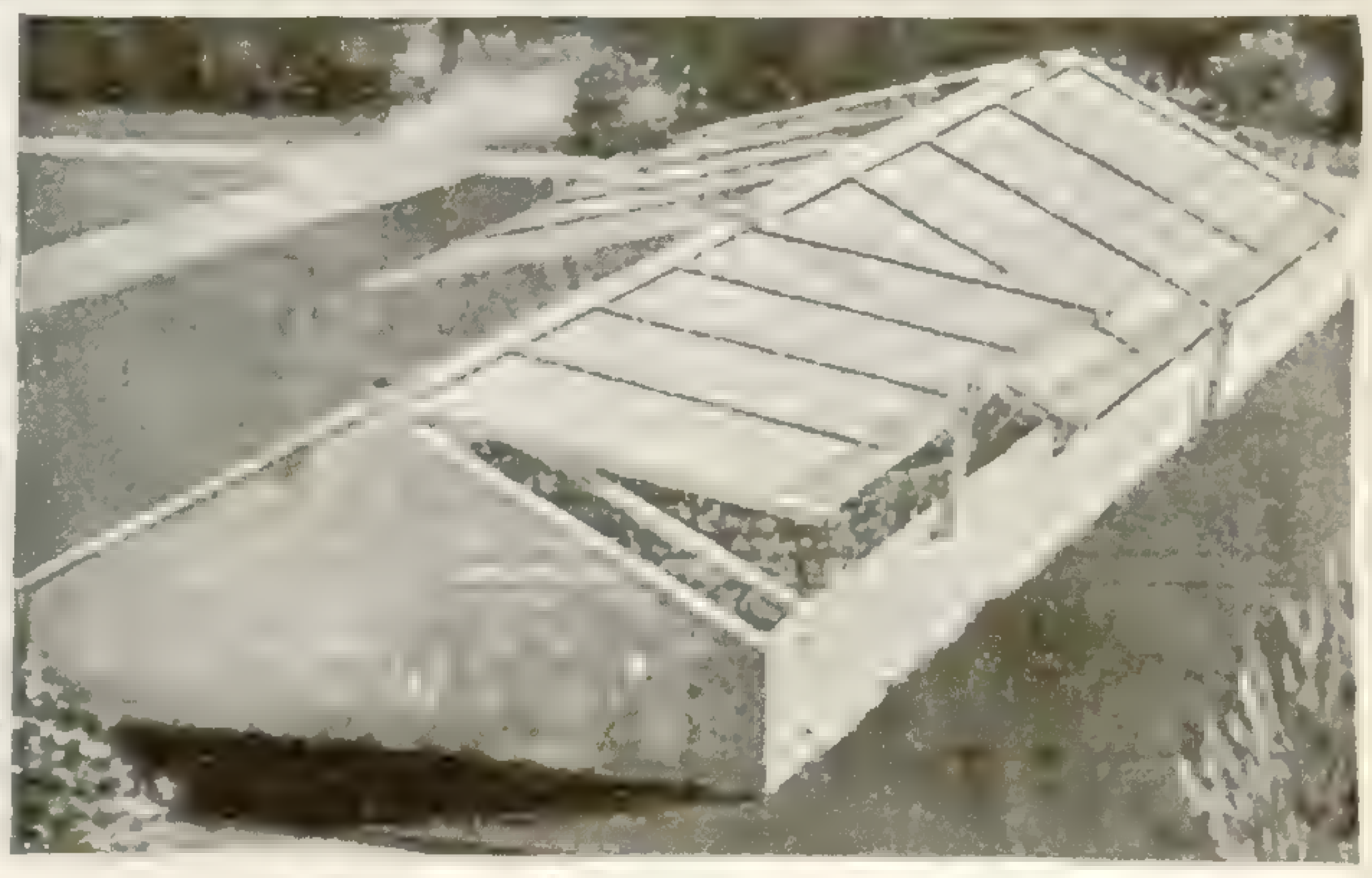
Reed Mats. 4 ft. 6 in. square, 20/- doz.

OUR SPECIALITIES.
SEND FOR PRICE LISTS.



No. 77. VIOLET FRAME
(as illustrated).
6 ft. by 4 ft. £1 15 0
9 ft. by 4 ft. 2 7 6

No. 60, PORTABLE PLANT PRESERVER
6 ft. by 3 ft., £1 14 0
6 ft. by 4 ft., £2 5 0
All Frames and lights Painted three coats. Glazed with 21 oz. glass.



Carriage Paid on all Orders of 40/- value to most Goods Stations in England and Wales.

BOULTON & PAUL, LTD., NORWICH.

If the "Daily Mail" £1,000 winning bunch of Sweet Peas
BE GROWN WITH
MACKERETH'S SPECIAL
SWEET PEA MANURE,

Sold in Tins, 1/- (1/4 post free), 2/6 (3/- post free).
Sold in Bags, 14 lbs., 5/-; 28 lbs., 8/6; 56 lbs., 14/-; 112 lbs., 25/- Carriage Paid.

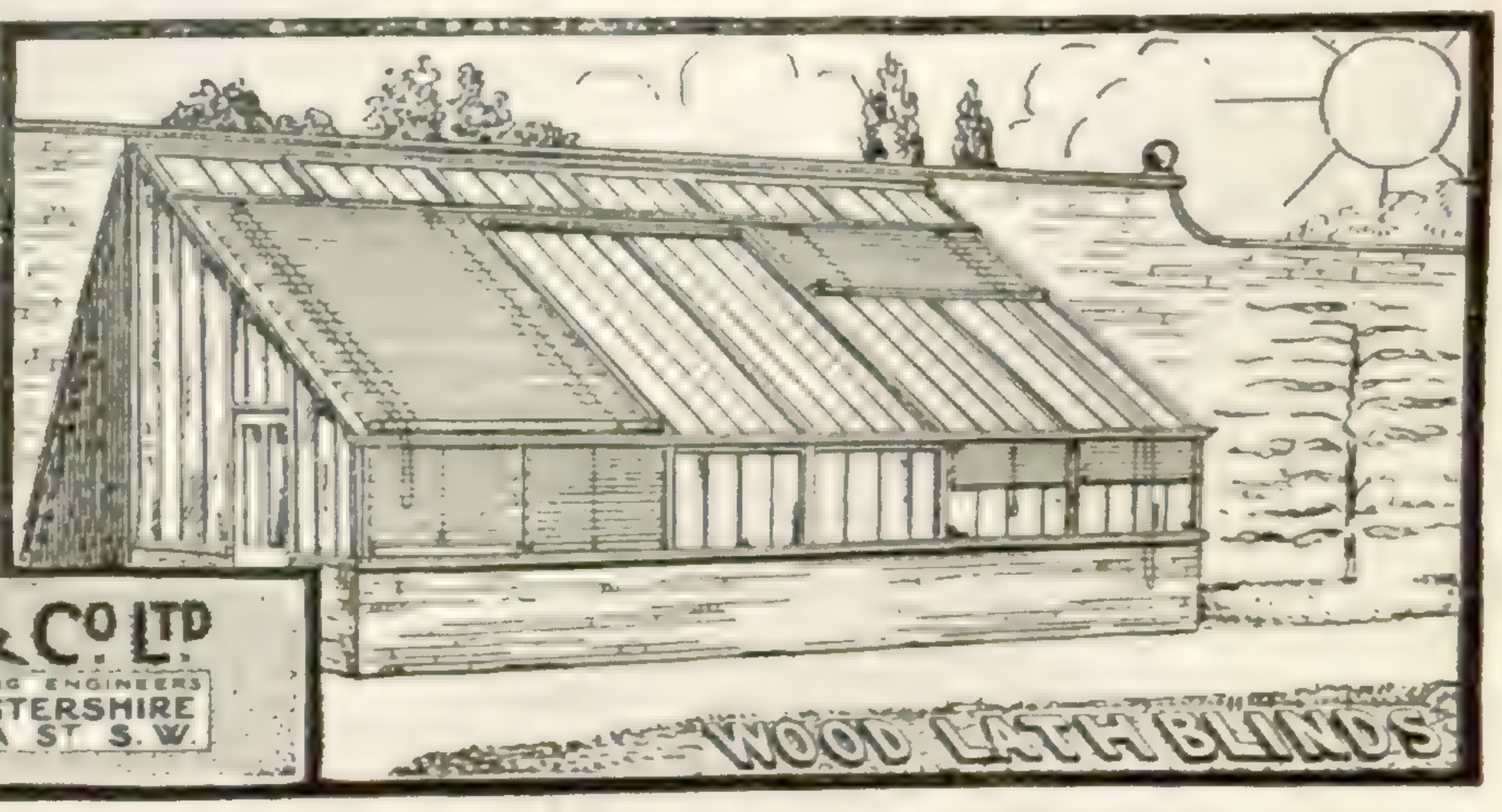
I will present the winner with £10, and if the bunch contains bloom of Earl Spencer, I will present the winner with £5.

I have splendid stocks of the most chaste Spencer Sweet Peas. Orders executed the day they are received.

G. H. MACKERETH,
The Sweet Pea Clearing House,
ULVERSTON.

WOOD LATH BLINDS ADMIT SUFFICIENT SUNLIGHT SO NECESSARY FOR Growing Purposes.

Write for Special Catalogue.



MESSENGER & Co Ltd
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office: 122 VICTORIA ST. S.W.

Phytobroma
Barr's New Plant Food
For Flowers Vegetables and Fruit
of highest quality & guaranteed analysis

Per cwt., 20/-; ½ cwt., 12/6; 28lb., 7/6; 14lb., 4/6; 7lb., 2/6; Sample Tins, 1/-.
Prepaid orders for 28lbs. and upwards, Carriage Paid.
Circular, with full particulars, on application.

BARR and SONS,
11, 12, and 13, KING STREET, COVENT GARDEN, LONDON.

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS, and an endless variety of Choice ORCHIDS.

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

TAKE NOTICE.
Intending planters should send for the STANCLIFFE CATALOGUE OF TREES, &c.

Our Stocks, which are grown on the highest and most exposed hills of Derbyshire, are in fine condition, and are sure to give satisfaction. Note the prices before ordering elsewhere.

Rockery Stone, 1/- per ton.

THE STANCLIFFE ESTATES CO., LTD.,
DARLEY DALE, DERBYSHIRE.

Birmingham Gardeners' Association.

On Monday, March 20, at the fortnightly meeting, with Mr. C. H. Herbert in the chair, there was a very good attendance to hear Mr. Wm. Hales, a former lecturer and at one time a student under Mr. W. B. Latham, at the Botanical Gardens, Edgbaston. In his preamble, Mr. Hales adverted to the pleasure it used to give him to join in the essays for the prizes offered by the committee, in rivalry with his fellow-student and friend, Mr. E. H. Wilson, of China floral research fame.

The subject of Mr. W. Hales's essay was "British Plants in the Garden," and he gave details of the life-history and habitats of the plants, as well as their decorative attributes. In the discussion which followed, Messrs. C. H. Herbert, Wm. Spinks, A. D. Christie, Alfred Cryer, Walter Jones, and Wm. Gardiner took part; several questions were asked, and were promptly responded to by Mr. Hales in appropriate terms, and to him a cordial vote of thanks was accorded.

At the close of the proceedings, when Mr. Hales was taking a cursory view of the invaluable collection of books in the association's book cases, he remarked to the librarian that he was tempted to break the eighth Commandment in respect of the twelve volumes of Sowerby's "English Botany."

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above sea-level, 150 feet.

Date. 1911. March 19 to March 25.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	Temperature of the Air. At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Mar. 19—Sunday	—	40	39	46	40
„ 20—Monday	6 18	45	43	51	39
„ 21—Tuesday......	4 18	42	42	58	35
„ 22—Wednesday..	3 48	42	42	58	35
„ 23—Thursday	—	44	44	51	42
„ 24—Friday........	1 6	41	38	46	38
„ 25—Saturday.....	7 42	32	32	40	31
Means	(total) 23 12	41	40	50	37

Date. 1911. March 19 to March 25.	Rain.	Temperature of the Soil at 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
Mar. 19—Sunday	—	40	40	42	36
„ 20—Monday	0·01	40	40	42	37
„ 21—Tuesday......	—	41	41	42	28
„ 22—Wednesday .	0·21	43	42	42	30
„ 23—Thursday	—	45	43	43	43
„ 24—Friday	0·02	41	43	43	36
„ 25—Saturday	—	41	42	43	25
Means	(total) 0·24	42	41	42	33

Thunder heard on the afternoon of Wednesday, 22nd, from 3.30 p.m. to 5 p.m.

Snow fell from 8.30 a.m. to 9 a.m. on Saturday, 25th, and at intervals during the day.

FORTHCOMING ENGAGEMENTS.

SATURDAY, April 1.—Paisley Florists' Spring Show.
TUESDAY, April 4.—Truro Spring Show; two days.
Bournemouth Spring Show; two days.
Scottish Horticultural Association meeting.
WEDNESDAY, April 5.—Liverpool Spring Show; two days.
Royal Horticultural Society's general examination in Horticulture.
THURSDAY, April 6.—Linnean Society meets.
FRIDAY, April 7.—Kingsbridge Daffodil Society.
MONDAY, April 10.—United Horticultural Benefit and Provident Society, committee meeting.
TUESDAY, April 11.—Royal Horticultural Society; Daffodil Committee meets at 11.30; Fruit, Floral, and Orchid Committees at 12 o'clock; lecture at 3 p.m. on "The Origin and Structure of Aquatic Flowering Plants," by the Rev. Prof. G. Henslow, V.M.H.; Scientific Committee at 4 o'clock.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

OLD DENDROBIUM GROWTHS.—A.: The old growths sent will not flower again, and they may be cut away, but unless there is some special reason for doing so only those more than one season old should be removed. Give the plants every encouragement to grow freely by affording a high temperature, ample atmospheric moisture, and plenty of light, only shading lightly during the brightest and hottest part of the day. The present is also an excellent time for potting dendrobiums that have started well into growth, as new roots will be quickly made and enter into the new potting material.

JAPANESE MAPLES.—J. C., Epsom: Comparatively few of the beautiful little shrubs and trees grown under the collective title of Japanese Maples are propagated in this country. Quantities are imported annually from Japan, and kept in frames or a cool-house until the season is so far advanced that they may be planted out without fear of harm. So far as we can gather, the stock upon which these elegant-leaved and brilliantly-coloured varieties are grafted or budded is the wild and typical Acer palmatum. In this country budding would be best done in the summer, and grafting in the early spring. Most maples will propagate readily from layers.

WHITE - STEMMED BRAMBLES. — C. B. A., Carnarvon: Two species of rubus have white canes or stems. One of these, Rubus biflorus, is from the Himalayas; it is quite hardy and of free growth. When leafless it forms a striking feature in the landscape, as the stems are so white as to suggest they have been white-washed. The other species of similar stem character is R. leucodermis, from North-west America. This is not so good as R. biflorus, because its growth is less robust and the whiteness of the stems is less decided. R. neglectus, probably a natural hybrid, and R. occidentalis — the Thimble Berry of the United States, both have whitened stems, but neither can compete in this direction with R. biflorus.

OMPHALODES VERNA.—S. A., Chelmsford: Sandy soil in which there is a goodly proportion of leaf-mould suits this pretty little spring flower quite well. Its increase offers no special difficulties in gardens where it grows freely, and a good method of propagation is that of dividing the plants in late summer or early autumn, and setting out the little tufts of growth where they are to remain and flower. This work should be done as early in the autumn as possible, so that the divisions may have full opportunity for becoming well established before the winter sets in.

ORNAMENTAL GRASSES.—J. B. C., Wokingham: A few of the more ornamental grasses, i.e., those suitable for association with cut flowers, and which can be easily raised from seeds sown in the spring, will include Agrostis nebulosa, A. pulchella, Briza maxima, B. minor, Hordeum jubatum, Lagurus ovatus, Lamarckia aurea, Stipa pennata.

VARIETIES OF LILIUM AURATUM.—M. W. E., Pontefract: There are several varieties of the beautiful Golden-rayed Lily of Japan (L. auratum), and they are all distinct. Of course we do not refer to the natural variation of the type, such as is evidenced by the size of the flowers and the breadth of the petals. There are good and bad forms of L. auratum, just as there are good and bad forms of Dendrobium nobile, Cattleya trianæ, etc., etc. But we now refer to well-marked and named varieties, and the best of these are L. auratum platyphyllum, which has big, broad petalled and finely-spotted blooms; L. a. rubro-vittatum, with a deep wine-red band down each segment; L. a. virginale, a lovely white form, with a golden band down each segment, and with very faint spottings; and L. a. Wittei, unspotted, and pure white save for the light band of gold down the centre of each segment.

PLANTING AND STAKING SWEET PEAS.—E. M. C., Ryde.—You will find full particulars in regard to planting and staking sweet peas in "Sweet Peas and their Cultivation," to be obtained, post free, for 1s. 2d., from the GARDENERS' MAGAZINE Office, 148, 149, Aldersgate Street, E.C.

RULES OF THE NATIONAL VEGETABLE SOCIETY. — S. G., Towcester: Doubtless the National Vegetable Society has a full set of rules for its management and the guidance of the committee, but such are not published in the Schedule for 1911, nor do we find a set in the Schedule for 1910. If you write to the hon. secretary, Mr. E. G. Quick, Kelmscott, Harrow View, Wealdstone, he will enlighten you on the matter. The society will hold its exhibition at the Royal Horticultural Hall, Westminster, on Wednesday, August 30, and the comprehensive schedule extends to no fewer than seventy-nine classes. The society is doing excellent work by means of trials, etc., and is deserving of support; the minimum annual subscription is 5s.

NAMES OF PLANTS.

F. E. R., Godalming.—1, Primula frondosa; 2, Erica carnea; 3, Adonis vernalis.

V. R. E., Harrogate.—1, Hippophæ rhamnoides; 2, Cupressus Lawsoniana pendula.

C. A., Doncaster.—A very finely fringed form of a large-flowered strain of Primula obconica.

J. B., Missenden.—1, Anemone hepatica; 2, A. blanda; 3, Lachenalia Nelsoni; 4, Coprosma aurea.

H. S., Gillingham.—1, Oncidium concolor; 2, Dendrobium Brymerianum; 3, Oncidium ampliatum; 4, Azalea amœna; 5, not recognised.

S. N. W., Taunton.—1, Pelargonium denticulatum; 2, Begonia phyllomaniaca; 3, Saintpaulia ionantha; 4, Cytisus fragrans; 5, Adiantum reniforme; 6, Opuntia microdasys.

TRADE NOTES.

Weeds will soon begin to assert themselves on the garden paths, and they will have to be dealt with in some fashion; certain methods entail a vast amount of time and labour, while others are expeditious and equally effective. Among the latter methods the application of Eureka Weed Killer is worthy of attention, as it is an extremely useful preparation for the purpose, manufactured by Messrs. Tomlinson and Hayward, Lincoln, and supplied by all nurserymen and sundriesmen.

The usefulness of "Scrim" for the purpose of protecting the flowers of choice fruit trees from frost has been demonstrated over and over again. The light, soft, and strong "Scrim" supplied by Messrs. Robertson, Ireland, and Co., Dundee, appears to be ideal material, and would also serve to break up the direct rays of the sun if stretched over sweet peas, exhibition roses, and other flowers.

Garden labels multiply in kind as well as in number. We must have labels, and we want them, usually, as light and unobtrusive as possible. The latest bidder for popularity is the Ivo Permanent label, manufactured by the Permanent Printing and Process Co., 2, Sandland Street, Red Lion Street, Holborn. These labels are 2½ inches long by ¾-inch wide, and made of a material that resembles celluloid; they are either white or green, and the name of the rose, etc., is permanently printed in the label. An eyelet hole at one end of the label offers a ready means of attachment to the plant. The firm is stocking a very large set of rose names.

CATALOGUES RECEIVED.

CHARLESWORTH AND CO., HAYWARDS HEATH.—An admirable orchid catalogue, clearly printed, and the individual plants offered for sale are described and priced, while in all cases the parentage of hybrids is given.

J. T. WEST, TOWER HILL, BRENTWOOD.—This handy descriptive list is devoted to dahlias and contains a first-rate selection of show, cactus, pompon and single varieties, as well as a list of pæony flowered and decorative varieties, including a number of good things raised by Mr. West.

KETTEN BROTHERS, LUXEMBOURG.—A descriptive list of new roses for 1911, with illustrations of Rayon d'Or and Baronne Charles d'Huart.

BARR AND SONS, COVENT GARDEN, W.C.—A very useful and comprehensive catalogue of hardy perennials, alpines, aquatics, climbers, and ornamental shrubs, phloxes, irises, delphiniums, and other hardy florists' flowers are dealt with at considerable length.

NICHOLLS AND CLARKE, LTD., SHOREDITCH, LONDON.—The sanitary and general catalogue issued by this firm is one of the most remarkable we have seen. It is a stoutly bound large-quarto volume, finely printed on good paper, indexed, and extending to no fewer than 452 pages. Illustrations are to be found on every page, and range from the meanest drain tile to the most elaborate bath-room fixtures. Every sanitary requisite is included, while, of special interest to horticulturists are the pages referring to glass, cloches, paints, colours of all kinds, drains, and drain fittings, cisterns, water pipes, pumps, fountains, syringes, garden engines, valves, etc., etc.

WALTER VOSS AND CO., LIM., MILWALL, E.—A list of reliable requisites for use in the garden, orchard and greenhouse; fertilisers, spraying fluids, and spraying machines are leading features.

SCHEDULES RECEIVED.

FOREST HILL CHRYSANTHEMUM SOCIETY.—Eighth annual exhibition at St. James' Hall, Forest Hill, on Wednesday, Nov. 1.

DUNDEE HORTICULTURAL SOCIETY.—The floral fête will be held on Magdalen Green on August 31 and September 1 and 2. A schedule of 227 classes is provided.

CONTENTS.

PAGE
A Beautiful Exhibit of Alpines ... 243
Among the Alpine Flowers ... 248
Answers to Correspondents ... 256
Beetroot ... 242
Cornwall County Fruit Plot ... 244
Crambe orientalis ... 241
Exhibitions and Meetings ... 251
Hardy Cyclamens ... 245
Notes from Kew ... 241
Notes of the Week ... 237
Orontium aquaticum or "Golden Club" ... 247
Rhubarb ... 244
The Cape Primroses ... 246
Variegated Dogwoods ... 249
Work for the Week ... 250

ILLUSTRATIONS.

Portrait of Mr. William Allan, 237; Perpetual-flowering Carnation Empire Day, 239; Crambe orientalis as grown at Kew, 241; A fine Beetroot—Sutton's Black, 242; A beautiful group of Alpines, 243; Hardy Cyclamens, 245; A large-flowered Hybrid Streptocarpus, 246; A beautiful Water Plant, 247; A fine specimen of Cornus alba sibirica variegatus, 249.

Perpetual-Flowering CARNATIONS.

This year's Novelties and all the Leading Varieties.

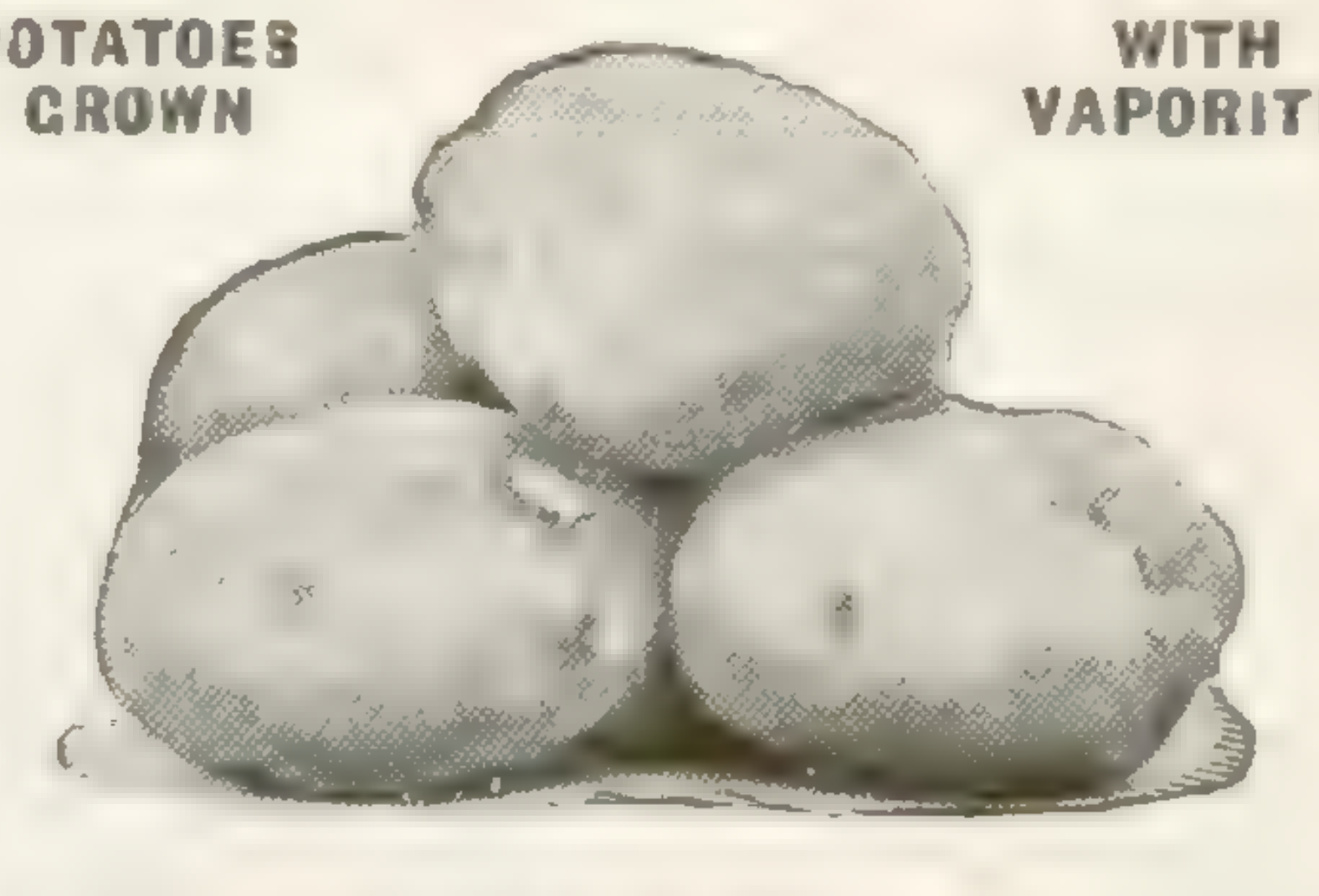
Send for descriptive Catalogue of 80 varieties with particulars when to stop them.

C. ENGELMANN, CARNATION GROWER,
SAFFRON WALDEN.

THIS DELICIOUS VEGETABLE
can be grown by everyone if planted at the present time.
Connover's Colossal Asparagus
2-year plants, 3s. per 100, 2/6. per 1,000.
Early Market Cabbage Plants
2s. 6d. per 1,000. Fruit Tree List free
W. HORNE & SONS,
Cliffe, Rochester, Kent.

MANY YEARS REPUTATION.
EUREKA WEED KILLER
LASTING RESULTS—NO NEW EXPERIMENT.
1/9 TIN FOR 25 GALLONS | 6/- TIN FOR 100 GALLONS | LARGER SIZES AT LOWER RATES
SOLD BY AGENTS. MANUFACTURERS: TOMLINSON & HAYWARD LTD LINCOLN.
IF ANY DIFFICULTY SENT DIRECT—PAID

POTATOES GROWN WITHOUT VAPORITE.



VAPORITE

THE ORIGINAL SOIL INSECTICIDE should be dug in your garden at the rate of 1 lb. to 8 sq. yds. to ensure DEATH TO WIREWORMS.

WIREWORMS.

"The wireworms in a piece of old garden have entirely disappeared since treatment two years ago."—Mrs. V., Cornwall.

VERMIN.

"Our garden was full of vermin. Vaporite has cleared all out and all seeds grow luxuriously."—J. H. W., Worleston.

PRICES: Tins, 1½lbs., **9d.**; 7 lb. **2/-**; 14 lbs. **3/-**; 28 lbs. **4/6**, of all seedsmen. Casks: **7/6** ½ cwt.; **11/6** cwt., Carriage paid from your seedsmen or the Company.

The easiest, most economical, and speediest means of destroying soil pests in your garden is to use Vaporite. If it is dug well in before planting according to the directions in every tin, there is no fear of souring the ground, or soil insects spoiling your plants.

Vaporite is described fully in the interesting booklet, No. 45, sent free on request.

The VAPORITE-STRAWSON CO., LTD.,
(Dept. E),
Spencer House, South Place, London, E.C.

TRUST THE FIRM BEHIND THE BOOT!

OVER 100 YEARS REPUTATION IS BEHIND EVERY PAIR.

Why Not Try a Pair of
NORWELL'S
"PERTH BOOTS"
THIS SPRING?

The right thing to do is to write for our Illustrated Free Catalogue to-day. Just drop us a Post Card, and by return you will get the description and details of the Best Value in footwear for gardeners and all those exposed to tearing country wear. We are specialists, and have the greatest confidence in our power to fit and please you. To-day, and every day, we are supplying families with footwear whose great grandfathers and mothers wore our celebrated "Perth Boots."

The Perth Gardener Boot - - 10/9 *FOR STRONG WEAR.* | **The Perth Calf Skin Gardener Boot 11/9** *FOR GREENHOUSE WEAR.*

SEE PAGE 10 OF OUR LIST FOR SPECIAL BOOTS FOR GARDENERS.

NORWELL'S Boot Factory, PERTH, N.B. ESTABLISHED OVER 100 YEARS.

WALWYN T. CHAPMAN,
Terra Cotta Works, CLEETHORPES.
For Vases, Sundials, Window Boxes, Lions, Balusters, Arches, Garden Ornaments, &c.

PERGOLAS.
Larch Poles at 1d. per foot. List Free.
PATRICK'S, Otley, Yorks.

OAK CRAMBLES.
Peeled and dry at ½d. per foot.
PATRICK'S, Otley, Yorks.

ROSE ARCHES.
Larch Poles at 1d. per foot.
PATRICK'S, Otley, Yorks.

TREE STAKES AND GARDEN RODS.
Lists free.
PATRICK'S, Otley, Yorks.

SCRIM FOR PROTECTING FRUIT BLOSSOM.—The protection from frosts, etc., afforded fruit blossom by our open-meshed scrim, goes far to ensure a good set of fruit. May repay many times its cost in one night. 2¼d. per sq. yd., 36in. and 72in. wide; 50 yards delivered. This scrim is also good for shading sweet peas, etc. Descriptive leaflets on application. ROBERTSON, IRELAND and CO., Vict Road, Dundee.

THOMSON'S Celebrated
VINE, PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES
UNRIVALLED FOR ALL PURPOSES
THE RESULT OF MANY YEARS
PRACTIC [illegible]
SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE
Wm Thomson & Sons Ltd Clovenfords N.B

LOOK! TANNED GARDEN NETTING, small mesh, 50yds. long by 1 yd., wide, 1s.; by 2yds. wide, 2s.; by 3yds. wide, 3s., either car. paid; any size made. Odd pieces Netting for protecting bush fruit buds, 14lbs., in bag, 3s. Package free. STANLEY GORDON, Bank House, Rye.

18 ALPINE PLANTS, 3s. cash; 50 Alpine plants, 16s. Send for Catalogue (1,000 varieties). Hardy Ferns, named, 100, 10s. "ENGLISH HOME OF ALPINE PLANTS," Hessenford, Cornwall.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

CAPT. G. H. BARNETT, Glympton Park, Woodstock, Oxon, wishes to very highly recommend his present HEAD WORKING GARDENER; life experience; reducing cause of leaving; 10 years' previous as Gardener and Management small estate; age 39; 1 daughter aged 14. Address E. JACOBS, as above.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; grapes, peaches, melons, stove and greenhouse plants; four and a-half and eleven years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head); general all-round knowledge, life experience in large and well-kept establishments; 13 years Head in last situation; age 39; married; gentleman will recommend. T. HARRIS, 2, Mill Lane, Cheshunt, Herts.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushrooms, ridge or flat; Kitchen, Lawn, Flower Garden. Special Prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (Head, where three or more kept); strongly recommended; excellent references; **24 years' most thorough experience every department; 12 years Head; age 40 years; married; abstainer. HORTUS, 135, London Road, Brighton.**

GARDENER (Head Working, where several are kept), age 33, disengaged, life experience in all branches, Inside and Out; vines, peaches, stove and greenhouse plants, etc.; excellent references; married. WM. GIBSON, 128, Lansdowne Road, Leicester.

GARDENER (Head Working), married, no family; age 36; life experience in all branches, Inside and Out; excellent references; Wife dairy, or house, if required. A., 27, Effingham Road, Reigate, Surrey.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; **been here six years as Second** of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working); late with W. H. Herbert, Esq., Coventry, previously Mill House, Halifax; Vines, Peaches (speciality), Early and Late Forcing, Stove, Greenhouse Plants, Herbaceous Rock Plants, Roses, Flower, Kitchen Garden, general upkeep Land, Stock; 18 years Head; references unimpeachable. LOWE, Wylde Green, Birmingham.

GARDENER (Head Working).—Mr. F. BERRILL, of Hall Close, Kettering, wishes to recommend FRANK DAINTY, who is a thoroughly capable Gardener, with life experience Inside and Out; 8 years in present situation; age 30; married, no children. DAINTY, Hall Close, Kettering.

GARDENER (Head Working, where two or more kept); married; age 33; life experience, Inside and Out; 4 years' present situation as Outside Foreman, well recommended by past and present employer. **A. BACON, The Gardens, Rickmansworth Park, Herts.**

GARDENER (Head Working, where three or more are kept), life experience in all branches; excellent references; age 27. L. BARKER, The Gardens, Manor House, Alton, Hants.

GARDENER (Head Working, where three or more are kept).—Mr. LAST, The Gardens, Homewood, Chislehurst, Kent, can with every confidence recommend his Foreman, W. WAITE, as above; 13 years' experience, gained in good establishments; five years present situation. Married when suited.

GARDENER (Head-Working), requires SITUATION; experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants, Flower and Kitchen Garden, Hardy Fruit, etc.; good references; married, no family. W. S., 73, Allen Street, Maidstone, Kent.

GARDENER (Head Working, where three or four are kept); **thoroughly experienced in all** branches; inside and out; also land and stock if required; age 38; married; no family; disengaged. HARE, Lynton, Bisley, Woking.

GARDENER (Head of two or three).—Mr. A. TOMALIN will be pleased to recommend H. CHERRY as above; life experience in good gardens; all branches; age 28. The Gardens, Oakwood, Crayford, Kent.

GARDENER (Head of two or three, or good single-handed, with or without help); age 26; single; life experience Inside and Out; leaving no fault; excellent references; would take Kitchen Gardener's place. GARDENER, Hove Cottage, Avenue Road, Branksome, Bournemouth.

GARDENER (Head or Good Second) seeks ENGAGEMENT; practical experience in first-class establishment, Fruit, Plants, Flower Gardens, etc.; 15 years' excellent references; age 34; married, one child. TANGYE, Daws Hill Gardens, High Wycombe, Bucks.

MAJOR HOLROYD, Ropley Manor, Alresford, Hants, wishes to highly recommend his late HEAD GARDENER; 18 years' practical experience in all branches of gardening Inside and Out; Single; age 32; excellent references. SCREEN, Coombe Hill Gardens, Butlers Cross, Tring, Bucks.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER, seeks good Single-handed **place; good all-round, practical experience;** thoroughly reliable, steady, industrious, and obliging; excellent references; married, 46. GARDENER, 47, Monk Street, Abergavenny.

GARDENER (Single-handed or with help); age 30; married; 14 years' experience, inside **and out; good references. Apply W. CROW, Deer**field, Beulah Hill, Upper Norwood.

GARDENER seeks SITUATION as single-handed; good all-round man; age 28; single; **3 years' good reference. 1, Eaton Villas, Wych** Street, Woking, Surrey.

FOREMAN or CHARGE; retail nursery or shop, floral work, garden contracting, jobbing, etc.; tera growing; or all-round private gardener. L., 17, Seaford Road, Enfield.

MANAGER or FOREMAN (Working); age 38; married; 20 years' experience in Market Growing, Tomatoes, Cucumbers, Grapes, Chrysanthemums, Bedding Stuff, Strawberries, etc.; good **knowledge of Roses and Hardy Plants. E. JONES, Derby Road, Melbourne, Derbyshire.**

NURSERY FOREMAN (Working); experienced in **Fruits, Roses, and** Ornamentals; fullest particulars given, age 35, married. WM. HALL, 1, Harrshaws, Lightwater, Bagshot.

GARDENER (Second of two or three, or Single-handed), Inside and Out; 10 years' experience; all-round work; age 24. FUDGE, 22, Markham Road, Winton, Bournemouth.

GARDENER (Second, where four or more are kept), good general experience, Inside and Out; excellent testimonials, age 24. T. JACKSON, Rush Court Gardens, Wallingford, Berks.

GARDENER (Second). MAJOR FOOT, White Hill, Berkhamsted, highly recommends W. COOK, as above, where four are kept; nine years' practical, Inside and Out; age 23 years. Apply W. COOK, White Hill Gardens, Berkhamsted, Herts.

GARDENER (Second) seeks SITUATION; 10 years' practical experience in good establishments, chiefly Inside; good references; has held similar position. C. NEWBURY, Frome Road, Maiden Bradley, Bath.

S. PRICKETT can well recommend H. IDDENDEN as GARDENER (Second, where three or four are kept); Inside or Outside work. Apply, The Gardens, Ersham House, Canterbury.

MR. PERKINS, Gardener to late Mr. Rydon, Prylands, Highbury New Park, can recommend J. ANTHONY as Second of three or four. London Colney, St. Albans, Herts.

JOURNEYMAN (First, Inside), in good establishment; age 24; eight years' experience; good references; can be well recommended. T. BLIGH, The Barton, Helland, Bodmin, Cornwall.

JOURNEYMAN (Inside and Out); good references; 1½ years here; age 21; can be highly recommended by employer and Head Gardener; bothy preferred. Apply BEASLEY, 2, Waldron Road, Harrow, Middlesex.

JOURNEYMAN (Inside and Out), age 23; nine years' experience; 5½ years present situation; three years Inside; leaving when suited; well recommended by Head Gardener. F. BASTON, The Gardens, Cricket House, Chard, Somerset.

JOURNEYMAN (Second, Inside), age 19, seeks SITUATION in good establishment; 5 years' experience; good references; bothy preferred. GEORGE JEFFERY, Jolesfield Cottage, Partridge Green, Sussex.

H. VOSS, The Gardens, Swanspool, Wellingboro', can with confidence recommend W. BUCKLEY as JOURNEYMAN (Inside and Out); age 22; 3½ years present situation. bothy preferred.

THOMAS PICKERSGILL can recommend ARTHUR MARSHALL as JOURNEYMAN; Kitchen Garden or Pleasure Grounds; 7 years' experience; age 23. Apply The Gardens, Sishes, Stevenage, Herts.

GARDENER (Under); private establishment or Grower Market Nursery; 14 years' experience, Inside and Out, private and nursery; good references. LEWINGTON, 169, High Street, Hampton Hill, S.W.

GARDENER (Under) seeks SITUATION, Kitchen Garden or Pleasure Ground; five years' experience; age 21; good references; Bothy preferred. R. TWORT, Frant Hill, Frant, Sussex.

YOUNG MAN, age 21, seeks SITUATION GARDENER Under, Inside and Out; seven years' experience in good establishments; good references. L. HAWKER, Westbury-on-Severn, nr. Newnham, Glos.

MR. HUBBARD will highly recommend A. W. WHAYMAN as GARDENER (Under), Inside and Out, or pleasure ground work; age 21; 7 years' experience; 4 years' present situation. Address, The Gardens, Oakhill, Ipswich.

SITUATION COUPON

To the Advertisement Manager of "The Gardeners' Magazine,"
148 & 149, Aldersgate Street, London, E.C.

For APRIL 8, 1911.

Please Repeat my Advertisement.

Name...

Address...

....

Date..............................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

uations Wanted—*continued.*

UNDER GARDENER, Young Man, seeks SITUATION as above; age 19-20; good refs.; 3 years 9 months last place. C. T. COLESHILL, 37, Wolsey Road, Hampton Hill, Middlesex.

IMPROVER.—J. LAWRENCE, The Gardens, Pimley Manor, Shrewsbury, can highly recommend E. JERVIS as above; age 18; four years' experience, inside and kitchen garden; Bothy preferred.

IMPROVER (18). — Mr. STATHER, F.R.H.S., Arlington Gardens, Cottingham, Yorks, recommends L. BERRIDGE as reliable, willing worker· general knowledge under Glass and Flower Gardens.

IMPROVER (Inside); past three years under glass; used to Watering. Stoking, and Inside work; quick, active, and obliging; highly recommended; age 18. PESTERFIELD, Beedingwood Gardens, Horsham.

IMPROVER (Inside or Inside and Out); three years' experience; age 18 years; not afraid of work; good reference. F. SKELTON, The Gardens. Mount Pleasant, Bishop Auckland, Durham.

IMPROVER (Inside).—Gardener's Son; age 19 years; five years in present situation in all departments. E. BROOKE, The Gardens, Chewton Priory, Bath.

MR. LAY, Gardens, Cheriton Rectory, Shorncliffe, Kent, would like to place his Son, age 19, in a good establishment as IMPROVER; three years' experience; Bothy preferred.

YOUTH requires SITUATION as IMPROVER (Inside and Out); age 17; three years' good character; bothy or otherwise. A. COLLICOTT, 30, Primrose Hill, Chelmsford.

ADVERTISER, married (age 30), seeks SITUATION in Private service; 15 years' nursery experience, chiefly inside; or could take Single-handed place, Inside and Out; South preferred; good references. SHEPHARD, 8, Ivy Street, Savile Park, Halifax, Yorks.

ORCHID GROWER requires SITUATION to take charge of collection or small place where Orchids speciality; experience Burford Lodge, etc.; excellent references. Apply S. BURROUGH, Royal Gardens, Sandringham.

YOUNG MAN (21) seeks SITUATION, inside and out; six years' experience; good references. W. JOHNSON, 11, Cottage Row, Forty Hill, N.

YOUNG MAN requires SITUATION on mixed establishment; two years' experience fruit growing. J. COWLISHAW, c/o Mr. Maple, Lye Green, Chesham.

YOUNG MAN (20) seeks SITUATION; inside and out; 3 years' experience; strong, willing; well recommended; prefer bothy near Weymouth or Wareham. GOULD, Stuckton, Fordingbridge, Hants.

WELL BORING.

MERRYWEATHERS' ECONOMIC SYSTEM.

Merryweathers' men with Steam Tackle boring a well.

Pure and Abundant Supplies.

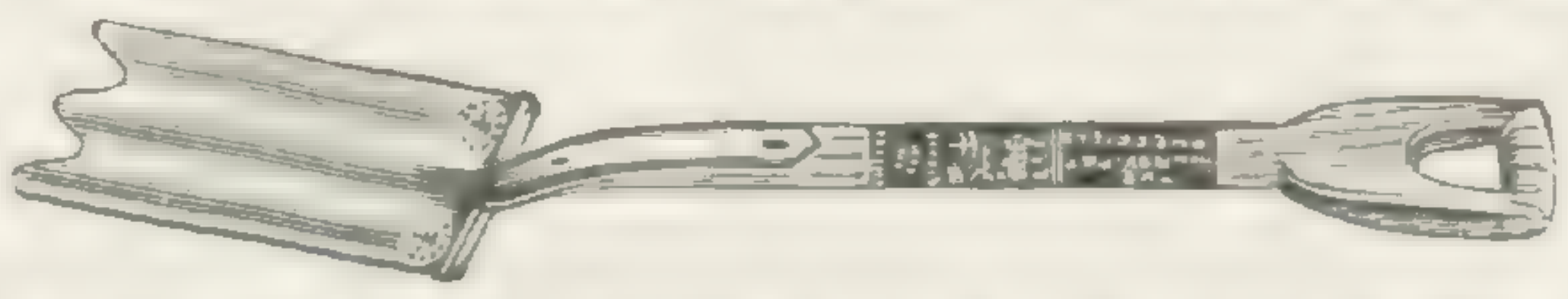
MEN AND TACKLE SENT AT A MOMENT'S NOTICE.

Work Carried Out with Economy and Despatch.

Write for Book on "Water Supply to Mansions."

MERRYWEATHER & SONS,
63, LONG ACRE, LONDON, W.C.

A NEW GARDEN SPADE (Carter's Patent).



This is claimed to be the most effective Spade on the market. Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

WHEELBARROWS.—Navvy, for building, 11s. 9d. each; general purpose, for farm use, 14s. 9d. each. 6 sent together, carriage paid, home stations. Also timber, woodwork, all descriptions. O. JENNINGS and CO., Timber Merchants, General Wood-workers, 916, Pennywell Road, Bristol.

Dr. J. COLLIS BROWNE'S

THE ORIGINAL AND
ONLY GENUINE

Chlorodyne

ADMITTED BY THE PROFESSION TO BE THE MOST VALUABLE REMEDY EVER DISCOVERED

The Best Remedy known for

COUGHS, COLDS,

ASTHMA, BRONCHITIS.

Cuts short all attacks of SPASMS, HYSTERIA, and PALPITATION.

The only Palliative in NEURALGIA, TOOTHACHE, GOUT, RHEUMATISM.

Acts like a Charm in DIARRHŒA and DYSENTERY.

Refuse imitations and insist on having **Dr. J. COLLIS BROWNE'S Chlorodyne.**

Convincing Medical Testimony with each bottle.
Of all Chemists, 1/1½, 2/9, 4/6.

"CARRUSTICIDE."

The Best and Cheapest Remedy for Carnation Rust and other Fungoid Diseases.

A well-known Carnation Grower writes:

Dear Sir, The Nurseries, March, Cambs.

"During the 27 years I have been growing Carnations (Perpetual and American) I have tried most of the fungicides placed on the market, but yours is the best. It is a pleasure to see how "Carrusticide" catches hold of the Rust and destroys it. I should say your preparation will be extensively used when it is better known." Yours very truly,
GEO. CLARKE.

One gallon makes 25 gallons for spraying purposes—Price 3s. per quart, 7s. 6d. per gallon. Special quotations for larger quantities.

Terms: Cash with order.

H. SAMUEL, Ph.C., M.P.S., Horticultural Chemist
55, High Street, Leighton Buzzard.

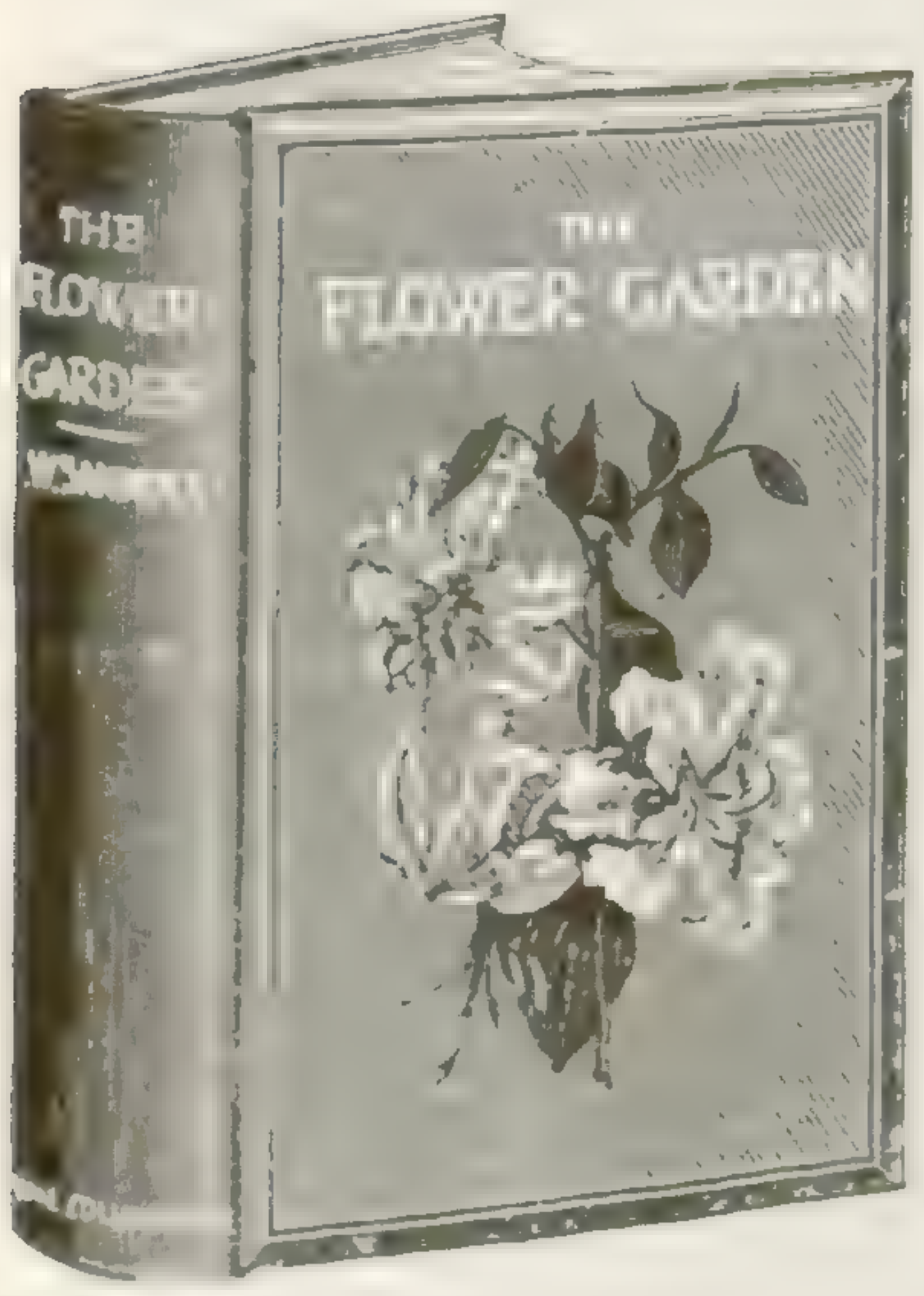
NOTICE. Always use PORTER'S IMPROVED COIL STAKES for Carnations, no tying required; last a lifetime. Sample doz. with price list 1s. carriage paid. A. PORTER, Stone House, Maidstone.

4/6. — RUSTIC ARCHES, 4s. 6d.; biggest and best; 8ft. x 4ft. x 18in. All Trellis and Rustic Work at comparative low price. London address—BRAMBLE WOOD CO., 30, Caroline Place, Bayswater.

A REALLY THOROUGH AND COMPREHENSIVE BOOK!

THE FLOWER GARDEN,

By T. W. SANDERS, F.L.S., Editor of "Amateur Gardening."



A Complete Guide to Planting and Management of the Flower Garden and the Cultivation of Flowers, Plants, Trees, &c., adapted for Outdoor Culture.

THE CONTENTS INCLUDE—

- Fashioning the Garden.
- Beds and Borders.
- Walks and Paths.
- Lawns and Tennis Courts.
- Rockeries and Ferneries.
- Arbours, Summerhouses, Arches, and Pergolas.
- Edgings.
- Walls and Fences.
- Garden Practice.
- Propagation.
- Colour Arrangement.
- Bedding.
- Annuals and Biennials.
- Bulbs.
- Hardy and Tender Border Plants and Flowers.
- Climbing Plants.
- Trees and Shrubs.
- Pests and Diseases.

480 PAGES, ILLUSTRATED BY 64 PLATES OF BEAUTIFUL GARDEN SCENES, PLANTS AND FLOWERS, AND MANY EXPLANATORY DIAGRAMS.

Price **7/6** net; by post, packed in box, **8/-**

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE," 148 & 149, Aldersgate St, London, E

Please send me a copy of **"THE FLOWER GARDEN,"** *by Post, for which I enclose remittance of* **8/-**

Name ....

Address ....

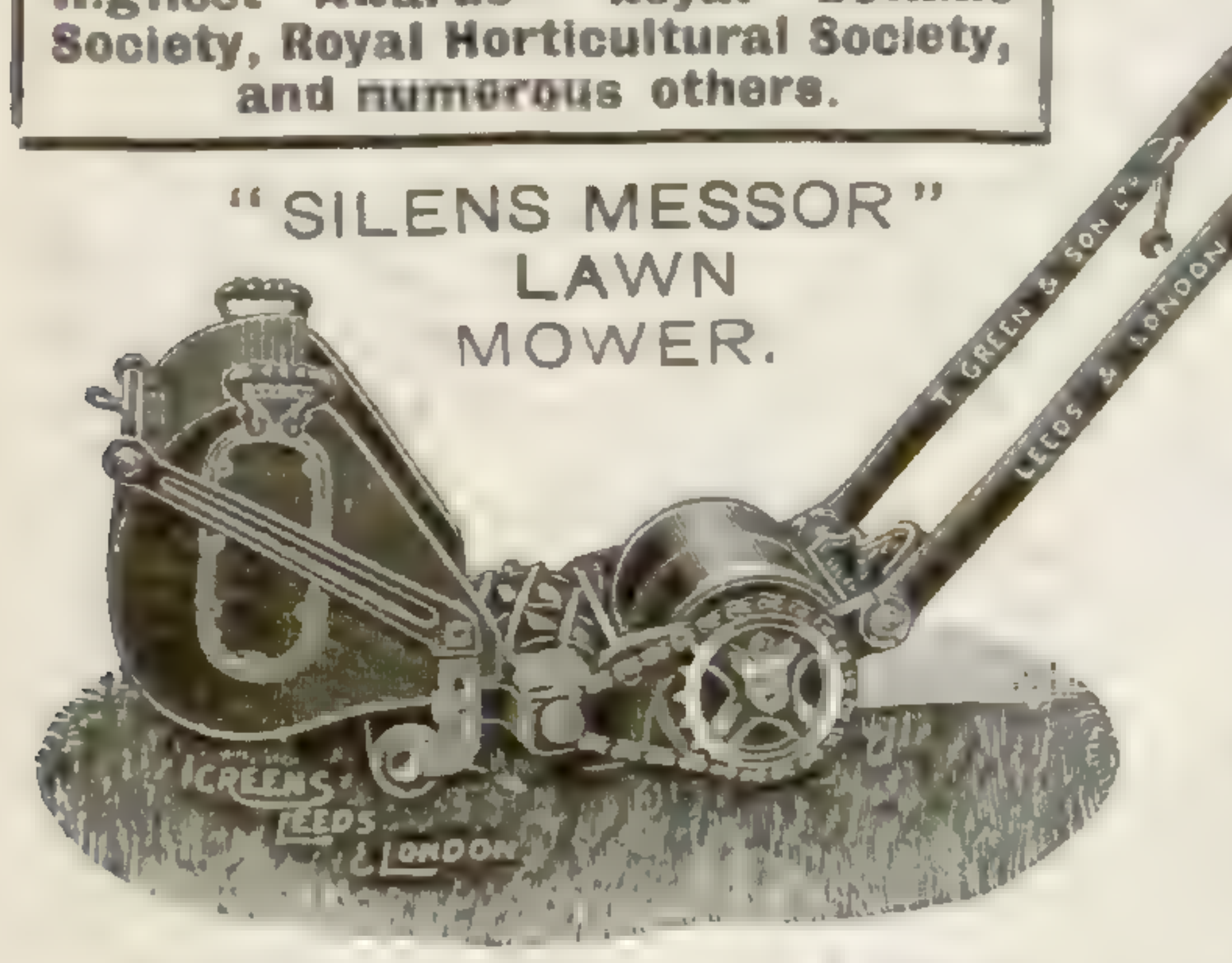
APPOINTED BY ROYAL WARRANT, HORTICULTURAL MACHINE MAKERS TO HIS MAJESTY KING GEORGE V.

GREEN'S LAWN MOWERS

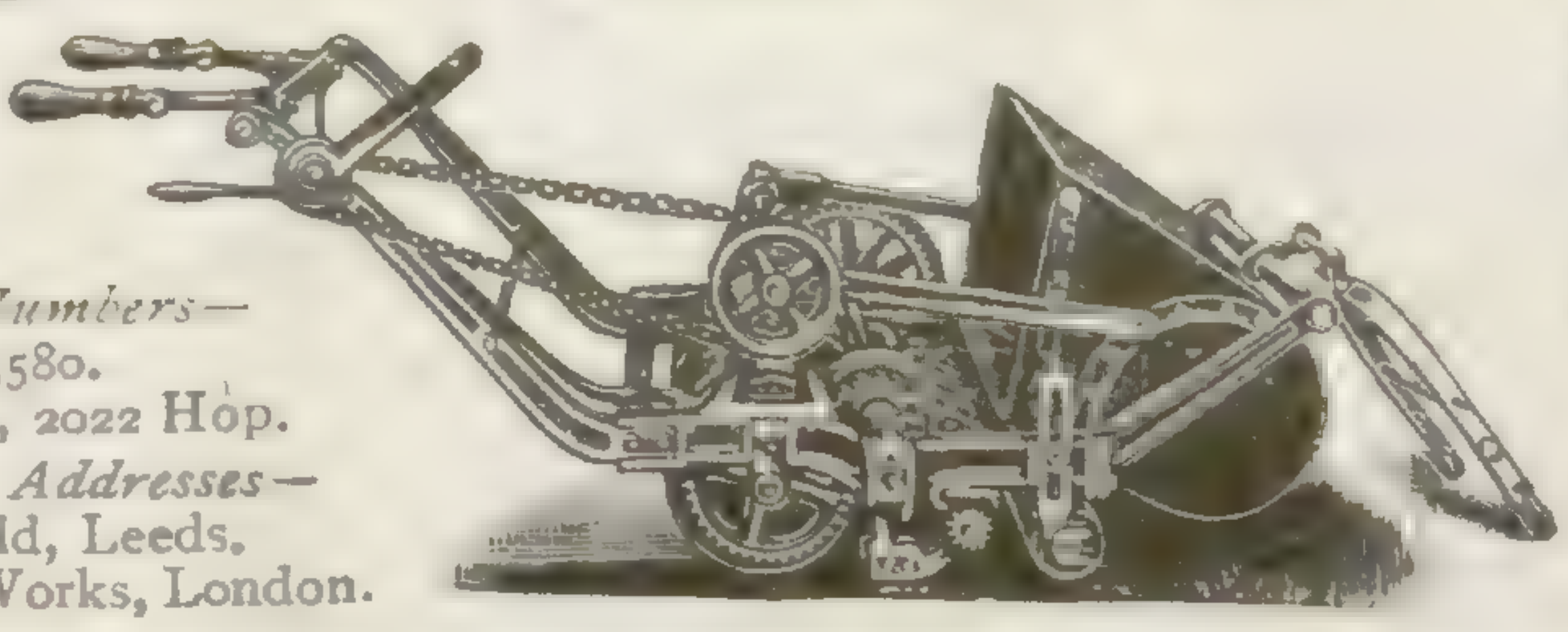
THE FIRST, FOREMOST, and BEST in the WORLD. Hundreds of Thousands are in use. Established nearly a Century.

Highest Awards — Royal Botanic Society, Royal Horticultural Society, and numerous others.

"SILENS MESSOR" LAWN MOWER.



PONY, AND HORSE MOWER
Either "Silens Messor" Pattern or Wheel-Geared.

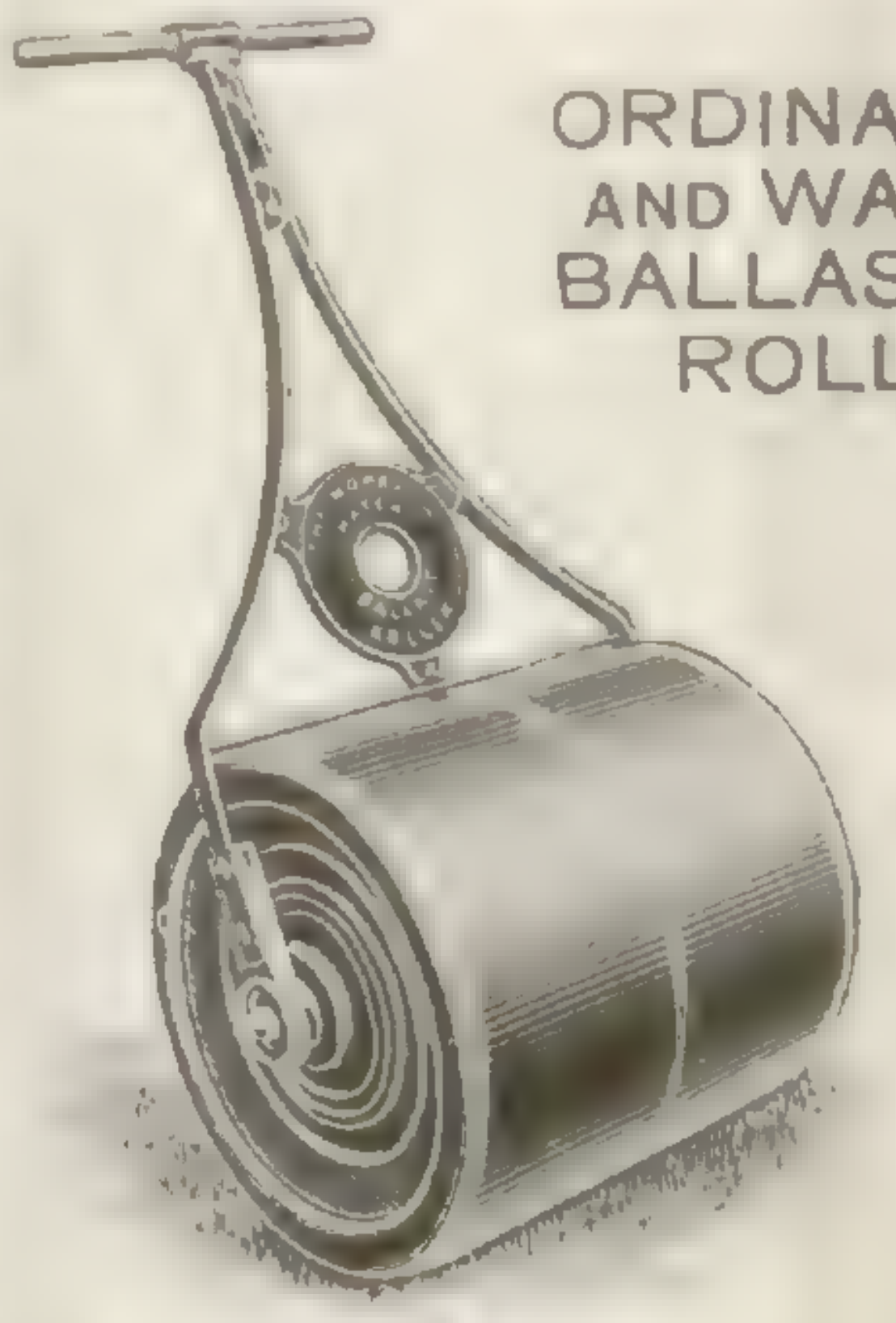


Telephone Numbers—
Leeds, 3580.
London, 2022 Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London.

They may be had of any Ironmonger or Seedsman in the United Kingdom.

Please write for ILLUSTRATED PRICE LIST No. 1 FREE.

ORDINARY AND WATER BALLAST ROLLERS



MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E.

THE FAVOURITE WEED KILLER.

SANDWITH'S
PREMIER
WEED
KILLER

As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for **6/-**; drum, **2/-**. 12 galls. for **16/-**; drum, **6/-**. 20 galls. for **26/8**; drum, **10/-**. 40 galls. for **50/-**; drum, **20/-**.

EITHER LIQUID OR POWDER.

Carriage Paid.

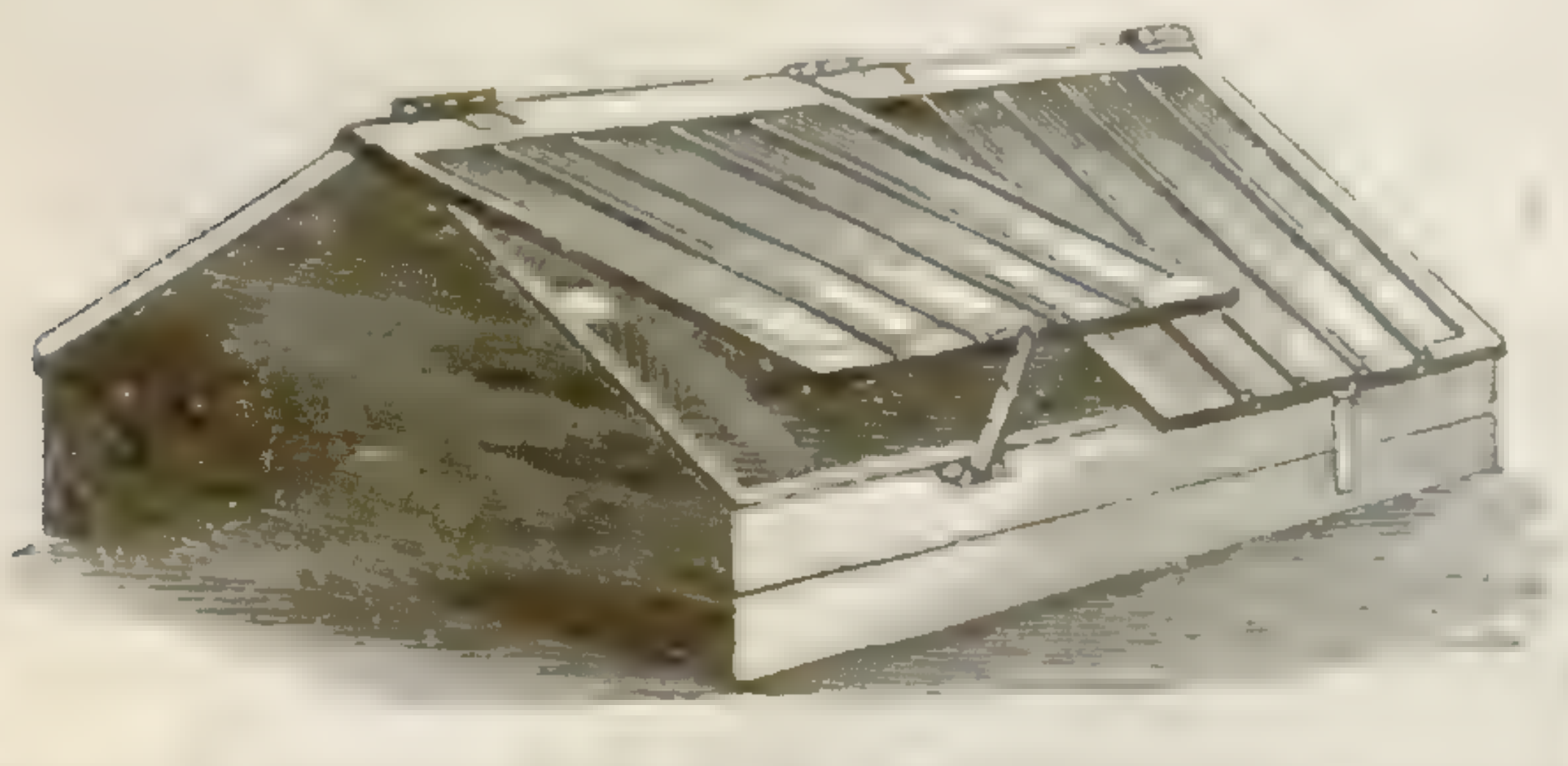
If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,
The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

PORTABLE PLANT FRAMES

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices. Glazed and Painted.		£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. " 4ft. "		2	5	0
6ft. " 5ft. "		2	15	0
12ft. " 4ft. "		4	0	0
12ft. " 5ft. "		4	15	0
12ft. " 6ft. "		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
ROYAL HORTICULTURAL WORKS,
MIDDLETON, MANCHESTER.

WATSON'S LAWN SAND.
(The Only Original.)

Destroys Daisies, Plantains, Dandelions, &c., and at same time invigorates the Grass.

34/- per cwt.; 56lb. Kegs, **18/-**; 28lb. Tins, **9/6**. Canisters, **5/-**, **2/6**, and **1/-**.

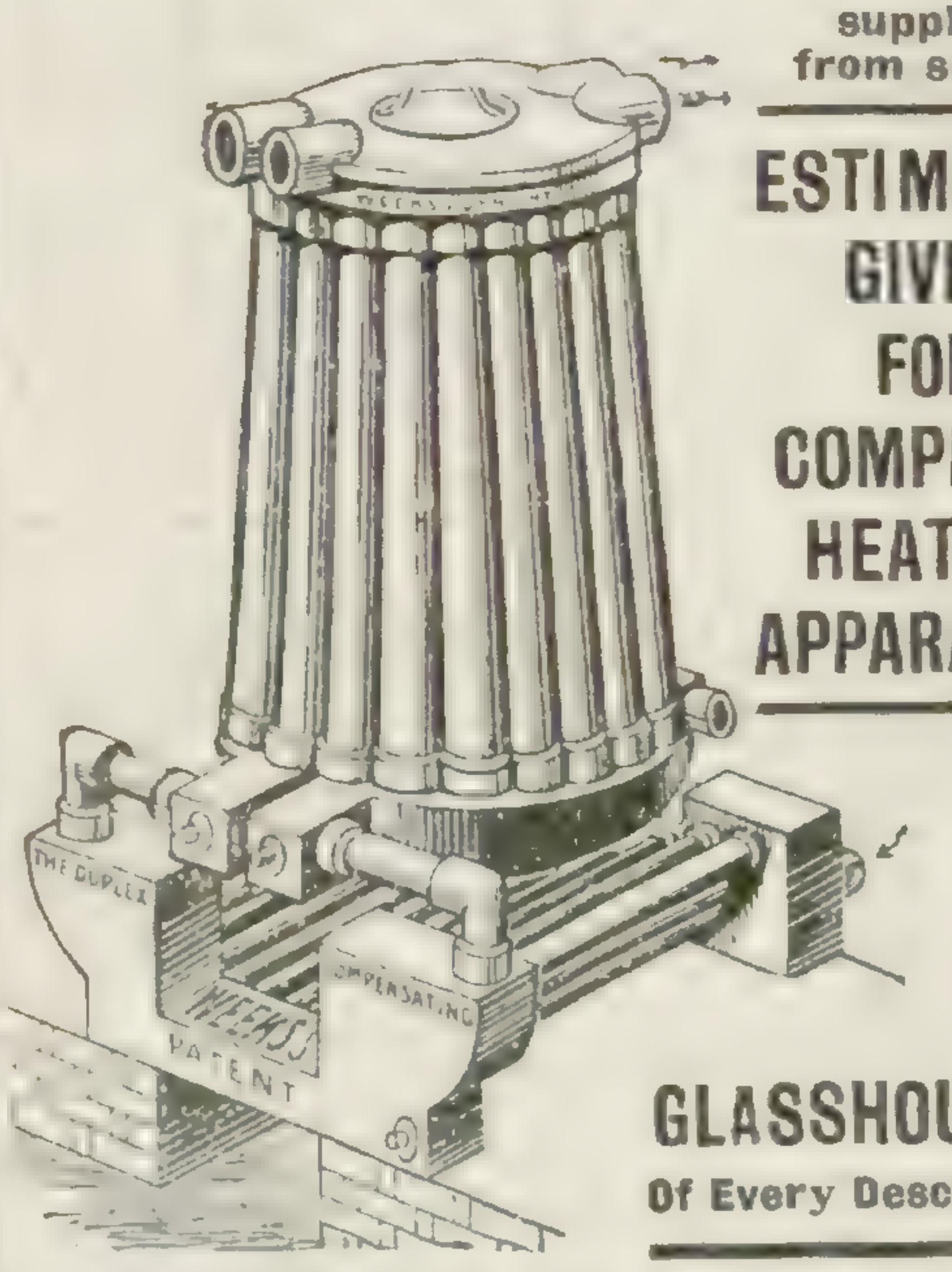
Please see that you get the genuine article.

Sold by Seedsmen and Nurserymen.

A. J. BARBOUR & Co., 8, Upper Fountaine St., LEEDS

WEEKS'S BOILERS

supplied from stock.



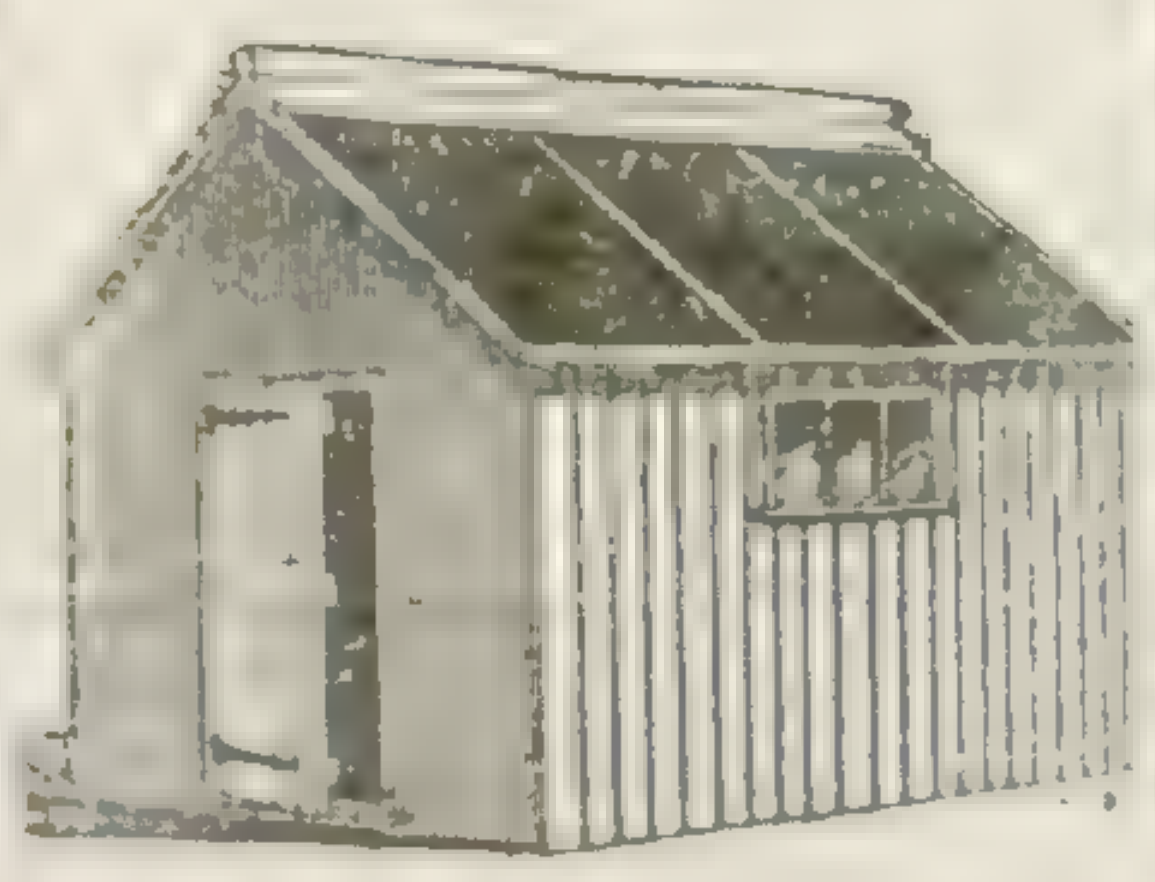
ESTIMATES GIVEN FOR COMPLETE HEATING APPARATUS

GLASSHOUSES.
Of Every Description.

J. WEEKS & CO.,
72, Victoria Street,
WESTMINSTER, S.W.

THE CHEAPEST IN ENGLAND.

NO. 60.



Copyright Registered.

Portable Buildings. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

Sizes.		Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/0

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
Established 70 Years. **BEDFORD.**
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to
EPPS & CO., Ringwood, HANTS.

FLOWER POTS.

SANKEY'S
FAMOUS
GARDEN
POTS

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant — Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

Extracts from 35th annual collection of reports:—

NATIVE GUANO for POTATOES, VEGETABLES, etc.

A. J. Beard, Erdington: "Potatoes, splendid, free from disease. Best I ever had."—H. Chester, Nantwich: "Best onion manure I ever used. Grand for onion fly."

NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc.

J. Cant, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. Frampton, Titchfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED**, 29, New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted

ONCE USED. ALWAYS USED. **The 'PATTISSON' LAWN BOOTS**

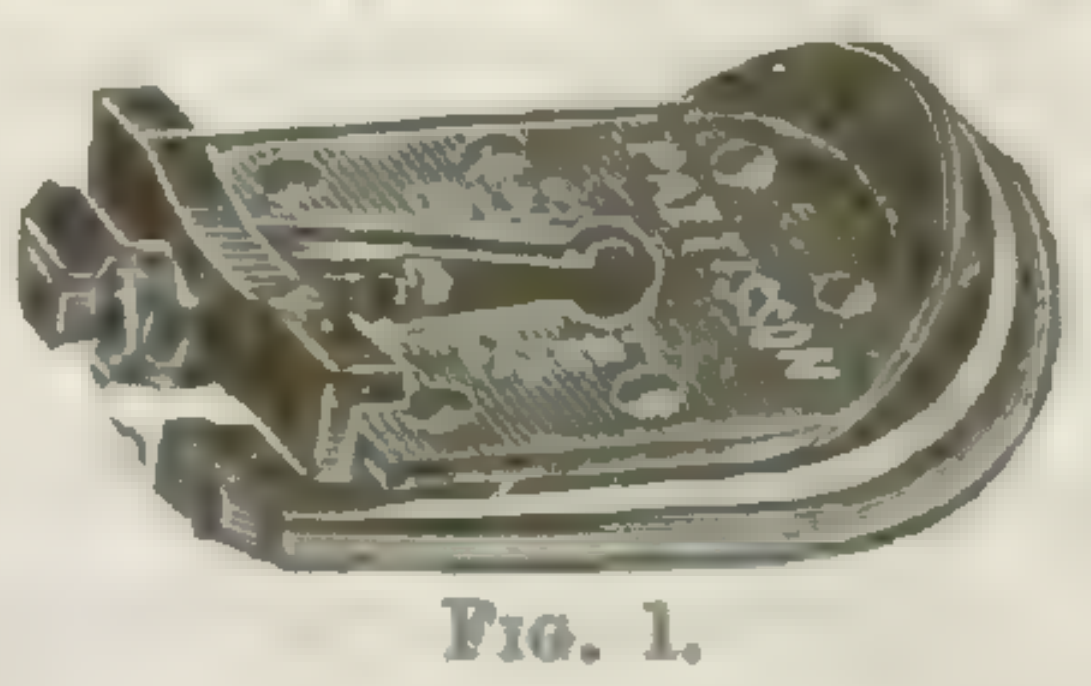


Fig. 1.

Simplest! Strongest! Most Economical!

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS.

Silver Medal—
Royal Horticultural Society.

Hundreds of Testimonials.

The Field says: **"As good as anything that could be devised."**

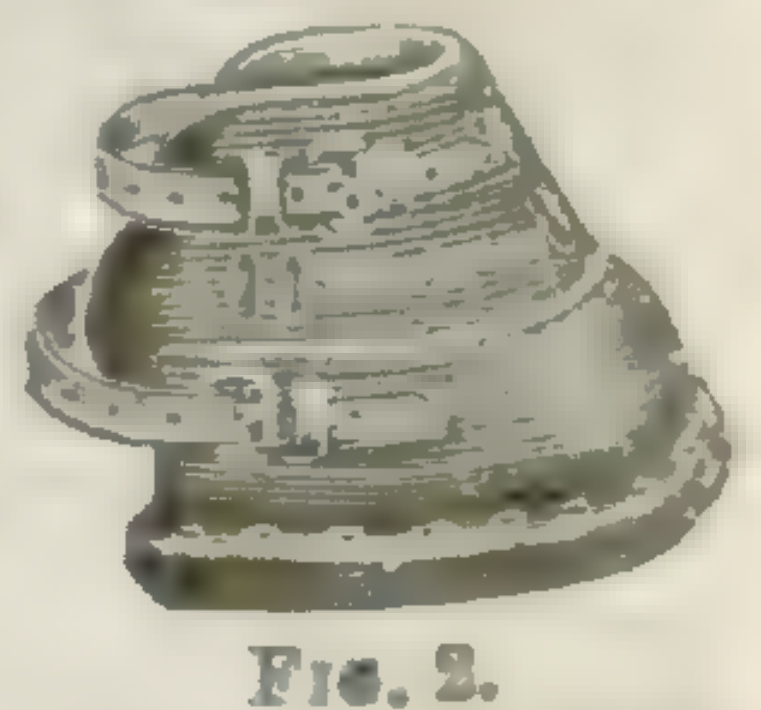


Fig. 2.

Illustrated Price List from—
H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM, S.W.

PEA TRAINERS, The "Paragon" and "Peafold" (patent), made 4ft., 5ft., and 6ft. high, and any length. Prices from 8s. 6d. per set, carriage paid. Write for leaflet. THE PEA TRAINER CO., Bridge Street, Banbridge.

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C. and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 2,997.
Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, APRIL 8, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S VEGETABLE & FLOWER SEEDS of finest selected strains and tested growth. Descriptive Catalogue, with cultural notes, free.

BARR'S BEAUTIFUL LILIES, CANNAS, GLADIOLI, MONTBRETIAS, TIGRIDIAS, ETC., for Spring planting. Catalogue free.

BARR'S Hardy PERENNIALS, ALPINES, AQUATICS, CLIMBERS, ETC., for Spring planting. Descriptive Catalogue, with cultural notes, free.

BARR and SONS, 11, 12, and 13, KING STREET, COVENT GARDEN, LONDON.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, S.W., has a large body of Painters and Glaziers now working at Busbridge Hall, Godalming. They go from thence to The Cedars, Harrow Weald, but can be secured for other Painting Contracts about April 20th, by letter, telephone "201 Western," or wire "Gray, Chelsea, London."

EXHIBITION PANSIES, VIOLAS, CARNATIONS; PHLOXES, and CHRYSANTHEMUMS.—12 Superb fancy Pansies, 3s.; newest and best, 5s. 12 Exhibition Violas, 2s. 6d.; newest and best, 4s. 12 Superb Carnations, 6s.; newest and best, 10s. 12 Yellow or white ground Picotees, 6s.; newest and best, 8s. 12 Superb Phloxes, 4s.; very best, 6s. 12 Early-flowering Chrysanthemums, 2s. 6d.; newest and best, 4s. 12 Best bedding Violas, 2s.; 50 in 10 vars., 4s. 6d.; 100 in 10 or 20 vars., 8s.; all post free, except Carnations in pots, which are car. forward. Lists free. S. PYE, Bowgreave Nursery, Garstang.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 20 Silver Medals, and 3 Silver Cups, 1906-1910.
H. BURNETT,
Carnation Specialist, Guernsey.

GENTIANA VERNA.—12 first-class clumps, 5s., free; 3 Dryas octopetala, 2s.; 2 Draba muralis argenteis O'Kelly, new, 3s.; 2 Butterfly Orchids, 2s.; 3 Bee Orchids, 2s.; 3 Orchis O'Kellyi, new, 5s.; 3 Osmunda regalis, 2s. P. B. O'KELLY, Nurseries, Ballyvaughan, Co. Clare.

FRENCH GARDENING REQUISITES.—Send for our new List, giving full particulars of the Double Glazed System, and numbers of new Labour-saving Appliances. Frames, Cloches, Reed Mats, and every requisite supplied. BOULTON and PAUL, Lim., Norwich.

RICHARDSON'S for GLASSHOUSES and HEATING APPARATUS, for full advertisement see back page. Darlington.

BARNARDS LIMITED, Norwich.—Best House for Fencing, Espaliers, Pergolas, Fruit Enclosures, Iron and Wire Bordering; all descriptions of Training Fittings, Arches, Wire Netting, Stakes, Wire Lattice, Rollers, and all garden requisites. Now is the time to effect improvements in your garden. Catalogues free; inquiries invited.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page ix.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

LOVELY LAWNS.
WEBBS' PRIZE LAWN GRASS SEEDS FOR TENNIS, CROQUET, and GARDEN LAWNS, BOWLING GREENS, etc. No. 1 Mixture, 1s. 9d. per lb., 5s. per gallon, 35s. per bushel. No. 2 Mixture, 1s. 6d. per lb., 4s. 6d. per gallon, 30s. per bushel. Carriage paid.

WEBBS' PRIZE LAWN GRASS SEEDS T. J. F. Haskoll, Esq., Brandon House, writes: "Your Lawn Grass Seeds have been an unqualified success. They came up thick and strong within a very short time of sowing, and have stood hard wear well."

WEBB and SONS, The King's Seedsmen, WORDSLEY, STOURBRIDGE.

BUNYARD'S NEW CATALOGUES.
The following have been recently published, and contain all worthy new varieties. Post free on application.

BUNYARD'S
CLIMBING PLANTS, Illustrated.

BUNYARD'S
HERBACEOUS PLANTS, Illustrated.

BUNYARD'S
HARDY TREES AND SHRUBS, Illustrated.

BUNYARD'S ASPARAGUS LIST.
Plants now ready for delivery.

BUNYARD'S SEEDS, VEGETABLE AND FLOWER, with coloured plates.

GEO. BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.

BEGONIAS, awarded 24 Gold Medals.—Double Seed, 2s. 6d. and 5s. per pkt.; Frilled, Crested, or plain Single, 1s., 2s. 6d., and 5s. per pkt. For price of Begonia tubers, Carnations Border and Perpetual flowering), Cannas, Cyclamen, Blue Primroses, Delphiniums, Pansies, Polyanthus, Lily of the Valley, Violets, etc., please send postcard for copy of our Illustrated Catalogue, free on application.

BLACKMORE AND LANGDON,
Twerton Hill Nursery, Bath.

LAXTON'S FRUIT TREE, STRAWBERRY, SEED, ROSE, HERBACEOUS, TREE, BULB, and SMALL FRUIT CATALOGUES, with full illustrations and descriptions, gratis on application.

LAXTON BROTHERS, Bedford.

PERENNIALS, UNIQUE COLLECTION,
including
ALPINES AND AQUATICS.
Also RARER SHRUBS, HIMALAYAN RHODODENDRONS, and Others.
Write for Catalogue. G. REUTHE, Keston, Kent.

DAHLIAS.
CACTUS, PÆONY, POMPONE, and SHOW, for GARDEN or EXHIBITION.
Prices and Catalogues free on application.

J. T. WEST, Tower Hill, Brentwood.

AMERICAN TREE CARNATIONS, best varieties, strong young plants, from pots, 3s. per doz., 20s. per 100; larger bushy plants, in 3in. pots, 5s. 6d. doz.; flowering plants, 8s. per doz. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

18 ALPINE PLANTS, 3s. cash; 50 Alpine plants, 16s. Send for Catalogue (1,000 varieties). Hardy Ferns, named, 100, 10s. "ENGLISH HOME OF ALPINE PLANTS," Hessenford, Cornwall.

CLAY'S MANURES, CRUSHED BONES
(See page iv.)

CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD Stourbridge.

SUTTON'S SUPERB BEDDING ASTERS.
A splendid selection of dwarf varieties, specially adapted for producing masses of colour in beds.
Scarlet, delicate Rose, bright Rose, Blue, Lilac (Mauve), and White, each per packet, 1s.
Collection of the six colours, separate, 5s.

SUTTON'S SUPERB BEDDING STOCKS.
Selected with great care expressly for bedding purposes.
Scarlet, White, Blue, Pink, Carmine-pink, Yellow, Peach-blossom, Purple, Terra-cotta, Blush Rose, each per packet, 1s.
Collection of the ten varieties, separate, 7s. 6d.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

KELWAY'S LATEST SUCCESS.
GRAND PRIX AND GOLD MEDAL, Japan-British Exhibition, White City. Unanimous award of the International Jury to Kelway and Son for Pæonies, Delphiniums, Gladioli, Pyrethrums, etc.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

THE KELWAY ARTISTIC BORDER ensures a garden of enduring beauty from early Spring to late Autumn, with a minimum of cultivation, and without the trouble of constant digging or bedding-out. The plants composing the border are selected by experts, and include some of Kelway's improvements in Pæonies, Delphiniums, etc. Send dimensions of spaces to be filled, or for Kelway's "Gardens of Delight," 6d. The cost of this border is 15s. or 25s. for every 10 square yards. Carriage and package free for remittance with order.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.

NOW IS THE TIME TO PLANT KELWAY DELPHINIUMS, which have been improved almost out of recognition in the past twenty years. They produce plants ranging in height from four to eight feet, exceptionally hardy and with a rich profusion of choice blooms in all the shades of that valuable colour, blue.

Choice named varieties: 24s., 34s., and 58s. a dozen. Carriage and package free for remittance with order.

The celebrated present-day Delphiniums, and nearly all the best well-known varieties shown at exhibitions, originated in Kelway's Langport Nurseries.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

IRON and WIRE FENCING for GARDENS, Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free. BOULTON and PAUL, Ltd., Manufacturers, Norwich.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.

XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.

XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown both poisonous and non-poisonous are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N.S. or Florist for Richards' small pink list.

G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Border and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

SEEDS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Select Seeds.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

SAMUEL M'GREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
Illustrated Catalogue free.

RHODODENDRONS.

DICKSONS & CO.,
1, Waterloo Place, Edinburgh.
Pink Pearls, Ponticums, choice Hybrids. Write.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

PRIMULA OBCONICA GIGANTEA GRANDIFLORA.

The most beautiful Free and Hardy Perpetual Greenhouse Plant grown.

ONCE IN FLOWER ALWAYS IN FLOWER.

We are NOTED for having the most — SUPERB Strain in commerce. —

SEED.

Mixed colours, also Compacta and Fimbriata, mixed, 1s. per packet; separate colours of Purple, Rose, Lilac, Deep Red, Crimson Scarlet, Pale Lilac, and Crimson (fringed petals), **2s. per packet; double flowering, including Pale Mauve and Rose, 2s. per packet. Instructions as to sowing with each packet.**

PLANTS, 3s., 5s., 7s. 6d., 10s. 6d., and 15s. per doz., according to size.

W. A., Esq., Reigate, Surrey, writes:—

I had a packet of seed from you last year, and am pleased to inform you that I have blooms measuring two inches and more across each individual flower. They are the best strain I have ever seen, both for variety of colours, and substance of bloom.

WM. ARTINDALE & SON,
Nether Green Nursery,
SHEFFIELD.

For 3 penny stamps we will send you our Catalogue of Plants, which is not merely a price list, but literature which gives all the cultural notes of plants therein mentioned. We have received hundreds of testimonials commenting on the value of this book.

OUR SEED CATALOGUE WILL BE SENT FREE ON APPLICATION.

AMERICAN TREE CARNATIONS

The Newest and Best Varieties.

Strong, healthy and well-rooted plants only supplied

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

ELLISON'S BEGONIAS are absolutely the best strain; 30 Begonias, all different and named, 10s. 6d.; Bedding Begonias, 9s., 12s., 15s. 100.

GERBERA, Adnets Hybrids, for which I was awarded Silver-gilt Medal R.H.S. March 14th. Seed, 1s. 6d.; Plants, 10s., 15s. doz. ELLISON.

LILIUMS.—24 choice Liliums, all different, 10s. 6d.; Gloxinias, 6, different, 2s.; Cannas, 10, do., 4s.; 100 German Iris, 10 sorts, 4s. ELLISON.

1,000,000 BEGONIAS. Single, 1s. 6d. to 7s. 6d.; Dble., 2s. to 15s. doz.; Tuberoses, Arum Lilies, 1s. doz.

LARGE FLOWERING GLADIOLI, 3s., 5s. 100; Amaryllis, 10s., 15s., 20s. doz.; Gladioli, early, 1s. 100. ELLISON, 57, West Bromwich.

SEED POTATOES.

	[illegible]	[illegible]		[illegible]	[illegible]
Myatt's ASHLEAF	4/6	8/-	LANGWORTHY	3/-	5/-
DUKE OF YORK	4/-	7/-	SENSATION	3/-	5/-
EARLY ROSE	4/-	7/-	BRITISH QUEEN	2/6	4/-
Sir J. LLEWELLYN	4/-	7/-	ROYAL KIDNEY	2/6	4/-
EARLY PURITAN	4/-	7/-	FACTOR	2/6	4/-
EPICURE	4/-	7/-	D. of CORNWALL	2/6	4/-
Sharpe's EXPRESS	3/6	6/-	NORTHERN STAR	2/6	4/-
SATISFACTION	3/6	6/-	EVERGOOD	2/6	4/-
MAGNUM BONUM	3/6	6/-	UP-TO-DATE	2/6	4/-
PRESIDENT	3/-	5/-	SCOT. TRIUMPH	2/6	4/-
K. EDWARD VII.	3/-	5/-	ARTICHOKES	2/6	14lb.

14lbs. of any above for 1/-, bags free. Cash with order.

Send for Illustrated List of Novelties, Sweet Peas, Flower and Garden Seeds, French Gardening, etc.

ADDRESS IN FULL—

J. W. CROSS, Old Grammar — School, — WISBECH.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

TAKE NOTICE.

Intending planters should send for the STANCLIFFE CATALOGUE OF TREES, &c.

Our Stocks, which are grown on the highest and most exposed hills of Derbyshire, are in fine condition, and are sure to give satisfaction. Note the prices before ordering elsewhere.

Rockery Stone, 1/- per ton.

THE STANCLIFFE ESTATES CO., LTD.,
DARLEY DALE, DERBYSHIRE.

ORCHIDS

EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS**, and an endless variety of Choice **ORCHIDS**.

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

CABBAGE PLANTS, extra strong. Ellams, Mein's, Offenham, First and Best, Enfield, Battersea, 3s. 1,000, 12s. 6d. 5,000 lots; Drumheads, 2s. 6d.; Red Cabbage, Cos Lettuce, Tripoli Onion, 4s, 1,000, on rail; or 1s. 100, post free. List free. C. HIGHT, Cranleigh, Surrey.

BENTLEY'S

WEED DESTROYERS

Utterly annihilate Weeds, Moss, Dandelions, and all other Weeds on Garden Walks, Carriage Drives etc.

HAVE THE LARGEST SALE IN THE UNITED KINGDOM!
ARE THE MOST POWERFUL MANUFACTURED!
ARE THE MOST PERMANENT IN EFFECT!

LIQUID (Poison).

Double Strength (1 to 50).

				£	s.	d.
3 gallons,	to make	153	gallons ...	£0	10	0
6	,,	,, 306	,, ...	0	18	0
12	,,	,, 612	,, ...	1	13	0
20	,,	,, 1,020	,, ...	2	7	6
40	,,	,, 2,040	,, ...	4	12	6

Special Concentrated Strength (1 to 80).

				£	s.	d.
3 gallons,	to make	243	gallons ..	£0	14	6
6	,,	,, 486	,, ...	1	7	0
12	,,	,, 972	,, ...	2	6	0
24	,,	,, 1,944	,, ...	4	10	0

BENTLEY'S DAISY KILLER.

(Lawn Sand.)

Completely eradicates Daisies, Moss, and other Weeds which infest **Lawns, Tennis Courts, Croquet Grounds, Bowling Greens, Golf Courses, etc.,** and afterwards improves the tone and colour of the sward.

1 ton, **£19**; 10 cwts., **£9 15s.**; 5 cwts., **£5**; 1 cwt., **£1 1s.**; 56 lbs., **12s.**

TINS, **5s., 2s. 6d.,** and **1s.** each.

Carriage paid on **7s. 6d.** orders and upwards.

WHOLESALE MANUFACTURERS,

JOSEPH BENTLEY, LIMITED,
Chemical Works,
BARROW-ON-HUMBER, HULL.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.

Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

Rhododendrons.

Crimson, White, Pink. 250 Choice Named Varieties, fine foliage, well budded, for potting or planting. 1 to 1½ ft., 1½ to 2 ft., 2 to 2½ ft., 2½ to 3 ft., 3 to 4 ft., 4 to 5 ft., 5 to 6 ft., 6 to 7 ft. List of sorts and prices on application; many thousands to offer. Standards in all sizes.

All Home-grown. Inspection invited.

F. STREET, Heatherside Nurseries, CAMBERLEY.

SEED POTATOES, Scotch, Irish, Midlands, Northerns; largest and best stock in West of England, both earlies and lates. Apply to OLIVER BROS., Importers, Exeter, and Barnstaple.

Sales by Auction.

SALES NEXT WEEK.

Monday next, April 10, at 12 o'clock.—Herbaceous, Border, and Alpine plants in variety, Japanese Liliums, and numerous other hardy bulbs and roots for spring planting.

At 1.30 o'clock.—1,000 Roses in large assortment; Fruit Trees in variety, Rhododendrons and Azaleas.

WEDNESDAY NEXT, April 12, at 12 o'clock.—Large quantities of hardy bulbs, roots, and corms for spring planting. New and rare perennials and Border plants.

At 1.30 o'clock.—4,500 Roses, Standard, Dwarf, Climbing, T., H.T., and H.P., including newest and best varieties.

At 2 o'clock.—400 c/s Japanese Liliums, as received, preceded at 12 o'clock by thousands of miscellaneous bulbs and plants.

At 3 o'clock.—450 Azaleas in variety, 300 Aspidistras, also Rhododendrons and Camellias. 100 lots of Ornamental Palms and greenhouse plants, Standard Bays, etc.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view morning of sale, and catalogues had.

ROSE TREES.

SHRUBS. BULBS.

SALES BY AUCTION

ON

MONDAY and WEDNESDAY

Next, at 12.30.

STEVENS' AUCTION ROOMS,

Established 150 Years,

38, King St., Covent Garden, London, W.C.

Catalogues on Application.

FOR SALE, IN GUERNSEY.—A compact little BULB-GROWING ESTATE of about 4 acres, splendidly situated on the south coast of the island, and well stocked with the best forcing varieties of daffodils, etc.; also a small Orchard of Apple and Pear Trees in bearing. The property contains glasshouse 150 x 18 heated, large shed, pumping mill, and an unlimited supply of water. Write Box 154, c/o Messrs. R. F. White and Son, General Advertising Agents, 33, Fleet Street, London, E.C.

COMPACT FREEHOLD NURSERY FOR SALE, comprising six-roomed House, Bath-room, Kitchen and Scullery, 13 GREENHOUSES, 120 FEET LONG each, all heated by four Horizontal, Tubular Boilers; about 3½ acres of land, more or less, with stabling, and various sheds. Apply W. C. VIRGO, Moat House, Welling, Kent.

CARNATIONS, DAHLIAS

ROSES IN POTS

AND OTHER FLORISTS' FLOWERS.

Catalogues on application to

CHARLES TURNER, The Royal Nurseries, SLOUGH

PERPETUAL-FLOWERING CARNATIONS.

The following choice collection packed free for **4s. 6d.**

Enchantress (blush)	Mrs. Burnett (salmon)
White Perfection	Rose Pink Enchantress
Britannia (scarlet)	Mikado (mauve)

Twelve choice varieties, all different, **7s. 6d.**

Splendid Young Plants. List free on application.

Elsenham Carnation Nursery, Elsenham, Essex.

CARNATIONS! CARNATIONS!!

For Immediate Planting.

As I am the possessor of the finest Collections of these flowers extant of all classes, I am in a position to treat intending planters on the most favourable terms.

1 Doz. for 6/-, 7/-, 8/-, or 10/-, free for cash with order.

CATALOGUE FREE.

CHARLES BLICK, Warren Nurseries, HAYES, KENT.

HOLLYHOCKS. CHOICE DOUBLE-FLOWERED. Strong plants to bloom this summer. White, Yellow, Rose, and Crimson; true to colour. Per dozen, **4/-**; six, **2/3**; 50, for **15/-**; Carriage Paid. DANIELS & SON, WYMONDHAM, NORFOLK.

VIOLETS.—Strong-rooted cuttings, all at 2s. 3d. doz.; 15s. 100; Admiral Avellan, Rose Perle, De Parme, Astor, Marie Louise, Semperflorens, J. Raddenburg, Princess of Wales. Clumps, 2s. doz.; 10s. 100; divisions, 1s. doz.; 5s. 100. VIOLET FARM, Shripney, Bognor.

NEW PLANTS FROM CHINA

In our **HERBACEOUS AND ALPINE PLANT** Catalogue, just issued, we offer for the first time a number of

FIRST CLASS NOVELTIES

secured by our Collector, **Mr. GEORGE FORREST,** in the high **ALPS OF YUNNAN, CHINA.** These plants, of great beauty and variety, can be got

ONLY FROM US,

and they form an introduction to what is probably the **MOST WONDERFUL COLLECTION** of hardy plants at present existing in the country if not **IN THE WORLD.** And yet the prices are quite absurdly low.

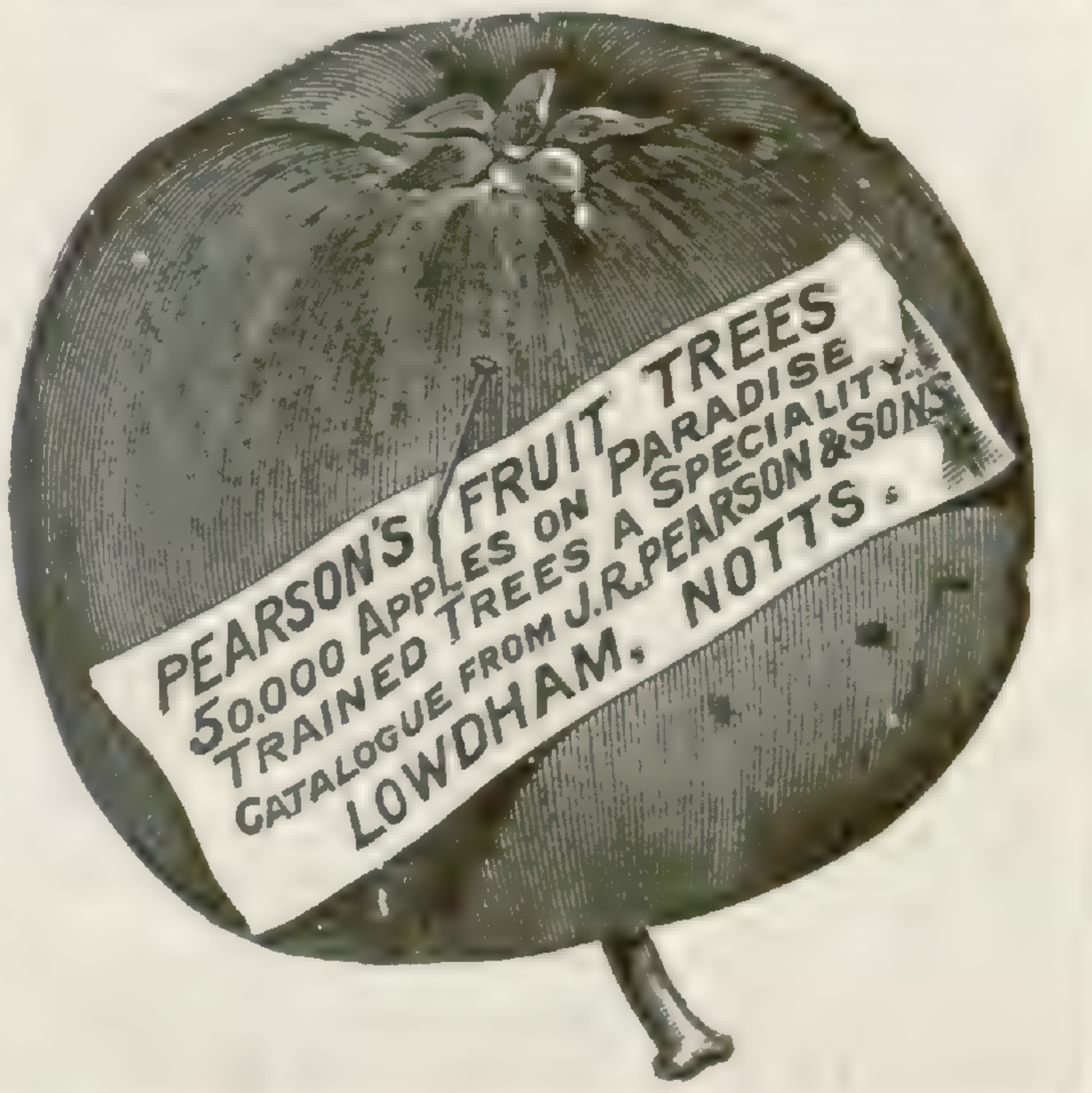
— CATALOGUE FREE. —

BEES LTD. Dept. 6, MILL ST., LIVERPOOL.

CARNATIONS, PINKS, AURICULAS.

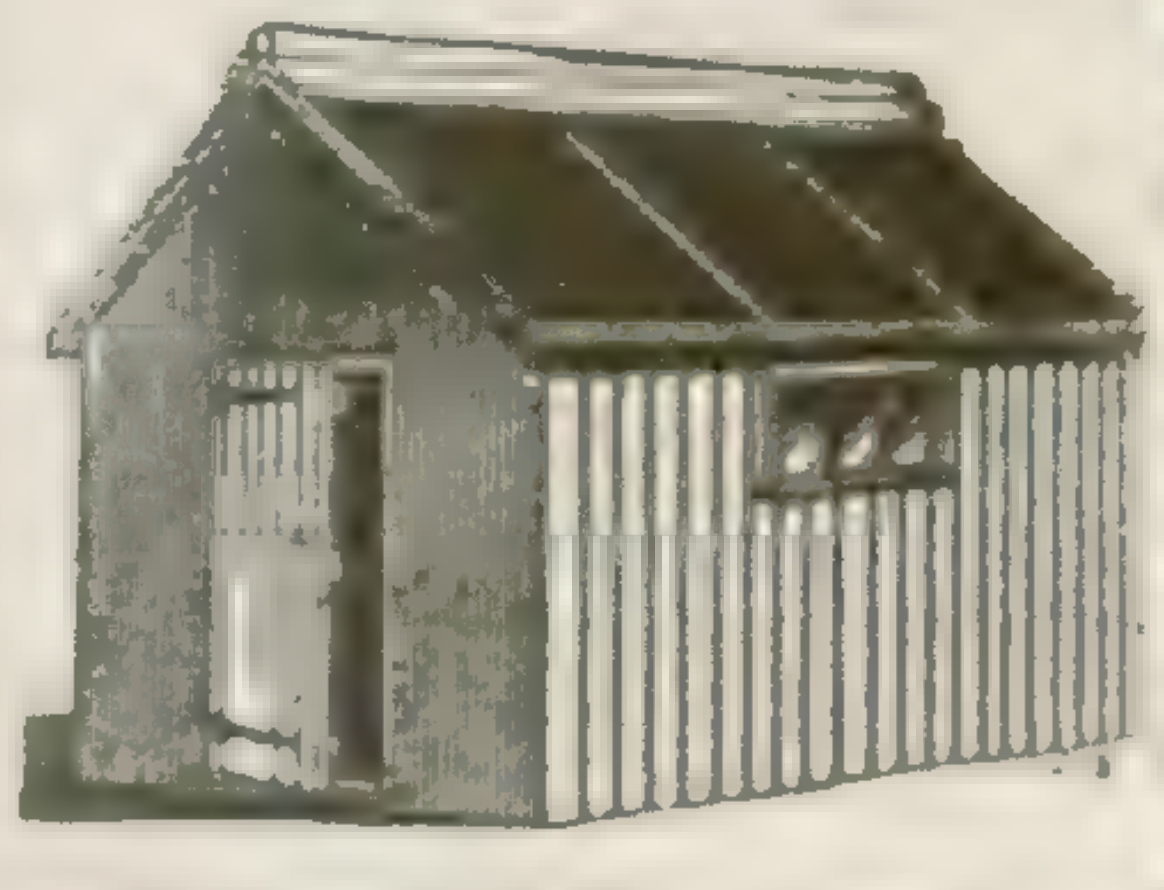
DOUGLAS for the best old and new varieties in all classes, and the finest quality in the world. Malmaison Carnations, new and old, **7/6** per dozen. Border, **6/-** to **12/-** per dozen. Tree, American, and English, **7/6** to **15/-** per dozen. Auriculas, Show, **21/-** to **30/-** per dozen. Alpine Auriculas, **9/-** to **21/-** per dozen. Carnation, Auricula, Pink, and Polyanthus seed, **1/0** and **2/6** per packet. **CATALOGUE FREE.**

J. DOUGLAS, Bookham, LEATHERHEAD.


PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J.R. PEARSON & SONS
LOWDHAM, NOTTS.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

PORTABLE BUILDINGS. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

Sizes.		Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.

Largest Makers of Portable Buildings,

ESTABLISHED 70 YEARS. *BEDFORD.*

Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

Price 7s. 6d. net. By post, packed in box, 8s.

THE FLOWER GARDEN.

The Formation and Management of a Garden, and the Culture of Outdoor Flowers and Plants.

W. H. and L. COLLINGRIDGE, 148 and 149, Aldersgate Street, London.

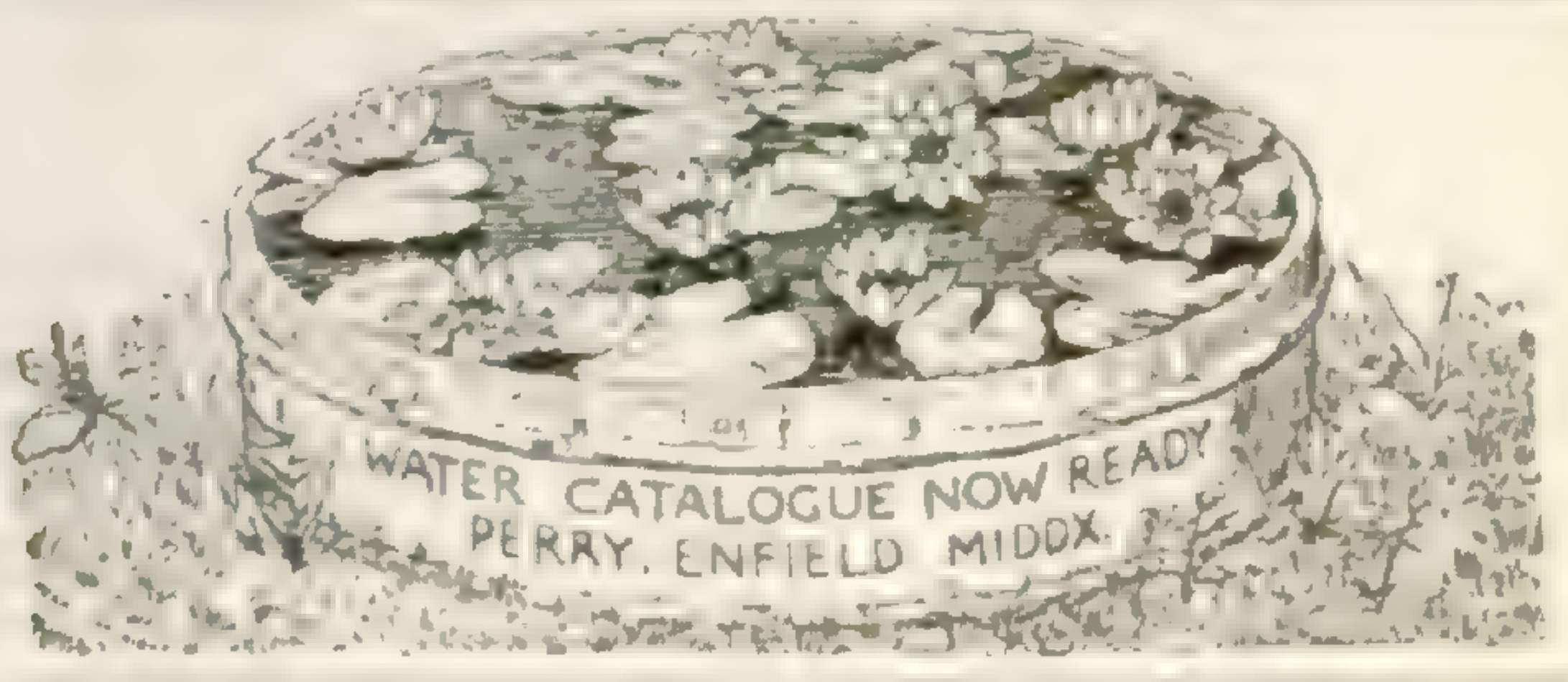
DO YOU WANT TO KNOW

The best new Chrysanthemums, Michaelmas Daisies, Carnations, Dahlias, Fuchsias, Pelargoniums, Zonal and Ivy Geraniums, Sweet Peas and other Seeds.

Send for Catalogue free.

H. J. Jones' Nurseries, Ltd.,

RYECROFT, LEWISHAM.



STALKER'S Forest Trees, Fruit Trees. Roses, Bulbs, and Seeds

Are known all over the world, and cannot be surpassed for hardiness and quality.

Famous for Quality and Cleanliness.

D. STALKER & SON,

Government Contractors,

Catalogues Free. NAIRN, N.B.

BEGONIA COLLECTION.—6 doubles, 6 singles, 3 double fringed, 3 single fringed, 18 grand tubers, in 6 distinct colours, separately packed, 2s. 6d., post free.

H. HASSALL, 136, Shepherdess Walk, London, N.

FOR SALE, SURPLUS STOCK, 1 bus. Early Long Pod Beans, ½ bus. Gradus, ½ bus. William Hurst, 1 bus. Daisy Peas; the whole for £6, cash with order. TURRILL AND DEW, Seed Stores, Woodstock.

ORCHID PEAT.—Hardwood Brown Fibrous, RHODODENDRON and DUST PEAT, SPHAGNUM MOSS.

Apply C. HALL, 1, Worgret, Wareham, Dorset.

GLASS. | GLASS. | GLASS.

NICHOLLS & CLARKE, LTD

Shoreditch, LONDON.

PAINT. Our List of PAINTS, COLOURS, VARNISHES and BRUSHES on Application.

When sending please cut out this advt.

THE LANGUAGE OF FLOWERS

"Feed us, we pray you, with

CLAY'S FERTILIZER

and our rare beauty and fragrance will repay you."

It is SAFE, CERTAIN, QUICK-ACTING and ECONOMICAL.

Flowers Grown with CLAY'S FERTILIZER catch the Judge's eye.

CLAY'S LONDON FERTILIZER TRADE MARK.

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags** :—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK AS AT SIDE.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Manure Manufacturers and Bone Crushers, **Stratford, London, E.**

WARE'S LOVELY DAHLIAS

AWARDED 25 GOLD MEDALS

Special Collection of

CACTUS DAHLIAS

For Garden Decoration & Exhibition.

Alexander	Deep crimson.
Brigadier	Bright Crimson.
Crescent	Coral red, yellow base
Diavalo	White, striped crimson.
E Cadman	Indian red.
Echo	Tyrian rose.
Electric	Yellow, tipped white.
Evening Star	Bright terra-cotta.
Elsa Ellrich	Pure white
Flame	Orange scarlet.
Mrs. W. Baxter	Crimson shade.
Mrs. J. Emberson.	Pale lemon.
Mrs. Ed. Mawley.	Clear yellow.
Glory of Wilts	Bright golden yellow.
Rosa Starr	Bright lilac pink.
Teutonic	Amaranth crimson.
Wm Marshall	Rich orange, white.
Nellie Reading	Deep crimson, tipped

12 for 6/-

The Set of 18 for 9/-. Post Free.

In strong, sturdy, hardened off plants.

For New Pæony-flowered and other sections see Catalogue.

BEGONIAS.

A choice collection of **Doubles** and **Singles** for [illegible] in **Bedding, Greenhouse,** and **Exhibition.**

BEDDING PLANTS. An immense stock of **Geraniums, Marguerites, Calceolarias, Verbenas, Stocks, Asters, Lobelias,** &c., &c.

CATALOGUE free by post from Dept. 2.

THOS. S. WARE, LTD.,

FELTHAM.

NEW ROSES

WM. PAUL & SON, WALTHAM CROSS, Ltd.,

Beg to offer strong plants of the following New Roses raised by them at the Waltham Cross Nurseries :—

Varieties of 1910.

Alice Cory Wright (H.T.), Dwarfs, **7/6** and **10/6** each.

Elsie (Wichuraiana, Rambler), Dwarfs, **7/6** each.

Juliet (Hybrid Briar), Dwarfs, **10/6** each; Standards and Half-Standards, **10/6** each.

Portia (H.T.), Dwarfs, **7/6** each.

Varieties of 1909.

Althea (H.T.), Dwarfs, **3/6** each; **36/-** per dozen.

Cynthia (H.T.), Dwarfs, **3/6** each; **36/-** per dozen; Standards, **5/-** each.

Fairy (Multiflora Rambler), Dwarfs, **2/6** each; **24/-** per dozen.

Margaret (H.T.), Dwarfs, **3/6** each; **36/-** per dozen.

For full descriptions of the above, and for New Roses of other raisers and general collection of Roses, see Rose Catalogue, post free on application.

Pauls' Royal Nurseries and Seed Warehouse,

WALTHAM CROSS, HERTS.

BUNYARD'S FRUIT TREES

The Best Quality and Largest Selection at Moderate Prices.

WRITE FOR CATALOGUE.

GEO. BUNYARD & CO., LTD.,

Royal Nurseries,

MAIDSTONE.

VEGETABLES.

Best Book on the Culture, Staging, &c.

Invaluable to Gardeners and Amateurs who wish to know the best Methods of Cultivation, and the best Kinds and Varieties of Vegetables for a regular supply. A work of necessity for all who wish to be successful as Growers or Competitors. Most favourably received by the Horticultural and General Press.

∴ VEGETABLES FOR ∴ HOME AND EXHIBITION

By EDWIN BECKETT, V.M.H., F.R.H.S.,

The Gardens,

Aldenham House, Elstree, Herts.

Price 5/- net. Post Free 5/6.

MESSRS. PULHAM & SON

Have been honoured with a Warrant of Appointment as

∴ ROCKWORKERS ∴

to His Majesty King George V.

They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,

71, Newman Street,

LONDON, W., and BROXBOURNE.

Our Work has stood the test of time.

NEW DELPHINIUM

REV. E. LASCELLES.

Unanimous "Award of Merit," R.H.S.

This grand Delphinium is acknowledged by experts to be the finest in commerce. Its striking appearance stamps it above all others. We are now offering strong flowering plants at **5/-** each.

Large ground roots of our unrivalled strain of Delphiniums, **12/-** per dozen.

Extra selected Seed saved from our Novelties, **2/6** per packet.

ALFRED A. WALTERS,

KENSINGTON NURSERIES, BATH.

DOUBLE PRIMROSE PLANTS.—Crimson, 2s. 6d.; mauve, 2s.; yellow, 1s. 6d.; white, 1s. 3d. doz.; very rare double crimson Polyanthus, 9d. each. Mrs. LLOYD, Croghan, Boyle, Ireland.

CANTALOUP MELON PLANTS, in 60's, ready for their final quarter, specially grown for frame culture, 3s. per doz., 22s. per 100. FOR AQUATICS, Allithwaite Grange, Lancs.

25 EARLY GARDEN CHRYSANTHEMUMS, double or single, truly named, 2s. 6d. List. Exchange for Pyrethrums or Herbaceous Plants. RICHMOND NURSERY, Ossett, Yorks.

VOL. LIV.—No. 2,997. SATURDAY, APRIL 8, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

What is a Flower?

In these happy days for flower lovers we live amid such a wonderful wealth of bloom of such marvellous diversity of colour, make, habit, and form, that their very abundance distracts our attention from the underlying miracles which each and every one embodies. It is, for instance, practically entirely outside popular knowledge that every one of the blossoms is built up of modifications of the green leaves which accompany them, and that, although the utter transformation which we now behold is the outcome of æons of progress and incalculable small accumulated modifications, there is still a tendency to revert to the original foliar types in many flowers, as exemplified in green roses, dahlias, and innumerable malformations which every now and again crop up. From the poetical point of view, indeed, our query may be answered to the effect that a flower is really a nuptial bower contrived on the most æsthetic lines that Nature has been able to design. The rosy, golden, or azure chalice which we so much admire, is a complexly arranged cosy home, and ornate nest, within which a second generation is conceived, nurtured, and sheltered until, in the shape of a matured seed, it is capable of being launched into the world to play its part in the perpetuation of its tribe. Clearly, however, as some of the simplest and most primitive flowers are concerned, this all-essential office may be performed without any ornate adjuncts at all; and in the ferns, which preceded flowering plants proper, the requisites are so inconspicuous as to be absolutely microscopic, though equally efficacious in results. In those distant days the world was rich in both vegetable and animal life, and, so far as human comprehension goes, it got on very well in the absence of brilliant flowers, and might, therefore, have continued to reproduce its generations to this day without their aid. That inscrutable upward and onward creative impulse, however, which must have lain innate in the simplest primæval germ, was ever active, and, bit by bit, the microscopic pseudo flowers increased in size in some ambitious members of the plant world, the green colour varied into tints attractive to insects, for whose benefit no doubt honeyed lures were also developed, and ere long the modified leaves began to shape the tiny nests and tinier organs, and to contrive newer and newer modes of fulfilling their functions as varied environments and varied visitors of the insect world exercised selection on varied lines. A start once made, the brightest colour, or the largest flower, or accumulation of flowers, was the most visited, and set the most seed, and so, step by step, the world became filled with ever-increasing floral beauty, ranging from the simplest types to the most complex and resplendent. We must therefore regard the flower as the penultimate outcome of vegetative evolution. The ultimate outcome, of course, is the fruit, but, wonderful as every fruit, i.e., seed, is as representing the reproductive germ associated with a store of nutriment, and wonderful as are its accompaniments, in the shape of attractive pulp, protective shells, or what not, it cannot vie with the flower which preceded it in subtlety of contrivance, beauty of design, and æsthetic attractiveness. The object of these last has ceased to exist. The brilliant petals fade and drop, as a rule, very speedily, so soon as they have lured the entomological Cupids to the bower they have formed, and secured a return for the nectar they have provided. These colours in themselves are marvels. No mind can grasp the subtlety of selection which lies within the floral cells, and which enables them to break up the sunbeam into its constituent tints, as it does, retaining or absorbing some, and throwing off the rest, to convey to our eyes the particular tint in which we rejoice, for, strange to say, we can only see the colour which is rejected, and never the one which is sifted out and retained. Many flowers are multicoloured, and within these cells, in definite designs and places, we may detect by the microscope, as Mr. E. Bunyard has demonstrated, that we see different tints by virtue of different arrangement of cell contents, as much as by the different tints of the contents themselves, in a quasi-kaleidoscopic fashion. In view of all these combined wonders it is clear that not merely a volume, but many, would be requisite for even an attempt to give an exhaustive answer to the question, "What is a flower?" since it is seen to be a cosmos in itself when fully studied.

MR. P. RUDOLPH BARR.

Mr. P. Rudolph Barr, whose portrait we have the pleasure of giving in this issue, is well-known as the senior partner in the firm of Messrs. Barr and Sons, and by reason of his geniality and ability is held in high estimation in horticultural circles, and, indeed, by all who have the pleasure of being acquainted with him and his work. Although a comparatively young man, it is now many years since Mr. Barr assumed his present position, on the retirement of his father, the late Mr. Peter Barr, V.M.H., from business, and in looking back over the period that has elapsed, it is interesting to observe how fully the traditions of the firm have been maintained. It need not now be recounted that the late Mr. Peter Barr was the pioneer of the daffodil cult in this country, and that he was successful in introducing many noteworthy daffodils into cultivation; but it should be of interest to mention that his love for and interest in the daffodil was shared by his sons, and that, as the result of this love and interest, combined with rare judgment, the firm is as closely identified with daffodils, and as busily engaged in the creation and distribution of new varieties at the present time as at any period in its history. That Mr. P. R. Barr, in conjunction with his brothers, takes a close interest in daffodils as in other branches of the business, goes without saying, but apart from the commercial aspect of these delightful flowers he has devoted much personal attention to them, and has long been regarded, and deservedly so, as one of the leading authorities on them. His thorough acquaintance with varieties was shown in a marked manner by the splendid service he rendered in the classification of daffodils which was accomplished by the Royal Horticultural Society's Daffodil Committee, of which he is a member. Mr. P. R. Barr is the honorary auditor of the Royal Gardeners' Orphan Fund, and the high appreciation of his services by the members is made abundantly evident by the unanimity with which he is re-elected on the periodic expiration of his term of office.

St. James' Park.—We are pleased to say the project for the erection of a memorial to King Edward VII. in St. James' Park, has, in consequence of the strong opposition to which it gave rise, been abandoned by the Executive Committee of the memorial fund. No question has been raised in any quarter as to the erection of a memorial in every way worthy of the splendid services rendered the country by the late King, during his long and active life. The objection has been to the erection of the memorial in a position in St. James' Park where it would, in conjunction with the proposed architectural bridge over the ornamental water, greatly impair the rural charms for which the park has so long been famous. It is surprising that men of acknowledged ability should have failed to appreciate the fact that the erection of a stately memorial and a highly ornate bridge in a comparatively small open space remarkable for its rural features, would greatly impair its amenities. Happily public opinion has been strong enough to save the rural aspects of the park, and to show that keen interest is being taken in the open spaces that form so valuable a heritage of those who reside in or visit the Metropolis.

The Gardeners' Royal Benevolent Institution. We have much pleasure in announcing the fact that the Queen has sent £10 10s., and Queen Alexandra £25 in aid of the funds of The Gardeners' Royal Benevolent Institution, of which Their Majesties are patronesses.

New Director of the "Times" Experimental Station.—We learn that Mr. Silas Cole, for many years head gardener to Earl Spencer, at Althorp Park, Northampton, has been appointed to succeed the late Mr. Charles Foster in the management of the "Times" Experimental Station, at Sutton Green, near Guildford. Mr. S. Cole (whose portrait we published in our issue of February 18) is well known as an able cultivator, competitor, and administrator. He was the raiser of the famous waved Countess Spencer sweet pea that has revolutionised this popular flower, and has ever been a most successful vegetable grower, hence his appointment to SuttonGreen will be particularly pleasing to the members of the National Sweet Pea and National Vegetable Societies, both of which have trials in hand at the "Times" Experimental Station.

National Rose Society.—This society will have a busy day on Tuesday, April 25. At three o'clock a special general meeting will be held at the Westminster Palace Hotel to receive the report of the Council on the proposed revision of the rules and byelaws of the society, and to consider and deal with the same. At five o'clock a rose conference will be held at the same hotel, when the President, the Rev. J. H. Pemberton, will give an address on "Roses for the Garden," to be followed by a discussion. To this meeting members and their friends, including ladies, are invited, and will be admitted on presentation of their address cards. This in its turn will be followed by a dinner, also at the Westminster Palace Hotel, at seven o'clock. The Rev. J. H. Pemberton will preside, and all members and their friends, including ladies, are invited. Those who intend being present at the dinner must give notice to the honorary secretary on or before Thursday, April 20, that suitable arrangements may be made.

Aquatic Plants are of special interest in these days, owing to the spread of water gardening, therefore any information concerning "The Origin and Structure of Aquatic Flowering Plants," cannot fail to be interesting also. Upon this subject the Rev. Professor G. Henslow, V.M.H., will lecture at the Royal Horticultural Hall on Tuesday, April 11, at 3 o'clock.

Importation of Potatoes into Jersey.—The Board of Agriculture and Fisheries desire to inform potato growers and merchants in Scotland that the States of the Island of Jersey have adopted an Act authorising the importation of potatoes from certain districts in Scotland from the 25th ult. to May 31 inclusive, on the following conditions: (1) The potatoes imported must form the sole cargo on the vessel, and must come direct from the district where they were grown to be sent to Jersey direct from the port of landing. (2) Each cargo must be accompanied by a solemn declaration by the shipper, attested by a notary or commissioner of oaths, giving the place of origin of the potatoes and certifying that they have not been grown in land or soil affected by wart disease of potatoes. (3) Each cargo must also be accompanied by a certificate of the Board of Agriculture and Fisheries to the effect that the district in which the potatoes were grown is free from disease. Intending exporters of potatoes to Jersey should, when applying to the Board for a certificate, forward the declaration from the grower of the potatoes referred to above. The declaration should state the parish in which the potatoes were grown. The adoption of this Act is probably due to the need that is felt by potato growers in Jersey for a change of seed from the northern parts of the British Isles. As potato growing in Jersey is almost exclusively devoted to the early crops, it may be assumed that such varieties as those grown in the South-West of Scotland for early summer crops will find must favour in the Jersey markets.

The Brent Valley Bird Sanctuary, near Ealing, serves a very useful purpose, and lovers of bird life are loud in their praises of the successful efforts of the Selborne Society to retain an area of nineteen acres, near London, where birds may be preserved unmolested. It must be remembered, however, that this bird sanctuary, concerning which Mr. Wilfred Mark Webb, F.L.S., is to lecture before the Horticultural Club on Tuesday evening, April 11, occupies an unusually advantageous position. Towards the south and south-west there are the extensive open spaces provided by the Gunnersbury House, Gunnersbury Park, Osterley Park, and Syon Park estates, with Kew Gardens, Old Deer and Richmond Parks, and Wimbledon Common farther afield. The lecturer is the hon. sec. of the Selborne Society, and his lecture is sure to be of great interest.

Rhododendron Show at Vincent Square.—Messrs. John Waterer and Sons, Ltd., of Bagshot, Surrey, will this year hold a special exhibition of rhododendrons at the Royal Horticultural Hall, Westminster, from May 30 to June 3 inclusive. Messrs. Barr and Sons, Covent Garden, will at the same time exhibit bulbous and other hardy flowers. Fellows of the Royal Horticultural Society will be admitted free on showing their passes, but a charge for admission will be made to the general public.

An Addition to the Great Sweet Pea Prize.—We understand that Messrs. John K. King and Sons, of Coggeshall, Essex, are offering a massive gold cup, value £50, or other article of plate, to the winner of the £1,000 prize offered by the "Daily Mail," provided such winner has grown the flowers from seed supplied direct from Messrs. John K. King and Sons.

Weather in Glasgow, 1910.—We acknowledge with much pleasure the report by Mr. James Whitton on the climatic conditions that obtained in Glasgow during the year 1910. The report is, as usual, of much interest, for not only does Mr. Whitton give a full record of the rainfall and temperature, but makes a number of useful remarks upon the general effects of the weather upon vegetation. In summarising the report Mr. Whitton states that in comparing the records of 1910 with those of 1909, the remarkable feature of the weather conditions is their general similarity. This is specially notable in the case of the rainfall as regards the total. The same may be said as to the temperature, though the year under notice was more uniform and slightly better. There were, perhaps, less prolonged spells of easterly winds, but those in the spring months unduly retarded vegetation, and during the flowering period of trees and shrubs caused much damage to the tender growths, and, by injuring the blossom, ruined the prospects of a fruit crop. Generally speaking, the display of bloom was under the average on trees and shrubs. Pears, plums, and cherries were but moderately flowered, while apples were well bloomed; but none set fruit freely on account of the conditions above-mentioned and exhaustion through a lack of atmospheric moisture. The hard dry winds lacerated and browned the first leaves on chestnuts and acers in exposed places, and many were in a pitiable condition. Later-growing trees and shrubs fared better, and made a quite satisfactory growth, which has ripened well, consequently the prospects for the coming season are favourable. Rarely has the bulk of the rhododendrons been so full of flower buds, and promise a finer display than that of 1908, when the bloom on these splendid shrubs was notably good. Though the fog fiend was in evidence at times, its frequency and density was not so marked as that of the previous year, and so far as its effects on the trees and shrubs in the Glasgow parks, the damage was not so apparent.

Plant Distribution.—The other evening at Hull the Rev. J. R. Wynne-Edwards, president of the Leeds Philosophical Society, gave an interesting lecture on the "Local Distribution of English Plant Life." At the outset of his lecture Mr. Wynne-Edwards said it was very difficult to account for the reappearance of the present British flora after the glacial period. The fossiliferous rocks afforded abundant evidence of the existence of many of the kinds prior to that epoch, and with reference to their return with warmer conditions, the view was held that the plants of the temperate zone merely retreated before the arctic invasion, and returned when the climate became milder. This theory he regarded as untenable, because plants only flourished in soils that were suited to their requirements, and there did not exist in this country continuous areas of soil along which they could have retreated and advanced. Mr. Wynne-Edwards expressed the opinion that the solution of the problem was to be found in the many and varied methods of distribution with which seeds are gifted. The various methods of distribution were passed under review and briefly described, and much other information of interest given.

The Metropolitan Public Gardens Association.—This Association has just published its twenty-eighth annual report, and from it we gather that the very excellent work of adding to, reclaiming and beautifying open spaces in the great Metropolis continues, and that such work is only limited by the financial support forthcoming. During the year 1910 the Association has secured the preservation of portions of Hampstead Heath from enclosure, and acquired for the public use spaces at Paddington, Kilburn, Shadwell, and Richmond. After years of endeavour it has opened West Square, Southwark, as a public recreation ground, and laid it out as a beautiful garden. The sum of £1,072 11s. was expended on the purchase of grounds, laying out, and maintenance of grounds, tree planting, window-garden competitions, and public seats. The Association is in no sense jealous of the work done by other bodies in a similar direction, and it is pleasant to find in the "Report" a ready appreciation of the efforts of the local authorities in the County of Middlesex, who, since 1897, have acquired no fewer than 43 separate areas, amounting to 1,078 acres, for the public use, at a cost of £584,280. Ranging from the provision of seats for the weary, and the acquisition of open spaces, the Association has successfully carried out or assisted in no fewer than 593 good works since 1882, and it is therefore well worthy of support.

Transactions of the Scottish Horticultural Association.—Part 3 of the first volume of the new series of these "Transactions" is before us, and, apart from the statistical and other matters of more or less local interest, it is a generally useful publication, and well worth the shilling charged to non-members. Mr. Matthew Todd's "Retrospect" shows how the Association came into being, while "The Rise and Progress of Gardening from the Earliest Period to the Present Time," is a wide subject, dealt with pleasantly by Mr. James Grieve. "The Working of Garden Soils," by Mr. James Whytock, of Dalkeith, and "The Working and Management of Garden Soils," by Mr. G. P. Berry, of the Edinburgh and East of Scotland Horticultural College, are practical subjects of the first importance, and deep cultivation is the text in each case. "Weather Forecasts," by Mr. James Moncur, "Sense Organs of Plants," by Dr. W. E. Smith; "Insect Pests," by Mr. George E. Greenhow; "Flower Gardening;" by Mr. D. W. Thomson; "The Cultivation of Peaches and Nectarines under Glass," by Mr. Thomas MacPhail; "The Perpetual Flowering Carnation," by Mr. J. S. Brunton; and "Plant Diseases," by Dr. A. W. Borthwick, are the other papers contributed, all of which have been read before the Association at its monthly meetings.

Legacy to a well-known Northern Gardener.—By the terms of the will of the late Lord Airedale, which was published March 29, Mr. Wm. Grix, the Gardens, Gledow Hall, Leeds, will benefit to the extent of his lordship's bequest of £250. One year's wages is also bequeathed to all indoor and outside servants who have fulfilled two years' service. Mr. Grix is a highly respected gardener of well-known ability.

The Aberdeen Botanical Gardens.—Much interest is at present being taken in Old Aberdeen in the work being carried on in connection with the extension of the Botanical Gardens. The ground forming part of the existing gardens is held on a lease from year to year under conditions that are unsatisfactory, and some time ago, when a piece of adjoining land came on the market, it was bought for the Botanical Gardens. The ground is about three acres in extent, and is well suited for the purpose of a botanical landscape garden, the soil being of good quality, with a slightly undulating surface sloping to the south. A large dwelling-house, forming part of the estate, has been completely renovated, and about a quarter of an acre at the back has been cleared of trees, surrounded by a wall, and laid out as a lawn-tennis court and garden, with flower borders, etc. A number of other trees have lately been cut down, a row being left along the outside of the dyke. Some of the trees on the north side of the property have likewise been felled, and it is understood the intention is to remove a number of the smaller and stunted trees on the west side, where at present there is a narrow belt running from top to bottom. All these have been a very pleasing characteristic of this part of the town, and there is a feeling prevalent that by their removal the landscape is being robbed of one of its most charming features, and that trees which contribute so much to the delightful aspect of Old Aberdeen should be preserved. It is urged that richly-foliaged, overhanging trees have a destructive effect on vegetation underneath, and also that as the trees are ash, elm, beech, and plane it would be better to have a greater number of species.

SOME OF THE FINELY-DEVELOPED GOLD MEDAL AMARYLLIS.
Exhibited by Messrs. R. P. Ker and Sons at the Liverpool Show, April 5 and 6.

SINGLE DAHLIAS.

Foremost among the various candidates at the present time for popular favour as autumn flowers must be placed the single dahlias, which, at that season, make the most brilliant display in the garden of them all. The single dahlia is, moreover, the ancestor of all the other types of dahlia, and the easiest to grow. Indeed, its cultural requirements are of the simplest character, and only three in number—planting, staking, and the frequent removal of the blooms as they fade.

Planting.

The young plants or divided tubers, as the case may be, should be planted out as soon as all fear of frost is at an end, say early in June. Five feet between the plants each way is not too much to allow them if they are intended for a bed, and this is by far the best way of growing them in order to obtain an effective display of bloom.

Staking.

A single firm stake will be sufficient to tie the new growths to at first, but when the plants become established four stakes should be driven firmly into the ground at equal distance round each dahlia—the stakes being connected by two rows of stout but soft twine, so that the shoots may be held up without destroying the natural appearance of the plants. The stakes when in position should not be more than about four feet out of the ground.

Removing Faded Blooms.

The only other attention needed, and it is perhaps the most important of them all, is the removal of the blooms as they fade. The reason for this is that the flowers are so numerous and follow each other in such rapid succession, that if allowed to form seed pods, such a strain would be put on the plants for the perfecting of the seeds that the plants, if left entirely alone, would cease to produce fresh flowers, whereas if the faded blooms be cut off once, or, better still, twice a week, the plants will remain in full flower until cut down by frost.

Selecting Varieties.

There is one most important caution for the beginner, and that is never to raise the plants from seed, however good seed may be, but always obtain named varieties from the nurseries. The latter are inexpensive, and, as they have been selected from hundreds, if not thousands of seedlings, are certain to give satisfaction, whereas if raised from seed, the colours being unknown, there will be no means of arranging the plants satisfactorily in a bed, and a very large majority of them would be but poor representatives of what a modern single dahlia should be.

I append a list of the varieties selected, at all events of all those of which I can find the colours, at a recent trial of single dahlias, as the best and freest-flowering varieties in cultivation in their different colours, viz.: Snowdrop, white; Peggy, rosy-crimson tipped orange; Leslie Seale, lilac with crimson centre; Columbine, pale rose; Lady Bountiful, mauve with crimson centre; Miss Roberts, yellow; Kitty, rosy-mauve with dark centre; Owen Thomas, crimson, tipped yellow; Amy, terra-cotta; Vesuvius, orange-scarlet; Rosebank Scarlet, scarlet-crimson; Miss Morland, crimson-scarlet; Fugi San, orange-yellow with crimson centre; Winona, deep maroon; and Morning Glow, amber with scarlet centre.

Edward Mawley.

SWEET PEA JOTTINGS.

The temptation to plant out sweet peas on Saturday, April 1, was very great, but other work was pressing, and so the temptation was resisted. During that evening, and the whole of April 2, the rain fell steadily, and the wind, though not strong, came from the north-east, followed all day on Monday, April 3 by a biting north wind, that found its way even through one's winter greatcoat. I was glad I did not plant out, for the plants were quite happy under a covering of fish netting, and with the pots plunged to the rim in ashes. In one or two cases there is an occasional bleached leaf, but every seedling is making vigorous growth from the base.

I imagine that some thousands of pot-raised sweet peas will be planted out during Eastertide this year, and, weather permitting, this will be a very good time for the work. Sifted decayed material from an old rubbish heap added to sifted ashes from the garden fire makes good stuff to use at planting time, mixing it freely with the staple soil in the shallow trench, and pressing it firmly about the sweet pea roots. Firm soil is a great factor in successful sweet pea culture, and where the ground has been trenched during the winter it is a matter of first importance that it be made firm by treading in both directions before the plot is raked down and marked out for planting.

The popularity of the sweet pea is responsible for several interesting movements. In more than one place sweet pea exhibitions are being promoted for the purpose of raising money for sick nursing funds and for hospitals. The latest thing of this kind that has come under my notice is the promotion of a sweet pea exhibition for the purpose of raising funds for a golf club. Sweet are the uses of—sweet peas.

The "Daily Mail" £1,000 prize for a bunch of sweet peas has caused a good deal of heart-burning, especially since a regulation was formulated that renders ineligible everyone who has won a first prize at a show of the National Sweet Pea Society. Those who would be otherwise eligible feel they are being penalised; others who are still eligible are so keen on winning this little fortune that they will not compete at the N.S.P.S. show on July 11, lest they should win a first prize, and thus render themselves ineligible for the other competition.

Messrs. J. K. King and Sons, Coggeshall, are offering a £50 gold cup to the winner of the thousand pound prize, but the condition is that the winning flowers must have been grown from seeds supplied by Messrs. J. K. King and Sons. It seems to me that the offer has come too late to be of real service to any of us. Supposing several firms made a somewhat similar offer, and the winning bunch of twelve spikes contained six varieties, two sprays of each, and that each variety was obtained from a different seedsman, all of whom were offering a special additional award on the above lines, would the winner receive all these special awards, or none of them, or a sixth part of the value of each?

So far as the sweet pea trials are concerned it seems to be quite in accordance with the general fitness of things that Mr. Silas Cole, the raiser of Countess Spencer, should follow the late lamented Charles Foster in the directorship of the "Times" Experimental Station. Mr. S. Cole is well known as a skilful grower, and in his charge of the gardens at Althorp Park he has had opportunity for the display of organising ability. He has to follow a man of remarkable personality and exceptional qualifications, but he should prove a worthy successor.

The membership of the N.S.P.S. grows steadily, and probably by the time these notes appear two hundred new members will have been enrolled this year. The number of societies in affiliation also increases. Among recent additions are two quite new societies, one at Strathpeffer and one at Whitchurch. The latter, with the Rev. J. Jacob as its president, and with Mr. Eckford, Mr. T. Jones, and Dr. Phillips all quite handy, ought to prove a great success. Mr. Jacob told me the other day that fifty members were enrolled at Whitchurch in a week.

Charles H. Curtis.

NEW PLANTS, ETC.

ODONTIODA VUYLSTEKEÆ VAR. LADY COLMAN.

A particularly fine form of this beautiful bigeneric hybrid, and one in which the whole flower is a deep, rich, and brilliant scarlet shade. F.C.C., R.H.S., March 28. Sir Jeremiah Colman, Bart. (gardener, Mr. Collier), Gatton Park, Reigate.

ODONTOGLOSSUM SWIETENI-COLOR.

A large-flowered and striking hybrid from O. Wilckeanum and O. Vuylstekei. The blooms are big, but not of the best form; the colour is rich mahogany-red (the Swietenia is the Mahogany tree), margined with cream yellow. A.M., R.H.S., March 28. Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking.

ODONTIODA IGNEA.

This is an entirely new hybrid derived from Cochlioda Noetzliana and Odontoglossum Lindeni. The flowers are small, and suggest the last-named parent in form, but they are of a deep red-scarlet hue, and borne freely in a branched inflorescence. A.M., R.H.S., March 28. Messrs. Sander and Sons, St. Albans.

CARNATION EMPIRE DAY.

This is a most delightful perpetual carnation, the shade of pink colour it shows being exquisite. It is free flowering, and has many good qualities besides its charming colour to recommend it. A.M., R.H.S., March 28. Mr. A. Smith, Enfield.

RHODODENDRON MRS. KINGSMILL.

A fine hybrid rhododendron bearing its bold white flowers in large trusses. The parents are R. Aucklandi and R. campylocarpum. It is early flowering, opening in March out of doors in the south. A.M., R.H.S., March 28; Miss C. Mangles, Littleworth Cross, Seale, Farnham, Surrey.

XERONEMA MOORI.

This striking liliaceous plant comes from New Caledonia, and was introduced about 1875. In habit the plant somewhat resembles an iris. The scape is a foot or more long, bearing a raceme that is bent almost at right angles to the scape. The small, numerous flowers are erect, rich red, with long purplish-red stamens. At Kew the plant succeeds under the treatment usually meted out to South African bulbs, and it flowers annually in June. "Bot. Mag.," t. 8,343.

PLEIOCARPA MUTICA.

A beautiful stove plant that needs similar treatment to the ixoras. It is a native of the Camaroons and Old Calabar. The plant is shrubby, and the white, shortly pedicelled flowers are borne in rounded clusters from the axils of the leaves. "Bot. Mag.," t. 8,344.

COLUMNEA OERSTEDIANA.

A native of Costa Rica, this showy plant has much the general appearance of an Æschynanthus, and it is an epiphytic shrub requiring similar treatment. The erect flowers are three inches long, borne singly in the leaf axils; the mouth of the flower is bi-labiate, and the colour is light scarlet. "Bot. Mag," t. 8,344.

PYRACANTHA ANGUSTIFOLIA.

Discovered by Delavay in Yunnan in 1882, this thorn was first described as a cotoneaster. It is a shrubby species, but at Kew is not fully hardy in the open, but at Torquay it flourishes and flowers and fruits freely. The flowers are white, and the berries orange-yellow. "Bot. Mag.," t. 8,345.

LEVELLING GROUND.

There are few operations in connection with the formation of gardens, croquet, tennis, bowling, and others lawns and greens, that require more knowledge, care, and experience than the levelling of ground. Yet, although this is the case, it is not by any means a rare thing to find a builder's contractor making terraces in front of the house he has erected, and shaping and levelling the other portions of the ground attached. His knowledge of soils usually amounts to being able to tell which will make bricks, and which are suitable for mixing with lime in the preparation of mortar. The surface soil, the rich storehouse of plant food, has no virtue in his eye, and no special adaptability for any purpose, consequently, it not infrequently, in the process of levelling, is buried below a layer of crude clay or barren gravel.

When it is remembered that this surface layer of soil has taken ages to bring it into its present condition of suitability for plant growth, and that the stratum upon which it rests is generally crude, and barren of plant food, every care should be taken, when levelling operations are in progress to preserve every ounce of the surface layer. To do this some remark that the cost is too great, as the other method of accomplishing it with which they are familiar is that of wheeling all the good soil off the piece to be dealt with, levelling the subsoil, and then returning the top layer to the surface. A much more economical way of accomplishing the same results is that of levelling the ground in sections. This reduces the wheeling and handling of the soil to a minimum.

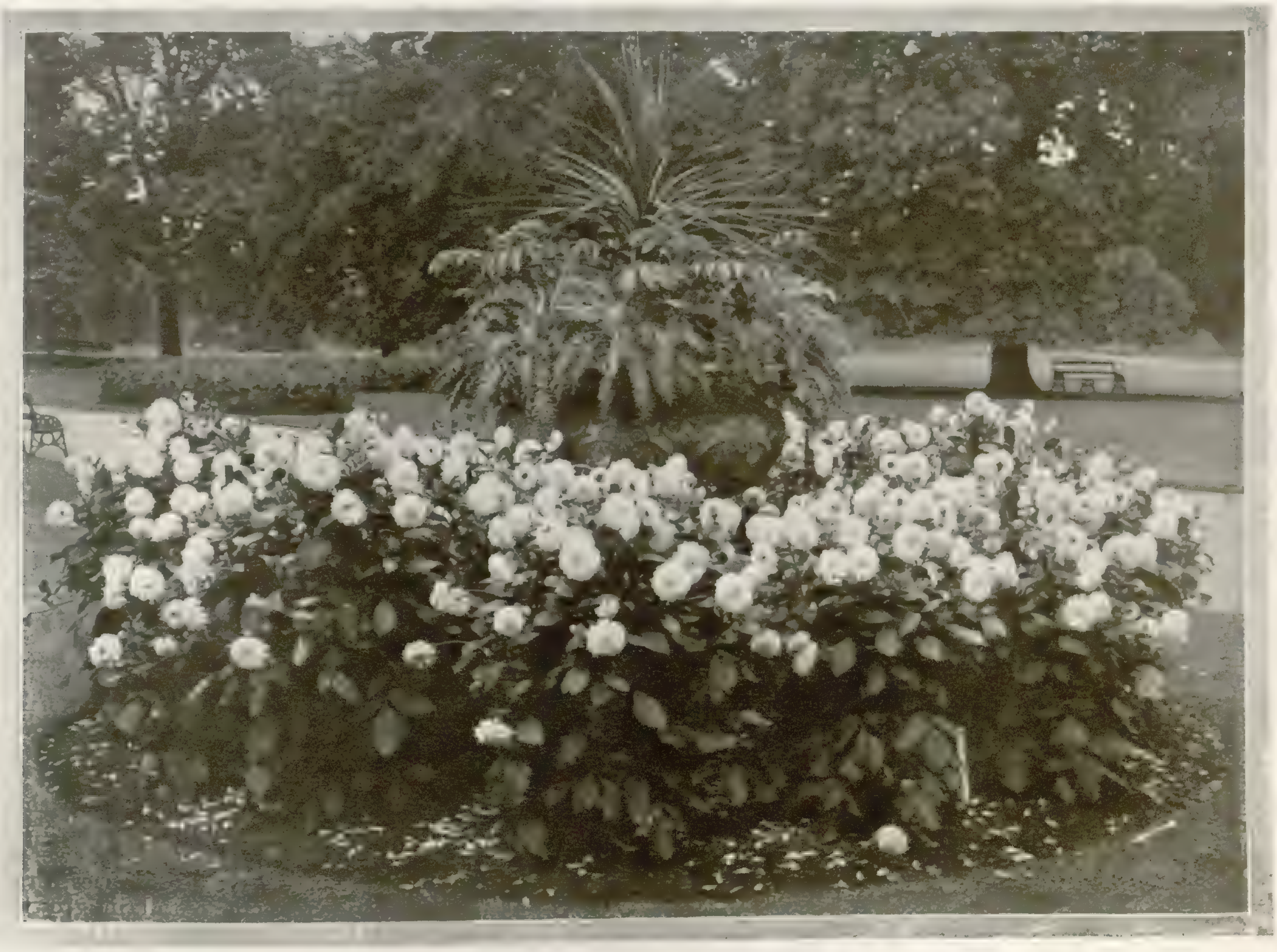
This system of levelling is effected by taking out an opening eight feet wide and nine inches deep along one side, and wheeling it to the one opposite. If there is a corner lower than another on the ground this opening should run from it to the higher side. This done, an opening eight feet wide and the same depth as the other should be taken out along the highest side, but in this case the soil should be ridged along the side of it. With the average level fixed, the subsoil can be wheeled from the higher ground to the lower till a level nine inches below what is to be the surface is secured, then the surface soil, eight feet wide, from the adjoining piece of ground, used to finish off the first section. The second section can then be treated in the same way, and so on, section after section, till the whole has been levelled. The object in taking out the opening along the higher end, or side, is to afford necessary material for levelling. This method of levelling is very much after the style of trenching, only the opening is wider. Although eight feet is given as the width of the sections, yet where there is little fall in the ground much narrower widths can be employed.

Should the object be to secure a surface of turf the filled up portion should be made solid from the foundation by treading with the heel. The roller does not find the soft parts, but once the ground has been made firm and finished it is useful for breaking up any lumps, and aiding in bringing the surface soil into a fine tilth for either seed or turf. In levelling for kitchen garden purposes it is advisable to have a depth of not less than two feet of good soil, so that, in this case, the opening should be made as deep as the desirable surface soil goes, if it is under two feet. In all levelling operations the aim should be to accomplish the work in the easiest and most economical manner, and to retain the surface soil on the top. Hibernia.

DAHLIA KAISERIN AUGUSTA VICTORIA.

During the last few years much more attention has been paid than formerly to the decorative value of the dahlia in the garden, and were I so unfortunate as to be restricted to growing only one variety, without hesitation the subject of this note would be my choice. It is a variety for dahlia lovers of every class, from the owner of a castle, around which he can cause it to be planted in hundreds, to the small town or suburban garden, where space can only be found for one or two plants in the border. It is perhaps best described as a double decorative bedding variety. The flowers are moderate in size, borne on stiff stems, every bloom being carried well above the foliage. The plants are free in growth, and particularly floriferous, seldom exceedingly a height of 3½ feet. The flowers are valuable for cutting, and, being white, are especially useful for wreaths and crosses. The variety is of German origin, and in Germany it is grown extensively during the winter under glass, when cut flowers are in demand. At Hampton Court and Kew it is one of the most popular bedding varieties. It must not be confused with the paeony-flowered variety bearing a similar name, of recent introduction, and with pale yellow flowers.

A. O.

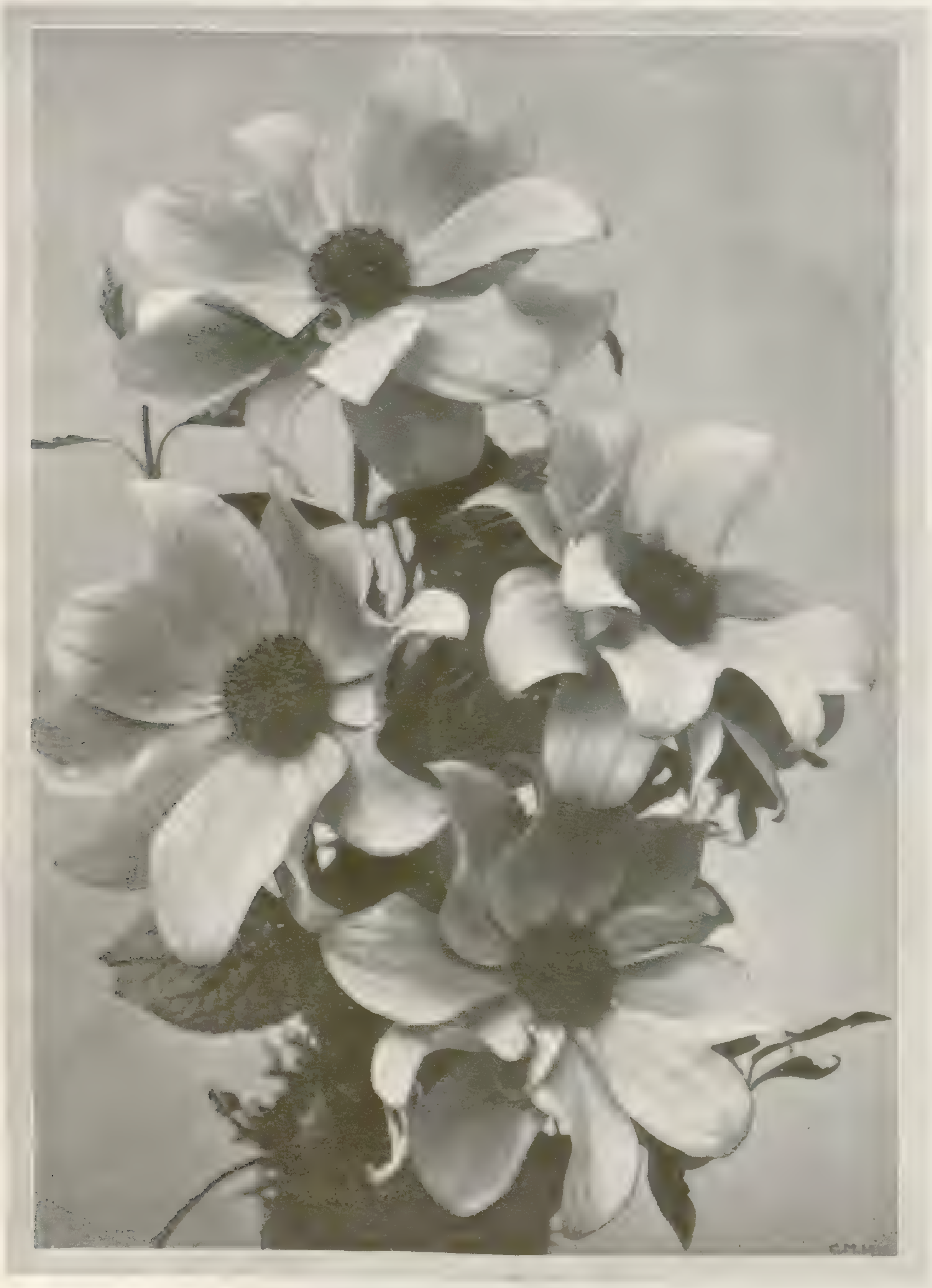


A FINE BED OF DAHLIA KAISERIN AUGUSTA VICTORIA AT KEW.
A very free-flowering white decorative variety.

Abutilon megapotamicum variegatum.—This very pretty free-flowering abutilon can be put to a variety of uses. In the first place, if grown as a loose, bushy specimen with the main branches looped up to a central stake, it forms, when in flower, a very attractive feature in the greenhouse; while even without blossoms it is decidedly ornamental.—W. T.

PÆONY-FLOWERED DAHLIAS

When first exhibited in this country, some six years ago, a good many by no means complimentary remarks were made about the pæony-flowered, or semi-double dahlias. The first recollections I have of their appearance in this country was at an exhibition of the London Dahlia Union, held at Earl's Court in the autumn of the year 1905. Several English growers were quick to recognise the possibilities of the flowers, and set to work raising new and improved varieties. That the pæony-flowered dahlia would so speedily rise in popular favour could scarcely have been imagined.



PÆONY-FLOWERED DAHLIA OLIVIA.

A distinct and beautiful single variety, raised by Mr. Charles Turner, the colours orange and fawn, suffused purple-rose.

The show, fancy, single, and cactus varieties each in their turn have held sway in the public favour, and the general favourites of the last ten years, the cactus section, are now seriously challenged by the subjects of this note. One can only guess at their origin; to me the flowers suggest a cross between the giant-flowered decorative class represented by Souvenir de Gustave Douzon or Jeanne Charmet, and the large-flowered single varieties. Until quite recent years raisers of new varieties in this country have invariably judged their seedlings from the florists' standpoint, their value in the garden and for cutting being more or less a secondary consideration. Numbers of these seedlings with flowers very similar in character to those first exhibited by the Dutch firm were discarded as useless. I remember the late Mr. Richard Dean saying a word for these semi-double seedlings, and they were promptly christened "Dean's mongrels."

The florists' ideal dahlias, however, are not exactly what the great majority of flower lovers require at the present day. Something bright and showy, easy to grow, and with flowers produced in profusion, is the demand of to-day, and this we have in the pæony-flowered dahlias. Vigorous growth, abundance of flowers, borne well above the foliage on stiff stalks eighteen to twenty inches in length, and bright colours, are qualities to recommend them for garden decoration. They are of particular value for massing in the pleasure grounds, to plant in large beds in the flower garden, and for the shrubbery border.

Always a popular flower for cutting, the demand for dahlias is increasing, while the last few years has seen a rapid change in the varieties grown for this purpose. For large displays or vases the blooms of the pæony-flowered section are ideal, having long stiff stems and good lasting qualities. A great fault with dahlias is the shortness of the flowering season. Given identical treatment with the other varieties we find the pæony-flowered section generally the first to bloom. In addition to the usual methods of propagation by cuttings, and the division of the tubers, the pæony-flowered section come fairly true from seeds, fully 50 per cent. having characteristic semi-double flowers.

The English-raised varieties already comprise a lengthy list, amongst which the following will be found a useful and varied selection: Codsall Gem, primrose edge, deeper colour in the centre, free and distinct. Hyde Park Gem, one of last season's novelties, sulphur-yellow. Lady Muriel Paget, a pleasing pure white, which attracted considerable attention at one of the fortnightly shows of the Royal Horticultural Society last summer. Lady Norman, a mixture of rose and apricot, distinct and pleasing. Mrs. E. Cragg, when opening the flowers are tinged with pink, changing with age to white, notable for the width and substance of the petals. Mrs. R. Copeland, a lovely rich pink, a shade of colour attracting immediate attention. Mrs. Ralph Heaton, a beautiful light rose-coloured variety, which is very effective. Mrs. W. E. Whineray, a very large flower, yellow centre, remainder of flower rosy-lilac. Ryton Roy.—This is a very rich yellow, of a golden hue. Romolo Piazzani, a most distinct colour, rather difficult to describe; it seems to be a mixture of orange, yellow, salmon, and red. Red Indian, a rich blood-red, the best of its colour amongst the English-raised varieties. Viscountess Newport, orange-red, free and good.

A selection of the best varieties should include the following sorts of Continental origin: Baron G. de Grancy, creamy-white, free flowering, blooms on good stems well above the foliage. Dr. K. W. van Gorkom, white, shaded rose, a pleasing flower. Duke Henry, the first dark red variety introduced, and still one of the best. Geisha, a pleasing orange-red shade with yellow centre, petals loosely arranged, a novelty of the year 1907. Germania, crimson-scarlet, shaded with yellow, very floriferous. Glory of Baarn, delicate pink, a typical semi-double flower of good substance. Hugo de Vries, orange, shaded bronze, not so tall in growth as most of the varieties. King Leopold, cream-yellow, the tallest grower I have seen, seven feet in height, flowers borne on long stems in great profusion. Paul Kruger, rosy-red and white striped, a very distinct flower. Queen Emma, salmon, flushed with lilac, one of the first varieties introduced. Queen Wilhelmina, a pure white variety of the first water, plants a mass of blossoms. Sneeuwwitje, in this country might be well named "Snow White," a larger flower than the preceding variety, and stronger in growth; there is room for both sorts.

A. Osborn.

Magnolia Soulangeana nigra.—Of all the early-flowering magnolias, that is to say, those which produce their blossoms before the advent of the leaves, this is the deepest tinted. On this account it will be at once singled out when in flower, for though the blossoms are wanting in the massive character of M. Lennei, and the purple tinge is less bright, its depth of colouring (well expressed by the varietal name of nigra) causes this variety to stand out distinct from all.—W. T.

BOULTON & PAUL, LTD., HORTICULTURAL BUILDERS, Norwich.

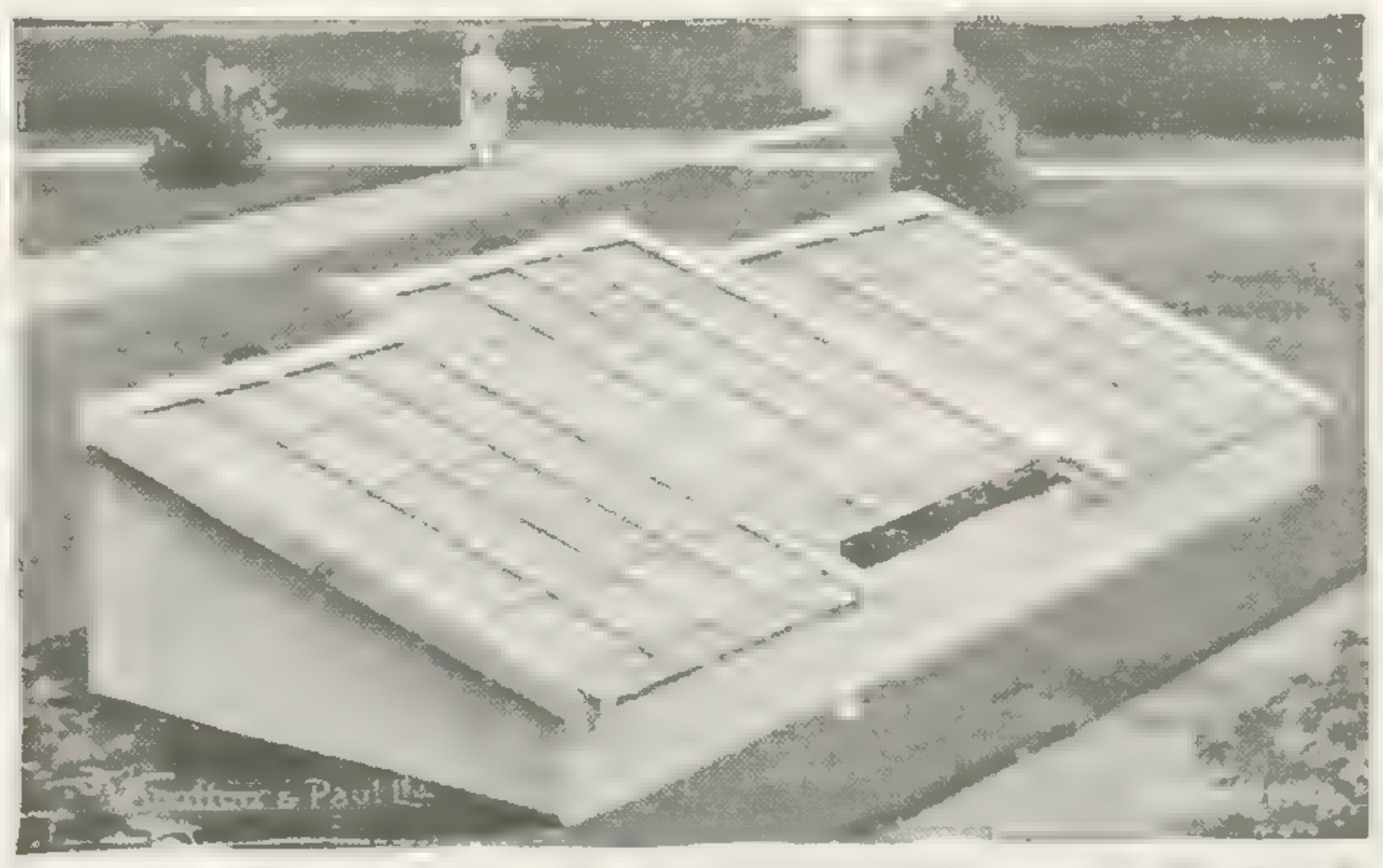
EFFECTIVE, PRACTICAL CONSERVATORIES.

Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of 40/- value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.

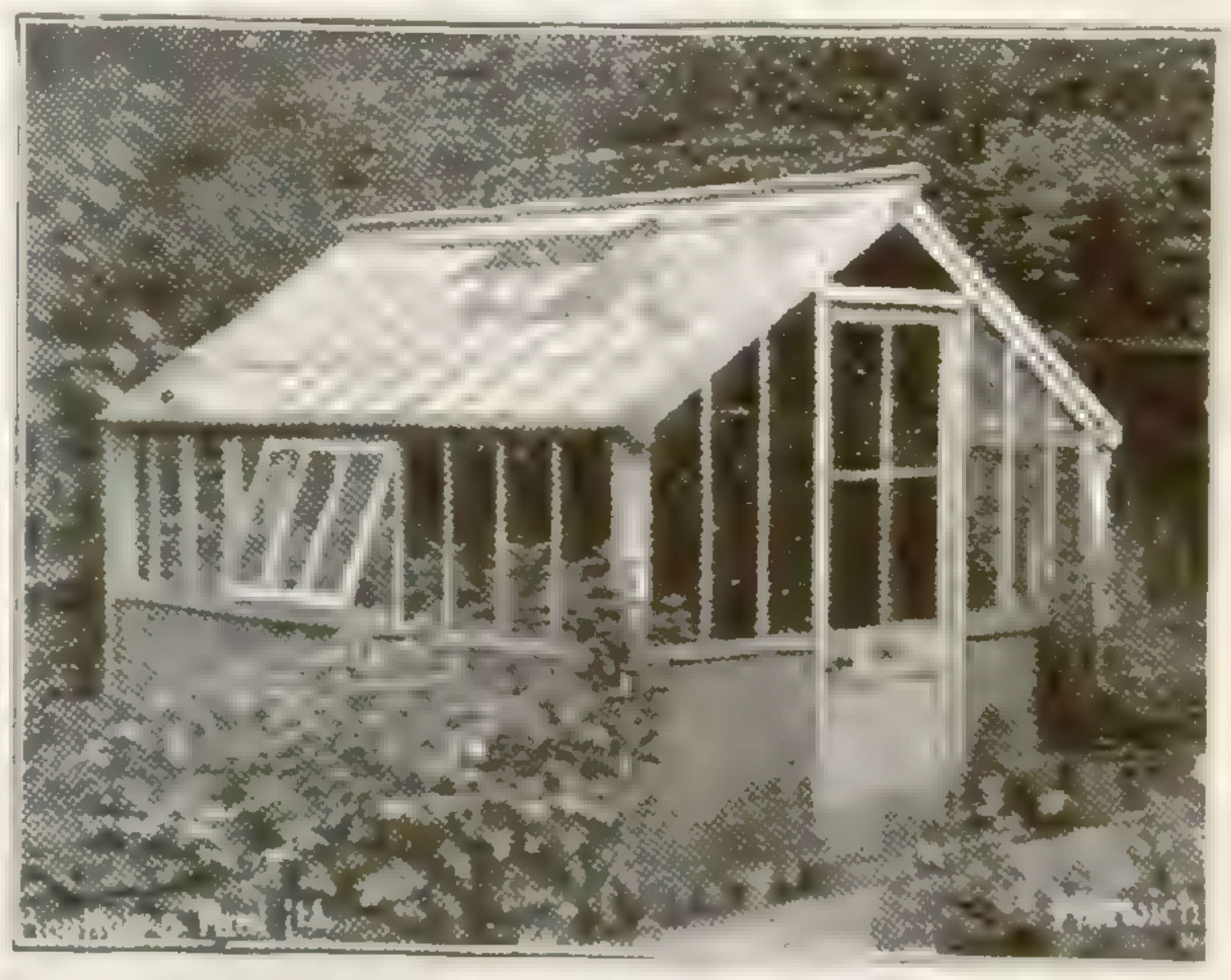


4ft. by 6ft. ... £2 0 0 | 8ft. by 6ft. ... 3 0 0
Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft. Similar to No. 75, with Two Lights... **35/-**

SEND FOR ILLUSTRATED CATALOGUES.

Every part of these Houses is thoroughly well made, painted three coats, GLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.



No. 49a.—Span, 1[illegible]ft. by [illegible]ft. **£11 10 0**
No. 47a.—Lean-to, 10ft. by 7ft. **£9 10 0**

All parts are numbered ready for easy re-erection by any handy man.

RANSOMES' LAWN MOWERS

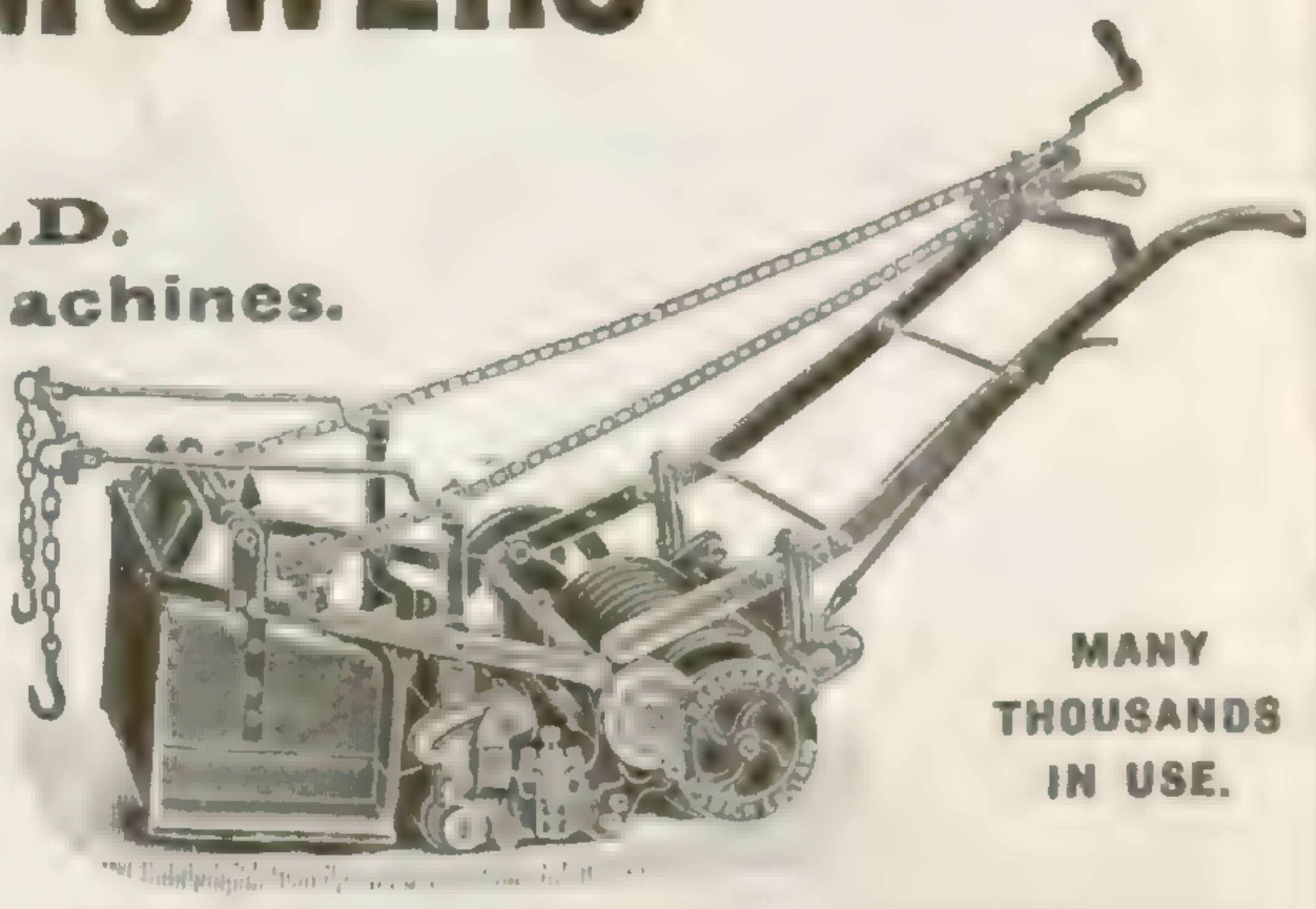
Appointed by Royal Warrant.

THE BEST IN THE WORLD.
Possess improvements contained in no other Machines.

Recent Awards.

3 GOLD MEDALS.
5 SILVER MEDALS.

SUPPLIED BY ALL IRONMONGERS.



MANY THOUSANDS IN USE.

HAND POWER MACHINES.
In all kinds and sizes.

MOTOR LAWN MOWERS
The first brought out. Reputation Established.

HORSE and PONY MOWERS.
The best large machines.

Illustrated Catalogues Free on Application to— **RANSOMES, SIMS & JEFFERIES, LTD., THE ORWELL WORKS, IPSWICH.**

By Appointment to H.M. The King.

1911 FORBES'

Illustrated Plant Catalogue **Nearly 200 Pages.**

GOLD MEDAL SPECIALITIES.

Contains carefully revised **Descriptions, Colour, Height, Time of Flowering, British or Common Names, Prices,** etc., of the **Grandest Collections of ASTERS, BEGONIAS, CALADIUMS, CARNATIONS, DAHLIAS, DELPHINIUMS, PÆONIES, PANSIES, VIOLAS, PELARGONIUMS, PENTSTEMONS, PHLOXES, PYRETHRUMS, HARDY BORDER PLANTS,** carefully-prepared **PLAN** for arranging **HARDY PLANT BORDERS,** etc.

Experts unanimously accord **FORBES' CATALOGUE** the unique distinction of being the **best** and most **reliable** up-to-date **Reference Book** extant.

FREE ON APPLICATION.

JOHN FORBES (HAWICK), LIMITED.
(Dept. I), The King's Nurserymen, **HAWICK, Scotland.**

If the "Daily Mail" £1,000 winning bunch of Sweet Peas

BE GROWN WITH

MACKERETH'S SPECIAL SWEET PEA MANURE,

Sold in Tins, 1/- (1/4 post free), 2/6 (3/- post free).
Sold in Bags, 14 lbs., 5/-; 28 lbs., 8/6; 56 lbs., 14/-; 112 lbs., 25/- Carriage Paid.

I will present the winner with **£10,** and if the bunch contains bloom of Earl Spencer, I will present the winner with **£5.**

I have splendid stocks of the most chaste Spencer Sweet Peas. Orders executed the day they are received.

G. H. MACKERETH,
The Sweet Pea Clearing House,
ULVERSTON.

PERPETUAL FLOWERING CARNATIONS: Britannia, Rose Doree, White Perfection, Black Chief, Fortuna, Mrs. Burnett etc. 3s. per doz.; strong plants; post free. Ask list. C. F. A. VAN DER SLUYS F.R.H.S., Ramee, Guernsey.

CHEALS
DAHLIAS

Descriptive Catalogue with all Novelties now ready Post free
J. Cheal & Sons,
The Nurseris, Crawley.

Amaryllis—Hippeastrums

NOW FLOWERING.

INSPECTION RESPECTFULLY INVITED.

Catalogues, and all particulars, free on application.

ROBT. P. KER & SONS,
AIGBURTH NURSERY, LIVERPOOL.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

.. A ..
GREAT FLORAL NOVELTY.
GERBERA HYBRIDS
(Dr. Jameson).

A most attractive table decoration, a flower of exquisite colouring and great variety of shades, from snow white, yellow, salmon, vermilion to crimson, purple, scarlet, and many other beautiful tints, with long stalks from 12in. to 25in. Very effective for wreaths.

Seeds, plants, and cut flowers for sale. Payment on delivery.

For Terms apply to

Etablissements Horticoles Du Littoral,
CAP d'ANTIBES
(Alpes-Maritimes)
FRANCE.

Lettres et Telegrammes
Villa Joyeuse, Antibes.

Large Stock of
HARDY WATER LILIES,
Coloured, delivered in all Countries by Parcel-Post.
New beautiful varieties unpublished.
NELUMBIUMS, etc., etc

B. LATOUR-MARLIAC, Nurseryman
At Temple-sur-Lot (FRANCE).
Catalogue Free on Application.

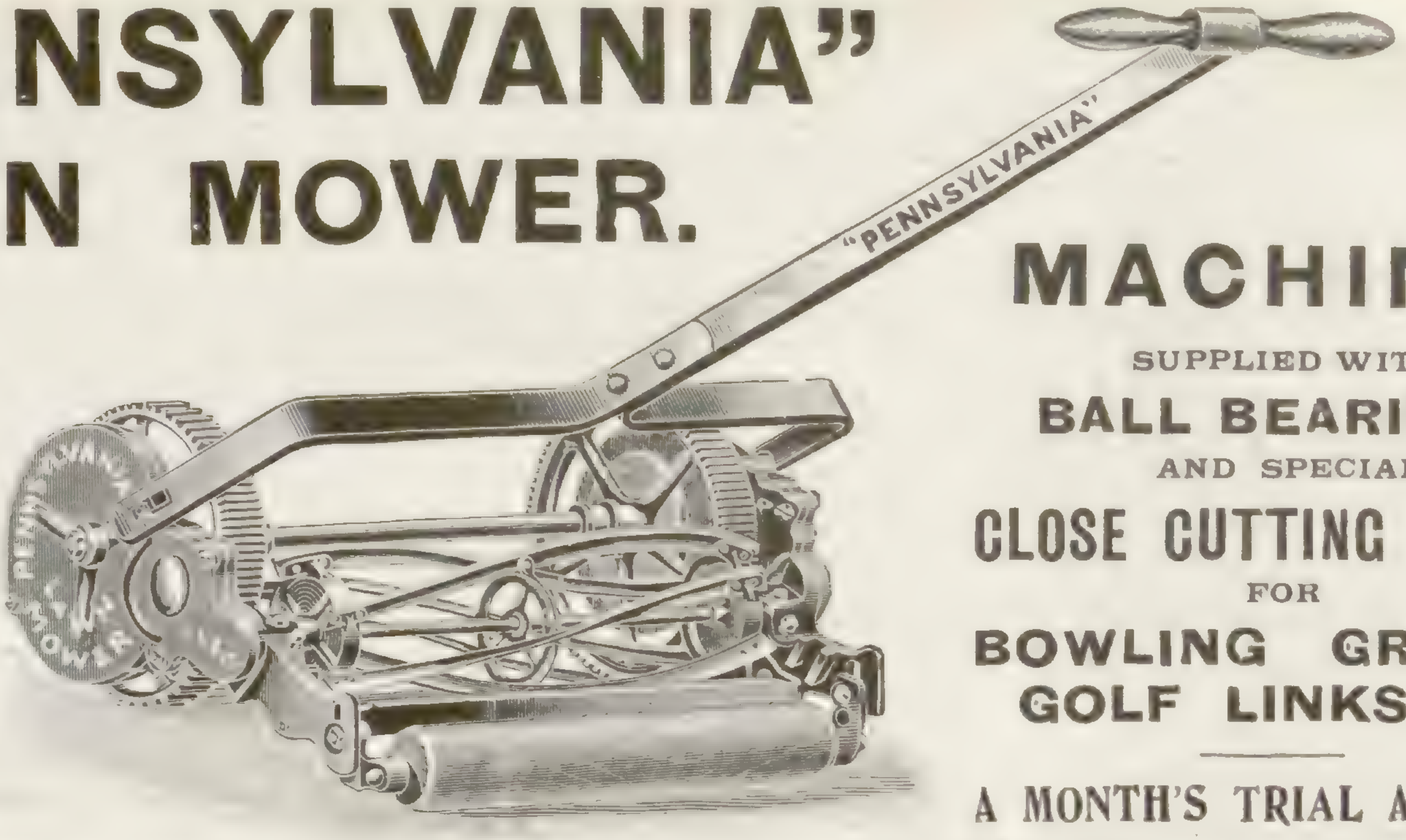
ZONAL PELARGONIUMS. Catalogue of New and Choicest Varieties

From V. SLADE, Zonal Specialist, Staplegrove Nursery, Taunton

The "PENNSYLVANIA" LAWN MOWER.

SPECIAL NOTICE.

With this Machine a Lawn can be Mown ONCE A DAY with scarcely more expenditure of time and labour than ONCE A WEEK with the ordinary heavy English Machines,



MACHINES
SUPPLIED WITH
BALL BEARINGS,
AND SPECIAL
CLOSE CUTTING KNIVES
FOR
BOWLING GREENS, GOLF LINKS, &c.

A MONTH'S TRIAL ALLOWED.

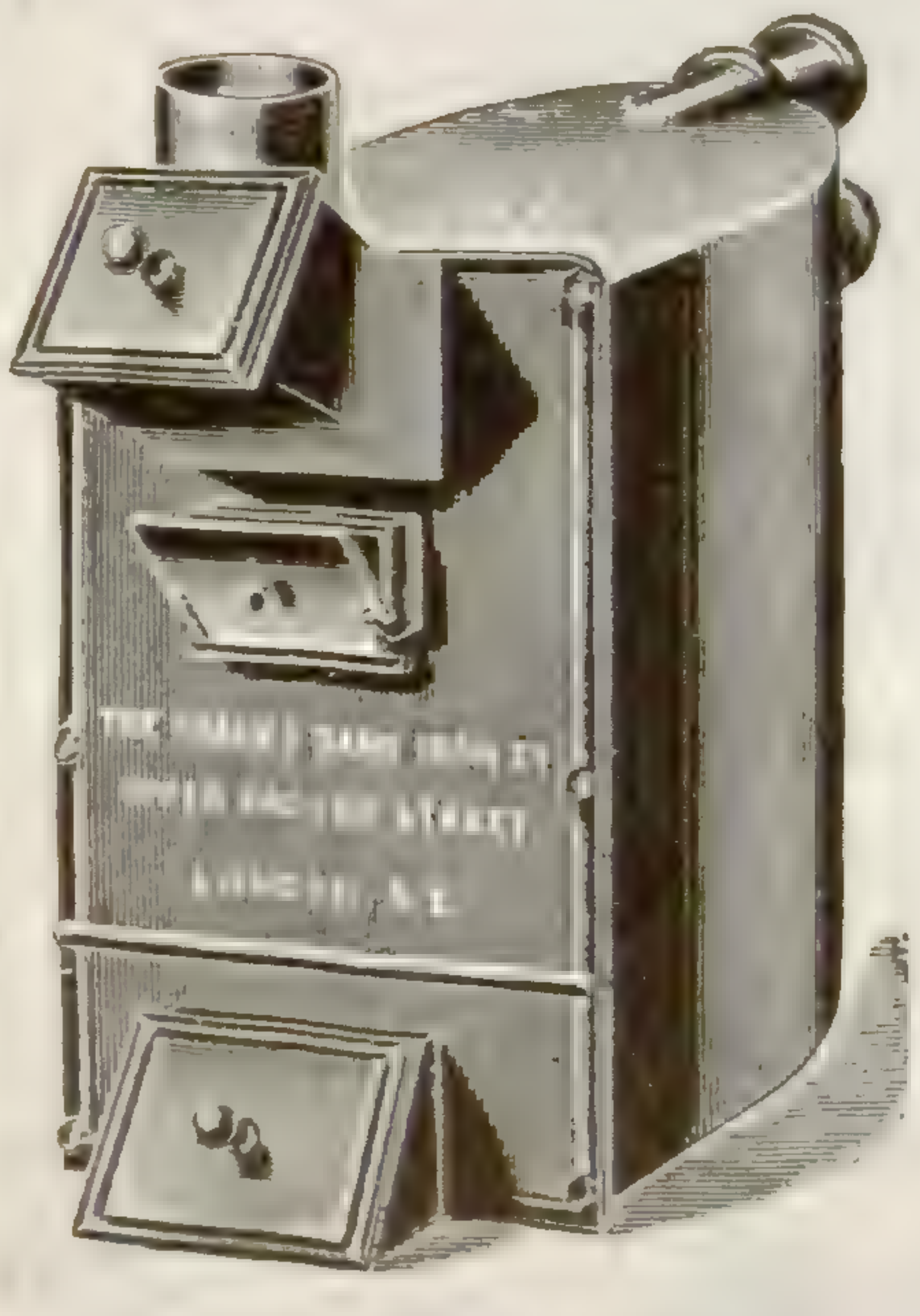
Price Lists and Testimonials from—
LLOYD, LAWRENCE & CO. (Dept. C.), 29, WORSHIP STREET, LONDON, E.C.,
And all Ironmongers and Seedsmen.

'Phone: Hop. 763.

When next a Small Boiler you require

TRY

THE HEEL


THE THAMES BANK IRON CO.
UPPER GROUND STREET
LONDON, S.E.

NONE TO BEAT IT.

THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.

4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

Barr's Pure Lawn Grasses
For Lawns, Tennis Courts, etc.

BARR'S STANDARD MIXTURE.
Suitable for fine Lawns and Croquet Grounds, containing neither clover nor coarse grasses.
Per lb., **1s. 10d.**; 20 lb., **34s.**

For hints on Making and the Management of Lawns see Barr's Lawn Grass Circular, free on application.

BARR and SONS,
11, 12, and 13, KING STREET, COVENT GARDEN, LONDON.

WELL BORING.

MERRYWEATHERS' ECONOMIC SYSTEM.

Merryweathers' men with Steam Tackle boring a well.

Pure and Abundant Supplies.
MEN AND TACKLE SENT AT A MOMENT'S NOTICE.
Work Carried Out with Economy and Despatch.

Write for Book on "Water Supply to Mansions."

MERRYWEATHER & SONS,
63, LONG ACRE, LONDON, W.C.

REGISTERED

THE
APRON
That has Come to Stay.
WORN BY ALL THE LEADING GARDENERS.
LOOK AT THE PRICE.
In Dark Blue Ponicus Twills,
1/9, Postage **3d.** extra.
Or in Dark Blue Ponicus Serge,
3/9, Postage **3d.** extra.
WRITE FOR ONE TO-DAY.
SHAW & MONTGOMERY
(PENMAN'S),
628, Argyle St., Glasgow, W.

SCRIM FOR PROTECTING FRUIT BLOSSOM.—The protection from frosts, etc., afforded fruit blossoms by our open-meshed scrim, goes far to ensure a good set of fruit. May repay many times its cost in one night. 2¼d. per sq. yd. 36in. and 72in wide; 50 yards delivered. This scrim is also good for shading sweet peas, etc. Descriptive leaflets on application. ROBERTSON, IRELAND and CO., Vict Road, Dundee.

PARISIAN {WOOD LATH} BLINDS

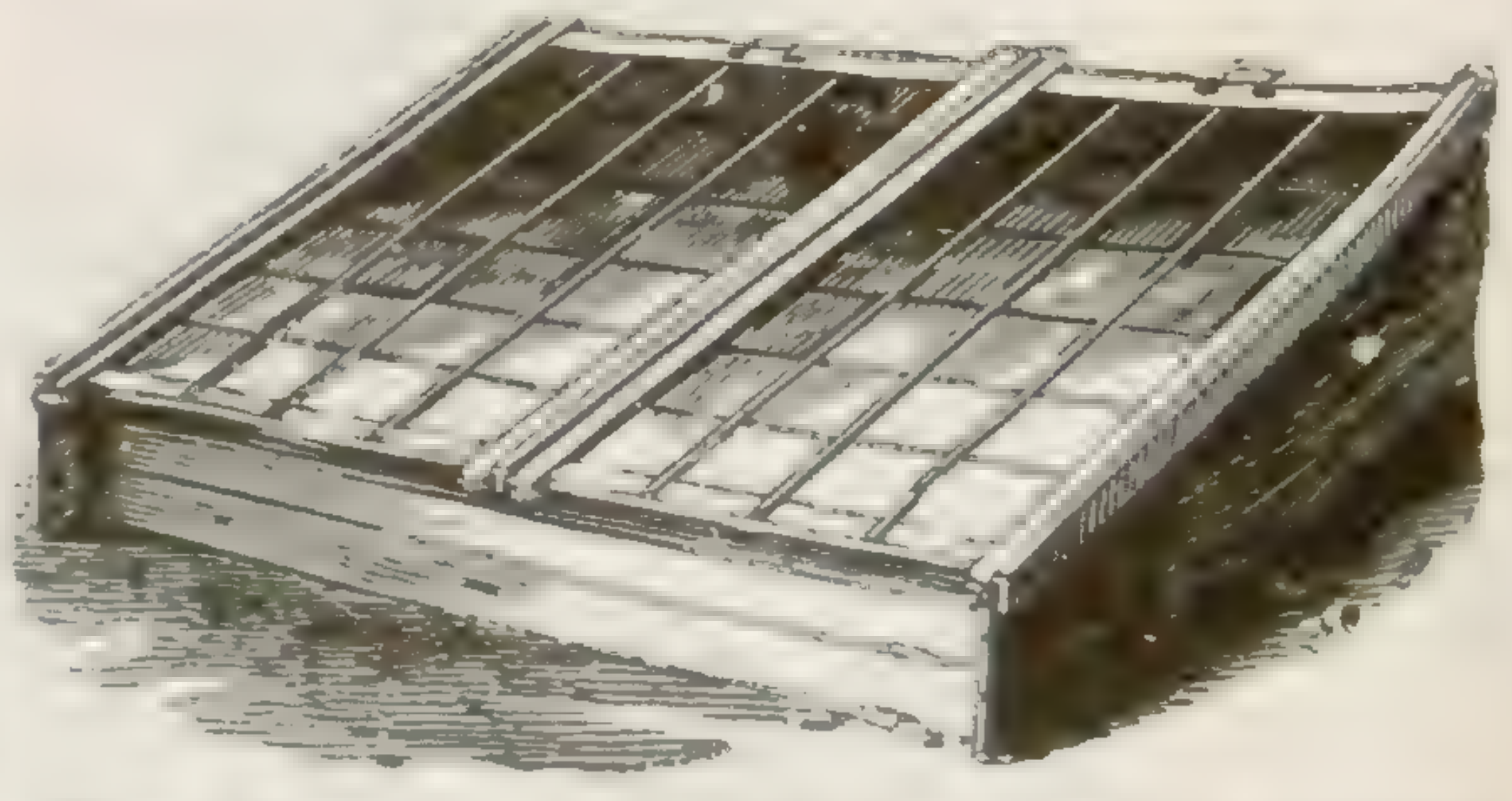
MOST DURABLE OUTSIDE SHADING.

NEATEST IN APPEARANCE.

SUPPLIED ONLY BY
W. RICHARDSON & CO.,
HORTICULTURAL WORKS,
DARLINGTON.

GARDEN {FROM STOCK} FRAMES

PORTABLE CUCUMBER FRAMES.
OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.		£	s.	d.
1-light 4 ft. by 6 ft.	CASH PRICES.	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.	CARRIAGE PAID.	5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON, MANCHESTER.

NEW EXHIBITION CACTUS DAHLIAS.

Very much has been said and written about the modern exhibition cactus dahlia during the past few seasons. It has come in for much adverse comment from people who have attempted to grow it as a garden decorative subject and have been very disappointed with the result. But not so the exhibitor, who cares nothing whatever about the appearance of the plants as long as they produce magnificent flowers for the show boards. He is quite satisfied with the present-day plant, because it produces the type of flower the judges have been asking for in recent times, and there is no ignoring the fact that the incurving, claw-like floret has ousted all other forms from the show boards. How long this state of affairs will exist it is difficult to say, for we have to acknowledge the fact that the varieties seen at our shows are those demanded by the public, whether they are useful to them or otherwise.

In reviewing the varieties that were seen for the first time last season it is difficult to pass a definite opinion as to their merits, for every season does not suit certain sorts, and those that were in excellent form last year in a dull sunless season may not prove so satisfactory in a hot, dry year. I do not think novelties were quite so numerous as usual, though there were enough and to spare, goodness knows. Neither can one recall anything very sensational, though it must be admitted most of them were well up to the average for quality. Perhaps the most striking variety was Onward, which, except for the colour, resembled a fine head of endive, the colour being a soft pink; it will no doubt become a popular exhibition variety. Kingfisher must not be confounded with the older variety of the same name, for it is distinct both in form and colour. It is a fine exhibition form, with beautifully light florets of a deep rosy-mauve colour. The Earl, a rich ruby-crimson, with very incurving florets and a fine centre. New York, a superb variety, large enough to suit the most fastidious in this respect, while there is plenty of substance in the petals; the colour, too, is most pleasing, being orange-yellow in the centre shading to buff-salmon. H. L. Brousson, a very striking variety, with a colour all its own, difficult to describe, but its general appearance is deep rich rose, while the florets resemble spider's legs, they are so fine; the flowers appeared rather fragile, but the raiser assured me it was not so, and its unique appearance will make it popular. Golden Eagle, another variety that received the hall-mark of the National Dahlia Society, should be frequently seen, for though its description is yellow, overlaid fawn and pink, it is quite distinct from the numerous varieties so described.

Mention should be made of Dr. Roy Appleton, for it is one of those varieties with long straight petals that generally denote a good stiff stem, but it is deeper in build than most of this particular type. The colour is best described as yellow, shaded salmon.

All the foregoing varieties are to be distributed by Messrs. James Stredwick and Son.

Theresa.—This is best described as white flushed heavily with rose. The petals are of good form, while the flower has a good high centre. The only novelty in this section to be introduced by Mr. C. Turner, Slough.

Excelsior.—A very refined variety, with long and very narrow petals, with a perfect filbert centre, deep maroon in colour, I expect to make a name for itself, for it will prove a good reliable exhibition variety.

Primrose Queen.—The name describes the colour exactly, but it does not give any idea of the great depth of the flower, or its distinct formation, but beyond a doubt it is a coming variety. Pride of Essex, a full deep flower, rather short in the floret, a pleasing shade of yellow changing to amber on the outer florets, but will make a distinct exhibition flower. These emanate from Mr. J. T. West.

Mrs. Douglas Fleming is a valuable addition to the white varieties, and I venture to say will take its place with the best of the exhibition forms. It is a full, deep flower, with long elegant petals, creamy-white in the centre.

CACTUS DAHLIA WHITE ENSIGN.
A dwarf-growing white-flowered garden cactus variety, raised by Messrs. J. Stredwick and Son.

Mrs. Landale.—A very beautiful cactus variety of good form and depth, with excellent florets. The colour is best described as yellow ground edged with bright rose, a remarkably free-flowering variety. I noted it at Crawley last September as being one of the most attractive on the field.

Victory.—A cactus variety of the largest type, in fact its size alone arrests attention, while its colouring is most pleasing, being a rich coral pink. Both these varieties are from the new sorts being sent out by Messrs. J. Cheal and Sons, Crawley.

No doubt I have passed over several really good exhibition cactus varieties, but I have recorded those that I have noted during the past autumn as being the best in my opinion, and, as we are always liable to make mistakes, I regard first impressions as being most reliable from a florist's point of view. Other varieties of the same year will doubtless prove good and useful, but they did not impress me, as staged at the leading exhibitions last autumn.

J. B. Riding.

VIOLETS.

These flowers will now demand attention with regard to propagation for providing a stock for the autumn planting in frames. The side growths, or runners, always make the best plants, and these may usually be secured with a few roots attached when the old plants are lifted. These side shoots may also be taken as cuttings and rooted in boxes, but the former is the simpler plan. A piece of ground should be well prepared by giving it a liberal dressing of well-decayed manure and leaf-soil, adding a sprinkling of soot. This should be thoroughly incorporated with the soil with a fork, afterwards making the whole firm. The double varieties should be set out in rows with eighteen-inch spaces between them, and twelve inches apart. The singles, being stronger growers, will require a little more room. A good watering should be given when planting is completed, and they must not be allowed to become dry during the season or red spider will soon be in evidence. Avoid planting on hot dry borders. The following will be found excellent varieties: Doubles.—Mrs. J. J. Astor, Comte de Brazza, Marie Louise, Neapolitan, and Mrs. Hume Campbell. Singles.—Admiral Avellan, Princess of Wales, La France, and Baroness Rothschild. E. C. P.

DAHLIAS FOR GARDEN DECORATION.

In directing attention to some of the more useful dahlias for the production of rich colour effects in the garden, there is no occasion to refer, otherwise than briefly, to the desirability of efforts being made to materially increase the number of varieties of value for garden decoration. The great need at the present time is a race of dahlias that are free branching and profuse flowering, and bear their blooms on stiff, erect stalks well above the foliage; and, moreover, have a season of flowering extending about two months instead of a few weeks. Such race would be of enormous value in the assistance they would give in maintaining the attractions of the garden during August and September, and its creation appears well within the capacities of the raisers, having regard to what they have accomplished in other directions. There is no occasion that while endeavouring to improve the dahlia as a garden flower the raisers should relax in their efforts to add to the list of exhibition varieties other flowers of undoubted merit. There is an apprehension in some quarters that if greater interest is created in garden dahlias, and raisers devote attention to the improvement of them, the exhibition varieties would be more or less injured thereby. It is difficult to understand the ground on which such apprehensions are based.

CACTUS DAHLIA MRS. LANDALE.
A handsome garden and exhibition cactus variety, with rose-pink florets, yellow at the base, raised by Messrs. J. Cheal and Sons.

The extension of the cultivation of garden dahlias, and the improvement in the effect they produce, would certainly not lessen the interest in dahlia exhibitions, or in the varieties remarkable for the high quality of their flowers; whether it would lessen the demand to any considerable extent of the latter remains to be seen, but there can be no possible doubt that in the aggregate there would be a large increase in the annual sales. It should be remembered that there are two classes of dahlia growers; one consisting of those who devote their attention to the production of blooms for competitive purposes, and the other comprising those who grow dahlias wholly for the effect they produce in the garden. Hitherto the first of these two classes have had such liberal provisions made for them that they have had no cause for complaint, excepting, it may be, the difficulty which so great a plethora of good things occasioned when making selections. The other class of growers, which is by far the largest, have had to select as best they could from exhibition varieties, and very often made selections that afforded but little satisfaction or pleasure. The fact should be more fully recognised than has yet been the case that there are these two classes of growers, requiring varieties adapted to different purposes, and an endeavour made to meet their needs.

The improvement of the position of the dahlia as a garden plant does not wholly depend upon some change in the lines on which raisers carry on their interesting work. Much depends upon the general body of cultivators, and before we can hope to see the dahlia contributing its full share to the attractions of the garden there must be some changes in the method of procedure. In the first place, it must be recognised that the English summer is comparatively short, and that there must be delay in the plants reaching the flowering stage if they have to make growth after they have been bedded out that should have been made while they were in the preparatory stage. If this point is clearly understood cultivators who have to purchase plants will buy them in April, or quite early in May, instead of at the end of the last-named month, and within a few days of their being received shift them into six-inch pots. In these the dahlias will have ample extension for their roots, and if the compost consists of turfy loam, to which a rather liberal proportion of well-decayed manure has been added, they will continue in a progressive state until planted out in the beginning of June.

Plants raised by simply starting the roots early in March and thinning the growth to one or two, or dividing the roots into two or more portions with a growth attached to each, come into bloom rather earlier than do those raised from cuttings. This is worth remembering by those who require their dahlias in bloom very early in the season, and in connection with this point it may be mentioned that dry or pot roots can be purchased at the nurseries. This method of procedure has the advantage of simplicity and early production of bloom, but the flowers do not attain to so high a state of development as in the case of plants raised from cuttings in the customary manner.

In the preparation of beds and borders for garden dahlias a method of procedure somewhat different to that which would be advisable in the cultivation of dahlias for exhibition should be adopted. In the former case a short-jointed growth and an abundant production of flowers are main essentials, and these are best obtained by deep digging and moderate manuring. The quantity of manure to use in a given area will depend upon the character of the soil, and no definite advice can be given without a knowledge thereof, but it may be stated that those soils known to be impoverished, or which are light and sandy, will require about double the quantity necessary for deep, holding loams that have not had their fertility impaired by previous occupants of the beds or borders.

The question as to which of the selections should be given the greatest prominence is one that must be left to the taste of the cultivator. It may, however, be suggested that it should not, as a rule, be restricted to one or two, because of the increase in the interest and attractiveness where there is an adequate representation of the several classes. Comparatively dwarf-growing and free-flowering cactus varieties are especially adapted for garden decoration, and it is gratifying to know that the raisers have already made considerable progress in the improvement of the section for that purpose. Prominent among the newer varieties is White Ensign (Messrs. J. Stredwick and Son), a variety which marks a considerable advance; the plant has a bushy habit, and, as shown in the accompanying illustration, bears its large finely formed pure white flowers well above the foliage.

Flagstaff and Sweetbriar, from the same raisers, are also valuable for the garden. The first-named has rose and yellow flowers, and the blooms of the latter are a charming shade of pink. Mrs. Landale, with flowers suffused with bright rose on a yellow ground, and Mrs. J. H. Usmar, orange-yellow suffused with coral-pink, are two varieties raised by Messrs. J. Cheal and Son, and are both of much merit for the garden. Minerva (Mr. Charles Turner) is a new variety of quite distinct character, and should prove of immense value for the same purpose; the flowers are rather large, and the colouring a combination of apricot, yellow, and rose-carmine. Of the older varieties the following may be mentioned for their usefulness: A. D. Stoop, crimson-scarlet; Amos Perry, deep crimson; Avoca, crimson-scarlet; Dainty, yellow; Eclair, orange-scarlet; Effective, amber; Hon. Mrs. Greville, orange, suffused salmon; Mauve Queen, bright mauve; Mrs. H. L. Brousson, yellow, tinted salmon; Snowdon, pure white; Westhall Scarlet, bright scarlet.

To the list of decorative varieties two important additions were made last season. One of these was Brentwood Yellow (Mr. J. T. West), a remarkably free flowering variety attaining a height of about three feet; the blooms six inches and upwards in diameter, and of rich yellow colour, are borne well above the foliage. This is a most valuable addition to its class, and is especially adapted for bedding. The other is Loveliness (Mr. Charles Turner) a distinct free-flowering variety, the blooms of large size, and the colour soft rose-pink. A variety no longer new that should be grown in every garden where dahlias have a place is Kaiserin Augusta Victoria, a comparatively dwarf-growing variety, with medium-sized white flowers that are produced in profusion from July till the growth is cut down by the frost. It is surprising that so valuable a variety which has formed a highly attractive feature in the Royal Gardens, Kew, for several years, should have failed to obtain a place in the trade catalogues of this country. The illustration of a bed of this variety at Kew is from a photograph taken in October last. Mrs. T. Dorey, also grown at Kew with much success, is an excellent variety, rather dwarf in growth, and bearing flowers of good form and a pleasing shade of rose-purple.

The single varieties form an important group for garden decoration, but as they were dealt with by Mr. J. Cheal in the paper that has recently been published in these pages, and on another page of this issue, there is no occasion to refer to them here. Pompon dahlias are rather too formal to appeal to all tastes, but when grown in soil that is not too rich they bloom so freely as to produce an effective display of colour, and provide liberal supplies of blooms for decorative purposes in a cut state. Glow, rich coral, and Pink Beauty, blush-pink, are two new varieties of merit that have been introduced by Messrs. J. Cheal and Sons. Other varieties of merit include Annie Holton, Bacchus, Clarissa, Douglas, Elsa, Florence, Galatea, H. E. Searle, Ideal, Marietta, Mignon, Nerissa, Queen of Whites, San Toy, and Tommy Keith.

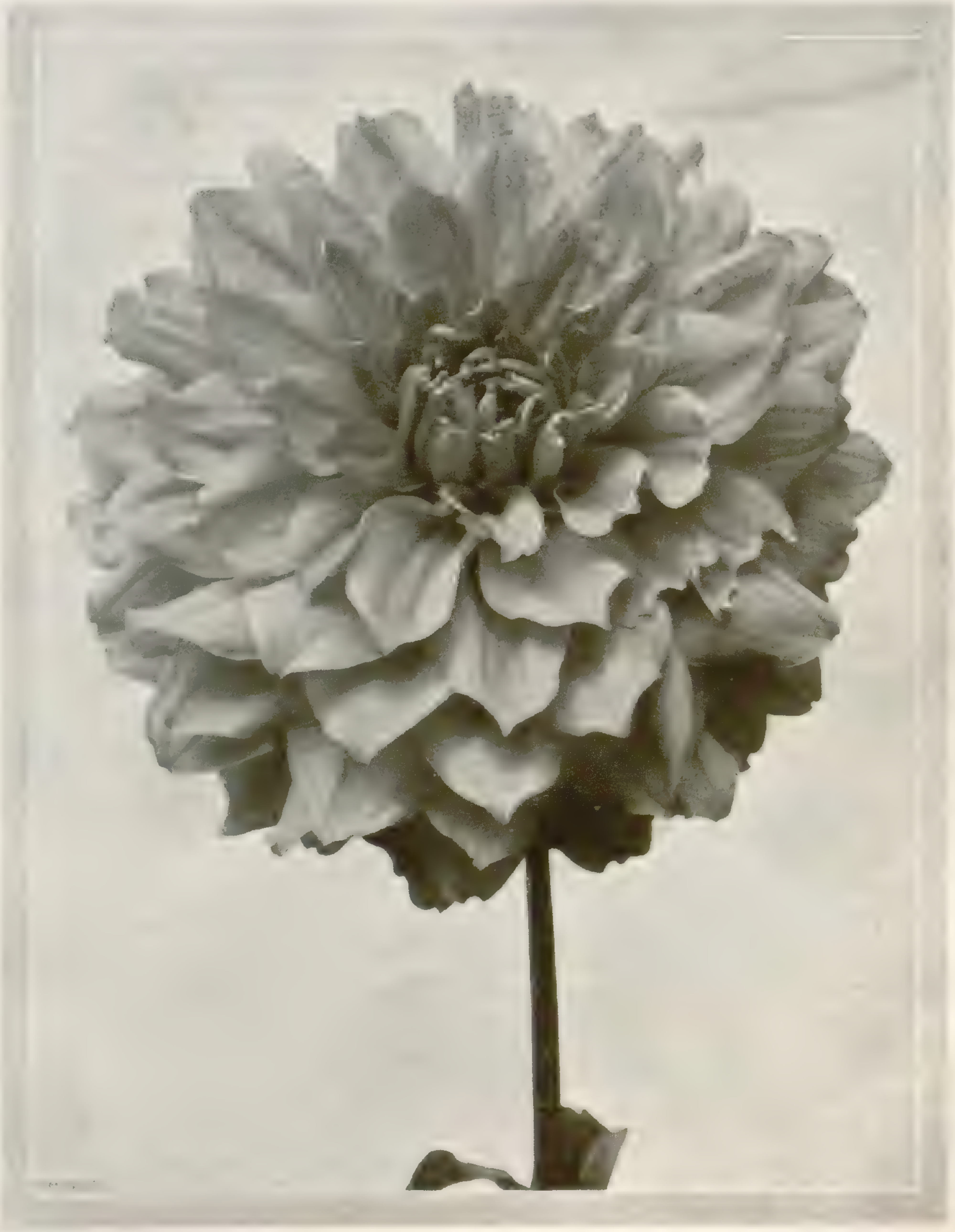
G. G.

For pretty gardens and lovely flowers read The Flower Garden, by T. W. Sanders, F.L.S. An up-to-date work on the formation, planting, and management of the garden, with description and cultivation of flowers and plants adapted for outdoor culture. Price 7s. 6d. net, by post, in box, 8s., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

FUCHSIAS FOR BEDDING.

With the present-day taste for a greater variety of subjects than was at one time employed for bedding out during the summer months, many different classes of plants previously little, if at all, used, are now much grown for the purpose.

Among them must be included the different forms of fuchsia, which are to be met with almost everywhere, and in many of our large public parks they form quite a speciality. Specimen plants from four to eight feet in height are particularly effective when plunged in the turf, especially in a grassy glade. In this way they should be disposed at such a distance from each other that their individual characters are retained, and yet not far enough apart to present a ragged appearance. Large specimens treated in this way last summer in Regent's Park formed a much-admired feature.



DAHLIA BRENTWOOD YELLOW.
A splendid decorative variety, with large rich yellow flowers, raised by Mr. J. T. West.

Next, beds are in many cases filled with fuchsias alone, and they are also largely used in association with other plants. For beds devoted entirely to fuchsias the larger and bolder kinds, such as Madame Cornellison, Marinka, Scarcity, Mrs. Marshall, and suchlike, are usually employed for the centre, surrounded by such kinds as Alice Hoffmann, or gracilis variegata, and edged with one of the coloured-leaved varieties, pegged down, to form a dwarf border.

Mixed beds of fuchsias and other plants admit of innumerable combinations, and these may be varied to any extent in order to suit individual tastes, for very few people see eye to eye in such matters. A particularly attractive series of beds, in which fuchsias played a prominent part came under my notice last summer. The fuchsias, in standard form, were disposed thinly in the beds, the ground underneath being carpeted with bedding violas. Springing from a groundwork of deep-coloured violas the light-tinted fuchsias had an exceedingly pretty effect, while the paler violas were overhung by the drooping flowers of the richer-hued kinds.

Coloured-leaved Fuchsias.

Last year a very pretty bed in Regent's Park was filled with fuchsias remarkable for the beauty of their foliage alone. Fairly large plants of the well-known varieties Sunray and Golden Treasure rose from an undergrowth of bushy plants of Fuchsia gracilis variegata, the whole being edged with a bronzy-crimson leaved variety—Meta, this last being pegged down. This combination of foliage varieties was certainly very pleasing, and admired by many. The natural habit of the fuchsia is such that its charms are displayed to great advantage when in an elevated position, for which reason some of the varieties are admirably adapted for furnishing vases, window boxes, and similar purposes. Those varieties of a somewhat loose habit of growth are seen to the best advantage when treated in this way.

Where glass accommodation is limited a desirable feature in connection with fuchsias is that even large specimens may be safely wintered where stood closely together, as being at that season devoid of foliage the heads do not take up much room. In spring they need to be shortened back into shape, and, with increased warmth and moisture, the young shoots will soon make their appearance. Then they must have more space assigned them, for the new shoots are exceedingly brittle, and will snap off if overcrowded.

Selection of Varieties.

Many of the new fuchsias of the present day are characterised by very large blossoms, which are much less numerous than those of a small or medium size. These large-flowered kinds are, as a rule, not adapted for summer bedding, as they are liable to be broken off by strong winds, and the loss of a few blooms is in their case severely felt. From this circumstance most of the popular bedding kinds are comparatively old varieties. Those of a self, or almost self, red colour are extensively grown, especially such as Marinka, Scarcity, Abel Carrière, and Monarch; while varieties with red sepals and petals and a dark or plum-coloured corolla, include Delight, Mr. King, President, Gertrude Pearson, Charming, Wave of Life, Lord Byron, and Abd-el-Kader. All these have single corollas, the double varieties from their weight, and consequent liability to injury, being but little employed for the purpose. Perhaps the most-grown of this class is Phenomenal.

Varieties with White Corollas.

The most popular variety of this section is undoubtedly Madame Cornellison, which was first sent out fifty years ago. It is of rather erect growth, with a corolla showing a tendency to become double, but not to a sufficient extent to form a weighty flower. This variety is also the hardiest of its class. A very desirable kind is the comparatively little-known Cadmus, which has a symmetrically shaped flower with a brightly-coloured tube and sepals, and a particularly clear white corolla. It is exceedingly floriferous, and, as noted at Peckham Rye Park last summer, bids fair to rival Madame Conellison in popularity. Among the best doubles of this colour are Ballet Girl, Duchess of Edinburgh, and Molesworth. Alice Hoffmann is a dwarf variety of this class.

Light-coloured Varieties.

The best of these are such old varieties as Amy Lye, Mrs. Marshall, Rose of Castile, and Lady Heytesbury. Lord Beaconsfield, the first of the group, with blossoms tinged with salmon, is still good, but it is less grown than Mrs. Rundle. A very promising member of this section which I have not met with elsewhere than in Regent's Park, is The Doctor, which is more floriferous, and has blooms of a brighter colour than those of the older kind.

Some distinct Continental hybrids sent out within the last few years have been tried for bedding, but they appear rather too delicate for the purpose.

Coloured-leaved Varieties.

These embrace Sunray, with leaves that become very brightly coloured under the influence of the summer's sun; Cloth of Gold, bright yellow; Meteor, reddish; Regalia, bronzy-yellow; Meta, bronzy-red; and the slender-growing Fuchsia gracilis variegata, a charming plant. W. T.

TUBEROUS BEGONIAS FOR BEDDING.

Where summer bedding is carried out to any great extent the present time will be a very busy one for the gardener, as the propagation and after cultivation of bedding plants take up much time and space, and the resources of many establishments are severely taxed at this season.

Among the various classes of plants used for the embellishment of the garden during the summer months none are more showy than the tuberous begonias, and very few, if any, take up less time and room in preparing them for bedding out. This in itself should commend them to those who have not a great amount of glass at their disposal, as when once there is a stock of tubers they may be used over quite a series of seasons, and need not be started into growth before the middle or end of March, or even later than this, so that at the outside they only require glass room for about ten weeks, and a cold frame, with the help of a very mild hotbed, will suit them quite as well, or even better, than a greenhouse.

There are one or two very good named varieties that are used for bedding, notably Lafayette (scarlet) and Major Hope (salmon-pink and white), while the old variety Worthiana is not to be despised, and these then make really effective beds either planted by themselves or in conjunction with some other bedding plants; the two former are made very good use of in this way at Hampton Court Palace gardens. But, generally speaking, these named varieties are not so robust and easy to grow as are the seedlings, the former, of course, having to be propagated from cuttings or by division of the tubers, which naturally weakens the constitution considerably, hence they are not so frequently met with as their brilliance and beauty would warrant.

Seedling begonias are very strong and free flowering, and as they may now be had in a great many colours and shades, from pure white to deep crimson, each of which will come practically true from seed, the expense of raising a batch of these beautiful bedding plants cannot be complained about, and if an early start is made plants may be raised from seeds and bedded out the same year, but it is from second and third year tubers that the best results are obtained.

The raising of begonias from seeds has often been explained in these pages, and it is only necessary for me to say that the seeds should be sown quite by the end of January, and, as soon as large enough to handle, the young seedlings must be pricked off, thereby avoiding any loss of plants by damping; this operation must be done two or three times, and at each successive pricking off give the young plants a little more room. The compost used must be light and open, and a fairly brisk temperature employed until the leaves are about two inches across, when they may be hardened a little. Assuming that up to this point boxes have been used, the plants may with advantage be removed from these and planted out from four to six inches apart in a frame on a hotbed, or in one which has a hot-water pipe or two running through it. As soon as they take hold of the soil in the frame the young plants sould be inured to a little more air, and any shading that may have been found necessary should be gradually removed until the begonias will stand full exposure to light and air.

From these frames they may be removed with a good ball of soil to the beds or borders in which they are to flower, and in this manner I have found them grow away much better, and without any check, than when they have been planted out from pots, and if they have been well managed they should be really good plants almost ready to throw up flowers by the second week in June, and this is about the date when it is really safe to plant out begonias in a great many districts.

Though seedlings may be raised in this manner and bedded out the first season, it is really better to plant them in specially prepared beds in the kitchen garden, or some other suitable place, where they may flower and be proved, and select them to colour for the following and subsequent seasons, and this will save the bother of having perhaps a few mixed colours in the flower beds, where they would spoil an otherwise effective colour scheme. For starting these tubers the second year I certainly prefer a mild hotbed or pit heated with hot water, placing them at the proper distance apart in three or four inches of suitable soil about the middle or end of March, and if kept fairly close till growth commences, afterwards keeping them thoroughly exposed to the sun and air, as the weather permits, they should have made fine sturdy plants about six inches high by the date previously mentioned.

To be really successful with begonias as bedding plants some consideration must be given to the position of the beds, or the results may not in all cases be quite satisfactory, and though they will in most seasons stand bright sunshine, there are certain positions where it would be fatal to plant them, such as a bed which is exposed to the sun, and where a cold or drying wind is likely to reach them, or a border which is sheltered from sunlight in the morning, and yet gets the full blaze in the afternoon; in either of these positions it is more than likely the foliage will be much burnt, and whenever this happens the beds are spoiled for a considerable time, and the check is so great that the plants take a very long time to recover.

But wherever the beds are not exposed to the wind, and where they are on a fairly low, damp position, they will succeed admirably, provided proper attention is given to the preparation of the soil, and even if the beds are in a semi-shady position it will be no detriment to them, but rather the reverse, should the season turn out to be very hot and dry. In heavy soils begonias are rather a long time in starting, and, when they become established, grow very soft, so that a moderately light rich soil is to be preferred for them. Plenty of water should be given after planting to ensure them having a good start, as well as right through the season.

As the plants grow it may be found necessary to put a stake to each growth to prevent damage by wind, etc., but if a proper strain has been selected it will not be necessary to stake the blooms, as they should stand erect, and be well clear of the foliage right through the season.

As mentioned earlier, there are many distinct shades of colour, all of which are beautiful, and it is easy to select the colours that please the individual, but probably the most popular are the scarlets, bright pinks, yellows, and whites, and I certainly think that they are most effective when planted in beds separately, with just an edging of some other bedding plant. If the beds are fairly large the addition of a few dot plants, such as acacias, eucalyptus, fuchsias, abutilons, Zea japonica, etc., etc., will do much to enhance the general effect.

Thomas Stevenson.

LARGE SUMMER BEDS.

In view of the fact that gardeners will soon be directing their attention towards the furnishing of flower beds for summer display a few remarks and suggestions as to the treatment of large beds may prove of service. Where space will admit a series of beds of spacious dimensions it is possible to produce both an imposing and artistic effect, and to this end plants of large growth must be pressed into service.

AN EFFECTIVE BED OF LANTANA ELEGANTISSIMA IN HYDE PARK.

A free-blooming plant with bluish mauve flowers.

It is difficult to understand why fuchsias in standard form are not more extensively employed as bedders, as it is difficult to conceive anything at once more graceful and beautiful. Further, we have learnt how to produce them in the course of a year, while in the second season they resolve themselves into splendid specimens. As seen employed towering above violas that provide a pleasing colour contrast or harmony we get a fine effect, and the same applies when Phlox Drummondi, verbenas, Callistephus sinensis, etc., are employed as a carpet. Pyramid fuchsias find many admirers, and wonderfully fine examples are seen in the London parks and gardens, and while nothing, to my mind, appear so happy or effective as violas as an undergrowth, the changes may be rung in carnations, asters, stocks, mimulus, mesembryanthemums, etc.

Groups of three plants each of specimen Heliotrope President Garfield, or other good named varieties, and Strepsolen Jamesoni, arranged alternately, the intervening space being filled in with Coreopsis grandiflora, with a framework of purple violas, is to be recommended, as is also Cuphea platycentra and Calceolaria Burbidgei arranged in the same way, Verbena venosa doing duty as a carpet, and Verbena Defiance to complete the picture in a foot-wide belt.

I noted a bed last season planted with Swainsonia galegifolia and Eulalia zebrina, backed up with a splendid strain of salpiglossis, and three rows of Dianthus Fireball as an edging, and was much impressed with the effect created.

The old school of gardeners would rub their eyes in amazement if they happened upon Stephanotis floribunda perfectly happy in the flower garden, and yet some beautiful examples were seen in the Hampton Court Gardens a year or two ago, and the air was redolent with their delicious fragrance, in combination with that emitted by the Polyantha roses and mignonette, also tenants of the bed in question.

The lantanas, as seen in large specimens, strike a beautiful and distinct note, and perhaps the finest for our purpose is shown in the illustration, namely L. elegantissima. Kœniga maritima and Antirrhinums Queen Victoria and Queen of the North, both of spotless purity, form a fine carpet for these plants, while the Nicotiana affinis hybrids are also to be recommended.

Plumbago capensis is indispensable, and apart from the fact that we have too little of its colouring in our gardens, it luxuriates and blossoms with freedom if given a sheltered position I have seen it associated with huge plants of Campanula pyramidalis and Verbena Lovely Blue, the edging being made up of violas of softest blue, and the effect was rich and pleasing. A huge bed in a western country garden was rendered conspicuous by the fact that it contained all white flowers. Very large plants of Bouvardia Humboldti corymbiflora, Campanula pyramidalis alba, the white counterpart of Plumbago capensis, and groups of Galtonia candicans towered above white violas, Gnaphalium microphylla and Kœniga maritima, with three rows of Centaurea candidissima compacta as edging.

It is superfluous to dwell upon the merits of ivy-leaved pelargoniums, when grown into pyramids ranging from three to six feet in height, and nothing, to my mind, is more effective than varieties of suitable shades with which to cover the ground. Effective is the association of Fuchsias Marinka and Mrs. Marshall with Pelargonium Madame Crousse, with a groundwork of fibrous-rooted begonias, and the same applies to large plants of Erythrina crista galli, in company with blue violas and white carnations.

Where standard heliotropes are available let them be associated with Carter's Monarch stock, a magnificent variety, which produces a single spike of pure white flowers 2½ feet in length. In the case of pyramids, Mont Blanc stock, of great purity, or, perhaps, Princess Alice, which remains in beauty over a long period, may be employed. Very fine must be written against specimen plants of Hydrangea paniculata grandiflora, Agapanthus umbellatus, and bold groups of Canna President Faure, with an eighteen-inch belt of Veronica Andersoni variegata, silver-leaved geraniums in standard form, with a mass of bronze-leaved cannas or Lobelia cardinalis Firefly, edged with Fuchsia Meteor; Paul Crampel pelargonium, with Antirrhinums Queen of the North, or Yellow Queen, and Verbena venosa; while white pelargoniums with Lobelia tenuior and rose-coloured dianthus cannot fail to please or to arrest attention. With the wealth of material we have at command monotony is out of the question in present-day flower gardening.

Walter H. Aggett.

TENDER FINE FOLIAGE PLANTS FOR SUMMER BEDDING.

Of the different subjects grown for summer bedding the choice is by no means limited to flowering plants, as many depend for their attractiveness upon their brightly-coloured or otherwise ornamental foliage.

Those in which the leafage is of a plain green tint, are, in some respect or other, decidedly ornamental, and apart from their intrinsic beauty, they frequently serve as a foil to brightly-coloured associates. Some, such as the wigandias, ricinus, and Polymnia grandis, are remarkable for their stately grandeur, while others are decidedly graceful in habit. In stature, too, they vary considerably, from the two or three inches of the alternantheras to the dozen feet or thereabouts of the plants just above-mentioned.

It is to these larger and bolder subjects that my remarks more particularly apply, for the choice of such plants is an extensive one. Among the best are Acacia lophantha and Acacia dealbata, with prettily divided foliage, the last-named being of a glaucous tint; Artemisia judaica, a quick-growing annual, with gracefully cut and silvery foliage; cannas, remarkable nowadays for their handsome flowers as well as their ornamental foliage; Cannabis gigantea, the Giant Hemp, with prettily cut foliage; Chamæpeuce cassabonæ (Fish-bone Thistle), and Chamæpeuce diacantha, two striking plants; Cordyline australis, hardy in favoured districts; Ferdinandia eminens, remarkable for its huge leafage; Gnaphalium microphyllum, an upright-growing plant with small silvery leaves; Grevillea robusta, well known for its pretty fern-like foliage; Kochia trichophylla, which has of late years become very popular; Melianthus major, with prettily divided, bluish-green leafage; nicotianas, some of which have very large, handsome foliage; Perilla nankinensis, deep purple leaves; Polymnia grandis (syn. Montanoa bipinnatifida), with large, much-divided foliage; Ricinus (Castor Oil Plant), majestic plants with noble leaves, which, in the different varieties, vary in colour from light green to dark purple; solanums, of which there are many striking kinds; wigandias, sturdy growing plants with noble leaves; and zea (maize), of which there are some beautifully variegated forms. In their earlier stage these do not show their true character, hence it is necessary not to condemn them too hastily.

With such a large choice of subjects as enumerated a vast number of combinations may be carried out. Such plants as the nicotianas, castor oil plants, cannas, and maize are seen to great advantage when occupying an entire bed, as they possess a massive grandeur of their own. The more slender-growing giant hemp, on the other hand, may well be employed for breaking up too dense a mass of foliage.

A very striking bed, noted by me, was planted with a dark-coloured ricinus, and the white-foliaged Solanum marginatum alternating with each other, the whole being margined with Solanum Balbisi, which has prettily-cut foliage and reddish spines.

The different subjects here mentioned can be readily raised from seeds, and, what is more, if sown early in the spring most of them are available for bedding out the same season. They are for the greater part natives of the Tropics, hence they need a warm structure during their earlier stages.

Of slower growth, and to which these last remarks do not apply, are the acacias, chamæpeuce, Gnaphalium microphyllum, and Grevillea robusta, while for the kochia only gentle heat is needed. The cannas, too, though effective the first season, are much stronger and more showy the second year.

Tender plants, for the most part of considerably lower stature, and grown principally for the sake of their bright-coloured leafage, would include the alternantheras, so valuable for carpet bedding; Amaranthus melancholicus ruber, with deep red leaves; Amaranthus salicifolius, whose leaves are marked with red, yellow, and green; begonias in variety; coleus, of sorts; iresine, in variety; Leucophyton Browni, a pretty silvery plant; and variegated-leaved pelargoniums. These are for the most part readily increased by cuttings, while old plants of alternanthera may be propagated to almost any extent by division.

T. C.

PELARGONIUMS IN THE FLOWER GARDEN.

I think I am right in stating that no other class of plant has enjoyed such popularity for summer bedding as the pelargonium, but it is not used so extensively now as it was at one time, owing to the introduction of more varied ideas and tastes into the flower garden. The tricolor and bicolor section appear to have suffered most through this change, while the zonale and ivy-leaved sections are still largely used, and with good effect.

Ofttimes we hear objections raised regarding the use of pelargoniums for bedding purposes, on account of the beds presenting a flat and stiff appearance; then, again, we are told that after the first lot of flowers is over we get nothing but rank growth, with a few straggling trusses of bloom, and also that at a time when the beds ought to be at their best they have to be disfigured for the purpose of procuring cuttings for the following year's stock. Probably these complaints carry some truth with them in a few instances, but where a little care is exercised in the selection of varieties, also in the method and manner of planting, no other summer bedding plant gives a more pleasing and lasting display.

Much may be done to relieve the flatness of beds by using plants two or three years old, as these, with very little trouble, can be grown from three to five feet in height, and even taller, if desired, especially the ivy-leaved varieties. To obtain these some of the best plants at the end of their first season's growth should be put into six-inch pots, and be kept rather dry in a cool house until early in the New Year, when they should be given more moisture at the roots and an increased temperature to encourage a free growth. As soon as new growth begins they are shifted into nine or ten-inch pots, and kept growing in a gentle heat until it becomes necessary to harden them off previous to putting them into their summer quarters. Plants treated in this way flower more profusely than young plants, giving a wealth of blossom all the summer through, and by their increased height make good specimens for dot plants in large beds. They may also be used to raise up the centre of a large bed, or in cases where it is desirable to have a group of pelargoniums in a flower border these tall plants will be found most useful for planting at the back. Old plants of the ivy-leaved varieties are almost indispensable for furnishing vases on terrace walls, etc., and when put into the vases they can be loosened from the stakes supporting them and allowed to hang down naturally, thereby furnishing the vases at once, otherwise, by using young plants for the same purpose, it takes them the greater part of the season to produce the desired effect.

When a little judgment is used in preparing the beds which pelargoniums are to occupy throughout the summer much can be done to check rank growth, and to induce the plants to flower freely. The soil should be light and firm, using manure only in places where the soil is of a very poor character. Too much water is often responsible for indifferent results; once the plants become settled very little is needed in most instances, unless an unusually dry time is experienced.

Usually, when bedding out is completed, there are a quantity of surplus plants to spare, and these, if planted in some vacant quarter, will give many cuttings for stock, while if the beds are examined at intervals many cuttings may be taken from the plants without making any appreciable injurious effect.

As it comes to my lot to arrange for the herbaceous borders to be kept as full and gay as possible from spring until the autumn, I have often found old plants of pelargoniums extremely useful for filling gaps caused by the early and short season of some of the occupants. Plants of a scarlet variety fill in splendidly where the Oriental poppies have passed out of flower, and those of a white variety can be used among doronicums and lupins, helping, rather than upsetting the colour arrangement of the border.

The following pelargoniums can be depended upon to give satisfactory results. Amongst the zonals are Paul Crampell, Reformator, Henry Jacoby, F. Raspail, and Mrs. Lever. Ivy-leaved: Madame Crousse, Souvenir de Charles Turner, Galilee, and Gordon Glory.

T. B. Field.

PIERIS JAPONICA.

Although there are several species of pieris cultivated in gardens, the most useful will probably be found in P. japonica, for though P. formosa, the Himalayan and Chinese species, is a larger growing shrub, and bears finer inflorescences, it is less hardy, and may only be successfully cultivated in those places where severe frost is not experienced. The species under notice is a native of Japan, and is often grown in companionship with the North American P. floribunda. It may be readily distinguished from the American plant, however, by its larger and glossier leaves, and by its longer, pendulous racemes of white flowers. As an evergreen it has much to commend it, for it grows into a shapely bush three to five feet high. The buds are formed during autumn, and lie dormant all winter to expand during late March and early April.

A well-flowered bush forms a conspicuous object, for the drooping panicles are from four to six inches in length, and borne with great freedom. It thrives under similar conditions to rhododendrons, but must not be planted in places where lime is prevalent in the soil to any appreciable extent. The best results are obtained from plants grown in groups, either alone or associated with other peat-loving subjects. During early life growth is very slow, and those plants which are grown from seeds take a considerable time before they are large enough to transfer to permanent positions.

W.

BEDS FOR DWARF SUMMER FLOWERS.

Plants of comparatively dwarf habit are eminently adapted for filling flower beds of medium size, and by bringing together subjects that are dissimilar in growth and colouring charming effects are produced. The order of the day forbids heavy and solid masses, and we are called upon to paint the picture with a light hand. One is led to wonder, in view of the vast improvements that have been effected in garden decoration in recent years, why this artistic perception was not more fully developed at an earlier date.

I propose to submit a few particulars of combinations of plants that struck me as being both pleasing and effective during the summer of 1910, and at the outset I would strongly advise that the dwarf and very beautiful annual Delphinium Blue Butterfly be associated with Antirrhinum Queen Victoria, of spotless purity. Rich purple violas form a capital edging to such a bed, and a few dot plants of Zea gracillima variegata will enhance the beauty of the whole. We are agreed that tuberous begonias present a somewhat heavy appearance en masse, and it was a happy inspiration to allow Iceland poppies to rub shoulders with them, being fairly evenly distributed over the whole bed; Eulalia gracillima variegata and Grevillea robusta were also pressed into service, and the result was a light and graceful whole. One cannot conceive anything more lovely than a combination of Celosia plumosa and Lilium lancifolium rubrum, L. album, and L. roseum, and what a splendid finish does Viola Lilacina make. What shall we say of Salvia Glory of Zurich as a decorative subject? Surely it has no rival for extreme brilliance, and just the softening effect desired is afforded by the presence of the wiry and silvery-white Leucophyton Browni, while dark blue violas appear at their best when employed in their company.

The old and meritorious pelargonium, West Brighton Gem, appeared in a new light, as seen arranged in raised groups of irregular size and outline, masses of Viola Ardwell Gem being employed in the intervening spaces. Very fine was a bed of choice double pyrethrums, and in close proximity a glorious mass of single kinds demonstrated their value, not only as early bedders, but to supply a wealth of cut flowers. Later, these were returned to the reserve garden and cockscombs thinly disposed, and carpeted with Lobelia Snowball, appeared upon the scene to create a rich effect.

Fibrous Begonia Erfordi was associated with Mesembryanthemum cordifolium variegatum, Kochia trichophylla doing duty as dot plants, the framework being blue verbenas. Begonia Major Hope, soft rose-pink, with Gnaphalium microphyllum interspersed, and a few two-feet high standards of Veronica Andersoni variegata looked well. A bed of Dianthus in both double and single forms, violas of various shades being freely interspersed, arrested my attention, and how very happy these plants appear so placed, and nothing better could have been found than Dactylis glomerata as an edging. An arrangement of Phlox Drummondi, in which groups were trained upright, the remainder being pegged close to the ground, made it clear that these old flowers yield to none from a floriferous point of view, while they contribute colouring as diverse as it is beautiful. Balsams arranged at eighteen inches apart, with a groundwork of Alternanthera magnifica and aurea, presented a formal appearance, which the silvery grass edging did something to redeem. By all means plant a bed with Lobelia Firefly, Lilium longiflorum, and Kœniga maritima, with Cliveden Blue viola as an edging. I noted such a bed in a public garden on the South Coast last season, and there was nothing to compare with it for fine effect.

Cineraria maritima, Iresine Lindeni, Amaranthus melancholicus ruber, the Crystal Palace Gem pelargonium, with two rows of Coleus Verschaffelti, constitutes a first-rate foliage arrangement for a medium-sized bed, and Dracæna indivisa may be allowed to tower above them. Fuchsia Ballet Girl, in company with Viola Sir R. Buller, looked well, with a few plants of Solanum pyracantha arranged between the rows of lobelia edging. Fuchsia Marinka, with the white sport from Pentstemon Newbury Gem, variegated geraniums in variety, with gold and silver abutilons freely interspersed amongst them, was another notable arrangement. Stocks arranged in a colour scheme, to be succeeded later by early-flowering chrysanthemums, dahlias from pots, etc., are to be recommended, while those who are wise in their generation will not fail to devote a spacious bed, situated in a prominent position, to Anchusa italica Dropmore variety. The finest examples I have seen of this beautiful plant were noted in Aldenham House Gardens, and I am reminded that when visiting another very large garden about the same time the man at the helm there was content to regard it as a respectable kind of weed. For some reason or another it was very unhappy in this garden, yet so fine at Aldenham.

A. H. W.

AN EFFECTIVE BED OF DWARF PLANTS AT HAMPTON COURT.
The plants consisted chiefly of Leucophyton Browni and Salvia splendens Glory of Zurich.

LAWNS.—Those who desire to make a new lawn or bowling green, or to renovate and maintain existing ones in good condition, can have no better guide than "Lawns and Greens," by T. W. Sanders, price 1s. net, by post 1s. 2d.; bound in cloth 1s. 6d., by post 1s. 9d., from W. H. and L. Collingridge, 148, Aldersgate Street, London.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

TREATMENT OF SEEDLINGS.—Many seedlings will now be showing signs of growth, and, as it is essential that the plants should have every inducement to grow, any potting necessary should be attended to before the young growths and new roots become far advanced. Calanthes which have just made their first bulb, if grown under favourable conditions, quickly commence growing with the return of favourable weather outside. We find that very considerable progress is made with the second growth, and many of the plants are induced to flower on completion of this growth. It is well, therefore, when repotting, to give the plants ample root room, or a second potting will be necessary later in the season. If loam is used for seedling calanthes, it should be of a very light and fibrous nature; we prefer to use peat, chopped sphagnum, and some broken leaves, mixed with finely broken crocks and sand. Place the plants in a position within reasonable distance of the glass, which will prevent them becoming unduly drawn and weakly.

DENDROBIUMS.—Where the conditions are favourable, no orchids are more easily grown than seedling dendrobiums. From the early stages of germination they make rapid progress, and in most cases a good pseudo-bulb is procurable the first year. The plants do not require a great deal of root room—in fact, they resent much compost about their roots. It is essential to have ample drainage, and to see that the potting compost is of a porous nature. Equal portions of fibrous peat, osmunda fibre, and finely-chopped sphagnum moss, with some broken charcoal intermixed, is suitable. This should be made firm about the base of the plants. It is advisable to attend to potting before the new roots become far advanced, as they are very brittle and subject to injury.

CATTLEYAS, and their allied genera, have of late years been raised in greater numbers than perhaps any other class of orchids; and, as their requirements are now pretty generally understood, I need not refer to the details, but must impress my readers with the fact that, if it is desirable to flower seedlings in anything like a reasonable period after seed-sowing, the plants must be kept growing practically at all seasons of the year, right up to the time they reach the flowering stage. It was the attempt to imitate Nature that prolonged the flowering of this class of plants for a number of years, and the resting season, assumed to be desirable under natural conditions, may be ignored under artificial treatment; and it is well to keep this fact in view, and to give the plants every facility for free growth. The present season is one of the most suitable to attend to potting among the plants of various ages. After potting keep the atmosphere humid about the plants. In some situations damping the floors, etc., at night may be beneficial. Protect from strong light until the new roots become established in the new potting compost.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

SHOW PELARGONIUMS.—These most useful plants are now showing their flower buds, and will be greatly assisted in their development by occasional applications of weak liquid manure. Plenty of ventilation is necessary, as pelargoniums greatly resent a close atmosphere. This section of the family is very much subject to attacks of green-fly, so that they must be fumigated at intervals to prevent damage, especially before taking them into the conservatory to form a display.

ZONAL PELARGONIUMS.—Cuttings of the zonal section which were inserted several in a pot ought now to be ready for potting. Make the soil moderately firm to induce sturdy growth. Careful watering is necessary at this stage. When the plants have become established after potting they should have the tips removed to make the plants branch.

HELIOTROPIUMS.—These are always acceptable as subjects for the conservatory on account of their fragrance. They may be grown as climbers, bushes, or standards, but undoubtedly the flowers are shown to greatest advantage when they are grown as standards. Cuttings may be put in now in a good brisk heat; when rooted, pot off singly into small pots, and keep them growing steadily by subsequent pottings. Grow to a height of about three feet, when the point should be pinched out. Remove all the side buds to within a short distance from the top; and as the remaining shoots develop they must be pinched to form a head. In the summer time the plants may be placed outside to derive full benefit from the sun. Fuchsias may also be treated in the same manner as advised for heliotropes.

BROMPTON STOCKS, which have been wintered in frames, are now showing their flower spikes. Remove a few into a slightly warmer place to provide early flowers, which will be found very acceptable. A little liquid manure will be very beneficial.

CUTTINGS AND SEEDLINGS.—One thing above all others which is necessary in successful plant culture is a good foundation. This can only be obtained by careful and ready attention to all details when the plants are in a young state. Rooted cuttings must not be allowed to become matted together before being potted off, or a serious check will be the result from which it is hard for the plants to recover. Seedlings must not be allowed to become crowded in the seed pans or boxes, but be pricked off or potted to keep them continually growing. It is this continual growth which builds up the strong constitution of the plant necessary to give the best results in flowering. Keep all seedlings and cuttings as near to the glass as possible to prevent them becoming drawn or "leggy"; shade from hot sunshine. —A. Grubb, Porter's Park Gardens.

HARDY FRUITS.

STRAWBERRIES. — Strawberry beds should now receive attention; they should be hoed through, have all weeds raked off, and given a good dressing of lime and soot as a preventive to slugs. Then add a thick layer of clean wheat or barley straw, worked well under the folage, to prevent the fruits from getting damaged by damp, or splashed with soil from heavy rains. Where there are handlights or frames to spare these may be placed over strong crowns of last season's planting, thereby advancing the crop quite a fortnight over those not protected. Extra attention will be well repaid; if the fruits under cover are slightly thinned and a good soaking of liquid manure given occasionally the crop will be improved.

BORDEAUX MIXTURE.—Apple and pear trees that are subject to scab may be sprayed with this mixture immediately before coming into flower. Bordeaux mixture is the best known remedy at present for this most disfiguring disease, which not only spoils the crop but is in a great measure responsible for the unhealthy state of some of the weaker and more delicate varieties of our principle hardy fruits. When using the mixture a careful memoranda should be kept of results obtained, as some varieties of apples may show slight injury to the foliage, and some also a slight russeting of the fruits. This may sometimes be due to the weather, or other causes, but if ordinary care be used in the mixing and application of the fungicide very little injury, if any, will be caused.

PREPARING BORDEAUX MIXTURE.—The most convenient way of preparing the mixture is to make 50 or 25 gallon lots, according to convenience or the size of the spraying machine, using at the rate of 4lbs. of sulphate of copper and 4lbs. of quicklime to 50 gallons of water. The sulphate of copper may be readily dissolved with a little hot water, and made up to 25 gallons; the lumps of lime—which must be quite fresh, or the mixture will be spoilt—should be allowed to "blow" in a little cold water at first, afterwards making up to 25 gallons. Both lime and copper solutions should then be poured simultaneously into the spraying machine, straining at the same time through a piece of gauze or sacking. Use at once, and keep it well stirred as the work proceeds.

SPRAYING.—The mixture should be applied through a very fine nozzle, and with sufficient force to cause a fog or smoke like spray, and on no account should the application be so heavy as to cause a drip from the leaves, or injury is sure to follow. Cox's Orange Pippin should be sprayed with the mixture at a slightly reduced strength, and, if it is thought necessary, give a later spraying when the fruits begin to turn eye downwards, as on very young fruits the spray will sometimes cause a russeting. — J. Whittle, Cheveney Gardens.

THE KITCHEN GARDEN.

CAULIFLOWERS. — The early - raised plants may now be safely planted out. A considerable portion should be given a warm situation to forward their growth, as these will be found useful to succeed the spring broccoli. The remainder may be given a more open quarter, to yield a lengthy supply of heads. Select ground that is sweet and in good heart, and give a distance between each plant of about eighteen inches. Should the weather prove cold afford the plants shelter for a time by placing laurel boughs in position to break up the winds.

BROCCOLI AND WINTER GREENS.—The principle sowing of these may be made. Select a piece of ground that has not carried crops of brassicas for some time, and is openly situated. Give a dressing of lime and wood ashes to its surface, forking it lightly in. Draw out the drills at one foot apart, and sow the seed thinly. The two most hardy and reliable varieties of late broccoli for this part of the country are Veitch's Model and Sutton's Flower of Spring.

MAIN CROP POTATOES.—It will be advisable to proceed with plantations of main crop varieties of potatoes. If the sets have been prepared by being picked over, removing the weakly and small shoots and retaining one or two of the strongest, keeping them in a cool, airy place, it will much assist matters in securing a desirable and even growth fit for planting. Potatoes require a rich and thoroughly worked soil. If manure has been scarce give a dressing of bone-meal and wood ashes along the drills at the time of planting. Give a distance of not less than two feet from row to row. Strong growers may require two feet six inches, and about a foot apart in the row. For winter supplies I pin my faith to Up-to-Date and Scottish Triumph for latest use.

ASPARAGUS.—A stock of young plants is mostly necessary either for forcing purposes or for renewing beds that are past their best. Where ground has been trenched and enriched with manure, wood ashes, etc., to bring it to a suitable condition, seeds may be sown in drills two feet apart. Where land is naturally suitable there is no reason why permanent beds should not be formed in this way directly from sowing, and so save the labour of replanting. Do not sow the seeds thickly; liberally thin out the young plants as soon as the strongest can be selected to about twelve inches apart.

SEAKALE.—The thongs that were saved when lifting the crop for forcing, if cut into lengths and stored in sand or ashes, will be now in condition for planting. Ground that was dug early and left to the influence of wind and frost will crumble down to a powdery surface it lightly forked over; apply a dressing of salt at this time. Plant in rows from fifteen to eighteen inches apart, and allow one foot between the plants in the row. Place the top of the thongs even with the surface of the ground, and make it firm.

GLOBE ARTICHOKES.—If fresh plantings are required this may now be carried out, either by the removal of healthy suckers from the old stools or the purchase of new stock.—C. Flack, Cholmondley Castle Gardens.

FALMOUTH SPRING FLOWER SHOW.
THE SHOW OF THE CORNISH RIVIERA.
To be held April 19th and 20th.
To be opened by their Royal Highnesses Prince and
Princess Alexander of Teck.
First-class Band and Programme.
Free accommodation to the Trade.
Schedules and full particulars,
R. E. GILL,
Hon. Secretary,
Falmouth.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

Liverpool Spring Show.

The spring show of the Liverpool Horticultural Association has for a long period ranked among the best of the early exhibitions in England, and the twenty-third of the series, which opened on April 5 for two days, may certainly be described as well maintaining the association's reputation. The Corn Exchange is a roomy building, which lends itself well to the effective arrangement of floral exhibits, and on Wednesday the scene was one of exquisite charm. In addition to spring-flowering bulbs, there were several other features that are lacking at some early shows, and consequently everybody's tastes were admirably catered for.

HYACINTHS

were shown in large numbers, and the quality was good throughout. The best twelve, distinct, singles, were staged by Mr. J. Nisbet, gardener to Miss Robinson, Holmfield, Aigburth. Queen of Pinks, King of Blues, City of Haarlem, and Queen of Blues were tall, shapely spikes, staged in nice condition. Mr. Thos. Hitchman, gardener to Arthur Earle, Esq., J.P., Childwall Lodge, Wavertree, took second, his flowers being a trifle smaller, but fresh and good. Third, Mr. A. Lewis, gardener to T. Von Heyder, Esq., Stone House, Allerton. Eight entries. Six singles brought nine entries, Mr. Nisbet again scoring, his plant of Menelik, one of the darkest varieties, carrying a grand spike; second went to Mr. J. V. Thompson, gardener to Mrs. D. P. Sinclair, Rivelm, Princes Park, Liverpool; Mr. Thos. Hitchman taking third.

Some good plants were staged in the class for six pots, three bulbs in each, five exhibitors competing. Mr. E. R. Finch, gardener to W. J. Lockett, Esq., Grassendale, led. His three bulbs of Yellow Hammer carried five good spikes, La Victoria and Correggio also being good. Mr. Nisbet followed, one of his pots carrying three spikes to each bulb, the spikes being necessarily rather thin; third prize went to Mr. John McColl, gardener to J. W. Hughes, Esq., New Heys, Allerton. For three pans of not more than ten bulbs each, Mr. Thos. Hitchman scored, second going to Mr. Geo. Osborne, gardener to Drs. Tisdall and Ingall, Tue Brook Villa, Tue Brook, and Mr. A. Lewis coming third.

TULIPS.

Twelve pots, singles, brought four entries, Mr. J. V. Thompson leading with a bright lot of well-grown flowers; second went to Mr. Jas. Williams, gardener to C. J. Proctor, Esq., J.P., Boscobel, Oxton; and third to Mr. E. R. Finch. There was a strong entry for six pots, singles, and here Mr. James Williams was the leader; Grace Darling, Couleur Cardinal, and Sarah Bernhardt were finely shown. Mr. E. Wharton, gardener to John Findlay, Esq., Mairscourt, Sefton Park, was second, with smaller flowers; Mr. Thos. Hitchman third. Six pots, doubles, made a good display. The winning lot, staged by Mr. Jas. Williams, being of great size and substance. Mr. J. V. Thompson made a good second, and Mr. E. R. Finch third (nine entries).

DAFFODILS.

Six pots, in not less than three varieties, found Mr. Nisbet to the fore, his varieties being Mdme. de Graaff, Glory of Leiden, Victoria, Emperor, and two pots of Mdme. Plemp. Mr. Geo. Osborne followed with Mrs. J. B. M. Camm and Empress, as well as four of Mr. Nisbet's varieties.

Collections of cut daffodils were not a great feature, there being no entry for 25 varieties, and only one for twelve, this being staged by Mr. Geo. Osborne, who received first prize. Four entries for a basket of cut daffodils, arranged with suitable foliage, were tastefully staged, the winner being Mr. E. Wharton. His basket was of massive design, and flowers were liberally used without undue crowding. Croton leaves and Asparagus plumosus constituted the foliage. Mr. Jas. Williams was second, and Mr. W. H. Roberts, gardener to F. Dixon-Nuttall, Esq., Nutgrove Hall, St. Helens, third.

MISCELLANEOUS.

In the miscellaneous section some splendid specimen plants were shown. The rhododendrons, azaleas, roses, lilacs, and trained clematis producing glorious masses of bright and cheerful colours. Specimen orchids were also remarkably well shown, and one of the most prominent and successful exhibitors of these subjects was Mr. G. Eaton, gardener to W. Ted, Esq., Dry Grange, Allerton. Among his wins were firsts for one and two specimen orchids, with immense plants of Cymbidium Lowianum; firsts also for three rhododendrons, four azaleas, four cinerarias, one rhododendron, and one greenhouse plant—Imantophyllum miniatum. Mr. E. R. Finch took firsts for three greenhouse azaleas, six forced hardy plants, four hardy plants, and one hardy azalea.

Three splendid entries for six pots of amaryllis, distinct, were forthcoming in the class provided by Messrs. R. P. Ker and Sons. The first prize was awarded Mr. W. Hignett, gardener to C. W. Carver, Esq., Woodbourne, West Derby. Mr. E. R. Finch second, and Mr. Thos. Rigg, gardener to Miss McKean, Wavertree Lodge, Wavertree, third.

Mr. W. Hignett took firsts for one specimen dendrobium and for two specimen orchids, distinct, showing some very large plants of D. nobile and D. Ainsworthi, which carried an immense quantity of flowers. Mr. Eaton scored again for a group of twelve Cineraria stellata, second prize going to Mr. D. McKelvie, gardener to John Stone, Esq., J.P., Blackdon Roby; Mr. F. C. Keightley, gardener to Mrs. Duncan Prizett, Grassendale, third. Mr. F. Atkin, gardener to F. W. Wright, Esq., Mossley Vale House, Mossley Hill, scored for six Primula sinensis in the class provided by Messrs. Sutton and Sons, second going to Mr. Thomas Hitchman, and third to Mr. E. R. Finch. Mr. Atkin again scored for six table plants, showing nice serviceable crotons, pandanus, and dracænas.

A dinner table decorated with flowers found Mr. J. Armitstead, gardener to Mrs. T. A. Vlasto, Bounevaine, Sefton Park, the leader of three entries. His table was treated with red roses and lily of the valley. The second prize table was decorated with carnation Mrs. Burnett, the exhibitor being Miss Newsham, Old Hall, Aughton. Mr. Jas. Williams came third, using daffodils and trails of Asparagus Sprengeri.

NON-COMPETITIVE.

The show was well supported by trade exhibitors, whose exhibits added both variety and interest to the display. Messrs. Mansell and Hatcher, Ltd., Rawdon, Yorks, brought a group of choice orchids, which, arranged in a tasteful manner, constituted a feature of the show. Many beautiful odontoglossums occupied the centre of the stage, with large, well-flowered dendrobiums at either end. Cattleyas, cypripediums, and a number of particularly good examples of the bright Oncidium concolor made up a splendid exhibit. The magnificent amaryllis staged by Messrs. R. P. Ker and Sons, Aigburth Nurseries, Liverpool, were remarkable alike for variety of colour and beauty of form. The intensity of the crimsons and scarlets was the more marked in consequence of the many delicate tints of other varieties, several quite new shades of rose-pink and orange being included among them. Messrs. Ker's group was well set off by a background of palms, ferns, etc., and some forced azaleas and other flowering shrubs were also staged.

Perpetual carnations from Messrs. W. Cutbush and Son, Highgate Nurseries, London, were tastefully arranged with trails of Asparagus Sprengeri as a set-off. Pink Delight, Lady C. Waring, Glendale, and Marmion stood out conspicuously as a few of the most distinct varieties. An exhibit of choice daffodils was staged by Messrs. Barr and Sons, Covent Garden, London. Mermaid, King Alfred, Sunrise, and Lord Kitchener were worthy of note.

Exhibits of alpine plants were present in considerable numbers, and many choice plants were shown. Messrs. Bees, Ltd. Liverpool, occupied about 100 square feet of tabling with an interesting exhibit of rock plants, among which primulas predominated. Their recent introductions from China were well represented, P. Forresti, P. pulverulenta, and the quaint little P. muscarioides being supported by many older favourites. P. malacoides and the variety alba were staged finely; and among other good things exhibited was Rhododendron racemosum, the plants being smothered in bloom. Messrs. Bakers, Wolverhampton, brought some choice little primulas and other alpine plants, which they placed in fibre and moss, making a bed of beautiful flowers. Lychnis alpina, Sanguinaria canadensis, Incarvillea grandiflora, and Cypripedium spectabile were nicely shown; and the rich purple-blue Viola gracilis was another choice item in this exhibit.

The Tully Nurseries, Kildare, Ireland, made a remarkably fine display of alpines, including such gems as Morisia hypogæa, Shortia galacifolia, Saxifraga oppositifolia, and many choice primulas. A plant of a new hybrid primula, named Mrs. Hall Walker, was staged, and may be described as a rich lavender flower, borne on erect stems above prettily-toothed glaucous foliage. It is certainly a distinct plant.

A group of azaleas, rhododendrons, and lilacs, put up by Mr. Wm. Rowlands, Childwall Nurseries, Wavertree, provided a fine bit of colour just beside the entrance door. Another bright exhibit of azaleas, deutzias, etc., came from Messrs. Thos. Davies and Co., Wavertree. The Liverpool Orchid and Nursery Co., Lim., Gateacre, put up a small group of odontoglossums, oncidiums, Læliocatleyas, and other orchids. Daffodils and tulips were admirably staged by Messrs. Hogg and Robertson, Lim., Dublin, who also had some beautiful flowers of their excellent strain of St. Brigid anemones.

MEDALS.

Gold.—Messrs. R. P. Ker and Sons, Liverpool; Messrs. Mansell and Hatcher, Lim., Rawdon; Messrs. W. Cutbush and Son, London; the Tully Nursery Co., Kildare.

Silver. — Messrs. Bees, Lim., Liverpool; Mr. Henry Middlehurst, Liverpool; Messrs. Barr and Sons, London; Mr. W. Rowlands, Liverpool; The Liverpool Orchid Co., Lim.; Messrs. Thos. Davies and Co., Liverpool; Messrs. Bakers, Wolverhampton; Mr. C. A. Young, West Derby; Messrs. Hogg and Robertson, Lim., Dublin; A. W. Carver, Esq., West Derby.

Redhill and Reigate Gardeners' Association.

This association held its fortnightly meeting on March 21 in the Penrhyn Hall, with Mr. W. P. Bound in the chair. Mr. J. Wright, V.M.H., Horticultural Instructor to the Surrey County Council, was the lecturer for the evening, his subject being "Hardy Fruit." There was a large gathering of members, and the lecture, which was of high educational value, received the closest attention from the large audience. A hearty vote of thanks was accorded Mr. Wright at the close of his lecture.

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, MARCH 28.

Present: Mr. E. A. Bowles, M.A., F.L.S. (in the chair), Dr. Voelcker, Canon Fowler, and Messrs. Pearson, Chapman, Worsley, Hales, Holmes, Bennet-Poë, Odell, Fraser, Arkwright, Hill, Elwes, Rolfe, and Chittenden (hon. sec.).

JASMINUM PRIMULINUM DISEASED.—Mr. Odell showed flowering shoots of Jasminum primulinum with brown patches here and there upon the stems, and withered foliage above them. The cause of the presence of these brown patches was the attack of the fungus Botrytis cinerea, a fungus which, while usually saprophytic, is capable of attacking living tissues and causing death, especially when the growths are sappy.

PRIMULA WITH FOLIOSE CALYX.—Mr. J. Fraser showed a flower with leafy calyx segments, which was, perhaps, a common primrose, but possibly a cowslip, similar to a dried specimen which had come from Wincanton, which he also showed.

CROCUS SPORT.—Mr. Bowles showed a deep purple sport of the Crocus President, from Mr. Jacob's garden at Whitchurch. One corm had produced three flowers, the two lateral ones bearing typical President, with colour and striping characteristic of that variety, the middle one being the sport in question.

PYRONIA x JOHN SEDEN.—Messrs. Veitch sent a fruit of this interesting cross, which Mr. Worsley took for further examination.

RHODODENDRON FARGESI.—A flowering shoot of this new Chinese rhododendron came from Mr. P. D. Williams, of Lanarth, Cornwall.

FUNGI PARASITIC ON INSECTS.—The Secretary, on behalf of Mr. W. A. Voss, showed a number of specimens of white fly (Aleyrodes sp.) and scab insects attacked by parasitic fungi, sent by Dr. Berger, of the U.S.A. Experiment Station, Florida. In Florida, considerable success has been achieved in dealing with insect attacks by spraying trees with water containing spores of fungi parasitic upon the insects. The fungi exhibited were Ascheronia flavocitrina on citrus white fly, A. aleurodes on white fly, Aegerita Webberi on white fly, Sphærostilbe coccophila on Orange scale, and on San Josè scale, Verticillum heterocladium on white fly and scale, Myriangium duryi on San Josè scale, and Ophionectria coccicola on San Josè scale.

BOTANICAL CERTIFICATE, ETC.—The discussion upon Mr. Worsley's motion that a new certificate was desirable was continued, but the committee were of opinion that the existing Botanical Certificate and the Certificate of Appreciation covered all the purposes, at present, for which such awards were required. A resolution was therefore sent to the council suggesting the desirability of restricting the recommendation of the award of the Botanical Certificate to the Scientific Committee.

Beckenham Horticultural Society.

The concluding lecture of the winter session, 1910-11, was given by Mr. Alex. Dean, V.M.H., on the 31st ult., his subject being "Elementary Landscape Gardening." Mr. Francis Hooper, vice-president, occupied the chair, and there was a good attendance. The lecturer, though not posing as a landscape gardener in a strict sense, delighted his audience by the way he handled his subject. The various styles, from the "Tudor," with its clipped yews, topiary work, etc.; the Dutch, Italian, and French parterre, were passed under review, and their chief points dilated on briefly. Following this, the various items that would require consideration from the gardener laying out his place, i.e., draining, lawn making, rockwork, water, roads and paths, planting trees and shrubs, etc., all these were discussed, and in each case a deal of instruction was given on how to carry out the work, sound cultural hints being added. A very hearty vote of thinks was accorded Mr. Dean for so kindly coming to Beckenham, though in his 80th year.

Southampton Gardeners' Society.

The monthly meeting of this society was held on Friday, March 31, in the Highfield Church Institute. Mr. B. A. Andrews was in the chair, and there was a good attendance of members.

Mr. O. Nicklen, of Ashton Lodge Gardens, Bassett, read an interesting and instructive paper on the cultivation of the rose for exhibition and decorative purposes. His remarks were followed with close attention, and, after an excellent discussion on the several points raised in the paper, and a number of questions answered, a hearty vote of thanks to Mr. O. Nicklen, proposed by the Hon. Secretary, and seconded by Mr. A. Greenaway, was carried with acclamation.

Eight new members were admitted, and the next meeting will be held on April 28.

Bristol and District Gardeners' Association.

The usual fortnightly meeting was held on March 30 at St. John's Parish Rooms, Mr. Hayball presided over a good attendance. A paper on "Orchids" was read by Mr. Cave, gardener to Dr. Eager, Northwoods. The lecturer said in no department of horticulture has such progress been made in recent years as with orchids. In former years there was often great loss of valuable plants through ignorance. But since cultivators have studied the requirements of the numerous species and varieties, and treated them under proper conditions, much greater success had been achieved, and now their cultivation is considered to be fairly easy. Mr. Cave said that moisture is the most important factor in orchid cultivation. He recommended a compost of equal parts osmunda fibre and sphagnum moss for most kinds, with the addition of loam for cypripediums. In the case of newly-imported plants it was important to see that the last growth is perfectly sound, and be very careful in watering until making new growth, using nothing but rain water for all purposes. A good discussion followed, after which a hearty vote of thanks was accorded Mr. Cave.

For two pots of mignonette Mr. Candy was first, Mr. Spry second, Mr. Shelton third. Mr. Springham gained five points, and Mr. Woodward three.

Elstree and Boreham Wood Horticultural Society.

On Tuesday, March 14, a large audience assembled in the Church Room, Elstree, to hear Mr. Andrew Ireland, of Messrs. Dobbie and Co., lecture on "Sweet Peas." Needless to say that the remarks made by such an authority as Mr. Ireland were brimful of interest, and of a thoroughly practical nature. The lecturer dealt with cultural detail, and fully described the best methods, both in relation to autumn and spring sowing, preparation of the ground, planting, and subsequent treatment, and he afterwards dealt with the newer varieties. Several questions were afterwards asked, and satisfactorily replied to, and a hearty vote of thanks was accorded Mr. Ireland for his kindness in entertaining them that evening.

On Wednesday, March 22, the spring show took place, and there was a brisk competition for prizes for pot hyacinths, offered by the society to school children and others. A good show resulted. The president, the Hon. V. Gibbs (gardener, Mr. E. Beckett, V.M.H.), staged the exhibits with which he won prizes at Vincent Square, and these were greatly admired. A general discussion took place afterwards, the members handing in questions for debate. Votes of thanks were accorded those who contributed towards the success of the meeting.

Broughty Ferry Horticultural Association.

The ordinary monthly meeting was held in "The British Workman" on March 21, when Mr. Andrew McAntkie, Ruthven Gardens, Meigle, submitted an essay on "The Pelargonium." After dealing with the subject in a general way, the essayist entered into the cultivation of bedding pelargoniums, and gave a list of the best varieties for this purpose. Passing on to deal with pot plants for the greenhouse and conservatory, he gave exhaustive details on their cultivation and treatment to ensure a continuous supply of flowering plants throughout the year. Damp was the worst enemy to winter-flowering plants, and a bracing atmosphere was necessary to counteract the evil.

In a subsequent discussion many interesting points were debated, after which the essayist was cordially thanked.

Among a number of exhibits on the table was a magnificent specimen of Cyclamen persicum giganteum album with about 500 flowers, fully developed, and numerous buds pushing up. This plant was grown and shown by Mr. John Bell, Corona Gardens, who has for the past six years been breaking his own records in cyclamen growing. The plant under notice was a three-year-old corm, growing in an eight-inch pot, and was admitted by all the members present to be the finest specimen they had ever seen. On the motion of Mr. Wm. Grant, Mr. Bell and the other exhibitors received the thanks of the meeting, and a like compliment to the president, Mr. James Bethel, closed the proceedings.

NOTES OF OBSERVATION.

◆

Single-flowered Camellias.—As with many other classes of plants, camellias whose blossoms are single, or at most semi-double, are appreciated much more than they formerly were. Compared with the formal blossoms of the double kinds, these single varieties are light and elegant in appearance, the central ring of yellow stamens forming in some of them a very noticeable feature. They are certainly very handsome in the greenhouse or conservatory, and as outdoor shrubs are far hardier than they are generally considered to be. Of the single-flowered forms I particularly like Alba simplex, pure white; Jupiter, rosy-red; Mercury, rich crimson; Minerva, deep rose; and Waltham Glory, very bright red.—W. T.

Hovea Celsi.—The comparative few whose experience goes back to the time when large specimen plants of various hard-wooded subjects formed a prominent feature of many exhibitions, will recognise in this an old-time favourite. It is an Australian member of the order Leguminosæ, and forms a loose-growing plant somewhat after the manner of chorizemas. The slender shoots are clothed for some distance with ovate deep green leaves, and studded for a considerable portion of their length with dense clusters of rich purplish blue flowers that from their distinct tint at once attract attention. Though generally known as above, the name of Hovea elliptica is now by our botanical authorities applied to it.—W. T.

Indian Azaleas.—One cannot fail to be struck with the change that has, within the last twenty years or so, been brought about in the generally grown varieties of the Indian azalea. At one time the varieties of a deep rose colour, often with a magenta shading, were largely grown, but now the most popular of the coloured kinds are those of a clear rose or salmon pink hue, with a light margin to the petals, and those in which the flowers are of a clear red or scarlet tint. White-flowered varieties were always and still are very popular. That small-flowered ruby-red variety, Hexe, a comparative new comer, is now grown in immense numbers in the form of little bushy plants. Another, Charles Encke, is also grown in the same way to a limited extent. The flowers of this are pink and white.—W. T.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

FLOWER BEDS.—E. P., Notts: The effect you are able to produce will depend very largely upon the size of the plants available. For the round beds use tall plants of Madame Crousse pelargonium placed thinly over a groundwork of white violas. The latter should also form a broad band round the pelargoniums, with dot plants of the salmon-pink dianthus among them. In the central bed associate the heliotrope, Calceolaria amplexicaulis, and the white and yellow antirrhinums down the centre; margin with bronze-leaved pelargoniums kept quite dwarf. The selection of plants at command is not of the best, therefore, as it is essential to secure a display as quickly as possible, you had better carpet the outer beds with yellow and mauve violas, make two circular groups of crimson pelargonium in each bed, round a central tall Calceolaria amplexicaulis, and fill in the intervening spaces with the pentstemons and antirrhinums planted thinly, so as to allow them full development. As an alternative the central beds might have the silver-leaved pelargoniums under the tall Madame Crousse, and a bordering of lobelia or Dactylis glomerata.

YOUNG GARDENERS.—C. W., Prittlewell: We imagine the address was not in manuscript, and our correspondent sent us a brief epitome of what was said. We will, however, see what we can do in the matter.

GARDENERS' ADMISSION TO OLYMPIA SHOW.—J. J., Poole: The Royal Horticultural Society's arrangements allow any bona fide working gardener, who is also a member of an affiliated society, to obtain one 2s. 6d. non-transferable ticket admitting to the Olympia Show on Wednesday, July 5, for 1s., on application to the secretary of his local society at least ten days before the show. In forwarding the member's application the local secretary must give the applicant's full name, and also certify that he is both a member of his society and also a bona fide gardener working in the locality. A large stamped and directed envelope should be enclosed with postal order in every case.

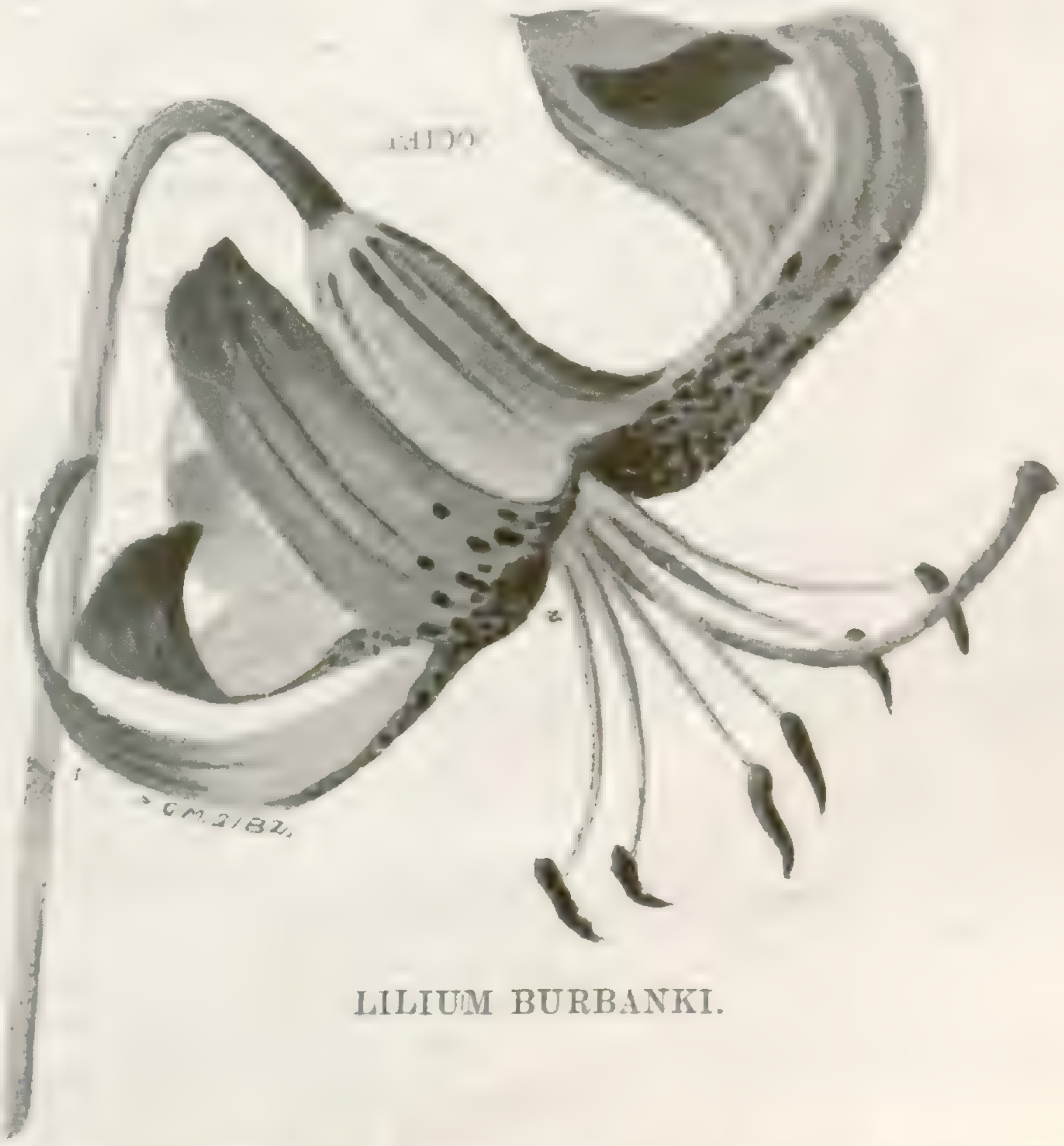
PROPAGATION OF EPIGÆA REPENS.—A. R. S., Sidcup: This low-growing, fragrant-flowered shrub is best propagated in spring by means of cuttings of the previous season's growth, placed in sandy, peaty soil, and put in gentle heat. When rooted the cuttings should be potted singly, and presently placed in a close frame. Ventilation should be given as the plants become established, so that by the autumn the best specimens may be planted out, the smaller ones being given the protection of a cold frame until the spring. Seeds germinate very slowly, but they also offer a means of increase, while division of the tufted growths in autumn, or the layering of the largest branches afford other means of propagation.

HARDY HIBISCUS.—L. A., Ivybridge: Hibiscus syriacus and its numerous varieties, single and double flowered, and ranging from pure white to deepest blue in floral colouring, are among the most popular of flowering shrubs in the South-Western Counties, and they form the most attractive group belonging to the hardy section of this genus. H. militaris, H. Moscheutos, H. palustris, and H. roseus are all more or less hardy; while H. Manihot and H. Trionum may be treated as half-hardy annuals, and raised in heat in early spring.

OURISIA COCCINEA.—T. B. C., Mitcheldean: This charming plant is the best-known member of a genus of about eighteen species. It is a native of the Chilian Andes, and, though it loves a light position in the rock-garden, full exposure to sun and wind does not suit it at all—indeed, a hot, dry place frequently proves fatal to it. A sheltered position, facing west or north-west, with ample moisture and yet a well-drained soil, will prove suitable. Stones should be placed close up to and round the plants, and these will soon be hidden by the trailing growths and a profusion of bright scarlet flowers.

COMPOST FOR THUNIAS.—C. M., Wakefield: For specimen thunias the pots should be drained one-third of their depth, and the compost used as rooting medium should be made up of equal parts of fibrous peat, turfy loam, and chopped sphagnum, with a sufficiency of finely-broken crocks and sand to keep the whole porous. Some people add a little old flaky manure to the compost, but others prefer not to do so, and give weak liquid manure when the plants are well established and growing and rooting freely.

LILIUM BURBANKI.—A. T. N., Stonehouse: The title of Lilium Burbanki has been given to a group of seedlings of mixed parentage, the species involved being L. pardalinum, L. Washingtonianum, L. Humboldti, and L. Parryi, possibly others also. It will thus be understood that the lily flowers vary somewhat in colour; they are all elegant and free flowering, and the colour is usually orange, shaded with crimson, and marked with chocolate. The petals are reflexed, and the hybrid belongs to the Martagon group. Some of the finer forms have been selected, and propagated by British specialists, and these are desirable garden plants. The flower stems rise four to six feet high, and the blooms expand during July. L. Burbanki grows well when there is ample moisture and good drainage; peat or leaf-soil should form the major part of their root run, and the site should be chosen with regard to shelter from keen drying winds.


LILIUM BURBANKI.

SILVER-LEAF IN PEACHES.—A. S., Lyndhurst: It is only quite recently that investigators have made any real progress in their efforts to deal effectively with the dreaded silver-leaf disease. So far it has only been possible to decide the cause of the trouble, and we must still wait for information concerning the methods to be adopted for staying or curing the disease. At present no cure is known. If only a branch or two are affected, cut these back to a main stem; if the trees are very badly affected they should be removed at the end of the fruiting season, and new trees be planted in the renewed border as early as possible in the autumn.

NEW BOOKS.

◆

ANNUAL AND BIENNIAL PLANTS.

By A. E. Speer, F.R.H.S. (John Murray, 50a, Albemarle Street, London.) Price, 7s. 6d. net.

Within a comparatively recent period there has been a material increase in the literature devoted to annual and biennial plants of value for the embellishment of the flower garden, and if we have not as yet had the ideal book on these subjects, the cultivator has had placed at his command an immense amount of information relating to them. It appears to have been an irresistible temptation to the authors of books on annuals to include a considerable number of plants that are strictly perennial in growth. This is done with a view to include all the more noteworthy plants that can, under the more modern methods of culture, be grown from seed to a suitable size for planting out by the time beds and borders are ready for the reception of their summer occupants. That they should be included is, in some respects, a great advantage to the cultivator in need of information, and their inclusion would merit unqualified praise were the authors to arrange the several classes under their respective headings, or clearly indicate in some other way the class to which each species and variety belongs. We are induced to make special reference to this point because annuals and biennials are rapidly increasing in popularity, and prizes are offered for them at a large number of exhibitions in the course of the summer, and many are the disqualifications owing to the exhibitors including perennials.

The book before us is not free from this drawback, but it is so thoroughly good in all that relates to the selection and cultivation of the plants that come within its scope, that we have no hesitation in heartily congratulating the author on what he has accomplished, a by no means easy task, and recommending our readers to give it a prominent position among their books on the garden and its management. The large number of plants included in its pages have been selected with judgment, the descriptions are clear, and the cultural details are stated briefly and in such manner as to leave no doubt in the mind of the reader as to the course he should take in the raising and preparation of stocks of plants with which he is but imperfectly acquainted. The book is freely illustrated with coloured plates and photographic reproductions.

MARKETS.

◆

COVENT GARDEN.

Flowers.

Forced bulbs now fill a large place in the markets, and these, with carnations and orchids, sell freely.

		s. d.	s. d.
Azaleas, white	per doz. bun.	3 0	4 0
Adiantum cuneatum	per doz. bun.	4 0	6 0
Anemone fulgens	per doz. bun.	1 6	2 0
Anemones French	per doz bun.	1 0	1 6
Arums	per doz.	2 0	4 0
Asparagus	per doz. bun.	7 0	10 0
Camellias	per doz.	1 6	2 0
Cattleyas	per doz.	8 0	10 0
Carnations	per doz.	1 6	2 0
,,	per doz. bun.	8 0	10 0
Croton leaves	per bun.	1 0	2 6
Cypripediums	per doz. blooms	2 6	3 0
Freesia alba	per doz. bun.	1 9	1 6
French fern	per doz. bun.	2 6	4 9
Gardenias	per doz.	3 0	5 0
Lilac	per bun.	2 6	3 6
Lilium auratum	per bun.	2 6	4 0
,, speciosum	per bun.	2 0	2 6
,, longiflorum	per bun.	2 6	3 6
Lily of the Valley	per doz. bun.	6 0	10 0
Marguerites	per doz. bun.	2 0	3 0
Myosotis	per doz. bun.	3 0	3 6
Narcissus	per doz. bun.	1 6	3 0
Odontoglossums	per doz. blms.	2 6	3 0
Pelargoniums	per doz. bun.	5 0	7 0
Ranunculus	per doz. bun.	3 0	5 0
Roses	per doz.	1 0	8 0
Smilax	per doz. trails	2 0	3 0
Stocks, white	per doz. bun.	4 6	5 6
Tuberoses	per doz.	6 4	0 6
Tulips	per doz. bun.	6 0	10 0
Violets	per doz. bun.	1 3	3 0
,, Parma	per bun.	1 0	1 6
Wallflowers	per doz. bun.	1 0	2 0

Fruits.

Fairly good supplies are forthcoming, and business is moderately brisk.

		s. d.		s. d.
Apples, English	per bush.	7 6	to	10 0
,, American	per barrel	20 0		26 0
,, Oregon Newtowns	per box	10 0		14 0
,, Canadian	per barrel	23 0		26 0
Bananas	per bun.	4 0		12 6
Chestnuts	per bag	10 0		20 0
Cranberries	per case	9 0		10 0
Grapes, English	per lb.	2 6		10 6
,, Belgian	per lb.	2 0		3 0
,, Cape	per case	3 6		7 6
,, Guernsey	per lb.	0 9		1 3
,, Almeria	per barrel	15 0		25 0
Lemons	per case	8 0		18 0
Nectarines, Cape	per case	8 0		12 0
Oranges	per case	10 0		25 0
,, Jamaica	per case	8 0		9 6
,, Californian Navels	per case	12 0		15 0
,, Sevilles	per case	7 6		8 6
Peaches, Cape	per case	3 0		6 0
Pears, Cape	per case	4 0		6 0
Pineapples	each	2 6		4 6
Plums, Cape	per case	5 0		8 0
Pomegranates	per case	1 9		2 3
Strawberries	per lb.	3 0		10 0

Vegetables.

A good business is being done, and supplies are generous for the time of year.

		s. d.		s. d.
Artichokes, Globe	per doz.	1 6	to	3 6
,, Jerusalem	per ½-sieve	1 0		1 6
Asparagus	per bundle	1 0		4 6
Beans, Jersey	per lb.	0 7		0 9
Beet	per bush.	1 0		1 6
Cabbages	per tally	3 6		7 0
Carrots	per doz. bun.	2 0		3 0
Cauliflowers	per crate	5 0		7 6
Celery	per doz. rolls	5 0		10 6
Chicory	per lb.	0 3½		0 4
Cucumbers	per doz.	2 6		4 0
Endive	per doz.	2 0		3 0
Horseradish	per doz. bun.	9 0		12 0
Lettuce	per doz.	1 6		2 6
Mint	per doz. bun.	1 0		2 0
Mushrooms	per doz. lb.	6 0		12 0
Onions	per bag	4 0		6 6
,, Spanish	per case	6 0		7 0
Parsnips	per bag	2 0		3 0
Parsley	per ½-sieve	1 3		1 6
Peas, Jersey	per lb.	3 0		3 6
Radishes	per doz. bun.	1 0		1 6
Rhubarb	per doz.	0 8		1 0
Seakale	per doz. pun.	8 0		10 0
Spinach, French	per crate	4 0		5 0
Tomatoes, Canary	per crate	10 0		15 0
,, English	per lb.	1 0		1 6
Turnips	per bag	2 0		3 0
Watercress	per doz. bun.	0 6		0 6½

LONDON POTATO MARKETS.

Supplies are good and the demand brisk.

		s. d.	s. d.
Evergood	per ton	80 0	85 0
King Edward	per ton	95 0	100 0
Maincrops	per ton	100 0	105 0
President	per ton	85 0	90 0
Up-to-Dates	per ton	90 0	100 0

OBITUARY.

◆

MR. B. C. CHAMBERS.

Mr. B. Coates Chambers, of Grayswood Hill, Haslemere, died, we regret to learn, at Hyeres, on March 23. The deceased gentleman was an enthusiastic gardener, and during his thirty years' residence at Haslemere he formed one of the most interesting of gardens to be found in the kingdom, filling it with the choicest of trees, shrubs, and flowers, and selecting the right positions for these with, apparently, unfailing accuracy.

MR. JOHN MUIR.

"Muir of Margham" was a striking personality in the horticultural world a quarter of a century ago, but during later years he retired from the exhibition arena. Mr. John Muir was a famous gardener, and for a number of years had charge of the gardens at Margham Abbey. He was a prolific writer and an acknowledged expert in all branches of horticulture. His death recently is a great loss to the horticultural world.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above sea-level, 150 feet.

Date. 1911. March 26 to April 1.	Sunshine.	Temperature of the Air.			
		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Mar. 26—Sunday	2 12	36	32	43	32
,, 27—Monday	—	37	37	44	36
,, 28—Tuesday	8 54	44	41	53	34
,, 29—Wednesday	—	42	41	49	40
,, 30—Thursday	—	41	40	48	39
,, 31—Friday	1 0	48	47	56	41
April 1—Saturday	6	43	42	50	40
Means	(total) 12 12	41	40	49	37

Date. 1911. March 26 to April 1.	Rain.	Temperature of the Soil at 9 a.m.			Lowest Temperature on Grass.
		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
Mar. 26—Sunday	·04	39	41	43	28
,, 27—Monday	·10	39	41	43	35
,, 28 Tuesday	trace	39	40	43	27
,, 29—Wednesday	—	42	41	43	36
,, 30—Thursday	trace	42	42	43	39
,, 31—Friday	—	44	42	43	42
April 1—Saturday	·52	44	43	43	32
Means	(total) ·66	41	41	43	34

Debregeasia velutina.—At one of the January meetings of the Royal Horticultural Society a group of this uncommon plant was shown. It was, I venture to think, quite unknown to the majority of the visitors, and attracted a good share of attention. It belongs to the mulberry section of the Nettle family, and forms a loose-growing shrub, whose long shoots are clothed with lanceolate leaves, about six inches long, and soft in texture. The flowers, borne in clusters from every joint, even on the older wood from whence the leaves have dropped, are inconspicuous, but are succeeded by softish fruits, which, when ripe, are the size of peas, and of a bright orange colour. This debregeasia is a native of India, and was introduced about fifteen years ago.—W. T.

There is no better guide to the kitchen garden than VEGETABLES AND THEIR CULTIVATION, by T. W. Sanders. It is a complete treatise on the general management of the garden, and the successful culture of vegetables, saladings, and herbs for home use. Price 5s. net, by post, in box 5s. 6d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

FORTHCOMING ENGAGEMENTS.

MONDAY, April 10.—United Horticultural Benefit and Provident Society, committee meeting.

TUESDAY, April 11.—Royal Horticultural Society; Daffodil Committee meets at 11.30, Fruit, Floral, and Orchid Committees at 12 o'clock; lecture at 3 p.m. on "The Origin and Structure of Aquatic Flowering Plants," by the Rev. Prof. G. Henslow, V.M.H.; Scientific Committee at 4 o'clock.

THURSDAY, April 13.—National Horticultural Society of France; exhibition and meeting in Paris.

WEDNESDAY, April 19.—Royal Horticultural Society of Ireland: Spring Show.

Devon Spring Flower Show, at Plymouth; two days.

THURSDAY, April 20.—Ipswich Spring Show.

TUESDAY, April 25.—Royal Horticultural Society; Daffodil Committee meets at 11.30; Fruit, Floral, and Orchid Committees at 12 o'clock; lecture at 3 p.m. on "The Tulip: Its Problems and History," by Rev. J. Jacob; Scientific Committee at 4 o'clock.

National Auricula and Primula Society's Show, in conjunction with Royal Horticultural Society.

National Rose Society; Special General Meeting. 3 p.m. Rose Conference with address by Rev. J. H. Pemberton, 5 p.m., Dinner 7 p.m., at Westminster Palace Hotel, Victoria Street, S.W.

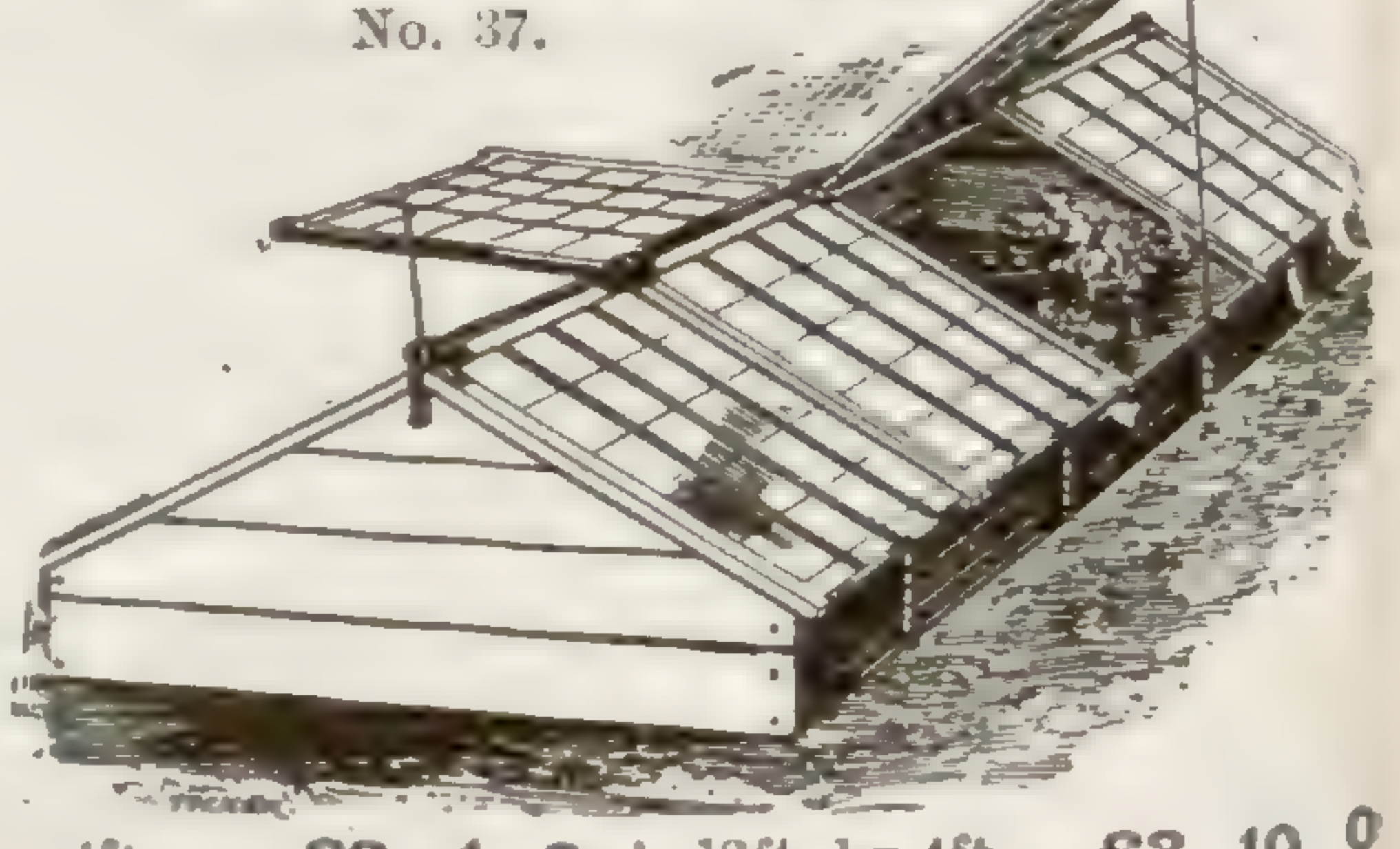
CATALOGUES RECEIVED.

H. J. JONES' NURSERIES, LIM., RYECROFT, HITHER GREEN, LEWISHAM.—The neat red-covered catalogue before us is generally useful, but is of special interest for its descriptive lists of dahlias, pelargoniums, chrysanthemums, fuchsias, Michaelmas daisies, and sweet peas.

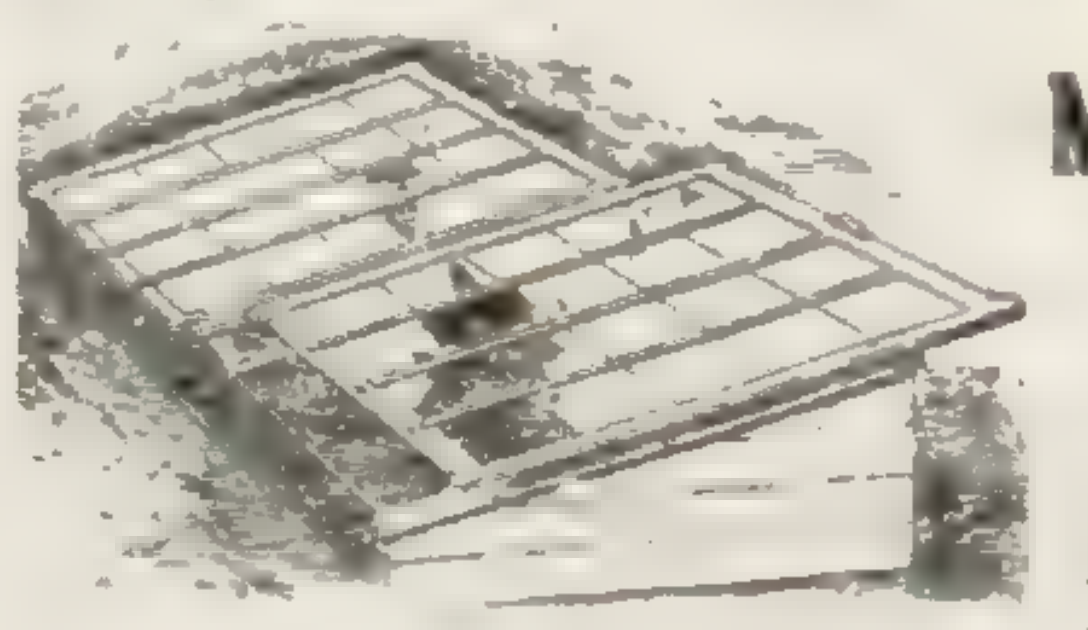
JAMES VEITCH AND SONS, CHELSEA.—A useful, descriptive, and priced list of dahlias, the varieties being carefully grouped in their several sections. A descriptive list of hardy water lilies is also sent.

ROBERT P. KER AND SONS, AIGBURTH NURSERY, LIVERPOOL.—A handy, illustrated catalogue of this firm's new and beautiful amaryllis or hippeastrums. Thirty-two gold medals now stand to this firm's credit for these handsome bulbous plants.

WM. DUNCAN TUCKER & SONS, LTD.
Horticultural Builders
27, Cannon St., London, E.C.
Works: Tottenham.
GARDEN FRAMES in variety.
PLANT PRESERVER.
No. 37.



6ft. by 4ft. £2 1 0 | 12ft. by 4ft. £3 10 0
8ft. by 6ft. 3 17 0 | 16ft. by 6ft. 7 0 0



Melon & Cucumber Frame
No. 38.
6ft. by 4ft. £1 14 0
8ft. by 6ft. 2 14 0
12ft. by 6ft. 3 14 0
16ft. by 6ft. 4 14 0
Carriage paid to most stations on orders of 40/- in value.
Please mention this paper.

SANKEY'S FAMOUS GARDEN POTS
FLOWER POTS.
The best and the cheapest.
Write for LISTS.
Quotations given for ANY Quantity, Carriage Free.
Appointed by Royal Warrant
Makers to His Majesty the late King.
Largest Manufacturers in the World.
Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

CONTENTS.

	PAGE
Answers to Correspondents	273
Beds for Dwarf Summer Flowers	269
Dahlias for Garden Decoration	264
Dahlia Kaiserin Augusta Victoria	261
Exhibitions and Meetings	271
Fuchsias for Bedding	265
Large Summer Beds	267
New Exhibition Cactus Dahlias	263
Notes of the Week	257
Pæony-flowered Dahlias	262
Pelargoniums in the Flower Garden	268
Single Dahlias	260
Sweet Pea Jottings	260
Tuberous Begonias for Bedding	266
Work for the Week	270

ILLUSTRATIONS.

Portrait of Mr. P. Rudolph Barr, 257; Some finely developed Amaryllis, 259; A fine bed of Dahlia Kaiserin Augusta Victoria, 261; Pæony-flowered Dahlia Olivia, 262; Cactus Dahlia White Ensign, 263; Cactus Dahlia Mrs. Landale, 264; Dahlia Brentwood Yellow, 265; An effective bed of Lantana elegantissima, 267; An effective bed of Dwarf Plants, 269.

SUN BLINDS SHADINGS

Of every Description for Indoors and Out.
Send for Priced Samples free by return.
Blinds made up complete ready for fixing.
All Fittings Supplied
SENT CARRIAGE PAID.

BAMBOO
LATH
TIFFANY
BLINDS

Of Modern and Improved Patterns.

"ECLIPSE" LAWN SAND AND DAISY KILLER.

Destroys Daisies, Dandelions, Mosses, Plantains, &c., and invigorates the growth of the grass.

WEED KILLER "ELECTRIC"

In Powder and Liquid.

"VERMICIDE" Liquid Earth - Worm Destroyer. Non-Poisonous.

NICOTINE EMULSION for prevention of bird attack, LEMON OIL, PARAFFIN SOAP and INSECTICIDE, &c., &c.

"A1" FUMIGATING COMPOUND.

The Cheapest and most successful Fumigant.

Kills Mealy Bug, AND ALL INSECTS.

Test and Prove its Value.

Can be used in the ordinary appliances.

For	1,000	2,000	4,000	8,000	12,000	20,000	40,000 cub. ft.
Price	**8d.**	**1/2**	**2/3**	**4/6**	**6/6**	**10/6**	**20/-** per bot.

NETTINGS

OF ALL DESCRIPTIONS, NEW AND REPAIRED, FOR PROTECTION AGAINST BIRDS, ETC.

SPRAYERS, SYRINGES, GARDEN ENGINES, WATER BARROWS, HOSE REELS, PUMPS, REVOLVING LAWN SPRINKLERS, &C.

Arctic Flannel Canvas, Frost Protector Espalier Training, All Requisites Supplied.

The Cheapest House in the Trade for

Lawn Mowers, Hose, Garden Rollers, &c.

Carriage Paid to your Station.

☛ SEND for Illustrated Price List of the latest elected Lawn Mowers. Over 50 designs. Also our up-to-date Compendium of Garden Requisites, with over 1,000 Illustrations.

WILLIAM WOOD & SON, LTD.,
North British Wharf,
WOOD GREEN, LONDON.
Telegrams: Fungheto, London.
Telephone: Palmers Green 377 and 378.

Fruit Pergola as recently erected.

Have a Fruit Pergola this Summer!

Charming effects and excellent results can be obtained by training fruit trees on our improved Arched Espaliers. Order now, and get your fruit trees planted in good time.

No. 103 Arched Espalier, 8ft. high, 5ft. wide, painted, 9/6 per yard.
Cheaper patterns 6/- and 3/- per yard.
Catalogue No. 153A of Espaliers, Rose Trainers, Garden Arches, Pergolas, etc., free.
HUTS FOR THE GARDEN, POTTING SHEDS, FRUIT ROOMS, TOOL HOUSES, ETC.

BOULTON & PAUL, Ltd., Specialists, NORWICH.

VAPORITE
THE ORIGINAL SOIL INSECTICIDE

Protect your plants NOW—when digging—to ensure DEATH TO WIREWORMS.

If you dig in Vaporite now—when preparing your ground—at the rate of 1 lb. to 8 sq. yds., you will bring this about. The small quantity required makes the cost negligible compared with the improvement in the development of your plants and vegetables. Illustrated booklet, No. 45, "Vaporite and Its Uses" sent, post free, by the Company.

WIREWORMS.

"My gardener is delighted with Vaporite. It kills insects very quickly. The land here is very light, and infested with wireworm." — Mrs. E. A. G., Notts.

CARROTS AND ONIONS.

"I find after using Vaporite in the garden I had a much better lot of carrots, also onions, and the potatoes were much better."—T. C., Staffs.

PRICES: Tins, 1¼ lbs., **9d.**; 7 lbs. **2/-**; 14 lbs. **3/-**; 28 lbs. **4/6.** *Carriage forward* of all seedsmen. Casks: **7/6** ½ cwt.; **11/6** cwt. Carriage paid from your seedsmen or the Company.

VAPORITE-STRAWSON CO., LTD.,
(Dept. E).
Spencer House, South Place, London, E.C

—BRITISH COLUMBIA—

A LAND OF FRUIT AND FLOWERS.
Eminently suitable for Britons seeking a Home beyond the Seas.
Increasing Prosperity. Decreasing Taxation.
The Province for Mixed Farming, FRUIT GROWING, and Dairying.

The Province is in a very prosperous position, as is evidenced by the fact that the revenue has within the last few years increased from $3,000,000 to $7,000,000.

Specimens of Fruit, etc., and Photographs may be seen at the London Agency. Full information, free of charge, on application to

Salisbury House, Finsbury Circus, London, E.C.
J. H. TURNER, Agent-Gen. for B.C.

PUBLISHERS' ANNOUNCEMENTS.

THE GARDENERS' MAGAZINE may be obtained by order from all Newsagents, price Twopence, every Saturday. If any difficulty be found, a copy will be posted weekly direct from the Publisher, 148 and 149, Aldersgate Street, London, on the following terms: Twelve Months, 10s. 6d.; Six Months 5s. 6d.

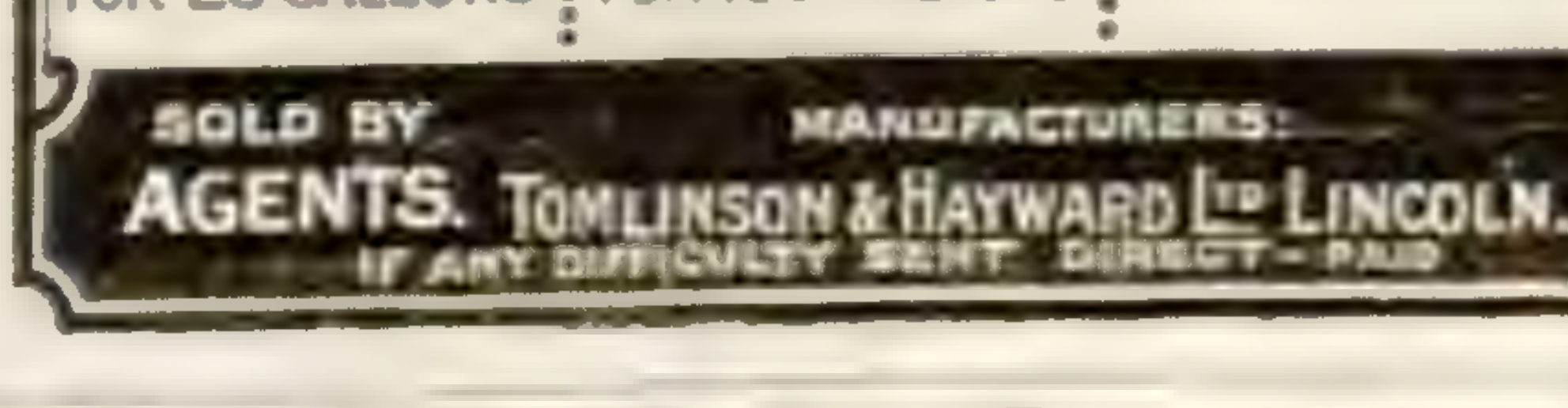
INDEX and Title Page to Vol. LIII. (comprising the weekly numbers from January to December, 1910), Price 2d., by post 2½d.

MANY YEARS REPUTATION.
EUREKA WEED KILLER
LASTING RESULTS—NO NEW EXPERIMENT.

1/9 TIN FOR 25 GALLONS	6/- TIN FOR 100 GALLONS	LARGER SIZES AT LOWER RATES

SOLD BY AGENTS. MANUFACTURERS: TOMLINSON & HAYWARD LTD LINCOLN.
IF ANY DIFFICULTY SENT DIRECT—PAID

A NEW GARDEN SPADE (Carter's Patent).



This is claimed to be the most effective Spade on the market, Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.
THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

CAPT. G. H. BARNETT, Glympton Park, Woodstock, Oxon, wishes to very highly recommend his present HEAD WORKING GARDENER; life experience; reducing cause of leaving; 10 years' previous as Gardener and Management small estate; age 39; 1 daughter aged 14. Address E. JACOBS, as above.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; grapes, peaches, melons, stove and greenhouse plants; four and a-half and eleven years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head); general all-round knowledge; life experience in large and well-kept establishments; 13 years Head in last situation; age 39; married; gentleman will recommend. T. HARRIS, 2, Mill Lane, Cheshunt, Herts.

GARDENER (Head Working), married, no family; age 36; life experience in all branches, Inside and Out; excellent references; Wife dairy, or house, if required. A., 27, Effingham Road, Reigate, Surrey.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working). Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working).—Mr. F. BERRILL of Hall Close, Kettering, wishes to recommend FRANK DAINTY, who is a thoroughly capable Gardener, with life experience Inside and Out; 8 years in present situation; age 30; married, no children. DAINTY, Hall Close, Kettering.

GARDENER (Head Working). Mr. GOULD, Shernfold Park, Frant, Sussex, highly recommends his Foreman, A. DAY, as above; thorough practical experience Inside and Out; excellent references; age 30.

GARDENER (Head Working, where three or more are kept). Mr. LAST, The Gardens, Homewood, Chislehurst, Kent, can with every confidence recommend his Foreman, W. WAITE, as above; 13 years' experience, gained in good establishments, five years present situation. Married when suited.

GARDENER (Head Working, where two or more are kept; good all round; 14 years as head in large and well-kept establishments; married, age 40, excellent references. E. MAYLETT, Park Hall, Salford Priors, Evesham.

GARDENER (Head - Working), requires SITUATION; experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants, Flower and Kitchen Garden, Hardy Fruit, etc.; good references; married, no family. W. S., 73, Allen Street, Maidstone, Kent.

GARDENER (Head of two or three, or good single-handed, with or without help); age 26; single; life experience Inside and Out; leaving no fault; excellent references; would take Kitchen Gardener's place. GARDENER, Hove Cottage, Avenue Road, Branksome, Bournemouth.

MAJOR HOLROYD, Ropley Manor, Alresford, Hants, wishes to highly recommend his late HEAD GARDENER; 18 years' practical experience in all branches of gardening Inside and Out; Single; age 32; excellent references. SCREEN, Coombe Hill Gardens, Butlers Cross, Tring, Bucks.

GARDENER (Head Working where 3 or more are kept); life experience in all branches; age 27; distance no object. L. BARKER, The Gardens, Manor House, Alton, Hants.

GARDENER (Head Working), age 35, life experience in all branches; inside and out; house and table decoration; highest references. JAMES GATES, Papworth, Everard, Cambs.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (Single-handed); little or no glass; 10 years' experience in present place; single; age 28. W. REEKS, 89, Amwell Street, Hoddesdon, Herts.

GARDENER (Single-handed, or with help); age 39; married; 14 years' experience, inside and out; good references. Apply W. CROW, 125, Queen's Road, Upper Norwood.

GARDENER, seeks good Single-handed place; good all-round, practical experience; thoroughly reliable, steady, industrious, and obliging; excellent references; married, 46. GARDENER, 47, Monk Street, Abergavenny.

FOREMAN (Inside or General).—Mr. G. NYE, late Head Gardener to Capt. R. Sloane Stanley, highly recommends A. HOBBS; age 27; life experience, disengaged; height 6 feet. The Gardens, The Steyne, Manor Road, Bournemouth.

MR. J. KIRKWOOD, The Gardens, Grass Park House, Church End, Finchley, can highly recommend J. DALY as FOREMAN (Outside) or GARDENER (Second); life experience in all branches; good references; age 25.

GARDENER (Second of two or three, or Single-handed), Inside and Out; 10 years' experience; all round work; age 24. FUDGE, 22, Markham Road, Winton, Bournemouth.

GARDENER (Second), seeks SITUATION, inside or inside and out; 10 years' experience; good reference; single; disengaged. Address F.P., 66, Fircroft Road, Upper Tooting, London, S.W.

GARDENER (Second, or Single-handed, Inside and Out); eight years' experience in all branches; 2½ years present situation; excellent references; age 25; single; abstainer. GREENFIELD, 4, Myrtle Terrace, Lancing, near Worthing, Sussex.

S. PRICKETT can well recommend H. IDDENDEN as GARDENER (Second, where three or four are kept); Inside or Outside work. Apply, The Gardens, Ersham House, Canterbury.

MR. PERKINS, Gardener to late Mr. Rydon, Prylands, Highbury New Park, can recommend J. ANTHONY as Second of three or four. London Colney, St. Albans, Herts.

JOURNEYMAN (Second, Inside), age 19, seeks SITUATION in good establishment; 5 years' experience; good references; bothy preferred. GEORGE JEFFERY, Jolesfield Cottage, Partridge Green, Sussex.

JOURNEYMAN (First, Inside), in good establishment; age 24; eight years' experience; good references; can be well recommended. T. BLIGH, The Barton, Helland, Bodmin, Cornwall.

JOURNEYMAN (Inside and Out), age 23; nine years' experience; 5½ years present situation; three years Inside, leaving when suited; well recommended by Head Gardener F. BASTON, The Gardens, Cricket House, Chard, Somerset.

GARDENER (Kitchen or otherwise); 14 years' experience; three years' Gardener (Kitchen) present place; good reference; age 29; married when suited. O. MORGAN, West End, Esher, Surrey.

ORCHID GROWER requires SITUATION to take charge of collection or small place where Orchids speciality; experience Burford Lodge, etc.; excellent references. Apply S. BURROUGH, Royal Gardens, Sandringham.

GARDENER (Under); private establishment or Grower Market Nursery; 14 years' experience, Inside and Out, private and nursery; good references. LEWINGTON, 169, High Street, Hampton Hill, S.W.

MR. HUBBARD will highly recommend A. W. WHAYMAN as GARDENER (Under), Inside and Out, or pleasure ground work; age 21; 7 years' experience; 4 years' present situation. Address, The Gardens, Oakhill, Ipswich.

UNDER GARDENER, Young Man, seeks SITUATION as above; age 19-20; good refs.; 3 years 9 months last place. C. T. COLESHILL, 37, Wolsey Road, Hampton Hill, Middlesex.

YOUNG MAN seeks SITUATION as GARDENER (Under); experienced. Apply G. HAYNES, care of Mr. Shinner, Staple, Dartingtin, near Totnes.

IMPROVER (Inside); past three years under glass; used to Watering, Stoking, and Inside work; quick, active, and obliging; highly recommended; age 18. PESTERFIELD, Beedingwood Gardens, Horsham.

IMPROVER (Inside or Inside and Out); three years' experience; age 18 years; not afraid of work; good reference. F. SKELTON, The Gardens, Mount Pleasant, Bishop Auckland, Durham.

IMPROVER (Inside).—Gardener's Son; age 19 years; five years in present situation in all departments. E. BROOKE, The Gardens, Chewton Priory, Bath.

IMPROVER seeks SITUATION in pleasure Grounds; used to Horse Mower; 12 months' experience; strong and willing; good references. A. LONG, Preston, Canterbury.

MR. LAY, Gardens, Cheriton Rectory, Shorncliffe, Kent, would like to place his Son, age 19, in a good establishment as IMPROVER; three years' experience; Bothy preferred.

YOUTH, age 16, seeks SITUATION as IMPROVER (Inside or Inside and Out); four years' good experience. Apply B. MORGAN, Colwinstone, near Cowbridge, Glam.

GROOM - GARDENER seeks SITUATION; age 31; good references; honest, sober, and industrious. W., 152, London Road, East Grinstead.

ELECTRICIAN - HANDYMAN requires SITUATION on country plant; married, one child; competent. CRAWLEY, 13, Lancaster Road, Westbourne Park.

SITUATION required by YOUNG MAN; age 22; Inside and Out; 4½ years present situation; Bothy preferred; highly recommended. A. HOLLOWAY, Medstead Manor Gardens, Alton.

YOUNG MAN (20) seeks SITUATION; inside and out; 3 years' experience; strong, willing; well recommended; prefer bothy. GOULD, Stuckton, Fordingbridge, Hants.

YOUNG MAN, age 27, Christian, recommended by W. TAYLOR, Gardener, Chesterford Park, Essex, for Pleasure Grounds and Kitchen Garden; used Lawn Mowing and scythe; at liberty when suited. A. TYRRELL, 5, Castle Street, Saffron Walden, Essex.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For APRIL 15, 1911.

Please Repeat my Advertisement.

Name...

Address..

....

Date.................................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

Situations Wanted—*continued.*

YOUNG MAN seeks SITUATION on pleasure grounds; 5 years' experience with horse and hand machines; well recommended; age 22; fond of cricket. F. GARDINER, Home Farm, Glympton, Woodstock, Oxon.

YOUNG MAN requires SITUATION on mixed establishment; two years' experience fruit growing. J. COWLISHAW, 23, Bromham Road, Bedford.

YOUNG MAN (aged 19) seeks SITUATION in garden (Inside and Out); 3 years' experience. F. SALES, 166, Lowfield Street, Dartford, Kent.

Situations Vacant.

CAN Gardener recommend YOUNG MAN for Kitchen and Pleasure Gardens? Alternate Sunday duty; wages, 14s. per week; bothy, milk, etc. Apply to JAMES TREBBLE, Hendrefoilan Gardens, Sketty, Swansea.

WANTED immediately, a thoroughly competent GARDENER, Single-handed, help given when required; thorough knowledge glass, vines, melons, cucumbers, tomatoes, etc.; fruit and vegetables; must be good man Inside and Out; highest references esential; knowledge of bees preferred. Write, stating wages, age, and experience. DR. EWENS, West Chase, Maldon, Essex.

WATSON'S LAWN SAND.

(The Only Original.)

Destroys Daisies, Plantains, Dandelions, &c., and at same time invigorates the Grass.

34/- per cwt.; 56lb. Kegs, 18/-; 28lb. Tins, 9/6. Canisters, 5/-, 2/6, and 1/-.

Please see that you get the genuine article.

Sold by Seedsmen and Nurserymen.

A. J. BARBOUR & Co., 8, Upper Fountaine St., LEEDS

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

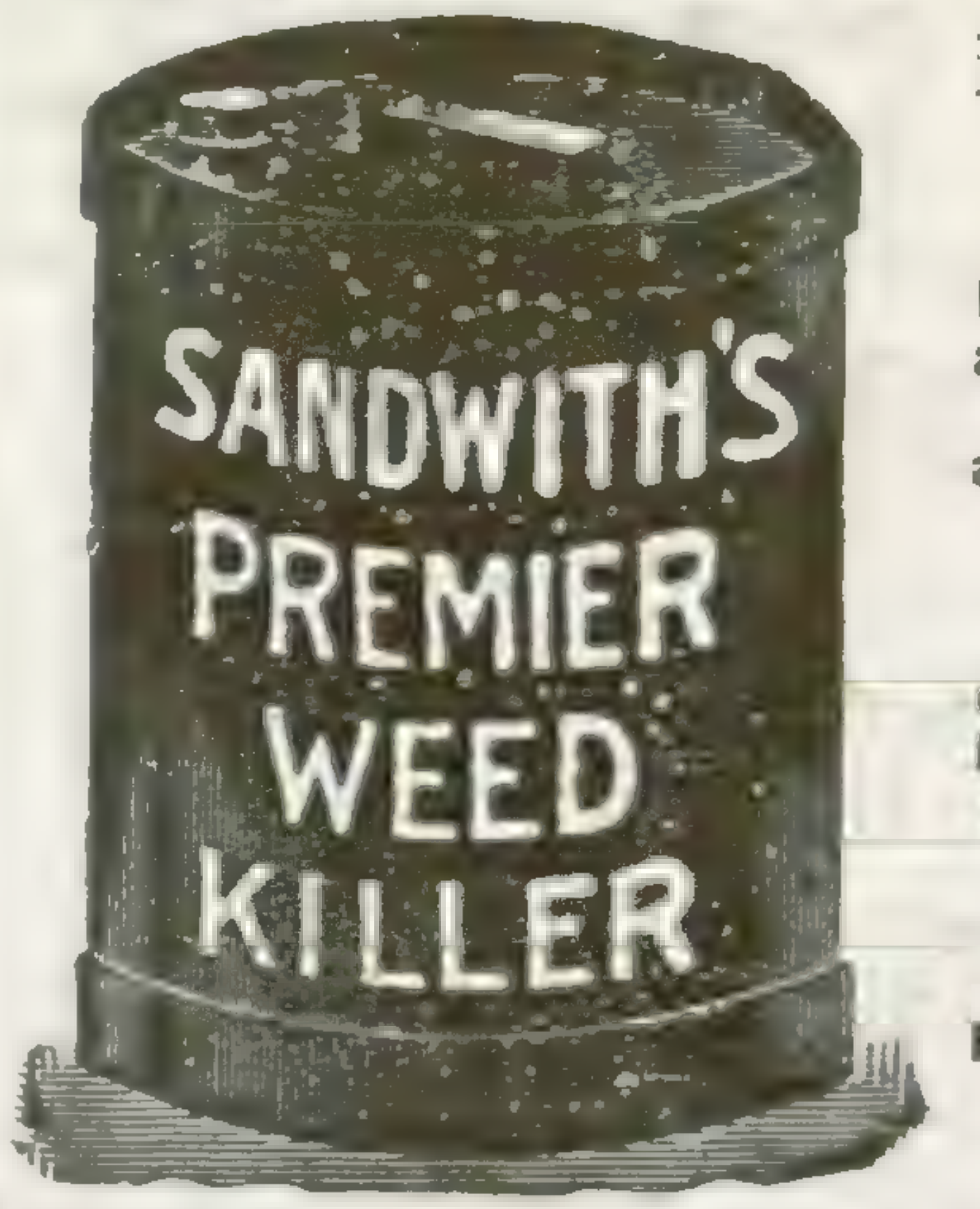
SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to

EPPS & CO., Ringwood, HANTS.

THE FAVOURITE WEED KILLER.



As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for 6/-; drum, 2/-. 12 galls. for 16/-; drum, 6/-. 20 galls. for 26/8; drum, 10/-. 40 galls. for 50/-; drum, 20/-.

EITHER LIQUID OR POWDER.

Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,

The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

PERGOLAS.
Larch Poles at 1d. per foot. List Free.
PATRICK'S, Otley, Yorks.

OAK CRAMBLES.
Peeled and dry at ½d. per foot.
PATRICK'S, Otley, Yorks.

ROSE ARCHES.
Larch Poles at 1d. per foot.
PATRICK'S, Otley, Yorks.

TREE STAKES AND GARDEN RODS.
Lists free.
PATRICK'S, Otley, Yorks.

LOOK! TANNED GARDEN NETTING, small mesh, 50yds. long by 1 yd., wide, 1s.; by 2yds. wide, 2s.; by 3yds. wide, 3s., either car. paid; any size made. Odd pieces Netting for protecting bush fruit buds, 14lbs., in bag, 3s. Package free. STANLEY GORDON, Bank House, Rye.

Dr. J. COLLIS BROWNE'S

THE ORIGINAL AND
ONLY GENUINE

Chlorodyne

Admitted by the Profession to be the M[illegible] Valuable Remedy ever Discovere[illegible]

The Best Remedy known for

COUGHS, COLDS,

ASTHMA, BRONCHITIS.

Cuts short all attacks of SPASMS, HYSTERIA, and PALPITATION.

The only Palliative in NEURALGIA, TOOTHACHE, GOUT, RHEUMATISM.

Acts like a Charm in DIARRHŒA and DYSENTERY.

Refuse imitations and insist on having

Dr. J. COLLIS BROWNE'S Chlorodyne.

Convincing Medical Testimony with each bottle.
Of all Chemists, 1/1½, 2/9, 4/6.

THOMSON'S
VINE PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES
SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE.

"A truly excellent shilling treatise."—Penny Illustrated Paper.

Price ONE SHILLING net, by Post 1/2. **Bound in Cloth 1/6, by Post 1/8.**

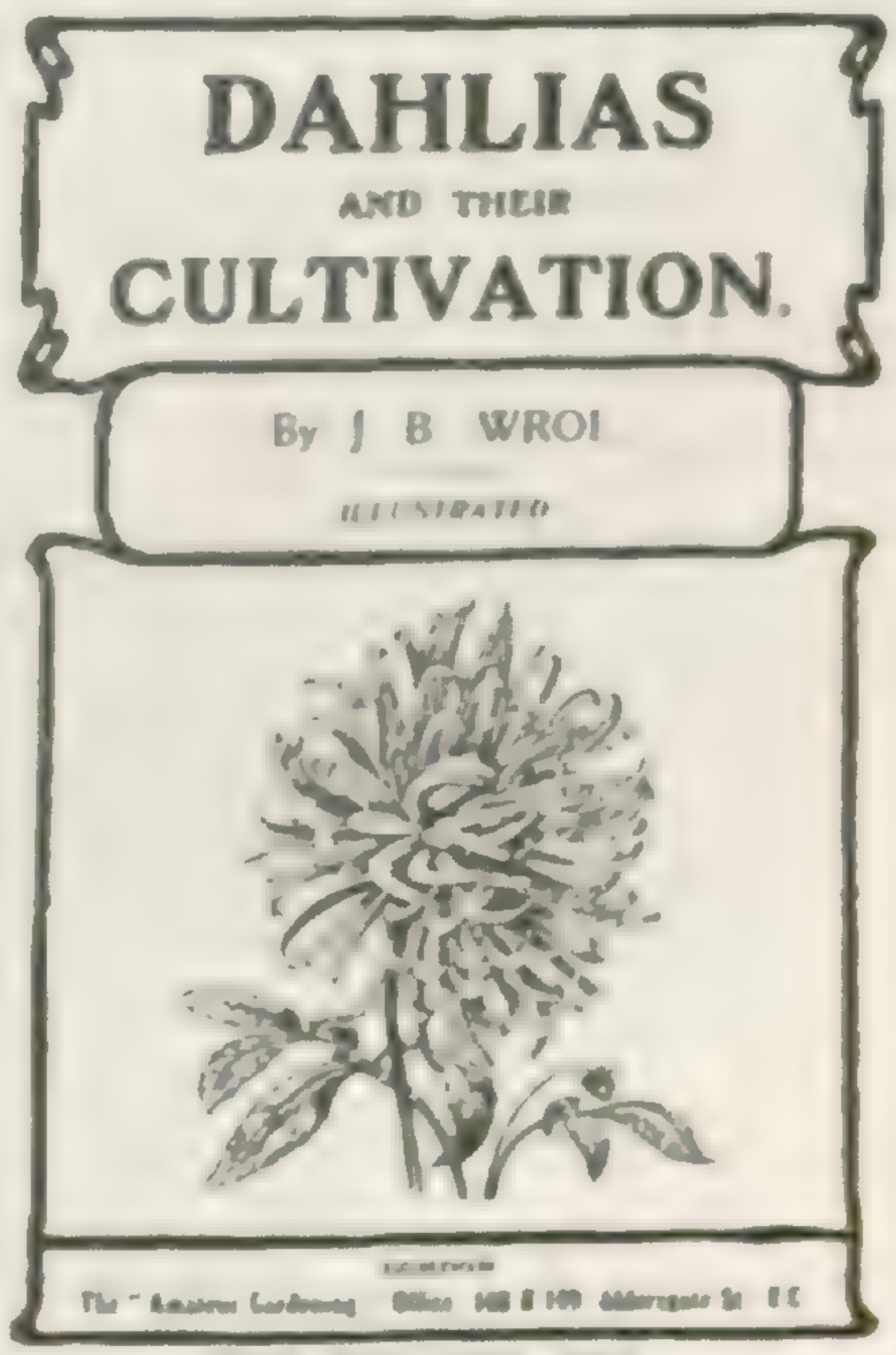
DAHLIAS AND THEIR CULTIVATION.

By J. B. WROE.

A Practical Treatise on the Culture, Propagation and History of the Show, Fancy, Cactus, Pompon and Single Dahlias for Exhibition and Garden Decoration.

CONTENTS.

- EVOLUTION OF THE DAHLIA.
- PROPAGATION.
- PREPARING THE CUTTINGS.
- POTS AND POTTING.
- PREPARATION OF THE SOIL.
- PLANTING OUT.
- STAKING AND TRAINING.
- WATERING AND TIMING.
- FEEDING THE PLANTS.
- MANURES AND MANURING.
- MULCHING.
- PROTECTING THE FLOWERS.



ONE SHILLING NET

CONTENTS.

- STAGING FOR EXHI[illegible]N.
- JUDGING.
- POINTS OF A SHOW [illegible]M.
- CULTURE FOR GARD[illegible]ECORATION.
- BEST TYPES FOR GA[illegible]S.
- LIFTING AND STORI[illegible]
- ENEMIES OF THE D[illegible].
- GOOD TRAPS FOR E[illegible]GS.
- FRIENDLY INSECTS.
- SELECTIONS FOR [illegible]IBITION AND GARDEN DECO[illegible]ON, GIVING COLOUR, HEIGH[illegible]TC.

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZIN[illegible]
148 and 149, Aldersgate Stre[illegible]ondon, E.C.

Please send me a copy of "DAHLIAS AND THEIR C[illegible]TIVATION" by Post, for which I enclose remittance of 1/2.

Name ....

Address ....

W. RICHARDSON & CO.,

MANUFACTURERS OF ALL KINDS OF

HORTICULTURAL BUILDINGS. Also HEATING ENGINEERS.

Recent Contracts for Horticultural Buildings and Heating include the following :—

H. M. Commissioners of Public Works, Royal Hospital, Dublin.
H. M. Office of Works, New Head Post Office, Newcastle-on-Tyne.
His Grace The Duke of Grafton, Wakefield Lodge, Stoney Stratford.
The Rt. Hon. The Earl of Donoughmore, Knocklofty, Clonmel, Ireland.
The Rt. Hon. The Earl of Durham, Lambton Castle, Durham.
The Rt. Hon. The Earl of Listowel, Convamore, Ballyhooly, Co. Cork.
The Rt. Hon. The Earl of Scarborough, Lumley Castle, Co. Durham.
The Rt. Hon. Lord Barnard, Raby Castle, Barnard Castle.
The Rt. Hon. Lord Glanusk, Glanusk Park, Crickhowell.
The Rt. Hon. Jonathan Hogg, Stratford, Rathgar, Co. Dublin.
The Rt. Hon. Lord Ravensworth, Eslington Park, Whittingham, [Northumberland.
W. A. Whitehead, Esq., Langley, Baildon, Yorkshire.
The Hon. Robert James, St. Nicholas, Richmond, Yorks.
His Excellency Monsieur Tzokow, 21, Queen's Gate, London, S.W.
Lady Palmer, Grinkle Park, Loftus-in-Cleveland.
Sir William Eden, Bart., Windlesham Hall, Ferryhill.
Sir Lindsay Wood, Bart., The Hermitage, Chester-le-Street.
Sir Reginald Graham, Bart., Norton Conyers, Melmerby.
The Royal Horticultural Society, Wisley, Ripley, Surrey.
Colonel Napier Clavering, Axwell Park, Northumberland.
Colonel Scott, Penmaenucha, Dolgelly.
Major Stobart, Spennithorne House, Spennithorne, Leyburn.
Captain Freeman, Coulby Hall, Ormesby.
Captain Wainman, Otterington Hall, Northallerton.
Mrs. Lloyd Jones, Vronheul, Llandinam.
Hy. Mitcheson, Esq., Baxterley, Atherstone.
W. Warde Aldam, Esq., Frickley Hall, Doncaster.
E. G. Wheler, Esq., Claverdon Leys, Warwick.
P. H. Ashworth, Esq., Horsley Hall, Gresford.
The Rev. James Farmer, Lucan House, Ripon.
Mrs. Jones, Glandenys, Lampeter.
R. A. England, Esq., Englethwaite Hall, near Carlisle.
The Rev. W. Ingham, The Vicarage, Old Malton, Yorkshire.
James Maunsell, Esq., Patrickswell, Co. Limerick, Ireland.
The Rev. J. Murray Dixon, Swithland Rectory, near Loughborough.
David Davies, Esq., M.P., Llandinam, Montgomeryshire.
David Richardson, Esq., Wheelbirks, Stocksfield-on-Tyne.
C. Lingford, Esq., Lancelands, Cotherstone.
E. W. Parker, Esq., Skirwith Abbey, Penrith.
C. L. B. Robinson, Esq., Brettanby Manor, near Darlington.
G. P. Roddam, Esq., Newtown, Stanhope.
H. Costobadie, Esq., Overdale, Mottram, Manchester.
I. J. Dewhurst, Esq., Whinmoor Lodge, Seacroft, Leeds.
J. Rossiter Hoyle, Esq., Grange Cliffe, Ecclesall, Sheffield.
W. Brown, Esq., Larne, Co. Antrim.
Mrs. Powell Price, Morganwg, Brecon.
W. J. Sharp, Esq., Bleasdale House, Silverdale, Carnforth.
F. Hartley, Esq., May Lodge, Bridlington.
J. A. Forster, Esq., Fernlands, Chertsey, Surrey.
W. Robson Hindmarsh, Esq., Ulleskelf.
J. W. Richardson, Esq., Sowerby Grange, Thirsk.
Hugh C. Fairfax Cholmeley, Esq., Brandsby Hall, Easingwold.
Harrison Benn, Esq., Holcombe Hall, Dawlish.
Miss Watt, Spott House, Dunbar.
W. Loudin MacNeill, Esq., Shennanton, Kirkcowan, Wigtownshire.
W. H. St Quintin, Esq., Scampston Hall, Rillington, Yorks.
St. Mary's Convent, Chiswick.
The John Copeland Hospital, Gainsborough.
Ackworth School, Pontefract.
Shaftesbury Theatre, Shaftesbury Avenue, London.
Durham Cathedral, Durham.

LONDON OFFICE :—Belgravia Chambers, Victoria Street, S.W.

TELEGRAMS { **"Richardson," Darlington.** **"Horticraft," London.** **NATIONAL TELEPHONE** } **17 Darlington.**

LOWEST PRICES FOR GARDEN FRAMES AND WOOD LATH BLINDS.

PLANS and ESTIMATES PREPARED FREE of COST.

Representatives sent to any part of the Kingdom to advise and take particulars.

DARLINGTON.

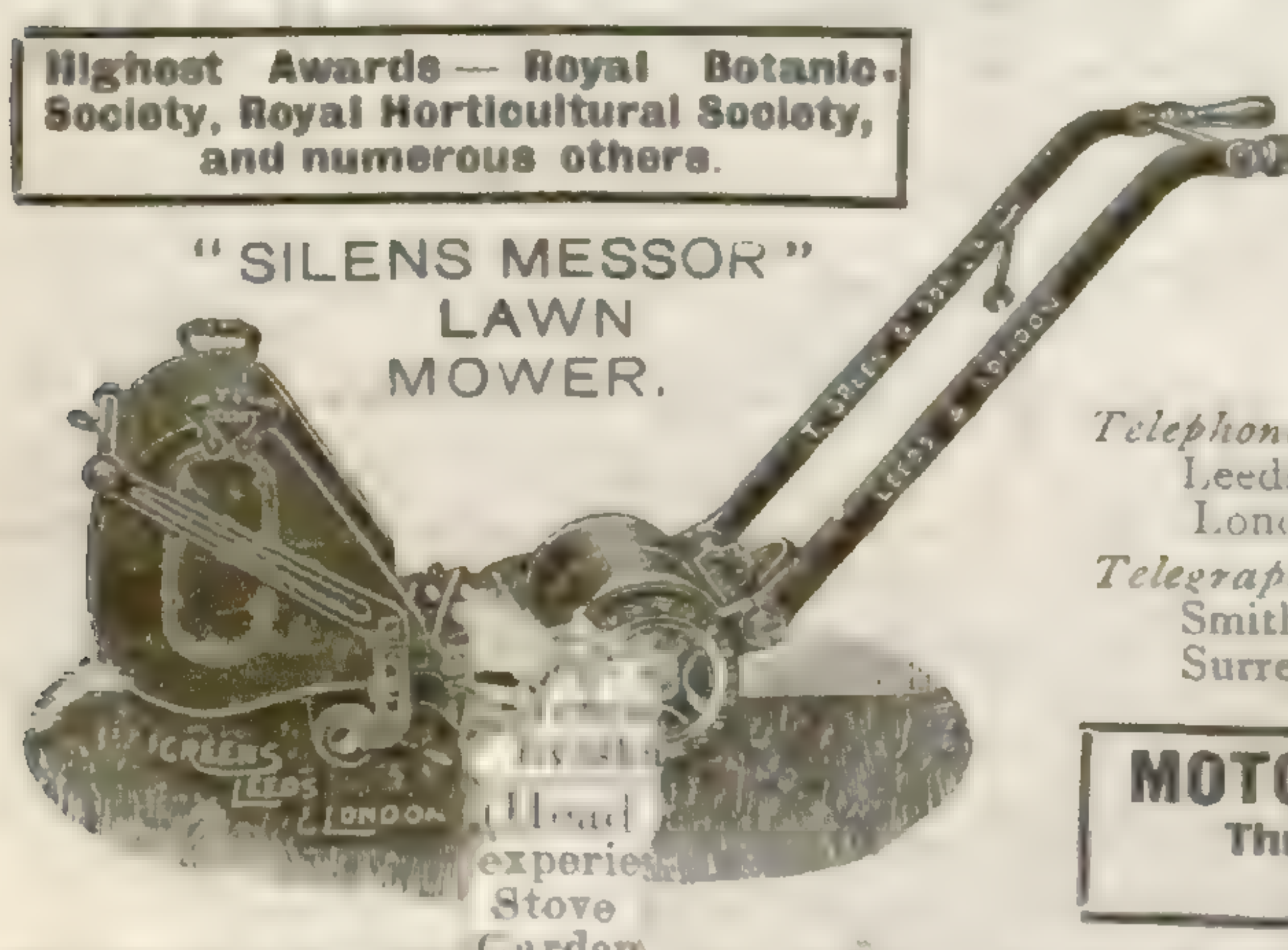
APPOINTED BY ROYAL WARRANT, HORTICULTURAL MACHINE MAKERS TO HIS MAJESTY KING GEORGE V.

GREEN'S LAWN MOWERS

THE FIRST, FOREMOST, and BEST in the WORLD. Hundreds of Thousands are in use. Established nearly a Century.

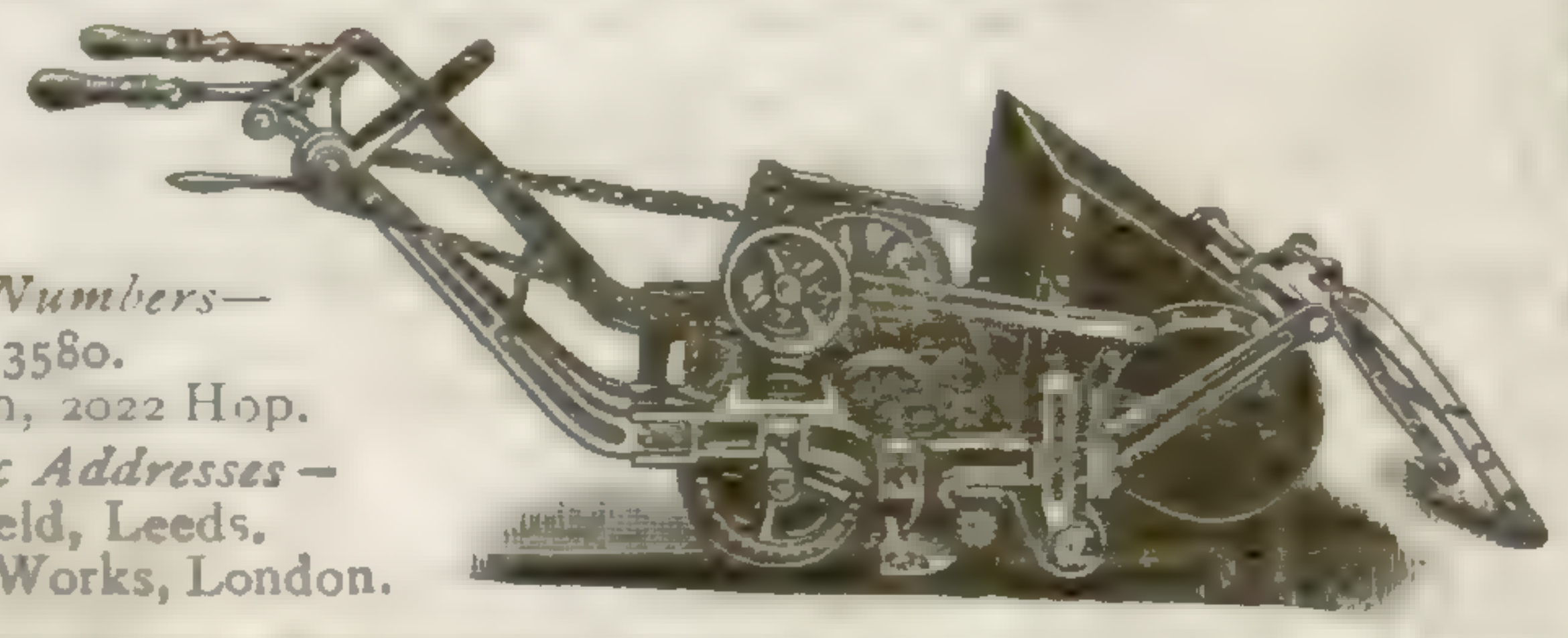
Highest Awards — Royal Botanic Society, Royal Horticultural Society, and numerous others.

"SILENS MESSOR" LAWN MOWER.



PONY, AND HORSE MOWER
Either "Silens Messor" Pattern or Wheel-Geared.

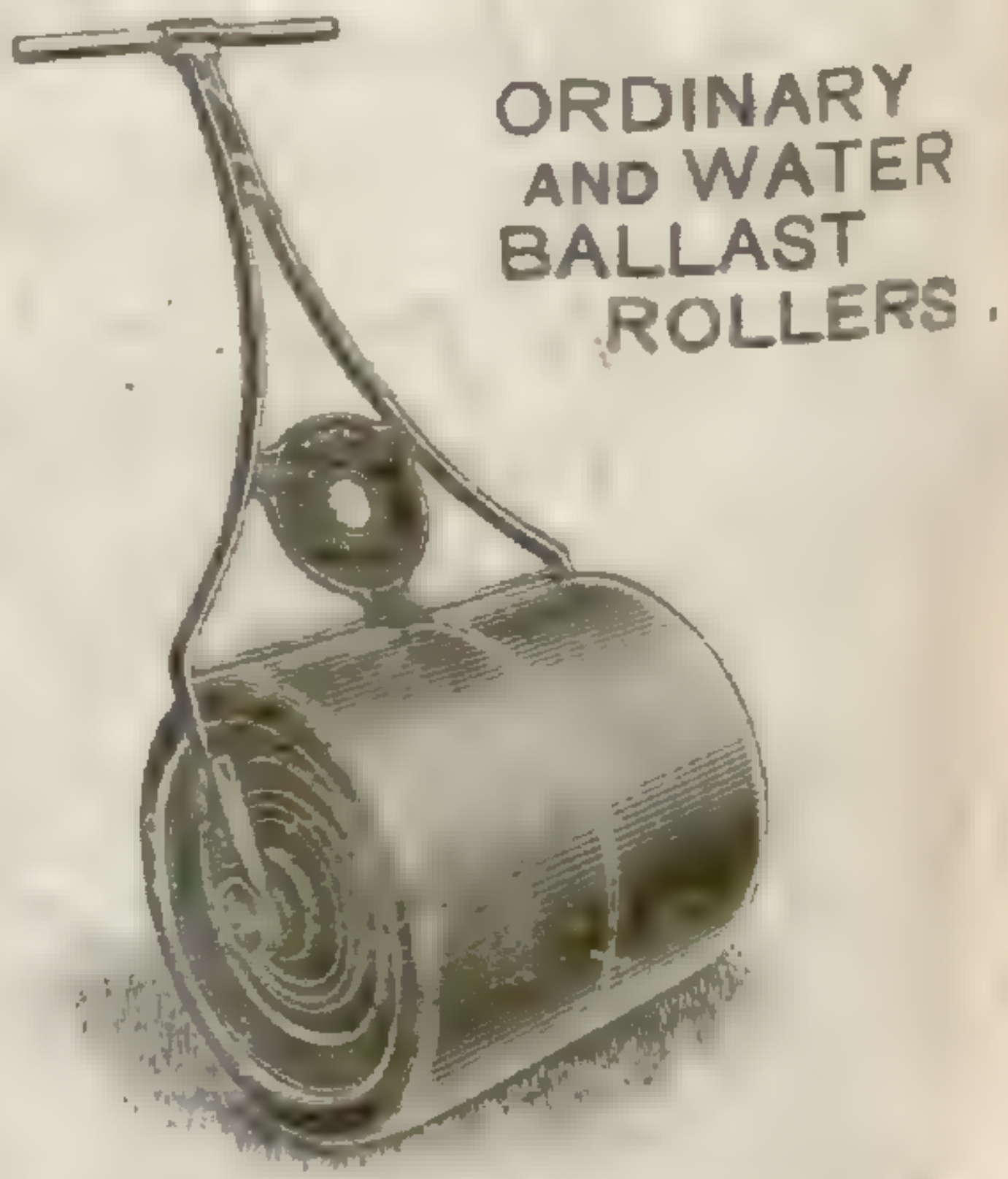
Telephone Numbers—
Leeds, 3580.
London, 2022 Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London.



They may be had of any Ironmonger or Seedsman in the United Kingdom.

Please write for ILLUSTRATED PRICE LIST No. 1 FREE.

ORDINARY AND WATER BALLAST ROLLERS.



MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GR[illegible] & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E.

NATIV[illegible] GUANO

BEST and CHEAP[illegible]ANURE for VEGETABLES, FRUI[illegible] FLOWERS.

Price **£3 10s.** per [illegible] bags at works. Lots under 10 cwt. **4s.** per cwt. at [illegible]; or **5s.** per cwt., carriage paid to any station in [illegible]nd.

Extracts from 35th [illegible]l collection of reports:—

NATIVE GUANO for [illegible]TOES, VEGETABLES, etc.

A. J. Beard, Erdin[illegible] "Potatoes, splendid, free from disease. Best I [illegible]ad."—H. Chester, Nantwich: "Best onion m[illegible] I ever used. Grand for onion fly."

NATIVE GUANO for [illegible]T, ROSES, TOMATOES, etc.

J. Cant, Ipswich [illegible]omatoes excellent. Roses grand. Cheapest ma[illegible]n market."—W. Frampton, Titchfield: "Strawb[illegible] splendid crop."

Orders to the N[illegible] GUANO CO., LIMITED, 29, New Bridge Street, [illegible]on, E.C., where 35th year's testimonials, etc., ma[illegible] obtained. Agents Wanted

---

NOTICE. — Always use PORTER'S IMPROVED COIL STAKES for Carnations, no tying required; last a lifetime. Sample doz. with price list 1s. carriage paid. A. PORTER, Stone House, Maidstone.

ONCE USED. ALWAYS USED. The 'PATTISSON' LAWN BOOTS

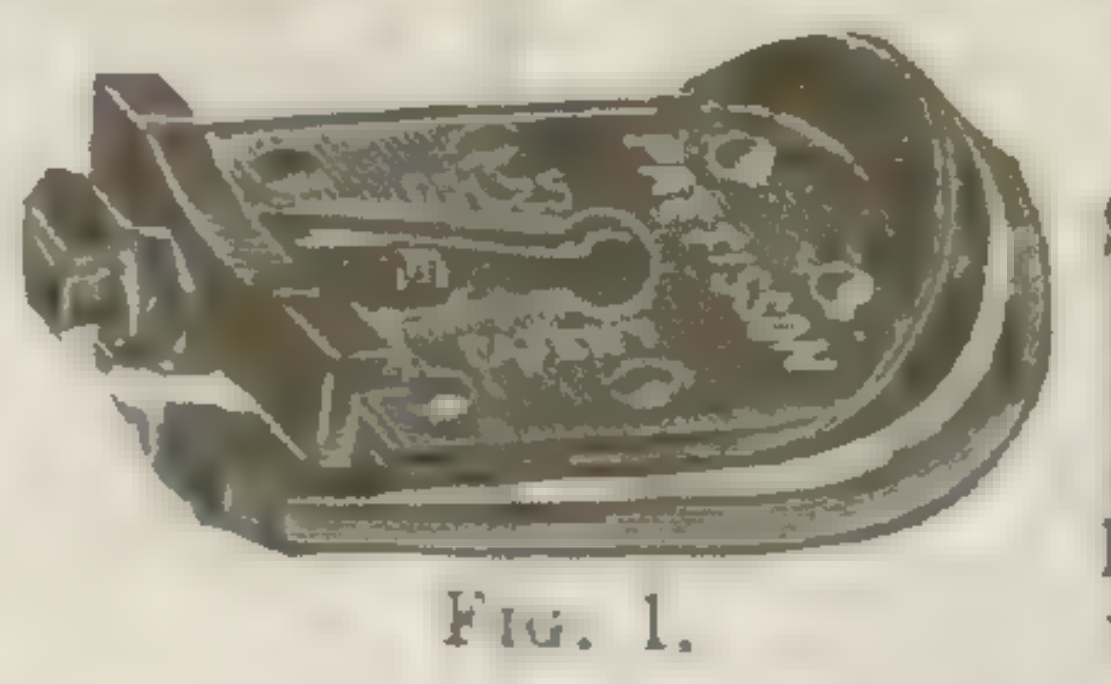


Fig. 1.

Simplest ! Strongest !
Most Economical !

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS.

Silver Medal—
Royal Horticultural Society.

Hundreds of Testimonials.

The Field says: **"As good as anything that could be devised."**

Illustrated Price List from—

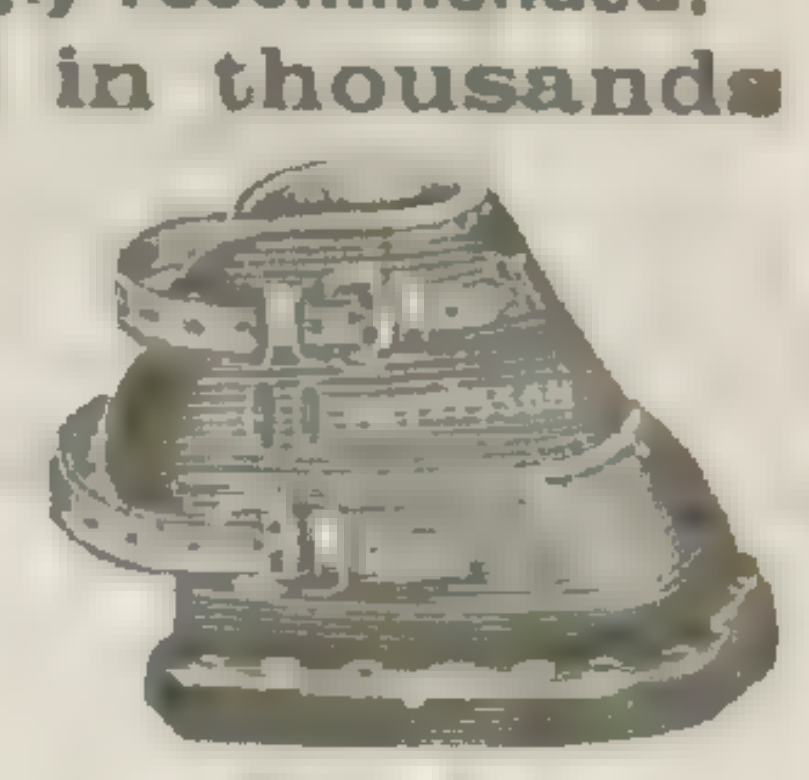


Fig. 2.

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM, S.W.

---

4 6. RUSTIC ARCHES, 4s. 6d.; biggest and best; 8ft. x 4ft. x 18in. All Trellis and Rustic Work at comparative low price. London address—BRAMBLE WOOD CO., 30, Caroline Place, Bayswater.

"CARRUSTICIDE."

The Best and Cheapest Remedy for Carnation Rust and other Fungoid Diseases.

A well-known Carnation Grower writes:

Dear Sir, The Nurseries, March, Cambs.

"During the 27 years I have been growing Carnations (Perpetual and American) I have tried most of the fungicides placed on the market, but yours is the best. It is a pleasure to see how "Carrusticide" catches hold of the Rust and destroys it. I should say your preparation will be extensively used when it is better known." Yours very truly,

GEO. CLARKE.

One gallon makes 25 gallons for spraying purposes —**Price 3s. per quart, 7s. 6d. per gallon.** Special quotations for larger quantities.

Terms: Cash with order.

H. SAMUEL, Ph C., M.P.S., Horticultural Chemist
55, High Street, Leighton Buzzard.

PLEASE MENTION
THE GARDENERS' MAGAZINE
when writing to Advertisers.

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and [illegible] Railway Bookstalls

THE GARDENERS' MAGAZINE.

No. 2,998.
Vol. LIV.
(Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.)
SATURDAY, APRIL 15, 1911.
(10/6 per Ann. Post Free. To Foreign Countries, 15/-.)
Twopence

BARR'S Hardy PERENNIALS, ALPINES, AQUATICS, CLIMBERS, Etc., for spring planting. Descriptive Catalogue, with cultural notes, free. BARR and SONS, 11, 12, 13, King St., Covent Garden.

NEW AND RARE FLOWER SEEDS FOR 1911, including a collection of choice Alpines for rockwork. Descriptive List on application.
BARR and SONS, 11, 12, 13 King St., Covent Garden.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers: they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, S.W., is now carrying a large stock of BRITISH CLOCHES for FRENCH GARDENING. For particulars see March on the calendar prepared and issued by James Gray. If you have not one of these calendars, write, telephone 201, Western; or wire "Gray, Chelsea London."

EXHIBITION PANSIES, VIOLAS, CARNATIONS, PHLOXES, and CHRYSANTHEMUMS.—12 Superb fancy Pansies, 3s.; newest and best, 5s. 12 Exhibition Violas, 2s. 6d.; newest and best, 4s. 12 Superb Carnations, 6s.; newest and best, 10s. 12 Yellow or white ground Picotees, 6s.; newest and best, 8s. 12 Superb Phloxes, 4s.; very best, 6s. 12 Early-flowering Chrysanthemums, 2s. 6d.; newest and best, 4s. 12 Best bedding Violas, 2s.; 50 in 10 vars., 4s. 6d.; 100 in 10 or 20 vars., 8s.; all post free, except Carnations in pots, which are car. forward. Lists free. S. PYE, Bowgreave Nursery, Garstang.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.
H. BURNETT,
Carnation Specialist, Guernsey.

PERENNIALS, UNIQUE COLLECTION,
including
ALPINES AND AQUATICS.
Also RARER SHRUBS, HIMALAYAN RHODODENDRONS, and Others.
Write for Catalogue. G. REUTHE, Keston, Kent.

WEEKS'S DUPLEX UPRIGHT TUBULAR BOILERS, for full advertisement see page vii.

DAHLIAS.
CACTUS, PÆONY, POMPONE, and SHOW, for GARDEN or EXHIBITION.
Prices and Catalogues free on application.

J. T. WEST, Tower Hill, Brentwood.

POULTRY AND KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

BARNARDS LIMITED, Norwich.—Best House for Fencing, Espaliers, Pergolas, Fruit Enclosures, Iron and Wire Bordering; all descriptions of Training Fittings, Arches, Wire Netting, Stakes, Wire Lattice, Rollers, and all garden requisites. Now is the time to effect improvements in your garden. Catalogues free; inquiries invited.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page vii.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

WEBBS' BEAUTIFUL ASTERS.
OSTRICH PLUME, GIANT RAY, COMET, VICTORIA, PÆONY-FLOWERED, and GIANT COMET. Each distinct or mixed colours, 1s. packet.

BEDDING.—Rose, Dark Crimson, White, Pink, Purple, Light Blue, and Mixed Colours. Each, 1s. packet; 6 distinct colours, separate, 3s.

WEBBS' BEAUTIFUL STOCKS.
NEW ADMIRATION, IMPERIAL TEN-WEEK, BROMPTON, and LARGE-FLOWERING TEN-WEEK. Each, distinct or mixed colours, 1s. packet.

BEDDING.—Scarlet, Canary yellow, Purple, Light Blue, White, Rose, and Mixed Colours. Each, 1s. packet; 6 distinct colours, separate, 3s.

WEBB and SONS, The King's Seedsmen,
WORDSLEY, STOURBRIDGE.

BUNYARD'S NEW CATALOGUES.
The following have been recently published, and contain all worthy new varieties. Post free on application.

BUNYARD'S
CLIMBING PLANTS, Illustrated.

BUNYARD'S
HERBACEOUS PLANTS, Illustrated.

BUNYARD'S
HARDY TREES AND SHRUBS, Illustrated.

BUNYARD'S ASPARAGUS LIST.
Plants now ready for delivery.

BUNYARD'S SEEDS, VEGETABLE AND FLOWER, with coloured plates.

GEO. BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.

BEGONIAS, awarded 24 Gold Medals.—Double Seed, 2s. 6d. and 5s. per pkt.; Frilled, Crested, or plain Single, 1s., 2s. 6d., and 5s. per pkt. For price of Begonia tubers, Carnations (Border and Perpetual flowering), Cannas, Cyclamen, Blue Primroses, Delphiniums, Pansies, Polyanthus, Lily of the Valley, Violets, etc., please send postcard for copy of our Illustrated Catalogue, free on application.
BLACKMORE AND LANGDON,
Twerton Hill Nursery, Bath.

LAXTON'S FRUIT TREE, STRAWBERRY, SEED, ROSE, HERBACEOUS, TREE, BULB, and SMALL FRUIT CATALOGUES, with full illustrations and descriptions, gratis on application.

LAXTON BROTHERS, Bedford.

ORDER MATS NOW!—To prevent disappointment and loss by early frosts, order Norfolk Reed Mats now. 50 per cent. more protective than straw. Made to any size, 1d. per square foot.—BOULTON and PAUL, Lim., Norwich.

AMERICAN TREE CARNATIONS, best varieties, strong young plants, from pots, 3s. per doz., 20s. per 100; larger bushy plants, in 3in. pots, 5s. 6d. doz.; flowering plants, 8s. per doz. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

18 ALPINE PLANTS, 3s. cash; 50 Alpine plants, 16s. Send for Catalogue (1,000 varieties). Hardy Ferns, named, 100, 10s. "ENGLISH HOME OF ALPINE PLANTS," Hessenford, Cornwall.

CLAY'S MANURES, CRUSHED BONES
(See page iv.)

CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

GARDEN ROLLERS, double cylinders, solid ends, rounded edges 14in. by 14in., 1½cwts., 24s. 6d.; 16in. by 16in., 2cwts., 26s.; 20in. by 20in., 3cwts., 36s.; 24in. by 24in., 4½cwts., 50s. each; carriage paid any station in Great Britain. Lists free. J. ATTWOOD, Stourbridge.

SOW NOW.
SUTTON'S CHARMING ANNUALS.
Beautiful colours; easily grown.
SUTTON'S FIREFLY CLARKIA,
per packet, 1s., post free.
SUTTON'S EASTERN STAR CHRYSANTHEMUM, per packet, 1s., post free.
SUTTON'S SELECTED SHIRLEY POPPY,
per packet, 1s., post free.
SUTTON'S DOUBLE ROSE GODETIA,
per packet, 1s., post free.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

KELWAY'S LATEST SUCCESS.
GRAND PRIX AND GOLD MEDAL, Japan-British Exhibition, White City. Unanimous award of the International Jury to Kelway and Son for Paeonies, Delphiniums, Gladioli, Pyrethrums, etc.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

THE KELWAY ARTISTIC BORDER ensures a garden of enduring beauty from early Spring to late Autumn with a minimum of cultivation, and without the trouble of constant digging or bedding out. The plants composing the border are selected by experts, and include some of Kelway's improvements in Paeonies, Delphiniums, etc. Send dimensions of spaces to be filled, or for Kelway's "Gardens of Delight," 6d. The cost of this border is 15s. or 25s. for every 10 square yards. Carriage and package free for remittance with order.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books, 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.

NOW IS THE TIME TO PLANT KELWAY DELPHINIUMS, which have been improved almost out of recognition in the past twenty years. They produce plants ranging in height from four to eight feet, exceptionally hardy and with a rich profusion of choice blooms in all the shades of that valuable colour, blue.

Choice named varieties: 24s., 34s., and 56s. a dozen. Carriage and package free for remittance with order.

The celebrated present-day Delphiniums, and nearly all the best well-known varieties shown at exhibitions, originated in Kelway's Langport Nurseries.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

CONSERVATORIES AND WINTER GARDENS, Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue free.—BOULTON and PAUL, Lim., Norwich.

GARDEN NETTING (best tanned only).—25 yds. x 8yds.; 50 x 4yds.; 100 x 2 yds., 8s. each. 50 x 2 yds.; 25 x 4 yds.; 100 x 1 yd., 4s. each. All sizes, large or small, at 1s. 20 sq. yds. Quality guaranteed.—EVANS, 14, Beresford Rd., Lowestoft.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.
XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.
XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown both poisonous and non-poisonous are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N.S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Border and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

SEEDS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Select Seeds.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS.
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

SAMUEL M'GREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

RHODODENDRONS.

DICKSONS & CO.,
1, Waterloo Place, Edinburgh.
Pink Pearls, Ponticums, choice Hybrids. Write.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

PRIMULA OBCONICA GIGANTEA GRANDIFLORA.

The most beautiful Free and Hardy Perpetual Greenhouse Plant grown.

ONCE IN FLOWER ALWAYS IN FLOWER.

We are NOTED for having the most — SUPERB Strain in commerce. —

SEED.

Mixed colours, also Compacta and Fimbriata, mixed, 1s. per packet; separate colours of Purple, Rose, Lilac, Deep Red, Crimson Scarlet, Pale Lilac, and Crimson (fringed petals), **2s. per packet; double flowering, including Pale Mauve and Rose, 2s. per packet. Instructions as to sowing with each packet.**

PLANTS, 3s., 5s., 7s. 6d., 10s. 6d., and 15s. per doz., according to size.

W. A., Esq., Reigate, Surrey, writes:—

I had a packet of seed from you last year, and am pleased to inform you that I have blooms measuring two inches and more across each individual flower. They are the best strain I have ever seen, both for variety of colours, and substance of bloom.

WM. ARTINDALE & SON,
Nether Green Nursery,
SHEFFIELD.

For 3 penny stamps we will send you our Catalogue of Plants, which is not merely a price list, but literature which gives all the cultural notes of plants therein mentioned. We have received hundreds of testimonials commenting on the value of this book.

OUR SEED CATALOGUE WILL BE SENT FREE ON APPLICATION.

By Appointment to H.M. The King.

1911 FORBES'

Illustrated Plant Catalogue Nearly 200 Pages.

GOLD MEDAL SPECIALITIES.

Contains carefully revised **Descriptions, Colour, Height, Time of Flowering, British or Common Names, Prices,** etc., of the **Grandest Collections of ASTERS, BEGONIAS, CALADIUMS, CARNATIONS, DAHLIAS, DELPHINIUMS, PÆONIES, PANSIES, VIOLAS, PELARGONIUMS, PENTSTEMONS, PHLOXES, PYRETHRUMS, HARDY BORDER PLANTS,** carefully-prepared **PLAN** for arranging **HARDY PLANT BORDERS,** etc.

Experts unanimously accord **FORBES' CATALOGUE** the unique distinction of being the **best** and most **reliable** up-to-date **Reference Book** extant.

FREE ON APPLICATION.

JOHN FORBES (HAWICK), LIMITED.
(Dept. I), The King's Nurserymen, **HAWICK, Scotland**

PERPETUAL FLOWERING CARNATIONS: Britannia, Rose Dorée, White Perfection, Black Chief, Fortuna, Mrs. Burnett etc. 3s. per doz.; strong plants; post free. Ask list. C. F. VAN DER SLUYS F.R.H.S., Ramee Guernsey.

PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J. R. PEARSON & SONS
LOWDHAM, NOTTS.

If the "Daily Mail" £1,000 winning bunch of Sweet Peas

BE GROWN WITH

MACKERETH'S SPECIAL

SWEET PEA MANURE,

Sold in Tins, **1/-** (1/4 post free), **2/6** (3/- post free).
Sold in Bags, 14 lbs., **5/-**; 28 lbs., **8/6**; 56 lbs., **14/-**; 112 lbs., **25/-** Carriage Paid.

I will present the winner with **£10**, and if the bunch contains bloom of Earl Spencer, I will present the winner with **£5**.

I have splendid stocks of the most chaste Spencer Sweet Peas. Orders executed the day they are received.

G. H. MACKERETH,
The Sweet Pea Clearing House,
ULVERSTON.

AMERICAN TREE CARNATIONS

The Newest and Best Varieties.

Strong, healthy and well-rooted plants only supplied

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.

Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

NEW DELPHINIUM

REV. E. LASCELLES.

Unanimous "Award of Merit," R.H.S.

This grand Delphinium is acknowledged by experts to be the finest in commerce. Its striking appearance stamps it above all others. We are now offering strong flowering plants at **5/-** each.

Large ground roots of our unrivalled strain of Delphiniums, **12/-** per dozen.

Extra selected Seed saved from our Novelties, **2/6** per packet.

ALFRED A. WALTERS & SON,
KENSINGTON NURSERIES, BATH.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

TAKE NOTICE.

Intending planters should send for the STANCLIFFE CATALOGUE OF TREES, &c.

Our Stocks, which are grown on the highest and most exposed hills of Derbyshire, are in fine condition, and are sure to give satisfaction. Note the prices before ordering elsewhere.

Rockery Stone, 1/- per ton.

THE STANCLIFFE ESTATES CO., LTD.,
DARLEY DALE, DERBYSHIRE.

ELLISON'S BEGONIAS are absolutely the best strain; 30 Begonias, all different and named, 10s. 6d.; Bedding Begonias, 9s., 12s., 15s. 100.

GERBERA, Adnets Hybrids, for which I was awarded Silver-gilt Medal R.H.S. March 14th. Seed, 1s. 6d.; Plants, 10s., 15s. doz. ELLISON.

LILIUMS.—24 choice Liliums, all different, 10s. 6d.; Gloxinias, 6, different, 2s.; Cannas, 10, do., 1s.; 100 German Iris, 10 sorts, 4s. ELLISON.

1,000,000 BEGONIAS, Single, 1s. 6d. to 7s. 6d.; Dble., 2s. to 15s. doz.; Tuberoses, Arum Lilies, 1s. doz.

LARGE FLOWERING GLADIOLI, 3s., 5s. 100; Amaryllis, 10s., 15s., 20s. doz.; Gladioli, early, 1s. 100. ELLISON, 57, West Bromwich.

---

13 BEAUTIFUL BORDER CARNATIONS, in 13 varieties, to include 1 yellow, all truly named, and post free, 2s. 6d. 13 Pinks in 7 varieties, 1s. Empress Pansies, beautiful colours, 20, 1s. Calceolarias, Golden Gem, 16, 1s.; all post free. S. BRIMLEY, 56, Howbury Street, Bedford.

Sales by Auction.

SALES NEXT WEEK.

WEDNESDAY NEXT, April 19th, at Twelve o'clock. —Herbaceous and Border Plants in large variety, Japanese Liliums, Gladiolus, Begonias, and other hardy Bulbs and Roots.

At Half-past One o'clock.—2,500 Roses, Standard, Dwarf, Climbing, T., H.T., and H.P. in lots to suit all buyers.

At Five o'clock.—100 lots of Ornamental Palms and other Greenhouse Plants, Standard Bays, etc., also Azaleas, Aspidistras, Rhododendrons, etc.

FRIDAY NEXT, April 21st, at Twelve o'clock.—Japanese Liliums and numerous other plants for spring planting; Border, Alpine, and Herbaceous Plants in variety.

At Half-past One o'clock.—1,500 Roses in large variety.

At Quarter to One o'clock.—Choice cool, intermediate, and hothouse Orchids, from various sources. An importation of dendrobiums, Cypripediums, etc. Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view mornings of sale, and catalogues had.

FOR SALE, IN GUERNSEY.—A compact little BULB-GROWING ESTATE of about 4 acres, splendidly situated on the south coast of the island, and well stocked with the best forcing varieties of daffodils, etc.; also a small Orchard of Apple and Pear Trees in bearing. The property contains glasshouse 150 x 18 heated, large shed, pumping mill, and an unlimited supply of water. Write Box 154. c/o Messrs. R. F. White and Son, General Advertising Agents, 33, Fleet Street, London, E.C.

COMPACT FREEHOLD NURSERY FOR SALE, comprising six-roomed House, Bath-room, Kitchen and Scullery, 13 GREENHOUSES, 120 FEET LONG each, all heated by four Horizontal, Tubular Boilers; about 3½ acres of land, more or less, with stabling, and various sheds. Apply W. C. VIRGO, Moat House, Welling, Kent.

SUMMER HOUSE FOR SALE.—A gentleman wishes to dispose of a Rustic S.H., 10ft. by 5ft., cost £12 12s. a few years ago; may be seen at F. Turrell and Sons' Rustic Works, adjoining Purley Station L.B. and S.C. Rlwy. Price £6; or write M. FISHER, The Gable, Golders Green Road, N.W.

20,000 YARDS WIRE NETTING TO BE SOLD CHEAP. Send for lists. Carriage paid on lots of 20s.
DOUTHWAITE'S CITY WIRE WORKS,
116, Vicar Lane, Leeds.

SMALL FREEHOLD NURSERY and FLORIST BUSINESS FOR SALE, with well-built and heated glasshouses, sheds, and frames; town water supply; immediate possession. Particulars, T., Avenue House, Crediton, Devon.

BEGONIA COLLECTION.—6 doubles, 6 singles, 3 double fringed, 3 single fringed, 18 grand tubers, in 6 distinct colours, separately packed, 2s. 6d., post free.
H. HASSALL, 136, Shepherdess Walk, London, N.

CANTALOUP MELON PLANTS, in 60's, ready for their final quarter, specially grown for frame culture, 3s. per doz., 22s. per 100, f.o.r. AQUATIAS, Allithwaite, Grange, Lancs.

CABBAGE PLANTS, extra strong, Ellam's, Mein's, Offenham, First and Best, Enfield, Battersea, 3s. 1,000, 12s. 6d. 5,000 lots; Drumheads, 2s. 6d.; Red Cabbage, Cos Lettuce, Tripoli Onion, 4s, 1,000, on rail; or 1s. 100, post free. List free. C. HIGHT, Cranleigh, Surrey.

FERNS.—Moss (Sphagnum, Wreath, and Packing), from Wales. Finest quality; lowest price. List free. Estab. 13 years. Ref., Bank of England.—HAWKINS, Dolgelley.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

CARNATIONS! CARNATIONS!!

For Immediate Planting.

As I am the possessor of the finest Collections of these flowers extant of all classes, I am in a position to treat intending planters on the most favourable terms.

1 Doz. for 6/-, 7/-, 8/-, or 10/-, free for cash with order.

CATALOGUE FREE.

CHARLES BLICK, Warren Nurseries, HAYES, KENT.

HOLLYHOCKS. CHOICE DOUBLE-FLOWERED. Strong plants to bloom this summer. White, Yellow, Rose, and Crimson; true to colour. Per dozen, **4/-**; six, **2/3**; 50, for **15/-**; Carriage Paid. DANIELS & SON, WYMONDHAM, NORFOLK.

ORCHID PEAT.—Hardwood Brown Fibrous, RHODODENDRON and DUST PEAT, SPHAGNUM MOSS.
Apply C. HALL, 1, Worgret, Wareham, Dorset.

Price 7s. 6d. net. By post, packed in box, 8s.

THE FLOWER GARDEN.

The Formation and Management of a Garden, and the Culture of Outdoor Flowers and Plants.

W. H. and L. COLLINGRIDGE, 149 and 149, Aldersgate Street, London.

CARNATIONS, PINKS, AURICULAS.

DOUGLAS for the best old and new varieties in all classes, and the finest quality in the world. Malmaison Carnations, new and old, **7/6** per dozen. Border, **6/-** to **12/-** per dozen. Tree, American, and English, **7/6** to **15/-** per dozen. Auriculas, Show, **21/-** to **30/-** per dozen. Alpine Auriculas, **9/-** to **21/-** per dozen. Carnation, Auricula, Pink, and Polyanthus seed, **1/6** and **2/6** per packet. **CATALOGUE FREE.**

J. DOUGLAS, Bookham, LEATHERHEAD.

CLARENCE ELLIOTT, Six Hills Nursery, STEVENAGE, Herts.

Rare Alpine & Herbaceous Plants

Lowest Prices consistent with best quality and careful packing.

Special Catalogue, including many striking novelties, at popular uniform price throughout of 6d. each; 5/- per doz.

*

General Catalogue, including Rare and Splendid Plants, and full of useful cultural directions. Both are well worth writing for.

Two Special Novelties for 1911.

OXALIS ENNEAPHYLLA. Height 3 inches. Lovely crinkled leaves, and large white trumpet flowers. Collected by myself in the Falkland Isles last year. Ready now. Strong pot plants. **1/-** each. **10/6** per doz.

CAMPANULA PUSILLA MISS WILLMOTT. Dwarf and free. Sheets of great Silver Blue Bells for rock garden or border edging. Order now for September delivery. **6**d. each. **5**/- per doz.

Amaryllis—Hippeastrums

NOW FLOWERING.

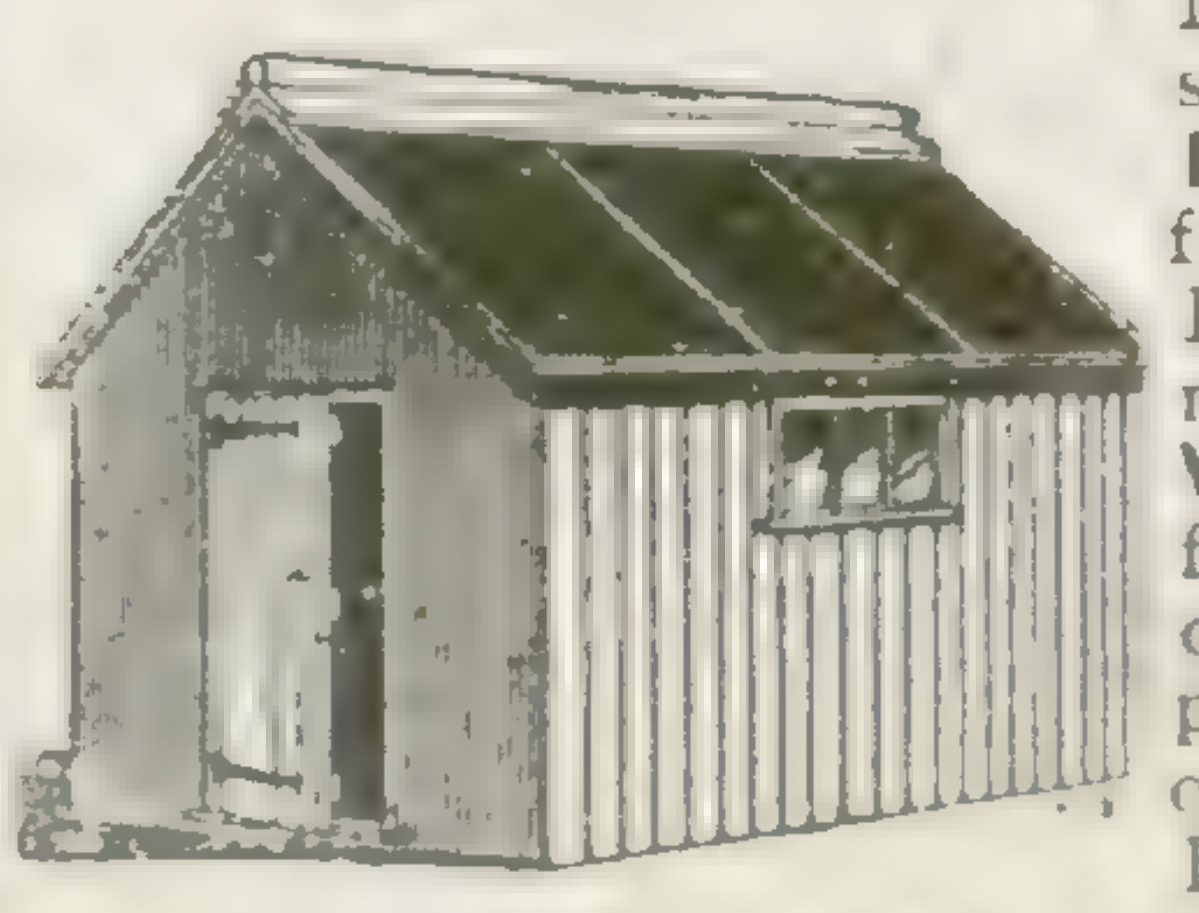
INSPECTION RESPECTFULLY INVITED.

Catalogues, and all particulars, free on application.

ROBT. P. KER & SONS,
AIGBURTH NURSERY, LIVERPOOL.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

PORTABLE BUILDINGS. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

Sizes.		Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.

Largest Makers of Portable Buildings,

ESTABLISHED 70 YEARS. ***BEDFORD.***

Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

Large Stock of

HARDY WATER LILIES,

Coloured, delivered in all Countries by Parcels Post.

New beautiful varieties unpublished.

NELUMBIUMS, etc., etc.

B. LATOUR-MARLIAC, Nurseryman
At Temple-sur-Lot (FRANCE).

Catalogue Free on Application.

ZONAL PELARGONIUMS.
Catalogue of New and Choicest Varieties

From V. SLADE, Zonal Specialist,
Staplegrove Nursery, Taunton.

SEED POTATOES, Scotch, Irish, Midlands, Northerns; largest and best stock in West of England, both earlies and lates. Apply to OLIVER BROS., Importers, Exeter, and Barnstaple

Rhododendrons.

Crimson, White, Pink. 250 Choice Named Varieties, fine foliage, well budded, for potting or planting. 1 to 1½ ft., 1½ to 2 ft., 2 to 2½ ft., 2½ to 3 ft., 3 to 4 ft., 4 to 5 ft., 5 to 6 ft., 6 to 7 ft. List of sorts and prices on application; many thousands to offer. Standards in all sizes.

All Home-grown. Inspection Invited.

F. STREET, Heatherside Nurseries, CAMBERLEY.

CARNATIONS, DAHLIAS
ROSES IN POTS

AND OTHER FLORISTS' FLOWERS

Catalogues on application to

CHARLES TURNER, The Royal Nurseries, SLOUGH

WATER CATALOGUE NOW READY
PERRY, ENFIELD, MIDDX.

BY APPOINTMENT.

ROSES IN POTS.

WM. PAUL & SON, WALTHAM CROSS, LTD.,

beg to offer a magnificent stock of DWARFS and RAMBLERS for present Planting and for Greenhouse Culture.

In 5-in. pots **10s. 6d.** to **18s.** per dozen, **75s.** to **120s.** per 100; extra strong in 8-in. pots **24s.** to **60s.** per dozen. Also a fine collection of New Roses.

Catalogue on application.

PAUL'S ROYAL NURSERIES,
Waltham Cross, HERTS.

GLASS & PAINT.

NICHOLLS & CLARKE, LTD.,

15 oz. and 21 oz. Glass,
IN ALL THE USUAL SIZES.

Shoreditch, London.

When sending for list please cut out this advt.

A PROFITABLE EASTER OCCUPATION
USE

CLAY'S FERTILIZER

AND MAKE
The Garden a Delight Throughout the Year.

CLAY'S LONDON FERTILIZER
TRADE MARK.

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags** :—7 lbs., **2/6** : 14 lbs., **4 6** : 28 lbs., **7 6**: 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK, AS AT SIDE.

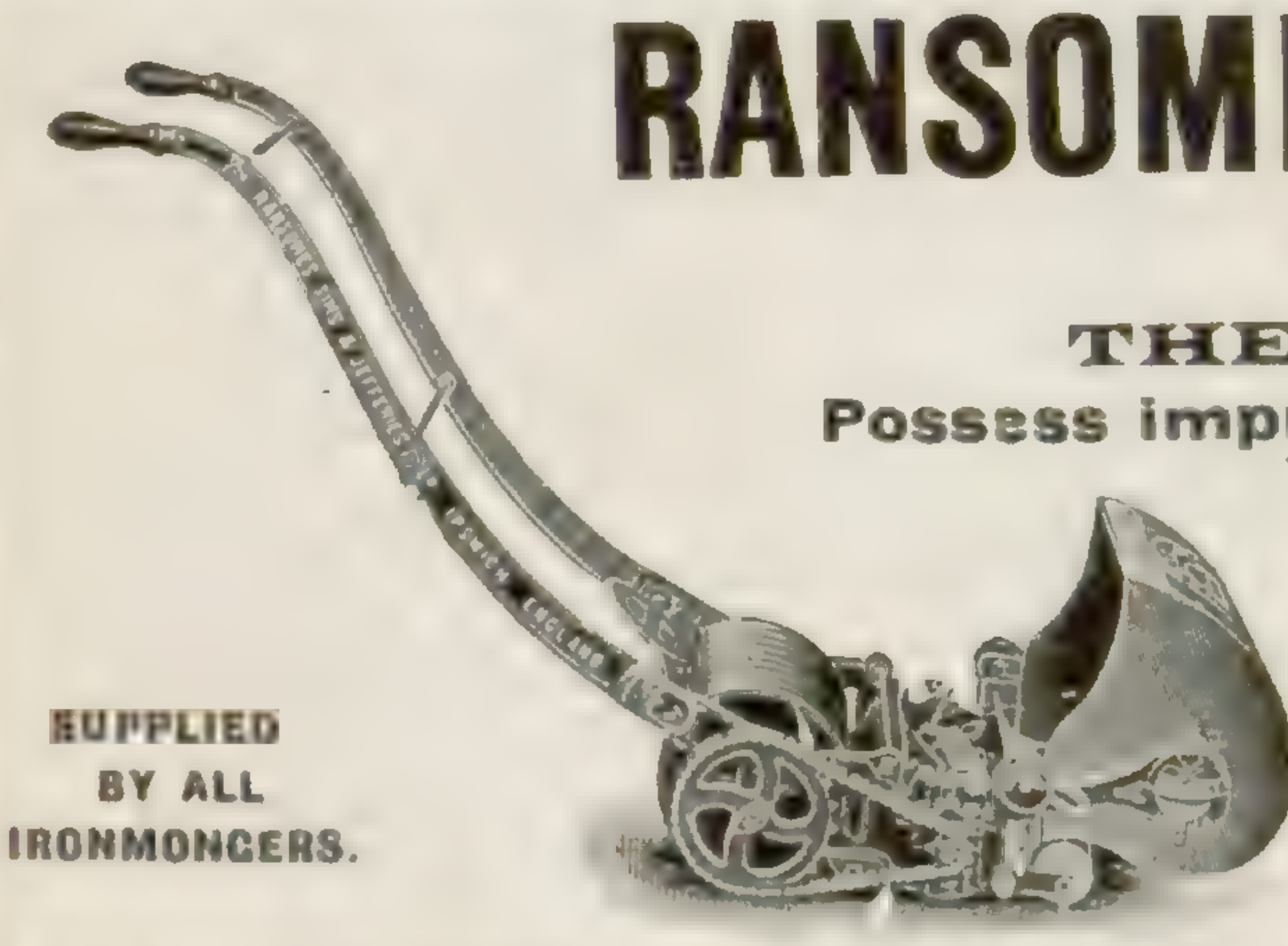
CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. Fourth Edition (Second Reprint). 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Stratford, London, E.

RANSOMES' LAWN MOWERS

Appointed by Royal Warrant.

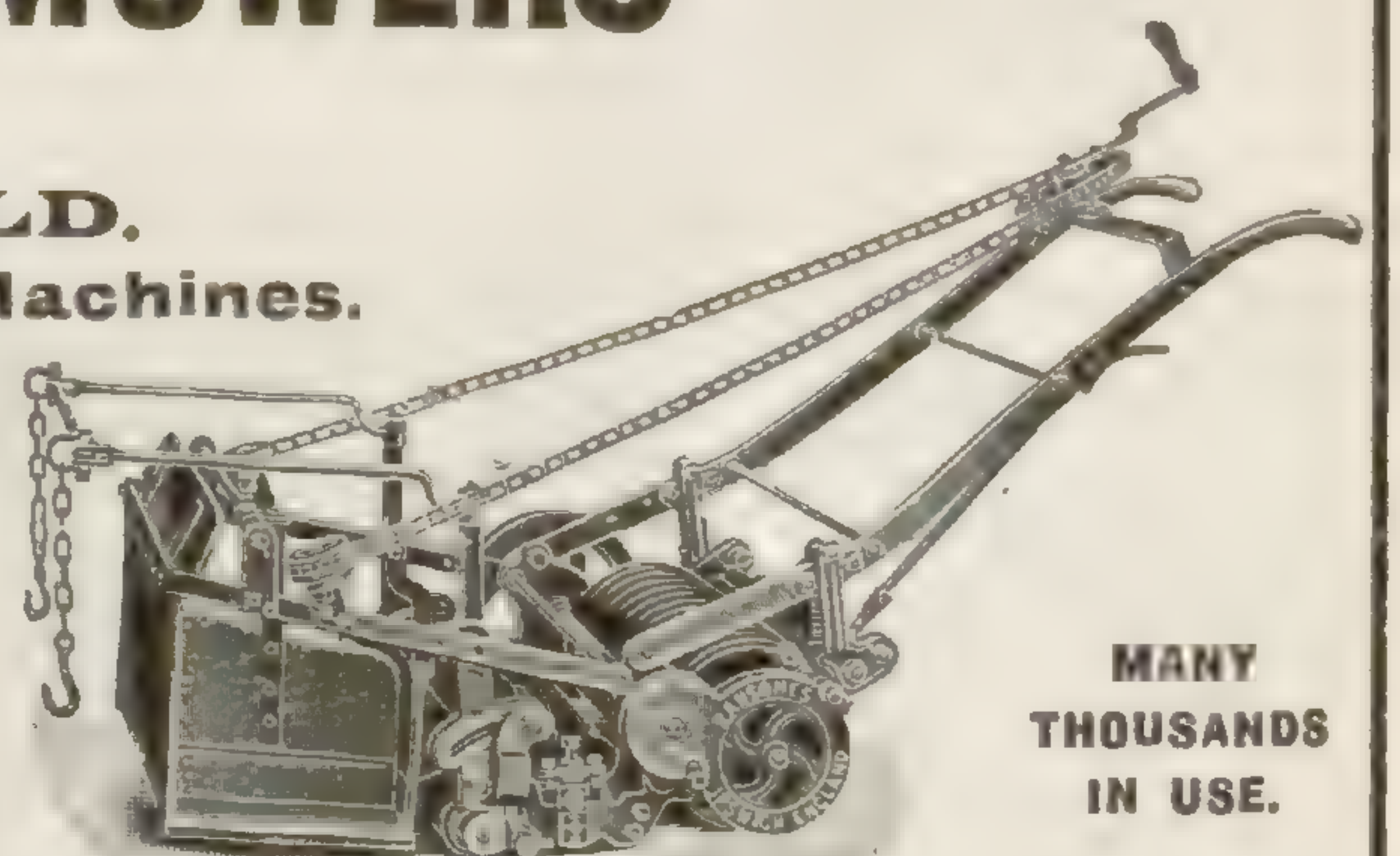
THE BEST IN THE WORLD.
Possess improvements embodied in no other Machines.



SUPPLIED BY ALL IRONMONGERS.

Recent Awards.

3 GOLD MEDALS.
7 SILVER MEDALS.



MANY THOUSANDS IN USE.

HAND POWER MACHINES.
In all kinds and sizes.

MOTOR LAWN MOWERS
The first brought out. Reputation Established.

HORSE and PONY MOWERS.
The best large machines.

Illustrated Catalogues Free on Application to— **RANSOMES, SIMS & JEFFERIES, LTD., THE ORWELL WORKS, IPSWICH.**

A Magnificent New

ZONAL PELARGONIUM

"His Majesty."

Award of Merit, R.H.S.

Of perfect habit, producing flowers of immense size, pips three inches across, trusses sometimes twenty-four inches in circumference.

Its colour is a Glorious Royal Scarlet.

Plants 3/6 each in 3-inch pots.

Being convinced that this is a real advance in Zonal Pelargoniums, I am offering a Silver Cup, value five guineas, a Silver Medal, and a Bronze Medal in open competition for three plants, and also similar awards for twelve trusses, to be exhibited at the National Chrysanthemum Society's November Show.

For particulars see Society's Schedule, or write

W. H. PAGE,
Tangley Nurseries,
HAMPTON. MIDDLESEX.
Telegrams: Page, Hampton.
Telephone: P.O. [illegible] Molesey.

ORCHIDS

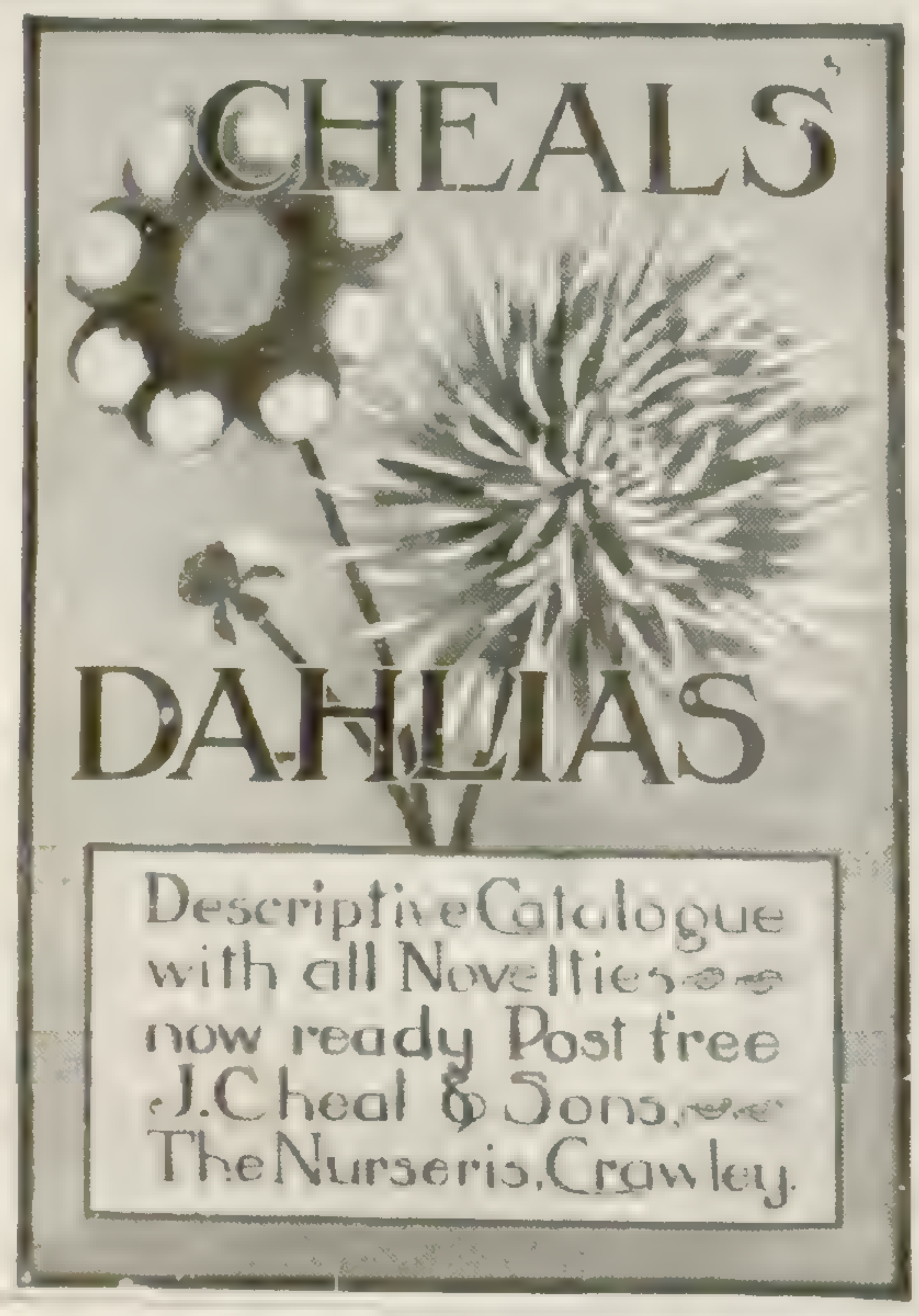
EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.



CHEALS'
DAHLIAS
Descriptive Catalogue with all Novelties now ready Post free
J. Cheal & Sons, The Nurseries, Crawley.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.
Our Work has stood the test of time.

BUNYARD'S FRUIT TREES

The Best Quality and Largest Selection at Moderate Prices.

WRITE FOR CATALOGUE.

GEO. BUNYARD & CO., LTD.,
Royal Nurseries,
MAIDSTONE.

VOL. LIV.--No 2,998. SATURDAY, APRIL 15, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Garden Flowers.

We have for some time been advocating the development of dahlias on lines differing somewhat from those which have been followed by raisers for a considerable period, with a view to an improvement in the position which these flowers occupy, and we derive much satisfaction from the knowledge that our advocacy is accomplishing its purpose. We have urged, among other things, that in the development of the cactus dahlia an endeavour should be made, not only to improve the size and form of the flowers and evolve new shades of colour, but to increase the rigidity and length of the flower stems sufficiently to carry the blooms well above the foliage. It appears to us so obvious this should be done that it comes somewhat as a surprise to be told that owners of gardens care nothing about the cactus dahlia from the decorative point of view; that their whole interest in this important section is centered in the individual blooms. This has not been our experience, and, so far from it being so, we have been frequently assured by owners of small gardens and those in charge of large ones that they feel it a matter for regret that plants producing blooms of such exquisite form and attractive colouring should not produce them in such manner that they can be readily seen. Lest our views should be misunderstood, and there appears to be some little misapprehension upon this point, we would state in the most distinct manner that, in advocating the creation of a race of garden cactus dahlias, we do not suggest there should be any relaxation in the endeavour to improve the cactus section for exhibition purposes. We did not intend referring to this matter further for the present, but we have been reading some literature bearing on it in which views are expressed that evince a wide divergence from our own. It may be we owe their expression to what we have written, but whether that be the case or not is a matter of but little consequence. The point of interest to ourselves and our readers is the statement that, if we would increase the popularity of the dahlia it must be by means of big blooms at the exhibitions. If we would prevent the rose falling from its high estate, we must make up the rose shows with huge exhibition blooms, for the public care but little about masses of the mere "garden variety"; and so on, with the chrysanthemum, the carnation, and some other classes of flowers. Caring little about anything but big blooms, the public will not, we are assured, go to shows where they are not represented. It is surprising, with the facilities now existing for obtaining information on all that relates to the progress of horticulture that such views should be held. They find no support from the evidence available. If we glance at the history of the National Rose Society we shall find that for a considerable period the society devoted its whole attention to "exhibition" blooms, and that throughout the whole of the period it was a comparatively small body. In course of time rose lovers began to take an interest in varieties that were so vigorous in growth and free in blooming as to be of special value in beautifying the garden, and the executive very wisely provided classes for them in the schedule, and by means of literature assisted their members in making selections. For many years garden roses have formed an important feature of the society's exhibitions, and the members have increased so rapidly since the change in policy that there are now about 5,000 on the books. We thought these facts were well known to all who take an interest in horticulture, but evidently very little must be taken for granted. Another excellent example is that afforded by the National Carnation Society. For a considerable period the society devoted its efforts exclusively to "exhibition" carnations and picotees; then, with the assistance of the late Mr. Martin Smith, border varieties were brought within the scope of the society's work, and with the most gratifying results. The membership increased, the exhibitions were extended and rendered more generally attractive, and, what was of not less importance, carnation culture was enormously increased throughout the United Kingdom. The exhibitions and meetings held by the Royal Horticultural Society during the past two decades should afford some indication as to whether the predominance of big blooms or huge specimen plants is essential to their success. That they are successful should be known to all who engage in a discussion on the all important question of the public taste in floricultural matters, and it ought also to be known to them that these gatherings owe their popularity to the admirable manner in which all classes of ornamental plants and useful subjects are represented. At these meetings the finely developed chrysanthemum, dahlia, or rose receives a share of attention, but there can be no question that the most popular of all the contributions to these gatherings are the hardy border plants, of which but few are regarded as "exhibition" subjects, although they have been considerably improved; alpine plants that have undergone but little, if any modification since they

G.M. 1703.

MR. E. H. CHRISTY.

were collected on their native mountains for beautifying British gardens, and subjects that are of value for embellishing the conservatory. These are the classes of subjects that draw visitors to the Royal Horticultural Hall in such numbers as to crowd the spacious building to its utmost capacity, and they assuredly belong to gardens and plant houses generally, rather than to special cults. With such evidence as these exhibitions afford at frequently recurring intervals, it appears to us something more than surprising that anyone acquainted with what is being done in the Metropolis should fail to recognise the fact that exhibitions have two functions: one to encourage cultural skill, and the other to bring into prominence that which is of the greatest value in enhancing the interest, attractions, and usefulness of the garden; and that exhibitions which properly fulfil their mission are those which attract the flower-loving community in the largest numbers.

Mr. E. H. Christy belongs to that excellent type of business man who, working hard in the City all day, works equally hard in his garden at either end of the business hours. That he finds pleasure, recreation, and health in the pursuit of his hobby—which, of course, is gardening—is evident, for Mr. Christy is a robust enthusiast. He has a large garden at Beacons, Ingatestone, and here he cultivates many things well. It is, however, as a sweet pea expert that he is most widely known, and not only is he a capable grower, but he takes a keen interest in the National Sweet Pea Society, is on the General Committee, and has acted on both the Executive and Floral Committees of that body. In the district in which he lives, Mr. Christy takes an interest in local horticulture, and though the office entails late hours, a railway journey, and a long walk afterwards, he has for some time been president of the Chelmsford Gardeners' Association, and it is rarely he misses any of its meetings held in the County Laboratories.

Damage to the Jersey Potato Crop.—In our issue of the 8th inst. we briefly stated that the Jersey potato crop had been seriously injured by a severe frost on the previous Wednesday. We hoped at the time the injury done was less than suggested by our correspondent, but subsequent communications show that the loss inflicted upon the growers was even greater than was at first feared. The earliest portions of the crop would have been ready for lifting during the next two or three weeks, and as these are by far the most profitable, it will not be difficult to have some idea of the loss that has been inflicted when we state that the haulm was cut to the ground. Instead of potatoes being sent to the English markets early in May, the month will be far advanced before any considerable quantity can be dispatched, and the period during which high prices are usually obtained will be missed. It is more than a quarter of a century since so heavy a loss has been inflicted upon the Jersey growers.

Photographs of Garden Scenes, etc.—Within the next few weeks the garden will afford abundant opportunities for those who have a practical acquaintance with the art of photography to display their taste and skill in the production of pictures of interesting garden scenes of the most varied character. We suggest that these opportunities should be taken advantage of more fully than has yet been the case, and at the same time we would remind our readers that we shall be pleased to see the results of their skill. We have for a long time past reminded our readers that we shall be obliged by their submitting to us photographs of interesting subjects associated with horticulture, and we give greater prominence to the expression of our desire with the hope that those who have attractive gardens and are skilled in photography will afford other readers an opportunity of participating in some degree in the pleasure tastefully-arranged gardens are so well able to give. We are, of course, prepared to pay for such photographs as we use, and as it is quite impossible to maintain the high standard of our illustrations unless the photographs are good, it is essential that those sent should be of high quality. They should be full of detail, and be bright and clear. Many photographs that reach us are unsatisfactory owing to the over or under exposure of the negatives, and we strongly advise amateur photographers to invariably use a light meter. These meters are inexpensive and easy to use, and soon save their cost in plates, besides enabling the photographer to avoid much vexation. The photographs should be sent addressed to "The Editor of the Gardeners' Magazine, Endsleigh, Priory Park, Kew."

Shrewsbury Floral Fete.—The financial results of the Shrewsbury Floral Fête in August last were not less satisfactory than the horticultural features as recorded in these pages at the time. According to the recently issued balance-sheet, the receipts for admission amounted to £3,105 15s. 1d., as compared with £2,689 6s. in 1909, and the income from all sources was £5,756 15s. 3d., against £5,245 18s. 7d. in the year previous.

Plague of Nematodes in the Midlands.—At the recent annual meeting of the Association of Economic Biologists at Birmingham Mr. Walter E. Collinge read a paper on "The Plague of Nematodes in the Midland and Other Counties." In his opening remarks, he said that the plague of these worms was crippling the growers of almost every farm and garden crop. No plague of such a magnitude had hitherto been known, and it was not confined to this country. The groups of worms which were causing the damage were popularly known as eelworms and white worms, and the knowledge of their life history and bionomics was scanty. He believed that much of the trouble was owing to the failure to burn diseased crops. The presence of weeds, particularly nettles and thistles, along hedgesides offered a particularly favourable breeding ground for eelworms. He had found eelworms equally plentiful in wet and sticky, dry, light, and heavy soils. The white worms flourished where the soil was poor. He recommended the application of basic slag and ground unslaked lime. In some cases soil fumigants had given good results. He appealed to those who had the direction of students at the Universities and elsewhere to bear in mind what extremely valuable service they would be rendering if they would set them to work out the structure and bionomics of these and allied pests.

British Horticultural Traders in America.—The British horticulturists who have been on a visit to the United States arrived safely, and received a warm welcome from their friends on the other side of the Atlantic. Arriving at New York on March 17, they proceeded to Philadelphia, and returned on the following day for the annual banquet of the New York Floral Club. Returning to Philadelphia they visited Baltimore and Washington and then proceeded to Richmond, Indiana, where they were received and entertained by Mr. E. G. Hill. Thence they went to Chicago, arriving there on March 24, when they were shown round the city, visiting the public parks, Swift's packing plant at the stockyards, and the nurseries of Messrs. Poehlmann Brothers. On their arrival at Chicago they were met and escorted to the Hotel Sherman by representatives of the Chicago Florists' Club, who entertained them at luncheon at the South Shore Country Club and dinner in the evening at the Union restaurant. The members of the party made a three-days' stay in Chicago and on leaving that city they proceeded to the Niagara Falls, previously expressing their high appreciation of the reception that had been given them at the American cities visited. The members of the party are Mr. J. Brown, Stamford; Mr. J. S. Brunton, Burnley; Mr. E. Barker, Manchester; Mr. W. A. Cull, Lower Edmonton; Mr. C. Engelmann, Saffron Walden; Mr. J. S. Gunn, Birmingham; Mr. L. M. Graves, Harlington; Mr. G. Prickett, South Tottenham; Mr. C. Pratley, Edmonton; Mr. J. Simpson, Burnley, and Mr. S. South, Tottenham.

The National Carnation and Picotee Society has issued its schedule of prizes for the present year, and this follows pretty much on old lines. The Martin Smith Memorial Cup, won in 1910 by Mr. H. R. Taylor, and the Cartwright Challenge Cup, won during each of the last three years by Mr. Jas. Douglas, are figured, and there is a complete list of the prize winners at the 1910 exhibition. Besides the annual report for 1910, and the list of members, there is an interesting contribution on the "Standard of Excellence in the Carnation and Picotee." Mr. Leopold de Rothschild is the president of the society, and Mr. T. E. Henwood, Hamilton Road, Reading, continues to act as hon. secretary and treasurer.

A Cold Week.—In connection with the low temperature that was experienced during the week ending on the 8th inst., it can hardly fail to be of interest to mention that there have been during the past forty years, four weeks in April in which the temperature has been considerably below the average. It is of interest also that two of these weeks ended with the 8th and 9th respectively, and two with the 25th and 28th. The coldest of the four weeks was that which ended April 25, 1908, and in this the mean temperature was 39.7 degrees or 10.3 degrees below the average; the mean maximum temperature was 46.0 degrees, or 12.0 below the average, and the mean minimum temperature 34.4 degrees, or 8.6 below the average. The next coldest week in April was that ended on the 8th inst. In this the mean was 37.4 degrees or 7.6 degrees below, the maximum mean 46.0 degrees or 12.0 degrees below, and the minimum mean 33.4 degrees, or 8.6 degrees below. It will be seen from the foregoing figures, that in the first week of the present month the mean temperature was 2.3 degrees below that of the week ended with April 25, 1908, but owing to the average temperature being lower at the beginning of the month than towards the end, the difference from the average is less. The effect upon vegetation of a temperature considerably below the average is very different in the two periods. The most important of the several kinds of hardy fruits had not, except in early districts, expanded their blossoms, whereas in 1908 most kinds were in bloom, or had flowered and set their fruit, and as the result their crops were the most complete failures that have yet been recorded. Early crops have this year been much retarded by the cold weather, but we may hope the damage done to them will be less than in 1908.

Flowers for Charity.—The citizens of Geneva have recently provided themselves with a motor-ambulance, for which they had great need, at a cost of £720. To raise this large sum it was arranged to have a sale of flowers in the streets, and in this upwards of seven hundred girls were engaged. The result we learn was highly satisfactory.

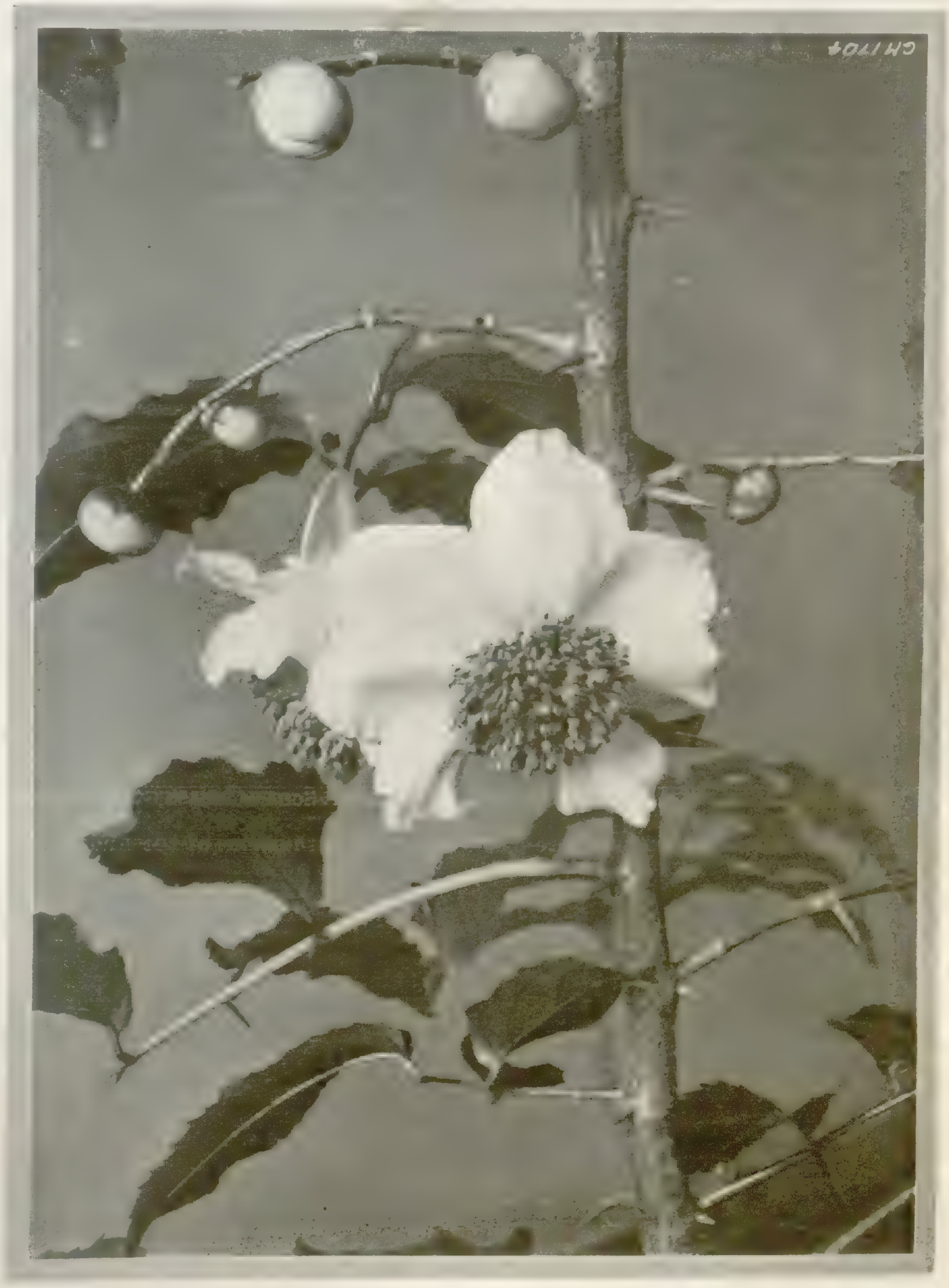
Preservation of Trees in Towns.—In an admirable lecture on "Tree Planting in Towns," delivered at the Town Planning Exhibition in Edinburgh, Mr. E. P. Stebbing deals at length in a most interesting way with the subject of planting trees in towns, but we are delighted to find he does not overlook trees existing on sites where towns or houses are to be planned. He said "There is one other point, however, in connection with tree planting in towns which applies alike to Edinburgh and all growing cities and towns. It is concerned, not with tree planting, but with tree felling. It is difficult to speak too strongly in disapprobation of the indiscriminate and pernicious felling of trees which usually takes place when a new block of houses is to be built or a new road laid down. No effort is made to first mark out the foundations or alignment to ascertain whether the trees must come down or can be left to afford a pleasing amenity to the district. Perhaps for the gain of a few shillings, or through ignorance or gross stupidity, they are ruthlessly hacked down, a few hours destroying the work of a century, and the stumps remain a lasting source of regret to those inhabiting the district, for they can never hope in their time to replace the trees so mercilessly destroyed. The first rule for a town-planning committee to lay down should be that no trees on areas in which building extensions are to take place should be felled or killed without a special permission being previously obtained."

Plants Poisonous to Live Stock.—Those of our readers who have the care of live stock will be interested to learn, on the authority of a well-known writer in the "Agricultural Gazette," that buttercups, white bryony, hemlock, cowbane, water dropwort, fool's parsley, bittersweet, sheep's sorrel, dog's mercury, acorns and meadow saffron are readily obtained by live stock and may prove harmful. Saffron, however, is rarely eaten, and sheep's sorrel is not usually harmful, while buttercups, though harmful in the green state, are harmless when in the form of hay. Plants that may cause poisoning, and which are sometimes within the reach of live stock, are foxglove, hellebore, monkshood, poppies, corn cockle, ivy, hound's tongue, rhododendron, yew, darnel, deadly nightshade, and laburnum.

Electricity in Plant Culture.—At the recent monthly meeting of the Farmers' Club Professor J. H. Priestley, of Bristol University read a paper on "Electricity as a factor in Crop Production." After referring at some length to the experiments that have of late been made with high tension electricity in the cultivation of farm crops, he gave an account of some experiments with mercury vapour lamps in the raising of garden crops under glass. He stated that Miss E. J. Dudgeon had in her experiments found the Cooper-Hewitt mercury vapour lamp "extraordinarily efficacious, producing accelerated germination, increased growth, greater depth of colour, and, more important still, no signs of the lanky, unnatural extension of the plant usually associated with forcing." Figures were also given showing how many days earlier seeds germinated under the lamp than in the control greenhouse: French beans, 8; carrot, 15; cauliflower, 20; lettuce, 6; oats, 5; barley, 5; wheat, 8. The lamp was 4ft. above the seeds, and the light was turned on two hours daily after daylight. Professor Priestley said that microscopic examination confirmed Miss Dudgeon's statements regarding the greater sturdiness of the treated plants. The treated plants and those in the control greenhouse had thermometers beside them, and the reading showed no difference. Professor Priestley said that he had experimented himself with the quartz mercury vapour lamp, and found germination "enormously accelerated" and the treated seedlings "extraordinarily sturdy." One result of the lamp-light was that mustard exposed at close range was absolutely without hairs, while the seedlings at some distance had hairs only on the sides of their leaves and stems next the lamp.

ROYAL HORTICULTURAL SOCIETY.

It was a great and beautiful show that greeted the Fellows of the R.H.S. on April 11; there were alpine flowers, flowering shrubs in profusion, a rare array of daffodils, and gorgeous orchids. There was a big crowd to inspect the exhibits, and once again the arrangement of tabling was altered; in the northern half the tables were lengthways, and in the other half crossways, and there was only one means of communication between the two halves of the show; the crush, however, in places, was fully as great as usual. A bigger hall was needed.



ONCOBA SPECIOSA, VAR. ROUTLEDGEI.
Flowers pure white, with golden anthers. F.C.C., R.H.S., April 11. C. E. Shea, Esq.

FLORAL COMMITTEE.

Messrs. R. and G. Cuthbert, Southgate, N., arranged a beautiful display of forced shrubs in a corner of the hall. Tall cocos palms occupied the background, while tall specimen weigelas, lilacs in variety, and laburnums were raised gracefully above a groundwork of well-flowered Azalea mollis, magnolias, and lilacs, the whole being finished off with ferns and other appropriate plants.

The Misses Le Lacheur and Sherris, Henfield, Sussex, had a table of myosotis and polyanthuses.

Messrs. W. Wells and Co., Lim., Merstham, Surrey displayed the white carnation

White House in fine form, also one or two very promising seedlings.

Auriculas from Mr. James Douglas, Edenside, Great Bookham, gave one a real feeling of April, in contrast to the weather. The plants were in good form, and the flowers in fine condition; the most attractive were Admiration, May Day, George Rudd, Old Rose, and Innocence; a truly fine early display of these charming flowers.

The Guildford Hardy Plant Company, Guildford, had a pleasing exhibit of hardy flowers. The primulas were most interesting, as were also the clumps of Viola gracilis, arabis in variety, and Tulipa Greigi.

From Mr. Charles Turner, Slough, came a fine table of Rhododendron Countess of Sefton, which were growing in pots. The delicate white flowers, slightly shaded with pink, were quite a source of interest with the visitors.

Mr. M. Prichard, Christchurch, Hants, contributed one of his well-known exhibits of hardy flowers, and, on this occasion, did full justice to his reputation. A few of the leading subjects were Fritillaria imperialis lutea and F. rubra maxima; anemones, too, were in splendid form, as were also the bold mounds of double primroses, and groups of P. nivalis and rosea, while the saxifragas and Viola rupestris contributed attractive features.

Mr. George Prince, Longworth, Oxford, had a fine exhibit of roses, chiefly the newer varieties, as represented by Rayon d'Or, in fine colour, Lady Hillingdon, Lady Pirrie, and Lyon. A few standards and climbing specimens relieved the tables. The dwarf polyantha variety, Tip-Top, was attractive, while the specimen roses in boxes were really good.

Another rock and alpine display was that from Mr. W. H. Paine, The Tully Nurseries, Kildare. The arrangement was most pleasing, while the chief features of the exhibit were the primulas, with Gentiana acaulis, and Lithospermum Heavenly Blue. The alpine Violas papilio and gracilis, too, were features.

Messrs. W. Paul and Son, Lim., Waltham Cross, Herts, occupied a table with roses in pots. Needless to say, the plants were in perfect condition, and the flowers timed well for the show. The most notable varieties were Juliet, Albatross, F. H. Veitch, and Margaret. The climbing varieties were also well flowered, especially Sylvia, a fine white variety, said to be perpetual.

Rock and alpine plants from Messrs. T. S. Ware, Lim., Feltham, were arranged naturally. The primroses formed quite a feature, being arranged in blocks of colour. The aubrietias, too, were a fine collection, while irises in variety were much admired.

Carnations from Messrs. Young and Co., Cheltenham, were worthy of notice, especially the vases of Marmion, Winsor, Enchantress, and Britannia; all of them being especially bright.

A most attractive group of forced shrubs and trees came from Messrs. James Veitch and Sons, Lim., Chelsea. The standard trees including fine examples of Cratægus oxyacantha multiplex, Spiræa confusa, and a variety of pyruses, while the groundwork was composed with fine groups of Rhododendron Pink Pearl, Mirabile, and Handsworth Early Red, while azaleas and lilacs formed a profusion of bloom, and added to the beauty of the exhibit.

Messrs. W. Cutbush and Son, Highgate, had a large miscellaneous exhibit, which consisted of fine specimen azaleas, lilacs in variety, and other forced shrubs, while rock and alpine plants occupied boxes in front. The same firm also staged some fine carnations arranged in tall vases. The best were Mrs. Fortescue, Enchantress, Pink Delight, Beacon, and the beautiful Lady Coventry.

Mr. H. N. Ellison, West Bromwich, once again staged a charming collection of gerbera hybrids, which presented a very wide range of colours, also a quantity of ferns, chiefly of a decorative type.

Hardy flowers, most beautifully arranged, came from Messrs. G. and A. Clark, Lim., Dover. The primroses included in the group denoted a very fine strain, and as they were arranged to colour they had a pleasing effect. Anemones and aubrietias, too, were most prominent.

Roses with long stems were the order of Messrs. G. Mount and Sons, Lim., Canterbury, and very fine they were, too. Richmond was in fine fettle, while White Killarney proved a source of attraction with its well-developed buds; other varieties equally good were Lady Hillingdon and Joseph Lowe.

The zonal pelargoniums of Messrs. H. Cannell and Sons, Swanley, maintained the reputation of the firm for these flowers. In addition to a large collection of single varieties, which were remarkably fine in size and colour, the firm staged a basket of Salmon Paul Crampel and Maxim Kevalesky (A.M.), an orange-scarlet bedding variety, quite distinct in colour, and said to possess a good habit.

Mr. C. E. Shea, The Elms, Foots Cray, Kent, exhibited a well-flowered specimen of the beautiful Oncoba speciosa Routledgei (F.C.C.), an evergreen greenhouse shrub, that he has received from Central Africa. The shrub is elegant in growth, and bears pure white single flowers, which have their beauty greatly enhanced by a cluster of rich golden stamens in the centre.

Some delightful plumose nephrolepis, notably N. Marshalli compacta (F.C.C.), "perfectly sweet," as the ladies said, were finely shown by Messrs. H. B. May and Sons, Edmonton, who also staged polyantha roses and some finely-flowered clematis in small pots.

Perpetual carnations were grandly shown by Mr. H. Burnett, Guernsey, who staged full-sized blooms of exquisite colour; Emperor, R. F. Felton, White Enchantress, Rose Doré, Marmion, the splendid Mrs. C. F. Raphael, Mikādo, and Pluto were the leading varieties in a superb exhibit.

Messrs. Pulhams, Elsenham, Essex, contributed a little alpine gărden, furnished with aubrietias, adonis, primulas, Viola gracilis, phloxes, and other pretty spring flowers.

Primula rosea was especially well shown by Messrs. Bakers, Wolverhampton, who also contributed Incarvillea grandiflora, Primula denticulata, Daphne cneorum, Arabis aubrietioides, and other pretty things.

Azaleas were finely shown by Messrs. Jas. Veitch and Sons, Chelsea, the examples of J. T. D. Llewelyn, and Niobe were superb; lilacs and anthuriums of the Andreanum section were also presented in fine style.

A large exhibit from Messrs. Stuart Low and Co., Enfield, included a collection of perpetual carnations, with the pink variety Lady Alington showing up finely; the new Hydrangea Madame Mouillère was also well shown, as were acacias, and a very beautiful set of gerbera hybrids, yellow, whitish, orange, pink, and scarlet being colours well represented.

Caladiums, as shown by Messrs. J. Peed and Sons, Norwood, were a foretaste of summer; the plants were small, but their wonderful and brilliant leaves attracted much attention.

Mr. Clarence Elliott, Seven Hills, Stevenage, set up a little rock garden, and in it were pretty colonies of Scilla siberica and its white form, the golden Morisia hypogæa, Saxifraga oppositifolia var. W. A. Clarke, Androsace sempervivoides, Puschkinea libanotica, the delightful Primula Mrs. J. H. Wilson, and the dainty little Ranunculus crenatus, with white flowers.

Besides their daffodils Messrs. Barr and Sons, Covent Garden, put up a group of alpines, such as aubrietias, Viola cornuta, V. c. papilio, V. gracilis, primulas in variety, anemones, and saxifragas.

A glorious lot of polyanthuses from Messrs. Blackmore and Langdon, Twerton Hill, Bath, attracted a great deal of attention; the white, yellow, and crimson selfs were particularly good, but other shades and combinations of colour were almost as effective.

Mr. A. Hemsley, Crawley, had a considerable rock garden, and, in addition to small flowering shrubs, he had Androsace coronopifolia, Primula denticulata, P. rosea, the double Caltha palustris, the new and dainty Androsace carnea alba, Primula frondosa, aubrietias, etc.

Messrs. Heath and Son, Cheltenham, presented a quite large rock garden, but the rocks were a trifle too obtrusive; very pretty were the colonies of Viola gracilis, Primula rosea, P. cashmeriana, Anemone nemorosa robusta, pale forms of P. japonica, Saxifraga lingulata, and the charming Arabis Billardieri rosea; Townsendia Wilcoxiana, Primula capitata, Lanakea radicans, and Anemone ranunculoides were also interesting.

The cut pelargoniums from Mr. Vincent Slade, Taunton, made a blaze of colour, and such semi-double varieties as Reverie, Charvarris, Hermanos, Fascination, Pres. Baillet, and Paul Reboux were notably good.

Herbaceous and alpine plants from Mr. James Box, Lindfield, Sussex, included Trillium grandiflorum, Aubrietia Purple Robe, Anemone fulgens, tree pæonies, Gentiana acaulis, Primula rosea, P. Sieboldi, aubrietias, and polyanthuses.

Very showy was the big group of flowering shrubs staged by Mr. L. R. Russell, Richmond; Azalea Anthony Koster was the great feature of the group, but Weigela alba, W. Eva Rathke, Pyrus malus Schiedeckeri, lilacs, clematis in small pots, and Spiræa confusa added greatly to the interest and effectiveness of the exhibit.

The group of rhododendrons staged by Messrs. John Waterer and Sons, Lim., Bagshot, was a fine feature; some of the best varieties, all shapely plants and finely flowered, were Handsworth White, Grand Arab, Sun of Austerlitz, the large-flowered George Hardy, with white blooms, and the showy Ascot Brilliant.

A particularly attractive group, most artistically set out, by Messrs. James Carter and Co., Raynes Park, was the centre of an admiring crowd all day. Here, with a background of dark conifers, rising above a rockery bank; in front a lovely green lawn, with a pair of circular beds of hyacinths, each with a tall central leaden vase filled with lovely flowers of King Alfred daffodil. Right in the centre was a big old leaden cistern of 1769 date, and finely modelled, filled with a mass of golden King Alfred daffodils. Primroses, polyanthuses, daphnes, cytisus, and other pretty plants adorned the surrounding rockwork, and a little pool, with its dripping water, completed a very delightful exhibit.

ORCHID COMMITTEE.

The exhibit from Mr. J. Hale, gardener to S. Larkin, Esq., Ridgeway, Haslemere, Surrey, contained Phalænopsis Schilleriana, odontoglossums in variety, Vanda suavis, and a few cypripediums.

Mr. E. V. Low, Vale Bridge, Haywards Heath, brought up Cymbidium insigne in fine form, several plants of the beautiful Brassocattleya Langleyense, Lælio-cattleya callistoglossa, Dendrobium Thwaitesi, etc.

Messrs. J. and A. McBean, Cooksbridge, presented a pretty group of orchids, in which light varieties of Odontoglossum crispum were especially good; with these were Cattleya Schröderæ, Epiphronitis Veitchi, Dendrobium Dearei, and the old Ada aurantiaca.

Miltonia Bleuana var. Peetersiæ (F.C.C.), curiously marked with mauve-purple, was shown by Mr. E. Demunter, gardener to F. Lambeau, Esq., Brussels; the plant carried three spikes.

Messrs. A. Peeters and Son, Brussels, sent over Miltonia Bleuana var. Laeken, a beautiful large-flowered variety.

The superb Cattleya Schröderæ The Baron, with four flowers, was shown by Mr. Alexander, grower to Lieut.-Colonel Sir G. Holford, Westonbirt, Gloucester.

Mr. Black, gardener to R. G. Thwaites, Esq., Streatham, showed several odontiodas; and Odontioda Charlesworthi superba, from W. Thompson, Esq., Walton Grange, Stone, was so fine in substance, colour, and spike, that one wondered how it failed to secure official recognition.

From the Gatton Park collection, Reigate, Mr. Collier, gardener to Sir Jeremiah Colman, Bart., staged Phaius Norman with good

(Continued on page 291.)

SOME NEW PERPETUAL CARNATIONS.

There are some promising additions to our perpetual carnations, and perhaps the variety which attracts most attention is R. F. Felton. Some beautiful blooms have recently been shown at the Royal Horticultural Society's meetings, and, apart from this, it has much to recommend it, and if it does not possess all the good qualities claimed for it, there are sufficient to merit its being grown extensively. It resembles both Mrs. Burnett and Enchantress, and may be a cross between these two varieties; of this I am not sure, neither am I quite sure who is most honoured by it, the raiser, or the gentleman whose name it bears. It is to be hoped that it will not develop rust to the extent that Mrs. Burnett has done, but as "rust" is largely a question of local surroundings and cultural detail, it should not trouble the good growers.

Lady Allington is a carnation of very attractive colour, and should be in great demand, not only for the shade of colour, but more so for its rich scent; the latter quality should enhance its merits, as many of the newer varieties can scarcely claim to have perfume. This variety appears to be of very good constitution and growth. Niagara and White House are very promising varieties, but as whites are not so much in demand these do not command the same amount of attention as other colours. For the private grower a couple of good whites, providing they are the best, is enough. Carola is a beautiful crimson, but I have not seen any blooms yet to equal those staged by Mr. Engelmann. He shows it superbly. I do not know if his plants show any rust, but I notice in many places the variety is subject to it; but this may be through improper treatment during winter. A variety said to be more refined in colour than Carola is one named Pluto, but this has its weak points, and while it may prove a rival, it will be some time before it displaces the latter.

Mrs. C. F. Raphael is more of a Malmaison in appearance, though it is claimed for the perpetual section, but I doubt if it will be a winter-flowering variety altogether. The blooms are too massive for the dull days of winter. There is plenty of room for a good yellow, for R. Whitcombe Riley is very disappointing; its blooms often curl when opening, and its constitution does not appear to be of the best. So far a good yellow has not been obtained. There are several yellow varieties which show white or pink splashes, and I know from my own experience it is difficult to get a good fixed yellow with sufficient good points to be satisfactory. We want a yellow variety of Audrey Campbell shade, or a bit deeper in colour, one possessing a good constitution, and also perpetual enough to flower through the winter.

Mrs. Tatton is a pink and white flower much in the way of Marmion, but the pink is not so deep in shade. Dorothy Gordon very closely resembles Rose-pink Enchantress, and may eventually be found too nearly like that variety. Scarlet Glow may displace some of the reds or scarlets now grown; it certainly is very brilliant, and the colour does not "dull" as in some of this shade, to wit, Britannia, which is about the worst fault this variety shows.

No doubt as more English or Guernsey seedlings are raised we shall have carnations better suited to our winter climate. Many of the American varieties are disappointing, and although little fault can be found with the descriptions of the raisers, it takes two years to prove them under our climatic conditions, they should therefore not be condemned too quickly, while, on the other hand, the descriptions should be taken "cum grano salis."

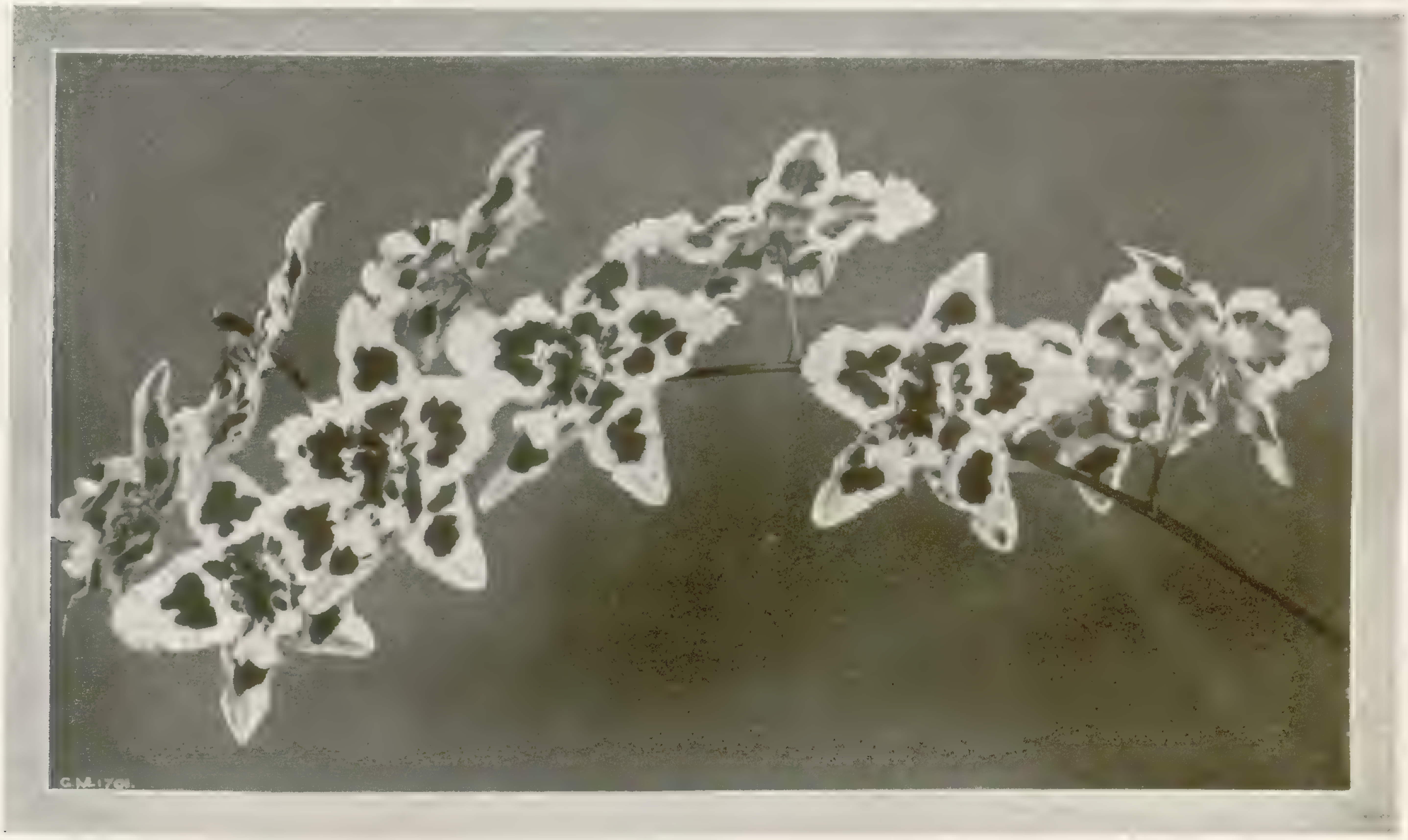
The demand for perpetual carnations still grows apace, which is not to be wondered at, considering their usefulness as cut blooms and as a flower which never appears out of place when arranged either in separate colours or mixed.

T. H. SLADE.

ODONTOGLOSSUM SPLENDIDISSIMUM OAKWOOD VARIETY.

The subject of the accompanying illustration was derived from the intercrossing of O. ardentissimum Oakwood variety and O. Pescatorei Veitchi. The O. ardentissimum was the result of crossing O. crispum Cooksonianum and O. Pescatorei Veitchi. In this secondary hybrid is included, therefore, two infusions of the rare O. Pescatorei Veitchi. The flowers are rather larger than those of the O. Pescatorei parent. The ground colour of the sepals and petals is white, suffused with rose, reflected from the purple colouring on the exterior of these segments. The spots and blotches are violet-purple. The broad lip has brownish-purple markings in front of the yellow disc. Unlike most secondary hybrids, there is very little variation among the plants, and it is possible the cause of the slight variations observable may be attributed to their more or less robust constitution. The plants were raised in the Oakwood collection, being one of the crosses the late Mr. Norman Cookson took a particular interest in. The plants flowered for the first time in the autumn of 1908.

H. J. C.



ODONTOGLOSSUM SPLENDIDISSIMUM OAKWOOD VARIETY.
A beautiful variety of the fine hybrid raised at Oakwood, Wylam-on-Tyne. The flowers white, suffused with rose, and spotted and blotched with violet-purple.

Camellia reticulata. — This Chinese species of camellia has certainly made headway in popular favour within the last few years, a result not to be surprised at, for it is a very beautiful kind, and quite distinct from Camellia japonica and its numerous forms. It has been several times exhibited this spring, but usually in the shape of small plants, in which manner it is not seen to so great an advantage as in larger specimens. The main features in which C. reticulata differs from its Japanese relative are the dull, not shining leaves, which when young have a reddish tinge, but particularly in its large informal flowers of a semi-double character. The petals are more or less undulated, and of a bright rosy-red colour.—W. T.

FERNS FOR ROCK GARDEN ADORNMENT.

The value of ferns for embellishing portions of the larger rock gardens, especially those which enjoy partially sheltered inland situations, is hardly ever appreciated to the full. In spite of the spirited advocacy of fern culture by Mr. Druery and a few other enthusiasts, the cult of the hardy fern has not proceeded to as great an extent as in other and more favoured groups of plants. Notwithstanding this, however, we may still hope for greater progress in the near future from such decorative subjects.

Nowhere, I think, can ferns be utilised to such great advantage as in the larger country gardens, especially those which enjoy the possession of a dell, sloping banks, a wild garden, or even, to take the keynote of this chat—a good rock garden. Ferns are regarded as solitary plants, being refused the additional value of acting in combination with other groups of plants, especially those of a flowering character. How far one could really go in combining ferns with flowering plants in obtaining decorative effects is, indeed, a wide question, but I purpose to briefly touch upon a few phases of such work, in the hope that they may serve to stimulate my readers with a greater love of the hardy ferns.

Many say they have not the suitable soil for fern culture, but, after all, what is this but a poor excuse for not embarking upon their culture? How rich or elaborate is a soil necessary for the cultivation of the polypodium from the tree trunk and the hedge-row, the lastreas from the copses, the scolopendriums from the moist woodland, or polystichums from the hedges and woods? Why, the possession of sloping banks, of valleyed depressions, and half-shady walks, will afford one facilities for the culture of these ferns and many others.

I recollect the turning of heavy clay banks into a veritable home of ferns. And this in a soil that spade would scarcely penetrate. The admixture of rough woodland peat, decayed leaves, and sandstone rubble, speedily altered the condition of the soil, and enabled one to plant without risk of loss, the choicest polystichums, athyriums, polypodiums, etc. With reference to rock-work, I would especially emphasise the fact that the cool interstices and chinks between the rocks provide a glorious opportunity for colonising various hardy ferns. The exquisite tasselled scolopendriums or hart's-tongue ferns delight in such positions in shade, especially if in near proximity to a stream or pool. Varieties such as densum, majus, serratum, robustum, Stansfieldi, and other typical "crispums." The fine forms, like marginatum and undulatum, of cristatum and fimbriatum, as well as others, deserve close attention when planting up the chinks and crevices.

Polypodiums are fine for capping cool rocks in shade, for a waving mass of dainty fronds crowning a rock ledge is decidedly attractive, and the only wonder is that they are not more used for the purpose. The finer forms of P. vulgare are indeed exquisite, and little groups of cambricum, cornubiense, grandiceps, cristatum, elegantissimum, etc., will give a full meed of pleasure when nicely established, and the practically evergreen character of these pretty ferns ought to add a further inducement to the planter. Those two charming ferns P. dryopteris and P. phegopteris, the oak and beech ferns, should be remembered by the planter, for they are exquisite subjects for crowding "en masse" by the sides of old stone steps.

Lastreas, aspidiums, and polytichums are grand when massed upon bold slopes, and the plumose forms of the latter comprise many varieties of especial value. Allosorus crispus, the Parsley Fern, woodsias, and the little walking fern, Camptosorus rhizophyllus, may be successfully naturalised between cool stones or in the crevices between shaded stone steps or stepping-stones. Osmundas and onocleas in variety are grand in moist spots, and a particularly fine specimen of Osmunda regalis, which used to stand in an old Sussex garden at the breaking-point of a spring of water, has always helped to remind me of the value of this fine fern for watery soils. The simple grandeur of Osmunda Claytonia, O. regalis, O. spectablis, etc., of Onoclea sensibilis, and the fine Struthiopteris germanica and S. pennsylvanica, will prove of inestimable value in half-shady spots. One might go on to tell of the wide range of the lastreas and athyriums, of the pretty aspleniums, of blechnums, Ceterach officinarum, cystopteris, Dicksonia punctilobula, and many others, and, in doing so, would but reveal something of the wealth of the hardy ferns.

But it is when the ferns are associated with flowering subjects that their full beauty is portrayed. Tall foxgloves coming up in beauty through the young green smiling fronds of lastreas and athyriums afford an illustration of this, both ferns and blossoms appearing to the fullest advantage. Shade-loving lilies, particularly the charming North American forms are exquisite amongst the ferns. Linarias such as L. Dalmatica, L. vulgaris, etc., the graceful Gaura Lindheimeri, the white Galtonia candicans, and many flowers of like habit are delightful amongst ferns. Cimicifugas, the lighter habited campanulas, astilbes, and many of the spiræas and thalictrums can also be utilised if one has sufficient space at disposal.

And now a word for the dwarfer flowers in conjuction with the lesser ferns. Here opens a wide field for operations. Picture colonies of small ferns, gemmed throughout with stretches of Anemone nemerosa, A. Robinsoni, A. blanda, etc., or with the nodding blue-bells of common thickets, or, if you like, Hyacinthus amethystinus, and the finest varieties of the scillas. Then there are Leucojum vernum, muscari of all types, gold and silvered, frilled and belled narcissi, the exquisite trilliums, primulas of various types, a drift of blue myosotis, masses of gaultheria, of Galax aphylla, of Sedum palustre, of kalmias, and, if you care for them, the charming Irish heaths or Menziesias, with the smaller ferns.

One could go still deeper into the possibilities of the combination of fern and blossom, but I will leave my readers to delve deeper. P. S. Hayward.

Bulbous Irises under Glass.—Few if any other bulbous plants have the richness of colouring, combined with the delicate markings, of this section of iris. From their lower stature and the fact that some of the most striking bloom during the dull winter days, they are not always seen at their best out of doors. They are, however, charming in a cool greenhouse, as under glass the flowers are clean and bright, and being brought near to the eye their subtle tints are more apparent. The best known and the cheapest of this section is I. reticulata, with purple-tinted flowers, and a golden blotch, and a pronounced fragrance of violets. The pale blue I. Bakeriana is charming, and the golden blossoms of I. Danfordiæ impart quite a distinct tint.—W. T.

FORSYTHIAS.

The importance of the various forsythias as decorative shrubs is impressed on us each spring, for they rarely fail to produce a wealth of blossoms, and are comparatively little trouble throughout the year, for once planted in good loamy soil, they continue to give good results for many years; while, should the plants appear to be weakening, a dressing of rotten manure in spring is usually all the attention required to promote fresh vigour. Their propagation is very simple, for, if cuttings of young shoots are inserted in pots of sandy soil in June, and stood in a close frame, roots are formed in the course of two or three weeks.

One species, F. suspensa, is sometimes pruned hard back after flowering to induce strong upright shoots, which may grow to a height of four feet or so. These vigorous branches are usually prolific of flowers, for blossoms appear from almost every bud from base to summit. The same species grown against a wall or trellis usually requires spurring back as soon as the flowers fade, but when grown in a shrubbery in the ordinary way, it, with the other kinds cultivated, may be allowed to go several years without attention from the pruner. As young plants are so easily obtained, and as they grow rapidly, it is seldom worth while to attempt to transplant old examples, as young ones are so much more satisfactory.

There are many uses to which forsythias may be put. As specimen beds they have much to commend them. Groups or single plants in shrubberies give a good account of themselves. Trellis work covered with S. suspensa has a gay appearance during March and early April, while for forcing much may be said in their favour. Large examples lifted from a border in autumn and planted in tubs are excellent where halls or corridors have to be furnished with flowers, while small plants are useful for room decoration.

Of the various kinds grown, F. suspensa, a native of China, is the most useful for general purposes. Under natural conditions it forms fairly erect main branches, with weeping branchlets, but, as previously stated, the habit may be altered by severe pruning as soon as the flowers have faded. The species is somewhat variable in character, both as regards habit, foliage, and flowers, and for this reason the name of F. Fortunei is still sometimes kept up for one form. Both F. Fortunei and F. Sieboldi are, however, simply synonymous with F. suspensa. F. viridissima, another Chinese species, may be readily distinguished from the last-named by reason of its sturdy bushy habit and deep green foliage. The leaves are always simple in this case, whilst in F. suspensa they are sometimes deeply lobed or ternate. The flowers are produced about a fortnight later, and are rather darker in colour.

F. intermedia is a hybrid between the two previously mentioned kinds. It forms a strong bush 8ft. high, intermediate in character. The golden blossoms are borne as freely as in the other instances. Several specially floriferous varieties have recently attracted considerable notice. Good ones are densiflora and spectabilis. They are less dense in habit than the type. A European species was introduced a few years ago under the name of F. europaea, from Albania. This is an upright-growing bush, bearing, like the remainder, yellow flowers. It is, however, of little value as compared with its Asiatic relatives.

W. Dallimore.

A USEFUL SALADING.

For a long period the dandelion has been held in repute for dietetic and medicinal purposes, but whether it has justified any considerable proportion of what has been written and spoken in praise of its virtues is doubtful, and it may be allowed to remain an open question. Upon one point there cannot well be two opinions, and that is the usefulness of its leaves as a salading. Many appreciate the young leaves in a green state, and obtain their supplies from the plants that usually are plentiful in pastures, or from cultivated plants in the garden, as may be the most convenient. When young the green leaves are tender and pleasantly bitter; but in process of development they become somewhat tough, and so bitter as to render them unpleasant to the palate. Cultivated plants, not having to compete with other herbage, continue in full growth for a longer period than do those in a wild state, and therefore afford supplies of tender leaves for a greater length of time. Not only do the latter give a more plentiful yield, but the leaves are more succulent, a point of considerable importance in salading.

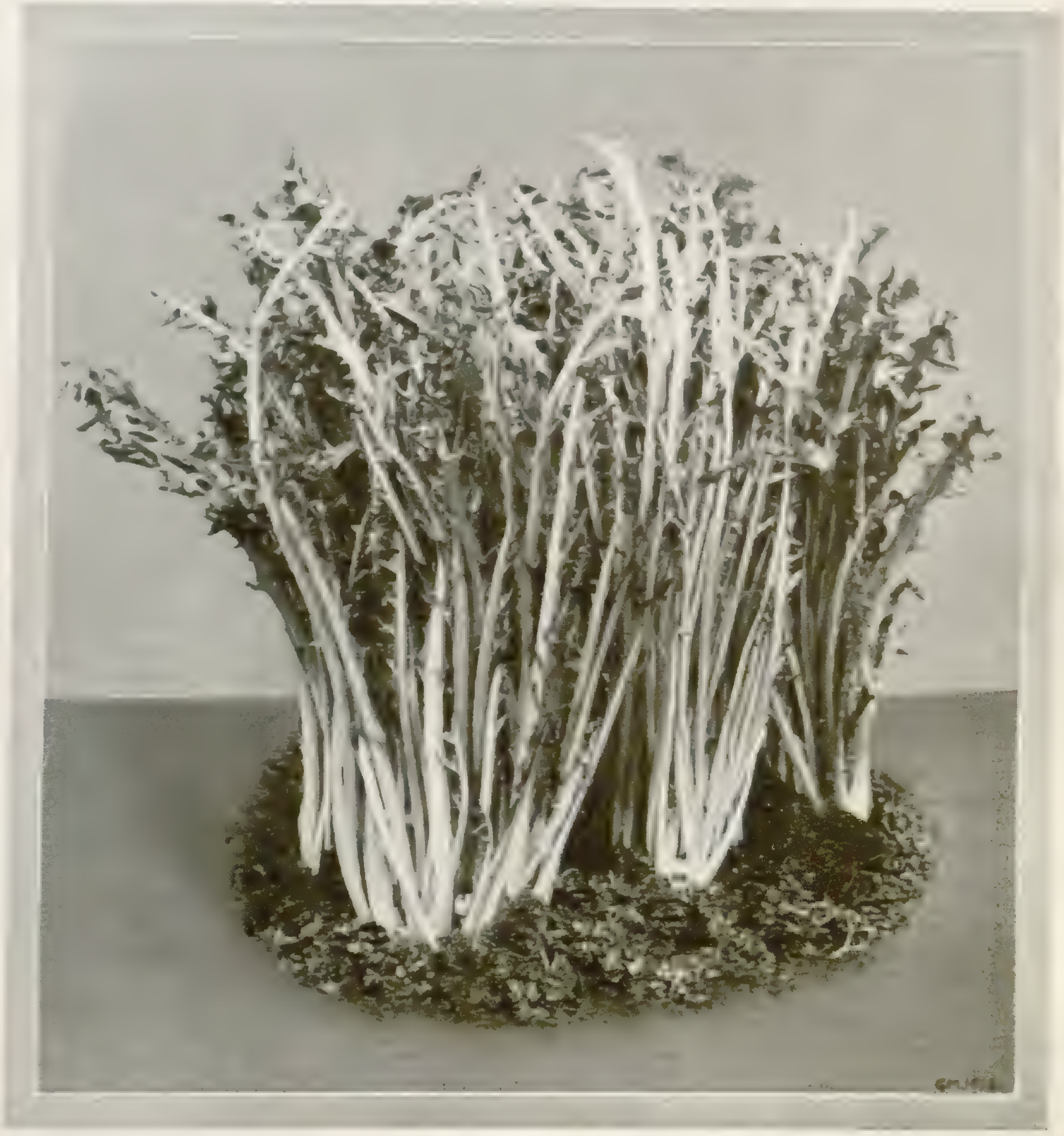
While the green leaves are to those who appreciate their distinctive flavour most useful, their value is small as compared with the blanched leaves which can be had in abundance from early in the winter until the spring season is well advanced. There is nothing difficult in the cultivation of dandelions for the supply of blanched leaves; on the contrary, the details are so simple that it would not be easy to fail in their comprehension. The first step, after a suitable type has been selected, is to set apart a quarter, or a portion of a quarter, according to the supplies that will be required, where the soil was deeply dug early in the winter, but was not manured. As in the case of beet and some other of the root crops, it is essential the soil should be in a fertile state without having had recent applications of manure made to it. An area on which potatoes, onions, or peas were grown in the previous year would answer admirably.

The seed may be sown towards the end of March, but there is no time more suitable for sowing than the present. Sow thinly in shallow drills fifteen inches apart, and in filling in the drills take the usual precaution of drawing the fine soil over the seeds. Within a comparatively short period the seedlings will begin to make their appearance above the surface, and before sufficient growth has been made for injury to result from overcrowding thinning should be commenced. The distance at which the plants should be apart in the rows is twelve inches, and the thinning may be done at one or several operations, but, generally speaking, the best course is to thin gradually, say in two or three operations. Beyond the removal of surplus plants, the only attention that will be required will be the rather frequent use of the hoe to keep down weeds and maintain the surface soil in a loose state.

At the end of October, or early in November, the lifting of the roots may be commenced for the purpose of placing them where they will have the assistance of a temperature sufficient to start them into growth. One that ranges between 55 and 60 degrees is the best; a few degrees below the minimum or above the maximum will not make much difference. A warm cellar or a mushroom house will answer admirably, the latter being preferable, as it will afford the temperature necessary to ensure a free growth without subjecting the roots to hard forcing. Both cellar and mushroom house should be sufficiently dark to ensure the proper blanching of the leaves; but if this is not the case measures must be taken to exclude the light from them. In the mushroom house the roots may be packed rather close together on the shelves with soil between them; but when they are started into growth in cellars it will be a convenience to put them in shallow boxes of such size as will readily admit of their being carried in and out. Late supplies in spring may be obtained from the open ground by early in March turning seven or eight-inch pots over the roots, and covering these with leaves or long litter, arranged in ridge form, to maintain a moderate degree of warmth about them.

The Large-leaved Dandelion herewith illustrated is the best for garden culture, for not only are the leaves large and comparatively thick, but they are produced in much larger numbers than in the case of the type. The specimens illustrated were exhibited by Messrs. Sutton and Sons at the first of the two March meetings held by the Royal Horticultural Society, and attracted much attention from the visitors.

G.



WELL-BLANCHED EXAMPLES OF THE LARGE-LEAVED DANDELION.
Exhibited by Messrs. Sutton and Sons at R.H.S. Meeting held March 14.

Early Figs.—In bright weather these will take copious supplies of water, especially when in shallow borders or in pots—in fact, the best figs are obtained from these borders—when they obtain all that is necessary in the way of moisture and liquid manure. Keep the shoots nicely tied and regulated, and the points pinched out. This will all help the second crop, which in many cases is more prolific than the first. As the fruits begin to ripen less moisture in the air will be necessary.—W. A. Cook.

MAGNOLIA STELLATA.

Among spring-flowering shrubs this bushy species of Magnolia forms a conspicuous object in April, for at that period it is covered with its semi-double, star-like, glistening white blossoms. A native of Japan, it has been known in English gardens for many years, though it was very scarce until quite recently. Within the last twelve or fifteen years, however, a great many plants have been imported from Japan, therefore it is now seen fairly frequently. For the first year or two after importation growth is slow, but after the plants have once become acclimatised they increase in size rapidly. There is no saying to what size it will eventually grow, although plants four feet high and four feet through are accounted fine examples; there are, however, plants in the country very much larger than these dimensions, one at Abbotsbury Castle, in Dorsetshire, being eleven or twelve feet high, and wide in proportion. Like other magnolias, it appreciates a little peat mixed with the soil, and thrives best in light, well-drained material. When selecting a position for the species, preference should be given to one with a west aspect, for, after a frosty night, bright sun on the flowers is apt to seriously injure them. Grown in tubs, the species is useful for greenhouses and conservatories in spring.

W. D.

CHRYSANTHEMUMS.—For full instructions on the Culture of Early-flowering Chrysanthemums in beds or borders for garden or greenhouse decoration, read the Second Edition of CHRYSANTHEMUMS FOR GARDEN AND GREENHOUSE, by D. B. Crane, price 2s. 6d. net; or by post, 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

WATER GARDENING.

Water gardening has become very popular during recent years, and it is now one of the most fashionable branches of horticulture. There is a certain fascination about it, for when carried out in quite an informal style it makes a pleasant relief to the more formal type of flower gardening, which has so long held sway. One of the charms of a water garden is that it is of necessity unlike another of its kind, for it must depend very largely on the surroundings and the existing natural features for its formation and character.

A situation possessing both sloping and level ground might be considered ideal for a water garden, for therein one can have running streams and spacious pools capable of accommodating every kind of aquatic and bog plant. A gentle slope is probably to be preferred to a level stretch of ground, for, given a natural stream by here and there widening it into pools, utilising a moderate amount of rockwork, and planting suitable trees and shrubs so that only certain portions are visible at one time, one can almost convert it into a veritable panorama of aquatic vegetation. From the high ground at the top of the slope a lovely view of the whole would be obtained, as is the case in the gardens here. Where such conditions as I have mentioned already exist it is an easy matter to plant the site so as to obtain the most artistic effects.

In flat situations, however, much skill and labour will be required to design and carry out a really artistic scheme that will be pleasing and natural when completed. If a few large specimen trees exist on the site they will help to add to its beauty, and also obviate that appearance of newness so very noticeable in some places. The choice of plants to embellish such a garden is very wide, so that there need be no lack of variety, and the majority can be successfully planted at the present time.

In the pools themselves water lilies will be the principle adornments, and to grow these well they require an open situation, where they can receive the full benefit of the sun's rays. The more vigorous species can be planted in the deeper parts of the water. Nymphæa alba, N. candidissima, with large double white flowers; N. marliacea and its varieties, succeed well in deep water; while N. Leydeckeri and N. odorata are suitable for the shallower parts. The present is a good time to divide and replant any that are becoming overcrowded. Replace them in baskets filled with heavy loam, and sink in the positions where they are to grow. Various other water plants may be planted in this way, including Orontium aquaticum (Golden Club), Pontederia cordata, with closely-set blue flowers; Nuphar luteum, the common yellow water lily; and Aponogeton distachyon, which is scented like hawthorn. Calla palustris (the Water Arum); Sagittaria gracilis, S. sagittifolia, the common Arrow Head, and Menyanthes trifoliata (the Bog Bean), should also be included. Such plants as Caltha palustris (the Marsh Marigold), Typha angustifolia, T. latifolia, Phragmites communis, and Butomus umbellatus (the Flowering Rush), are very effective planted on the water's edge.

The banks of the stream and the surrounding marshy places are ideal localities for numerous bog plants, and if planted in masses these form objects of much beauty. Senecio clivorum and S. Wilsonæ are very bright and showy, and they look well associated with some of the fine-leaved bamboos, which are especially ornamental planted on the banks of streams. The lovely Japanese irises, I. Kæmpferi, and Acorus calamus (the Sweet Flag), succeed well close to the water. Rodgersia podophylla, a handsome plant with large peltate leaves, is very striking, while Saxifraga peltata should on no account be overlooked, as its large flower spikes are produced early in the season in advance of its handsome foliage, which is always effective near the water's edge. Arundo donax and Carex japonica are both telling plants. Epilobium angustifolium, with purple flower spikes; Trollius europæus. Funkia Sieboldiana, Hemerocallis aurantiaca, astilbes and spiræas in variety, especially A. Davidi and S. palmata, are very effective.

Osmunda regalis (the Royal Fern) and the broad-leaved Gunnera manicata and G. scabra, must be included. The latter needs a little protection in winter, and in some seasons the handsome leaves reach a height of fully twelve feet. A few of the Japanese maples should be planted in the water garden, as they will furnish some additional pleasing colours. Acer japonicum laciniatum, A. palmatum sanguineum, A. p. dissectum, and A. p. palmatifidum are some of the most showy. Liquidambar styraciflua, the Sweet Gum of the United States, is eminently adapted for such a position, as it succeeds well in a moist loamy soil.

J. Gardner.

LILY OF THE VALLEY.

There are many persons who, not having had much experience in the cultivation of lily of the valley in the open borders, firmly believe that the only position in which this charming flower can succeed is a north border where the soil is fairly heavy. Furthermore, they are under the impression that heavy surface dressings of rich composts are essential every winter.

For many years I grew more than a quarter of an acre of lily of the valley in one garden, in various positions, and had the least satisfactory results from plants growing in north borders. The best results were obtained from those growing in south-west borders and others in the centre of the garden. In time, of course, the soil wears away from the crowns if top-dressing is not afforded. I found that it was a great mistake to allow the plants to become very bare of soil, and then to put on a heavy top-dressing, as the crowns in places seemed to degenerate very much. I generally applied a very light dressing of sifted sandy loam and leaf-soil in equal proportions annually, and with excellent effect. At no time were the crowns entirely buried with the soil.

For a number of years I have observed the progress of some thousands of plants growing in almost pure sand in a wood in which fir trees are dotted about; other kinds of trees and shrubs also grow there, but in the open space the lily of the valley seems quite at home. No further attention than that necessary to keep the plants free from weeds is bestowed upon them, and every year the leaves of the trees and deciduous shrubs are left to decay on the lily beds. Stronger and more satisfactory plants I have never seen. In my own case, the soil was a sandy loam. The plants spread rapidly, and we were obliged to dig up some near the box edging every year to prevent them growing on to the pathway. All the plants had, previous to planting in the garden, been forced, and I am quite sure that they may be cultivated successfully in many odd corners in gardens in a natural way.

G. B.

MORE ABOUT GOOSEBERRIES

My notes on "Mistakes in Gooseberry Growing," which appeared in The Gardeners' Magazine of January 14 last, have been criticised in a way which seems to call for a few words in reply on my part. Both "E. M." and Mr. Hammond take objection to my statement that gooseberry trees are often getting past their best after 12 or 15 years, the latter having trees 20 to 25 years old which are still bearing well. So have I; one tree of Red Champagne which, as a five or six-year-old tree, was planted in its present position in the middle of April, 1881, being still in full vigour of growth and bearing well. But where one tree has lasted 20 or more years, a dozen have been replaced, and, in my judgment, with advantage.

I know there is a great gulf between commercial and private fruit growing, but my space being limited, every tree must be fully efficient if it is to be allowed to occupy the ground. I always keep some young gooseberry bushes in reserve, and these can be moved at the end of October from one part of the garden to another almost without feeling it, even when six or seven years old, and after the first season will produce a fair crop of fruit and soon do better than the old trees they replaced. The efficiency of trees at 15 years old depends a great deal upon the extent to which they have suffered from caterpillars, birds, and other pests.

Mr. Hammond also objects to my statement that gooseberries rarely produce secondary growth after pinching in May. Divorced from its context, this statement is certainly misleading. If all the growths of a gooseberry bush were pinched at that season, probably all of them would break out into growth again, but if the pinching in the latter part of May is confined to the shoots on the inner parts of the bushes, or where there is no room for them to grow during the summer without unduly crowding the tree, the rest of the shoots, and the rapidly swelling crop, provide such a free outlet for the sap that a bush must be remarkably vigorous, or the season very damp, if secondary growth from this pinching is at all general.

I always attach great importance to keeping the bushes open during the summer, both for the sake of the fruit and next year's fruiting wood, and I usually look over the bushes again two or three weeks after the pinching, when any secondary growths that have been made are pinched to one leaf, while some of the primary shoots that are then seen to be crowding the tree are cut back to three, four, or six leaves, according to space available. I can understand that this amount of detailed attention is scarcely practicable in field cultivation.

Alger Petts.

Carter's Harbinger Lettuce is very fine for early culture in frames, and when the supply of salading is in great demand, it is very easily forced in small seed trays or boxes, and grown on in frames or on the shelves in warm houses. It is valuable because it comes into use so quickly. It is not a big-hearting variety, but of very quick growth, and it produces quantities of young tender leaves which are particularly useful. One can sow a box, and prick out a dozen more boxes from it, and if needs be the whole box can be cut for a salad. By weekly sowings a good supply all through the cold season can be easily kept up. These light fresh lettuce are better than old hard stuff, especially when mixed up with chicory, dandelion, mustard and cress, etc., and are therefore much appreciated.—W. A. Cook.

BALSAMS AS POT PLANTS.

These are flowers which have had their day, relatively speaking, like petunias, verbenas, and fuchsias, and it is not always in the superior merits of newer introductions so much as in fashion that the reason for the change is to be sought, most people apparently liking to grow those things which are seen on every exhibition table and grown and talked about by their friends. The double camellia-flowered balsam, more worthy of culture than the rose-flowered form, is as beautiful now as it was a generation or more ago, when it was so popular, and those who like to have a good flower which is not much grown, and is at the same time easy of cultivation, either with or without heat, would not regret the revival of a good old-fashioned flower.

Balsams make excellent pot plants for the conservatory, or, if one does not possess such a place, for use indoors during the summer, enough being grown to permit of the plants being changed every day or two, as they soon show the ill effects of life indoors. Some care should be exercised in procuring the seed, as some seedsmen take but little trouble in keeping a good strain now the seed is not much asked for, and cheap seed will often produce a mixture of singles, rose-coloured doubles, and nondescripts. Seeds may be sown any time during March and April, but for our purpose fairly early in March, in gentle heat, is the best time, otherwise at the end of the month, or early in April, in a frost-proof frame, using light rich soil.

The seedlings come up with a pair of fleshy leaves, and they may be pricked out into small sixties, one in each, as soon as they are beginning to show the third leaf, taking care to prevent the seedlings developing too long a leg, as it detracts from the beauty of the plants. As soon as they are getting well rooted they should be given a shift each time increasing the richness of the soil—turfy loam and rotted manure, cow by preference—the addition of some bone manure helping to lessen the naturally sappy nature of the growth, and increasing the fineness and substance of the flowers. They will eventually need twenty-fours at least, and very good plants a size larger. In the days when the cultivation of balsams was studied they were sometimes given even twelve-inch pots, which meant gross feeding and very coarse plants, but it is doubtful if the flowers were finer, or if the plants produced a more pleasing effect than well-grown specimens in twenty-fours, while for room decoration the smaller size of the pots will certainly be appreciated.

Balsams are gross feeders; when grown in the open ground it is recommended not to give them too rich a soil, because the sappiness of the growth in such conditions is detrimental to the flowers, but there is not much risk of this in pots, though perhaps it is advisable to defer liquid feeding until the flower buds are well in sight. If the finest individual flowers are wanted, the smallest buds may be removed in their early stages. The plants need abundance of water, and all the sunshine they can get. The doubles do not seed much, but any pods produced should be picked off, and this, combined with good feeding, will cause the development of fine flowering laterals, these keeping up a succession of blossom for a couple of months.

P.

BEST PLANTS FOR GREENHOUSE.—Nearly 300 pages are devoted to the description, propagation, and culture of the best flowers and plants for the green house in THE AMATEUR'S GREENHOUSE, by T. W Sanders, price 5s. net, or by post 5s. 6d., from W. H. and L. Collingridge, 148, Aldersgate Street, London.

INTERESTING CONIFERS.

It may be interesting to Mr. Dallimore, page 209, and your readers generally, to know that there is a very large tree of Cunninghamia sinensis, forty to fifty feet high, at Holmbush Park, Horsham, the seat of Colonel Clifton Brown. This gentleman showed me the specimen last season during the interval of a cricket match played within sight of it. It is by far the largest specimen I have ever seen, and it does not stand in a particularly sheltered spot; in fact, it is isolated on the lawn and within range of north-east winds, and at a height of several hundred feet. It seems wonderfully strange how this tree should have escaped the frost, as it has done. Several trees have been planted in these gardens during the last three years, and are doing well.

There is a fine specimen of the columnar Libocedrus decurrens in these gardens, and in nearly all photographs that have been taken of the alpine garden it will be noticed towering up to a height of between fifty and sixty feet.

Cupressus Goviniana is one of the most interesting of the whole family, and is supposed to have been discovered by Hartweg in California, and was introduced in 1847. It does not appear to be very much grown or known. The foliage is very fine and thin, but does not give one the impression that it is tender; we have several trees that have been out two winters, and look quite happy and flourishing.

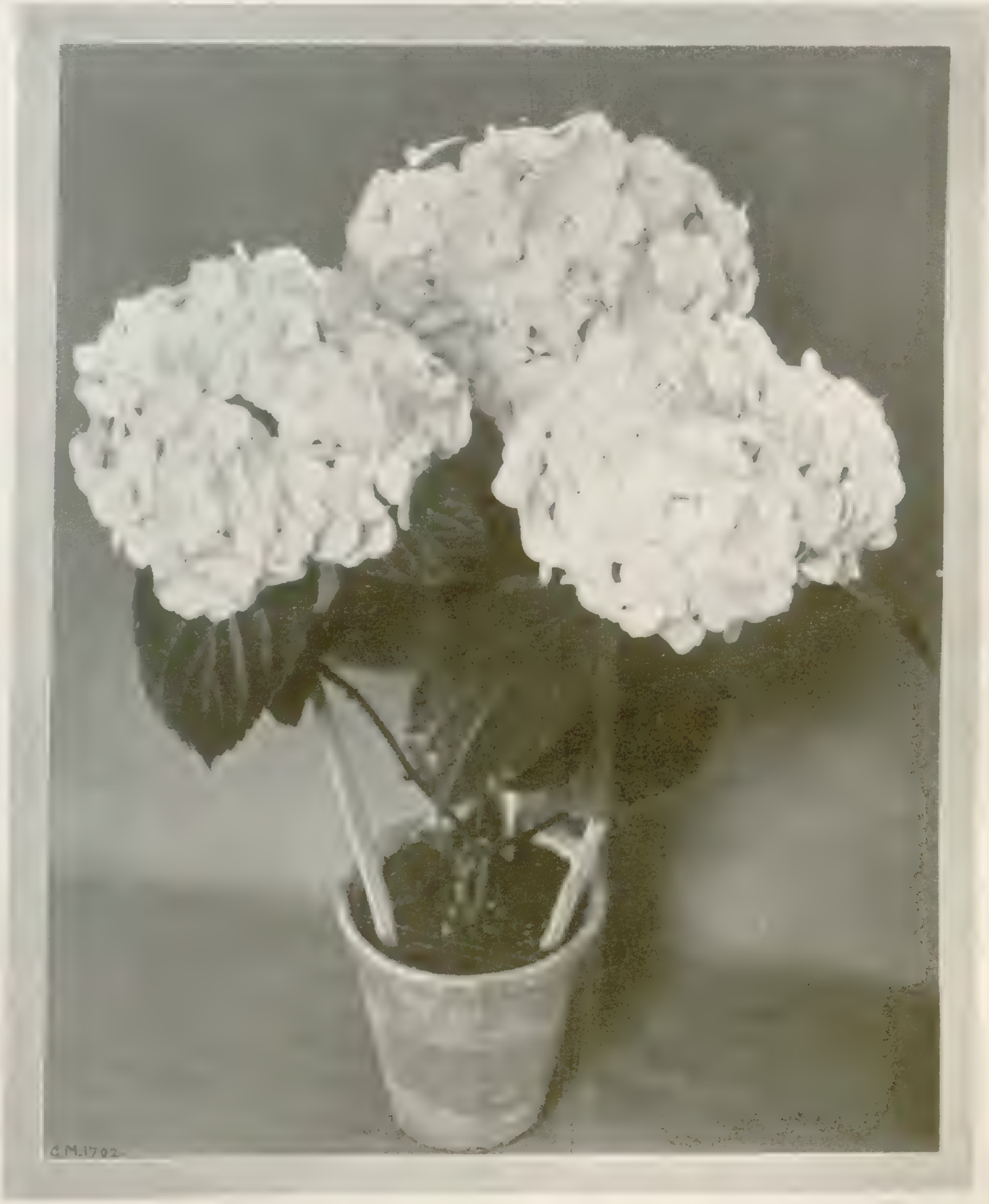
Cupressus cashmeriana is perhaps the prettiest conifer of the whole section, and if it proves hardy it will be an acquisition: but it is well worth trying, for even as a greenhouse plant it is beautiful.

W. A. Cook.

NEW PLANTS, ETC.

HYDRANGEA HORTENSIS MDME. E. MOULLIERE.

A very beautiful variety with large heads of broad white slightly-fringed flowers. It is a famous pot plant, and ought quickly to become popular. We understand it was raised by Mons. E. Moullière, Vendome, France. A.M., R.H.S., March 28; Messrs. Stuart Low and Co., Bush Hill Park, Enfield.



HYDRANGEA HORTENSIS MDME. E. MOULLIERE.
Flower heads large, pure white. A.M., R.H.S., March 28. Messrs. S. Low and Co.

HOULLETIA SANDERI.

This species, from Peru, has been exhibited on several occasions recently at R.H.S. meetings, by Messrs. Sander and Sons, of St. Albans, its importers. The pseudo-bulbs are short, surmounted by a foot-long leaf. The erect scape bears two or three fleshy, inverted flowers, pale yellow, with a golden-yellow central area on the three-lobed lip. The plant is said to flourish under conditions found successful for Lycaste Skinneri. "Bot. Mag.," t. 8,346

POMPON DAHLIAS.

Those who take an active interest in dahlias and their cultivation can hardly fail to highly appreciate the prominence that was given to these flowers in the issue of the Gardeners' Magazine for the 8th inst. I am very glad to see that you fully appreciate the importance of the dahlia as a garden flower, and are endeavouring to induce raisers to give attention to the habit of the plant and the length and rigidity of the flower stems as well as to the size and form of the individual flowers. If they act on your suggestion, dahlias will rapidly increase in popularity, and contribute, in a few years hence, more to the attractions of the garden than has yet been the case.

POMPON DAHLIA QUEEN OF WHITES.
A distinct variety with pure white flowers.

As my attention is chiefly devoted to the pompon varieties, the question as to whether they are best suited for the exhibition stage or the garden does not greatly concern me, because the varieties, although differing in relative merits, are, with two or three exceptions, equally adapted for both purposes. Evidently the raisers of pompons did not lose sight of the fact that the flower stems should be long enough and of sufficient strength to carry the stems well above the foliage. As the result we have large numbers of varieties that can be depended upon to produce a bright display of colour from the latter part of the summer till the autumn frost, and also to yield plentiful supplies of flowers for competitive purposes. There is a strong objection in some quarters to this section because of the formality of their flowers, and it is not unusual to hear it stated that they are quite unsuited for floral arrangements. This is a mistake, because really charming effects can be produced with them. The arrangements, however tasteful, may not appeal to everyone, because so much depends upon individual taste. The manner in which the pompons are presented to public notice at the exhibitions should not be regarded as evidence of their unsuitability for decorative purposes in a cut state. The arrangements one sees at competitive gatherings are not intended to represent the taste of the exhibitors, but the method of staging the blooms has been adopted as the most convenient for bringing them to the exhibitions, and setting them up on arrival in the comparatively short space of time that is available.

The simplicity of the details by which the most successful results can be obtained in the cultivation of the pompons is, to my mind, a strong recommendation, and especially to those who have not had much experience in dahlia culture. It is necessary to root the cuttings early enough for them to become established in six-inch pots, and be making a vigorous growth by the end of May. The beginning of March is a good time to put the roots in a pit or house, in which a temperature of 60 degrees is maintained. Under the influence of such temperature new growth soon commences, and the cuttings are taken off and inserted singly in small sixties when three or four inches in length. When nicely rooted they are removed to cooler quarters, where they can enjoy a moderate degree of sunlight and a free circulation of air about them. As the pots become filled with roots they are shifted into five or six-inch pots, and a rather rich compost used. The beds and borders in which they are grown are given a moderate dressing of manure, and deeply dug some time during the winter. The first week in June is a suitable time for planting, and where beds and borders are to be wholly devoted to them three feet six inches will be a good distance at which to put them apart.

The number of varieties in cultivation is now so large that the making of a small selection is a perplexing task. Some excellent varieties have recently been mentioned in these pages, but I should like to say that of those included in my collection the following are of special merit: Adela, a pleasing variety, the flowers white, tinted lilac; Bacchus, an old variety, but one of the best, with crimson-scarlet flowers; Claribel, blush, shaded and edged rose-purple; Daisy, bright amber; Douglas, rich maroon-crimson, one of the best of the dark pompons; Ganymede, amber and fawn, shaded rose, a very pleasing combination of colour; Iolanthe, orange-buff, effective; Kitty Barrett, rich yellow, edged scarlet; Nellie Broomhead, lilac; Queen of Whites, one of the best whites; and Tommy Keith, bright crimson, tipped with white.

B. K.

Scilla sibirica.—Of the low-growing blue-flowering bulbous plants so valuable in our outdoor garden in early spring, opinions may differ as to the relative merits of Scilla bifolia, Scilla sibirica, or the chionodoxas. As tastes vary this cannot be decided offhand; but as far as I have seen, in one respect at least, Scilla sibirica has the advantage of the others. This is with regard to its accommodating nature, for in instances that have come under my knowledge it has, under disadvantageous conditions within the London area, made itself at home in places where its brother scilla and the chionodoxas have died out. As a pot plant, too, it is most useful.—W. T.

Bamboos.—The latter half of April and the beginning of May is the most suitable season for lifting, dividing, and replanting bamboos. It is just the time when the plants are starting into fresh growth that the work should be taken in hand. Undoubtedly they thrive most luxuriously in a good depth of stiff loam, which should be well prepared beforehand by trenching and at the same time enriched with well-decayed manure and leaf-soil. Bamboos associate themselves grandly with water, and no doubt the finest effect is obtained when they are grown on the banks of streams or ponds; at the same time, this is not essential, for they thrive equally as well away from it. The most interesting results are obtained by planting them in colonies, or by making a bamboo garden. When the latter is contemplated, a position must be carefully selected, for shelter from the east and north-east winds is necessary, otherwise the plants become browned from exposure, and have a rusty appearance through the summer.—E. C. P.

TRANSPLANTING CELERY.

At the present time hundreds of thousands of small celery plants will be transplanted in various positions and soils. Successful cultivators know exactly how to treat the plants during their early stages of growth so as to eventually procure the best crop. But there are others whose experience in the matter is somewhat limited, and, consequently, they make the common mistake of overgrowing the plants, and, notwithstanding their care and attention, the celery does not turn out really well. The plants look strong enough until they are put out in the trenches, and then they fall apart, and a serious check is given.

Unlike cabbages, which can be cut here and there as they become fit for use, celery in rows must be gathered by commencing at one end of the row and finishing at the opposite. As far as possible, therefore, we must have all plants when finally put out of equal size. To this end a good selection must be made when the seedlings are being transplanted from box to box, or from box to nursery bed. Those seedlings intended for the earliest crops must be subjected to a certain amount of artificial heat, but those for the main crop should have coolframe treatment, if possible.

For the benefit of the inexperienced I will briefly state how I treat my plants. As a result of thin sowing the seedlings are not very crowded, nevertheless, I select those around the outside of the pan, as they are the sturdiest and of about the same size; these are transplanted in a prepared bed of soil made moderately firm. First, I put down a thin layer of rotted manure in a cool frame, and beat it well with a clean spade; then a compost of old fibrous loam, some old mushroom bed manure rubbed through a half-inch mesh sieve, and a small quantity of sand, is laid on to a depth of four inches, and made moderately firm.

The seedlings are pricked out in this bed four inches apart each way, then watered, shaded in bright weather for a few days; afterwards they are freely ventilated, but fully exposed to the light and sunshine; in due course the lights are removed altogether. In the meantime their final quarters are prepared, and when the time comes to put out the plants they are lifted with a good ball of soil and manure attached, and never droop in the trenches. Their progress is steady throughout the season, the sticks being solid and heavy.

Geo. Garner.

A PLEASING GROUP OF ALPINES.

The method of exhibiting alpine plants has altered very considerably within the past ten years. Formerly a group consisted of a collection of small pot-grown specimens, arranged on the flat, with a background of dwarf shrubs, or, in a few cases, a series of pans of saxifragas, sedums, primulas, etc., were arranged; also on the flat staging. But nowadays the traders compete with each other in their efforts to display plants in as natural a manner as possible, and they dispose the dainty specimens in groups on a miniature rock garden. Such exhibits are very pleasing, provided the association of plants is not incongruous. Mr. Clarence Elliott, Seven Hills, Stevenage, has arranged many charming rock garden exhibits at the meetings of the Royal Horticultural Society, and one of these is illustrated in the present issue. Primulas and saxifragas were the outstanding features on this occasion, and they were prettily disposed in informal colonies. It may be worth while to observe that the palms which intrude in the pictures have nothing whatever to do with Mr. Elliott's exhibit, but are part of another display altogether.

A PLEASING ARRANGEMENT OF ALPINE FLOWERS.
Exhibited by Mr. Clarence Elliott at a recent R.H.S. Meeting

OWN-ROOT ROSES.

That some varieties of roses do quite as well upon their own roots as upon any foster stock will be admitted by all observant growers. But to go so far as to say stocks should be dispensed with entirely is taking a most extreme view. It would be more reasonable to use both methods of culture. Even some of our strongest roses are very chary of rooting from cuttings. Take the Austrian and Persian briars, for example; also Lady and Lord Penzance sweet briars, with the strongest of the rugosas. These seem to demand the aid of a foster root before they can be grown with any degree of success. It is the same also with some of the newer hybrid Wichuraianas, not a few of which I have failed to root with any degree of success. On the other hand, perhaps no roses root so freely as Dorothy Perkins, White Dorothy, Delight, Hiawatha, and several more; these even rooting more freely than the manetti and polyantha stocks.

We also find some of the Chinas, and many teas and hybrid teas, root with exceptional freedom, and it is such varieties that can be grown in that way to great advantage. Much time is saved that would be occupied in growing the stocks, besides the year lost while budding. Not the least point in favour of own-root roses is their entire freedom from objectionable suckers.

Very soon a considerable number of excellent cuttings will be available from forced plants of teas and their hybrids. Short pieces of growth, a little more than half-ripened, will root freely if kept close in a compost of loam and sand. The main thing is to keep them quite close for a time. Always select free growers for this purpose, for there can be little doubt stocks are absolutely necessary for some roses, and with the better preparation of stocks now practised the risk of suckers is almost nil. One has only to remember the hundreds of thousands of roses annually worked upon stocks in this country alone to be certain it is essential in many cases. A. Piper.

Pea G. F. Wilson.—This variety is not one of the largest or most handsome, but it is a splendid one for growing in naturally light, dry soils, and in a dry season. It is an old variety, too. I grew peas at one time in a light soil, which sloped very much to the south, and the above-named variety was one of the first tried. Occasionally, of course, we experienced rather dry, hot summers, and the peas suffered more or less, but the one to remain the greenest and most satisfactory at such times was G. F. Wilson. When the summers were wet, however, many pods came quickly.—G. B.

SPRING-FLOWERING SHRUBS

We are reminded at this season of the value of such shrubs that possess the temerity to bloom under somewhat adverse conditions, and while the majority have scarcely resumed activity. The climatic conditions must be bad, indeed, if two or three amongst the rhododendrons fail to unfold their beauty from February onwards, and fine examples of R. nobleanum were noted at Kew during that month. R. barbatum is also a very desirable species, and some idea of its hardy character may be gathered from the fact that in spite of frost and cold winds it blossoms with regularity in February, while its crimson-scarlet colouring is both effective and welcome. A very fine hybrid is seen in R. Shilsoni, which claims R. barbatum as one of its parents, and great brilliance is seen in its crimson flowers; when arranged in bold groups of a dozen or more a fine effect is produced. R. ciliatum gives us delicate pink flowers which change to pure white with age, while it is of a sturdy and compact habit. Need it be said that a sheltered site should be allocated to these rhododendrons, or that they are well worth the labour involved in affording protection with reed mats or evergreen prunings while in flower and during severe or boisterous periods.

The Purple-leaved Plum, Prunus Pissardi, hastens to clothe its naked stems with minute and pure white flowers with the advent of March, and, to my mind, would be well worth growing if this were its only qualification. It is not so, however, and it yields to none amongst shrubs with richly-coloured leafage. Beautiful, indeed, are the delicate pink flowers of P. triloba fl. pl., while another double form of long-lived beauty is seen in P. spinosa fl. pl. The hardy heaths, too, are cheery subjects, being responsible for bright spots in the garden in the early season. Erica carnea rosea and its variety are good examples, while E. codonodes takes the form of a small tree, and may often be seen towering up to a dozen or more feet in height.

One need not dwell upon the merits of Cydonia japonica, but it would be well if other kinds were more freely represented in gardens generally. C. Maulei, in richest scarlet, and its variety alba, also C. cardinalis, are of great merit. The amelanchiers are endowed with graceful beauty and it may perhaps be said are pre-eminent as far as elegance is concerned amongst spring-flowering trees. Further, they are accommodating to a degree, and seem to luxuriate in a variety of positions and soils.

The old Flowering Currant, Ribes sanguinea, has been in full beauty since March 12 here in congested Bermondsey, and its behaviour as a town plant is fully appreciated, and the same applies to the almond tree, which literally clothes itself with its delicate flowers at this season. Experiments made with Pyrus malus floribunda and the double Peach, Amygdalus magnifica fl. pl., have gone to show that they cannot withstand an impure and chemical-laden atmosphere, and they fail after the first season. As so well known, they are a huge success and very desirable in the country. It is impossible to speak too highly of the ornamental cherries, which resolve themselves into a white sheet each season, and by bringing the various forms together we get a beautiful picture. Cerasus pseudo cerasus is very fine, as is also the variety J. H. Veitch, while the double form of the ordinary cherry forms a splendid lawn ornament.

Given a sheltered spot, secure from rough winds and early spring frosts, two or three amongst the magnolias make a brave show in April and early in May, and let us hope that M. stellata and M. Soulangeana will soon enjoy the same popularity and be as extensively planted as the yulan. The more showy and handsome of the shrubby spiræas should be represented in every garden, and, given liberal culture, they yield up a great wealth of flowers. Further, some of the finest blossom in spring, and the same holds good in speaking of the barberries, which are responsible for much beauty and brilliance at perhaps the most attractive period of the year. B. stenophylla, B. concinna, and B. Darwini are good examples. Walter H. Aggett.

CHOICE CAMPANULAS FOR THE ROCKERY.

For furnishing the rockery and creating interest over a long season the dwarf bellflowers are most useful, and, almost without exception, they grow freely and flower abundantly. I need hardly say any yearly attention given them in the way of fresh soil before growth commences, as well as replanting occasionally, well repays the trouble taken. Sandy loam, with an addition of old mortar rubble, and a small quantity of manure, will do much to aid growth, and, naturally, increase the blossoms, as well as maintain the colour of each in its true shade of blue.

For edgings to paths these dwarf campanulas are useful, and produce a fine effect when planted in masses of one variety. Such edgings as these are distinctly more interesting than the ordinary box edging, and do not harbour slugs and snails, as does box, when allowed to grow too large, as is too often the case.

Campanula turbinata grandiflora is a distinct advance upon the ordinary forms, being larger in flower and freer in growth; in colour it is the same, deep blue, and it grows six inches high. C. t. alba is a beautiful white form, difficult to obtain true; four inches high. C. t. Isabel has deep violet-blue flowers, which open quite flat; it is free in growth and flowering, and quite one of the best of rock plants; six inches high. C. pulla is a neat-growing species, three inches high, with dark purple flowers. C. pulloides is a larger form of the above, and a distinct improvement. C. pumila and C. p. alba, the blue and white forms of this dwarf-growing plant, flower most profusely, and grow in hillocks.

C. abietina is a capital alpine plant, with purple flowers; it grows a foot high. C. Allioni bears large solitary blue flowers. C. carpatica is the well-known blue Carpathian bellflower; it grows about six inches high. C. c. alba is a white form, and a pretty companion to the former. C. c. White Star is a new white-flowered form, with handsome blossoms. C. c. Riverslea, gives clematis-like flowers of a rich blue on slender erect stems. C. excisa is a delightful little alpine, three inches high, with funnel-shaped blue flowers. C. Stansfieldi bears pretty blue-violet flowers, and growing but three inches high. C. G. F. Wilson, a fine hybrid, with deep purplish-blue flowers, is six inches high. C. Hendersoni carries a mass of deep cup-shaped flowers, of a violet colour, and is one foot high. C. Hosti grows in a light graceful manner, and has deep blue flowers. C. Profusion is a new hybrid, free in growth, and gives a profusion of mauve-blue flowers in August and September; tender; six inches.

E. Molyneux.

POPPIES AND MIGNONETTE.

Twice during the summer season combined sowings of poppies and mignonette may be made in sunny borders. Both kinds of plants grow and flower freely in such positions, and where the soil is only of very moderate richness. It is a difficult matter for some cultivators to procure a plentiful supply of manure for the flower beds, and many kinds of bedding-out plants require a fairly rich rooting medium if they are to be quite successful. For many years I devoted certain borders in the garden to the two kinds of flowers named, and the result was always satisfactory.

The soil was deeply dug, and, being of moderate richness, manure was not put in. The seeds of both kinds were sown at the same time, they were scattered thinly on the surface broadcast, and then raked in; the first sowing was made in April. I think the prettiest effect was secured by sowing the Shirley poppies; all the flowers were borne above those of the mignonette, and, from a distance, they looked like hosts of butterflies hovering above the bed in a gentle breeze. But another fine effect was secured by the dropping of the seeds of Victoria Cross and other varieties of poppies in separate clumps at a few feet apart, still retaining the mignonette as a groundwork.

In the case of the Shirley varieties, it was not necessary to thin out the young plants, but it is advisable to do so in the case of the large-leaved varieties, so as to provide sufficient light for the full development of the mignonette. All seed pods must be gathered before the seed in them matures and falls on the ground, as, if it does, seedlings will appear where not wanted the next year, and, furthermore, the constant removal of the seed pods ensures a longer flowering period.

The following are lovely varieties of poppies to grow, namely, Miss Sherwood, white, bordered rose; Admiral, white, single, paeony-flowered, scarlet band around the top; Snowdrift, pure white; White Queen, double white; The Mikado, double white, crimson edge; The Cardinal, double, scarlet on white ground; The Tulip, scarlet; The Peacock, scarlet, black zones on each petal.

G. B.

PEACHES AT WOBURN PLACE

The illustration of Peach Libra (p. 165), although well representing that tree carrying four dozen good-sized fruit, is only a fair indication of what peaches growing at Woburn Place are like, in spite of the ungenial soil conditions, as described by Mr. Stevenson.

I was at Woburn Place last year, and thought I never saw peach trees looking better or carrying crops of superior fruit. Mr. T. Stevenson does not agree that out-of-door peach culture is a thing of the past, nor does he make the unfavourable weather an excuse, though this is often advanced by many present-day cultivators.

In addition to the variety named, there were huge crops of Hale's Early, Barrington, Bellegarde, and Princess of Wales peaches, with Humboldt, Pine Apple, Rivers' Early Orange, and Lord Napier nectarines. Mr. Stevenson does not believe in allowing a tree to carry double the quantity of shoots required to provide a full crop or to furnish the wall, but prefers space for the proper development of leaves and wood, and in this manner he obtains maturity, for he knows quite well that is the salient point in producing desirable crops of the finest peaches, even though the trees are but six years planted.

E. M

CHINESE PRIMULAS AT FOREST HILL.

Never have the primulas looked so well at Messrs. James Carter and Co.'s Forest Hill nurseries as this season. When we visited the nursery house after house was filled with plants that were pictures of rude health, models of cultivation, and full of beautiful blooms. Some years ago Messrs. Carter used to flower their primulas earlier in the year, and we have recollections of journeying to the Houston Road Nurseries, Forest Hill, "when the snow lay round about," decidedly "cool," if not "crisp and even." But the ever-increasing demand for seeds of the fine strains here cultivated has made it imperative that every plant shall produce the maximum of those tiny grains that will each reproduce its variety. To secure the largest possible crop a slightly later flowering period has been selected, so that at the end of February and through March, when the sun helps to make the pollen "free," the big batches of plants are at their best. It is, however, a good plan to visit the nurseries as early in March as possible, because as soon as the flowers are fully open the work of fertilisation goes on, assisted by skilful fingers and a camel-hair brush. Every day the flowers are brushed over, and the utmost care is taken to use one brush only for each variety. The effect of regular pollination is soon seen upon the plants, because, having set seed, the blooms quickly fade and fall, hence the grand colour effects produced by the plants soon lose their pristine brilliance. Of course, this is what the seedsman wants, and when the rounded seed vessels set at the base of the green calyx swell up readily in each bloom, then the prospect of a good seed harvest is excellent.

The double primulas are particularly good at Forest Hill. They seed as freely as the single forms, because the doubling is not due to the petaloid character of the stamens, or to the multiplication of petals at the expense of fertility, but to an outgrowth of the true petals from close to the eye, so that while the flowers have a double appearance, and are, for all practical purposes double, they are not so, strictly speaking. This is an advantage, because really double flowers rarely seed freely. Carmine Empress, rich red; Princess of Wales, white, flaked with pink; Double Pink, blush; Double Scarlet, very rich shade; Lilac Queen, a pleasing silvery-lilac; and Snowflake, white, form a set of double primulas remarkable alike for their freedom, usefulness, and beauty.

The "catch of the season" is the new Raynes Park White, a giant single white variety, of wonderful substance, exquisite beauty, the utmost purity, splendid habit, and freedom of flowering. The frilled overlapping petals make up a large bloom, and the blooms make up a perfect truss, surrounded by elegant leafage, so that the variety is a model one in every way. But though this newcomer promises to lord it over his fellows, there are other single varieties of high merit that have certain colour attractions it does not possess, and, after all, we must have variety, even in primulas. For instance, there are the two exquisite varieties named King Edward and Princess May. The former is a grand white variety that appeals to everyone by reason of its bold flowers and large trusses. Princess May is a pink variety of great beauty and freedom, while Holborn Coral gives a delightfully warm shade of coralred that is very effective. White Elaine always attracts attention, as its pure white blossoms are thrown into sharp contrast by the dark stems and leafage. Holborn Blue and Holborn Ruby are two others of great beauty, and deservedly popular for the richness of their colouring.

Turning to the star primulas, there can be no getting away from the fact that notwithstanding the glories of the giant florists' forms, there is a beauty in the more graceful stellate varieties that makes for wide popularity. The amateur with limited conveniences is pinning his faith to this section, and in every establishment where Chinese primulas are grown the star varieties are becoming more largely cultivated year by year. A well-grown plant of either the pink, white, lilac, crimson, salmon, or blue varieties is a picture of loveliness, and set in an ornamental pot, it is a charming ornament for the table or a delightful present for a friend. As you look at the fine batches of these varieties at Forest Hill it is easily understandable that the popularity of the section has advanced by leaps and bounds during the past few years.

PRIMULA SINENSIS RAYNES PARK WHITE.
A giant single white variety, raised by Messrs. J. Carter and Co.

Daphne mezereum.—This is well worthy of a place among the most select of our hardy shrubs, one great point in its favour, apart from its beauty and fragrance, being the early season of the year at which it flowers. There is a good deal of individual variation in the colour of the blossoms, some being of a much richer shade than others. In nurseries the varietal name of rubra is often applied to the best form. There is besides this a variety alba, with white blossoms, which is also represented by a rare double-flowered form. A distinct variety is grandiflora, with blooms of a lilac tint.—W. F.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

CATTLEYA HOUSE.—Plants of Cattleya Trianæ should be examined, and repotted as they pass out of flower, if necessary. They usually commence rooting during the period in which their flowers are developing, and, consequently, many roots will have advanced to a considerable length, it is therefore the more difficult to avoid injury to the roots in the potting process. Every care must be observed when turning the plants out of their pots, and in removing the decayed potting compost. If the potting compost is in a good state of preservation, and the plants only require more root room, it is desirable to use a larger pot without disturbing the old material more than is absolutely necessary. However carefully the operation is done cattleyas and their allied genera suffer more or less from repotting, and with every care and attention it is frequently some time before the plants regain their normal vigour. This is particularly the case with imported plants; the home-raised hybrids appear to be able to recover much more rapidly. In all cases they should be relieved from flowering the first season after repotting. The effects of flowering is very pronounced in a plant that is not well rooted. We find a suitable compost consists of about equal portions of osmunda fibre, peat, and sphagnum moss, a few broken oak or beech leaves, and sufficient sand and broken crocks to render the compost porous.

EPIPHRONITIS VEITCHI.—This charming bigeneric hybrid is now producing its flower scapes. Careful observation is necessary to keep the plants free from thrips and other insect pests, which attack and spoil the flower scapes. This orchid is so easily cultivated, and is so free flowering, that it is worthy of extensive cultivation. As the plants pass out of flower repotting should be attended to. I find it is best to repot annually. New growths are freely produced from the sides of the shoots that have flowered, and as these are produced at varying distances along the stem, it seems difficult to provide a rooting medium without either cutting off these shoots or shortening the old growth. But as roots are freely produced along the stem of the old growths, as well as from the base of the new, there is little difficulty in preparing the plants for repotting. It is best to place several growths together in the same pan, and to select those that are about in the same state of growth for each. See that ample drainage is provided, and use as a potting compost equal portions of fibrous peat and finely chopped sphagnum, with sand and broken crocks added. We find the plants do best on the stage in a warm intermediate house.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

GLOXINIAS.—The present time affords a favourable opportunity for raising further batches of gloxinias, and other similar stove subjects usually raised from seed. For this purpose have in readiness some shallow pans or boxes, which must be provided with ample drainage, and both drainage and pans must be thoroughly clean and dry. Fill these within half an inch of the rim with finely sifted material composed of loam, leaf-soil, and sand. After the surface has been made even a thorough watering may be applied, and the pans be allowed to drain for an hour or two previous to sowing the seed, which must be sown thinly and evenly. With the finer seeds it is advisable not to apply any covering of compost, and a very fine sprinkling of silver sand will, in most cases, be sufficient. The pans should afterwards be placed in the propagating case and covered with glass. Any older specimens of gloxinias that are nicely started into growth may be repotted as the opportunity occurs. The tubers started in January, as advised in a previous calendar, are now showing abundance of flower buds, and will need regular applications of liquid manure and soot water; a top-dressing of bonemeal at this stage will also be found to afford the plants much assistance.

CLIMBERS will need regular attention from now onwards, and the shoots must be regularly tied into position. Remove all weak and undesirable shoots. Climbers must not be allowed to ramble at will, or much injury will be done to the other occupants by the exclusion of light. Where old permanent borders exist they must be renovated from time to time.

CROTONS AND DRACÆNAS, which were notched and mossed as recommended in a previous calendar will now be ready for removal from their parent plants; this, however, must be done with extreme care if no loss of foliage is to be experienced. It is advisable to separate the tops by cutting the stems halfway through first, and, after two or three days, finally removing the tops and potting them up. Where bottom heat is available they may be plunged for a few days until root action is vigorous. A cucumber house is also an ideal place for starting the tops into growth after potting. Apply a good shade during hot sunshine, and occasionally syringe overhead during the day. Established crotons are now making rapid progress, and those who desire highly-coloured specimens for exhibition purposes must now afford the plants plenty of light, and place them as near the glass as possible without injury to the foliage. As the pots become filled with roots the colour of the foliage grows richer, and it may be further improved by frequent regular applications of some approved fertiliser, used in accordance with instructions.—John Donoghue, Bardon Hill Gardens.

THE FLOWER GARDEN.

SHRUBBERIES.—All evergreen shrubs may be transplanted now with safety. A good ball of earth should remain attached to the roots, and its size must be determined by the size of the tree or shrub to be lifted. The operation needs great care, so that the ball is not broken; otherwise failure may occur. After being placed in its new position and the soil filled in, a good watering should be afforded. If the surface is left in a hollow formation watering can be readily accomplished, and the roots will obtain the full benefit of the water. A good mulching proves beneficial in conserving the moisture. The plant should be made secure against the winds either by the use of stakes or wires. Should there be a spell of dry weather the freshly-planted deciduous shrubs will require watering, especially those which have been planted since Christmas. Shrubs planted early in autumn usually make sufficient roots to take care of themselves; yet an occasional examination is advisable. Stakes, ties, and all supports should be thoroughly examined, and, where necessary, made good.

FORSYTHIA SUSPENSA should be pruned immediately the flowers are over. It is one of the most beautiful of our early-flowering shrubs, and well repays any extra attention bestowed upon it. The weak, thin growths may be cut out, and the stronger shoots cut back to within a few inches of the older wood. This will encourage the plant to make good growths for next spring flowering. The sucker growths which often occur round the stems of lilacs should be removed, or they will eventually spoil the plant. The double gorse should be pruned hard after flowering if the plants are inclined to become leggy and untidy.

GUNNERA MANICATA AND G. SCABRA are two of the noblest plants we have for streamsides, and should be planted as soon as growth commences. Their cultivation is exceedingly simple, providing they are planted where the roots can quickly reach the water. A position on the extreme edge of the water should be afforded them. Established plants which have had their winter covering removed must yet be protected by a covering of mats when the nights are frosty, for if the young growths are damaged by frost they do not recover, and the edges of the leaves look untidy all through the season. By removing the flower-heads early in the season larger leaves are obtained, and a slight dressing of nitrate of soda given occasionally when the plants are in full growth is beneficial.

HERBACEOUS BORDERS.—Now that the majority of the plants are well above ground, and can be plainly seen, the surface of the soil should be frequently stirred with the hoe. Great care must be exercised when working near clumps of late-flowering liliums, gladioli, Galtonia candicans, and such bulbous plants, which have not yet appeared above the surface. The incarvilleas are not yet showing growth; therefore any weeding required must be accomplished by hand. The growths of Michaelmas daisies should be thinned out, leaving sufficient to form a good clump and allowing each growth enough room to develop properly. This advice also applies to helianthuses, solidagos, heleniums, and other plants of similar habits.—E. C. Pooley, Gnaton Gardens.

FRUITS UNDER GLASS.

EARLY VINERY.—The bunches should now be finally examined, and any portions crowded should be thinned out carefully, while any stoneless or misshapen berries should also be removed. Carefully loop up any large shoulders. In the case of old or permanent vines that have reached the top of the roof, nothing more will be necessary beyond pinching the laterals about every other week. If the vines are young and have not reached the top, tie the main rod carefully, and when it has reached the desired length it may be stopped in order to give strength to the lower branches; but after once stopping it should be allowed to go on again in order to encourage the uppermost growths. Guard against mealy bug and mildew. See that the roots do not lack moisture; damp down very thoroughly several times daily, and maintain a steady temperature of from 65 to 75 deg.—the latter, of course, with sunshine. A little air should be given by means of the top ventilators first thing in the morning, and as the temperature rises give more air.

ORCHARD HOUSE.—The trees in this house will now be in full bloom, and great judgment is required to keep an even temperature. Keep the ventilators closed on the windy side, and open the others and the door wide during sunshine. Examine the trees about the middle of the day, and give them a sharp tap or shake to distribute the pollen. On a very bright, sunny day a gentle spraying about 2.30 p.m. will give the trees great assistance. As soon as the blooms have set the house should be fumigated, even if no aphis is present, as cherries and peaches are liable to attack at this stage, following this the next day with a good sharp syringing, and, if need be, a good watering. Early pears grown in these structures will need much water, and unless they obtain it they very quickly drop their fruits. Cherries in pots carrying good crops should now be topdressed with some good compost, and be watered at least twice a week with liquid manure, and be well syringed twice daily; and those growing in the border must likewise have frequent manurial waterings, and the points pinched out if growing freely. I like to do all the pruning with the thumb and finger.

STRAWBERRIES.—As soon as the early crop is finished clear the plants out at once, and, if not wanted, throw them away. I think it always best to throw the earliest lot away, as those forced later will be found much more serviceable for other purposes. Give the shelves a good scrubbing before more plants are placed thereon. As subsequent batches are introduced less forcing will be required, and as each batch approaches maturity a lower temperature should be employed. The latest batches should be kept cool and airy.—W. A. Cook, Leonardslee Gardens.

EXHIBITIONS AND MEETINGS.

Cornwall Daffodil and Spring Flower Society.

This society, which is the oldest of those devoted to the daffodil, having been incorporated sixteen years ago, has for patronesses her Majesty Queen Mary and her Majesty Queen Alexandra, while among the names of the vice-presidents are to be found the Earl of Mount Edgcumbe, Sir A. P. Vivian, K.C.B., the Viscountess Falmouth, and Mr. T. A. Dorrien-Smith, so that it is under distinguished patronage. From its inception the spring shows of this society have attained a high standard of excellence, and the present exhibition, which was opened in the great Market Hall at Truro on April 4, was fully equal to the best of its predecessors. The entries were large, and the competition in almost all classes was exceedingly keen, and many of the exhibits were notable for their excellent quality. Ever since the formation of the society the Hon. John Boscawen has been the hon. secretary, and under his skilful management and invariable courtesy all the arrangements are carried out to perfection, there never having been a single complaint. The band of the Royal Marines played during the afternoon in a portion of the hall partitioned off, and delighted the visitors, while those desirous of closely inspecting the flowers were not incommoded. During the afternoon the attendance was very large, all parts of England and the Metropolis contributing to the total, while the county of Cornwall was influentially represented. Unfortunately the past March, with its absence of sun and continued east winds, was much against the early-flowering shrubs, which made practically no advance through the whole month, with the result that some varieties which usually appear were conspicuous by their absence.

Of the daffodils the greatest interest centred in Class 2, for thirty varieties, in commerce or not in commerce. In this class numerous seedlings of high merit were staged, though the majority were numbered and not named. First prize was won by Mr. T. C. Williams, and among the notable flowers were 317; with white petals and spreading orange-red cup; 81, white petals and yellow saucer-shaped cup edged with orange; 11, an enormous bicolor incomparabilis; 261, bright golden trumpet; 289, primrose petals, spreading yellow cup, edged with orange-scarlet; 260, with massive petals and flat citron cup edged with orange. Mr. P. D. Williams was a very close second, two of his most striking varieties being Medusa, white petals and glowing crimson-orange cup, a twin flower; and Robespierre, with orange-scarlet cup. For thirty varieties of daffodils in commerce, Mr. E. H. Williams was first, and in his stand King Alfred, Cœur de Lion, Victoria, Redbreast, Beacon, White Queen, and Lady Margaret Boscawen were very fine.

In the next nine classes the price of the bulbs was limited to 10s. Six magni-coronati: First prize, Lady Margaret Boscawen. Six medio-coronati: First prize, Mr. A. Blenkinsop. Six Leedsi: First prize, Miss Clarice Vivian. Six parvi-coronati: First prize, Miss C. Vivian. Fifteen distinct varieties: First prize, Mr. H. G. Hawker.

Finest bloom magni-coronati: First prize, Miss Nowell Usticke, with King Alfred; second prize, Mr. R. S. Nowell Usticke, with Rev. D. R. Williamson. Finest bloom medio-coronati: First prize, Miss L. Williams, with Lady Margaret Boscawen; second prize, Mr. A. Blenkinsop, with Homespun. Finest bloom parvi-coronati: First prize, Miss Clarice Vivian, with Armorel; second prize, Mr. R. S. Nowell Usticke, with Blood Orange, Finest bloom poeticus: First prize, Miss Clarice Vivian, with Horace; second prize, Miss Nowell Usticke, with Homer. Three doubles: First prize, Col. Nowell Usticke. Fifteen distinct varieties: Equal first prizes, Lady Margaret Boscawen and Mr. A. Blenkinsop. Finest bloom magni-coronati in commerce: First prize, Mr. E. H. Williams, with King's Norton; second prize, Mr. A. Blenkinsop, with Van Waveren's Giant. Finest bloom medio-coronati in commerce: First prize, Mr. E. H. Williams, with White Queen; second prize, Miss Clarice Vivian, with Bernardino. Finest bloom parvi-coronati: First prize, Mr. E. H. Williams, with Incognita; second prize, Col. Nowell Usticke, with Blood Orange. Finest bloom poeticus: First prize, Col. Nowell Usticke, with Dante; second prize, Mr. E. H. Williams, with Homer.

Three finest blooms of magni-coronati, not in commerce: First prize, Mr. J. C. Williams, with three fine flowers. Three finest blooms of medio-coronati, not in commerce: First prize, Mr. P. D. Williams, with 92, a clear yellow; Elizabeth, primrose petals and deep yellow cup; and Robespierre, primrose petals and orange-scarlet cup. Three finest blooms of parvi-coronati, not in commerce: First prize, Mr. P. D. Williams, with Medusa, a beautiful, though not over large flower, with white petals and orange-scarlet cup, borne two on a stem; Liberty, white petals and flat yellow-cup; and 717, white petals, spreading orange-scarlet cup. Ten distinct varieties, any section: First prize, Mr. C. Bewes.

Three bunches of anemones: First prize, Mr. R. Fox. One bunch Anemone fulgens: First prize, Mr. T. B. Bolitho. Three polyanthus plants: First prize, Lady Margaret Boscawen. Three primrose plants: First prize, Miss Danbuz. Twelve varieties of hardy unforced spring flowers: First prize, Mr. T. B. Bolitho, with Fritillaria meleagris, Sanguinaria canadensis, Anemone blanda, Erythronium Johnsoni, Tulipa præstans, Muscari botryoides album, Iris bucharica, Myosotidium nobile, Iris orchioides, Caltha platypetala, Tulipa saxatilis, and Fritillaria imperialis. Six varieties of hardy unforced spring flowers: First prize, Mr. T. B. Bolitho, with Erythronium revolutum, Muscari botryoides, Muscari Heavenly Blue, Tulip Keiser Kroon, Caltha platypetala, and Myosotidium nobile.

Collection of hardy spring flowers arranged as a rockery: First prize, Miss Waterer, with Iris tingitana, Corydalis cheilanthiphia. Viola gracilis, Parochetus communis, Lithospermum prostratum, Muscari conicum, Saxifraga Rhei, and other rock plants. Three bunches single violets: First prize, Hon. H. F. Trefusis. Three bunches double violets: First prize, Capt. W. Tremayne. Three bunches single violets, one variety: First prize, Hon. H. F. Trefusis. Three bunches double violets, one variety: First prize, Capt. W. Tremayne. Six vases of roses: First prize, Mrs. Messer Bennetts. Three vases of roses: First prize, Mrs. Messer Bennetts. Three vases of carnations: First prize, Mr. C. Bewes.

Flowering Shrubs.—Finest plant of rhododendron in flower: First prize, Mr. E. B. Beauchamp. Best group of rhododendron blooms: First prize, Mr. D. H. Shilson, the stand containing R. Iverianum, R. arboreum roseum crispum, Beauty of Tremough, Thompsoni, Duchess of Cornwall, R. barbatum, R. argenteum, Gill's Triumph, and R. arboreum giganteum. Six trusses of rhododendrons, cut from plants out of doors: First prize, Mr. J. C. Williams. Three trusses of large-leafed rhododendrons: First prize, Mr. D. H. Shilson. Six cut trusses of rhododendrons under glass: First prize, Mr. R. Fox. Finest rhododendron truss out of doors: First prize, Mr. Robert Fox. Finest truss of hybrid Sikkim rhododendron out of doors: First prize, Mr. J. C. Williams. Finest truss of rhododendron under glass: First prize, Mr. E. J. P. Magor. Three large jars of sprays of outdoor rhododendrons, three varieties: First prize, Mr. Robert Fox, with R. Shilsoni and two seedlings. Six cut blooms of camellias under glass: First prize, Mr. J. C. Danbuz. Three large jars of sprays of outdoor camellias: First prize, Mr. R. Fox. Three vases acacia, out of doors: First prize, Mr. Charles Hext, with A. dealbata, A. longifolia, and A. ovata. Three vases of acacias, under glass: First prize, Mr. J. H. N. Watson, with A. Drummondi, A. albicans, and A. longifolia magnifica.

Twenty varieties of outdoor, unforced, hard-wood flowering shrubs or climbers: First prize: Mr. T. B. Bolitho, who had Andromeda japonica, Polygala Dalmasiana, Chorizema Lowi, Cerasus Watereri, Cydonia Simoni, Magnolia stellata, Lapageria rosea, Jasminum primulinum, Erica lusitanica, Clianthus puniceus, Chorizema cordatum splendens, Magnolia conspicua, Prunus pendula, Euryops virgineus, Boronia heterophylla, Pernettya ciliaris, Embothrium coccineum, Skimmia Fortunei, Camellia reticulata, Boronia megastigma. This was a remarkable good class. The Rev. A. Boscawen and Mr. R. Fox were placed equal second, but there was very little between their exhibits and the first prize stand. Six varieties of outdoor unforced hardwood flowering shrubs and climbers: First prize, Lady Margaret Boscawen, with Pyrus Maulei, Clematis indivisa lobata, Senecio petasites, Grevillea rosmarinifolia, Ceanothus rigidus, and Jasminum primulinum.

Awards of merit were given to Mr. C. Hext for Rhododendron trebianum, to Mr. J. C. Williams for a rhododendron seedling, to the Rev. A. Boscawen for Erica melanthera, to Mr. R. Gill for the Himalayan Primula Winteri, to Messrs. R. Veitch and Son for hybrid gerberas, to Mr. R. Fox for Rhododendron Lady Alice Fitzwilliams and R. Keysi, and to Mr. P. D. Williams for Shere Khan. Cultural commendations were awarded to Mr. G. Reuthe for Rhododendron intricatum, to Mr. E. Magor for Rhododendron Lindleyi, and to the Rev. A. Boscawen for Acacia diffusa. A first class certificate was given to Narcissus Lemon Star, exhibited by Messrs. Cartwright and Goodwin. The nurserymen's stands were very bright, and added much to the attractions of the show. Miss Josephine Gundry, F.R.H.S., exhibited a selection of beautiful water-colours of gardens and flowers which were much admired.

Royal Caledonian Horticultural Society.

The spring show of this society was held in the Waverley Market, Edinburgh, on April 5 and 6. Notwithstanding the cold, sunless weather experienced for several weeks previous to the show, there was an excellent display, especially of trade exhibits, and the spacious hall looked bright with colour, though the effects of the deficient sunshine was apparent in the case of many things.

GARDENERS AND AMATEURS.

For the group of miscellaneous plants, arranged in a space of 15ft. by 10ft., on the floor, there was only one competitor, Mr. Geo. McKinna (gardener to Sir Robert Usher, Bart., of Norton, Ratho), and he was awarded the first prize. For the group of orchids arranged in a space of 12ft. by 6ft., Mr. J. Smith (gardener to R. Brooman-White, Esq., of Arddarroch), was the only entrant. The group was a very fine one, and Mr. Smith was awarded the first prize, along with the Sander Cup, which has to be won three times before it becomes the property of the competitor. For four stove or greenhouse plants Mr. A. Smith (gardener to Provost Ballantyne, The Neuk, Peebles), was first; and Mr. A. McMillan (gardener to the Earl of Home, Douglas Castle), second. For six plants in bloom (exclusive of hyacinths and tulips), Mr. G. McKinna was first, and Mr. J. Pearson (gardener to Mrs. Bickmore, Beechwood, Murrayfield), second. Mr. D. Kidd (gardener to Lord Elphinstone, Carberry Tower, Musselburgh), was first for greenhouse rhododendrons, and the principal prizewinners in the other plant classes were Messrs. McKinna, McMillan, J. Thom (gardener to Mrs. Hutchison, of Carlowrie, Kirkliston), W. G. Pirie (gardener to C. W. Cowan, Esq., Dalhousie Castle, Bonnyrigg), whose alpines were very fine, G. D. Kerr (gardener to Hon. Mrs. Baillie Hamilton, Langton, Duns), J. McIntyre (gardener to Sir John Murray, Challenger Lodge, Edinburgh), P. R. Hills (gardener to Sir George

Bullough, Kinlock Castle, Isle of Rhum), W. J. Galloway (gardener to Mrs. Dewar, Dryland House, Edinburgh), and J. Cossar (gardener to Miss Watt, Spott House, Dunbar). The gold medal offered by the Royal Dutch Bulb Growers' Society for three pans of hyacinths, was won by Mr. J. Gibson (gardener to the Duke of Portland, Welbeck Abbey, Notts).

In the cut flower classes, Mr. W. G. Pirie was first for twelve bunches narcissi, Mr. J. R. Hills first for 24 roses, and Mr. D. Kidd first for twelve roses. Mr. J. Wilson (gardener to Sir John Gilmour, Bart., of Montrane, Leven), was first for twelve Gloire de Dijon roses, and Mr. J. Pearson first for twelve Marechal Niel roses, while Mr. J. R. Hills was first for twelve of any other variety. In the other cut flower classes the chief prize-winners were Messrs. A. Brydon, Innerleithen, Gibson, McMillan, Kidd, and A. Johnstone (gardener to Miss Gillespie, Hay Lodge, Edinburgh).

For a decorated dinner table, 10ft. by 5ft., Mr. John Hood (gardener to T. G. Bishop, Esq., Dalmore, Helensburgh), was first, and Mr. D. Kidd second.

For the collection of six distinct kinds of vegetables, Mr. Gibson, Welbeck, was first; Mr. R. Stuart (gardener to the Earl of Lauderdale, Thirlestane Castle), second; and Mr. Geo. McKinley (gardener to the American Ambassador, Wrest Park, Beds), third. For a collection of salad plants, Mr. Gibson was first, and Mr. McKinley second. In the other vegetable classes the principal prizes were won by Messrs. Gibson and McKinley.

In the plan competition for under-gardeners there were four entries. The problem is to lay out to the best advantage an area of about sixteen acres, in pleasure ground, kitchen garden, etc., and the competitors are supplied with a small sketch plan, giving the outlines of the ground and its contours. The first prize was awarded to Mr. Charles Wilken, Erskine House Gardens, Renfrewshire; the second to Mr. J. W. Forsyth, Fairburn House Gardens, Muir of Ord; and the third to Mr. E. W. Fuller, Heveningham Hall Gardens, Saxmundham, Suffolk.

NON-COMPETITIVE EXHIBITS.

The largest of these was that of Messrs. Dickson's and Co., Edinburgh, and it consisted of a large group of Pink Pearl rhododendron, interspersed with standard Wichuraiana hybrid, and other roses, and other plants, and they also had two large circular groups of their seedling amaryllis (hippeastrums), of which they make a speciality (gold medal).

Messrs. R. B. Laird and Sons, Lim., Edinburgh, had a very artistic exhibit in virgin cork, with rhododendrons, azaleas, Japanese maples, and other plants

Messrs. Cunningham, Fraser, and Co., Edinburgh, had hybrid rhododendrons as the leading feature of their exhibit, and they also showed choice alpines (silver-gilt medal).

Messrs. W. Cutbush and Son, London, had a nice exhibit of hardy plants, amongst which were several novelties, such as Rhododendron intricatum, and a number of interesting alpines (silver-gilt medal).

The firms who made narcissi the leading feature were Messrs. Barr and Sons, London (silver-gilt medal); Messrs. Hogg and Robertson, Dublin (gold medal); and Mr. J. A. Cooper, Lissadell (silver-gilt medal). Messrs. Hogg and Robertson had also a fine lot of St. Brigid anemones, and Messrs. Barr had some choice alpines. Messrs. Dobbie and Co., Edinburgh, had a nice collection of narcissi, hyacinths, and tulips (silver medal).

Mr. H. N. Ellison, West Bromwich, had choice ferns, hybrid gerberas, and hybrid freesias (silver-gilt medal), and Messrs. John Forbes, Hawick, Lim., had primulas, carnations, violas, various alpines, and florists' flowers (silver medal). Mr. David King, Osborne Nursery, Edinburgh, staged a large display of narcissi, tulips, ferns, palms, etc. (silver-gilt medal), and Dr. McWatt, Duns, exhibited a large and very choice collection of primulas (silver-gilt medal).

Messrs. Todd and Co., Edinburgh, contributed a unique exhibit of bouquets and baskets of carnations, to the exclusion of all other flowers, such novelties as Empire Day, British Queen, Rex, Regina, and Crimson Glow, etc., being used. In view of the carnation being the flower chosen by her Majesty for the Coronation bouquet, this exhibit attracted a good deal of attention (gold medal).

Messrs. Young and Co., Hatherley, Cheltenham, contributed some fine perpetual-flowering carnation novelties, including Duchess of Devonshire, Hon. Audley Neeld, J. W. Riley, Gladwys, Rose Doré, etc. (silver medal); and Messrs. J. and A. Glass, Edinburgh, had also a nice lot of these, Crimson Glow being conspicuous (silver-gilt medal).

Messrs. Storrie and Storrie, Glencarse, Perthshire, staged primulas, hybrid cinerarias, etc.; Messrs. Bakers, Wolverhampton, alpines; Mr. D. McLeod, Chorlton-cum-Hardy, orchids; and Mr. J. E. Sadler, Newbury, orchids.

Messrs. Ransomes, Sims, and Jefferies, Lim., Ipswich, had a very fine exhibit of motor and other lawn mowers, lawn sweepers, verge cutters, etc., and Messrs. Alex. Shanks and Sons, Arbroath, also showed lawn mowers, etc.

The only new plant certificated was a hybrid Indian rhododendron (R. Dalhousiamum seedling x R. Nuttalli), exhibited by Mr. D. Macdonald (gardener to Mrs. Currie, Trinity Cottage, Edinburgh). A first-class certificate was awarded to it.

Bournemouth Spring Show.

APRIL 4 and 5.

The fourth annual spring show was held in the Winter Gardens on the above dates. The general verdict was that it far surpassed any spring show previously held at Bournemouth. The competitive classes were well filled with produce of a very high order of merit throughout. The non-competitive contributions were also extremely fine and representative. Those from Messrs. James Veitch and Sons, London, which included beautiful specimens of amaryllis, nepenthes, hydrangeas, primulas, and orchids; Messrs. Charlesworth and Co., who had orchids; Messrs. Cypher and Son, Cheltenham, orchids; Messrs. Stuart Low and Co., orchids and tree carnations; Messrs. Sutton and Sons, primulas and cinerarias; and Mr. Maurice Prichard, Christchurch, a model rockery exquisitely furnished with alpine and other plants, were very prominent features of the exhibition. These exhibits were not small ones; that of Messrs. James Veitch occupied about fifty feet run of tabling, and the others were also very large.

COMPETITIVE EXHIBITS.

The principal class was that for a group of miscellaneous plants in a space twelve feet by eight feet. The Park Nurseries (manager, Mr. F. W. Welch) secured premier position; the group was a most charming one, lightly arranged, the colours harmonising well. A very fine rose, freely flowered, occupied the centre; begonias, salvias, coleuses, liliums, azaleas, deutzias, lilacs, mignonette, and spiræas were the principal flowers used. Messrs. G. Watts and Sons, Bournemouth, were awarded second prize. The centre was very light and graceful; a fine Magnolia stellata was placed there, and other notable plants were rhododendrons, orchids, spiræas, azaleas, laburnums, hyacinths, with lovely plants of double violets in pots dotted in as an edging.

Mr. R. Thurston (Miss Steel) had the best table decoration, Mr. C. Ball and Miss Taylor being second and third respectively. Mr. T. K. Ingram, of Parkstone, Dorset, scored in the two classes for six Azalea mollis and an indica respectively. Mr. Usher, gardener to Sir Randolph Baker, Bart., M.P., was placed first in the class for twelve pots of narcissi. He had Madame Plemp (2), Leoni, Madame de Graaff, Barri, Golden Spur, Barri Conspicuus, Glory of Leiden (2), Mrs. Langtry, Emperor, and Horsfieldi. Mr. Pearce, gardener to Mrs. Ormond, was a close second, having fine Sir Watkin and Maximus in his collection. Mr. T. K. Ingram was third, and first for six pots of Polyanthus narcissi, with Aspasia, Triumph, Elvira, Ideal, Klondyke, and Irene; these were really splendid pots of plants. Second honours went to Messrs. G. Watts and Sons, who staged fine examples. The latter were well to the front in the class for twelve hyacinths. Grand Maitre, Marie, Czar Peter, King of Blues, Paix de l'Europe, Moreno, Lady Derby, Lord Balfour, Charles Dickens, Queen of Blues, and Mimi were even and good. Mr. Ingram came a close second, having King of the Blues, Jacques, Moreno, and Enchantress exceptionally fine. The Park Nurseries were third. Mr. Ingram scored with lily of the valley, being followed by the Park Nurseries and Messrs. Watts for second and third places respectively. The Park Nurseries had the best twelve tulips in pans not exceeding 7½ inches in diameter. Joost van Vondel, Queen of the Netherlands, Pink Beauty, and El Toreador were finely developed. Messrs. Watts and C. Pearce were second and third respectively.

Mr. Usher again scored in the class for a collection of narcissi, eighteen distinct varieties. Lucifer, Sir Watkin, Horace, White Lady, Victoria, Emperor, Madame Plemp, Queen of Spain (pretty), Glory of Leiden, King Alfred, and Madame de Graaff were the best. Second honours went to Mr. Ingram, Henry Irving, Glory of Leiden, and Victoria being very good; Messrs. Watts were third.

For the best five blooms of narcissi magni-coronati, Glory of Leiden won for Mr. Northway; and Sir Watkin won for the same exhibitor in the class for five blooms, medio-coronati. Mr. T. Squire, of Wimborne, was awarded first prize in the group class, the space occupied being nine feet by six feet; schizanthuses were fine in this group. Mr. Heath, gardener to Mr. G. G. Russell, had the best six pots of narcissi, Mr. Pearce being second, and Mr. George Garner third. Mr. Heath had the best three pots of Polyanthus narcissi. Mr. Pearce won in the class for six hyacinths, Mr. Garner being second and Mr. Heath third. Mr. Garner had the best six pots of tulips, Keizer Kroon, Duchesse de Parma, and Joost van Vondel being very fine. Mr. Pearce was second. Mr. Barge, gardener to the Rev. C. H. Burrows, was awarded first prize for six pots of cyclamen. Messrs. Usher, Heath, and Pearce were very successful exhibitors in the classes for spiræas, cinerarias, primulas, deutzias, mignonette, and zonal pelargoniums.

AWARDS TO TRADE EXHIBITS.

Gold medals were awarded as follows: To Messrs. Sutton and Sons, primulas and cinerarias; Messrs. Charlesworth, orchids; Messrs. J. Veitch and Sons, Chelsea, miscellaneous plants; Messrs. J. Cypher and Sons, orchids; Messrs. Stuart Low and Co., orchids and tree carnations; Mr. Chamberlain, floral designs; Mr. Maurice Prichard, rockery plants. Silver medals: Mr. G. H. Rolls, orchids; and to Mr. W. C. Clark, who had a fine specimen of Dracæna atropurpureum (very scarce). The children's section was a charming one.

Croydon Gardeners' Association.

At the recent fortnightly meeting of this society Dr. J. Augustus Voelcker gave a highly instructive lecture on "The Influence of Physical Conditions upon the Cultivation of the Soil." Mr. J. J. Reid presided over a large audience.

Dr. Voelcker stated in his opening remarks that in defining the word soil we understand it to be an element that primarily holds up the plant and supplies it with food. It is composed of small particles of rock, which has been reduced to its present degree of fineness by the action of water and air. Other agencies, such as earthworms, are helpful in disintegrating these small particles and making the soil fertile. The top soil is darker in colour, and contains more nitrogen than the subsoil, but in the undersoil we find more potash. Soils vary considerably in their texture, the two extremes being sand and clay. Dr. Voelcker, with diagrams,

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

illustrated how these soils are composed, and explained why a sandy soil loses its moisture quicker than clay, which is owing to the larger particles of sand, providing larger channels for the passage of air, but these channels filled with air will not allow moisture to evaporate from the surface so rapidly as clay soils will do. The two great forces at work with soils are gravitation, by which method moisture descends through the soil, and capillarity or a drawing-up power from below. In sand the former force goes on more rapidly owing to the bigger particles allowing the moisture to drain away, the second force being considerably deterred by these bigger particles, and greater air interspaces. In clay soil exactly the opposite takes place, hence we find clay becomes waterlogged. Sandy soil more quickly takes up heat, and loses it as readily owing to the same action as water descending and rising. The lecturer pointed out that what the cultivator has to remember in dealing with soil is, in the case of light soil, he must consolidate, and with heavy soil he must open it. These can both be accomplished by the same means, viz., cultivation, for in the former nitrogenous substances can be incorporated with the soil, binding it together, and in clay or heavy land lime is best mixed with the soil to loosen the fine particles. Frost acts upon heavy land in the same way as lime, so that trenching clay land before frost sets in is highly advantageous. Fine tilth is the great principle in the cultivation of the soil, for it converts the food stored up in the soil into a condition that renders it available for the plants. Dr. Voelcker's remarks were followed with the keenest attention, and so engrossed did he become in his subject that the time slipped quickly by leaving very little for the usual discussion. However, a few questions were asked, and the lecturer's replies embodied further useful information. Each member of the audience no doubt was fully alive to the practical part of cultivating the soil, but, as the lecturer remarked, he would be doubly benefited now by having an explanation of why he did it.

A hearty vote of thanks was accorded to Dr. Voelcker, and to Mr. J. J. Reid.

Reading Gardeners' Association.

The usual fortnightly meeting was held in the Abbey Hall, Reading, on Monday, April 3, Mr. F. Townsend occupying the chair, and there was again a large attendance. Mr. Alderman Parfitt, owing to indisposition, was unable to be present.

The lecturer for the evening was Mr. T. Wilkinson, of The Gardens, Tyntesfield Park, Bristol (representative from the Bristol and District Gardeners' Association), his subject being "Grapes." Mr. Wilkinson is a prominent grower of the luscious fruit in the west, and his remarks were listened to with great attention by the assembled audience. Mr. Wilkinson explained at the opening that it was not his intention to give a lengthy paper, his object being rather to provoke discussion, whereby much useful information is certain to be diffused.

The paper, though brief, was exceedingly lucid and practical. The construction of houses and preparation of borders (here the lecturer was emphatically against deep borders), being first referred to. Afterwards manuring, watering, stopping, thinning, ventilation, cracking, shanking etc., were dealt with. Mr. Wilkinson had every reason to be satisfied that the object he had in view was realised, for quite the best discussion which has taken place this session followed the close of his remarks, the lecturer being closely plied with the questions, which he answered readily and to the point.

On the proposition of the Chairman, seconded by the Vice-chairman, a hearty vote of thanks to Mr. Wilkinson was carried with applause.

Royal Horticultural Society.

(Continued from page 278.)

spikes, Odontioda Vuylstekeæ, O. Gattonense, Dendrobium Brymerianum, Odontoglossum Queen of Gatton, and Chysis Langleyensis.

Odontoglossum Prince Albert, brown spotted on a blush ground, was submitted by Mr. Day, gardener to H. S. Goodson, Esq., West Hill, Putney.

Mr. Stables, gardener to De Barri Crawshay, Esq., Rosefield, Sevenoaks, brought forward Odontioda Rosefieldiensis (A.M.)—O. triumphans crossed with Cochlioda Noetzliana; Odontoglossum crispum Princess, O. illustré, O. Vulcan, and the showy O. Leonidas.

Odontoglossum triumphans and Oncidium concolor were very conspicuous in the exhibit arranged by Messrs. Stuart Low and Co., Enfield; Cattleya Schröderæ, Cymbidium Woodhamensis, and Renanthera Imschootiana were other good things.

From Messrs. Mansell and Hatcher, Rawdon, Leeds, came Lælio-cattleya Wellsiana alba, Brasso-cattleya Mrs. M. Gratrix, Odontoglossum Dora, O. Rolfeæ, O. Ossulstonei, O. Pescatorei virginale, and other lovely things.

Messrs. Charlesworth and Co., Haywards Heath, presented a very beautiful exhibit of orchids, odontiodas, oncidiums, and odontoglossums figuring largely. Of the former, O. Cassiope, O. Bohnhofiæ, O. Bradshawiæ, and O. Charlesworthi were fine; other splendid things were Odontoglossum Ossulstonei The Shrubbery var. (F.C.C.), with sixteen splendid flowers of rich maroon, purple, and white colouring; the quaint Selenopedium Lindeni, Cattleya Endora, Bulbophyllum virescens, and Brassia brachiata.

Messrs. Armstrong and Brown, Tunbridge Wells, set out their plants among maidenhair ferns, and disposed them thinly. Notable things were Brasso-cattleya Thorntoni, Odontoglossum excellens, Lælio-cattleya eximea, L.-c. Ernesti, and a number of interesting seedling cypripediums.

Messrs. Sander and Sons, St. Albans, exhibited Odontioda Vuylstekiæ finely, and also presented Cattleya Schröderæ, Odontoglossum Pescatorei, Brasso-cattleya Chas. Mason, Cypripedium Merlin magnificum, Scuticaria Hadweni, and other beautiful and interesting orchids.

Messrs. W. B. Hartland and Sons, Ardcairn, Cork, showed Cattleya Schröderæ, Odontoglossum crispum, and Cypripedium Curtisi in some quantity.

DAFFODIL COMMITTEE.

Mr. F. Herbert Chapman, Rye, presented a number of charming daffodils, and in South Saxon, a seedling from Poeticus ornatus, he staged the first of his own seedlings he has been able to set up in quantity. Torch, Chough, Blackwell, Virgil, Sonata, White Glare, Weardale Perfection, White Queen, and Duke of Bedford were varieties very well shown.

Mr. Alex. M. Wilson, Shovell, Bridgwater, exhibited a magnificent lot of new seedling daffodils all of great beauty and distinction. There were a few named sorts, notably Diogenes, Bernardino, Crœsus with vivid flat orange cup; Lola, a cream white Ajax; Conqueror, a fine trumpet variety; Cœur de Lion, Buttercup, Cornopean, and Mrs. Franklin. Some of the new unnamed varieties of what is known as the Englehearti group were of extraordinary brilliance.

A very pretty exhibit of daffodils from Messrs. Barr and Sons, Covent Garden, was greatly admired, both for the quality of its flowers and the way these were set up. Such varieties as King Alfred, Seagull, Homespun, Sunrise, White Lady, Cœur de Lion, Great Warley, Duke of Bedford, Ariadne, Plenipo, Bernardino, Bedouin, Buttercup, and Lord Kitchener were well shown.

Set up in their usual pleasing style, with isolepis between the vases, Messrs. Cartwright and Goodwin, Kidderminster, contributed a very interesting set of daffodils, their flowers clean and bright. Very striking were the blooms of Much the Miller, Golden Apple, Red Sundew, Ailsa, Barcarolle, The Skipper, Bennett Pöe, Lord Kitchener, Lemon Star, Homespun, Golden Casquet—a fine golden trumpet variety, Neptune, Circlet, and Southern Star.

Miss F. W. Currey, Lismore, Ireland, had a large and pleasing exhibit of daffodils, and staged these in larger bunches than most of the exhibitors. These bright Irish flowers included King Alfred, Scarletta, Van Waveren's Giant, White Queen, Lady of the Snows, Seagull, Michael, Duke of Bedford, Atalanta, the magnificent Crœsus, the refined pure white Mrs. Robert Sydenham, Avalanche, White Slave, and Firebrand.

From Robert Sydenham, Ltd., Tenby Street, Birmingham, came a neat group of bright flowers, and the pick of the varieties were Argent, Sir Francis Drake, Apricot Queen, Golden Gem, White Lady, Incognita, Mrs. H. J. Veitch, Homespun, Red Flag, Queen of Scots, Firebrand, the bold golden trumpet variety named King's Norton, and Orange Gem, with a large flat vivid orange cup.

Messrs. R. H. Bath, Ltd., Wisbech, showed daffodils and tulips growing in bowls of fibre; the tulips were grand, especially such varieties as Clara Butt, Bartagon, and White Swan; Madame de Graaff daffodil, in fibre, was also splendid. There were also good flowers of La Grandeur, Prince of Austria, Van Goozen, Isis, and Vermilion Brilliant tulips, and a few lovely plants of double white and double lilac primroses.

An exhibit from the Lissadell Bulb Farm, Sligo, contained branches of very fine flowers of Incognita, Lady Mary Boscawen, Ariadne, Homer, Waterwitch, King Alfred, Mrs. Robert Sydenham, Judge Bird, Mrs. J. A. Cooper, C. J. Backhouse, and Golden Bell; the flowers were large, and very clean and bright after so long a journey.

In a setting of blue primroses and golden polyanthuses Mr. W. A. Watts, St. Asaph, showed a number of seedling daffodils, very few of which were named.

VEGETABLE COMMITTEE.

Messrs. Sutton and Sons, Reading, had a fine exhibit of vegetables and salads, arranged most tastefully in baskets and boxes. The cabbages included beautiful heads of Sutton's April, Harbinger, and Flower of Spring, the latter being in good form; Broccoli Snow White was excellent, without protection. The peas included Empress of India and Early Giant, both in fine condition; seakale, rhubarb, mushrooms, and a large variety of salads were in excellent condition. The cucumbers Sutton's Market were pictures for early April; in fact, the whole exhibit demonstrated what can be done by proper selection of varieties and cultural skill.

CERTIFICATES AND AWARDS.

First Class Certificate.—To Nephrolepis Marshalli compacta, from Messrs. H. B. May and Sons, Edmonton; to Oncoba spinosa Routledgei, from Charles E. Shea, Esq., Foots Cray, Kent; to Miltonia Bleuana var. Peetersiæ, from Firmin Lambeau, Esq., Brussels; and to Odontoglossum Ossulstoni The Shrubbery var., from Messrs. Charlesworth and Co., Haywards Heath.

Award of Merit.—To Odontioda Rosefieldiensis, from De Barri Crawshay, Esq., Rosefield, Sevenoaks; to Auriculas Mrs. Gardiner and Mrs. Harry Veitch, from Mr. James Douglas, Great Bookham; to Pelargonium Maxim Kevalesky, from Messrs. H. Cannell and Sons, Swanley; to H.T. Rose Marcelle, from Messrs. Paul and Sons, Cheshunt.

MEDALS.

Silver-gilt Flora.—To Mr. A. Wilson, Bridgwater, for daffodils; to Messrs. Barr and Sons, Covent Garden, for daffodils; to Miss F. W. Currey, Lismore, Ireland, for daffodils; to Messrs. W. Cutbush and Son, Highgate, for carnations, etc.; to Messrs. James Veitch and Sons, Chelsea, for shrubs and greenhouse plants.

Silver-gilt Banksian.—To Mr. H. Burnett, Guernsey, for carnations; to Mr. G. Prince, Longworth, for roses; to Messrs. Charlesworth and Co., Haywards Heath, for orchids; to Messrs. Sander and Sons, St. Albans, for orchids.

Silver Flora.—To Messrs. Cartwright and Goodwin, Kidderminster, for daffodils; to Messrs. James Carter and Co., Raynes Park, for a garden exhibit; to Messrs. R. and G. Cuthbert, Southgate, for flowering shrubs; to Messrs. Mansell and Hatcher, Rawdon, Leeds, for orchids; to Messrs. Stuart Low and Co., Enfield, for orchids; to Messrs. W. B. Hartland and Sons, Cork, for orchids; to Sir Jeremiah Colman, Bart. (gardener, Mr. Collier), for orchids; to Lissadell Bulb Farm, Lissadell, for daffodils; to Messrs. Stuart Low and Co., Enfield, for carnations, acacias, etc.

Silver Banksian.—To de Barri Crawshay, Esq. (gardener, Mr. Stables), Rosefield, Sevenoaks, for orchids; to Messrs. Armstrong and Brown, Tunbridge Wells, for orchids; to Messrs. J. and A. McBean, Cooksbridge, for orchids; to S. Larkin, Esq. (gardener, Mr. Hale), for orchids; to Mr. F. H. Chapman, Rye, for daffodils; Messrs. W. B. Hartland and Sons, Cork, for daffodils; to Robert Sydenham, Ltd., Birmingham, for daffodils; to Messrs. R. H. Bath, Ltd., Wisbech, for daffodils and tulips; to Mr. Paine, Kildare, for alpine plants; to Messrs. H. Cannell and Sons, Swanley, for pelargoniums; to Messrs. H. B. May and Sons, Edmonton, for ferns, roses, etc.; to Messrs. G. Mount and Sons, Canterbury, for roses; to Mr. M. Prichard, Christchurch, for hardy plants; to Mr. L. R. Russell, Richmond, for flowering shrubs.

Bronze Flora.—To Messrs. G. and A. Clark, Dover, for hardy plants; to Messrs. Wm. Paul and Son, Waltham Cross, for roses; to Mr. G. Reuthe, Keston, for hardy plants; to Messrs. T. S. Ware, Lim., Feltham, for hardy flowers; to Messrs. John Waterer and Sons, Bagshot, for rhododendrons.

Bronze Banksian.—To Messrs. Barr and Sons, Covent Garden, for hardy flowers; to Messrs. Blackmore and Langdon, Bath, for polyanthuses; to Mr. J. Box, Lindfield, for hardy plants; to Mr. A. Hemsley, Crawley, for hardy plants; to the Misses Hopkins, Shepperton, for hardy flowers; to Mr. Chas. Turner, Slough, for rhododendrons; and to Messrs. Heath and Co., Cheltenham, for alpines, etc.

Scottish Horticultural Association.

The April meeting of this association was held in the Goold Hall, 5, St. Andrew Square, Edinburgh, on the 4th inst. Mr. Massie, the president, occupied the chair, and there were 100 members present.

On the suggestion of the President, it was decided by the Council at the opening of the present session to try the experiment of devoting one of the evenings to the young members, who were asked to read short papers or notes on horticulture or any allied subject, and the venture was most gratifying, six papers being intimated. Five only of the entrants were able, however, to come forward. These were: Mr. Ernest Milne, Royal Botanic Garden, Edinburgh, subject, "The Forcing of the Strawberry"; Mr. Wm. Smith, Gosford Gardens, Longniddry, subject, "Fruit Culture in Pots"; Mr. James Reid, Carberry Tower Gardens, Musselburgh, subject, "The Making and Planting of a Rockery"; Mr. Malcolm Phillips, Granton Road Nursery, Edinburgh, subject, "Fern Raising and Growing"; Mr. C. B. Roy, Royal Botanic Garden, Edinburgh, subject, "The Young Gardener's Outlook."

The President offered two book prizes, to be awarded to those who acquitted themselves best in the reading and writing of the papers, and the judges—Messrs. Whytock, Todd, Hay, and Berry—will submit their decisions at the May meeting.

The President intimated that the Council had amongst themselves subscribed a sum of about £200 to start a fund for the foundation of a horticultural institution, and that the Council had commenced the revision of the constitution of the association.

The exhibits were: Fine collection of seedling hybrid amaryllis, from Messrs. Dicksons and Co., Edinburgh; Narcissus poetaz (N. poeticus x N. tazetta), from Messrs. Dobbie and Co., Edinburgh; hybrid Indian rhododendrons, from Mr. Duncan Macdonald, gardener to Mrs. Currie, Trinity Cottage, Edinburgh. Certificates of Merit were awarded to the following: A seedling amaryllis, exhibited by Messrs. Dicksons and Co., Edinburgh; rhododendron Mrs. David Callander (R. Dalhousianum (seedling form) x R. Nuttalli), and R. Mrs. James Currie (R. Dalhousianum (seedling form) x R. Falconeri), exhibited by Mr. Macdonald.

Three new members were elected.

On May 2 Mr. Robert L. Scarlett, Sweethope, Musselburgh, will read a paper entitled "Some Factors in the Production and Storage of Seeds."

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.—W. S., Birmingham: We can most heartily recommend you to join this excellent society. The secretary, Mr. Wm. Collins, 9, Martindale Road, Balham, London, S.W., will gladly send you all necessary information. The meetings of the committee at which the nomination and election of members take place are held in the evening of the second Monday of each month, at the Royal Horticultural Hall, Vincent Square, Westminster.

PLANTING SWEET PEAS.—J. B., Rickmansworth: At the moment of writing the wind is blowing keenly from the north-east, and snowflakes fall every now and then; but probably (and we fervently hope) the weather will have improved before these lines appear in print. Do not plant out for a week or so, unless the weather improves; meanwhile, if the pots are very full of roots, give a little quite weak liquid cow manure every second watering until planting can be done. Stake the rows directly planting is finished, and, if possible, arrange some mats, evergreen boughs, fish netting, canvas, or other protecting material on the north and north-east sides of the sweet pea plot, to break up the cold winds, and thus assist the plants to make new roots. But do not place these means of protection so close to the rows that they will seriously reduce the light and make the plants draw up weakly.

HOEING.—W. R. S., Bromley: We regard the Dutch hoe as an implement of the greatest importance in the garden. In every garden of any size there should be Dutch hoes of several sizes, and these should be kept bright and clean by frequent use. Begin to hoe at once, in the kitchen garden, the herbaceous border, the fruit quarters, and the flower beds; surface cultivation and soil aeration are of the utmost importance, and their value can scarcely be over-estimated. The great mistake, as we have so often pointed out, is that of regarding the Dutch hoe merely as a tool for the eradication of weeds. The hoe should be used so regularly that weeds have no opportunity of living.

PRUNING ROSES.—J. E. G., Worksop: Reve d'Or against the south wall requires comparatively little pruning, beyond the removal of any old exhausted growths to make room for the newer vigorous ones. Fellenberg needs to be thinned out freely, removing small, misplaced, and unnecessary growths entirely; the remaining growths should be shortened a little. Gloire de Dijon should have exhausted growths removed, and the others thinned a little if necessary; hard pruning will defeat the end in view, therefore leave last year's shoots their full length provided they are uninjured; in any case, the only pruning they need is the removal of the unripened or frost-injured tips. Mdme. Abel Chatenay, if for garden purposes, should be pruned back to six or eight buds after the removal of old and superfluous growths; for exhibition purposes, prune back to four or five eyes.

MILDEW ON RADISHES.—D. S. B., Bangor: The radishes have been kept too close and damp as a general rule, and probably ventilation was given when a cold wind prevailed. The radish mildew is not usually a serious disease, and its appearance is generally due to some cultural error. Spray with a solution of sulphide of potassium.

PITMASTON DUCHESS PEAR.—J. C. W., Market Drayton: You are quite right in your contention. The pear now so well known as Pitmaston Duchess was first named Pitmaston Duchesse d'Angoulême. It was raised by Mr. Williams, of Pitmaston, near Worcester, who obtained it by crossing Duchesse d'Angoulême with Glou Morceau. The late Dr. Hogg, who gave the variety its popular name, wrote, "Bearing no resemblance whatever to the former, it might with as much reason have been called Pitmaston Glou Morceau; and, as neither name would be a misapplication, I have called it simply Pitmaston Duchess, it being sufficiently meritorious to stand on its own merits, without borrowing its reputation from any other fruit." We must all feel obliged to the worthy doctor for shortening the title.

CALIFORNIAN ANNUALS.—G. T. N., Ormskirk: So far as we can gather from your friend's description, the seeds must represent the genus Layia. Several species are fairly attractive half-hardy annuals, notably L. calliglossa, yellow; L. elegans, golden and white; L. glandulosa, white, yellow centred; and L. platyglossa, deep yellow. The layias belong to the order Compositæ; the two first named are from a foot to eighteen inches high; the third is rather taller; and the last rarely exceeds a foot in height. Treat as half-hardy annuals, and plant out in the open at the end of May or early in June.

PRUNUS TRILOBA IN POTS.—C. S. P., Chichester: As soon as the plants have lost their flowers prune the growths that have flowered back to two or three eyes from their base; then put the plants in a warm greenhouse or intermediate house, and induce them to grow freely. When the new growths have advanced a little, give weak liquid manure, increasing the strength as the shoots extend, and also the amount of ventilation at the same time. During the summer and autumn stand the plants in a sunny position so that the growths may ripen up and set flower buds. Repotting should be done, if necessary, as soon as the leaves fall, in the early autumn.

METROPOLITAN PUBLIC GARDENS ASSOCIATION.—L. G., Muswell Hill: The secretary of the above association is Mr. Basil Holmes, and his address is 83, Lancaster Gate, W. You will find a very complete list of horticultural societies, with name and address of secretary in each case, in addition to an immense amount of other information of value to those engaged in horticultural persuits, in "The Gardening Year Book for 1911"; 1s. 2d., post free, from the Gardeners' Magazine Office, 148 and 149, Aldersgate Street, E.C.

DYED NARCISSUS.—G. R., Pudsey: The flowers are cut directly they have expanded and the stems are at once placed in an aniline dye (Judson's dyes answer the purpose). The colour is taken up through the stem and soon appears in the flower. White flowers are the best for this process. Some colours are taken up more readily than others, but green, red, pink, and deep yellow are usually effective.

DISEASED PEACH TREE.—H. M., Huddersfield: We find no trace of insect infestation on the small piece of growth sent, but the colour of the leaflets at once suggests that the tree is suffering from a bad attack of the silver leaf disease. This is a fungus pest concerning which very little is at present known, and no cure has as yet been found for it. Sometimes only a portion of a tree suffers, but in other cases the trees gradually grow weaker and soon succumb. Remove the affected parts, and if the tree shows no signs of improving, take it out and burn it, re-

SWEET PEAS

Reach the greatest perfection when grown with Canary Guano. This Fertilizer increases the size and brilliance of the blossoms and doubles their number. The Fertilizer may be applied at time of sowing and as a top dressing during the early part of growth. Try it. Canary Guano is used all over the world and is sold by practically all Seedsmen.

In Tins, **6d., 1/–,** and **2/6,** and in bags from **3/6** to **20/–** each.

FOR GARDEN AND GREENHOUSE USE CANARY GUANO.

Further particulars sent post free by the manufacturers—

THE CHEMICAL UNION, LTD, IPSWICH.

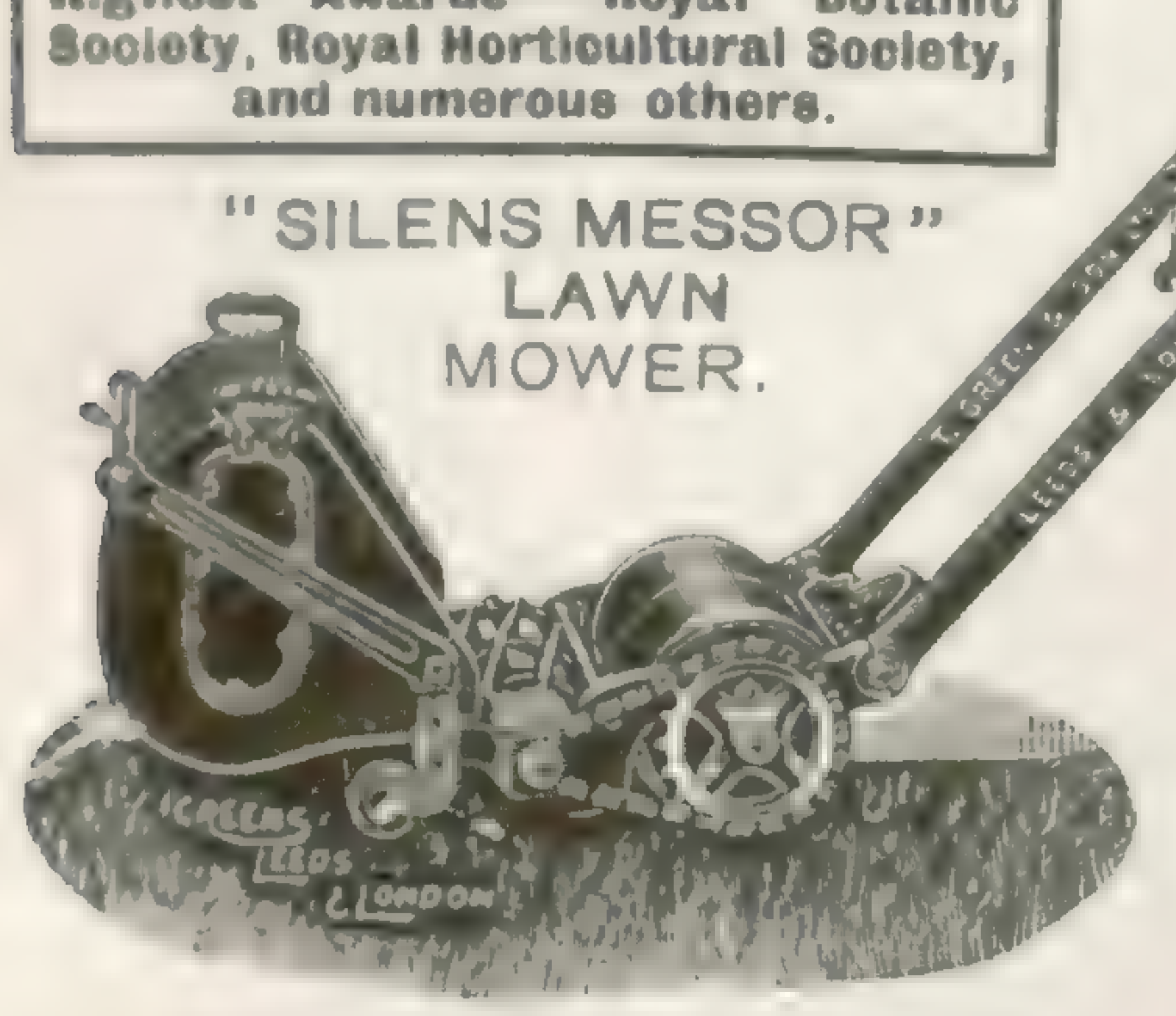
APPOINTED BY ROYAL WARRANT, HORTICULTURAL MACHINE MAKERS TO HIS MAJESTY KING GEORGE V.

GREEN'S LAWN MOWERS

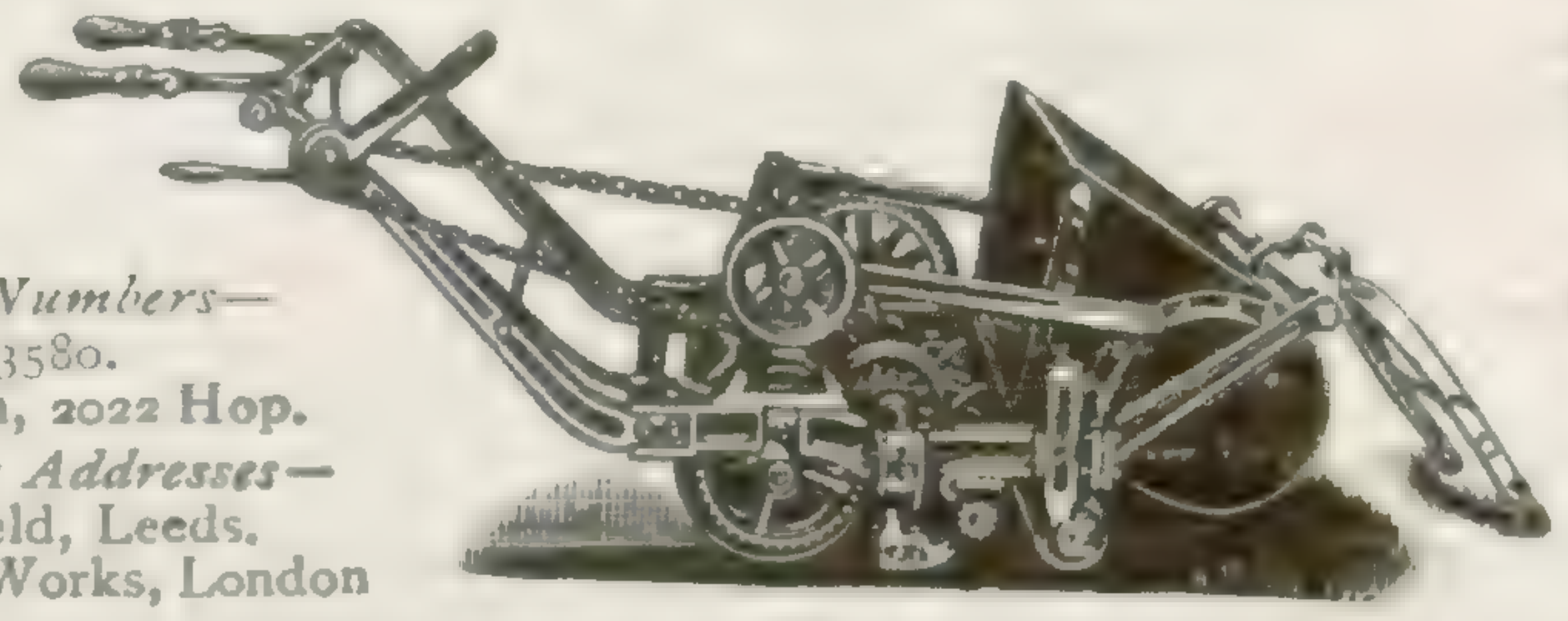
THE FIRST, FOREMOST, and BEST in the WORLD. Hundreds of Thousands are in use. Established nearly a Century.

Highest Awards — Royal Botanic Society, Royal Horticultural Society, and numerous others.

"SILENS MESSOR" LAWN MOWER.



PONY, AND HORSE MOWER
Either "Silens Messor" Pattern or Wheel-Geared.

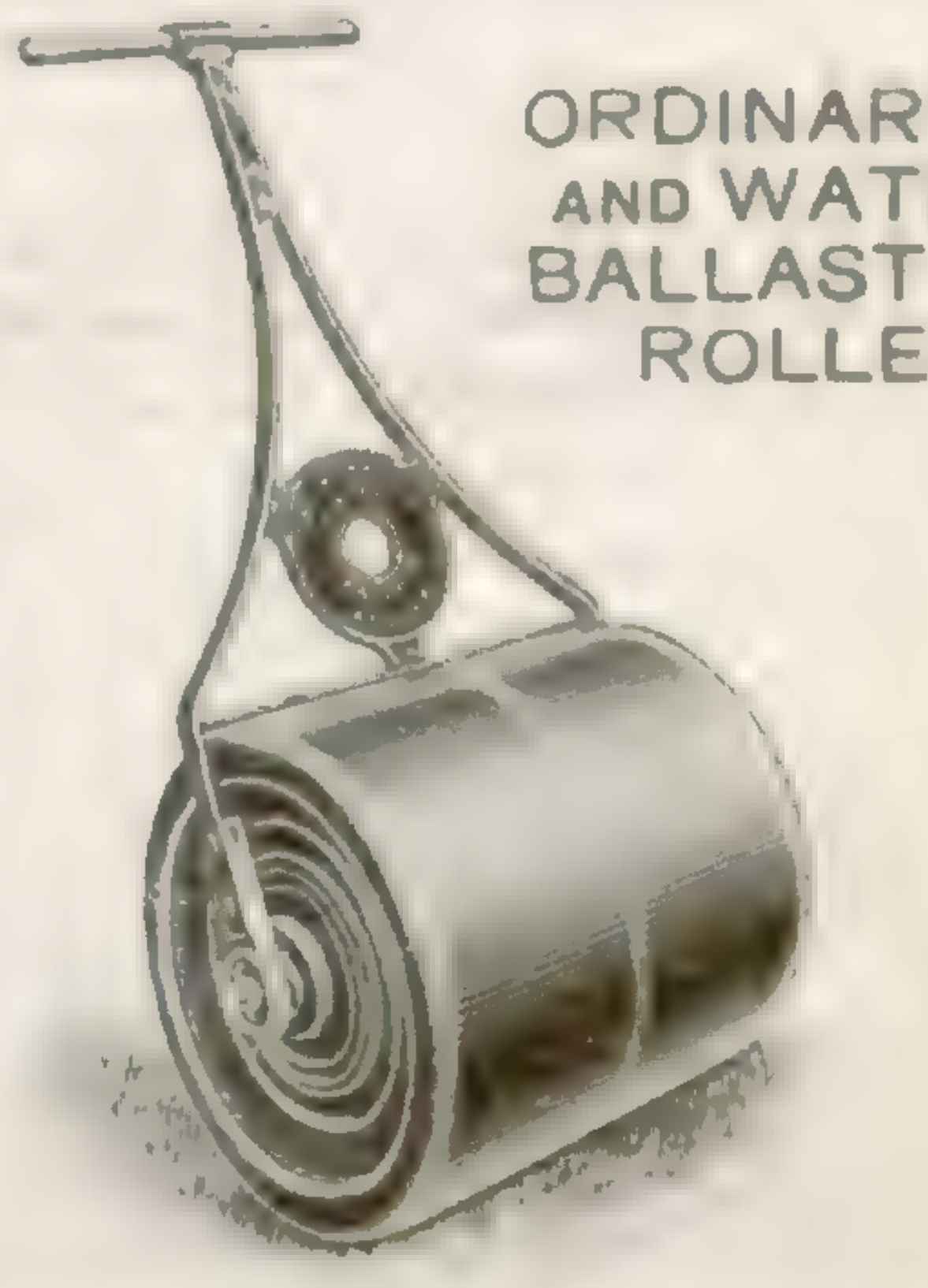


Telephone Numbers—
Leeds, 3580.
London, 2022 Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London

They may be had of any Ironmonger or Seedsman in the United Kingdom.

Please write for ILLUSTRATED PRICE LIST No. 1 FREE.

ORDINARY AND WATER BALLAST ROLLERS



MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E.

WELL BORING.

MERRYWEATHERS' ECONOMIC SYSTEM.

Merryweathers' men with Steam Tackle boring a well.

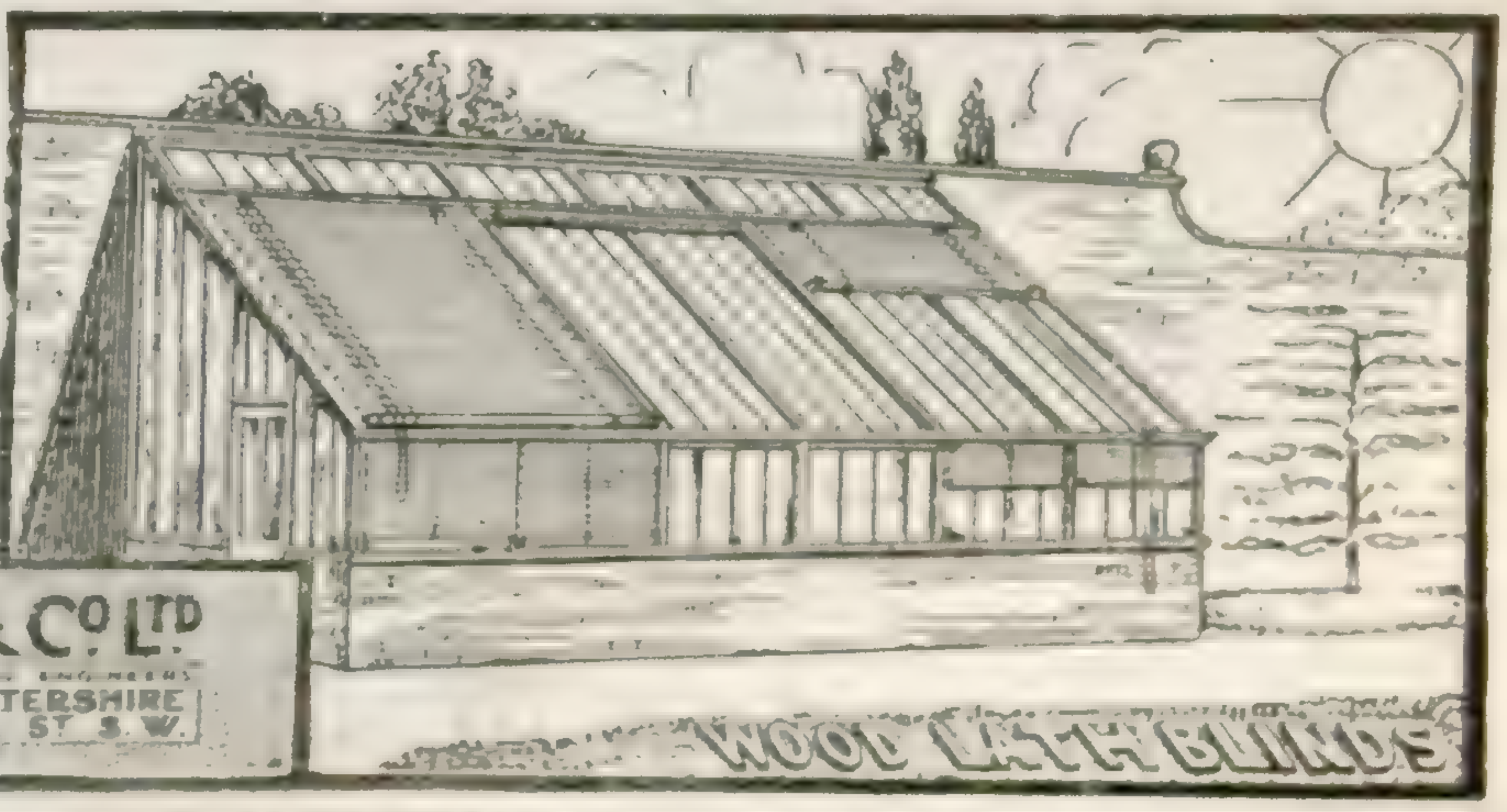
Pure and Abundant Supplies.
MEN AND TACKLE SENT
AT A MOMENT'S NOTICE.
Work Carried Out with Economy and Despatch.

Write for Book on "Water Supply to Mansions."

MERRYWEATHER & SONS,
63, LONG ACRE, LONDON, W.C.

WOOD LATH BLINDS ADMIT SUFFICIENT SUNLIGHT SO NECESSARY FOR Growing Purposes.

Write for Special Catalogue.



MESSENGER & Co. Ltd.
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office 122 VICTORIA ST S.W.

TRUST THE FIRM BEHIND THE BOOT!

OVER 100 YEARS REPUTATION IS BEHIND EVERY PAIR.

Why Not Try a Pair of

NORWELL'S "PERTH BOOTS"

THIS SPRING?

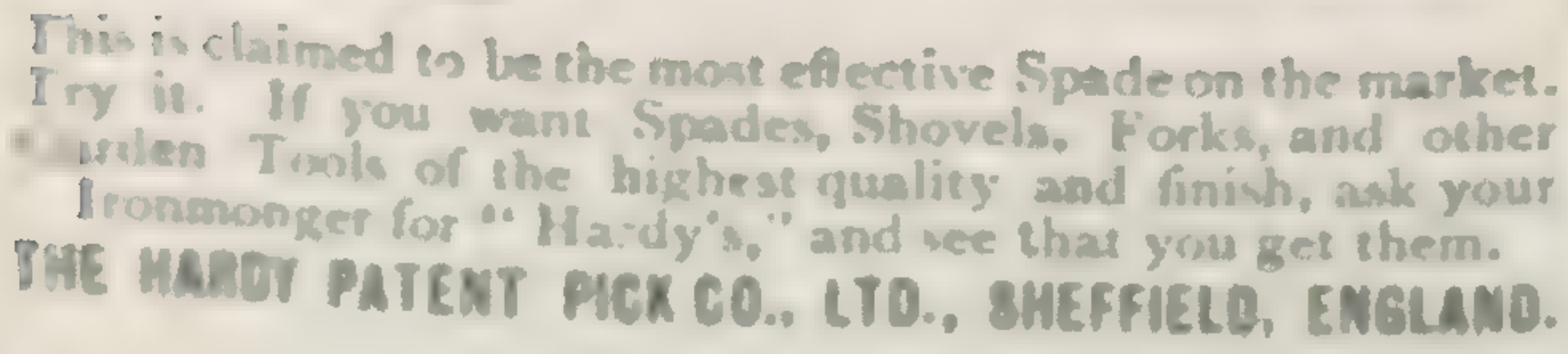
The right thing to do is to write for our Illustrated Free Catalogue to-day. Just drop us a Post Card, and by return you will get the description and details of the Best Value in footwear for gardeners and all those exposed to trying country wear. We are specialists, and have the greatest confidence in our power to fit and please you. To-day, and every day, we are supplying families with footwear whose great grandfathers and mothers wore our celebrated "Perth Boots."

The Perth Gardener Boot - 10/9 *FOR STRONG WEAR.* | **The Perth Calf Skin Gardener Boot** 11/9 *FOR GREENHOUSE WEAR.*

SEE PAGE 10 OF OUR LIST FOR SPECIAL BOOTS FOR GARDENERS.

NORWELL'S Boot Factory, PERTH, N.B. ESTABLISHED OVER 100 YEARS.

A NEW GARDEN SPADE (Carter's Patent).



This is claimed to be the most effective Spade on the market. Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

make the border, and plant a good tree as early in the autumn as possible. If the latter can be obtained from the wall outside, in the same garden, and is a comparatively young tree, no crop will be lost.

BIENNIALS.—J. H., Lyndhurst: For your purpose you cannot do better than choose foxgloves, Canterbury bells, Campanula pyramidalis, Brompton, Intermediate, and East Lothian stocks (want cold frame protection in winter), Œnothera biennis, most of the verbascums, and sweet williams.

NAMES OF PLANTS.

T. L., Surrey.—1, Bifrenaria Harrisonæ; 2, probably Eupatorium Haageanum; 3, Platyclinis glumacea.

H. J., Coventry.—The anemones sent are representative of a well selected St. Brigid strain.

C. B., Stone.—1, Eupatorium Haageana; 2, E. riparium; 3, Daphne Mezereum; 4, Dracæna congesta; 5, Cycas circinalis; 6, Phormium tenax.

NEW BOOKS.

SALADS AND THEIR CULTIVATION.

By T. W. Sanders, F.L.S. (W. H. and L. Collingridge, 148 and 149, Aldersgate Street, E.C.). Price 1s. net; post free 1s. 2d.

It may be difficult to determine the season at which the liberal use of salads are likely to prove most beneficial to health, if there be any difference, but there can hardly be two opinions as to the constituents of the salad bowl being more highly appreciated in the opening months of the year than at any other period. Hence the appearance of the book now before us is most opportune. It reminds us of the supplies of tender lettuces, the delicately flavoured dandelion, the pungent mustard and cress, and the crisp radishes that are now being drawn from pits and frames, where the glass culture of salads is carried out on systematic lines, and it shows very clearly how large are the supplies that may be obtained from warm, sheltered borders and open quarters at no distant date, provided the needful preparations are made. The publication of the book is not only opportune at the present time, for its usefulness in reminding us of the supplies that may be had now and a little later on, but it makes its appearance when active preparations should be made for the provision of salads during the summer, and, indeed, for a later period. In other words, the author has placed at the disposal of his readers full information on the production of salads throughout the year at exactly the time it is likely to prove the most useful. All classes of salads are, as a matter of course, included in the book, and with the aid of the advice given there should be no difficulty in maintaining supplies of high quality throughout the year.

The usefulness and interest of the book is materially enhanced by the author giving, in addition to ample information on the selection and cultivation of the various plants used in salads, advice on the preparation of salads, and of dressings suitable, the latter being so varied as to render it an easy matter to prepare dressings suited to the most divergent tastes.

PRACTICAL SCHOOL GARDENING.

By Percy Elford, M.A., F.C.C., and Samuel Heaton, F.R.H.S. (Henry Frowde, The Clarendon Press, Oxford, and London.) Price, 2s. net.

The authors of this work are the secretary and horticultural instructor respectively to the Oxfordshire Education Committe; and in the manual before us they afford conclusive proofs as to their thorough acquaintance with gardening, and the best methods of instructing the young in the multitarious details of the gentle art. The manual should prove of immense value to those who are engaged in teaching horticulture in schools; and the young gardener who is filled with a desire to attain a high position in his profession will also find it of much assistance.

MARKETS.

COVENT GARDEN.

Flowers.

Business is brisk and supplies are good and prices steady.

		s. d.	s. d.
Azaleas, white	per doz. bun.	3 0	4 0
Adiantum cuneatum	per doz. bun.	4 0	6 0
Anemone fulgens	per doz. bun.	1 6	2 6
Anemones (French)	per doz. bun.	1 0	1 3
Arums	per doz.	2 0	4 0
Asparagus	per doz. bun.	7 0	10 0
Camellias	per doz.	1 6	2 0
Cattleyas	per doz.	[illegible] 0	10 0
Carnations	per doz.	1 6	2 0
,,	per doz. bun.	8 0	10 0
Croton leaves	per bun.	1 0	2 6
Cypripediums	per doz. blooms	2 6	3 0
Freesia alba	per doz. bun.	1 9	1 6
French fern	per doz. bun.	2 6	4 9
Gardenias	per doz.	3 0	5 0
Lilac	per bun.	2 6	3 6
Lilium auratum	per bun.	2 6	4 0
,, speciosum	per bun.	2 6	2 6
,, longiflorum	per bun.	2 5	3 6
Lily of the Valley	per doz. bun.	6 0	10 0
Marguerites	per doz. bun.	2 0	3 0
Myosotis	per doz. bun.	3 0	3 6
Narcissus	per doz. bun.	1 6	3 0
Odontoglossums	per doz. blms.	2 6	3 0
Pelargoniums	per doz. bun.	5 0	7 0
Ranunculus	per doz. bun.	3 0	4 0
Roses	per doz.	1 0	8 0
Smilax	per doz. trails	2 0	3 0
Stocks, white	per doz. bun.	4 6	5 6
Tuberoses	per doz.	6 4	0 6
Tulips	per doz. bun.	6 0	10 0
Violets	per doz. bun	1 3	3 0
,, Parma	per bun.	1 0	1 6
Wallflowers	per doz. bun.	1 0	2 0

Fruits.

Australian and Cape fruits find a ready sale; grapes are fairly plentiful for the time of year; oranges are excellent. Business is good.

		s. d.		s. d.
Apples, English	per bush.	7 6	to	10 0
,, American	per barrel	20 0		26 0
,, Oregon Newtowns	per box	10 0		14 0
,, Canadian	per barrel	23 0		26 0
Bananas	per bun.	4 0		12 6
Chestnuts	per bag	10 0		20 0
Cranberries	per case	9 0		10 0
Grapes, English	per lb.	2 6		10 6
,, Belgian	per lb.	2 0		3 0
,, Cape	per case	3 6		7 6
,, Guernsey	per lb.	0 9		1 3
,, Almeria	per barrel	15 0		25 0
Lemons	per case	8 0		18 0
Nectarines, Cape	per case	8 0		12 0
Oranges	per case	10 0		25 0
,, Jamaica	per case	8 0		9 6
,, Californian Navels	per case	12 0		15 0
,, Sevilles	per case	7 6		8 6
Peaches, Cape	per case	3 0		6 0
Pears, Cape	per case	4 0		6 0
Pineapples	each	2 6		4 6
Plums, Cape	per case	5 0		8 0
Pomegranates	per case	1 9		2 3
Strawberries	per lb.	3 0		10 0

Vegetables.

The recent bad weather has affected the supplies of greenstuffs and best qualities are dear. Rhubarb and salading find a ready sale.

		s. d.		s. d.
Artichokes, Globe	per doz.	1 6	to	3 6
,, Jerusalem	per ½-sieve	1 0		1 6
Asparagus	per bundle	1 0		4 6
Beans, Jersey	per lb.	0 7		0 9
Beet	per bush.	1 0		1 6
Cabbages	per tally	3 6		7 0
Carrots	per doz. bun.	2 0		3 0
Cauliflowers	per crate	5 0		7 6
Chicory	per lb.	0 3½		0 4
Cucumbers	per doz.	2 6		4 0
Endive	per doz.	2 0		3 0
Horseradish	per doz. bun.	9 0		12 0
Lettuce	per doz.	1 6		2 0
Mint	per doz. bun.	1 0		2 0
Mushrooms	per doz. lb.	6 0		12 0
Onions	per bag	4 0		6 6
,, Spanish	per case	6 0		7 0
Parsnips	per bag	2 0		3 0
Parsley	per ½-sieve	1 3		1 6
Peas, Jersey	per lb.	2 6		3 0
Radishes	per doz. bun.	1 0		1 6
Rhubarb	per doz.	0 8		1 0
Seakale	per doz. pun.	8 0		10 0
Spinach, French	per crate	4 0		5 0
Tomatoes, Canary	per crate	10 0		14 0
,, English	per lb.	1 0		1 6
Turnips	per bag	2 0		3 0
Watercress	per doz. bun.	0 6		0 6½

LONDON POTATO MARKETS.

Supplies are short and prices high.

		s. d.	s. d.
Evergood	per ton	90 0	95 0
King Edward	per ton	95 0	100 0
Maincrops	per ton	100 0	105 0
President	per ton	90 0	95 0
Up-to-Dates	per ton	95 0	105 0

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above sea-level, 150 feet.

Date.	Sunshine.	Temperature of the Air.			
1911. April 2 to April 8.		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
April 2—Sunday	—	41	41	43	40
,, 3—Monday	4 42	38	35	45	38
,, 4—Tuesday	4 48	37	35	42	32
,, 5—Wednesday	5 36	32	30	34	30
,, 6—Thursday	4 48	32	32	36	26
,, 7—Friday	5 30	35	34	41	29
,, 8—Saturday	1 24	40	38	48	28
Means	(total) 2 48	36	35	41	32

Date.	Rain.	Temperature of the Soil at 9 a.m.			Lowest Temperature on Grass.
1911. April 2 to April 8.		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
April 2—Sunday	0·27	44	43	43	40
,, 3—Monday	trace	43	43	43	36
,, 4 Tuesday	0·05	40	42	43	25
,, 5—Wednesday	trace	40	42	44	28
,, 6—Thursday	—	37	41	43	22
,, 7—Friday	0·01	37	40	43	23
,, 8—Saturday	—	37	39	43	22
Means	(total) 0·33	39	41	43	28

FORTHCOMING ENGAGEMENTS.

WEDNESDAY, April 19.—Royal Horticultural Society of Ireland; Spring Show.

Devon Spring Flower Show, at Plymouth; two days.

THURSDAY, April 20.—Ipswich Spring Show.

TUESDAY, April 25.—Royal Horticultural Society: Daffodil Committee meets at 11.30; Fruit, Floral, and Orchid Committees at 12 o'clock; lecture at 3 p.m. on "The Tulip—Its Problems and History," by Rev. J. Jacob; Scientific Committee at 4 o'clock.

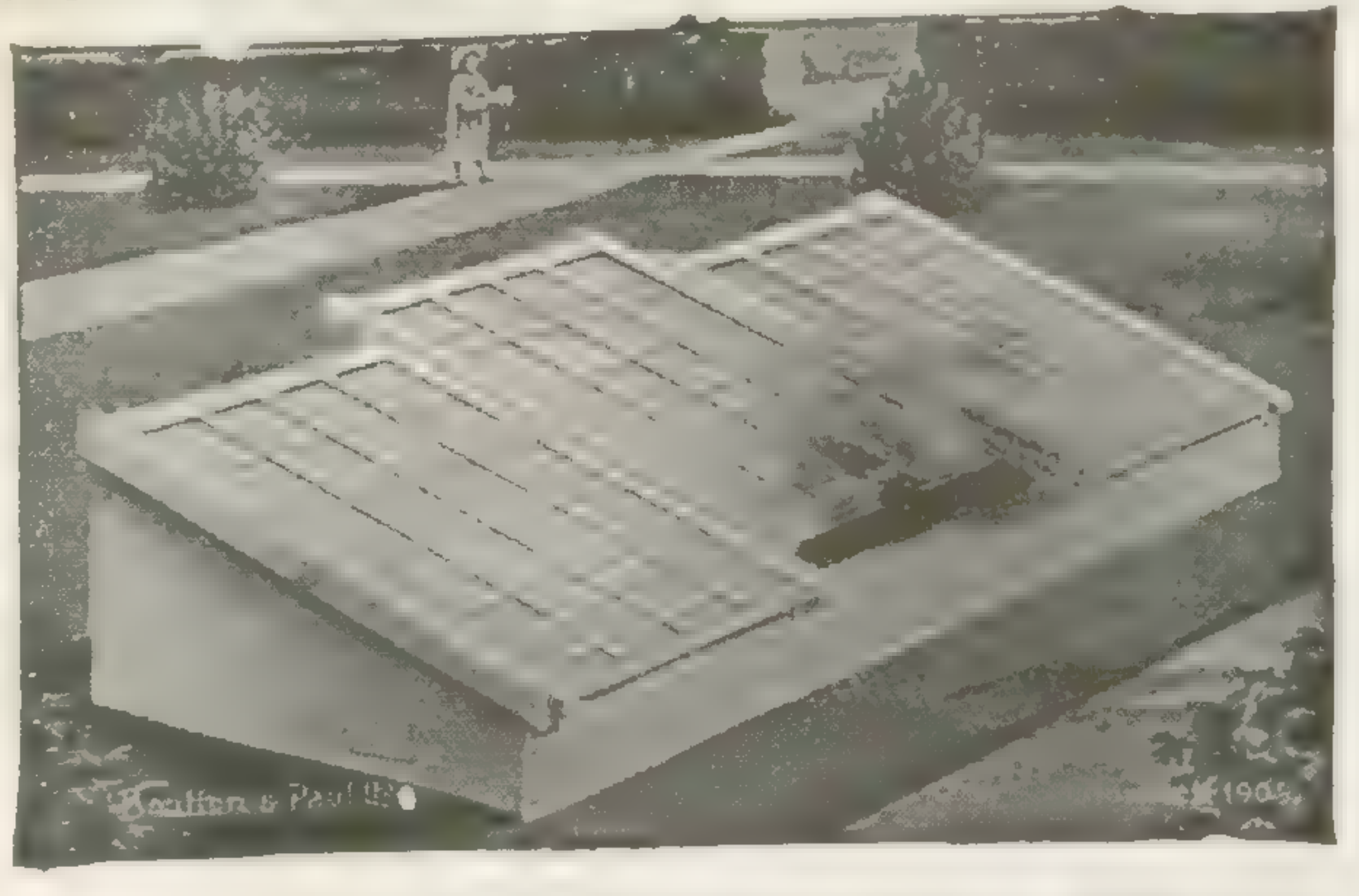
National Auricula and Primula Society's Show, in conjunction with Royal Horticultural Society.

National Rose Society; Special General Meeting, 3 p.m. Rose Conference with address by Rev. J. H. Pemberton, 5 p.m., Dinner 7 p.m., at Westminster Palace Hotel, Victoria Street, S.W.

Kalanchoe Dyeri.—As exhibited at the meeting of the Royal Horticultural Society on February 28 last, this kalanchoe, as a decorative plant, shows greater promise than it has hitherto done. The individual plants composing a group put up by Messrs. J. Veitch and Sons were about a couple of feet high, the stout erect stems being clothed with broadly ovate leaves of a succulent character, and terminated by large heads of white flowers somewhat suggestive of an enlarged jasmine. In size they greatly surpass any of the other kalanchoes, while another distinctive feature of K. Dyeri is the fact that it blooms early in the year, whereas most of the others flower in the summer.—W. T.

Cucumbers.—These simply revel in sunny weather, and should have copious supplies of water at the root, and also overhead. Damp down the house at nightfall with soot water or liquid manure. Give top-dressings as early and as often as necessary; when the roots are observed coming through the last dressing that is the time more soil should be given. We planted out a batch of Everyday on February 14, and cut beautiful fruits on March 22. I had other varieties, but none came into use so quickly as Everyday. Sow seeds now for frames and for further supplies. Good fruits can be grown in vegetable frames, after other produce has been used; in fact, when hotbeds are used for forcing asparagus and carrots they make very suitable places for both melons and cucumbers, with but little more attention, and melons grown in this way come in very useful.—W. A. Cook, Leonardslee Gardens.

SECURE AN EARLY PRODUCTION
of Fruit and Flowers by using our well made
No. 75. MELON AND CUCUMBER FRAME.



4 ft. by 6 ft. ... £2 0 0 | 12 ft. by 6 ft. £3 19 0
8 ft. by 6 ft. ... 3 0 0 | 16 ft. by 6 ft. 4 18 0
Painted three coats, glazed 21 oz. glass.

Garden Frames,
in every variety always in stock.

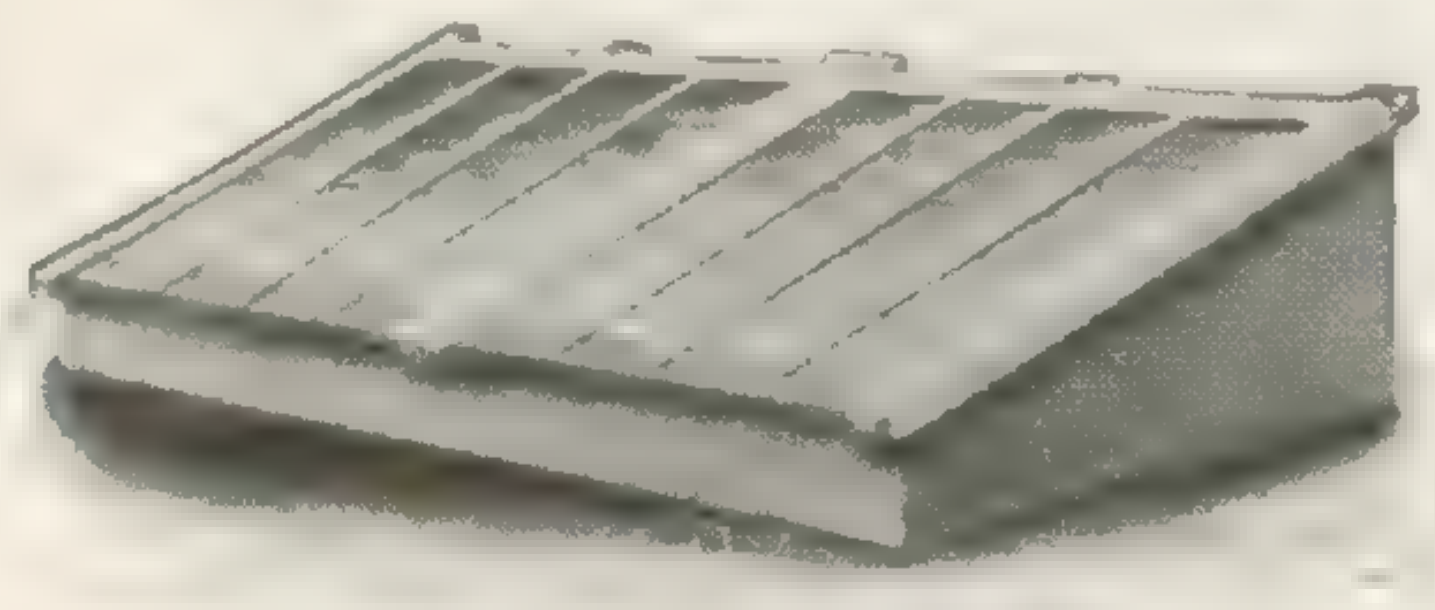
Pit Lights.
6 ft. 1½ in. by 4 ft. Painted and Glazed **14**/- each
Unpainted and Unglazed ... ... **5**/- „

Double Glazed Lights.
4 ft. 7in. by 4 ft. 3 in. Painted and Glazed, **15**/**6** each

Improved Fruit Trays.
20 in. by 19 in., **18**/- doz.; 24 in. by 15 in., **15**/- doz.
Carriage Paid on one dozen Trays and over.

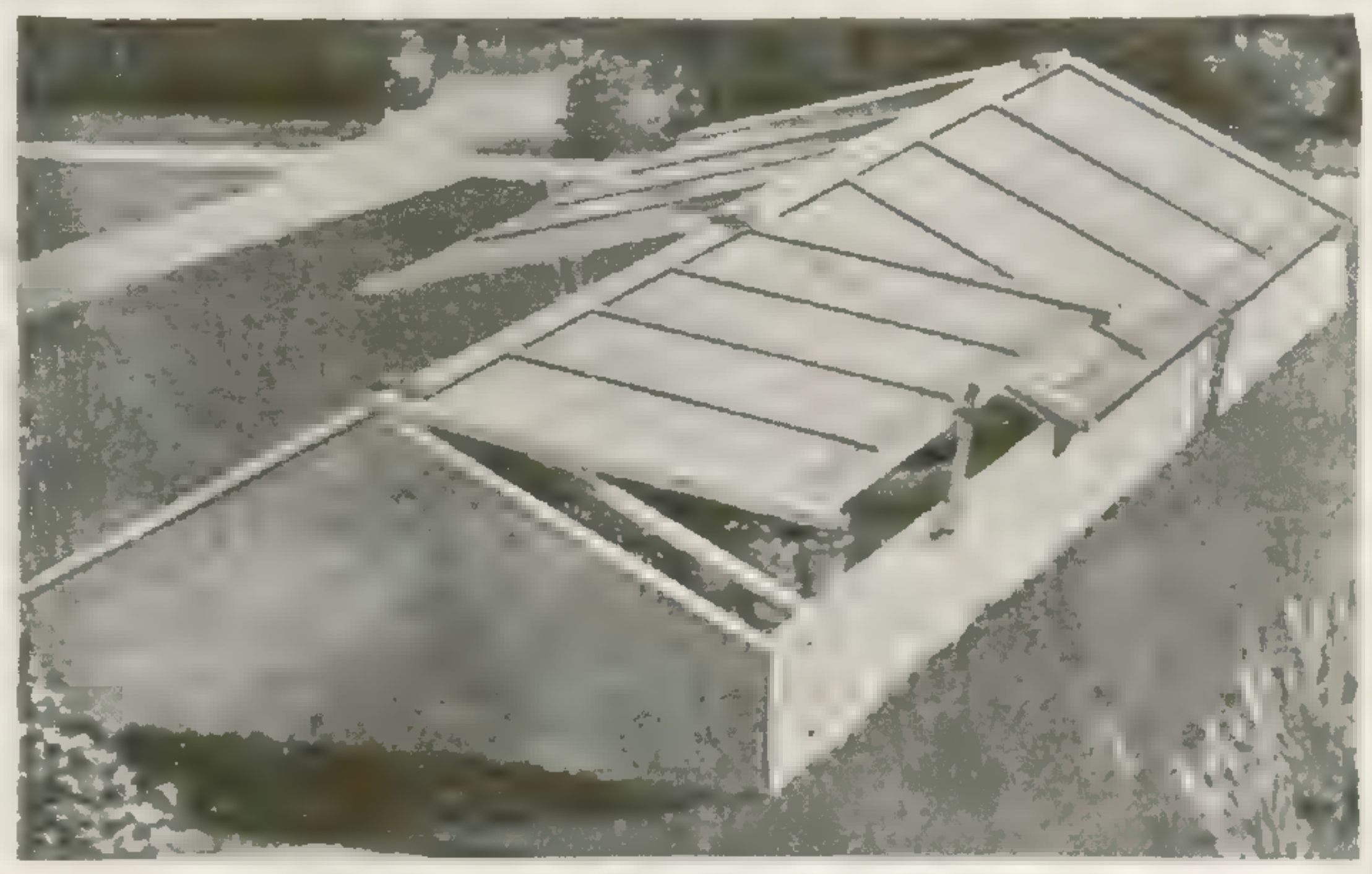
Reed Mats. 4 ft. 6 in. square, **20**/- doz.

OUR SPECIALITIES.
SEND FOR PRICE LISTS.



No. 77. **VIOLET FRAME**
(as illustrated).
6 ft. by 4 ft. £1 15 0
9 ft. by 4 ft. 2 7 6

No. 60.
PORTABLE PLANT PRESERVER
6 ft. by 3 ft., £1 14 0
6 ft. by 4 ft., £2 5 0
All Frames and lights Painted three coats. Glazed with 21 oz. glass.



Carriage Paid on all Orders of 40/- value to most Goods Stations in England and Wales.

BOULTON & PAUL, LTD., NORWICH.

Protect your plants NOW—when digging—and ensure DEATH TO WIREWORMS.

If you dig in Vaporite NOW—when preparing your ground—at the rate of 1 lb. to 3 square yards, you will bring this about. Leatherjackets, Wireworms, and other soil pests must be dealt with before planting if you wish for the best results. The small quantity required makes the cost negligible compared with the improvement in the development of your plants and vegetables. The Illustrated Booklet No. 45 sent post free by the Company.

WIREWORMS.
"My gardener is delighted with Vaporite; it kills insects very quickly. The land here is very light, and infested with wireworm."—Mrs. E. A. G., Notts.

CARROTS, ONIONS, etc.
"I find after using Vaporite in the garden I had a much better lot of Carrots, also Onions, and the Potatoes were much better."—T. C., Staffs.

VAPORITE
The ORIGINAL *SOIL INSECTICIDE*

PRICES.
Tins—1½ lbs., **9d.**; 7 lbs., **2**/-; 14 lbs., **3**/-; 28 lbs., **4**/**6**.
Car. forward. Of all Seedsmen.
Casks **7**/**6** ½ cwt.; **11/6** cwt.
Carr. paid from your Seedsman or the Company.

THE
VAPORITE-STRAWSON CO., Ltd.,
(Dept. E),
SPENCER HOUSE,
SOUTH PLACE, LONDON, E.C

MANY YEARS REPUTATION.
EUREKA WEED KILLER
LASTING RESULTS—NO NEW EXPERIMENT.
1/9 TIN FOR 25 GALLONS | 6/- TIN FOR 100 GALLONS | LARGER SIZES AT LOWER RATES
SOLD BY AGENTS. MANUFACTURERS: TOMLINSON & HAYWARD LTD. LINCOLN.
IF ANY DIFFICULTY SENT DIRECT—PAID

Phytobroma
Barr's New Plant Food
For Flowers Vegetables and Fruit
of highest quality & guaranteed analysis

Per cwt., **20/-**; ½ cwt., **12/6**; 28lb., **7/6**; 14lb., **4/6**; 7lb., **2/6**; Sample Tins, **1/-**.
Prepaid orders for 28lbs. and upwards, Carriage Paid. Circular, with full particulars, on application.

BARR and SONS,
11, 12, and 13, KING STREET, COVENT GARDEN, LONDON.

CONTENTS.

PAGE
Answers to Correspondents 292
A Useful Salading 281
Chinese Primulas at Forest Hill 287
Choice Campanulas for the Rockery 286
Exhibitions and Meetings 289
Ferns for Rock Garden Adornment 280
Forsythias 280
Lily of the Valley 282
Notes of the Week 275
Odontoglossum splendidissimum Oakwood var. 279
Pompon Dahlias 284
Royal Horticultural Society's Exhibition ... 277
Some New Perpetual Carnations 279
Transplanting Celery 285
Water Gardening 282
Work for the Week 288

ILLUSTRATIONS.

Portrait of Mr. E. H. Christy, 275; Oncoba speciosa var. Routledgei, 277; Odontoglossum splendidissimum Oakwood var., 279; Well-blanched Examples of the large-leaved Dandelion, 281; Hydrangea hortensis Mdme. Moullière, 283; Pompon Dahlia Queen of Whites, 284; A pleasing arrangement of Alpine Flowers, 285; Primula sinensis Raynes Park White, 287.

NEW HYDRANGEAS.

MDE. MOUILLERE—Producing pure white heads of flower of immense size with great freedom.

LA LORRAINE.—A very free flowering pink variety.

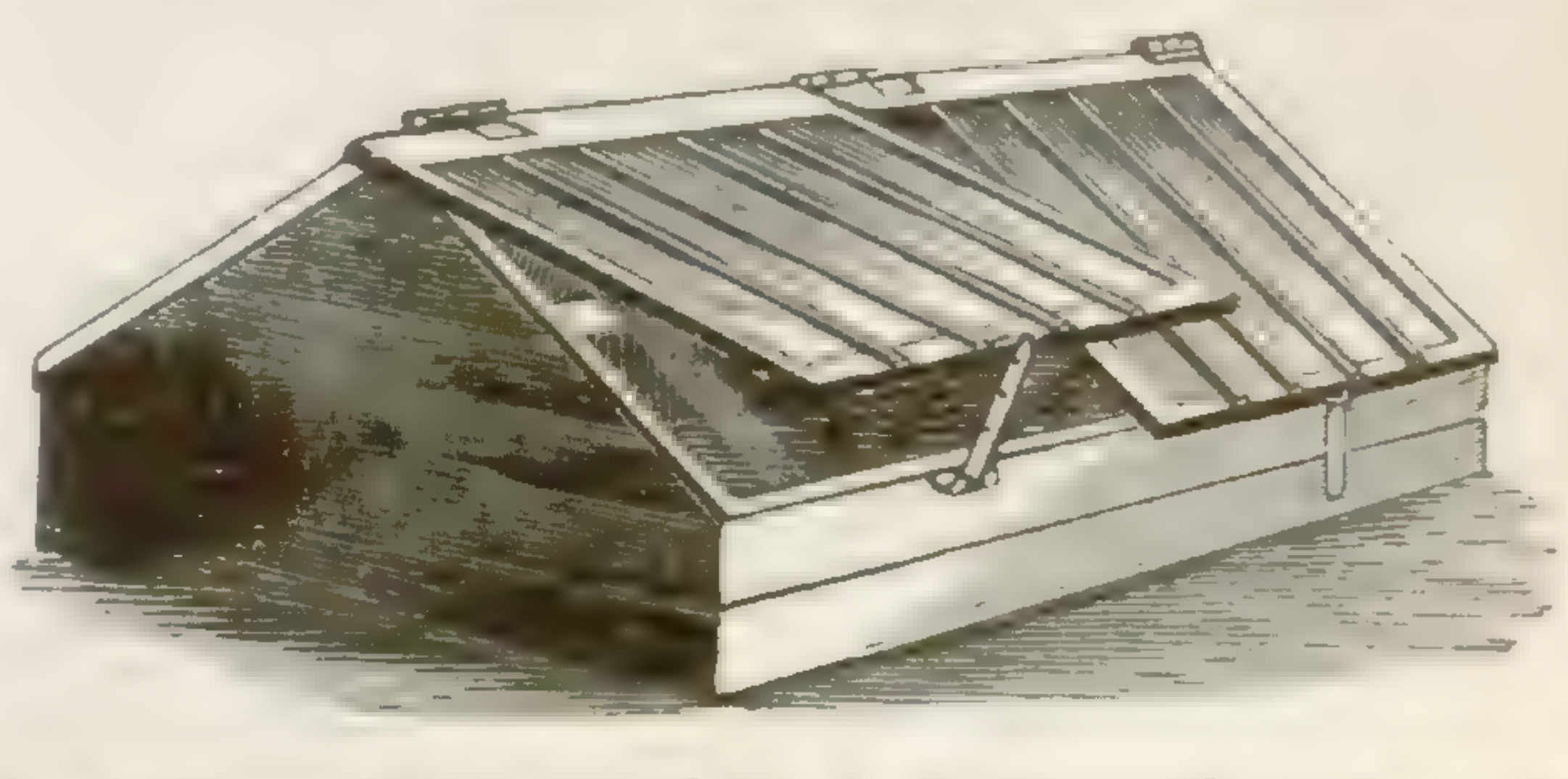
AVALANCHE.—In every way an improvement on the old white favourite Thomas Hogg.

Young plants in 5-in. pots **3**/- each. Six plants for **15**/-. In 3-in. pots **2**/- each, **18**/- doz.

The set of three varieties, one of each, in 3-in. pots, for **5**/-.

STUART LOW & CO.,
BUSH HILL PARK, MIDDLESEX.

PORTABLE PLANT FRAMES
OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices. Glazed and Painted.		£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. „ 4ft. „		2	5	0
6ft. „ 5ft. „		2	15	0
12ft. „ 4ft. „		4	0	0
12ft. „ 5ft. „		4	15	0
12ft. „ 6ft. „		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
ROYAL HORTICULTURAL WORKS,
MIDDLETON, MANCHESTER.

BUDS AND FRUIT SAVED. — GARDEN NETTING. Rotless and Tanned, small mesh, superior quality. Satisfaction guaranteed or money returned. 100 by 1yd., 3s. 9d.; any length and width supplied. LAWN MOWERS, 5 blades, UNEQUALLED VALUE, 13s. 6d. Wheelbarrows, 16s. — POTTER BROS., Dept. M., Frankwell Works, Shrewsbury.

VIOLETS. — Strong-rooted cuttings, all at 2s. 3d. doz.; 15s. 100; Admiral Avellan, Rose Perle, De Parme, Astor, Marie Louise, Semperflorens, J. Raddenburg, Princess of Wales. Clumps, 2s. doz.; 10s. 100; divisions, 1s. doz.; 5s. 100. VIOLET FARM, Shripney, Bognor.

PUBLISHERS' ANNOUNCEMENTS.

THE GARDENERS' MAGAZINE may be obtained by order from all Newsagents, price Twopence, every Saturday. If any difficulty be found, a copy will be posted weekly direct from the Publisher, 148 and 149, Aldersgate Street, London, on the following terms: Twelve Months, 10s. 6d.; Six Months 5s. 6d.

INDEX and Title Page to Vol. LIII. (comprising the weekly numbers from January to December, 1910). Price 2d., by post 2½d.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

CAPT. G. H. BARNETT, Glympton Park, Woodstock, Oxon, wishes to very highly recommend his present **HEAD WORKING GARDENER**; life experience; reducing cause of leaving, 10 years' previous as Gardener and Management small estate; age 39; 1 daughter aged 14. Address E. JACOBS, as above.

GARDENER (Head, where several are kept); **thoroughly experienced in all branches, Inside and Out; grapes, peaches, melons, stove and greenhouse plants; four and a-half and eleven years' excellent references as head**; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head); **general all-round** knowledge; life experience in large and well-kept establishments; 13 years Head in last situation; age 39; married; gentleman will recommend. T. HARRIS, 2, Mill Lane, Cheshunt, Herts.

GARDENER (Head Working), married, no **family; age 36; life experience in all branches**, Inside and Out; excellent references; Wife dairy, or house, if required. A., 27, Effingham Road, Reigate, Surrey.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Clees Hall, Gisburn, Clitheroe.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working).—Mr. F. BERRILL, of Hall Close, Kettering, wishes to recommend FRANK DAINTY, who is a thoroughly capable Gardener, with life experience Inside and **Out; 8 years in present situation; age 30; married**, no children. DAINTY, Hall Close, Kettering.

GARDENER (Head Working).—Mr. GOULD, Shernfold Park, Frant, Sussex, highly recommends his Foreman, A. DAY, as above, thorough **practical experience Inside and Out; excellent references**; age 30.

GARDENER (Head Working, where three or more are kept).—Mr. LAST, The Gardens, Homewood, Chislehurst, Kent, can with every confidence recommend his Foreman, W. WAITE, as above; 13 years' experience, gained in good establishments; five years present situation. Married when suited.

GARDENER (Head-Working), requires SITUATION; experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants, **Flower and Kitchen Garden, Hardy Fruit, etc.; good references; married, no family. W. S., 73, Allen** Street, Maidstone, Kent.

GARDENER (Head Working, where 3 or more are kept), life experience in all branches, excellent references, age 27, married when suited. Distance no object. L. BARKER, Abbots Worthy, **Winchester, Hants.**

GARDENER (Head of two or three, or good Single-handed, with or without help); age 26, single; life experience Inside and Out, leaving no fault; excellent references; would go abroad. GARDENER, Hove Cottage, Avenue Road, Branksome, Bournemouth.

GARDENER (Head Working, where three or four are kept), thoroughly experienced in all branches, inside and out; also land and stock if required; age 38; married, no family; disengaged. HARE, Lynton, Bisley, Woking.

GARDENER (Head Working), age 35, life experience in all branches; inside and out; house and table decoration; highest references. JAMES GATES, Papworth, Everard, Cambs.

MR. CARTER, Head Gardener to Col. **W. H. O. Duncombe, will highly recommend C.** HARDY as JOURNEYMAN (Inside) to any Gardener. Apply C. HARDY, Waresley Park, Sandy, Beds.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushrooms, ridge or flat; Kitchen, Lawn, Flower Garden. Special Prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in **all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable** place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (Single-handed); little or no glass, 10 years' experience in present place; **single; age 28. W. REEKS, 89, Amwell Street, Hoddesdon, Herts.**

MR. SALTER, The Gardens, Avenue House, Church End, Finchley, highly recommends W. BICKER as GARDENER (single-handed, or with help), experienced Inside and Out; at present in his employ; age 28; Eastern Counties preferred.

FOREMAN or CHARGE; retail nursery or shop; floral work, garden contracting, jobbing, etc.; fern growing; or all-round private gardener. L., 17, Seaford Road, Enfield.

FOREMAN (Inside or General).—Mr. G. NYE, late Head Gardener to Capt. R. Sloane **Stanley, highly recommends A. HOBBS; age 27; life** experience; disengaged; height 6 feet. The Gardens, The Steyne, Manor Road, Bournemouth.

GARDENER (Second, where more are kept); Inside or Inside and Out; 9 years' experience, 2 years as Second; age 25, good references. HARRISON, Gardens, Stockwood, Luton.

GARDENER (Second of two or three, or Single-handed), Inside and Out; 10 years' ex**perience; all-round work; age 24. FUDGE, 22,** Markham Road, Winton, Bournemouth.

GARDENER (Second), seeks SITUATION, inside or inside and out, 10 years' experience; good references, single; disengaged. Address F.P., 66, Fircroft Road, Upper Tooting, London, S.W.

GARDENER (Second, or Single-handed, Inside and Out), eight years experience in all branches; 2½ years present situation; excellent references; age 25, single; abstainer. GREENFIELD, 4, Myrtle Terrace, Lancing, near Worthing, Sussex.

MR. PERKINS, Gardener to late Mr. **Rydon, Prylands, Highbury New Park, can** recommend J. ANTHONY as Second of three or four. London Colney, St. Albans, Herts.

JOURNEYMAN (First, Inside), in good establishment, age 24, eight years' experience, good references, can be well recommended. T. **BLIGH, The Barton, Helland, Bodmin, Cornwall.**

JOURNEYMAN (Inside and Out), age 23; nine years' experience, 3 years present situation; three years Inside, leaving when suited, well recommended by Head Gardener. F. BASTON, The Gardens, Cricket House, Chard, Somerset.

H. M. HARVEY will be pleased to recommend F. WOODLAND to any Gardener requiring a thorough good JOURNEYMAN Inside or Inside and Out; 8 years' practical experience; highest references. F. WOODLAND, Cricket, Chard, Somerset.

ORCHID GROWER seeks SITUATION, Trade or Private; age 41; 19 years with Messrs. **J. and A. A. McBean, Cooksbridge; for the past three years here at Balcombe, growing 20,000 practically** single-handed, the culture of which is open to inspection by the keenest Orchid critic; disengaged April **22nd; wages 25s. and cottage. G. ALLCORN, Deanland**, Balcombe, Sussex.

ORCHID GROWER requires SITUATION to take charge of collection or small place where Orchids speciality; experience Burford Lodge, etc.; excellent references. Apply S. BURROUGH, Royal Gardens, Sandringham.

H. E. DENNIS, Esq., St. Leonards Park, Horsham, recommends H. JUTSON (18), JOURNEYMAN (Inside and Out); 3 years' references. **JUTSON, St. Leonard's Park Gardens, Horsham**, Sussex.

WANTED, a SITUATION as UNDER GARDENER, by a Single Man; middle age; 7 years' good character. Address N., 78, High Street, Burbage, Wilts.

GARDENER (Under) seeks SITUATION, where 3 or 4 are kept, well up Inside and Out; **7 years' experience; age 21; excellent** references. **H. F., Ladds House, Sandhills, Witley, Surrey.**

GARDENER (Under); private establishment or Grower Market Nursery; 14 years' experience, Inside and Out, private and nursery; good references. LEWINGTON, 169, High Street, Hampton Hill, S.W.

MR. HUBBARD will highly recommend A. W. WHAYMAN as GARDENER (Under), Inside and Out, or pleasure ground work; age 21; 7 years' experience; 4 years' present situation. Ad**dress, The Gardens, Oakhill, Ipswich**

UNDER GARDENER, Young Man, seeks SITUATION as above; age 19-20; good refs.; 3 years 9 months last place. C. T. COLESHILL, 37, **Wolsey Road, Hampton Hill, Middlesex.**

JOURNEYMAN, Under; age 19; 5 years experience in good gardens; 2 years last place, at Worth Park, Sussex; highly recommended. FUNNELL, South Park, Reigate.

YOUNG MAN, age 20¾, seeks SITUATION as Inside and Outside; 4 years' experience. Home Counties preferred. H. E. HANNER, Milgate Park, Maidstone.

YOUTH, 18, seeks SITUATION as IMPROVER in good establishment; 4 years' experience, good references; bothy preferred. Apply A. F. JORDAN, High Street, Pewsey, Wilts.

YOUNG MAN seeks SITUATION as GARDENER (Under); experienced. Apply G. HAYNES, care of Mr. Skinner, Staple, Dartington, near Totnes.

IMPROVER (Inside); past three years under glass; used to Watering, Stoking, and Inside work; quick, active, and obliging; highly recommended; age 18. PESTERFIELD, Beedingwood Gardens, Horsham.

IMPROVER (Inside or Inside and Out); three years' experience; age 18 years; not afraid of work, good references. F. SKELTON, The Gardens, Mount Pleasant, Bishop Auckland, Durham.

IMPROVER seeks SITUATION in pleasure Grounds; used to Horse Mower; 12 months' experience, strong and willing; good references. A. **LONG, Preston, Canterbury**

MR. LAY, Gardens, Cheriton Rectory, Shorncliffe, Kent, would like to place his Son, age 19, in a good establishment as IMPROVER; three years' experience. Bothy preferred.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For APRIL 22, 1911.

Please Repeat my Advertisement.

Name ....

Address ....

....

Date ....

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

Situations Wanted—*continued.*

YOUTH, age 18, seeks SITUATION as IMPROVER (Inside or Inside and Out), four years' good experience. Apply B. MORGAN, Colwinstone, near Cowbridge, Glam.

GROOM - GARDENER seeks SITUATION; age 31; good references; honest, sober, and industrious. W., 152, London Road, East Grinstead.

ELECTRICIAN - HANDYMAN requires SITUATION on country plant; married, one child; competent. CRAWLEY, 13, Lancaster Road, Westbourne Park.

YOUNG MAN seeks SITUATION on pleasure grounds; 5 years' experience with horse and hand machines; well recommended, age 22; fond of cricket. F. GARDINER, Home Farm, Glympton, Woodstock, Oxon.

Situations Vacant.

LADY requires, early in May, SINGLE-HANDED GARDENER, where help is given. Some work possible for wife as laundress or caretaker. Remote district on border of South Wales. Apply R., 7,623, c/o Bantin, New Quebec Street, W.

WANTED immediately, a thoroughly competent GARDENER, single-handed, help given when required: thorough knowledge glass, vines, melons, cucumbers, tomatoes, etc.; fruit and vegetables; must be good man Inside and Out; highest references essential; knowledge of bees preferred. Write, stating wages, age, and experience. DR. EWENS, West Chase, Maldon, Essex.

WATSON'S LAWN SAND.

(THE ONLY ORIGINAL.)

Destroys Daisies, Plantains, Dandelions, &c., and at same time Invigorates the Grass.

34/- per cwt.; 56lb. Kegs, **18/-**; 28lb. Tins, **9/6.** Canisters, **5/-, 2/6,** and **1/-.**

Please see that you get the genuine article.

Sold by Seedsmen and Nurserymen.

A. J. BARBOUR & Co., 8, Upper Fountaine St., LEEDS

PEA TRAINERS. The "Paragon" and "Peatold" (patent), made 4ft., 5ft., and 6ft. high, and any length. Prices from 8s. 6d. per set, carriage paid. Write for leaflet. THE PEA TRAINER CO., Bridge Street, Banbridge.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

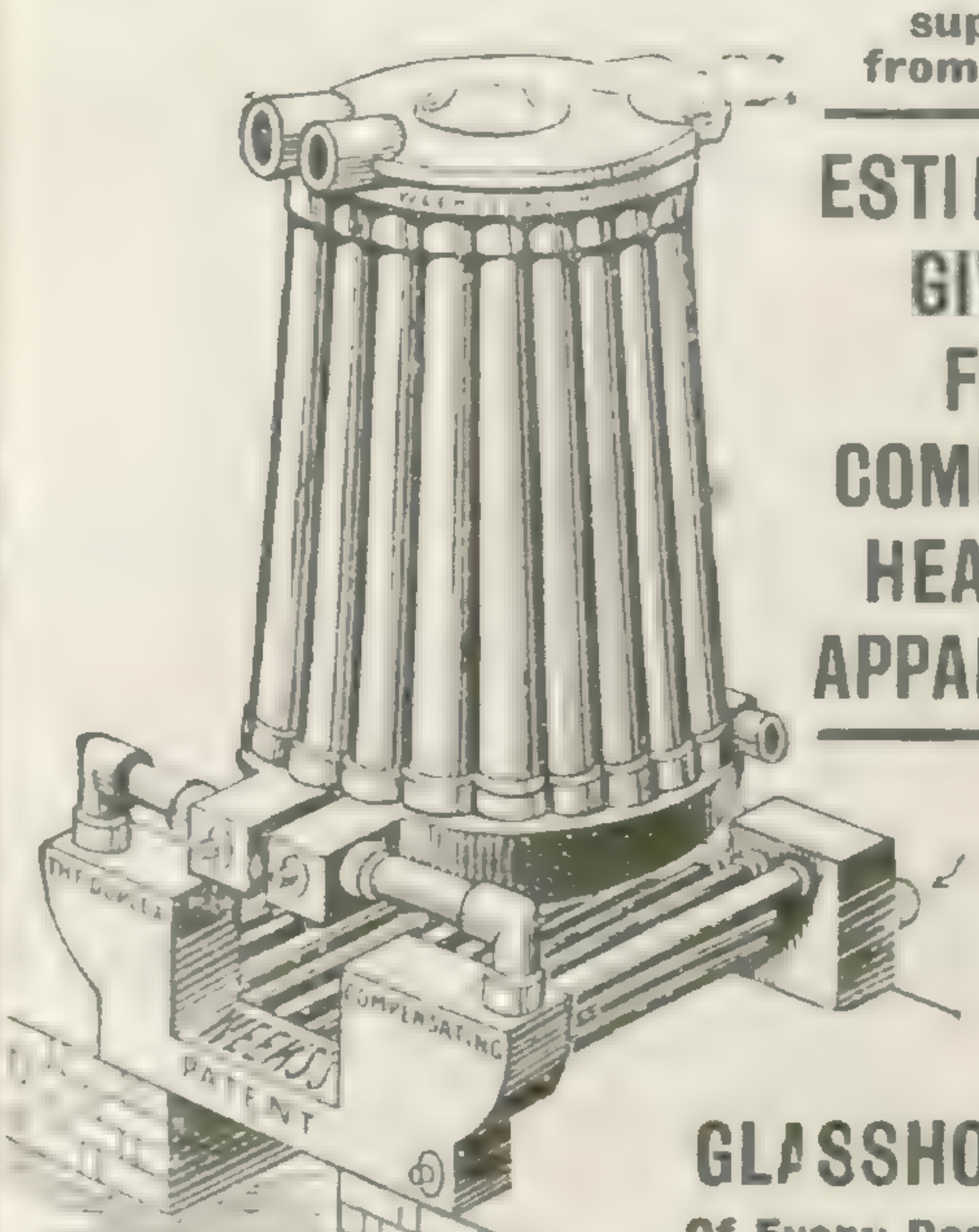
Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to

EPPS & CO., Ringwood, HANTS.

WEEKS'S BOILERS

supplied from stock.



ESTIMATES GIVEN FOR COMPLETE HEATING APPARATUS

GLASSHOUSES.

Of Every Description.

J. WEEKS & CO.,

72, Victoria Street,

WESTMINSTER, S.W.

PERGOLAS.
Larch Poles at 1d. per foot. List Free.
PATRICK'S, Otley, Yorks.

OAK CRAMBLES.
Peeled and dry at ½d. per foot.
PATRICK'S, Otley, Yorks.

ROSE ARCHES.
Larch Poles at 1d. per foot.
PATRICK'S, Otley, Yorks.

TREE STAKES AND GARDEN RODS.
Lists free.
PATRICK'S, Otley, Yorks.

THE FAVOURITE WEED KILLER.

SANDWITH'S
PREMIER
WEED
KILLER

As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for **6/-**; drum, **2/-**. 12 galls. for **16/-**; drum, **6/-**. 20 galls. for **26/8**; drum, **10/-**. 40 galls. for **50/-**; drum, **20/-**.

EITHER LIQUID OR POWDER.

Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,

The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

HAILSTORMS.

REDUCTION in PREMIUMS

From 25th March, 1911, Premiums will be subject to a BONUS of 15%.

Numerous claims paid, one amounting to £886 1s. 0d.

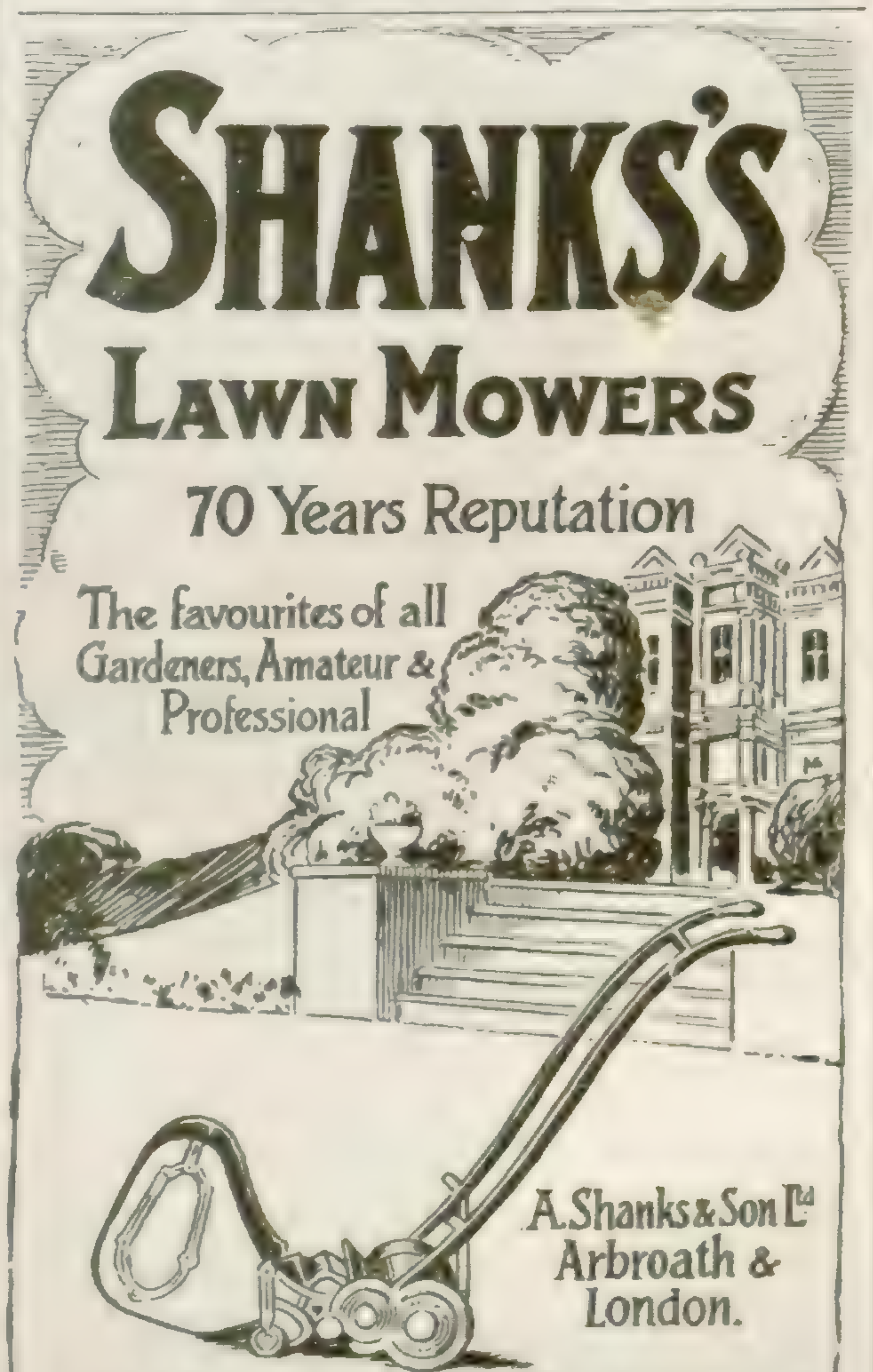
ARE YOU INSURED?

Apply for particulars—

The Nurserymen's Hailstorm Insurance Corporation, Lim.,

41 & 42, KING ST., COVENT GARDEN, W.C.

HARRY J. VEITCH, Chairman.
ALEX. JAMES MONRO, Secretary.


SHANKS'S
LAWN MOWERS
70 Years Reputation
The favourites of all Gardeners, Amateur & Professional
A. Shanks & Son Ltd
Arbroath & London.
Of All Ironmongers & Seedsmen.

LOOK! TANNED GARDEN NETTING, small mesh 25yds. long by 1 yd. wide, 1s.; by 2yds. wide, 2s.; by 3yds. wide, 3s., either car. paid; any size made. Odd pieces Netting for protecting bush fruit beds, 14lbs., in bag, 3s. Package free. STANLEY GORDON, Bank House, Rye.

Dr. J. COLLIS BROWNE'S

THE ORIGINAL AND ONLY GENUINE

Chlorodyne

ADMITTED BY THE PROFESSION TO BE THE MOST VALUABLE REMEDY EVER DISCOVERED

The Best Remedy known for

COUGHS, COLDS,

ASTHMA, BRONCHITIS.

Cuts short all attacks of SPASMS, HYSTERIA, and PALPITATION.

The only Palliative in NEURALGIA, TOOTHACHE, GOUT, RHEUMATISM.

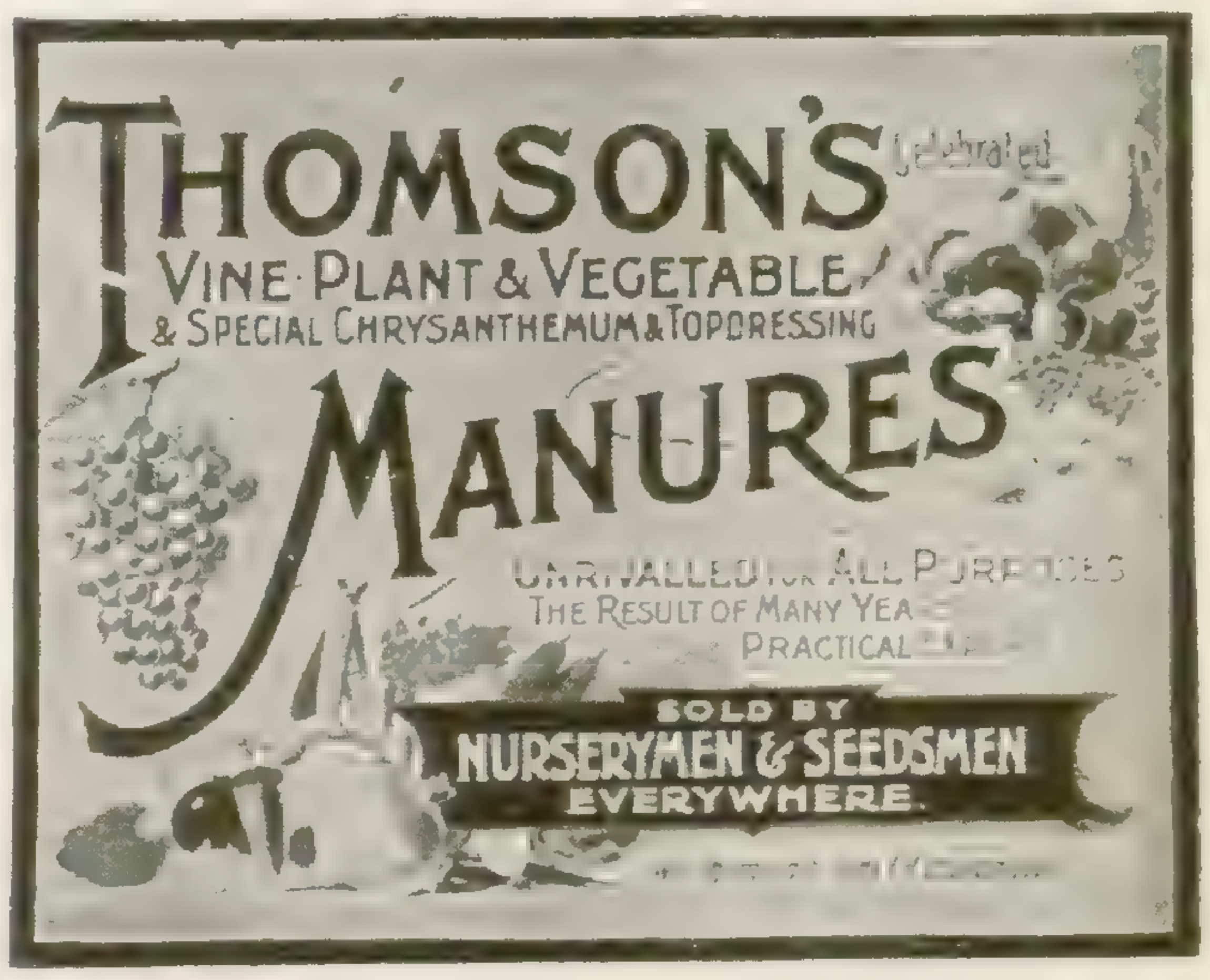
Acts like a Charm in DIARRHŒA and DYSENTERY.

Refuse imitations and insist on having

Dr. J. COLLIS BROWNE'S Chlorodyne.

Convincing Medical Testimony with each bottle.

Of all Chemists, **1/1½, 2/9, 4/6.**



FLOWER POTS.

SANKEY'S
FAMOUS
GARDEN
POTS

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant

Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:

RICHARD SANKEY & SON, LD.,

Bulwell Potteries,

NOTTINGHAM.

REGISTERED

THE

APRON

That has Come to Stay.

WORN BY ALL THE LEADING GARDENERS.

LOOK AT THE PRICE.

In Dark Blue Ponicus Twills,

1/9, Postage **3d.** extra.

Or in Dark Blue Ponicus Serge,

3/9, Postage **3d.** extra.

WRITE FOR ONE TO-DAY.

SHAW & MONTGOMERY

(PENMAN'S),

628, Argyle St., Glasgow, W.

MODERN GLASSHOUSES

as supplied by MESSENGER and CO., Ltd., are made of the best materials, and only capable and reliable workmen are employed in the erection thereof.

The following letter was recently received by us on the completion of a contract for a well-known Member of Parliament.

February, 1911.

"I should not be doing my duty to your workmen if I did not at once tell you, on the completion of your work, how pleased I have been with each and all of them.

"They have been most obliging throughout the whole job, and have endeavoured to do everything in an efficient and thoroughly workmanlike manner, and I must congratulate you upon having such capable employees."

Catalogues and Estimates Free.

MESSENGER & Co. Ltd.
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office 122 VICTORIA St. S.W.

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

Extracts from 35th annual collection of reports:—

NATIVE GUANO for POTATOES, VEGETABLES, etc.

A. J. Beard, Erdington: "Potatoes, splendid, free from disease. Best I ever had."—H. Chester, Nantwich: "Best onion manure I ever used. Grand for onion fly."

NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc.

J. Cant, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. Frampton, Titchfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED,** 29, New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted

---

NOTICE. — Always use PORTER'S IMPROVED COIL STAKES for Carnations, no tying required; last a lifetime. Sample doz. with price list 1s. carriage paid. A. PORTER, Stone House, Maidstone.

ONCE USED. ALWAYS USED.

The 'PATTISSON' LAWN BOOTS

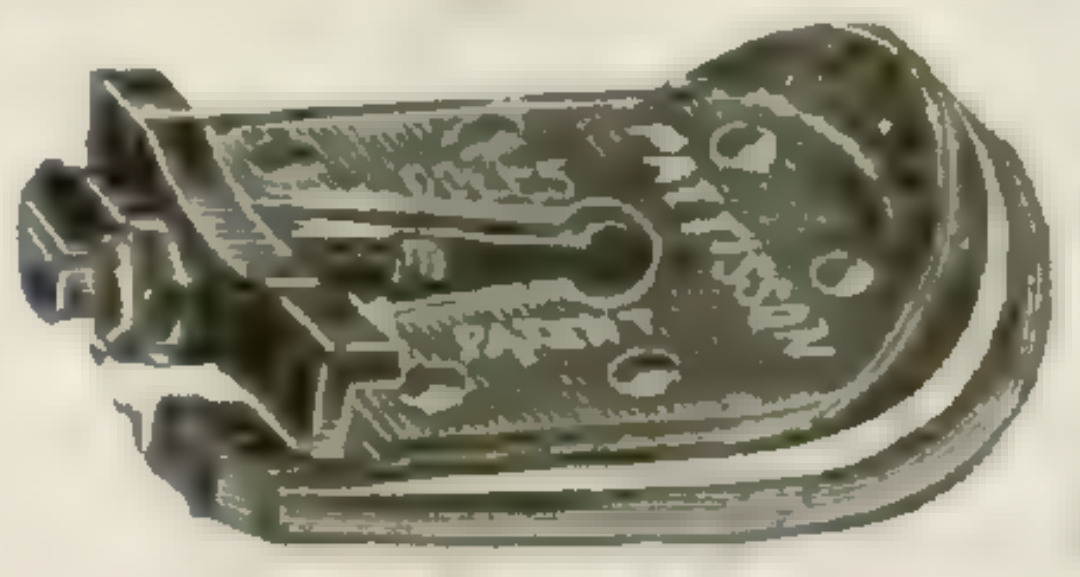


Fig. 1.

Simplest! Strongest! Most Economical!

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS.

Silver Medal—
Royal Horticultural Society.

Hundreds of Testimonials.

The Field says: **"As good as anything that could be devised."**

Illustrated Price List from—

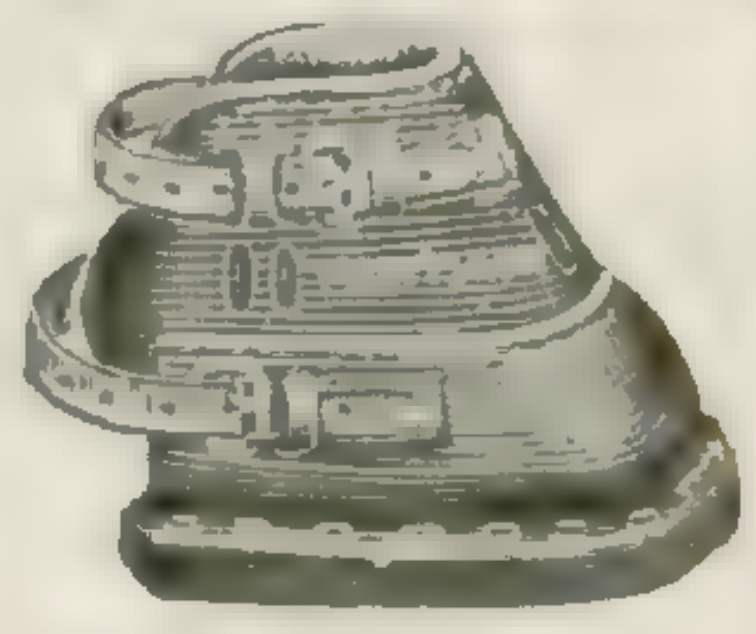


Fig. 2.

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM, S.W.

4/6. —RUSTIC ARCHES, 4s. 6d.; biggest and best; 8ft. x 4ft. x 18in. All Trellis and Rustic Work at comparative low price. London address—BRAMBLE WOOD CO., 30, Caroline Place, Bayswater.

"CARRUSTICIDE."

The Best and Cheapest Remedy for Carnation Rust and other Fungoid Diseases.

A well-known Carnation Grower writes:

Dear Sir, The Nurseries, March, Cambs.

"During the 27 years I have been growing Carnations (Perpetual and American) I have tried most of the fungicides placed on the market, but yours is the best. It is a pleasure to see how "Carrusticide" catches hold of the Rust and destroys it. I should say your preparation will be extensively used when it is better known." Yours very truly,

GEO. CLARKE.

One gallon makes 25 gallons for spraying purposes —Price 3s. per quart, 7s. 6d. per gallon. Special quotations for larger quantities.

Terms: Cash with order.

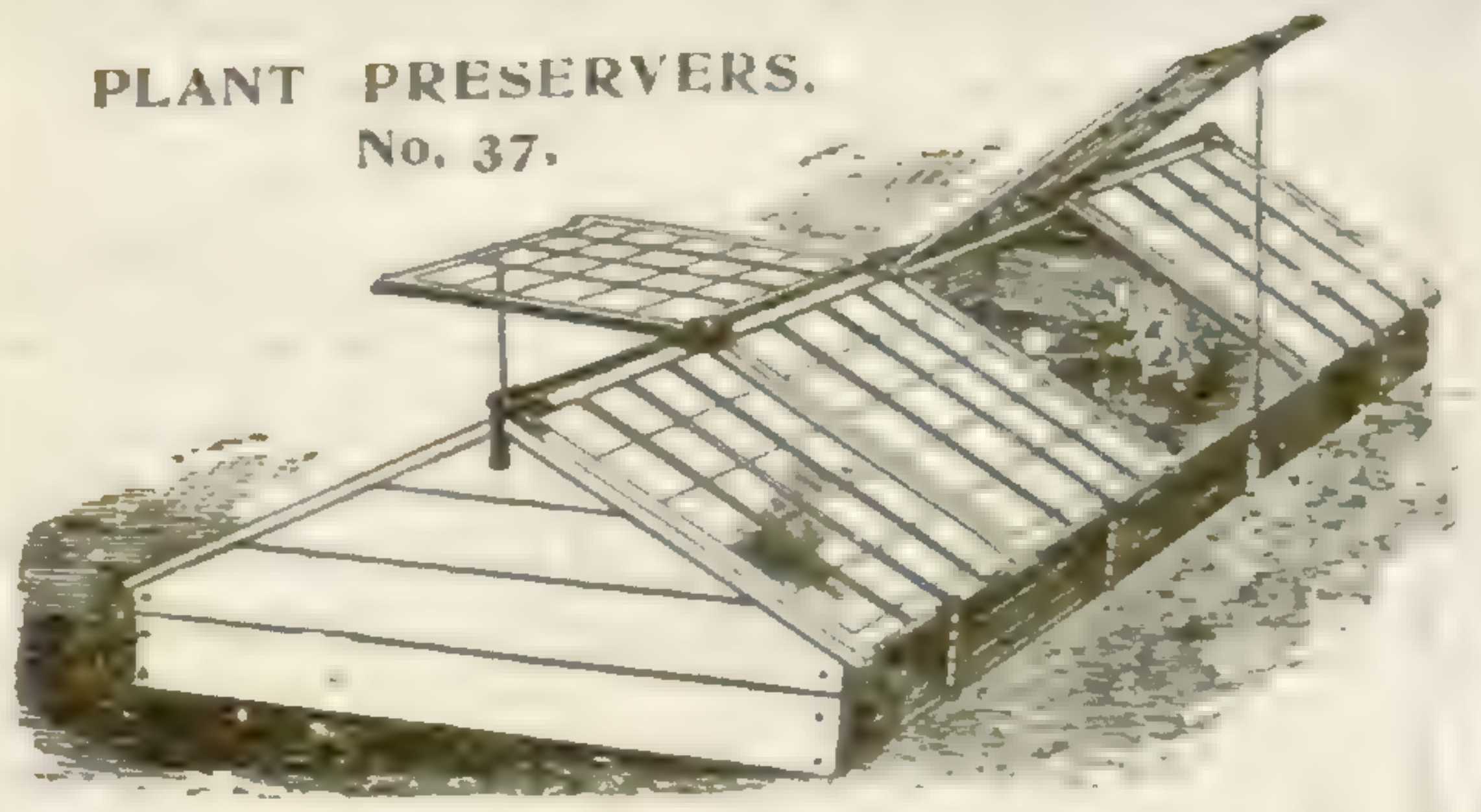
H. SAMUEL, Ph.C., M.P.S., Horticultural Chemist
55, High Street, Leighton Buzzard.

TANKS! TANKS!! TANKS!!!

Now is the time to buy cheap Tanks. We have several hundreds for sale, which have come off ships we have broken up. All capacities from 25 gallons. List free on application. THOS. W. WARD, LIMITED, Sheffield.

Wm. DUNCAN TUCKER & SONS, Ltd.

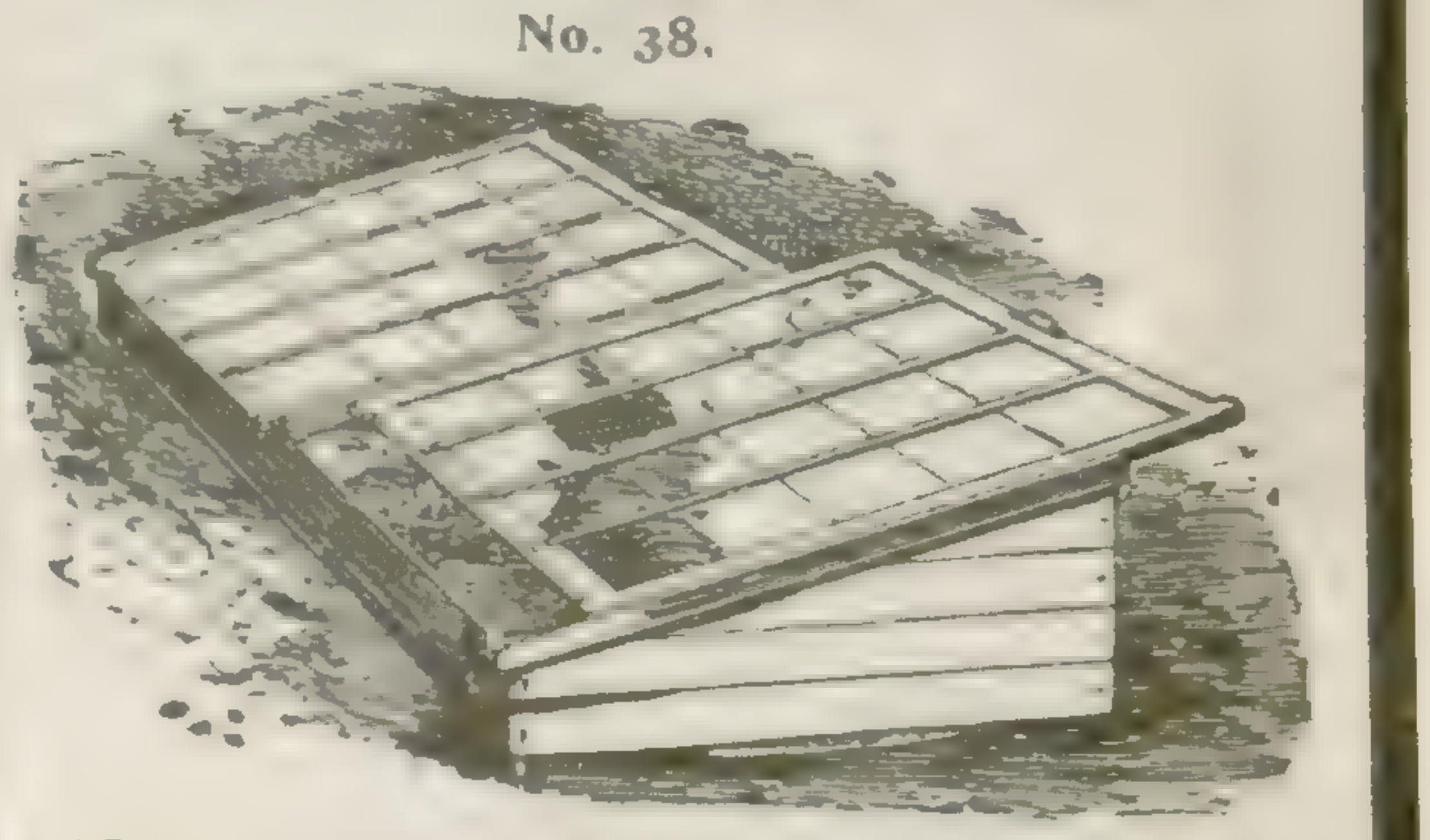
PLANT PRESERVERS.
No. 37.



6 ft. × 4 ft. ...	£2 1 0	12 ft. × 4 ft. ...	£3 10 0
8 ft. × 6 ft. ..	3 17 0	12 ft. × 6 ft. ...	5 5 0

Carriage Paid on 40/- Orders to most Stations.

MELON AND CUCUMBER FRAMES.
No. 38.



6 ft. × 4 ft. ...	£1 14 0	12 ft. × 6 ft. ...	£3 14 0
8 ft. × 6 ft. ...	2 14 0	16 ft. × 6 ft. ...	4 14 0

Please mention this Paper.

27, CANNON STREET, LONDON, E.C.

Works—Tottenham.

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 2,999. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, APRIL 22, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S Hardy PERENNIALS, ALPINES, AQUATICS, CLIMBERS, Etc., for Spring planting. Descriptive Catalogue, with cultural notes, free. BARR and SONS, 11, 12, 13, King St., Covent Garden.

NEW AND RARE FLOWER SEEDS FOR 1911, including a collection of choice Alpines for rockwork. Descriptive List on application.
BARR and SONS, 11, 12, 13, King St., Covent Garden.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, S.W., is now carrying a large stock of BRITISH CLOCHES for FRENCH GARDENING. For particulars see March on the calendar prepared and issued by James Gray. If you have not one of these calendars, write, telephone 201, Western; or wire "Gray, Chelsea, London."

EXHIBITION PANSIES, VIOLAS, CARNATIONS, PHLOXES, and CHRYSANTHEMUMS.—12 Superb fancy Pansies, 3s.; newest and best, 5s. 12 Exhibition Violas, 2s. 6d.; newest and best, 4s. 12 Superb Carnations, 6s.; newest and best, 10s. 12 Yellow or white ground Picotees, 6s.; newest and best, 8s. 12 Superb Phloxes, 4s.; very best, 6s. 12 Early-flowering Chrysanthemums, 2s. 6d.; newest and best, 4s. 12 Best bedding Violas, 2s.; 50 in 10 vars., 4s. 6d.; 100 in 10 or 20 vars., 8s.; all post free, except Carnations in pots, which are car. forward. Lists free. S. PYE, Bowgreave Nursery, Garstang.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.
H. BURNETT,
Carnation Specialist, Guernsey.

PERENNIALS, UNIQUE COLLECTION,
including
ALPINES AND AQUATICS.
Also RARER SHRUBS, HIMALAYAN RHODODENDRONS, and Others.
Write for Catalogue. G. REUTHE, Keston, Kent.

DAHLIAS.
CACTUS, PÆONY, POMPONE, and SHOW, for GARDEN or EXHIBITION.
Prices and Catalogues free on application.

J. T. WEST, Tower Hill, Brentwood.

FRENCH GARDENING REQUISITES.—Send for our new List, giving full particulars of the Double Glazed System, and numbers of new Labour-saving Appliances. Frames, Cloches, Reed Mats, and every requisite supplied. BOULTON and PAUL, Lim., Norwich.

BARNARDS LIMITED, Norwich.—Best House for Fencing Espaliers, Pergolas, Fruit Enclosures, Iron and Wire Fencing; all descriptions of Training Frames, Arches, Wire Netting, Stakes, Wire Lattice, Rollers, and all garden requisites. Now is the time to effect improvements in your garden. Catalogues free; inquiries invited.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page ix.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint 9s. per gall. "Plastine" supersedes Putty, 10s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

SOW NOW.

WEBBS' DOUBLE ROSE GODETIA.
1s. per packet.

WEBBS' DOUBLE SALMON CLARKIA.
6d. per packet.

WEBBS' NEW ENSIGN LARKSPUR.
1s. per packet.

WEBBS' CARMINE ESCHSCHOLTZIA.
1s. per packet.

WEBB and SONS, The King's Seedsmen,
WORDSLEY, STOURBRIDGE.

BUNYARD'S NEW CATALOGUES.
The following have been recently published, and contain all worthy new varieties. Post free on application.

BUNYARD'S
CLIMBING PLANTS, Illustrated.

BUNYARD'S
HERBACEOUS PLANTS, Illustrated.

BUNYARD'S
HARDY TREES AND SHRUBS, Illustrated.

BUNYARD'S ASPARAGUS LIST
Plants now ready for delivery.

BUNYARD'S SEEDS, VEGETABLE AND FLOWER, with coloured plates.

GEO. BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.

BEGONIAS, awarded 24 Gold Medals.—Double Seed, 2s. 6d. and 5s. per pkt.; Frilled, Crested, or plain Single, 1s., 2s. 6d., and 5s. per pkt. For price of Begonia tubers, Carnations (Border and Perpetual flowering), Cannas, Cyclamen, Blue Primroses, Delphiniums, Pansies, Polyanthus, Lily of the Valley, Violets, etc., please send postcard for copy of our Illustrated Catalogue, free on application.

BLACKMORE AND LANGDON,
Twerton Hill Nursery, Bath.

LAXTON'S FRUIT TREE, STRAWBERRY, SEED, ROSE, HERBACEOUS, TREE, BULB, and SMALL FRUIT CATALOGUES, with full illustrations and descriptions, gratis on application.

LAXTON BROTHERS, Bedford.

PENTSTEMONS and CHRYSANTHEMUMS. Splendid stuff, established in pots, all the finest in cultivation. Catalogues free; also General Catalogue of Rock and Border plants, Ferns, Iris, Delphiniums, etc., etc. PERRY'S HARDY PLANT FARM, Enfield, Middlesex.

18 ALPINE PLANTS, 3s. cash; 50 Alpine plants, 16s. Send for Catalogue (1,000 varieties). Hardy Ferns, named, 100, 10s. "ENGLISH HOME OF ALPINE PLANTS," Hessenford, Cornwall.

CABBAGE PLANTS, extra strong. Ellams Mein's, Offenham, First and Best, Enfield, Battersea, 3s. 1,000, 12s. 6d. 5,000 lots; Drumheads, 2s. 6d.; Red Cabbage, Cos Lettuce, Tripoli Onion, 4s. 1,000, on rail; or 1s. 100, post free. List free. C. HIGHT, Cranleigh, Surrey.

CLAY'S MANURES, CRUSHED BONES
(See page iv.)

CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

"**WEEKS'S GLASSHOUSES and HEATING APPARATUS,** for full advertisement see back page."

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

SOW NOW.

SUTTON'S CHARMING ANNUALS.
Beautiful colours; easily grown.
SUTTON'S FIREFLY CLARKIA,
per packet, 1s., post free.
SUTTON'S EASTERN STAR CHRYSANTHEMUM, per packet, 1s., post free.
SUTTON'S SELECTED SHIRLEY POPPY,
per packet, 1s., post free.
SUTTON'S DOUBLE ROSE GODETIA
per packet, 1s., post free.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

KELWAY'S LATEST SUCCESS.

GRAND PRIX AND GOLD MEDAL, Japan-British Exhibition, White City. Unanimous award of the International Jury to Kelway and Son for Pæonies, Delphiniums, Gladioli, Pyrethrums, etc.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

THE KELWAY ARTISTIC BORDER ensures a garden of enduring beauty from early Spring to late Autumn with a minimum of cultivation, and without the trouble of constant digging or bedding-out. The plants composing the border are selected by experts, and include some of Kelway's improvements in Pæonies, Delphiniums, etc. Send dimensions of spaces to be filled, or for Kelway's "Gardens of Delight," 6d. The cost of this border is 15s. or 25s. for every 10 square yards. Carriage and package free for remittance with order.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.

NOW IS THE TIME TO PLANT KELWAY DELPHINIUMS, which have been improved almost out of recognition in the past twenty years. They produce plants ranging in height from four to eight feet, exceptionally hardy and with a rich profusion of choice blooms in all the shades of that valuable colour, blue.

Choice named varieties: 24s., 34s., and 56s. a dozen. Carriage and package free for remittance with order.

The celebrated present-day Delphiniums, and nearly all the best well-known varieties shown at exhibitions, originated in Kelway's Langport Nurseries.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

IRON and WIRE FENCING for GARDENS, Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free. BOULTON and PAUL, Ltd., Manufacturers, Norwich.

GARDEN NETTING (best tanned only).—25 yds. x 8yds.; 50 x 4yds.; 100 x 2 yds., 8s. each. 50 x 2 yds.; 25 x 4 yds.; 100 x 1 yd., 4s. each. All sizes, large or small, at 1s. 20 sq. yds. Quality guaranteed.—EVANS, 14, Beresford Rd., Lowestoft.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.

XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.

XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown both poisonous and non-poisonous are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N.S. or Florist for Richards' small pink list.

G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

BEDDING PLANTS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Chrysanthemums, Dahlias and Summer-Bedding Plants.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Border and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE.
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS.
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Sanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

SAMUEL M'CREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

RHODODENDRONS.

DICKSONS & CO.,
1, Waterloo Place, Edinburgh.
Pink Pearls, Ponticums, choice Hybrids. Write.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

AMERICAN TREE CARNATIONS

The Newest and Best Varieties.

Strong, healthy and well-rooted plants only supplied

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

Amaryllis—Hippeastrums

NOW FLOWERING.

INSPECTION RESPECTFULLY INVITED.

Catalogues, and all particulars, free on application.

ROBT. P. KER & SONS,
AIGBURTH NURSERY, LIVERPOOL.

FERNS.—Moss (Sphagnum, Wreath, and Packing), from Wales. Finest quality, lowest price. List free. Estab. 13 years. Ref., Bank of England. HAWKINS, Dolgelley.

Rhododendrons.

Crimson, White, Pink. 250 Choice Named Varieties, fine foliage, well budded, for potting or planting. 1 to 1½ ft., 1½ to 2 ft., 2 to 2½ ft., 2½ to 3 ft., 3 to 4 ft., 4 to 5 ft., 5 to 6 ft., 6 to 7 ft. List of sorts and prices on application; many thousands to offer. Standards in all sizes.

All Home-grown. Inspection Invited.

F. STREET, Heatherside Nurseries, CAMBERLEY.

A Very Cheap Offer of Apple and Pear Trees to suit Small Holders and Cottage Gardeners.

Apples, our selection, Standards, 12s.; purchaser's selection, 14s. per doz. Half Standards, 8s.; purchaser's selection, 9s. per doz. Double, grafted two years, 6s.; purchaser's selection, 7s. per doz. Pear Trees at similar prices. Currants, red, at 2s. 6d. per dozen. Gooseberries, assorted at 3s. per dozen. Also an extensive stock of ornamental trees, flowering shrubs, rock plants, etc. Catalogues free.

THE STANCLIFFE ESTATES CO. LTD.,
Darley Dale, Derbyshire.

ORCHID PEAT.—Hardwood Brown Fibrous. RHODODENDRON and DUST PEAT, SPHAGNUM MOSS.
Apply C. HALL, 1, Worgret, Wareham, Dorset.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

HOLLYHOCKS. CHOICE DOUBLE-FLOWERED. Strong plants to bloom this summer. White, Yellow, Rose, and Crimson; true to colour. Per dozen, **4/-**; six, **2/3**; 50, for **15/-**; Carriage Paid. DANIELS & SON, WYMONDHAM, NORFOLK.

BUDS AND FRUIT SAVED. GARDEN NETTING, Rotless and Tanned, small mesh, superior quality. Satisfaction guaranteed or money returned. 100 by 1yd., 3s. 9d.; any length and width supplied. LAWN MOWERS, 5 blades, UNEQUALLED VALUE, 12s. 6d. Wheelbarrows, 16s. POTTER BROS., Dept. M., Frankwell Works, Shrewsbury.

JUST PUBLISHED. 1911 EDITION.

67 Illustrations, 17 Plates and Frontispiece. 200 Pages. 2/6 net; by post 2/10.

ROSES AND THEIR CULTIVATION.

By T. W. SANDERS, F.L.S.

SEVENTH EDITION.

- How and When to Plant Roses.
- Propagation of Roses—Ways to Grow Them.
- How to Prune, Bud, and Graft Roses
- Erection of Pergolas and Arches.
- How to Show Roses.
- Insect Pests and Fungoid Diseases—Remedies.
- Types of Roses, full description, Culture, etc.
- Soil and Manures for Roses.
- The Rose Grower's Calendar; showing what to do each month.

LIST OF OVER 1,700 CULTIVATED ROSES:

Showing Variety, Section or Class, Date Introduced, Colour, Habit of Growth, How Best Grown, Mode and Time of Pruning, Description of Flower.

◆ ◆ ◆

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE,"
148 and 149, Aldersgate Street, London, E.C.

Please send me a copy of "ROSES AND THEIR CULTIVATION," by post, for which I enclose remittance of 2/10.

Name ____________________

Address ____________________

Sales by Auction.

SALES NEXT WEEK.

WEDNESDAY NEXT, April 26th, at Twelve o'clock. 100 lots of choice Herbaceous Plants. Flowering Shrubs, Gladiolus, Montbretias, Begonias, Gloxinias, Spiræas; Iris, Japanese and other Lilies. Peat, Leaf-mould, Fibre, etc.

At Four o'clock.—100 lots of Ornamental Palms, standard Bays, Dracænas, and other decorative plants, stove and Greenhouse plants, pot Roses, etc.

At Twelve o'clock.—Trade Sale of Miscellaneous Plants, Bulbs, Corms, etc. Also Japanese Liliums, in cases.

FRIDAY NEXT, April 28th, at a Quarter to One o'clock. 500 lots of well-grown, established Orchids in large variety; also imported Orchids, Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view morning of sale, and catalogues had.

FOR SALE, IN GUERNSEY.—A compact little BULB-GROWING ESTATE of about 4 acres splendidly situated on the south coast of the island, and well stocked with the best forcing varieties of daffodils, etc.; also a small Orchard of Apple and Pear Trees in bearing. The property contains glasshouse 150 x 18 heated, large shed, pumping mill, and an unlimited supply of water. Write Box 154. c/o Messrs. R. F. White and Son, General Advertising Agents, 33, Fleet Street, London. E.C.

COMPACT FREEHOLD NURSERY FOR SALE, comprising six-roomed House, Bath-room, Kitchen and Scullery, 13 GREENHOUSES, 120 FEET LONG each, all heated by four Horizontal, Tubular Boilers; about 3½ acres of land, more or less, with stabling, and various sheds. Apply W. C. VIRGO, Moat House, Welling, Kent.

13 BEAUTIFUL BORDER CARNATIONS, in 13 varieties, to include 1 yellow, all truly named, and post free, 2s. 6d. 13 Pinks in 7 varieties, 1s. Empress Pansies, beautiful colours, 20, 1s. Calceolarias, Golden Gem, 16, 1s.; all post free. S. BRIMLEY, 56, Howbury Street, Bedford.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

AMERICAN TREE CARNATIONS, best varieties, strong young plants, from pots, 3s. per doz., 20s. per 100, larger bushy plants, in 3in. pots, 5s. 6d. doz.; flowering plants, 8s. per doz. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

GREENHOUSES and GARDEN FURNITURE. — Distinctive Designs and Finished Workmanship. Write NOW for illustrated Catalogue. CARTER and HOWARD, Fife House, Kingston-on-Thames.

20,000 YARDS WIRE NETTING TO BE SOLD CHEAP. Send for lists. Carriage paid on lots of 20s.
DOUTHWAITE'S CITY WIRE WORKS,
116, Vicar Lane, Leeds.

4/6.—RUSTIC ARCHES, 4s. 6d.; biggest and best; 8ft. x 4ft. x 18in. All Trellis and Rustic Work at comparative low price. London address—BRAMBLE WOOD CO., 30, Caroline Place, Bayswater.

LOOK! TANNED GARDEN NETTING, small mesh, 50yds. long by 1 yd., wide, 1s.; by 2yds. wide, 2s.; by 3yds. wide, 3s., either car. paid; any size made. Odd pieces Netting for protecting bush fruit buds, 14lbs., in bag, 3s. Package free. STANLEY GORDON, Bank House, Rye.

CHARGES FOR ADVERTISEMENTS IN

THE
GARDENERS'
MAGAZINE.

Five Lines and under	£0	2	6
Per Line beyond	0	0	6
" Inch	0	6	0
" Half Column ...	1	10	0
" Column	3	0	0
" Page	9	0	0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— / & Co. /

Telephone Numbers:
Editorial and Printing Depts. ... ... 831 Holborn.
Advertising and Publishing Depts. ... 2140 Holborn.

Offices: 148 and 149, Aldersgate Street, London.

CARNATIONS, PINKS, AURICULAS.

DOUGLAS for the best old and new varieties in all classes, and the finest quality in the world. Malmaison Carnations, new and old, **7/6** per dozen. Border, **6/-** to **12/-** per dozen. Tree, American, and English, **7/6** to **15/-** per dozen. Auriculas, Show, **21/-** to **30/-** per dozen. Alpine Auriculas, **9/-** to **21/-** per dozen. Carnation, Auricula, Pink, and Polyanthus seed, **1/0** and **2/6** per packet. **CATALOGUE FREE.**

J. DOUGLAS, Bookham, LEATHERHEAD.

PRIMULA OBCONICA GIGANTEA GRANDIFLORA.

The most beautiful Free and Hardy Perpetual Greenhouse Plant grown.

ONCE IN FLOWER ALWAYS IN FLOWER.

We are NOTED for having the most — SUPERB Strain in commerce. —

SEED.

Mixed colours, also Compacta and Fimbriata, mixed, 1s. per packet; separate colours of Purple, Rose, Lilac, Deep Red, Crimson Scarlet, Pale Lilac, and Crimson (fringed petals), **2s. per packet; double flowering, including Pale Mauve and Rose, 2s. per packet. Instructions as to sowing with each packet.**

PLANTS, 3s., 5s., 7s. 6d., 10s. 6d., and 15s. per doz., according to size.

W. A., Esq., Reigate, Surrey, writes:—

I had a packet of seed from you last year, and am pleased to inform you that I have blooms measuring two inches and more across each individual flower. They are the best strain I have ever seen, both for variety of colours, and substance of bloom.

WM. ARTINDALE & SON,
Nether Green Nursery,
SHEFFIELD.

For 3 penny stamps we will send you our Catalogue of Plants, which is not merely a price list, but literature which gives all the cultural notes of plants therein mentioned. We have received hundreds of testimonials commenting on the value of this book.

OUR SEED CATALOGUE WILL BE SENT FREE ON APPLICATION.

By Appointment to H.M. The King.

1911 FORBES'

Illustrated Plant Catalogue **Nearly 200 Pages.**

GOLD MEDAL SPECIALITIES.

Contains carefully revised **Descriptions, Colour, Height, Time of Flowering, British or Common Names, Prices,** etc., of the **Grandest Collections of ASTERS, BEGONIAS, CALADIUMS, CARNATIONS, DAHLIAS, DELPHINIUMS, PÆONIES, PANSIES, VIOLAS, PELARGONIUMS, PENTSTEMONS, PHLOXES, PYRETHRUMS, HARDY BORDER PLANTS,** carefully-prepared **PLAN** for arranging **HARDY PLANT BORDERS,** etc.

Experts unanimously accord **FORBES' CATALOGUE** the unique distinction of being the **best** and most **reliable** up-to-date **Reference Book** extant.

FREE ON APPLICATION.

JOHN FORBES (HAWICK), LIMITED.
(Dept. J), The King's Nurserymen, **HAWICK, Scotland**

CARNATIONS! CARNATIONS!!

For Immediate Planting.

As I am the possessor of the finest Collections of these flowers extant of all classes, I am in a position to treat intending planters on the most favourable terms.

1 Doz. for 6/-, 7/-, 8/-, or 10/-, free for cash with order.

CATALOGUE FREE.

CHARLES BLICK, Warren Nurseries, HAYES, KENT.

ELLISON'S BEGONIAS are absolutely the best strain; 30 Begonias, all different and named, 10s. 6d.; Bedding Begonias, 9s., 12s., 15s. 100.

GERBERA, Adnets Hybrids, for which I was awarded Silver-gilt Medal R.H.S. March 14th. Seed, 1s. 6d.; Plants, 10s., 15s. doz. ELLISON.

LILIUMS.—24 choice Liliums, all different, 10s. 6d.; Gloxinias, 6, different, 2s.; Cannas, 10, do., 4s.; 100 German Iris, 10 sorts, 4s. ELLISON.

1,000,000 BEGONIAS. Single, 1s. 6d. to 7s. 6d.; Dble., 2s. to 15s. doz.; Tuberoses, Arum Lilies, 1s. doz.

LARGE FLOWERING GLADIOLI, 3s., 5s. 100; Amaryllis, 10s., 15s., 20s. doz.; Gladioli, early, 1s. 100. ELLISON, 57, West Bromwich.

ZONAL PELARGONIUMS.
Catalogue of New and Choicest Varieties.

From V. SLADE, Zonal Specialist,
Staplegrove Nursery, Taunton.

BY APPOINTMENT.

ROSES IN POTS.

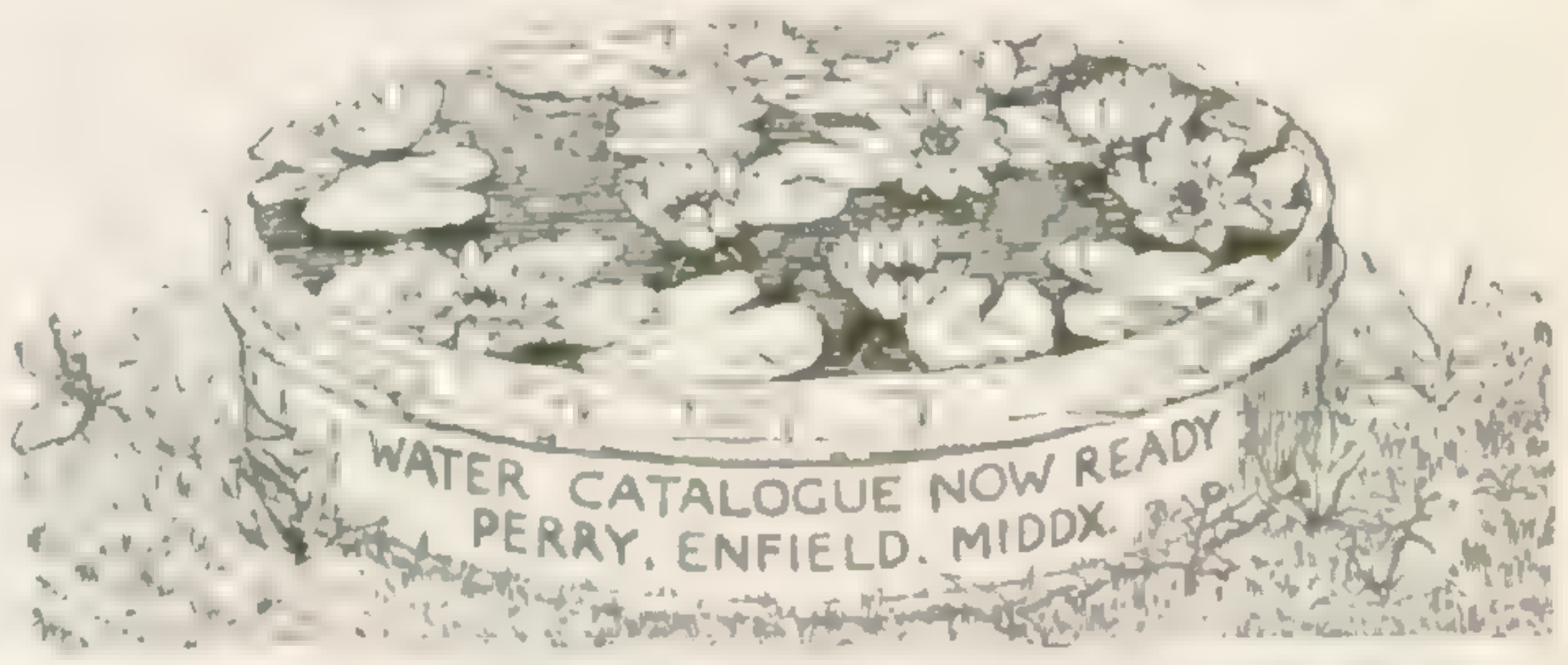
WM. PAUL & SON, WALTHAM CROSS, LTD.,

beg to offer a magnificent stock of DWARFS and RAMBLERS for present Planting and for Greenhouse Culture.

In 5-in. pots **10s. 6d.** to **18s.** per dozen, **75s.** to **120s.** per 100; extra strong in 8-in. pots **24s.** to **60s.** per dozen. Also a fine collection of New Roses.

Catalogue on application.

PAUL'S ROYAL NURSERIES,
Waltham Cross, HERTS.



STALKER'S Forest Trees, Fruit Trees. Roses, Bulbs, and Seeds

Are known all over the world, and cannot be surpassed for hardiness and quality.

Famous for Quality and Cleanliness.

D. STALKER & SON,

Government Contractors,

Catalogues Free. NAIRN, N.B.

ORCHIDS

EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**

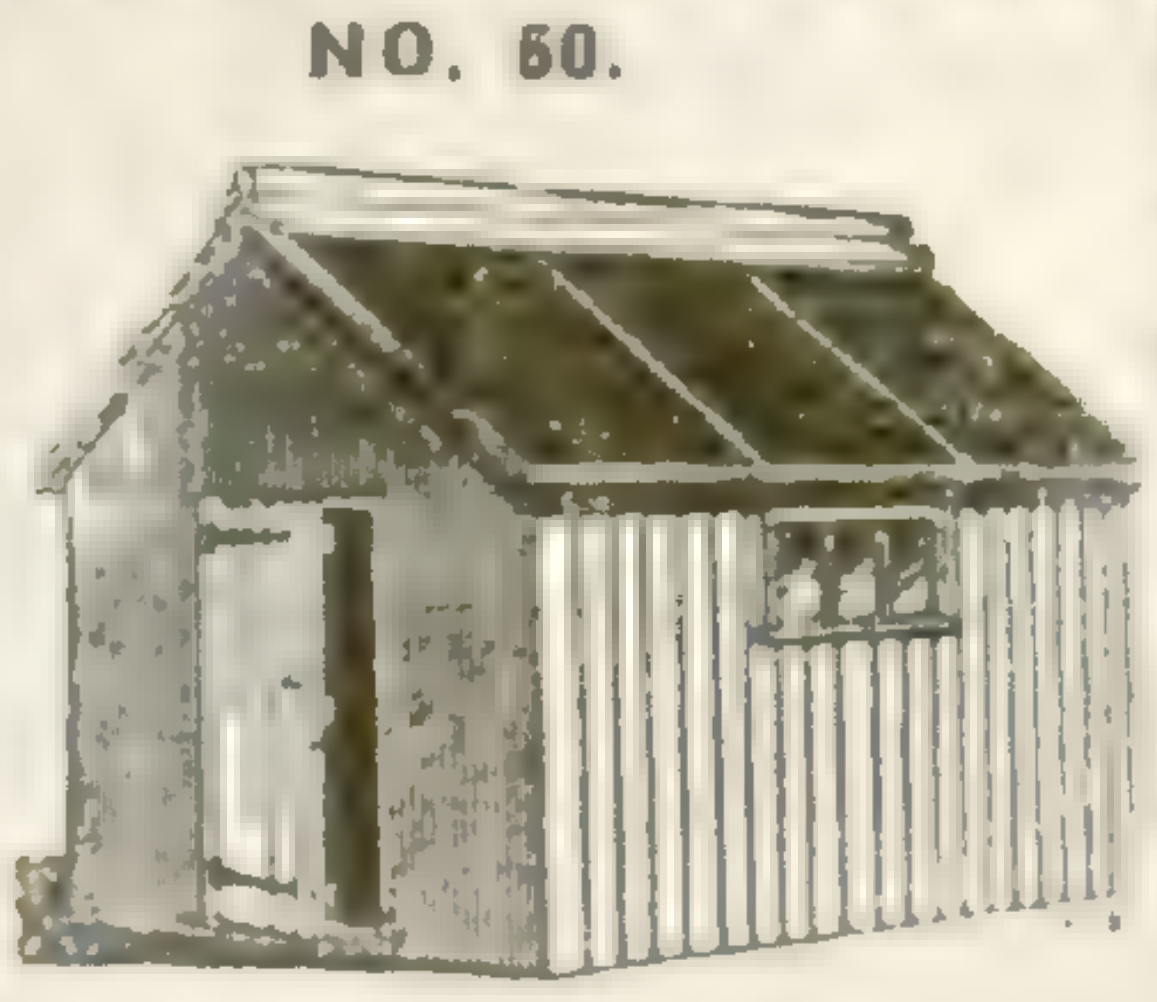
Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., **Royal Nurseries, BUSH HILL PARK, MIDDX.**

THE CHEAPEST IN ENGLAND.

NO. 60.



Copyright Registered.

Portable Buildings. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

Sizes.		Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
Established 70 Years. *BEDFORD.*
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

PAINT & GLASS.

NICHOLLS & CLARKE, LTD.
SHOREDITCH, LONDON.

GLASS. When sending for Catalogue please cut out this advt.

"THE SECRET OF SUCCESS."
USE
CLAY'S FERTILIZER
AND MAKE
The Garden a Delight Throughout the Year.

CLAY'S ✲ LONDON ✲ FERTILIZER
TRADE MARK.

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK, AS AT SIDE.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. Fourth Edition (Second Reprint). 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Stratford, London, E.

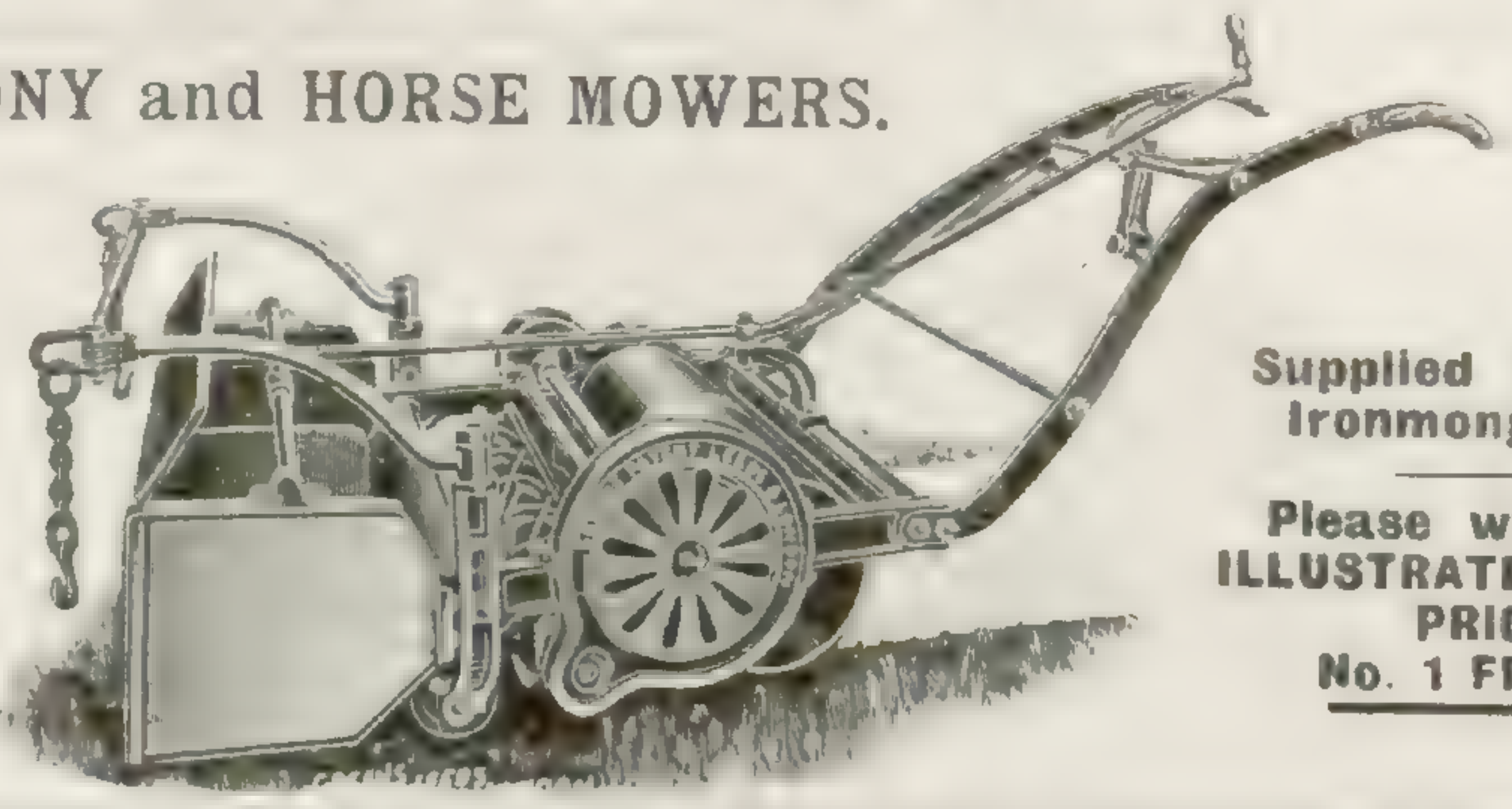
APPOINTED BY ROYAL WARRANT, HORTICULTURAL MACHINE MAKERS TO HIS MAJESTY KING GEORGE V.

GREEN'S LAWN MOWERS ARE UNEQUALLED.
Hundreds of Thousands are in use. Established nearly a Century.

Highest Awards — Royal Botanic Society, Royal Horticultural Society, and numerous others

"SILENS MESSOR" LAWN MOWER.

PONY and HORSE MOWERS.



Telephone Numbers—
Leeds, 3530.
London, 2022 Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London

Supplied by all Ironmongers.

Please write for ILLUSTRATED PRICE LIST No. 1 FREE.

ORDINARY and WATER BALLAST ROLLERS.

MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.
Our Work has stood the test of time.

ORCHIDS. ORCHIDS.
Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.
STOVE AND GREENHOUSE PLANTS OF ALL KINDS.
Please Write for List.
JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

CHEALS' DAHLIAS
Descriptive Catalogue with all Novelties now ready Post free. J. Cheal & Sons, The Nurseries, Crawley.

PERPETUAL CARNATIONS
1911 Illustrated Catalogue Ready & FREE.
We have a Wonderful Collection of Novelties this Season, including our
"DUCHESS OF DEVONSHIRE,"
The best all-round Perpetual Crimson ever raised.
(See Illustration Page 305.)

Read our "TREATISE ON CULTURE" 1/-, Free.

YOUNG & Co., Gold Medallists, **HATHERLEY, CHELTENHAM.**

BUNYARD'S FRUIT TREES

The Best Quality and Largest Selection at Moderate Prices.

WRITE FOR CATALOGUE.

GEO. BUNYARD & CO., LTD.,
Royal Nurseries,
MAIDSTONE.

VOL. LIV.—No. 2,939. SATURDAY, APRIL 22, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Variable Weather.

From a superficial point of view the great variability of the weather experienced in most parts of the world is a profound puzzle, independently of the seasonal influences which are readily understood, depending as they do on the gradual waxing and waning of the sunshine, due to the revolution of the earth around the sun on an oblique axis. This, of course, determines the gradual approach and retreat of the North and South Poles alternately to and from the solar influence, which naturally increases and reduces the amount of vital illumination received on the earth's surface, and thus determines warmer and colder seasons. All this, however, runs as smoothly and as regularly as clockwork; year after year and æon after æon, the earth rolls and has rolled smoothly around the sun, returning every year to the same point, and then commencing a new revolution. There is nothing here apparently to hinder an equally even change of seasons, merely diversified by an equally regular increase and decrease of warmth and illumination, yet practically no two years are alike. Sometimes, as this year, the cold blasts of winter invade the spring, and at others, bright warm sunshine intervenes to mitigate the winter, while it is within the memory of many that years have been experienced in this so-called temperate climate when the rigour of winter has even extended well into the summer season proper, keen frost and heavy snowfalls occurring up to the end of May or even into June. If now we seek the cause of such great vacillations in cataclysmic changes of conditions on the earth's surface sufficient to account for such an upsetting of normal conditions, volcanic eruptions or anything of that sort, we seek in vain. Even our meteorologists with all their knowledge are utterly unable to predict the coming conditions long beforehand, and are quite dependent for the predictions they do make on ascertained existing factors near and far which denote the approach or retreat of aerial disturbances for which they are unable to account in the slightest degree. One thing only is certain, and that is that the great and often sudden changes are due to aerial disturbance, which leads to changes of temperature which in their turn determine the formation of rain, snow, or hail, as the case may be, accompanied by more or less violent aerial currents due to the inequality of pressure which these disturbances involve. One great factor in variation is undoubtedly the diversity of the earth's surface itself, broken up as it is on land into mountain ranges, and on the broad ocean surfaces by islands and continents, all of which exercise their effect on the great system of circulation both of air and water, which forms the basis of weather conditions. These, too, however, it may be justly argued, are, as a rule, regular factors like the earth's revolution itself and the consequent seasonal results, and thus afford no clear clue to the variability we treat of. In short, we are driven to look farther afield for the main disturbing factor, and in all probability we may seek this in the great solar orb itself. This, as the astronomer will tell us, has not, like the earth, cooled down into solid and more or less stable conditions, but is undoubtedly the scene of inconceivably vast convulsions and eruptions of molten and gaseous matter, which, like the light and heat with which we are familiar, make these influences felt upon the planets, the earth, of course, included. Electric influences, too, undoubtedly figure largely in this connection. Here, then, we have a constantly fluctuating factor, and, considering its potency, it is not unreasonable nor illogical to impute to this cause much of the otherwise incomprehensible changes which affect our atmosphere, breeding gales and hurricanes, and thus sweeping at one time the cold air of the polar circle into warm southern regions, and at another reversing the process, in this way at once accounting fully for the apparent waywardness of the elements. Once, in short, set winds so engendered in motion, and immediately there disappear all theories regarding cosmic regularity of season, since all equilibrium is upset by the resulting conflict. That the cause we have suggested is probably the main one is already evidenced by certain agreements between sun spots, i.e., indications of solar storms, coinciding with abnormal weather conditions on earth, and, considering this, it is clear that, so far from its being a wonder that weather is fickle, it is rather a marvel that we should ever have periods of stable fine weather at all.

MR. R. S. HALLEY.

Mr. R. S. Halley, whose portrait is given in this issue, belongs to the ever-increasing band of sweet pea enthusiasts, and in the work he has accomplished on behalf of the flower in which he is so greatly interested, he has done excellent service in the cause of floriculture across the Border. We need hardly say that for many years past sweet peas have been successfully grown in Scotland by Mr. Malcolm and other cultivators, or that these fragrant flowers have annually constituted a delightful feature of the autumn exhibitions held by the Royal Caledonian Horticultural Society, for these facts have all been duly recorded in our pages by Mr. Halley. But until some eighteen months ago the Scottish enthusiasts had no common meeting ground north of the Tweed; or, to state the case in another way, they had no society wholly devoted to their favourite flower. To Mr. Halley belongs the credit of recognising the desirability of a sweet pea society being established in Scotland, and to his initiative the founding of the Perthshire Sweet Pea Society is due. As Mr. Halley tells us in our sweet pea number (January 21, 1911), he is in the habit of attending many of the flower shows in Scotland, and. believing the time ripe for the formation of a society to bind the growers together, he brought the matter before other enthusiasts. The project was received with much favour, a strong society was formed, and in July last an exhibition held that was remarkable alike for its extent and the high development of the flowers in competition. Although this new organisation is designated the Perthshire Sweet Pea Society, and has its headquarters at Perth, it embraces within the scope of its operations the whole of Scotland. As the first Scottish society it was necessarily the most northern organisation wholly devoted to sweet peas, but this is no longer the case, for its influence has been so great in the far North that a society has been formed at Strathpeffer. Mr. Halley may be heartily congratulated in what he has accomplished, and we trust the Scottish sweet pea enthusiasts may long have him for their leader.

Hollies, Rhododendrons, etc.—In view of the favourable opportunity that is now presented for the planting of hollies, rhododendrons, ivies, and some other evergreens, we shall include in our next issue (April 29) special articles on hollies, rhododendrons, ivies, and evergreen shrubs with variegated leafage. As the ornamental vines may now be successfully planted from pots, there will be a special article on them. The issue will be freely illustrated, the illustrations being chiefly associated with the special articles.

The Easter Holidays proved a thoroughly enjoyable time for all who could get out of doors to enjoy the brilliant sunshine and the south-westerly breezes. The weather was bright and warm without being really hot. There was a tremendous exit from London and other big cities and towns, the country and its beauties attracting immense crowds, while to the enthusiastic gardener the time was all too short. The Continental and other long-distance traffic from London was unusually heavy. In and around London the holiday crowds were great on Easter Monday. On Hampstead Heath no fewer than 300,000 people disported themselves; 43,407 went to the Zoological Gardens, and over 144,000 had a good time among the daffodils and other spring flowers at the Royal Gardens, Kew. Hampton Court Palace was visited by 16,854 persons, but there were thousands who wandered round the gardens and over the green and did not enter Wolsey's palace. At the Natural History Museum, the Science Museum, the Victoria and Albert Museum, and the National Gallery the visitors were fewer than usual owing to the attractive power of the sunshine outside. The River Thames was thronged from Kew to Windsor, and the Crystal Palace attracted its many thousands. Throughout the Southern counties the maximum shade temperature on Easter Monday ranged from 50 degrees to 62 degrees, and the bright sunshine record ranged from three to eight hours, Hastings apparently enjoying the most sunshine. A falling barometer and southerly or south-westerly breezes suggested the approach of rain, and now that the holidays are over some warm April showers would do no harm but would be welcomed because of the good they would do in garden and farm.

Royal International Horticultural Exhibition, 1912.—The directors of the Royal International Horticultural Exhibition, 1912, ask us to intimate to our readers that, in view of the numerous applications for space at the exhibition, it is necessary for the sub-committee dealing with the matter to obtain some idea of the proportion which the total demand will bear to the area at their disposal. They will, therefore, be much obliged if exhibitors will intimate at the earliest date possible the nature of any exhibit, whether competitive or otherwise, which they propose to submit, together with a note of the area in square feet which it is likely to occupy. The Spacing Committee will, of course, do their best to satisfy the demands of intending exhibitors, but it will be understood that this request for information does not necessarily imply that the committee will be in a position to grant all the space that may be asked for. Under any circumstances, the work of allotment must be a difficult matter, and the committee rely upon the kind assistance of exhibitors in the simplification of their task.

Heath and Forest Fires.—Within the past ten days an immense amount of damage by fire has been done on heaths and in woodlands in various parts of the country. On the line of hills extending from Folkestone to Beachborough fires extended over large tracts of heath land and destroyed the vegetation thereon. In one case the line of fire was several thousand feet in length, and it was only by the most strenuous endeavour on the part of a large number of people that the flames did not reach the plantations around Beachborough Hall. A few days later some twenty acres of gorse on Hayes Common was destroyed by fire. Still more destructive was the forest fire which occurred in Perthshire. This fire originated in Carsie Woods, the property of Mr. William Panton, and, favoured by the dry state of both the trees and undergrowth and a strong wind, it rapidly spread to the woods of Meikleour, the Perthshire seat of the Marquis of Lansdowne. Here upwards of one hundred acres of Scots fir, almost full grown, and a plantation of young trees were destroyed. It is reported that for over a mile in length the wood resembled a fiery furnace, the flames leaping to a height of between twenty and thirty feet, and it was at one time feared that the whole of the wood, which has an area of 300 acres, would be destroyed, but happily this disaster was averted. The Meikleour estate is remarkable for the famous hedge which borders the public road, of which we gave an illustration two or three years since. It is a quarter of a mile long, is 80 feet high, and was planted in 1747.

Lord Kitchener's New Garden.—While in India Lord Kitchener acquired the reputation of being a skilful and enthusiastic gardener, and now the opportunity to display his talents in connection with the "gentle art" appears to have arrived, for we understand that his lordship has purchased Broome Hall, near Canterbury. Broome Hall stands at a considerable elevation, and is surrounded by a splendidly timbered park.

The Mosquito Plant. — Eight years since Major H. D. Larymore, who was engaged in Northern Nigeria, described in a letter to the "Times," the basil plant (Ocymum viride) and its peculiar properties in keeping away mosquitoes. His opinion was corroborated by Sir George Birdwood, who stated "when the Victoria Gardens and Albert Museum were established in Bombay the men employed on these works were at first so pestered by mosquitoes, and suffered so much from malarious fever, that on the recommendation of the Hindu manager the whole boundary of the gardens was planted with holy basil, and any other basil at hand, on which the plague of mosquitoes was at once abated, and fever altogether disappeared from among the resident gardeners." The contention that basil possessed such protective value was discredited by several authorities. In a letter, published a few days since, Major Larymore states that during the past ten years he has continued to sow the seeds of the basil wherever he has been stationed, and that "the immunity from fever which both my wife and I have experienced for the past ten years in West Africa, speaks for itself." He also directs attention to the fact that the results of a preliminary investigation at the Laboratory of the Imperial Institute by Dr. Goulding, D.Sc., and Mr. Pelly have been published in the Proceedings of the Chemical Society, and show that leaves of this plant imported from West Africa contain a volatile oil which possesses the same aromatic, thyme-like odour of the leaves in a highly concentrated degree. An analysis of this oil showed that it contained 32 per cent. of thymol, together with other aromatic substances. Now thymol is a recognised antiseptic and most powerful germicide, and in "The Extra Pharmacopœia" it is stated that "ten grains dissolved in an ounce of soft paraffin applied to the skin keeps off gnats and mosquitoes." It is easier now observes Major Larymore to understand the real reason why the plant repels mosquitoes—containing as it does in its oil so very large a proportion (one-third) of such a powerful antiseptic as thymol appears to be, and the further analysis which Dr. Goulding purposes to conduct will be looked forward to with interest.

Lister Park, Bradford.—Some of the ratepayers of Bradford are opposing a proposal of the City Council to cut down a number of trees in this park in order to widen Keighley Road. Application was made to the Local Government Board for permission to carry out the project, but the Board replied to the effect that they had no power to give permission for the appropriation of a portion of the park for such purpose. The City Council have taken the view that, if the Board have no power to sanction the proposed alteration, they could not prevent it being made, and decided to proceed with cutting down the trees. This decision has given rise to considerable feeling, and the ratepayers who are opposed to the cutting down of the trees are talking of applying to the High Court for an interim injunction and to contest the legality thereof.

Damage from Overhanging Trees.—An interesting case was heard at the Lambeth County Court on the 7th inst., having reference to damage caused by trees alleged to project over the roadway. Mr. Charles William Carpenter, a cartage contractor, of Queen Street, Hammersmith, claimed £11 3s. 9d. from the Camberwell Borough Council, being damage done to furniture and a pantechnicon caused through the alleged negligence of the defendants, or their servants, by allowing trees to overlap the roadway. While the pantechnicon was being driven down Camberwell New Road the trees swept certain furniture and other articles off the vehicle. Mr. Leon Freedman, counsel for the plaintiff, said that the trees were vested in the local authority, but Mr. Cecil Whiteley, for the defendants, said he should require proof of that. The plaintiff stated that at a height of 9ft. the tree trunk projected several inches over the roadway. He produced a photograph. The Judge remarked that it appeared from the photograph that the tree was older than the Act counsel was dealing with. Mr. Freedman asked if he damaged the tree, who would fine him? and Judge Parry, in reply, said he did not say that anybody would; but he might try cutting it down and see what would happen. In the result the plaintiff was nonsuited, with costs.

Conversazione of the Selborne Society.—The annual conversazione of this society will be held on May 5 in the theatre and halls of the Civil Service Commission, Burlington Gardens, W. There will be exhibits of rural industries including the prehistoric occupation of flint knapping, which still survives in Suffolk, etc. The Keeper of the Brent Valley Bird Sanctuary will be at work making boxes, and an unpublished MS. of Gilbert White will be on view. The president, Lord Avebury will take the chair in the theatre, and an illustrated lecture on "The Eggs of Butterflies and Moths" will be given by Mr. F. Noad Clark. Tickets can only be obtained through members of the society.

Experimental Culture in Staffordshire.—The field experiments carried out under the auspices of the Education Committee of the Staffordshire County Council and at the Harper-Adams College, Newport, Salop, in 1910 were varied in character and of importance both to gardeners and farmers. The annual report has just reached us, and from this we learn that the manurial experiments of the Education Committee were carried out with the aid of potatoes, sugar beet, mangels, swedes, and meadow land. Somewhat similar experiments were conducted on the college farm, and, in addition to other work of a varied character, the wart disease of potatoes was fully investigated and much valuable information relating thereto obtained. The results are embodied in the report, and are fully deserving of the careful attention of all who are interested in potatoes.

Fruits from Barbados.—A promising beginning has been made in the export of fruits from Barbados to England. Bananas, Avocado pears, and mangos have been sent, but there is need for more experiment with the two latter crops ere they can be sent on a long journey successfully. Sweet potatoes and yams have also been sent and have arrived in good condition.

The Botanical Magazine for the current month contains a double-page illustration of Clematis aristata Dennisæ, a free, white-flowered Australian variety with salmon-coloured filaments; Pseuderanthemum malaccense, a Malayan acanthad with clusters of long-tubed, pale violet coloured flowers; Eleagnus argentea, a hardy shrub from North America, with metallic grey leaves and axillary clusters of small yellow flowers; Felicia petiolata, a South African composite of lowly growth, with rosy florets to the daisy-like flowers; and Dendrobium muricatum munificum, a short-bulbed orchid from New Caledonia, and one that bears a many flowered raceme of green, brown spotted blooms.

Judging Sweet Peas.—At the Sweet Pea Conference held under the auspices of the National Sweet Pea Society last December, Mr. W. P. Wright proposed the following scale of points for judging sweet peas: Freshness and good colour, 6 points; number of flowers per stem (three to four), 4; length of stem (approximating 18in.), 4; arrangement of flowers on stem, 4; size of bloom, approximate width of standard (¾in.), 4; colour blending, 2; total, 24. The National Sweet Pea Society of America has decided that its scale of points for judging shall be: Stem, 25; colour, 20; size, 25; number of flowers per stem, 15; substance, 15; total, 100 points. As already indicated in these pages, a simplified method of pointing was arrived at by those present at the N.S.P.S. Conference, following on the lines frequently adopted by chrysanthemum judges. It is as follows: "Give a maximum of 6 points per bunch. This maximum to be allocated to the best bunch, or bunches, in the stands, and then point the other bunches, by half points if necessary, working downwards from the maximum. In awarding these points due regard must be given to freshness, quality, and size of flowers. It is also recommended, where necessary (i.e., when the bunch pointing brings an equality, or nearly so), that 6 points extra be taken as a maximum for arrangement and blending of colours, the points so obtained being added to the total bunch points. Double-standard flowers should not be discounted."

The Japanese Gate at Kew.—Our readers were informed last autumn that the facsimile of the Kyoto Gate, which was exhibited at the Japan-British Exhibition at Shepherd's Bush, had been presented by the Japanese Government to the Royal Gardens, Kew. Reference to this gate is made in the "Journal of the Kew Guild" as follows: "A new feature, erected under Japanese supervision, will be found beneath the old Cedars on Mossy Mound, between the Holly Walk and the Pagoda. This is a facsimile of an old sacred gateway at Kyoto, the capital of Old Japan. It was exhibited at the recent Japan-British Exhibition, and was presented to the Royal Gardens, Kew, at its close. The Exhibition Guide gives a description of the original gateway: from it the following notes are extracted: The gate called Chokoshi Mon, or Royal Gate, is a representation of the sacred gateway to one of the temples in Kyoto. Through the doorway only the Emperor, the members of his family, or his representatives are allowed to pass. The original is to be seen in the Temple of Higashi Hong-wanji, the largest Buddhist temple in Japan, and one of the most magnificent. It is rightly called the St. Peter's of Japan, having been erected by the people at a cost of £1,600,000. Seventeen years were occupied in its building. The gate in question is made of the wood of Cupressus obtusa and is of an ornamental character. It was made in Japan and shipped in sections to the White City, where it was found to be so accurately made that it could be fitted together without any alterations."

Nursery Inspection in New York State.—Some idea of the importance attached to the inspection of nursery stock in America can be gathered from the eighteenth annual report of the New York State Department of Agriculture. This shows that during the year 572 nurseries were inspected, and all stock examined, including 116,640,977 trees and plants of different kinds. Seventeen thousand and eighty-one trees were destroyed on account of being infested with San José scale, which, if distributed to parts of the State now free from this pest, would have caused untold damage. More than twelve million seedlings recently imported were examined, and 3,726 nests of brown-tail moths, as well as some nests of gipsy moths, found, and destroyed. Thus far, although they have appeared at more than a score of different places in the State, agents of the department have in every instance completely eradicated these insects. The importance of this work may be estimated when it is stated that in Massachusetts last year more than $1,000,000 was spent by Federal, State, and municipal governments for the purpose of keeping under control these pests, which, unfortunately, have gained a foothold there.

FERN SPORE PODS.

When we compare ferns with flowering plants we find them distinguished by several characters, of which the main consist in the circinate form of vernation, or frond development, which, with a few insignificant exceptions, characterises them all, and the fact that they are reproduced by spores instead of seeds.

Circination, it may be explained, implies that the fronds, in their young state, are rolled inwards, so that as they develop and the stalk lengthens a coil is seen, which gradually loosens and expands into the more or less flat frond, the secondary, or tertiary, or even further divisions, developing in the same way from laterally coiled segments, while in flowering plants, as a rule, the foliage is arranged in the bud on straight lines, involving no uncoiling process, even the coiling of tendrils, stems, etc., being a subsequent operation often induced by sensitiveness to touch with neighbouring growths or other supports.

A further character, however, exists in the nature of the pods or capsules borne by ferns as receptacles for their spores. In flowering plants the equivalent reproductive bodies, i.e., the seeds, are contained in vessels of an almost infinite diversity of size, shape, and make associated with innumerable contrivances to facilitate distribution when ripe. In ferns, however, on the other hand, despite their diversity of make of foliage, habit of growth, size, etc., the spore receptacle is, in the vast majority of cases, practically alike, and its method of scattering the spores abroad the same. This receptacle, or sporangium, consists of an oval capsule, usually of a lucent brown colour, which is attached to the frond by a ribbed stalk. These ribs continue as a ridge from the point of junction to the capsule, right over the top, and halfway down the other side, so that the capsule, to some extent, resembles a fireman's or policeman's helmet. When the spores are ripe, this ribbed ridge contracts, and eventually by such contraction exercises such a strain upon the capsule at the point where the ridge terminates, that it suddenly splits there, the opening gradually widening until the top half is turned upwards, when the sudden disruption of the few retaining cells throws it violently backward, jerking the contents in all directions. This curious process can be easily seen if a small portion of a fertile frond be scraped as soon as the brown colour of the sporangia indicates ripeness, and the capsules be allowed to fall upon the glass slip of a microscope. Viewed then in a warm room, they will appear at first as a loose heap. Presently this heap will begin to display twitching movements, indicating the first rupture of the capsules, which may be seen to be gaping wider and wider until quite suddenly the whole heap is broken up, as by an explosion, and spores will be noticed falling like a miniature hail shower upon the bare portions of the glass slip, which eventually becomes profusely peppered over with them, mingled with the now empty capsules. For sowing purposes, if the slip be now gently breathed upon until it appears misty, the spores will thereby become temporarily attached to it, and a smart puff will remove the capsules and other debris, leaving them clean and ready for sowing when the moisture evaporates.

In some species, Osmunda regalis, for instance, the capsules are plain, and the spores escape by simple lateral splitting; in other genera there is a horizontal ribbed ring round the top of the capsule, which acts similarly to the perpendicular ones by contraction on the same principle. There is also some diversity of size, colour, and make of the spores themselves. Those of the common Polypody (Polypodium vulgare) are a bright yellow, as are the capsules themselves, those of Osmunda a dull green, but in the great majority of species they only vary in grades of brown or nearly black. In shape they may be smoothly oval, oval with irregular projections, or bluntly pyramidal. The size, however, is always nearly microscopic, so that in this respect there is a vast difference between ferns and flowering plants as regards the diversity of size of the seed of the latter and the spore of the former. Nor are spores ever accompanied by any of those adjuncts of attractive pulp, etc., which are seen in fruits proper; they are, indeed, very simple bodies, consisting merely of a reproductive cell protected by a husk or shell, and only capable of producing the parental form of fern after first developing a small green structure termed the "prothallus," on the underside of which the equivalents of male and female flowers are engendered, and an embryo seed, embedded in its substance, fertilised.

It is clear that the absence of any conspicuous flowers, and the consequent non-attraction of the insect world for fertilising purposes, has been the main factor in what may be termed the evolutionary stagnation in ferns, those of the present day strongly resembling the fossil species of the Coal Age in general character. There is, however, great diversity in the ways in which the spore capsules are arranged upon the fronds, and the mode of such arrangements being the most constant factor in each genus, it has been adopted by botanists for classification purposes. Thus, if we take one genus, the Polypodiums, for instance, we shall find all the many species embraced therein to have the spores arranged in round or oval heaps, entirely without a protective cover, or "indusium." In the common Bracken, as a type of another extensive genus, we find the spores arranged in continuous marginal lines, the edge of the frond being turned back to form the cover in question. The Lastreas, or Nephrodiums, have round heaps, protected by a kidney-shaped cover attached to the centre, and the Polystichums differ by having a circular one.

In the Osmunda we see the spores all collected at the frond tips, where, the leafy portion being suppressed, a rough resemblance to a faded spiræa inflorescence is produced, whence the common but incorrect name of the "flowering fern." The Davallias have their spores in little cups inserted in the frond edges, and in the Platyceriums special fronds are produced, the backs of which are coated, as it were, with a uniform layer of capsules near their tips. Each genus, in short, has its distinctive arrangement, and these are so diverse that exigences of space entirely preclude full description. Our most familiar native species, however, may be distinguished thus, the Polypodies, Lastreas, Polystichums, Osmunda, and Bracken are already described; besides these there are the Spleenworts, with spores in straight lines, arranged herring-bone fashion; the Hart's-tongues, with much larger heaps on like lines, but in faced pairs, the cover springing from opposite sides, which coalesce when ripe. The Lady Fern (Athyrium) has them of a rough horseshoe form, with a ragged central cover. The Bladder Fern (Csytopteris) as dots, with bladder-like covers; the Hard Fern (Blechnum) on special erect attenuated fronds: the Filmy Ferns in marginal cups, something like the Davallias, but more projecting.

Chas. T. Druery, V.M.H., F.L.S.

ROCK GARDEN NOTES.

The rock garden is now looking bright, and much attention is necessary at this season to keep everything in order. A nightly inspection should be maintained to prevent slugs eating the choice flowers and new growths. Hand picking, with the aid of a lantern, is the surest way to keep them down. Should there be any length of dry weather watering must be resorted to, or plants which were put out last month will suffer greatly. The dwarf primulas will require to be closely watched, or the small birds will soon ruin the flowers. A few strands of black cotton stretched over the plants will usually frighten the marauders. The oppositifolia group of saxifragas should be top-dressed when their flowering season is over to keep them in good condition. Some fine gritty soil, with a little old mortar mixed with it, should be sprinkled over the plants, and well worked amongst the stems with a pointed stick, afterwards watering with a fine rose to settle it.

Ramondias will need abundance of water during dry weather, as the foliage soon shrivels when the plants become dry at the roots. A simple and effective plan to adopt with regard to watering is to bore a few holes with an iron bar behind the plants and fill them up with water, when the soil will be thoroughly soaked. It is useless trying to water the plants from the front, and also very harmful. Ourisia coccinea may have a slight top-dressing of peat, and a few extra stones placed amongst the young growths will prove beneficial. It is a plant that loves to spread about over stones, and every encouragement should be given to induce it to thrive.

There are numbers of tender plants most suitable for the work which may be wintered in cold frames and planted out in April or May. Mesembryanthemums create a fine effect when given a position in full sun, as also does Convolvulus mauritanicus. This latter should be given a spot where its slender shoots can hang over stones. Of Lotus peliorhynchus, Asteriscus maritimus, Antirrhinum azarina, Sphæralcea Munroanum, and Amphicome Emodi, a stock may be maintained by propagating annually by cuttings, which root quickly in close cold frames if taken early in August, and make good plants for putting out the following season. A small frame should be reserved specially for propagating all classes of rock garden plants, and should have a bed of clean sand in it, for this will be found the most suitable rooting medium. I have tried many schemes for propagating the most difficult plants, and have come to the conclusion that there is nothing better than pure sand. The one thing to guard against is dryness, for once the sand is allowed to remain dry for any length of time the cuttings are almost sure to perish. Another thing, immediately they are rooted potting must be attended to. I have practised this method of propagating with excellent results, and always obtain a splendid percentage of rooted plants.

There are various annuals which adapt themselves wonderfully well to the rock garden, and these may be either raised in boxes, and planted out, or sown where they are intended to flower. Ionopsidium acaule (Violet Cress) is a beautiful miniature plant suitable for damp crevices, and when once established, will reproduce itself freely. Portulaca should be sown in dry, sunny spots, and slightly thinned when the plants are large enough to handle. The dwarf forms of leptosiphons, such as aureus, roseus, and hybridus, are excellent for the purpose, also Limnanthes Douglasi. Phacelia campanularia has blue flowers rivalling the gentians, and is easily grown, and when seen in a mass is very effective. Nemophila, calandrinia, nycterinia, sanvitalia, Campanula attica, annual erysimums, and many others all lend themselves to rock garden effect.

Diascia barberæ requires to be treated as a half-hardy annual in cold districts, but when grown in warm nooks in the Southern counties it is perennial. Although hardy plants are generally associated with rock gardens, there is no reason whatever why suitable plants of annual habit should not be grown, for they certainly provide an additional interest, without being out of place. When the aubrietias, alyssums, helianthemums, arabis, etc., which supply the colour effect, have finished flowering the garden is inclined to look rather dull, and this is where the value of annuals begin. E. C. Pooley.

ROSES OF DISTINCTIVE COLOURING.

A small number of roses are so peculiarly coloured as to deserve a few remarks. Of recent years this has become more noticeable, and causes this brief note.

Not all of these are new, however, for one of them is the Austrian Copper, with a colour I fail to find in any other flower, much less in roses. Grand indeed is this oldest of roses, in its bright and glowing copper, shaded with clear terra-cotta. If it were only perpetual, and not so fleeting for the short time it is with us, it would be of immense value. Leading from this class of Austrian and Persian briars we find Soleil d'Or, in 1900, obtained from crossing Persian briar Harrisoni with Antoine Ducher. Here we have a colour varying from deep orange-yellow to reddish-gold, shaded with nasturtium-red, and quite distinct from any other rose. A couple of years later we had Gottfried Keller, another remarkably shaded rose, varying from clear apricot to orange and yellow, with veins of deep rosy-orange at the base of its petals. The crosses from seedlings of Soleil d'Or are giving us some of the most unique colour of all, Lyon Rose being now well known, with its coral or shrimp-pink, suffused with deep orange-yellow. Arthur R. Goodwin varies from coppery-red to salmon-pink. But one of the most unique shaded of all is Rayon d'Or, a rose there is considerable discussion about just now, because of its very indifferent behaviour up to the present. This is as yellow as the marsh marigold, with a streak of orange and red in the bud stage.

In Irish Elegance we have a single rose that is almost indescribable in its shadings of bronzy-orange and apricot. Jacques Vincent is another difficult to describe. Its main shades are coral-red and yellow, with a rosy-salmon centre; a very hardy and beautiful variety this. Juliet is a cross between Soleil d'Or and Captain Hayward, and a charming combination of the glorious shades of these grand roses has resulted. Hugo Roller must not be omitted; rich rosy-crimson on the outer petals, with a lemon-yellow centre. The aptly-named Beauté Inconstante has coppery-red, carmine, and yellow flowers, with seldom two shaded alike. Many peculiarities are found in the striped roses, such as York and Lancaster, Merrie England, Pride of Reigate, and Rainbow. In Grand Duc A. de Luxemburg and Mrs. E. G. Hill we have deep coral rosy-reds on the reverse of the petals that give the flowers a peculiar appearance.

A. P.

MESEMBRYANTHEMUM PYROPEUM.

With the exception of M. cordifolium variegatum, so extensively used for summer bedding, the mesembryanthemums are not extensively cultivated in other than the warmest and brightest parts of the country. This is due largely to the fact that certain plants are so immensely popular and useful that they crowd out others equally interesting and beautiful; a wider knowledge of plants is rapidly growing, and, as a result, these beautiful and somewhat rarely seen subjects are steadily growing in favour among those who do not wish their gardens to be mere copies of their neighbours. One of the annual mesembryanthemums is herewith figured; it is M. pyropeum, also known as M. tricolor and M. tricolorum. It is a Fig Marigold of great beauty, and in a sunny season it is remarkably effective. Sown in April on rich light soil, to which some lime rubble has been added, it soon germinates, grows readily, and in sunny weather is a blaze of flowers that are crimson, with a pink zone round the dark eye. The long acute leaves, with their numerous little glistening glandular protuberances, make the plant still more interesting. A warm sunny position is the best for this species, as indeed it is for all mesembryanthemums, as they love sunshine. Those who have been privileged to see the huge masses of various mesembryanthemums growing on the rockwork at Tresco Abbey Gardens, in the Scilly Isles, will not need to be told of their beauty on a sunny day; but whereas many of those species do not grow satisfactorily out of doors in cooler districts, M. pyropeum is one that may be depended upon in the Midlands and the Southern Counties in a bright season. It should be remembered that this annual does not take kindly to transplantation, and therefore should be sown where it is to remain and flower.

MESEMBRYANTHEMUM PYROPEUM. [Photo: C. P. Raffill.

A hardy species of annual duration, and producing a profusion of crimson flowers.

THE VALUE OF THE ROOF GARDEN.

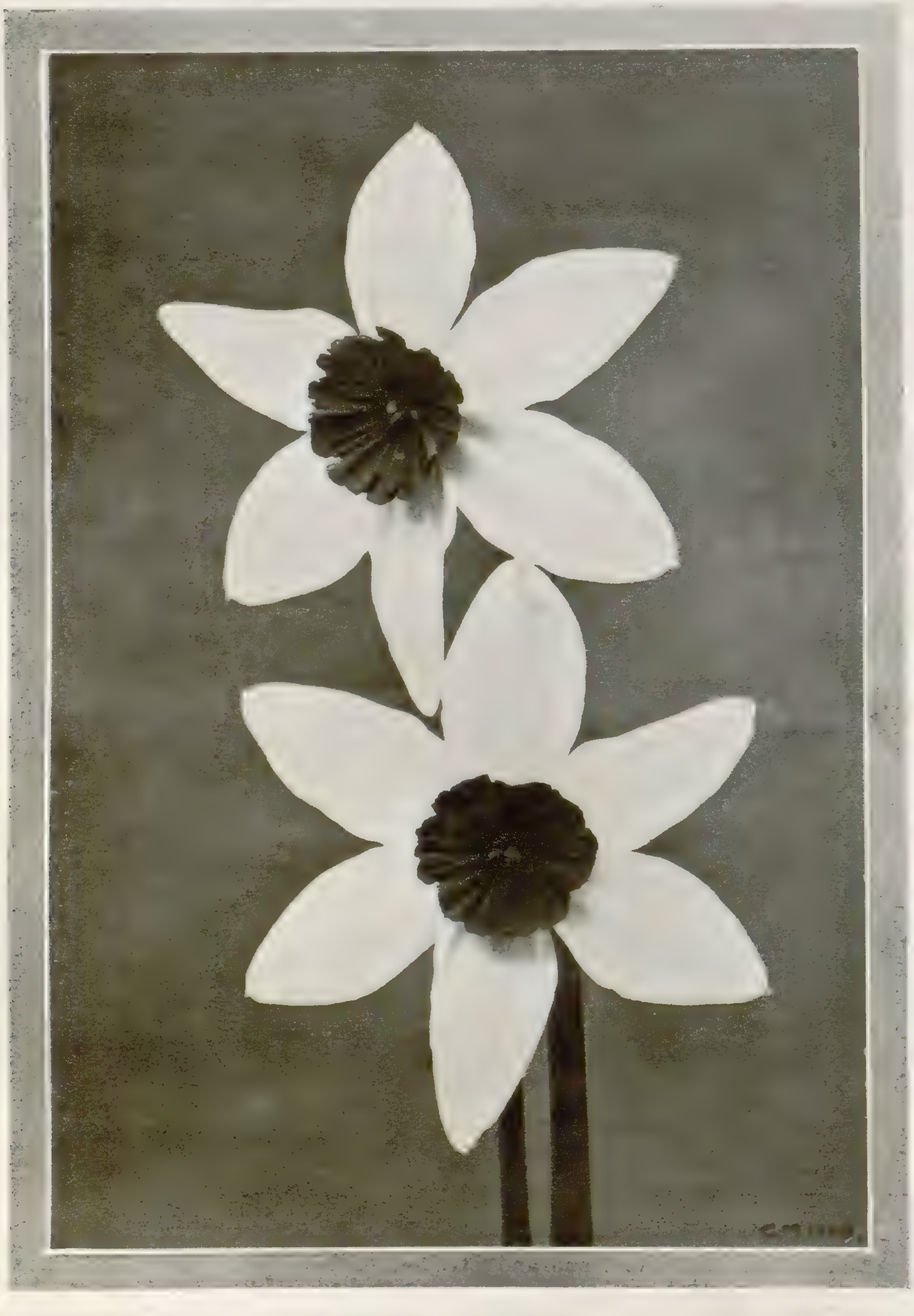
In large towns, where the price of land practically prohibits the making of pleasure grounds, the scheme of roof gardening has a value that deserves, and no doubt will receive, ever-increasing appreciation. Open-air life, the additional purity (or, perhaps it should be said, the less impurity) of the atmosphere high above street levels, the cheering influence of a sense of space, are all benefits to be enjoyed by those who can climb to the roof and find there reasons for lingering and working among objects of interest, such as plants, whether minute or stately; shrubs, whether rare or common; and trees, whether dwarfed or giant.

Large terrace houses in London often possess flat roofs, edged by stone balustrades, that are absolutely fitted for the making of gardens; similar rows of houses face the sea in most coast towns, and the force of ocean gales would not prevent the safe cultivation of numerous lovely subjects. In London the worst enemy will be the poisonous nature of atmospheric deposits; but syringings with soft soap and water have a marvellous result in keeping leaves clean and healthy.

The first study of any roof top, with a view to gardening, will consist of a series of revelations to the inexperienced worker. There are such strangely warm nooks to be discovered behind and against chimney stacks that it is possible to take a deck chair and rug and sit down in comfort to meditate over the site, and draw a rough plan of its measurements and aspects. There will also be cold places, wind-swept, or sure receivers of the first ice, that must be described on the chart. A thermometer is needed in taking and recording observations, and a comparison of its records on the same day, at almost the same moment, in twenty or thirty different places and altitudes on the same roof, will give a lesson more eloquently than could be done in words. The whole secret of roof gardening, provided that a sufficient depth of pure soil is obtained, consists of adapting the plants to their environment and position.

Borders have to be held in by boarded sides, painted grey to match stone balustrades, or brown, or green, but there is no reason why they should not be three feet deep in some situations, fitted, therefore, for the culture of shrubs, roses, climbers, and handsome herbaceous plants. It is true that permanence is not to be gained in the sense in which we can command it in Mother Earth, but surely a climbing Rambler rose or clematis, ivy or Virginian creeper, that has been a joy for three or four years, can be gladly replaced by another specimen? Any of these climbers mentioned will thrive longer still if planted in large oil casks, which affords yet greater room for root development.

Beds on the open roof spaces can be made by throwing down a heap of builder's rubbish and stones, levelling the top, adding to it a pile of turfy loam mixed with old manure, a further mound of the compost sold by florists for potting, and then banking the whole round, two feet deep, with a rockery wall of large stones, cemented together sufficiently to well retain the earth. When the summit is gently rounded off, a raised bed will be gained, in which hyacinths, tulips, daffodils, with forget-me-nots; then ivy-leaved geraniums and violas, are sure to live and blossom. The chinks of the rockery sides can be adorned by blue Scilla sibirica and Chionodoxa Lucillæ, crocuses, and small ferns, to be followed by lobelia and sweet alyssum.



NARCISSUS INCOGNITA.

A beautiful variety, with white perianth and yellow, orange-rimmed crown. The flowers illustrated were grown at the Lissadell Bulb Farm, Lissadell, Sligo.

It is always advisable to board up the inner side of the balustrade, as this prevents a draught from sweeping across the floor level; outjutting tall screens of painted wood may be of use here and there against chimney alcoves or the ends of walls to increase the geniality of the southern sides. In a deep border, by a balustrade, a row of different shrubs will usually flourish; the golden euonymus and golden privet will imitate the glow of sunshine, syringa and gorse can blossom even within the City boundaries; there may be red, rose, and white hawthorns, lilac rhododendrons, snowy masses on red stems of Prunus Pissardi, and, where the warmth and shelter are greatest, whole groups of azaleas will burst out to greet the passing of May into June.

Wonderful are the winter effects that clever roof gardeners can show: a chimney stack may be vermilion from October to February with the clustered berries of the fire thorn, and the ground beneath be spread over by the deeper red-berried branches of cotoneasters. In a square tub, set in a cosy angle, the spring-perfumed roseate Daphne mezereum will flourish, with variegated arabis above its roots. Whole rockeries of primroses, forget-me-nots, hepaticas, and double red and white daisies may appear slanted against cooler walls, and in the shadowed places may be displayed the green and yellow foliage of the periwinkle, Vinca minor variegata, glossy rosettes of London pride, and sword-grey leaves of German iris.

There should be flowers all the summer in profusion for gathering, since marguerites, asters, violas, pinks, begonias, Marguerite carnations, sweet williams, and snapdragons are but a sample of the plants that can be safely introduced, while autumn Michaelmas daisies and early chrysanthemums will flourish in deep boxes. For the supply of the home vases alone the roof garden is of immense value.

Then do we not each one of us need a solitude of peace, to which to carry our weariness, anxieties, and moods? There is a spiritual atmosphere, as well as a temporal one, about this Eden near the sky, although its vista views may be only above the housetops; we can take to it a love of Nature that is, to many, a pain in London life, and find in the crinkled primrose leaf, or unfurling violet bud, a comforting message of union between town and country, a pledge of the undying poetry of being, a forecast of the coming of a sun-power that will reveal fresh loveliness even in this man-made sanctuary.

Failures there must be among the trees, shrubs, and plants that we ask to adapt themselves to this high altitude, but these will not spoil the record of success any more than a sculptor's renown is destroyed by his wasted chip heaps. That there are millions of experiments to be tried will not deter but invigorate the work of flower lovers, who know that the perfection of roof gardening can only be earned for future men and women in a yet more overcrowded land, by the patient pioneer efforts that are made to-day. M. H.

NARCISSUS INCOGNITA.

One of the finest of the Barri group of daffodils, and especially of that section in which the perianth is white, is Incognita. This is not one of the newest varieties, but its beauty and price keep it in a high position, and yet it is within the reach of those fanciers who do not mind paying anything from ten shillings to twenty-one shillings per bulb. The flowers are of large size, and the white perianth segments are of good shape and substance, setting off to fullest advantage the showy and rather flattened crown, which is of a deep rich yellow colour, edged with bright orange, and charmingly frilled. Under good culture Incognita grows from fifteen to eighteen inches high, and as its flowers have the merit of lasting in good condition for a long time the variety is worthy of consideration. Our illustration represents flowers exhibited from the Lissadell Bulb Farm, Lissadell, Sligo, Ireland, at the meeting of the Royal Horticultural Society held at Westminster on April 11.

Euphorbia jacquinæflora.—When the young shoots on the stock plants have grown two to three inches they should be removed with a portion of the old stem attached, and have the wounded part placed in powdered charcoal or fine wood ashes to prevent bleeding. These cuttings may be inserted close to the edges of small sixty-sized pots previously filled with peat and sand in equal parts. Give sufficient water to settle the soil, and plunge in a bed with a bottom heat of 80 to 85 degrees; the propagating case must be kept close for a few days, after which a little ventilation may be afforded them each evening, as a preventive of damping, to which this useful winter-flowering plant is most subject. Should the moisture collect upon the propagating frames it must be removed daily with a sponge. If these details are carefully and regularly observed little or no trouble will be experienced.—J. D.

LAWNS.—Those who desire to make a new lawn or bowling green, or to renovate and maintain existing ones in good condition, can have no better guide than "Lawns and Greens," by T. W. Sanders, price 1s. net, by post 1s. 2d.; bound in cloth 1s. 6d., by post 1s. 9d., from W. H. and L. Collingridge, 148, Aldersgate Street, London.

BOULTON & PAUL, LTD., HORTICULTURAL BUILDERS, Norwich.

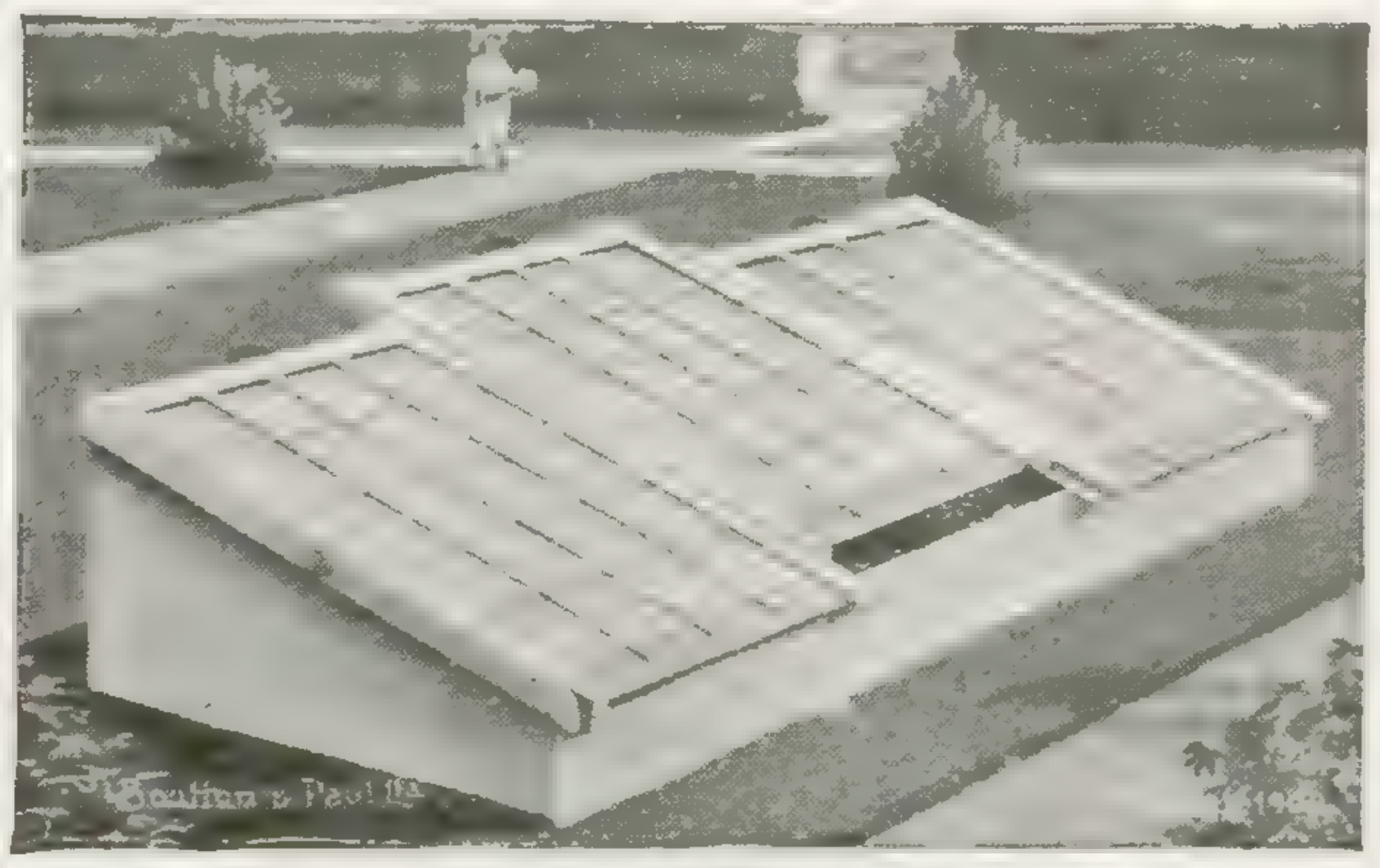
EFFECTIVE, PRACTICAL CONSERVATORIES.

Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of **40**/- value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.

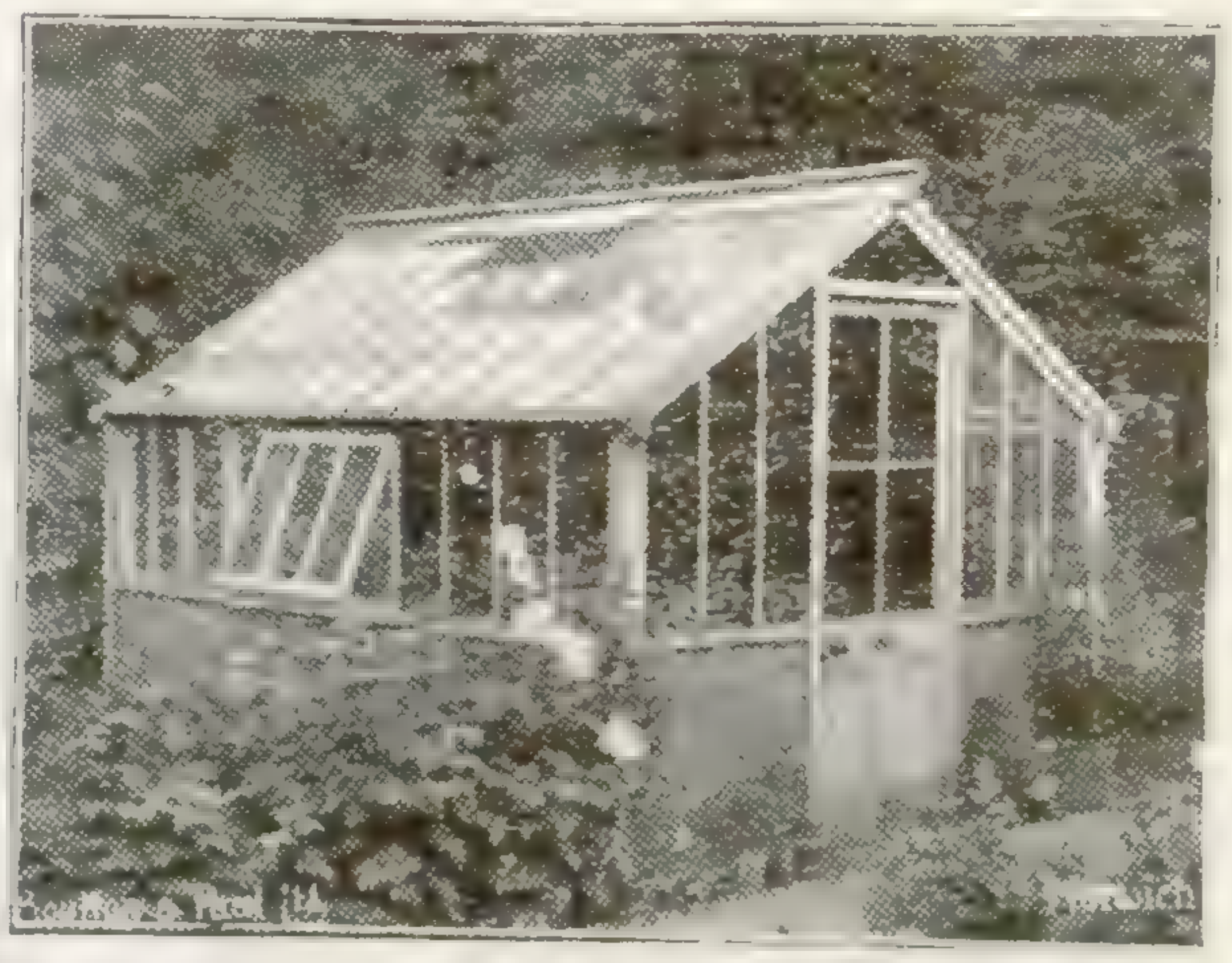


4ft. by 6ft. ... £2 0 0 8ft. by 6ft. ... 3 0 0
Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft. Similar to No. 75, with Two Lights... **35/-**

SEND FOR ILLUSTRATED CATALOGUES.

Every part of these Houses is thoroughly well made, painted three coats, GLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.



No. 49A.—Span, 1[illegible]ft. by [illegible]ft.	£11 10 0
No. 47A.—Lean-to, 10ft. by 7ft.	£9 10 0

All parts are numbered ready for easy re-erection by any handy man.

RANSOMES' LAWN MOWERS

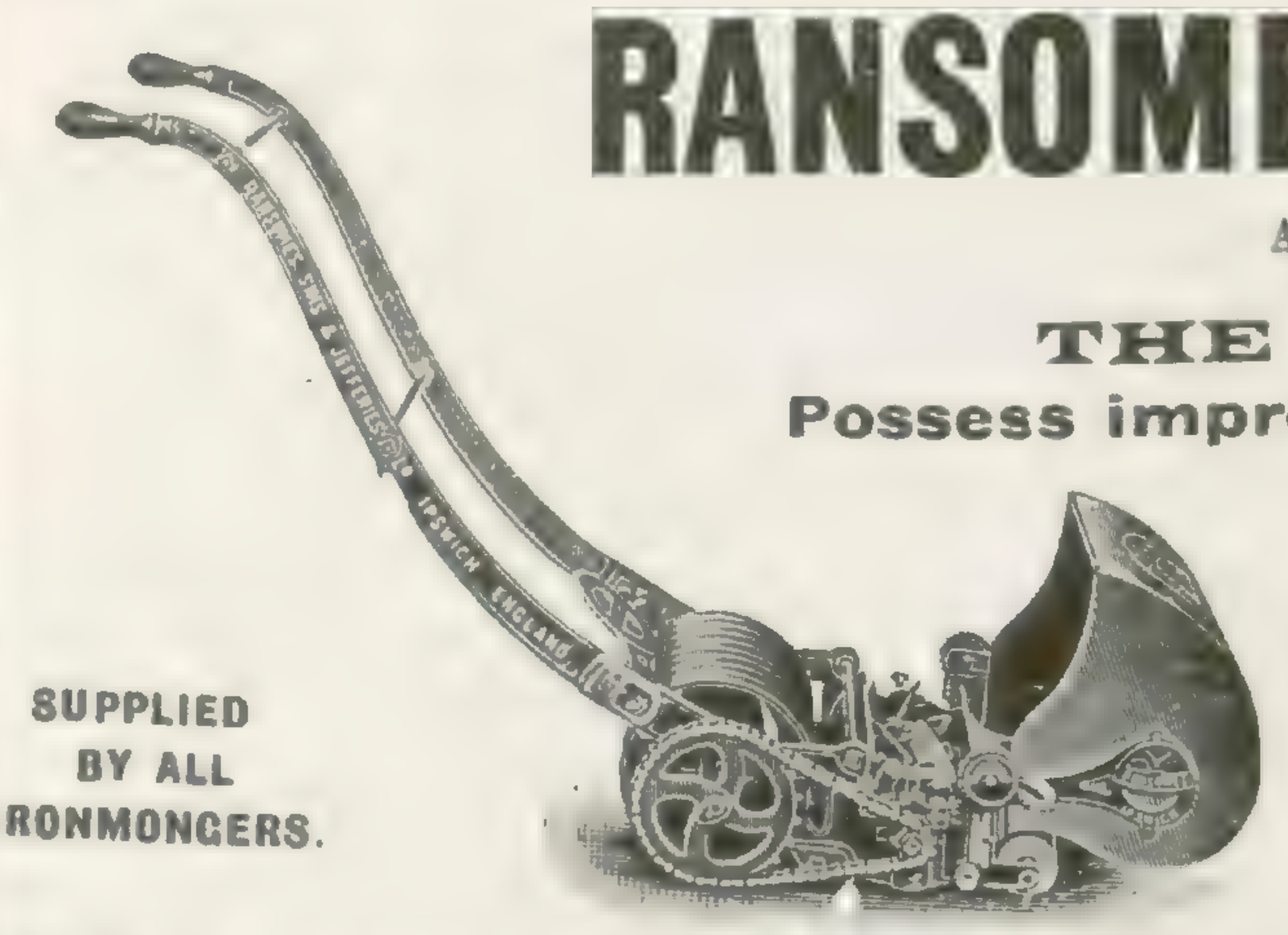
Appointed by Royal Warrant.

THE BEST IN THE WORLD.

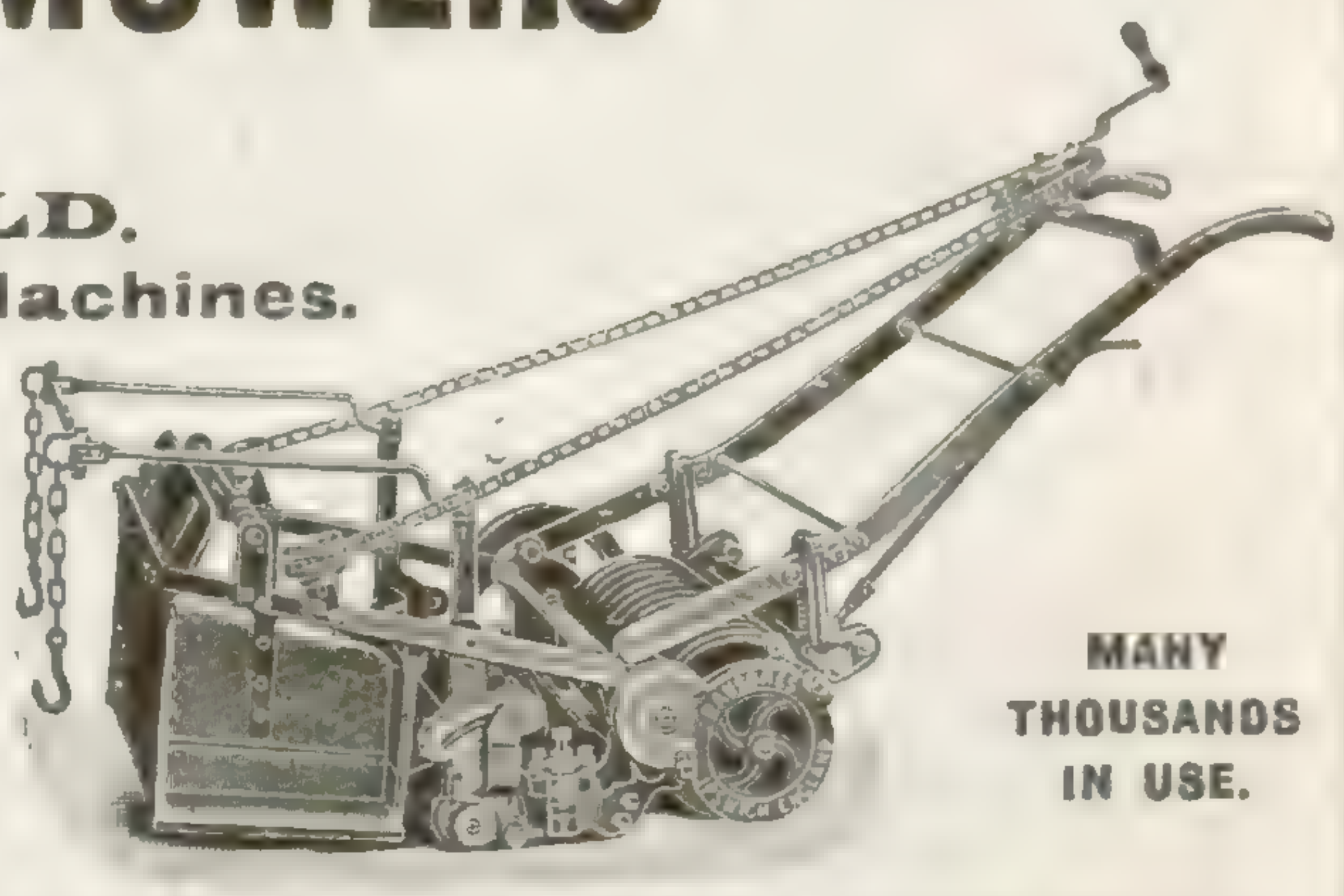
Possess improvements embodied in no other Machines.

Recent Awards.

3 GOLD MEDALS.
7 SILVER MEDALS.



SUPPLIED BY ALL IRONMONGERS.



MANY THOUSANDS IN USE.

HAND POWER MACHINES.
In all kinds and sizes.

MOTOR LAWN MOWERS
The first brought out. Reputation Established.

HORSE and PONY MOWERS.
The best large machines.

Illustrated Catalogues Free on Application to— **RANSOMES, SIMS & JEFFERIES, LTD., THE ORWELL WORKS, IPSWICH.**

BENTLEY'S
WEED DESTROYERS

Utterly annihilate Weeds, Moss, Dandelions, and all other Weeds on Garden Walks, Carriage Drives, etc.

HAVE THE LARGEST SALE IN THE UNITED KINGDOM!
ARE THE MOST POWERFUL MANUFACTURED!
ARE THE MOST PERMANENT IN EFFECT!

LIQUID (Poison).

Double Strength (1 to 50).

3 gallons, to make 153 gallons ...	£0	10	0
6 ,, ,, 306 ,, ...	0	18	0
12 ,, ,, 612 ,, ...	1	13	0
20 ,, ,, 1,020 ,, ...	2	7	6
40 ,, ,, 2,040 ,, ...	4	12	6

Special Concentrated Strength (1 to 80).

3 gallons, to make 243 gallons .	£0	14	6
6 ,, ,, 486 ,, ...	1	7	0
12 ,, ,, 972 ,, ...	2	6	0
24 ,, ,, 1,944 ,, ...	4	10	0

BENTLEY'S DAISY KILLER.

(Lawn Sand.)

Completely eradicates Daisies, Moss, and other Weeds which infest **Lawns, Tennis Courts, Croquet Grounds, Bowling Greens, Golf Courses, etc.,** and afterwards improves the tone and colour of the sward.

1 ton, **£19**; 10 cwts., **£9 15s.**; 5 cwts., **£5**; 1 cwt., **£1 1s.**; 56 lbs., **12s.**

Tins, **5s.**, **2s. 6d.**, and **1s.** each.

Carriage paid on **7s. 6d.** orders and upwards.

WHOLESALE MANUFACTURERS,
JOSEPH BENTLEY, LIMITED,
Chemical Works,
BARROW-ON-HUMBER, HULL.

PERPETUAL FLOWERING CARNATIONS, Britannia, Rose Dorée, White Perfection, Black [illegible], Fortuna, Mrs. Burnett, etc. 3s. per doz. (strong plants) post free. Ask list. C. F. A. VAN DER SLUYS, F.R.H.S., [illegible], Guernsey.

Glaze your Greenhouses and Vineries with

ZINC BAR DRY-GLAZING.

No paint or putty ever required. No leaks. No breakages from expansion or contraction. No drip from condensation. Breakages by accident easily repaired. All woodwork covered. Cheap, Durable, and Efficient.

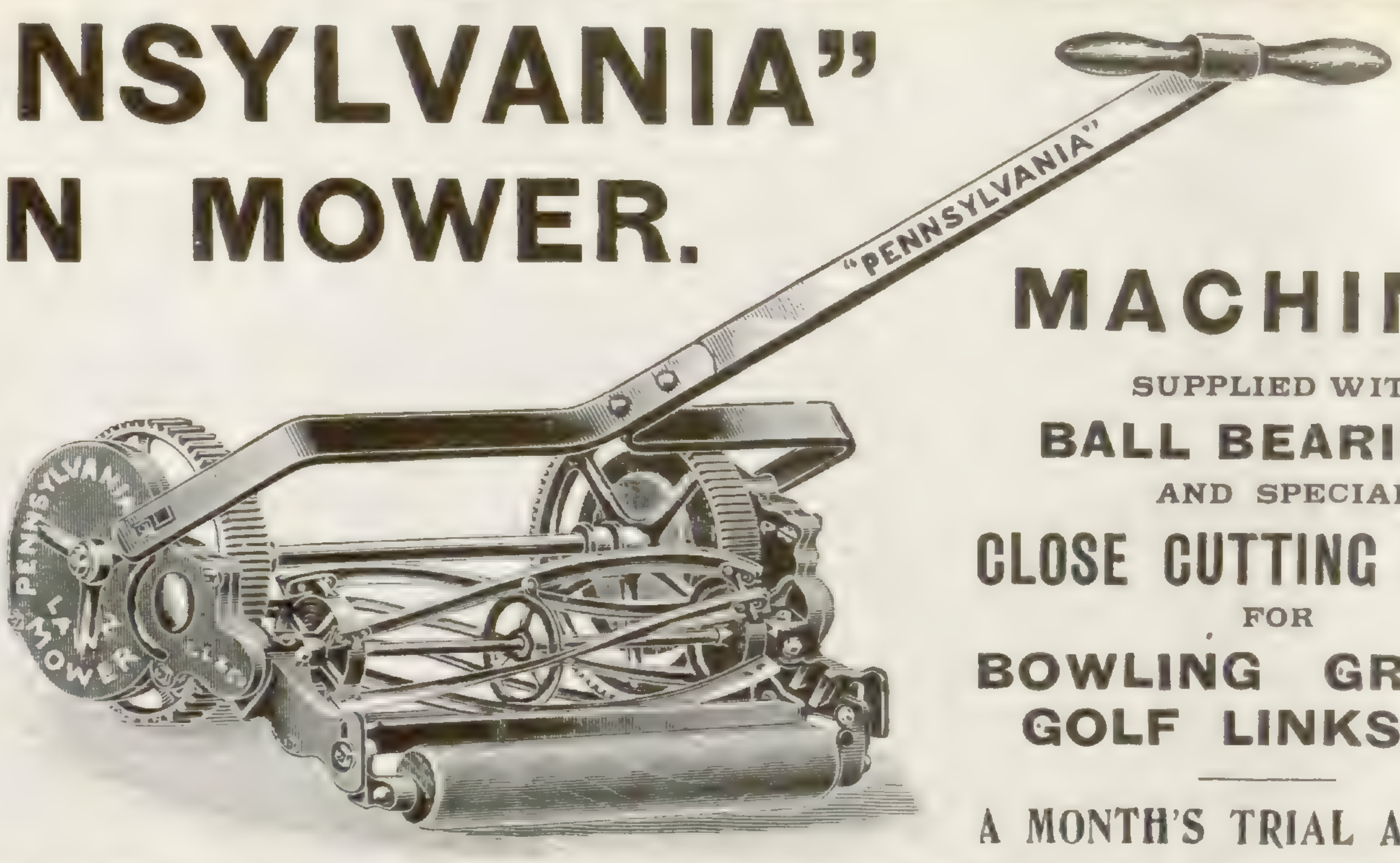
Range of Plant and Peach Houses erected for J. T. Bond, Esq., Mannamead, Plymouth.

Write for Testimonials and Price List,

SAUNDERS (F.R.H.S.) & BISS,

Horticultural Builders and Heating Engineers . . . . **EXETER.**

The "PENNSYLVANIA" LAWN MOWER.



SPECIAL NOTICE.

With this Machine a Lawn can be Mown ONCE A DAY with scarcely more expenditure of time and labour than ONCE A WEEK with the ordinary heavy English Machines.

MACHINES

SUPPLIED WITH
BALL BEARINGS,
AND SPECIAL
CLOSE CUTTING KNIVES
FOR
BOWLING GREENS, GOLF LINKS, &c.

A MONTH'S TRIAL ALLOWED.

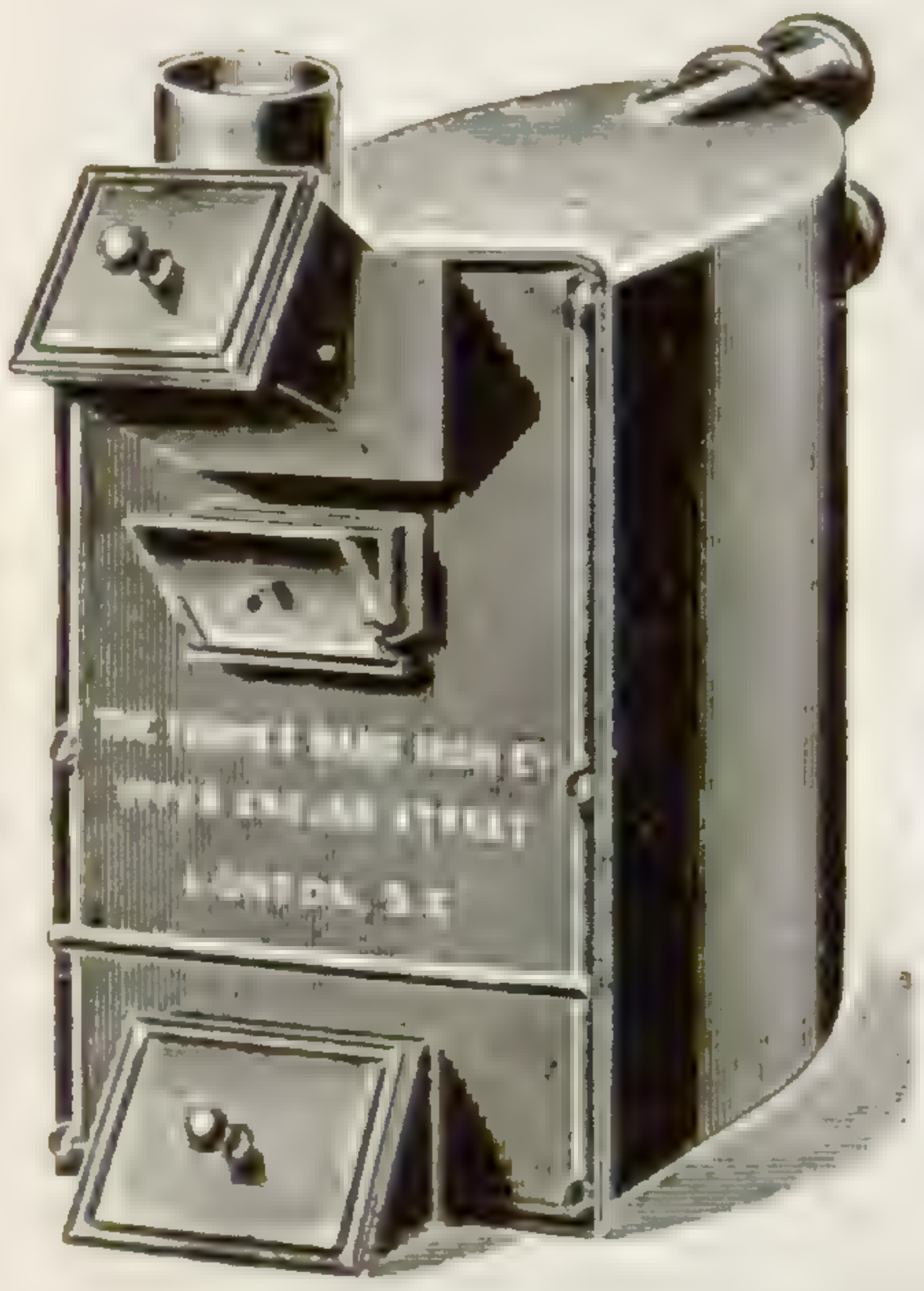
Price Lists and Testimonials from—
LLOYD, LAWRENCE & CO. (Dept. C.), 29, WORSHIP STREET, LONDON, E.C.,
And all Ironmongers and Seedsmen.

'Phone: Hop. 763.

When next a Small Boiler you require

TRY

THE HEEL



NONE TO BEAT IT.

THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.

4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

Barr's Pure Lawn Grasses

For Lawns, Tennis Courts, etc.

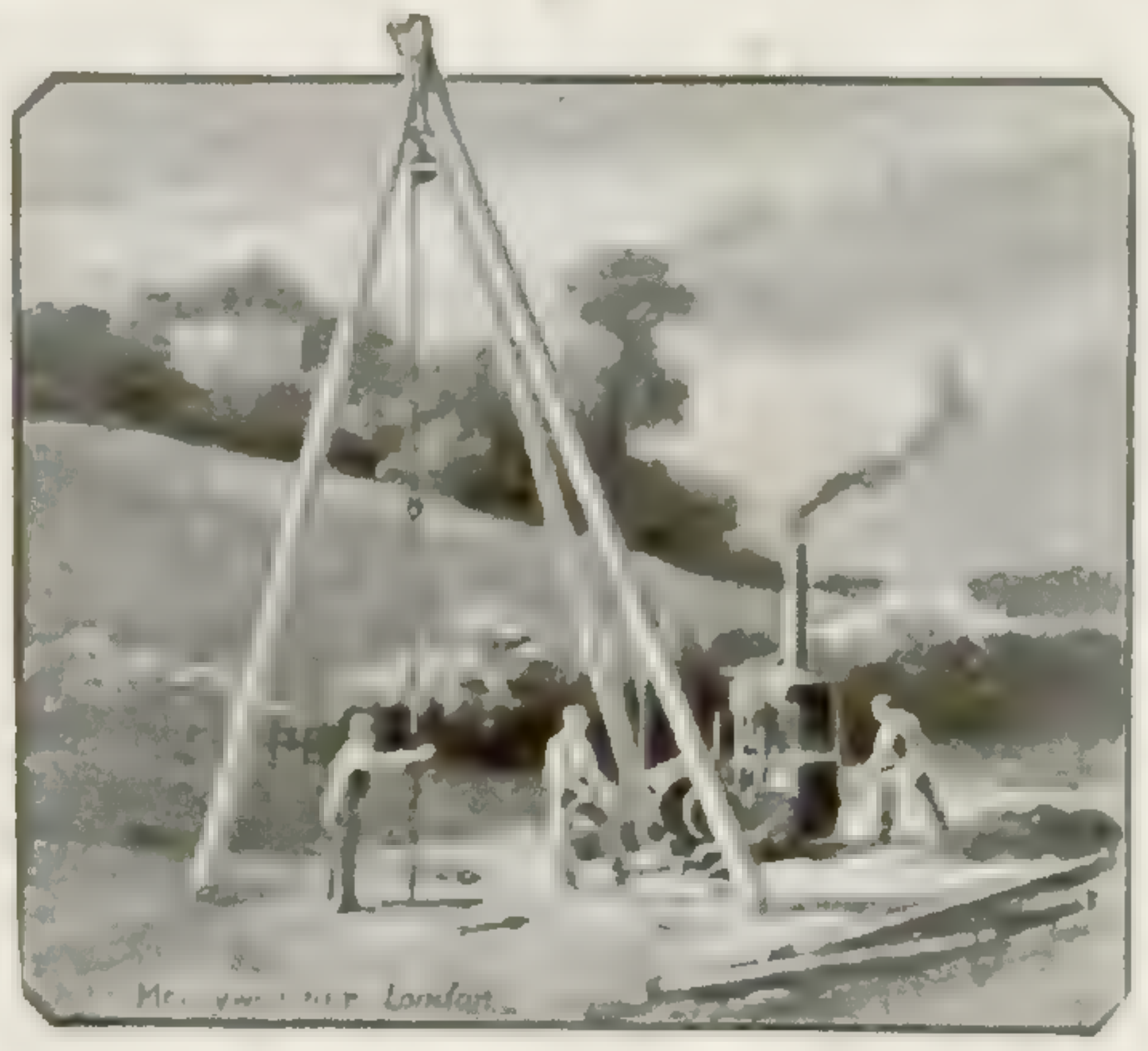
BARR'S STANDARD MIXTURE.
Suitable for fine Lawns and Croquet Grounds, containing neither clover nor coarse grasses.
Per lb., **1s. 10d.**; 20 lb., **34s.**

For hints on Making and the Management of Lawns see Barr's Lawn Grass Circular, free on application

BARR and SONS,
11, 12, and 13, KING STREET, COVENT GARDEN, LONDON.

WELL BORING.

MERRYWEATHERS' ECONOMIC SYSTEM.



Merryweathers' men with Steam Tackle boring a well.

Pure and Abundant Supplies.
MEN AND TACKLE SENT AT A MOMENT'S NOTICE.
Work Carried Out with Economy and Despatch.

Write for Book on "Water Supply to Mansions."

MERRYWEATHER & SONS,
63, LONG ACRE, LONDON, W.C.

THE FAVOURITE WEED KILLER.

SANDWITH'S
PREMIER
WEED
KILLER

As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for **6/-**; drum, **2/-**. 12 galls. for **16/-**; drum, **6/-**. 20 galls. for **26/8**; drum, **10/-**. 40 galls. for **50/-**; drum, **20/-**.

EITHER LIQUID OR POWDER.

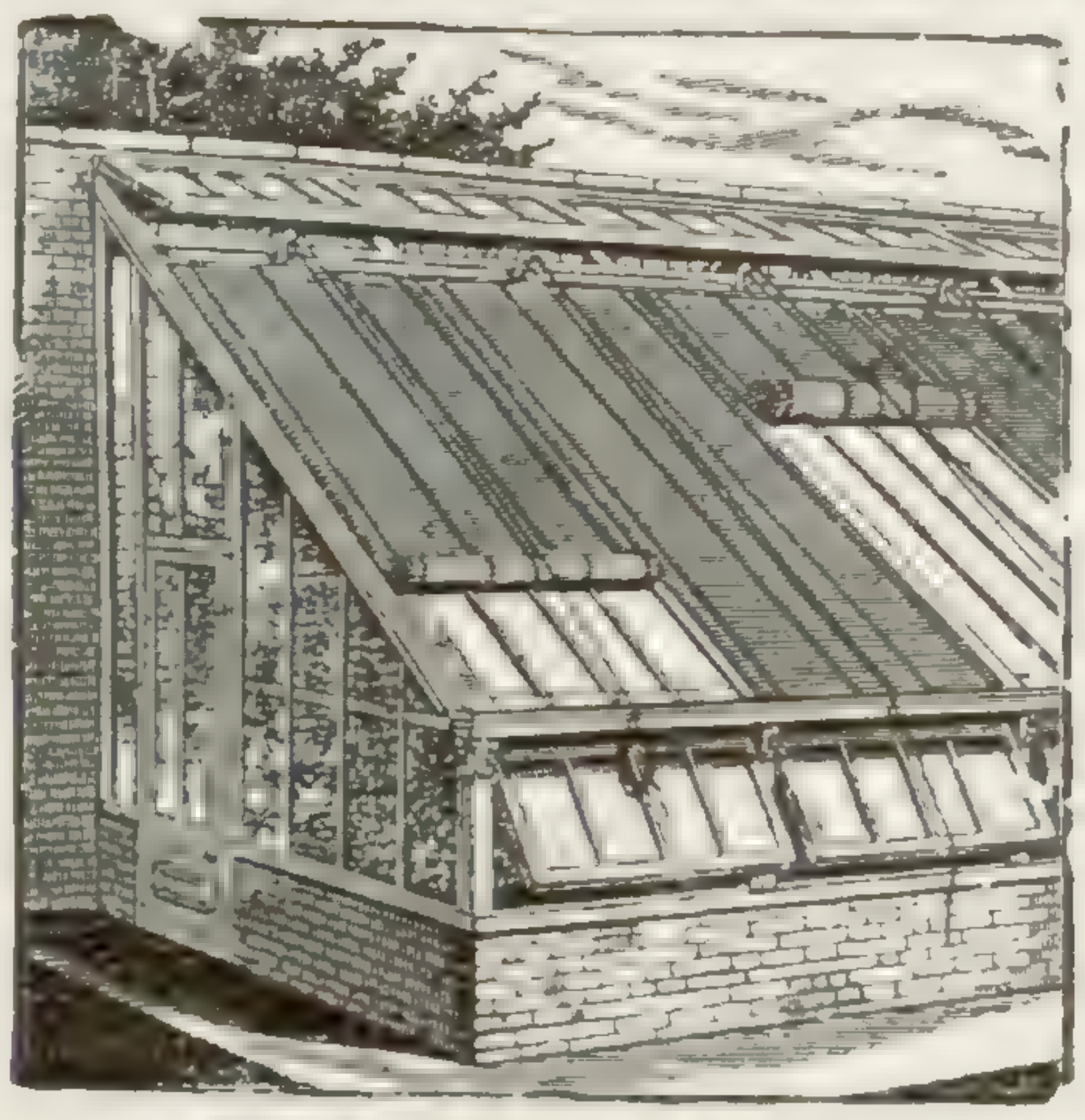
Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,
The Horticultural Specialists, BRACKNELL, BERKS.
Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

PARISIAN (WOOD LATH) BLINDS

MOST DURABLE OUTSIDE SHADING.



SEND FOR ESTIMATE.

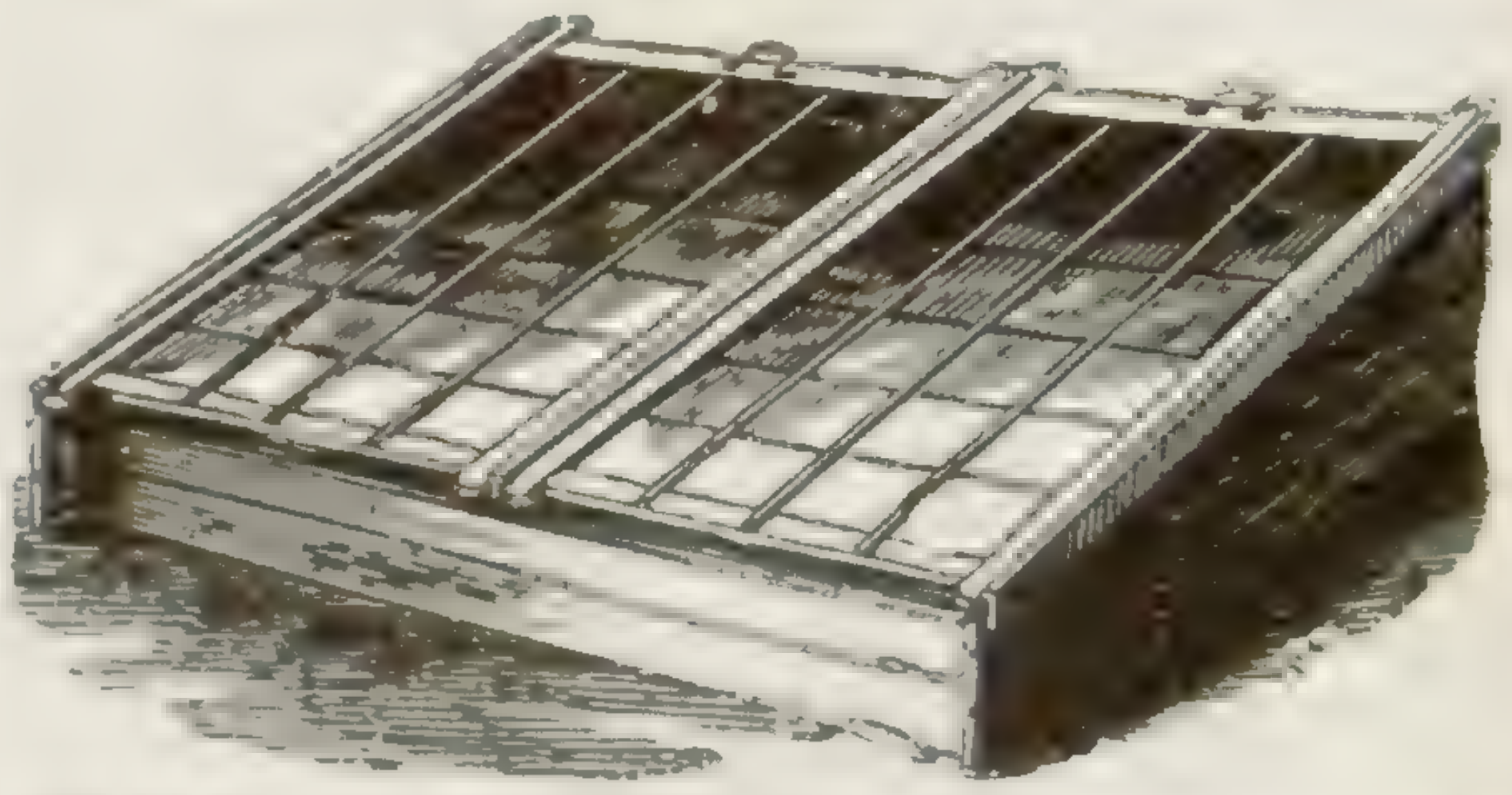
SUPPLIED ONLY BY
W. RICHARDSON & CO.,
HORTICULTURAL WORKS,
DARLINGTON.

GARDEN (FROM STOCK) FRAMES

PORTABLE

CUCUMBER FRAMES.

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.		£	s.	d.
1-light 4 ft. by 6 ft.	CASH PRICES. CARRIAGE PAID.	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.		5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON, MANCHESTER.

NEW PLANTS, ETC.

ODONTOGLOSSUM OSSULSTONI. SHRUBBERY VARIETY.

This is a superb odontoglossum, and it was represented by a grand plant carrying a spike of nearly a dozen and a half beautiful flowers. The Shrubbery variety is the finest of the numerous forms of the hybrid between O. nobile (Pescatorei) and O. spectabile, and it gave ample evidence of the influence of O. Harryanum through the last-named parent. The largest flowers were about four inches in depth, finely proportioned, and largely of a rich purplish-maroon colour, with white tips and marks on the sepals and petals, and a white apex to the yellow-marked lip. F.C.C., R.H.S., April 11. Messrs. Charlesworth and Co., Haywards Heath.

ONCOBA SPINOSA ROUTLEDGEI.

A quite new and distinct greenhouse shrub, with deep green lanceolate leaves, spiny branches, and beautiful glistening pure white flowers, each about 2½ inches across, and with a large central cluster of rich yellow stamens and anthers. The oncobas form a small genus of the order Bixineæ, and the typical O. spinosa is regarded as a native of Arabia, but O. spinosa Routledgei was found, we understand, in Central Africa by a gentleman who was hunting big game, and the seeds were sent by him to Mr. Shea, in whose garden plants flowered in two years from seed sowing. As the plant flowers freely it may become of considerable horticultural value. F.C.C., R.H.S., April 11. Chas. E. Shea, Esq., Foots Cray, Kent.

NEPHROLEPIS MARSHALLI COMPACTA.

In this most elegant fern we seem to have reached the acme of plumose development, fineness of division, and "mossiness," on the part of the variable Nephrolepis exaltata. It is a very beautiful fern, and a well-grown plant forms one of the most charming presents one could make to a lady. This variety formerly secured an A.M. F.C.C., R.H.S., April 11. Messrs. H. B. May and Sons, Edmonton.

MILTONIA BLEUANA VAR. LAEKEN.

This is a striking and a remarkable variety, but by no means so beautiful as M. B. nobilior and some other varieties of M. Bleuana. The plant shown carried three spikes of large flowers, and on the white ground the purplish-rose colouring was laid rather heavily on the base of the sepals and petals, and, in lighter shade, appeared on the centre of the broad lip. F.C.C., R.H.S., April 11. Mr. Firmin Lambeau, Brussels.

PELARGONIUM MAXIM KOVALESKY.

This is said to be a fine bedding variety, and if it proves so to be, then it has a great future before it, as the colour is at once distinct and striking. The flowers are of large size, and borne in large, compact trusses. The colour is light yellowish orange. Indian yellow is perhaps the correct shade, and one we have not hitherto possessed in bedding pelargoniums. As a pot plant the variety will also be useful, but the flowers do not possess that wonderful development of size and form that so many of the splendid Swanley seedlings show, consequently it will depend on its colour and suitability for bedding for its popularity. A.M. R.H.S., April 11. Messrs. H. Cannell and Sons, Swanley.

ROSE MARCELLA.

A new hybrid tea rose of considerable promise and great beauty; the well-formed flowers are light flesh-pink, charmingly brightened by a suffusion of light yellow that shades up from the base of each petal. The flowers are of large size and good substance. A.M., R.H.S., April 11. Messrs. William Paul and Son, Waltham Cross.

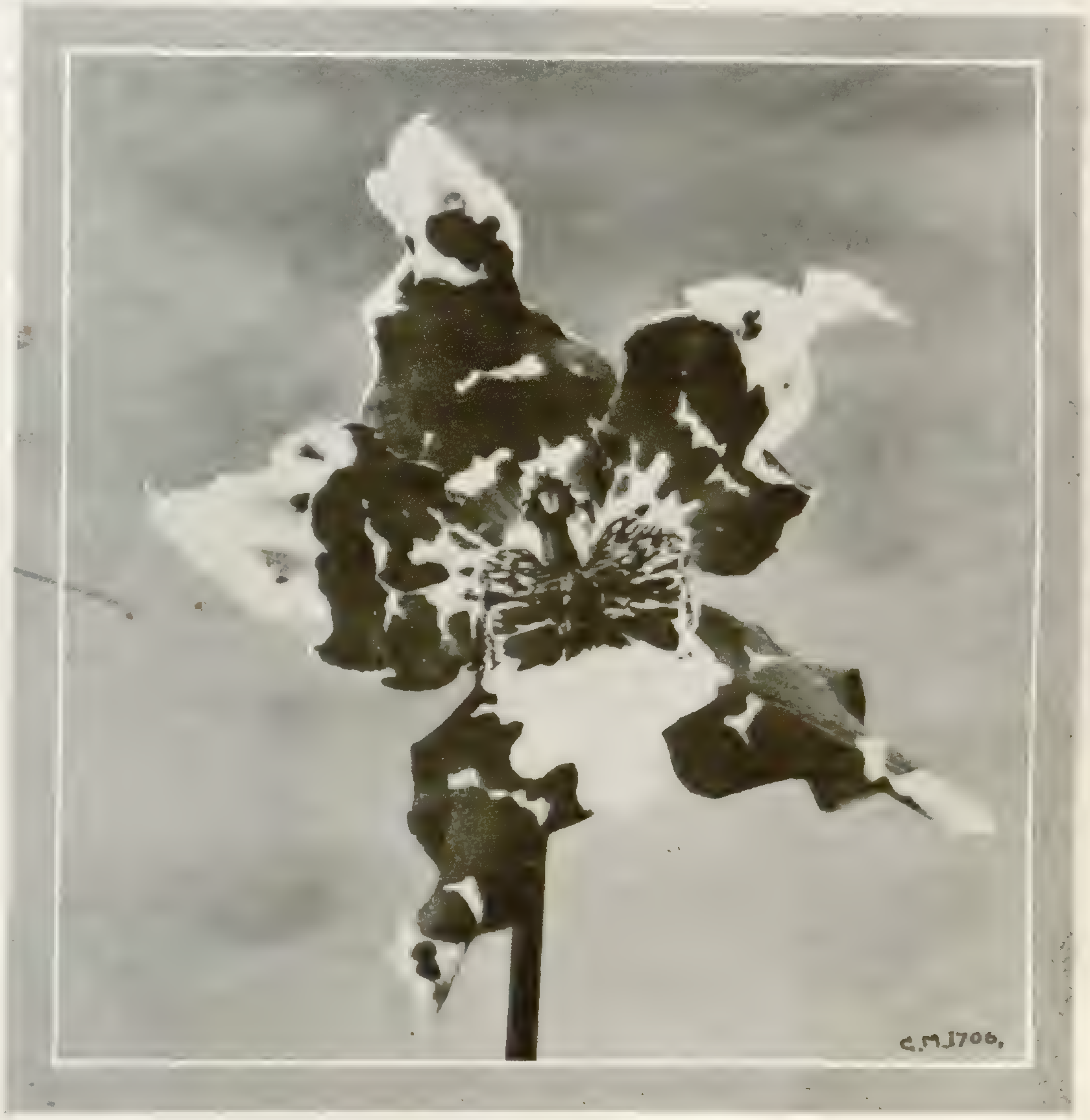
AURICULAS.

Mrs. Harry Veitch.—A beautiful auricula of fine form and size, and a good grower. The flowers are a brilliant shade of rich old rose colour. A.M., R.H.S., April 11. Mr. Jas. Douglas, Great Bookham.

Mrs. Gardiner.—This very pretty and effective variety produces a fine truss of shapely flowers that are a beautiful shade of pale lilac, almost a lavender tint. A.M. R.H.S., April 11. Mr. Jas. Douglas, Great Bookham.

SINGLE DAHLIAS.

During the summer of last year a special trial of single dahlias was conducted for the National Dahlia Society at Messrs. J. Cheal and Sons' Nurseries with a view to selecting the most suitable effect for the garden. Some sixty or more of the finest varieties in general cultivation, with a considerable number of novelties, were included in the trial, and the committee of the society, after making a critical inspection of them, selected the following as being the best in their several shades of colour for the production of a rich display of colour. It is a point of some interest that these varieties include some of the best single dahlias for exhibition.



ODONTOGLOSSUM OSSULSTONI SHRUBBERY VARIETY.
Flowers rich purplish-maroon and white. F.C.C., R.H.S., April 11.
Messrs. Charlesworth and Co., Haywards Heath.

Amy (Mawley).—An excellent variety with refined flowers of a rich terra-cotta hue.

Ensign.—An effective variety with brilliant scarlet flowers of fine form.

Butterfly (Cheal).—Distinct and pleasing, the flowers white with primrose band round the centre.

Columbine (Girdlestone).—A variety that has long been in cultivation, and still the best in its colour, which is rich rose with a suggestion of orange at the base of the florets.

Cardinal (Cheal).—A quite new variety which received a F.C.C. from the N.D.S. and an A.M. from the R.H.S. for its merits for exhibition, as well as the three marks for garden decoration. The flowers are cardinal-red with golden band round the centre.

Fugi San (Cheal).—Rich golden-yellow, the centre encircled with a crimson ring.

Kitty (Cheal).—A distinct and beautiful variety, the colour rose-mauve, the florets darker at the base.

Lady Bountiful (Seale).—A charming variety, the colour rich pink with crimson band round the centre.

Leslie Seale (Seale).—Bright silvery lilac, the disc encircled with a deep crimson band.

Miss Morland (Cheal).—Crimson-scarlet, effective and of high quality.

Miss Roberts (Ware).—An exceptionally fine yellow variety, remarkable for its rich colour and high quality.

Mrs. Joynson Hicks (Cheal).—A new variety of much value for its fine form and distinct colour, this latter being pale buff, with crimson ring round the centre. F.C.C., N.D.S., and A.M., R.H.S., for exhibition, and three marks from the N.D.S. for the garden.

Mrs. W. Hood (Dobbie).—A rich yellow flowered variety of much merit.

Morning Glow (Seale).—A fine flower, the colour amber with broad scarlet band round the disc.

Owen Thomas (Cheal).—Very effective, the flowers large, crimson-scarlet, tipped with golden-yellow.

Peggy (Cheal).—A distinct variety with well-formed flowers, coloured purple-rose, orange and crimson.

Rosy Gem (Dickson and Robinson).—A pretty variety with flowers of fine form and a pleasing rose colour.

Rosebank Scarlet (Mawley).—Flowers brilliant scarlet and produced with remarkable freedom.

Snowdrop (Cheal).—A pure white variety of great excellence.

Vesuvius (Cheal).—An effective variety with orange-scarlet flowers.

STIGMONOSE AND PERPETUAL-FLOWERING CARNATIONS.

This disease is one of real danger, and not simply the slight disfigurement of the leaves, as it has been the wont of the majority of private and commercial growers to regard it. In appearance it is simply small, yellow translucent spots on the leaves, which are, in reality, destroyed cells. These are seen plainer when the leaf is held up to the light, or in the early spring of the year, when the plants are making a very rapid growth. The spots are also very noticeable upon the young leaves of certain varieties. The course the disease takes is, that as the leaf develops, so the spots enlarge until they run together, then finally the leaf turns yellow and dies.

AURICULA MRS. GARDINER.
An effective variety with large lilac-coloured flowers. A.M., R.H.S., April 11. Mr. James Douglas, Great Bookham.

These spots may be caused, in the first place, by thrip, red spider, aphids, etc. We look upon them as present memorials of a past evil, and this is where we have been wrong. It has been the undoing of many varieties already, and unless steps are taken we shall see such stand-byes as Enchantress, etc., falling a prey to the ravages of stigmonose.

The theory of what we will call the new disease is simply this: After the insect has withdrawn its proboscis from the young leaf, it leaves a poison in the leaf cells, which, under favourable conditions becomes a permanent disease. That these punctures are primarily the cause of this disease I have no doubt, and I think it quite possible that this poison may grow and permeate the whole plant and its cuttings, regardless of fresh punctures, providing that the health of the plants had been weakened by indifferent cultivation or old age.

I hold that the development of the disease greatly depends upon the condition of the plant at the time, and the after-treatment received. Naturally, varieties with a robust constitution, whose foliage is deep and rich in colour, and what seems to me as being most important of all, plants grown in a light, airy house, are better able to resist the attack and throw off the poison deposited in their system. On the other hand, in the case of a plant which has been grown under unfavourable conditions, and naturally suffering from a weakened constitution, the poison left in its system is able to gradually permeate its tissues, and unless better culture is given to those particular plants and their offspring, they will become most unprofitable to their owner, producing a yellow spotty growth, poor bloom, and only a very indifferent crop.

To illustrate my meaning and convey this new idea of stigmonose, I would cite the case of the variety Enchantress. Those who remember this Queen of Carnations when it was first disseminated, know that at no time of the year was its foliage marked, unless, of course, the plants had been neglected and allowed to become blighted. But I venture to say now in the early spring it is quite the exception that one sees a stock entirely free from this disease. The reason for this is, no doubt, owing to its rapid and succulent growth, which naturally would make this variety in question a prey to the ravages of this particular disease.

A quite common theory, and one which I personally favoured until quite recently, was that these yellow translucent spots on the leaves which, as a rule, were most general and much more conspicuous in the early spring, were caused by the sun. Now I maintain that the sun does not cause the spots, but in its natural course builds up the chlorophyll in the leaves, and so causes the disease spots to become more conspicuous.

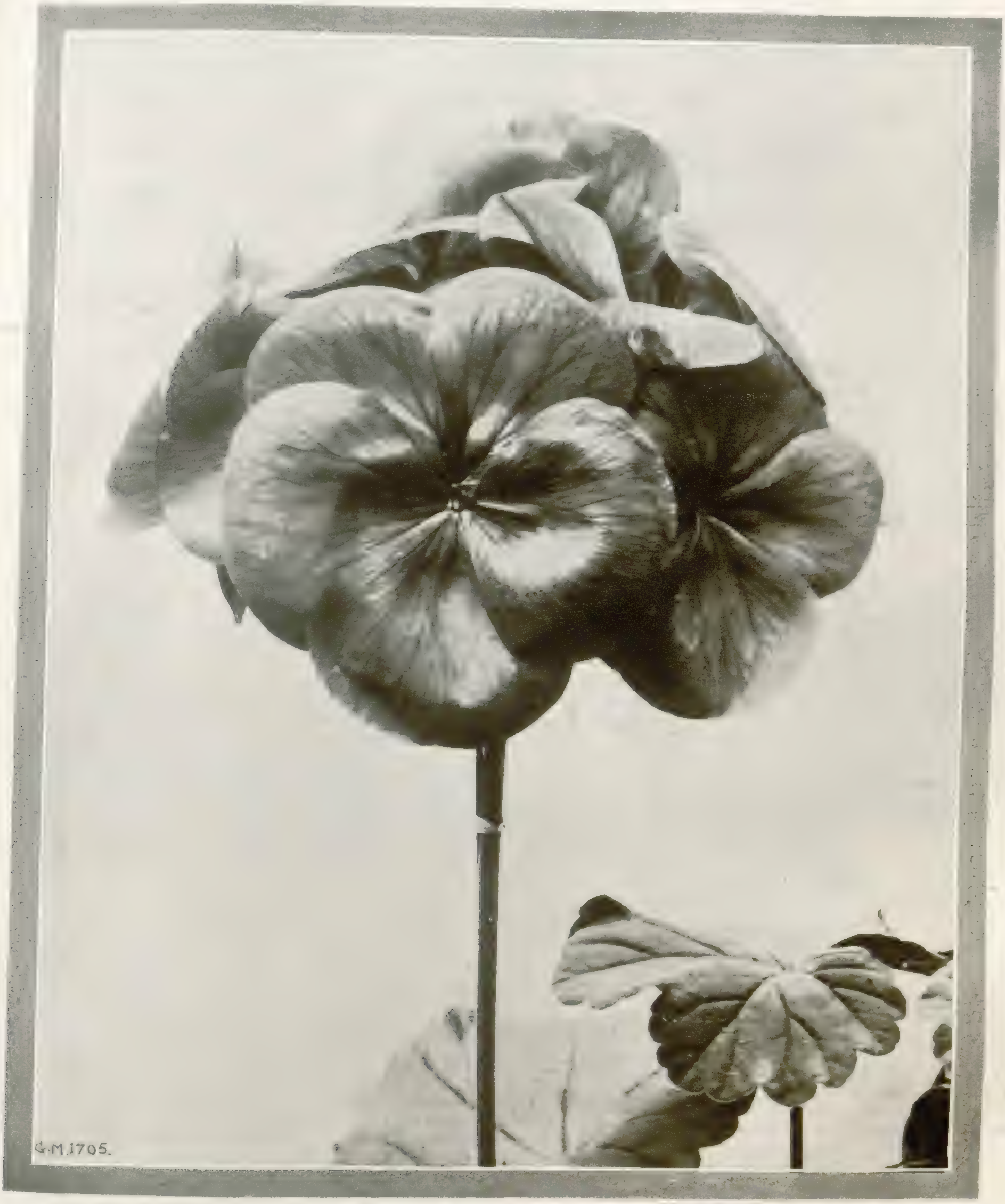
The means by which we can exterminate this disease are many. First, endeavour to raise varieties with more robust constitution, and hence better able to resist its attack, or rather the attack of its allies. Keep the plants as free as possible from all insect pests. Take the greatest possible care in the selection of cuttings, not only the cutting itself, but the actual parent plant. Grow the plants in as light a house as possible, with as much air as is conducive to a slow, hard growth. Give a moderate diet, and water with care and discrimination. Under such conditions, with unerring care, it will take three years to purge a variety of this disease, so that in the case of old varieties it is really not worth while to try and restore them to their own original state of health, particularly because of the large number of new improved varieties competing for place.

We cannot too fully realise the wisdom, or rather the absolute necessity of discarding the old varieties of carnations, for the perpetual-flowering carnation quickly deteriorates after being in commerce for several years. This is well known to all who raise and grow seedlings, as well as to the large market growers who remember Mrs. T. W. Lawson or even Enchantress in their palmy days.

Montagu C. Allwood.

Herbs.—The herb garden at this season will require to be thoroughly overhauled, and the stocks of the various kinds taken into consideration. Some may require to be reduced, and those that are scarce be multiplied by division or propagation. Beds may also be sown now of seed of sage, thyme, tarragon, etc., and also of the annual kinds, such as basils, chervil, etc.—C. Flack.

SILVER-LEAF IN PEACHES.



PELARGONIUM MAXIM KOVALENSKY.
A new bedding variety of Indian yellow colour. A.M., R.H.S., April 11. Messrs. H. Cannell and Sons, Swanley.

A few years ago I was much troubled with silver-leaf in plum trees growing on a wall three hundred feet long. The wall had been specially devoted to plums for generations, and I found, on taking charge, that many trees were old ones. The garden in question was made in 1717. Some of the oldest plum trees were badly affected with silver-leaf, and nothing that I could do seemed to have any effect upon the disease; so I rooted up all affected specimens, well limed the soil, and planted young ones.

I have just read your reply to a correspondent—"A. S., Lyndhurst"—in your issue April 8, and it has induced me to write this note. There are peach trees under my notice here that are affected with silver-leaf, and, although the disease has not shown itself at all in previous years, I am firmly convinced that the trees have been affected by it for several years past. The garden in which these trees are growing was formerly a portion of an old nursery, and I find that fungus is very general in the soil and other kinds of plants suffer through it. What the general treatment of the soil has been in the past I do not know, but I do know—and many other gardeners also know—that in these days chips are used wholesale as a bedding material for cattle, horses in particular. Scores of tons of manure, full of chips, is used in nurseries and private gardens to my knowledge, and I feel sure that the soil so treated will, in the future, be a hot-bed of fungus.

When I served my time to gardening I was instructed to carefully clear away all prunings and wood generally from the surface of the soil, and never, on any account, dig in the prunings, as fungus would result. Now, we find gardeners burying chips by the ton. The matter is a serious one, and I should much value the opinions of pathologists who contribute to your pages on this subject.

Geo. Garner.

THE REVIVAL OF THE PENTSTEMON.

The past few years, so full of horticultural progress, has witnessed a marked advance in the culture and improvement of the pentstemon. The pentstemon has long had a place in English gardens, though not always holding quite so high a position as now. I remember the florists' pentstemons of fifteen years or more ago were not only inferior in size of blossom and spike, but decidedly poorer in colourings than those we now possess.

In the best strains of the present day the washy hues are almost entirely eliminated. The lilacs, dull pinks, and motley purplish shades are practically non-existent. The pink and rose shades are clearer, purer, and brighter, the crimsons are richer, and less heavy in tone, the scarlets much more intense and brilliant, while the pale forms are clearer and more pleasing than in the past. We have still with us maroon, purple, and other deep hues, but these are good in their rich and decided shades, and are of value as contrasts. The improvement in size of blossom is doubtless the result of continuous selection, leaving but the finer forms to continue the race. That the pentstemon is rapidly becoming a fashionable subject is obvious.

Pentstemons are ideal plants for associating with roses, especially for grouping under standards or half-standards, or for massing in the foreground of a rose screen or series of arches. With lilies they are very effective, especially if used as a groundwork, with tall lilies of the tigrinum, speciosum, or auratum groups rising boldly through them. Massed in beds or borders, without the addition of any other subject, unless it is an edging of violas or pansies, pentstemons are the equal of any late summer-flowering plants, and the superior of most.

In beds and borders of pentstemons it is well to specialise in certain colours, and this brings me to the distinctive Gem type of pentstemon. Many gardeners acknowledge the value of Newbury Gem, an attractive pentstemon of undoubted hardiness in the majority of gardens, but the intending planter should choose the new Southgate Gem to secure the best in this particular bright colour. The effect of a mass of this brilliant scarlet-crimson, with white throat, is very striking. In the pink shades afforded by these light-habited pentstemons, Myddleton Pink, a graceful carmine-pink, with white throat, is finer than Pink Newbury Gem, though the latter is also valuable, while a variety under the name of Holland House Gem has equalled Myddleton Pink, in form, beauty, and freedom, the difference being that the throat is marked with rose, and the pink has a tendency towards a salmon tint. White Newbury Gem is not pure enough for extended use. We want a good clear white in this section. When secured it will be one of the most valuable garden plants one could possess.

There are several forms of P. campanulatus in cultivation, though none of them offer any striking note of colour. The type gives various shades of rose, but there is too much tendency to purple in the blossoms. The variety atro-purpureus gives a decided violet-purple, but, though really graceful, it is not a good colour. P. Kellermanni, said to be a specific form, is nearly akin to the latter in habit and colour, which is a deep maroon-purple; it is a very recommendable plant to those requiring sombre tones for contrast.

It would hardly be of service to give a list of the best show pentstemons, as the raisers in different localities have often the same varieties under different names, but a few especial good varieties are Gertrude, Don Juan, Juliet, White Giant, George Home, Le Prophete, Sir Trevor Lawrence, George Ulrich, Cordelia, Romeo, Princess, and Albert Durer.

In the matter of culture, deep digging and good manuring should go hand in hand. Top-dressing in summer is not necessary if the soil is good and the hoe is kept going. Finally, in an open situation, uncrowded, and well staked with light bamboos, the pentstemon, in its revived beauty, and new forms, will prove one of the greatest attractions of the garden.

P. S. HAYWARD.

HARDY PLANT CHAT.

Arends' Astilbes.

Those who have seen the varieties of the hybrid astilbes raised by Herr George Arends, of Ronsdorf, Germany, at the Temple Shows and at other places, have been much struck with their value for the garden, yet I think they are even prettier when grown under glass, and thus protected from the weather. This remark specially applies to those varieties with pink flowers, which, of course, predominate in the Arends' astilbes. Yet it is almost impossible to overestimate the worth of some of these hybrids for the open garden, and those who have suitable places by the margins of ponds will do well to study the effect of the different varieties in such places. The astilbe delights in a good deal of moisture at the roots, although when in flower the beauty of the inflorescence is much shortened by rain followed by strong sun. With plenty of moisture at the roots, however, the astilbes generally assume a much prettier aspect than in an ordinary border, and those who cultivate the newer nymphæas in their gardens and grounds will do well to study the effect of the two plants when associated. Some consideration of the colour tints is necessary, and one can see, for example, that the new Astilbe Venus, which has violet-rose flowers, and grows from three to four feet high, would jar badly in its colour tones with some of the deeper-coloured nymphæas, such as Ellisiana or Robinsoniana, although going well with some of the finest of the white or yellowish ones. But, as plants for moist gardens, or even for drier ones, where plenty of water can be supplied to them in the growing season, these charming hybrids ought to be looked after by lovers of the best of the graceful astilbes and spiræas.

Astrantia carniolica.

The Masterworts do not appear to rank too high in the estimation of the ordinary cultivator of hardy flowers, yet one finds an increasing appreciation of their good qualities among those who are best acquainted with them. Doubtless they are but dull in the garden, and there are few of these astrantias which can be called really bright enough to make a border gay. Yet they are liked for cutting where bright hues are not requisite, and the formation of the flower and the tints it possesses, even in the case of the least brilliant of the species, call for a good many encomiums from those who have studied these points.

A good plant is not to be despised, and for cutting purposes we have few flowers which will last longer in water than these masterworts. Probably the brightest of all these plants is A. carniolica, which has flowers that have been fairly well described as of a clear rose-pink, and this colour, with the peculiar arrangement or formation of the flowers, give it a special claim upon us. It is not generally known that the astrantias belong to the umbelliferous plants, and that the blooms conform to the usual arrangement of the flowers of this order. Astrantia carniolica is, therefore, commended to those who would like to own one or two of the best of these plants, not only because of the formation of the flowers, but also because of their intrinsic beauty and value. The uses of this and other astrantias are increased by the fact that they grow well in shade, even in that of deciduous trees, while the foliage itself is neat and pretty.

Salvia argentea.

I observe that a little boom is appearing among the salvias or sages, but those who are inclined to take part in it will do well to consider that the number of first-class border flowers in the genus is comparatively limited, although they certainly afford the keen hybridiser many opportunities for distinguishing himself, as, so far as I know, nobody has seriously taken up the hybridisation of the salvias. In the species called S. argentea we have an oldish plant which has been known to me for many years, and I have occasionally seen it grown in small and narrow borders—a position where it is quite out of place. The leaves, which are handsome without a doubt, being of a fine silvery hue, are too large and spreading for the small border, although the total height of the plant when in bloom—about three feet admits of its inclusion in such borders. The branching heads of white flowers are not much in themselves, and the main beauty of this salvia, to me, lies in the handsome foliage. It is a plant which looks exceedingly well in the wild garden if planted where its leaves are not hidden by taller subjects, and a little group by some path in the more open part of the woodlands is very pleasing. This silvery sage seems to call for no special treatment, and those who seek for such subjects may purchase it with safety in spring or early autumn.

The Spring Satin Flower.

Now that the improvement of many well-known hardy flowers is going on apace—a rate of progress which will certainly be accelerated by the operations of the National Hardy Plant Society, somebody might well turn their attention to raising improved forms of the lovely spring Satin Flower, Sisyrinchium grandiflorum, which generally gives great delight to all who grow it, as it sends up from above its grassy leaves its stems carrying such lovely satin-like, lustrous bells of purple or white. An old plant, it is not a common one, though cheap to purchase, and very beautiful when in bloom. I was in the garden of a famous artist recently, and was pleased to see that he had been including a good many plants of S. grandiflorum among his garden treasures, and I am confident that it only requires to be better known to become again more popular. The typical purple form is charming, and I like it even better than the white one, albus, although some are of a different taste. One thing may be remarked, which is, that this sisyrinchium does not like to be carpeted with any other subject, and flowers better if left without any other plant about its "feet." By the way, the accepted name of Satin Flower is undeniably to be preferred to the odious one of "Swine's Snout," at one time prevalent.

S. ARNOTT.

CAMPANULAS FOR THE HERBACEOUS BORDER.

Campanulas, or bellflowers, are among the most useful of hardy subjects for the herbaceous border, as they grow readily, flower abundantly, have much variety of growth and flower, are readily propagated, and generally appreciated because they give a full crop of blossom over a long period. While some campanulas grow but a few inches high, others reach as high as six feet, therefore they may be used for all parts of the border. Even the low growers can be accommodated quite at the front of the border, on slightly raised hillocks, or as an edging to the border itself, where a permanent edging is not provided in the shape of grass, box, or tiles.

Campanulas are found in many countries; some few species are British, notably C. persicifolia, C. glomerata, and C. pyramidalis. Some exotics have been cultivated in this country upwards of two hundred years, perhaps longer. While many varieties can be grown from seed, the most certain method of propagation is by division, as they are easily increased in this way in spring, and a quite small portion with a root attached will grow readily. Some of the more rare or weakly-growing kinds are best propagated in cold frames.

Deeply dug ordinary garden soil, well enriched with manure, will grow the stronger-growing kinds quite easily, while some of the dwarf growers need a little more attention as to soil and drainage; the latter, in stiff soil, is important. In no case is it wise to allow the plants to remain on the same site without replanting for more than three years, as they become exhausted, and without robust progress the flower crop cannot be good.

The following varieties are useful, interesting, and attractive, and, as a guide to intending planters, I attach the approximate height of growth to each. C. persicifolia is the most common type, yet distinctly useful; it is thoroughly hardy, grows freely, and produces its single blue flowers in abundance; 2½ feet. C. p. alba is similar in every way, except save colour, which is pure white; 2½ feet. C. p. Moerheimi has large semi-double white flowers: 3 feet. C. p. Daisy Hill, semi-double lavender blue; 3 feet. C. p. alba grandiflora (Backhouse's), snowy-white, extra large single flowers; 3 feet. C. p. Porcelain, pale porcelain blue; 2½ feet. C. Van Houttei, a fine hybrid, with long blue bells; 2 feet. C. amabilis, a new and distinct species, from the Crimea, large light blue flowers; 2½ feet. C. boninensis, a slender-growing species, with numerous pale blue flowers; 3 feet. C. b. alba, similar except in colour. C. carpatica alba, white; 1 foot. C. c. Riverslea, deep blue, vigorous habit: 1½ feet. C. Fergusoni, large cup-shaped flowers, pale blue; 2 feet. C. glomerata dahurica, rich deep blue; 1½ feet. C. Hendersoni, with mauve-tinted flowers; 1 foot.

C. lactiflora, has its flowers milk coloured, tinged with blue, borne in erect loose panicles; 4 feet. C. grandiflora (platycodon), a hardy Chinese species, with deep blue balloon-like blossoms; 1½ feet. C. g. alba, pure white; 2 feet. C. g. Mariesi, a dwarf-growing blue form; 1 foot. C. alliarifolia, a choice kind, of pyramidal habit, the broad leaves are greyish and the long-tubed white flowers have serrated petals, and hang on gracefully arching stems: 2½ feet. C. Burghalti has long silky flowers of a lavender-blue tint; 2½ feet. C. latiloba (grandis) is a stately species, midway between persicifolia and pyramidalis, rich blue; 3 feet. C. macrantha produces royal purple trumpet-shaped flowers in pyramidal spikes; 4 feet. C. m. alba is a white form of the above. C. patula is a free-flowering species with nodding blue flowers; 1½ feet. C. pulcherrima is tall and floriferous, bearing deep blue, reflexed, bell-shaped flowers, valuable for the wild garden; 3 feet.

E. Molyneux.

Brachycome iberidifolia. — Scarcely anything more charming or capable of yielding such a prolonged display can be found among annuals than the various forms of Brachycome iberidifolia, commonly known as "The Swan River Daisy." It is a dwarf half-hardy annual, and is best raised from seed sown in a cold frame, and transplanted to flowering quarters in the open, where it forms an admirable edging or groundwork plant, and may also be used as a carpet in bare places among shrubs. It succeeds in a light, rich soil that is well drained, and in the sunniest exposure. The plant attains a height of some nine inches, and the flowers are most suggestive of some small stellate form of cineraria. The colour ranges from white to deep purple, one of the most effective shades being a pale lavender-blue. Unlike so many of our best annuals, the strain of seed production appears not to adversely affect the flowering, as the plants always maintain a good display until cut down by frost in autumn.—Thomas Smith.

CARNATION DUCHESS OF DEVONSHIRE.
A new crimson perpetual variety, distributed by Messrs. Young and Co., Hatherley, Cheltenham.

CARNATION DUCHESS OF DEVONSHIRE.

It is remarkable how great an attraction a carnation has if it has a considerable resemblance to the Old Clove. A deep crimson flower is always admired, and when exhibited nearly everyone smells it with a vague hope that it will be as fragrant as the old garden favourite. There are now several good deep crimson perpetual carnations, but there is always room for a first-rate variety. The new Duchess of Devonshire, introduced by Messrs. Young and Co., Hatherley, Cheltenham, is already receiving a great deal of attention at the hands of growers of perpetual carnations because of the fine size of the blooms and their deep and yet bright crimson shade. Long stems and a good calyx are additional merits, and the variety is free flowering. Messrs. Young and Co. have been exhibiting this variety finely for some time, while at the recent North of England Horticultural Society's show, and at the Royal Horticultural Society's meetings, the variety has been displayed in excellent form. Both in the North and in the South the variety has been regarded with considerable favour.

FOLLOWING NATURE'S LEAD

"It won't do here." How often does one hear this remark in reference individually to a host of plants which flourish like the proverbial bay tree under certain conditions, and either absolutely refuse to grow in others, or merely linger. I am not referring here to plants introduced from other lands, but native subjects, both utilitarian and otherwise, and in respect of them the sentence quoted above is no mere idle expression, but proof of the fact that though Nature is kind, she will not be dictated to. If trees, shrubs, and plants would succeed in all places the same gardening would become a simple matter, but the fact that such-and-such a thing will not do here or there offers possibilities to the gardener, who brings skill to bear in order, if possible, to make them do. Does he succeed? This question might be answered in a hundred gardens to-day, the owners of which have indicated that they would like to have such-and-such a thing, which, in the ordinary way, would not do, but by altering conditions so as to make them as favourable as possible they have been induced to flourish.

It may be said in all sincerity that the gardener does not prove his skill in growing things for which local conditions are in every way suited so much as in the cultivation of subjects which, to use the expression again, will not do, or will not do very well, and in obtaining good results, with Nature opposed to him, as it were, he proves himself to be an expert. What private gardeners can do in this direction is extraordinary, provided they have employers who are patient and do not complain about the cost, but the commercial grower who adopts this attitude of fighting Dame Nature and making things do is on the wrong track. He has got to live out of what he grows, and the plan for him is to take Nature as his teacher, let her indicate where things will do, and, having settled on the favoured spot, grow them to the best of his ability. Just why a certain plant will flourish here, and not there, very often presents a problem which the experimentalist may try and master; but the commercial man must take things as they are, follow Nature's lead in fact as to what he shall grow and where he shall grow it.

It is owing to Nature's way of adapting certain localities for certain things that great horticultural industries have centred themselves in certain districts. On visiting a locality where some crop is grown profitably one might be disposed to try it elsewhere, and, in the light of an experiment, this would be all very well, but it would not be wise to put any money into the venture without having some reasonable indication that it would succeed. Whether we have missed opportunities through taking too much for granted in this respect is another matter, and, as a case in point, it was thought for a long time that Holland, and only Holland, was the place for bulbs, but it has been proved since that bulb growing can be carried on in certain places in old England, and Nature will aid their culture. Speaking of this matter, I am reminded of a district on the borders of Gloucestershire where in the early spring the land is yellow over with flowers of the single daffodil. Where this bulb is a weed would not the same conditions be suitable for growing other forms of this lovely flower commercially? No one has tried it, so far as I know, and perhaps here there is a missed opportunity.

One day, not long ago, I was talking to an enthusiastic amateur who was bemoaning the fact that his garden would not grow asparagus. How much money he had spent on his bed I should not like to say, but he had dug out the soil, put in drainage, made up the bed after the elaborate manner described in books on the subject, and planted the best of crowns, but the asparagus only lingered, and if the man only reckoned up what each head that has come to table as yet had cost him he would probably be frightened. Now for the contrast. The next day I was in another district, and saw an agricultural labourer working amongst his asparagus on a twenty perch allotment, turning up great clods of the stiffest of soil with a two-pronged fork. There had been no elaborate bed-making there; in fact, the man knew nothing about asparagus, except that it grew well round the district, and he had been induced to put in a few crowns, which did so well that he planted the whole of his twenty perches with the crop, and was hankering after a bit more land for the same purpose. In other words, he had followed Nature's lead, a bit blindly, if you like, but, nevertheless, with profit to himself.

There are peculiarities about plums which are not easily explained, and particularly in regard to varieties. Commercial plum culture is confined largely to certain areas dotted about the country, and in most of these you will find, in addition to well-known varieties that can be obtained from any nursery, local plums which are peculiar to the locality. Take, for instance, the Pershore, or egg plum of Worcestershire, which propagates itself from suckers and grows like a weed in its own locality. Not a high-class plum, you will say; perhaps not, but the Worcestershire folk have followed Nature's lead in growing this plum, which she gave to them, and it is questionable whether there is another that pays better, taking one year with another. Years ago, I don't know when, there originated in a tiny little village in Gloucestershire a local plum known as the Blaisdon Red, and to-day, along the Severn side, you may see acres of them, all grown from suckers, though I do not remember ever seeing the variety elsewhere. Here is another case of Nature's lead being followed, and where people plant the Blaisdon Red they know it will grow, and do its share towards paying the rent.

As with plums, so with damsons, which show strong likings for some districts in preference to others. Most people must have heard of the Cheshire damsons, which seem to have size and flavour all their own, but Cheshire is not the only county in the Midlands that is famous for damsons, for I know a district in Staffordshire, overlooking the valley of the Dove, where every farm and small holding has its damson orchard, and many of the hedges which divide the fields are lined with damson trees. Mind you, they are damsons, too, these natives of the Midlands, the fruits being large and fleshy, and, when in good condition, fit for any dessert table. Propagation is a simple matter as the trees are increased readily by means of suckers, and I know of no fruit which, taking one year with another, pays so well, and costs so little. The Staffordshire farmer or small holder who looks to his damson trees to pay part of his rent—they may pay it all in some seasons—can take no credit unto himself for the cultivation of the fruit; he simply follows Nature's lead by planting the trees with which she provides him, and the rest is left to the favoured condition of the locality.

The mixed medley of trees which make up a Staffordshire damson orchard present a different appearance to a cherry orchard in Kent, and if the Kentish cherry grower does a great deal more than the Midland farmer, first in arranging his trees in symmetrical rows, and afterwards paying attention to them in matters of pruning and cultivation, the cases, contrasting though they may be in many respects, are alike in the matter of following Nature's lead. What would be the good of trying to establish a cherry orchard in the damson-growing district of North Staffs? The thing would necessarily be a failure, and the reason why Kent practically holds a monopoly in the matter of cherry growing is because Nature has selected the hop county as being peculiarly adapted to the fruit in question. Let the cobbler stick to his last, says the old proverb, and, in the same way, the Kentish man may stick to his cherry growing, knowing that in the establishment of orchards where trees will grow he is doubling the marketable value of the land.

Just one more instance of Dame Nature's lead being followed, and this time I would take the reader to the famous Cheddar Valley in Somerset, where the cheese comes from, but perhaps more noted in recent years for the earliness of its strawberries. Summer visitors who drive out to see the famous caves and cliffs of the Cheddar Valley, also see strawberry patches situated in all sorts of situations, where, in some cases, it has been necessary to make the ground at the outset, and a novice might be inclined to wonder why strawberry culture should be made an industry in such a district. Well, it is all a story of following Nature's lead. It might have been an accidental discovery in the first place to find that Cheddar strawberries came finer and earlier than those in other parts, but be that as it may, the Cheddar folk have not been slow to take advantage of the lead which Nature gave them, and have established an industry which is lucrative, and grows in importance. If the Cheddar strawberry growers had never found out the advantage that Nature gives them, what a splendid opportunity would have been missed!

H.

Medinillas. — Where well-grown examples of the handsome Medinilla magnifica are found they cannot fail to command appreciation. Their flowers are produced in graceful drooping panicles, forming at once a charming floral display which the handsome foliage renders most effective. Medinilla magnifica is an extremely gross feeder, and where space is available for its full development the plants must be afforded ample root room and be placed in a light position. Large specimens are undoubtedly the most effective, and flower in great profusion. Cuttings may be rooted at this stage when it is desirous to increase the stock, and they should be removed from the parent plant with a heel of the old wood when the shoot has developed about six inches of growth. If these are inserted in a brisk bottom heat of 80 to 85 degrees they will readily take root. A liberal application of the syringe on bright days will assist in keeping down red spider and other troublesome pests. As regards the potting compost loam and peat of best quality, in equal parts, will be found suitable, adding sufficient lime rubble and Bedfordshire sand to keep it porous. As soon as the larger flowering specimens are growing freely, with abundant root action, give liberal applications of diluted farmyard manure, with an occasional top-dressing of some approved artificial fertiliser.—J. D.

MAINTAINING THE BALANCE

Pruning is a subject upon which there are most diverse opinions held, and on no portion of it is this so much the case as concerning the advisability of pruning or non-pruning trees the year they are planted. As "G. H. H." rightly observes, there will probably always be this difference of opinion, based on the pruner's experience and his success or failure with either method.

Now, in my opinion, we are all agreed that the determining factor is the state of the roots; "maintaining the balance" means, in the opinion of its exponents, shortening the top of the tree in a corresponding degree to that which the roots have experienced by the spades of the lifters in the nursery. Whether this is sound doctrine from a botanical point of view, I will leave in abler hands, but apparently, according to the results experienced by "G. H. H.'s" friends, it is not altogether borne out in practice.

To come to practical experience, which is often the only safe thing to go upon in these matters, we are ourselves convinced first-year pruners, having never seen the slightest ill-effects attend such a course in an experience of upwards of fifty years. Standing by itself, this fact would seem absolutely contrary to the former writer's experience, but there is something else to be said, which, in my opinion, explains the seeming contradiction somewhat.

We always raise all our trees at home on a piece of light land; further, we keep them constantly shifted, so that when the time comes for planting they have a mass of fibrous roots of much greater extent than it would be possible to send out from a nursery unless each tree were bundled solely by itself. In this case, there is no question of a large amount of the roots being removed, so that "maintaining the balance" does not come in; in fact, the state of the tree is almost as if it had never been moved, and indeed for purposes of pruning behaves exactly so.

Whether we should still succeed as first-year pruners with trees which had not such an extensive root system, I very much doubt. This idea, "maintaining the balance" is a very pretty one; nothing seems simpler than this, that, because a certain portion of the roots which feed the top have been removed, a corresponding amount of the top should also go in order that the remaining roots should not be overtaxed.

Apparently, however, there is another factor which enters into the situation which to some extent alters matters. Just as the call for an extraordinary effort often brings out some hitherto latent power in the individual, so the greater demand upon the roots seems to increase their activity, and consequently their extent. Naturally, there are limits within which this is true, the relation between top and root must not be allowed to assume such proportions that the latter cannot provide the necessary water, etc., to maintain life in the top. If, however, this can be maintained, as far as my experience goes, the larger amount of top, calling for increased energy on the part of the roots, stimulates their activity and produces a larger root run.

This was brought to my notice very forcibly some years ago by some root-grafting experiments in which I was interested.

Small portions of fibrous roots of plum stocks and broad-leaved paradise apple stocks were grafted on to pieces of wood, "laid in" by the heels in sand in a shed during the winter to callus, and then planted out in the spring. The pieces of root were only about a couple of inches long, and about ⅛ inch in diameter. By far the best results were obtained when the roots were put on to pieces of old wood upwards of three feet long and an inch or so in diameter, rather than pieces of wood of the current year's growth a foot or so in length.

It seemed almost impossible to me, at the first sight, but I have lifted and examined many of the trees and their roots since, and can vouch from experience for the facts stated above. I regard this as an exaggerated example of the principle I have tried to enunciate, viz., the greater the demand within reasonable limits, the greater is the effort to respond to that demand. When, however, the tree is pruned the amount of wood dependent upon the roots is reduced to half, perhaps less, with correspondingly less reflex action on the roots.

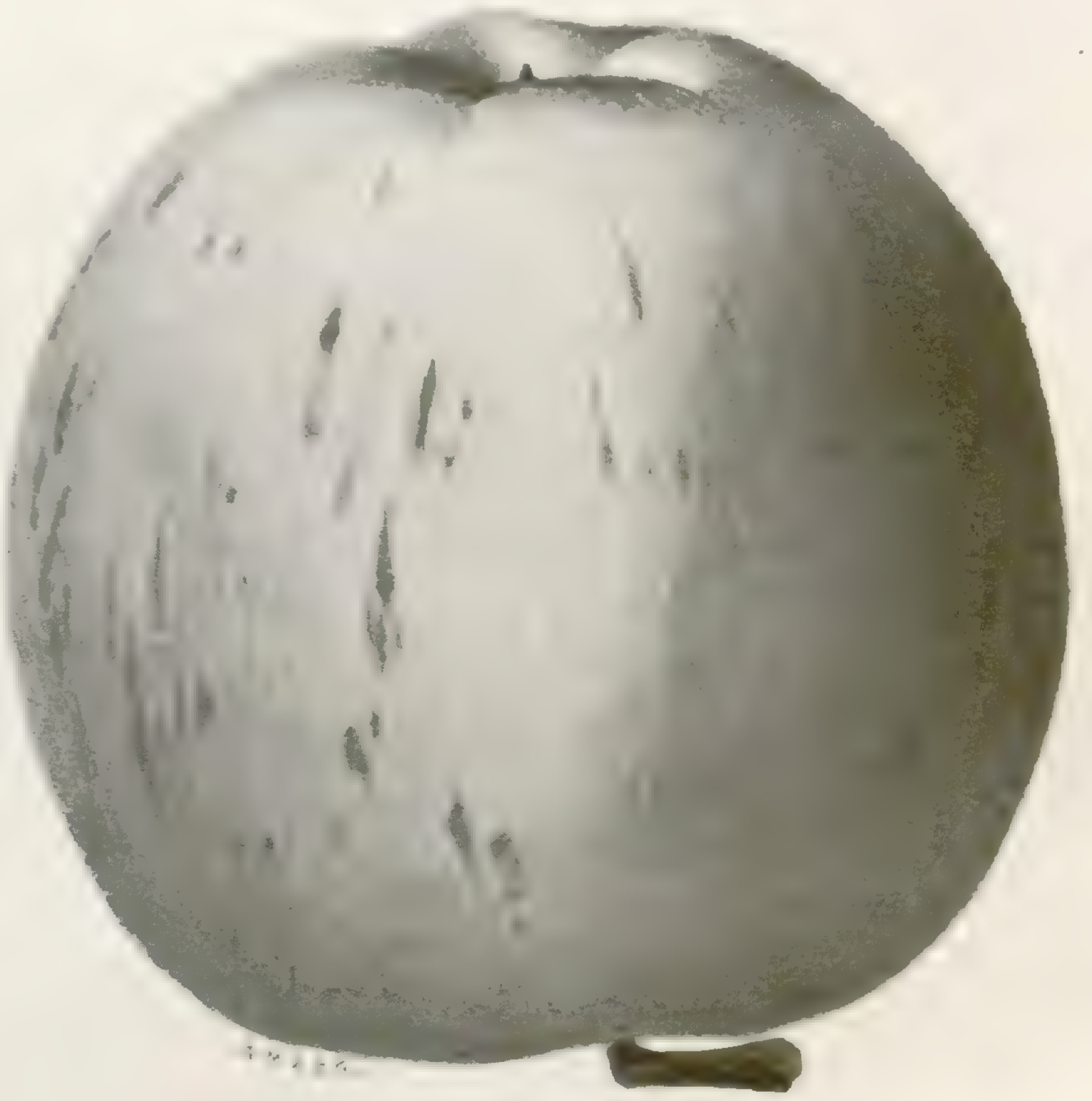
Not only so, but the area of leaf surface is probably reduced to a far greater degree, so that the roots also lack their assistance in the production of carbon and also in elaborating the sap for their use.

Another point that still further hampers the pruned tree whose root system is bad, is that the lower buds, which are almost the only ones left after pruning, are mostly dormant buds, the breaking of which must cost the tree very much greater efforts to produce the necessary leaves and shoots than the more natural wood buds at the top—that is to say, on the portion pruned away. This difficulty, coupled with the considerably reduced leaf area, must be a severe handicap to the pruned tree, even without that caused by the reflex action I spoke of first. These are a few of the reasons by which I have tried to account in my own mind for what is an undoubted fact, viz., that many trees, particularly those planted late and with bad roots, are far better left unpruned the first year, and afterwards, the succeeding year, pruned to much the same point as one would have cut to the first year.

F. W. Hammond.

APPLE BOW HILL PIPPIN.

From time to time we have drawn attention to apples and pears of outstanding merit, but which have not, so far, achieved a full measure of popularity. Some varieties do far better in some localities than others, and this is the point we would emphasise. It is not possible to deal with all these excellent fruits in these pages at planting time, as the needs of others besides fruit specialists have to be studied regularly. We hope, however, that our readers will during the ensuing season make notes of the behaviour of Bow Hill Pippin apple, and kindly report to us, as we feel convinced the variety is of unusual merit. The fruits are large and handsome, and somewhat like those of Peasgood's Nonsuch in appearance. The tree bears well, but is best cultivated in bush form. Useful alike for culinary and dessert purposes, Bow Hill Pippin is in use from October to February. It was raised, we believe, by Mr. A. C. White, a noted Kentish hop grower, and that it possesses considerable merit may be gathered from the fact that the Royal Horticultural Society has conferred upon it an Award of Merit, and a First Class Certificate was granted it at York some time ago. Most of the leading nurserymen who cultivate fruit trees list the variety, and have shown good fruits of it, therefore Bow Hill Pippin is a variety to be made note of with a view to future planting.



APPLE BOW HILL PIPPIN.

A useful and handsome variety, suitable both for culinary and dessert purposes.

Jacobinia chrysostephana.—This beautiful winter-flowering plant has been so frequently shown within recent years that it must by now be familiar to nearly everyone. The crown-like heads of orange-coloured flowers are so charming that it is surprising its merits were not recognised directly after its introduction from Mexico, some forty years ago. Such was indeed far from the case, for in the course of time it nearly dropped out of cultivation, till more recently a revival set in in its favour. When first introduced it was regarded as a stove plant, which was perhaps the reason that it did not make the headway that one might expect, for grown in a stove it is not nearly as satisfactory as under cooler conditions. —W. T.

WORK FOR THE WEEK.

◆

THE ORCHID HOUSES.

COOL HOUSE ORCHIDS.—Plants of Odontoglossum Rossi and O. R. majus which have recently passed out of flower should be examined for the purpose of ascertaining whether they require repotting. Where the compost is in a decomposed state it is advisable to repot the plants, but while there is ample root space, and the potting compost is in a good state of preservation, it is not desirable such plants should be disturbed. This odontoglossum is not the best subject to become re-established, and it takes a considerable amount of care to retain the pseudo-bulbs in a normal plump state, and the leaves from decaying after repotting. We find the plants do best grown in shallow, well-drained pans, with a small bulk, not more than an inch deep, of potting compost, this latter consisting of two parts fibrous peat to one of broken leaves and finely chopped sphagnum moss. The compost should be pressed firmly about the base of the plants. Water after repotting, thoroughly wetting the compost through, and suspend them in a position near the roof glass where they may be carefully shaded for a time, and where they may derive the greatest advantages from the moisture in the atmosphere.

O. ROSSI HYBRIDS.—The hybrids that have been derived from the influence of O. Rossi partake in most cases of the dwarf habit of this species, and they are best grown under the same conditions as the other odontoglossums, but should at all seasons have a position within a short distance of the roof glass. We find that unless the pseudo-bulbs become thoroughly ripened, they continue to throw new growths instead of flowering, and even in cases where they do bloom from a soft immature pseudo-bulb the flowers produced are by no means satisfactory.

ODONTOGLOSSUM HARRYANUM.—The plants of this useful species are now commencing to produce new roots from the base of the developing growth. It is just at this stage that the plants may best be attended to for any repotting that may be necessary. If the roots are permitted to extend far from the base of the new growth before repotting they are the more liable to be injured in the process. It is surprising the rapid progress made by this species when a suitable position is given it. I have found that it is advisable not to over-pot the plants, and to shift them annually, using a pot just large enough to contain the roots comfortably. It will often then be found that they may be gradually shifted on as required, without having to disturb the old compost much. They are best accommodated in well-drained pots, using chopped bracken roots as drainage, the compost consisting of about equal portions of fibrous peat and osmunda fibre, with a few broken leaves and chopped sphagnum moss intermixed, with sufficient broken crocks and sand added to render the compost porous. I consider the failures in the culture of this species are due to the plants being subjected to a low temperature during winter. They should be retained in a temperature of about 55 degrees during the winter months.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

CHRYSANTHEMUMS.—Plants intended for the production of large blooms should now be ready for a further shift into 32's. The compost should be of a coarser nature, and consist of good fibrous loam, leaf-soil, and silver sand, with an addition of a little bone-meal and soot. If the loam is of a retentive nature, a little lime rubble may be mixed in to assist drainage. In potting, the soil must be made nice and firm without being hard; after potting, replace the plants in the frame, and keep rather close for a few days. Syringe as often as possible. When growth has re-commenced, gradually increase the ventilation until the lights may be left off altogether, preparatory to standing the plants outside. At this stage watering must be undertaken with great care. It is advisable to examine the plants two or three times a day in this respect, for under no circumstances must they be allowed to become dry, and, on the other hand, the new soil must not be kept too wet before the roots have penetrated it. Stopping must be regularly attended to in order to secure the best results from each particular variety. There can be no fixed date given for this operation, as it varies according to variety and locality. Prevent insect attacks by occasional fumigation. Continue to pinch as required the shoots of plants of the decorative or bush type.

GREENHOUSE CALCEOLARIAS.—These most showy plants are now developing their flower trusses, and should be given assistance with some approved artificial manure. When applying the manurial matter, be careful not to let any touch the foliage, as the leaves are very soft and easily injured. Do not employ artificial heat, but endeavour to grow them as cool as possible. Shade from sunshine is absolutely necessary. Greenfly is very troublesome to these plants, and must be kept in check by fumigation, which should be light.

FUCHSIAS.—Specimen plants, if treated as advised previously, will now be ready for repotting. Use a fairly rich compost, and pot moderately firm. As the plants grow the shoots must be stopped from time to time in order to secure a shapely plant; but this must cease at least seven weeks before the plants are required to flower. Cuttings may be rooted now for giving a display in the autumn.

CLIMBERS.—As these are now growing freely, the young growths must be regulated. Avoid overcrowding by removing all weak shoots. Tying should be done regularly to endeavour to give the plant a neat appearance.

THE CONSERVATORY.—At this time of the year, when there is such an amount of flowering plants in hand, there is a great tendency to overcrowd the conservatory. This is a fault to be carefully avoided. A light, graceful appearance is what should be aimed at, and plants should be staged so that the beauties of each may be seen individually as far as is possible. Keep down the temperature by damping the paths occasionally, and admitting a little air at night to preserve the flowers.—H. Grubb, Porters Park Gardens.

HARDY FRUITS.

THE FRUIT CROP OF 1911.—It may be somewhat early to predict, but if we may be allowed to build our hopes upon the fruit buds, which are now sufficiently developed to reveal their number, then a very heavy fruit crop is assured. Apples, peaches, plums, cherries, and nuts give especial promise, pears being the only fruit that is lighter than usual in fruit buds. Of course, any or all of these bright prospects may be blighted by the weather. The blizzard experienced through the south on April 5 and 6 would do some damage to apricots and early flowering peaches where not well protected; gooseberries may also have suffered somewhat, but on the other hand it may prove a blessing in disguise in checking the winter moth and other caterpillars, which were already noticeably at work. It would also act as a timely check to a dangerously early spring.

PROTECTION.—Protection will need careful regulation; extra covering that may be put on to protect the blossom from cold cutting winds should be removed at the first appearance of brighter weather, as coddling in any way must be rigorously avoided. Light frost will do very little damage to wall fruit trees if protected with a two feet coping of glass or boards. The coping will, of course, remain a little longer, but opportunity should be taken of removing it as soon as the fruits are set and the weather settled.

STRAWBERRIES.—These should be protected with netting as soon as the first flowers open, as promptness in this little matter will oftentimes save the earliest blossoms from injury by frost. A light framework of posts and string may be erected over the beds, about four feet in height, to allow of easy access and comfort at gathering time. Bird-proof netting drawn tightly over this and pegged down on all sides, with any old netting spread loosely over the top to act as extra protection from frost, will suffice.

PEACHES AND NECTARINES.—These will require attention in the way of disbudding, and the work should be done at regular intervals and by degrees, so as not to check root action more than possible. Well-placed basal shoots should be chosen to keep the trees well furnished, and especially is this necessary in the case of young trees. A look-out must be kept for aphis, and on its first appearance tobacco powder may be used. Avoid the use of strong insecticides until the trees are well under way, as the foliage is so delicate in its young stage. Trees that have suffered from a bad attack of red spider the previous season may be given a dressing of sulphur, either applied through a sulphurator or mixed with water and syringed on as soon as the fruits are set. No harm will accrue if the trees are literally smothered in sulphur at this early stage, and this is the most simple and safe method of keeping peach trees from this dreaded pest.

TOP-DRESSING PEACHES. — Peache may now be top-dressed with leaf-soil or spent hotbed material, which will very much assist the trees, by checking a too rapid evaporation during bright weather. It will also encourage the roots to the surface, whole masses of roots being found quite near the top of the ground, especially if leaf-soil be used.—J. Whittle, Cheveney Gardens.

THE KITCHEN GARDEN.

CUCUMBERS.—If the plants were put out on hotbeds in the forcing house, and subjected to a moist suitable temperature, as recommended in an early calendar, they will now be growing freely and showing a plentiful supply of fruit. For a steady demand that is usual in private establishments it is not wise to crop very heavily, but rather to reserve the strength of the plants by continually reducing the number of fruits down to a fair quantity. Keep the vines trained out thinly so that the leaves can make their growth in full light, and as the days lengthen, with more sunshine, apply a good syringing to the foliage twice a day to keep it clean and vigorous. The roots, too, will be active; and will require frequent top-dressings of good mellow loam; if very heavy it may be well to lighten it a little with grit, but do not add much rotten manure. Give applications of liquid manure when it is seen the plants require it.

SALSIFY AND SCORZONERA.—Where these vegetables are required, and likely to be appreciated, now is a good time to make sowings of seed. They are not so particular to soil as many crops, but will grow on most land that is sweet and has been dug and manured. Draw out the drills at eighteen inches apart, and give the plants a distance in the rows of eight inches by thinning them out early as soon as the best ones can be selected.

CHICORY.—This plant is invaluable to the gardener who has to keep up the supply of a salad the whole year round by serving him with succulent leaves at the times when other important plants are the most scarce or hard to produce. Make a good sowing during the next week or so in size according to the likely demand. Give a distance of eighteen inches in the lines, and thin out the plants rather liberally to ensure strong crowns.

PERENNIAL SPINACH.—On land that is light it is sometimes difficult to keep up a constant supply of spinach during the summer months. Where it is so, to avoid against annoyance by failure, make a sowing of perennial spinach now to form a substitute. It is not necessary to select the best position for this crop as it will thrive quite well in semi-shaded places, and on moderately conditioned land. If allowed to remain long the plant becomes robust, and should be given two feet from row to row, and thinned out accordingly.

BEET.—If early roots are wanted make a sowing on a raised border of the turnip-rooted kind, sufficient to carry a supply till the main sowing is ready for pulling. Work the land over with a fork, and incorporate some wood ashes or soot with the surface soil as the work proceeds. When in a proper condition draw cut the drills about one and a-half inches deep, and about fifteen inches apart, and sow fairly thick. Slugs are often troublesome to this sowing, therefore a sharp look out is advisable as soon as the young plants appear above the ground; then dustings of soot and lime will be necessary.

GENERAL REMARKS.—Proceed as the weather will permit with the planting of main crop potatoes. Have the hillocks for vegetable marrows made ready in time for planting. See that sufficient manure is being turned and rotted in readiness for the quarters that will be cleared later of the kales and late broccoli.—C. FLACK, Cholmondeley Castle Gardens.

ANNUAL LARKSPURS.

The various annual larkspurs furnish a group of most beautiful hardy flowers for the garden in summer, and, as they are easily raised from seed, they commend themselves to everyone on the score of economy also. They are seen to greatest advantage when grown for colour effect in beds or borders, while for providing a supply of cut flowers for indoor decoration they form a most desirable and welcome change.

The cultural requirements of larkspurs are of the simplest character; they are best raised from seed sown in the position where the plants are intended to flower; the seed is sown thinly on ground that has been previously dug and manured, April being a suitable time, and as soon as the seedlings are large enough, they are thinned out singly, allowing 9 to 18 inches between the plants, according to the variety. When the plants attain to some height, supports should be afforded them in the form of stakes, which, however, should be of a light nature, so as to be really inconspicuous when the plants come into flower.

One of the best of the annual larkspurs is the charming blue Butterfly, a variety that attains but a height of 18 inches, and associates admirably with white or cream-coloured dwarf antirrhinums or similar shades of violas. The Dwarf Rocket or hyacinth-flowered larkspurs offer a good range of colour, and are excellent subjects to mass in quantity, the habit is dwarf and exceedingly neat, and when in flower the bed presents a most symmetrical appearance. The forms of Delphinium consolida produce flowers that are stock like in appearance; these are taller in growth and are equally effective when massed in quantity, but should always be allowed plenty of room for lateral development. Among branching forms of larkspur Branching Blue and Empress Carmine are two specially good and useful colour forms that come remarkably true to colour; both are light and graceful in habit, and, under favourable conditions attain a height of 3 to 4 feet; the lateral branches always develop well and furnish unlimited quantities of most useful material for supplying cut flowers for indoor decoration.

Nearly all the types of annual larkspurs may be procured in several distinct shades of colour, so that their value in any colour scheme is at least equal to anything else we have among annuals suitable for summer display.

THOMAS SMITH.

PRELIMINARY ANNOUNCEMENT.

A GREAT SWEET PEA SHOW will be held, under the auspices of the Eastbourne Horticultural Society and the Chairman and Directors of the Devonshire Park Company, in

THE FLORAL HALL, DEVONSHIRE PARK, EASTBOURNE.

On WEDNESDAY and THURSDAY, July 19th and 20th, 1911.

ATTRACTIVE PRIZE LIST.

Special Classes for Ladies and the Trade.

Schedules for particulars of the Show may be obtained from Mr. C. R. AUST, Honorary Secretary, 5, Cornfield Road, Eastbourne.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

A Daffodil Show in Piccadilly.

The cult of the daffodil grows apace. Every year new enthusiasts take up the culture of this delightful spring flower, and, like the auricula and tulip and carnation fanciers of other days, they specialise, leaving the majority of popular and cheap varieties to those who fill big flower beds and produce glowing or gleaming effects in woodland, vale, and garden. Such enthusiasts will have already achieved success in the culture of these everyday varieties, and they pass on now to those of higher price, which are different from the rank and file, and have some merit of special beauty, colour, size, form, or rarity, and presently, if still successful, they pay yet higher prices for new seedlings, commence the work of cross-fertilisation and the raising of seedlings, always hoping to obtain something that will be so great an advance that it will carry the raiser's name down to posterity.

There is no doubt a boom in the new, or comparatively new, daffodils, and the aim of most amateur enthusiasts is to acquire the complete stock of a fine new variety, grow it well, and, as it increases, use it for the exchange or purchase of several other new ones, and so the sporting element comes in to some degree.

But the professional raisers and distributors of daffodils, on the one hand, and the budding or regular enthusiasts on the other, have to be brought together somehow, and the multiplicity of spring shows nowadays greatly tends to that end. The fortnightly exhibitions are, of course, a great opportunity for "narcissists" to foregather, and several notable firms who deal largely in daffodils keep open house during the spring season, but it has been left to the Messrs. Barr and Sons, of Covent Garden, to hold a daffodil exhibition in the heart of the fashionable quarter of the Metropolis, and on the Wednesday and Thursday before Easter they had a very delightful display of the choicest varieties at No. 10, Dover Street, Piccadilly. The exhibition was well attended.

We made a few notes, and among the bold, large-crowned, or magni-coronati set a noticeably fine thing was Conqueror, a grand bicolor trumpet variety, with a superb perianth and a pale yellow trumpet of good form. Admiral Makaroff, a finely formed deep yellow Ajax variety, with a beautifully frilled trumpet, is of a pleasing shade of yellow. Stockwell is a splendid upstanding trumpet variety, with widespread frilled trumpet and a large perianth, all of light golden-yellow shade.

King Alfred was, of course, finely represented, and its exquisitely frilled trumpet and rich golden colour make it a real King among trumpet varieties. Cornopean, a neat bicolor Ajax form, with light yellow trumpet, and Alice Knights, the early white variety, were other beauties, while Atalanta, with a long primrose trumpet and white perianth, and the popular and deeply-hued Buttercup were highly attractive. Mrs. Robert Sydenham, Avalanche, and Lolah are three good white trumpet varieties, the former exceptionally good.

Among incomparabilis forms, or those closely approximating to this section, Pedestal attracted attention by reason of its very substantial creamy perianth and yellow straight cut crown. Great Warley was very much in evidence, and Fleetwing, with its frilled yellow crown, was also a great attraction. Bernardino quite took our fancy; it is an incomparabilis variety, with a shorter crown than most of the section; the white perianth segments are very broad, and the light orange yellow crown is wonderfully frilled and crested.

The exquisite silvery-white Leedsi varieties included the lovely Fairy Queen, which was beautifully shown. Princess Maud was another lovely silvery-white.

Incognita, with its shapely perianth and orange-rimmed crown, and the smaller, fiery-cupped Firebrand, attracted general attention. Mascotte has a very bright orange rim to its flattish yellow cup, while Fiery Cross imitates Firebrand in its brilliance, but has a larger and cream-tinted perianth. Gadfly has pure white, slightly reflexing segments, that suggest poeticus parents, but it has a bright, flat, frilled orange crown. Furnace is very bright, but scarcely so flaming as its name suggests, and Bedouin is not so ragged and wild as is Arab, but has a refined, broad-petalled white perianth, and an orange red-edged cup.

Of the new poeticus varieties we noted Lycidas and Cassandra, while double varieties were represented by the old Capax plenus, Volcano, Cernuus plenus, the gold and white Argent, Campanella plenus, and the handsome primrose-yellow Plenipo.

Irene, Jaune à Merveille, and Ideal represented the increasingly popular and useful poetaz section, while among quite small, but very pretty daffodils, such varieties as Sunset, Queen of Spain, Colleen Bawn, Mrs. Vincent, and Cloth of Gold served to throw the larger flowers into sharp relief without losing any of their own quiet beauty.

Horticultural Club.

On Tuesday, the 11th instant, the usual monthly dinner of this club was held at the Hotel Windsor, Mr. Harry J. Veitch, V.M.H., occupying the chair; and subsequently a very interesting lecture was given by Mr. Wilfred Mark Webb, secretary of the Selborne Society, on "The Bird Sanctuary," which has been established between Ealing and Harrow for the protection of bird life amid the ever-increasing dangers which beset it in the environs of the great city. A large number of lantern slides, mainly executed from photos taken by Mr. Poole, who was also present, were shown to exhibit the success which had attended the devotion of a piece of well-wooded land of about nineteen acres to the purpose indicated, by enclosure and adequate protection by a keeper against the raids of birdcatchers and intrusive bird-nesting boys. Many of the slides depicted nests in situ, sometimes with the clutches of unhatched eggs, and sometimes with the young birds, the various modes of building and choice of materials being thus exemplified, and at the same time the precaution taken by the parents to hide the nests from their natural foes. One series of slides was devoted to the cuckoo, whose larger but otherwise similarly characterised egg was first shown in the unwitting foster parent's nest, the next stage in the history being the young cuckoo monopolising the nest entirely after having thrown its unfortunate foster brothers and sisters ruthlessly over the precipice formed by the nest edge. The growth of the young cuckoo was followed up, and its curiously repellent appearance of snake-like markings of black and white shown, together with a presumed further resemblance to a snake owing to the eye-like marks seen in the interior of the beak when gaping to receive its food, a snake-like hiss accompanying such gaping when an intruder appeared. Owing to the provision of nesting boxes and other attractions, the nightingale, which has been missing from the locality for some years owing to unprotection from vandalistic attacks, had recently re-established itself as an annual visitor, and in all a very respectable list of resident or migrant species attested to the value of the sanctuary as a centre. A number of the concluding slides were devoted to the various kinds of nesting boxes and other contrivances to the same end, which had been designed and made on the spot as substitutes for those of German make which had hitherto been largely imported, but were now being supplanted by the simpler and better ones made by those concerned with the sanctuary, and which experience had shown were better fitted for our native birds by their variety dictated by personal study and experience of the birds' particular habits.

A particularly interesting discussion followed the lecture, in which Messrs. Pearson, Cranfield, Bilney, Bunyard, Boyd-Watt, and Poole participated, each of whom contributed his own personal experience in ornithological study as a practical expert. During the discussion both sides of the question were aired, viz., those of birds as foes and as friends. Against two birds an unanimous verdict of "guilty" and sentence of death was pronounced, viz., the carrion crow as a deadly enemy of all other birds, and the common sparrow as both a horticultural and agricultural pest. Kestrels and owls, which, in many parts, are victims of misplaced hostility, were, on the other hand, beneficial, and should be spared, their prey being voles, mice, and other inimical vermin. The bullfinch, starling, and a few others were terribly detrimental to fruit, and where fruit culture was desired, the first-named specially had to be kept under as far as possible. In this connection the lecturer's remarks received a humorous set-back by those of Mr. Bunyard, whose fruit was decimated sometimes by birds which he assumed were probably cherished and incited to propagate in some "confounded neighbouring sanctuary," a remark which was received as hilariously by the lecturer himself as it was obviously intended to be by the speaker.

One result of the discussion was the conviction that "circumstances altered cases," that birds, like all other forms of organic life, were factors in the balance of nature, and that whether they were friends or foes depended largely upon whether, owing to this balance being artificially upset by abundance of food or extirpation of natural foes, or other causes, they became too numerous or otherwise. Over-abundance leading to change of habit in detrimental directions, while a short supply may, and doubtless often does, lead to invasions of insect pests which it was the province under ordinary conditions of the birds to keep under.

A hearty vote of thanks to the lecturer concluded the meeting.

Dundee Horticultural Association.

The usual ordinary monthly meeting was held in the Technical College on the evening of the 14th inst. The President, Mr. Wm. Christison, presided, and the subject of "Pear Culture" was admirably treated upon by Mr. William Ritchie, Telford House Gardens, Stirlingshire. After briefly referring to historical records regarding the introduction and evolution of the pear, the lecturer referred to some of the ancient trees to be found in Scottish orchards, particularly those at Lindores Abbey and at Telford Orchard, near Blairgowrie. In the last-named place there were three huge trees over 300 years old, one of which had a girth one foot from ground, of 13½ feet; at 3 feet from the ground, girth 9½ feet; here it breaks away into huge branches, each as large as a good pear tree, and these have a diametrical spread of 15 yards. Considering the age and size and consequent exposure of such trees, they are in a prolific fruit-bearing condition, and still making good healthy growth. With such an object-lesson in front of him one could not wonder at the enthusiasm and practical knowledge displayed by the lecturer as he entered into the cultural details of pruning, training, budding, grafting, etc. Exhibiting a photograph of a good tree grafted by himself on a whitethorn stock many years ago, he remarked upon the dwarfing influence of the latter on the growth, and its fruit producing tendencies; as a stock he thought it eminently suitable for bush and pyramid form.

His remarks on pruning and training of wall trees were greatly enhanced by his reference to diagrams and sketches which he had prepared, illustrating his methods, and the practical results obtained as shown by the branches and twigs laden with bursting flower buds were convincing proof of his sound knowledge.

Strongly condemning hard, close winter pruning, Mr. Ritchie advised August pinching and a system of pruning in winter, whereby the leading shoots were merely shortened one-third of their length; this resulted in fruit buds being formed along the entire shoot the following year.

After Messrs. Benvie, Campbell, Slater, Grant, and others had eulogised the lecture and the lecturer had replied to one or two questions raised, he was accorded a hearty vote of thanks on the motion of Mr. James Bethel.

Mr. William Benvie, Inchmartin Gardens, Carse-of-Gowrie, exhibited several dishes of apples, and the following varieties were noted in the pink of condition: Baumann's Red Reinette, Warner's King, and Bramley's Seedling. Votes of thanks to exhibitor and chairman terminated an enjoyable and profitable evening.

East Anglian Horticultural Club.

"The Care and Management of the Lawn." This was the subject of an essay competition open to the members of this club at the April meeting. Five papers were received, and the writers did themselves and the subject great credit. Generally speaking, the lawn does not come in for that amount of thought and care which it requires, and the soil needs some artificial or other manure to replace the food constituents extracted by the grass roots. The subject of worms—Are they good or harmful?—entered largely into an animated discussion which followed. The balance of opinion being in favour of them, as they are so useful in drainage.

The exhibition portion of the meeting was a striking feature. Messrs. Daniels Bros., Lim., Norwich, displayed an array of roses, acers, and forced flowering shrubs; Mr. F. Williams, gardener to Louis Tillett, Esq., Catton, Norwich, staged some fine fruits of a new strawberry raised by Mr. Robt. Holmes, Tuckswood, Norwich, named "Tuckswood Early." It is a medium size, elongated fruit, of beautiful colour, and excellent flavour, and crops profusely when forced. Mr. W. Shoesmith, gardener to F. W. Harmer, Esq., Cringleford, staged a very nice plant of cymbidium, and a lady's spray composed of dendrobiums by the same exhibitor, was exquisite. Mr. Frank Neave, Lingwood, displayed some gorgeous zonal pelargonium blooms with large, massive pips and trusses.

British Gardeners' Association.

LONDON BRANCH.

The monthly meeting of the London branch of the British Gardeners' Association was held at Carr's Restaurant on Thursday, April 13. There was a good attendance, and a very interesting debate upon the policy of the B.G.A. was opened with an able address by Mr. Smith, of Kew Gardens. Many interesting points were raised, and Mr. Smith was strongly supported by a number of young gardeners from Kew. An increase of 2s. 6d. in the annual subscription, so that a fund might be started for the relief of unemployment, was very strongly advocated. It was also thought that the time had arrived for the appointment of a paid secretary who could devote the whole of his time to the interests of the association. Mr. Hawes, in moving a vote of thanks to Mr. Smith, expressed the hope that some of the suggestions made would be adopted. The debate had been a most instructive one, and he hoped that good results would accrue.

Huntingdon Daffodil Show.

The daffodil exhibitions held in the Corn Exchange, Huntingdon, are delightful functions, and they attract the good folks of the town and district in large numbers. The competition is open entirely and wholly to amateurs, and there is a very great keenness to secure the awards for the sake of the honour and glory of a win over one's neighbours and friends. The life and soul of the Huntingdonshire Daffodil Society is Miss Louise L. Linton, the hon. sec., who is admirably supported by an energetic committee, and by five members of her own family at Buckden, and Colonel and Mrs. Linton of St. Ives.

The Corn Exchange is not an ideal place for an exhibition, as all the light comes from one side, and there is barely enough room for exhibits and visitors. The show held on Wednesday, April 19, was a fine one, the competition keen, and the flowers, on the whole, of good quality and rich colouring. Curiously enough such varieties as Emperor, Empress, and King Alfred were a trifle small all through, but Lucifer, Firebrand, Lulworth, Cresset, Circlet, Sir Watkin, and the newer Poet's varieties were particularly good.

In the premier class thirty distinct varieties of daffodils are required, not fewer than three and not more than nine flowers of a variety, and the three great divisions of daffodils to be represented. Here the chief prize was a silver vase presented by Messrs. Barr and Sons, Covent Garden, and it was won by Mr. F. Staffurth, Frieston Priory, Lincoln, who set his flowers up finely, and had beautiful examples of Cresset, Chough, Glory of Leiden, Firebrand, Lucifer, Citron, Sceptre, Kings Norton, Princess Mary, Circlet, and Southern Star. Mr. J. Cator, M.P., Woodbastwick, Norfolk, who won first place last year, was second on this occasion, and some of his best vases were of Mdme. Plemp, Sunrise, and Gloria Mundi; Miss Linton, Stirtloe House, Buckden, third. There were six competitors.

There was a very poor competition in the classes for daffodils grown in moss fibre, and second prizes only were awarded in each case. There were eight entries of three varieties of Poeticus daffodils, and here Mrs. Nowell-Usticke, Philleigh, Cornwall, annexed the premier award, and with charming blooms of Cassandra, Poet Laureate, and Epic; Mrs. Stables, Offord Hill, Godmanchester, second; and Miss Olive Linton, Buckden, third.

Mr. H. R. Darlington, Potter's Bar, who is as keen on daffodils as on roses, secured the leading award for six trumpet varieties, not more than five blooms of each, with splendid examples of Seraphim, Glory of Leiden, Fairy, Victoria, Golden Bell, and Outpost. Mrs. Lisborough second; and Mr. T. Longland, Warboys, Huntingdon, third.

Miss Irene Linton scored for six medium-crowned varieties with Princess Mary, Katherine Spurrell, Lucifer, Fairy Queen, Seagull, and Leonie; Mrs. Stables second, and Mr. H. R. Darlington third. For six small-crowned varieties Mr. Jas. Marshall, Hartford Cottage, Huntingdon, secured the chief award with high-class blooms of Virgil, Epic, Dante, Homer, and Horace; Miss Olive Linton second and Lady Lilford, Lilford Hall, Oundle, third. Lady Lilford was also successful for three varieties of polyanthus narcissi, and was followed in order by Mrs Carnegy, Alconbury, Huntingdon, and Mr. H. R. Darlington. Miss L. L. Linton led for three poetaz varieties with handsome vases of Triumph, Aspasia, and Klondyke; Mrs

Daily Mail

£1000

Sweet Pea Prize

THE DAILY MAIL will hold a Sweet Pea Show on July 28th and 29th at the Crystal Palace (Festival of Empire). The following prizes will be given for the best bunch of Sweet Peas consisting of 12 spikes containing three varieties at least.

FIRST PRIZE £1,000, SECOND PRIZE £100, THIRD PRIZE £50, and 1,000 MEDALS.

SPECIAL Children's Prizes amounting to £50.

Premiums for the best bunch of artificial Sweet Peas, entirely made in England, will also be given.

No Competitor may enter more than one bunch.

The varieties need not be named.

The bunches may be sent by post and will be arranged for the Competitors.

Entries cannot be made till a date in June, when a succession of announcements will be made in the DAILY MAIL.

The Competition is designed to spread the cultivation of Sweet Peas among Amateur Gardeners.

The following, as announced in the DAILY MAIL, are ineligible :—

Those who have at any time grown flowers for profit.

Those who have at any time won a first prize at the National Show.

Those people who employ more than one paid worker, gardener, or other, in the garden.

The gardeners or persons so employed by such persons as are disqualified in the preceding clause.

Members of any Institution, Agricultural or other, who grow their flowers in a common garden.

The families or dependants of any of the categories enumerated above.

Full details of the Competition, with instructions in the culture and management of the flowers, will appear from time to time in the "Daily Mail" until the date of the Show.

R. L. Towgood, Farm Hall, Godmanchester, second, and Miss Irene Linton third.

The best single flower of a trumpet daffodil was a very clean Weardale Perfection from Mr. Staffurth; Mr. Darlington second with Duke of Bedford, and Lady Lilford third with King Alfred. Mr. Staffurth was also first for one medium-crowned daffodil with a fine flower of Bernadino; Miss Joan Linton second with Lady Mary Boscawen, and Mr. Darlington third with Lucifer. For one small-crowned variety Mr. J. Linton came to the front with a very big clean specimen of Virgil; Miss Linton followed with Circlet, and Lady Lilford with Armorel. The three best vases of Leedsi varieties were from Miss Linton, Mrs. Longland coming second, and Mr. J. Marshall third; all showed White Lady in fine form. Miss Irene Linton's first prize set of three varieties of double daffodils consisted of Argent, Plenipo, and Dubloon, all good; Mr. Darlington second, and Mrs. Towgood third.

Mrs. Stables scored for four varieties of daffodils, any sections, three blooms of each, with Lucifer (very fine), Sir Watkin, Firebrand, and Mdme. de Graaff; Rev. O. P. Fisher, Graveley, Huntingdon, second, and Miss Irene Linton third.

In the county class for six varieties of daffodils, any kinds, three to five flowers of each, there were nine contestants, and here Mrs. Senior, Brampton Park, Huntingdon, scored with splendid blooms of Mdme. Plemp, Mdme. de Graaff, J. B. M. Camm, Glory of Leiden, Emperor, and Empress; Mrs. Towgood second, and Mrs. Carnegy third. In the other county class, for three varieties of daffodils, any section, Mrs. Towgood secured first prize with Stella Superba, Vanilla (sweetly-scented), and Sir Watkin; Mrs. Senior a close second, and Mrs. Longland third.

In the numerous classes for spring flowers, such subjects as hyacinths, tulips, primroses, flowering shrubs, perpetual carnations, etc., were freely exhibited and well staged. The leading prize-winners in this section were Lady Lilford, Mrs. J. Linton, Colonel Chichester, Godmanchester; Mrs. Senior, Mr. J. Cator, and Mr. Hunnybun.

Non-competitive exhibits ranged round the Exchange included daffodils, tulips, and double primroses from Messrs. R. H. Bath, Lim., Wisbech; choice new daffodils from Messrs. Cartwright and Goodwin, Kidderminster; spring flowers and roses, from Messrs. W. and J. Brown, Peterborough; Tritonia crocata Alberta and greenhouse plants, from Mr. J. E. Perkins, Huntingdon; seedling and other new daffodils of great variety and merit, from Messrs. Barr and Sons, Covent Garden; orchids from Mr. G. W. Miller, Wisbech; interesting hardy flowers from Mr. G. Reuthe, Keston, Kent; and very fine perpetual carnations from Messrs. Laxton Brothers, Bedford.

FORTHCOMING ENGAGEMENTS.

TUESDAY, April 25.—Royal Horticultural Society: Daffodil Committee meets at 11.30; Fruit, Floral, and Orchid Committees at 12 o'clock; lecture at 3 p.m. on "The Tulip—Its Problems and History," by Rev. J. Jacob; Scientific Committee at 4 o'clock.

National Auricula and Primula Society's Show, in conjunction with Royal Horticultural Society.

National Rose Society: Special General Meeting, 3 p.m. Rose Conference with address by Rev. J. H. Pemberton, 5 p.m., Dinner 7 p.m., at Westminster Palace Hotel, Victoria Street, S.W.

WEDNESDAY, April 26.—Hereford Daffodil Show.

Royal Horticultural Society's Examination of School Teachers.

Irish Gardeners' Association.

THURSDAY, April 27.—Midland Daffodil Show at Birmingham; two days.

LONDON POTATO MARKETS.

Prices rule high, and appear likely to remain so.

		s.	d.	s.	d.
Evergood	per ton	90	0	100	0
King Edward	per ton	95	0	110	0
[illegible]	per ton	100	0	120	0
Presidents	per ton	85	0	90	0
Up to Date	per ton	95	0	120	0
Jersey new	per lb.	0	3½	0	4½
Algerian new	per lb.	0	3	0	4
Teneriffe new	per cwt.	12	0	14	0

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

SEEDS FROM THE CANARY ISLANDS. H. W. J., Liverpool: Rhodocistus Berthelotianus is more correctly Cistus vaginatus, and though sometimes listed as Cistus candidissimus, this last is at most but a varietal form of C. vaginatus. It is a shrub that would scarcely be hardy in your district; about two feet or a yard high, it flowers in May and June, and the blooms are rose-coloured; sow in sandy soil in a greenhouse. Convolvulus floridus, from Teneriffe, is an evergreen greenhouse plant of trailing habit, and produces its pink flowers in late summer and early autumn; sow in gentle heat. Delphinium staphisagria, a native of Southern Europe, is a biennial that should be sown in a cold frame; some of the plants may be put out in the autumn, but most of them should be kept in the frame until spring, and be then put out where they are to flower. It grows from two feet to three feet high, and its short-spurred blue and white flowers are carried in loose racemes in May and early June. Spartocytisus rubegenus is none other than our old friend Cytisus fragrans, the popular yellow-flowered and fragrant greenhouse shrub so largely grown for market, with which, no doubt, you are perfectly familiar. Spergula rubra we do not know, but the several kinds of spurrey are annuals, hardy or half-hardy, so you might treat it as such. Echium strictus is an evergreen greenhouse plant that produces erect spikes of blue flowers in summer; sow in sandy soil in the greenhouse. Kleinia neriifolia is a native of the Canary Islands, and is a succulent plant belonging to the natural order Compositæ; the yellow flowers are produced in the autumn. Sow the seeds in sandy soil, just covering them, and place in gentle heat to germinate.

BROWNED EDGES TO RICHARDIA LEAVES.—E. P., Bristol: The browning of the edges of the richardia leaves may be due to one of two causes, or both. Under bright sunshine, if allowed to become dry at the roots, the plants flag, and if this error of management is repeated the edges of the leaves turn brown. Another possible cause is the exposure of the foliage to cold draughts. At this season of the year there is especial need for great care in ventilation, as bright sunshine is often accompanied by extremely cold winds, and the latter, acting upon the tender leaves through the ventilators, will do considerable damage in a short time.

PLANTING WATER-LILIES.—W. B., Sudbury: In our issue of March 25 we gave considerable information concerning hardy water-lilies and how to plant them, and also included an article on "Waterside Plants." You can obtain a copy of the issue, post free, for 2½d. from the Publisher, Gardeners' Magazine, 148-149, Aldersgate Street, E.C. Water-lilies may be planted any time from the end of April to the beginning of July.

DAMAGE TO CARNATIONS.—E. G., Hounslow: The damage done to the plants is due entirely to the birds, probably sparrows. These pests—they are little less in most places—tear out the growing points of the carnations, probably because these are succulent morsels, though often they seem to do damage in a spirit of wicked mischievousness. Use black thread or netting to keep the birds away.

WEEVILS IN BROAD BEAN SEEDS.—J. M., Yorks: The bean seeds are very badly infested with the Bean Beetle (Bruchus granarius), and one of the seed-sent had as many as five of the tiny beetles in it. As the young seedlings depend in large measure upon the amount of food material stored up in the seed substance, it follows that if the seeds are badly "holed" by beetles the crop is not likely to be a great success. The eggs of the Bean Beetle are laid in the opening bean flower, and as these hatch out they eat their way into the seed vessel, and bore into the growing seed. The seed develops and closes up the tiny hole through which the grub entered, but the latter gradually eats out a little chamber for itself, turns to chrysalis form, and presently becomes a tiny beetle. In the spring the beetles break through the seed skin, and are then ready to increase their kind. If infested seeds are sown, the prospect of a recurring attack is very great, as the beetles emerge from the seeds and remain in the soil until favourable conditions induce them to come up through the earth. Seeds so badly infested as those of which you have sent us a sample should be returned to the seedsman with a request that they be replaced by sound ones.

WOUNDS ON APPLE TWIGS.—R. F. M., Devon: We are endeavouring to find the cause of the trouble, and will report later.

NAMES OF PLANTS.

M. B., Lincoln.—Adiantum cuneatum grandiceps.

W. B., Sudbury.—1, see next issue; 2, Daphne Laureola.

C. L. G., Wareham.—1, Ribes sanguinea; 2, Prunus sinensis; 3, Eleagnus pungens.

S. C., Lee.—1, Forsythia suspensa; 2, Anemone blanda; 3, Soldanella alpina; 4, Erythronium dens canis; 5, Primula rosea.

R. E. C., Bridgwater.—1, Magnolia stellata; 2, Primula viscosa; 3, Erica carnea; 4, Ribes aurea.

J. J. M., Bedford.—1, Hymenophyllum radicans; 2, Kerria japonica; 3, Odontoglossum excellens; 4, O. Wilckeanum.

OBITUARY.

Mr. J. MELVILLE.

We regret to learn that Mr. J. Melville, for many years superintendent of Finsbury Park, under the London County Council, died suddenly on Sunday evening last. Mr. Melville was a very capable gardener and organiser.

MR. WILLIAM E. GUMBLETON.

The death of Mr. W. E. Gumbleton, on April 4, at Belgrove, Queenstown, removes from horticultural and botanical circles one of the most interesting personages. At Belgrove he had an exceptionally fine collection of rare plants, and it was his great delight to be the first to cultivate newly introduced species and varieties. He was a great patron of horticulture, and his wide knowledge of plants rendered him famous throughout the United Kingdom and on the Continent. He was a frequent visitor to and correspondent of Kew, and he rarely missed a Temple Show. Mr. Gumbleton, whose portrait we gave in our issue of July 20, 1907, was seventy-one years of age.

MR. R. N. G. BAKER.

The rose world is the loser by the recent death of Mr. R. N. G. Baker, of Exeter, who was for a considerable period a prominent member of the National Rose Society, and took a keen interest in all horticultural movements in Devonshire. He was a frequent and successful exhibitor of roses, and his flowers won many victories, both at the N.R.S. exhibitions and in the West of England.

MONS. C. du BOIS LARBALESTIER.

M. Larbalestier, who died recently in Jersey, was an eminent botanist, but he came little before the public, as he devoted his attention chiefly to lichens, of which he was the chief British authority. His splendid collection of lichens was secured some time ago by Mr. W. Cadbury for the Birmingham University.

MARKETS.

◆

COVENT GARDEN.

Flowers.

Trade is rather good for so soon after the holidays; daffodils and tulips sell freely and liliums are good.

		s.	d.	s.	d.
Azaleas, white	per doz. bun.	3	0	4	0
Adiantum cuneatum	per doz. bun.	4	0	8	0
Anemone fulgens	per doz. bun.	1	6	2	0
Anemones (French)	per doz. bun.	1	0	1	3
Arums	per doz.	2	0	3	6
Asparagus	per doz. bun.	7	0	10	0
Camellias	per doz.	1	6	2	0
Cattleyas	per doz.	8	0	10	0
Carnations	per doz.	1	6	2	0
,,	per doz. bun.	8	0	12	0
Croton leaves	per bun.	1	0	2	6
Cypripediums	per doz. blooms	2	6	3	0
Freesia alba	per doz. bun.	1	0	1	6
French fern	per doz. bun.	2	6	4	9
Gardenias	per doz.	3	0	5	0
Lilac	per bun.	2	6	3	6
Lilium auratum	per bun.	3	0	4	0
,, speciosum	per bun.	2	0	2	6
,, longiflorum	per bun.	2	6	3	6
Lily of the Valley	per doz. bun.	6	0	12	0
Marguerites	per doz. bun.	2	0	3	0
Myosotis	per doz. bun.	3	0	4	6
Narcissus	per doz. bun.	1	0	2	0
Odontoglossums	per doz. blms.	2	6	3	0
Pelargoniums	per doz. bun.	5	0	8	0
Primroses	per doz. bun.	0	9	1	0
Ranunculus	per doz. bun.	3	0	6	0
Roses	per doz.	1	0	6	0

Fruits.

Business is steady, and the fine weather is probably answerable for the big demand for oranges, apples, and bananas.

		s.	d.		s.	d.
Apples, English	per bush.	7	6	to	12	0
,, American	per barrel	20	0		24	0
.. Australian	per case	14	0		20	0
.. Oregon Newtowns	per box	10	0		14	0
.. Canadian	per barrel	23	0		24	0
Bananas	per bun.	4	0		12	6
Chestnuts	per bag	10	0		20	0
Cranberries	per case	9	0		10	0
Grapes, English	per lb.	2	0		4	0
,, Belgian	per lb.	2	0		3	6
.. Cape	per case	4	0		11	0
,, Guernsey	per lb.	0	9		1	3
.. Almeria	per barrel	15	0		25	0
Lemons	per case	8	0		18	0
Nectarines, Cape	per case	8	0		12	0
Oranges	per case	10	0		25	0
.. Jamaica	per case	8	0		9	6
.. Californian Navels	per case	12	0		15	0
,, Sevilles	per case	6	6		8	6
Peaches, Cape	per case	3	0		6	0
Pears, Cape	per case	4	0		20	0
.. Australian	per case	10	0		16	0
Pineapples	each	2	6		4	6
Plums, Cape	per case	5	0		8	0
Strawberries	per lb.	2	0		8	0

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above sea-level, 150 feet.

Date. 1911. April 9 to April 15.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
April 9—Sunday	—	42	39	47	34
,, 10—Monday	1 24	40	37	45	38
,, 11—Tuesday	2 0	43	39	49	39
,, 12—Wednesday	6 48	39	38	59	29
,, 13—Thursday	9 18	44	40	55	39
,, 14—Friday	10 0	48	44	64	34
,, 15—Saturday	10 6	51	45	65	37
Means	(total) 39 36	43·6	40·2	54·6	35·5

Date. 1911. April 9 to April 15.	Rain.	Temperature of the Soil at 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
April 9—Sunday	trace	40	40	43	28
,, 10—Monday	—	41	40	42	33
,, 11—Tuesday	—	41	40	42	37
,, 12—Wednesday	—	39	41	42	20
,, 13—Thursday	—	43	42	43	28
,, 14—Friday	—	44	43	42	26
,, 15—Saturday	—	45	44	43	26
Means	(total) —	41·6	41·3	42·3	28·2

Fruit Pergola as recently erected.

Have a Fruit Pergola this Summer !

Charming effects and excellent results can be obtained by training fruit trees on our improved Arched Espaliers. Order now, and get your fruit trees planted in good time.

No. 103 Arched Espalier, 8ft. high, 5ft. wide, painted, 9/6 per yard.
Cheaper patterns 6/- and 3/- per yard.
Catalogue No. 153A of Espaliers, Rose Trainers, Garden Arches, Pergolas, etc., free.
HUTS FOR THE GARDEN, POTTING SHEDS, FRUIT ROOMS, TOOL HOUSES, ETC.

BOULTON & PAUL, Ltd., Specialists, NORWICH.

Do not wait till after planting to destroy wireworms.

It is too late then: use Vaporite NOW, and you will have the ground freed from soil insects. 1 lb. to 8 square yards will do, if dug well in. Before digging, send for the illustrated booklet No. 45, which describes Vaporite fully. :: ::

VAPORITE

—— THE ORIGINAL SOIL INSECTICIDE: ——

"I tried Vaporite last year for carrots and tomatoes, and found it very beneficial."—C. B., [illegible].

"It is by far the most efficient pest destroyer I have known or used, and should be used in every garden."—E. P., Hoddesdon, Herts.

PRICES: **Tins, 1½lb. 9d., 7lb. 2/-, 14lb. 3/-, 28lb. 4/6**, carriage forward, of all seedsmen.

Casks, 7/6 ½-cwt., 11/6 per cwt., carriage paid from your seedsman or the company.

The Vaporite-Strawson Co., Ltd.
(Dept. E).
Spencer House, South Place,
London, E.C.

CONTENTS.

	PAGE
Annual Larkspurs	309
Answers to Correspondents	312
Apple Bow Hill Pippin	307
Carnation Duchess of Devonshire	305
Exhibitions and Meetings	309
Fern Spore Pots	297
Following Nature's Lead	306
Hardy Plant Chat	304
Maintaining the Balance	307
Mesembryanthemum pyropeum	299
New Plants, etc.	301
Notes of the Week	[illegible]
Rock Garden Notes	298
Roses of Distinctive Colouring	298
Stigmonose and Perpetual-flowering Carnations	302
The Revival of the Pentstemon	304
The Value of the Roof Garden	299
Work for the Week	308

ILLUSTRATIONS.

Portrait of Mr. R. S. Halley, 295; Mesembryanthemum pyropeum 299; Narcissus Incognita, 300; Odontoglossum [illegible]; Varieties Mrs. [illegible] 302; Pelargonium Maxim Kovalensky, 303; Carnation Duchess of Devonshire, 305; Apple Bow Hill Pippin, 307.

MANY YEARS REPUTATION.
EUREKA WEED KILLER
LASTING RESULTS – NO NEW EXPERIMENT.
1/9 TIN FOR 25 GALLONS ⁝ **6/- TIN** FOR 100 GALLONS ⁝ LARGER SIZES AT LOWER RATES
SOLD BY AGENTS. MANUFACTURERS: TOMLINSON & HAYWARD LTD. LINCOLN.
IF ANY DIFFICULTY SENT DIRECT - PAID

NOTICE. — Always use PORTER'S IMPROVED COIL STAKES for Carnations, no tying required; last a lifetime. Sample doz. with price list 1s. carriage paid. A. PORTER, Stone House, Maidstone

PEA TRAINERS, The "Paragon" and "Penfold" (patent) made 4ft. 5ft. and 6ft. high and any length. Prices from [illegible] per set carriage paid. Write for leaflet. THE PEA TRAINER CO., Bridge Street, Banbridge

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; Grapes, Peaches, Melons, Stove and Greenhouse Plants; 6 and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

CAPT. G. H. BARNETT, Glympton Park, Woodstock, Oxon, wishes to very highly recommend his present HEAD WORKING GARDENER; life experience; reducing cause of leaving; 10 years' previous as Gardener and Management small estate; age 39; 1 daughter aged 14. Address E. JACOBS, as above.

GARDENER (Head Working), married, no family; age 36; life experience in all branches, Inside and Out; excellent references; Wife dairy, or house, if required. A., 27, Effingham Road, Reigate, Surrey.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working). Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working). Mr. F. BERRILL, of Hall Close, Kettering, wishes to recommend FRANK DAINTY, who is a thoroughly capable Gardener, with life experience Inside and Out; 8 years in present situation; age 30; married, no children. DAINTY, Hall Close, Kettering.

GARDENER (Head Working). Mr. GOULD, Sheratold Park, Frant, Sussex, highly recommends his Foreman, A. DAY, as above; thorough practical experience Inside and Out; excellent references; age 30.

GARDENER (Head - Working), requires SITUATION; experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants; Flower and Kitchen Garden, Hardy Fruit, etc.; good references; married, no family. W. S., 73, Allen Street, Maidstone, Kent.

GARDENER (Head Working, where two or more are kept); good all round; 14 years as head in large and well-kept establishments; married; age 40; excellent references. E. MAYLETT, Park Hall, Salford Priors, Evesham.

GARDENER (Head Working), age 35, life experience in all branches; inside and out, house and table decoration; highest references. JAMES GATES, Papworth, Everard, Cambs.

GARDENER (Head Working, where two are kept, or good Single-handed); experienced in all branches; age 30. C. WOOD, Manor Cottages, Clayton Road, Hook, Surbiton, Surrey.

GARDENER (Head Working, where two or more are kept); good all round; 14 years as head in large and well-kept establishments; married; age 40; excellent references. E. MAYLETT, Park Hall, Salford Priors, Evesham.

MR. CARTER, Head Gardener to Col. W. H. O. Duncombe, will highly recommend C. HARDY as JOURNEYMAN (Inside) to any Gardener. Apply C. HARDY, Waresley Park, Sandy, Beds.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (Single-handed); little or no glass; 10 years' experience in present place; single; age 28. W. REEKS, 89, Amwell Street, Hoddesdon, Herts.

MR. SALTER, The Gardens, Avenue House, Church End, Finchley, highly recommends W. BICKER as GARDENER (Single-handed, or with help); experienced Inside and Out, at present in his employ; age 28; Eastern Counties preferred.

GARDENER (Second), seeks SITUATION, inside or inside and out; 10 years' experience; good reference; single; disengaged. Address F.P., 66, Fircroft Road, Upper Tooting, London, S.W.

JOURNEYMAN (First, Inside), in good establishment; age 24; eight years' experience; good references; can be well recommended. T. BLIGH, The Barton, Helland, Bodmin, Cornwall.

JOURNEYMAN (Inside and Out), age 23; nine years' experience; 5½ years present situation; three years Inside; leaving when suited; well recommended by Head Gardener. F. BASTON, The Gardens, Cricket House, Chard, Somerset.

J. HARDING, Coneygar Gardens, Bridport, highly recommends W. BARTLETT, age 20 here three years, as JOURNEYMAN (Second, Inside or Inside and Out).—Apply, W. BARTLETT, Coneygar Gardens, Bridport, Dorset.

H. M. HARVEY will be pleased to recommend E. WOODLAND to any Gardener requiring a thorough good JOURNEYMAN (Inside or Inside and Out); 9 years' practical experience; highest references. E. WOODLAND, Cricket, Chard, Somerset.

H. E. DENNIS, Esq., St. Leonards Park, Horsham, recommends H. JUTSON (18), JOURNEYMAN (Inside and Out), 3 years' references. JUTSON, St. Leonard's Park Gardens, Horsham, Sussex.

JOURNEYMAN, Under; age 19; 5 years' experience in good gardens; 2 years last place at Worth Park, Sussex; highly recommended. FUNNELL, South Park, Reigate.

WANTED, a SITUATION as UNDER GARDENER, by a Single Man; middle age; 7 years' good character. Address N., 78, High Street, Burbage, Wilts.

GARDENER (Under) seeks SITUATION, where 3 or 4 are kept; well up Inside and Out; 7 years' experience; age 21; excellent references. H. F., Ladds House, Sandhills, Witley, Surrey.

GARDENER (Under); private establishment or Grower Market Nursery; 14 years' experience, Inside and Out, private and nursery; good references. LEWINGTON, 169, High Street, Hampton Hill, S.W.

ORCHID GROWER requires SITUATION to take charge of collection or small place where Orchids speciality; experience Burford Lodge, etc.; excellent references. Apply S. BURROUGH, Royal Gardens, Sandringham.

MR. WM. PARKER, Orford House Gardens, Market Rasen, wishes to recommend YOUNG MAN, age 19; three years' good experience, Inside and Out; nurseries or private garden. Worcestershire preferred. F. CARROTT, Healing, near Grimsby, Lincs.

WANTED, employment in Nurseries: Part Fruit Culture preferred; 2½ years' experience; age 18½. Not afraid of work; references. DAY, Nomansland, Sandridge, near St. Albans, Herts.

YOUNG MAN seeks SITUATION on pleasure grounds; 5 years' experience with horse and hand machines; well recommended; age 22; fond of cricket. F. GARDINER, Home Farm, Glympton, Woodstock, Oxon.

YOUNG MAN (20) seeks SITUATION; Inside and Out; 3 years' experience; strong, willing; well recommended; prefer bothy. GOULD, Stuckton, Fordingbridge, Hants.

YOUNG MAN, age 20¾, seeks SITUATION as Inside and Outside; four years' experience. Home Counties preferred. H. E. HARMER, Milgate Park, Maidstone.

Situations Vacant.

WANTED, CARNATION GROWER; experienced Young Man for a large trade Nursery; good wages to a competent grower. None but the best men need apply. CARNATIONS, c/o Office of this Paper.

WANTED, GARDENER, Single-handed; help given when required; unmarried. Apply, giving full particulars and wages required, to LT.-COLONEL R. HILL, Hamble, Hants.

SITUATION COUPON

To the Advertisement Manager of "The Gardeners' Magazine," 148 & 149, Aldersgate Street, London, E.C.

For APRIL 29, 1911.

Please Repeat my Advertisement.

Name ....

Address ....

....

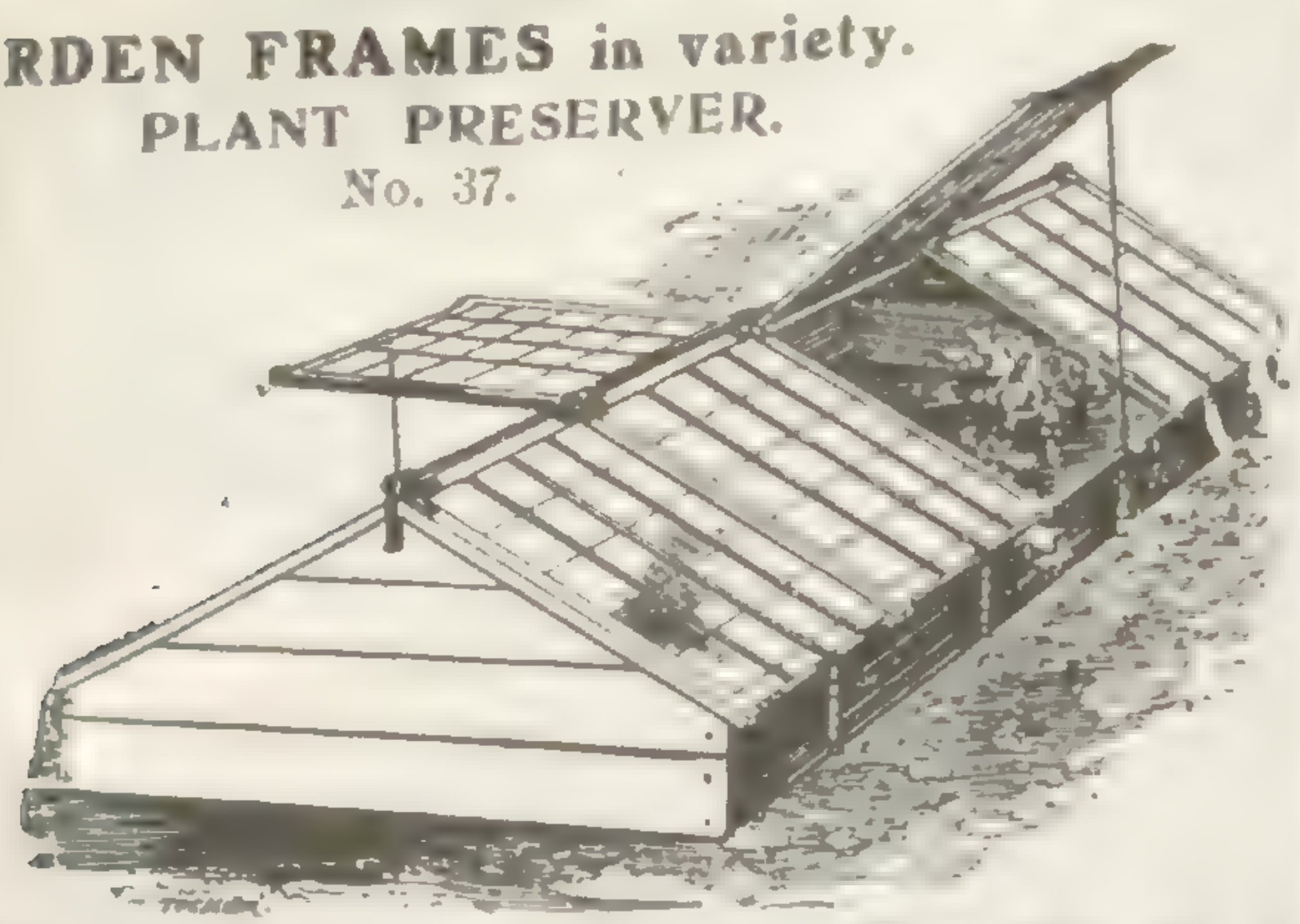
Date..............................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

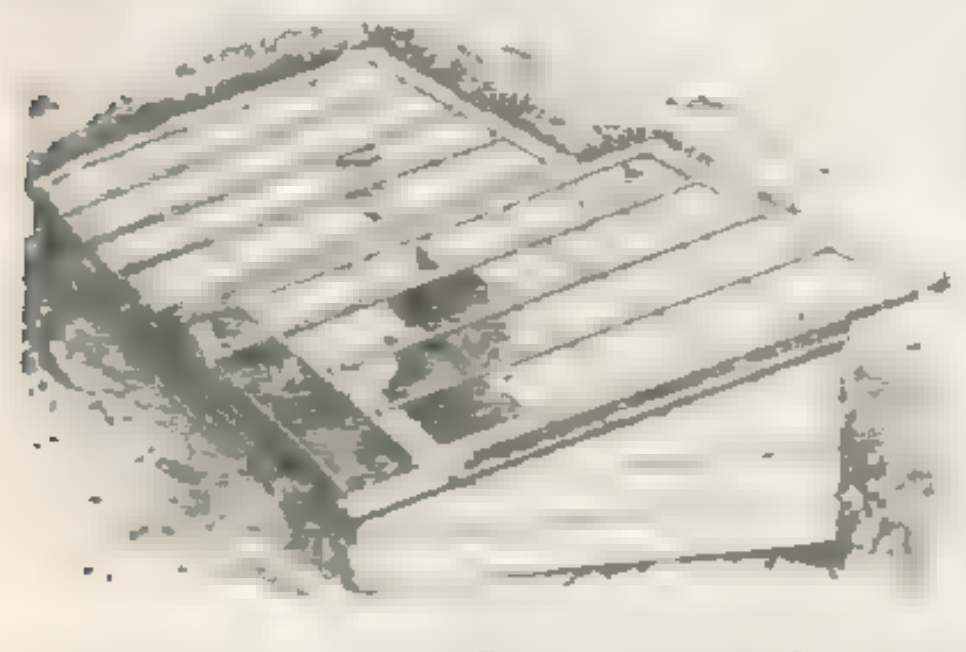
WM. DUNCAN TUCKER & SONS, LTD.

Horticultural Builders 27, Cannon St., London, E.C.
Works: Tottenham.

GARDEN FRAMES in variety.
PLANT PRESERVER.
No. 37.



6ft. by 4ft.	£2 1 0	12ft. by 4ft.	£3 10 0
8ft. by 6ft.	3 17 0	16ft. by 6ft.	7 0 0



Melon & Cucumber Frame
No. 38.

6ft. by 4ft.	£1 14 0
8ft. by 6ft.	2 14 0
12ft. by 6ft.	3 14 0
16ft. by 6ft.	4 14 0

Carriage paid to most stations on orders of 40/- in value.
Please mention this paper.

WATSON'S LAWN SAND.

(The Only Original.)
Destroys Daisies, Plantains, Dandelions, &c., and at same time Invigorates the Grass.
34/- per cwt.; 56lb. Kegs, 18/-; 28lb. Tins, 9/6.
Canisters, 5/-, 2/6, and 1/-.
Please see that you get the genuine article.
Sold by Seedsmen and Nurserymen.
A. J. BARBOUR & Co., 8, Upper Fountaine St., LEEDS

"CARRUSTICIDE."

The Best and Cheapest Remedy for Carnation Rust and other Fungoid Diseases.

A well-known Carnation Grower writes:
Dear Sir, The Nurseries, March, Cambs.
"During the 27 years I have been growing Carnations (Perpetual and American) I have tried most of the fungicides placed on the market, but yours is the best. It is a pleasure to see how "Carrusticide" catches hold of the Rust and destroys it. I should say your preparation will be extensively used when it is better known." Yours very truly,
GEO. CLARKE.

One gallon makes 25 gallons for spraying purposes—Price 3s. per quart, 7s. 6d. per gallon. Special quotations for larger quantities.
Terms: Cash with order.

H. SAMUEL, Ph.C., M.P.S., Horticultural Chemist,
55, High Street, Leighton Buzzard.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to
EPPS & CO., Ringwood, HANTS.

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant — Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

Extracts from 35th annual collection of reports:—

NATIVE GUANO for POTATOES, VEGETABLES, etc.

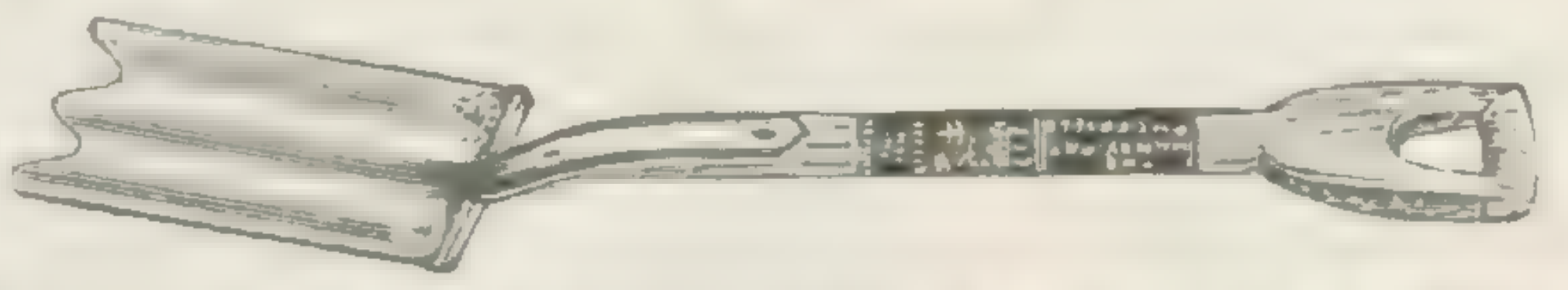
A. J. Beard, Erdington: "Potatoes, splendid, free from disease. Best I ever had."—H. Chester, Nantwich: "Best onion manure I ever used. Grand for onion fly."

NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc.

J. Cant, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. Frampton, Titchfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED**, 29, New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted

A NEW GARDEN SPADE (Carter's Patent).



This is claimed to be the most effective Spade on the market. Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

TANKS! TANKS!! TANKS!!!

Now is the time to buy cheap Tanks. We have several hundreds for sale, which have come off ships we have broken up. All capacities from 25 gallons. List free on application. THOS. W. WARD LIMITED, Sheffield.

Dr. J. COLLIS BROWNE'S Chlorodyne

THE ORIGINAL AND ONLY GENUINE

Admitted by the Profession to be the most Valuable Remedy ever Discovered

The Best Remedy known for

COUGHS, COLDS,
ASTHMA, BRONCHITIS.

Cuts short all attacks of SPASMS, HYSTERIA, and PALPITATION.

The only Palliative in NEURALGIA, TOOTHACHE, GOUT, RHEUMATISM.

Acts like a Charm in DIARRHŒA and DYSENTERY.

Refuse imitations and insist on having
Dr. J. COLLIS BROWNE'S Chlorodyne.
Convincing Medical Testimony with each bottle.
Of all Chemists, 1/1½, 2/9, 4/6.

THOMSON'S Celebrated
VINE PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES
UNRIVALLED FOR ALL PURPOSES
SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE.

ONCE USED. ALWAYS USED. The 'PATTISSON' LAWN BOOTS

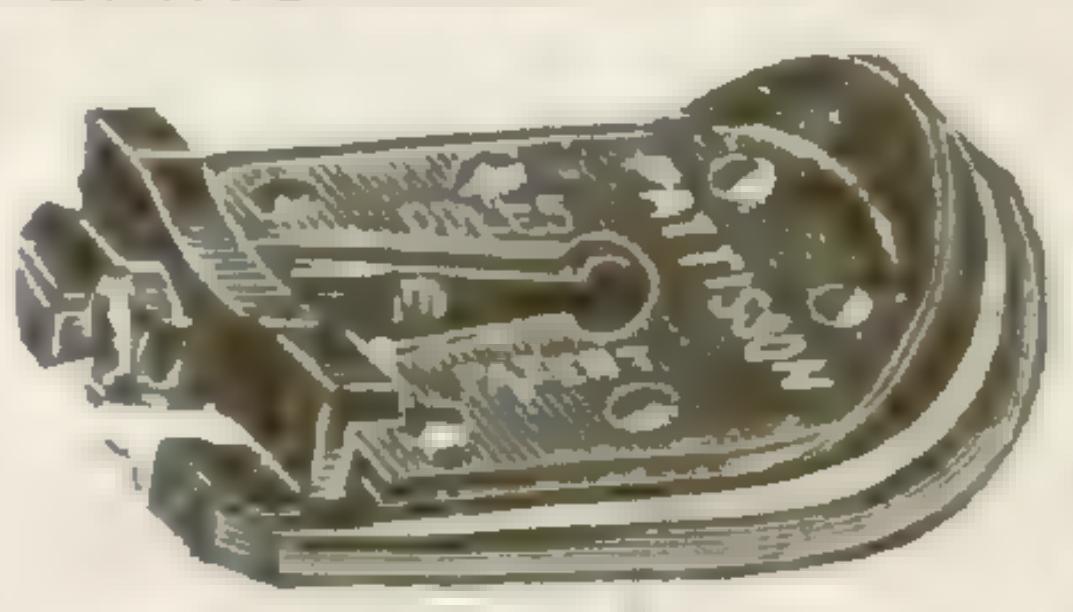


Fig. 1.

Simplest! Strongest! Most Economical!

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS.

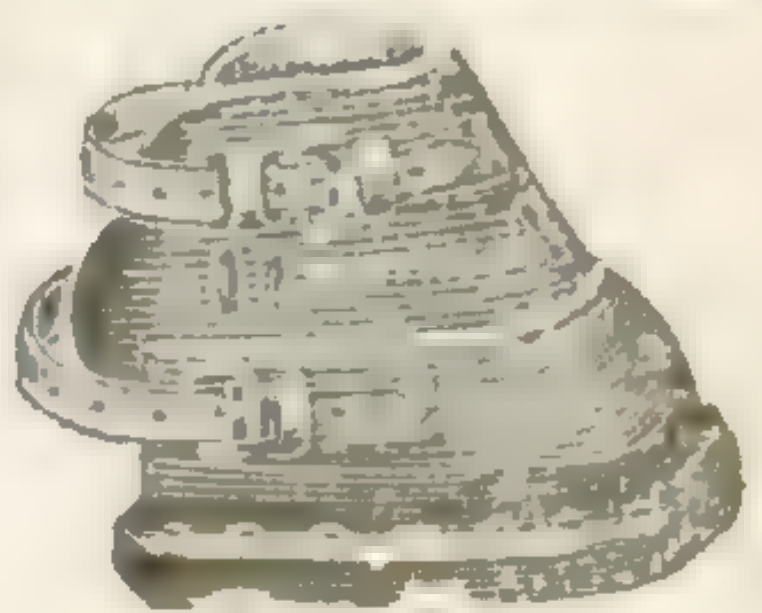
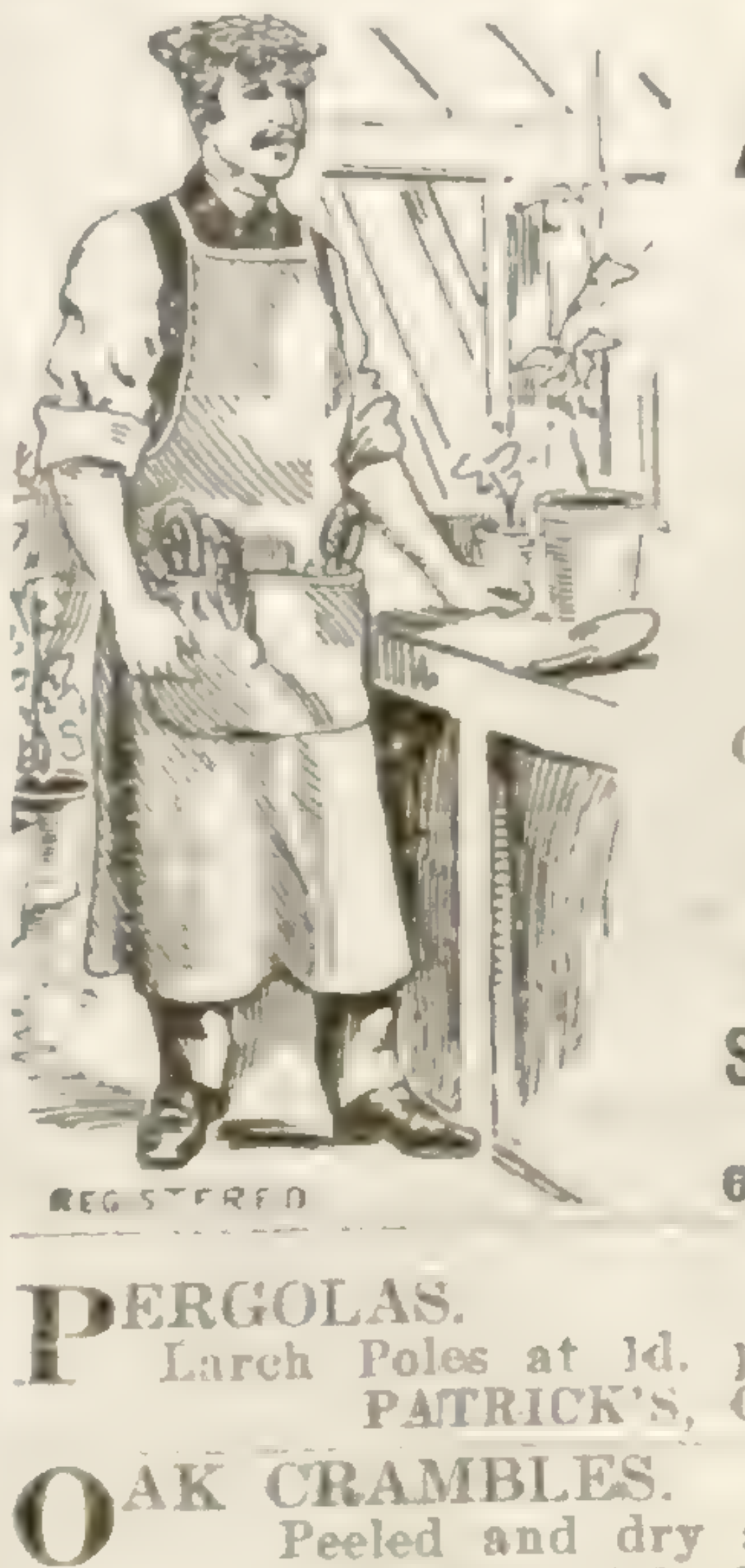


Fig. 2.

Silver Medal—
Royal Horticultural Society.
Hundreds of Testimonials.
The Field says: **"As good as anything that could be devised."**
Illustrated Price List from—
H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM, S.W.



THE
APRON

That has Come to Stay.
WORN BY ALL THE LEADING GARDENERS.
LOOK AT THE PRICE.
In Dark Blue Ponicus Twills,
1/9, Postage 3d. extra.
Or in Dark Blue Ponicus Serge,
3/9, Postage 3d. extra.
Write for One To-Day.
SHAW & MONTGOMERY
(PENMANS),
628, Argyle St., Glasgow, W.

PERGOLAS.
Larch Poles at 1d. per foot. List Free.
PATRICK'S, Otley, Yorks.

OAK CRAMBLES.
Peeled and dry at ½d. per foot.
PATRICK'S, Otley, Yorks.

ROSE ARCHES.
Larch Poles at 1d. per foot.
PATRICK'S, Otley, Yorks.

TREE STAKES AND GARDEN RODS.
Lists free.
PATRICK'S, Otley, Yorks.

SUBSCRIBER'S ORDER FORM

Every Saturday THE GARDENERS' MAGAZINE. Twopence

To W. H. and L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose______ for______ months in advance.

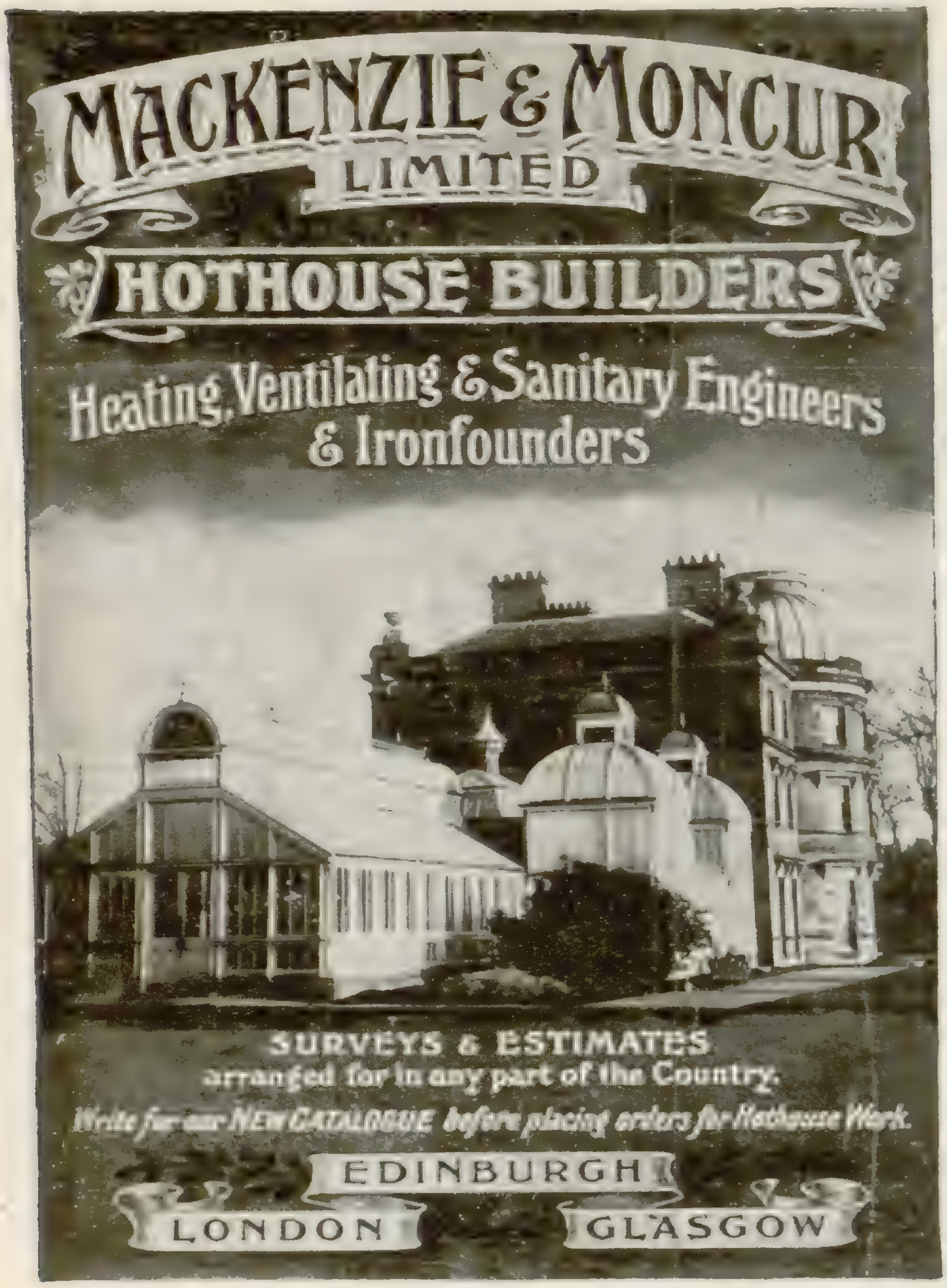
Name________________

Address________________

Date________________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

∴ If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.



MACKENZIE & MONCUR
LIMITED
HOTHOUSE BUILDERS
Heating, Ventilating & Sanitary Engineers
& Ironfounders

SURVEYS & ESTIMATES
arranged for in any part of the Country.
Write for our NEW CATALOGUE before placing orders for Hothouse Work.
EDINBURGH
LONDON GLASGOW

THE BEST BOOK ON THE SUBJECT.

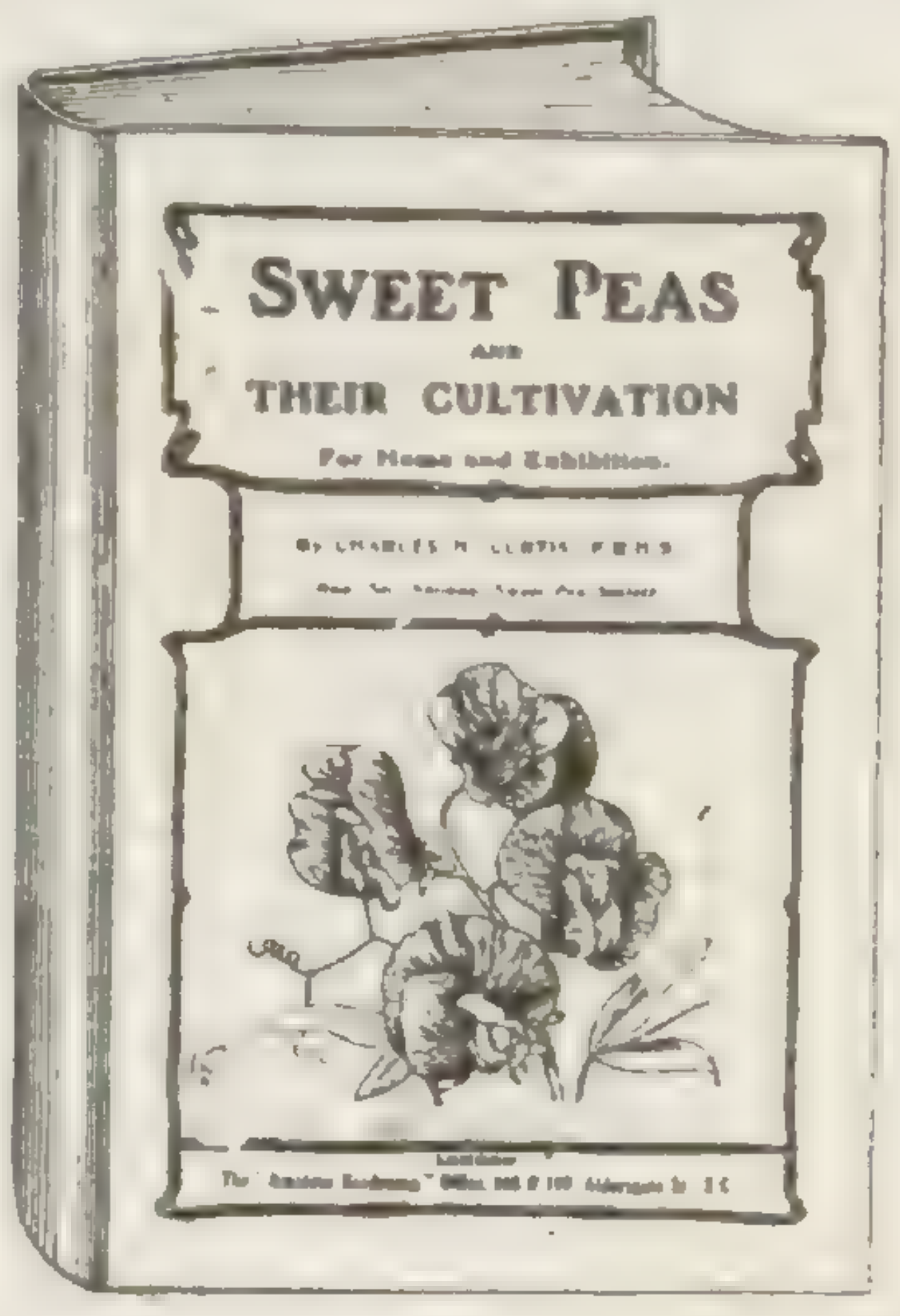
THIRD EDITION. Price **1/-** net, by post **1/2**. Cloth **1/6**, by post **1/8**

SWEET PEAS
AND THEIR
CULTIVATION
FOR HOME AND EXHIBITION.

By
CHAS. H. CURTIS, F.R.H.S.,
Hon. Sec. National Sweet Pea Society.

THE BEST SWEET PEAS.
HOW TO GROW THEM.
MANURING.
WATERING.
STAKING AND TYING.
RAISING NEW VARIETIES.
DISEASES AND INSECT PESTS.
EXHIBITING.
Etc., Etc.

Fully Illustrated.



ORDER FORM.

To the Publishers, "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, LONDON.

Please send me a copy of "SWEET PEAS AND THEIR CULTIVATION" by post, for which I enclose remittance of 1/2 (if bound in cloth, 1/8).

Name ....
Address ....
....

Telegrams: "Hortulanus, London."
Telephone: 5947 Westminster.

J. WEEKS & Co. (CHELSEA),

The First Established Horticultural Building Firm in 1808. Foremost in 1911.

UNDER THE DISTINGUISHED PATRONAGE OF

HIS ROYAL HIGHNESS THE LATE PRINCE CONSORT.
HIS MAJESTY'S BOARD OF WORKS.
THE ADMIRALTY.
HER MOST GRACIOUS MAJESTY THE LATE QUEEN VICTORIA.
THE ROYAL HORTICULTURAL SOCIETY.
THE WAR OFFICE.

CONTRACTS FOR **HORTICULTURAL BUILDINGS AND HEATING** INCLUDE THE FOLLOWING:—

The LORDS OF THE ADMIRALTY, Royal Naval Barracks, Chatham.
Her Grace the COUNTESS of WINCHILSEA, Sleaford Lincolnshire
The Rt. Hon. VISCOUNTESS GOSCHEN Seacox Heath, Hawkhurst, Kent
The Rt. Hon LORD NORTH Wroxton Abbey, Banbury.
The Rt. Hon. LORD HOWARD de WALDEN Audley End Saffron Walden
LADY PHILIPSON STOW Fernhurst Haslemere Surrey.
The Hon. Mrs EGERTON, Mountsbridge Court, Robertsbridge.
The Hon. JOHN WARD, Chilton Lodge, Hungerford
Sir SAMUEL BOULTON, Bart., Copped Hall, Totteridge, Herts.
Sir HY. HARBEN Bart., Warnham Lodge, Horsham
Lieut Colonel LONGSTAFF, Ridgelands, Wimbledon, S.W.
Captain DALGETTY Lockerley Hall Romsey
Captain A. C. THYNNE, Penstowe, Bude, Cornwall.
ROYAL BOTANICAL SOCIETY, Regent's Park, London.
C. S. GORDON CLARK, Esq., Fetcham Park, Leatherhead.
F. J. O MONTAGU Esq., Mundford Hall, Norfolk.
Mrs T DRAKE The Grove White Waltham Berks.
J W BENSON, Esq., Knott Park, Oxshott.
ISAAC LEWIS, Esq., Bedgebury Park, Gowdhurst, Kent.
EXORS of the Late H. P. LESCHALLAS, Highams, Windlesham.
A PARMENTER, Esq Mount Alwyn Arkley, Barnet.
A. KINGSMILL, Esq., The Holt, Harrow Weald.
J. W. STEPHENS, Esq. Cuckoo Hill Pinner.
Mrs. BROCKLEHURST, Sudeley Castle, Gloucestershire.
J CHARRINGTON, Esq., Shenley, Herts
FOSTER MACGEAH, Esq., Hadlow Castle, Tonbridge.
JAMES WILLING, Esq., Rock Hall, Teddington.
W F. H. MELLOR, Esq., Rooklands, Torquay.
Mrs. GOSSETT-HILL, Mill Hill, London, N.W.
J. C. HICKMAN, Esq., Micklefield Green, Rickmansworth.
Mrs G. H PHILIPS, Penybont, Radnorshire.
L. HIRSCH, Esq., Littlecote, Hungerford, Berks.
Miss PINCHIN, Springfield, Snaresbrook.
J. W. PARKES, Esq., Grangemuir, Wimbledon, S.W.
W. G RAPHAEL, Esq., Castle Hill, Englefield Green, Surrey.
Mrs. TEESDALE, Kingsland, Newnham on-Severn.
T. W. HALL, Esq., Woodcroft, Putney, S.W.
H. THELLUSON, Esq., Brodsworth, Doncaster.
Mrs. HARE Oakleigh Edgware, N.W.
L. F. HARRISON, Esq., Orchards, East Grinstead.
E. A. DUFFY, Esq., Middleton Road, Golders Green.
TOWN HALL, Girvan, Scotland.
ST. MARK'S CHURCH, The Boltons, London, S.W.
ST. MARY'S CHURCH, Graham Street, Pimlico.
WITTERSHAM CHURCH Wittersham Kent.
BENEFIELD CHURCH, Oundle, Northants.
BRENTWOOD MOTOR WORKS, Ltd., Brentwood.
QUEEN'S HOSPITAL FOR CHILDREN, Bexhill.
CLUB BUILDING, 60, St. James' Street, S.W.

Patentees of Weeks' Patent "Duplex" Upright Tubular Boilers.

(A number of each size of boiler and parts always kept in stock for replacements).

We spare no effort to uphold our reputation for first-class work only, at lowest prices.

Please Address all Letters to HEAD OFFICE | **72, VICTORIA ST., WESTMINSTER, S.W.**

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls

THE GARDENERS' MAGAZINE.

No. 3,000.
Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, APRIL 29, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

NEW AND RARE FLOWER SEEDS FOR 1911, including a collection of choice Alpines for rockwork, etc. Descriptive List on application.
BARR and SONS, 11, 12, 13, King St., Covent Garden.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, S.W., is now carrying a large stock of BRITISH CLOCHES for FRENCH GARDENING. For particulars see March on the calendar prepared and issued by James Gray. If you have not one of these calendars, write, telephone 201, Western; or wire "Gray, Chelsea, London."

EXHIBITION PANSIES, VIOLAS, CARNATIONS, PHLOXES, and CHRYSANTHEMUMS.—12 Superb fancy Pansies, 3s.; newest and best, 5s. 12 Exhibition Violas, 2s. 6d.; newest and best, 4s. 12 Superb Carnations, 6s.; newest and best, 10s. 12 Yellow or white ground Picotees, 6s.; newest and best, 8s. 12 Superb Phloxes, 4s.; very best, 6s. 12 Early-flowering Chrysanthemums, 2s. 6d.; newest and best, 4s. 12 Best bedding Violas, 2s.; 50 in 10 vars., 4s. 6d.; 100 in 10 or 20 vars., 8s.; all post free, except Carnations in pots, which are car. forward. Lists free. S. PYE, Bowgreave Nursery, Garstang.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.
H. BURNETT,
Carnation Specialist, Guernsey.

PERENNIALS, UNIQUE COLLECTION,
including
ALPINES AND AQUATICS.
Also RARER SHRUBS, HIMALAYAN RHODODENDRONS, and Others.
Write for Catalogue. G. REUTHE, Keston, Kent.

DAHLIAS.
CACTUS, PÆONY, POMPONE, and SHOW, for GARDEN or EXHIBITION.
Prices and Catalogues free on application.

J. T. WEST, Tower Hill, Brentwood.

CONSERVATORIES AND WINTER GARDENS. Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue free.—BOULTON and PAUL, Lim., Norwich.

WEEKS'S DUPLEX UPRIGHT TUBULAR BOILERS. for full advertisement see back page.

BARNARDS LIMITED, Norwich.—Best House for Fencing, Espaliers, Pergolas, Fruit Enclosures, Iron and Wire Bordering; all descriptions of Training Fittings, Arches, Wire Netting, Stakes, Wire Lattice, Rollers, and all garden requisites. Now is the time to effect improvements in your garden. Catalogues free; inquiries invited.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page 333.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

SOW NOW.
WEBBS' SELD. SHIRLEY POPPY.
Mixed. 1s. per packet, post free.

WEBBS' BUTTERCUP ESCHSCHOLTZIA.
Golden-yellow. 1s. per packet, post free.

WEBBS' DOUBLE SALMON CLARKIA.
Salmon. 6d. per packet, post free.

WEBBS' DOUBLE ROSE GODETIA.
Rose. 1s. per packet, post free.

WEBB and SONS, The King's Seedsmen
WORDSLEY, STOURBRIDGE.

BUNYARD'S NEW CATALOGUES.
The following have been recently published, and contain all worthy new varieties. Post free on application.

BUNYARD'S
CLIMBING PLANTS, Illustrated.

BUNYARD'S
HERBACEOUS PLANTS, Illustrated.

BUNYARD'S
HARDY TREES AND SHRUBS, Illustrated.

BUNYARD'S ASPARAGUS LIST.
Plants now ready for delivery.

BUNYARD'S SEEDS, VEGETABLE AND FLOWER, with coloured plates.

GEO. BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.

LAXTON'S FRUIT TREE, STRAWBERRY, SEED, ROSE, HERBACEOUS, TREE, BULB, and SMALL FRUIT CATALOGUES, with full illustrations and descriptions, gratis on application.

LAXTON BROTHERS, Bedford.

PENTSTEMONS and CHRYSANTHEMUMS. Splendid stuff, established in pots; all the finest in cultivation. Catalogues free; also General Catalogue of Rock and Border plants, Ferns, Iris, Delphiniums, etc., etc. PERRY'S HARDY PLANT FARM, Enfield, Middlesex.

18 ALPINE PLANTS, 3s. cash; 50 Alpine plants, 16s. Send for Catalogue (1,000 varieties). Hardy Ferns, named, 100, 10s. "ENGLISH HOME OF ALPINE PLANTS," Hessenford, Cornwall.

CABBAGE PLANTS, extra strong, Ellams, Mein's, Offenham, First and Best, Enfield, Battersea, 3s. 1,000, 12s. 6d. 5,000 lots; Drumheads, 2s. 6d.; Red Cabbage, Cos Lettuce, Tripoli Onion, 4s, 1,000, on rail; or 1s. 100, post free. List free. C. HIGHT, Cranleigh, Surrey.

ORDER MATS NOW!—To prevent disappointment and loss by early frosts, order Norfolk Reed Mats now. 50 per cent. more protective than straw. Made to any size, 1d. per square foot.—BOULTON and PAUL, Lim., Norwich.

CLAY'S MANURES, CRUSHED BONES
(See page iv.)

CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

GARDEN NETTING (best tanned only).—25 yds. x 8yds.; 50 x 4yds.; 100 x 2 yds., 8s. each. 50 x 2 yds.; 25 x 4 yds.; 100 x 1 yd., 4s. each. All sizes, large or small, at 1s. 20 sq. yds. Quality guaranteed.—EVANS, 14 Beresford Rd., Lowestoft.

GARDEN ROLLERS, double cylinders, solid ends, rounded edges 14in. by 14in., 1¾cwts., 24s. 6d.; 16in. by 16in., 2cwts., 26s.; 20in. by 20in., 3cwts., 36s.; 24in. by 24in., 4¼cwts., 50s. each; carriage paid any station in Great Britain. Lists free. J. ATTWOOD, Stourbridge.

SOW NOW.
SUTTON'S PRIZEWINNER RUNNER BEAN. The finest exhibition variety, of superb table quality.
Per pint, 2s.; quart, 3s. 6d.

Mr. John Hudson, Westleigh, writes:—"At Shrewsbury, Leicester, and Leamington, I have this year (1910) won prizes value £30 1s. 6d. for Vegetables, the produce of your seeds. I have tried nearly all other varieties of Runner Bean, but your Prizewinner is ahead of all others for quantity and quality. For exhibition during the last three or four years I have grown no other."

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

KELWAY'S LATEST SUCCESS.
GRAND PRIX AND GOLD MEDAL, Japan-British Exhibition, White City. Unanimous award of the International Jury to Kelway and Son for Pæonies, Delphiniums, Gladioli, Pyrethrums, etc.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

THE LIBERTY of the KELWAY GARDEN versus the Tyranny of the Bedding-out system. Infinite variety: no sameness of treatment.

ABSOLUTE FREEDOM of choice of treatment for your garden or garden borders. See "Gardens of Delight," post free, 6d.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.

TESTIMONIAL.
From ——, Esq., Guildford.

"I may say that your Illustrated Catalogue is without doubt the finest book of the sort I have had the pleasure of seeing."

NOW IS THE TIME TO PLANT KELWAY DELPHINIUMS which have been improved almost out of recognition in the past twenty years. They produce plants ranging in height from four to eight feet, exceptionally hardy and with a rich profusion of choice blooms in all the shades of that valuable colour, blue.

Choice named varieties: 24s., 34s., and 56s. a dozen. Carriage and package free for remittance with order.

The celebrated present-day Delphiniums, and nearly all the best well-known varieties shown at exhibitions, originated in Kelway's Langport Nurseries.

TESTIMONIAL.
From Mrs. ——, Eltham, Kent, 18th April, 1911.

"The Delphiniums and Pyrethrums you sent me three years ago are doing splendidly, and were a joy last summer.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

POULTRY AND KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.

XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.

XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown both poisonous and non-poisonous are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N.S. or Florist for Richards' small pink list.

G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

BEDDING PLANTS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Chrysanthemums, Dahlias and Summer-Bedding Plants.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Border and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS.
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

SAMUEL M'GREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

RHODODENDRONS.

DICKSONS & CO.,
1, Waterloo Place, Edinburgh.
Pink Pearls, Ponticums, choice Hybrids. Write.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

BY APPOINTMENT.

HOLLIES and RHODODENDRONS.

The finest Stock of **HOLLIES** and **RHODODENDRONS** in the London district are growing at the Loughton nursery of WM. PAUL AND SON, Waltham Cross, Ltd.; also **HOLLIES** at their Broxbourne nursery. Samples and named collections can be seen at Waltham Cross.

Priced List free on application.

PAUL'S ROYAL NURSERIES,
Waltham Cross, Herts.

Amaryllis—Hippeastrums

NOW FLOWERING.

INSPECTION RESPECTFULLY INVITED.

Catalogues, and all particulars, free on application.

ROBT. P. KER & SONS,
AIGBURTH NURSERY, LIVERPOOL.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

AMERICAN TREE CARNATIONS

The Newest and Best Varieties.

Strong, healthy and well-rooted plants only supplied

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

RHODODENDRONS.

We specialise in these most beautiful of Flowering Shrubs.

Immense and superior stocks of choice named varieties, including "Pink Pearls," and also Ponticums for covert planting.

Lists on application.

DICKSONS & CO.,
THE KING'S NURSERYMEN,
1, WATERLOO PLACE, EDINBURGH.

By Appointment to H.M. The King.

1911 FORBES'

Illustrated Plant Catalogue **Nearly 200 Pages.**

GOLD MEDAL SPECIALITIES.

Contains carefully revised **Descriptions, Colour, Height, Time of Flowering, British or Common Names, Prices,** etc., of the **Grandest Collections of ASTERS, BEGONIAS, CALADIUMS, CARNATIONS, DAHLIAS, DELPHINIUMS, PÆONIES, PANSIES, VIOLAS, PELARGONIUMS, PENTSTEMONS, PHLOXES, PYRETHRUMS, HARDY BORDER PLANTS,** carefully-prepared **PLAN** for arranging **HARDY PLANT BORDERS,** etc.

Experts unanimously accord **FORBES' CATALOGUE** the unique distinction of being the **best** and most **reliable** up-to-date **Reference Book** extant.

FREE ON APPLICATION.

JOHN FORBES (HAWICK), LIMITED.
(Dept. I), The King's Nurserymen, **HAWICK, Scotland.**

BUDS AND FRUIT SAVED. — GARDEN NETTING, Rotless and Tanned, small mesh, superior quality. Satisfaction guaranteed or money returned. 100 by 1yd., 3s. 9d.; any length and width supplied. LAWN MOWERS, 5 blades, UNEQUALLED VALUE, 13s. 6d. Wheelbarrows, 16s. — POTTER BROS., Dept. M., Frankwell Works, Shrewsbury.

TANKS! TANKS!! TANKS!!!

Now is the time to buy cheap Tanks. We have several hundreds for sale, which have come off ships we have broken up. All capacities from 25 gallons. List free on application. THOS. W. WARD, LIMITED, Sheffield.

HAILSTORMS.

REDUCTION in PREMIUMS

From 25th March, 1911, Premiums will be subject to a BONUS of 15%.

Numerous claims paid, one amounting to £886 1s. 0d.

ARE YOU INSURED?

Apply for particulars—

The Nurserymen's Hailstorm Insurance Corporation, Lim.,

41 & 42, KING ST., COVENT GARDEN, W.C.

HARRY J. VEITCH, Chairman.
ALEX. JAMES MONRO, Secretary.

REGISTERED

THE

APRON

That has Come to Stay.

WORN BY ALL THE LEADING GARDENERS.

LOOK AT THE PRICE.

In Dark Blue Ponicus Twills,

1/9, Postage **3d.** extra.

Or in Dark Blue Ponicus Serge,

3/9, Postage **3d.** extra.

WRITE FOR ONE TO-DAY.

SHAW & MONTGOMERY
(PENMAN'S),
628, Argyle St., Glasgow, W.

ELLISON'S BEGONIAS are absolutely the best strain; 30 Begonias, all different and named, 10s. 6d.; Bedding Begonias, 9s., 12s., 15s. 100.

GERBERA, Adnets Hybrids, for which I was awarded Silver-gilt Medal R.H.S. March 14th. Seed, 1s. 6d.; Plants, 10s., 15s. doz. ELLISON.

LILIUMS.—24 choice Liliums, all different, 10s. 6d.; Gloxinias, 6, different, 2s.; Cannas, 10, do., 4s.; 100 German Iris, 10 sorts, 4s. ELLISON.

1,000,000 BEGONIAS, Single, 1s. 6d. to 7s. 6d.; Dble., 2s. to 15s. doz.; Tuberoses, Arum Lilies, 1s. doz.

LARGE FLOWERING GLADIOLI, 3s., 5s. 100; Amaryllis, 10s., 15s., 20s. doz.; Gladioli, early, 1s. 100. ELLISON, 57, West Bromwich.

CARNATIONS, PINKS, AURICULAS.

DOUGLAS for the best old and new varieties in all classes, and the finest quality in the world. Malmaison Carnations, new and old, 7/6 per dozen. Border, 6/- to 12/- per dozen. Tree, American, and English, 7/6 to 15/- per dozen. Auriculas, Show, 21/- to 30/- per dozen. Alpine Auriculas, 9/- to 21/- per dozen. Carnation, Auricula, Pink, and Polyanthus seed, 1/6 and 2/6 per packet. **CATALOGUE FREE.**

J. DOUGLAS, Bookham, LEATHERHEAD.

Sales by Auction.

SALES NEXT WEEK.

WEDNESDAY NEXT, May 3rd, at Twelve o'clock.—Japanese and other Lilies, Hardy Bulbs in variety, large quantities of choice Herbaceous and Border Plants, Leaf-mould, Peat, Fibre, etc.

At Four o'clock. — 100 lots of choice Ornamental Palms, Standard Bays, Dracænas, and other Decorative Plants, Stove and Greenhouse Plants, Pot Roses, etc.

FRIDAY NEXT, May 5th, at a Quarter to One o'clock.—A magnificent Importation of Cattleya Aurea in fine condition, together with other imported Orchids, a large quantity of Established Orchids in variety, Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, London, E.C. On view morning of sale, and catalogues had.

FOR SALE, IN GUERNSEY.—A compact little BULB-GROWING ESTATE of about 4 acres, splendidly situated on the south coast of the island, and well stocked with the best forcing varieties of daffodils, etc.; also a small Orchard of Apple and Pear Trees in bearing. The property contains glasshouse 150 x 18 heated, large shed, pumping mill, and an unlimited supply of water. Write Box 154. c/o Messrs. R. F. White and Son, General Advertising Agents, 33, Fleet Street, London, E.C.

COMPACT FREEHOLD NURSERY FOR SALE, comprising six-roomed House, Bath-room, Kitchen and Scullery, 13 GREENHOUSES, 120 FEET LONG each, all heated by four Horizontal, Tubular Boilers; about 3½ acres of land, more or less, with stabling, and various sheds. Apply W. C. VIRGO, Moat House, Welling, Kent.

TO BE LET, or SOLD, NURSERYMAN'S and FLORIST'S BUSINESS.—A genuine Business for Disposal, in a flourishing town in North-East Kent. Long frontage to road, and comprises Eight Greenhouses, all heated by hot-water pipes, and row of forcing frames. This is an old-established business, and the present tenant has been in occupation for many years. The premises may be purchased at a low price. Splendid opportunity for a young energetic man with a small capital. For full particulars apply to P. H. S., c/o "Gardeners' Magazine," 148-9, Aldersgate Street, London, E.C.

CHRYSANTHEMUMS Unlimited Quantity.
All up to date varieties. List Free.

CARNATIONS Fully 80,000 yet to offer.
Prices very Low. List Free.

MICHAELMAS DAISIES Perfect Collection List Free.

PANSIES AND VIOLAS Fully 600.000 Violas offered this Season. List Free.

WM. SYDENHAM, MELBOURNE DERBYSHIRE.

POLYANTHUS, dbl., old Tortoiseshell, 6, 2s. 3d.; do., dbl. A. Dunrolin, 6, 1s. 9d.; Primroses dbl. yellow, 6, 1s. 6d.; Auricula, dbl. yellow, rare, 3, 1s. 9d.; Delphinium nudicaule, bright scarlet, dwarf, 6, 1s. 3d.; Pyrethrums, dbl., 6 fine varieties, 2 of each, 1s. 9d., all free, flowering plants. WM. MUNRO, Riverdale, Crathes, Aberdeen.

AMERICAN PERPETUAL CARNATIONS.—Everyone interested in PERPETUALS should write for our 1911 Illustrated Catalogue. FREE. Read our "TREATISE ON CULTURE," 1s., post free. YOUNG and CO., Carnation Specialists, HATHERLEY, CHELTENHAM.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

PRIMROSES, double, Rose, Ruby, Grey, Violet, Yellow, Lilac, White. HEPATICAS, White, Blue. Large FRENCH DAISIES. AURICULAS, various. List free.
MISS PALMER, Dromahair.

AMERICAN TREE CARNATIONS.—Best varieties, strong bushy plants, in 3in. pots, 5s. 6d. doz., 40s. per 100; flowering plants, in 5in. pots, 8s. doz. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

ZONAL PELARGONIUMS.
Catalogue of New and Choicest Varieties.

From V. SLADE, Zonal Specialist,
Staplegrove Nursery, Taunton.

LOVELY DOUBLE MAUVE and DOUBLE WHITE ROCKETS, three plants, 2s. Mrs. M. KILMER, Hill of Down, Co. Meath.

20,000 YARDS WIRE NETTING TO BE SOLD CHEAP. Send for lists. Carriage paid on lots of 20s.
DOUTHWAITE'S CITY WIRE WORKS,
116, Vicar Lane, Leeds.

ORCHID PEAT.—Hardwood Brown Fibrous, RHODODENDRON and DUST PEAT, SPHAGNUM MOSS.
Apply C. HALL, 1, Worgret, Wareham, Dorset.

RHODODENRONS,

RHODODENRONS are a special feature, being grown by hundreds of thousands in these Nurseries, they can be supplied either from loam or peat, in healthy, bushy plants, growing at an elevation of **1,100 feet above the level of the sea**. The major portion consists of "**Ponticums**" and "**Hybrids**" mixed, suitable for planting as **Game Cover** or Ornamental purposes, and are offered at

EXCEPTIONALLY CHEAP RATES.

Special mention may be made of the large quantities of Early Blooming named varieties in stock, fine bushy healthy plants including the following well-known kinds, at

SPECIAL CHEAP CLEARANCE PRICES.

Alba Splendens (pink), **Caucasicum Album** (Cunningham's white), **Jacksonii** (early scarlet), **Snowball** (early white).

The **Hardiness** and **Quality of Stock** cannot be excelled—intending planters should therefore pay a visit to this **Old Established Firm** before **ordering** elsewhere.

CATALOGUE FREE BY POST on application to

JAMES SMITH & SONS,
DARLEY DALE NURSERIES,
Near MATLOCK.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.
Our Work has stood the test of time.

TWO GRAND

BEDDING GERANIUMS.

(1) SALMON SPORT FROM PAUL CRAMPEL.

Flowers profusely all the year. Its colour is distinct and fascinating. It should, like its parent, be grown everywhere, winter and summer.

(2) MAXIME KOVALESKY.

Awarded a "First Class Certificate." It has a high tone of Indian Yellow, and gives strong hopes of a real yellow in the near future.

No one who loves the Garden will be without these two charming varieties.

3/6 the two, post free.

H. CANNELL & SONS (Dept. C),
SWANLEY, KENT.

Don't forget to ask for our "Floral Guide."

CARNATIONS! CARNATIONS!!

For Immediate Planting.

As I am the possessor of the finest Collections of these flowers extant of all classes, I am in a position to treat intending planters on the most favourable terms.

1 Doz. for 6/-, 7/-, 8/-, or 10/-, free for cash with order.

CATALOGUE FREE.

CHARLES BLICK, Warren Nurseries, HAYES, KENT.

A Very Cheap Offer of Apple and Pear Trees to suit Small Holders and Cottage Gardeners.

Apples, our selection, Standards, 12s.; purchaser's selection, 14s. per doz. Half Standards, 8s.; purchaser's selection, 9s. per doz. Double grafted two years, 6s.; purchaser's selection, 7s. per doz. Pear Trees at similar prices. Currants, red, at 2s. 6d. per dozen. Gooseberries, assorted at 3s. per dozen. Also an extensive stock of ornamental trees, flowering shrubs, rock plants, etc. Catalogues free.

THE STANCLIFFE ESTATES CO., LTD.,
Darley Dale Derbyshire.

PRIMULA OBCONICA GIGANTEA GRANDIFLORA.

The most beautiful Free and Hardy Perpetual Greenhouse Plant grown.

ONCE IN FLOWER ALWAYS IN FLOWER.

We are NOTED for having the most — SUPERB Strain in commerce. —

SEED.

Mixed colours, also Compacta and Fimbriata, mixed, 1s. per packet; separate colours of Purple, Rose, Lilac, Deep Red, Crimson Scarlet, Pale Lilac, and Crimson (fringed petals), **2s. per packet; double flowering, including Pale Mauve and Rose, 2s. per packet. Instructions as to sowing with each packet.**

PLANTS, 3s., 5s., 7s. 6d., 10s. 6d., and 15s. per doz., according to size.

W. A., Esq., Reigate, Surrey, writes:—

I had a packet of seed from you last year, and am pleased to inform you that I have blooms measuring two inches and more across each individual flower. They are the best strain I have ever seen, both for variety of colours, and substance of bloom.

WM. ARTINDALE & SON,
Nether Green Nursery,
SHEFFIELD.

For 3 penny stamps we will send you our Catalogue of Plants, which is not merely a price list, but literature which gives all the cultural notes of plants therein mentioned. We have received hundreds of testimonials commenting on the value of this book.

OUR SEED CATALOGUE WILL BE SENT FREE ON APPLICATION.

BY APPOINTMENT.

ROSES IN POTS.

WM. PAUL & SON, WALTHAM CROSS, LTD.,

beg to offer a magnificent stock of DWARFS and RAMBLERS for present Planting and for Greenhouse Culture.

In 5-in. pots **10s. 6d.** to **18s.** per dozen, **75s.** to **120s.** per 100; extra strong in 8-in. pots **24s.** to **60s.** per dozen. Also a fine collection of New Roses.

Catalogue on application.

PAUL'S ROYAL NURSERIES,
Waltham Cross. HERTS.

WATER CATALOGUE NOW READY
PERRY, ENFIELD. MIDDX.

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS**, and an endless variety of Choice **ORCHIDS**.

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

Rhododendrons.

Crimson, White, Pink. 250 Choice Named Varieties, fine foliage, well budded, for potting or planting. 1 to 1½ ft., 1½ to 2 ft., 2 to 2½ ft., 2½ to 3 ft., 3 to 4 ft., 4 to 5 ft., 5 to 6 ft., 6 to 7 ft. List of sorts and prices on application; many thousands to offer. Standards in all sizes.

All Home-grown. Inspection Invited.

F. STREET, Heatherside Nurseries, CAMBERLEY.

GLASS. | GLASS. | GLASS.

NICHOLLS & CLARKE, LTD.,
Shoreditch, LONDON.

PAINT. Our List of PAINTS, COLOURS, VARNISHES and BRUSHES on Application.
When sending please cut out this advt.

EVERY FLOWER IN THE GARDEN WILL GRATEFULLY RESPOND
To the Use of

CLAY'S FERTILIZER

IT IS

THE PLANT FOOD OF RENOWN.

CLAY'S * LONDON * FERTILIZER
TRADE MARK.

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK, AS AT SIDE.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. Fourth Edition (Second Reprint). 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Stratford, London, E.

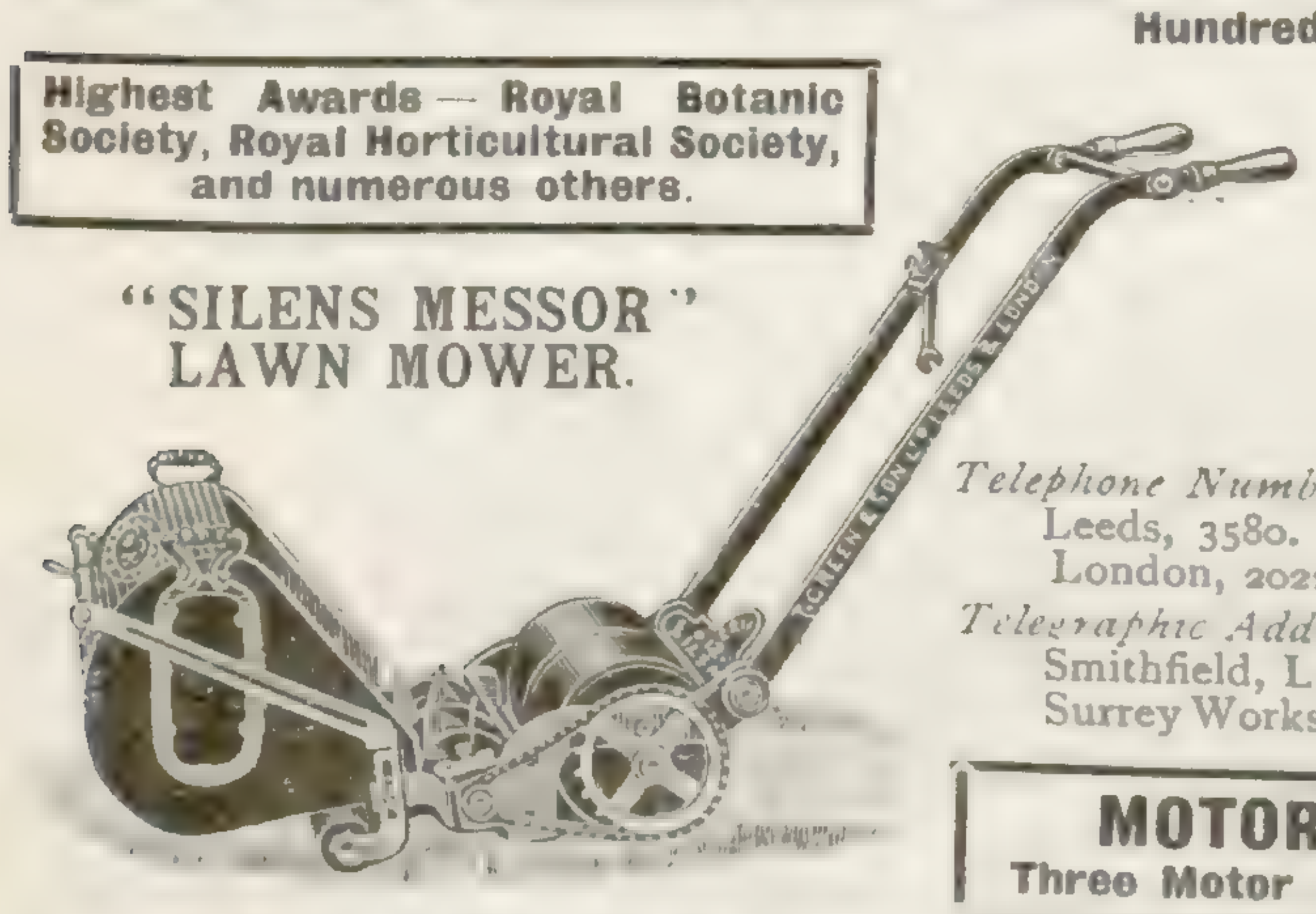
APPOINTED BY ROYAL WARRANT, HORTICULTURAL MACHINE MAKERS TO HIS MAJESTY KING GEORGE V.

GREEN'S LAWN MOWERS ARE UNEQUALLED.

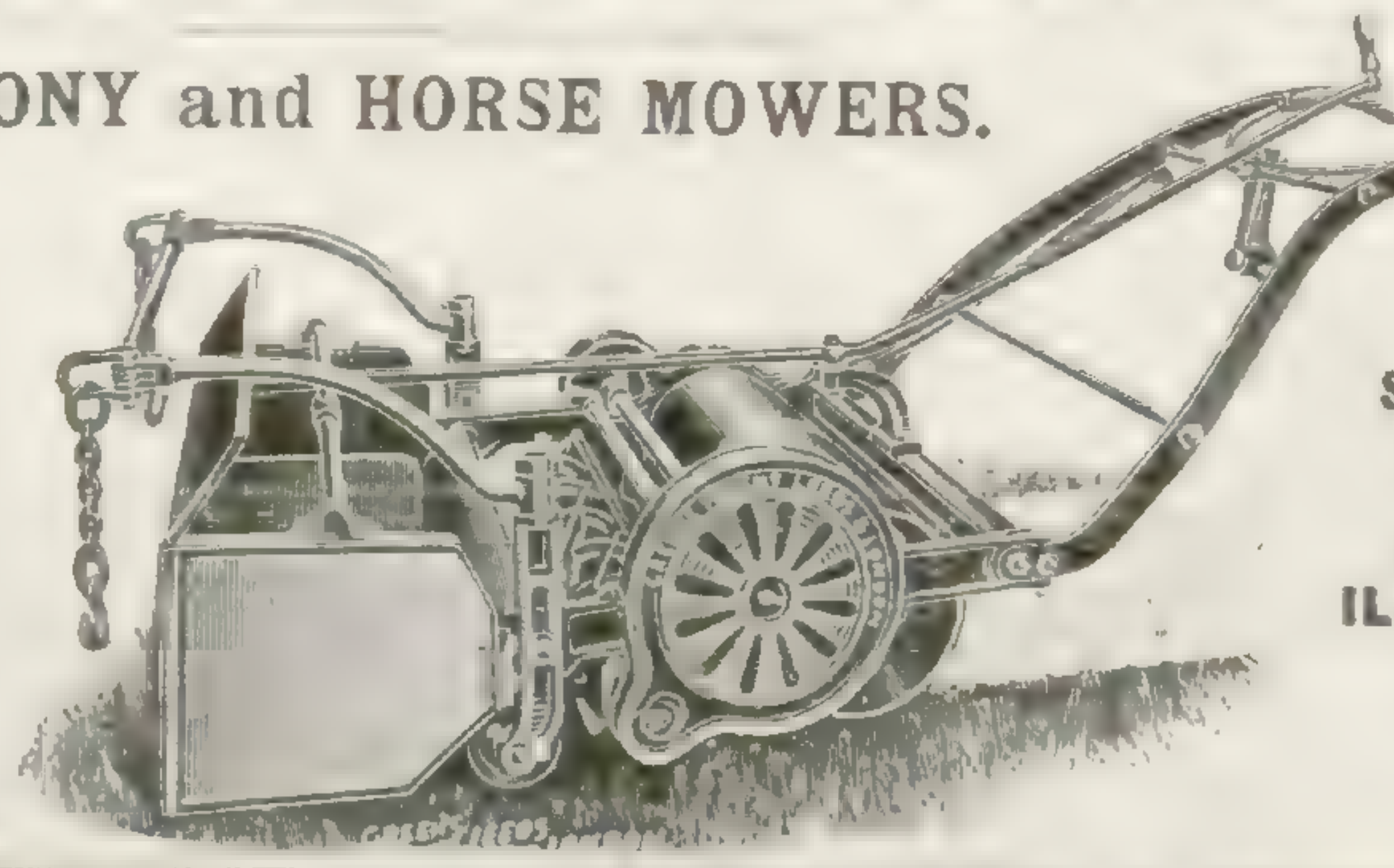
Hundreds of Thousands are in use. Established nearly a Century.

Highest Awards — Royal Botanic Society, Royal Horticultural Society, and numerous others.

"SILENS MESSOR" LAWN MOWER.



PONY and HORSE MOWERS.

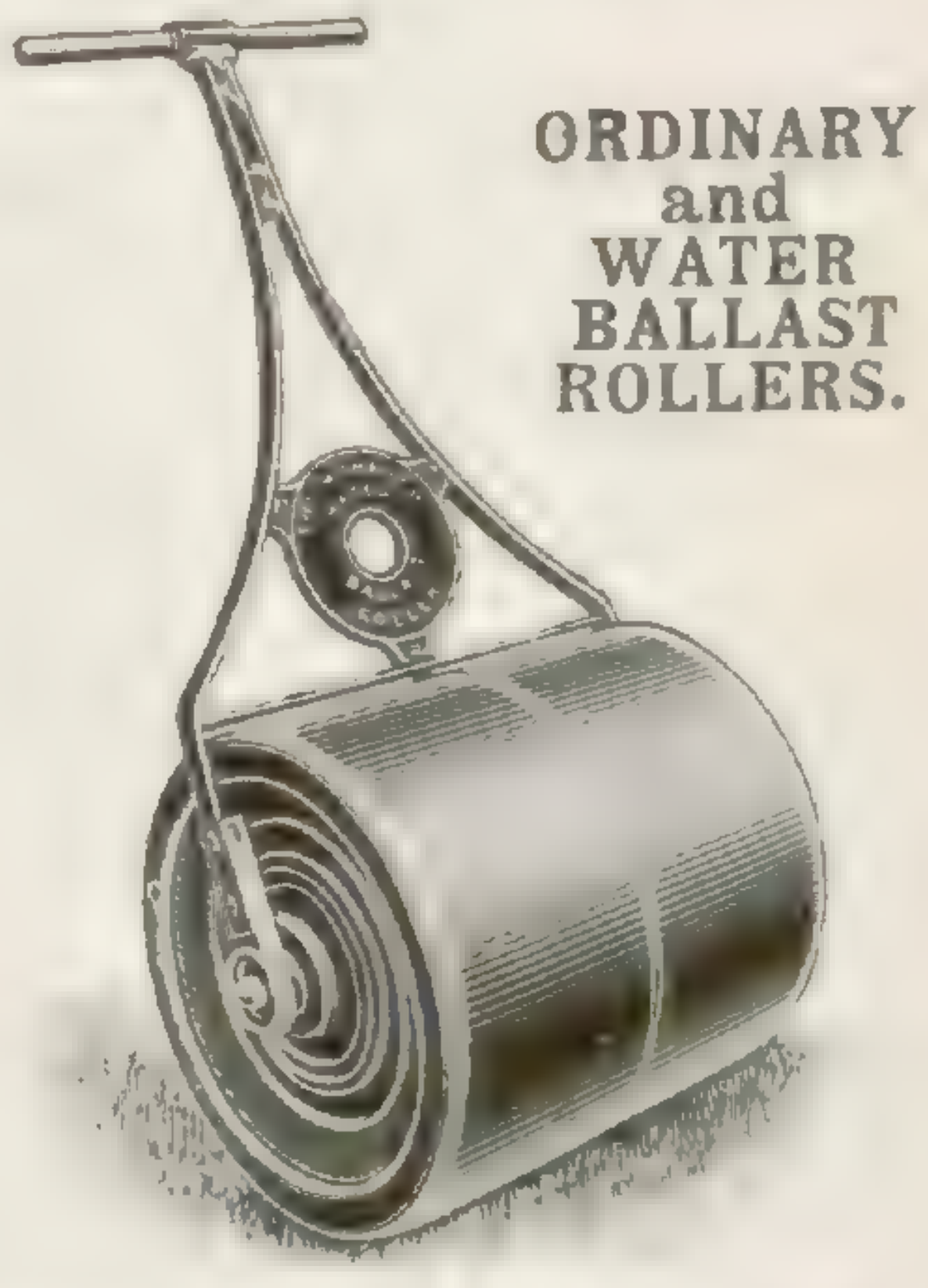


Telephone Numbers—
Leeds, 3580.
London, 2022 Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London

Supplied by all Ironmongers.

Please write for ILLUSTRATED PRICE LIST No. 1 FREE.

ORDINARY and WATER BALLAST ROLLERS.



MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E.

SPECIAL CHEAP OFFER TO CLEAR!

HOLLIES HODGINSII and others.

2-3 ft.	30/- doz.	200/- 100
3-4 ft.	42/- ,,	300/- ,,
4-5 ft.	72/- ,,	500/- ,,

RHODODENDRON PONTICUM.

1½-2 ft. ...	5/- doz.	32/6 100	275/- 1000
2-2½ ft.	10/6 ,,	40/- ,,	350/- ,,
2½-3 ft.	17/6 ,,	55/- ,,	500/- ,,
3-3½ ft. ...	21/- ,,	75/- ,,	700/- ,,

CLIMBING ROSES. Extra Strong, in 8 in. pots, with shoots 5-8 ft. long, for planting out now.

Also **BUSH ROSES** in 7 in. pots for filling up at **2/6** each, **24/-** doz.

New List of Bedding Plants and Dahlias post free on application.

DICKSONS ROYAL NURSERIES, **CHESTER.**

ORCHIDS, ORCHIDS.

Clean, healthy, well grown Plants at reasonable prices. Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

Please Write for List.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

NOTICE.

The AZALEAS and RHODODENDRONS planted in Hyde Park, near Rotten Row, finest to be seen in London, are supplied by **ANTHONY WATERER**, whose only address is **Knap Hill Nursery, Woking, Surrey.**

No connection with any other firm of similar name

PERPETUAL FLOWERING CARNATIONS: Britannia, Rose Doree, White Perfection, Black Chief, Fortuna, Mrs. Burnett etc. [illegible] per doz.; strong plants; post free. Ask list C. F. A. VAN DER SLUYS, F.R.H.S., [illegible], Guernsey.

BUNYARD'S FRUIT TREES

The Best Quality and Largest Selection at Moderate Prices.

WRITE FOR CATALOGUE.

GEO. BUNYARD & CO., LTD.,
Royal Nurseries,
MAIDSTONE.

PAUL & SON'S HOLLIES.

GROWN AT THEIR HIGH BEECH NURSERY.

Probably the Finest Collection of Varieties in Europe, including all Novelties, such as WILSONI, MUNDAYANUM, SPINOSISSIMA, GOLDEN KING & MADAME BREON.

COMMON GREEN For Hedges.
2 ft. to 2½ ft. to 7 ft. to 8 ft.

BROAD LEAVED GREEN VARIETY.
3 to 4½ ft. to 5 to 6 ft. 3 ft. in diameter.

GOLD HOLLIES with Leads.
GOLD QUEEN, SCOTCH GOLD and MADAME BREON.

BEST SILVERS and SILVER QUEEN
HANDSWORTH SILVER.

HOLLIES IN COLLECTIONS OF 25 VARIETIES,
18/-, 24/-, 30/-, 42/- PER DOZ

PAUL & SON,
THE OLD NURSERIES,
CHESHUNT.

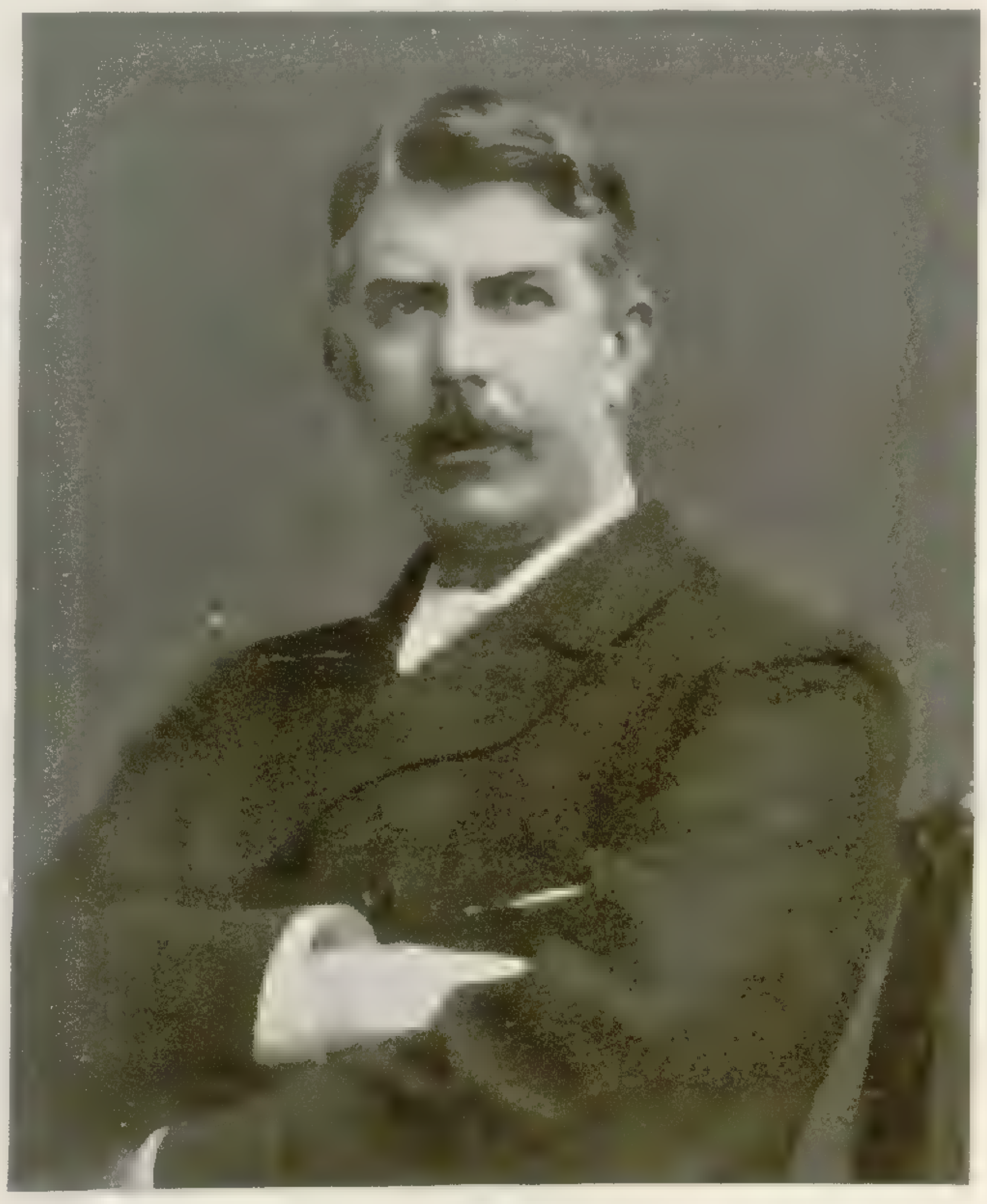
VOL. LIV.—No. 3,000. SATURDAY, APRIL 29, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Evergreen Trees and Shrubs.

Fully appreciating the usefulness of trees and shrubs with persistent leafage as aids in enhancing the interest and attractions of all classes of gardens, we have considered it advisable in the interest of our readers to devote considerable space in the present issue to some of the more important kinds. We have selected the present date for calling prominent attention to evergreens for two reasons. One is the hope that as we have just entered on the season in which many of them can be planted with the assurance of successful results, we may be able to render our readers assistance of great practical value. The other is a desire to interest them in this section of ornamental trees and shrubs, and thereby induce them to study the various kinds during the next six months, when outdoor study can be carried on under the most pleasant conditions. If this important group of ligneous and arborescent vegetation is studied systematically, and with some degree of persistence, it will soon be recognised that it contains a much greater diversity in form and colour than is commonly supposed to be the case, and that a thorough acquaintance with the most distinct and beautiful kinds should be regarded as an essential part of the education of those who are concerned with garden management. Much improvement in this direction has been made within recent years, but something more has to be accomplished before we can hope to see an adequate representation of the finer kinds in the majority of gardens, and some reduction in the number of aucubas and common laurels which have for so long a period enjoyed a high degree of popularity. Happily, there has of late years been a considerable reduction in the numbers annually planted of the two last-named classes, excepting, it may be, in gardens planted by builders who are anxious to give the environment of the houses they have erected a furnished appearance at the smallest possible cost. We have no wish to exalt the evergreens at the expense of the trees and shrubs of deciduous habit, and, so far from doing this, we would direct special attention to the necessity for maintaining a proper balance between the two classes. Trees and shrubs that wholly shed their leaves annually are, generally speaking, much lighter, and more elegant in appearance than are the evergreens, and their leaves undergo several changes in the process of growth and decay. First, there is the tender green of the young leaves, which constitutes so great a charm of the landscape in spring; this passes into the sombre green of the fully developed leaves in the summer; and this, when the breath of autumn has passed over the land, is replaced with soft browns, or, it may be, colouring of the most resplendent character. Having completed their allotted functions the leaves return to Mother Earth and leave the trees and shrubs bare. It is then that the value of evergreens as aids in the adornment of the garden is brought into special prominence. There will, however, be no difficulty in recognising their utility at all seasons of the year, provided the selection has been judiciously made. Handsome objects in themselves, they present a striking contrast to the deciduous kinds, and serve to accentuate the charms of their distinctive characteristics. An essential point is to avoid planting too liberally such kinds as, like the evergreen oaks, have very dark foliage, especially in gardens of comparatively small size. There is no occasion for planting dark-hued subjects other than in small proportions, for there is a wide range of subjects from which to select. Hollies should, as a matter of course, be well represented, and although the leaves of some of the finest forms are of a dark green hue, their glossy surface lights them up in a marked manner, except, it may be, on a very dull winter's day. There are, of course, a considerable number of hollies with silvery and golden variegation, and these should be planted freely, for the colouring, while in some cases decidedly rich, is less aggressive than the foliage of some other shrubs, and is in no way trying to the eyes in the brightest of summer weather. There are many other variegated evergreens of much beauty, as will be seen on reference to the article devoted to them which appears on another page. All that are enumerated are fully deserving of attention, and we would strongly recommend the more general planting of the fine golden form of Elæagnus pungens, of which an illustration is given in association with the article referred to. Evergreens, as in the case of other plants, differ considerably in hardiness, and the kinds that are considered rather tender should not be planted largely until it has been found by practical test, or from observations made in other gardens in the district, that they may be planted with the assurance of successful results. The reputed tender shrubs should not, as is often the case, be left severely alone, because the result of this policy is a reduction in the attractions of the garden. The evergreen magnolia is a case in point. It is very seldom that a plant away from a wall is met with, yet at Kew there is a splendidly developed bush twenty feet or so in height, and what will thrive in the Royal Gardens will succeed over a wide area in England. There is one class of evergreens that should certainly be more largely planted in gardens than has yet been the case, and that is the one formed by the hybrid rhododendrons. If varieties having a good habit are selected their rich green leaves will render them more or less attractive throughout the year, and during their season of flowering will produce colour effects that are quite unequalled by those of any other group of plants that can be grown out of doors in British gardens. Higher praise could not well be given, and those who act upon our advice and devote a larger area to these shrubs will, in a few years hence, have good cause for being satisfied with the results.



MR. WILFRED MARK WEBB, F.L.S.,
Secretary of the Selborne Society.

Mr. Wilfred Mark Webb, F.L.S., whose portrait we have the pleasure of giving in this issue, has from an early period in his life devoted much attention to nature study, and by means of his activities in various directions, and the books he has written on the subject has rendered splendid service in promoting the study of natural history on scientific lines. Mr. Webb, who is the editor of "Knowledge" and "The Country Home," spent many years in teaching botany and horticulture, and from 1893 to 1898 was the senior assistant lecturer on biology for the Essex County Council, and later he was seven or eight years lecturer on biology and nature study for the Surrey County Council, and in both of these positions did excellent work. Appreciating the needs of students Mr. Webb has written a book on "The Principles of Horticulture," which, at the time of its publication, we had the pleasure of reviewing in these pages. From the first he has taken an active part in promoting the nature study movement, and as one result of the remarkable ability shown in connection therewith he was some years since elected to the important position of honorary secretary of the Selborne Society, which has accomplished such excellent work in connection with natural history; and he is also chairman of the Brent Valley Bird Sanctuary Committee. In connection with the second of the two offices Mr. Webb gave a lecture on the Brent Valley Bird Sanctuary at the recent meeting of the Horticultural Club, and this, as our report will have shown, was highly appreciated by the members. It is interesting in this brief note on Mr. Webb's work in connection with the promotion of the study of natural history, to recall the fact that he was secretary of the first Nature Study Exhibition, and of the first Country in Town Exhibition, and to mention that he is a member of the Rural Education Committee of the County Councils Association, and of the Organising Committee of Section D (Zoology) of the British Association. Among the books written by Mr. Webb, in addition to the one already mentioned, is a monograph of "The British Woodlice" and the "Eton Nature Study," and "Eton Nature Study Note Book."

The Horticultural Charities.—We wish to draw the attention of our readers to the annual festival meeting of both the Royal Gardeners' Orphan Fund and the Gardeners' Royal Benevolent Institution, which are to be held in the month of May. These functions are somewhat earlier than usual, owing to the forthcoming Coronation festivities, and we would urge that the claims of these two most deserving horticultural charities be well considered in a year like the present, when money will be freely spent, and the needs of the orphans and the helpless aged members of our craft may possibly be overlooked. Mr. N. N. Sherwood, V.M.H., a most generous supporter of all good works, will be the genial president of the Orphan Fund Dinner, which is to be held at 7 o'clock on Thursday, May 4, at the Hotel Cecil, Strand, W.C. Sir Marcus Samuel, Bart., so well known in financial and horticultural circles, will take the chair at the dinner of the Gardeners' Royal Benevolent Institution, to be held in the beautiful and famous Grocers' Hall, in the City of London, at 7 o'clock, on Tuesday, May 23, the evening of the first day of the Temple Show.

Spring Flowers at Belvoir Castle.—The high reputation which the gardens of Belvoir Castle have so long enjoyed for the extent and beauty of the displays of spring flowers is fully maintained this season. It would probably be more exact to say that it has been enhanced by the wealth of flowers that now form a series of effects of surpassing beauty. The plants of all kinds have come remarkably well through the winter, and they are now at their best; should the weather be favourable they will remain in good condition for several weeks hence. The Duchess's garden is open to the public every week day, and the large number of visitors during the past fortnight show that the generosity of the Duke of Rutland is fully appreciated. Mr. W. H. Divers, the chief of the Belvoir Castle gardens, may be heartily congratulated on the success he has achieved in the production of this season's display of spring flowers.

The Late Monsieur B. Latour-Marliac.—Mr. James Hudson, V.M.H., whose interest in water lilies is so well-known, writes with reference to the late M. B. Latour-Marliac: "The death of this distinguished hybridist, whose name will always be associated with the genus Nymphæa, took place a few weeks back, at his home at Temple-sur-Lot, in the province of Lot-et-Garonne, in the South of France. It was in the raising of the many beautiful hybrids of the water lily, that now grace many a lake and pond in this and other countries, that M. Marliac's name came prominently before the horticultural public some 15 years or so back. Our lamented friend had worked with a definite purpose in view, and though often discouraged, yet he persevered until he saw the reward of his many years of patient work. After working for ten years he saw some signs of improvement in colour, but his hopes were dashed to the ground by the loss of this seedling. Still he went on until he secured the now well-known hybrids that were first distributed by him. Since that time many more have been raised and put into commerce by his indefatigable labours. In recognition of his work with the nymphæa the Veitch Memorial medal was awarded to him in 1898, but as far back as 1889 he received the 'Premier Prix à l'Exposition Universelle de France.' He left many fine forms behind him that have not yet found their way into commerce; these seedlings will in due time be placed upon the market. The business will now be conducted by his son. His widow survives him, Madame Latour-Marliac having been, and still is, a keen enthusiast in the work. Monsieur B. Latour-Marliac was elected Mayor of Temple-sur-Lot in 1893. He died at the ripe age of 80 years, but his name will live so long as the lovely water lilies that he raised are to be found in cultivation. M. Latour--Marliac was, I would add, an old subscriber to the Gardeners' Magazine."

St. George's Day (April 23) was observed in London and in many of the provincial towns, and roses, which are now abundant in the markets and at the florists' were worn by large numbers of persons. At Windsor, the Queen was presented, on behalf of the Royal Society of St. George, with a basket of roses. The varieties were the bright red Richmond and the snow white Frau Karl Druschki, and the blooms, of which there were one hundred of each variety, were arranged in a large white enamelled basket, ornamented with white and red ribbons. Upon the red ribbon was inscribed in white, "To England's Queen on England's Day," and on the white ribbon was the inscription, "With the love, homage, and devotion of the members of the Royal Society of St. George and branches." As the roses were presented to "England's Queen on England's Day," the society responsible for the presentation does not appear to have been particularly patriotic in selecting American and German roses for filling the basket, when we have so many beautiful roses available that have been raised in the United Kingdom.

Promotion of Forestry in Scotland.—A committee, composed of Sir John Stirling-Maxwell, Bart. (chairman), the Right Hon. Lord Lovat, C.B., K.C.V.O., the Right Hon. R. C. Munro-Ferguson, M.P., Mr. John D. Sutherland, Sir John Fleming, Sir Matthew Wallace, and Mr. R. H. N. Sellar, with Mr. H. Warre Cornish, Dover House, Whitehall, S.W., as secretary, has been appointed by the Secretary for Scotland "To report as to the selection of a suitable location for a demonstration forest area in Scotland; the uses, present and prospective, to which such area may be put (including the use that may be made of it by the various forestry teaching centres in Scotland); the staff and equipment required for successful working; the probable cost; and the most suitable form of management. To report as to any further steps following upon the acquisition of the said area which, in the opinion of the committee, it is desirable should be taken with the view of promoting sylviculture in Scotland, due regard being had to the interests of other rural industries."

Perpetual-flowering Carnations.—Those who are interested in these beautiful and deservedly popular flowers should make note of the fact that the tenth exhibition of the Perpetual-flowering Carnation Society will be held in the gardens of the Royal Botanic Society on May 2 and 3.

Carbon Bisulphide as a Sterilising Agent.—The result of experiments made in the Jodrell Laboratory, Kew, go to show that the use of carbon bisulphide for the purpose of exterminating eelworms and similar parasitic organisms in the soil and roots of pot plants, is attended with very great risk. The carbon bisulphide was poured on to the crocks through the drainage hole in every case; one dram to a forty-eight sized pot proved fatal to worm and plant alike; half a dram defoliated the plants but did not kill them outright. The "Kew Bulletin" points out it would not be wise to attempt the treatment of pot plants in vigorous growth with carbon bisulphide with the object of eradicating eelworm, etc. Fridericia bisetosa, the Oligochaet worm that suggested the experiment, is snow-white, as slender as thread, equal in thickness throughout, and about three-quarters of an inch in length. It occurs in old horse-dung, among rotten leaves, etc., and probably from such sources finds it way into the soil used by gardeners. The treatment of such leaf-soil, etc., with carbon bisulphide some time before it is used would be a wise precaution. The same remark applies to the soil introduced into tomato houses, etc. In dealing with carbon bisulphide it is very important to remember that it is highly inflammable, the heat from a lighted cigarette being sufficient to cause an explosion.

Clandon Park, Guildford.—In our next issue (May 6) we shall give an illustrated account of the beautiful gardens of Clandon Park, near Guildford, the Surrey seat of the Earl of Onslow. These gardens are especially remarkable for the success that has been achieved in the use of hardy flowers.

Fall of a Large Elm Tree at Hampton Court.—One day last week a large elm tree fell with little warning in the wilderness at Hampton Court, and severely injured a Dutch lady and gentleman, and also slightly injured other members of their party. Mr. W. J. Marlow, the superintendent of the Palace Gardens, happened to be near at hand, and rendered assistance to the injured visitors, who were, after treatment at Molesey Cottage Hospital, conveyed to Kingston Infirmary. This is further evidence of the need for great care in the management of old elms, especially where these are in public parks and gardens.

Horticultural Exhibition at Weymouth.—A horticultural exhibition is to be added to the attractions of the Royal Counties Agricultural Society's Show at Weymouth in June next. The dates are June 13, 14, 15, and 16. Mr. C. S. Fuidge, whose wide experience makes him eminently suitable for the position, has been appointed superintendent of this horticultural section, and from him all particulars may be obtained. His address is 7, Silverdale Road, Southampton.

Additions to the Kew Library in 1910.—The books, periodicals, and manuscripts added to the library of the Royal Gardens, Kew, during 1910, are very numerous, and the list, in the form of an appendix to the "Kew Bulletin," occupies fifty-two octavo pages. The list is printed on one side of the page only to allow of its being cut up and used by those who make the Kew catalogue a basis of their own. A considerable number of the additions have been made by gift, and these include material collected for a projected second edition of Lowe's "Yew Trees of Great Britain and Ireland," consisting of printed matter, manuscript, and photographs, all presented by Mr. J. Lowe's executors.

Eradication of Bracken.—Within the past twenty years or so the Common Bracken (Pteris aquilina) has spread with great rapidity in some parts of Scotland, and has been especially aggressive on some of the richer pastures in the Western Highlands. As the bracken is of little food value, and effectually checks the growth of nutritious herbage, the spread of the plant has given rise to considerable anxiety on the part of land owners, and the question has been much discussed at the meetings of the various agricultural societies with but little result. Lieut.-Colonel Fergusson-Buchanan has devoted considerable attention to the question, and by adopting a very simple method of procedure, such as we have frequently recommended in the case of other weeds, has succeeded in clearing a large area of the fern on his Auchentorlie estate, Bowling, Dumbartonshire. He has succeeded in checking the spread of the bracken, and by the end of the year he will, it is anticipated, have exterminated it from six hundred acres of moor and low ground. This extermination has been accomplished by the systematic cutting of the fronds. The effect of cutting the fronds was first noticed seventeen years ago, when the bracken was cleared behind the shooting butts. It was observed that the growth became less vigorous each year, and that grass began to grow among the weakened bracken. The lesson of this cutting back was extended, and the undertaking of dealing with the whole 600 acres entered upon. Operations were begun on the outside of the area in order to prevent the fern spreading, and, working gradually towards the centre, five years' efforts have all but completed the task. Lieut.-Colonel Fergusson-Buchanan states that the acreage cleared of bracken is between 500 and 600 acres, and as the cost has been about £350 he considers that the expenditure, representing at 5 per cent. only £18 per annum, is a small price to pay for the large area of fine pasturage already established. Clean cutting with a scythe or hook has been the most effective, and care is taken to cut below the lowest pinnæ, which, if left, will go on producing spores. Cutting should begin early in the year, and the more the growth of the plant is stimulated by the process the quicker will be its ultimate exhaustion.

ROYAL HORTICULTURAL SOCIETY.

The hall in Vincent Square was again well filled with interesting and effective exhibits. Orchids were scarcely in such force as usual, but daffodils, hardy flowers, forced shrubs, and greenhouse plants were present in abundance. The old order of arrangement of tabling was returned to.

FLORAL COMMITTEE.

Early spring flowers from Messrs. Barr and Sons, Covent Garden, included pretty varieties of Iris pumila, Gentiana verna, tulips, saxifragas, Anemone blanda, Erica mediterranea, Iris tingitana, muscaris, Aubrietias Peter Barr, Royal Purple, H. Marshall, and Dr. Mules, Viola gracilis, and some Ghent and Mollis azaleas.

Mr. Clarence Elliott, Six Hills, Stevenage, had in his little rock garden display some very pretty colonies of Saxifraga muscoides, double primroses, Gentiana acaulis, Androsace sempervivoides, Morisia hypogæa, Primula frondosa, and Aubrietia Fire King.

Messrs. Phillips and Taylor, Bracknell, Berks, showed a beautiful lot of Primula rosea, finely flowered, and of rich colouring; with these were alpine auriculas of great merit and beauty, some fine aubrietias, notably the variety named A1, and a few daffodils.

A large group of the elegant strain of schizanthuses grown by Messrs. Garaway and Sons, Clifton, Bristol, was set up in the upper annexe. The plants were finely grown, the flowers large and of varied hues, varying from white to intense purple. The plants, one in a pot, were in many cases 3ft. high and nearly as much through.

In the group presented by Mr. Amos Perry, Enfield, the leading features were the double form of Anemone apennina, A. Alleni, Primula rosea, P. denticulata, Iris stylosa, Tulipa Forsteriana, Crown Imperials, and the new red-flowered Jasminum Beesianum.

The alpine auriculas from Mr. Chas. Turner, Slough, included several plants of the handsome and effective Golden Gem, a variety well named. Mr. Turner also showed the white Rhododendron Purity.

Mr. H. Burnett again presented a grand lot of Guernsey-grown carnations, the flowers of Mrs. Tatton, White Enchantress, Marmion, R. F. Felton, Rose Doré, Mrs. C. F. Raphael, and Raphael being particularly fine.

Mr. Maurice Prichard, Christchurch, put up a charming lot of alpine and spring flowers, and he showed Gentiana acaule, Cytisus præcox, Primula Forresti, Saxifraga muscoides, Iris pumila varieties, the pretty Tulipa Clusiana, and an assortment of varieties of Primula Sieboldi.

In the rock garden arranged by Messrs. J. Cheal and Sons, Crawley, the leading features were Gentiana acaule, alpine phloxes, Anemone Robinsoniana, Viola gracilis, and some excellent saxifragas.

A very bold and effective exhibit from Messrs. Wm. Cutbush and Son, Highgate, faced the entrance. It was a rock garden display of large size, surmounted by flowering trees and shrubs, the latter including two very tall and big examples of Magnolia soulangeana, mollis azaleas, and rhododendrons. The alpines were grouped in colonies, and chief among the subjects were Iris susiana, Incarvillea grandiflora, Cypripedium spectabile, Primula rosea, P. denticulata superba with especially rich colouring, Anemone pulsatilla, Mertensia virginica, and Primula Sieboldi. The whole arrangement was excellent, and formed a central feature of the exhibition.

Clivias are not often shown nowadays, but Mr. J. Watts, gardener to H. Little, Esq., Baronshalt, Twickenham, grows them well, and showed a fine batch of plants carrying grand trusses of orange-tinted flowers.

The lovely shades of colour seen in the new hybrid gerberas were well displayed by Mr. H. Ellison, of West Bromwich, who had a fine lot of flowers associated with such new ferns as Nephrolepis lycopodiodes and the useful Cyrtomium falcatum Rochfordi.

Roses were delightfully staged by Messrs. G. Mount and Sons, Canterbury, this firm showing fine flowers of Mrs. W. J. Grant, Joseph Lowe, Liberty, Caroline Testout, Richmond, Lady Hillingdon, and Frau Karl Druschki.

Pelargoniums from Messrs. H. Cannell and Sons, Swanley, were a fine feature, their brilliant colours and large blooms attracting general attention; New York, Dublin, Arabic, Princess Dhuleep Singh (a new salmon), King Victor, Scarlet King (new), and Lady Folkestone were notably fine.

Messrs. Bakers, Wolverhampton, showed little groups of Viola gracilis, Incarvillea grandiflora, Saxifraga Red Admiral, the brilliant S. Mrs. Hudson, Aubrietia J. S. Baker, Aquilegia glandulosa, Primula rosea, and alpine phloxes.

Messrs. Stuart Low and Co., Enfield, had a quite brilliant exhibit of Callistemon salignus, acacias, Coronella glauca, blue hydrangeas, and the fine new Hydrangea Mdme. Mouilliere, an array of gerbera hybrids in many colours, and a goodly selection of perpetual carnations.

Beautiful flowers of hybrid gerberas grown at Clewer Mead, Windsor, were exhibited by Mr. W. Allum, gardener to Mrs. H. Oppenheim.

Mr. W. H. Smith, gardener to W. James, Esq., West Dean Park, Chichester, showed a dozen and a half wonderfully fine plants of schizanthuses, grandly grown and flowered, and marvels of high culture.

Messrs. James Veitch and Sons, Chelsea, contributed alpine auriculas, a beautiful set of cactus-flowered cinerarias, as well as examples of a fine old florists' strain, and the neat-flowered Feltham Beauty in white and pink colouring. The cinerarias were greatly admired, and deservedly so.

Mr. G. Reuthe, Keston, Kent, had, as usual, a number of interesting things on view, and his Rhododendron Thomsoni, R. arboreum Kermesina, R. Falconeri, Magnolia stellata, double primroses, tulips, and anemones were notably good.

The scarlet Salvia Glory of Zurich is grand in a mass, and the exhibit of a hundred and more plants from Mr. L. R. Russell, Richmond, was a great success, the blaze of colour compelling attention.

Muscari Heavenly Blue was superbly shown by Messrs. R. Wallace and Co., Colchester, and this firm had an interesting lot of alpine shrubs, Morisia hypogæa, aubrietias, fritillarias, Tulipa saxatilis, T. ingens, the glowing T. Fosteriana, and the lovely little T. Clusiana.

Messrs. T. S. Ware, Ltd., Feltham, were represented by a rockery exhibit in which Trillium grandiflorum, a fine lot of the best aubrietias, saxifragas in variety, primulas in quantity, iberis, violas, phloxes, and other beautiful things were very prettily disposed.

Messrs. B. R. Cant and Sons, Colchester, were exhibitors of roses, and showed these in pots as well as cut flowers; Sallie, Lady Reay, Lady de Bathe, Claudius, St. Helena, and William Allan Richardson were prominent varieties.

Messrs. G. Jackman and Son, Woking, presented a nice bank of hardy flowers, on which were noted nice pans of Lithospermum Heavenly Blue, Phlox Laphami (Perry's variety), Onosma alba rosea, Ramondia Serbica, primulas in variety, Iris cyanea and I. pumila azureus, some gerbera hybrids, and some fine hybrid aubrietias, with a good variety of saxifragas.

Messrs. Storrie and Storrie, Glencarse, had a splendid display of coloured and ornamental kales, which proved a source of attraction to the visitors. They were certainly most charming in their colouring.

From Mr. Vincent Slade, Staplegrove Nurseries, Taunton, came a nice exhibit of zonal pelargoniums, arranged in bunches with their own foliage. The flowers presented a bright and attractive appearance.

Messrs. W. Paul and Son, Lim., Waltham Cross, made a magnificent display of climbing roses in pots, all being in splendid condition, each plant forming a perfect pillar. The White Fairy was superb; other good varieties were American Pillar, Tausendschon, Kathleen, Wartbery, and the quaint Veilchenblau. Some fine hybrid teas in pots were arranged in front, the most attractive being Portia, Albatross, Alice Cory Wright, and Jessie: a very fine group.

ORCHID COMMITTEE.

From Sir Trevor Lawrence's collection at Dorking, Mr. W. H. White brought up Odontoglossum ramosissimum - Edwardi (A.M.), a graceful and pretty hybrid with pink and purple flowers; and Brasso-lælio-cattleya Triune, with huge rosy-mauve flowers.

Mr. H. Redden, gardener to G. W. Bird, Esq., West Wickham, Kent, showed a small group of odontoglossums and odontiodas, all in quite small pots.

Messrs. J. and A. McBean, Cooksbridge, had some very beautiful white and pale rose coloured forms of Odontoglossum crispum and the finely-spotted O. Fascinator, together with good specimens of Miltonia vexillaria.

Mr. R. G. Thwaites, Streatham, presented Odontoglossum Thompsonianum and O. Clytie, with long spikes of purplish flowers, and a good spike of the pure O. Pescatorei virginale.

Mr. Hale, gardener to S. Larkins, Esq., Haslemere, put up a little group of orchids, in which Phalænopsis Schilleriana, catleyas, and vandas were very fine.

Messrs. Hassall and Co., Southgate, showed Odontioda Bradshawiæ, Dendrobium Brymerianum, the pretty little Oncidium pulchellum, Renanthera Imschootiana, and the old Cypripedium Dominianum.

A very fine specimen of the beautiful Cymbidium eburneum, from Lieut.-Colonel H. P. Greenwood, Whitsbury House, Salisbury, carried several dozen lovely flowers.

Messrs. Stuart Low and Co., Enfield, had in their group of orchids numerous dendrobiums, Renanthera Imschootiana, Odontioda Bradshawiæ, Oncidium macranthum, and other interesting things.

Messrs. Charlesworth and Co., Haywards Heath, presented in their collection of orchids such good things as Cattleya Mendeli Princess Mary, the fine Trichopilia Backhousiana, Odontioda Lambeauiana, Cypripedium caudatum, Brasso-cattleya Queen Alexandra, and the interesting Zygo-colax Charlesworthi.

Mr. E. V. Low, Haywards Heath, showed Cymbidium insigne, Cattleya Schroderæ, Cypripedium Rothschildeanum, the rare Bulbophyllum Sillemianum, and Dendrobium Wardianum album.

Messrs. J. Cypher and Sons, Cheltenham, were large exhibitors of orchids, and they had a fine lot of odontoglossums, Cattleya Mendeli, Lælia purpurata, Masdevallia Chimæra, M. Veitchi, odontiodas, Renanthera Imschootiana, Cymbidium Lowianum, C. L. concolor, and the quaint Cœlogyne pandurata.

Messrs. Sander and Sons, St. Albans, presented a fine lot of Cattleya Schroderæ, sweetly fragrant, with Odontioda Charlesworthi, the curious Lælio-cattleya Cora plumosa, Cypripedium Rothschildeanum, a very fine specimen of Maxillaria Sanderiana, and Brasso-cattleya Langleyensis.

Mr. De Barri-Crawshay, Sevenoaks, brought up the brilliant Odontioda Rosefieldiensis, O. Gattoniensis, and Odontoglossum Dirce.

Mr. Day, gardener to H. S. Goodson, Esq., Fairlawn, Putney, showed Odontoglossum percultum, Goodson's var., almost wholly of a deep reddish-purple colour.

DAFFODIL COMMITTEE.

Messrs. Barr and Sons, Covent Garden, had a splendid exhibit of daffodils just inside the entrance door, and they set up goodly bunches of a large number of beautiful varieties, including a goodly set of new seedlings. The arrangement was good, and the flowers of excellent size and colour. Especially attractive were the following varieties: King Alfred, St. George, Pharaoh, White Standard, Gray, White Lady, G. P. Haydon, Rosalind, Timon, Salmonetta, Sequin, and other lovely things, and the new poeticus variety Socrates (A.M.).

From the Rev. G. P. Haydon, Westbere, Canterbury, came a group of new daffodils, chiefly Ajax varieties, and among the most notable things from this successful raiser were Dutch Hoy, Marx, Sevenoaks, Kuroki, Day, Pearl of Kent, Chart, Buxted, Man, Allen, Minster, Oakapple, and Heliodora, the three latter white or cream trumpet varieties.

Messrs. Wm. Bull and Sons, King's Road, Chelsea, contributed a small group of daffodils, all popular varieties, but the blooms were somewhat crowded in the bunches.

Mr. G. Kelf, gardener to A. W. Merry, Esq., Welwyn, Herts, contributed a charming collection of daffodils, comprising about a hundred varieties, and including good specimens of Emperor, Sir Watkin, Blunderbore, Autocrat, Cormoran, Katherine Spurrell, White Lady, Firefly, Zenith, Rev. C. Digby, Lord Muncaster, Solfaterre, etc.

Some especially glorious flowers came from Messrs. Walter T. Ware, Lim., Inglescombe, Bath, this firm displaying two vases of superb flowers of the poeticus var. Horace, four of the beautiful white variety Miss Willmott (F.C.C.), two of Macebearer, and three of the magnificent Great Warley; this little group was a great attraction all day, the flowers and their fine culture appealing to everyone.

Mr. James Douglas, Great Bookham, presented a beautiful bowl of the fine Lady Margaret Boscawen daffodils, comprising about five dozen flowers; Mr. Douglas also staged eight pots of Narcissus calathinus, all from seed, and representing an enlarged strain of this graceful flower. A Cultural Commendation was granted.

A group of choice daffodils from Mr. Christopher Bourne, Simpson, Bletchley, needed rather more space than they had. There were excellent vases of Whitewell, Earl Grey, Norma, White Queen, Countess Grey, Great Warley, Warleyensis, Mrs. Wolverley, White Lady, Lord Muncaster, Lord Kitchener, Chough, and the brilliant new Queen of Hearts (A.M.), with creamy perianth and deep orange cup. The flowers were all of fine quality.

Mr. F. Lilley, Guernsey, brought over a few daffodils and tulips, and among the latter was a good vase of the handsome Le Réve.

Rev. Canon Fowler, Earley, Reading, entered for the Barr Cup, but, being the only entrant, the cup was not awarded. His best vases were of Cormoran, Lady Margaret Boscawen, King Alfred, and Mdme. de Graaff.

FRUIT AND VEGETABLE COMMITTEE.

Messrs. Sutton and Sons, Reading, contributed excellent examples of Early Paris and Golden Ball lettuces, Snow White broccoli, Tender and True climbing French beans, Winter Beauty tomatoes, The Sutton rhubarb, Ideal peas, mushrooms, Inimitable Forcing carrots, and many other spring vegetables of great excellence.

Magnificent Cyprus oranges, five baskets full of real beauties, were submitted by Messrs. Dianellow and Vergopoulos, of Nicosia, Cyprus.

CERTIFICATES AND AWARDS.

First-Class Certificate.--To Narcissus Miss Willmott, from Messrs. Walter T. Ware, Inglescombe, Bath.

Award of Merit.—To Narcissus Queen of Hearts, from Mr. C. Bourne, Simpson, Bletchley; to Narcissus Socrates, from Messrs. Barr and Sons, Covent Garden; to Odontoglossum ramosissimum-Edwardi, from Sir Trevor Lawrence, Bart., to Diacattleya Sanderæ, from Messrs. Sander and Sons, St. Albans; to Rhododendron Pengaer, from Sir J. T. D. Llewelyn, Bart., Swansea; to Auricula Umpire, from Mr. J. Douglas, Great Bookham; and to Primula obconica Chenies' Excelsior, from Adeline, Duchess of Bedford, Chenies.

MEDALS.

Gold.—To Messrs. W. Cutbush and Son, Highgate, for alpines, flowering shrubs, and carnations.

Silver-Gilt Flora.—To Messrs. G. Mount and Sons, Canterbury, for roses; to Messrs. Barr and Sons, Covent Garden, for daffodils.

Silver-Gilt Banksian.—To Mr. H. Burnett, Guernsey, for carnations; to Mr. C. Bourne, Simpson, for daffodils.

Silver Flora.—To Messrs. B. R. Cant and Sons, Colchester, for roses; to Messrs. Garaway and Sons, Bristol, for schizanthuses; to Messrs. Stuart Low and Co., Enfield, for greenhouse plants; to Messrs. Wm. Paul and Son, Waltham Cross, for roses; to Mr. M. Pricbard, Christchurch, for hardy plants; to Mr. L. R. Russell, Richmond, for salvias and flowering shrubs; to Messrs. Jas. Veitch and Sons, Chelsea, for cinerarias, etc.; to Messrs. Storrie and Storrie, Glencarse, for albino broccoli, etc.; to Messrs. Charlesworth and Co., Haywards Heath, for orchids; to Messrs. Sander and Sons, St. Albans, for orchids; to Messrs. J. Cypher and Sons, Cheltenham, for orchids.

Silver Banksian.—To Mr. G. P. Haydon, Canterbury, for daffodils; to Mr. Kelf, gardener to A. W. Merry, Esq., Welwyn, for daffodils; to Messrs. R. H. Bath, Lim., Wisbech, for daffodils; to Burton Hardy Plant Co., Christchurch, for hardy flowers; to Messrs. H. Cannell and Sons, Swanley, for pelargoniums; to W. James, Esq., West Dean Park, Chichester, for schizanthuses; to Messrs. H. B. May and Sons, Edmonton, for ferns, roses, etc.; to Mr. C. Turner, Slough, for auriculas, etc.; to G. W. Bird, Esq., West Wickham, for orchids; to Messrs. Stuart Low and Co., Enfield, for orchids; to S. Larkin, Esq., Chislehurst, for orchids.

Bronze Flora.—To Messrs. R. and G. Cuthbert, for azaleas; to H. Little, Esq., Twickenham, for clivias; to Mr. G. Prince, Longworth, for roses; and to Mr. G. Reuthe, Keston, for hardy flowers.

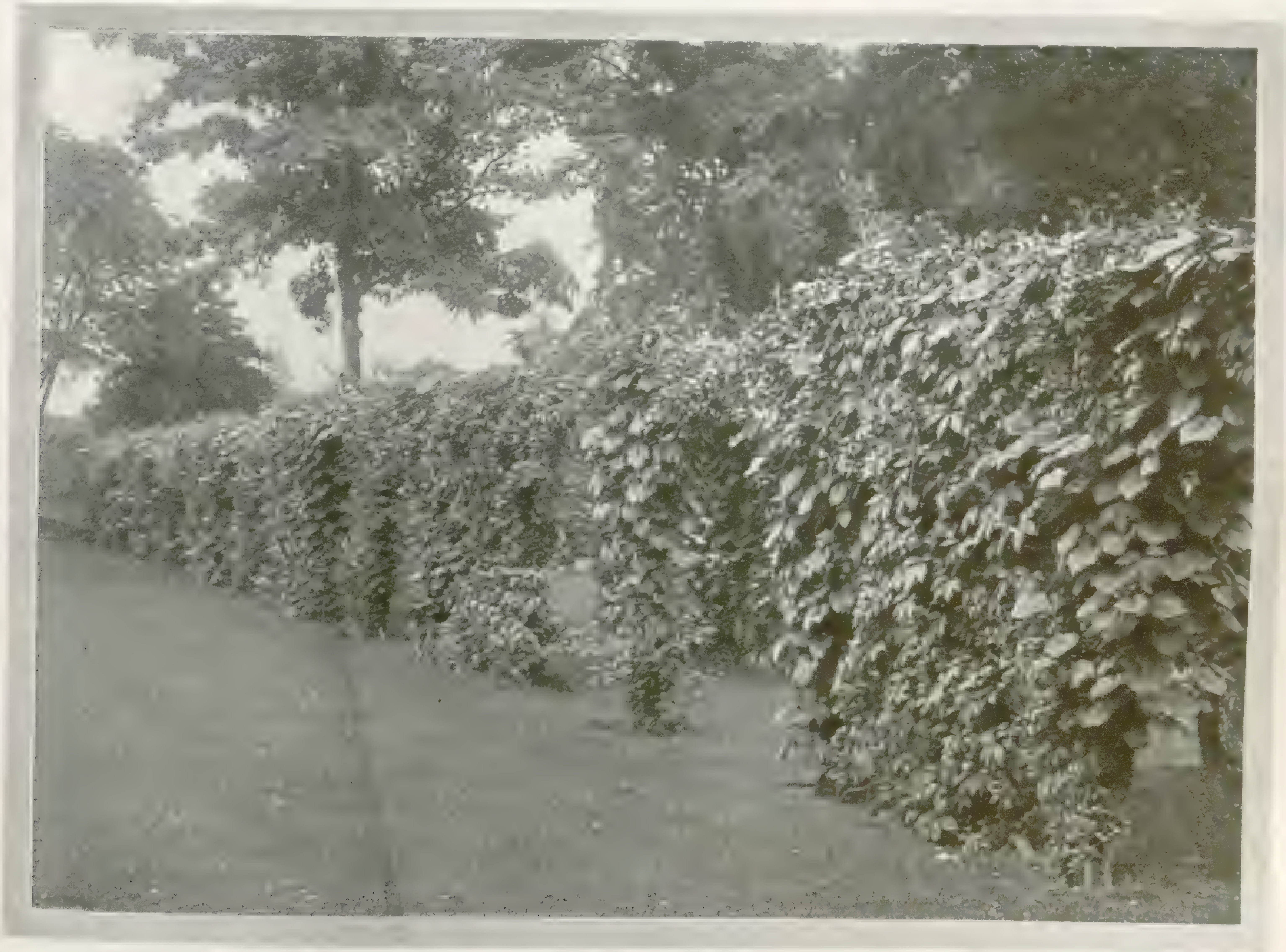
Himalayan Rhododendrons.—The way that these flourish in the extreme South-West of England makes one envious of that especially favoured clime. The advantages enjoyed by dwellers in the West is brought home forcibly every year to residents in less congenial districts, for cut blooms of many kinds, the product of Cornish or Devon gardens, are shown annually at the meetings of the Royal Horticultural Society. A notable feature of these Himalayan rhododendrons is the richness of colouring to be found in the flowers of some of them, notably in one or two varieties of R. arboreum, in R. barbatum, and R. Thomsoni. All have been employed by the hybridist in the production of new varieties. That fine hardy form, Ascot Brilliant, undoubtedly owes a good deal of its richness of colouring to the influence of Rhododendron Thomsoni.—W. T.

Eccremocarpus scaber and aurea.—A plant of inestimable value in the summer garden is the charming Eccremocarpus scaber, a climbing subject with delicate compound fern-like leafage, and clustered tubular flowers of a vivid shade of orange-scarlet. Generally regarded as a perennial, it is, however, quite easy to flower from seeds raised the same season, provided these are sown under glass, and the plants not put out until they attain a fair size. It produces an excellent effect when lightly trained over archways or trelliswork, and may even be allowed to intertwine into a good-sized holly tree with the happiest results. There is also a variety (aurea) with rich golden flowers that, seen under the conditions last-named, are particularly rich and effective. Eccremocarpus succeed in a rich well-drained soil, in a sheltered position open to the sun, and under such conditions it is a true perennial; in a good autumn seed is freely produced, and I have frequently found seedlings spring up in quantity around the parent plant.—Thomas Smith.

PERGOLAS.

The best gardens nowadays consist of a series of gardens within one boundary. Well-planned establishments of the present day have a rose garden, a rock or alpine garden, a water garden, a Japanese garden, a wild garden, an annual garden, the flower garden proper, and I know not how many more individual fancies, but it may be said that no garden is quite complete without a pergola, with its own trim borders.

Although pergolas are most suitable structures on which to train and show to perfection the many beautiful climbing plants we now possess, it may be well to observe that a pergola cannot be set down anywhere; it must have a suitable position, and should serve some definite purpose, otherwise it would only look out of place.



A WELL-FURNISHED PERGOLA IN THE GUNNERSBURY PARK GARDENS.
Showing the use of Ornamental Vines.

Provided a suitable position can be found, the making of a pergola is most simple, and the work may be carried out by any handy man. It may be constructed entirely of wood, or with upright piers of brick or stone erected in pairs, with cross beams of timber of suitable size in proportion to the piers. If in character with the surroundings piers of masonry are to be preferred, as wooden posts will only last a certain time, and after some years decay must be expected.

A pergola should be on the level, and should not curve or twist; it may be of any length, but ought not to be less than eight feet wide or eight feet high. The spaces between the posts or piers along the sides may vary according to the strength of the structure, but should certainly be not less than eight feet. Some of the openings may advantageously be filled in with rustic work, on which the creepers may be spread over. The pathway or walk underneath a pergola may be either of grass or paved with stones, or bricks, or flags, and if preferred a narrow border may be made on either side in which suitable plants may be grown or plunged; some of the liliums are well adapted for this purpose, and right well they look, as also do the German or flag irises; Campanula pyramidalis, and many other partial-shade loving plants will give a very pleasing effect when observed from either end of the pergola. Then again, should the pathway be paved or flagged, many suitable plants can be established between the joints and crevices; for instance, many of the dianthi, sedums, thrifts, linarias, erinus, and a host of other plants, will be quite happy, and look well at any season.

Plants suitable for covering pergolas are abundant, and it is quite an easy matter to make a selection of plants, either for their flowers or foliage, for any particular pergola one may wish to furnish. Laburnums, for instance, may also be planted, and trained to form a growing pergola without the aid of any support, and when established, and in the flowering season the branches are hung with their golden chains of flowers, such a pergola presents a very charming picture. Wistarias may also be employed in the same way, and are excellent either employed by themselves or intermixed with other climbers.

'Wistaria blossoms of purple and white,
In spring-time are truly a beautiful sight;
The vine is ambitious, and spreads far and wide,
But in it is nothing expressive of pride.
Just note how it hangs down its beautiful head
Thus teaching humility's lesson instead''

We have now so many excellent climbing roses that they deserve a special pergola to themselves, where one has the room at command. Other suitable flowering plants are jasmines, polygonums; P. Baldschuanicum, will be found one of the best plants for this purpose. Clematis in variety are all good and useful, perhaps none more so than C. montana, and its more recent introduction C. montana rubens; Forsythia suspensa, Akebia quinata, ceanothus of sorts, and the sweet-scented honeysuckles are all beautiful pergola plants.

In foliage plants we have nothing to surpass the vines, of rampant growth, and with beautiful ornamental leafage that is most conspicuous in autumn, when the brilliant colouring quite lights up the landscape. One of the best is Vitis Coignetæ, a noble vine, with large leaves colouring well in autumn, and of rampant growth. V. Thunbergi is also of vigorous habit, and colours well; V. purpurea, the "Claret Vine," is also useful and distinct, and these, together with some of the more recent introductions from China, such as V. armata, V. megalophylla, V. Henryana, V. Titanea, and V. Thomsoni, will be found unsurpassed where plants for a pergola are required.

The pergola here figured was erected some six or seven years ago, in the lower portion of the grounds of Gunnersbury Park, at the suggestion of Mr. Leopold de Rothschild, and carried into effect by his able head gardener, Mr. G. Reynolds. It is a quite simple structure, built entirely of wood to suit the surroundings; it measures about two hundred feet long, is eight feet high, and eight feet wide, the side openings being about seven feet six inches in width; two side spaces are left open, and then one is panelled in with rustic work. This pergola is flanked on either side by lawns, and the pathway underneath is also of grass; it serves as a connecting link between the gardens of Gunnersbury Park and of Gunnersbury House, though there is now no formal division between the two.

Although this pergola is not entirely devoted to vines, yet from the illustration here given one may learn the usefulness of these ornamental climbers, and their great value, beauty, and noble appearance when employed for covering such structures.

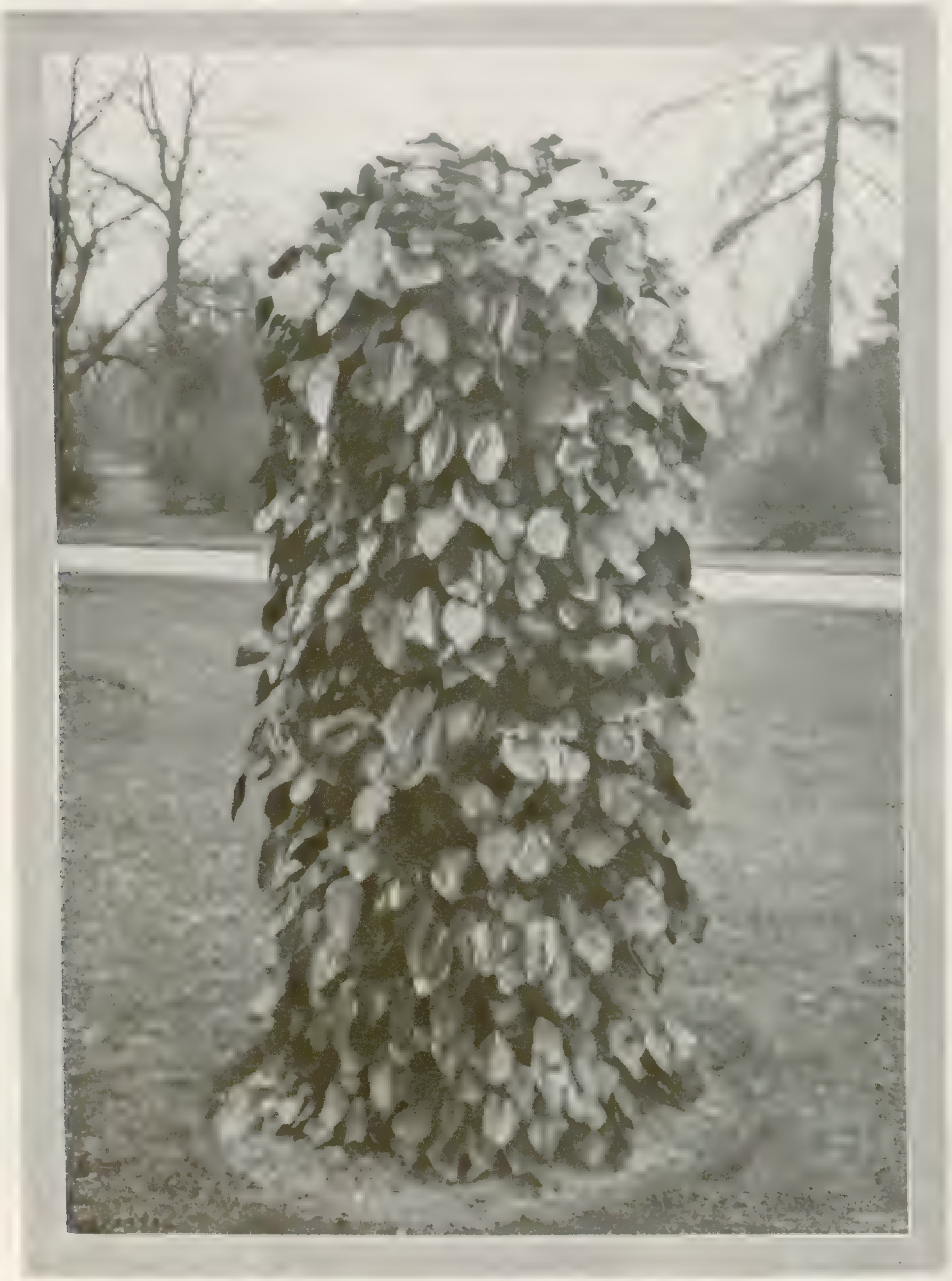
A. Bedford.

THE DOUBLE-FLOWERED PEACHES.

Among April-flowering trees the several forms of the peach are very conspicuous, for their semi-double flowers are extremely showy and varied in character. The normal pink of the typical peach is found in several varieties, and the one called Clara Meyer is perhaps the most beautiful of its colour, for the flowers are large and double. The double crimson variety is, however, more conspicuous, and where one tree only is required, that is by far the most satisfactory one to obtain, for the flowers are peculiarly rich in colour, and are conspicuous from a considerable distance. Another variety with showy crimson flowers is found in dianthiflora. It is distinguished by very large semi-double blossoms, but is hardly so free as the previously mentioned variety. Flore albo pleno adds variety by reason of its double white blooms, while a greater variety of kinds may be obtained by adding Chrysanthemum, camelliæflora, and flore roseo pleno to the list.

Most of these varieties, though the flowers are double or semi-double, produce fruit which, in some instances, is quite good enough for culinary purposes. Stewed or preserved they may be made good use of. In addition to being useful for outdoor effects all these peaches have much to commend them for forcing for greenhouse decoration in spring.

W. D.



THE TOOTHED-LEAVED IVY (HEDERA HELIX DENTATA).
Grown as a pillar specimen.

The Grevilleas.—The grevilleas are for the most part natives of Australia, and are all plants of a shrubby character. The best known species is Grevillea robusta, which is largely grown for the sake of its beautiful fern-like foliage. It is, however, from a flowering point of view that some of them claim recognition. Two species that bloom during the early spring months are among the hardiest of all Australian shrubs. They are G. rosemarinifolia, with reddish flowers; and G. Juniperinæ, or sulphurea, in which they are pale yellow. Both of these do well near the sea, especially in the milder districts. One that will in a greenhouse flower throughout the winter and well on into the spring is G. alpina, a dense bush with narrow greyish leaves and curious reddish and yellow flowers. All the grevilleas are remarkable for the strange curved shape of the blossoms.—W. T.

IVIES IN GARDEN DECORATION.

Undoubtedly the ivy is one of the most beautiful of the hardy evergreen climbers, and it is to be seen growing almost everywhere either in a wild or cultivated state. Perhaps it is seen to its best advantage when growing naturally in woods, although there at times it becomes a veritable nuisance amongst timber trees, but the fact of it being a nuisance in such instances does not detract in any way from its merits as being a most charming and useful climber. The ivy can be used effectively in numerous ways, and with the many varieties available to select from it is possible to grow it successfully in almost any situation, choosing for exposed positions strong free-growing varieties, using the more delicate kinds in places where they will be somewhat sheltered.

No other climber is so useful for forming festoons on the edges of terraces, and, owing to the rapid growth of many of the varieties, it is possible, in a remarkably short space of time, to obtain a most beautiful and lasting effect at a quite modest outlay. On wide terraces, where some suitable structure does not already exist for training ivy in the manner just stated, the following simple method will be found to answer admirably. In the first place, upright posts should be firmly fixed about 15 feet apart, and from 9 to 10 feet in height; to the tops of these attach either a chain, rope, or stout wire, in such a manner as to allow it to hang in festoons; between these posts a rustic fence can be erected from two feet six inches to three feet in height, the woodwork of which should be arranged close enough to allow ample opportunities for fixing the shoots by tying and entwining. In the case of narrow terraces it is sometimes best to do without the rustic fence entirely, using only the upright posts supporting the festoons. Judgment is here necessary to decide on the height of these posts, in some instances from thirty inches to four feet will be most suitable. Ivies that are best adapted for this purpose are those having a free and vigorous habit, such as canariensis (Irish Ivy), palmata, and lucida. If good sized plants are procured and planted in fairly good soil they will in a short time, with careful training, produce the desired effect.

One of the most useful purposes to which ivy can be put is to cover bare ground under trees. Owing to the usually exhausted condition of the soil, and the dense foliage overhead, very few plants or shrubs will thrive, especially under the beech and chestnut. But if some trouble is taken when planting ivies in such a position, by either digging out holes about three feet square and filling them in with good soil or by making mounds on which they can be placed—this latter course being preferable, so as to give the plants a good start—they will without any further attention form a dense carpet. The ivy will cover all bare ground, and always present a fresh and green appearance. Steep banks and cuttings where scarcely anything will exist in hot, dry weather, when planted with ivy become in time entirely covered. This not only hides the bareness of the ground, but prevents the action of frosts crumbling away the surface soil. It is necessary to well establish the plants in good soil. The Common Ivy (Hedera helix) will be found most suitable for growing on sloping banks, as will the Irish ivy.

In some places quite a feature is made by growing specimen ivies on lawns; this is usually accomplished by training the plants to stout stakes of wood or iron, the latter being preferable on account of their durability. The stakes are so arranged as to form a pyramid, over which the shoots of the ivies are trained evenly until the stakes are entirely covered. The height of these pyramids vary according to the position and the choice of varieties. Well-grown specimens treated in this way are always admired, and varieties such as Rægneriana and dentata will be found to give a most noble effect, as with their vigorous habit it is possible to grow them into huge specimens, and by using some of the more delicate and variegated varieties in a similar manner, these, too, will be found very effective. Fine specimens are also formed with tree ivies. These have an additional charm by their freedom of flowering and setting berries while in a young state. Strong examples planted singly in good soil soon make large shapely heads. They thrive in almost any position, and are very effective when grouped with other shrubs in large beds or borders, also when judiciously planted on large rockeries, their restricted habit of growth making them especially suitable subjects for that purpose. Both the silver and golden variegated varieties of the Tree Ivy (aborescens) are very desirable, also the one bearing yellow berries.

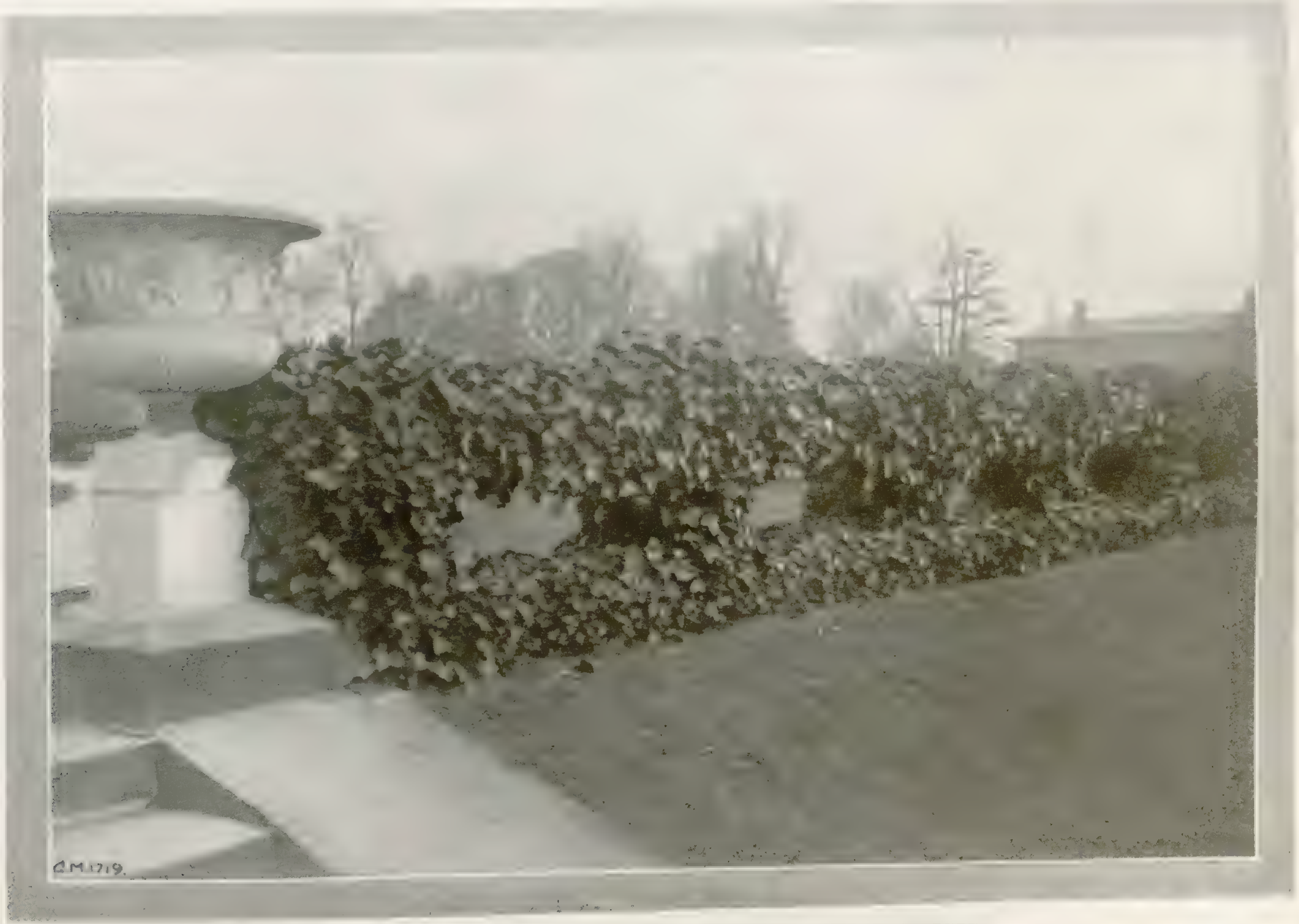
When ivies are planted near the base of old tree stumps and allowed to clamber over them naturally, they are then seen to great advantage, and form a most picturesque addition to the wild garden. By selecting positions which are somewhat sheltered it is possible to grow the most delicate and highly variegated forms to perfection in this manner, and at no other time do the variegated forms present a more pleasing and brighter appearance than when treated in this way. All varieties with the exception of arborescens lend themselves to this method of culture.

Modern architecture is not altogether too kind to this class of climber, as one often sees on damp-proof walls ivies badly infested with an attack of red spider, in some instances scale, especially so on plants situated in a sunny position. Even the strong-growing varieties against a wall having a north aspect are not immune from the ravages of these pests. Sometimes we see indications of them on plants growing against old solid walls, but no doubt the more modern style of building has greatly aggravated these conditions, and when treating with walls of this description it is advisable to exclude all the forms that have not a robust constitution.

This by no means exhausts the many useful purposes to which ivies can be put, as much might be said regarding their merits for covering arbours, for planting judiciously on pergolas with other climbers of a deciduous character, relieving the bareness of such structures in winter; the large-leaved varieties are indeed excellent for this purpose if kept well within bounds. Some varieties, too, are used to form edgings to large beds devoted to shrubs; these present a neat appearance when kept in order. In fact, no class of hardy climbers can be used in a greater variety of ways. Ivies thrive in almost any soil, but a little care should be taken not to have it too rich for the variegated varieties, as they colour best on soils of a poor nature. Planting can be successfully done at almost any season of the year, owing to the fact that nurserymen usually supply the plants established in pots.

It is important that ivies growing against walls, trellis-work, etc., should be clipped in April of each year. This operation causes them to present a bare appearance for a short time, but it is very beneficial to them and also admits of their being kept within bounds.

T. B. Field.



THE IRISH IVY (HEDERA HELIX CANARIENSIS).
Trained as a margin to a narrow terrace at Kew.

APPLE ROUNDWAY MAGNUM BONUM.

For some years past Messrs. G. Bunyard and Co., of the Maidstone Nurseries, have in their catalogue highly eulogised this apple as a late-keeping dessert variety, equal to, or even superior to, Ribston or Cox's Orange Pippin in flavour. Some cultivators have from time to time in the horticultural press had the temerity to doubt this, and I, for one, considered the statement somewhat exaggerated. Last autumn, having about a bushel of well-ripened fruits, for which, owing to the plenitude of other sorts, there was no special need throughout the winter months, I determined to test their keeping qualities and value for dessert late in the season. Accordingly none were used until the close of March, and when sent to table the firm, well-coloured, and richly-flavoured fruits were much admired and appreciated, and subsequent enquiry as to identity, while regret was expressed that the supply was limited.

At the present time—mid-April—most of the fruits are used, but, to all appearance, they would have kept plump and in good condition until May was well advanced. The fruits were grown upon a bush tree in the open garden (I have but one in bearing), which seems a very suitable form, as being of a rather spreading, shapely habit, no difficulty is experienced in keeping it to a pleasing outline. The tree in question is about ten years planted, and has borne several crops of fair-sized handsome fruits, and, although a heavy crop was produced last year, the promise at present, by way of a plentiful supply of flower buds, is all that could be wished for.

James Day.

CHOICE HEMEROCALLIS.

Hemerocallis, or day lilies, have increased so rapidly of late that there are now quite a number of varieties deserving of cultivation, indeed no herbaceous border is complete without several, and it is not easy to form a collection without including at least a dozen sorts. The flowers are somewhat ephemeral, but as they are produced so freely, and in rapid succession, the shortness of their life can scarcely be regarded as a fault.

The bulk of the species are from China and Japan. For cutting they are not very useful, as they look untidy quickly. All the species are easily grown in good garden soil, deeply dug and well enriched with farmyard manure, except H. aurantiaca major, which requires a light sandy soil or special preparation in heavier material, as the cold heavy soil causes its thick fleshy roots to decay in the winter, and the plants do not start freely in spring.

Propagation is easily effected by division of the roots; every small piece will grow if taken off with a small root attached. Hardly any varieties or species require supporting, as their flower stems are usually so stiff, even in the taller-growing kinds, that they give little trouble.

The following are all desirable: H. Apricot is one of the best varieties in cultivation, flowering remarkably well over a long season; in growth it is two feet high, and the flowers are rich apricot in colour. H. aurantiaca major grows vigorously, producing spikes four feet high; many of the blooms are six to eight inches in diameter, and as many as a dozen are produced on one stem. As previously stated this should have drainage provided where the soil is heavy. H. Thunbergi is a late-flowering kind, therefore valuable for that reason; the pale sulphur-coloured flowers are pleasantly perfumed. H. Sir Michael is a late addition to the day lilies, and has large clear yellow blossoms, reminding one of Lilium sulphureum in shape. H. luteola is a hybrid from H. aurantiaca major and H. Thunbergi. Its colour is golden-yellow, and its flower stems are from three to four feet high. H. Dr. Regel is a distinct, broad-petalled hybrid, giving its rich glowing orange blossoms in August. H. flava is the common species so much grown, and one of the oldest; it was introduced in 1596; colour, clear yellow.

H. aureole is a Japanese kind, giving a number of branching spikes, with many deep glowing orange flowers, each with a ruddy reverse. H. Dumortieri grows one foot high, and blossoms abundantly; it is compact, and useful for the front of the border. The flowers are orange-yellow, tinged with brown on the outside. H. Middendorfi has deep golden-yellow flowers, freely produced in summer. H. graminea is suitable for the rockery, growing but six inches high; the flowers are yellow, tinted green. H. disticha flore plena opens its semi-double, tawny-coloured flowers late in summer. E. M.

HEDERA MADERENSIS VARIEGATA.
A distinct and beautiful ivy, the leaves finely marked with silvery white.

SAXIFRAGAS.

The saxifragas are what I may term very substantial plants, because they make a border look furnished when first planted out in it, and afterwards continue to spread until much surface of both border or rock-work is covered. Not only are the leaves diverse in form and very beautiful, but the flowers of some are charming.

In several districts in Hampshire where the soil is light and sandy, with a gravelly subsoil, I have found saxifragas thriving splendidly in extremely hot seasons while many other kinds of plants were looking very dejected. On a steep bank in one garden a number of shallow pans (which were cracked or chipped, and consequently rendered useless for seedlings or for plants in the usual way) were fixed, but not in such a way as to look very formal, and saxifragas were luxuriating in them. Altogether, the bank, with a slope of about 15ft., was one of the most attractive I have ever seen in a garden. The surface was more or less undulating, and the miniature-leaved and large-leaved plants were so disposed as to look natural, and still further lend to the bank an informal and even rugged appearance.

The spring is a good time for the work of dividing clumps. A light fibrous loam, with a small quantity of leaf-soil added, should be used if procurable. Peat is also good, but it should not be added in too great quantity to the loam, except in instances where the position is naturally low and damp.

The following are good saxifragas for forming a new collection.: Saxifraga cæsia major, flowers in May and June; S. ceratophylla, June; S. ciliata, March to May; S. coriophylla, March; S. Fortunei, October, and later if the weather remains comparatively mild; and S. ligulata, with beautiful large leaves, and flowers borne on spikes resembling, somewhat, that of a hyacinth, March to May. S. longifolia, one of the very best, has been called the Queen of Saxifragas, it is a species that thrives even in a wet situation, the leaves are massed together, rosette-fashion, but there is nothing stiff about them, as the individual leaves are narrow and pointed; it flowers in June and July. Other good things are Saxifraga mutata, June to August; S. paradoxa, May and June; and S. peltata, June. Saxifraga purpurascens has very large leaves and is a noble example to use as a dot plant; April to June. S. pyramidalis is very beautiful, it bears flowers on spikes somewhat similar to those of Spiræa japonica, in June and July. S. Wallacei flowers from April to August, and London Pride, S. umbrosa, will grow freely under trees, and where the soil is fairly rich the flower spikes are large and branching and suitable for cutting.

George Garner.

THE HOLLIES.

The important position occupied in gardens and woodlands by the common holly overshadows the virtues of many other species which in themselves are worthy to rank amongst the most useful evergreens suitable for garden decoration in the British Isles. Neither is it as evergreens alone that the value of these various kinds of hollies has to be determined, for the fruit in some instances is quite as beautiful as that of the common kind, whilst several species are deciduous, and their importance centres entirely in their bright coloured berries. The various hollies are included in the genus Ilex, a family rich in species, which has its headquarters in South America, Brazil alone claiming sixty of the 167 described species. The others are widely distributed, for representatives are found in each of the following countries: Europe, West Indies, Malaya, Australia, Polynesia, Himalaya, China, Japan, Formosa, N. America, and N. Africa. A great many of these are unsuitable for outdoor culture in the British Isles, but in addition to the European kind, those from the United States, and several from Japan, China, the Himalaya, and the Azores give satisfactory results in various localities, though all may not be grown in the colder districts.

With the exception of their ornamental qualities and for hedge making, the hollies cannot be said to be of any other use in this country, though the wood is very hard and durable, and, if it could be obtained in quantity it would probably find a place amongst commercial timbers. At one time it was used by the turner for various purposes, and also for inlaying. Young straight shoots are in some request for making into walking-sticks and whip-handles, whilst at one time the bark of the common holly was used largely in the manufacture of bird-lime. In other countries the bark of various species is still used for the same purpose, and at the recent Japan-British Exhibition in London numerous samples of bird-lime prepared from the bark of Ilex integra were shown, together with bird-lime manufactured from the bark of Trochodendron aralioides, the two trees being known as bird-lime trees. In South America a kind of tea known as Maté or Paraguay tea, is prepared from the leaves of Ilex paraguayensis. This is stated to occupy an important position amongst the products of the country, and to be held in similar esteem to ordinary tea in other countries. "The Treasury of Botany," second edition, gives the annual consumption in South America at the time of publication at 8,000,000 lbs.

Fruits and Leaves.

Ilex aquifolium, the Common Holly, is such a familiar object in gardens and woodlands that it is known to everybody; yet, though so well known, some of its peculiarities do not appear to have been generally recognised if we are to judge from questions which are constantly occurring. The question as to why one specimen should fruit freely and another one be barren often arises. This, however, is accounted for by the fact that, generally speaking, hollies are diœcious, the male flowers appearing on one plant and the female flowers on another. This distinction breaks down sometimes, for now and then perfect female flowers are borne by specimens on which the majority of the flowers are males; the same thing occurring in the opposite direction. An examination of the flowers readily indicates the sex to which a particular tree may belong, for, though in male flowers female organs are present, they are very rudimentary in character, whilst the male organs are well developed and bear a large quantity of pollen. In female flowers, on the other hand, the female organs are prominent, and the stamens immature. Female flowered trees some distance away from male trees frequently perfect large crops of fruits, a fact which has given rise to the idea that trees are often monœcious. An examination of the flowers of such trees, however, has failed to provide evidence in support of this theory, whilst the very small percentage of fertile seeds found on such trees indicate that pollen has been carried by insect agency, but not in sufficient quantity to effect general pollination. It also emphasises the fact that fruits may swell to their normal size and ripen without containing fertile seeds. Where flowers containing mature male and female organs have been noted, they have usually been borne later than the normal flowering time. One particular example of the Himalayan Holly, Ilex dipyrena, has been under observation for some years. This is a male-flowered tree, but most years two or three fruits may be collected from it. A female plant of the same species growing some distance away rarely perfects a seed, though it never fails to produce normal-sized fruits and frequently a good crop. This lack of fertile seeds is probably due to the species blossoming in advance of other hollies and the insects necessary for pollination not being available.

ILEX ALTACLARENSIS.
A large-leaved green holly, remarkable for its free growth and effectiveness.

Another peculiarity of the common holly which does not appear to be generally understood, is its habit of producing leaves of vastly different outlines. The character most commonly associated with the leaves of the holly is its intense spininess, yet it may also be found with leaves almost or quite destitute of spines. When the latter character applies to a whole tree, it has been thought to indicate a different species. This, however, is not the case, for, as a holly advances in age, the spines peculiar to its youth disappear, and spineless branches occur. The phenomenon has been explained as a provision of nature for the protection of young plants from attacks by animals, and weight is added to the explanation by the fact of the lower branches of old trees bearing spiny leaves, whilst those of the upper branches are spineless. By propagating from these spineless branches, trees bearing wholly spineless leaves have been obtained. The Common Holly (Ilex aquifolium) is widely distributed through Europe, and a variety of it has been found in China. It is a native of the British Isles, and attains its largest dimensions in various parts of England and Scotland. It is often found in woods associated with oak, birch, or Scots pine from the South of England to the

North of Scotland, whilst it has been noted in companionship with birch on the wild hill sides of Skye. In Hertfordshire, Buckinghamshire and other counties it is frequently found as a hedge-row tree 15 to 25 feet high, with a trunk 9 to 15 inches in diameter. Growing in woods it attains larger dimensions, and may frequently be seen between 35 and 55 feet in height, whilst trees 70 to 80 feet high have been recorded. It is probable that the height of many trees would be greater were it not that berried branches are in such demand at Christmas time, and that terminal branches are not spared when holly is being gathered for market.

ILEX AQUIFOLIUM AUREA REGINA

An effective variety with rich yellow variegation, popularly known as the "Golden Queen Holly."

Cultivation.

Providing certain conditions relating to transplanting are observed, the cultivation of hollies is not attended by serious difficulties. The family, as a whole, is impatient of root disturbance, consequently transplanting must be done at a period when the minimum of risk from this source will be run. This is when the health of the tree presents its most vigorous aspects, and it is in the most favourable condition for repairing injury to roots and the attendant reduction of the food supply. Two periods of the year present themselves as being superior to others. The first and best is late April and May. The first fortnight of May may be taken as a medium, but a week or two earlier or later may be desirable in different parts of the country. An examination of the plants will reveal the correct time, for it is when the young growths are beginning to push that transplanting should be accomplished. The second period for transplanting is the end of August and the beginning of September just as growth is completed. At this time also root injury is quickly repaired. Providing trees can be removed with large balls of earth attached to the roots, transplanting may be done at almost any time, for the danger of root disturbance is thus minimised. Ground ought always to be prepared beforehand so that on the arrival of the plants they may be inserted without delay. Should the roots be dry, a good watering must be given previous to planting, and in any case a sufficient amount of water should be provided afterwards to settle the soil well about the roots. In the event of hot, dry weather being experienced, the newly-planted trees will be benefited by a good syringing each morning and evening for a few weeks. A mulch of decayed manure and leaves applied to the surface of the ground will assist root action by keeping the soil cool and moist. In the case of good-sized specimens being removed with little or no soil, some means should be adopted of keeping them from being blown about until new roots have been formed. In some cases stakes may supply the need, in other instances a triangle of ropes secured to stakes driven in the ground may be necessary, whilst for hedges, one or two strands of strong wire run along, and secured to stakes here and there, will be found useful to tie the plants to.

Pruning of hollies needs to be done with extreme care. Too often the trees are clipped into hideous cones or globes, and nothing of the natural outline remains. This may be obviated by letting pruning take the form of thinning out rather than a general cutting back. Should a bush be outgrowing its position or certain parts be developing at an abnormal rate, then, instead of hard clipping such as is done to a hedge, let the operator remove certain branches bodily. This will leave behind a free and natural appearance, and even if a hole is made it will soon fill up again. Late spring is the best time to prune, for then the new shoots quickly hide the cuts, and any stiffness which may be apparent is soon relieved.

Propagation of the species is effected by seeds, but the many garden varieties must be increased by cuttings, by grafting, or by budding. The former is the better method, for in the latter cases there is always the danger of suckers arising from the stock, which, if not attended to soon overgrow the scion. Cuttings of partly ripened shoots may be taken in July and inserted in sandy soil in a cold but close frame. They will not be ready for removal from the frame for at least nine months. For several years careful attention must be paid to the leaders of young plants raised from cuttings, or no proper central stem will be formed, the tendency being to develop a bush-like habit.

Varieties of Ilex aquifolium.

Upwards of one hundred varieties of this species have been described within the last century and a-half. During the last thirty years of the eighteenth century there appears to have been a brisk demand for varieties, and from old publications we gather that several nurserymen about that period raised and collected new varieties assiduously. Some of those varieties exist at the present time, though not under the same names, the tendency having been to create descriptive names in place of the popular ones of that time. We, however, still find some lingering as second or popular names to present-day varieties. Cases in point are "Hedghog Holly" and "Milkmaid Holly." The numerous forms are distinguished in various ways; some differ in size or degree of spininess of the leaves, others by habit, and others again by variegated foliage. The latter set is again divided into distinct groups by silver and golden variegated leaves, whilst the position of the variegation determines the varietal names of some kinds. In those instances where the variegation is found in the centre of the leaves there is always a greater tendency for a plant to revert to the type by producing branches without variegation than when the colouring is found near the margins and the centres are green. Why this peculiarity should occur there would appear to be no good reason, but such will be found to be the case if the various kinds are kept under observation. When branches do revert, they should be removed at once, or they will exert a harmful effect on the tree. There is no necessity to refer to a long list of varieties, but the following kinds might well be admitted into any garden.

I. a. fructu-luteo, commonly called the Yellow-berried Holly, was discovered wild several centuries ago in a wood near Wardour Castle, Wiltshire. Except that its berries are yellow, it is a counterpart of the type.

I. a. camelliæfolia is one of the most handsome of the stronger-growing varieties. Of pyramidal outline, it is readily recognised amongst other kinds by reason of its dark olive-green glossy leaves which may be spineless throughout, or bear a few irregularly placed spines on the margins. It is a fruiting variety.

I. a. donningtonensis is a male kind, which originated in the Handsworth Nursery, Sheffield. This variety has narrow, deep green leaves, which are scarcely more than three-quarters of an inch wide. The margins, though usually entire, sometimes bear a few stout spines.

I. a. laurifolia.—This, the "Laurel-leaved Holly," is distinguished by its dark-green spineless leaves, which are smaller and thinner than those of I. a. camelliæfolia.

I. a. myrtifolia introduces another type of holly, for it represents a set of low, bushy kinds, which are recognised by small spiny leaves that are rarely more than $1\frac{1}{2}$ inches long and often less. This, and others belonging to the same set, are useful where compact, slow-growing evergreens are required.

I. a. ovata is peculiar by reason of its regular sized ovate leaves, armed with short spines distributed at regular intervals along the margins. It forms a shapely bush, and is of very distinct appearance.

I. a. aurea marginata.—Broadly speaking, all the varieties with golden marginal variegation are included under this heading, but such a variation of size of leaf, degree of colouring and habit are found that many kinds have been given distinctive names. Some are abundantly distinct one from another, others are not, while some differ simply by being male or female kinds. So close are some varieties to each other, that it is possible to gather specimens from several named varieties, and match them on a single plant which is variable in habit; yet there is a peculiarity of growth about each variety that is sufficient to make it distinct from its neighbour. On typical aurea marginata the leaves are as large as those of the common holly with somewhat less ferocious spines. The centre of the leaf is green, with a wide irregular-shaped band of gold around the margin.

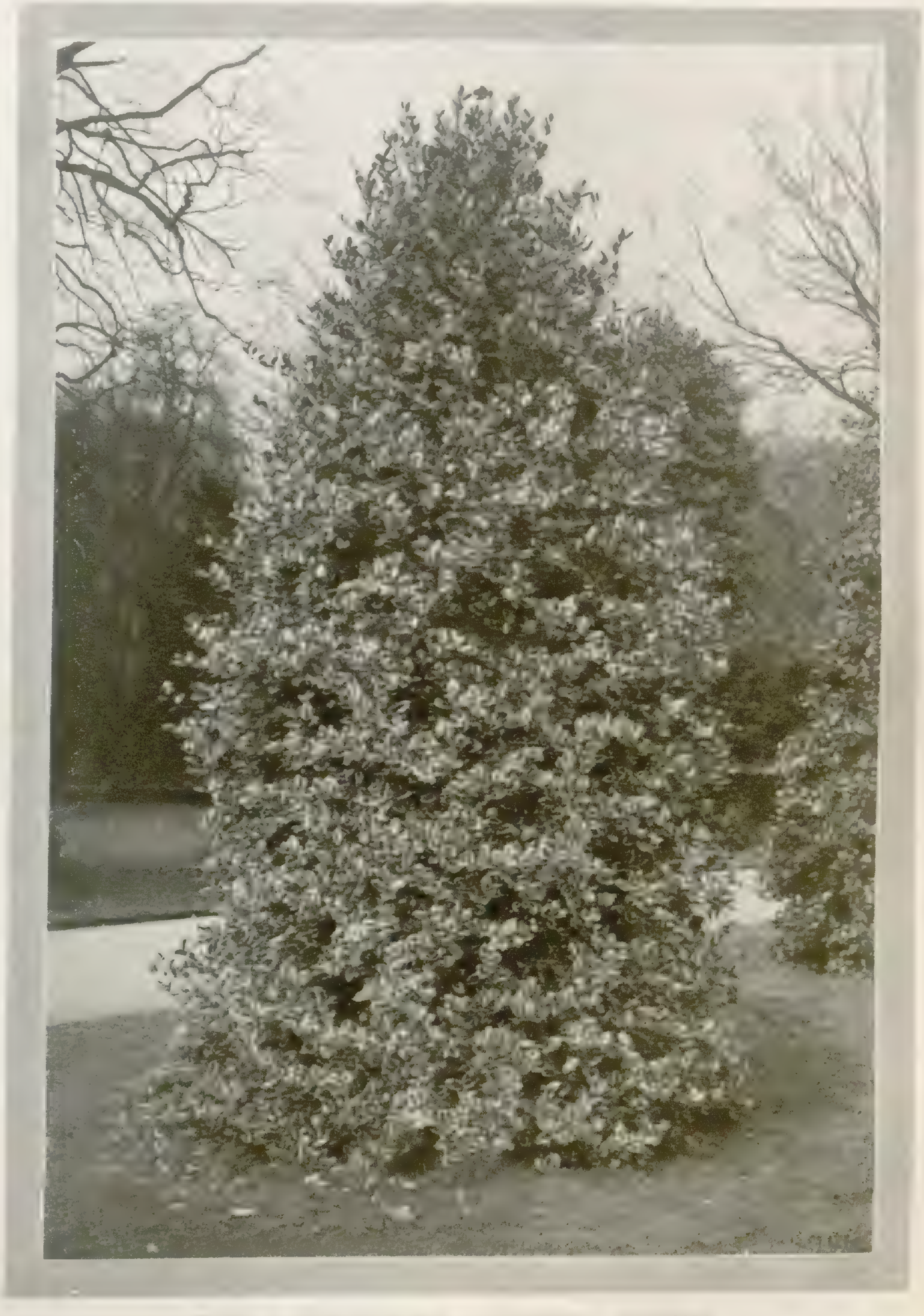
I. a. aurea regina, "Golden Queen Holly."—Where one golden-leaved holly only is required, this is the one which should be selected, for not only is it of vigorous habit, but the colour is wonderfully rich and well developed. The centre of the leaf is mottled with grey and green in an irregular manner, whilst the broad band of gold surrounding the margin mixes with the other colours at varying depths, sometimes extending well towards the middle.

I. a. Watereriana is distinct and easily recognised, for it is of compact habit, of slow growth, and keeps shapely with little attention to pruning. The leaves are more or less ovate, up to $2\frac{1}{2}$ inches in length, and somewhat more than an inch wide. The spines are not numerous, and what few appear are not of a ferocious character.

I. a. argentea-marginata.—The remarks passed about aurea marginata apply also in this case, for the variety exhibits wide variation. It is a quick-growing and useful variety, its silver-margined leaves making it a conspicuous object.

I. a. argentea regina is well known as "Silver Queen Holly." Its leaves are more or less oval or broadly ovate, and the green centre has a generous margin of silver, or rather cream colour. As in the case of Golden Queen, it is one of the most conspicuous of its group.

I. a Handsworth Silver is a very handsome silver-margined holly. It may be distinguished by its purple bark and long elliptic-oblong leaves, armed with sturdy spines. The centre of the leaf is mottled grey and green, and the silver margin is of irregular width.



ILEX AQUILFOLIUM ARGENTEA REGINA.

A handsome form with silvery variegation, and popularly known as the "Silver Queen Holly."

I. a. pendula is a green-leaved form of the common holly with pendulous branches. The habit is of the uniform umbrella type, and a well-developed plant forms a distinct and attractive object. It is necessary to keep a leading branch tied up to get the plant to attain a presentable height.

It is sometimes the habit to use some of the above-mentioned varieties for hedges, but none of them are so attractive or so generally useful for the purpose as the common holly. Their position in the garden is essentially that of specimen plants.

Other Species and Varieties.

I. platyphylla.—Though this large-leaved holly is frequently included amongst varieties of I aquifolium, there can be little doubt but that it is a form of the Canary Island species I. platyphylla.

In all essential characters it agrees with that species more closely than with I. acquifolium, and neither it nor any of the varieties bearing broad leaves of the same type ever, so far as I have been able to learn, produce shoots which bear leaves anything like those of the common holly, whereas most of the varieties of I. aquifolium revert to the type now and then. The leaves of I. platyphylla are oval, often 4 to 5 inches long, and $2\frac{1}{2}$ to 3 inches wide, the margins being usually irregularly armed with short spines, though on some varieties the spines may be absent. Varieties are noticeable in balearica, maderensis, and nigrescens. Hybrids have doubtless originated between it and I. aquifolium, and it is probable that I. altaclarensis, I. belgica, I. Hendersoni, I. Hodginsi, and I. Shepherdi are of this parentage. Many growers consider the last two kinds synonymous, but, as they are seen in some places they show a slight variation, for whilst Shepherdi is a male form, Hodginsi sometimes bears fruit. Presuming the two kinds to be hybrids, several slightly different plants may have been raised which have been placed under one or other name.

I. altaclarensis, of which an illustration of a fine specimen growing at Kew is given, is one of the most ornamental of the broad-leaved kinds. Of vigorous constitution, it grows rapidly into a fine bush, and is distinguished by its purplish bark and deep green roundish-ovate leaves, which are up to 4 inches long and 3 inches wide, armed with strong spines. W. Dallimore.

(To be continued.)

THE BROCCOLI CROP IN SCOTLAND.

From the time of the first severe frost of the waning year, which effectually disposes of such subjects as marrows, beans, peas, and probably cauliflowers, the frequently expressed complaint from the chef, and may be from those higher in the social scale, is, that the available supply of vegetables is too much of the common kind and lacking in variety. Too often, it is feared, there are good grounds for this complaint, as, however prime in quality and acceptable the various root crops, savoys, kales, or even Brussels sprouts are when first introduced for the season, they become common, and are not highly appreciated at table when brought into every-day use.

In establishments where facilities for forcing during the winter months are not of the best, whereby the production of seakale, mushrooms and similar products are unattainable until the turn of the year, the difficulties of the cultivator are very considerably accentuated.

It may be safely assumed that in many establishments requiring and expecting full supplies of fresh vegetables at all seasons, the broccoli crop is not assessed at its full value, while on the other hand too much stress is often laid upon the possible injury to the plants from frost, whereby the ground space and labour expended is wasted. While readily admitting that there always exists the risk of loss to a portion, or in extreme instances, perhaps the whole of the crop in this way, yet, except in very unfavourable situations as to soil and climate, such loss seldom occurs.

The winter immediately preceding the one just passed was the worst experienced in Scotland for several years, for not only did long-continued severe frost prevail, but the abnormal earliness of the same, and the general absence of snow as a protective covering, told heavily upon vegetation, and green plants in particular. Apart from this very few cultivators were prepared for such an early visitation, consequently, broccoli plants in most cases were in a growing position, and the frozen condition of the soil precluded the possibility of bringing them to the customary recumbent condition of comparative safety. Needless to say under the circumstances many plants were killed outright, but others passed through the trying ordeal almost unharmed.

The winter just closed has been quite the reverse, being almost free from severe frost and very light snow falls, and at this place not a broccoli plant has suffered injury, while a daily supply of heads has throughout been obtainable, and will probably so continue well into June, when the earliest cauliflowers are expected to be ready. To have this delicious vegetable the whole year round is worthy of strenuous effort, albeit the attempt may occasionally be frustrated by influences beyond the apprehension and control of the operator.

In recent years many new names have been added to the lists of varieties, more names evidently than distinct varieties. In some cases it is impossible to distinguish even a slight degree of superiority over those older and well-tried varieties, and with many, the capability of frost resistance is not a prominent feature. For autumn and early winter use Walcheren, Michaelmas White, and Veitch's Self-protecting are all that could be desired, or if only one sort can be accommodated the last is certain to give satisfaction. Two sowings at least should be practised; the first early in April and one towards the close of the month. From these sowings the resultant plants should be transferred to a well-prepared plot of soil, a few inches apart, to gain strength, and for the further encouragement of a fibrous-root system previous to being set out permanently about two feet apart, upon well-manured and firm ground. Maggot, or grub at the root is the bane to which these are subject, and is best overcome by the free use of soot stirred below the surface, by applying water to the roots at intervals, in which nitrate of soda at the rate of one ounce to the gallon of water has been dissolved, and also by using one af the several preparations advertised for the purpose of destroying these insidious foes.

From November onwards Sutton's Superb White, Christmas White, and Snow's Winter White are all excellent, and, if sowing and planting is carried out successively these will provide a supply until February, when Leamington will probably be ready for use. The last is an old but most reliable variety, having close heads well protected by incurving leaves, which often so well envelop the curd that its presence may pass undetected. Where a few scores of this variety are grown they produce a long succession, and the purity of colouring very nearly approaches that of the cauliflower. For late use Model, Late Queen, June Monarch, and lastly Methven's June, the latest that I am acquainted with, may be depended upon to produce a large supply of heads all through the spring months.

There are others, both old and new sorts, that approach, or perhaps equal these, but few I think that surpass them upon the main points. It is prudent, however, before relying entirely upon new comers to test them for two or more seasons alongside those of well-established repute, and afterwards act according to the results obtained.

Sprouting Broccoli is distinct from all the foregoing, and once grown and tested as a cooked vegetable, would never afterwards be willingly dispensed with. There are two kinds of this, the white and the purple headed, the former being the earlier and likewise the more tender, but, as the produce is generally available for use shortly after the New Year, it is easily understood that its susceptibility to injury by frost is increased compared with its purple counterpart, which is seldom ready for gathering before the middle or end of March, and then if all has so far gone well with the plants, an abundant supply is ensured for several weeks. The treatment accorded the broccoli proper, as to sowing the seeds and after culture, suit this equally well, and as the small leaves surrounding the flower heads may with much acceptance be retained in the cooking process variety is thus obtained, though the relationship to the more stately subject is very close.

Before sowing the seeds of late varieties a decision should be arrived at as to the position the plants are eventually to occupy, and fix the date of sowing accordingly. If the ground is vacant or likely to be so, whenever the plants are of suitable size, sowing may be done from the middle of April onwards, but if other crops, as early potatoes or peas must first mature upon the site, it may be advisable to defer the sowing until May to avoid the unwelcome circumstance of the plants becoming overgrown before they can possibly be accommodated. Ground in good condition but not recently manured, is best, and, if bearing another crop, a turning over of the surface with fork or cultivator when this is cleared, is all that is necessary to fit it for broccoli, as a firm root-run induces sturdiness of growth and hardness of tissue; both so very essential to withstand excessive damp and low temperature.

Maggot or grub attacking the root is the main evil during the growing season, more especially about midsummer, when the annoying spectacle of drooping leaves here and there in a plot of otherwise healthy plants is not uncommon. Winter dressings of lime, or gas-lime are helpful.

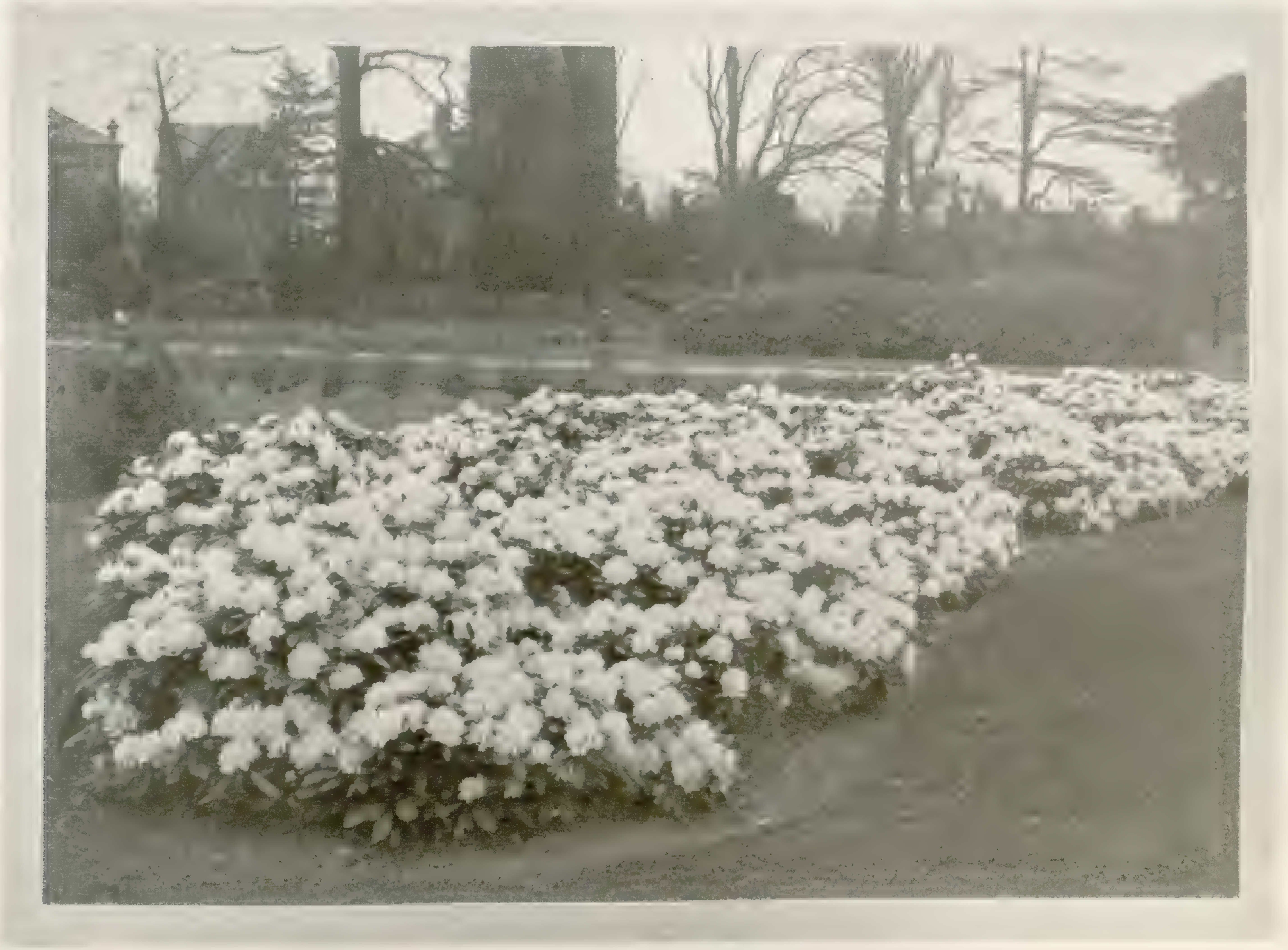
James Day.

RHODODENDRONS FOR GENERAL CULTIVATION.

To those who have taken a leading part in obtaining for the trees and shrubs remarkable for the beauty of their flowers a prominent position in the garden, it is highly gratifying to have unquestionable proofs that the rhododendrons are sharing to the full in the popularity which such subjects enjoy, and that they are now being annually planted in largely increased numbers. This is gratifying, not so much because one's efforts have been highly successful as for the knowledge that we may anticipate a material increase in the attractions of large numbers of gardens. The increase in the planting of rhododendrons has been great, but certainly not larger than it should have been, for there are many gardens in which these shrubs have not been given a place, or are so indifferently represented as to render it impossible for the owners to have any proper idea of their value as aids in beautifying the garden. It is quite certain that no one can base an estimate of the beauty and usefulness of rhododendrons as a class from a few seedling plants of Rhododendron ponticum planted in a mixed shrubbery or on the margin of a plantation.

This great group of evergreens contains so large a number of species and hybrids as to be rich in interest as well as in attractions, and a moderate collection would form a feature of considerable importance. Provided the garden is in a district enjoying a kind climate it would be possible to include a considerable number of the Himalayan species and their hybrids, and thus have a succession of flowers from quite early in the year until the beginning of July, when the little grown Rhododendron azalioides yields freely of its fragrant flower trusses. It would be interesting to refer to the formation of a collection adapted to gardens of sufficient size to allow of distinctive features being included within their area, but this would necessitate considerable space, and it has been considered advisable to confine these notes to the many fine hybrids that are so hardy in constitution that they may be successfully grown in all parts of the British Isles.

For a long period the general belief that rhododendrons, other than the pontic varieties, could not be successfully grown without the aid of peat was a most effectual check to the extensive planting of these shrubs. Good peat is an expensive commodity when used in large quantities, and it is not altogether surprising that many owners of gardens should have hesitated to plant rhododendrons. Happily the belief in the necessity of peat as a rooting medium is no longer general; but one now and again hears rhododendrons described as expensive. They of course cost more than a common laurel, an aucuba or a green-leaved holly, but to regard them as costly is an error not easy to understand. If we turn to the catalogues of firms who devote considerable attention to these and other evergreens we find that strong plants may be purchased at prices ranging from 3s. 6d. to 5s. each. Supposing we take the higher price, which is for good bushes that will mostly be furnished with flower buds, it will be seen that the cost will be £3 per doz., and as twenty-four plants will be sufficient for a bed of considerable size, the outlay need not be excessive in furnishing the garden with rhododendrons. Purchased by the hundred the price would be somewhat less. A smaller size may be obtained at a proportionately lower rate, but there is an objection to them when required for beds occupying a prominent position in the garden; they require two years or more before appreciably increasing in size, and when annuals are sown in the intervening spaces to hide the soil and give brightness to the bed, the rhododendrons suffer more or less. It is better from all points of view to extend the furnishing of the garden with these shrubs over two or three years, and plant strong bushes, than to fill the whole of the beds to be devoted to them in one season with plants of small size.



RHODODENDRON ROSA MUNDI.
A dwarf-growing variety, producing in great profusion rather large trusses of flowers, which are white suffused with rose, and produced in April. The plants in the fine bed at Kew herewith depicted are about twenty years old.

The preparation of the soil for rhododendrons, whether they are to be grown in beds, arranged in groups, or to occupy prominent positions as single specimens, is by no means a difficult matter. It has been already stated that peat is not essential to their successful culture, but as they flourish in it, any supplies of peat that may be available within a short distance of the garden, and obtainable at a cheap rate, should be taken advantage of. This, however, is seldom the case, and we may at once pass on to the consideration of the best method of preparing what for convenience may be described as ordinary garden soil. Rhododendrons will grow in all classes of soil provided it is free from lime, but they thrive best in one that is fairly substantial and sufficiently open to admit of the delicate roots running freely through it. Fibrous loam, to which a liberal addition of leaf-mould has been made, forms an excellent compost, and where the soil is fairly good it will suffice to take out the bottom spit and replace with the mixture of loam and leaf-mould and well incorporate it with the top spit. Should, on the other hand, the staple be a strong clay or light sand, the best course will be to take out the soil to a depth of eighteen inches or two feet and replace with the fresh compost. Planted in beds so prepared the rhododendrons will soon commence to make vigorous growth and require but little attention for several years. The distance at which the plants should be put must be determined by their size. They should be far enough apart to allow, as nearly as may be estimated, for three years' growth without their becoming unduly crowded, and when they have filled the whole bed they should be lifted and replanted, and in the latter process they should, of course, be given increased space. The surplus plants will, of course, be utilised in filling other beds and forming new groups, or planting singly on the lawn.

In the general management of rhododendrons it should be remembered that they are moisture-loving subjects, and that a little assistance, such as the watering-pot or hose can render, should be given if the weather is at all dry when they are making their new growth. An occasional overhead watering during the period in which growth is being made will also be beneficial, the evening being the best time. As the roots are near the surface it will be a further advantage to check evaporation during the summer months, and there is nothing better for the purpose than a mixture of decayed vegetable matter and cow manure in equal proportions.

The selection of varieties need not be large, but the number of fine forms is so large that it is not easy to make a small one. The following are all of a high order of merit. Alexander Adie, deep crimson; Altaclarense, rich scarlet; Barclayanum, crimson; Broughtoni, deep rose; Charles Noble, bright scarlet; Comte de Gomer, light rose with deeper margin; Everestianum, rose-lilac; Rosa Mundi, white, suffused with rose, dwarf and free flowering; it is also very early, being in full bloom on the 20th inst.; Helen Waterer, white, margined with crimson; James Nasmyth, rose tinted lilac; James Marshall Brooks, deep scarlet; John Walter, clear scarlet; Joseph Whitworth, rose-red; Lady Eleanor Cathcart, rose-crimson; Madame Carvalho, white; Michael Waterer, crimson; Mrs. John Clutton, white; Mrs. J. Penn, salmon-pink; Mrs. R. G. Holford, salmon-red; Pink Pearl, soft bright pink, very fine; Prince Arthur, claret colour; Queen of Whites, white; The Bride, white; Vestitum coccineum, rich claret; and William Austin, bright crimson.

G.

THE CHERRY STEM BORER.

As the cherry stem borer (Semasia Woeberiana) appears to be on the increase in this country, the following contribution to the current issue of the "Journal" of the Board of Agriculture by Mr. Walter E. Collinge, M.Sc., F.L.S., F.E.S., is especially deserving of the attention of fruit growers, more particularly those in cherry growing districts.

During the early part of 1908 my attention was drawn to the damage occasioned to cherry trees in various parts of Kent by the larvæ of a small moth commonly known as the Cherry Stem Borer, and later to similar damage to cherry trees in Hertfordshire. The pest increased during 1909 and 1910, and as the known remedial measures have only proved partially successful, various experiments have been made, an account of which is now given.

This insect has long been known to economic entomologists. Kollar* gave an account of it in 1837; it is also mentioned by Taschenberg,† Stainton,‡ Kaltenbach,§ and other writers. Wilkinson || records it from the Edinburgh and Belfast districts, and Theobald mentioned it in 1897,¶ in his annual reports for 1906, 1907, and 1908, and again in his work on Fruit Tree pests.** I have failed to find any reference to it in the writings of Westwood, Curtis, Whitehead, or Ormerod.

I am informed that it has been seen in past years in some parts of Worcestershire, but I have no personal knowledge of it beyond its occurrence in the two counties mentioned above.

Trees Attacked and Damage Done.

Whilst the cherry seems to be more prone to attack than other trees, this insect has also been recorded as attacking almond, apple, laurel, nectarine, peach, and plum trees.

The damage done consists of borings made through the bark into the sapwood. Often these are very small, but when a tree is badly attacked large cavities are formed, two to four inches in depth, and about the same width, extending from about one to three feet in length. Trees so infested are frequently attacked by fungi, the lower part of the stem quickly rotting, and finally dying

Life History and Habits.

The moths of the first brood appear in May and June, and the females deposit their eggs in crevices or cracks in the bark, usually close to the ground. In one case where two main roots were partially exposed it was noticed that all the eggs were deposited at the junction between stem and root. I am not able definitely to state the number of eggs; they are not all deposited together, but in isolated groups. From observations made during the past three years it would seem that they are not particularly numerous. They hatch in from five to seven days.

Immediately on hatching the larvæ commence to feed upon the bark, tunnelling beneath it, and forming irregular cavities by eating the inner bark and sapwood, sometimes penetrating as deep as three to four inches. Their presence can be easily detected by the holes made for extruding the frass. Exudations of gum are also noticeable on the trees, and not unfrequently fungi attack the exposed portions of the roots and stems.

The larvæ become full fed about the middle or end of August, and pupate on the walls of the cavities. The full fed larvæ measure slightly more than half an inch in length, and are usually of a pinkish-white or fleshy colour; occasionally they are found of a creamy-white colour, or even very pale brown. The moths appear in about fourteen days. About the time the moth is ready to emerge the pupa pushes its way through the bark. The pupa, which is enclosed in a cocoon, is deep brown in colour.

The eggs from this brood are laid in September, and the larvæ live beneath the bark until the following spring. They continue to feed until the end of October, and commence again at the end of March or early in April.

Preventive and Remedial Measures.

Theobald mentions amongst preventive measures smearing the trunks with grease and paraffin, cow dung or clay and lime, and thickly coating the stems with pitch. Brushing or painting with arsenate of lead and clay has not been found effective.

My own experiments were designed with a threefold object, viz., (i.) to make the surface of the stem obnoxious to the moths in order to prevent egg laying; (ii.) to prevent the newly hatched larvæ from boring into the bark; and (iii.) to destroy the larvæ in the cavities beneath the bark.

(i.) Various substances have been tried upon the surface of the bark, e.g., grease and paraffin, bone oil and paraffin, etc., none of which, however, were more than partially successful.

(ii.) Two experiments were made with a view to prevent the newly hatched larvæ from entering the bark. In one case the lower part of the stem was covered with pitch and gave very fair results, whilst in a second case the pitch was mixed with slaked lime, the two well worked together, and then applied to the lower part of the stem with a stiff brush. Before drying the whole of the surface was well dusted with lime. This proved most successful, no larvæ entering the bark. Kollar (op. cit., p. 237) mentions that egg laying may be prevented and the caterpillars prevented from entering the inner bark if the trees are washed about the end of May, and again in September, with a solution of lime.

(iii.) Where the larvæ were known to be in the bark a mixture consisting of one part of powdered napthalene and three parts of clay were mixed together with water to the consistency of a paste, and the trees were smeared over to a height of between two and three feet. This mixture was applied to the trees in June, and again in November. In the latter case the larvæ were particularly numerous, but no further trouble was noticed after the mixture was applied. Any composition which will adhere to the tree and make the surface obnoxious to the moths will in all probability prevent egg laying.

In the case of the trees I saw in Kent many had had the tunnels cut open and the larvæ destroyed by hand, but this constant cutting into the bark and sapwood undoubtedly injures the trees, apart from disfiguring them and leaving crevices for any stray moths to lay their eggs in.

The methods described above are both cheap and effective, and may prove of service to fruit growers who are troubled with this undesirable pest.

---

[*] A Treatise on Insects injurious to Gardeners, etc., Eng. Trans., 1840, p. 236. † Prak. Insekten-kunde, 1879, [illegible] 220. ‡ Man. Brit. Butterflies and Moths, 1859, vol. [illegible] p. 241. § Pflanz. Klasse der Insekten, 1874, pp. [illegible] and 193. || British Tortrices, 1859, p. 196. ¶ Journ. Bd. Agric., 1897, p. 165. ** Insect Pests of Fruit, 1909, p. [illegible]

Garrya elliptica.—Among shrubs remarkable for the beauty of their long pendulous catkins, this native of California merits a prominent position. Whereas nearly all the others are deciduous, this is strictly an evergreen, the leaves being elliptical in shape, and from 1½ to 2½ inches long. The catkins, which are, as a rule, at their best during the late winter and early spring months, are in good examples quite six inches in length, and yellowish-green in colour. When well furnished with catkins, sprays of this garrya in a cut state are very effective for indoor decoration. As with many Californian shrubs, Garrya elliptica is none too hardy in some parts of the country. For this reason it is sometimes trained to a wall, but in the southern counties it can be grown as an open bush. In the case of the garrya male and female blossoms are borne on different plants, the female, which is far less showy than its mate, being seldom met with. —W. T.

CHOICE HOLLIES IN ENGLISH NURSERIES.

Shapely, well-grown hollies are not only beautiful, but are of considerable intrinsic value, and, in fact, rank amongst the most valuable stocks any nursery can hold. Being of slow growth and development, and demanding skilful attention during the younger stages, there is little risk of the market being glutted, at any rate so far as the choicer varieties or well-developed specimens are concerned. Firms who grow hollies well have usually to meet a good demand for both young plants and larger specimens. In the course of my visits to important nurseries in various parts of the kingdom, I have had the pleasure of seeing some exceedingly fine batches of the more popular kinds, and many beautiful varieties that may be classed as uncommon or rare.

In the extensive nurseries of Messrs. Dicksons, Lim., Chester, may be seen immense stretches of the ever-useful Hodginsi, one big batch numbering many thousands of plants of wonderfully even size, the average being about 3½ft. in height by as much in diameter. In another quarter were well-furnished pyramids 8ft. to 10ft. high. Silver Queen and Golden Queen, two of the finest of the variegated hollies, are largely grown, and both the green and variegated forms of the Hedgehog Holly (Ilex aquifolium ferox) are here in abundance. Such uncommon species and varieties as I. dipyrena, I. crassifolia, I. contorta, I. tortuosa, and I. brevifolia aureo picta are included in this highly interesting collection, which numbers in all somewhere between sixty and seventy distinct sorts.

Another huge stock of hollies may be seen at Messrs. James Smith and Sons, Darley Dale Nurseries, near Matlock. Young plants varying from 1ft. to 3ft. in height are grown by acres, and on the open Derbyshire hillsides the growth made is hard and sturdy indeed. Tall pyramids and massive bushes may be had in almost any known variety, whilst for hedging purposes the stock of the common holly (Ilex aquifolium) is equal to all demands.

For many years Mr. H. Frettingham, Beeston Nurseries, Notts, has made a great feature of hollies, the Beeston hollies being largely drawn upon by nurserymen and landscape gardeners throughout the kingdom. The varieties grown here are chiefly of such popular forms as I. Hodginsi, I. a. aureo marginatum, argentea marginata, Golden Queen, etc., the aim being to meet large demands for general planting.

In the Staffordshire Nurseries of Messrs. Isaac Matthews and Sons, Lim., Milton, Stoke-on-Trent, a review of which was published in the Gardeners' Magazine last autumn, I have seen superb specimens of such good things as I. laurifolia, I. tortuosa, I. Lawsoniana, the bronze-leaved holly, and I. aquifolium fructo lutea, the yellow-berried holly. Beautiful bushy plants of I. maderensis nigra up to 8ft. and 10ft. in height thrive here, in spite of the pottery chimneys that abound in the district. I. maderensis seems to be particularly well suited for growing in towns or smoky situations, and Messrs. Matthews' nurseries are well placed to meet the demands of that large district known as "The Black Country."

Near London there are several nurseries where hollies are grown extensively, and with much success. Messrs. W. Paul and Son, Waltham Cross, have for very many years made a feature of choice varieties, and magnificent specimens may be seen in these always interesting nurseries. The stock of young plants is remarkable for health, vigour, and good roots, as a result of expert management.

Messrs. Paul and Son, The Old Nurseries, Cheshunt, are also great specialists in hollies. Their High Beech nursery is famous for the quality of the stock produced on its mellow loamy soil, and it is worth anybody's while to see the fine breadths of gold, silver, and green hollies, ranging in size from young seedlings and grafts to specimens 8ft. to 10ft. in height.

At Woking Mr. Anthony Waterer's stock demands attention. The Knaphill Nursery is far famed for many things, and I have at various times been interested in the grand displays of flowering shrubs, the unique collection of topiary specimens, the noble conifers, and the hollies, of which not only an abundance of saleable stuff, but many great trees that are now to be reckoned among the permanent features of the nursery are to be seen. Naturally, the beautiful variety named Watereri is well represented in its original home, and it must be admitted that this is a holly worthy its honoured name.

At Bagshot we find hollies almost, if not quite, as important a feature as the world-famed rhododendrons inseparably associated with the firm of Messrs. John Waterer and Sons, Lim. The range of varieties here grown is remarkable, and, did space permit, I should delight in enlarging upon the quite uncommon and very beautiful sorts to be seen in these nurseries. Visitors to the leading shows are familiar with the beautiful specimens exhibited by Messrs. Waterer, and to every gardener I would say, take the first opportunity of seeing this, and, indeed, any of the collections of hollies that I have mentioned growing at home, for it is out of the ordinary run to meet with large stocks of really good hollies that have been grown with such skill and care that, whilst developing into tall shapely specimens, the root system has been so kept within bounds that the trees may be transplanted with confidence.

L. I. Atris.

VARIEGATED EVERGREEN SHRUBS.

For a garden to present a pleasing appearance at all seasons of the year nothing is more desirable than an assortment of choice evergreens, and amongst them variegated kinds should be largely planted. Their bright and showy foliage will do much to render the garden cheerful at a time when there is little to brighten the surroundings. The present is a good time to plant evergreens, and in doing this it is well to arrange them in groups where they are placed in the shrubberies, planting those belonging to the same class together, those with variegated leaves being given conspicuous positions, and so placed that they are set off by a background of green.

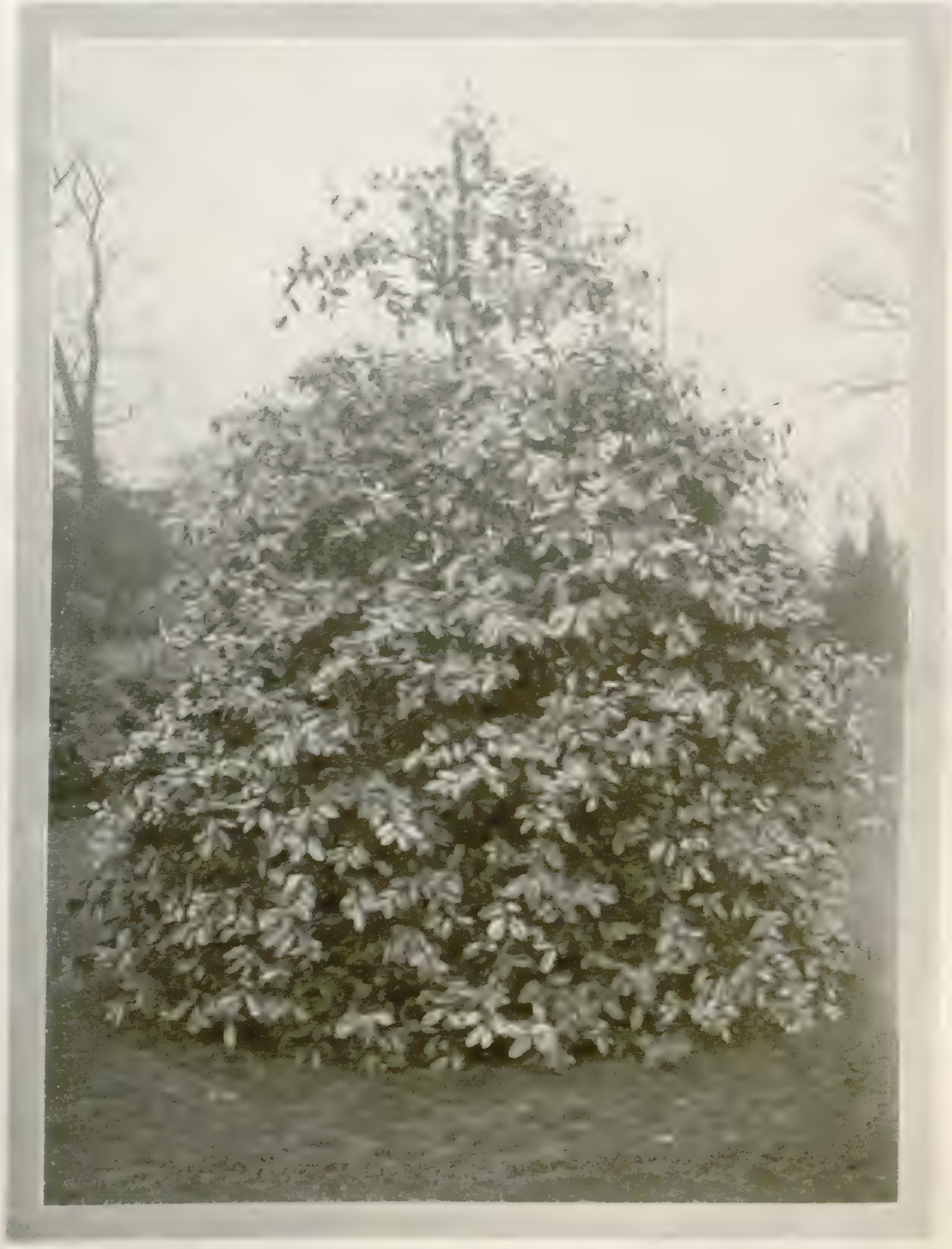
In planting it is most important to take out a hole large enough to spread out the roots fully without any of them being cramped because of too small a space. When transplanting large specimens it is important to lift them with a ball of soil about the roots, so that they may receive as little check as possible. If the soil is at all dry at the time of planting, a liberal watering will do much to give them a good start in their new positions. Another point to be taken into consideration is to allow sufficient space for each specimen to develop its natural habit of growth. This is important, because overcrowding will deprive them of their individual charm, and later on spoil their shape as specimens.

The variegated hollies are some of the most showy evergreens, and these are well adapted for planting as single specimens on the lawn, their habit of growth and rich colouring rendering them objects of unusual beauty at all seasons. Ilex ferox argentea, I. ferox aurea, and Silver Queen and Golden Queen are some of the best varieties. Weeping hollies with variegated leaves, specially when grown as standards, are very handsome, and need to be given a position where they can display their charms to advantage.

Several of the Elæagnus are very striking, and E. pungens aureo-variegata, which is shown in the accompanying illustration, is especially rich in colouring. Euonymus japonicus albo-marginatus is an effective shrub, and E. j. aurea marginata is a very showy variety. Ligustrum ovalifolium aureum is a well-known golden privet, which is always effective, and is well adapted for forming hedges. Aucuba japonica is an old but handsome variegated shrub, and is most suitable for town and seaside planting, being especially hardy. Buxus sempervirens aureo-marginata and B. argenteo-marginata are all showy. Rhamnus folio-argentea is a handsome buckthorn, which can be included where a large number of shrubs are planted. Veronica selaginoides is a lovely golden species of dwarf habit, quite a charming plant for the rock garden.

Amongst the conifers are some really handsome variegated trees, which produce rich colour effects. One of the most showy of these is Cupressus Lawsonia lutea, and several specimens of this fine variety arranged in a group produce a very fine effect. C. macrocarpa lutea is hardly less rich in colour, and looks well associated with dwarfer species, its tall pyramidal form standing out with fine effect. Thuja occidentalis lutea is also a very striking variety. Retinospora plumosa aurea is distinct and highly effective. Taxus baccata elegantissima and T. baccata aurea are lovely yews, while Taxus fastigiata aurea variegata is a very handsome form of the Irish yew, Cephalotaxus drupacea is a Chinese yew, which, on account of its bright golden foliage is quite an acquisition. Biota orientalis aurea is a handsome plant well adapted for the outskirts of shrubberies. It is also useful for seaside planting, and is invariably much admired. Juniperus chinensis aurea, J. japonica alba variegata, and Abies Sieboldiana are very effective specimens; while A. pungens glauca, A. lasiocarpa, and Cedrus atlantica glauca are all handsome trees, but on account of their large size are only recommended for extensive gardens.

J. Gardner.



ELÆAGNUS PUNGENS AUREO-VARIEGATA.
A richly-coloured variety of this handsome shrub.

Crowea saligna.—A delightful hard-wooded plant, which apart from its beauty is valuable from the fact that it will flower during the autumn and winter months. It forms a freely-branched little bush, whose slender shoots are clothed with willow-like leaves. From the axils of these the flowers are produced. They are over an inch in diameter, and of a pleasing shade of clear pink. This crowea, which is also known by the name of Crowea latifolia, is an old plant in gardens, and recent signs point to the fact that it is likely to regain its one-time popularity. A second species with narrower leaves and petals blooms as a rule in the spring. Both of these succeed under the same conditions as the more easily cultivated of the greenhouse heaths.—W. T.

WORK FOR THE WEEK.

◆

THE ORCHID HOUSES.

ODONTOGLOSSUM SEEDLINGS. — Any seedlings left on the pots from last year's seed beds that are ready for transplanting should now be attended to. Where only a few seedlings are grown I would suggest that the sooner they are potted off separately the better the progress they are likely to make. There is also another reason why seedlings should be treated individually at the earliest possible moment, and that is, their requirements can be properly attended to. Moreover, where the destructive maggot attacks the plants or small slugs become troublesome, we can the more readily protect the plants from injury. I also consider that after the third leaf has been developed the plants root more freely, and considerably more progress is made where the plants are treated liberally. It is advisable to see that the potting compost used is of a good and lasting nature. The sphagnum moss in particular should be only sparingly used and chopped very fine, so that there is little risk of the young plants becoming buried in sphagnum moss, immediately it begins to grow. See also that the pots and drainage are clean, and the latter ample. If bracken fern roots are used, have them thoroughly dried and freed from all sappy matter, or they will assuredly set up fungoid growth.

SEEDLING PLANTS that were put into small pots in the autumn will now need attention, and those that have made good progress will be benefited by being given more root room. It is not desirable when potting on seedlings of odontoglossums and allied genera to disturb the roots unnecessarily. If the potting compost is in a good state of preservation, carefully turn the plants out of their pots and transfer to suitable sizes without disturbing the roots. It is really surprising the progress in growth made by seedlings after the third leaf has been developed, and, if encouraged by suitable treatment after this period, it will be found that a more satisfactory first pseudo-bulb will be produced and the plants flower earlier. As the plants increase in size the compost used should be of a coarser nature, until they reach a stage when they may be expected to flower. Subsequently the ordinary compost used for the potting of the imported and other odontoglossums may be used. We find it advisable to carefully shade all fresh-potted plants from strong light, and also to give a gentle spraying at least once a day.—H. F. Chapman, Oakwood Gardens.

STOVE PLANTS.

DIEFFENBACHIAS.—These fine foliage ornamental plants are of easy culture and most attractive; under favourable treatment the plants will attain a serviceable size very rapidly. Old unsightly plants may be utilised for the propagation of new stock. After the top has been inserted as a cutting the stems may be divided into lengths, retaining a bud or two on each piece. These may be put in shallow pans or boxes and plunged in a brisk hotbed where they will quickly form roots, and may afterwards be potted up singly, using a sandy compost. It is always advisable to raise one's stock annually, as the young plants quickly develop into a useful decorative size, and when grown with single stems they are most effective.

ACALYPHAS.—For introducing colour into a group of foliage plants there is no stove plant more satisfactory that A. Macafeana, for its handsome crimson foliage gives a marked effect. Plants may be raised from cuttings rooted some time during the spring or autumn; it is perhaps advisable where space is available to insert the cuttings singly into small 60's, and plunge the latter in a moderate hotbed, keeping the propagating case closed for a few days, after which ventilation may be given carefully until root action has commenced. The plants may then be transferred to a light airy position in the intermediate stove, and eventually hardened off to full exposure of the sunlight, and placed as near the glass as circumstances permit.

ACALYPHA HISPIDA (SANDERIANA), when seen under good culture, has much to recommend it to a place in every collection, and similar treatment to A. Macfeeana may be given to it. The tails must be kept dry or they will not retain that handsome scarlet colour for long, and eventually decay from excessive moisture in the atmosphere.

ARALIA ELEGANTISSIMA is most useful for table decoration, and has a most effective and graceful appearance. Where larger specimens of the same type are desired A. Veitchi and A. gracillima will be found most valuable; they succeed best in the intermediate stove, and should be kept regularly sponged with insecticide. This will add much to their appearance, and the bottom foliage will keep in a healthy condition for a long time. When repotting aralias care must be exercised that they are not overpotted, as they succeed best with a moderate amount of rooting space, and are better adapted for decoration in smaller pots.

PANDANUS VEITCHI is an excellent plant; its white variegated foliage is much appreciated when in a small stage, and in addition it does not suffer ill effects from dryness when used for decoration indoors.—John Donoghue, Bardon Hill Gardens.

THE FLOWER GARDEN.

ANTIRRHINUMS.—Where these are intended for bedding purposes good culture must be given to ensure good-sized plants which will flower simultaneously with begonias, geraniums, etc. Assuming the beds they are to occupy are planted with spring flowers, it will be some time before they can be put out, therefore something must be done to maintain them in a progressive state. A good plan is to transfer them from the boxes to the frames which have been cleared of violets. Here every attention can be given them, and fine plants will be produced by the time they are required for bedding. This may appear too much attention for a common snapdragon, yet one is amply repaid, and, after all, the labour is small as compared with that which has to be expended on pelargoniums, and a good bed of antirrhinums is quite equal to one of the best arrangements of pelargoniums.

ANNUALS, HARDY.—On no account must the thinning of these be neglected, for if the seedlings are allowed to become drawn and leggy the results will be poor. Many of the failures with hardy annuals may be traced to overcrowding. They must have sufficient room to develop properly. Such subjects as cornflowers, Shirley poppies, and others with similar habits of growth, should have at least eighteen inches clear space to attain their full development, and, when given this, quite good-sized bushes are obtained. Clarkias, godetias, annual chrysanthemums, etc., which are not so tall-growing as the former, may have less room. The thinning operations should be gradually accomplished, extending the work over two or three intervals until the required space is obtained.

DAHLIAS.—No time must be lost in preparing the soil of beds and borders in which it is intended to plant dahlias. The exact spots should be marked off, and a stake put in. Holes about eighteen inches wide and of the same depth should be taken out, and refilled by adding a liberal quantity of well-decayed manure with the soil. This should be allowed to settle naturally without treading, and if the work is done now, the soil will be in good condition by planting time.

ROSES require considerable attention just as the buds are showing leafage. It is at this stage of growth when so much damage is caused by aphides, which increase so rapidly if allowed to remain undisturbed. Spraying with quassia extract is usually effective when persevered with, and the operation should be performed either on dull days or when the sun has lost its power in the afternoon. A sharp watch must be maintained for leaf curl, and where found the affected leaves should be pinched out with the finger and thumb.—E. C. Pooley, Gnaton Gardens.

FRUITS UNDER GLASS.

MELONS.—The earliest fruits that are advancing towards maturity should be fully exposed to all available sunshine, and a little more air be admitted when possible. These fruits require careful attention in the matter of watering to avoid giving too much or too little. Supplies of liquid manure should be stopped as soon as the fruits begin to colour. It is not well to cease watering altogether, as the fruits that are later suffer. Enough moisture must always be retained to ensure the completion of the ripening process. The plants that are being grown for producing the second crop should be kept daily tied to the wire, and as soon as enough flowers are opened they should be pollinated.

MUSCAT OF ALEXANDRIA GRAPE.—Continue to tie down and remove all laterals that are not required. Overcrowding the foliage must be avoided, and as soon as the flowers are expanding increase the temperature to 75 deg. At present keep the paths and walls nicely damped down, and at the blooming time a little drier atmosphere should be maintained. I am a firm believer in setting the grapes with the aid of a fine spray from the syringe, and when the vines are in really good health there is no better method. See that the roots are not suffering from an insufficiency of moisture. In narrow borders the roots will have so well filled them that the vines will take a surprising amount of water.

EARLY VINES.—Where the grapes are approaching or commencing the stoning period maintain an equable temperature, as the development of the fruits is proceeding slowly, and therefore it is a good plan to avoid excitement by fluctuating temperatures. As soon as it is seen that the fruits are commencing their last swelling, a good watering is, as a general rule, requisite.

FIGS (EARLY). Give these copious supplies of diluted liquid manure, and admit plenty of air on all sunny days, and shut up with copious syringings. Attend to the stopping and tying in of young shoots, giving plenty of room to shoots with the second crop, and as the fruits are reaching maturity give more air.

FIGS IN COOL HOUSES should be promptly disbudded, leaving no more growths than is absolutely necessary. It is always best to take these off before overcrowding takes place, as wood and fruits may both suffer.

PEACHES AND NECTARINES. — The early house must now be kept warm and free from great variations of temperature while the process of stoning is being carried on; but see that the roots, especially those in close proximity to the pipes, do not become dry, or this will cause the fruits to drop. Take off the surplus fruits from heavily-laden trees in the second house, and keep the growths neatly tied in. Late houses should be fumigated and disbudded as early as possible, and kept cool by giving abundance of air.

ORCHARD HOUSE.—Give liberal supplies of air on all fine days, and shut up with sunheat. Trees growing on raised beds should have copious supplies of liquid when necessary. Well-drained borders will require a good watering every other week, and care should be taken that the water reaches the soil about the roots.—W. A. Cook, Leonardslee Gardens.

For pretty gardens and lovely flowers read The Flower Garden, by T. W. Sanders, F.L.S. An up-to-date work on the formation, planting, and management of the garden, with description and cultivation of flowers and plants adapted for outdoor culture. Price 7s. 6d. net, by post, in box, 8s., from W. H. and L. Collingridge, 148 and 149, Aldersgate street, London.

ROYAL SHOW

NORWICH,
June 26th to 30th, 1911.

President—HIS MAJESTY THE KING.

72nd ANNUAL EXHIBITION of Horses, Cattle, Sheep, Pigs, Poultry and Farm Produce; Jumping, Horse-Shoeing and Butter-Making Competitions, Agricultural Education, Forestry and Horticulture.

HORTICULTURE

ENTRIES CLOSE MAY 31st.
(Live Stock Entries Close May 20th).

Prize-sheets and Entry Forms will be forwarded on application to

THOMAS McROW, Secretary.
Royal Agricultural Society of England,
16, Bedford Square, W.C.

PRELIMINARY ANNOUNCEMENT.

A GREAT SWEET PEA SHOW will be held, under the auspices of the Eastbourne Horticultural Society and the Chairman and Directors of the Devonshire Park Company, in

THE FLORAL HALL, DEVONSHIRE PARK, EASTBOURNE,

On WEDNESDAY and THURSDAY, July 19th and 20th, 1911.

ATTRACTIVE PRIZE LIST.

Special Classes for Ladies and the Trade.

Schedules for particulars of the Show may be obtained from Mr. C. R. AUST, Honorary Secretary, 5, Cornfield Road, Eastbourne.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

National Auricula and Primula Society.

The National Auricula and Primula Society held its annual exhibition at Vincent Square on Tuesday, the entire show occupying four tables in the hall. The premier class for twenty-four show varieties found Mr. Jas. Douglas, Great Bookham, once more in the front rank with fine, well-finished flowers of Heatherbell, Queen of Spain, Mikado, Favourite, Mrs. Harry Veitch, Wheatear, Prince Charming, George Lightbody, Rachel, Marmion, Victor, and Acme. Mr. W. B. Cranfield, Enfield Chase, was second with nice examples of George Rudd, Olympus, Heatherbell, Mrs. Phillips, Sunshine, Abbe Liszt, and Lapwing. Messrs. Phillips and Taylor, Bracknell, were third; and Mr. W. M. Shipman, Altrincham, fourth.

There were four competitors for twelve show varieties, Mr. Jas. Douglas leading off with a superb dozen. His varieties were: Mikado, Rachel, Favourite, Shirley Hibberd, Queen of Spain, Conservative, Harrison Weir, George Lightbody, Abbe Liszt, Marmion, Eucharis, and Wm. Smith. Messrs. Phillips and Taylor was second with excellent examples of Heatherbell, Shirley Hibberd, Geo. Rudd, and Mrs. Henwood; Mr. W. B. Cranfield was third.

In the class for six plants Mr. J. L. Gibson, Leatherhead, won well with nice level plants. The varieties were Favourite, Shirley Hibberd, Prince Charming, and George Lightbody, of the best type. Mr. W. H. Parton, Hollywood, Birmingham, was a capital second, though some of the flowers gave evidence of rapid development. Mr. F. W. Price, Beckenham, was third; and Mr. J. T. Bennett-Poe, 29, Ashley Place, was fourth.

For four plants of show varieties Mr. F. W. Price led off with really good specimens of Mrs. Henwood, Olympus, Richard Headley and Acme. Mr. W. H. Parton was second, and Mr. J. T. Bennet Poe third. There were but five entries for a single plant in the green-edged section. Mr. Jas. Douglas was first with a fine plant of Prince Charming. Mr. Shipman was second with Miss Ethel; the same exhibitor was third with the same variety.

The best grey-edged variety was Acme, from Mr. Jas. Douglas; Mr. Shipman was second with the same variety; while the same exhibitor was third. Mr. Jas. Douglas again scored in the selfs with Harrison Weir; Mr. J. T. Bennett-Poe was second with a charming plant of Mikado; Mr. W. H. Parton third with Harrison Weir.

In class nine for a pair of selfs, Mr. H. R. Taylor, Cheam, was first; Mr. J. L. Gibson being second with Capella. For four plants, Mr. W. G. Langlands, Epsom, was first with nice even examples of Mikado, Favourite, and George Rudd in fine form; while Mr. C. C. Price, Brentwood was second.

Class eleven had but one entry, that of Mr. J. L. Gibson, Leatherhead, who was deservedly awarded the first prize.

For twenty-four alpine varieties Mr. Jas. Douglas was first with a superb collection. The best varieties were Prime Minister, Phyllis Douglas, Argus, Prince of Tyre, Admiration, Mrs. Douglas, Roxborough, and Commander Douglas. Messrs. Phillips and Taylor, Bracknell, were an excellent second with some very bright colours. The best varieties were Majestic, Charmer, Empire, Argus, Salome, and Ideal. Mr. W. M. Shipman was third, with weaker plants.

For twelve alpines Mr. James Douglas was also invincible; he had clean fresh examples of Ilene, Robert Bruce, Muriel, Admiration, and Argus; Messrs. Phillips and Taylor, Bracknell, were second; Mars, Stella, Daphne, and Capella were their chief varieties, while Mr. W. M. Shipman came third with excellent plants of Bluebell, Verbal, and Admiration.

There were seven entries in the class for six plants, Mr. F. W. Price being in fine form with Argus, Majestic, Phyllis Douglas, Rosy Morn, and Mrs. James Douglas; Mr. W. H. Parton was second, and Mr. W. B. Cranfield third.

Class sixteen was for four plants, and Mr. C. C. Price led off in fine style, followed by Messrs. F. W. Price and W. H. Parton in the order named.

For a single plant, gold centre, Mr. W. H. Parton was placed first with Mrs. Danks, Mr. Shipman being second with Exquisite, while the same exhibitor was third with Duke of York.

Class eighteen found Mr. J. L. Gibson, Leatherhead, first for white centres, with a fine example of Orion. Mr. F. W. Price was second with Argus, and Mr. J. Bennett Poe third with Phyllis Douglas.

For six alpines Mr. J. Dupuy, 4, Highlands Gardens, Ilford, won first prize, Mr. Shipman being second.

Mr. H. R. Taylor won first for six alpine seedlings with a very creditable lot. There were but two entries for twelve fancy varieties; and, as might be expected, Mr. James Douglas was again placed first for some fine plants of the following varieties: Soleil, Dorothy Cutts, May Day, Mrs. Gardner, Sweet Ann Page, Ashstead, Sunset, and some good seedlings. Mr. W. B. Cranfield was second with some nice examples of Belle, Flambeau, Isir, and May Day.

Sir J. T. D. Llewelyn, Bart., Swansea, won first prize for twelve primulas arranged in two baskets. The kinds shown were P. rosea, P. frondosa, P. involucrata, P. auricula, P. Foresti, P. Palmiri, P. Kewense, P. obconica, P. malacoides, P. boveana, and P. denticulata. A very fine and interesting display.

For twelve polyanthus there were but two exhibitors. Mr. F. Bostock, Springfield, Northampton, won premier place with very fine flowers. Mr. S. Mortimer, Farnham, was second with a greater variety of colours, though lacking somewhat in size. Mr. S. Mortimer won first for a single plant with a nice white form.

Mr. F. Bostock was awarded first prize for the group of primroses and polyanthus. His flowers were large, fresh, and beautifully bright. Mr. S. Mortimer was placed second with smaller flowers, but a grand strain. The polyanthus made a really fine show.

Mr. James Douglas was to the fore for six double primroses, the crimson forms being by far the best. Mr. John Crook, Camberley, Surrey, had a beautiful basket of polyanthus in art shades. Messrs. Storrie and Storrie, Glencarse, had a fine display of polyanthus well set up in moss. The colours were tastefully arranged. The strain is a very fine one.

The premier show variety was the grey-edged George Lightbody, from Mr. James Douglas. The premier alpine was Majestic from Messrs. Phillips and Taylor.

Devon Daffodil and Spring Flower Society.

The eighth annual show of the above society was opened in the Guildhall, Plymouth, on April 19, and it was certainly the best show that the society has ever held. The daffodils, both in the open and in the Devon section, were of very high quality, and the competition was very keen, many of the classes having between twelve and fourteen entries. The flowering shrubs were superb, and the fortnight that had elapsed since the show of the Cornwall Daffodil and Spring Flower Society at Truro had brought many shrubs that were then not available into full bloom. Last year the society, thinking it wise to endeavour to popularise itself in other parts of the county beside the neighbourhood of Plymouth, where the shows had always been held up to that time, arranged for its exhibition to be held at Barnstaple. This innovation certainly had the effect of adding considerably to the membership, but owing to a certain lack of support from Plymouth, the entries rather fell off, and this year the society has returned to Plymouth as the site of the show.

The class for fifteen varieties of hardwooded shrubs or climbers was the finest ever seen in Devonshire, and even compared favourably with the preceding show at Truro. There were four Cornish and two Devon entries, and to show how close the competition was, it may be stated that only six points divided the six stands, any one of which would have won in an ordinary year. In the Devon class in the same section the competition was equally keen, there being only two points between the first and second prize stands. Many of the Cornish exhibitors competed in the open daffodil classes, and Truro winners were again successful.

The following is the prize list: Twenty-four varieties of daffodils: First prize, Miss Clarice Vivian with Aragon, Beacon, Incognita, Bullfinch, Castile, Will o' the Wisp, Stonechat, Mrs. Bowley, and Wheatear, all with bright cups; Ptarmigan, Homespun, Queen Sophia, Greeneye, Madame de Graaff, and Mrs. Camm. The class for a group of daffodil seedlings not yet in commerce unfortunately did not fill, Mr. J. C. Williams, who usually sends a collection of his beautiful unnamed seedlings, not exhibiting. Nine Magni-coronati: First prize, Miss Clarice Vivian with P. R. Barr, M. J. Berkeley, Grandis, Empress, Weardale Perfection, J. B. M. Camm, Mrs. Camm, Madame de Graaff, and Lord Roberts. Nine Medio-coronati: First prize, Miss Pope with a remarkably fine stand, containing Bernardino, Sebastian, White Star, Lady Margaret Boscawen, White Queen, Strongbow, Estelle, Homespun, and

Gold Chalice. Three incomparabilis, with white perianths: First prize, Miss Pope with Bernardino, White Queen, and Lady Margaret Boscawen. Three incomparabilis with yellow perianths: First prize, Miss Clarice Vivian with Leonie, Autocrat, and Queen Sophia. Three Barri: First prize, Miss Pope with Circlet, Southern Star, and Silene. Three Leedsi: First prize, Mr. H. G. Hawker with Evangeline, Dryad, and White Lady. Three Parvi-coronati: First prize, Miss Clarice Vivian with Ptarmigan, Stonechat, and Bullfinch. Three Poeticus: First prize, Mr. H. G. Hawker with Cassandra, Almira, and Herrick. Best bloom Magni-coronati: First prize, Mr. H. G. Hawker with Mrs. H. J. Veitch; second prize, Weardale Perfection; third prize, Glory of Noordwyk. Best bloom Medio-coronati: First prize, Miss Pope with Bernardino; second and third prizes, White Lady. Best bloom Parvi-coronati: First prize, Miss Pope with Silene; second prize, Incognita; third prize, Cassandra.

In the Devon section for daffodils, the big class for fifteen varieties was won by Mrs. Soltau Symons, who also took first prizes for six Medio-coronati; for three Parvi-coronati; for best bloom of Magni-coronati; and for best bloom of Parvi-coronati. Other winners of first prizes in these classes were Mrs. Bain-Bridge, Hon. Mrs. Colborne, Mrs. Parlby, and Mr. C. Bewes.

Spring flowers, collection of twelve varieties: First prize, Mr. H. Grigg, with a stand of exceptional merit. Six bunches of anemones: First prize, Miss A. Yonge. Six bunches Anemone fulgens: First prize, Mrs. Bainbridge. Three varieties carnations: First prize, Mr. C. Bewes. There was no entry for a group of rhododendrons, as the plants have been so terribly cut by the late frosts. The Earl of Morley was the only one to send a single truss of rhododendron, and took first prize. For the finest camellia bloom, the first prize was awarded to Mr. H. Grigg for a superb blossom of Camellia reticulata, fully seven inches in diameter. For a collection of fifteen varieties of hard-wooded flowering shrubs and climbers, first prize was won by Mr. H. Grigg, who showed Clematis indivisa lobata, Ceanothus rigidus, Magnolia soulangeana, Ribes speciosus, Cerasus Watereri, Forsythia suspensa, Amelanchier canadensis, Jasminum primulinum, Prunus persica flore-pleno, Distylium racemosum, Drimys aromatica, Erica australis, Pyrus nivalis, Calceolaria violacea, and Citrus trifoliatus. As has been said the competition was so close that there were only two points between the first and second prize stands. Mr. T. B. Bolitho gained second prize with an excellent stand, in which were several rare specimens, including Viburnum rugosum, Chorizema Lowi, Acacia diffusa, and Correa bicolor; Prostanthera rotundifolia in Rev. A. Boscawen's stand, a pretty shrub with purple flowers, was given a Certificate of Merit.

The attractions of the show were much heightened by the nurserymen's exhibits. The Devon Rosery, Torquay, staged the finest display of pot roses that had ever been seen at Plymouth, many of the plants bearing large and very perfect blooms. Among the most noticeable were Madame de Watteville, A. Singer, Celia, Leonie Lamesch, Maman Cochet, White Maman Cochet, Caroline Testout, Climbing Caroline Testout, Madame Abel Chatenay, Jean Ducher, Madame Gabrielle Drevet, Ulrich Brunner, Liberty, Innocente Pirola, Mrs. John Laing, Mrs Sanford, and Climbing Captain Christy, while there were many large ramblers. This stand received a Certificate of Merit. Messrs. Robert Veitch and Son, Exeter (Certificate of Merit) had a very interesting collection of plants, including a fine set of tree carnations, gerberas in many colours, Celmisia holosericea, C. Lindsayi, and C. coriacea, Cytisus præcox, Magnolia soulangeana nigra, Acacia Drummondi, A. cordata, Callistemon salignus, Rhododendron Yodogama, Cytisus Daisy Hill (a variety of C. andreanus), Boronia megastigma, Dendromecon rigidum, Caltha polypetala, Clematis montana rosea, C. Nellie Moser, Camellia reticulata, and several ericas. Messrs. Barr and Sons (Gold Medal) had a fine show of daffodils, including Torchlight, Bernardino, Venus, Lucifer, Lolah, Crœsus, a very pretty flower with pale yellow perianth and brilliant and spreading orange cup; Socrates, Peter Barr, Bedouin, Cœur de Lion, Lady Margaret Boscawen, Red Beacon, Ibis, Eoster, Ice Peak, Great Warley, Charm, White Queen, Oracle, Crown Prince, and Diana.

The attendance was very small during the afternoon, comparing very badly with the crowds that thronged the show at Truro, and it was said that the exhibition had not been sufficiently advertised.

National Rose Society.

Tuesday was a busy day for the members of the National Rose Society, for the Council arranged at the Westminster Palace Hotel three meetings in the afternoon and a dinner in the evening, and, as they were all exceptionally well attended, it is evident their strength was not overtaxed. The first meeting was that of the Council, which assembled at two p.m. for the transaction of the ordinary business; at three p.m. the special general meeting of the members was held for the consideration of the revised rules; and two hours later the members again assembled for the purpose of taking part in the conference on roses. This meeting extended over nearly two hours, the proceedings being brought to a close within ten minutes or so before seven p.m., the hour fixed for the dinner. The Rev. J. H. Pemberton, president of the society, occupied the chair at the three meetings, and the dinner, and thus established a record in the history of the society.

The special general meeting at three p.m. was a very short one, as the whole of the alterations that had been made in the rules and bye-laws were accepted by the members without comment. The President, in opening the proceedings, explained that the Council had, as requested by the members at the annual meeting, revised the rules in such manner as to more readily admit of the infusion of new blood than was previously possible. Hitherto the practice had been for the Council to prepare a house list of officers and members of committee, and submit such list to the members, who had the power to strike out any names they might wish, and substitute others in their place. Under the new rules it would be open to members to send in nominations on or before a given date (November 1), and such names would be entered on a list that would be sent to the members. Then, if the number of names is in excess of the vacancies, they can strike out such names as they may wish and hand the lists to the scrutineers at the annual meeting. The motion that the rules and bye-laws be received and adopted was moved by Mr. C. E. Shea in a brief speech, and seconded by Dr. Williams, who had taken a leading part in the work of revision. There was no discussion, and, on the motion being put from the chair, it was unanimously adopted.

One of the larger rooms of the hotel was secured for the purpose of the conference, but the attendance was so large that some difficulty was experienced in seating the members. The President, in expressing his regret for the crowded state of the room, said the conference was of an experimental character, and, as the experiment had proved so great a success, the Council would be careful in providing a larger room. Mr Pemberton proceeded to give his address on "Roses for the Garden," and it was exactly what such address should be—plain, practical, and interesting, and was listened to with closest attention by the two or three hundred members present, and was highly applauded. Owing to the pressure on our space, it is not possible to give even a summary of the address in this issue, and we shall refer to it again in our issue of the 6th prox.

Those who took part in the discussion included Mr. H. R. Darlington, who spoke on the points of importance in garden roses; Mr. Rolt, who referred to the colours of roses; the Mayor of Colchester (Mr. Frank Cant), who mentioned the failures that often occurred through injudicious pruning; Mr. Farrow, who referred to the eradication of mildew on roses; Mr. R. E. Felton, who spoke in appreciative terms of the Pernettiana roses; Mr. Easlea, who dissented from some of Mr. Darlington's views; Mr. G. Birch, who directed attention to the desirability of preparing a calendar showing the dates of the flowering of the several classes; and Mr. G. Paul, V.M.H., who spoke appreciatively of the value of the strong growing roses for shrubbery borders.

At the close of the discussion, a hearty vote of thanks was, on the motion of Mr. George Gordon, V.M.H., seconded by Mr. J. Green, accorded the Rev. J. H. Pemberton for his address and his conduct in the chair.

There were about sixty-five present at the dinner, and the guests included a considerable number of ladies. There were but few toasts, and, as the speeches were commendably brief, a very enjoyable evening was spent. The three loyal toasts were, as a matter of course, proposed by the President, and Mr. George Paul, V.M.H., submitted the toast of "Continued Success to the National Rose Society," and this was responded to by Mr. J. T. Strange. Mr. E. Mawley, V.M.H., proposed "The Health of the President," and testified to the remarkable ability he had shown in presiding over the several meetings, and in acknowledging the compliment Mr. Pemberton observed that whatever may be said with regard to other flowers, there could be no question that the rose is the Coronation Flower.

Broughty Ferry Horticultural Association.

The ordinary monthly meeting was held in the British Restaurant on the evening of the 18th inst. Mr. James Bethel presided over an exceedingly large number of members, as well as a number of foresters and gardeners from outlying districts, who had assembled to hear Mr. William Davidson, head forester to the Earl of Dalhousie, on the Panmure estate. "Notes on Forestry" formed an admirable text, from which the lecturer delivered a most admirable scientific and practical lecture, in which every argument went to show the valuable asset timber growing in this country would prove if taken up by qualified men who thoroughly understood the scientific, as well as practical, principles of cultivation. He deplored the fact that very often plantations were made with a subservient purpose in view, viz., "The preserving of game," which was a real hardship to the higher aims of the foresters, as rabbits and hares were his worst enemy, and caused nearly as much heart-burning as a careless sportsman often did in trying to remove some of them.

In summing up the financial position, the lecturer criticised the action of the Government in dealing with the afforestation scheme, pointing out that the Government had passed over the recognised source of information, i.e., the Royal Arboricultural Society, and relied on the meagre information obtained from County Councils, the members of which could not give unbiassed evidence. Whatever influence State afforestation might have, it must be separated from unemployment in the cities. Passing on to deal with the import timber trade, and dealing statistically with current prices and those of ten to eighteen years ago, he proved conclusively that, while Memel pitch pine and other wood was becoming scarce, the prices were still going up. As a substitute for Memel our own mature Scotch fir was equally as good as the finest, but joiners did not like it simply because it was harder to work.

When dealing with planting Mr. Davidson advised the choice of young plants, and the L notch in practice when planting; also care in selecting kinds and suitable site and soil. He had no hesitation in saying that the exposed situations on the barren and rocky eminences of the East coast were greatly re-

Make your Garden a delight by using

CANARY GUANO.

There is nothing like it for producing the best possible results in the garden. For improving Lawns, increasing the size and brilliance of Flowers, and producing heavy yields of Vegetables there is no Fertilizer that has given such excellent results. Canary Guano is sold by practically all Seedsmen throughout the United Kingdom and is used all over the world. TRY IT.

Sold in **6d., 1/-** and **2/6** Tins; and in bags from **3/6** to **20/-.**

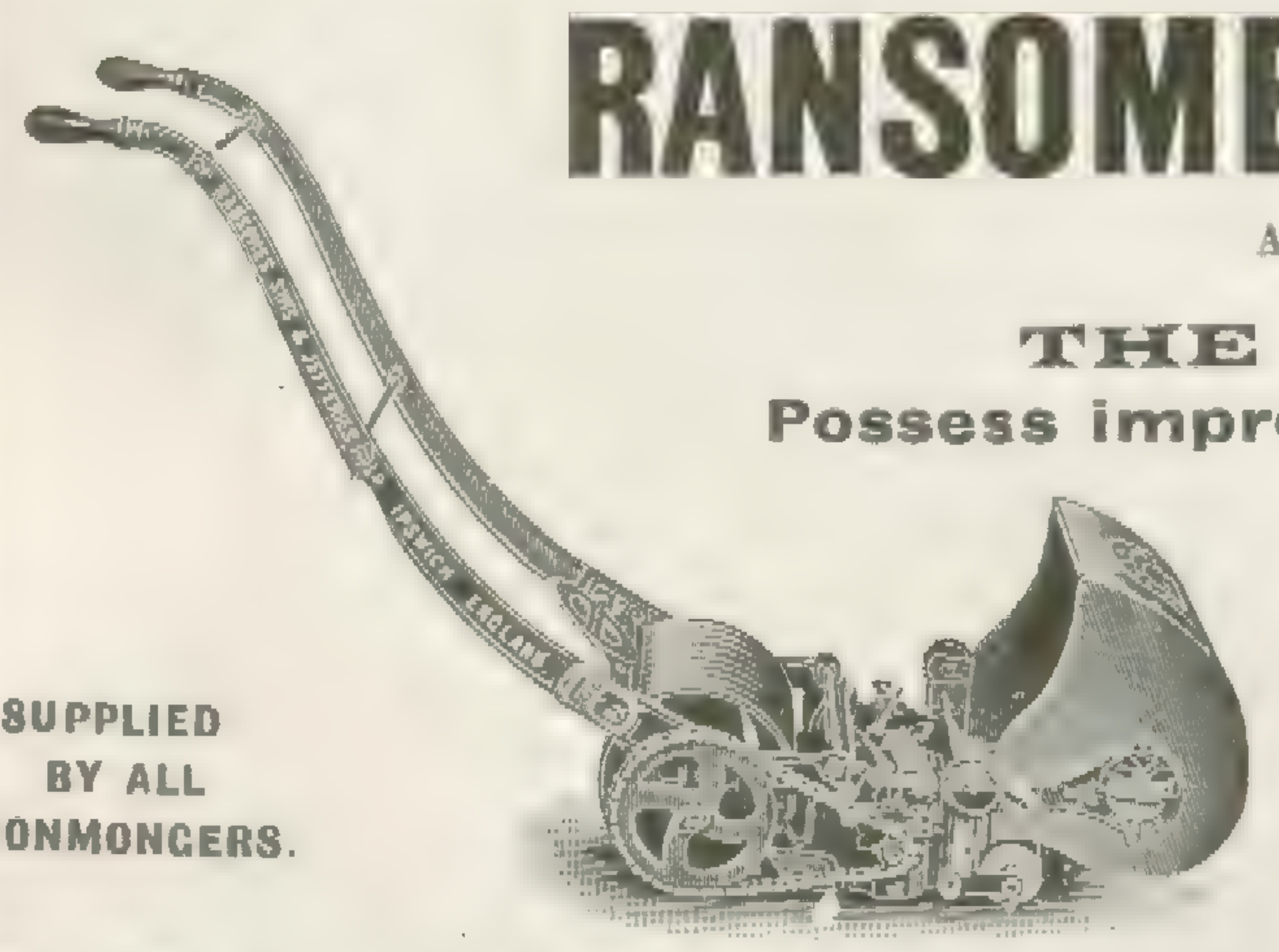
Further particulars sent post free by the Manufacturers

THE CHEMICAL UNION, LTD, IPSWICH.

RANSOMES' LAWN MOWERS

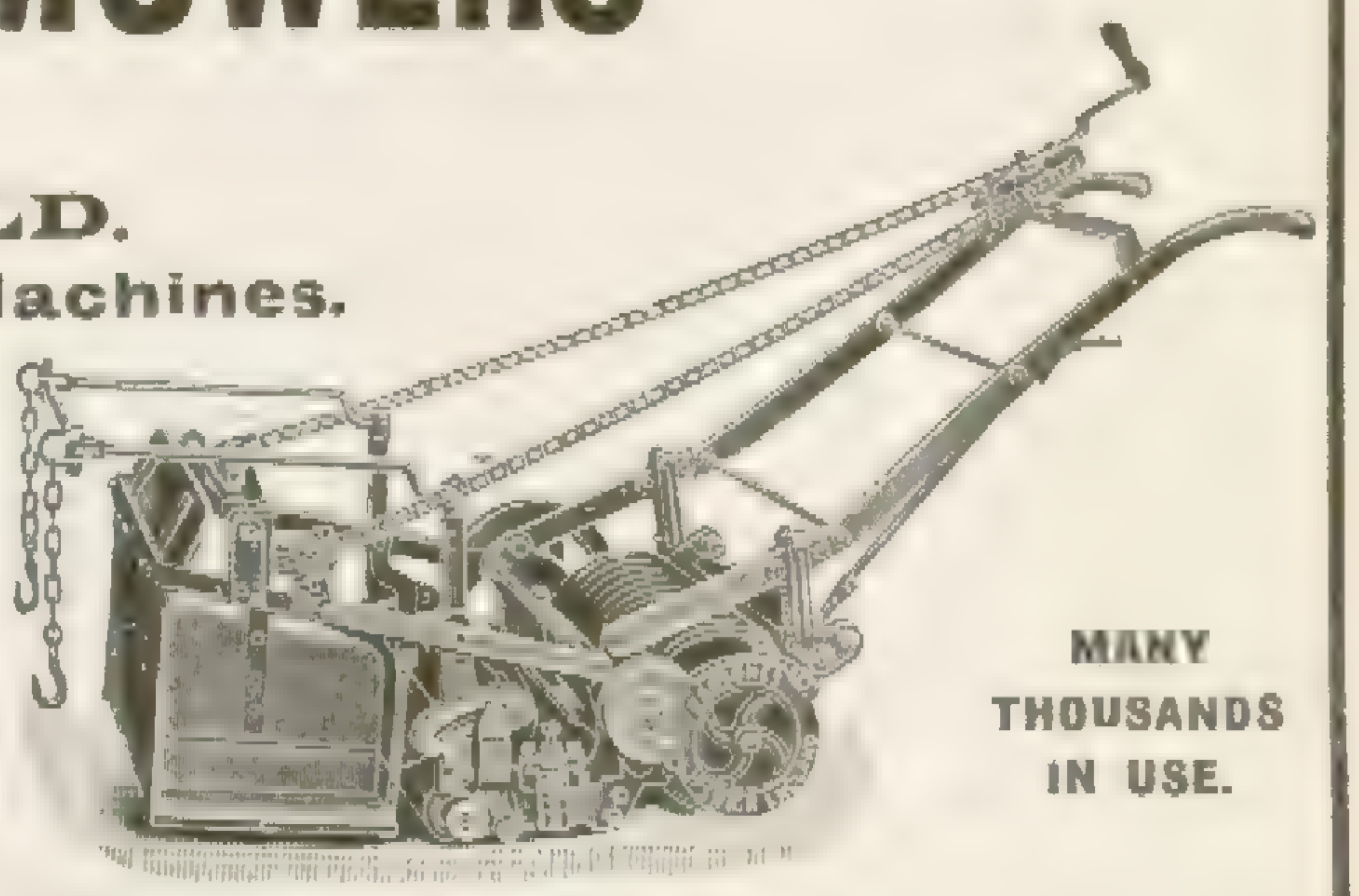
Appointed by Royal Warrant.

THE BEST IN THE WORLD.
Possess improvements embodied in no other Machines.



Recent Awards.

3 GOLD MEDALS.
7 SILVER MEDALS.



SUPPLIED BY ALL IRONMONGERS.

MANY THOUSANDS IN USE.

HAND POWER MACHINES.
In all kinds and sizes.

MOTOR LAWN MOWERS
The first brought out. Reputation Established.

HORSE and PONY MOWERS.
The best large machines.

Illustrated Catalogues Free on Application to— **RANSOMES, SIMS & JEFFERIES, LTD., THE ORWELL WORKS, IPSWICH.**

WELL BORING.

MERRYWEATHERS' ECONOMIC SYSTEM.

Merryweathers' men with Steam Tackle boring a well.

Pure and Abundant Supplies.

MEN AND TACKLE SENT AT A MOMENT'S NOTICE.

Work Carried Out with Economy and Despatch.

Write for Book on "Water Supply to Mansions."

MERRYWEATHER & SONS,
63, LONG ACRE, LONDON, W.C.

WATSON'S LAWN SAND.

(The Only Original.)

Destroys Daisies, Plantains, Dandelions, &c., and at same time Invigorates the Grass.

34/- per cwt.; 56lb. Kegs, 18/-; 28lb. Tins, 9/6. Canisters, 5/-, 2/6, and 1/-.

Please see that you get the genuine article.

Sold by Seedsmen and Nurserymen.

A. J. BARBOUR & Co., 8, Upper Fountaine St., LEEDS

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

Extracts from 35th annual collection of reports:—

NATIVE GUANO for POTATOES, VEGETABLES, etc.

A. J. Beard, Erdington: "Potatoes, splendid, free from disease. Best I ever had."—H. Chester, Nantwich: "Best onion manure I ever used. Grand for onion fly."

NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc.

J. Cant, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. Frampton, Titchfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED**, 29, New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted

---

SMITH'S WEED KILLER
is absolutely "PERFECT."
4 Tins of Powder or 4 Gallons of Liquid to make 100 Gallons.
6/6 Carriage Paid.
MARK SMITH, Ld. *Louth, Lincolnshire.*

PERGOLAS. Larch Poles at 1d. per foot. List Free. PATRICK'S, Otley, Yorks.

OAK CRAMBLES. Peeled and dry at ½d. per foot. PATRICK'S, Otley, Yorks.

ROSE ARCHES. Larch Poles at 1d. per foot. PATRICK'S, Otley, Yorks.

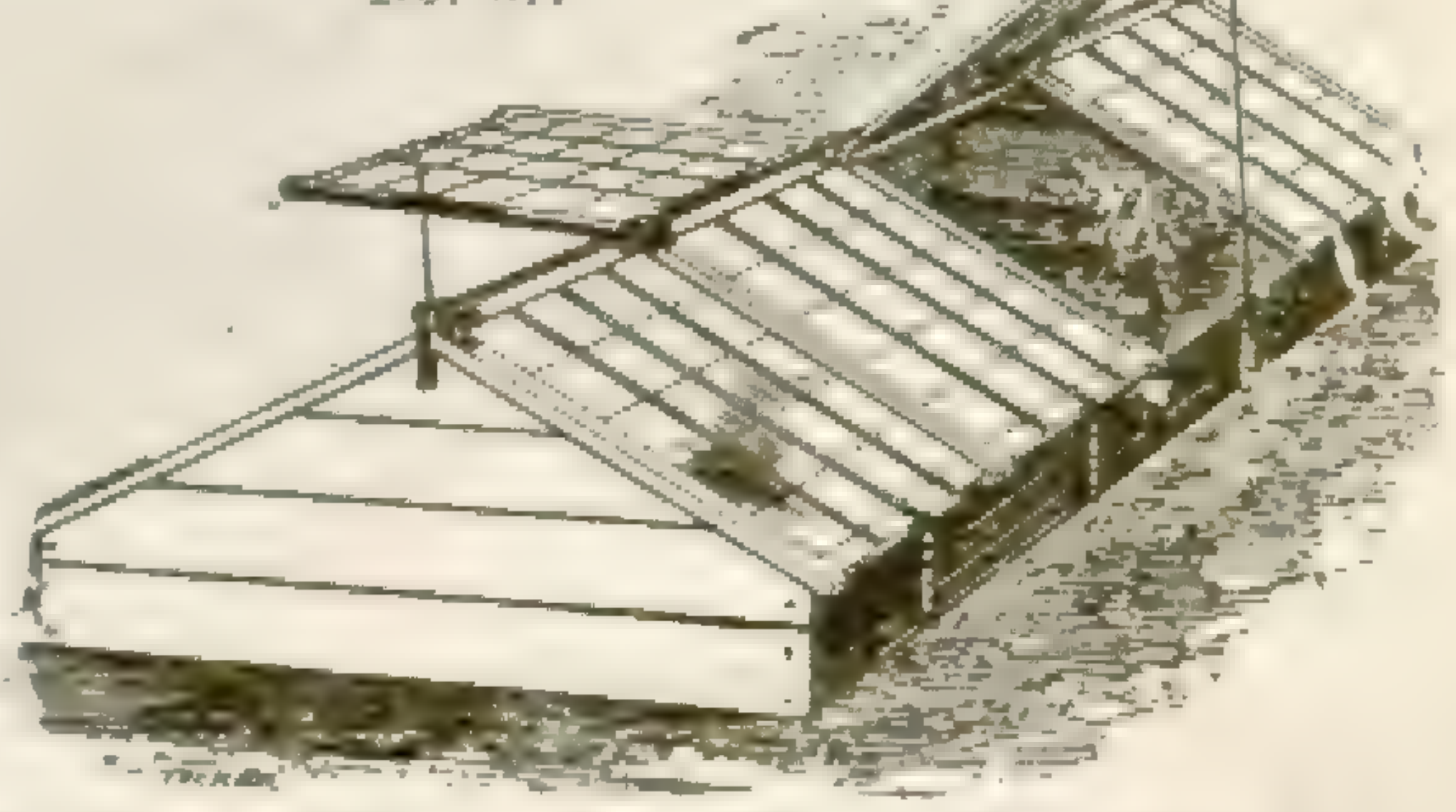
TREE STAKES AND GARDEN RODS. Lists free. PATRICK'S, Otley, Yorks.

WM. DUNCAN TUCKER & SONS, LTD.

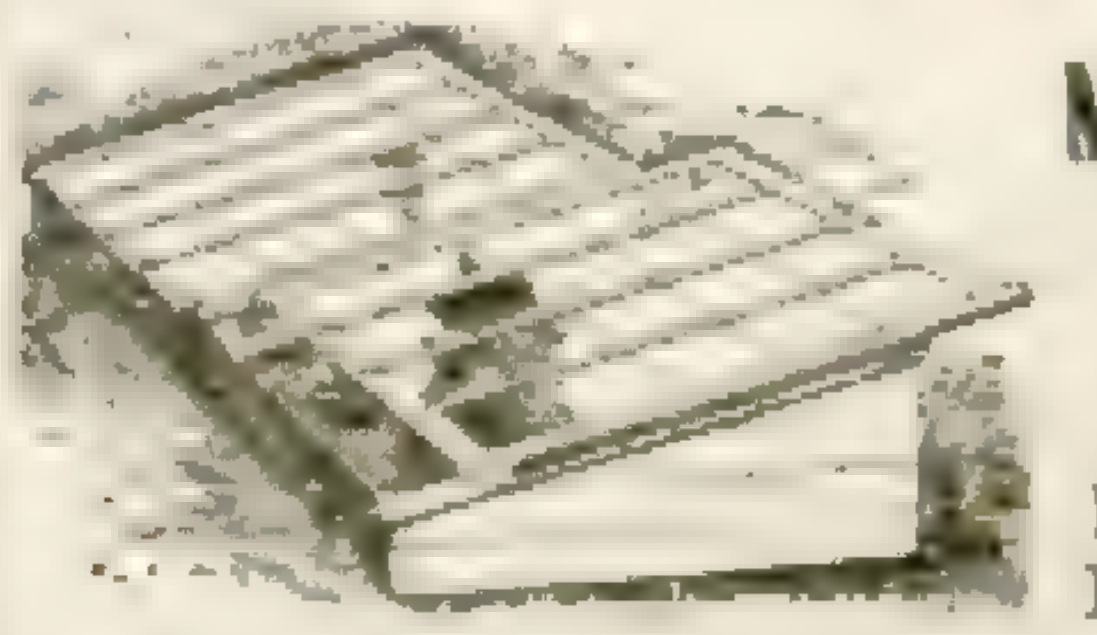
Horticultural Builders, 27, Cannon St., London, E.C.
Works: Tottenham.

GARDEN FRAMES in variety.

PLANT PRESERVER.
No. 37.



6ft. by 4ft.	£2 1 0	12ft. by 4ft.	£3 10 0
8ft. by 6ft.	3 17 0	16ft. by 6ft.	7 0 0



Melon & Cucumber Frame
No. 38.

6ft. by 4ft.	£1 14 0
8ft. by 6ft.	2 14 0
12ft. by 6ft.	3 14 0
16ft. by 6ft.	4 14 0

Carriage paid to most stations on orders of 40/- in value. Please mention this paper.

Phytobroma

Barr's New Plant Food
For Flowers, Vegetables and Fruit of highest quality & guaranteed analysis

Per cwt., 20/-; ½ cwt., 12/6; 28lb., 7/6; 14lb., 4/6; 7lb., 2/6; Sample Tins, 1/-.

Prepaid orders for 28lbs. and upwards, Carriage Paid. Circular, with full particulars, on application.

BARR and SONS,
11, 12, and 13, KING STREET, COVENT GARDEN, LONDON.

PEA TRAINERS. The "Paragon" and "Peafold" (patent), made 4ft., 5ft., and 6ft. high and any length. Prices from [illegible] per set, carriage paid. Write for leaflet. THE PEA TRAINER CO., Bridge Street, Banbridge.

sponsible for the spread of "Larch blister," which was now a dreaded plague. When lucidly explaining the principles of thinning and pruning, the lecturer minutely described these practices through the three decades of forest-making; these he referred to as the thicket, pole, and high forest stages.

In a lengthy discussion various questions were asked, and answered. The following by their remarks added considerable interest: Mr. Smith, forester at Camperdown; Mr. Campbell, forester at Strathmartine Castle; and Mr. MacRea, City Parks, Dundee; while the local gardeners, Messrs. Grant, Christeson, Slater, Bell, and Man took part in the discussion.

On the motion of Mr. D. C. Hutcheson, Mr. Davidson received quite an ovation for his eloquent address, and his information in reply to the various questions.

The exhibits consisted of one plant of Hydrangea Hortensis, growing in a four-inch pot, and carrying seven well-developed heads, and a vase of Abutilon megapotamicum and a spike of Rehmannia angulata, all from the president, whose remarks on each evoked considerable discussion and interest.

Bournemouth Gardeners' Association.

On April 18 Mr. Thomas Alexander, of Parkstone, Dorset, gave a very interesting lecture on "Insects of the Garden."

There was a very fine exhibition of hardy and greenhouse flowers in competition for the prizes offered by the society. For six vases of hardy flowers, distinct, with own foliage, grown out of doors, Mr. Tompkins, gardener to the Dowager Lady Miller, was first with a lovely collection; Mr. C. Nippard, gardener to J. J. Norton, Esq., was a close second. In the class for four vases of greenhouse flowers, distinct, with any foliage, the same exhibitors won the two chief prizes, but Mr. Nippard beat his opponent Mr Tompkins, who was a very close second. In the first prize collection there was a beautiful vase of the hybrid greenhouse rhododendron, Countess of Haddington, the flowers being large, pure, and very fragrant. Quite a large batch of new members joined the association, which is now a very strong one. Miss Rooper, an ardent supporter of the association, offered, through Mr. Reeves, the hon. treasurer, one of her framed paintings as a prize to be awarded at the end of the year to the competitor who receives the highest number of points.

In his lecture, Mr. Alexander dealt chiefly with the insects which were more the friends of the gardener than his enemies. He referred to the great family of beetles, and especially to that little friend the ladybird, which does so much good by destroying greenfly. At one time they were collected in Germany and brought to this country. Spiders were also dealt with, and Mr. Alexander said they destroyed many kinds of winged insects, from the large bluebottle fly and the mosquito to very minute insects; they were also specially useful to farmers where ground was newly-broken up, as they covered the surface with fine webs, which colud be clearly seen on dewy mornings, and in these webs the crane flies were caught, their long legs becoming entangled, when they were soon destroyed. He mentioned that he once watched a very tiny spider overcome a large crane fly by gradually encircling the legs of the latter with a fine web, hobbling it until the spider could approach the fly and kill it.

In addition to references to insects that were friends of the gardener, Mr. Alexander discussed many that were enemies, and, though they did some good, were destructive. Wasps, moths, cockchafers, and others were all described.

A good general discussion followed, and a very enjoyable evening was brought to a close by the passing of hearty votes of thanks to the lecturer and Mr. Garner, who presided.

"FINGO" Ellis's New Summer Shades. No HOT water simply add COLD water, [illegible] [illegible] [illegible] [illegible] ORIGINAL. (Advt.)

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

SCHIZANTHUSES.—C. K., Reading: In addition to the grandiflora hybrids, the tallest schizanthuses are S. pinnatus, S. retusus, S. retusus Grahami, and S. Hookeri.

FLOWERS FOR JANUARY.—C. K., Reading: We could the better help you if we knew the accommodation at your command. Forced bulbs should figure largely, and there should be perpetual carnations, the latest chrysanthemums, eupatoriums, Euphorbia jacquinæflora and Poinsettia pulcherrima. Begonia Gloire de Lorraine, B. fuchsioides, Eupatorium Weinmannianum, E. ianthinum, Coleus thyrsoideus, zonal pelargoniums, Libonia floribunda, Linum trigynum, and, if orchids are grown, there should be plenty of the cool cypripediums, numerous odontoglossums, calanthes, and Lycaste Skinneri.

FUNGUS ON LEAVES.—G. B., Dublin: The leaves are suffering from an attack of a puccinia that approximates to P. malvacearum, the hollyhock disease. Spray with Bordeaux mixture diluted so that it does not scorch the leaves. Burn badly diseased leaves and keep the plants well away from all malvaceous subjects.

DISEASED APPLE TWIGS.—R. F. M., Devon: The trees are suffering from a bad attack of the scab fungus (Fusicladium dentriticum), and unless prompt measures are at once taken the crop of fruit will be badly scabbed, and consequently of little value. Use Bordeaux mixture at half strength, and spray the trees with it just as the flower buds begin to open; spray again when the petals have fallen, and spray a third time when the fruits are about the size of large peas. If the weather should be wet during the spraying time, a fourth application twelve or fourteen days after the third may be desirable. Next winter thoroughly spray the trees with a solution of sulphate of iron. At present, prepare the Bordeaux mixture carefully, and only use it at half strength, or it will scorch the expanding leafage.

HOT WATER AS AN INSECTICIDE.—R. P., Chester: You will find that water heated to a temperature of 150 degrees Fahr. is an effective and at the same time a safe insecticide. Keep the water at this temperature, and dip the plants in it.

STAKING SWEET PEAS.—F. A. M., West Runton: We believe in staking sweet peas as soon as they are planted, as it affords the plants some protection, and they seem to know that supports are at hand for them to climb. Have you read "Sweet Peas and their Cultivation," by Mr. C. H. Curtis, hon. secretary of the National Sweet Pea Society? It gives full directions for staking and many interesting particulars concerning the use of substitutes for ordinary stakes. It can be obtained post free for 1s. 2d. from The Gardeners' Magazine Office, 148 and 149, Aldersgate Street, E.C.

POTATOES IMMUNE FROM WART DISEASE.—J. E. W., Malpas: It is doubtful whether any potato is absolutely immune from wart disease over several years, but there are varieties which have so far proved capable of resisting an attack even in a district where the disease is frequently met with. In a memorandum issued by the Board of Agriculture last month the following varieties were "recommended as having yielded on the whole good, large crops, free from wart disease". Early varieties—Midlecross Early and Aberlady Early; second early—Conquest and Sutton's Abundance; maincrop—Davies' Laird, White City, The Crofter, The Provost, Langworthy, What's Wanted, and Golden Wonder. The memorandum also states that, "In order to see whether the potatoes which were found to be disease-resistant when planted on certain farms in Lancashire, Cheshire, and Shropshire in 1909, would remain immune when planted in cottage gardens or allotments in other districes, a supply of the 'seed' potatoes of the three varieties, Conquest, Golden Wonder, and Langworthy, saved from the experiments conducted in 1909, was distributed to rather more than fifty centres in Cumberland, Lancashire, Cheshire, Staffordshire, Shropshire, Worcestershire, Warwickshire, Derbyshire, and Nottinghamshire. These potatoes were planted in badly infected soil, and with scarcely any exception proved to be disease-resistant. There is some reason to think that a few of these exceptions may have been due to 'self-set' potatoes of some other variety that had been overlooked, since in only one centre were all three varieties attacked, and in every district in which one variety was attacked, the same variety grown on a neighbouring plot was immune."

DUTCHMAN'S PIPE.—S. R. E., Letchworth: The popular title of Dutchman's Pipe has been given to the very ornamental climber known in gardens as Aristolochia sipho, and the title refers to the quaint, curved, pipe-like shape of the small and ineffective flowers. The plant is quite hardy, and a famous climber, its big, heart-shaped leaves measuring six or eight inches across. Aristolochia sipho needs no special soil, but it should have plenty of room to ramble, as it will cover a large space when established.

WATERING NEWLY-PLANTED SWEET PEAS.—S. W., Oxford: A great mistake is made in watering newly-planted sweet peas with water obtained direct from the pipes. Where possible, the water should be exposed to the air in a tub or tank for a dozen hours or more before use, and even then it will be all the better if a few gallons of hot water are added before use "to take the chill off." We believe that watering sweet peas at this season of the year with water direct from the service pipes is often responsible for a great deal of harm

DAMAGED TULIP LEAVES.—B. D. T., Shepperton: The damage done to the leaves is not due to fungus attack or to animals, but is caused by the sharp frosts and biting winds experienced two or three weeks ago. We are sorry to say we have hundreds of tulips with their leaves damaged in similar fashion, and they look as though they had been sprayed with some burning solution.

NAMES OF PLANTS.

T. L., Surrey.—Masdevallia coccinea Lindeni.

P., Purley.—Not recognised: send when in flower.

M. P. W., Exeter.—1, Cytisus præcox; 2, Rhododendron racemosum; 3, Veronica Hulkeana.

R. O. A., Brampton.—1, Fritillaria meleagris; 2, Erica carnea; 3, Saxifraga oppositifolia; 4, Pleroma macrantha.

F. B., Wanstead.—1, Fatsia japonica (or Aralia Sieboldi); 2, Cyrtomium falcatum; 3, Polypodium aureum; 4, Helxine Soleiroli.

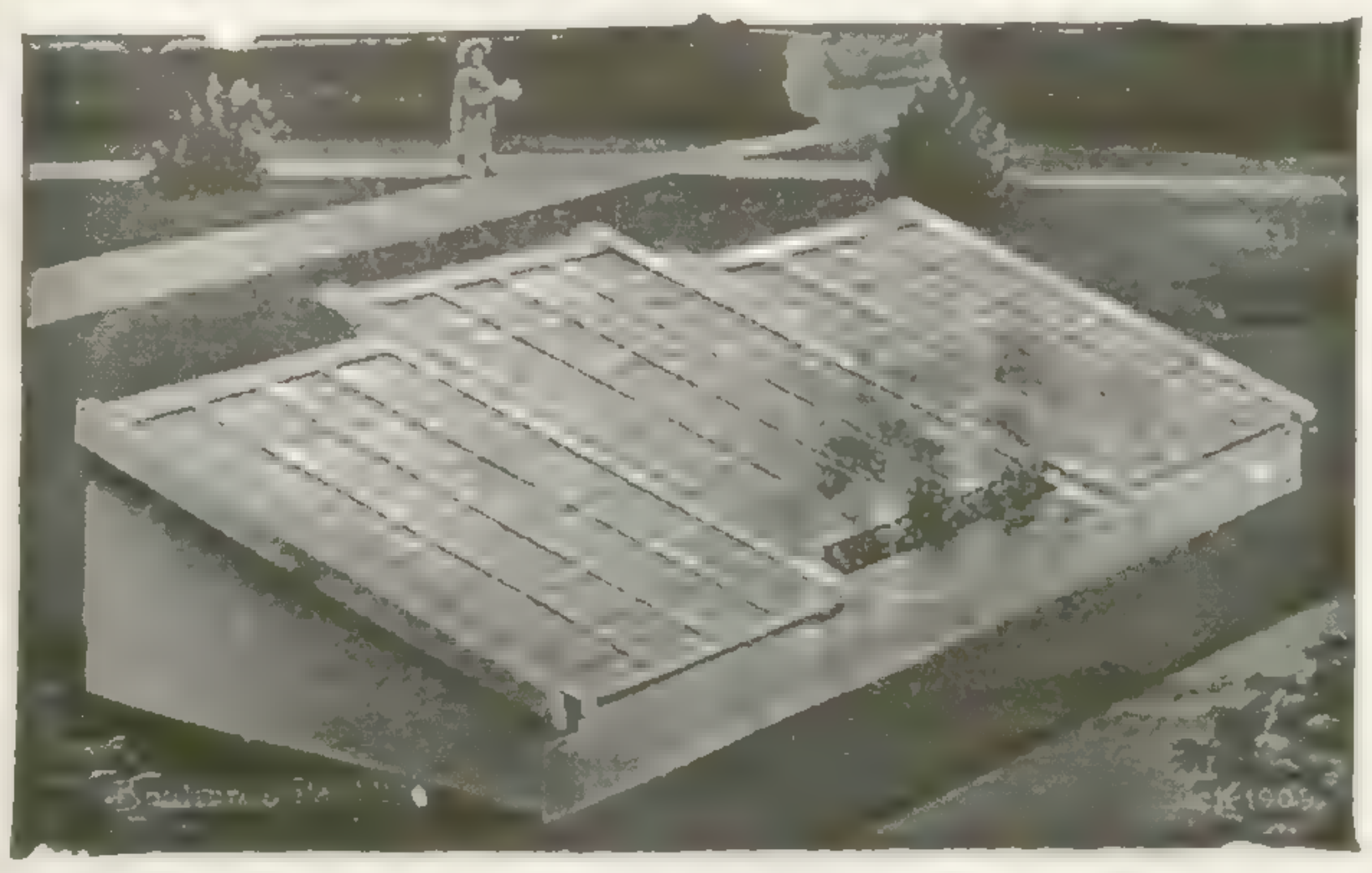
E. T. S., Aylesbury.—1, Garrya elliptica; 2, Elaeagnus longipes; 3, Quercus ilex; 4, Fuchsia procumbens; 5, Alyssum saxatile; 6, Cydonia Maulei.

M. G. E., Sittingbourne.—1, Jasminum nudiflorum; 2, Muscari botryoides; 3, Narcissus Johnstoni Queen of Spain; 4, Diplopappus chrysophyllus; 5, Hedera digitata.

W. W. P., Ulverston.—1, Odontoglossum Pescatorei; 2, Cattleya Schrederæ, a very pretty form; 3, Odontoglossum triumphans; 4, Bifrenaria Harrisonæ; 5, Medinilla magnifica.

SECURE AN EARLY PRODUCTION
of Fruit and Flowers by using our well made

No. 75. MELON AND CUCUMBER FRAME.



4 ft. by 6 ft. ... £2 0 0 | 12 ft. by 6 ft. £3 19 0
8 ft. by 6 ft. ... 3 0 0 | 16 ft. by 6 ft. 4 18 0
Painted three coats, glazed 21 oz. glass.

Garden Frames,
in every variety always in stock.

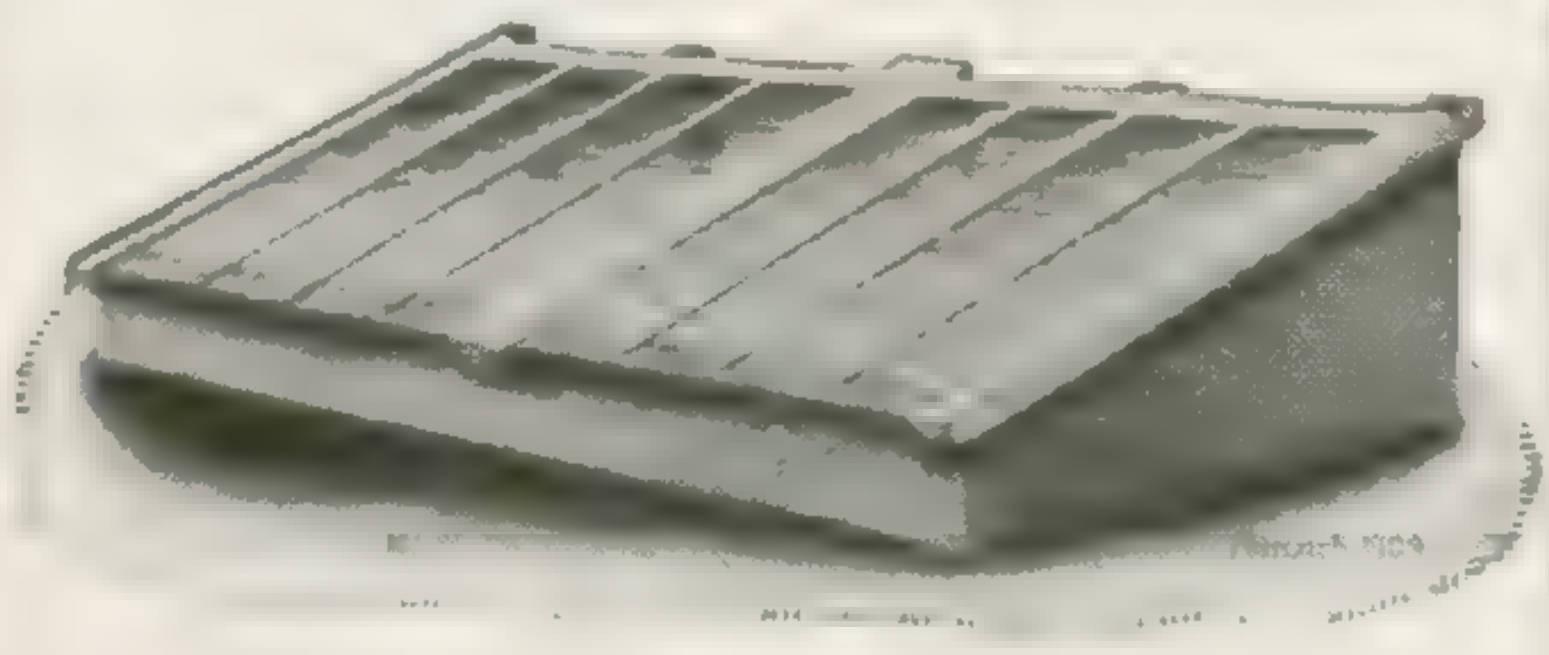
Pit Lights.
6 ft. 1½ in. by 4 ft. Painted and Glazed 14/- each
Unpainted and Unglazed ... ... 5/- „

Double Glazed Lights.
4 ft. 7in. by 4 ft. 3 in. Painted and Glazed, 15/6 each

Improved Fruit Trays.
20 in. by 19 in., 18/- doz.; 24 in. by 15 in., 15/- doz.
Carriage Paid on one dozen Trays and over.

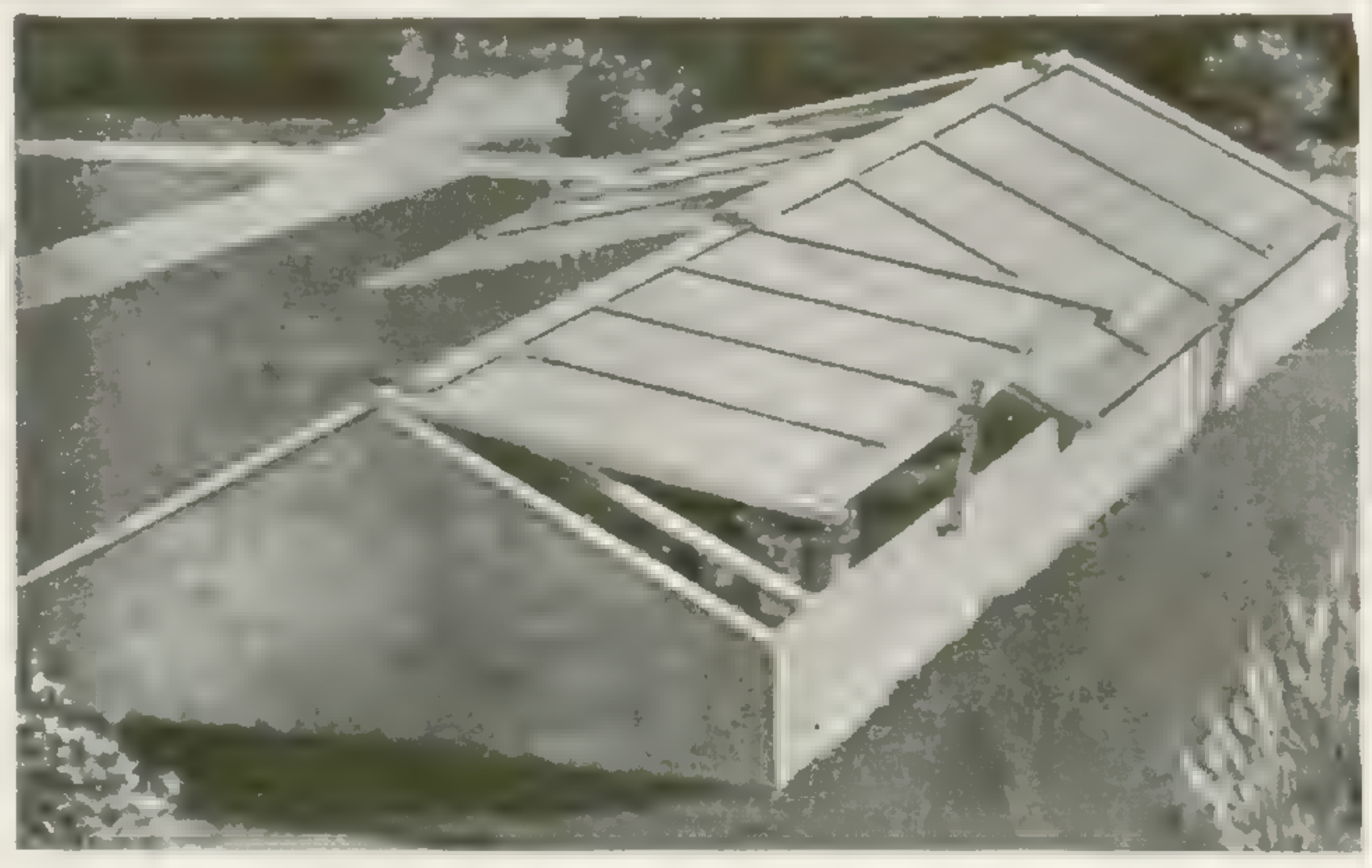
Reed Mats. 4 ft. 6 in. square, 20/- doz.

OUR SPECIALITIES.
SEND FOR PRICE LISTS.



No. 77. **VIOLET FRAME**
(as illustrated).
6 ft. by 4 ft. £1 15 0
9 ft. by 4 ft. 2 7 6

No. 60.
PORTABLE PLANT PRESERVER
6 ft. by 3 ft. £1 14 0
6 ft. by 4 ft., £2 5 0
All Frames and lights Painted three coats. Glazed with 21 oz. glass.



Carriage Paid on all Orders of 40/- value to most Goods Stations in England and Wales.

BOULTON & PAUL, LTD., NORWICH.

GROWN WITHOUT VAPORITE.

If your cabbages, lettuces, geraniums and other plants and vegetables have holes eaten into them by **Caterpillars**;

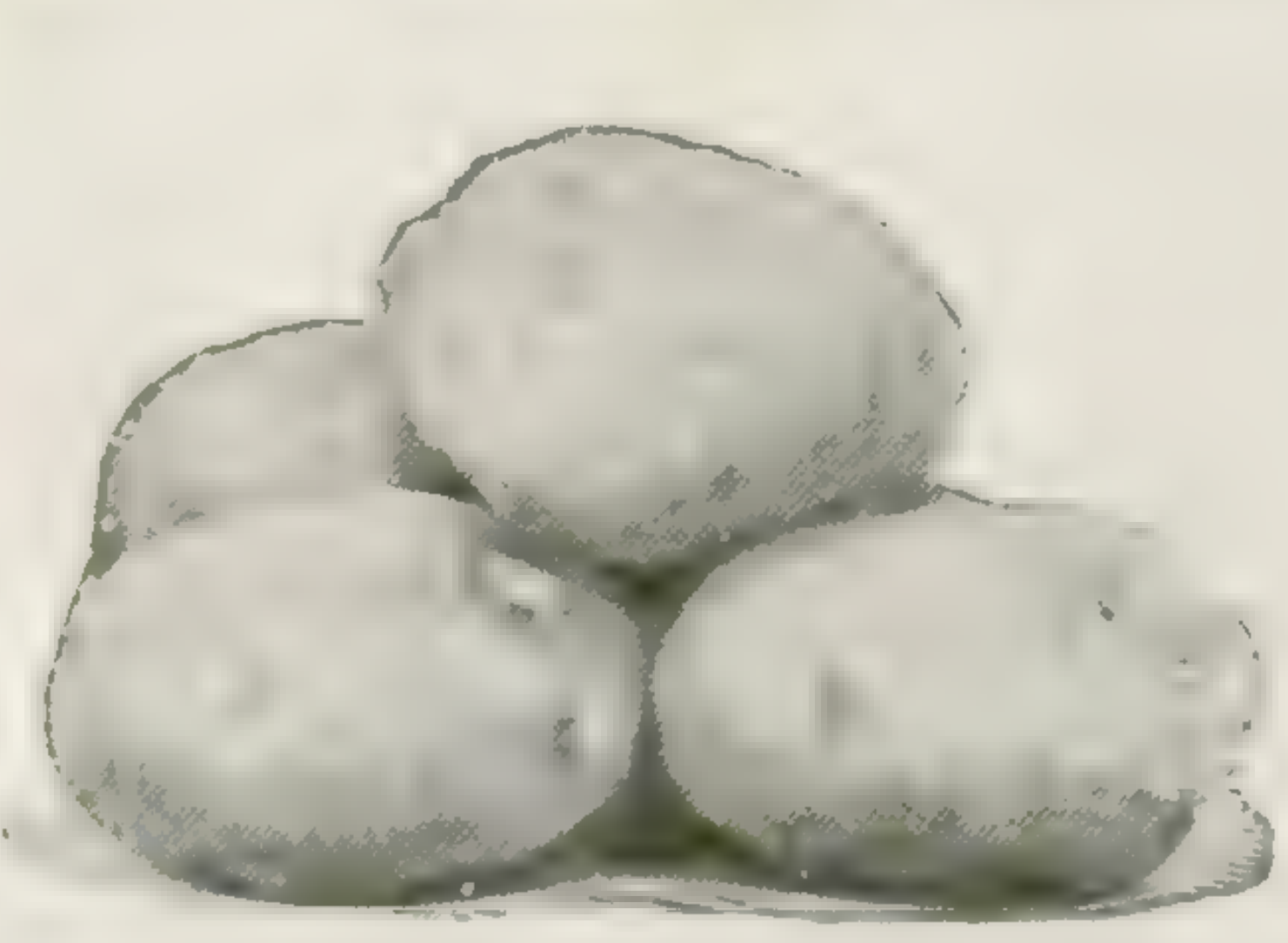
If your sweet peas are eaten off as they come up by **Slugs**;

If your potatoes, carrots, etc., are disfigured by **Wireworms**;

VAPORITE

The ORIGINAL SOIL INSECTICIDE.

will put an end to all these hungry insects.
Vaporite simply requires digging into your garden (1 lb. to 8 square yards) at the last digging before bedding out, or before planting your kitchen garden, to ensure it looking at its best in the summer.
In addition, Vaporite destroys other soil insects which are almost invisible and whose presence is often unsuspected, but all of which **live on your plants.**
By their destruction you ensure the fullest development of all your plants.
No gardener can afford to be without Vaporite in the Spring.
Every package contains full directions for use.



GROWN WITH VAPORITE.

PRICES: Tins, 1½lbs., **9d.**; 7 lbs. **2/-**; 14 lbs. **3/-**; 28 lbs. **4/6.** *Carriage [illegible]* all seedsmen. Casks: **7/6** ½ cwt.; **11/6** cwt. Carriage paid from your seedsmen or the Company.

Write for Illustrated Booklet No 45.
THE VAPORITE STRAWSON CO., LTD.
(Dept. E).
Spencer House, South Place, London, E.C.

4/6.—RUSTIC ARCHES, 4s. 6d.; biggest and best; 8ft. x 4ft. x 18in. All Trellis and Rustic Work at comparative low price. Lists free.—BRAMBLE WOOD CO., 30 Caroline Place, Bayswater.

GREENHOUSES and GARDEN FURNITURE. — Distinctive Designs and Finished Workmanship. Write NOW for Illustrated Catalogue. CARTER and HOWARD, Fife House, Kingston-on-Thames.

PLEASE MENTION
THE GARDENERS' MAGAZINE
when writing to Advertisers.

PUBLISHERS' ANNOUNCEMENTS.

THE GARDENERS' MAGAZINE may be obtained by order from all Newsagents, price Twopence, every Saturday. If any difficulty be found, a copy will be posted weekly direct from the Publisher, 148 and 149, Aldersgate Street, London, on the following terms: Twelve Months, [illegible]; Six Months, 5s. 6d.

INDEX and Title Page to Vol. LIII. (comprising the weekly numbers from January to December, 1910), price 2d., by post 2½d.

BINDING CASES for binding the 12 months' numbers, green cloth, ornamented in gold, price 2s., post free.

VOLUME LIII., bound in green cloth, containing the 52 weekly numbers, 1910. Price [illegible], by post [illegible]s. 4d.

Dr. J. COLLIS BROWNE'S
THE ORIGINAL AND ONLY GENUINE
Chlorodyne
ADMITTED BY THE PROFESSION TO BE THE MOST VALUABLE REMEDY EVER DISCOVERED
The Best Remedy known for
COUGHS, COLDS,
ASTHMA, BRONCHITIS.
Cuts short all attacks of SPASMS, HYSTERIA, and PALPITATION.
The only Palliative in NEURALGIA, TOOTHACHE, GOUT, RHEUMATISM.
Acts like a Charm in DIARRHŒA and DYSENTERY.
Refuse imitations and insist on having
Dr. J. COLLIS BROWNE'S Chlorodyne.
Convincing Medical Testimony with each bottle.
Of all Chemists, 1/1½, 2/9, 4/6.

THOMSON'S Celebrated
VINE, PLANT & VEGETABLE,
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES
UNRIVALLED FOR ALL PURPOSES
THE RESULT OF MANY YEARS PRACTICAL EXPERIENCE
SOLD BY NURSERYMEN & SEEDSMEN EVERYWHERE.

SANKEY'S FAMOUS GARDEN POTS

FLOWER POTS.
The best and the cheapest.
Write for LISTS.
Quotations given for ANY Quantity, Carriage Free.
Appointed by Royal Warrant
Makers to His Majesty the late King.
Largest Manufacturers in the World.
Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

MANY YEARS REPUTATION.
EUREKA WEED KILLER
LASTING RESULTS—NO NEW EXPERIMENT.
1/9 TIN FOR 25 GALLONS | 6/- TIN FOR 100 GALLONS | LARGER SIZES AT LOWER RATES
SOLD BY AGENTS.
MANUFACTURERS: TOMLINSON & HAYWARD LTD LINCOLN.
IF ANY DIFFICULTY SENT DIRECT—PAID

NOTICE. — Always use PORTER'S IMPROVED COIL STAKES for Carnations, no tying required; last a lifetime. Sample doz. with price list 1s. carriage paid. A. PORTER, Stone House, Maidstone.

MARKETS.

◆

COVENT GARDEN.

Flowers.

Daffodils and tulips are abundant, and prices are very low except for the finest qualities; business is good.

		s.	d.	s.	d.
Azaleas, white	per doz. bun.	3	0	4	0
Adiantum cuneatum ...	per doz. bun.	4	0	6	0
Anemone fulgens	per doz. bun.	1	6	2	0
Anemones	per doz. bun.	1	0	1	3
Arums	per doz.	2	0	3	6
Asparagus	per doz. bun.	10	0	15	0
Cattleyas	per doz.	8	0	12	0
Carnations	per doz.	1	6	2	6
,, ...	per doz. bun.	8	0	12	0
Croton leaves	per bun.	1	0	2	6
Cypripediums	per doz. blooms	2	6	3	0
Freesia alba	per doz. bun.	1	0	1	6
French fern	per doz. bun.	2	6	4	0
Gardenias	per doz.	2	0	3	0
Lilac	per bun.	2	6	3	6
Lilium auratum	per bun.	3	0	4	0
,, speciosum	per bun.	2	0	2	6
,, longiflorum	per bun.	2	6	3	6
Lily of the Valley	per doz. bun.	6	0	12	0
Marguerites	per doz. bun.	1	6	3	0
Myosotis	per doz. bun.	2	6	3	6
Narcissus	per doz. bun.	1	0	2	0
Odontoglossums	per doz. blms.	2	6	3	0
Pelargoniums	per doz. bun.	4	0	6	0
Primroses	per doz. bun.	0	6	0	9
Ranunculus	per doz. bun.	2	0	3	0
Roses	per doz.	1	0	5	0
Tulips	per doz. bun.	4	0	10	0
Violets	per doz. bun.	1	3	3	0
,, Parma	per bun.	1	0	1	6
Wallflowers	per doz. bun.	1	0	1	6

Fruits.

Oranges are in great demand, and there is a ready sale for Cape fruits and Australian apples.

		s.	d.	s.	d.
Apples, Californian	per case	9	0	10	0
,, Australian	per case	12	0	20	0
,, Oregon Newtowns	per box	10	0	15	0
,, Canadian	per barrel	23	0	24	0
Bananas	per bun.	6	0	12	6
Chestnuts	per bag	15	0	25	0
Cranberries	per case	9	0	10	6
Grapes, English	per lb.	1	9	4	0
,, Belgian	per lb.	2	0	3	0
,, Cape	per case	4	0	11	0
,, Almeria	per barrel	15	0	25	0
Lemons	per case	7	6	18	0
Melons, Cape	each	0	9	1	0
Nectarines, Cape	per case	8	0	12	0
Oranges	per case	12	0	30	0
,, Jamaica	per case	8	0	9	6
,, Californian Navels ...	per case	12	0	15	0
,, Sevilles	per case	6	6	7	6
,, Blood	per case	7	0	12	0
Peaches, Cape	per case	4	0	6	0
Pears, Cape	per case	5	0	20	0
,, Australian	per case	6	0	16	0
Pineapples	each	2	6	4	6
Plums, Cape	per case	5	0	8	0
Strawberries	per lb.	2	0	5	0

Vegetables.

Greenstuffs are dear, consequently roots are more in demand. Rhubarb sells freely, and salading is in good request.

		s.	d.		s.	d.
Artichokes Globe	per doz.	1	6	to	3	[illegible]
,, Jerusalem	per ½-sieve	1	0		1	6
Asparagus	per bundle	1	4		16	0
Beans, Jersey	per lb.	0	7		1	[illegible]
Beet	per bush.	1	0		1	6
Cabbages	per tally	3	6		10	[illegible]
,, new	per doz.	1	6		1	[illegible]
Carrots, new	per pad	2	0		3	[illegible]
Cauliflowers	per crate	5	[illegible]		[illegible]	[illegible]
Chicory	per lb.	0	3½		0	4
Cucumbers	per doz.	2	6		4	[illegible]
Endive	per doz.	1	3		3	0
Horseradish	per doz. bun.	9	0		12	[illegible]
Lettuce	per doz.	1	3		4	0
Marrows	per doz.	[illegible]	[illegible]		7	[illegible]
Mint	per doz. bun.	1	0		2	[illegible]
Mushrooms	per doz. lb.	6	0		12	[illegible]
Onions	per bag	6	0		8	[illegible]
,, Spanish	per case	5	0		7	[illegible]
Parsnips	per bag	2	[illegible]		2	[illegible]
Parsley	per ½-sieve	1	[illegible]		1	[illegible]
Peas, Jersey	per lb.	1	6		2	[illegible]
Radishes	per doz. bun.	0	10		1	[illegible]
Rhubarb	per doz. bun.	1	[illegible]		2	[illegible]
Seakale	per doz. pun.	8	0		15	[illegible]
Spinach, French	per bush.	4	0		5	[illegible]
Tomatoes, Canary	per crate	10	0		14	[illegible]
,, English	per lb.	1	0		1	[illegible]
Turnips	per bag	2	0		2	[illegible]
,, French	per doz. bun.	8	0		10	[illegible]
Watercress	per doz. bun.	0	6		0	[illegible]

LONDON POTATO MARKETS.

Although business is not very brisk, consequent upon the warm weather, prices are well maintained.

		s.	d.	s.	d.
Evergood	per ton	85	0	100	0
King Edward	per ton	95	0	120	0
Maincrops	per ton	100	0	125	0
President	per ton	85	0	90	0
Up-to-Dates	per ton	90	0	125	0
Jersey new	per lb.	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	per lb.	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	per cwt.	12	[illegible]	[illegible]	[illegible]

OBITUARY.

◆

MR. J. R. TRANTER.

We regret to record the death of Mr. J. R. Tranter, which occurred suddenly at his residence at Henley on the 20th inst. Originally a builder by trade, Mr. Tranter had a strong love for flowers, his special favourite being the dahlia, which, as an amateur, he grew with much success, and about fifteen years ago he engaged in business as a nurseryman. He was a successful cultivator and exhibitor of dahlias, and raised several good varieties, notably Mrs. Tranter. Mr. Tranter was a director of the Henley Waterworks Company, and a manager of the Henley Penny Savings Bank, and he was for many years a member of the committee of the National Dahlia Society.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above sea-level, 150 feet.

Date. 1911. April 16 to April 22.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
April 16—Sunday	2 48	49	46	57	39
,, 17—Monday	7 6	52	46	62	35
,, 18—Tuesday......	4 42	50	48	62	41
,, 19—Wednesday..	11 0	51	46	55	47
,, 20—Thursday....	9 43	52	45	58	43
,, 21—Friday........	0 6	49	46	57	43
,, 22—Saturday.....	9 20	56	49	64	46
Means ...	(total) 45 0	51	46	59	42

Date. 1911. April 16 to April 22.	Rain.	Temperature of the Soil at 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
April 16—Sunday	—	46	44	44	34
,, 17—Monday	—	45	45	44	29
,, 18—Tuesday	·01	47	46	44	37
,, 19—Wednesday..	—	48	46	45	41
,, 20—Thursday	—	47	46	45	38
,, 21—Friday	—	47	47	45	38
,, 22—Saturday	—	48	47	45	42
Means ...	(total) ·01	47	46	44	37

FORTHCOMING ENGAGEMENTS.

TUESDAY, May 2.—Perpetual Flowering Carnation Society, at Royal Botanic Gardens, N.W.; two days.

Scottish Horticultural Association.

WEDNESDAY, May 3.—National Auricula and Primula Society, Midland Section, at the Botanic Gardens, Edgbaston; two days.

THURSDAY, May 4.—Royal Gardeners' Orphan Fund; Twenty-third Annual Dinner, at the Hotel Cecil, Strand, London. Chair to be taken by N. N. Sherwood, Esq., V.M.H., 6.30 for 7 o'clock.

Linnean Society Meeting.

SATURDAY, May 6.—French Horticultural Society at [illegible].

MONDAY, May 8.—United Horticultural Benefit and Provident Society.

TUESDAY, May 9.—Royal Horticultural Society; Committees meet at 12 o'clock; Lecture at 3 p.m. by Mons. H. Correvon, on "Alpine Gardens"; Scientific Committee at 4 o'clock.

THURSDAY, May 11.—British Gardeners' Association, London Branch.

FRIDAY, May 19.—National Horticultural Society of France; seven days; Conference on May 20.

TUESDAY, May 23.—Royal Horticultural Society's Great Annual Exhibition at Inner Temple Gardens, London.

Gardeners' Royal Benevolent Institution; 72nd Annual Festival; Dinner at the Grocers' Hall, Princes Street, London, at 7 for 7.30. Chair to be taken by Sir Marcus Samuel, Bart.

Devon Counties Show, at Newton Abbott.

WEDNESDAY, May 23.—National Tulip Society's Exhibition in connection with the Temple Show. [illegible] Society meets.

TUESDAY, May 30.—Rhododendron Exhibition at Royal Horticultural Hall.

CATALOGUES RECEIVED.

THOMAS S. WARE, LIM., FELTHAM, MIDDLESEX.—A special catalogue of bedding plants, including excellent lists of dahlias, begonias, chrysanthemums, pentstemons, cannas, fuchsias, geraniums, and choice annuals.

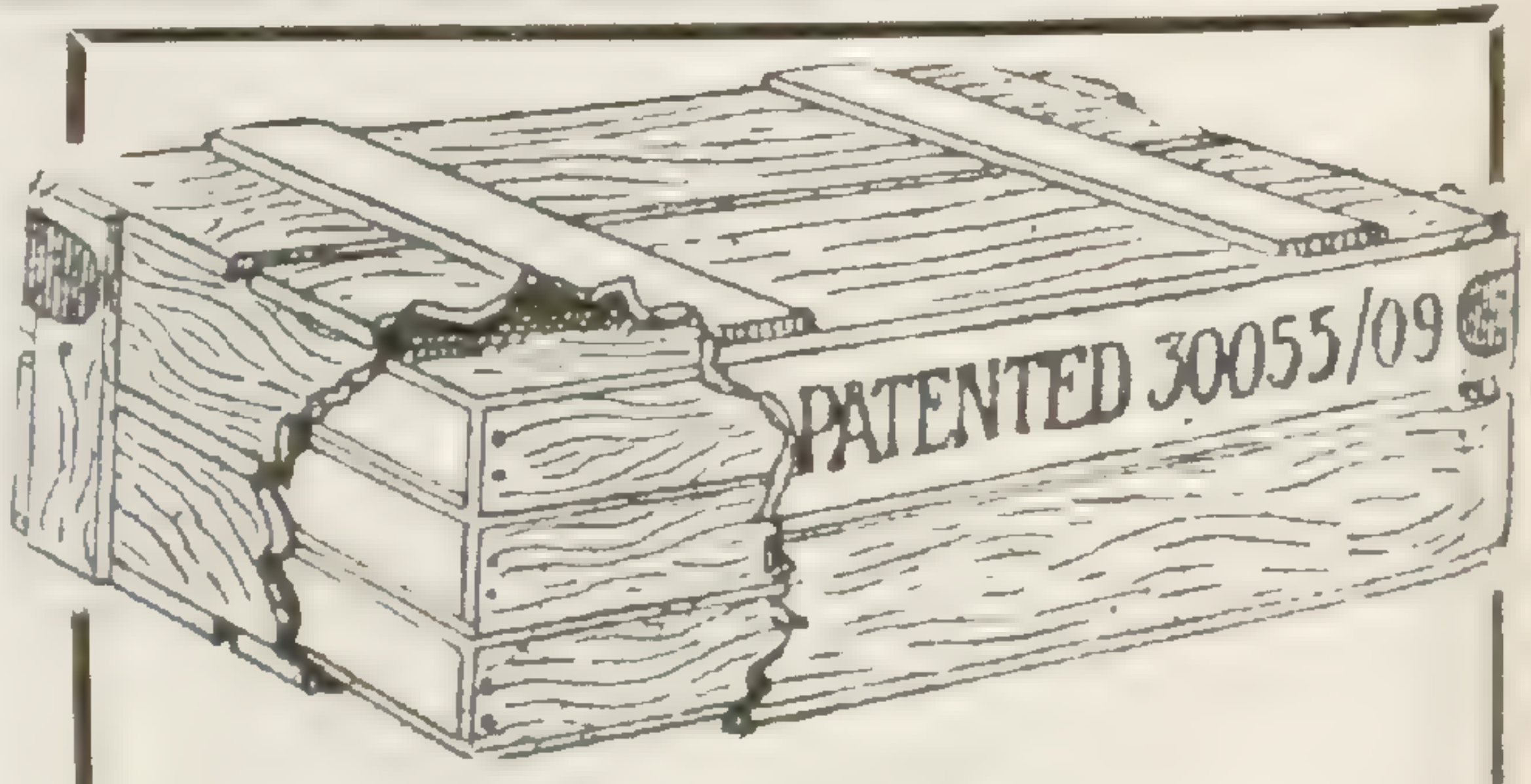
HENRY CANNELL AND SONS, SWANLEY, KENT.—Rarely does such a comprehensive catalogue reach us as is the annual Floral Guide sent out by the Swanley firm. The new issue is freely illustrated, includes many novelties, and its special features are the pages devoted to cannas, pelargoniums, fuchsias, gloxinias, roses, dahlias, begonias, and such hardy florists' flowers as pinks, violas, pansies, phloxes, and perennial asters.

CONTENTS.

PAGE
Answers to Correspondents 332
Apple Roundway Magnum Bonum 319
Choice Hemerocallis 320
Choice Hollies in English Nurseries 326
Exhibitions and Meetings 329
Ivies in Garden Decoration 318
Notes of the Week 313
Pergolas 317
Rhododendrons for General Cultivation ... 324
Royal Horticultural Society 315
Saxifragas 320
The Broccoli Crop in Scotland 324
The Cherry Stem Borer 326
The Double-flowered Peaches 318
The Hollies 321
Variegated Evergreen Shrubs 327
Work for the Week 328

ILLUSTRATIONS.

Portrait of Mr. Wilfred Mark Webb, F.L.S., 313; A Well-furnished Pergola, 317; The Toothed-leaved Ivy, 318; The Irish Ivy, 319; Hedera maderensis variegata, 320; Ilex altaclarensis, 321; Ilex aquifolium aurea regina, 322; Ilex aquifolium argentea regina, 323; Rhododendron Rosa Mundi, 325; Elæagnus pungens aureo-variegata, 327.



Use DAY'S
Fruit Trays & Crates

No more damaged fruit. If properly packed it is impossible for it to get damaged.

The trays hold about 3lb. of Strawberries, Gooseberries, or Cherries, and are non-returnable, price 2d. each. The Crates are 1s. 6d. each, and may be returned to growers for renewals. C.W.O.

They are strongly made, and growers speak very highly of them.

R. D'E. DAY, THE NURSERY, SUTTON SCOTNEY, HANTS.

Fig. 1.

Fig. 2.

ONCE USED. ALWAYS USED. The 'PATTISSON' LAWN BOOTS

Simplest! Strongest! Most Economical!

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or Solid Rubber. Fig. 1 can be REFITTED repeatedly, equal to New Boots. Rubber Soles strongly recommended.

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS.

Silver Medal Royal Horticultural Society.

HUNDREDS OF TESTIMONIALS.

The Field says: "As good as anything that could be devised."

Illustrated Price List from—

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM, S.W.

LAWN BOWLS.—£2 2s. tournament set; noted maker, eight superior full size polished lignum bowls, medium bias, and two jacks, complete in strong case, never used, price 27s. 6d.; approval. Box 365, Gilyards' Library, Bradford.

Price 7s. 6d. net. By post, packed in box, 8s.

THE FLOWER GARDEN.

The Formation and Management of a Garden, and the Culture of Outdoor Flowers and Plants.

W. H. and L. COLLINGRIDGE, 148 and 149, Aldersgate Street, London

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

LADY GARDENER; 6 years' experience as Head; thorough knowledge of peaches, vines, etc.; accustomed to market gardening. Disengaged in June. Miss SWINDALE, Halsway Manor Gardens, Taunton.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working), married, no family; age 36; life experience in all branches, Inside and Out; excellent references; Wife dairy, or house, if required. A., 27, Effingham Road, Reigate, Surrey.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working, where three or more are kept).—Mr. LAST, The Gardens, Homewood, Chislehurst, Kent, can with every confidence recommend his Foreman, W. WAITE, as above; 13 years' experience, gained in good establishments; five years present situation. Married when suited.

GARDENER (Head Working).—Mr. F. BERRILL, of Hall Close, Kettering, wishes to recommend FRANK DAINTY, who is a thoroughly capable Gardener, with life experience Inside and Out; 8 years in present situation; age 30; married, no children. DAINTY, Hall Close, Kettering.

GARDENER (Head Working).—Mr. GOULD, Shernfold Park, Frant, Sussex, highly recommends his Foreman, A. DAY, as above; thorough practical experience Inside and Out; excellent references; age 30.

GARDENER (Head Working, where two or more are kept); good all round; 14 years as head in large and well-kept establishments; married; age 40; excellent references. E. MAYLETT, Park Hall, Salford Priors, Evesham.

GARDENER (Head Working, where three or four are kept); thoroughly experienced in all branches; Inside and Out; also land and stock if required; age 38; married; no family; disengaged. HARE, Lynton, Bisley, Woking.

GARDENER (Head Working); good single or market grower; Inside and Out; life experience; good references; hardy fruits, budder, grafter, pruner. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (Head Working), age 35, life experience in all branches; inside and out; house and table decoration; highest references. JAMES GATES, Papworth, Everard, Cambs.

GARDENER (Head or Single-handed); life experience; Flowers, Fruit, and Vegetables; age 27; married, no family; good references; life abstainer. H. V., Dunsell Green, Chobham, Woking, Surrey.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (Single-handed); little or no glass; 10 years' experience in present place; single; age 28. W. REEKS, 89, Amwell Street, Hoddesdon, Herts.

GARDENER (Single-handed or Under) seeks SITUATION; age 23; single; Nursery and other experience; good references. Apply A. HILL, Bardney Road, Wragby, Lincs.

GARDENER (Single-handed or with help), experienced Inside and Out; age 30; married, no family; good refs. H. J. C., 64, St. Mary's Road, Reigate.

MR. SALTER, The Gardens, Avenue House, Church End, Finchley, highly recommends W. BICKER as GARDENER (Single-handed, or with help); experienced Inside and Out; at present in his employ; age 28; Eastern Counties preferred.

GARDENER requires position as FOREMAN, or such like; born Austrian; over 8 years' experience in most branches of gardening; speaks English, French, and German; 3½ years in England; age 25, single. HANS SCHMIDKUNZ, 363, Sandy Combe Road, Kew Gardens.

LORD KENYON will be pleased to recommend his Foreman (Outside) to any Lady or Gentleman as GARDENER, where two or three are kept. Apply to LORD KENYON, Gredington, Whitchurch, Salop.

GARDENER, well up Inside and Out, seeks SITUATION, where two or more are kept, or good Single-handed; two years present place, ten years previous; age 34, one girl age 9 years. A. HUTCHINGS, Chiltern Rise, Woodcote, Oxon.

GARDENER (Second, Inside and Out); seven years' practical experience; age 22; single; life abstainer; honest, respectable. A. BOWLES, Westlands Cottage, Ingatestone.

GARDENER (Second, or Single-handed, Inside and Out); eight years' experience in all branches; 2½ years present situation; excellent references; age 25; single; abstainer. GREENFIELD, 4, Myrtle Terrace, Lancing, near Worthing, Sussex.

JOURNEYMAN (First, Inside), in good establishment; age 24; eight years' experience; good references; can be well recommended. T. BLIGH, The Barton, Helland, Bodmin, Cornwall.

J. HARDING, Coneygar Gardens, Bridport, highly recommends W. BARTLETT, age 20, here three years, as JOURNEYMAN (Second, Inside or Inside and Out).—Apply, W. BARTLETT, Coneygar Gardens, Bridport, Dorset.

MR. H. DUKE, Felixstowe Lodge, Suffolk, will be pleased to recommend JOURNEYMAN (Inside or Inside and Out); age 22; past three years here; abstainer.

MR. DARE, Head Gardener to Captain Lynch Staunton, can highly recommend W. ALFORD to any Gardener as JOURNEYMAN, for Inside and Out, or Inside; strong, and good worker; 4 years' experience; age 20. W. ALFORD, Waterlooville, nr. Cosham, Hants.

GARDENER (Under) seeks SITUATION, where 3 or 4 are kept; well up Inside and Out; 7 years' experience; age 21; excellent references. H. F., Ladds House, Sandhills, Witley, Surrey.

GARDENER (Under); private establishment or Grower Market Nursery; 14 years' experience, Inside and Out, private and nursery; good references. LEWINGTON, 169, High Street, Hampton Hill, S.W.

YOUNG MAN (22) requires SITUATION as GARDENER (Under) or IMPROVER in gentleman's gardens; 2½ years' experience; good references; disengaged. S. TALBOT, Barrow, Bury St. Edmunds.

IMPROVER (Inside); past three years under glass; used to Watering, Stoking, and Inside work; quick, active, and obliging; highly recommended; age 18. PESTERFIELD, Beedingwood Gardens, Horsham.

ORCHID GROWER requires SITUATION to take charge of collection or small place where Orchids speciality; experience Burford Lodge, etc.; excellent references. Apply S. BURROUGH, Royal Gardens, Sandringham.

MR. WM. PARKER, Orford House Gardens, Market Rasen, wishes to recommend YOUNG MAN, age 19; three years' good experience, Inside and Out; nurseries or private garden. F. CARROTT, Healing, near Grimsby, Lincs.

CANADA.—HANDY MAN desires place in Canada; can attend gas or oil engines, suction plants; plain painting, or farm machinery; age 24; single; hard worker. JOHN NORTHCOTT, St. Andrew Street, Tiverton, Devon.

SITUATION required under a Gardener by a willing Lad; age 15. FRANK LANE, 125, Keslake Road, Kensal Rise, London, N.W.

SITUATION required by BOY of 17 under experienced Gardener; has been three years in present place; is industrious, quick, and thoroughly dependable. FRANK EDWARDS, care of Miss Bryan Smith, Villa Nova, Shrewsbury.

WANTED, employment in Nurseries; Part Fruit Culture preferred; 2½ years' experience; age 18½. Not afraid of work; references. DAY, Nomansland, Sandridge, near St. Albans, Herts.

YOUNG MAN (20) seeks SITUATION; Inside and Out; 3 years' experience; strong, willing; well recommended; prefer bothy. GOULD, Stuckton, Fordingbridge, Hants.

YOUNG MAN seeks SITUATION on pleasure grounds; 5 years' experience with horse and hand machines; well recommended; age 22; fond of cricket. F. GARDINER, Home Farm, Glympton, Woodstock, Oxon.

YOUNG MAN, just finished Apprenticeship, requires SITUATION in Nursery as Grower; near London preferred; Grapes, Cucumbers, Tomatoes, Strawberries. BUDD, care of T. S. Trenfield, The Vineyards, Attleboro', Norfolk.

YOUNG MAN seeks SITUATION in good garden; 5 years' experience, Inside and Out; excellent reference. Apply B. C., 1, Ivanhoe Terrace, Broadwater, Worthing, Sussex.

Situations Vacant.

WANTED, YOUNG MAN who understands the growth of all kinds bedding plants, to assist his employer, and be able to do jobbing at times; wages 23s. D., Nursery, Breakspears Road, Brockley.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For MAY 6, 1911.

Please Repeat my Advertisement.

Name..

Address..

....

Date..

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

SPRAYING ENGINES

FOR ALL PURPOSES

PRICES FROM

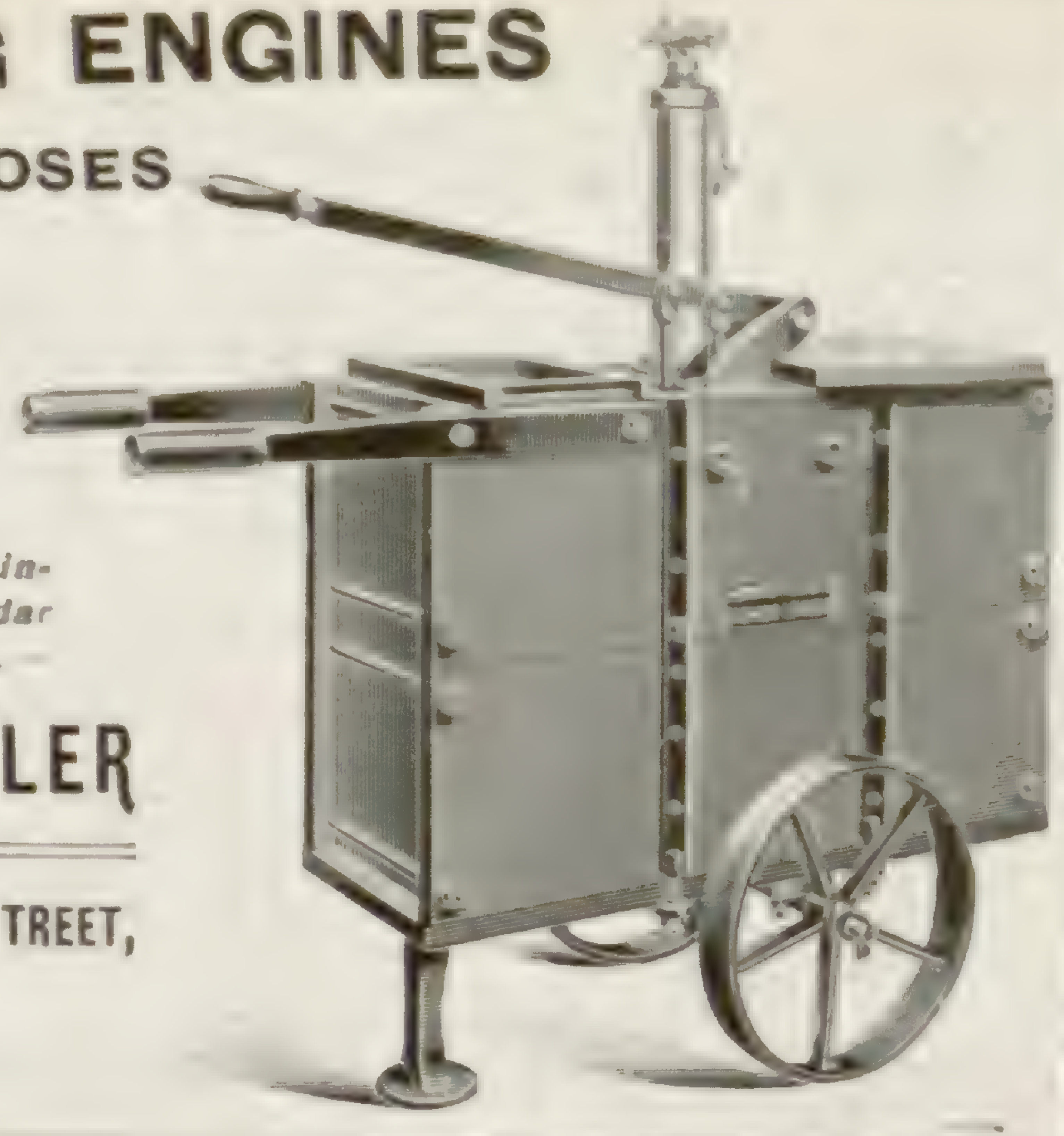
£2 0 0

UPWARDS.

Send for List, which includes Spraying Calendar and List of Washes.

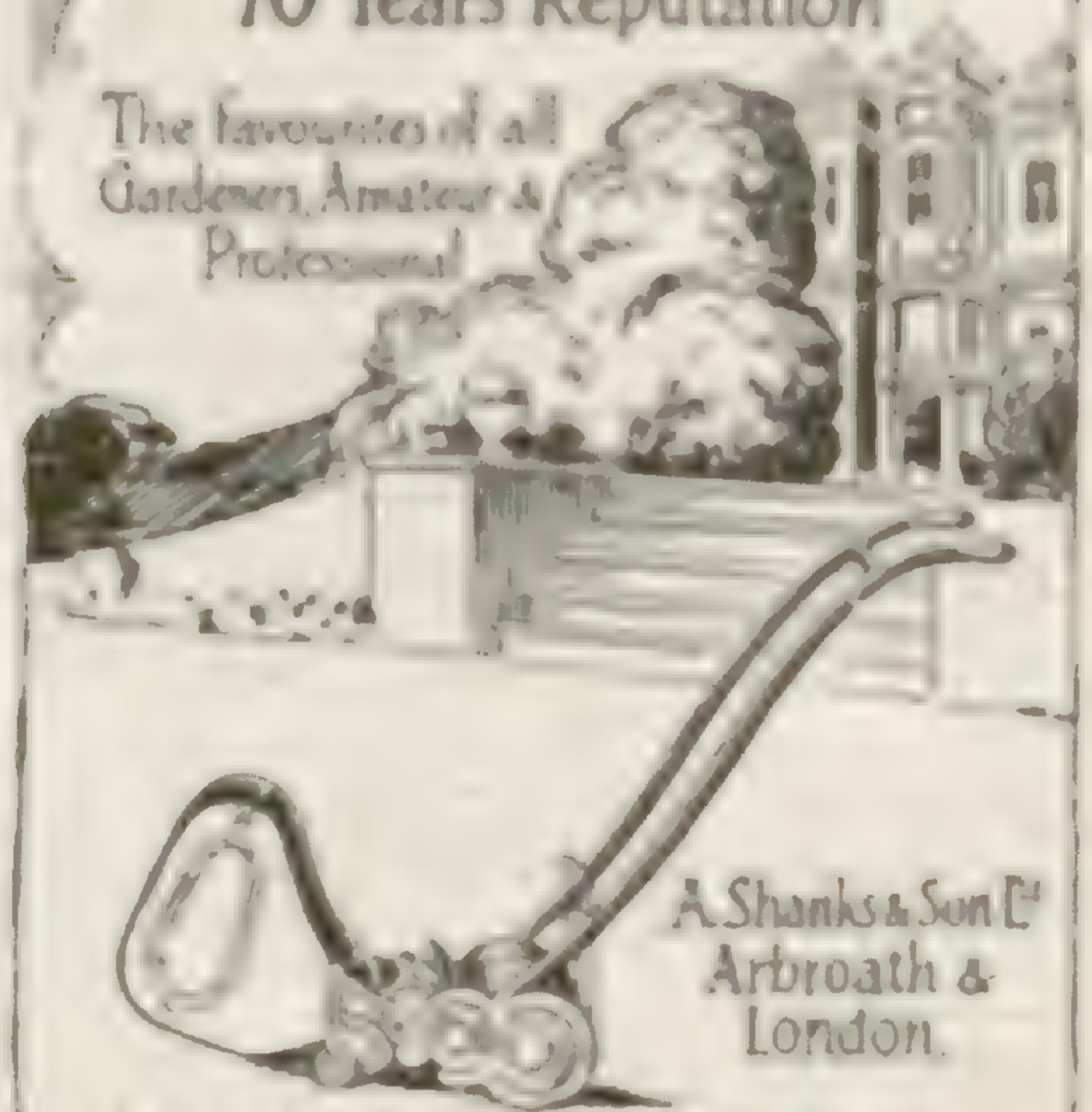
HAYWARD-TYLER & Co., Ltd.,
99, QUEEN VICTORIA STREET,
LONDON, E.C.

Telephone: Bank 192.
Telegrams: Tylerox, London.



SHANKS'S LAWN MOWERS

70 Years Reputation


The favourites of all Gardeners, Amateur & Professional

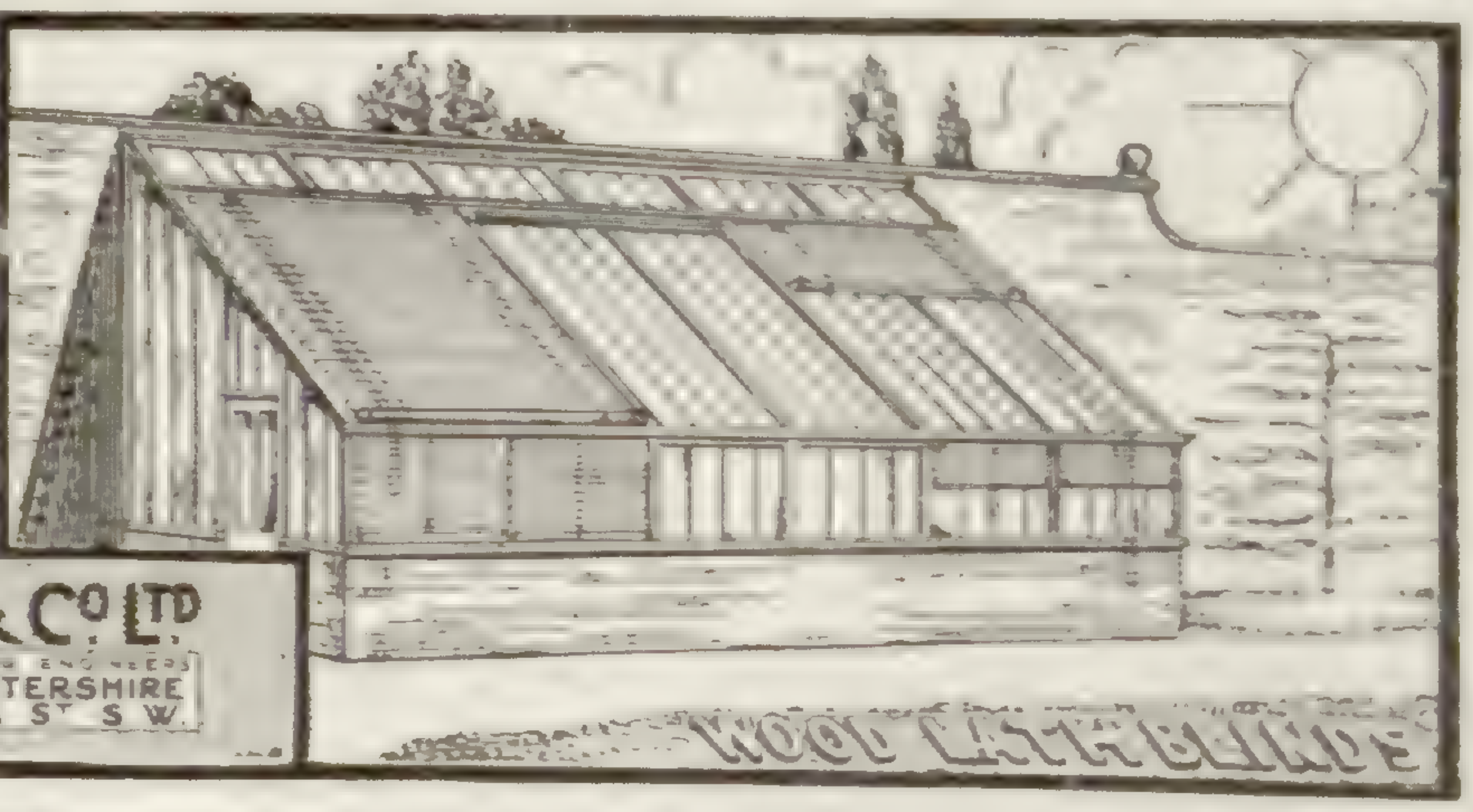
A. Shanks & Son Ltd
Arbroath & London.

Of All Ironmongers & Seedsmen.

WOOD LATH BLINDS ADMIT SUFFICIENT SUNLIGHT SO NECESSARY FOR Growing Purposes.

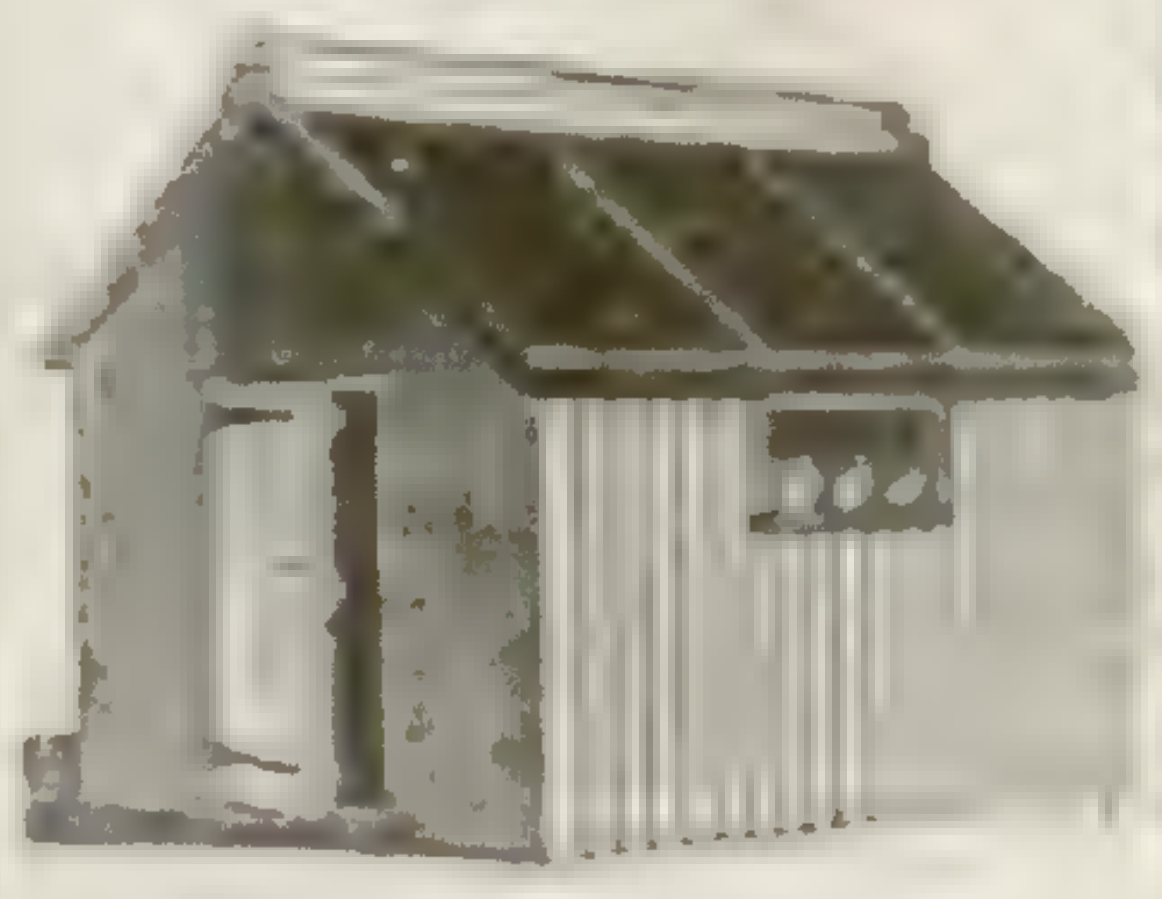
Write for Special Catalogue.

MESSENGER & Co. Ltd
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office: 122 VICTORIA ST. S.W.



THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

[illegible] Made in complete sections, best quality Red Deal [illegible] Foreign Match Boards [illegible] planed and V jointed on strong framing. Roof covered with compressed Asphalte [illegible]. Door fitted with strong hinges, lock and key bolts, etc.

CASH WITH ORDER.

[illegible]		[illegible]
[illegible] high	£1 12 6	4 6
[illegible] high	£1 19 6	6 0
[illegible] high	£2 10 0	8 6
[illegible]ft. long, 7ft. wide, 8ft. high	£2 17 6	10 6
[illegible] long, 8ft. wide, 8ft. 4in. high	£3 7 6	16 0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19 6

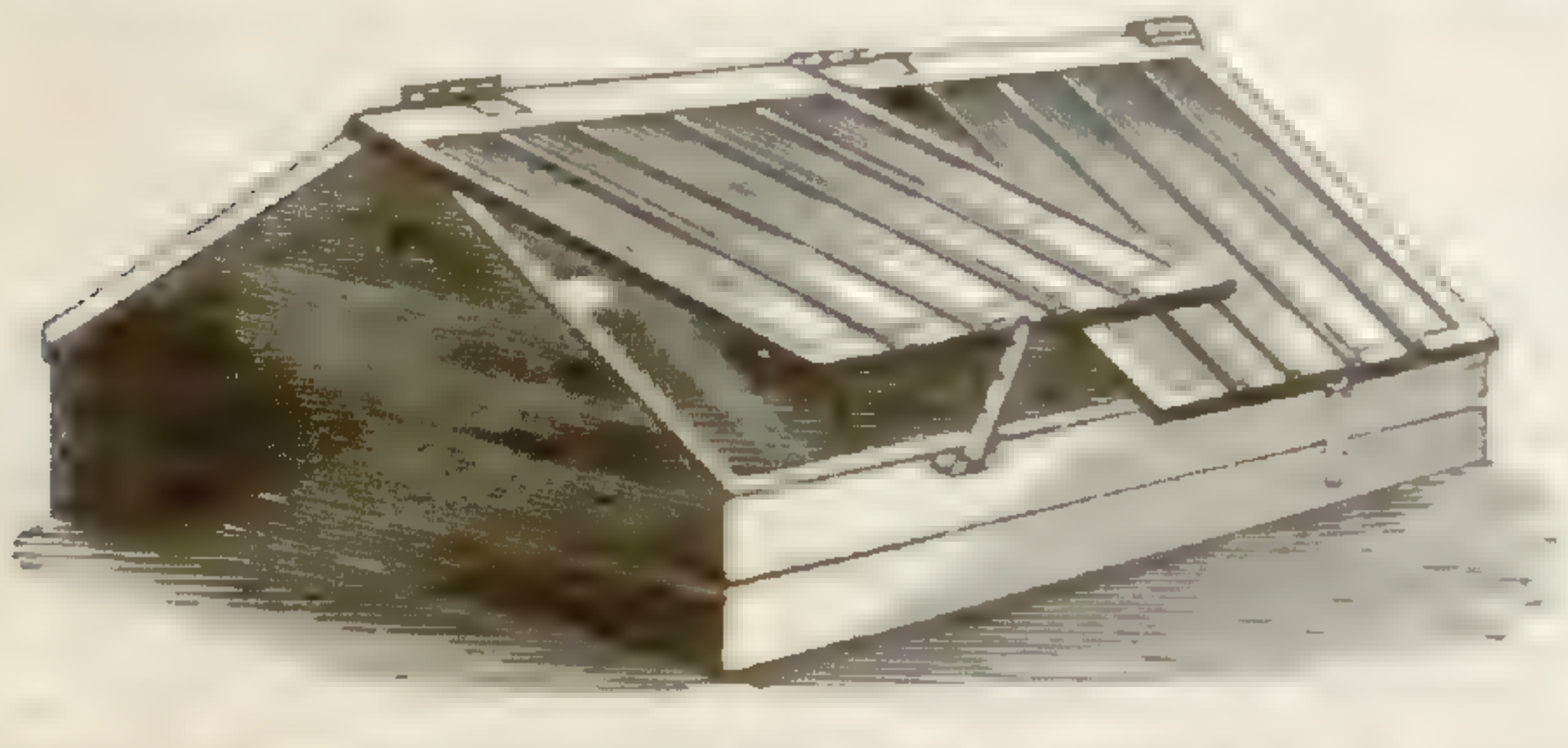
Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings.
ESTABLISHED 70 YEARS. **BEDFORD.**
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

PORTABLE PLANT FRAMES

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

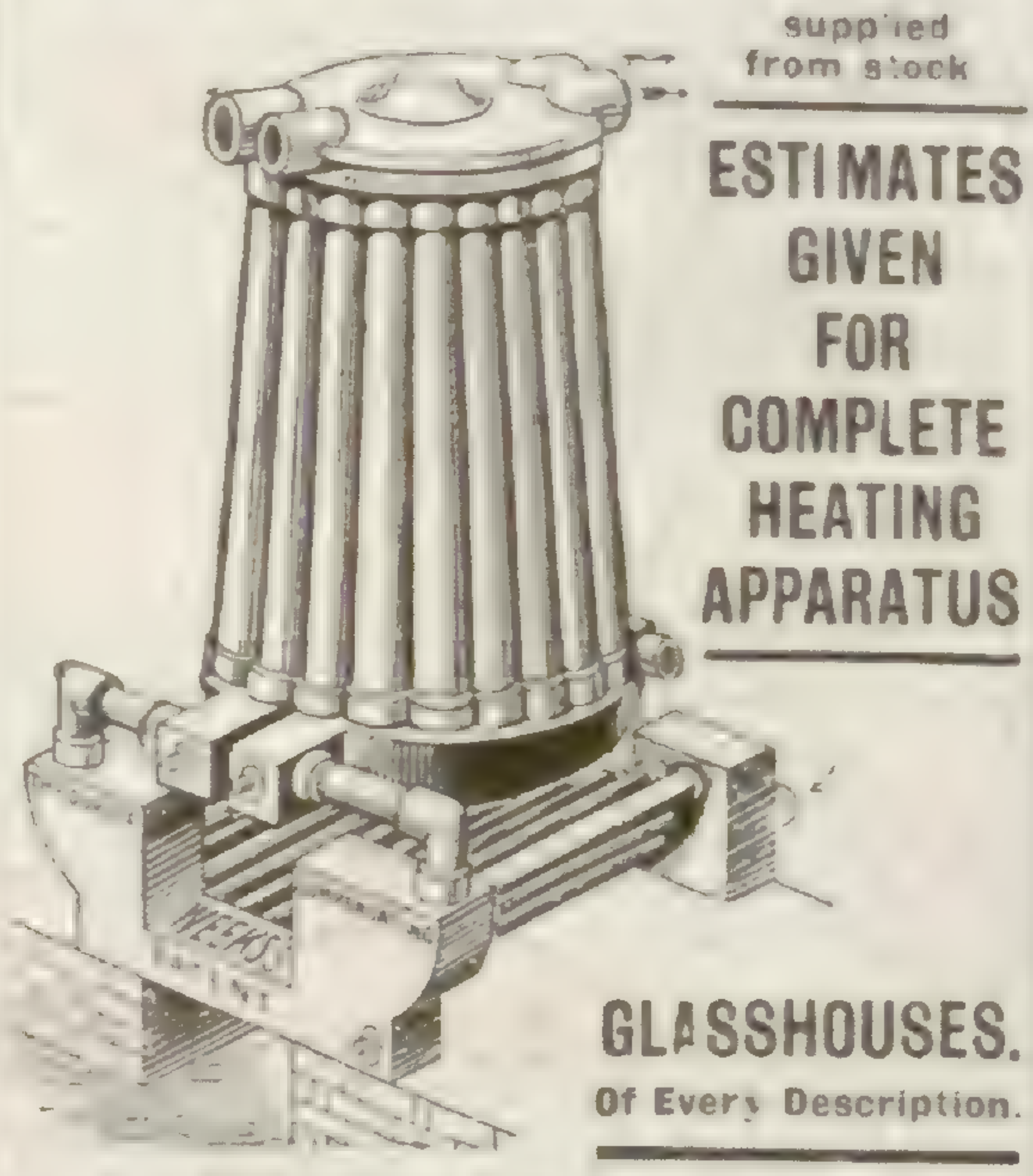
Sizes and Prices, Glazed and Painted.		£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. ,, 4ft. ,,		2	5	0
6ft. ,, 5ft. ,,		2	15	0
12ft. ,, 4ft. ,,		4	0	0
12ft. ,, 5ft. ,,		4	15	0
12ft. ,, 6ft. ,,		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
ROYAL HORTICULTURAL WORKS,
MIDDLETON, MANCHESTER.

WEEKS'S BOILERS

supplied from stock

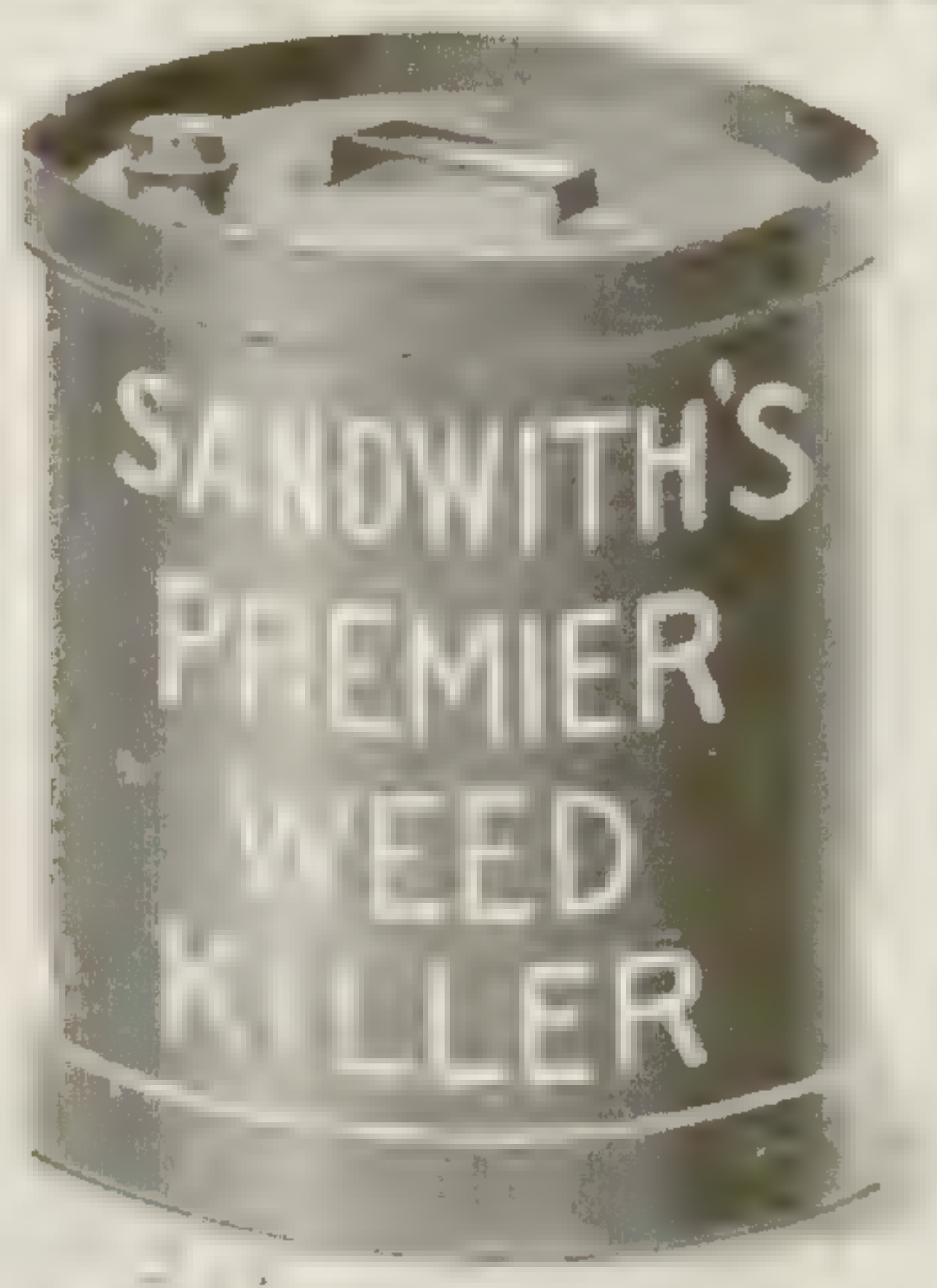


ESTIMATES GIVEN FOR COMPLETE HEATING APPARATUS

GLASSHOUSES.
Of Every Description.

J. WEEKS & CO.,
72, Victoria Street,
WESTMINSTER, S.W.

THE FAVOURITE WEED KILLER.



As supplied to His Majesty's Board of Works, [illegible] Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for 6/-; drum, 2/-. 12 galls. for 16/-; drum, 6/-. [illegible] galls. for 26/8; drum, 10/-. [illegible] galls. for 50/-; drum, 20/-.

EITHER LIQUID OR POWDER.

Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,
The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities [illegible] Post free.

EPPS'S SELECTED PEAT

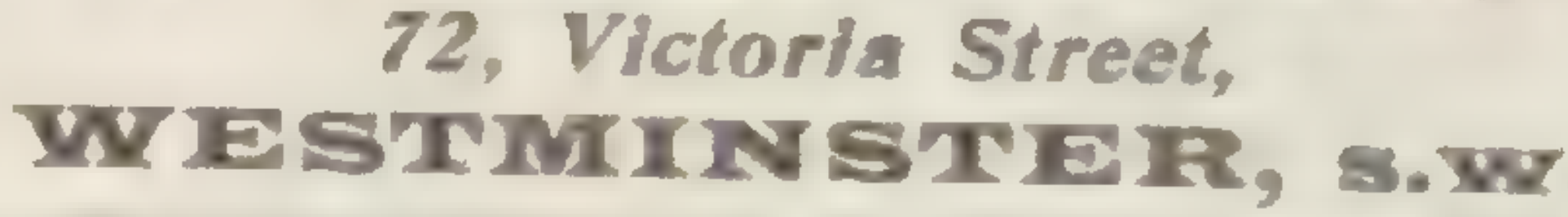
For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C. N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to
EPPS & CO., Ringwood, HANTS.

A NEW GARDEN SPADE (Carter's Patent)



[illegible] Try it. If you want Spades, Shovels, Forks and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

Printed and Published by W. H. & L. COLLINGRIDGE, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 3,001.
Vol. LIV.
(Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.)

SATURDAY, MAY 6, 1911.

(10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

NEW AND RARE FLOWER SEEDS FOR 1911, including a collection of choice Alpines for rockwork, etc. Descriptive List on application. BARR and SONS, 11, 12, 13, King St., Covent Garden.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, S.W., is arranging this Spring for a large selection of Blinds for Conservatories, Greenhouses, Private Houses, Verandahs, etc., and will be happy to send samples, prints, and prices on receipt of a Postcard. Telephone Call (201 Western), letter, or wire "Gray, Chelsea, London."

EXHIBITION PANSIES, VIOLAS, CARNATIONS, PHLOXES, and CHRYSANTHEMUMS.—12 Superb fancy Pansies, 3s.; newest and best, 5s. 12 Exhibition Violas, 2s. 6d.; newest and best, 4s. 12 Superb Carnations, 6s.; newest and best, 10s. 12 Yellow or white ground Picotees, 6s.; newest and best, 8s. 12 Superb Phloxes, 4s.; very best, 6s. 12 Early-flowering Chrysanthemums, 2s. 6d.; newest and best, 4s. 12 Best bedding Violas, 2s.; 50 in 10 vars., 4s. 6d.; 100 in 10 or 20 vars., 8s.; all post free, except Carnations in pots, which are car. forward. Lists free. S. PYE, Bowgreave Nursery, Garstang.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.
H. BURNETT,
Carnation Specialist, Guernsey.

PERENNIALS, UNIQUE COLLECTION,
including
ALPINES AND AQUATICS.
Also RARER SHRUBS, HIMALAYAN RHODODENDRONS, and Others.
Write for Catalogue. G. REUTHE, Keston, Kent.

DAHLIAS.
CACTUS, PÆONY, POMPONE, and SHOW, for GARDEN or EXHIBITION.
Prices and Catalogues free on application.

J. T. WEST, Tower Hill, Brentwood.

FRENCH GARDENING REQUISITES.—Send for our new List, giving full particulars of the Double Glazed System, and numbers of new Labour-saving Appliances. Frames, Cloches, Reed Mats, and every requisite supplied. BOULTON and PAUL, Lim., Norwich.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-work, showing screens, wall panels, window surrounds, arches, arbors, etc., post free. BOULTON and PAUL, Ltd., Norwich.

BARNARDS LIMITED, Norwich.—Best House for Fencing, Espaliers, Pergolas, Fruit Enclosures, Iron and Wire Bordering; all descriptions of Training Fittings, Arches, Wire Netting, Stakes, Wire Lattice, Rollers, and all garden requisites. Now is the time to effect improvements in your garden. Catalogues free; inquiries invited.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page ix.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint, 6s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

SOW NOW.
WEBBS' EXHIBITION RUNNER BEAN. Winner of Champion Prizes at Shrewsbury, Leamington, Leicester, etc., in 1910. 2s. per pint; 3s. 6d. per quart. WEBBS' SELECTED SCARLET RUNNER, 2s. 6d. per quart.

WEBBS' SUPREME DWARF BEAN, Winner of Champion Prizes at Cardiff, Leamington, etc., in 1910. 2s. per pint; 3s. 6d. per quart. WEBBS' SELECTED CANADIAN WONDER. 2s. per quart.—WEBB and SONS, The King's Seedsmen, Wordsley, Stourbridge.

BUNYARD'S NEW CATALOGUES.
The following have been recently published, and contain all worthy new varieties. Post free on application.

BUNYARD'S
CLIMBING PLANTS, Illustrated.

BUNYARD'S
HERBACEOUS PLANTS, Illustrated.

BUNYARD'S
HARDY TREES AND SHRUBS, Illustrated.

BUNYARD'S ASPARAGUS LIST.
Plants now ready for delivery.

BUNYARD'S SEEDS, VEGETABLE AND FLOWER, with coloured plates.

GEO. BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.

LAXTON'S FRUIT TREE, STRAWBERRY, SEED, ROSE, HERBACEOUS, TREE, BULB, and SMALL FRUIT CATALOGUES, with full illustrations and descriptions, gratis on application.

LAXTON BROTHERS, Bedford.

PENTSTEMONS and CHRYSANTHEMUMS. Splendid stuff, established in pots, all the finest in cultivation. Catalogues free; also General Catalogue of Rock and Border plants, Ferns, Iris, Delphiniums, etc., etc. PERRY'S HARDY PLANT FARM, Enfield, Middlesex.

CABBAGE PLANTS, extra strong, Ellams, Mein's, Offenham, First and Best, Enfield, Battersea, 3s. 1,000, 12s. 6d. 5,000 lots; Drumheads, 2s. 6d.; Red Cabbage, Cos Lettuce, Tripoli Onion, 4s, 1,000, on rail; or 1s. 100, post free. List free. C. HIGHT, Cranleigh, Surrey.

ZONAL PELARGONIUMS.
Catalogue of New and Choicest Varieties

From V. SLADE, Zonal Specialist,
Staplegrove Nursery, Taunton.

RUSTIC SUMMER HOUSES, trellis-work, Fencing, Pergolas, Arches, Seats, Bridges, Log Cabins, Loggias, etc. Send for our new LOG CABIN and RUSTIC CATALOGUE (just published), sent post free. BOULTON and PAUL, Ltd., Norwich.

CLAY'S MANURES, CRUSHED BONES
(See page iv.)

CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

NOTICE. — Always use PORTER'S IMPROVED COIL STAKES for Carnations, no tying required; last a lifetime. Sample doz. with price list 1s. carriage paid. A. PORTER, Stone House, Maidstone.

GARDEN NETTING (best tanned only).—25 yds. x 8yds.; 50 x 4yds.; 100 x 2 yds., 8s. each. 50 x 2 yds.; 25 x 4 yds.; 100 x 1 yd., 4s. each. All sizes, large or small, at 1s. 20 sq. yds. Quality guaranteed.—EVANS, 14, Beresford Rd., Lowestoft.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD Stourbridge.

TO ENSURE FINE BUSHY PLANTS
SOW NOW.
SUTTON'S WALLFLOWERS
SUTTON'S FIRE KING ... per packet 1/6
SUTTON'S GIANT BLOOD RED ,, 1/6
CLOTH OF GOLD ... ... ,, ,, 6d.
SUTTON'S SUPERB, mixed ... ,, ,, 1/-
Post free.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

KELWAY'S LATEST SUCCESS.
GRAND PRIX AND GOLD MEDAL, Japan-British Exhibition, White City. Unanimous award of the International Jury to Kelway and Son for Pæonies, Delphiniums, Gladioli, Pyrethrums, etc.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

THE LIBERTY of the KELWAY GARDEN versus the Tyranny of the Bedding-out system. Infinite variety; no sameness of treatment.
ABSOLUTE FREEDOM of choice of treatment for your garden or garden borders. See "Gardens of Delight," post free, 6d.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
TESTIMONIAL.
From ———, Esq., Guildford.
"I may say that your Illustrated Catalogue is without doubt the finest book of the sort I have had the pleasure of seeing."

NOW IS THE TIME TO PLANT KELWAY DELPHINIUMS, which have been improved almost out of recognition in the past twenty years. They produce plants ranging in height from four to eight feet, exceptionally hardy and with a rich profusion of choice blooms in all the shades of that valuable colour, blue.
Choice named varieties: 24s., 34s., and 56s. a dozen. Carriage and package free for remittance with order.
The celebrated present-day Delphiniums, and nearly all the best well-known varieties shown at exhibitions, originated in Kelway's Langport Nurseries.
TESTIMONIAL.
From Mrs. ———, Eltham, Kent, 18th April, 1911.
"The Delphiniums and Pyrethrums you sent me three years ago are doing splendidly, and were a joy last summer.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

IRON and WIRE FENCING for GARDENS, Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free. BOULTON and PAUL, Ltd., Manufacturers, Norwich.

RICHARDSON'S for GLASSHOUSES and HEATING APPARATUS, for full advertisement see back page. Darlington.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.
XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.
XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown both poisonous and non-poisonous are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N.S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London. S.E.

BUSINESS CARDS.

BEDDING PLANTS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Chrysanthemums, Dahlias and Summer-Bedding Plants.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Border and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE.
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

SAMUEL M'GREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

RHODODENDRONS.

DICKSONS & CO.,
1, Waterloo Place, Edinburgh.
Pink Pearls, Ponticums, choice Hybrids. Write.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

BY APPOINTMENT.

ROSES IN POTS.

WM. PAUL & SON, WALTHAM CROSS, LTD.,

beg to offer a magnificent stock of DWARFS and RAMBLERS for present Planting and for Greenhouse Culture.

In 5-in. pots **10s. 6d.** to **18s.** per dozen, **75s.** to **120s.** per 100; extra strong in 8-in. pots **24s.** to **60s.** per dozen. Also a fine collection of New Roses.

Catalogue on application.

PAUL'S ROYAL NURSERIES,
Waltham Cross, HERTS.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

Rhododendrons.

Crimson, White, Pink. **250** Choice Named Varieties, fine foliage, well budded, for potting or planting. 1 to 1½ ft., 1½ to 2 ft., 2 to 2½ ft., 2½ to 3 ft., 3 to 4 ft., 4 to 5 ft., 5 to 6 ft., 6 to 7 ft. List of sorts and prices on application; many thousands to offer. Standards in all sizes.

All Home grown. Inspection Invited.

F. STREET, Heatherside Nurseries, CAMBERLEY.

AMERICAN TREE CARNATIONS

The Newest and Best Varieties.

Strong, healthy and well-rooted plants only supplied

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

RHODODENDRONS.

We specialise in these most beautiful of Flowering Shrubs.

Immense and superior stocks of choice named varieties, including "Pink Pearls," and also Ponticums for covert planting.

Lists on application.

DICKSONS & CO.,
THE KING'S NURSERYMEN,
1, WATERLOO PLACE, EDINBURGH.

By Appointment to H.M. The King.

1911 FORBES'

Illustrated Plant Catalogue **Nearly 200 Pages.**

GOLD MEDAL SPECIALITIES.

Contains carefully revised **Descriptions, Colour, Height, Time of Flowering, British or Common Names, Prices,** etc., of the **Grandest Collections of ASTERS, BEGONIAS, CALADIUMS, CARNATIONS, DAHLIAS, DELPHINIUMS, PÆONIES, PANSIES, VIOLAS, PELARGONIUMS, PENTSTEMONS, PHLOXES, PYRETHRUMS, HARDY BORDER PLANTS,** carefully-prepared **PLAN** for arranging **HARDY PLANT BORDERS,** etc.

Experts unanimously accord **FORBES' CATALOGUE** the unique distinction of being the **best** and most **reliable** up-to-date **Reference Book** extant.

FREE ON APPLICATION.

JOHN FORBES (HAWICK), LIMITED.
(Dept. I), The King's Nurserymen, **HAWICK, Scotland**

BUDS AND FRUIT SAVED. — GARDEN NETTING, Rotless and Tanned, small mesh, superior quality. Satisfaction guaranteed or money returned. 100 by 1yd., 3s. 9d.; any length and width supplied. LAWN MOWERS 5 blades, UNEQUALLED VALUE, 13s. 6d. Wheelbarrows, 16s. — POTTER BROS., Dept. M., Frankwell Works, Shrewsbury.

TANKS! TANKS!! TANKS!!!

Now is the time to buy cheap Tanks. We have several hundreds for sale, which have come off ships we have broken up. All capacities from 25 gallons. List free on application. THOS. W. WARD, LIMITED, Sheffield.

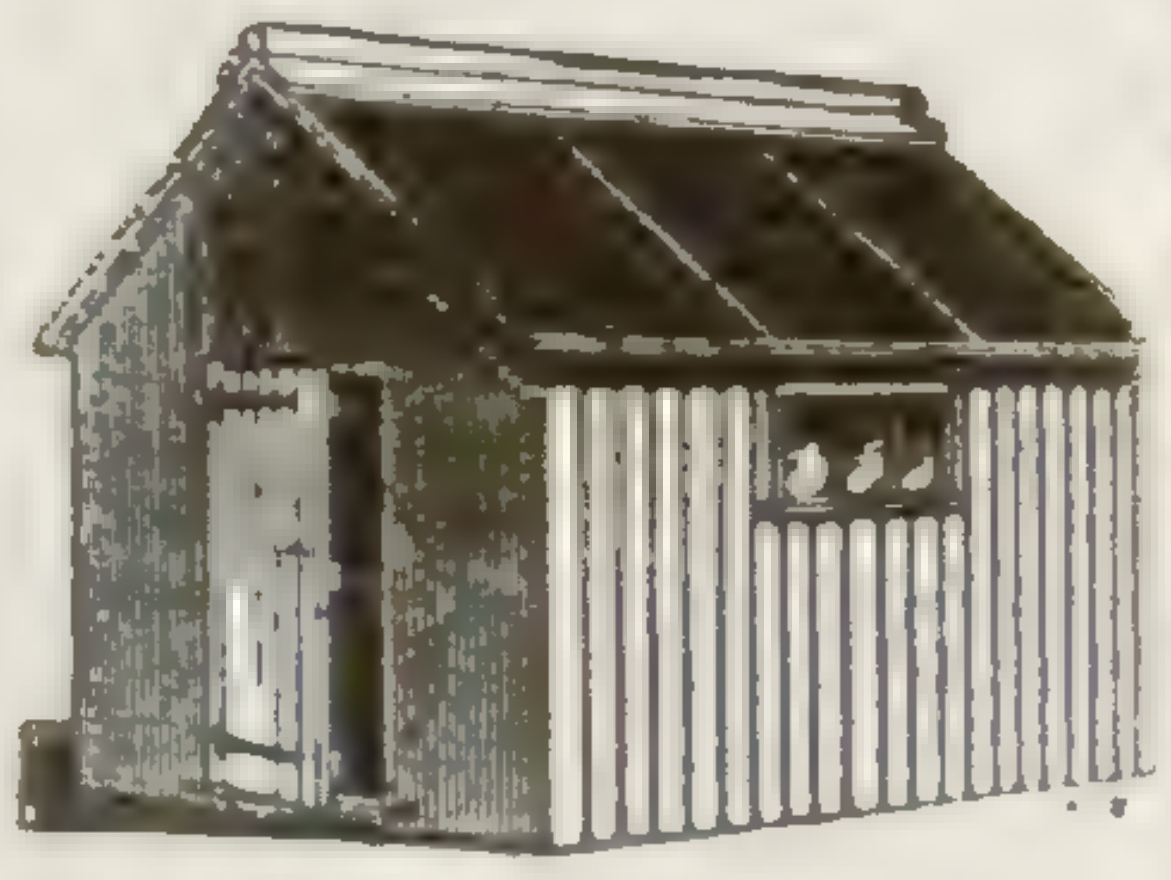
CARNATIONS, PINKS, AURICULAS.

DOUGLAS for the best old and new varieties in all classes, and the finest quality in the world. Malmaison Carnations, new and old, 7/6 per dozen. Border, 6/- to 12/- per dozen. Tree, American, and English, 7/6 to 15/- per dozen. Auriculas, Show, 21/- to 30/- per dozen. Alpine Auriculas, 9/- to 21/- per dozen. Carnation, Auricula, Pink, and Polyanthus seed, 1/6 and 2/6 per packet. **CATALOGUE FREE.**

J. DOUGLAS, Bookham, LEATHERHEAD.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

Portable Buildings. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

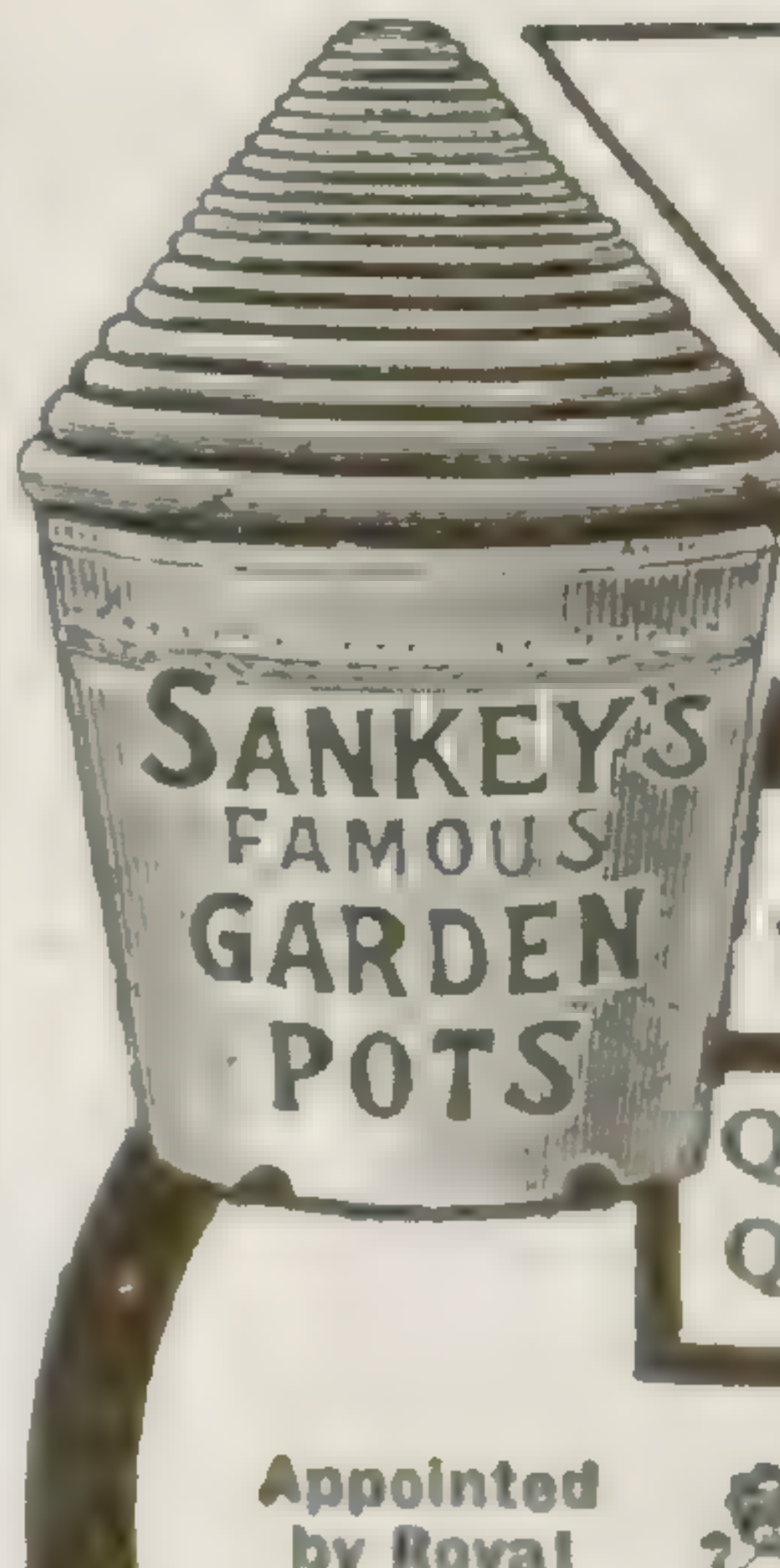
CASH WITH ORDER.

Sizes.		Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/6
8ft. long, 6ft. wide, 8ft. high	£2 10 6	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
Established 70 Years. **BEDFORD.**
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.



FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant **Makers to His Majesty the late King.**

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

ORCHID PEAT.—Hardwood Brown Fibrous, RHODODENDRON and DUST PEAT, SPHAGNUM MOSS.
Apply C. HALL, 1, Worgret, Wareham, Dorset.

Sales by Auction.

SALES NEXT WEEK.

WEDNESDAY NEXT, May 10th, at Twelve o'clock.—New and Rare Perennials and Herbaceous Plants, Liliums, Gladioli, Begonias, and other hardy Bulbs, Fibre Peat, and Leaf-mould.

At Three o'clock. — Trade Sale of Thousands of Hardy Bulbs, Roots, and Corms, Japanese Liliums, etc.

At Five o'clock.—100 lots of Ornamental Palms, Greenhouse and Stove Plants. Roses in pots, Standard Bays, etc.

FRIDAY NEXT, May 12th, at a Quarter to One o'clock. Choice Imported and Established Orchids from various sources, Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view morning of sale, and catalogues had.

---

100 NURSERIES, MARKET GARDENS, FLORIST AND SEED BUSINESSES TO BE DISPOSED OF.

MESSRS. PROTHEROE and MORRIS'S HORTICULTURAL REGISTER contains full particulars of the above, and can be obtained gratis at 67 and 68, Cheapside, E.C.

COMPACT FREEHOLD NURSERY FOR SALE, comprising six-roomed House, Bath-room, Kitchen and Scullery, 13 GREENHOUSES, 120 FEET LONG each, all heated by four Horizontal, Tubular Boilers; about 3½ acres of land, more or less, with stabling, and various sheds. Apply W. C. VIRGO, Moat House, Welling, Kent.

TO BE LET, or SOLD, NURSERYMAN'S and FLORIST'S BUSINESS.—A genuine Business for Disposal, in a flourishing town in North-East Kent. Long frontage to road, and comprises Eight Greenhouses, all heated by hot-water pipes, and row of forcing frames. This is an old-established business, and the present tenant has been in occupation for many years. The premises may be purchased at a low price. Splendid opportunity for a young energetic man with a small capital. For full particulars apply to P. H. S., c/o "Gardeners' Magazine," 148-9, Aldersgate Street, London, E.C.

BETWEEN Bristol and Bath (on main line).—High-class NURSERY BUSINESS; low ingoing, including about 300 feet up-to-date glass, stock, utensils, etc.; rent £35, including excellent modern house, stabling, and outbuildings. Apply, WEEKS, 40, Whiteladies Road, Bristol.

AMERICAN PERPETUAL CARNATIONS.—Everyone interested in PERPETUALS should write for our 1911 Illustrated Catalogue, FREE. Read our "TREATISE ON CULTURE," 1s., post free. YOUNG and CO., Carnation Specialists, HATHERLEY, CHELTENHAM.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

PERGOLAS.
Larch Poles at 1d. per foot. List Free.
PATRICK'S, Otley, Yorks.

OAK CRAMBLES.
Peeled and dry at ½d. per foot.
PATRICK'S, Otley, Yorks.

ROSE ARCHES.
Larch Poles at 1d. per foot.
PATRICK'S, Otley, Yorks.

TREE STAKES AND GARDEN RODS.
Lists free.
PATRICK'S, Otley, Yorks.

CHARGES FOR ADVERTISEMENTS IN THE GARDENERS' MAGAZINE.

Five Lines and under	£0	2	6
Per Line beyond	0	0	6
" Inch	0	6	0
" Half Column	1	10	0
" Column	3	0	0
" Page	9	0	0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— & Co.

Telephone Numbers:
Editorial and Printing Depts. ... ... 831 Holborn.
Advertising and Publishing Depts. ... 2140 Holborn.

Offices: 148 and 149, Aldersgate Street, London.

MERRYWEATHER'S
614 PUMP
IS THE
Gardener's Friend.

Easy to Work.
Simplicity Itself.

Write or Call—
63, Long Acre,
LONDON, W.C.

A Very Cheap Offer of Apple and Pear Trees to suit Small Holders and Cottage Gardeners.

Apples, our selection, Standards, 12s.; purchaser's selection, 14s. per doz. Half Standards, 8s.; purchaser's selection, 9s. per doz. Double, grafted two years, 6s.; purchaser's selection, 7s. per doz. Pear Trees at similar prices. Currants, red, at 2s. 6d. per dozen. Gooseberries, assorted at 3s. per dozen. Also an extensive stock of ornamental trees, flowering shrubs, rock plants, etc. Catalogues free.

THE STANCLIFFE ESTATES CO., LTD.,
Darley Dale Derbyshire.

WHARFEDALE. 5 ft. long.

In Best Redwood, painted two coats. White.

£1 15 0

Delivered any station.

Full Catalogue on application.

PETER PATRICK & SON, Otley, Yorks.

SEED BOXES.—12 x 9 x 2in. timber, 8s. 9d. gross, made, 10s. 3d.; 15 x 9 x 2in., 10s. 3d., made 11s. 9d.; also flower sticks, trellis, greenhouses, garden lights, or timber of all description. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

LAWN BOWLS.—£2 2s. tournament set, noted maker, eight superior full size polished lignum bowls, medium bias, and two jacks, complete in strong case, never used, price 27s. 6d.; approval. Box 365, Gilyards' Library, Bradford.

GREENHOUSES and GARDEN FURNITURE. — Distinctive Designs and Finished Workmanship. Write NOW for illustrated Catalogue. CARTER and HOWARD, Fife House, Kingston-on-Thames.

PRIMROSES, double, Rose, Ruby, Grey, Violet, Yellow, Lilac, White. HEPATICAS, White, Blue. Large FRENCH DAISIES, AURICULAS, various. List free.
MISS PALMER, Dromahair.

AMERICAN TREE CARNATIONS.—Best varieties, strong bushy plants, in 3in. pots, 5s. 6d. doz., 40s. per 100; flowering plants, in 5in. pots, 8s. doz. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

BEGONIAS.—30 Begonias, all different and named, 10s. 6d. Bedding Begonias, 9s., 12s., 15s. 100. German Iris, named, 4s. 100. ELLISON, 57, West Bromwich.

LILIUMS, 24 choice Liliums, all different, 10s. 6d. Gloxinias, 6 different, 2s.; Cannas, 10 do., 4s.; Gerbera, Adnet's Hybrids, 1s. 6d. packet. ELLISON.

GLADIOLI, large flowering, 3s.; 5s. 100 American Tree Carnations, best varieties, 5s. 6d. doz. Tropæolum Tuberosum, 2s. Garden Lilies, 2s. doz. ELLISON.

PRIMULA OBCONICA GIGANTEA GRANDIFLORA.

The most beautiful Free and Hardy Perpetual Greenhouse Plant grown.

ONCE IN FLOWER ALWAYS IN FLOWER.

We are NOTED for having the most — SUPERB Strain in commerce. —

SEED.

Mixed colours, also Compacta and Fimbriata, mixed, 1s. per packet; separate colours of Purple, Rose, Lilac, Deep Red, Crimson Scarlet, Pale Lilac, and Crimson (fringed petals), 2s. per packet; double flowering, including Pale Mauve and Rose, 2s. per packet. Instructions as to sowing with each packet.

PLANTS, 3s., 5s., 7s. 6d., 10s. 6d., and 15s. per doz., according to size.

W. A., Esq., Reigate, Surrey, writes:—

I had a packet of seed from you last year, and am pleased to inform you that I have blooms measuring two inches and more across each individual flower. They are the best strain I have ever seen, both for variety of colours, and substance of bloom.

WM. ARTINDALE & SON,
Nether Green Nursery,
SHEFFIELD.

For 3 penny stamps we will send you our Catalogue of Plants, which is not merely a price list, but literature which gives all the cultural notes of plants therein mentioned. We have received hundreds of testimonials commenting on the value of this book.

OUR SEED CATALOGUE WILL BE SENT FREE ON APPLICATION.

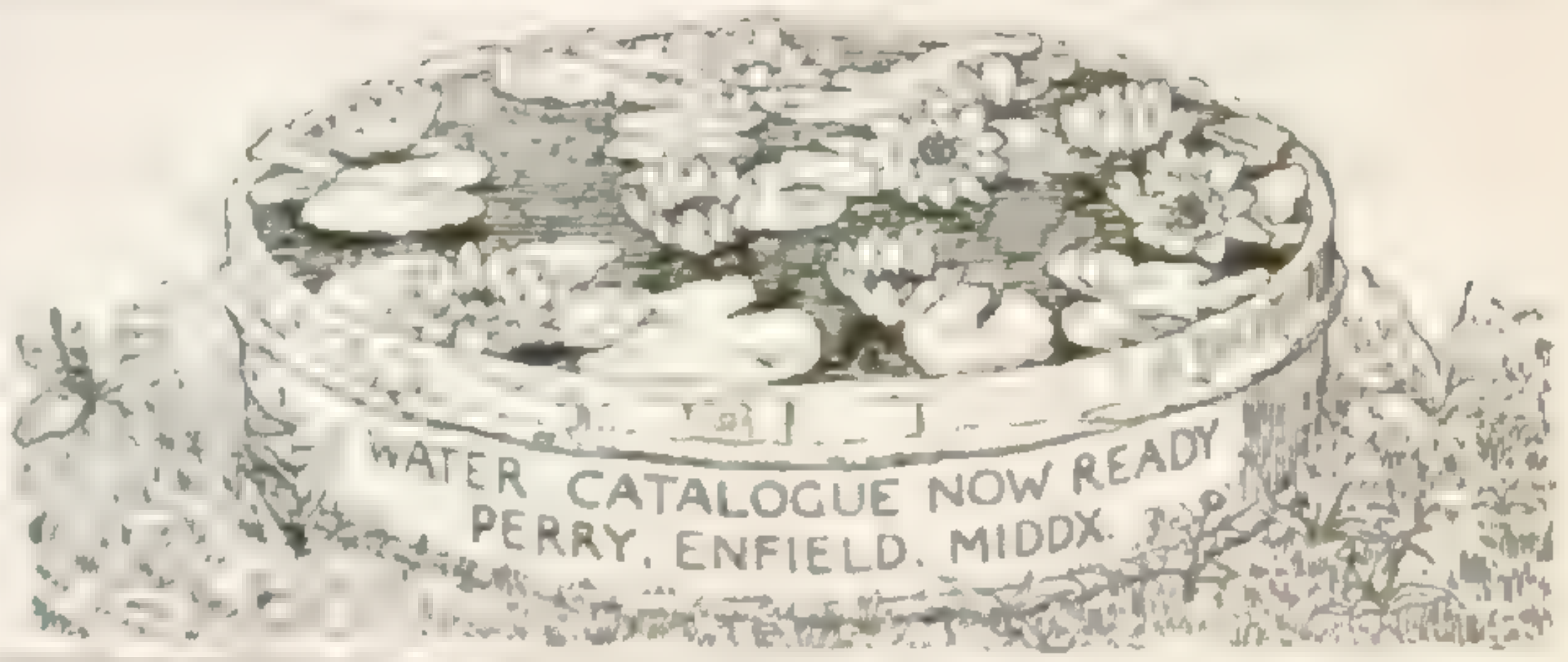
CHRYSANTHEMUMS Unlimited Quantity. All up to date varieties. List Free.

CARNATIONS Fully 80,000 yet to offer. Prices very Low. List Free.

MICHAELMAS DAISIES Perfect Collection List Free.

PANSIES AND VIOLAS Fully 600,000 Violas offered this Season. List Free.

WM. SYDENHAM, MELBOURNE DERBYSHIRE.



ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS**, and an endless variety of Choice **ORCHIDS**.

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

WRITE

WM. BOWEN,
HALSTEAD, SEVENOAKS,
— FOR —
GARDEN STAKES, PEA AND BEAN STICKS, HURDLES, Etc.

GARDEN AND TENNIS NETS (best tanned only, small mesh).—50 x 8yds., 17s.; 25 x 8yds., 50 x 4yds., 100 x 2yds., 8s. each; 100 x 1yd., 50 x 2yds., 25 x 4yds., 4s. each. Any size to order. Tennis Netting (corded), 25 x 2, 6s. 6d.; 25 x 3, 7s. 6d.; 25 x 4yd., 8s. 6d. Write for Price List. L. WREN and SON, Net Merchants, 139, High Street, Lowestoft. Established 1863.

GLASS & PAINT.

NICHOLLS & CLARKE, LTD.,
15 oz. and 21 oz. Glass,
IN ALL THE USUAL SIZES.
Shoreditch, London.
When sending for list please cut out this advt.

EVERY FLOWER IN THE GARDEN WILL GRATEFULLY RESPOND
To the Use of

CLAY'S FERTILIZER

IT IS

THE PLANT FOOD OF RENOWN.

CLAY'S ✻ LONDON ✻ FERTILIZER
TRADE MARK.

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK, AS AT SIDE.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. Fourth Edition (Second Reprint). 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Stratford, London, E.

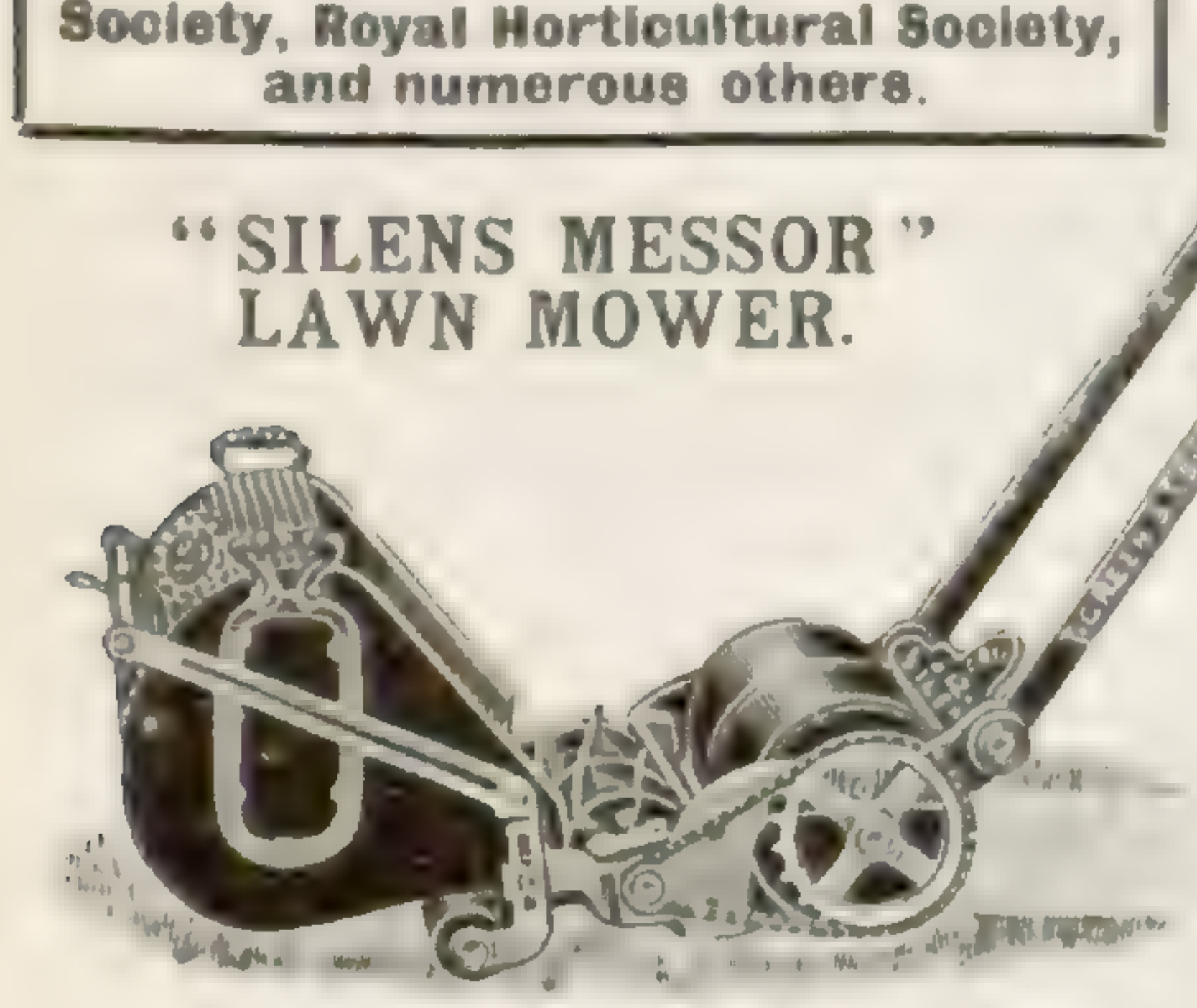
APPOINTED BY ROYAL WARRANT, HORTICULTURAL MACHINE MAKERS TO HIS MAJESTY KING GEORGE V.

GREEN'S LAWN MOWERS ARE UNEQUALLED.

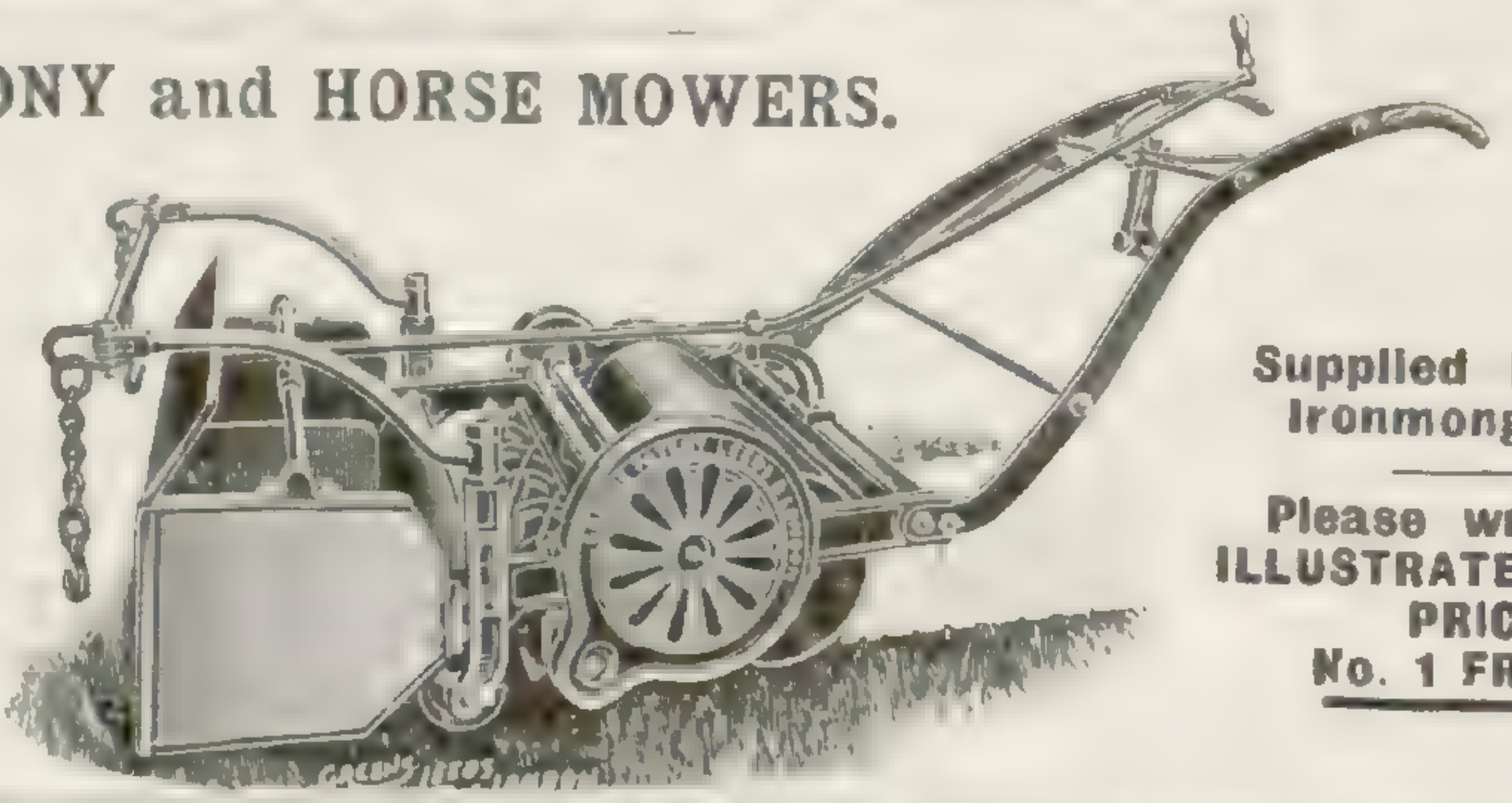
Hundreds of Thousands are in use. Established nearly a Century,

Highest Awards — Royal Botanic Society, Royal Horticultural Society, and numerous others.

"SILENS MESSOR" LAWN MOWER.



PONY and HORSE MOWERS.

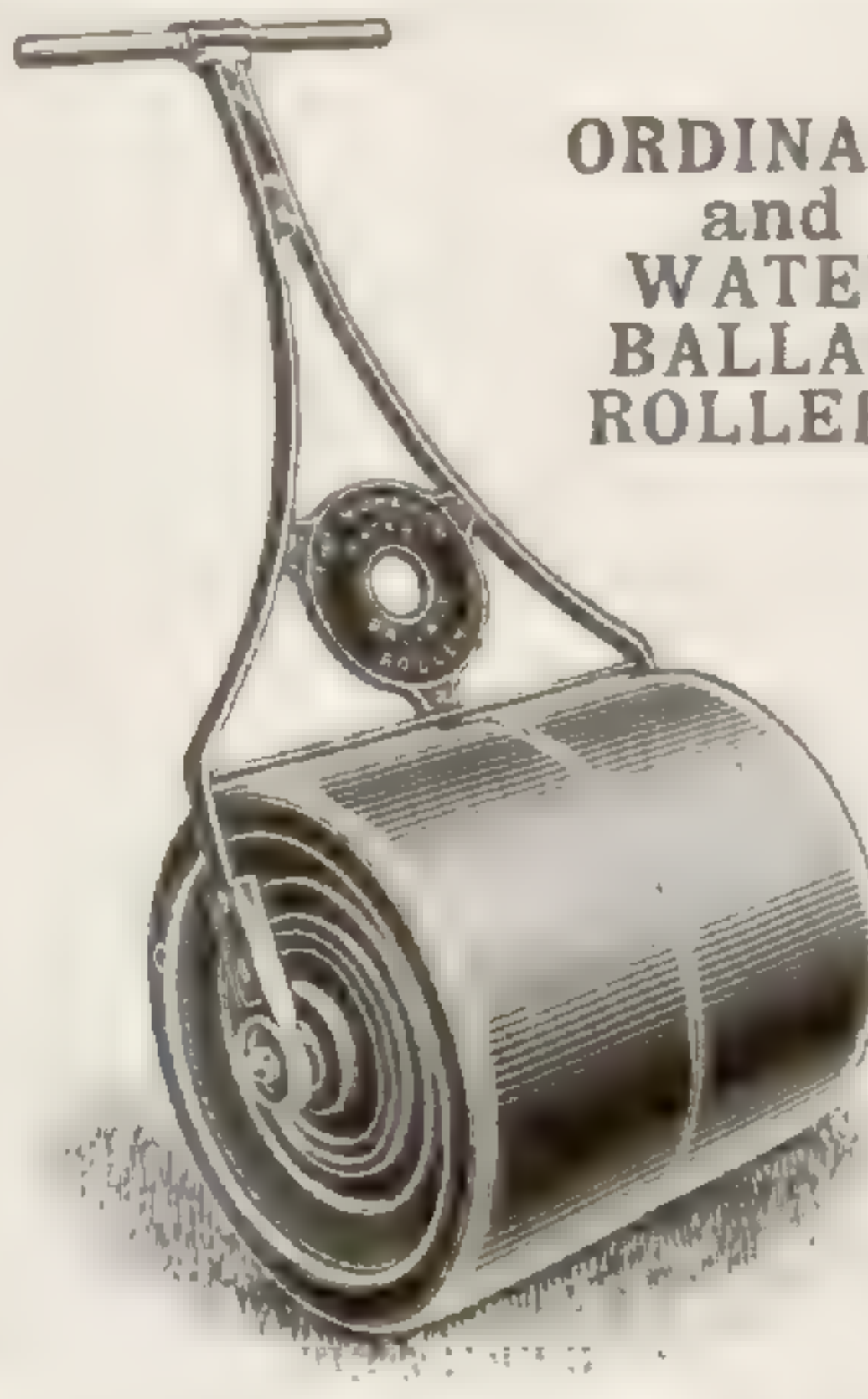


Telephone Numbers—
Leeds, 3580.
London, 2022 Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London

Supplied by all Ironmongers.

Please write for ILLUSTRATED PRICE LIST No. 1 FREE.

ORDINARY and WATER BALLAST ROLLERS.



MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E.

SPECIAL CHEAP OFFER TO CLEAR!

HOLLIES HODGINSII and others.

2-3 ft.	... ...	**30/-** doz.	**200/-** 100
3-4 ft.	... ...	**42/-** ,,	**300/-** ,,
4-5 ft.	... ...	**72/-** ,,	**500/-** ,,

RHODODENDRON PONTICUM.

1½-2 ft.	...	**5/-** doz.	**32/6** 100	**275/-** 1000
2-2½ ft.	...	**10/6** ,,	**40/-** ,,	**350/-** ,,
2½-3 ft.	...	**17/6** ,,	**55/-** ,,	**500/-** ,,
3-3½ ft.	...	**21/-** ,,	**75/-** ,,	**700/-** ,,

CLIMBING ROSES, Extra Strong, in 8 in. pots, with shoots 5-8 ft. long, for planting out now.

Also **BUSH ROSES** in 7 in. pots for filling up at **2/6** each, **24/-** doz.

New List of Bedding Plants and Dahlias post free on application.

DICKSONS ROYAL NURSERIES, CHESTER.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.
PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

NOTICE.

The AZALEAS and RHODODENDRONS planted in Hyde Park, near Rotten Row, finest to be seen in London, are supplied by ANTHONY WATERER, whose only address is Knap Hill Nursery, Woking, Surrey.

No connection with any other firm of similar name.

PERPETUAL FLOWERING CARNATIONS: Britannia, Rose Dorée, White Perfection, Black Chief, Fortuna, Mrs. Burnett etc. 3s. per doz.; strong plants; post free. Ask list. C. F. A. VAN DER SLUYS F.R.H.S., Ramee Guernsey.

BUNYARD'S FRUIT TREES

The Best Quality and Largest Selection at Moderate Prices.

WRITE FOR CATALOGUE.

GEO. BUNYARD & CO., LTD.,
Royal Nurseries,
MAIDSTONE.

BY APPOINTMENT.

HOLLIES and RHODODENDRONS.

The finest Stock of **HOLLIES** and **RHODODENDRONS** in the London district are growing at the Loughton nursery of WM. PAUL AND SON, Waltham Cross, Ltd.; also **HOLLIES** at their Broxbourne nursery. Samples and named collections can be seen at Waltham Cross.

Priced List free on application.

PAUL'S ROYAL NURSERIES,
Waltham Cross, Herts.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.

Our Work has stood the test of time.

STALKER'S Forest Trees, Fruit Trees, Roses, Bulbs, and Seeds
Are known all over the world, and cannot be surpassed for hardiness and quality.

Famous for Quality and Cleanliness.

D. STALKER & SON,
Government Contractors,
Catalogues Free. NAIRN, N.B.

VOL. LIV.—No. 3,001. SATURDAY, MAY 6, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

◆

Species of Plants and Their Differentiation.

A German botanist, J. C. Th. Uphof, has recently estimated the species of known flowering plants to reach the astounding number of 133,082, and those of ferns as 4,521. Among the former the largest family appears to be that of the Compositæ, which embraces 14,324 species, while the palms have 1,085, the grasses 3,545, and the orchids no less than 7,521. Of course, it is probable that these numbers would be largely modified in both directions by botanists who are known as "lumpers" and "splitters," i.e., those who ignore small differences and class together plants as of the same species which others regard as distinct, and those who define as separate species those of any similar type which are possibly merely varieties of one and the same. Nature draws no hard and fast lines, a different environment, a different climate, will undoubtedly modify the specific types to some extent, and, what is more to the point, every now and again, and, so far as we can ascertain, without impulse of this kind, she modifies it, often very greatly by inventing, as it were, new types or "sports" or "mutations," which, while retaining the generic character, materially alters the specific one, so that, if, as is usually the case, this new type is capable of reproducing itself truly by seed or spore, it fulfils all the requirements of a new species entirely. Here, however, it is practically impossible for the classifying botanist to rank such varieties as new species. When we consider that, taking our British ferns as an example, several of the species have sported under wild conditions into hundreds of distinct varieties, and all plants, more or less, are subject to similar variation, it is obvious that their acceptance as species would involve the multiplication of the above figures by scores or many scores in order only to embrace all the different natural forms, while if cultivated ones were included their name would indeed be legion, and the ponderous volumes of the Kew list would fill a large library. The exact definition of a species is a very difficult matter for the botanist. The merely local botanist finds comparatively little difficulty in determining the species he comes across in his travels, but when the cosmopolitan botanist has recourse to his herbarium containing species from all over the world, he finds linking forms which blur the sharp dividing line which the local botanist easily finds, and "lumping" or "splitting" then occurs precisely in accordance with the proclivities of the botanists concerned. Amongst our hardy ferns, to recur to a familiar branch, we find Polystichum setosum, with its lucent ciliated fronds, is considered by some as a form of P. aculeatum, despite, to the fern student here, the clear specific difference between them. He is also greatly puzzled by the allocation of such a fern as the Lady Fern (Athyrium filix foemina) in its common form to the asplenia, and in its less common form of the Scottish mountains (Pseudathyrium alpestre), actually to the polypodiums, despite its difference in all, in his opinion, truly specific characters. With our native Blechnum spicant we have a peculiar instance of allocation by even the Kew authorities, to a wrong genus, viz., Lomaria. Fern genera are determined by the form in which the spores are borne and the peculiarities by which they are protected or unprotected, as the case may be, this feature having been found to be the most reliable and persistent, despite changes of specific type. Botanists are entirely agreed that in Blechnum the spores are borne on contracted fronds, and protected by a cover well within the margin and quite independent of it, while in Lomaria, the edge of the frond division itself is turned backward and acts as indusium or protective cover. Our native Blechnum quite clearly shows the independent indusium of its genus, and there is actually a not very rare form of it, B. s. anomalum, in which there is a wide space between the spore heaps and the margin, a form impossible to Lomaria. That has been pointed out for years, but nevertheless, it figures as Lomaria at Kew, and, as a consequence, in many books and lists. In this connection, it is a curious and unfortunate fact that it is almost impossible to get a mistake of this sort corrected, even when, as in this case, a mere glance at the plant itself cannot fail to be convincing. In Britten's "European Ferns," the difference is shown by clear drawings in the body of the book, and the plant is described under Blechnum, the coloured frontispiece, however, is labelled "Lomaria," the writer and the illustrator being obviously at variance here, as they are elsewhere in numerous cases where different synonyms are used.

MR. F. HANSON.

Mr. F. Hanson, whose portrait we give in this issue, has for many years occupied a foremost place among the practical horticulturists in East Anglia, and the high position to which he has attained may be ascribed to a rare combination of administrative ability, cultural skill, and a genial temperament. We are not quite certain as to the year in which Mr. Hanson assumed the charge of the gardens of Somerleyton Hall, the fine Suffolk seat of the Right Hon. Sir Saville Crossley, Bart., but it is nearly twenty years since we gave an illustrated account of the extensive and beautiful gardens, which at that time, as now, were regarded by all who were acquainted with them as forming one of the best-kept horticultural establishments in the county. In walking through these great gardens, in which the owner takes so keen an interest, it is not easy—if, indeed, it is possible—for the visitor to determine whether Mr. Hanson has any preference in relation to garden management, so high is the keeping in all departments. In the flower garden we find displays of hardy and tender plants of surpassing beauty, and in the kitchen garden crops that bespeak cultural skill of a high order; while under glass, from the magnificent winter garden to the smaller structures, tender plants and fruit crops are met with in the best possible condition. As an exhibitor Mr. Hanson has excelled with chrysanthemums and hardy fruits, and we have a clear recollection of the splendidly-developed blooms of chrysanthemums, and the even more noteworthy collections of apples and pears, with which he has obtained premier honours at Norwich during the past fifteen or more years.

Royal International Horticultural Exhibition, 1912.—The Lord Mayor has issued invitations for a meeting at the Mansion House for the purpose of promoting the success of the Horticultural International Exhibition, which will be held in London in May next year. The meeting will take place on May 10 at 3 p.m. in the Egyptian Hall. Amongst those who are expected to address the meeting are Lord Balfour of Burleigh, K.T., Lord Rothschild, G.C.V.O., Lord Aldenham, the Hon. Vicary Gibbs, Alderman Sir Marcus Samuel, Bart., and Sir Jeremiah Colman, Bart. The scheme for the exhibition has already the patronage of the King and Queen and Queen Alexandra.

Ornamental Cherries constitute at the present time a distinct and beautiful feature of the Royal Gardens, Kew, and those who are interested in trees remarkable for the beauty of their flowers should, if they have the opportunity, see them during the time the flowers show their true colouring. The finer kinds have been rather freely planted within recent years, and there will be no difficulty in meeting with good specimens, and the example that has been set at Kew might with advantage be followed in other great gardens. The pale pink and exceedingly beautiful Prunus pseudo-cerasus fl. pl. is the most largely represented, and the finest specimen is in the Pagoda Avenue, and this has during the past fortnight been simply a huge bouquet of flowers. Somewhat later in flowering, and surpassingly beautiful, is the rich rose-coloured P. pseudo cerasus J. H. Veitch, of which comparatively large specimens may be found in the Pagoda Avenue and near the tropical lily house, which is not far distant from the palm house. The effect produced by the wreaths of large, richly-coloured flowers is such as to at once arrest attention, and it is interesting to observe how the visitors crowd around the trees. Sometimes comparisons are instituted between the two cherries last named, with a view to determine their relative merits, but there is really no occasion to do this, as both should have a place in every garden. They are quite distinct in colour, and differ in the time of flowering by about two weeks. The yellow-flowered cherry (P. serrulata flore pleno lutea) is flowering in the most profuse manner, and the fine specimen presents a charming appearance. The flowers are not yellow, but a rich cream colour. The pure white P. avium flore pleno is also flowering freely, the finest specimens being the one near the Cumberland Mound and those in the Pagoda Avenue. The new rose-coloured P. Sargenti is now out of bloom, but the small tree in the collection has flowered freely, and given promise of being a valuable addition to the ornamental cherries. The flowers are single, and consequently are more ephemeral than those of the double varieties. Visitors to Kew should also note the rich effect produced by the groups of Berberis stenophylla.

Horticultural Club.—The next house dinner of the Horticultural Club will be held at the Hotel Windsor, Westminster, on Tuesday, May 9, to be followed by a lecture on "Glimpses of Morocco and the Canary Isles," by Mr. T. Ernest Waltham; the lecturer will wear the national costume of Morocco, and his lecture will be illustrated by a hundred lantern slides, made from photographs taken by himself. All the members of the club have now received a list of members elected up to April 30, and a list of the Club Rules, both of which they much appreciate. The new hon. sec., Mr. R. Hooper Pearson, Braewyn, Earlsfield Road, Wandsworth Common, S.W., will gladly receive nominations for membership.

Perpetual-flowering Carnations.—In our next issue we shall devote special attention to perpetual-flowering carnations. The articles will deal with cultivation and the selection of varieties, and among the illustrations will be several of the most noteworthy of the exhibits at the Perpetual-flowering Carnation Society's show,of which a report appears in this issue.

Springtime at Balmoral. Our Aberdeen correspondent writes: "The surroundings of Balmoral Castle are, with the advance of the year, daily becoming more delightful. With seasonable haste old Dame Nature is discarding her austere winter garb, which at an altitude of 1,000 feet above sea level lingers in the eye longer than in the lowlands. To the fine, moist, and genial weather experienced in the latter half of April, the face of Nature has at once responded. The grey, sterile-looking fields, having heard the "voice of spring," are, as if by magic, flourishing green again. Trees are budding vigorously, and the policies and parks have assumed the charm of true springtime; and one begins to survey the scene forgetful of the snow wreaths still clinging to the distant slopes of "Dark Lochnagar," which still maintains its wonted stubborn fight against the ever-strengthening genial breezes which herald the approach of summer. It is expected that after the Coronation and the Royal visits to Dublin and Edinburgh their Majesties will visit Balmoral in August, and make a long stay. If one would like to see Balmoral and its surroundings at their very best, August and September are the months to choose for the visit. Then the hills are purple to their summits with the "bonnie bloomin' heather," and in the valleys the fields of golden grain, with the silvery Dee winding its zigzag course along to the sea, all combine to make one of the most exquisite settings in which any Royal residence was ever placed since kings began to rule.

National Sweet Pea Society.—A special general meeting of this society will be held at the Hotel Windsor, Westminster, at 2.30 p.m., on Thursday, May 18, for the purpose of considering and adopting a set of rules for the constitution and government of the Society's Floral Committee. These rules formulated by a sub-committee and approved by the General Committee will become immediately operative, as passed at the meeting of May 18. Notice of meeting and a copy of the proposed rules have been sent to every member of the society.

Spring Flowers in Regent's Park.—The traditions of Regent's Park are worthily maintained, and at the present time there is a surprisingly beautiful display of bulbous and other spring-flowering plants. The numerous beds on the lawns that flank and divide the Chestnut Avenue in the south-east corner of the park are chiefly filled with hyacinths, tulips, and daffodils, and, as the colours have been arranged with due regard to harmony, the colour effect is at once rich and beautiful. The large beds of hyacinths are now past their best, but the huge spikes show that when in perfection they were most effective. The tulips, which include the finest of the early-flowering varieties suitable for massing, are now in their highest state of development, and produce a series of brilliant colour effects. The large bed, which is usually filled with tropical plants during the summer months, is wholly devoted to tulips, which are arranged in blocks, and form a delightful colour scheme. The opposite mound is clothed with trumpet daffodils, and on the wide lawn near Gloucester Gate there is a remarkably fine breadth of star daffodils now at the zenith of their beauty.

Bargany, Ayrshire.—Through the kindness of Mr. North Dalrymple Hamilton, of Bargany, the picturesque policies of that estate are now to be open to visitors during the summer months. A request for such permission emanated from the Girvan Town Council, and a reply to the above effect has been received by that body from Mr. Inglis, the factor on the property. Admission is to be limited to a certain number, and is to be by ticket. Mr. D. Buchanan, the gardener on the estate, is one of the best-known of Scottish gardeners, and the policies are always maintained in the highest condition. The trees and shrubs are very fine, and altogether the inhabitants of Girvan are to be congratulated on obtaining permission to visit such a fine place.

Accident at Balmoral Castle.—Alexander Smith (36), the gardener's horseman at Balmoral Castle, is suffering from a serious accident, which occurred while he was at work on the lawns at the castle last week. Smith and another man were rolling the lawns with a horse-roller, when the horse took fright at the noise of the implement, and bolted. Smith fell, and was struck with the roller. He was removed to his home, and medical assistance at once secured.

The Old Gardens of Italy were the subject of a highly interesting lecture given by Mr. Joseph Cheal the other evening before the members of the Brighton Horticultural Society. In the course of his lecture Mr. Cheal stated that the love of gardening in Italy may be traced to an early period in the history of the country, and it may be assumed the Roman Generals brought home glowing accounts of the gardens they had seen in Eastern countries. It was probable that these accounts stimulated the imagination of Lucullus and induced him to make the fine garden at Naples described by Pompey, and thus become the pioneer of the grand style of gardening that became so popular at a later date. Emperor Hadrian also did much to stimulate a taste for the higher branches of architecture and horticulture, but during the comparatively long period over which the decline of the Roman Empire extended there was a material decrease in the taste for the stately style of gardening. Towards the end of the fourteenth century there was a considerable revival in the taste for gardening, and, during the Renaissance, dignitaries of the Church and wealthy senators and merchants appear to have vied with each other in the building of houses and the construction of gardens. Certainly the arts of the architect, the sculptor, and the landscape gardener were employed in the creation of the magnificent gardens of the period. The style that found favour was more or less formal, and the gardens were embellished with terraces and parterres, fountains, and cascades, temples and cascades, and avenues and pergolas in great variety. The climate favoured the development of a wealth of trees, shrubs, and flowering plants, and these in their luxuriant growth afforded a succession of delightful pictures, and filled the air with grateful perfumes. The shady walks, avenues, and grottos provided cool retreats during the heat of spring and summer, and the rippling of the cascades, the splashing of the fountains, and the song of birds greatly enhanced the charms of these gardens. Many of the more noteworthy gardens were described and the lecture was throughout illustrated with excellent slides. Need it be said that the audience greatly appreciated the intellectual feast provided them, or that Mr. Cheal was heartily thanked for his lecture.

Royal Horticultural Society of Aberdeen. The prize schedule for the forthcoming show of this society, to be held in the Duthie Public Park, Aberdeen, in August, presents some interesting and novel features. Many and varied are the prizes offered, including several valuable challenge cups—some presented by the society, and others the gifts of patrons and well-wishers. No fewer than four valuable silver cups are to be awarded this year, besides a large number of silver medals, and over £150 in money prizes. Some years ago the directors instituted special prizes for sweet peas, a flower in which great development has taken place in recent years, and which is at its very best at the time of the show. This year specially valuable prizes have been offered for this flower, so as to render it a distinctive feature. In the classes for roses also there are additional prizes offered by patrons of the society, thus ensuring a large number of attractive exhibits, which should make the show this year, so far, at least, as sweet peas and roses are concerned, the finest ever held in the North of Scotland.

Messrs. Sutton and Sons were awarded the Silver-gilt Banksian Medal for the remarkably fine collection of spring vegetables exhibited by them at the meeting of the Royal Horticultural Society, held on April 25, and described in our issue of the 29th ult.

R.H.S. Journal. The Rev. W. Wilks, M.A., writes as follows: "The President and Council of the Royal Horticultural Society greatly regret the unavoidable delay which has taken place in the issue of the society's journal, caused by the recent strike of printers' operatives in London."

Gladioli in America. The American Gladioli Society has a membership of 172, and considers that it must depend largely for new members upon amateurs. Efforts are being made to institute a thorough trial of gladioli varieties at Ithaca, for the purpose of testing merit and correcting nomenclature. A scheme of pointing to be used in the consideration of novelties for certificates was arranged as follows: Resistance to disease, 5; texture of flower, 10; duration of bloom, 10; size of bloom, 10; colour of bloom, 15; form of flower, 10; form of spike, 10; stem (length and stiffness), 10; number of flowers on spike, 15; vigour (aside from disease resistance), 5; total, 100.

Intensive Culture is being carried out with much success on Lancashire County Council's farm at Hutton, near Preston, and some photographs that we have had an opportunity of seeing show that during the winter the frames were filled with cabbage lettuces of great excellence.

ROSES FOR THE GARDEN.

As duly recorded in our issue of the 29th ult., the National Rose Society held a conference at the Westminster Palace Hotel on the previous Tuesday, which was regarded by all who had the pleasure of being present as an unqualified success. The subject selected for consideration was "Roses for the Garden," and the discussion was opened by the President (the Rev. J. H. Pemberton), who is not less conversant with the roses for garden decoration than he is with exhibition varieties, in the cultivation of which he is so well known as a past master.

In his opening remarks Mr. Pemberton said he was delighted to see so large a gathering, for it afforded the best possible proof that a large number of the members were greatly interested in roses that are especially adapted for beautifying the garden, and the supply of blooms for the decoration of indoor apartments. He was sorry the room was crowded, but the council of the society had no data on which to base an opinion of the number of members likely to be present, and it was thought that the large room in which they were assembled would be fully equal to the requirements. He was gratified by the large number present, because it augured well for other conferences, which, he hoped, in the future would form part of the society's regular work. He believed it to be good for rosarians to confer together from time to time upon matters requiring attention in the cultivation of roses, as it was possible at such conferences to afford assistance to each other.

The subject for consideration was roses for the garden, and, as they had met for the purpose of conferring with each other, he hoped his opening address would be regarded simply as a peg on which to hang the discussion, and this he trusted would be as full as the time at disposal would permit. They were met to discuss garden roses, and not the varieties which bear flowers that render them of special value for exhibition. They had now become a great and important class, and it was satisfactory to know that the rose, while still held in the highest estimation for exhibition, was now being given the prominent position in the garden that it so well deserved. The rose, he ventured to suggest, fully justified its title as the Queen of Flowers, and was worthy of the position it occupies as the national emblem of the British Empire.

There was no occasion to refer at length to the claims which the rose has on owners of gardens, for these were now being acknowledged, as evidenced by the enormous extension of rose culture within recent years. He might point out that the rose had certainly no superior in beauty among the many plants that have now a place in the garden, and it surpassed all others in the period over which the season of flowering extends. Many of the rosarians present had in all probability read the story of the rise of the hybrid perpetuals in the Early Victorian period, and there could be little doubt of their being conversant with the fact that many of the so-called hybrid perpetuals had a comparatively short season of flowering. But the intercrossing of these with the tea-scented varieties had resulted in the creation of a race of roses that were so continuous in flowering as to render it possible to have the garden as bright with roses in September as in June.

By the inclusion of some of the early-flowering species in a selection, it is possible to have roses in the garden from April till Christmas, and as a proof of the continuous flowering of some of the varieties until the winter had commenced, Miss Pemberton had been able for several years past to place six vases of roses on the altar of his church on Christmas Day, all the blooms having been cut from plants growing in the open. The season of roses commenced with the Banksian roses, the single yellow being the earliest to bloom and was carried on by Rosa altaica, R. alpina, and other of the species that yield of their blossoms early in the summer, the teas, the hybrid teas, and other of the well-known classes.

He submitted that the rose meets all the requirements of cultivators. It is admirably adapted for the formation of hedges, screens, pillars, and specimen plants; it is of much value for clothing pergolas, for the supply of cut flowers, and also for bedding purposes. The owners of gardens were no longer tied to the various softwood plants for filling beds, as, with the aid of suitable varieties, they could have a continuous display of roses extending over a long period. The great value of roses for bedding had been proved to demonstration at the White City during the past two years. In one year Continental growers had shown what roses are capable of as bedding plants, and in the other English growers had demonstrated not less clearly the wondrous beauty of bedding roses when they are planted and grown under proper conditions.

The importance of a knowledge of the several sections was insisted upon, and Mr. Pemberton reminded those present that if they wished to excel in growing roses, they must cultivate the power of observation. There were many growers who were successful with chrysanthemums and sweet peas, but who failed in some degree with roses, and this was explained by the fact that, while the two classes of flowers first mentioned can be treated all alike, all the roses cannot be treated in the same way. Roses have different habits, and not until the points of difference are understood can success be achieved. He suggested that those who know but little about roses should go out into the fields and lanes and study the growth of the Field Rose (Rosa arvensis) and the Dog Rose (R. canina), and when they had proceeded far enough to enable them to differentiate between the growth of those two roses, they might take the pruning knife from their pocket and proceed to prune their roses. Not only was there a great difference in the habit of the various groups, but varieties in the same group differed materially, and unless this fact is recognised and acted upon, there is a risk of the cultivator, when pruning, cutting away the flowering wood. Cultivators should, indeed, know their roses so well as to be able to recognise each variety, even in the depth of winter.

In connection with pillar roses Mr. Pemberton pointed out that it was necessary to remember that there are not, as a matter of fact, any roses that are true climbers. The growth of the so-called climbers was naturally rambling, and a good name for the whole race is rambler. In the cultivation of these there is no occasion to trouble about budding and grafting, as the propagation of the multiflorus and Wichuraianas can be readily effected by means of cuttings. It is simply necessary in August to slip off the side shoots with a small heel; to trim the latter, and to shorten the shoots to six or eight inches, and remove all but the top leaves. They should be then placed in trenches four or five inches in depth with a little fine sand in the bottom, and have the soil filled in about them, and have it well trodden. It is important to make note of the wood that bears the flowers, for when this is done it is found that flowers are produced on the shoots that spring from the base, and that when they are cut back the flowers are lost. The proper course is to thin out the shoots that have flowered, and shorten the young shoots by the removal of the soft portion at the top. When the thinning-out is done early in the autumn the remaining growths will become well ripened throughout the greater part, if not the whole of the length. Many gardeners liked to trim their ramblers close back, and as the result lose their flowers. Ramblers should not be tied up closely to the posts. The shoots, as so well known to those who observe their roses closely, bend over in process of development, and the new shoots rise up in the centre. It is a good practice to stretch a moderately stout cord between the posts and secure the growths to them in a slanting direction.

(To be continued.)

PERPETUAL-FLOWERING CARNATION SOCIETY.

This society's tenth exhibition was held at the Royal Botanic Gardens, Regent's Park, on May 2 and 3. The show was a good one, but probably not quite up to the high-water mark of the previous one held at Westminster. Some of the flowers were of remarkable size and beauty, and as shown in quantity they attracted full attention and admiration. It is no wonder at all that perpetual carnations are popular. Messrs. Brunton, Mathias, and Hawes carried out the arrangements in good style, and were ably assisted by several members of the committee.

OPEN CLASSES.

The premier award and Gold Medal for a collection of carnations arranged on a space 10ft. by 3ft., was won by Messrs. Young and Co., Hatherley, Cheltenham, with a bold and fine display of good flowers of Lady Audley Nield, Mrs. Greswolde Williams, Enchantress, Mrs. Burnett, Mikado, Queen, Cheltonian, White Perfection, and the crimson Duchess of Devonshire; Mr. F. C. Harwood, Upton Leigh, Torquay, second.

First prize and the Brunton Cup for three vases of British novelties distributed since January, 1909, fell to Mr. C. Engelmann, Saffron Walden, for Regina, Carola, and Rex; Mr. W. E. Wallace, Eaton Bray, second with May Day, Delight, and Scarlet Glow; one competitor was disqualified for showing Britannia, which was sent out in 1906. The American Cup for three vases of American novelties was won by Mr. B. E. Bell, Castel, Guernsey, with Whitcombe Riley, the flaked Bay State, and Governor Duveen; he was the only competitor.

Mr. W. C. Wallace, Eaton Bray, won the Covent Garden Bowl for two varieties of carnations, sixty blooms of each, half to be packed in boxes, and half set up in vases; he showed Rose Pink Enchantress and White Enchantress in his usual fine style; the Thatcham Fruit and Flower Farm, Newbury, came second with Enchantress and Winsor. Mr. Burnett was unfortunately disqualified; a few of his flowers had wire supports.

LARGE VASES.

The open classes for twenty-five blooms of a variety were well contested. For the Enchantress set Mr. W. E. Wallace led with that variety; Mr. B. Bell second with Admiration; and Mr. H. Burnett third with Enchantress. In the Mrs. Burnett class, Mr. A. Smith, Enfield Highway, scored with Empire Day; Mr. Wallace second with May Day; and Mr. Dalton, third with May Day. For flowers of the Winsor type Mr. Wallace led with that variety in grand form; Mr. Bell second with Winsor; and Mr. Burnett third with R. F. Felton, the latter very large. In the Lawson class Mr. B. Bell was a capital first with Mrs. C. W. Ward—a grand vase; Mr. C. Engelmann second with Mrs. T. W. Lawson; and Mr. Dalton, Iver, Bucks, third with Lawson Enchantress.

For a vase of white flowers Mr. Wallace was to the fore with White Enchantress; Mr. Bell second with Judith; and the Thatcham Fruit and Flower Farm, third, with White Perfection. The best vase of a scarlet variety was Beacon, from Mr. A. F. Dutton, Mr. B. E. Bell coming second with Britannia, and the Thatcham Fruit and Flower Farm third with Beacon. There was only one vase of a crimson variety, and this was Mr. Engelmann's Carola, a fine form. Mr. Bell was first for any other self with Rose Doré, Mr. Burnett coming second with Mikado, and Mr. Engelmann third, also with Mikado.

For one vase of thirty-six flowers, one or more varieties, arranged with any foliage in a decorative manner, Mr. W. E. Wallace scored with a beautiful vase of May Day; Mr. B. E. Bell second with mixed varieties; and Thatcham Fruit and Flower Farm, Newbury, third. A first prize was awarded to Mr. Engelmann for a vase of a fancy variety—Harlequin; and he was awarded a second for a dozen flowers of a registered variety not in commerce, and here he showed a yellow variety.

In this section Mr. Bell's vase of Mrs. C. W. Ward won the silver-gilt medal as the best vase in the division.

AMATEURS.

In the amateur division there was only one entry of a collection of cut carnations, set up on a space 6ft. by 3ft., and this was from Mr. F. C. Stannett, gardener to Mr. F. May, Houndswood, Radlett, who had a fair display of blooms arranged with ferns.

Mr. A. E. Usher, gardener to Sir Randolf Baker, Bart., Ranston, Blandford, Dorset, led for a vase of Messrs. Low's novelties, Royal Purple and Roseate Dawn being his best blooms; Mr. Weston was placed second for Mr. Burnett's novelties, showing good blooms of Marmion. Mr. Usher scored for a dozen blooms in six varieties, and was followed in order by Mr. Warton, gardener to Lord Gerard, Eastwell Park, Kent, and Mr. J. Vert, gardener to Lord Howard de Walden, Audley End, Saffron Walden. In the classes for six flowers in one vase, there was a moderate competition. For a blush variety Mr. A. E. Usher scored with Mrs. Chas. Knopf, in very fine form.

For a light pink, Mr. Usher led with May Day, Mr. Warton coming second with Mrs. H. Burnett, and Mr. Vert third. In the rose-pink class Mr. A. E. Usher led with Rose Pink Enchantress; Mr. Weston second; and Mr. J. Vert third, also with the same variety. In the Lawson class Mr. Usher was again to the front, showing Lawson Enchantress; Mr. J. G. Weston second with Hannah Hobart; and Mr. Vert third.

In the white class Mr. Usher was first with Perfection; Mr. Weston second, and Mr. Vert third. The best scarlet variety was Robert Craig, superbly shown by Mr. Usher; Mr. Vert second with Britannia; and Mr. Weston third with the latter variety. Mr. Weston, Mr. Usher, and Mr. Vert led in the crimson class, the first two showing Carola in fine form. Mr. Weston scored for Mikado, with Mr. Usher second. Mr. Johnson was to the fore for a fancy variety with the popular Marmion; Mr. Usher second with Imperial; and Mr. Weston third with Marmion.

SMALL GROWERS.

In the division open to those who grow their flowers unaided, or have a gardener only part of the time, there was a fair number of entries, and here the leading prize winners were Mr. G. H. Lawrence, Stratton, Glastonbury; Mrs. Kenyon Fuller, Sonning; Mr. T. H. Plowright, Trinity Place, Windsor; and Mr. P. N. Patterson, South Drive, St. Annes-on-Sea; Enchantress, Beacon, and Royal Purple were the best flowers.

DECORATIVE EXHIBITS.

Three competitors entered in the amateur competition for a dinner-table decoration in carnations, and here Mrs. A. D. Ruff, Sharnbrook, Beds, scored with Rose Pink Enchantress nicely disposed; Miss Muscutt, Church Street, Wolverton, second; and Mrs. Maslin, Addlestone, third. In the open class for a table decoration, Mrs. A. D. Ruff was again first, and this time she used Britannia with asparagus fronds and leaves of Caladium argyrites; Mr. Bealing, a good second, with a very pretty table of Mrs. Burnett, that might well have been placed first; and Messrs. Clark and Cook, Castlethorpe, Bucks, third, with a rather heavy arrangement of Mrs. Burnett.

Mrs. K. F. Hammond, King's Road, Sloan Square, S.W., was the only exhibitor of a basket of carnations, and was awarded first prize for a bold design of White Perfection and Marmion; a few flowers of the latter where the bow of ribbon was placed would have been an improvement. Mrs. Hammond had the best three ladies' sprays, and also the best three gents' button-hole bouquets; Mr. F. G. Bealing, Bassett, Southampton, second in the former class, and Mr. G. Johnson, gardener to Lord Burnham, Hall Barn, second in the latter class. Mrs. Hammond also had the best bouquet of carnations.

NON-COMPETITIVE.

Messrs. Cutbush and Son, Highgate, contributed a rather large group of carnations, the flowers being arranged in vases of varying heights so as to present an effective group. The leading varieties were Enchantress, Mrs. W. Ward, Beacon, O. P. Bassett, Lady Coventry, Marmion, Winsor, Rose Doré, Edna, and the curious purplish maroon Lady N. Brassey. Mr. C. F. Waters set up a somewhat small exhibit, from Balcombe, Sussex, and the variety most in evidence was the salmon-red Edith Waters, about a dozen vases representing this variety.

A very large exhibitor was Mr. C. Engelmann, Saffron Walden, but he rather crowded many of his blooms, setting his smaller vases too closely together. Of course, Carola was largely shown, and other leading varieties shown in some quantity were Mikado, Mrs. H. Burnett, Enchantress, Britannia, Rose Pink Enchantress, and Governor Duveen. Mr. H. Burnett, Guernsey, put up a large and beautiful exhibit of good flowers, his best varieties being R. F. Felton, Marmion, Rose Pink Enchantress, Fortuna, Mikado, and Mrs. H. Burnett.

In the big winter garden Messrs. Stuart Low and Co., Enfield, had a very large contribution, one-half consisting of Boronia megastigma, B. heterophylla, Callistemon saliginis, schizanthus, gerberas, acacias in variety, and hydrangeas. The other half was devoted to carnations arranged in bowls and bamboo stands, with fern fronds. The short-stemmed flowers in bowls were not particularly effective. Mikado, Lady Alington, Marmion, Rose Pink Enchantress, Beacon, Rose Doré, May Day and Britannia, Winsor and Royal Purple were well represented. Mr. A. Smith, Enfield Highway, showed a very large and beautiful vase of his new and delightful flesh-pink variety named Empire Day. Some delightful blooms of the Lyon rose and gerberas were put up by Messrs. R. Felton and Sons, Hanover Square, W.

A large group, composed of flowering plants in pots, and some stands of cut flowers, was arranged by Mr. A. Grubb, gardener to C. Raphael, Esq., Porters Park, Shenley; Britannia, Rose Doré, Carola, and Enchantress, were well represented, and the plants shown were full of flowers and buds.

MEDALS.

Gold.—To Mr. H. Burnett, Guernsey; Mr. C. Engelmann, Saffron Walden; Messrs. Stuart Low and Co., Enfield.

Silver-gilt.—Messrs. W. Cutbush and Son, Highgate, N.; C. Raphael, Esq., Porters Park, Shenley.

Cultivating the Soil.—The quarters in which apples and pears are growing that were dug over early in the spring may now have the surface broken down by the hoe or other tool, according to the texture of the soil. Most soils may be made quite fine at this time of year if it is done immediately after a light shower or two. The hoe should be kept regularly at work amongst the apples, pears, and plums on the surface, keeping an inch or two of fine loose soil, which is a great aid in conserving the moisture. This will be found one of the great factors in the production of fine fruit.—J. Whittle, Cheveney Gardens.

Templetonia retusa. — When hard-wooded plants were popular this was far more often grown than it is now, though as a flowering plant in the greenhouse it is at this season both distinct and pretty. This Templetonia, which, by the way, is also known as Templetonia glauca, forms a rather upright-growing shrub, whose shoots are clothed with oblong-shaped leaves about an inch in length. The flowers, which are of a peculiar salmon-red hue, are somewhat like those of small examples of Erythrina crista-galli. The season of blooming extends over a fairly lengthy period. A compost made up of two parts of peat to one part of loam, and a liberal sprinkling of sand, suits this templetonia well.—W. T.

THE HOLLIES.

(Concluded from page 324.)

I. cornuta, the "Horned Holly," of China, is so called on account of its curiously-arranged spines. Five large spines are usually found on each leaf, one on each side near the base, and three at the apex, a central one and two side ones. The leaves are oblong and bright green, with revolute margins. It forms a medium-sized, shapely bush, and is an acquisition to any garden where curious and interesting plants are encouraged.

I. crenata. - - Though this Japanese species may grow to a height of 10 feet or so under cultivation, and has been recorded 20 feet high in its native country, it is usually met with as a neat, compact bush, 2 to 4 feet high. It has moderately stiff shoots, clothed with tiny deep green leaves with crenated margins. For an isolated specimen or for planting in groups in conspicuous positions, it is well adapted. Its fruits are black. There are several varieties which differ from the type in the colour or shape of the leaves. A conspicuous one has golden variegated foliage.

I. dipyrena is sometimes called the "Himalayan Holly." It is only sufficiently hardy to survive in the southern and western counties, but it there grows into a large bush 15 feet or more high. The evergreen leaves are dull in appearance, having none of the gloss which is characteristic of I. aquifolium. The fruits are large and oval. The variety known in gardens as I. a. elliptica is correctly I. dipyrena elliptica.

I. integra is one of the so-called "Birdlime trees" of Japan. The species is found in both China and Japan, and is sometimes spoken of as Othera japonica. Its dark green leaves have usually entire margins, though occasionally a slight tendency to teeth are noticed. It is a distinct and ornamental species.

I. latifolia may be grown successfully in the southern counties, though it would not be advisable to plant it in the north. A native of Japan, it has been stated to be one of the handsomest broad-leaved trees of the country, and certainly when at its best in England it is very ornamental. The leaves may be anything between 4 and 8 inches long and between 2 and 4 inches wide. The margins of some forms are but slightly toothed, whilst those of others are spiny. The red fruits are smaller than those of the common holly, but are quite showy.

I. opaca is the holly of America, which occupies about a similar position in that country to I. aquifolium here. Its leaves are more opaque than those of the common species, and they are usually shorter. The fruits are red and very ornamental. It grows into a tree at least 30 feet high.

I. Pernyi is one of the new species of Ilex, several of which have appeared during the last few years. A native of Central China, it was introduced to this country by Messrs. Veitch, through the agency of their collector, Mr. E. H. Wilson. In China it has been met with at varying heights between 6 feet and 30 feet. Its evergreen leaves, though smaller, have a wonderful resemblance to those of I. cornuta. The plant is of good constitution, grows freely, and is likely to become exceedingly popular in gardens.

W. DALLIMORE.

HOW TO GROW SWEET PEAS.—"SWEET PEAS AND THEIR CULTIVATION," by C. H. Curtis (Secretary of the National Sweet Pea Society), is a complete guide to the successful culture of sweet peas for home or exhibition. Price 1s. net, by post 1s. 2d., or bound in cloth 1s. 6d., by post 1s. 8d., from W. H. and L. Collingridge, 148, Aldersgate Street, London.

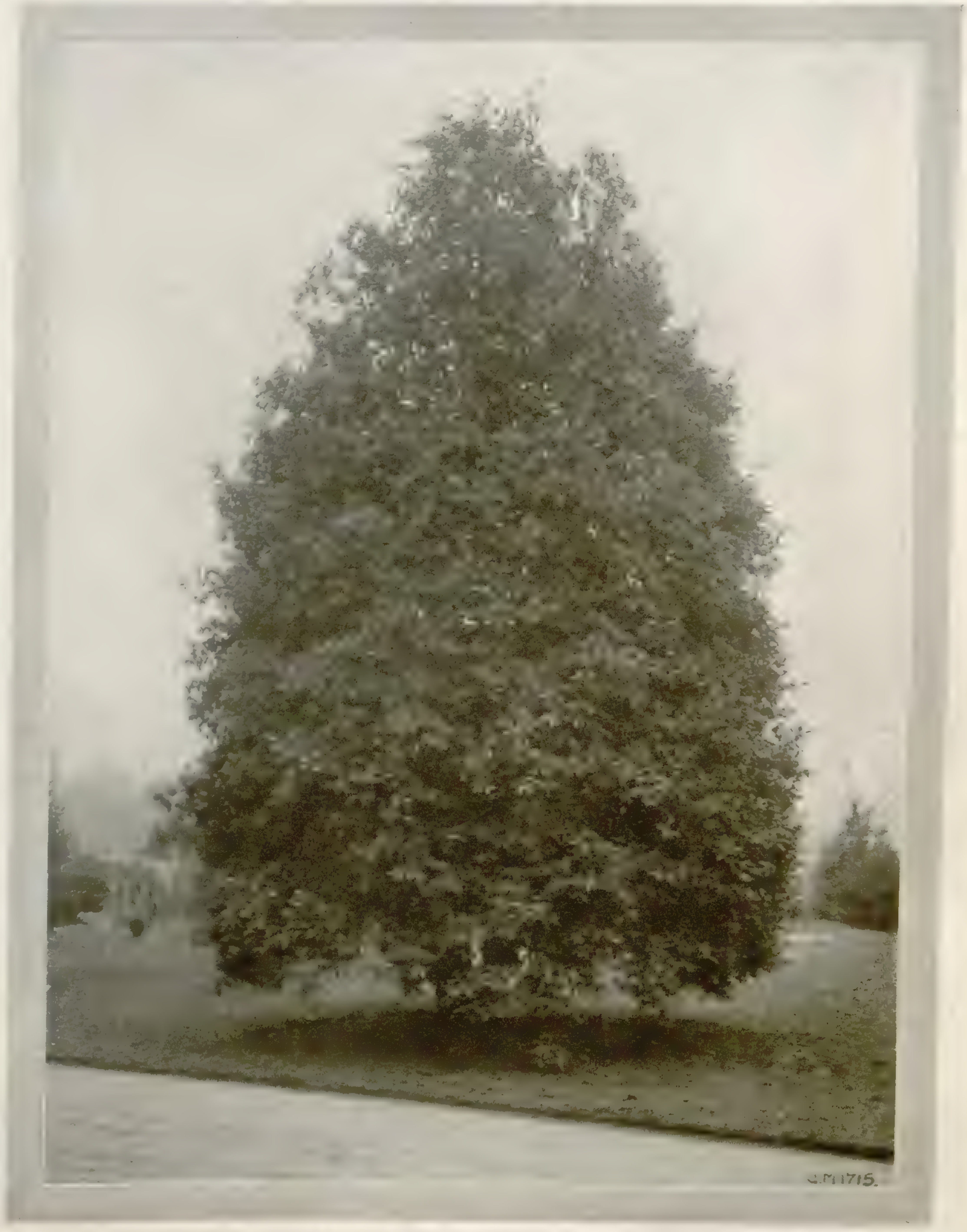
OUT-OF-DOOR PEACH CULTURE.

The brief note by "E.M.," page 286, on the successful cultivation of peaches on the open walls by Mr. T. Stevenson, at Woburn Place, recalls to my mind two cases of successful culture in Lancashire, three in Warwickshire, and several in Hampshire. Of course, there are scores of others in the country, but these have come under my notice, particularly as I have had to do with them, more or less, and they were instances far apart as regards situation. In Lancashire trees were grown under glass and trained on open walls, and at both establishments the positions of the glass structures and the uncovered walls were the same. In the north of the county all round success was achieved. In the south the trees on the open walls were a great success, but only a partial one under glass. The gardener, a very experienced cultivator, did everything possible to ensure full crops under glass, but never succeeded. In the open air he had excellent crops year after year.

At both establishments ample space was allowed for the young shoots to grow and mature in, and a broad band of tiffany was always lowered when rain and hail showers came, also when very cold winds prevailed. Every night, until the young fruits were set, the sheet of tiffany was lowered without fail. The chief difficulty under glass was the non-setting of the flowers.

In Warwickshire the long walls of peach and nectarine trees were similarly treated, and proved successful. Equal satisfaction was the result of timely coverings and thin training of the young shoots in Hampshire. In one establishment I had 210 feet of wall covered with glass, facing south-south-east, and near the top ventilators the leaves suffered from blister a little when east winds prevailed. On 200 feet run of wall having a similar aspect I at first only covered the top portion of the trees when in bloom, and, as a result, that part of each tree was free from blister, while the lower, or exposed part suffered. Herring nets doubled let down to the ground afterwards had the desired effect. On a long wall facing due west, in the same garden, the peach and nectarine trees were not much blistered, and these trees were protected more scantily than the others. I know of instances where neglect as regards the thin tying-in of the young shoots and covering the trees at the flowering stage has had one result four years out of five, i.e., failure.

GEO GARNER.



THE HIMALAYAN HOLLY (ILEX DIPYRENA).

The handsome specimen, herewith illustrated of this distinct narrow-leaved species, occupies a prominent position in the Kew collection.

EVESHAM IN APRIL.

It was one of those delightful springlike days we had during the Easter holidays that I journeyed over the Cotswold Hills and down into the fertile Vale of Evesham. What a contrast to be sure! The rolling scenery of the Cotswolds, miles of stone walls, great expanses of arable land, straight, monotonous roads, few trees, farmsteads dotted here and there at long intervals, and ever and again a grey stone church nestling, as it were, with a cluster of houses round it in one of those sheltered nooks which add a distinct charm of their own to the Cotswold country. How different the Vale of Evesham! Long before one reached the town there was evidence of the development of its fruit and market gardening industry in small holdings, allotments, and big fields which once grew corn now planted up with fruit and vegetable crops. On the hills one looked for the population, in the Vale it was apparent; there was a well-to-do air about the villages through which one passed, building was going on, which is always a sign of commercial activity; men, women, and lads were at work on the land; and in the depth and character of the soil one observed that Nature has endowed the Vale with facilities which are withheld on the Cotswolds.

The whole district gave the impression of one great garden, and the panorama of blossom almost baffles description. Imagine if you can the waters of the Avon meandering through the Vale and the sloping hillsides one living sheet as far as the eye could see of pearly white plum blossom. That is Evesham in April, and if the district is not justified in calling itself the Garden of England, I know of no other that has a claim to the title. As I looked at that feast of blossom I thought of the thousands of pounds it represented—barring any accident in the shape of frost or other disaster and I remembered an article I had just read about the bee disease in the Isle of Wight, and the fear of fruit crops suffering in consequence; but surely if bees are absolutely essential for the fertilisation of fruit blossom Evesham would accommodate the occupants of every hive in the United Kingdom, and then not be supplied. A gentle breeze played through the trees, the like of which Evesham growers appreciate in April, contending that it helps materially in the dispersal of pollen and the setting of fruit.

One noticed that every plum tree had the remnant of last autumn's grease band round it, and this is a reminder that Evesham fruit growers are grease banders almost to a man, they believe in it, and by co-operation in doing it have warded off many a plague of caterpillars, but the general talk now is how very few winter moths were caught on the bands last season, and the deduction from this is that caterpillars should be less plentiful this time than usual. In and about amongst the plum plantations the eye rested on breaks of apples, and many of these were also white, not with blossom, of course, but lime, for round about Evesham lime-spraying has made great advances in the past few years, and in this operation many think that they have discovered the secret of spraying with definite results. It would be wrong to describe the Evesham gardener as being conservative, indeed, he is very progressive and up-to-date. It is true that many strangers have flocked to the district, but a large percentage of the growers are natives. They or their fathers discovered the secret of this magic soil and situation years ago, and, aided by the security of tenure offered by the well-known Evesham system, have grown into prosperous citizens, who are ready to spend a pound if they can see a prospect of getting thirty shillings back for it.

As you wander through the broad, quaint streets of Evesham you see shop fronts set out with up-to-date spraying tackle and insecticides, and here you see a difference between the Evesham gardener and his neighbour, the West-Country farmer, who grows apples in his more or less antiquated orchard. The latter, with here and there an exception, scoffs at spraying as being a new-fangled idea of theorists, and accepts the periodical attacks of blight which ruin his crops as being something that is inevitable and unavoidable. The Evesham man takes another view entirely, he is a born fighter, fruit is a big egg in his basket, he must save it, if possible, so the sprayer has established itself amongst him and his class, and every year spraying becomes more and more a part of the cultural routine. The farmer with his grass orchard might do well to take a lesson, and he may take it for granted that his Evesham friend does not spend time and money on grease bands, sprayers, and insecticides just for mere amusement, for he is very much too wide awake for that.

It was not only the blossom on the trees which struck me on that bright April day, though the florescence of the Pershores, Victorias, and Prolifics made the greatest show, but here and there, underneath the trees, the heads of thousands of yellow daffodils and pearly white narcissi nodded in the breeze, and the air was redolent with the scent of wallflowers. The Evesham grower is a man of parts, everything is fish that comes to his net, and the customers who take his fruit and vegetables also want flowers which do not cost a great deal to grow. At a distance one only saw the plum trees and the blossom, but getting nearer one observed men and women bending over long beds of something green. They were radishes, and further on was the bright green of thousands of lettuces that had stood the winter, while along the road one passed dray after dray piled up with spring cabbages off to market. Cabbage is a great crop with Evesham gardeners, and it is a thorn in the side of outside growers that within that favoured circle spring cabbage is ready for cutting a week or two earlier than it is a few miles away, and that little time makes a considerable difference to the price.

"Grass" is a word that comes frequently into the vocabulary of Evesham folk, and it refers to one of their most paying crops, i.e. asparagus. The harvest of the "grass" has yet to come, but one saw the preparation, in the form of dozens of men forking down the crowns of the narrow beds or ridges in readiness for the appearance of the heads. In a general way we look upon asparagus as a somewhat aristocratic crop that is expensive to grow, but round about Evesham it is the mainstay of dozens of small holders, who, with their simple methods of cultivation, produce some of the finest asparagus that is seen in the market.

On the visit I am recording, I saw nothing of Evesham's French gardens, unless I can apply the term to hundreds of handlights covering early cauliflowers planted in triangles, from which they are removed in due course to afford similar protection to the young marrows. There seems to be always something selling at Evesham, and an everlasting interest in the state of the market. Just now it is a question every day about the cabbage being up or down, the next thing will be the state of the asparagus market, followed by the sale of the gooseberries, and, later, the plum trade, which is of stupendous importance, for at that season Evesham is the centre of gravitation for buyers from the length and breadth of the kingdom.

One thing that strikes you is the commercial activity of the place, and it all savours of gardening. The town is of historic interest, and was, of course, there first; but it seems to have grown up amongst the gardens, which, as it were, are next door to the shops, and every other man you meet has the brown soil adhering to his boots which stamps him as a gardener. Birmingham is not far distant, and on the day of my visit I met many representatives of its people who had come to see the blossom, and their pale cheeks and towny appearance presented a striking contrast to Evesham's sturdy sons of the soil.

I grant you that Evesham men work hard, but they present no slavish, downcast mien, which writers often associate with workers on the land. On the other hand, they are manly and independent, if somewhat rough and ready, practical to their finger-ends, and capable of looking after their own. As I turned my wheel homeward, leaving this fair scene behind me, until at length there were no more plum trees, cabbage fields, small holdings, and asparagus beds, I felt that not only had the day been profitably and agreeably spent, but that this country of ours can present to the tourist a no more beautiful picture than the Vale of Evesham in April.

H.

HYBRID RUGOSA ROSES.

Rugosas are such a hardy and accommodating class of roses, needing scarcely any attention when once planted, and making one of the best hedges or fences of roses, that they really should be more grown where there is space available. The old pink and white singles are well known, and so is the seedling from the last-named, the beautiful Blanc Double de Coubert, one of the purest white roses we have, with not a suspicion of pink about the blossoms.

There are several very good hybrids now, the chief of which is undoubtedly Conrad F. Meyer, a rose obtained by a double cross. This is a very vigorous grower, admirably adapted for pillars and large solitary bushes. The foliage, like all the rugosas, is seldom affected with diseases such as mildew and red rust, so that the plant always has a clean appearance. Conrad F. Meyer is also one of the sweetest scented roses, very large, exquisitely formed when young, and a clear silvery-rose in colour. Nova Zembla is a very pale blush-white sport from this, and differs only in colour. Rose a parfum de l'Hay has some sap of General Jacqueminot among it, and much of its exquisite perfume. This is also a late bloomer, and purplish-crimson in colour. One of the best and most distinct is Atropurpurea, a single-flowered variety that has very taking deep maroon-coloured buds, opening into deep crimson and purple-crimson flowers that are greatly improved by the showy stamens. The flowers, as in the case of those of the original singles, are followed by showy hips of intensely deep crimson colour.

Madame Georges Bruant is one of the first roses to open its flowers with me, does not cease all through the summer, and is in bloom when frosts arrive. This is a cross with the old tea Sombreuil, and the flowers are white, a little more than semi-double, and very round in the bud stage.

A. P.

BOULTON & PAUL, LTD., HORTICULTURAL BUILDERS, Norwich.

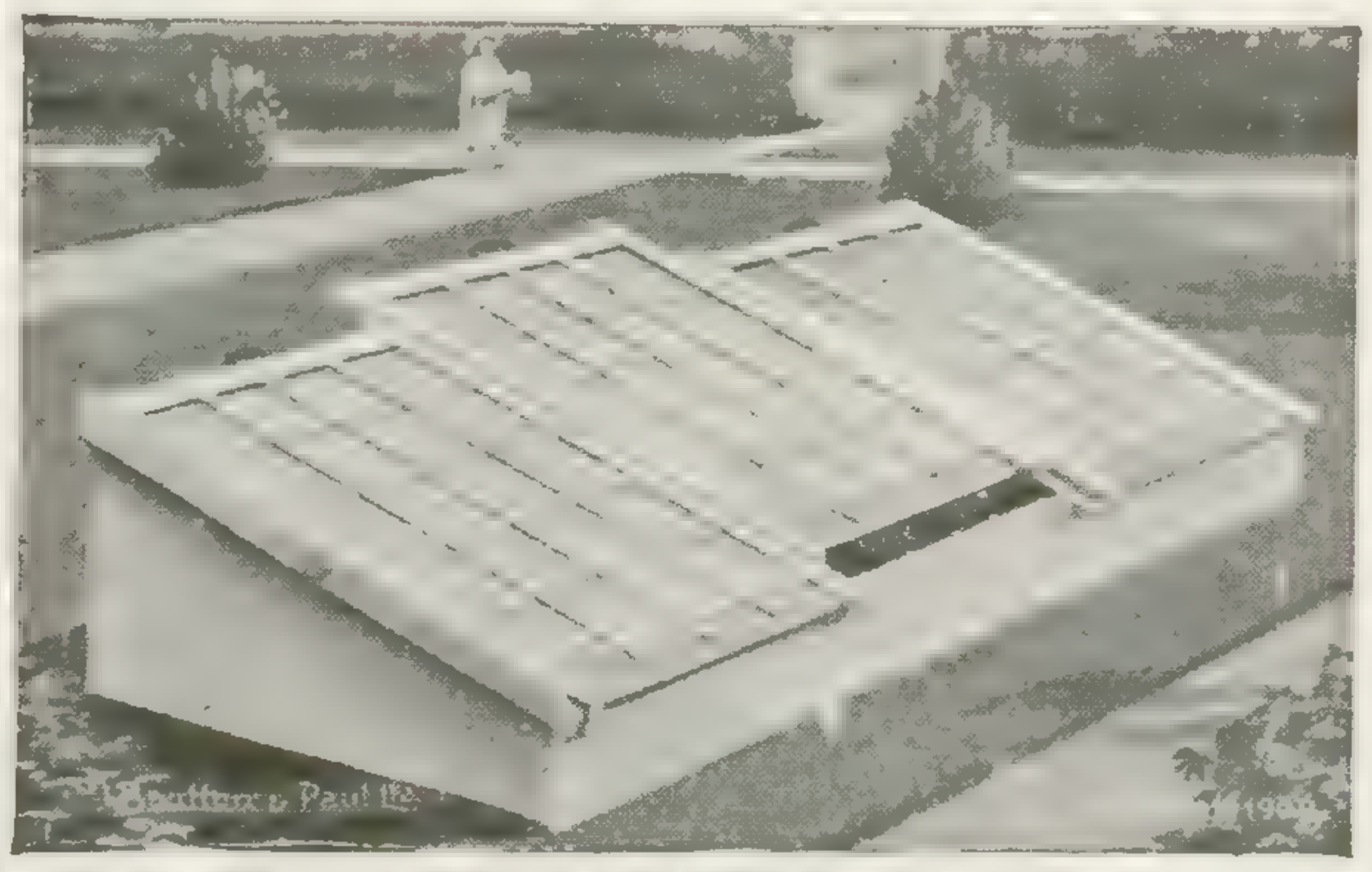
EFFECTIVE, PRACTICAL CONSERVATORIES.

Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of 40/- value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.

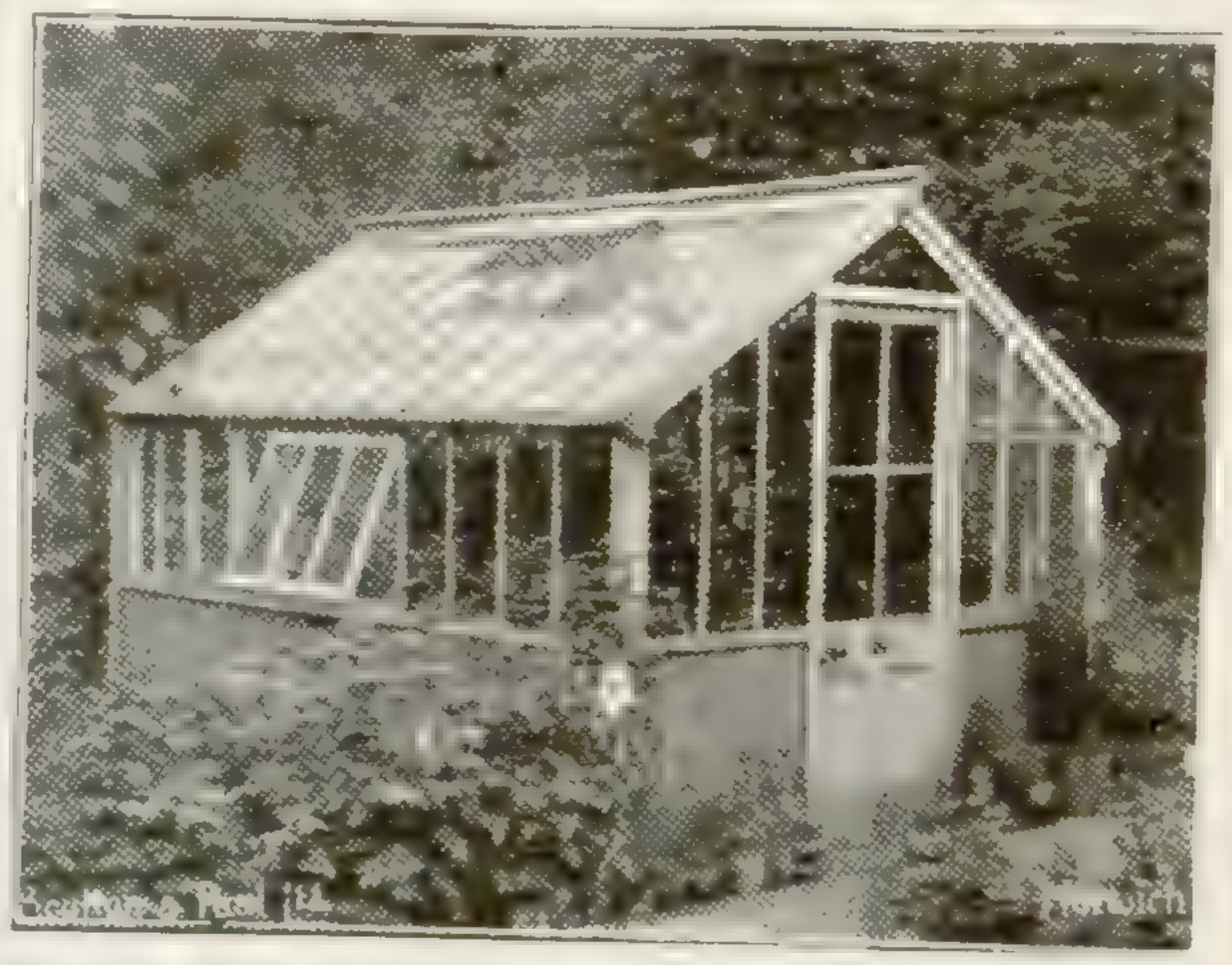


4ft. by 6ft. ... £2 0 0 | 8ft. by 6ft. ... 3 0 0
Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft. Similar to No. 75, with Two Lights... **35/-**

SEND FOR ILLUSTRATED CATALOGUES.

Every part of these Houses is thoroughly well made, painted three coats, GLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.



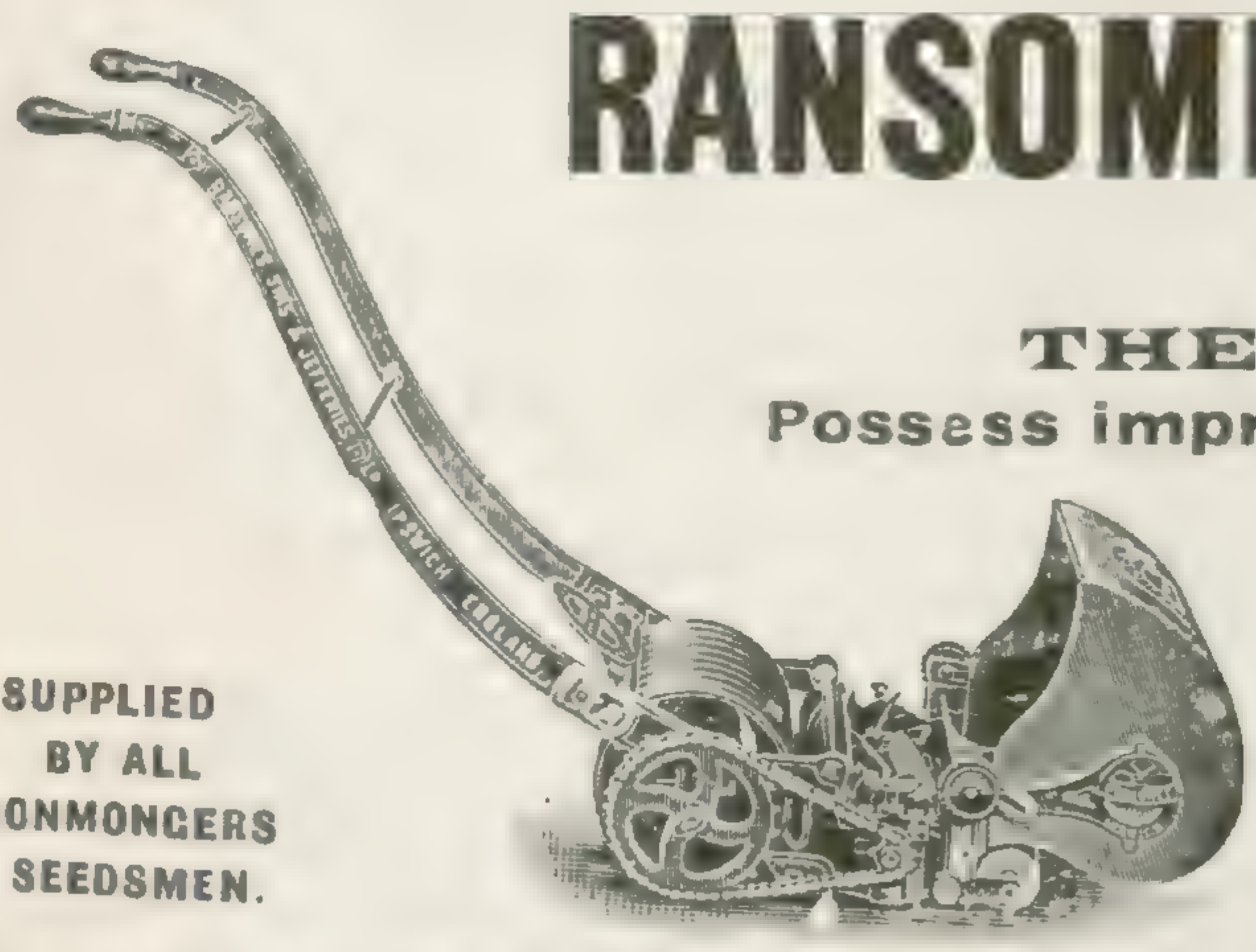
No. 49A.—Span, 10ft. by 8ft. £11 10 0
No. 47A.—Lean-to, 10ft. by 7ft. £9 10 0

All parts are numbered ready for easy re-erection by any handy man.

RANSOMES' LAWN MOWERS

Appointed by Royal Warrant.

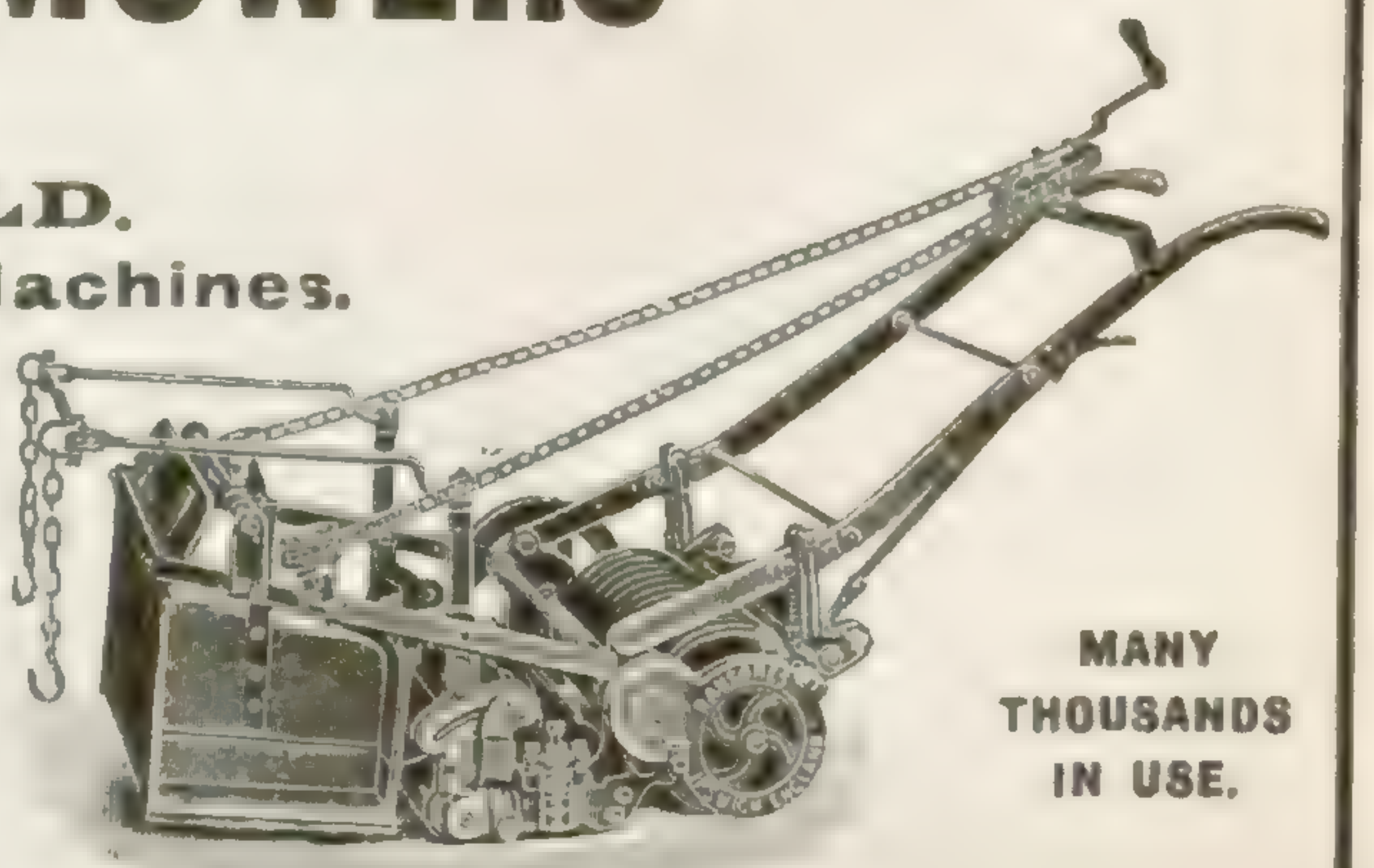
THE BEST IN THE WORLD.
Possess improvements embodied in no other Machines.



SUPPLIED BY ALL IRONMONGERS & SEEDSMEN.

Recent Awards.

3 GOLD MEDALS.
7 SILVER MEDALS.



MANY THOUSANDS IN USE.

HAND POWER MACHINES.
In all kinds and sizes.

MOTOR LAWN MOWERS
The first brought out. Reputation Established.

HORSE and PONY MOWERS.
The best large machines.

Illustrated Catalogues Free on Application to— RANSOMES, SIMS & JEFFERIES, LTD., THE ORWELL WORKS, IPSWICH.

BENTLEY'S WEED DESTROYERS

Utterly annihilate Weeds, Moss, Dandelions, and all other Weeds on Garden Walks, Carriage Drives etc.

HAVE THE LARGEST SALE IN THE UNITED KINGDOM!
ARE THE MOST POWERFUL MANUFACTURED!
ARE THE MOST PERMANENT IN EFFECT!

LIQUID (Poison).
Double Strength (1 to 50).
3 gallons, to make 153 gallons .. £0 10 0
6 " " 306 " .. 0 18 0
12 " " 612 " .. 1 13 0
20 " " 1,020 " ... 2 7 6
40 " " 2,040 " 4 12 6

Special Concentrated Strength (1 to 80).
3 gallons, to make 243 gallons . £0 14 6
6 " " 486 " .. 1 7 0
12 " " 972 " ... 2 6 0
24 " " 1,944 " ... 4 10 0

BENTLEY'S DAISY KILLER.
(Lawn Sand.)

Completely eradicates Daisies, Moss, and other Weeds which infest **Lawns, Tennis Courts, Croquet Grounds, Bowling Greens, Golf Courses, etc.,** and afterwards improves the tone and colour of the sward.

1 ton, **£19**; 10 cwts., **£9 15s.**; 5 cwts., **£5**; 1 cwt., **£1 1s.**; 56 lbs., **12s.**

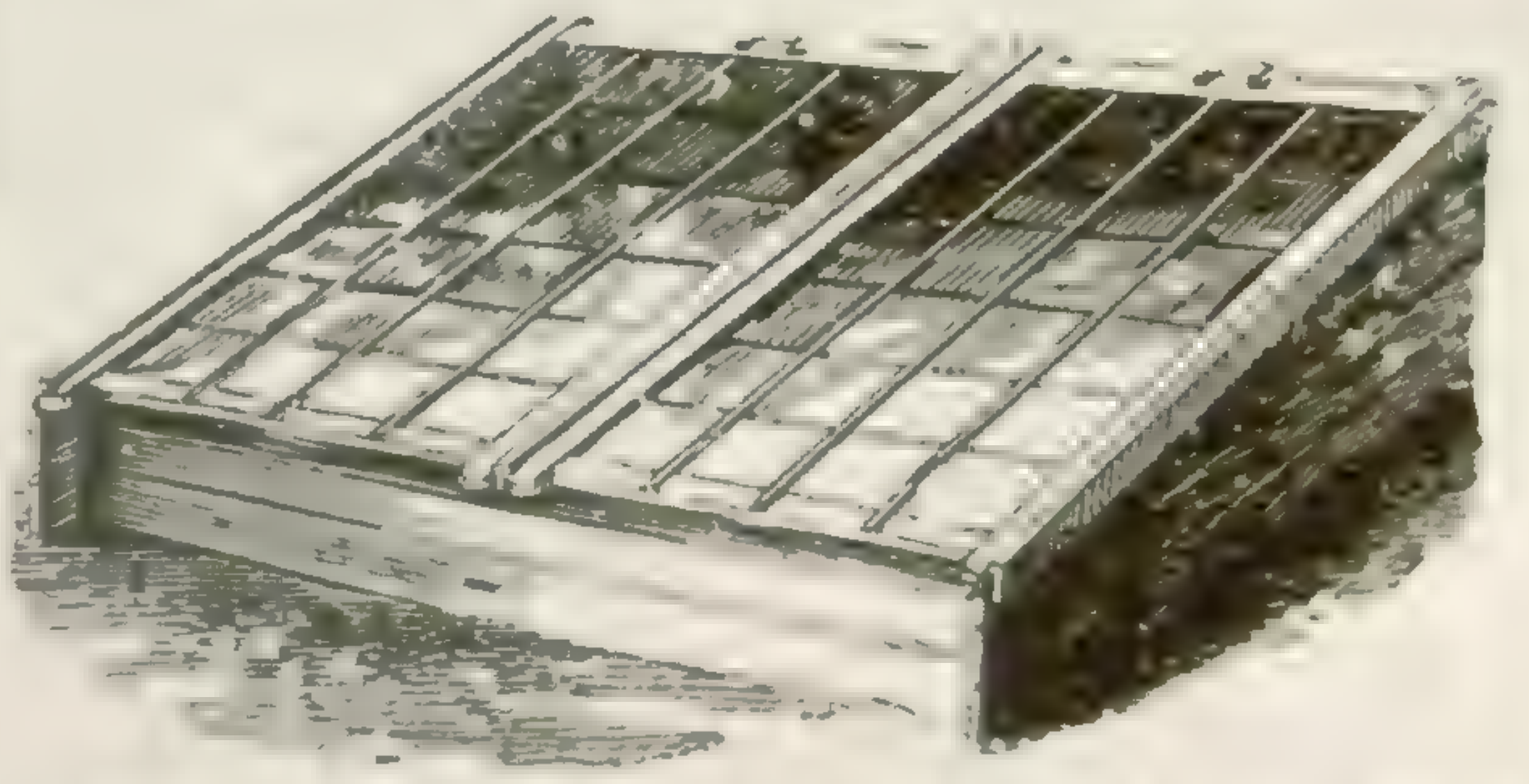
Tins, **5s., 2s. 6d.,** and **1s.** each.
Carriage paid on **7s. 6d.** orders and upwards.

WHOLESALE MANUFACTURERS,
JOSEPH BENTLEY, LIMITED,
Chemical Works,
BARROW-ON-HUMBER, HULL.

PEA TRAINERS. The "Paragon" and "Peafold" (patent) made 4ft., 5ft., and 6ft. high, and any length. Prices from 8s. 6d. per set, carriage paid. Write for leaflet. THE PEA TRAINER CO., Bridge Street, Banbridge.

PORTABLE CUCUMBER FRAMES.

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted. £ s. d.
1-light 4 ft. by 6 ft. 2 0 0
2-light 8 ft. by 6 ft. 3 0 0
3-light 12 ft. by 6 ft. 4 2 6
4-light 16 ft. by 6 ft. 5 5 0
5-light 20 ft. by 6 ft. 6 7 6
6-light 24 ft. by 6 ft. 7 10 0
CASH PRICES. CARRIAGE PAID.

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON, MANCHESTER.

WATSON'S LAWN SAND.
(The Only Original.)

Destroys Daisies, Plantains, Dandelions, &c., and at same time Invigorates the Grass.

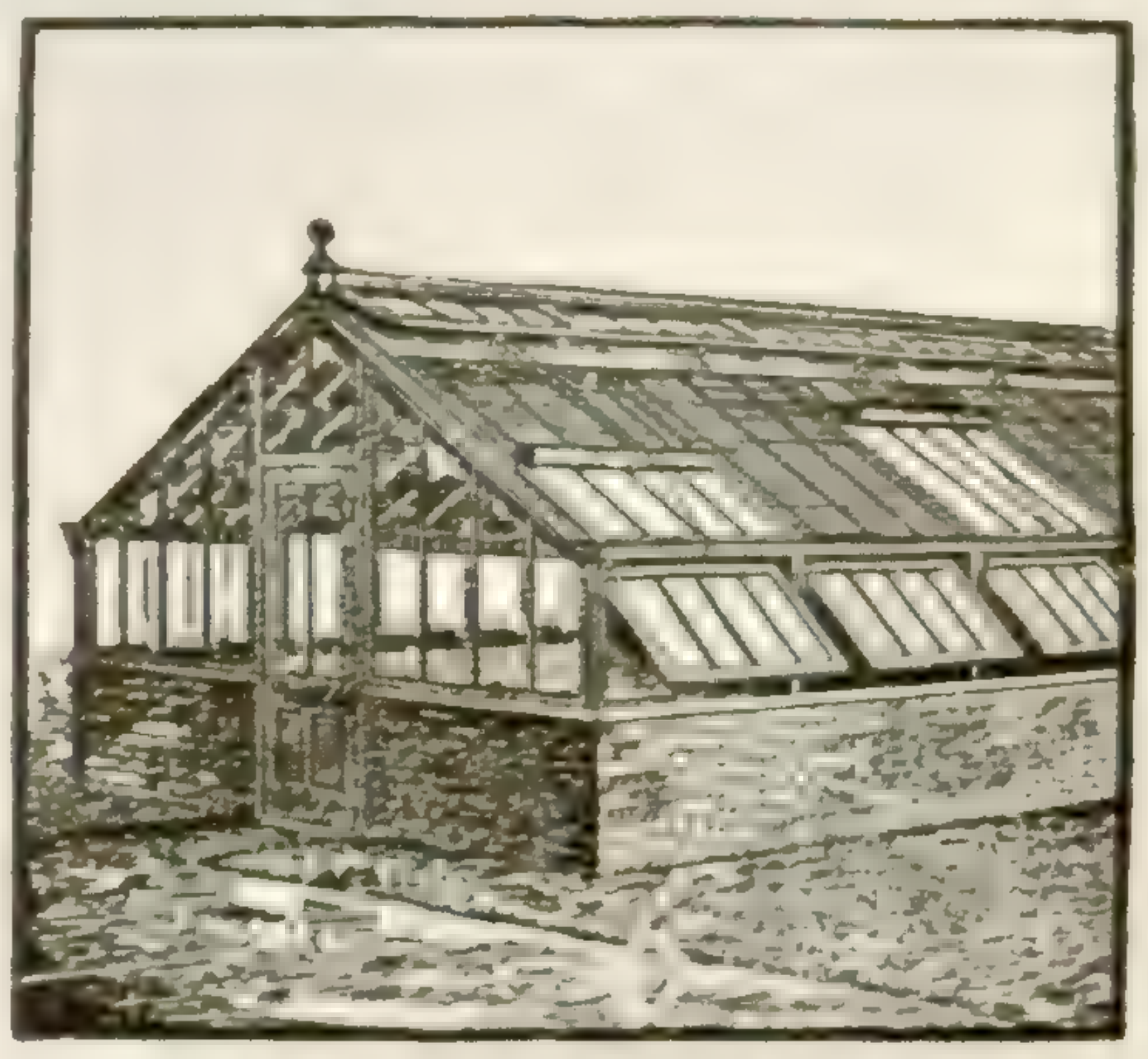
34/- per cwt.; 56lb. Kegs, 18/-; 28lb. Tins, 9/6. Canisters, 5/-, 2/6, and 1/-.

Please see that you get the genuine article.
Sold by Seedsmen and Nurserymen.

A. J. BARBOUR & Co., 8, Upper Fountaine St., LEEDS

PARISIAN {WOOD LATH} BLINDS

MOST DURABLE OUTSIDE SHADING.

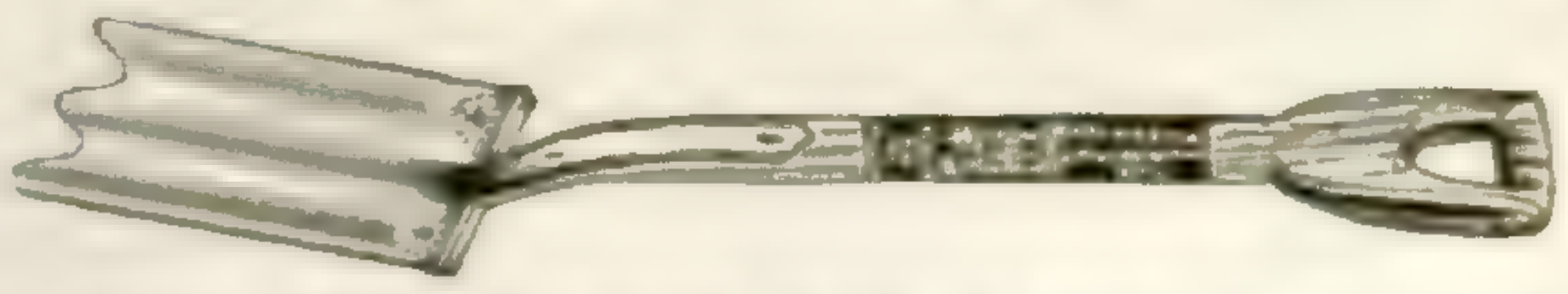


NEATEST IN APPEARANCE.

SUPPLIED ONLY BY
W. RICHARDSON & CO.,
HORTICULTURAL WORKS,
DARLINGTON.

GARDEN {FROM STOCK} FRAMES

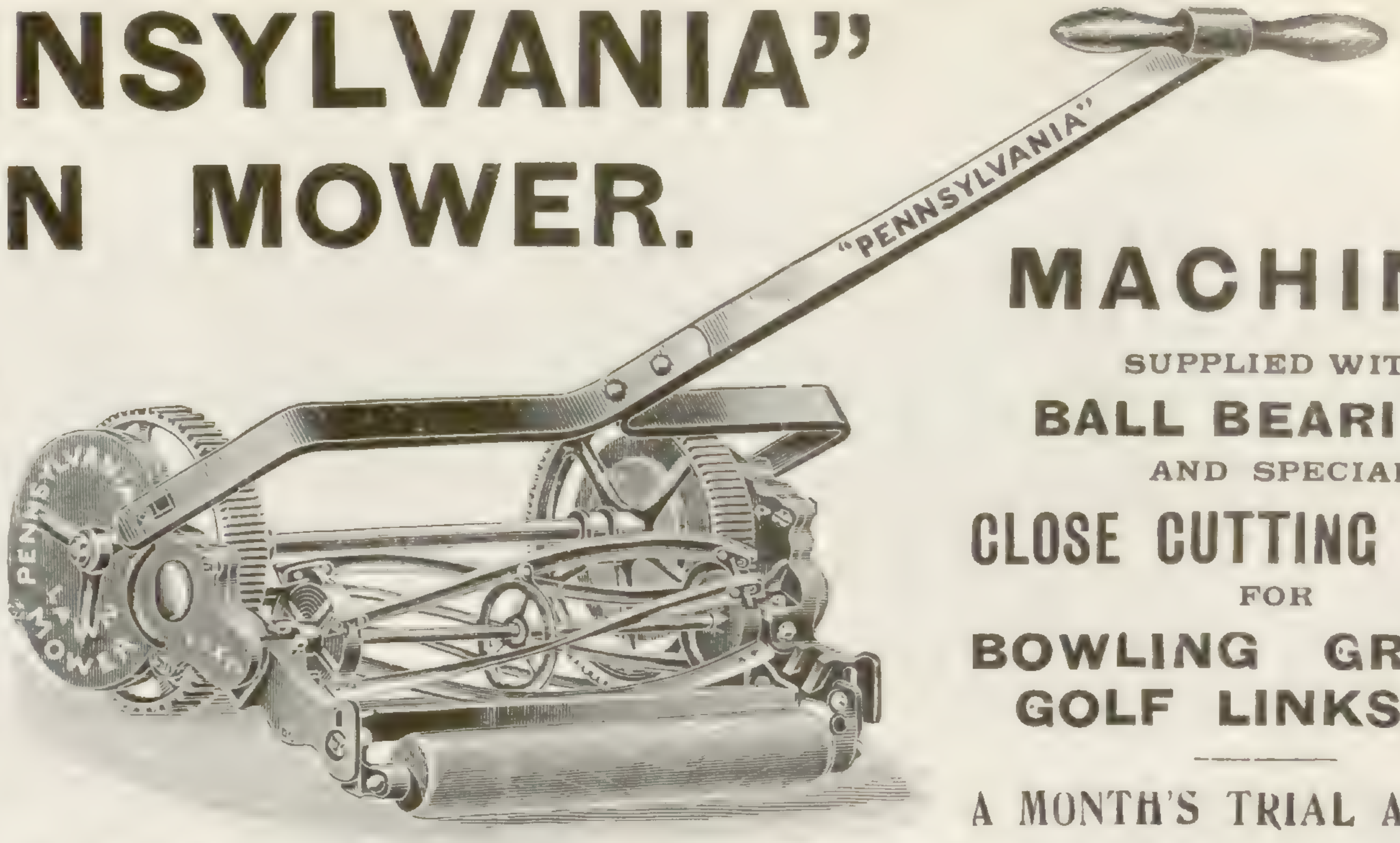
A NEW GARDEN SPADE (Carter's Patent).



This is claimed to be the most effective Spade on the market. Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

The "PENNSYLVANIA" LAWN MOWER.



SPECIAL NOTICE.

With this Machine a Lawn can be Mown ONCE A DAY with scarcely more expenditure of time and labour than ONCE A WEEK with the ordinary heavy English Machines.

MACHINES
SUPPLIED WITH
BALL BEARINGS,
AND SPECIAL
CLOSE CUTTING KNIVES
FOR
BOWLING GREENS, GOLF LINKS, &c.

A MONTH'S TRIAL ALLOWED.

Price Lists and Testimonials from—
LLOYD, LAWRENCE & CO. (Dept. C.), 29, WORSHIP STREET, LONDON, E.C.,
And all Ironmongers and Seedsmen.

Catalogues and Estimates Free.

MESSENGER & Co. Ltd.
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office 122 VICTORIA St. S.W.

MODERN GLASSHOUSES

as supplied by MESSENGER and CO., Ltd., are made of the best materials, and only capable and reliable workmen are employed in the erection thereof.

The following letter was recently received by us on the completion of a contract for a well-known Member of Parliament.

February, 1911.

"I should not be doing my duty to your workmen if I did not at once tell you, on the completion of your work, how pleased I have been with each and all of them.

"They have been most obliging throughout the whole job, and have endeavoured to do everything in an efficient and thoroughly workmanlike manner, and I must congratulate you upon having such capable employees."

Barr's Lawn Phytobroma
The best Manure for all Lawns.

The most economical of all artificial manures, 2 oz. to the square yard only being required.
Per cwt., **20/**; ½-cwt., **12/6**; 28lb., **7/6**; 14lb., **4/6**; 7lb., **2/6**; sample tins, **1/-**.
Prepaid Orders for 28lbs. and upwards, carriage paid.
Circular with full particulars, on Application.

BARR & SONS,
11, 12, & 13 KING STREET, COVENT GARDEN, LONDON

EPPS'S SELECTED PEAT
For Choice Plants, Ferns, Rhododendrons, &c., &c.
SPECIAL ORCHID PEAT.
Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to
EPPS & CO., Ringwood, HANTS.

20,000 YARDS WIRE NETTING TO BE SOLD CHEAP. Send for lists. Carriage paid on lots of 20s.
DOUTHWAITE'S CITY WIRE WORKS,
116, Vicar Lane, Leeds.

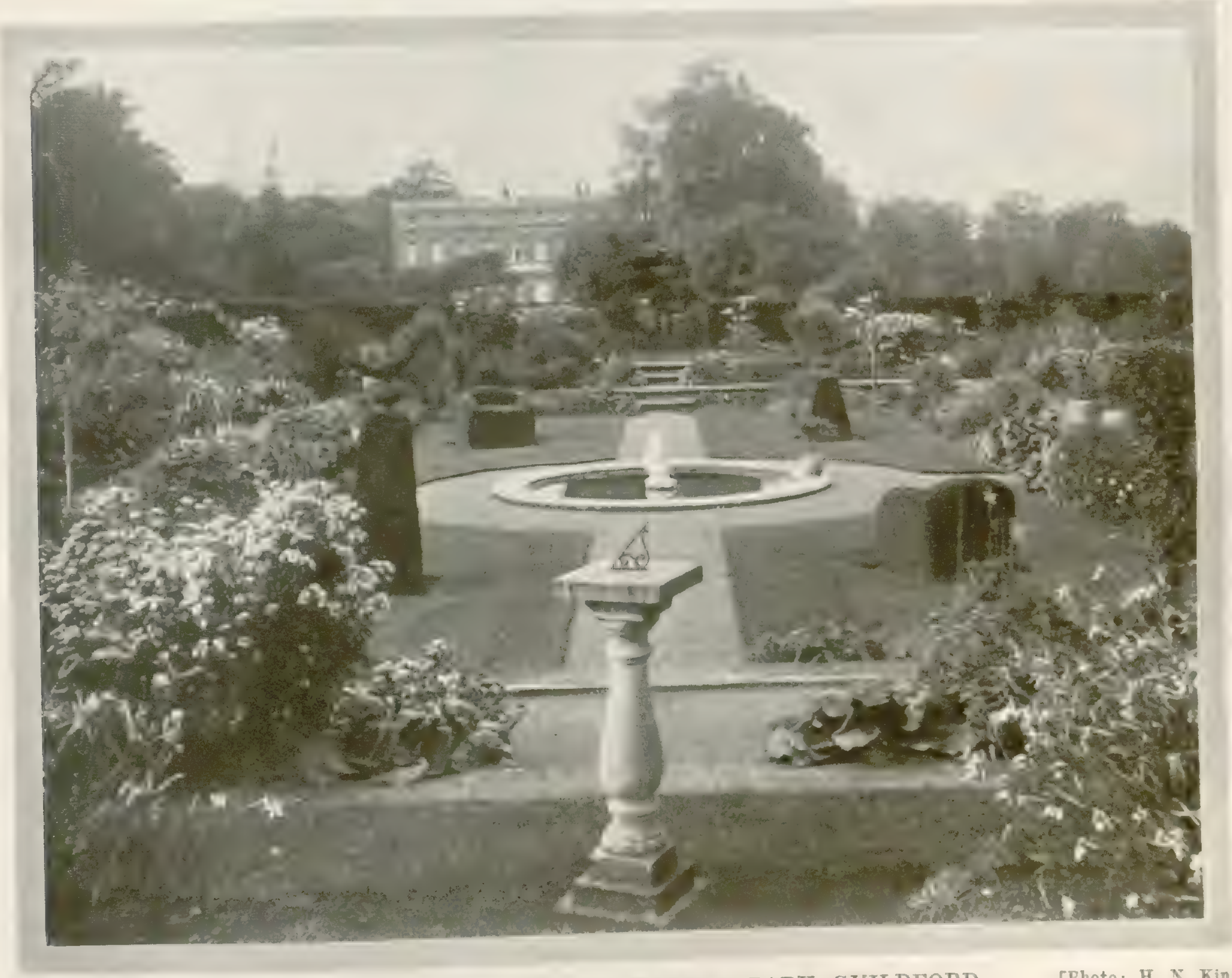
SMITH'S WEED KILLER
is absolutely "PERFECT."
4 Tins of Powder or 4 Gallons of Liquid to make 100 Gallons.
6/6 Carriage Paid.
MARK SMITH, Ld. *Louth, Lincolnshire*

CLANDON PARK.

Anyone who visits many gardens quickly learns to grasp the main features of an establishment, and is pleased, or otherwise, accordingly as each garden reveals some glad surprises or conforms to some very general or commonplace plan. In most of the larger gardens in the county of Surrey, and they are many, there is little opportunity for owner or gardener to reduce the place to a common idea, because of the great variation of levels, and the consequent charm of hill and vale, placid lake and purling stream, woodland, meadow, and heath.

Round about Guildford lies a large area of beautiful country, and to the north-east of the old county town is Clandon Park, with its old-time red brick mansion, built in 1731, and set amid fine groups of trees, chiefly oak and elm. Clandon Park, the residence of the Earl and Countess of Onslow, possesses many attractions for the horticulturist, because the noble owners have taken an especially keen interest in the gardens during the last fifteen years, and they have been ably seconded in all their efforts by Mr. H. Blake, their head gardener. The gardens are not arranged to produce a specially brilliant effect at any particular season of the year, consequently from the time the great breadths of crocuses blossom in early spring, until the frost brings down the bright-hued leaves of elm, oak, and Japanese maple, there is a series of beautiful displays. Just outside the garden proper, and where the park slopes up to fence and wall, very many thousands of daffodils follow after the crocuses, and the huge informal colonies of fine varieties also follow each other in quick succession, until the latest of the poet's narcissi conclude this particular display.

Clandon Park has its pergola, with pillars of masonry along one side, and wood supports on the other; it is a copy of a pergola seen by Lord Onslow near Rome. This pergola connects the garden close to the mansion with a sunken garden. The latter is a very interesting feature, for although the plan of the garden and its beds and borders is strictly formal, and the whole is enclosed in a trimly-clipped yew hedge, the beds and borders are not planted in formal manner. A little pool and fountain occupy the centre, and there are quaintly clipped yew trees in each of the four little lawns. Herbaceous plants fill the beds and borders, and such things as eremuri, liliums, Michaelmas daisies, and anemones are a great success. The pergola, furnished almost wholly with roses and clematis, is remarkable also for the manner in which liliums, chiefly L. auratum, succeed in the narrow borders on either side. Lilies and roses form a delightful combination.



THE SUNKEN GARDEN AT CLANDON PARK, GUILDFORD. [Photo: H. N. King.

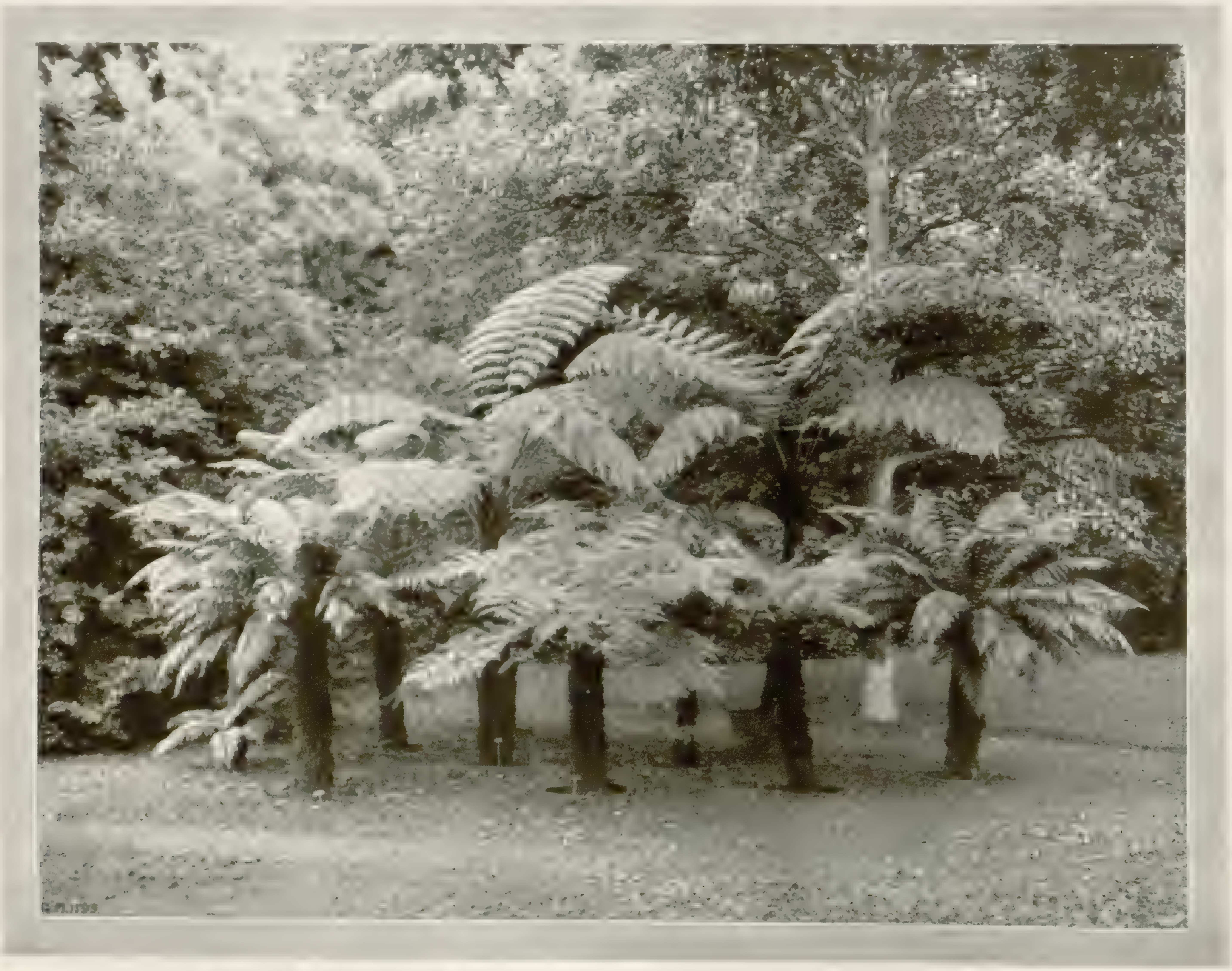
There is a little flower garden on the east side of the mansion, and practically every bed has been cut out of solid chalk and filled in with good soil. Before the garden is reached a particularly attractive feature is noticed, and it might well be called a garden of Japanese maples. These elegant and beautiful shrubs are an unqualified success at Clandon Park, growing in a wide and long curved border, sheltered by old elms and set in full sunshine, hundreds of plants thrive, and year after year produce a scene that the flowers cannot excel for brilliance or colouring. During this last season Mr. Blake has lifted every plant, remade the border, and replanted the maples, giving them additional and needful space. The dissectum and red-leaved varieties are well represented in this splendid group.

Conifers do well on the rising ground eastward, and there is a stately avenue of Cupressus Lawsonianus and another of erect Irish yews. Very fine is the Cranley Avenue, that extends from the front of the mansion to the Guildford Road. It is a double avenue, the inner lines composed of copper beeches backed by lines of common beech. The trees are now of good size and handsome shape.

Water is plentiful at Clandon Park as springs abound, therefore it has been used, or taken advantage of to greatly improve the interest and attractions of the garden. One fairly large piece of water is known as "The Canal." Here the water, rising from an unfailing spring, is dammed back just as it was in the old days, when it was necessary to obtain a good head of water to drive the mill lower down. Steep banks rise all round, and, at the entrance to this part of the garden bamboos thrive wonderfully well, being represented by splendid masses that rise to upwards of a dozen feet. Here they have ample shelter from winds, and their roots are practically always in moisture.

But the great feature of Clandon Park gardens is the irises, and on the banks of the Canal these are planted in their thousands. Down near the water edge, and below the water line in summer, are the beautiful Japanese varieties of Iris lævigata (I. Kæmpferi). Higher up, where a path is terraced out of the bank, Iris stylosa flowers almost all the winter, and has the benefit of almost every ray of sunshine the year round. On either side of the path are big colonies of German or flag irises, this big group being represented by numerous fine varieties of each of the several sections. Spanish and English irises find here a congenial home, and the early-flowering varieties of the I. pumila group are also planted freely. Most of the hardy species obtainable in quantity are represented, but the foregoing, with varieties of I. sibirica, form the bulk of a display that must be the finest of its kind in the county, for irises extend for about 250 yards along the banks of the Canal.

There are, however, other subjects here besides irises, and flowering shrubs, notably rhododendrons, spiræas, and sweet briar, form a background for the lowlier plants, while dogwoods and willows and white-stemmed brambles lend colour to the scene during winter by means of their coloured bark. Here and there also are goodly clumps of hemerocallis, herbaceous spiræas, and alstroemerias, which stand out conspicuously.



GROUP OF TREE FERNS AT CLANDON PARK, GUILDFORD. [Photo: H. N. King.

Another charming feature is the Primula Dell. Here, under the trees, with little streams of water running round and among the mounds, great colonies of hardy primulas have been planted, and they thrive in a fashion that must be most gratifying to Mr. Blake, who has taken very great pains to make this dell an unique as well as a beautiful feature. In the early summer time he dams up the little serpentine stream until it floods the lower levels of the dell, and this creates an atmospheric as well as soil moisture, to which the primulas gaily respond, making big leaves and fine crowns against the floral harvest of another year. Three species of primula are here grown in their thousands, and these are P. cashmeriana, with its varieties denticulata and alba; P. japonica in many shades of colour; and the lovely P. rosea. P. Veitchi, P. Cockburniana, and P. pulverulenta are also included. Abundance of moisture, the shelter from wind and frost that thinly overhanging trees afford, and abundance of leaf-soil, appear to be the chief requirements of these primulas, and doubtless there are many gardens where a corner of a woodland could be turned into a delightful garden, just as the Primula Dell has at Clandon Park. Primroses, polyanthuses, forget-me-nots, and meconopsis, including the new M. integrifolia, are also skilfully managed in this dell.

Yet another very fine feature remains, and it is the water garden. This is further afield, and has developed in a curious way. Some years ago, on returning from the Governorship of New Zealand, Lord Onslow obtained a fine old Maori Council House, and this quaintly carved structure was erected near the far end of a piece of water. Presently the idea of converting the ground on either side of the water, up to the Council House, into a garden, was entertained, the work was begun, and gradually developed and extended. Irises abound, indeed Lord Onslow has a very great love and admiration for irises of all kinds, and they respond to the care bestowed upon them in no uncertain fashion. Iris sibirica, I. Snow Queen, I. gigantea, I. virginica, I. lævigata, I. germanica, I. albo-purpurea, I. florentina, and many others flourish all through this water garden. Water lilies deck the pool close to the Council House, and great masses of Crimson Rambler rose threaten to hide the thatch on the roof of the house, while Gunnera manicata at the water's edge becomes a huge mass of gigantic leafage each summer.

Large groups of roses, senecios, spiræas, Hydrangea paniculata, kniphofias, verbascums, and hemerocallis occupy positions a little away from the water.

Fragrant plants are grouped in a yew-enclosed garden some distance from the water garden; here are daphnes, roses, lavender, stocks, mignonette, carnations, musk, and sweetly-scented herbs, with Aloysia citriodora added in the summer. Near by, and outside the high walls of the kitchen and fruit gardens, roses are planted very largely in beds, with rambling varieties on pillars and chains, and on a trellis at one end, as well as on the wall itself. In the beds the stronger-growing roses are placed, and these are tied down instead of being pegged down; a stout wire frame is laid over the bed, and to this the sturdy growths are tied. This appears to be a method possessing many advantages over pegging, and one that might be generally adopted in the same or a modified form.

The glass houses at Clandon Park are not numerous. Excellent grapes and peaches are grown, and there is a good collection of palms and tree ferns; the latter are placed out of doors in the summer, and form a very interesting group, reminiscent of Lord Onslow's sojourn in New Zealand. The kitchen garden is of considerable extent, and the crops here, as well as the peaches on walls (trained to wires, not nailed), are ample evidence that Mr. Blake's skill is not confined to primulas, irises, daffodils, and Japanese maples, or the construction of dells and water gardens.

Charles H. Curtis.

Salads.—During the next few months liberal supplies of salad will be demanded, and, fortunately, it can be more easily supplied. Make larger sowings of lettuce, radish, mustard and cress, in warm positions on borders, and plants of lettuce from the frame yard will be hardened off ready for planting out.—C. F.

NOTES FROM KEW.

Himalayan Rhododendrons.

The most notable feature in the Temperate House just now is furnished by the rhododendrons in the cool portion of that structure. Rhododendron arboreum is freely represented in the shape of large specimens, one in particular of the variety roseum, quite a massive tree, being absolutely laden with trusses of rich rose-coloured blossoms. Another notable form is one with large rosy red flowers, while in another they are pink. These individuals serve well to show the great variability that exists in the colours of the blossoms of this species, while there is also a considerable difference in the leafage of some of them. Rhododendron barbatum, from the rich blood-red colour of its blossoms, can be readily singled out from any of the others, its only rival in this respect being R. Thomsoni, which is not now in bloom. The hybrid between these two last-named species, R. Shilsoni, seems to be gradually advancing in popular favour.

[Photo: Lord Onslow.

VIEW IN THE IRIS GARDEN AT CLANDON PARK, GUILDFORD.

Some dense bushes of R. ciliatum are absolutely laden with their white blossoms, which in the bud state are often slightly tinged with pink. The neat habit and extreme floriferousness of this rhododendron has led to it being largely employed by the hybridist in the production of new varieties, one of which, a cross with R. Edgeworthi, is unfolding its large deliciously fragrant blossoms. Another white-flowered species is R. Gibsoni, also known as R. formosum, a favourite conservatory plant, remarkable for its profusion of bloom. The uncommon R. Hodgsoni, characterised by very large leaves, thickly clothed with tomentum, is bearing its rounded clusters of peculiarly tinted blossoms, a kind of rose lilac in colour. It is certainly less showy than some of the others, but is at the same time very distinct. The pale yellow flowers of R. campylocarpum are just unfolding. This is an exceedingly pretty and distinct species, and suggests the possibility that, by a series of seedlings therefrom, a rich yellow form might in time be obtained. Another species also in bloom is the Chinese R. ciliicalyx, somewhat suggestive of the Moulmein R. Veitchianum, but the white flowers have in the bud state a pinkish tinge.

From the species to the hybrids is but a step, and concerning these one cannot fail to note the important part that R. Griffithianum or Aucklandi has played in the production of many fine forms. Glory of Penjerrick, a Cornish raised hybrid, stands out conspicuous from any of the others, the noble leafage and huge trusses of richly-coloured flowers being all points in its favour. The other Griffithianum hybrids include those raised at Kew between that species and some of the garden forms, while the well-known Pink Pearl is also represented. R. Forsterianum, one of the largest flowered of the Edgeworthi hybrids, being a cross between that species and R. Veitchianum, makes a fine display with its noble blossoms. Besides those above mentioned, some of the garden varieties are used with advantage in the main portion of the Temperate House to lighten up the beds of foliage plants. So situated they were safe from the cutting winds of early April, and consequently the flowers are fresh and bright.

Enkianthus japonicus.

This, like the rhododendrons, is a member of the order Ericaceæ, but in general appearance it differs widely therefrom. It forms a freely-branched deciduous shrub, whose blossoms make their appearance almost simultaneously with the leaves. The flowers are of a drooping urn shape, and suspended by rather long pedicils. In colour they are of a pure waxy white. Though introduced in 1870, it is not often met with. A specimen in the Temperate House is just now in full bloom.

Cytisus proliferous.

This distinct but tender member of the Broom family has mounted upward to the top of one of the pillars of the Temperate House, and, being just now laden with blossoms, it forms a very pleasing object. Compared with the other brooms, it is a strong grower, the long, vigorous shoots being clothed with silky leaves, and studded for a considerable distance with white pea-shaped blossoms. This species is a native of Teneriffe, from whence it was introduced in 1779. It is hardy in the especially favoured parts of the extreme West of England.

Veronica Hulkeana.

A group of this pretty veronica in the greenhouse forms a very attractive feature, the plants composing it being quite laden with their pleasing lilac-coloured blossoms. It is a fairly well-known species, native of New Zealand, and hardy in Cornish and Devon gardens. When large, it has occasionally an unfortunate habit of partially dying away quite suddenly. As a decorative plant for the greenhouse it is, as may be seen at Kew, well worthy of note.

Calceolaria violacea.

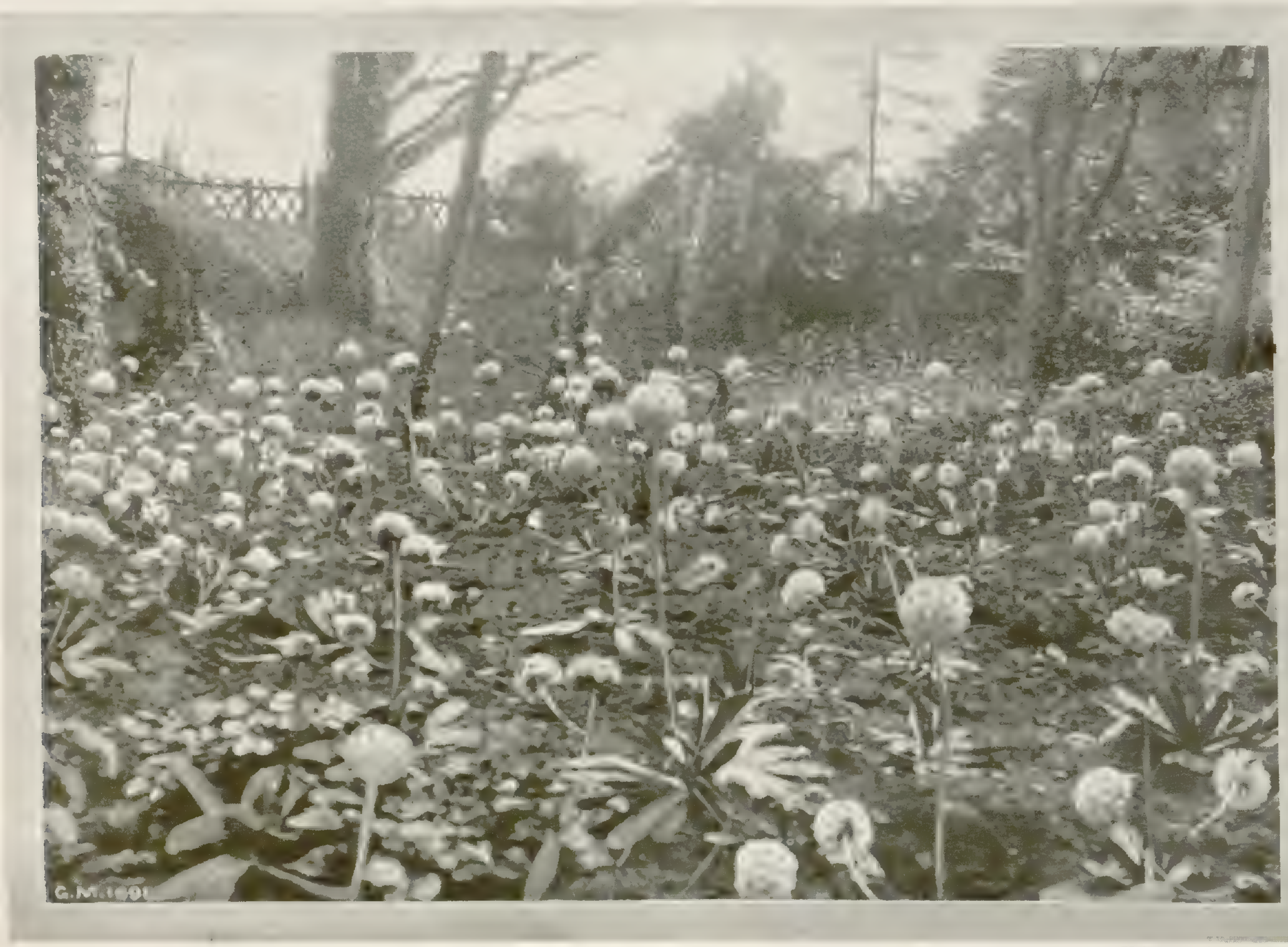
A specimen bush of this calceolaria, some six feet or so in height, is in full bloom in the greenhouse. The general idea of a calceolaria is that the flowers are of some shade of yellow or red, but this is quite a break away therefrom, while in shape also it differs very widely from the garden varieties, being more in the form of a helmet. The blooms are small, but very freely borne, their colour being a kind of deep mauve dotted with violet. This calceolaria forms a much-branched shrub whose comparatively slender shoots are clothed with deeply serrated ovate lanceolate leaves.

Psoralea pinnata.

This attractive greenhouse shrub is now in bloom in the greenhouse. It is a native of South Africa, and, although it was, according to the "Dictionary of Gardening," introduced in 1690, it was till within the last few years very little known; indeed, it does not occur in the "Kew Hand List of Tender Dicotyledons." It forms a rather upright-growing, freely-branched shrub, clothed with light pinnate leaves. The pea-shaped blossoms are of a pleasing shade of blue, marked with a lighter tint. It flowers for some considerable time, and forms a very pretty object in the greenhouse.

Rondeletia cordata.

This South American evergreen shrub is in full flower in the greenhouse, where, planted out in one of the beds, it is much admired. This rondeletia is a near relative of the bouvardias, but is altogether a larger growing plant than any of them. It forms a free, bold-growing shrub, clothed with stout leaves, which are in the largest examples about six inches long and half as much in width. The flowers, which are borne in terminal clusters, may individually be compared to those of the laurestinus. In the bud state they are deep pink, but the interior shown after expansion is blush, with yellow hairs in the centre. Taken altogether, the rondeletias are a very pretty class, this just named species, R. speciosa, and R. gratissima, being perhaps the three best.



[Photo: Lord Onslow.

PRIMULA DENTICULATA IN THE PRIMULA DELL AT CLANDON PARK, GUILDFORD.

Rhododendron racemosum.

One often sees specimens of this charming little rhododendron dotted here and there, perhaps on a piece of rockwork, but it is not in this way that it is seen at its best. At Kew there is a considerable stretch of it planted near the Pagoda in the same manner as the hardy heaths are there treated, and in this way the rhododendron forms a delightful feature. They are apparently seedlings, as in habit and colour of the flower there is a certain amount of individual variation. Lesser quantities are also planted in other parts of the gardens, but they are also very beautiful; indeed, the claim of this rhododendron to be regarded as one of the best of early flowering shrubs cannot be disputed. K.

ANDROSACES.

It is common knowledge that with many genera of plants a single species is so representative of the genus that it forms, as it were, the key whereby we unlock a long series of good things, and after many years of trial may still maintain a foremost position among hardy plants. Of the genus androsace one ascribes this influence rather to the Himalayan members than to those common to Europe, not, however, as being of more beauty or greater merit, but their cultural requirements places them within the reach of all. I particularly have in mind Androsace sarmentosa and A. lanuginosa, for in both we find the great beauty characteristic of the group presented in most exquisite detail, in which form, arrangement and colour of leaf and flower alike contribute, so that in the aggregate we are confronted by two hardy Alpine plants that are practically faultless.

Their cultural requirements are not difficult to provide; both species appreciate an open sunny position, and preferably one that is slightly elevated and well drained; the soil should consist of rich loam, leaf-soil, and grit, with plenty of sandstone chips to render it cool and porous, and the addition of lime in some form is also advisable, as both plants flourish with marked vigour on limestone soils. A suitable position for A. sarmentosa is under the friendly shelter of a projecting rock, with an inclined face to shed the water behind, as too much moisture upon the rosettes and growths in winter is the pressing danger one has to safeguard these subjects from.

A. lanuginosa prefers a deep crevice about middle level, with plenty of rock surface over which the prostrate shoots will hang; the supply of moisture for both species should always be adequate in summer, and in order to protect them from excessive damp in winter some temporary measure can always be adopted by placing sheets of glass raised a few inches above the plants, and at such an angle as readily carries the water away from the roots. Androsace lanuginosa is a choice and most effective plant for "rock" or "dry walls," and in such positions they are singularly free from winter damp.

Although both species are native of the Himalayas, they are quite distinct. A. lanuginosa is a trailer, with silken grey leaves arranged on prostrate stems that are tinted red; the flowers are in umbellate heads borne on short erect stems, and the individual flowers are of a delicate rose shade with a conspicuous eye; it usually begins to flower in June, and stray blossoms may often be found as late as October. In A. sarmentosa the leaves are arranged in perfect rosettes, from which, in the growing season numbers of runner-like growths are produced, each terminated by a miniature plant that, when pegged into the soil produce roots and develop into a fresh individual; by this means increase is easy. The flowers come in May and June, and are borne in umbellate heads on erect stems some five to seven inches in height; the flowers are of a rich clear shade of rose, with a paler coloured eye.

Both species require a top-dressing of rich soil worked in among the shoots every year, early in spring; the rosettes being all securely pegged into the soil at the same time, and care should also be exercised so as not to unduly smear the silken foliage with the soil. Thomas Smith.

AROUND THE ROCK GARDEN

In the GARDENERS' MAGAZINE of April 22 Mr. E. C. Pooley advocates the use of annuals for rock garden adornment. This may be distinctly a good idea where there are large patches of uncovered soil, but it is not one to be followed when planting up a rock garden. There is such a wealth of perennial alpines, rock plants, and mountain shrubs, that I would always advise the almost total exclusion of annuals from the rock garden proper.

One has not only to consider the effect of masses of blossom in spring and summer, but of equal necessity is the drapery of foliage and the colouring it gives to the rock garden during autumn and winter. Herein lies the true charm of the rock garden. It is a garden, not for any special season, but for the whole year. In it one can always find growth, foliage, colouring, and blossom; a perpetual beauty which annuals cannot give. Take aubrietias, alyssums, helianthemums, rhododendrons, lithospermums, sedums, saxifrages, violas, drabas, arabis, yea, and a host of other plant groups of perennial duration, and you will inevitably recognise that even when entirely out of blossom the diverse forms and hues of these spreading mounds of foliage are intensely interesting, and have a quiet beauty of their own. There is nothing dull in foliage effects, even if there is little blossom to heighten the beauty, but the studied charm of varying hues and shades found in alpine shrubs and plants on a winter's day is truly a mine of delight.

One aim of the successful rock gardener should be directed toward the securing of varietal forms which tend to perpetual blossoming. Certain plants have this good habit far above their fellows. Aubrietia Dr. Mules is typical. It is practically perpetual in flowering, and it should be the ideal for the raiser to get other varieties with the same freedom with differing colours.

Violas, again, give forms which are practically ever in flower. Viola gracilis is grandly effective, but if we could infuse this continuous flowering into this species, its value would be greatly enhanced. A golden yellow viola, which I use as a contrasting associate to gracilis, carried its gleams of gold right through the dull days, and is typical of what we want in other species and varieties. Helianthemums, too, are worth consideration, for here again we have forms which give one profuse display, and then pass out of blossom, while others give good secondary displays without impairing their vigour or good habit of growth.

I need not emphasise the value of seedling alpines and rock plants, but the reader will agree with me that in this direction lies one of the great charms of garden work. The raising of seedlings and the interest associated with their blossoming, is of importance to all who value their garden, and ofttimes one gets charming results.

For instance, the raising of mossy saxifrages is fraught with much pleasure. The new red shades which come from various sources are typical. Since the advent of that standard favourite Guildford Seedling, we have had the pleasure of securing R. W. Hosier, Scarlet Queen, decipiens hybrida grandiflora, and bathoniensis, the two last being exceptionally showy.

A batch of seedlings from these now coming into blossom gives promise of many pretty forms, one already surpassing in depth and brilliancy of colouring the varieties under notice. As the range varies from white, through pale and deep pink, to scarlet and crimson, it may be realised by the reader that the flowering of the seedlings is of certain interest.

Again, in violas we are obtaining some useful forms. V. gracilis has favoured us with a fine large-flowered variety with flowers of rounded outline, without losing anything of its inimitable colouring. A vinous purple variety which lights up splendidly in the sunlight is also an acquisition, and several others are noteworthy. A cross between gracilis and a florist's viola has given a bright blue-winged flower of good size, which we anticipate will take the place of V. papilio, as far as we are concerned.

Few bulbous subjects are more charming during spring time than the fritillarias. Even if one confined themselves entirely to forms of F. meleagris, the interest afforded is especially pleasing. There is such a diversity of pretty colouring to be found amongst a good strain of these dainty bell-like flowers, ranging from the purest whites to the deepest maroon purples, that there is ample reason for them to be found in every garden. The addition of a few of the better species, such as persica, recurva, Thunbergi, pyrenaica, aurea, armena lutea, and rubra, and biflora, will give an added interest and charm to even the best of gardens.

Anemones in quantity, including the forms of blanda, apennina, palmata, and the glorious pulsatilla and its variety alba,

FIRST PRIZE TWELVE LONG TRUMPET DAFFODILS.
Exhibited by Messrs. Cartwright and Goodwin, of Kidderminster, at the Midland Daffodil Show, Birmingham.

give fine drifts of blossom. The varied forms of the wood anemone (A. nemerosa) are also charming en masse, the best of these being alba plena, rosea, rosea plena, and the brilliant blue Robinsoniana. Tall plants in certain positions help to give a fine effect to the masses of lowlier subjects, and therefore, if space permits, a few romneyas, Gaura Lindheimeri, flag irises, light habited campanulas, etc., may with wisdom be permitted into the rock garden proper.

Flowering shrubs, including tamarisks, weigelias, rubus in variety, ribes, shrubby spiræas, deutzias, rhododendrons, azaleas, kalmias, etc., may be freely introduced into the large rock garden, and with their beauty will lighten up the heavy pines, cypress, etc., and the dull bronzed rocks during the season of blossoming.

P. S. Hayward.

THE CISTUSES.

Unfortunately these dwarf flowering shrubs are not sufficiently hardy to allow them to be generally planted, yet in the warm districts of the south and south-west, where the winters are not very severe, most of them will survive. The hardiest are C. ladaniferus (the Gum Cistus), C. laurifolius, C. crispus, and C. florentinus. These may be grown in the colder localities, and if afforded wall protection, with a sunny aspect, will usually pass through the winter safely. In the warmer districts, where the winters are fairly mild, they should be largely grown, for there is hardly another class of flowering shrubs more suitable for furnishing dry sunny banks. They all adapt themselves wonderfully well to rock garden planting, and provide an abundance of bloom through the summer months. Although the individual blossoms are but short-lived, they are produced in large numbers over a considerable period.

Pruning is necessary when the plants are in the young stage to secure a bushy habit, but afterwards no pruning is required, unless the plants become too large for the position, then hard pruning may be resorted to. Cistuses derive much benefit if the seed pods are picked off immediately the flowering season is over, as these have a weakening effect when left on. Propagation may be easily accomplished by taking cuttings early in August and inserting them in sand in a close cold frame. Here they quickly form roots, and should be potted and grown in a frame until well established. In two seasons fair-sized flowering plants are thus obtained.

Cistus algarvense has a dwarf spreading habit, and is a most suitable kind for the rock garden. A position in the lower part of the rockery should be afforded it, one where the eye can catch it. The flowers are small and yellow, with a dark blotch at the base of the petals. It requires no pruning. C. albidus is very shrubby, and reaches a height of three to four feet. The foliage is whitish, hence the name, and the flowers are bright rose in colour. It is rather tender, and requires a little protection during hard weather. C. crispus has large saucer-shaped flowers of a reddish-purple colour. It is a great favourite, and grows about two feet high. C. cyprius reaches a height of three to four feet, and bears large white flowers in clusters.

C. formosus is extremely beautiful, its slender growths carrying numbers of yellow blossoms, each having a red blotch at the base of the petals. There is a variety called formosus unicolor, which has clear yellow flowers. C. ladaniferus, the Gum Cistus, is an old favourite, and is perhaps the best known of any. It is sometimes confused with its variety maculatus, which has dark blotches at the base of the flowers, while the species is pure white. C. laurifolius is similar to the preceeding with regard to the flowers, and it also has a variety called maculatus. These two species, ladaniferus and laurifolius, are suitable for grouping in warm sheltered corners.

C. lusitanicus is perhaps one of the best, and should be planted wherever it will stand the winter safely. The pure white flowers, with crimson base, are very effective. C. purpureus has pale purple flowers with a dark base to the petals. It is rather tender, and inclined to become leggy, especially if pruning is neglected in its young state. C. obtusifolius, C. rosmarinifolius, and C. salvifolius all have white flowers, and grow about two feet high. C. villosus makes a delightful little bush about eighteen inches high, and bears a profusion of rose-coloured blossoms. E. C. Pooley.

FIRST PRIZE COLLECTION OF TWENTY-FOUR DAFFODILS.
Exhibited at the Midland Daffodil Show, Birmingham, by Mr. F. S. Staffurth, Frieston Priory, Boston, Lincs.

Coccocypselum hirsutum.—Among the plants which have a very pretty effect when grown in a suspended basket in the stove or intermediate house must be reckoned this coccocypselum, as under these conditions its long trailing shoots will hang down for a considerable distance. These are of a somewhat succulent nature, and are clothed with oppositely arranged ovate leaves, which, in common with the stems are very hairy, hence the specific name. The flowers, which are borne in little clusters in the axils of the leaves, are blue, but small and not at all conspicuous. They are succeeded by berries, which, when ripe, are about the size of large peas, and of a bright blue colour. It is a native of the West Indies and also known as Crepens.—W. T.

Everyone interested in a garden should obtain a copy of the Alphabet of Gardening, by T. W. Sanders. Thoroughly practical information is given as to soils, manures, seed sowing, planting, potting, budding, pruning, grafting, forcing, hybridising, etc., with explanatory diagrams. Price, bound in cloth 1s. 6d. net, post 1s. 9d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

FLORISTS' PENTSTEMONS.

Apart from its uses for general purposes of garden decoration, the pentstemon is one of the most useful plants we have, flowering, as it does, from midsummer to Michaelmas, and even later. It is a hardy perennial, in a limited sense, in favourable soils and situations, but normally it cannot be relied upon to stand a sharp, or even a very wet, winter, 12 deg. to 15 deg. of frost generally being sufficient to blacken the foliage, damage from which plants seldom recover sufficiently to be worth retaining. Where they do stand the winter they will be in flower by the end of May or beginning of June, but they do not last so long in beauty as young examples.

FIRST PRIZE COLLECTION OF NEW DAFFODILS.
Exhibited at the Midland Daffodil Show, Birmingham, by Mr. E. M. Crosfield, Cossington, Bridgwater, who won the Cartwright Cup and Gold Medal with his exhibit.

Pentstemons like a deep, rich, moist soil, flowering very little in a dry one, while they do not object to a considerable amount of shade. As there are so few of our summer bedding plants that are not the better for all the sunshine they can get, this latter characteristic is a considerable point in their favour. Named varieties are, as bedders, certainly rather dear to buy, but this is the quickest way to get a stock of the finest sorts with massive spikes of gloxinia-like flowers. Once a stock has been obtained, however, their propagation by cuttings is a simple matter. Plants of mixed sorts may be bought much more cheaply, but will, as a rule, be of no better varieties than can be obtained from a packet of the best seed, though they will flower earlier, supposing in both cases no preparations for a bed to have been made until the approach of spring. The drawback of mixed seed, as of unnamed plants, is the usually undue proportion of flowers of lilac, maroon, purple, and magenta shades. Some seedsmen sell seed of the best shades of pink and red by themselves, and it is well to buy this, unless one wants as great a variety as possible. Seed sown in gentle heat in February, and the seedlings treated as pot plants till they are ready to put out, will produce good flowering plants by the end of July or the beginning of August. If, however, seedlings are going to be grown at all, it is better to sow the seed in June, and pot them up, standing the pots in a cold frame for the winter, and giving protection in severe weather. Those in pots sometimes begin to damp off after February, and when such is observed to be the case they should be planted out as soon as the weather permits, keeping some light covering handy to throw over the bed in the event of a very sharp frost. Plants raised in this way will be coming into flower in June, and will attain the size of small shrubs by the autumn. Seed may also be sown in the open at the end of May or early in June, and the seedlings pricked out on a nursery bed of good soil, in which case they can be potted up in the autumn and treated as mentioned above, always remembering to give plenty of air in open weather. A pentstemon bed should receive a mulch of short manure as soon as the plants begin to grow together, and in the event of a dry spell should receive one thorough soaking and be then left alone.

If named sorts are grown, as many cuttings as possible should be secured, and, if mixed seedlings are grown, there will generally be some which it will be worth while to propagate. In any case, the first batch of cuttings should be taken before the end of August, putting them in pans of sandy soil, and setting them for the first week or two in a frame, which is kept well ventilated and shaded from the sun. Afterwards it is as well to set them in a shady place in the open. Further batches may be taken, as material becomes available, up to October. Cuttings may be made from the laterals of the flowering stems, from the tops of strong shoots which have not flowered, and from little shoots from the base, cutting them off level just below a joint, and removing one, two, or three pairs of leaves according to the nature of the cuttings. As with seedlings, all the attention they need in the winter is ventilation, occasional protection, and enough water to allow of growth, which continues all the winter in favourable weather. The earliest cuttings may be potted off in October and the rest in February, or as soon after as they are well rooted, and planted out when they are ready for a shift. They will be rather later in coming into flower than the seedlings raised the previous summer, but will become quite as strong later, though not, perhaps, such large bushy plants. When a good stock has been obtained it is worth while marking some of the finest spikes for seed to supplement the cuttings, as it is often difficult to get enough of the latter in good time to allow for casualties—rather numerous sometimes—while the seedlings will sport to a certain extent, and some fine varieties may be obtained.

Alger Petts.

Vegetable Marrows.—If seeds were sown in March the plants will have attained a size sufficient for planting out on hillocks, but will require the protection of handlights for a few weeks to encourage them to make growth, admitting air during the day, especially when the sun is bright. The plants that were raised early and planted on mild hotbeds will be making fruitful growth, and should be carefully watered, and the flowers fertilised during the middle of the day, admitting more air to the frames as the power of the sun advances.—C. F.

WORK FOR THE WEEK.

CONSERVATORY AND GREENHOUSE.

PERPETUAL - FLOWERING CARNATIONS.—The main batch of young plants should now be placed in unheated frames. Cleanliness must be aimed at to keep the plants in perfect health, therefore the frames must be thoroughly cleaned, and receive a new coat of limewash. A good ash bottom is preferable on which to stand the pots. When removing the plants examine each one separately for any signs of rust, and this, if detected, must be picked off and burnt. Ventilation must be carefully attended to at first, gradually increasing the amount as the plants become hardened. A little air may be admitted during the night to prevent the atmosphere becoming close and stuffy. Other plants which are now carrying quantities of bloom will need the assistance of occasional dressings of manure. Weak soot water may be given every alternate day. The growths must be kept neatly tied up to the centre stake. Shade from brilliant sunshine is necessary to preserve the colour in the flowers. Admit an abundance of air without causing a draught on all possible occasions, and keep down the temperature by damping the floor and stages.

CANNAS.—Young plants that were raised from suckers in the early part of the year will now be ready for potting into 48's. The compost used should be fairly rich and porous, and include some dried cow manure. The pots should be well crocked to allow a free drainage, for cannas delight in plenty of water when in full growth.

CAMELLIAS.—As soon as the flowers have fallen the trees should be thoroughly cleaned. Little pruning is necessary, except that required to keep them in shape. See that the roots are well supplied with water. Any pot plants which require repotting should be attended to now, using a good fibrous loam, peat, and coarse sand, and pot firmly. A little shade from hot sunshine is necessary to prevent the young foliage being scorched.

FRANCOA RAMOSA.—This plant is of easy cultivation, and is a very useful subject in many forms of decoration. When grouped amongst low-growing subjects, such as begonias, its long sprays of white flower-show off to great advantage. Associated with other flowers it is most effective for the dinner table decoration, and is also very useful for wreaths and bouquets. Seeds may be sown at the present time in sandy soil, and placed in an intermediate temperature. A companion plant to the francoa is Celsia arcturus, and may be grown in a similar manner. Both plants resent being overpotted, a 48-size pot being large enough for the first year in which to flower them.—A. Grubb, Porter's Park Gardens.

THE ORCHID HOUSES.

CONSTRUCTION OF ORCHID HOUSES.—On two or three occasions recently I have been asked to advise on the building of orchid houses, and this has led me to believe that a note on the subject would be of service. I do not wish to convey the idea that there is a demand for structures for the successful cultivation of orchids differing materially from those used for the accommodation of other classes of plants. At the same time, I would point out that where houses are being built with the intention of growing orchids in them, there are certain points that may be considered desirable, and as these will not make any appreciable difference to the cost of the structure, it will be well to consider them. The first point is the aspect. In my opinion all houses for plant growing are best built north and south, as the plants growing in them have the full advantage of the light obtainable, and as this is one of the essential conditions of successful culture, the suggested arrangement is preferable. Some of the cool houses we have are lean-to, with a north aspect, and I find the odontoglossums grow equally as well in them as they do in the span houses built in accordance with the above suggestion with a south aspect. Lean-to houses are suitable for most of the hot-growing kinds, but I do not consider it an ideal aspect for the intermediate temperature and cool house orchids during the hot summer months.

SIDE WALLS.—I have noticed of late years that in many prominent gardens brick side walls are superseding the horticultural builders' orthodox method of side lights. The wall is carried up to the eaves, or what may now be termed the wall plate. This I have long advocated, for glass sides are of little or no advantage as a means of admitting light. Where they exist there is the necessity of covering the glass for a considerable period of the year with a permanent shading, to prevent scorching, and in winter they afford little or no protection against frost and cold winds. On the other hand, a decided advantage is obtained from brick walls during the cold winter months, in the fact that a more even temperature is obtainable with less artificial heat.

HEATING.—Another point is the provision of a heating apparatus that is fully equal to the work it will have to do. The greater the heating surface the less will be the excessive driving of fires, and thus a considerable saving in the full cost will be effected. I would advocate laying all the pipes flat. One flow pipe and three returns even in the cool houses. I consider this gives the full advantage of heating surface.

RAIN WATER SUPPLY.—It is of the greatest importance to have a full supply of rain water throughout the year. The ground should be excavated and tanks built of brick or concrete sufficiently large to store a supply that will be equal to the necessary requirements.

VENTILATORS.—The lower ventilators should be fixed in the wall, just on a level or slightly above the hot-water pipes, so that when air is admitted it will pass over the hot-water pipes, and thus be warmed before coming into direct contact with the plants. The usual roof ventilators should also be fixed, so that they may be opened at the discretion of the operator. If they are worked on a worm-screw attached to a lever bar this is easily effected. The staging should be made so that it may easily be raised or lowered at discretion. This will be found of considerable advantage in dealing with both small and larger plants; with a movable stage they can be raised close up to the glass, or be lowered some distance from it.—H. J. Chapman, Oakwood Gardens.

HARDY FRUITS.

FRUIT TREE PESTS.—As regularly as the spring appears so do the troubles of the grower of hardy fruits begin. With the first signs of growth pests of every description spring into existence, and soon do much damage if not checked. The earliest to contend against are the fungoid diseases, closely followed by caterpillars, aphis, slugs, and birds. We have advanced so rapidly in our knowledge of different washes that no very serious attack should be allowed. Washing will be the order of the day for fungi and insects at this time of year. The more highly fruit is cultivated the less open are the trees to attack, except in the case of birds. I know of nothing more aggravating after all washing, care, and attention, than to see tits, blackbirds, and starlings damaging the fruit. Tits are especially destructive in this district, and so particular are they that nothing but the choicest specimens are good enough for them. In the winter time a piece of suet is very acceptable to them, and opportunity should be taken at that time to keep them in check. It must be admitted that tits destroy many insects at this time of year, but the number thus destroyed is insignificant as compared with the damage they do in plantations of Cox's Orange apples and Doyenne du Comice pears.

NUTS.—Cobs or filbert nuts may be washed as soon as each shoot has one or two leaves fully developed, thereby allowing no time for caterpillars to establish themselves, or half the crop may be lost before they can be fully checked. The acetate of lead wash has been used freely, with great success among the Kentish fruit growers, this being less injurious to the tender foliage than Paris green. To make this wash use at the rate of 2lb. acetate of lead and 10oz. arsenate of soda to 100 gallons of water. Dissolve the lead acetate first in most of the water, then dissolve the soda arsenate in water in a separate vessel; when both are dissolved mix them and stir well. Double this strength has been recommended, but for ordinary attacks it will be sufficient. When spraying use a very fine nozzle, allowing the spray to fall on the leaves where the poison will remain and be devoured by the caterpillars. This wash may also be used in conjunction with Bordeaux mixture, care being taken not to allow it to go near green vegetables or green gooseberries.

PEACHES AND NECTARINES.—Continue to pay close attention to disbudding, and in the performance of this necessary operation do not allow more side growths than will be necessary to furnish the trees with fruit-bearing wood for next season. Any trees that have been recently replanted or have been weakened by heavy cropping should have a goodly proportion of misplaced fruits removed as soon as possible. Trees suffering with leaf blister should have all injured leaves picked off and burned. On very fine warm days a good washing with the hose early in the day, so that the trees may have time to become quite dry by nightfall, will help them very much in starting into an active and clean growth.—J. Whittle, Cheveney Gardens.

THE KITCHEN GARDEN.

FRENCH BEANS.—A large and important sowing of French beans may now be made on a warm sunny border in many parts of the country. Select deeply dug and well-manured ground. Draw out the drills at from two feet six inches to three feet apart running southwards, and giving a dusting of soot as a stimulant to the plants, and to ward off as much as possible the attack of slugs. Ne Plus Ultra and Canadian Wonder are heavy cropping and reliable varieties. Where plants have been raised under glass with a view to planting them in a similar position, gradually allow them more air. Those who possess narrow portable frames for placing over early vegetables will find them invaluable for this crop.

TURNIPS.—To succeed the smaller sowings made on warm borders, a good sowing should be made in an open quarter of the garden. It is necessary that turnips be quickly grown to be of first quality, therefore choose ground that is rich and in good friable condition. Sow in drills at fifteen inches apart. Model or Snowball are excellent kinds for summer cultivation. The turnip fly at times is damaging to the young plants if the weather is dry. Light waterings, assisted with a stimulant of quick acting artificial manure is often a preventive, or if badly affected syringe the plants with quassia extract.

CELERY.—The early plants will stand more air as the season advances, and as root action becomes more active give them more water at their roots. The later plants will require to be pricked out in rich soil in cool frames at about six inches apart, and brought along steadily for later plantings.

ASPARAGUS BEDS.—Growth will be in full swing, and should be encouraged by giving applications of nitrate of soda or salt, and watering it in, or light doses of diluted liquid manure from the farm tank.

TOMATOES.—The plants raised for planting against walls, etc., outside should be grown along steadily, but gradually may be given more air to harden their tissues without subjecting them to a check. This will materially help the plants at the time when they are fully exposed later. Do not allow them to become dry at the roots. Should they be pot-bound extra care will be necessary till planting out time arrives.—C. Flack, Cholmondeley Castle Gardens.

TAUNTON DEANE HORTICULTURAL AND FLORICULTURAL SOCIETY.

The next ANNUAL EXHIBITION will be held on THURSDAY, August 10th.

Schedule and particulars from—
R. A. GOODMAN, Secretary,
3, Hammet Street, Taunton.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

Midland Daffodil Show.

The exhibition held at the Edgbaston Botanic Gardens, Birmingham, on April 28 and 29 was probably the finest ever held in this country. The competition was exceptionally keen throughout, and the number of entrants quite large. The trade displays were also good, and in both the competitive and non-competitive trade exhibits there were daffodils of the most exquisite beauty and variety, these in many cases being the last word to date in certain directions, from the leading raisers.

The show was well arranged, and the infectious good humour and generous hospitality of Mr. Robert Sydenham put everyone in good temper, while the energy of Mr. Herbert Smith, and the good arrangements of Mr. Thomas Humphries compelled admiration.

It is at Birmingham that the leading daffodil raisers and traders foregather, and it is here that the finest sets of new seedlings are placed before the public. Not only is a great deal of business done there, but it is done in pleasant surroundings, and under favourable conditions. During the evening of the first day Mr. Robert Sydenham, assisted by Mrs. and Miss Sydenham, entertained the exhibitors at the Grand Hotel, and a quite large party sat down to dinner, and after dinner discussed "The Progress of the Daffodil," a subject admirably opened up by the Rev. G. H. Engleheart, V.M.H., whose chief point was that raisers, instead of throwing away all but their very finest flowers, should save those that possessed merit for garden purposes, even though these did not quite approach the florists' ideal. He believed there was a good market for garden daffodils of strong constitution and varied colours, and that the dispersal of such varieties would tend to still further popularise the flower; whereas there was a limited demand for the tip-top flowers of perfect form. And with this contention most of those present fully agreed; indeed, many people have felt for some time that there is ample room for the perfect florists' daffodils for exhibition purposes, and ampler room for less perfect, but not less useful, flowers suitable for garden and market purposes. Mr. P. D. Williams, Mr. R. Wallace, Rev. J. Jacob, Mr. Welchman, Mr. H. Backhouse, Mr. R. Sydenham, Mr. J. D. Pearson, and Colonel Howard all spoke, and the last-named gentleman urged raisers to make sure that their new varieties possessed good constitution and freedom.

Needless to say, the host and hostess of the evening were heartily thanked, and accorded musical honours and cheers.

OPEN CLASSES.

In the big class for fifty varieties of daffodils, legibly named, and representing all sections of the family, there were five competitors, and here the premier prize was secured by Messrs. Cartwright and Goodwin, Kidderminster, whose collection of fresh flowers included good vases of Glory of Nordwyk, Coreen, Armorel, Long Tom, Giraffe, Homespun, Lord Roberts, Felspar, Whitewell, Incognita, Clarissa, Circlet, and Barcarolle. Mr. Christopher Bourne, Simpson, Bletchley, came a good second, and he showed Dewdrop, the lovely new Queen of Hearts, Lemon Belle, Horace, Cygnet, Victoria, White Lady, Occident, Lucifer, and Will Scarlet. Mr. J. Pope, King's Norton, was third, and he had fine things in Victory, Winifred, White Lady, White Queen, Circlet, and Middleton; Mr. F. H. Chapman fourth with a good lot of Leedsi and poet varieties.

There was an excellent competition in the class for a dozen varieties of long-trumpet daffodils, three stems of each, and here the premier award was secured by Messrs. Cartwright and Goodwin, Kidderminster, with a grand set of fresh, large, and clean flowers of Lord Roberts, Mdme. de Graaff, Princess Ina (a lovely new variety), Mrs. H. J. Veitch, Glory of Nordwyk, Leiden Jar, Onslaught, Mrs. Betteridge, General Makaroff, Herod, Weardale Perfection, and Cornelia. Second prize fell to Mr. J. Pope, King's Norton, who had Mervyn, and Olympus in good condition; Mr. J. Mallander, Bawtry, third, with a set of his own seedlings, in which Nance Broadley and Miles Standish were good; Rev. J. Jacob fourth.

Messrs. Cartwright and Goodwin also obtained the chief award for six varieties of short-trumpet varieties, three flowers of each, with lovely flowers of Long Tom, Lady M. Boscawen, Giraffe, Bert Sands, Neptune, and Felspar; Rev. J. Jacob, Whitewell, Whitchurch, second; and Mr. C. Bourne, Simpson, Bletchley, third; and Mr. J. Pope fourth.

The class for a dozen large-cupped daffodils proved a great attraction, and there were six competitors. First prize was won by Messrs. Cartwright and Goodwin, who staged very handsome blooms of May Hanson, Homespun, Whitewell, Perseus, Pilgrim, Castile, Eoster, Gloria Mundi, Evangeline, Joan of Arc, White Nectarine, and Marigold; the Rev. J. Jacob was second; Mr. H. D. Phillips, Olton, third; and Mr. C. Bourne, Bletchley, fourth.

Four competitors came forward in the class for a dozen distinct varieties of small-cupped daffodils, and here the Rev. J. Jacob came to the front with Evening, Ecstasy, White Lady, Charlotte, Vivid, Japonica, Jacob Faithful, Scarletta, Delicacy, Firebrand, Pancake, and Ellen Barr; Messrs. Cartwright and Goodwin second; Mr. J. Pope third; and Mr. C. Bourne fourth.

Messrs. Cartwright and Goodwin continued their successes in the class for six distinct poeticus varieties, scoring a first with beautiful examples of Matthew Arnold, Childe, Oliver Goldsmith, Rudyard Kipling, Highland Bard, and Sir Philip Sydney; Mr. C. Bourne was placed second; Mr. F. H. Chapman, Rye, third; and Rev. J. Jacob fourth. For six varieties of flat-cupped daffodils Messrs. Cartwright and Goodwin continued their monotonous way, scoring with Sulphur Eye, Orange Eye, Incognita, Circlet, Semiramis, and Armeline; Rev. J. Jacob second; Mr. J. Pope third; and Mr. C. Bourne fourth.

The Rev. J. Jacob scored for six varieties of bunch-flowered daffodils, and he had good trusses of Orient, Klondyke, Jaune a Merveille, Triumph, Elvira, and Sunset.

AMATEURS.

In the competition in the leading class open to amateurs only, no bulbs to cost more than 10s. 6d., there were seven competitors, and here Mr. S. F. Staffurth led with a beautifully clean and even set, in which the leading varieties were Ida Pope, Glory of Leiden, Horace, Evangeline, Weardale Perfection, Gloria Mundi, Beacon, Brunston, White Lady, Leonie, Tangerine, and Blood Orange; the Rev. T. Buncombe was a good second, and he was strong in trumpet varieties; Mr. N. Y. Lower, third; and Mr. E. H. Wood, Ludlow, fourth.

For the best nine distinct varieties of long-trumpet daffodils, equal first prizes were awarded to the Rev. J. Buncombe, Black Torrington, Devon; and Mr. H. R. Darlington, Potter's Bar; the latter had Glory of Leiden and Admiral Makeroff in good form, and the former presented good flowers of Mdme. de Graaff, and Weardale Perfection; there were nine entries, and third prize went to Mr. J. A. Kenrick, Harborne; and fourth to Mr. N. Y. Lower, Presteign.

In the smaller classes the same keen competition continued; for three trumpet varieties Mr. N. Y. Lower and Mr. H. R. Darlington were first and second. For nine large-cupped varieties Mr. H. R. Darlington, Mr. S. F. Staffurth, and Mr. Lower won prizes in the order named. For nine small-cupped daffodils, three flowers of each, Mr. Lower, Mr. Staffurth, and Rev. J. Buncombe came in order of mention; while for six daffodils, costing not more than 3s. per dozen, Mr. Lower, Mr. W. H. Parton, Moseley, and Mr. H. R. Darlington scored in the order of their names.

Mr. H. R. Darlington, Mr. Gumbleton, Tewkesbury; Mr. W. H. Parton, Mr. H. J. Jones, Ludlow; Mr. B. Brown, Ludlow; Mr. A. Taylor, Olton; Mr. J. H. Padley, Worksop; and Mr. W. F. Mitchell, Leek Woolton, near Warwick, were other prominent prizewinners.

SEEDLINGS.

Great interest centred in the class for a dozen distinct new daffodils raised by the exhibitor, and here Mr. P. D. Williams, Lanarth, St. Keverne, wrested the Bourne Cup from Mr. E. M. Crosfield, Crossington, Bridgwater, after a great fight. Mr. Williams had flat-cupped varieties all through, and his named sorts, Bonfire, and Sheba were lovely things, one numbered, 233 had a lovely bit of delicate colour. Mr. E. M. Crosfield's Charles Surface was a magnificent bit of orange colouring; while Anchorite and Chintz were delightful; Mr. W. Welchman, Wisbech, was third, and his Princess Fushima was a quaint big flower, with striped cup.

Mr. A. Wilson led for six seedlings raised by the competitor, and he showed Hermica, Druid, Seborga, Leontes, Abigail, and Anicot, the latter a most charming flower with a suspicion of pink in the delicately citron-edged cup; Mr. C. H. Cave, Margotsfield, Bath, second; and Mr. J. Pope, third.

Mr. G. Stocks, Doncaster, led for three seedlings, with Mr. W. Wilson, Sheffield, second; and Mr. C. L. Adams, Wolverhampton, third.

NEW VARIETIES.

Premier award—the Cartwright Cup—for a dozen distinct varieties of daffodils that have not been in commerce more than four years, was won by Mr. E. M. Crosfield, who displayed lovely blooms of Zouave, Chintz, Anchorite, Fire Eater, Sarchedon, Gaybird, Royal Lady, Tinsel, Spartan, Iliad, Coquette, and Chic. Messrs. Cartwright and Goodwin came second, their Whitewell, Sulphur Eye, Bert Sands, and Orange Queen being very fine; Mr. T. H. Chapman, Rye, third, with Silver Spangle, and Elegy as good specimens.

The Rev. J. Jacob came first for six varieties, not in commerce more than four years, and he showed a handsome set; Mr. H. D. Philips, Olton, second; Mr. J. Pope, third; and Mr. C. Bourne, fourth. Mr. Crosfield scored for six distinct poeticus varieties not in commerce more than four years, annexing the Chapman Trophy, with beautiful blooms of Sarchedon, Socrates, Snow King, Iliad, Bret Harte, Coronation, and Socrates; Mr. A. A. Wilson, Bridgwater, second; and Messrs. Cartwright and Goodwin, third.

The Walter Ware Cup for a group of obvious triandrus hybrids was won by Mr. E. N. Crosfield, who had some delightful flowers of chaste beauty, refinement, and delicacy; only one, Honey Maid, was named, but the seedling silvery-white forms were lovely; Messrs. Cartwright and Goodwin came second, but they had duplicate blooms of several varieties, such as Princess Ina, Yellow Diamond, Zephyr, etc.; Mr. T. H. Chapman, Rye, third.

PLANTS IN POTS.

In this section Mr. J. Scaney, Harborne, led the way for six pots of daffodils, and he had a fine set of Emperor, Madame Plemp, Madame de Graaff, Glory of Leiden, Empress, and Grandee; Mr. J. A. Kenrick, Harborne, second; and Mr. J. A. Kenrick (gardener, Mr. A. Cryer), Edgbaston, third. For six pots of bunch-flowered daffodils Mr. J. A. Kenrick, Edgbaston, led with perfect sheaves of Klondyke, Elvira, Lucia, Mont Cenis, Jaune a Merveille, and Jaune Supreme; Mr. W. H. Parton, Mosely (gardener, Mr. W. Carpenter), second; and Mr. J. A. Kenrick, Harborne, third.

Mr. J. A. Kenrick, Edgbaston, had the best six pots of tulips, and he showed Prince of Austria, Fabiola, Pink Beauty, Couleur Cardinal, Rose Luisant, and Spaendonck in grand style; Mr. J. A. Kenrick, Harborne, second.

For bunch-flowered daffodils grown in fibre Mr. J. A. Kenrick, Edgbaston, led, with Mr. E. Deakin, Hay Mills, second. Trumpet daffodils in fibre were very fine, and here Mr. Sydenham's special prizes were well won in order of mention by Mr. J. A. Kenrick, Edgbaston; Mr. E. Deakin, and Mr. J. A. Kenrick, Harborne, the first-named showing grand bowls of Emperor, Madame Plemp, and Glory of Leiden.

Mr. A. W. Milner, Sheffield, and Mr. S. Mortimer, Farnham, were first and second respectively for baskets of polyanthuses. Mr. J. Pope, Mr. E. J. Keeling, Small Heath; and Mr. J. Sceaney were the leading competitors in the class for bowls of spring flowers.

NON-COMPETITIVE.

The trade growers once again contributed their share, and that no mean one, to the effective display. One or two growers whom we are accustomed to meet at Birmingham were prevented on this occasion owing to local storms from putting in an appearance, but the exhibits staged were excellent in every way. The Rev. G. H. Engleheart, Dinton, Salisbury, put up a capital group of novelties, which, of course, were a source of attraction to the experts. Several trumpet flowers, both in yellow and cream, were of huge size, and of beautifully modelled build. Poeticus varieties were also well represented.

Messrs. Barr and Sons, Covent Garden, London, occupied their usual position in front of the platform, and upon their stand were displayed a fine array of choice things. Flat-cupped varieties of special note were Sheba, pure white perianth, vivid red eye; Challenger, with an eye graduating from orange to vivid scarlet; Marie Louise, with a pure orange eye; and the very pure white Moonbeam. Pink Beauty, a trumpet flower which is a near approach to Apricot, Pink Czarina, one of the largest trumpets on the stand, and Sevenoaks also of immense size and a glorious butter-yellow.

Robert Sydenham, Lim., Tenby Street, Birmingham, had a beautiful display of fresh, clean flowers, among which Lady Margaret Boscawen, Apricot Queen, Lila, Cardinal, and Weardale Perfection figured prominently. Tulips and lily of the valley in fibre were also shown. Mr. C. Bourne, Simpson, Bletchley, showed about fifty vases of high-class varieties, including many distinctly pretty things. Queen of Hearts, Heroine, White Lady, and Crown Prince were a few of the leading features of the stand.

On Messrs. J. R. Pearson's stand a few of the most striking varieties were Prima Donna, Dorothy Vernon, Crœsus, and Heroine. It may be said that the texture and freshness of the flowers spoke well for the Lowdham district, and for the skill of the Messrs. Pearson as growers.

From Ireland two good exhibits came, one from Miss F. W. Currey, The Warren Gardens, Lismore, and the other from Messrs. Hogg and Robertson, Lim., Mary Street, Dublin. Miss Currey showed Sunspot, Evangeline, Arctic Light, Challenger, Beacon, and a number of other nice things. The daffodils from the Dublin firm were supplemented by brilliant tulips, which showed excellent culture.

Pleasing variety was afforded by a number of exhibits of other spring flowers, among which the alpines brought by Messrs. Bakers, Wolverhampton, were conspicuous. This exhibit was both beautiful and interesting, the gems of the rock garden being pleasingly displayed on an improvised rockery. Incarvillea grandiflora, varieties of saxifragas, primulas, and hardy cypripediums were finely shown. An excellent group of perpetual carnations came from Messrs. Young and Co., Hatherley, Cheltenham. The popular variety Mikado was blended with Whitcombe Riley, a pale yellow, which "goes well" with the heliotrope. Pink, Rose, and White Enchantress, Britannia, Lady Audley Nield, and others were also shown.

A really grand lot of polyanthus, in yellows and crimsons, came from Mr. W. A. Watts, St. Asaph, North Wales. Hybrid gerberas in a beautiful range of colours were put up among choice ferns by Mr. H. N. Ellison, West Bromwich. Messrs. B. R. Cant and Sons, Colchester, staged roses that would do credit to June. A new pink Druschki and two lovely porcelain pink varieties of great merit were shown. Sallie is of a particularly pleasing shade and good shell form; St. Helena is overlaid with a shade of pinkish apricot, leaning toward the colour of G. Nabonnand.

Messrs. Sutton and Sons, Reading, staged cinerarias of both large-flowered and stellata types, the colours ranging from pure white to deepest crimson and richest blue. A nice collection of rock plants and dwarf shrubs came from Messrs. R. Wallace and Co., Colchester; some delightful androsaces and primulas, and choice little saxifragas were shown in good-sized clumps. A number of tulips and narcissi occupied the end of Messrs. Wallace's stand. A group of large-flowered polyanthus in various colours came from Mrs. W. A. Milner, Totley Hall, Sheffield, and another excellent exhibit of the same flower was put up by Mr. S. Mortimer Rowledge, Farnham, Surrey.

A very striking bedding viola, named "Queen's Park," was exhibited by Mr. W. H. Morter, the superintendent of the Birmingham Public Parks. The flower is of good shape, petals crisp and substantial, and the colour orange-yellow, but rayed. Mr. T. E. Dawes, Syderstone, Norfolk, showed his three fine varieties of rhubarb.

Hereford Spring Flower Society.

The second exhibition of this society was held in the fine old Shire Hall, Hereford, on Wednesday, April 26, under very pleasant conditions, the sun shining brightly all day, and attracting a good attendance. Daffodil and spring flower societies are becoming fashionable, especially those where the competition is confined almost entirely to amateurs. Brecon, Glamorgan, Huntingdon, and Hereford are all excellent examples of this kind of spring show, and the keenness of the ladies, either as competitors or visitors, is remarkable.

At Hereford the competition was keen throughout; the daffodils were good, and the little rock gardens, baskets of primroses and polyanthuses, and miniature rock gardens were delightful, while the class for flowering trees and shrubs was unusually fine. Miss A. Barneby, Longworth, Hereford, is the very energetic and capable secretary, and she had all arrangements for judging, etc., well up to time, so that everything was ready for the public well before the time of opening.

DAFFODILS.

Miss Pope, The Ericas, Kings Norton, led in the open class for a set of new seedling daffodils, and she put up a very good and interesting set; one labelled Sol No. 2 had a fine white perianth, and a neat flat primrose cup.

Chief award in the open amateurs' class for a collection of five and twenty varieties of daffodils, three flowers of each, all sections to be represented, was won by Miss Parr, Staunton Park, Staunton-on-Avon, with a beautiful set that included Glory of Leiden, Lord Roberts, Empress, Sunrise, Lady Margaret Boscawen, Lady Audrey, Lulworth, White Lady, and Lucifer; Mrs. Manley Power, Aston Court, second; and Mrs. H. J. Barley, Rowden Abbey, third; there were six competitors.

For a flower of a trumpet variety Mrs. H. J. Bailey scored with Mervyn; Mrs. Davenport, Foxley, Hereford, second, with Weardale Perfection; and Mrs. A. W. Foster third with a grand flower of Olympia. Mrs. Davenport led for a medium crowned variety with a splendid bloom of Homespun; H. J. Bailey, Esq., second, with Orangeman; and Miss Hopton third, with M. M. de Graaff. In the small-crowned section Miss Hopton led with a good bloom of Horace; Mr. H. J. Bailey second, with Circlet; and the Rev. R. H. Wilmot, Bishopstone Rectory, Hereford, third, with Horace.

The premier award for local competitors in a class for twenty varieties, three blooms of each, went to the Rev. A. C. Lee, Lugwardine Vicarage, and his best flowers were of King Alfred, Lulworth, Barri conspicuus, White Lady, Madame Plemp, and Luciter; N. T. Lower, Esq., Presteign, came a good second; and Mrs. H. J. Bailey, Rowden Abbey, Bromyard, third; three entries. The chief award here was a silver cup, presented by Sir John Cotterell.

The challenge cup presented by Mrs. F. Mount for the best collection of twelve varieties of daffodils, representing all sections, was won by Mrs. Greswolde Williams, Bredenbury Court, Bromyard. In this case no bulb had to cost more than 10s. Mrs. Williams' varieties were Gloria Mundi, Emperor, Lucifer, Duke of Bedford, King Edward, Madame Plemp, Madame de Graaff, Fairy Queen, Sentinel, Apricot, Horsefieldi, and Barri conspicuus; Miss Hopton, Homend, Ledbury, second; and Mrs. Davenport, Foxley, Hereford, third; Mrs. Manley Power, Aston Court, Ross, highly commended; eight entries.

In a county class for six varieties of daffodils the Rev. R. H. Wilmot led, and he had Homer in fine form; Mrs. R. Heygarth, The Wells, Hereford, came second; and Mrs. Bedford, Newent, third.

HARDY SPRING FLOWERS.

The class for a collection of eighteen hardy spring-flowering plants (daffodils and flowering shrubs excluded), arranged in rock garden fashion, was a great success, and the competition especially keen. The cup offered by W. H. Barneby, Esq., was won by the Rev. R. H. Wilmot, Bishopstone Rectory, Hereford, who had a charming lot of Arenaria balearica, Primula cortusoides, P. pulverulenta, Saxifraga Arkwrighti, Fritillaria pyrenaica, and Uvularia sessilifolia; Mrs. W. H. Bailey was a good second, while Lady Hopton, Homend, Ledbury, was third.

In a class of similar character, but for eight kinds of plants, Miss Lee, Broadlands, Hereford, scored a first, and had Saxifraga muscoides and Sanguinaria canadensis in good condition; Mrs. Arkwright, Lyonshall, Kington, second, showing a fine example of Arabis aubrietioides; Miss Hopton, third. Hardy flowers, shrubs excluded, were best shown by Miss E. Armitage, who had splendid crown imperials, Iris pumila, and Iris bucharica; Rev. A. C. Lee second, and Mrs. Ware, Hampton Dene, Hereford, third; Miss Barneby was unfortunately disqualified, as she had a white form of Anemone apennina among the blue, and no mixed bunches were allowed.

For unforced spring flowers Mrs. Davenport led the way with a beautiful lot of bloom set in green moss; Gentiana acaulis, crown imperials, auriculas, violas, Corydalis cheilanthifolia, and Primula rosea were very good; Mrs. Clowes second; and Miss Burdon, Munstone House, Hereford, third. Miss Burdon, Munstone House, Hereford, led for half a dozen auriculas, and was followed in order of merit by Lady Rankin and Mrs. G. Williams; there were five entrants, and all showed well.

Mrs. H. J. Bailey led in the class for three primroses, distinct colours, shown in a basket one foot across; Mrs. Arkwright came second, and Miss Burden third, and the competition was a very pretty one. There were no fewer than fourteen competitors in the delightful class for a collection of polyanthuses, four distinct colours, to be shown in a basket, and here Mrs. Davenport again scored, and with fine plants of a fine strain; Mrs. Clowes second, and Rev. R. H. Wilmot third. The baskets of flowers arranged over white paper down a broad corridor looked very fine.

The best collection of four kinds of primulas was exhibited by Rev. R. H. Wilmot, who led with excellent examples of P. denticulata, P. Sieboldi, and a bright form of P. frondosa named P. farinosa Warei; the Dowager Lady Croft, Blairmont, Hereford, second; and Mrs Davenport, Foxley, Hereford, third. Mrs. Clowes, Burton Court, Pembridge, led for anemones. Mrs. Arkwright, Lyonshall, Kington, scored for four sets of violas. Rev. H. Mallinson had the best six vases of tulips—a fine lot.

Miss Betty Barneby had the best table decoration.

HARDY SHRUBS.

The class for a group of sixteen kinds of hardy flowering shrubs was a famous one, and there were six competitors. Had the position been somewhat lighter the display would have been superb, but, as it was, it was delightful and interesting. Premier award fell to Lady Rankin, Bryngwyn, Hereford, who contributed grand bunches of Forsythia suspensa, Spiræa Thunbergi, Kerria japonica, Cydonia japonica, Azara microphylla, Skimmia japonica, Berberis Darwini, Magnolia stellata, and Grevillea rosmarinæfolia. The second award fell to Mrs. A. W. Foster, Brockhampton Court, Hereford, whose best bunches were of Cunningham's White rhododendron, Spiræa Thunbergi, Kerria japonica, Magnolia Soulangeana, and rosemary; W. T. Bareby, Esq., Saltmarsh Castle, Bromyard, secured third place with a very bold exhibit, in which Cytisus præcox, C. radiata, and Amelanchier canadensis were conspicuously good.

NON-COMPETITIVE.

Several excellent trade exhibits were put up which added variety and interest to the display. Messrs. R. Wallace and Co., Kilnfield Gardens, Colchester, brought a choice collection of alpine flowers, small shrubs, and a few bulbs. Fritillarias, various tulip species, and irises were shown, as well as choice narcissi. Violas, aubrietias, androsaces, etc., were prominent among the rock plants. Choice narcissi and tulips were the main features of a bright group staged by King's Acre Nurseries, Lim., Hereford. St. Brigid anemones, iris, hyacinths, and a few early gladiolus were, however, also shown in good form.

Another capital display was that arranged by Messrs. Barr and Sons, King Street, Covent Garden, London, who had clean fresh daffodils in great variety, with tulips, muscari, and a few alpines in the foreground. Mr. G. Reuthe, Keston, Kent, showed auriculas, Primula rosea, P. denticulata, and such other choice rock plants as Shortia uniflora, Ourisia macrophylla, Schizocodon soldanelloides, etc., together with a number of Himalayan rhododendrons.

Messrs. H. and W. Evans, Hardy Plant Nursery, Llanishen, showed a group of freely flowering alpines, such as Gentiana acaulis, Saxifraga Clibrani, Primula denticulata, Waldsteinia trifoliata, etc. Rock plants were also shown by Messrs. Heath and Son, Cheltenham, a few among their many choice things being Scutellaria indica japonica, Viola gracilis, primulas of sorts, Ionopsidium acaule, and Corydalis tomentosa. A small group of choice calceolarias was exhibited by Miss Lee, Broadhead, Hereford.

A really fine collection of splendidly grown carnations was put up by Messrs. Young and Co., Hatherley, Cheltenham. The leading varieties were represented by superb blooms, and the manner of staging was very artistic. Sir John T. D. Llewelyn, Bart., Penllergore, Swansea, contributed a very pretty set of the newer daffodils, and his collection was especially good in poeticus varieties.

MEDALS.

Gold.—To Messrs. Young and Co., Hatherley, for carnations.

Silver-gilt.—To Mr. Wilson, Hereford, for floral designs; to the King's Acre Nursery Company, Hereford, for daffodils, etc.; to Messrs. Barr and Sons, Covent Garden, for daffodils.

Silver Medal.—Messrs. W. and H. Evans, Llanishen, for hardy flowers; to Messrs. R. Wallace and Co., Colchester, for hardy flowers; and to Sir John T. D. Llewelyn, Bart., for daffodils.

Small Silver.—Messrs. Heath and Son, Cheltenham, for hardy flowers; and to Mr. G. Reuthe, Keston, Kent, for hardy flowers.

Kent, Surrey, and Sussex Daffodil and Spring Flower Show.

This exhibition took place at the Great Hall, Tunbridge Wells, on Wednesday, April 26, and was the sixth of its kind held successively. Like those of preceding years, it was marked by a high standard of excellence in all exhibits. The trade added greatly to the attraction by means of their varied contributions.

In the competitive classes the following awards were made:

For a collection of daffodils, consisting of ten varieties of each of the three groups, Magni-Coronati (trumpet), Medio-Coronati (chalice-cupped), and Parvi-Coronati (saucer or flat crowned, including varieties of Poeticus), three blooms of each variety, the first prize and silver challenge cup went to Mr. J. A. Nix, Tilgate, Crawley, for a collection consisting of such varieties as Rev. D. R. Williamson, Sunrise, Fair Maiden, Henri Vilmorin, Red Beacon, Cygnet, Incognita, Lady Margaret Boscawen, Pilgrim, and Mrs. G. H. Barr; Mr. C. G. A. Nix, Forest Lodge, Crawley, second, with a collection that was very greatly admired. For twelve distinct single varieties of true trumpet daffodils, the Rev. G. P. Haydon, Canterbury, led with lovely blooms of Peter Barr, Pearl of Kent, Imp, Moon, Loveliness, and Philip de Vilmorin; Miss A. L. Nix, Tunbridge Wells, and Mr. E. M. Eversfield, Horsham, second and third respectively. For six distinct trumpet varieties as above, Mr. W. C. Bull, Ramsgate, scored with Weardale Perfection, Monarch, Grandis, Admiral Togo, Mdme. de Graaff, and Glory of Leiden; second, Mrs. G. F. H. Banks, Crawley, with F. Barchard, Esq., Maresfield, third.

For twelve distinct varieties of chalice-cupped daffodils, Miss A. L. Nix was first with Sunrise, Gipsy Lad, White Lady, Lady M. Boscawen, and Albatross; Rev. G. P. Haydon second. In the class for six distinct chalice-cupped daffodils, Mr. F. Barchard was first, Mr. W. C. Bull second, and Mrs. G. F. Banks third. The best six distinct, saucer or flat crowned varieties, were from Mr. F. Barchard, who showed Laureate, Purity, Pindar, etc.; second, Mrs Banks.

In the class for nine distinct varieties of daffodils, drawn from any of the three sections, but not to cost more than 3s. 6d. per dozen, Mrs. G. F. Banks led with Mdme. Plemp, Empress, Horsefieldi, Sir Watkin, Katherine Spurrell, etc.; second, J. Shephard, Esq.; third, Miss E. Roberts, Tunbridge Wells. For seedling narcissi, three distinct varieties not in commerce, the Rev. G. P. Haydon was first with Moon, a beautiful bicolor; Muff, and Mouse, a pleasing yellow. The finest single bloom of trumpet daffodil was Weardale Perfection, from Mr. E. M. Eversfield; second, the Rev. G. P. Haydon, with Pearl of Kent; third, F. Barchard, Esq., with Weardale Perfection. The finest single bloom of a chalice-cupped variety was Lord Kitchener, from Mr. F. Herbert Chapman; second, Mr. C. G. A. Nix, with Mermaid; third, the Rev. P. Haydon, with Lowdham Beauty. The Rev. G. P. Haydon scored for the finest single bloom of saucer or flat crowned variety with Kingsley; second, Mr. F. Barchard, with Purity; and third, Mr. C. G. A. Nix, with Harold Finn.

Mr. E. W. Nix was first, Mr. M. Bridgman second, and Mrs. C. G. Nix third for twelve vases of distinct kinds of hardy herbaceous and bulbous spring flowers. For a collection of hardy cut flowering shrubs, in flower, Mr. J. A. Nix scored, and he had Magnolia stellata, Camellia Donckelaari, Rhododendron arboreum, Daphne japonica, Erica arborea, and Drimys aromatica; Mr. C. G. A. Nix second.

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, April 26.

Present: Mr. E. A. Bowles, M.A., F.L.S. (in the chair), Sir Everard im Thurn, Dr. A. B. Rendle, Messrs. A. Worsley, W. C. Worsdell, J. O'Brien, J. Douglas, R. H. Pearson, W. Hales, C. E. Shea, G. Gordon, and F. J. Chittenden (hon. secretary).

GONGORA SP.—Mr. J. O'Brien brought forward a species of gongora, introduced by the late Mr. Tracy from Peru. It was apparently a new species, and was referred to Kew.

ONCOBA SPINOSA VAR. ROUTLEDGEI.—Mr. Shea showed flowers and foliage of this newly-introduced greenhouse shrub from Central Africa. The seed had been sent home to Mr. Shea from Central Africa, a fruit having been presented to a friend of his by a native chief as a parting gift, on account of its great value as a means of ridding one of enemies with little trouble. The instruction given was to soak the hard fruit in water and present the decoction to the person disliked to drink. The fruit has therefore probably very poisonous properties. The plant, which belongs to the Bixineæ, has large showy white flowers, strongly scented, and with numerous yellow stamens. Many of the flowers lacked a pistil. Mr. Shea's plant appears to differ from the type which is a native of Arabia, and the varietal name of Routledgei is in honour of the sender of the seed. It was unanimously resolved to recommend the award of a Botanical Certificate to the plant on the ground of its novelty and peculiar properties.

SPORT IN DAFFODIL. — Mr. Bowles showed flowers of a sport from "Weardale Perfection," which had appeared among a group of that variety in Mr. Cranfield's garden. It had a yellow-tinged perianth, and a much deeper yellow trumpet than the type.

DOUBLE PRIMROSES, ETC. — Messrs. Cocker and Sons, of Aberdeen, sent a large number of flowers of double polyanthus and primroses which they had raised from seed. The colours ranged from primrose yellow through white to purplish-blue shades, but were not, as a rule, very bright. They were raised by crossing the Wisley Blue primrose with the well-known Polyanthus platypetala plena. In the second and third generation numerous double-flowered forms had appeared and a wide range of colours. It was unanimously resolved to recommend the award of a Certificate of Appreciation to Messrs. Cocker in acknowledgment of their work in raising these plants.

RHODODENDRON HYBRID.—Sir John Llewelyn showed flowers cut from the open of a seedling rhododendron, raised from R. Thomsoni x R. Aucklandi. The leaves had something of the blue-green coloration of R. Thomsoni, but were devoid of hair beneath, much longer, and more acute than those of that plant. The corolla was deep red, and lacked the spotting often seen in R. Thomsoni.

PYRONIA x SEDENI.—Mr. Worsley reported that he had examined the fruit of this hybrid shown at a recent meeting, and had failed to find ripe seeds in it. The cells each contained as a rule three undeveloped seeds.

Sparkhill Amateur Narcissus and Auricula Society.

APRIL 29.

Under the auspices of an energetic committee, the exhibition of this society was held in the St. John's Schools, Sparkhill. The staging of the flowers and judging takes place in the evening for the accommodation of the working classes and others not able to attend earlier in the day. The several classes for daffodils were very well filled, and the auriculas, though somewhat lacking in number as compared with last year, were of high quality. Some of the varieties were in such excellent form as to render the judging difficult. Similar remarks apply to the daffodils, so good were they in quality.

NARCISSI.

The committee provided a class for eight bunches of narcissi, not more than five blooms in a bunch, but, unfortunately, made no provision for the naming of exhibits. Hence there was an absence of names, and the exhibition lost much of its interest and usefulness. Naming should be insisted upon by all horticultural societies. The blue riband of the society was won by Mr. Dentin; second, Mr. E. J. Fox; and third, Mr. E. Deakin. For six bunches of narcissi Mr. E. Deakin was first with very good specimens; second, Mr. E. J. Keeling; third, Mr. C. J. Ford. For three bunches, distinct, Mr. E. Deakin was again first; second, Mr. A. G. Henwood; and third, Mr. T. Justice. For the most tasteful arrangement of narcissi, to occupy a space not exceeding 4ft. by 2½ft., no artificial background allowed. First prize secured by Mr. E. J. Keeling with a bold arrangement; second, Mr. F. Anderson, with a somewhat stiff arrangement of flowers and narcissus foliage; and Mr. E. Deakin, Haymills, third, with a somewhat crowded yet effective arrangement. The prizes were awarded in bulbs according to the money value, and the society's bronze medal was awarded to the exhibitor obtaining the most points in the four classes.

AURICULAS.

There was a spirited contest in all the classes. For three named show varieties Mr. Arthur Gilbert was allocated the premier position with excellent examples of Shirley Hibberd, Mrs. Potts, and Mr. Phillips; second Mr. H. W. Miller with Mrs. Barrett, Abbe Lizst, and Geo. Lightbody; third, Mr. A. Freeman with Mrs. Potts, Isabel, and Prince Charlie. For three named alpine auriculas: First, Mr. H. W. Miller with A. F. Kew Agnes, and Geo. Cadbury; second, Mr. E. Saunders with Agnes (very fine), Majestic, and Phyllis Douglas; and third, Mr. A. Gilbert with Argus, Mrs. Gorton, and Miss Baker. For three seedling alpines: First, Mr. H. W. Miller with unnamed plants; second, Mr. J. Freeman; and for one show auricula, Mr. A. Gilbert was accorded the first prize with Alexis, a deep maroon self.

In the members' class Mr. A. W. Millar won with A. F. Kew in excellent form. In Class A, open to all-comers, Mr. E. Saunders occupied the first place with Geo. Rudd, Abraham Barker, and Geo. Lightbody; first prize a silver medal, given by the National Auricula Society (Midland Section). In Class B, three alpines, distinct, first prize a bronze medal, given by the foregoing society: First, Mr. T. W. Eglington with Duke of York, Thetis, and Mrs. Danks; second, Mr. E. Saunders with Mrs. Danks, Charmer, and Mrs. J. Douglas; third, Mr. G. Savory, with Argus, General Buller, and Angus; a Certificate of Merit was awarded to Mr. R. M. Eglington for Premier auricula Mrs. Danks.

At the conclusion of the judging Mr. Wm. W. Staples read out the names of the winners, and complimented them upon the excellence of their exhibits. The Chairman, in adverting to Mr. Stables' resignation of the secretaryship of the Sparkhill Horticultural Society, testified to his abilities and his courtesy to all concerned, including the exhibitors. Mr. Wm. Davison has succeeded Mr. Stables as the show secretary.

Asystasia scandens.—Under the name of Henfreya scandens, this stove climbing plant was introduced from Sierra Leone over sixty years ago. It is now seldom met with, though it is very pretty and distinct, and flowers for a long time. It is one of the few climbing acanthads, but might at a superficial glance be taken as belonging to the bignonia family. The flowers are trumpet-shaped, nearly a couple of inches long, and creamy-white in colour. It needs a fairly open potting compost, and the warmest part of the stove for its well doing.—W. T.

OBITUARY.

◆

MR. SIMON DE GRAAF.

A familiar figure in the great fraternity of Dutch bulb-growers has been removed by the death, on April 25, of Mr. Simon de Graaf, one of the two brothers who built up the extensive business at Leiden, under the title of De Graaf Brothers. In former years Mr. Simon de Graaf was a regular visitor to our spring exhibitions, and his genial, jolly manner won for him many friends. He was among the earliest of those who took up the work of raising new daffodils, and though he was in the field before there was a very big market for new varieties, he was clever enough to bide his time, and profited accordingly. The beautiful daffodil named Mdme. de Graaf he would not part with, except at a fairly high price, preferring to work up a good stock against the time that the public would want it. By the time the daffodil boom had arrived Mr. Simon de Graaf had thousands of bulbs of this lovely and refined variety. This shows the business instinct of the man.

THE LATE MR. S. A. DE GRAAF.

The association of the De Graaf family with horticulture dates back to the latter part of the seventeenth century, when the firm of Messrs. S. A. and H. de Graaf was well known as growers of medicinal plants at Lisse, Holland. In 1720 the firm started growing a few bulbs in addition to their other cultures. In 1762 the firm dissolved partnership, and S. A. de Graaf, the grandfather of the late Mr. Simon Adreanus de Graaf started a nursery in Leiden, where he soon became well known as an importer and grower of Cape bulbous plants. He was the first to flower Cape amaryllis in Europe. The deceased, who for so many years was head partner in the firm of Messrs. de Graaf Bros. besides being a large grower of tulips, made a speciality of the amaryllis family, and the culture of Cape bulbs. In 1872 he made his first journey to England, and it was the late Mr. Peter Barr, who accompanied him on a journey through England, Scotland, and Ireland, and introduced him to various horticultural friends. From that time dated the great friendship existing between the De Graaf and Barr families. Many fine new amaryllis were raised by the late S. A. de Graaf, and were purchased by English growers to improve their strains. From having grown a quantity of the late Mr. Peter Barr's daffodils in his nursery, Mr. de Graaf was caught by the daffodil fever, and soon set to work to raise new hybrids. All daffodil growers will remember the introduction of the beautiful pale trumpet daffodil Madame de Graaf, raised from Empress and Albicans. For this new daffodil the Messrs. de Graaf asked £10 a bulb, a sum then considered by many to be fabulous for such a bulb as the daffodil. It may be said that this initiated the still higher price to follow, such as twenty guineas for "Weardale Perfection," and £50 for "Peter Barr." Following the introduction of "Madame de Graaf" came "Glory of Leiden," "Madame Plemp," etc., by the same raiser. In recent years Mr. de Graaf's finest introductions were unquestionably the pure white daffodils Loveliness, Mrs. G. H. Barr, Mrs. Robert Sydenham, White Knight, Lady of the Snows, Maid of the Mist, etc. In 1900 Mr. S. A. de Graaf retired from active participation in the business, leaving the management in the hands of two of his sons, Jan and William H. de Graaf. He then took a long holiday, and made a journey to the East Indian Dutch Colonies to see his youngest son Dirk, who was then managing a large coffee plantation. For the last few years the deceased has been forced to live a very quiet life owing to an affection of the heart. He expired suddenly seated in his easy chair next to his wife on Tuesday morning, April 25, age 71 years. The funeral took place on Friday, April 28, at the Cemetery "Rynhof," a beautiful private estate just outside Leiden, which has recently been converted into a burial place. A large number of personal friends and acquaintances and employees were present. Among his friends was Mr. Peter Rudolph Barr, of the firm of Messrs. Barr and Sons, London. The floral tributes were many, and very beautiful, including large wreaths of narcissi, etc., from the employees, a wreath of pink roses from the Barr family, and a lovely wreath of orchids, lapagerias, stephanotis, etc., from Mr. Harry Veitch. The coffin was covered with sprays of narcissi Madame de Graaf and Glory of Leiden.

MR. WILLIAM GREENAWAY.

One of the oldest contributors to The Gardeners' Magazine has passed away in the person of Mr. William Greenaway, of Oxford. Deceased, who was 77 years of age, had been ailing for the past few months, but he was kept from his secretarial work barely a month, and his end came quite peacefully on Friday last. For a long period Mr. Greenaway was a regular contributor to this journal of reports and articles, and wrote accounts of the leading horticultural shows with an authority which came of an accurate knowledge of the subjects with which he dealt. Although making no pretence to higher education, he was so well versed in literature appertaining to horticulture that he was an encyclopædia in himself in respect to the names of plants and their merits, and the names to him were not meaningless titles, for he had taken pains to search out the origin of and reason for the family classification, and the Latin terms applied to the innumerable varieties of flowers, both common and rare. He was con amore with his subject: the commercial aspect of it was foreign to his nature, and he was ever ready to pass on to others any information he possessed. The chrysanthemum was his first love, and in the early days of the Oxfordshire Chrysanthemum Society he attained some local success in the culture of the queen of autumn flowers. His work, however, lay in praising the efforts of others. He always wrote appreciatively of merit, whether found in professional or amateur products. In Oxford, where he was a familiar figure, and was highly respected, he will be long remembered as a painstaking and efficient secretary of horticultural societies. For about forty years he was secretary to the Oxfordshire Chrysanthemum Society, and many years ago he succeeded the late Mr. Hobbs in the secretaryship of the Royal Oxfordshire Horticultural Society, whose summer show is the occasion of a grand floral display and a fashionable gathering on the Tuesday of Commemoration week. Four years ago, at the annual chrysanthemum show in Oxford, he was the recipient of a handsome testimonial in recognition of his services to that society and to horticulture generally. He was for some years hon. secretary of the Headington Horticultural Society.

The funeral on Monday was attended by a large and sympathetic gathering, and beautiful wreaths were sent by various societies and friends. H. G. L.

NEW PLANTS, ETC.

NARCISSUS.

Miss Willmott. — This bold handsome flower is the result of crossing poeticus ornatus with a Barri variety. The flowers are large, of fine form and substance, with pure white perianth segments, and a broad cup, yellow, edged with red. The variety obtained an A.M. in April, 1906. F.C.C., R.H.S., April 25. Messrs. Walter T. Ware, Lim., Bath

Queen of Hearts.—A lovely variety with a beautifully-formed creamy perianth, with all the segments very broad and rounded; the cup is rich orange. A.M., R.H.S., April 25. Mr. Christopher Bourne, Simpson, Bletchley.

Socrates. — Another fine addition to the poeticus group; the white perianth segments are very substantial, and the prominent eye or crown is orange with a dark red rim. A.M., R.H.S., April 25. Messrs. Barr and Sons, Covent Garden, W.C.

PRIMULA CHENIES' EXCELSIOR.

A very distinct primula, free-flowering, and almost hardy. The flowers are wine-red in colour of medium size, and borne in whorls after the manner of P. japonica. The new-comer is said to be the result of crossing P. japonica with P. obconica. A.M., R.H.S., April 25. Mr. Dickson, gardener to Adeline, Duchess of Bedford, Chenies.

AURICULA UMPIRE.

A showy alpine variety with large and rich red-brown flowers, the colour being enhanced by the circle of white paste. It is a strikingly effective variety. A.M., R.H.S., April 25. Mr. Jas. Douglas, Great Bookham.

RHODODENDRON PENGAER.

A beautiful hybrid between R. Thomsoni and R. Aucklandi. As shown, the truss carried a dozen blooms each about four inches across, and of a deep red hue shaded or tinted with rose. A.M., R.H.S., April 25. Sir John T. D. Llewelyn, Bart., Penllergaer, Swansea.

ODONTOGLOSSUM RAMOS-EDWARDI.

A very elegant and pretty hybrid between O. ramosissimum and O. Edwardi. The inflorescence is much branched, and the abundant flowers are somewhat larger than those of the first-named parent. The wavy segments are pale pink, freely marked with purple. A.M., R.H.S., April 25. Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking.

DIA-CATTLEYA SANDERÆ.

A remarkable hybrid between Cattleya Mendeli and Diacrium bicornutum. The flowers are of fair size and good shape, white, shaded with rose on the lip, and with a yellow disk. The influence of the Diacrium parent is most marked. . A.M., R.H.S., April 25. Messrs. Sander and Sons, St. Albans.

Lapageria rosea.—In order to succeed in its culture this lapageria needs a thoroughly prepared border for its reception, and, as a rule, for the first year or two after planting the rate of growth is by no means rapid. Such being the case, it is very essential that a good form be selected, for there is a great deal of individual variation to be found in the case of this lapageria, some being greatly superior to others. The best forms are propagated by means of layers, which take a long time to root, and, consequently, a fairly high price is asked for them. They are, however, much preferable to seedlings. The same remarks also hold good with regard to the white-flowered variety.—W. T.

ANSWERS TO CORRESPONDENTS.

SWEET PEA TRAINERS. — R. T. H., Yorks: The trainers you refer to may be used with every prospect of success. Plant the sweet peas inside the lower ring, and train the plants through the lower meshes, and give them a few ties on the outside. With this little assistance to begin with the plants will need no further care beyond an occasional tie to keep an extra strong growth in place. See also reply to "F. A. M.." on p. 332, in our issue of April 29.

FIBRE FOR ORCHIDS.—E. D. B., Chester: The difficulty of securing good peat for orchids becomes greater each year, especially in some districts, but a very good substitute for fibrous peat is Osmunda fibre, and this material all the leading nurserymen and sundriesmen now stock. It is used in precisely the same way as fibrous peat, but, as shown in these columns so many times, the practice of adding broken oak and beech leaves to the fibre for many kinds of orchids is extending. You should regularly consult the notes on Orchid Culture in our "Work for the Week" columns.

ROYAL GEORGE PEACH. — G. R. C., Ely: The late Dr. Hogg was of opinion that the fine peach now so familiar to growers under the name of Royal George, was not so named originally. The original Royal George appears to have been raised by Mr. Oram, of Brompton Lane, some time previous to 1724; apparently it was a good peach, large, and handsome, but it did not unite readily with the stock, and so in time cultivators substituted another variety that would propagate freely and sustain the reputation of Royal George. The variety chosen was Millet's Mignonne, new about the same time, and introduced by Mr. Millet, of North End, Fulham, who was one of the first market growers to force crops under glass. Royal George, as we know it, has small flowers; Oram's Royal George had large flowers. The Barrington peach was raised early in the nineteenth century by a Mr. Barrington, of Burwood, Surrey.

ACÆNAS. — C. P., Frinton: There are about thirty species of Acæna, but only eight or nine of these are at all well known to cultivators. They are all of creeping habit and useful for the rock garden, where they flourish in fairly dry positions. The small, pinnate, toothed leaves are very attractive, while the spiny burr-like flower heads of A. microphylla are an additional attraction to that species. Propagation may be effected by seeds, division, or cuttings. The chief species are A. adscendens, with purple flower heads; A. microphylla, crimson spined heads; A. millefolia, with finely cut, pale-green leaves; A. myriophylla, very elegant leafage; A. pulchella, with bronzy leaves; A. sarmentosa, with quite silky-haired leaves; A. sericea, with long leaves and greenish flowers; and A. splendens, with its leaves clothed in whitish silky hairs.

HARDY SPLEENWORTS. — H. H. S., Cowes: Omitting the Lady Ferns or Athyriums, which are grouped botanically under the aspleniums, we still have a number of very interesting spleenworts that are quite hardy. The Maidenhair Spleenwort, A. adiantum-nigrum, does well in a moist, shady rockery; A. ceterach needs some shade, but does well in a fairly dry position when once established; it is a very pretty fern; A. fontanum and A. germanicum both need sheltered positions, and sandy loam and peat to grow in; A. marinum needs a warm moist spot, and always does well near the seaside. A. ruta-muraria and A. septentrionale do well on walls; while A. trichomanes in a moist shady rockery is a very delightful fern; it has several fine varieties. A. viride frequently succumbs to the wet of winter, hence a sheet of glass should be placed over it as soon as cold wet weather sets in.

"PINGO," Elliott's New Summer Shading. No HOT water, simply add COLD water, and apply. Of Seedsmen, price as ORIGINAL.—[Advt.]

NAMES OF PLANTS.

V. G. J., Faringdon.—1, Odontoglossum crispum; 2, O. excellens.

G. S. B., Axminster.—1, Funckia Sieboldi; 2, Chorezema Lowi; 3, Corydalis thalictrifolia.

J. J., Haverfordwest.—1, Asplenium Fabianum; 2, Nephrodium molle; 3, Selaginella cæsia.

W. H., Selby.—1, Spiræa arguta; 2, Erica mediterranea; 3, Muscari conicum Heavenly Blue: 4, Prunus incana.

A. F. S., Dorking.—1, Primula rosea: 2, Daphne Cneorum; 3, Parottia jacquimontiana: 4, Berberis stenophylla.

L. D., Waterford.—1, Prunus serrulate fl.-pl.; 2, Calceolaria Burbidgei; 3, Pelargonium Clorinda; 4, Allium neapolitanum; 5, Dendrobium Parishi.

P. F., Coventry.—1, Amelanchier canadensis; 2, Cestrum aurantiacum; 3, Callistemon salignus; 4, Forsythia suspensa; 5, Azara microphylla; 6, Prunus triloba; 7, Magnolia conspicua.

C. C. J., Teignmouth.—1, Clematis montana; 2, C. indivisa lobata; 3, Erica Veitchi; 4, Doronicum excelsum; 5, Ribes sanguinea alba; 6, Cytisus albus; 7, probably Magnolia stellata, flower bady damaged; 8, Muscari botryoides alba; 9, Tulipa Clusiana.

TRADE NOTES.

From Messrs. Hayward-Tyler and Co., Lim., of 99, Queen Victoria Street, London we have received a copy of their new catalogue of spraying and lime-washing machines, which is well deserving the attention of all who are engaged in fruit culture. The catalogue contains descriptions and illustrations of a large number of spraying and lime-washing machines, ranging from light sprayers worked by the hand to powerful engines worked by a six-horse-power motor, and capable of supplying thirty branches, each fitted with a nozzle, at a pressure of 60lb. We observe that the firm supply spraying nozzles in sufficient variety to enable operators to use a nozzle adapted to the special work in hand. They also supply in an inexpensive form spraying pumps that can be readily fitted to water barrels. A spraying calendar and a list of washes add much to the value of the catalogue.

GARDENING ENGAGEMENTS.

Mr. H. Cheal, lately with Messrs. McBean, of Cooksbridge, has been engaged by Mr. E. V. Low as sole representative and traveller.

Mr. George Pierce, for the past seven years gardener to J. W. Summers, Esq., M.P., Cam-yr-Alyn, Rossett, has removed with his employer to Emral Park, Bangor-on-Dee, Wrexham.

FORTHCOMING ENGAGEMENTS.

[The Editor will be greatly obliged if Secretaries of Societies will send schedules and dates of exhibitions to him, at Endsleigh, Priory Park, Kew, Surrey.]

MONDAY, May 8.—United Horticultural Benefit and Provident Society.

TUESDAY, May 9.—Royal Horticultural Society; Committees meet at 12 o'clock; Lecture at 3 p.m. by Mons. H. Correvon, on "Alpine Gardens"; Scientific Committee at 4 o'clock.

Horticultural Club: House Dinner, at 6 p.m., followed by a lecture by Mr. T. Ernest Waltham, entitled, "Glimpses of Morocco and the Canary Isles."

WEDNESDAY, May 10.—Royal International Horticultural Exhibition, 1912: Meeting at the Mansion House, the Lord Mayor presiding, for the purpose of promoting the success of this exhibition. Chair will be taken at 3 p.m.

THURSDAY May 11.—British Gardeners' Association, London Branch.

THURSDAY, May 18.—National Sweet Pea Society: Special General Meeting at the Hotel Windsor, Westminster, 2.30 p.m.

SCHEDULES RECEIVED.

NEWMARKET HORTICULTURAL SOCIETY.—Seventeenth annual show will be held at Heath Lodge Paddocks on July 6. The schedule extends to 220 classes.

GRESFORD ROSE SOCIETY.—This society will hold its show in the Vicarage Grounds, on July 14.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches. Inside and Out; Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushrooms, ridge or flat; Kitchen, Lawn, Flower Garden. Special Prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (Head of two or three) seeks SITUATION; 12 years' good practical experience; age 2[illegible]; married when suited; well recommended. Apply E. WALLIS, The Gardens, Maristow, Roborough, South Devon.

GARDENER (Head Working), married, no family; age 36; life experience in all branches, Inside and Out; excellent references; Wife dairy, or house, if required. A., 27, Effingham Road, Reigate, Surrey.

GARDENER (Head working or Single-handed); married, no family; life experience in all branches Inside and Out, good references. GARDENER, 36, Clarence Place, Gravesend, Kent.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Closes Hall, Gisburn, Clitheroe.

GARDENER (Head working), where two or three are kept; thoroughly experienced, Inside and Out. Early and late forcing, gained in good establishments. Can be highly recommended. age 28. G. SIMS, Junction Road, Cowley, Oxford.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working, where three or more are kept).—Mr. LAST, The Gardens, Homewood, Chislehurst, Kent, can with every confidence recommend his Foreman, W. WAITE, as above; 13 years' experience, gained in good establishments; five years present situation. Married when suited.

GARDENER (Head Working).—Mr. F. BERRILL, of Hall Close, Kettering, wishes to recommend FRANK DAINTY, who is a thoroughly capable Gardener, with life experience Inside and Out; 8 years in present situation; age 30; married, no children. DAINTY, Hall Close, Kettering.

GARDENER (Head working), age 33, married, desires RE-ENGAGEMENT; 19 years' practical experience gained in good establishments; excellent references. WM. GIBSON, 128, Lansdowne Road, Leicester.

GARDENER (Head Working).—Mr. GOULD, Shernfold Park, Frant, Sussex, highly recommends his Foreman, A. DAY, as above; thorough practical experience Inside and Out; excellent references; age 30.

J. D. BOTTERELL, Esq., J.P., Colne Park, Essex, recommends his Gardener (Second) as HEAD of two or more; 17 years' all-round experience; married, age 4[illegible], one child age five; can cricket. H. BACON, as above.

GARDENER (Single-handed); little or no glass; 10 years' experience in present place; single; age 28. W. REEKS, 89, Amwell Street, Hoddesdon, Herts.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

MR. SALTER, The Gardens, Avenue House, Church End, Finchley, highly recommends W. BICKER as GARDENER (Single-handed, or with help); experienced Inside and Out; at present in his employ; age 28; Eastern Counties preferred.

GARDENER (Single-handed or Under) seeks SITUATION; age 23; single; Nursery and other experience; good references. Apply A. HILL, Bardney Road, Wragby, Lincs.

GARDENER (Single-handed or with help), experienced Inside and Out; age 30; married, no family; good refs. H. J. C., 64, St. Mary's Road, Reigate.

GARDENER (Single-handed or otherwise); experienced Inside and Out; Vines, Fruit, Flowers, Vegetables; 10 years' excellent reference; abstainer; married when suited; disengaged. C. KIBBLEWHITE, Lyndhurst Lodge, The Grove, Slough, Bucks.

CHARGE HAND on Pleasure Grounds, or as GARDENER (Single-handed); well recommended; 4 years present place; disengaged when suited. H. CONNETT, Marsh Cottage, Sidmouth.

FOREMAN (Inside or General), would take HEAD place where four or more are kept; age 26; 11 years' practical experience in all branches, including Fruits, Orchids, Carnations, Stove, and Greenhouse Plants, etc., House and Table Decoration, R.H.S. certificate, disengaged when suited; England preferred. L. D. DREDGE, Dupplin Castle Gardens, Perth.

FOREMAN (Inside) in good establishment; life experience in all branches; House and Table Decorating; can be well recommended; age 27; three years as Foreman. WM. RANSOM, Easton Grey Gardens, Malmesbury, Wilts.

GARDENER (Second, Inside and Out), where three or four are kept; 9 years' experience; well recommended; age 23. COOK, Ivy Cottage, Scotsbridge, Croxley Green, Herts.

GARDENER (where one more kept); 15 years' practical experience Inside and Out. Essex preferred. Age 33, single; disengaged. R. W., 32, Forest Road, Loughton, Essex.

MR. DARE, Head Gardener to Captain Lynch Staunton, can highly recommend W. ALFORD to any Gardener as JOURNEYMAN, for Inside and Out, or Inside; strong, and good worker; 4½ years' experience; age 20. W. ALFORD, Waterlooville, nr. Cosham, Hants.

J. HARDING, Coneygar Gardens, Bridport, highly recommends W. BARTLETT, age 20, here three years, as JOURNEYMAN (Second, Inside or Inside and Out).—Apply, W. BARTLETT, Coneygar Gardens, Bridport, Dorset.

MR. H. DUKE, Felixstowe Lodge, Suffolk, will be pleased to recommend JOURNEYMAN (Inside or Inside and Out); age 22; past three years here; abstainer.

YOUNG MAN seeks SITUATION as JOURNEYMAN, under a Foreman (Inside or Inside and Out); eight years' experience; excellent characters; age 22. ALBERT BROADLEY, Dunnington Hall, York.

GARDENER (Under) seeks SITUATION, where 3 or 4 are kept, well up Inside and Out; 7 years' experience; age 21; excellent references. H. F., Ladds House, Sandhills, Witley, Surrey.

GARDENER (Under); four years' excellent character; Vegetables, Melons, Cucumbers, Tomatoes, Flowers, Herbaceous Borders; Inside and Out; Bothy preferred; age 24. W. CRACKNELL, Feltwell, Norfolk.

GERMAN GARDENER; many years' experience in France, Belgium, and Germany, seeks SITUATION in high-class English Nursery; can speak a little English. HENR. BODENBENDER, care of Mrs. Moorien, Albury Nursery, College Road, Cheshunt.

MR. CHAS. COATES, Manor Park Gardens, Potton, Beds, can with the utmost confidence thoroughly recommend a steady, strong Man for good garden as Carter, Kitchen Garden, etc.; excellent references; abstainer; non-smoker; age 23.

ORCHID GROWER requires SITUATION to take charge of collection or small place where Orchids speciality; experience Burford Lodge, etc.; excellent references. Apply S. BURROUGH, Royal Gardens, Sandringham.

IMPROVER. — Rev. MANLEY POWER, Rector of Hagley, strongly recommends Youth, 18 years, who has been in his gardens for three years. E. HOPCUTT, Hagley, near Stourbridge.

COWMAN-GARDENER seeks SITUATION on Gentleman's Estate; age 24; single; with good references. Apply P. TURNER, Florance Terrace, or 63, Courtney Road, Woking, Surrey.

SITUATION required under a Gardener by a willing Lad; age 15. FRANK LANE, 125, Keslake Road, Kensal Rise, London, N.W.

YOUNG MAN seeks SITUATION in good garden; 5 years' experience, Inside and Out; excellent reference. Apply B. C., 1, Ivanhoe Terrace, Broadwater, Worthing, Sussex.

YOUNG MAN (22) seeks SITUATION, Inside and Out; 6 years' experience; 3½ years in present situation; can be well recommended. Bothy preferred. J. ACRES, Blakes Cottages, Long Ditton, Surrey.

YOUNG MAN (22) requires SITUATION as GARDENER (Under) or IMPROVER in gentleman's gardens; 2½ years' experience; good references; disengaged. S. TALBOT, Barrow, Bury St. Edmunds.

Situations Vacant.

WANTED, YOUNG MAN who understands the growth of all kinds bedding plants, to assist his employer, and be able to do jobbing at times; wages 23s. D., Nursery, Breakspears Road, Brockley.

WANTED, YOUNG MAN as THIRD, for Inside and Out. Must be good stoker, and to take turn with Sunday duty. Wages 16s. 6d. Apply, with reference, F. FLATMAN, Sugnall Hall Gardens, Eccleshall, Stafford.

WANTED, TWO YOUNG MEN for lawns, Herbaceous Borders; little knowledge of glass; take Sunday duties. Wages 16s.; bothy, etc. Apply J. HILL, Kidbrooke Park Gardens, Forest Row, Sussex.

WANTED, at Bognor, Sussex, a GARDENER. Wages, 21s. a week with cottage. For particulars apply to the CLERK, 30, Threadneedle Street, London, E.C.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For MAY 13, 1911.

Please Repeat my Advertisement.

Name..

Address..

....

Date..................................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

MARKETS.

◆

COVENT GARDEN.

Flowers.

Daffodils still arrive in quantity, and tulips and hyacinths are abundant; carnations and arums are good and gardenias sell freely.

		s.	d.	s.	d.
Azaleas, white	per doz. bun.	3	0	4	0
Adiantum cuneatum	per doz. bun.	4	0	6	0
Anemone fulgens	per doz. bun.	1	6	2	0
Anemones	per doz. bun.	1	0	1	3
Arums	per doz.	2	0	3	6
Asparagus	per doz. bun.	10	0	15	0
Cattleyas	per doz.	8	0	12	0
Carnations	per doz.	1	6	3	6
,,	per doz. bun.	8	0	12	0
Croton leaves	per bun.	1	0	2	6
Cypripediums	per doz. blooms	2	6	3	0
Freesia alba	per doz. bun.	1	0	1	6
French fern	per doz. bun.	2	6	4	0
Gardenias	per doz.	2	0	3	0
Gypsophila elegans	per doz. bun.	4	0	4	0
Iris, Spanish	per doz. bun.	10	0	12	0
Lilac	per bun.	2	6	4	0
Lilium auratum	per bun.	3	0	4	0
,, speciosum	per bun.	2	0	2	6
,, longiflorum	per bun.	2	6	3	6
Lily of the Valley	per doz. bun.	6	0	12	0
Marguerites	per doz. bun.	1	6	3	0
Myosotis	per doz. bun.	2	6	3	6

Fruits.

Business is a trifle slack at present; supplies are good for the season.

		s.	d.	s.	d.
Apples, Californian	per case	9	0	10	0
,, Australian	per case	10	0	20	0
,, Oregon Newtowns	per box	10	0	16	0
,, Tasmanian	per case	10	0	18	0
,, Canadian	per barrel	23	0	30	0
Bananas	per bun.	6	0	12	6
Chestnuts	per bag	15	0	25	0
Cranberries	per case	9	0	10	6
Grapes, English	per lb.	1	9	4	0
,, Belgian	per lb.	2	0	2	6
,, Cape	per case	4	0	11	0
,, Almeria	per barrel	15	0	25	0
Lemons	per case	7	6	18	0
Melons	each	1	0	3	6
Nectarines, Cape	per case	8	0	12	0

CONTENTS.

PAGE
Androsaces ... 344
Around the Rock Garden ... 345
Clandon Park ... 341
Evesham in April ... 340
Exhibitions and Meetings ... 349
Florists' Pentstemons ... 347
Hybrid Rugosa Roses ... 340
Notes from Kew ... 343
Notes of the Week ... 335
Out-of-Door Peach Culture ... 339
Perpetual-flowering Carnation Society ... 338
Roses for the Garden ... 337
The Cistuses ... 346
The Hollies ... 339
Work for the Week ... 348

ILLUSTRATIONS.

Portrait of Mr. R. F. Hanson, 335; The Himalayan Holly, 339; The Sunken Garden at Clandon Park, 341; Group of Tree Ferns at Clandon Park, 342; View in the Iris Garden at Clandon Park, 343; Primula denticulata in the Primula Dell at Clandon Park, 344; First Prize Twelve Long Trumpet Daffodils, 345; First Prize Collection of Twenty-four Daffodils, 346; First Prize Collection of New Daffodils, 347.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.
Height above sea-level, 150 feet.

DATE. 1911. APRIL 23 TO APRIL 29.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
April 23—Sunday	1 54	54	51	60	49
,, 24—Monday	11 0	53	47	63	43
,, 25—Tuesday	1 24	50	45	56	43
,, 26—Wednesday	8 36	49	47	58	49
,, 27—Thursday	2 42	49	49	57	42
,, 28—Friday	6 18	51	47	59	48
,, 29—Saturday	3 54	47	44	52	42
Means	(total) 35 48	50	47	58	45

DATE. 1911. APRIL 23 TO APRIL 29.	RAIN.	TEMPERATURE OF THE SOIL AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg.
April 23—Sunday	—	50	47	45	46
,, 24—Monday	—	49	48	46	38
,, 25 Tuesday	·02	50	48	46	37
,, 26—Wednesday	·14	50	49	47	46
,, 27—Thursday	·02	49	49	47	36
,, 28—Friday	·22	50	48	47	44
,, 29—Saturday	·74	48	48	47	37
Means	(total) ·74	49	48	46	40

A thunder storm took place at 1 p.m. on Saturday, 29th.

MANY YEARS REPUTATION.
EUREKA WEED KILLER
LASTING RESULTS—NO NEW EXPERIMENT.
1/9 TIN FOR 25 GALLONS | 6/- TIN FOR 100 GALLONS | LARGER SIZES AT LOWER RATES
SOLD BY AGENTS. MANUFACTURERS: TOMLINSON & HAYWARD LTD LINCOLN.
IF ANY DIFFICULTY SENT DIRECT—PAID

GARDEN ETC PESTS
EUREKATINE FUMIGANT
EUREKA INSECT SPRAY
EUREKA SOIL FUME
EUREKA LAWN SAND
AND OTHER USEFUL ARTICLES MANUFACTURED BY
TOMLINSON & HAYWARD LTD LINCOLN.
MAKERS OF THE WELL KNOWN "EUREKA" WEED KILLER.

TRUST THE FIRM BEHIND THE BOOT!
OVER 100 YEARS REPUTATION IS BEHIND EVERY PAIR.
Why Not Try a Pair of
NORWELL'S
"PERTH BOOTS"
THIS SPRING?

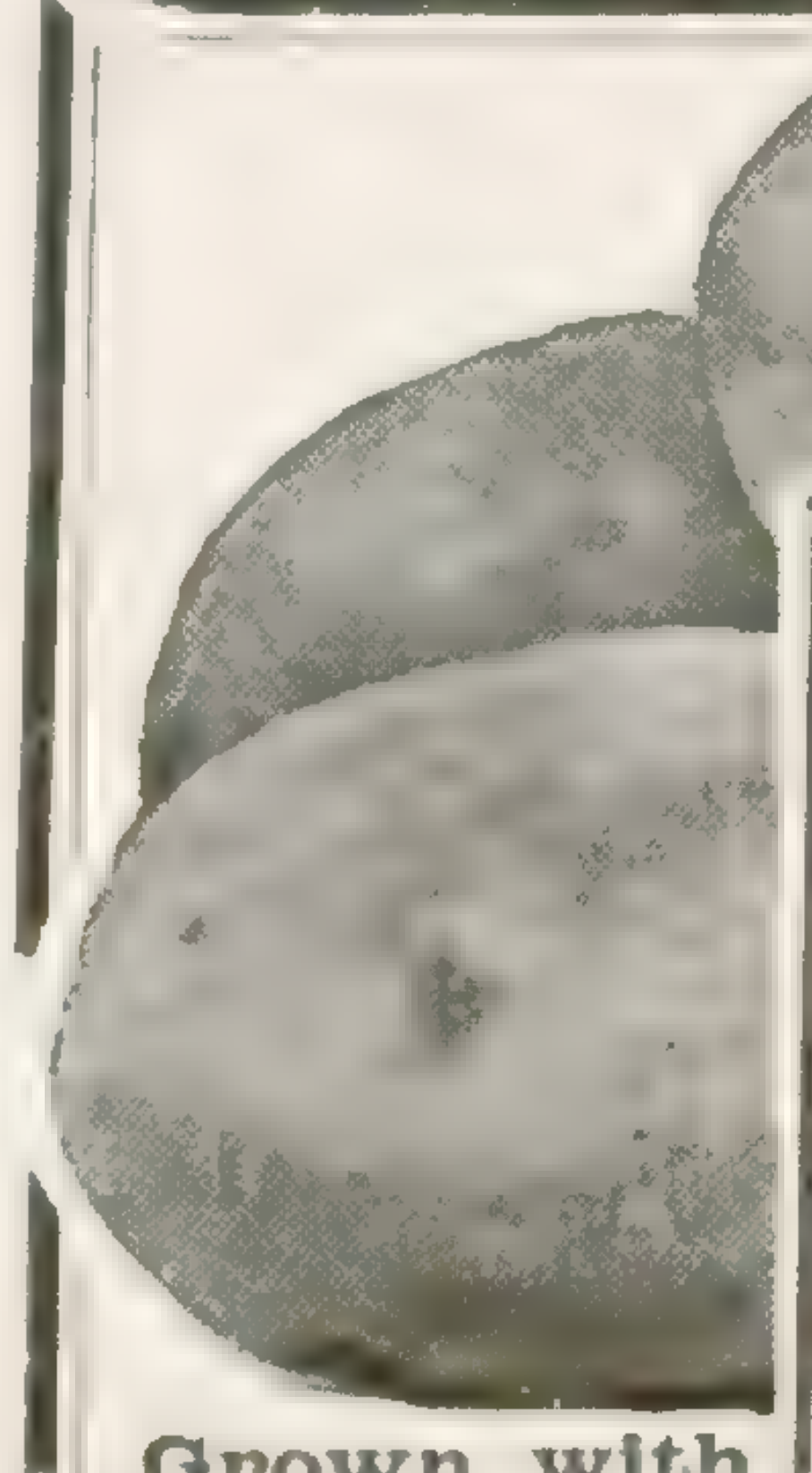
The right thing to do is to write for our Illustrated Free Catalogue to-day. Just drop us a Post Card, and by return you will get the description and details of the Best Value in footwear for gardeners and all those exposed to tearing country wear. We are specialists, and have the greatest confidence in our power to fit and please you. To-day, and every day, we are supplying families with footwear whose great grandfathers and mothers wore our celebrated "Perth Boots."

The Perth Gardener Boot - 10/9 FOR STRONG WEAR. | The Perth Calf Skin Gardener Boot 11/9 FOR GREENHOUSE WEAR.

SEE PAGE 10 OF OUR LIST FOR SPECIAL BOOTS FOR GARDENERS.

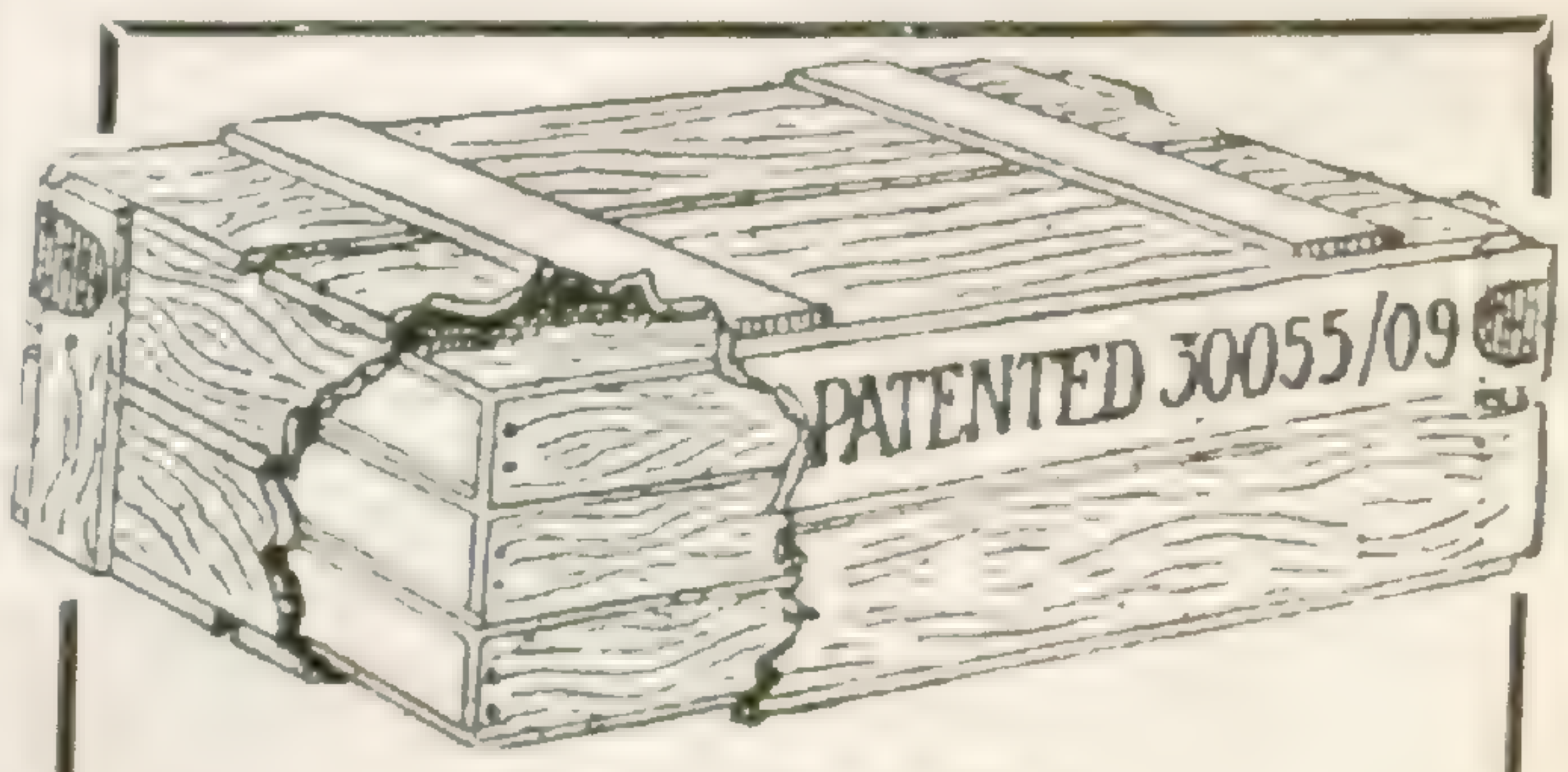
NORWELL'S Boot Factory, PERTH, N.B. ESTABLISHED OVER 100 YEARS.

Dr. J. COLLIS BROWNE'S
THE ORIGINAL AND ONLY GENUINE
Chlorodyne
ADMITTED BY THE PROFESSION TO BE THE MOST VALUABLE REMEDY EVER DISCOVERED
The Best Remedy known for
COUGHS, COLDS,
ASTHMA, BRONCHITIS.
Cuts short all attacks of SPASMS, HYSTERIA, and PALPITATION.
The only Palliative in NEURALGIA, TOOTHACHE, GOUT, RHEUMATISM.
Acts like a Charm in DIARRHŒA and DYSENTERY.
Refuse imitations and insist on having
Dr. J. COLLIS BROWNE'S Chlorodyne.
Convincing Medical Testimony with each bottle.
Of all Chemists, 1/1½, 2/9, 4/6.



Grown with Vaporite.

Vaporite is the original invention for destroying Wireworms, Leatherjackets, Slugs, etc. By their destruction the fullest development of your plants is ensured. Sold by all Seedsmen in tins from 6d. upwards or in casks
VAPORITE
The Original Soil Insecticide.
Illustrated Booklet No. 45 free from
VAPORITE-STRAWSON CO., Ltd.
(Dept. E),
Spencer House, South Pl., E.C.



Use DAY'S
Fruit Trays & Crates
No more damaged fruit. If properly packed it is impossible for it to get damaged.
The trays hold about 3lb. of Strawberries, Gooseberries, or Cherries, and are non-returnable, price 2d. each. The Crates are 1s. 6d. each, and may be returned to growers for renewals. C.W.O.
They are strongly made, and growers speak very highly of them.
R. D'F. DAY, THE NURSERY, SUTTON SCOTNEY, HANTS.

THOMSON'S Celebrated
VINE PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES
UNEQUALLED FOR ALL PURPOSES
RESULT OF MANY YEARS
PRACTICAL EXPERIENCE
SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE
Wm Thomson & Sons Ltd Clovenfords

W. RICHARDSON & CO.,

MANUFACTURERS OF ALL KINDS OF

HORTICULTURAL BUILDINGS. Also HEATING ENGINEERS.

Recent Contracts for Horticultural Buildings and Heating include the following :—

H. M. Commissioners of Public Works, Royal Hospital, Dublin.
H. M. Office of Works, New Head Post Office, Newcastle-on-Tyne.
His Grace The Duke of Grafton, Wakefield Lodge, Stoney Stratford.
The Rt. Hon. The Earl of Donoughmore, Knocklofty, Clonmel, Ireland.
The Rt. Hon. The Earl of Durham, Lambton Castle, Durham.
The Rt. Hon. The Earl of Listowel, Convamore, Ballyhooly, Co. Cork.
The Rt. Hon. The Earl of Scarborough, Lumley Castle, Co. Durham.
The Rt. Hon. Lord Barnard, Raby Castle, Barnard Castle.
The Rt. Hon. Lord Glanusk, Glanusk Park, Crickhowell.
The Rt. Hon. Jonathan Hogg, Stratford, Rathgar, Co. Dublin.
The Rt. Hon. Lord Ravensworth, Eslington Park, Whittingham, [Northumberland.
W. A. Whitehead, Esq., Langley, Baildon, Yorkshire.
The Hon. Robert James, St. Nicholas, Richmond, Yorks.
His Excellency Monsieur Tzokow, 21, Queen's Gate, London, S.W.
Lady Palmer, Grinkle Park, Loftus-in-Cleveland.
Sir William Eden, Bart., Windlesham Hall, Ferryhill.
Sir Lindsay Wood, Bart., The Hermitage, Chester-le-Street.
Sir Reginald Graham, Bart., Norton Conyers, Melmerby.
The Royal Horticultural Society, Wisley, Ripley, Surrey.
Colonel Napier Clavering, Axwell Park, Northumberland.
Colonel Scott, Penmaenucha, Dolgelly.
Major Stobart, Spennithorne House, Spennithorne, Leyburn.
Captain Freeman, Coulby Hall, Ormesby.
Captain Wainman, Otterington Hall, Northallerton.
Mrs. Lloyd Jones, Vronhaul, Llandinam.
Hy. Mitcheson, Esq., Baxterley, Atherstone.
W. Warde Aldam, Esq., Frickley Hall, Doncaster.
E. G. Wheler, Esq., Claverdon Leys, Warwick.
P. H. Ashworth, Esq., Horsley Hall, Gresford.
The Rev. James Farmer, Lucan House, Ripon.
Mrs. Jones, Glandenys, Lampeter.
R. A. England, Esq., Englethwaite Hall, near Carlisle.
The Rev. W. Ingham, The Vicarage, Old Malton, Yorkshire.
James Maunsell, Esq., Patrickswell, Co. Limerick, Ireland.
The Rev. J. Murray Dixon, Swithland Rectory, near Loughborough.
David Davies, Esq., M.P., Llandinam, Montgomeryshire.
David Richardson, Esq., Wheelbirks, Stocksfield-on-Tyne.
C. Lingford, Esq., Laneelands, Cotherstone.
E. W. Parker, Esq., Skirwith Abbey, Penrith.
C. L. B. Robinson, Esq., Brettanby Manor, near Darlington.
G. P. Roddam, Esq., Newtown, Stanhope.
H. Costobadie, Esq., Overdale, Mottram, Manchester.
I. J. Dewhurst, Esq., Whinmoor Lodge, Seacroft, Leeds.
J. Rossiter Hoyle, Esq., Grange Cliffe, Ecclesall, Sheffield.
W. Brown, Esq., Larne, Co. Antrim.
Mrs. Powell Price, Morganwg, Brecon.
W. J. Sharp, Esq., Bleasdale House, Silverdale, Carnforth.
F. Hartley, Esq., May Lodge, Bridlington.
J. A. Forster, Esq., Fernlands, Chertsey, Surrey.
W. Robson Hindmarsh, Esq., Ulleskelf.
J. W. Richardson, Esq., Sowerby Grange, Thirsk.
Hugh C. Fairfax Cholmeley, Esq., Brandsby Hall, Easingwold.
Harrison Benn, Esq., Holcombe Hall, Dawlish.
Miss Watt, Spott House, Dunbar.
W. Loudin MacNeill, Esq., Shennanton, Kirkcowan, Wigtownshire.
W. H. St. Quintin, Esq., Scampston Hall, Rillington, Yorks.
St. Mary's Convent, Chiswick.
The John Copeland Hospital, Gainsborough.
Ackworth School, Pontefract.
Shaftesbury Theatre, Shaftesbury Avenue, London.
Durham Cathedral, Durham.

LONDON OFFICE :—Belgravia Chambers, Victoria Street, S.W.

TELEGRAMS { "Richardson," Darlington. / "Horticraft," London. NATIONAL TELEPHONE } 17 Darlington.

LOWEST PRICES FOR GARDEN FRAMES AND WOOD LATH BLINDS.

PLANS and ESTIMATES PREPARED FREE of COST.

Representatives sent to any part of the Kingdom to advise and take particulars.

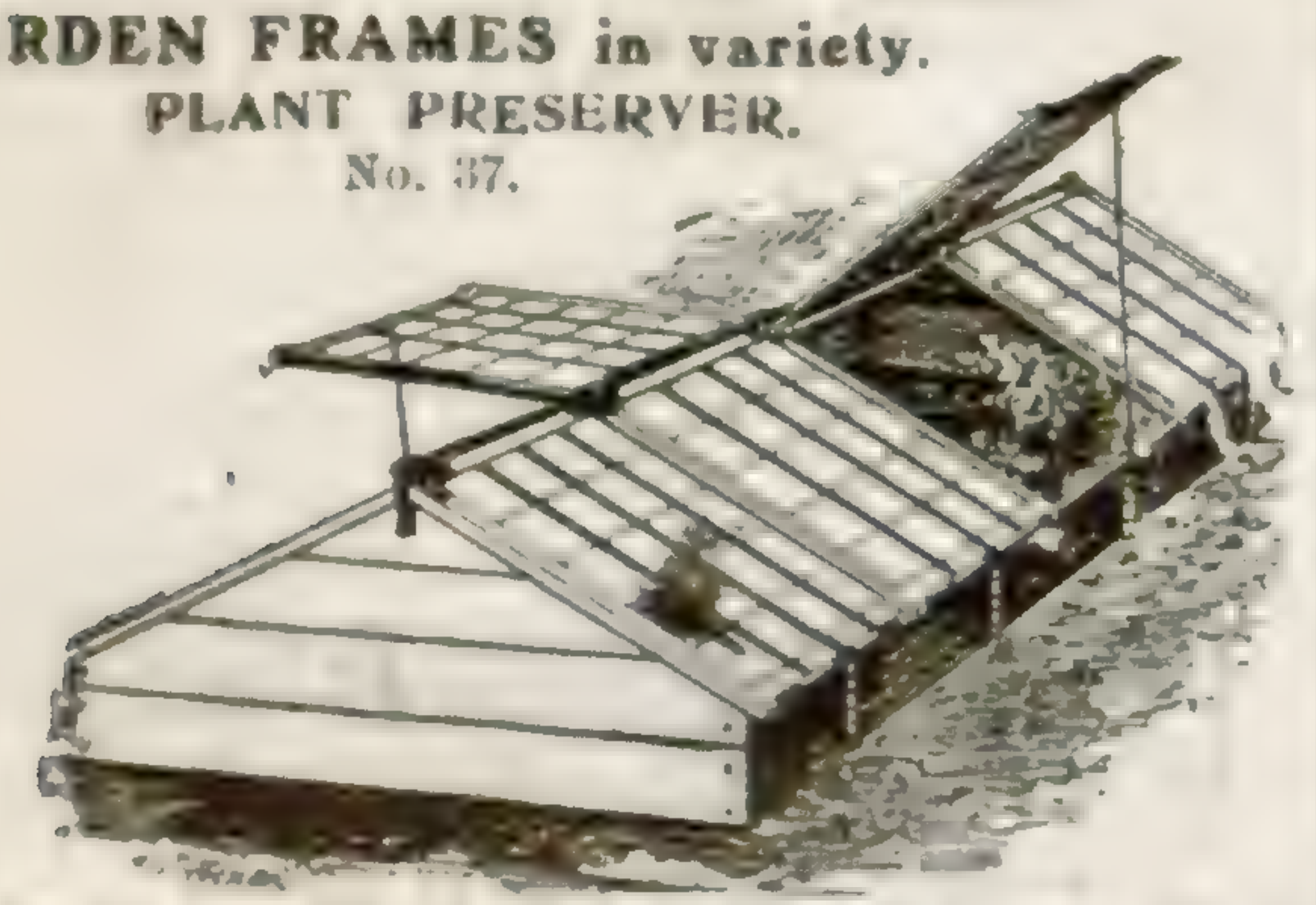
DARLINGTON.

WM. DUNCAN TUCKER & SONS, LTD.

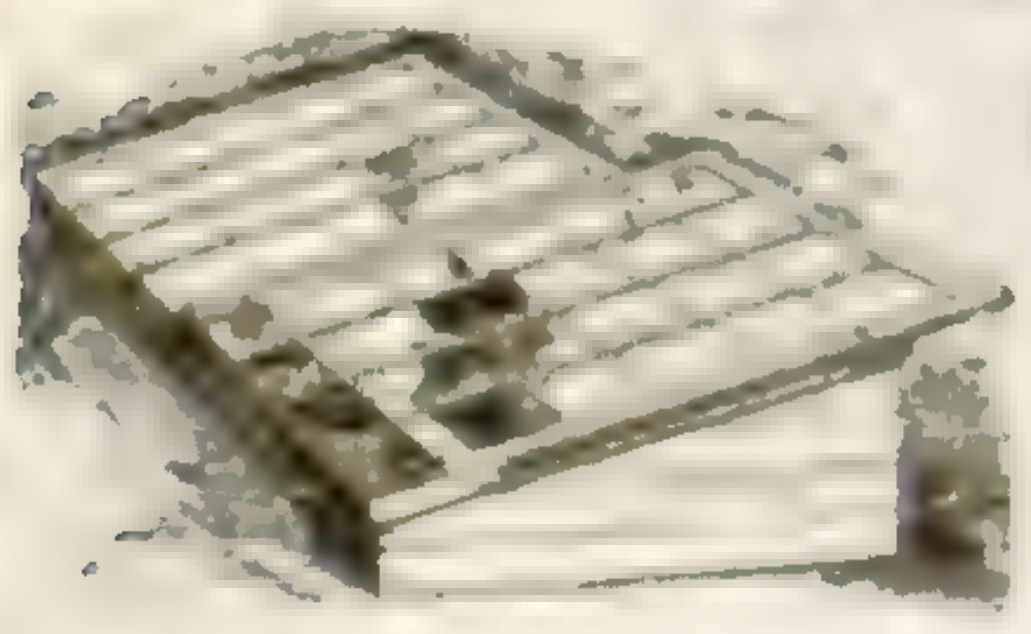
Horticultural Builders, 27, Cannon St., London, E.C.
Works: Tottenham.

GARDEN FRAMES in variety.

PLANT PRESERVER.
No. 37.



6ft. by 4ft.	£2 1 0	12ft. by 4ft.	£3 10 0
8ft. by 6ft.	3 17 0	16ft. by 6ft.	7 0 0



Melon & Cucumber Frame

No. 38.

6ft. by 4ft.	£1 14 0
8ft. by 6ft.	2 14 0
12ft. by 6ft.	3 14 0
16ft. by 6ft.	4 14 0

Carriage paid to most stations on orders of 40/- in value.
Please mention this paper.

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

Extracts from 35th annual collection of reports:—NATIVE GUANO for POTATOES, VEGETABLES, etc.

A. J. Beard, Erdington: "Potatoes, splendid, free from disease. Best I ever had."—H. Chester, Nantwich: "Best onion manure I ever used. Grand for onion fly."

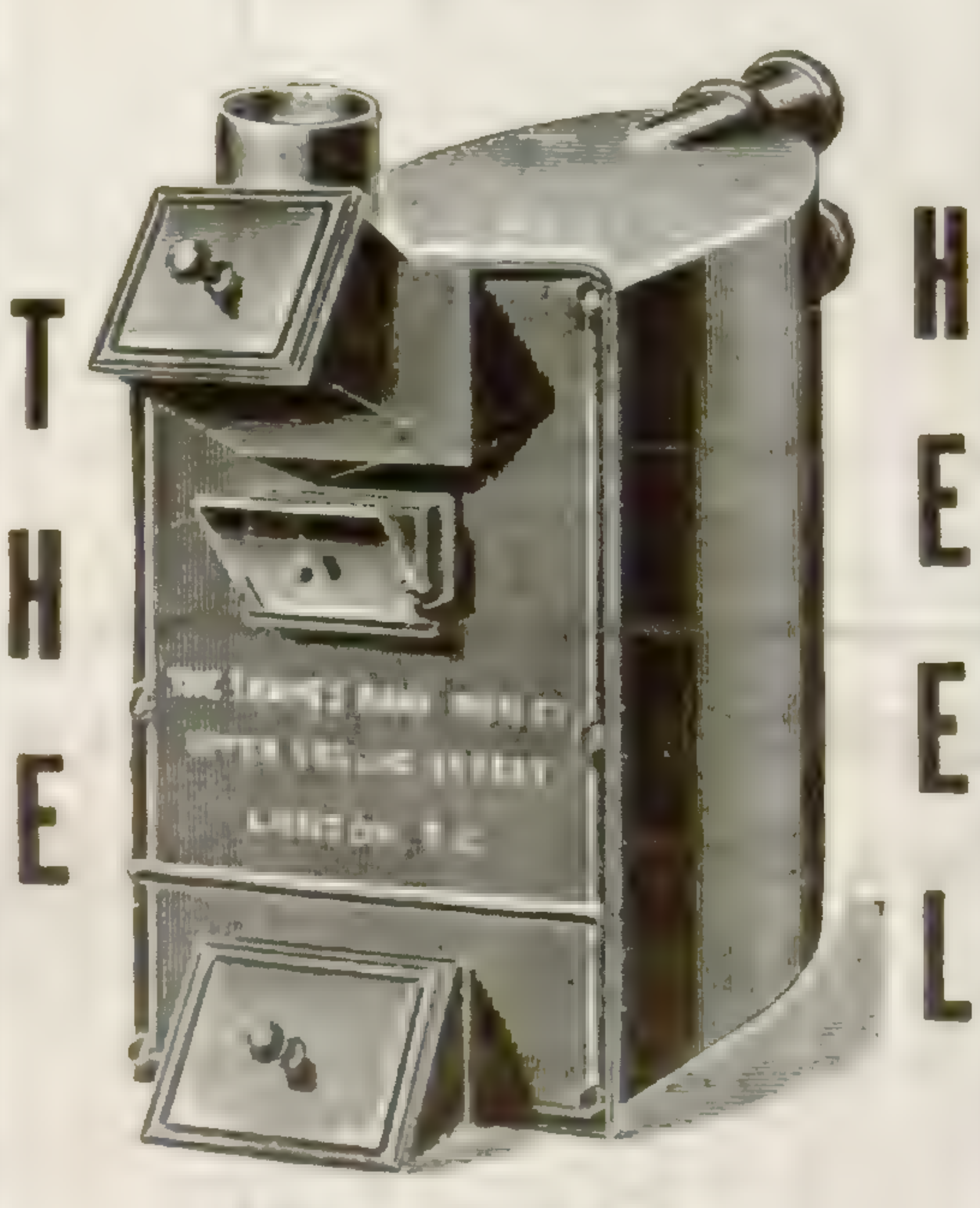
NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc. J. Cant, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. Frampton, Lichfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED**, 29, New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted.

'Phone: Hop. 763.

When next a Small Boiler you require

TRY



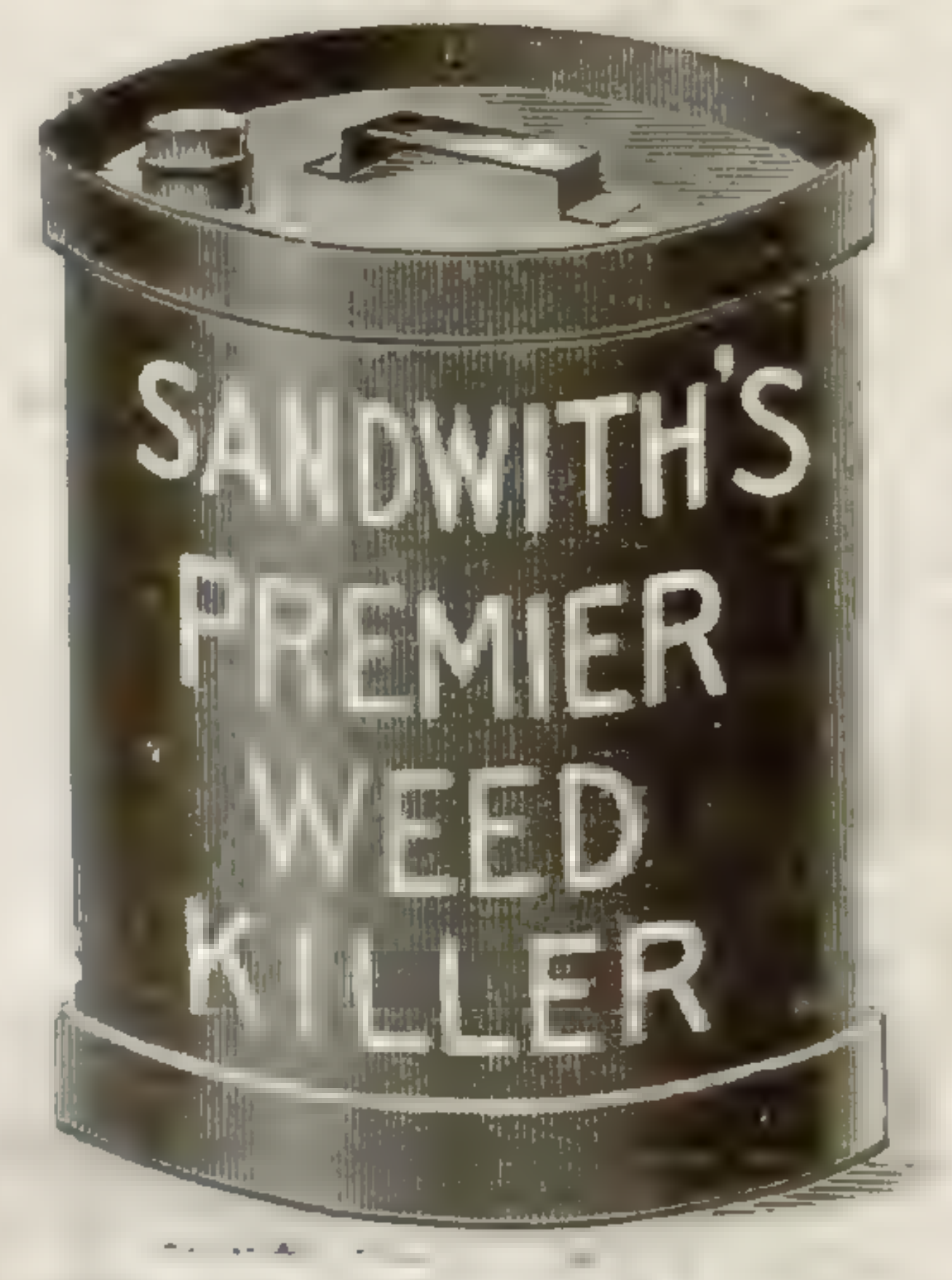
NONE TO BEAT IT.

THE THAMES BANK IRON CO.,

Upper Ground Street,
LONDON, S.E.

4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

THE FAVOURITE WEED KILLER.



As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for 6/-; drum, 2/-. 12 galls. for 16/-; drum, 6/-. 20 galls. for 26/8; drum, 10/-. 40 galls. for 50/-; drum, 20/-.

EITHER LIQUID OR POWDER.

Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,

The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

ONCE USED. ALWAYS USED.

The 'PATTISSON' LAWN BOOTS

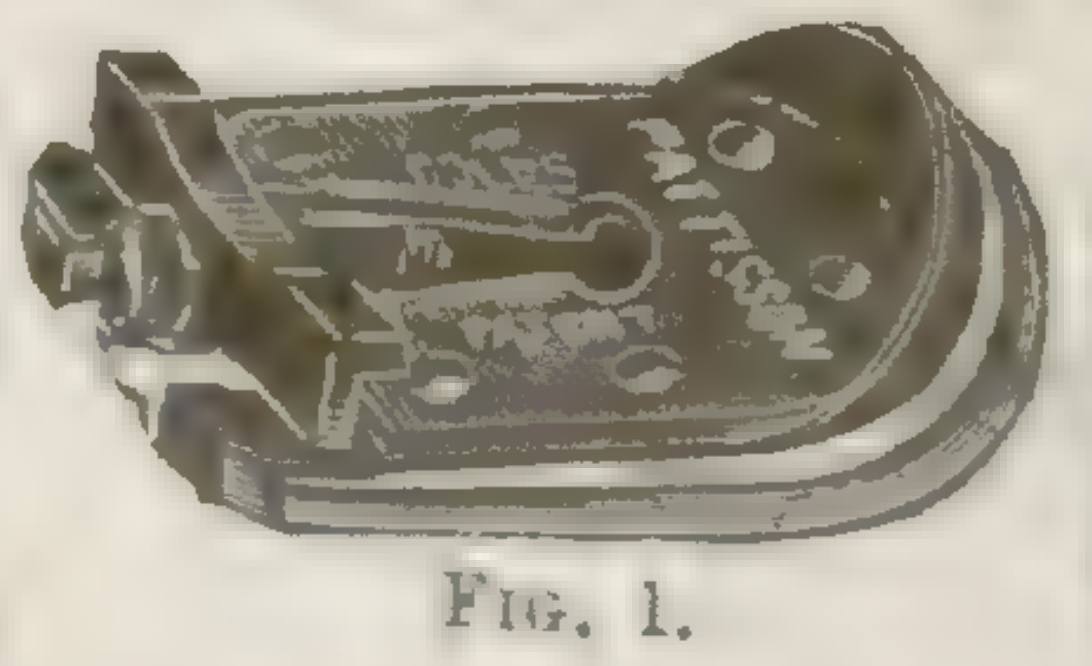


Fig. 1.

Simplest! Strongest! Most Economical!

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS.

Silver Medal—
Royal Horticultural Society.

Hundreds of Testimonials.

The Field says: **"As good as anything that could be devised."**

Illustrated Price List from—

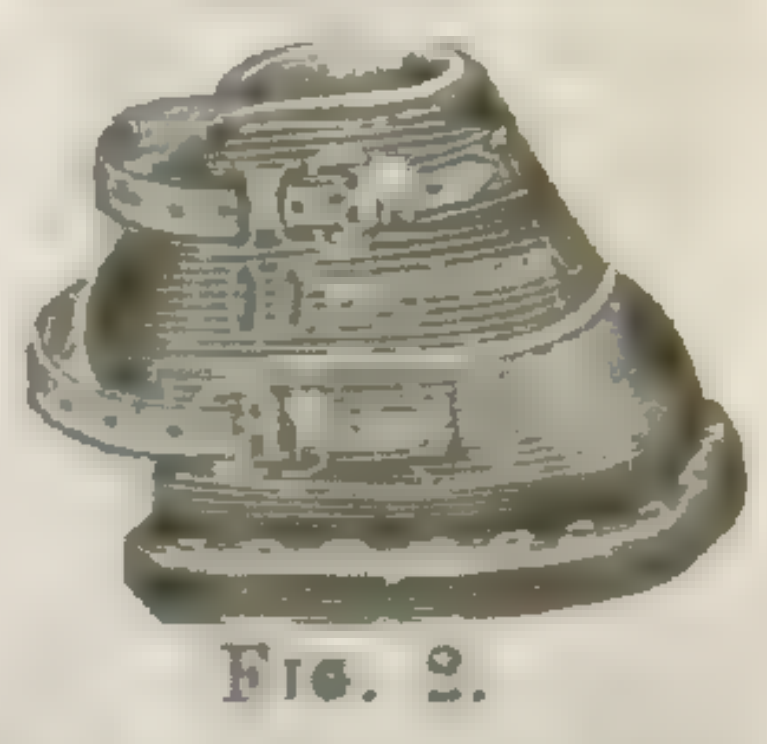


Fig. 2.

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM, S.W.

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 3,002. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.)

SATURDAY, MAY 13, 1911.

(10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S SEEDS FOR MAY and JUNE SOWING.—Finest strains of Antirrhinums, Aquilegias, Campanulas, Canterbury Bells, Calceolarias, Cinerarias, Delphiniums, Hollyhocks, Lupins, Pansies, Primulas, Stocks, Wallflowers, etc. Special list on application.. BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from

PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, S.W., is arranging this spring for a large selection of Blinds for Conservatories, Greenhouses, Private Houses, Verandahs, etc., and will be happy to send samples, prints, and prices on receipt of a Postcard. Telephone Call (201 Western), letter, or wire "Gray, Chelsea, London."

EXHIBITION PANSIES, VIOLAS, CARNATIONS, PHLOXES, and CHRYSANTHEMUMS.—12 Superb fancy Pansies, 3s.; newest and best, 5s. 12 Exhibition Violas, 2s. 6d.; newest and best, 4s. 12 Superb Carnations, 6s.; newest and best, 10s. 12 Yellow or white ground Picotees, 6s.; newest and best 8s. 12 Superb Phloxes, 4s.; very best, 6s. 12 Early-flowering Chrysanthemums, 2s. 6d.; newest and best, 4s. 12 Best bedding Violas, 2s.; 50 in 10 vars., 4s. 6d.; 100 in 10 or 20 vars., 8s.; all post free, except Carnations in pots, which are car. forward. Lists free. S. PYE, Bowgreave Nursery, Garstang.

OSMUNDA FOR ORCHIDS.

CONSIGNMENTS ARRIVE FORTNIGHTLY.

2s. 6d. per bushel; per bag, 8s. 6d.

SANDER AND SONS, ST. ALBANS.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.

H. BURNETT,
Carnation Specialist, Guernsey.

PERENNIALS, UNIQUE COLLECTION, including

ALPINES AND AQUATICS.

Also RARER SHRUBS, HIMALAYAN RHODODENDRONS, and Others.

Write for Catalogue. G. REUTHE, Keston, Kent.

DAHLIAS.

CACTUS, PÆONY, POMPONE, and SHOW, for GARDEN or EXHIBITION.

Prices and Catalogues free on application.

J. T. WEST, Tower Hill, Brentwood.

WEEKS'S DUPLEX UPRIGHT TUBULAR BOILERS, for full advertisement see page v.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-work, showing screens, wall panels, window surrounds, arches, arbors, etc., post free. BOULTON and PAUL, Ltd., Norwich.

BARNARDS LIMITED, Norwich.—Best House for Fencing, Espaliers, Pergolas, Fruit Enclosures, Iron and Wire Bordering; all descriptions of Training Fittings, Arches, Wire Netting, Stakes, Wire Lattice, Rollers, and all garden requisites. Now is the time to effect improvements in your garden. Catalogues free; inquiries invited.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint, 8s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

WEBBS' BEANS for Sowing Now.

New Exhibition Runner, 2/- per pint.
Selected Scarlet Runner, 1/3 per pint.
New Supreme Dwarf, 2/- per pint
Selected Canadian Wonder, 1/- pint.

WEBBS' WALLFLOWERS.

New Universal (mixed), 1/- per packet.
Canary Bird (golden-yellow), 1/- packet.
Kinver Favourite (blood red), 6d. packet.
Eastern Queen (salmon shaded), 1/- packet.
WEBB and SONS, The King's Seedsmen,
Wordsley, Stourbridge.

BUNYARD'S NEW CATALOGUES.

The following have been recently published, and contain all worthy new varieties. Post free on application.

BUNYARD'S
CLIMBING PLANTS in Pots, Illustrated.

BUNYARD'S
HERBACEOUS PLANTS, Illustrated.

BUNYARD'S
BEDDING PLANTS, Illustrated.

GEO. BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.

LAXTON'S FRUIT TREE, STRAWBERRY, SEED, ROSE, HERBACEOUS, TREE, BULB, and SMALL FRUIT CATALOGUES, with full illustrations and descriptions, gratis on application.

LAXTON BROTHERS, Bedford.

CABBAGE PLANTS, extra strong, Ellams, Mein's, Offenham, First and Best, Enfield, Battersea, 3s. 1,000, 12s. 6d. 5,000 lots; Drumheads, 2s. 6d.; Red Cabbage, Cos Lettuce, Tripoli Onion, 4s, 1,000, on rail; or 1s. 100, post free. List free. C. HIGHT, Cranleigh, Surrey.

ZONAL PELARGONIUMS.

Catalogue of New and Choicest Varieties

From V. SLADE, Zonal Specialist,
Staplegrove Nursery, Taunton.

POULTRY AND KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

RUSTIC SUMMER HOUSES, trellis-work, Fencing, Pergolas, Arches, Seats, Bridges, Log Cabins, Loggias, etc. Send for our new LOG CABIN and RUSTIC CATALOGUE (just published), sent post free. BOULTON and PAUL, Ltd., Norwich.

CLAY'S MANURES, CRUSHED BONES

(See page iv.)

CLAY'S FERTILIZER is UNSURPASSED for all Horticultural Purposes.

CLAY and SON, Stratford, E.

NOTICE. — Always use PORTER'S IMPROVED COIL STAKES for Carnations, no tying required; last a lifetime. Sample doz. with price list 1s. carriage paid. A. PORTER, Stone House, Maidstone.

ORCHID PEAT.—Hardwood Brown Fibrous, RHODODENDRON and DUST PEAT, SPHAGNUM MOSS.

Apply C. HALL, 1, Worgret, Wareham, Dorset.

GARDEN NETTING (best tanned only).—25 yds. x 8yds.; 50 x 4yds.; 100 x 2 yds., 8s. each. 50 x 2 yds.; 25 x 4 yds.; 100 x 1 yd., 4s. each. All sizes, large or small, at 1s. 20 sq. yds. Quality guaranteed.—EVANS, 14, Beresford Rd., Lowestoft.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

GARDEN ROLLERS, double cylinders, solid ends, rounded edges 14in. by 14in., 1¾cwts., 24s. 6d.; 16in. by 16in., 2cwts., 26s.; 20in. by 20in., 3cwts., 36s.; 24in. by 24in., 4¼cwts., 50s. each; carriage paid any station in Great Britain. Lists free. J. ATTWOOD, Stourbridge.

TO ENSURE FINE BUSHY PLANTS
SOW NOW.

SUTTON'S WALLFLOWERS.

SUTTON'S FIRE KING ...	per packet	1/6
SUTTON'S GIANT BLOOD RED	,,	1/6
CLOTH OF GOLD ... ... ,,	,,	6d.
SUTTON'S SUPERB, mixed ... ,,	,,	1/-

Post free.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

NOW IS THE TIME TO PLANT KELWAY'S GAILLARDIAS, the rich golden blooms of which are noted for their powers of endurance during the driest season, and as cut flowers retain their freshness and beauty long after they have been gathered. They flourish with a minimum of attention, and give abundant bloom the same year that they are planted. Choice named collections, 12s. and 18s. a dozen.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

KELWAY GLADIOLI flower freely in the open air through the autumn. Their fine bold blooms make an admirable addition to borders or beds, and are invaluable as cut flowers for church or table decoration. Choice named collections, 3s., 4s. 6d., 6s., 7s. 6d., 9s., 12s., and 18s. a dozen.

Order at once.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.

TESTIMONIAL.

From ———, Esq., Guildford.

"I may say that your Illustrated Catalogue is without doubt the finest book of the sort I have had the pleasure of seeing."

NOW IS THE TIME TO PLANT.

KELWAY'S PYRETHRUMS, their celebrated free flowering, brilliant large flowered, elegant, long stemmed kinds; invaluable in the Hardy Border and for the Cut Flower Garden.

The "Spring Chrysanthemum" or
"Coloured Marguerite.'

Collection B, 12/- per dozen,
improved "Kelway" varieties.
Collection C, 21/- per dozen, EXTRA fine.
Carriage paid for remittance with order.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

THOMSON'S CELEBRATED MANURES.

For full advertisement see page v.

CONSERVATORIES AND WINTER GARDENS, Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue free.—BOULTON and PAUL, Lim., Norwich.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.

XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.

XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown both poisonous and non-poisonous are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N.S. or Florist for Richards' small pink list.

G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

BEDDING PLANTS.

R. H BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Chrysanthemums, Dahlias and Summer-Bedding Plants.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Border and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS.
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

SAMUEL M'GREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

RHODODENDRONS.

DICKSONS & CO.,
1, Waterloo Place, Edinburgh.
Pink Pearls, Ponticums, choice Hybrids. Write.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

PERPETUAL CARNATIONS

1911 Illustrated Catalogue Ready & FREE.

We have a Wonderful Collection of Novelties this Season, including our

"DUCHESS OF DEVONSHIRE."

The best all-round Perpetual Crimson ever raised.
(See Illustration "Gardeners' Magazine," April 22nd.)

Read our "TREATISE ON CULTURE" 1/-, Free.

YOUNG & Co., Gold Medallists, HATHERLEY, CHELTENHAM.

NOTICE.

The AZALEAS and RHODODENDRONS planted in Hyde Park, near Rotten Row, finest to be seen in London, are supplied by ANTHONY WATERER, whose only address is
Knap Hill Nursery, Woking, Surrey.

No connection with any other firm of similar name.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.

Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

BUDS AND FRUIT SAVED.—GARDEN NETTING as supplied by us to the Royal Gardens. SMALL MESH, satisfaction or cash returned. 100 by 1 yd., 3s. 3d. Any length and width supplied. Cheaper quality, 50 yds. 1s.
POTTER BROS.,
Dept. M, Net Makers, Shrewsbury. Est. 1855.

REGISTERED

THE
APRON

That has Come to Stay.
WORN BY ALL THE LEADING GARDENERS.
LOOK AT THE PRICE.
In Dark Blue Ponicus Twills,
1/9, Postage 3d. extra.
Or in Dark Blue Ponicus Serge,
3/9, Postage 3d. extra.
WRITE FOR ONE TO-DAY.
SHAW & MONTGOMERY
(PENMAN'S),
628, Argyle St., Glasgow, W

TANKS! TANKS!! TANKS!!!

Now is the time to buy cheap Tanks. We have several hundreds for sale, which have come off ships we have broken up. All capacities from 25 gallons. List free on application. THOS. W. WARD, LIMITED, Sheffield.

CARNATIONS, PINKS, AURICULAS.

DOUGLAS for the best old and new varieties in all classes, and the finest quality in the world. Malmaison Carnations, new and old, 7/6 per dozen. Border, 6/- to 12/- per dozen. Tree, American, and English, 7/6 to 15/- per dozen. Auriculas, Show, 21/- to 30/- per dozen. Alpine Auriculas, 9/- to 21/- per dozen. Carnation, Auricula, Pink, and Polyanthus seed, 1/6 and 2/6 per packet. **CATALOGUE FREE.**

J. DOUGLAS, Bookham, LEATHERHEAD.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

AMERICAN TREE CARNATIONS

The Newest and Best Varieties.

Strong, healthy and well-rooted plants only supplied

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

AMERICAN TREE CARNATIONS.—Best varieties, strong bushy plants, in 3in. pots, 5s. 6d. doz., 40s. per 100; flowering plants, in 5in. pots, 8s. doz. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

GERANIUMS.—Paul Crampel, large plants, 3s. doz. King of Denmark, 2s. 6d. doz. Hydrangeas, 9d. each. Calceolarias and Marguerites, 1s. 3d. doz. HEAD GARDENER, 22, Charlton Rd., Blackheath.

CHARGES FOR ADVERTISEMENTS IN

THE
GARDENERS'
MAGAZINE.

Five Lines and under	£0	2	6
Per Line beyond	0	0	6
„ Inch	0	6	0
„ Half Column	1	10	0
„ Column	3	0	0
„ Page	9	0	0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— & Co.

Telephone Numbers:
Editorial and Printing Depts. .. ... 831 Holborn.
Advertising and Publishing Depts. ... 2140 Holborn.

Offices: 148 and 149, Aldersgate Street, London.

Sales by Auction.

SALES NEXT WEEK.

WEDNESDAY NEXT, May 17th, at 1 o'clock, 120 lots of Herbaceous Plants, Flowering Shrubs, Gladiolus, Montbretias, Begonias, Liliums, Spiraeas, Iris, Pinks, Leaf-mould, Peat, and Fibre.

At 3 o'clock, 100 lots of Ornamental Palms, Standard Bays, Dracaenas, and other Decorative Plants, Stove and Greenhouse Plants, Pot Roses, etc.

FRIDAY NEXT, May 19th, at 12.45 o'clock, an importation of Cattleya Dowiana, also a quantity of cool, intermediate, and hot-house Orchids in variety.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view mornings of sale, and catalogues had.

For Sale, with Possession.

VALUABLE FREEHOLD PROPERTY, situate in the centre of an excellent Fruit Growing district, and about 1½ miles from main line station, comprising eight-roomed house, and about 8¼ acres of fertile land, stocked with about 4,260 choice Fruit Trees, Gooseberries, Strawberries, and Raspberries. Full particulars and order to view of PAUL BAUSOR and SON, Surveyors, Valuers, etc., Highfield House, Fen Ditton, Cambridge.

To Nurserymen and Fruit Growers.—TWYFORD, BERKS, about 1¼ miles from the station, on the main G.W.Rly., about 8 miles from Maidenhead and 6 from Reading, a compact little FREEHOLD PROPERTY, known as HURST NURSERIES, comprising a picturesque cottage residence, containing 2 reception, bath, and 5 bedrooms, together with stabling, outbuildings, 5 large glasshouses (heated), and about 3½ acres of garden, planted with a Great Variety of FRUIT TREES and bushes, and affording an unusual opportunity of ACQUIRING as a GOING CONCERN a LUCRATIVE LITTLE NURSERYMAN, and FRUIT GROWER'S BUSINESS.—Messrs.

GIDDY and GIDDY will SELL the above, BY AUCTION, at the Mart, E.C., on June 1st next (unless previously disposed of). Full particulars of the Auctioneers, Maidenhead; and 11a, Regent Street, S.W.

FREEHOLD NURSERY FOR SALE, with five Glasshouses and good Dwelling House, all standing on one acre of land. Apply 9, Station Road, Ash Vale, Surrey.

FRUIT and SEED BUSINESS, splendid position; opposite entrance large factory; main street; long lease; stock, fittings, etc., £110. 148, King's Road, Reading.

COMPACT FREEHOLD NURSERY FOR SALE, comprising six-roomed House, Bath-room, Kitchen and Scullery, 13 GREENHOUSES, 120 FEET LONG each, all heated by four Horizontal, Tubular Boilers; about 3½ acres of land, more or less, with stabling, and various sheds. Apply W. C. VIRGO, Moat House, Welling, Kent.

EDMUNDS and CO.—Specialities: Early vegetable plants, etc.; all hard grown in cold frames; lights off all day and very safe night; Tomato plants, Carter's Sunrise, Laxton's Open Air, Edmund's Supreme, etc., 12 for 1s., 25 for 1s. 9d., 50 3s. 3d., 100 4s. 6d.; Ridge Cucumbers, 6 for 1s., 1s. 9d. doz.; Celery, Clayworth's Prize Pink, extra strong, transplanted, ready for trenches, 1s. 6d. 100; Bush Marrow plants, green or white, fine strong plants, 12 for 1s.; Pumpkins, same price; also all manner of Bedding Plants, Geraniums, Dahlias, Annuals, etc., etc.; write for our fully illustrated catalogue of up-to-date novelties for summer bedding; one of the finest published; post free on application. EDMUNDS and CO., Milton, Cambridge.

RHODODENDRONS.

We specialise in these most beautiful of Flowering Shrubs.

Immense and superior stocks of choice named varieties, including "Pink Pearls," and also Ponticums for covert planting.

Lists on application.

DICKSONS & CO.,
THE KING'S NURSERYMEN,
1, WATERLOO PLACE, EDINBURGH.

Barr's Lawn Phytobroma

The best Manure for all Lawns.

The most economical of all artificial manures, 2 oz. to the square yard only being required.

Per cwt., **20/-**; ½-cwt., **12/6**; 28lb., **7/6**; 14lb., **4/6**; 7lb., **2/6**; sample tins, **1/-**.

Prepaid Orders for 28lbs. and upwards, carriage paid.

Circular with full particulars, on Application.

BARR & SONS,
11, 12, & 13 KING STREET, COVENT GARDEN, LONDON.

WHARFEDALE. 5 ft. long.

In Best Redwood, painted two coats. White.

£1 15 0

Delivered any station.

Full Catalogue on application.

PETER PATRICK & SON, Otley, Yorks.

GARDEN AND TENNIS NETS (best tanned only, small mesh).—50 x 8yds., 17s.; 25 x 8yds., 50 x 4yds., 100 x 2yds., 8s. each; 100 x 1yd., 50 x 2yds., 25 x 4yds., 4s. each. Any size to order. Tennis Netting (corded), 25 x 2, 6s. 6d.; 25 x 3, 7s. 6d.; 25 x 4yd., 8s. 6d. Write for Price List. L. WREN and SON, Net Merchants, 139, High Street, Lowestoft. Established 1863.

PERGOLAS.
Larch Poles at 1d. per foot. List Free.
PATRICK'S, Otley, Yorks.

OAK CRAMBLES.
Peeled and dry at ½d. per foot.
PATRICK'S, Otley, Yorks.

ROSE ARCHES.
Larch Poles at 1d. per foot.
PATRICK'S, Otley, Yorks.

TREE STAKES AND GARDEN RODS.
Lists free.
PATRICK'S, Otley, Yorks.

SUBSCRIBER'S ORDER FORM

Every Saturday THE GARDENERS' MAGAZINE. Twopence

To W. H. AND L. COLLINGRIDGE,
148 AND 149, ALDERSGATE STREET, LONDON, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose________ for________ months in advance.

Name________________

Address________________

Date____________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

*** If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.

PRIMULA OBCONICA GIGANTEA GRANDIFLORA.

The most beautiful Free and Hardy Perpetual Greenhouse Plant grown.

ONCE IN FLOWER ALWAYS IN FLOWER.

We are NOTED for having the most — SUPERB Strain in commerce. —

SEED.

Mixed colours, also Compacta and Fimbriata, mixed, 1s. per packet; separate colours of Purple, Rose, Lilac, Deep Red, Crimson Scarlet, Pale Lilac, and Crimson (fringed petals), **2s. per packet; double flowering, including Pale Mauve and Rose, 2s. per packet. Instructions as to sowing with each packet.**

PLANTS, 3s., 5s., 7s. 6d., 10s. 6d., and 15s. per doz., according to size.

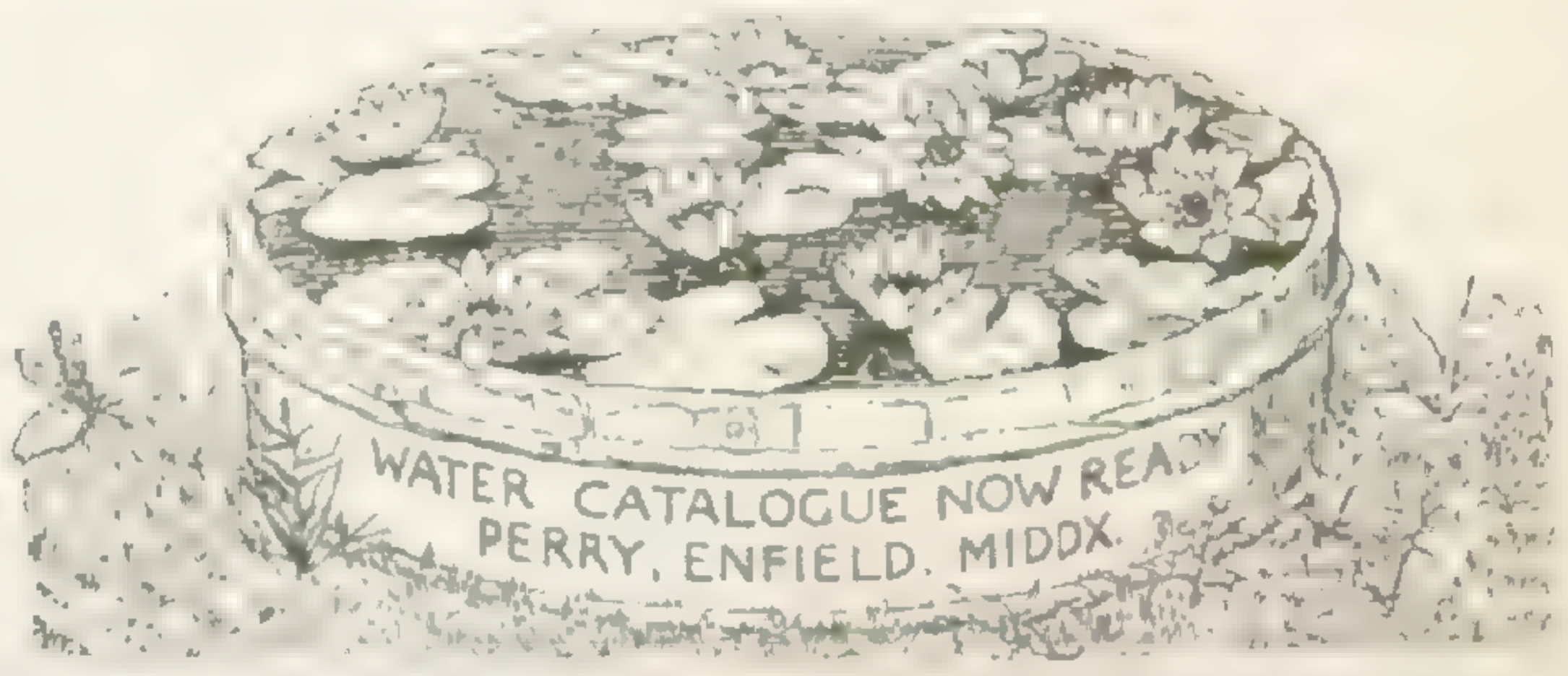
W. A., Esq., Reigate, Surrey, writes:—

I had a packet of seed from you last year, and am pleased to inform you that I have blooms measuring two inches and more across each individual flower. They are the best strain I have ever seen, both for variety of colours, and substance of bloom.

WM. ARTINDALE & SON,
Nether Green Nursery,
SHEFFIELD.

For 3 penny stamps we will send you our Catalogue of Plants, which is not merely a price list, but literature which gives all the cultural notes of plants therein mentioned. We have received hundreds of testimonials commenting on the value of this book.

OUR SEED CATALOGUE WILL BE SENT FREE ON APPLICATION.



ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS**, and an endless variety of Choice **ORCHIDS**.

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

SMITH'S WEED KILLER
is absolutely "PERFECT".
4 Tins of Powder or
4 Gallons of Liquid
to make 100 Gallons.
6/6 Carriage Paid.
MARK SMITH, Ld. *Louth, Lincolnshire.*

BEGONIAS.—30 Begonias, all different, 10s. 6d.; Bedding Begonias, 9s., 12s., 15s. 100; German Iris, named, 4s. 100. ELLISON, 57, West Bromwich.

LILIUMS.—24 choice Liliums, all different, 10s. 6d.; Gloxinias, 6 different, 2s.; Cannas, 10 do., 4s.; Gerbera, Adnets, 1s. 6d. packet; flowering size plants, 10s.; extra strong, 15s. doz. ELLISON.

GLADIOLI, large-flowering, 3s., 5s. 100. American Tree Carnations, 5s. 6d. doz.; Tropæolum tuberosum, 2s.; Garden Lilies, 2s. doz.—ELLISON.

PAINT & GLASS.
NICHOLLS & CLARKE, LTD.
SHOREDITCH, LONDON.
GLASS.

When sending for Catalogue please cut out this advt.

1861. BY APPOINTMENT TO HIS MAJESTY THE KING.

Messrs. **WILLIAM BULL & SONS** have the honour to announce that in celebration of the Jubilee of their firm, they purpose holding a Floral Display and

Orchid Exhibition.

Private View, Monday next the 15th May, by Cards of Invitation.

The Exhibition will remain open to the Public until the end of the week, 10 to 6 o'clock, in

The Winter Garden, 536, King's Road, Chelsea, London, S.W.

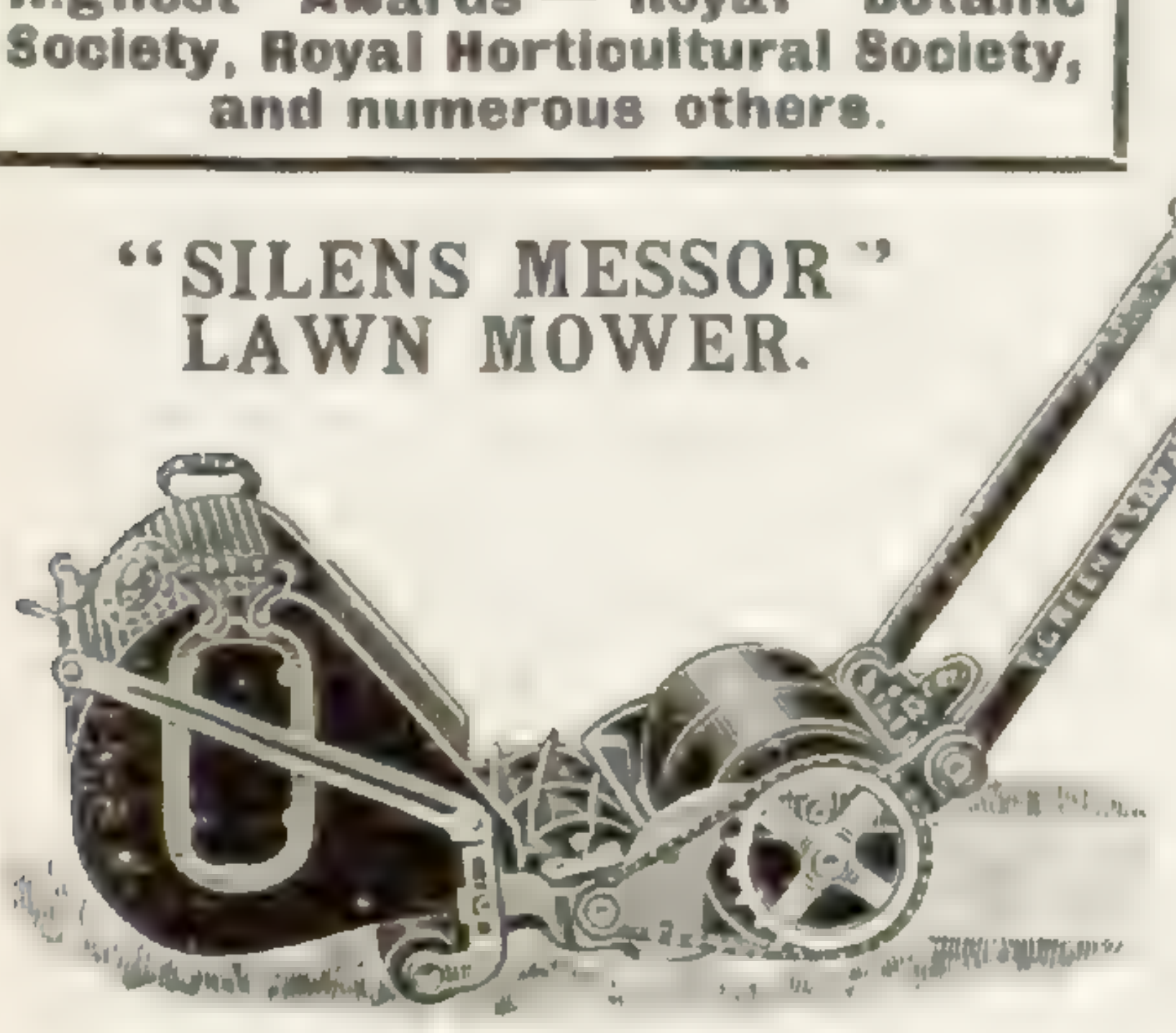
APPOINTED BY ROYAL WARRANT, HORTICULTURAL MACHINE MAKERS TO HIS MAJESTY KING GEORGE V.

GREEN'S LAWN MOWERS ARE UNEQUALLED.

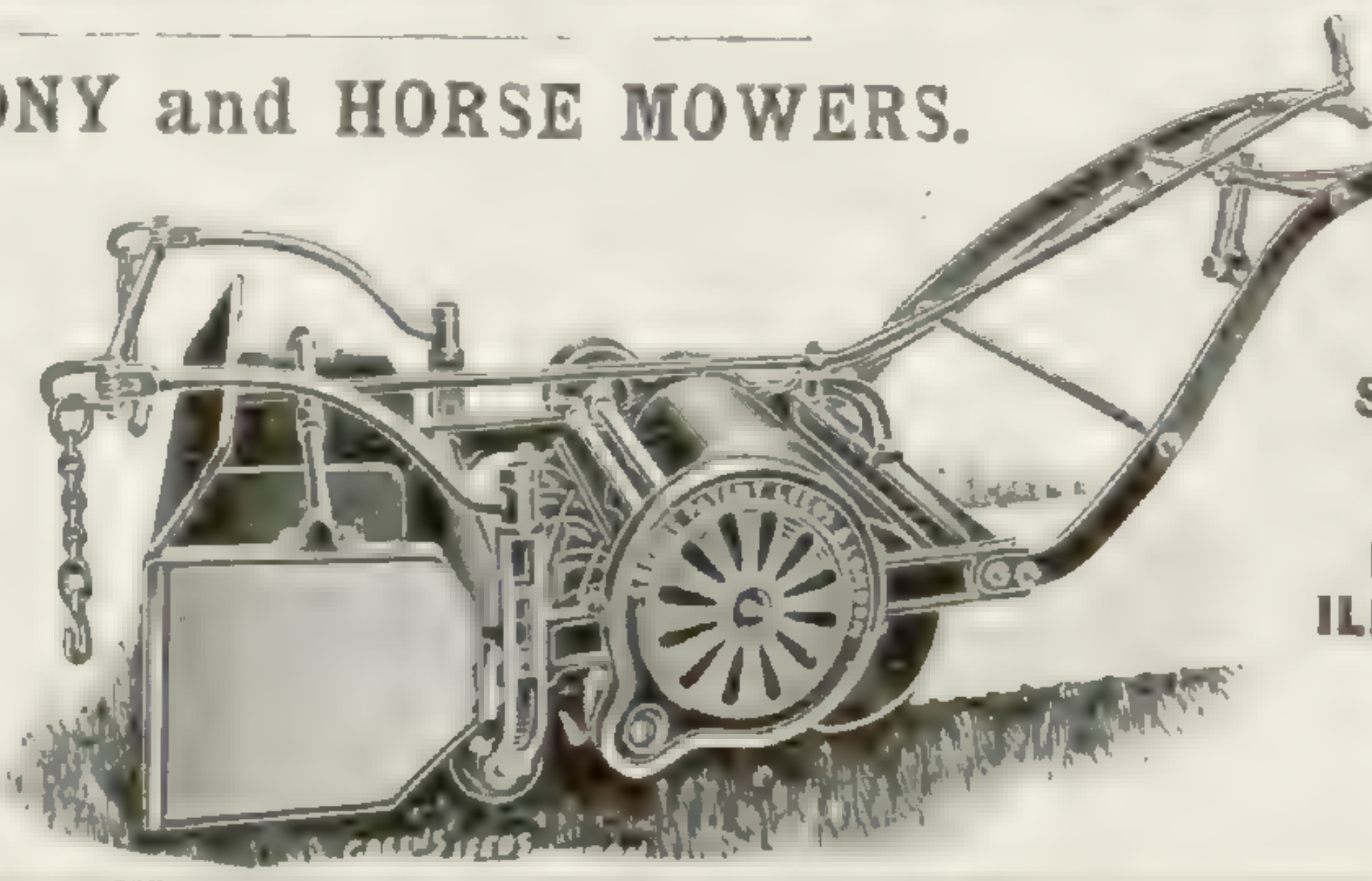
Hundreds of Thousands are in use. Established nearly a Century,

Highest Awards — Royal Botanic Society, Royal Horticultural Society, and numerous others.

"SILENS MESSOR" LAWN MOWER.



PONY and HORSE MOWERS.

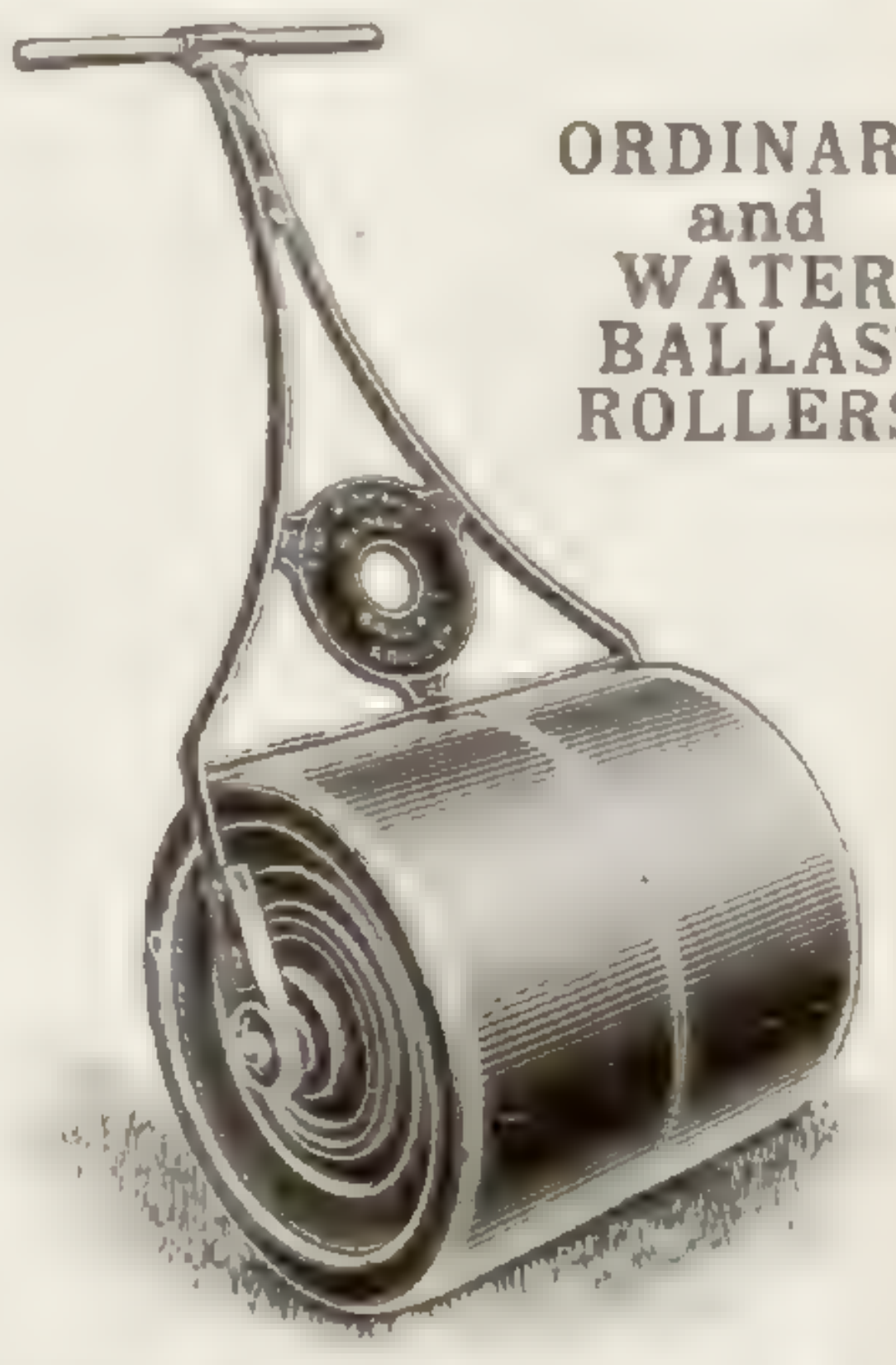


Telephone Numbers—
Leeds, 3580.
London, 2022 Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London

Supplied by all Ironmongers.

Please write for ILLUSTRATED PRICE LIST No 1 FREE.

ORDINARY and WATER BALLAST ROLLERS.



MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E.

EVERY FLOWER IN THE GARDEN WILL GRATEFULLY RESPOND
To the Use of

CLAY'S FERTILIZER

IT IS

THE PLANT FOOD OF RENOWN.

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK, AS AT SIDE.

CLAY'S LONDON FERTILIZER
TRADE MARK.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. Fourth Edition (Second Reprint). 275 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Stratford, London, E.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.
Our Work has stood the test of time.

PERPETUAL FLOWERING CARNATIONS: Britannia, Rose Dorée, White Perfection, Black Chief, Fortuna, Mrs. Burnett, etc. 3s. per doz.; strong plants; post free. Ask list. C. F. A. VAN DER SLUYS, F.R.H.S., Ramee Guernsey.

SPECIAL CHEAP OFFER TO CLEAR!

HOLLIES HODGINSII and others.

2-3 ft.	30/- doz.	200/- 100
3-4 ft.	42/- ,,	300/- ,,
4-5 ft.	72/- ,,	500/- ,,

RHODODENDRON PONTICUM.

1½-2 ft. ...	5/- doz.	32/6 100	275/- 1000
2-2½ ft. ...	10/6 ,,	40/- ,,	350/- ,,
2½-3 ft. ...	17/6 ,,	55/- ,,	500/- ,,
3-3½ ft. ...	21/- ,,	75/- ,,	700/- ,,

CLIMBING ROSES, Extra Strong, in 8 in. pots, with shoots 5-8 ft. long, for planting out now.

Also **BUSH ROSES** in 7 in. pots for filling up at **2/6** each, **24/-** doz.

New List of Bedding Plants and Dahlias post free on application.

DICKSONS ROYAL NURSERIES, CHESTER.

BY APPOINTMENT.

ROSES IN POTS.

WM. PAUL & SON, WALTHAM CROSS, LTD.,

beg to offer a magnificent stock of DWARFS and RAMBLERS for present Planting and for Greenhouse Culture.

In 5-in. pots **10s. 6d.** to **18s.** per dozen, **75s.** to **120s.** per 100; extra strong in 8-in. pots **24s.** to **60s.** per dozen. Also a fine collection of New Roses.

Catalogue on application.

PAUL'S ROYAL NURSERIES,
Waltham Cross. HERTS.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH London Fern Nursery, Loughborough Junction, S.W.

.—No. 3,002. SATURDAY, MAY 13, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Perpetual-flowering Carnations.

Perpetual-flowering carnations have long been with us, but the varieties that tested the skill of past generations of growers, and gave pleasure to the lovers of flowers in general and carnations in particular in bygone years, were very different to the race of carnations that we have now with us. The perpetual, or tree carnations that gladdened the hearts of some of the old florists, and gave rise to disappointment in others, possessed merit. The best of them were moderately free in growth, and if not profuse in flowering, they yielded in the course of the winter and spring months a fairly good harvest of bloom. They differed in one respect from the varieties constituting the present race, and this consisted in their bearing flowers with petals that were smooth at the edge. Raisers, cultivators, and those who were responsible for making awards to new plants and flowers, were agreed that the edges of the petals should be free from serrations, and if they were serrated they would have none of them, whatever may have been their merits in other respects. This point is of interest as showing how difficult it is sometimes to break away from traditional rules, and also of the necessity for those who are concerned with special classes of flowers to pause now and again for the purpose of carefully considering whether some deviation from existing methods of procedure would not be an advantage. In the case of the flowers under notice it would have been highly advantageous to have considered whether something more than a smooth edge to the petals was not needed. Previous generations of florists had decreed that the blooms of carnations should, to justify the recognition of the varieties, possess certain properties, and had the decree been limited to the show flowers all would have been well. It was regarded, as time went on, as applying to all the sections, and the perpetual-flowering varieties suffered in consequence. In the "show" carnation perfection of form is of primary importance, a fact no one could more readily recognise than ourselves. But in the "perpetual" carnation something more is needed. The flowers should be of relatively large size, good form, and attractive in colour, be borne on long stems, and the plants should have a vigorous constitution, and produce a continuous succession of flowers extending over a long period. The present-day varieties possess all these desirable qualities, and to this fact they owe the high degree of popularity that they now enjoy. They mostly have their petals fimbriated, but this is regarded by not a few of those who appreciate carnations as an additional charm, instead of a defect, as was the case in years now belonging to the past. To our friends across the Atlantic must be given the credit of demonstrating to the world the great value of the new race of perpetual carnations for the supply of cut flowers, and also of raising and distributing large numbers of varieties possessing a high degree of merit. The services they rendered to the flower-loving community could not well be overestimated; and in stating this fact it is gratifying to be able to feel that on this side of the Atlantic the cultivation of perpetual carnations is being carried on with a degree of success that has certainly not been surpassed in any other country. We have had proof of this at the exhibitions of the Perpetual-flowering Carnation Society, at the exhibitions and meetings of the Royal Horticultural Society, and in the flower market at Covent Garden. In immense numbers of private gardens they are largely and successfully grown, and in the raising of new varieties our growers have achieved so high a degree of success that some of the varieties of British origin are quite unsurpassed in their respective shades of colour. Those engaged in the cultivation of perpetual carnations for market do not require advice, excepting that which relates to novelties of promise, but we may with advantage strongly advise owners of gardens to provide one or more structures specially for carnations. Gardeners who have to grow their flowers in association with other plants having different cultural requirements are so severely handicapped as to render it impossible for them to demonstrate their skill, and produce a supply of flowers proportionate to the number of plants they have. The structures need not be elaborate in design or costly in fitting. All that is necessary is a plain light structure, with a heating apparatus equal to maintaining the necessary temperature without excessive stoking, and ventilators so whether some deviation buoyant atmosphere can be maintained without exposing the plants to cold draughts. Span roofs are preferable to lean-to's because of the plants being freely exposed to light on all sides, and the position selected for carnation houses should be open, and beyond the influence of the shade of tall trees. Until within a quite recent period perpetual carnations have been almost exclusively regarded as of value for glass culture. But it is evident that no such limit should be placed on their usefulness. Their chief value is for cultivation under glass, and it is not un-

MR. HARRY A. BARNARD.

reasonable to assume that it will remain so. But the results obtained in the course of the trials conducted by the Perpetual-flowering Carnation Society in the gardens of the Royal Botanic Society, and also in some private gardens, have proved to demonstration that they can be grown with much success in open beds and borders. By bedding out at the end of May plants that have produced a crop of flowers under glass, a succession of blooms of good quality will be obtained from quite early in June until the autumn frosts impose a check upon vegetation. They may, of course, be planted in the borders of the flower garden, but where they are intended for the supply of cut flowers the preferable course will be to grow them in beds in the kitchen garden, or reserve ground. Then, if a light framework is fixed over the beds it will, with the aid of suitable material, be a very easy matter to protect the blooms from heavy rains and moderate frosts. We have no doubt as to perpetual-flowering carnations having a great future before them for outdoor culture, and we advise those who have opportunities for doing so to put their suitability for the purpose to a practical test during the summer on which we are about to enter.

Mr. Harry A. Barnard, whose jubilee with the Messrs. Low, of Clapton and Bush Hill Park, was celebrated in so pleasant a manner the other day, may be heartily congratulated on the good fortune with which he has been favoured during the past fifty years, which, it need hardly be said, form a very considerable portion of a man's activities in commercial life. Entering the nurseries of the Messrs. Low at Clapton at an early period of his life, when the late Mr. Hugh Low was at the head of the firm, Mr. Barnard was successful within a comparatively short period of obtaining a prominent position as a member of the staff, and this position he has maintained until the present time. Mr. Barnard is fortunate in possessing the ability essential to his taking a leading position, and in being able to so discharge the duties associated therewith as to command the esteem of the members of the firm, and to enjoy the respect of the other members of the staff. He has been fortunate also in having been blessed with so robust a constitution that during the fifty years he has been with the Messrs. Low he has not once been absent from business through ill-health. The jubilee of Mr. Barnard was celebrated on Saturday last by a presentation from the staff at the Royal Nurseries, Bush Hill Park, of a remarkably handsome clock and ornaments, the clock bearing the following inscription: "Presented to Mr. Harry A. Barnard on the celebration of his jubilee with the Lows of Clapton, as a mark of esteem and affection from all employed at the Royal Nurseries, Bush Hill Park, April, 1911." The presentation was made by Mr. Stuart Low, the head of the firm, who spoke in eulogistic terms of Mr. Barnard's abilities, which were shown in a marked manner in the readiness with which he could, when the circumstances demanded, change with the times. Mr. Barnard acknowledged the gift in a highly appreciative speech, which was interspersed with many interesting anecdotes, and in his concluding remarks gave some excellent advice to the young employees of the firm.

The Gardeners' Company.—The deputation of this company that recently returned from a visit to the bulb-growing districts of Holland consisted of Mr. Charles Bayer (the Master of the company), Mr. Beaumont Shepheard, Mr. N. N. Sherwood, V.M.H., Mr. J. Francis, Mr. J. Gurney Fowler, Dr. P. Purnell, Mr. J. E. Rubie, Mr. H. S. Harris, Mr. H. C. Bayer, and Mr. A. E. Rogers, the latter, from the Board of Agriculture, being a guest of the company. Mr. E. A. Ebblewhite, the clerk of the company, and Mr. Boone, the beadle, were also in the party. The deputation visited Katwyk, Aalsmere, Leiden, Hillegom, Lisse, Haarlem, Amsterdam, and Wageningen. Mr. R. Bonthius and Mr. K. Volkersz, horticultural experts under the Netherlands Board of Agriculture, placed themselves at the service of the deputation during its stay, from April 27 to May 1. The deputation was everywhere received with great cordiality, and everything possible was done to make the visit instructive and enjoyable.

Flowering Trees and Shrubs at Kew.—The procession of flowers that belong to the season of spring continues, and the Royal Gardens, Kew, now present a highly attractive appearance. Some of the Japanese cherries have, for the season, lost their floral charms, but the finest of all, Prunus pseudo cerasus J. H. Veitch still affords ample evidence of the wondrous beauty of its large deep rose-pink flowers. Some of the pyrus are now in the ascendant, and the large specimens of the Siberian crab (Pyrus baccata) have presented, as seen from a distance, much the appearance of mounds of snow. The group of specimens of Pyrus malus floribunda on the mound contiguous to the tropical lily house are just now in perfection, and the myriads of delicate pink flowers produce a delightful effect. Visitors to Kew who are interested in trees should make note of the trees of P. malus floribunda atrococcinea, which has deep rose-red flowers, and also of the handsome P. Scheideckeri, which has rich pink flowers. The elegant free-blooming Berberis stenophylla has been planted somewhat freely within recent years, and the bold groups in the berberis collection on the east side of the garden, and in the arboretum on the western side, are now in full bloom, and the masses of golden flowers produce an exceedingly rich effect. The glory of Magnolia Soulangeana will have departed before this note appears in print, but the bushes of M. Lennei that are contiguous to the fine specimen in the azalea garden are in perfection, and the mollis azaleas are producing a brilliant display of colour. The narcissi, with the exception of a few stray flowers of the poet's narciss, are over, and are being succeeded by the bluebells in the Queen's Cottage grounds and elsewhere, and by the blue, white, and lilac-coloured flowers of the Spanish Quill in various parts of the garden.

Kew Guild Annual Dinner.—The annual dinner of the Kew Guild will be held at the Tavistock Hotel, Covent Garden, W.C., on Wednesday, May 24, at 7 p.m. prompt. Mr. R. Hooper Pearson will preside. After the dinner the annual business meeting will take place, to be followed by a "social."

Spring Flowers at Croydon.—The last fortnightly meeting of the Croydon Gardeners' Society was of special interest as, on this occasion, the members held their spring show. A special invitation was sent out to members to contribute of their best, and it was suggested in connection therewith that each one should have a small exhibit, so that the single-handed gardeners' contributions should not be overpowered by the products of those who have charge of large gardens. Seventeen collections were staged, and as they differed materially from each other they collectively produced an interesting and attractive display. In the course of the evening there were discussions on the cultivation of the more noteworthy of the plants staged, and these proved of much interest, and most useful. The members who contributed products of their skill included Mr. F. W. Hart, Mr. T. H. Young, Mr. E. Mann, Mr. F. Oxtoby, Mr. G. Rapley, Mr. Mills, Mr. Jeal, Mr. J. Dingwall, Mr. C. Thrower, Mr. J. Brown, Mr. H. Boshier, Mr. J. Gregory, and Mr. A. Edwards.

Site of Natural History Museum.—At a meeting of the Council of the Royal Horticultural Society, held on the 9th inst., the following resolution was carried unanimously and ordered to be forwarded to the Prime Minister: "The Council of the Royal Horticultural Society beg to record their great regret that it should be proposed to encroach on the entirety of the site which was secured to the Natural History Museum by the delimitation of its northern boundary by the Treasury and the Office of Works in 1899, which site they regard as being of vital importance to the efficiency of the Museum." Given under the Common Seal of the Royal Horticultural Society.—W. Wilks, Secretary.

Proposed List of Tulip Names.—The members of the Royal Horticultural Society's Daffodil and Tulip Committee have appointed Messrs. P. R. Barr, R. Wallace, G. W. Leak, Rev. J. Jacob, and the chairman and hon. secretary, to act as a sub-committee for the purpose of drawing up a list of tulip names on the lines of the original and useful daffodil list. Such a list will be very welcome.

Preservation of Wild Flowers.—Mr. W. M. Webb, hon. secretary of the Selborne Society, writes with regard to a recently published letter from the Rev. E. J. Bacon Phillips: "My council has recently constituted, in January last, a special section of the Selborne Society to deal with the important question of plant protection. The chairman is Dr. A. B. Rendle, F.R.S., Keeper of Botany in the British Museum (Natural History), and the recorder is Mr. A. R. Horwood, of Leicester Museum, who has paid considerable attention to the methods by which plants are becoming exterminated. We have the support of Lord Avebury and several distinguished botanists, while a report has been drawn up and adopted by my council with a view to carrying out the objects of the section, which include a strenuous endeavour to influence public opinion and secure legislation."

National Chrysanthemum Society.—We have already published a list of this society's exhibitions and meetings, but the newly-issued schedule of prizes includes additions to the programme. There is to be an outing to Cliveden, by permission of W. Astor, Esq., on July 17: the Floral Committee will visit Messrs. Cragg, Harrison, and Cragg's nurseries, at Heston, Middlesex, on October 21; and there will be a Chrysanthemum Conference at Carr's Restaurant, Strand, W.C., on Monday evening, December 4. Details of the conference will be announced later.

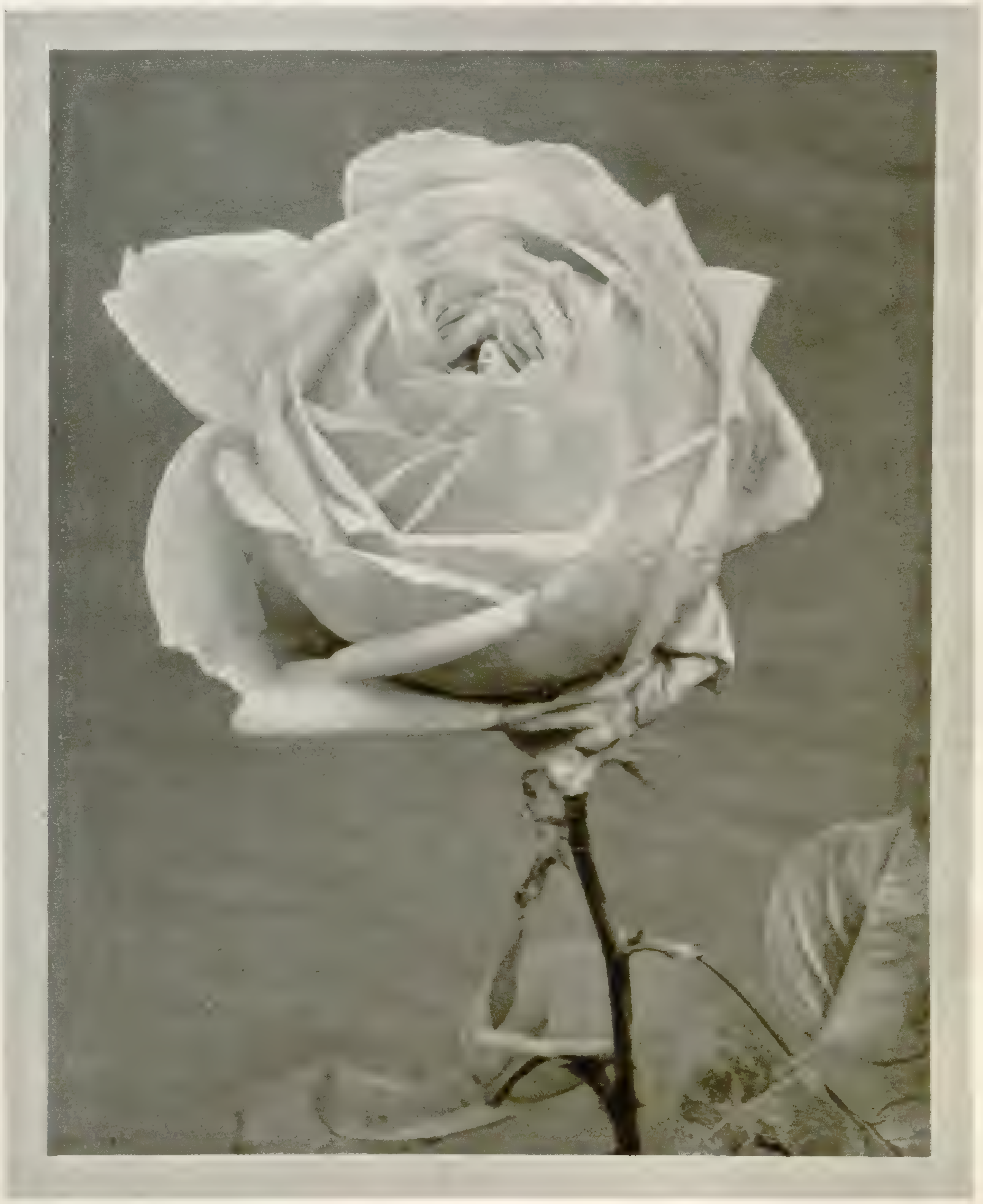
Presentation to Alderman J. W. Bentley, J.P. Much additional interest was given to the exhibition held by the Northern Section of the National Auricula Society at Manchester, on April 29, by the presentation of an illuminated address to this distinguished florist. Alderman Bentley, who has for many years past cultivated with much success in his gardens at Stakehill, Castleton, near Manchester, auriculas, polyanthuses, tulips, and other of the older florists' flowers, was for fourteen years hon. treasurer and secretary of the society. Retiring from the dual office at the close of the last financial year, the members of the society decided to recognise the splendid services he had rendered in the cause of floriculture, by presenting him with an illuminated address. The presentation was made on the occasion of the annual exhibition, by Mr. T. S. Turnbull, one of the vice-presidents, who referred in appreciative terms to the value of Mr. Alderman Bentley's services to the society. The address was as follows: "We the undersigned members of the National Auricula Society (Northern Section), on this, the occasion of your retirement, after fourteen years of active service as hon. treasurer and secretary, desire to tender you our heartiest thanks for the efficient and successful manner in which you have conducted our affairs. During the period of office the society has passed through a critical period in its history, and we fully recognise that the willing service which you have rendered must have been at much inconvenience and self-sacrifice in consequence of your many public and private appointments; we feel that, not this society, but auricula growers in general, are indebted to you for the many seedlings of high merit which you have raised, and for your kindness in distributing them so readily, thereby setting an example worthy of emulation, and materially increasing the taste for the culture of the auricula. The knowledge that your labours have revived interest in these beautiful flowers, the auricula and gold-laced polyanthus, which have been valued by so many generations of flower lovers, will be your chief satisfaction and reward. We hope, therefore, that you will accept this address as a token of our appreciation and respect, and as a memento of your official connection with this society since 1897." The address is signed by the leading cultivators of the auricula in the United Kingdom.

Floral Decorations at Drury Lane.—We understand that the floral decorations for the Gala Performance to be given at Drury Lane Theatre, on Wednesday, May 17, on the occasion of the visit of the Emperor of Germany, will be carried out by Messrs. Wm. Cutbush and Son, Highgate; roses in two colours will be the flowers chiefly employed on this occasion.

Rose Alice Cory-Wright, H.T., which we have the pleasure of illustrating herewith, is a valuable addition to the somewhat lengthy list of hybrid teas, and one of the most noteworthy of the varieties belonging to this section that have been raised and introduced by Messrs. William Paul and Son, of Waltham Cross. The flowers of the variety are of the largest size, remarkable for their fullness, and of a rich rose-pink hue. The bloom illustrated is shown about two-thirds its natural size. This fine rose was introduced by Messrs. W. Paul and Son in 1910, and is proving of even higher value than was anticipated.

Flower Shows at Birmingham.—We are informed that the Birmingham Botanical and Horticultural Society have arranged to hold two exhibitions during the summer months, as for several years past. The first will be held on June 8, at which the chief features will be orchids and early summer flowers, and the second on July 20, when roses and midsummer flowers will predominate. Honorary exhibits of flowers, fruits, and vegetables will be welcomed. The hon. secretaries, Botanical Gardens, Birmingham, will supply schedules and all needful particulars.

Care for the Orphans.—To commemorate the Coronation year Mr. N. N. Sherwood, V.M.H., suggests the formation of a fund that, invested, shall provide for the maintenance of one orphan in connection with the Royal Gardeners' Orphan Fund. If this suggestion is carried into effect it is proposed to ask her Majesty to allow it to be called the Queen Mary Fund. Mr. Sherwood is prepared to start the fund with £50.



H.T. ROSE, ALICE CORY-WRIGHT.

A distinct and beautiful hybrid tea raised by Messrs William Paul and Son, Waltham Cross. The blooms are of the largest size, and the colour a rich shade of rose-pink.

Teaching of Botany.—In the course of an exhaustive article on the teaching of science in secondary schools, which appeared in the issue of "Nature" for May 4, the writer observes with reference to the teaching of botany: Considerable changes have been effected in recent years in the method and scope of botanical teaching. The time given to the purely descriptive work connected with the classification of plants in their natural orders has been greatly curtailed, and it is now common to find included in the course an experimental treatment of plant physiology and some consideration of the question of habitat. There is, too, an increasing tendency to recognise that no adequate study of botany is possible without some knowledge of the elementary facts and principles of chemistry and physics. The broader treatment which the subject now receives, and the substitution of a partially experimental for a purely descriptive method, have led to a healthier development of science teaching in many girls' schools. But the new methods have brought with them their own special difficulties, which, in most cases, still await solution. It is rare, for example, to find the experimental work on plant physiology really well done, and the possibilities of the school garden as an adjunct to the laboratory are insufficiently realised by teachers of botany. Though in connection with this subject it is possible to record a general tendency in the right direction, and in a fair number of instances a real advance, it is still the case that in too many schools botany is regarded somewhat in the light of an accomplishment, making no very serious demands on the pupils' intelligence, and requiring little more by way of equipment than a classroom and a bunch of flowers.

ROSES FOR THE GARDEN.

(Concluded from page 337.)

In dealing with specimen plants, it is advisable to allow them to grow naturally, then thin out the weakly wood and shorten the tips of the shoots that are to remain. Caroline Testout and other strong growers should not be pruned too hard, the best blooms being produced on shoots that are two or three feet high. When growing roses as bedding plants they should be planted more closely than is generally considered advisable, and Mr. Pemberton suggested they should be arranged twelve inches apart in rows with a space of thirty inches between them; when planted thus they fill out the space in the most satisfactory manner, and the hoe can be freely used between them. Pruning was necessary to encourage growth, and if the growth could be obtained, as in the case of Bessie Brown and the Earl of Warwick, without severe pruning, prune moderately.

Speaking of the enemies of the rose, Mr. Pemberton said that prevention was better than cure, and much might be done in this direction by maintaining the roses in a healthy state by means of good cultivation. The best way of destroying grubs that were enclosed in the leaves is a pressure between the finger and thumb, and other caterpillars should be kept down by hand-picking. Aphis were especially troublesome because of the rapidity with which they increased. The finger and thumb can be used with success in keeping down these pests; the sponge also can be used most successfully, and a spraying machine used at an early stage will also render substantial assistance in keeping these pests in subjection.

One of the most destructive of the fungoid pests is the rose mildew, for, when not held in check, it would spread over the leaves and do much injury to the plants. The only way to prevent it doing serious damage was to persist year after year in keeping it under. Mr. Pemberton said that he had used as a spraying solution a mixture of Calvert's carbolic soap and water, and had found it most effective. This was prepared by boiling 1½lb. of the soft soap in 7½ quarts of water, and then diluting it by adding six parts of soft water to each quart of the solution.

Mr. H. R. Darlington said there was little of a controversial character in the President's address, and he congratulated the President on the great success of the conference, and certainly hoped that it would not be the last at which they would have the pleasure of being present. He thought he might perhaps best employ the time at his disposal by making a brief reference to the five points which, in his opinion, constituted a perfect rose. He placed form first, as it could be of little value unless of fairly good form. Colour should, in his opinion, have second place, because upon its colour the value of a rose greatly depended. It was thought by some that if a colour is distinct it must be good; but, in his opinion, the colours of roses should harmonise with each other. The colour of some roses that he could mention would not harmonise with the colours of others, and this detracts from the merits of the varieties, however beautiful they may be in themselves. Perpetual-flowering he placed third, and felt sure that all who were present would agree with him that it was a strong point; certainly a rose that blooms over a period of six months must be superior to one that blooms six weeks, provided other points are equal. Fragrance ought to accompany the perfect rose, and everything that is possible should be done to develop this much-appreciated charm. Constitution was a most necessary quality, and it should be such as would adapt the rose to the English climate. He was longing to see the hardy Marechal Niel, and he was hoping they might see some day a Marechal Niel with the constitution of Rayon d'Or.

Mr. Vivian Rolt said, as an artist, he was much interested in the colour of roses, and he should not stage The Lyon rose in a box if he could help it, because the colour is so brilliant that it would kill that of the varieties with which it was associated.

The Mayor of Colchester (Mr. Frank Cant) said the President had told them about the failures that occurred owing to treating all classes alike. He had many proofs of this, and he had found on investigating complaints of roses not flowering, that the failure of the roses to bloom satisfactorily was due to cutting away the shoots that would have bloomed. In most cases these shoots were cut away simply for the purpose of making the roses tidy. Those who tidy-up rambler roses invariably have a very poor harvest of blossom in the following season.

Mr. Farrow, who stated that his garden was within six miles of Westminster, said that for a long time his roses had been seriously injured by mildew, the fungus having baffled all his efforts to keep it in subjection. Some two years ago, acting on the advice of Dr. Williams, a member of the council of the society, he tried spraying his roses with a solution of a preparation known as Cyllin, and it had proved a complete success. He prepared the solution in accordance with the directions given, and he syringed his roses twice a week, with the result that not a trace of mildew was to be found on the leaves. He found it most necessary not to miss a week.

Mr. R. E. Felton expressed the opinion that it was a mistake to discourage new breaks of colour in roses, simply because the new colour is not quite in harmony with the existing colours. Juliet is very fascinating, and will make history; it gives certain colours that in certain lights are exquisitely beautiful. They should remember in connection with the colours of roses that when one has so brilliant a colour as to overpower colours less bright, it is only a question of time when, as mentioned by Mr. Rolt, we shall have other varieties equally remarkable for brilliance.

Mr. Easlea did not agree with Mr. Darlington that all roses should be perpetual, but thought it an advantage to have some that were quite ephemeral in bloom production.

Mr. G. Birch said that it would be of great assistance to rose-growers generally if a calendar showing the times of the blooming of the several sections could be prepared and published.

Mr. George Paul, V.M.H., strongly advised the planting of the stronger-growing varieties in shrubbery borders. The rugosas and other of the more robust kinds were able to withstand the competition of other shrubs, and when from six to seven feet high were remarkably attractive.

As intimated in our issue of last week, the proceedings terminated with a hearty vote of thanks to the President for his address.

Plumbago rosea.—This plumbago is of exceptional merit as a winter-flowering subject, and well deserves more extensive cultivation. At this season it may be readily propagated from the young shoots which have developed after the flowering season. Place four or six cuttings close to the inner edge of small sixty-sized pots filled with a compost of sand, leaf-soil, and peat in equal parts. Give sufficient water to settle the soil, and plunge in a gentle hotbed, if such is available, and keep the propagating frame closed until root action has commenced. After the plants have been inured to the light they may be potted up singly, using good loam and leaf-soil, with a little sand and peat added; pot firmly, and keep the plants well sprayed to encourage growth. The tips of the growing shoots may be occasionally pinched out if the plants do not break freely otherwise. Plumbagos must not be allowed to suffer from want of rooting space until after the final potting; for the latter use a compost of rougher material, and add a small quantity of well-decayed manure. Pots of five to six inches diameter are usually quite large enough.—John Donoghue, Bardon Hill Gardens.

SPRING-FLOWERING CEANOTHUSES.

With a few exceptions the various kinds of ceanothus which blossom during the spring months are not hardy enough, unfortunately, to stand uninjured in the open ground, except in the more favoured parts of the country, such as Cornwall and South Wales, for, although they may escape from injury through a mild winter, they can never be considered safe. As the majority are evergreen, however, and, in addition, of a floriferous character, they well deserve a place on a wall, where the slight protection thus afforded enables them to withstand the severity of all ordinary winters.

Except that they are not very hardy, it cannot be urged that these ceanothuses are difficult to grow, for in ordinary garden soil they form vigorous shoots, and soon cover a considerable area. They cannot, however, be successfully transplanted, except as quite small examples, for the branch system grows out of all proportion to the roots, and it is difficult to move a plant with a ball of soil so as to cause little or no root disturbance. Propagation is effected by means of cuttings, and it is a good plan to root a small batch of cuttings of each kind every summer, and keep them in a cold frame for the winter, in case of a mishap to the old plants. As they blossom on the previous year's wood care must be taken not to prune away any wood until after the flowers have fallen. Pruning is very necessary, however, in regard to wall-grown specimens, for if not cut well back as soon as the flowers fade the plants quickly become overgrown, and stand out too far from the wall to gain the necessary amount of protection in winter.

Another use to which these plants may be put is to plant them in large pots and tubs, and use them for the decoration of conservatories and corridors. Throughout winter they may be stored in a cold house or frame. Young year-old plants are also effective for table decoration, for the blue flowers supply a colour which is not common at this time of year.

The species which concern us most are chiefly of Californian origin, and are as follows: C. integerrimus, a tall-growing shrub, with slender branches, bearing large inflorescences of lilac flowers. C. papillosus, a vigorous habited plant, readily distinguished from other kinds by reason of its long narrow leaves, which are covered with viscid hairs containing a fragrant oily substance. The flowers are borne from terminal and axillary buds, and are a pretty shade of blue; they open during April and May. C. rigidus is perhaps the most showy of all, for its flowers are borne in dense heads from almost every leaf axil on the previous year's wood. They are of a rich deep shade of blue, and open in April. The species may be readily detected among others by reason of its short leaves, which are deeply lobed, and its stiff manner of growth.

C. thyrsiflorus is sometimes spoken of as the Californian lilac, and is the hardiest of those mentioned. In the neighbourhood of London it grows in the open ground to a height of 15 or 18 feet. Its oval leaves are half an inch to an inch long, and the flowers, which appear with great freedom in May, are blue in colour. C. Veitchianus is an exceptionally showy species. It grows freely, forming sturdy, but somewhat slender growths, clothed with small evergreen leaves, and during May with showy blue flowers. It is suitable for both wall and pot culture.

W. Dallimore.

PERPETUAL CARNATIONS FROM THE FLORISTS' STANDPOINT.

The long list of names and varieties in our flowers are a perpetual embarrassment to the average amateur and gardener alike, who is simply in search of the few best varieties. Those who cannot attend the leading shows have to rely upon reports and catalogue descriptions, which, no matter how they are written, rarely, if ever, convey quite the correct description to the reader. Hence the deductions of others, governed by the editorial blue pencil, are a guide to those who are in search of just the few best varieties.

The merits of a flower as a commercial commodity are revealed more accurately in Covent Garden Market than anywhere else in the world. For there we have congregated together the largest number of expert flower producers selling their products to expert buyers.

Sentiment may rule the enthusiastic amateur, sentiment may govern the specialist, but it never influences the purely commercial florist. It is he who must know the taste of that supreme judge, the public, and it is he who must know those varieties which best enable him to display his art. Hence flowers which are beautiful, shades which harmonise, are the only ones which meet with any considerable favour in the eyes of the florist.

The cool, calculating market grower, who produces carnation flowers, not for their enchanting beauty, nor for their several other charms, but solely for the financial results he can obtain, will only grow such varieties as produce sufficient flowers to make their culture profitable. So that between these two groups of experts, the one searching for beauty, the other demanding healthy, free-flowering varieties, we have the greatest criterion of all. They are the greatest judges of merit in our modern varieties of perpetual-flowering carnations, much to be preferred to floral committees, and their verdict is far more valuable than First Class Certificates.

We will therefore restrict our attention purely to varieties as we find them favoured in London's great floral market.

In white varieties there are only two found in large quantities, White Perfection being the strongest favourite, on account of its purity of colour and perfectly formed flowers. The grower finds that the plants occupy less room than some of the other varieties, hence he is able to procure at least as many flowers per foot of space. White Enchantress, now that the stocks have been carefully selected, and an absolutely pure strain procured, has increased in favour, and promises to be the white grown in the greatest quantity next season. This season's three white novelties will receive their test during next winter, but exclusive of the varieties mentioned there are hardly any other white carnations seen in the market.

In pink shades, Enchantress, of course, and Winsor, lead in their respective shades, with May Day becoming increasingly popular. Its perfectly built flowers and delightful salmon-rose colour, coupled with the freest habit of growth of any variety, makes it indispensable to all. Rose-pink Enchantress and Dorothy Gordon, which are almost, if not quite, identical, are seen in decreasing quantities. The shade of colour, which is considered a little crude, is alone the cause of this decline in the estimation in which they are held by growers.

Mrs. H. Burnett remains the stand-by of the salmon shade, but May Day, though distinct in tone, is being substituted for it on account of its greater productiveness. In dark or cerise-pinks, Mrs. T. W. Lawson and Afterglow are found in decreasing quantities. Mrs. C. W. Ward will supersede both these varieties, and promises to be the most popular cerise variety next season. Its good all-round qualities bespeak a long life for it. There are several other varieties, also some promising novelties and seedlings, seen in varying quantities, but we are restricting our remarks to established favourites.

A battle royal goes on for supremacy in the red section, and it is difficult to judge between Britannia and Beacon as to which is the most popular. I should say Britannia was favoured by those who cultivate in pots, and Beacon by those who grow planted out, while we all expect to see the new variety Scarlet Glow firmly establish itself with both grower and florist next season.

The demand for crimsons is limited, but Carola leads, followed by Wanoka and Black Chief. At present there is no yellow variety of sufficient merit to interest Covent Garden, hence only occasional lots are seen. There is a small, though constant demand for certain fancy varieties, Mikado being perhaps the most popular of these. That variety has undoubtedly made a market for heliotrope varieties. Marmion also sells well, though not nearly so readily as a few years ago. Royal Purple also has a market, and if we only had a good free-flowering white, pink-striped variety, something in the way of old Mrs. A. Patten, it would have a limited, though constant, demand, as also would a good white, flaked pink, in the way of the old variety Prosperity.

It will be seen, therefore, that the average Covent Garden grower only grows some six to ten varieties, the bulk of which are pink and white, followed by red. He aims to grow as few varieties as possible, but makes sure that his collection contains the best, testing each year the most promising novelties.

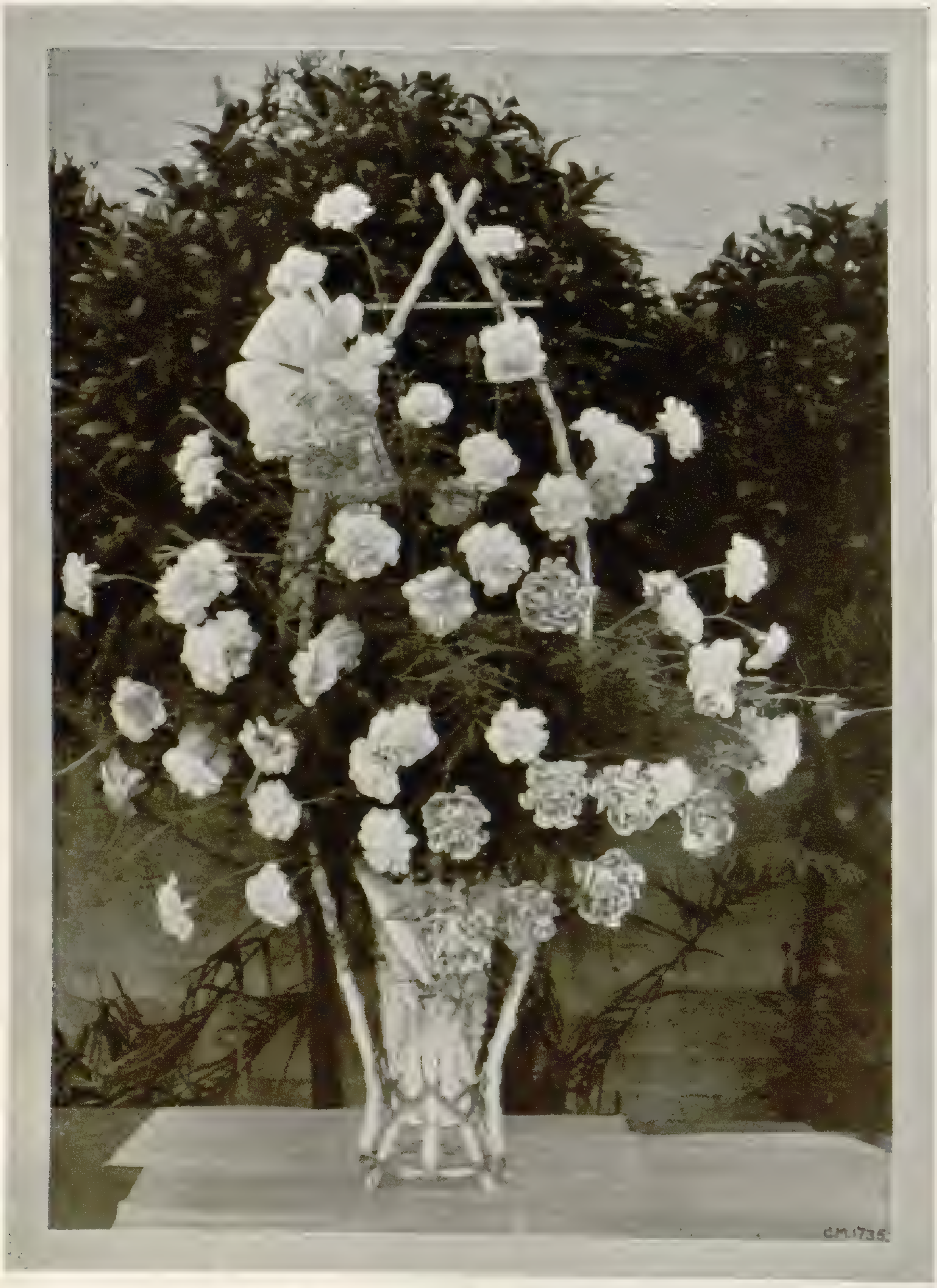
Montagu C. Allwood.

CARNATION R. F. FELTON.

A beautiful and large-flowered pink perpetual variety, raised and exhibited by Mr. H. Burnett, Guernsey.

PERPETUAL-FLOWERING CARNATIONS AS BEDDING PLANTS.

To those who desire to break away from the ordinary run of bedding plants for the summer decoration of the garden, I would suggest that the perpetual-flowering carnation should be given a thorough trial. Of its value for this purpose there is ample proof, as in addition to individual efforts which have been made at various places throughout the country, a series of trials under the auspices of the Perpetual-flowering Carnation Society have been held during the past two years in the Royal Botanic Gardens, Regent's Park. These were instituted in order to prove the value of this popular type of carnation for garden decoration.



FIRST PRIZE BASKET OF CARNATIONS.
Arranged and exhibited by Mrs. K. Hammond, Chelsea, at the Perpetual Carnation Show.

A series of plants were grown in the Royal Botanic Gardens throughout the year, and three distinct stages of growth were selected as most suitable for this purpose. It may perhaps prove interesting to describe the method most satisfactory in detail. Cuttings were taken in the early part of May, placed in a frame in a warm greenhouse, where the majority were rooted by the end of May, or early in June, stopped once, and planted out in the open border not later than the first week in July. Ordinary border culture was given, and due attention paid to watering, staking, and tying as required. The plants commenced flowering in September of the same year, and were lifted early in October, and planted out on the benches in a light glass house, where they continued blooming throughout the whole of the winter months.

After being gradually hardened off they were planted in an open border in May of the following year, and, being in bloom when planted, gave an immediate effect, and continued to provide a succession of flowers throughout the whole of the summer and autumn months, and were only checked by the falling temperature in the winter.

The plants were set out in groups along the front of an open border facing due west, and given ordinary border culture. No stopping was done after planting.

E. F. Hawes.

OUR CARNATION ILLUSTRATIONS.

In the present issue we give some prominence to perpetual-flowering carnations because this is the time of year when the blooms of this delightful class of flowers are at their best, having due regard to size, colour, and length of stem. Then also this is a capital time to secure young stock in small pots, to be grown on into fine plants to flower later in the season.

At the recent exhibition of the Perpetual Flowering Carnation Society, one vase of blooms stood out conspicuously by reason of the fine size and rich colour of its thirty beautiful specimens of the variety named Mrs. C. W. Ward, a deep cerise-pink flower of great beauty and usefulness. This was shown by Mr. Bertie E. Bell, Castel Nursery, Guernsey, and gained for him the first prize in its class, and also the silver-gilt medal for the best vase in the open section.

A particularly attractive exhibit at the Regent's Park show was the group of blooms arranged by Messrs. Young and Co., Hatherley, Cheltenham; not only were the flowers good in size, colour, and length of stem, but they were well set up, and Mr. Taudevin, the manager of the company, had skilfully arranged a greenish background behind his flowers, and in front of the glass side of the corridor. This background was just dense enough to break up the bright light, and so enable visitors to see the flowers in comfort, which would not have been the case had the background been absent. Apparently trivial matters, properly considered, often become important ones, and this question of a background for flowers staged against a bright light is a case in point. Messrs. Young and Co. secured a gold medal for their first prize exhibit.

The use of carnations in floral designs has been exemplified over and over again in these pages, but we give an illustration of one more example. This is a high basket of blooms as exhibited by Mrs. K. Hammond, of Chelsea, at Regent's Park last week, which was awarded a first prize. Only two varieties were used, i.e., White Perfection and Marmion. The latter, grouped towards the base at one side, was very effective, and if a few flowers of this variety had been placed towards the top, near the ribbon, the design would have been more effective, and no less artistic.

As a commercial item the perpetual carnation is no small one in the flower trade of our great markets, and while it is essential that good varieties should be selected and fine blooms produced for market purposes, it is also essential that when these are grown they should be well packed, otherwise the returns will suffer. One class at the recent show was for sixty blooms of each of two varieties, thirty-six to be shown in a vase and two dozen packed in a box, as for market, in each instance. There were several competitors, and Mr. W. C. Wallace, of Eaton Bray, Dunstable, won the first prize. One of his boxes, packed with beautiful blooms of Rose-pink Enchantress, is shown in the accompanying illustration.

A beautiful new variety that promises to occupy a very high position in the pink group is R. F. Felton, raised and exhibited by Mr. H. Burnett, Guernsey. The blooms are of fine size and form, and the colour is a delightful shade of pink, midway between light salmon-pink and rose-pink.

Make your Garden a delight by using

CANARY GUANO.

There is nothing like it for producing the best possible results in the garden. For improving Lawns, increasing the size and brilliance of Flowers, and producing heavy yields of Vegetables there is no Fertilizer that has given such excellent results. Canary Guano is sold by practically all Seedsmen throughout the United Kingdom and is used all over the world. TRY IT.

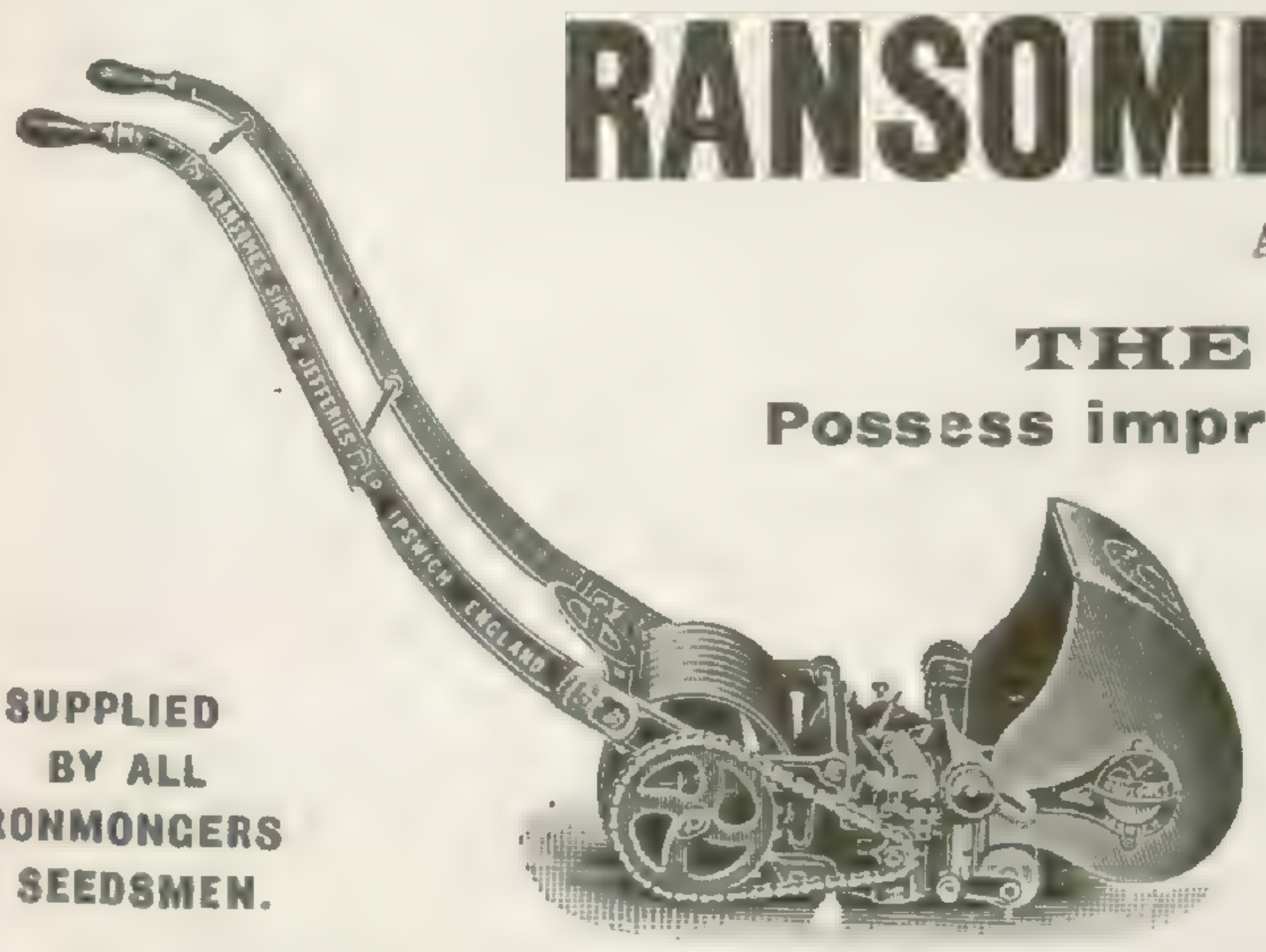
Sold in **6d., 1/-** and **2/6** Tins; and in bags from **3/6** to **20/-.**

Further particulars sent post free by the Manufacturers

THE CHEMICAL UNION, LTD, IPSWICH.

RANSOMES' LAWN MOWERS

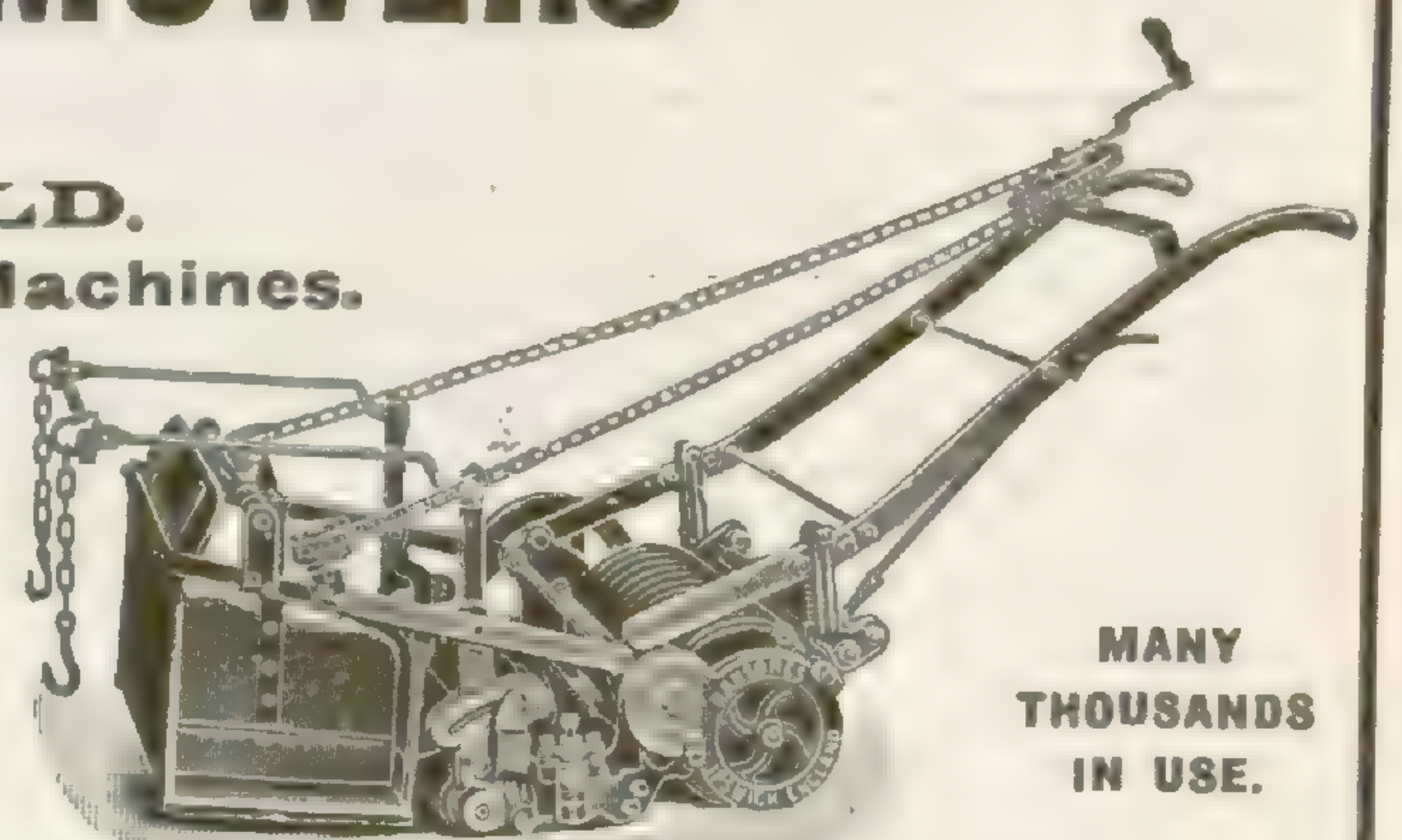
Appointed by Royal Warrant.



THE BEST IN THE WORLD.
Possess improvements embodied in no other Machines.

Recent Awards.

3 GOLD MEDALS.
7 SILVER MEDALS.



SUPPLIED BY ALL IRONMONGERS & SEEDSMEN.

MANY THOUSANDS IN USE.

HAND POWER MACHINES.
In all kinds and sizes.

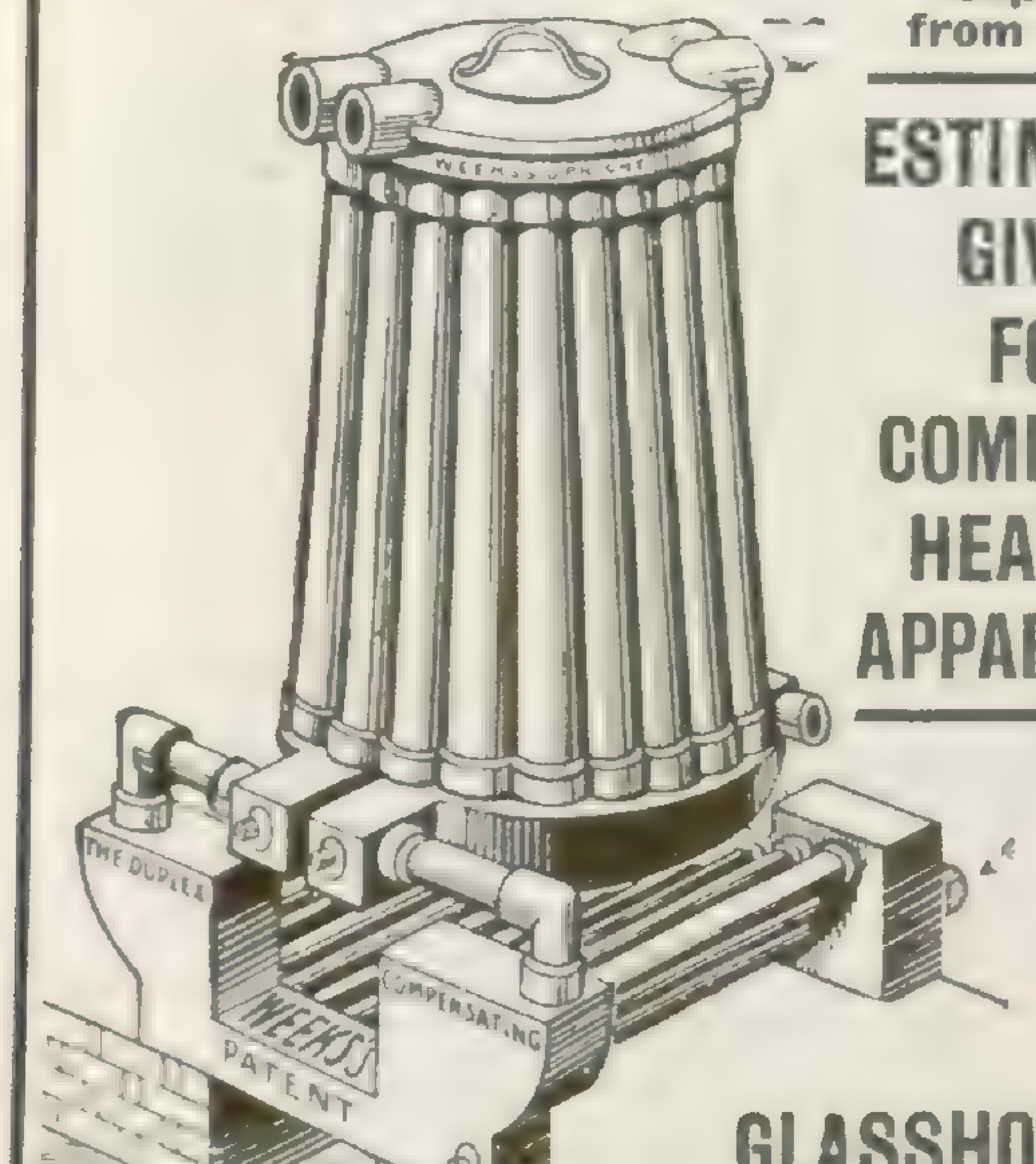
MOTOR LAWN MOWERS
The first brought out. Reputation Established.

HORSE and PONY MOWERS.
The best large machines.

Illustrated Catalogues Free on Application to— **RANSOMES, SIMS & JEFFERIES, LTD., THE ORWELL WORKS, IPSWICH.**

WEEKS'S BOILERS

supplied from stock.

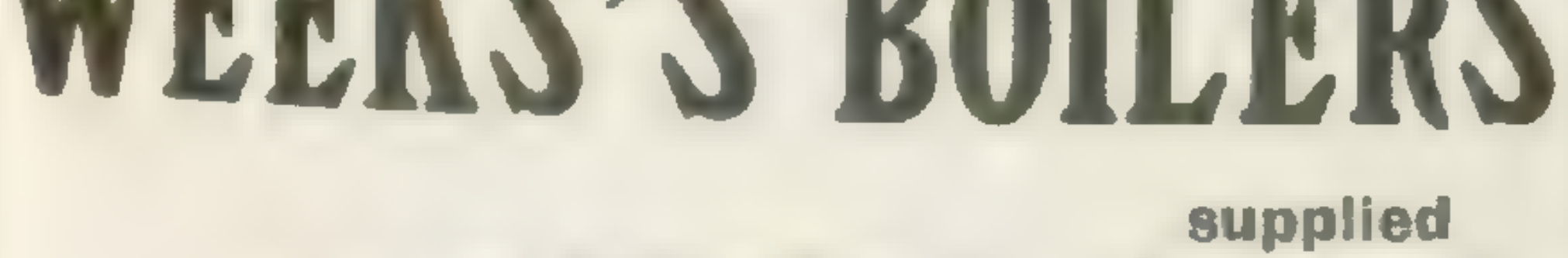


ESTIMATES GIVEN FOR COMPLETE HEATING APPARATUS

GLASSHOUSES.
Of Every Description.

J. WEEKS & CO.,
72, Victoria Street,
WESTMINSTER, s.w.

A NEW GARDEN SPADE (Carter's Patent).



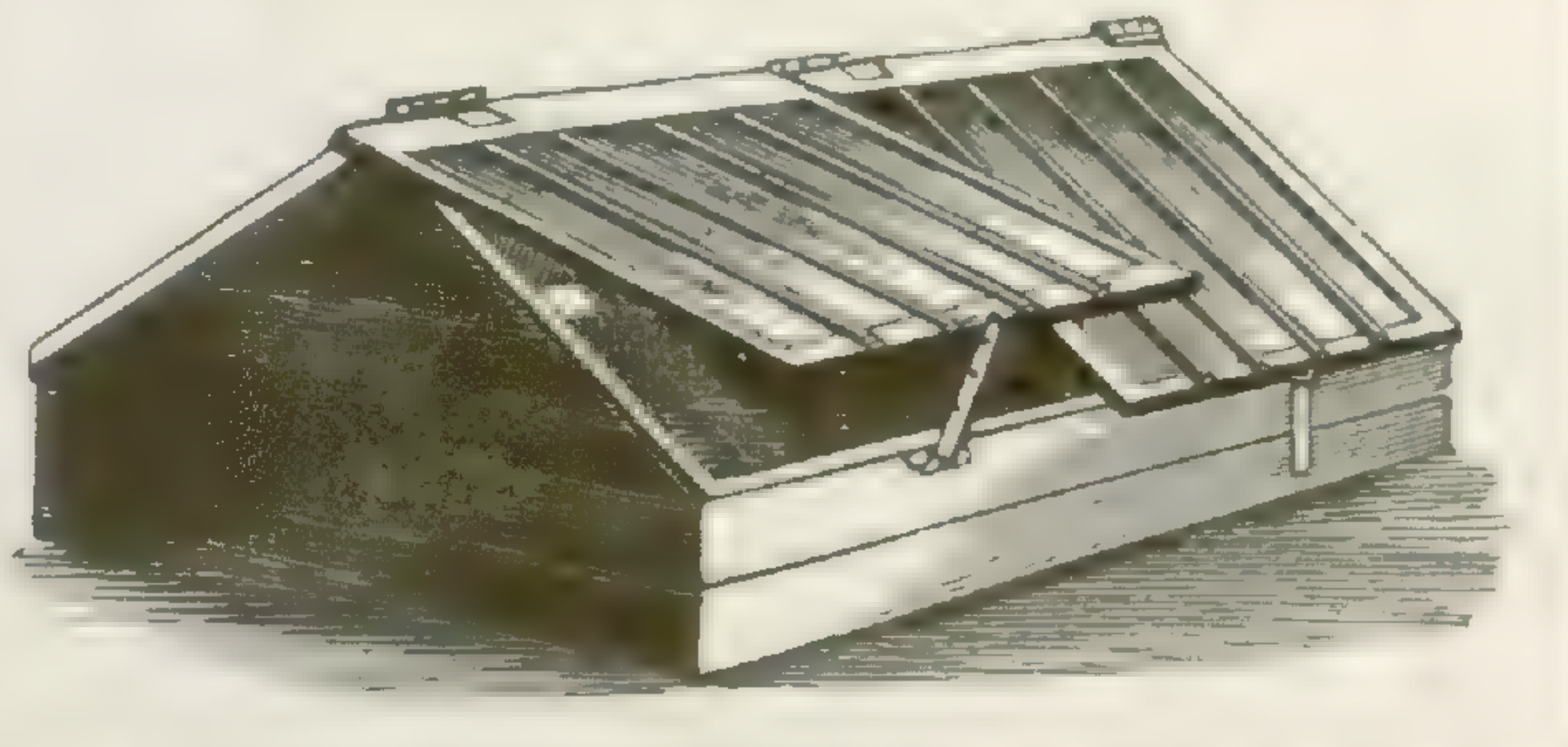
This is claimed to be the most effective Spade on the market Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

20,000 YARDS WIRE NETTING TO BE SOLD CHEAP. Send for lists. Carriage paid on lots of 20s.
DOUTHWAITE'S CITY WIRE WORKS,
116, Vicar Lane, Leeds.

PORTABLE PLANT FRAMES

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices. Glazed and Painted.		£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. " 4ft. "		2	5	0
6ft. " 5ft. "		2	15	0
12ft. " 4ft. "		4	0	0
12ft. " 5ft. "		4	15	0
12ft. " 6ft. "		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
ROYAL HORTICULTURAL WORKS,
MIDDLETON, MANCHESTER.

WATSON'S LAWN SAND.

(The Only Original.)

Destroys Daisies, Plantains, Dandelions, &c., and at same time Invigorates the Grass.

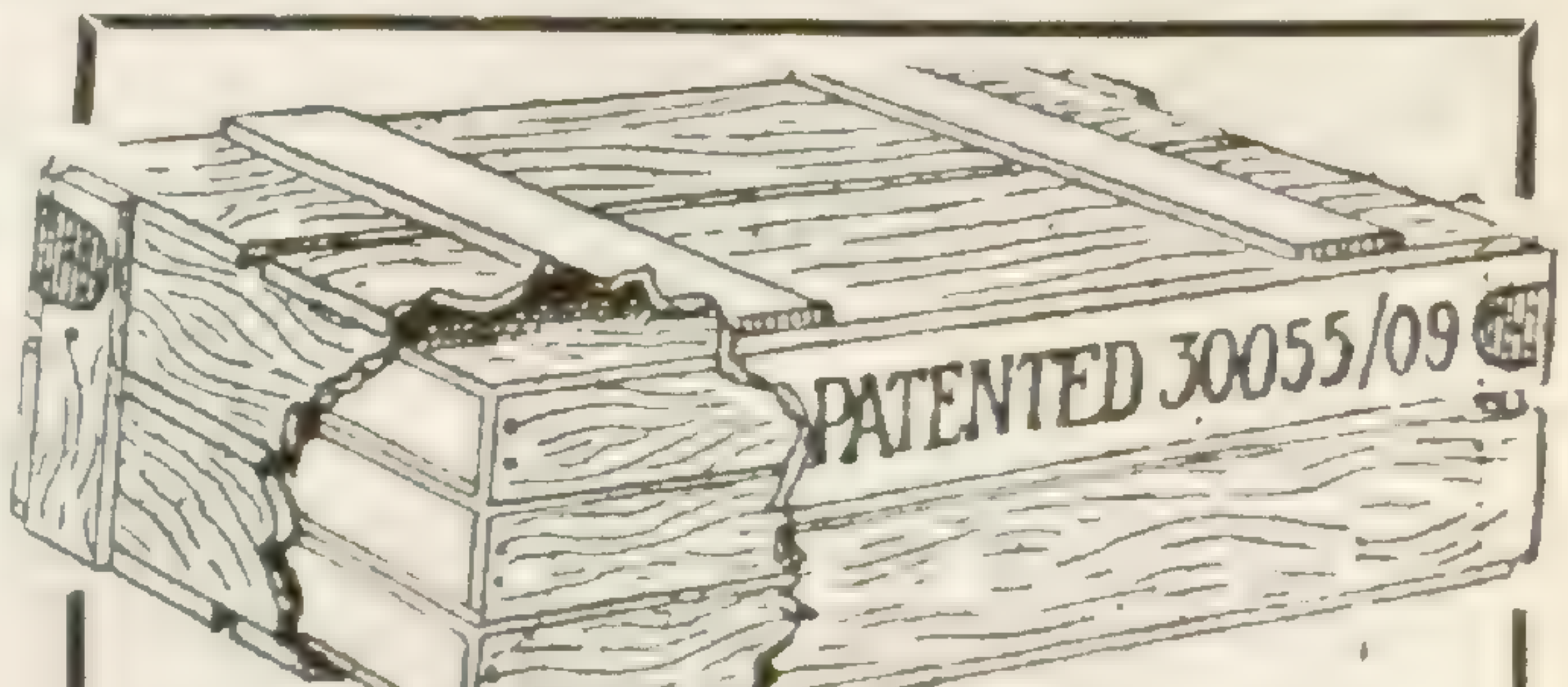
34/- per cwt.; 56lb. Kegs, **18**/-; 28lb. Tins, **9/6.** Canisters, **5**/-, **2**/**6**, and **1**/-.

Please see that you get the genuine article.

Sold by Seedsmen and Nurserymen.

A. J. BARBOUR & Co., 8, Upper Fountaine St., LEEDS

PEA TRAINERS. The "Paragon" and "Peated" patents, made 4ft., 5ft., and 6ft. high, and any length. Prices from 5s. 6d. per set, carriage paid. Write for leaflet. THE PEA TRAINER CO., Bridge Street, Banbridge.



Use DAY'S

Fruit Trays & Crates

No more damaged fruit. If properly packed it is impossible for it to get damaged.

The trays hold about 3lb. of Strawberries, Gooseberries, or Cherries, and are non-returnable, price 2d. each. The Crates are 1s. 6d. each, and may be returned to growers for renewals. C.W.O.

They are strongly made, and growers speak very highly of them.

R. D'E. DAY, THE NURSERY, SUTTON SCOTNEY, HANTS.

THOMSON'S Celebrated
VINE, PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES
SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE.

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant

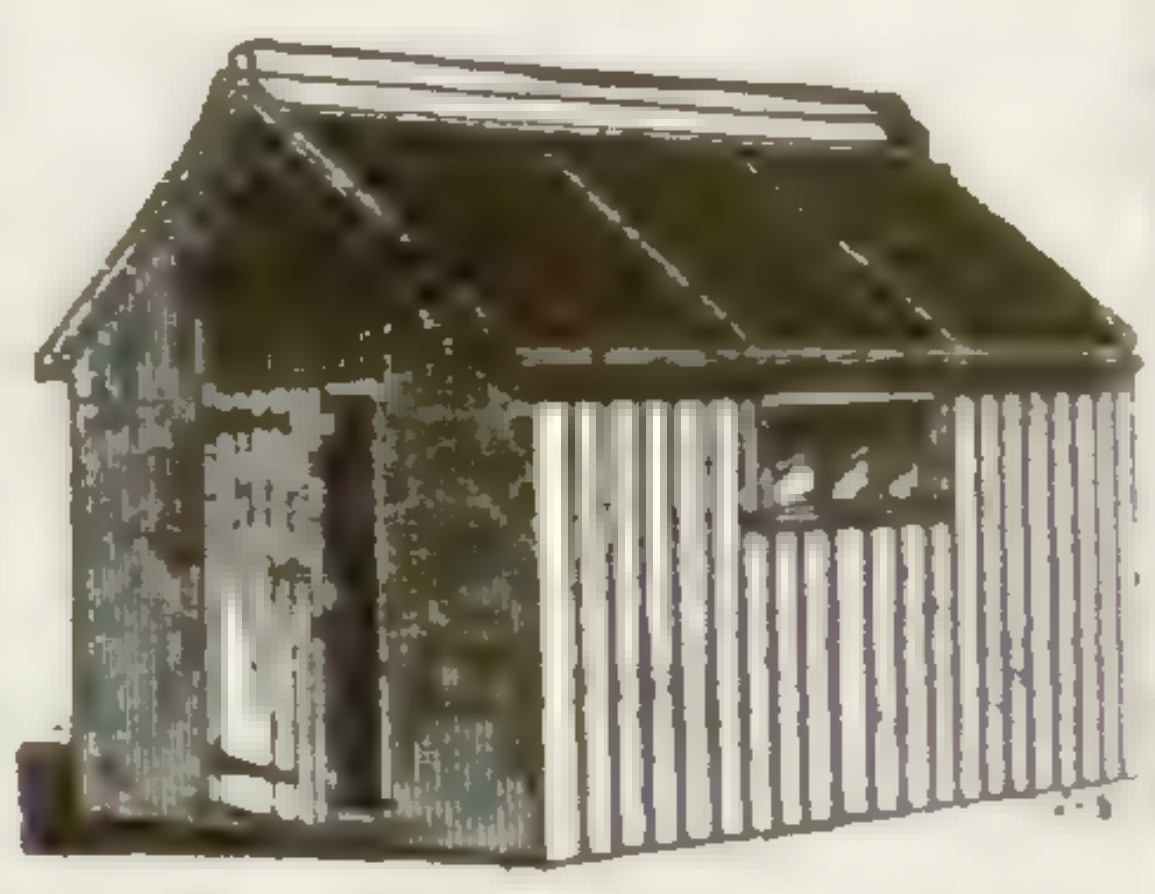
Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

PORTABLE BUILDINGS. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

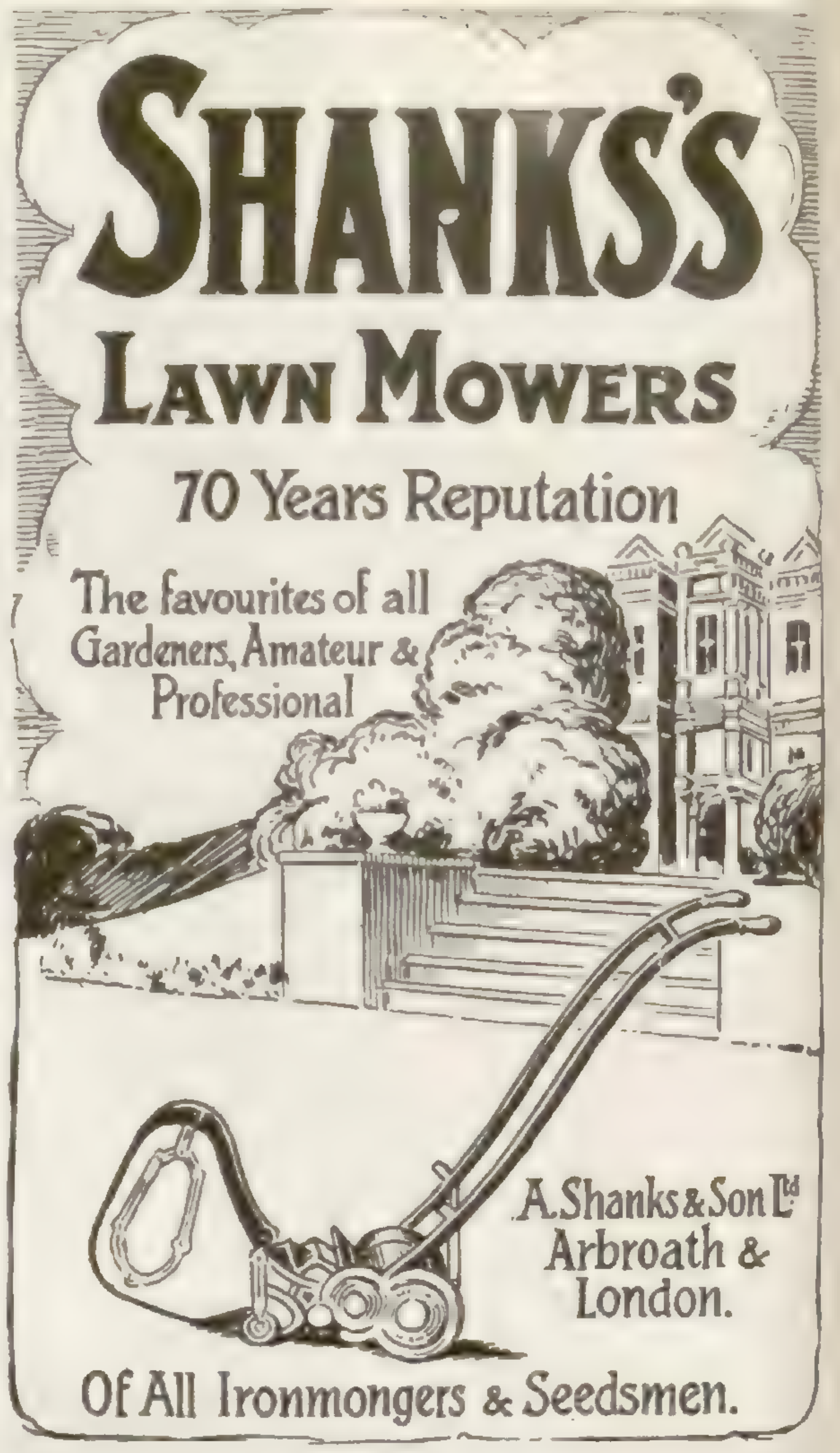
CASH WITH ORDER.

SIZES.		Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

'Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
ESTABLISHED 70 YEARS. *BEDFORD.*
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.



SHANKS'S LAWN MOWERS

70 Years Reputation

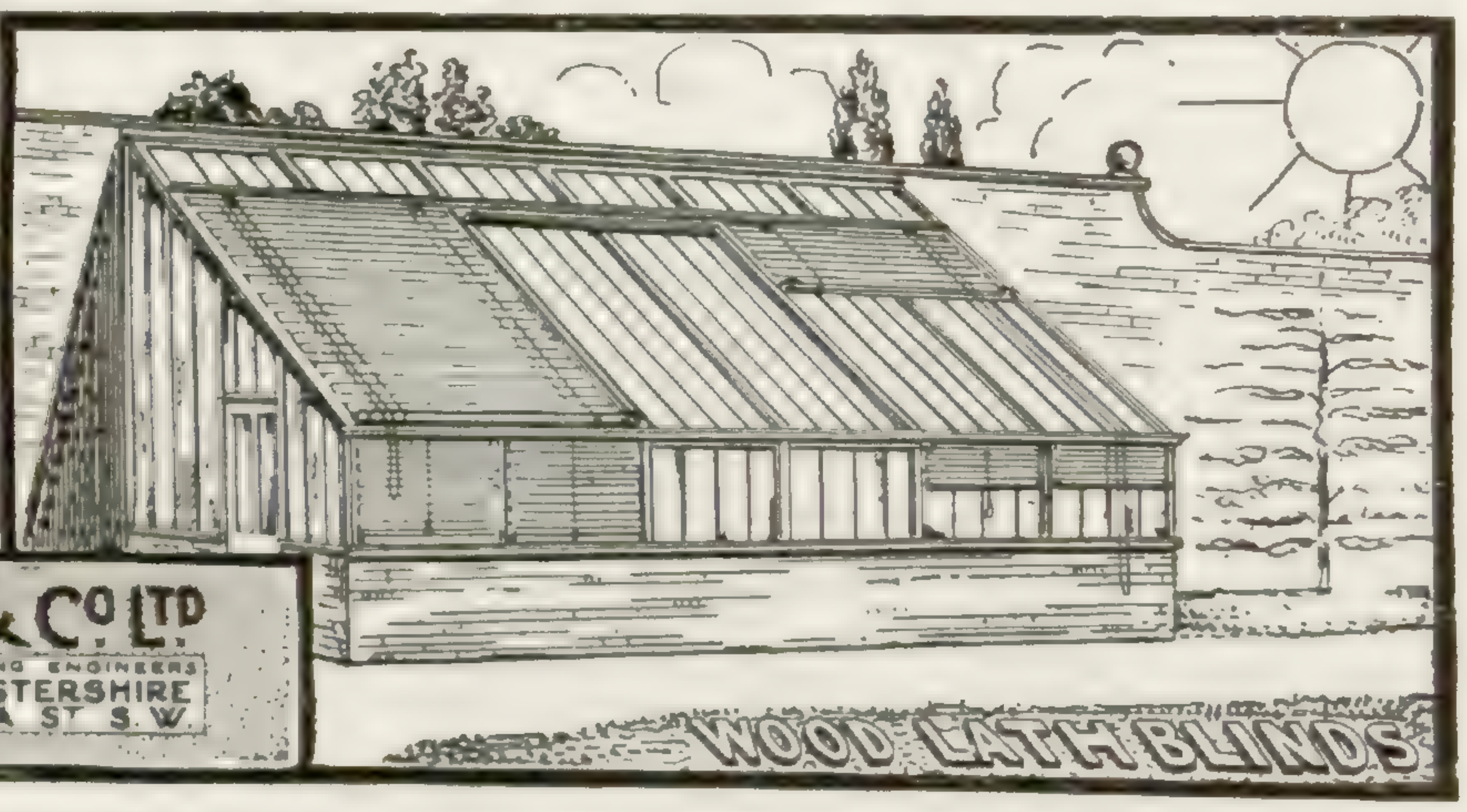
The favourites of all Gardeners, Amateur & Professional

A. Shanks & Son Ltd
Arbroath & London.

Of All Ironmongers & Seedsmen.

WOOD LATH BLINDS ADMIT SUFFICIENT SUNLIGHT SO NECESSARY FOR Growing Purposes.

Write for Special Catalogue.



MESSENGER & Co Ltd
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office: 122 VICTORIA ST S.W.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

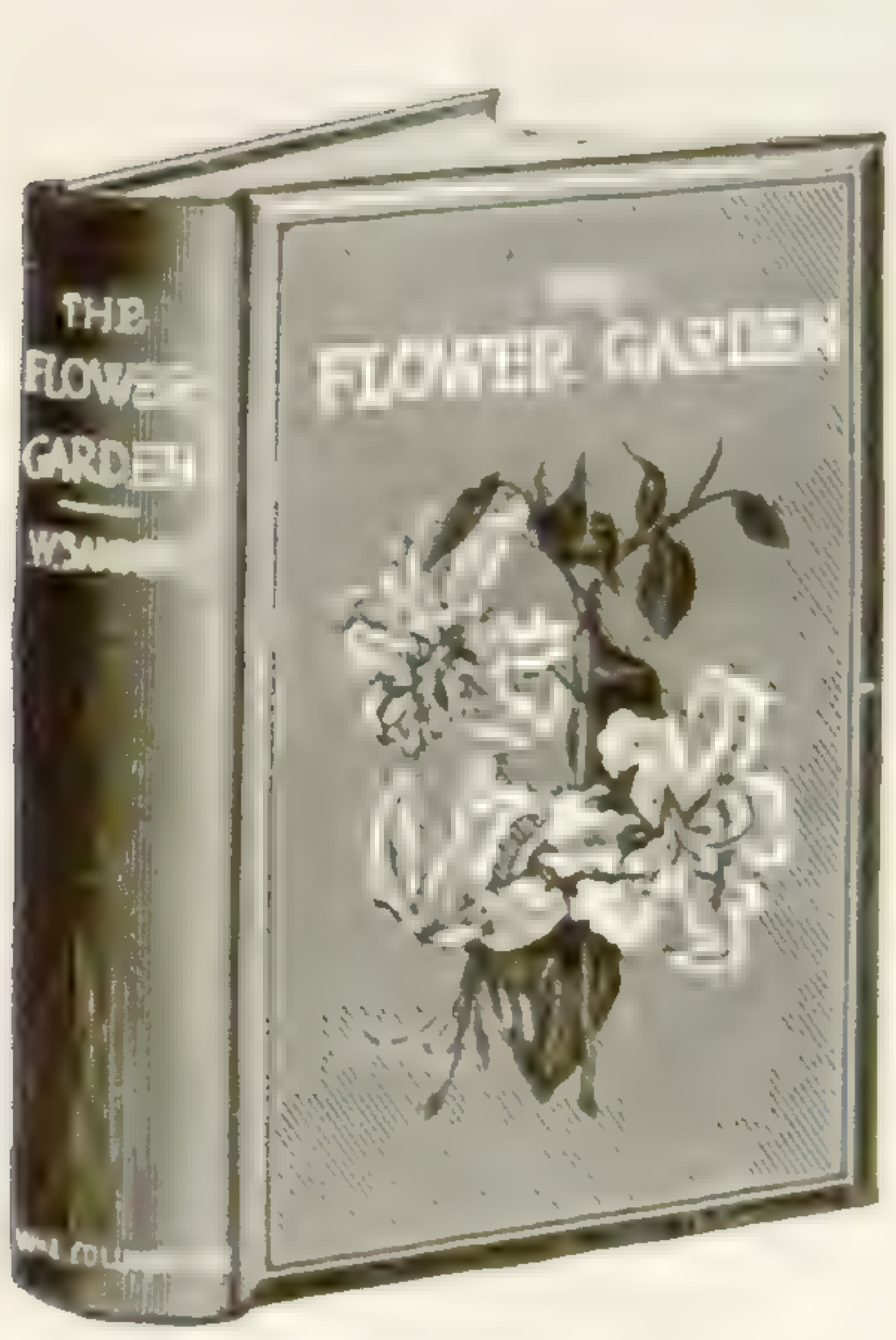
Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to
EPPS & CO., Ringwood, HANTS.

THE MOST USEFUL GUIDE.

THE FLOWER GARDEN,

By T. W. SANDERS, F.L.S., Editor of "Amateur Gardening."



A Complete Guide to Planting and Management of the Flower Garden and the Cultivation of Flowers, Plants, Trees, &c., adapted for Outdoor Culture.

THE CONTENTS INCLUDE—

- Fashioning the Garden.
- Beds and Borders.
- Walks and Paths.
- Lawns and Tennis Courts.
- Rockeries and Ferneries.
- Arbours, Summerhouses, Arches, and Pergolas.
- Edgings.
- Walls and Fences.
- Garden Practice.
- Propagation.
- Colour Arrangement.
- Bedding.
- Annuals and Biennials.
- Bulbs.
- Hardy and Tender Border Plants and Flowers.
- Climbing Plants.
- Trees and Shrubs.
- Pests and Diseases.

480 PAGES, ILLUSTRATED BY 64 PLATES OF BEAUTIFUL GARDEN SCENES, PLANTS AND FLOWERS, AND MANY EXPLANATORY DIAGRAMS.

Price **7/6** net; by post, packed in box, **8/-**

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE," 148 & 149, Aldersgate St, London, E.C.

Please send me a copy of **"THE FLOWER GARDEN,"** *by Post, for which I enclose remittance of* **8/-**

Name ....

Address ....

PERPETUAL-FLOWERING CARNATIONS.

The ever-increasing popularity of this delightful section of carnations may yet have a still greater impetus given to its cultivation. The perpetual-flowering carnation is gradually being cultivated in most private gardens. In some places they are well grown, in others with a fair measure of success, and in some very indifferently. The various degrees of success are not always the fault of cultivators.

Very frequently, when owners of private gardens wish these carnations grown they think it only a matter of finding the necessary room, somewhere under glass, but it often happens that the structures are unsuitable. A span house running north and south is the best kind of house for their cultivation. Elaborate structures are unnecessary; a light, well-ventilated house for flowering the plants in, a lower one for growing them on, and some frames for summering them, will afford sufficient room for keeping up a succession of bloom. The amount of accommodation will be governed by the supply of blooms required. Whereever grown, they should have the houses wholly devoted to them, and not be housed with other subjects. One may frequently see them growing in lean-to houses, but such houses do not give them a sufficient amount of light.

Propagation is really not difficult, as cuttings root freely placed in shallow pans of sand. These should be placed in a case or frame, and if a little bottom heat can be given it will hasten the rooting process. A close, stagnant atmosphere in the propagating frame should be avoided. A temperature of 55 degrees to 60 degrees will be suitable, and as soon as the cuttings are rooted they should be removed from the frame and gradually inured to more airy quarters. Put them singly in small pots in medium loam, a little leaf-soil, and sand. Keep the young plants steadily growing near the glass.

As the plants fill the small pots with roots they should be transferred to larger sizes. I am not a believer in overpotting. A seven-inch pot will carry a large plant, and, with judicious feeding, will sustain it in full vigour. After a good crop of flowers has been produced the plants should be bedded out in the open to make room for younger stock coming on. When shifting from the small pots use a five or six-inch pot of a good carnation manure to a barrowload of soil. Cultivators have their pet manure, but the manurial matter used with the soil should not be too stimulating, but should promote a firm growth with that glaucous colour of the "grass" so dear to the cultivator. When they are pushing up their flower stems "Clay's" and soot water are both beneficial, at the rate of an ounce to a gallon. The solution is best prepared by placing a given quantity in a bag, and immersing it in a tub of water. The use of these fertilisers should be alternated with supplies of clear water, and the use of manures should be stopped as the blooms begin to open.

During the summer months the growing plants are best kept in frames, where the sashes can be placed over them if necessary. They can remain in these quarters until autumn, when they should be placed in their flowering houses. While in the frames they should be protected from heavy rains, and also heavy night dews. If aphis show at any time they can be destroyed by fumigation. Some cultivators give the growing plants occasional syringings, others do not believe in it. This is best decided with a full knowledge of the surroundings; no set rule can be given.

"Rust" is the disease most dreaded, and while some varieties are immune from attack, others may be badly affected. Some good cultivators probably think it due to some defect in the cultural details. While improper treatment doubtless fosters the spread of "rust," it is not solely due to that, for in some districts, whatever the treatment, it will appear. In such places the plants will require extra attention. It is in such places that the watering pot must be used with judgment, and also the matter of ventilation requires very careful attention.

Generally speaking, a good market variety is also a good one for private gardens, but in the matter of colour individual taste has to be considered, and with some owners of gardens this is very pronounced. Private growers should be careful to ascertain their employers' wishes in the matter of colour, and only grow those varieties which please them. There are plenty of varieties from which to select; some say too many, but I have not so far found too many good things. The cultivator should always endeavour to obtain the best. Some varieties deteriorate quickly. It is therefore necessary that new varieties should be raised with better constitution, and other good points, if possible, and also to give that stimulus which is so necessary.

The grower who is timorous of buying new varieties should invest in a couple of plants of each to try them; it is the only way to find out which are the best. Promising new kinds are, in pink, R. F. Felton, Gloriosa, May Day (not quite new); rose-pinks are Rose Enchantress, Dorothy Gordon may supersede the last-named; Admiration, Roseate Dawn, Mrs. H. Burnett, salmon-pink; Lady Alington, salmon-rose, scented; rosy-cerise pink, Mrs. C. W. Ward, Colossus, Afterglow, Winsor; salmon-red, Rose Doree, and Rival. Reds and scarlets, Britannia, Beacon, Scarlet Glow; whites, Sarah Hill, White House, White Perfection, Niagara, White Wonder—this may displace other whites; crimsons, Carola, Harlowarden, Black Chief, Gladys; fancies, Fireglow, Jessica, Conquest, Bay State; shades of yellow, Fortuna, and the doubtful J. Whitcombe Riley; this may improve when English-grown stock has been tested.

T. H. Slade.

SEASONABLE WORK AMONG "MAIDEN" ROSES.

There is much to do at the present time among the young, or "maiden," roses, that have resulted from budding last summer. Dwarf stocks of cutting briars are always the most forward in growth, and these will now need looking over carefully. All suckers must be cut out with a sharp knife before earthing the young plants up with a little of the surrounding soil. The soil should always be in a fairly fine condition when drawn against the young rose shoot.

When earthed up in this way the union of stock and bud is made more complete, the soil keeping them softer, and assisting in a better and more uniform swelling. The same process is carried out with all dwarfs no matter whether the stock be polyantha, manetti, or seedling briar.

If a few early and really good flowers are wanted the maiden shoots are not headed, but where good plants are wanted it is well to pinch out the tips of these shoots as soon as they reach a length of six inches. This induces a stocky growth from the lower eyes, which will soon break. Heading, or pinching out the tips also causes a more complete union between rose and stock, securing a sounder base before strain from wind and rain affects the tender plant. The same process of heading should be carried out with the young growth upon standard briars.

Sticks will be needed in most cases to keep the young plants steady during the first season. In the case of dwarfs one should consider a little as to the height each variety will generally attain. It is ludicrous to find a five feet stake to a rose of the La France, Baroness Rothschild, or Victor Hugo type, or one suitable for these asked to do duty for Frau Karl Druschki, Avoca, or Margaret Dickson. The extra-strong growers, such as Crimson Rambler, Gloire de Dijon, and the Wichuraianas, need a strong stick fully four feet out of the ground to make them quite secure. Care must be taken in putting the stick into the ground, or the rose bud will be pushed out of the stock. But more care than ever is necessary when tying the rose to the sticks. If drawn in at all forcibly the rose growth will frequently break out at the socket, and then all past labour will have been in vain. Draw the shoot towards the stick steadily at the first tying, taking it in closer as the plant advances in growth.

When tying standards it is not always possible to procure stakes that reach from the ground upwards, and leave sufficient top to secure the head to; but it is the better plan, where only a few are being worked. In this case the stem itself can be tied to the stake, and the whole made secure. Tie the young rose growth carefully as described for the dwarfs. All suckers should be promptly removed from the stems of standards as soon as they are observable, thus throwing all the sap into the rose growth. If more than one bud has lived upon standards it is not so necessary to pinch out the tips, but the union will be assisted by this check to too rapid growth and swelling, as in the case of dwarfs.

I am much in favour of a little artificial manure sprinkled between the rows of dwarf roses before earthing them up. And seedling weeds that may appear around the plants should be removed by hand, as it needs more than ordinary care to use the hoe around the plants, nor do we want to remove the soil from around their base. Upon all favourable opportunities the hoe should be used freely among the maiden roses.

Some very dwarf growers, such as Mildred Grant and Lady Mary Fitzwilliam, do better if the flower bud is picked out as soon as observable, unless, as before hinted, an early bloom is wanted. Monsieur Noman, Horace Vernet, Louis Van Houtte, Duchess of Bedford, and a few more, are frequently grown as maiden dwarfs solely to secure the first flower, and in such cases one much treat accordingly.

Not a few roses are grafted because of the difficulty found in securing buds at a suitable time during summer; some, too, such as the dwarf polyanthas and Chinas, do not produce a bud sufficiently large and strong to insert upon dwarf stocks, hence the wood is used for grafting, and the young plants turned out later on. My own are already planted in the open. Roses will stand much bad weather if the plants have been partially hardened off, and we like to get the roots into the ground as soon as possible. Let the soil be well prepared, and be careful to plant deep enough to cover the junction of graft and stock. Chinas, dwarf polyanthas, and such free-growing teas as Madame Antoine Mari, G. Nabonnand, Edu Meyer, Corallina, Anna Olivier, Betty, etc., will make quite passable plants, and flower freely by late summer and autumn if treated thus. We also save a year of planting out and budding stocks by this means.

"Rosarian."

IMPROVEMENT OF LAWNS.

During the winter months old, worn-out lawns fall into a very bad state. The surface becomes sour and impervious to the passage of air; therefore the grasses cannot make a healthy growth in springtime. It is then a good plan to take a chain-harrow over the turf, so as to break up and disintegrate the sour and hardened surface. Rolling does not improve a lawn unless it is performed at the proper time, and more harm than good may be done by pressing the surface when it is in a wet, soggy condition. Especially is this so where the soil is inclined to be retentive, for a hard cap will be formed, and the growth of the grass seriously hampered. Where grass seeds are sown with the object of improving old, worn-out lawns, the best plan is to have the bare places dug over and enriched with good, well-decayed manure. All stones and lumps should be raked off prior to sowing. Seeding must be tolerably thick, and a light covering of fine sifted soil should be thrown over the seed. A very effective method of renovating old lawns is by simply sprinkling them with nitrate of soda two or three times during the season in April, May, and June, at the rate of about 3lb. to one square rod. This stimulates growth, and the sward becomes soft and springy.

Lawn Grasses.

For all general purposes, and where the soil is of a comparatively rich and loamy character, the best grasses, and those which most need encouragement, are as follows: Cynosurus cristatus (crested dogstail), Festuca ovina tenuifolia (fine-leaved sheep's fescue), Festuca duriuscula (hard fescue), Festuca rubra (red fescue), Lolium perenne tenue (perennial rye grass), Poa pratensis (smooth-stalked meadow grass), Poa nemoralis (woodside meadow grass), Poa sempervirens (evergreen meadow grass), Trifolium repens perenne (perennial white clover), Trifolium minus (yellow suckling). Standard mixtures are put up by most of the leading seed merchants, and there is no doubt that the finest and most enduring lawns are made by sowing seeds, for suitable turf can seldom be secured, even where a high price is paid. Suitable mixtures may be obtained, without perennial rye grass, to form an ideal garden lawn with a springy and close velvety texture capable of standing a great deal of hard wear. Fescues should enter largely into their composition, and all the grasses should be well blended.

These mixtures take longer to develop than do those including clovers, but they ensure the finest sward. Special mixtures should be ordered for sowing bare patches under trees and in shady places; the fescues should be left out, and similar quantities of Poa nemoralis substituted. Poa nemoralis angustifolium is the best of all grasses for producing a close and velvety sward under trees, for its growth is so close that it displaces weeds, and is green in the spring before most other grasses. It also does well in exposed positions. Lolium perenne (common rye-grass) must be distinguished from Lolium perenne tenue (perennial rye-grass); it is far inferior to the latter variety, which thrives on almost any soil which is not wet, and remains perfectly fresh throughout the winter. Before ordering a mixture of grass seeds it is well to specify the size of the plot that is to be laid down, and also the purpose to which the lawn is principally intended. Any respectable seedsman will then be able to supply the correct quantity and quality of mixture. Sometimes bare spots in lawns are merely scratched over with a rake during dry weather in spring, and seed worked into the soil, which is afterwards rolled.

Fertilisers for Lawns.

Stimulating fertilisers for lawn grasses are often applied too freely, with the result that a somewhat rank and coarse growth is produced; such quick-acting manures as nitrate of soda, for example, must be used with care on this account. Many gardeners sprinkle thin dressings of guano and fine mould over the lawn at frequent intervals in the autumn and spring; or from 1lb. to 3lb. of nitrate of soda per square rod may be substituted. Phosphatic manures are required to promote the growth of the clovers, the grasses being encouraged by the aid of potash. On many lawns the latter are in great preponderance, and during very hot weather they are quickly burnt up, and the lawn given a scorched and unsightly appearance.

Clovers, on the other hand, do not burn so quickly, and their growth may be encouraged by a good top-dressing of superphosphate at the rate of 2 or 3lb. per square rod. Old mortar rubbish forms a cheap and effective dressing for old worn-out lawns; when used, it should be screened, and spread thinly two or three times in autumn or spring. Weeds, such as plaintains, daisies, thistles, docks, etc., must be spudded out or destroyed with lawn-sand, and stimulating fertilisers given in sufficient quantities to enable the grasses to grow luxuriantly at the expense of the weeds. The latter can also be destroyed by a dressing of nitrate of soda, applied during hot weather; the grass will turn brown at first, but will resume its normal colour after the first shower of rain. If used simply for the purpose of stimulating the growth of the grasses nitrate of soda should be applied in dull showery weather.

J. C. N.

FIRST PRIZE AND MEDAL VASE OF MRS. C. W. WARD CARNATIONS.
Exhibited by Mr. Bertie E. Bell, Guernsey, at the Perpetual Carnation Show, on May 2.

CHRYSANTHEMUMS ON WALLS.

Early-flowering chrysanthemums are numerous, and are easily grown and flowered in the open borders in the usual way. But very few of the large-flowered ones can be successfully grown in the open air. A very little protection afforded them, however, makes much difference between success and failure at the flowering period.

Nearly all chrysanthemum growers possess surplus plants at this season, and such specimens are generally good ones. Though not required for pot culture, they may be planted at the foot of some bare walls and fences, where, in due course, both the foliage and the flowers will look very attractive. The blooms on plants so grown are easily protected at night when the weather is frosty, by fastening long strips of scrim or similar material over them. At one time, I believe, Mr. E. Molyneux grew a number of plants in this way, and I well remember an enthusiastic amateur cultivator keeping plants in bloom on a south-west wall until nearly Christmas. My own experience has taught me the usefulness of so growing a number of the larger-flowering varieties, too.

The principal points to note in this system of growing the plants are not to make the soil very rich, but feed judiciously while the plants are growing in the summer time; to avoid overcrowding by planting at proper distances apart and disbudding shoots in due course; to tie or nail up the main stems; to select dwarf and taller-growing varieties so as to clothe the wall with flowers as low down as possible—and this can be accomplished if tall and dwarf-growing sorts be planted alternately—and to disbud at the proper time in the autumn.

Single-flowered varieties look charming growing against walls, and those Japanese sorts that flower in pots under glass during the early part of November should be selected for training and flowering on open walls.

Geo. Garner.

GOLD MEDAL GROUP OF CARNATIONS.
Exhibited at the Perpetual Carnation Show, Regent's Park, on May 2. by Messrs. Young and Co., Hatherley, Cheltenham.

STIGMONOSE IN CARNATIONS.

Mr. Allwood's notes upon the carnation disease designated as "Stigmonose," are very readable, and emphasise the danger of this latter-day trouble to carnation growers. Hitherto my recent work among carnations has led me to depend more and more upon seedlings, as these give one material which is in every way healthy, sound, and free from fungoid disease, insect pests, and the debility associated with over-propagation.

The pity is that carnation growers in the past have thought too lightly of disease. A partial disfigurement of foliage has had little effect, so long as the crop of blossom was fairly good, and the stock of young plants increasing apace. I have handled many consignments of carnations during the past few years, but have rarely received a batch in which every plant was absolutely clean and healthy. My stock of Enchantress came into my hands with the curse heavy upon the plants. I have tended them with the idea of eradicating the disease, but, though the vigour of the stock has been improved, the affliction cannot be shaken off. The whole treatment has been to secure strong natural growth under clean conditions, but it looks as if the once glorious Enchantress will never regain her high place.

The theory that the sun has been the instrument of this disease Mr. Allwood has rightly discarded, for sunlight is inimical to weakness and debility in all walks of life. As to whether the original cause of disease is the punctures caused by insects, I am inclined to doubt. Rather would I hold to the idea that the marring spots are but the outward sign of disease in the tissues of the plant, and that varieties weakened by over-propagation, old age, and faulty cultivation, are susceptible and unable to resist the spread of the curse.

It looks as though we shall have to be very watchful in the future, over the carnation. There is a danger that the disease may be transmitted to seedlings raised from infected varieties, and we shall soon have to ask the raisers of novelties for a pedigree and a clean bill of health before purchasing.

Wise, indeed, is the man who, having a sound, clean collection of carnations throughout, has courage enough to depend upon his own exertions, and raise seedlings from healthy parents as he may require them. Others may secure finer forms than he by buying novelties, but he will have health, and health is the first wealth in the carnation world, as well as in all others.

Mr. Allwood's advice on cultural details is very sound. I have nothing to add to his notes, unless it is to state that artificial manures should be eschewed as far as possible. I manage to get along without them, trusting to a good fibrous loam, with charcoal, burnt soil, and coarse sand to make the compost purer and workable. Even crushed bones should be given sparingly.

P. S. Hayward.

WALLFLOWERS.

Few plants give such a wealth of flowers for spring bedding as do the wallflowers. The secret of success lies in early sowing, transplanting when the young seedlings are large enough to handle, and careful handling when they are removed to their flowering quarters in the autumn. Many failures may be attributed to the seeds being sown too late, thereby not allowing the plants sufficient time to develop.

The present is an excellent time to sow the seeds which, fortunately, may be done outdoors. A piece of ground in the open should be selected in preference to a warm border, and the soil should be in a fairly rich condition, for, although the wallflower will grow under almost starvation conditions, yet good culture is essential when good plants are required. The soil must be made firm, and the seeds sown thinly in shallow drills, which should be drawn about ten inches apart. If dry weather prevails watering must be resorted to, as it will prove beneficial in assisting germination. Immediately the seedlings are large enough to handle they should be transplanted into well-prepared ground. In doing this, the tap roots should be trimmed to induce a more fibrous root growth.

Personally, I am in favour of twice transplanting during the growing season, and am convinced that better roots and sturdier growth is thus obtained. In the first place, they are pricked out about six inches apart, and, after a week or two of growth, transplanted about fifteen inches apart. Whichever plan is adopted, either the once transplanting or twice, the fact must be borne in mind that, if the seedlings are allowed to remain in the seed rows until they become drawn and leggy, poor results will follow.

A good range of colours may be obtained by growing the following varieties: Blood Red is a good reliable dark colour, and not surpassed, providing a good strain is obtained. Cloth of Gold is excellent for massing, the bright yellow being very effective. Ivory White is a good addition, and makes a useful break in colour schemes. Fire King is one of the newer varieties, and gives a brilliant display, especially if a few hundred plants can be massed in one spot as from a distance the effect of such a bed is grand. It is one of the new wallflowers that is well worth growing. The old brown Harbinger is well worthy of a place, if only for its early-flowering propensities. Vulcan still maintains its position as one of the good older varieties, and in habit it is excellent, being dwarf and branching. Anyone caring about other colours might try Purple Queen or Eastern Queen, but these two are not general favourites.

E. C. Pooley.

Arabis albida flore pleno is an excellent plant either for the rock garden, dry walls, or spring bedding, and undoubtedly the finest spikes of bloom are obtained from young plants. These should be grown annually from cuttings, which, if propagated this month, will make excellent plants for putting out in the coming autumn. Young unflowered growths should be selected for the purpose, preparing them in the ordinary way as one would a geranium cutting. They will root quickly in a bed of sand in a close cold frame, and after which they may be planted in nursery beds, where they are to remain until required in the autumn. Increase of stock may also be accomplished by division of the roots immediately the flowering season is over, but the forthcoming flowers will not be so fine as on those plants which have been raised from cuttings. Good culture is necessary to obtain large spikes of bloom; this arabis responds readily to liberal treatment, although it is not particular as to position, and will grow almost anywhere.—E. C. P.

AVAILABLE PLANT FOOD.

The availability of plant food in soils is a matter of great importance in horticulture, and to make the plant food available is one of the chief objects of thorough cultivation. Rotation of crops and the use of farmyard and stable manures, with the judicious use of artificial fertilisers also aid in bringing about the necessary physical and chemical changes in the soil that render the plant food more soluble and available.

A BOX OF ROSE-PINK ENCHANTRESS CARNATIONS,

packed for market by Mr. W. E. Wallace, Eaton Bray, Dunstable. First prize at Perpetual Carnation Show on May 2.

The average good soil will contain about 4,000 lb. per acre of phosphoric acid to the depth of one foot; a similar quantity of nitrogen, and 48,000 lb. of potash. The character and amount of plant growth that a soil is capable of producing is found to differ considerably in different soils, and the largest quantity of produce will be grown on those soils where the natural wild plants could obtain the greatest amount of food. It happens, therefore, that the virgin soils, as they are termed, derived from a meadow or forest, are richly charged with a blackish-brown vegetable substance known under the general name of humus, and is recognised as one of the marks of a fertile soil. In fact, humus was considered by agricultural chemists in the early parts of the past century to be the main source of soil fertility.

Recent investigations have shown that the loss of humus from the soil has affected not only the nitrogen content, but also the chemical combination of the mineral ingredients, particularly the phosphates. In the presence of the necessary potash and lime in the soil, the phosphates and other mineral constituents unite with the organic compounds produced from the decay of the humus, and form muriates—muriate of potash, muriate of lime, muriate of soda, etc.—all of which are available forms of plant food.

Hence it is that good cultivation and right systems of manuring assist in maintaining the supply of available plant food in the soil. Many soils which have been under cultivation for only comparatively short periods, and show upon analysis quite large amounts of plant food, but give poor crop returns, need better cultivation, and the use of a suitable active manure to combine with the locked-up or inert plant food already present, because the rate of decay of the mineral matter is too slow to furnish a liberal supply of plant food even when the crops are rotated, and some farmyard or stable manure is used and good cultivation is given.

In such cases, some readily acting artificial manure, such as superphosphate, bone-meal, fish guano, or nitrate of soda are necessary if the best results are to be obtained, because rotation of crops only hastens instead of retarding the exhaustion of the soil fertility.

Soils of the highest and most lasting fertility are of good texture, and contain a liberal store of total plant food derived from mineral substances which, when the soil is cultivated, decay with sufficient rapidity to furnish the necessary available food to growing crops. The accumulated plant food in a virgin soil is often sufficient to last for long periods of cultivation without material decline in crop yield. This is seen in the rich prairie soils of the New World, but there are few soils, however, so well constituted that they are capable of producing continually maximum yields without the application of some kind of fertiliser.

When the accumulated fertility of a soil is exhausted, then the growing crops have to depend upon the natural supply of the soil, namely, that which is derived from the decay of the minerals and humus matter, and this alone is generally insufficient to produce paying crops. All this teaches us that constant provision should be made to conserve the fertility of the soil by judicious cropping and manuring.

Chemical investigations have further shown that micro-organisms which assist in the conversion of insoluble and unavailable plant food into a usable form, are present in greater or less numbers in all fertile soils, but are most active in soils under cultivation, teaching us the advantage of the frequent use of the hand hoe and other implements of tillage in the open garden and of a friable porous soil for potting purposes.

J. J. Willis.

(To be continued.)

CINERARIAS.

By botanists the cinerarias are now included in the genus Senecio, but as with some other classes of plants, the popular name is not likely to be generally superseded.

Although for a long period cinerarias have been justly valued for the decoration of the greenhouse, they, at the present day have attained a height of popularity never before reached. This is no doubt owing to the many diverse forms that we have now in cultivation, most of them forming far more graceful specimens than the florists' varieties of old.

In my young days, now unfortunately many years ago, the only type of cineraria considered worthy of cultivation was of short growth, with dense massive heads of large round flowers. The finest of these were then named, and increased by means of cuttings. In the early sixties some double-flowered forms arose, and for about a generation they were thought highly of, several of them receiving First Class Certificates from the Royal Horticultural Society. A good price was in those days asked in nurseries for the best of them. These double-flowered forms have, however, now practically disappeared, for they are rarely seen. In those days, when cinerarias were raised from seed, any varieties that did not come up to a more or less rigid interpretation of the florists' standard were ruthlessly destroyed.

In the latter part of the eighties the tide began to turn, it being recognised that some of the original species with their more starry flowers and looser arrangement, possessed a grace and elegance that was altogether wanting in the latest florists' varieties. These had all been gradually evolved from Cineraria cruenta, the typical form of which, with reddish-purple blossoms, was introduced from the Canary Islands as long ago as 1777. This original species was again brought into requisition, as also were Cineraria aurita, or Heritieri, sent from Teneriffe in 1843, and Cineraria multiflora, introduced from the Canaries ten years later. The flowers of Cineraria multiflora are a kind of purplish-lilac, while in Cineraria aurita, or Heritieri, the florets are white, tipped with purple, while the central disc is also purple. This species forms a loose bush, whose comparatively small leaves are thickly clothed on the underside with whitish tomentum. The flowers, freely borne on every shoot, are disposed in a loose open cluster in altogether a far more graceful manner than the blooms of the florists' varieties. From this species much of the more graceful habit of recent varieties has been obtained, while its parti-coloured flowers have in many instances left their mark on the progeny.

Another and more recent species has been employed by Messrs. J. Veitch and Sons in the production of new forms. This was introduced from British Central Africa in 1898, under the name of Senecio auriculatissimus. It is of a rambling, almost climbing habit of growth, with rich golden-yellow blossoms about an inch across. The first hybrid of this kind to make its appearance was Cineraria flavescens, which was given an Award of Merit by the Royal Horticultural Society two years ago. This was obtained by the intercrossing of the species with the garden form Feltham Beauty. The flowers of C. flavescens are, when first expanded, of a sulphur tint, becoming paler after opening. What are known as cactus-flowered cinerarias, in which the edges of the florets are revolute, are very popular, possessing as they do a lightness of aspect which is totally wanting in those forms with larger and heavier flowers.

The cultivation of these cinerarias has been so often dwelt upon, and is now so generally understood, that nothing needs to be said on this point at present.

W. T.

ACHILLEA ARGENTEA.

Some confusion has existed with regard to this plant, which has been sometimes referred to Tanacetum argenteum. The latter, however, is quite distinct, being of shrubby habit, with large golden yellow flowers. Achillea argenta was sent out by Mr. Thompson, of Ipswich, about the year 1888, but its origin is somewhat obscure. At the same time it is a very decorative rock plant, with silvery-white foliage in rosettes of closely set pinnate leaves. Like many of the other dwarf-growing achilleas it forms a spreading carpet that makes it a very attractive plant even when not in flower. During May and June the flowers are produced on stems from four to five inches high, usually about six on a stem. The individual flower heads are about three-quarters of an inch in diameter, with pure white rays, and a pale yellow disc.

ACHILLEA ARGENTEA.
A beautiful Alpine Achillea in the Rock Garden at Kew.

In choosing a position for this plant it must be borne in mind that damp or heavy soil is fatal to it in winter, therefore a sunny, somewhat sloping ledge should be selected. The soil should be deep, but of a strong nature. A. argentea is readily propagated by means of division in early spring, or by cuttings in summer. The latter strike readily in a close frame, and soon make good flowering plants. As a pot plant for the cold house it is very useful and decorative, coming into flower in the cold frame a little earlier than in the rock garden. In a selection of six of the best dwarf achilleas for the rock garden this would be one of the first chosen, others being A. ageratifolia, A. moschata, A. rupestris, A. tomentosa, and A. umbellata.

W. T.

Alyssum saxatile flore pleno and A. saxatile citrinum flore pleno, are two splendid plants for producing early colour, and should be propagated by cuttings. It is necessary to obtain the cuttings as early as possible, as they are slow-growing, compared to arabis, and should be potted when rooted, instead of planted out.—E. C. P.

WORK FOR THE WEEK.

THE ORCHID HOUSE.

ONCIDIUM MARSHALLIANUM.—There is no orchid more serviceable than a finely flowered plant of this species, either for exhibition or decorative purposes, but, unfortunately, its freedom of flowering has a tendency to spoil the future well-being of the plants. It will be generally found that where newly-imported plants are procured there is little difficulty in growing them, provided they are placed in a warm intermediate house and kept free from thrips and other insect pests. Remarkable flower scapes are also produced for the first year or two after importation, but after this they lose their normal vigour, and gradually become unsatisfactory. I feel that we who are in charge are sometimes responsible for this early deterioration, because as the flowers are exceedingly durable, and give such a fine display we are loath to cut the spikes, and thus a great strain is put upon the plants, and the effect is seen in a smaller succeeding growth. There can be no doubt but that it is a considerable advantage to remove the flower spikes within a reasonable time after the flowers have become fully expanded.

POTTING.—Where the plants are actively rooting, after the flower scapes have been removed, any repotting necessary may be attended to without delay, but it is not advisable to disturb the plants more often than is absolutely necessary, and where the compost is in a good state of preservation, and more root room is required, they should be transferred to larger receptacles with the least possible disturbance of the roots. We find a compost of good fibrous peat and chopped sphagnum suits the plants well. It is a good plan to place the plants in the cool odontoglossum house for a few weeks after flowering; the moist cool atmosphere assists them to regain their normal plump conditions, and affords a suitable rest.

ANGULOAS.—The plants of the various species of anguloas are now producing their flowers, as well as new growths. They should now receive every inducement to properly expand their flowers, and where they have had a long period of dry, resting conditions it is essential that little or no water be afforded until the flower scapes are observed or the plants will break into growth without flowering at all. When the scapes appear see that the potting compost is thoroughly wetted through; it is a good plan to dip the pot to the rim in a pail or tub of tepid water. Repotting should be attended to as the plants pass out of flower, as the young growths will then be actively rooting, and they quickly re-establish themselves in the fresh potting compost. We find a mixture of good turfy loam, fibrous peat, and chopped sphagnum, with sufficient broken crocks or charcoal added to render the compost porous, suitable for these and allied genera.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

POINSETTIAS.—Cuttings should be taken as soon as the old plants have developed growths two to three inches long. These may be removed with a portion of the old wood attached, and plunged into powdered charcoal or fine wood ashes to prevent bleeding; then insert them singly in small thumb pots which have been made ready for their reception by filling up with a compost of silver sand and cocoanut fibre refuse or fine peat in equal parts. Take particular care that the base of the cutting rests firmly on the soil at the bottom of the hole made by the dibber. Give sufficient water to settle the soil, and plunge the pots up to the rims in a bottom heat of 80 to 85 degrees. Extreme care must be constantly exercised to counteract excessive moisture in the propagating case. Give shade from sunshine, and take every precaution to prevent flagging; root action will commence in a few weeks, after which the plants may be given a little ventilation in order to harden them off for a position near the glass, which will insure sturdy, short-jointed wood that is so desirable at all times.

POTTING.—With the exception of spring-rooted cuttings most of the potting in the plant stove will now be completed. At this season, and later on, when plants have to be repotted from time to time, the operator must use extreme care after they have been treated, or disastrous results may follow. Thoroughly shade from the sun, and give an occasional spraying with the syringe. Now that the season is so far advanced we may expect the sunshine to be exceptionally strong during the day, so that the pipes must not be overheated or damage may soon be done to young and tender foliage.

MUSA CAVENDISHI.—Where sufficient space is available for the full development of this stately and ornamental foliage plant it may be included in any collection, as it certainly forms a distinct and interesting addition. Suckers with a few roots attached may be removed from the base of the old plants, and if placed singly in small pots, and given a little bottom heat, they will quickly develop into large specimens. When cultivated expressly for decorative use they may be kept in large pots or tubs. They are extremely gross feeders, and during their growing season will require frequent applications of farmyard liquid. If retained for fruiting purposes it is certainly advisable to plant them in borders specially prepared with good loam and peat, and a free sprinkling of lime rubble, with ample drainage. Musas will greatly benefit from an occasional sponging of the foliage to keep them free from insect pests.—John Donoghue, Bardon Hill Gardens.

THE FLOWER GARDEN.

HERBACEOUS BORDERS.—Many plants will now require attention to staking. Support should be afforded before the growths become too far advanced, for if neglected until they actually fall over great difficulty will be experienced in getting them into proper form again. Various methods are adopted, and, whichever one is decided upon, the main idea is to make the support as inconspicuous as possible. The plant should be made to look quite natural after being staked, and this is rather a difficult task with some. A specimen bundled up like a faggot makes a very bad impression, while the same plant, with judicious handling, may be made a beautiful object. Liliums, delphiniums, etc., will require each growth staked separately, and there is nothing better for the purpose than brown bamboos of sufficient strength to afford the necessary support. Thin canes of the same colour answer for Canterbury bells, aquilegias, Campanula persicifolia, and plants of similar habit. For phloxes twiggy pea sticks are admirable, and should be placed round the clump, and also among the growths. If these are put in position fairly early the shoots will grow up amongst them, and eventually hide any suggestion of support. The same idea will be found useful for the Michaelmas daisies, etc., for whilst providing the necessary strength to hold the growths in position there is nothing formal about it, and the plant remains in a perfectly natural condition. Anything replanted early this spring will require watering, should there be any length of dry weather, and a mulching of decayed manure will prove beneficial to those plants which have not yet made sufficient roots to enable them to withstand dry weather.

SWEET WILLIAMS AND CANTERBURY BELLS should be sown now in boxes, and placed in cold frames. When the young plants are large enough to handle they should be pricked out into cold frames, and kept close, and shaded for a few days until fresh root action commences. When large enough to look after themselves they may be transplanted into nursery beds, where they may remain until required for planting out.

BEDDING PLANTS.—Now that the time is drawing near for summer bedding all plants required for the purpose should be gradually hardened off. Full exposure should be afforded on every available occasion, so that no check may be experienced when planted. Many of the hardiest kinds should be stood out on ashes, and have a framework of some description over them, when, in the event of frost, some light protecting material may be laid over them. Now is the time to make a general survey of the spring bedding, noting on the plan any desirable alteration which is to take place in the next season's arrangement. Slight alterations annually makes a garden more interesting than a repetition of the same old style year after year. Perhaps the alteration is not always an improvement, yet at the same time a change is effected, which, in many cases, adds to the charm of the work.—E. C. Pooley, Gnaton Gardens.

FRUIT UNDER GLASS.

YOUNG VINES.—If any vines have been raised this season for planting they should now be put out into their permanent quarters, the soil having been prepared as previously advised. If the vines are being prepared for a house where grapes are still being forced, they had better be transferred to larger pots, or they will become root-bound. This has not been a wonderful year for forcing, and if the vines cannot be put out within the next month little advantage will be gained. Vines planted at the end of March will now be making vigorous growth, and will need tying and regulating every week. Keep the house well supplied with moisture, syringe in the afternoon, and shut up with a good brisk solar heat. Give plenty of air on all fine days; stop the lateral growths, and also the main growth when 8 to 10ft. has been reached. See that the roots are supplied regularly with liquid as often as they require it.

EARLY PEACHES.—As soon as the fruits are well over the stoning period, at which time they swell very rapidly, they should receive a thorough soaking, and a good dressing of some fertiliser, well washed down to the roots, or some good farmyard liquid manure. Then remove all lateral growths that are shading the fruits, and prop the fruits up to the glass with small strips of wood, so that they are exposed to every scrap of sunshine, as this wonderfully improves the colour and flavour. The young shoots should be tied and regulated as often as necessary in successional peach houses, and the fruits be thinned in good time. Keep the roots well supplied with water, and give the borders an occasional dressing of good manure.

MUSCAT OF ALEXANDRIA GRAPES.—These will now be passing out of flower, and should have every aid to ensure a good set especially. The end of the bunch does not open its flowers all at once, and when some are apparently set others are still in flower, therefore a brisk heat should be kept up, and pollination continued till all are out of bloom. Main crop muscats that are to be kept through the autumn and winter should be kept growing now, as these grapes require a long season to produce successful results. When thinning leave plenty of berries on the top of the bunch, and, if need be, tie up the more important shoulders; do not on any account overcrop, or the finishing process will not be satisfactory. A hundred good bunches of grapes are worth infinitely more than double the number of inferior ones. Keep the temperature at about 70 degrees; damp the path, stages, and walls several times daily, and as soon as the wood is in a fit condition tie all the branches neatly and regularly to the wires.

BANANAS.—Where these are grown, and are now showing fruit, plenty of moist heat must be employed; syringe and water freely, and afford alternate waterings of liquid manure or guano. When the fruits are fully grown the bunch should be severed from the plant, and hung up in a warm and dry atmosphere to finish off, using the fruits for dessert as fast as they ripen. Strong suckers may now be removed with some roots attached, and potted up in good rich loam and decomposed cow manure. As soon as these have filled their pots with roots transfer them to large pots or tubs, and place over heated pipes.—W. A. Cook, Leonardslee Gardens.

EXHIBITIONS AND MEETINGS.

◆

National Auricula Society.

(MIDLAND SECTION.)

The twelfth annual exhibition, held at the Edgbaston Botanical Gardens, Birmingham, on May 3 and 4, was probably one of the finest held by the society. The increasing popularity of these charming and old-time florist flowers, more especially in regard to alpine and fancy auriculas, chiefly by reason of their comparative showy, rich colouration, is a matter for much congratulation. In the "show" section the "green-edges" were especially fine, and there were also numerous excellent examples among the white and grey edges. There was a keen competition between the young amateur growers. There was a class for lady amateurs, but there was only one entry, and that was from Miss Mary Chamberlain, who opened the exhibition. The class was for alpine auriculas, and she was awarded the first prize for very good examples of Dean Hole and Miss Aston. The seedlings in both sections were more numerous than usual.

SHOW AURICULAS.

In the class for eight varieties the competition was really very keen, and Mr. Charles Wain, Selly Hill, Birmingham (gardener, Mr. T. T. Sheppard), was first, with very fine examples of Mrs. Potts, Henry Wilson (premier) of great breadth and substance, Eucharis, Lancashire Hero, George Lightbody, Henwood, Mikado, and Rifleman; Mr. F. Simonite, Sheffield (who is enthusiastically emulating his father, of pleasant memory), was a close second, with H. F. Wilson, Lancashire Hero, Letitia, Boadicea, Ossian, Mrs. Potts, Geo. Lightbody, and Acme; Mr. W. H. Parton was third, and staged an excellent set of plants; Mr. G. A. Wright, Bowden, Cheshire, fourth; and Mr. W. M. Shipman, Altrincham, fifth.

For six plants, Mr. C. Winn was again first, staging Lancashire Hero, Harrison Weir, Marmion, Mrs. Potts, Mrs. Henwood, and Geo. Lightbody in fine condition; Mr. F. Simonite repeated his former success by again occupying the second place, he had Rachel, Orient, Fanny Mearbick, Abraham Barker, an unnamed seedling of high promise, and Letitia of high quality; Mr. W. M. Shipman third. The class for four plants was well filled; Mr. W. C. G. Ludford, Four Oaks, was first with Harrison Weir, Shirley Hibberd, Mrs. Potts, and Mrs. Henwood; Mr. C. Reeves, Handsworth, second, with Richard Headley, Acme, Mrs. Phillips, and Mrs. Henwood; and Mr. Richard Holding third. For two plants, Mr. Holding won with Acme and Mrs. Phillips; Mr. H. W. Miller second, with Mikado and Shirley Hibberd; and Mr. G. Saunders and Mr. C. Reeves were third and fourth respectively.

Single plants, green edges, Mr. C. Winn first and second with Mrs. Henwood; Mr. W. H. Parton third, and Mr. Ludford fourth. Grey edges, Mr. Ludford first with Marmion, Mr. C. Winn second with Geo. Lightbody, and Mr. Simonite third with Geo. Lightbody. White edges, Mr. C. Winn first, and Mr. F. Simonite second and third with Acme; the winners of the fourth and fifth prizes had the same variety. Selfs, Mr. R. Holding, Bournville, first, with Harrison Weir; Mr. C. Winn second, with Victor. Selfs (orange, yellow, primrose, or buff), C. Winn, G. Ludford, W. M. Shipman, W. A. Renton were the respective winners with good examples of Daffodil. Parenthetically, it may be remarked that this lovely yellow variety afforded a pleasing relief to such a wealth of the colouration of the other varieties, and the wonder is that Daffodil is not more extensively exhibited.

In the maiden growers' class for two alpines, Mr. A. Gilbert was first with Shirley Hibberd and Mrs. Phillips; Mr. H. G. Spencer second with Geo. Rudd and Favourite; Mr F. J. Twist third. In the local growers' class for three show auriculas, Mr. C. Winn was first with Mikado, Mrs. Henwood, and Geo. Lightbody; Mr. Ludford second with Favourite, Shirley Hibberd, and Geo. Lightbody; Mr. R. Holding third with Mikado, Shirley Hibberd, and Acme. In the class for young amateur growers only, Mr. G. H. Spencer was first with Lancashire Hero, Harrison Weir, and Shirley Hibberd; Mr. J. Freeman, Sparkhill, second, with Abraham Barker, Harrison Weir, and Prince Charming; Mr. E. Saunders third with Mrs. Potts, Mars, and Acme.

ALPINES.

In the leading class, which was for eight plants, Mr. W. H. Parton was the winner of the first prize with a grand collection, comprising Mrs. J. Douglas, Ettrick, Mrs. Martin Smith, Thetis, J. F. Kew, Argus, and Kingswood; Mr. C. Winn second with Thetis, Miss Barker, Majestic, J. F. Kew, Mrs. Banks, Mrs. J. Douglas, Golden Acme, and Argus; Mr. T. M. Eglington third with Mrs. Banks, Blue Peter, Unexpected, Thetis, Duke of York, J. F. Kew, Golden Acme, and Winifred. For six plants, Mr. C. Winn was first with Thetis, J. F. Kew, Mrs. Banks, Majestic, Argus, and Mrs. J. Douglas; Mr. Parton second with Thetis, Ettrick, Mr. M. Smith, Argus, J. F. Kew, and Jack Parton; Mr. R. Holding third with J. F. Kew, Violet Vanbrugh, Mrs. Banks, Golden Acme, and Argus. For four alpines, Mr. H. W. Miller, Handsworth, was first with Thetis, Argus, Geo. Cadbury, and J. F. Kew; Mr. E. Danks, Handsworth, second, with F. Knighton, Sappho, Modesty, and Majestic; Mr. C. Reeves, Handsworth, third, with Phyllis Douglas, Charmer, J. F. Kew, and Argus. For two varieties, Messrs. H. W. Miller, W. J. Ellison, Handsworth, and C. Reeves were the respective winners. In the class for three plants, open to local growers, Mr. W. C. G. Ludford won with Thetis, Duke of York, and Firefly; Mr. W. H. Parton, second, with Mrs. M. Smith, Phyllis Douglas, and Jack Parton; Mr. E. Saunders, Sparkhill, third, with Thetis and Argus. For two plants (local growers), Mr. F. J. Twist first with Argus and Golden Acme; Mr. A. Gilbert second with Thetis and Mrs. Barker; Mr. Hughes third.

For single plants, gold centre, Mr. R. Holding led with a superb example of Unexpected; Mr. F. J. Twist second with Majestic; Mr. Ludford third with Unexpected; and Mr. W. H. Parton fourth with Mrs. Parton. For a light centre, Mr. Parton was first, Mr. E. Danks second, and Mr. Ludford third, all showing Phyllis Douglas.

SEEDLING AURICULAS.

For two plants, dissimilar, Mr. F. Simonite was first with Juliet (premier bloom), a dark self and green edge, Mrs. Simonite; Mr. E. Danks second with Raven Plume and Nubian; Mr. Ludford third with Agnes Wakefield and David Copperfield. For one plant, green edge, Messrs. F. Simonite, C. Winn, and Ludford were placed as in the order named, with promising seedlings, unnamed. For a grey edge, Messrs. F. Simonite, J. Collier, and E. Danks, the foregoing remarks apply. For a white edge, Mr. F. Simonite first with a flower similar but better than Acme, which is saying much for the newcomer. For a self, Mr. E. Danks first with Raven Plume; Mr. C. Reeves second with Mrs. T. E. Owens; and Mr. C. Winn third.

Much interest was created by seedling alpines. For four varieties, Messrs. H. W. Miller, C. Winn, and W. H. Parton were the respective winners with flowers of high merit. For two plants, Messrs. J. Collier, C. Reeves, and T. J. Stevens, Cannon Hill, Birmingham, were the prize winners.

The premier prize for a show auricula was awarded to Mr. C. Winn for Henry Wilson, green edge. The premier alpine was Majestic, gold centre, also exhibited by Mr. C. Winn, who was awarded premier for a seedling alpine. The premier seedling show auricula was contributed by Mr. F. Simonite.

AWARDS FOR HONORARY EXHIBITS.

Mr. H. N. Ellison, West Bromwich, contributed a collection of gerberas and ferns (silver-gilt medal); Mr. F. Bostock, Northampton, polyanthus and primroses (silver medal); Mr. A. R. Brown, King's Norton, polyanthus and primroses (silver medal); Mr. W. H. Edwards, Arnold, Notts, Edwardian epergnes and flowers arranged for effect (silver medal); the Birmingham Botanical and Horticultural Society's silver medal was awarded to Mr. C. Winn, the bronze medal to Mr. W. H. Parton. The Brookes silver medal was awarded to Mr. W. H. Parton; the National Society's silver medal for local growers, to Mr. C. Winn. A silver medal was also awarded to Mr. C. Winn for a collection of dwarf and compact schizanthus.

Scottish Horticultural Association.

The May meeting of this association was held in the Goold Hall, 5, St. Andrew Square, Edinburgh, on the 2nd inst. Mr. Massie, the president, was in the chair, and there was an attendance of 95 members.

The paper for the evening was by Mr. Robert L. Scarlett, C.D.A., Sweethope, Musselburgh, who took as his subject "Some Factors in the Production and Storage of Seeds." The paper was of much interest, and the author, who is one of the young members of the association, was highly complimented on its excellence.

After a reference to the enormous number of plants of all kinds which are raised from seed, Mr. Scarlett pointed out that gardeners, as a rule, paid very little attention to the seeds they used; they trusted to the seed grower, in whose hands lay great power in the matter—the power to produce good or bad seeds. We manure our crops, and cultivate our land, study weather conditions, and fight insect and fungus pests, yet what did it all come to if we used bad seed? The expense of working in both cases was the same, and the difference in the initial cost of good and bad seed was very small, yet the difference in the result was enormous. Cheap seed was not necessarily bad seed, though it was almost always so, and, on the other hand, high price was not always evidence of good quality.

Good stocks were obtained by (1) crossing, (2) fixing of natural sports, (3) selection, which was the most common method, and (4) change of seed. It was a great advantage to have well grown and well fed plants, a fact which was thoroughly realised by German seedsmen in the production of East Lothian stock seed, of which they guarantee 90 per cent. to come double from plants grown in pots under glass and well fed, whereas only 55 per cent. of doubles are got from ordinary treatment in the open ground. In manuring for a seed crop it was very important to use phosphates as the dominant constituents of the manure, as a seed crop required far more of these than a green crop.

Mr. Scarlett dealt next with the testing and storing of seeds. In testing it was necessary to take into consideration (1) purity of sample, (2) germinative capacity, (3) germinative energy, and (4) average weight. It was only in the case of such seeds as peas and beans, which were hand picked, that the sample could be got absolutely pure. Such impurities as bits of husk, etc., gave no trouble with the crop, but it was quite a different matter with seeds of weeds. A sample might be quite pure, but all the seeds might be dead, hence the necessity for testing it for germinative capacity (or the percentage of living seeds), and germinative energy (or the rate at which the seeds germinate). In storing seeds it was absolutely necessary to have perfectly dry conditions, and a sufficiently low temperature, and the greatest possible care was necessary to prevent mixing. The worst enemy of stored seeds was mites, and the most effective method of dealing with them was treatment with carbon bisulphide. On the motion of Mr. Comfort Mr. Scarlett received a very hearty vote of thanks.

The judges' decisions on the short papers read at the April meeting by juniors were intimated: Mr. C. B. Roy, Royal Botanic

Garden, Edinburgh, whose subject was "The Young Gardener's Outlook," being placed first, and Mr. Malcolm Phillips, Granton Road Nursery, Edinburgh, whose subject was "Fern Raising and Growing," second. The prizes were presented by the president.

The President intimated that the association had received a sum of £80 from the surplus of the Scottish National Exhibition (1908) as a contribution to the fund for the foundation of a Horticultural Institution.

The exhibits were: Fine lot of the new dwarf polyantha rose, Orleans, from Messrs. Dicksons and Co., Edinburgh; choice narcissi (including several fine seedlings), from Mr. W. G. Pirie, gardener to C. W. Cowan, Esq., Dalhousie Castle, Bonnyrigg; Begonia gracilis Prima Donna (awarded Certificate of Merit), from Messrs. Dobbie and Co., Edinburgh; new species of deutzia and a hybrid of D. gracilis (awarded a Cultural Certificate), from Mr. A. Porter, Davidson's Mains; new hybrid Indian rhododendrons (one awarded a Certificate of Merit) from Mr. William Williamson, Logie Green Nursery, Edinburgh; Clianthus puniceus and Habrothamnus elegans, from Mr. A. Johnstone, Hay Lodge, Edinburgh; Clianthus puniceus and fruits of strawberry Royal Sovereign from Mr. John Middleton, Callander House, Falkirk; and specimen of the giant puff ball fungus from Messrs. James Grieve and Sons, Redbraes Nursery, Edinburgh.

Eight new members were elected.

The meeting on June 6 will be open for the discussion of any subject brought forward by the members.

Bournemouth Gardeners' Association.

There was a very successful meeting of the members of this association on May 2, to meet Mr. J. Crook, of Camberley, who gave a splendid lecture on "Propagation by Seed versus Cuttings."

The best exhibition of pot plants and cut flowers held this year, so far, was the one at this meeting. The exhibits were staged by the members for the prizes offered at the end of the year for produce to which the highest number of points have been awarded during the whole year by any individual member. The exhibits staged on Tuesday night were exceptionally well grown, showing much cultural skill. Mr. C. Nippard had a magnificent plant of schizanthus, three perfect ones of cinerarias, and three beautiful pots of mignonette, for all of which he was awarded the maximum number of points. Mr. G. Tompkins had four lovely schizanthuses, three fine ones of Cineraria stellata, and three grand vases of East Lothian stocks. These exhibits were awarded nearly the full number of points. Mr. C. Pearce received the full number for a collection of cut flowers, Cineraria stellata, show pelargoniums, and gloxinias being exceptionally fine. Mr. Crook exhibited several bunches of his seedling polyanthuses, his new apricot shades and distinct yellows being very beautiful. He also had a dish of Sturmer Pippin apples, to prove that apples can be kept throughout the winter in a plump condition in an ordinary shed with an iron roof, from which frost is just excluded.

Mr. Crook, at the commencement of his lecture, said there was plenty of room at the top of the best produce, but not any at the bottom. He said that owing to over-propagation of many kinds of plants by cuttings the stock gradually weakened, and he strongly advocated the sowing of seeds very frequently, and the propagation by cuttings from the resultant plants every few years, and by this means keep up the vigour of the stock generally. He gave many illustrations in support of his views. He said that both rhubarb and seakale should be raised from seeds occasionally, and not always be propagated from division thongs. But the propagation thongs from plants raised from seeds occasionally did undoubtedly strengthen and improve the stock. Salvia patens generally died out after six years of propagation by cuttings; at the end of three years, he said, stock should be raised from seeds, followed by propagation by cuttings. He instanced a case where a gardener, many years ago, boasted of being able to keep his cyclamen corms for seven years. At the present time, Mr. Crook said, we obtain extra strong plants from seeds in a very short period, and do not trouble about old corms. In making reference to gloxinias and begonias he said that some persons were under the impression that seeds could not be ripened of Gloire de Lorraine, but he had ripened them, and he found that nearly all the female flowers were the last ones to develop; in his case they were the end pods on each truss, or cluster, of flowers. He deprecated the early and severe cutting back of plants when seed pods are required. Mr. Crook made interesting references to potatoes. Primula kewensis, P. rosea, and P. obconica, to the hardy primroses and polyanthuses, to the way in which Nature fostered seedlings, to the bad practice of placing seed pans and boxes on dry shelves, and the loss of seedlings thereby, to uniformity by selection and the re-introduction of improved and stronger stocks.

During the animated discussion that followed the lecture Mr. Nippard, the assistant secretary, mentioned a case where a gardener had baskets of Begonia Gloire de Lorraine suspended over flowering chrysanthemums, and as the plants were kept rather dry, because of the blooms below them, seed pods formed, the seeds fell on the soil in the chrysanthemum pots, and young begonia seedlings appeared in due course in large numbers.

Very cordial votes of thanks were passed to both lecturer and Mr. King, who ably presided.

Bristol Gardeners' Association.

The thirteenth annual meeting was held at St. John's Parish Rooms, Mr. Hayball presiding over a large attendance. Mr. J. Scott read the annual report, and followed with the financial statement, both of which proved to be very satisfactory. The society is in a prosperous condition, both numerically and financially, and a good attendance has been maintained throughout the session.

An interesting part of the proceedings was the presentation of a travelling bag and mounted walking stick to each of the secretaries (Messrs. J. Scott and H. Woodward), to which all the members had subscribed. The chairman made the presentation, and the recipients suitably replied.

A vote of thanks was passed to the retiring officers. Colonel Carey Batten was again elected president, Mr. A. Perry was voted to the chair, and Mr. Thoday as vice-chairman. Mr. J. Scott, hon. treasurer and secretary, and Mr. H. Woodward, assistant secretary, were again re-elected, with Mr. Coombes as librarian, and Mr. Extence as registrar. The following were elected on the committee: Messrs. Binfield, Hayball, Curtis, Lee, Shelton, Harford, House, Grieve, Ayres, Bastin, Candy, Garnish, Spry, Jennings, Morse, and Shaddick.

For six vases of daffodils Messrs. Scott, Woodward, and Binfield won in the order given. Six new members were elected—a good start for the new session.

Southern Counties (Scotland) Gardeners' Association.

A paper, under the auspices of the above association, this being the second since the movement was inaugurated, was given at a recent meeting held at the Mechanics' Institute, Dumfries. The lecture was given by Mr. James Henderson, gardener to James Wyllie, Esq., Elmbank, Dumfries, and was on a subject with which the lecturer is well acquainted, viz., "Chrysanthemums." Mr. Henderson is an ardent admirer of the chrysanthemum in its various classes, and has frequently been a successful competitor at exhibitions. In the paper he gave a full resumé of the treatment required from the cutting stage to the conclusion of the life of the plant. Early and late varieties were dealt with, both as regards their treatment for large blooms, those of decorative size, and plants. The paper was a thoroughly practical one, and received a hearty reception. The lecturer was warmly thanked. Mr. Prichard, Ellangowan Gardens, occupied the chair.

Norfolk and Norwich Horticultural Society.

Time after time the committee have had thought of abandoning this fixture owing to lack of support from the public, and again this year receipts fell below those of previous years. True the day was wet, but the show was great. It was freely remarked by those present that such a pretty display had not been seen for years. There were groups of plants and foliage. Plants of almost every subject one could expect to find to give a wealth of flowers at this period of the year, and cut blooms in profusion, all combined to make a bright blaze of colour. One or two features stood out as shining lights. First of these must be mentioned the grand new seedling daffodil raised by Mr. George Davison, Westwick, Norwich, and named after himself. In size it easily beat all the blooms of Van Waveren's Giant in the exhibition, and there were some good ones of this from Mr. A. Woodhouse, gardener to Sir H. Cozens Hardy, Letheringsett. In colour it is a golden-yellow self. The form is a perfect broad perianth, and a long, well-formed frilled trumpet. Awarded a F.C.C. The next feature was a seedling odontoglossum, named Miss Violet Fellowes, which was staged by Mr. Lewis Smith, gardener to this lady at Shotesham Hall. It is a strong grower with beautifully blotched flowers of great width and substance. Next came quite a new break in blue polyanthus, from Mr. Frank Neave, Lingwood. It has enormous pips, lengthy footstalks, with a large, bold truss of perfect dark blue flowers. Unanimously awarded a F.C.C.

The trade did much to brighten up the show, and to educate the spectators. Daniels Bros., Lim., Norwich, made a fine display of roses in pots, azaleas, lilacs, deutzias, lilies, carnations, and kalmias, with a massive group of cut blooms of the new rose Lady Hillingdon. Hobbies, Lim., Dereham, staged "roses red" and "roses white," and every other colour known in the rose world. The best ramblers, the latest H.T.'s, with some of the older types, were there in profusion, and the arrangement was all one could wish. It was a place for note-making. Messrs. A. J. and C. Allen, Norwich, made a display of their "Norvic" roses, and they excelled greatly.

Mr. R. C. Notcutt, Woodbridge, sent a fine collection of forced shrubs, beautifully grown, to get the best out of them. Mr. G. W. Miller, Wisbech, made a feature of orchids, odontoglossums predominating. Messrs. Cutbush and Son, Highgate, N., made a miniature rockery to display to the best advantage a comprehensive group of rock plants.

Reading Gardeners' Association.

The final meeting of the spring session took place in the Abbey Hall on Monday, April 24, by kind permission of Messrs. Sutton and Sons, the president, Mr. Alderman Parfitt, occupying the chair. There was a very large gathering, including many ladies who were specially admitted to this meeting. "A Practical Demonstration on the Artistic Arrangement of Flowers," by Mr. T. J. Powell, The Gardens, Park Place, Henley-on-Thames, was the subject for the evening. Members have on many previous occasions had the privilege of enjoying Mr. Powell's demonstrations, but so great is that gentleman's versatility that he is always able to bring something new before his audience, and the meeting under notice was no exception in this respect.

A vote of thanks, carried with acclamation, was accorded Mr. Powell for his highly instructive and enjoyable demonstration.

ROYAL SHOW

NORWICH,
June 26th to 30th, 1911.

President – HIS MAJESTY THE KING.

72nd ANNUAL EXHIBITION of Horses, Cattle, Sheep, Pigs, Poultry and Farm Produce; Jumping, Horse-Shoeing and Butter-Making Competitions, Agricultural Education, Forestry and Horticulture.

HORTICULTURE

ENTRIES CLOSE MAY 31st.
(Live Stock Entries Close May 20th).

Prize-sheets and Entry Forms will be forwarded on application to
THOMAS McROW, Secretary.

Royal Agricultural Society of England,
16, Bedford Square, W.C.

Under the immediate Patronage of H.R.H. the DUCHESS OF ALBANY.

IN AID OF THE FUNDS OF THE LEAGUE OF MERCY.

THE RIVER THAMES GRAND FLORAL
AND DRAMATIC FETE,
to be held on Tagg's Island, Hampton Court,
WEDNESDAY and THURSDAY,
JUNE 7th and 8th, 1911.

£120 IN CUPS AND PRIZES.

Schedules and full particulars of the Joint Secretaries, Fête Office, Tagg's Island, Hampton Court.

TAUNTON DEANE HORTICULTURAL
AND FLORICULTURAL SOCIETY.

The next ANNUAL EXHIBITION will be held on THURSDAY, August 10th.

Schedule and particulars from—
R. A. GOODMAN, Secretary,
3, Hammet Street, Taunton.

SHREWSBURY GREAT FLORAL FETE.
AUGUST 23 and 24, 1911.
£1,200 in Cash Prizes.
Schedules for this year are now ready, and may be had post free from—
Messrs. ADNITT and NAUNTON, Hon. Secs.,
Shrewsbury.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

Royal Horticultural Society.

Notwithstanding the fact that the show of May 9 only preceded the Temple Show by a fortnight there was a splendid exhibition, and a very large attendance. The weather was perfect, and the sunshine and the crowd made the Hall very warm during the afternoon. Tulips were a great feature of the show, and roses were grandly staged. Flowering trees and shrubs were presented in large numbers, and alpine plants were staged as largely as ever, the saxifrages of the decipiens group being unusually fine.

FLORAL COMMITTEE.

The great display on this occasion was the magnificent contribution from Messrs. Thomas Rochford and Sons, Broxbourne. It was almost wholly of roses in pots, some trained as weeping standards, some rambling over rugged branches, some forming arches in pairs), some as pillars, some as standard heads, some as low bushes, and some as umbrellas. It was a grand display of high culture, and as such was greatly admired. The beauty of the roses and the elegance of their training and arrangement appealed to everyone, and plenty of admiration was lavished upon the specimens of Tausendschon, Dorothy Perkins, Delight, Hiawatha, American Pillar, Lady Gay, Maman Lavavasseur, and Crimson Rambler.

Messrs. Whitelegge and Page, Chislehurst, contributed a small rockwork display with Primula malacoides, Cheiranthus Allioni, saxifrages, and gentians as leading features.

Flowering trees and shrubs in a cut state were submitted in some quantity by Messrs. J. Cheal and Sons, Crawley, and among many good things we noted Pyrus spectabilis Riversi, P. malus sanguinea, P. m. Cheali, P. Scheideckeri, Cytisus præcox, several Japanese cherries, Piptanthus nepalensis, Azalea Yodogama, and Exochorda Alberti.

Messrs. Jackman and Son, Woking, Surrey, showed Alyssum citrinum finely, and also A. saxatile plena; Saxifraga Bakeri, S. Lindsayana, Vesicaria utricularia, Gerbera Jamesoni, Androsace sarmentosa, Anemone alpina sulphurea, and Primula Cockburniana were other good things.

Mr. G. Reuthe, Keston, set up alpine and herbaceous plants against a background of rhododendrons; Gentiana acaulis, Trillium grandiflorum, and Darwin tulips were very prominent.

Mr. J. Crook, Camberley, Surrey, displayed a strain of strong-growing and bright-hued polyanthuses.

Very fragrant were the heliotropiums, so well shown by the King's Acre Nursery Company, Hereford, and the fine heads of bloom were greatly admired; Lord Roberts, Favourite, Mdlle. Marie, and Mdme. Bruant were particularly good.

Messrs. Heath and Son, Cheltenham, set up a rock garden, but it was somewhat thinly planted; the newer saxifragas were good, and so were Primula frondosa, P. sikkimensis, violas, gentians, and alyssums.

In the rock garden display set up by Messrs. G. and A. Clark, Dover, good things were Primula Sieboldi, varieties of Iris pumila, Daphne Cneorum, Anemone baikalense, Primula pulverulenta, and alpine auriculas.

Messrs. Stuart Low and Co., Enfield, presented a group of carnations, and also showed Ceanothus rigidus, Rhododendron fragrantissimum, Callistemon salignus, Hydrangea Mdme. Moulliere, and Acacia pulchella.

Mr. Clarence Elliott, Seven Hills, Stevenage, set up a quite large alpine garden, and planted it with Iris Susiana (very fine), Aubrietia Fire King, the pretty Wahlenbergia serpyllifolia, Primula farinosa, Gentiana acaulis, the lovely little Phlox subulata Vivid, Saxifraga bathoniensis, and Cheiranthus mutabilis purpureus, etc.

Very fine were the carnations, again well displayed by Mr. H. Burnett, Guernsey, and his Snow Queen, Marmion, R. F. Felton, Mikado, and Orpheus were excellent.

Plumose ferns were charmingly shown by Mr. H. Ellison, West Bromwich, who also contributed a delightful set of blooms of the vari-coloured gerberas.

Messrs. James Veitch and Sons, Chelsea, presented a bank of schizanthuses, all well grown, each plant a mass of flowers, and representing a quite wide range of beautiful colours; the same firm exhibited the red-flowered Primula Maximowiczi, some auriculas, and the graceful stove plant Medinilla magnifica. Another display of Messrs. James Veitch and Sons consisted of standard and dwarf mollis azaleas, Rhododendron Vaseyi, R. George Hardy, graceful wistarias, Andromeda cassinæfolia, Azalea Hinodigira, the new Berberis congestifolia hakloides, and Cytisus Kewensis. In yet another group the graceful Feltham Bouquet, plants over a yard through and as much high, with the more slender C. Decorator and a basket of Calceolaria Buttercup were displayed.

Mr. C. W. Breadmore, Winchester, exhibited sweet peas that had wonderfully long stems for so early in the season. Mrs. A. Ireland, Jack Tar, Stirling Stent, Constance Oliver, Elsie Herbert, Mrs. C. W. Breadmore, Princess Mary (a new blue), the soft salmon-pink Iris, and Dazzler were notably good.

Messrs. Barr and Sons, Covent Garden, presented a fine strain of polyanthuses, a selection of saxifragas, Cyclamen repandum, Dimorphotheca Ecklonis, Veronica Hulkeana, and aubrietias and violas.

Alpine and show auriculas were beautifully staged by Mr. James Douglas, Great Bookham, who always shows these flowers perfectly. He also submitted two fine flowering specimens of Myosotidium nobile. Among the auriculas those that most appealed to us were Gold Eye, Canary Bird, Bronze, Ettrick, Isla's Maid, Ilene, and Prince of Tyre, Mrs. Douglas, Old Gold, Mildred Jay, and The Bride.

The sweet peas from Messrs. Dobbie and Co., Edinburgh, were delightful, their colour and fragrance appealing to everyone; the notable varieties were the new rose-flaked May Campbell, Earl Spencer, Dobbie's Cream, which seems to be a good Clara Curtis; Masterpiece, Edrom Beauty, Dobbie's Scarlet, Mrs. Cuthbertson, Melba, and Sunproof Crimson; violas were also beautifully shown by this firm.

Messrs. Eggett and Son, Thames Ditton, made a feature of alpine shrubs, such as Pinus sylvestris pygmæa, and Retinospora pisifera nana variegata.

Mr. G. F. Waters, Balcombe, was an exhibitor of carnations, and presented some excellent flowers of Edith Waters, Alma Ward, Carola, and White Perfection.

Mr. Maurice Prichard, Christchurch, had a particularly pleasing exhibit of alpines, etc., in one of the annexes, and displayed very beautiful colonies of the brilliant Saxifraga bathonensis and S. R. W. Hosier, together with Primula Forresti, P. Munroi, P. japonica, P. pulverulenta, Trillium grandiflorum, Alyssum citrinum, Veronica diosmæfolia, Corydalis nobilis, Tulipa persica, Androsace Chumbyi, and Iris Lorteti.

Messrs. H. Cannell and Sons, Swanley, exhibited the free-flowering Phyllocactus German Empress, and made a very fine display with the elegant golden-flowered Calceolaria Clibrani, a graceful plant totally unlike the solid and dwarf florists' varieties, and useful alike for the conservatory or for summer bedding.

Messrs. Bakers, Wolverhampton, had a somewhat remarkable exhibit, consisting of blocks of Saxifraga Bakeri, S. Apple Blossom, S. Lady Deane—very fine, with unusually large flowers; S. R. W. Hosier, S. Miss Willmott, S. Wallacei, S. A. Lynes, and the yellowish Saxifraga S. T. Wright. Besides these were violas and a good colony of Incarvillea grandiflora.

Dwarf florists' calceolarias from Mr. G. Hill, gardener to G. T. Wigan, Esq., Forest Park, Windsor, made a bright lot of colour.

Messrs. T. S. Ware, Feltham, showed alpines and herbaceous plants in a rock garden, and the leading plants set out in little colonies were Ranunculus gramineus (golden-yellow), Trillium grandiflorum, Tiarella cordifolia, Saxifraga granulata fl.-pl., a lovely mass of the dainty Veronica repens, and some of the new highly-coloured saxifragas.

Mr. W. Honess, gardener to W. Raphael, Esq., Hopedene, Dorking, sent up a box of the new Myosotis Marie Raphael, which has a little central white, feathered stripe on each segment of deep blue.

Messrs. Felton and Sons, Hanover Square, W., showed the fine Lyon rose in connection with gerbera hybrids.

The violas from Mr. J. Box, Lindfield, made a brave show, and the St. Brigid anemones and varieties of Primula cortusoides from the same firm were attractive.

Roses were beautifully exhibited by Messrs. G. Mount and Sons, Canterbury, who presented a number of fine flowers of Mrs. John Laing, White Killarney, Richmond, Mrs. George Shawyer (A.M.), a deep pink, very fragrant H.T. variety; Ulrich Brunner, Frau Karl Druschki, and Lady Hillingdon.

Roses were largely and beautifully shown by Messrs. William Paul and Son, Waltham Cross, who exhibited pot-grown plants of the lovely Juliet, Sylvia, Hiawatha, Blush Rambler, Elsie, Paradise, The Orleans, and Kathleen; it was an elegant exhibit.

Messrs. Sutton and Sons, Reading, exhibited an attractive table of Cineraria Reading Gem, a semi-dwarf form, with small foliage and star-like flowers; it should prove a useful section for decorative uses.

Mr. S. Mortimer, Swiss Nursery, Rowledge, Farnham, exhibited three fine mounds of polyanthuses, yellow and white on either flank, with shades of crimson in the centre; in spite of the hot day the flowers kept up well.

From Mr. C. Turner, Slough, came some fine specimen Rambler roses. The Pink Rambler was in fine form, as were also the weeping specimens of Alberic Barbier. The same exhibitor brought up a few Malmaison carnations, Ceanothus rigidus, and the beautiful golden alpine auricula, Golden Queen.

Mr. A. Hemsley, Crawley, arranged a rock garden exhibit, wherein the leading subjects planted were Gentiana acaulis, Androsace coronopifolia, Cheiranthus Allioni, Geum Rossi, Primula involucrata, Draba pyrenaica, and Linaria triornithophora.

Mr. W. A. Jenkins, Albion Nursery, Farnham, staged a new ivy-leaved pelargonium named Emmeline, a bright red colour, and evidently very free flowering.

A tasteful exhibit of carnations was arranged by Mr. A. T. Paskett, gardener to Mr. E. J. Johnstone, Burrs Wood, Groombridge. The vases of Princess of Wales, Beacon, Royal Purple, and Enchantress being especially conspicuous.

Mr. Vincent Slade, Staplegrove Nurseries, Taunton, again had a fine exhibit of cut zonal pelargoniums, in both single and double varieties.

Hardy flowers from Mr. Amos Perry, Enfield, were staged in the annexe. These included a collection of megaseas, which appear on the eve of large developments, also trolliuses in variety, and Daphne Cneorum.

Messrs. Phillips and Taylor, Bracknell, had a beautiful exhibit of show and alpine auriculas in the pink of condition; the same firm also staged hardy flowers. Here the aubrietias and saxifragas were the chief features, while the primulas were worthy of note.

From Messrs. Paul and Son, Cheshunt, came some flowering shrubs. The deutzias, such as D. discolor, D. gracilis eximea, and D. carnea were the chief items.

The Burton Hardy Plant Nursery, Christchurch, contributed a rock and alpine display. The alyssums, with Ramondia pyrenaica, saxifragas, and Scutellaria indica japonica, with Dianthus microlepis, formed some of the most interesting features.

Messrs. Young and Co., Hatherley, Cheltenham, staged a splendid exhibit of carnations, lightly arranged in tall vases. The most noteworthy varieties were Lady Audrey Neeld, Beacon, Britannia, and Duchess of Devonshire.

Messrs. W. Fells and Son, Hitchin, contributed a nice display of rock plants. Antirrhinum azarina, Cheiranthus versicolor, and primulas in variety formed the best features.

A large exhibit of plants came from Messrs. W. Cutbush and Sons, Highgate. This was composed of Rhododendron Pink Pearl in good condition, with some very good seedling Azalea mollis. A brightly-coloured plant was Coleus James Attfield. Oranges in pots, and tall standard lilacs made a fine background. The same firm also arranged a group of carnations, in which Lady Coventry, Marmion, Rose Doré, and Lady N. Brassey were most conspicuous.

Messrs. H. B. May and Sons, Upper Edmonton, occupied a large space with a collection of zonal pelargoniums in pots, verbenas, and ferns. The verbenas were in splendid condition, as was also the heliotrope Lord Roberts.

NARCISSUS AND TULIP COMMITTEE.

Robert Sydenham, Lim., Birmingham, presented a pretty exhibit of daffodils, and the only trumpet variety in the collection was Weardale Perfection; Bullfinch was well shown, and so were Ptarmigan, Stonechat, Tangerine, the broad-cupped Cavalier, White Lady, Beacon, and the brilliant Gloria Mundi, and the Poet Horace.

Mr. James Box, Lindfield, Sussex, contributed a display of tulips, and set up his flowers in bamboo stands and large vases, associated with sprays of Asparagus Sprengeri.

Messrs. Hogg and Robertson, Mary Street, Dublin, filled the central table in the lower annexe with gorgeous tulips, and they presented grand bunches of Yellow Queen, Corydon, Loveliness, Chameleon, Summer Beauty, Lion d'Orange, Mrs. Moon, Bartigon, and Clara Butt. The flowers were of magnificent size and substance, and very clean, but they occupied an unkind position.

Tulips were also finely shown by Messrs. Sutton and Sons, Reading, who had a rather high-pitched group, in which splendid bunches of Godet Parfait, Mrs. Stanley, Sierrad Von Flora, Turenne, Clio, Psyche, Wedding Veil, Pride of Haarlem, and La Fiancée were well set up.

A grand exhibit of tulips was displayed by Messrs. Alex. Dickson and Sons, Newtownards and Belfast. The flowers were of enormous size and grand colour. Particularly fine were the sheaves of Marie, Clara Butt, White Queen, Jaune d'Oeuf, Enchantress, Sensation, Pride of Haarlem, Nauticus, Scarlet Emperor, Remembrance, Ravenswing, La Fiancée Phœcia, Dora, and the glorious Inglescombe Pink.

A bold and beautiful contribution of glowing tulips from Messrs. Barr and Sons, Covent Garden, was a good feature of the show. The yellow varieties and the brilliant Parrot tulips added the needed note of brightness. A few of the best varieties on view were Europe, Lady of the Lake, Blue Flag, Inglescombe Pink, Moonlight, Clara Butt, Pride of Haarlem, Electra, General Kohler, and Auber.

Messrs. R. Wallace and Co., Colchester, presented a very beautiful display of tulips, and arranged them tastefully with Japanese maples. Le Tulipe Noir was shown well and Rev. H. Ewbank, Eguste, and Electra made up the central grouping; Flame, Mr. Farncombe Saunders, Millet, Inglescombe Pink, the beautiful Psyche, Margaret, Clara Butt, and Beauty of Bath were also grandly shown, and helped with others to make up a most interesting exhibit.

Messrs. R. H. Bath, Lim., Wisbech, contributed good bunches of Rev. H. Ewbank, Parisiana, Mrs. Moon, Mr. Farncombe Saunders, Antony Roozen, Clara Butt, Suzon, Inglescombe Pink, and William Copeland, tulips and some vases of late spikes of Muscari Heavenly Blue.

Tulips were largely shown by Messrs. G. Massey and Sons, Spalding, this firm staging medium-sized bunches of somewhat small flowers, over white paper; the best bunches were of Vitellina, Isis, W. Copeland, Fulgens, Dream, and Lion d'Osaze.

ORCHID COMMITTEE.

Messrs. Sander and Sons, St. Albans, put up a group of orchids, in which leading things were Renanthera Imschootiana, Cattleya Mendeli, C. Schroderæ, Odontoglossum Thompsonianum, odontiodas, and Lælio-cattleya Choletiana.

Messrs. Stuart Low and Co., Bush Hill Park, Enfield, showed Lælia Latona, Dendrobium thyrsiflorum, D. crepidatum, Cattleya Mossiæ, and C. Bertheana.

Odontoglossums, light forms, Miltonia vexillaria, Cattleya Skinneri alba, Brassolælia purpurata-Digbyana and Lælio-cattleya Dominiana made up the bulk of a group from Messrs. J. Cypher and Sons, Cheltenham.

Very richly coloured was Odontoglossum illustrissimum Queen Mary (F.C.C.), a cross between O. Lambeauianum and O. ardentissimum, from Mr. W. Stevens, gardener to W. Thompson, Esq., Walton Grange, Stone.

Mr. Edward V. Low, Haywards Heath, sent some choice forms of Odontoglossum crispum, a fine Cattleya Mendeli, Cirrhopetalum Coletti, and C. Roxburghi.

J. V. Moss, Esq., Wintershall, Hants, contributed some odontoglossums, chiefly hybrids.

A beautiful little group of orchids from Messrs. J. and A. McBean, Cooksbridge, contained some fine odontoglossums and grand forms of Cattleya Mossiæ, with C. Mendeli Pearl McBean as the chief feature.

FRUIT AND VEGETABLE COMMITTEE.

Salading was daintily shown by Messrs. Sutton and Sons, Reading, and included good examples of Early Paris and Golden Ball lettuces, Sutton's Market cucumbers, Winter Beauty tomatoes, and a great variety of radishes.

CERTIFICATES AND AWARDS.

First Class Certificate.—To Odontoglossum illustrissimum Queen Mary, from W. Thompson, Esq., Walton Grange, Stone.

Award of Merit.—To Orleans Rose, from Messrs. William Paul and Son, Waltham Cross; to Asplenium decorum, from Messrs. H. B. May and Sons, Edmonton; to Viola Moseley Perfection, from Messrs. Bakers, Wolverhampton; to H.T. rose Mrs. George Shawyer, from Messrs. Lowe and Shawyer, Uxbridge; to Ismene festalis hybrida from A. Worsley, Esq., Isleworth; to Rhododendron Dawn's Delight, from Miss Mangles; to Narcissus Sonata, from Mr. F. H. Chapman, Rye.

MEDALS.

Gold.—To Messrs. Thomas Rochford and Sons, Broxbourne, for roses.

Silver-gilt Flora.—To Mr. James Douglas, Great Bookham, for auriculas; to Messrs. G. Mount and Sons, Canterbury, for roses; to Messrs. Hogg and Robertson, Dublin, for tulips; to Messrs. R. Wallace and Co., Colchester, for tulips.

Silver-gilt Banksian. — To Messrs. Barr and Sons, Covent Garden, for tulips; to Messrs. Alex. Dickson and Sons, Newtownards and Belfast, for tulips; to Messrs. James Veitch and Sons, Chelsea, for flowering trees and greenhouse plants.

Silver Flora.—To Mr. H. Burnett, Guernsey, for carnations; to Messrs. W. Cutbush and Son, Highgate, for carnations, etc.; to Mr. Maurice Prichard, Christchurch, for alpines; to Messrs. R. H. Bath, Lim., Wisbech, for tulips; to Messrs. Sutton and Sons, Reading, for tulips; to Messrs. Sander and Sons, St. Albans, for orchids.

Silver Banksian.—To Messrs. Dobbie and Co., Edinburgh, for sweet peas; to Messrs. Stuart Low and Co., Enfield, for greenhouse plants and carnations, and one for orchids; to Messrs. Wm. Paul and Son, Waltham Cross, for roses; to Mr. H. Pulham and Son, Elsenham, for alpines; to Messrs. James Cypher and Sons, Cheltenham, for orchids; to Messrs. Sutton and Sons, Reading, for salading.

Bronze Flora.—To Messrs, Bakers, Wolverhampton, for saxifragas and violas; to Mr. A. Hemsley, Crawley, for alpines; to A. Wigan, Esq., Forest Park, Windsor, for calceolarias; to Messrs. H. B. May and Sons, Edmonton, for greenhouse plants; to Messrs. Phillips and Taylor, Bracknell, for auriculas; to Mr. L. R. Russell, Richmond, for clematis, cytisus and salvias; to Messrs. T. S. Ware, Feltham, for hardy flowers; to Messrs. A. Young and Co., Hatherley, for carnations.

Bronze Banksian.—To Burton Hardy Plant Co., for hardy plants; to Messrs. J. Cheal and Sons, Crawley, for flowering trees and shrubs; to E. J. Johnstone, Esq., Groombridge, for carnations; to Mr. J. Box, Lindfield, for hardy flowers.

National Auricula Society.

(NORTHERN SECTION.)

The thirty-eighth annual exhibition of this society was held at the Coal Exchange, Manchester, on April 29. As usual, the date fixed proved all too early for the edged auriculas, which were not smooth enough; even selfs and alpines would have been better had the show been a week later; if we are to have cold sunless March-like weather in April year after year the members will have to try a May show. The danger is, that should a spell of warm, sunny weather come at the end of April the bloom is quickly hurried over, but it seems high time to risk it, as for some years the exhibitors have had to come with flowers not fully developed.

Polyanthuses were poor, the only good feature being that there were more exhibitors of them, one of whom, Mr. Grindrod, of Whitworth, made a creditable first appearance, securing the prize for the best polyanthus in the show with a bloom of George IV., the judges being influenced by what it had been, rather than by what it was. As last year, the great feature of the show was the continued progress of the younger members of the society.

There is not much to be said about the show auriculas. Green edges were not as good as usual; Shirley Hibberd seemed poor with most of us; Mrs. Henwood scarcely in show form; there were more of the newer greens, such as Ossian, Orient, and Henry Wilson on view; but the best of all was a beautiful green edge, in the way of Shirley Hibberd, exhibited by Mr. Simonite, called Mrs. Simonite.

In grey edges Lancashire Hero and George Lightbody were supreme. Horner's Orpheus was shown, and would be a useful flower if it were placed in commerce, as it is a good grower, makes a fine truss of even, well-marked pips, with every good property, except that the edge of the petals is not quite round enough. Mr. Dickens had a pleasing seedling in the way of George Rudd called Ledlie Clark. In white edges there was nothing to touch Acme; Letitia is still rough, and we badly want some new varieties of merit. By the way, why do so many exhibitors show Heather Bell, it is rarely good enough for a stage flower. There were some good selfs, Mikado, Harrison Weir, Mrs. Potts, and Miss Violet were well shown; the latter is a fine truss maker, although rather too long in the stem.

The premier auricula was Mrs. Henwood, shown by Mr. Alfred Yates, a fine flower, which wanted a few more days' growth to be at its best.

In alpines the competition was very severe, and there was the usual crop of seedling novelties in bewildering profusion. Of the new varieties from the South Mrs. Douglas was, in Mr. J. W. Bentley's opinion, the best. Bluebell is a very striking light ground, but rather deficient about the centre; Phyllis Douglas was not so good as last year; Dazzle, in the way of Bluebell, was rougher as shown. This well-known authority said he did not like Janet, Lady June, or Claude Halcro. Flora McIvor was pleasing, but not flat enough, and the segments cut into the centre. Amy, Colin Bell, and Rookwood are promising varieties, and especially noteworthy were the well grown excellent seedlings exhibited by a new member, Mr. E. Blomily, of Blackley, near Manchester, of which more will, it is hoped, be seen some day. But the end of it all was that old J. F. Kew, shown by Mr. Dickens, won the prize for the best alpine of the show.

It was a good show, the day wet, as usual, but the exhibitors had a good time among themselves, and the new treasurer and secretary did their work excellently well.

In the chief class for six show auriculas Mr. F. Simonite led with Lancashire Hero, Orient, Acme, Ossian, and a seedling; he was followed in order by Mr. W. M. Shipman, Mr. W. Yates, jun., Mr. Alfred Yates, and Mr. J. W. Bentley. Mr. F. J. Dickens scored for four distinct show auriculas, and his set consisted of Mrs. Potts, Leslie Clark, Shirley Hibberd, and Acme; Mr. J. Antrobus was second, Mr. J W. Bentley third, and Mr. W. M. Shipman fourth.

In the class for a pair of plants Mr. G. Lord came to the front with G. Rudd and Shirley Hibberd, followed by Mr. W. Marshall, Rev. C. E. Bell, and Mr. A. Preston. The Rev. C. E. Bell led in the class for a pair of plants, maiden growers, and he secured the award with Acme and George Lightbody; Mr. J. P. Beaumont came second, and Mr. J. Tonge third.

The single plant classes brought out a fine competition. For a green-edged variety Mr. W. H. Parton scored with Abbé Lizst; Mr. F. J. Dickens second with A. Barker; and Mr. William Yates, jun., third, with Shirley Hibberd. Mr. W. H. Parton scored for a grey-edged variety with George Lightbody, Mr. J. W. Bentley second with the same, and Mr. W. M. Shipman third with Lancashire Hero. Mr. Shipman was both first and second for a white-edged variety, showing Acme in each case; Mr. F. Simonite third with Conservative. The best self was Mikado, from Mr. G. A. Wright, Mr. G. D. A. Hall coming second and third with Mrs. Petts. Mr. F. Simonite showed the best seedling, with Mr. W. H. Midgley second. The premier show auricula was a Mrs. Henwood, shown by Mr. Alfred Yates. Mr. W. Marshall, Mr. F. Simonite, and Mr. W. H. Midgley won in the order of mention for three plants, dissimilar.

In the alpine section Mr. W. H. Parton led for six, distinct, with Mrs. M. Smith, P. Douglas, Mrs. Gorton, Thetis, J. F. Kew, and Kingswood; Mr. J. W. Bentley second, and Mr. F. J. Dickens third. Mr. Dickens, Mr. Parton, and Rev. C. E. Bell scored in order of mention for four plants, dissimilar, while for a pair of plants the awards fell to Rev. C. E. Bell (for P. Douglas and Bluebell), Mr. Jack Bentley, and Mr. E. Blomily. Leading prize winners in other classes were Mr. W. Stringer, Rev. C. E. Bell, Mr. W. H. Parton, and Mr. J. Tonge. Mr. J. W. Bentley, Mr. N. Brownhill, Mr. D. Johnson, Mr. W. Grindrod, Mr. James Lomas, and Mr. G. Lord were the chief prize winners in the classes for gold-laced polyanthuses.

Royal Gardeners' Orphan Fund.

The twenty-third annual festival dinner in aid of this charitable and eminently useful fund was held at the Hotel Cecil, on Thursday, May 4, at 7 o'clock, under the genial presidency of N. N. Sherwood, Esq., V.M.H. There was a record attendance. The room was beautifully decorated with flowers and plants kindly provided by Messrs. James Veitch and Sons, Messrs. Sander and Sons, and Messrs. Barr and Sons.

After dinner, and the usual honouring of the loyal toasts, the Chairman, who had a most hearty reception, proposed "The Royal Gardeners' Orphan Fund." In hearty, pleasant, and effective manner he advocated the claims of the fund, and set forth the duty of those who loved or profited by gardening, to the orphans of gardeners. He said that the fund began in a small way, and the first meeting was called to consider a proposition made simultaneously by Mr. Charles Penny, Mr. H. J. Clayton, and Mr. James Udale, to "establish a gardeners' orphanage or fund for the benefit of the orphan children of gardeners, as a memorial of the Jubilee of Queen Victoria," and was held on March 22, 1887, in the conservatory of the former R.H.S. gardens at South Kensington. At that meeting Mr. George Deal was voted into the chair, and after some discussion it was resolved unanimously: "That in the opinion of this meeting it is desirable to establish a fund to be called 'The Gardeners' Orphan Fund.'"

A provisional committee was appointed to prepare a scheme, consisting of the chairman, Mr. Deal, Mr. Shirley Hibberd, Dr. Masters, Mr. James Douglas, Mr. John Fraser, Mr. Charles Penny, Mr. C. H. Sharman, Mr. Harry J. Veitch, Mr. J. Roberts, Mr. A. F. Barron, Mr. R. Dean, Mr. J. Matthews, Mr. John Wright, Mr. B. S. Williams, Mr. William Richards, Mr. B. Wynne, and Mr. W. Roupell. Mr. William Richards was appointed hon. treasurer, and Mr. J. Wright, Mr. B. Wynne, and A. F. Barron, hon. secretaries.

The first list of subscriptions received up to this date amounted to £28 14s. 6d., and the list was made up in the office of Messrs. James Carter and Co., by Mr. Penny and Mr. Sharman.

After numerous meetings of the provisional committee had been held, and a set of rules drawn up, the fund was duly constituted as a going concern on July 12, 1887, at a meeting held in the arcade over the western annexe of the conservatory at South Kensington, under the presidency of Sir Julian Goldsmid, Bart., and at which there were present, amongst others, Dr. Hogg, representing the council of the R.H.S., Dr. Masters, Mr. H. J. Veitch, Mr. Shirley Hibberd, Mr. G. Deal, and Mr. John Fraser.

The first annual general meeting was held at the Cannon Street Hotel, London, on July 13, 1888, Mr. George Deal presiding. There were ten candidates at this meeting, and at the time the date of the meeting was fixed the committee did not consider it prudent to elect more than six, but by the close of the accounts for the year, the financial position had improved so satisfactorily that the whole of the candidates were put upon the funds. Queen Alexandra, when Princess of Wales, became patroness of the fund in January, 1892, and early in 1893 Queen Victoria commanded that the fund should be called the Royal Gardeners' Orphan Fund.

The Chairman said that twenty-two years ago he had the honour of presiding over an annual dinner, and since that time there had been great progress, but the need for great effort was still present. There were now 117 orphans on the funds, but 21 were still waiting for assistance; 293 children had been helped, and one of the first to receive help had now become an annual subscriber. The cost of maintenance was over £2,000 a year, but the annual subscriptions amounted only to £693 per year. He concluded by asking those present to be generous, to do their best, remembering the old Biblical promise that "Whosoever shall give to drink unto one of these little ones a cup of cold water he shall in nowise lose his reward."

Mr. Arthur W. Sutton, V.M.H., responded to the toast, and said that the funds would not permit the committee to elect all the orphans to its benefits, therefore there was great need for all to do a little more than they had intended to do, to assist in a great work, and to show their loyalty to the chairman.

The Rev. Canon Curtis made a delightful speech in proposing "Gardeners and Gardening." He divided gardeners into three kinds; the professional, who called science to aid practice, and evolved new and beautiful fruits and flowers for the general good; the old gardener, who loved his garden, and concerning whom it was difficult to understand whether the gardens belonged to him or to his employer—he had a great love for such old gardeners; and the amateur gardeners, who delighted themselves, and often vied with professionals in the art of gardening. These were the "Three Jolly Gardeners," and he wished them prosperity. Gardening was of two kinds, that which followed Nature, and that which subverted it. The love of Nature brought out the best in mankind; gardening gave recreation to the toiler in the city, and solace to the aged. Dean Hole had said, "There is nothing like gardening to put before the people, it gives delight in life and peace and solace in old age.

Mr. W. A. Bilney, who responded, referred to the advances in horticulture since Mr. Sherwood first presided at an Orphan Fund dinner, to the work of the Royal Horticultural Society, and the forthcoming International Horticultural Exhibition. He said that a student at Wisley had just been appointed sub-inspector of school gardens—[in Surrey—ED.]—at a salary of 30s. per week, but this statement did not call forth applause.

The list of subscriptions was then read by Mr. Brian Wynne, the secretary, and it totalled up to the record amount of £1,570. Messrs. Hurst and Sons gave £100, Mr. N. N. Sherwood £50, Mr. William Sherwood £50, Mr. Edward Sherwood £50, and Mrs. Campbell (Mr. Sherwood's daughter) 25 guineas; the Covent Garden friends did well again, Mr. D. Ingamells raising £120, Mr. Wright £58 9s., and Mr. W. Poupart £24 16s. Mr. G. Reynolds brought over £100, Mr Cuthbert nearly £50, Messrs. Rothschild and Sons sent £25, Messrs. Sutton and Sons sent £50; Mr. A. W. Sutton, V.M.H., gave £50, and Mr. M. H. Fouquet Sutton gave £5 5s.; and Messrs. W. Leech, A. Turner, J. F. McLeod, D. W. Thompson, W. Nutting, W. Atkinson, — Daniels, R. H. Pearson, J. Veitch and Sons, H. B. May, T. W. Sanders,

A. Watkins, Barr and Sons, Eno, and others brought substantial amounts towards this grand total.

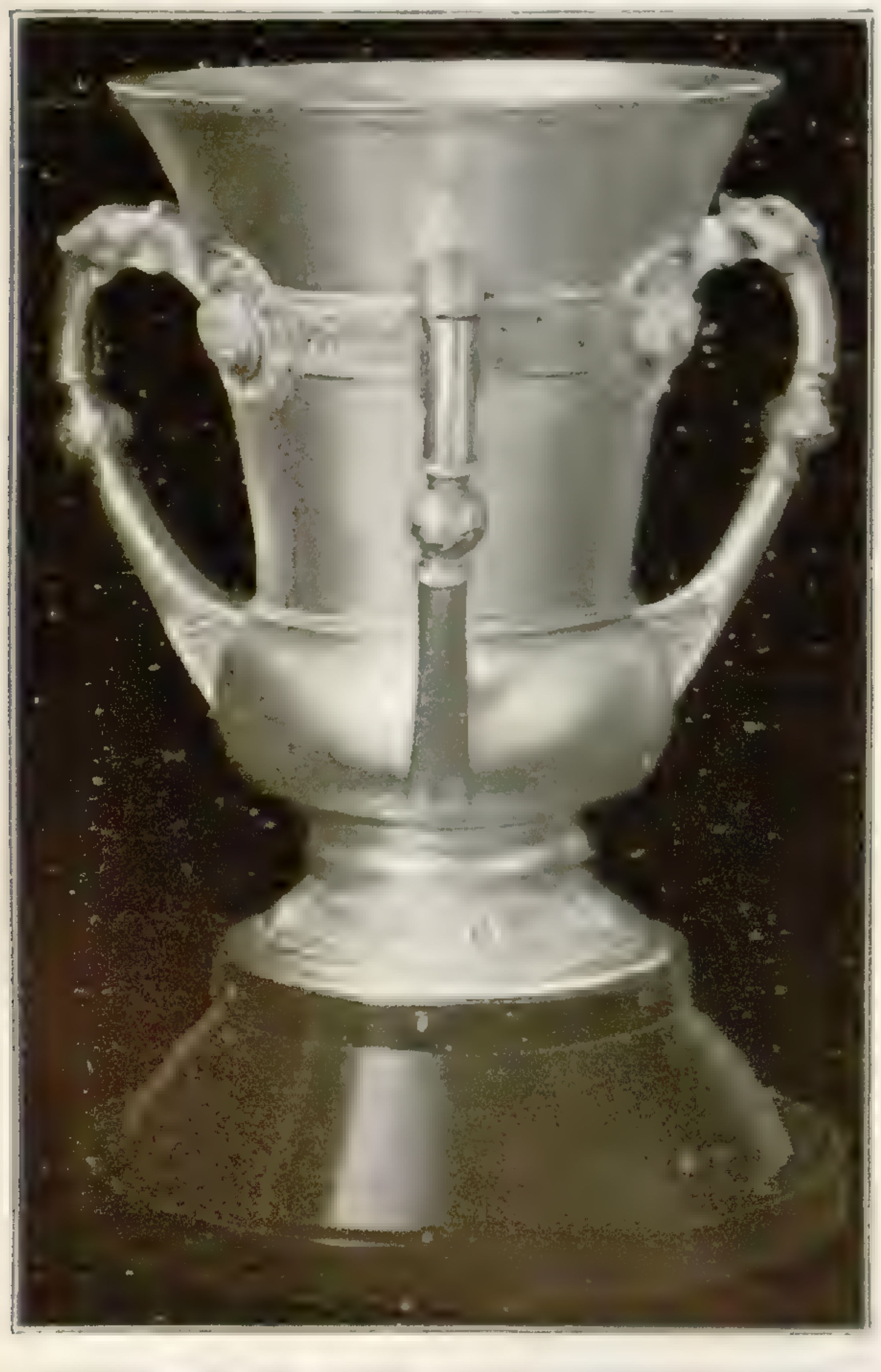
Mr. Edward Sherwood ably proposed "The Visitors," and, as treasurer, he congratulated the chairman (his father) on the success of the evening; he hoped the visitors had enjoyed themselves, and would remember the claims of the Orphan Fund. Mr. William Atkinson, of Sheffield, briefly responded.

Mr. H. B. May proposed "The Chairman," and expressed the committee's thanks to Mr. Sherwood for presiding, and for working so hard to secure the gratifying result they had just heard. He spoke of the Chairman as a peer in the realm of horticulture, a sentiment with which all agreed, as evidenced by the musical honours and rounds of cheering that went with the toast. Mr. Sherwood responded, and thanked all who had so nobly responded to his appeal, and in conclusion he proposed the health of the secretary, to which Mr. Wynne suitably responded

The proceedings were somewhat prolonged; the musical arrangements, in the hands of Mr. Turle Lee, gave every satisfaction.

FESTIVAL OF EMPIRE IMPERIAL EXHIBITION.

As briefly intimated in these pages a short time since, it is intended that horticultural and floricultural products shall form an important part of the Imperial Exhibition, to be held in association with the Festival of Empire, which is now in progress in the grounds of the Crystal Palace, Sydenham. There will be a permanent exhibition in the grounds, and special exhibitions in one of the buildings, the latter, we understand, comprising two rose shows. One of the most noteworthy of the prizes that are being offered is a handsome cup, of the value of twenty-five guineas, that has been presented to the Festival of Empire by Messrs. Clay and Son, of Stratford. This trophy will be awarded as the premier prize for the finest horticultural display produced by nursery firms in the grounds. The trophy is a copy of a fine three-handled ancient cup found at Ardagh, Ireland. In the spaces between the three handles are the following inscriptions, (1) Imperial Exhibition, 1911; (2) Presented by Messrs. Clay and Son, Stratford, London; (3) Awarded for the premier horticultural exhibit. It has been designed and executed by Messrs. Elkington and Co., of Regent Street, and is an excellent specimen of their fine work.



MESSRS. CLAY AND SON'S TWENTY-FIVE GUINEA CUP.

INTERNATIONAL HORTICULTURAL EXHIBITION OF 1912.

MANSION HOUSE MEETING.

A meeting for the furtherance of the efforts already made in connection with the International Horticultural Exhibition of 1912 was held in the Egyptian Hall, Mansion House, London, at three o'clock on Wednesday, May 10. The Lord Mayor presided, and was supported on the platform by Lord Aldenham, Sir Trevor Lawrence, Bart., Sir Jeremiah Colman, Bart., Sir Marcus Samuel, Bart., J. Gurney Fowler, Esq., H. J. Veitch, Esq., and Mr. Edward White.

There was a small attendance, those present being almost all well-known horticulturists, and including the Rev. J. H. Pemberton, Messrs. George Paul, H. B. May, C. Bayer (Master of the Gardeners' Company), J. Green, G. Jackman, R. Wallace, A. Kingsmill, J. O'Brien, G. J. Ingram, A. Gaskill, W. Jennings, A. Turner, C. Blick, W. Pope, D. McDonald, A. H. Rivers, Owen Thomas, H. Mount, J. Harrison, R. C. Notcutt, F. Sander, W. Watson, F. K. Sander, W. A. Bilney, J. A. Alexander, W. Cooper, W. Bolton, R. H. Pearson, W. Harvey, J. H. Dick, C. H. Curtis, etc.

The Lord Mayor opened the proceedings with a few references to the desirability of holding such an exhibition as proposed in London, and he read letters from Lord Rothschild and Lord Balfour of Burleigh, both of whom were unable to be present.

Lord Aldenham expressed his regret at Lord Balfour's absence, and proceeded to state that forty-four years ago a great international horticultural exhibition was held on the site of the Natural History Museum at Kensington. Now it was proposed to hold a great show in 1912 at Chelsea Hospital grounds, where 22 acres would be at disposal, and he hoped the show next year would greatly exceed the brilliance of the last one. Horticulture had now greatly advanced. The Royal Horticultural Society had 12.000 Fellows—then it had about 3,000. Now almost everyone had some knowledge of gardening, and it was time London slept no longer on the matter, since St. Louis, Ghent, Liege, Buda Pesth, and other places had had their great international shows. In the City men worked hard, and they needed relaxation; and, no matter whether their garden was small or large, horticulture afforded such relaxation, and of the highest order. This being so, he moved that "This meeting cordially approves the idea of holding the Royal International Horticultural Exhibition in London in May, 1912, and pledges itself to do its utmost to ensure the success of the undertaking."

Sir Marcus Samuel seconded the resolution, and endorsed the merits of horticulture as expressed by Lord Aldenham. The Royal Horticultural Society was evidently in full sympathy with the movement for a great show in 1912, or it would not have made the great sacrifices it had, and offered to give up the big May show next year. The great advance made in horticulture during the past forty-four years in Great Britain had been almost equally marked in other countries. He believed everyone was ready to support the motion he had the pleasure of seconding.

Sir Trevor Lawrence, Bart., supported the motion, and said that some of his earliest recollections were of the famous old shows at Chiswick. He had been intimately associated with the fortunes of the Royal Horticultural Society, had seen it in grievous trouble, and had seen it recover and achieve its present high position. Almost everyone nowadays could enjoy plants and flowers, from window plants to great collections in well-kept gardens. In recent years British horticulturists had received unbounded hospitality at various great exhibitions on the Continent, and it was high time we returned the hospitality and compliments so often received.

Sir Jeremiah Colman, Bart., further supported the motion, and in doing so outlined the movement. He said the Executive Committee had been fortunate in obtaining the patronage of their Majesties the King and Queen, and he believed they would be able to open the exhibition in person. Queen Alexandra and the other members of the Royal Family had granted their patronage also, and were followed by the "flower of the British aristocracy." There was also an Empire List of Honour, including Lord Strathcona, Sir R. Solomon, Sir J. Reid, and the representatives of nearly all our colonies. Prominent foreign horticulturists to the number of 150 were assisting. The Duke of Portland had become president of the movement, and Mr. J. Gurney Fowler had already proved a most capable chairman of committee, while Mr. Edward White was giving constant attention to the business of the show as hon. secretary. In Mr. Harry J. Veitch they had one who was on the executive of the great show of 1866. At Chelsea they had ample space in the Hospital Gardens for the 1912 show. The scientific and educational side of horticulture would not be overlooked, and a powerful committee was in charge of this section, which would cover such subjects as plant breeding, physiological questions, insect and fungus life, soil sterilisation, legislation, horticultural employment, etc. In respect of resources they had no experience as to the possible amount needed to bring the movement to a successful issue, and he asked that donations or guarantees should be given so that the financial side of affairs might not press heavily upon the executive; Mr. G. J. Ingram had the collection of such donations, etc., in hand. The Royal Horticultural Society had given £1,000, and guaranteed £4,000, and in return the Fellows would receive substantial benefits.

In regard to the show itself he thought the honour of winning cups and medals should be sufficient for exhibitors, but some cash prizes would be given, and the prize-list would amount to about £3,000. Hospitality would be extended to foreign guests, so that the function might be a pleasant as well as instructive one. It was now absolutely certain that the show of 1912 would, from a purely horticultural point of view, be one such as had never before been seen. He suggested it would be a large and glorified Temple Show, and concluded by a grateful reference to the work of the county secretaries, who were working for the success of the movement, and to the generous assistance already rendered by the Press, through whom he would on this occasion be speaking, not to empty chairs, but to all interested in horticulture.

Mr. J. Gurney Fowler moved a vote of thanks to the Lord Mayor for granting the use of the Mansion House for the meeting. They wanted a good send-off for the movement, and hoped in the course of another week to send out particulars to all interested in horticulture. Then the schedule would be finished, and steps at once be taken to secure donations and guarantees, and promises of cups, etc., for prizes. If the weather was good in 1912 the financial side of the show would, he thought, be a huge success, and he hoped there would be a good surplus of profits for presentation to the horticultural charities, etc.

Mr. Harry J. Veitch, in seconding the proposal, said the forthcoming show would be far different, and he believed far finer, than the one of 1866.

Sir Marcus Samuel, who had occupied the chair for the latter part of the meeting, courteously replied on behalf of the Lord Mayor, who, he said, took a keen interest in the movement, and would use his great influence to further it.

The proceedings lasted about three quarters of an hour.

CATALOGUES RECEIVED.

WM. PAUL AND SON, WALTHAM CROSS.—A spring catalogue of roses, in which pot plants of a wide selection of the queen of flowers are offered. Chief [illegible] the new varieties described, and mostly figured such as Florence Haswell Veitch, Sylvia, Elsie, Juliet, Portia, Fairy, Milky Way, Orleans Rose, etc.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

DISEASED TULIPS.—F. J. C., Camborne: The trouble is due to a bad attack of a fungus, and the disease as now evident is the botrytis form of a sclerotinia (possibly S. parasitica). At a later date the fungus produces resting bodies, or sclerotia, at or near the base of the stem, and among the bulb scales. Bulbs containing sclerotia are almost sure to be attacked the following year, and the soil in which diseased bulbs are now growing is certain to be infected, and would cause the disease to appear again even if clean bulbs were planted in it. When the bulbs are lifted all diseased ones should be rejected, and promptly burned, and a further close examination for diseased bulbs should be made at planting time. Plant on soil that has not been used for tulips. An attack may be mitigated if the tulips are sprayed with potassium sulphide at the rate of one ounce to three gallons of water, as soon as the disease is in evidence in the foliage in early spring. Soils heavily charged with organic matter appear to encourage the disease, and an attack is always strongest when cold rains or frosts have caused a severe check to growth.

QUICKLY-GROWING CLIMBERS FOR AN ARCH.—R. B., Maidstone: Cobæa scandens, or the good old Canary Creeper (Tropæolum canariensis) will be suitable for covering the arch. In the autumn you may plant clematis, roses, or ornamental vines to occupy the position permanently.

LIFTING DAFFODILS.—B. P., Taunton: You may lift the daffodils as soon as the foliage turns brown and shrivels; by that time the leaves will have done their work for the season, and the roots made during the winter and spring will also have shrivelled. As new roots soon begin to appear it is always a good plan where lifting is contemplated to lift as early in July as the state of the foliage will permit. Remove the offsets and replant the bulbs at the end of July or in August. Good varieties from which show blooms are expected should not be left unplanted until October or November.

BRUSSELS SPROUTS.—N. D. B., Luton: If the seedlings are of fair size, and the plot is quite ready, then set them out two feet apart each way. We very strongly believe in an early plantation of Brussels sprouts, especially if a somewhat later batch is to follow. If the ground is not yet ready for the Brussels sprouts then prick out the seedlings into nursery beds, from which they may be lifted with a trowel in due course, and put into position.

POETAZ NARCISSI.—S. J. W., Lancaster: We have on numerous occasions referred to the great value of the poetaz varieties of narcissi for pot culture and garden decoration. These varieties have been raised by crossing poeticus varieties with Tazetta, or polyantha forms, the result being sturdy plants carrying heads of fairly large and substantial flowers. One variety that we specially recommend you to try for pot culture is Aspasia, which has white, yellow-centred flowers of quite good size.

MARKS ON TOMATO LEAVES.—T. D. S., Coventry: The marks on the tomato leaves are not caused by a fungus attack, but are due to scalding. Scalding may be due to the action of bright sunshine through moisture on the leaves, the drops of water acting like so many lenses or burning glasses. It may also be produced by faulty glass in the roof, and as the marks have only appeared on two or three plants, this would seem the most probable cause of the damage in your case.

STUDY OF PLANTS.—W. L. S., Stocksfield: Have you tried "Kerner's Natural History of Plants"? If not, we recommend you to do so, as Anton Kerner was a close student of plant life, and he makes many things plain, and presents them in a fashion not general in text books. The English translation, by Dr. Frank Oliver, is published by Blackie and Co., Old Bailey, London. The work consists of two large volumes, freely illustrated, and is issued at 30s.

MOSSES.—W. L. S., Stocksfield: There are several works on mosses, with coloured illustrations, and the chief of these are Braithwaite's "British Moss Flora," a very expensive book; Dickson's "Handbook of British Mosses" (18s. 6d.); and Berkeley's "British Mosses" (21s.) Can you send us other specimens of the willow gall?

WITCHES BROOM ON BIRCH TREES.—C. B. F., Brockley: The peculiar twig formation known as witches broom is caused by the irritating action of a gall mite that is closely allied to the big bud mite so prevalent among black currants. It is a difficult matter to check the pest on a large birch tree, and probably no serious harm is being done. We know some folks who would not for one moment consider the question of removing the witches' brooms from a tall birch tree which we pass every day. If the clusters of deformed twigs increase too freely then cut out all such clusters at once, and, as soon as the leaves fall next autumn, cut away any newly-formed clusters, burning them at once.

NAMES OF PLANTS.

C. B. T., Swindon.—Spiræa arguta.

N. C. B., Godalming.—1, Cytisus præcox; 2, C. albus; 3, Olearia Haasti.

R. C., Westbury.—Pinus laricio pumila.

W. C., Oldham.—A garden form of Clivia miniata.

S. H. J., Earl's Colne.—1, Maxillaria luteo-alba; 2, Muscari botryoides alba; 3, Richardia albo maculata.

P. R. D., St. Albans.—1, Ribes aureum; 2, Pyrus spectabilis; 3, P. aria; 4, Tiarella cordifolia; 5, Tillandsia usneoides.

W. H., Harrow.—1, Sarracenia Drummondi; 2, Daphne laureola; 3, Pernettya mucronata; 4, Myrica Gale.

O. B. R., Sunninghill.—1, A piece of growth of Polygonum Baldschuanicum; 2, Cheiranthus kewensis; 3, Narcissus biflora; 4, Narcissus poeticus recurvus.

TRADE NOTES.

We are informed by Messrs. John Waterer and Sons, Ltd., American Nursery, Bagshot, that on account of the expansion of their Welsh business they have secured the services of Mr. W. Lewis (for many years with Messrs. Clibran), who will, from the middle of May, represent them in the Principality, thus liberating his brother, Mr. Thomas Lewis, for the increasing demand on his time in connection with the firm's landscape and advisory department.

The Vaporite-Strawson Co., of Spencer House, South Place, London, have received a letter from Mr. D. Wilshun Murch, F.C.S., in praise of Vaporite. He writes: "Personally, I strongly believe in the value of Vaporite, having made a number of experiments with it on various insects, and these were in all cases most successful." Vaporite the chemical powder invented by Mr. G. F. Strawson, has long since been proved to be effective in ridding the land of insect pests which prey upon the crops; the vapour which emanates from it in contact with the soil being absolutely fatal to wireworms and other pests which cause cultivators such serious loss, but its advantages by no means end there. If a little Vaporite is mixed with limewash used for coating the interior of poultry sheds and similar buildings, it will prevent insects annoying the stock, and keep the place sweet and free from vermin—a very important point which every poultry-breeder should note.

The double delivery nozzle of the Pine Spray Syringe bends up or down, this way ‿ or that ⌒
on a joint that is as soundly made as a high-pressure steam cock. And delivery of the fluid can be made through an insecticide spray as fine as a mist, or through an ordinary watering rose, by merely half turning the syringe bodily in the hand. Every spraying combination required in Greenhouse or Garden can be obtained instantly without the removal or addition of a single fitment.

You can see it before you buy.
By writing to us, your ironmonger or seedsman can obtain a syringe for your inspection. Neither he nor you are under any obligation to buy if you are not satisfied that it is the most convenient, effective, and best made syringe you have ever seen.

ROBINSON'S PATENT
PINE SPRAY SYRINGE **10\6**

Send for illustrated list to ROBINSON BROTHERS, Ltd., West Bromwich

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head, or good Single-handed); 10 years' practical experience in good establishments; leaving through death; near London preferred. A. GLOVER, High Street, Stockbridge, Hants.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushrooms, ridge or flat; Kitchen, Lawn, Flower Garden. Special Prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (Head of two or three) seeks SITUATION; 12 years' good practical experience; age 26; married when suited; well recommended. Apply E. WALLIS, The Gardens, Maristow, Roborough, South Devon.

GARDENER (Head working or Single-handed); married, no family; life experience in all branches Inside and Out; good references. GARDENER, 36, Clarence Place, Gravesend, Kent.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working, where two or more are kept); good all round; 14 years as head in large and well-kept establishments; married; age 40; excellent references. E. MAYLETT, Park Hall, Salford Priors, Evesham.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working); thoroughly practical, Inside and Out; life experience; 5 years' good character; age 40. Address T. BELL, The Gardens, Rose Court, Havering, near Romford.

GARDENER (Head Working, where three or more are kept).—Mr. LAST, The Gardens, Homewood, Chislehurst, Kent, can with every confidence recommend his Foreman, W. WAITE, as above; 13 years' experience, gained in good establishments; five years present situation. Married when suited.

GARDENER (Head working), age 33, married, desires RE-ENGAGEMENT; 19 years' practical experience gained in good establishments; excellent references. WM. GIBSON, 128, Lansdowne Road, Leicester.

GARDENER (Head Working, where two or three are kept); life experience; age 36; married; good reference. HALES, 8, Ivy Terrace, Old Church Road, Romford.

GARDENER (Head Working or good Single-handed); 24 years' experience Inside and Out; understands Electric Plant; age 38; disengaged May 27. A. COOK, The Hall, Hook, Surbiton.

GARDENER (Head Working, where three or four are kept); thoroughly experienced in all branches; Inside and Out; also land and stock if required; age 38; married; no family; disengaged. HARE, Lynton, Bisley, Woking.

GARDENER (Head Working).—Mr. GOULD, Shernfold Park, Frant, Sussex, highly recommends his Foreman, A. DAY, as above; thorough practical experience Inside and Out; excellent references; age 30.

GARDENER (Single-handed); little or no glass; 10 years' experience in present place; single; age 28. W. REEKS, 89, Amwell Street, Hoddesdon, Herts.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

MR. SALTER, The Gardens, Avenue House, Church End, Finchley, highly recommends W. BICKER as GARDENER (Single-handed, or with help); experienced Inside and Out; at present in his employ; age 28; Eastern Counties preferred.

GARDENER (Single-handed or with help), experienced Inside and Out; age 30; married, no family; good refs. H. J. C., 64, St. Mary's Road, Reigate.

GARDENER (good Single-handed, or where help is given); married, no family; age 36; good references. State wages. SMITHERS, Lion Lane, Haslemere, Surrey.

GARDENER (Single-handed or otherwise); experienced Inside and Out; Vines, Fruit, Flowers, Vegetables; 10 years' excellent reference; abstainer; married when suited; disengaged. C. KIBBLEWHITE, Lyndhurst Lodge, The Grove, Slough, Bucks.

FOREMAN (Inside or General), would take HEAD place where four or more are kept; age 26; 11 years' practical experience in all branches, including Fruits, Orchids, Carnations, Stove, and Greenhouse Plants, etc., House and Table Decoration; R.H.S. certificate; disengaged when suited; England preferred. L. D. DREDGE, Dupplin Castle Gardens, Perth.

YOUNG MAN seeks SITUATION, either as Single-handed or Foreman; experienced in vines, orchids, etc.; Inside and Out; 7 years' experience; good references; age 23. C. E. RASS, Park House Gardens, Cotham Park, Bristol.

GARDENER (where one more kept); 15 years' practical experience Inside and Out. Essex preferred. Age 33; single; disengaged. R. W., 32, Forest Road, Loughton, Essex.

GARDENER seeks a SITUATION age 21; experience in Herbaceous Borders, Rockery, and Pleasure Grounds; good reference from present place. C. BRAIDEN, Gardens, Nunnery, Rusper, near Horsham.

MR. H. DUKE, Felixstowe Lodge, Suffolk, will be pleased to recommend JOURNEYMAN (Inside or Inside and Out); age 22; past three years here; abstainer.

JOURNEYMAN (Inside) seeks SITUATION; six years' experience Inside and Out; age 21; excellent references; 5 feet 10 inches; South preferred. C. OSBORN, High Street, Turvey, Bedford.

YOUNG MAN seeks SITUATION as JOURNEYMAN, under a Foreman (Inside or Inside and Out); eight years' experience; excellent characters; age 22. ALBERT BROADLEY, Dunnington Hall, York.

MR. T. BOLTON, Powderham Gardens, Exeter, would be pleased to recommend Young Man as JOURNEYMAN (Inside, under Foreman); age 21; strong, active, and obliging; Bothy preferred.

MR. FAGENCE, Nork Park, highly recommends H. THOMPSON as JOURNEYMAN (First, Inside); 10 years' good experience; good references; age 23. H. THOMPSON, The Lodge, Drapers, Margate.

GARDENER (Under) seeks SITUATION, where 3 or 4 are kept; well up Inside and Out; 7 years' experience; age 21; excellent references. H. F., Ladds House, Sandhills, Witley, Surrey.

GARDENER (Under); private establishment or Grower Market Nursery; 14 years' experience, Inside and Out, private and nursery; good references. LEWINGTON, 169, High Street, Hampton Hill, S.W.

GARDENER (Under); four years' excellent character; Vegetables, Melons, Cucumbers, Tomatoes, Flowers, Herbaceous Borders; Inside and Out; Bothy preferred; age 24. W. CRACKNELL, Feltwell, Norfolk.

ORCHID GROWER requires SITUATION to take charge of collection or small place where Orchids speciality; experience Burford Lodge, etc.; excellent references. Apply S. BURROUGH, Royal Gardens, Sandringham.

GARDENER seeks SITUATION on Gentleman's Estate; age 24; single; with good references; understands kitchen gardens and lawns. Apply P. TURNER, Florance Terrace, or 63, Courtney Road, Woking, Surrey.

WANTED, a SITUATION as Second, or Head, where two are kept; 14 years' experience, Inside and Out; 7 years last situation, as leading hand, Inside; used to exhibition; highly recommended; 27½ years of age; married when suited. Apply GEORGE WIFFIN, 5, Alpha Road, Trumpington, Cambridge.

IMPROVER (Inside or Inside and Out); age 19; well recommended; total abstainer; Bothy preferred; take duty. A. W. RUSSELL, 69, Brighton Street, The Chase, Nottingham.

IMPROVER. — Rev. MANLEY POWER, Rector of Hagley, strongly recommends Youth, 18 years, who has been in his gardens for three years. E. HOPCUTT, Hagley, near Stourbridge.

YOUNG MAN seeks SITUATION as IMPROVER (Inside and Out), or to help in Herbaceous Borders and Pleasure Grounds: age 23. Apply to H. JEFFERIES, Keevil, Trowbridge, Wilts.

FLORIST ASSISTANT; age 17; three years' good reference from present employer; understand making-up all designs. HENRY CLEMENTS, 26, Merritt Road, Brockley, London.

WANTED to go as PUPIL with Florist, in connection with Market Gardening preferred. Had experience on a large Nursery. Write and state terms, etc. R. MILLER, 192, Brockley Road, London, S.E.

YOUNG MAN (22) seeks SITUATION, Inside and Out; 6 years' experience; 3½ years in present situation; can be well recommended. Bothy preferred. J. ACRES, Blakes Cottages, Long Ditton, Surrey.

YOUNG MAN (22) requires SITUATION as GARDENER (Under) or IMPROVER in gentleman's gardens; 2½ years' experience; good references; disengaged. S. TALBOT, Barrow, Bury St. Edmunds.

YOUNG MAN (age 28), seeks SITUATION, pleasure ground, herbaceous border, kitchen garden, and good knowledge of inside; 9 years' experience; bothy preferred. J. POWELL, 13 Victoria Road, Sutton, Surrey.

YOUNG MAN, age 21, seeks Situation as GARDENER (Under, Inside and Out); 7 years' experience in good establishment; good references. L. HAWKER, Police Station, Westbury-on-Severn, nr. Newnham, Glos.

Situations Vacant.

WANTED, good all-round MAN (Single) immediately, age 24, for small range of houses, kitchen garden, and lawn; capable of running, or willing to learn, small Crossley oil engine for electric light; state age, wages, and reference, to J. A. FOWLER, Bridgfield, Halewood, Liverpool.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For MAY 20, 1911.

Please Repeat my Advertisement.

Name.......................................

Address.......................................

....

Date.......................................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

OBITUARY.

◆

MR. THOMAS BRYCE.

Many of our Scottish and other readers will learn with regret of the death of Mr. Thomas Bryce, gardener to Sir Charles Dalrymple, Bart., of Newhailes, Midlothian. Mr. Bryce was for a goodly number of years gardener at Newhailes, and under his care the gardens were well known as among the best in a county where good gardens are plentiful. He was a capital gardener, as the condition of the gardens under his charge testified, and was also a man much esteemed by his many friends. He was a member of the Scottish Horticultural Association, and took a quiet, but real, interest in its work and that of other horticultural bodies. Mr. Bryce died on May 1, and his services will be greatly missed by his employer, while his loss will be much felt by a wide circle of others.

MR. ROBERT SERVICE.

We have to record the death, on May 8, of Mr. Robert Service, who was until near the end of 1910 the sole partner of the firm of Messrs. James Service and Sons, nursery and seedsmen, Maxwelltown, Dumfries, which is now being carried on under the same name by Messrs. Barr and Hunter. Mr. Service was trained to his business by his late father, Mr. James Service, by whom he and his brother, Mr. Joseph Service, were admitted as partners under the firm name of James Service and Sons. On the death of his father and the subsequent retiral of his brother, Mr Robert Service became the sole partner of the firm. Failing health and other circumstances largely arising therefrom, led to the disposal of the business towards the end of last year, and since that time Mr. Service has been practically confined to his house by illness. He was an exceptionally able man, his bent of mind, however, leading him more to devote his attention to natural history especially ornithology, than to horticulture. He was recognised as one of the best Scottish authorities on the subject of ornithology, and his services were in much request as a contributor to scientific periodicals and as a lecturer. Mr. Service took some part in public life and was for a short time a member of Maxwelltown Town Council, and Traqueer Parish Council. He was a member of the Floral Committee of the Royal Caledonian Horticultural Society, and took much interest in the local horticultural societies.

GARDENING ENGAGEMENTS.

Mr. J. E. Jones, formerly at Birkenhead, has been appointed head gardener to Sir C. A. Cripps, M.P., Parmoor, Henley.

FORTHCOMING ENGAGEMENTS.

FRIDAY, May 19.—National Horticultural Society of France; seven days; Conference on May 20.

TUESDAY, May 23.—Royal Horticultural Society's Great Annual Exhibition at Inner Temple Gardens, London.

Gardeners' Royal Benevolent Institution; 72nd Annual Festival; Dinner at the Grocers' Hall, Princes Street, London, at 7 for 7.30. Chair to be taken by Sir Marcus Samuel, Bart.

CONTENTS.

PAGE
Achilica argentea ... 363
Available Plant Food ... 362
Chrysanthemums on Walls ... 361
Cinerarias ... 363
Improvement of Lawns ... 360
Notes of the Week ... 353
Our Carnation Illustrations ... 358
Perpetual Carnations from the Florists' Standpoint ... 357
Perpetual-flowering Carnations ... 359
Perpetual-flowering Carnations as Bedding Plants ... 358
Roses for the Garden ... 356
Spring-flowering Ceanothuses ... 356
Stigmonose in Carnations ... 361
Wallflowers ... 362

ILLUSTRATIONS.

Portrait of Mr. Harry A. Barnard, 353; H.T. Rose Alice Cory-Wright, 355; Carnation R. F. Felton, 357; First Prize Basket of Carnations, 358; First Prize and Medal Vase of Mrs. C. W. Ward Carnations, 360; Gold Medal Group of Carnations, 361; A Box of Rose-Pink Enchantress Carnations, 362; Achillea argentea, 363.

MARKETS.

◆

COVENT GARDEN.

Flowers.

Sweet peas, stocks, carnations, roses, Spanish irises, and liliums provide the bulk of the supplies. The demand is good.

		s.	d.	s.	d.
Azaleas, white	per doz. bun.	3	0	4	0
Adiantum cuneatum	per doz. bun.	4	0	6	0
Anemone fulgens	per doz. bun.	1	6	2	0
Anemones	per doz. bun.	1	0	1	3
Arums	per doz.	2	0	3	6
Asparagus	per doz. bun.	10	0	15	0
Cattleyas	per doz.	8	0	12	0
Carnations	per doz.	1	6	3	0
,,	per doz. bun.	8	0	12	0
Croton leaves	per bun.	1	0	2	6
Cypripediums	per doz. blooms	2	6	3	0
Freesia alba	per doz. bun.	1	0	1	6
French fern	per doz. bun.	2	6	4	0
Gardenias	per doz.	2	0	3	0
Gypsophila elegans	per doz. bun.	3	6	4	0
Iris, Spanish	per doz. bun.	5	0	10	0
Lilac	per bun.	2	6	4	0
Lilium auratum	per bun.	3	0	4	0
,, candidum	per doz.	1	0	2	0
,, speciosum	per bun.	2	0	2	6
,, longiflorum	per bun.	2	0	3	0
Lily of the Valley	per doz. bun.	6	0	12	0
Marguerites	per doz. bun.	1	6	3	0
Mignonette	per doz. bun.	3	0	4	0
Myosotis	per doz. bun.	2	6	3	0

Fruits.

New season fruits are now arriving in fair quantity, and strawberries, peaches, and grapes meet a brisk demand.

		s.	d.	s.	d.
Apples, Californian	per case	9	0	10	0
,, Australian	per case	10	0	18	0
,, Oregon Newtowns	per box	10	0	16	0
,, Tasmanian	per case	10	0	18	0
Bananas	per bun.	6	0	12	0
Chestnuts	per bag	15	0	25	0
Cranberries	per case	9	0	10	6
Figs	per doz.	4	0	15	0
Grapes, English	per lb.	2	6	10	0
,, Belgian	per lb.	2	0	2	6
,, Cape	per case	4	0	15	0
,, Almeria	per barrel	15	0	25	0
Lemons	per case	7	6	18	0
Melons	each	1	0	3	6
Oranges	per case	12	0	32	0
,, Jamaica	per case	8	0	9	0
,, Californian Navels	per case	12	0	18	0
,, Sevilles	per case	6	6	7	0

Vegetables.

Vegetables are fairly plentiful, and though the demand is good, prices are moderate.

		s.	d.		s.	d.
Artichokes Globe	per doz.	1	6	to	3	6
,, Jerusalem	per ½-sieve	1	0		1	6
Asparagus	per bundle	0	8		12	0
Beans, Jersey	per lb.	0	6		1	0
Beet	per bush.	1	0		1	6
Cabbages	per tally	3	0		10	0
,, new	per doz.	0	9		1	0
Carrots, new	per pad	2	0		2	6
Cauliflowers	per crate	3	0		5	0
Chicory	per lb.	0	3½		0	4
Cucumbers	per doz.	2	0		4	0
Endive	per doz.	1	3		3	0
Horseradish	per doz. bun.	9	0		10	0
Lettuce	per doz.	0	9		1	6
Marrows	per doz.	5	0		6	0
Mint	per doz. bun.	1	0		2	6
Mushrooms	per doz. lb.	6	0		12	0
Onions	per bag	6	0		8	0
,, Spanish	per case	5	0		7	0
Parsnips	per bag	1	0		1	3

By Royal Warrant to
H.M. King George V.
H.M. Queen Alexandra.

THE BEST REMEDY for MILDEW, GREENFLY, and all forms of INSECT BLIGHT, is

Jeyes' Horticultural Wash,

As used at the Kew Royal Botanic Gardens.

This liquid form of Cyllin Soft Soap has been placed on the market in response to the numerous requests from prominent rosarians and gardeners, to obviate any labour involved in preparing the stock solution incidental to the use of soft soap.

Jeyes' Horticultural Wash destroys greenfly and other aphides, red spider, rose hopper, gooseberry caterpillar, black currant mite, American blight, mildew, etc., etc. It is non-poisonous, and will not injure the tenderest vegetable shoots when diluted as recommended.

Pint tins 1/-, quart tins 1/9, also in drums.
Full directions with each package.

CYLLIN SOFT SOAP may still be obtained in its original form. Prices: 1 lb. tins 9d., 3 lb. tins 1/9, 7lb. tins 3/-; also in wooden kegs.

Jeyes' Horticultural Sprayer, complete, £1 5s.

JEYES' SANITARY COMPOUNDS CO., Ltd.,
64, Cannon Street, London, E.C.

Dr. J. COLLIS BROWNE'S
THE ORIGINAL AND ONLY GENUINE
Chlorodyne

Admitted by the Profession to be the most Valuable Remedy ever Discovered

The Best Remedy known for
COUGHS, COLDS,
ASTHMA, BRONCHITIS.

Cuts short all attacks of SPASMS, HYSTERIA, and PALPITATION.

The only Palliative in NEURALGIA, TOOTHACHE GOUT, RHEUMATISM.

Acts like a Charm in DIARRHŒA and DYSENTERY.

Refuse imitations and insist on having
Dr. J. COLLIS BROWNE'S Chlorodyne.
Convincing Medical Testimony with each bottle.
Of all Chemists, 1/1½, 2/9, 4/6.

MANY YEARS REPUTATION.
EUREKA WEED KILLER
LASTING RESULTS – NO NEW EXPERIMENT.
1/9 TIN FOR 25 GALLONS
6/- TIN FOR 100 GALLONS
LARGER SIZES AT LOWER RATES
SOLD BY AGENTS.
MANUFACTURERS: TOMLINSON & HAYWARD Ltd LINCOLN.
IF ANY DIFFICULTY SENT DIRECT - PAID

GARDEN ETC PESTS
EUREKATINE FUMIGANT
EUREKA INSECT SPRAY
EUREKA SOIL FUME
EUREKA LAWN SAND
AND OTHER USEFUL ARTICLES MANUFACTURED BY
TOMLINSON & HAYWARD Ltd LINCOLN.
MAKERS OF THE WELL KNOWN "EUREKA" WEED KILLER.

Grown with Vaporite.

Vaporite is the original invention for destroying Wireworms, Leatherjackets, Slugs, etc. By their destruction the fullest development of your plants is ensured. Sold by all Seedsmen in tins from 9d. upwards, or in casks

VAPORITE
The Original Soil Insecticide.
Illustrated Booklet No. 45 free from
VAPORITE-STRAWSON CO., Ltd.
(Dept. E),
Spencer House, South Pl., E.C.

PIGSTYE TIMBER, 1½in., Elm, 1½d. square foot; also 1in. cheap rough shedding boards, 1d. square foot. Portable houses of all kinds. JENNINGS and CO., Timber Merchants. General Woodworkers. 916, Pennywell Road, Bristol

GREENHOUSES and GARDEN FURNITURE. — Distinctive Designs and Finished Workmanship. Write NOW for illustrated Catalogue. CARTER and HOWARD, Fife House, Kingston-on-Thames.

PUBLISHERS' ANNOUNCEMENTS.

THE GARDENERS' MAGAZINE may be obtained by order from all Newsagents, price Twopence, every Saturday. If any difficulty be found, a copy will be posted weekly direct from the Publisher, 148 and 149, Aldersgate Street, London, on the following terms: Twelve Months, 10s. 6d.; Six Months 5s. 6d.

INDEX and Title Page to Vol. LIII. (comprising the weekly numbers from January to December, 1910), price 2d., by post 2½d.

BINDING CASES for binding the 12 months' numbers, green cloth, ornamented in gold, price 2s., post free.

VOLUME LIII., bound in green cloth, containing the 52 weekly numbers, 1910. Price 12s. 6d.; by post, 13s. 4d.

WM. DUNCAN TUCKER & SONS, LTD.
Horticultural Builders, 27, Cannon St., London, E.C.
Works: Tottenham.

GARDEN FRAMES in variety.
PLANT PRESERVER.
No. 37.

6 ft. by 4ft.	£2 1 0	12ft. by 4ft.	£3 10 0
8 ft. by 6ft.	3 17 0	16ft. by 6ft.	7 0 0

Melon & Cucumber Frame
No. 38.

6ft. by 4ft.	£1 14 0
8ft. by 6ft.	2 14 0
12ft. by 6ft.	3 14 0
16ft. by 6ft.	4 14 0

Carriage paid to most stations on orders of 40/- in value.
Please mention this paper.

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

Extracts from 35th annual collection of reports:—
NATIVE GUANO for POTATOES, VEGETABLES, etc.

A. J. BEARD, Erdington: "Potatoes, splendid, free from disease. Best I ever had."—H. CHESTER, Nantwich: "Best onion manure I ever used. Grand for onion fly."

NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc.
J. CANT, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. FRAMPTON, Titchfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED,** 29, New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted.

MERRYWEATHER'S

614 PUMP
IS THE
Gardener's Friend.

Easy to Work.
Simplicity Itself.

Write or Call—
63, Long Acre,
LONDON, W.C.

A Very Cheap Offer of Apple and Pear Trees to suit Small Holders and Cottage Gardeners.

Apples, our selection, Standards, 12s.; purchaser's selection, 14s. per doz. Half Standards, 8s.; purchaser's selection, 9s. per doz. Double, grafted two years, 6s.; purchaser's selection, 7s. per doz. Pear Trees at similar prices. Currants, red, at 2s. 6d. per dozen. Gooseberries, assorted at 3/-. per dozen. Also an extensive stock of ornamental trees, flowering shrubs, rock plants, etc. Catalogues free.

THE STANCLIFFE ESTATES CO., LTD.,
Darley Dale Derbyshire.

THE FAVOURITE WEED KILLER.

SANDWITH'S PREMIER WEED KILLER

As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for 6/-; drum, 2/-. 12 galls. for 16/-; drum, 6/-. 20 galls. for 26/8; drum, 10/-. 40 galls. for 50/-; drum, 20/-.

EITHER LIQUID OR POWDER.
Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,
The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

ONCE USED. ALWAYS USED. **The 'PATTISSON' LAWN BOOTS**

Simplest! Strongest! Most Economical!

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

FIG. 1.

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS

Silver Medal—
Royal Horticultural Society.
HUNDREDS OF TESTIMONIALS.
The Field says: **"As good as anything that could be devised."**
Illustrated Price List from—

FIG. 2.

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM, S.W.

JUST PUBLISHED. 1911 EDITION.

67 Illustrations, 17 Plates and Frontispiece. 200 Pages. 2/6 net; by post 2/10.

ROSES AND THEIR CULTIVATION.

SEVENTH EDITION.

By T. W. SANDERS, F.L.S.

- How and When to Plant Roses.
- Propagation of Roses—Ways to Grow Them.
- How to Prune, Bud, and Graft Roses.
- Erection of Pergolas and Arches.
- How to Show Roses.
- Insect Pests and Fungoid Diseases—Remedies.
- Types of Roses, full description, Culture, etc.
- Soil and Manures for Roses.
- The Rose Grower's Calendar; showing what to do each month.

LIST OF OVER 1,700 CULTIVATED ROSES:

Showing Variety, Section or Class, Date Introduced, Colour, Habit of Growth, How Best Grown, Mode and Time of Pruning, Description of Flower.

ORDER FORM.

To the Publishers of **"THE GARDENERS' MAGAZINE,"**
148 and 149, Aldersgate Street, London, E.C.

Please send me a copy of **"ROSES AND THEIR CULTIVATION"** by post, for which I enclose remittance of 2/10.

Name……………………………………………

Address ……………………………………………

Printed and Published by W. H. & L. COLLINGRIDGE, City Press 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 3,003.
Vol. LIV.
(Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.)
SATURDAY, MAY 20, 1911.
(10/6 per Ann. Post Free. To Foreign Countries, 15/-.) Twopence

BARR'S SEEDS FOR MAY and JUNE SOWING.—Finest strains of Antirrhinums, Aquilegias, Campanulas, Canterbury Bells, Calceolarias, Cinerarias, Delphiniums, Hollyhocks, Lupins. Pansies, Primulas, Stocks, Wallflowers, etc. Special list on application.. BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, S.W., is arranging this Spring for a large selection of Blinds for Conservatories, Greenhouses, Private Houses, Verandahs, etc., and will be happy to send samples, prints, and prices on receipt of a Postcard, Telephone Call (201 Western), letter, or wire "Gray, Chelsea, London."

EXHIBITION PANSIES, VIOLAS, CARNATIONS, PHLOXES, and CHRYSANTHEMUMS.—12 Superb fancy Pansies, 3s.; newest and best, 5s. 12 Exhibition Violas, 2s. 6d.; newest and best, 4s. 12 Superb Carnations, 6s.; newest and best, 10s. 12 Yellow or white ground Picotees, 6s.; newest and best, 8s. 12 Superb Phloxes, 4s.; very best, 6s. 12 Early-flowering Chrysanthemums, 2s. 6d.; newest and best, 4s. 12 Best bedding Violas, 2s.; 50 in 10 vars., 4s. 6d.; 100 in 10 or 20 vars., 8s.; all post free, except Carnations in pots, which are car. forward. Lists free. S. PYE, Bowgreave Nursery, Garstang.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 20 Silver Medals, and 3 Silver Cups, 1906-1910.
H. BURNETT,
Carnation Specialist, Guernsey.

PERENNIALS, UNIQUE COLLECTION,
including
ALPINES AND AQUATICS.
Also RARER SHRUBS, HIMALAYAN RHODODENDRONS, and Others.
Write for Catalogue. G. REUTHE, Keston, Kent.

DAHLIAS.
CACTUS, PÆONY, POMPONE, and SHOW, for GARDEN or EXHIBITION.
Prices and Catalogues free on application.

J. T. WEST, Tower Hill, Brentwood.

"WEEKS'S GLASSHOUSES and HEATING APPARATUS, for full advertisement see back page."

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-work, showing screens, wall panels, window surrounds, arches, arbors, etc., post free. BOULTON and PAUL, Ltd., Norwich.

BARNARDS LIMITED, Norwich.—Best House for Fencing, Espaliers, Pergolas, Fruit Enclosures, Iron and Wire Bordering; all descriptions of Training Fittings, Arches, Wire Netting, Stakes, Wire Lattice, Rollers, and all garden requisites. Now is the time to effect improvements in your garden. Catalogues free; inquiries invited.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint. 8s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

WEBBS' WALLFLOWERS.
Kinver Favourite (blood-red), 6d. per pkt.
Canary Bird (golden-yellow), 1s. per pkt.
Eastern Queen (salmon shaded), 1s. per pkt.
Cloth of Gold (bright yellow), 6d. per pkt.
Ruby Gem (ruby-violet), 1s. per pkt.
Vulcan (velvety crimson), 1s. per pkt.
Double (mixed), 1s. per packet.
Universal (single, mixed), 1s. per pkt.
WEBB AND SONS, The King's Seedsmen,
WORDSLEY, STOURBRIDGE.

BUNYARD'S NEW CATALOGUES.
The following have been recently published, and contain all worthy new varieties. Post free on application.

BUNYARD'S
CLIMBING PLANTS in Pots. Illustrated.

BUNYARD'S
HERBACEOUS PLANTS, Illustrated.

BUNYARD'S
BEDDING PLANTS, Illustrated.

GEO. BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.

LAXTON'S FRUIT TREE, STRAWBERRY, SEED, ROSE, HERBACEOUS, TREE, BULB, and SMALL FRUIT CATALOGUES, with full illustrations and descriptions, gratis on application.

LAXTON BROTHERS, Bedford.

ZONAL PELARGONIUMS.
Catalogue of New and Choicest Varieties

From V. SLADE, Zonal Specialist,
Staplegrove Nursery, Taunton.

RUSTIC SUMMER HOUSES, trellis-work, Fencing, Pergolas, Arches, Seats, Bridges, Log Cabins, Loggias, etc. Send for our new LOG CABIN and RUSTIC CATALOGUE (just published), sent post free. BOULTON and PAUL, Ltd., Norwich.

CLAY'S MANURES, CRUSHED BONES
(See page iv.)
CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

NOTICE. — Always use PORTER'S IMPROVED COIL STAKES for Carnations, no tying required; last a lifetime. Sample doz. with price list 1s. carriage paid. A. PORTER, Stone House, Maidstone.

ORCHID PEAT.—Hardwood Brown Fibrous, RHODODENDRON and DUST PEAT, SPHAGNUM MOSS.
Apply C. HALL, 1, Worgret, Wareham, Dorset.

GARDEN NETTING (best tanned only).—25 yds. x 8yds.; 50 x 4yds.; 100 x 2 yds., 8s. each. 50 x 2 yds.; 25 x 4 yds.; 100 x 1 yd., 4s. each. All sizes, large or small, at 1s. 20 sq. yds. Quality guaranteed.—EVANS, 14, Beresford Rd., Lowestoft.

IRON and WIRE FENCING for GARDENS, Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free. BOULTON and PAUL, Ltd., Manufacturers, Norwich.

20,000 YARDS WIRE NETTING TO BE SOLD CHEAP. Send for lists. Carriage paid on lots of 20s.
DOUTHWAITE'S CITY WIRE WORKS,
116, Vicar Lane, Leeds.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865. 1881. 1895. J. ATTWOOD Stourbridge.

A MARVELLOUS NEW COLOUR IN WALLFLOWERS.
SUTTON'S FIRE KING.
Vivid orange, the most brilliant colour attained in the flower.
Per packet 1s. 6d., post free.
Mr. R. J. Walker, gardener to J. Stewart Robertson, Esq., writes: "Fire King Wallflower is the most effective variety I have. It is grand."

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

NOW IS THE TIME TO PLANT KELWAY'S GAILLARDIAS, the rich golden blooms of which are noted for their powers of endurance during the driest season, and as cut flowers retain their freshness and beauty long after they have been gathered. They flourish with a minimum of attention, and give abundant bloom the same year that they are planted. Choice named collections, 12s. and 18s. a dozen.
KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
From ———, Esq., Guildford.
"I may say that your Illustrated Catalogue is without doubt the finest book of the sort I have had the pleasure of seeing."

POPLAR AND STEPNEY SICK ASYLUM DISTRICT.

GARDENER'S LABOURER REQUIRED.

The Managers of the above-named District REQUIRE the services of a GARDENER'S LABOURER at their Bromley Asylum, situated at Bromley-by-Bow, London, E., at a wage of 30s. per week. Particulars, with printed form of application, which alone will be received, may be obtained on applying at my office, as below, any day before noon, or will be sent by post on receipt of a stamped addressed foolscap envelope. The form must be filled in by the candidate, and returned to me not later than 10 a.m. on TUESDAY, 23rd May, 1911.

A knowledge of gardening is essential to the appointment.

Selected candidates will be written to as to the time of attendance before the Board.

Canvassing the Managers, directly or indirectly, is prohibited.

The appointment will be subject to the provisions of the Poor Law Officers' Superannuation Act, 1896.

By Order.
CARRINGTON F. SIZER,
Acting Clerk.

Clerk's Offices: Devon's Road,
Bromley-by-Bow, London, E.
11th May, 1911.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page vii.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.
XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.
XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown both poisonous and non-poisonous are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N.S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

BEDDING PLANTS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Chrysanthemums, Dahlias and Summer-Bedding Plants.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Border and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE.
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS.
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

SAMUEL M'GREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

RHODODENDRONS.

DICKSONS & CO.,
1, Waterloo Place, Edinburgh.
Pink Pearls, Ponticums, choice Hybrids. Write.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS.

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

AMERICAN TREE CARNATIONS

The Newest and Best Varieties.

Strong, healthy and well-rooted plants only supplied

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

BEGONIAS, 30, all different, 10s. 6d. Bedding Begonias, 9s., 12s., 15s. 100; German Iris named, 4s. 100.—ELLISON, 57, West Bromwich.

LILIUMS.—24 choice Liliums, all different, 10s. 6d.; Gloxinias, 6 different, 2s.; Cannas, 10 do., 4s.; Gerbera, Adnet's, 1s. 6d. packet, flowering-size plants, 10s.; extra strong; 15s. doz.—ELLISON.

GLADIOLI, large-flowering, 3s., 5s. 100. American Tree Carnations, 5s. 6d. doz. Garden Lilies, 2s. doz.—ELLISON, 57, West Bromwich.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to

EPPS & CO., Ringwood, HANTS.

TANKS! TANKS!! TANKS!!!

Now is the time to buy cheap Tanks. We have several hundreds for sale, which have come off ships we have broken up. All capacities from 25 gallons. List free on application. THOS. W. WARD, LIMITED Sheffield.

AMERICAN TREE CARNATIONS.—Best varieties, strong bushy plants, in 3in. pots, 5s. 6d. doz., 40s. per 100; flowering plants, in 5in. pots, 8s. doz. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

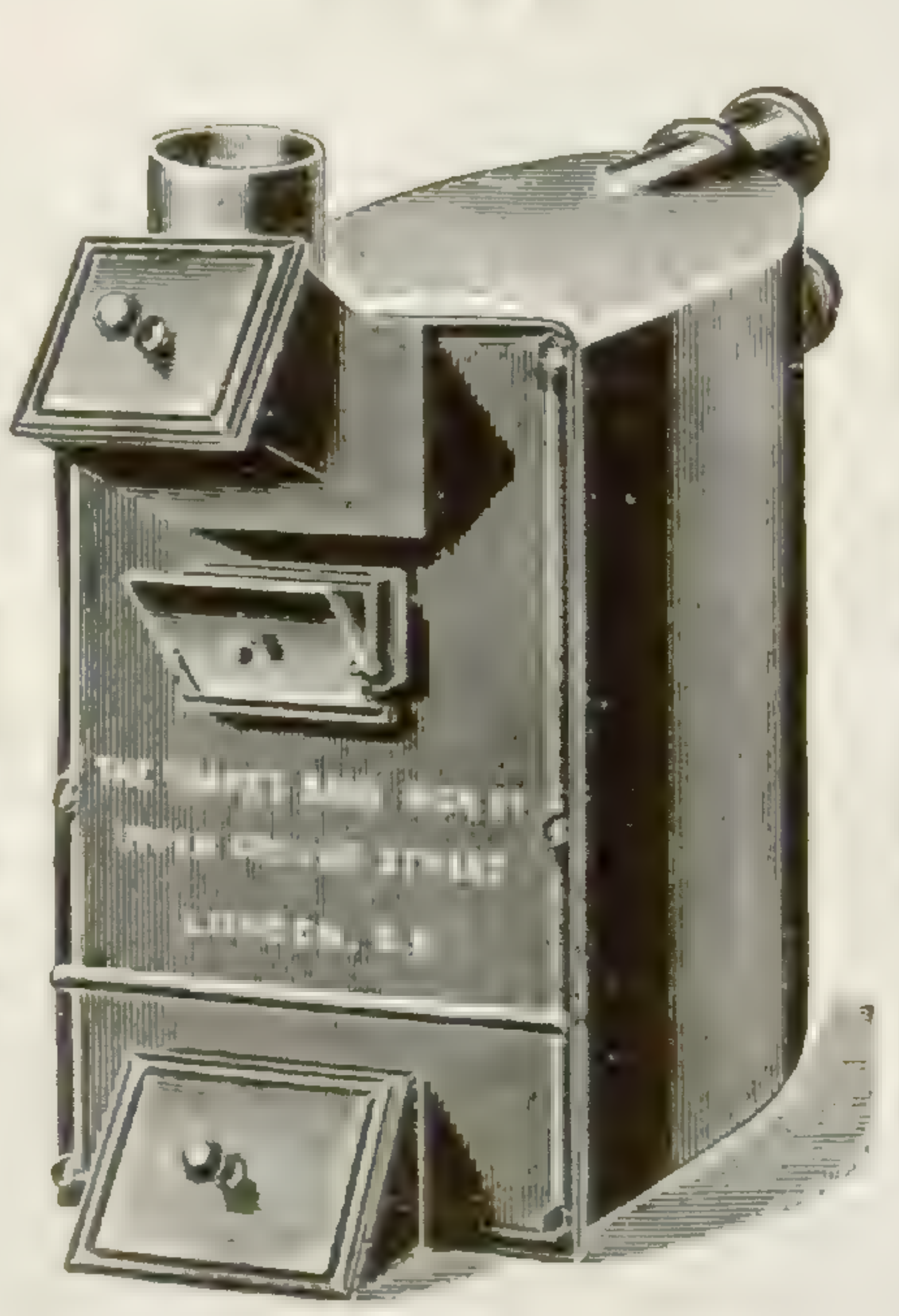
GERANIUMS.—Paul Crampel, large plants, [illegible] doz. King of Denmark, 2s. 6d. doz. Hydrangeas, 9d. each. Calceolarias and Marguerites, 1s. 3d doz. HEAD GARDENER, 22, Charlton Rd., Blackheath.

ALOES.—A Gentleman who has been growing Aloes for twenty years, has some very fine specimens to be sold cheap. Apply at 18, Highbury Grove, N.

'Phone: Hop. 763.

When next a Small Boiler you require

TRY



THE HEEL

NONE TO BEAT IT.

THE THAMES BANK IRON CO.,

Upper Ground Street,

LONDON, S.E.

4 SIZES.

Heating Powers, 80 to 250 ft. of 4 in. pipe.

WATSON'S LAWN SAND.

(The Only Original.)

Destroys Daisies, Plantains, Dandelions, &c., and at same time invigorates the Grass.

34/- per cwt.; 56lb. Kegs, 18/-; 28lb. Tins, 9/6. Canisters, 5/-, 2/6, and 1/-.

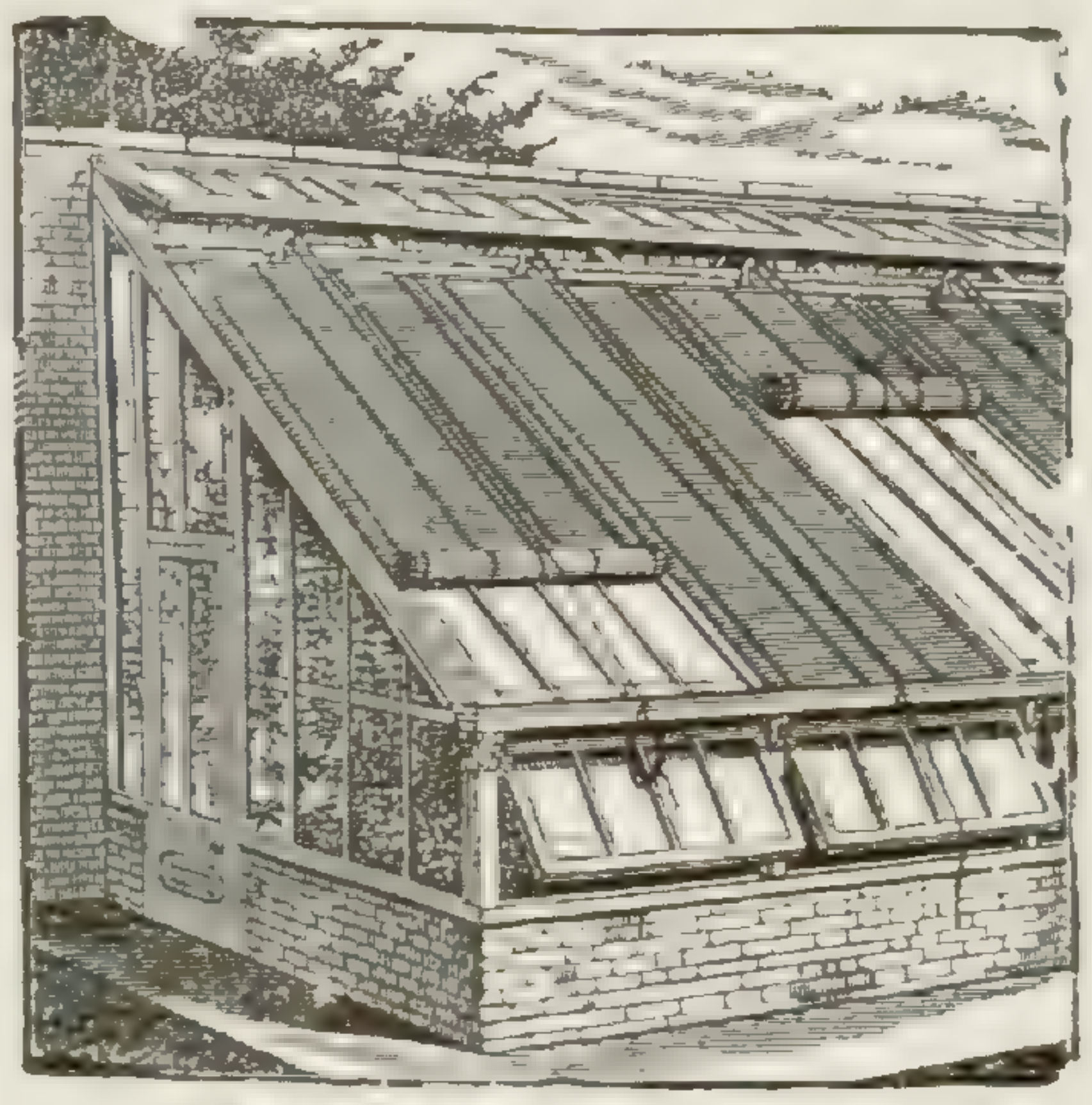
Please see that you get the genuine article.

Sold by Seedsmen and Nurserymen.

A. J. BARBOUR & Co., 8, Upper Fountaine St., LEEDS

PARISIAN (WOOD LATH) BLINDS

MOST DURABL. OUTSIDE SHADING.



SEND FOR ESTIMATE.

SUPPLIED ONLY BY

W. RICHARDSON & CO.,

HORTICULTURAL WORKS,

DARLINGTON.

GARDEN (FROM STOCK) FRAMES

CHARGES FOR ADVERTISEMENTS IN

THE GARDENERS' MAGAZINE.

	£	s.	d.
Five Lines and under	0	2	6
Per Line beyond	0	0	6
„ Inch	0	6	0
„ Half Column	1	10	0
„ Column	3	0	0
„ Page	9	0	0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 8d. each. Situations vacant are charged 1s. for 32 words.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— & Co.

Telephone Numbers:
Editorial and Printing Depts. .. ... 831 Holborn.
Advertising and Publishing Depts. ... 2140 Holborn.

Offices: 148 and 149, Aldersgate Street, London.

Sales by Auction.

SALES NEXT WEEK.

WEDNESDAY NEXT, May 24th, at One o'clock.—Large quantities of Herbaceous and other plants. Hardy Bulbs, etc.

At Three o'clock.—100 Lots of Palms, Stove and Greenhouse Plants, Standard Bays, Roses in pots, etc.

SPECIAL SALES OF ORCHIDS.

TUESDAY NEXT, May 23, at Half-past Two.—200 lots of magnificent Orchids, by order of Messrs. Sander and Sons, St. Albans.

WEDNESDAY NEXT, May 24th, at Two o'clock.—Duplicate Plants from the "Oakwood" Collection of Orchids, by order of the Exors. of the late Norman C. Cookson, Esq.

THURSDAY NEXT, May 25th, at One o'clock.—Choice Established Orchids, including many rare and valuable varieties.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view mornings of sale, and catalogues had.

To Nurserymen and Fruit Growers.—TWYFORD, BERKS, about 1¼ miles from the station, on the main G.W.Rly., about 8 miles from Maidenhead and 6 from Reading, a compact little FREEHOLD PROPERTY, known as HURST NURSERIES, comprising a picturesque cottage residence, containing 2 reception, bath, and 5 bedrooms, together with stabling, outbuildings, 5 large glasshouses (heated), and about 3½ acres of garden, planted with a Great Variety of FRUIT TREES and bushes, and affording an unusual opportunity of ACQUIRING as a GOING CONCERN a LUCRATIVE LITTLE NURSERYMAN, and FRUIT GROWER'S BUSINESS.—Messrs.

GIDDY and GIDDY will SELL the above, BY AUCTION, at the Mart, E.C., on June 1st next (unless previously disposed of). Full particulars of the Auctioneers, Maidenhead; and 11a, Regent Street, S.W.

FOR SALE, PORTABLE SHELTER, by Boulton and Paul, with half-glass doors to fold in 4 sections, sliding windows, on improved principles, easily revolved according to wind, 8ft. by 6ft., used a few weeks, £16 16s. HARDING, Denmark Road, Kingston-on-Thames.

EDMUNDS and CO.—Specialities: Early vegetable plants, etc.; all hard grown in cold frames; lights off all day and very safe night; Tomato plants, Carter's Sunrise, Laxton's Open Air, Edmund's Supreme, etc., 12 for 1s., 25 for 1s. 9d., 50 3s. 3d., 100 4s. 6d.; Ridge Cucumbers, 6 for 1s., 1s. 9d. doz.; Celery, Clayworth's Prize Pink, extra strong, transplanted, ready for trenches, 1s. 6d. 100; bush Marrow plants, green or white, fine strong plants, 12 for 1s.; Pumpkins, same price; also all manner of Bedding Plants, Geraniums, Dahlias, Annuals, etc., etc.; write for our fully illustrated catalogue of up-to-date novelties for summer bedding; one of the finest published; post free on application. EDMUNDS and CO., Milton, Cambridge.

ORCHIDS, ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.

Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

IN THE
Royal Horticultural Hall,
Vincent Square, Westminster, S.W.

Tuesday, May 30th to June 2nd, 1911.

John Waterer & Sons, Ltd.
AMERICAN NURSERIES,
BAGSHOT, SURREY.
will make a
SPECIAL SHOW
of
RHODODENDRONS,
CONIFERS,
EVERGREENS, &c.

Messrs. BARR and SONS and Messrs. WILLS and SEGAR will also make Special Exhibits in the Annexes of the Hall.

R.H.S. Fellow's Tickets admit free.

The Exhibition will be open from 11 to 7 each day.

Charges of Admission:

May 30th 2/6
May 31st, June 1st and 2nd 1/-

At the Temple Show

Do not fail to see our Exhibit of

NEW CARNATIONS,
NEW ROSES,
NEW HYDRANGEAS.

The Hydrangea "Mde. Moulliere" is a plant of the future.

Healthy young plants, 2/- each, 18/- dozen.

STUART LOW & CO.,
Royal Nurseries,
BUSH HILL PARK, MIDDLESEX.

GARDEN AND TENNIS NETS (best tanned only, small mesh).—50 x 8yds., 17s.; 25 x 8yds., 50 x 4yds., 100 x 2yds., 8s. each; 100 x 1yd., 50 x 2yds., 25 x 4yds., 4s. each. Any size to order. Tennis Netting (corded), 25 x 2, 6s. 6d.; 25 x 3, 7s. 6d.; 25 x 4yd., 8s. 6d. Write for Price List. L. WREN and SON. Net Merchants, 139, High Street, Lowestoft. Established 1863.

Roses in Pots.

For Outdoor Planting.
from **10/6** per doz.

For the Conservatory.
Coming into bloom.
from **15**/- per doz.

For Walls and Pergolas.
All best varieties. Extra strong for immediate effect from **1/6** to **5**/- each.

New May List gratis and post free.

Geo. COOLING & Sons,
The Nurseries, BATH.

FLOWER POTS.

SANKEY'S
FAMOUS
GARDEN
POTS

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant

Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS**, and an endless variety of Choice **ORCHIDS**.

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

SMITH'S WEED KILLER
is absolutely "PERFECT."
4 Tins of Powder or
4 Gallons of Liquid
to make 100 Gallons.
6/6 Carriage Paid.
MARK SMITH, Ld. *Louth, Lincolnshire.*

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

PERPETUAL FLOWERING CARNATIONS: Britannia, Rose Dorée, White Perfection, Black Chief, Fortuna, Mrs. Burnett, etc. 3s. per doz.: strong plants: post free. Ask list. C. F. A. VAN DER SLUYS, F.R.H.S., Ramee, Guernsey.

GLASS. | GLASS. | GLASS.

NICHOLLS & CLARKE, LTD.
Shoreditch, LONDON.

PAINT. Our List of PAINTS, COLOURS, VARNISHES and BRUSHES on Application.

When sending please cut out this advt.

SUBSCRIBER'S ORDER FORM

Every Saturday **THE GARDENERS' MAGAZINE.** Twopence

To W. H. and L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose______for______months in advance.

Name____________________

Address____________________

Date____________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

⁂ If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.

EVERY FLOWER IN THE GARDEN WILL GRATEFULLY RESPOND
To the Use of

CLAY'S FERTILIZER

IT IS

THE PLANT FOOD OF RENOWN.

CLAY'S LONDON FERTILIZER
TRADE MARK.

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK, AS AT SIDE.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. Fourth Edition (Second Reprint). 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Stratford, London, E.

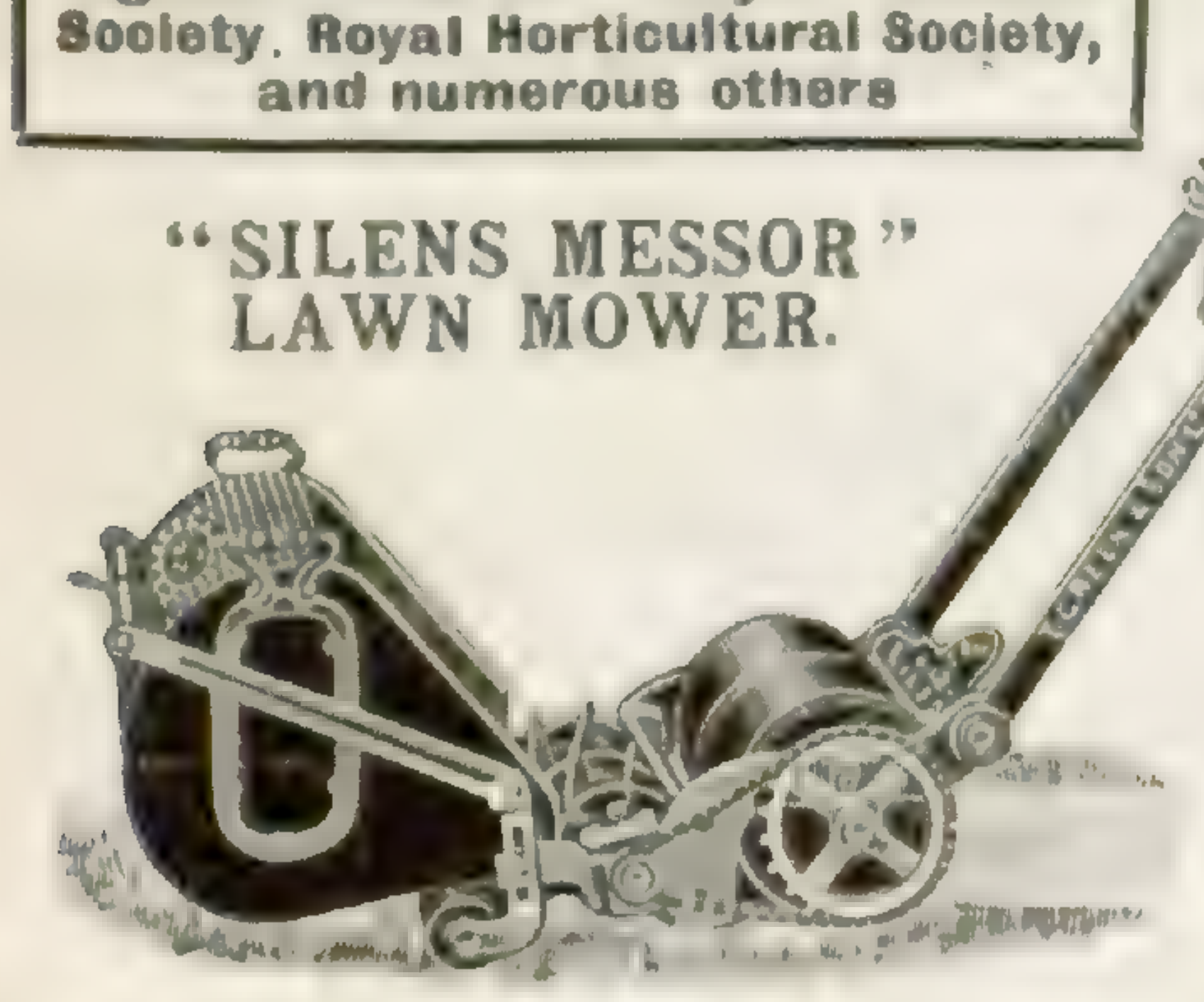
APPOINTED BY ROYAL WARRANT, HORTICULTURAL MACHINE MAKERS TO HIS MAJESTY KING GEORGE V.

GREEN'S LAWN MOWERS ARE UNEQUALLED.

Hundreds of Thousands are in use. Established nearly a Century.

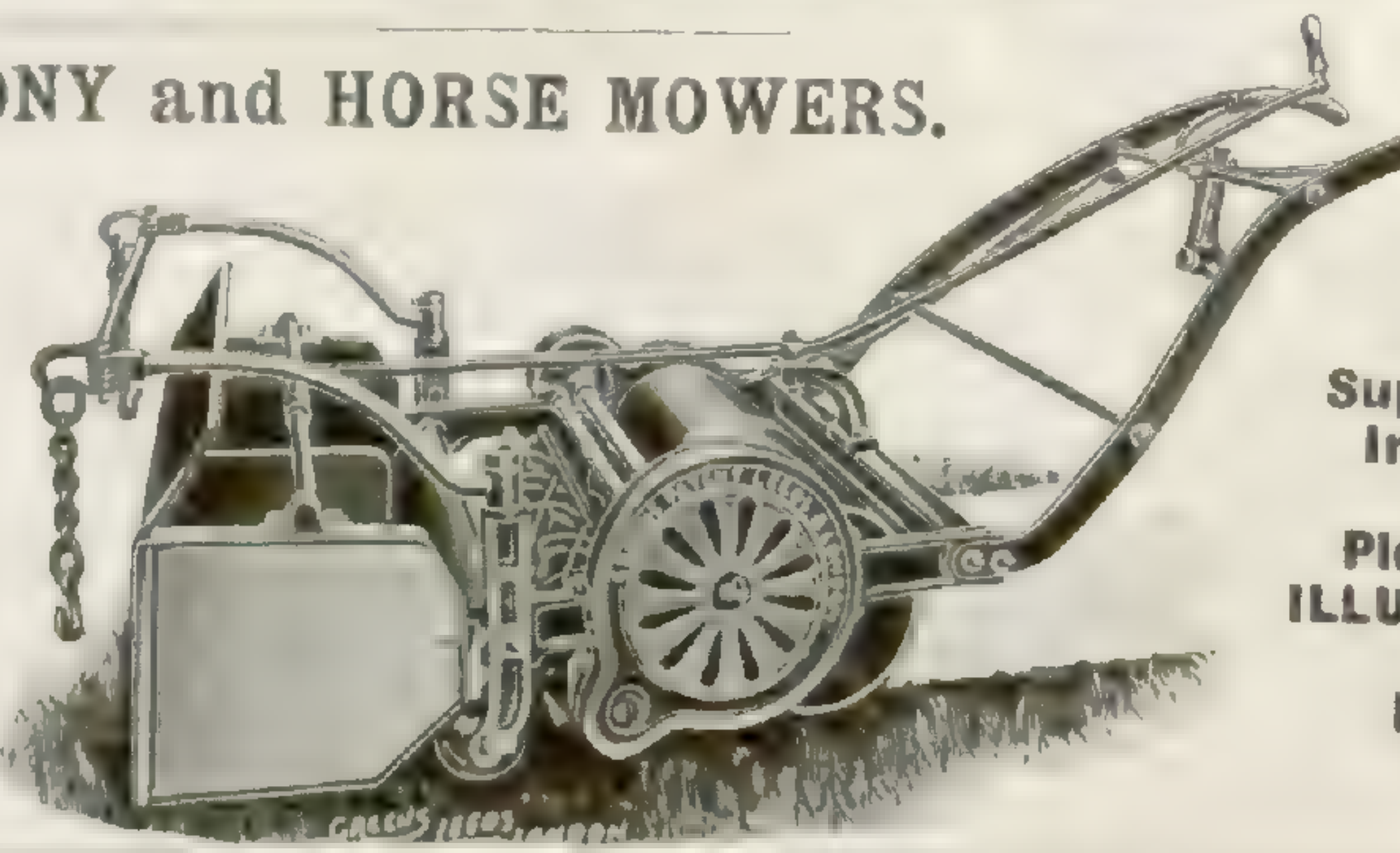
Highest Awards — Royal Botanic Society, Royal Horticultural Society, and numerous others

"SILENS MESSOR" LAWN MOWER.



Telephone Numbers—
Leeds, 1580.
London, 2022 Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London

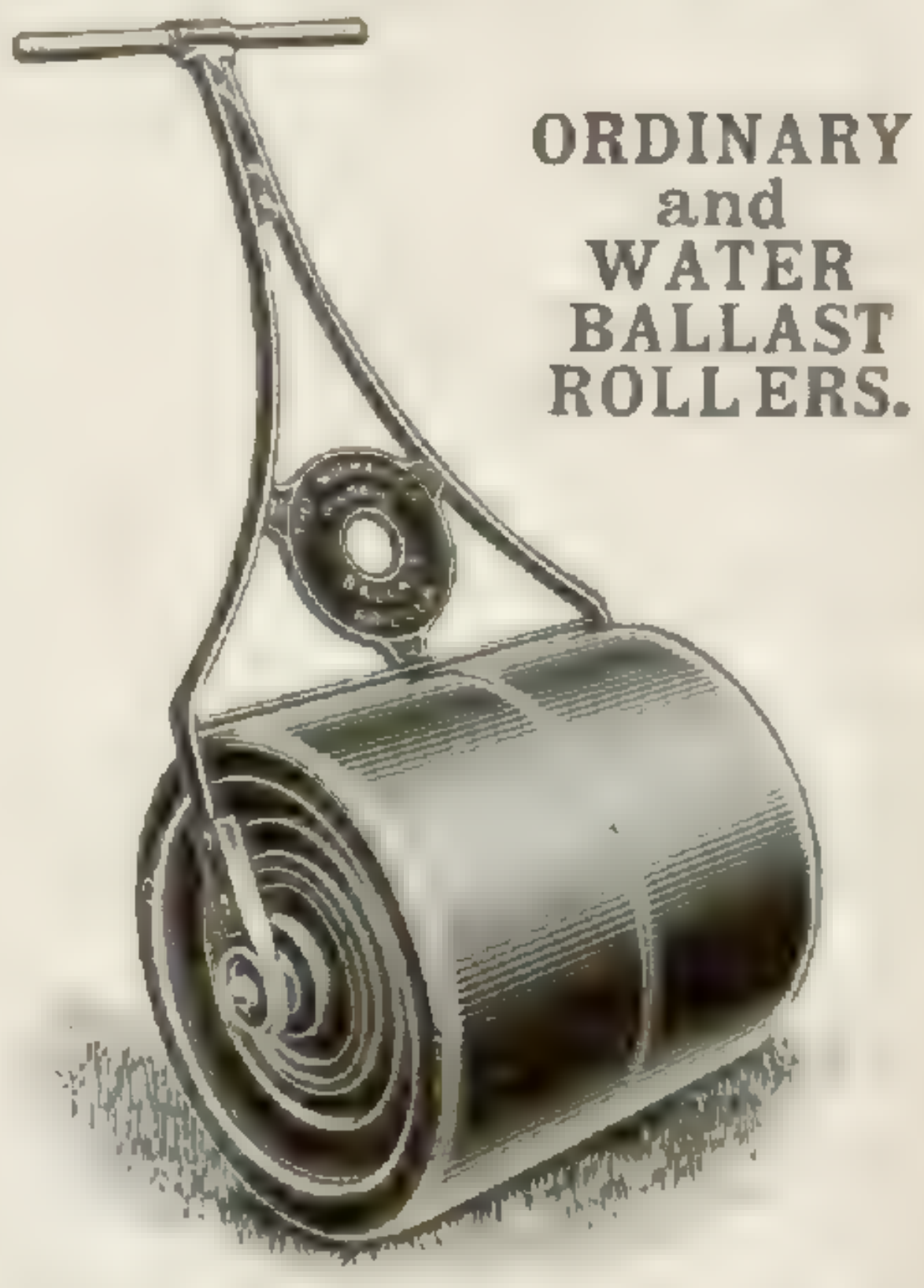
PONY and HORSE MOWERS.



Supplied by all Ironmongers.

Please write for ILLUSTRATED PRICE LIST No. 1 FREE.

ORDINARY and WATER BALLAST ROLLERS.



MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.

They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.

Our Work has stood the test of time.

SPECIAL CHEAP OFFER TO CLEAR!

HOLLIES HODGINSII and others.

2-3 ft.	**30/-** doz.	**200/-** 100
3-4 ft.	**42/-** ,,	**300/-** ,,
4-5 ft.	**72/-** ,,	**500/-** ,,

RHODODENDRON PONTICUM.

1½-2 ft. ...	**5/-** doz.	**32/6** 100	**275/-** 1000
2-2½ ft. ..	**10/6** ,,	**40/-** ,,	**350/-** ,,
2½-3 ft. ...	**17/6** ,,	**55/-** ,,	**500/-** ,,
3-3½ ft. ..	**21/-** ,,	**75/-** ,,	**700/-** ,,

CLIMBING ROSES, Extra Strong, in 8 in. pots, with shoots 5-8 ft. long, for planting out now.

Also **BUSH ROSES** in 7 in. pots for filling up at **2/6** each, **24/-** doz.

New List of Bedding Plants and Dahlias post free on application.

DICKSONS ROYAL NURSERIES, CHESTER.

PERPETUAL CARNATIONS.—Everyone interested in PERPETUALS should write for our 1911 Illustrated Catalogue, FREE. Send for "TREATISE ON CULTURE," 1s., post free. YOUNG and CO., Carnation Specialists, HATHERLEY, CHELTENHAM.

WATER CATALOGUE NOW READY
PERRY, ENFIELD, MIDDX.

STALKER'S Forest Trees, Fruit Trees, Roses, Bulbs, and Seeds
Are known all over the world, and cannot be surpassed for hardiness and quality.

Famous for Quality and Cleanliness.

D. STALKER & SON,
Government Contractors,
Catalogues Free. NAIRN, N.B.

BY APPOINTMENT.

ROSES IN POTS.

WM. PAUL & SON, WALTHAM CROSS, LTD.,

beg to offer a magnificent stock of DWARFS and RAMBLERS for present Planting and for Greenhouse Culture.

In 5-in. pots **10s. 6d.** to **18s.** per dozen, **75s.** to **120s.** per 100; extra strong in 8-in. pots **24s.** to **60s.** per dozen. Also a fine collection of New Roses.

Catalogue on application.

PAUL'S ROYAL NURSERIES,
Waltham Cross, HERTS.

NOTICE.

The **AZALEAS** and **RHODODENDRONS** planted in Hyde Park, near Rotten Row, finest to be seen in London, are supplied by ANTHONY WATERER, whose only address is
Knap Hill Nursery, Woking, Surrey.

No connection with any other firm of similar name.

PRIMULA OBCONICA GIGANTEA GRANDIFLORA.

The most beautiful Free and Hardy Perpetual Greenhouse Plant grown.

ONCE IN FLOWER ALWAYS IN FLOWER.

We are NOTED for having the most — SUPERB Strain in commerce. —

SEED.

Mixed colours, also Compacta and Fimbriata, mixed, 1s. per packet; separate colours of Purple, Rose, Lilac, Deep Red, Crimson Scarlet, Pale Lilac, and Crimson (fringed petals), **2s. per packet; double flowering, including Pale Mauve and Rose, 2s. per packet. Instructions as to sowing with each packet.**

PLANTS, 3s., 5s., 7s. 6d., 10s. 6d., and 15s. per doz., according to size.

W. A., Esq., Reigate, Surrey, writes:—

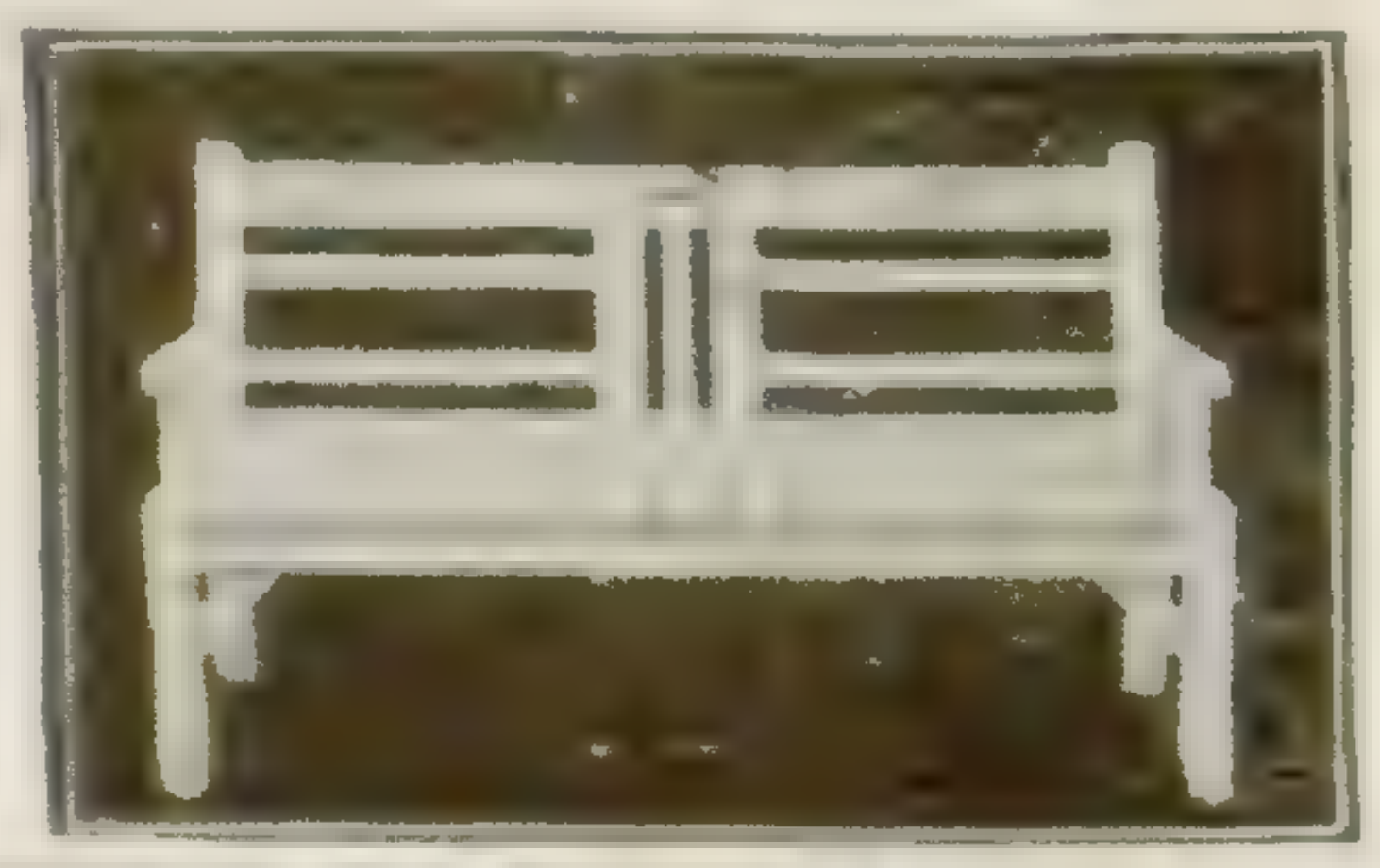
I had a packet of seed from you last year, and am pleased to inform you that I have blooms measuring two inches and more across each individual flower. They are the best strain I have ever seen, both for variety of colours, and substance of bloom.

WM. ARTINDALE & SON,
Nether Green Nursery,
SHEFFIELD.

For 3 penny stamps we will send you our Catalogue of Plants, which is not merely a price list, but literature which gives all the cultural notes of plants therein mentioned. We have received hundreds of testimonials commenting on the value of this book.

OUR SEED CATALOGUE WILL BE SENT FREE ON APPLICATION.

IDEAL, 5 feet long.



In best redwood, painted two coats white

£1 : 7 : 6.

Delivered any Station.

Full catalogue on application.

PETER PATRICK & SON, OTLEY, YORKS.

VOL. LIV.—No. 3,003. SATURDAY, MAY 20, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Vegetative Activity.

To the unimaginative eye vegetative growth is extremely sluggish, but when we come to consider the amount of constructive work which is going on, say, in a large tree, when it is busily engaged in fashioning its annual set of leaves, we are forced to the opposite conclusion. In the first place, we must remember that the whole panoply of its leaves and flowers is practically completed within a few weeks from the first bursting of the buds, and that these are built up by the multiplication of infinite myriads of tiny cells within each of which a most complicated process of division is performed, and a number of subtle chemical changes effected simultaneously. Take the case of, say, a huge spreading elm or oak tree, with its intricate labyrinth of branches and twigs, all perfectly bare as the wintry blasts have left them. Give some manufacturer of artificial leaves and flowers the order to clothe that tree with fair imitations of such, each one to be carefully attached, and the whole completed within, say, a month from receipt of order, and we should then form a faint idea of the work effected when we saw the busy crowd of workers at their task, first of making and then of attaching seriatim. Then, when all was done, what a pitiable travesty it would be of Nature's perfection! Outwardly, there might be a faint resemblance to the real thing, but where would be that marvellous interior workmanship, the infinitely beautiful network of veins which pervade every leaf, the wonderful delicacy of the pollen grains and incipient seeds, and the organs which effect fertilisation. The human artificer could only produce mere replicas of a single type, but Nature's handiwork is infinitely varied; search as we might we could never find two leaves alike, in every one, although the general plan was the same, the detail would differ. Furthermore, the work done by the tree is infinitely greater than that implied in the travesty we have imagined, since there is not only involved the mere fashioning of the foliage, but in the process the wonderful root system is extended, and throughout the entire fabric, from the huge trunk to the minutest twig, a strengthening sheath of wood is formed, and besides the mere leaves which may be imitated, as many compact little buds are fashioned. In short, the work effected in a few weeks defies description, and against its apparent slowness must be set the fact of that general extension of area of foliage which is built up cell by cell, with microscopic bricks, as it were, fashioned by the tree itself from thin air and earthy salts in solution. Our artificial flower maker would have to start with a ton or two of raw material, and would certainly never accept the contract if confined to the ingredients with which Nature manages to perfect her work. In considering this question of vegetative activity, we have purposely chosen a most familiar example, but if we lived in the tropics or even if we visit a tropically heated stove, we may find examples of far greater activity. Under the stimulus of warmth and humidity, growth becomes incredibly rapid when we bear in mind the fundamental fact that it is not a question of mere inflation, but ever and always of building up cell by cell, brick by brick, on solid and substantial lines. In the early autumn, for instance, we may behold a stately banana plant, with a solid trunk as thick as a twenty-year-old tree, and enormous leaves, from whose axis of growth there hangs a huge pendulous bunch of the now familiar fruits, weighing perhaps a hundredweight. With our ordinary notions of vegetative growth, we should estimate the age of this plant at several years at least, and yet, in the self-same year in the spring it was a sucker of comparatively small size. Take, too, the giant bamboos, with their rods 80 or more feet long, the product of a season's growth, and remembering always how it is done, it dawns upon us that the activity of cell growth is something marvellous. We are, indeed, reminded of the old tale of the horseshoe nails and the infinite numbers that result from repeated doubling. This, in fact, is what growing cells are always doing, but in addition, they are always following subtle plans, the end result of which is those wonderful and infinitely varied organisations which we term vegetation on the one hand, and animal life on the other.

MR. S. F. STAFFURTH.
Winner of the Barr Cup for Daffodils at Huntingdon, and First Prize in the chief Amateur Class at Birmingham, 1911.

The Fruit Crop.

Although the season is not as yet sufficiently advanced for those who write with some sense of responsibility to express a definite opinion as to the extent and quality of the fruit crop that will be gathered in British gardens and orchards during the forthcoming summer and autumn, there is full justification for anticipating by far the best crop within recent years. It is not a case this year of this or that kind of fruit promising an abundant yield while other kinds present an appearance that justifies but little hope of the results being otherwise than unsatisfactory. All kinds are highly promising. It was feared by some that the sharp frosts experienced during the first week of April would do an immense amount of damage to the flowers of plums

EVERY FLOWER IN THE GARDEN WILL GRATEFULLY RESPOND
To the Use of

CLAY'S FERTILIZER

IT IS

THE PLANT FOOD OF RENOWN.

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**: —7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK, AS AT SIDE.

CLAY'S LONDON FERTILIZER
TRADE MARK.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. Fourth Edition (Second Reprint). 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Stratford, London, E.

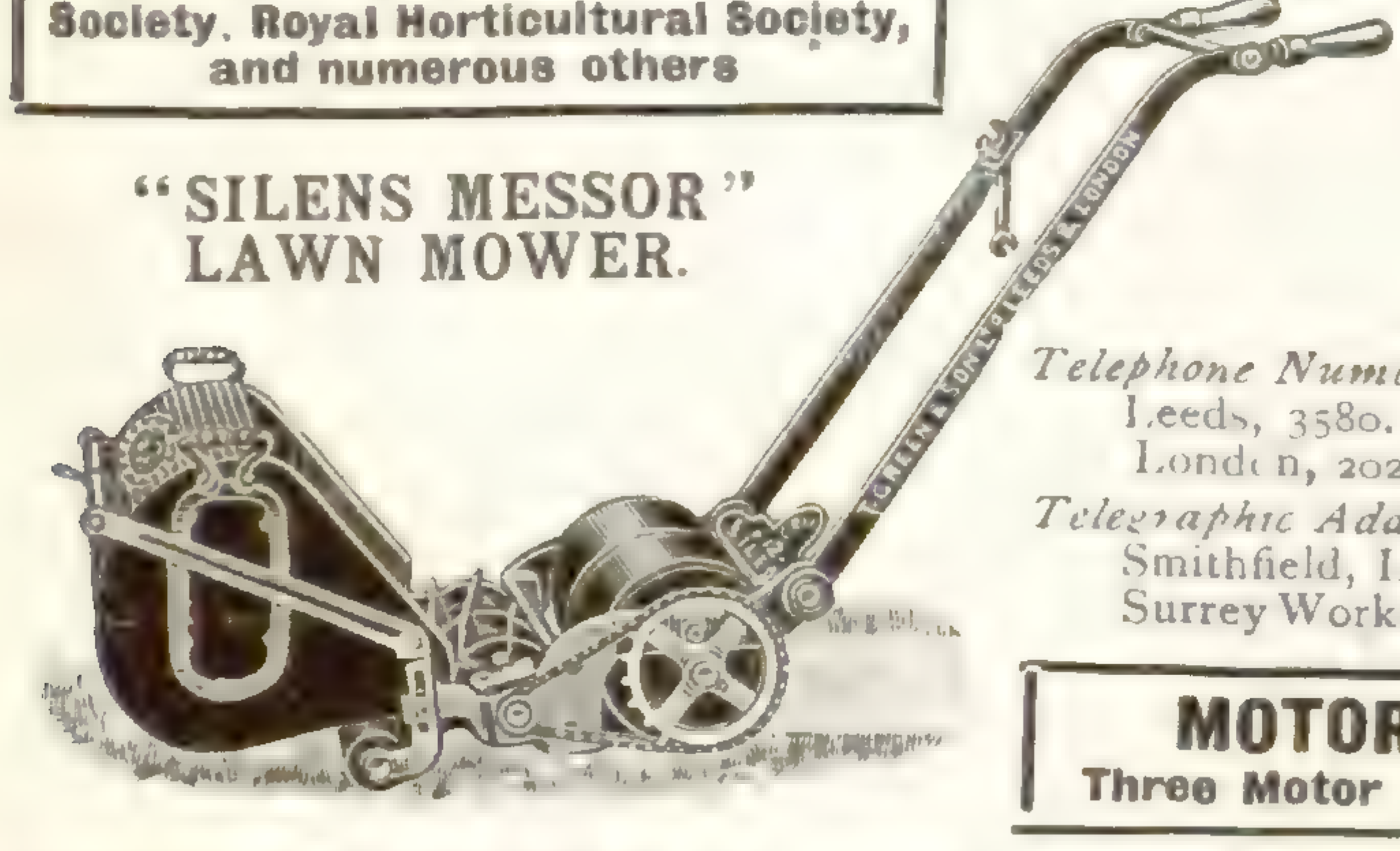
APPOINTED BY ROYAL WARRANT, HORTICULTURAL MACHINE MAKERS TO HIS MAJESTY KING GEORGE V.

GREEN'S LAWN MOWERS ARE UNEQUALLED.

Hundreds of Thousands are in use. Established nearly a Century.

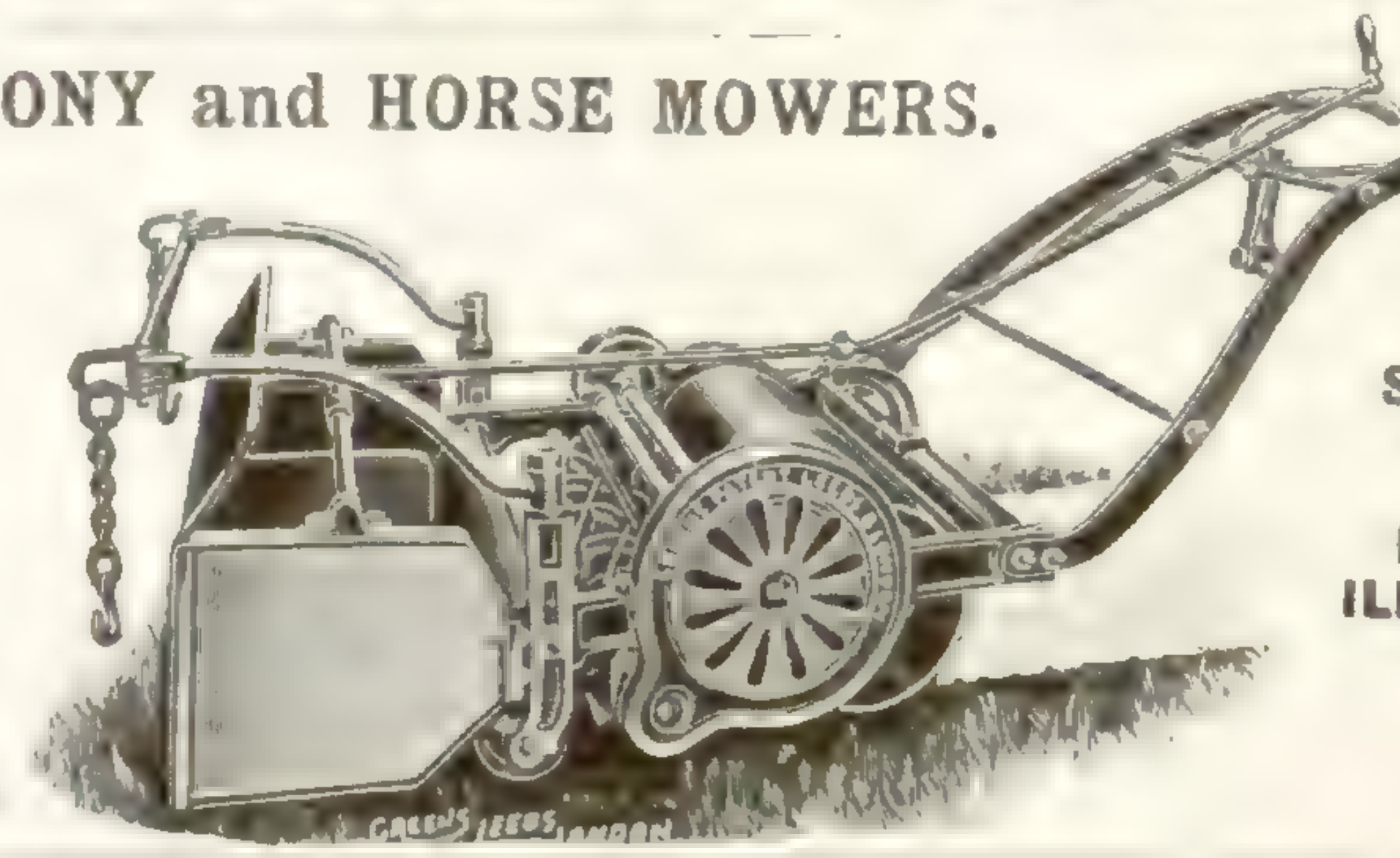
Highest Awards — Royal Botanic Society, Royal Horticultural Society, and numerous others

"SILENS MESSOR" LAWN MOWER.



Telephone Numbers—
Leeds, 3580.
London, 2022 Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London

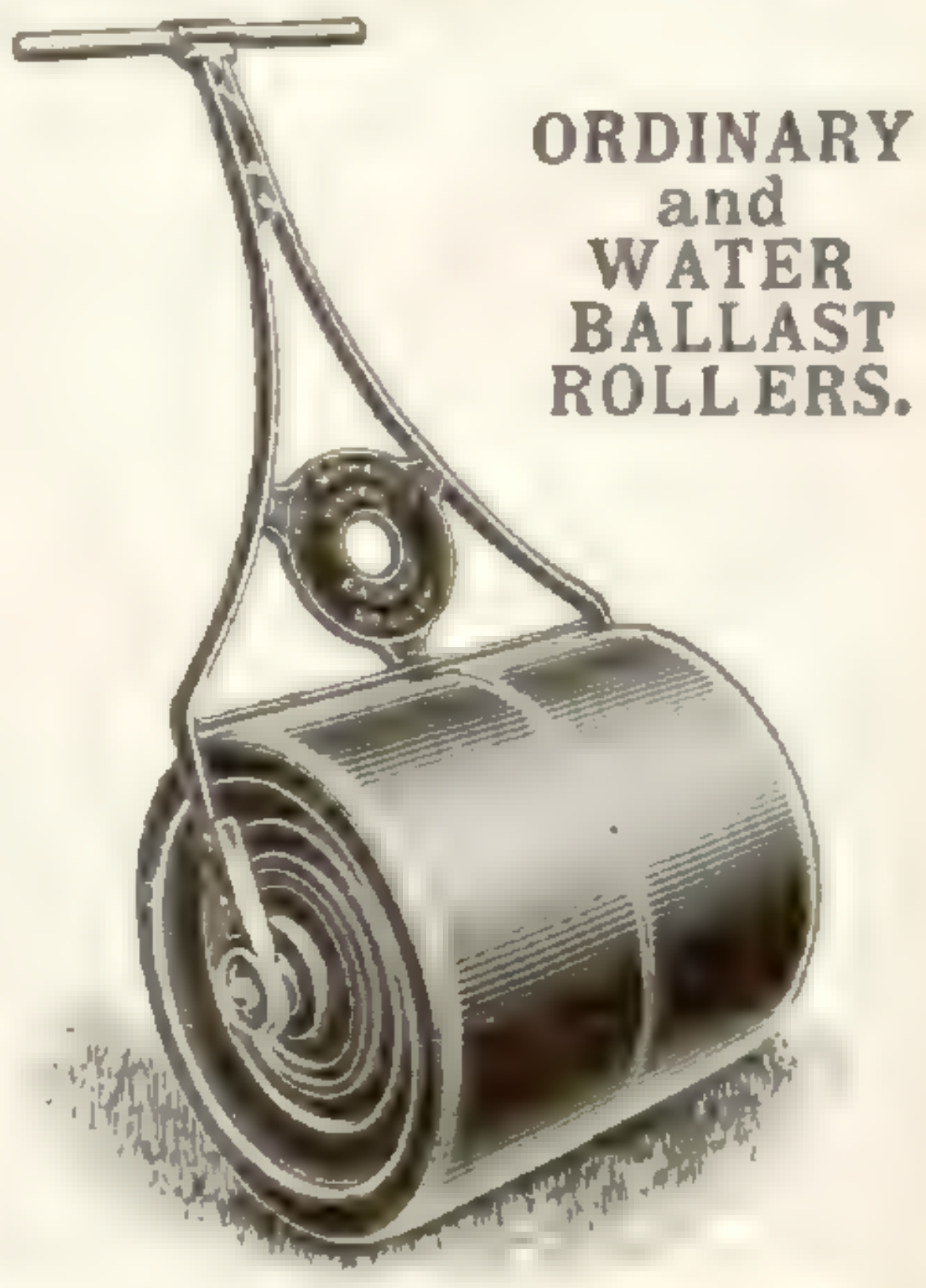
PONY and HORSE MOWERS.



Supplied by all Ironmongers.

Please write for ILLUSTRATED PRICE LIST No. 1 FREE.

ORDINARY and WATER BALLAST ROLLERS.



MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.

Our Work has stood the test of time.

SPECIAL CHEAP OFFER TO CLEAR!

HOLLIES HODGINSII and others.

2-3 ft.	30/- doz.	200/- 100
3-4 ft.	42/- ,,	300/- ,,
4-5 ft.	72/- ,,	500/- ,,

RHODODENDRON PONTICUM.

1½-2 ft. ...	5/- doz.	32/6 100	275/- 1000
2-2½ ft. ..	10/6 ,,	40/- ,,	350/- ,,
2½-3 ft. ...	17/6 ,,	55/- ,,	500/- ,,
3-3½ ft. ...	21/- ,,	75/- ,,	700/- ,,

CLIMBING ROSES, Extra Strong, in 8 in. pots, with shoots 5-8 ft. long, for planting out now.

Also **BUSH ROSES** in 7 in. pots for filling up at **2/6** each, **24**/- doz.

New List of Bedding Plants and Dahlias post free on application.

DICKSONS ROYAL NURSERIES, CHESTER.

PERPETUAL CARNATIONS.—Everyone interested in PERPETUALS should write for our 1911 Illustrated Catalogue, FREE. Read our "TREATISE ON CULTURE." 1s., post free. YOUNG and CO., Carnation Specialists, HATHERLEY, CHELTENHAM.

WATER CATALOGUE NOW READY
PERRY, ENFIELD, MIDDX.

STALKER'S Forest Trees, Fruit Trees. Roses, Bulbs, and Seeds
Are known all over the world, and cannot be surpassed for hardiness and quality.

Famous for Quality and Cleanliness.

D. STALKER & SON,
Government Contractors,
Catalogues Free. NAIRN, N.B.

BY APPOINTMENT.

ROSES IN POTS.

WM. PAUL & SON, WALTHAM CROSS, LTD.,

beg to offer a magnificent stock of DWARFS and RAMBLERS for present Planting and for Greenhouse Culture.

In 5-in. pots **10s. 6d.** to **18s.** per dozen, **75s.** to **120s.** per 100; extra strong in 8-in. pots **24s.** to **60s.** per dozen. Also a fine collection of New Roses.

Catalogue on application.

PAUL'S ROYAL NURSERIES,
Waltham Cross, HERTS.

NOTICE.

The AZALEAS and RHODODENDRONS planted in Hyde Park, near Rotten Row, finest to be seen in London, are supplied by ANTHONY WATERER, whose only address is Knap Hill Nursery, Woking, Surrey.

No connection with any other firm of similar name.

PRIMULA OBCONICA GIGANTEA GRANDIFLORA.

The most beautiful Free and Hardy Perpetual Greenhouse Plant grown.

ONCE IN FLOWER ALWAYS IN FLOWER.

We are NOTED for having the most — SUPERB Strain in commerce. —

SEED.

Mixed colours, also Compacta and Fimbriata, mixed, 1s. per packet; separate colours of Purple, Rose, Lilac, Deep Red, Crimson Scarlet, Pale Lilac, and Crimson (fringed petals), **2s. per packet; double flowering, including Pale Mauve and Rose, 2s. per packet. Instructions as to sowing with each packet.**

PLANTS, 3s., 5s., 7s. 6d., 10s. 6d., and 15s. per doz., according to size.

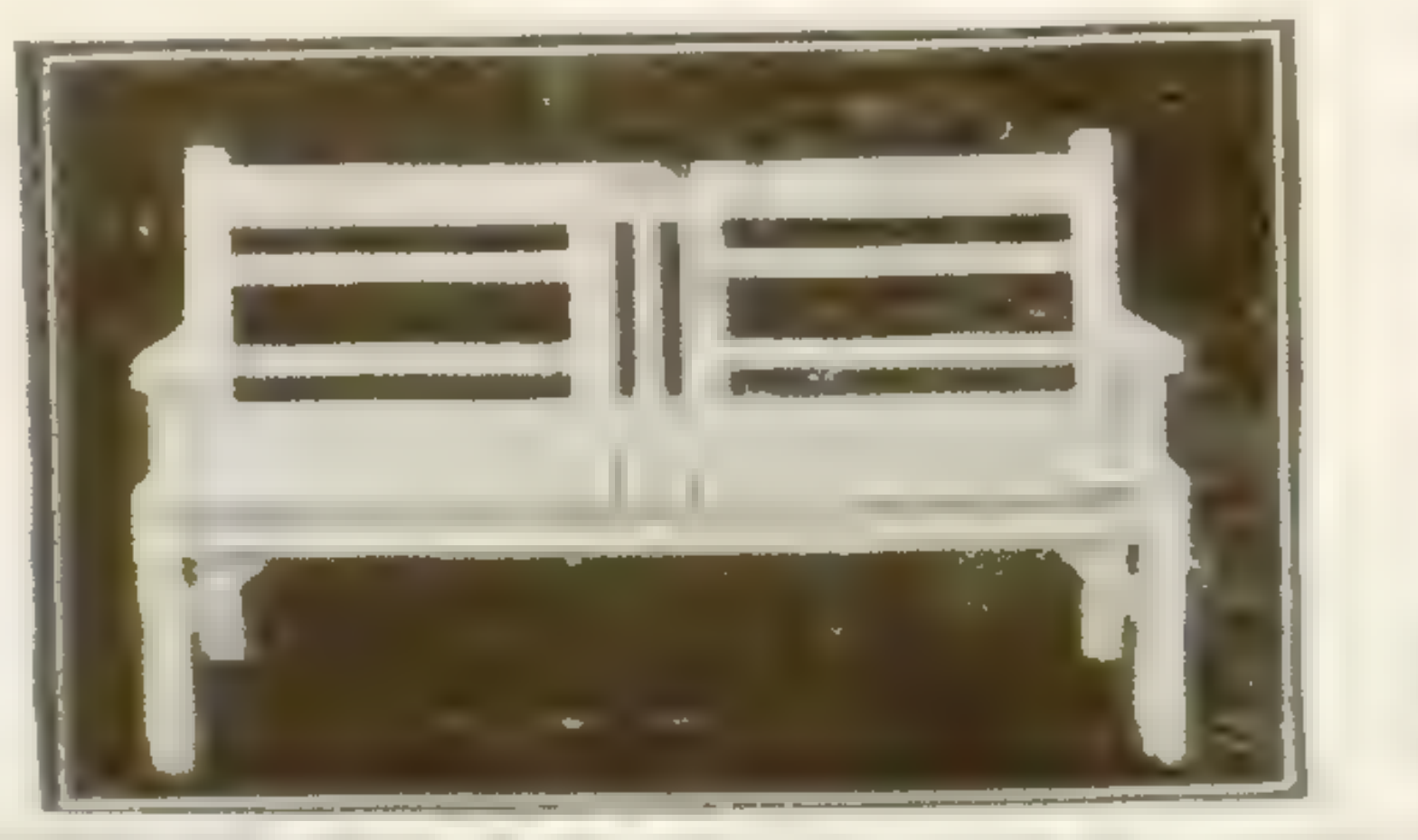
W. A., Esq., Reigate, Surrey, writes:—
I had a packet of seed from you last year, and am pleased to inform you that I have blooms measuring two inches and more across each individual flower. They are the best strain I have ever seen, both for variety of colours, and substance of bloom.

WM. ARTINDALE & SON,
Nether Green Nursery,
SHEFFIELD.

For 3 penny stamps we will send you our Catalogue of Plants, which is not merely a price list, but literature which gives all the cultural notes of plants therein mentioned. We have received hundreds of testimonials commenting on the value of this book.

OUR SEED CATALOGUE WILL BE SENT FREE ON APPLICATION.

IDEAL, 5 feet long.



In best redwood, painted two coats white

£1 : 7 : 6.

Delivered any Station.

Full catalogue on application.

PETER PATRICK & SON, OTLEY, YORKS.

VOL. LIV.—No. 3,003. SATURDAY, MAY 20, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Vegetative Activity.

To the unimaginative eye vegetative growth is extremely sluggish, but when we come to consider the amount of constructive work which is going on, say, in a large tree, when it is busily engaged in fashioning its annual set of leaves, we are forced to the opposite conclusion. In the first place, we must remember that the whole panoply of its leaves and flowers is practically completed within a few weeks from the first bursting of the buds, and that these are built up by the multiplication of infinite myriads of tiny cells within each of which a most complicated process of division is performed, and a number of subtle chemical changes effected simultaneously. Take the case of, say, a huge spreading elm or oak tree, with its intricate labyrinth of branches and twigs, all perfectly bare as the wintry blasts have left them. Give some manufacturer of artificial leaves and flowers the order to clothe that tree with fair imitations of such, each one to be carefully attached, and the whole completed within, say, a month from receipt of order, and we should then form a faint idea of the work effected when we saw the busy crowd of workers at their task, first of making and then of attaching seriatim. Then, when all was done, what a pitiable travesty it would be of Nature's perfection! Outwardly, there might be a faint resemblance to the real thing, but where would be that marvellous interior workmanship, the infinitely beautiful network of veins which pervade every leaf, the wonderful delicacy of the pollen grains and incipient seeds, and the organs which effect fertilisation. The human artificer could only produce mere replicas of a single type, but Nature's handiwork is infinitely varied; search as we might we could never find two leaves alike, in every one, although the general plan was the same, the detail would differ. Furthermore, the work done by the tree is infinitely greater than that implied in the travesty we have imagined, since there is not only involved the mere fashioning of the foliage, but in the process the wonderful root system is extended, and throughout the entire fabric, from the huge trunk to the minutest twig, a strengthening sheath of wood is formed, and besides the mere leaves which may be imitated, as many compact little buds are fashioned. In short, the work effected in a few weeks defies description, and against its apparent slowness must be set the fact of that general extension of area of foliage which is built up cell by cell, with microscopic bricks, as it were, fashioned by the tree itself from thin air and earthy salts in solution. Our artificial flower maker would have to start with a ton or two of raw material, and would certainly never accept the contract if confined to the ingredients with which Nature manages to perfect her work. In considering this question of vegetative activity, we have purposely chosen a most familiar example, but if we lived in the tropics or even if we visit a tropically heated stove, we may find examples of far greater activity. Under the stimulus of warmth and humidity, growth becomes incredibly rapid when we bear in mind the fundamental fact that it is not a question of mere inflation, but ever and always of building up cell by cell, brick by brick, on solid and substantial lines. In the early autumn, for instance, we may behold a stately banana plant, with a solid trunk as thick as a twenty-year-old tree, and enormous leaves, from whose axis of growth there hangs a huge pendulous bunch of the now familiar fruits, weighing perhaps a hundredweight. With our ordinary notions of vegetative growth, we should estimate the age of this plant at several years at least, and yet, in the self-same year in the spring it was a sucker of comparatively small size. Take, too, the giant bamboos, with their rods 80 or more feet long, the product of a season's growth, and remembering always how it is done, it dawns upon us that the activity of cell growth is something marvellous. We are, indeed, reminded of the old tale of the horseshoe nails and the infinite numbers that result from repeated doubling. This, in fact, is what growing cells are always doing, but in addition, they are always following subtle plans, the end result of which is those wonderful and infinitely varied organisations which we term vegetation on the one hand, and animal life on the other.

MR. S. F. STAFFURTH.
Winner of the Barr Cup for Daffodils at Huntingdon, and First Prize in the chief Amateur Class at Birmingham, 1911.

The Fruit Crop.

Although the season is not as yet sufficiently advanced for those who write with some sense of responsibility to express a definite opinion as to the extent and quality of the fruit crop that will be gathered in British gardens and orchards during the forthcoming summer and autumn, there is full justification for anticipating by far the best crop within recent years. It is not a case this year of this or that kind of fruit promising an abundant yield while other kinds present an appearance that justifies but little hope of the results being otherwise than unsatisfactory. All kinds are highly promising. It was feared by some that the sharp frosts experienced during the first week of April would do an immense amount of damage to the flowers of plums and gooseberries. A few may have suffered from the effects of the frost in early districts where the flowering of these two kinds were well advanced, but the general effect of the frost and the low temperature that followed was to check the development of the flowers and to delay the blooming of the majority of the fruits by a fortnight or more. Since the commencement of this month the weather has been warm and genial, with the result that they are setting their fruits in the most satisfactory manner. According to the reports that have reached us from our correspondents, plums and cherries have set well, and the young fruits are swelling freely; pears have set fairly well, but in some cases the trees have cast their flowers rather more readily than could be desired; apples, which are not so advanced as the other kinds, are setting freely, and we may anticipate that the later varieties will be not less satisfactory in this respect than are those which bloom early. Bush fruits are, on the whole, promising an abundant yield, and the strawberry crop will, if favourable weather continues, be in every way satisfactory. As the trees of the several kinds have not had their strength heavily taxed by fruit bearing for several years past, they are now in a robust state of health, and provided excessive cropping is avoided will be able to bring their fruit to a high state of development.

Mr. S. F. Staffurth, whose portrait we present to our readers in the present issue, is a gentleman who has taken up one particular flower as a hobby, and finds a vast amount of pleasure in it. He works under some disadvantages and difficulties because he is engaged in the scholastic profession at Brighton, whereas his flowers—they are daffodils—grow in his father's garden at Frieston Priory, Boston, Lincs. With a fairly long Easter vacation to fill up he turned his attention to the flowers that bloom at that season, and, of course, the daffodil was selected as first favourite. He started with a small collection of bulbs about eight years ago, and he was aided in his selection of varieties by Mr. A. M. Wilson, now of Bridgwater, and then of Spilsby. For the last five or six years Mr. Staffurth has been a regular exhibitor at the Lincolnshire Daffodil Society's show at Spilsby, and has been successful chiefly with medium, small-crowned, and poeticus varieties, but until this year he has not had great success with trumpet daffodils. In 1910 Mr. Staffurth competed in the chief class at Huntingdon, for thirty varieties of daffodils, and gained second place in a keen competition; this year he again competed, and secured the gold medal and first prize with a very beautiful collection. Two years ago he exhibited at the Midland Daffodil Show, at Birmingham, with practically no success, but this season he won first prize in the leading amateur's class with a delightful display that we figured in our issue of May 6. Mr. Staffurth is at home at Frieston Priory for three periods of the year, autumn, Christmas, and Easter, and it is during these times that he attends to his daffodil beds, and prepares for coming exhibitions; his sister reports progress during his absence, and she also lifted the stocks of his best varieties last year in early July. Daffodil culture is a holiday recreation for Mr. Staffurth, one he is devotedly fond of, and one that he has been very successful in.

Awards of R.H.S. Committees.—The Rev. W. Wilks, M.A., secretary of the Royal Horticultural Society, sends us the following copy of a letter which has been sent by the Council to the chairmen of the R.H.S. Committees: "Dear Sir,—I am desired by the Council to recall to the minds of the members of the committees the high merit which should be represented by all the awards, certificates, and medals of the society. It is probably to be expected that the number of awards should increase slightly year by year, but there exists a constant danger of their too lavish bestowal. It should, therefore, be a matter for constant watchfulness that the relative standards of merit be fully maintained, and that none of the medals, etc., should become depreciated by neglect in the use of the award ranking below it. If, for example, the use of the Bronze Medal is allowed to lapse, it can only result in the equivalent depreciation of the next higher awards, which, in turn, will have a tendency to fall out of use and depreciate those still higher; until at last little value would attach to even Gold Medals. The value attaching to each medal can only be upheld by maintaining the appropriate value of the medal ranking below it, and so on in descending scale. The value attaching to the society's bronze medal is therefore the primary factor of the value which attaches to the highest Gold Medal, and whatever depreciation the Bronze Medal suffers the Silver and Gold will inevitably reflect in their turn. The Council therefore urge the committees to make greater use of the Bronze Medals, regarding them as very honourable awards suited to groups and collections which require something more than a mere 'vote of thanks.'—Faithfully yours, W. Wilks, Secretary."

Queen Mary's Coronation Bouquet.—The well-known and attractive border carnation Lady Hermione, which has rich rose-pink flowers, has been selected for the bouquet which will be presented to Queen Mary by the Worshipful Company of Gardeners on the occasion of her Coronation.

Spring Flowers at Kew.—The procession of flowers that belong to the season of spring continues to make a visit to the Royal Gardens, Kew, immensely enjoyable and of much interest. The species of pyrus and their varieties which followed the British and Japanese cherries have flowered with great freedom, and the masses of white and pink flowers have formed a delightful feature. Unfortunately, the rain which fell on the 14th inst. had the effect of shortening the period of flowering of the somewhat ephemeral Pyrus malus floribunda, one of the most elegant of small trees. It also rather spoilt the flowers of the Snowdrop Tree (Halesia tetraptera), which bloomed with exceptional freedom, and the wreaths of the pure white campanulate flowers have produced a charming effect. Rhododendrons now constitute a glorious feature, and the dell that is devoted to these attractive shrubs is aglow with colour, and some of the groups alongside the main walk leading to the palm-house and contiguous to that structure, are fully in bloom, notably the fine rosy-red Lord Palmerston, one of the best of its colour, and Cunningham Cunningham's White, an old but valuable white variety of good habit and blooming profusely. The group at the southern end of the lake is so freely furnished with flower trusses that if it does not exactly present the appearance of "a mountain of snow," it attracts the attention of the visitors immediately it comes within the range of vision. Many of the hybrid rhododendrons of recent introduction in the dell are fully in bloom, the pale pink Kewense being especially attractive. Several of the older hybrids are also at their best, and visitors should not overlook the huge specimen of Broughtoni at the south end of the dell, for it is not less remarkable for its fine habit and handsome leaves than it is for its huge trusses of rich rose-red flowers. The azalea garden, which has been considerably extended within recent years, is resplendent with colour, to which both the Ghent and mollis varieties contribute their full share. Another feature of interest is the fine display of May-flowering tulips and other spring flowers in the geometric garden on the east side of the palm house. The visitor, whatever may be the trend of his taste, should not miss the delightful effects produced by the bluebells in various parts of the arboretum and in the grounds that form so beautiful a setting to the Queen's Cottage.

Straw for Strawberries.—The strawberry season will soon be with us again, and in this connection it is interesting to notice that nearly 3,000 tons of straw are used in the Swanwick district of Hampshire, to lay under the strawberries for the purpose of keeping the fruits clean. Altogether, there are some 3,000 acres under strawberry cultivation, and some further idea of the magnitude of the industry may be obtained from the fact that in the height of the season a million and a-half of 4lb. baskets of strawberries are dispatched from Swanwick Station in a week.

Edinburgh Autumn Show.—The Council of the Royal Caledonian Horticultural Society have decided to alter the date of the autumn show. It has accordingly been arranged to hold the show in Edinburgh on September 13 and 14, instead of September 6 and and 7, as intimated in the schedule. The arrangements made with the railway companies will apply to September 12, 13, 14, and 15, instead of the dates previously noted. The date on which the entries will close is September 6.

Gardeners' Royal Benevolent Institution.—We are asked to remind our readers of the 72nd anniversary festival dinner of this institution, which will take place on Tuesday next, May 23, at the Grocers' Hall, Princes Street, City, at seven o'clock, under the presidency of Sir Marcus Samuel, Bart., who will be supported by an influential company. Subscriptions in aid of the funds, to be placed on the chairman's list, are earnestly solicited, and will be thankfully received by Sir Marcus Samuel, Bart., 3, Hamilton Place, W.; Harry J. Veitch, Esq., V.M.H., Chelsea; or the secretary, Mr. George J. Ingram, at the office of the institution, 92, Victoria Street, Westminster, S.W.

Pollination of Plums.—In an interesting communication to the "Journal of the Board of Agriculture," Mr. C. H. Hooper discusses the importance of the study of pollination of fruit blossoms. He points out that experiments conducted in 1910 showed that plums are, on the whole, "self-fertile," but that hybrids tend to be completely sterile. Thus "Rivers' Early Prolific" appeared to set fruit with its own pollen with the greatest difficulty, only nine plums setting out of as many thousand flowers, whereas "Victoria" proved completely self-fertile. The Histon Apricot plum, the Blue Bullace and Sloe were all found to be self-fertile. The "old greengage" showed itself self-sterile, but when dusted with the pollen of "Early Rivers" it set plentifully; in like manner the pollen of the "greengage" on the "Early Rivers'" gave a good crop. As a practical example of this, a case may be mentioned where it was found that "Rivers' Early Prolific" and "Black Diamond," if planted in large blocks fruited badly, fruiting chiefly on the outsides of the plantation, where they adjoined plum trees of mixed varieties. In another case, a block of 20 acres of "Victoria" plums were practically a failure until a number of trees were taken out and other varieties planted in their place.

British Gardeners' Association.—At the meeting of this association, held on May 9, Mr. W. H. Divers presided, and twelve new members were elected, bringing the total up to 2,142. It was decided that a sum of £250 should be invested in Local Loans, and that an honorarium be granted to each of the secretaries of the local branches of the association. In reference to the National Insurance Bill a resolution was passed approving of the Government scheme, and deciding that the B.G.A. should watch the progress of the Bill through Parliament in conjunction with the United Horticultural Benefit and Provident Society. The annual meeting of the association will be held on Thursday, May 25, at 7 p.m., at Carr's Restaurant, Strand.

Exhibiting New Daffodils for Awards. The President and Council of the Royal Horticultural Society have approved a recommendation of the Narcissus Committee to the effect that "five flowers of a daffodil be submitted for an Award of Merit instead of eight as heretofore." The society's regulation No. 25 for the Standing Committees is therefore amended accordingly.

Slug Hunting. — Notwithstanding the many remedies for and preventives against slugs, many people still believe in the old-fashioned method of systematically hunting over the flower borders or the beds of seedlings after rain. Probably not many of our readers are so industrious as one at Hounslow, who last week captured nearly five hundred and fifty. Slices of parsnips were used as traps.

Plant Diseases in Holland. In connection with the recent visit of the Gardeners' Company to the bulb-growing districts of Holland, which was recently referred to in these pages, it may be of interest to mention that hitherto the growers have relied wholly upon their own endeavours in contending with insect and fungoid pests. Consequently, there is not at the present time any law requiring growers to take steps to keep their stocks free from disease. A Bill is now before the Dutch Parliament, the chief object of which is to prevent the spread of the American gooseberry mildew, and as it has not met with any opposition, it is hoped by the promoters that it will pass in the course of the present session. ◆ The Phyto-Pathological Institute, of which D. J. Ritzema Bos, the State entomologist and vegetable pathologist is the head, undertakes the inspection of nursery stock of all kinds intended for exportation to foreign countries. This inspection on the part of the growers is purely voluntary, and in carrying out their duties the inspectors report upon the diseases present, and endeavour to determine, as far as possible, the extent to which it has been developed. Crown gall and root gall on pear and apple trees are diseases that are having special attention paid to them at the present time, but such common diseases as rose mildew and rose rust are by no means overlooked. The nurseries that are under inspection are examined sometimes two or three times, and there are special inspections of stock that have been collected for export from several growers. A few fruit trees are imported into Holland, and those from England are invariably inspected, more especially gooseberry bushes, because of the American gooseberry mildew. Fruit trees from America are not imported because of the risk that German and other nations might in consequence of their importation into Holland, refuse to receive them from the Dutch growers.

The Temple Show is this season creating much additional interest, from the fact that the International Horticultural Exhibition will take its place next year. The exhibition promises to be at least fully equal to the best of its predecessors, and fine weather alone is necessary to ensure its success. We shall give a full and illustrated account of this great gathering in our next issue.

A Munificent Gift for Advancing Science has been made by the Worshipful Company of Drapers to the Battersea Polytechnic. This is to be devoted to the erection of a building to house a department that will include such scientific studies as bacteriology, physiology, hygiene, and town planning. It is also hoped that geology, in its special relation to soil formation and vegetation will be added to this list.

Early Flowers from the South of France.—The United States Consul at Toulon, Mr. F. M. Mansfield, has recently reported in most interesting fashion upon the trade in spring flowers carried on in the South of France. He tells how the flowers are picked and packed, and handled direct by the railway authorities without the intervention of the regular postal authorities, and he states that every year a million parcel post packages of cut flowers, with a total value of 40,000,000 francs, are sent from the gardens of Southern France. Every night during the winter months a special train, popularly called the Rapide des Fleurs, leaves Toulon for Paris, carrying cut flowers in baskets and cardboard boxes from all stations on the line from Nice to Toulon, to the Paris markets. Certain cars are switched off to Frankfort, Berlin, and Munich, others continue to Brussels, and others to Calais, where their perishable freight is transferred to steamships crossing the English Channel and rushed to the markets of London and Manchester.

Available Plant Food.—Mr. J. J. Willis writes: In the article on "Available Plant Food," page 362, it is stated that in the presence of the necessary potash and lime in the soil, the phosphates and other mineral constituents unite with the organic compounds produced from the decay of the humus, and form "muriates." This should read "humates"—humate of potash, humate of lime, humate of soda, etc., all of which are available forms of plant food.

Small Holdings.—Six new Commissioners have been appointed under the Small Holdings Act for the purpose of assisting County Councils to satisfy outstanding demands for small holdings and to put into force the provisions of the law in cases of default where necessary. The new Commissioners are Mr. A. Allsebrook, Mr. J. H. Diggle, Mr. E. O. Fordham, Mr. Sydney Mager, Mr. F. E. N. Rogers, Mr. T. Baines, and Mr. E. J. Cheney. Mr. Allsebrook was for six and a-half years resident agent to Earl Beauchamp on the Madresfield Estates, where there are over a thousand small holdings under 50 acres. All the other gentlemen have had considerable experience in the management of land and the work of small holdings, so that their appointment seems eminently fitting.

SWEET PEA NOTES.

Sweet pea enthusiasts will be now feeling the effects of what is the fever which will reach its culminating point at or about the dates of the National Show or the great "Daily Mail" competition later in the month of July. Between now and then there is much work to be done, and to ensure success it is not only necessary to obtain good reliable seeds, raise good sturdy plants, prepare the ground well, and plant out when both plants and soil are in good condition, but the plants must be properly tended after planting.

The spring, on the whole, has been a very boisterous one; in fact, I cannot remember when we had so much wind, and I am afraid in many instances sweet peas will have suffered from it; more especially are those likely to have suffered that were planted out quite early in April. Many, I hear, were very sadly treated at that time, but, provided they were fairly hard and had good roots this crippling ought only to be of a temporary character, although enough to retard the blooming by two or three weeks. However, by now they ought to be breaking away nicely at the base, and the plants should be regularly attended to; see that these young shoots are not laying about on the ground, or during the showery weather slugs may set to work on them, and provide check number two.

Plants raised from autumn-sown seeds that were put out about the second or third week of April, have fared very much better, and although we have had plenty of wind since then, it has not been so cold and trying to tender vegetation; indeed, beyond a tendency to hardness, they have not suffered from it. I find by an examination of the roots that they are running freely through the soil in all directions, which bodes well for the future.

According to my experience, it is not a wise plan to put the permanent stakes to the plants very early. I hear of many growers, who stake before planting. I prefer to leave them out till the plants are about a foot high, as the stakes naturally rob the plants of just a little light, and to keep the haulm sturdy should be the aim right through the season of cultivation.

Sweet Peas in Pots.

Those who are cultivating sweet peas in pots are no doubt admiring the first few good blooms, and very welcome, indeed, they are to the sweet pea lover. Now that the plants are actually in flower they should have plenty of food, such as liquid manure, with the addition of a little artificial once or twice a week. Water they will take ad. lib., and on bright days it will be found necessary to attend to them three times a day.

If the plants are placed where they can root through the pots into a layer two or three inches in thickness of short manure it will help them materially, and the blooms will be much finer. If the pots are stood on stages then it will be almost impossible to use manure, but good flat turves (upside down) may be substituted. Even this will do much to conserve the moisture, and provide a little more rooting medium. With the admission of plenty of air very few varieties will require shading.

Should they be growing on the back of fruit houses trouble may arise through the dropping of the buds, this being caused in many instances through shutting the house up fairly early in the afternoon, the consequent rise in the temperature being more than sweet peas like, or will stand. It is advisable to have them in a house in which the temperature can be adjusted to their requirements.

THOMAS STEVENSON.

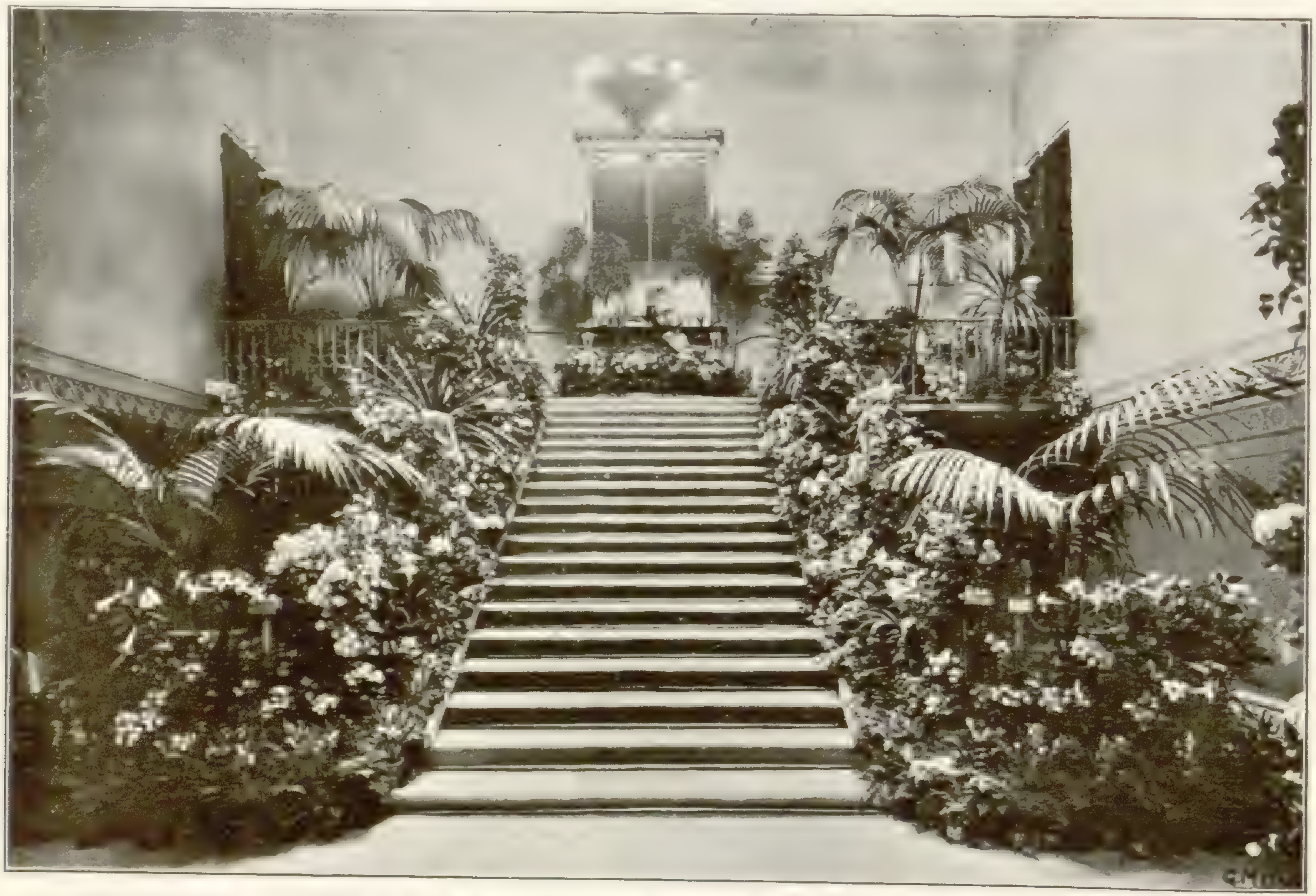
FLORAL DECORATIONS AT DRURY LANE THEATRE.

The attractions at Drury Lane Theatre on Wednesday night, on the occasion of the gala performance given by command of the King in honour of the Kaiser and Kaiserin, were many, and certainly not the least important was the remarkable demonstration of floral art by Messrs. W. Cutbush and Son, of Highgate and High Barnet. The decorations of the grand entrance, the rotunda, the rotunda gallery, the King's staircase, the retiring rooms, the balcony, and some other parts of the house were entrusted to this well-known firm, and it is not too much to say that in the execution of their commission they surpassed themselves, a feat not easy of accomplishment having regard to the high position they occupy as floral decorators. The general scheme was characterised by lightness and softness of colouring; but, soft as were the colours of the flowers of the various kinds of plants employed, they were sufficiently bright to produce a rich and tasteful effect. The chief flowers employed by Messrs. Cutbush in carrying out the scheme of decoration were rambling and dwarf roses, the pure white Lilium Harrisi, bright pink hydrangeas, white marguerites, and rich red rhododendrons, and in association with them were graceful palms in variety and bamboos.

The grand hall was richly embellished with rambling roses and hydrangeas, and gave an excellent foretaste of what was to follow. The rotunda was remarkably attractive, the plants being arranged to form a series of four bold groups in which large specimens of finely-flowered rambling roses, white lilies, and white marguerites, relieved by tall feathery palms, such as Cocos flexuesa and Acer negundo variegata, the white variegation of which produced a delightful contrast as seen under the influence of the electric light, to the pink, rose, and red hues of the rambling roses. Ascending to the rotunda gallery there are a dozen or more alcoves, all of which were filled with rambling roses grown in pillar form, and white lilies set in a groundwork of dwarf polyantha roses which were splendidly flowered, and contributed in no small degree to the general effect. Between each alcove was a well-developed specimen some 7ft. or 8ft. high of the elegant Cocos flexuosa. From the cluster of electric lights depending from the roof were festoons formed with Dorothy Perkins roses and trails of smilax, and these caught up and the lower ends secured to the balustrade, produced a distinct and extremely beautiful effect.

Leading from the rotunda gallery is the King's Staircase, and this Messrs. Cutbush were successful in embellishing in a manner that, if not beyond praise, was such as to deserve the heartiest commendations. Rambling roses were used trained as specimens, chiefly in pillar form, and also for clothing the balustrades with foliage and flowers. At the base of the roses was a fringe of flowers, chiefly dwarf roses and white lilies. The floral decorations in the large apartment set apart for the King and Queen, the Kaiser and Kaiserin, and their suites were characterised by simplicity; and, while these were remarkably beautiful, the chief effect was produced by the tall, finely furnished kentias, of which there were a dozen or more. In the grand circle brightness was given by festoons of pink roses and smilax and asparagus, and over the stage were bold festoons of laurel.

It may be of interest to add that in carrying out the decorations which we have thus briefly described, Messrs. W. Cutbush and Son utilised 2,000 pot roses, 1,000 palms, 400 marguerites, 250 hydrangeas, 2,000 ferns of various kinds, and 250 Lilium Harrisi. The principal roses were Dorothy Perkins, Electra, a scarlet polyantha of much merit, Hiawatha, Mrs. F. W. Flight, and Crimson Rambler. In addition to the decorations Messrs. Cutbush supplied 105 bouquets of carnations, each consisting of twelve blooms arranged as posies with their stalks in silver hardles. With the exception of two, the variety used was the rich pink Winsor, and in these two, which were presented to the Queen and the Empress of Germany, the rich pink Malmaison Princess of Wales was used. The task undertaken by Messrs. W. Cutbush and Son on Wednesday was a heavy one, and the success achieved was so complete that they may be heartily congratulated on the results of their efforts.



THE KING'S STAIRCASE, DRURY LANE THEATRE.
As Decorated by Messrs. W. Cutbush and Son, on Wednesday last.

NOTES OF OBSERVATIONS.

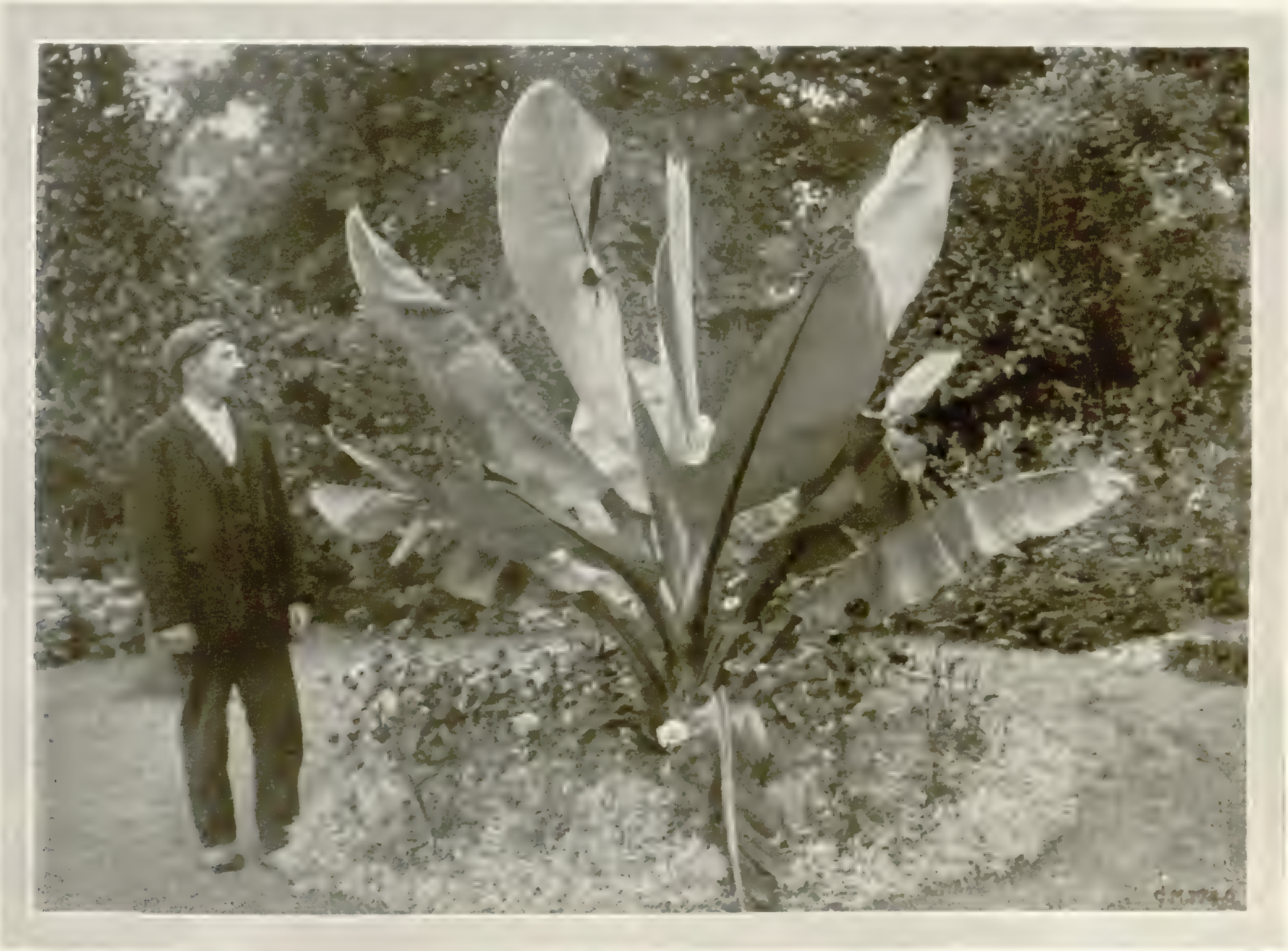
The Judas Tree (Cercis siliquastrum).—This is so distinct from any other shrub or tree, and so pretty withal that one wonders it is not more often planted. It is a native of the Mediterranean region, and is seen at its best in warm, well-drained soils where it has plenty of sunshine. The pea-shaped flowers are of a pretty reddish tint, a peculiar feature being the manner in which they are borne from all parts of the stem, even on the old wood. The Judas tree forms when old a very picturesque specimen. There is a white-flowered variety and other species, natives of North America and China, but the common kind is, as far as its ornamental qualities go, quite the equal of any of them.—W. T.

Cytisus scoparius pallidus.—This, to which the popular name of the Moonlight Broom has been applied, is a very distinct form of the common broom (Cytisus scoparius), but instead of the blossoms being of a golden hue, as in the type, they are in this variety of a pale sulphur tint. Viewed in a subdued light the popular name of Moonlight Broom is a very appropriate one. Beside this, there is the variety Andreanus, which may be said to have bounded into popularity after its introduction, and of which several forms are now grown. The weeping variety, too, is very pretty either on a stem, when its drooping character is shown, or as a prostrate plant on the rockwork.—W. T.

Forsythia intermedia spectabilis.—It is now many years since Forsythia intermedia, a hybrid between F. suspensa and F. viridissima was raised, and later on several forms of F. intermedia were distributed by Continental nurserymen. As far as these varieties have come under my observation by far the best is F. intermedia spectabilis, which differs from the typical kind in the blossoms being of a richer yellow, while it is also more floriferous. It is indeed a very beautiful forsythia, and well worthy of a place among the best of little-known shrubs, for it is certainly at present uncommon. I have not met with it in English lists, though in some Continental ones it is quoted at a comparatively cheap rate.—W. T.

MUSAS IN THE SUMMER GARDEN.

The practice of relying almost entirely on flowering plants for a display during summer generally prevails in gardens, and while such plants must always predominate in bedding and other arrangements, yet the value of good foliage plants should not be overlooked, as they introduce a distinct feature, and are capable of producing very bold and striking effects when suitably placed. Among tender foliage plants that succeed out of doors during summer, musas occupy a foremost position on account of their great size and the noble character of their leaves. Only two species have the slightest claim to hardiness, and although these stand the winter in a few favoured spots in the south-west, in all other parts of the country they must be housed indoors during the winter.


MUSA ENSETE IN A LINCOLNSHIRE GARDEN.

Musa japonica (Basjoo), sometimes, so far stands the winter as to send out suckers in spring, but this belated growth is not to be depended upon, and cannot compare with specimens that have been forwarded under glass.

Musa japonica is readily propagated from suckers, which are freely produced from old plants, and are best severed in autumn and potted up in light sandy soil, placing them in a warm greenhouse or stove, in order to stimulate root production before winter. It is unnecessary to subject them to a high temperature during winter, and, as a rule, an intermediate house will give the best results. By February they should be placed in the warmest position available, and every means adopted to induce rapid growth, and as each pot becomes filled with roots one of larger size should be provided, using a compost of loam and old rotted manure, in equal parts, with the addition of a small quantity of sand. By May the plants will stand much cooler conditions, and if gradually hardened off in a cold greenhouse or orchard house they will bear placing in their summer quarters by the middle of June.

The other species employed out of doors in summer is Musa ensete (Abyssinian), which is propagated by seeds sown either in autumn or spring, the former season being advisable in order to secure large plants for the following summer. The seeds are sown singly in 60-sized pots, filled with light sandy soil, and plunged over a brisk bottom heat. Once the seeds germinate and the pots are filled with roots, transplant the seedlings into a larger size, using soil as previously advised for M. japonica. Plants raised from seeds sown in autumn are best kept growing throughout the winter in a stove or forcing pit, their subsequent treatment being in all respects similar to that described for M. japonica.

Plants of one or several years' growth may be lifted in autumn, reducing the foliage to the centremost undeveloped leaves, and treating the roots in a similar drastic manner; they are then placed in the smallest receptacle that will hold them, and given a position in a house having a minimum temperature of 50 degrees during winter; water must be sparingly applied until fresh roots are formed, and repotting should, in this case, be deferred till March or April, unless unlimited space is available for producing large specimens. In northern districts it is only these two-year-old plants that develop the rich tropical luxuriance for which the banana is noted.

Apart from the system of planting out in summer, both species are extremely effective as tub plants, and where such treatment can be afforded them a ready means of securing two-year-old plants is obtained by wintering these in tubs intact, and planting them out in the open the following year.

Musas produce leaves having unbroken margins, and, owing to their great size, it is imperative to employ them where they receive shelter from rough winds. Local conditions must in every case govern the actual date for placing them in their summer quarters, but, as a general rule, it is not advisable to put them out earlier than the middle of June.

Thomas Smith.

THE RUSSIAN ALMOND.

The above is the popular name applied to a pretty little species of prunus, i.e., P. nana, a plant which might well be said to be a common almond in miniature, for the foliage and flowers of the two species have many points in common, though there is, of course, a great difference in size. P. nana is by no means a new plant, although uncommon, for it was introduced from its home in Southern Russia very many years ago. Under cultivation it may be found at almost any height between one and three feet, its slender branches forming a rather loose bush with small almond-like leaves.

The flowers are borne in April from axillary buds, and are from half-an-inch to three-quarters of an inch across, the colour being very similar to that of the ordinary almond. Several variations from the type may be obtained, the two most important varieties being alba with white flowers, and Gessleriana with deep red blooms. The latter is a particularly handsome shrub, and worthy of extended cultivation. The probable reason for Prunus nana being uncommon is that it is very difficult to propagate from cuttings. It may, however, be increased without any great amount of trouble by layering. Branches pegged down in spring in the ordinary way root during summer, and by early in the autumn may be severed from the parent.

D.

THE GLORY OF RICH COLOUR

A great writer has said that the face of Nature could not be beautiful without colour; the mere shape and outlines of hills and dales, forests and plains, would sadden and torment us by their monotony and barrenness if they were not clothed, not only in lovely hues, but in every imaginable shading, from darkness to light. In order to make the surroundings of our dwellings happy in their loveliness, we are constrained, therefore, to mass colour in them. It is true that

> "A garden in a garden, a green spot,
> Where all is green."

may delight by its rarity as a cool glade for summer, but even green is a colour, and we should weary of that if it were not relieved by the contrast of blue, gold, and roseate skies, brown trunks of trees, yellow and orange of foliage tints, silver of bark and leaves. The secrets of successful gardening are many, but most important of all to learn is the use of colours, so as to appreciate them individually, to combine them into fairest harmonies, and to blend them sympathetically with their environment.

MUSA JAPONICA IN TUBS.
Plants raised from suckers of the previous autumn.

Summer is the canvas on which the gardener-artist must chiefly use his paint brush; if he misses this great opportunity he must wait for the next year to offer him another, but the one that he neglected will be irretrievably lost. To make a good picture at the precious exhibition season it is essential for him to set his palette early and work hard in spring—the late spring of May and the first week of June.

Most landscapes, whether of open country, woodland, or cultivated pleasure grounds, lack a sufficiency of rich hues, that is why we wait impatiently for autumn tints, or exclaim in rapture if our eyes witness a flaming field of poppies, or a glade of warm blue Scilla nutans. On our lawns we do well to mass the scarlet of geraniums, but it is a mistake to let their value as colour producers blind us to their defectiveness in the matter of grace; we can build up a perfect bed only by adding to these plants others that will soften the effect of their rigid outlines; for example, by giving scarlet dahlias and cannas the centre space, ranging scarlet salvias against the stiff geranium stems, finishing off with pegged-down scarlet verbenas, and, even then, the appearance will be infinitely redeemed in character if we plant Gypsophila elegans alba among the taller vermilion flowers, and scatter seed of the elegant grass, Agrostis nebulosa, between the lower verbenas. At a distance a bed such as this will show as a wholly beautiful colour mass, without a single harsh outline.

Scarlet flowers and red brick are usually accounted sufficiently harmonious, yet it is worthy noting that brick shades vary, and the vermilion of dwarf nasturtiums and single begonias, in which there is a distinct orange, may prove quite unlike the red of the house; a little care in selecting varieties will prevent a discord; blood-red nasturtiums are easily obtainable. Scarlet King is quite distinct from the vermilion Fire King, for example, while Empress of India, with its crimson-scarlet blossoms among dark leaves, can scarcely be rivalled for attractiveness.

The copious use of white flowers will do a great deal to introduce a light effect into rather sunless gardens, and the result will be to remarkably intensify the colour value of such red, blue, gold, rose, carmine, mauve, or purple flowers, as accompany them; best of all for the purpose are white blossoms, that are gold blotched, or have yellow prominent centres: Gilia nivalis Snow Queen, single asters and dahlias, single chrysanthemums, violas and large pansies, Iceland poppies, Linaria bipartita alba, salpiglossis, Schizanthus retusus albus, Erigeron Coulteri, Michaelmas daisies, and single begonias in white, are very valuable.

Lilac-lavender and blue violet give a welcome effect near red brick or red flowers, but are in need of white ones as neighbours; mauve and red-purple should be avoided as carefully as rose and carmine in such situations, while a grand shaded scheme can be created out of gold, orange, salmon, vermilion, and deeper scarlet; the hues of orange sweet peas have a great merit in garden paintings, and they may be carried out on a lower level by many snapdragons that are blended, streaked, or blotched, of yellow and red.

Where to successfully place the most vivid blue was a problem that perplexed gardeners a few years ago; it was found that it gave a crude effect near red brick except of the antique, weather-beaten kind, and the happy idea was hit upon of using crimson-bronze bedding plants also to soften the too sharp contrast. A bed or border of Phacelia campanularia, delphiniums, tall cornflowers, and lobelia, in which ruddy-foliaged trees exist at intervals, will be quickly perfected by adding Dell's crimson-leaved beet, crimson alternantheras and cockscombs, coleuses, iresine, etc., even if the building near is of the newest of scarlet brick.

Pinks, magentas, carmines, and maroons are probably the fairest of all colour masses upon green lawns and turf-edged banks, but too many gardeners employ them in beds that are cut out of bright gravel, the orange hue of which is in utter discord. A white house climbed by roses of these tints will be yet more pleasing if some vivid green climber is added, or if such a boldly verdant feathery tall annual as Artemisia annua is sown in the immediate borders. For a carpet or edging the Liliput nasturtium White Queen, with its pea-green leaves and lemon-white blossom, behind a row of Silene pendula compacta or rose begonias, will prove satisfactory. Against a grey or dun-coloured house, on the contrary, green will be little needed as a relief to pink and carmine roses, but the heaviness of effect must be relieved by the introduction of cream-yellow, such as that of variegated euonymus, cream-blotched ivy, the Japanese golden honeysuckle, Lonicera reticulata aureum, with variegated abutilons bedded out in borders edged by Mesembryanthemum variegatum. Cream-primrose violas will also prove useful.

The violent gold of the calceolaria ought probably to be more or less isolated; it can never look really well near scarlet flowers, rich blues, purples, mauve, rose, or crimson, though for brilliant bedding schemes we often admit it into their company; it is the colour beyond all others for brightening up shady glades and the borders of evergreen shrubberies, or, used only with white and pale blue flowers, or else with lavender and blue-violet, it can make a splendid front garden for an old red brick, ivy and Virginian creeper covered mansion. The gold of the sunflower is toned down by the rich brown discs and the multiplicity of silver-green giant leaves; wherever an aged grey fence stands there should be rows and groups of helianthuses of many different statures, and rockeries of grey stones be trailed over by creeping jenny, to follow the yellow alyssum and wallflowers, daffodils and crocuses of spring.

Let us not be sparing of rich colours, for they gladden the eye first, and then the heart, but the best glories are gained by lavish employment of a single, or a couple of hues of perfect suitability, not by spreading broadcast all the tints of the floral palette.

M. H.

SPRING FLOWERS IN THE BOURNEMOUTH PUBLIC GARDENS.

Every year fresh features are to be seen in the bedding at the Bournemouth gardens both in spring and summer time. The flower beds are this spring charming, and Mr. J. B. Stevenson, the energetic superintendent, is to be complimented on the results he has achieved, especially in the face, as it were, of such unfavourable weather obtaining during the past few months.

I have lately closely noted the condition of the flower beds, and I do not think there are any bad plants in them. The tulips were weather-beaten a little, but not enough to spoil their beauty. Through the main portion of the gardens a broad, gently curving path leads to the entrance to the pier from the centre of the town. There are ten pairs of beds, all round, and very large, bordering this path, and cut out on the beautifully green lawn. These beds are planted in pairs to match, and I have never yet seen one bed distinctly better than its neighbour, which proves at once how skilful the general treatment is.

The following arrangements were very noteworthy: Tulips, with pansies as a groundwork; tulips, and polyanthuses as a groundwork; pheasant's eye narcissus and dark wallflowers mixed, with an edging of yellow wallflowers; crimson tulips over double white arabis, and an edging of aubrietias; yellow tulips, aubrietias as a groundwork, and a broad edging of double white daisies.

The polyanthuses in these beds were exceptionally well flowered; indeed, some of the trusses of blooms were so weighty that a light shower of rain caused them to topple over a little, notwithstanding their strong flower stalks. Wallflowers had a charming effect massed round the large ornamental fountain. Rhododendrons and camellias in the shrubberies made splashes of colour in the background, over which loomed the blue-green pines, mingled with the light green tints of the young leaves of deciduous trees, all adding charm to the scene.

Hyacinths in distinct colours filled a number of beds cut in the grass and partially shaded by younger pines near the sea entrance to these gardens.

In the Boscombe gardens the spring flowers are equally lovely, full of health and vigour: in small enclosed spaces throughout the town Mr. Stevenson has also left his mark in the form of bright flower borders. About a year ago he planted a number of climbing roses close to the boundary fence of the central gardens; neat iron arches were fixed for the rose branches to be trained on in due course. All are in full view of the public thoroughfare, which is one of the busiest in the town, and divides the gardens into two parts. The festoons of rose blossoms, in due time, will be a delightful acquisition to the central gardens.

Geo. Garner.

American Gooseberry Mildew. The Board of Agriculture and Fisheries inform us that they have received information that the summer stage of American gooseberry mildew (Sphærotheca Mors uvæ) was discovered in two Cambridgeshire gardens on Monday last. All gooseberry-growers are advised to examine their bushes carefully and, should any sign of disease be found to spray them with a solution of liver of sulphur (one pound to 32 gallons of water). Growers are reminded that by Article 3 of the American Gooseberry Mildew Order of 1909 they are required to report the presence of this disease on their premises to the Board or the clerk of the local authority for the district, either directly or through an inspector, and that the failure to report is punishable by a fine.

PENTSTEMON CÆRULEUS.

Of the many beautiful members of this family this species may be considered one of the most desirable, and at the same time it is one of the rarest. Other inferior kinds are often substituted for it, and it is seldom that the true plant can be obtained. A native of the Western United States, it is found on the plains at the base of the Rocky Mountains. It is of sub-shrubby habit, quite dwarf, seldom exceeding nine inches to one foot in height, with long, narrow, glaucous leaves. The stems are erect and unbranched, well covered with foliage, and bear on the upper half an inflorescence of closely set flowers. These are produced in June and July, and on opening are of a pretty mauve shade, but eventually assume a beautiful blue colour that is very pleasing. The plant shown in the illustration was grown in a sunny position in the rock garden in sandy loam. At the time of flowering it was about eighteen months old from seed. It is a perennial, but, like many other pentstemons, suffers much from cold and wet during the winter, and therefore should have a sheltered and well-drained position. Seeds were sparingly produced, but P. cæruleus can be increased variety to plant at the entrance to a per- by means of cuttings taken as soon as the plant has finished flowering. These should be potted off as soon as rooted, and kept in a cold frame during the winter. W.

PENTSTEMON CÆRULEUS.
A dwarf-growing beautiful species bearing blue flowers.

IVIES IN GARDEN DECORATION.

Mr. Field does well to draw the attention of readers to the value of ivies in garden decoration. I am sure they are not nearly enough employed as specimens in many parts of the garden, where they would create a pleasing, as well as a useful, effect, especially in winter. At Aldenham the Hon. Vicary Gibbs employs them as specimens 12ft. high in the shrubberies, both gold and silver varieties, and there they add colour, especially during the winter, when they are much appreciated. The variety dentata, by its drooping habit of leaf, is quite the right gola, on an arch, or similar structure. In summer its deep green massive leaves give a cooling effect to the surroundings, but in winter they are especially attractive. Quite one of the best of sorts to grow as a specimen is Hedera helix atropurpurea, its foliage reminding one much of the purple-coloured vine in the autumn. For covering walls or screens quickly no variety is equal to Rægneriana for fast growth: it is not unusual for this variety to make six feet of growth in one season.

E. M.

THE GARDEN OF SHADE.

It is probably in London and other towns that gardens shadowed by walls and trees are chiefly left unbeautified, the ground allowed to become damp and unhealthy, weeds and rank grass permitted to struggle together for existence; the place, in fact, given up to the use of the animal and insect pests that never fail to adopt it. Why should there be ugliness, the squalor of decay, where a little culture could create a floral and foliage Eden?

Among the shrubs that will make coverts of real beauty under tall trees Berberis aquifolium ranks high in order of merit, the glossy foliage resists London smuts, and turns to glorious ruddy hues each autumn, the yellow blossom is showy, early, and continues long, the blue-purple berries are charming out of doors or in the home vases. To cover a waste of ground with a shrubbery of this costs but little, no frost of winter will destroy it, no atmospheric conditions rob it of attractiveness. There are other berberises that can rise above this one here and there, form a high background, or hedge at the sides, notably Berberis Darwini and Berberis stenophylla, both spring bloomers, and the latter an elegant grower that attains large dimensions. Berberis Thunbergi offers a change, as its blossom includes red among the yellow petals, its berries are crimson, and the leaves take on extra rich tones late in the year. As a foreground to this shrubbery, under the plane or lime trees down the long side of a garden maybe, can live and thrive the spreading low-growing rock sprays or Cotoneasters Simonsi, microphylla, and rotundifolia, all giving white flowers followed by coloured berries. The final edging to the ground may be a wide belt of London pride, that glossiest and most vigorous of all the saxifrages, so pleasing to the eye after every washing by the rain, so fairy-like when sending up its early summer forest of long-stemmed miniature pinky-white flowers.

Cold shaded alleys between houses need not be left unadorned; the green euonymus, that furnishes so many house-fronts in Brighton and other seaside towns, will flourish in almost any city or situation; it can be planted as a hedge jutting out across the chief width of the alley, leaving only a path, if needed, for tradesmen, which itself can be simply arched over by ivy, supported on two upright poles eight feet high nine inches apart on either side of the walk, and a single cross bar a foot from the summit. Down the border space against the house wall let a narrow border be dug and enriched, planted with variegated Irish ivy, a row of summer and autumn-blooming tall phloxes, and an edging of the mossy saxifrage, Saxifraga hypnoides; the last gives velvety green cushions of foliage that are permanent, and has white bloom in early April or March that continues until July. Across the path, in the wide border of the alley, a background of Rosa rugosa, the hardy Japanese rose, should be tried, choosing the red, white, or pale pink varieties in preference to the ordinary purplish-pink that is a dull heavy tone. These vigorous, tall rugosas are so accommodating that they can be used to form coverts in woods. In addition to the buds and flowers of summer and autumn, they offer gold and red streaked leaves in the wane of the year, and their large bright fruits appear in profusion, often remaining on the branches until spring calls forth the tender green again upon the myriad-spined boughs.

There is no lack of herbaceous plants to arrange as tall groups here and there in this shadowy, cool border. Golden Rods can bud and bloom as profusely without sunshine as with it; indeed, the late spikes of amber, feathery and deep, are of extra value when they come later, reluctantly maybe, after warmth has faded the plumes of their sisters in the open parts of the garden. Common tall lavender, and rosy-red Michaelmas daisies may also be relied upon, and the stately snow-white Aster Novæ Belgæ alba will begin in August and be still a floral mass in October. Day lilies will succeed nearer the middle of the border, for they bloom in dense copses in the country, or amidst all the evil climatic conditions of smoky towns; Hemerocallis flava, clear yellow, and Hemerocallis fulva, coppery-orange, look well in groups together. Then the old-fashioned form of Moon Daisy, plain Chrysanthemum maximum, will be found willing to yield a harvest of its often ill-shaped, but bold yellow-eyed blossoms on two to three foot stems, clothed in the glossiest of gay green leaves; foxgloves, rose or white, may be safely introduced, woodland denizens by nature though they are, and stately mulleins, Verbascum Chaixi, and Verbascum pannosum may accompany them where pyramidal spires of yellow, six to eight feet high, will be suitable. Then, for a bright lavender-blue flower to give a pleasing contrast, may be chosen Campanula latifolia macrantha, whose bells are set closely up long stems, above tufts of evergreen foliage that has itself a real value for border furnishing in winter.

In front of all these, between them, too, since the giant plants look so much more artistic in clumps at varying distances instead of in formal rows arranged according to their heights, may appear carpets, relieved by groups of innumerable plants of noted hardiness. St. John's Wort alone is sufficient to brighten and cover many yards; although not actually evergreen, there are few years in which it is not always possessed of some leaves from January to January, while those gardeners who care to keep the handsome golden flowers from ever developing into seed pods, will be rewarded by a succession of them during nine of the twelve months.

Wallflowers sometimes fail, but it is worth while to put out sturdy small plants, for even if the leaves become blasted by nipping east winds, the new growth in spring will probably give us lemon, apricot, amber, copper, rose, crimson, brown, and purple blossom trusses to harmonise with similar tints in the polyanthuses and primroses. White arabis will make an excellent edging, improved by single plants here and there of the twelve-inch Megasea cordifolia, with tall pink-lilac trusses and large leaves, bronze-shaded. Then is there not the yellow or common stonecrop to be spread out in formal lines or over banks; may the woodland primrose not be used as a carpet even in city gardens; and can we ever be really excused if we neglect to fill the best places with daffodils, large and small, single and double?

A neglected waste of land around any home is a reproach to the occupier; better a field of hart's-tongue fern, or an expanse of pegged-down ivy, in the shadow, than a barrenness of lonely earth.

M.

Raspberries.—Raspberry suckers may now be thinned, leaving three or four of the strongest. The next season's crop depends entirely on the strength and ripeness of this year's growth, so that every encouragement should be given, letting the growths have all light and air possible to ensure well-ripened canes.—J. W.

RHODODENDRON KÆMPFERI.

Though this plant is usually spoken of as a form of the Indian azalea, R. indicum, and was, in fact, classified as a variety of that species by Maximowicz, other people are inclined to accept Planchon's determination, and keep it up as a distinct species. For garden purposes the latter determination would appear to be most appropriate, for it is abundantly distinct from the numerous varieties of R. indicum, which are such familiar objects in conservatories during spring. Its nearest well-known relative is R. amœnum, which, by the way, has been made a variety of Kæmpferi, instead of indicum, by some authorities.

R. Kæmpferi is a native of Japan, and the mountains of Hokkaido and Hondo are said to be made brilliant by its flowers during June and July. It is quite as hardy, if not hardier, than R. amœnum, and grows quite well out of doors in the neighbourhood of London. Unfortunately, the flowers commence to expand early in the spring, and are well advanced by the second week in May, consequently they sometimes fall a prey to late spring frosts. Under normal conditions it grows freely, but where it is liable to be cut by late spring frosts it forms a dense bush of small twiggy growths. Though it cannot be said to be strictly deciduous, neither is it truly evergreen, for, though the majority of the leaves are lost during winter, a few about the extremities of the shoots are usually retained.

The flowers are upwards of one inch across, and they vary in colour from orange-red to pink. Some forms are particularly showy, and these are worth propagating for grouping in conspicuous positions. In those gardens where collections of rhododendrons are grown, a number of plants of this distinct kind might be included with advantage. Like other small-growing rhododendrons, it may be readily increased from cuttings of half-ripe wood in summer.

W. Dallimore.

Leschenaultia biloba major.—Since the dispersal of the collection of hard-wooded plants which used to be cultivated with so much success by Messrs. Balchin, we see very little of this charming blue-flowered Australian shrub. When specimen hard-wooded plants were extensively grown, it used often to occupy a prominent position, the rich blue of its flowers being so distinct from most other plants grown for the same purpose. Even when met with now the flowers seem to lack the colour of those which used to be sent up from Hassocks, where the pure clear air of the Southdowns imparts a richness of colouring to flower and foliage alike. The red-flowered Leschenaultia formosa seems to be even scarcer than the blue one above referred to.—W. T.

The Double Furze.—The double-flowered variety of our native furze or gorse presents when at its best a mass of gold, which for richness of tint is approached by very few of our hardy shrubs. What is more, no elaborate preparation of soil is necessary to its well doing; indeed, like its common relative, it will both grow and flower well on dry, stony soils. The double-flowered furze cannot be increased by seeds, but it is readily propagated from cuttings, which should be taken in August and inserted into sandy soil in a frame kept close and shaded. These cuttings will produce roots by the following spring, when they should be potted off into small pots. From these they must be planted into their permanent quarters, as the double furze, like some other leguminous subjects, can only be transplanted with great difficulty.—W. T.

NEW PLANTS, ETC.

ODONTOGLOSSUM ILLUSTRISSIMUM QUEEN MARY.

A richly coloured and handsome hybrid, derived from O. Lambeauianum and O. ardentissimum. The blooms are of good size, but might be of better shape; the colouring is rich deep purplish-maroon, with white and gold markings on the lip. F.C.C., R.H.S., May 9. W. Thompson, Esq. (gardener, Mr. W. Stevens), Walton Grange, Stone, Staffs.

ODONTIODA ROSEFIELDIENSE.

An attractive newcomer, the parentage being Cochlioda Noetzliana and Odontoglossum triumphans, the latter probably one of Mr. Crawshay's fine varieties. O. Rosefieldiense has bright orange-coloured flowers with a golden glow over the orange lip. A.M., R.H.S., May 9. De Barri Crawshay, Esq. (gardener, Mr. Stables), Rosefield, Sevenoaks.

ODONTOGLOSSUM HARVENGTENSE CRAWSHAYANA.

A very showy form of the hybrid between O. crispum and O. triumphans. The flowers are of considerable size and excellent shape, the ground colour is soft yellow, and on this are numerous bright brown blotches and spots, the lip being chiefly brown margined with white, and with a golden crest. A.M., R.H.S., May 9. De Barri Crawshay, Esq., Rosefield, Sevenoaks.

MILTONIA BLEUANA HYEANA INVERSA.

This variety has particularly large flowers, and these are of delightful pink shade, with a deep magenta purple blotch at the base of the lip. A.M., R.H.S., May 9. F. M. Ogilvie, Esq., The Shrubbery, Oxford.

NARCISSUS POETICUS SOCRATES.

A fine and beautiful poeticus daffodil, shapely, substantial, and late flowering. The rounded perianth segments are well placed, and the crown, rich red, is very effective. A.M., R.H.S., May 9. Mr. F. Herbert Chapman, Rye.

ASPLENIUM DECORUM.

A very beautiful and graceful fern that is a sport from the popular Asplenium bulbiferum. It is of compact habit, and its rich yet light green colouring renders it very attractive. It was greatly admired by all who saw it, and the generally expressed opinion was that it has a great future as a market plant. A.M., R.H.S., May 9. Messrs. H. B. May and Sons, Edmonton.

ASPARAGUS.

Two varieties out of many grown under trial at Wisley have received awards because of their earliness and productiveness. These are Barr's Green Canadian, A.M., R.H.S., May 9, Messrs. Barr and Sons, Covent Garden; and Veitch's Earl Giant French, A.M., R.H.S., May 9, Messrs. James Veitch and Sons, Chelsea.

RHODODENDRON DAWN'S DELIGHT.

A large-flowered rhododendron, that appears to belong to the Pink Pearl group. The pink and white colouring is very beautiful, and as trusses and flowers are alike large, the variety is most effective. A.M., R.H.S., May 9. Miss Mangles, Seale, Surrey.

KALE THE LABRADOR.

This useful hardy and freely sprouting kale is of proved merit, and thoroughly deserves recognition. A.M., R.H.S., May 9. Messrs. Laxton Brothers, Bedford.

CABBAGE SUTTON'S HARBINGER.

This variety occupies a high position among spring cabbages, for its hardiness, earliness, and its freedom from that bane of so many early varieties—bolting. A.M., R.H.S., May 9. Messrs. Sutton and Sons, Reading.

VIOLA MOSELEY PERFECTION.

A most effective rich yellow viola, with large flowers of deep hue, and fine form and substance. If the habit of growth is good then the variety has a great future for bedding purposes. A.M., R.H.S., May 9. Messrs. Bakers, Wolverhampton.

H.T. ROSE MRS. GEORGE SHAWYER.

This very fine hybrid tea rose has unusually long or deep blooms, and very broad fleshy petals. The colour is rather deep rose-pink. The variety appears to be excellent for forcing, having long stiff stems, and considerable freedom. It was finely shown by Messrs. Mount and Sons. A.M., R.H.S., May 9. Messrs. Lowe and Shawyer, Uxbridge.

THE ORLEANS ROSE.

A new polyantha rose of considerable promise; it is of dwarf habit, and bears large trusses of bright pink flowers that are individually of good size. This vigorous variety should be a very popular bedding and pot rose. A.M., R.H.S., May 9. Messrs. William Paul and Son, Waltham Cross.

THE ORLEANS ROSE.

A fine polyantha variety of dwarf habit, bearing trusses of large, rich pink flowers. A.M., R.H.S., May 9. Messrs. Wm. Paul and Son, Waltham Cross, Herts.

CORYLOPSIS VEITCHIANA.

This bushy shrub has reddish branchlets, and its leaves are reddish-purple when young, changing to dark green. The little nodding flowering branches carry a number of small primrose-yellow flowers, each with prominent red-brown anthers. April is the time of flowering, and the attractiveness of this hardy Chinese shrub is enhanced by the fragrance of the flowers. C. Veitchiana was found by Mr. E. H. Wilson when collecting for Messrs. James Veitch and Sons. "Bot. Mag.," t. 8,349.

PINUS ARMANDI.

A new pine from South-western China, where it grows to a height of 60ft. Its needles are in tufts of five, and the cones are of considerable size. P. Armandi promises to be a very useful and ornamental conifer. "Bot. Mag.," t. 8,347.

NEOGLAZIOVIA CONCOLOR.

This Brazilian bromeliad is an erect grower, with long stoutly spiny leaves, and carries a long raceme of violet flowers, each bloom with a scarlet calyx. It needs stove treatment and plenty of sunshine. "Bot. Mag.," t. 8,348.

AQUILEGIA FLABELLATA NIVEA.

This is a whitish-flowered variety of a Japanese species that, according to some authorities should be included under A. glandulosa. Others regard it as a form of A. sibirica, but even so it has to be regarded as distinct, from a garden point of view. May is the flowering time of A. flabellata nivea, and the solitary three-flowered stems rise only from six to ten inches high. The nodding whitish flowers are two inches long, and each has five short strongly curved spurs. "Bot. Mag.," t. 8,354.

JACOBINIA SUBERECTA.

An Uruguayan species, introduced to cultivation in 1899 by Mr. Sallier, of Neuilly, is of somewhat prostrate habit, but sends up erect spikes of bright scarlet flowers that are admirably set off by the velvety grey-green of the foliage. It is a stove plant that appears to need frequent propagation from cuttings, and to be cultivated in small pots. "Bot. Mag.," t. 8,350.

TULIPS IN REGENT'S PARK.

As in other of the public parks and gardens in the Metropolis, early-flowering bulbous plants are freely used in Regent's Park for beautifying the enclosures during the spring months, and of the several classes of the more popular kinds the tulips greatly predominate. The preference that is given to the early tulips in the production of displays of colour on a large scale are not difficult to understand. The bulbs are inexpensive, the flowers graceful and refined, and the colours varied and immensely attractive; three strong points in their favour. Hyacinths are of course, largely planted, and are much admired by the visitors, but they are more expensive than the majority of the tulips. To what extent those responsible for the management of open spaces are influenced in the selection of spring-flowering bulbs by the question of cost, we are not in a position to say. That they are influenced to some extent may be safely assumed, but the chief question that has to be considered is the production of a bright display that will extend over a considerable period, and this can be more readily ensured by a judicious combination of hyacinths and tulips. As in the case of the other open spaces in London, there were, earlier in the season, numerous beds of hyacinths in which the best of those suitable for outdoor culture were planted. As the flowers of these lost their freshness, they were quickly followed by the tulips, and during the past three weeks or so, the gardens that flank the chestnut avenue have been aglow with their brilliant colours. The most noteworthy of Mr. A. D. Webster's efforts in the utilisation of early tulips was the large bed near the northern end of the avenue. This bed, which is usually devoted to tropical plants during the summer months was, as will be seen from the accompanying illustration, filled with tulips arranged in small blocks consisting of different colours. The marginal band was formed with a dwarf pink variety, and within this were groups representative of the various colours found in the early tulips, and so arranged as to produce a harmonious effect. It will be seen that the handsome Keizers Kroon was well represented, and asserted its attractions, but it was by no means overdone. Very effective towards the south end of the garden was the rich orange-coloured Prince of Austria.

AN EFFECTIVE ARRANGEMENT OF EARLY-FLOWERING TULIPS, REGENT'S PARK.

NOTES FROM SCOTLAND.

Hardy Fruit Crop Prospects.

Following upon an unusually mild winter the weather during the spring months has not been particularly unfavourable to the earlier blossoming trees. Cold winds and occasional frosts were experienced in April, but as this month and the one immediately preceding it were abnormally dry, not much harm appears to have been done. It is, perhaps, needless to say that it is yet too early to anticipate later results, especially so with the larger kinds of fruit, as in the past an abundance of embryo fruits have not always been true precursors of heavy crops in autumn; nevertheless, the prospects of the season are at the present very encouraging.

Pears, plums, and cherries are all well set with fruits, and the copious rains of late and the more genial atmospheric conditions now (May 10) prevailing, afford grounds of much promise. Apples, except on walls, are not yet in bloom, but the amount of this all over assures a fine display in course of a few days. Gooseberries are very heavily cropped, and the fruit being now so well protected by the foliage the event of a late severe frost would scarcely do much damage. This fruit generally does well in Scotland, but the greatly increased number of house sparrows in recent years renders futile the labours and hopes of the cultivator in very many instances, despite the fact that frequent dressings of unpalatable compounds are applied to the bushes at varying intervals throughout the winter and early spring months. In others the mischief done and loss of crop, more particularly in gardens adjacent to farm steadings is put down to the effects of frost, the owners apparently having no suspicion that the little marauders are capable of such complete destruction. Currants of all varieties are equally satisfactory, and the same remark may be applied to strawberries and raspberries. The former are now in flower in sheltered positions, and have received some little protection from possible injury by having a double fold of herring net suspended over the plants, this simple contrivance has in the past proved helpful, if not quite effectual, in preserving the blossoms from early morning frosts and one may be pardoned for expressing surprise at the damage caused by very slight visitations of frost after a short period of warm and moist weather.

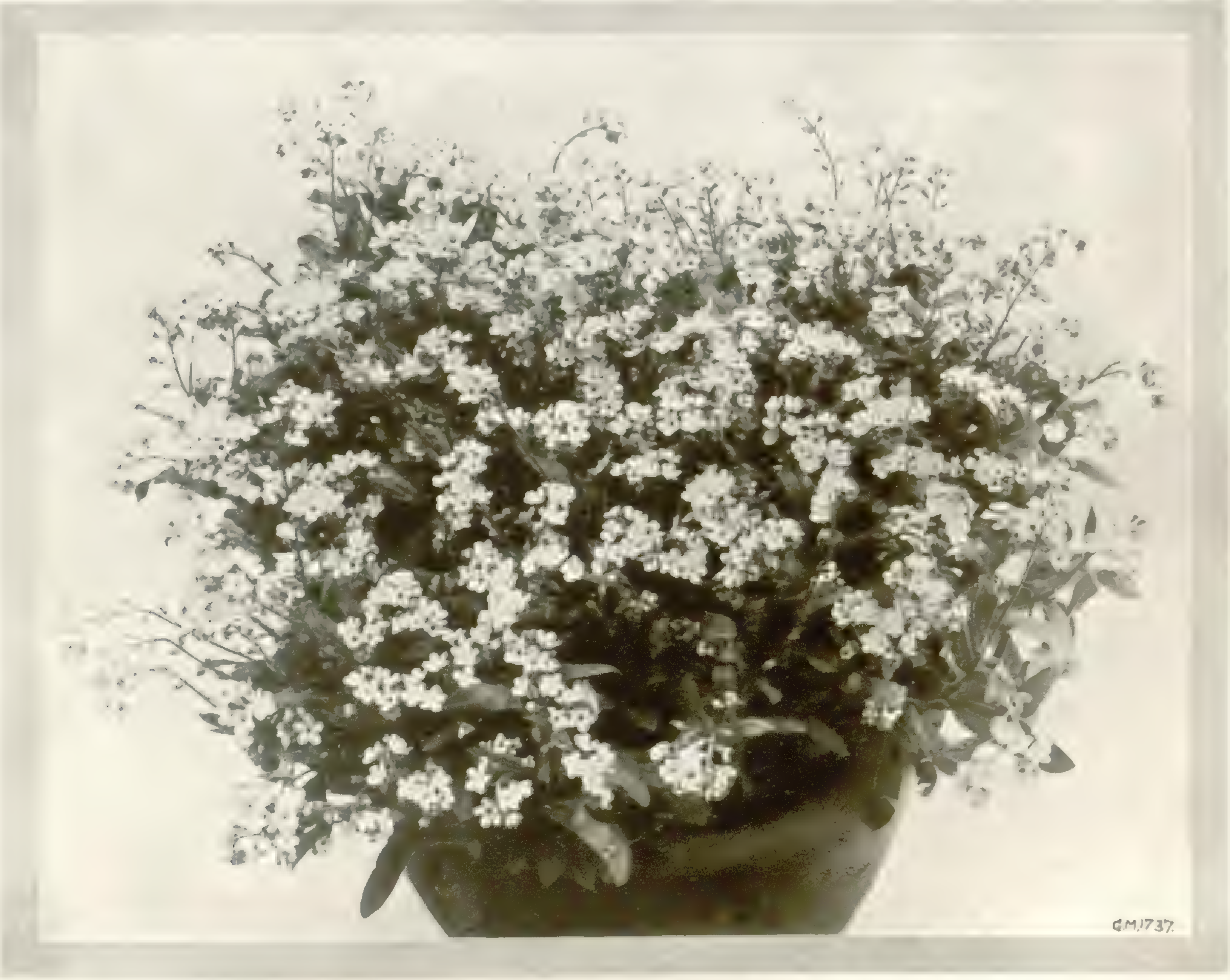
JAMES DAY.

Frame Melons.—As soon as pits are cleared of bean and potato crops they may be utilised for melons, and I find these invaluable in the late summer. Their use also gives one a chance to clean and paint the early houses, which can be utilised for late crops again. In preparing the pits and frames it is necessary that a small quantity of fermenting material be used to give the plants a start, after which the heat can be husbanded by shutting up early or late according to the weather. Two or three plants should be put in each light. If the nights are cold mats should be put over the lights to keep up the temperature.—W. A. COOK.

SUBTROPICAL GARDENING.

In gardens where a suitable position lends itself subtropical gardening can be made a pleasing feature, and, when well arranged and cared for it forms one of the most interesting parts of the pleasure grounds. It is important that such a garden be well sheltered from high winds, or many of the large-leaved tender foliage plants are liable to suffer a good deal. A sunny position is also essential, and a site facing south-west may be considered an ideal one.

The beds should be deeply cultivated and manured during the winter months, and finally made ready for planting by the end of May, at which time it will be safe to plant out most of the subjects employed. Many of the plants used require to be raised in heat during March, and are grown near the glass and hardened in cold frames ready for planting out. The plants should be so arranged in their permanent quarters as to produce a natural, and, at the same time, bold effect. Boldness can be obtained by massing some of the more vigorous kinds in groups, and by placing those subjects with ornamental foliage in prominent positions, the general effect will be very fine.



MYOSOTIS ALPESTRIS MAGGIE RAPHAEL.
An attractive Forget-me-not with blue flowers striped with white.

Copious supplies of water are essential during dry weather, and until well established a light spraying over every evening will prove beneficial to many subjects, as they suffer more from a dry atmosphere than from lack of heat.

Among the numerous plants suitable for the subtropical garden the canna is perhaps the most beautiful. There are now some lovely varieties with gorgeous flower spikes, and their handsome foliage is not the least commendable point in their favour. Beta cicla variegata, a showy variety, with glossy leaf stalks, varying in colour from orange-yellow to purplish-crimson, is very effective amongst other foliage plants, and should be given a prominent position near the front of the border. The Fishbone Thistle, Chamæpeuce casæbone, and C. diacantha, are very striking, and are suitable for edging beds of larger subjects.

Eucalyptus globulus is most useful for planting-out purposes, and it prefers a sunny situation. Marvel of Peru, which may be raised from seed, or taken up and treated like the cannas, is a pleasing addition. Melianthus major is an effective half-hardy plant, and it should be lifted in the autumn, and stored in a cold frame for the winter. The tobacco plants make very effective beds and groups. Nicotiana affinis, with white fragrant flowers; N. sylvestris, a sturdy species, with pyramidal racemes of long white flowers; N. colossea, a vigorous kind; and N. Sanderae, with pink flowers, are some of the best. The Castor-oil Plant, ricinus, is very handsome, and often attains a height of fully eight feet; three good ones are R. Bronze King, Gibsoni, and africanus.

Various solanums are handsome foliage plants, eminently adapted for the sub-tropical garden. S. atropurpureum, S. callicarpum, S. pyracanthum, and S. robustum are some of the most attractive. The wigandia is largely grown for its fine foliage, and, indeed, its leaves are quite gigantic, often being three feet in length, and of proportionate width. The well-known maize, or Indian corn, is a highly ornamental plant, and Zea gracillima and Z. quadricolor are both handsome. Phormium tenax is often employed, and among other subjects its erect sword-like leaves are very telling. Daturas are very picturesque, and grow rapidly when planted out; their large pendulous white, yellow, or crimson flowers are produced freely throughout the season. Abutilons are often employed, and amongst them Boule de Neige, Fire King, Thompsoni, Sovitzi, and vexillarium variegatum are some of the most showy.

Sunflowers in variety, especially the large-flowered forms, are very effective. Cordyline australis and several palms are well adapted for this form of bedding: Trachycarpus excelsa is a perfectly hardy species, and succeeds well planted in the open garden. In warm localities specimen crotons can be plunged out in the open: in Regent's Park, London, they seem quite happy outside for a number of weeks. Agave americana and various cacti are also well suited for a garden of this description.

J. Gardner.

A NEW FORGET-ME-NOT.

A charming little forget-me-not, and one that is quite distinct, is the variety of Myosotis alpestris named Marie Raphael. The habit of the plant is dwarf and bushy, and the deep blue flowers are freely produced in the springtime. The striking feature of this new variety lies in the white band down the centre of each segment. This little band is slightly feathered. The box and pan of plants shown at the recent meeting of the Royal Horticultural Society had any number of admirers. Mr. W. H. Honess, gardener to W. Raphael, Esq., Hopedene, Dorking, was the exhibitor, and is, we believe, the raiser.

TREE CULTURE ON LINKS.

A report on tree growing on links which should prove very interesting to local authorities and others having charge of those stretches of waste land which fringe our seaboard, has just been prepared for the Aberdeen Town Council by Mr. William Dawson, lecturer on forestry in the Aberdeen and North of Scotland College of Agriculture. Aberdeen, be it noted, is possessed of a magnificent "lung" in the form of a wide expanse of links, stretching from the mouth of the Dee to the mouth of the Don, and how best to utilise and beautify this fine asset is one of the chief questions in local politics. A fine bathing station has already been erected, and an esplanade, which when completed will be two miles in length, is being run along the ridge of the sand dunes, but the City Fathers think much more might yet be done in the way of making the people's playground more attractive.

With this end in view the advice of Mr. Dawson was requested, and that gentleman has responded with a very interesting report on tree growing on the links. The conditions prevailing at the links, Mr. Dawson says, are particularly unfavourable to the growth of trees and shrubs. In the first instance, there are the continuous salt-laden winds, which exercise an adverse influence on the growth of most trees. This difficulty can be so far got over by planting in large blocks, so that the trees naturally shelter one another, but at the links the blocks can never be large enough, and each individual tree stands exposed, and gets no shelter from those surrounding it. Further, the trees which are influenced in the least degree by the salt winds are the conifers, mountain pine, Corsican pine, and White American spruce, but, on the other hand, these are the least able to withstand the second hostile influence, namely, the smoke and fumes coming from the factories bordering on the links. Then there is the further difficulty that the trees are continually liable to be damaged by children. This damage is all the more real, because, to give the trees a chance to establish themselves in the unfavourable conditions, only young material should be planted. The ordinary type of street tree, with a big top and a small root, is unsuitable, being exposed in the greatest possible degree to all the natural dangers. The type of trees best adapted for the purpose is the young, small-topped tree, with a specially large and well-developed root system. Such a tree can grow up, adapting itself to its circumstances. It would, however, be impossible to grow such trees till the areas were fenced off in such a way that people were excluded, and kept out for a period of ten or twelve years. It is thus clear that the matter would be very troublesome, while the results would be by no means certain, as it is impossible to predict how far the smoke of factories in the neighbourhood will affect the growth. Low-growing shrubs, like the creeping variety of the Mountain Pine (Pinus montana, var. pumila) would grow on the slopes, and would not interfere with the general character of the links. The sides of the embankments facing the sea would be greatly improved if sown with grasses better adapted to seaside conditions. At present the grass which is sown on the slopes is largely rye grass, which is short-lived, and has not the binding qualities so necessary in these circumstances. Sheep's fescue, crested dog's-tail, and Bent Grass (Agrostis vulgaris) would do much better. Those banks facing the sea might also be improved by growing creeping shrubs. The mountain pine already mentioned might do in some places. Other hardy shrubs of this kind are Juniperus nana and Salix repens. Juniperus nana is evergreen, and grows flat on the ground, and is accustomed to grow in a salt-laden atmosphere. It is found on the rocky shores of Aberdeenshire in the neighbourhood of Slains Castle. Salix repens is also to be found wild locally. It also grows flat on the ground, and would bind and protect the slopes. Sufficient supplies of these, together with the creeping mountain pine, can easily be secured in time for planting out this season. Experiments should be made on a small scale in specially selected places just now.

Dealing with sand dunes, and how these can best be permanently fixed, and all danger of sand-blowing done away with, Mr. Dawson advocates the planting of the sand grasses, Elymus arenaria, Psamma arenaria, and Festuca rubra var. arenaria. The fixing of sand dunes proceeds best by the transplanting of bunches of the grasses with roots. These are set in rows two feet or so apart, and rapidly spread over the whole area.

AMONG THE ALPINE FLOWERS.

> "And the spring arose on the garden fair,
> Like the spirit of love felt everywhere;
> And each flower and herb on Earth's dark
> breast
> Rose from the dreams of its wintry rest."
> —Shelley.

Here we have had a dry spring until the last few days, and, in consequence, we have not had our usual enjoyment of the early days of April. Even the daffodils seemed arrested in their onward course, and many of their flowers awaited the coming of the "tears" of April longingly. Now that they have come—accompanied, however, by but few of the "smiles" of the month—we begin to see more of the advance of spring, and to realise once again the beauties it brings in its train. Shrub, tree, and lesser plant all join in welcoming the milder days and the softer breath of the season calling upon them to awake. And how they respond! Buds are bursting into flower or leaf. Verdure is everywhere, and the growth of the plants gives us all sorts of tints to attract us to watch their opening leaves. They seek, but seek in vain, to rival in their colouring the charming flowers which adorn the garden, and we have thus a double pleasure in looking at our plants in these April days. Let us see what the rock garden brings us now!

Arenaria balearica.

Novelties are not always the most desirable, and we should not forsake the cultivation of such well-proved plants as the Balearic Sandwort, Arenaria balearica, for other and less useful things. It is almost incontestable that we have no other plant in our gardens—old or new—which can oust this arenaria from its place. One can think carefully over all the creeping plants one knows without recollecting any flower which can supplant it, and even a careful study of books and catalogues but confirms us in this opinion. I do not think that anyone can suggest a flower of this character which will even rival our little sandwort, whose close carpet of tiny green leaves is so pretty growing over a stone or clambering up a shady wall. Then when this little close carpet is spangled all over with tiny white stars, it is impossible to pass it without a feeling of keen joy—a feeling which is only within the ken of the true lover of flowers.

But to enjoy Arenaria balearica to the full it must have its tastes considered and supplied, and this is where the beginner is liable to go astray in attempting its cultivation. Long years of acquaintance with this little plant confirms the general experience that it loves a shady place, and a moist stone up which to creep and which it delights to veil with its greenery. In a moist fernery it will flourish, and on a shady wall it will thrive amazingly. There is in this garden a test planting on a shady and a sunny stone on either side of [illegible], and the difference between the two carpets is literally amazing. The one is growing fast; the other little more than holds its own, and when it does creep up a little higher the sun appears to make it shrink back again. We have no more fairy-like flower than the Balearic sandwort, and those who have not yet found a place for it in their rock gardens will do well to order it now and plant it as suggested.

Viola gracilis.

We have reason to appreciate this little viola, which has in the past attracted so much notice at the shows and elsewhere. It has come into flower early this season, and in the beginning of April, in a far from kindly season, has opened to our admiring eyes its intense violet-blue flowers. This earliness is not its chief merit, however, as it is a long bloomer, and we can have a supply of its pretty flowers all summer, so that the spot it occupies need not be long without its dainty little blossoms. Its true perennial habit is a point of great value, so that lovers of the viola may well keep it in view, and add it to their gardens as soon as possible. A little group in the rock garden here is very pretty now. It is fast finding its way into all good collections of rock plants, numerous as are the flowers which are claiming an entrée there nowadays.

Saxifraga Bathonensis.

Mossy saxifrages with crimson flowers, or at least approaching that hue, are now plentiful enough, and the difficulty evidently lies in selecting from among the many aspirants to our favour. It seems but yesterday that we had only the tiny (and not very bright) Saxifraga muscoides atropurpurea, which, by the way, has had several names. Then followed S. m. Rhei, its variety superba being among the next to follow. But now they are to be counted by the score, and many are vast improvements so far as regards depth of colour upon those already named. I have come to like S. Bathonensis in everything save its name, which does not in the least appeal to me. But, as a plant it is beyond praise, with its nice mossy growth and its glowing scarlet flowers. As a mound of foliage and flower, reaching a height of about nine inches, it is a gem of the first order indeed.

Erythronium giganteum.

One of the finest of the lovely American dog's-tooth violets, or erythroniums, is E. giganteum, a species of much beauty and also one which is very reliable in a suitable position. I observe from my garden book that a little clump here which is now in flower was the produce of one bulb, which was planted in 1906, my former bulbs of the same species having been lost during removal from another home. After a year or two, during which it flowered, it has taken to spreading a little, so that the one bulb has become a little family, and the group is certainly more beautiful than a single individual. This handsome species gives from one to ten flowers on a stem, the blooms being of a very light yellow with orange or brighter yellow markings at the base. The leaves are beautifully mottled, and the whole appearance of the little clump in the garden is very beautiful. I find these American Dog's-tooth violets like a light, well-drained soil, but that they thrive better at or near the base of the rock garden than higher up. A small collection of these flowers forms an interesting feature to one's garden, and none will be found more worthy of growth than E. giganteum.

S. Arnott.

FLAG IRISES.

The flag, or German irises will succeed in the most diverse soils and situations, flowering well in deep, moist soils beneath deciduous trees, while they will flourish and bloom with equal freedom on shallow hard-baked railway embankments. In fact, they will flower anywhere and everywhere. One of the finest colonies of the old purple flag iris that I have ever seen was growing beneath a large standard apple tree in a cottage garden, a breadth of deep purple, set off by a few golden doronicums in the forefront, and the white-washed cottage in the background.

The beautiful flag irises are amongst the loveliest of our early summer flowers, but nowhere are their charms displayed to such effect as in the untrammelled freedom of the wild garden. Here are no stiff lines, no evidence of the foot rule or of the study of geometrical design, but the informal grouping of flower and foliage that creates a picture infinitely beautiful, since in its composition Nature has not been bound hand and foot, but has been permitted to exercise, within due limits, her beneficent sway. The sword-shaped leaves of the irises curve boldly out, their tall flower heads, with heavy drooping falls, standing boldly against the crimson blossoms of the great leafy pæony. In the background beneath a tree stands another group of irises, a breadth of white, whilst fine form is present in the cordate leaves of the funkia, and in the thin, rush-like leafage of the bulbous irises that are thrown into high relief by the distant greenery. Irises always appear to the best advantage when planted in fair-sized clumps and groups of one variety, as they then show, when in flower, a broad colour effect.

A wide selection of beautiful tints may be obtained from the flag irises, flowers that, while individually as lovely as those natives of the tropics that can only be looked upon in this country in the steamy confines of the hothouse, possess the additional charm of being associated with other, and natural beauties—the fresh green of the grass, the full-foliaged trees in the zenith of their loveliness, the shifting lights and shades of the ever-changing skies, and the sense of atmosphere that softens the blue distances and limns with a tenderer hue the colours of the flowers of the open air.

No more effective arrangement of flag irises can be adopted than that of planting large clumps of the different varieties in long borders on either side of a grass walk, for in this way charming vistas of tender colour gradations are formed which the eyes rest on with absolute content. Iris pallida and I. pallida dalmatica, with their faint tints of lavender, are seen to the best effect when a clump of I. flavescens, with its pale yellow blossoms, adjoins them. The dark purple of I. atropurpurea, is accentuated by the white of I. Princess of Wales, while I. florentina, I. Madame Cheréau, I. Victorine, I. Queen of the May, and I. Celeste are all well worthy of a place in such a border. Here, between the clumps of iris, grows Papaver pilosum, and during the morning the impression rendered is exquisite. The indescribable tint of the poppy flowers, an apricot-buff, with, at times, the suspicion of a pink flush, is just the hue to set off to the best advantage the shades of the irises. By midday every poppy petal will have fluttered earthward, to be renewed each morn by a fresh breadth of fleeting colour long after the beauty of the irises has waned and departed.

Flag irises should not be planted in the autumn, as if this is done they make but little root growth before the following spring, and do not become established by the winter, and their flowering the following season naturally suffers. The best time to transplant is immediately after they have finished flowering, and if put into good soil, without allowing their roots to become dry, they should succeed. It is important, however, that they should be well looked after in the matter of watering during hot weather, so that the roots may be kept in a moist condition, as, unless this is seen to, the rootlets will not take hold of the fresh soil, and, failing this, the plants will not be able to establish themselves until the autumn. The sooner the plants can be shifted after flowering the better will be the chance of a satisfactory flowering season in the following year.

As cut flowers the flag irises are very valuable, the blossoms, if brought into the house before they are fully open, expanding well in water.

Wyndham Fitzherbert.

A BEAUTIFUL BANK OF FLAG IRISES.

GARDEN WALKS.

Scarcely anything conduces to greater comfort, efficiency, and the general appearance of a garden than clean, dry, firm rolled walks, the realisation of which redounds to the credit of the gardener. The old-time practice of hand-weeding and hoeing is now obsolete; it had the disadvantage of loosening the surface of walks, thereby detracting from their appearance and entailing increased labour before the normal firm surface was again secured. The use of an approved weed-killer in liquid form and of sufficient strength to destroy all vegetative growth on walks is sound in practice, being alike efficacious and economical in working; it leaves the walks firm and passable as before, while the gravel retains its bright and clean appearance always. T. S.

Pieris (Andromeda) japonica.—It is not every spring that the blossoms of this delightful shrub pass unscathed, but when they do they are very beautiful. The urn-shaped flowers are of a white waxy nature, and are borne in long pendulous racemes in such a manner that the entire bush is quite veiled with them. Added to this quite a distinct feature is apparent later on, when the young shoots first make their appearance, as they are then of a rich crimson tint.—W. T.

NOTES ON ONION CULTURE.

A point that often comes under discussion in the cultivation of vegetables for show purposes is how far size should govern quality. Extremes are not uncommon in both respects, but the standard type of vegetable should, without doubt, be one equally well adapted for table use and for exhibition purposes. Now the standard type of onion may be represented by exceedingly large, heavy, and well-ripened bulbs, displaying in every respect the many characteristics of the particular variety they represent. These are invaluable for a great number of purposes in the kitchen, and are at the same time splendid epitomes of good cultivation and high quality. Not the least advantage enjoyed by this crop is that it may be grown several years in succession on the same piece of ground, provided the necessary condition of soil fertility is maintained, or until such time as an attack from mildew or maggot makes it imperative to give a complete change.

Large and Medium-sized Bulbs.

There is one point which every onion grower should study. He will be well advised to determine beforehand whether it is his wish to produce a large and heavy yield of medium-sized bulbs, or whether abnormally large individual specimens are to be preferred. One may be excused for remarking that the former is by all means the most profitable and rational method to adopt; but, at the same time, it must be remembered that the large-sized bulbs have a sole object to fulfil. They must be grown for the exhibition table alone, although, as a rule, some use can be made of them in the kitchen. Their cultivation must, of course, be pursued with this object in view, and not a little importance will be attached to the natural capabilities of the soil and climate of the district for the development of large-sized bulbs. If the latter cannot be secured, it is best to leave the culture of exhibition onions well alone, for disappointments are bound to ensue. The so-called secret of how to grow large onions is a part of every gardener's knowledge, but few are able to secure the best results unless particular attention is paid to the deep and thorough trenching and working of the soil before the plants are put out. The seedlings must, of course, be well grown and hardened off, and, after planting, little attention is required beyond stirring the soil occasionally and keeping the surface free from weeds. Stimulants of any kind must be very carefully administered, especially as the season advances, for excessive nourishment at this stage may often kill the plants entirely. The best and largest bulbs are usually harvested in a good drying autumn.

Main Crop and Other Varieties.

The best main crop varieties of onions are Improved Reading, Improved White Spanish, Brown Globe, Bedfordshire Champion, and Giant Zittau. A good pickling variety is the Silver-Skinned, which should be sown not earlier than May, so as to prevent the bulbs becoming too large. The latter must also be sown in the poorest soil in the garden, and they require no singling or thinning, as a rule. For autumn sowings for transplantation in February or March, seed should not be sown before September, and Trebons, Danver's Yellow, and Giant Zittau are three good varieties for this purpose, being especially valuable as regards keeping qualities. They are to be preferred, as a rule, to the Tripoli onions, which are usually too soft, and lack keeping qualities. For exhibition purposes I have secured many perfect types of Ailsa Craig, turning the scale at 2, 3, or 4oz. above 3lb. Other good exhibition onions are Magnum Bonum, Cranston's Excelsior, and Rousham Park Hero. The potato, or underground onion is deserving of a little more attention than it actually receives; its culture is especially suited to cottage gardens and allotments. As a rule, the smallest bulbs are selected and planted almost on the surface of the soil as early in the spring as the weather will permit. They may even be planted in December if the bulbs then commence to push. The rows should be set 15in. apart, and the bulbs 10in. apart in the rows. An old Devonshire custom is to plant potato-onions on the shortest day of the year, and harvest the crop on the longest; but the winters in this district are comparatively mild. As the bulbs push, the plants are earthed-up like potatoes, and in this way they form large clusters. Another method is to clear away all the soil from the bulb as soon as the latter begins to get a little brown on the top, and the moisture which collects around the ring from which the fibres of the root proceed induces the growth of new bulbs on the old ones; these form a cluster of onions above the surface of the ground.

Commercial Onion Culture.

There is no doubt that a large and steady demand exists for home-grown onions. Spanish or Portuguese produce the bulk of the total market supplies, but one cannot help feeling that if market gardeners, small-holders, and farmers were to devote a little attention and a few acres to this crop under a system of intensive culture, the returns would be quite satisfactory, even if not out of the ordinary. Commercial growers, as a rule, swear by the Ailsa Craig type, which, where the ground is deeply worked and liberally manured, may yield a crop weighing quite 200lb. per rod. About 270 bulbs per rod would be needed, the onions being planted 12in. each way; and 2lb. of seed, sown early in February in frames, would furnish sufficient plants to plant an acre of ground. Expenses of cultivation, manuring, sowing, and planting would not amount to more than £30, harvesting and marketing £10; and if the crop realised, say, at a minimum estimate, 8s. per rod, the return per acre would be £64, thus leaving a profit of £24. The introduction of a suitable catch crop would considerably lessen the burden of rent, salesmen's commissions, and other incidental expenses.

J. C. N.

Cytisus racemosus.—It would be impossible to even guess as to the number of cytisus grown by some of those nurserymen who supply Covent Garden Market, for it is there offered for sale in very large quantities. Neat bushy plants laden with blossoms can be purchased at a very cheap rate, in proof of which one has but to note the numbers that are now being offered for sale by the costermongers in the streets of London. Though the above is the correct botanical name, this member of the broom family is always referred to in the market as a genista. Apart from their richness of colouring, and profusion in which they are borne, the blossoms of this cytisus have a pleasing fragrance. It is a native of the Canary Islands, and there are several forms of it; but a good type of the ordinary kind is grown more than any other.—W. T.

PLANTING TOMATOES OUTDOORS.

The tomato is one of the easiest plants to grow and one of the most rampant, but the better the soil conditions, according to the standard applied to the cultivation of most plants, the less is it inclined to fruit, and it is no uncommon thing to see plants three or four feet high with scarcely any fruit upon them. This is not the way plants grow in a state of nature, but is, in fact, contrary to the course of nature; and the explanation must be sought mainly in wrong feeding, even though this consists in putting the plants where they have the run of a store of plant food in the wrong proportions—in other words, an ill-balanced diet.

Assuming we have obtained good plants—sturdy and well hardened—we need to give them such conditions that they will continue in that strong short-jointed growth which is conducive to fruitfulness rather than the rank growth which leads to still ranker growth, so that the energy of the plant is drawn away, as it were, or diverted, from the lateral flower trusses to the more vigorous growing points. The first condition necessary to success, that is, a good set of fruit from the first two or three trusses of blossoms, is a sufficiency of sun and air, so that all the leaves may be of a stout, rather than of a watery character. Therefore close planting should be avoided. Of almost equal importance—for though we may possibly succeed in any soil, no success is possible without abundance of sun and air—is the preparation of the soil, so that from the beginning the plants may have as much phosphate in an available form as they can absorb—this being the element of plant food which more than any other makes for fruitfulness—instead of an excess of nitrogen, which induces rankness of growth. As in the human body health begets health, so in plant life strength leads to still greater strength, every lead adding to the vigour of the roots, and, unless fruit is formed in the comparatively early life of the plant to absorb some of its energies, matters going rapidly from bad to worse. Hence the importance of early fruiting, not only for the sake of the earlier ripening, but for the better-balanced growth of the plant. When preparing the soil for tomatoes no animal manure should be applied, as this is largely nitrogenous, but a phosphatic manure should be used, more especially one of a non-acid character, such as basic slag or bone meal, the latter being an especially good manure to mix with the soil some time previous to planting. Both help to keep the soil sweet and lessen the chance of the plants being attacked by disease.

An important feature to be considered in the planting of tomatoes outdoors is the kind of root system encouraged. It is a matter of common observation that when a plant makes long and vigorous roots the growth of the top is somewhat similar in character, and, conversely, when the growth of the roots is compact and fibrous the top is of a short-jointed and sturdy character. The difference is in part owing to the fact that the nitrate in solution in the soil—generally considered to be the only form in which the tomato plants absorb nitrogen to any extent—can be taken up by comparatively few roots in a given quantity of soil, whereas the phosphate is not so much diffused in solution in the soil as dissolved by the root sap at the growing points of the numberless root hairs, or ultimate rootlets, of which the root system is composed. Hence the greater the number of roots formed the greater will be the chance of the plants getting a sufficiency of phosphate proportionate to the amount of nitrogen absorbed. One way to ensure this is to make the soil firm at the time of planting, stamping on it, or ramming it, if it is not too damp, as this induces the fibrous rooting system we want.

There is no doubt that, as in fruit trees, surface rooting conduces to fruitfulness, though this may not be the only explanation of the fact that good results follow from putting in tomatoes in an almost horizontal position, so that three or four inches of the stem are covered with soil, and the whole ball of roots is near the surface. The buried portion of the stem will at once emit roots, which will ramify in the surface soil all round the plant, much to the increase of its sturdiness and fruitful vigour. The border will need mulching with strawy manure, which should be added to occasionally during the summer to keep these roots feeding near the surface, and help to support the plants as they become laden with fruit. Those well established in this way will not need that watering which is often recommended for getting the first trusses of blossom to set, but generally results in a watery growth which is quite opposed to fruitfulness. Unusually dry spells may necessitate watering, but in a normal season, when the plants have got established, with the added root system from the stem, a mulch properly applied and attended to will keep them from suffering.

Alger Petts.

PROTECTING STRAWBERRIES.

Where strawberries are grown on a large scale boys are engaged to keep off the thirsty birds, but where small plots are devoted to their culture such labour cannot be afforded, therefore some simple and inexpensive means must be adopted. Wire netting, properly fixed, is a very effectual guard against the birds, but this material is expensive in the first place. The majority of cultivators use nets, and when sound and well fixed they serve the purpose well. But I have seen so many nets badly fixed, laid flat on the plants and soil, or roughly propped up on forked sticks with the edges pegged to the soil—where they quickly rot—that I would like to very briefly describe my own method.

A number of stakes are driven into the ground about seven feet apart in rows the same distance asunder. On the top of each stake a ball of hay is made secure. Around the sides small-meshed wire netting is fixed to stout stakes, the netting being 2ft. 3in. high. Then strong nets are spread over the top of the hay-bound stakes, the edges being made secure to the wire netting, and lapping over it several inches. The balls of hay on the top of each stake prevent the tearing of the net, and the height of the latter from the ground enables a person to creep underneath the net quite comfortably to gather the fruits. No part of the net touches the soil, and, with ordinary care, it will last in good condition for many years.

No doubt many readers of the Gardeners' Magazine protect their strawberries in a similar way, but many cultivators do not, to my knowledge.

A neat packing of clean straw under the plants serves two purposes, namely, the prevention of soiled fruits, and the protection of the roots from the drying influence of the sun.

G. B.

HALF-HARDY PLANTS.

The month of May is generally regarded by gardeners as a favourable season for placing out in permanent positions such plants and shrubs as are of questionable hardiness in our climate. Several reasons may be adduced in support of this practice; the soil temperature at this season rises appreciably under the influence of increased sunheat, so that, as a rooting medium, the soil offers conditions to which roots readily respond. Frost has still to be guarded against, but, provided the plants have been carefully hardened off, the addition of some light protective material will safeguard them from all danger on this head; this need only be applied during nighttime. Of greatest moment is the prospect of securing uninterrupted growth throughout summer and autumn, thus securing the maximum period wherein plants may become acclimatised before they are subjected to the ordeal of a British winter.

In the case where it is only possible to start with pot-grown plants, and frequently only small specimens, no amount of care and attention expended on the choice and preparation of the site can be regarded as fruitless, when it guarantees establishing a plant that for many years must add distinction and character to the garden.

Many herbaceous perennials, chiefly of a bulbous character, give the best results when planted at this season; commelina, roscoeas, crinums, gerberas, ixiolirion, watsonia, tigridias, gladioli, and hyacinthus are representative kinds of conspicuous merit to which the above conditions apply.

The general run of half-hardy plants succeed best in a medium loamy soil that is thoroughly well drained; soils of a heavy nature require special preparation, ample drainage must be provided, and the soil lightened by the addition of a liberal quantity of leaf-soil, sand, or road grit; to this a dressing of very old decayed farm manure should be added previous to planting.

T. C. L.

LAWNS.—Those who desire to make a new lawn or bowling green, or to renovate and maintain existing ones in good condition, can have no better guide than "Lawns and Greens," by T. W. Sanders, price 1s. net, by post 1s. 2d.; bound in cloth 1s. 6d., by post 1s. 9d., from W. H. and L. Collingridge, 148, Aldersgate Street, London.

A NEW SPRAYING PLANT.

An interesting demonstration with the Merryweather patent portable spraying plant, manufactured by Messrs. Merryweather and Sons, Lim., 63, Long Acre, W.C., took place last week on Mr. Harlow's plantation at Orpington. A number of students from the Imperial College of Science were present, together with Mr. Lefroy, the famous entomologist, who is now home from India, and is giving a course of lectures on the subject at the college. The Merryweather system comprises a portable steam or petrol pump, which delivers the spraying mixture through a series of pipes. These pipes can be readily transported from one area to another when required. The system claims to possess numerous advantages over other spraying methods, its chief features being economy in working and the rapidity with which a large area can be efficiently sprayed. The steam-driven plant belonging to Mr. Harlow was shown at work, and this was followed by a demonstration with a little petrol worked pump conveniently arranged for transport on a two-wheeled barrow. Mr. Harlow was spraying young apple trees with nicotine, using a very fine spray, and great surprise was evinced by the spectators at the amount of work performed by this machine in comparison with its diminutive size. It should prove a most useful plant for tea and other plantations abroad, which are frequently situated on steep hill sides.

MESSRS. MERRYWEATHER AND SONS' PATENT PORTABLE SPRAYING MACHINERY.

Hippeastrum pardinum.—This is in general appearance widely removed from the popular garden varieties of hippeastrum, which have gained many admirers of late years. Compared with the novelties of this class the flowers of H. pardinum are smaller and much more shallow. They are of a bright cream colour, freely dotted with crimson. There is a certain amount of individual variation to be found in flowers of H. pardinum, and that known as superbum is so closely freckled with red that little of the ground colour is to be seen. This hippeastrum has been but little employed by the hybridist in the production of new varieties. It was introduced from Peru by Richard Pearce when travelling for Messrs. Veitch, and was distributed by that firm in 1867.—W. T.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

PHAIUS.—The hybrids belonging to the group that have P. simulans (tuberculosus) as one parent will now be advancing their new growth to that stage when new roots are emitted, and it is at this time that potting should be attended to. In the case of average sized specimens, it is desirable that they should have an annual repotting. Turn them out of their pots with as much care as possible, so as to avoid damaging active roots. It is not an easy matter to detach the roots from the sides of the pots, but if the plants are well watered a few hours previously we find that they are more readily moved than is the case when the compost is in a dry state. Carefully remove the old potting compost, and cut away any dead and decaying material. Where there are several old or back pseudo-bulbs attached to the rhizome they should be cut away at about the second bulb from the lead. These old bulbs will, in most cases, have dormant eyes, which are capable of producing young growth, but they rarely produce a growth break unless they are severed from the main stem; they may be taken away from the old plant and potted for the purpose of increasing the stock, or if again potted with the other portion of the plant they may increase the size of the specimen. See that the pots used are thoroughly clean, and fill them to about one-third their depth with clean drainage. In selecting pots for the reception of vigorous healthy plants, the fact of their being strong-rooting subjects should not be overlooked, and a liberal amount of pot room may be given. The compost we have found most suitable for these hybrids consists of one part fibrous loam, two parts peat, and the remainder chopped sphagnum moss, coarse sand, and broken crocks, sufficient of the latter being added to render the compost free and porous. Make the material reasonably firm about the roots of the plants, and cover the surface of the potting compost with a thin layer of finely chopped sphagnum moss.

OTHER HYBRIDS.—Those belonging to the section which have P. Humbloti as one parent, are now in flower, and the annual repotting must be delayed for a few weeks until after the flowers have faded. These hybrids require practically the same treatment as those mentioned above. I may say that we have found it a good plan to place them under cooler and drier conditions while the flowers are open, as this not only increases the durability of the blooms, but also affords them a beneficial rest. Keep all newly-potted phaius in a well-shaded position, and a brisk warm moist atmosphere; the house should be kept reasonably close until the roots are running freely in the new compost.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

CAMPANULA PYRAMIDALIS.—Being of easy cultivation this bell-flower deserves to be extensively grown in pots. Where a large conservatory has to be kept furnished they will be found very useful, the colours, blue and white, blending readily with the other occupants of the conservatory. Plants which have been wintered are now growing freely, and must be frequently fed with weak liquid manure. As soon as the flower spikes begin to develop they should be loosely tied to a neat stake placed in the centre of the pot. If the earlier flowers are picked off as soon as they fade, others will come on in succession, and so prolong the flowering period. Seeds may be sown now for next season's plants; no heat is necessary, a cold frame being a good place in which to raise them.

TUBEROUS BEGONIAS.—When repotting these begonias a rich compost should be used, made up of good fibrous yellow loam, leaf-soil, and sand, with a liberal addition of dry cow manure or old mushroom bed material. See that the pots are clean and well drained. Grow the plants on as cool as possible, and shade from hot sunshine. For basket culture Marie Bouchet is one of the finest of the many summer-flowering varieties of the present day. It is one of the first to flower, and is very free and graceful. The tubers should be started in boxes in early spring. When growth has commenced they may be planted permanently in the baskets in which they are to flower, the baskets having previously been made ready by being lined with moss. The compost used may be similar to that used for other fibrous begonias. Liberal supplies of water should be given when in full growth, with an occasional application of liquid manure. Fumigate at intervals to keep down the mite, which causes much havoc on the foliage of begonias.

CYCLAMEN.—These are now ready for shifting in 48 and 32-sized pots, in which they will be allowed to flower. After potting, replace them in the house. Avoid overwatering at the start, but syringe the plants twice a day. When nicely rooted they can be removed to a cold frame, but where the space is available in a convenient house it is advisable to grow them inside, where all cultural points may be more easily attended to. Cyclamen require plenty of light, but they must be shaded in the hottest part of the day; allow ample room between the pots for the air to circulate freely, and keep a check on green-fly and thrip. Damping between the pots is a preventive against thrip.

GENERAL NOTES.—Cuttings raised in the spring will need regular attention in regard to potting. Do not allow plants to become root bound before potting them, as this causes a severe check. Pay careful attention to shading and airing, keeping up a free circulation of air without causing draughts. Watering is best done if the plants are examined at least twice a day.—A. Grubb, Porter's Park Gardens.

THE KITCHEN GARDEN.

TOMATOES.—If the plants have been hardened off as advised, in most counties not too far north it will be safe to plant them out against south walls or warm buildings. Should any lights from frames be at hand, and placed for protection over the plants for a week or two, it will assist them into growth. It is not wise to make the soil very rich, or the plants may romp away into strong and unprofitable growth. Grow the plants as cordons by removing all side laterals, to expose the fruit and trusses of flower to air and full sunshine.

BRUSSELS SPROUTS.—In cases where Brussels sprouts are expected early in September, and the seed was sown with the view of obtaining early plants, they should now be planted out in permanent quarters. Deeply dug and richly manured ground is essential for this crop, with ample space to give light for development of the side sprouts, or dwarf leafy produce is the result. Two feet six inches should be the minimum distance allowed between the plants. When planting secure a good ball of earth to the roots, and make the soil firm by treading round each one to encourage sturdy growth.

PEAS.—Important sowings now should be made in prepared trenches to give plentiful supplies of this much appreciated vegetable during the end of August and through September. It is not advisable to sow thickly, but allow space between the plants for light and air to play through them. The early peas growing on south borders will, now that they are filling their pods, be much assisted if a good watering with liquid manure is given once a week, and during hot days a syringing is applied to the foliage late in the afternoon. Give timely attention to sticking successional crops before being damaged by wind.

MULCHING.—Where time can be spared, and materials are at hand, the mulching of many crops will amply pay for the labour and time expended upon it, and will often enhance the value of the crop by one-third, especially on a light quick soil. Old mushroom beds, grass from lawns, or any partly decayed manure, are suitable for this purpose, the main object being to conserve the moisture at the roots. Cauliflowers, peas, beans, lettuce, marrow, and cabbage are a few plants that can be profitably dealt with to advantage during the summer months.

PARSLEY.—From the early sowing young plants will be of sufficient size for transplanting. Make the bed on sweet rich ground, and mix a good dusting of soot into the surface soil. Give a distance of twelve inches from row to row, and the same between the plants in the row, so that sound hard growth is made; drawn up foliage is of little value for garnishing purposes, and parsley grown thickly gives way under extremes of weather.

THINNING AND HOEING.—The young crops of parsnips, onions, carrots, etc., will require prompt attention to thinning. At this stage the crops are much benefited by having the Dutch hoe frequently worked through them on fine days, which is also an economiser of labour, by destroying weeds before they reach the seeding stage.—C. Flack, Cholmondeley Castle Gardens.

HARDY FRUITS.

GOOSEBERRY MILDEW. — The much talked of American gooseberry mildew makes itself evident this month, and may be easily recognised by the white powdery appearance at the tips of the young growth, the fungus at the same time producing quite a nettled and stunted appearance on the trees affected. The more popular market varieties appear to be the most susceptible to the attack of this mildew, and where there are plantations of many varieties, as is often found in private gardens, it will be noticed that Crown Bob and Lancashire Lad—two varieties that are grown more than any other in this district for market purposes, may be badly infected, while others standing around them will show little, if any, signs of the disease. Cutting away all diseased wood early in winter has been recommended, which is very sound advice, although it decreases the next season's crop considerably, as practically the points of all shoots have to be cut away. Liver of sulphur is also recommended as a wash to keep the summer attack in check: this may be used at the rate of one ounce to three gallons of water; the trees should be thoroughly drenched, using the wash with force.

CODLIN AND WINTER MOTH.—Apples should be sprayed against the codlin and winter moth as soon as the blossom has fallen. The acetate of lead wash recommended in the calendar on Hardy Fruit on May 6, will be found very efficacious in dealing with these destructive pests; one application, in most cases, is all that will be necessary. If very heavy rains are experienced a second spraying may with advantage be given, thereby keeping the poison for at least a month on the young fruit and foliage, to be taken by the caterpillars in their daily wandering after food, to their destruction.

WALL FRUITS.—Material that has been used for protection may be removed now that practically all danger of frost is over. Peach and nectarine trees should be syringed freely with soft water, if possible, early in the afternoon on fine days; all borders of wall fruits should be examined to see that they do not lack moisture, as the failure of wall crops may often be traced to the borders not having sufficient water, stone fruit especially requiring abundance of water through the swelling period. Liquid manure should be used freely after a good soaking of clear water has been given. Keep the borders well mulched to save labour in watering. A sharp look out must be kept for aphis, and on its appearance quassia, soft soap, or nicotine wash must be used at regular intervals until the trees are quite clean.—J. Whittle, Cheveney Gardens.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, May 9.

Present: Mr. E. A. Bowles, M.A., F.L.S. (in the chair); Sir Everard im Thurn, Dr. A. Voelcker, Messrs. W. E. Ledger, W. Cuthbertson, C. E. Shea, W. W. Fowler, J. T. Bennett-Poë, W. Hales, R. H. Pearson, J. Douglas, J. O'Brien, A. Worsley, and F. J. Chittenden (hon. secretary).

GONGORA TRACYANA.—This plant, shown at the last meeting by Messrs. Tracy and referred to Kew, proved to be an undescribed species, to which the name of G. Tracyana Rolfe has been given. It was unanimously resolved to recommend the award of a Botanical Certificate to it on the ground of its novelty.

ONCOBA ROUTLEDGEI.—The plant recommended for a Botanical Certificate under the name of Oncoba spinosa var. Routledgei at the last meeting had been further examined at Kew, and it has now been made a separate species and named O. Routledgei.

MALFORMED ODONTOGLOSSUM. — A spike of a form of Odontoglossum crispum from Sir Julius Wernher, of Luton Hoo, having several flowers malformed upon it, as well as others of a normal character, was referred to Mr. Worsdell, who reports as follows:—"The balance of the spike is quite upset. Most of the flowers are quite normal, however. The peculiar structure present is due to a compromise between two tendencies (1) that making for reduction or fusion, and (2) that making for multiplication of parts. There is no evidence at all for actual synanthy or for the "passing of one part of a flower into the next," as the spatial distribution of the flowers on the spike appears to be quite normal. On the other hand, there is an equal absence of evidence that an increase in the number of flowers on the spike is occurring. In one flower there is a remarkable case of 'positive dedoublement'; four sepals, uppermost (posterior) forked; four ordinary petals (which might have resulted from forking of the lateral ones); one of these four lies exactly in the median plane (anterior); two labella forming with the column a whorl of three within the four ordinary petals; the column is double below, but triple above (there being three anthers). One anther is becoming petaloid. Owing to the causes above mentioned the flower comes to have a larger number of members than usual, and the composition of the whorls is altered, owing to the fact that, under the circumstances, the members must be more or less re-arranged, so as to obey the law of alternations. In the second flower there were three normal sepals, but the anterior one is in structure and appearance intermediate between a sepal and a petal, as it has the brown blotches of the former; but it is lighter in colour than the sepals, and has a slight tendency to be fringed at the margin like a petal; there is no present evidence as to its origin, but it perhaps arose by division of the normal sepals, two labella forming with the double column a whorl of three. In the third flower the reductive or fusion tendency has overpowered the other (or multiplicative). The two lateral sepals have fused into a single one in the anterior median plane, but this sepal is triple, and the middle lobe may represent the third sepal-like petal of the second flower referred to, and this is very likely, in which case it would not be accurate to speak of fusion of two sepals. Two labella, one of which is much smaller than the other, and has its stalk completely fused with the column. The column is double, but the anthers are much more closely approximated than in the last two flowers (an interesting fact as showing the fusing process). The sepals are more petal-like and larger than usual, as is natural. In the fourth flower the reduction and fusion tendency is all-potent; the flower is 2-merous. It has two sepals (antero-posterior), the anterior one being very large, owing to fusion of the two normal lateral ones; two lateral petals larger than normal, doubtless correlated with the complete absence of the labellum. The absence of the latter must be attributed either to abortion or to congenital and intimate fusion with the column (an analogy for such a fusion exists in the third flower, and the column has its lateral petaloid appendages larger than usual). The ovary appears to be normal. A very interesting fact is that the bracts subtending, two or three of the flowers showing positive dedoublement, are double, having two tips and two midribs. In such cases the splitting tendency is very powerful, and if it went further would result in the formation of two flowers side by side; these then might become spatially separated in a vertical direction on the axis of the spike. The structure of the dimerous flower has probably, from a morphological point of view, nothing whatever to do with the other malformations, but, physiologically, there may be a connection. Exigencies of nutrition may demand that, if some flowers have an extra number of organs to be fed, other flowers must not be supplied with so many organs, economy in the spike-household being thus maintained."

FASCIATED ASPARAGUS.—Canon Fowler showed a fasciated and contorted stem of asparagus about one and a-half inch in diameter.

TULIP DISEASE.—He also contributed specimens of tulips with numerous brown patches upon their leaves. This disease appears to be caused by the botrytis form of a species of sclerotinia. When the attack is a bad one, the fungus forms black sclerotia near and about the top of the bulbs, between them and the soil, and by these the disease is continued into the next year. The spread of the disease may be checked by spraying with potassium sulphide, but it is well to completely remove and destroy badly-diseased plants, to plant in fresh soil, and to discard any bulbs showing traces of the sclerotia (which vary in size from a pin's head to a pea) when planting is done in the autumn.

TWIN-FLOWERED DAFFODILS.—Mr. Shea showed several varieties of narcissus having two flowers in place of the normal one, and a specimen was sent from Darlington of a form of N. poeticus with three flowers. Several members remarked upon the common appearance of this phenomenon this season.

NEW PLANTS.—Messrs Veitch submitted specimens of Viburnum Davidi, an evergreen viburnum with large, glossy leaves and corymbs of small, whitish flowers, and Rhododendron concinnum and R. rufescens, the latter a dwarf species, about six inches in height, with white flowers about half an inch in diameter, and having somewhat the habit of R. intricatum.

HYMENOCALLIS x FESTALIS.—Mr. Worsley showed spikes of this hybrid raised by him between Ismene calathina ♂ and Elisena longipetala. The hybrid is remarkably vigorous in habit.

Horticultural Club.

GLIMPSES OF MOROCCO AND THE CANARY ISLES.

On Tuesday, the 10th inst., at the Hotel Windsor, this club held its usual monthly dinner, under the chairmanship of Mr. Harry J. Veitch, V.M.H., and after it Mr. T. Ernest Waltham gave a very interesting lecture entitled as above, and illustrated by about a hundred lantern slides of great beauty and clearness. Commencing with a number taken in Madeira, Teneriffe, and elsewhere, depicting the peculiarities of the inhabitants, the vegetation and the scenery, which in its subtropical aspect was often of great beauty, involving plantations of bananas, date palms, etc. Morocco next appeared upon the scene, local colour being supplied in the foreground by the lecturer himself being clad in a typical burnous and fez, and armed with a native gun, which was probably far more formidable in appearance than effective at long range, while a curved dagger added materially to the warlike effect. The numerous slides, while, by their excellence giving a vivid idea of the picturesqueness of the native costumes and the generally arid nature of the country, also conveyed a conviction that the natives themselves were of a very debased order of civilisation, the treatment of the women and their general intolerant behaviour towards foreigners demonstrating clearly what a terrible bar to true progress and humanity is the Mohammedan religion in places where other influences are debarred from working. So much is this the case that even in these days travelling in the country is attended with innumerable risks, owing to the hostility of the natives to the Christians, or indeed all foreigners, and the risk these latter run of unwittingly infringing some religious restriction and of consequently being stoned or even murdered. In a country where to be merely mad is to be deemed a saint, the vicinity of whose tomb, or even of a tree under whose welcome shades it lies, no Christian is permitted to approach, it is obviously difficult for common-sense to obtain a foothold. Sanitation is absolutely unknown, and progress through the narrow, evil-smelling gangways, which do not merit the name of streets, means practically shouldering one's way through a crowd of beggars. In short, the more this state of things was brought before the audience the more one marvelled at the boldness of travellers who persist in traversing such inhospitable countries both in pursuit of knowledge and in the desire of, in some way, ameliorating the conditions they find there. Here and there, thanks to such, a ray of light had penetrated, and groups of cheerful little pupils of established missions gave evidence of some success. As, however, our friends the French are now experiencing, attempted civilisation is bitterly resented, and no opportunity is lost of what the natives doubtless consider as a religious crusade or "Jehad" against the infidel, too often with most tragic results. Following the Moroccan views Mr. Waltham supplemented his lecture with a number of others, depicting home scenes and Alpine and other flowers in their native habitats, many of them in their natural colours.

Mr. Harry J. Veitch, in conveying a hearty vote of thanks to the lecturer, adverted to his own visit to the East, not indeed to Morocco, but to Palestine, where similar patriarchal conditions prevail, on somewhat milder lines perhaps, but still based upon an intolerance which renders the visitor subject to insult and even injury.

Dundee Horticultural Association.

The ordinary monthly meeting was held in the Technical College, on the evening of 11th inst. The president, Mr. Wm. Christeson, presided, and introduced the lecturer, Mr. James Murdoch, Cliffside, Stirling, who had for his subject "Flowering Shrubs." Confining his remarks to those that are quite hardy, the lecturer graphically described their introduction, and use in the adornment of the flower garden and pleasure grounds. Where Nature and art went hand in hand in arrangement, a pleasing scene could be created, whereas often the reverse was the case. In this connection he mentioned public parks and cemeteries for special criticism, while for utter neglect to make use of shrubs in beautifying their premises, among other concerns he held up to ridicule the railway companies, who are not doing their duty to the public who travel by their lines in failing to beautify even the railway stations.

In submitting practical details, and giving a descriptive list of shrubs which flower from "early spring to late autumn," the lecturer gave in illustration vivid pictures as he had seen them in Nature's wilderness amid the gorges of the Rockies and Alpine glaciers; sometimes, too, he referred to the beautiful effects he had seen in Golden Gate Park, San Francisco, or in Kew Gardens, where he had made many pilgrimages in seeking knowledge of his hobby. In advising what to plant he urged his audience not to forget berry-bearing shrubs, and those with ornamental foliage or bark, like salix and dogwood, rubus, Rosa rugosa, etc., to brighten up the garden scene in winter. The lecture was enhanced by mounted specimens, which the lecturer referred to as he described them.

A profitable discussion ensued, Messrs. Reid, Grant, Campbell, and Bethel being the principal speakers.

Croydon Gardeners' Society.

This society's usual fortnightly meeting was held at the Sunflower Temperance Hotel, and the members were well entertained with a practical address on the "Cultivation of Michaelmas Daisies and Phloxes." Mr. Frank Brazier, Caterham, who has for several years made a special study of these late summer and autumn flowers, generously gave to his audience a summary of their cultivation as exhibition plants and their decorative utility in the herbaceous borders.

The treatment for both plants is very similar in character, and the grower's first consideration must be given to the ground wherein the plants are to grow. Mr. Brazier's soil is of a very clayey nature, and he finds it best to trench in the early spring, exposing the under soil to drying winds and sun. When the upper crust is worked down to a fine tilth the rooted cuttings are inserted and grown on as much as possible without check. To obtain his cuttings he lifts his old plants about December and brings them into the greenhouse, where they quickly show signs of growth, and cuttings are taken. From the greenhouse they are transferred to cold frames, and hardened off ready for planting out in the open ground. When the young plants are established attention is paid to the soil surrounding them, and the hoe is kept constantly at work. In the summer months a mulching of fresh manure that has been exposed to the air a little is placed round the roots. This helps to keep moisture around them, and feeds and encourages surface roots. A great mistake often made is leaving them in the soil they are planted in without further attention, and when the flowers begin to open the roots have almost exhausted their food supply, so that when they are required to make their greatest effort there is nothing left to stimulate growth

Mr. Brazier gave many useful hints to the exhibitor.

A very hearty vote of thanks was conveyed to Mr. Brazier when he had concluded his subject, and to this he briefly replied.

An attractive group of rhododendrons, acers, etc., was put up by Mr. T. Butcher, Mr. R. Cleveland staging three vases of daffodils.

United Horticultural Benefit and Provident Society.

The monthly committee meeting of this society was held at the Royal Horticultural Hall, Westminster, on Monday evening, May 8. Mr. Charles H. Curtis presided. Three new members were elected, making a total of thirty-nine this year so far. A lapsed member having reached 60 years of age, withdrew the sum of £11 11s. 8d. standing to his credit. Several members over 60 drew the interest on their account. The amount paid out in sick benefit since the last meeting was £51 15s. The secretary will be pleased to send a few copies of the report for 1910 to any member wishing to distribute them.

East Anglian Horticultural Club.

There was a good gathering at the May meeting of this club, held at the Boar's Head Hotel, Norwich. Mr. F. W. E. Shrivell gave a most interesting discourse upon the uses of chemical manures in the garden. He remarked that for seventeen years the experiments at Golden Green, Kent, had been carefully noted, and it was proved that in most cases chemicals, plus a small quantity of dung, yielded the best results. The address was followed by a good discussion.

The exhibits greatly brightened up the room, special mention being due to Messrs. Daniels Bros., Ltd., Norwich, for pots of liliums and azaleas; Mr. W. Laws, gardener to G. E. White, Esq., for his group of Marmion carnations; and to Mr. W. Shoesmith, gardener to F. W. Harmer, Esq., for a nice piece of Cypripedium barbatum.

Ivies in Pots or Tubs.—The various uses to which ivies may be put were recently enumerated in the Gardeners' Magazine, but apart from those mentioned, they form, when grown in pots or tubs, and trained to a flat trellis, good screens to shut off any unsightly feature. In the courtyards of towns they are often valuable in this way, and where general decoration is carried out on a large scale, screens of ivy may, from their hardiness, be used where more tender plants would suffer.—W. T.

VIEW IN MESSRS. W. BULL AND SONS' WINTER GARDEN.

JUBILEE OF A CHELSEA FIRM.

During the week now ending Messrs. William Bull and Sons, King's Road, Chelsea, have been celebrating their jubilee, and it is because of this that they will probably not be exhibiting at the forthcoming Temple Show. Not that there has been excessive jubilation, and a resultant need for recuperation. That is not the point. Orchids, amaryllis, and other flowers of the season have been timed as far as possible for this jubilee display, instead of being prepared for the Temple Show.

During the half century that has elapsed since the late Mr. William Bull set up in business for himself, the firm has introduced many new, rare, and beautiful plants to cultivation. Orchids, stove plants, pelargoniums, and even sweet peas, have been distributed from the establishment in all their newness, and sweet pea readers will perchance remember that Henry Eckford's first new sweet pea was sent out by Mr. William Bull.

The fine winter garden that fronts on to the King's Road has been made quite gay and beautiful for this jubilee occasion. Giant palms were arranged over smaller ones, and above groups of handsome foliage plants of many kinds, including the celebrated Dracæna Victoria. On either hand down the central avenue were tall pillar roses representing such beautiful varieties as Tausendschon, Hiawatha, Philadelphia, and Mrs. F. W. Flight, with groups of Verbena Miss Willmott, unusually fine pink and blue forms of Hydrangea Otaksa, the latter carrying five to seven huge heads of bloom in a 32-sized pot; Lilium auratum, L. speciosum, and L. longiflorum were also effectively grouped among the foliage plants.

Two semicircular paths, one to the right and one to the left, cut through the great groups of elegant leafage, and each revealed new beauties. On the left were amaryllis in large numbers and a great range of colouring. The majority were of excellent form. White, blush, pink, rose, red, orange, vermilion, blood-red, and deep crimson were colours to be seen in these big and glorious blooms. The lighter shades of pink and rose and salmon were notably beautiful, and such varieties as Aviator, Blush Queen, and Sunbeam were exceptionally good.

Down the other path the orchids were arranged on both sides, and these looked particularly well among the surrounding foliage. One great piled-up mass of dendrobiums included D. Wardianum, D. Devonianum, and D. primulinum. Lælio-cattleya Baden Powell formed another group, and the numerous free-flowering plants of this hybrid between L. tenebrosa and C. Skinneri were most effective. Vanda suavis towered behind Renanthera Imschootiana and such odontiodas as O. Bradshawiæ and O. Chelseaensis. Brasso-cattleya Thorntoni and Brasso-lælia Helen were conspicuous by reason of the fringing of the lip in each case. Cattleya Mendeli and C. Mossiæ were present in quantity, and one variety of the latter, named Duchess, of light hue, and bearing four or five closely-set flowers on a spike, attracted attention. The Butterfly orchid—Oncidium Papilio, was a source of interest. As also was Maxillaria Sanderiana with a pair of its blood-stained flowers coming out between the bars of the hanging basket.

The seedling odontoglossums were good and interesting, and some of these were from a cross between two fine forms of O. crispum, i.e., O. c. Alfonso and O. c. Franz Mazerell. Among the several resulting from this cross one stood out pre-eminent, and it was named O. c. Coronation. In form and colour it commends itself to the connoisseur, while to the man in the street its rounded outline, deep red-brown markings, blush ground colour, and fringed petals appeal none the less strongly. O. Pescatorei was well represented, and there was one particularly fine white variety.

We peeped into a few of the houses behind the winter garden and saw minute odontoglossums from seeds sown last September, growing by the hundreds, while tiny plantlets were present by the thousands, and houses were filled with interesting cypripedium and cattleya and lælia hybrids. One odontoglossum that should become popular is the result of crossing O. Edwardi and O. ardentissimum; this blooms at a very early stage, and in many cases the first flowering bulb was pushing a pair of sturdy spikes. The latter are long, and carry flowers of great beauty, and in which the characteristics of the two parents are very evident.

NEW BOOKS.

AUSTRALIAN PLANTS.

By W. R. Guilfoyle. Whitcombe and Tombs, Lim., Melbourne and London.)

This important work is from the pen of the late Director of the Melbourne Botanic Gardens, and in the introduction he informs his readers that the principal feeling which has inspired the preparation and publication of the book has been a desire to arouse increased enthusiasm in regard to the Australian Flora, which, in his opinion, is the most varied, wonderful, and beautiful in the world. The grandeur of the trees, and the exquisite beauty of the shrubs that are met with in all the States of the Commonwealth are generally admitted, and the author is strongly of the opinion that the many kinds which are capable of adapting themselves to the climatic conditions that obtain in the several States should be taken full advantage of in the planting of parks and gardens. He directs attention to the fact that there are many hundreds of kinds, at once interesting and beautiful, that can be successfully grown in any of the States, and he naturally regrets that so many of them should be so often neglected in the planting of parks and gardens, in favour of exotics, which in the majority of cases are less picturesque, and not so well adapted to the soil and climatic conditions that obtain. Upwards of 2,000 species are enumerated and briefly described under their scientific names, and the popular names given in connection therewith, and a section of the book is devoted to the latter, these being arranged in alphabetical order, and accompanied by the scientific names. There are several hundred photographic reproductions of specimens of the more notable kinds, and these add much to the value of the work, which should be in the hands of all who are interested in the ornamental plants that have a place in the Australian Flora.

THE BEGINNER'S BOOK OF GARDENING.

By Harry Roberts. (John Lane, The Bodley Head, London.) Price 2s. 6d. net.

This volume of the series of "Handbooks of Practical Gardening" "aims," we are told in an introductory note, "at providing a sufficiency of accurate information to enable the gardening beginner to grow ordinary flowers, fruits, and vegetables with understanding and success." In his endeavour to accomplish his object, the author has written a series of short articles on the various subjects to which those who would achieve success in gardening must give attention. These articles are instructive, pleasantly written, and of value for their suggestiveness, but it appears to us that it would have been an advantage to the beginner had the cultural requirements of some of the subjects been set forth in greater detail.

RHODODENDRONS AND AZALEAS.

By William Watson. (T. C. and E. C. Jack, 14, Henrietta Street, London.) Price 1s. 6d.

As observed by Mr. F. W. Moore in the admirable preface he has contributed to this work "it is difficult to understand why a book on rhododendrons, within the means of ordinary garden folk, has been so long in making its appearance." The reason may or may not be that the number of persons qualified to perform the task is comparatively few, but with this point we need not greatly concern ourselves. We know that Mr. Watson's knowledge of the history and development of rhododendrons and azaleas is at least unsurpassed, and that he is fully acquainted with all that relates to their propagation and cultivation. It is well known that he is equally familiar with the large number of species and hybrids that are now in cultivation, and the book affords ample evidence, if such was wanted, that he has the facility in a marked degree of conveying to others the remarkable store of information at his command in a clear and highly interesting manner. In a series of twelve chapters Mr. Watson deals with the botanical characteristics of these two important classes of shrubs, rhododendrons, hybrids, famous collections, cultivation, Ghent and Mollis azaleas, Indian azaleas, Javanicum hybrid rhododendrons, rhododendrons for cool houses, miscellaneous hybrids, and cultivated hybrids.

The book is illustrated with eight coloured plates.

THE FEEDING OF CROPS AND STOCK.

By A. D. Hall, M.A. (John Murray, Albemarle Street, London). Price 5s.

This work forms an admirable companion to Mr. Hall's books on "The Soil" and "Fertilizers and Manures," and cultivators who possess the three volumes which, it may be mentioned, are uniform in price and style, will have equipped themselves for dealing with the various problems associated with the soil and its cultivation as they arise. As the Director of the Rothamsted Experimental Station Mr. Hall is in a position to draw upon the results of a very number of experiments, both in the laboratory and in the field, and thus present to his readers first-hand information relating to the feeding of crops, the feeding of stock, and the relative value of the residual products of the various kinds of food utilised in the feeding of stock. Although the title of the book suggests that it is more immediately concerned with agriculture than horticulture, ten of the fourteen chapters contain information that is of equal importance to both gardeners and farmers, and in the remaining four there is much that the gardener may study with advantage. It is no dry-as-dust statement of great scientific truths relating to the food requirements of crops and stock that Mr. Hall presents to his readers, but a work not less remarkable for its interest than for its scientific value.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

SKIN DISEASE AND PRIMULA OBCONICA.—C. R., Hampstead: We know of no special specific for the alleviation or cure of the rash produced by contact with Primula obconica foliage. Your best plan will be to consult a doctor, and tell him what you consider the cause of the skin eruption; you should also most carefully avoid contact with the primula. Some people are very susceptible to the acid poison contained in the hairs of P. obconica leaves; others handle the plants and leaves with impunity and suffer not the slightest irritation; we ourselves have never experienced the slightest trouble, and we frequently handle our modest stock of two dozen plants, and potting is done without any protection to hands or arms. If any of our readers who are liable to suffer from handling Primula obconica have found a special cure for the trouble, we shall be glad to hear from them.

SPENT HOPS AS MANURE.—M. H. D., Maidstone: Spent hops have practically no value as manure, but are nevertheless useful in the garden, where they can be obtained for carting. By their decay they add humus to the soil, and a good application, an inch or more thick, makes a capital mulch for nearly all flower and vegetable crops. The material should be put on the soil at the end

The Spray is broad and fine as a mist.

The double delivery nozzle of the Pine Spray Syringe bends up or down, this way ‿ or that ⌝ on a joint that is as soundly made as a high pressure steam cock. And delivery of the fluid can be made through an insecticide spray as fine as a mist, or through an ordinary watering rose, by merely half turning the syringe bodily in the hand. Every spraying combination required in Greenhouse or Garden can be obtained instantly without the removal or addition of a single fitment.

You can see it before you buy.

By writing to us, your ironmonger or seedsman can obtain a syringe for your inspection. Neither he nor you are under any obligation to buy if you are not satisfied that it is the most convenient, effective, and best made syringe you have ever seen.

ROBINSON'S PATENT
PINE SPRAY SYRINGE 10/6
(GUARANTEED)

Send for illustrated list to ROBINSON BROTHERS, Ltd. 20 'est Bromwich

of the present month, after a good rain or a good watering.

APHIS ON PEACHES.—J. C., Haileybury: Forcibly wash the trees by means of a hose or garden engine, and the following day spray the trees with a solution of quassia and a little soft soap. Within a week use the engine or hose again, and mulch the root area with half-decayed manure, provided the soil is comfortably moist.

PLANTING OUT FORCED DAFFODILS.—W. M. S., Harlow: If the plants have been placed in a cold frame, or given some protection from cold weather, they may be at once planted out in shrubbery borders, the semi-wild garden, or other places where flowers will be effective and welcome another spring. Plant each potful as it is, and do not attempt to part the bulbs one from the other; give a good watering after planting, and do not remove the foliage until it has quite died down. By the exercise of a little care and forethought many parts of the garden may be made bright in spring time at little expense if the bulbs flowered in pots are saved.

DEFECTIVE APPLE BLOSSOM.—D. N. M., Halstead: On the shoot sent we found evidence of the work of the apple blossom weevil, and there were aphis and looper caterpillars present. Under the circumstances you should spray the tree with a nicotine or quassia solution at intervals, as necessary, and next winter give it a winter dressing.

BLISTERED PEACH LEAVES.—M. E. J., Ross: The curling of the foliage is due to the action of a fungus known as Exoascus deformans. Where the leaves are very badly affected cut back the growth bearing them and burn at once. If the attack is light, remove and burn the curled leaves and encourage the tree to grow by syringing it freely, and paying prompt attention to watering, thinning, and disbudding.

BEST DOZEN DARWIN TULIPS.—B. W. S., Buxton: You have set us a very difficult task, because there are so many things to be considered before making a selection of the best dozen Darwin tulips. There are such matters as expense and taste to be kept in mind. We gather, however, that you want a really good selection of twelve varieties, and if that is so we can recommend the following: Clara Butt, salmon-pink; Erguste, heliotrope; Mr. Farncombe Saunders, crimson; King Harold, ruby crimson; La Candeur, creamy-white; Leonardo da Vinci, deep maroon; Mdme. Krelage, rosy-pink; Margaret, soft rose; Millet, crimson-maroon; Pride of Haarlem, rich red; Suzon, pink, shading to silvery pink; and Van Poortvleit, deep rose. To these you should add such bright May-flowering tulips as Bouton d'Or, Gesneriana lutea, Golden Crown, Inglescombe Pink, Inglescombe Scarlet, Jaune d'Oeuf, La Merveille, Mrs. Moon, Parisian Yellow, Picotee, Scarlet Emperor, The Fawn, and Vitellina. Pay a visit to a nursery where tulips are grown, or to the Temple Show, where, if the weather is not too bright and hot meantime, many of these grand May-flowering tulips will be on view.

SPORT FROM PELARGONIUM CLORINDA.—A. W. A., Hungerford: The sport is a very beautiful one, and the colour of the flowers should make it at least as popular as its parent. Under "Forthcoming Engagements" you will see the dates of the meetings of the Royal Horticultural Society, and you can decide at which one you will show your plants, previously notifying the secretary of the R.H.S., at Vincent Square, Westminster, S.W., of your intention to exhibit. If June 6 would suit the plants that would be a good day to show them for an award at Westminster.

NAMES OF PLANTS.

A. R., Clifton.—Pæony mollis.

A. M. R., Cirencester.—1, Viburnum Tinus lucidum; 2, Alyssum saxatile citrinum.

S. F., Ely.—1, Trillium grandiflorum; 2, Anemone alpina; 3, Cerastium alpinum.

F. N. J., Bletchley.—1, Arenaria balearica; 2, A. montana; 3, Phlox subulata; 4, Iberis sempervirens.

G. M. W., Lechlade.—1, Cattleya Skinneri; 2, Viola gracilis; 3, Pyrus Schiedeckeri; 4, Stylophorum diphyllum.

F. G. W., St. Austell.—1, Rhododendron Falconeri; 2, Andromeda cassinefolia; 3, Kerria japonica; 4, Magnolia Soulangeana nigra.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above sea-level, 150 feet.

Date. 1911. May 7 to May 13.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
May 7—Sunday	10 30	53	47	63	36
,, 8—Monday	12 0	60	49	64	45
,, 9—Tuesday	12 36	59	52	69	39
,, 10—Wednesday	7 6	52	50	74	47
,, 11—Thursday	5 30	54	52	72	48
,, 12—Friday	4 48	52	51	65	47
,, 13—Saturday	8 18	57	5[illegible]	72	50
Means	(total) 60 48	55	51	68	44

Date. 1911. May 7 to May 13.	Rain.	Temperature of the Soil at 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
May 7—Sunday	—	50	50	48	27
,, 8—Monday	—	53	50	48	41
,, 9—Tuesday	—	52	51	48	31
,, 10—Wednesday	—	54	52	49	42
,, 11—Thursday	·01	54	52	49	40
,, 12—Friday	—	55	52	50	39
,, 13—Saturday	·07	55	53	50	42
Means	(total) ·08	53	51	48	37

CONTENTS.

PAGE
Among the Alpine Flowers ... 382
A New Forget-me-not ... 381
A New Spraying Plant ... 385
Answers to Correspondents ... 389
Exhibitions and Meetings ... 387
Flag Irises ... 383
Floral Decorations at Drury Lane Theatre ... 374
Garden Walks ... 383
Half-hardy Plants ... 385
Jubilee of a Chelsea Firm ... 388
Musas in the Summer Garden ... 375
New Plants, etc. ... 379
Notes on Culture ... 384
Notes of the Week ... 371
Notes from Scotland ... 380
Pentstemon Cæruleus ... 377
Planting Tomatoes Outdoors ... 384
Protecting Strawberries ... 385
Rhododendron Kæmpferi ... 378
Spring Flowers in the Bournemouth Public Gardens ... 377
Sub-tropical Gardening ... 381
Sweet Pea Notes ... 373
The Garden of Shade ... 378
The Glory of Rich Colour ... 376
The Russian Almond ... 375
Tree Culture on Links ... 382
Tulips in Regent's Park ... 380
Work for the Week ... 386

ILLUSTRATIONS.

Portrait of Mr. S. F. Staffurth, 371; The King's Staircase, Drury Lane Theatre, 374; Musa Ensete in a Lincolnshire Garden, 375; Musa americana in Tubs, 376; Pentstemon cæruleus, 377; The [illegible] Rose, 379; An Effective Arrangement of Early-flowering Tulips, 380; Myosotis alpestris [illegible], 381; A Beautiful Bank of Flag Irises, 383; Messrs. Merryweather and Sons' Patent Portable Spraying Machinery, 385; View in Messrs. W. Bull and Son's Winter Garden, 388.

MARKETS.

◆

COVENT GARDEN.

Flowers.

There is a brisk demand for roses, lilies, and sweet peas; supplies are in fine condition.

		s.	d.	s.	d.
Azaleas, white	per doz. bun.	3	0	4	0
Adiantum cuneatum	per doz. bun.	4	0	6	0
Arums	per doz.	2	0	3	6
Asparagus	per doz. bun.	10	0	15	0
Cattleyas	per doz.	8	0	12	0
Carnations	per doz.	1	6	3	0
.. c	per doz. bun.	8	0	10	0
Croton leaves	per bun.	1	0	2	6
French fern	per doz. bun.	2	6	4	0
Gardenias	per doz.	2	0	2	6
Gypsophila elegans	per doz. bun.	3	6	4	0
Iris, Spanish	per doz. bun.	5	0	10	0
Ixias	per doz. bun.	2	0	3	0
Lilac	per bun.	2	0	3	0
Lilium auratum	per bun.	3	0	4	0
.. candidum	per doz.	1	0	2	0
.. speciosum	per bun.	2	0	2	6
,, longiflorum	per bun.	2	0	3	0
Lily of the Valley	per doz. bun.	6	0	15	0
Marguerites	per doz. bun.	1	6	3	0
Mignonette	per doz. bun.	3	0	4	0
Myosotis	per doz. bun.	2	6	3	6
Odontoglossums	per doz. blms.	2	0	4	0
Pelargoniums	per doz. bun.	3	0	4	0
Ranunculus	per doz. bun.	2	0	3	0
Roses	per doz.	1	0	3	6
Smilax	per doz. trails	4	0	5	0
Stocks, white	per doz. bun.	3	0	4	0
Sweet Peas	per doz. bun.	2	0	5	0
Tuberoses	per doz.	0	4	0	6
Tulips	per doz. bun.	4	0	12	0
Violets	per doz. bun.	1	3	3	0
.. Parma	per bun.	1	0	2	0
Wallflowers	per doz. bun.	1	0	1	6

Fruits.

Strawberries are quite plentiful and gooseberries are coming in well; peaches and new grapes meet a ready sale.

		s.	d.	s.	d.
Apples, Australian	per case	10	0	16	0
.. Tasmanian	per case	10	0	16	0
Bananas	per bun.	6	0	12	6
Cranberries	per case	9	0	10	6
Figs	per doz.	4	0	15	0
Gooseberries	per peck	2	0	4	0
Grapes, English	per lb.	2	6	9	0
.. Belgian	per lb.	1	3	2	6
.. Cape	per case	6	0	15	0
Lemons	per case	7	6	14	0
Melons	each	1	0	3	6
Nectarines	per doz.	12	0	30	0
Oranges	per case	12	0	32	0
.. Jaffa	per case	12	0	14	0
.. Blood	per case	7	0	13	0
Peaches	per doz.	9	0	36	0
Pears, Australian	per case	10	0	18	0
Pineapples	each	2	0	4	0
Strawberries	per lb.	1	0	3	0

Vegetables.

Supplies are excellent and the demand good, while prices are quite easy.

		s.	d.		s.	d.
Artichokes, Globe	per doz.	1	6	to	4	0
.. Jerusalem	per ½-sieve	1	0		1	6
Asparagus	per bundle	0	8		[illegible]	0
Beans, Jersey	per lb.	0	6		1	6
Beet	per bush.	1	0		1	6
Cabbages	per doz.	0	9		1	3
Carrots, new	per pad	2	0		2	6
Cauliflowers	per crate	4	0		6	0
Chicory	per lb.	0	3½		0	4
Cucumbers	per doz.	2	0		4	[illegible]
Endive	per doz.	1	3		3	0
Horseradish	per doz. bun.	9	0		10	0
Lettuce	per doz.	0	6		1	[illegible]
Marrows	per doz.	5	0		6	0
Mint	per doz. bun.	1	0		2	[illegible]
Mushrooms	per doz. lb.	6	0		12	0
Onions, Egyptian	per case	4	6		5	[illegible]
.. Spanish	per case	5	0		[illegible]	[illegible]
Parsnips	per bag	1	0		[illegible]	[illegible]
Parsley	per ½-sieve	1	0		1	[illegible]
Peas, Jersey	per lb.	0	10		1	[illegible]
Radishes	per doz. bun.	0	4		1	[illegible]
Rhubarb	per doz. bun.	0	10		2	[illegible]
Seakale	per doz. pun.	6	0		4	[illegible]
Spinach	per bush.	1	0		2	[illegible]
Tomatoes, Canary	per crate	10	0		20	[illegible]
.. English	per lb.	0	10		[illegible]	[illegible]
Turnips	per bag	2	0		[illegible]	[illegible]
.. French	per doz. bun.	1	6		2	0
Watercress	per doz. bun.	0	6		[illegible]	[illegible]

CARNATIONS, PINKS, AURICULAS.

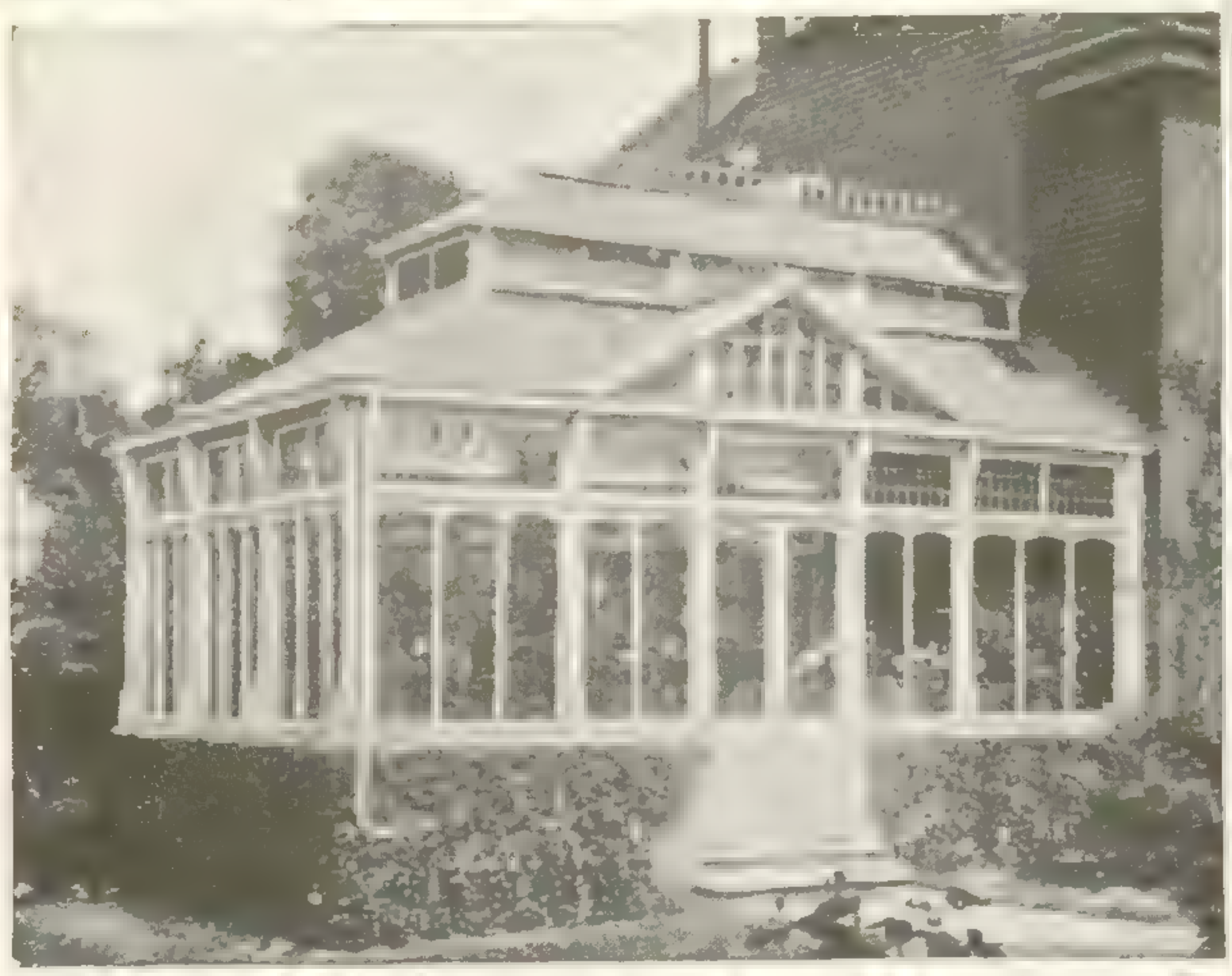
DOUGLAS for the best old and new varieties in all classes, and the finest quality in the world. Malmaison Carnations, new and old, 7/6 per dozen. Border, 6/- to 12/- per dozen. Tree, American, and English, 7/6 to 15/- per dozen. Auriculas, Show, 21/- to 30/- per dozen. Alpine Auriculas, 9/- to 21/- per dozen. Carnation, Auricula, Pink, and Polyanthus seed, 1/6 and 2/6 per packet. CATALOGUE FREE.

J. DOUGLAS, Bookham, LEATHERHEAD.

BOULTON & PAUL, LTD., . . . HORTICULTURAL BUILDERS, Norwich.

See our Stand at the Royal Agricultural Society's Show, to be held at Norwich in June.

EFFECTIVE, PRACTICAL CONSERVATORIES.

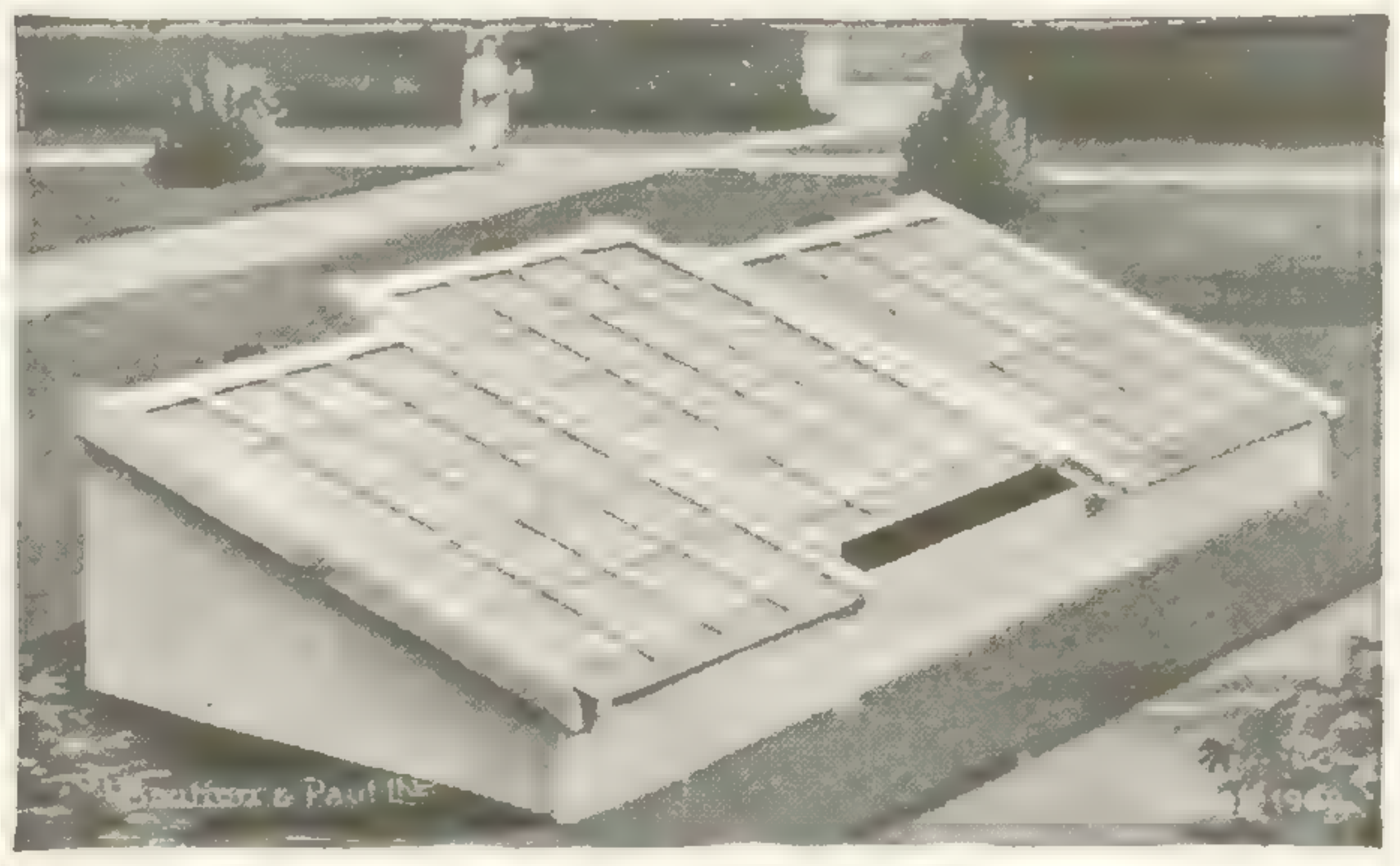


Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of 40/- value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.

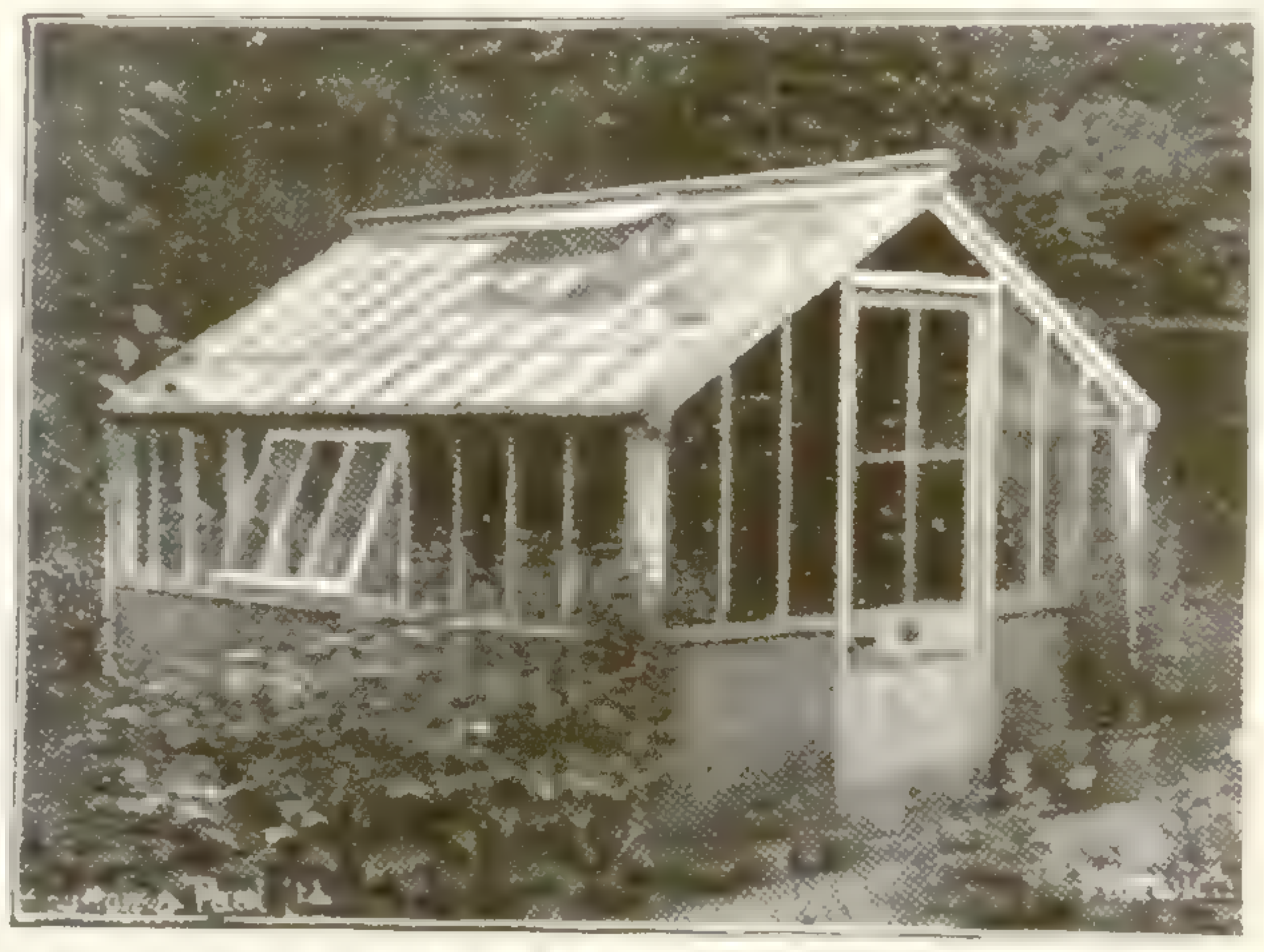


4ft. by 6ft. ... £2 0 0 | 8ft. by 6ft. ... 3 0 0
Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft. Similar to No. 75, with Two Lights... **35/-**

SEND FOR ILLUSTRATED CATALOGUES.

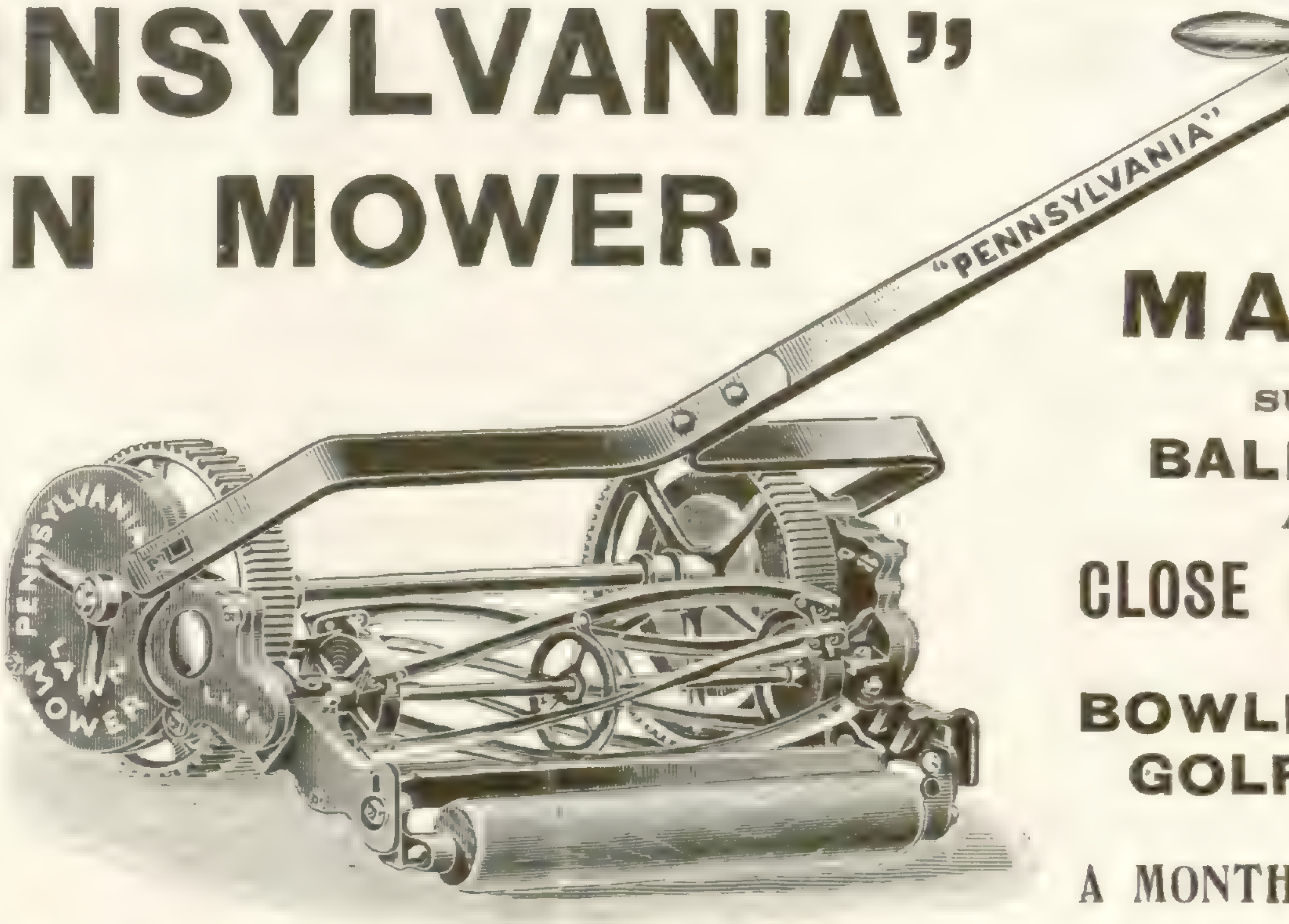
Every part of these Houses is thoroughly well made, painted three coats, GLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.



No. 49A.—Span, 10ft. by 8ft. £11 10 0
No. 47A.—Lean-to, 10ft. by 7ft. £9 10 0

All parts are numbered ready for easy re-erection by any handy man.

The "PENNSYLVANIA" LAWN MOWER.



SPECIAL NOTICE.

With this Machine a Lawn can be Mown ONCE A DAY with scarcely more expenditure of time and labour than ONCE A WEEK with the ordinary heavy English Machines.

MACHINES
SUPPLIED WITH
BALL BEARINGS,
AND SPECIAL
CLOSE CUTTING KNIVES
FOR
BOWLING GREENS, GOLF LINKS, &c.

A MONTH'S TRIAL ALLOWED.

Price Lists and Testimonials from—
LLOYD, LAWRENCE & CO. (Dept. C.), 29, WORSHIP STREET, LONDON, E.C.,
And all Ironmongers and Seedsmen.

BENTLEY'S
WEED DESTROYERS

Utterly annihilate Weeds, Moss, Dandelions, and all other Weeds on Garden Walks, Carriage Drives, etc.

HAVE THE LARGEST SALE IN THE UNITED KINGDOM! ARE THE MOST POWERFUL MANUFACTURED! ARE THE MOST PERMANENT IN EFFECT!

LIQUID (Poison).

Double Strength (1 to 50).

3 gallons, to make 153 gallons ...	£0	10	0
6 ,, ,, 306 ,, ...	0	18	0
12 ,, ,, 612 ,, ...	1	13	0
20 ,, ,, 1,020 ,, ...	2	7	6
40 ,, ,, 2,040 ,, ...	4	12	6

Special Concentrated Strength (1 to 80).

3 gallons, to make 243 gallons ..	£0	14	6
6 ,, ,, 486 ,, ...	1	7	0
12 ,, ,, 972 ,, ...	2	6	0
24 ,, ,, 1,944 ,, ...	4	10	0

BENTLEY'S DAISY KILLER.
(Lawn Sand.)

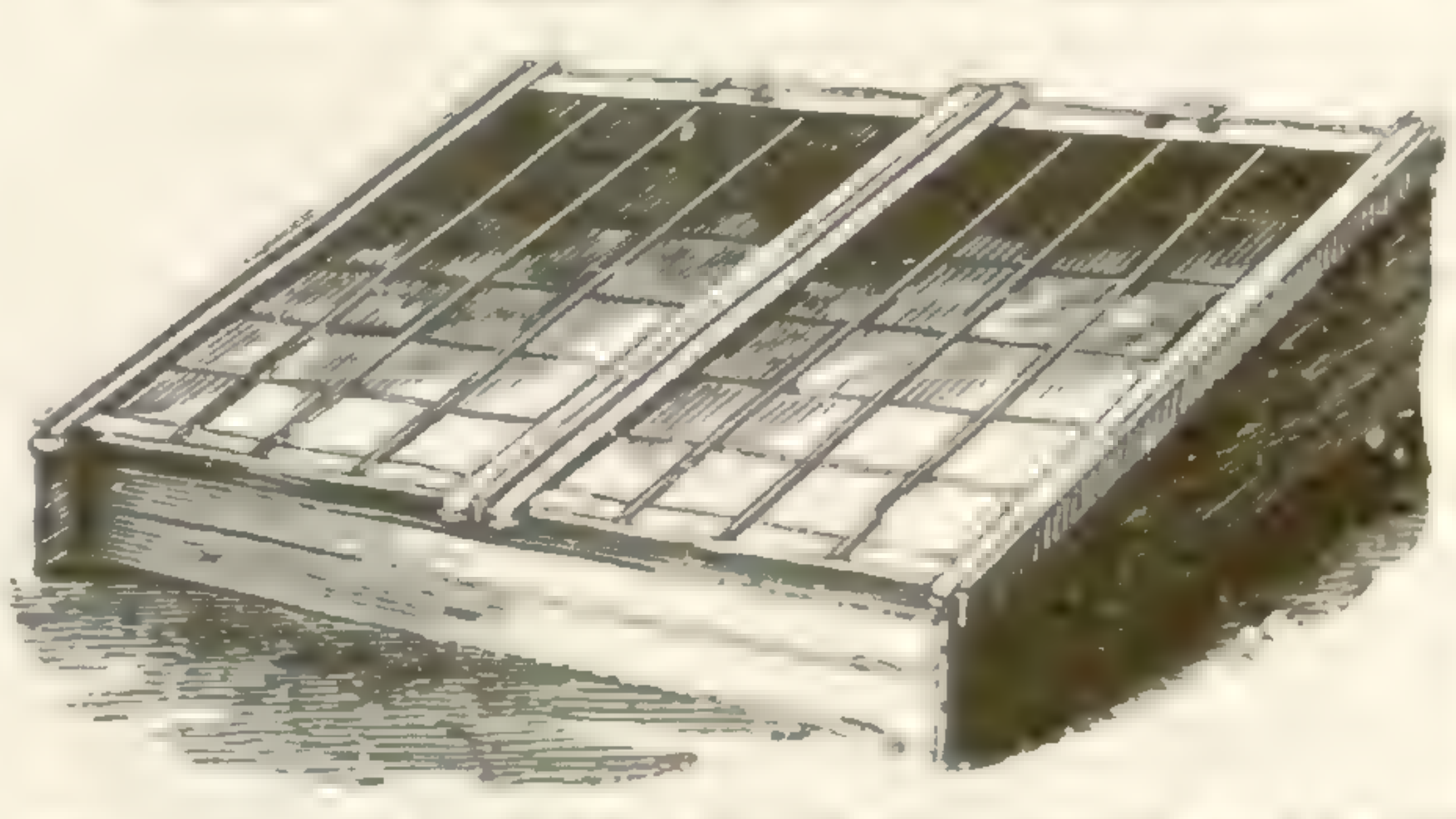
Completely eradicates Daisies, Moss, and other Weeds which infest **Lawns, Tennis Courts, Croquet Grounds, Bowling Greens, Golf Courses, etc.,** and afterwards improves the tone and colour of the sward.

1 ton, **£19**; 10 cwts., **£9 15s.**; 5 cwts., **£5**; 1 cwt., **£1 1s.**; 56 lbs., **12s.**
Tins, **5s.**, **2s. 6d.**, and **1s.** each.
Carriage paid on **7s. 6d.** orders and upwards.

WHOLESALE MANUFACTURERS,
JOSEPH BENTLEY, LIMITED,
Chemical Works,
BARROW-ON-HUMBER, HULL.

PORTABLE CUCUMBER FRAMES.

OUR WELL-KNOWN MAKE.



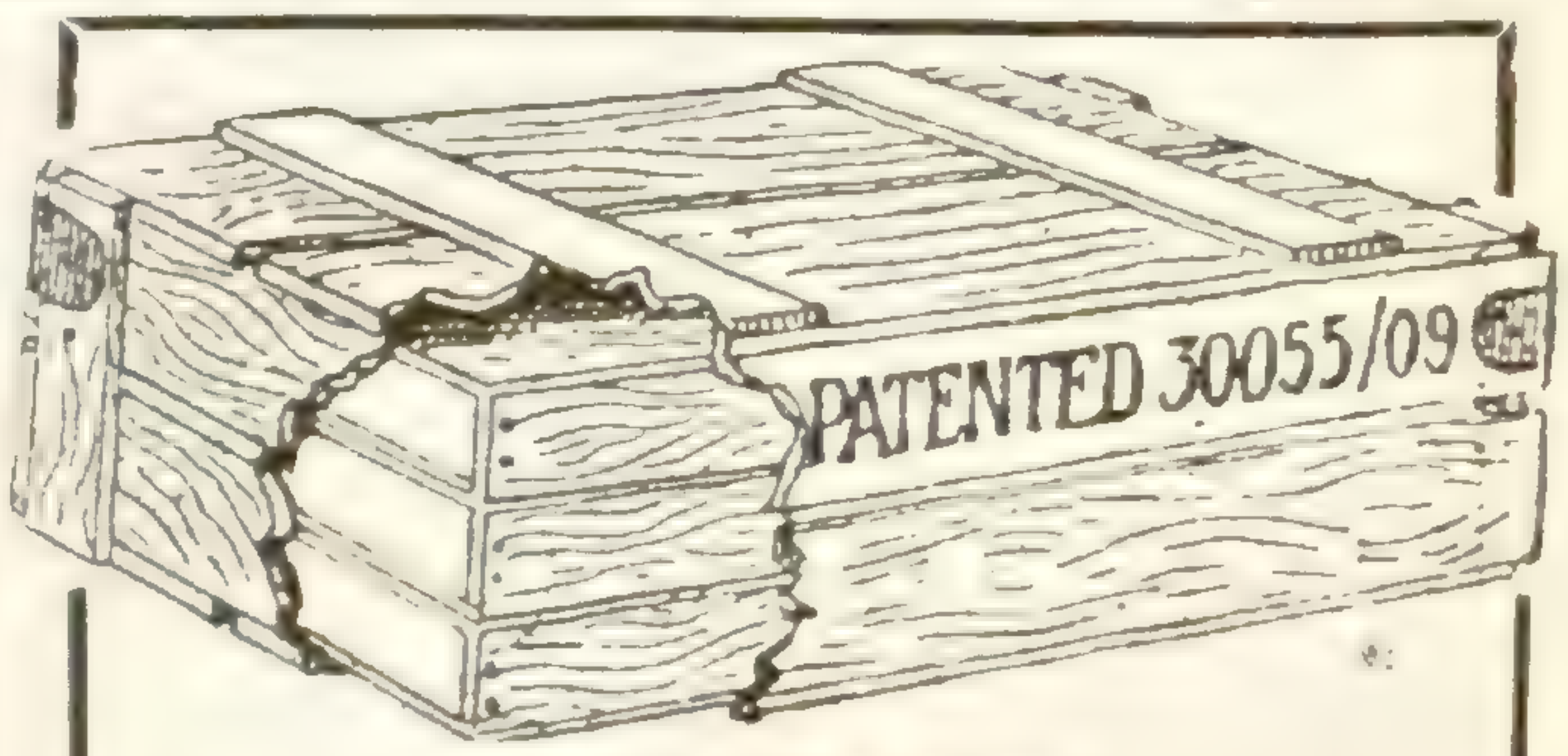
These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.		£	s.	d.
1-light 4 ft. by 6 ft.	*CASH PRICES.* *CARRIAGE PAID.*	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.		5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON, MANCHESTER.

PEA TRAINERS, The "Paragon" and "Peafold" (patent), made 4ft., 5ft., and 6ft. high, and any length. Prices from 8s. 6d. per set, carriage paid. Write for leaflet. THE PEA TRAINER CO., Bridge Street, Banbridge.



Use **DAY'S**
Fruit Trays & Crates

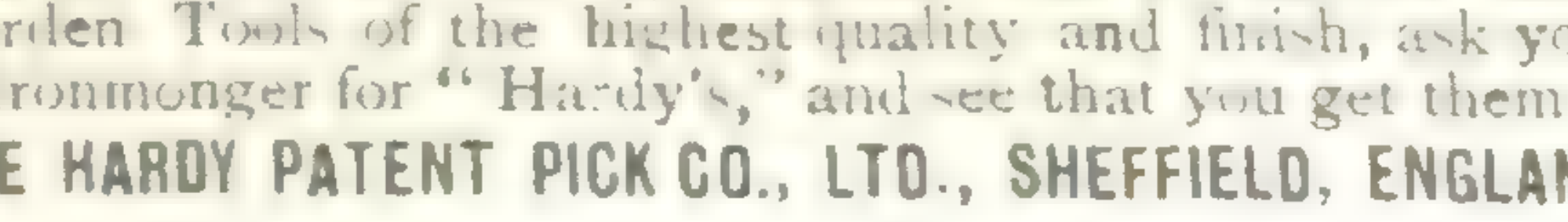
No more damaged fruit. If properly packed it is impossible for it to get damaged.

The trays hold about 3lb. of Strawberries, Gooseberries, or Cherries, and are non-returnable, price 2d. each. The Crates are 1s. 6d. each, and may be returned to growers for renewals. C.W.O.

They are strongly made, and growers speak very highly of them.

R. D'E. DAY, THE NURSERY, SUTTON SCOTNEY, HANTS.

A NEW GARDEN SPADE (Carter's Patent).



This is claimed to be the most effective Spade on the market: Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head, or good Single-handed); 10 years' practical experience in good establishments; leaving through death; near London preferred. A. GLOVER, High Street, Stockbridge, Hants.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushrooms, ridge or flat; Kitchen, Lawn, Flower Garden. Special Prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (Head of two or three) seeks SITUATION; 12 years' good practical experience; age 26; married when suited; well recommended. Apply E. WALLIS, The Gardens, Maristow, Roborough, South Devon.

GARDENER (Head working or Single-handed), married, no family; life experience in all branches Inside and Out; good references. GARDENER, 36, Clarence Place, Gravesend, Kent.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Cloces Hall, Gisburn, Clitheroe.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working, where three or more are kept).—Mr. LAST, The Gardens, Homewood, Chislehurst, Kent, can with every confidence recommend his Foreman, W. WAITE, as above; 13 years' experience, gained in good establishments; five years present situation. Married when suited.

GARDENER (Head Working, where two or three are kept); life experience; age 36; married; good reference. HALES, 8, Ivy Terrace, Old Church Road, Romford.

GARDENER (Head Working, where three or four are kept); thoroughly experienced in all branches, Inside and Out; also land and stock if required; age 38; married; no family; disengaged. HARE, Lynton, Bisley, Woking.

GARDENER (Head Working).—Mr. GOULD, Shernfold Park, Frant, Sussex, highly recommends his Foreman, A. DAY, as above; thorough practical experience Inside and Out; excellent references; age 30.

GARDENER (Head or Single-handed); thoroughly experienced in all branches; age 36; married, three in family; well recommended. E. OSBORNE, Offham, West Malling, Kent.

MAN, age 40, requires Position as Manager, Foreman, Salesman, or Traveller in small Nursery, and Florists. 28 years' experience; good Florist and Salesman; experienced in estimating and supervision of jobbing and furnishing; good grower. Apply F. O., 120, Westcombe Hill, Blackheath.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (Single-handed or Kitchen Garden and Pleasure Ground); life experience; age 28; good references; single. C. SMITH, The Gardens, Goldsmiths, Langdon Hills, Essex.

MR. SALTER, The Gardens, Avenue House, Church End, Finchley, highly recommends W. BICKER as GARDENER (Single-handed, or with help); experienced Inside and Out; at present in his employ; age 28; Eastern Counties preferred.

GARDENER (Single-handed or otherwise); experienced Inside and Out; Vines, Fruit, Flowers, Vegetables; 10 years' excellent reference; abstainer; married when suited; disengaged. C. KIBBLEWHITE, Lyndhurst Lodge, The Grove, Slough, Bucks.

GARDENER, 26, single (Head of 2 or 3, or Single-handed); good, all-round practical experience, Inside and Out; lawns, vines, tom's, 'cumbers, 'mums, carnations, bedding plants, roses, etc.; splendid kitchen gardener; abstainer; non-smoker. L. CRAGG, West Tytherley Rectory, Salisbury.

GARDENER seeks good Single-handed place; good, all-round, practical experience; thoroughly reliable, steady, industrious, and obliging; excellent character; married; family out. GARDENER, 47, Monk Street, Abergavenny.

YOUNG MAN seeks SITUATION, either as Single-handed or Foreman; experienced in vines, orchids, etc.; Inside and Out; 7 years' experience; good references; age 23. C. E. RASS, Park House Gardens, Cotham Park, Bristol.

GARDENER (Second, where others are kept); life experience in all branches; good reference; four years present; 15 months and three years previous; age 25; near London preferred. E. HUMPHREY, 90 Brookwood Road, Southfields, S.W. (No circulars.)

GARDENER (Second, Inside and Out), where three or four are kept; 9 years' experience; well recommended; age 23. COOK, Ivy Cottage, Scotsbridge, Croxley Green, Herts.

GARDENER (where one more kept); 15 years' practical experience Inside and Out. Essex preferred. Age 33; single; disengaged. R. W., 32, Forest Road, Loughton, Essex.

MR. H. DUKE, Felixstowe Lodge, Suffolk, will be pleased to recommend JOURNEYMAN (Inside or Inside and Out); age 22; past three years here; abstainer.

J. HARDING, Coneygar Gardens, Bridport, highly recommends W. BARTLETT, age 20, here three years, as JOURNEYMAN (Second, Inside or Inside and Out). Apply W. BARTLETT, Coneygar Gardens, Bridport, Dorset.

JOURNEYMAN (Inside) seeks SITUATION; six years' experience Inside and Out; age 21; excellent references; 5 feet 10 inches; South preferred. C. OSBORN, High Street, Turvey, Bedford.

JOURNEYMAN (Inside) seeks SITUATION; six years' experience Inside and Out; age 20; Bothy preferred; good references. E. ARCHER, Ockham, Woking, Surrey.

JOURNEYMAN seeks SITUATION, Inside and Out; seven years' experience; age 21; Bothy preferred. E. BAILEY, The Garden, Swaffham Prior House, Cambs.

MR. FAGENCE, Nork Park, highly recommends H. THOMPSON as JOURNEYMAN (First, Inside); 10 years' good experience; good references; age 23. H. THOMPSON, The Lodge, Drapers, Margate.

GARDENER seeks SITUATION in Kitchen Garden and Lawns, or potting and watering in nursery; used to machines and scythe; 14 years' experience in all branches; single; abstainer; age 34; two years here; good reference. H. DAVIS, Victoria Nurseries, The Downs, Luton, Beds.

GARDENER seeks a SITUATION; age 21; experience in Herbaceous Borders, Rockery and Pleasure Grounds; good reference from present place. C. BRAIDEN, Gardens, Nunnery, Rusper, near Horsham.

GARDENER (Under, where two or three are kept); Inside or Inside and Out; age 20; 6 years' experience. L. TYLER, Preston, near Uppingham.

GARDENER (Under) seeks SITUATION, where 3 or 4 are kept; well up Inside and Out; 7 years' experience; age 21; excellent references. H. F., Ladds House, Sandhills, Witley, Surrey.

GARDENER (Under); private establishment or Grower Market Nursery; 14 years' experience, Inside and Out, private and nursery; good references. LEWINGTON, 169, High Street, Hampton Hill, S.W.

GARDENER (Under); four years' excellent character; Vegetables, Melons, Cucumbers, Tomatoes, Flowers, Herbaceous Borders; Inside and Out; Bothy preferred; age 24. W. CRACKNELL, Feltwell, Norfolk.

FLORIST ASSISTANT; age 17; three years' good reference from present employer; understand making up all designs. HENRY CLEMENTS, 26, Merritt Road, Brockley, London.

ORCHID GROWER requires SITUATION to take charge of collection or small place where Orchids speciality; experience Burford Lodge, etc.; excellent references. Apply S. BURROUGH, Royal Gardens, Sandringham.

SITUATION REQUIRED under a Gardener by a willing Lad; age 15. FRANK LANE, 125, Keslake Road, Kensal Rise, London, N.W.

WANTED, a SITUATION as Second, or Head, where two are kept; 14 years' experience, Inside and Out; 7 years last situation [illegible] leading hand, Inside; used to exhibition; highly recommended; 27½ years of age; married when suited. Apply GEORGE WIFFIN, 5, Alpha Road, Trumpington, Cambridge.

YOUNG MAN seeks SITUATION as IMPROVER (Inside and Out), or to help in Herbaceous Borders and Pleasure Grounds; age 23. Apply to H. JEFFERIES, Keevil, Trowbridge, Wilts.

YOUNG MAN, age 22, seeks SITUATION as GARDENER (Under); willing to [illegible] himself useful. Apply GARDENER, Gilstead [illegible], Brentwood, Essex.

YOUTH (17), strong and willing, seeks Situation as IMPROVER (Inside or Inside [illegible] Out); two years' experience in French gar[illegible] Hatch, Tisbury, Wilts; good reference. A[illegible] REED, Bishop's Fonthill, Salisbury, Wilts.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For MAY 27, 1911.

Please Repeat my Advertisement.

Name...

Address...

....

Date..................................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

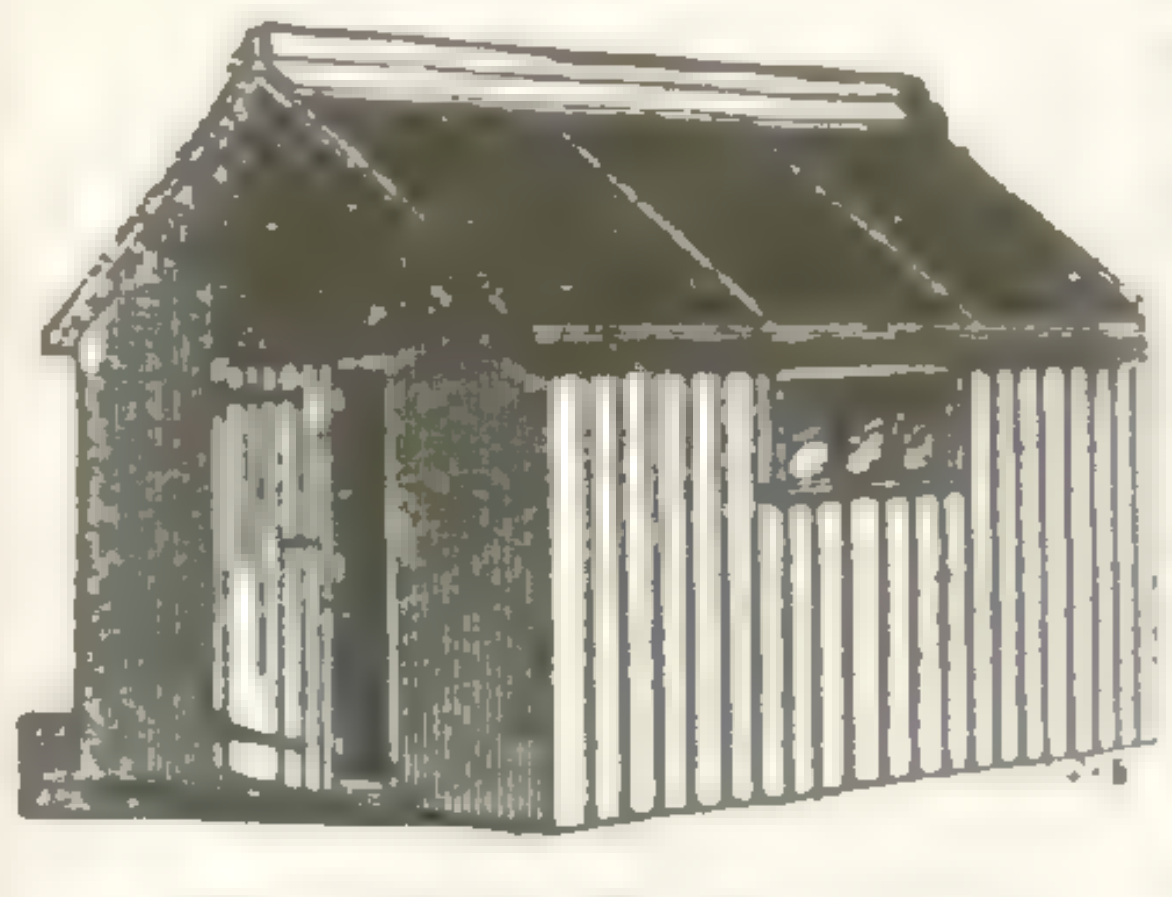
Situations Vacant.

WANTED, good all-round MAN (Single) immediately, age 24, for small range of houses, kitchen garden, and lawn; capable of running, or willing to learn, small Crossley oil engine for electric light; state age, wages, and reference, to J. A. FOWLER, Bridgfield, Halewood, Liverpool.

WANTED, JOURNEYMAN (Inside); must be smart in his work and well recommended; abstainer preferred; wages 16s. and Bothy (four in Bothy). Apply, stating age and experience, to JOHN PODMORE, Manor House Gardens, Little Berkhamstead, Hertford.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

PORTABLE BUILDINGS. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

SIZES.		Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.

Largest Makers of Portable Buildings,

ESTABLISHED 70 YEARS. **BEDFORD.**

Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

Extracts from 35th annual collection of reports:—

NATIVE GUANO for POTATOES, VEGETABLES, etc.

A. J. BEARD, Erdington: "Potatoes, splendid, free from disease. Best I ever had."—H. CHESTER, Nantwich: "Best onion manure I ever used. Grand for onion fly."

NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc.

J. CANT, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. FRAMPTON, Titchfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED**, 29, New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted.

ONCE USED. ALWAYS USED.

The 'PATTISSON' LAWN BOOTS

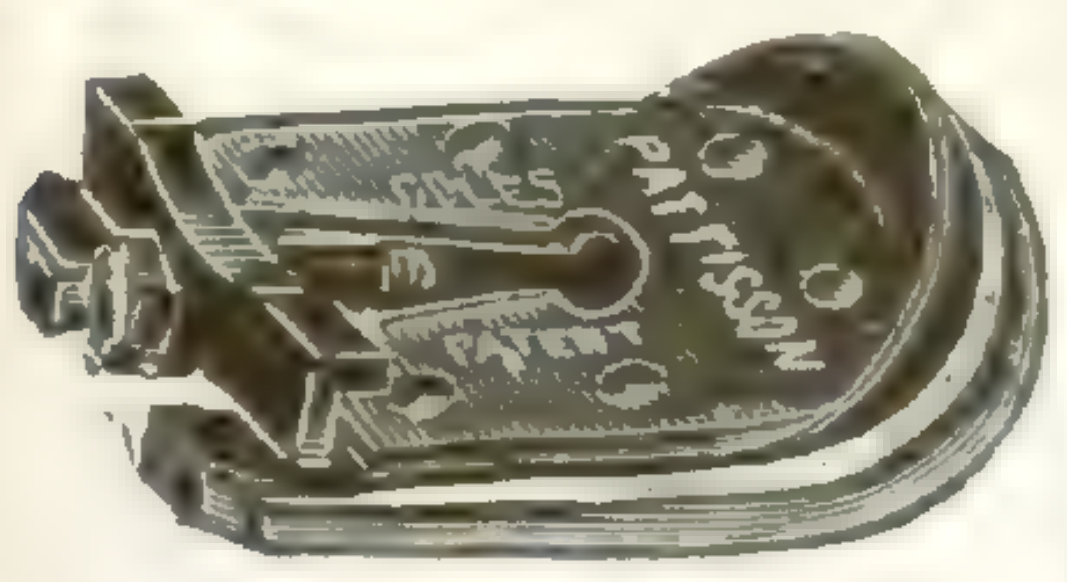


FIG. 1.

Simplest! Strongest! Most Economical!

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS

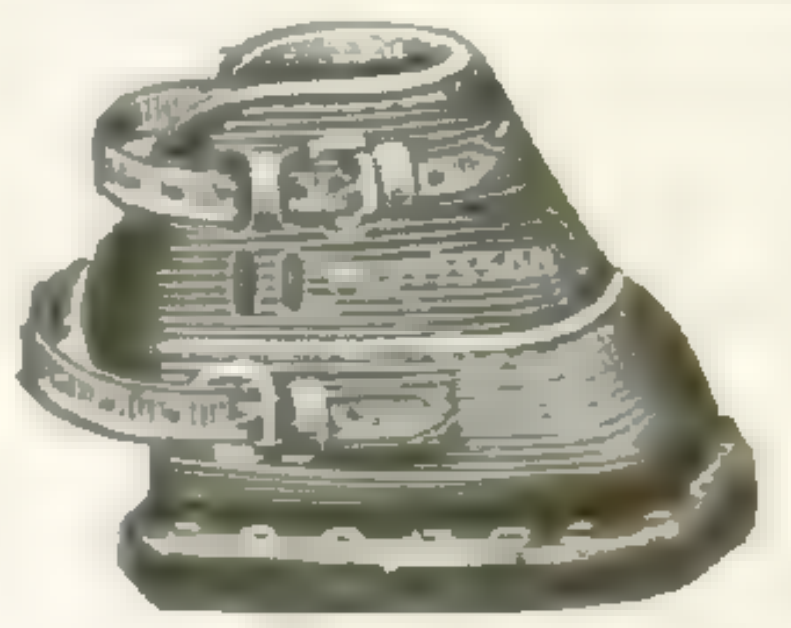


FIG. 2.

Silver Medal—
Royal Horticultural Society.

HUNDREDS OF TESTIMONIALS.

The Field says: **"As good as anything that could be devised."**

Illustrated Price List from—

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM, S.W.

1s. FOR 50 YARDS, TANNED GARDEN NETTING; satisfactory, or cash returned. Small mesh, 50 yards by 1 yard, 1s.; 50 by 2 yards, 2s.; 50 by 3, 3s.; 25 by 2, 1s.; either carr. paid. CARTER and CO., Net Works, Hove, Sussex.

WHY BUY FOREIGN DOORS?—We make all kinds of woodwork to compete against foreign. Timber, portable houses, woodwork supplied for United Kingdom or export. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

GARDEN NETTING.—Protect your Strawberries from the ravages of birds. Small mesh 40 yds. long, 2 yds. wide, 2s.; 40 x 3, 3s.; 40 x 4, 4s.; 40 x 5, 5s.; 40 x 6, 6s.; carriage paid on orders of 5s. and over. HENRY ROBINSON, Net Works, Rye, Sussex.

MERRYWEATHER'S

614 PUMP

IS THE

Gardener's Friend.

Easy to Work.
Simplicity Itself.

Write or Call—

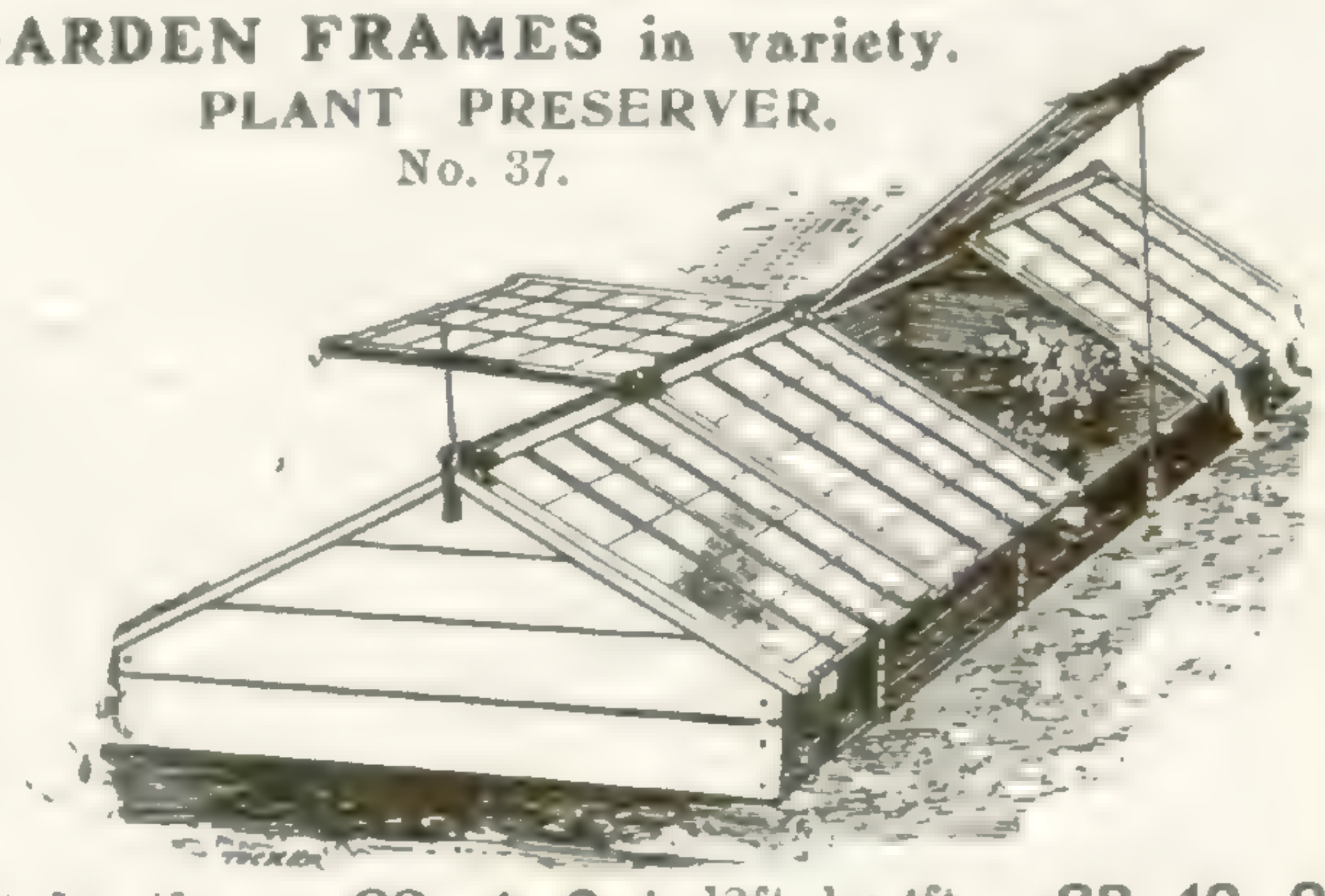
63, Long Acre, LONDON, W.C.

WM. DUNCAN TUCKER & SONS, LTD.

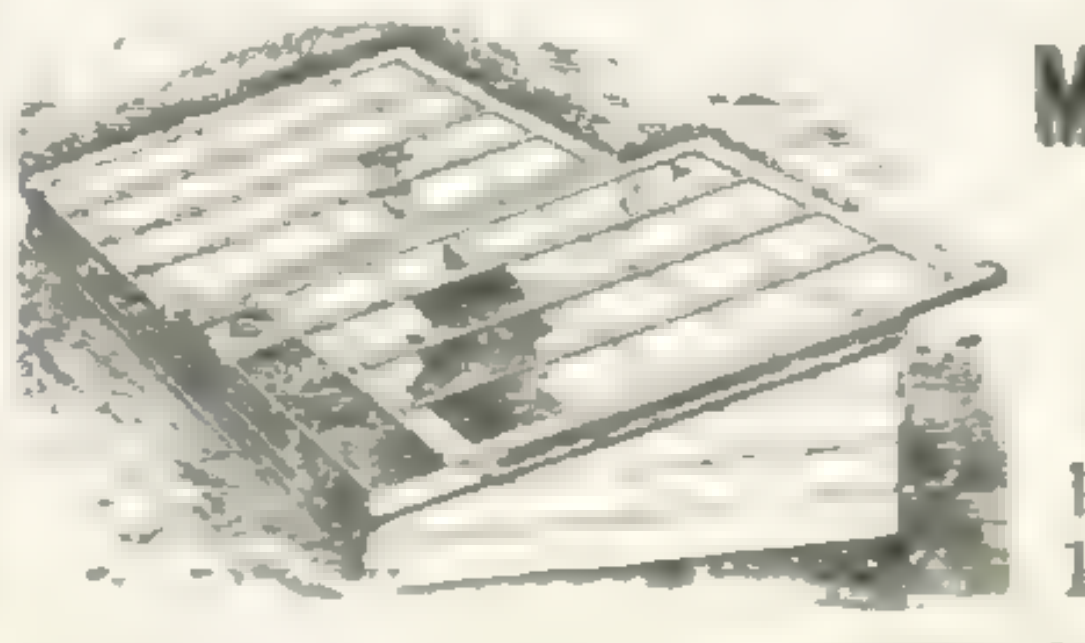
Horticultural Builders, 27, Cannon St., London, E.C.
Works: Tottenham.

GARDEN FRAMES in variety.

PLANT PRESERVER.
No. 37.



6ft. by 4ft.	£2 1 0	12ft. by 4ft.	£3 10 0
8ft. by 6ft.	3 17 0	16ft. by 6ft.	7 0 0

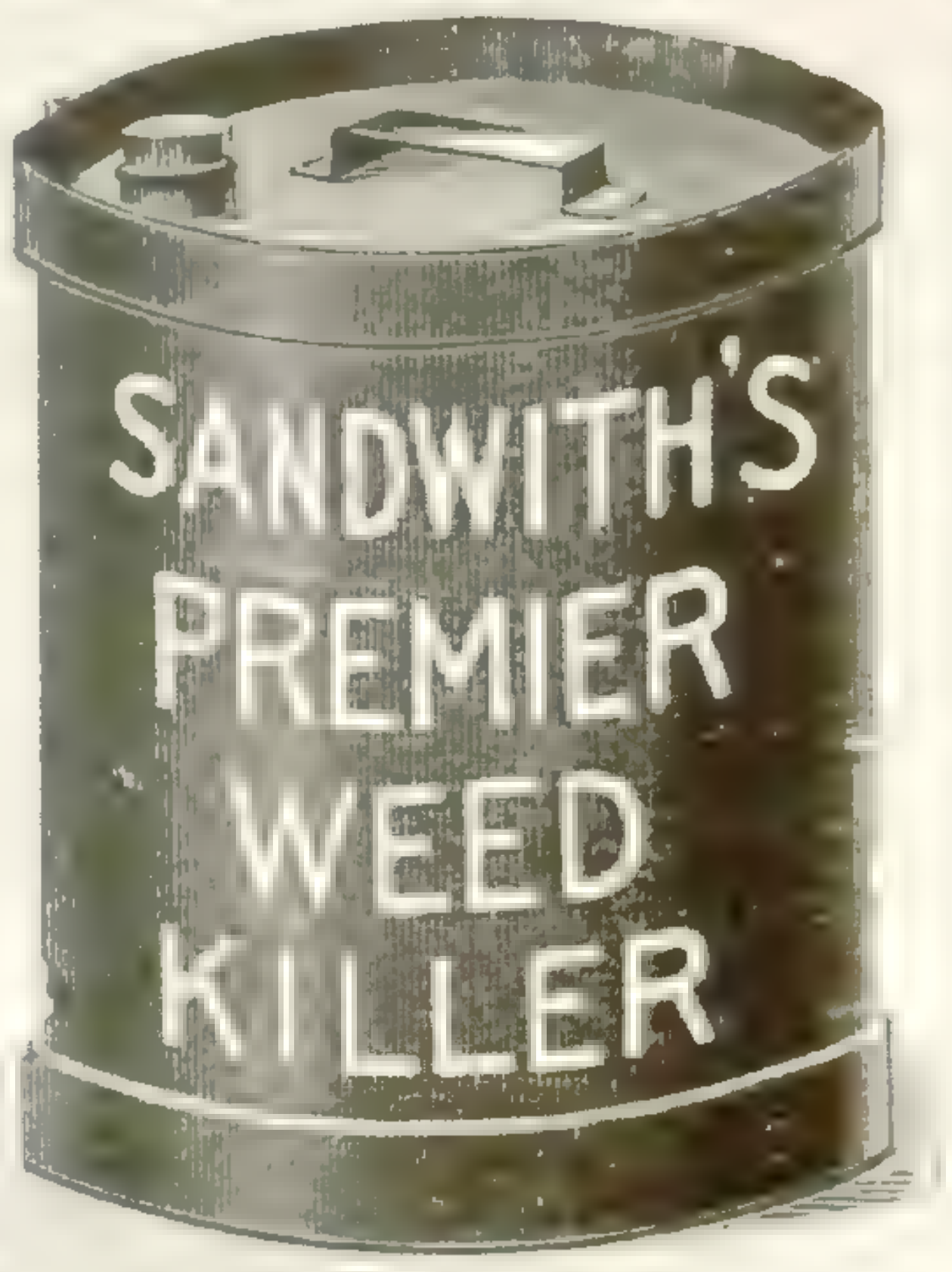


Melon & Cucumber Frame
No. 38.

6ft. by 4ft.	£1 14 0
8ft. b. 6ft.	2 14 0
12ft. by 6ft.	3 14 0
16ft. by 6ft.	4 14 0

Carriage paid to most stations on orders of 40/- in value.
Please mention this paper.

THE FAVOURITE WEED KILLER.



As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for **6/-**; drum, **2/-**. 12 galls. for **16/-**; drum, **6/-**. 20 galls. for **26/8**; drum, **10/-**. 40 galls. for **50/-**; drum, **20/-**.

EITHER LIQUID OR POWDER.

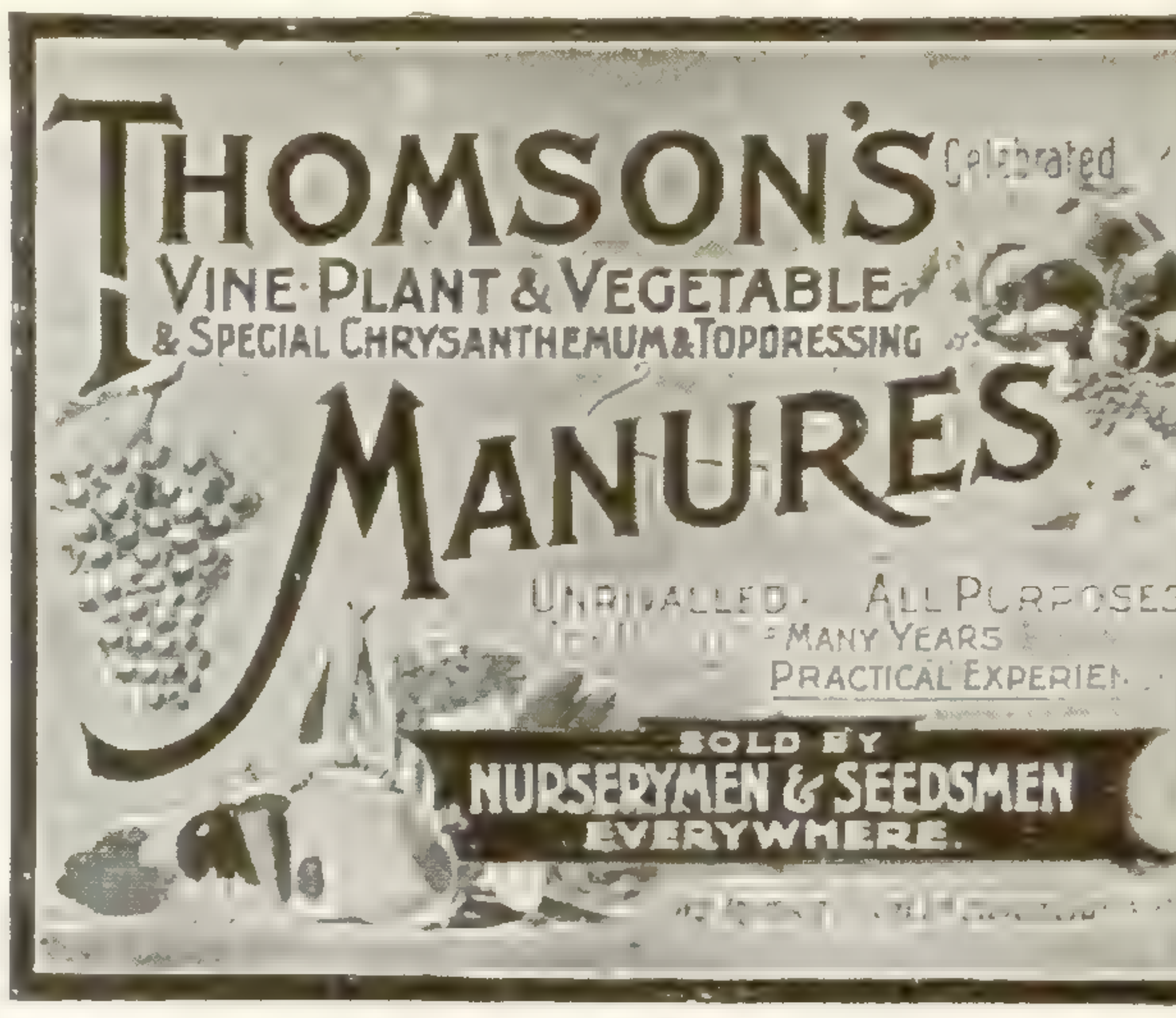
Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,

The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.



MANY YEARS REPUTATION.

EUREKA WEED KILLER

LASTING RESULTS—NO NEW EXPERIMENT.

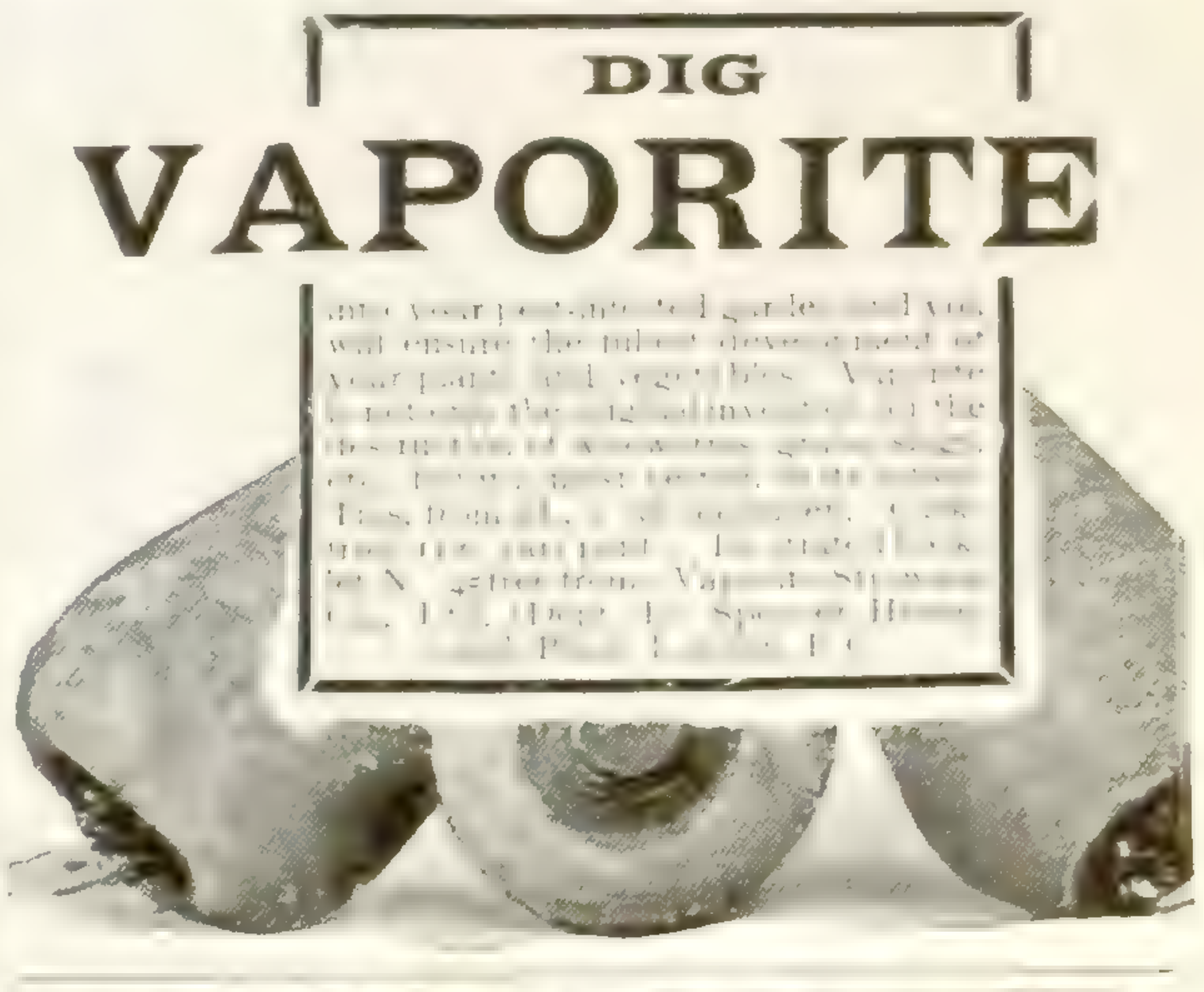
1/9 TIN FOR 25 GALLONS	**6/-** TIN FOR 100 GALLONS	LARGER SIZES AT LOWER RATES

SOLD BY AGENTS.
MANUFACTURERS: TOMLINSON & HAYWARD LTD LINCOLN.
IF ANY DIFFICULTY SENT DIRECT—PAID

GARDEN ETC PESTS

EUREKATINE FUMIGANT
EUREKA INSECT SPRAY
EUREKA SOIL FUME
EUREKA LAWN SAND

AND OTHER USEFUL ARTICLES MANUFACTURED BY
TOMLINSON & HAYWARD LTD LINCOLN.
MAKERS OF THE WELL KNOWN "EUREKA" WEED KILLER.



Phytobroma

Barr's New Plant Food
For Flowers Vegetables and Fruit of highest quality & guaranteed analysis

Per cwt., **20/-**; ½ cwt., **12/6**; 28lb., **7/6**; 14lb., **4/6**; 7lb., **2/6**; Sample Tins, **1/-.**

Prepaid orders for 28lbs. and upwards, Carriage Paid. Circular, with full particulars, on application.

BARR and SONS,

11, 12, and 13, KING STREET, COVENT GARDEN, LONDON.

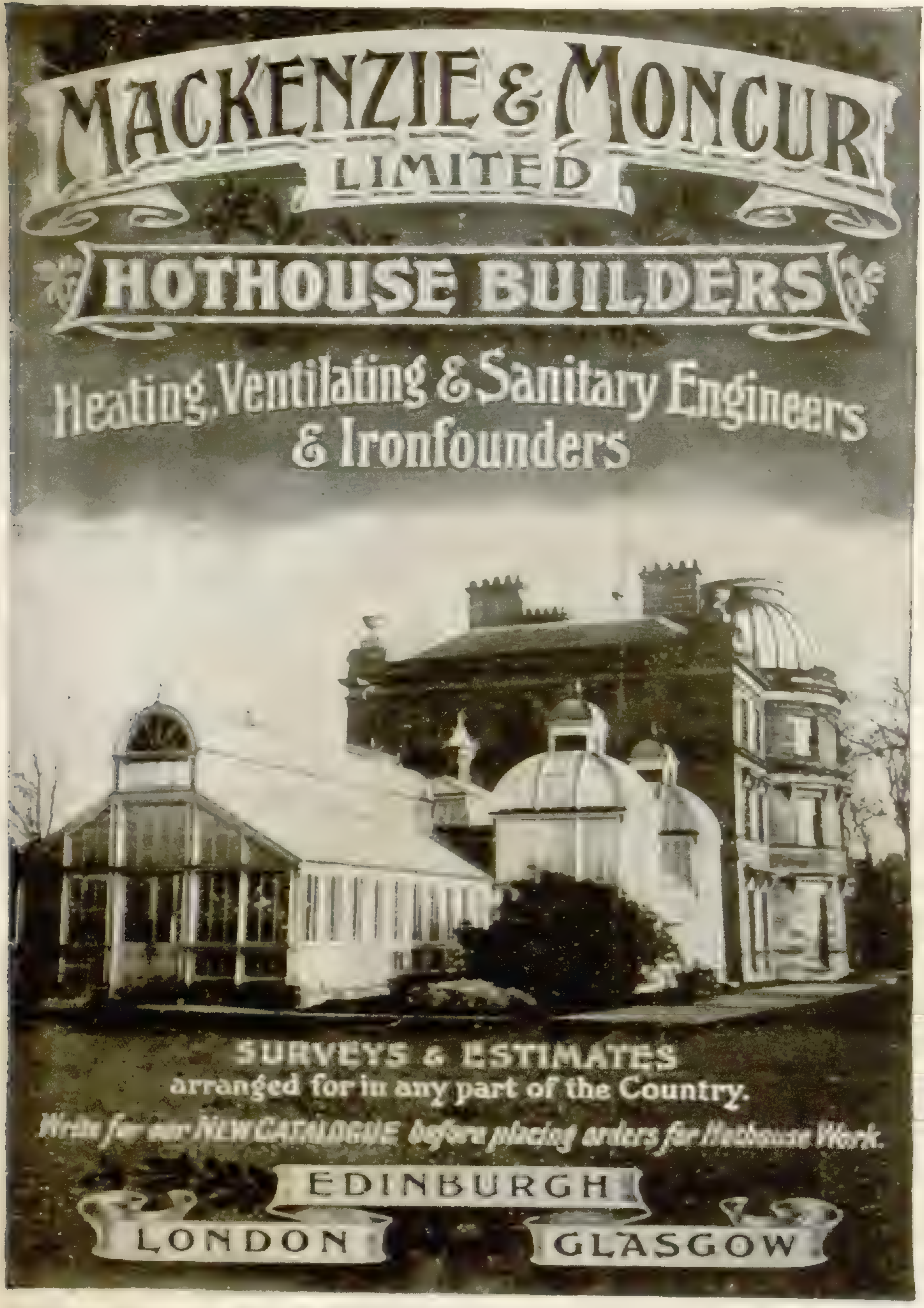
GREENHOUSES and GARDEN FURNITURE. — Distinctive Designs and Finished Workmanship. Write NOW for illustrated Catalogue CARTER and HOWARD, Fife House, Kingston-on-Thames.

GARDENERS' OPPORTUNITY.—Select Fruiterers, established 30 years, owner retiring, nice home, guaranteed genuine living, everything £95 only. Particulars, "NAVY CUT," 150, Kings Road, Reading.

PUBLISHERS' ANNOUNCEMENTS.

THE GARDENERS' MAGAZINE may be obtained by order from all Newsagents, price Twopence, every Saturday. If any difficulty be found, a copy will be posted weekly direct from the Publisher, 148 and 149, Aldersgate Street, London, on the following terms: Twelve Months, 10s. 6d.; Six Months 5s. 6d.

INDEX and Title Page to Vol. LIII. (comprising the weekly numbers from January to December, 1910), price 2d., by post 2½d.



MACKENZIE & MONCUR
LIMITED
HOTHOUSE BUILDERS
Heating, Ventilating & Sanitary Engineers
& Ironfounders

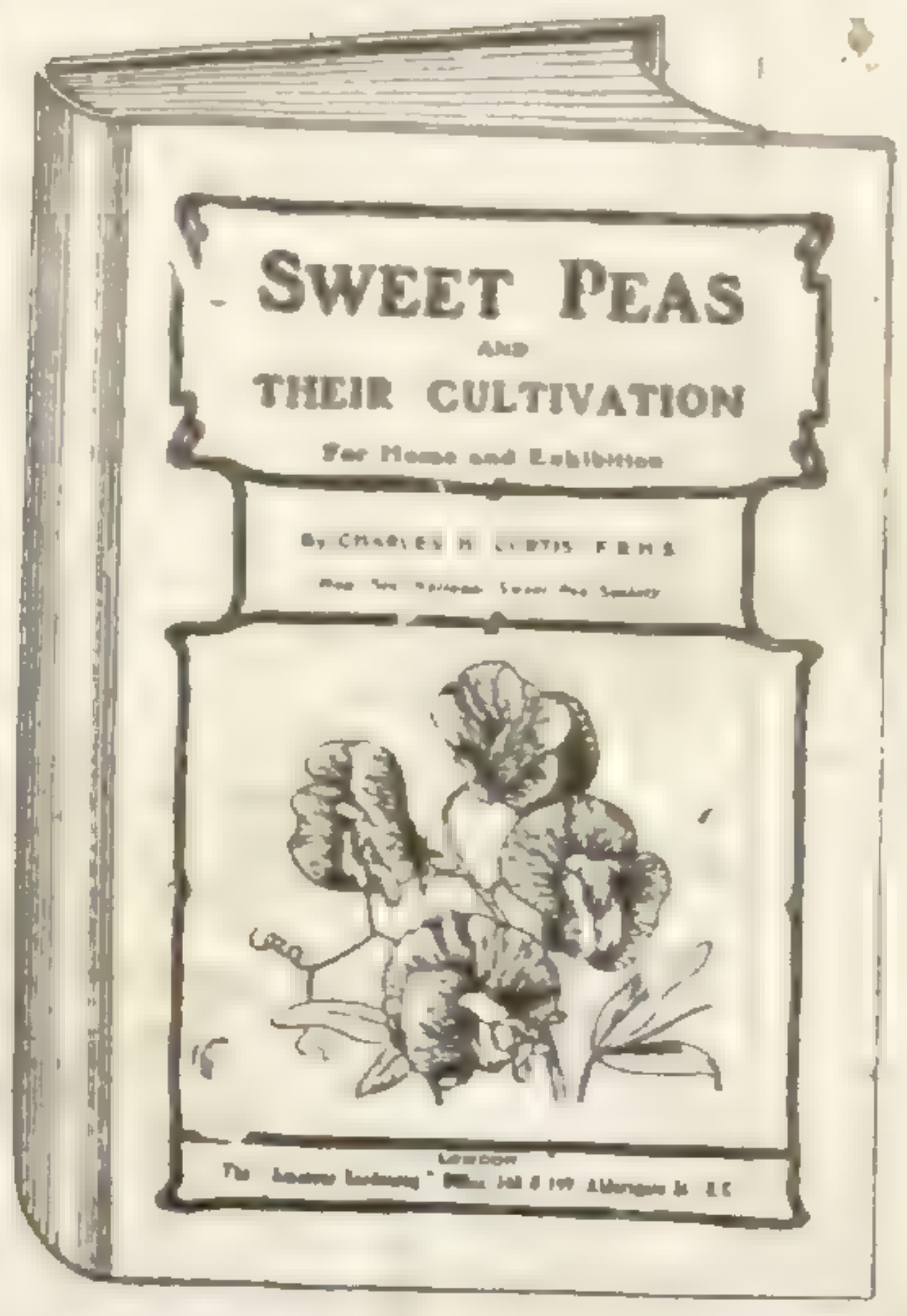
SURVEYS & ESTIMATES
arranged for in any part of the Country.
Write for our NEW CATALOGUE before placing orders for Hothouse Work.
EDINBURGH
LONDON GLASGOW

THE BEST BOOK ON THE SUBJECT.

THIRD EDITION. Price **1/-** net, by post **1/2**. Cloth **1/6**, by post **1/8**

SWEET PEAS
AND THEIR
CULTIVATION
FOR HOME AND EXHIBITION.

By
CHAS. H. CURTIS, F.R.H.S.,
Hon. Sec. National Sweet Pea Society.



- THE BEST SWEET PEAS.
- HOW TO GROW THEM.
- MANURING.
- WATERING.
- STAKING AND TYING.
- RAISING NEW VARIETIES.
- DISEASES AND INSECT PESTS.
- EXHIBITING.
- Etc., Etc.

Fully Illustrated.

ORDER FORM.

To the Publishers, "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, LONDON.

Please send me a copy of "SWEET PEAS AND THEIR CULTIVATION" by post, for which I enclose remittance of 1/2 (if bound in cloth, 1/8).

Name ....

Address ....

....

TELEGRAMS:—
"HORTULANUS."

BEST WORKMANSHIP AND LOWEST PRICES.

TELEPHONE:
5947, Westminster.

J. WEEKS & Co., CHELSEA,

ESTABLISHED 1808.

THE OLDEST FIRM IN THE TRADE FOR

CONSERVATORIES, HOT HOUSES, FRUIT HOUSES.

Plans prepared for Glass Houses and Estate Buildings of every Description, Motor Car Houses; etc. Estimates for Painting and Repairs.

MAKERS OF WEEKS' PATENT "DUPLEX" UPRIGHT TUBULAR BOILERS.

CONSULTING ENGINEERS AND SPECIALISTS IN

HEATING AND VENTILATION FOR ANY KIND OF BUILDING.

PLEASE ADDRESS ALL ENQUIRIES TO HEAD OFFICE:

72 VICTORIA STREET, WESTMINSTER, S.W.

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

THE TEMPLE SHOW Illustrated Report.

THE GARDENERS' MAGAZINE.

No. 3,004.
Vol. LIV.
(Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.)

SATURDAY, MAY 27, 1911.

(10/6 per Ann. Post Free. To Foreign Countries, 15/-.) Twopence

BARR'S SEEDS FOR MAY and JUNE SOWING.—Finest strains of Antirrhinums, Aquilegias, Campanulas, Canterbury Bells, Calceolarias, Cinerarias, Delphiniums, Hollyhocks, Lupins, Pansies, Primulas, Stocks, Wallflowers, etc. Special list on application. BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, S.W., is arranging this Spring for a large selection of Blinds for Conservatories, Greenhouses, Private Houses, Verandahs, etc., and will be happy to send samples, prints, and prices on receipt of a Postcard, Telephone Call (201 Western), letter, or wire "Gray, Chelsea, London."

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

GERBERA.—ADNET'S HYBRIDS, awarded Silver-Gilt Medal R.H.S.; Seed, 1s. 6d. pkt.; plants, 3-year-old, 15s.; extra strong, 20s. doz. ELLISON, 57, West Bromwich.

MUSHROOMS.—Now is the time to plant Spawn in pastures. To protect the crop by making it a cultivated one, get BARTER'S Specially-prepared Spawn, with instructions, in 10s. 6d., 21s., and 42s. cases. Carriage paid. Cash with orders to
JOHN F. BARTER, LTD., Wembley, Middlesex.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.
H. BURNETT,
Carnation Specialist, Guernsey.

PERENNIALS, UNIQUE COLLECTION,
including
ALPINES AND AQUATICS.
Also RARER SHRUBS, HIMALAYAN RHODODENDRONS, and Others.
Write for Catalogue. G. REUTHE, Keston, Kent.

DAHLIAS.
CACTUS, PÆONY, POMPONE, and SHOW, for GARDEN or EXHIBITION.
Prices and Catalogues free on application.

J. T. WEST, Tower Hill, Brentwood.

WEEKS'S DUPLEX UPRIGHT TUBULAR BOILERS, for full advertisement see page x.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-work, showing screens, wall panels, window surrounds, arches, arbors, etc., post free. BOULTON and PAUL, Ltd., Norwich.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

WEBBS' WALLFLOWERS.
Kinver Favourite (blood-red), 6d. per pkt.
Canary Bird (golden-yellow), 1s. per pkt.
Eastern Queen (salmon shaded), 1s. per pkt.
Cloth of Gold (bright yellow), 6d. per pkt.
Ruby Gem (ruby-violet), 1s. per pkt.
Vulcan (velvety crimson), 1s. per pkt.
Double (mixed), 1s. per packet.
Universal (single, mixed), 1s. per pkt.
WEBB AND SONS, The King's Seedsmen,
WORDSLEY, STOURBRIDGE.

BUNYARD'S NEW CATALOGUES.
The following have been recently published, and contain all worthy new varieties. Post free on application.

BUNYARD'S
CLIMBING PLANTS in Pots, Illustrated.

BUNYARD'S
HERBACEOUS PLANTS, Illustrated.

BUNYARD'S
BEDDING PLANTS, Illustrated.

GEO. BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.

LAXTON'S FRUIT TREE, STRAWBERRY, SEED, ROSE, HERBACEOUS, TREE, BULB, and SMALL FRUIT CATALOGUES, with full illustrations and descriptions, gratis on application.

LAXTON BROTHERS, Bedford.

RUSTIC SUMMER HOUSES, trellis-work, Fencing, Pergolas, Arches, Seats, Bridges, Log Cabins, Loggias, etc. Send for our new LOG CABIN and RUSTIC CATALOGUE (just published), sent post free. BOULTON and PAUL, Ltd., Norwich.

CUT BOX TREES.—9 different designs, 31s. 6d. to £5 5s., half regular price; photos 2s., refunded when photo returned. ELLISON, 57, West Bromwich.

CLAY'S MANURES, CRUSHED BONES
(See page v.)
CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

NOTICE — Always use PORTER'S IMPROVED COIL STAKES for Carnations, no tying required; last a lifetime. Sample doz. with price list 1s., carriage paid. A. PORTER, Stone House, Maidstone.

ORCHID PEAT.—Hardwood Brown Fibrous, RHODODENDRON and DUST PEAT, SPHAGNUM MOSS.
Apply C. HALL, 1, Worgret, Wareham, Dorset.

GARDEN NETTING (best tanned only).—25 yds. x 8yds.; 50 x 4yds.; 100 x 2 yds., 8s. each. 50 x 2-yds.; 25 x 4 yds.; 100 x 1 yd., 4s. each. All sizes, large or small, at 1s. 20 sq. yds. Quality guaranteed.—EVANS, 14, Beresford Rd., Lowestoft.

POULTRY AND KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

GARDEN ROLLERS, double cylinders, solid ends, rounded edges 14in. by 14in., 1¾cwts., 24s. 6d.; 16in. by 16in., 2cwts., 26s.; 20in. by 20in., 3cwts., 36s.; 24in. by 24in., 4½cwts., 50s. each; carriage paid any station in Great Britain. Lists free. J. ATTWOOD, Stourbridge.

A MARVELLOUS NEW COLOUR IN WALLFLOWERS.
SUTTON'S FIRE KING.
Vivid orange, the most brilliant colour attained in the flower.
Per packet 1s. 6d., post free.
Mr. R. J. Walker, gardener to J. Stewart Robertson, Esq., writes: "Fire King Wallflower is the most effective variety I have. It is grand."

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

NOW IS THE TIME TO PLANT KELWAY'S GAILLARDIAS, the rich golden blooms of which are noted for their powers of endurance during the driest season, and as cut flowers retain their freshness and beauty long after they have been gathered. They flourish with a minimum of attention, and give abundant bloom the same year that they are planted. Choice named collections, 12s. and 18s. a dozen.
KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
From ———, Esq., Guildford.
"I may say that your Illustrated Catalogue is without doubt the finest book of the sort I have had the pleasure of seeing."

100,000 CACTUS DAHLIAS, new Pæony-flowered Dahlias, Chrysanthemums, American Tree Carnations, and Violas; all exceptionally good, strong plants and best varieties; grown especially for exhibitors. Send for catalogues, gratis, and post free. — JOHN E. KNIGHT, Nurseryman, Wolverhampton.

JAMES SENDALL and CO., Cambridge; Conservatories; Vineries, Garden Frames; Heating Engineers. Surveys made and Plans prepared to suit any position. Illustrated List free. Telegrams: "Sendall, Cambridge." 'Phone, 511.

CONSERVATORIES AND WINTER GARDENS, Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue free.—BOULTON and PAUL, Lim., Norwich. See our Stand at the Royal Agricultural Society's Show, to be held at Norwich in June.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page ix.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.
XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.
XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown both poisonous and non-poisonous are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N.S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

BEDDING PLANTS.

R. H BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Chrysanthemums, Dahlias and Summer-Bedding Plants.

CARNATIONS.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

RHODODENDRONS.

DICKSONS & CO.,
1, Waterloo Place, Edinburgh.
Pink Pearls, Ponticums, choice Hybrids. Write.

ROSES.

R. H. BATH, Ltd.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

SAMUEL M'GREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

SUN BLINDS SHADINGS

Including all the Newest Designs, made on the premises, and fixed by our own men.

LATH ROLLER BLINDS,

ORIENTAL BAMBOO BLINDS,

TIFFANY & STANDARD TICKS

SEND for our Complete Range of Samples POST FREE.

WEED KILLER

"ELECTRIC."

50 per cent. Saved in Labour.

Destroys all Weeds.
Brightens the Walks and Drives.

Prices, Liquid, Ordinary Strength.

	£	s.	d.
10 galls. making with water 260 galls.	0	15	0
20 ,, ,, ,, 520 ,,	1	7	6
40 ,, ,, ,, 1,040 ,,	2	12	0
80 ,, ,, ,, 2,080 ,,	5	0	0

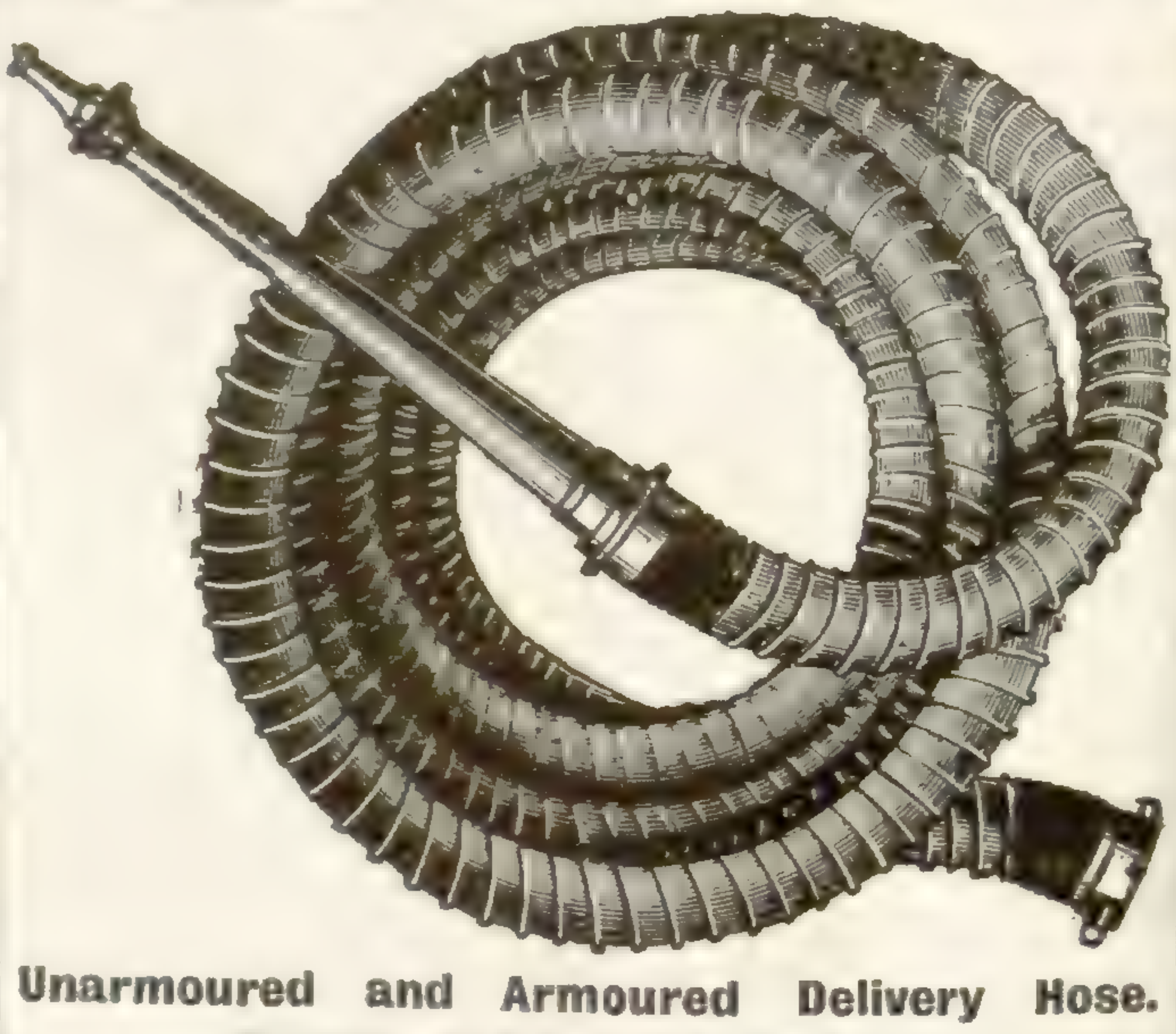
Prices, Liquid, Double Strength.

	£	s.	d.
5 galls. making with water 255 galls.	0	16	0
10 ,, ,, ,, 510 ,,	1	8	0
20 ,, ,, ,, 1,020 ,,	2	12	0
40 ,, ,, ,, 2,040 ,,	4	18	0
80 ,, ,, ,, 4,080 ,,	9	10	0

Prices, Powder, Ordinary Strength.

	£	s.	d.
1 tin sufficient to make 25 galls.	0	2	0
4 ,, ,, ,, 100 ,,	0	7	0
8 ,, ,, ,, 200 ,,	0	12	0
12 ,, ,, ,, 300 ,,	0	17	0
20 ,, ,, ,, 500 ,,	1	7	6
40 ,, ,, ,, 1,000 ,,	2	12	0

THE CHEAPEST HOUSE IN TRADE FOR GARDEN AND DELIVERY HOSE



Unarmoured and Armoured Delivery Hose.
Samples and Prices by Return.

BEFORE YOU BUY

Send for Particulars and Prices of our Special Five Leading Lines.
The Best is the Cheapest.

LAWN MOWERS

AT WHOLESALE PRICES.
Carriage Paid to any Station in Great Britain.

Send for our List of 50 Leading Designs, also our Up-to-date Catalogue with over 1,000 Illustrations of Garden Requsites.

Dermatine Hose.

Latest Introduction.
LASTS LONGER THAN RUBBER.
As supplied by us to the ROYAL GARDENS

All Goods sent Carriage Paid in Great Britain on Orders of 5s. and upwards.

WM. WOOD & SON, Ltd. (Royal Warrant Holders to His Majesty the King), WOOD GREEN, LONDON.

TELEPHONE—PALMERS GREEN 377 & 8. TELEGRAMS—"FUNGHETO, LONDON."

ROCK, ALPINE, WALL, WATER
and all kinds of
LANDSCAPE GARDENING
Carried out in any part of the country by
H. HEMSLEY, F.R.H.S., Crawley, Sussex.
Nurseries: Main Brighton Road.

FLOWER POTS,
SAUCERS, SEED PANS, RHUBARB AND SEAKALE POTS, RUSTIC WARE, VASES, PEDESTALS etc., etc.
Our Pots are Low in Price and rich in Colour.
Amateurs should try our FAMOUS CRATES OF POTS.
7/6, 10/6, 15/-, and 21/-.
NO BETTER VALUE OFFERED IN THE COUNTRY.
Catalogue Free. Orders sent off same day.
Buy from the Makers—
HERBERTS PARK POTTERY CO., DARLASTON, STAFFS

EPPS'S SELECTED PEAT
For Choice Plants, Ferns, Rhododendrons, &c., &c.
SPECIAL ORCHID PEAT.
Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum. Charcoal, and all kinds of Garden Sundries.
Prices on application to
EPPS & CO., Ringwood, HANTS.

Sales by Auction.

SALES NEXT WEEK.

WEDNESDAY NEXT, May 31st, at One o'clock.—Large quantities of Herbaceous and Border Plants, Liliums, Gladiolus, Begonias, and other Hardy Bulbs; Peat, Fibre, and Leaf-mould.

At Three o'clock.—100 lots of Ornamental Palms, Standard Bays, and other Decorative Plants, Stove and Greenhouse Plants, Pot Roses, etc.

FRIDAY NEXT, June 2nd, at a Quarter to One o'clock.—Importations of Cattleyas Dowiana, Skinneri, and Citrina, Dendrobiums, Oncidiums, and others; choice Established Orchids in variety. Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view morning of sale, and catalogues had.

To Nurserymen and Fruit Growers.—TWYFORD, BERKS, about 1½ miles from the station, on the main G.W.Rly., about 8 miles from Maidenhead and 6 from Reading, a compact little FREEHOLD PROPERTY, known as HURST NURSERIES, comprising a picturesque cottage residence, containing 2 reception, bath, and 5 bedrooms, together with stabling, outbuildings, 5 large glasshouses (heated), and about 3½ acres of garden, planted with a Great Variety of FRUIT TREES and bushes, and affording an unusual opportunity of ACQUIRING as a GOING CONCERN a LUCRATIVE LITTLE NURSERYMAN, and FRUIT GROWER'S BUSINESS.—Messrs.

GIDDY and GIDDY will SELL the above, BY AUCTION, at the Mart, E.C., on June 1st next (unless previously disposed of). Full particulars of the Auctioneers, Maidenhead; and 11a, Regent Street, S.W.

EDMUNDS and CO.—Specialities: Early vegetable plants, etc.; all hard grown in cold frames; lights off all day and very safe night; Tomato plants, Carter's Sunrise, Laxton's Open Air, Edmund's Supreme, etc., 12 for 1s., 25 for 1s. 9d., 50 3s. 3d., 100 4s. 6d.; Ridge Cucumbers, 6 for 1s., 1s. 9d. doz.; Celery, Clayworth's Prize Pink, extra strong, transplanted, ready for trenches, 1s. 6d. 100; bush Marrow plants, green or white, fine strong plants, 12 for 1s.; Pumpkins, same price; also all manner of Bedding Plants, Geraniums, Dahlias, Annuals, etc., etc.; write for our fully illustrated catalogue of up-to-date novelties for summer bedding; one of the finest published; post free on application. EDMUNDS and CO., Milton, Cambridge.

SPAR GRAVEL for Paths, Drives, &c. White, strong quality, broken and properly graded; also Rockery Stone.
BECK & CO., Stone Merchants, Matlock.

SASH BARS.—Special lines in certain lengths only, 1½ by 1, 2s. 6d. 100ft.; 3 by 1½, 5s. 9d. 100ft.; quotations for special lengths or for any kind of timber, garden lights, greenhouses, and woodwork. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

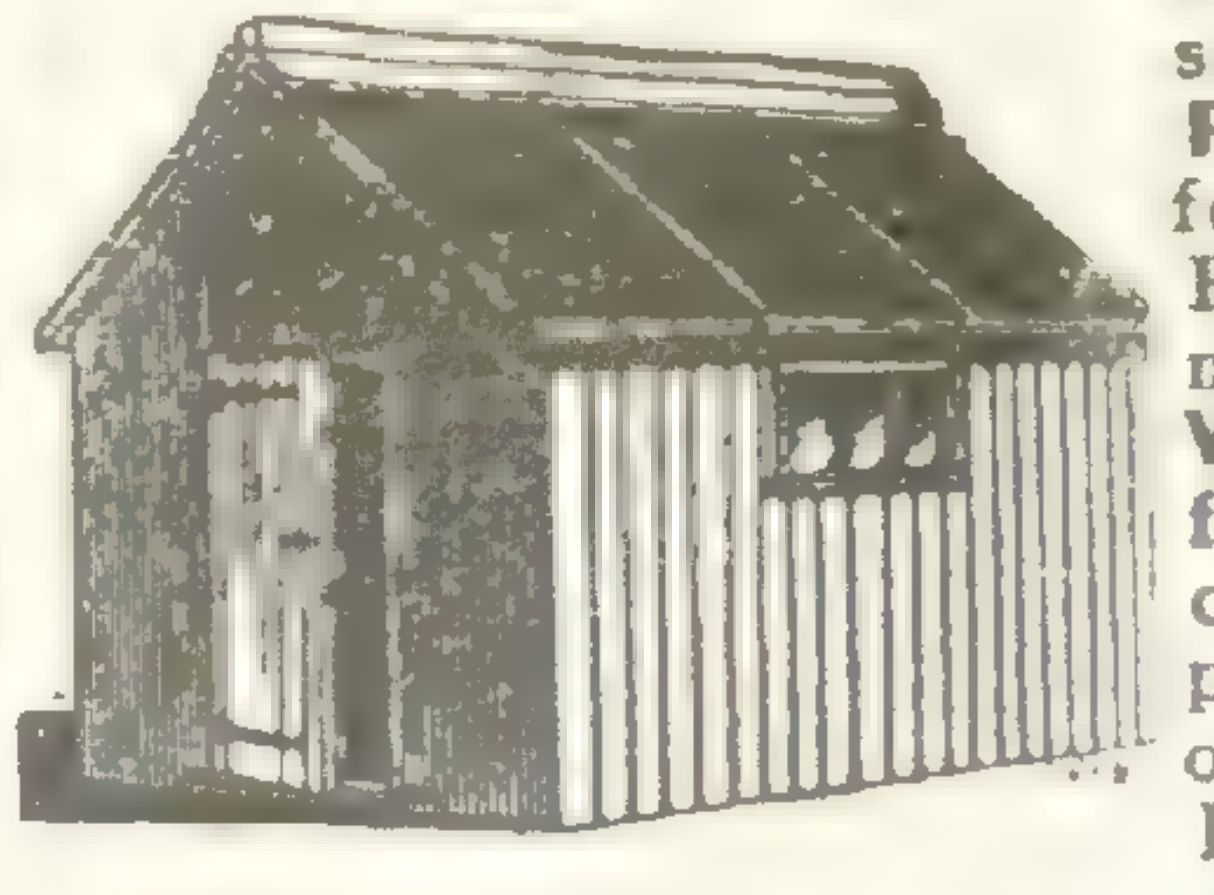
GREENHOUSES and GARDEN FURNITURE. — Distinctive Designs and Finished Workmanship. Write NOW for illustrated Catalogue. CARTER and HOWARD, Fife House, Kingston-on Thames.

BOTTLING FRUIT. Patent Apparatus Complete. **5/6**

Efficient, Reliable, Simple, Easily Operated.
WICKHAM and Co., Dept. M, Ware, Herts.

THE CHEAPEST IN ENGLAND.

NO. 60.


Copyright Registered.

Portable Buildings. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

Sizes.		Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
Established 70 Years. **BEDFORD.**
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

MANY YEARS REPUTATION.

EUREKA WEED KILLER

LASTING RESULTS — NO NEW EXPERIMENT.

1/9 TIN FOR 25 GALLONS | **6/-** TIN FOR 100 GALLONS | LARGER SIZES AT LOWER RATES

SOLD BY AGENTS. MANUFACTURERS: TOMLINSON & HAYWARD Ltd LINCOLN.
IF ANY DIFFICULTY SENT DIRECT—PAID

GARDEN ETC PESTS

EUREKATINE FUMIGANT
EUREKA INSECT SPRAY
EUREKA SOIL FUME
EUREKA LAWN SAND

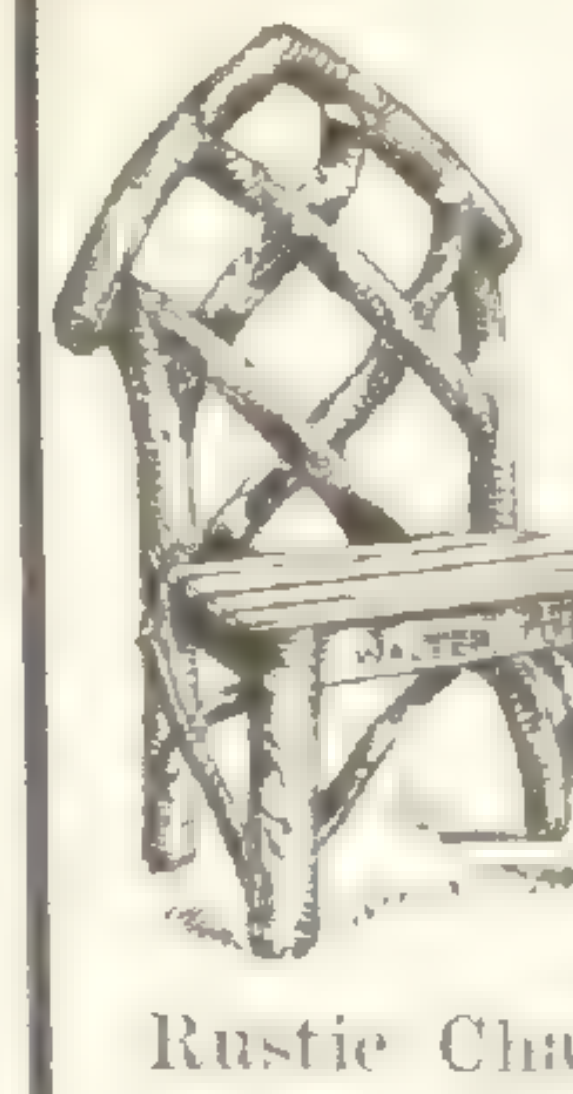
AND OTHER USEFUL ARTICLES MANUFACTURED BY:
TOMLINSON & HAYWARD Ltd LINCOLN.
MAKERS OF THE WELL KNOWN "EUREKA" WEED KILLER.

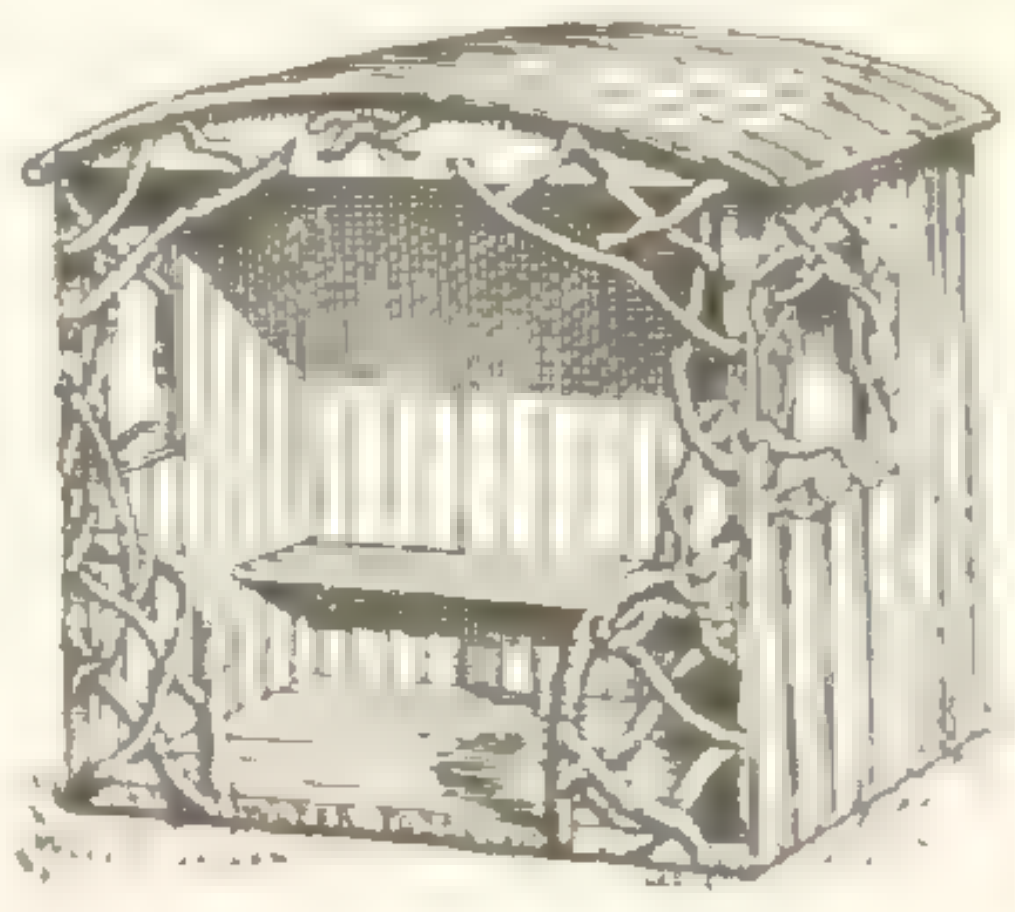
CACTI CUTTINGS, various, 1s. per doz. Named, 2s. 6d. per doz., post free. Plants from 1s. each. Now is the time to start a collection. IVANHOE, 7, Hartington Villas, Hove, Brighton.

GARDEN AND TENNIS NETS (best) tanned only, small mesh).—50 x 8yds., 17s.; 25 x 8yds., 50 x 4yds., 100 x 2yds., 8s. each; 100 x 1yd., 50 x 2yds., 25 x 4yds., 4s. each. Any size to order. Tennis Netting (corded), 25 x 2, 6s. 6d.; 25 x 3, 7s. 6d.; 25 x 4yd., 8s. 6d. Write for Price List. L. WREN and SON, Net Merchants, 139, High Street, Lowestoft. Established 1863.

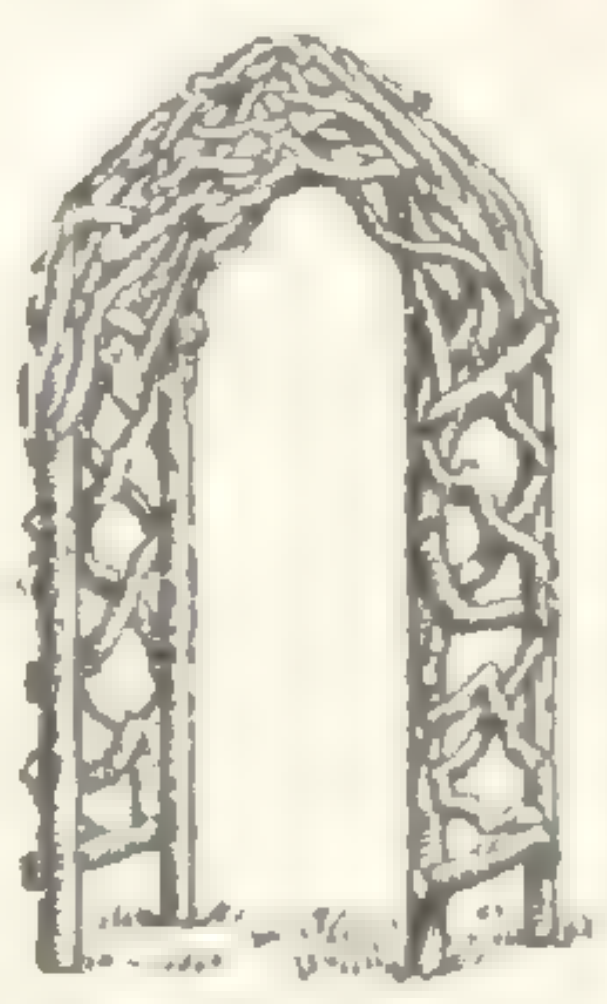
Your Opportunity

to make your
GARDEN ATTRACTIVE


Rustic Chairs from 3/6

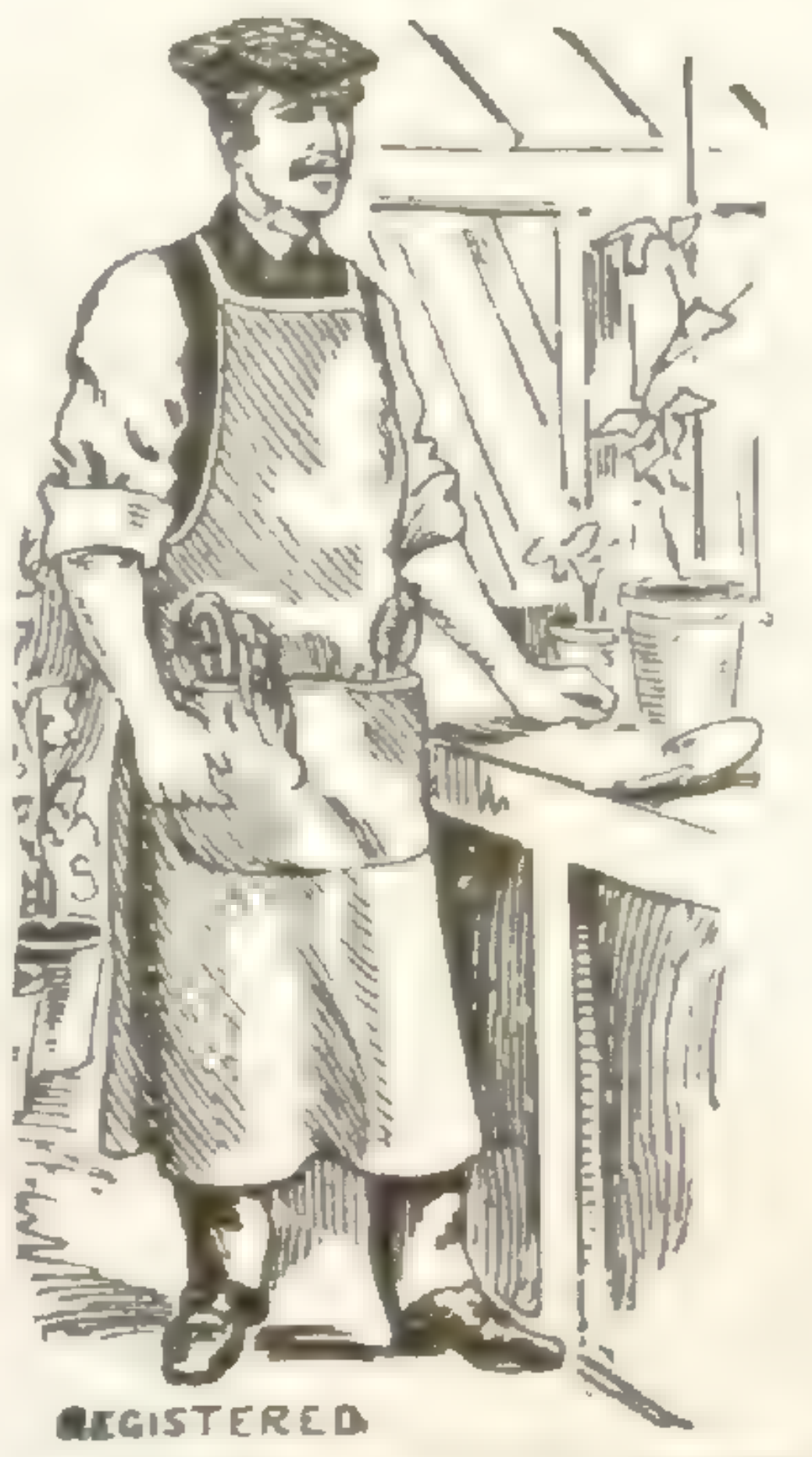

Pretty Rustic Arbours from £2 2s. 0d.

DO IT NOW.
Send for Free Illustrated List
And Save Money.


Rustic Arches from 5/-

Walter Todd,
"Rustic Specialist,"
SMETHWICK, Staffs.

PRICES to suit everybody.


REGISTERED

THE
APRON
That has Come to Stay.

WORN BY ALL THE LEADING GARDENERS.

LOOK AT THE PRICE.

In Dark Blue Ponicus Twills,
1/9, Postage 3d. extra.

Or in Dark Blue Ponious Serge,
3/9, Postage 3d. extra.

Write for One To-Day.

SHAW & MONTGOMERY
(PENMAN'S),
628, Argyle St., Glasgow, W

SPECIAL OFFER.

5/- EACH, POST FREE.

A Stock of 1,000 Gardeners' Watches. Specially constructed to stand Hard Wear. Gunmetal and Nickel Cases. Keyless, Non-Magnetic, Lever Movement, Excellent Timekeepers.

Warranty with each.

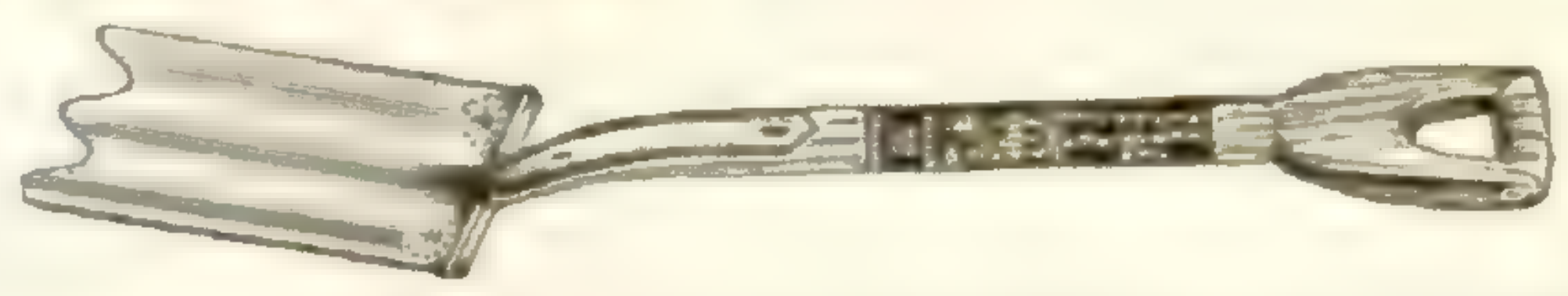
THE WATCH SUPPLY STORES,
DRAYCOTT, DERBY.

SCIENTIFIC and PRACTICAL HORTICULTURIST and BOTANIST requires temporary post till October; English and Tropical experience; would carry on hybridising or experimental work, Herbarium, collecting, etc.; anxious to travel. W. H., 9, Palgrave Road, London, W.

BUDS AND FRUIT SAVED. — GARDEN NETTING, Rotless and Tanned, small mesh, superior quality. Satisfaction guaranteed or money returned. 100 by 1yd., 3s. 9d.; any length and width supplied. LAWN MOWERS, 5 blades, UNEQUALLED VALUE, 13s. 6d. Wheelbarrows, 16s.—POTTER BROS., Dept. M., Frankwell Works, Shrewsbury.

ACETYLENE WELDING.—Broken garden shears repaired; guaranteed unbreakable at welded joint; send broken side with P.O.O. 1s. to LINCOLN JEFFRIES, 27, Whittall Street, Birmingham.

A NEW GARDEN SPADE (Carter's Patent)



This is claimed to be the most effective Spade on the market: Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

PAINT & GLASS.

NICHOLLS & CLARKE, LTD.
SHOREDITCH, LONDON.

GLASS. When sending for Catalogue please cut out this advt

SUBSCRIBER'S ORDER FORM

Every Saturday **THE GARDENERS' MAGAZINE.** Twopence

To W. H. and L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose ______ for ______ months in advance.

Name ______________________

Address ______________________

Date ______________________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

* * If a receipt is required for amounts under 10s. a stamped envelope should be forwarded

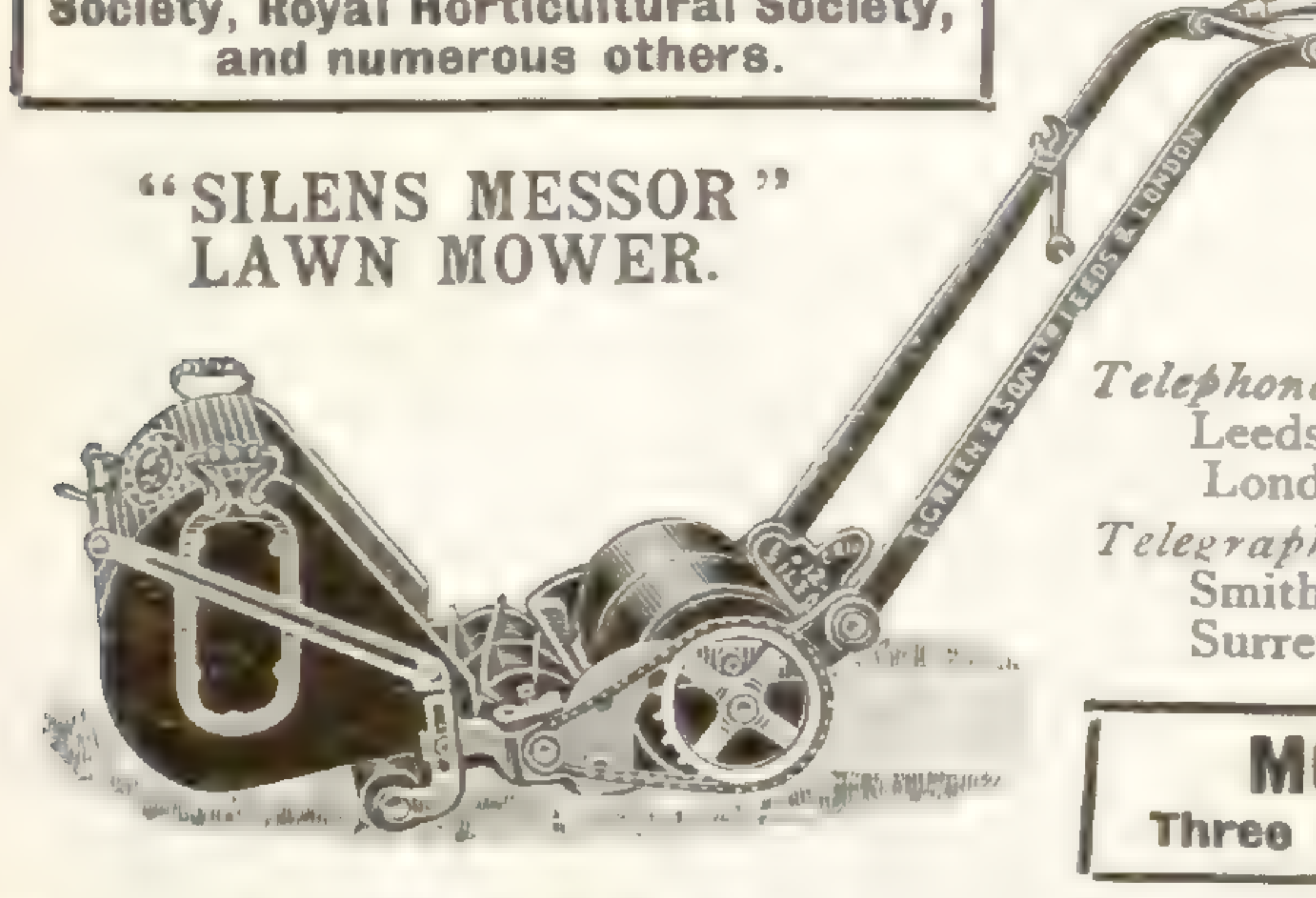
APPOINTED BY ROYAL WARRANT, HORTICULTURAL MACHINE MAKERS TO HIS MAJESTY KING GEORGE V.

GREEN'S LAWN MOWERS ARE UNEQUALLED.

Hundreds of Thousands are in use. Established nearly a Century.

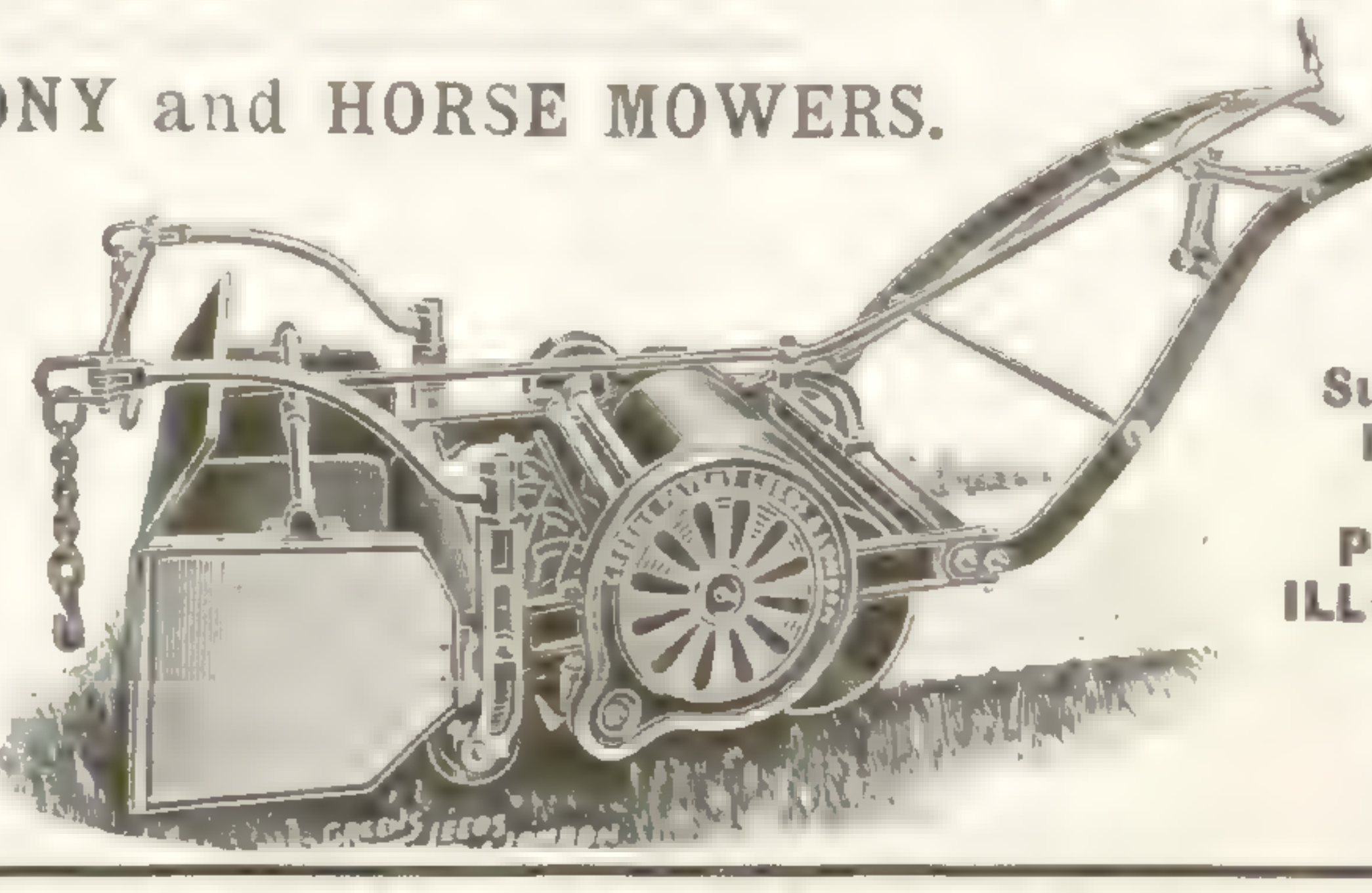
Highest Awards – Royal Botanic Society, Royal Horticultural Society, and numerous others.

"SILENS MESSOR" LAWN MOWER.



Telephone Numbers—
Leeds, 3580.
London, 2022 Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London

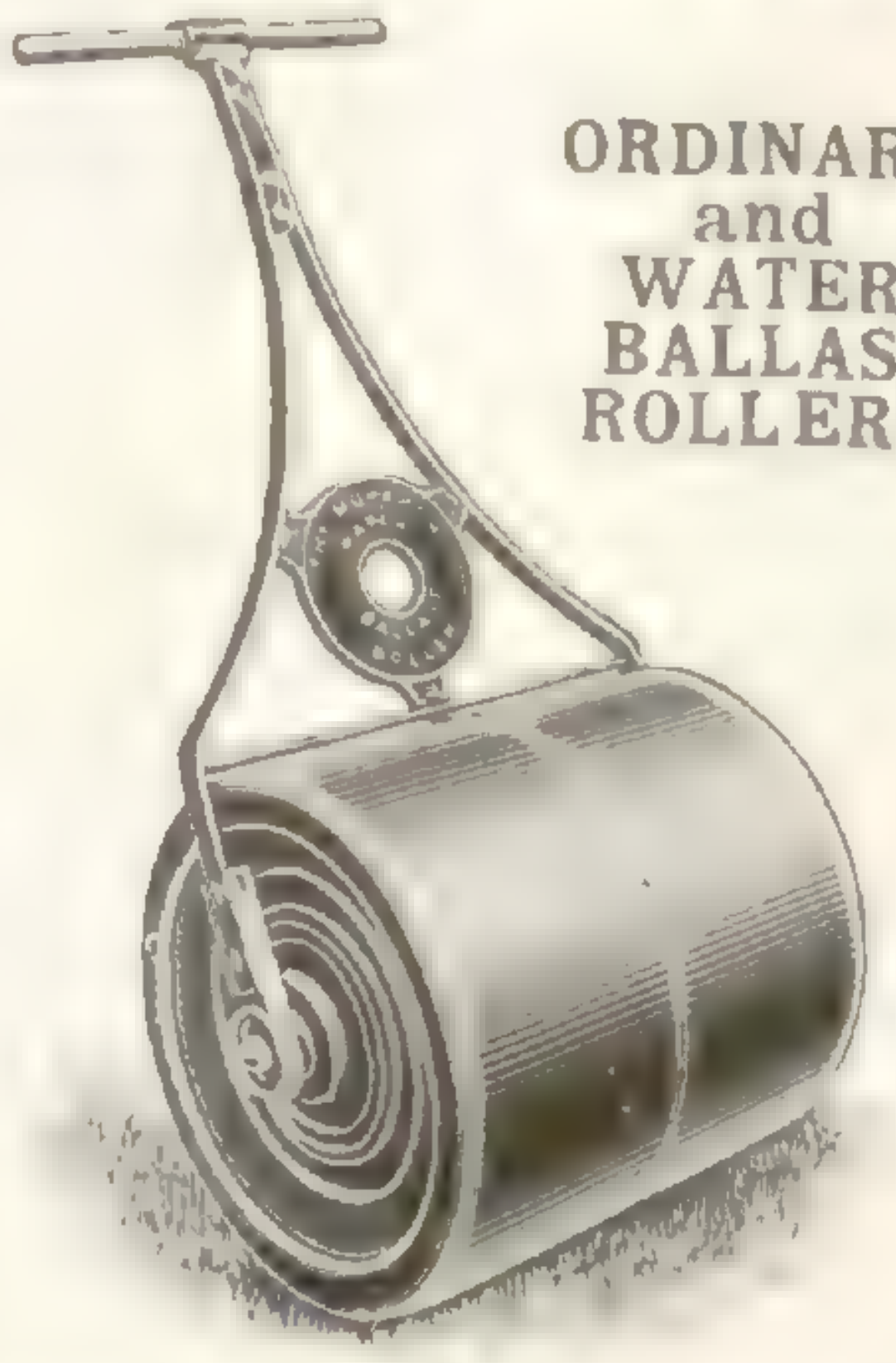
PONY and HORSE MOWERS.



Supplied by all Ironmongers.

Please write for ILLUSTRATED PRICE LIST No. 1 FREE.

ORDINARY and WATER BALLAST ROLLERS.



MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E.

HARDY PLANTS
. . FOR . .
HERBACEOUS BORDERS.

ROCK, ALPINE, WALL, AND WATER GARDENS.

Plans and Estimates FOR All Classes of Garden Work.

Catalogue of Alpine and Rock Plants Free on Application.

GOLD MEDALS Holland House Show, 1909 and 1910.

PRESS NOTICE, JULY 14:—

"Messrs. Wallace and Co. took the lead for originality of treatment, though the idea (like all great ones) was delightfully simple, being, just as it were, a slice of an Old-fashioned garden transferred to the show."

R. WALLACE & CO.,
Kilnfield Gardens,
COLCHESTER.

BEGONIAS, 30, all different, 10s. 6d. Bedding Begonias, 9s., 12s., 15s. 100. German Iris named, 4s. 100.—ELLISON, 57, West Bromwich.

LILIUMS.—24 choice Liliums, all different, 10s. 6d.; Gloxinias, 6 different, 2s.; Cannas, 10 do., 4s.; Gerbera, Adnet's, 1s. 6d. packet, flowering size plants, 10s., extra strong, 15s. doz.—ELLISON.

GLADIOLI, large-flowering, 3s., 5s. 100. American Tree Carnations, 8s. 6d. doz. Garden Lilies, 2s. doz.—ELLISON, 57, West Bromwich.

CHEALS'

113 ACRES,
FRUIT TREES,
ORNAMENTAL TREES,
SHRUBS OF ALL KINDS.

CHEALS'

GARDEN SEEDS,
FARM SEEDS,
BULBS AND PLANTS,

CHEALS'

LANDSCAPE GARDENERS,
GARDEN ARCHITECTS, &c.

London Office for this Department:
53, VICTORIA STREET, WESTMINSTER, S.W.

BOOKLET ON "GARDEN MAKING" POST FREE.

CATALOGUES POST FREE.

J. CHEAL & SONS,
Lowfield Nurseries, Crawley, SUSSEX.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

AMERICAN TREE CARNATIONS

The Newest and Best Varieties.

Strong, healthy and well-rooted plants only supplied

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

BEGONIA PHOSPHORESCENS.—The best small flowering double scarlet tuberous variety for bedding; strong plants from single pots ready end of May, 3s. 6d. doz., 25s. 100. W. STACEY, Nurseries, Dunmow.

PERPETUAL CARNATIONS.—Everyone interested in PERPETUALS should write for our 1911 Illustrated Catalogue, FREE. Read our "TREATISE ON CULTURE," 1s., post free. YOUNG and CO., Carnation Specialists, HATHERLEY, CHELTENHAM.

Roses in Pots.

For Outdoor Planting.
from **10/6** per doz.

For the Conservatory.
Coming into bloom.
from **15/-** per doz.

For Walls and Pergolas.
All best varieties. Extra strong for immediate effect from **1/6** to **5/-** each.

New May List gratis and post free.

Geo. COOLING & Sons,
The Nurseries, BATH.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.

Our Work has stood the test of time.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.

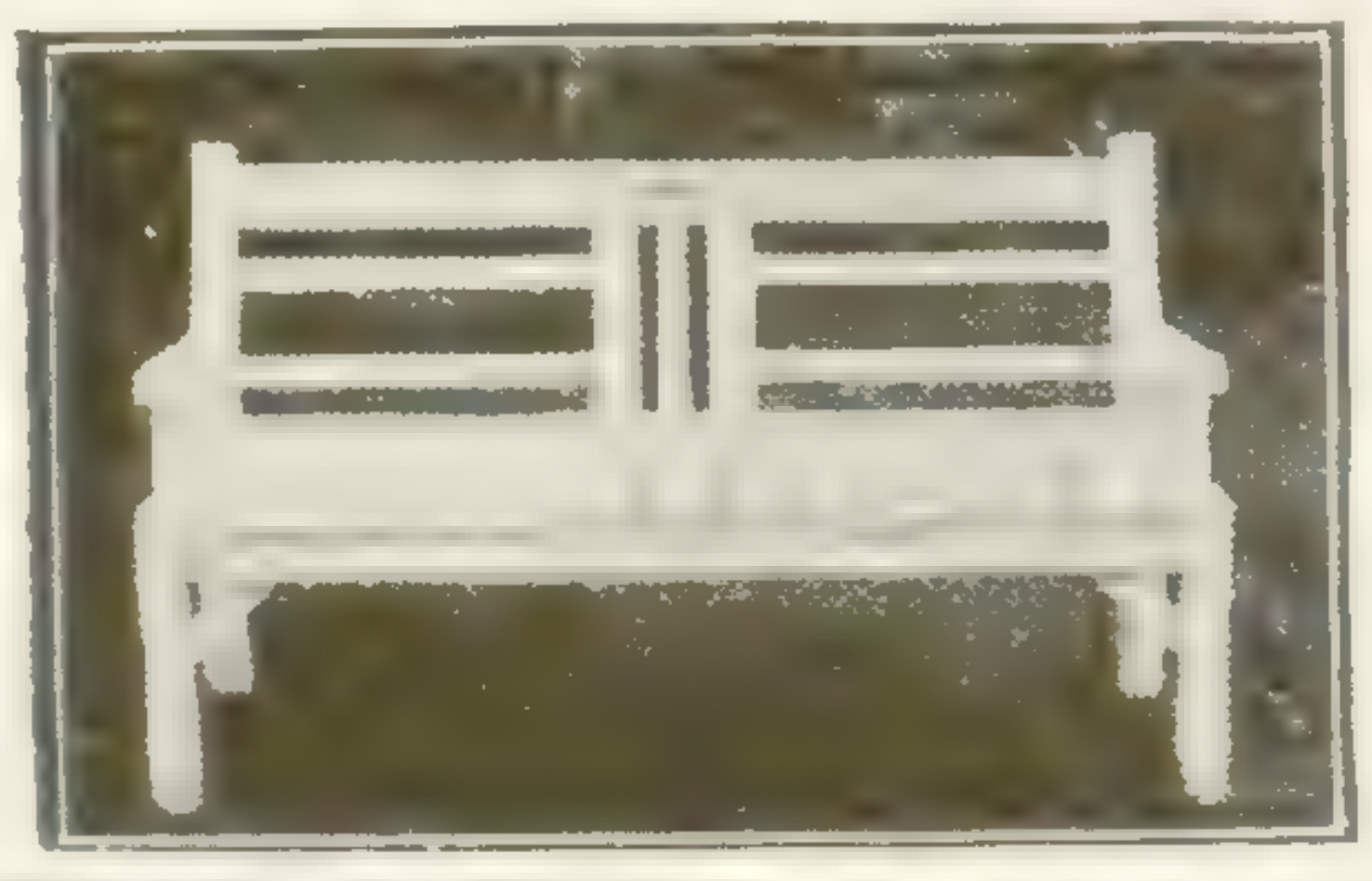
Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

IDEAL, 5 feet long.



In best redwood, painted two coats white

£1 : 7 : 6.

Delivered any Station.

Full catalogue on application

PETER PATRICK & SON, OTLEY, YORKS.

NOTICE.

The **AZALEAS** and **RHODODENDRONS** planted in Hyde Park, near Rotten Row, finest to be seen in London, are supplied by **ANTHONY WATERER,** whose only address is **Knap Hill Nursery, Woking, Surrey.**

No connection with any other firm of similar name.

CARNATIONS, PINKS, AURICULAS.

DOUGLAS for the best old and new varieties in all classes, and the finest quality in the world. Malmaison Carnations, new and old, **7/6** per dozen. Border, **6/-** to **12/-** per dozen. Tree, American, and English, **7/6** to **15/-** per dozen. Auriculas, Show, **21/-** to **30/-** per dozen. Alpine Auriculas, **9/-** to **21/-** per dozen. Carnation, Auricula, Pink, and Polyanthus seed, **1/6** and **2/6** per packet. **CATALOGUE FREE.**

J. DOUGLAS, Bookham, LEATHERHEAD.

OL. LIV.—No. 3,004. SATURDAY, MAY 27, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

◆

The Temple Show.

As we write, the early summer exhibition of the Royal Horticultural Society is being held in the historic gardens of the Inner Temple, and the enormous display of ornamental plants, cut flowers, and other products of the garden that are available for exhibition at this season, and the immense concourse of visitors testify in no uncertain manner to the continuation of the popularity which these great gatherings have enjoyed during the past twenty odd years. The present show suggests an increase rather than a diminution in popularity, and it would appear that it has created more interest in the minds of horticulturists, and indeed of all who take an active interest in gardening from the fact that it completes the first series of exhibitions held on lines wholly different from those which were previously followed. Horticulturists, knowing how great is the value of the work these shows have accomplished, have not unnaturally been anxious to see the last of the first series, and many visitors are asking each other when and where the second of the series will be commenced. There, however, does not appear to be any cause for anxiety upon either of these two points. We know the splendid work the present Council has accomplished during the past two decades, and with this knowledge we may well rest content, with the assurance that whatever the Royal Horticultural Society can do for the advancement of gardening the Council will enter heartily into the task of accomplishing. The fact that there will be no Temple Show in 1912, is, as many of our readers are aware, due to the holding of a great International Horticultural Exhibition at Chelsea in May of next year. The Council is giving this project substantial financial support, and, to still further assist in making it a complete success, have decided not to hold the usual Temple Show, and thus leave the International Exhibition Committee in possession of the field. That this was a wise decision there can be no doubt, and it is all the more worthy of commendation from the fact that it was made before the scheme was submitted to public notice. Two decades is not a long period in the life of a nation, or, indeed, in that of a society whose centenary was celebrated six years ago. Yet the advances that have been made in horticulture during this period, as exemplified by the annual exhibitions in the gardens of the Inner Temple, are little less than marvellous. Some classes of ornamental plants that could not well be spared have, as the result of a change in public taste, practically passed out of cultivation. For example, the highly attractive show and fancy pelargoniums, the elegant heaths, and many hard-wooded plants on which past generations of cultivators lavished their skill and attention, no longer grace the Temple Shows, and are but seldom seen at the exhibitions in the provinces. In their place, we have new races of orchids of abounding interest and wondrous beauty that have been created by the skill and painstaking endeavour of the hybridists, and for a long number of years orchids have contributed a feature equally remarkable for its extent and surpassing beauty. These fascinating plants have, as usual, been staged in immense numbers, and, as the art of arranging orchids at exhibitions has been highly developed within recent years, visitors have had an opportunity of enjoying the diversity of form and colour of their flowers under the most favourable conditions. The perpetual-flowering carnations, which also were splendidly shown, practically belong to the period over which the Temple Shows have extended, and, as one admires the collections of finely developed flowers, the mind is filled with admiration of the skill and painstaking effort by which such splendid results have been obtained. Roses also have been greatly increased and improved, and their cultivation so modified as to enormously extend their usefulness for exhibition purposes and house decoration, and the numerous collections that are now annually contributed to these exhibitions add greatly to their interest and attractiveness. The groups of formally trained plants that were usually shown in pre-Temple Show days were such as to evoke considerable admiration, but the effect they produced fell far short of the delightful arrangement of ramblers and dwarf plants. Moreover, the specimens that delighted rose lovers in bygone days could only be seen at a few of the more important exhibitions, and some of the principal nurseries; but the specimens that find favour at the present time are just as useful for house decoration as for exhibition, and they are now largely grown in gardens and nurseries for that purpose. Their cultivation for commercial purposes has indeed attained such proportions as to constitute a considerable industry, and it may be assumed that some thousands of specimens of the various ramblers will be used for decorative purposes in London alone during the next few weeks. We have special pleasure in mentioning these facts, because while the Temple Shows have afforded full opportunities for demonstrating their usefulness, the GARDENERS'

SIR MARCUS SAMUEL, BART.

Magazine published the first article in which attention was directed to their value, and directions given for their production. Equally as remarkable as the advances in orchids, perpetual carnations, and roses has been the progress with hardy flowers which are now shown more largely than was previously the case, and in a really tasteful manner. It was for a considerable period a reproach that plants from the border and rock garden were so crowded together on the stages as to afford an indifferent idea of their distinctive characteristics or charms. But now we see them arranged on rockeries or in groups according to the positions they occupy in the garden, and while producing an effect that at once attracts attention, visitors have an opportunity of formulating an opinion as to their merits. The methods of staging cut flowers of hardy plants have undergone considerable improvement within recent years, and there is now less crowding in the vases and in the collections, and exhibitors appreciate the importance of eliminating flowers and varieties that are second rate. It would be interesting to refer to the fine displays of hardy trees and shrubs that now form so distinct a feature, as at the earlier shows they were practically unrepresented, and to the several classes of soft-wooded plants requiring glass culture that have been created. Our present object, however, is to briefly direct attention to a few advances that have been made, mainly through the influence of the first series of Temple Shows, to express the hope that the next series of similar shows will be not less prolific of good results, and to heartily congratulate all concerned on the splendid results that have been obtained by their efforts during the past two decades.

Sir Marcus Samuel, Bart., who presided so ably at the festival dinner of the Gardeners' Royal Benevolent Institution on Tuesday, has a great love for horticulture, and is the happy possessor of a fine garden at The Mote, near Maidstone, in Kent. In the world of finance, and of commerce, Sir Marcus Samuel has an unique reputation for rapid decisions and cash payments. He has travelled widely, and his knowledge of Japan and the Far East is peculiar and extensive, and here, as elsewhere, he has been quick to grasp the possibilities of new countries and the advance of civilisation. Many honours have fallen to him, both for his commercial integrity and astuteness, and for his benevolence. As Alderman and Sheriff of the City of London he did excellent work, and as Lord Mayor of our great capital in 1902-3 he set his successors to that high office a splendid example of devotion to duty. Sir Marcus is a Freeman of Sheffield and Maidstone; he was knighted in 1898 for services rendered to H.M.S. "Victorious," and created a baronet in 1903. He has also been honoured in other lands, and is Commander of the Order of Leopold of Belgium, a Grand Officer of the Legion of Honour, and a Knight Commander of the Order of the Rising Sun of Japan. It was a distinct innovation to hold the festival dinner of the senior gardening charity in the heart of the City of London, and this was due to the efforts of Sir Marcus Samuel, who secured the famous Grocers' Hall, belonging to the Worshipful Company of Grocers, for the occasion.

New Superintendent of Greenwich Park.—We learn that Mr. Thomas Hay, head gardener to the Marquis of Linlithgow, at Hopetoun House, has been appointed Superintendent of Greenwich Park, and will enter upon his new duties about the middle of June. This important position is held under his Majesty's Office of Works. Mr. Hay is an accomplished gardener, as these pages have shown on many occasions, and in our issue of October 2, 1909, we presented our readers with his portrait. Mr. Hay will be greatly missed in the Edinburgh district, as he has ably supported the Royal Caledonian Horticultural Society and the Scottish Horticultural Association, and has been a member of the council of each body. We congratulate Mr. Hay on his appointment, and, knowing something of his work at Hopetoun, we feel sure he will fill his new position with credit to himself, and advantage to the famous old park he will control. As evidence of the excellent relations which exist between Mr. Hay and his noble employers, it may be mentioned that he was entrusted with the task of selecting his successor. His choice fell upon Mr. John Highgate, head gardener to the Marquis of Tweeddale, Yester, Haddington, and there can be no question as to his judgment, for Mr. Highgate is a gardener of great ability.

Chestnut Sunday in Bushey Park.—Notwithstanding the dull and rather cool weather experienced on Sunday, May 21, very large numbers of people, largely Londoners, paid a visit to Bushey Park to see the horse chestnut trees in bloom. The trees are finely in flower this year, and will be worth a visit any time during the coming week, unless a severe wind storm should arrive meanwhile. The famous avenue, which is a fe wyards over a mile in length, was planted by the famous architect, Wren, for King William III., in 1699, at a cost of £3,300, while access to the park itself is said to be due chiefly to the efforts of Timothy Bennett, a shoe maker, who, "unwilling to leave the world worse than he found it, by a vigorous application of the laws of his country obtained a free passage" through it.

North of England Horticultural Society.—This society has a series of reviews of the horticultural journals in its "Magazine" for April, and the Gardeners' Magazine receives an especially favourable notice of its interesting and instructive articles during April. The reviewer concludes, "We tender our heartiest thanks to the Editor and staff of the magazine, which they so thoroughly deserve, for the able and timely assistance they so willingly rendered our society throughout its initial stages of progress." A list of the officers and committee of the society, and also of the Fellows and Associates, are given in this issue; there appears to be about 258 subscribers so far, evidence of good progress, but also evidence of the need for plenty of steady spade work to place the society on a proper foundation.

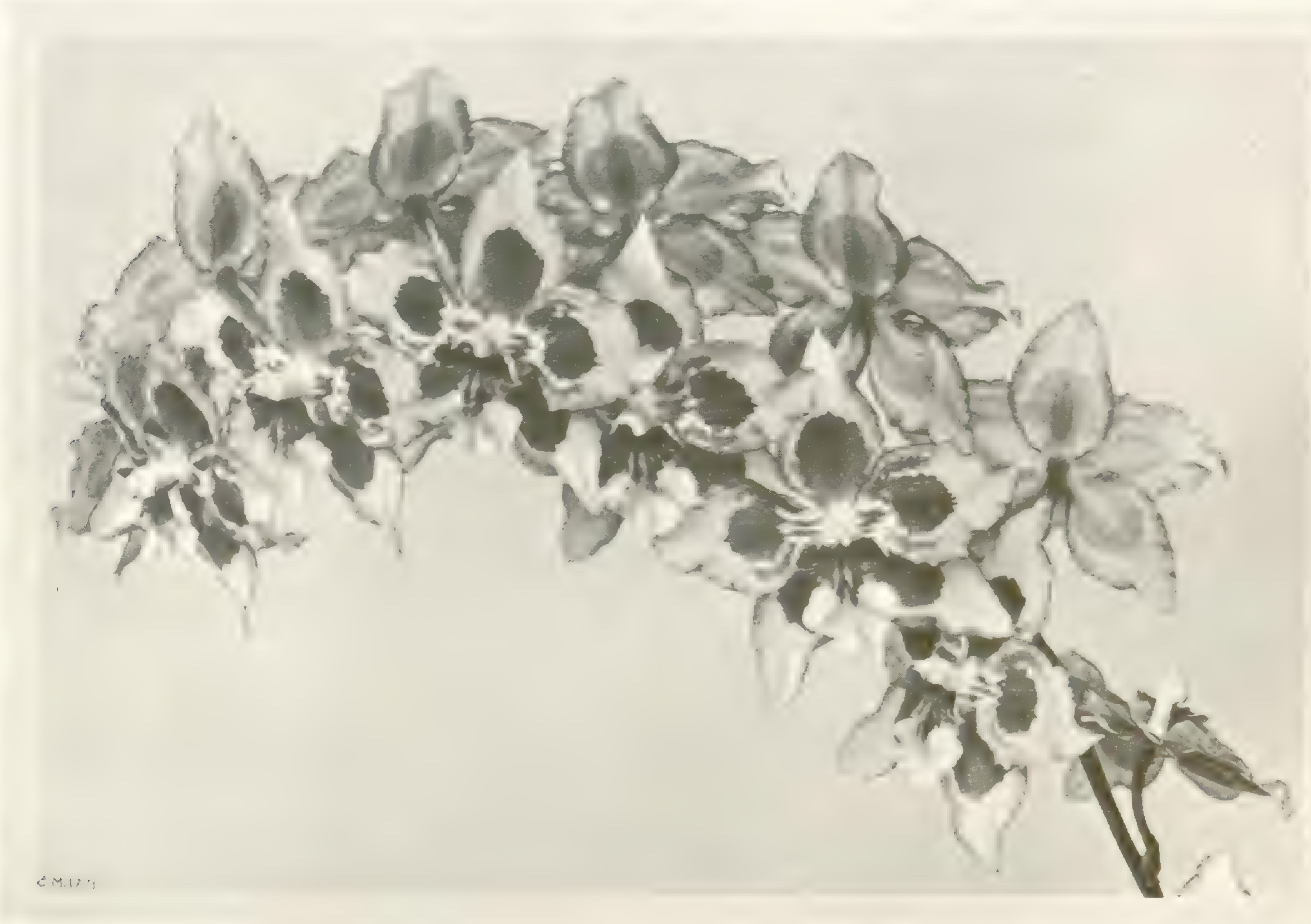
Perpetual-flowering Carnations.—Mr. Laurence J. Cook asks the question: "Do exhibitors carefully read their schedules?" and adds that in order to make the exhibition of the Perpetual-flowering Carnation Society as universal to members as possible, a new section was opened for the last display, allowing those residing over fifty miles from London to send their blooms to the show, when the society undertook to stage them. The classes in this section might be described as "soft things" for anyone growing fairly good blooms had a good chance of success, but such a few entered that a comparatively small number of members could have noticed the innovation. It is interesting to notice that one competitor, sending a few flowers from as far as Lancashire, managed to secure five first prizes in this section. The same classes are open for competition at the December show, and no doubt, when better known, there will be good and instructive competition in this section.

Wye College. — The half-yearly meeting of the Governors of the South-Eastern Agricultural College was held at Wye, on Tuesday, May 16, the right Hon. Lord Ashcombe presiding. The Principal reported that 124 students were in residence, and that since the January meeting five old students had received appointments at home and abroad. Ten students entered for the Professional Associateship of the Surveyors' Institute in March, and the following nine were successful: W. Adam, W. B. Barling, R. Edwards, R. A. Hay, C. G. Kibler, F. W. Page-Roberts, L. H. Pyke, A. L. Tate, and W. T. Trench. An increased grant from the Board of Agriculture, and a grant for research work from the Development Commissioners, were reported, and it was decided that it would be necessary to erect further temporary buildings for the accommodation of students until the formalities for the erection of the permanent new block were completed.

Variation in the English Climate.—To the recent monthly meeting of the Royal Meteorological Society Mr. W. Marriott contributed a highly interesting paper on the variation in the English climate during the thirty years ended with 1910. Mr. Marriott stated that in 1874 the Royal Meteorological Society commenced the organisation of a series of "second-order stations," at which observations of pressure, temperature, humidity, rainfall, and wind are made twice a day—viz., at 9 a.m. and 9 p.m. In addition to these, another class of stations, termed "climatological," at which observations are made once a day—viz., at 9 a.m.—was organised in 1880. The monthly results from all these stations have been recorded, and Mr. Marriott has taken the general monthly means of these results as representing the means for England and Wales, and these general means were exhibited in the form of a series of diagrams, in which the variations of the various elements for each month were shown in red when above the average, and in blue when below the average, for the thirty years. The warmest months were August, 1899, July, 1900, and July, 1901, while the coldest months were February, 1895, January, 1881, and December, 1890. During the last fourteen years the temperature in October was above the average, with only one exception, viz., 1905. The years with the highest mean temperature were 1898, 1893, and 1899, and the years with the lowest temperature were 1892, 1888, and 1887. The month with the highest mean pressure was February, 1891, and that with the lowest pressure was March, 1909. On the average, April is the month with the least rainfall, and October the month with the heaviest rainfall, while June has the least number of days of rain. The wettest months during the thirty years were October, 1903, and October, 1891, and the driest months were February, 1891, and April, 1893. The years with the heaviest rainfall were 1903 and 1891, and the years with the least rainfall were 1887 and 1893. The wind diagrams showed that the prevailing winds were from the south-west and west, but that in April, May, and June north-easterly winds were more pronounced than in the other months of the year.

Outdoor Trials of Perpetual-flowering Carnations. — During the past two years the Perpetual-flowering Carnation Society conducted trials of a considerable number of the perpetual-flowering varieties in the gardens of the

Royal Botanic Society, Regent's Park, with a view to determine their relative merits for outdoor culture. In the trial conducted in 1910 three sets of plants were grown, the first comprising those rooted in May, 1909, planted out in June, lifted in October, wintered under glass with a temperature ranging from 40 to 50 degrees, and planted out again in May, 1910. The second set consisted of plants raised from cuttings in October, 1909, and grown under glass, and finally shifted into 48 size pots, stopped once, and bedded out in June, 1910. The third set consisted of plants that were raised from cuttings rooted in January, 1910, grown on, and finally put into 60 size pots, and stopped once. The plants belonging to the first section being well established and full of buds, and planted in May at once became effective, and flowered freely throughout the summer. The report which is published in the society's "Year Book" does not refer to the second and third sets of plants, except that the plants were inspected late in September by the committee, "when they were in a healthy condition, full of bud, and the majority having a good number of blooms." Thirty-four varieties were included in the 1910 trial, and the following were the most effective: Britannia, Fair Maid, Fiancée, Helen M. Gould, Jessica, Lady Bountiful, Mrs. H. Burnett, Pink Imperial, Rival, Superior, White Perfection, and Winsor.



TEMPLE SHOW—ODONTIODA VUYLSTEKEI CORONATION.

The flowers are large, richly coloured rose-red on a light rose ground. F.C.C., R.H.S., May 23.
Exhibited by Mr. Ch. Vuylsteke.

A Flower Show on the Thames.—The Thames Valley is well known for its beauty, but this year a grand floral and dramatic fête is to be added to the many other attractions. The River Thames Flower Show, to be held on Tagg's Island, close to Hampton Court, on June 7 and 8, promises to be a great success. It is to be opened by H.R.H. the Duchess of Albany, and there is a lengthy list of patrons. Although only fifteen classes have been arranged, the prizes are sufficiently substantial to attract the best growers. Carnations, sweet peas, and roses are the flowers chiefly catered for, but there are classes for a rock and water garden, for a group of hardy flowers, and also for floral designs, while in the class for nurserymen only, where an area of 200 square feet will be provided, and this may be filled as the skill and taste of the exhibitor dictates, the premier award is a £20 cup. In addition, there are prizes for the best decorated houseboat moored to Tagg's Island and for the best decorated craft. The proceeds of the show and dramatic fête will go to the funds of the League of Mercy. Mr. C. W. Kent is the flower show secretary, and his address is Fête Office, Tagg's Island, Hampton Court.

The Age of Trees, as estimated from the number of concentric rings shown in a section of the trunk, is not easily determined in Queensland. Mr. F. A. Bailey, the Government botanist at Brisbane, recently stated that the usual method of calculation by means of these rings could not be relied upon in Queensland, because in certain seasons more than one ring may be formed, and on the other hand, one ring might under certain conditions take more than a year to form.

Club Root Disease.—The prevention of club root in turnips and other crops subject to the disease has been fully investigated at the West of Scotland College Experiment station, and the recently issued report confirms the conclusions arrived at from earlier experiments that the disease can be checked by liberal dressings of lime. The lime was found the most effective when applied to the land in the autumn preceding the cropping of the land, and lime slaked in the ordinary way gave the best results, and was cheaper than ground lime.

BRYANTHUS EMPETRIFORMIS.

This pretty little ericaceous plant grows into a low bush scarcely more than six inches high, but it spreads horizontally to form a good-sized patch. Either on rockwork or growing as an ordinary border plant it is equally effective, and during late April and early May forms a charming feature when covered with its reddish nodding flowers. It is an American plant, being found from British Columbia to California, and has long been in cultivation in British gardens, though it does not appear to be common. Like other plants belonging to the same family, it thrives most satisfactorily in peaty ground, though good results may be obtained from loamy soil, providing lime is not present in any appreciable quantity.

Propagation may be effected by means of cuttings of young shoots an inch or so long, taken in July or August, and inserted in pots of sandy peat in a close frame. Roots ought to be formed in from six to eight weeks, and the young plants prove most satisfactory if kept in a cold frame through the winter, planting them in a well-prepared border, either outside, where shade from bright sun can be given, or in a cold frame the following spring. B. Breweri and B. taxifolius are two other desirable species, while B. erectus is a showy and rare hybrid between B. empetriformis and Rhodothamnus chamæcistus. D.

Aubrietias are usually in great demand for the spring beds, and to maintain a good stock of plants, cuttings should be rooted annually. These should be taken immediately the plants finish flowering. The young growths provide the most suitable material, and these should be dibbled into sand in a cold, shady frame, and kept moist and close.—E. C. Pooley.

ROYAL GARDENERS' BENEVOLENT INSTITUTION.

The seventy-second festival dinner of the above institution was held at the famous and splendid Grocers' Hall, Princes Street, City. There was an unusually large company, under the presidency of Sir Marcus Samuel, Bart., who was supported by Sir J. Colman, Sir Edward Stern, Rt. Hon. Colonel Lockwood, M.P., Sir G. Wyatt Truscott, Sir Chas. C. Wakefield, Sir Albert Rollit, Mr. Harry J. Veitch, Mr. L. Solomons, Mr. W. Fremlin, Mr. Oscar Berry, Mr. Ebblewhite, Mr. W. Cobb, Mr. J. G. Veitch, Mr. W. A. Bilney, Mr. W. Poupart, Mr. W. Iceton, Mr. Jas. Hudson, Mr. W. Y. Baker, Mr. W. Ingamells, Mr. H. B. May, Mr. J. Rochford, Mr. Alderson, Mr. Alderman Piper, Mr. G. H. Barr, Mr. W. Barr, Mr. G. Mowis, Mr. Hiehle, Mr. Segar, Mr. A. Watkins, Mr. A. J. Wood, Mr. N. F. Barnes, Mr. A. McKellar, Mr. Owen Thomas, Mr. J. McLeod, Mr. W. Cull, Mr. C. R. Fielder, Mr. A. Bedford, Mr. Leopold Salomons, the Rev. Boscawen, etc.

The Chairman had a hearty reception when he proposed "Success to the Gardeners' Royal Benevolent Institution." He referred gracefully to the presence of the ladies, and to the Grocers' Company for so kindly placing the hall at their disposal, and thanks for the presence of the Master of the company. He hoped all present understood the objects of the meeting, and the work of the institution among necessitous horticulturists and their widows. There were 246 pensioners in all, and the annual expenditure of £4,500 was incurred in their support. In addition to permanent benefits, the institution made grants from its Good Samaritan and Victoria Era Funds, which assisted those approved candidates awaiting election. The regular income amounted to about £1,000 a year, hence the great need of large donations. He referred to the great International Exhibition of 1912, and said it would not look well if, while entertaining our foreign guests royally, we omitted to care for needy horticulturists. He hoped the ladies present would induce the gentlemen to give liberally to the funds. The Chairman set a fine example in brevity, and he concluded by expressing regret at the absence of Mr. A. W. Sutton, Mr. R. Sydenham, and Mr. G. Monro, and by appealing strongly for a bumper donation list.

The response to this toast was once again in the hands of Mr. Harry J. Veitch, the treasurer, who received a particularly hearty reception. He very cordially thanked Sir Marcus Samuel for presiding in a year when everyone was so busy and had so many calls. He also thanked the chairman for obtaining the Grocers' Hall, and for his suggestion that ladies should grace the proceedings. Further thanks from the gardeners of England, their wives and sweethearts, were accorded to the Grocers' Company. Mr. Veitch said this was his twenty-fifth year of office as treasurer, and he pointed out how great had been the advance of the institution during that period, an advance due to the hard work of a very excellent committee, and the hard-working secretary, Mr. G. J. Ingram. The institution was essentially a benevolent one, and not a benefit society. There were no costly buildings to maintain, and, with the exception of the amount needed for management expenses in the London office, all the money went to the support or assistance of the needy. Mr. Veitch referred to the advantage obtained by those who have subscribed before the evil days come, and also pointed out other leading points in the rules of the institution, such as that a candidate might have an income of not more than £30 a year, and so not be absolutely destitute. The work of the Good Samaritan and Victorian Era Funds was reviewed, and it was pointed out that in 1886, when Mr. Veitch became treasurer, there were 118 pensioners, and now there were 246 on the funds, 192 of whom were widows of gardeners. The pensioners usually lived with their relatives, and therefore the £20 or £16, as the case may be, came as a great help to the family. The oldest pensioner was a widow, 97 years of age, her husband and she had received altogether £394 in return for a donation of 25 guineas made long years ago. He maintained that the institution was doing a grand work, and a necessary work. The invested funds amounted to £50,000, an amount quite necessary in view of the liabilities now incurred. Mr. Harry Veitch praised the work of the auxiliaries, and he suggested that the ladies might form an auxiliary among themselves, and so enable all the approved candidates to be elected at the next election.

"The Ladies and Visitors" was admirably proposed by Sir Albert Rollit, who made an excellent and humorous speech, and the response was in the able hands of Sir George Wyatt Truscott, Bart.

The subscription list included such donations as 100 guineas from the chairman, 100 guineas from Messrs. de Rothschild, £150 from Mr. N. N. Sherwood and his sons,; Messrs. Sutton and Sons, £100; Mr. A. W. Sutton, 20 guineas; Mr. Salamans, 20 guineas; Mr. L. Sutton, 20 guineas; Sir G. W. Truscott, 20 guineas; Sir Ed. Stern, £20; Mr. H. J. Veitch, 20 guineas; Sir J. Colman, 20 guineas; Mr. J. Hudson, £27; Mr. Lane, £15; Messrs. Wood and Sons, £35; Mr. A. MacKellar, £20; Mr. A. Waterer, £25; and Mr. McLeod, 10 guineas. Then followed a long list of subscribers of 10 guineas and downwards until the whole magnificent total came to the splendid sum of £2,400. The Covent Garden friends were again to the front; Mr. Ingamell's table realised £100, and Mr. Rochford's table £209.

Mr. N. N. Sherwood proposed the health of the Chairman in very kindly and pleasing terms, and the toast was honoured in a most enthusiastic manner, and with cheers for Sir Marcus and Lady Samuel.

Sir Marcus Samuel briefly responded, and expressed his pleasure that so fine a record of subscriptions had been established. He concluded with thanks to all who had contributed flowers and plants to the decoration of the hall, and which had been so beautifully arranged by Mr. Leopold de Rothschild's staff of gardeners at Gunnersbury, led by Mr. Bedford, the foreman under Mr. Hudson, at Gunnersbury House.

The musical arrangements were once more in the able hands of Mr. Herbert Schartau.

The Grocers' Hall was built in 1427, destroyed by the Great Fire of London, 1666, except the garden turret, in which were preserved the records and muniments of the company. It was rebuilt in 1668, the third hall was erected in 1802, and the present beautiful one in 1893.

SUTTONS
G.M.1773

TEMPLE SHOW—GOLD MEDAL COLLECTION OF HERBACEOUS CALCEOLARIAS, STAR CINERARIAS, ETC.
Exhibited by Messrs. Sutton and Sons.

SOME OF THE NEWER ROSES.

It is not always safe to write much in favour of new roses until they are thoroughly tested, but the following are undoubtedly good varieties, or they would not have proved so satisfactory last autumn, winter, and the present spring under glass. Short as this test has been in several cases, I have no hesitation in giving the accompanying notes:

Miss Alice de Rothschild.

This variety is growing very freely, and certainly promises to be a good bedder, if one is to judge from its habit and freedom in blooming. The buds in the open stood the weather equally with the majority of other roses, and this alone is much in its favour. The flowers have been a strikingly clear citron yellow. This has been described as a dwarf Maréchal Niel; but, unlike that grand old favourite, it is evidently a continuous bloomer.

TEMPLE SHOW—ROSE A. R. GOODWIN.
An effectively-coloured variety belonging to the Pernetiana group. The flowers rich cream colour with orange-red centre. Exhibited by Messrs. Paul and Son.

Beaute de Lyon.

A variety that has been very good this spring. Although a very globular flower, it has opened better than most varieties, and its globular form does not seem likely to detract from its usefulness in the open. The flowers are coral-red, shaded with old gold and yellow. It is quite distinct, and with much of the growth and deep green foliage so characteristic of Soleil d'Or, from which it descended. I am afraid, however, it will be troubled with the blackish-brown spots too often found on Soleil d'Or, as some have appeared among our batch of pot plants. The flower lasts well, and the variety is good for pot culture.

Miss May Kenyon Slaney.

A variety that has large and particularly well-shaped blooms. Blush-pink, with rich creamy ground, the shades blending in a very pleasing manner. It has the peculiarity of bronzy-coloured thorns and deep green foliage. Such thorns are almost always accompanied by bronzy-coloured or reddish foliage. This has been really good, and is exceptionally sweet-scented.

Mrs. Herbert Stevens.

This rose resembles the Maman Cochet class in size and exquisite form. That it is a really good grower I am already convinced, and it seems destined to become one of our all round varieties, i.e., good for exhibition, garden, or pots. White, shaded with fawn and peach in the centre. Very large petals, and each one faultlessly arranged.

Mrs. Arthur Coxhead.

Another rose that promises to be useful in all forms, except as a climber. It blooms very freely indeed. Of a peculiar colour, and quite distinct; claret-red, shaded with vermilion, and does not fade quickly. Most of the flowers are borne singly, and they stand up well.

Mrs. Philip le Cornu.

A very well built-up flower of the Mrs. W. J. Grant type—from which it claims parentage—and promises to be a much better grower, and more hardy. A somewhat weak constitution is the only fault Mrs. W. J. Grant possesses, and here we have an improvement without losing any of the other good qualities. It may best be described as a clear cerise-crimson form of the old favourite.

Ethel Malcolm.

This variety has not produced a flower yet which I did not admire. It seems to be the best white hybrid tea we have for open-air culture, and is also grand under glass. Of good substance, size, and form. I mentioned this variety in a former note, so will only say that, if possible, I have formed a higher opinion of it since.

Mrs. Walter Easlea.

The flowers of this variety stand up well, and its buds are long, opening into large flowers of fairly good form. A deep crimson-scarlet, with satiny-crimson on back of petals.

J. L. Mock.

This variety will be exceptionally useful to cut from, as it is so vigorous and free, each flower carried stiff and erect. Colour, carmine, changing to imperial pink. The flowers are of similar form and substance to the well-known La France; large enough for show, and yet a good bedding and garden rose.

Mrs. Foley Hobbs.

Probably one of the best of the ivory-whites, with a clear tinge of pink on the edges. A grand rose for exhibition, and, withal, a free bloomer, while the growth is both robust and vigorous.

Viscount Carlow.

This variety gives us a peculiarly shaped flower among roses when it is expanded, camellia-formed, and rather taking in that stage. Carmine, pink, and cream are all to be found in this rose. A good grower, and likely to be good as a decorative rose only.

RHODODENDRONS.

The excellent article by "G.," in the issue for April 29 (pages 324-5) should do much to increase the popularity of these noble evergreen flowering plants. I was pleased to note the reference to the "general belief that rhododendrons, other than the pontic varieties, could not be successfully grown without the aid of peat." They certainly can be very well grown without its aid, though, as "G." advises, some should be used in districts where it can be readily obtained. In a garden overlooking Morecambe Bay, in Lancashire, I saw rhododendrons flourishing in a thin layer of shingle and yellow loam, overlying solid rocks. Many seedlings were growing on the bare rocks with their roots tightly wedged in the crevices. In another garden, also in Lancashire, hybrid rhododendrons were grown as standards on both sides of a long winding path through the pleasure grounds. Here the rooting medium was composed of gravel and rich loam, no peat or leaf-soil having been used. These standards looked charming when in full bloom, and really very ornamental when not in flower, as a healthy specimen has always a substantial and attractive appearance.

In Hampshire there are rhododendron forests—so-called on account of the immense size of the plants (chiefly ponticum varieties), and the large area covered by them, on the Earl of Malmesbury's estate near Heron Court. Here peat, loam, and gravel obtain. In another part of Hants a friend of mine commenced the formation of another forest, but the choicest varieties and hybrids were used. Some portion of this vast plantation was situated on high ground, where the soil was a natural deep loam; the other parts were situated on low hillsides and in valleys where the rooting medium was very moist, bog, peat, gravel, and a clayey subsoil obtaining. Large beds, containing one variety only, were planted, and as all the plants were well cared for during the first few years of their growth, they made good progress. It has been difficult since then—twenty years back—to tell which have done best, those on the high ground or those in the moist valleys.

I know that many persons believe it to be harmful to apply organic manures to these plants, but some of the finest specimens grown are annually top-dressed with well-rotted manure and fibrous loam mixed.

Geo. Garner.

TEMPLE SHOW—HARDY LADY'S SLIPPERS.

As shown by Messrs. T. S. Ware, Lim.

CARNATION DISEASE.

I was naturally somewhat flattered when I saw Mr. P. S. Hayward's remarks regarding my views of the carnation disease, stigmonose, because he is a cultivator of standing, and his words have considerable weight. We cannot too fully appreciate the fact, as Mr. Hayward makes plain, that these yellow marks in the leaves of our carnations, which are perpetuated in the race, are there through weakness of constitution, and are invariably the first signal of the inevitable destruction of the variety. Apparently those varieties which have a light green foliage are more prone to the ravages of stigmonose than those of a deeper and bluer shade, as are also the white and pink-flowering varieties, than those of a red and crimson colour.

That stigmonose is present through weakness is apparently undoubted. This fact was proved to me last season, when my brother came over from America and settled at Haywards Heath, in Sussex, where he founded a wholesale cut flower carnation nursery. Whilst in America he had for years held the view that all and everything in growing perpetual-flowering carnations depended upon the constitution of the stock, and so, with this idea in view, he took the greatest possible care in selecting his stock, obtaining it, in the majority of cases, from the actual raisers of the variety concerned, many of whom were his personal friends. He happened, however, to be short of a few hundred plants to fill one of his houses, and these he purchased haphazard; the difference between the two grades of stock was such that they appeared almost as distinct varieties. The foliage of the selected stock, even in such varieties as Enchantress, is perfectly clear and healthy, and the flowers have much stronger stems and calyces, also are of a deeper shade of colour. Before Christmas he had destroyed the hundreds of plants that he had bought haphazard to complete his stock.

In my opinion the main reason why there is so much inferior carnation stock about is that so many growers over-propagate by removing the tops of the young plants and inserting them as cuttings. It is wholly unnecessary for me to point out the absurdity of this act, because it must be obvious to every intelligent grower who stops to think that nothing could be more weakening to the plant. It is like a human being undergoing two serious operations within a few weeks of each other. Yet the desire of some men for a quick return is too strong for them to resist the temptation of temporary gain. The use of improper fertilisers, as Mr. Hayward points out, also plays its part.

Montagu C. Allwood.

Look Around You.

This is the simple suggestion that occurs to anyone visiting the magnificent displays the Temple Show affords, just as it is the intimation, graven in stone, that greets the visitor to St. Paul's, who stands wondering at the architectural triumph of Sir Christopher Wren.

Looking around at the Temple Gardens there is the profusion of bloom, the abundance of fruits—"the wealth" of the Dutch farmer that we translate into the desirable word *wealth*. There is dazzling radiance of colour, too, kaleidoscopic in the variety and change of its hues, that is the potent charm attracting in every direction. A look around will awaken every artistic impulse, as it will please every sense we possess.

What would the population of horticulturists do without its Temple Show, or its international equivalent? Is it affectation to add—What would the world of gardeners do without its CLAY'S FERTILIZER?

Such floral beauties as are lavishly exhibited have been fed and sustained by—have been very literally brought up upon—the Plant Food of Renown that everyone who loves and cultivates a garden is so familiar with. Eulogistic correspondents call it "CLAY'S, TRIUMPHANT CLAY'S"; others, grateful for its timely help, find it "guide, philosopher, and friend." Kindly writers they are, surely, but they simply express the thoughts of many others who rely upon this standard plant diet to furnish their plants with material for growth and power for producing flowers and fruits in due season.

These use it in their gardens and in their cultivation under glass, and so it comes to pass that when the exhibition stage is reached, when the prize is to be gained and the victory won, you have but to look around you, as you have done at the Temple Show, and, lo! you will see the results of using CLAY'S.

At this famous exhibition it is always in evidence. At the Festival of Empire it will also be seen, for its proprietors are presenting a fine artistically-designed cup, recently figured in this journal, for the premier horticultural exhibit; and there will be a remarkable competition, to judge by arrangements already in hand. Equally true will this be also at every local show where nurserymen, professional gardeners, and amateurs congregate, as even the most casual visitor will observe, if he but look around.

A more accurate description of this most useful manure could hardly be given than appears in the latest edition of "Cassell's Dictionary of Gardening," page 217, as under:—

Clay's Fertilizer.

> A perfectly safe and useful manure, containing the three chief elements of plant foods, viz., nitrogen, potash, and phosphoric acid. It is a proprietary specific in general use, adaptable to all forms of soil preparation, and is applied with advantage to plants in pots, and for the production of flowers, fruits, and vegetables grown in the open.

If the reader of these lines has not a copy of "CLAY'S SUCCESSFUL GARDENING" in his possession he will do well to obtain one. This interesting book contains contributions by the best-known horticultural writers: its speciality subjects are full of information, much of it exclusive, that is eminently practical, and for the ninepence charged for it, the cost is simply nominal. It includes a supplementary chapter entitled "CLAY'S MANURES, How to Use Them," that is of value to users of this preparation. Four complete editions of the work have already been sold; indeed, so well-sustained and rapid has been the demand for the last edition that a large second reprint is now on sale. It may be had post free from the publishers, Messrs. CLAY AND SON, STRATFORD, LONDON, E.

**THE
VOICE
OF
EMPIRE**
CALLS FOR
**"CLAY'S,
TRIUMPHANT
CLAY'S"**

**EXHIBITS grown with
CLAY'S FERTILIZER
catch the JUDGE'S EYE.**

CLAY'S FERTILIZER is ready for immediate use. It imparts to the soil forces that vitalize all growing plants and ensures their successful cultivation. It is safe, sure, quick in action and perfectly reliable. It is also a most economical manure.

INDISPENSABLE FOR ALL HORTICULTURAL PURPOSES.

CLAY'S LONDON FERTILIZER
TRADE MARK.

Every Tin, Bag, and Seal bears this TRADE MARK—the only Guarantee of Genuineness

Sold everywhere in Tins at 6d. and 1/-; and in Branded and Sealed Bags.

7 lbs.	2/6
14 lbs.	4/6
28 lbs.	7/6
56 lbs.	12/6
112 lbs.	20/-

Or direct from the Works, Carriage Paid in the United Kingdom for Cash with order (except 6d. TINS).

Used in the Royal Gardens by Government and Local Authorities, and in Horticultural and Botanical Establishments throughout the world, as well as by leading Professional and Amateur Growers everywhere.

Full directions for use appear in the Fourth Edition (Second Reprint) of

CLAY'S SUCCESSFUL GARDENING,

the Horticultural Wonder-book, by Eminent Writers; comprehensive, informing, reliable, and up-to-date; 276 pages, illustrated, bound in cloth.

NINEPENCE NETT,
post free; or of Seedsmen.

Write for Full PRICE LIST of Manures, Chemicals & Sundries.

CLAY & SON,
Manure Manufacturers and Bone Crushers,
STRATFORD, LONDON, E.

CLAYS'

STOVE AND GREENHOUSE PLANTS,

FOLIAGE AND FLOWERING

SPECIMEN ORCHIDS! RARE ORCHIDS!
CHEAP ORCHIDS!

ROSES, SHRUBS, and Everything for the Garden.

Kindly send for New Illustrated Catalogue.

JAMES CYPHER and SONS, EXOTIC NURSERIES, **CHELTENHAM.**

PRIMULA OBCONICA GIGANTEA GRANDIFLORA.

The most beautiful Free and Hardy Perpetual Greenhouse Plant grown.

ONCE IN FLOWER ALWAYS IN FLOWER.

We are NOTED for having the most — SUPERB Strain in commerce. —

SEED.

Mixed colours, also Compacta and Fimbriata, mixed, 1s. per packet; separate colours of Purple, Rose, Lilac, Deep Red, Crimson Scarlet, Pale Lilac, and Crimson (fringed petals), **2s. per packet; double flowering, including Pale Mauve and Rose, 2s. per packet. Instructions as to sowing with each packet.**

PLANTS, 3s., 5s., 7s. 6d., 10s. 6d., and 15s. per doz., according to size.

W. A., Esq., Reigate, Surrey, writes:—

I had a packet of seed from you last year, and am pleased to inform you that I have blooms measuring two inches and more across each individual flower. They are the best strain I have ever seen, both for variety of colours, and substance of bloom.

WM. ARTINDALE & SON,

Nether Green Nursery,

SHEFFIELD.

For 3 penny stamps we will send you our Catalogue of Plants, which is not merely a price list, but literature which gives all the cultural notes of plants therein mentioned. We have received hundreds of testimonials commenting on the value of this book.

OUR SEED CATALOGUE WILL BE SENT FREE ON APPLICATION.

ORCHIDS **EIGHT MILES BY ROAD FROM THE CITY.**

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., **Royal Nurseries, BUSH HILL PARK, MIDDX.**

PERPETUAL FLOWERING CARNATIONS: Britannia, Rose Dorée, White Perfection, Black Chief, Fortuna, Mrs. Barnett etc. 3s. per doz., strong plants; post free. Ask list. C. F. A. VAN DER SLUYS, F.R.H.S., Rames, Guernsey.

By Appointment.

NEW ROSES.

WM. PAUL & SON, WALTHAM CROSS, Ltd.,

beg to call attention to their extensive collection of New Roses, including Rambling varieties, good plants of which, in pots, will be ready for delivery early in June and throughout the summer months.

WM. PAUL & SON'S New Varieties:

Florence Haswell Veitch (H.T.), **7/6.**
Frances Charteris Seton (H.T.), **7/6.**
Lady Downe (H.T.), **7/6.**
Sylvia (Hybrid Wichuraiana), **7/6.**
Alice Cory-Wright (H.T.), **3/6 to 5/-.**
Elsie (Hybrid Wichuraiana), **2/6 to 5/-.**
Juliet (Hybrid Briar), **3/6 to 10/6.**
Portia (H.T.), **3/6 to 5/-.**

New British and Continental varieties of other raisers, **2/-** to **10/6** each.

Priced Descriptive Catalogue Post Free on Application.

Also a large general collection of Roses in pots for filling vacancies in rose gardens and for pot culture, **12/-** to **42/-** per dozen; Climbers and Ramblers, **12/-** to **60/-** per dozen.

PAULS' ROYAL NURSERIES, Waltham Cross, Herts.

GERANIUMS.—Paul Crampel, large plants, 3s. doz. King of Denmark, 2s. 6d. doz. Hydrangeas 3d. each. Calceolarias and Marguerites, 1s. 3d. doz. HEAD GARDENER, 22, Charlton Rd., Blackheath.

Royal Botanic Gardens,
REGENT'S PARK, LONDON.

JOHN WATERER & SONS, Ltd.,

GREAT

EXHIBITION of RHODODENDRONS

will be opened on

TUESDAY, JUNE 6th, at 3 p.m.

BAND and PIPERS
of
H.M.'s SCOTS GUARDS.

(By permission of Colonel P. J. CUTHBERT.)

Cards of Admission to be obtained from

John Waterer & Sons, Ltd.,
American Nursery,
Bagshot, Surrey.

A Magnificent New

Zonal Pelargonium

"His Majesty." **Award of Merit, R.H.S.**

Of perfect habit, producing flowers of immense size, pips three inches across, trusses sometimes twenty-four inches in circumference.

Its Colour is a Glorious Royal Scarlet.

Plants now ready at 3/6 each in 3in. pots.

Being convinced that this is a real advance in Zonal Pelargoniums, I am offering a Silver Cup, value five guineas, a Silver Medal, and a Bronze Medal in open competition for three plants, and also similar awards for twelve trusses, to be exhibited at the National Chrysanthemum Society's November Show.

All the best English and American **Perpetual Carnations.** **Rambler Roses in Pots** in large quantities. **Liliums** of the finest quality.

LISTS FREE.

For Particulars, see Society's Schedule, or write

W. H. PAGE,
Tangley Nurseries, HAMPTON, Middlesex.

Telegrams. "Page, Hampton."
Telephone: P.O. 166 Molesey.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

BEGONIAS.

NOW IS THE TIME TO BUY GOOD LARGE PLANTS.

Choice large-flowered Doubles, in nine separate colours, strong plants, splendid for pots or bedding, **4/6** per doz

Large-flowered Doubles, strong plants, mixed colours, **3/6** per doz

If you have never tried Double Begonias for Bedding, don't be afraid to try some. They are sure to please.

Frilled Singles, very pretty, large plants, **3/-** and **4/6** per doz.

Send for Free List of Choicest Named Begonias, Carnations, Delphiniums, etc., to:

BLACKMORE & LANGDON, Bath. AWARDED 24 GOLD MEDALS.

THE WATERSIDE IN MAY.

A survey of the conditions prevailing among the pools and watersides during May is fraught with the greatest interest to garden lovers. Just at this season, when blossoms are plenteous and growth is at its full, the water garden is worthy of the closest attention.

Nymphæas are rapidly pushing up new leaves and flower buds, and all who contemplate further plantings of these desirable subjects should carry out the work without delay, for the water is now thoroughly warmed, and growth is correspondingly responsive. There is no need for ornate planting baskets. A few discarded wicker fruit baskets, or box-like structures made from rough laths, with plenty of space between them, will be sufficient for the purpose of planting and sinking the nymphæas.

Protection should be given to the many forms of life found in the pools, for, apart from plant life, there are a host of aquatic creatures which assist materially in purifying and cleansing what would otherwise develop into stagnant water. Spare them all, as far as possible. Newts and water snails, beetles and fishes, water boatmen, and a host of others, including the wriggling tadpole, so dear to schoolboy's heart. All assist to maintain an efficient service of cleanliness, and any attempt to destroy these agents is a blow to the purity and sweetness of the water pools.

Plant life, too, is very necessary, both in the water and by the margins, the constant growth, bringing its supply of oxygen, and its constant work in drawing impurities from the pond base, and using them in the upbuilding of leaf and blossom, will be very apparent to all save the most casual beholder.

Now for the plants themselves. Calthas, which give such a glowing display of golden blossom, are now passing from beauty. Varieties of C. palustris are usually grown, some, including the double forms, being very attractive. The newer C. Tyermanni is good, and when a little lower in price will be greatly sought for. C. polypetala is a general favourite, and is now found in many gardens.

Camassias are now in bloom. Though the beauty of these subjects is not long-lived, yet a few groups of these light-stemmed starry flowers is of decided interest. C. esculenta is usually grown, but it is well to include also C. Cusicki, and the various forms of C. Leichtlini, which give shades of blue through to deep violet, and also good whites.

Primula pulverulenta is even better than the favoured P. japonica for waterside massing, though the latter, of course, gives such a wide range of colouring, so as to be practically indispensable. P. cortusoides is very effective in moisture, especially the second year from seed, giving a selection of light, graceful flowers over a good period. The pretty little P. involucrata, with its snowy blossoms, which, in the case of the varietal form Monroi, are lightly stained with blue, is deserving of note, and as a companion to it may I suggest the pretty Siberian Primrose, P. siberica, which, following the general formation of involucrata, gives two or three pleasing forms, of which the dominant colours are mauve and white. P. sikkimensis, the graceful golden-yellow primula, is just showing the colour in its buds, and will soon be delighting us once again with its beauty.

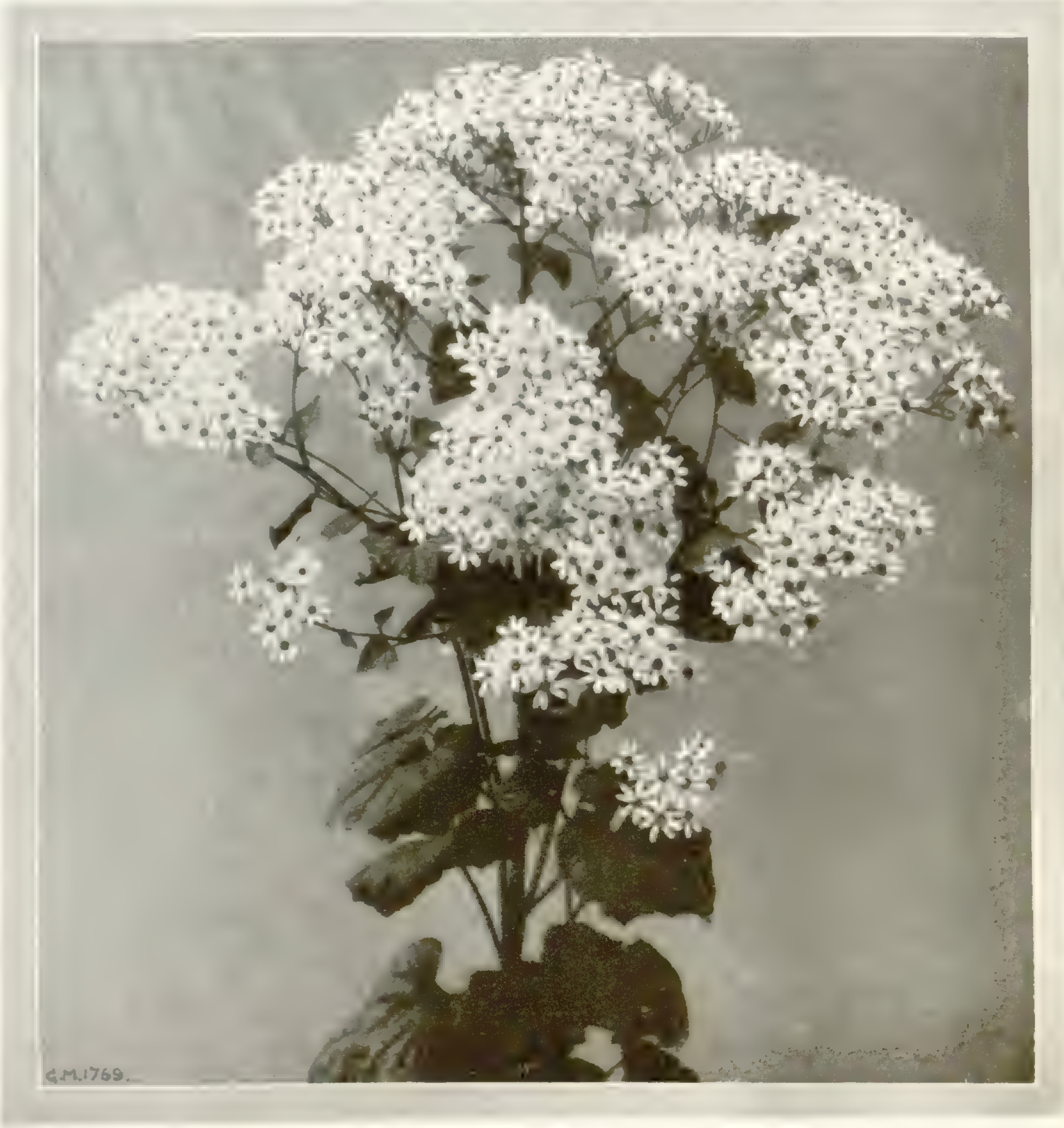
Many of the grassy cyperacæa are showing their tasselled flowers, and near by the Bog Bean (Menyanthes trifoliata) is noticeable by its white-fringed blossoms. Saxifraga peltata is also in full flower, the pinkish blossoms always coming in advance of the foliage.

The promise of myosotis and mimulus is as rich as ever. The newer forms of Myosotis palustris are better than the type, and, to my mind, Siren Eye is about the pick of the group. Mimulus are represented by various hybrid forms, of which Brilliant and Crimson Queen are well known. The species, luteus, an old English plant, which will rove through any ordinary pond, and the tall-growing cardinalis, so useful for the pond sides, are now in full vigorous growth.

Irises are coming on apace, and the blossoms of the delicate-hued I. missouriensis are open. Following rapidly one notes the rising stems of such gems as aurea, Monnieri, monspur, mon-aurea, orientalis, and the many forms of siberica. The interest attaching to an iris garden in spring and early summer is very great, and a large number of delightful species are eminently suitable for waterside adornment. In connection with this let me note the value of Iris virginica and its varieties for growing in shallow water, thriving in such a position better than they do above the water line. It is also feasible to grow Iris Kæmpferi perpetually submerged at the root, plants in such a position doing well year after year.

Astilbes and spiræas are full of promise, while asphodels, lythrums, lysimachias, epilobiums, and the host of summer-flowering waterside plants, are growing apace, and as a word of advice to late planters who have still undeveloped watersides to plant up, I would draw attention to the fact that many herbaceous plants commonly grown in the borders will do infinitely better by the water margins. Phloxes of the decussata type are notable examples, and others are sidalceas, cimicifugas—of which the Japanese Simplex is a notable example; senecios in many forms being valuable for their golden colourings; golden rods, aconitums, ranunculus, montbretias, pyrethrums, and many others. Trollius are just now at their best, and give splendid touches of colour to the scene. From white and palest yellow to the deepest orange we get a wealth of charming shades, and the delightful freedom of these globe flowers well repays the seeker after effects. In places where the depth of soil is limited a mulch of decayed manure will work wonders. No matter whether the subjects are irises, or hemerocallis, or primulas, or any of the thousand and one waterside subjects, they will be greatly benefited by this cooling, strengthening top-dressing. In this section of the garden (as in the rock garden) artificial manures are not needed; indeed, in few cases, except what we term "catch crops," are artificials worthy of note, but are more often the primary agents in undermining the constitution of plants.

P. S. Hayward.



TEMPLE SHOW—A FINE TYPE OF STAR CINERARIAS.

Colours various. Exhibited by Messrs. E. Webb and Sons.

Fabiana imbricata.—If considered only as a curiosity, from the great resemblance that it bears both in foliage and in flower to a member of the Heath family, this fabiana would be well worth growing, for in reality it belongs to the same order as the potato, namely, Solanaceæ. As a flowering shrub it is, however, delightful, forming as it does a specimen of somewhat upright growth clothed with small, crowded leaves, while the white tubular-shaped flowers are borne in great profusion.—W. T.

STAKING SWEET PEAS.

Where sweet peas were sown in the open last September or October they will have made considerable headway during the bright hot weather of the past fourteen days or more, and in many instances they will have been staked. Generally speaking, these early-sown sweet peas will be grown chiefly with the object of obtaining early flowers for decorative purposes, and where large quantities of cut bloom are required, and the soil and locality favour these early sowings, the flowers will come in very useful at a time when the principal bulbs have lost their beauty.

For general exhibition purposes these sweet peas are usually a little early, but they are most useful for staging at such shows as Windsor, Richmond, or Norwich, which are held in June; but the greater proportion of sweet peas are raised in pots, and planted out, or sown in the open ground during March, and these will now be in about the right condition for having permanent stakes put to them, and this is a matter worthy of considerable attention. In the case of sweet peas grown for the supply of cut flowers for ordinary purposes the matter is very simple, and, with plenty of good hazel boughs, they may be staked in just the same way as the culinary varieties, inclining the stakes outward at the top to save the haulm falling or being blown through.

Where the sweet peas are grown for the supply of exhibition flowers, and are encouraged to make very strong growth, the matter is more serious, and very seldom can one obtain stakes of sufficient length to carry them the season through, as in many instances they require to be quite ten or twelve feet in length. When these cannot be obtained it is wise to put up posts, and run a couple of wires from end to end of the row, and in this way the stakes may be carried up to the desired height, tying some nice light stakes to the two wires; this entails considerable labour, but it is well worth the trouble when good flowers are wanted over a long season. Where neatness is considered wire netting is also recommended for the purpose, but, personally, I do not like it, except when growing for ordinary cutting.

Bamboos tied to wires in the way suggested for the hazel stakes have proved very satisfactory, and where one does not mind the extra labour involved in training and tying, I would strongly recommend this method of supporting the haulm, the plants keeping wonderfully stocky, and the flowers coming very clean on good hard stems. At the Sweet Pea Conference last autumn this method did not meet the views of some of our friends, but I particularly noted that these gentlemen were not exhibitors in the competitive classes at the N.S.P.S. shows.

Whatever method is employed for supporting the plants, it should be done thoroughly well, as it is most annoying later on in the season to find the plants, and, in some instances, also the stakes, blown down by the force of the wind.

After staking, the ground between the rows or clumps should be lightly forked over, giving a dusting of soot among the plants as work proceeds, this latter keeping them free from slugs, while the forking over makes everything look tidy, which is a point that should not be overlooked.

T. Stevenson.

TEMPLE SHOW—TULIP MOONLIGHT.

A handsome May-flowering tulip with large flowers of a soft yellow colour. Exhibited by Messrs. Barr and Sons.

THE JUDAS TREE.

Cercis siliquastrum, a small tree or large shrub, familiarly spoken of in gardens as the Judas tree, is both showy and interesting, while its legendary associations appeal to the imagination of many people. The common name has been given on account of the tree being credited with being the one on which Judas Iscariot hanged himself after betraying the Saviour, and through this story it has come to be known to people who would not give it a second thought otherwise. It is, however, wonderfully effective when in blossom, for [illegible] pea-shaped flowers are rosy-purple [illegible] colour, and borne from all parts of [illegible] tree, even from buds on the older branches and some parts of the trunk. The species is readily distinguished amongst other trees by reason of its rounded, or almost reniform, leaves, which are from two [illegible] three inches across. Under normal conditions it may be met with as a bush fifteen feet high, and as far through, branching to the ground, or as a tree thirty [illegible] high, with a trunk nine to twelve inches in diameter. Like other leguminous subjects it likes a moderately light, [illegible] soil, and though it gives better results [illegible] rich, deep loam, it thrives fairly satisfactorily in that of a poorer nature.

W. D.

Habrothamnus Newelli.—Of [illegible] red-flowered forms of Habrothamnus I prefer this to any other, the flowers being of a clear, decided tint. It is an old kind, [illegible] been given a first-class certificate by [illegible] Royal Horticultural Society in [illegible] [illegible] met with so frequently as H. [illegible] H. fasciculatus. Though the generic [illegible] as above, commonly used in gardens, [illegible] plants are now included in the genus [illegible]trum. To those just mentioned may [illegible] added aurantiacus, whose orange flowers [illegible] borne in autumn, and the comparatively [illegible] Smithi, with pink blossoms.—W. T.

THE COMPLETION OF BEDDING OUT.

When bedding out has been done it may be found that some of the effects most aimed at prove unsatisfactory, either by reason of miscalculation of distances, crudity of colour mixtures, too uniform a level of flower or foliage, or an insufficiency of soil covering. The gardener would do well to complete his work by additions or alterations at once, rather than remain displeased with his efforts; all defects can be remedied, and often the loveliest results proceed from what may be described as amended bedding out arrangements.

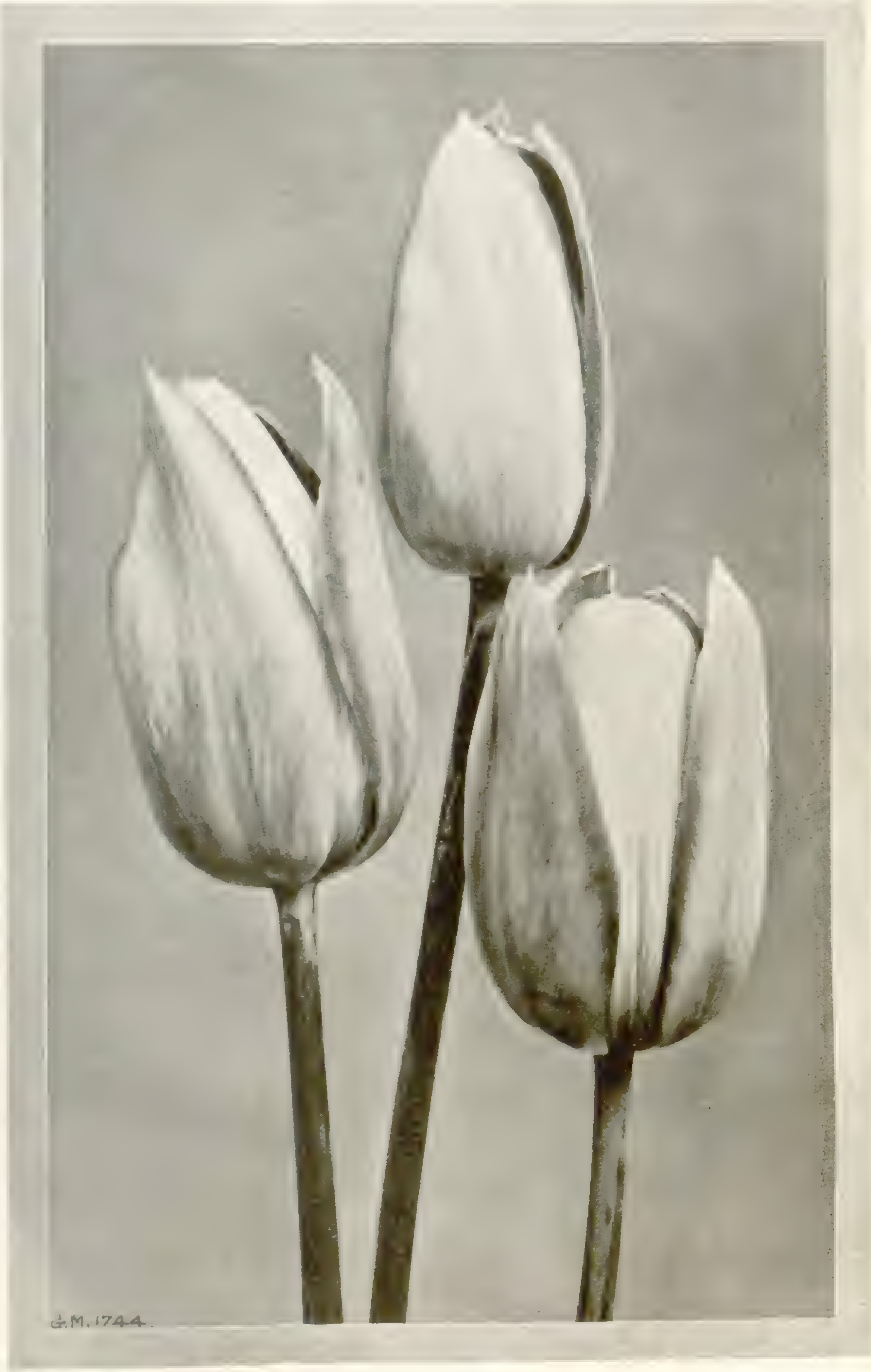
Unskilled labour may have set plants unsymmetrically, leaving unequal spaces between them, whereas those spaces were intended to be of precise dimensions; to lift the plants again would be to give them a check which some, notably begonias, would probably not survive. The true remedy for the evil appearance is to sow, or plant, seedlings of light-stemmed annuals in these spaces, introducing in a few weeks by that means an elegant grassy undergrowth that springs up around the more solid plants, veiling them partly in delicate foliage and florescence, while, at the same time, blurring the outlines of the unequal gaps. Among tall subjects the annual Gypsophila elegans, either in its pinky-white form or the pure white grandiflora alba, is excellent; there is not much leaf, and that on a low level, while the masses of miniature white star blossom will but enhance the beauty of gay and bigger flowers. There is also Gypsophila elegans carminea, a deep rose, and the pale pink G. e. rosea. Among dwarf plants, near the edge of the beds, Gypsophila muralis, a pink, six-inch species, can be employed. Those gardeners who prefer a perennial species will find Gypsophila Rokejeka, pinky-white, three feet tall, and Gypsophila venusta, white, eighteen inches high, admirable for the purpose; plants put out in June blossom freely later, and provide seed which, if sown on a sunny bed under a wall as soon as ripe, will give numerous specimens for removal into permanent quarters in March next.

A white annual, with forget-me-not-shaped flowers, on stiff branching stems, and lightest of grey foliage, is Omphalodes linifolia; this, among stiff scarlet or rose geraniums, vastly improves spaces, whether irregular or well-measured. Varieties of Michaelmas daisies, with myriads of minute blooms, can be well used, and will not fail to flower before winter; other suitable hardy annuals, however, are numerous, including the red, rose, blue, and white viscarias; blue, scarlet, and rose flax, or linum; the vermilion or yellow tassel flowers, or cacalias; and the lovely grasses, Briza maxima and gracilis, Agrostis nebulosa and minutiflora, and Eragrostis elegans and maxima.

Crude colour mixtures may generally be dealt with by introducing grey-foliaged plants; Cineraria maritima, C. m. Diamond, and C. candidissima; the glistening Ice Plant, Mesembryanthemum crystallinum; acanthuses, Achilleas Clavennæ, ægyptiaca, and clypeolata; Alyssum argenteum, Anthemis Biebersteini, Bocconia cordata, Centaurea candidissima, Sedum album, and the cerastiums, offer a variety. In colour mixtures that are too cold the use of crimson foliage plants will prove of value, while gold foliage is a safe remedy where heavy shades, such as purple, crimson, and violet have been over-employed.

A monotonously level bed ought to be improved by lifting a few of the plants and by the introduction of others of superior height; the striped maize, or zea, the handsomely variegated Tree Mallow, Lavatera arborea variegata; cannas, sweet peas grown singly against lofty sticks, standard fuchsias, or heliotropes, or palms, can be recommended.

When the soil shows too much among plants that will be sure to spread over it in autumn it is possible to contribute greatly to the summer beauty by putting out lobelia, in white, if colours are not required, small portions of divided stonecrops, or Mesembryanthemum variegatum, cerastiums, or iresine; these can, if desired, be cleared away later when no longer needed for their softening and furnishing effect.



TEMPLE SHOW—TULIP BEAUTY OF BATH.

A distinct variety; the flowers pale-yellow, suffused on the back of the petals with red-purple. Exhibited by Messrs. R. Wallace and Co.

Sometimes an ineffectively filled bed can be redeemed in character by having two or three centre plants removed, and a large palm, eucalyptus, or plumbago, from the greenhouse, inserted as a middle ornament.

M. H.

Gloriosa Rothschildiana.—The introduction of this species a few years ago gave a great stimulus to the culture of the gloriosas, one of which—G. superba—is said to have been sent here as long ago as 1690. The strange flowers and their bizarre colouring always attract attention, but it is not met with as often as one might expect, when the cheap rate at which it can be purchased, and its simple cultural requirements, are taken into consideration. Gloriosa Rothschildiana is, of course, more expensive, but its richly-coloured flowers and broad segments go to form a very striking flower. Owing to their long, often bifurcated tubers, these gloriosas are, as a rule, seen to greater advantage when planted out in a small prepared borders than when confined in pots.—W. T.

NOTES FROM KEW.

Tricuspidaria lanceolata.

This South American shrub, which is also known as Tricuspidaria dependens, Tricuspidaria hexapetala, and Crinodendron Hookerianum, forms a charming feature in the cool division of the Temperate House. A specimen some eight feet high, or thereabouts, is thickly studded with its bright red urn-shaped blossoms, which, hanging suspended as they do on long stalks, are somewhat suggestive of cherries. It is a beautiful, but by no means a common shrub, being, in some districts, not quite hardy. Under conditions favourable to the Himalayan rhododendron this tricuspidaria is just at home. It was first introduced by William Lobb in 1848, but it would appear after that to have become lost, till reintroduced by two other of Messrs. Veitch's collectors, namely, Richard Pearce and Downton. There is also a white-flowered tricuspidaria in cultivation under the name of T. dependens, over which a most unfortunate confusion has arisen. It is in this way: The red-flowered species, with drooping blossoms, had long been grown as T. dependens (a most appropriate name), till about ten years ago the white-flowered species was introduced, and, being then compared with herbarium specimens, was proved to be the true T. dependens, the red form being T. lanceolata. Our botanical authorities are not always such sticklers for priority as this, and it was a pity to uphold the mistake of the original authority, for the name of dependens is now applied to a plant whose flowers are much less drooping than those of the other species.

TEMPLE SHOW—BEGONIA MISS ETHEL GILL.
A fine variety with large, well-formed blooms of a rich rose colour. Exhibited by Messrs. Blackmore and Langdon.

Impatiens Herzogi.

This very striking member of the balsam family is flowering freely in the greenhouse. It is of sturdy growth, somewhat suggesting Impatiens Hawkeri, but the individual flowers are larger and more rounded, while they are of a distinct orange-salmon shade with a small violet eye. It is certainly a balsam of considerable promise, and will no doubt soon become popular.

Lantanas.

At Kew the different garden forms of lantana are regarded as but varieties of Lantana camara, the original species from whence these forms have sprung. A group of a particularly bright-coloured kind shows well the value of these lantanas for greenhouse decoration. It is of a fairly compact, but not lumpy, habit, and the freshly expanded blossoms are in colour rich orange, changing to deep scarlet. The plants of this lantana are at Kew alternated with flowering examples of Saxifraga sarmentosa, whose more sober tints serve as a foil to the vivid hues of the lantana, which, considering their easy culture and continuous flowering qualities, one might reasonably expect to find more often employed for greenhouse decoration.

Begonia coccinea.

For grouping purposes plants of a loftier stature than the general run of decorative subjects are often in demand in the greenhouse or conservatory. Such a one is this begonia, of which there are numerous examples from four feet to six feet in height, and all freely laden with their clusters of bright-coloured blossoms. It is a very old species, but at the same time one whose merits might be more often recognised than they are at the present day.

Primula Forbesi.

The charm of novelty or rarity cannot be claimed for this pretty little Chinese primula, as it is now, and has for a long time been, well known. For all this, it may be said to form one of the most pleasing features in the greenhouse, and one that directly appeals to those who can see beauty in small, as well as in large blossoms.

Two Beautiful Everlasting Peas.

Two charming members of the pea family, too tender for general cultivation in the open air, are now flowering in the greenhouse. They are Lathyrus pubescens and L. splendens. The first-named—L. pubescens—is a native of Chili, and though introduced a long time ago, has only been grown more or less within recent years. This, which is noticeable for the pubescent character of its leafage, has clusters of bright lavender-blue flowers. Lathyrus splendens, the second to mention, is a native of California, and was first sent out by the late Mr. William Bull, of Chelsea, about a quarter of a century ago. It, however, soon disappeared, probably owing to its being treated as a hardy plant. From seeds sent later on to Kew it flowered, I believe, there for the first time in 1897, and has been occasionally noted since then. The flowers are in colour a kind of carmine-red, a tint difficult to define. Anyone in search of uncommon greenhouse climbers might do well to take a note of these charming peas.

Begonia undulata, or B. glaucophylla.

This begonia is one of the best of all this extensive genus for growing in suspended baskets, that is, where large ones are desired. It is a free-growing plant, from whose long branching stems aerial roots, after the manner of the ivy, are produced. The foliage is very ornamental, the leaves when mature being of a deep green tint, with rose-coloured veins, while when young the entire leaf is suffused with rose. The salmon-coloured flowers are borne in dense drooping clusters for some months. This begonia is a native of Brazil, but it will flourish in the greenhouse during the summer. Good examples treated as basket plants are to be seen both in the greenhouse and in the Temperate House.

Pelargoniums.

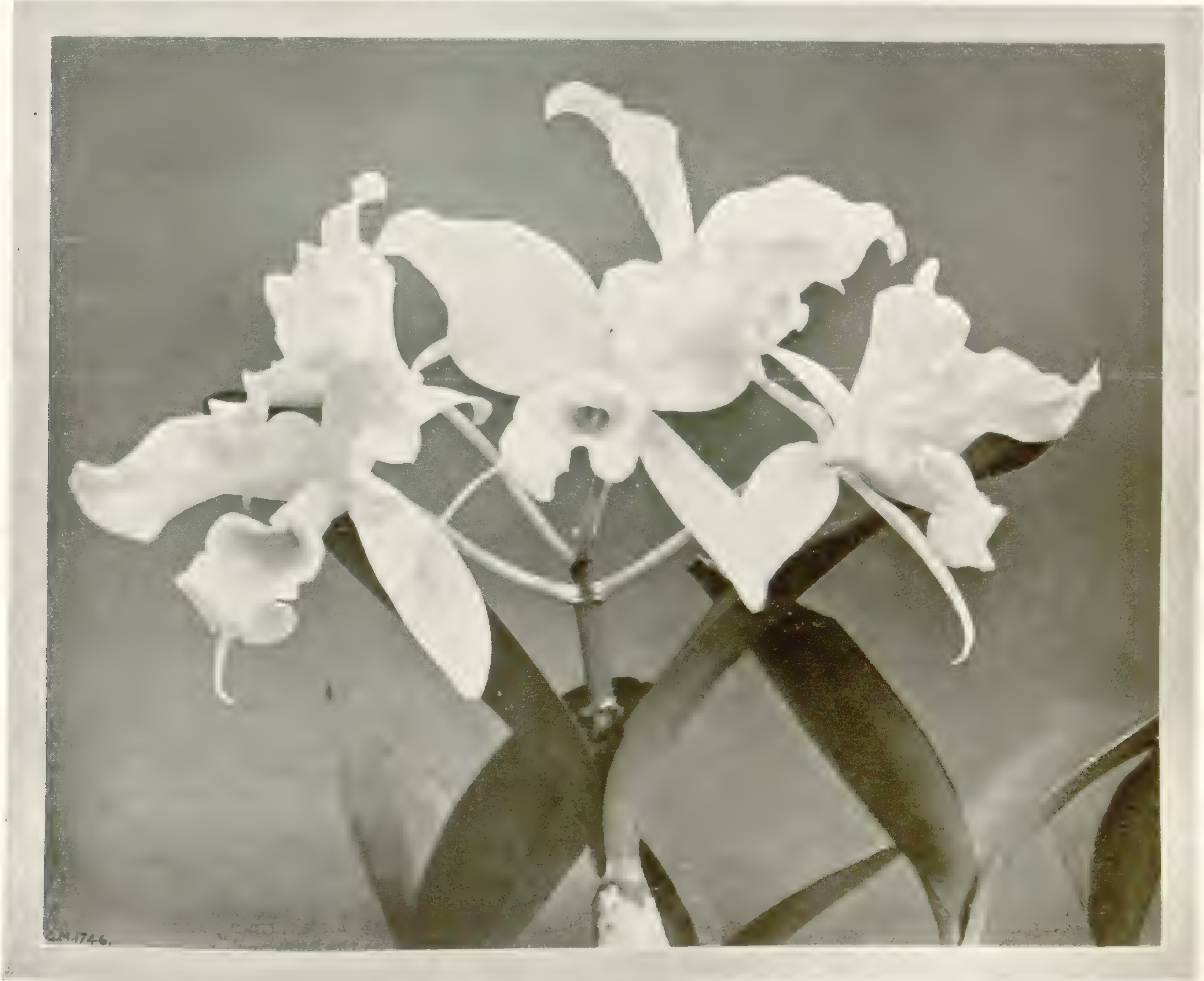
In the cool portion of the T range a most interesting collection of the different species of pelargonium is brought together, their diversity in habit, foliage, and in flower being remarkable. Both in the shape of the leaves and the fragrance thereof an extensive variety prevails, while the flowers of some of them, though small, are very pretty. One cannot but note Pelargonium echinatum, whose clear white flowers have each two distinct blotches of crimson, with a slight feathering of the same tint; P. altum, of a brilliant scarlet, veined with black; and P. citriodorum, white, with a large purple blotch.

Eranthemum Teysmanni.

A group of this eranthemum shows it in the light of a valuable decorative subject for the intermediate house at this season. It forms an upright, slender-growing plant, clothed with long narrow leaves. The flowers, which are loosely disposed in a terminal spike-like head, are of a pleasing shade of very pale mauve, while the centre of the comparatively large lip is almost white. It is certainly very pretty, and quite distinct from the eranthemums usually grown.

Ixora congesta.

The "Dictionary of Gardening" gives the date of the introduction of this species as 1845, but it is seldom seen, though it forms a very striking stove plant. It is apparently a strong grower that does not branch out freely as many of the garden forms do. The leaves are large, and pointed oblong in shape, while the flowers are borne in a massive terminal head or cluster. They are a kind of orange-buff in colour, an uncommon tint even in a genus where so many have flowers somewhat in the same way. A plant is now in flower in the stove portion of the T range.



TEMPLE SHOW CATTLEYA SKINNERI ALBA.

A pure white variety of Skinner's Cattleya, exhibited by Messrs. J. Cypher and Sons.

Episcia fulgida.

A hanging basket of this pretty South American gesnerad in the Nepenthes House shows it in a very favourable light. When growing freely it produces runners that each bear a young plant at their tip, while if grown in pots, and these runners are kept pinched off, it forms a gloxinia-like plant, pretty both in foliage and in flower. The leaves, the blade of which is roundish oblong in shape, and from six to eight inches in length, have their surface puckered in a peculiar manner. They are dark metallic green in colour, with the midrib and principal veins marked out with silver, these showing up conspicuously against the rest of the leaf. The flowers, which are little more than an inch across the expanded mouth, are of a bright rosy-scarlet colour. Under the generic name of Cyrtodeira it was sent home from Columbia nearly forty years ago.

Columnea glabra major.

This gesneriaceous plant, which was introduced from Costa Rica three or four years since, is now in flower in the intermediate portion of the T. range. In its partially woody growth and general appearance it bears a good deal of resemblance to an æschynanthus, none of which are, however, now in bloom. The flowers of the columnea, which are freely produced, are long, somewhat tubular in shape, and of a bright scarlet colour. This columnea was, a few years since, put into commerce by M. Lemoine, of Nancy. A second species also in flower at Kew is Columnea Tulæ, with yellowish blossoms, but it is much less showy than the other.

Eulophiella Peetersiana.

A very fine example of this eulophiella is now in bloom in the warmest portion of the orchid house. In general appearance it suggests one of the lissochilus, but the rhizome is of a decided creeping nature. The plant is nearly six feet in height, the upper part of the sturdy spike bearing from two to three dozen of its thick, wax-like rose-coloured blossoms. It is considered to be a native of Madagascar, and requires a warm moist structure for its well-doing.

Clematis montana rubens.

The specimen of this clematis which was so well illustrated in the GARDENERS' MAGAZINE as recently as March 4 of this year, is now again at its best, and a charming feature it makes. Apart from the rich rosy colour of its blossoms, this variety is also remarkable for its extreme floriferousness, far surpassing in this respect the typical Clematis montana close by. Of the many good things we have of late years received from China this is certainly among the very best.

Clianthus Dampieri.

At Kew the difficulties that used to attend the culture of this clianthus have for some years now been cleared away, and good flowering examples are always to be seen there in the season. The cultural difficulty is, I believe, overcome by grafting the clianthus on to Colutea arborescens, both stock and scion being seedlings. K.

Melons.—Cut melons as soon as the stem is leaving the fruit. The stems should at all times be preserved, as a melon appears wanting if the stem has gone. When cut, place the fruits upon wood wool, and convey to the fruit room to await its turn on the table.—W. A. Cook, Leonardslee Gardens.

WHITE EVERLASTING PEA.

The useful Lathyrus latifolius albus is becoming more generally grown, and it deserves its popularity. It has a great advantage over the so-called crimson and rose-coloured perennial peas—though L. grandiflorus is a fine flower in size and form—in that it does not clash with anything else, whereas the others are rather hard to place in this respect.

The removal of established plants is not to be lightly undertaken, as they suffer more from removal than almost anything else in the garden, the roots being very long, fleshy, and fibreless; so that one should consider well before putting a plant in a given place. Ordinary plants, as bought from a nurseryman, must be allowed two years to produce any effect, and sometimes even longer; but when once established they will go on for years without cultural attention of any sort as regards the soil. They should be allowed to grow as naturally as possible, any tying up to pillars, arches, pergolas, etc., marring their effect unless very judiciously done. They are well suited for rough places and for running over bushes, tree stumps, and the like. One admirable use for this pea is to plant it near delphiniums, so that when these latter are cut down to two or three feet after flowering, some twiggy sticks can be put amongst them, and the pea allowed to scramble over them, and so hide their untidiness. This is merely an illustration of the use to which it may be put. Slugs are fond of the young shoots in the spring, and a heap of cinder ashes should be put over the roots in the autumn. It provides excellent material for cutting during a good part of the summer, pieces from one to two feet in length producing a capital effect in large arrangements.

Propagation may be effected by division in the autumn or spring, but only large plants should be subjected to the treatment or flowering may be sacrificed for a couple of years. A better way is to remove shoots in the spring with as much root attached as can be obtained without unduly disturbing it. Such pieces, if well started in a frame, will make nice, though not large, flowering plants the following year. Stock may also be raised from seed, and will come fairly true, but it is not always a quick way, as seed sometimes does not germinate the year it is sown.

Alger Petts.

TEMPLE SHOW GLOXINIA HER MAJESTY.

A remarkably fine variety with large pure white flowers. Exhibited by Messrs. Sutton and Sons.

EVERGREEN MAGNOLIAS.

The magnolias, like the figs, live to a great age. I lately had charge of a garden in which there were about eighteen very fine specimens growing; some were trained on walls, but the majority were grown as standards, and one or two as bushes, their huge limbs branching out from the main stem just above the surface of the soil. In the Midland and Northern districts some protection is necessary during very severe winters. But in the south, taking my own case, I never saw a leaf damaged on the fully-exposed standard and bush trees during those two extremely severe winters that occurred about twelve and sixteen years ago respectively. Plants trained on walls did suffer a little. The new shoots on the wall trees were always longer jointed than those on the standards in the open. This was natural, of course, and it was to be expected that the shoots on the former were not as well matured as those on the more exposed trees, and bore fewer flowers in consequence. But nearly the whole side of one dwelling-house was covered by the healthy, glossy leaves of two specimens, and even where no flowers were borne the plants were worth growing, and caring for, on account of their magnificent leaves. I am, of course, referring to M. grandiflora.

I know of some very fine specimens trained on walls in London gardens; they are lightly protected during severe frosts, and rightly so, as the clear, glossy leaves are so highly appreciated in the gardens I refer to at South Kensington. Now, I find that some cultivators are loth to plant magnolias in any but a naturally dry soil. In my own case I had trees growing in very dry borders on steep slopes, and others in a long border through which water from a pond 20ft. away percolated constantly owing to the fact that the magnolia border was 2ft. lower than the water in the pond. The trees, however, did remarkably well, lost few leaves, and bore the largest blooms.

If I had to choose, I should select a medium, moist soil, well drained; one that was a deep loam, not too retentive. When the trees are well established annual top-dressings of fibrous loam, leaf-soil, and rotted manure in equal proportions are, I find, very beneficial, and tend to keep the roots near the surface.

G. B.

KOCHIA TRICHOPHYLLA.

This charming annual, commonly know as the Summer Cypress, is one of the mo distinct and indispensable subjects in t garden during the summer months; th erect, columnar habit, and delicate green leafage render it a conspicuous ject, either by itself, or when in contra or harmony with other plants.

Fortunately its cultivation is of easiest description, as it succeeds in a ordinary garden soil that is well work moderately rich in character, and of a lig nature. As a pot plant it develops superb specimens even when given but stricted root room.

Kochia trichophylla is readily raised fr seeds, and although frequently reco mended to be sown early in the year und glass, this is by no means the best tr ment, as far better plants result from later sowings, grown as cool as possible from th commencement. The best specimens kochia I have ever seen were from s sown seedlings in the open, these being transplanted to their permanent posit in May.

Thomas Smith

THE GREAT TEMPLE FLOWER SHOW,

MAY 23, 24 and 25.

The latest of the long and unbroken series of splendid exhibitions held by the Royal Horticultural Society in the gardens of the Inner Temple, on the Thames Embankment, was probably the finest of them all, having due regard to extent, culture, colour, splendour, and arrangement. To the Treasurer and Benchers of the Inner Temple thanks are due for permission to hold this show in their gardens, and though nowadays it would be a quite easy matter to fill double the space available, it must not be forgotten that the site of the exhibition is a particularly good and convenient one. About 11,000 square feet of staging were filled to the utmost in the fine huge tents provided, while outside the tents not less than 40,000 square feet were occupied.

Orchids, roses, choice hardy flowers, gorgeous calceolarias, beautiful carnations, handsome clematis, rock gardens, vivid tulips, and artistic Japanese gardens, and full-bloomed rhododendrons, were among a few of the great attractions, though the pot fruit trees and the choice vegetables must not be omitted.

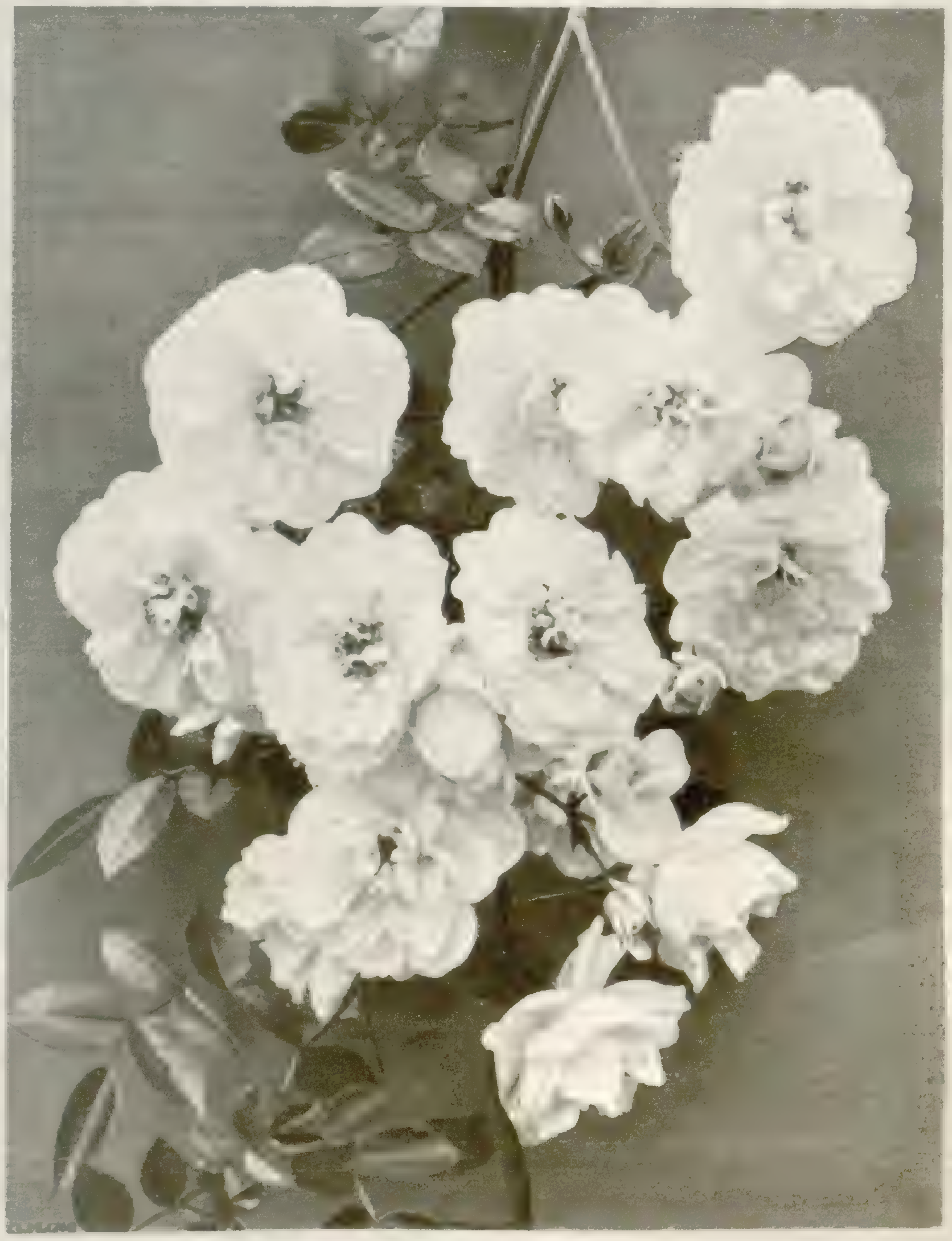
About ten o'clock in the morning, while judging was proceeding, their Majesties the King and Queen visited the exhibition, and stayed some considerable time inspecting the flowers and plants. They appeared to pay special attention to the orchids, the roses, the fruit, and the carnations, and were evidently delighted with their visit. Sir Trevor Lawrence, the president of the society, with the Rev. W. Wilks, secretary, and Sir George Holford, conducted their Majesties through the tents.

We would add a well-deserved word of praise to the Rev. W. Wilks, Mr. Gaskell, Mr. S. T. Wright, Mr. Reader, Mr. May, Mr. Gurney Fowler, and Mr. H. J. Veitch, and others who gave their time and skill to the arrangements that must precede such a huge exhibition, and one that is the finest of its kind in the world.

ORCHIDS.

Once again orchids occupied the place of honour, and they were shown even more largely than usual, filling the centre of the huge marquee with intense, brilliant colour, and amazing interest.

Entering from the Embankment end and turning to the right, the first exhibit was that staged by Messrs. Sander and Sons, St. Albans. The arrangement was delightful, and consisted of two deep bays with a central forward group and flanking ends. The central grouping was composed of glorious forms of Cattleya Mendeli, Lælia purpurata, and fine examples of Brasso-cattleya Digbyano-Mossiæ, Odontoglossum Cooksonæ, the brilliant O. Meteor, and the wonderful and curious Bulbophyllum virescens. To the left in the back of the bay were arching spikes of Phalænopsis Rimestadiana, Oncidium splendens, O. macranthum, and the vivid Renanthera Imschootiana. White forms of Odontoglossum crispum appeared on every hand rising from more richly coloured orchids. Odontoglossum amabile Empress of India, O. Black Douglas (Wilckeanum x Vuylstekei), and O. McNabiana were fine here, and so also were Odontioda Lambeauiana, O. Bradshawæ luminosa, and the free-branching O. ornata (Odontoglossum Pescatorei Lindeni x Odontioda Vuylstekeæ). In the right-hand part of this superb exhibit phalænopsis and oncidiums and odontoglossums were very much in evidence. Among the latter the chief subjects were O. Memoria King Edward VII., heavily blotched with reddish purple; O. amabile King George, red spotted on rosy ground; and O. King Arthur with big red-brown spotted blooms. Right in front was a delightful group of Miltonia St. Andre, with the lovely Cattleya Schroderæ Queen Mary just behind it. Oncidium Muelleri, with white rosy-lipped flowers, and somewhat the habit of O. macranthum, was a very distinct and novel orchid in this grand collection.



TEMPLE SHOW—ROSE SYLVIA.

A beautiful rambling variety, bearing large clusters of pure white flowers. A.M., R.H.S., May 23. Exhibited by Messrs. William Paul and Sons.

The very large contribution tastefully arranged by Mr. W. Collier, gardener to Sir Jeremiah Colman, Bart., Gatton Park, Reigate, was greatly admired. The striking feature of the group was the large number of graceful spikes of Odontoglossum Thompsonianum, arching over a light arrangement of pale cattleyas; there were nearly thirty plants of this purple-coloured hybrid. Finely grown examples of Miltonia vexillaria, Cattleya William Murray, C. Mendeli, Cymbidium eburneo-Lowianum, and C. insigne made a grand background, and in front of these was a host of good and interesting plants, such as Odontioda Bradshawiæ in variety, O. Vuylstekæ, Odontoglossum Lady Roxburgh, O. Lambeauianum, the deeply hued O. crispum Sir Richard Knight Causton, O. The Kaiser, a finely marked Gatton seedling, and O. King George V., a rich yellow flower. Somewhat smaller, less showy, but not less interesting were Oncidium pulchellum, Masdevallia Chimæra, Oncidium Clæsi, Cœlogyne Parishi, Cochlioda Noetzliana, and Bulbophyllum Lobbi Colossus.

Messrs. Jas. Cypher and Sons, Cheltenham, had a bold and beautiful group, and, as usual, they made special features of their finely grown and beautiful forms of the good old Lælia purpurata and Miltonia vexillaria. The arrangement was charming, ferns, palms and moss being used to show off the flowers to advantage. Phalænopsis Rimestadiana, and good forms of Cattleya Mendeli made up a graceful centre, with a few long branching sprays of Odontoglossum Clytie. In addition to colour and design, the group had other features of interest, and a close inspection revealed Cypripedium callosum Sanderæ, C. bellatulum, Maxillaria Sanderiana, Masdevallia Harryana, the erect Phaius Norman, Odontioda Cooksoniæ, O. Bradshawiæ, and O. Vuylstekæ, Dendrobium Dearei, Cattleya citrina, with pendant flowers of gold.

Messrs. Mansell and Hatcher, Rawdon, Yorkshire, put up a large and very delightful exhibit, the plants carefully disposed over moss and ferns, and so set out that each plant was distinct from its neighbour. The central part of the group was composed of Dendrobium densiflorum, Renanthera Imschootiana, white forms of Odontoglossum crispum, and golden sprays of Oncidium Marshallianum; it was a charming arrangement, and at the base were Odontioda Bradshawæ, O. Vuylstekæ, and O. Cooksonæ. Cattleya Mossiæ, C. Mendeli, Miltonia vexillaria, Dendrobium nobile virginale, D. McCarthiæ, Odontoglossum Vuylstekeanum, O. crispum Leonora, Miltonia phalænopsis, and Cypripedium Queen of Italy, were other choice subjects.

Mr. Harry Dixon, Spencer Park Nursery, Wandsworth Common, presented a small collection of orchids, that included fine examples of the graceful Cœlogyne Dayana, Odontoglossum Pescatorei, with odontiodas and odontoglossums in great variety.

Messrs. Charlesworth and Co., Haywards Heath, presented one of their marvellous contributions of well grown and finely arranged orchids. They filled a large space, and filled it grandly, as usual. In the middle was a lovely mound of Phalænopsis Rimestadiana and Miltonia vexillaria, and standing well out from the base of this mound were numerous plants of Odontioda Charlesworthi. Right along the back were Oncidium Marshallianum, Lælia purpurata, Renanthera Imschootiana, and Odontoglossum crispum. Miltonias and odontoglossums formed flanking groups, and Cattleya Mossiæ and C. Lawrenceana and C. Mendeli formed a background in the bays for the newer things, that included Lælio-cattleya Dominiana, L.-c. Fascinator King George V., L.-c. Wellesleyana superba, L.-c. Golden Glory, L.-c. Dora, Miltonia Bleuana, Miltonioda Ajax—a very rare hybrid, Odontioda Lambeauiana, Cattleya intermedia Acquini, Brasso-cattleya Vilmoreana, Odontoglossum eximium Prince of Wales, with deep crimson blotches; O. illustrissimum, almost wholly maroon-red; O. eximium The Kaiser, finely marked; O. percultum Blue Bird, a curious shade of colour; O. Jasper, red spotted on rosy-purple; Sophro-cattleya Chamberlainianum, Zygocolax Charlesworthi, Cypripedium bellatulum Queen of Spain, and a large number of other choice and beautiful subjects.

Messrs. J. and A. McBean, Cooksbridge, had a large and effective group that was strong in Odontoglossum crispum, and notably in white and shapely forms of this charming species. Cattleya Mendeli and C. Mossiæ were superbly shown. In the centre were a few very choice things, such as odontoglossum hybrids, and finely marked forms of O. crispum. The background was composed of Cymbidium Lowianum and Miltonia vexillaria.

Messrs. Armstrong and Brown, Tunbridge Wells, contributed a light and elegant exhibit of orchids, and they set out their plants somewhat thinly over green moss and ferns. Their central feature was composed of Odontoglossum crispum, Renanthera Imschootiana, Cœlogyne pandurata—very fine; Lælio-cattleya Aphrodite, and Miltonia vexillaria. The flanking ends were somewhat similarly composed, and in the two bays were hosts of cypripediums, notably C. Rothschildeanum, C. glaucophyllum, C. Goweri, C. callosum Sanderæ, C. Victoria Moriæ, and many unnamed hybrids. Brasso-cattleya Veitchi, Brasso-lælia Veitchi, and fine forms of Lælio-cattleya Aphrodite, occupied points of vantage. Some fine masdevallias were also included.

Messrs. Stuart Low and Co., Bush Hill Park, Enfield, occupied a prominent position near the end of the big tent. In the middle odontoglossums, odontiodas, and golden oncidiums were piled up to form an imposing feature. On either hand gorgeous cattleyas, notably C. Mossiæ, C. Mendeli, and C. Empress Frederick, were effectively grouped, and near at hand were Lælio-cattleya Fascinator, Cattleya Parthenia Prince of Wales, Renanthera Imschootiana, and the pretty Oncidium pulchellum.

Mr. Edward V. Low, Vale Bridge, Haywards Heath, showed the pale-lipped Lælia purpurata Lowi, L. p. Ashtoni, and L. p. Lewisi, Cattleya Skinneri alba, Cypripedium Beekmani, C. callosum Sanderæ, and the pretty Odontoglossum crispum Jeanette.

Mr. Hale, gardener to Samuel Larkin, Esq., Ridgways, Haslemere, Surrey, put up a pleasing exhibit, and bedded all the plants in maidenhair ferns. Cattleya Mossiæ, Phalænopsis Rimestadiana, Renanthera Imschootiana, various richly-hued odontiodas, and graceful odontoglossums, Cypripedium concolor, and Anguloa Clowesi were the prominent kinds of orchids displayed.

Mr. John Robson, Altrincham, had a lovely lot of Renanthera Imschootiana, and a number of superb unnamed odontoglossum hybrids rising out of a groundwork of cattleyas. Mons. Chas. Vuylsteke, Loochristy, Ghent, submitted a few glorious hybrid orchids; he brought up Odontioda Vuylstekeæ Coronation, a superb large-flowered form, with scarlet markings on a rosy ground; Odontoglossum cæruleum, a bluish flowered hybrid from O. gandavensis and O. ardentissimum; O. Grand Monarch with vivid blood-red marks and shadings; O. crispum His Majesty King George V., crimson with white edging; and O. Loveliness, with bluish-purple blotches on a white ground.

Mr. Shiel, gardener to Baron Bruno Schröder, The Dell, Egham, exhibited Odontoglossum Black Prince, Dell variety; this had a spike of fifteen grand flowers almost wholly of deep rich red-brown colouring.

Cœlogyne Burfordiense, a very distinct and pretty cross between C. asperata and C. pandurata; this is very like C. pandurata, but the green is paler, and the petals reflex distinctly. Mr. H. S. Goodson, Putney, brought up Odontoglossum amabile Fredericki, red spotted on a white ground.

Mr. Hopkins, gardener to Francis Wellesley, Esq., Westfield, Woking, staged the very bright yellow and ruby-crimson Lælio-cattleya C. Graham White, and the handsome large-lipped Lælio-cattleya Morningtoniæ.

In the splendid group of stove and greenhouse plants submitted by Messrs. Jas. Veitch and Sons, Chelsea, there were three mounds of orchids, and here the chief subjects were Cattleya Mendeli, Renanthera Imschootiana, Disa Veitchi, Cattleya Mossiæ, Odontoglossum Clytie, O. Felicity, O. crispum, Odontioda amabile, Brasso-catt.-lælia Veitchi, Oncidium Marshallianum, Cattleya Dusseldorfi Undine, and the beautiful Disa Luna.

ROSES.

We have come to look upon roses as one of the leading features of the Temple Show, and it seemed fitting that a special effort should be made with the National flower in Coronation year. Entering the big tent, the first thing to meet the eye was the group of roses in pots set up by Messrs. Paul and Son, of Cheshunt, and we are safe in saying that the firm has never made a finer display. Weeping standards of the rambler type, including Dorothy Perkins, Excelsa, Lady Gay, White Dorothy, and Lady Godiva, stood up above a groundwork of dwarf plants, amongst which were represented Marquise de Sinety, Cardinal, Etoile de France, Freda, George C. Waud, Elizabeth Barnes, and a host of others.

The outstanding feature of the group of roses staged by Mr. Charles Turner, Slough, was the weeping standards. Beautiful indeed were the examples of the popular Dorothy Perkins, Lady Gay, Hiawatha, the old Crimson Rambler, and others, while in amongst the ramblers we noticed specimens of the Lyon Rose, Lady Ashtown, Queen of Spain, and Florence Pemberton, all in good form.

Magnificent was the expression we heard in connection with the exhibit of roses sent from the nurseries of Messrs. William Paul and Son, Waltham Cross, and it was quite justified. We can imagine nothing more beautiful than the gloriously-flowered specimens of American Pillar, Tausendschon, Lady Gay, Excelsa, and the Lyon Rambler, and the well grown and finely flowered specimens of dwarf plants which formed the ground looked as fresh as paint. All the best varieties were represented, and in every case the blooms were in the pink of condition.

A good deal of taste was displayed in the arrangement of the interesting collection of roses set up by Messrs. Frank Cant and Co., Colchester. Perhaps the most striking thing in the exhibit was the beautifully-formed crimson buds of the variety Richmond, but the old William Allen Richardson did not suffer by contrast, and on orthodox show boards were to be seen numerous blooms of many well-known varieties. To complete the exhibit were a few weeping standards of Hiawatha, Minnehaha, and others.

Messrs. H. Cannell and Sons, Eynsford, had a bank of roses which would have been more effective if it had looked a bit less solid. American Pillar figured conspicuously in the centre, and we also noticed Lyon Rambler, Veilchenblau, which is something approaching a blue; The Light Star, Aennchen Muller, and White Dorothy.

Weeping roses, including Blush Rambler, Mrs. F. W. Flight, Dorothy Perkins, and American Pillar, formed the background of the wonderful groups set up by Messrs. W. Cutbush and Son, Highgate, and as a groundwork in amongst the carnations were beds of polyantha roses, including Mrs. W. H. Cutbush, Jessie, Madame N. Levavasseur, and others. Indeed, it is rarely that one sees roses and carnations blended together to better advantage.

Messrs. B. R. Cant, of Colchester, sent a fine collection of rambling roses, but the position was not good for staging roses of this kind to the best advantage. Indeed, the space was inadequate for the group, and, consequently, there was some suspicion of overcrowding; but, nevertheless, the finely-flowered specimens of Dorothy Perkins, Tausendschon, Minnehaha, and Mrs. F. W. Flight did not fail to attract attention. The novelty in the collection was the so-called blue rose Veilchenblau.

Ramblers again were the feature of the rose group set up by Messrs. Prince, of Oxford, and here also were finely-flowered specimens in weeping standard form of Lady Gay, Dorothy Dennison, Hiawatha, Delight, White Dorothy, and the old Crimson Rambler. In the front was a beautiful box of roses of the variety Mrs. Longworth, which is described as a striped Caroline Testout, and the Lyon Rose was also well shown.

Messrs. George Mount and Sons, Canterbury, added further lustre to their fame by exhibiting a wonderful collection of roses. At the back were tall standards of Dorothy Perkins and Crimson Rambler, and below were beautiful banks of Mrs. John Laing, Lady Hillingdon, Frau Karl Druschki, Mrs. Geo. Shawyer, and Ulrich Brunner. The Richmond and the Lyon Rose were highly attractive, and every flower in this magnificent collection was stamped with the brand of high-class quality.

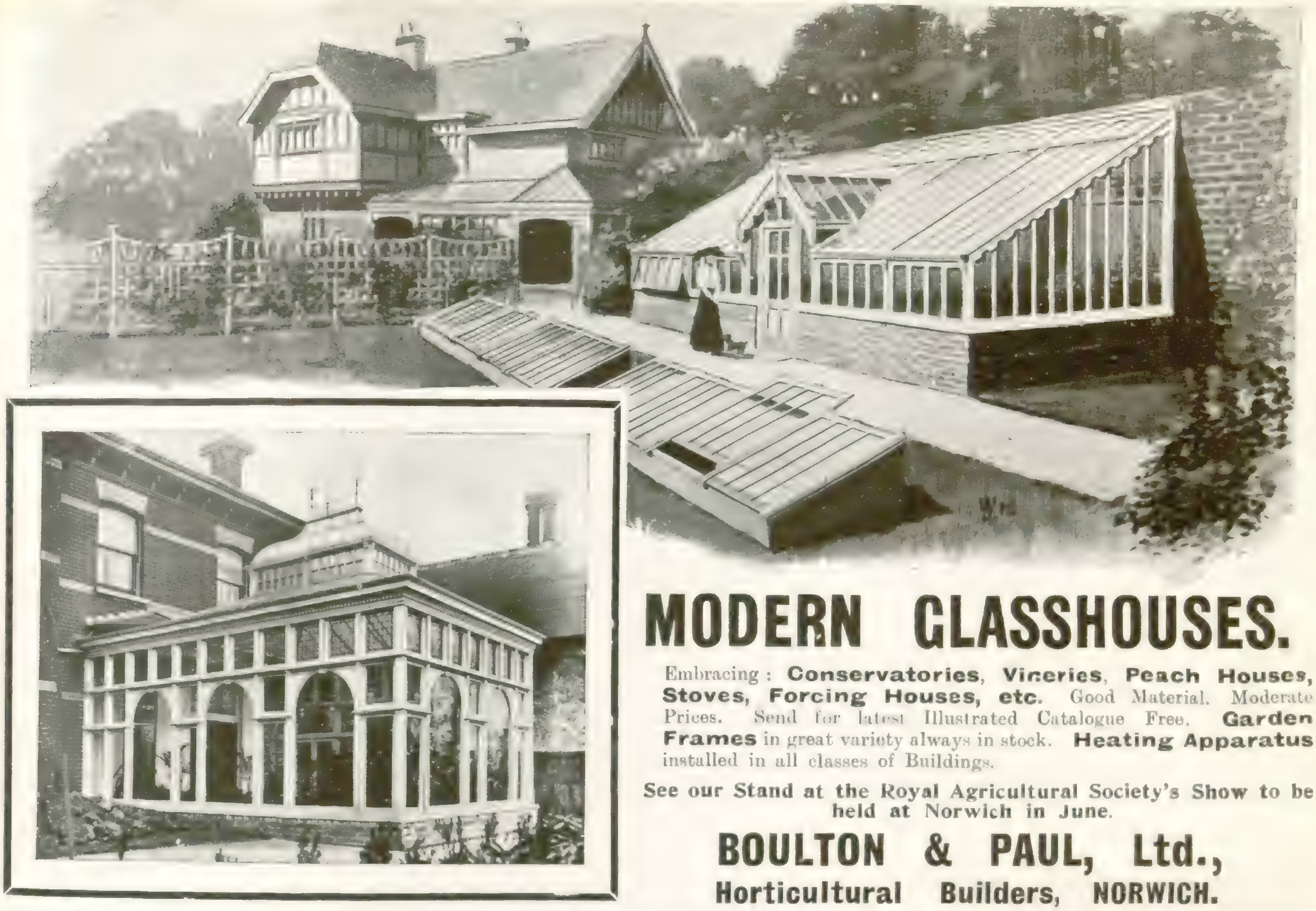
One end of the long tent was occupied by roses sent by Messrs. Hobbies, Lim., Dereham, and a fine collection it was. The conspicuous feature was the weeping standards of Excelsa, Minnehaha, American Pillar, and Lady Gay, and mixed in with the above were roses of numerous other varieties. Perhaps the group was a little overcrowded, but, nevertheless, it was very fine.

Messrs. Alexander Dickson and Sons, of Newtownards, set up a small, but choice collection of roses in bamboo stands. Amongst the varieties were fine flowers of Mrs. Walter Easlea, Mrs. Fred Straker, Mrs. Cornwallis West, and Mrs. Gordon Sloane.

BEGONIAS.

We have seen more tuberous begonias at previous Temple Shows, but we question if a finer lot of plants and flowers have ever been staged than those which came from Messrs. Blackmore and Langdon, Bath. There was a bewildering variety of colour, the flowers were magnificent in size and form, and the leathery foliage bore traces of rude health and good cultivation.

Mr. A. L. Gwillim, Sidcup, Kent, staged some good tuberous begonias, but the arrangement of the plants was rather flat and uninteresting.



MODERN GLASSHOUSES.

Embracing: **Conservatories, Vineries, Peach Houses, Stoves, Forcing Houses, etc.** Good Material. Moderate Prices. Send for latest Illustrated Catalogue Free. **Garden Frames** in great variety always in stock. **Heating Apparatus** installed in all classes of Buildings.

See our Stand at the Royal Agricultural Society's Show to be held at Norwich in June.

BOULTON & PAUL, Ltd.,
Horticultural Builders, NORWICH.

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant — Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

TRUST THE FIRM BEHIND THE BOOT!

OVER 100 YEARS REPUTATION IS BEHIND EVERY PAIR

Why Not Try a Pair of

NORWELL'S

"PERTH BOOTS"

THIS SPRING?

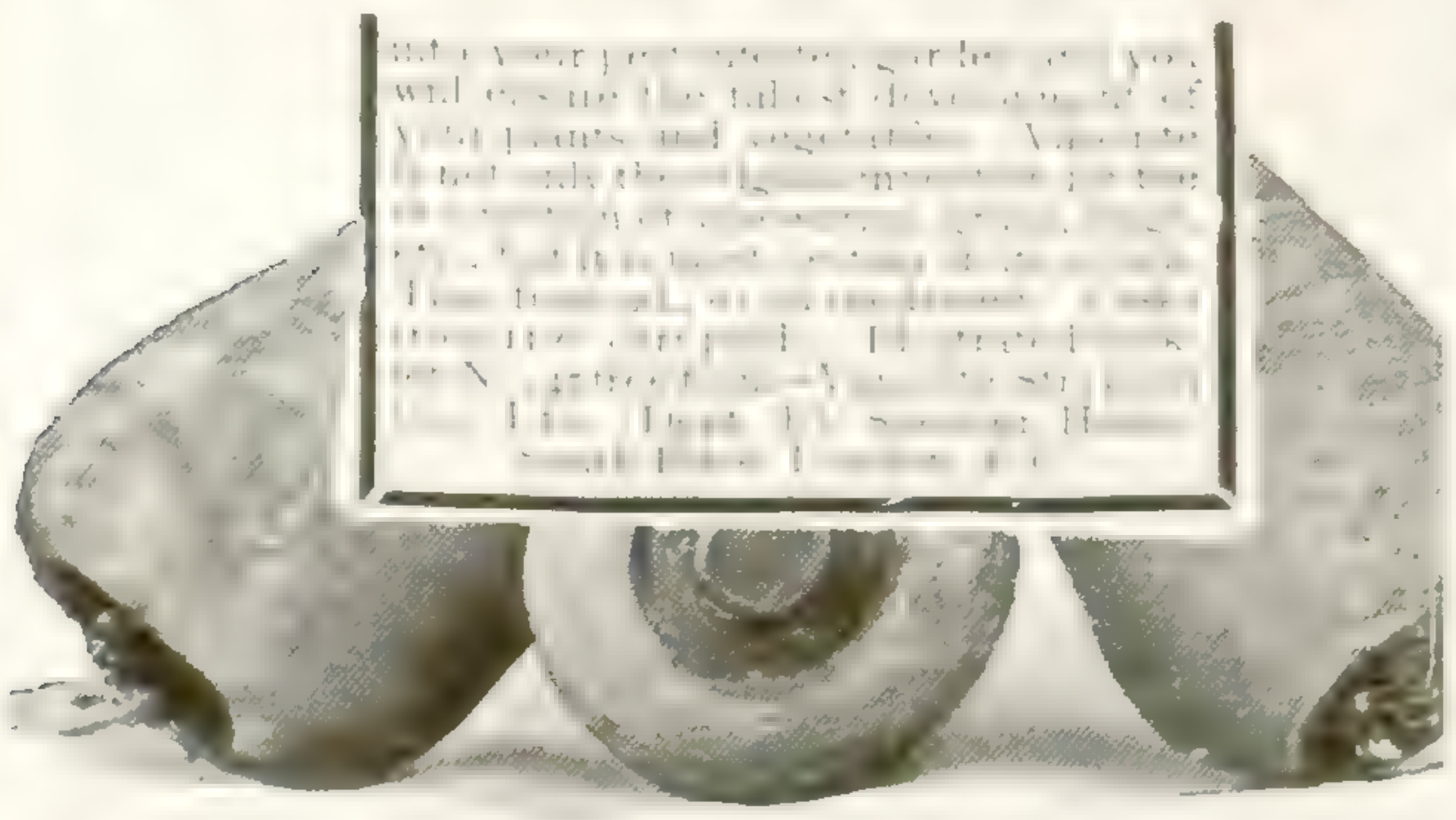
The right thing to do is to write for our Illustrated Free Catalogue to-day. Just drop us a Post Card, and by return you will get the description and details of the Best Value in footwear for gardeners and all those exposed to tearing country wear. We are specialists, and have the greatest confidence in our power to fit and please you. To-day, and every day, we are supplying families with footwear whose great grandfathers and mothers wore our celebrated "Perth Boots."

The Perth Gardener Boot - **10/9** *FOR STRONG WEAR.* | **The Perth Calf Skin Gardener Boot** **11/9** *FOR GREENHOUSE WEAR.*

SEE PAGE 10 OF OUR LIST FOR SPECIAL BOOTS FOR GARDENERS.

NORWELL'S Boot Factory, PERTH, N.B. **ESTABLISHED OVER 100 YEARS.**

DIG
VAPORITE



[illegible] will ensure the fullest development of your plants and vegetables. Vaporite [illegible]

BAYLISS, JONES AND BAYLISS, LIMITED.

MFRS. OF
IRON RAILING

IRON FENCING

PARK-ENTRANCE
GATES

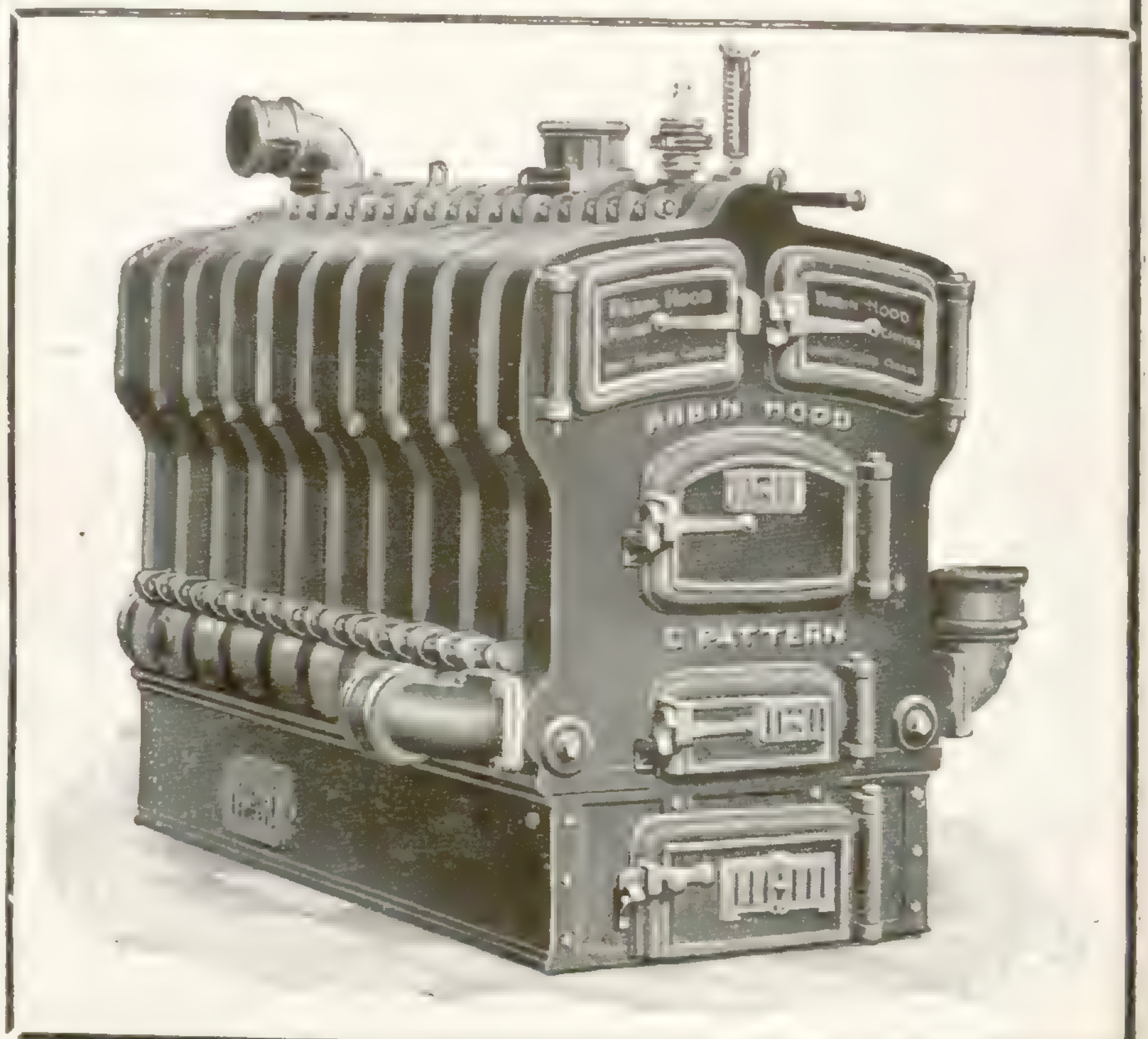
Catalogue Free *on Request.*

WOLVERHAMPTON AND 139 & 141 Cannon Street, LONDON, E.C.

FOSTER AND PEARSON LTD.
BEESTON, NOTTS.

We were building Greenhouses in 1841.
We are building Greenhouses in 1911.
We only build good Greenhouses. . .
Good Greenhouses last:
Others do not.

Catalogue on application.



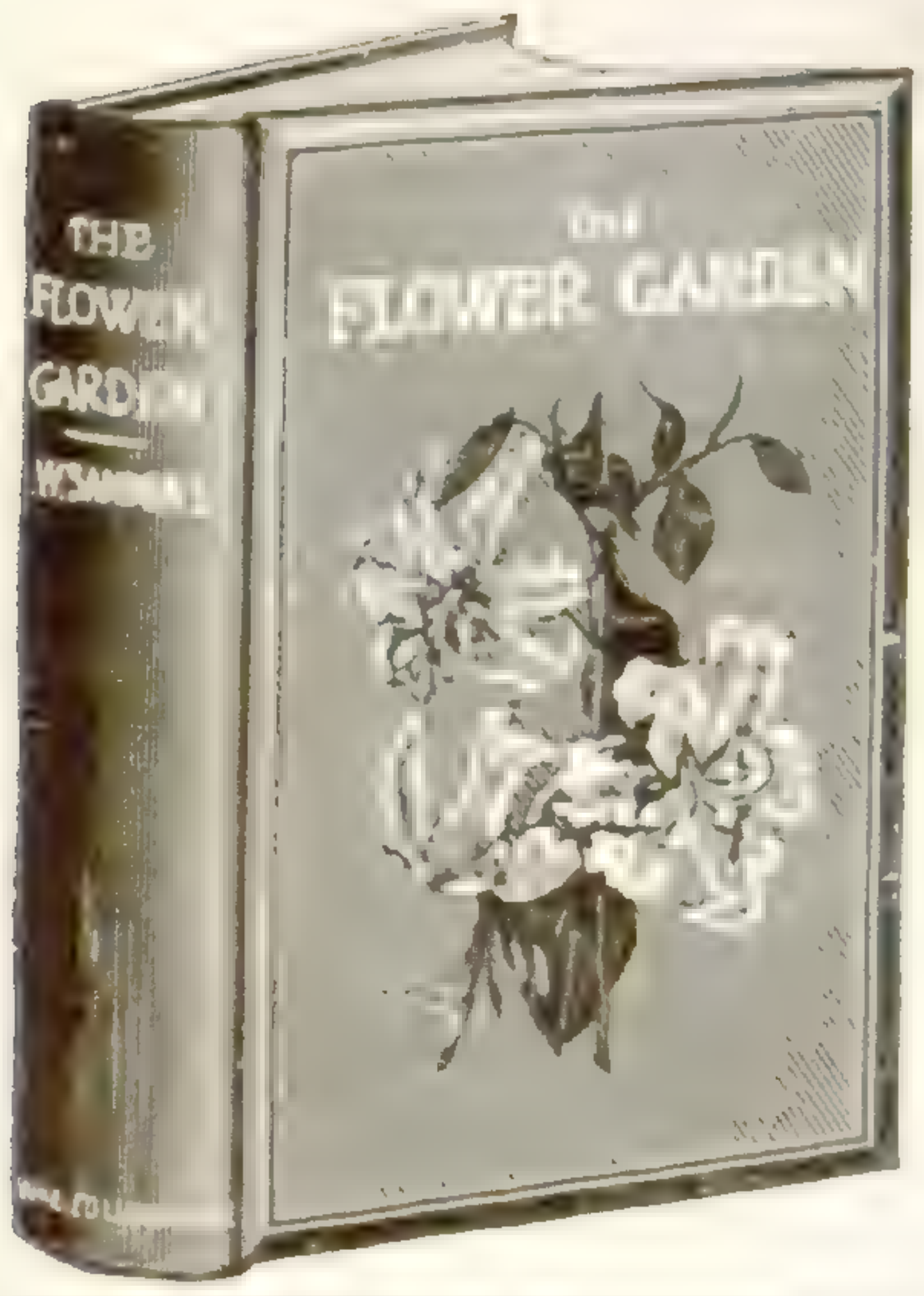
THE "ROBIN HOOD," C Pattern.

THE JOY OF ALL IS A BEAUTIFUL GARDEN.

READ THE BEST PRACTICAL GUIDE.

Price 7/6 net; by post, packed in box, 8/-

THE FLOWER GARDEN,



By T. W. SANDERS, F.L.S., Editor of "Amateur Gardening."

A Complete Guide to Planting and Management of the Flower Garden and the Cultivation of Flowers, Plants, Trees, &c., adapted for Outdoor Culture.

THE CONTENTS INCLUDE—

- Fashioning the Garden.
- Beds and Borders.
- Walks and Paths.
- Lawns and Tennis Courts.
- Rockeries and Ferneries.
- Arbours, Summerhouses, Arches, and Pergolas.
- Edgings.
- Walls and Fences.
- Garden Practice.
- Propagation.
- Colour Arrangement.
- Bedding.
- Annuals and Biennials.
- Bulbs.
- Hardy and Tender Border Plants and Flowers.
- Climbing Plants.
- Trees and Shrubs.
- Pests and Diseases.

480 PAGES, ILLUSTRATED BY 64 PLATES OF BEAUTIFUL GARDEN SCENES, PLANTS AND FLOWERS, AND MANY EXPLANATORY DIAGRAMS.

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE," 148 & 149, Aldersgate St, London, E.C.

Please send me a copy of "THE FLOWER GARDEN," *by Post, for which I enclose remittance of* 8/-

Name ....

Address...

The size of many of the tuberous begonia flowers staged by Messrs. Ware, of Feltham, was extraordinary, and altogether the group was a highly attractive one. There were many varieties, but the one which attracted most attention was Lady Cromer, a charming flower of salmon-pink shade.

SWEET PEAS.

Sweet peas at the Temple Show are now quite an ordinary feature, and the flowers prepared for the occasion seem almost as good as those seen at the summer shows later on. Messrs. Robt. Sydenham, Lim., Birmingham, were represented by a fresh-looking lot of flowers, amongst which we noticed Zarina, Thomas Stevenson, King Edward VII., and other well-known varieties, all of which were staged in pleasing form.

Mr. W. E. Alsen, Denmead, Hants, put up a fresh-looking collection of sweet peas, conspicuous amongst which were Sterling Stent, King Alfonso, and Moneymaker.

Mr. Breadmore, of Winchester, staged a choice collection of sweet peas, and amongst the varieties we observed Sterling Stent, Dazzler, Charlie Irving, George Herbert, and King Alfonso. The flowers were tastefully arranged with asparagus foliage.

Mr. J. Stevenson, Wimborne, had an interesting collection of sweet peas, and included amongst the varieties we noticed vases of The King, Flora Stevenson, Asta Ohn, etc.

Sweet pea flowers, with some of their own foliage, were shown in variety by Messrs. E. W. King and Co., Coggeshall, and perhaps the most attractive varieties in the collection were Anglian Orange and Rosabelle. An air of novelty was introduced by Mr. H. J. Jones, of Lewisham, in the arrangement of his sweet pea flowers, and the elegant grasses used amongst the spikes were very pleasing. The varieties included, amongst many others, Nancy Perkins, Thos. Stevenson, Helen Lewis, Stirling Stent, Doris Burt, and Moneymaker. No exhibit of sweet peas in the tent was more attractive than this.

The outstanding feature in the exhibit of sweet peas from Miss Hemus, Upton-on-Severn, was the white flowers of Zero, raised from seed sown in an open field exposed to the east, last September. The flowers were very fine, and full of substance.

A very fine lot of sweet peas were set up by Messrs. Dobbie and Co., Edinburgh, the blooms being fresh, and borne on long footstalks. The varieties which attracted most attention were Mrs. Cuthbertson, Elfrida Pearson, Ivanhoe, Cherry Ripe, White King, and Sunproof Crimson. Considering the time of the year, this was really a wonderful lot of peas.

Messrs. Stark and Son, Great Ryburgh, had a pretty little collection of sweet peas, in which the varieties Lord Northcliffe and Hercules were mostly conspicuous.

FERNS.

Cool and fresh looking was the bank of ferns set up by Messrs. Hill and Son, Lower Edmonton, and amongst the different forms displayed were Nephrolepis Whitmani, Davallia robusta, Lomaria attenuata, Polypodium Mayi, and others. Everything about the appearance of the plants indicated signs of good cultivation.

Densely green was the big bank of ferns set up by Messrs. H. B. May and Sons, Upper Edmonton, and the plants which comprised the group were magnificent. Nephrolepis Marshalli compacta attracted much attention, and there were also some finely-grown examples of Davallia solida superba, Platycerium alcicorne, Polypodium Mayi, and others. The graceful Lygodium microphyllum exhibited in this collection was favourably commented upon.

Mr. H. N. Ellison, West Bromwich, set up a nice collection of mixed ferns. Amongst them, arranged with asparagus, were the bright orange flowers of Gerbera hybride.

Mr. A. A. Fabius, Emsworth, staged a novelty in the way of ferns called "The Glory Fern," which is very pleasing in appearance, and well suited to cool house culture.

GREENHOUSE PLANTS.

Across the top of the largest tent Messrs. Sutton and Sons, Reading, displayed one of their magnificent collections of flowers, and again they did themselves great credit. The group was a feast of rich colouring and grace, while the central mound of elegant stellate and cactus-flowered cinerarias lent fragrance to colour. On either side of the cinerarias were glorious groups of superb herbaceous calceolarias in glowing colours and rich and varied spottings, and every plant a perfect specimen; gloxinias were used with nemesias to edge the groups of calceolarias. At one end was a mound of schizanthuses, and at the other end schizanthuses were associated with brilliant begonias. The bright Firefly variety of Clarkia elegans was also a feature of this grand effort.

TEMPLE SHOW—CARNATION LADY ALINGTON.

A beautiful perpetual-flowering carnation, with blooms of a pleasing colour.
Exhibited by Messrs. S. Low and Co.

Indian azaleas and Malmaison carnations from Mr. Charles Turner, Slough, filled a corner with beauty and fragrance close to the side entrance to the big tent; the pyramidal azaleas towered up above the carnations, and were a reminder of old-time shows.

Greenhouse plants in great variety were staged by Messrs. Stuart Low and Co., Enfield. This firm showed heaths, anthuriums, blue hydrangeas, Hydrangea Madame Moulliere, gerberas, and acacias.

Mr. A. Bruce, Chorlton-cum-Hardy, again brought up an exhibit of interesting insectivorous plants, and showed sarracenias well, placing these amid moss and grasses. There were good specimens of S. flava gigantea, S. Farnhami, S. flava maxima, S. Drummondi, S. Willmottæ, the splendid new S. Sir Frank Crisp, and the dark crimson-hooded S. Watsonia, S. Chelsoni, S. Swaniana, etc., and also pans of Dionæa muscipula—the Venus fly trap—a very interesting group that was pleasant to look upon after the richer hues of other things.

Messrs. H. B. May and Sons, Edmonton, put up a few dozen bunches of double and semi-double pelargoniums but rather crowded the flowers; they had a fine new clematis of the lanuginosa type named Queen Mary.

Sweet heliotropes from the King's Acre Nursery Company, Hereford, attracted all the ladies, especially as the plants carried fine heads, notably in the case of Lord Roberts, Favourite, and Dr. Jewlin.

Zonal pelargoniums were contributed in large bunches by Messrs. Carter Page and Co., London Wall, but they soon suffered from the heat of the tents.

Amateurs' exhibits were few and far between, but Mr. Wickam Noakes, Selsdon Park, Croydon (gardener, Mr. Howarth), came up with a brave little show of herbaceous calceolarias, and staged well-grown and brilliant plants of a fine strain.

Zonal pelargoniums were brilliantly shown by Mr. R. J. Fry, Abbott's Leigh, near Bristol; the plants of Fiat, Abbot's Pride, Mentmore, and Miss G. N. Fry carried very large trusses.

Mr. W. H. Page, Hampton, had three grand new zonal pelargoniums in his varieties, His Majesty, Fiscal Reformer, and Winter Cheer.

Vivian Phillipps, Esq., Crofton Court, Orpington, was another amateur who came forward with herbaceous calceolarias, staging compact, freely-flowered plants. Mr. Vincent Slade, Taunton, Somerset, contributed cut zonal pelargoniums, and had excellent flowers of Ascott, Blenheim, and Mentmore.

Messrs. Webbs, of Wordsley, Stourbridge, made a big display on one side of the central tent. The exhibit was a very diversified one, and groups of bright calceolarias rubbed shoulders, as it were, with old-fashioned clarkias, new hybrid schizanthuses, Cineraria stellata, and calceolarias. The greenhouse cinerarias were very bright, and the arrangement of the whole was not wanting in taste.

THE LYON ROSE AND ORANGE-RED GERBERAS.
Artistically arranged by Messrs. R. Felton and Son.

Messrs. Sander and Sons, St. Albans, were represented by sturdily-grown plants of the new double white marguerite Mrs. F. Sander.

Messrs. R. Sydenham, Lim., Birmingham, staged some beautiful valley lilies in pots without drainage, as well as specimens of Spiræa Queen Alexandra, and Lilium auratum.

Messrs. H. Cannell and Sons, Swanley, made a brilliant display, first with a collection of superb cannas, then a bank of gorgeous calceolarias, followed by a little break of fancy pelargoniums; further on a group of interesing cacti, and then a brilliant show of zonal pelargoniums. The pretty little Myosotises pyramidalis Pink Gem and White Gem were much admired, and altogether this was one of the most interesting and superb groups of greenhouse plants in the show.

Graceful and effective are the adjectives which best describe the collection of hybrid schizanthuses exhibited by Messrs. Garaway, Bristol, and the well-grown plants attracted much attention.

Messrs. Godfrey and Sons, Exmouth, had a fine collection of their quaint Oriental poppies in different varieties, and they also made a bright show with fancy pelargoniums, but the bunches of flowers were rather overcrowded.

Nothing in the show was more effective than the exhibit at the main entrance, from Messrs. Carter and Co., Holborn. The baskets of schizanthuses were worth going some way to see, and specimens of the same flower in pots were highly effective. Petunia Queen of Roses made a bright show; carnations and sweet peas were good, and the display of gloxinias was extremely brilliant. Greenhouse cinerarias were shown in bank-like form, and the varied coloured petunias were much admired, as also was the pink stock Empress Elizabeth. Unfortunately the crush at the main entrance prevented many of the visitors from seeing the full beauty of this exhibit.

A stamp of quality, as well as extreme beauty, characterised the exhibit from Messrs. J. Veitch and Sons, Chelsea. The new hybrid gerberas staged by the Chelsea firm were a study in themselves, and Gloriosa Rothschildiana attracted much attention. Beautiful and varied to a degree was the bank of streptocarpus, while the plants of Kalanchoe flammea, Begonia Lucerna, Calceolaria Clibrani, Cinerarias Langley Red and Decorator, the pretty little Saxifraga sarmentosa tricolor, and Veitch's Snow Queen geranium, were much admired. It would be difficult to overpraise this interesting collection of plants.

Gloxinias in great variety came from Messrs. John Peed and Son, Norwood. Perhaps the prettiest of the named varieties was Queen Alexandra, but many of the others were very attractive.

CARNATIONS.

In their usual corner in the big tent Messrs. William Cutbush and Son, Highgate, put up a very effective display, consisting chiefly of roses and carnations. Tausendschon, Dorothy Perkins, American Pillar, and Hiawatha roses, combined with palms to make a background, except where in the angle of the tent there was a bank of Pink Pearl rhododendrons. The groundwork was composed of dwarf roses, such as Mrs. William Cutbush, White Pet, and Madame N. Levavasseur. Tall vases of carnations towered over everything, and the varieties Rose Doré, Queen Mary, Lady Hermione (the variety that is to form the Queen's Coronation bouquet), Mrs. Fortescue, and White Enchantress. Lower down were smaller vases and groups of other fine perpetual carnations, notably King Arthur, Mercia, Winsor, May Day, Lady C. Waring, The Queen, Lady Coventry, and Baldwin. The display was a large and also a magnificent one in every respect.

Mr. C. H. Herbert, Acocks Green, Birmingham, put up a lovely group of the fragrant perpetual-flowering pink named Progress; this has big blooms of a lovely rosy-heliotrope shade.

Messrs. Young and Co., Hatherley, Cheltenham, put up a very pretty display of well-grown carnations, setting up the flowers in goodly bunches, with asparagus fronds. Duchess of Devonshire, J. Whitcombe Riley, Cecilia, Mikado, Golden Glory, Enchantress, Rose Pink Enchantress, Winsor, and the fragrant Cheltonian, were the leading varieties on view.

The carnation exhibit arranged by Messrs. Stuart Low and Co., Enfield, was a novel one. Baskets of flowers were suspended high over a base of vases of various heights, and with a few palms, ferns, and smilax sprays a good effect was produced. Prominent varieties were the pink Lady Allington, Marchioness of Linlithgow, Royal Purple, Rival, Roseate Dawn, Enchantress, Marmion, the blush Baroness de Brenen, and the new pink shaded Gloriosa pink.

Mr. C. Engelmann, Saffron Walden, presented his big crimson carnation, Carola, in fine condition again, and also put up his vases of Sunstar, Rosa, White Enchantress, Rex, and the curious heliotrope and red variety named La Mode.

Mr. Bertie Bell, Castel Nursery, Guernsey, was a large exhibitor of beautiful carnations, and set up a fine group of bright blooms of Marmion, The President, Judith, Winsor, Rose Doré, Enchantress, Bay State, and the bright scarlet Beacon.

From the Thatcham Fruit and Flower Farm, Newbury, came a few large vases of such good carnations as Mrs. H. Burnett, Mikado, Victory, Beacon, and Rose Doré.

Mr. S. Mortimer, Farnham, had a goodly exhibit of popular perpetual carnations, but his few dozen vases of the sweet All the Year Round stock attracted even more attention than the carnations.

Messrs. Jones and Son, Shrewsbury, associated carnations with sweet peas, and of the former they showed Britannia, Enchantress, Rosea, Rise Pink Enchantress, Harlequin, and Mrs. Lawson.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

ROYAL SHOW

NORWICH,
June 26th to 30th, 1911.

President—HIS MAJESTY THE KING.

72ND ANNUAL EXHIBITION of HORSES, CATTLE, SHEEP, PIGS, POULTRY AND FARM PRODUCE; JUMPING, HORSE-SHOEING AND BUTTER-MAKING COMPETITIONS, AGRICULTURAL EDUCATION, FORESTRY AND HORTICULTURE.

HORTICULTURE

ENTRIES CLOSE MAY 31st.
(Live Stock Entries Close May 20th).

Prize-sheets and Entry Forms will be forwarded on application to

THOMAS McROW, Secretary.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND,
16, Bedford Square, W.C.

Under the immediate Patronage of H.R.H. the DUCHESS OF ALBANY.

IN AID OF THE FUNDS OF THE LEAGUE OF MERCY.

THE RIVER THAMES GRAND FLORAL AND DRAMATIC FETE,
to be held on Tagg's Island, Hampton Court,
WEDNESDAY and THURSDAY,
JUNE 7th and 8th, 1911.

£120 IN CUPS AND PRIZES.

Schedules and full particulars of the Joint Secretaries, Fête Office, Tagg's Island, Hampton Court.

SHREWSBURY GREAT FLORAL FETE.
AUGUST 23 and 24, 1911.

£1,200 in Cash Prizes.

Schedules for this year are now ready, and may be had post free from—
Messrs. ADNITT and NAUNTON, Hon. Secs.,
Shrewsbury.

WOLVERHAMPTON GREAT FLORAL FETE,
JULY 11, 12, and 13, 1911.
£900 in PRIZES.
Schedules on application to the Secretary.

CHESTERFIELD FLOWER SHOW,
WEDNESDAY, 2nd August, 1911.
Affiliated with the National Rose Society.
Special large Marquee for staging Roses.
Schedules on application.
CHAS. WM. HADFIELD, Secretary.

GRAND YORKSHIRE FLOWER SHOW AND GALA,
JUNE 14th, 15th, and 16th, 1911.
£800 Offered in PRIZES.
£275 for Orchids, Stove and Greenhouse Plants.
£175 for Pelargoniums, Carnations, Begonias, etc.
£225 for Roses, Cut Flowers, etc.
£125 for Fruit and Vegetables.
FOUR GOLD MEDALS and PREMIER PRIZE FOR TRADE EXHIBITS.
Entries close 7th June. For Schedules, apply to
FRED. AREY, Secretary, Davyhall Chambers, York.

HANLEY PARK, STAFFORDSHIRE.
JULY 5th and 6th, 1911.
FIFTEENTH GREAT
ANNUAL FLORAL FETE.

£650 in Prizes, Silver Cups, Gold and Silver Medals.
Silver Challenge Cup, value £10 10s., offered for TRADE EXHIBIT.
(For particulars see page 8 in Schedule.)
Valuable Special Prizes offered by the Principal Firms in England.
Schedules post free on application to
WM. POULSON, Secretary.
Town Hall, Hanley.

HARDY FLOWERS.

Hardy flowers were exhibited in various ways, and in groups of various sizes, but beyond a few special displays this section proved very monotonous, and provided little in the way of noveity.

The large and very interesting exhibit of hardy plants and flowers from Messrs. R. Wallace and Co., Colchester, was so full of good things that folks lingered long around it. Irises were charming, both the germanica varieties, I. Susiana, Spanish irises, etc.; Habranthus pratensis was very gay, and the liliums—L. umbellatum, L. tenuifolium Golden Gleam, L. excelsum, L. Hansoni, L. venustum, L. japonicum Colchesteri, L. martagon, and L. Browni—were lovely. Eremurus Elwesianus made a fine central group, while May-flowering tulips, pæonies, poppies, Incarvillea Delavayi, Allium Rosenbachiana, the lovely little ixias, gladiolus of the Colvillei section, and a group of Orchis foliosa and Cypripedium spectabile all went to make up a beautiful feature.

Mr. Howard Crane, Highgate, presented a charming exhibit of sweetly fragrant violas and violettas, setting the flowers in little bowls; of the small varieties Flora de Pinna, Jean, White Empress, Lorna, Claribel, Purity, Butterfly, Miss Jekyll, Rock Yellow, and Eileen were all very lovely, and attracted quite as much attention as the larger violas.

Choice hardy flowers were staged in quantity by Messrs. B. Ladhams and Son, Shirley, Southampton; pyrethrums were very effective, and so were the white and blue long-spurred aquilegias and the bright Primula Cockburniana and P. pulverulenta.

Messrs. Dobbie and Co., Edinburgh, are great on long-stemmed aquilegias, and on this occasion they showed a great range of colours in these lovely garden plants. Pansies and violas from the same firm were a great success, and here again the range of colour and the size and form of the flower merited all the praise bestowed upon them.

Among the hardy flowers submitted by Mr. A. J. Harwood, St. Peters, Colchester, the selected forms of Primula japonica were very good, and so were the lupins. A small exhibit of violas from Messrs. Wm. Artindale and Son, Nether Green, Sheffield, included V. gracilis, Darkey, May Burnie, Ajax, Addie Elsden, Moseley Gem, and Mary Hamilton.

The pyrethrums raised at Langport by Messrs. Kelway and Son are beautiful and popular herbaceous plants, and the firm showed a few of the best on this occasion, notably Passion Flower, Decoy, Lord Milner, Firefly, and Jas. Kelway; Queen Alexandra, silvery-white, was a conspicuously good tree pæony, while the lupins, aquilegias, and herbaceous pæonies all made a good show.

The leading subjects exhibited by Mr. Maurice Prichard, Christchurch, were pæonies, Hemerocallis Gold Dust and H. Aureole, verbascums, Eremurus himalaicus, pyrethrums, Embothrium coccineum, and a particularly fine selection of German and other irises.

An effective contribution of hardy flowers from Messrs. G. Jackman and Son, Woking, included Gladiolus The Bride, the scarlet Delphinium nudicaule, Saxifraga longifolia, Incarvillea grandiflora, Cypripedium pubescens, and Perry's variety of Phlox canadensis.

Long-spurred aquilegias, the scarlet anemone Rouge Ponceau, double ranunculuses, and poppies were pleasingly set up by Mr. Jas. Box, Lindfield.

Tulips and violas, the latter in vases arranged on arches, formed the exhibit from Messrs. Rich and Co., Bath, but the monster double white daisies attracted quite as much attention.

The golden trollius were splendidly shown by Messrs. Harkness and Son, Bedale, and the pick of several fine varieties would be His Majesty, Boule d'Or, Elsie Harkness, Orange Crest, Triumph, and Derby Day. Violas were nicely shown by Messrs. Seagrave and Co., Gleadlees, Sheffield.

Messrs. Storrie and Storrie's polyanthuses, cowslips, and auriculas for the garden border were very charming, and the deep giant yellow polyanthuses were very fine; while the fragrant sweet-scented yellow alpine or border auriculas were a feature of great beauty and interest.

Messrs. Fred Smith and Co., Woodbridge, had an elegant contribution of heucheras, eremurus, aquilegias, poppies, and trollius.

Messrs. Ware, of Feltham, filled up a small space with hardy flowers, which early in the afternoon felt the heat of the tent. The feature of the exhibit were some fine spikes of Eremurus Nimrod, a fine form of this showy flower.

A golden-yellow exhibit, made by the flowers of Trollius Springhill Beauty, Lemon Queen, Queen Mary, Aberdonian, and others, was set up by Messrs. J. Cocker and Son, Aberdeen, and striking by contrast in this exhibit were the blue flowers of Gentiana acaulis.

Mr. H. Hemsley, Crawley, exhibited a bank of Myosotis alpestris Marie Raphael that was much admired.

Viola cornuta purpurea was the outstanding feature of the floral exhibit staged by Messrs. Gunn and Sons, Olton, Warwick, but Viola gracilis also attracted attention.

Mrs. Lloyd Edwards, Bryn Ocrog, near Llangollen, staged a pretty collection of Saxifragas Lady Northcliffe and Rose Beauty, and Aubrietia Lloyd Edwards, very beautiful, in baskets.

Dr. Macwatt Morelands, Duns, N.B., staged some beautiful flowers of Primula obconica; white obconica in the same exhibit was also much admired.

Mr. John Forbes, Hawick, made a fine display with violas in variety, streptocarpus, and a fine pink stock called Beauty of Nice.

A long length of tabling was occupied by Messrs. Bakers, of Wolverhampton, who had tall-growing plants, including spiræas, irises, etc., as a background, and in front a bewildering selection of alpine flowers. Included in the exhibit were some very effective hardy cypripediums, violas, incarvilleas, saxifragas, and phloxes. Few exhibits in the tent attracted more attention than this one.

Messrs. Jones and Jones, Shrewsbury, made an interesting display with irises and violas shown in shallow dishes.

In the group which came from Mr. Amos Perry, Enfield, were a number of different varieties of trollius, Eremurus Elwesianus albus, and phloxes in variety. Pretty little primulas were accommodated in a rockwork arrangement, and another interesting section of the exhibit was that devoted to various forms of iris. Ramondia pyrenaica purpurea, growing amongst stones, was much admired, and specimens of the tree pæony Mountain were very effective. Tiarella unifoliata was very well shown in this collection, Daphne Cneorum was much admired, and the herbaceous poppies attracted much attention.

In the exhibit sent by Mr. T. Jannoch, Dersingham, lilacs vied with lilies of the valley in sweetness, and both were much admired.

Messrs. Barr and Sons, Covent Garden, London, had an interesting exhibit, in which Gladioli The Bride, cardinalis elegans, and Ackerman were conspicuous. Ixias, aquilegias, German and Spanish irises, were also very attractive.

Messrs. Lilley, of Guernsey, set up Iris filifolia, Gladiolus Lord Byron, Ornithogalum arabicum, and German iris in bamboo stands, and the effect was very pleasing.

Conspicuous in the varied exhibit from Mr. G. Reuthe, Keston, was a wonderfully fine white rhododendron called Loder's White, but many other fine rhododendrons were included, as well as azaleas, a few tulips, and a number of hardy alpine plants. A plant that attracted some attention in this exhibit was the curious Crinodendron Hookeri. Taste in arrangement was a characteristic of this exhibit.

Messrs. G. Gibson and Co., Bedale, showed a bank of hardy flowers, in which most of the usual subjects were represented.

Queen Mary is the name of a pretty new pyrethrum shown by Mr. G. W. Miller, of Wisbech, and the flowers were much admired. Anemones in charming variety were shown by Messrs. Reamsbottom and Co., King's County, Ireland, and the bright colours were very attractive.

CHOICE FLOWERING TREES AND SHRUBS.

Messrs. Jas. Veitch and Sons, Chelsea, had a very bold and glowing exhibit of choice flowering trees and shrubs in the big tent. The fine mollis azalea Anthony Koster, and the lovely Pink Pearl rhododendron gave splendid colour, and the tree pæonies were also splendid. Magnolia parviflora, Olearia stellata, blue hydrangeas, the soft yellow Rosa Hugonis, Rhododendron Smithi aureum, Nandina domestica, Clematis montana rubens, the white wistaria, and the graceful Styrax japonica were, with Vitis Henryana and V. heterophylla variegata, notably interesting and beautiful plants.

A big bank of clematises from Messrs. George Jackman and Son, Woking, again demonstrated the value of these fine climbers. Some were on pillars and others were trained to form low bushes, but all were grandly flowered, especially the varieties Blue Gem, Lady Northcliffe, Nellie Moser, The President, Jackmani rubra, Ville de Lyon, and Mrs. Hope.

Messrs. J. Piper and Sons, Bishop's Road, Bayswater, put up a big sloping bank of the fine Pink Pearl rhododendron, but somehow the group was not a success, probably because so many flowers were as yet unopened.

Mr. L. R. Russell, Richmond, contributed a small group of clematises, and exhibited the leading varieties.

Messrs. John Waterer and Sons, Bagshot, showed the most beautiful of rhododendrons, and they presented their Pink Pearl in beautiful form and delicious colour. Without crowding their plants, they grouped Doncaster, Alice, Mrs. Holford, Mrs. Wm. Agnew, Prometheus, Frederick Waterer, and Cynthia in fine style around the pink of hardy varieties.

The brilliance of the Ghent and Mollis azaleas exhibited in quantity by Messrs. R. and G. Cuthbert was quite dazzling; they had more standard plants than usual, and many of these were soft primrose and white varieties, and they showed up beautifully over the group of such gorgeous kinds as Alphonse Lavallée, Anthony Koster, Comte de Quincy, Prince of Orange, Bismarck, etc The smaller flowered Ghent varieties were well represented by freely flowered, compact bushes in various shades of colour. Altogether it was a most gorgeous display, and one that even outvied the colouring of the orchids.

Lilacs were extensively exhibited by Messrs. W. and J. Brown, Peterborough, and their fragrance filled the air; particularly good were Souv. de Louise Spathe, Charles X., Negro, Dr. Von. Regel, M. de Bassompierre, and the double white Mons. Lemoine.

Shrubs and hardy flowers were combined by Mr. R. C. Notcutt, Woodbridge; Azalea Bungiri, Helianthemum formosum, Andromeda cassinefolia, Carpenteria californica, and the new pink Azalea sub-lanceolata (A.M.), were the chief among the shrubby subjects, the latter being a very handsome plant that proved hardy at Woodbridge during last winter.

Lilacs were famously shown in large bunches by Messrs. Paul and Son, Cheshunt, who presented splendid spikes of Jeanne d'Arc, President Carnot, Souv. de Leon Späthe President Grevy, Marie Legrave, alba grandiflora, Belle de Nancy, and Arthur W. Paul.

Rhododendron Keyesi, R. Gill's Goliath, R. Falconeri, with several great trusses of creamy flowers; R. campylocarpum, R. Aucklandi—superb in truss and bloom, and the scarlet Embothrium coccineum, were all shown by Messrs. R. Gill and Son, Falmouth. The new Primula Winteri was also shown, but not in flower.

TULIPS.

Brilliant in colour, and almost bewildering in variety, were the tulips staged by Messrs. R. H. Bath, Lim., Wisbech. The flowers were nicely staged, and varieties which attracted much attention were Mr. Farncombe Sanders, Prince of Orange, Cupid, Clara Butt, and Maiden's Blush. It was easy to observe from the remarks of visitors that they were keenly interested in these May-flowering tulips.

Nothing could be more beautiful than the display of May-flowering tulips staged by Alex. Dickson and Sons, Newtownards. The variety was bewildering, the flowers wonderfully fine, and amongst those which attracted much attention were Prima Donna, Clara Butt, Gesneriana lutea, Sunset, Enchantress, Sensation, King's Court, Dom Pedro, Rev. Harpur Crewe, Duchess of Westminster, Flora's Ornament, and the black tulip, La Tulipe Noire.

The tulips staged by Messrs. George Bunyard and Co., Maidstone, made a bright show, but they would have looked better if they had been less crowded. Most of the best varieties in the May-flowering section were included.

Needless to say, Messrs. Barr's display of tulips was a glorious one, and almost everything good amongst May-flowering tulips was represented. The colours were delightful, the flowers fine, and the remarks made by the visitors were evidence that the Covent Garden firm's effort was appreciated. It would be unfair to make invidious comparisons, and the Cottage tulips, Darwins, and others struck us as being equally effective.

A rather closely-packed, but otherwise fine and bright display of May-flowering tulips was made by Messrs. Jefferies and Son, Cirencester; Columbus, Loveliness, Bouton d'Or, Edmée, Hecla, and Corot were notably good.

Messrs. Hogg and Robertson, Mary Street, Dublin, brought over a fine set of Irish-grown tulips, in which the colours were particularly bright; Gesneriana lutea, Rev. Harpur Crewe, Henner, Mrs. Kerrell, Quaintness, elegans lutea, and Beauty of Bath were notably good varieties presented.

A large bank of glowing tulips put up by Messrs. Sutton and Sons, Reading, contained a large collection of fine substantial flowers, set up in big bunches; Thorback, Margaret, Picotee, Golden Goblet, Ellen Willmott, Clara Butt, Prince of Orange, Louis XIV., Mrs. Cleveland, Columbus, and Jaune d'Œuf were a few of the best varieties.

CERTIFICATES AND AWARDS.

Floral Committee Awards.—First Class Certificate to Davidia involucrata, from Messrs. J. Veitch and Sons, Chelsea.

Award of Merit, to Haberlea Ferdinand Coburgi, from Mr. G. Reuthe, Keston, Kent; to Lewisia cotyledon, from Mr. G. Reuthe, Keston, Kent; to Azalea Duchess of Portland, from Messrs. Cuthbert, Southgate; to H.T. Rose Portia, from Messrs. W. Paul and Son, Waltham Cross; to perpetual-flowered Rambler Rose Sylvia, from Messrs. W. Paul and Son; to Azalea sublanceolatum, from Mr. R. C. Notcutt, Woodbridge; to Rhododendron Corona, from Messrs. J. Waterer, Bagshot; to Lilium tenuifolium Golden Gleam, from Messrs. Wallace and Co., Colchester; to Rhododendron Loder's White, from Mr. G. Reuthe, Keston, Kent; to Rhododendron Littleworth Corallina, from Miss Mangles, Seale, Surrey; and to Rhododendron Glory of Littleworth, from Miss Mangles, Seale, Surrey.

Orchid Committee Awards.—First Class Certificate to Oncidium Mulleri, from Messrs. Sander and Sons, St. Albans; to Odontioda Lambeauiana, from Messrs. Sander and Sons; to Odontioda Bradshawiæ, from Sir J. Colman, Bart.; to Odonticda Vuylstekeæ Coronation, from M. Ch. Vuylsteke, Loochristy; to Odontoglossum Black Prince, The Dell var., from Baron Bruno Schröder, Englefield Green; to Lælio-cattleya Morningtoniæ, from F. A. Wellesley, Esq., Woking.

Award of Merit—to Odontoglossum amabile var. Empress of India, from Messrs. Sander and Sons, St. Albans; to Lælio-cattleya germanica, from Messrs. Charlesworth and Co., Haywards Heath; to Oncidium Claesi, from Sir J. Colman, Bart.; to Cattleya Mossiæ G. N. Hale, from S. Larkin, Esq., Haslemere; and to Cœlogyne x Burfordense, from Sir Trevor Lawrence, Bart., Dorking.

Cultural Commendation to Messrs. Charlesworth and Co., Haywards Heath, for Odontoglossum hastilabium Charlesworth's var.

GOLD MEDALS.

To Sir Jeremiah Colman, Bart., Reigate, for orchids; Hon. Vicary Gibbs, Elstree, for vegetables; Messrs. Charlesworth, Haywards Heath, for orchids; Messrs. Sander and Sons, St. Albans, for orchids; Messrs. T. Rivers and Sons, Sawbridgeworth, for fruit trees in pots; Messrs. R. and G. Cuthbert, Southgate, for azaleas; Messrs. W. Cutbush, Highgate, for carnations with roses; Messrs. Sutton and Sons, Reading, for flowering plants; Messrs. Geo. Mount and Sons, Lim., Canterbury, for roses; Messrs. Paul and Son, Cheshunt, for roses; Messrs. W. Paul and Son, Waltham Cross, for roses; Messrs. J. Veitch and Sons, Chelsea, for foliage plants; Messrs. H. B. May and Sons, Upper Edmonton, for ferns and flowering plants; Mr. Amos Perry, Enfield, for herbaceous plants, etc.; Messrs. R. Wallace and Co., Colchester, for flowering plants.

SILVER CUPS.

To Messrs. Armstrong and Brown, Tunbridge Wells, for orchids; Samuel Larkin, Esq., Haslemere, for orchids; Messrs. Mansell and Hatcher, Lim., Rawdon, for orchids; Messrs. Alex. Dickson and Sons, Lim., Belfast, for tulips; Messrs. Jas. Veitch and Sons, Lim., Chelsea, for herbaceous and flowering plants; Messrs. W. Cutbush and Son, Highgate, for rock, alpine, and herbaceous plants; Messrs. Barr and Sons, Covent Garden, for rockery, tulips, pigmy trees, etc.; Messrs. James Carter and Co., Raynes Park, for Japanese garden and flowering plants; Mr. Charles Turner, Slough, for azaleas, carnations, and roses; Mr. L. R. Russell, Richmond, for ornamental trees and flowering plants; Messrs. T. S. Ware, Lim., Feltham, for begonias, etc.; Messrs. H. Cannell and Sons, Swanley, for calceolarias, pelargoniums, etc.; Messrs. J. Cheal and Sons, Crawley, for rock garden and group; Messrs. G. Jackman, Woking, for clematis; Craven Nursery Company, Clapham, York, for rock garden; Mr. Clarence Elliott, Stevenage, for alpines; Messrs. Ben Cant and Sons, Colchester, for roses; Messrs. W. Fromow and Sons, Chiswick, for Japanese maples; Messrs. Laxton Bros., Bedford, for strawberries; Mr. H. Burnett, Guernsey, for carnations; Messrs. Dobbie and Co., Edinburgh, for sweet peas and violas; Messrs. Hobbies, Lim., Dereham, for roses; Messrs. Blackmore and Langdon, Twerton-on-Avon, for begonias; Messrs. J. Waterer and Sons, Lim., Bagshot, for rhododendrons; and to Messrs. R. P. Ker and Sons, Liverpool, for amaryllis.

SILVER-GILT FLORA MEDAL.

To Messrs. James Cypher and Sons, Cheltenham, for orchids; Messrs. J. and A. McBean, Cooksbridge, for orchids; Mr. Maurice Prichard, Christchurch, for [illegible] garden; Messrs. Stuart Low and Co., Enfield, for orchids, etc.; Messrs. Bakers, Codsall, for rock garden, herbaceous and [illegible] plants; Messrs. J. Backhouse and Sons, Lim., York, for Alpines and herbaceous plants; Mr. G. Reuthe, Keston, for herbaceous and alpine plants; Messrs. John Peed and Son, [illegible] Streatham, for caladiums; Mr. R. C. Notcutt, Woodbridge, for flowering shrubs, etc.; Mr. A. J. A. Bruce, Manchester, for sarracenias, etc.; Messrs. Frank Cant and Co., Colchester, for roses; Messrs. J. Hill and Son, Lower Edmonton, for ferns; Mr. Charles Blick, Hayes, for carnations; Mr. Frank Lilley, Guernsey, for gladiolus and iris; Messrs. Pulham and Son, Oxford Street, for rock garden.

SILVER-GILT BANKSIAN MEDAL.

To Messrs. J. Piper and Son, Uckfield, for rhododendrons and box trees; Guildford Hardy Plant Nursery, for alpine and rock garden; Mr. Bertie Bell, Guernsey, for carnations; Mr. C. Engelmann, Saffron Walden, for carnations; Messrs. Hogg and Robertson, Dublin, for tulips and bulbous plants; Messrs. John Jefferies and Son, Ltd., Cirencester, for tulips and to Messrs. Jones and Sons, Ltd., Shrewsbury, for carnations, sweet peas, etc.

SILVER KNIGHTIAN MEDAL.

To Mr. A. J. Harwood, Colchester, for asparagus and primulas; Thatcham Fruit and Flower Farm, near Newbury, for carnations and vegetables.

SILVER FLORA MEDAL.

To Mr. J. Robson, Altrincham, for orchids; Messrs. R. and G. Cuthbert, Southgate, for tulips; Messrs. Sutton and Sons, Reading, for tulips; Messrs. R. H. Bath, Ltd., Wisbech, for carnations and tulips; Messrs. G. Bunyard and Co., Lim., Maidstone, for tulips and herbaceous plants; Messrs. G. and A. Clark, Lim., Dover, for alpines and herbaceous plants; Mr. Howard H. Crane, Highgate, for violas and violettas; Messrs. Artindale and Son, Sheffield, for rock garden and herbaceous plants; Mr. H. Hemsley, Crawley, for alpines and herbaceous plants; Mr. G. Prince, Longworth, for roses; Burton Hardy Plant Nurseries, Christchurch, for alpines; Messrs. B. Ladhams, Lim., Southampton, for hardy flowers; Mr. John Macwatt, Duns, N.B., for primulas and auriculas; Mr. C. F. Waters, Balcombe, for carnations; Messrs. E. Webb and Sons, Stourbridge, for calceolarias, etc.; and to Mr. C. Breadmore, Winchester, for sweet peas.

SILVER BANKSIAN MEDAL.

To Mr. Robert Stevenson, Cambridge, for asparagus; King's Acre Nurseries, Lim., Hereford, for heliotropes and herbaceous plants; Mr. A. F. Dutton, Iver, for carnations; Messrs. H. J. Jones, Lewisham, for sweet peas and pelargoniums; Messrs. Kelway, Langport, for pyrethrums and pæonies; Messrs. Fred Smith and Co., Woodbridge, for herbaceous plants; Messrs. Storrie and Storrie, Glencarse, for polyanthus and auriculas; Messrs. J. Cocker and Son, Aberdeen, for herbaceous flowers; Messrs. John Forbes (Hawick), Lim., Hawick, for delphiniums and pentstemons; Messrs. Gunn and Sons, Olton, for herbaceous flowers; Messrs. Heath and Son, Cheltenham, for rock garden; Messrs Harkness, Hitchin, for trollius; Misses K. and E. Hopkins, Shepperton, for rock garden; Mr. Reginald Prichard, West Moors, for alpines; Messrs. Bees, Lim., Liverpool, for new primulas and alpines; Mr. H. Correvon, Geneva, for alpines; Messrs. G. Gibson and Co., Bedale, for herbaceous and alpines; Mr. A. L. Gwillim, Sidcup, for begonias; Mr. W. H. Page, Hampton, for zonal pelargoniums; Messrs. Robt. Sydenham, Lim., Birmingham, for sweet peas and lilies; Messrs. Young and Co., Cheltenham, for carnations.

BRONZE FLORA MEDAL.

To Mr. E. V. Low, Haywards Heath, for orchids; Mr. H. Dixon, Wandsworth Common, for orchids; Messrs. Carter Page and Co., London Wall, for flowering plants; Messrs. Godfrey and Sons, Exmouth, for poppies; Mr. John E. Knight, Wolverhampton, for violas; Mr. J. Stevenson, Wimborne, for sweet peas; Mrs. Edward Lloyd, [illegible], for saxifrages and alpines; Messrs. Seagrave and Co., Sheffield, for violas; Messrs. W. Wells and Co., Merstham, for carnations, etc.; Vivian Phillips, Esq., Orpington, for calceolarias; and Wickham Noakes, Esq., Croydon, for calceolarias

---

[Owing to the pressure on our space we are compelled to leave over the remaining sections until our next issue.]

WORK FOR THE WEEK.

THE ORCHID HOUSES.

SUMMER - FLOWERING CYPRIPEDIUMS.—Such species as C. barbatum, C. Curtisi, C. callosum, C. ciliolaris, C. Lawrenceanum, and the various hybrids that have been derived from them will now be producing their flowers. In the majority of cases the blooms are exceedingly durable and remain a long time in good condition; but the future of the plant should have some consideration, and the flowers should be cut after they have been expanded for a reasonable time. Where we have plants of this kind that are both useful for exhibition and decorative purposes alike, there is generally a tendency to permit the flowers to remain as long as they will last good, but it will be found that even the most vigorous and robust kinds are not improved by over-flowering, and a great strain should not be placed on them. Perhaps most of the albino or green forms of the coloured species are the most liable to suffer, and, as in the majority of cases the albino form is less vigorous in constitution, it is more desirable that the flowers should be removed as early as possible.

POTTING.—These, without exception, are shallow-rooting plants, and do not require the depth of potting compost necessary for the winter-flowering section. The pots should be clean, and filled to about half their depth with broken crocks. The compost we find most suitable for all the section with variegated-foliage, consists of two parts fibrous peat to one of finely-chopped sphagnum moss, and sufficient broken charcoal, small crocks, and sand to render the whole porous. Practically all these cypripediums make a continuous growth on a single rhizome, and, unless from injury or some other cause, the leading growth fails to break, back growths are rarely produced, and as living roots are rarely attached to them to assist in their support, they must of necessity gain their sustenance from the front of the plant, which naturally detracts from the vigour of the new growth. It is a good plan to examine the plants a few weeks before they are repotted, and if the rhizome is cut through the old growths usually start into growth from dormant eyes, and may be removed at the time of potting to increase the size of the specimen, or give stock as the case may be. Keep all freshly-potted plants carefully shaded from strong light until the roots get hold of the fresh compost. The atmosphere about the plants should also be kept in a humid state at all times.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

BEGONIA GLOIRE DE LORRAINE.—Further batches of cuttings may now be selected and rooted in the way previously advised. Now that the earliest rooted plants will be growing freely, it is advisable to repot them, using pots three to four inches in diameter. When preparing the potting compost, preference should be given to the moist fibrous loam used in a lumpy state, and well-decayed oak leaf soil, both of these may be used in equal parts; but in cases where the loam is not of the best quality, an equal amount of fibrous peat should be added, and sufficient lumpy charcoal, Bedfordshire sand, and lime rubble to keep the compost porous and sweet. Pots must be dry, clean, and provided with ample drainage. Extreme care must be exercised when handling the roots, as they are easily damaged by careless potting, and it is advisable to dispense with the use of the potting stick, as this begonia will succeed best when provided with a somewhat loose rooting medium; and on no account should the compost be pressed too firmly around the roots. With many years' experience of this useful winter flowering subject, and careful observation of its progress under different treatment, I have arrived at the conclusion that providing careful attention is paid to watering immediately after repotting, abundance of heat and moisture is afforded, with a spraying overhead several times daily, and thorough shade from the hot sunshine is given, then the conditions are provided for the successful culture of this begonia.

BOUVARDIAS which have been raised during the early part of the year for providing a floral display for autumn will now be ready for their final repotting. The pots may be from four to five inches in diameter, according to the size and strength of the batch to be treated. They may also be prepared for their summer quarters by gradually hardening off in pots or frames. If the plants are not disposed to branch freely the tips may be removed to counteract their straggling habit. Syringe the plants twice daily, during the early morning and again early in the afternoon after closing the frames. Immediately after repotting, thoroughly shade from the sun; and as root action is again restored, a lighter shading only will be needed during the hottest part of the day. To insure success bouvardias must be kept clean from attacks of aphis and red spider by frequent syringings with insecticide.—John Donoghue, Bardon Hill Gardens.

THE FLOWER GARDEN.

SUMMER BEDDING. — Planting the flower beds for the summer display may now be proceeded with, commencing with the hardiest subjects, and leaving the more tender plants until last. During late years the style of bedding has undergone a great change, and the change is certainly one for the better. In place of the formal designs of earlier years, a more natural effect is aimed at, and numbers of plants are now brought into use which were not thought of then. The scheme of planting for this season should have been decided on last August, when the necessary plants could be propagated in sufficient quantities to allow the new ideas to be carried out. When this method is followed, planting is an easy matter, for one only has to consult the plan to discover what is to occupy each bed. To those who have not decided how to plant, a few suggestions are offered. In dealing with some plants, edgings may be dispensed with altogether, as being quite unnecessary. Antirrhinums, begonias, heliotropes, etc., provide a much better effect when planted close to the grass without edging plants, allowing the growths to hide the straight lines of the beds entirely. Again, excellent effects are obtained by using specimen plants over a carpet of a dwarf-growing subject. Fuchsias, heliotropes, Humea elegans, Calceolaria Burbidgei, ivy-leaved pelargoniums, Grevillea robusta, and many others all lend themselves to this kind of planting. The fibrous-rooted begonias may be used for ground work to specimen plants, according to taste, whilst the tuberous-rooted ones should occupy beds to themselves and be kept in separate colours. Calceolaria amplexicaulis mixed with Heliotrope Lord Roberts, allowing the growths of each to intermingle, make a pretty bed. Standard plants of the same calceolaria dotted among Salvia patens look fine and make a pleasing contrast. Abutilon Savitzi may be mixed with Paul Crampel pelargonium when the latter is considered too showy by itself. For large beds, Humea elegans is excellent for dot plants, the large brown plumes looking exceedingly graceful, and a ground work of Souv. de Charles Turner ivy-leaved pelargonium might be used to advantage. Salvia splendens vars. Pride of Zurich and Fireball, are both useful for bedding purposes, and where bright colours are needed are indispensable. Mad. Crousse pelargonium is very free flowering and of a popular colour; beds planted with this variety, having a few tall plants of the same to relieve the flatness, are very pretty. There are a number of combinations, yet in many cases the planting rests with individual taste, for what pleases the eye of one annoys that of another. It is important that the plants should be in a moist condition when put out, and if the weather is dry, it will be necessary to water the beds after planting.

DAHLIAS.—Providing the plants are properly hardened off, and the ground prepared, they may be put out next week. After planting in completed the permanent supports should be afforded the plants. Old roots which have been started into growth under glass should have a few of the growths cut out, where they are very numerous, two or three shoots being quite sufficient to form a large bush.

SEED SOWING.—Sow seeds of myosotis, silene, etc., required for autumn planting; also the seeds of various biennials.—E. C. POOLEY, Gnaton Gardens.

FRUITS UNDER CLASS.

EARLY BLACK HAMBURGH GRAPES.—These will now be ripening apace, and are putting on a good colour, therefore more air must be allowed both top and bottom, and it would be well to leave a little on all night so that the berries do not get covered with moisture. On warm days open the house freely, so long as the temperature can be kept at 70 deg.; do not let it fall much below 70 degs. until the grapes are thoroughly ripe. When Foster's Seedling is grown in the early house this will take a trifle longer to reach really good condition. Water thoroughly, but the floor, etc., may be kept somewhat drier, though on hot, dry days, the interior should be damped several times or red-spider will put in an appearance. There is now on the market a little sulphur fumigator, which is an excellent means of dispersing red spider and mildew; it is made to vaporise a small quantity of sulphur over a long period, and if used carefully and according to instructions, cannot fail to be of great assistance in keeping down these dreaded pests. Continue to stop lateral growths as occasion requires, or the vines soon become a thicket of growth. Along the South Coast, where hot sunshine prevails, if the sun is found too powerful, no harm is done by shading lightly to prevent burning or scorching of the foliage. That excellent grape, Madresfield Court, should not have too much water during its later stages of development, but plenty of air must be afforded, and when the grapes are really ripe the heat may be reduced to a minimum, only using a little at night or on wet days to dispel damp.

EARLY PEACHES AND NECTARINES.—Peaches that are ripe and ripening may be kept much cooler; examine the trees every morning, remove fruits that are ripe, and lay them carefully in a basket or box on a layer of fine wood wool. Peaches require to be handled very carefully. It is a mistake to take them before they are really ripe, as the flavour is not fully developed, and near the stone and stem there will be a hard portion of fruit. Nor should they be allowed to become too ripe, so that they drop. If the fruits are ripening fast enough fire heat may be dispensed with, excepting on dull days or cold nights. Keep the floors and borders damped down to prevent attacks of insects, and as soon as the fruits are all gathered start syringing the trees again. The second or succession crop should be brought along in time to meet the first, so that no gap exists in the supply. Syringe well twice daily, and shut up with a good temperature. Give liquid manure at alternate waterings, and keep the branches tied in, and expose the fruit to sunshine in order to get good colour.

CHERRIES.—As soon as these are gathered open the ventilators to the full top and bottom, and give the borders a good soaking, and syringe the trees with an insecticide. Cherries when shaded and protected will keep a considerable time, and late varieties are all the better for being kept and thoroughly ripened.

ORCHARD HOUSE.—Give plenty of air on all occasions, and give copious supplies of water. Pinch the shoots of pears, plums, and apricots as often as they may require it. Fumigate for aphis, and now and again give a washing with quassia extract, which is a fine medium for keeping trees clean. Thin peaches and nectarines as soon as possible, and regulate the shoots that they be not overcrowded.—W. A. COOK, Leonardslee Gardens.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

NEMESIAS.—H. J. G., Havant: Sow the seeds at once, thinly, on light, well-worked soil, in a shady position, out of doors. The seeds will probably germinate readily and quickly here if just covered with soil; germination is often very erratic when the seeds are sown under glass.

NATIONAL SWEET PEA SOCIETY.—M. E. B., Goole: We believe this society has between twelve hundred and thirteen hundred members. The minimum annual subscription is five shillings, and no floricultural society gives a better return for the subscription paid. The secretary is Mr. C. H. Curtis, Adelaide Road, Brentford.

CYPRIPEDIUM CALLOSUM.—F. S., Chippenham: You will find just the information you need respecting this and somewhat similar cypripediums under the heading of "Orchids" in our "Work for the Week" columns in the present issue.

MOWING MACHINE.—R. S., Oxted: You cannot do better than apply for catalogues and particulars to the several firms who make a speciality of mowing machines, and who advertise in our columns. With the lists before you, you can make your selection readily.

UNSATISFACTORY VINES.—W. P., Cardiff: So far as we can gather from your letter, it would appear that the vines have not had a proper opportunity of ripening their wood, hence the lack of bunches on the new growth of this year. If the vines are cared for this season, laterals pinched back, growths tied in, and watering and ventilation provided efficiently, then there ought to be a great improvement another year. The somewhat small border is no disadvantage if feeding is done in due course. You do not say what the aspect of the vinery is, and, of course, the position may be as much answerable for the failure as is the neglect of the past few years.

ASPARAGUS BEDS.—I., Fareham.—You should have been able to cut asparagus from your beds at or about the date of your letter, and cuttings could continue until about June 16 or 18, certainly not beyond the end of June. You may cut all the heads that are of sufficient size to use as fast as they appear. Well made asparagus beds should continue in good bearing for at least a score of years, provided ample manurial dressings are given, chiefly in liquid form, soon after cutting ceases, and when growth is free. Asparagus should not be cut from a bed until the second year after planting. The quantity of asparagus obtainable from a given bed depends chiefly on the preparation of the bed and the after culture.

EXHIBITION STANDS FOR CHRYSANTHEMUMS.—E. W. T., Chesterfield: The following regulation of the National Chrysanthemum Society gives the sizes of the stands: Exhibitors must have their stands made of the following dimensions, viz., stands for twelve incurved blooms to be twenty-four inches wide from left to right, and eighteen inches deep from back to front, with holes six inches apart from centre to centre, to stand six inches high at back, and three inches high in front. Two "twelve-boards" may be used for twenty-four blooms, three for thirty-six blooms, and so on. The stands for six incurved blooms to be twelve inches wide from left to right, and eighteen inches deep from back to front; for twelve Japanese blooms to be twenty-eight inches wide from left to right, and twenty-one inches deep from back to front, the holes seven inches apart from centre to centre. Stands for six Japanese blooms to be fourteen inches wide from left to right, and twenty-one inches deep from back to front. The height at the back to be seven inches and four inches in front.

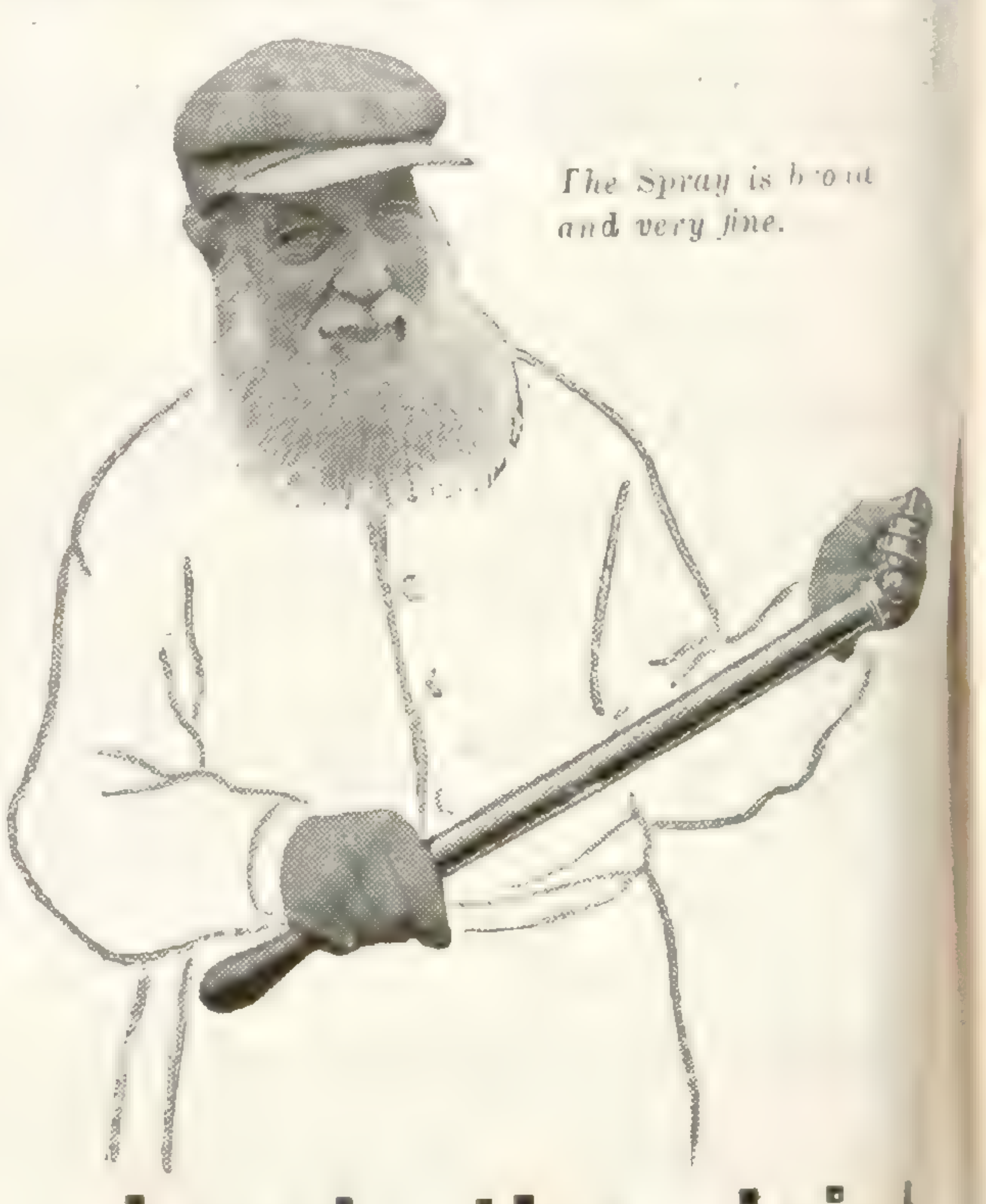
NAMES OF PLANTS.

W. J., Nottingham.—1, Saxifraga granulata fl.-pl.; 2, S. Camposi; 3, Veronica gentianoides.

L. S., Ipswich.—1, Berberis stenophylla; 2, Cytisus albus; 3, C. scoparius Andreanus; 4, Uvularia grandiflora.

R. B. M., Matlock.—1, Renanthera Imschootiana; 2, Miltonia vexillaria; 3, Cypripedium Lawrenceanum.

Superintendent of Finsbury Park. The Parks Committee of the London County Council have appointed Mr. Frank Wright to succeed the late Mr. Melville as superintendent at this popular northern park. Mr. Wright is widely known and respected as an able horticulturist, and his excellent work at the Victoria Embankment Gardens and elsewhere has attracted much attention.



—bend the joint

to spray the undersides of foliage, and half turn the syringe bodily in the hand to change from 'rose' to 'spray'

¶. The Pine Spray Syringe provides every spraying combination of 'rose' and bend or 'spray' and bend, instantly, without the addition or removal of a single fitment.

¶ To appreciate it fully, you ought to see it. Ask your ironmonger or seedsman to obtain one for your inspection—neither you nor he will be asked to buy unless you approve of the Syringe entirely.

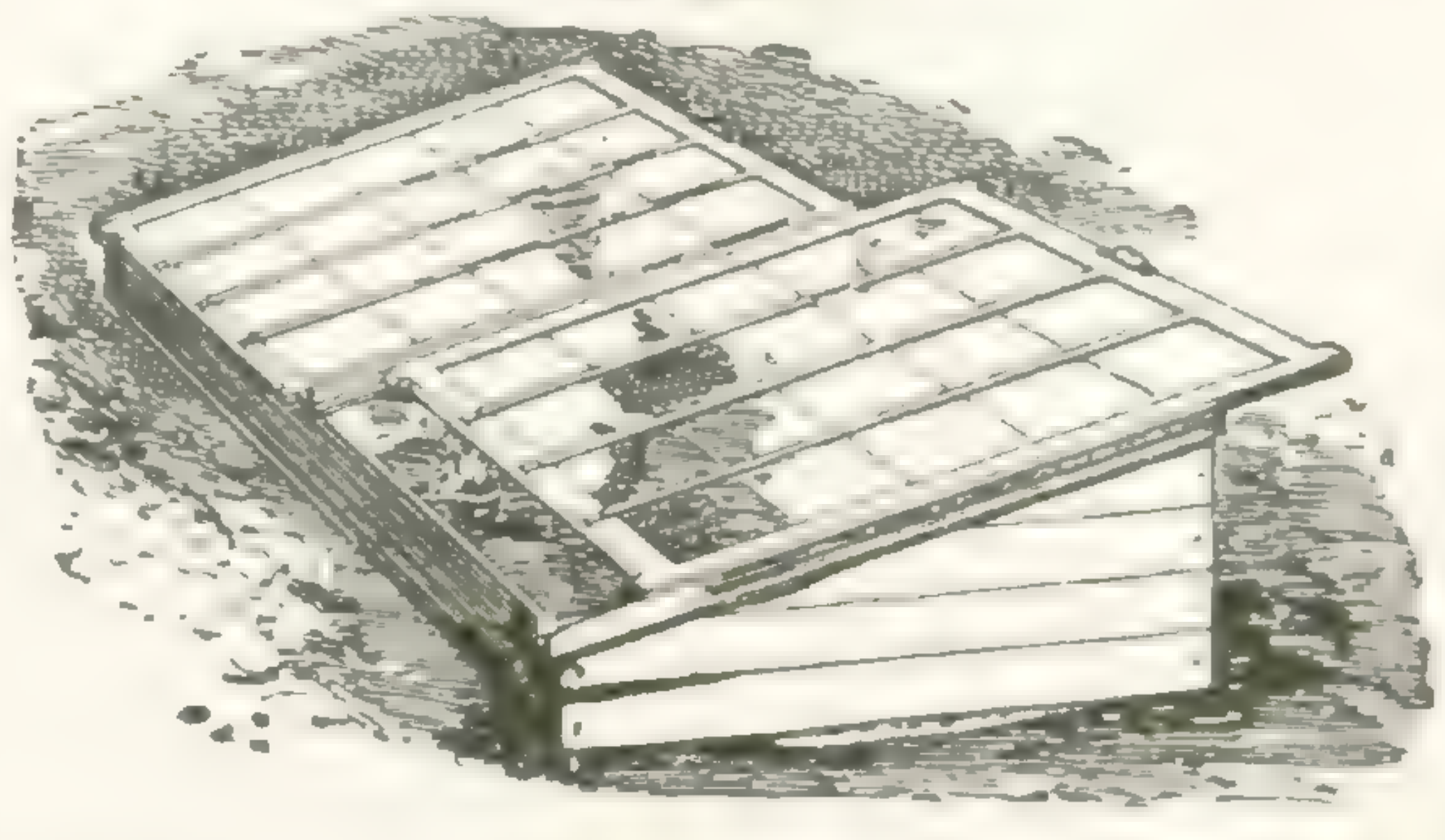
Illustrated list and full particulars from
ROBINSON BROS. LTD.,
WEST BROMWICH.

PATENT
PINE SPRAY SYRINGE
24in. long × 1¼in dia. barrel

GUARANTEE
Every Syringe is individually numbered tested and guaranteed.
PRICE 10/6

Wm. DUNCAN TUCKER & SONS, Ltd.

MELON AND CUCUMBER FRAMES.
No. 38.



6 ft.×4 ft. ...	£1 14 0	12 ft.×6 ft. ...	£3 14 0
8 ft.×6 ft. ...	2 14 0	16 ft.×6 ft. ...	4 14 0

Carriage Paid on 40/- Orders to most Stations.

Please mention this Paper.

27, CANNON STREET, LONDON, E.C.

Works Tottenham.

Erected at Berkhamsted.

MERRYWEATHER'S

614 PUMP

IS THE

Gardener's Friend.

Easy to Work.
Simplicity Itself.

Write or Call—

63, Long Acre,
LONDON, W.C.

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

Extracts from 35th annual collection of reports:—NATIVE GUANO for POTATOES, VEGETABLES, etc.

A. J. BEARD, Erdington: "Potatoes, splendid, free from disease. Best I ever had."—H. CHESTER, Nantwich: "Best onion manure I ever used. Grand for onion fly."

NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc.

J. CANT, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. FRAMPTON, Titchfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED,** 29, New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted.

Phytobroma

Barr's New Plant Food
For Flowers Vegetables and Fruit
of highest quality & guaranteed analysis

Per cwt., 20/-; ½ cwt., 12/6; 28lb., 7/6; 14lb., 4/6; 7lb., 2/6; Sample Tins, 1/-.

Prepaid orders for 28lbs. and upwards, Carriage Paid. Circular, with full particulars, on application.

BARR and SONS,
11, 12, and 13, KING STREET, COVENT GARDEN, LONDON.

By Royal Warrant to
H.M. King George V.
H.M. Queen Alexandra.

THE BEST REMEDY for MILDEW, GREENFLY, and all forms of INSECT BLIGHT, is

Jeyes' Horticultural Wash,

As used at the Kew Royal Botanic Gardens.

This liquid form of Cyllin Soft Soap has been placed on the market in response to the numerous requests from prominent rosarians and gardeners, to obviate any labour involved in preparing the stock solution incidental to the use of soft soap.

Jeyes' Horticultural Wash destroys greenfly and other aphides, red spider, rose hopper, gooseberry caterpillar, black-currant mite, American blight, mildew, etc., etc. It is non-poisonous, and will not injure the tenderest vegetable shoots when diluted as recommended.

Pint tins 1/-, quart tins 1/9, also in drums.
Full directions with each package.

CYLLIN SOFT SOAP may still be obtained in its original form. Prices: 1 lb. tins **9d.,** 3 lb. tins **1/9,** 7lb. tins **3/-**; also in wooden kegs.

Jeyes' Horticultural Sprayer, complete, £1 5s.

JEYES' SANITARY COMPOUNDS CO., Ltd.,
64, Cannon Street, London, E.C.

THE FAVOURITE WEED KILLER.

SANDWITH'S
PREMIER
WEED
KILLER

As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for **6/-**; drum, **2/-**. 12 galls. for **16/-**; drum, **6/-**. 20 galls. for **26/8**; drum, **10/-**. 40 galls. for **50/-**; drum, **20/-**.

EITHER LIQUID OR POWDER.

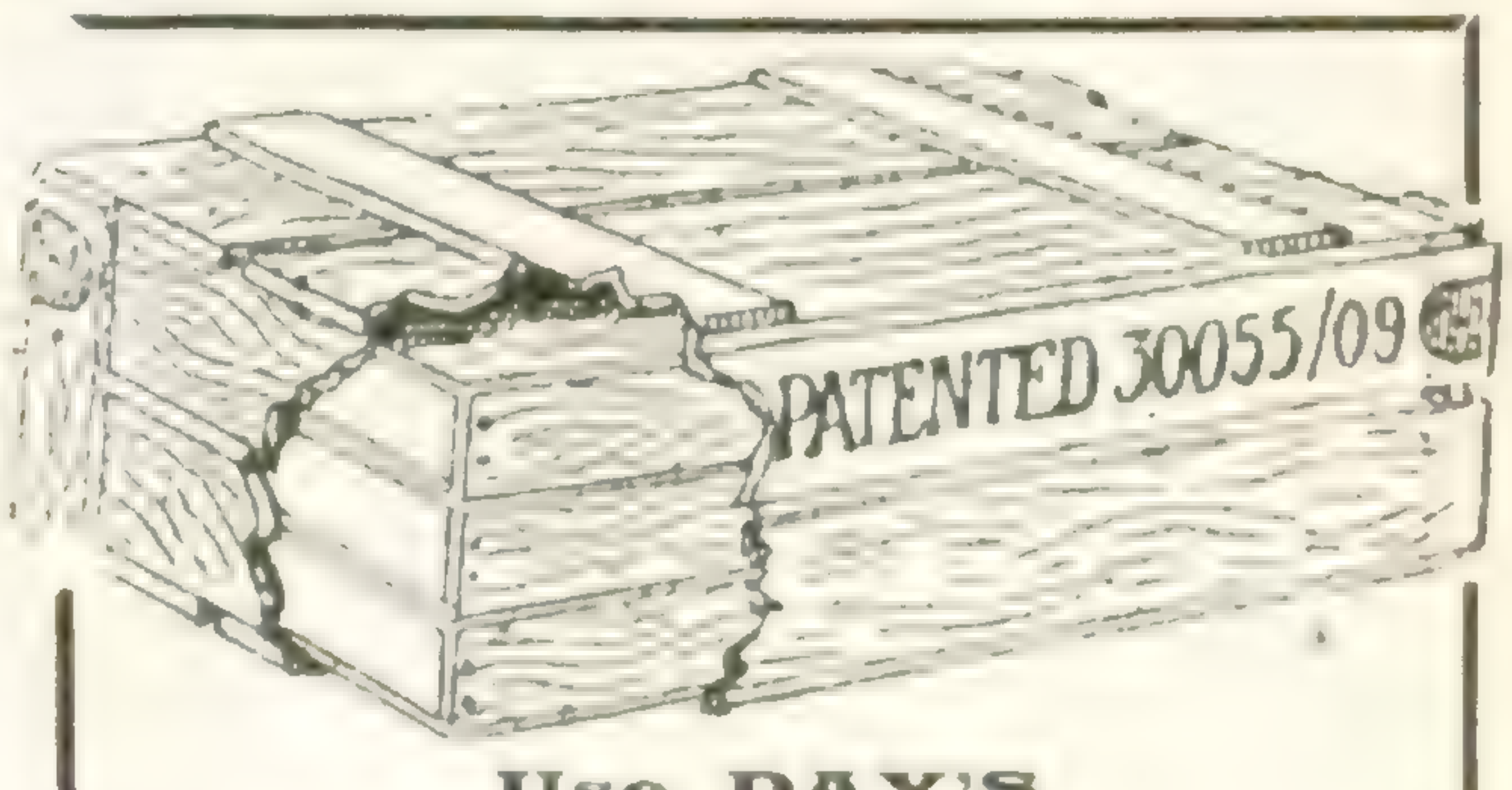
Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,
The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

SMITH'S WEED KILLER
is absolutely "PERFECT."
4 Tins of Powder or
4 Gallons of Liquid
to make 100 Gallons.
6/6 Carriage Paid.
MARK SMITH, Ld. *Louth, Lincolnshire.*



Use DAY'S

Fruit Trays & Crates

No more damaged fruit. If properly packed it is impossible for it to get damaged.

The trays hold about 3lb. of Strawberries, Gooseberries, or Cherries, and are non-returnable, price 2d. each. The Crates are 1s. 6d. each, and may be returned to growers for renewals. C.W.O.

They are strongly made, and growers speak very highly of them.

R. D'E. DAY, THE NURSERY, SUTTON SCOTNEY, HANTS.

THOMSON'S
Celebrated
VINE PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES
SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE.

ONCE USED. ALWAYS USED. **The 'PATTISSON' LAWN BOOTS**

Simplest! Strongest! Most Economical!

FIG. 1.

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS

Silver Medal—
Royal Horticultural Society.

HUNDREDS OF TESTIMONIALS.

The Field says: **"As good as anything that could be devised."**

Illustrated Price List from—

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM, S.W.

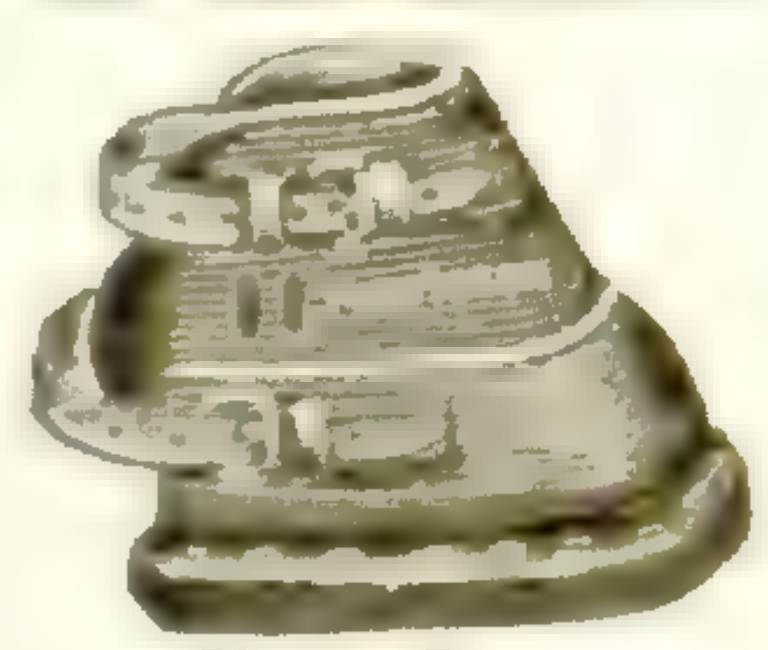


FIG. 2.

GARDEN NETTING.—Protect your Strawberries from the ravages of birds. Small mesh 40 yds. long, 2 yds. wide, 2s.; 40 x 3, 3s.; 40 x 4 4s.; 40 x 5, 5s.; 40 x 6, 6s.; carriage paid on orders of 5s. and over. HENRY ROBINSON, Net Works, Rye, Sussex.

MARKETS.

◆

COVENT GARDEN.

Flowers.

There is a good general demand, roses and carnations being in great request.

		s. d.	s. d.
Azaleas, white	per doz. bun.	3 0	4 0
Adiantum cuneatum	per doz. bun.	4 0	6 0
Arums	per doz.	2 0	3 0
Asparagus	per doz. bun.	10 0	15 0
Cattleyas	per doz.	8 0	12 0
Carnations	per doz.	1 6	3 0
.. ..c........	per doz. bun.	8 0	10 0
Croton leaves	per bun.	1 0	2 0
French fern	per doz. bun.	2 6	4 0
Gardenias	per doz.	1 6	3 0
Gladiolus	per doz. bun.	5 0	8 0
Gypsophila elegans	per doz. bun.	3 6	4 0
Iris, Spanish	per doz. bun.	5 0	8 0
Ixias	per doz. bun.	1 0	2 0
Lilac	per bun.	2 0	4 0
Lilium auratum	per bun.	3 0	4 0
.. candidum	per doz.	1 0	2 0
.. speciosum	per bun.	2 0	2 6
,, longiflorum	per bun.	2 0	3 0
Lily of the Valley	per doz. bun.	6 0	15 0
Marguerites	per doz. bun.	1 6	3 0
Mignonette	per doz. bun.	3 0	4 0
Myosotis	per doz. bun.	2 6	3 0
Narcissus	per doz. bun.	0 9	2 0
Odontoglossums	per doz. blms.	1 6	3 0
Pelargoniums	per doz. bun.	3 0	4 0
Smilax	per doz. trails	4 0	5 0
Stocks, white	per doz. bun.	3 0	4 0
Sweet Peas	per doz. bun.	2 0	5 0
Tuberoses	per doz.	0 4	0 6
Tulips	per doz. bun.	4 0	12 0
Wallflowers	per doz. bun.	1 0	1 6

Fruits.

Business is fairly good, and supplies are well up to the average for the time of year.

		s. d.	s. d.
Apples, Australian	per case	10 0	16 0
,, Tasmanian	per case	10 0	16 0
Bananas	per bun.	6 0	12 6
Cherries, French	per box	1 6	3 0
Cranberries	per case	9 0	10 6
Figs	per doz.	4 0	12 0
Gooseberries	per peck	2 6	4 0
Grapes, English	per lb.	2 6	10 0
,, Belgian	per lb.	1 3	2 6
,, Australian	per case	20 0	28 0
Lemons	per case	7 6	14 0
Melons	each	1 0	3 6
Nectarines	per doz.	9 0	30 0
Oranges	per case	12 0	32 0
,, Jaffa	per case	12 0	14 0
,, Blood	per case	7 0	13 0
Peaches	per doz.	6 0	36 0
Pears, Australian	per case	10 0	25 0
Pineapples	each	2 0	4 6
Strawberries	per lb.	1 0	3 0

Vegetables.

Asparagus is particularly good, and cauliflowers are plentiful, but new cabbages are scarce. Trade is good.

		s. d.		s. d.
Artichokes, Globe	per doz.	1 6	to	4 0
,, Jerusalem	per ½-sieve	1 0		1 6
Asparagus	per bundle	0 8		10 0
Beans, Jersey	per lb.	0 6		0 10
Beet	per bush.	1 0		2 0
Cabbages	per doz.	0 9		1 3
Carrots, new	per pad	2 0		2 6
Cauliflowers	per crate	4 0		6 0
Chicory	per lb.	0 3½		0 4
Cucumbers	per flat	6 0		7 6
Endive	per doz.	1 3		3 0
Horseradish	per doz. bun.	9 0		10 0
Lettuce	per doz.	0 6		1 0
Marrows	per doz.	5 0		6 0
Mint	per doz. bun.	1 0		1 6
Mushrooms	per doz. lb.	6 0		12 0
Onions, Egyptian	per case	4 6		5 6
,, Spanish	per case	5 0		7 0
Parsnips	per bag	1 0		1 3
Parsley	per ½-sieve	1 0		1 3
Peas, Jersey	per lb.	0 6		0 8
Radishes	per doz. bun.	0 3		1 3
Rhubarb	per doz. bun.	0 10		2 0
Seakale	per doz. bun.	6 0		9 0
Spinach	per bush.	1 0		2 0
Tomatoes, Canary	per crate	10 0		20 0
,, English	per lb.	0 10		1 0
Turnips	per bag	2 0		2 6
,, French	per doz. bun.	1 6		2 0
Watercress	per doz. bun.	0 6		0 6½

LONDON POTATO MARKETS.

Business is steady, and prices for new potatoes are firm.

		s. d.	s. d.
Evergood	per ton	85 0	95 0
King Edward	per ton	95 0	110 0
Maincrops	per ton	100 0	120 0
President	per ton	85 0	90 0
Up to Dates	per ton	90 0	110 0
Jersey new	per lb.	0 5	0 7
Teneriffe new	per cwt.	11 0	13 0
Spanish new	per cwt.	23 0	28 0

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.
Height above sea-level, 150 feet.

DATE. 1911. MAY 14 TO MAY 20.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
May 14—Sunday	1 0	57	56	59	50
,, 15—Monday	1 12	55	54	63	50
,, 16—Tuesday	2 30	58	56	68	45
,, 17—Wednesday	3 24	61	57	69	45
,, 18—Thursday	8 18	55	52	62	47
,, 19—Friday	4 6	54	49	56	47
,, 20—Saturday	—	46	43	51	45
Means	(total) 20 30	55	52	61	47

DATE. 1911. MAY 14 TO MAY 20.	RAIN.	TEMPERATURE OF THE SOIL AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg.
May 14—Sunday	·34	57	54	50	44
,, 15—Monday	—	55	53	51	43
,, 16—Tuesday	—	55	53	51	39
,, 17—Wednesday	—	55	54	51	38
,, 18—Thursday	—	57	54	51	42
,, 19—Friday	trace	56	54	52	44
,, 20—Saturday	—	54	54	52	45
Means	(total) —	55	53	51	42

CONTENTS.

PAGE
Answers to Correspondents 408
Bryanthus empetriformis 391
Carnation Disease 394
Bryanthus empetriformis 391
Kochia trichophylla 400
Notes from Kew 398
Notes of the Week 389
Rhododendrons 394
Some of the Newer Roses 393
Staking Sweet Peas 396
The Completion of Bedding Out 397
The Great Temple Show 401
The Judas Tree 396
The Waterside in May 395
White Everlasting Pea 400
Work for the Week 407

ILLUSTRATIONS.

Portrait of Sir Marcus Samuel, Bart., 389; Temple Show—Odontioda Vuylstekei Coronation, 391; Gold Medal Collection of Herbaceous Calceolarias, Star Cinerarias, etc., 392; Rose A. R. Goodwin, 393; Hardy Lady's Slipper, 394; A Fine Type of Star Cinerarias, 395; Tulip Moonlight, 396; Tulip Beauty of Bath, 397; Begonia Miss Ethel Gill, 398; Cattleya Skinneri alba, 399; Gloxinia Her Majesty, 400; Rose Sylvia, 401; Carnation Lady Alington, 403; The Lyon Rose and Orange-red Gerberas, 404.

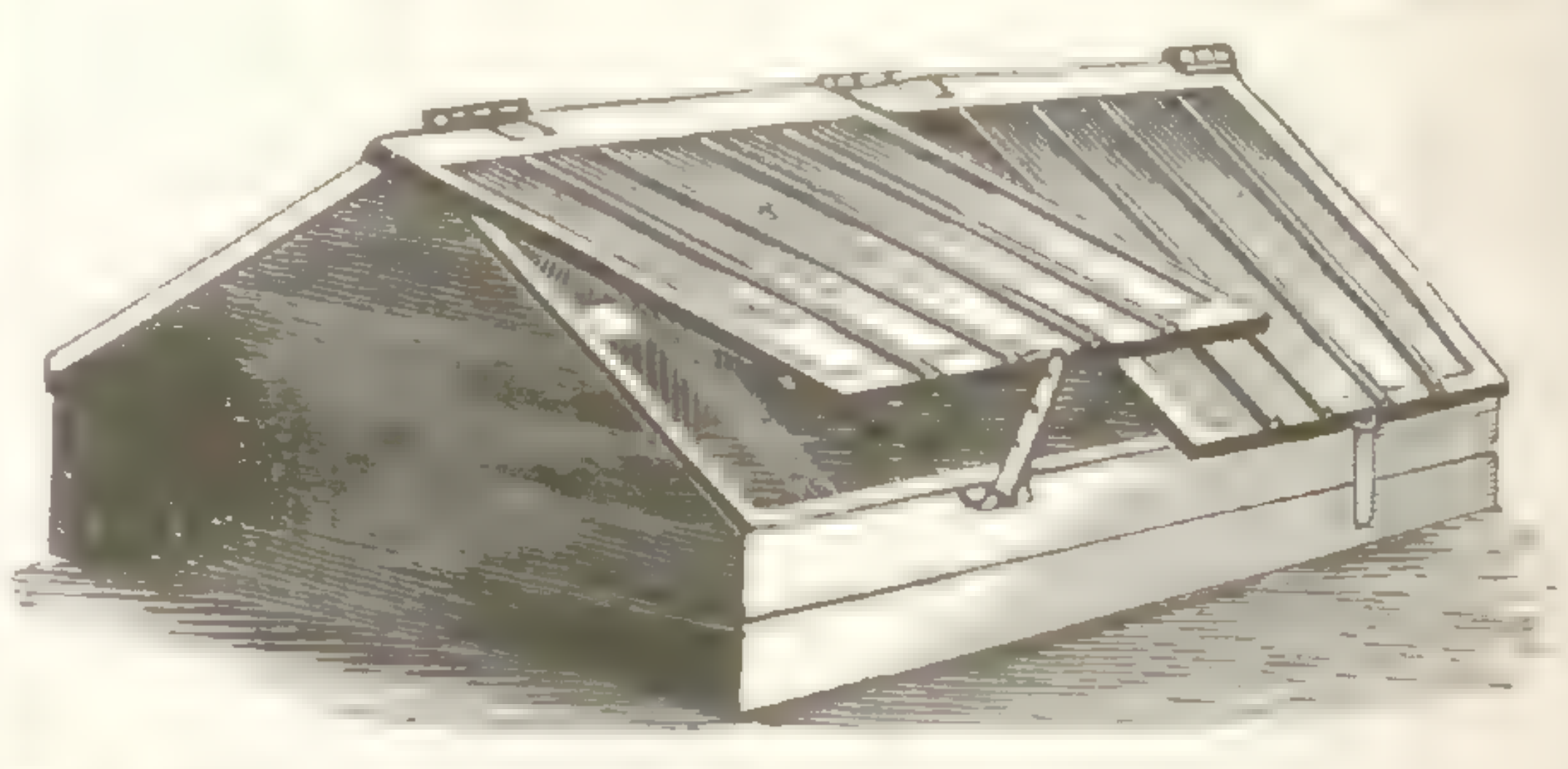
FOR ROSE MILDEW
use
V2K FLUID
THE BEST REMEDY
FOR THIS PERSISTENT PEST.
Does not discolour the foliage.
OF AGENTS EVERYWHERE.
Sole Mfrs., Willm. Cooper & Nephews, Berkhamsted.

WOOD LATH BLINDS
ADMIT SUFFICIENT
SUNLIGHT
SO NECESSARY FOR
Growing Purposes.
Write for Special Catalogue.

WOOD LATH BLINDS

MESSENGER & Co LTD
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office: 122 VICTORIA ST S.W.

PORTABLE PLANT FRAMES
OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices. Glazed and Painted.

	Cash Prices. Carriage Paid. £ s. d.
6ft. long by 3ft. wide	2 0 0
6ft. ,, 4ft. ,,	2 5 0
6ft. ,, 5ft. ,,	2 15 0
12ft. ,, 4ft. ,,	4 0 0
12ft. ,, 5ft. ,,	4 15 0
12ft. ,, 6ft. ,,	5 12 6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
ROYAL HORTICULTURAL WORKS,
MIDDLETON, MANCHESTER.

WEEKS'S BOILERS
supplied from stock.

WEEKS'S PATENT
THE DUPLEX
PATENT
WEEKS'S
COMPENSATING

ESTIMATES GIVEN FOR COMPLETE HEATING APPARATUS
GLASSHOUSES, Of Every Description.
J. WEEKS & CO.,
72, Victoria Street,
WESTMINSTER, S.W.

THE V.T.H. SLUG TRAP.—Invaluable in all gardens.—By means of these traps slugs, beetles, woodlice, wireworms, leather-jackets, etc., may be caught all the year round, and the gar practically cleared of these pests before cropp over 200 slugs and many more woodlice, beetles, have been caught in one of these traps in one n Full instructions sent with each trap. Price each, 1s. 9d. post free. If 12 or more are ord at the rate of 16s. a doz., carriage forward. NON T. HILL, F.R.H.S., Mendip Nurseries, ford, near Bristol.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head, or good Single-handed); 10 years' practical experience in good establishments; leaving through death; near London preferred. A. GLOVER, High Street, Stockbridge, Hants.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working, where three or more are kept).—Mr. LAST, The Gardens, Homewood, Chislehurst, Kent, can with every confidence recommend his Foreman, W. WAITE, as above; 13 years' experience, gained in good establishments; five years present situation. Married when suited.

GARDENER (Head Working, where two or more are kept); good all round; 14 years as head in large and well-kept establishments; married; age 40; excellent references. E. MAYLETT, Park Hall, Salford Priors, Evesham.

GARDENER (Head Working), life experience in all branches; land and stock if required; age 47; excellent character. WILLIAM MASKELL, School House, Lovel Road, Winkfield, Berks.

GARDENER (Head Working, where two or three are kept); life experience Inside and Out; good references; disengaged 29th; age 38; married, no family. C. DOMAN, The Gardens, Thornes Beach, Beaulieu, Hants.

GARDENER (Head Working).—Mr. GOULD, Shernfold Park, Frant, Sussex, highly recommends his Foreman, A. DAY, as above; thorough practical experience Inside and Out; excellent references; age 30.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working, where two or three are kept); life experience; age 36; married; good reference. HALES, 8, Ivy Terrace, Old Church Road, Romford.

GARDENER (Head or Single-handed) seeks SITUATION; middle aged; long experience on large and small estates; also pony, trap. Vicar's and other references; married; abstainer; one boy. SUTTON, Upchurch, Sittingbourne, Kent.

GARDENER (Single-handed or with help), experienced Inside and Out; age 30; married, no family; good refs. H. J. C., 64, St. Mary's Road, Reigate.

GARDENER (Single-handed or Kitchen Garden and Pleasure Ground); life experience; age 28; good references; single. C. SMITH. The Gardens. Goldsmiths, Langdon Hills, Essex

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (Single-handed or otherwise); experienced Inside and Out; Vines, Fruit, Flowers, Vegetables; 10 years' excellent reference; abstainer; married when suited; disengaged. C. KIBBLEWHITE, Lyndhurst Lodge, The Grove, Slough, Bucks.

GARDENER (good Single-handed, or where help is given); married, no family; age 36; good references. State wages. SMITHERS, Lion Lane, Haslemere, Surrey

GARDENER (Second, Inside or Out); 12 years' good experience; Plants, Fruit, and Kitchen Garden; excellent references; age 26. W. JOHNSTON, Wood End Cottage, Hemel Hempstead, Herts.

MR. SALTER, The Gardens, Avenue House, Church End, Finchley, highly recommends W. BICKER as GARDENER (Single-handed, or with help); experienced Inside and Out; at present in his employ; age 28; Eastern Counties preferred.

MR. H. DUKE, Felixstowe Lodge, Suffolk, will be pleased to recommend JOURNEYMAN (Inside or Inside and Out); age 22; past three years here; abstainer.

J. HARDING, Coneygar Gardens, Bridport, highly recommends W. BARTLETT, age 20, here three years, as JOURNEYMAN (Second, Inside or Inside and Out). Apply W. BARTLETT, Coneygar Gardens, Bridport, Dorset.

JOURNEYMAN (Inside) seeks SITUATION; six years' experience, Inside and Out; age 20; Bothy preferred; good references. E. ARCHER, Ockham, Woking, Surrey.

GENTLEMAN can highly recommend JOURNEYMAN; six years in present place; age 20; Inside or Inside and Out; Bothy preferred. Address E. EASON, Merriott, Crewkerne, Somerset.

GARDENER seeks a SITUATION; age 21; experience in Herbaceous Borders, Rockery and Pleasure Grounds; good reference from present place. C. BRAIDEN, Gardens, Nunnery, Rusper, near Horsham.

GARDENER (Under, where two or three are kept); Inside or Inside and Out; age 20; 6 years' experience. L. TYLER, Preston, near Uppingham.

GARDENER (Under) seeks SITUATION Inside and Out; or to help in Pleasure Grounds; age 23; disengaged; good reference. Apply H. JEFFERIES, Keevil, near Trowbridge, Wilts.

MR. KEITH recommends Young Man (22, single) as GARDENER (Under or Single-handed) in charge of garden and greenhouse; 6 years' experience; strong, hard-working, and obliging. Ivy House, Horton Kirby, Kent.

GARDENER (Under) seeks SITUATION, where 3 or 4 are kept; well up Inside and Out; 7 years' experience; age 21; excellent references. H. F., Ladds House, Sandhills, Witley, Surrey.

GARDENER (Under); private establishment or Grower Market Nursery; 14 years' experience, Inside and Out, private and nursery; good references. LEWINGTON, 160, High Street, Hampton Hill, S.W.

GARDENER seeks SITUATION in Kitchen Garden and Lawns, or potting and watering in nursery; used to machines and scythe; 14 years' experience in all branches; single, abstainer; age 34; two years here; good reference. H. DAVIS, Victoria Nurseries, The Downs, Luton, Beds.

IMPROVER. — Rev. MANLEY POWER, Rector of Hagley, strongly recommends Youth, 18 years, who has been in his gardens for three years. E. HOPCUTT, Hagley, near Stourbridge.

SITUATION REQUIRED under a Gardener by a willing Lad; age 15. FRANK LANE, 125, Keslake Road, Kensal Rise, London, N.W.

ORCHID GROWER requires SITUATION to take charge of collection or small place where Orchids speciality; experience Burford Lodge, etc.; excellent references. Apply S. BURROUGH, Royal Gardens, Sandringham.

YOUTH (17), strong and willing, seeks Situation as IMPROVER (Inside or Inside and Out); two years' experience in French gardens at Hatch, Tisbury, Wilts; good reference. Apply J. REED, Bishop's Fonthill, Salisbury, Wilts.

YOUNG MAN (21) seeks SITUATION as Under Gardener or Improver; Inside and Out; 3 years' experience. E. HAWKER, Musbury, Axminster, Devon.

YOUNG MAN (20) seeks SITUATION in Gardens; four years' experience Inside and Out, with charge of electric plant; good references. G. STONE, North Wraxall, Chippenham.

YOUNG MAN seeks SITUATION in Nursery or Private Gardens; 5 years' experience; good references; age 22; height 5ft. 8in. Apply H. HODDIN and CO., Frome Flower and Fruit Company, Frome.

YOUNG MAN seeks SITUATION; chiefly Inside; some Outside not objected to; well recommended; six years' general experience; age 22. MARTIN LODGE, Redlands, Holmwood.

YOUTH (17), strong and willing, seeks Situation as IMPROVER (Inside or Inside and Out); two years' experience in French gardens at Hatch, Tisbury, Wilts; good reference. Apply J. REED, Bishop's Fonthill, Salisbury, Wilts.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For JUNE 3, 1911.

Please Repeat my Advertisement.

Name..................................

Address..................................

....

Date..................................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

Catalogues and Estimates Free.

MESSENGER & Co. Ltd.
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office 122 VICTORIA St. S.W.

MODERN GLASSHOUSES

as supplied by MESSENGER and CO., Ltd., are made of the best materials, and only capable and reliable workmen are employed in the erection thereof.

The following letter was recently received by us on the completion of a contract for a well-known Member of Parliament.

February, 1911.

"I should not be doing my duty to your workmen if I did not at once tell you, on the completion of your work, how pleased I have been with each and all of them.

"They have been most obliging throughout the whole job, and have endeavoured to do everything in an efficient and thoroughly workmanlike manner, and I must congratulate you upon having such capable employees."

THOUSANDS NOW IN USE. HUNDREDS SOLD MONTHLY.

PRICE, PACKED & CARR. PAID.
17/6 each.

"ALPHA" KNAPSACKS GUARD THE NATION'S FRUITS.

"ALPHA" SPRAYERS SAVE ITS FLOWERS.

Have only to be introduced to be adopted, having won 15 Gold and other Medals and Diplomas in about as many months.

"ALPHA" SPRAYERS are well finished with 2 coats of "Aluminium" upon heavily lead coated strong steel plates.

MAY BE HAD FROM NEAREST AGENT OR

BLAKE BROS., Ltd., BROAD STREET IRON WORKS, ROSS, Herefordshire.

Printed and Published by W. H. & L. COLLINGRIDGE, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

NOVELTIES AT THE TEMPLE SHOW—ILLUSTRATED.

THE GARDENERS' MAGAZINE.

No. 3,005. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, JUNE 3, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S SEEDS FOR JUNE SOWING.—Finest strains of Antirrhinums, Aquilegias, Campanulas, Canterbury Bells, Calceolarias, Cinerarias, Delphiniums, Hollyhocks, Lupins, Pansies, Primulas, Stocks, Wallflowers, etc. Special list on application. BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

DOUGLAS'S PERPETUAL CARNATIONS (British and American). Magnificent Stock of robust plants, now ready, all in perfect health, and guaranteed to give satisfaction. From 2s. per dozen. J. DOUGLAS, The Carnation Specialist, Edenside, Gt. Bookham, Surrey.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, S.W., wishes to call the attention of his customers, and of gardeners generally, to his Fruit Tree Protectors. Photographs and Blueprints of these, with prices, will be sent on receipt of a postcard, telephone message (201 Western), or wire, "Gray, Chelsea, London."

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

GREENHOUSES and GARDEN FURNITURE. — Distinctive Designs and Finished Workmanship. Write NOW for illustrated Catalogue. CARTER and HOWARD, Fife House, Kingston-on-Thames.

MUSHROOMS.—Now is the time to plant Spawn in pastures. To protect the crop by making it a cultivated one, get BARTER'S Specially-prepared Spawn, with instructions, in 10s. 6d., 21s., and 42s. cases. Carriage paid. Cash with orders to
JOHN F. BARTER, LTD., Wembley, Middlesex.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.
H. BURNETT,
Carnation Specialist, Guernsey.

RICHARDSON'S for GLASSHOUSES and HEATING APPARATUS, for full advertisement see back page. Darlington.

PERENNIALS, UNIQUE COLLECTION,
including
ALPINES AND AQUATICS.
Also RARER SHRUBS, HIMALAYAN RHODODENDRONS, and Others.
Write for Catalogue. G. REUTHE, Keston, Kent.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-work, showing screens, wall panels, window surrounds, arches, arbors, etc., post free. BOULTON and PAUL, Ltd., Norwich.

FRUIT SAVED.—GARDEN NETTING as supplied by us to the Royal Gardens. SMALL MESH, satisfaction or cash returned, 100 by 1 yd., 3s. 3d. Any length and width supplied. Cheaper quality, 50 yds. 1s.
POTTER BROS.,
Dept. M. Net Makers, Shrewsbury. Est. 1855.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

WEBBS' WALLFLOWERS.
Kinver Favourite (blood-red), 6d. per pkt.
Canary Bird (golden-yellow), 1s. per pkt.
Eastern Queen (salmon shaded), 1s. per pkt.
Cloth of Gold (bright yellow), 6d. per pkt.
Ruby Gem (ruby-violet), 1s. per pkt.
Vulcan (velvety crimson), 1s. per pkt.
Double (mixed), 1s. per packet.
Universal (single, mixed), 1s. per pkt.
WEBB AND SONS, The King's Seedsmen,
WORDSLEY, STOURBRIDGE.

BUNYARD'S NEW CATALOGUES.
The following have been recently published, and contain all worthy new varieties. Post free on application.

BUNYARD'S
CLIMBING PLANTS in Pots, Illustrated.

BUNYARD'S
HERBACEOUS PLANTS, Illustrated.

BUNYARD'S
BEDDING PLANTS. Illustrated.

GEO. BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.

LAXTON'S FRUIT TREE, STRAWBERRY, SEED, ROSE, HERBACEOUS, TREE, BULB, and SMALL FRUIT CATALOGUES, with full illustrations and descriptions, gratis on application.

LAXTON BROTHERS, Bedford.

GARDEN NETTING.—Protect your Strawberries from the ravages of birds. Small mesh 40 yds. long, 2 yds. wide, 2s.; 40 x 3, 3s.; 40 x 4, 4s.; 40 x 5, 5s.; 40 x 6, 6s.; carriage paid on orders of 5s. and over. HENRY ROBINSON, Net Works, Rye, Sussex.

RUSTIC SUMMER HOUSES, trellis-work, Fencing, Pergolas, Arches, Seats, Bridges, Log Cabins, Loggias, etc. Send for our new LOG CABIN and RUSTIC CATALOGUE (just published), sent post free. BOULTON and PAUL, Ltd., Norwich.

CLAY'S MANURES, CRUSHED BONES
(See page iv.)

CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

NOTICE — Always use PORTER'S IMPROVED COIL STAKES for Carnations, no tying required; last a lifetime. Sample doz. with price list 1s., carriage paid. A. PORTER, Stone House, Maidstone.

ORCHID PEAT.—Hardwood Brown Fibrous, RHODODENDRON and DUST PEAT, SPHAGNUM MOSS.
Apply C. HALL, 1, Worgret, Wareham, Dorset.

GARDEN NETTING (best tanned only).—25 yds. x 8yds.; 50 x 4yds.; 100 x 2 yds., 8s. each. 50 x 2 yds.; 25 x 4 yds.; 100 x 1 yd., 4s. each. All sizes, large or small, at 1s. 20 sq. yds. Quality guaranteed.—EVANS, 14, Beresford Rd., Lowestoft.

SCOTCH! CHRYSANTHEMUMS. Finest Early-flowering, strong, healthy, 12 varieties, 1s. 9d., post free; satisfaction guaranteed. Wm. CHALMERS, Blackhutts, Muchalls, Stonehaven, N.B.

IRON and WIRE FENCING for GARDENS, Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free. BOULTON and PAUL, Ltd., Manufacturers, Norwich.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

A MARVELLOUS NEW COLOUR IN WALLFLOWERS.
SUTTON'S FIRE KING.
Vivid orange, the most brilliant colour attained in the flower.
Per packet 1s. 6d., post free.
Mr. R. J. Walker, gardener to J. Stewart Robertson, Esq., writes: "Fire King Wallflower is the most effective variety I have. It is grand."

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

NOW IS THE TIME TO PLANT KELWAY'S GAILLARDIAS, the rich golden blooms of which are noted for their powers of endurance during the driest season, and as cut flowers retain their freshness and beauty long after they have been gathered. They flourish with a minimum of attention, and give abundant bloom the same year that they are planted. Choice named collections, 12s. and 18s. a dozen.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
From ———, Esq., Guildford.
"I may say that your Illustrated Catalogue is without doubt the finest book of the sort I have had the pleasure of seeing."

100,000 CACTUS DAHLIAS, new Pæony-flowered Dahlias, Chrysanthemums, American Tree Carnations, and Violas; all exceptionally good, strong plants and best varieties; grown especially for exhibitors. Send for catalogues, gratis, and post free. — JOHN E. KNIGHT, Nurseryman, Wolverhampton.

WHEELBARROWS. — Navvy, for building, 11s. 9d. each; general purpose, for farm use, 14s. 9d. each. 6 sent together, carriage paid some stations. Also timber, woodwork, all descriptions. O. JENNINGS and CO., Timber Merchants, General Wood-workers, 916, Pennywell Road, Bristol.

JAMES SENDALL and CO., Cambridge; Conservatories, Vineries, Garden Frames; Heating Engineers. Surveys made, and Plans prepared to suit any position. Illustrated List free. Telegrams: "Sendall, Cambridge." 'Phone, 511.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page v.

CARNATIONS.—Spiral Wire Stakes. No tying required. Will last a lifetime. 24 inches long, 7s. 6d. per 100; 30 inches, 8s. 6d. per 100; 36 inches, 10s. per 100; sample doz., 1s., 1s. 3d., and 1s. 9d., all carriage paid. Pea Trainers, 6ft. by 4ft., 2s. and 3s. each. Garden Archways, Garden Edge and Croquet Bordering, 8 inches high, 8d.; 10 inches high, 10d. per yard. All cash with order. Catalogue free on application. J. PENKETH, Iron and Wire Works, Market Place, Manchester. Telp.: 3695 City.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.
XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.
XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown both poisonous and non-poisonous are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N.S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

BEDDING PLANTS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Chrysanthemums, Dahlias and Summer-Bedding Plants.

CARNATIONS.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

RHODODENDRONS.

DICKSONS & CO.,
1, Waterloo Place, Edinburgh.
Pink Pearls, Ponticums, choice Hybrids. Write.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

ROSES.

R. H. BATH, Ltd.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

SAMUEL M'GREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

FLOWER POTS.

SANKEY'S
FAMOUS
GARDEN
POTS

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant

Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:

RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

ORCHIDS

EIGHT MILES BY ROAD FROM THE CITY.

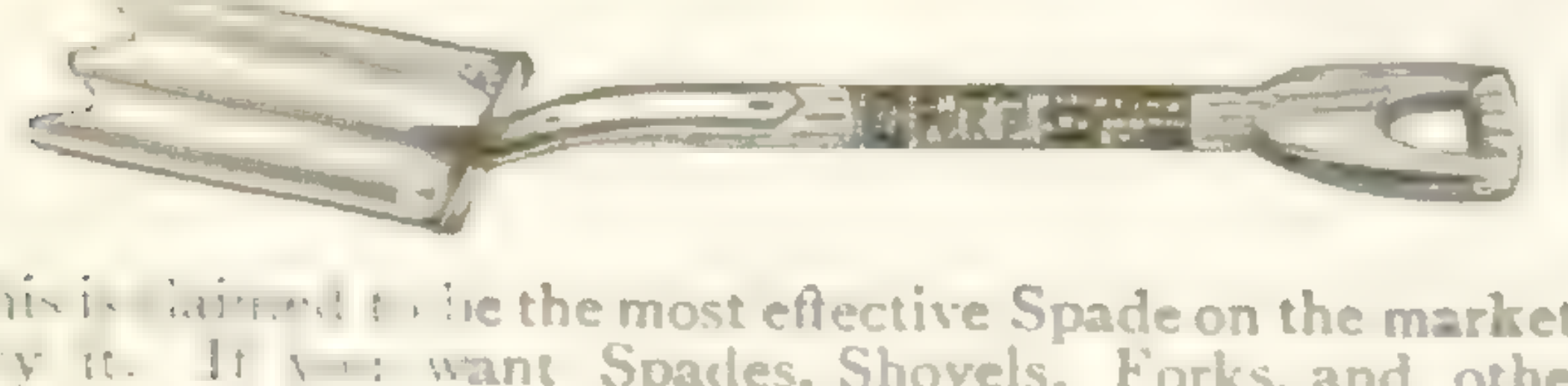
A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS**, and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

A NEW GARDEN SPADE (Carter's Patent)



This is claimed to be the most effective Spade on the market: Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

GARDEN AND TENNIS NETS

(best) tanned only, small mesh).—50 x 8yds., 17s.; 25 x 8yds., 50 x 4yds., 100 x 2yds., 8s. each; 100 x 1yd., 50 x 2yds., 25 x 4yds., 4s. each. Any size to order. Tennis Netting (corded), 25 x 2, 6s. 6d.; 25 x 3, 7s. 6d.; 25 x 4yd., 8s. 6d. Write for Price List. L. WREN and SON, Net Merchants, 139, High Street, Lowestoft. Established 1863.

BENTLEY'S
WEED DESTROYERS

Utterly annihilate Weeds, Moss, Dandelions, and all other Weeds on Garden Walks, Carriage Drives, etc.

HAVE THE LARGEST SALE IN THE UNITED KINGDOM!
ARE THE MOST POWERFUL MANUFACTURED!
ARE THE MOST PERMANENT IN EFFECT!

LIQUID (Poison).

Double Strength (1 to 50).

			£	s.	d.
3 gallons, to make	153	gallons ...	£0	10	0
6 ,, ,,	306	,, ...	0	18	0
12 ,, ,,	612	,, ...	1	13	0
20 ,, ,,	1,020	,, ...	2	7	6
40 ,, ,,	2,040	,, ...	4	12	6

Special Concentrated Strength (1 to 80).

			£	s.	d.
3 gallons, to make	243	gallons ..	£0	14	6
6 ,, ,,	486	,, ...	1	7	0
12 ,, ,,	972	,, ...	2	6	0
24 ,, ,,	1,944	,, ...	4	10	0

BENTLEY'S DAISY KILLER.

(Lawn Sand.)

Completely eradicates Daisies, Moss, and other Weeds which infest **Lawns, Tennis Courts, Croquet Grounds, Bowling Greens, Golf Courses, etc.**, and afterwards improves the tone and colour of the sward.

1 ton, **£19**; 10 cwts., **£9 15s.**; 5 cwts., **£5**; 1 cwt., **£1 1s.**; 56 lbs., **12s.**

TINS, **5s., 2s. 6d.,** and **1s.** each.

Carriage paid on **7s. 6d.** orders and upwards.

WHOLESALE MANUFACTURERS,

JOSEPH BENTLEY, LIMITED,
Chemical Works,
BARROW-ON-HUMBER, HULL.

Barr's
Lawn Phytobroma

The best Manure for all Lawns.

The most economical of all artificial manures, 2 oz. to the square yard only being required.
Per cwt., **20/-**; ½-cwt., **12/6**; 28lb., **7/6**; 14lb., **4/6**; 7lb., **2/6**; sample tins, **1/-**.
Prepaid Orders for 28lbs. and upwards, carriage paid.
Circular with full particulars, on Application.

BARR & SONS,
11, 12, & 13 KING STREET, COVENT GARDEN, LONDON

WHARFEDALE. 5 ft. long.

In Best Red wood, painted two coats. White.

£1 15 0

Delivered any station.

Full Catalogue on application.

PETER PATRICK & SON, Otley, Yorks.

STALKER'S Forest Trees, Fruit Trees, Roses, Bulbs, and Seeds
Are known all over the world, and cannot be surpassed for hardiness and quality.

Famous for Quality and Cleanliness.

D. STALKER & SON,
Government Contractors,
Catalogues Free. NAIRN, N.B.

BEGONIAS.

NOW IS THE TIME TO BUY GOOD LARGE PLANTS.

Choice large-flowered Doubles, in nine separate colours, strong plants, splendid for pots or bedding, **4/6** per doz

Large-flowered Doubles, strong plants, mixed colours, **3/6** per doz.

If you have never tried Double Begonias for Bedding, don't be afraid to try some. They are sure to please.

Frilled Singles, very pretty, large plants, **3/-** and **4/6** per doz.

Send for Free List of Choicest Named Begonias, Carnations, Delphiniums, etc., to

BLACKMORE & LANGDON, Bath. AWARDED 24 GOLD MEDALS

Sales by Auction.

SALES NEXT WEEK.

WEDNESDAY NEXT, June 7th, at One o'clock. Choice herbaceous Plants, flowering Shrubs, Gladiolus, Montbretias, Begonias, Liliums in variety, etc. About 50 c/s Japanese Lilies, various, and a large quantity of double and single Begonias.

At Three o'clock.—100 lots of choice Ornamental Plants, Standard Bays, and other Decorative Plants, Stove and Greenhouse Plants, Roses in pots.

FRIDAY NEXT, June 9th, at Quarter to One o'clock. —A fine importation, received direct, of Cattleya Dowiana in grand condition. Choice Established Orchids in variety. Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view morning of sale and catalogues had.

EDMUNDS and CO.—Specialities: Early vegetable plants, etc.; all hard grown in cold frames; lights off all day and very safe night; Tomato plants, Carter's Sunrise, Laxton's Open Air, Edmund's Supreme, etc., 12 for 1s., 25 for 1s. 9d., 50 3s. 3d., 100 4s. 6d.; Ridge Cucumbers, 6 for 1s., 1s. 9d. doz.; Celery, Clayworth's Prize Pink, extra strong, transplanted, ready for trenches, 1s. 6d. 100; bush Marrow plants, green or white, fine strong plants, 12 for 1s.; Pumpkins, same price; also all manner of Bedding Plants, Geraniums, Dahlias, Annuals, etc., etc.; write for our fully illustrated catalogue of up-to-date novelties for summer bedding; one of the finest published; post free on application. EDMUNDS and CO., Milton, Cambridge.

100 NURSERIES, MARKET GARDENS, FLORIST AND SEED BUSINESSES TO BE DISPOSED OF.

MESSRS. PROTHEROE and MORRIS'S HORTICULTURAL REGISTER contains full particulars of the above, and can be obtained gratis at 67 and 68, Cheapside, E.C.

Roses in Pots.

For Outdoor Planting. from **10/6** per doz.

For the Conservatory. Coming into bloom. from **15/-** per doz.

For Walls and Pergolas. All best varieties. Extra strong for immediate effect from **1/6** to **5/-** each.

New May List gratis and post free.

Geo. COOLING & Sons,
The Nurseries, BATH.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.
Our Work has stood the test of time.

ORCHIDS, ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

NOTICE.

The AZALEAS and RHODODENDRONS planted in Hyde Park, near Rotten Row, finest to be seen in London, are supplied by ANTHONY WATERER, whose only address is Knap Hill Nursery, Woking, Surrey.

No connection with any other firm of similar name.

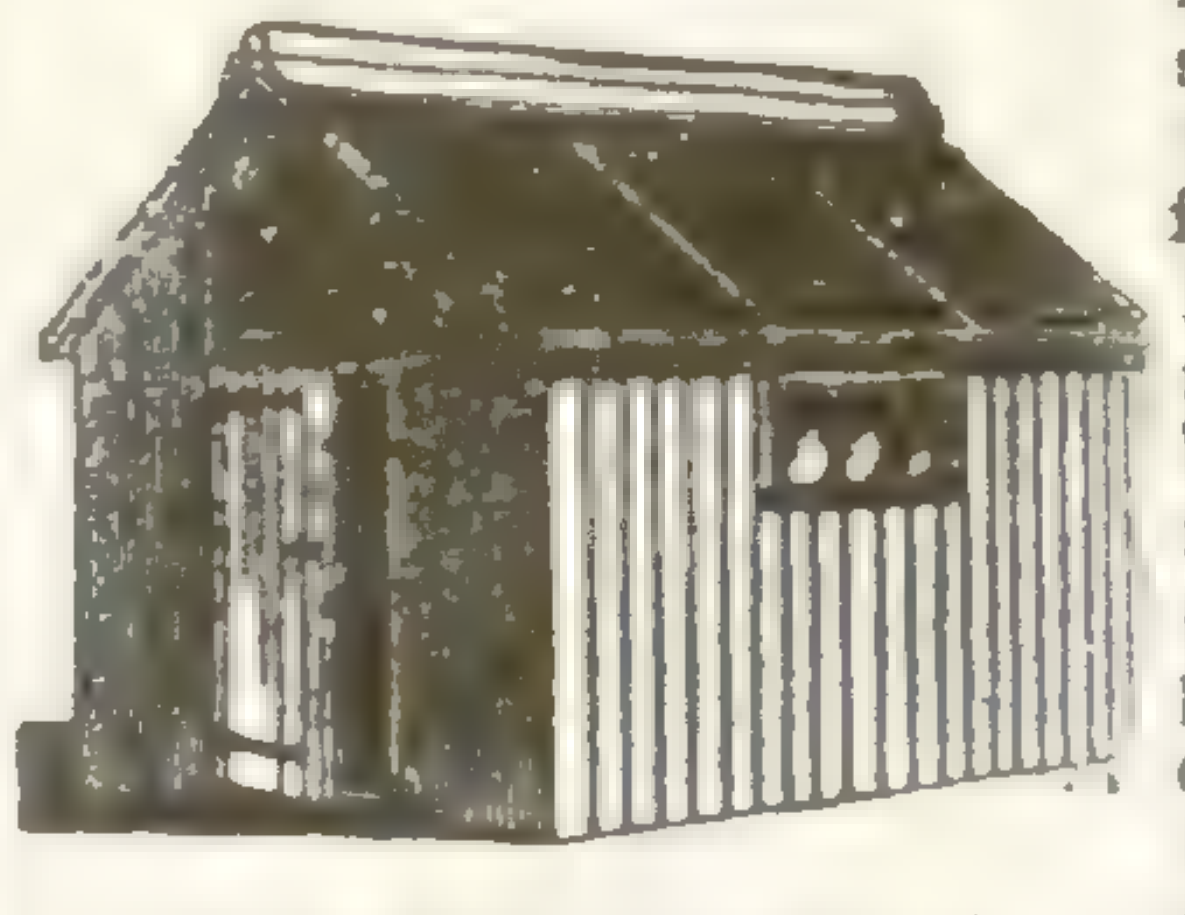
BOTTLING FRUIT.

Patent Apparatus Complete. **5/6**

Efficient, Reliable, Simple, Easily Operated.
WICKHAM and Co., Dept. M, Ware, Herts.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

PORTABLE BUILDINGS. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as & other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

Sizes.		Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
ESTABLISHED 70 YEARS. BEDFORD.
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

MERRYWEATHER'S

614 PUMP

IS THE

Gardener's Friend.

Easy to Work. Simplicity Itself.

Write or Call—

63, Long Acre, LONDON, W.C.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS.

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

AMERICAN TREE CARNATIONS

The Newest and Best Varieties.

Strong, healthy and well-rooted plants only supplied.

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

BEGONIA PHOSPHORESCENS.—The best small flowering double scarlet tuberous variety for bedding; strong plants from single pots ready end of May, 3s. 6d. doz., 25s. 100. W. STACEY, Nurseries, Dunmow.

PERPETUAL CARNATIONS.—Everyone interested in PERPETUALS should write for our 1911 Illustrated Catalogue, FREE. Read our "TREATISE ON CULTURE," 1s., post free. YOUNG and CO., Carnation Specialists, HATHERLEY, CHELTENHAM.

BY APPOINTMENT.

NEW ROSES.

WM. PAUL & SON, WALTHAM CROSS, Ltd.,

beg to call attention to their extensive collection of New Roses, including Rambling varieties, good plants of which, in pots, will be ready for delivery early in June and throughout the summer months.

WM. PAUL & SON'S New Varieties:

- **Florence Haswell Veitch** (H.T.), **7/6.**
- **Frances Charteris Seton** (H.T.), **7/6.**
- **Lady Downe** (H.T.), **7/6.**
- **Sylvia** (Hybrid Wichuraiana), **7/6.**
- **Alice Cory-Wright** (H.T.), **3/6** to **5/-.**
- **Elsie** (Hybrid Wichuraiana), **2/6** to **5/-.**
- **Juliet** (Hybrid Briar), **3/6 to 10/6.**
- **Portia** (H.T.), **3/6** to **5/-.**

New British and Continental varieties of other raisers, **2/-** to **10/6** each.

Priced Descriptive Catalogue Post Free on Application.

Also a large general collection of Roses in pots for filling vacancies in rose gardens and for pot culture, **12/-** to **42/-** per dozen; Climbers and Ramblers, **12/-** to **60/-** per dozen.

PAULS' ROYAL NURSERIES, Waltham Cross, Herts.

Royal Botanic Gardens,
REGENT'S PARK, LONDON.

JOHN WATERER & SONS, Ltd.,
GREAT

EXHIBITION of RHODODENDRONS

will be opened on
TUESDAY, JUNE 6th, at 3 p.m.

BAND and PIPERS
of
H.M.'s SCOTS GUARDS.
(By permission of Colonel P. J. CUTHBERT.)

Cards of Admission to be obtained from

John Waterer & Sons, Ltd.,
American Nursery,
Bagshot, Surrey.

GLASS & PAINT.

NICHOLLS & CLARKE, LTD.,
15 oz. and 21 oz. Glass, IN ALL THE USUAL SIZES.
Shoreditch, London.
When sending for list please cut out this advt.

CLAYS'

If You go for

CLAY'S FERTILIZER

as the ARROW does—
You are safe to
HIT THE MARK.

CLAY'S LONDON FERTILIZER
TRADE MARK.

Sold everywhere in **6d.** and **1s. Tins**; and **in Branded and Sealed Bags** 7lbs. **2s. 6d.**; 14 lbs. **4s. 6d.**; 28 lbs. **7s. 6d.**; 56 lbs., **12s. 6d.**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

Every Tin' Bag, and Seal bears the Trade Mark (to which the Arrow points). the only Guarantee of genuineness.

CLAY'S SUCCESSFUL GARDENING.— A thoroughly comprehensive, informing, up to-date Publication. Fourth Edition (Second Reprint), 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or free by post for this amount direct from the Publishers as under:—

CLAY & SON, Manure Manufacturers, Bone Crushers, etc.,
Stratford, London, E.

CLAY'S FERTILIZER

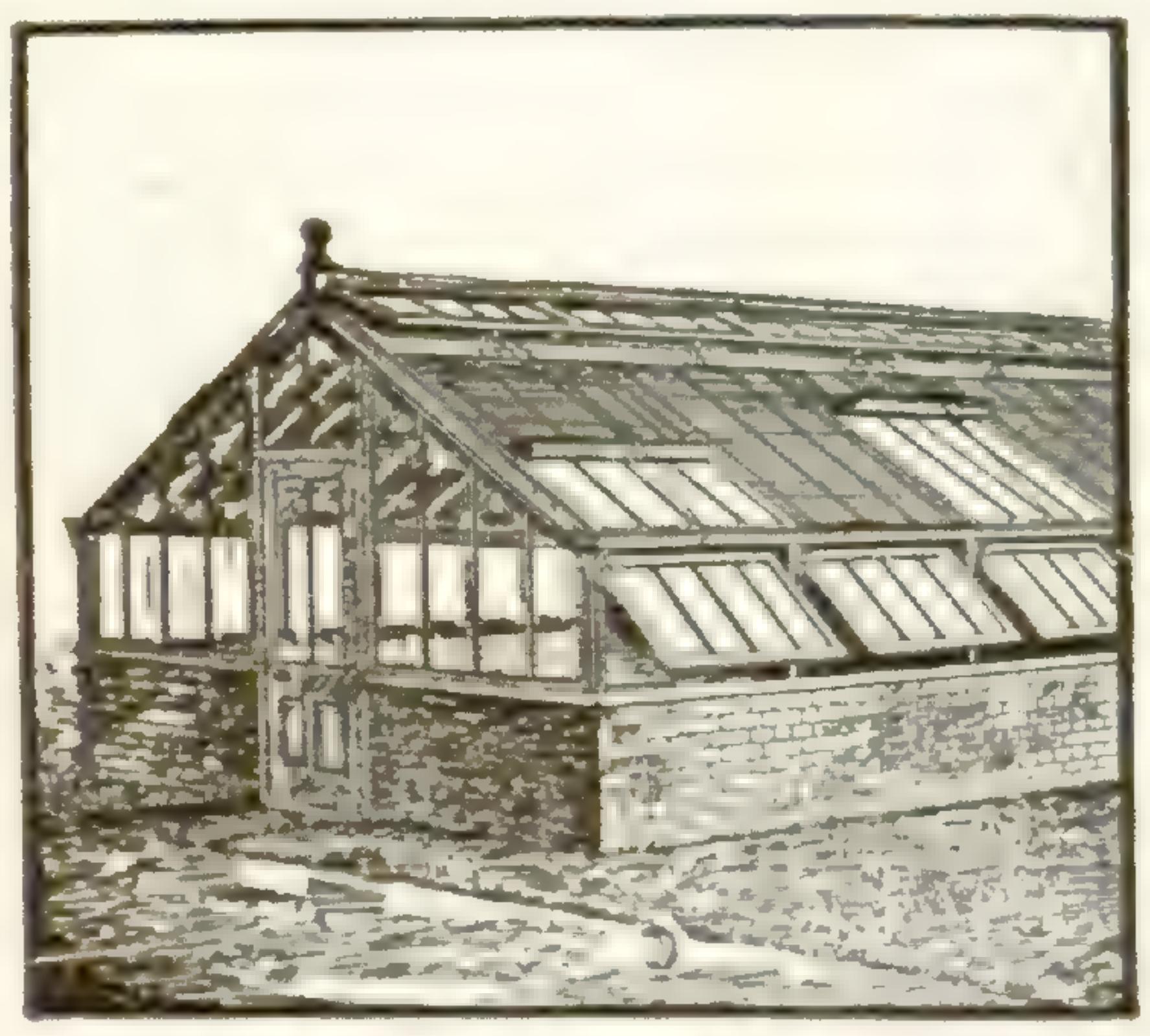
A perfectly safe and useful manure containing the three chief elements of plant food, viz., nitrogen, potash and phosphoric acid. It is a proprietary specific in general use, adaptable to all forms of soil preparation, and is applied with advantage to plants in pots, and for the production of flowers, fruits and vegetables grown in the open.

(Cassell's Dictionary of Gardening, p. 217)

IT IS
UNSURPASSED
FOR ALL
HORTICULTURAL
PURPOSES.

PARISIAN (WOOD LATH) BLINDS

MOST DURABLE OUTSIDE SHADING.



NEATEST IN APPEARANCE.

SUPPLIED ONLY BY
W. RICHARDSON & CO.,
HORTICULTURAL WORKS,
DARLINGTON.

GARDEN (FROM STOCK) FRAMES

SMITH'S WEED KILLER
is absolutely "PERFECT."
4 Tins of Powder or
4 Gallons of Liquid
to make 100 Gallons.
6/6 Carriage Paid.
MARK SMITH, Ld. *Louth, Lincolnshire.*

CORRY & CO.,
LIMITED,
Horticultural Sundries Merchants & Manufacturers
(Established in 1848).
Sole Makers of the following Old-established and Valuable Preparations at their Bonded Chemical Works,
SHAD THAMES, LONDON, S.E.
By permission of H.M. Treasury.
The Original Makers and Introducers in 1866 of

TOBACCO POWDER (Duty Free).
In Tins, 6d., 1/-, 2/6, and 5/- each.

TOBACCO JUICE (Duty Free).
In Bottles, Pt., 1/-; Qt., 1/9; ½-Gall., 2/6; 1 Gall., 4/-; and in Kegs, 2/6 Gall.

NICOTINE SOAP.
Destroys all pests effectually, and no possible injury to plants. Jars, 1/-, 2/6, 5/-. In Kegs, 12lbs., 13/6; 28lbs., 25/-; 56lbs., 48/- each.

"SURPAZOLL" FUMIGATING LIQUID.
Each, 5,000, 2/10; 10,000, 5/6; 20,000, 10/6; 40,000 cubic feet, 20/-. Also in Quarts, ½-Gall., 1 Gall.

EWING'S MILDEW COMPOSITION.
In Bottles, 1/-, 2/-; Gall., 10/6 each.

FOWLER'S MEALY BUG ERADICATOR.
Bottles, 1/-, 2/6, 5/- each.

SCOTT'S WASP DESTROYER.
Bottles, 1/6, 2/6 each.

NIQUAS NON-POISONOUS INSECTICIDE.
Tins, Pt., 1/-; Qt., 1/9; ½-Gall., 3/-; 1 Gall., 5/-. Kegs, each 5 Gall., 22/6; 10 Gall., 42/6.

LETHORION VAPOUR CONES
For Fumigating. No. 1 for frames of 600 cubic feet, each, 6d. No. 2 for 1,000 to 1,200 cubic feet, 8d. No. 3 for 2,000 to 2,500 cubic feet 1/-.

CORRY'S LIQUID EXTRACT OF QUASSIA.
Each, 6d., 1/-, 2/6, 4/-.

CORRY'S WINTER DRESSING (For Fruit Trees).
Each, Pt., 1/-; Qt., 2/-; ½ Gall., 3/6; 1 Gall., 6/-.

STANDEN'S MANURE.
In Tins, 6d., 1/-, 2/6, 5/6 each. In Bags, ¼ cwt., 7/6; ½ cwt., 12/6; 1 cwt., 20/-, each.

"SUMMER CLOUD" GREEN SHADING
Has given general satisfaction wherever it has been used. It is rain-resisting, but can be easily washed off with hot water when necessary.
In Packets, 1/- and 2/6 each, also in Bags, 7 lbs., 10/6; 14 lbs., 20/-.

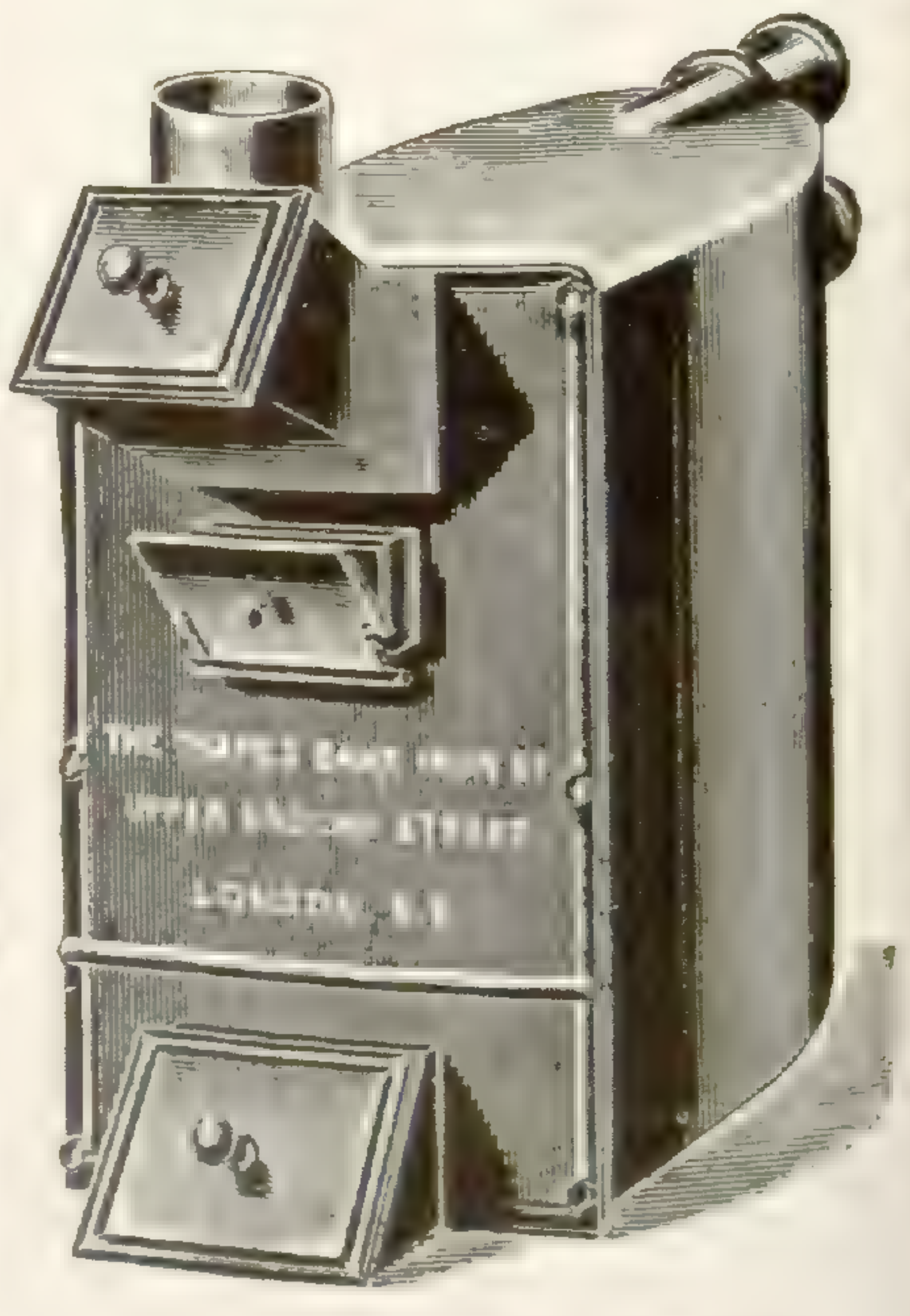
FOWLER'S LAWN SAND.
In Tins, 1/-, 2/6, 5/- each. Kegs, ¼-cwt., 8/6; ½-cwt., 16/-; 1 cwt., 30/- each.
To be had from all Dealers in Horticultural Sundries throughout the Kingdom.

'Phone: Hop. 763.

When next a Small Boiler you require

TRY

THE


THE THAMES BANK IRON CO.
UPPER GROUND STREET
LONDON, S.E.

HEEL

NONE TO BEAT IT.

THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.

4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

VOL. LIV.—No. 3,005. SATURDAY, JUNE 3, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

◆

Climbers and Clingers.

MR. A. R. BROWN.
A well-known Midland Carnation and Auricula Expert.

In the study of the life struggle which is always going on in the plant world, as it is in the animal world on different lines, one of the most interesting features is the innumerable subtle ways in which many plants manage to hold their own in despite of certain inherent weaknesses. The light of the sun, and the free access of air, are the two main essentials for all green plant life. The first is the great vitalising and invigorating factor, while the second, the air, is at once the vehicle and the source of supply of the carbonic acid gas which forms the main structural material of the plant. The sturdy trees and shrubs hold their own by virtue of a more or less erect growth and spreading branches, the foliage on which is arranged in such a fashion as to receive the maximum amount of light, which also involves due exposure to the air. As a result of their sturdy growth under natural conditions they manage to cover large areas of the earth's surface. There have, however, been evolved a host of plants, with the same vital needs, but with slender stems and branches which are quite incapable of rising by themselves to any height, and, unless provided with some means of so doing, would be entirely deprived by the overshadowing trees of the two essentials aforesaid. To remedy this defect in construction they have been provided with various contrivances by which they are enabled either to attach themselves to the neighbouring soaring growths by hooks or clinging thorns, or to coil round them, and so ascend them to such a height as to enable their foliage to compete with that of their supports in the upper air. Hence, we are told that in the dense forests of the Tropics an almost impenetrable tangle of lianas and vines and other climbing and clinging plants exists beneath the shadow of the trees which they ascend, and upon whose very tops they spread their leaves and display their flowers, sometimes in such abundance that the trees themselves, instead of their weaker-growing neighbours, fall victims by deprival of sun and air, and often are practically strangled as well by the constriction of the ever-thickening coils of their insidious invaders. It is, however, in many cases by no means a mere matter of mechanical ascent by coiling stems or hooked thorns. If, for instance, we study the clematis family as a type, we shall find the stalk of every leaf to be endowed with a sensitiveness by virtue of which, where it touches a support, it is induced not only to bend and twist itself and the leaf lightly round it, but the very structure of the stalk is strengthened and toughened so as to give it a firm and permanent hold, from which it can only be detached by breakage. If we now turn to the tendril-forming climbers, such as the vine family, we find some of the foliage transformed into long slender branching processes resembling very slender fingers. These are at first straight, but, like the clematis leaf stalks, are also sensitive, and if, when swayed by the wind, they come into contact with a support, these points speedily become hooked, and if contact be thereby retained, they not only cling round it tightly, but the primary stalk, or wrist as we may term it, coils into a spiral, and thus brings the other fingers into contact with like effect, the branch being, at the same time, pulled home, as it were, and thus the greatest possible security obtained. In one member of this family, the now well-known Ampelopsis Veitchi, these little tendrils are very short. Their province is not a clutching one, as in the grape vine, but a clinging and cementing one adapted to the flat surfaces of rock, brickwork, or even glass. As the plant becomes attached to the nearest surface from the outset, and these tiny tendrils spring from the stem close to every leaf produced, they originate so near to the surface concerned as to touch it. They then appear to be endowed with a faculty of creeping until their points find a minute crevice or orifice, into which they insert themselves, and then exude a cementing sap which forms so adhesive a little disc as to be undetachable except by fracture of its stalk, or, as more frequently happens, of the material itself to which it adheres. In the hop we have an example of the clinger pure and simple, a type of many. Here the plant rises perpendicularly for a foot or so, when the top of the shoot commences to swirl round and round, lengthening as it does so until it is stopped by some obstacle, round which it continues its motion, encircling it, and thus achieving its purpose of climbing Ivy is another type which makes its way upwards by clinging, forming adventitious roots, which penetrate the bark of the tree, or the interstices of the wall, and so give it fresh holds as it proceeds on its upward growth. The parasitic dodder is of a different type; it climbs over its unfortunate host by penetrating roots which suck the very life sap of its support as it proceeds, as it is not, like the other plants named, provided with a root system of its own in the soil. It is thus an exception to the general rule that the climber and its support usually manage to exist fairly amicably together, a natural provision, where the destruction of the support would be, as a rule, inimical to the climber concerned.

Mr. Arthur R. Brown, of Arthur R. Brown, Lim., King's Norton, whose portrait appears on our front page, is one of the best known and one of the largest exhibitors in the carnation world. Quoting the words used by the mover of a vote of thanks to Mr. Brown after delivering a lecture at Manchester last year, "He comes of a generation of carnation growers, and it is rumoured, was born in a ten-inch pot with a pair of tweezers in his hand." Certainly he can claim to have been the youngest judge who ever judged at a National Show; the occasion was the Supplementary Show at Oxford in 1882, and he was then fourteen years of age. Born at Handsworth, Birmingham, in 1868, he went with his father, the late Samuel Brown, to his first show at the age of five, and has been to practically all the leading carnation shows since. Though a large professional grower, he is very keen on the encouragement of the amateur, and is connected, as president or vice-president, with nearly all the amateur gardening and mutual improvement societies which are so prominent a feature in Midland horticultural life, and which, in his opinion, are the chief factors in the success and popularity of the Midland shows. Though comparatively a young man, Mr. Brown, owing to his long connection with floriculture, has been intimate with most of the principal leading florists of the last thirty years, and a very popular lecture he gives is entitled, "Twenty-five Years of Flower Shows," in which he recounts many little anecdotes of famous exhibitors. Mr. Brown is also prominently identified with auriculas, is chairman of the Midland branch of the National Auricula Society, and his services as a judge are requisitioned at most of the exhibitions of this popular florists' flower.

Royal Gardeners' Orphan Fund.—It is with great pleasure we learn that the list of subscriptions to the above charity has been considerably augmented since the festival dinner, presided over by N. N. Sherwood, Esq., V.M.H. At the dinner the list amounted to £1,550; it has now reached £1,600.

American Sweet Pea Society.—Owing to the lateness of the season in America the National Society that cares for sweet peas has considered it advisable to postpone for one or two weeks the exhibition previously arranged for June 23 and 24, but the actual date will not be fixed for another week or so. The society's schedule appears to be a cumulative one, for at the recent meeting eight special prizes were offered and accepted, and the committee allocated 170 dollars to further classes for sweet peas in specified colours.

Oncoba Routledgei.—We are informed that since further opportunities of studying its flowers have been provided from Mr. C. E. Shea's garden, at Foots Cray, Kent, the Kew authorities have decided to accord specific rank to the plant figured in our issue of April 15 (p. 277), as Oncoba spinosa Routledgei. It is now to be known as Oncoba Routledgei, in honour of the gentleman who sent seeds from East Central Africa to Mr. Shea. Our readers will remember that the Royal Horticultural Society awarded a First Class Certificate to this white-flowered plant on April 11 last, when it was exhibited by Mr. C. E. Shea.

Fruit Prospects in the North.—The glorious weather which marked the departure of May, writes our Aberdeen correspondent, has warmed the hearts of the fruit growers. During the past few weeks they have been watching the weather with no little anxiety, dreading the advent of any of those sharp frosts which did so much damage two years ago. Fortunately up till now the season has been exceedingly favourable, but a week or so must elapse ere all danger is over. In the valley of the Dee, great stretches of which are devoted to the strawberry, there is the promise of abundant blossom. When the flowering has been completed there will be more definite ground for giving an indication as to the bulk and quality of the crop. Meantime, the plants are looking remarkably well, are in a particularly healthy condition, and give capital promise of a large and excellent harvest. With other fruits the prospects are equally encouraging. There was an enormous amount of flower on gooseberry bushes, and the red currant bushes are showing up capitally, with plenty of hangers now well formed. Everything, in fact, is looking in better condition, and gives hope of a more cheering character than has been the case in the North at the corresponding period for many years.

Success of the Temple Show.—There is, of course, a huge bill to pay for the recent Temple Show, but the Council of the Royal Horticultural Society is not worrying much about it, we imagine, considering that the takings at the gate amounted to £1,093; only £3 below the record of 1907; and £130 better than in 1910, notwithstanding the great increase of Fellows. The takings on the first day were £273; second day, £500; and third day, £320.

Rhododendrons at Vincent Square.—The very beautiful exhibition of rhododendrons at the Royal Horticultural Hall during the present week has been a great success. Messrs. J. Waterer and Sons, of Bagshot, arranged a delightful display in a most effective and natural manner. In the centre of the hall two big oval groups were placed, and in one of those Rhododendron Pink Pearl was an outstanding feature. Except for the tall crowning palms these beds might have been transported from some big garden. On either side of the entrance there were grand banks, and in one of these liliums, weeping standard roses, choice conifers, and groups of lily of the valley were used with great effect. Near the emergency exit an undulating group of kalmias attracted everyone, while the small-flowered Rhododendron odoratum, banked up in quantity, was equally attractive. Mollis azaleas provided brilliant colouring at the opposite end of the hall, while groups of Gomer Waterer, Alice, Pink Pearl, Doncaster, and other exquisite rhododendrons were magnificent. The whole display was arranged to represent a garden, and, as there was ample space to move about, and the air was kept delightfully cool, the garden was a pleasant, as well as a beautiful one. Messrs. Barr and Sons filled one annexe with choice hardy flowers and pigmy trees, and Messrs. Wills and Segar, Kensington, filled the other annexe with charming floral designs.

Two New Poet's Narcissi.—Two new varieties of Narcissus poeticus have appeared this spring, and some little confusion has arisen in regard to their names. N. poeticus Socrates, from Messrs. Barr and Sons, Covent Garden, received an Award of Merit on April 25, while N. p. Sonata gained a similar award for Mr. F. H. Chapman on May 9, but, by a clerical error we described the latter also as N. p. Socrates. The description of N. p. Socrates appeared in our issue of May 6.

Famous Gardens Round Edinburgh.—In our issues of June 10 and June 17 we shall devote considerable space to illustrated descriptions of a number of the leading private and public gardens in and round Edinburgh. This addition to our series of famous gardening centres should prove fully as attractive as the best we have yet published, and we anticipate a big demand for the issues of the above dates. The gardens described will include those at Dalkeith Palace, Hopetoun House, Carberry Towers, Preston Hall, and Oxenford Castle.

Nurseryman's Convention at St. Louis.—The great annual meeting and convention of the American Association of Nurserymen will take place this year at St. Louis, Missouri. This city is noted for the beauty of its parks, which have an area of 3,200 acres, and include the famous Missouri Botanical Gardens. A large number of subjects are down for discussion at the convention, including "Nurserymen and Entomologists," by Professor S. J. Hunter, the State Entomologist for Kansas; and "Spring versus Fall Planting of Fruit Trees," by Dr. J. C. Whitten, of the Missouri University.

The Past History of Conifers is a most interesting subject, and it is somewhat unfortunate that the lecture upon it, by Professor A. C. Seward, at the Royal Horticultural Hall, Westminster, is to be delivered on Tuesday, June 6, at three o'clock, as the audience is likely to be a somewhat small one on the day following Whit Monday.

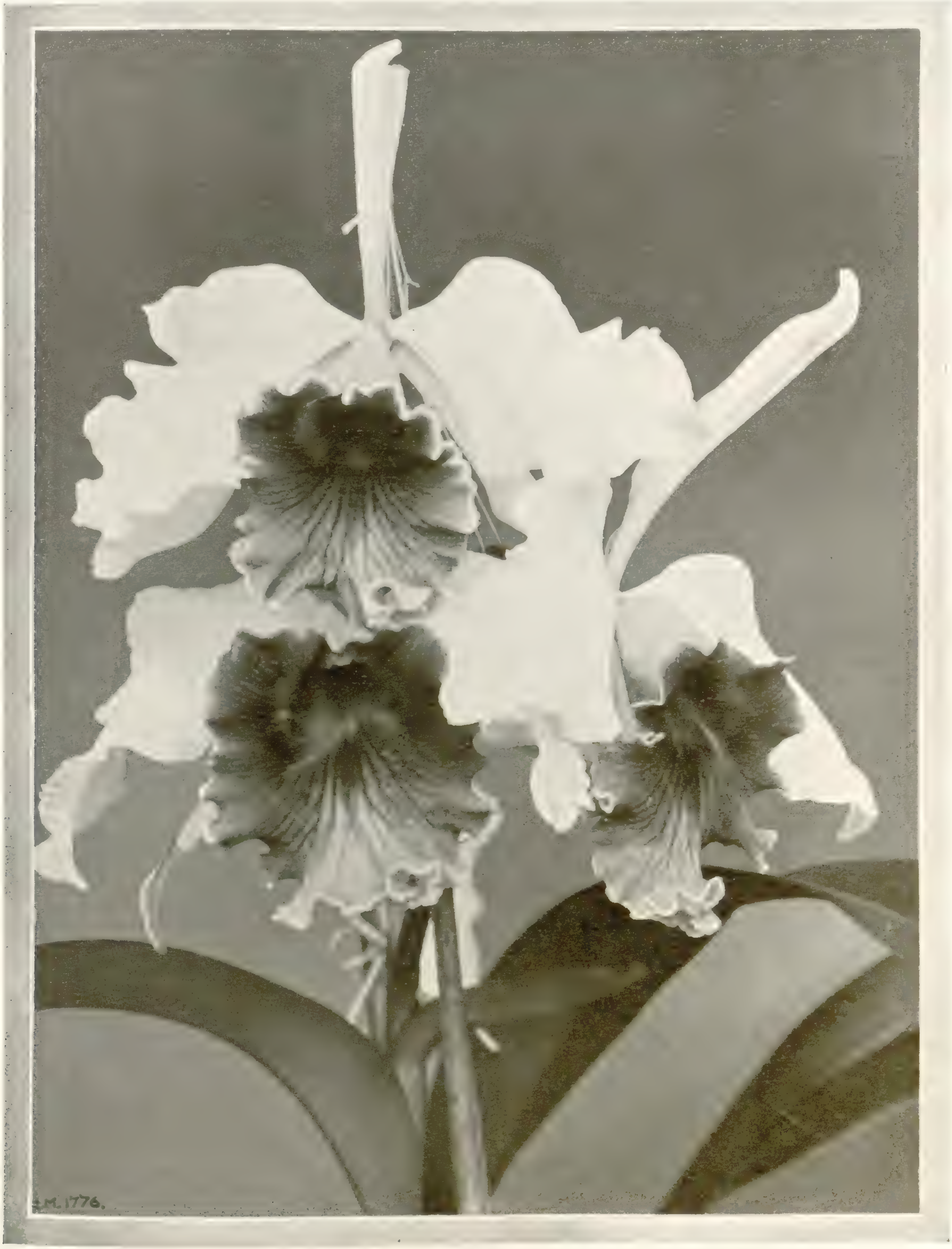
Trowbridge Floral and Horticultural Society. — This society suffered a loss of £70 on its flower show last year, but there was a profit of £50 on the tournament, in which the Life Guards took a prominent part. The total loss for the year was therefore £20, which, after all, is not a very serious matter, for the Trowbridge Society has still a balance of £544 on the general account at the bank.

Underground Gardens.—It is not quite correct to speak of the efforts being made to brighten some of the railway stations on the District Railway as underground gardening, but those who crowd into the great Metropolis day by day from the south-west and western suburbs do speak of these efforts as such. A number of hanging baskets of flowering and foliage plants have been suspended at the Temple and other stations, and in some cases, where space and sunlight permit, there are delightful little gardens just outside the stations, with rough walls made beautiful by means of climbers planted in baskets of soil. All these things point to the growing love of flowers, and the increased taste for gardening, even under difficulties.

Success in Slug Trapping.—With reference to the all-important operation of slug trapping, Mr. E. R. Tolley, gardener to E. H. M. Luckoch, Esq., Widworthy Court, Honiton, Devon, writes: "Having seen your note on 'Slug Hunting' in the Gardeners' Magazine of May 20 (page 373), of which I have long been a regular reader, it has occurred to me that my own experience in dealing with slugs may be of interest to your readers. In the past two and a-half years 250,000 slugs were trapped and destroyed, and of these 45,000 were caught in March last. The infested area consists of three acres of walled-in garden. The pests were trapped by means of boards laid by the sides of the paths, under which a layer of bran was spread. In the morning the slugs were found adhering to the underpart of the boards feeding on the bran."

SOME IMPRESSIONS OF THE TEMPLE SHOW.

I do not like to think of the number of Temple Shows I have seen, because it makes one feel that old age is creeping on, but each time of late years when I have made my annual pilgrimage to the Temple Gardens, it has been with the thought—Is this the last time? For there has been a kind of a hardy annual rumour about for some time that the Royal Society would have to seek fresh quarters for its great May show. Next year there will be no Temple Show, but a great big international exhibition instead. Of course, the great show will be larger than the Temple, but will it be better? Some say yes, but I have my doubts, and simply to say that the Temple Show is the Temple Show means more than I can express in words. It is absolutely unique, an institution the like of which there is no other, and if a year lapses without the familiar tents appearing on the Thames Embankment, will the show come back? And if not, where is there another spot in London where the Temple Show, such as we know it, could be held?



LÆLIO-CATTLEYA MORNINGTONIÆ.
A beautiful hybrid, with white, purple, and ruby-crimson colouring. F.C.C., R.H.S., May 23. Francis Wellesley, Esq. (gardener, Mr. W. Hopkins), Westfield, Woking.

I do not say that everybody who visited the Temple Show this year went for the express purpose of seeing the flowers; there were other things that you could not fail to notice. For instance, there were the ladies' frocks and the hats. I had seen the like of them on the fashion plates, but I never seemed to realise that such things actually existed. Did anyone ever see such hats, the size of them, and—dare I say it?—the ugliness of them, at least, so they seemed to my untrained vision. More than once I was filled with feelings of something like pity, when I saw ladies, not walking, for the frock would not allow that, but doing a kind of shuffle from stand to stand with the aid of a walking-stick, which really seemed very helpful. Of course, I do not pose as an expert, and perhaps I have no right to criticise, but if you ask me who was the best dressed, and with it all the most comfortably dressed lady I saw, I should have no hesitation in saying the Queen herself, and I venture to think there are others who will agree with me.

I wonder what the horticultural trade of England could do if the Temple Gardens would lend themselves to stretching and every nurseryman were allowed just as much space as he cared to fill? Perhaps it is as well that things are as they are, because one would never be able to get round the show; but I do not envy those who have the allotting of the space, and one heard the usual grumbles of exhibitors who asked for 100ft., got 25ft., and had to leave half the good things they intended to exhibit at home, etc., etc. And why do exhibitors clamour for space at the Temple Show, seeing that it is not competitive, and prize-money is unknown? Well, ask the men who stood, note-books in hand, in front of their exhibits, suffering the heat of those tents for three whole days without a murmur, while the society folk kept coming along with their orders. The whole thing then is explained in a nutshell—the magic words advertisement and business are written large in every corner of the Temple Show.

After considering the orchids, the roses, the carnations, and the rock gardens, and admitting everything that may be said about and in favour of them, there was one flower which, to my mind, seemed to possess as great a possibility as any other for a brilliant future. No, it wasn't sweet peas, and I'm not quite sure whether the world at large is not getting a bit tired of the sweet pea boom, but the flowers I have in mind were the May-flowering tulips. While a little handful of ardent florists were bending in admiration over a few blooms of florist's tulips in a small tent set apart for them, criticising and comparing like bird fanciers at a show, hundreds of people who never saw the inside of the florist's tulip tent were jotting down the names of Clara Butt, Bouton d'Or, La Tulipe Noire, Dom Pedro, and others of the May-flowering fraternity with minds made up that they would have some in their own gardens next year.

Some uncharitable people have been heard to say that the Temple Show is popular because it is a society function, and everybody who is anybody (you know what I mean) goes there for the purpose of seeing and being seen. Personally, I don't believe it, and the object of nine-tenths of the visitors was to see the flowers and improve themselves educationally in the art of horticulture. You may say, if you like, that gardening is fashionable just now; perhaps it is, but it was not merely a dictate of fashion which prompted the crowds of people to literally fight their way through those hot, overcrowded tents. Not a bit of it, they were a genuinely interested community, and when they came outside to get a breath of the fresh breeze which blew off Father Thames, it was not that they were tired of the flowers, but simply that the conditions of the tents were getting too much for them.

If you ask me who were the most patient, courteous, and yet much tried individuals I saw at the Temple Show, I should say that the members of the Metropolitan police force who acted as guides, and, in not a few cases, as friends, would be hard to beat. I wonder what it is in the estimation of the public that a policeman is not supposed to know; and when I heard a lady ask a man in blue the name of a flower on an adjoining stand, which I do not suppose he had ever set eyes on before, I felt sorry for him. My sympathies also went out to another officer who stood at the show entrance instructing people to "Pass along to the left, please." The left, of course, was crowded, the right was comparatively free from people, and a couple of ladies slipped out and tried to pass the limb of the law, but it was no good. They entreated and cajoled, informed the officer that they had paid half a guinea for their tickets, and thought they had a right to go which way they liked; then they threatened and abused, but the London "bobby" wiped his perspiring face, and smiled on when the injured ladies at length beat a retreat and went to seek solace in Carter's Japanese Garden close at hand.

If you have been a regular visitor to the Temple Shows you cannot help noticing how everything seems to have grown and developed. Even the members of the committees who bustle about making the awards on the morning of the opening day, though they seem to be as familiar almost as the tents themselves, have grown older, and, in some cases, quite patriarchal in appearance; but this is by the way, and one remembers when rock gardens were first introduced they were all tiny little models on the tables inside the tents, but at the last show the whole of the ground outside seemed to be a series of rock gardens, not models, but real gardens, so bold and natural that they looked as if they had been there for years. Thus the rock garden idea has grown, and so have others, including methods of arrangement which have improved out of knowledge in passing years. In fact, in my humble opinion, the last Temple Show of the first series—let us hope it will not be the last in reality—was the best the society has yet held, and with this remark these rambling impressions end. H.

VIBURNUM UTILE.

This is one of several very distinct and beautiful viburnums which have recently been introduced from China, and it promises to be quite as ornamental as the well known variety of V. tomentosum, which is known as plicatum. Doubtless as it becomes more common it will enjoy a wide range of popularity, for it appears to grow vigorously and blossom while quite small. In its home in Ichang it is said to grow to a height of five feet, and to form a rounded, many-branched bush on ground strong in lime. Judging from its behaviour in this country to the present time there appears to be no reason why its maximum dimensions should not be attained here. It is distinguished by oval leaves, which may be anything from one to three inches or more in length. They are deep green above but silvery beneath by reason of a covering of dense felty hairs. The white flowers are borne in rounded heads two inches or more in diameter, and they are succeeded by dark-coloured fruits. For specimen plants or specimen beds it has much to commend it, though it is probably still too scarce and expensive to plant on a large scale. W. Dallimore.

FITTONIAS.

The fittonias are certainly among the most beautiful foliage plants grown in our stoves. Their delicately veined leaves are very much admired by most people, and I find they always receive more than passing notice from visitors looking round our garden.

Usually two kinds are grown, one named F. argyroneura or Verschaffelti, having very dark foliage beautifully veined with red, and the other usually called F. Pearcei, the green foliage of which is very beautifully veined with white. They require stove treatment.

We find the most interesting way to grow them is to form pyramids of seed pans and flower pots and plant the cuttings in April in tiers one above the other, with one cutting in a thumb pot on the top. About three pans and four pots are used; the bottom pan of fair size, and the second smaller, and the third still smaller, and then four sizes of pots with the apex of the smallest size.

The pans and pots are duly crocked with potsherds, and regulated so that they rise evenly one above the other, and their moss is placed on the potsherds, and the fabric made secure so that no disturbance will take place after the cuttings are inserted. The soil must be of a rich light nature; good loam, leaf-mould, cocoanut-fibre refuse, and a very small proportion of peat, with which must be incorporated some sharp silver sand. The soil must be pressed tightly in to each pan and pot, and then it is ready for the cuttings, which are the tops of old plants just starting into new growth. They should be inserted with a pointed dibber and pressed firmly in the soil. A good plan is to fill one pan with the white-veined and the next one with the red-veined kind, and follow the same way with the pots, and by mid-summer the pyramid is very beautiful to look upon.

Fittonias are very tender subjects, and must remain in the warm moist stove, for if they are taken out and exposed to cold they soon become flaccid and lose their great beauty. As is the case with many beautiful leaved plants, the flowers of fittonias are insignificant, and should be removed with a sharp knife or vine scissors when they appear. Fittonias require plenty of water during the growing season, but in the autumn and winter only just enough to keep the soil moist. In the afternoons on bright days they are benefited by being lightly syringed overhead with tepid water.

Of course, I need scarcely add that to secure even growth the pyramids must be regularly turned round, so that all sides can have the benefit of light, but they must not be exposed to bright sunshine as they are apt to scorch and become disfigured, but this will not occur if ordinary stove blinds are used. W. M.

Evergreen Barberries.—One is puzzled which to admire the most—the rich orange coloured blossoms of Berberis Darwini, or the golden ones of Berberis stenophylla. As a specimen this last-named is the more graceful of the two, still Berberis Darwini is remarkably handsome when in bloom. It shows a considerable amount of variation, and from the depth of orange in the flowers of some individuals I have often thought of the possibility of a red-flowered form being evolved by gradual selection. Some, too, flower again very freely in the autumn. Though an accidental hybrid, B. stenophylla is quite the equal of any shrub obtained by systematic hybridisation.—W. T.

NEW PLANTS, ETC.

◆

ONCIDIUM MULLERI.

In this species we have a very distinct member of the macranthum group. It has long leaves, and produces a very long, twisting, and shortly branching spike. The flowers are an inch and a-half across, and fairly rounded; the sepals and petals are white, with a flush of rose at the base of each, and the somewhat heart-shaped lip is very bright and deep rose, with a cream-yellow crest. F.C.C., R.H.S., May 23. Messrs. Sander and Sons, St. Albans.

ODONTIODA LAMBEAUIANA.

A delightful odontioda, with medium-sized, shapely, and very substantial blooms of a deep rich scarlet shade, with a yellow crest on the orange-scarlet lip. The parentage is Cochlioda Noetzliana and Odontoglossum Lambeauianum. F.C.C., R.H.S., May 23. Messrs. Sander and Sons, St. Albans.

ODONTOGLOSSUM BLACK PRINCE, THE DELL VARIETY.

A very handsome variety, and represented by a splendid plant carrying a spike of fifteen flowers. The colour is rich deep red-brown, a very solid shade, with margins of blush-white, and veinings of the same colour. The lip has a yellow crest, and a white margin. Each flower was about four inches across. F.C.C., R.H.S., May 23. Baron Bruno Schröder (grower, Mr. J. E. Shill), The Dell, Egham.

ODONTIODA BRADSHAWÆ, GATTON PARK VARIETY.

This splendid variety attracted general attention by reason of the brilliant orange-scarlet shade of its shapely flowers, and the beautiful form of the long spike of nineteen blooms. Each bloom was about two inches across, and the yellow crest enhanced the brilliance of the sepals and petals. F.C.C., R.H.S., May 23. Sir Jeremiah Colman, Bart. (gardener, Mr. Collier), Gatton Park, Reigate.

ODONTIODA VULYSTEKEÆ CORONATION.

This was the most talked-of orchid at the Temple Show, and to date it is the last word in the hybrid genus of odontioda. The plant shown carried a spike of fourteen beautiful blooms, all flat, and of excellent form, sepals and petals being alike broad, and the latter overlapping the former. All the segments had rosy, purple-tinted margins, and a paler area within it at the apical portion, but the basal half was of rich red hue, with a few pale veinings in the case of the petals. The fiddle-shaped lip has red side lobes, a creamy apex, and a golden crest. The blooms were three inches across, and they attracted a vast amount of attention from orchid lovers. The price of the plant was said to be £1,000. F.C.C., R.H.S., May 23. Mons. Charles Vuylsteke, Loochristy, Ghent, Belgium.

LÆLIO-CATTLEYA MORNINGTONIÆ.

A chaste, large-flowered, and very beautiful orchid, obtained by crossing Lælio-cattleya Pallas with the fine Lælio-cattleya Fascinator. The blooms are of great size, the cream-white petals each measuring 3½ inches in length, and over two inches in breadth. The sepals are narrow. The big, broad, frilled lip is purple, with violet-purple edge and apex, and an area of ruby-crimson just in front of the orange and yellow throat. F.C.C., R.H.S., May 23. Francis Wellesley, Esq. (gardener, Mr. W. Hopkins), Westfield, Woking.

CATTLEYA MOSSIÆ VAR. G. M. HALE.

An unusual and striking variety of this old, popular, and beautiful orchid. The ample sepals and petals are rich rosy-purple, and the lip is of similar hue, except for the yellow colour in the throat and the bright violet-purple colouring on the broad and frilled apex. A.M., R.H.S., May 23. Samuel Larkin, Esq. (gardener, Mr. G. M. Hale), Ridgways, Haslemere, Surrey.

LÆLIO-CATTLEYA GERMANIA.

This showy hybrid has flowers of good size, and presents very much the general outline of Cattleya Mendeli, but the colour is a pleasing shade of yellow, with ruby-crimson shading almost obliterating the yellow over the whole of the front lobe of the lip. Lælio-cattleya Cappei and Cattleya Mendeli were the parents. A.M., R.H.S., May 23. Messrs. Charlesworth and Co., Haywards Heath.

LÆLIO-CATTLEYA GERMANIA.

A handsome hybrid with soft yellow sepals and petals, and a bright ruby-crimson lip. A.M., R.H.S., May 23. Messrs. Charlesworth and Co., Haywards Heath.

ONCIDIUM CLÆSI.

This is a strong-growing, long-spiked species belonging to the macranthum group. As shown it carried a branching spike about ten feet long. The flowers are about an inch and a-half across, the sepals being brownish and the lip and petals dark slaty-purple. A.M., R.H.S., May 23. Sir Jeremiah Colman, Bart. (gardener, Mr. Collier), Gatton Park, Reigate.

ODONTOGLOSSUM AMABILE EMPRESS OF INDIA.

A superb odontoglossum, producing flowers nearly five inches across. The deep rosy ground colour is heavily marked with bright brownish-red, the latter colour almost covering the base of the white lip. A yellow and red-brown crest, and a few yellow veins at the base of the lip add greatly to the beauty of the flower. A.M., R.H.S., May 23. Messrs. Sander and Sons, St. Albans.

CŒLOGYNE BURFORDIENSE.

An interesting hybrid between C. pandurata and C. asperata. In general appearance it was very like the first-named parent, but the green of the sepals and petals was rather lighter and the black markings on the lip showed a suspicion of brown pigment. A.M., R.H.S., May 23. Sir Trevor Lawrence, Bart. (orchid grower, Mr. W. H White), Burford Lodge, Dorking.

AZALEA DUCHESS OF PORTLAND.

A very fine azalea of the mollis type with cream-coloured flowers, marked with brown and tinged with pink. A.M., R.H.S., May 23. Messrs. R. and G. Cuthbert, Southgate.

LILIUM TENUIFOLIUM GOLDEN GLEAM.

This graceful lily has quite narrow linear leafage that clothes the stem well up towards the flowers. The spike carries from six to a dozen flowers, each flower about 2¼ inches across, with reflexing segments that are of a rich orange-yellow colour. A very pretty variety. A.M., R.H.S., May 23. Messrs. R. Wallace and Co., Colchester.

DAVIDIA INVOLUCRATA.

This quite hardy tree, introduced to cultivation by Mr. E. H. Wilson when collecting in the province of Hupeh, China, in 1903, has now flowered for the first time in Great Britain at Messrs. J. Veitch and Sons' Coombe Wood Nursery. The bright green leaves are somewhat like those of a lime, and also have a little resemblance to a hazel. The flower itself is not conspicuous but each one has a pair of large white bracts, the lower of the two being three or four inches long, and nearly as broad. F.C.C., R.H.S., May 23. Messrs. James Veitch and Sons, Chelsea.

LEWISIA COTYLEDON.

A new lewisia, with small, soft green, and rather succulent leaves, gathered into a little rosette two or three inches across. It appears to be quite free flowering, even small plants producing three or four little spikes about three inches high. The rounded flowers, composed of nine segments, are greenish as they open, but soon brighten into rosy-lavender, with white margins to each segment. The seeds originally came from Klondyke. A.M., R.H.S., May 23. Mr. G. Reuthe, Keston, Kent.

HABERLEA FERDINANDI COBURGI.

A neat low-growing alpine, with the habit of a ramondia, but with rather shiny leaves. The flowers are tubular, but two of the mouth segments are shorter than the other three. The colour is violet-rose on the outside, soft lavender at the mouth, and white in the throat. A.M., R.H.S., May 23. Mr. G. Reuthe, Keston, Kent.

ROSE SYLVIA.

This very beautiful rambling rose is one of the most graceful of recent introductions. The flowers are about two inches across, double, but not solidly so, and borne in big branching trusses at the end of every growth. The expanded flowers show a few golden stamens, and this adds to their beauty. A.M., R.H.S., May 23. Messrs. William Paul and Son, Waltham Cross, Herts.

ROSE PORTIA.

A beautiful and large hybrid tea rose, broad petalled, substantial, and a lovely shade of silvery-blush, or pale pearly-pink. It appears to be a very satisfactory grower, judging from its behaviour in pots. A.M., R.H.S., May 23. Messrs. William Paul and Son, Waltham Cross, Herts.

AZALEA DUCHESS OF PORTLAND.

A charming azalea of mollis character. It bears large trusses of shapely blooms that are a lovely shade of soft cream, prettily shaded with pale pink as they attain full size. The plant is very free flowering, and altogether a fine variety. A.M., R.H.S., May 23. Messrs. R. and G. Cuthbert, Southgate.

AZALEA SUBLANCEOLATUM.

This effective azalea has proved hardy at Woodbridge during the past winter, and therefore promises to be a success in the southern counties under kindly conditions. The leafage is that of an Indian azalea, but rather blunted at the top. The flowers are as large as those of a good Azalea indica, and of a bright glowing pink shade, very showy, with a few brownish marks on the lower segment. A.M., R.H.S., May 23. Mr. R. C. Notcutt, Woodbridge.

RHODODENDRON CORONA.

A most interesting variety, with a large and erect truss, in which the flowers are set quite clear of each other. The rounded blooms are of a most brilliant pink shade, almost cerise, with a little paler shading down the centre of the segments. A.M., R.H.S., May 23. Messrs. John Waterer and Sons, Lim., American Nurseries, Bagshot.

RHODODENDRON LODER'S WHITE.

A very beautiful rhododendron, probably a hybrid between R. Aucklandi and R. arboreum album. It is a strong grower, with modified Aucklandi foliage, and large trusses of purest white flowers that are broad and charmingly frilled or crimped. It is one of the most beautiful of rhododendrons, and the fine plant shown, smothered in snowy bloom, had been lifted from the open to bring to the show. A.M., R.H.S., May 23. Mr. G. Reuthe, Keston.

RHODODENDRON LITTLEWORTH CORALLINA.

This is a large-flowered hardy rhododendron, with neat stiff leaves suggestive of R. campylocarpum. The blooms are broadly funnel-shaped, and of a beautiful pink shade, exquisitely veined, and with a small and very dark base to the tube. The flat leaves are dark green above, and quite pale green beneath. A.M., R.H.S., May 23. Miss Mangles, Seale, Surrey.

RHODODENDRON GLORY OF LITTLEWORTH.

A very beautiful and quite distinct rhododendron, with a handsome shapely truss of white flowers, three of the segments being freely shaded with bright brownish-orange. It is a most effective variety, so far as colour and bloom are concerned, but the crinkled leafage is not beautiful. A.M., R.H.S., May 23. Miss Mangles, Seale, Surrey.

Prunus (Cerasus) pseudo-cerasus J. H. Veitch.—This is one of the most valuable plants introduced through the travels of the late Mr. J. H. Veitch in Japan, nearly twenty years ago. It was not found there by him, but according to "Hortus Veitchi," when travelling in that country he heard by chance in Tokio of a nurseryman who specialised cherries in a district he was unable to visit, and he wrote for the most distinct forms the man grew. Subsequent trial in England proved all to be valueless except this variety. It forms a specimen of compact, sturdy growth with large semi-double rose-pink flowers and prettily serrated leaves of a bronzy tint.—W. T.

AMONG THE ALPINE FLOWERS.

> "Then did I see a pleasant Paradise,
> Full of sweete flowres and daintiest delights,
> Such as on earth man could not more devise,
> With pleasures choyce to feed his cheerefull sprights."
>
> —Edmund Spenser.

Truly as May wends her way, and June steps upon the stage, we cannot but think that, after all, the rock garden is a "pleasant paradise, full of sweete flowres and daintiest delights," and we are loth to leave it for the desk and pen, even to single out for notice, and to hold up to others, the banners of the sweetest of our flowers. Truth to tell, the task of selecting the daintiest is an impossible one. Flowers galore lay claim to the distinction, and it is perhaps better to yield up the task, and simply to tell of those which come before us as we sit by the study window and gaze upon their delightful blossoms in sheets or in spires, in hollows, or upon the mounds and elevations. Even that is an impossible thing to do. There are too many among them. Saxifrage, iris, aubrietia, cerastium, cytisus, genista, azalea, rhododendron, alyssum, cheiranthus—aye, a veritable catalogue of dainty flowers, shining and gleaming in the bright sunlight of this truly blissful time. We never tire of them if we are imbued with true love for our flowers.

As the years swiftly pass along they seem to fly all the more swiftly when we are among our flowers. It appears as if it were only in the short winter days that we weary, and then it is for the coming of the sweet spring, the glorious summer, and the pensive autumn, all laden with the wealth of their seasons, and all gladdened by the blossoms they bear. And so now we are revelling amid the treasures of our gardens, happy in the contemplation of all their graces.

Cheiranthus alpinus.

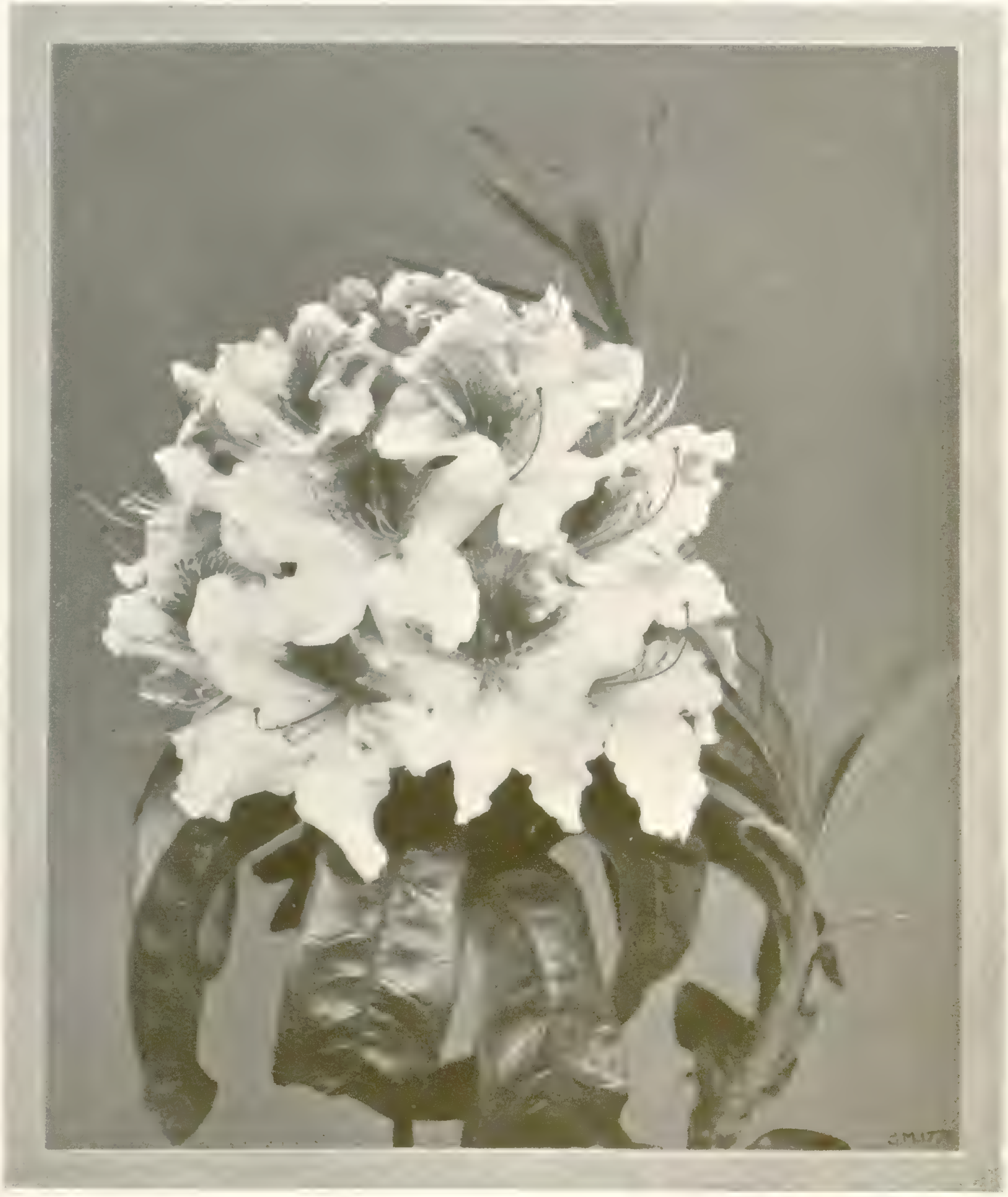
One cannot but speak a little about this alpine wallflower, of which there is here a mass some three or four feet across, all glowing in the light of the early summer sun, and on a dry bank proving quite perennial. Our ordinary wallflowers, with all the bravery of colouring they have now donned through the work of the seedling raiser, look far less refined than does this alpine one. Its clear yellow heads of flowers, its trailing habit, its profusion of bloom, all point it out as a good and acceptable flower, and one which, where it is happy, will thrive and flourish in a sunny place on a dry slope or amid the rocks, and will give true pleasure from year to year. In a damp climate it is liable to loss in excessively wet and unsettled winters, but with care in planting, and with full exposure to the sun and air, and thorough drainage, it lasts for many years, and gives entire satisfaction. The best way to raise it is from seeds, giving a good place to the seedlings, and planting a goodly number together.

Primula Munroi.

One of the most satisfactory and most beautiful of our moisture-loving primula species is P. involucrata, one of the many gems we owe to the Himalayan regions. Of high beauty is it indeed, with its dainty leafage and its slender stems, which show up so well the beauty of the white, golden-eyed flowers it affords us. The war of authorities respecting P. Munroi seems to have practically resolved into a fairly general agreement that this is only a variety of P. involucrata. This is in accordance with the views formed after their cultivation together, but we learn to appreciate the bluish tone of the flowers of P. Munroi as giving us a welcome variety in a lovely primrose—a gem amid the many jewels we have among these exquisite flowers. Given a moist place, in peaty soil, there seems little difficulty in making P. Munroi perfectly happy. It does not require shade if it has moisture, but it appears to appreciate a little shelter from strong sun if only poorly supplied with a full share of its requirements in the way of water near the roots. Growing about six or nine inches high, this Himalayan primrose is a lovely thing indeed.

Anthemis cupaniana.

Although some would consider this more a border than a rock plant, yet it is finer when grown on rockwork than on the level, while the nature of its growth would evidently suggest that its appearance is more studied if it is included in the rock garden rather than in a flat border. It is said to be the same as A. montana, but it does not at all agree with the description given of that plant so far as regards its flowering time. Here it blooms in May and June instead of in autumn, as reported in works of reference. Whatever its relationship to, or similarity with, A. montana, it is a good plant, giving us charming, finely cut silvery foliage, and good-sized single white flowers with a yellow centre, on stems long enough to render them fit for decorative purposes in a cut state. But the habit of the plant is prostrate, and hanging over a ledge, or covering a low brow of the rocks, it is a pleasing and conspicuous plant. Even when out of bloom the silvery foliage gives it a charm, while the aromatic fragrance of the whole plant will appeal to some who delight in the virtue of pleasant odours. It is more agreeable in this respect than are some of its other allies among the chamomiles.



RHODODENDRON GLORY OF LITTLEWORTH.

A hardy variety with bright brownish orange colouring on a white ground. A.M., R.H.S., May 23. Miss Mangles, Seale, Surrey.

Saxifraga Aizoon "Number Three."

As yet, so far as I can learn, unhonoured by a name, and still, after a lapse of years, to be found in a few good gardens and nurseries as "S. Aizoon No. 3," there is a dainty little saxifrage of the Aizoon type, and one which deserves to be much better known than it has become. If Mr. Reginald Farrer, to whom we owe it, would give it another name, we would feel grateful to him, seeing that we desire to look upon this charming little plant as a permanent member of the garden treasures, and not as a mere sojourner in one of the modern caravanserais, passing simply by the sobriquet of "Number Three," instead of being recognised as a friend of distinction whose name we delight to honour. I wonder how I can describe it. It is a dainty little silvery saxifrage, packing closely together its exquisite deep grey rosettes in a charming way for the rock garden, and brightened up by little tinges of red towards the centre. It grows very compact, and is, when out of flower, about as dainty a little silver saxifrage as we can see in a day's journey. But when it is in flower we admire it still more. It blooms very freely, and sends up many of its neat stems, each carrying a satisfactory number of rather large flowers. The ground colour of these is white, but they are thickly spotted with little red dots in the most beautiful way, so profusely that a pinkish appearance is given to the flower. On a dry and sunny rockery this little saxifrage is a perfect delight to the lover of this invaluable class of alpine flowers.

Such are a few out of many things to be seen as we sit at our desk, and scan through the window the blossoms of the time. They may be fleeting, but their memory never fades, and remains with us through the height of summer, the shortening days of autumn, and the long and dreary winter, enlivening us in the latter time with the hope of once more looking with delight upon these gems of the early summer.

S. Arnott.

TEMPLE SHOW—A FINE COLONY OF AQUILEGIA STUARTI IN THE EXHIBIT ARRANGED BY MESSRS. T. S. WARE, LIM., FELTHAM. (Silver Cup.)

Salvia splendens Pride of Zurich.—It was a matter of surprise to many to see quite a large batch of well-flowered examples of this salvia at the meeting of the Royal Horticultural Society on April 25. The typical Salvia splendens used to be regarded more as an autumn-flowering plant; then, when some improved varieties were put into commerce, they were used for summer bedding, but to meet with it in such grand condition during the height of the daffodil season was quite a revelation. Though matched for brilliancy by the zonal pelargoniums this salvia when in a mass, as shown, supplies a tone of colour essentially its own.—W. T.

SWEET PEA NOTES.

Thinning the haulm or bine of sweet peas is a matter of considerable importance to those growing for exhibition, and by this time all peas, whether early or late sown, should be in vigorous growth, so that no time should be lost in performing this operation, starting, of course, with the earliest sown plants.

With some varieties and on some soils it may be advantageous to keep the plants to one lead, but, presuming the soil is fairly holding, and that it has been well prepared, this is, in my opinion, overdoing the matter. Providing the plants have been given a fair distance apart, two or three shoots should be taken up, but in all cases sufficient space should be allowed between the shoots for the foliage to develop properly, and the growth generally to keep firm. One can hardly expect to obtain good hard-stemmed flowers with plenty of substance in them if the bine becomes at all attenuated.

After thinning the growths, each shoot retained should be given a tie, and, if possible, brought to the outside of the stakes, where it will receive still more light and air, and as growth from now will be pretty rapid, the plants will require to be attended to at least once a week to remove all side growths from the shoots and to tie them to their supports as may be necessary. This thinning, etc., is only necessary when growing for exhibition, as quite good enough flowers with long stems can be secured from rows planted and allowed to grow at will.

From many parts of the country one hears complaints of drought, and the early need for watering. It is quite as well to keep a watchful eye on the plants, as they quickly decline in vigour if allowed to become dry at the root, but by using the hoe frequently between the rows they ought not to be really suffering, except perhaps on shallow or very light porous soils.

In many gardens clumps of peas are used for the adornment of the borders, also for filling large beds on the lawn, and now that the bulbs and other plants used for the spring bedding have been removed, no time should be lost in planting the sweet peas. Plenty of good short manure should be placed around them, within easy reach of the roots, making the soil very firm, as a too rampant growth is not needed in this phase of sweet pea cultivation, but rather a steady, short-jointed growth, which produces plenty of bloom.

A considerable amount of water will be required by these clumps till the plants become well established in the soil, as they will have made many roots in the pots and, unlike the earlier planted ones, will not stand shaking free of the soil, so there is some danger of the ball of soil drying out if particular attention is not paid to the watering should the weather prove very hot after planting. A spraying overhead both morning and evening will help them, and possibly prevent the lower foliage turning yellow.

The staking of these clumps should be very neatly done, using rather firm, bushy stakes for the purpose, and tying the tops to a wire or withy hoop to keep them steady. Using a hoop also tends to keep the clumps to a uniform size, which is quite essential if they are in conspicuous positions on the lawns.

Thomas Stevenson.

SOME VARIETIES OF SCAB IN POTATOES.

There are several so-called "scab" diseases of the potato, some of which cause widespread damage to the crop. Wart disease, or "black scab," due to Synchitrium endobioticum, Percival, is dealt with in Leaflet No. 105; and corky scab, due to Spongospora scabies, Massee, is described in Leaflet No. 232. In the present leaflet it is proposed to give some account of three other forms of "scab," due, respectively, to the fungus Oospora scabies, Thaxter, to millipedes (Julus sp.), and to mechanical injury.

Oospora Scab of Potatoes.

The scab caused by Oospora scabies is one of the most widespread of diseases affecting the potato. The fungus usually attacks the tubers while young, forming scattered rough patches or scabs on the surface; these patches gradually increase in size and number, and not infrequently when the tuber is full-grown its surface is more or less completely covered with scab. This scab is distinguished from the other forms by the presence of the parasite, which appears on the wounded portions as a delicate greyish bloom.

The injury is confined to the surface of the tuber, the skin being broken up into fragments over the diseased patches. Though the market value is much depreciated when oospora scab is present in quantity, the quality of the potato is not in the least impaired for eating. The preventive and remedial measures which may be practised against this form of scab are:

(1) If scabbed potatoes are used for "seed" without having been sterilised, the resulting crop will almost certainly be diseased, and in addition the fungus will pass into the soil, where it is capable of living for several years. Scabbed potatoes may be used for "seed" without the slightest danger of spreading the disease if they are immersed for two hours in a solution consisting of one pint of commercial formalin (—formaldehyde, 40 per cent.) mixed with thirty-six gallons of water. The potatoes should then be spread out to dry, when they may be cut and planted in the usual manner. Great care must be taken after potatoes have been treated as above that they are not placed in sacks or hampers that have contained scabbed potatoes.

(2) Land that has produced scabbed potatoes is certain to be infected with fungus, and should not be planted with potatoes for several years afterwards; beets, swedes, carrots, and cabbages are also attacked by the fungus, and should therefore not follow a crop of diseased potatoes. Cereals may be sown with safety on infected land.

(3) In the case of gardens and small allotments, where potatoes are of necessity grown every year, the trenches in which the potatoes are planted should be sprinkled with powdered sulphur.

(4) Lime favours the development of the fungus in the soil; the same is true of stable manure, night-soil, etc. Acid manures only should be applied to land that is infected.

(5) Peelings from infested potatoes, unless they have been boiled, should not be given to pigs. Burning is the safest, and in the end the most economical, method of dealing with them.

(6) Nitrate of potash, at the rate of 2 cwt. per acre, has proved beneficial.

Scab Due to Mechanical Injury.

This type of scab resembles the scab produced by the fungus Oospora scabies in the very superficial nature of the scars, which often cover the greater portion of the surface of the tuber, and are entirely due to mechanical irritation of the skin of the potato during the early stage of growth. The most general cause of irritation is the presence of ashes in the soil, and it is very prevalent in the neighbourhood of towns where night-soil is used as a manure. In an experiment conducted at Kew, for the purpose of proving the correctness of this statement, twelve potatoes free from scab of any kind were planted in soil mixed with ashes. A second row parallel with the first, planted in soil containing no ashes, acted as a control. When the crop was lifted, all the potatoes grown in the land containing ashes were badly scabbed, whereas those grown in the land not containing ashes were free from scab. This experiment has been repeated on several occasions with similar results.

In addition to ashes, certain climatic conditions favour the formation of the scab under consideration. During a dry period the surface of the quickly growing tubers presses against the comparatively unyielding soil, with the result that the skin is injured. As such injured tubers continue to increase in size, the original minute scars are stretched wider and wider, and become bounded by a somewhat raised border of wound cork, the result being scab. This type of scab is often very prevalent on potatoes grown in sharp sandy soil during a dry season.

TEMPLE SHOW — PART OF THE GOLD MEDAL DISPLAY OF ORCHIDS ARRANGED AT THE TEMPLE SHOW BY MESSRS. SANDER AND SONS, ST. ALBANS.

Unless complications follow, the injury caused is slight, as the wounds are only "skin deep," and such scabbed potatoes may be used for "sets." In many instances, however, mechanical injuries to the skin enable eelworms, bacteria, fungi, etc., to gain an entrance into the tuber, which may result in its complete destruction.

The only means of preventing this type of scab consists in an improvement in the condition of the soil.

Scab Caused by Millipedes.

Among the various kinds of millipedes, popularly known as "false wire-worms," Julus pulchellus, L., is the greatest enemy of growing potatoes. It varies from half to three-quarters of an inch in length, and is not much thicker than an ordinary pin, pale yellowish-pink in colour, with a double row of crimson or purplish spots running its entire length. Though not generally a primary cause of injury, Julus readily takes advantage of any minute wound, which it quickly enlarges by feeding on the sound portion of the tuber. In some instances numerous shallow cavities are formed in the flesh of the potato, and as each wound becomes surrounded by a raised border of wound cork, a scabbed appearance results. In other instances small holes roughly circular and of varying depth are produced, whereas in some cases, as when following on an attack of Spongospora scabies, Mass. (Leaflet 232), very large cavities are formed, or the tuber may be completely hollowed out. In such cavities hundreds of millipedes are often present. Millipedes are often introduced to the land in leaf-mould or decaying vegetable matter. This form of scab may be reduced by destroying millipedes in the soil.—Board of Agriculture Leaflet.

Roses.—A sharp watch must be maintained to prevent green-fly. Frequent syringings with some approved insecticide will prove effective, and this operation should be carried out late in the day, when the sun has lost its power. If extra fine blooms are required, disbudding must be resorted to, removing the small buds, and allowing only one flower to each shoot. Should there be any duration of dry weather, the beds will require watering, and weak liquid manure may be given occasionally.—E. C. POOLEY.

PERPETUAL CARNATION NOTES.

I do not intend to again traverse the ground so skilfully covered by Mr. Allwood in a previous issue, but, with him, can enjoy a meditation on the porgress of the modern perpetual carnation.

He recalls with evident pleasure the very floriferous Alpine Glow, one of the freest carnations in existence; Floriana, which gave such a delightful shade of clear pink; Mrs. Theodore Roosevelt, one of the prettiest carnations under artificial light, and several others. These varieties, which are still offered by some growers, are superseded, but it is marvellous how the popularity of Enchantress and Mrs. Lawson still holds them warm favourites with the rank and file of cultivators. The constitution of these two varieties has indeed been splendid, but in certain cases I believe the stock is slowly losing vigour, perhaps the more marked in the case of Enchantress.

The query with regard to the raiser of Miss Joliffe I cannot safely answer, but it originated in the gardens of Campsea Ash, Wickham Market, probably about 1870, so that it had quite a long career

A favourite carnation of the seventies was La Belle, a very free white variety, raised by a Mr. Blackley, of Leyton, from a small consignment of French seed. At one of the meetings of the R.H.S., in 1872, this was shown on a balloon-shaped trellis, five feet in height, and a yard through. It was the boast of the raiser that from three to five dozen blooms coult be cut from this specimen all the year through, truly a wonderful record

TEMPLE SHOW—PART OF THE ROCK GARDEN DISPLAY MADE BY MESSRS. W. ARTINDALE AND SON, SHEFFIELD (Silver Flora Medal).

Nowadays a carnation has to be almost perfect to gain a position as a standard variety. Its constitution must be good, the stem long and stiff, the blossom large, of good form, and approved colouring, with a sound calyx. Furthermore, it is desirable that the variety should be free, and "get away" quickly to blossom, the latter being a very particular point with many growers, particularly the Americans.

Pink Delight, Mr. Allwood notes as a really difficult variety under ordinary culture. This remark calls to mind the difficulty of some of the older English varieties, such as Pride of Exmouth, which in many hands was an absolute failure. On the other hand, Mr. C. F. Waters and other good growers have shown this carnation remarkably well, and though smaller than the American varieties, yet its good form and appealing colour proved very attractive to flower lovers.

A seedling I have under the name of Elegance carries during the warmer months the colour and tinting of Pride of Exmouth, though at all points it is far more preferable than the old form. During the winter months, however, it has given a clear self pink colouring, almost approaching Winsor and Floriana, though perhaps showing a little tendency to a salmon shade. This, with me, has proved one of the quickest carnations to blossom, and should it retain its present vigour and freedom will undoubtedly prove a serviceable variety.

It is pleasing to note that Mrs. C. W. Ward is doing so well with growers on this side, thus continuing its victorious career, so markedly inaugurated at the American exhibitions. One will also watch with interest its companion variety, Alma Ward, which, though not perfect in blossom, yet undoubtedly is the largest, and one of the most fragrant carnations in existence. Both will undoubtedly be brought into service in the raising of novelties, as they have so many good points about them.

Coming to the question of future work and aims I believe we can rely for many fine forms upon our English raisers, which will be the equal of the best American novelties. Mr. Allwood could tell us, doubtless, of good things in new colourings, varieties that will follow Royal Purple, Regal Mauve, Mrs. Crook, and other notable forms among the newer English varieties, and Mr. Engelmann is sure to hold a further batch of good novelties for the future.

The main factor in carnation culture, the market grower, will call for good stout stems, clear decided colouring, and quickness to blossom, in addition to good form and freedom. And this is just what is needed, varieties that will yield to the utmost without losing their vigour and constitution or falling prey to the several insidious enemies which are ever ready to seize upon the weakling.

P. S. Hayward.

Everyone interested in a garden should obtain a copy of the Alphabet of Gardening, by T. W. Sanders. Thoroughly practical information is given as to soils, manures, seed sowing, planting, potting, budding, pruning, grafting, forcing, hybridising, etc., with explanatory diagrams. Price, bound in cloth 1s. 6d. net, post 1s. 9d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

PERMANENT SHADING.—It will generally be admitted that a light coating of permanent shading on the roof of the houses is found advantageous during the hottest of the summer months. On the cool houses in particular this shading should be put on without delay. The ordinary canvas blinds or the lath blinds even are not, in my opinion, sufficient protection from strong light during the summer season excepting in cases where the houses have a northern aspect. A thin solution of whitening mixed with butter-milk or skim milk, with a little salt added, and put on with a whitewash brush during favourable outside conditions will quickly become quite dry. The advantage of a slight shading on the warmer division is found in not having to lower the blinds so early in the morning and being able to roll them up again earlier in the afternoon; the plants thus obtain lighter conditions and a considerable amount of natural heat accumulates which dispenses with a corresponding amount of artificial heat. Even where the shading is syringed on the roof there is a considerable breaking up of the heat rays, which makes the plants practically safe from the danger of scorching.

TEMPLE SHOW—AN EXHIBIT OF CLIPPED TREES, FROM MESSRS. J. PIPER AND SONS, BISHOP'S ROAD BAYSWATER (Silver-gilt Banksian Medal).

LATH BLINDS.—I would draw attention also to what we consider one of the greatest drawbacks to the use of lath roller blinds. It will be frequently observed that the temperature inside the houses falls rapidly almost immediately these blinds have been lowered. This is to a great extent due to the rapid cooling of the roof glass, caused by the current of air passing between the blind and the glass. This must be minimised as far as possible by the discreet use of the ventilators. On bright mornings, when the free use of the lower ventilators is permitted before the blinds are lowered, the temperature naturally runs high, and it is the sudden fall, under such conditions, that causes great injury to many plants, and should be guarded against.

DAMPING. — With the favourable conditions now prevailing, we have been enabled to keep up a humid atmosphere with little difficulty. I do not consider it advantageous to lay down any hard and fast rules as to how a house should be damped, or the number of times in the day damping should be done. The conditions under which plants have to be grown in various situations throughout the country, and the changeable climate renders any rule of thumb unpractical. Those in charge should be the best judges of the conditions suited to meet the requirements of the plants.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

CHRYSANTHEMUMS.—The potting of chrysanthemums, as soon as they become ready, should be taken in hand. The compost should be coarse, and consist of three parts good fibrous loam, with coarse sand and lime rubble. A six-inch potful of bone-meal to each barrowload of soil should be added, together with some old mushroom bed material. Sprinkle the whole with soot. The materials should be thoroughly mixed by turning them over several times before use. When potting see that the ball of the plant is thoroughly moist, and pot very firmly. After potting the plants may be placed in their summer quarters. The choosing of this site is a most important point, and must be carefully considered. As nearly as possible it should be chosen so that there is no shade from the sun, for sunshine is most essential in building up the constitution of the plant. A good solid ash bottom is best on which to stand the pots, but, failing this, battens may be used to prevent worms entering the pots and choking up the drainage. Syringe the plants twice a day with clear soft water, and occasionally with weak soot water.

CINERARIAS.—The main batch of seeds may be sown, using well-drained pans for the purpose. A light sandy compost should be used, and must be moistened before sowing. After sowing, place the pans in a cold frame in a shady part of the garden. Prevent evaporation by covering the pan with a piece of glass, on which place a sheet of paper. As soon as the seedlings are large enough to handle they may be pricked off in boxes about three inches apart. Do not allow the plants to become overcrowded in the boxes, but pot them off singly into small pots when ready.

HUMEA ELEGANS.—Seeds of this attractive plant may also be sown, and treated in the early stages in the same manner as advised for cinerarias. As the seeds are very light a little more care is necessary in sowing. Germination is very slow, but artificial heat must not be used.

HIPPEASTRUMS (AMARYLLIS).—Plants that have finished flowering should be given the full benefit of the sun to assist them in making their new growth. A stake should be placed in each pot, to which the leaves may be loosely tied. Do not hasten the ripening of the bulb by withholding water too early, but rather keep the plants fairly moist until the foliage shows signs of decay. Weak liquid manure or some fertiliser will be found very beneficial to them while growing.

RICHARDIAS (ARUMS).—Plants which have finished flowering should be stood outside to harden, preparatory to being divided and planted out.—A. Grubb, Porter's Park Gardens.

THE KITCHEN GARDEN.

CAULIFLOWERS.—The seeds sown outdoors in March will have by this time produced plants large enough for planting out into ground at two feet apart, and will succeed the earlier plantings, and provide heads until the autumn varieties are ready for cutting. If it is possible select showery days for removal of the plants. Preserve the fibrous roots by careful lifting, and settle the soil about the roots by giving them a copious watering as soon as planted, thus avoiding any unnecessary check to growth.

WINTER BROCCOLIS.—Prick out the young plants into nursery beds as soon as large enough. The soil should be sweet, and a good dressing of soot is highly beneficial, and will assist growth. Calculate the quantities required, allowing a margin for losses of each variety. Time and space in most places are valuable, therefore it is well to keep down to a minimum the number of tender kinds, allowing the larger quantities to contain the well-tried ones suitable to the part of the country one is situated in.

CELERY.—During the next week or two the main crop of celery will be in condition for planting out into the trenches. Give a thorough soaking of water to the plants previous to lifting, and preserve as many roots with a ball of earth to each as possible, doing everything to avoid a check during the process. If the weather is hot and dry it may be necessary to give a light shade to the plants during the middle of the day by placing a few boughs to ward off the direct sunshine. Apply water to the roots, and give a sprinkling to the foliage according to the weather conditions.

GLOBE ARTICHOKES.—The plants will be in active growth, and to strengthen the bearing shoots a good mulching of manure should be given to the roots. At the same time remove the small worthless growth to avoid a thicket, and to admit light amongst the stronger ones. Where stocks of plants have been obtained by division, and established in pots, they should now be planted out in prepared land at about three feet apart, and will be also benefited by a mulching of light manure during the hot months.

RUNNER BEANS.—Seed that was sown outside a short time since will have produced plants about to run up. Have them staked at once before being damaged by wind, and to carry the leaders of the plants out of the way of slugs. Plants that have been raised under glass, and potted on, must be attended to at once.

POTATOES.—Up to the present crops of potatoes seem very satisfactory, coming up regularly and strong. Work between the rows as soon as they appear above ground, and if any show themselves weak, give them assistance with a quick-acting manure by spreading in round the plants and working it in the surface of the soil. Do not delay the earthing up of the crops too long, or considerable damage follows to the young laterals under ground that are running away to tuber.—C. Flack, Cholmondeley Castle Gardens.

TEMPLE SHOW—AVENUE OF FLOWERING AND ORNAMENTAL-FOLIAGED TREES AND SHRUBS ARRANGED BY MESSRS. JOSEPH CHEAL AND SONS, CRAWLEY. (Silver Cup.)

HARDY FRUITS.

MULCHING FRUIT TREES.—Apple and pear trees that are heavily set with fruit will require a thick mulch of good manure, which need not necessarily be half-rotted. Pig or cow manure coming straight from the pens will be found more stimulating, although somewhat more unsightly. Where, for appearance sake, objection would be made to farmyard manure at this time of year, this may, in a great degree, be rendered less unsightly by flooding, and puddling down with water at the time of application, and as soon as the material has become a little dry on the surface, a thin dressing of fine soil may be spread lightly over it. This will act in two ways, by keeping down the offensive odour, and obviating further attention in watering unless an exceptional drought is experienced.

WALL FRUITS.—Peach, nectarine, and apricots trees have generally set a very heavy crop, and thinning should be taken in hand as soon as possible. This should be carried out gradually until the size of the fruit warrants the final thinning. This requires a determined hand, and a knowledge of the trees and varieties. The quantity of fruit left to mature will be governed by the size of the fruits and vigour of the trees. Young trees planted this season should not be allowed to carry fruit, or a serious check will be given them. Such trees need all their strength in becoming established, and in the making and ripening of next year's fruiting wood. At the first signs of mildew on the foliage or fruit, flowers of sulphur may be dusted over the affected parts before the disease has time to spread.

PEARS AND PLUMS.—A practice of stopping the strong growths of pears and plums should be carried out during the whole growing season, always, of course, excepting the shoots required for extension. The first stopping should be made at about the sixth leaf, and all further lateral growths be stopped at the second or third leaf. This will regulate the flow of sap, and allow air and light to pass readily through the trees and ripen the wood. If exhibition pears are required it will be found advantageous to fully expose the fruits of some varieties, such as Durondeau, and Doyenne du Comice, which is best done by picking off a few leaves; Beurre Diel, Beurre Superfin, Pitmaston Duchess, and several other varieties will obtain a much finer finish and texture of skin if grown entirely shaded by the leaves.

RED AND WHITE CURRANTS.—These will derive much benefit if stopping is carried out at the present time. Aphis, that usually attack the currants, choose the very young leaves as a nursery. Light will be admitted to bring the fruit to maturity earlier, and the general condition of the bushes be improved.

GOOSEBERRIES.—If large berries are required for dessert or exhibition purposes, and the trees are heavily cropped, the fruits may be severely thinned and used in the kitchen. If manure has not already been applied, a good littering down with stable manure will prove very beneficial to the bushes, and keep the fruits free from grit and splashing by heavy rains. Gooseberries for bottling and jelly should be gathered while still quite young to be perfectly satisfactory.—James Whittle, Cheveney Gardens.

Seakale.—Thongs planted as advised will have formed heads of growth, and in many cases produced more than is required. Where so, reduce them down to one, retaining the strongest, and assist the young plants with a dressing of salt or nitrate of soda, and work the Dutch hoe frequently amongst them on fine days, to give them a good start to form vigorous plants.—C. F.

The Value of Lime in the Garden.—The beneficial influence of lime on garden crops is difficult to overestimate, for with the exception of a few conifers and the ericaceous order, nearly all plants cultivated in this country may with advantage have lime as a soil constituent. On ground devoted to the production of fruit and vegetables lime becomes a great factor, as without it the organic matter in the soil cannot be transformed into nitrates, the form in which plant food is assimilated by growing crops. Lime produces marked results on garden soils that have been heavily manured for a number of years; such rich soils can be made sweet and fertile with lime, the growth of the crops are much freer and heavier, and they mature quicker. Lime is being continually washed out of the soil and lost in the drainage, hence the necessity of applying it at frequent intervals. It is best applied as slaked lime at the rate of 10 to 15 cwts. per acre.—Thomas Smith.

CHESTERFIELD FLOWER SHOW,
WEDNESDAY, 2nd August, 1911.
Affiliated with the National Rose Society.
Special large Marquee for staging Roses.
Schedules on application.
CHAS. WM. HADFIELD, Secretary.

PORTSMOUTH HORTICULTURAL SOCIETY.
SUMMER SHOW, July 18th and 19th. AUTUMN SHOW, Nov. 1st. Schedules and particulars, W. E. GILL, Osborne Road, Southsea.

RICHMOND HORTICULTURAL SOCIETY.

THE THIRTY-SEVENTH ANNUAL SHOW will be held in the Old Deer Park, Richmond, Surrey, on
WEDNESDAY, 28th June.

Silver Challenge Cups, Gold and Silver Medals,
upwards of 300 Money Prizes.

W. J. COOK, Hon. Sec., Holmsley, Richmond, Surrey.

STRATFORD-ON-AVON FIFTH ANNUAL FLOWER SHOW.
On BANK HOLIDAY, August 7th, 1911.
OPEN TO ALL.
MARIE CORELLI CHALLENGE CUP,
Value 25 guineas,
With Gold, Silver, and Bronze Medals,
For Best Collection of Cut Flowers and Fruit to occupy a stage 12ft. by 4ft.
NUMEROUS OTHER PRIZES.
Schedules to be had of Mr. J. HOWE, Hon, Secretary, Stratford-on-Avon.

WOLVERHAMPTON GREAT FLORAL FETE,
JULY 11, 12, and 13, 1911.
£900 in PRIZES.
Schedules on application to the Secretary.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

The Great Temple Flower Show.

In the present issue we give the reports of those sections of the Temple Show which pressure upon our space prevented us from including in our issue of May 27. We also present our readers with a series of illustrations of this great exhibition.

STOVE PLANTS.

A magnificent contribution of stove plants from Messrs. Jas. Veitch and Son, Chelsea, was a striking feature in the orchid tent, and showed in a marked manner the grace and beauty of ornamental leafage. At the back were tall and brilliant crotons, and bold caladiums, and a huge Cocoloba pubescens with umbrella-like leaves in the centre. Anthurium Veitchi, Deiffenbachia imperialis, D. Jenmani, and Alocasia Mortefontainensis were also grouped with more and bright caladiums over the central area. Towards the front were quaint and vivid anthuriums, with beautiful bertolonias, Rex begonias, maranthas, and the yellow green-margined Sanseviera Laurentia. Medinilla magnifica and Dracæna indivisa atropurpurea were other notable plants.

Messrs. J. Peed and Sons, Norwood, again contributed a big group of caladiums, many of these vying with orchids in their colouring; the big leaves always attract attention, especially those of such varieties as Fastuosum, Oriflamme, Red Indian, Rufus, Mons. Leon Say, John Peed, Duke of Teck, and Triomphe de Comte. Some of the plants were of great size, and all represented high culture.

The group of hippeastrums from Messrs. R. P. Ker and Sons, Aigburth, Liverpool, was greatly admired; the flowers were glorious in colouring, and of fine shape. With the deeper colours, such as orange-scarlet and crimson, we are familiar, and the Messrs. Ker have introduced new colours and notably rosy and pink shades, and such varieties as Cerise King, Lady Rose, Rosa Mundi, and Arcadia were specially fine in this line of development.

Stove foliage plants from Mr. L. R. Russell, Richmond, formed a bold group, and specially good were the specimens of Dracæna Victoria, Croton Reidi, Anthurium crystallinum, nepenthes, bertolonias, and strobilanthes.

CARNATIONS.

A large exhibitor of carnations was Mr. C. Blick, Hayes, Kent, who had very pretty and bright blooms of perpetual, Malmaison, and border varieties. Among the latter a few fine things were Prince Arthur, Victory, Thomas a'Beckett, Sir Walter, Donald McDonald, San Remo, and Lieut. Shackleton; Mr. Blick had also a very fine vase of Lady Hermione, the Coronation carnation.

We always expect fine perpetual carnations from Mr. A. F. Dutton, Iver, Bucks, and are not disappointed. On this occasion he set up beautiful flowers of Winona, Carola, May Day, Mikado, Mrs. T. W. Lawson, Lawson-Enchantress, Pink Delight, Beacon, and the large new blush American variety named Mrs. Charles Knopf.

Messrs. Wells, Merstham, Surrey, had a small, but choice, collection of perpetual-flowering carnations, amongst which White House, a fine white flower, was conspicuous.

Messrs. Bath, Lim., Wisbech, were represented by a nicely arranged collection of carnations, in which Mrs. C. W Ward, May Day, White Enchantress, and Mrs. T. W. Lawson were boldly conspicuous.

A beautiful new crimson carnation, called Edith Walters, was a conspicuous feature in the exhibit staged by Mr. C. F. Waters Balcombe, Sussex, but other flowers which attracted attention were Alma Ward, Glendale, and Carola.

Mr. H. Burnett, Guernsey, made a fine show with perpetual-flowering carnations. Mikado and R. F. Felton were remarkably fine, and other varieties which were much admired were Mrs. C. F. Raphael, Mrs. H. Burnett, Mrs. W. J. Hunter, and Scarlet Glow.

FRUIT AND VEGETABLES.

Vegetables were not largely represented, but it was a pleasure to turn from the flowers to the fresh-looking specimens from the kitchen garden of the Hon. Vicary Gibbs, Aldenham House. The specimens bore the stamp of high quality, which is characteristic of everything shown by Mr. E. Beckett, and on the long length of table were cucumbers and peas with the natural bloom intact, the whitest of cauliflowers, neat little marrows, dishes of fine tomatoes, potatoes of wax-like appearance, aparagus that you could eat to the very stump, crisp salading, curious looking fruits of egg plants, pure white turnips, crisp-looking radishes, etc. The method of arrangement left nothing to be desired, and the whole exhibit was most effective.

Another small collection of salading and forced vegetables came from the Thatcham Fruit and Flower Farm, Newbury. Some of the lettuces were very good, as also were the cauliflowers, but radishes struck us as being rather overdone.

Messrs. Laxton Brothers, Bedford, had some splendid baskets of strawberries, which included the varieties King George V., George Monro, Bedford Champion, and Laxton's Maincrop. The fruits were well grown and highly coloured, but tasting was, of course, prohibited.

Messrs. Harwood, of Colchester, were represented by several large bunches of asparagus.

Giant sticks of rhubarb came from Mr. T. E. Dawes, Syderstone, Norfolk, the best amongst them being Dawes' Challenge.

In amongst the flowers and fine foliage plants was a collection of fruit trees in pots from Messrs. T. Rivers and Son, Sawbridgeworth, and a fine exhibit it was. The leaves of the peaches and nectarines were of that dark green hue which indicates perfect health, and the fruits with which they were thickly studded were fine and highly coloured. Peaches and nectarines were the feature, but Early Rivers and Knight's Early Black cherries were included, as well as specimens of the well-known Rivers Plum.

ROCK AND ALPINE EXHIBITS.

The King's Acre Nursery Company, Hereford, put up a little rock garden display in the begonia tent, but the moss covering for the soil was not in keeping with the plants. Saxifragas, Heuchera sanguinea, Corydalis Wilsoni, Primula sikkimensis, P. Sieboldi, and Daphne Cneorum were noticeable plants in the exhibit.

In the rock garden exhibit prettily arranged by Messrs. James Backhouse and Son, York, a whole host of delightful alpine and other hardy flowers was brought together. There were fine forms of aquilegias, and trollius, a collection of the newer primulas, including P. Bulleyana and P. Littoniana, colonies of Gentiana acaulis, Ramondia pyrenaica, hardy cypripediums, daphnes, saxifragas, and Haberlea rhodopensis.

Being rock garden experts, Messrs. J. Cheal and Sons, Crawley, were able to put up a very pretty alpine exhibit, where, backed by dwarf pines, Japanese maples, and mollis azaleas, they filled the rock crannies with phloxes, daphnes, saxifragas, sedums, dianthuses, Lithospermum prostratum, and Ramondia pyrenaica, and had colonies of Primula japonica, violas, and hardy orchids in the lower foreground.

Messrs. G. and A. Clark, Dover, presented a low rock garden, and Trillium grandiflorum, Primula Veitchi, Heuchera sanguinea, and Incarvillea Delavayi were prominent subjects; the same firm had a rare show of brilliant trolliuses, tulips, and Pyrethrum John Malcolm, a fine rosy single variety.

The exhibit of hardy flowers contributed by Messrs. Whitelegge and Page, Chislehurst, was rich in Primula japonica, P. Unique, P. pulverulenta, saxifragas, Dodecatheon Meadia, the handsome Geum coccineum Mrs. J. Bradshaw, and Aquilegia Mrs M. Nicholls, the latter a beautiful and large blue and white variety.

Messrs. Jarman and Co. were forward with their charming sweet sultans—The Bride, Bridegroom, and Bridesmaid; these are lovely flowers, both for garden and table decoration.

Messrs. Cunningham, Fraser, and Co., Comely Bank, Edinburgh, showed a collection of alpines, and charming things in it were Cytisus Ardoinei, Rhododendron glaucum, Veronica Fairfieldi, Saxifraga D. Ramsey—a very pretty hybrid, Pentstemon Lewesi, and Celmisia holocerisea.

A small rock garden display from Messrs. W. H. Rogers and Son, Lim., Red Lodge, Southampton, was lightly filled with choice dwarf shrubs, and small-growing alpines, with rhododendrons and lilacs at either end.

A pretty combination of flowering azaleas and tiny alpines was shown by Mr. H. Hemsley, Crawley. The arrangement of the stones was natural, and the plants were set off to great advantage.

A pretty little rock garden was shown by Messrs. Bees, Lim., Liverpool, in which saxifragas, primulas, sempervivums, and other things were displayed in interesting variety. Particularly effective in this exhibit were several clumps of Saxifraga Lindsayana.

Messrs. Bunyard and Co., Maidstone, had a neat little rock garden, in which the pretty Dianthus Atkinsoni looked effective. A background was formed with specimens of flowering shrubs, and amongst hardy herbaceous subjects we noticed eremurus, spiræas, irises in variety, pæonies, and different varieties of trollius.

OUTSIDE EXHIBITS.

A very artistically arranged rock garden was erected near the main entrance by Messrs. Pulham and Son, Elsenham, and the broad pathway through it was very freely patronised. A good background of shrubs served to show up the pretty colonies of saxifragas, phloxes, primulas, etc., so pleasingly disposed.

Messrs. W. Cutbush and Son, Highgate, brought up a very large collection of their cut bushes, and the quaint forms of these clipped trees proved a great attraction; the ships and the "Teddy Bears" seemed to be specially interesting. This firm also presented a big rock garden, with great banks or borders of flowers leading up to it, and a narrow mound of alpines dividing the broad pathway down the centre. The back of the rock garden was furnished with rhododendrons, wistarias, azaleas, and liliums, and around the pool of aquatics were big gunneras, and colonies of irises and trollius. In the foreground a very large colony of hardy cypripediums was linked up with grouplets of Primula japonica, P. Bulleyana, P. Littoniana, meconopsis, and brilliant mimuluses, sarracenias, and funkias clustering close to the water's edge. In the borders were bold groups of Eremurus himalaicus, Lilium candidum, L. Harrisi, L. Browni, L. excelsum, German irises, Lupinus Moerheimi, Incarvillea Delavayi—very fine, and Anchusa italica Dropmore variety, all backed by roses and bamboos. A great and striking display.

The Japanese garden designed and planted by Messrs. James Carter and Co., Raynes Park and Holborn, occupied a position near the Embankment entrance. All around were Japanese maples rising out of the grass, and a number of stately pyramids of the Umbrella Pine (Sciadopitys verticillata), some of unusual size. A winding stream, bridged by stepping stones, and a pretty little bridge that led to a bamboo-thatched garden house was the central feature, and along its banks were iris, funkias, blue hydrangeas, and bamboos. Here and there were rare old dwarf Japanese trees, in quaint shapes, and some rare old Japanese lanterns and cisterns added a further touch of Japanese art and interest. The wistarias were very pretty, and at one end a rock garden prettily planted flanked the charming little gateway with its thatched porch. The whole was a pleasing design, and cleverly and prettily carried into effect.

The graceful Japanese maples were pleasingly grouped by Messrs. W. Fromow and Sons, Chiswick, the red, purple, crimson, green, and yellow-green foliage all adding beauty of colour to the grace of the foliage of these charming shrubs.

A very interesting arrangement of rockwork was exhibited by Mr. C. Elliott, Stevenage, in which stones were boldly used, and showy groups of Saxifraga granulata, achilleas, and other alpines looked very natural in their temporary quarters.

The Craven Nursery, Clapham, Yorks, had a novel, but prettily arranged, rockery, in which many charming little gems of the alpine family were exhibited.

A bold arrangement of stones and alpines was set up by the Guildford Hardy Plant Nursery, and Mons. H. Correvon, Geneva, had a quaint little collection of natural alpine plants.

Not the least interesting of the outdoor exhibits was the rock garden arranged by Mr. M. Prichard, Christchurch, Hants, in which rocks and alpine plants were employed with charming effect.

Messrs. Eggett and Son, Thames Ditton, had a pretty rockwork arrangement, and another charming rock garden was shown by Mr. R. Prichard, Wimborne.

Mr. R. C. Notcutt, Woodbridge, showed azaleas, rhododendrons, and lilacs in charming profusion. Messrs. W. Paul and Son, Waltham Cross, had a similar arrangement, and the tulips shown outdoors by Messrs. R. and G. Cuthbert, Southgate, were much admired. A pretty table of alpines came from the Burton Hardy Plant Nursery, Christchurch.

One of the boldest of the outdoor rockeries was that arranged by Messrs. R. Wallace and Co., Colchester. Stones in just sufficient quantity were used, and low shrubs and alpine plants contributed to the making of an effective exhibit.

Boxes and yews cut into various shapes, and illustrative of the art of topiary, were exhibited by Messrs. Pipers, of Bayswater.

Unique in design and highly effective was the rockwork arrangement set up by Messrs. W. Artindale and Son, Sheffield. Stones, large and bold, were used with marked effect with alpines growing apparently quite naturally in the crevices, while a group of pæonies in the front gave a finish to the exhibit which was admired by everyone.

Barr's Japanese pigmy trees are too well known to need any description, but they were in their usual place, as dwarf and venerable as ever.

In a square enclosure Messrs. H. B. May and Sons, Upper Edmonton, had an interesting exhibit, consisting of ferns in variety, fuchsias, and heliotropes in standard form, and verbenas and tricoloured geraniums in baskets.

In the annexe between the tents Messrs. Barr and Sons, Covent Garden, had an interesting rock garden, in which we observed the effective foliage of the new Rodgersia tabularis, from Northern China.

Messrs. Stuart Low and Co., exhibited a large collection of the bottle-brush plant, and the same firm also set up a fine group of rambler and polyantha roses in pots, both standards and trained plants being represented.

The Misses Hopkins, Shepperton-on-Thames, had an interesting group of alpines, arranged with stones and water, in an effective manner.

Messrs. J. Cheal and Sons, Crawley, set up a fine collection of flowering and foliage plants, in which Rhododendron White Pearl, Japanese maples, Rhododendron The Bride, and other beautiful things were noticed.

The outdoor alpine garden arranged by Messrs. T. S. Ware, of Feltham, was much admired, especially for its fine colony of Aquilegia Stuarti; and Messrs. J. Veitch and Sons exhibited a group of flowering subjects that was a blaze of colour.

Messrs. Heath and Son, Cheltenham, had an interesting display of rock plants, and Mr. L. R. Russell, of Richmond, made a big show with rhododendrons, azaleas, acers, and other flowering and foliage plants. A pretty arrangement of rock plants, etc., was set up by Mr. G. R. Reuthe, Keston, and much admired; Lewisia cotyledon was a very interesting plant in this group.

National Sweet Pea Society.

The special general meeting of this society, held at the Hotel Windsor on Thursday, May 18, for the purpose of considering the proposed Floral Committee's rules, as drawn up by the sub-committee, and approved by the General Committee, was fairly well attended, and Mr. G. W. Leak presided.

After the notice convening the meeting had been read, the Chairman formally moved the acceptance of the rules on behalf of the committee, and this was seconded by Mr. H. J. Wright.

Each rule was then taken in order as arranged on the set sent out recently to every member of the society. Remembering what has gone before, and led up to the construction of the rules, i.e., the alleged need for a reorganisation of the Floral Committee, and the exclusion of any one having an interest in any variety or trial, the temper of the meeting was interesting.

We have not space in this issue to give the rules as passed for immediate use by the general meeting, but we may give the chief points. The Floral Committee is to consist of nine persons, to be elected from the members, by the General Committee, by ballot, and the election will be annual, no portion of the committee being ineligible for election by rotation. The members of the Floral Committee need only be members of the society, their status matters not; nor does the fact that they are interested in any variety or trial exclude them from election. The Floral Committee must visit the trials at least twice annually; their awards will be made by ballot, each member having his or her own personal voting card; but if a vote is recorded by any member for a variety, he or she is financially interested in, then such vote will be struck out by the trials superintendent and secretary before the ballot is declared.

The silver medal will be only provisionally awarded the first year, and the variety must keep up its reputation a second year to obtain the medal. A First-Class Certificate will need seven-ninths of the votes of the committee, but an Award of Merit may be granted if there is a clear majority of votes.

Further, the Floral Committee is to bracket varieties it considers to be identical as seen growing at the trials; to prepare a list of too-much-alike varieties; and to indicate in order of merit the three varieties it considers best in each colour class.

On the whole, the meeting was a good-humoured one. There were some misunderstandings, and some speakers added chaff and sarcasm to their arguments. Now that a general meeting has adopted the rules as amended by a very large majority, only two voting against the set as a whole, matters ought to run smoothly, at least, until the annual general meeting.

National Tulip Society.

This society did not make a large display in Inner Temple Gardens on the second day of the Temple Show, the majority of the Southern growers being unable to compete owing to the early season. But although the flowers were not numerous, the quality was good throughout, and maintained the prestige of the old English tulip.

Class A was for twelve dissimilar rectified varieties, two feathered and two flamed in each class. There were three entries, Mr. C. W. Needham, Hale, Cheshire, winning first prize with fine examples of Sam Barlow, George Edward, Annie McGregor, George Hayward, Chancellor, Mabel, Sir Jos. Paxton, Stockport, Mrs. Collier, Masterpiece, Mrs. Hepworth, and Modesty. Mr. Jas. W. Bentley, Middleton, Manchester, was second with good specimens of Robert Headley, Coningsby, Mrs. Collier, Mabel, and Sir Jos. Paxton, while Mr. W. Dunn, Cambridge, had good blooms of Sam Barlow, Adonis, Bertha, Dreadnought, and Sir Jos. Paxton in his third prize stand.

In the smaller class, for six rectified flowers, one feathered and one flamed of each class, Mr. C. W. Needham again secured the first prize with fine specimens of Duchess of Sutherland, Sir Joseph Paxton, Mabel, Stockport, George Hayward, and Mrs. Collier; Mr. J. W. Bentley followed with Stockport, S. Barlow, W. Annibal, and Alice McGregor; Mr. W. Dunn third.

There were but two entries for three feathered tulips, Mr. Jas. W. Bentley winning with Garibaldi, Fanny, and Mrs. Atkin; Mr. C. W. Needham was second. For three flamed varieties there were as many exhibitors, Mr. C. W. Needham being placed first with good examples of Sir Jos. Paxton, a very fine Talisman, and Annie McGregor; Mr. J. W. Bentley was second, and Mr. W. Dunn third.

The class for breeder tulips was better filled, Mr. C. W. Needham winning first prize with Talisman, Mad. St. Amand, Lloyd's Seedling, Litchurch, Annie McGregor, and Sir Joseph Paxton; Mr. J. W. Bentley was second, staging nice examples of Mrs. Barlow, Alfred Lloyd, Talisman, and Mad. St. Amand; Mr. W. Dunn was third with good examples, while Mr. A. D. Hall, Harpenden, had to be content with fourth place. Mr. C. W. Needham was first for three breeder varieties, having good examples of Dr. Hardy, Mabel, and Litchurch; Mr. J. W. Bentley followed with Lady Grosvenor and Goldfinder, the third falling to Mr. Dunn.

Mr. J. W. Bentley was first for a feathered rose with Modesty; Mr. C. W. Needham was second. Mr. J. W. Bentley led off with a flamed rose, exhibiting Mabel; Mr. W. Peters, Cambridge, second with Sarah Headley. Mr. A. D. Hall scored for feathered byblœmens with Elizabeth Pegg, and was second with the same variety. For a flamed byblœmen Mr. J. W. Bentley led with Miss Henderson, Mr. C. W. Needham coming second with Talisman. For a feathered bizarre Messrs. Barr and Sons won with a good flower of James Wild; Mr. A. D. Hall was second with George Hayward; Mr. J. W. Bentley third with Garibaldi; and Mr. A. D. Hall fourth.

Flamed bizarres were only represented by two exhibitors, Mr. C. W. Needham being first with Sir Joseph Paxton, and Mr. A. W. Needham second with Sam Barlow. Mr. A. D. Hall led with byblœmen breeders, staging a finely-shaped seedling. The same exhibitor was second with a light-coloured seedling

The growers of less than four hundred flowering bulbs did not make a great show. For six varieties Mr. R. W. Hall, Cambridge, was the only exhibitor, and was awarded first prize; the varieties were Sam Barlow, Mabel, Talisman, Diarmid, Mrs. Atkin, and a seedling. The same exhibitor won first in the class for three feathered varieties, and also for three breeders, with examples of Diarmid, John Heap, and Annie McGregor. He was also the only exhibitor for two rectified varieties, and won with Dr. Hardy and Mr. Wilson.

Messrs. Barr and Sons put up a pretty display that included Talisman, Sir Joseph Paxton, Dr. Hardy, and Mabel, also some handsome bunches of the May-flowering varieties.

Mr. C. W. Needham had the premier flamed flower, winning with Sir Joseph Paxton. Mr. J. W. Bentley had the premier feathered flower, with Stockport; while the premier breeder was from Mr. C. W. Needham, who showed Dr. Cooper.

British Gardeners' Association.

(LONDON BRANCH.)

The third annual meeting of the London Branch took place at Carr's Restaurant on Thursday, May 11. Mr. North presided, and there was an attendance of over fifty members. The committee, in presenting the report, stated that the results of the past year's work were very gratifying, and that the branch is now firmly established, with a steadily increasing membership. Eight general meetings have been held during the past year, and these are held principally for the purpose of transacting general business; but they have also been made interesting and instructive by lectures and papers dealing with subjects of horticultural interest generally, or with the policy of the association. Two very successful concerts have been held during the past year, and these proved very popular, and were a valuable source of revenue to the treasurer, the net profits amounting to £7 5s. 11d. From the fund thus raised a subscription of £2 2s. has been forwarded to the Royal Gardeners' Orphan Fund, and £2 2s. to the British and Foreign Blind Association.

During the summer months excursions were made to the Priory Gardens, Roehampton; Downside, Leatherhead; and the R.H.S. Gardens, Wisley.

The balance-sheet shows the branch to be in a sound financial condition, and the auditors in their report highly compliment the treasurer, Mr. A. G. Barnes, upon the excellent manner in which the accounts of the branch have been kept.

The committee conclude their report with an earnest appeal to members to unite with them in their efforts to make the work of the branch a greater success than ever during the coming year.

In moving the adoption of the report and balance-sheet, Mr. Hawes congratulated the branch upon the good progress made, and the fact that it had been able to carry on its work during the past year without a money grant from the executive council.

The officers for the coming year were duly elected, and the meeting terminated with a hearty vote of thanks to the retiring officers.

Croydon Gardeners' Society.

On Tuesday evening last this society held its usual fortnightly meeting at the Sunflower Temperance Hotel, George Street. This meeting concludes their programme of lectures for the first session of the year. During the summer months it is found more acceptable to visit the gardens of repute within the district, when members can examine the mode of culture carried on at these establishments and interchange their views as they pass through the gardens.

Nothing could be more appropriate for a final meeting than to hold discussions on subjects relative to horticulture, and at Tuesday's meeting this was the form of entertainment. At each meeting since January of this year a question box has been placed on the table so that any member experiencing a difficulty or wishing to record a success that his fellow members may profit by his system of culture, he notes it at the time, and after writing it on a piece of paper drops it into the box for reference during discussion night. A goodly number of questions were dealt with, and much useful information derived from this source. With time to spare other questions were invited, and as each one came in for criticism all the members entered into friendly discourse on the subject. Knowledge diffused in this way keeps each member in touch with present-day experiences, and is very useful in circulating up-to-date ideas.

Broughty Ferry Horticultural Association.

The ordinary monthly meeting was held in the British Restaurant. Mr. James Bethel presided. The essayist for the evening was Mr. Alexander McLennan, Laurelhill Gardens, Stirling, who had for his subject, "Some Ways of Making Gardens Attractive." In the course of an excellent paper, Mr. McLennan gave many helpful hints, and in eloquent fashion drew many vivid pictures of attractive corners in notable gardens where he had been a visitor or worker. Confining his remarks chiefly to the flower garden and pleasure grounds, he dealt with their adornment and furnishing, giving advice on the best methods of constructing and planting rock and wall gardens; the making of undulating borders and edgings for alpine and rock plants, bowers, arches, pergolas, pillars, etc., and what to grow or train on them. Wild and bog gardens, too, were treated upon, as well as the formation of shrubberies, and the best plants to use. At the same time he gave a useful list of shrubs suitable for covering walls in exposed as well as sheltered positions.

Regarding the formal flower garden as the most attractive place for all, he was glad to note a change from the old designs and ribbon borders and carpet beds laid down with neat regularity and composed of tender bedding plants that took the greater part of the year to grow under glass. Too much he could not say in praise of the colour schemes executed with hardy annuals, biennials, and herbaceous perennials to be seen in some gardens. In connection with this style of gardening he spoke in flattering terms of the wonderful achievements wrought by Mr. Thomas Hay, at Hopetoun Gardens, Queensferry.

A good discussion followed, after which Mr. McLennan was cordially thanked for his paper and interesting replies.

Mr. Wm. Grant, Fernhall Gardens, exhibited vases of parrot, Darwin, and May-flowering tulips in new and choice variety, for which he was cordially thanked.

FORTHCOMING ENGAGEMENTS.

THURSDAY, June 1.—Linnean Society.
Ipswich Flower Show, in conjunction with the Suffolk Agricultural Society
MONDAY, June 5.—Bank Holiday.
TUESDAY, June 6.—Royal Horticultural Society; Committees meet at 12 o'clock; lecture at 3 p.m. on "The Past History of Conifers," by Professor A. C. Seward, F.R.S.; Scientific Committee at 4 o'clock.
WEDNESDAY, June 7.—Thames Flower Show, at Tagg's Island, Hampton Court; two days.
MONDAY, June 12.—United Horticultural Benefit and Provident Society; committee meeting.
WEDNESDAY, June 14.—Grand Yorkshire Floral Fête and Gala; three days.
Royal Cornwall Agricultural Show at St. Austell; two days.
THURSDAY, June 15.—Linnean Society.
TUESDAY, June 20.—Royal Horticultural Society; Committees meet at 12 o'clock; lecture at 3 p.m. on "The Origin of Monocotyledons from Aquatic Dicotyledons," by Rev. Prof. G. Henslow; Scientific Committee at 4 o'clock.
Oxford Summer Show.
THURSDAY, June 22.—Coronation Day.
TUESDAY, June 27.—Great Flower Show at Norwich, in connection with Royal Agricultural Society; four days.
Southampton Rose Show.
WEDNESDAY, June 28.—Richmond Flower Show.
Windsor Rose Show.
Irish Gardeners' Association.
THURSDAY, June 29.—Isle of Wight Rose Show.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above sea-level, 150 feet.

DATE.	SUNSHINE.	TEMPERATURE OF THE AIR.			
1911. MAY 21 TO MAY 27.		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
May 21—Sunday	—	45	42	53	44
,, 22—Monday	11 48	52	50	66	35
,, 23—Tuesday......	10 18	57	52	67	46
,, 24—Wednesday..	4 30	59	56	70	53
,, 25—Thursday	8 36	64	54	71	46
,, 26—Friday........	—	61	59	66	54
,, 27—Saturday.....	6 30	61	58	75	52
Means ...	(total) 41 42	57	53	67	47

DATE.	RAIN.	TEMPERATURE OF THE SOIL AT 9 A.M.			LOWEST TEMPERATURE ON GRASS.
1911. MAY 21 TO MAY 27.		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
May 21—Sunday	—	52	53	52	43
,, 22—Monday	—	51	52	52	28
,, 23—Tuesday......	—	54	53	52	41
,, 24—Wednesday..	—	56	54	51	47
,, 25—Thursday	·01	56	54	52	41
,, 26—Friday	·02	58	55	52	45
,, 27—Saturday	—	57	55	52	47
Means ...	(total) ·03	54	53	51	41

"**The Homestead**" is the title given by the Great Central Railway Company to a booklet that is at once an illustrated guide to that beautiful locality in and around the Chiltern Hills, and a gazette showing where residential centres are developing. It also includes lists of available houses, and of builders and estate agents, consequently to those seeking residence—a homestead—in this charming district, the book is a great boon. There is a very complete time-table showing how the City man can get to and from business; rail fares and prices of season tickets are given from every place referred to, and to this is added such important information as population, subsoil, altitude, cost of water, gas, electric light, and rates, the local authority, and distance from Baker Street. Still further, as an inducement to read on, there are three interesting articles in the beginning of the book. A Sportsman's Paradise breathes of open spaces, of golf links, of hunting and cycling. Climatic and Geological Considerations tell of chalk hills, breezy uplands, of winding streams, and good drainage; while The Flowers and Gardens of the Chiltern Hills gradually leads the reader from the beauties of hedgerow and woodland to the glories of cultivated roses, and ideal rock gardens. "The Homestead" is a book all living in or near London should secure from Marylebone.

Babianas. — These pretty little Cape bulbs are well worth growing for the decoration of the greenhouse during the late spring or early summer months. Most of them form a tuft of rather broad hairy leaves, which are overtopped by the spikes of flowers. These last are in many cases of some shade of blue, frequently with a metallic lustre, and often marked with some other colour. In rubro-cyanea, the flowers, which are a couple of inches across, are of a brilliant metallic blue, with a rich crimson centre. Bulbs of these babianas are by no means expensive, and they need the same treatment as the ixias, sparaxis and tritonias, all of which are well suited for greenhouse decoration.—W. T.

ANSWERS TO CORRESPONDENTS.

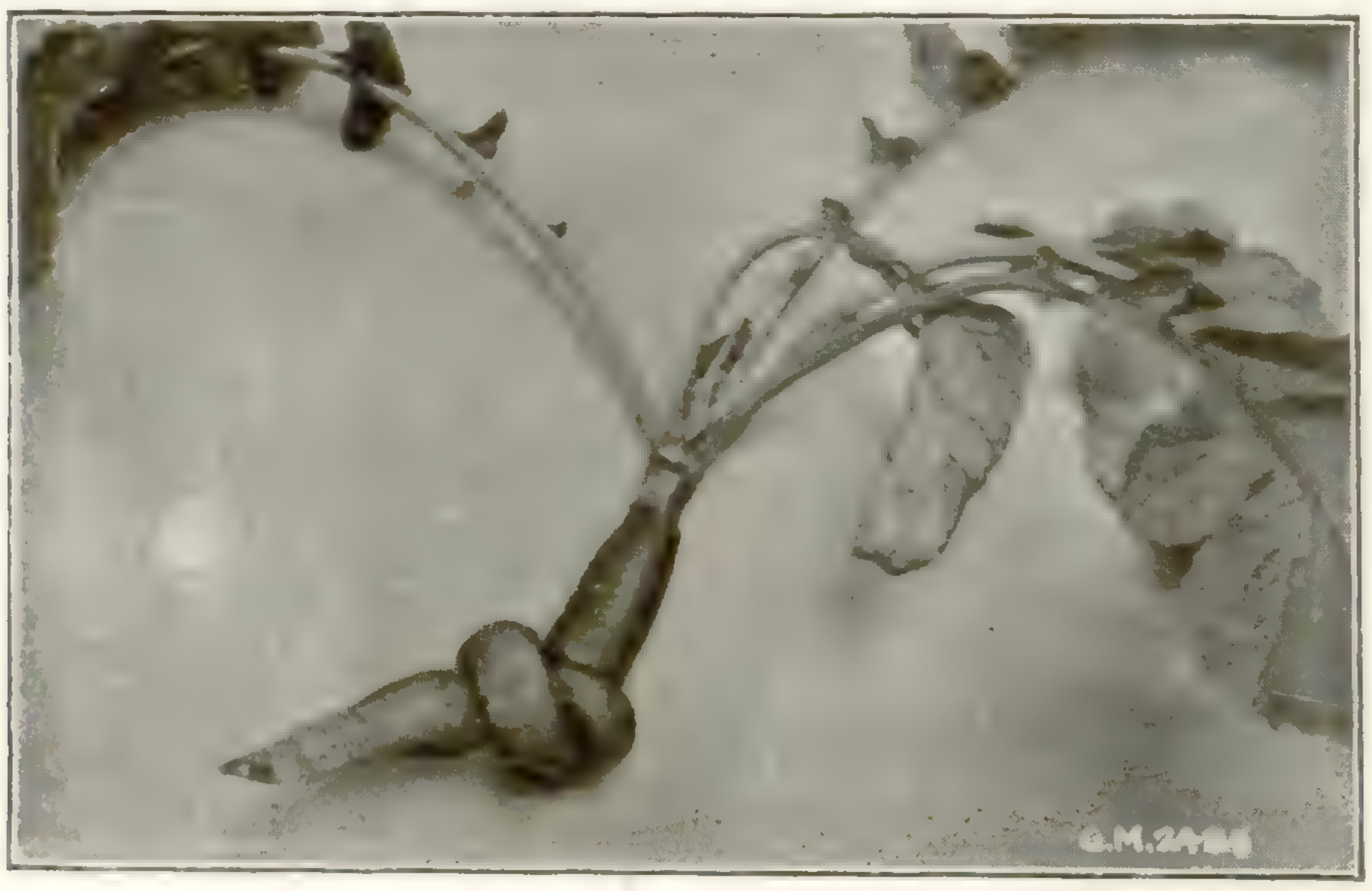
Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

QUAINT VEGETABLES.—W. S. A., Gillingham: All root crops are apt to produce quaint examples, especially when a root comes into contact with some hard substance, or has to squeeze between hard material. A carrot or parsnip growing through the neck of a bottle, and a potato growing through an iron ring or link are fairly familiar objects. A quickly-growing root like a long turnip or radish, will sometimes turn upon itself if the growing point comes into contact with a smooth hard surface, such as a piece of slate, glass, or crockery-ware. In the accompanying illustration you will see what a radish is capable of doing under some such conditions; the growing point of the root reached a curved piece of hardware, and it bent round with the curve until the line of least resistance was through the loop it had already made, and so, literally, the radish tied itself in a knot.



A RADISH TIED IN A KNOT.

PINK LILY OF THE VALLEY.—C. E. N., Denbigh: When the flowers reached us the only evidence of colour was a tinge of rose at the base of each bell; in every case the rest of the flowers had faded to greenish-brown during transit. We take your word for it that the flowers were pink when fresh, and that the plants have produced coloured flowers for several years, but your expectation that yours are the only pink-flowered lily of the valley in England is not likely to be realised. There are several varieties of the beautiful Convallaria majalis, and the difference is chiefly one of habit and size of spike and flower; some have variegated leafage, and yet another has double flowers; while one variety—and this is what concerns us most at present—has rosy or pink flowers, and is known as Convallaria majalis rosea. This is not much grown, but we believe it can be supplied by the leading hardy plant purveyors who advertise in our pages. If grown under glass this pink variety comes pure white.

FASCIATED POLYANTHUS.—A. M. P., Chepstow: The excessive vigour of the plants has resulted in the cohesion of numerous spikes of bloom, the main compound stem being peculiarly flattened or fasciated. Such specimens are not common, but they do appear now and again. It is most improbable that the specimen will behave in similar fashion next year, and even supposing this method of flowering became a fixed character it would not add to, but rather detract from, the beauty of the plant. Such a freak would possess no commercial value.

COMPOUND MANURE.—M. E. M., Lichfield: If the several constituents were purchased separately in the percentages stated, the manure could be obtained at a cost of about 28s. per ton. Nitrate of soda, superphosphate, and basic slag would provide a similar compound. Write to the Board of Agriculture, Whitehall Place, London, S.W., for Leaflet No. 72.

GALLS ON WILLOW.—W. L., Stocksfield: The gall-like swellings on the willow stems are produced by one of the numerous sawflies that attack willows, in this case probably a species of Euura. As a rule, this does not do much harm, but every care should be taken to remove fallen leaves and other refuse from among and below the willows attacked. Frequent applications of soot or the removal of surface soil to the depth of three or four inches during winter if there are but a few trees, will mitigate the attack. Most of the sawflies burrow into the soil to become pupæ.

NAMES OF PLANTS.

J. G. C., Tavistock.—1, Gerbera Jamesoni; 2, Arnebia echioides.

G. R., Abergavenny.—1, Androsace sarmentosa; 2, Morisia hypogea.

R. B. A., Chelmsford.—1, Scilla hispanica; 2, Berberis Darwini; 3, Rubus deliciosus.

G. A. J., Bicester.—1, Ophiopogon Jaburan; 2, Ficus repens; 3, Berberis stenophylla.

L. V., Swindon.—1, Viola cornuta; 2, Berberis stenophylla; 3, Phlox setacea; 4, Pyrus Malus floribunda; 5, Clematis montana.

T. J. C., Macclesfield.—1, Odontoglossum triumphans; 2, O. Cooksonæ; 3, Cattleya Mossiæ, a very pretty variety; 4, C. Mossiæ, a poor and worthless form.

T. B., Hillsborough.—The little box and also the enclosed specimen were badly smashed in the post; the azalea is probably a garden variety closely approaching a rosy form of A. nudiflora.

A. B. C., Lincoln.—1, Send again, probably a veratrum; 2, Funkia ovata; 3, Funkia Sieboldi; 4, Thalictrum purpureum; 5, Geum triflorum; 6, Kerria japonica fl.-pl.; 7, Spiræa prunifolia; 8, S. confusa; 9, Exochorda Alberti.

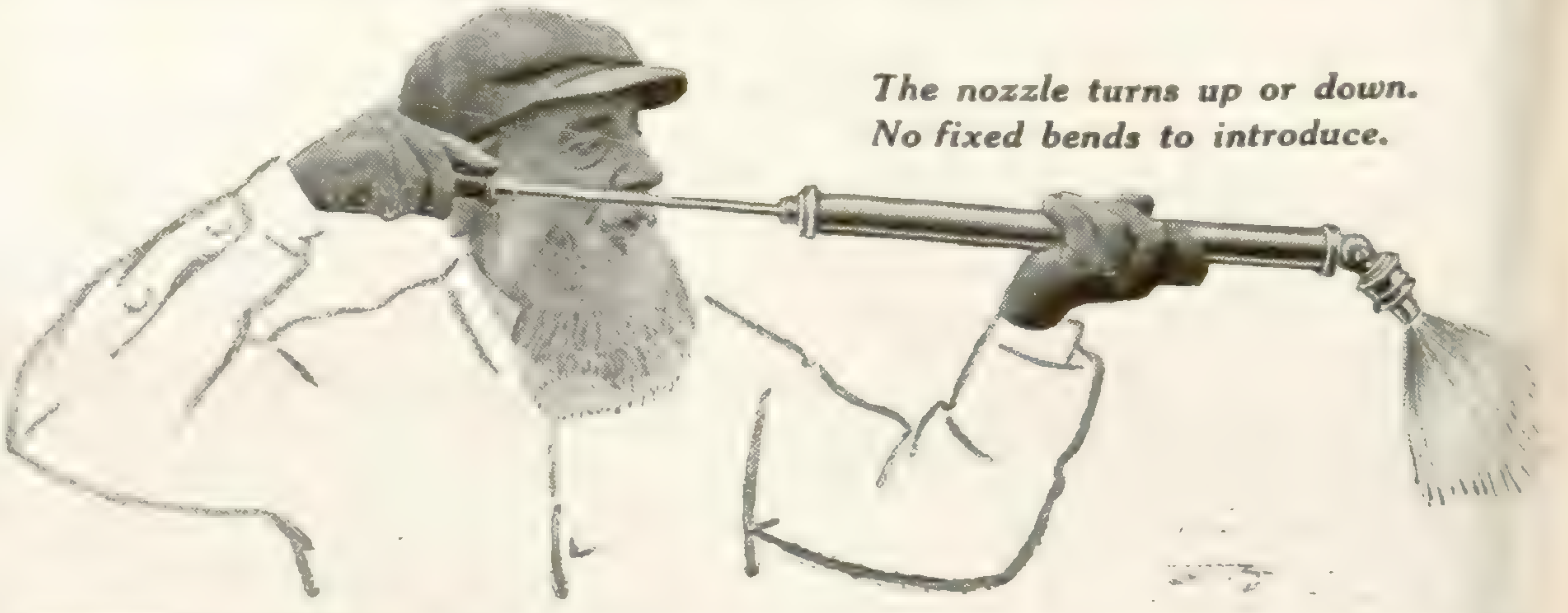
T. I., Byfleet.—1, Lælia purpurata, a good form—the other would have been a variety only, and this species is somewhat variable; 2, Cattleya Schroderæ; 3, C. Mossiæ; 4, Odontoglossum citrosmum; 5, not sufficient for identification, probably Miltonia flavescens; 6, Rhynchospermum jasminoides.

CONTENTS.

PAGE
Among the Alpine Flowers ... 415
Answers to Correspondents ... 424
Exhibitions and Meetings ... 421
Fittonias ... 412
New Plants, etc. ... 413
Notes of the Week ... 409
Perpetual Carnation Notes ... 418
Some Impressions of the Temple Show ... 411
Some Varieties of Scab in Potatoes ... 417
Sweet Pea Notes ... 416
Viburnum utile ... 412
Work for the Week ... 419

ILLUSTRATIONS.

Portrait of Mr. A. B. Brown, 409; Lælio-cattleya Morningtoniæ, 411; Lælio-cattleya Germania, 413; Azalea Duchess of Portland, 414; Rhododendron Glory of Littleworth, 415; A fine Colony of Aquilegia Stuarti, 416; Part of Messrs. Sander and Sons' Gold Medal Display of Orchids, 417; Part of Messrs. Artindale and Son's Rock Garden Display, 418; An Exhibit of Clipped Trees, 419; Avenue of Flowering and Ornamental-foliaged Trees and Shrubs, 420.


The nozzle turns up or down.
No fixed bends to introduce.

The adjustable bend is NOT the only advantage

of the Pine Spray Syringe. The nozzle has a double delivery; an insecticide sprayer, quite mist-like in its fineness, and an ordinary rose for watering, either of which can be brought immediately into use by half turning the syringe bodily in the hand

Every spraying combination of rose and bend or spray and bend, instantly obtainable without the removal or addition of a single fitment.

PINE SPRAY SYRINGE
(PATENT)
24in. long × 1¼in. diam. barrel. PRICE 10/6

You ought to see it; ask your ironmonger or seedsman to get one for your approval, neither he nor you will be asked to buy if the Pine Spray Syringe is not the most perfect hand syringe you have ever seen.

Ask your ironmonger or seedsman to-day, tell him we pay carriage both ways if you reject it.

TESTED AND GUARANTEED
Every Pine Spray Syringe is numbered, tested and guaranteed.
Send for lists and further particulars from sole proprietors—
ROBINSON BROTHERS LIMITED,
WEST BROMWICH.

BOULTON & PAUL, LTD., HORTICULTURAL BUILDERS, Norwich.

See our Stand at the Royal Agricultural Society's Show, to be held at Norwich in June.

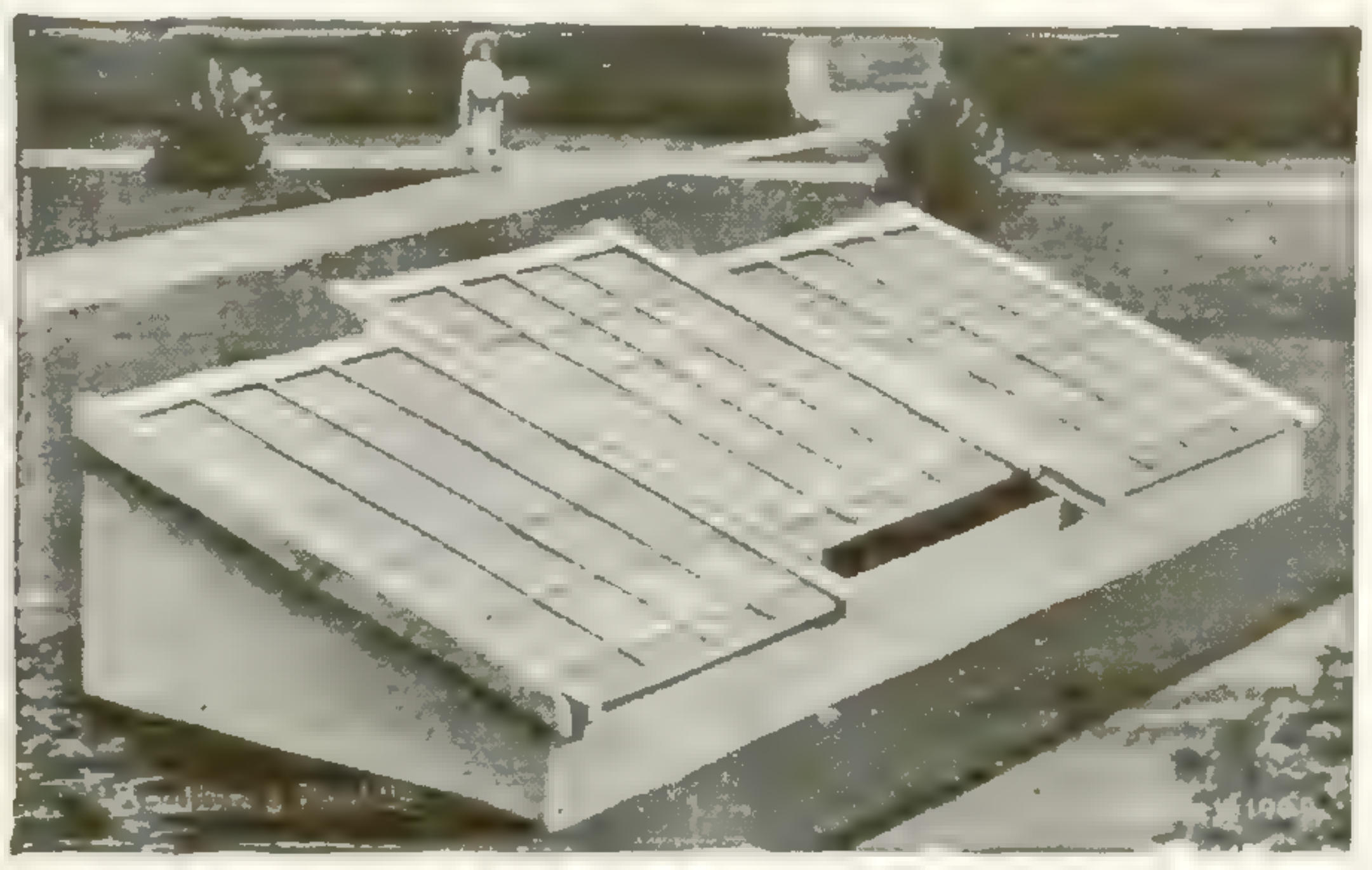
EFFECTIVE, PRACTICAL CONSERVATORIES.

Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of 40/- value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.

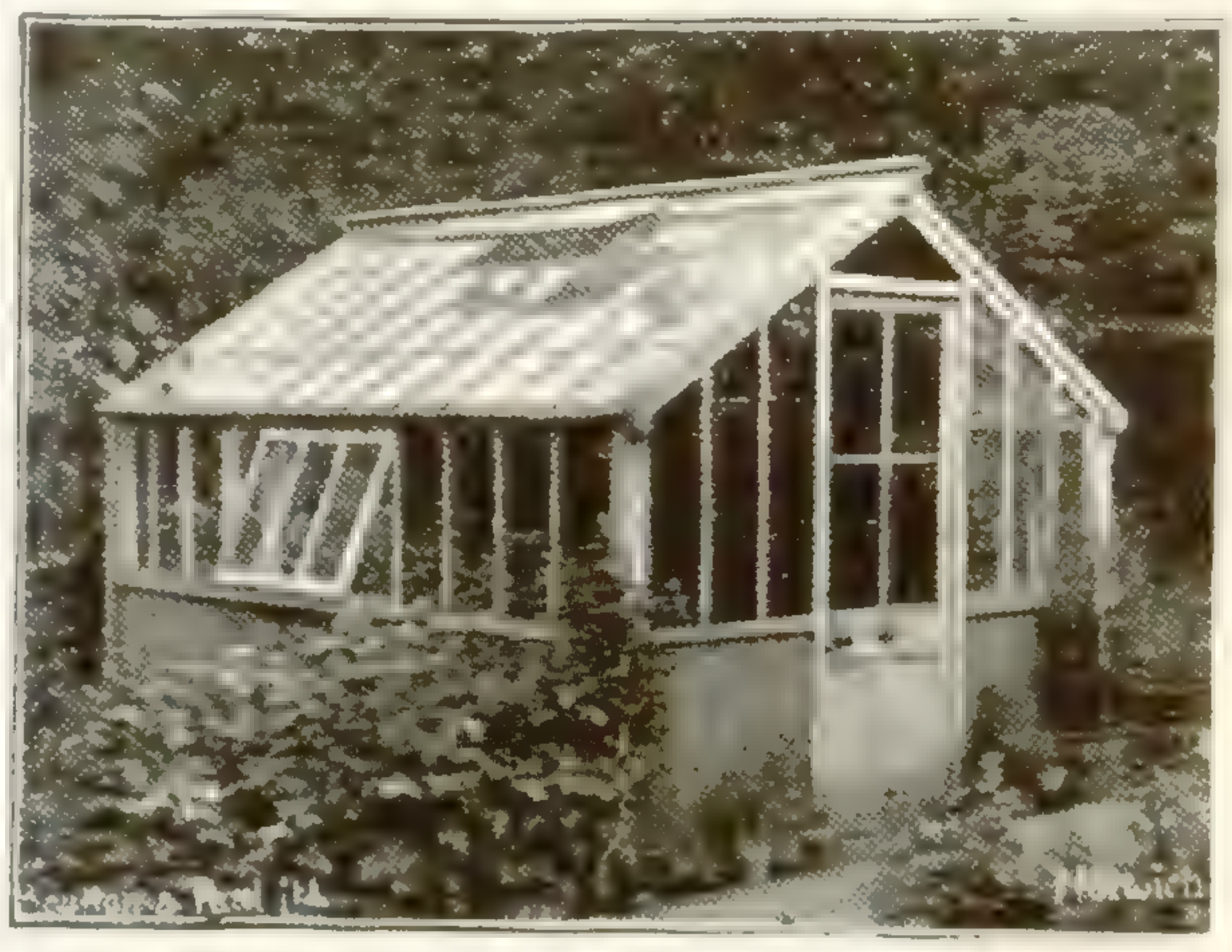


4ft. by 6ft. ... £2 0 0 | 8ft. by 6ft. ... 3 0 0
Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft.
Similar to No. 75, with Two Lights... **35/-**

SEND FOR ILLUSTRATED CATALOGUES.

Every part of these Houses is thoroughly well made, painted three coats, GLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.



No. 49A.—Span, 10ft. by 8ft. £11 10 0
No. 47A.—Lean-to, 10ft. by 7ft. £9 10 0

All parts are numbered ready for easy re-erection by any handy man.

SANDER & SONS, St. Albans.

ORCHIDS in immense quantities in all the best species and varieties.
Importations constantly arriving from our own collectors.

INSPECTION INVITED.

OSMUNDA FIBRE.

The finest quality from our own lands in the United States, 8/6 per bag.

Specially prepared mixtures for

Cattleyas, Dendrobiums, Cypripediums, Odontoglossums, etc.
4/- per bushel.

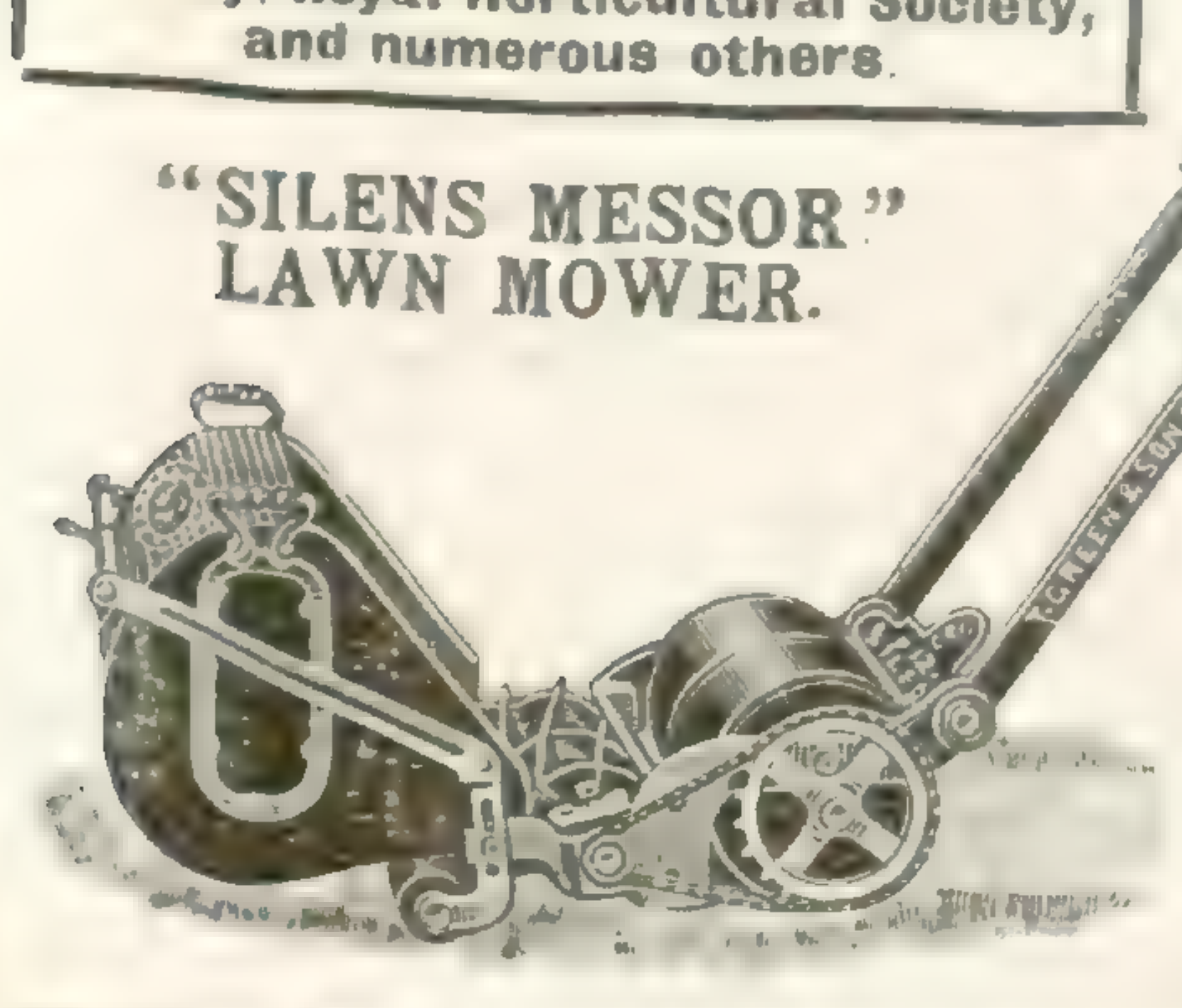
APPOINTED BY ROYAL WARRANT, HORTICULTURAL MACHINE MAKERS TO HIS MAJESTY KING GEORGE V.

GREEN'S LAWN MOWERS ARE UNEQUALLED.

Hundreds of Thousands are in use. Established nearly a Century.

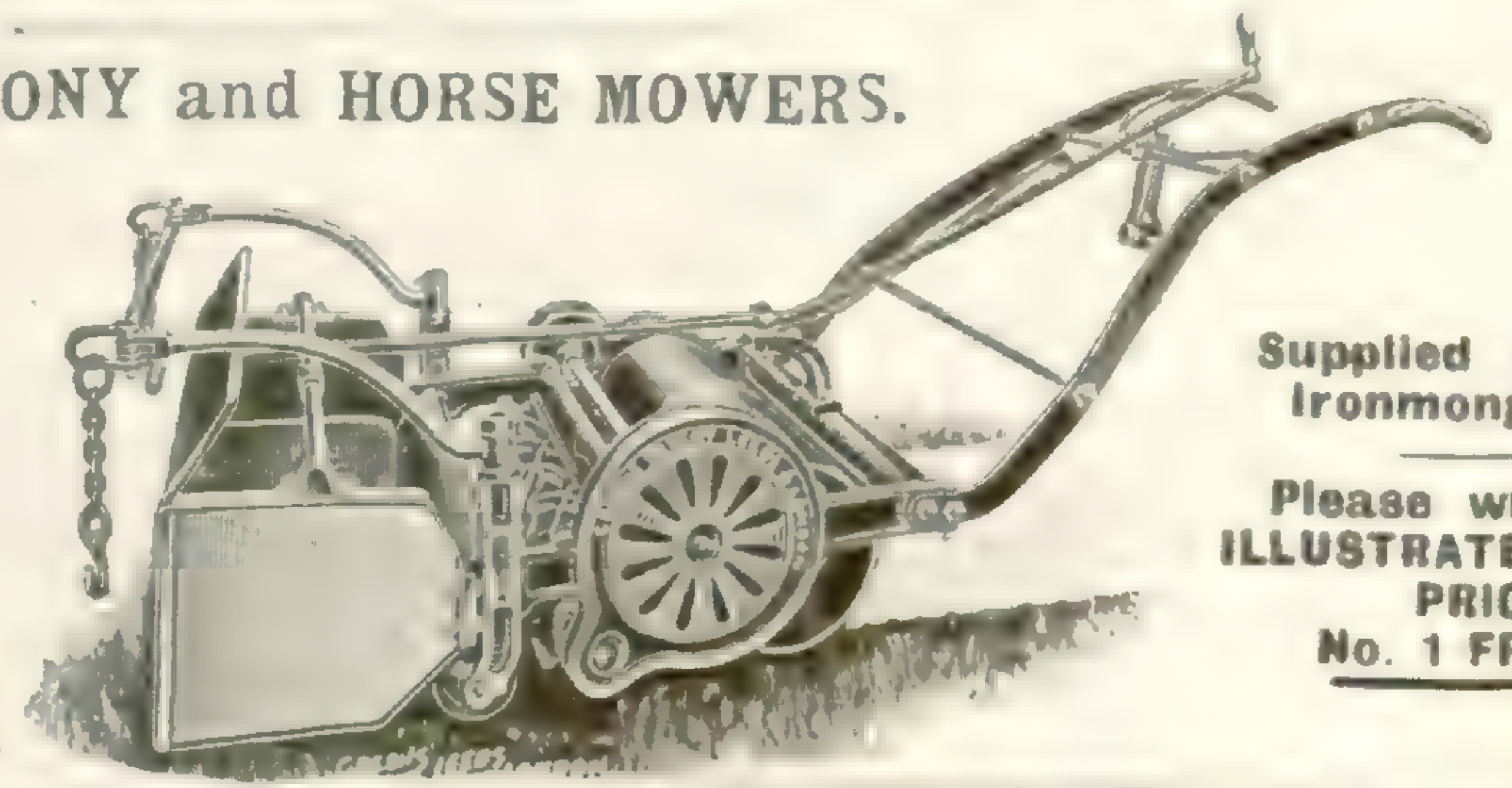
Highest Awards — Royal Botanic Society, Royal Horticultural Society, and numerous others.

"SILENS MESSOR" LAWN MOWER.



Telephone Numbers—
Leeds, 3580.
London, 2022 Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London

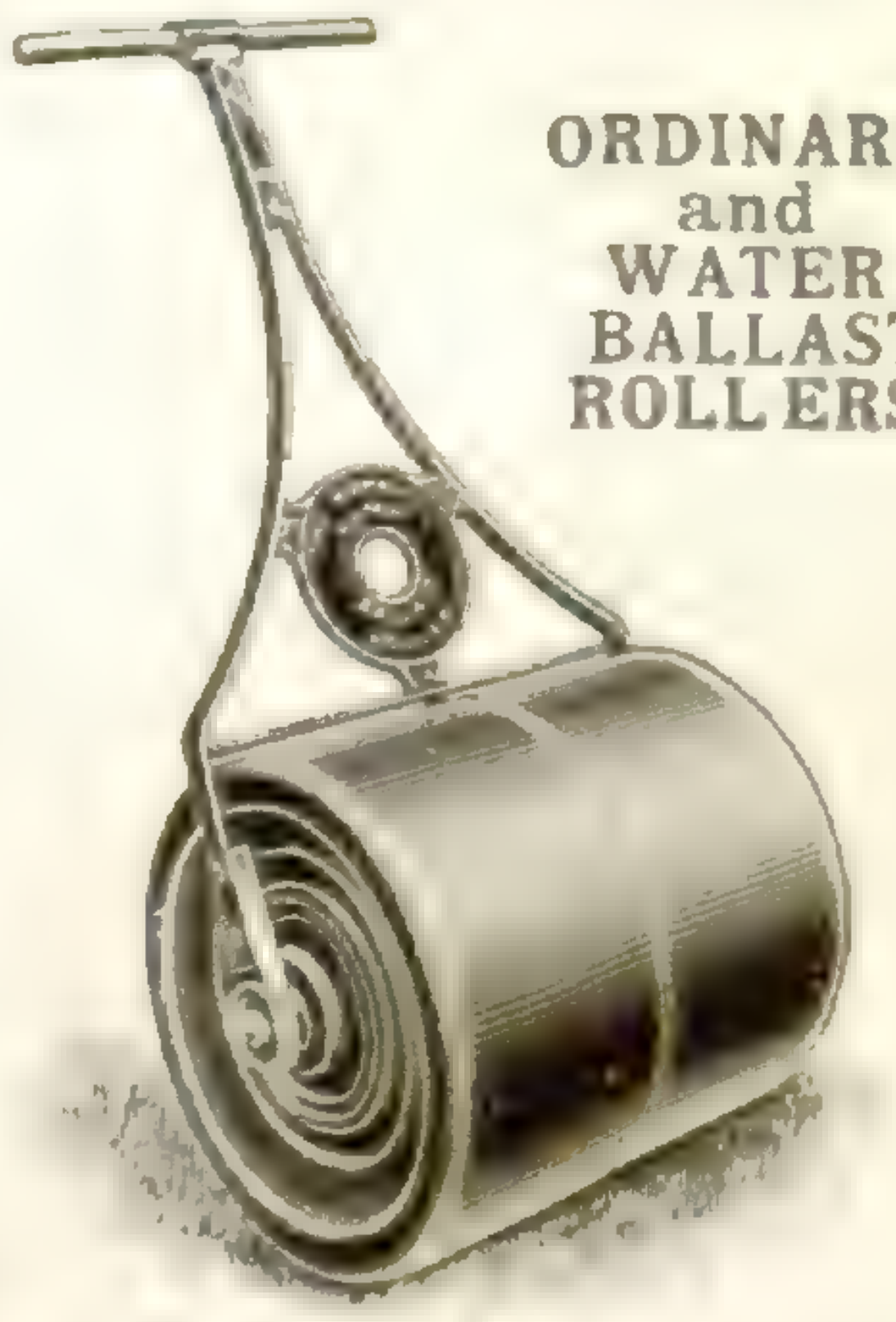
PONY and HORSE MOWERS.



Supplied by all Ironmongers.

Please write for ILLUSTRATED PRICE LIST No. 1 FREE.

ORDINARY and WATER BALLAST ROLLERS.



MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E.

VAPORITE

The Original Soil Insecticide, kills Wireworms, Leatherjackets and all other soil pests. Send a p.c. for illustrated descriptive Booklet No. 45, post free from the **VAPORITE STRAWSON CO., LTD.,** Dept. E, Spencer House, South Place, London, E.C.

PERPETUAL FLOWERING CARNATIONS: Britannia, Rose Dorée, White Perfection, Black Chief, Fortuna, Mrs. Burnett, etc. 3s. per doz.; strong plants; post free. Ask list. C. F. A. VAN DER SLUYS, F.R.H.S., Ramee, Guernsey.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

W. ARTINDALE & SON

Castlefolds Market, **SHEFFIELD**

MAKERS and DESIGNERS of ALPINE GARDENS

Old English Flower Borders.
Experts sent to any part.
Enquiries invited.

Our instructive and comprehensive list of Beautiful Hardy Plants sent on application. Over 200 pages of valuable information.

ONCE USED. ALWAYS USED. **The 'PATTISSON' LAWN BOOTS**

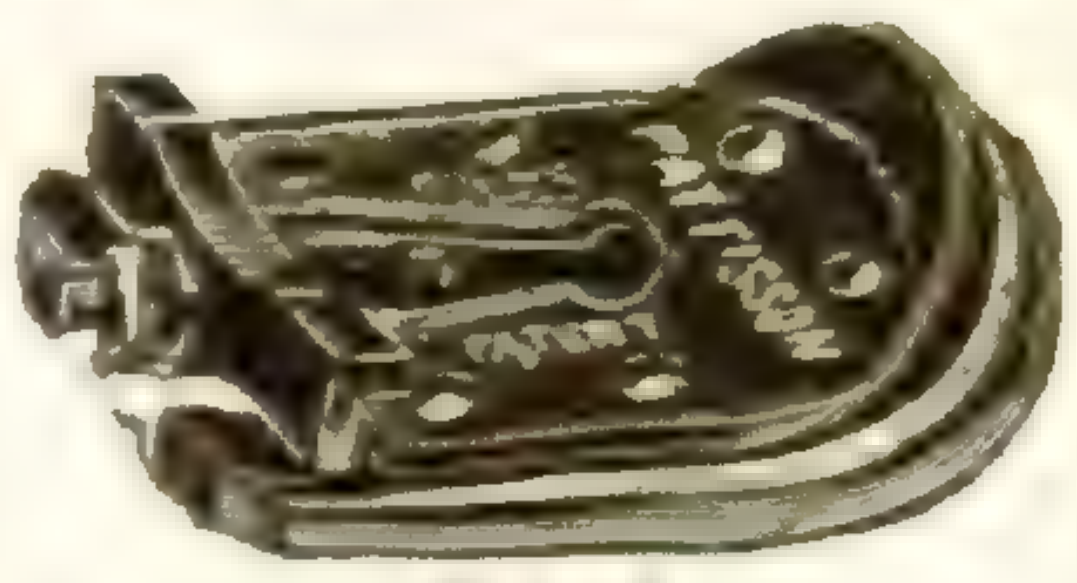


FIG. 1.

Simplest! Strongest!
Most Economical!

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS

Silver Medal—
Royal Horticultural Society.

HUNDREDS OF TESTIMONIALS.
The Field says: **"As good as anything that could be devised."**

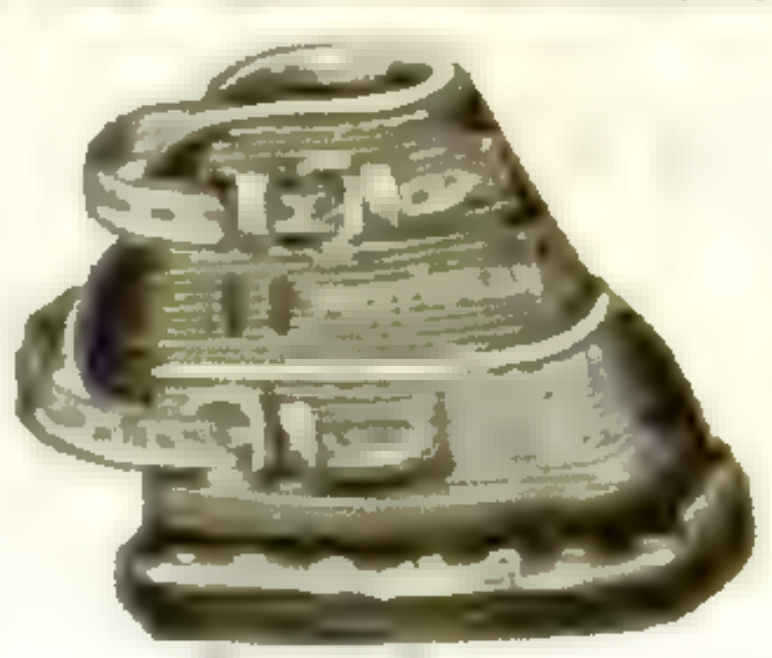


FIG. 2.

Illustrated Price List from—
H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM S.W.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Clocs Hall, Gisburn, Clitheroe.

GARDENER (Head Working, where three or more are kept).—Mr. LAST, The Gardens, Homewood, Chislehurst, Kent, can with every confidence recommend his Foreman, W. WAITE, as above; 13 years' experience, gained in good establishments; five years present situation. Married when suited.

GARDENER (Head Working. where two or more are kept); good all round; 14 years as head in large and well-kept establishments; married; age 40; excellent references. E. MAYLETT, Park Hall, Salford Priors, Evesham.

GARDENER (Head Working), life experience in all branches; land and stock if required; age 47; excellent character. WILLIAM MASKELL, School House, Lovel Road, Winkfield, Berks.

GARDENER (Head Working).—Mr. GOULD, Shernfold Park, Frant, Sussex, highly recommends his Foreman, A. DAY, as above; thorough practical experience Inside and Out; excellent references; age 30.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working, where two or three are kept; life experience; age 36; married; good reference. HALES, 8, Ivy Terrace, Old Church Road, Romford.

GARDENER (Head Working or Single-handed); married, no family; life experience in all branches Inside and Out; good references. GARDENER, 36, Clarence Place, Gravesend, Kent.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushroom, ridge or flat; Kitchen, Lawn, Flower Garden. Special Prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (Single-handed or otherwise); experienced Inside and Out; Vines, Fruit, Flowers, Vegetables; 10 years' excellent reference; abstainer; married when suited; disengaged. C. KIBBLEWHITE, Lyndhurst Lodge, The Grove, Slough, Bucks.

GARDENER (Single-handed, or with help) seeks SITUATION; 14 years' experience; good references; age 27; married, no family. BISHOP, Stockwell Hall, Billericay, Essex. (No circulars.)

GARDENER (good Single-handed, or where help is given); married, no family; age 36; good references. State wages. SMITHERS, Lion Lane, Haslemere, Surrey.

GARDENER (Single-handed or Second) seeks SITUATION; understands Fruit, Flowers, Vegetables; age 25; single; good references; seven years last place. STRUTT, 70, Croft Street, Ipswich.

COUNTRYMAN (experienced Inside and Out), 2 years present situation as second of eight; married when suited; highly recommended. Apply W. Bicher, or Head Gardener (age 28), The Gardens, Avenue House, Church End Finchley. Eastern Counties preferred.

GENTLEMAN can highly recommend JOURNEYMAN; six years in present place; age 20; Inside or Inside and Out; Bothy preferred. Address E. EASON, Merriott, Crewkerne, Somerset.

GARDENER (Under, where two or three are kept); Inside or Inside and Out; age 20; 6 years' experience. L. TYLER, Preston, near Uppingham.

GARDENER (as Inside and Out, or single-handed); experienced in fruit, flowers, and vegetables; good references; age 28. E. FOSTER, Wickham Heath, Newbury, Berks.

MR. KEITH recommends Young Man (22, single) as GARDENER (Under or Single-handed) in charge of garden and greenhouse; 6 years' experience; strong, hard-working, and obliging. Ivy House, Horton Kirby, Kent.

GARDENER (Under); private establishment or Grower Market Nursery; 14 years' experience, Inside and Out, private and nursery; good references. LEWINGTON, 169, High Street, Hampton Hill, S.W.

GARDENER (Under) seeks SITUATION, where 3 or 4 are kept; well up Inside and Out; 7 years' experience; age 21; excellent references. H. F., Ladds House, Sandhills, Witley, Surrey.

GARDENER and MOTOR DRIVER seeks SITUATION; age 29; good and long character, E., 43, Rutland Gardens, Hove.

GARDENER or GROOM-GARDENER; 9 years' experience; ride or drive; age 34; good references. Apply F. FAUTLY, Little Barnetts, Leigh, near Tonbridge, Kent.

ORCHID GROWER requires SITUATION to take charge of collection or small place where Orchids speciality; experience Burford Lodge, etc.; excellent references. Apply S. BURROUGH, Royal Gardens, Sandringham.

SCIENTIFIC and PRACTICAL HORTICULTURIST and BOTANIST requires temporary post till October; English and Tropical experience; would carry on hybridising or experimental work, Herbarium, collecting, etc.; anxious to travel. W. H., 9, Palgrave Road, London, W.

TO FLORISTS and FRUITERERS.—Disengaged MANAGER requires situation; seven years' experience; good salesman, window dresser and maker-up; excellent references. CUSSONS, care of Rennison, Low Bondend, Knaresborough.

KNIFEMAN seeks RE-ENGAGEMENT; Fruit department preferred; life experience; age 28; single; good reference. G. MORTEN, Ivanhoe, Connaught Road, Slough, Bucks.

IMPROVER in the Houses.—Gardener's son; age 20; 5 years' experience; live in Bothy; premium given. C. BLYTH, Penrice Gardens, Austell, Cornwall.

IMPROVER (17) seeks SITUATION (Inside or Inside and Out); three years' experience, Bothy preferred. HUGGETT, 33, North Albert Road, Reigate, Surrey.

SITUATION REQUIRED under a Gardener by a willing Lad; age 15. FRANK LANE, 125, Keslake Road, Kensal Rise, London, N.W.

STRONG, active LAD (16) seeks SITUATION under Gardener; 2½ years' good character. Rev. R. E. HARDING, Leysdown Vicarage, Sheppey, Kent.

YOUNG MAN (21) seeks SITUATION as Under Gardener or Improver; Inside and Out; 3 years' experience. E. HAWKER, Musbury, Axminster, Devon.

YOUNG MAN (20) seeks SITUATION in Gardens; four years' experience Inside and Out, with charge of electric plant; good references. G. STONE, North Wraxall, Chippenham.

SITUATION COUPON

To the Advertisement Manager of "The Gardeners' Magazine,"
148 & 149, Aldersgate Street, London, E.C.

For JUNE 10, 1911.

Please Repeat my Advertisement.

Name……………………………………

Address……………………………………

……………………………………

Date……………………

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue

Primulas! Primulas! Primulas!
41st Year of Distribution.
OUR WELL-KNOWN MAGNIFICENT STRAIN,
1/6 doz.; 2/6 25; 10/- 100. Package and Carriage Free.
Primula Obconica Gigantea, Cineraria (Large-flowered) and **Stellata** at same prices.
JOHN STEVENS & SON, COVENTRY.

FLOWER POTS,
SAUCERS, SEED PANS, RHUBARB AND SEAKALE POTS, RUSTIC WARE, VASES, PEDESTALS, etc., etc.
Our Pots are Low in Price and rich in Colour.
Amateurs should try our FAMOUS CRATES OF POTS.
7/6, 10/6, 15/-, and 21/-.
NO BETTER VALUE OFFERED IN THE COUNTRY
Catalogue Free. Orders sent off same day.
Buy from the Makers—
HERBERTS PARK POTTERY CO., DARLASTON, STAFFS.

EPPS'S SELECTED PEAT
For Choice Plants, Ferns, Rhododendrons, &c., &c.
SPECIAL ORCHID PEAT.
Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.
Prices on application to
EPPS & CO., Ringwood, HANTS.

MARKETS.

◆

COVENT GARDEN.

Flowers.

Supplies are large and the demand is good. Spanish irises and roses are in great request.

		s. d.		s. d.
Azaleas, white	per doz. bun.	3 0		4 0
Adiantum cuneatum	per doz. bun.	4 0		6 0
Arums	per doz.	2 0		3 0
Asparagus	per doz. bun.	10 0		15 0
Cattleyas	per doz.	8 0		12 0
Carnations	per doz.	1 6		3 0
	per doz. bun.	8 0		10 0
Croton leaves	per bun.	1 0		2 6
French fern	per doz. bun.	2 6		4 0
Gardenias	per doz.	1 0		2 6
Gladiolus	per doz. bun.	5 0		8 0
Gypsophila elegans	per doz. bun.	3 6		5 0
Iris, Spanish	per doz. bun.	5 0		8 0
Ixias	per doz. bun.	1 0		2 0
Lilac	per bun.	2 0		4 0
Lilium auratum	per bun.	3 0		4 0
,, candidum	per doz.	1 0		2 0
speciosum	per bun.	2 0		2 6
,, longiflorum	per bun.	2 0		3 0
Lily of the Valley	per doz. bun.	6 0		15 0
Marguerites	per doz. bun.	1 6		3 0
Mignonette	per doz. bun.	3 0		4 0
Myosotis	per doz. bun.	2 6		3 6
Narcissus	per doz. bun.	0 9		2 0
Odontoglossums	per doz. blms.	1 6		3 6
Pæonies	per doz. bun.	4 0		8 0
Pelargoniums	per doz. bun.	3 0		4 0
Smilax	per doz. trails	4 0		5 0
Stocks, white	per doz. bun.	3 0		4 0
Sweet Peas	per doz. bun.	2 0		5 0
Tuberoses	per doz.	0 4		0 6

Fruits.

Trade is brisk all round, supplies are good and prices steady.

		s. d.		s. d.
Apples, Australian	per case	8 6	to	16 0
,, Tasmanian	per case	8 6		16 0
Bananas	per bun.	4 0		12 6
Cherries, French	per box	1 0		2 0
Cranberries	per case	9 0		10 6
Figs	per doz.	4 0		12 0
Gooseberries	per peck	2 0		3 0
Grapes, English	per lb.	2 6		7 6
,, Belgian	per lb.	1 3		2 0
,, Australian	per case	20 0		30 0
Lemons	per case	13 0		22 0
Melons	each	1 0		3 0
Nectarines	per doz.	9 0		24 0
Oranges	per case	12 0		32 0
Jaffa	per case	12 0		14 0
,, Blood	per case	7 0		13 0
Peaches	per doz.	6 0		24 0
Pears, Australian	per case	10 0		25 0
Pineapples	each	2 0		4 6
Strawberries	per lb.	0 6		2 0

Vegetables.

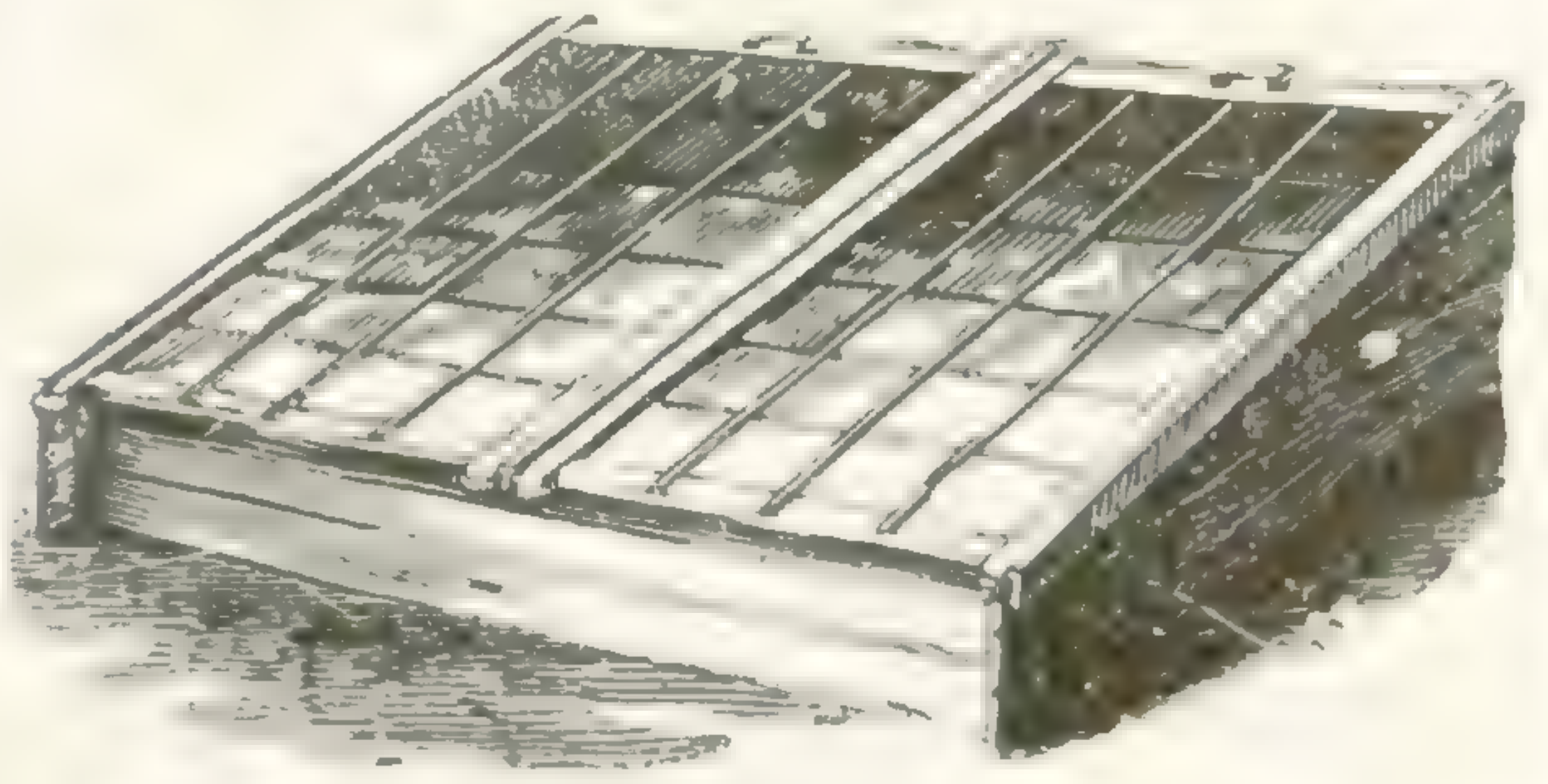
Considering that supplies are unusually large business is excellent.

		s. d.		s. d.
Artichokes, Globe	per doz.	1 6	to	4 0
,, Jerusalem	per ½-sieve	1 0		1 6
Asparagus	per bundle	0 8		10 0
Beans, Jersey	per lb.	0 6		0 10
Beet	per bush.	1 0		2 6
Cabbages	per doz.	0 9		1 3
Carrots, new	per pad	2 0		2 6
Cauliflowers	per crate	4 0		7 0
Chicory	per lb.	0 3½		0 4
Cucumbers	per flat	6 0		7 6
Endive	per doz.	1 3		3 0
Horseradish	per doz. bun.	9 0		12 0
Lettuce	per doz.	0 6		1 [illegible]
Marrows	per doz.	5 0		6 0
Mint	per doz. bun.	1 0		1 6
Mushrooms	per doz. lb.	6 0		12 6
Onions, Egyptian	per case	4 6		5 6
,, Spanish	per case	5 0		6 6
Parsnips	per bag	1 0		1 3
Parsley	per ½-sieve	1 0		1 3
Peas, Jersey	per lb.	0 6		0 8
Radishes	per doz. bun.	0 3		1 0
Rhubarb	per doz. bun.	0 10		1 6
Spinach	per bush.	0 9		2 0
Tomatoes, Canary	per crate	10 0		20 0
,, English	per lb.	0 8		0 10
Turnips	per bag	2 0		2 6
,, French	per doz. bun.	1 6		2 0
Watercress	per doz. bun.	0 6		0 6½

LONDON POTATO MARKETS.

The demand is about equal to the supply and prices are steady.

		s. d.		s. d.
Evergood	per ton	85 0	to	95 0
King Edward	per ton	95 0		110 0
Maincrops	per ton	100 0		115 0
President	per ton	85 0		90 0
Up-to-Date	per ton	90 0		110 0
[illegible]	per cwt.	22 0		25 0
[illegible]	per cwt.	11 0		15 0
[illegible]	per box	6 0		7 [illegible]



PORTABLE
CUCUMBER FRAMES.
OUR WELL-KNOWN MAKE.

These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.

		£ s. d.
1-light 4 ft. by 6 ft.	*CASH PRICES.*	2 0 0
2-light 8 ft. by 6 ft.		3 0 0
3-light 12 ft. by 6 ft.		4 2 6
4-light 16 ft. by 6 ft.	*CARRIAGE PAID.*	5 5 0
5-light 20 ft. by 6 ft.		6 7 6
6-light 24 ft. by 6 ft.		7 10 0

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON, MANCHESTER.

SANDWITH'S
PREMIER
WEED
KILLER

THE FAVOURITE WEED KILLER.

As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for 6/-; drum, 2/-. 12 galls. for 16/-; drum, 6/-. 20 galls. for 26/8; drum, 10/-. 40 galls. for 50/-; drum, 20/-.

EITHER LIQUID OR POWDER.

Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,
The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price £3 10s. per ton in bags at works. Lots under 10 cwt. 4s. per cwt. at works; or 5s. per cwt., carriage paid to any station in England.

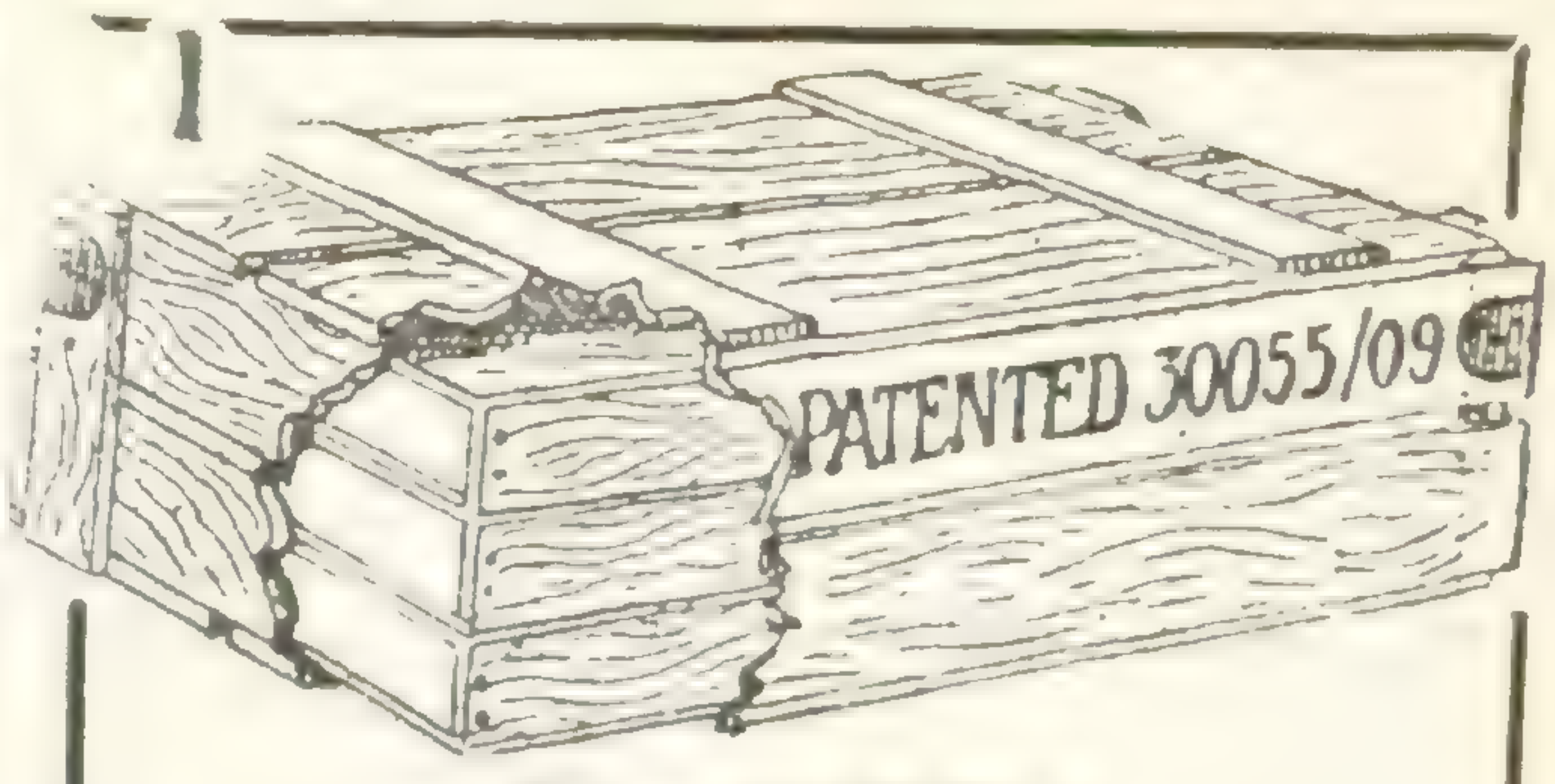
Extracts from 35th annual collection of reports:—
NATIVE GUANO for POTATOES, VEGETABLES, etc.

A. J. Beard, Erdington: "Potatoes, splendid, free from disease. Best I ever had."—H. Chester, Nantwich: "Best onion manure I ever used. Grand for onion fly."

NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc.
J. Cant, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. Frampton, Titchfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED**, 29, New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted.

FOR ROSE MILDEW
use
V2K FLUID
THE BEST REMEDY FOR THIS PERSISTENT PEST.
Does not discolour the foliage.
OF AGENTS EVERYWHERE.
Sole Mfrs., Willm. Cooper & Nephews, Berkhamsted.



Use DAY'S
Fruit Trays & Crates

No more damaged fruit. If properly packed it is impossible for it to get damaged.

The trays hold about 3lb. of Strawberries, Gooseberries, or Cherries, and are non-returnable, price 2d. each. The Crates are 1s. 6d. each, and may be returned to growers for renewals. C.W.O.

They are strongly made, and growers speak very highly of them.

R. D'E. DAY, THE NURSERY, SUTTON SCOTNEY, HANTS.

THOMSON'S Celebrated
VINE PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES
SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE.

HAYWARD'S
Eureka
WEED KILLER

insures clean paths, best known and most satisfactory. It is no new experiment. A Weed Killer that can be thoroughly relied upon to keep paths clear for 12 months with one dressing is most helpful, but under-strength articles with no reputation are an aggravation. The "Eureka" is sold everywhere, 1/9 for 100 sq. yards, 6/- for 400 yards, 49/- for 4,000 yards; intermediate sizes at suitable prices. The "Eureka" Lawn Sand, Soilfume, Quassia Extract, Bordeaux Mixture, etc., have been in regular use for years, and there is no better value. If any difficulty in obtaining apply only makers, TOMLINSON and HAYWARD, Ltd., Lincoln.

"EUREKATINE"
is the satisfactory fumigant for destroying
Greenhouse Pests.

THE NATIONAL HARDY PLANT SOCIETY.

If you are interested in Hardy Plants write for particulars of the Society to the Hon. Secretary—FRANK BOUSKELL, Market Bosworth, Nuneaton.

W. RICHARDSON & CO.,

MANUFACTURERS OF ALL KINDS OF

HORTICULTURAL BUILDINGS. Also HEATING ENGINEERS.

Recent Contracts for Horticultural Buildings and Heating include the following :—

H. M. Commissioners of Public Works, Royal Hospital, Dublin.
H. M. Office of Works, New Head Post Office, Newcastle-on-Tyne.
His Grace The Duke of Grafton, Wakefield Lodge, Stoney Stratford.
The Rt. Hon. The Earl of Donoughmore, Knocklofty, Clonmel, Ireland.
The Rt. Hon. The Earl of Durham, Lambton Castle, Durham.
The Rt. Hon. The Earl of Listowel, Convamore, Ballyhooly, Co. Cork.
The Rt. Hon. The Earl of Scarborough, Lumley Castle, Co. Durham.
The Rt. Hon. Lord Barnard. Raby Castle, Barnard Castle.
The Rt. Hon. Lord Glanusk, Glanusk Park, Crickhowell.
The Rt. Hon. Jonathan Hogg, Stratford, Rathgar, Co. Dublin.
The Rt. Hon. Lord Ravensworth. Eslington Park, Whittingham [Northumberland.
W. A. Whitehead, Esq., Langley, Baildon, Yorkshire.
The Hon. Robert James, St Nicholas, Richmond, Yorks.
His Excellency Monsieur Tzokow, 21, Queen's Gate, London, S.W.
Lady Palmer, Grinkle Park, Loftus-in-Cleveland.
Sir William Eden, Bart., Windlesham Hall, Ferryhill.
Sir Lindsay Wood, Bart., The Hermitage, Chester-le-Street.
Sir Reginald Graham, Bart., Norton Conyers, Melmerby.
The Royal Horticultural Society, Wisley, Ripley, Surrey.
Colonel Napier Clavering, Axwell Park, Northumberland.
Colonel Scott, Penmaenucha, Dolgelly.
Major Stobart, Spennithorne House, Spennithorne, Leyburn.
Captain Freeman. Coulby Hall, Ormesby.
Captain Wainman, Otterington Hall, Northallerton.
Mrs. Lloyd Jones, Vronhaul. Llandinam.
Hy. Mitcheson, Esq., Baxterley, Atherstone.
W. Warde Aldam, Esq., Frickley Hall, Doncaster.
E. G. Wheler, Esq., Claverdon Leys, Warwick.
P. H. Ashworth, Esq., Horsley Hall, Gresford.
The Rev. James Farmer, Lucan House, Ripon.
Mrs. Jones, Glandenys, Lampeter.
R. A. England, Esq., Englethwaite Hall, near Carlisle.
The Rev. W. Ingham, The Vicarage, Old Malton, Yorkshire.
James Maunsell, Esq., Patrickswell, Co. Limerick, Ireland.
The Rev. J. Murray Dixon, Swithland Rectory, near Loughborough.
David Davies, Esq., M.P., Llandinam, Montgomeryshire.
David Richardson, Esq., Wheelbirks, Stocksfield-on-Tyne.
C. Lingford, Esq., Lancelands, Cotherstone.
E. W. Parker, Esq., Skirwith Abbey, Penrith.
C. L. B. Robinson, Esq., Brettanby Manor, near Darlington.
G. P. Roddam, Esq., Newtown, Stanhope.
H. Costobadie, Esq., Overdale, Mottram, Manchester.
I. J. Dewhurst, Esq., Whinmoor Lodge, Seacroft, Leeds.
J. Rossiter Hoyle, Esq., Grange Cliffe, Ecclesall, Sheffield.
W. Brown, Esq., Larne, Co. Antrim.
Mrs. Powell Price, Morganwg, Brecon.
W. J. Sharp, Esq., Bleasdale House, Silverdale, Carnforth.
F. Hartley, Esq., May Lodge, Bridlington.
J. A. Forster, Esq., Fernlands, Chertsey, Surrey.
W. Robson Hindmarsh, Esq., Ulleskelf.
J. W. Richardson, Esq., Sowerby Grange Thirsk.
Hugh C. Fairfax Cholmeley, Esq., Brandsby Hall, Easingwold.
Harrison Benn, Esq., Holcombe Hall, Dawlish.
Miss Watt, Spott House, Dunbar.
W. Loudin MacNeill, Esq., Shennanton, Kirkcowan, Wigtownshire.
W. H. St Quintin, Esq., Scampston Hall, Rillington, Yorks.
St. Mary's Convent, Chiswick.
The John Copeland Hospital, Gainsborough.
Ackworth School, Pontefract.
Shaftesbury Theatre, Shaftesbury Avenue, London.
Durham Cathedral, Durham.

LONDON OFFICE :—Belgravia Chambers, Victoria Street, S.W. TELEGRAMS { "Richardson," Darlington. "Horticraft," London. NATIONAL TELEPHONE } 17 Darlington.

LOWEST PRICES FOR GARDEN FRAMES AND WOOD LATH BLINDS.

PLANS and ESTIMATES PREPARED FREE of COST.

Representatives sent to any part of the Kingdom to advise and take particulars.

DARLINGTON.

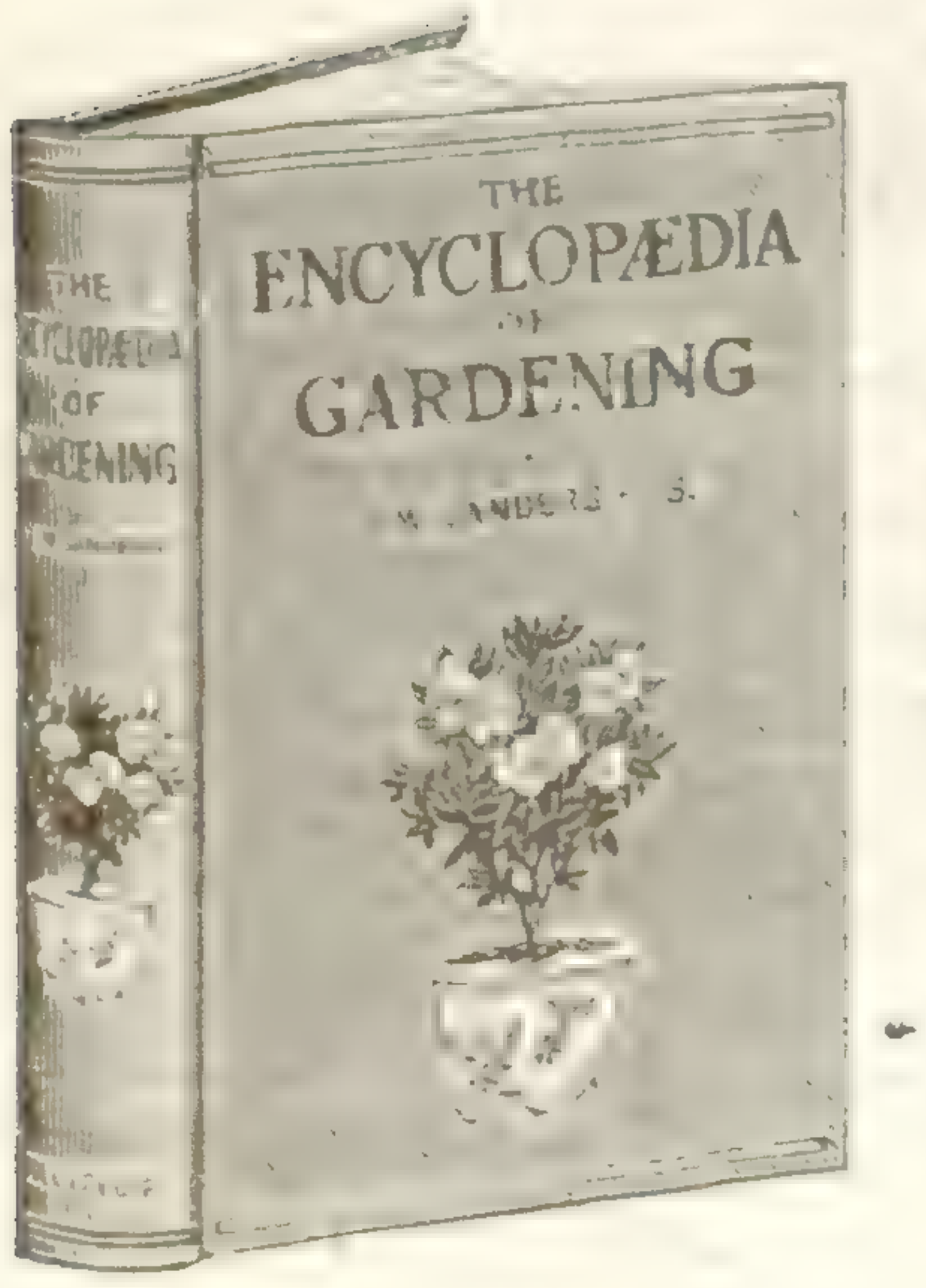
No Garden Library is Complete without this Book.

The Culture of any Flower, Fruit or Vegetable at a Glance.

THE ENCYCLOPÆDIA OF GARDENING.

Crown 8vo, 482 pages bound in cloth. NET 3/6; by Post, 3/10.

By T. W. SANDERS, F.L.S., F.R.H.S.
Editor of "Amateur Gardening."



FOURTEENTH — EDITION. —
Revised and Improved.

A COMPLETE GUIDE AND DICTIONARY to the Culture, Propagation and Description of Flowers, Fruit, Vegetables, Plants, Trees, Shrubs, etc.

. . . INCLUDING . . .

Time of Planting.
Position.
Soil.
Manures.
Temperatures.
Common or Popular Names.
Botanical Names.
Watering.
Natural Order.
Date of Introduction.
Species Cultivated.
Propagation.
Colour.
Height.
Time of Flowering.
Duration.
Forcing.
Potting.
Pruning.
Cultural Details.

"Gardeners who want a really practical dictionary of their art will find all they need in this work."—*Sheffield Independent.*

☛ *Send Postcard for complete Catalogue of Books on all Garden Subjects.*

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE," 148 & 149, Aldersgate St., E.C.

Please send me a Copy of the New Edition of "THE ENCYCLOPÆDIA OF GARDENING," by post, for which I enclose remittance of **3/10.**

Name ....

(G.M.) Address ....

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

SOME FAMOUS EDINBURGH GARDENS—Illustrated.

THE GARDENERS' MAGAZINE.

No. 3,006.
Vol. LIV.
(Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.)
SATURDAY, JUNE 10, 1911.
(10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S SEEDS FOR JUNE SOWING.—Finest strains of Antirrhinums, Aquilegias, Campanulas, Canterbury Bells, Calceolarias, Cinerarias, Delphiniums, Hollyhocks, Lupins, Pansies, Primulas, Stocks, Wallflowers, etc. Special list on application. BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

DOUGLAS'S PERPETUAL CARNATIONS British and American. Magnificent Stock of robust plants, now ready, all in perfect health, and guaranteed to give satisfaction. From 9s. per dozen. J. DOUGLAS, The Carnation Specialist, Edenside, Gt. Bookham, Surrey.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, S.W., wishes to call the attention of his customers, and of gardeners generally, to his Fruit Tree Protectors. Photographs and Blueprints of these, with prices, will be sent on receipt of a postcard, telephone message (201 Western), or wire "Gray, Chelsea, London."

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES and ORCHARD HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

GREENHOUSES and GARDEN FURNITURE.—Distinctive Designs and Finished Workmanship. Write NOW for illustrated Catalogue. CARTER and HOWARD, Fife House, Kingston-on-Thames.

MUSHROOMS.—Now is the time to plant Spawn in pastures. To protect the crop by making it a cultivated one, get BARTER'S Specially-prepared Spawn, with instructions, in 10s. 6d., 21s., and 42s. cases. Carriage paid. Cash with orders to
JOHN F. BARTER, LTD., Wembley, Middlesex.

PERPETUAL - FLOWERING CARNATIONS. Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals and 3 Silver Cups, 1906-1910.
H. BURNETT,
Carnation Specialist, Guernsey.

PERENNIALS, UNIQUE COLLECTION,
including
ALPINES AND AQUATICS.
Also RARER SHRUBS, HIMALAYAN RHODODENDRONS, and Others.
Write for Catalogue. G. REUTHE, Keston, Kent.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-work, showing screens, wall panels, window surrounds, arches, arbors, etc., post free. BOULTON and PAUL, Ltd., Norwich.

FRUIT SAVED.—GARDEN NETTING as supplied by us to the Royal Gardens. SMALL MESH, satisfaction or cash returned. 100 by 1 yd., 2s. 4d. Any length and width supplied. Cheaper quality on [illegible].
POTTER BROS.,
Dept. M, Net Makers, Shrewsbury. Est. 1855.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint, [illegible] per gall. "[illegible]" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

WEBBS' CHOICE FLOWER SEEDS FOR PRESENT SOWING.
Rose Queen Antirrhinum (rose), 1s. per pkt.
Sceptre Antirrhinum (crimson), 1s. per pkt.
Guinea Gold Antirrhinum (yellow), 1s. pkt.
Golden Spur Aquilegia (golden yellow), 1s. pkt.
Pink Beauty Sweet William, 1s. per pkt.
Invincible Sweet William (mixed), 1s. per pkt.
Giant Crimson Polyanthus, 1s. per pkt.
Giant Yellow Polyanthus, 1s. per pkt.
Universal Wallflower (mixed), 1s. per pkt.
Double Mixed Wallflower, 1s. per pkt.
WEBB AND SONS, The King's Seedsmen,
WORDSLEY, STOURBRIDGE.

BUNYARD'S NEW CATALOGUES.
The following have been recently published, and contain all worthy new varieties. Post free on application.

BUNYARD'S CLIMBING PLANTS in Pots. Illustrated.

BUNYARD'S HERBACEOUS PLANTS, Illustrated.

BUNYARD'S BEDDING PLANTS. Illustrated.

GEO. BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.

LAXTON'S FRUIT TREE, STRAWBERRY, SEED, ROSE, HERBACEOUS, TREE, BULB, and SMALL FRUIT CATALOGUES, with full illustrations and descriptions, gratis on application.
LAXTON BROTHERS, Bedford.

RUSTIC SUMMER HOUSES, trellis-work, Fencing, Pergolas, Arches, Seats, Bridges, Log Cabins, Loggias, etc. Send for our new LOG CABIN and RUSTIC CATALOGUE (just published), sent post free. BOULTON and PAUL, Ltd., Norwich.

CLAY'S MANURES, CRUSHED BONES
(See page xv.)

CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

POULTRY AND KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

NOTICE.—Always use PORTER'S IMPROVED COIL STAKES for Carnations, no tying required, last a lifetime. Sample doz. with price list 1s., carriage paid. A. PORTER, Stone House, Maidstone.

ORCHID PEAT.—Hardwood Brown Fibrous, RHODODENDRON and DUST PEAT, SPHAGNUM MOSS.
Apply C. HALL, 1, Worgret, Wareham, Dorset.

GARDEN NETTING (best tanned only).—25 yds. x 8 yds.; 50 x 4 yds.; 100 x 2 yds., 8s. each. 50 x 2 yds., 25 x 4 yds.; 100 x 1 yd., 4s. each. All sizes, large or small, at 1s. 20 sq. yds. Quality guaranteed.—EVANS, 14, Beresford Rd., Lowestoft.

CONSERVATORIES AND WINTER GARDENS, Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue free. BOULTON and PAUL, Lim., Norwich. See our stand at the Royal Agricultural Society's Show, to be held at Norwich in June.

GARDEN ROLLERS, double cylinders, solid ends, rounded edges. 14in. by 14in., 1½cwts., 24s. 6d.; 16in. by 16in., 2cwts., 26s.; 20in. by 20in., 3cwts., 36s.; 24in. by 24in., 4½cwts., 75s. each, carriage paid any station in Great Britain. Lists free. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach Houses, Portable Buildings, etc. Catalogue gratis.

SUTTON'S PINK BEAUTY SWEET WILLIAM. Beautiful salmon pink colour. This variety deserves to be grown in every garden.
Per packet, 1s. and 1s. 6d., post free.
"Mrs. Brace must say how splendidly Sutton's Pink Beauty Sweet William is blooming. Crowds of people come to see it in her garden." Sunnycroft.

SUTTON'S SCARLET SWEET WILLIAM. A most remarkable colour. Flowers being of an intense scarlet.
Per packet, 1s. and 1s. 6d., post free.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

NOW IS THE TIME TO PLANT KELWAY'S GAILLARDIAS, the rich golden blooms of which are noted for their powers of endurance during the driest season, and as cut flowers retain their freshness and beauty long after they have been gathered. They flourish with a minimum of attention, and give abundant bloom the same year that they are planted. Choice named collections, 12s. and 18s. a dozen.

KELWAY and SON, The Royal Horticulturists, LANGPORT, SOMERSET.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
From ———, Esq., Guildford.
"I may say that your Illustrated Catalogue is without doubt the finest book of the sort I have had the pleasure of seeing."

100,000 CACTUS DAHLIAS, new Paeony-flowered Dahlias, Chrysanthemums, American Tree Carnations, and Violas; all exceptionally good, strong plants and best varieties, grown especially for exhibitors. Send for catalogues, gratis, and post free.—JOHN E. KNIGHT, Nurseryman, Wolverhampton.

JAMES SENDALL and CO., Cambridge; Conservatories, Vineries, Garden Frames; Heating Engineers. Surveys made, and Plans prepared to suit any position. Illustrated List free. Telegrams: "Sendall, Cambridge." 'Phone, 311.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page iii.

CARNATIONS. Spiral Wire Stakes. No tying required. Will last a lifetime. 24 inches long, 7s. 6d. per 100; 30 inches, 8s. 6d. per 100; 36 inches, 10s. per 100; sample doz., 1s., 1s. 3d., and 1s. 9d., all carriage paid. Pea Trainers, 6ft. by 4ft., 2s. and 3s. each. Garden Archways, Garden Edge and Croquet Bordering, 8 inches high, 8d.; 10 inches high, 10d. per yard. All cash with order. Catalogue free on application. J. PENKETH, Iron and Wire Works, Market Place, Manchester. Telp.: 3695 City.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.
XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.
XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown both poisonous and non-poisonous are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N.S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

BEDDING PLANTS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Chrysanthemums, Dahlias and Summer-Bedding Plants.

CARNATIONS.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

ROSES.

R. H. BATH, Ltd.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

SAMUEL M'GREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

Primulas! Primulas! Primulas!

41st Year of Distribution.

OUR WELL KNOWN MAGNIFICENT STRAIN,

1/6 doz.; 2/6 25; 10/- 100. Package and Carriage Free.

Primula Obconica Gigantea Cineraria (Large-flowered) and **Stellata** at same prices.

JOHN STEVENS & SON, COVENTRY.

FLOWER POTS,

SAUCERS, SEED PANS, RHUBARB AND SEAKALE POTS, RUSTIC WARE, VASES, PEDESTALS, etc., etc.

Our Pots are Low in Price and rich in Colour. Amateurs should try our FAMOUS CRATES OF POTS.

7/6, 10/6, 15/-, and 21/-.

NO BETTER VALUE OFFERED IN THE COUNTRY

Catalogue Free. Orders sent off same day.

Buy from the Makers—

HERBERTS PARK POTTERY CO., DARLASTON, STAFFS.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to

EPPS & CO., Ringwood, HANTS.

1911 Edition. The Book you need now!

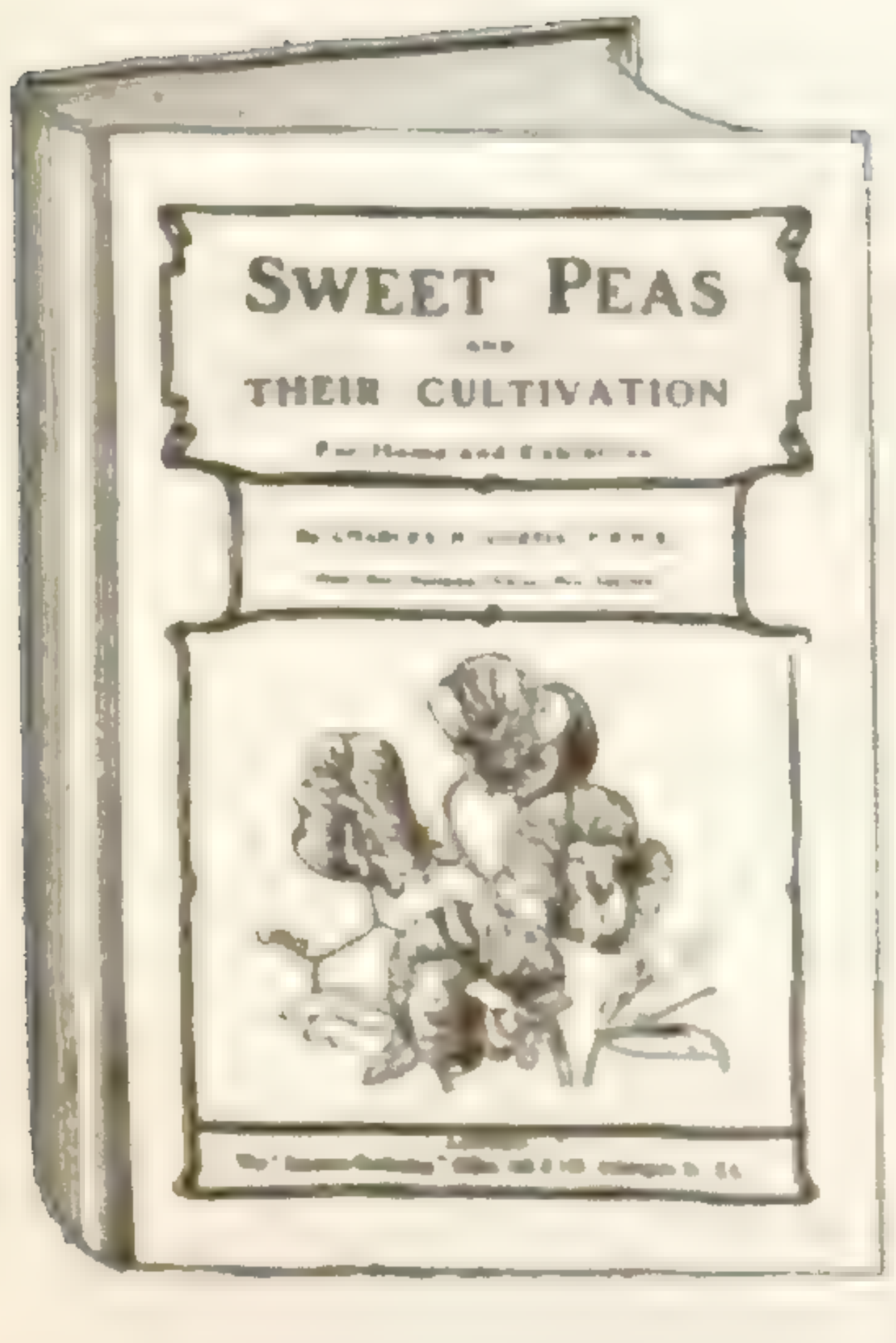
One Shilling: free by post, 1/2. Bound in cloth, 1/6; by post, 1/8.

SWEET PEAS AND THEIR CULTIVATION.

FOR HOME AND EXHIBITION.

By CHARLES H. CURTIS, F.R.H.S.,

Hon. Secretary National Sweet Pea Society.



PREPARATION OF SOIL.
SEEDS AND SEED SOWING.
WATERING AND MANURING.
GENERAL MANAGEMENT.
HOW GROWN IN TUBS AND POTS.
WINTER-FLOWERING SWEET PEAS.
STAKING AND TYING.
SWEET PEAS FOR SCREENS AND WINDOWS.
THE BEST SWEET PEAS.
RAISING NEW VARIETIES.
CULTURE IN CONSERVATORY.
CUPID AND BUSH SWEET PEAS.
VASES AND STANDS.
POINTS FOR EXHIBITORS.
DEVELOPMENT OF SWEET PEAS.
DISEASES AND PESTS.
ETC., ETC.

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE,"
148 and 149, Aldersgate Street, E.C.

Please send me "SWEET PEAS AND THEIR CULTIVATION" *by Post, for which I enclose remittance of* 1s. 2d. (*if bound in cloth,* 1s. 8d.).

Name ....

Address ....

Sales by Auction.

SALES NEXT WEEK.

FRIDAY NEXT, June 16th, at Two o'clock.—Special Sale of a grand collection of Old Dwarf Japanese Trees and Flowering Plants, Japanese Garden Hats, together with 19 Tree Fern Stems in variety.

FRIDAY NEXT, June 16th at Quarter to One o'clock.—The following importations of Orchids, comprising 1,800 Cattleya Mossiæ, 2,500 Miltonia Vexillaria, large flowered, deep coloured type, 200 Cattleya Dowiana, 150 Catasetum Saccatum, Brassavola Grandiflora, Peristeria Elata, etc.; all in fine condition. Established Orchids. Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view mornings of sale and catalogues had.

NOTICE.

The **AZALEAS and RHODODENDRONS** planted in Hyde Park, near Rotten Row, finest to be seen in London, are supplied by **ANTHONY WATERER**, whose only address is **Knap Hill Nursery, Woking, Surrey.**

No connection with any other firm of similar name.

PERPETUAL FLOWERING CARNATIONS: Britannia, Rose Dorée, White Perfection, Black Chief, Fortuna, Mrs. Burnett, etc. 3s. per doz.; strong plants; post free. Ask list. C. F. A. VAN DER SLUYS, F.R.H.S., Ramee, Guernsey.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S W.

CHARGES FOR ADVERTISEMENTS IN

THE GARDENERS' MAGAZINE.

	£	s.	d.
Five Lines and under	£0	2	6
Per Line beyond	0	0	6
,, Inch	0	6	0
,, Half Column	1	10	0
,, Column	8	0	0
,, Page	9	0	0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— & Co.

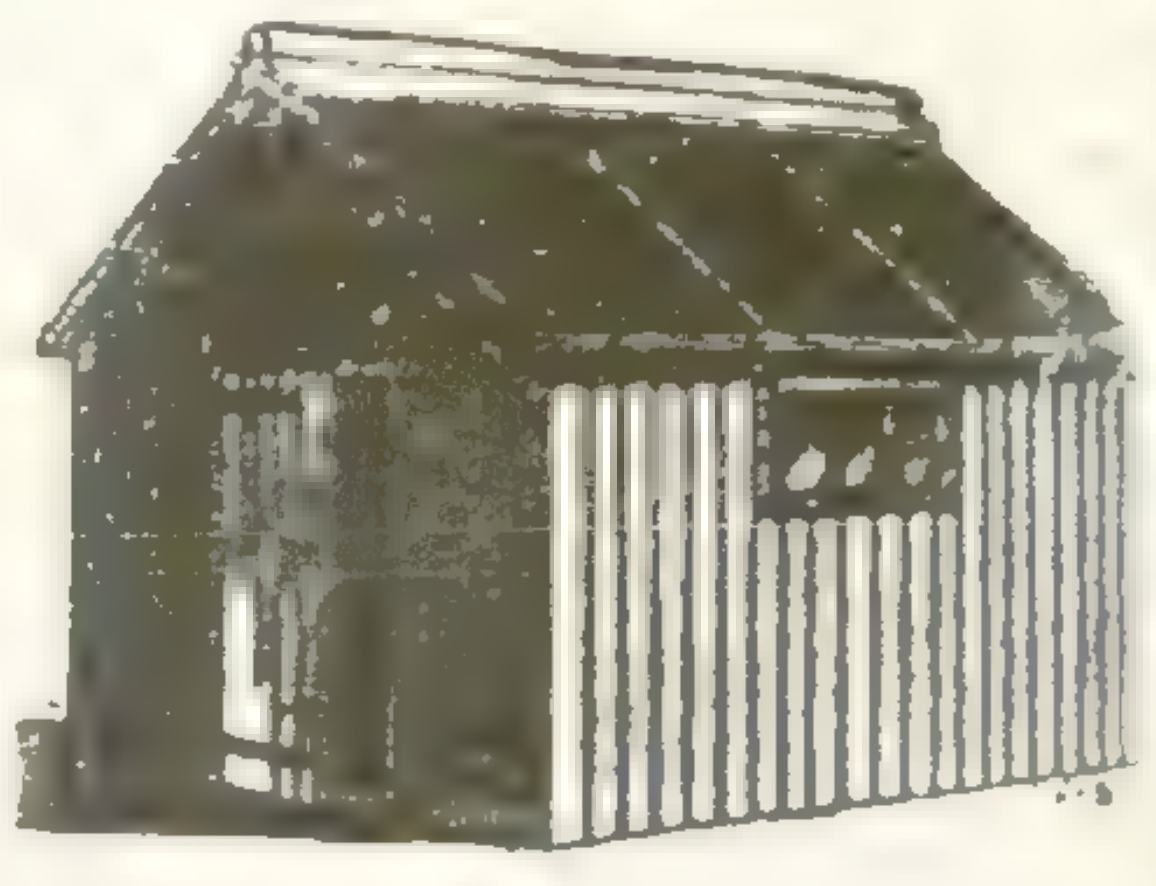
Telephone Numbers:

Editorial and Printing Depts. .. ... 831 Holborn.
Advertising and Publishing Depts. ... 2140 Holborn.

Offices: 148 and 149, Aldersgate Street, London.

THE CHEAPEST IN ENGLAND.

NO. 86.



Copyright Registered.

PORTABLE BUILDINGS. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

Sizes.		Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/6
8ft. long, 6ft. wide, 8ft. high	£2 10 6	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.

Largest Makers of Portable Buildings,

ESTABLISHED 70 YEARS. **BEDFORD.**

Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

PERPETUAL CARNATIONS.—Everyone interested in PERPETUALS should write for our 1911 Illustrated Catalogue, FREE. Read our "TREATISE ON CULTURE," 1s., post free. YOUNG and CO., Carnation Specialists, HATHERLEY, CHELTENHAM

PINGUICULA GRANDIFLORA, beautiful purple blossom. Good plants in bloom, 2s. a dozen, post free. RECTOR, Kilgobbin Rectory, Camp, R.S.O., Co. Kerry, Ireland.

FIGS, VINES, for fruiting and planting. Please write for sizes and prices.

WILL TAYLER, Hampton, Middlesex.

BEGONIAS.—Started Begonias, 12s.; 16s. 100. Gerberas, Adnet's Hybrids, Seed, 1s. 6d.; plants, 15s., 20s. doz. Japanese Davallia Ferns. Badgers, Elephants, Rabbits, Squirrels, Monkeys, Balls, etc., from 2s. ELLISON, 57, West Bromwich.

POINSETTIAS, established in small pots, clean and strong, 2s. 6d. per dozen, 18s. per 100; cash with order. JOHN BURCH, Staple Hill Nursery, Bristol.

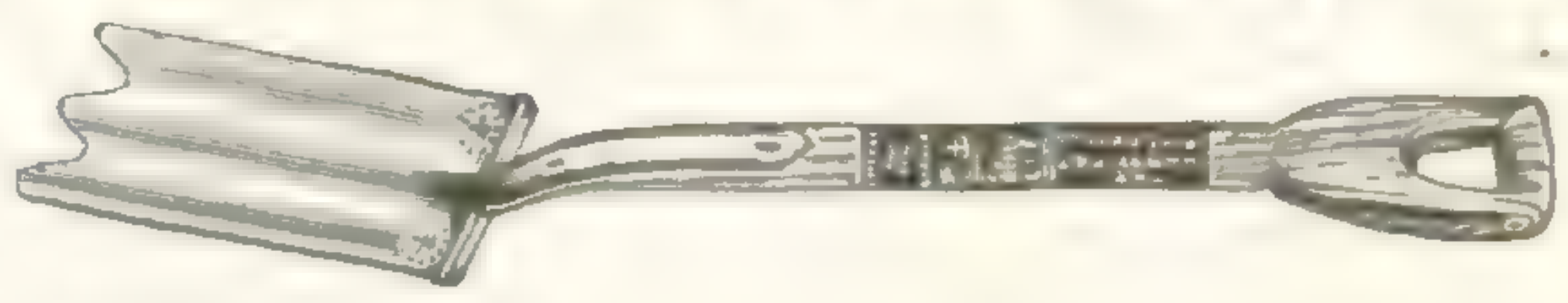
RARE ALPINES CHEAP.—Profits devoted to Patriotic objects. Apply for list, LADY C., The Abbey, Much Wenlock, Shropshire, and please enclose fully addressed and stamped envelope.

THE NATIONAL HARDY PLANT SOCIETY.

IF you are interested in Hardy Plants write for particulars of the Society to the Hon. Secretary—FRANK BOUSKELL, Market Bosworth, Nuneaton.

THOMSON'S Celebrated
VINE PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES
UNRIVALLED for ALL PURPOSES
SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE.

A NEW GARDEN SPADE (Carter's Patent).



This is claimed to be the most effective Spade on the market Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

GARDEN AND TENNIS NETS (best) tanned only, small mesh).—50 x 8yds., 17s.; 25 x 8yds., 50 x 4yds., 100 x 2yds., 8s. each; 100 x 1yd., 50 x 2yds., 25 x 4yds., 4s. each. Any size to order. Tennis Netting (corded), 25 x 2, 6s. 6d.; 25 x 3, 7s. 6d.; 25 x 4yd., 8s. 6d. Write for Price List. L. WREN and SON, Net Merchants, 139, High Street, Lowestoft. Established 1863.

BOTTLING FRUIT. Patent Apparatus Complete. **5/6**

Efficient, Reliable, Simple, Easily Operated.

WICKHAM and Co., Dept. M, Ware, Herts.

CORONATION WORK

Apply to JULES DE COCK, Nurseryman, in Meirelbeke (Belgium), for special offer in large Palms, Dracænas, Bamboos, Bay Trees, Standards, or Pyramids, in all sizes.

BEGONIA PHOSPHORESCENS. The best small flowering double scarlet tuberous variety for bedding; strong plants from single pots ready end of May, 3s. 6d. doz., 25s. 100. W. STACEY, Nurseries, Dunmow.

SEED BOXES.—12 x 9 x 2in. timber, 8s. 9d. gross, made 10s. 3d.; 15 x 9 x 2in., 10s. 3d., made 11s. 9d.; also flower sticks, trellis, greenhouses, garden lights, or timber of all description. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

SMITH'S WEED KILLER
is absolutely "PERFECT".
4 Tins of Powder or
4 Gallons of Liquid
to make 100 Gallons.
6/6 Carriage Paid.
MARK SMITH, Ld. *Louth, Lincolnshire.*

PUBLISHERS' ANNOUNCEMENTS.

THE GARDENERS' MAGAZINE may be obtained by order from all Newsagents, price Twopence, every Saturday. If any difficulty be found, a copy will be posted weekly direct from the Publisher, 148 and 149, Aldersgate Street, London, on the following terms: Twelve Months, 10s. 6d.; Six Months, 5s. 6d.

INDEX and Title Page to Vol. LIII. (comprising the weekly numbers from January to December, 1910), price 2d., by post 2½d.

BINDING CASES for binding the 12 months' numbers green cloth, ornamented in gold, price 2s., post free.

GLASS. | GLASS. | GLASS.

NICHOLLS & CLARKE, LTD.

Shoreditch, LONDON.

PAINT. Our List of PAINTS, COLOURS, VARNISHES, and BRUSHES on Application.

When sending please cut out this advt.

SUBSCRIBER'S ORDER FORM

Every Saturday THE GARDENERS' MAGAZINE. Twopence

To W. H. AND L. COLLINGRIDGE,
148 AND 149, ALDERSGATE STREET, LONDON, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose________for________months in advance.

Name________________

Address________________

Date________________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

* * If a receipt is required for amounts under 10s. a stamped envelope should be forwarded

VOL. LIV.—No. 3,006. SATURDAY, JUNE 10, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

The Evolution of Flowers.

In visiting our present-day floral exhibitions, such as we have recently seen at the Temple, one of the chief things which strike the thoughtful student of Nature is the truly marvellous capacity of flowers to respond to selection, and by such response, in many cases, to become altogether transformed from their original primitive type. It is quite true that there are exceptions to this in the case of plants which by purely natural evolution have become so elaborate and so beautiful as to rival the finest results of human selection, such as the Gloriosas, Tacsonias, and other grand tropical productions, but these nowadays are greatly in the minority, and the bulk of the flowers we see owe their brilliancy and splendour almost entirely to man's influence in selective breeding. Even Nature's masterpieces, to which we have alluded, are rarely long under cultivation before variation occurs and novelties are brought forward as rivals for supremacy, and in the large majority of instances the end result of this is that in time the normal falls into the background and its descendants alone monopolise popular attention. Thus it is, for instance, with those wonderful tulips which figured so largely at the Temple. It would have been an instructive lesson could the normal wild flowers from which they have descended been exhibited alongside, such as was done some years ago with the chrysanthemum. In them we should see an uniform tint in each species, instead of an infinite variety ranging from snowy white to the nearest approach to jet black which flowers can be induced to adopt; and it is here that we get a glimpse of the fact that human selection and natural selection are effected on very different lines. Nature has evolved all her floral beauty to one particular end, viz., as an aid to reproduction. Brilliancy of colour is primarily due to insect tastes, and, judging by many of the results, those tastes must be fairly æsthetic. Where would a black tulip come in on those lines? Assuming the dark colour to have been arrived at progressively, it is clear that the first approaches thereto would have involved a marked dimming of that conspicuous lustre which the natural tulip mostly displays, and that hence any tendency in that direction would have seriously handicapped the reproduction of the strain. Man, however, conceived the notion that a black tulip would be, if not beautiful, at any rate a valuable curio, and hence in the days of the great tulip mania, every approach to that desired end was hailed with delight, greater and greater nigritude rewarded the selector, and finally success was attained so far as an intense purplish black is concerned. But, after all, the popular taste so far agrees with the entomological one that it far and away prefers the brilliant scarlets and yellows and exquisitely feathered and flushed varieties to this swarthy example of misapplied perseverance. Could we imagine Dame Nature accompanying us in lady-like form round the exhibition tents at the Temple we should probably hear numerous drastic criticisms of many of our floral triumphs. The all-important and all-essential aim of seed production is entirely ignored in all the myriads of double flowers we behold. In Nature's eyes they are mere attractive gauds to no effective purpose, and, if handed over to her tender care, would either speedily die out or survive only by reversion to her own original type. The beauty by itself to her is nothing; it must, from Nature's point of view, be a means to an end, and that end the survival of the race. With man's selection, it is true, it is a means to an end, but that end is his own profit or pleasure, not the individual advantage of the plant concerned, and if it bear no seed at all, he is quite content if it can be propagated by cuttings or layers. In point of fact, he has so manipulated many of his triumphs by crossing and hybridising that even if they bear seed that seed is so fraught with mixed influences that he cannot at all rely on the reproduction of the parental form in its integrity. Nature, however, has been kind enough to encourage these outrages upon her laws by every now and again departing from them herself in the way of spontaneous "sports," which serve as starting points for the selector, and are, indeed, at the bottom of much of the diversity we enjoy. In making these starts man is utterly powerless, all he can do is either to keep his eyes open for natural variation in the wild plants or to sow on a large scale and profit by any break which turns up. Once Nature affords such an opportunity, she is usually liberal in further departures in the progeny, and so progress is made. In the process of hybridising, however, i.e., the combination of the peculiarities of diverse species or even genera, man is only indebted to Nature's endowment of the plants concerned with the capacity of combining the potencies in the seed cells and contriving some mode of architure, so to speak, which permits of a new structure on the lines of a compromise, often of great beauty. This we may particularly see in the orchid displays, and also in those of the wonderful tuberous and other begonias, which are really mixtures of three species in many cases, and of two at least in all. It would be an extremely interesting feature of the International Exhibition of next year if, as already suggested, the normal progenitors whose union gave the starting point in these and other cases could be shown side by side with their marvellously diversified progeny, as exemplifications of what human selection can effect in a comparatively short period as contrasted with the results of æons of natural selection.

MR. JOHN DICKSON,

Head Gardener to Adeline, Duchess of Bedford, Woodside, Chenies.

Mr. John Dickson, head gardener to Adeline, Duchess of Bedford, Woodside, Chenies, is a capable gardener, who has paid particular attention to the culture and improvement of hardy flowers, and has taken special pains with the group of hellebores known as Lenten roses, and with primulas of the obconica type. Mr. Dickson was apprenticed to the late Mr. A. Brown, then gardener to Mr. W. Macalpino

Levy, at Dalswinton, Dumfries, and after five years' service with this fine old cultivator, he went as journeyman to Drumlanrig castle, under the late Mr. David Thomson; here, for five years, he worked through all the departments, and thus obtained a fine foundation of horticultural practice under an exceptionally fine master of the art. Leaving Drumlanrig, he went as foreman to Douglas Castle, Lanarkshire, the seat of the Earl of Home, where the late Mr. Thomas Brown was in charge. The gardens at Douglas Castle were then kept up in fine style, and here Mr. Dickson spent five years. After this he worked with Messrs. Cunningham and Fraser in their Edinburgh nurseries for a while, and then came south, eleven years ago, to take charge of the Woodside gardens. Not long ago we gave an illustrated account of these gardens, which showed how finely choice hardy plants are managed there. Mr. Dickson has raised the fine Gesnera Orange King, which we figured last year, and also a brilliant primula of obconica habit, named Chenies Excelsior. The Woodside strain of Primula obconica is a superb one, and Mr. Dickson uses the plants freely for outdoor decoration, as well as for the conservatory and greenhouse. His good work and excellent judgment have secured for Mr. Dickson a seat on the Royal Horticultural Society's Floral Committee.

The Whitsuntide Holiday was accompanied by weather of the most brilliant description, Saturday, Sunday, and Bank Holiday being alike wondrously fine. For some people the temperature was rather too high, but very few complained of the heat, and they spent all the hours they possibly could out of doors. Crowds hurried from the great centres of population and business to the country, the seaside, or the river, while others, with fewer hours to spare, busied themselves in their own gardens or visited the great public parks and gardens that are now so numerous in our land. On Whit Monday 157,000 people had a glorious day at the famous and extensive Kew Gardens; over half a million went to the White City; nearly 16,000 visited Hampton Court, 27,591 were admitted to the Zoological Society's Gardens, Regent's Park, and 40,000 went to the Alexandra Palace. The Crystal Palace, Richmond Park, Epping Forest, Bushey Park, and all the public parks and gardens in and around London had a full complement of visitors.

The U.H.B.P. and the National Insurance Bill. Mr. Mark Webster, Kelsey Park Gardens, Beckenham, writes: "Legislation is now under consideration which very materially affects the United Horticultural Benefit and Provident Society, and calls for special and immediate attention. In the committee's report for 1910 (issued with the balance-sheet), under the heading of 'State Insurance,' it states: 'A keen watch has been kept on all statements and reports in the Press in regard to the tentative proposals of State insurance against sickness, and the committee has been in communication with the Chancellor of the Exchequer twice on this matter. A report and balance-sheet for 1909 was also forwarded to the Chancellor with a request that the committee be kept informed of any developments.' Judging by the Bill, the 'communication' appears to have been fruitless, and the time for keeping 'a keen watch,' also waiting to 'be kept informed' is past; a crisis has arrived, which calls for the attention of all members to the unfavourable position of the society, which under the Bill as at present drafted is expressly excluded from the State benefits on account of a less membership than 10,000, although otherwise eligible. Established in 1865, the society has a contributory membership of 1,324. With an accumulated balance of £39,799, it is solvent, and conforms to all the provisions of Section 18 of the Bill except the membership limit. The benefits are in many respects more ample than those of the Government scheme. As a class, gardeners are underpaid, and to be called upon to contribute another 4d. per week towards a general scheme of insurance is a serious item. Members of the U.H.B. and P. Society are so widely distributed throughout the United Kingdom that it might have some effect if each one addressed his particular parliamentary representative, pointing out the hardship, and asking him to support an amendment in committee on the Bill, so that our society may be dealt with at least as equitably as others now eligible for State benefits."

Heat and Drought. With the exception of the great thunderstorm that was so general a fortnight or so ago (and which, by the way, did not do the good we could have wished, because the rain fell so heavily that much of it passed away down the drains instead of soaking into the warm earth), there has been practically no rain over the greater part of the country for a month. Crops are already suffering badly in many districts, and twenty-four hours of gentle rain would be a priceless blessing. In the garden annual flowers, notably sweet peas, are rushing into flower in a way that suggests a short life and a merry one. Turnips, potatoes, and peas need water badly, and so do the fruit crops. Whit Sunday and Whit Monday provided a record of high shade temperature that has not been reached for many years. On Bank Holiday the shade temperature in London was 84 degrees, while 78 was the highest temperature the following day, though in the sun 117 degrees was reached on Tuesday last, and this was quite comfortable as compared with the two previous days. In London the tube railways have been the coolest places lately, always excepting the ice stores.

Wandsworth Common. — The good people of Wandsworth are afraid lest a large slice of land almost in the midst of their fine common should be sold or let for building purposes. The slice consists of about 20 acres, hitherto let on an agricultural lease, and belonging to the Royal Patriotic Fund Corporation. This is a portion of 55 acres secured at the close of the Crimean war for providing schools and education for children of officers killed in that war. The Corporation complains that increasing expenses and diminishing income compel them to obtain better terms than the £150 a year received in rent for the 20 acres it is now proposed to sell on building lease. The latest statement is that only as a last resort will the land be used for building purposes.

A King's Cup for the International Horticultural Exhibition of 1912. In connection with the great International Horticultural Exhibition which will be held next May in the spacious grounds attached to the Royal Hospital, Chelsea, His Majesty King George V. has intimated his intention to offer a cup, valued at 100 guineas. In accordance with the King's wish, this cup will be awarded for the best exhibit in the show. Many other valuable cups, medals, and awards offered by the Duke of Portland and others will be included in the vast number of prizes contained in the schedule. Altogether the exhibition promises to far exceed in interest and in spectacular effect any show of the kind ever held in any part of the world. The show authorities have reason to believe that the exhibition will be opened by their Majesties the King and Queen on May 22, 1912.

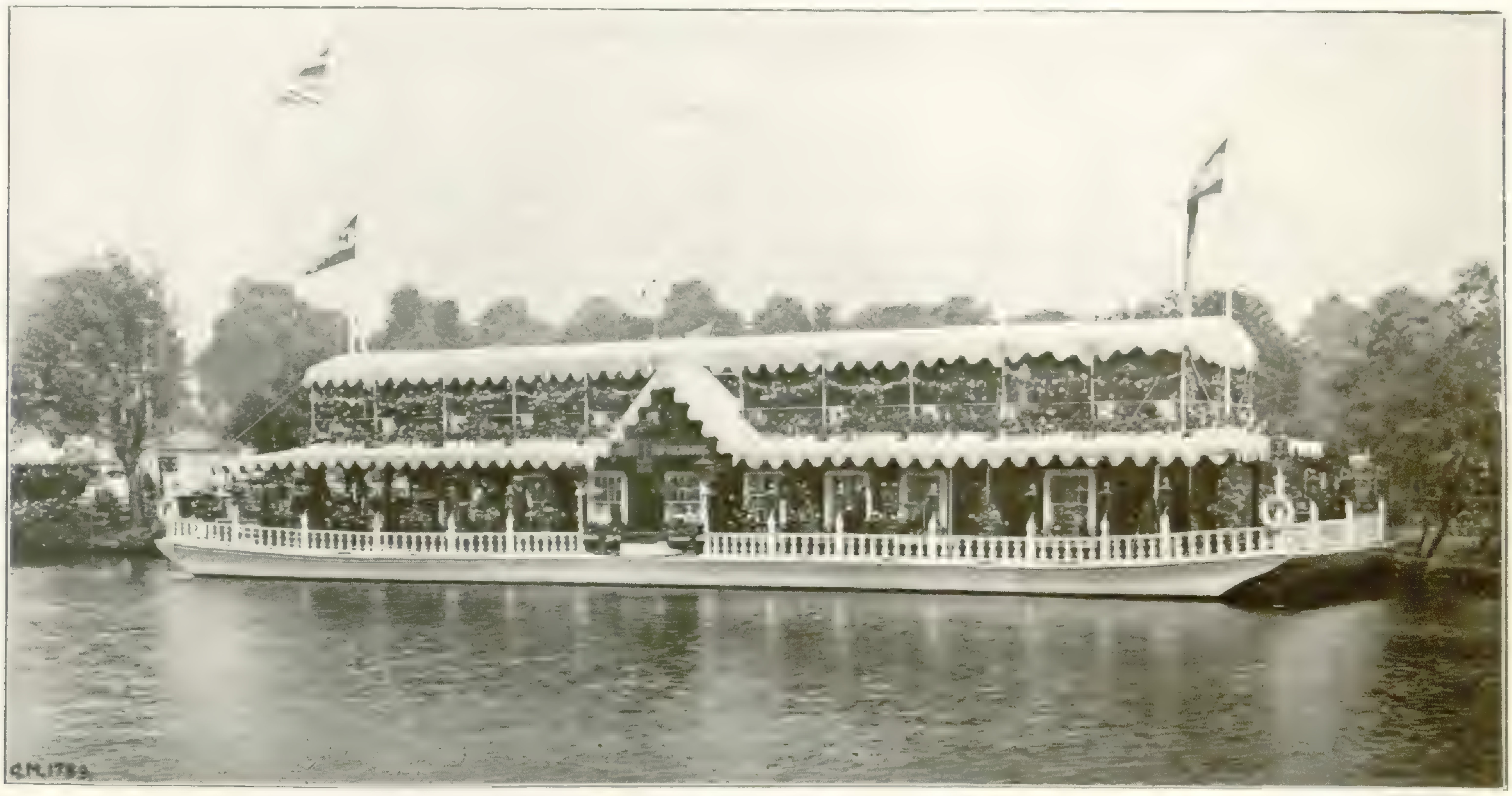
Seeds of Chinese Trees and Shrubs for Kew. Kew has lately received, through Mr. J. C. Williams and Mr. A. K. Bulley, a quantity of seeds collected in South-Western China by Mr. Forrest. The country traversed by this intrepid collector is considerably to the south of that explored by Henry and Wilson, and the respective floras, whilst presenting much the same general features, are, no doubt, in many ways distinct. That of Mr. Forrest's country had in part been revealed by the work of some of the earlier Jesuit missionaries, notably by Abbé Delavay. Among Mr. Forrest's seeds (of most of which the genus only is known), there is a considerable number of rhododendrons, ranging from low matted shrubs to trees 30 high. One of the latter, says the "Kew Bulletin," described as having large, pale yellow, fragrant flowers, is of exceptional interest. Will it provide us with the long-desired, yellow-flowered, hardy rhododendron with large leaves and trusses? All the yellow species we cultivate at present, with the exception of R. campylocarpum, are of a small Alpine type, and although very pretty in their way, they are not robust, and their charms are of a modest kind. Mr. Forrest describes this new one as growing in the rhododendron forest on the Tali range of mountains at 12,000-13,000 feet altitude. On the same range, at somewhat lower altitudes, he obtained seed of two other yellow rhododendrons; these he describes as from two to four feet high, one with "bright yellow," the other with "deep yellow" flowers. Of the remainder of the seeds the most interesting are two spruces, two firs, a larch, and a cedar. Mr. Forrest seems somewhat doubtful as to the generic identity of the cedar, but we may hope that his estimate is correct. A new cedar would be a great acquisition, and, with the deodar growing on the Himalayan ranges, the existence of one on the mountains northward seems at least probable.

The Forest of Auchnacarry, composed of ancient Scots firs, has, we understand, been sold to the timber merchant, but it is just possible some effort may be made to secure its preservation. The forest is in the west of Inverness-shire, to the north of Fort William, and near Loch Askaig. It is probably the largest and finest part now left to us of a primæval forest, neither planted or tended by man. It is the remains of a huge forest of Scots firs that at one time extended from Ben Nevis to the Spey, and which, like other forests, was chiefly used up for shipbuilding purposes during the end of the eighteenth and the beginning of the nineteenth centuries.

Officers and Council of the Linnean Society. At the recent anniversary meeting of the Linnean Society the following officers and council were elected for the year 1911-12: President, Dr. D. H. Scott, F.R.S.; Treasurer, Mr. H. W. Monckton; Secretaries, Dr. B. Daydon Jackson, Professor A. Dendy, F.R.S., and Dr. Otto Stapf, F.R.S. Council, Prof. V. H. Blackman, Mr. H. Bury, Sir Frank Crisp, Prof. A. Dendy, F.R.S., Prof. J. Stanley Gardiner, F.R.S., Mr. E. S. Goodrich, F.R.S., Mr. H. Groves, Prof. W. A. Herdman, F.R.S., Mr. A. W. Hill, Dr. B. Daydon Jackson, Mr. H. W. Monckton, Prof. F. W. Oliver, F.R.S., Prof. E. B. Poulton, F.R.S., Dr. A. B. Rendle, F.R.S., Dr. W. G. Ridewood, Miss Edith R. Saunders, Dr. D. H. Scott, F.R.S., Dr. Otto Stapf, F.R.S.; Miss E.

N. Thomas, and Dr. A. Smith Woodward, F.R.S.

Engelmann's Spruce (Abies Engelmanni), which has a wide distribution in the western parts of the American continent, is dealt with at some length in a circular recently issued by the U.S. Department of Agriculture. It is possible that from its wind and frost-resisting powers, and its thriving under moist conditions, it may be of considerable service for planting in exposed positions in Great Britain; therefore, a brief summary of the circular may be useful. The species is found from the Yukon territory south through British Colombia, Oregon, and the Rocky Mountains, to Arizona and New Mexico. As in the case of other species, Engelmann's spruce occupies progressively higher altitudes from north to south, and over the greater part of its range, it grows in small bodies, and, except in the south, it is found growing in association with other species. The tree is dependent for its healthy development upon a liberal amount of moisture in the soil and atmosphere; and altitude and aspect are important factors, inasmuch as they affect the amount of precipitation and its conservation. The physical condition of the soil appears to be of greater importance than its composition, but a limestone soil appears to be the most conducive to full development. In good situations the trees range from 80 to 100 feet in height, and from twenty to thirty inches in diameter, and the most cylindrical trunks are found in deep, moist valleys, where they are growing closely. The roots do not strike deep into the soil, but the root system is so fully developed that the trees are well able to resist strong gales. This spruce is rather slow in growth, and in its forests the trees require about 150 years to produce trunks eighteen inches in diameter. The timber is light in weight, pale yellow, very close, and usually straight, even in texture, and easily worked. It is not very durable when in contact with the soil, but it possesses considerable value as construction material. The U.S. Forest Service recommends that forests of this spruce should be treated under the selection system, and be regarded as protection forests.



A BEAUTIFUL FLORALLY-DECORATED HOUSEBOAT.

This fine boat, the "Gipsy," belongs to John Bradford, Esq., one of the secretaries of the River Thames Flower Show. It is moored to Tagg's Island, and proved one of the most attractive features of the exhibition held there on June 7 and 8.

THE THAMES FLOWER SHOW.

Held on Tagg's Island—a spot beloved of all who frequent the Thames above Richmond—amid beautiful surroundings, the Thames Flower Show was a great success. A good schedule was provided, and there were numerous non-competitive displays, but it was obvious that everyone was out to do his or her best in the sacred cause of charity. The exhibition, with its accompaniment of dramatic fête, illuminations, and aeroplane flights was promoted for the purpose of raising funds for the League of Mercy, which assists all hospitals.

The Duchess of Albany attended in the afternoon to officially open the fête, and she was received on the "Gipsy," a handsome and beautifully-decorated house boat, belonging to Mr. John Bradford, who, with Mr. C. W. Kent, fulfilled the secretarial duties. The "Gipsy," with its vases of flowering plants, its window and house-top boxes, and its hanging baskets, we figure in our present issue, but we cannot show the glowing colours of the flowers or of the electrically lit Chinese lanterns.

The Flower Show Committee was composed of the leading market growers of the Hampton district, with Mr. T. Stevenson. The judges, all well-known horticulturists, gave their services, and everything was done to secure a handsome result for the charity.

COMPETITIVE.

Mr. C. W. Breadmore annexed the chief award for a group of sweet peas arranged on an area of fifty square feet, and he had a charming display, in which the colours were well blended, and the flowers of fair quality. Dazzler, Stirling Stent, Mrs. C. W. Breadmore, Lavender George Herbert, Aurora Spencer, and Edrom Beauty all looked well. Mr. W. E. Alsen, Denmead, Hants, came second with a pretty arrangement of flowers, his arch of blooms being quite effective; Stirling Stent was a great feature; Messrs. S. Bide and Sons, Farnham, third.

There were six entries in the big class for a display of any kind of plants or flowers arranged on a space of 200 square feet, and these provided a rare display in themselves. The premier award, a silver cup presented by Mr. H. O. O'Hagan, and valued at £20, was won by Mr. W. H. Page, Hampton, with a superb exhibit of weeping standard roses, pillar roses, masses of pink spiræas, and of the rich scarlet zonal pelargonium His Majesty, while liliums, yellow richardias, and dozens of vases of carnations made up a most artistic arrangement. Mr. C. Engelmann, Saffron Walden, came second, securing Mr. R. J. Kent's silver cup with a bright corner display of perpetual carnations, and Messrs. George Mount and Sons, Canterbury, came third, winning Mr. Preston's cup with a display of roses that was good, but not quite up to some of the best of their wonderful exhibits. Miss Hemus, Upton-on-Severn, put up a big group of sweet peas in this class, and while the flowers were good the spikes were crowded in the bunches; Messrs. H. Cannell and Sons, Swanley, had a brilliant show of cannas; and Mr. Thos. Page, Hampton, presented a miscellaneous group; these three latter competitors were all very highly commended.

Mr. H. Burnett, Guernsey, won the cup offered for a group of carnations, and he scored on the high quality of his flowers, Mr. C. F. Waters, Balcombe, who was placed second, had a more artistic display, and showed Edith Waters finely. For half a dozen vases of carnations, Mr. B. Bell, Guernsey, was a capital first, and Mr. C. Engelmann second.

Mrs. Maslin, Addlestone, beat Mr. C. W. Breadmore for an epergne of sweet peas, and the same lady was awarded first prize for a basket of sweet peas. Messrs. Gibson and Co., Leeming Bar, Yorks, were the only competitors in the class for a group of hardy flowers, and their effective bank contained grand bunches of poppies, Campanula glomerata, and pyrethrums.

NON-COMPETITIVE.

Mr. Amos Perry had a rare display of ornamental poppies, a perfect blaze of colour, and in the centre of their contribution a mass of Dictamnus fraxinella backed up a little pool of water lilies and hardy orchids.

A huge exhibit of pæonies, pyrethrums, delphiniums, and lupins from Messrs. Kelway and Son, Langport, provided another mass of lovely and soft shades of colouring, but the display lacked something in the matter of arrangement. The single pæonies were very lovely, and attracted a vast amount of attention by reason of their grace and simple beauty, while the scarlet and crimson pyrethrums provided the deep and vivid hues in the group.

A very elegant exhibit set up most artistically by Messrs. James Veitch and Sons, Chelsea, was composed of palms, rare stove plants, grouplets of cannas, carnations, hydrangeas, such choice ferns as Cyrtomium Rochfordi, and Nephrolepis Marshalli, the bright Kalanchoe flammea, some delightful cattleyas, and odontoglossums and anthuriums, graceful standard fuchsias, and Japanese maples.

Messrs. Bakers, Wolverhampton, presented a selection of Oriental poppies. Messrs. Young and Co., Hatherley, made up a very pretty exhibit of well-grown carnations. Oriental poppies in art shades, and a collection of cut pelargoniums came from Mr. W. J. Godfrey, Exmouth. Messrs. Barr and Sons, Covent Garden, had one tent to themselves, and here their little forest of pigmy trees was an outstanding feature, and the great attraction. The firm also contributed banks of Spanish irises, poppies, pyrethrums, and other fine hardy flowers. Messrs. W. Wells and Co., Merstham, staged the White House carnation and other good varieties.

Messrs. Jarman and Co. brought up their elegant sweet sultans from Chard, and Messrs. R. H. Bath, Wisbech, made a brave show of herbaceous pæonies and pyrethrums.

Mr. W. J. Unwin, Histon, Cambs, had a delightful lot of sweet peas, all well set up, and he showed Mrs. W. J. Unwin, Constance Oliver, Frank Dolby, and Mrs. Hallam in excellent condition. Messrs. Jackman and Son, Woking, were large exhibitors of hardy flowers, and so were Messrs. J. Peed and Son, West Norwood.

MEDALS.

Gold.—To Messrs. James Veitch and Sons, Chelsea.

Silver Gilt.—To Messrs. Kelway and Son, Langport; Mr. W. J. Unwin, Histon; Mr. Amos Perry, Enfield; and Messrs. Barr and Sons, Covent Garden.

Large Silver.—To Messrs. Young and Co., Hatherley.

Small Silver.—To Messrs. Jarman and Co., Chard; Mr. G. Lange, Hampton (carnations); Mr. W. J. Godfrey, Exmouth; Messrs. W. Wells and Co., Merstham; Messrs. R. H. Bath, Wisbech; Messrs. Bakers, Codsall, Wolverhampton; and Messrs. G. Jackman and Son, Woking.

NEW PLANTS, ETC.

◆

DENDROBIUM SANDERÆ.

This beautiful species, from South-eastern Asia, was introduced in 1909. It is closely allied to D. Dearei, but has larger flowers and bright purple stripes at the base of the white lip, and on the side lobes of that organ. So far as present knowledge goes it would appear that the treatment found successful for D. Dearei is suitable for this fine introduction. Messrs. Sander and Sons, St. Albans, were the introducers. "Bot. Mag.," t. 8,351.

ASTER FALCONERI.

This splendid aster, a native of Sikkim and Eastern Nepal, was originally considered identical with A. diplostephioides. It is hardy, grows about 1½ft. high, is very leafy at the base, and carries flower heads 3½in. across. The linear blue ray florets are 1½in. long, white at the base, and trifid at the apex. The disc florets are orange-yellow. Messrs. Barr and Sons introduced this plant to cultivation, and it was flowered in May, 1910, both at Kew and with Mr. William Marshall, V.M.H., of Auchinraith, Bexley. A most interesting and beautiful introduction. "Bot. Mag.," t. 8,355.

PHÆDRANASSA CORMIOLI.

Apart from the popular hippeastrums few bulbs needing stove treatment are now cultivated to any extent, consequently the Costa Rican species under notice is not likely to receive attention in many gardens. It produces a spike about 2ft. high, bearing an apical umbel of from five to ten flowers; these latter are about two inches long, yellowish at the base, and green, with yellow margins at the apex, the rest of the flower being scarlet. "Bot. Mag.," t. 8,356.

DWARF, FRENCH, OR KIDNEY BEANS.

Perhaps more commonly known as dwarf beans, the above are extensively grown, and are very popular with the cooks, especially before the runner beans come into use.

The earliest supplies are produced under glass from pot plants, or, where heated pits are at hand, from rows of plants. Their culture is not at all difficult where space and heat is at command. I will not, however, describe this early culture, but just deal with details for those grown in cool frames, and with a little protection, in order to keep up a more or less continuous supply until crops can be picked out of doors.

Where a cold frame is to be had, and preferably standing on a mild hotbed, excellent results may be expected. Raise the seedlings in pots containing a moderately light compost of loam and leaf-mould, with a little spent mushroom-bed manure, sowing the seeds about the end of March. Raise them in gentle heat, and do not allow the plants to become drawn through an insufficiency of light. When about six inches high plant out in the frame, in a good holding mixture of loam and leaf-mould, to which has been added some horse droppings and bonemeal. Keep the frame close, and damp the inside with the syringe whenever the weather permits. This will serve to keep red spider in check, which is to this plant a deadly enemy. When the plants have made their first pair of rough leaves pinch out the point of growth. This will slightly retard the first supply of beans, but does much to preserve a dwarf habit, and increase their productiveness.

For the earliest crops out of doors I follow the course adopted for peas, and raise the seedlings in pots, in the same way as advised for frame culture. As soon as germination takes place the plants are gradually inured to cooler surroundings, and as soon as possible transferred to cold frames, being careful to protect them in cold weather at night. Give air cautiously but plentifully when the weather admits, and endeavour to get the beans as hardy as possible. Before they are planted out the lights must be entirely removed for a while during the daytime. Select a warm border that has been previously well dug and manured, and, if possible, at the foot of a south wall. Place the plants out carefully with a trowel at a foot apart, and two feet between the rows. Give them a damping over, and water as required; a sprinkling of finely-sifted cinder ashes placed near the base of the plants will keep slugs at bay. Protection may be afforded by placing spruce boughs round or on the more exposed sides of the batch.

As the plants grow dress with soot in showery weather, and a little fertiliser sprinkled on the ground before Dutch hoeing will prove beneficial. The first sowing out of doors, unless in a favoured place, should not be made before the last week in April, and then only on a sheltered site. When the ground is in a suitable condition fork it down to a fine tilth, dust the surface with soot, and draw drills two inches deep and six inches wide, allowing a distance of a yard between each drill. Sow two rows of seed in each drill, cover it, and well rake down the bed. If the seeds appear good, do not sow thickly, and when the plants are up thin out so that the remaining plants are left alternately in the double row.

Keep the plot free from growth of weeds by frequent Dutch hoeings, and dust the plants with soot during showery weather. This will act as a valuable stimulant, and cause increased vigour in the foliage. Support the growth with twiggy sticks, and when the beans are large enough look the plants over at frequent intervals, remove the beans, and tie them up in bundles, placing the stalks in water or wet sand until required. If the beans are removed before they get too large the plants will yield considerably larger supplies.

For continuous supplies make further sowings once a fortnight till the end of July.

If needed for exhibition purposes it will, of course, be necessary to assist the plants with copious supplies of water and liquid manure, and apply a mulch to the soil. The beans must be of uniform size, good in colour, and exhibited in a young state. Canadian Wonder and Ne Plus Ultra are two of the best I know

E. Beckett.

Aldenham House Gardens.

HAWTHORNS IN THE GARDEN.

Standards and bushes of these plants have flowered beautifully this year, and, as there are few flowering shrubs and trees more cheery-looking, I often wonder why more are not planted in our gardens.

They look charming as standards on lawns, and as standards and bushes in shrubberies. I have, in my mind's eye, some very old specimens that have never received any cultural treatment since they were planted, and the soil in which they grow is of poor quality and shallow, too, yet they have rarely failed to blossom freely three years out of five.

Some of the finest specimens of both single and double-flowered thorns I have ever seen are growing in the New Forest, in Hampshire. The cattle eat away all young shoots as high up as they can reach, so the result is, trees with the lower branches perfectly level. Scores of such trees measure from 20ft. to 30ft. in diameter, and average 20ft. in height. Trees of equal beauty grow near Guildford in Surrey. Not far from Clandon Park, Lord Onslow's country seat, I have seen some grand specimens growing amidst many acres of the common buttercup, which formed a dense carpet. In many parts of the New Forest the trees are growing in quite swampy ground, and I could not see much difference between their general condition and that of other specimens growing on high, dry mounds.

In a garden I would plant the trees in a deeply-trenched loam, which was never either very wet nor very dry; if the soil was shallow I would remove some subsoil and replace it with good loam. I have had considerable experience of the cultivation of thorns on lawns and in extensive shrubberies, and always found them to do best in a nice loam without any feeding during the first ten years. Only a little pruning is then necessary as the object should be to secure specimens with long branches, not growing too closely together, thus leaving the head somewhat open, and not too formal in outline.

A few good varieties are: Cratægus oxyacantha punicea, single scarlet; C. o. plena, double scarlet; C. o. rosea, single rose; C. o. rosea plena, double rose; and C. o. multiplex, double white. All these are very beautiful, and the single-flowered white, rose, and scarlet varieties are equally lovely, being light and graceful.

G. B.

SOME GARDENS AROUND EDINBURGH—I.

In giving a brief account of some of the more noteworthy of the gardens within a short distance of Edinburgh, there is no occasion to write in a general way on the high position to which gardening has attained across the Border, or to refer to the great ability of Scottish gardeners as evidenced by their work, for both these interesting points are so well known as to have become proverbial wherever gardening matters come up for discussion. Neither does it appear necessary to indulge in much praise of a general character of gardening as carried on around Edinburgh. It is well known that great gardens abound within a short distance of the city, and it is reasonable to assume that a large proportion of those who are interested in horticulture are well acquainted with a considerable number of them. It is a matter of interest in this connection that practical horticulturists take advantage in largely increased numbers each year of the facilities that exist for spending their holidays in Scotland, and the majority of those who do so make a point of visiting several of the leading gardens that can be readily reached from the capital, even if they do not attempt to visit some that are further north. Hence it will suffice to say that Edinburgh is surrounded by gardens that are not less remarkable for their extent and beauty than they are for the splendid demonstrations they afford of the more advanced methods of horticultural practice. They are indeed so numerous and admirably managed, that the selection of a few for notice is not easy, and in connection with this point it should be mentioned that in making a selection an endeavour was made to include gardens that were representative of the district, and so situated that they could be visited in the time at disposal. One could have wished to visit at least double the number, and there is ground for the hope that it may be possible at a date not so far distant, to have the pleasure of participating in the enjoyment which a tastefully designed, judiciously planted, and well-managed garden is so well able to give.

CONIFEROUS TREES, DALKEITH PALACE GARDENS.

Dalkeith Palace.

The wide-spreading gardens which form so delightful a setting to the historic Midlothian seat of the Duke of Buccleuch, have from time well nigh immemorial occupied a commanding position among the great horticultural establishments, not only of Scotland, but of the whole kingdom. How far it would be necessary to go back to find a period when these gardens were not more or less famous for their extent and the great excellence of the work accomplished within their boundaries cannot be stated. It is extremely doubtful if there has been such a period, and it would be a tedious, if not an unprofitable, task to make the search necessary to determine the point. It must, therefore, suffice to state that for many generations the Dalkeith gardens have been under the charge of men of the highest eminence in their profession, and that, as the result of their famous. If we take a retrospective glance extending over three-quarters of a century, we shall find Charles McIntosh busily engaged in the preparation of his "Book of the Garden," one of the most important books of its kind published during the past century, and not less assiduous, or successful, in the cultivation of grapes, pines, and other subjects that received attention during the first half of the nineteenth century. His successor, the late Mr. William Thomson, will be remembered as one of the most accomplished gardeners of his day, and as a raiser and cultivator of grapes with but few equals. On the retirement of Mr. Thomson the gardens came under the charge of the late Mr. Malcolm Dunn, who, as the result of his great abilities, and his activities in the promotion of the various movements that had for their object the advancement of horticulture, was held in high esteem. On Mr. Dunn's untimely death Mr. J. Whytock, who had won golden opinions by the splendid work he had accomplished at Powerscourt, was appointed his successor, and during the decade or so that he has been in charge he has succeeded in greatly adding to the fame of Dalkeith, and, what is not less deserving of mention, has obtained the esteem of the large body of horticulturists who pursue their avocations in Midlothian.

Dalkeith is some eight or nine miles to the south of Edinburgh, and is a quaint old burgh, remarkable for the number of seats that are close at hand, for the ruins of the old collegiate church, on the north side of the principal street with which the town is intersected, and for the extent of its grain market, which is said to be one of the largest in Scotland. The palace and grounds are close to the boundary of the town, and the former is built upon a rock overlooking the junction of the North and South Esks, and occupies one of the most delightful spots imaginable. It was built from designs by Sir John Vanburgh towards the close of the seventeenth century, and has a very substantial appearance. The valley of the Esk is one of the beautiful spots near Edinburgh, and for that matter in Scotland, and, although less picturesque near Dalkeith than higher up at Hawthornden, the residence of William Drummond, the poet, it possesses much beauty, and the widespreading park through which the Esk proceeds merrily on its way to the sea, and the fine trees, form an excellent setting to the stately edifice, and affords a succession of charms to the visitor. Especially noteworthy are the coniferous trees, which include a cedar of Lebanon of stately proportions, the beautiful Ginkgo biloba, rising to a height of between thirty and forty feet; a specimen of the weeping ash that is not less in stature; and the large groups of Portugal laurel and rhododendrons, both of which flourish under the conditions that obtain, and it is not difficult to imagine how beautiful must be the colour effect produced by the last-named when the spring is merging into summer.

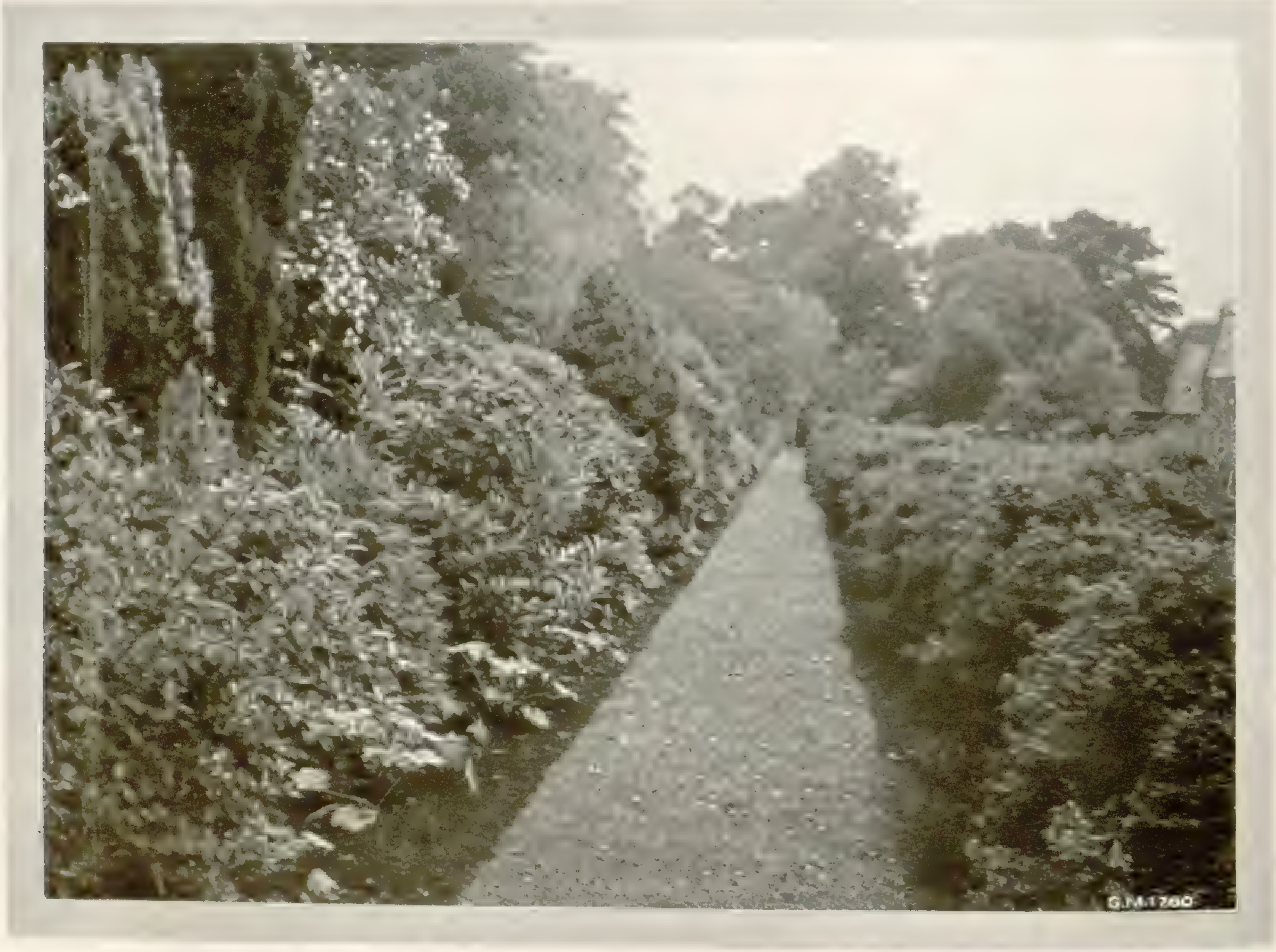
Not far distant from the palace is the old-fashioned, but handsome, conservatory that was built when the gardens were under the management of James Macdonald, who was gardener at Dalkeith sixty years previous to Charles McIntosh, and did excellent service. The structure is handsome in design, although heavy as compared with plant houses at the present day, and is remarkable for the fine stone, the product of the Craigleith quarry.

Proceeding from the pleasure grounds immediately contiguous to the palace, in a northerly direction towards the kitchen garden and orchard, we pass through, on reaching the higher ground, a spacious lawn, on which are groups and single specimens of ornamental trees of various kinds. Especially deserving of mention are the finely developed lilacs and laburnums, which annually yield a rich harvest of flowers, Japanese maples, which flourish and assume goodly proportions, and a weeping wellingtonia, which makes a strong appeal to those who have a predilection for trees that have a pendent habit of growth. At the end of this lawn there is a border with a sheltering wall, in which are many subjects in a robust state of health that one would hardly expect to find in really first-class condition so far north. Among the many good things of which note was made are Cistus ladaniferus, eucalypti in variety, Staphylea colchica, which not only blooms freely, but ripens seed; Virgilea utes a handsome shrub with long pinnate leaves; Buddleia variabilis Veitchiana, Magnolia acuminata, M. hypoleuca, Chimonanthus virginicus, and Cydonia japonica in variety, the several forms being of the best.

A short distance from the border containing the shrubs briefly referred to in the preceding paragraph there is a remarkably fine collection of coniferous trees, all of which are in an excellent state of health, and have, for the most part, reached a size that shows their distinctive characteristics. On the way is a series of scroll beds that extend several hundred yards, and tastefully filled with flowering plants, as they certainly were when the present writer saw them, they are singularly attractive. On the one side the beds are flanked by a high wall that is clothed with pear trees in such manner as to clearly indicate that the training of wall trees is well understood at Dalkeith, and must, indeed, have long been carried out in a skilful manner, for many of the trees are of great age. On the other side the ground slopes away towards the town, and in this area are many fine specimens of trees and shrubs remarkable for the beauty of their flowers. Still proceeding in the direction of the pinetum we reach a rose bower so well clothed with rambling roses as to prove to demonstration that Mr. Whytock is not less successful in the cultivation of roses than in dealing with the many other subjects that come within the scope of his activities. The bower is 500 feet long, eight feet wide, and ten feet high, and one can, even if above the average in height, pass along the bower without discomfort.

The pinetum contains many fine specimens, and it was interesting to find the trees, as in other parts of the garden, had their names attached to them, and that the labels used possess the two desirable characteristics of legibility and durabi and the example set in this matter at D keith might be followed in many ot gardens with advantage. It need har be said that the handsome Cupressus La soniana and the finest of its varieties are well represented, the specimen of the fine golden form known as lutea being parti cularly noteworthy. Also deserving of mention are the specimens of Abies polita, A. Alcockiana, A. Veitchi, Thuiopsis boreale, Sciadopitys verticillata, golden yews, including Taxus elegantissima aurea, and T. Dovastoni pendula aurea, which forms a widespreading bush, with pendulous branches.

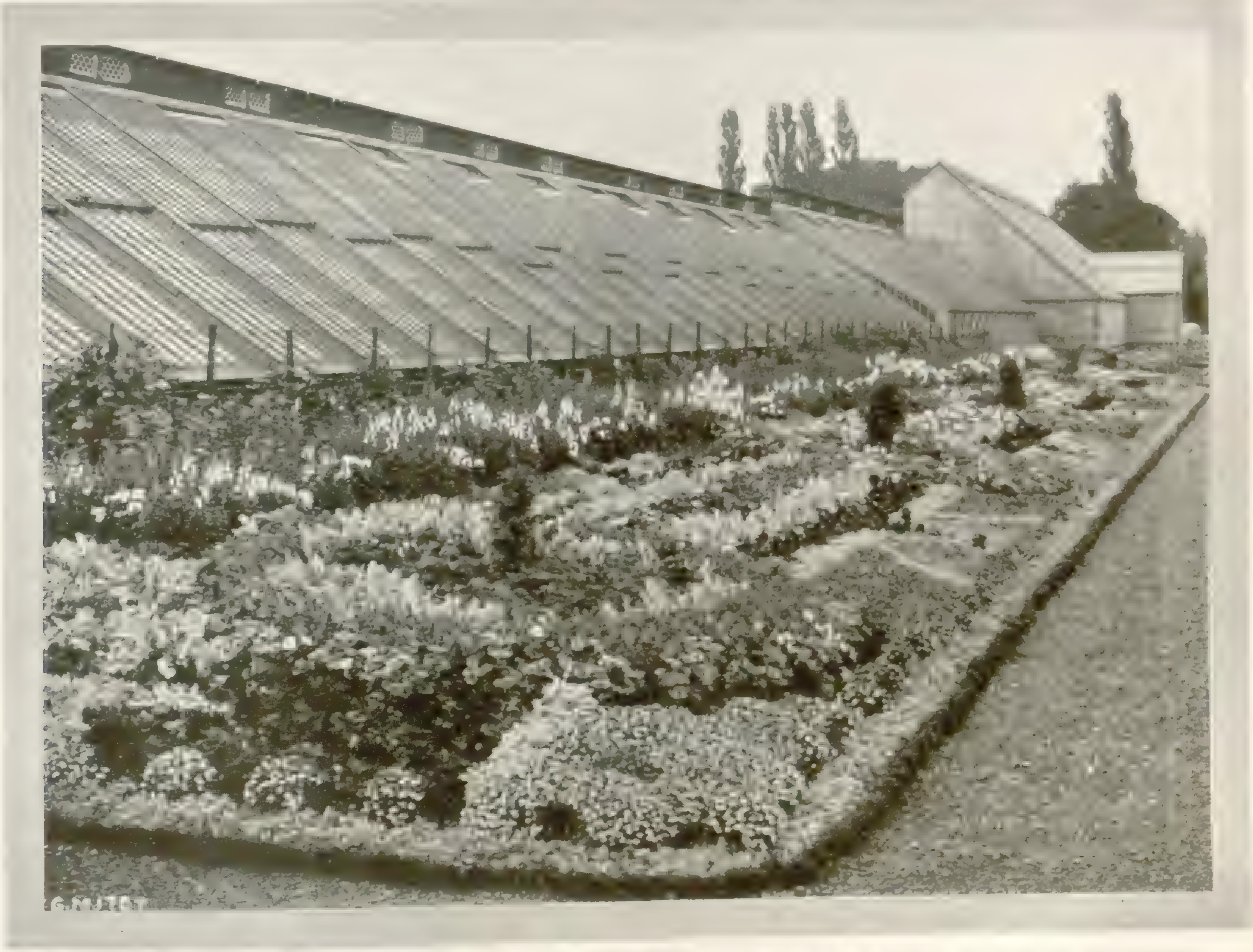
Hybrid perpetual, hybrid tea, C rambler, and other roses that produce rich colour effects when in bloom are grown largely and well at Dalkeith, and deserve all the attention the visitor can give but the Scotch roses that are growing in an enclosure not far distant from Mr. Whytock's house should not be overlooked



COLLECTION OF SCOTCH ROSES, DALKEITH PALACE GARDENS.

There are upwards of ninety varieties, and these were collected by a former Duke of Buccleuch, who was greatly interested in the section, and as they have been well cared for during the long period that has elapsed since they were planted they have continued a feature of much interest. The roses, as will be seen on looking at the accompanying illustration, are arranged to form a broad hedge, which has a length of several hundred yards, and on the opposite side of the walk the broad border is admirably furnished with evergreen and deciduous shrubs, the last-named consisting chiefly of those grown for their flowers.

It is a point of some interest that at Dalkeith the flower garden is brought into close association with the plant and fruit houses, and rich and diversified are the displays that are annually produced during the summer months. The illustration of one of the borders renders a description of the plants employed and the style of arrangement unnecessary, but it should be mentioned that there are numerous single beds, that help materially to enhance the general effect.



AN EFFECTIVE ARRANGEMENT OF SUMMER FLOWERS. DALKEITH PALACE GARDENS.

The glass structures are so numerous, and their contents so varied, as to almost bewilder one when time so presses as to render it impossible to have more than a rapid run through them, and to take a cursory glance at their occupants. A detailed description of them is unnecessary, nor would it be possible without occupying much space. There are many vineries, for a liberal supply of grapes is maintained during the greater part, if not the whole of the year, and in the several structures may be seen, in their respective seasons, magnificent crops of Black Hamburgh, Muscat of Alexandria, Mrs. Pince, and other of the more valuable grapes. The houses devoted to peaches and nectarines are numerous, and in one range we noticed four spacious structures, which furnish supplies of ripe fruit from the end of April or the beginning of May until the end of September. As supplementary to these, there is, in another part of the gardens, an unheated peach house, which has a length of 250 feet, and is furnished with trees that bear abundantly. Pines, which have been banished from so many gardens during the past forty years, are grown largely and well at Dalkeith, and those who know the pineapple as grown in British gardens previous to it having become unfashionable, will derive much pleasure from a glimpse of the finely finished fruits—The Queen, Black Jamaica, and Smooth Cayenne—that may be seen in a walk through the several houses, and a peep into the pits devoted to these noble fruits.

As the demand is great for cut flowers and decorative plants liberal provisions have been made for maintaining the necessary supplies. Hence there are plant stoves, intermediate houses, and greenhouses in considerable numbers, with carnation houses, orchid houses, and structures for other subjects that give the best results when so arranged as to admit of their being placed under the exact conditions most favourable to their full development. Of the plant houses there must be sufficient to form a respectable village of glass, and in walking through them it is not difficult to see that while the noble owners of Dalkeith Castle fully appreciate the charms of carnations, they do not, as is done in so many cases, overlook the merits of other beautiful flowers.

The heating arrangements of the immense number of fruit and plant houses are remarkable for their completeness, and have been conceived with due regard to economy of fuel and convenience of working. There are six miles of hot-water piping, and three Trentham or Cornish boilers, all of which are set in the one stokehole, which is a model of its kind. In the summer and autumn but one boiler is used, and in the winter and spring two are brought into requisition, the third being held in reserve in cases of an emergency arising. The result of this arrangement, as compared with several stokeholes and boilers, is a saving of several tons of coal annually, and one man only is sufficient for attending to the stoking in the busiest times.

The kitchen and fruit gardens have an area of twenty-two acres, and it need hardly be said that the whole of the space is utilised to the best advantage. On the high enclosing walls are splendidly trained pear, plum, cherry, and other fruit trees, all of which bear abundantly in seasons when the climatic conditions are at all favourable. In the open quarters are low standards and bush fruit trees, apples predominating, and of these useful fruits there are between three and four hundred varieties, the most comprehensive collection probably in this country.

Much might be written with reference to the many object-lessons the kitchen garden is so well able to afford, but more cannot be said than is necessary to mention the fact that there is a big collection of herbaceous phloxes therein, which produce a display of colour, and fill the air with perfume during their season of flowering, and that Mr. Whytock always grows his crop of carrots on the same ground.

Hopetoun House.

Hopetoun House, the truly magnificent seat of the Marquis of Lothian, stands some nine or ten miles to the north-west of Edinburgh, and, as in the case of Dalkeith, has long been famous for its highly-kept and beautiful gardens. Upwards of eighty years ago Loudon, whose judgment on such matters was beyond question, described the Hopetoun gardens as typical of the highest development to which the art of gardening had attained in Scotland, and to-day they may be described as in every way worthy of the palatial edifice to which they form so charming a setting. In the long interval that has elapsed since Loudon expressed his well-considered opinion on their merits, the gardens of Hopetoun House have been specially favoured, for the noble owners have taken a keen interest in them, and have been careful to place them under the management of gardeners who have been equally remarkable for their cultural skill and administrative ability. It may not, perhaps, be so easy to trace the line of gardeners who have had charge of the Hopetoun House since they were originally laid out by Switzer rather more than a century and a-half ago, as in the case of Dalkeith, but there can be no doubt as to their having possessed ability of a high order. We know beyond all question that Mr. James Smith, who for many years was gardener at Hopetoun, was a man of great ability, and the condition of the gardens at the present time is an unquestionable proof that Mr. T. Hay is a gardener of the highest eminence.

SCROLL FLOWER BEDS AND FAMOUS PEAR WALL, DALKEITH PALACE GARDENS.

The mansion, which was built about the same time as the grounds were laid out by Switzer, from designs by Sir James Bruce, is of imposing elevation, and occupies a commanding position not far distant from Queensferry. From the plateau on which it stands magnificent views are obtained over the Firth of Forth, and the fertile tract of land which has given West Lothian a leading position among the corn and root-growing counties of Scotland. While essentially agricultural in its characteristics, the district is remarkable for its beauty, and one might range over the whole of the lowlands of Scotland and yet fail to find views equal in diversity and charm to those that meet the eye in walking through the grounds. The park is extensive, and finely wooded, and many are the fine specimen coniferous and deciduous trees that attract attention, a goodly proportion of which have been planted since the gardens and grounds were remodelled about ninety years ago.

The gardens, without taking into account the wide stretches of lawn contiguous to the mansion, or the leafy glades in the policies, have an area of about thirty acres, and, with reference to this large area, it might be said there is not a square foot of ground that is not utilised to the best possible advantage. Briefly stated, the gardens occupy a portion of a valley that extends some distance, and has a small stream flowing through it, but the valley is not so low as to affect in any way the ornamental or useful plants that are grown on its slopes. On the northern slopes are the flower, fruit, and kitchen gardens, and the numerous fruit and plant houses, and lower down is the extensive and beautiful rose garden, and at the bottom of the slope is the wondrous border of hardy herbaceous plants, which, if it has an equal, has certainly no superior. Then, on the south side of the stream that intersects the valley is a large and tastefully designed area devoted to moisture-loving plants.

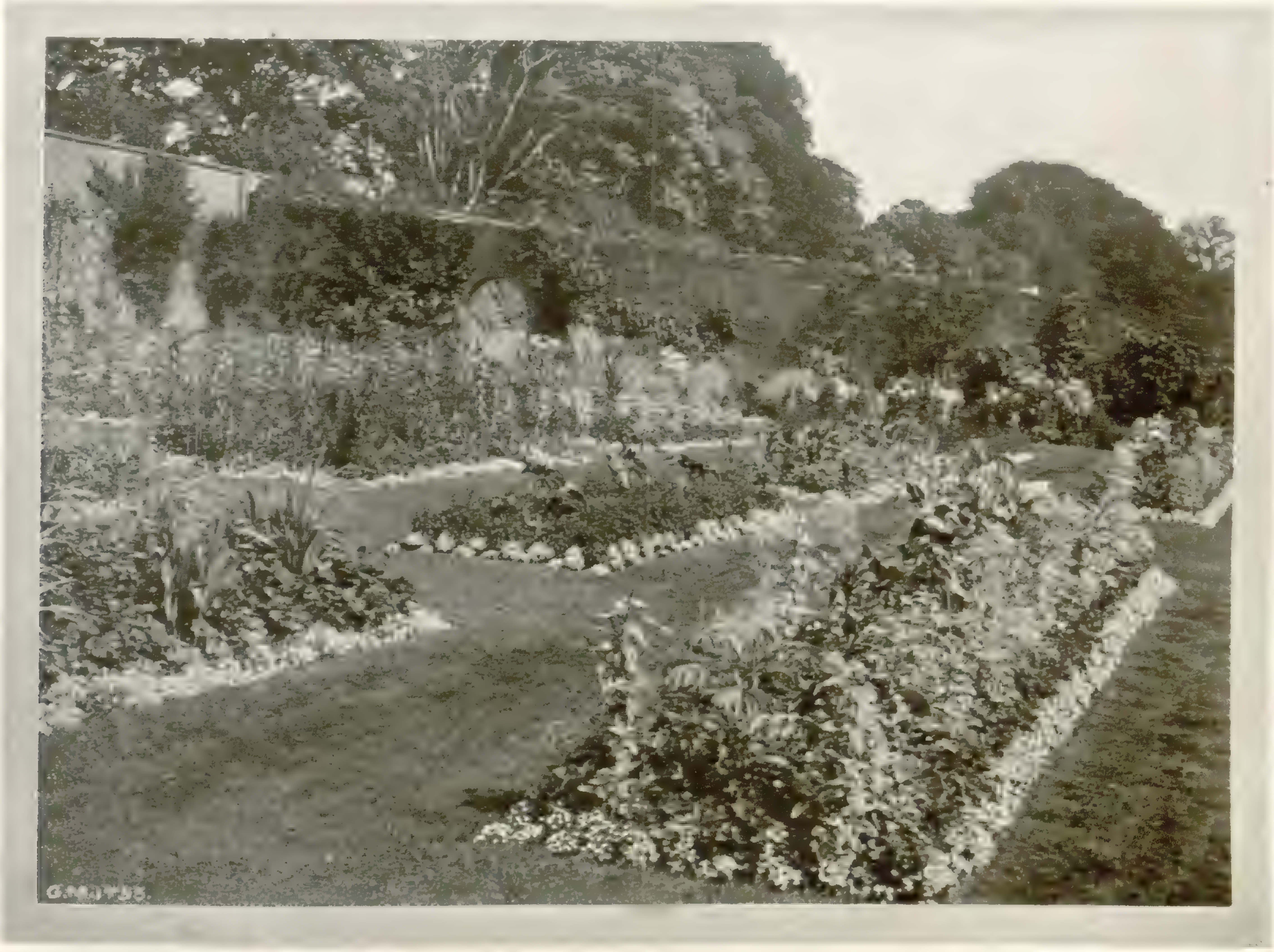
Having surmounted the slopes to reach the high ground on which the glass structures have been erected, one is beset with some difficulty in determining which of these shall be first explored. If the trend of his mind favours the various fruits he will be anxious to pass on to those devoted to grapes, peaches, and other kinds, but if he has a preference for ornamental subjects he will turn to the plant houses. It matters not which course is taken, the visitor will find much that is both interesting and instructive. In the fruit houses he will find crops of grapes, etc., according to season that fully testify to Mr. Hay's ability as a fruit cultivator, while the plant houses will afford object-lessons of immense value in the selection of plants from tropical and temperate regions.

Grapes have long been cultivated with much success at Hopetoun, and the splendid crops of Madresfield Court, which is a great favourite; Black Hamburgh, Muscat of Alexandria, and Lady Downes, that may be seen in their respective seasons, have contributed in no small degree to the fame enjoyed by the gardens. There are six or seven houses, each with a length of forty feet, devoted to grapes, and after admiring the large, finely finished clusters of the richly-flavoured Madresfield Court, and the golden hue of the Alexandrian Muscat, it was a matter of much interest to turn to the fine crop of Lady Downes intended for use during the winter months. This crop was interesting as a proof that grapes of high flavour are preferred at Hopetoun House, and that in the production of the necessary supplies a high degree of success is annually achieved. There are the same number of peach houses as vineries, and they are not less remarkable for the health of the occupants, and the abundance and quality of the crops obtained from them than are the latter. The varieties are those known to produce fruit of good appearance and high quality, and with reference to these it may be mentioned that the crop of Peregrine peach attracted special attention by reason of its abundance and the high finish of the fruits. Figs also are cultivated with much success, and in the several houses devoted to melons there was no lack of fruits in a high state of development, and in those in which the crop was approaching maturity the perfume that pervaded the structures suggested that the size and exterior finish of the fruits were not the only claims they had for attention.

Many are the plants of interest in the cool houses and plant stoves to which reference might be made, but it is not possible to do more than mention a few. In one of the stoves there is a remarkably fine collection of hibiscus that has but few, if any, equals. There are upwards of twenty species and varieties, and trained to the rafters in such manner as not to exclude the light, they produce an attractive display of flowers, extending over a considerable period without in any way injuring the plants growing on the stages below. There is also in this structure, among other noteworthy specimens, a fine example of that distinct and handsome fern, Platycerium alcicorne.

In the greenhouses may be seen a host of good things, chief among them being the perpetual-flowering and Malmaison carnations. Two or more houses are devoted to these popular and exquisitely beautiful flowers, and Mr. Hay would appear to possess the secret of banishing the enemies of these carnations from the structures in which they are grown. At all events, all the plants were in a condition that bespeaks perfect health. Perpetual-flowering carnations are not only cultivated in pots, in accordance with the orthodox practice, but they are most successfully grown in baskets suspended from the roof.

Immediately in front of one of the ranges of houses is a large rose garden, in which roses and violas are grown in association with much success. This fine garden has been already illustrated in these pages, and it will suffice to say that the large lozenge-shaped beds radiate from a central point, and are filled with dwarf roses set in a carpet of a pale blue viola known as Come to Stay. Each bed is filled with one variety, and as it is necessary the garden should present a bright appearance in August, when the family is in residence, Caroline Testout and Madame Abel Chatenay are the two roses that have been planted. The viola mentioned, which is one of the late Dr. Stewart's raising, has very pale blue flowers, and, consequently, there is no clashing of colours, as in the case when the deep purple, rich yellow, and dark blue violas are associated with roses.



A TASTEFUL ARRANGEMENT OF SUMMER FLOWERS, HOPETOUN HOUSE GARDENS.

The flower garden on the upper slope, which is, for the most part, furnished with plants that are more or less tender, is invariably arranged with much taste, and highly attractive. All the beds were more or less effective, but generally more than less, especially those filled with dwarf-growing scarlet-flowered begonias, notably Hatton Bedder, in association with variegated abutilons and other plants with ornamental leafage. The illustration of the flower garden will render detailed description unnecessary, and among other things it will show that Koniga maritima is freely used as an edging to the flower beds.

At the lower part of the slope, on the northern side of the valley, is the herbaceous border, which forms a magnificent feature, and is of itself sufficient to make the garden famous. This is many hundreds of feet in length, and sixteen feet in width, and planted with subjects that flower from about the middle of July onward. Conspicuous among the many good things represented was Anthemis Kelwayi, a distinct form with soft yellow flowers, that is of much value in borders that are required at their best during August. The photograph, of which the illustration herewith is a reproduction, was taken at the end of the first week in August, and is a proof, if proof were wanting, that those who complain of a dearth of flowers of hardy plants in August have much to learn.

In the area devoted to the plant and fruit houses, and in the kitchen garden, are numerous borders devoted to flowering plants of various kinds. In one part of the gardens we meet with a border of pentstemons containing some 4,000 plants, a big border of carnations, from which some hundreds of excellent blooms may be cut at any given moment; a large area containing a thoroughly representative collection of herbaceous phloxes; a border of immense length given up to early-flowering chrysanthemums; a large breadth of antirrhinums and East Lothian stocks; an extensive collection of gladioli, and so one might continue at some length without exhausting the interesting features of these great gardens. But space renders it necessary to bring these notes to a close; but before this is done mention must be made of the well-equipped recreation room that was provided, with his usual thoughtfulness and kindness, by the late Marquis of Linlithgow, for the use of the young men employed in the gardens, and in some other departments of the estate. It is one of the best-equipped recreation rooms the writer has yet seen, and it is gratifying to know that the kindly spirit which prompted its provision is remembered with feelings of gratitude by those who have the privilege of using it. George Gordon.

[Since the foregoing notes on the gardens at Hopetoun House were written, Mr. Thomas Hay has, as we have previously noted, been appointed Superintendent of Greenwich Park; his successor at Hopetoun is Mr. Highgate, from Yester.—Ed.]

Gardener's Notice to Leave.—At Salford County Court, Mr. F. Stocker, a gardener at Swinton, sued his late employer for three weeks' wages in lieu of proper notice. He had had one week's notice to leave. His Honour Judge Mellor gave judgment for the amount, £4 7s., claimed by the plaintiff, with costs.

AMONG THE HEUCHERAS.

Old hardy plantsmen love to dwell upon the changes they have seen in the plants of their choice, but I fancy they find few flowers which have increased in variety within a short time to a greater degree than the heucheras, or alum roots, of which we have now a host indeed. These are excellent for cutting, their sprays or panicles of graceful flowers being admired when cut, and equally valuable in the garden when growing. A little talk about these may be of use and of interest when readers are pondering over the flowers they want to secure by and by

Long ago Heuchera Richardsoni was valued for its bronzy-red leaves in spring, but its flowers are of little account, so that it has never been so popular as the others. The advent of H. sanguinea transformed the heucheras, however, and it is from the union of this and other species that the greater number of the newer kinds now to be mentioned derive their origin. Sanguinea is a lovely thing, with spikes of the most brilliant scarlet. Its drawback is its shyness of flowering in many gardens. Splendens is a fine variety of this, but is not so free in flowering as we would like. Walker's variety is the best of the trio, being finer in every respect, and also freer in flowering.

Brizoides marked an advance, and resulted from the union of the two species already named. It has graceful spikes of elegent rosy flowers, small in size, but very useful in their loose spikes. Brizoides gracillima has pretty spikes of red flowers, and looks graceful anywhere

In H. micrantha we have a still more beautiful alum root, with many little rosy-white flowers on long stems two to three feet high. Its variety rosea has rosy-pink blooms on red stems, and is a most exquisite plant in every way.

When we come to the newer heucheras, whose parentage is a mixture of races, but mostly owing their fine characters to the species and hybrids already named, we are embarassed by the choice. Brownsea Brush is among the latest of the novelties. It has hosts of sprays of the most elegant growth, having flowers whose shading seems to pass through blush to rose. Then Coralie, coral-tinted, bearing many fine panicles, and the graceful, lax-growing elegans are two good varieties, the latter being a soft rosy-red.

Heath-like in their appearance are the varieties known as ericoides, the first, ericoides itself, having charming pink sprays of flower; the variety alba has these of a pure white; and rosea is blush—a shade likely to be popular among these exquisite heucheras.

Fantasy, blush-white, seems to have a future before it, because of the elegance of its inflorescence, but Flambeau is more likely to be sought after by those who like bigger blooms. It has bright red long-shaped flowers. Grenade has brighter flowers than Flambeau—more approaching scarlet-crimson than those of that variety; and the noble Pageant has fine bright crimson blooms. Madeline, dwarf in its growth, has blush-white flowers in plenty; and Pluie de Feu has these of a vivid fiery-red.

Rosamunde, of the micrantha style, has proved itself a favourite. Its branching stems of fine coral-red flowers are glorious in the border, rising, as they do, from three to four feet high. Saladin may be said to be a deeper-coloured sanguinea; and Snowflake, although pretty, appears to have been misnamed, as the flowers, white inside, are only grey on the exterior.

To conclude, we may name two good heucheras of much the same habit. These are Sancyl—between sanguinea and cylindrica—and Zabeliana. Both of these bloom twice in the year, and give good panicles of charming, long-shaped, bright pink flowers. The greater number of heucheras will thrive in any good soil, but some flower less freely than others, for some obscure reason. Yet a rich soil does not seem to cure this defect, and a good loam, with a little peat and leaf-soil mixed, will generally answer well for these fine flowers, which are of high value for the ornament of the garden and the home.

S. Arnott.

A MAGNIFICENT DISPLAY OF HARDY FLOWERS, HOPETOUN HOUSE GARDENS.

Crown Gall Disease.—An important investigation into the crown gall disease of plants has, during the past six years, been conducted by the U.S. Bureau of Plant Industry, and the report thereon has just been published. From this we learn that Dr. E. F. Smith, one of the authors of the bulletin containing the report, suspected a bacterial origin for the disease as far back as 1904, but definite proof was not obtained until 1906. In the last-named year those engaged in the investigations succeeded in isolating a bacterium, and in transmitting infection resulting in gall production from pure cultures. To this organisation, a short, rod-like form, the name of Bacterium tumefaciens was given. The investigations were commenced with galls upon glass-grown plants of Chrysanthemum frutescens, and later on similar galls on apple and peach trees, grape vines, sugar beet, and other plants. It is considered probable that there are different physiological races of the bacterium, but cross inoculation was, generally speaking, possible. Dr. Smith regards the manner of growth of the galls as bearing a resemblance to certain animal tumours.

BIENNIALS.

The various biennials provide the garden with a grand display during the early summer. Considering the ease with which they may be raised and grown, it is rather surprising they are not made more use of. When raising the plants all that is necessary is a cold frame, wherein the pots or boxes may be placed for the seeds to germinate. If one has not the frame, and only a few plants are required, the seed pots may be placed in a box, and a few sheets of glass laid on the top will suffice. The seeds germinate with great freedom when kept fairly close and shaded. When the seedlings appear light and air may be gradually afforded until they have made sufficient roots to withstand full exposure. When the plants are large enough to handle they should be planted out into nursery beds, where they will make suitable plants for putting out the following autumn.

If one has several frames to spare for the work better results are obtained by pricking the seedlings out in them and growing them on for a time before planting in the nursery beds. More labour is entailed by following this latter method, yet one is amply repaid for the extra trouble expended on the culture, for, to a great extent, success depends on a good start, and having a sturdy plant to put out in the first instance. An ordinary Canterbury bell will usually give one spike of flowers, but one that has been well grown from the commencement will, as a rule, throw several spikes. Sweet williams, too, respond readily to the better treatment, and finer plants are obtained. May is the most suitable month for sowing the seeds, and by following the advised methods an excellent display can be obtained for the following year.

Foxgloves are indispensable for woodland planting, and excellent effects are obtained by boldly grouping the plants in large masses. They may also be planted to advantage amongst dwarf shrubs, where the flower spikes may tower above the shrubs. Ivery's Spotted is a good variety, and the gloxiniæflora strain is exceedingly pretty.

Canterbury bells adapt themselves to use in shrubbery borders, and also for grouping in the herbaceous borders. They are also useful as pot plants for conservatory decoration if potted in October.

Sweet Williams have been largely improved, and are now very popular for bedding purposes. Pink Beauty is a charming variety, and makes a beautiful bed. The scarlet and crimson both give excellent effects, either in the herbaceous borders or in beds.

The Evening Primrose (Œnothera Lamarckiana) is seen at its best when naturalised in the woodland or shrubberies; a bold group or two flowering amongst evergreen shrubs is very effective, the dark green foliage showing off the soft yellow blooms to great advantage. It lasts for some considerable time in flower.

Honesty (Lunaria biennis) is hardly good enough for the flower border, yet is very pretty when associated with other plants in the wild garden. It is somewhat neglected, yet quite worthy of a place where natural effects are aimed at.

Verbascum Chaixi, V. longifolium, V. olympicum, and V. phlomoides are extremely useful for naturalising, and should be boldly grouped in the wild garden and woodland. The phœniceum hybrids make pretty groups in the herbaceous borders, and are quite suitable for the purpose. On warm soils the verbascums will prove perennial, but on wet ones it is advisable to treat them as biennials.

Papaver nudicaule, the Iceland Poppy, owing to its habit of damping off in the winter, or dying out after flowering one season, should be raised annually to maintain a stock. It is one of the most beautiful and graceful of poppies we have, and extremely lasting in a cut state. For light vases, either in the drawing or dining-room it is a lovely flower. A combination of yellow Iceland poppies and Campanula persicifolia for a drawing-room table is most effective, and highly appreciated. The improved strains contain a large variety of colours, and the plants adapt themselves well to rock garden culture; in fact, when planted in dry, sunny spots, they live longer than in the open border.

Of the meconopsis perhaps the best are M. integrifolia, M. Wallichi, M. aculeata, and M. puniceus. In dealing with these the safest plan to follow is to gather and sow the seeds as soon as ripe, otherwise they often lie dormant for some considerable time.

E. C. Pooley.

MULCHING AND WATERING SWEET PEAS.

The continuance of dry weather naturally tends to make the sweet pea grower contemplate mulching, and on light dry soils it may be advantageous to get it done at once—at least a light mulching of leaf-soil or leaf-soil and well-rotted horse manure may be given. This should be prepared some little time beforehand, and before it is applied the ground between the rows should be well hoed, and, if necessary, the rows should be hand weeded. Work the leaves or manure well between the plants, and for at least a foot on each side of the rows; this should suffice for a time. Although the plants at this stage should not require any manure, it is not wise to waste anything, so the mulching should be well watered in, as by this means its manurial properties are washed in also, while the mulch itself will lay closer to the plants, and so prevent evaporation. A little later on, should the weather continue warm and dry, a heavier mulching should be given to all the sweet peas, but this should be delayed until actually needed, as this heavy mulch, with plenty of water, will do much to rejuvenate the plants after they have flowered for a few weeks.

As may be inferred, I am not in favour of much water until the plants are well in bloom, when, of course, they will quickly suffer if allowed to become dry; but as we have had so little rain in many parts of the country since planting out time, where plants are failing to grow properly the grower will be well advised to make quite sure that they are not suffering from drought.

At the time of writing, May 30, many varieties (autumn-sown) are opening flowers nicely, Elsie Herbert, Sunproof Crimson, Earl Spencer, Evelyn Hemus, Scarlet Monarch, and Doris Burt being among the most forward, though perhaps the earliest of all is Bertha Massey, every plant of this variety having well-expanded flowers on it. This is a variety that was shown under the name of Mrs. Ryle last season, and is of a very pleasing shade of rosy-lilac, quite distinct from anything else, and if the whole stock is as true as the few plants I have it will be much sought after

After what we saw at the great Temple Show we shall all be looking forward to those varieties Messrs. Dobbie and Co. exhibited; several of them appear to be real acquisitions, notably Melba, Mrs. Cuthbertson, May Campbell, and Dobbie's Scarlet.

Thomas Stevenson.

HARDY AZALEAS.

The delicate shades of colour noticeable amongst the flowers of the numerous forms of deciduous rhododendrons, or azaleas as they are more popularly called, combined with a delicious perfume, makes these shrubs justly popular, and few more effective sights can be imagined than a collection of the various kinds when in full bloom. Collectively known as Ghent azaleas, these hardy plants have originated by crossing several North American species with the Chinese and Japanese R. sinense (Azalea sinensis or A. mollis) and the Caucasian R. flavum. As may be ascertained from the common name of "Ghent azaleas," a great many varieties originated in Ghent, but English growers also have done their share in raising new kinds, the nursery of Mr. Anthony Waterer, Knap Hill, Woking, being specially noteworthy as the birthplace of many of the richer reds, whilst the late Mr. Cripps, of Tunbridge Wells, raised a number of very pretty sorts.

Given ground fairly free from lime, whether it be loamy or peaty in character, it is possible to succeed with azaleas, and providing a few particulars about cultivation are borne in mind, they cannot be said to be difficult shrubs to manage. Should the natural soil be peaty, all well and good, if it is not so, however, there is no necessity to provide a lot, in fact, it is better to exclude peat altogether, rather than excavate beds 1½ feet deep or so and fill them entirely with peat. A good plan to adopt is to trench ordinary light loamy ground 1½ feet deep, and remove a few inches of the lower soil, then spread over the surface sufficient peat to make up the deficiency, afterwards forking it into the upper foot. When planting, care must be taken to keep the upper roots near the surface of the soil, for deep planting is often fatal to the well-being of the bushes. At the same time, the soil must be well trodden about the roots, for if left loose, the water will run round about the sides without penetrating the old ball of roots. It is also necessary to provide against drought. But while this may be done by continued watering, it is better to so arrange that a minimum amount of artificial watering is necessary by applying a good surface dressing of decayed leaves to the soil. Leaves used in this manner keep the soil cool and moist for a long period, and also encourage surface roots, which is a very necessary item towards the successful cultivation of azaleas. Surface dressings of manure are not to be encouraged, though an occasional application of liquid cow manure after the plants are thoroughly established will do good. The removal of the old flower heads before seeds have time to form is attended with advantageous results, for the strength which would have gone towards the maturing of the seeds is thereby available for the promotion of new growth and the ensuing year's flower buds.

The kinds which have played an important part in the production of the numerous hybrids are A. calendulacea (R. calendulaceum), a North American species, which usually grows to a height of from 4 to 6 feet, though it occasionally grows much taller. The flowers are often orange or orange-scarlet in colour, and very fragrant. A great many of the best orange and scarlet flowered varieties claim it as a parent. Like other species from the same country, it is very floriferous.

A. nudiflora (correctly R. nudiflorum), commonly called the "Pinxter Flower," is another N. American shrub. This contributes varieties with white, red, and pink flowers, which are not so large as those of the last-named species. The two plants have often been crossed, and their progeny may be frequently noted, especially in red, white, and bi-coloured sorts.

A. flavum, sometimes called Azalea pontica, bears yellow flowers, which are very large and fragrant. It is a native of the Caucasus, and has been used with the American kinds in the production of the garden azaleas. Some of the larger-flowered orange and yellow varieties owe their existence to the influence of this species.

A. sinensis (correctly R. sinense) is well-known as a shrub for forcing, but it is also grown largely out of doors, though it is less useful in some respects than the previously-mentioned species. It blossoms earlier than the American and Caucasian kinds, therefore the flowers are sometimes injured about the end of April or early May by late frosts. This year they have escaped, and have been responsible for a gorgeous display. Orange, red, and scarlet flowered forms are common, while cream and yellow also exist. The varieties of this species lack the fragrance of the American sorts, thus one charm usually attributed to the azalea is absent. It has of late years been crossed with other kinds and numerous showy hybrids are the result.

A. viscosa (syn. R. viscosum), the Swamp Honeysuckle of N. America, blossoms later than the others, and is usually at its best about the middle of July. Its peculiarly fragrant flowers are easily determined by their viscid character.

A. occidentalis (correctly R. occidentale) is another late-flowering kind, for it is usually at its best about the end of June and early July. It is from California, and forms a looser bush than the other kinds, often 8 or 9 feet high. The flowers are white or pink, and very fragrant.

A. arborescens (R. arborescens) flowers about the same time as the last-named. It is a N. American species, bearing white, or occasionally pink, fragrant blossoms. Crossed with the earlier kinds, these late-flowering sorts have so influenced their progeny that flowering takes place after the majority of the Ghent azaleas are over.

W. Dallimore.

Rhododendron Pink Pearl.—No variety of rhododendron has within recent years attracted such a large share of attention as Pink Pearl. It is such a grand rhododendron that its extreme popularity is not to be wondered at, though now there are several newer forms on somewhat the same lines. The Temple Shows of recent years have made us familiar with the fact that for flowering indoors at that season it is really superb, while strictly as an outdoor shrub its merits rank high. Another feature more pronounced I think this year than at any previous time, is that it may be included among the varieties which can be forced into flower early, when its noble blooms are as at all other times much appreciated.—W. T.

New Hydrangeas.—We have had a great many new varieties of hydrangea distributed within recent years, notably those from the establishments of M. E. Moullière, Vendome, and MM. Lemoine et Fils, Nancy, both in France. Last year a variety from each raiser was given an Award of Merit by the Royal Horticultural Society, namely, Ornement, from MM. Lemoine, and Madame E. Moullière, from the other raiser. A singular feature in connection with the last-named is that again on March 28 this year a similar award was given it by the Floral Committee. It is certainly a very fine hydrangea, and one, I should say, destined to stay, but of the two I prefer the variety Ornement, though that is, of course, only a matter of personal opinion. Both, however, are good.—W. T.

INFLUENCE OF SOIL ON THE COLOUR AND FLAVOUR OF STRAWBERRIES.

I think it is generally admitted by experienced cultivators that the soil has a direct influence on both the colour of the fruit and its flavour. In some districts strawberries are very highly coloured, but of poor flavour; in others they are not highly coloured but are of rich flavour. I would like to give an instance bearing out these facts.

When the variety Noble was first cultivated I planted several long rows of plants in a rather heavy, clayey soil, the latter being light in colour. The resultant fruits were almost as scarlet as those of Royal Sovereign, and very rich in flavour—for Noble. A few miles away a doctor, who was very fond of gardening generally, had a plantation of Noble strawberries. His fruits were of a deep crimson, almost black, and he gleefully contrasted his fruits with my light-coloured ones. But when it came to the eating test his fruits almost entirely lacked flavour, while mine were really very agreeable to the palate.

The soil in which the doctor's plants were grown was dark, and had, in time past, been a part of old heath, or forest.

To digress a little. I once exhibited some apples at an exhibition at Earl's Court. While staging them some gentlemen remarked, "Those apples have been grown under glass; no apples grown in the open air were ever coloured like those." As a matter of fact, the trees were grown in an almost pure clay bed, not the light-looking clay one so often sees, but dark red, and of a crumbling nature. To properly drain the orchard open trenches 2ft. and more in depth were made, a row of trees growing between each pair of trenches. In summer time, when the clay crumbled down and got baked in the sun, the particles were almost as hard as bullets. I told the gentlemen in question the conditions under which the apples had been grown, but I think they were disinclined at first to believe my statement. A silver medal was awarded. The trees are still growing in the same position, and are fruitful, but canker is a little troublesome.

Even in the same garden I have found that the fruits from young strawberry plants are more highly coloured than those from three-year-old plants. I am quite convinced that many inexperienced growers allow too much space between their rows and the plants in them. As a private cultivator I grew about five hundredweight of strawberries each year for a considerable number of years. During that period I experimented, of course, and I found it to be much more profitable to discard my plants (grown in a medium light soil) after the second year's fruiting, so every year some rows were destroyed, and others planted. In a heavier loam I think the plants will last quite a year longer in a remunerative state—until after the third year.

I would urge cultivators who have only small gardens to deal with to grow a number of strawberry plants as annuals, putting out the plants 14in. apart each way. Runners are plentiful, are easily rooted, and if the very earliest ones are secured, as in the case of runners for forcing in pots, the resultant crops from even a small plant would surprise the owner. Moreover, the fruits so grown are of the highest quality, both as regards flavour and appearance.

The ground for the plants should be prepared early, and the runners secured as soon as possible, and treated generously.

G. B.

THE CYPRESS OAK.

The oak which is known under this name is a pyramidal form of the common oak, and is correctly Quercus pedunculata var. fastigiata. To its peculiarity of habit, no doubt, the common name is due, for it has that distinct upright character noticeable in some of the cypresses. A similarity of habit may be seen in several varieties of the commoner trees, for the hornbeam, robinia, elm, and mountain ash have all produced varieties which exhibit the stiff character of the Lombardy poplar to a remarkable degree.

The Cypress oak forms a narrow tree 20 feet or more high, and is useful for planting in gardens where stiff growing trees are required to relieve those of a more spreading character. Several variations of it occur, one of the most distinct being Grangei, which is inclined to develop a globular habit with age. The forms known respectively as cucullata and oxyacanthifolia are distinguished by their contorted leaves; tortuosa by its twisted branches; and variegata by its variegated leaves. The latter cannot be called an ornamental tree by any means, for its leaves have a diseased appearance rather than a decorative character. These several varieties are increased by grafting on to stocks of the common oak.

W. D.

Summer-flowering Chrysanthemums. — Where not already done these may be planted in the beds and borders in which they are to bloom. Rich soil is necessary to obtain good results, therefore the beds or borders where they are to be grown should be well prepared beforehand. A good dressing of well-decayed manure and soot should be thoroughly mixed with the soil, and when planting out a small quantity of artificial manure may be added. The style of planting depends a great deal on the tastes of the owner of the garden, for whilst some prefer planting each bed in separate colours, others favour the mixed style. In cases where one has only a single bed to devote to chrysanthemums then mixing the varieties has to be resorted to, but when several beds are set aside for their culture, the whole colour system may be carried out, that is separate varieties in each bed. Regarding the border planting, each group or block should be of one variety. A few varieties may well be grown in the reserve garden in sufficient quantities to provide flowers for cutting, also a good batch should be grown in the nursery beds for the herbaceous borders. These will be found extremely useful for the filling up of blanks caused by the removal of sweet williams, canterbury bells, etc. They will lift readily, especially if dull showery weather can be chosen for the work. The plants should be well watered in, and syringed daily, in the evenings, until established. The taller growers may be planted out two feet apart each way, and the dwarfs eighteen inches.—E. C. P.

Azalea Anthony Koster.—The different nursery catalogues give this azalea as one of the varieties emanating from the intercrossing of Azalea mollis and Azalea sinensis, but as these two are by all botanical authorities regarded as synonymous, this particular variety can only be looked upon as an improved form of A. sinensis, better known in gardens as A. mollis. At all events Anthony Koster must be regarded as one of the very finest of the entire group, equally desirable for the outdoor garden, and for flowering under glass. It is of a free, rather upright habit of growth, while the flowers, borne in good-sized trusses, are individually large, of fine shape, and of a delightful rich pure golden-yellow colour. Being of unusual substance, they also last in bloom longer than some of the others.—W. T.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

VANDA TERES.—As plants of this species pass out of flower they should be examined, in view of repotting. It is not desirable to disturb the plants unless they have become leggy from loss of the lower leaves or the potting material is in a decomposed state. Where repotting is necessary carefully remove the old material from about the base of the plants, and turn them out of their pots. The stems that need shortening may be cut away to the best advantage, aiming to secure as many live roots as possible. If the plants have to be grown in pots, it is desirable that as many stems as possible should be grown together; sticks of suitable size to secure the plants in position should be neatly attached to each; then place the plants in position, and fill in the usual drainage material. The potting compost may consist of equal portions of fibrous peat, osmunda fibre, and chopped sphagnum moss, with sufficient broken charcoal and crocks added to render the compost porous. After potting replace the plants in position, and water with rain water sufficiently to wet the compost thoroughly. Syringe daily, and afford hot humid conditions and ample light all through the active season of growth. These vandas may also be successfully grown in boxes, and are most suitable subjects to be cultivated at the south end of an East Indian or stove house, where they may have the full benefit of the sun's rays.

V. HOOKERII is not so extensively grown as the above-mentioned species. It is altogether of weaker constitution, and is not generally found easy to cultivate; for a few years after importing they grow and flower satisfactorily, but soon deteriorate, and are then difficult to manage. Unlike V. teres, it does not require a prolonged rest under absolutely dry conditions; the plants are best managed and retained longest in a healthy state when grown in a semi-exposed position in a hot humid atmosphere throughout the whole year.

V. MISS AGNES JOAQUIM is derived from the intercrossing of the two above-mentioned species, and, strange to say, it is of a more vigorous constitution than either of its parents. It combines the characteristics of each in its flowers, and as the plants have now become reasonably plentiful it should have a place in every garden where this class of vanda is appreciated. The habit of the plant is somewhat straggling, and it makes plenty of growth where conditions favourable to its requirements are afforded. It should be placed in a position where it may be trained up the roof within reasonable distance of the glass, and where it may have the full advantage of strong light. During active growth liberal treatment is required, but during the dormant season dry conditions are essential, and a reasonably cool airy atmosphere. Upon the proper maturing of the growth depends the successful flowering of the plants.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

BEGONIA GLOIRE DE SCEAUX.—The handsome metallic foliage of this begonia renders it most attractive, and well deserving of a position in any collection of plants. Its flowering season usually commences about Christmas and extends over three or four months. It may be cultivated to provide a display of bloom to follow Begonia Gloire de Lorraine. The method of culture outlined in a previous calendar for this latter will be found suitable for B. Gloire de Sceaux, with the exception of high temperature: cooler conditions are more suitable, i.e., a temperature of 50 to 55 degrees. Cuttings may be inserted at this date and they will form useful decorative stock for next springtime. The plants should not experience any check to growth, and better results may be obtained by restricting the roots and using small pots. This begonia is an exceptionally gross feeder, and growth responds too freely to liberal treatment. All stimulants should be withheld until plenty of flower buds are showing, when an occasional watering with clear soot water and diluted farmyard liquid will have beneficial results. Occasional fumigation will keep the stock clean.

CROTONS.—The splendid bright sunshine which is so unusual for the Northern Counties has had a decided and beneficial effect on the colouring of these handsome foliage plants. They should be exposed to the full light, but it is often found advisable to shade lightly for a couple of hours during the hottest part of the day. The house should be thoroughly syringed and closed early in the afternoon, the shading removed, and full advantage gained from the heat of the sun. Extreme care must now be exercised with the management of the hot-water pipes: a minimum of 70 degrees will now suffice at night, and the pipes must not be overheated during the mornings, or the sun may easily cause much damage to foliage. Crotons are now growing freely, and those retained in small pots will require constant attention in the matter of top-dressings and watering.

ACALYPHAS.—The acalyphas are now developing their handsome foliage freely. The red and bronzy crimson leafage of A. Macafeeana adds a bold and distinctive appearance to any collection of foliage plants. This must now be afforded all the light available, giving but a very thin shade during the hottest part of the day. It enjoys an exceptionally robust constitution, and will freely respond to liberal treatment, thereby adding much to the quality of its foliage. If the stock is required for house decoration it will be found a distinct advantage to restrict the size of pot used for final potting, and frequent applications of chemical fertilisers must be given. Where large specimens are required a better plant is obtained with this particular kind if pots of from seven to nine inches in diameter are used, according to the size and strength of plants to be treated. Red spider and mealy bug are the most troublesome pests to deal with, and there must be frequent applications of insecticide to hold them in check.

ACALYPHA HISPIDA (SANDERIANA) may be treated similarly to the above, with the exception that as soon as the handsome long tassels of bright crimson flowers make their appearance the atmosphere must be kept considerably drier, and syringing overhead altogether dispensed with, or the ornamental flowering tails will not last long.

ALOCASIAS.—These will now need further top-dressing with some lumpy fibrous loam and peat, and a few lumps of charcoal and broken crocks to assist in keeping the soil sweet and porous. A few pieces of sphagnum moss dibbled in are always appreciated by the surface roots, and serve as a covering from drying sun, etc.; the sphagnum moss also serves the purpose of making the plant appear more decorative. Alocasias will now need abundance of heat and moisture, and on no account should they be allowed to suffer from dryness at the roots. The foliage at this season develops quickly, and will need careful attention to shading and ventilation. Owing to the exceedingly tender nature of the leaf stalks in their early stages these should be supported by a neat green stake and safely secured. Before the plants are used either for exhibition or decoration their general appearance may be much improved by a syringing over with soapy water.—John Donoghue, Bardon Hill Gardens.

THE FLOWER GARDEN.

BORDER CARNATIONS.—It is advisable to provide the flowering growths with the necessary support before they become too heavy; when allowed to remain too long without staking they grow bent, and are often snapped off when endeavouring to straighten them. The coil wire support is, perhaps, the best for many reasons: the work is done quickly, and when the flowers are required for cutting one has only to turn the stem off the coil. Brown bamboo canes are useful for the purpose, and inconspicuous; green raffia should be used for tying. Watering must be resorted to during dry weather, and great benefit is derived from frequently stirring the surface of the beds with the hoe. Where the buds are close and numerous, a few should be removed, as those left will produce finer flowers, and the spray will be more effective. No hard and fast rule can be laid down regarding disbudding; it has to be done at the discretion of the operator, who will see at a glance which should be removed.

ROSES.—An important point at the present time regarding the cultivation of roses is to prevent any damage being done by maggot or greenfly. A constant watch must be maintained to keep these pests in check, syringing with insecticide for the fly, and hand picking for the maggot. Where one has the advantage of a good pressure of water, it takes but little time to hose the plants in the evening, and this will greatly assist in keeping the foliage healthy. The young growths which are now being produced on the ramblers must be carefully tied in to prevent the wind from damaging them.

VIOLETS.—All runners should be picked off as soon as they appear, and the soil between the plants frequently stirred with the hoe. Good waterings will be necessary during dry weather, and the plants derive much benefit from being damped overhead every evening. This helps to keep red-spider down, which in some gardens is extremely troublesome.

PINKS.—It is necessary to propagate early to obtain a good stock of plants for next season, and as soon as the growths are of sufficient length they should be taken off for the purpose. The quickest plan is to slip the young shoots from the stem with a downward pull, and trim off the ragged ends and a few of the lower leaves with a sharp knife. A small frame should be prepared by placing a few inches of sand in it, and the cuttings may be dibbled in closely. Here they quickly form roots, if kept moist and shaded, after which the shading may be gradually dispensed with, and the light removed altogether. When the cuttings have become accustomed to full light and air, and well-rooted, they should be planted into nursery beds, where they will make good plants for autumn or spring planting.

ANNUALS.—A good supply of bloom for the autumn may be obtained by sowing the seeds now. The beds should be prepared as advised for earlier sowings, and the plants thinned in their young stages of growth. The early plants will require to be watered during dry weather or they quickly cease flowering, and supporting them must not be neglected.

MIXED BORDERS. — These are usually filled with a collection of herbaceous, biennial, and annual plants, and must not be confused with the herbaceous borders proper. Wallflowers, myosotis, silene, polyanthus, tulips, etc., are generally made use of to create an early display, and now these have finished flowering replanting the spaces must be taken in hand. The various annuals, such as asters, stocks, phloxes, zinnias, etc., which have been grown in frames, will come in handy for refilling the blanks caused by the removal of the spring flowers. Summer-flowering chrysanthemums will be found useful for the purpose, also the surplus plants from the general bedding. For the background dahlias, sweet peas, and tall sunflowers are effective.—E. C. Pooley, Gnaton Gardens.

FRUITS UNDER CLASS.

MUSCAT GRAPES. — Great attention should be paid now to the final thinning. Aim at keeping a good supply of berries at the top of the bunch, so that when ripe the bunch maintains its position when placed upon the table or show board. Mistakes are frequently made in over thinning, especially when a good set has been obtained. Do not overcrop, or the berries will fail to develop thoroughly, and if Muscats are not properly and thoroughly developed they never have that beautiful rich flavour for which this grape is distinguished. One bunch to a spur would, in most cases, be more than the vine could bear; at least, for several years in succession. One pound of fruit to a foot of rod is considered a very fair crop. Thinning should be taken in hand as soon as it can be determined which berries have set the best and which are the most useful. Supernumerary bunches are a great waste of energy. Great care should also be exercised that the points of the scissors do not pierce the berries, or a berry may have to be taken away and cause a gap. It is essential also that the stalks be cut short, as these, when left long, disfigure the otherwise smart appearance of the bunch. The temperature should be kept at about 70 deg., giving more and more air as the temperature rises, and diminishing it correspondingly in the afternoon; at the closing time give a thorough damping with the syringe, wetting every portion of the floors and walls; damp down again about 8.30 p.m. with soot water or liquid manure. A little air should be given early in the morning, at 6.30 a.m.

LATE GRAPES. — These must now be finally tied down to the wires, and the branches stopped; take out all laterals, and stop the shoot about two or three eyes beyond the bunch. The latter will in most cases be ready for final thinning by the time these lines are in print; take care that such varieties as Gros Colmar are well thinned. The bunches appear to look thin if berries are left an inch apart, but the grapes rapidly fill up the space, and it is much better for this type of grape for each berry to stand clear of its neighbour, as they then keep so much better. Alicante and Lady Downes require thinning evenly and expertly, as these are also late keepers. Afford plenty of water when the borders need it, and close the house as recommended for Muscats. It is imperative that a little ventilation be left on in hot weather, and this will practically prevent scalding. The temperature at night need not be more than 65 deg., and the merest circulation in the hot-water pipes will keep up this temperature.

FIGS.—When these are ripe, and are being gathered keep the house cooler by means of more air, but on no account allow the roots to become dry, or it will be at the expense of the second crop. As soon as the crop is finished the house may then be kept warmer, and more moisture used for the well-being of the second crop. Keep the branches pinched and the leaders tied in as occasion demands.

MELONS.—As soon as the early house is cleared give it a thorough washing with petroleum soap, and whitewash the walls. See that everything is scrupulously clean; make up another bed, and replant. In succession houses and frames keep the growths regulated, and set the fruits as they become ready for pollination. Sow seeds again for the latest batch, which should be ready for planting by the first week in August.

ORCHARD HOUSE.—Keep the growths well pinched, and do this regularly. Syringe copiously twice daily, and water well whenever necessary. Thin the plums for cooking purposes, so as to give those left more chance of becoming fine specimens for the dessert table. Thin peaches and nectarines finally. —W. A. Cook, Leonardslee Gardens.

Kalmia glauca. — Compared with the well-known Kalmia latifolia, this is quite a small growing kind, forming as it does a neat growing little bush, usually from eighteen inches to two feet in height. The flowers are bright rosy-red, and borne in terminal heads in the early part of the month of May. The leaves are only about an inch long, dark-green above, and glaucous underneath. This Kalmia, which is a native of Canada, and some of the North-Eastern States, is well suited for association with the smaller growing members of the ericaceæ, such as the heaths, ledums, the lesser azaleas, and others of this class. Like most of its allies, it needs a fairly moist, but not water-logged soil, while the presence of lime is injurious to it.—W. T.

HANLEY PARK, STAFFORDSHIRE.
JULY 5th and 6th, 1911.
FIFTEENTH GREAT
ANNUAL FLORAL FETE.

£650 in Prizes, Silver Cups, Gold and Silver Medals.
Silver Challenge Cup, value £10 10s., offered for TRADE EXHIBIT.
(For particulars see page 8 in Schedule.)
Valuable Special Prizes offered by the Principal Firms in England.
Schedules post free on application to
WM. POULSON, Secretary.
Town Hall, Hanley.

RICHMOND HORTICULTURAL SOCIETY.

THE THIRTY-SEVENTH ANNUAL SHOW will be held in the Old Deer Park, Richmond, Surrey, on WEDNESDAY, 28th June.

Silver Challenge Cups, Gold and Silver Medals, upwards of 300 Money Prizes.

W. J. COOK, Hon. Sec., Holmsley, Richmond, Surrey.

SHREWSBURY GREAT FLORAL FETE.
AUGUST 23 and 24, 1911.

£1,200 in Cash Prizes.

Schedules for this year are now ready, and may be had post free from—
Messrs. ADNITT and NAUNTON, Hon. Secs.,
Shrewsbury.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

Royal Horticultural Society.

The exhibition held on the day following Whit Monday was of moderate dimensions and moderate quality, while the attendance was small. We have previously uttered a mild protest against exhibitions at Westminster on a day following immediately on a Bank Holiday, but without effect; many exhibitors would gladly stay away, but as the hall is open they do not care to leave all the business to others, and so they bring up a group and grumble at the lack of visitors, and, in this case, at the heat as well.

Hardy flowers, orchids, and roses were the chief features of the meeting

FLORAL COMMITTEE.

The display of pæonies from Messrs. R. H. Bath, Wisbech, was very pleasing to the eyes as the abundant and beautiful flowers toned from purest white through cream, blush, and pink to soft crimson. Solfaterre was a particularly pleasing cream-white. To beautiful colour and form was added lovely fragrance.

The leading features of the group from Messrs. G. Bunyard and Co., Maidstone, were the graceful heucheras in variety, some delphiniums, Oriental poppies, and some lovely ixias.

Messrs. Wm. Cutbush and Son, Highgate, had in their exhibit of carnations some especially fine specimens of Frank Galsworthy, Lady Coventry, Alma Ward—a fine white, Queen Mary, Mikado, Marquis of Tweeddale, and O. P. Bassett.

Messrs. Whitelegge and Page, Chislehurst, presented a pleasing and interesting display of hardy flowers; their two little rock gardens were gay with Dianthus Napoleon III., Saxifraga pyramidalis, bronze antirrhinums, etc.; heucheras were very well shown in large bunches in tall glasses, the forms of H. sanguinea being especially graceful; Delphinium Persimmon was another fine thing in this group.

Mr. J. Box, Lindfield, Sussex, was responsible for an effective contribution of Oriental poppies, the salmon-coloured Mrs. Perry being very fine, and largely shown; these were backed by tall stands of long-spurred aquilegias, flanked by single and double pyrethrums, and edged with violas and a fine box of the showy Incarvillea Delavayi.

Mr. Amos Perry, Enfield, showed a lovely collection of irises in novel style. A host of tiny hardy ferns, chiefly tasselled forms of the Lady fern, formed a soft green bed, out of which the iris spikes (set in concealed vases of water) rose erect and stately. It is difficult to particularise in such a fine lot of varieties, but just a few that attracted our attention were pallida Beatrice, Bronze Beauty, Perfecta, Gold Crest, Sweetheart, Ada, Foster's Yellow, Queen of May, Sympathy, Albert Victor (a noble pallida form), Mrs. Newbronner (rich yellow), Standard Bearer, Oriflamme — a glorious variety, Herald, Sincerity, and Mdme. Patti.

Messrs. Kelway and Son, Langport, brought up a collection of pæonies, single and double, and a set of single and double pyrethrums; the hot weather had somewhat affected the pæonies during their journey from Somersetshire; good double pæonies were Lord Curzon, Leonard Kelway, Media, Addison, and Princess Beatrice, while good singles were Cherry Ripe, Lady Helen Vincent, Her Grace, Princess, and the dark crimson Millais. The white double pyrethrum named Aphrodite, with long graceful guard florets, was a notably good thing in the Langport group.

Messrs. W. and J. Brown, Peterborough, presented some very good bunches of Achillea Grassi, the pink and rose Lupinus Moorheimi, the brilliant Heuchera sanguinea splendens, Lilium umbellatum, L. Sovitzianum, the large yellow gaillardia Lady Rolleston, and pot plants of Dianthus Napoleon III., and the good old Trachelium cœruleum, the latter a useful greenhouse plant.

Phyteuma comorum, the white form of Ramondia pyrenaica, Dianthus alpinus, Anemone alpina sulphurea, hardy cypripediums, edelweiss, alpine campanulas, and free-flowered azaleas of the anemone group were the leading features in the exhibit from Mr. G. Reuthe, Keston, Kent.

Messrs. Barr and Sons, Covent Garden, were represented on this occasion by a display of irises of the germanica group; Perfection, Maori King, Bridesmaid, Dalmarius (new soft lavender), Queen Alexandra, Rhein N[illegible] Black Prince—very fine deep colour; Nie[illegible]lungen, copper and purple; Cordelia, very handsome blue and purple, and King of Iris, gorgeous in gold, copper, and crimson, were a few of the best.

A particularly fine specimen of the graceful Utricularia montana was shown by Mr. Downes, gardener to J. T. Bennett-Poe, Esq., M.A., V.M.H., Holmwood, Cheshunt.

The roses from Messrs. B. R. Cant and Sons, Colchester, included rambling varieties that backed up bunches of Dr. J. [illegible] Hall, Killarney, Mdme. Alfred Carrière, Betty, Joseph Hill, Aimee Cochet, and other lovely varieties

Messrs. Stuart Low and Co., Enfield, associated nephrolepis fronds with their carnation flowers; good varieties of the latter were Roseate Dawn, May Day, C. P. Little, a new yellow, Royal Purple, and Sunset. Hydrangeas were also well shown by this firm.

A fragrant, compact double white stock named New White Winter, was shown by Mr. Ernest Benary, Erfurt; the flowers were [illegible] extraordinary in size or spike, and the variety did not appeal to us.

Messrs. G. and A. Clark, Dover, filled the table across the top end of the hall with hardy flowers, but their grouping was too low to be really effective. Pyrethrums were in great force, and so were German or flag irises, Siberian irises, Oriental poppies, Heuchera Edge Hall, Geum John Bradshaw, G. Mrs. Bradshaw, delphiniums, lupins, p[illegible], and trollius.

The long-spurred aquilegias from Messrs. Dobbie and Co., Edinburgh, were very beautiful, and were presented in a rare range of colours: crimson and yellow, white and pink, and slate, cream and purple, yellow and pink, and [illegible] and blue were a few of the delightful [illegible] combinations; the sweet peas shown in [illegible] the fine new Melba, Masterpiece, Edrom Beauty, Mrs. Cuthbertson, and Elfrida Pearson.

Show pelargoniums from Messrs. H. Cannell and Sons, Swanley, were reminders of the value of these showy plants for greenhouse and conservatory decoration; Countess, Lady Treloar, Alice Hayes, Admiral Beresford, Dainty, and Royalty were varieties that greatly appealed to us.

Mr. C. Blick, Hayes, Kent, showed a fine lot of carnations, and specially good were Lady Hermione. Lieut. Shackleton, Enchantress, Skirmisher, White Perfection, Nell Gwynne, and Beacon.

Oriental poppies from Messrs. Bakers, Wolverhampton, made a rare blaze of colour; Mrs. Perry, Mahony, Lady Roscoe, White Queen, Beauty of Livermere, and Prince of Orange were all very showy, while the lupins and irises were scarcely less effective.

Messrs. George Mount and Sons, Canterbury, had a lovely lot of roses, and set up large stands of Lady Hillingdon, Mrs. G. Shawyer, Mrs. John Laing, and Frau Karl Druschki, as well as the smaller vases of other varieties.

Eremurus robustus overtopped everything else in the group of hardy flowers from Messrs. T. S. Ware, Lim., Feltham, but the towering spikes did not subdue the colours of pæonies, gaillardias, pyrethrums, erigerons, campanulas, and hardy orchids.

Mr. James Hudson, gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton, presented a small group of old-fashioned varieties of scented-leaved pelargoniums, and these, though small-flowered, were very beautiful; the varieties exhibited were Little Pet, Pretty Polly, Chiswick, and Countess of Devon.

Other contributions included standard fuchsias, nephrolepis, and fragrant heliotropes from Messrs. H. B. May and Sons, Edmonton; spotted and self gloxinias from Messrs. J. Peed and Sons, Norwood; varieties of Primula obconica from Mr. L. R. Russell, Richmond; pyrethrums from Mr. G. W. Miller, Wisbech; St. Brigid Anemones from Messrs. Reamsbottom and Co., Geashill, King's Co., Ireland; dahlias, etc., from Messrs. Carter Page and Co., London Wall, and hardy flowers from the Guildford Hardy Plant Company.

ORCHID COMMITTEE.

Messrs. J. and A. A. McBean, Cooksbridge, Sussex, had a lovely lot of Miltonia vexillaria with fine spikes of Odontoglossum crispum, good forms of Cattleya Mossiæ, Lælia purpurata, etc.

Lælio-cattleya Farrantia, as shown by Mr. Francis Wellesley, Westfield, Woking, was very effective.

Sir Trevor Lawrence's Cattleya Mossiæ Aureola, with a fine yellow lip, secured an Award of Merit, but his L.-c. Fascinator x Mossiæ did not pass muster.

Mr. W. J. Stables, gardener to De Barri Crawshay, Esq., Sevenoaks, brought up several fine odontoglossums, and some new odontiodas, the best of the latter were O. Rosefieldiense and O. Ganymede, the latter an O. elegans cross of considerable beauty.

Messrs. Sander and Sons, St. Albans, had Phaius Cooksoniæ in good form, a dozen fine flowers on a Lælio-cattleya Canhamiana, the rare Ornithocephalus grandifolius, the pretty Ærides Houlletiana, Odontoglossum Thompsoni, Phalænopsis Rimestadiana, and the wee little Masdevallia O'Brieniana.

Mr. Hale, gardener to S. Larkin, Esq., Haslemere, presented a small group of orchids wherein Phalænopsis Rimestadiana, varieties of Cattleya Mossiæ, Lælio-cattleya Canhamiana, Odontoglossum Pescatorei, O. excellens, and Renanthera Imschootiana were effective.

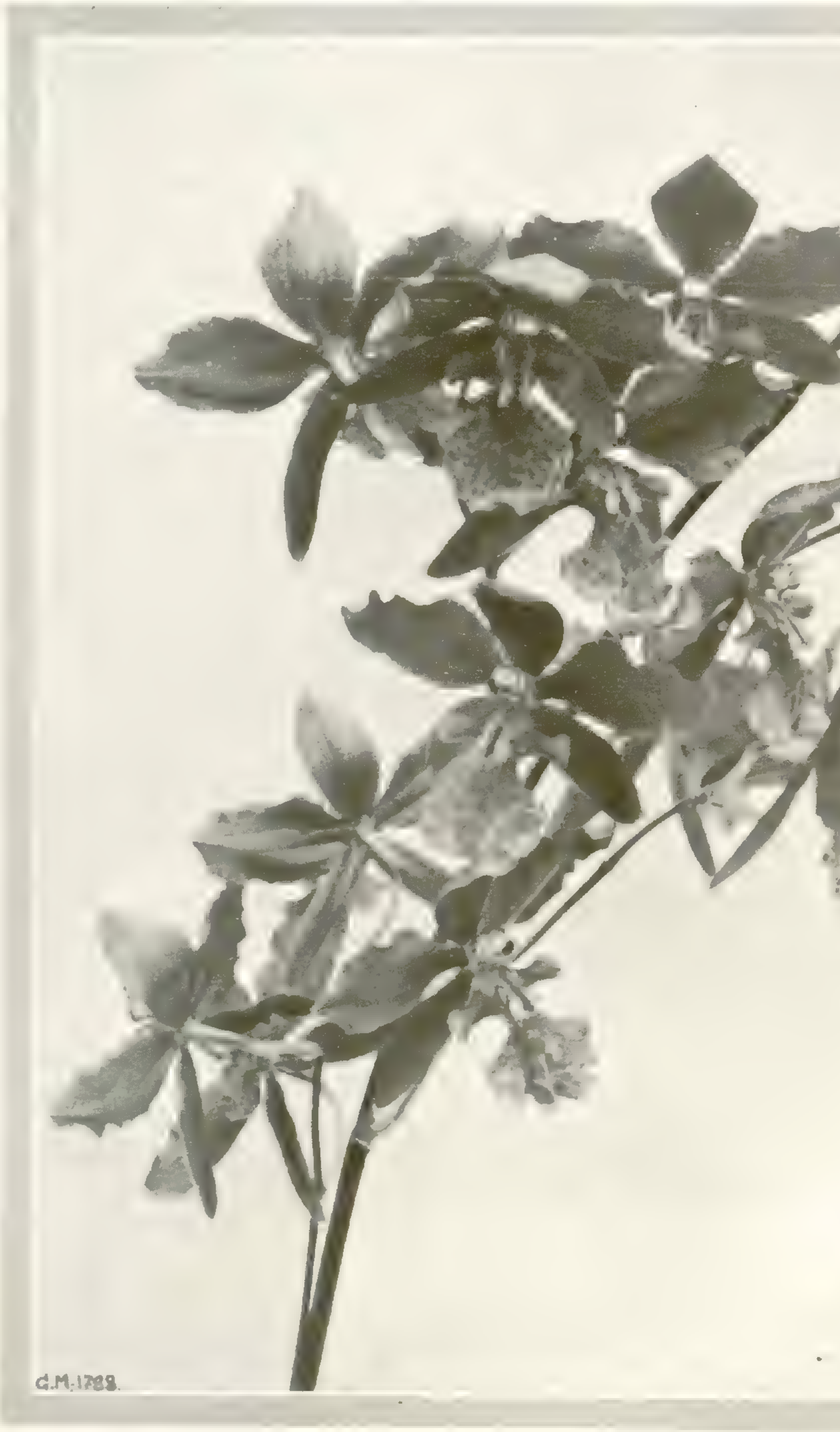
Oncidioda Cybele (A.M.), a very interesting cross between Cochlioda Noetzliana and Oncidium sarcodes was prominent in Messrs. Charlesworth and Co.'s group of orchids; here also were fine plants of Lælio-cattleya Canhamiana, L.-c. Fascinator, L.-c. Aphrodite, Odontoglossum Jasper, O. Lambeauianum, and the splendid Odontioda Charlesworthi.

Messrs. Stuart Low and Co., Enfield, had a quite good show of orchids, the varieties of Cattleya Mossiæ showing up conspicuously, here also were Odontoglossum Pescatorei, Cœlogyne pandurata, Miltonia Queen Alexandra, Lælio-purpurata in variety, Odontioda Bradshawiæ, and the very fragrant Odontoglossum citrosmum.

White-petalled forms of Cattleya Mossiæ made a good central feature in the group from Messrs. Hassall and Co., Southgate; all around these were coloured forms of C. Mossiæ, with L.-c. Canhamiana and Brasso-cattleya Veitchi.

Mr. E. V. Low, Vale Bridge, Haywards Heath, had a pretty and pale form of Lælia purpurata, Cœlogyne pandurata, forms of Cattleya Parthenia, and two plants of the sensitive Bulbophyllum barbigerum, but not a single plant was labelled.

In Messrs. Armstrong and Brown's orchid exhibit from Tunbridge Wells, Brasso-lælia Veitchi was very effective; Cœlogyne pandurata attracted considerable attention, and Renanthera Imschootiana gave a bit of brilliant colouring; odontoglossums were freely shown, and there was a plant of Pescatorea cerina.



ONCIDIODA CYBELE.
A remarkable hybrid between Oncidium sarcodes and Cochlioda Noetzliana. Flowers bright brown and yellow. A.M., R.H.S., June 6. Messrs. Charlesworth and Co., Haywards Heath.

FRUIT COMMITTEE.

Figs in pots, from Messrs. Stuart Low and Co., Enfield, carried good crops, notably the varieties St. John's, Pingo de Mel, and White Marseilles.

Messrs. Le Laicheur and Sherris, The Flower Farm, Henfield, Sussex, sent a dozen and a-half fruits of an unnamed melon, and Miss Dixon, Westergate, Chichester, contributed a small collection of melons.

AWARDS OF MERIT.

No First-Class Certificate was awarded on this occasion.

Award of Merit.—To Heuchera sanguinea Nancy Perry, and to Iris variegata Miss Eardley, from Mr. Amos Perry, Enfield; to Grevillea robusta compacta, from Mr. R. B. Leech, Woodhall Gardens, Dulwich; to Primula pulverulenta Hidcote strain, from Lawrence Johnston, Esq., Campden, Glos.; to Crinum Johnstoni, from Mr. Bain, gardener to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking; to Cattleya Mossiæ Aureola, from Sir Trevor Lawrence (grower, Mr. W. A. White); and to Oncidioda Cybele, from Messrs. Charlesworth and Co., Haywards Heath.

MEDALS.

Silver Flora.—To Messrs. J. and A. McBean, Cooksbridge, for orchids; to Messrs. Charlesworth and Co., Haywards Heath, for orchids; to Messrs. Stuart Low and Co., Enfield, for orchids; to Messrs. Sander and Sons, St. Albans, for orchids; to Mr. C. Blick, Hayes, for carnations; to Mr. J. Box, Lindfield, for hardy flowers; to Messrs. G. Bunyard and Co., Maidstone, for hardy flowers; to Messrs. G. and A. Clark, Dover, for hardy flowers; to Messrs. H. B. May and Sons, Edmonton, for ferns and fuchsias; to Messrs. G. Mount and Sons, Canterbury, for roses; to Mr. Amos Perry, Enfield, for irises; to Messrs. R. H. Bath, Lim., Wisbech, for pæonies.

Silver Banksian.—To Messrs. Bakers, Codsall, for Oriental poppies, etc.; to Messrs. H. Cannell and Sons, Swanley, for pelargoniums; to Messrs. B. R. Cant and Sons, Colchester, for roses; to Messrs. W. Cutbush and Son, Highgate, for hardy flowers; to Messrs. Dobbie and Co., Edinburgh, for aquilegias and sweet peas; to Messrs. Kelway and Son, Langport, for pæonies and pyrethrums; to Messrs. Stuart Low and Co., Enfield, for carnations, etc.; to Messrs. J. Peed and Son, Norwood, for gloxinias; to Mr J. Hudson, gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton, for scented-leaved pelargoniums; to Mr. S. Larkin, Haslemere, for orchids; to Mr. E. V. Low, Haywards Heath, for orchids; and to Messrs. Whitelegge and Page, Chislehurst, for hardy flowers.

Bronze Flora.—To the Guildford Hardy Plant Co., for hardy flowers.

Bronze Banksian.—To De Barri Crawshay, Esq. (gardener, Mr. Stables), for orchids; to Messrs. W. and J. Brown, Peterborough, for hardy flowers, etc.; to Messrs. Carter Page and Co., London Wall, for dahlias, etc.; to the Misses Hopkins, Shepperton, for hardy flowers; to Messrs. Jackman and Son, Woking, for hardy flowers; to Mr. G. Reuthe, Keston, for hardy flowers; to Mr. L. R. Russell, Richmond, for primulas; to Messrs. T. S. Ware, Lim., Feltham, for hardy flowers; to Miss C. M. Dixon, Chichester, for melons; to Messrs. Le Laicheur and Sherris, for melons.

Kew Guild.

The annual meeting of the Kew Guild was held on May 24 at the Tavistock Hotel, Covent Garden, under the presidency of Mr. R. Hooper Pearson. The meeting followed after a dinner, at which nearly one hundred Kewites sat down.

Great good fellowship prevailed, and, while there was plenty of straight talk at the business meeting—indeed it was the liveliest meeting of the series—no ill-feeling was shown. Everyone was pleased that the old function of an annual dinner had been revived, after a brief lapse. In connection with the Guild accounts there were many, notably the younger present Kewites, who considered the Guild had no liabilities concerning life subscribers, and therefore there was no need to place the life subscriptions on the liability side of the balance-sheet. Old Kewites who are life subscribers should keep their eyes on this matter, or they may find themselves called upon for annual subscriptions, notwithstanding they have previously compounded. As there was no "Annual" in 1910, subscriptions were in many cases not paid, consequently the annual income did not meet the annual expenditure.

There was an "Irish Question" forward; about a score of Kewites in the Sister Isle are anxious to form an Irish branch of the Guild, and they suggest a strong forward policy and the creation of a kind of employment bureau, but these matters were all presented to the committee for consideration, and to be reported upon at the next annual meeting.

Mr. R. Hooper Pearson, in proposing "The Guild," made an excellent speech, in which he eulogised the work of Old Kewites in all parts of the Empire, and gave encouragement and advice to the present Kewites, and urged them to do all they could to maintain the prestige of Kewites. He made a strong point of increased educational facilities at Kew, and pointed out that, whereas at various horticultural colleges theoretical and scientific studies were being strongly backed up by horticultural practice, at Kew the practical work, which was of exceptional value, was not backed up in equally vigorous fashion by a full course of study. At present, Kew men occupied an unique position in the horticultural world, but if such position was to be maintained by future Kewites then the Kew authorities must move with the times, or the leading positions would be filled from students at horticultural colleges rather than from Kew. "The Guild" was toasted with great enthusiasm, and a great reception was accorded the toast of "The Chairman," proposed in able and pleasing fashion by Mr. W. Watson.

Mr. Hillier, Mr. Briscoe, and others rendered musical items during the meeting, and the proceedings closed at a late hour, many Old Kewites having to leave at various times during the evening to catch trains for distant parts of the kingdom.

Bath and West and Southern Counties Agricultural Society.

The annual show of this society opened at Cardiff on Tuesday, May 31, and continued until Whit Monday. It was a grand show, and the opening day was glorious so far as the weather was concerned. The horticultural section is now a feature of considerable interest and importance. It is by way of being unique, in that no schedule of classes is issued, no awards of any kind are made, but nevertheless the available space was on this occasion filled to the crowding point with exhibits of a very high order of merit. The thought crossed our mind as we strolled through the big marquee that it would be by no means difficult for this society if so inclined to extend the horticultural section, and make it not only a more important feature but a flower show that would take rank among the best fixtures in the country.

Messrs. W. Cutbush and Son, Highgate Nurseries, brought down from London a remarkably fine collection of carnations, rambler roses, and foliage plants, which were grouped across the end of the marquee in that tasteful manner which has become familiar as the particular style of the firm. Dwarf plants of Orleans rose, Jessie, and Mrs. W. H. Cutbush, made a groundwork, above which the tall stands filled with such carnations as Britannia, Lord Charles Beresford, The Queen, and King Arthur displayed their charms to the full.

At the opposite end of the tent Messrs. R. Veitch and Son, Exeter, built up a group of miscellaneous plants and flowers that comprised subjects of outstanding merit both in the way of hardy border and rock plants and in ornamental shrubs. The latter were used mainly as a background, and were carried almost to the top of the tent, providing a capital foil to the gorgeous colours of rhododendrons, azaleas, roses, and dwarfer herbaceous subjects in the foreground. A dripping well and pool of water added charm and provided a suitable environment for such things as Primula Unique, P. Cockburniana, sarracenias, Ramondia pyrenaica, Ourisia coccinea, and a variety of equally interesting things.

Ferns suitable for glasshouse or dwelling were tastefully displayed by Mr. H. N. Ellison, West Bromwich, a few well-grown young Dicksonias being prominent, as also were plumose forms of nephrolepis. Hybrid gerberas in delightful colours were also shown by Mr. Ellisoa. Alpine plants and border flowers were well shown by Messrs. H. and W. Evans, Hardy Plant Nursery, Llanishen. Encrusted saxifragas, Onosma taurica, dianthuses, and a few sedums were backed up by heucheras, iris, pyrethrums, etc.

Mr. J. Milburn, Victoria Nursery, Bath, was another exhibitor of alpines, his collection being particularly pleasing by reason of the freedom with which choice little gems were blooming. Messrs. Jarman and Co., Chard, showed their well-known centaureas, which were in fine form for so early in the season. A bright lot of zonal pelargoniums and some carnations were also well staged by this firm. Mr. Frank Lilley, Guernsey, made a bright display with ixias, irises, sparaxis, and other seasonable bulbous flowers.

Border flowers, such as pyrethrums, Oriental poppies, aquilegias, etc., came from Messrs. Rich and Co., Bath. Messrs. A. A. Walters and Son, Bath, set up a big bank of rambler roses, including beautifully-grown plants of Dorothy Perkins, Lady Gay, Hiawatha, Aennchen Muller, and other favourites. Pyrethrums were the great feature of a big bank of flowers from Mr. Wm. Treseder, Cardiff. The flowers were well grown, bright, and fresh, and the varieties of the best. Lupinus arboreus, in several new varieties, and hybrid aquilegias were also well shown, a background of roses competing a group which worthily upheld the fame of the Cardiff growers. Messrs. Garaway, of Bristol, staged their excellent strain of schizanthus in a manner that claimed the admiration of every visitor. Mr. W. J. Godfrey, Exmouth, continued his efforts to revive the popularity of the fancy pelargonium by exhibiting a big collection of choice varieties. We commend Mr. Godfrey for his enterprise, and are confident his object will be achieved.

Messrs. John Waterer and Sons, Lim., Bagshot, Surrey, showed rhododendrons in their own inimitable style. Lady Eleanor Cathcart, Pink Pearl, M. Waterer, and Gomer Waterer were just a few of the more striking varieties. Messrs. Cooling and Sons, Bath, showed rambler roses in the form of pillars and weeping standards, together with clematis, azaleas, early gladioli, and other seasonable flowers. A glorious bank of begonias came from Messrs. Blackmore and Langdon, Twerton Hill Nurseries, Bath; Mrs. J. Whalley, Pink Pearl, Mrs. Ainslie, and Duchess of Cornwall being a few names taken at random of varieties that displayed exquisite form and colour.

Weeping standards and pillars of American Pillar, Lady Gay, Lady Godiva, and other teas, such as Florence Pemberton, Dorothy Page Roberts, and Madame A. Hewetson, were superbly shown by Messrs. Paul and Son, The Old Nurseries, Cheshunt. A group of perpetual carnations came from Messrs. Young and Co., Hatherley, Cheltenham; their new variety Duchess of Devonshire, the popular Enchantress, and Lady Audley Nield were well represented. Orchids from Messrs. J. Cypher and Sons, Cheltenham, provided a distinct feature of the show, and naturally were much admired and commented upon.

A big but rather densely-packed group of stove and greenhouse plants was brought by Mr. Farmer from the Marquis of Bute's gardens, Cardiff Castle; crotons and liliums, Spiræa Peach Blossom, heliotropes, verbenas, etc., were all nicely arranged, so far as blending of colours went, but the group was rather formal.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above sea-level, 150 feet.

Date. 1911. May 28 to June 3.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.
	hr. m.	deg.	deg.	deg.
May 28—Sunday	13 12	67	58	75
,, 29—Monday	13 36	68	62	77
,, 30—Tuesday	7 8	65	59	73
,, 31—Wednesday	4 48	58	56	73
June 1—Thursday	12 24	70	61	77
,, 2—Friday	14 6	67	55	75
,, 3—Saturday	10 24	67	62	78
Means	(total) 75 38	66	59	75

Date. 1911. May 28 to June 3.	Rain.	Temperature of the Soil At 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.
	ins.	deg.	deg.	deg.
May 28—Sunday	—	58	56	53
,, 29—Monday	—	61	56	53
,, 30—Tuesday	Trace	60	57	53
,, 31—Wednesday	·07	60	57	54
June 1—Thursday	—	61	58	54
,, 2—Friday	—	61	58	54
,, 3—Saturday	—	63	59	55
Means	(total) ·17	61	57	54

ANSWERS TO CORRESPONDENTS.

NAMES OF HARDY FERNS.—S. P. R., Fulham: It would certainly have been more helpful had the "Kew Hand List of Ferns and Fern Allies" indicated which generic titles still in common use are included under the several genera of hardy ferns therein given. In your list No. 1 should be polypodium; Nos. 2 and 3 are correct; No. 4 should be nephrodium, according to Kew; Nos. 5 and 6 are correct, but No. 7 should be a nephrodium, and N. dilatatum is given as a variety of N. spinulosum; No. 8 is correct, but No. 9 should be Nephrodium montanum. Aspidium angulare is a sub-species of A. aculeatum, but is regarded as a distinct species for garden purposes. You will find good botanical descriptions of British species of ferns in Hooker's "Students' Flora of the British Isles" (Macmillan and Co.). Many thanks for your congratulatory letter.

FERTILISERS FOR APPLES.—H. C., Taunton: As the trees were not overtaxed last year, and as they have been well cared for in the matters of pruning and spraying, they are not likely to need much assistance in the production of this year's crop. However, if the crop promises to be a heavy one, and the trees seem to need assistance, give a dressing of 4lb. of superphosphate and 2lb. of kainit per square rod, adding 1lb. of nitrate of soda per square rod if the trees are not making good growth. Spread the dressing regularly after a thorough mixing, and hoe it into the soil.

PYRETHRUMS.—J. R. K., Stocksfield: The collapse of the flowers is due to some severe check, probably at the roots. Extreme drought may be the cause, but we are inclined to think that grubs or wireworms at the roots of the plants have also had a part in bringing about the collapse. Lift and examine the roots of one or two of the affected plants, and you will then probably find a clue to the trouble.

NAMES OF SPECIMENS.—T. I., Byfleet: The specimens were duly named when received, but pressure upon our space in previous issues squeezed out several answers relative to plant names, yours among them, but you will have seen the answer in our issue of June 3.

ARTIFICIAL MANURES.—S. B., Swindon: We have drawn attention to this matter on previous occasions. A complete explanation of the method of valuing artificial manures so as to ascertain their true commercial value is given in Leaflet 72, issued by, and to be obtained on application to, the Board of Agriculture, Whitehall Place, London, S.W., and gardeners and farmers should consult this leaflet in order to see whether the price of the manure, having regard to cost of carriage and terms of payment, is approximately equal to the value of the fertilising constituents which the manure is stated to contain. When wide discrepancies are disclosed no purchase should be made; the chances are that the manure would be dear at any price. Apart from lime, which may be purchased at from 10s. to 18s. per ton in most localities, there are three constituents, and only three, which should be taken into consideration in arriving at the value of artificial manures, viz., nitrogen, phosphates, and potash. These are the constituents which an artificial manure is intended to supply to the crop, and any statements as to its value in other directions should be ignored.

NATIONAL TULIP SOCIETY.—S. W., Shoreham: The hon. secretary of the National Tulip Society is Mr. W. Peters, Farcet House, Cambridge. Subscriptions are from [illegible] upwards per annum.

ASPARAGUS BEDS.—T. G. C., Dunstable: By the middle of the month, when cutting should cease, give the beds a good watering, and follow this with a thorough soaking of fairly strong liquid manure. Diluted farmyard or stable drainings make a suitable dressing. Make arrangements for supporting the growth by placing cords around and also zig-zag fashion across the beds. Give two or three good waterings with liquid manure during the season of growth, the aim being to secure tall, strong stems, and thus enable the crowns below to form strong buds to provide a crop for the following season.

RHODODENDRON LUSCOMBEI.—A. B., Reading: R. Luscombei was raised by crossing R. Fortunei with R. Thomsoni; it flowers towards the end of April in the south-west of London and the large blooms are rich rose colour.

BIENNIALS.—M. L., Northampton: June is the best month in which to sow biennials; an article on this subject appears in the present issue.

YELLOW CINERARIA.—P. D. D., Cork: The yellow cineraria, like the yellow sweet pea is yet to seek, but there is a yellowish variety which shows quite a yellow shade just as the buds open, but the colour quickly fades to white. This is called Cineraria flavescens, and is the result of crossing Cineraria Feltham Beauty with Senecio auriculatissimus.

NAMES OF PLANTS.

R. C., Nottingham.—1, Geum coccineum; 2, Thalictrum purpureum; 3, Aster alpinus; 4, Kerria japonica fl.-pl.

M. E. H., Warminster.—1, Linum arboreum; 2, Camassia Cusicki; 3, Polemonium cœruleum; 4, Dianthus alpinus.

G. S., Ryde.—1, Asperula odorata; 2, Corydalis lutea; 3, Cochlearea officinalis; 4, Thalictrum minus; 5, Saxifraga hypnoides.

F. G., Manchester.—1, Oncidium concolor; 2, O. Marshallianum; 3, Cattleya Skinneri; 5, Adiantum polyphyllum; 6, Gazania ringens.

A. E., Winkfield.—1, Streptosolon Jamesoni; 2, Impatiens Sultani; 3, Lavendula dentata; 4, Cyperus alternifolius; 5, Ophiopogon Jaburan; 6, Carex brunnea; 7, an aloe, species not recognised.

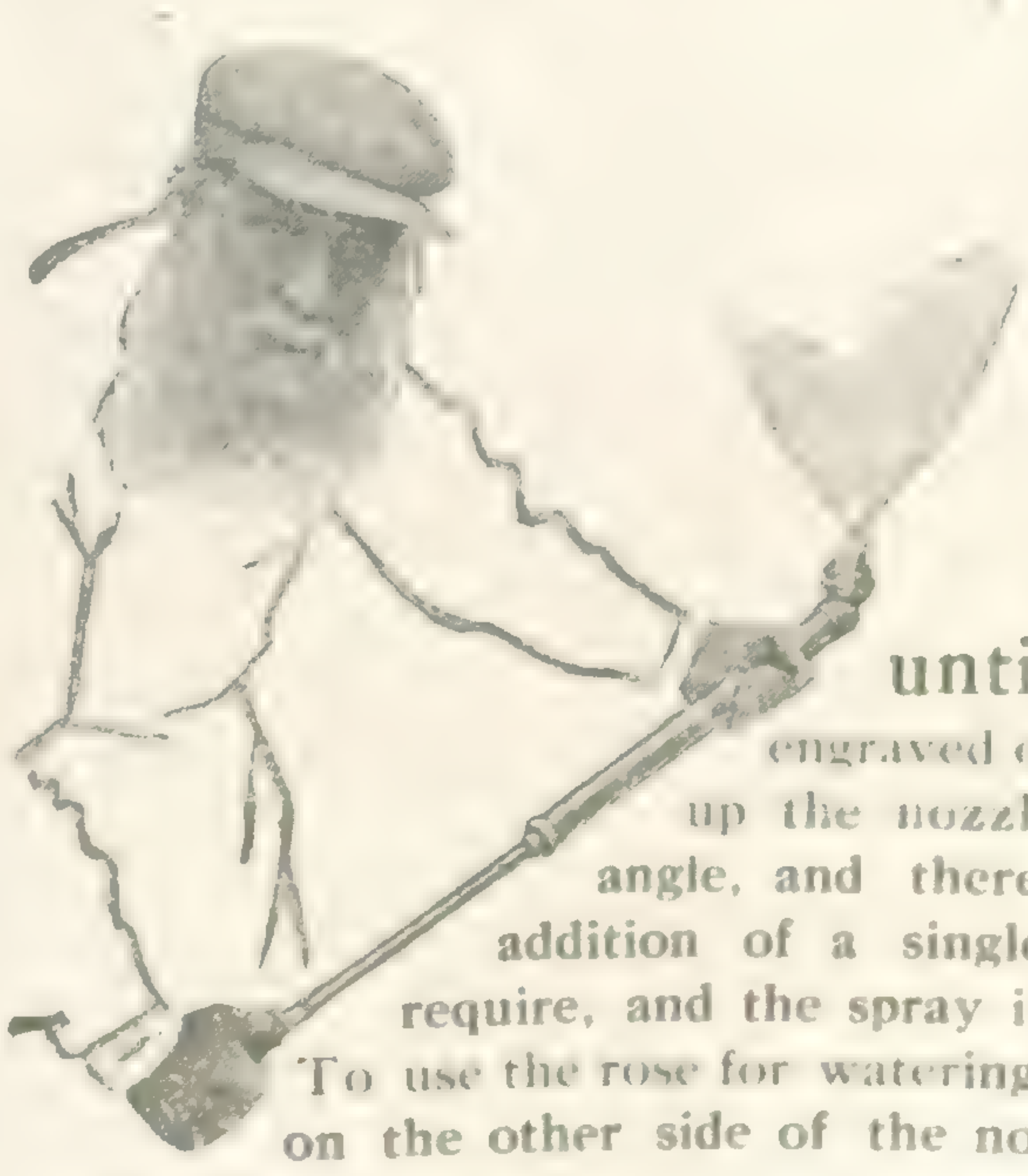
Ransomes, Sims, and Jefferies, Lim., Ipswich. — This well-known firm have issued a prospectus inviting subscriptions for 133,334 5½ per cent. cumulative preference shares of £1 each at par, and for £166,667 4½ per cent. first mortgage debenture stock at 99½ per cent. The business was founded in 1789, and to the majority of our readers the firm is principally known as manufacturers of lawn mowers and rollers; but it appears from the prospectus that the manufacture of lawn mowers is only an adjunct, although a valuable one, to the more important departments of the company's business, which includes the manufacture of ploughs, agricultural machinery, portable, traction, and other steam engines, and of thrashing machines, the export of which is now even more important than the home trade, so much so that they have a branch at Odessa, as well as distributing agencies in nearly every part of the world. The auditors to the company certify that the average profits earned for the past ten years amount to no less than £63,018, which would have been sufficient to pay the interest on the debenture stock now being issued more than five times over, and that the surplus, after deducting the debenture interest, would have been sufficient to pay the interest on the preference shares more than four times over. The interest in the stock and shares now offered to the public, therefore, seems well secured. The proceeds of the present issue are intended to be applied partly in paying off existing debentures and loans; partly in recouping to revenue account moneys advanced thereout for capital purposes; and partly in the extension of the company's works and as additional working capital. The subscription list closes on Saturday, the 10th inst.

CONTENTS.

PAGE
Among the Heucheras ... 434
Answers to Correspondents ... v.
Biennials ... 435
Dwarf French or Kidney Beans ... 428
Exhibitions and Meetings ... 438
Hardy Azaleas ... 435
Influence of Soil on the Colour and Flavour of Strawberries ... 436
Mulching and Watering Sweet Peas ... 435
New Plants, etc. ... 428
Notes of the Week ... 425
Some Gardens around Edinburgh.—I. ... 429
The Cypress Oak ... 436
The Thames Flower Show ... 427
Work for the Week ... 437

ILLUSTRATIONS.

Portrait of Mr. John Dickson, 425; A beautiful Florally-decorated House Boat, 427; Coniferous Trees, Dalkeith Palace Gardens, 429; Collection of Scotch Roses, Dalkeith Palace Gardens, 430; An effective arrangement of Summer Flowers, Dalkeith Palace Gardens, 431; Scroll Flower Beds and Famous Pear Wall, Dalkeith Palace Gardens, 432; A Tasteful Arrangement of Summer Fowers, Hopetoun House Gardens, 433; A Magnificent Display of Hardy Flowers, Hopetoun House Gardens, 434; [illegible] Cycle, 439.



Say for instance you want to spray the undersides of Roses—Well then you merely turn the syringe until the word "Spray" (clearly engraved on the nozzle) appears uppermost. Bend up the nozzle at the knuckle joint to the required angle, and there—in a second—without the removal or addition of a single fitment you have exactly what you require, and the spray is the very finest of the fine.

To use the rose for watering, you turn the word "Rose" (engraved on the other side of the nozzle) uppermost, and its there, waiting.

Every Syringe is Lettered by the Inventors, individually Numbered and Guaranteed.

PINE-SPRAY SYRINGE
—— PATENT. ——
(Patented in Foreign Countries).
Your Ironmonger or Seedsman can, without expense, get one for your approval in 24 hours by writing to us.
Illustrated Lists and full particulars from the Proprietors:
ROBINSON BROS., Ltd.
West Bromwich, Staffs.

One Model only 24 in. overall and 1½ in. diameter Barrel.
PRICE 10/6.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Clovee Hall, Gisburn, Clitheroe.

GARDENER (Head Working, where three or more are kept).—Mr. LAST, The Gardens, Homewood, Chislehurst, Kent, can with every confidence recommend his Foreman, W. WAITE, as above; 13 years' experience, gained in good establishments; five years present situation. Married when suited.

GARDENER (Head Working, where two or more are kept); good all round; 14 years as head in large and well-kept establishments; married; age 40; excellent references. E. MAYLETT, Park Hall, Salford Priors, Evesham.

GARDENER (Head Working), life experience in all branches; land and stock if required; age 47; excellent character. WILLIAM MASKELL, School House, Lovel Road, Winkfield, Berks.

GARDENER (Head Working).—Mr. GOULD, Shernfold Park, Frant, Sussex, highly recommends his Foreman, A. DAY, as above; thorough practical experience Inside and Out; excellent references; age 30.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working, where two or three are kept; life experience; age 36; married; good reference. HALES, 8, Ivy Terrace, Old Church Road, Romford.

GARDENER (Head Working, of two or three).—Mr. Clarke, Oakwood Gardens, Bath, highly recommends his Foreman, G. Longman, as above; 16 years' practical experience; age 29; married when suited. Apply LONGMAN, Stoney Stoke, Bruton.

GARDENER (Head Working, where two or three are kept); life experience Inside and Out; good references; disengaged 29th; age 38; married, no family. C. DOMAN, The Gardens, Thornes Beach, Beaulieu, Hants.

GARDENER (Head Working, where two; three, or four are kept); 20 years' experience Inside and Out; age 35; married; two children; youngest six. H. TEER, The Gardens, Bark Hart, Orpington, Kent.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushroom, ridge or flat; Kitchen, Lawn, Flower Garden. Special Prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

MR. SALTER, The Gardens, Avenue House, Church End, Finchley, highly recommends W. BICKER as GARDENER (Single-handed, or with help); experienced Inside and Out; at present in his employ; age 28; Eastern Counties preferred.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (Single-handed, or with help) seeks SITUATION; 14 years' experience; good references; age 27; married, no family. BISHOP, Stockwell Hall, Billericay, Essex. (No circulars.)

GARDENER (Single-handed or Second) seeks SITUATION; understands Fruit, Flowers, Vegetables; age 25; single; good references; seven years last place. STRUTT, 70, Croft Street, Ipswich.

FOREMAN (General), age 30; 18 years' experience in Stove and Greenhouse Plants, Fruit, and Carnations; good references. A. HAYES, 22, St. Nicholas Street, Droitwich, Worcestershire.

GARDENER, with thorough knowledge and experience of growing Fruit, Flowers, and Vegetables, Outside and under glass, Tree and Malmaison Carnations, Orchids, requires Situation; nine years present situation as Head. Apply, HORTICULTURIST, care of Mr. Collins, 88, Catherine Street, Reading.

GENTLEMAN can highly recommend JOURNEYMAN; six years in present place; age 20; Inside or Inside and Out; Bothy preferred. Address E. EASON, Merriott, Crewkerne, Somerset.

GARDENER (Under) seeks SITUATION, where 3 or 4 are kept; well up Inside and Out; 7 years' experience; age 21; excellent references. H. F., Ladds House, Sandhills, Witley, Surrey.

TO FLORISTS and FRUITERERS.—Disengaged MANAGER requires situation; seven years' experience; good salesman, window dresser, and maker-up; excellent references. CUSSONS, care of Rennison, Low Bondend, Knaresborough.

IMPROVER in the Houses.—Gardener's son; age 20; 5 years' experience; live in Bo premium given. C. BLYTH, Penrice Gardens, Austell, Cornwall.

YOUNG MAN (22) seeks SITUATION (In side and Out); seven years' experience years present situation; good references. W. WH The Gardens, Briggin Park, Roydon, Ware, H

Situations Vacant.

WANTED a young Scotch Gardener, where garden boy kept and help given; wages commencing 21s., with good cottage, coal, and tables. Write in first instance, with age and particulars, HEMMING, Cambridge L H

SITUATION COUPON

To the Advertisement Manager of "The Gardeners' Magazine," *148 & 149, Aldersgate Street, London, E.C.*

For JUNE 17, 1911.

Please Repeat my Advertisement.

Name ....

Address ....

....

Date.............. . ...

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue

. . . There are no better . . .

GUIDES TO THE GARDEN

than those issued from the "Gardeners' Magazine" Office.

A COMPLETE GUIDE.

. . THE . .
FLOWER GARDEN.

FLOWER GARDEN

By T. W. SANDERS, F.L.S.

Bound in cloth, bevelled edges, 480 pages.

7/6 net;

By post, packed in box, 8/-.

SIXTY-FOUR PLATES of Beautiful Garden Scenes, Plants and Flowers, and FORTY EXPLANATORY DIAGRAMS.

A comprehensive work on the Formation, Planting, and Management of the Flower Garden, and the Cultivation of Flowers, Plants, &c., adapted for Outdoor Culture.

FOURTEENTH EDITION—REVISED—ENLARGED—IMPROVED.

ENCYCLOPÆDIA OF GARDENING.

By T. W. SANDERS, F.L.S.

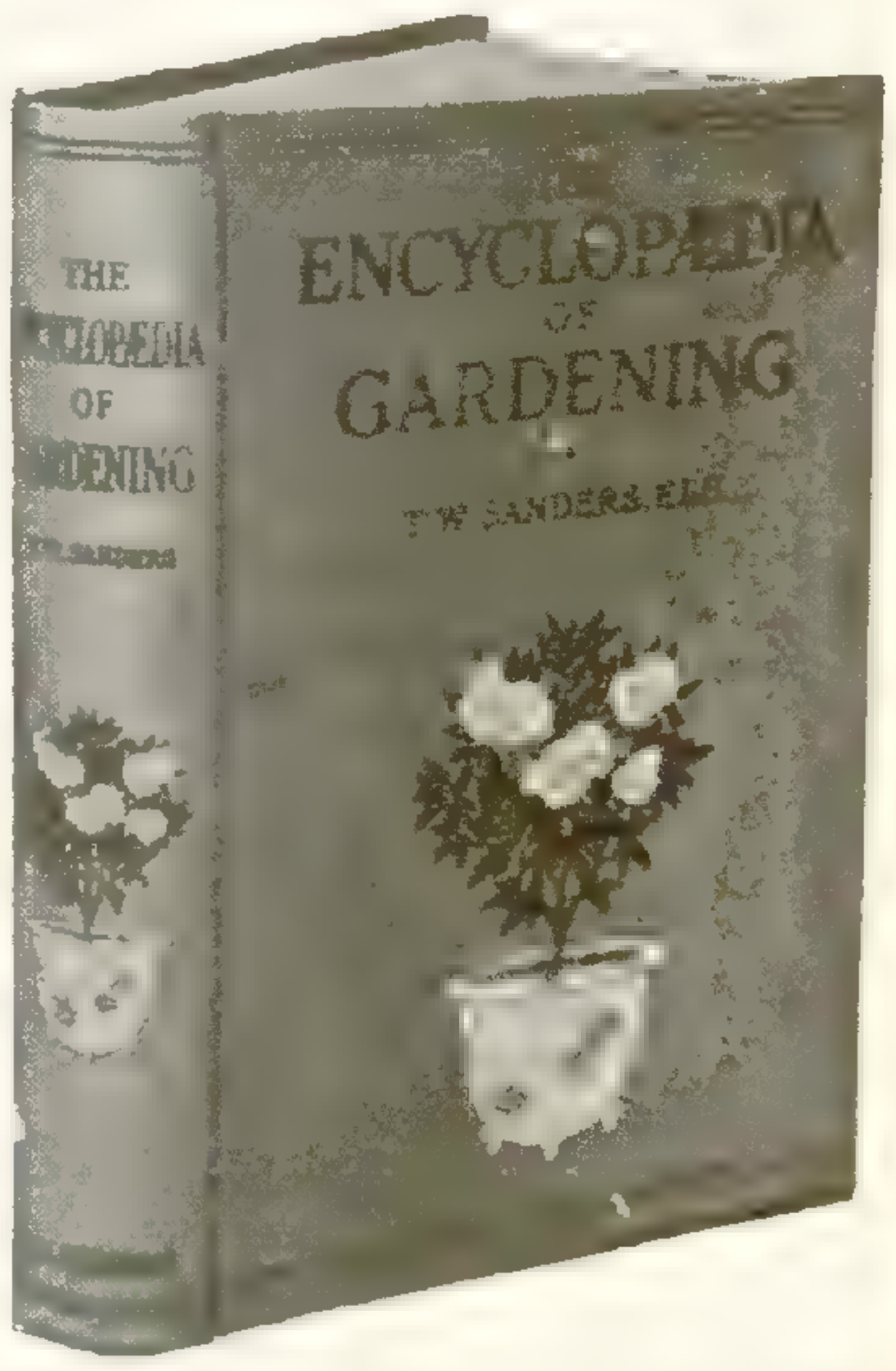
Bound in cloth, 482 pages.

3/6 net;

By post, packed in box, 3/10.

A complete Dictionary, giving at a glance the Cultivation and Description of every Flower, Fruit, Vegetable, Plant, Tree, or Shrub; Popular and Technical Names, Time of Planting, Colour of Flowers; Name of every Species, Suitable Soil, &c., &c.

A Popular Garden Guide.


THE ENCYCLOPAEDIA OF GARDENING
T. W. SANDERS
THE ENCYCLOPAEDIA OF GARDENING
T. W. SANDERS, F.L.S.

CARNATIONS, PICOTEES AND PINKS.

By T. W. SANDERS, F.L.S.

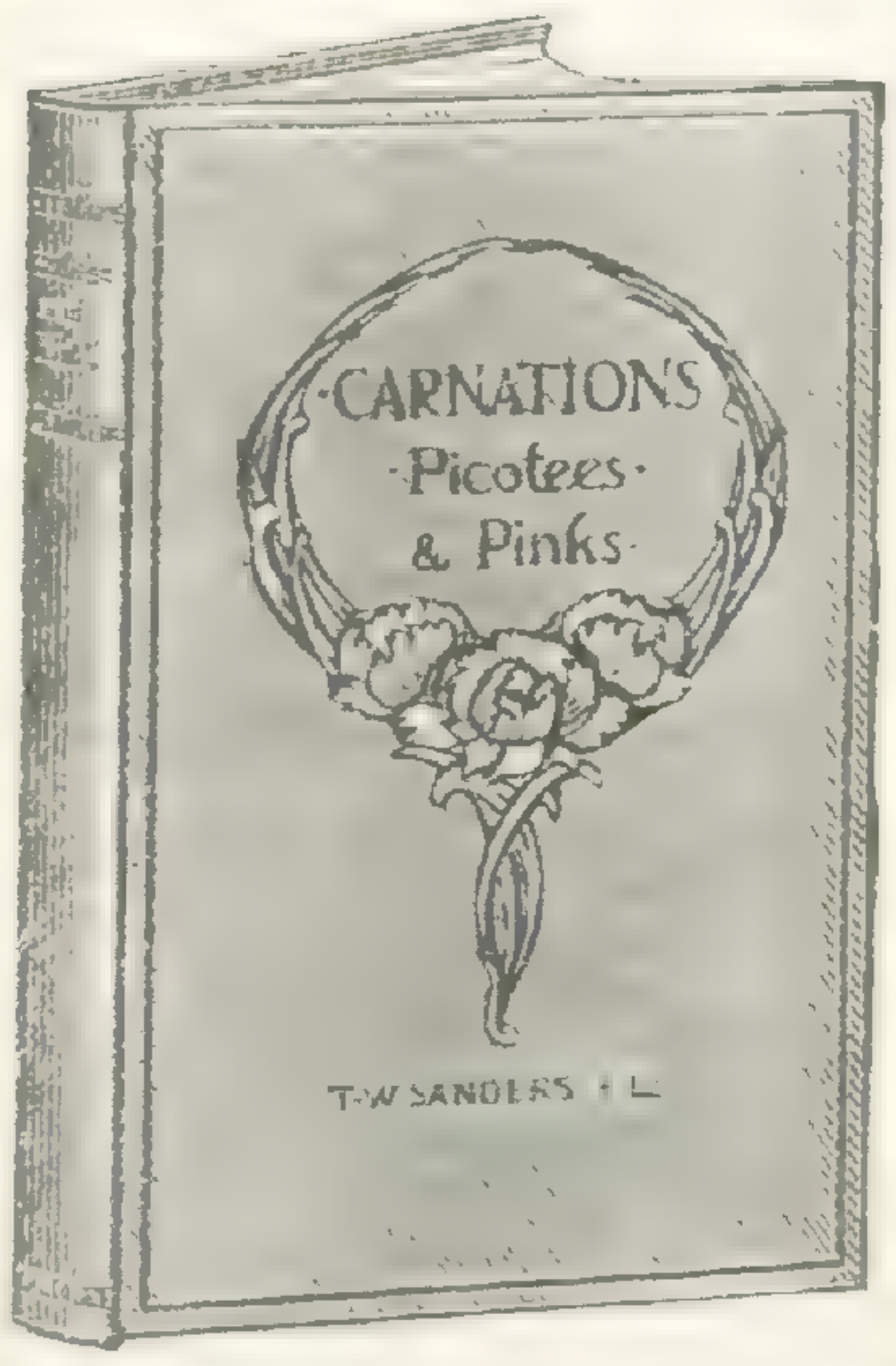
Bound in cloth, 188 pages.

2/6 net;

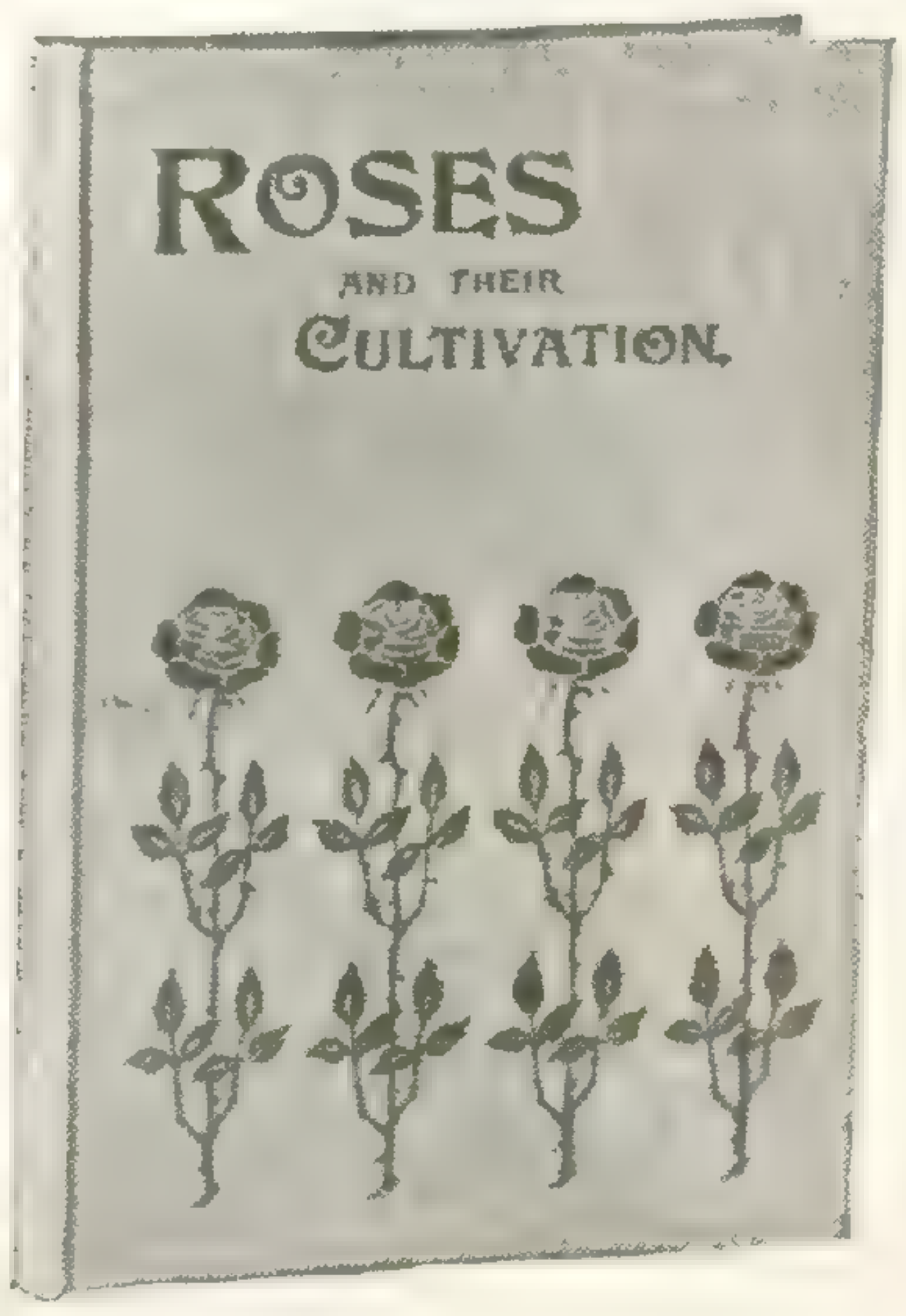
By post, packed in box, 2/10.

BEAUTIFULLY ILLUSTRATED.

A Practical Guide to the Cultivation of Border, Perpetual and other Carnations, Picotees and Pinks; Lists of Varieties; Pests and Diseases, &c.



SEVENTH EDITION—INCLUDING REVISED LIST WITH DESCRIPTION OF 1,700 DIFFERENT ROSES.



ROSES and their CULTIVATION.

By T. W. SANDERS, F.L.S.

Bound in cloth, 198 pages, 67 illustrations.

2/6 net;

By post, packed in box, 2/10.

SEVENTEEN PHOTO PLATES and FRONTISPIECE.

A Practical Guide as to Growing Roses Outdoors and Under Glass; When to Plant; How to Prune, Bud, and Graft; Full list of 1,700 Cultivated Roses with description.

"Is by far the best book we have seen of its kind."—BEDFORD EXPRESS.

GARDEN FOES.

GARDEN FOES
T. W. SANDERS
GARDEN FOES

By T. W. SANDERS, F.L.S.

Bound in cloth, 336 pages.

2/6 net;

By post, packed in box, 2/10.

150 ILLUSTRATIONS.

A description of Insect, Animal and Fungoid Pests injurious to Fruit and Vegetable Crops, Hardy Plants, Trees, Shrubs and Greenhouse Plants, with all the latest Remedies for their Eradication, &c.

"It is full of sensible and experienced directions."—THE SCOTSMAN.

WINDOW AND INDOOR GARDENING

By T. W. SANDERS, F.L.S.

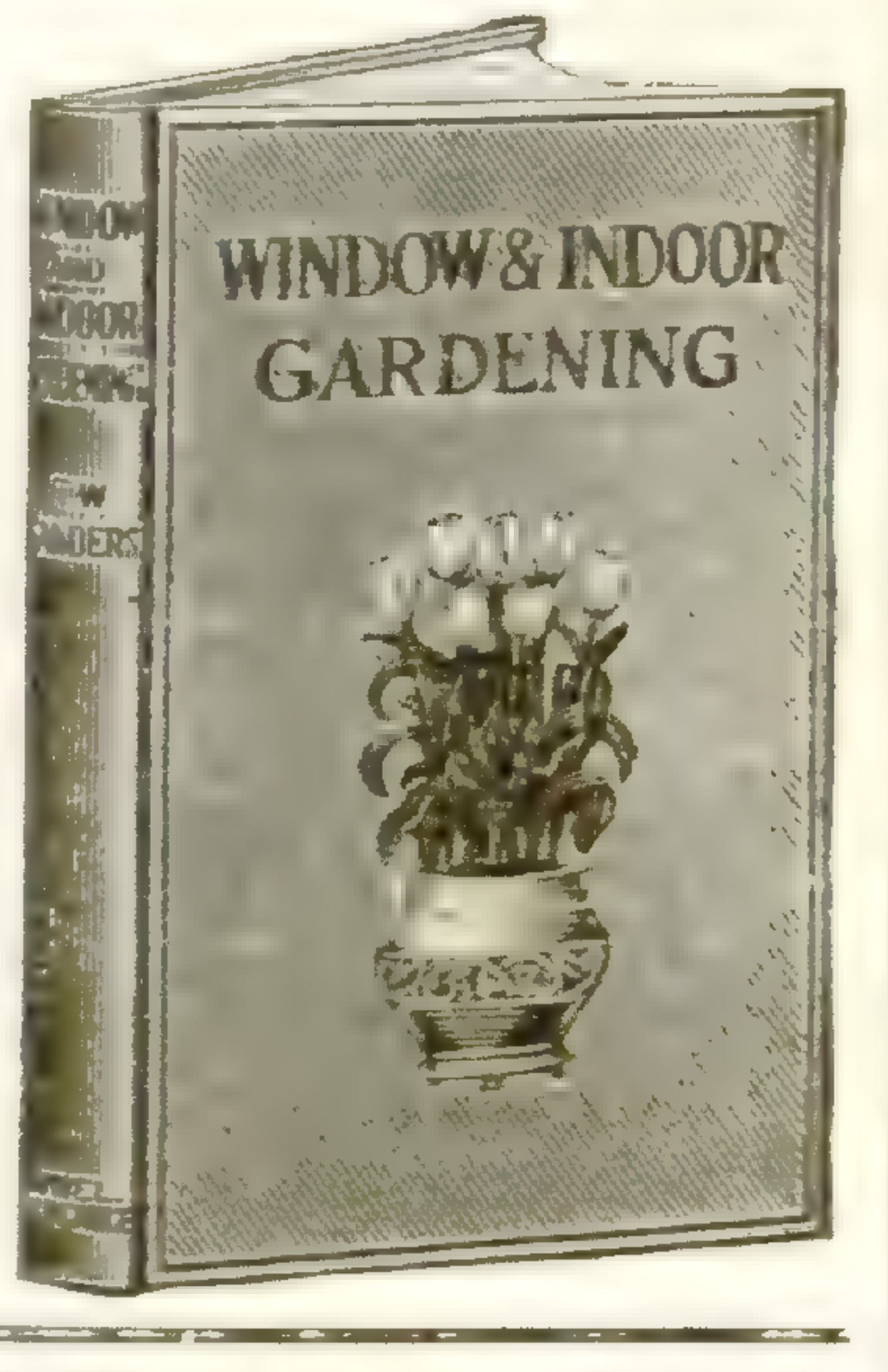
Bound in cloth, 194 pages.

2/6 net;

By post, packed in box, 2/10.

SIXTEEN PLATES and NUMEROUS ILLUSTRATIONS.

A Complete Guide to the Cultivation of Foliage and Flowering Plants in Rooms, Window Boxes, Balconies, Verandahs, &c.; Hanging Baskets; Table Decorations, &c.



To the Publishers, "GARDENERS' MAGAZINE," 148 and 149, Aldersgate Street, London.

ORDER FORM.

Please send by post..

for which I enclose remittance of ....

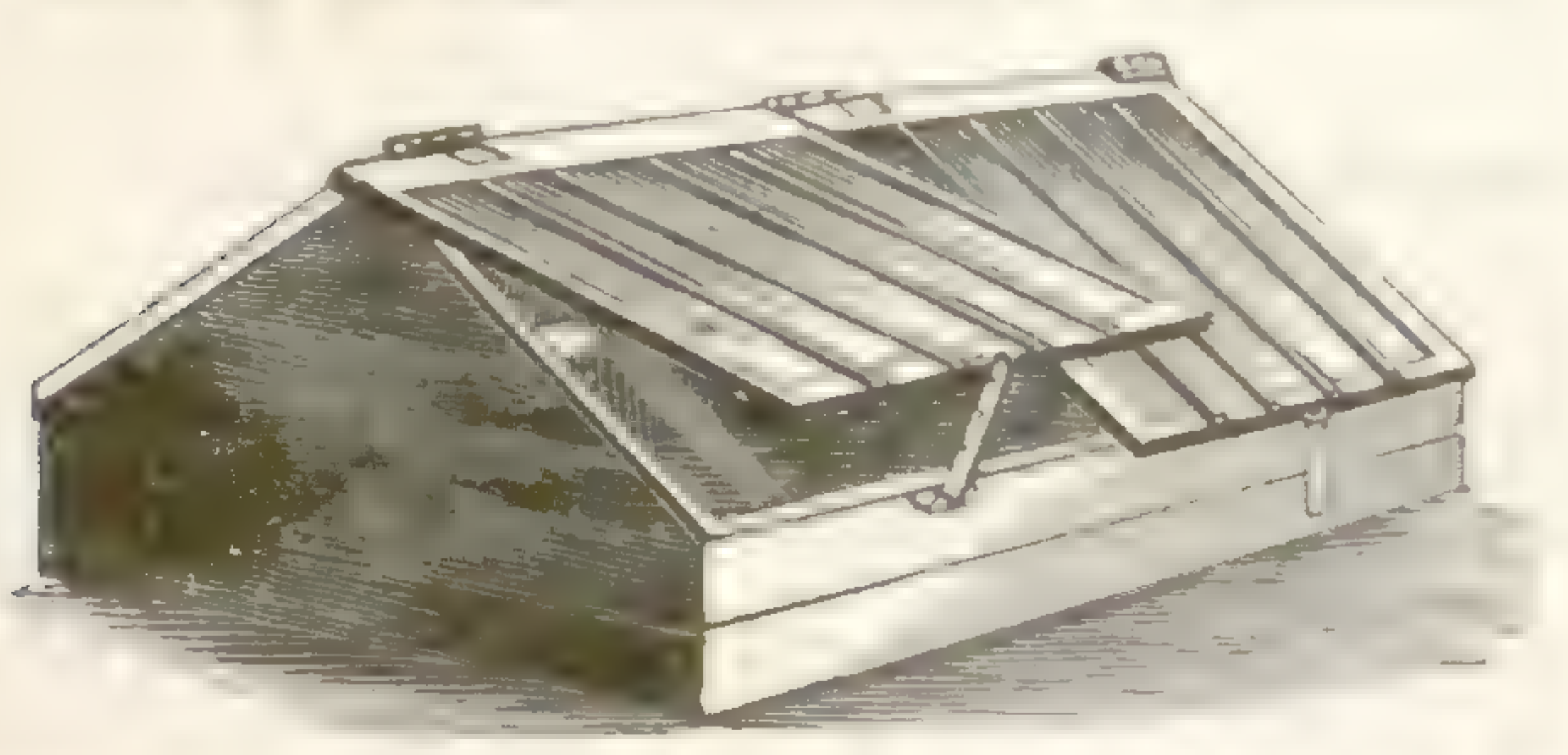
Name ....

Address ....

☞ *Send for our Complete Catalogue of Gardening Books.* ☜

PORTABLE PLANT FRAMES

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices. Glazed and Painted.		£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. ,, 4ft. ,,		2	5	0
6ft. ,, 5ft. ,,		2	15	0
12ft. ,, 4ft. ,,		4	0	0
12ft. ,, 5ft. ,,		4	15	0
12ft. ,, 6ft. ,,		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
ROYAL HORTICULTURAL WORKS,
MIDDLETON, MANCHESTER.

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

Extracts from 35th annual collection of reports:—
NATIVE GUANO for POTATOES, VEGETABLES, etc.

A. J. Beard, Erdington: "Potatoes, splendid, free from disease. Best I ever had."—H. Chester, Nantwich: "Best onion manure I ever used. Grand for onion fly."

NATIVE GUANO for FRUIT ROSES, TOMATOES, etc

J. Cant, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. Frampton Titchfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED,** 29, New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted.

THE FAVOURITE WEED KILLER.

SANDWITH'S
PREMIER
WEED
KILLER

As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for 6/-; drum, 2/-. 12 galls. for 16/-; drum, 6/-. 20 galls. for 26/8; drum, 10/-. 40 galls. for 50/-; drum, 20/-.

EITHER LIQUID OR POWDER.

Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,
The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

FOR ROSE MILDEW
use
V2K FLUID
THE BEST REMEDY
FOR THIS PERSISTENT PEST.
Does not discolour the foliage.

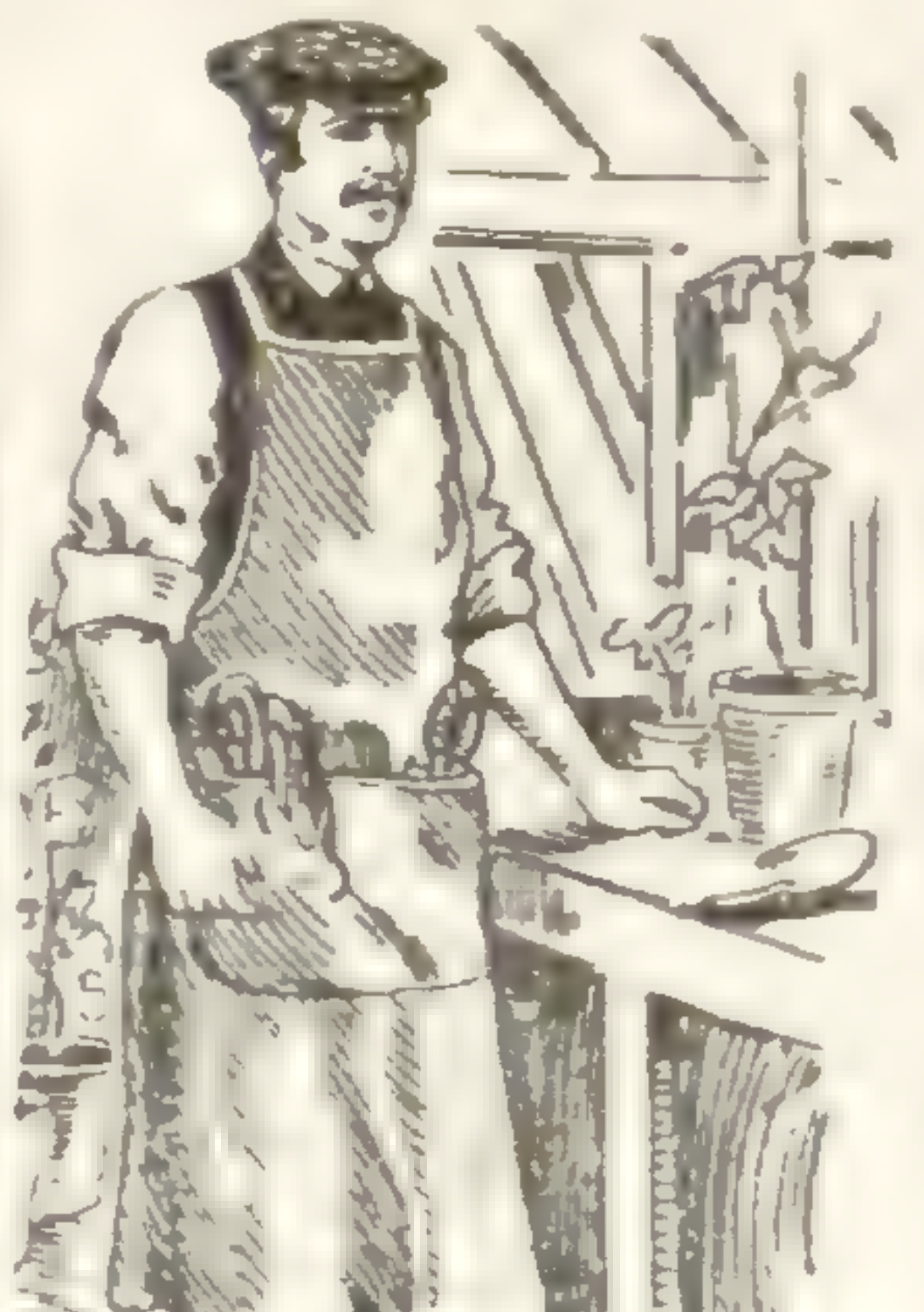
OF AGENTS EVERYWHERE.

Sole Mfrs.. Willm. Cooper & Nephews, Berkhamsted.

HAYWARD'S
Eureka
WEED KILLER

insures clean paths, best known and most satisfactory. It is no new experiment. A Weed Killer that can be thoroughly relied upon to keep paths clear for 12 months with one dressing is most helpful, but under-strength articles with no reputation are an aggravation. The "Eureka" is sold everywhere, 1/9 for 100 sq. yards, 6/- for 400 yards, 49/- for 4,000 yards; intermediate sizes at suitable prices. The "Eureka" **Lawn Sand, Soilfume, Quassia Extract, Bordeaux Mixture,** etc., have been in regular use for years, and there is no better value. If any difficulty in obtaining apply only makers, **TOMLINSON and HAYWARD, Ltd., Lincoln.**

"EUREKATINE"
is the satisfactory fumigant for destroying
Greenhouse Pests.



THE
APRON
That has Come to Stay.
WORN BY ALL THE LEADING GARDENERS.
LOOK AT THE PRICE.
In Dark Blue Ponicus Twills.
1/9, Postage **3d.** extra.
Or in Dark Blue Ponicus Serge.
3/9, Postage **3d.** extra.
Write for One To-Day.
SHAW & MONTGOMERY
(PENMAN'S),
628, Argyle St., Glasgow, W

ONCE USED. ALWAYS USED. The 'PATTISSON' LAWN BOOTS

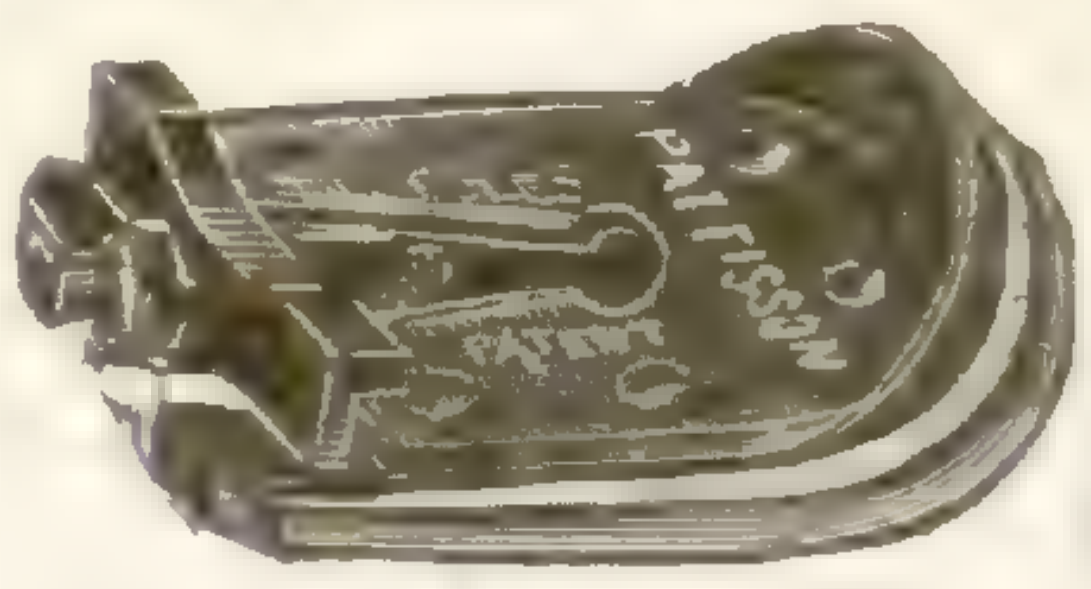


Fig. 1.

Simplest! Strongest! Most Economical!

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS

Silver Medal—
Royal Horticultural Society.
Hundreds of Testimonials.
The Field says: **"As good as any thing that could be devised."**
Illustrated Price List from—
H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM S.W

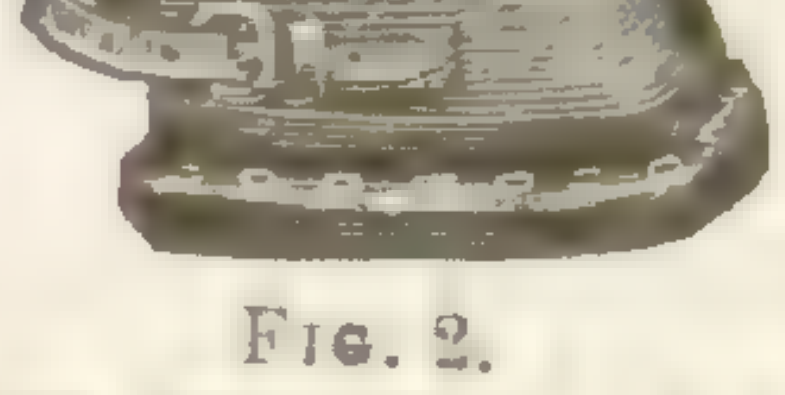
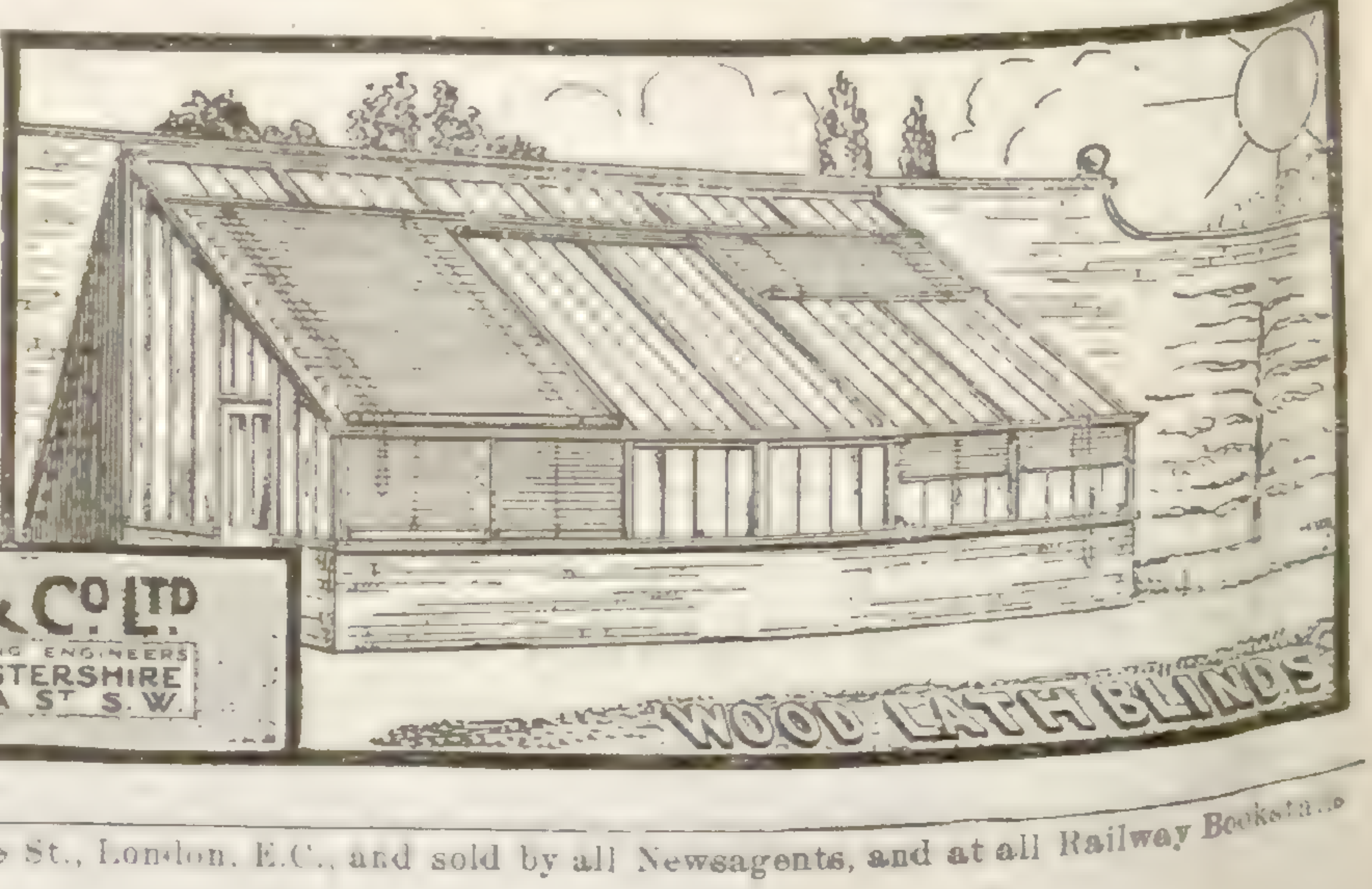


Fig. 2.

WOOD LATH BLINDS ADMIT SUFFICIENT SUNLIGHT SO NECESSARY FOR Growing Purposes.

Write for Special Catalogue.

MESSENGER & Co Ltd
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office: 122 VICTORIA ST S.W.



FLOWER POTS.

SANKEY'S
FAMOUS
GARDEN
POTS

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity. Carriage Free.

Appointed by Royal Warrant — Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address

RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

MERRYWEATHER'S

614 PUMP
IS THE
Gardener's Friend.

Easy to Work. Simplicity Itself.

Write or Call—
63, Long Acre,
LONDON, W.C.

VAPORITE

The Original Soil Insecticide, kills Wireworms, Leatherjackets, and all other soil pests. Send a p.c. for illustrated descriptive Booklet No. 45, post free from the **VAPORITE STRAWSON CO., LTD.,** Dept. E, Spencer House, South Place, London E.C.

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls

YORK GALA FLOWER SHOW—ILLUSTRATED REPORT.

THE GARDENERS' MAGAZINE.

No. 3,007.
Vol. LIV.
(Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.)
SATURDAY, JUNE 17, 1911.
(10/6 per Ann. Post Free. To Foreign Countries, 15/-.)
Twopence

BARR'S SEEDS FOR JUNE SOWING.—Finest strains of Antirrhinums, Aquilegias, Campanulas, Canterbury Bells, Calceolarias, Cinerarias, Delphiniums, Hollyhocks, Lupins, Pansies, Primulas, Stocks, Wallflowers, etc. Special list on application. BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

DOUGLAS'S PERPETUAL CARNATIONS (British and American). Magnificent Stock of robust plants, now ready, all in perfect health, and guaranteed to give satisfaction. From 9s. per dozen. J. DOUGLAS, The Carnation Specialist, Edenside, Gt. Bookham, Surrey.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, S.W., wishes to call the attention of his customers, and of gardeners generally, to his Fruit Tree Protectors. Photographs and Blueprints of these, with prices, will be sent on receipt of a postcard, telephone message (201 Western), or wire, "Gray, Chelsea, London."

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

GREENHOUSES and GARDEN FURNITURE. — Distinctive Designs and Finished Workmanship. Write NOW for illustrated Catalogue. CARTER and HOWARD, Fife House, Kingston-on Thames.

MUSHROOMS.—Now is the time to plant Spawn in pastures. To protect the crop by making it a cultivated one, get BARTER'S Specially-prepared Spawn, with instructions, in 10s. 6d., 21s., and 42s. cases. Carriage paid. Cash with orders to
JOHN F. BARTER, LTD., Wembley, Middlesex.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.
H. BURNETT,
Carnation Specialist, Guernsey.

PERENNIALS, UNIQUE COLLECTION,
including
ALPINES AND AQUATICS.
Also RARER SHRUBS, HIMALAYAN RHODODENDRONS, and Others.
Write for Catalogue. G. REUTHE, Keston, Kent.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-work, showing screens, wall panels, window surrounds, arches, arbors, etc., post free. BOULTON and PAUL, Ltd., Norwich.

FRUIT SAVED.—GARDEN NETTING as supplied by us to the Royal Gardens. SMALL MESH, satisfaction or cash returned, 100 by 1 yd., 3s. 3d. Any length and width supplied. Cheaper quality, 50 yds. 1s.
POTTER BROS.,
Dept. M, Net Makers, Shrewsbury. Est. 1855.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

WEBBS' CHOICE FLOWER SEEDS
FOR PRESENT SOWING.
Rose Queen Antirrhinum (rosa), 1s. per pkt.
Sceptre Antirrhinum (crimson), 1s. per pkt.
Guinea Gold Antirrhinum (yellow), 1s. pkt.
Golden Spur Aquilegia (golden yellow), 1s. pkt.
Pink Beauty Sweet William, 1s. per pkt.
Invincible Sweet William (mixed), 1s. per pkt.
Giant Crimson Polyanthus, 1s. per pkt.
Giant Yellow Polyanthus, 1s. per pkt.
Universal Wallflower (mixed), 1s. per pkt.
Double Mixed Wallflower, 1s. per pkt.
WEBB AND SONS, The King's Seedsmen,
WORDSLEY, STOURBRIDGE.

BUNYARD'S CATALOGUES
Free on Application.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting

KENT STRAWBERRY PLANTS
NEW CATALOGUE READY.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

FIGS, VINES. For fruiting and planting.
Please write for sizes and prices.
WILL TAYLER, Hampton, Middlesex.

LAXTON'S FRUIT TREE, STRAWBERRY, SEED, ROSE, HERBACEOUS, TREE, BULB, and SMALL FRUIT CATALOGUES, with full illustrations and descriptions, gratis on application.
LAXTON BROTHERS, Bedford.

RUSTIC SUMMER HOUSES, trellis-work, Fencing, Pergolas, Arches, Seats, Bridges, Log Cabins, Loggias, etc. Send for our new LOG CABIN and RUSTIC CATALOGUE (just published), sent post free. BOULTON and PAUL, Ltd., Norwich

CLAY'S MANURES, CRUSHED BONES
(See page iv.)

CLAY'S FERTILIZER is UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

NOTICE.—Always use PORTER'S IMPROVED COIL STAKES for Carnations, no tying required; last a lifetime. Sample doz. with price list 1s., carriage paid. A. PORTER, Stone House, Maidstone.

ORCHID PEAT.—Hardwood Brown Fibrous, RHODODENDRON and DUST PEAT, SPHAGNUM MOSS.
Apply O. HALL, 1, Worgret, Wareham, Dorset.

IRON and WIRE FENCING for GARDENS, Tree Guards, Gates, Arches, Espaliers, Rose stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free. BOULTON and PAUL, Ltd., Manufacturers, Norwich.

GARDEN NETTING (best tanned only).—25 yds. x 8yds.; 50 x 4yds.; 100 x 2 yds., 8s. each. 50 x 2 yds.; 25 x 4 yds.; 100 x 1 yd., 4s. each. All sizes, large or small, at 1s. 20 sq. yds. Quality guaranteed.—EVANS, 11, Beresford Rd., Lowestoft.

WM DUNCAN TUCKER and SONS, Ltd., 27 Cannon Street, London E.C., Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

SUTTON'S PINK BEAUTY SWEET WILLIAM.—Beautiful salmon-pink colour. This variety deserves to be grown in every garden.
Per packet, 1s. and 1s. 6d. post free.
"Mrs. BRACE must say how splendidly Sutton's Pink Beauty Sweet William is blooming. Crowds of people come to see it in her garden."—Sunnycroft.

SUTTON'S SCARLET SWEET WILLIAM.
A most remarkable colour. Flowers being of an intense scarlet.
Per packet, 1s. and 1s. 6d., post free.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books, 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
From ———, Esq., Guildford.
"I may say that your Illustrated Catalogue is without doubt the finest book of the sort I have had the pleasure of seeing."

100,000 CACTUS DAHLIAS, new Pæony-flowered Dahlias, Chrysanthemums, American Tree Carnations, and Violas; all exceptionally good, strong plants and best varieties; grown especially for exhibitors. Send for catalogues, gratis, and post free. — JOHN E. KNIGHT, Nurseryman, Wolverhampton.

J. WOOD'S NEW LIST OF ALPINE AND HERBACEOUS PLANTS to be had on application. Prices moderate for good plants. J. WOOD, Nurseries, Boston Spa, Yorks.

"WEEKS'S GLASSHOUSES and HEATING APPARATUS, for full advertisement see back page."

JAMES SENDALL and CO., Cambridge; Conservatories, Vineries, Garden Frames; Heating Engineers. Surveys made, and Plans prepared to suit any position. Illustrated List free. Telegrams: "Sendall, Cambridge." 'Phone, 511.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page iii.

CARNATIONS.—Spiral Wire Stakes. No tying required. Will last a lifetime. 24 inches long, 7s. 6d. per 100; 30 inches, 8s. 6d. per 100; 36 inches, 10s. per 100; sample doz., 1s., 1s. 3d., and 1s. 9d., all carriage paid. Pea Trainers, 6ft. by 4ft., 2s. and 3s. each. Garden Archways, Garden Edge and Croquet Bordering, 8 inches high, 8d.; 10 inches high, 10d. per yard. All cash with order. Catalogue free on application. J. PENKETH, Iron and Wire Works, Market Place, Manchester. Telp.: 3695 City.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.
XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.
XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown both poisonous and non-poisonous are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N.S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

BEDDING PLANTS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Chrysanthemums, Dahlias and Summer-Bedding Plants.

CARNATIONS.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS.
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

ROSES.

R. H. BATH, Ltd.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

SAMUEL M'GREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

W. ARTINDALE & SON

Nurserymen, **SHEFFIELD**

MAKERS and DESIGNERS
: of ALPINE GARDENS :

Old English Flower Borders.
Experts sent to any part.
Enquiries invited.

Our instructive and comprehensive list of Beautiful Hardy Plants sent on application. Over 200 pages of valuable information.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,

71, Newman Street,
LONDON, W., and BROXBOURNE.

Our Work has stood the test of time

Primulas! Primulas! Primulas!

41st Year of Distribution.

OUR WELL KNOWN MAGNIFICENT STRAIN,
1/6 doz.; 2/6 25; 10/- 100. Package and Carriage Free.
Primula Obconica Gigantea Cineraria (Large-flowered) and **Stellata** at same prices.

JOHN STEVENS & SON, COVENTRY.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

MERRYWEATHER'S

614 PUMP

IS THE

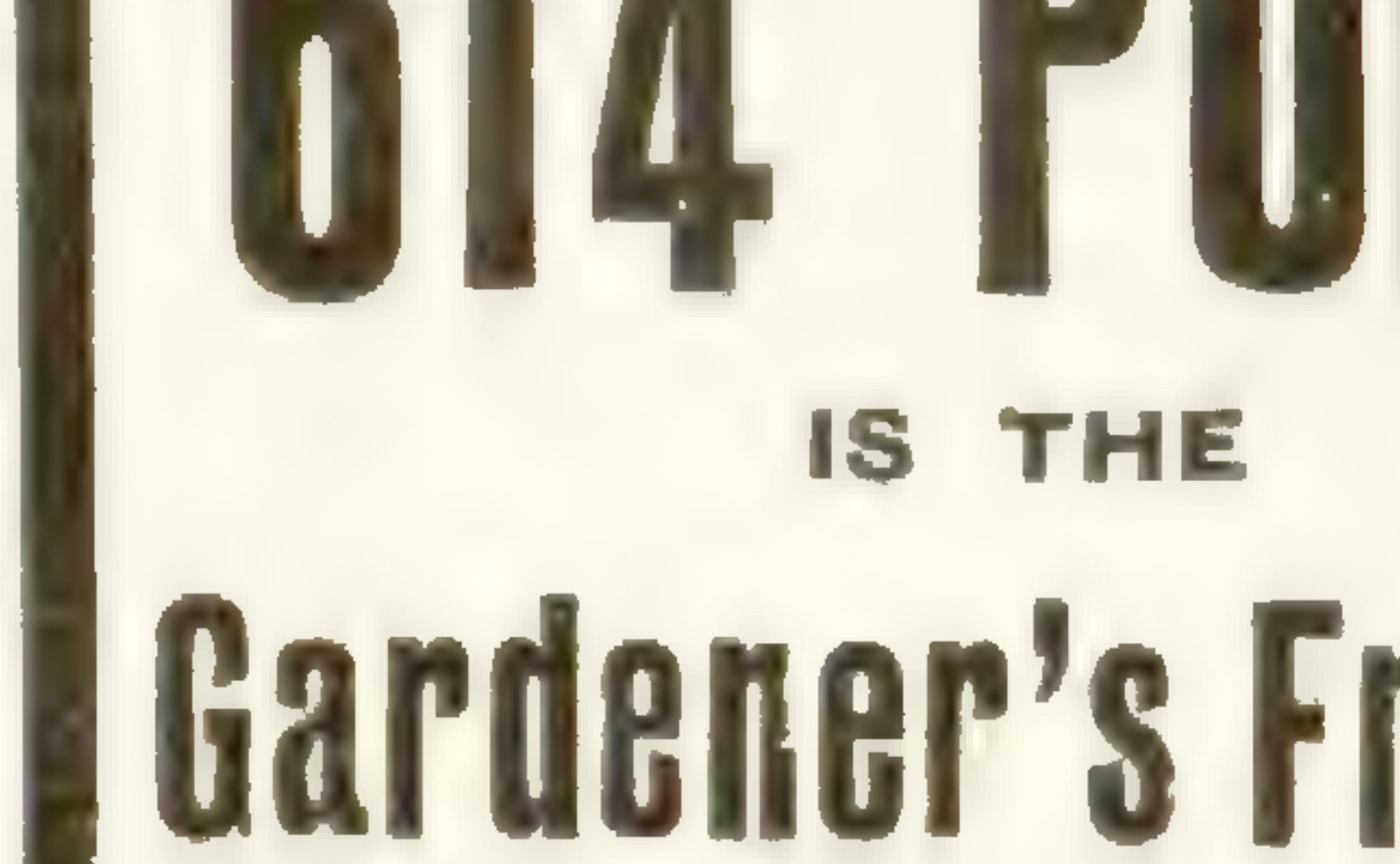
Gardener's Friend.

Easy to Work.
Simplicity Itself.

Write or Call—

63, Long Acre, LONDON, W.C.

IDEAL, 5 feet long.



In best redwood, painted two coats white

£1 : 7 : 6.

Delivered any Station.

Full catalogue on application

PETER PATRICK & SON, OTLEY, YORKS.

AMERICAN TREE CARNATIONS

The Newest and Best Varieties.

Strong, healthy and well-rooted plants only supplied

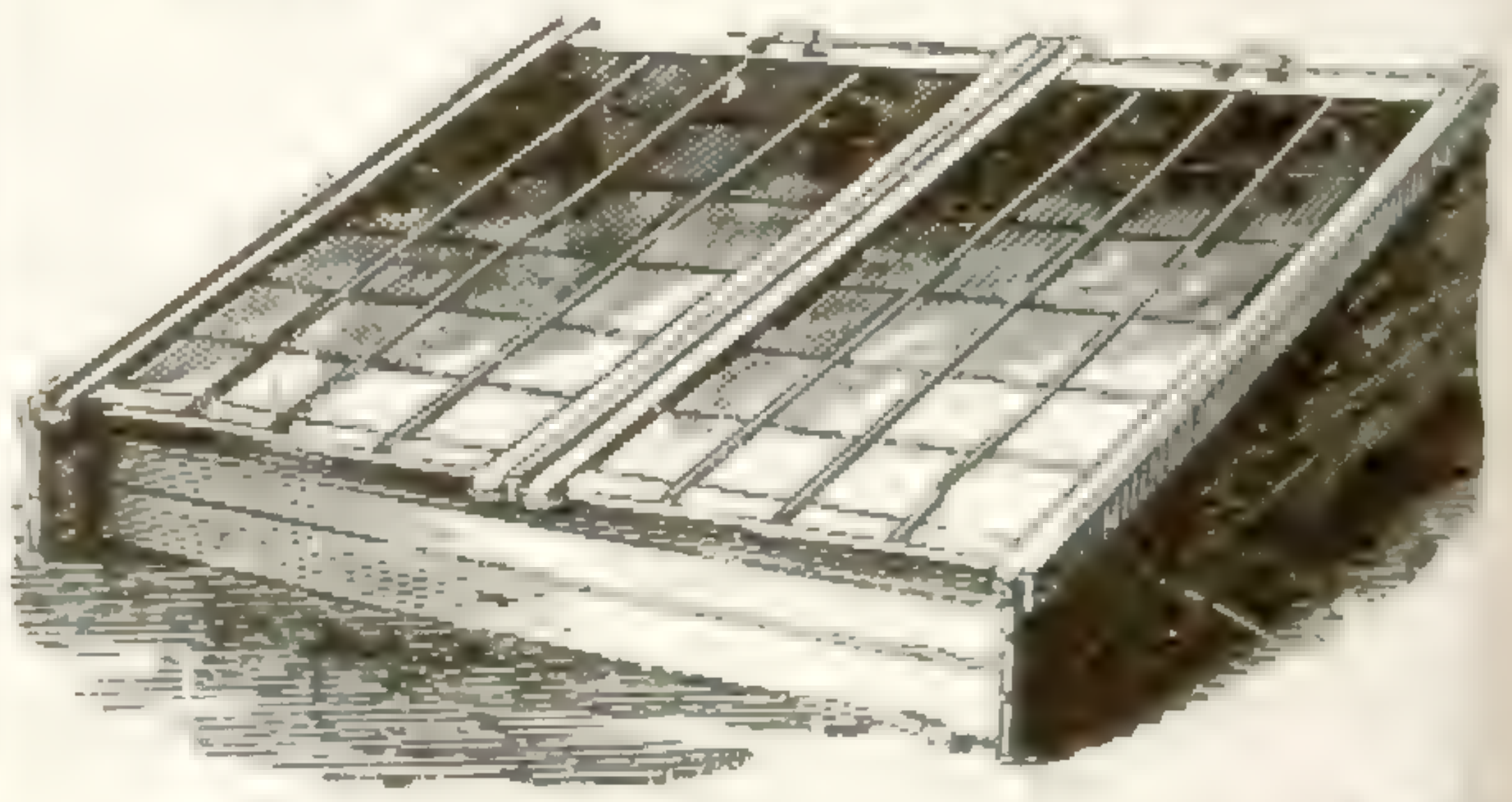
Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

PORTABLE

CUCUMBER FRAMES.

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.		£	s.
1-light 4 ft. by 6 ft.	*CASH PRICES.*	2	0
2-light 8 ft. by 6 ft.		3	0
3-light 12 ft. by 6 ft.		4	2
4-light 16 ft. by 6 ft.	*CARRIAGE PAID.*	5	5
5-light 20 ft. by 6 ft.		6	7
6-light 24 ft. by 6 ft.		7	10

Larger sizes at proportionate prices.

R. HALLIDAY & CO.

Royal Horticultural Works,

MIDDLETON, MANCHESTER.

ORCHIDS

EIGHT MILES BY
FROM THE CITY

A visit of Inspection invited of our well grown stock. Thousands of **CATTLEYAS, DENDROBIUMS, ODO**
GLOSSUMS, and an endless variety of Choice **ORCHI**
Nurseries easily reached by Rail to BUSH HILL PA
Station, or by Road.

Telephone :—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MI

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable p
Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KI

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,

Exotic Nursery, Cheltenham.

BOTTLING FRUIT.

Patent Appara Complete.

5/6

Efficient, Reliable, Simple, Easily Operated.

WICKH M and Co., Dept. M, Ware, Herts.

STALKER'S Forest Trees, Fruit Trees. Roses, Bulbs, and Seeds
Are known all over the world, and cannot be surpassed for hardiness and quality.

Famous for Quality and Cleanliness.

D. STALKER & SON,

Government Contractors,

Catalogues Free. **NAIRN. N.B.**

NOTICE.

The AZALEAS and RHODODENDRONS planted in Hyde Park, near Rotten Row, finest to be seen in London, are supplied by ANTHONY WATERER, whose only address is Knap Hill Nursery, Woking, Surrey.

No connection with any other firm of similar name.

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

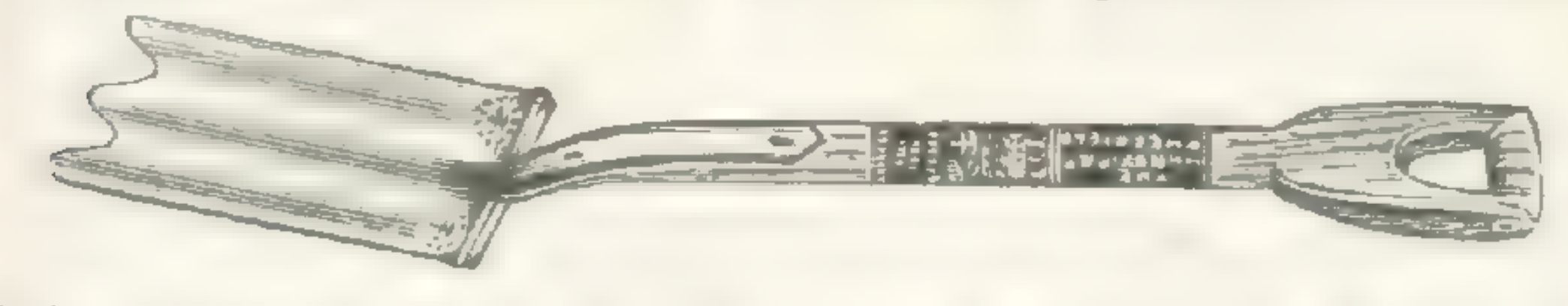
Extracts from 35th annual collection of reports:—
NATIVE GUANO for POTATOES, VEGETABLES, etc.

A. J. BEARD, Erdington: "Potatoes, splendid, free from disease. Best I ever had."—H. CHESTER, Nantwich: "Best onion manure I ever used. Grand for onion fly."

NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc.
J. CANT, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. FRAMPTON, Titchfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED,** 29, New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted.

A NEW GARDEN SPADE (Carter's Patent):



This is claimed to be the most effective Spade on the market. Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

VAPORITE

KILLS SOIL PESTS

Write for illustrated and descriptive Booklet No. 45 post free to

VAPORITE STRAWSON, Co., Ltd,
Dept. E, Spencer House, South Place, London, E.C.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to
EPPS & CO., Ringwood, HANTS.

ONCE USED. ALWAYS USED.

The 'PATTISSON' LAWN BOOTS

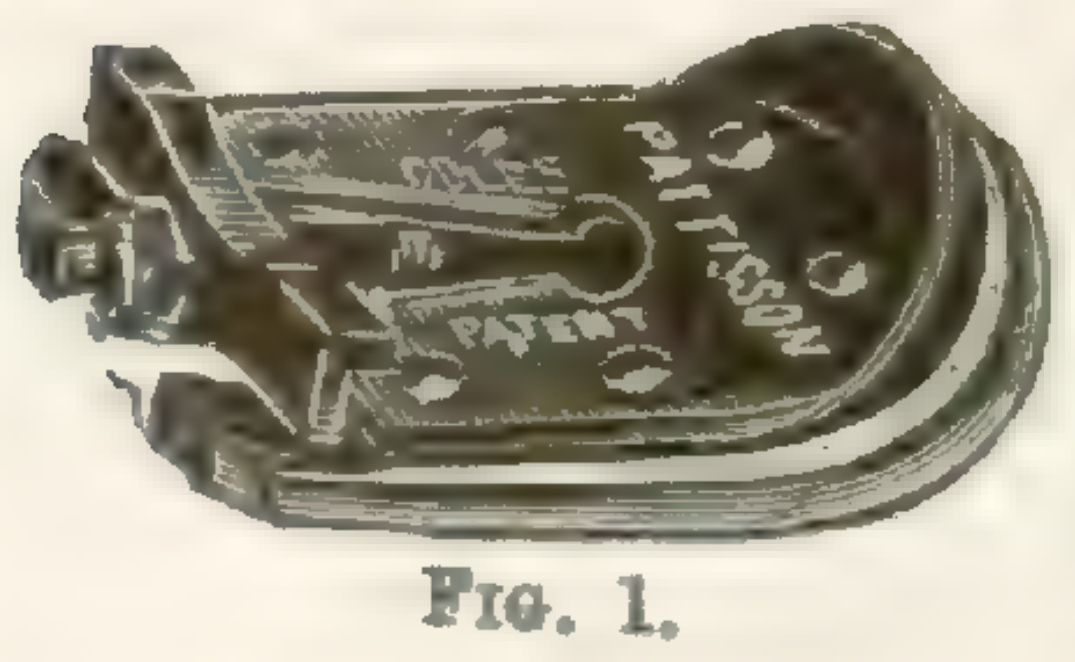


FIG. 1.

Simplest! Strongest! Most Economical!

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS

Silver Medal—
Royal Horticultural Society.

HUNDREDS OF TESTIMONIALS.
The Field says: **"As good as any thing that could be devised."**

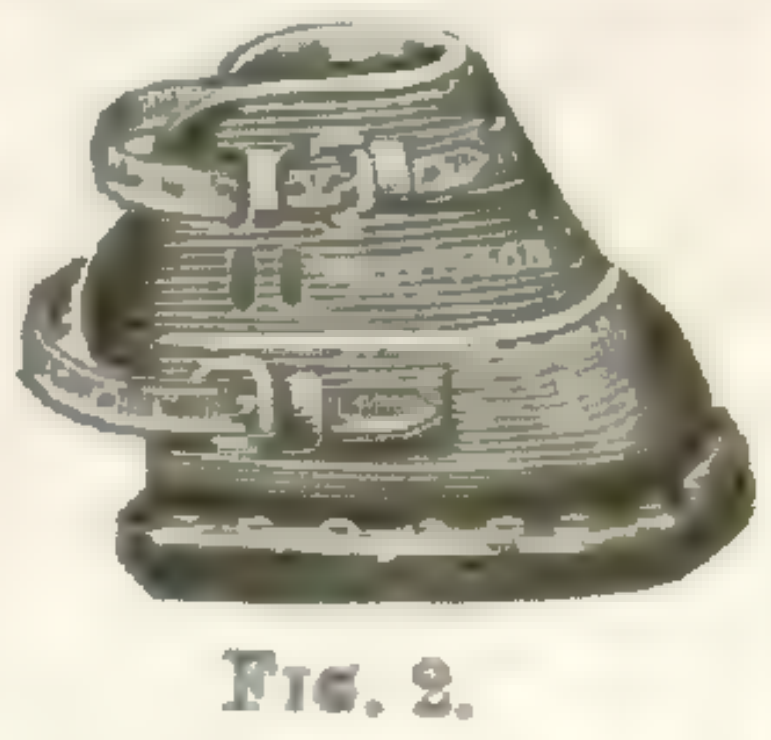


FIG. 2.

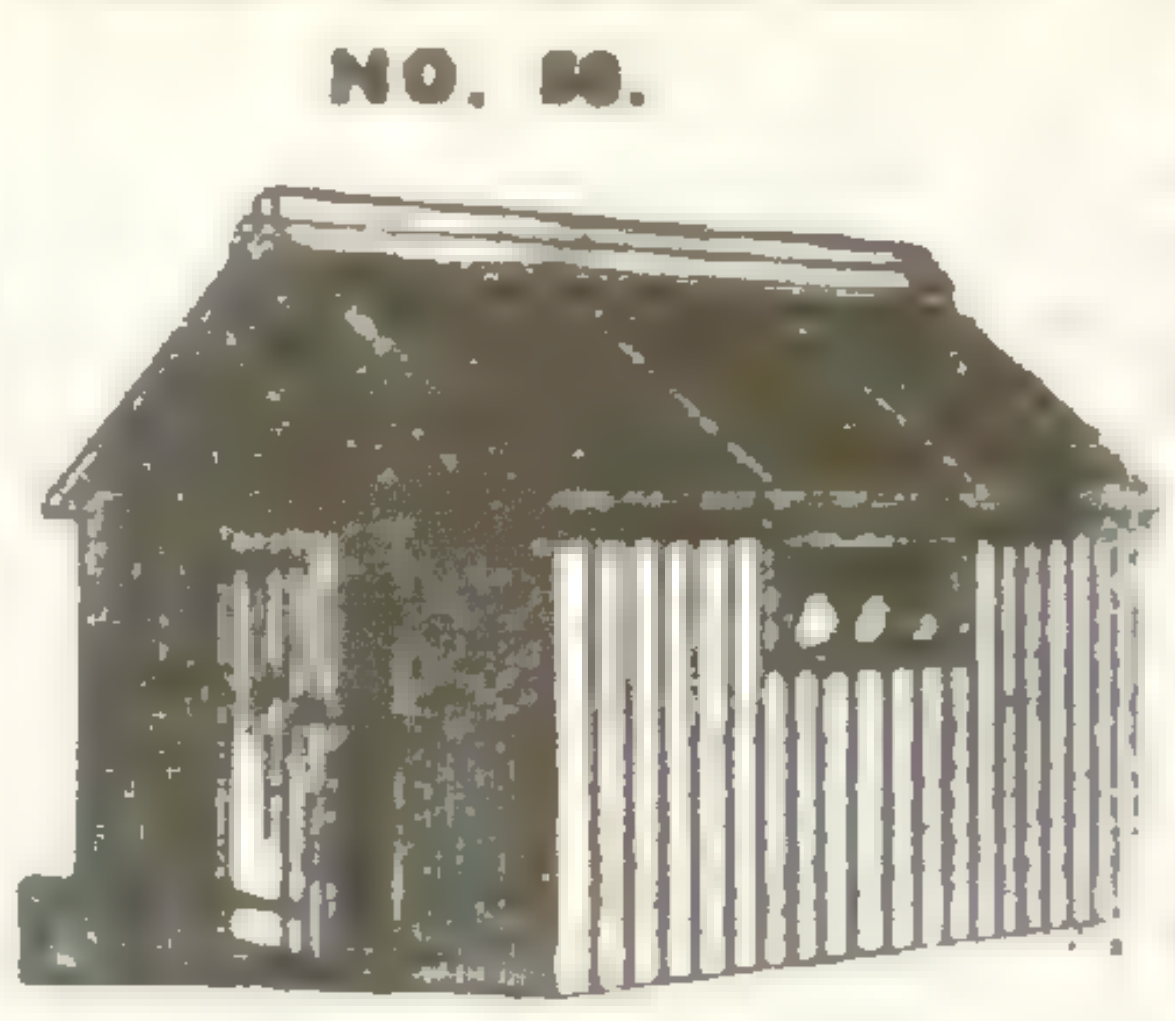
Illustrated Price List from—
H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM S.W

CORONATION HOLIDAYS.

All Advertisements intended for the "Gardeners' Magazine" of June 24 must be received by FIRST POST on WEDNESDAY, JUNE 21.

THE CHEAPEST IN ENGLAND.

NO. 80.



Copyright Registered.

PORTABLE BUILDINGS. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

SIZES.		Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/6
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.

Largest Makers of Portable Buildings,

ESTABLISHED 70 YEARS. **BEDFORD.**

Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

HAYWARD'S

Eureka WEED KILLER

insures clean paths, best known and most satisfactory. It is no new experiment. A Weed Killer that can be thoroughly relied upon to keep paths clear for 12 months with one dressing is most helpful, but under-strength articles with no reputation are an aggravation. The "Eureka" is sold everywhere, 1/9 for 100 sq. yards, 6/- for 400 yards, 49/- for 4,000 yards; intermediate sizes at suitable prices. The "Eureka" Lawn Sand, Soilfume, Quassia Extract, Bordeaux Mixture, etc., have been in regular use for years, and there is no better value. If any difficulty in obtaining apply only makers, TOMLINSON and HAYWARD, Ltd., Lincoln.

"EUREKATINE"

is the satisfactory fumigant for destroying

Greenhouse Pests.

GARDEN AND TENNIS NETS (best) tanned only, small mesh).—50 x 8yds., 17s.; 25 x 8yds., 50 x 4yds., 100 x 2yds., 8s. each; 100 x 1yd., 50 x 2yds., 25 x 4yds., 4s. each. Any size to order. Tennis Netting (corded), 25 x 2, 6s. 6d.; 25 x 3, 7s. 6d.; 25 x 4yd., 8s. 6d. Write for Price List. L. WREN and SON, Net Merchants, 139, High Street, Lowestoft. Established 1863.

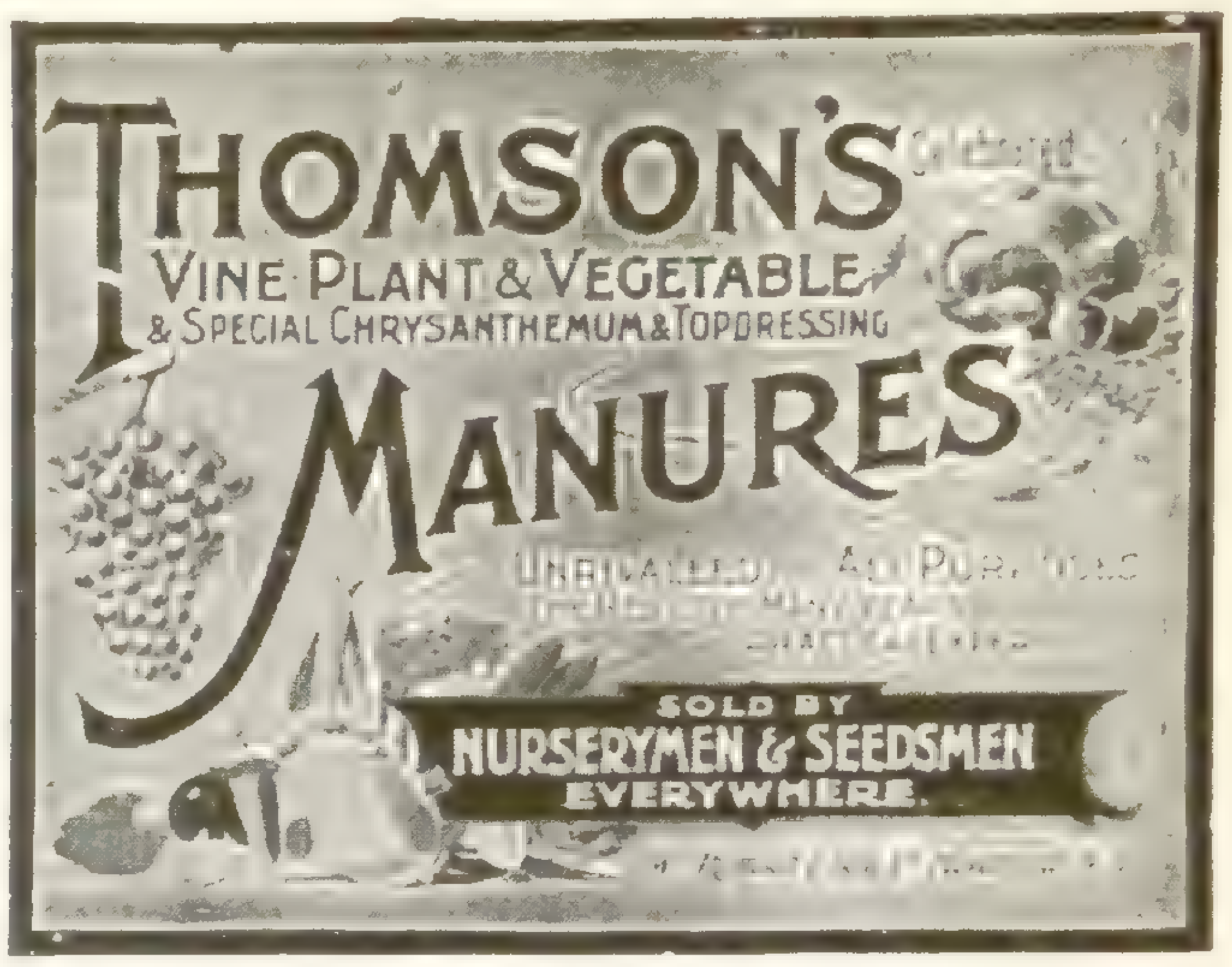
FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S W.

PERPETUAL CARNATIONS.—Everyone interested in PERPETUALS should write for our 1911 Illustrated Catalogue, FREE. Read our "TREATISE ON CULTURE," 1s., post free. YOUNG and CO., Carnation Specialists, HATHERLEY, CHELTENHAM

BEGONIAS.—Started Begonias, 12s.; 16s. 100. Gerberas, Adnet's Hybrids, Seed, 1s. 6d.; plants, 15s., 20s. doz. Japanese Davallia Ferns, Badgers, Elephants, Rabbits, Squirrels, Monkeys, Balls, etc., from 2s. ELLISON, 57, West Bromwich.

POINSETTIAS, established in small pots, clean and strong, 2s. 6d. per dozen, 18s. per 100; cash with order. JOHN BURCH, Staple Hill Nursery, Bristol.

RARE ALPINES CHEAP.—Profits devoted to Patriotic objects. Apply for list, LADY C., The Abbey, Much Wenlock, Shropshire, and please enclose fully addressed and stamped envelope.



BENTLEY'S

WEED DESTROYERS

Utterly annihilate Weeds, Moss, Dandelions, and all other Weeds on Garden Walks, Carriage Drives etc.

HAVE THE LARGEST SALE IN THE UNITED KINGDOM!
ARE THE MOST POWERFUL MANUFACTURED!
ARE THE MOST PERMANENT IN EFFECT!

LIQUID (Poison).

Double Strength (1 to 50).

3 gallons, to make 153 gallons ...	£0	10	0
6 „ „ 306 „ ...	0	18	0
12 „ „ 612 „ ...	1	13	0
20 „ „ 1,020 „ ...	2	7	6
40 „ „ 2,040 „ ...	4	12	6

Special Concentrated Strength (1 to 80).

3 gallons, to make 243 gallons ..	£0	14	6
6 „ „ 486 „ ...	1	7	0
12 „ „ 972 „ ...	2	6	0
24 „ „ 1,944 „ ...	4	10	0

BENTLEY'S DAISY KILLER.

(Lawn Sand.)

Completely eradicates Daisies, Moss, and other Weeds which infest **Lawns, Tennis Courts, Croquet Grounds, Bowling Greens, Golf Courses, etc.,** and afterwards improves the tone and colour of the sward.

1 ton, **£19**; 10 cwts., **£9 15s.**; 5 cwts., **£5**; 1 cwt., **£1 1s.**; 56 lbs., **12s.**

TINS, **5s., 2s. 6d.,** and **1s.** each.

Carriage paid on **7s. 6d.** orders and upwards.

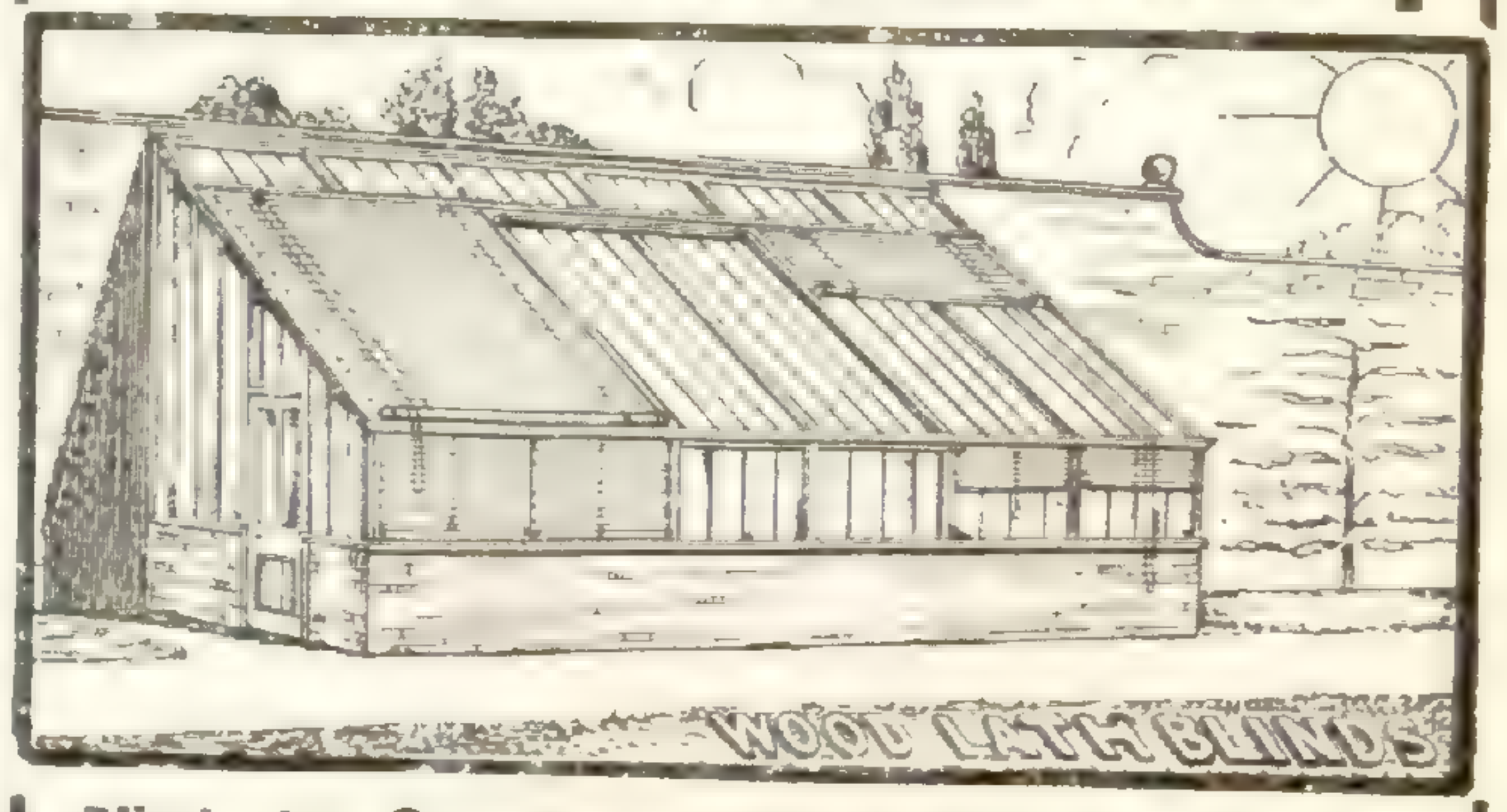
WHOLESALE MANUFACTURERS,

JOSEPH BENTLEY, LIMITED,

Chemical Works,

BARROW-ON-HUMBER, HULL.

WOOD LATH BLINDS.



Blinds for Greenhouses must admit part of the sunlight so essential to the healthy growth of Plants.

Our Wood Lath Blinds secure this advantage.

250,000 ft.

already supplied.

Send for Special Illustrated Catalogue.

MESSENGER & CO., Ltd.,
LOUGHBOROUGH.

London Office:
122, VICTORIA STREET, WESTMINSTER, S.W.

GLASS & PAINT.

NICHOLLS & CLARKE, LTD.,

15 oz. and 21 oz. Glass,
IN ALL THE USUAL SIZES.
Shoreditch, London.
When sending for list please cut out this advt.

STATE INSURANCE DOES NOT COVER RISKS TO THE PLANTS YOU LOVE
BUT

CLAY'S FERTILIZER

DOES INSURE YOU
ADEQUATE PROVISION FOR THEIR HEALTH AND MAINTENANCE.

CLAY'S LONDON FERTILIZER
TRADE MARK.

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK, AS AT SIDE.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. Fourth Edition (Second Reprint). 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Stratford, London, E.

APPOINTED BY ROYAL WARRANT, HORTICULTURAL MACHINE MAKERS TO HIS MAJESTY KING GEORGE V.

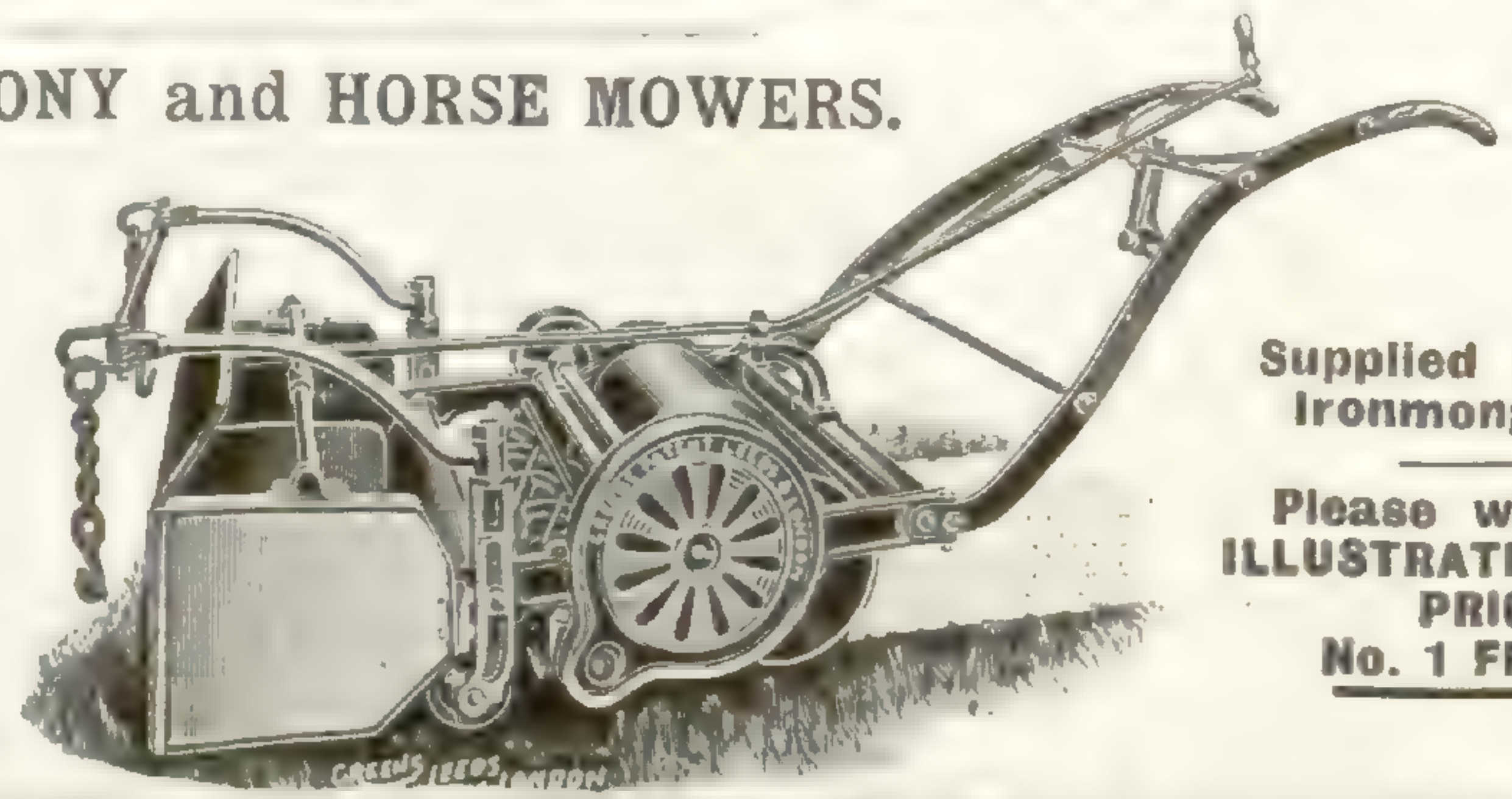
GREEN'S LAWN MOWERS ARE UNEQUALLED.

Hundreds of Thousands are in use. Established nearly a Century,

Highest Awards — Royal Botanic Society, Royal Horticultural Society, and numerous others.

"SILENS MESSOR" LAWN MOWER.

PONY and HORSE MOWERS.



Telephone Numbers—
Leeds, 3580.
London, 2022 Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London

Supplied by all Ironmongers.

Please write for ILLUSTRATED PRICE LIST No. 1 FREE.

ORDINARY and WATER BALLAST ROLLERS.

MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E

Catalogues and Estimates Free.

MESSENGER & Co. Ltd
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office 122 VICTORIA St S.W.

MODERN GLASSHOUSES

as supplied by MESSENGER and CO., Ltd., are made of the best materials, and only capable and reliable workmen are employed in the erection thereof.

The following letter was recently received by us on the completion of a contract for a well-known Member of Parliament.

February, 1911.

"I should not be doing my duty to your workmen if I did not at once tell you, on the completion of your work, how pleased I have been with each and all of them.

"They have been most obliging throughout the whole job, and have endeavoured to do everything in an efficient and thoroughly workmanlike manner, and I must congratulate you upon having such capable employees."

VOL. LIV.—No 3,007 SATURDAY, JUNE 17, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

The Boon of Rain.

To fully appreciate the blessing of the rainfall, it is necessary either to have experienced its absence by a sojourn in dry and arid countries, or, at any rate, to have passed through a period of drought at home, when both the agriculturist and the garden lover find their crops threatened and their precious floral pets wilting under the influence of drying winds and persistent unmitigated sunshine. Even to the merely pleasure-loving social part of the community, who regard wet weather merely as a bar to picnicking and outdoor sports, long-continued drought becomes monotonous; and in these days of the motor car, the pleasures of travelling through country roads of a normally pretty and umbrageous character is practically annihilated by the clouds of dust, which do not merely almost choke the traveller but, what is even worse, cover vegetation with a dingy coating of the same material to the detriment of its first appearance, and also of its vitality. Contrast all this with the enjoyment experienced after a copious and refreshing drenching, such as the country generally is from time to time blessed with. The dust-laden atmosphere gives place to pure air which it is a delight to draw into the lungs, the hard white dusty roads are transformed into pleasant tracks bordered, not by whitish or greyish travesties of vegetation, but by verdant lucent shrubs and trees, beneath which the smaller growths, the primroses, violets, etc., etc., glory in the vivifying moisture, which has at once washed, as it were, their faces, and decked them apparently in new robes, so fresh and glistening has their foliage become. The agriculturist sees his nascent crops springing from the moistened soil, and those more advanced growing vigorously, obviously eager to seize the opportunity and make up for lost time; and everywhere the wide prospect is revivified and rebeautified by the beneficent boon of rain which is literally heaven's own gift. Irrigation may do much by supplying moisture to the roots, on a smaller scale the garden lover may do something to alleviate the drought by means of the hose, but it is the heaven-sent boon alone which does the work thoroughly by at once cleansing the foliage, opening its pores, and thus, to the maximum degree, facilitating that vital work which it is the province of the leaves to perform, while at the same time, providing the roots with the needful supply from below. Fortunately, in the course of evolution, Nature has endowed most plants with a fairly wide margin of drought endurance, this depending largely upon the character of their natural habitats and habits of growth. The tiny oval pores or stomata which perform the double office of admitting the carbonic acid gas which the air supplies for the structural needs of the plant, and of permitting the escape of the water vapour transpired from the leaf-cells, are beautifully shaped, so as to close up or nearly close in dry weather, thus economising expenditure. Some plants which grow in exposed positions, such as walls, besides doing this, contract their foliage also, and after a long, exhaustive drought, which would and does kill many plants, these, though apparently dead and shrivelled, are capable of absorbing the rain when it comes and resuming their pristine freshness unharmed. Thus it is with some of our ferns, such as the Ceterach and Common Polypody. Others, like the stonecrops, have thick fleshy leaves so replete with moisture as not to be easily exhausted. Many plants, too, like the saxifrages, form such dense masses as to prevent the drying sunbeams reaching the soil beneath them, and in this way, coupled with leathery leafage, they manage to hold their own. Apart from all this, however, we may legitimately ask ourselves, Whence does the boon of rain come? The day, perhaps, commences hot and sunny. Not a cloud is in the sky, and we sigh once more, "Another baking day." Presently, however, clouds appear and gather, and if we watch them we may see them grow. A faint, ragged wisp thickens into a mass, and ere long the sky is covered, the air grows cooler, and the rain begins. It may surprise many to know that under such conditions the whole of the water which eventually drenches the soil and everything on it may have been there overhead all the time as transparent vapour, and has only become visible and tangible by virtue of a cooling change of wind. Or, if accompanied by a south-westerly wind, as is more frequently the case, the raindrops which we delight in may have been lifted up by the sun at the equator, and wafted across the ocean invisibly as transparent vapour or visibly as driving cloud masses, to find a temporary lodging here as a benefactor, and when its work is dcne to be wafted away again on its manifold and eternal mission as a factor in the great circulatory system of the earth's water supply.

ALDERMAN J. W. BENTLEY, J.P., C.C.
Famous for his work among Auriculas, Carnations, and Tulips.

Alderman J. W. Bentley, J.P., C.C.—The well-known florist whose portrait appears in the present issue, was born at Royton, near Manchester, in 1859; his father, Mr. William Bentley, being a well-known botanist and tulip grower. So from his earliest years our friend has been familiar with plants and flowers. He was educated at the Manchester Grammar School when the famous Mr. Walker, who afterwards finished his life's work at St. Paul's School, London, was the headmaster. On leaving school in 1876 he came to Stakehill to learn the business of his uncle, Mr. Samuel Barlow, who was himself an ardent florist, growing, among other things, auriculas, tulips, and carnations; here he was in daily contact with flowers and flower-lovers, and soon became afflicted with auriculamania; the rich brown flowers of Campbell's self, Pizarro, having such an effect upon him that in 1877 he got a small collection together himself. At Stakehill, Mr. Barlow delighted to get together men who were prominent in floriculture, and so Mr. Bentley came to know a great many, including Thomas Moore, Shirley Hibberd, E. S. Dodwell, Rev. F. Symons, John Hepworth, Joseph Lakin, James Thurstan, Richard Dean, John Beswick, Ben Simonite, David Jackson, Rev. F. D. Horner, and Mr. James Douglas. He was a lad among grown men, and naturally most of these old florists have gone to their rest, though Messrs. Horner and Douglas are fortunately still with us, both of whom he has to thank for gifts of auriculas when he started as far back as 1877. Mr. Bentley did not begin to grow tulips until 1889, being already interested in his uncle's collection; but as he was always expected to be on hand at the tulip shows, writing labels, prize-cards, etc., he decided to grow some flowers himself, so as to have a more personal interest in these matters, and so he has been a constant grower and exhibitor of tulips ever since. Many years ago, at the request of the late Dr. Hogg, Mr. Bentley wrote a series of articles on tulips, with a catalogue of the varieties known to him at that time. Although written so long ago the catalogue would not now need much revision or addition, as new meritorious varieties of old English tulips are very slowly evolved, or good old varieties eliminated. Mr. Bentley has been the hon. secretary of the Northern Branch of the Tulip Society since 1893, and has done a good deal in conjunction with Mr. C. W. Needham, of Hale, Cheshire, and a few others, to keep interest in the flower alive. Mr. Bentley became the hon. secretary of the Northern Auricula Society in 1897, at a time when nobody could be found to undertake the duties and it was feared that the society would have to break up, but he gave up the office this year, leaving the society in a healthy condition, with plenty of members and enthusiasm. He was president of the Northern Carnation Society from 1893 until last year, with Mr. W. Prescott as hon. secretary, but both resigned last year owing to lack of support, and the society is now continuing more on the lines of the London and Birmingham Shows, in the capable hands of Messrs. Budenberg and Rogerson. As a public man, Mr. J. W. Bentley has been a member of the Middleton Town Council since 1889, was Mayor of the town in 1904-1905, and is now the oldest member of the Council. He was appointed a magistrate in 1893, and has been chairman of the licensing justices since 1904. He has represented Middleton on the Lancashire County Council for four years, and quite recently has been appointed a member of the Horticultural Committee. In business he is the managing director of the firm of Samuel Barlow and Co., Lim., bleachers, dyers, and printers of cotton goods, principally for the Far East. Much more might be written concerning Mr. Bentley's floricultural enthusiasm and success, but these few notes will serve to show that a man may be a foremost florist of his times, a capable and hardworking business man, and also find time to take a full share in the conduct of local and county affairs.

The Coronation.—As we go to press the finishing touches are being given to the preparations for the crowning of the King and Queen in Westminster Abbey, and everything points to the ceremonial and the various functions associated with the Coronation being exceptionally brilliant. The immense amount of interest that is being taken in this great event by all classes of the community fully justifies the expectation that there will be an enormous influx into London of loyal subjects from all parts of the United Kingdom, filled with a strong desire to do honour to King George V. and his Royal Consort, who, happily, have already won the hearts of their subjects. There is at the present time but one thought uppermost in the public mind, and that is the hope their Majesties may have a long, prosperous, and happy reign. That this may be so is certainly the earnest hope of ourselves and our many readers.

Lecture by Rev. Professor G. Henslow.—Professor Henslow's lectures are always of great interest, and they have the merit of being entertaining as well as instructive; on Tuesday, June 20, he will deliver one at the Royal Horticultural Hall, Westminster, at 3 p.m., on "The Origin of Monocotyledons from Aquatic Dicotyledons."

R.H.S. Committee's Outing.—As in previous years, Mr. and Mrs. Harry J. Veitch are inviting the members of the Royal Horticultural Societies to East Burnham Park, and the date fixed for the outing is Friday, June 30. This is somewhat earlier than usual, chiefly because a later date proves inconvenient for a number of the members. Those committeemen who have not yet accepted Mr. and Mrs. Veitch's kind invitation and purpose visiting the delightful gardens and grounds at East Burnham Park, near Slough, are requested to notify Mr. S. T. Wright, R.H.S. Gardens, Wisley, Ripley, at once, so that the necessary arrangements may be made.

The Crush at the Temple Show.—Mr. W. J. Godfrey, of Exmouth, writes: "No one will deny that, in spite of the increased charge for admission, the tents and grounds were uncomfortably crowded at the recent Temple Show, but there was a smaller proportion of the élite of the land than used to visit this exhibition. This is due to the fact that it is impossible, even with a struggle, to obtain a fair view of the varied exhibits, and the crush of the crowd of visitors is unbearable to many. Would not this crush be avoided in a large measure if the show were opened earlier? The tents are promptly cleared of exhibitors at 10 a.m., but for the next two hours the exhibits are losing most of their beauty owing to the heat. Thus, precious time is practically wasted, mainly for the purpose of allowing numerous small groups of learned men to display their knowledge by awarding medals, which awards in most instances are far from satisfactory, or even appreciated by the exhibitors. I am, of course, referring to the awards of less value than the Gold Medal or Silver Cup. The main object of the exhibitor is business, and the awards are intended as an advertisement. Much more business would result if the show were opened the first day at 10.20 or 10.30 a.m., and more satisfaction would be given to all concerned. Why the medal awards are unsatisfactory need not for the moment be discussed. The additional time which would be saved if this suggestion were adopted could be reserved for subscribers of not less than two guineas, others being charged a guinea for admission."

Floral Decorations at the Gala Opera.—It is estimated that about a hundred thousand roses will be used in the decoration of the Royal Opera House, Covent Garden, on June 26, when their Majesties and their Coronation guests will attend the gala performance. White and gold orchids and carnations will be used to decorate the Royal Box; pink roses will be used on the ground floor, arranged on trellises. The proscenium will be outlined with crimson roses, and baskets of crimson roses, connected by festoons of pink roses, will adorn the grand tier.

Messrs. J. Cheal and Sons' Success.—The Council of the Festival of Empire at the Crystal Palace have just awarded Messrs. J. Cheal and Sons, Crawley, a twenty-five guinea silver cup for designing and laying out the gardens around the Terrace Club, comprising enclosed flower gardens, paved terrace, walks, pergola, rockery banks, terrace walls, garden houses, seats, etc.

The Fruit Crop.—At the Council meeting of the National Fruit Growers' Association held at the Horticultural Hall on Monday last, Mr. C. S. Martin presented a report on the fruit crop prospects, which, he stated, was based on information obtained from trustworthy sources. Apples will, judging from present appearances, yield a fair crop, but the prospect is not very good in West Kent and the Evesham district. Plums are promising an abundant yield, but as the trees are suffering considerably from drought, the yield may not come up to expectations. Damsons are likely to be plentiful, particularly in Kent. Gooseberries are less plentiful than was anticipated earlier in the season in all parts of the country, with the exception of Hereford and Norfolk. Black currants are indifferent in all districts, but red currants range from fair to good. Raspberries bloomed satisfactorily, but the dry weather has checked the development of the fruit. Strawberries have failed to realise the splendid promise of a few weeks since, as, owing to the continued dry weather, the fruits have failed to attain their full size. Cherries will be a light crop in all districts. Aphis and other insect pests are abundant in fruit plantations and doing considerable damage.

U.H.B.P.S. and the National Insurance Bill.—At the monthly meeting of this society, held on June 12, it was proposed by Mr. Wesker, and seconded by Mr. Burge, that, at as early a date as possible, Messrs. C. H. Curtis, Jas. Hudson, W. Collins, J. H. Dick, W. P. Thomson, and W. A. Bilney act as a deputation to the Chancellor of the Exchequer re the United Horticultural Benefit and Provident Society in its relation to the National Insurance Bill.

Agricultural and Forestry Exhibition in Sweden.—The next quinquennial gathering of the Swedish Agricultural Societies takes place at Orebro on July 3 to July 9, inclusive. There will be a great display of horses, pigs, cattle, poultry, sheep, rabbits, bees, etc., and sections will be devoted to scientific agriculture, dairy farming, forestry, and pisciculture. Full particulars may be obtained from the Swedish Consul-General, 63, Finsbury Pavement, E.C.

GRAND YORKSHIRE FLORAL FETE AND GALA.

Although the wind was cool and brisk, the weather was bright for the great York flower show, which was held on June 14, 15, and 16, and, as usual in Bootham Park. It was a magnificent show, and some rearrangement of the classes made the general effect different from that of previous years. The hardy flowers, roses, rock gardens, orchids, and fruit were especially good. There was a good attendance, including a deputation from the North of England Horticultural Society, one from the Council of the International Horticultural Exhibition of 1912, and also one from the National Hardy Plant Society. The latter body granted a First-class Certificate to Heuchera Lady Greenhall, from Messrs. Bakers, Wolverhampton, and Awards of Merit to Delphinium Lady Faire and Pæony Lena Ashwell, from Messrs. J. Kelway and Son, Langport; to Iris Asia, from Mr. G. Yeld, M.A., Burton Lane, York; and to Verbascum Salmon Queen, from Mr. F. Bouskell, Market Bosworth. Altogether the good folks at York have every reason to congratulate themselves upon their latest gala.

YORKSHIRE FLORAL FETE AND GALA—A NEW METHOD OF STAGING HARDY FLOWERS.

Cut hardy flowers, with a few plants, were delightfully arranged on a ground space by Messrs. W. Artindale and Son, Sheffield, to form a herbaceous border. An entirely new class was provided, and the Sheffield firm won first prize with the display here depicted.

GROUPS.

In the leading group class the usual area of 300 square feet was allowed, and awards were made with due regard to the plants and flowers used and the effect created therewith. There were five competitors, and once again the premier award of £20 was won by Mr. J. Donoghue, gardener to J. Pickersgill, Esq., Bardon Hill, Weetwood, Leeds. With tall palms and dracænas, rambling roses and liliums as a background. Mr. Donoghue arranged an arch of ferns and moss from which sprang sprays of odontoglossums and beautiful blooms of Cattleya Mossiæ. In front of these, over the wide foreground, tall, stately, and gorgeous crotons rose from among smaller plants, with light caladiums, a few cattleyas and Clerodendron fallax all tastefully disposed. Small caladiums, foliage begonias, and bertolonias made a pleasing margin, while a few graceful plants of Humea elegans lent additional lightness to a very fine effort. Mr. W. A. Holmes, West End Nurseries, Chesterfield, won second prize; his exhibit was rather weak in the background, and needed a few more choice flowering plants towards the front; crotons were prominent in the group; Messrs. R. Simpson and Sons, Brook Street, Selby, gained third prize; Mr. Wm. Vause, Leamington, fourth; and Mr. G. Cottam, Alma Gardens, Cottingham, Hull, fifth. The whole set of five groups made a fine show.

For a smaller group, arranged on a space of 200 square feet, Mr. W. Holmes annexed the premier award of £12 with an effective but rather crowded arrangement, that was rendered beautiful by the extreme brilliance of the very many fine crotons used in it; Mr. J. Donoghue was second, and it was evident that he had made his great effort in the big class; Mr. W. Vause third, his alocasias, Dracæna Sanderiana, and Rex begonias giving his group a silvery-grey effect; Messrs. Simpson and Sons fourth.

Mr. J. Barker, Clumber Gardens, Worksop; Mr. J. Donoghue, Weetwood Gardens; and Mr. W. Langstaffe, secured the awards for a group of carnations, but in neither case were the plants at their best. Mr. W. Walls, gardener to Mrs. Craven, Moorlyn, York, staged the best group of gloxinias; Mr. Douthwaite, gardener to Miss Barstow, Garrow Hill, York, led for a group of begonias; and Mr. F. Dean, gardener to Joseph Rowntree, Esq., Rose Cottage, Clifton, York, secured the premier award for a group of calceolarias. The prizes in all these classes were well contested by the local growers.

SPECIMEN PLANTS.

Down the centre of the chief tent specimen stove and greenhouse plants were arranged in large numbers, but their disposition, while effective, was such that the first, second, and third prize specimens were often quite a long way from each other. There were eight classes, and the chief one was for a collection of specimens, in bloom, arranged on a space 20ft. by 10ft. Messrs. James Cypher and Sons, Cheltenham, were first prizewinners with bold examples of Erica Cavendishiana, E. ventricosa, Anthurium Scherzerianum, Pimelia diosmæfolia, Ixora coccinea, I. Regina, Clerodendron fallax, etc.; Mr. W. Vause, Leamington, was second, bougainvilleas and anthuriums being his best features.

Mr. W. Vause led for three stove or greenhouse plants, and also for one specimen in bloom, the latter being a fine bougainvillea. Messrs. J. Cypher and Sons were a capital first for six ornamental foliage plants, with magnificent kentias, latanias, crotons, etc.; the Cheltenham firm had the best flowering greenhouse plant—Erica Cavendishiana, and they were also first for three foliage plants that included a huge Croton Warreni.

ORCHIDS.

In the class for a table of orchids, arranged on a space of 12ft. by 5ft., there were two competitors, and the judges awarded equal first prizes to Messrs. Mansell and Hatcher, Rawdon, Leeds, and Messrs. Jas. Cypher and Sons, Cheltenham; for ourselves, we think the latter firm had a trifle the better of the contest, but no doubt the judges had good reasons for placing the competitors on an equality. Messrs. Mansell and Hatcher had fine plants of Lælio-cattleya Canhamiana, L.-c. Fascinator, Cattleya gigas Sanderiana, Renanthera Imschootiana, and Odontoglossum crispum, while the Cheltenham firm used cut flowers gracefully in their background, and made features of Miltonia vexillaria, Cymbidium Lowianum, Brassavola Digbyana, and Lælio-cattleyas.

Messrs. J. Cypher and Sons led for ten specimen orchids with goodly examples of Miltonia vexillaria, Cattleya gigas, C. Mendeli, C. Mossiæ, L.-c. Canhamiana, Oncidium macranthum, and Epidendrum prismatocarpum; Mr. J. Barker, gardener to W. P. Burkinshaw, Esq., West Hill, Hessle, second with good specimens of Cattleya Mossiæ alba, Miltonia vexillaria magnifica, and M. St. Andre; Mr. James Sunley, South Milford, third with quite small plants.

The Cheltenham firm was also to the front for six orchids, and here they scored well with Miltonia vexillaria, Cattleya gigas, C. Mendeli, C. Mossiæ, Lælio-cattleya Canhamiana, and L.-c. Aphrodite splendens; Mr. J. T. Barker, second. For three orchids Messrs. J. Cypher and Sons led with Cattleya gigas with eight big blooms, Lælio-cattleya Pecunia, and L.-c. Canhamiana; Mr. J. T. Barker was second again, and Mr. J. Sunley third.

ROCK GARDEN CLASS.

Four competitors came forward in the prominent class for a group of hardy flowers and plants arranged in the form of a rock and water garden. This year the groups were placed at the side of the big tent instead of in the centre, for the purpose of keeping down the recent tendency to erect very high shrubbery backgrounds. The first prize was won by Messrs. James Backhouse and Son, Lim., York, with a bold and charming contribution. Roses, bamboos, and rhododendrons occupied the high ground, and below these came a massive rock arrangement adorned with colonies of Saxifraga pyramidalis, Ramondia pyrenaica, double lychnis, dwarf roses, campanulas, azaleas, and erigerons. In the cool and moist recesses at the base were pretty groups of Primula sikkimensis, Orchis latifolia, and Cypripedium spectabile, while in the little bridge-spanned stream floated flowers of the newer nymphæas. The island and the rockery margin were furnished with dwarf campanulas, sedums, Primula Littoniana, violas, dianthuses, etc. Very bold and striking was the second prize arrangement from Messrs. W. Artindale and Son, Sheffield, who used little alpine shrubs, Primula Cockburniana, Japanese maples, heucheras, alpine phloxes, and pink spiræas freely and well in their design. Mr. S. Pickering, 31, Rosslyn Street, Clifton, Yorks, a working joiner, was a most creditable third prize winner, and Mr. Gledhill, Cottam, Cottingham, Hull, came fourth.

ROSES.

Roses were an unusually fine display, the competition being excellent throughout, and the flowers very bright and good.

In the chief cut bloom class, for seventy-two flowers, there were six entrants, and the first prize fell to Messrs. Benjamin Cant and Sons, Colchester, who presented a beautiful set of blooms, among which we noted Bessie Brown, Frau Karl Druschki, Lyon Rose, J. B. Clark, Yvonne Vacherot, Killarney, Colcestra, Gustave Piganeau, Lady Helen Vincent, Captain Hayward, and Lady Ashtown; Messrs. R. Harkness and Co., Hitchin, came second, their Marechal Niel, Capt. Hayward, Hugh Dickson, Mrs. W. McKee, and S. M. Rodocanachi being especially fine; Messrs. D. Prior and Sons, Colchester, third.

For forty-eight blooms, in not fewer than two dozen varieties, Messrs. R. Harkness and Co. were winners of the first prize, and they exhibited large, full blooms of Frau Karl Druschki, White Lady, J. B. Clark, and Caroline Testout; Messrs. J. Burrell and Co., Cambridge, second; and Mr. G. Prince, Longworth, third. From eleven competitors Mr. H. Drew, Ledbury, came to the front for three dozen flowers, in not fewer than eighteen varieties, and he had Madame Jules Gravereux and Kaiserin Augusta Victoria in fine form; he was followed in order of mention by Messrs. R. Harkness and Co. and Messrs. W. and J. Brown, Peterborough.

Messrs. B. R. Cant and Sons, Colchester, led for two dozen roses, distinct, and here they scored with large light-coloured varieties, such as Mildred Grant, Joseph Hill, Bessie Brown, Yvonne Vacherot, etc.; Messrs. R. Harkness and Co., second; and Messrs. D. Prior and Sons, Colchester, third.

Ten competitors came forward in the class for eighteen blooms, distinct, and here Mr. Drew, Ledbury, secured first place with lovely flowers of Comtesse de Nadaillac, C. J. Grahame, Bessie Brown, etc.; Messrs. G. and W. Burch, Peterborough, second; and Mr. E. J. Hicks third.

Mr. Drew also scored for a dozen white or yellow roses, with Messrs. Perkins and Sons, Coventry, second, and Messrs. D. Prior and Sons third. Mr. T. Park, Bedale; Mr. W. Hutchinson, Kirby Moorside; and Mr. F. A. Grange, Worcester, were the chief prize-winners in the amateur classes.

Mr. J. E. Skaife, Clarence Street, York, led for a group of roses in pots, with a moderate display; Mr. W. Langstaffe, Garth Terrace, York, second, his weeping standard of Lady Gay being very pretty; Mr. W. Todd, Vyner Street, York, third. In a class for twenty pot roses grouped with foliage plants, the above-named competitors were placed in a similar order of merit, with Mr. H. Pybus, Wormald Green, Leeds, third.

HARDY FLOWERS.

A new and important class that has brought into effect the sort of thing we have all been talking about so long, i.e., the grouping of hardy flowers in a more natural method than that of the sharply pitched banks now so common, was a great feature of the gala, and in the near future we shall see many more of these groups arranged on a ground space where the flowers can be comfortably inspected. The space allowed was 200 sq. ft., and there were four competitors. Chief honours fell to Messrs. W. Artindale and Son, Sheffield, for a simple and bold display. The design represented the end of a double herbaceous border, with a few central steps from whence the whole could be surveyed. Across the end of the scene were acers, bamboos, and rambling roses; in the centre were lovely groups of Lilium Szovitzianum, Verbascum Caledonia, Spanish irises in distinct varieties, the rosy form of Lupinus polyphyllus, James Kelway pyrethrums, and gorgeous Oriental poppies. To the right and left of the steps were further beautiful groups of Spanish irises, Anchusa italica, Delicata pinks, Campanula persicifolia alba, Gilenia trifoliata, Heuchera brizoides gracilis, Gladiolus Ne Plus Ultra, and deliphiniums, with Viola cornuta purpurea and funkias in the foreground. Messrs. Harkness and Sons, Bedale, won second place, but their arrangement was a trifle flat, while the stands of pyrethrums, poppies, etc., rather spoiled the idea of a flower border that this class was obviously intended to bring out; Mr. G. Cottam, third.

FRUITS.

There were two competitors in the interesting class for a table of ripe dessert fruit, and here Mr. Jas. Gibson, gardener to the Duke of Portland, Welbeck Abbey, Worksop, secured the first prize with a total of 106 points. His table was pleasingly decorated with blush and pink carnations. The dishes of fruit were Buckland Sweetwater grapes, 5 and 5; Black Hamburgh grapes, 7 and 5; Early Rivers cherries, 6; Lady Sudeley apples, 5; Early Rivers and Lord Napier nectarines, 7 and 7; Bedford Champion strawberries, 5; Bellegarde and Hale's Early peaches, 6 and 7; Golden Gem and Duchess of Portland melons, 4½ and 4½; Brunswick and Brown Turkey figs, 5 and 4; and Kirk's plums, 5 points; beauty of flowers and foliage, 6; blending of colour, 6; and general effect, 6, the three latter items being 2 points each below the maximum. Mr. A. Seale, gardener to the Marquis of Northampton, Castle Ashby, Northampton, second, with white odontoglossums, yellow oncidiums, and Cattleya Mendeli as floral decorations, and a total of 97 points; his British Queen strawberries, Early Rivers nectarines, and Gross Mignonne peaches were good.

There were three competitors in the class for a collection of ten kinds of fruits, and here Mr. S. Barker, gardener to the Duke of Newcastle, Clumber, Worksop, came first with Black Hamburgh and Buckland Sweetwater grapes, Early Rivers nectarines, and Early Transparent Gage plums, as his best dishes; Mr. J. Brennand, gardener to J. E. Hathaway, Esq., Baldersly Park, Thirsk, second; and Mr. Hague, gardener to W. D. Cliff, Esq., Meanwood Towers, Leeds, third.

For six kinds ot fruits Mr. Gibson led with a good set of Foster's Seedling and Black Hamburgh grapes, Hale's Early peaches, Early River's nectarines, Brown Turkey figs, and Royal Sovereign melon; Mr. J. C. McPherson, gardener to Baron de Forest, Londesborough, second; and Mr. J. Brennand third.

The best set of four dishes of dessert fruit came from Welbeck, Mr. Gibson scoring with good clusters of Black Hamburgh grapes, Lord Napier nectarines, Hale's Early peaches, and Superlative melon; Mr. J. McPherson second, and Mr. A. Searle third.

Out of six entries Mr. James Gibson scored for a pair of bunches of Black Hamburgh grapes, his clusters carrying large, well-finished berries; Mr. H. S. Bray, gardener to Lady Hawke, Wighill, Yorks, second, with rather loose clusters; Mr. W. Nicholls, gardener to the Hon. Lady Beaumont, Carlton Towers, Selby, third.

There were five sets of white grapes, and here Mr. McPherson scored first with rather green, loose bunches of Muscat of Alexandria; Mr. Hague was placed second with tiny clusters of Buckland Sweetwater; and Mr. J. Gibson third with larger clusters of the latter variety. The judging in this class came in for some amount of criticism, and an opinion freely expressed was that the Muscats did not deserve the high position given them.

NON-COMPETITIVE.

The non-competitive exhibits contributed materially to the size and effect of the exhibition.

Mr. G. Yeld, Burton Lane, York, showed some of the latest results of his work among irises, hemerocallis, and liliums. His Neptune and Asia irises were superb, and Hemerocallis Corona bids fair to become as popular as his older H. Apricot. Messrs. Aldersey and Marsden Jones, the new sweet pea specialists, of Tilston, Malpas, exhibited a small collection of sweet peas, in which were good bunches of such new and interesting varieties as Tortoiseshell, Ruby, Moonstone, Helen Grosvenor, and Topaz. Robert Sydenham, Limited, Birmingham, displayed sweet peas in rustic stands and pretty bowls, several of these flower holders being of entirely new shape.

Pæonies in big blocks of colour from Messrs. G. Massey and Sons, Spalding, made a brave show, and as each block represented one variety, the exhibit was interesting: Solfaterre, Mons. C. Leveque, Duchess de Nemours, Caussie, and Lady Bramwell were all excellent varieties. Messrs. Gilbert and Son, Dyke, Bourne, Lincs., arranged sweet peas in small vases, grouping the colours in tasteful style.

Some beautiful cattleyas and lælio-cattleyas were shown by Messrs. Sander and Sons, St. Albans. L.-c. Canhamiana Marguerite, Cattleya Mossiæ Wagneri Mrs. F. Sander were among the best. Messrs. Sander also showed their double white Marguerite Mrs. F. Sander. Kelway's pæonies and delphiniums were remarkable for both size and colour. The great mass of blooms embraced varieties of both flowers that must be considered the best in cultivation, and were worthy of the Langport specialists.

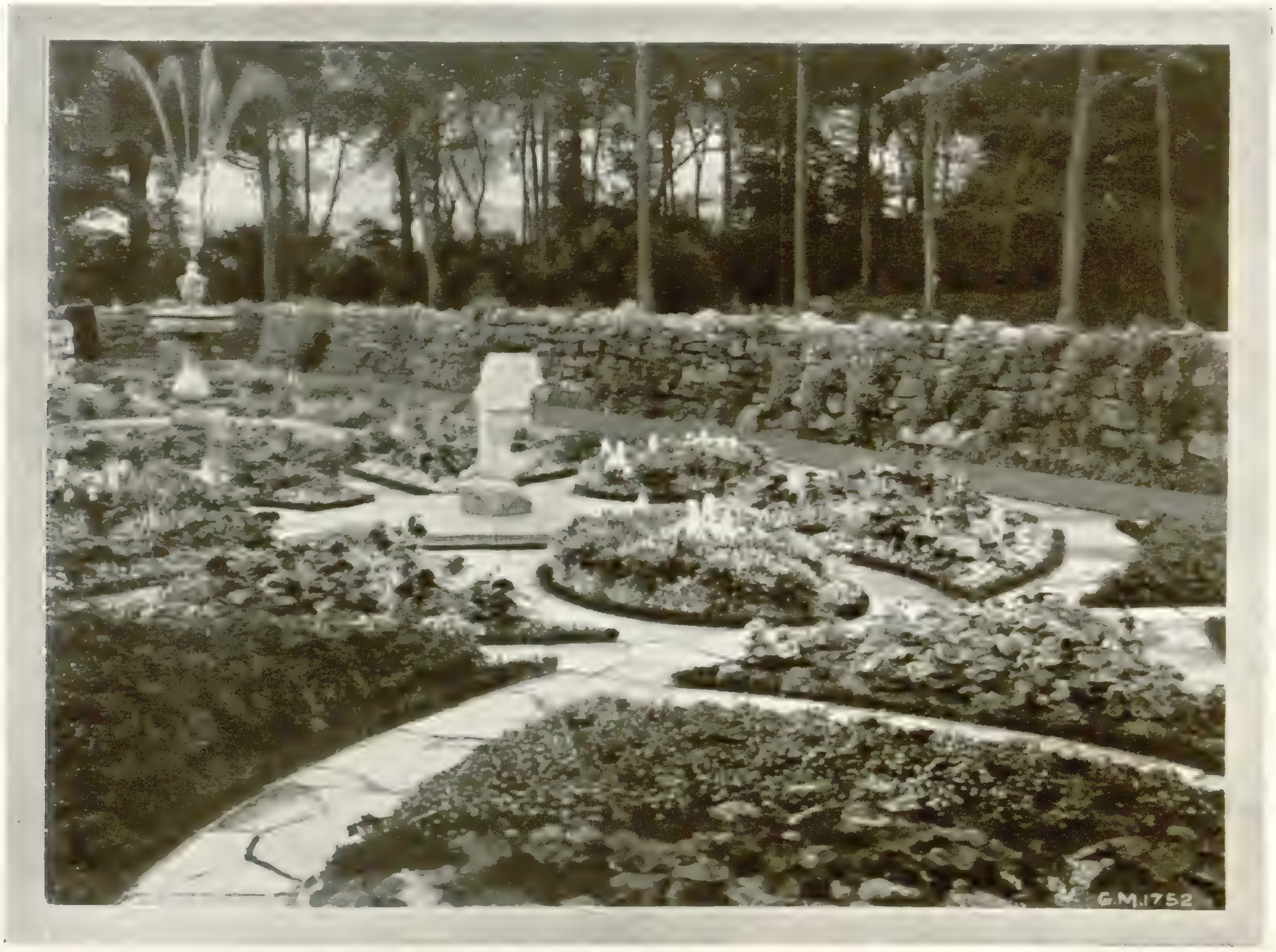
The stand of fruit, vegetables, and flowers put up by Messrs. Sutton and Sons, Reading, was of a particularly bright and interesting character. The dishes of tomatoes, the melons, and the carrots were almost as gay as the sweet peas, delphiniums, and other blooms used to set off the stand. Hardy flowers shown by Messrs. Dicksons, Chester, were representative of the best of the flowers of June. Pæonies, liliums, irises, and delphiniums were all well staged, as also were

(Continued on page 456.)

SOME GARDENS AROUND EDINBURGH—II.

Carberry Towers.

For a long period the gardens of Carberry Towers, the residence of Lord Elphinston, have been regarded by those who are well qualified to express an opinion on the subject as some of the best in the Edinburgh district. They have not been seen by so many of the English horticulturists who go North on the occasion of the great gatherings in the Scottish capital, but that is wholly due to their being less easy of access than some others that could be mentioned. Situate in the direction of Musselburgh, Lord Elphinston's delightful seat is not any great distance from Edinburgh, and is well within an easy drive; but those who have to depend upon the railway as a means of locomotion find the service of trains rather inconvenient. To those who have plenty of time on their hands the service is satisfactory enough, but when the horticulturist wishes to see all he can in the time at his disposal, and endeavours to compress two days' work into one, he has of necessity to limit his visits, however much he may regret having to do so, to those gardens which are within a comparatively short distance of a railway station and have the advantage of a frequent train service. The drive to Carberry Towers is exceedingly pleasant, for the distance is not too great, and the road passes through some of the most beautiful scenery on the south-east side of Edinburgh.



AN OLD DUTCH GARDEN AT CARBERRY TOWERS.

One of the great features of the gardens of Carberry Towers has for many years past been fruit culture under glass, for grapes of various kinds have been grown to a high degree of perfection, and have obtained many high awards at Edinburgh and other of the leading exhibitions. Grape growing is still carried on with much success, and one might linger long in the several vineries and discuss with Mr. Kidd, the able gardener, the principal points in the management of vineries, and the relative merits of varieties of grapes for various purposes. What is true of grapes is true also of various other fruits that are usually grown under glass. They have been, and still are, grown with quite exceptional success, and the several structures devoted to peaches, nectarines, etc., afford object-lessons of immense value on the various points to which the cultivator must give the closest of attention if he would obtain the best possible results from the area of glass of which he has command.

The cultivation of the various classes of plants requiring the shelter of glass and the assistance of artificial heat that are of value for decorative purposes or the supply of cut flowers receives, as in other establishments of the highest class, a full share of attention; but, as brevity is necessary, it is not possible to speak of them in detail. At Carberry Towers the cultivation of hardy flowers has, within recent years, been so greatly developed that the borders devoted to them form a glorious feature from the opening days of spring until the autumn. Lord Elphinston has a strong predilection for hardy plants, and, in consequence thereof, their cultivation has been greatly extended. It would be a pleasant task to write of the borders in detail, and discuss the relative merits of the many kinds of plants that have a place in them, but for the present purpose it must suffice to refer to both borders and plants in a general way. An illustration of one of the principal borders several hundred feet in length is given herewith, and this will give a far better idea of its general features than would a written description. The border occupies a rather open position, and in the provision of a background to the occupants rambling roses have been utilised with much success. Stout poles, standing eight or nine feet out of the ground were fixed in a line at the back of the border. The poles were connected with chains, rambling roses planted, and these have clothed both pillars and chains with a healthy growth and produce an abundance of flowers. Need it be said that in the formation of this beautiful screen the best of the varieties belonging to the section were used. These pillars are not only useful for the support of the roses, but they show with much clearness the splendid development of the various herbaceous plants. It can be readily seen that the latter attain to a height that is exceptional, and with regard to their development it may be added that the growth is stout and short-jointed, and that the flowers, of which there is a profusion, are characterised by high quality.

Water gardening, in which the noble owner of Carberry Towers is greatly interested, has been materially developed of late years. The fine expanse of water herewith illustrated forms a distinct and immensely attractive feature; the margin is well furnished with vegetation that thrives in association with moisture; and the finer of the nymphaeas are being planted in the lake. A goodly number of the latter are already well established, but in the case of a lake of such large dimensions as this a considerable period elapses before they cover sufficient areas of water to produce an impression in a photographic reproduction.

Another new feature is that formed by the old Dutch garden which has been created within the past three or four years. The design is well shown, and no description is necessary. The garden has been formed in a somewhat retired part of the grounds, and is enclosed with low, dry walls, in which various rock plants are making vigorous growth, and clothing its surface with foliage and flowers, and contributing not a little to the general effect. A feature that is not new, but is of much interest, is the remarkably fine avenue of Wellingtonia gigantea in the park. The avenue is of great length, and the trees have occupied their present position long enough for them to attain full development, but not so long as to have an opportunity of giving evidence of age by losing their lower, or, indeed, any other branches. When, as here, the trees grow to a considerable age without showing signs of a diminution of vigour, the wellingtonia is of much value for avenue planting; but when, as in so many cases, it begins to lose its branches at an early age, it is very disappointing.

A FINELY FURNISHED HERBACEOUS BORDER IN CARBERRY TOWERS GARDENS.

Preston Hall.

The gardens of Preston Hall, the charming residence of Mrs. Callender, occupy a prominent position among the great horticultural establishments that cluster around Dalkeith, and are therefore within a comparatively short distance of Edinburgh. It is a fresh, invigorating walk or drive from Dalkeith Station to Preston Hall; the roads are of the best, and intersect some of the finest agricultural land in Scotland, as indicated by the fine crops of cereals and roots that may be seen on all sides in the respective seasons, as for example, at the beginning of August, when the writer was last there. On approaching Preston Hall the country becomes finely wooded, and the policies on the estate and those of the immediately adjoining estate of Oxenford Castle, add materially to the attractiveness of the scenery, and are of much interest to those who are in any way concerned with arboricultural matters.

The mansion occupies a position whence fine views are obtained over a broad stretch of country, wherein are wide expanses of woodlands remarkable for their high keeping, rolling meadows, and arable land, that, by the splendid condition of their crops, reflect the more advanced methods of farming. The principal flower garden is situate a short distance from the mansion, and the annual displays that are produced therein would of themselves fully justify the fame which the Preston Hall gardens have so long enjoyed for the success achieved in the cultivation of ornamental plants. The fame of the gardens does not, moreover, rest upon the work that has been accomplished within the flower garden proper; the spacious kitchen garden contiguous thereto is largely devoted to hardy flowering plants, and the glorious effects that are obtained from spacious borders devoted to herbaceous plants must be a revelation to many, including not a few of those who are acquainted with what is being done in various parts of the country. Mrs. Callender possesses a wide knowledge of hardy plants, and the important position they occupy in her beautiful and interesting gardens is largely due to the generous encouragement given those in charge to do their best, and, it may be mentioned, to the value of the advice they receive.

The flower garden is enclosed in some part by the high walls of the kitchen garden, which are so masked by climbing roses and other plants as to present a highly attractive appearance from the opening days of spring until the autumn is well advanced. The predominant features are large beds of dwarf and tall summer bedders, bold groups of hardy plants, beds of roses comprising dwarf and tall specimens, pillars of roses and coniferous trees. The garden is altogether free from formality, and the sense of retirement one experiences in walking through it adds immensely to the enjoyment of the many delightful features awaiting attention. Very attractive were the big beds of Calceolaria amplexicaulis, the plants rising to a height of six feet, and producing in great profusion their soft yellow flowers. In association with this old, but fine form was the dwarf-growing Calceolaria mexicana, which has [illegible] yellow flowers. Very conspicuous also were the group of the Sunderland Hall variety of Fuchsia Riccartoni, and the attractive bed of Preston Hall pentstemon, attaining a height of about two feet, and bearing large crimson flowers. Some [illegible] of tuberous begonias were bright [illegible] colour and immensely attractive, and [illegible] of interest as showing how well tuberous begonias thrive in the district. The beds devoted to hardy herbaceous plants were especially noteworthy, for in one of them were delphiniums upwards of twelve feet in height, and Spiræa gigantea in great masses; the magnificent spikes of blue flowers of the one, and the breadths of the foamy inflorescence of the other were equally attractive. Dahlia Pink Pearl had a bed to itself, and the freedom with which it flowers, and the pleasing colour of the blooms fully justified its use in flower garden decoration.

The roses constitute a glorious feature of this garden, for they have been judiciously selected, freely planted, and successfully cultivated. The rich pink and highly popular Dorothy Perkins is strongly represented in standard and pillar form, and contributes materially to the general effect. Very attractive also were the beds of Laurette Messimy rose, carpeted with Wm. Neil viola, an excellent variety bearing pale blue flowers. At one end of the garden is a group of four beds, all of which are circular in form, and of large size. In each bed are three poles, connected at top with horizontal poles, and flinging their graceful flower-laden shoots over them are such useful and popular climbing roses as the cream-coloured Allister Stella Gray, the brilliantly-coloured Crimson Rambler, the pure white Madame A. Carriere, and the bright red Carmine Pillar. On the wall, to which reference has already been made, the delicate pink Blush Rambler and Allister Stella Gray were yielding freely of their floral wealth, and trained to chains supported by pillars several of the Ayrshires were demonstrating their usefulness as aids in beautifying the flower garden.

A BEAUTIFUL WATER SCENE IN THE GARDENS OF CARBERRY TOWERS.

One of the great features of the Preston Hall gardens is that formed by the magnificent borders of hardy flowers that flank the broad grass walk by which the kitchen garden is intersected. In these are represented at their best all the finer kinds that can be successfully grown so far north, and an enumeration of any considerable proportion of them would form a somewhat lengthy list. Here, as in the flower garden, the delphiniums attain to noble proportions, and the spikes of flowers in various shades of blue rising to a height of ten or twelve feet produce a surprisingly beautiful effect. There are other borders of hardy flowers in the kitchen garden, and these are not less remarkable for the splendid development of the many fine things that have found a home in them. Of special interest also is the pergola, which is of immense length, and of a height and width that renders it possible to enjoy the delightful display of flowers, the grateful shade, and the soft turf, without risk of injury to headgear from the spiny growths. The ramblers already mentioned are prominent, but they by no means occupy the larger portion of the area available for training, as all the finest of those introduced until within a very recent period are included in the selection.

Some distance from the gardens to which reference has been made Mrs. Callender has had formed within recent years another one, in which bulbs and other classes of plants are grown under what may be described as natural conditions. Known as the bulb garden, it has an area of several acres, and, with a gentle slope to the west, it has a fine view, in which some of the Oxenford policies are prominent; crocuses, daffodils, scillas, tulips, English and Spanish irises, and others of the more attractive bulbous subjects, have been planted in large numbers, and under the conditions that obtain grow freely and produce beautiful displays of colour in their several seasons. There are also bold groups of rhododendrons and Ghent and Mollis azaleas, and arranged in various parts of the garden are lilacs, spiræas, laburnums, thorns, and other flowering trees and shrubs of great beauty. Floating on the surface of the brook that forms the western boundary of the garden are numerous water lilies, comprising many of the newer hybrids, and on the margin of the stream are bold groups of some of the finest of the moisture-loving plants.

The kitchen and fruit gardens, and the plant and fruit houses, are on a scale proportionate to the needs of a first-class establishment, and the several departments afford ample evidence of the ability with which they are managed by Mr. W. Staward, the head gardener.

Oxenford Castle.

This fine seat of the Earl of Stair occupies a delightful position on an estate a few miles south of Dalkeith, and affords abundant interest to those who appreciate good gardening, especially when carried out on a large scale, and can enjoy beautiful scenery. The stately mansion occupies a commanding position in the spacious park, and the great masses of woodland, fine old trees, and rolling greensward that constitute its environment, form a living picture of surpassing beauty.

The flower garden contiguous to the mansion is of comparatively small dimensions, but it is well kept and judiciously planted, and the bright displays of flowers that are produced in the respective seasons contribute materially to the attractions of the surroundings. The garden is enclosed with a neatly-clipped low hedge, and as one admires the flowers, the fine expanses of turf, and noble trees, one forms a high opinion of the judgment which limited the number of flower beds and kept them within the enclosure immediately contiguous to the mansion, instead of spreading them over the lawns, where, amid such charming surroundings as those of which Oxenford Castle can boast, they would distract attention, and it maybe, prove irritating, by breaking up areas of turf where an unbroken surface has so great a charm. As in the case of so many mansions standing in a great park, Oxenford Castle is approached from various points of the compass; but while not in a position to determine the relative merits of the several approaches, it appeared difficult to imagine a more delightful approach than that by way of the Terrace Walk, which extends from the grounds around the castle to Cranston Parish Church, which is in view throughout the whole length of the walk, and produces a picturesque effect. Between the two points there is an avenue of wellingtonias and purple beeches, and the planting of the latter is due to the fact that within recent years it has been found necessary to remove some of the wellingtonias, and the noble owner, anxious to avoid a break in the avenue, has had purple beeches planted between them. The rich colouring of the leafage of the beeches produces, in contrast with the green of the wellingtonias, a very pleasing effect, but it appears possible that as years pass on, and the beeches predominate, the avenue will present a rather sombre appearance. This is not likely to happen for many years hence, for, as so admirably shown in the accompanying illustration, the trees are not only finely developed, but are in a robust state of health.

SPLENDIDLY DEVELOPED HERBACEOUS BORDER IN KITCHEN GARDEN, PRESTON HALL.

The gardens and grounds of Oxenford Castle have many features of interest, but the one of outstanding importance is unquestionably that devoted to the production of fruits and vegetables. The fruit and kitchen gardens are extensive, and enclosed within high walls that are finely clothed with trees of such fruits as thrive in the district. On the north side of the kitchen garden there is a range of peach houses and vineries in which the peach and nectarine trees, and the grape vines, in their respective structures, suggest cultural skill of a high order. There are seven houses in the range, and all are of the same size and dimensions, being forty-five feet in length, twenty-five feet in height, and twenty-two feet in width, and are characterised by elegance and strength. In the vineries Black Hamburgh, Madresfield Court, Muscat of Alexandria, and Lady Downes grapes were all remarkable for their robust health, and the excellence of the several crops; and in the peach houses there were especially fine crops of Stirling Castle and Royal George peaches, and Lord Napier and Pine Apple nectarines. At the back of one of the peach houses is a large tree of Negro Largo fig, which fills the whole of the wall space and bears heavy crops of fruit.

The central house in the range is devoted to plants of various kinds, which prove to demonstration that Mr. R. Ness, the able head gardener, is not less successful with plants than fruits. Where all was good there is no occasion to specialise, but it should be mentioned that the baskets of carnations were especially attractive, and that the hundred or more specimen clivias leave no doubt in the mind as to the rich display of colour they produce when in bloom. In a second set of houses there is one of large size, and the roof of this is wholly covered with lapagerias, from which thousands of flowers are obtained in the course of the season. The lapagerias are planted in the front, and include the pure white, which grows as freely and blooms as profusely as the red-flowered forms. In the same set of houses is a plant stove, in which palms and other decorative plants luxuriate. The conservatory is of large size, and is used as a show house during the winter. Noteworthy in this structure for its splendid development is the large specimen of the elegant Acacia Riceana, which annually bears a profusion of flowers, and is highly attractive when in bloom. Azaleas, it should be added, form a great feature, and one can readily imagine how beautiful is the effect produced by their varied and richly-coloured flowers.

Annuals and other ornamental plants have a liberal amount of space assigned them in the kitchen garden, and they add much to the interest of the department. It was interesting to observe that British ferns are well represented, both as regards number and development, and, judging from the appearance of the several kinds, the climatic conditions that obtain are highly favourable to this interesting and beautiful class of plants. In another part of the garden we made note of a rockery on which various alpines were making good growth, and many flowering freely.

A portion of the spacious kitchen garden has, on the east side, been grassed down, and a number of beds provided for summer and other flowers, and contiguous thereto is an extensive rose garden, in which dwarf and standard roses and the various ramblers grow vigorously and produce flowers of high quality. In a second kitchen garden, which is known as the orchard, there are tomato and melon houses, and a fig house, devoted to the handsome and richly-flavoured Brown Turkey variety.

In these gardens the apricot trees are a fine feature, they are large in size, and remarkable for fruit production. There are great avenues of apple trees, many fine coniferous trees, and, indeed, the objects that should be mentioned are so numerous that to refer to them would necessitate at least double the amount of space available. It is, therefore, not possible to do more than take leave of Mr. Ness feeling that the visit to Oxenford Castle had, as in the case of the other gardens, been both pleasant and profitable.

GEORGE GORDON.

SUMMER PRUNING.

This is an important operation in gardens where the production of a quantity of high-class fruit is essential. Where the best results are required a judicious shortening and regulating of the growths of trees is very necessary. The advantages of summer pruning are numerous; in the first place, by admitting more sunlight and air to the trees it assists the wood to ripen, and helps in the formation of fruit buds. It induces the fruits to swell, and by exposing them to the influence of the sun better colour and flavour are secured.

The apricot is one of the first trees to need attention, and where these were carefully disbudded the matter of summer pruning is considerably lessened. All main shoots that are required for extension purposes are laid in full length, and this is a means of encouraging a free circulation of sap throughout the tree. It is also desirable to lay in young shoots wherever possible without overcrowding, as on this young wood the best fruit is invariably produced, hence the necessity for keeping a regular amount trained in all over the tree. Lateral shoots growing from spurs should be shortened back to within four leaves of their base. It is not advisable to cut them closer, or the basal buds will break into growth, and so ruin next season's fruit prospects.

The next trees to receive attention are sweet cherries, and these are pruned on much the same principle. Plums will next require treatment, and with these the laying in of young growths is very important, and it is the neglect of this that is the cause of so many bare and badly furnished trees one sees about the country. Peach and nectarine trees require frequent attention during the summer, but in the case of these all surplus shoots will have been removed at the time of disbudding, and the remaining ones must be trained in, taking care to avoid overcrowding. Lateral growths that form on this season's wood are pinched out altogether.

Pear trees growing on walls can be pruned after the middle of July, which is quite soon enough. Bush and pyramid trees of apples and pears must not be dealt with until August, except in the case of early varieties, which may be advantageously pruned during the last week in July. In dealing with these the main growths are left full length, and the lateral shoots shortened to within four leaves.

J. Gardner.

VIEW IN FLOWER GARDEN AT PRESTON HALL.

PITTOSPORUM TOBIRA.

The pittosporums are classed with greenhouse plants, but in the southern counties, and even in Wales, the species abovenamed will thrive in the open borders, and especially in borders near walls, such as garden walls and those of the dwelling-house. The flowers are pure white, and, on large, strong plants the trusses measure about six inches across. They are very fragrant. The leaves are somewhat similar to those of a rhododendron, but are very glossy, having the appearance of smooth-surfaced leaves that have been sponged with soapy water.

Shoots of young wood, taken off with a tiny heel of older wood attached, root freely enough in a compost of fibrous loam, peat, and sand, if placed under a handlight, or in a cool frame, in the spring or early part of summer. As pot plants for the embellishment of the cool greenhouse or unheated conservatory, porch, or glass-covered verandah, these are ideal, especially where very fragrant flowers are appreciated.

B.

CULINARY PEAS.

It is a difficult matter for cultivators to grow satisfactory crops of peas in some soils during the hottest part of the summer. It is a question whether an unlimited water supply is a real boon to growers. Of course, it is in one way, but if they are tempted to use it too freely disaster may follow. I know of many instances where mildew has quickly ruined the plants which have been freely watered during hot spells of weather. I will give one instance only. The garden is situate on the bank of the Thames. A trench was made, and several times each week the water was allowed to flow into the pea trenches. Result, entire loss of plants through mildew.

Other plants growing near, but not subjected to the weekly soakings, succeeded well, and bore good crops; these rows of plants were well mulched and watered occasionally.

I have myself experienced much loss through overwatering peas in hot summers. I grew them in trenches for the greater convenience of watering. I treated some rows extra well, as I thought, but they were not nearly so satisfactory as others which had less attention as regards watering. Then I commenced to surface mulch my peas systematically, immediately after a heavy rainfall, even when this came early in the growth of the plants. In the absence of rain the ground was well soaked with water, and the mulch put on at once. Half-rotted manure was used chiefly, but the grass from the lawn was also placed on, and I found that the soil remained moist under it for a longer time than under the manure. I also began to manure the whole of the ground where peas were grown, and I found the result in every way satisfactory.

G. Garner.

SCHOOL TEACHERS' EXAMINATION IN GARDENING.

I have before me the list of questions set in the recent school teachers' examination in cottage and allotment gardening, which is undertaken, so says the prospectus of the Royal Horticultural Society, in view of the increased demand in country districts that the school teachers shall be competent to teach the elements of cottage and allotment gardening, and of the absence of any test whatever of such capacity. If the part of the schoolmaster was to teach the elements of cottage and allotment gardening, say, to adult pupils, then one would not take exception to the nature of the questions set in the examination, but, as they stand, they convey the impression that they were drawn up by someone who knew little or nothing of the way gardening is taught in the elementary school.

PICTURESQUE GARDENERS' COTTAGE, OXENFORD CASTLE.

It is very important, of course, that the schoolmaster who teaches gardening should have a practical knowledge of horticulture as applied to a school garden, but it is even more important that he should know how to teach the subject, be able to interest his boys in it, make them inquisitive, self-reliant, and observant, and possess the capacity for correlating the work of the garden with that of the school, so that the two work in harmony together to the educational benefit of the child. I see nothing in the questions set in the R.H.S. examination which have any direct bearing on the methods of teaching gardening, but, on the other hand, there are many intelligent allotment holders who would probably be able to answer all the questions, but who would be absolutely at sea if they were asked how they would arrange a school garden and teach a class of boys, say, for a year, on the best educational lines. If the R.H.S. examination is to be of any real value it must not only be a test of practical knowledge, but also of capacity for teaching school gardening, and making the most of its varied possibilities.

Some of the questions have very little to do with school gardening. Here is one: "What are the best times for pruning Jasminum nudiflorum and Jasminum officinale so as to ensure a profusion of flower, each in its season? Explain the best methods of pruning in each case." This sounds very like a trap question for an unwary teacher to fall into, and I wonder how many school gardens there are in the country in which the above jasmines grow at all.

Here is another question: "Why are plums so often non-productive in a cottager's garden?" It would probably be news to nineteen out of twenty teachers that such is the case, and is there any conclusive evidence of it? because there are dozens, probably hundreds, of cottage gardens in which plums are as productive as they are anywhere else.

The only question out of the fourteen in which the word "school garden" appears at all is No. 10, which runs as follows: "Given an average school garden plot of, say, one-eighth of an acre, suggest how it may best be worked for the instruction of the pupils in both fruit and flower cultivation over a period of three years at least." Mind you, there is no reference to vegetables, and I wonder in how many schools there are, or likely to be, twenty perches of ground set apart for the culture of fruit and flowers. Even if such were the case, why say anything about three years, because one would have to wait pretty well that time before much was made out of the fruit?

These are a few of the questions taken at random, but I do not see a single one asking the teacher how he would make use of his school garden, and employ the material in it for teaching purposes in drawing, composition, arithmetic, Nature study, mensuration, etc. There is no question asking how a teacher would arrange his school garden, crop it to the best advantage, and make it a place of educational interest, not only for the actual boys forming the class, but the whole school.

I may say, however, that there are teachers who actually do all this, who not only arrange and crop the school garden admirably, but use it in a dozen ways, and you see evidence of the garden all over the school. A large number of teachers now sit for the R.H.S. examination, and what is wanted is that passing at the examination should make them better teachers of gardening. This being so, something more is wanted in the examination than a few elementary questions on cottage and allotment gardening.

G. H. Hollingworth.

Nephrolepis exaltata. — Introduced into this country over a century ago, Nephrolepis exaltata, although a fairly popular fern showed no marked divergence from the normal form till within the last decade or thereabouts, when a form originated in America with divided pinnæ. Once started the change has been extraordinary, and we have now a great number of varieties, some of them so far removed from the type that it is difficult to look upon them as but seminal variations thereof. The latest development is N. exaltata Marshalli compacta, given an Award of Merit on April 11. This represents a dense mass of bright green moss rather than a fern of any kind. As there is in these varieties a certain amount of individual variation, the long list of names is now somewhat puzzling.—W. T.

AVAILABLE PLANT FOOD.

(Continued from page 362.)

All plants are very dependent structures; they must be supplied with water and certain soluble salts—potash, soda, lime, magnesia, etc.—which are derived from the soil, together with oxygen and carbonic acid obtained from the air, in addition to sunlight and a certain amount of heat. When all these conditions are fulfilled, somewhat as the plant's ancestors have been accustomed to them, the plant must grow, increase in size and texture, and become productive, provided no diseases or accidents overtake it.

These facts make it plain that a growing plant is influenced by all of the external conditions about it; for example, its environment and the availability of certain chemical substances which act as plant food.

To study how a plant lives therefore, one must consider the factors of growth, both the actual growth processes which go on within the structure of the plant, and the conditions to which such growth is sensitive.

Factors of Plant Growth.

One of the first things that call for attention in the question of how a plant lives is that of water. The rigidity or stiffness of any plant or succulent part of such plant is largely dependent upon its water content. If a succulent branch or leaf is severed from the parent, it soon loses its water by evaporation and the severed portion becomes flaccid or wilted. The proper extension or turgidity of the cells of plants with water is absolutely necessary for active plant growth, and points to the fact of the immense importance of the subject of artificial watering. The passage of soil water into the plant and afterwards of its transfer from cell to cell is accomplished by what is known as the principle of osmosis, which is the diffusion of liquids through the plant membranes and tissues.

Surrounding each rootlet for some distance behind the tip is a fringe-like growth of delicate root hairs. These hairs are single tubular cells, each one containing within its walls (as do all active cells), living matter called protoplasm, along with cell sap.

In a well-cultivated soil these delicate root hairs pass readily among the soil particles and cover an immense area. Owing to the dense cell sap of the root hairs and other surface cells, the water is taken into these cells by osmosis action, and along with the water are minute quantities of food substances in solution.

The absorptive activity of the root hairs is so great that water may be extracted from a soil which is apparently dry.

Plants contain much water, and it requires a considerable amount of artificial heat to drive out all the moisture from plant substance. The total water in some garden plants, as determined by the chemist, may be stated as follows: In one ton weight of cabbage heads there is 2,016 lbs. of water; in one ton of potato tubers there are 1,725 lbs. of water, and in one ton of potato haulm 321 lbs. of water. In a ton weight of carrots will be found 1,904 lbs. of water, and in a ton of onion bulbs 1,926 lbs. of water. One ton of celery will contain 1,884 lbs. of water, one ton of lettuce 2,106 lbs., and one ton of asparagus 2,090 lbs.

These facts show how largely kitchen vegetables are composed of water, and very clearly point to the fact that if the gardener is to ensure vigorous and uninterrupted plant growth he must have a sufficiency of moisture in the soil in immediate proximity to the mass of root fibrils and root hairs which branch out from the root stock.

Effect of Farmyard Manure.

It is probable, therefore, that independently of the liberal supply of all necessary plant-food constituents in well-made farmyard or stable manure, its beneficial effects are in a considerable degree due to its influence on the mechanical condition of the soil, rendering it more porous, hence more moisture sustaining, and therefore more easily permeable to surface roots, upon the proper development of which the success of so many horticultural productions depends.

The absorptive activity of all plant roots gives rise to a pressure within the plant tissues which tends to force the sap currents upwards. In fact, root pressure, together with other natural forces, especially that of transpiration, causes the crude sap to ascend through the woody cell bundles of the plant, and by means of these cellular bundles soil water is absorbed by the roots, which soil water contains minute quantities of available mineral salts necessary for plant growth. This solution is carried upward through all parts of root and stem, through the leaves and stalks, and finally through the blossoms, fruit, and seed.

J. J. Willis.

(To be continued.)

AVENUE OF WELLINGTONIAS AT OXENFORD CASTLE.

R.A.S. "Journal," 1910.—The issue of the "Journal" of the Royal Agricultural Society for the past year is now before us, and while necessarily of chief interest to agriculturists, it contains much that is deserving the attention of horticulturists. Especially noteworthy in this respect is Dr. E. J. Russell's contribution on "The Production of Plant Food in the Soil," which should be of considerable assistance to cultivators in the solution of problems associated with the soil. The reports of Dr. J. A. Voelcker, Professor R. H. Biffen, and Mr. Cecil Warburton, the consulting chemist, botanist, and zoologist respectively, are of interest to horticulturists from the fact that they refer to matters which concern gardeners as well as farmers.

ACER PLATANOIDES VAR. SCHWEDLERI.

There are numerous ornamental varieties of the Norway maple which might with advantage be included amongst select collections of trees more frequently than they are at present. Of the number, the variety under notice is certainly one of the best. Its most picturesque time is spring, just as the young leaves are developing, for both the leaves and shoots are of a pretty reddish-purple hue, which contrasts finely with the various shades of green seen on surrounding trees and with its own yellow blossoms which appear at the same time. Its period of beauty lasts longer than is the case with the young foliage of some trees, for the dark purplish-green peculiar to the variety at a later date is not assumed until after the leaves have reached their full size. It is a quick-growing variety, and apparently as vigorous as the type, hence its suitability for avenue planting in addition to its value as an ornamental tree. It is also worth planting as a group in a conspicuous position, for when at its best its rich colour is conspicuous from a considerable distance. As is the case with other maples, it is not fastidious regarding soil, though it thrives best in a fairly good deep loam.

D. W.

The Flame Flower (Tropæolum speciosum) is frequently spoken of as the "Glory of the Scotch Highlands," from the fact that it luxuriates in the cool, moist climate of the northern parts of Scotland, and where it appears in loveliest contrast against the white-washed walls of many a humble cottage. It is a coveted plant in southern gardens, but often proves troublesome to establish, the difficulty being not entirely one of soil alone, as position is also an important factor, the latter should be selected where some light shade will be cast over the ground, such as the north side of a holly hedge, which invariably gives good results, as the vine finds its way through to the sunny side, there to develop its flowers. It succeeds in ordinary garden soil that is trenched and manured previous to planting; the rhizomes should be placed horizontal in the soil, and at a depth of nine inches, making the ground perfectly firm after planting. —Thomas Smith.

NEW PLANTS, ETC.

ONCIDIODA CYBELE.

A most interesting orchid, obtained by crossing Cochlioda Noetzliana with Oncidium sarcodes. The plant and spike show the influence of the oncidium parent in a marked degree, the latter being branched in true oncidium fashion. The flowers, too, approach those of the oncidium parent in size and form, and they are of a curious shade of light brown, suffused with scarlet, and freely marked with yellow on the lip. A.M., R.H.S., June 6. Messrs. Charlesworth and Co., Haywards Heath. (See figure on p. 439 of our issue of June 10.)

CATTLEYA MOSSIÆ AUREOLA.

A very beautiful variety with large blooms. The sepals and petals are rosy-blush, and the big wavy lip is light rose-purple with a soft yellow area over the centre and throat. A.M., R.H.S., June 6. Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking.

GREVILLEA ROBUSTA COMPACTA.

This is a very distinct variety of a most useful and popular foliage plant, and one that differs from the type in having its leaves placed more closely together, and of a richer shade of green. If it can be propagated readily the variety ought to prove a good market plant. We understand but one plant of this character was found in a large batch of seedlings. A.M., R.H.S., June 6. Mr. R. B. Leech, Woodhall Gardens, Dulwich.

CRINUM JOHNSTONI.

A very fine crinum from Tropical Africa, and one that succeeds out of doors at Burford Lodge, planted close to the foot of a south wall. The spike exhibited carried about two dozen flowers and buds, all white, with a tinge of rosy-blush down the centre of each segment. A.M., R.H.S., June 6. Sir Trevor Lawrence, Bart. (gardener, Mr. W. Bain), Burford Lodge, Dorking.

IRIS VARIEGATA MISS EARDLEY.

The variegata group of the extensive family of germanica irises contains many gorgeous varieties, and one of the most brilliant is this newcomer. It has bright yellow standards, and rich red-purple falls, the latter veined and studded at the base with yellow and white, and set off with a showy orange-yellow crest or beard. A.M., R.H.S., June 6. Mr. Amos Perry, Enfield.

HEUCHERA SANGUINEA NANCY PERRY.

A beautiful and graceful variety with pink red-tipped flowers, borne freely on spikes about eighteen inches high. A.M., R.H.S., June 6. Mr. Amos Perry, Enfield.

PRIMULA PULVERULENTA HIDCOTE STRAIN.

A distinct and effective strain of the mealy stemmed primula that is closely allied to P. japonica. It has white stems, soft rosy flowers with a brighter ring around the yellow eye. A.M., R.H.S., June 6. Mr. Lawrence Johnston, Hidcote, Campden, Gloucester.

GREVILLEA ROBUSTA COMPACTA.
A graceful plant, with elegant green leaves. A.M., R.H.S., June 6. Mr. R. B. Leech, Woodhall Gardens, Dulwich.

NOTES FROM SCOTLAND.

Severe Drought.

Not for many years has such a severe drought as now prevails in many parts of Scotland been experienced, and at the present date, June 8, there is not the slightest indication of a change, while the brilliant sunshine daily throughout the whole period and an accompanying breeze of wind day after day as its meridian is reached, makes it very trying for vegetation. A month ago, with a fair amount of warmth and abundant moisture, everything was very promising, but already the hopes then engendered are largely dispelled, and unless rain comes very soon, some crops, as strawberries, potatoes, peas, and a few others that are shallow rooting will be injured beyond remedy. In regard to newly-sown seeds the matter is still worse, and farm crops of turnips and mangolds make no progress, consequently the turnip fly works havoc, thus making resowing imperative.

Fruit trees and bushes that a short time ago were free from insects and healthy in appearance are now quite the reverse, and where spraying or other forms of washing are unavailable the foliage is infested with insects, and nothing short of a heavy rainstorm can effect a riddance.

Fortunately, this adverse state of matters is not general, as in some districts thunderstorms have provided all the moisture needed, and where these have not been too severe to cause any great amount of damage to the foliage, or by washing the soil from the roots of plants, the present warmth both by day and night, provides cultivators with a pleasure seldom experienced in the north country.

The Early Potato Crop.

This having advanced almost unchecked by frost is considered about ten days earlier than usual, and were it not for the drought which on the light, sandy soils of the seaboard of Ayrshire and Wigtownshire has been severely felt, the crop would have been a bountiful one. As it is, the first consignment of tubers in quantity to the Glasgow market was made from the Girvan district on June 6, which is nearly a fortnight earlier than last year; it is seldom that the auction sales take place until the third week of the month, and lifting the crop immediately follows, though, as in the case mentioned, extra favourable situations may accelerate this by a few days.

The well-known Epicure appears to be still the earliest, and grown upon a soil that suits it, the quality is tolerable, but if the reverse of this, or the season should prove very moist, the less said about its good points the better. Such, however, is the constant longing for the first fruits of the season, in commercial as well as private life, that the gratification of the desire rather than the palate would appear to be most in evidence, and tasteless and immature though potato tubers may be at this early season, the market returns to the fortunate possessor of an extra early crop is a great consideration.

James Day.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

EARLY-SOWN CYPRIPEDIUMS of the winter-flowering section will, in many instances, have advanced sufficiently far to be producing their roots. Providing the seed bed is in a good state it is not always necessary to remove them, but I consider the sooner seedling cypripediums of this class can be given a separate existence the better progress they make. Where potted separately they are treated individually, which is impossible where the plant has to be cared for around which the seed bed has been made, and the seedlings are liable to suffer from excess of moisture. Where seedlings are pricked off at the present season they make considerable growth during the next two months, and they become so far established that they are enabled to withstand the trying months, and make considerable headway during the early spring.

THE COMPOST suitable for any of the plain-leaved cypripedium seedlings consists of about equal parts of fibrous loam, peat, and sphagnum moss, with sufficient rough sand or finely-broken crocks to render the compost free and porous. The compost should be pressed moderately firm. For any of the tessellated-leaved section we dispense with loam, and use only peat and sphagnum. chopped fine, in equal proportions. The size of pot used should be governed by the strength of the seedling plants. The pots should be clean, and filled to about one-half their depth with clean broken crocks. After the seedlings have been pricked off water with rain water passed through a very fine rose, thoroughly wetting the compost through. The plants should then be placed in a position within reasonable distance of the roof glass, either by raising the staging, suspending several together in a pan or basket, or, better still, on a shelf, with a thin layer of broken coke to afford ample drainage. They must be protected from the direct rays of the sun, but otherwise they should have the benefit of all the light obtainable. Occasional spraying overhead will be found beneficial in hot, dry weather, and with careful attention to watering little difficulty will be found in their successful cultivation.

OLDER PLANTS.—Plants of one or two years' growth that have not sufficiently advanced to be likely to produce flowers this winter should also be repotted at the present season, for it will be found in most cases root action has commenced, and when in this state, with favourable outside conditions, they quickly become established in the new compost. The potting compost mentioned above, but of a coarser nature, is suitable for these also. It should be pressed moderately firm, and less drainage should be used as the plants gain strength. The more delicately constitutioned kinds, such as the hybrids of C. niveum, C. bellatulum, and its allies, also root at the present season, and where any repotting is necessary they should be attended to at once. These should have ample drainage, and a liberal proportion of lime rubble intermixed with the potting compost will be beneficial.—H. J Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

SOUV. DE LA MALMAISON CARNATIONS.—When these plants have finished flowering they should be sorted over and stood outside to harden before layering. For this purpose choose the most suitable plants, which, above all, must be clean and healthy. The present time is an excellent one in which to order new varieties of Malmaisons. Even if no new varieties are required, it is advisable to secure young plants from a different locality, as Malmaisons are apt to weaken if the stock is not changed occasionally. The grower may be guided in his selection by the list of varieties given here.

Princess of Wales is undoubtedly one of the most useful pink varieties in cultivation, and, together with Old Blush and Duchess of Westminster, will be sufficient in this shade of colour. Nell Gwynne is the only reliable white as yet introduced. In the yellow section, too, there is not much choice. Yaller Gal is a good colour, but we prefer to grow the two border carnations, Cecilia and Miss A. Campbell to fill this vacancy. If these two are grown under the same conditions as Malmaisons for two years, a good display of large blooms can be obtained, those of Cecilia being especially fine. Maggie Hodgson only requires to be seen to recommend itself to any cultivator. A good grower, of a rich velvety crimson, and very sweetly scented, it soon becomes a favourite. King Oscar may be said to be the best of the scarlets, and Lady Mary Hope is the best in terra-cotta shades. Of the red varieties The Colonel is very good for general purposes, but is far superseded by Lady Coventry, which is the best red Malmaison of recent introduction. The growth and habit are strong, and the plant is not much troubled by disease. The flowers are of a gigantic size, with a most exquisite scent, and altogether it is a variety which can be strongly recommended to those who have not seen or tried it.

PERPETUAL - FLOWERING CARNATIONS.—Constant care and attention must be given to the young plants to ensure good strong growth. If the final potting is not finished it should be done without any further delay. Pinching and stopping must be discontinued at the end of the present month. As soon as the plants have recovered from the check sustained in the potting they may be stood outside. When removing the plants examine each one for any signs of rust, which, if found, must be picked off and burnt. Avoid overcrowding, allowing enough space for the air to circulate freely between the plants. After a hot day the whole stock may be syringed with very weak soot water, from which they will greatly benefit.—A. Grubb, Porter's Park Gardens.

HARDY FRUITS.

THINNING FRUITS. — Practically all varieties of apples that are in a healthy state have set a heavy crop of fruit this year, at least in this locality, and where possible partial thinning should be commenced as soon as time will allow. Too much stress cannot be laid on the importance of this operation, both as regards future crops and the well-being of the trees. No doubt great damage is caused by overloading some varieties in a fruitful year, and especially is this so with young trees. Lane's Prince Albert may be taken as an example: if judiciously thinned, the trees may be grown as fine as many others, but if allowed to do so the trees will almost crop themselves to death. At the first operation, if an exceedingly heavy crop is set, whole bunches that are misplaced may be cut away with a sharp penknife as a quick and simple means of relieving the trees. Where quantities of apples and pears are grown thinning will need to be done systematically, or many trees may be overlooked. Large fruiting varieties need to be more freely thinned than those of medium size. The health of an individual tree should also be considered in regard to the number of fruits to be left to ripen.

WATERING.—The continued drought will cause many fruit growers anxiety, and fortunate is the grower who has a good water supply conveniently laid on. Fruit trees on walls will well repay fortnightly soakings during spells of very dry weather. Fig trees, especially if rooting space is confined, will need heavy soakings of water, for if the trees are allowed to suffer at the present time the fruits may fail to mature. Opportunity should be taken to apply manure or soot water after a soaking of clear water to weakly or heavily-cropped trees, as this will help wonderfully towards fine and well-finished fruits of all descriptions.

STRAWBERRIES.—Layering for the purpose of providing plants for new plantations should be taken in hand as soon as the layers are large enough; the best plants are usually obtained by layering in pots. Large 60's should be filled to within half an inch of the top with a mixture of rich loam and sifted spent hotbed material; the pots may be grouped as much as possible to form protection for each other against the sun, and the drying influence of the wind, and also as a convenience for watering. One layer only from each runner should be laid on the soil, and weighted down by a stone that will fit conveniently inside the rim of the pot. Stones are preferable to pegs, as they retain the moisture and keep the plants cool at a very drying time. The soil should at all times be in a moist state, watering being done as late in the afternoon as possible. The layering of the later varieties may be postponed another fortnight or so, Laxton's Latest and Waterloo being much later in sending out their runners than the early and midseason varieties; the first-named promises to supersede Waterloo entirely, as it crops a little later, and much more heavily, and its flavour and constitution is all that can be desired.

SMALL RAMBLING FRUITS. — The strong growth of loganberries, blackberries, wineberries, etc., will need a little attention, and may be tied carefully to separate stakes, or, if on fencing trained as much as possible clear of the fruiting canes, or the tender young growths may become damaged during fruit gathering. — J. Whittle, Cheveney Gardens.

THE KITCHEN GARDEN.

LEEKS.—The plantation to form the principal winter supply should be made now; over large produce is not to be desired, but useful good-sized leeks in quantity are the aim of most kitchen gardeners in private places. Like the majority of other crops, leeks require ground in a fertile condition to secure satisfactory results. Put out the plants at about eighteen inches from row to row, and about fifteen inches apart in the row, preserving the young fleshy roots from damage in transplantation, and not allowing them to become dry.

PARSLEY.—About this date it is advisable to making a large sowing of parsley to provide for the main winter crop. Before sowing see that the soil is charged with sufficient moisture to ensure germination, and that precautions are taken as far as possible against wireworms, which are very destructive to the crop.

ASPARAGUS.—It is inadvisable to cut asparagus very heavily after this date, but much more profitable to build up the plants for next season's supply. Give a good dressing of some approved manure to the beds, and if the rainfall is not ample water it well in to the roots, and repeat the dose again in a few weeks when growth is vigorous and new crowns are being made. Weeds often take possession of the beds from now if not checked; a dressing of salt keeps them down, and assists to build up the asparagus plant.

CABBAGE.—The autumn-planted cabbages are now turning in fast for use, and will carry the supply on for a considerable time. If a sowing of seeds was made this spring a stock of young plants will be at hand for planting now, which will turn in about the end of August and onwards through the winter. These may be cleared from the ground as soon as cut, allowing the old stock of plants to develop quantities of heads, which will give a profitable yield well on in the new year during a scarce time.

TRANSPLANTING.—In most parts of the country vegetation is suffering very much through want of rain, and transplantation is very difficult; where possible sow crops where they are to remain, in preference to removing them, and thin them out to the desired distance apart. In cases where transplanting has to be carried out liberal treatment must be given or serious checks will follow.—Charles Flack, Cholmondeley Castle Gardens.

ROYAL SHOW

PRACTICE WITH SCIENCE

NORWICH,
June 26th to 30th, 1911.
President—HIS MAJESTY THE KING.
£10,600 in PRIZES.
Horses, Cattle, Sheep, Pigs, Poultry, Produce, Implements.
JUMPING, RIDING AND DRIVING.
FOUR-IN-HAND TEAMS,
Horse-Shoeing and Butter-making, Competitions, Agricultural Education and Forestry Exhibitions.
FLOWER SHOW.
The Band of the 16th (The Queen's Lancers).

Prices of Admission: Monday, June 26th, 5s.; Tuesday and Wednesday, June 27th and 28th, 2s. 6d.; Thursday and Friday, June 29th and 30th, 1s.
THOMAS McROW, Secretary.
Royal Agricultural Society of England,
16, Bedford Square. London, W.C.

NORTH OF ENGLAND HORTICULTURAL SOCIETY.

AUGUST 15th (Tues), at HARROGATE, in conjunction with Harrogate Agricultural Society. R. H. S. Delegates will award their Medals.

Trade exhibits and Horticultural Sundries welcomed.

SEPT. 20th (Wednesday), at Leeds.
OCT. 18th (Wednesday), at Leeds.
NOV. 15th and 16th (Wednesday and Thursday), at Newcastle, in conjunction with NEWCASTLE CHRYSANTHEMUM SOCIETY, and the NATIONAL FRUIT CONGRESS.
DEC. 13th (Wednesday), at Leeds.

All particulars from Rev. J. BERNARD HALL,
Rawdon, Leeds.

BECKENHAM HORTICULTURAL SOCIETY.

GRAND SUMMER SHOW.

WEDNESDAY, July 12, 1911.

OPEN CLASSES, ROSES, Etc.

MILITARY BANDS, PASTORAL PLAY, ETC.
J. A. BENNETT,
CLOCK HOUSE, Hon. Sec.

CARDIFF FLOWER SHOW.
By kind permission.
SOPHIA GARDENS, CARDIFF.
WEDNESDAY and THURSDAY, July 26th and 27th, 1911.
The renowned Full Band of H.M. 19th Queen Alexandra's Own Royal Hussars.
Grounds and Tents brilliantly Illuminated.
Mr. John Studt's Complete and Extensive Amusements.
Every Particular and Schedule, Apply
A. MAURICE BAILEY, Secretary,
24, Duke Street, Cardiff.

HANLEY PARK, STAFFORDSHIRE.
JULY 5th and 6th, 1911.
FIFTEENTH GREAT
ANNUAL FLORAL FETE.

£650 in Prizes, Silver Cups, Gold and Silver Medals.
Silver Challenge Cup, value £10 10s., offered for TRADE EXHIBIT.
(For particulars see page 8 in Schedule.)
Valuable Special Prizes offered by the Principal Firms in England.
Schedules post free on application to
WM. POULSON, Secretary.
Town Hall, Hanley.

SOUTHAMPTON ROYAL HORTICULTURAL AND SOUTHERN COUNTIES CARNATION AND SWEET PEA SOCIETY.

GRAND SUMMER EXHIBITION.
ROSES, SWEET PEAS, PLANTS, FRUIT, AND VEGETABLES:
JUNE 27 and 28.

Trade Exhibits especially invited.

Schedules and all particulars of—
C. S. FUIDGE,
7, Silverdale Road, Southampton.

EXHIBITIONS AND MEETINGS.

◆

The International Horticultural Exhibition at Florence.

An International Exhibition of Horticulture and Allied Industries was held recently at Florence, in celebration of the fiftieth year of Italian Independence, and brought together a large and brilliant display. The schedule included 450 classes, and in these over 280 awards were made, besides 53 prizes awarded to groups staged not for competition, and some twenty-five prizes of honour awarded by the Executive Committee, and by the R. Societa Toscana d'Horticulture. This will give some idea of the importance of the event, for it is impossible to give anything like a detailed account of the exhibition. The classes were grouped in thirty-one sections, about one-third of which were open to International competition, the rest being limited to native products. The jury consisted of over 150 members of Italian, French, German, Dutch, Belgian, and British nationality, the latter being represented by Mr. R. Allen Rolfe, president of the orchid section, and Mr. Stuart H. Low. The exhibition was opened by their Majesties the King and Queen of Italy, who made a tour of the exhibition and were highly pleased with the fine horticultural display, though the event was accompanied by a heavy downpour of rain which continued throughout the greater part of the first two days, and must have made an enormous difference to the attendance.

Coming to the exhibits we may state that the first section was devoted to new plants, for which gold, silver-gilt, and silver medals were offered in fifty-two classes, though awards were made in only thirty-one of them, and these chiefly were the novelties of garden origin, as anthuriums, caladiums, dracænas, and crotons, in all of which the R. Scuola di Pomologia, Florence, secured premier honours, their exhibits invariably reaching a high standard of excellence. Six classes in this section were devoted to orchids, and only produced a single exhibit, a fine seedling from Cypripedium Lawrenceanum x Rothschildianum being shown by Signor Ferdinando Scarlatti, Florence, in the class for a new cypripedium, but the gold medal offered had to be withheld, on the ground the plant was already in commerce under the name of C. Mahleræ. No new species, no new hybrid odontoglossum, no new hybrid of the cattleya group, not even a hybrid sent out during the last five years were forthcoming, though six gold medals were offered, and the whole section was open to International competition.

The orchid section was also International, and did rather better, though eight out of thirteen classes were blank. The prize offered for 100 distinct species and varieties —an ornamental vase, value 200 lire—was awarded to Messrs. Theodore Pauwels and Co., Meirelbeke, Ghent, for a very fine group, including a few odontiodas, many beautiful odontoglossums, Renanthera Imschootiana, some good cattleyas and allies, forms of Miltonia vexillaria, a number of good dendrobiums, cypripediums, cymbidiums, oncidiums, etc. For a group of fifty diverse kinds the large gold medal was awarded to Signor R. Mercatelli, Florence, his group including some good cattleyas and lælio-cattleyas, several dendrobiums and cypripediums, Anguloa Clowesi, Aërides odoratum, Odontoglossums luteopurpureum, Pescatorei, and citrosmum, bulbophyllums, Phaius Norman, Oncidium sphacelatum, etc. For twenty-five diverse kinds there were three competitors, the R. Scuola do Pomologia, Florence, gaining the gold medal for a group of well-grown plants, in which vandas and varieties of Lælia purpurata were conspicuous, while the Marquis Carlo Ridolfi, Meleto, was awarded the silver-gilt medal for a more varied group of smaller plants, mostly warm house kinds. Signor R. Linari, Florence, staged a group of well-grown specimens, including Cœlogyne pandurata with a spike of eight flowers, Cattleya Lawrenceana and intermedia, a fine Cymbidium Lowianum, Lælia purpurata, Lycaste Skinneri, and a number of good cypripediums and selenipediums, but the group included duplicates, and had to be passed over.

For a group of cypripediums and selenipediums Signor F. Scarlatti, Florence, staged a group mostly of familiar kinds, to which the second prize, a silver-gilt medal, was awarded. For a collection of cypripediums and selenipediums, a good group of familiar kinds was exhibited by Signor F. Scarlatti, the second prize, a silver-gilt medal, being awarded. For a vanilla in flower or fruit the first prize was awarded to the Marquis Carlo Torrigiani, Florence, for a fine plant bearing seven racemes, mostly of young fruit.

The aroid section was International, and contained eleven classes, in eight of which awards were made. The gold medals offered for the best fifty caladiums, the best group of Anthurium Andreanum, and for the best collection of aroids (excluding the preceding and A. Scherzerianum), were all won by the Scuola di Pomologia, Florence, with excellent groups, while that for a group of A. Scherzerianum went to Signor F. Scarlatti, for a large and brilliant exhibit. The silver-gilt medal for the best specimen of the latter species was won by Count Ugo Cahen, Allerona, with a fine plant bearing a dozen magnificent spathes.

Only one of the thirty-five classes devoted to palms was marked as International, that for thirty species and varieties, in strong examples, but the two gold medals offered went no further than Florence, the first prize being won by the R. Orto Botanico, and the second by Signor R. Mercatelli. The palms formed a large and beautiful series, and prizes were awarded in twenty-five other classes. In that for kentias, in strong examples, a fourth prize had to be given, the order being: Signor R. Mercatelli, first; G. Turri, second; P. Capecchi, third; and G. Luigi, fourth, all of Florence. For the best specimen of Latania borbonica the R. Orto Botanico, Florence, won the silver-gilt medal with a magnificent specimen bearing three panicles of fruit, while Baron de Gunderrode was first for a specimen of Licuala grandis. For the best spinose palm the first prize went to Signor B. Gattai, Florence, for a very beautiful example of Astrocaryum mexicanum. In five classes a third prize had to be given.

The next five sections were not International, and may be passed over quickly, though in each there was a very fine display, about which much might be said. The section devoted to hothouse plants contained forty classes, twenty-four of which were filled. That for the best collection of ferns and lycopods produced a keen competition, and two additional prizes had to be awarded, making five in all; the premier group, staged by the firm of G. Bonfiglioli e figlio, Bologna, being magnificent, both in composition and arrangement. For the best thirty distinct hothouse plants, the Scuola di Pomologia, Florence, was first with a fine group, also for a magnificent specimen of Acalypha hispida, and for collections of crotons and dracænas, while Signor R. Mercatelli was first for ornamental-leaved begonias. There were forty-one classes for greenhouse plants, of which twenty nine were filled, the pelargoniums being specially fine, as might be expected in such a climate. In the class for 100 distinct zonals four prizes were awarded. Conifers, trees, and shrubs contained forty-five classes, twenty-seven of them being filled, and among them we noted the azaleas, rhododendrons, and hydrangeas as being excellent. There were eleven classes for roses, of which two only were blank, while the quality was excellent and the competition keen, in one case one, and in another two additional prizes being given. Herbaceous plants and bulbs were good, but only twenty-nine out of fifty-three classes were filled, the carnations, sweet peas, cinerarias, calceolarias, petunias, and mignonette calling for special mention. Four

International classes were set apart for aquatics and marsh plants, but did not yield an exhibit.

The sections devoted to fruits, fresh and preserved, and to vegetables, were in part International, some good collections appearing in the former, particularly of the citrus family, and in the latter there were some very fine exhibits of asparagus. Cut flowers, artificial flowers, and decorations produced an extensive display, and many of them were very artistic, but we cannot attempt to enumerate them. Lastly, must be mentioned the exhibits of horticultural appliances, literature, photographs, and horticultural instruction, which were very interesting, and for which a large number of awards were made. A large gold medal, offered for an orchid house built for utility and economy, was won by Messrs. Houtsch and Co., Dresden, with a well-built structure.

Among the numerous awards made to groups exhibited "not for competition" must be mentioned two large gold medals, value 200 lire, given to very beautiful groups of orchids sent by Messrs. Charlesworth and Co., Haywards Heath, and Messrs. Stuart Low and Co., Enfield, in which cool-growing species were largely represented, and thus forming a marked feature of the show, for cool orchids are not much grown in Italy, chiefly for climatal reasons. In these groups odontoglossums, species and hybrids, were represented by a very fine series, with a few brilliant odontiodas, masdevallias, dendrobiums, oncidiums, cattleyas, Lælio-cattleyas, cypripediums, and several other interesting things, the groups being greatly admired. In Messrs. Charlesworth's group was a beautiful hybrid from Brasso-cattleya Veitchi x Cattleya Trianæ alba, which was named Brasso-cattleya Queen Elena, in honour of the Queen of Italy, and the King and Queen graciously shook hands with Mr. Bohnhof, Messrs. Charlesworth's representative, in recognition of the favour.

The members of the jury were entertained at luncheon, and there were several other interesting functions in which the jury and exhibitors took part. The meeting was a great horticultural success, and will long be remembered with pleasure by those who had the good fortune to be present.

Birmingham Botanical and Horticultural Society.

The annual show of orchids and early summer flowers was held on June 8, under ideal show weather conditions. Strangely, however, there was a very sparse response to the committee's invitation to growers (trade excluded), to compete for the monetary prizes for orchids, stove and greenhouse plants, carnations, and violas, the latter only being represented. The absence, however, was amply compensated for by the splendid non-competitive contributions of orchids, roses, ferns, and herbaceous flowers by the amateurs and the trade.

The centre of attraction was the magnificent collection of orchids occupying 36ft. by 12ft., from Southfields, Edgbaston, the seat of W. Waters Butler, Esq.; it was most artistically arranged by the head gardener, Mr. R. H. Jones, and was pronounced to be the finest exhibit of orchids ever exhibited in Birmingham; the society's gold medal was awarded. Cattleyas, odontoglossums, cymbidiums, miltonias, and lælio-cattleyas, were presented, and included many rare forms.

Silver-gilt medals were awarded to Messrs. H. B. May and Sons, Edmonton, for a very choice collection of exotic ferns; to Messrs. Gunn and Son, Olton, for climbing roses in pots, Oriental poppies, sweet peas, and alpine plants.

Silver medals were awarded to Messrs. Sander and Sons, St. Albans, for orchids and their Marguerite Mrs. F. Sander—a fine double-flowered variety; to Messrs. J. Cypher and Sons, Cheltenham, for a small but choice collection of orchids; to Mr. E. V. Low, Haywards Heath, Sussex, for a collection of orchids; and to Mr. George Prince, Oxford, for cut roses.

Bronze medals went to Mr. G. W. Miller, Wisbech, for pyrethrums; and to Messrs. J. Bastock and Sons, Moseley, for an effective arrangement of violas, conspicuous amongst which was their well-known Moseley Perfection, probably the finest yellow variety extant, and a fine acquisition.

In the competitive classes violas were comparatively poor and sparse. For twelve varieties second prize was awarded to Mr. S. Smith, Bournville, the only competitor. For six varieties the first prize was awarded to Mr. F. Riley, King's Heath; second to Mr. H. Anderson, Shirley; and third, Mr. T. E. Winterlogg, Yardley.

Votes of thanks were accorded Mr. Godfrey Nettlefold, South Bank, Edgbaston (gardener, Mr. J. Higley), for a small collection of sweet peas, grown under glass, and to Mr. George Cadbury (gardener, Miss Cope) for a large specimen of the cocoa plant in flower, and bearing one oblong yellowish fruit, growing from one of the lower main branches.

In the society's committee room a meeting of the County Committee, formed in connection with the International Horticultural Exhibition of 1912, to be held in London, was held; Mr. Neville Chamberlain was elected chairman, and Alderman Holt, Leamington, vice-chairman.

National Hardy Plant Society.

At the meeting held in Anderton's Hotel on May 24, 1911, Mr. A. J. Macself presided, and members were present from Scotland, Ireland, the North, South, and Midlands of England.

Saturday, July 8, was fixed for the visit to Friar Park, Henley-on-Thames, by kind invitation of Sir Frank Crisp. It was decided to send a deputation to the North of England Horticultural Society's Show at Harrogate, on August 15, also to renew the offer of prizes and medals offered for the June show, which had been postponed. Delegates were appointed to attend York Gala. Delegates were also appointed for Cardiff and Leamington Shows. It was decided to advertise the objects of the society in the "Gardeners' Chronicle," "The Garden," the "Gardeners' Magazine," and "Journal of Horticulture." A long and useful discussion took place on the model schedule suggestions sent by several members of the Council unable to attend. The matter was deferred to a future meeting. Mr. E. H. Jenkins was added to the Publications Committee.

Dr. Macwatt sent a seedling white viola (violetta type), which was of excellent habit and flowers in July and August. Mr. Hawes kindly undertook to conduct a trial of the same for the Council, who expressed the wish to see it again later. Mrs. H. L. Scott, Cadeby Hall, showed Smilacina racemosa, a pure white form, very strongly scented, from three to four feet in height. The thanks of the society were awarded to these two exhibitors. Messrs. Artindale and Co., Sheffield, staged a fine collection of violas and pansies. The names of several varieties were noted of which it was desired to see growing plants. It was decided to offer medals at several other shows in 1911, and this was left to the chairman and secretary to arrange.

Scottish Horticultural Association.

The June meeting of this association was held in the Goold Hall, 5, St. Andrew Square, Edinburgh, on the 6th inst. Mr. Massie, the president, was in the chair, and there was an attendance of 75 members.

The meeting was an open one, and the evening was devoted to the discussion of questions by members. These were—(1) Had Mendel's law been applied to any plant belonging to the compositæ, and with what result? (2) What was the best means of combating the chrysanthemum leaf-mining maggot; and (3) the vine weevil? (4) How did the Americans get their stock of apples? (5) What was the most profitable crop to grow under glass? And (6) Would not fruit and vegetable culture form a necessary adjunct in the working of the small holding of the future?

In answer to the first question, Mr. Cuthbertson pointed out that Mendel made many experiments with the Hawkweeds (Hieracia), but that, owing to the extreme delicacy of the flowers and the minuteness of the operations, he had to abandon them. Some experiments had been made in the genus gerbera, and in these it had been found that red colour was dominant. There was agreement that the best way to combat the chrysanthemum leaf-mining maggot was by spraying with quassia extract and soft soap, and Mr. Berry pointed out that the highly concentrated extract known as "Cirengol," a sixpenny tube of which was sufficient for twenty gallons of water, was the best form to use. Picking off the affected leaves was also essential. Mr. Nicoll, Rossie, one of the leading chrysanthemum growers in Scotland, considered from what he had observed that the marguerite, or "Paris Daisy," played an important part in propagating the pest, and Mr. Comfort stated that he had observed the variety "Queen Alexandra" was very liable to attack. As regards the vine weevil, spreading sheets of white paper underneath the vines, and, in the evening, when all was quiet, giving the stems a sharp knock so as to dislodge the insects, and collecting and destroying them, was the plan which found most favour. Mr. Kirk, Alloa, stated that the weevil always sought a dry hiding place, and he warned growers against allowing the borders to become dust dry in winter. The substance "Phospho nicotyle" was also recommended, and Mr. Kirk gave the following as a good preparation for coating the stems of the plants: Clay, five parts; gas tar, one part; add sufficient boiling water to bring to consistency of paint, and put on with ordinary paint brush. Mr. Berry mentioned that the clay-coloured weevil (Otiorrhynchus picipes) was doing enormous havoc in some of the raspberry crops by eating the tips of the unopened flowers, which invariably produced malformed fruit after being so attacked. Arsenate of lead spraying, he said, was the best preventive, and this should be done as soon as the young shoots appeared.

As regards the most profitable crop to grow under glass, Mr. King, nurseryman, Edinburgh, stated that it all depended on circumstances. In some parts one crop might be the most profitable, in other districts another; but the question was not so much what to grow as how to grow it. A well-grown crop would always sell, but not a badly grown one. Violas and lobelia were about as profitable things to grow as any, provided it wasn't overdone. There was no time to discuss the question relating to fruit and vegetable culture in connection with small holdings.

The exhibits were: Sweet peas, from Messrs. Dobbie and Co., Edinburgh (Cultural Certificate); new hydrangeas and Statice Dickensoni, from Mr. John Downie, Edinburgh; hydrangeas, Solanum Wendlandi, and Cytisus Adami (three kinds of flowers), from Mr. R. H. Cockburn, Gartmore, Perthshire (Cultural Certificate for hydrangeas); Clarkia elegans "Firefly," from Mr. J. Alexander, Niddrie, Midlothian; sweet peas, from Mr. Jas. Staward, St. Fort, Newport (Fife); late chrysanthemums "Niveus" and "Western King," and sweet pea (sport from Countess Spencer), from Mr. P. Slater, Leebrae, Galashiels; new pyrethrum, "Stenhouse Beauty," seedling pyrethrums, and Ox-eye daisy "Early Queen," from Mr. F. Baillie, Liberton, Edinburgh; tree pæonies, from Mr. James Fraser, Bonally Tower, Colinton; Viola gracilis purpurea, from Messrs. Todd and Co., Edinburgh; Rhododendron Pink Pearl, from Mr. J. K. Brown, Dunnikin, Kirkcaldy; Rhododendron cinnabarinum, from Mr. W. Williamson, Edinburgh; Phyiocactus Ackermanni, from Mr. A. Johnstone, Hay Lodge, Edinburgh; calceolarias, from Mr. A. Smibert, Leith.

Eleven new members were elected.

The paper on July 4 will be by the secretary, the subject being "Some Recent Additions to Our Knowledge of Trees."

GRAND YORKSHIRE FLORAL FETE AND GALA.

(Continued from page 444.)

such things as inulas, achilleas, heucheras, etc. About a dozen varieties of new and popular strawberries were staged by Messrs. Laxton Bros., Bedford. Bedford Champion, Laxton's Count, Epicure, and Reward were probably the best of the collection.

Messrs. Webb and Son's exhibit was, as usual, a display of vegetables, flowers, and fruits of the highest quality, displayed in a manner that betokens the practised hand. Gloxinias were the chief feature among the flowering plants used, and the melons were exceptionally good. Water lilies, rushes, sarracenias, and other moisture-loving plants were shown by Messrs. Bakers, Wolverhampton, in particularly appropriate fashion. Big bunches of delphiniums, pæonies, Spanish irises, and other border flowers were also shown by the Wolverhampton firm.

A collection of violas from Messrs. W. Artindale and Son, Sheffield, was well put up, and included some of the latest as well as the best of older varieties. The group of flowering shrubs and ornamental trees arranged in the open by Messrs. J. Backhouse and Son, Lim., York, was a feature of the show. The front of the group was gay with roses, azaleas, and rhododendrons, and the standard privets, box, and bay trees in the rear were good specimens.

The floral designs staged by Messrs. J. Backhouse and Son, Lim., York, were massive and of original character. A Royal Throne in double white pyrethrums, a cross of double stocks, and a crown of pinks were the formal pieces, with baskets of roses, bouquets, etc., grouped around. A table of pot roses, cut carnations, and other decorative subjects, admirably put up by Messrs. W. Cutbush and Son, Highgate, N., contained among other notable things some excellent plants of Dracæna Bruanti variegata, Marguerite Mrs. F. Sander, and the gay flowers of Rose American Pillar.

Clipped trees in all manner of quaint shapes were shown by Messrs. Piper's, Floral Establishment, Bayswater, London. Some of the birds, animals, and other objects into which the trees were cut were very cleverly worked out. A big exhibit of pillar roses, hydrangeas, liliums, and other flowering plants, with acers, conifers, and other shrubs in the background, came from Messrs. Kent and Brydon, Darlington, who also showed alpines on a model rockery of excellent design. Ferns were nicely shown by Messrs. H. B. May and Sons, Edmonton.

Excellent groups of orchids were staged by the leading firms, from both north and south of the country. The fine group at the end of a central stage, put up by Messrs. Charlesworth and Co., Haywards Heath, contained some exquisite odontiodas, cattleyas, and miltonias. Lælio-cattleya Feronia, L.-c. Fascinator, and Brasso-cattleya Veitchi were also conspicuous. A large and interesting group came from Messrs. Mansell and Hatcher, Lim., Rawdon, Leeds; miltonias and odontoglossums being the predominant features, together with Lælio-cattleya Aphrodite and L.-c. Canhamiana.

Perpetual carnations were admirably displayed by Mr. C. F. Waters, Balcombe, the variety named Edith Waters being very prominent. Messrs. Jarman and Co., Chard, displayed centaureas, etc., and Mr. C. W. Breadmore, High Street, Winchester, contributed good sweet peas, with Lavender George Herbert, Mrs. C. W. Breadmore, and Stirling Stent as notably good varieties.

The contribution from Messrs. W. and J. Brown, Peterborough, embraced roses and hardy herbaceous flowers, the former being particularly strong, and Mdme. Ravary, Joseph Hill, Mrs. Peter Blair, and Mdme. Melanie Soupert were notably well shown. Mr. Elisha J. Hicks, Twyford, Berks, was another large exhibitor of roses, and one who made an attractive display of bright blooms. Messrs. Seagrave and Co., Sheffield, staged violas in quantity, and the flowers of a whole host of delightful varieties were most effectively displayed. Messrs. G. Massey and Sons, Spalding, were represented by popular varieties of pæonies, pyrethrums, and irises.

Mr. C. Engelmann, Saffron Walden, brought up a contribution of carnations, in which the crimson Carola was a special feature. Messrs. Young and Co., Hatherley, presented finely-grown perpetual carnations in good style, and their hanging baskets were delightful; we noticed especially good flowers of May Day and Rose Pink Enchantress.

From the Six Hills Nursery, Stevenage, Mr. Clarence Elliott brought a collection of herbaceous and alpine plants, and arranged these to form a most interesting and attractive rock garden; quite choice and rare plants were displayed. The sweet peas from Messrs. Dobbie and Co., Edinburgh, were very beautiful, and we noticed good vases of such new varieties as Melba, May Campbell, Mrs. Cuthbertson, Marion, Elfrida Pearson, Dobbie's Cream, and the bright orange-shaded Edrom Beauty. Messrs. Batchelor and Sons, Harrogate, presented a pleasing exhibit of plumose ferns, and Messrs. R. H. Bath, Lim., Wisbech, contributed a bright and fragrant display of popular and useful herbaceous pæonies, with single and double pyrethrums.

Mr. Maurice Prichard, Christchurch, and Mr. G. W. Miller, Wisbech, were both exhibitors of hardy flowers, and Mr. J. Wood, Boston Spa, had a big rock garden, so arranged that visitors could walk along its winding paths and closely inspect the many beautiful alpine and herbaceous plants therein planted. A fine strain of Canterbury bells, from Messrs. W. J. Godfrey and Sons, Exmouth, added to this firm's Oriental poppies in many art shades, made up a large exhibit. Mr. George Prince, Longworth, exhibited roses in pleasing fashion, and his tea-scented varieties were especially bright.

MEDALS, ETC.

Premier prize, presented by Lord Middleton, to Messrs. Mansell and Hatcher, Rawdon, Leeds, for the most meritorious exhibit in the show—a group of orchids.

Special Gold Medals for Trade Displays.—For orchids, to Messrs. Mansell and Hatcher, Rawdon, Leeds; for stove and greenhouse plants, to Messrs. J. Backhouse and Sons, Lim., York; for decorative plants and flowers, to Messrs. W. Cutbush and Son, Highgate, N.

Large Gold.—To Messrs. Sutton and Sons, Reading; to Messrs. Webb and Sons, Stourbridge; to Messrs. James Backhouse and Sons, Lim., York; to Messrs. W. Cutbush and Son, Highgate; and to Messrs. Kent and Brydon, Darlington.

Gold.—To Messrs. W. Artindale and Son, Sheffield; to Messrs. Mansell and Hatcher, Leeds; and to Messrs. W. and J. Brown, Peterborough.

Large Silver-gilt.—To Messrs. Charlesworth and Co., Haywards Heath; to Messrs. J. Piper and Son, Bishops Road, Bayswater; to Messrs. R. H. Bath, Lim., Wisbech; to Messrs. H. B. May and Sons, Edmonton; to Mr. Clarence Elliott, Stevenage; to Mr. E. J. Hicks, Twyford; and to Messrs. Laxton Brothers, Bedford.

Silver-gilt.—To Mr. C. F. Waters, Balcombe; to Messrs. James Backhouse and Sons, York; to Mr. G. Yeld, Burton Lane, York; to Messrs. Dicksons, Chester; to Messrs. Bakers, Wolverhampton; to Messrs. Dobbie and Co., Edinburgh; to Messrs. Batchelor and Sons, Harrogate; to Mr. J. Wood, Boston Spa; and Messrs. Sander and Sons, St. Albans.

Large Silver.—To Mr. C. W. Breadmore, Winchester; to Mr. C. Engelmann, Saffron Walden; to Messrs. Young and Co., Hatherley; to Messrs. James Kelway and Son, Langport; to Mr. Maurice Prichard, Christchurch; and to Messrs. W. J. Godfrey and Sons, Exmouth.

Silver.—To Messrs. J. Backhouse and Sons, Lim., York; to Messrs. Seagrave and Co., Sheffield; to Messrs. G. Massey and Sons, Spalding; to Mr. J. E. Sadler, Newbury; and to Mr. George Prince, Longworth.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.
Height above sea-level, 150 feet.

Date. 1911. June 4 to June 10.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
June 4—Sunday	13 6	71	65	83	51
,, 5—Monday	12 36	72	65	82	54
,, 6—Tuesday	12 0	70	61	78	54
,, 7—Wednesday	12 12	58	52	70	52
,, 8—Thursday	13 54	69	54	78	47
,, 9—Friday	7 42	68	62	74	48
,, 10—Saturday	11 18	53	47	62	38
Means	(total) 82 48	66	58	75	49

Date. 1911. June 4 to June 10.	Rain.	Temperature of the Soil at 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
June 4—Sunday	—	63	60	55	45
,, 5—Monday	—	65	61	55	48
,, 6—Tuesday	—	65	62	56	48
,, 7—Wednesday	—	64	61	56	46
,, 8—Thursday	—	64	61	57	36
,, 9—Friday	—	65	62	57	42
10—Saturday	—	62	61	57	27
Means	(total) 0·0	64	61	56	41

On the morning of the 10th the tips of the bracken on Wisley Common were blackened by frost.

SPRAY
GUARANTEE
PINE SPRAY
SYRINGE No
PINE SPRAY
SYRINGE
Patent
No 261

Rose-Spray and Bend

all on the one head of the Pine Spray Syringe, provide between them, every spraying combination required in greenhouse or garden. By half turning the syringe in the hand the character of the Spray can be instantly changed from a very fine, mist like spray, to an ordinary rose, or vice versa, and delivery through either can be made in an upward or downward direction by merely bending the adjustable joint.
The size is 24 in. over all by 1¼ in. diameter barrel, and each syringe is individually numbered, tested and guaranteed, and each is accompanied by a large sample of Robinson's Plant Wash—Pine Spray.
Your Ironmonger or Seedsman can, in 24 hours, obtain a Pine Spray Syringe for your approval, without expense to himself or you. Ask him to write to-night. Don't be put off, but insist on at least seeing one, even if you have to send direct to the

Sole proprietors and manufacturers,
Robinson Brothers, Limited, West Bromwich.
Lists and further particulars on application.

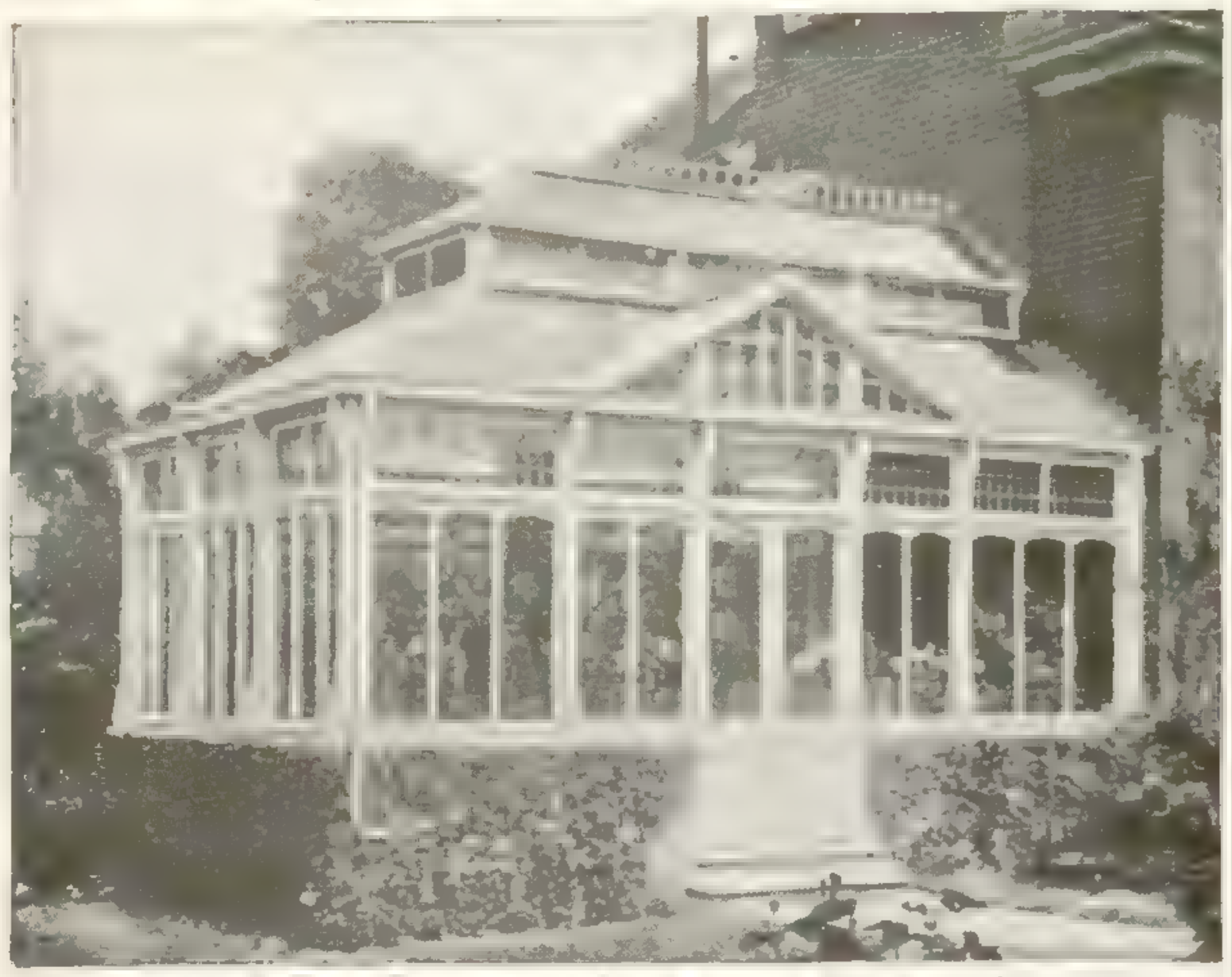
PRICE 10/6

ROBINSON'S PATENT
PINE SPRAY SYRINGE
RB Ltd
ESTD. 1869

BOULTON & PAUL, LTD., HORTICULTURAL BUILDERS, Norwich.

See our Stand at the Royal Agricultural Society's Show, to be held at Norwich in June.

EFFECTIVE, PRACTICAL CONSERVATORIES.

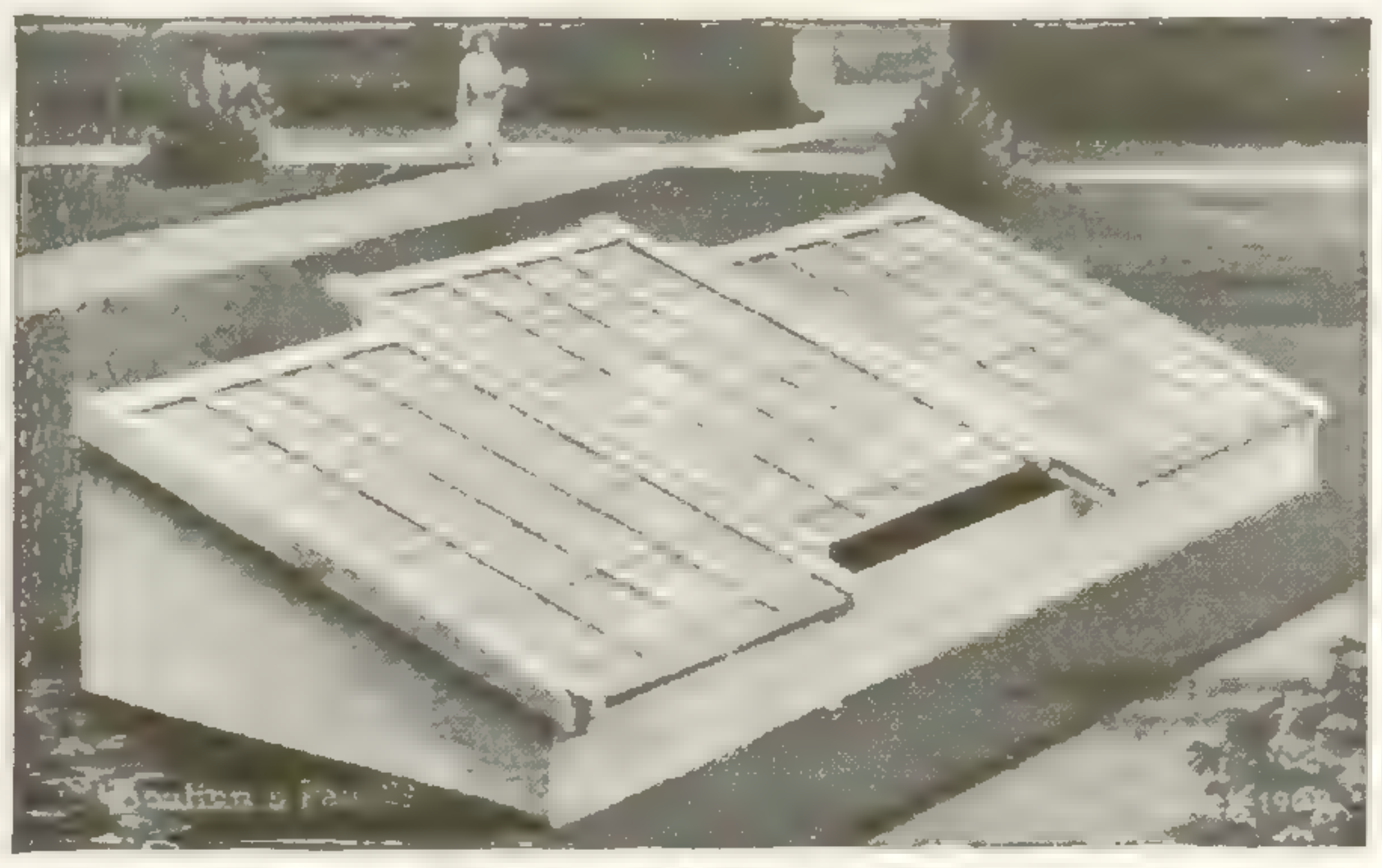


Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of 40/- value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.

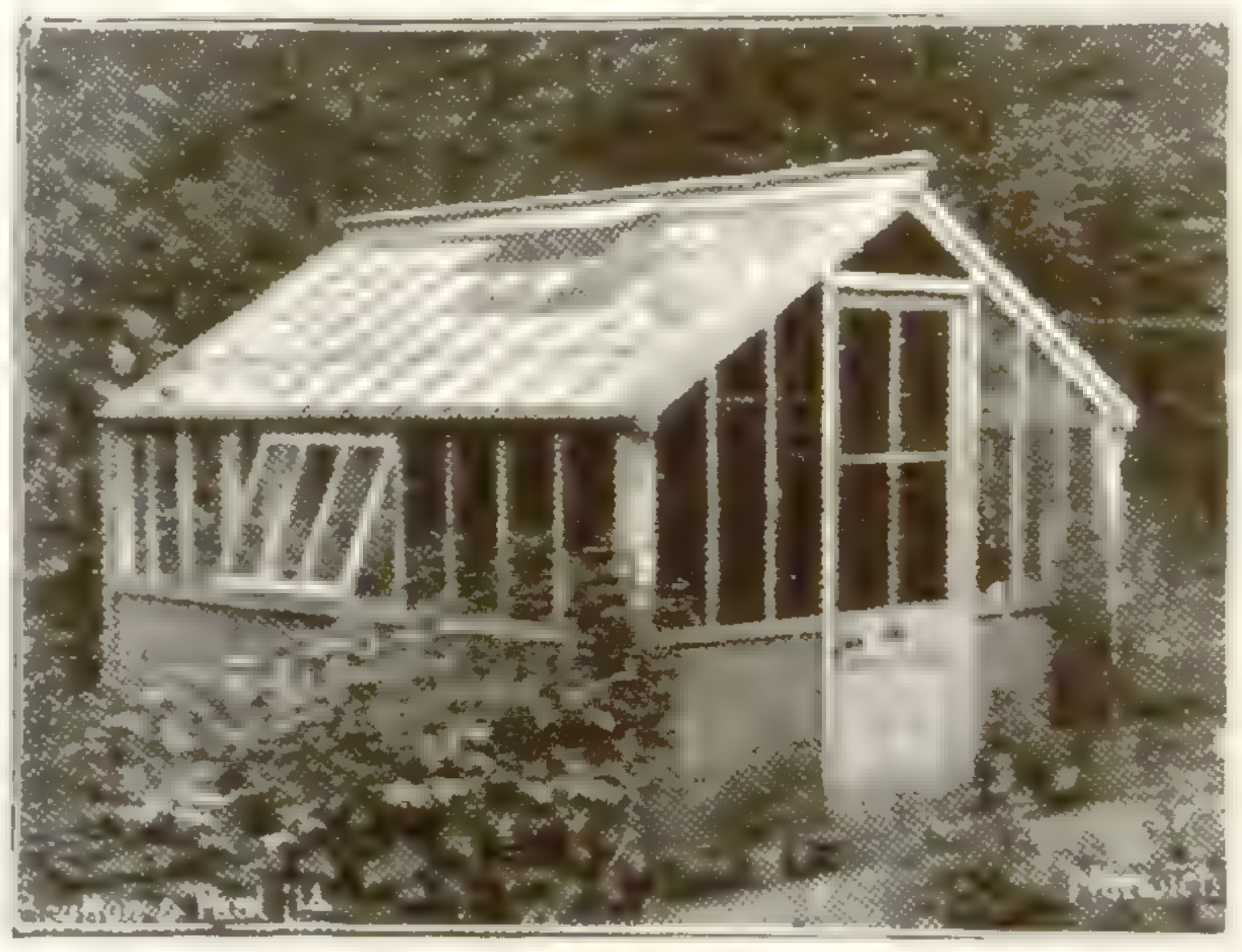


4ft. by 6ft. ... £2 0 0 | 8ft. by 6ft. ... 3 0 0
Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft. Similar to No. 75, with Two Lights... **35/-**

SEND FOR ILLUSTRATED CATALOGUES.

Every part of these Houses is thoroughly well made, painted three coats, GLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.



No. 49A.—Span, 1-ft. by 8ft.	**£11 10 0**
No. 47A.—Lean-to, 10ft. by 7ft.	**£9 10 0**

All parts are numbered ready for easy re-erection by any handy man.

TRUST THE FIRM BEHIND THE BOOT!

OVER 100 YEARS REPUTATION IS BEHIND EVERY PAIR

Why Not Try a Pair of

NORWELL'S "PERTH BOOTS"

THIS SPRING?

The right thing to do is to write for our Illustrated Free Catalogue to-day. Just drop us a Post Card, and by return you will get the description and details of the Best Value in footwear for gardeners and all those exposed to tearing country wear. We are specialists, and have the greatest confidence in our power to fit and please you. To-day, and every day, we are supplying families with footwear whose great grandfathers and mothers wore our celebrated "Perth Boots."

The Perth Gardener Boot - - **10/9**
FOR STRONG WEAR.

The Perth Calf Skin Gardener Boot **11/9**
FOR GREENHOUSE WEAR.

SEE PAGE 10 OF OUR LIST FOR SPECIAL BOOTS FOR GARDENERS.

NORWELL'S Boot Factory, **PERTH, N.B.** ESTABLISHED OVER 100 YEARS.

THE FAVOURITE WEED KILLER.

SANDWITH'S
PREMIER
WEED
KILLER

As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for 6/-; drum, 2/-. 12 galls. for 16/-; drum, 6/-. 20 galls. for 26/8; drum, 10/-. 40 galls. for 50/-; drum, 20/-.

EITHER LIQUID OR POWDER.

Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,

The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

Exceptional opportunity of acquiring second-hand this large and handsome Winter Garden or Conservatory, complete with expensive fittings. Just removed from large country house, neighbourhood of London; no fault, place required for garage. Now awaiting dispatch. Size, 58 x 43 x 21ft. high. Immediate price, with all heating apparatus and fittings complete, £100 0s. 0d., worth £500 0s. 0d.; approximate price, erected on site, including all builder's work £250 0s. 0d. Further particulars from JAMES GRAY, Danvers Street, Chelsea, S.W.

FLOWER POTS.

SANKEY'S
FAMOUS
GARDEN
POTS

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant **Makers to His Majesty the late King.**

Largest Manufacturers in the World.

Only Address:

RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

FOR ROSE MILDEW
use

V2K FLUID

THE BEST REMEDY FOR THIS PERSISTENT PEST.

Does not discolour the foliage.

OF AGENTS EVERYWHERE.

Sole Mfrs., Willm. Cooper & Nephews, Berkhamsted.

GARDEN NETS, Tanned, best quality, extra small mesh, bound all round, 56 yards by 15, 21s.; smaller sizes, ½d. sq. yard, for cash with order. TRAINER, St. Monance, Fifeshire.

WANTED.—Second-hand Table Decorations, any condition; decorations replated.
BASTOCK,
105, Vyse Street, Birmingham.

FOR SALE, FREEHOLD NURSERY of three acres; 1,350ft. run of glass, heated by 4in. h.w. pipes and three Rochford tubular boilers; fully stocked with Tomatoes and Cucumbers, one acre of Strawberries, which are disposed of locally; 10 minutes' walk from rail, 17 miles London; selling on account of owner leaving England. Apply W. LEE, Victoria Nursery, North Weald, Essex.

PROTECT YOUR FRUIT.—Herring Nets, 120ft. by 40ft., inch mesh, whole and fresh, 7s. 6d. each cash with order. Satisfaction guaranteed or money returned. REID, Denmark Street, Fraserburgh.

PIGSTYE TIMBER, 1½in., Elm, 1½d. square foot; also 1in. cheap rough shedding boards, 1d. square foot. Portable houses of all kinds. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

ANSWERS TO CORRESPONDENTS.

ROLLED-UP ROSE LEAVES.—E. L. L., Hampstead: The roses are suffering from a very bad attack of the Leaf-rolling Sawfly (Blennocampa pusilla), a pest that appears during May and June, and often causes a great deal of damage. A period of dry weather appears to aggravate the trouble, as the leaf growth is somewhat slow. The little green larvæ were present in each rolled leaf sent, and the irritation they set up then causes the leaflet to roll up cylindrically. Spraying with a nicotine solution directly a leaflet is seen rolled up would prevent a great deal of mischief; indeed, where the pest is prevalent regular spraying should commence early in May. When an attack has developed the rolled leaves should be picked off and burned. Full-fed grubs go down into the soil during August, form a cocoon, and winter thus, but about February they pupate, and the mature sawflies appear in May and June, and quickly commence to deposit eggs, from which the green larvæ (greyish at first) hatch out.

ELM TREE INJURED BY LIGHTNING.—C. C., Elmstead: If any branches were broken these should be cut back to the uninjured portion; the cut surface should then be carefully smoothed over with a spokeshave and tarred. Where only a strip of bark has been torn off there will be little need to do more than carefully trim the torn edges of the bark, and then dress the exposed surface with a moist mixture of clay, etc., such as is used for grafting; this would encourage the formation of new bark.

MANURES FOR TOMATOES.—A. P., Acton, wishes to know the amount of superphosphate of lime, bonemeal, and basic slag Mr. A. Petts uses in the soil for tomatoes; the figures were not given in the article that appeared in our issue of May 20. Will Mr. Petts please oblige, giving the amount of each substance per bushel of loam.

QUASSIA DRESSING FOR GREEN FLY.—O. R.: Place half a pound of quassia chips in two gallons of water, soft water if possible, and allow them to soak for twelve or fifteen hours; then bring the whole slowly to the boil, and allow it to boil for ten minutes. Strain the mixture, and while it is still hot, add half a pound of soft soap and stir well. Use while warm, not hot, spraying the infested plants all over, and half an hour later well syringe the sprayed plants with clear water.

SULPHIDE OF POTASSIUM FOR MILDEW.—C. H. H., Leicester: Dusting the foliage with flowers of sulphur immediately there are indications of mildew is a very good remedy for that disease, but spraying with a solution of potassium sulphide (liver of sulphur) is more effectual. The solution should consist of [illegible] of potassium sulphide dissolved in a gallon of water; the potassium sulphide readily dissolves in hot water, which should be allowed to cool before the solution is used for spraying. This is one of the best fungicides for use in plant and fruit houses, and it has much value in preventing and checking attacks of mildew on rose and other plants growing in the open.

BIRDS CAUGHT IN NETS.—A Liverpool correspondent writes as follows with reference to the desirability of at once dealing with birds that are caught in nets used for the protection of fruit: "Will you allow me to suggest to the bird-lovers among your readers that during the summer season they should make a point of periodically visiting their fruit nets, and so insure against such of our little songsters as may have been caught there dying a slow death by hunger and thirst. It is quite a common thing to find the dead body of a bird entangled in the meshes of a strawberry net, and one does not like to think of the lingering death to which the little thief has [illegible] by his very natural greediness. Will you also let me take this opportunity of reminding their friends of the difficulties our birds experience during very dry weather in finding food and water, many of them suffering keenly from the want of it, and beg that their tin of water and allowance of 'scraps' may be given them during summer droughts as well as during winter frosts."

COTTON WORM.—A. J. H., Windsor: We should be glad if you will send us one or more specimens of the worm, should you again find any in your garden.

NAMES OF PLANTS.

H. T., Colchester.—Schizanthus Wisetonensis.

J. H. C., Tooting.—1, Papaver bracteatum; 2, Achillea alpina; 3, Erysimum Perofskianum; 4. Bocconia cordata.

W. G., Ely.—1, Dracæna Sanderiana; 2, Cattleya Skinneri; 3, Nertera depressa; 4. Chamælirium corolinianum; 5, Linaria alpina; 6, Tilia platyphyllos.

CORONATION HOLIDAYS.

All Advertisements intended for the "Gardeners Magazine" of June 24 must be received by FIRST POST on WEDNESDAY, JUNE 21.

CONTENTS.

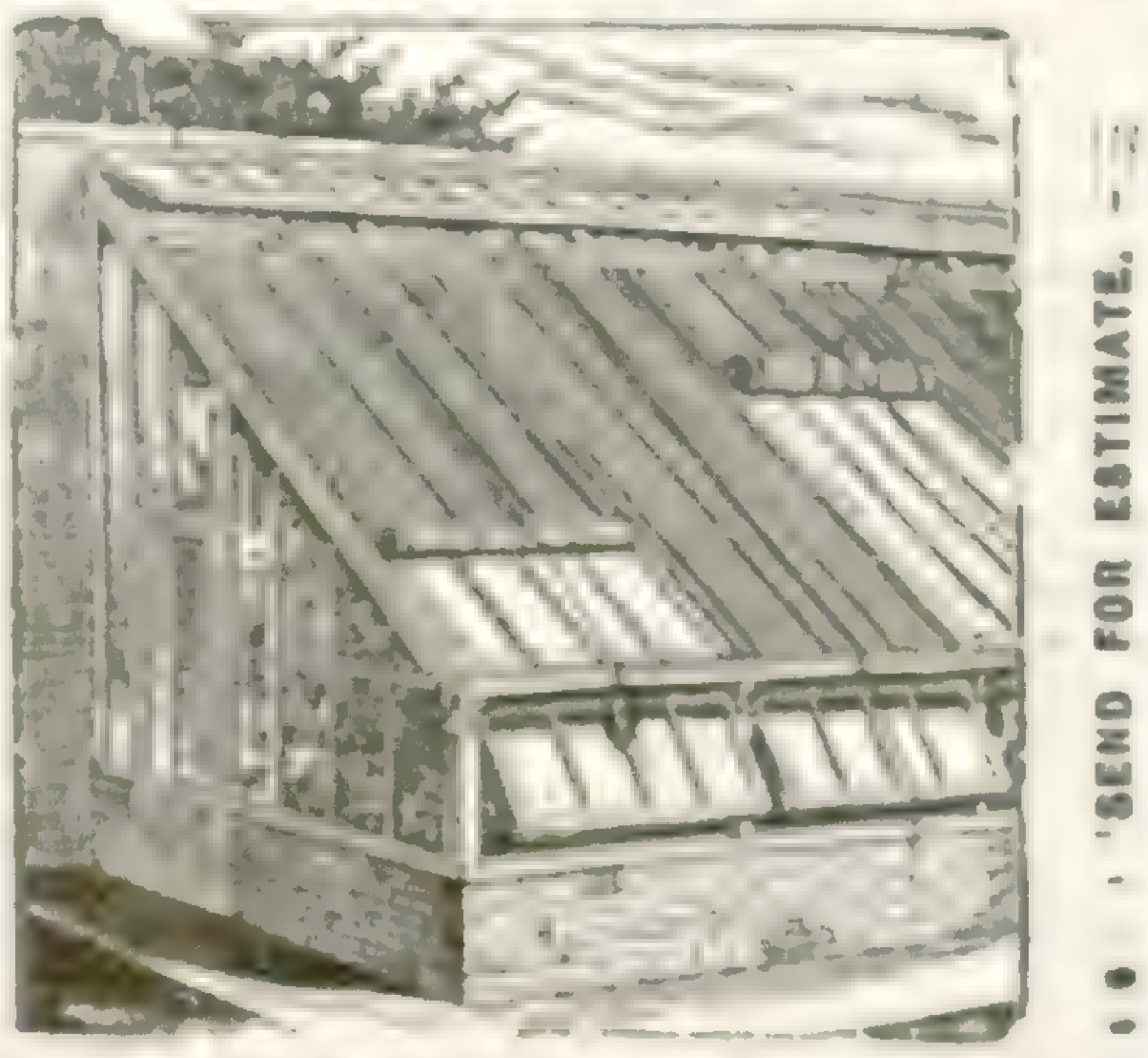
	PAGE
Acer platanoides var. Schwedleri	451
Answers to Correspondents	vi.
Available Plant Food	451
Culinary Peas	449
Exhibitions and Meetings	454
New Plants, etc.	452
Notes from Scotland	452
Notes of the Week	441
Pittosporum tobira	449
School Teachers' Examination in Gardening	450
[illegible] Gardens Around Edinburgh. II.	445
Summer Pruning	449
Work for the Week	453

ILLUSTRATIONS.

Portrait of Alderman J. W. Bentley, J.P., C.C., 441; An Old Dutch Garden at Carberry Towers, 445; A Finely Furnished Herbaceous Border in Carberry Towers Gardens, 446; A Beautiful Water Scene in the Gardens of Carberry Towers, 447; Splendidly Developed Herbaceous Border in Kitchen Garden, Preston Hall 448; View in Flower Garden at Preston Hall, 449; Picturesque Gardeners' Cottage, Oxenford Castle, 450; Avenue of Wellingtonias at Oxenford Castle 451; Grevillea robusta compacta, 4[illegible]

PARISIAN (WOOD LATH) BLINDS

MOST DURABLE OUTSIDE SHADING.



"SEND FOR ESTIMATE."

SUPPLIED ONLY BY

W. RICHARDSON & CO.,

HORTICULTURAL WORKS,

DARLINGTON.

GARDEN (FROM STOCK) FRAMES

THE NATIONAL HARDY PLANT SOCIETY.

IF you are interested in Hardy Plants write for particulars of the Society to the Hon. Secretary—FRANK BOUSKELL, Market Bosworth, Nuneaton.

'Phone: Hop. 763.

When next a Small Boiler you require

TRY

THE
HEEL
THE THAMES BANK IRON Co.
UPPER GROUND STREET
LONDON, S.E.

NONE TO BEAT IT.

THE THAMES BANK IRON CO.,

Upper Ground Street,

LONDON, S.E.

4 SIZES.

Heating Powers, 80 to 250 ft. of 4 in. pipe.

SMITH'S WEED KILLER is absolutely "PERFECT."

4 Tins of Powder or 4 Gallons of Liquid to make 100 Gallons.

6/6 Carriage Paid.

MARK SMITH, Ld. Louth, Lincolnsh

SPAR GRAVEL for Paths, [illegible] Walks, [illegible] graded; also Rockery Stone.

BECK & CO., Stone Merchants, Matlo

CHARGES FOR ADVERTISEMENTS IN

THE GARDENERS' MAGAZINE.

	£	s.	d.
Five Lines and under	0	[illegible]	6
Per Line beyond	0	[illegible]	6
" Inch	0	[illegible]	0
" Half Column	1	[illegible]	0
" Column	[illegible]	[illegible]	0
" Page	9	0	0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed

Telephone Numbers:

Editorial and Printing Depts. .. .. 131 Holborn

Advertising and Publishing Depts. .. 2148 Holborn

Offices: 148 and 149, Aldersgate Street, Lon

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

HEAD GARDENER.—S. GILLTHORPE, over two years foreman to the Right Hon. the Earl of Northbrook, Stratton Park, Micheldever, Hants, previously foreman Kylemore Castle, requires situation as above. Thorough experience in all branches; highest recommendations; disengaged when suited.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited; excellent references. Address Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working, where three or more are kept).—Mr. LAST, The Gardens, Homewood, Chislehurst, Kent, can with every confidence recommend his Foreman, W. WAITE, as above; 13 years' experience, gained in good establishments; five years present situation. Married when suited.

GARDENER (Head Working).—Mr. GOULD, Shernfold Park, Frant, Sussex, highly recommends his Foreman, A. DAY, as above; thorough practical experience Inside and Out; excellent references; age 30.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working, of two or three).—Mr. Clarke, Oakwood Gardens, Bath, highly recommends his Foreman, G. Longman, as above; 16 years' practical experience; age 29; married when suited. Apply LONGMAN, Stoney Stoke, Bruton.

GARDENER (Head Working, where two or three are kept); life experience Inside and Out; good references; disengaged; age 38; married, no family. C. DOMAN, 1, Addington Road, Reading.

GARDENER (Head Working, where two, three, or four are kept); 20 years' experience, Inside and Out; age 35; married; two children; youngest six. H. TEER, The Gardens, Bark Hart, Orpington, Kent.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushroom, ridge or flat; Kitchen, Lawn, Flower Garden. Special Prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (Single-handed, or with help) seeks SITUATION; 14 years' experience; good references; age 27; married, no family. BISHOP, Stockwell Hall, Billericay, Essex. (No circulars.)

GARDENER (Single-handed or Second) seeks SITUATION; understands Fruit, Flowers, Vegetables; age 25; single; good references; seven years last place. STRUTT, 70, Croft Street, Ipswich.

GARDENER.—W. REEVES seeks SITUATION as single-handed, or with help; age 27; abstainer, 12 years' experience; 2 years present situation as Foreman to Earl Amherst, Montreal Gdns., Riverhead, nr. Sevenoaks.

FOREMAN (General), age 30; 18 years' experience in Stove and Greenhouse Plants, Fruit, and Carnations; good references. A. HAYES, 22, St. Nicholas Street, Droitwich, Worcestershire.

GARDENER (Under); private establishment or Grower Market Nursery; 14 years' experience, Inside and Out, private and nursery; good references. LEWINGTON, 169, High Street, Hampton Hill, S.W.

GARDENER or GROOM-GARDENER; 9 years' experience; ride or drive; age 34; good references. Apply F. FAUTLY, Little Barnetts, Leigh, near Tonbridge, Kent.

JOURNEYMAN, under Foreman, in plant or fruit houses; age 20; 5 years' experience; Bothy preferred. W. INGRAM, Montreal Gardens, Sevenoaks, Kent.

JOURNEYMAN (Inside) seeks SITUATION, six years' experience, inside and out; good references; Bothy preferred. E. ARCHER, Ockham, Woking, Surrey.

YOUNG MAN (19½) seeks SITUATION, Inside (or Inside and Out); excellent character; willing worker; Bothy preferred. V. MEPHAM, 3, High Path, Merrow, nr. Guildford, Surrey.

TO FLORISTS and FRUITERERS.—Disengaged MANAGER requires situation; seven years' experience; good salesman, window dresser, and maker-up; excellent references. CUSSONS, care of Rennison, Low Bondend, Knaresborough.

Situations Vacant.

EXPERIENCED GARDENER Wanted, used to heavy clay soil, to take charge of garden, 2 small greenhouses and supervise odd man and boy. Preference given to man who can run small oil engine. Apply A. GALLOPS, Homestead, Ditchling, Sussex. (Burgess Hill 2½ miles).

GARDENER wanted immediately for Canada. Wages 40 dollars (about £2 a week); competent; good references. Address in first instance to A. BOWDER, 37, Southampton Street, Strand, London, W.C.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For JUNE 24, 1911.

Please Repeat my Advertisement.

Name..

Address..

....

Date...................................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue

MACKENZIE & MONCUR
LIMITED
HOTHOUSE BUILDERS
Heating, Ventilating & Sanitary Engineers
& Ironfounders

SURVEYS & ESTIMATES
arranged for in any part of the Country.
Write for our NEW CATALOGUE before placing orders for Hothouse Work.
EDINBURGH
LONDON GLASGOW

THE ROSE-GROWER'S VADE MECUM.

Seventh Edition, Including New Features and Illustrations, and Revised List of 1,700 Different Roses.

ROSES
AND THEIR
CULTIVATION
By T. W. SANDERS, F.L.S.

200 Pages. 16 Plates. Frontispiece and 67 Illustrations.

2/6 Net; By post, 2/10.

A Complete Guide to the Selection and Culture of
STANDARD ROSES. CLIMBERS FOR PERCOLAS.
PILLAR ROSES. POT ROSES.
GREENHOUSE CLIMBERS. DWARF ROSES.
RAMBLING ROSES. ROSES FOR EXHIBITION.
ROSES FOR TRELLISES. &c., &c.

LIST OF 1,700 CULTIVATED ROSES:
Showing Variety, Section or Class, Date Introduced, Colour, Habit of Growth, How Best Grown, Mode and Time of Pruning, Description of Flower.

ORDER FORM.

To the Publishers of "The Gardeners' Magazine,"
148 & 149, Aldersgate Street, London, E.C.

Please send me a copy of "ROSES AND THEIR CULTIVATION" by post, for which I enclose remittance of 2/10.

Name……………………………………………

Address……………………………………………

J. WEEKS & Co. (CHELSEA),

Telegrams: "Hortulanus, London."
Telephone: 5047 Westminster.

The First Established Horticultural Building Firm in 1808. Foremost in 1911.

PATENTEES AND MAKERS OF WEEKS' PATENT "DUPLEX" UPRIGHT TUBULAR BOILERS.

ERECTED FOR CAPT. DALGETTY, LOCKERLEY HALL, ROMSEY.

THE MOST PERFECT SYSTEM of GLAZING

is our latest "Challis" system, as illustrated

NO BARS. MORE LIGHT. NO DRIP.
NO OUTSIDE ROOF PAINTING OR PUTTY.

It has not the disadvantages of some other systems which involve great loss of heat, rattle in windy weather, and broken glass.

THE COST IS LESS THAN OUR STANDARD CONSTRUCTION. LET US SEND YOU A PRICE TO COMPARE WITH OTHERS.

We only use best materials, and spare no effort to uphold our reputation for first-class work, at lowest prices.

CATALOGUES, PLANS AND ESTIMATES, FREE.

Please address all Letters to HEAD OFFICE 72, VICTORIA ST., WESTMINSTER, S.W.

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 3,008. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, JUNE 24, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S SEEDS FOR JUNE SOWING.—Finest strains of Antirrhinums, Aquilegias, Campanulas, Canterbury Bells, Calceolarias, Cinerarias, Delphiniums, Hollyhocks, Lupins, Pansies, Primulas, Stocks, Wallflowers, etc. Special list on application. BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

DOUGLAS'S PERPETUAL CARNATIONS (British and American). Magnificent Stock of robust plants, now ready, all in perfect health, and guaranteed to give satisfaction. From 9s. per dozen. J. DOUGLAS, The Carnation Specialist, Edenside, Gt. Bookham, Surrey.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, S.W., wishes to call the attention of his customers, and of gardeners generally, to his Fruit Tree Protectors. Photographs and Blueprints of these, with prices, will be sent on receipt of a postcard, telephone message (201 Western), or wire, "Gray, Chelsea, London."

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

GREENHOUSES and GARDEN FURNITURE. — Distinctive Designs and Finished Workmanship. Write NOW for illustrated Catalogue. CARTER and HOWARD, Fife House, Kingston-on-Thames.

MUSHROOMS.—Now is the time to plant Spawn in pastures. To protect the crop by making it a cultivated one, get BARTER'S Specially-prepared Spawn, with instructions, in 10s. 6d., 21s., and 42s. cases. Carriage paid. Cash with orders to
JOHN F. BARTER, LTD., Wembley, Middlesex.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.
H. BURNETT,
Carnation Specialist, Guernsey.

PERENNIALS, UNIQUE COLLECTION,
including
ALPINES AND AQUATICS.
Also RARER SHRUBS, HIMALAYAN RHODODENDRONS, and Others.
Write for Catalogue. G. REUTHE, Keston, Kent.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-work, showing screens, wall panels, window surrounds, arches, arbors, etc., post free. BOULTON and PAUL, Ltd., Norwich.

FRUIT SAVED.—GARDEN NETTING as supplied by us to the Royal Gardens. SMALL MESH, satisfaction or cash returned, 100 by 1 yd., 3s. 3d. Any length and width supplied. Cheaper quality, 50 yds. 1s.
POTTER BROS.,
Dept. M, Net Makers, Shrewsbury. Est. 1855.

GREENHOUSE PAINTING and GLAZING.—"Vitrolite," superior to White Lead Paint 3s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

WEBBS' CHOICE FLOWER SEEDS
FOR PRESENT SOWING.
Rose Queen Antirrhinum (rosa), 1s. per pkt.
Sceptre Antirrhinum (crimson), 1s. per pkt.
Guinea Gold Antirrhinum (yellow), 1s. pkt.
Golden Spur Aquilegia (golden yellow), 1s. pkt.
Pink Beauty Sweet William, 1s. per pkt.
Invincible Sweet William (mixed), 1s. per pkt.
Giant Crimson Polyanthus, 1s. per pkt.
Giant Yellow Polyanthus, 1s. per pkt.
Universal Wallflower (mixed), 1s. per pkt.
Double Mixed Wallflower, 1s. per pkt.
WEBB AND SONS, The King's Seedsmen,
WORDSLEY, STOURBRIDGE.

BUNYARD'S CATALOGUES
Free on Application.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting

KENT STRAWBERRY PLANTS
NEW CATALOGUE READY.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

LAXTON'S FRUIT TREE, STRAWBERRY, SEED, ROSE, HERBACEOUS, TREE, BULB, and SMALL FRUIT CATALOGUES, with full illustrations and descriptions, gratis on application.

LAXTON BROTHERS, Bedford.

RUSTIC SUMMER HOUSES, trellis-work, Fencing, Pergolas, Arches, Seats, Bridges, Log Cabins, Loggias, etc. Send for our new LOG CABIN and RUSTIC CATALOGUE (just published), sent post free. BOULTON and PAUL, Ltd., Norwich.

CLAY'S MANURES, CRUSHED BONES
(See page iv.)
CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

POULTRY AND KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

NOTICE — Always use PORTER'S IMPROVED COIL STAKES for Carnations, no tying required; last a lifetime. Sample doz. with price list 1s., carriage paid. A. PORTER, Stone House, Maidstone.

PROTECT YOUR FRUIT.—Herring Nets, 120ft. by 40ft., inch mesh, whole and fresh, 7s. 6d. each, cash with order. Satisfaction guaranteed or money returned. REID, Denmark Street, Fraserburgh.

CONSERVATORIES AND WINTER GARDENS, Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue free.—BOULTON and PAUL, Lim., Norwich. See our Stand at the Royal Agricultural Society's Show, to be held at Norwich in June.

GARDEN ROLLERS, double cylinders, solid ends, rounded edges 14in. by 14in., 1¾cwts., 24s. 6d.; 16in. by 16in., 2cwts., 26s.; 20in. by 20in., 3cwts., 36s.; 24in. by 24in., 4½cwts., 50s. each; carriage paid any station in Great Britain. Lists free. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

SUTTON'S PINK BEAUTY SWEET WILLIAM.—Beautiful salmon-pink colour. This variety deserves to be grown in every garden.
Per packet, 1s. and 1s. 6d. post free.
"Mrs. BRACE must say how splendidly Sutton's Pink Beauty Sweet William is blooming. Crowds of people come to see it in her garden."—Sunnycroft.

SUTTON'S SCARLET SWEET WILLIAM.
A most remarkable colour. Flowers being of an intense scarlet.
Per packet, 1s. and 1s. 6d., post free.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
From ———, Esq., Guildford.
"I may say that your Illustrated Catalogue is without doubt the finest book of the sort I have had the pleasure of seeing."

WHY BUY FOREIGN DOORS?—We make all kinds of woodwork to compete against foreign. Timber, portable houses, woodwork supplied for United Kingdom or export. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

GARDEN NETTING (best tanned only).—25 yds. x 8yds.; 50 x 4yds.; 100 x 2 yds., 8s. each. 50 x 2 yds.; 25 x 4 yds.; 100 x 1 yd., 4s. each. All sizes, large or small, at 1s. 20 sq. yds. Quality guaranteed.—EVANS, 14, Beresford Rd., Lowestoft.

ORCHID PEAT.—Hardwood Brown Fibrous, RHODODENDRON and DUST PEAT, SPHAGNUM MOSS.
Apply C. HALL, 1, Worgret, Wareham, Dorset.

JAMES SENDALL and CO., Cambridge; Conservatories, Vineries, Garden Frames; Heating Engineers. Surveys made, and Plans prepared to suit any position. Illustrated List free. Telegrams: "Sendall, Cambridge." 'Phone. 511.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page iii.

CARNATIONS.—Spiral Wire Stakes. No tying required. Will last a lifetime. 24 inches long, 7s. 6d. per 100; 30 inches, 8s. 6d. per 100; 36 inches, 10s. per 100; sample doz., 1s., 1s. 3d., and 1s. 9d., all carriage paid. Pea Trainers 6ft. by 4ft., 2s. and 3s. each. Garden Archways, Garden Edge and Croquet Bordering, 8 inches high, 8d.; 10 inches high, 10d. per yard. All cash with order. Catalogue free on application. J. PENKETH, Iron and Wire Works, Market Place, Manchester. Telp.: 3695 City.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.
XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.
XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown both poisonous and non-poisonous are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N.S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

BEDDING PLANTS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Chrysanthemums, Dahlias and Summer-Bedding Plants.

CARNATIONS.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS.
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

ROSES.

R. H. BATH, Ltd.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

SAMUEL M'CREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

W. ARTINDALE & SON

Nurserymen, **SHEFFIELD**

MAKERS and DESIGNERS
: of ALPINE GARDENS :

Old English Flower Borders.
Experts sent to any part.
Enquiries invited.

Our instructive and comprehensive list of Beautiful Hardy Plants sent on application. Over 200 pages of valuable information.

Primulas! Primulas! Primulas!

41st Year of Distribution.

OUR WELL-KNOWN MAGNIFICENT STRAIN,
1/6 doz.; 2 6 25; 10 - 100. Package and Carriage Free.
Primula Obconica Gigantea Cineraria (Large-flowered) and **Stellata** at same prices.

JOHN STEVENS & SON, COVENTRY.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.
Our Work has stood the test of time.

MERRYWEATHER'S

614 PUMP

IS THE

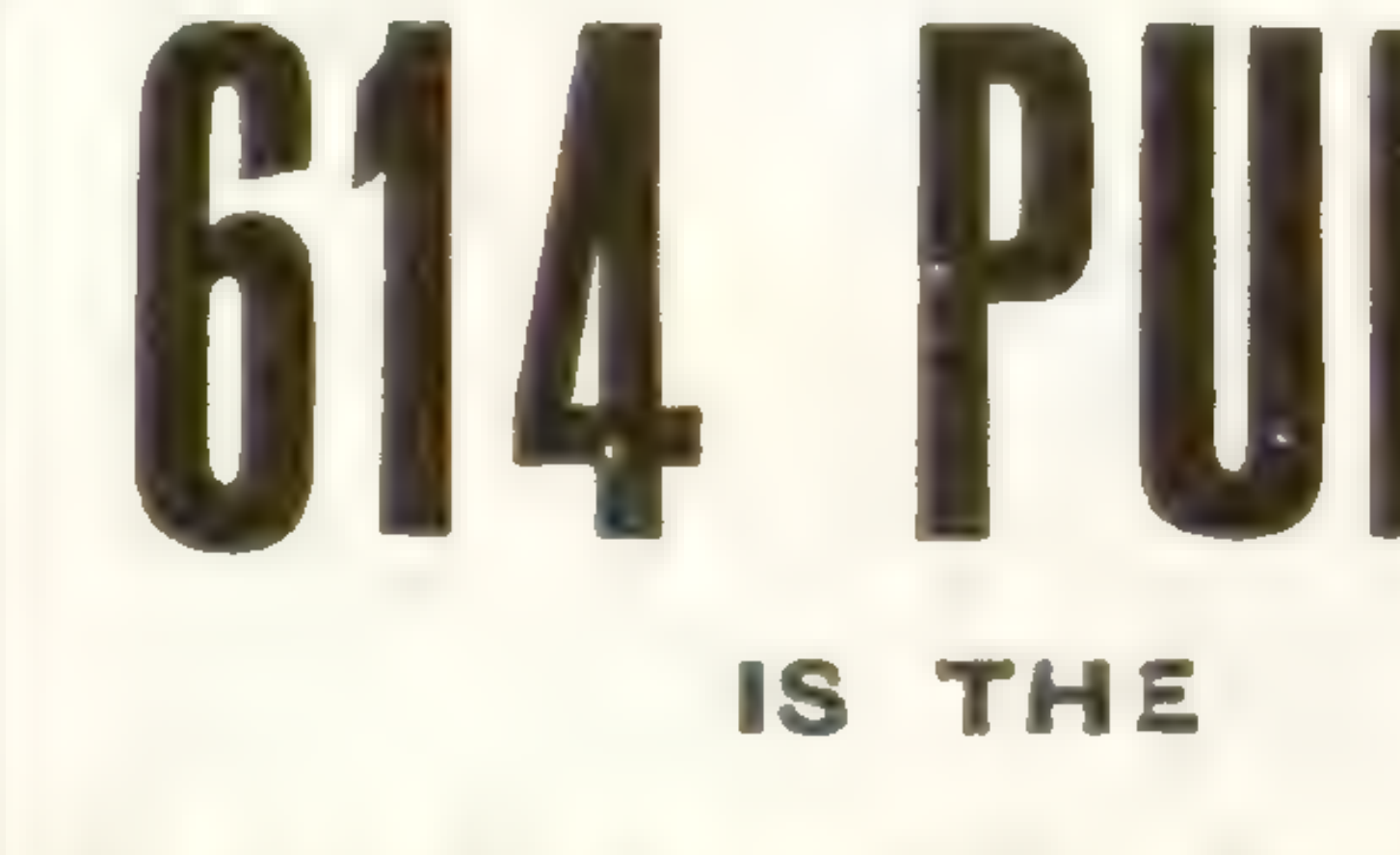
Gardener's Friend.

Easy to Work.
Simplicity Itself.

Write or Call—

63, Long Acre, LONDON, W.C.

IDEAL, 5 feet long.



In best redwood, painted two coats white

£1 : 7 : 6.

Delivered any Station.

Full catalogue on application

PETER PATRICK & SON, OTLEY, YORKS.

AMERICAN TREE CARNATIONS

The Newest and Best Varieties.

Strong, healthy and well-rooted plants only supplied

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

ORCHIDS, ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

BOTTLING FRUIT.

Patent Apparatus Complete. **5/6**

Efficient, Reliable, Simple, Easily Operated.
WICKHAM and Co., Dept. M, Ware, Herts.

BEGONIAS.—Started Begonias, 12s.; 16s. 100. Gerberas, Adnet's Hybrids, Seed, 1s. 6d.; plants, 15s., 20s. doz. Japanese Davallia Ferns, Badgers, Elephants, Rabbits, Squirrels, Monkeys, Balls, etc., from 2s. ELLISON, 57, West Bromwich.

GARDEN NETTING. — Protect your Strawberries from the ravages of birds. Small mesh, 40 yds. long, 2 yds. wide, 2s.; 40 x 3, 3s.; 40 x 4, 4s.; 40 x 5, 5s.; 40 x 6, 6s.; carriage paid on orders of 5s. and over. HENRY ROBINSON, Net Works, Rye, Sussex.

GARDEN NETS, Tanned, best quality, extra small mesh, bound all round, 56 yards by 15, 21s.; smaller sizes, ½d. sq. yard, for cash with order. TRAINER, St. Monance, Fifeshire.

CHARGES FOR ADVERTISEMENTS IN THE GARDENERS' MAGAZINE.

	£	s.	d.
Five Lines and under	£0	2	6
Per Line beyond	0	0	6
,, Inch	0	6	0
,, Half Column	1	10	0
,, Column	3	0	0
,, Page	9	0	0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situati vacant are charged 1s. for 32 words.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— & Co.

Telephone Numbers:
Editorial and Printing Depts. .. ... 331 Holborn.
Advertising and Publishing Depts. ... 2140 Holborn.

Offices: 148 and 149, Aldersgate Street, London.

Sales by Auction.

BRIDLINGTON.
TO BE SOLD BY AUCTION, by
MR. JOHN HERMON,
at
THE BRUNSWICK HOTEL, BRIDLINGTON,
on
THURSDAY, the 29th day of June, 1911,
at 3 o'clock in the afternoon precisely.

(Subject to the General Conditions of Sale of the Hull Incorporated Law Society, and to such other Conditions as may be then produced.)

ALL THAT FREEHOLD DWELLING-HOUSE, gardens, outbuildings, and premises thereto, situate and being No. 19, Church Green, Bridlington, in the occupation of Mr. William Wilson, with the good flower garden at the front and large kitchen garden at the rear, the latter being well stocked with choice fruit trees and vegetables, also piggeries, large shed, stables, and other outbuildings, the whole covering an area of Half an Acre or thereabouts.

ALSO ALL THAT FREEHOLD DWELLING-HOUSE situate and known as No. 18, Church Green, Bridlington, with the yard, garden, and premises behind the same.

ALSO THOSE PIECES OR PARCELS OF
FREEHOLD GROUND

situate in and adjoining Church Green, and Applegarth Lane, Bridlington, occupied as

MARKET GARDENS,

by Mr. William Wilson, with the greenhouses, stables, and buildings erected thereon, containing in the whole 2 acres 1 rood and 28 perches, or thereabouts.

Further particulars may be had, and permission to view obtained, on application to the Auctioneer; or to

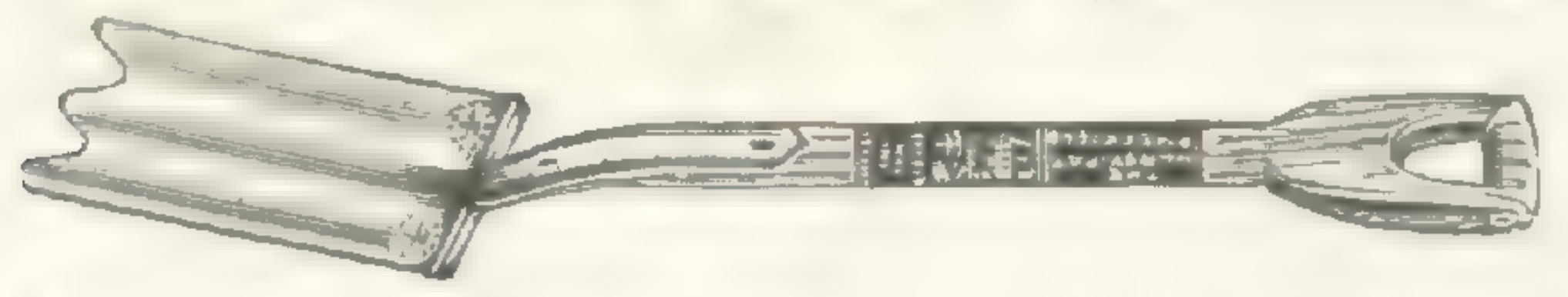
RICHARDSON, SON, and FAWCETT,
Solicitors,
Bridlington.

NOTICE.

The **AZALEAS** and **RHODODENDRONS** planted in Hyde Park, near Rotten Row, finest to be seen in London, are supplied by **ANTHONY WATERER**, whose only address is Knap Hill Nursery, Woking, Surrey.

No connection with any other firm of similar name.

A NEW GARDEN SPADE (Carter's Patent):



This is claimed to be the most effective Spade on the market Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

VAPORITE
KILLS SOIL PESTS

Write for illustrated and descriptive Booklet No. 45 post free to

VAPORITE STRAWSON, Co., Ltd.,
Dept. E, Spencer House. South Place, London, E.C.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to
EPPS & CO., Ringwood, HANTS.

ONCE USED. ALWAYS USED.

The 'PATTISSON' LAWN BOOTS

Simplest! Strongest! Most Economical!

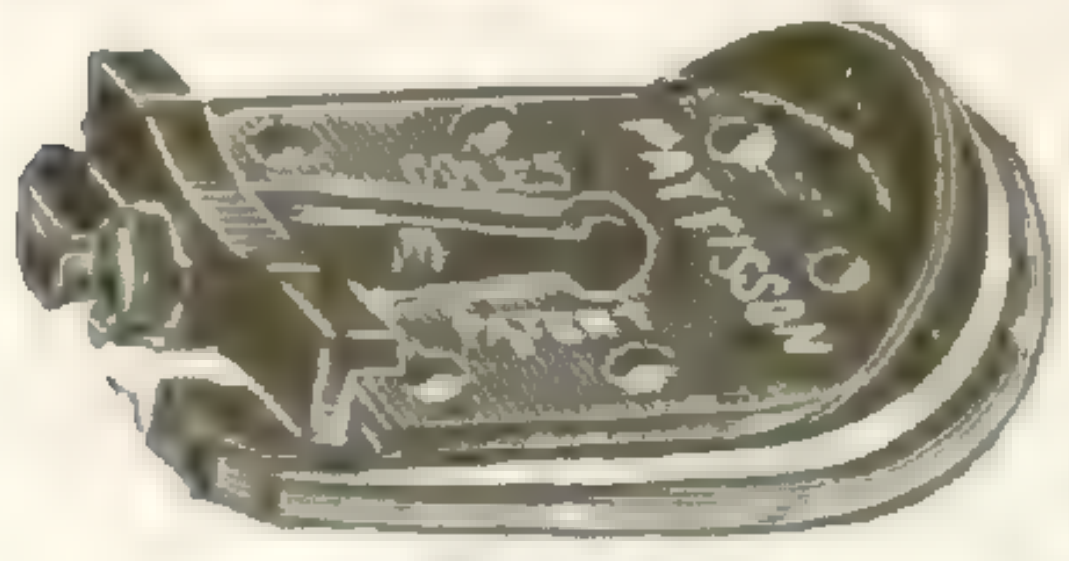


FIG. 1.

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS

Silver Medal—
Royal Horticultural Society.

HUNDREDS OF TESTIMONIALS.
The Field says: **"As good as any thing that could be devised."**

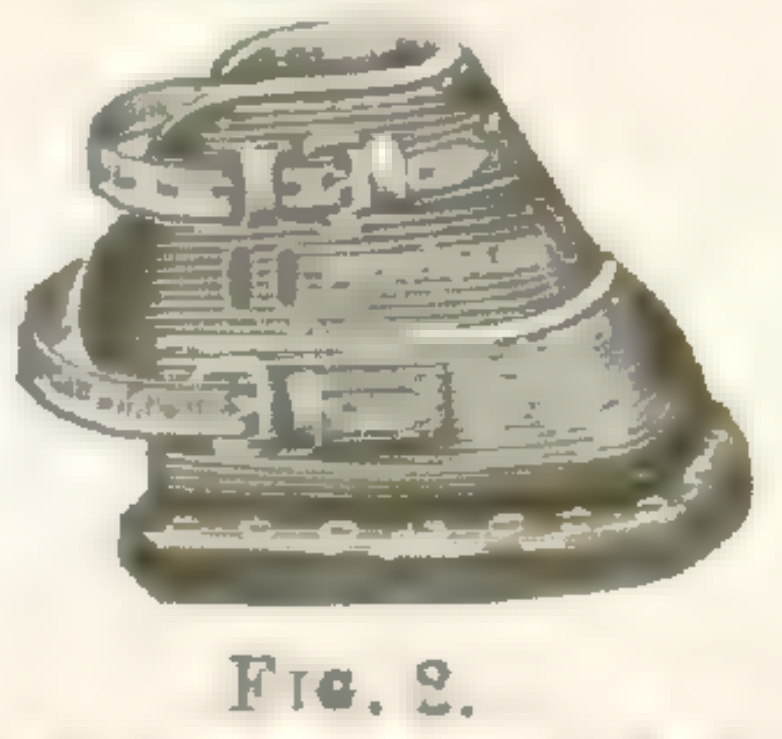


FIG. 2.

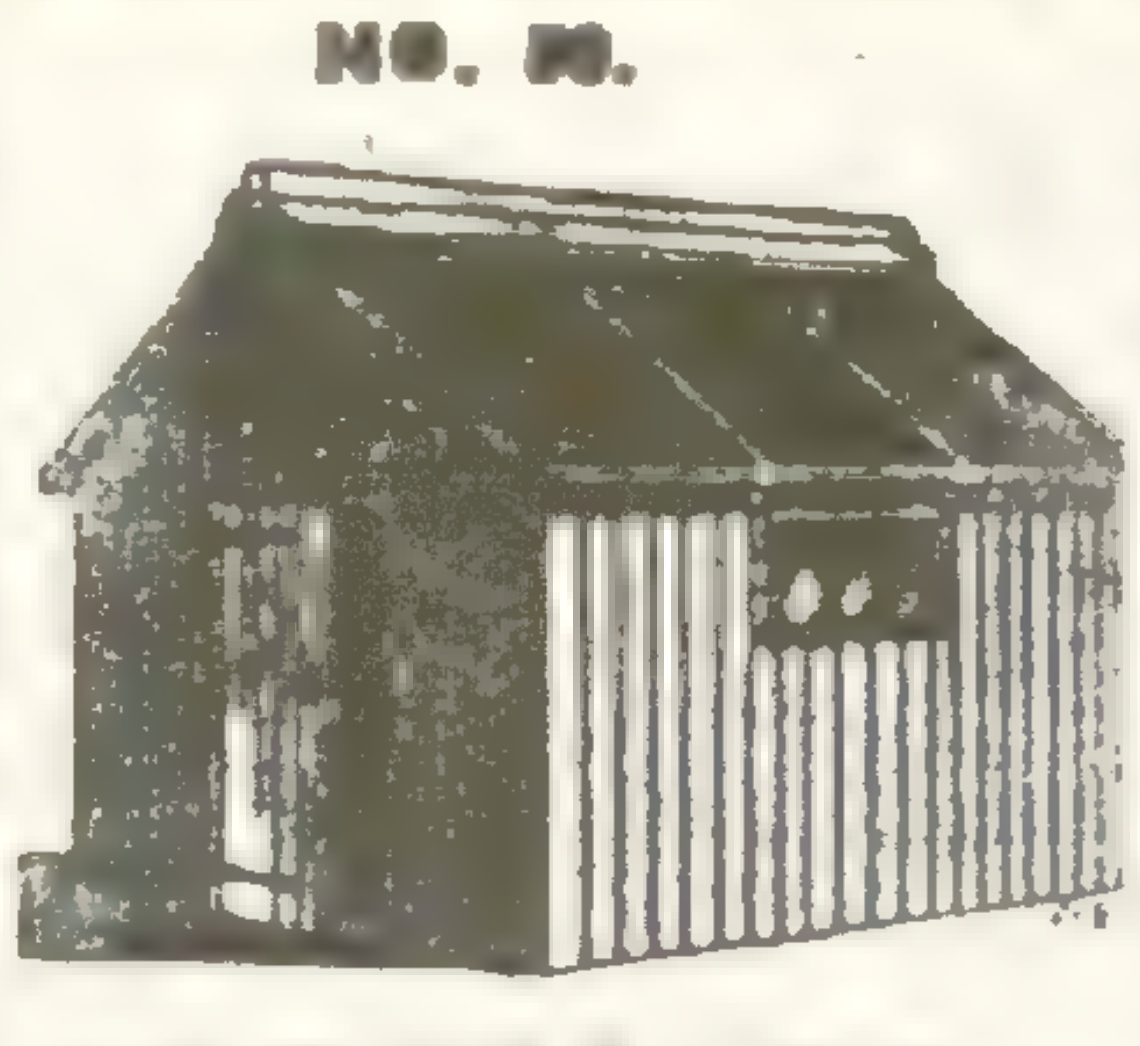
Illustrated Price List from—
H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM S.W.

SPAR GRAVEL for Paths, Drives, &c White, strong quality, broken and properly graded; also Rockery Stone.

BECK & CO., Stone Merchants, Matlock.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

PORTABLE BUILDINGS. Made in complete sections, best quality **Red Deal** (not inferior Foreign Match Boards as other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

SIZES.		Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
ESTABLISHED 70 YEARS. **BEDFORD.**
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

HAYWARD'S *Eureka* WEED KILLER

insures clean paths, best known and most satisfactory. It is no new experiment. A Weed Killer that can be thoroughly relied upon to keep paths clear for 12 months with one dressing is most helpful, but under-strength articles with no reputation are an aggravation. The "Eureka" is sold everywhere, 1/9 for 100 sq. yards, 6/- for 400 yards, 49/- for 4,000 yards; intermediate sizes at suitable prices. The "Eureka" Lawn Sand, Soilfume, Quassia Extract, Bordeaux Mixture, etc., have been in regular use for years, and there is no better value. If any difficulty in obtaining apply only makers, **TOMLINSON and HAYWARD, Ltd., Lincoln.**

"EUREKATINE"
is the satisfactory fumigant for destroying
Greenhouse Pests.

GARDEN AND TENNIS NETS (best tanned only, small mesh).—50 x 8yds., 17s.; 25 x 8yds., 50 x 4yds., 100 x 2yds., 8s. each; 100 x 1yd., 50 x 2yds., 25 x 4yds., 4s. each. Any size to order. Tennis Netting (corded), 25 x 2, 6s. 6d.; 25 x 3, 7s. 6d.; 25 x 4yd., 8s. 6d. Write for Price List. L. WREN and SON, Net Merchants, 139, High Street, Lowestoft. Established 1863.

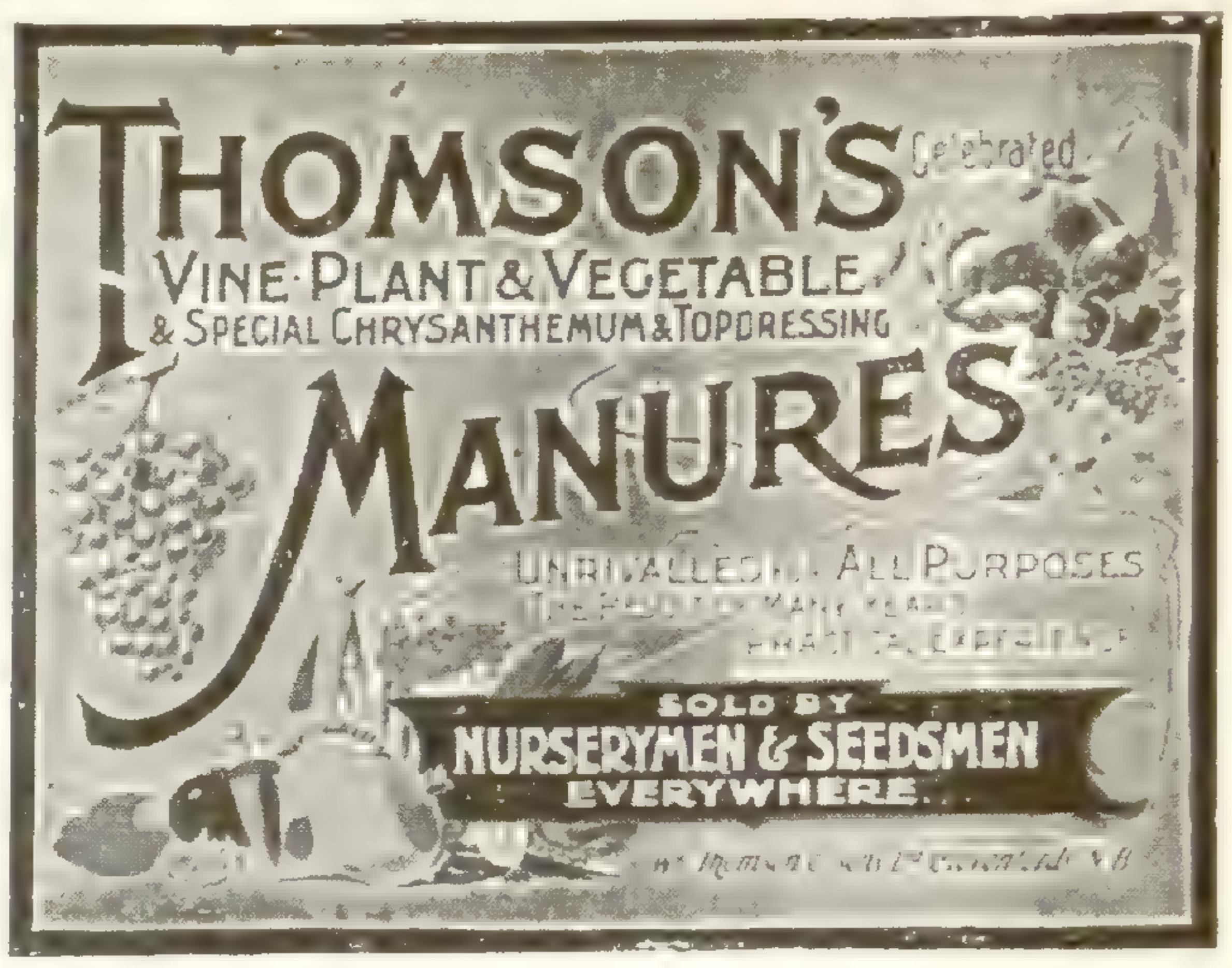
FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

PERPETUAL CARNATIONS.—Everyone interested in PERPETUALS should write for our 1911 Illustrated Catalogue, FREE. Read our "TREATISE ON CULTURE," 1s., post free. YOUNG and CO., Carnation Specialists, HATHERLEY, CHELTENHAM

RARE ALPINES CHEAP.—Profits devoted to Patriotic objects. Apply for list, LADY C., The Abbey, Much Wenlock, Shropshire, and please enclose fully addressed and stamped envelope.

THE NATIONAL HARDY PLANT SOCIETY.

CONSTITUTED for the encouragement, the extension and the improvement of Hardy Plant culture for the garden, for decoration purposes, and for exhibition. For particulars apply to the Hon Secretary—FRANK BOUSKELL, Market Bosworth, Nuneaton.



By Royal Warrants

To H.M. King George V. To H.M. Queen Alexandra.

The Best Remedy

FOR

MILDEW, GREENFLY, and all **INSECT BLIGHT,** is

Jeyes' Horticultural Wash

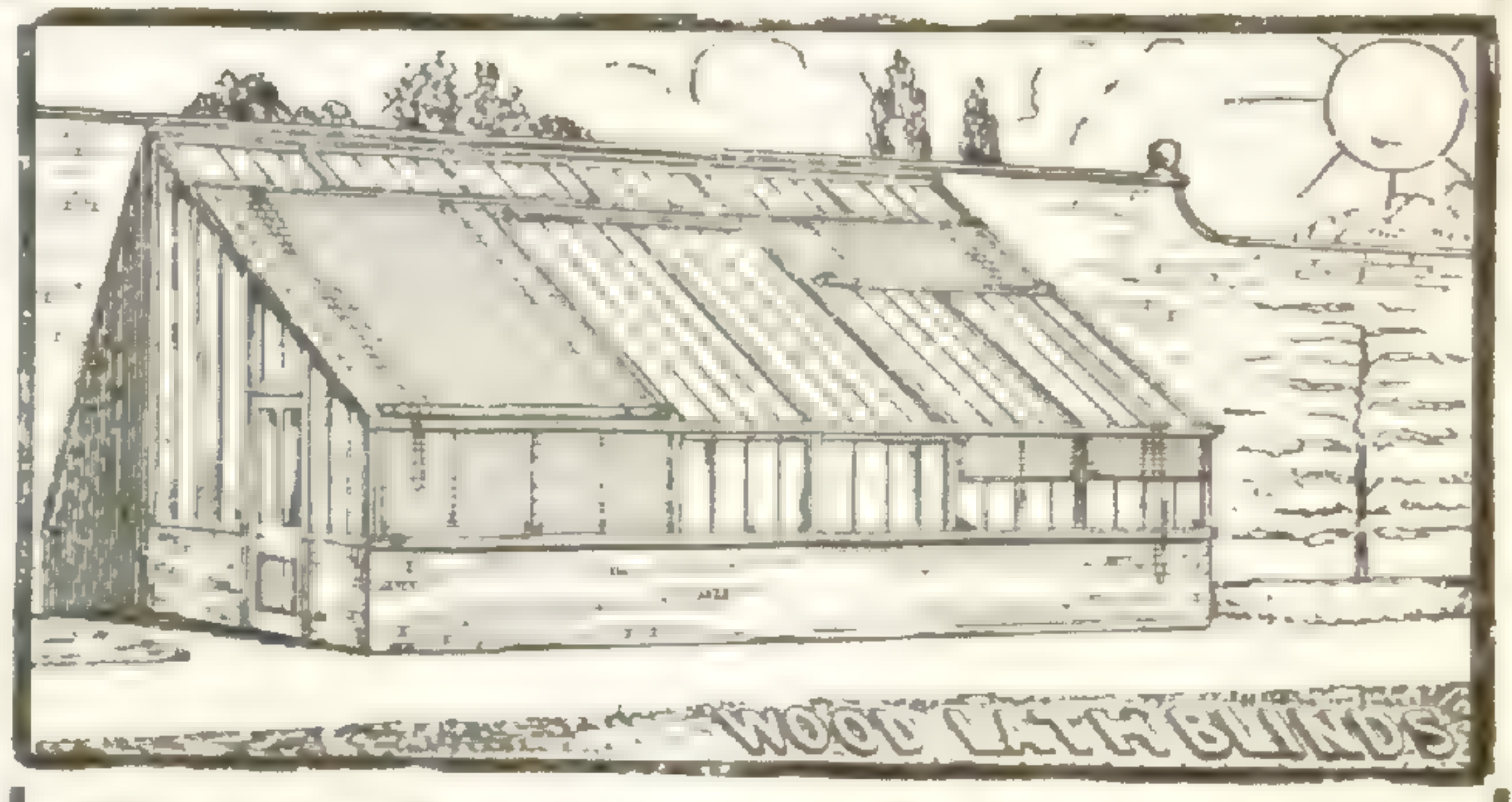
(Cyllin Soft Soap in liquid form).

Half Pints, Pints, Quarts, One Gall. Tins; also Two Gall., Five Gall., and Ten Gall. Drums.

From all Chemists, Seedsmen, and Florists.

Write for Pamphlet and Prices to
Jeyes' Sanitary Compounds Co., Ltd.,
64, Cannon Street, London, E.C.

WOOD LATH BLINDS.



Blinds for Greenhouses must admit part of the sunlight so essential to the healthy growth of Plants.
Our Wood Lath Blinds secure this advantage.

250,000 ft.
already supplied.
Send for Special Illustrated Catalogue.

MESSENGER & CO., Ltd.,
LOUGHBOROUGH.
London Office:
122, VICTORIA STREET, WESTMINSTER, S.W.

Please mention
THE GARDENERS' MAGAZINE
when writing to Advertisers.

GLASS. | GLASS. | GLASS.

NICHOLLS & CLARKE, LTD
Shoreditch, LONDON.

PAINT. Our List of PAINTS, COLOURS, VARNISHES, and BRUSHES on Application.
When sending please cut out this advt.

CLAY'S FERTILIZER

CROWNS THE CORONATION YEAR WITH FLORAL TROPHIES.

CLAY'S LONDON FERTILIZER
TRADE MARK.

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK, AS AT SIDE.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. Fourth Edition (Second Reprint). 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Stratford, London, E.

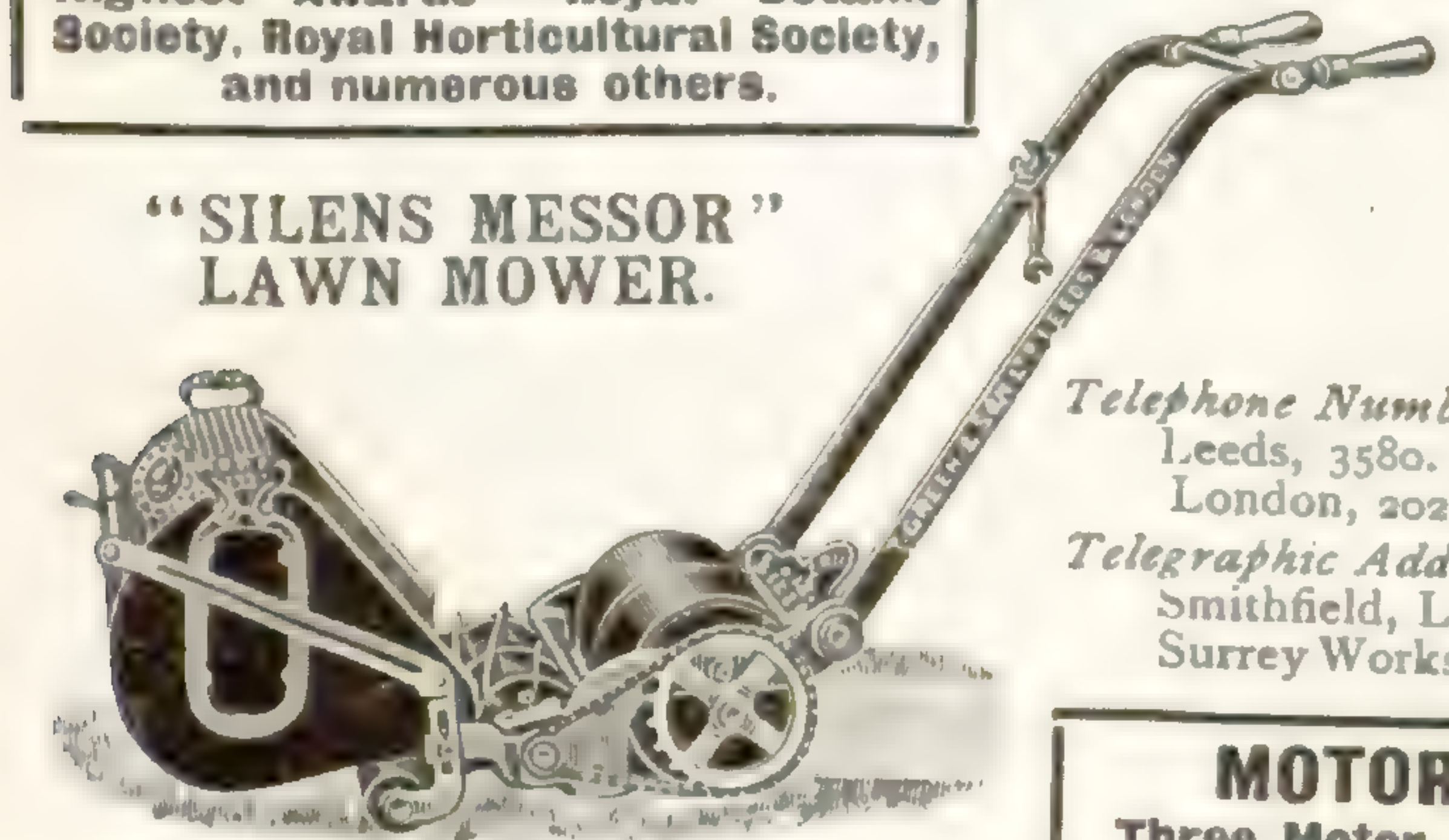
APPOINTED BY ROYAL WARRANT, HORTICULTURAL MACHINE MAKERS TO HIS MAJESTY KING GEORGE V.

GREEN'S LAWN MOWERS ARE UNEQUALLED.

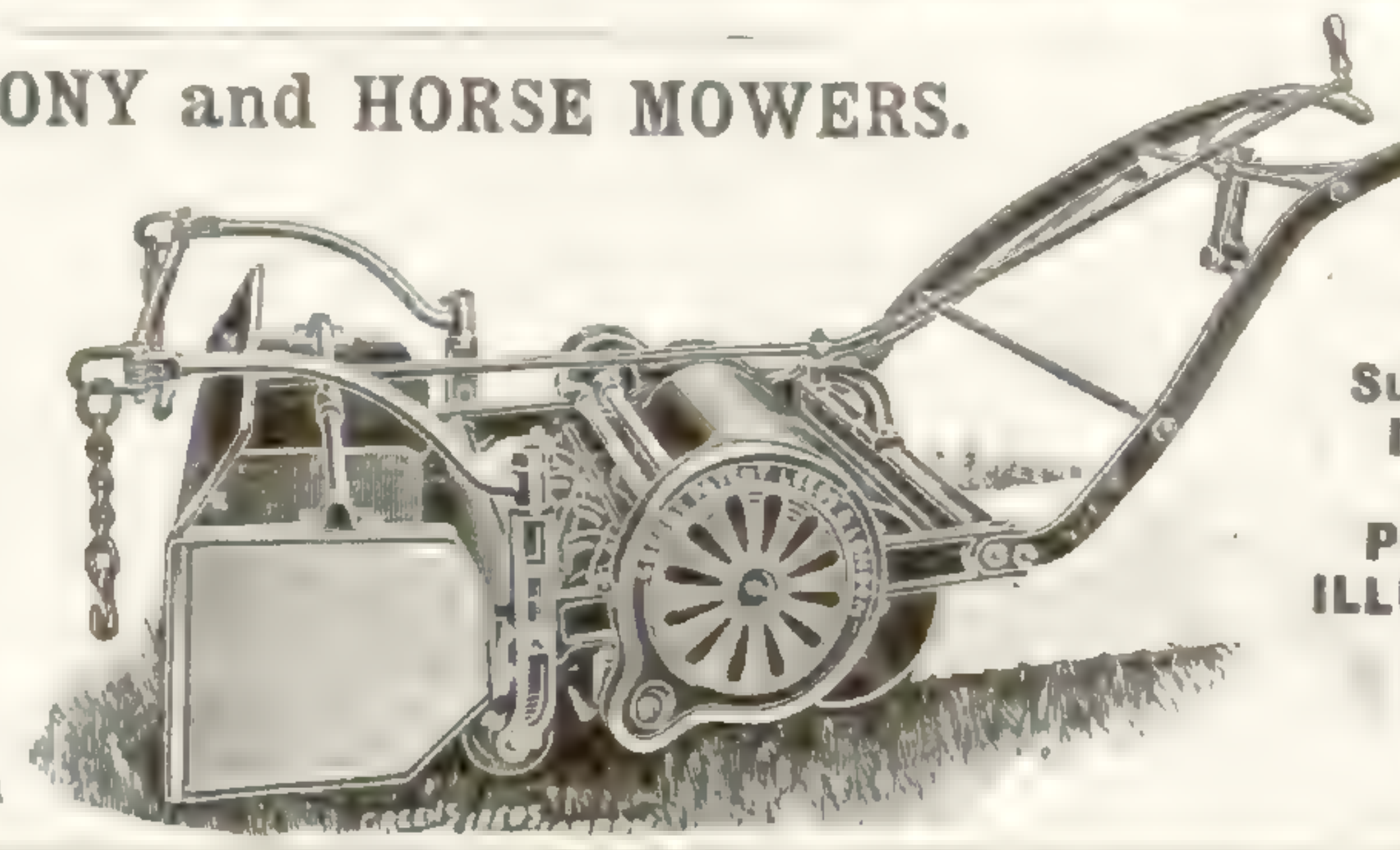
Hundreds of Thousands are in use. Established nearly a Century,

Highest Awards — Royal Botanic Society, Royal Horticultural Society, and numerous others.

"SILENS MESSOR" LAWN MOWER.



PONY and HORSE MOWERS.

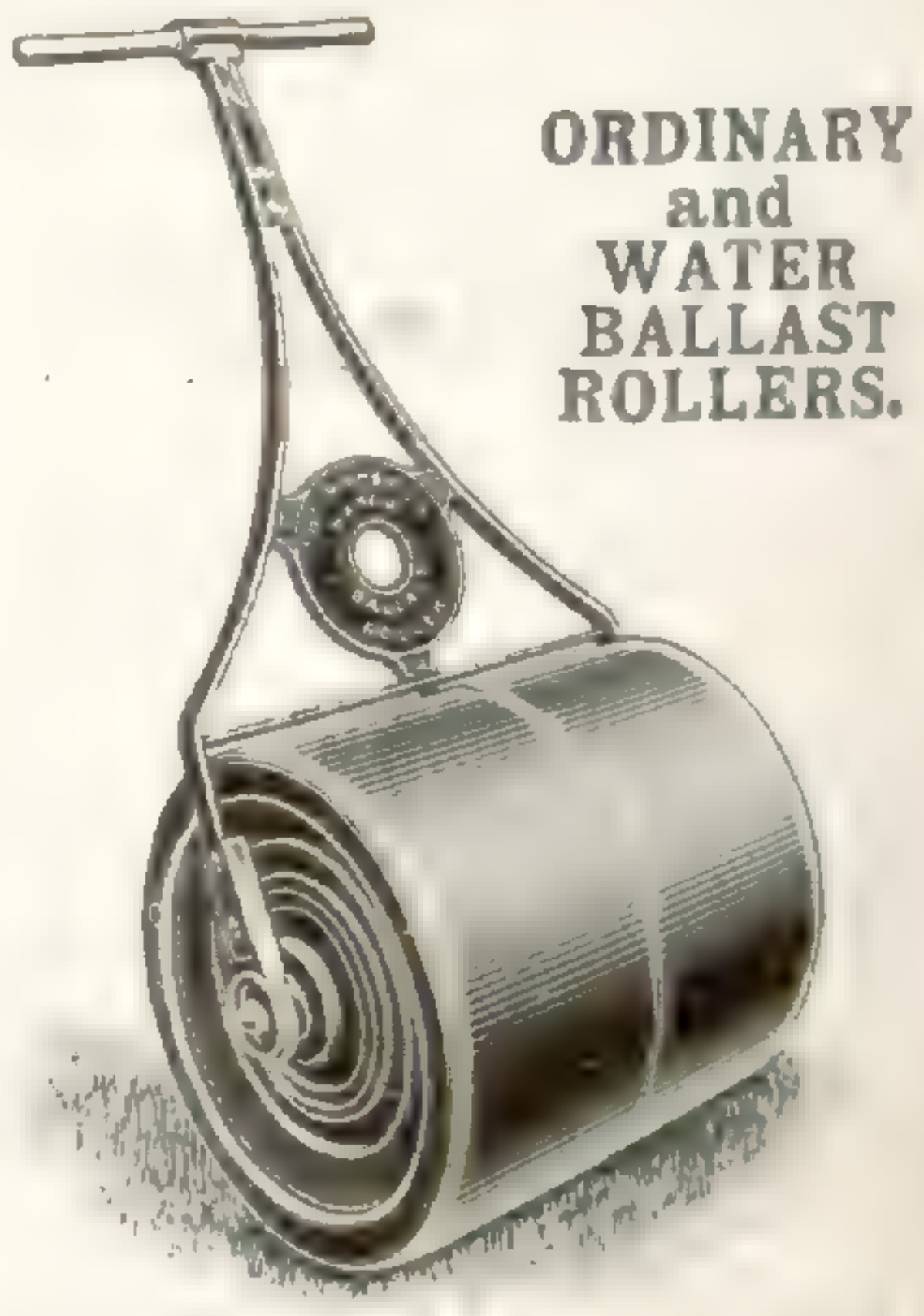


Telephone Numbers—
Leeds, 3580.
London, 2022 Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London

Supplied by all Ironmongers.

Please write for ILLUSTRATED PRICE LIST No. 1 FREE.

ORDINARY and WATER BALLAST ROLLERS.



MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E.

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant — Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

SMITH'S WEED KILLER

is absolutely "PERFECT."

4 Tins of Powder or
4 Gallons of Liquid
to make 100 Gallons.
6/6 Carriage Paid.

MARK SMITH, Ld. *Louth, Lincolnshire.*

THE FAVOURITE WEED KILLER.

SANDWITH'S
PREMIER
WEED
KILLER

As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for **6/-**; drum, **2/-**. 12 galls. for **16/-**; drum, **6/-**. 20 galls. for **26/8**; drum, **10/-**. 40 galls. for **50/-**; drum, **20/-**.

EITHER LIQUID OR POWDER.

Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,
The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

FOR ROSE MILDEW
use

V2K FLUID

THE BEST REMEDY FOR THIS PERSISTENT PEST.

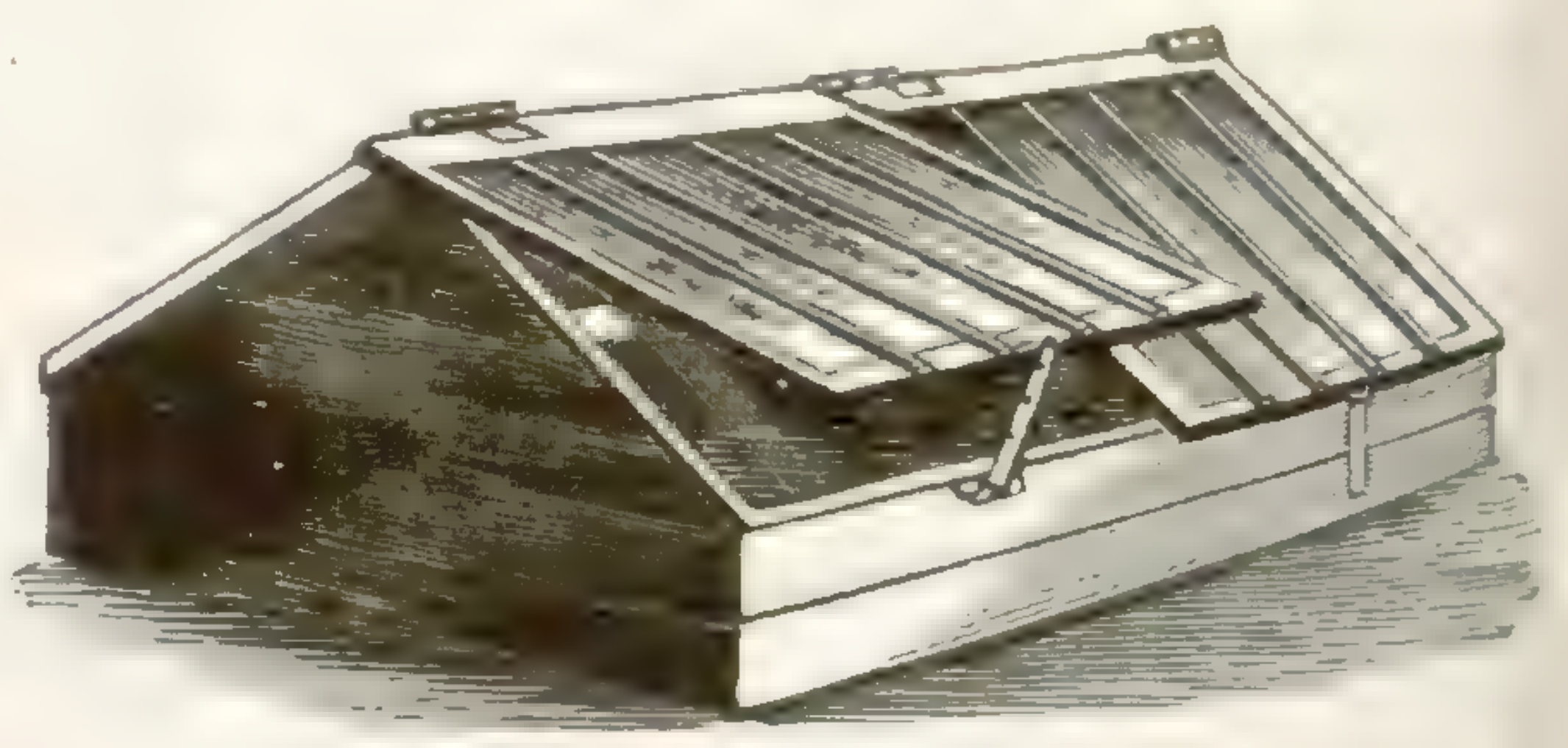
Does not discolour the foliage.

OF AGENTS EVERYWHERE.

Sole Mfrs., Willm. Cooper & Nephews, Berkhamsted.

PORTABLE PLANT FRAMES

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices. Glazed and Painted.

		£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. ,, 4ft. ,,		2	5	0
6ft. ,, 5ft. ,,		2	15	0
12ft. ,, 4ft. ,,		4	0	0
12ft. ,, 5ft. ,,		4	15	0
12ft. ,, 6ft. ,,		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
ROYAL HORTICULTURAL WORKS,
MIDDLETON, MANCHESTER.

ORCHIDS

EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

VOL. LIV.—No. 3,008. SATURDAY, JUNE 24, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

◆

The Water Supply of Gardens.

MR. NORMAN DAVIS.

Although the comparatively long period of dry weather that has been experienced over a wide area this summer has not been so injurious in its effects upon garden crops generally as some of the droughts of the past decade, it has been sufficiently harmful to seriously affect most kinds of vegetation, and to materially add to the anxiety and the work of those engaged in garden management. The crops of several kinds of hardy fruits have in many cases been appreciably reduced by the trees shedding many of their fruits owing to an insufficiency of moisture in the soil, and the injury arising from this check has been accentuated by the infestation of the new growth by insect pests. In the kitchen garden some of the crops, and especially where the value of deep cultivation is not fully appreciated, have experienced so severe a check as to leave no doubt as to their being below the average, both in quantity and quality. The effect of the drought is not less pronounced in the flower garden and pleasure grounds than in the kitchen garden and fruit plantations; and hardy herbaceous plants are showing signs of distress which, we trust, may be greatly mitigated by the showers that are falling as we write. Lawns that should now be of the richest green and in the best possible condition for garden games have become somewhat bare, and assumed a colour that is far from pleasing to the eye and quite unsuitable as a setting to ornamental plants, whether remarkable for the beauty of their flowers or the distinctive character of their leafage. Deep cultivation, by enabling plants to send their roots down into the soil, is of immense value in relation to the amelioration of the effects of long-continued dry weather, and the frequent stirring of the surface with the hoe will render valuable aid in checking excessive evaporation, and thereby conserving the moisture in the soil. We have abundant evidence in this, as in previous seasons, of the value of deeply stirring the soil when in process of preparation, and of maintaining a loose surface during the season of growth; but there is a point at which they cease to render much assistance, and that is when the moisture contained in the soil is practically exhausted. To ensure a full measure of success in the cultivation of useful crops and ornamental plants there must be a liberal amount of moisture within reach of the roots, and for this reason, as soon as the rainfall becomes insufficient for the needs of the plants, the deficiency must be made good by means of water obtained from artificial sources. This, under the most favourable conditions entails a considerable amount of labour, but when, as in many gardens, the supplies have to be obtained from some distance and applied with a watering-can, the work of watering is very heavy. Having regard to this fact, it is surprising the water supply of gardens should in so many cases have failed to receive the attention its importance would justify. Much good work is annually done with the water-barrow and watering-can, with a distant pond or pump as the source of supply; but the use of such old-fashioned appliances involves a very heavy expenditure of labour—and in this connection labour means money—as compared with a modern system by which the greater proportion of the watering in the open can be done with no more labour than is involved in the manipulation of the ordinary garden hose. The difference in the cost of supplying the occupants of the garden with water under the old and the modern systems is great, but this is not the only point that should have careful consideration. The chief point is the efficiency of the supply, and it is well-nigh impossible in the case of fruit and other trees, and some of the deep-rooting crops, to give supplies that are equal to their needs. It may, of course, be done, but in periods of drought the demands upon the water supply are so great that it is difficult for those in charge to avoid having their attention diverted from those objects requiring exceptional quantities before their requirements have been fully satisfied. To ensure the watering in gardens being done cheaply and efficiently, a well-devised system of water distribution that is in accordance with the more advanced views on garden planning must be provided. This need not be costly, but it should be so far complete as to render it unnecessary for water to be carried any considerable distance when there is an occasion for its application by means of a watering-can, as in the case of newly-sown seeds, and to admit of watering generally being done with a hose. To accomplish this it will be simply necessary to have a system of pipes extending over the whole of the area, and fitted with standards about two feet in height at convenient distances apart, to which the hose can be fitted or from which water can be drawn as may be desired. With such a system it will not only be possible to readily supply growing crops, fruit trees, ornamental plants, etc., with water at the roots, but it will be possible to thoroughly wash fruit and other trees, shrubs, etc., overhead with but little trouble, and thus rid them of insect pests that in a period of drought do so much damage. The source of the water supply will depend upon circumstances, but in country districts a wind motor of a suitable size will be invaluable for raising large quantities from deep wells at a small cost, while various other motors may be utilised. In such cases, the water should be pumped into a tank formed high enough to ensure its flowing by gravitation over the garden, with sufficient pressure to admit of it being utilised in the overhead washing of trees of moderate height. In suburban districts the public supply will, as a rule, be utilised; and, with reference to gardens in such districts, it may be said that seldom is the moisture in the soil during the season of growth equal to the requirements of the majority of the objects that come under the gardener's care, owing to the rapidity with which rainwater is carried off by the surface drainage. The more thorough watering of trees, shrubs, plants, etc., growing in the open in suburban and town gardens would remove many of the difficulties with which gardeners have to contend; and in country gardens fruit trees and ornamental climbers trained to walls would derive much assistance from more liberal supplies of water than it is possible to give them under the old methods.

Mr. Norman Davis, of Framfield, Sussex, bears a name that is famous wherever chrysanthemums are grown. He is not only a splendid cultivator of the Autumn Queen, but he is a capital exhibitor, and a prominent raiser of fine exhibition, as well as useful decorative varieties. Many years ago he had a nursery at Camberwell, but ere long he entered business on a large scale, and amid the brighter surroundings and kindlier climate of Framfield. Here, ably assisted by his son, Mr. Algernon Davis, the business has developed, and other things besides chrysanthemums are grown, and with equal skill. Mr. Davis has won gold medals galore, and many lovers of chrysanthemums will remember his delightful groups at the old Royal Aquarium, at the Crystal Palace, at Birmingham, and elsewhere. Certificates and Awards of Merit have also fallen to his share in large numbers. Mr. Davis has always taken a keen interest in the work of the National Chrysanthemum Society, and from time to time has rendered valuable assistance to that body. He has a strong belief in the future of "big blooms," and his very able paper on "Japanese Chrysanthemums for Exhibition," contributed to the N.C.S. Conference, held at Essex Hall last autumn, and published in our issues of December 24 and 31, 1910, is the last word on a subject with which Mr. Davis is quite au fait, for no one has continuously shown fine blooms over a long series of years like he has. We hope to see many fine flowers and fine varieties develop under Mr. Davis's care at Framfield.

Coronation Floral Gifts.—On Monday last the Master and Clerk of the Gardeners' Company presented to Queen Mary the floral gifts that Her Majesty had graciously consented to receive from the company on the occasion of her Coronation. These gifts comprised two bouquets and a basket of carnations.

New Roses at Bagatelle.—The new roses submitted for trial in the gardens of Bagatelle adjoining the Bois de Boulogne, near Paris, were judged on the 14th inst., and Mr. Arthur W. Paul, who assisted, as in previous years, at the judging, kindly sends us the following notes on the new varieties that received awards: The interest in the annual trial of new roses in the beautiful gardens of Bagatelle continues to be well maintained, and this year 162 varieties of the past two years were entered in the official lists. These are sent by various raisers in different parts of the Continent, Great Britain, and the United States of America, and are planted and tended with the greatest care by Mr. Forestier, the conservateur of that section of the park in which Bagatelle is situated. Considering the somewhat unfavourable season, which has been very dry and hot in Paris, a good proportion of the novelties of 1910 were in excellent condition at the time of judging, and gold medals were awarded to Beauté de Lyon, a very showy coppery-red flower of the hybrid-briar class, and to Jonkheer J. L. Mock, an excellent hybrid tea of Dutch origin, somewhat resembling, but superior to, Farbenkonigin, with large red and pink flowers produced on long, upright stalks, ideal for cutting purposes. Certificates of Bagatelle were awarded to Viscountess Enfield, a flower somewhat resembling Lyon Rose; to May Millers, a blush-white hybrid tea; and to William Speed, also a pale-flowered hybrid tea. An extra certificate was awarded to the climbing Wichuraiana hybrid Desiré Bergera, the orange-yellow flowers of which were very effective. Some other good sorts of the same year, all hybrid teas, were Prince E. C. d'Arenberg, Bertha Gautis, Nathalie Bottner, Lieutenant Chauré, and Mrs. Arthur Munt. The varieties of 1911, owing, no doubt, to the recent planting, were not so fully in flower, but Rayon d'Or received the maximum of 10 points, and Orleans Rose (Polyantha) 9 points. Some other promising kinds that received 8 points each were the crimson-flowered hybrid tea President Vignet and two exceptionally healthy and vigorous kinds from Denmark, the one a rosy-crimson hybrid tea named Fru Margrethe Moller, and the other a hybrid polyantha Rodhaette, with crimson flowers, both flowers and foliage being large for its class. The general collection of roses in the gardens, including the tall weeping standards, are very finely in flower at the present time and attract large numbers of visitors daily from Paris.

Presentation to Mr. Mackenzie.—On the 15th inst. a very pleasant function took place in the Royal British Hotel, Edinburgh, when Mr. Donald Mackenzie, the popular secretary of the Royal Caledonian Horticultural Society, was made the recipient of a wedding gift, in the form of a purse of sovereigns, subscribed by friends in the Royal Caledonian and Scottish Horticultural Societies. The presentation was made on behalf of the subscribers by Mr. McHattie.

Experiments in Gooseberry Pruning.—Since 1908 some gooseberry bushes planted in 1905 for the purpose of experiments in pruning, have been subjected to two distinct methods of pruning, under the direction of the National Fruit and Cider Institute. Hard pruning consists of cutting leading and lateral growths hard back, while light pruning is shortening the leading growth, and cutting the laterals back closely. For the latter method ease and economy of time in gathering, together with finer berries, are the advantages claimed; during the two years 1,531lb. of fruit have been gathered from the hard-pruned trees, and 1,404lb. from light-pruned trees.

Great Flower Show at Norwich. That there will be a great flower show at Norwich in connection with the exhibition of the Royal Agricultural Society in the ensuing week, is quite certain. One big tent has been provided for the local competitors, while the general display will need one tent 200ft. by 85ft., and two tents, each 220ft. by 50ft., to accommodate it. Mr. Peter Blair, the show superintendent of the horticultural section writes that his difficulty is not to provide a great exhibition of plants, flowers, fruits, etc., but to find accommodation for those who desire to exhibit.

Sale of the Crystal Palace.—We have received a notice to the effect that at a date to be fixed later, the Crystal Palace, Sydenham, with its terraces, fountains, pavilions, cricket and football grounds, machinery, statuary, pictures, books, furniture, and general effects, will be sold by auction, pursuant to an order of the High Court of Justice. The gardens and grounds cover 182 acres, but the Crystal Palace estate, including the frontages let, comprises just over 200 acres. Sir Joseph Paxton laid out the grounds, and the Crystal Palace was opened by Queen Victoria in 1854. Since then eighty millions of people have paid for admission. In the notice a hope is expressed that someone may come forward and save the Crystal Palace for the people.

Lt.-Col. D. Prain, F.R.S., Director of the Royal Gardens, Kew, has been nominated president of the Congress of the South Eastern Union of Scientific Societies for 1912.

North of England Horticultural Society.—This society has made arrangements for an exhibition at Harrogate, on August 15, in connection with the Harrogate Agricultural Society; a deputation from the Royal Horticultural Society will attend and award medals. Shows will be held at Leeds on September 20, October 18, and on December 13, and there will be one at Newcastle on November 15 and 16, in conjunction with the Newcastle Chrysanthemum Society and the Northern Fruit Congress. Full particulars may be obtained from the Rev. J. Bernard Hall, Rawdon, Leeds.

Spraying for Potato Disease.—The Board of Agriculture is doing excellent service in drawing the attention of potato growers to the importance of spraying their crops with Bordeaux mixture as a protection against potato disease. In wet seasons spraying is of great value, while even in dry seasons when no disease is apparent the treatment is found to be beneficial, producing a longer period of growth and an increased yield. The crop should be sprayed twice, and the first spraying should take place as soon as there is a good development of haulm, towards the end of June or early in July, according to the locality and season. About three weeks later the treatment should be repeated.

Rosa hemispherica.—To a recent meeting of the Scientific Committee of the Royal Horticultural Society, the Rev. Canon Ellacombe sent flowers of the sweetly-scented Rosa hemispherica from a plant growing on a wall in his garden. This yellow rose, which is rare in gardens, is said to flower only in very dry seasons.

Shadwell Market as an Open Space.—We gather from the "City Press" that the Bishop of Stepney suggests the utilisation of the derelict market at Shadwell as an open space, and throws out the hint that it would form a magnificent memorial of King Edward. The idea is not, our contemporary observes, a new one by any means. A definite scheme is, in fact, already under consideration, and, all being well, will, in the comparatively near future, be made public. The Corporation of the City of London, in spite of the huge loss it has incurred on the enterprise, may be relied upon not only to concede generous terms, but to make a substantial contribution to the purchase fund. At present Shadwell stands in the loan ledgers at a sum of £140,000, and repayment of the bonds will only commence in the year 1927

Crawley Gardeners' Visit to Headley Park.—A visit that proved of great interest and educational value was paid to Headley Park, near Epsom, by the Crawley Gardeners' Association a few days ago. The gardens belong to J. Newton Mappin, Esq., whose gardener, Mr. Beeson, conducted the party round. The alpine, water, and wild gardens are particularly good at Headley Park, but everywhere there is evidence of very high cultural skill.

National Chrysanthemum Society's Outing.—The usual summer outing of the N.C.S. will take place on Monday, July 17, when the members and friends will pay a visit to the famous gardens at Cliveden, Taplow, by kind permission of W. Astor, Esq. The party will travel from Paddington to Windsor by rail and thence to Cookham and Cliveden by steam launch. The whole outing will occupy twelve hours, as the train leaves Paddington at 9.15 a.m. and returns at 9.10 p.m. Tickets for the outing are 10s. 6d. each (which includes rail fare, launch, luncheon, and tea), and can be obtained on application to the secretary, Mr. R. A. Witty, 72, Savernake Road, Gospel Oak, N.W.

Tree Planting in Uruguay.—The Board of Agriculture have received through the Foreign Office a copy of a memorandum from H.M. Vice-Consul at Montevideo, in which it is stated that the newly-appointed Uruguayan Minister of Industries, Dr. Eduardo Acevedo, is anxious to foster the agricultural development of the country in the direction of tree planting. With this object he intends to organise a competition at which twenty prizes of the total value of about £40,000 will be given for plantations of woods and artificial parks. He has brought in a Bill which will probably be sanctioned, making it binding on every proprietor of pastoral land to plant five trees for every hectare (equivalent to two trees for every acre). H.M. Vice-Consul is also informed that the Government School of Agronomy will be put in a position to supply trees for those who require them. British horticultural firms who might wish to supply part of the demand thus created should put themselves in communication with Senor Pablo Varzi, Presidente del Consejo de Administracion y Patronato, Escuela de Agronomia, Montevideo.

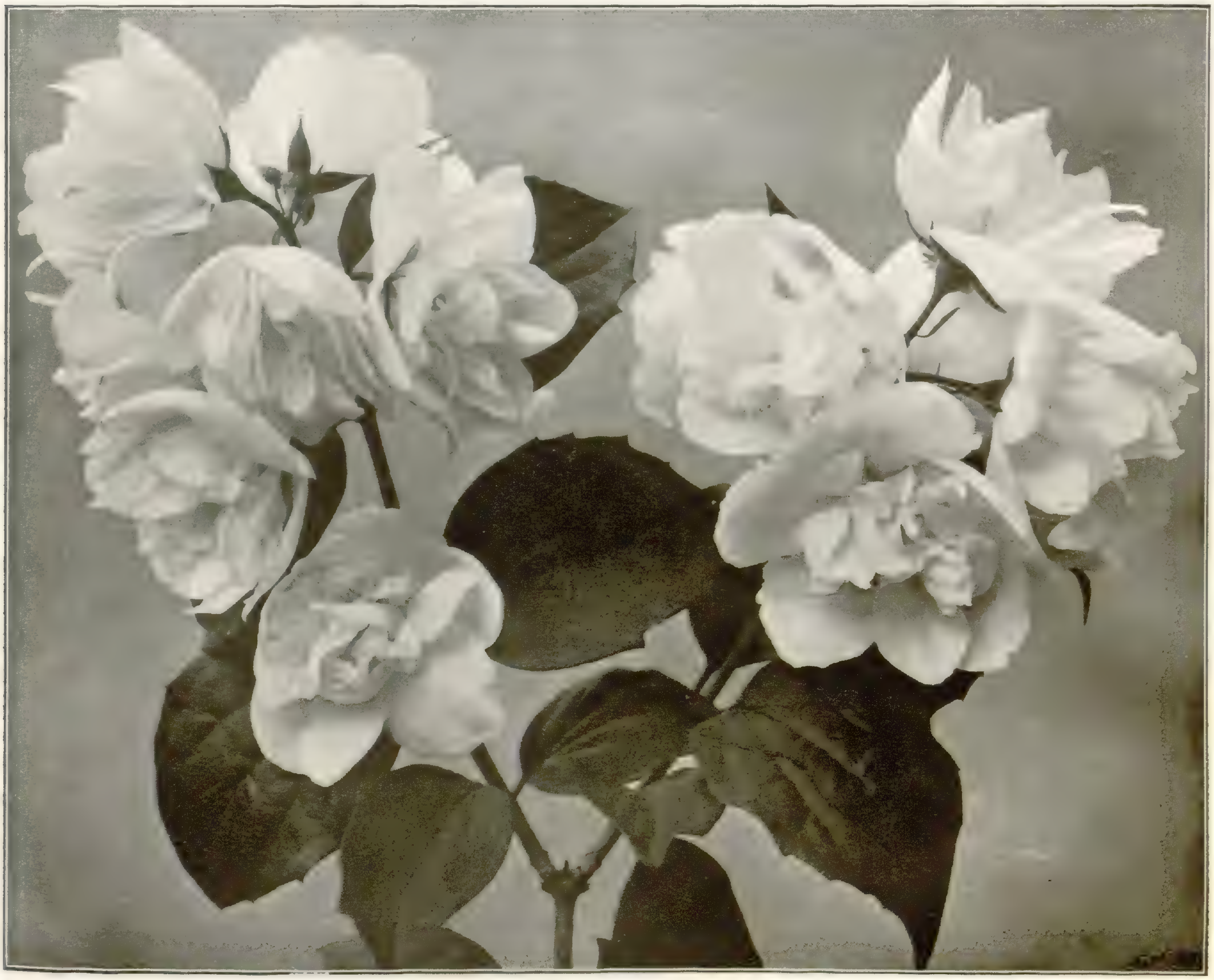
HARDY PLANT CHAT.

Lactuca alpina.

We frequently observe this blue sow thistle catalogued as Mulgedium alpinum, but it is not now so much cultivated in gardens as at one time. I am not surprised at this, as it has, with all its colour value, a bit of coarseness about its appearance, and is hardly a plant for the most select border. Its true rôle is for the wild garden, where a good crop of this plant, with its tall stems and blue flowers, makes rather a conspicuous feature, especially in a piece of rich soil, where it will soar to three, four, or even five feet. But the writer has seen it in an old garden, where it has to fight its way among old roses and a host of other border plants, and where it really looked well in its semi-wild surroundings. The blue flowers are rather dandelion-like in their formation, and as a feature of the wild garden or the rough border outside the choicer parts of the garden this blue sow thistle has a value. It must not, however, be supposed that it has all the fecundity of the common sow thistle, the name being only a conventional one.

Pentstemon Menzieisi.

Some of the dwarf and shrubby pentstemons afford us plants of much beauty, and highly suitable for the border or the rockery. Their true place in the former is



PHILADELPHUS LEMOINEI VIRGINAL.

Flowers double, pure white, fragrant. F.C.C., R.H.S., June 20. Sir Trevor Lawrence, Bart. (gardener, Mr. W. Bain), near the front, and they are undoubtedly of more effect when placed in a good position in a well-ordered rock garden. They do not too often appear at shows, but Messrs. Bunyard had P. Menziesi, with other plants, in their exhibit at the last Temple Show. Those who only know the border pentstemons are amazed when they see for the first time one of these shrubby pentstemons, with their low growth and their pretty flowers. They can hardly conceive that these belong to the same genus as the stately pentstemon of the florist, with its showy flowers, especially in the modern type of the pentstemon of the florist.

The one exhibited at the Temple called P. Menziesi is a pretty plant indeed, with low habit—with me about six or nine inches high—and having glossy leaves and wonderfully large purple flowers. The expression respecting the size of the blooms is comparative, as they seem really large for a plant of its height and habit. As regards its hardiness, I think that it does not care for a moist winter climate, and that it prefers a dry autumn to enable it to ripen its growths. Yet in a place where there is not too much wet in winter I believe P. Menziesi can stand a very low temperature with impunity. My own plant came to me from the garden of a friend in a cold part of Scotland, where, however, the cold of winter is accompanied by a dry atmosphere—drier, in fact, than that here. But I have no reason to doubt its hardiness with me, where it is grown among sandstone chips and with a full south exposure.

A GROUP OF HANDSOME CUPS TO BE OFFERED AT THE FESTIVAL OF EMPIRE ROSE SHOW.

Tiarella unifoliata.

This handsome Foam Flower seems to be gaining ground but slowly, although when well cultivated it is a fine plant indeed. It originally came to me from a North of England source, under the name of Tiarella rosea, so named, I consider, from the rosy appearance of the stems and the slight tinge of colour on the flowers at certain stages. A year or so afterwards it was shown in a good group at the Temple Show, but there it did not attract so much notice as it deserved, probably because it is not a showy plant, but, like the better known Tiarella cordifolia, the ordinary Foam Flower, it is seen at its best in the garden.

Compared with its ally, T. cordifolia, T. unifoliata is a more effective plant, the spikes of flower being taller and longer in their inflorescence. They are, as has been indicated, not quite so pure in colour at certain stages, but the aspect of this foam flower is really beautiful.

It appears to do best in a somewhat moist place, but for experiment's sake I have been trying it in a dryish and sunny place at the base of a rockery. The latter is low, so that the drainage from it may be said to be practically disregarded as a factor in the growth of the plant. Here it flowers very freely, and reaches a height of fully a foot. It is less inclined to roam about than T. cordifolia. It comes to us, so the "Index Kewensis" informs us, from North-west America. In a shady, moist soil it assumes a bolder aspect than that suggested by its behaviour in the dry place spoken of above. S. Arnott.

A GREAT ROSE SHOW AT THE CRYSTAL PALACE.

This is a great year for pageants and festivals, and flower shows, and, that being so, it is a pleasure to find that the Crystal Palace, Sydenham, is not behindhand in either of these matters. We have attended great flower shows at the Crystal Palace over a very long period of years, and some of them have been so fine that their extent and beauty remain a pleasant memory. But for the moment we are concerned with the present and the future rather than with the past, and the schedule before us proves that the Administration of the Festival of Empire fully recognises the great attraction flowers possess, and have given the Horticultural Department of the Festival a very free hand in the preparation of a suitable programme.

The date fixed for the forthcoming exhibition is June 29, and no fewer than forty-nine classes have been provided for the rose, the Queen of Flowers. There ought to be a glorious exhibition, as the classes have been arranged and graded so carefully that almost everyone who grows roses has an opportunity of competing. Entries must be sent to T. Geoffrey W. Henslow, Esq., Horticultural Department, Festival of Empire Offices, Crystal Palace, Sydenham, S.E., and must reach him not later than Saturday, June 24. Although this latter date is the same as that of our present issue, our readers will receive their copies of the Gardeners' Magazine by Friday morning, June 23, and so will have ample time then to make their entries.

As to the place of the show, there is probably no finer building for a flower show than the Crystal Palace, and there is ample room for everyone to set up their blooms carefully. Further, when the work is done, judgment has been pronounced, and the excitement of the competitors has abated, there are other and wonderful attractions this year at the Crystal Palace, both for competitors and for visitors who may go chiefly to see the roses. The Great Festival of Empire and the Pageant of London will provide all that the most energetic or fastidious visitor could well wish for either in interest, instruction, or amusement.

As to the schedule of the great rose show, we have already pointed out its comprehensiveness. The first division comprises twenty classes open to nurserymen, and there ought to be a rare tussle for the Canadian Pacific Railway Company's £50 silver trophy for the best four dozen blooms, and probably an equally good fight for the silver cup for the best three dozen blooms, presented by the Festival of Empire. Lord Northcote and the Earl of Plymouth give silver cups, and the National Rose Society also add a silver cup in this division. There are no cash awards whatever, the prizes being cups and medals of various grades. Messrs. Clay and Son, Stratford, offer a special gold medal for the best bloom in the whole show. Amateur rosarians are presenting a silver cup to the members of the trade, and it is to be won on points, every first prize counting three points, a second prize two points, and a third prize one point.

In the amateur division there are prizes of silver cups from the Festival of Empire, the Duke of Fife, Lord Northcote, King's Acre Nursery Company, Hereford; Messrs. J. Cheal and Son, Crawley; and the National Rose Society, the latter award being for a dozen distinct varieties of decorative roses, not fewer than three or more than seven trusses of each variety, arranged on a space not exceeding five feet by three feet. Then the trade growers present a cup to the amateurs, to be won on points, as in the case of the trade division.

Then there is the Ladies' Artistic Section of six classes, wherein the ladies will compete with each other in the artistic disposition of roses in baskets, vases, bowls, buttonholes, and sprays, and also on a dinner table. Finally, there are the non-competitive displays, and here the Festival of Empire offer a cup for the best exhibit.

If a good schedule, a well known venue, and multitudinous attractions beyond the flowers, can produce a great flower show, then the Rose Exhibition of June 29, with its £500 worth of cups and medals as prizes, ought to be the finest ever yet held in this country. So hurry up with your entries, and help to make it such.

PAPAVER ALPINUM.

Nothing more enchanting than Papaver alpinum is found among alpine flowers. The lowly stature of the plant and fairy-like elegance of the flowers never fail to captivate, and this innate charm is greatest when disclosed from plants enjoying unrestrained freedom on the rock garden. It is a species readily raised from seed at all seasons, and may be sown either in boxes of prepared soil or in shallow drills in the open ground, the seedlings being subsequently transferred to their flowering position when large enough. The type bears flowers of a yellow shade, but in a good strain of P. alpinum, as represented in gardens, a considerable range of colour is present, and is represented by yellow, white, and red, with many delicate shades between. The foliage is broken into narrow, irregular lobes, and is of a glaucous green colour, yielding a soft harmony to the flowers.

P. alpinum succeeds best in well-drained soil, preferring such having plenty of stone chips, and, as already indicated, it is admirably at home on the rock garden. In rock walls having wide interstices with plenty of soil, it makes itself quite at home, and under these conditions is most reliable as a perennial. From a botanical point of view P. alpinum and the well known P. nudicaule are really the same species, but whereas the latter generally exceeds a foot in height, alpinum more frequently averages six inches, and from a garden standpoint both are distinct enough to merit widest recognition, as they yield a lavish display of richest colour, and as cut flowers their light and elegant appearance places them in the foremost rank.

Thomas Smith.

STOPPING PERPETUAL CARNATIONS.

There is a twofold object in stopping perpetual carnations. The first is to regulate the season of flowering and to preserve the plants energy, the second is to build up a shapely plant.

The perpetual carnation is perpetual-flowering because it is perpetually growing, but to allow a plant to produce a large crop of flowers at one time is unwise, inasmuch as it places undue strain upon the plant, and the flowers themselves cannot be nearly so fine. Furthermore, it is encouraging the old hereditary "cropping" tendency, which raisers for over half a decade have been endeavouring to eliminate from the race. Naturally, if you stop all the growths on a plant at once, they will flower at the same time, so that it is most essential that we should work in the opposite direction, and so break up the "cropping" tendency.

We will presume that the young plants were stopped at the fifth or sixth joint from the surface of the soil, and now carry some five or six good growths. In the natural course of events these young side growths produced after the first stop do not all grow away evenly, and in the case of perpetual carnations this is a decided advantage. As the leading side growths reach the required length, which, as a general rule, is six joints, or sets of leaves, from the main stem, they should be stopped. Go over the plants systematically each week, just stopping those which have reached the correct length, if possible never stopping more than one growth at a time, thus minimising the check.

The opposite method to this would be to allow the shoots to grow away until one day you would make a wholesale slaughter of them, but such a method cannot be logically upheld.

The absurdity of just pulling out the point of the growth instead of removing the entire top with a set of developed leaves intact is that the remaining eyes are more or less in the same degree of maturity, and so break more evenly, whereas if only the point of the growth is removed, the tendency is for only one or two breaks to be produced at the top of the shoot.

If a plant is allowed to get into a poor starved condition it cannot break freely, and the breaks on several varieties are not so numerous in a spell of very dull, wet weather or during a period of drought. The crux of the whole matter, in the eyes of many gardeners, will be to regulate stopping so as to ensure flowers in October, and the following dates are given with this end in view, if the irregular system of stopping is followed.

I always consider it is best to cultivate many of the rather slow-growing but very free-breaking British-raised varieties such as Britannia, Mrs. Burnett, Fortuna, Rival, Royal Purple, Rose Doré, Black Chief, Carola, etc., by potting the young plants as required, and not stopping them until they are about from seven to nine inches high. If they are all stopped, then you obtain some dozen or so young growths from many of them in the first place. Some of these would commence to flower too early if not stopped a second time, and also have a tendency to "crop," whereas if some of the more forward growths are stopped this is prevented. This method of handling British-raised varieties is, I am sure, the best, and more flowers are thus procured. Under the ordinary system time will not allow us to stop all the growths a second time, hence one does not procure so many growths by the fall, which means less blooms.

The following varieties should not be stopped after the present date: Britannia, Bay State, Carola, Fire Glow, Mikado, Mrs. Burnett, O. P. Bassett, Black Chief, Rival, Rose Doré, Royal Purple, Marmion, and Mrs. Raphael.

Varieties which should not be stopped after July 1: Admiration, Afterglow, Colossus, Fortuna, Harlowarden, J. W. Riley, Lady Alington, Lady Bountiful, Mrs. Chas. Knopf, Mr. C. W. Ward, Mrs. R. F. Felton, Mrs. Tatton, Pink Delight, and Wanoka.

Varieties which should not be stopped after mid-July: Beacon, Dorothy Gordon, Enchantress, Helen M. Gould, Lady Alington, May Day, Mrs. Lawson, Rose Pink Enchantress, Rex, Scarlet Glow, White Enchantress, White Perfection, Winona, and Winsor.

Of course, there are innumerable other varieties, but these lists include the best.

Montagu C. Allwood.

ROSE AMERICAN PILLAR.

Few roses have caught the popular fancy so strongly or so quickly as this splendid single-flowered climber. It was first introduced by Messrs. H. Cannell and Sons, of Swanley, who made a great feature of it at the Temple Show three years ago. Since then it has been multiplied enormously, and when well shown it captivates everyone who sees it. The large flowers, of rich rose colour with paler centre, last a quite long time for a single rose, and the broad petals are thick and firm. Further, the trusses of bloom are very large, from twenty to thirty flowers being clustered together. Of good growth and free-flowering habit, American Pillar seems to have all the points a good garden rose should possess. As a pot plant it is glorious, and the fine examples, one of which we illustrate herewith, that were exhibited by Messrs. William Paul and Son, Waltham Cross, at the recent Temple Show, obtained a full share of attention and admiration, especially from those interested in roses.

SINGLE-FLOWERED ROSE AMERICAN PILLAR.
A beautiful variety with large blooms that are bright rose with paler centre.

FORESTRY IN SCOTLAND.

The composition of the committee just appointed to report upon the establishment of a demonstration forest area in Scotland, writes our Aberdeen correspondent, has given great pleasure to all interested, as it is felt that the presence of such men as Lord Lovat, Sir John Stirling Maxwell (who is to act as chairman), and Mr. Munro Ferguson, of Novar, will secure for the committee beforehand the confidence of the public. The appointment of the committee marks a distinct advance, and all concerned are to be heartily congratulated. Forestry, be it noted, is one of the subjects which come within the scope of the Development Fund, and it has been properly enough felt that, instead of a number of separate and conflicting claims being submitted to the Development Commissioners, an effort should be made, if possible, to formulate a single and comprehensive scheme which could be laid before the Commissioners, and supported with the full weight of the Secretary for Scotland behind it.

There is no getting over the fact that if proper afforestation is to come in these islands, Scotland is the area where the bulk of the work will be done. For it is in Scotland the greatest area of vacant land for the purpose lies, and particularly in the northern half. Indeed, it may fairly enough be said, that afforestation in Great Britain is primarily a Scottish question, and those who deal with it will be bound to focus their attention, to begin with at any rate, upon Scotland, and especially the Scottish Highlands, where the potentialities of success in afforestation mainly lie.

Of course, the immediate point upon which the new committee is asked to report is the establishment of a demonstration forest area, the best site for it, and the uses to which it could be put. This, one naturally infers, means a considerable tract of ground where planting and forestry can be carried out upon a commercial scale, and the best methods of afforestation be tried and demonstrated under conditions analogous to those obtaining on ordinary estates. Research work, in the scientific sense, would probably fall to be done at the forestry teaching centres. The first centre in Scotland to establish a course of instruction for working foresters was the Aberdeen College of Agriculture, which is affiliated to Aberdeen University—the Lamp of the North. It is all the more satisfactory, therefore, to know that the membership of the committee includes Sir John Fleming, the head of an eminent firm of Aberdeen timber merchants, and Mr. R. M. Sellar, vice-convener of the County of Aberdeen, and a noted educationist. Both these gentlemen are governors of the Aberdeen College of Agriculture. But there is yet a fly in the ointment. Surprise and not a little disappointment is being felt in the North at the omission of the name of Mr. Sydney J. Gammell, of Drumtochty and Countesswells, also a governor of the Aberdeen College. For many years this gentleman has taken a very warm interest in forestry, his extensive and finely-wooded estates offering him every facility for the study of his favourite science. Sir John Fleming and Mr. Sellar are looked upon as splendid acquisitions from the commercial and educational point of view, but the inclusion of Mr. Gammell would, it is felt, have added another member thoroughly au fait with the practical work of forestry. Indeed, it may be noted that the forestry department of the college is the one which chiefly—it may be said entirely—engrosses his interest.

Coming now to where a suitable afforestation area site could be found, there are strong arguments pointing to the selection of a district somewhere in the Northern Highlands, and no better district could be found than Speyside. Such an area as the Valley of the Spey would be typical of the Highlands, which, as I have said, will of necessity be the scene of practical afforestation in this country. It is a lovely district, and our late King Edward, and King George, when Prince of Wales, have spent many happy hours in it, as the guests of the Duke of Richmond and Gordon, at Gordon Castle, and of Mr. Sassoon, at Tulchan Lodge. Besides, it has the advantage of being central and easy of access, not only from the south, but also from the north-east, and from the north, which, let us not forget, are regions which contain enormous potential resources for timber growing.

SOME JUNE FLOWERS.

Soon will the high midsummer pomps come on;
  Soon will the musk carnations break and swell;
Soon shall we have gold-dusted snapdragon,
  Sweet william with his homely cottage smell,
    And stocks in fragrant blow.
—Matthew Arnold.

With the poets June is par excellence the month of flowers, and so it is in the meadows, and even, though to a less extent, in the typical cottage garden by the country roadside, where old-fashioned things like single pinks, European pæonies, short-spurred columbines, red and white daisies, forget-me-nots, valerian, Jacob's ladder, snapdragons, foxgloves, soapwort, and sweet williams usually grow in the greatest luxuriance. The flowering trees and shrubs too, such as thorns, chestnuts, guelder rose, lilacs, and laburnums, are generally still in their full splendour at the beginning of the month, and are folowed later by the mock orange, honeysuckle, and the great family of the queen of the garden.

In the generality of gardens, however, June, or at least the first half of it, is reckoned by the few only as a good month for the garden, as the spring flowers are over, and the great mass of the perennials are not yet out, while the summer bedding plants for the most part make but little show before the end of the month. Yet, leaving out of account the roses, which, with the exception of the Banksias and a few others on the wall, are not generally in full display much before the turn of the days, there are a few subjects, apart from those old-fashioned inhabitants of cottage gardens referred to above, which, by their luxuriance and brilliancy of effect do much to lighten up the garden, and make it quite unnecessary that it should be dull at any time of the month.

One of the glories of the month is the Chinese pæony in all its wonderful variety of colouring. It is true it does not last very long in flower, seldom more than two or three weeks, but afterwards varieties make handsome foliage plants for the rest of the summer, taking on crimson and bronze tints as the summer draws to an end. A walk flanked on each side by clumps three feet in height, and more in diameter, with fifty to a hundred blooms on a clump, forms one of the sights of the gardening year. They should never be moved while doing well, but should be fed with a well-balanced manure, phosphate in some form being applied to counteract the foliage-producing effects of heavy mulchings of stable manure. When they must be moved for any cause, as, for instance, owing to their deterioration, the work should not be deferred till the general renovating operations of October and November, being better done as soon as possible after the end of August, when some amount of flower may be obtained the following season. They are not a success on a very retentive soil, one inclining to lightness suiting them best, though it must not be too hot and dry.

Another wonderful effect of the month, about a fortnight earlier than the preceding, is that produced by the tree lupin, both yellow and white. It is not suitable for wet soils, as it does not stand the winter well enough in such conditions; but on medium loam it makes a bush four or five feet in height, and as much in diameter, the whole being thickly covered with racemes of yellow or white flowers. It should be planted in the spring, or it will very likely die in the winter. It is a curious thing about this lupin that, instead of becoming more resistant to the winter as it gets older and more woody, its vitality seems to lessen, and consequently its power to resist the cold and wet. Another branch of the lupin family which has revived in popularity of late years is Lupinus polyphyllus, the old-fashioned garden lupin. Its long, handsome spikes often come in very useful to brighten up herbaceous borders which would otherwise be dull.

Having called in question the flowering character of the month, it seems scarcely consistent to mention the iris, which, in one or other of its forms, keeps up a succession of beauty throughout the month. The German irises of May linger on into June, followed by I. neglecta, squalens, and others, which ultimately become contemporary with the Spanish irises, while these in turn, with other less known species, keep up the tale till the English iris begins to show at the end of the month. The "orchid of the garden," like its more exclusive namesake of the house, is a flower for specialising, their diversity being not less than their beauty. One word to those who are not specialists—do not move the evergreen species in late autumn if it can be helped, but, as a general rule, somewhere about a month after flowering.

The delphinium can hardly be regarded as a June flower, as it comes so late in the month, but there is another flower besides the iris which has some claim to be called the orchid of the garden, and that is the long-spurred columbine. The short-spurred types are nearly over before these delicate hybrids come into general bloom, but they last throughout June and even longer, and if flowers for cutting should happen to be deficient any part of the time, nothing fills the gap better. A packet of seed obtained from a good collection of hybrids should be sown in March every year, and the young plants given good cultivation for the following season. Unless the soil contains plenty of humus and is rather light, many will not do much good the second year, though some are unaccountably capricious in every respect.

Space forbids the enumeration of all the possible glories of the June garden. It is not only the month of roses, but of poppies—Shirley (if sown early enough), Iceland, and Oriental; while of hardy annuals generally we can have the finest displays during this month by sowing them in the later summer and autumn. Sweet peas should always be included among these, as they may be had in flower at the end of May by sowing them in September, either in the open, or in pots to be stored in the frame during the winter.

Alger Petts.

Weigela Eva Rathke.—As an outdoor shrub this variety of weigela is much appreciated for the rich colour of its blossoms and its continuous flowering qualities, compared with many other varieties. Beside this, it is one of the most popular for forcing into bloom as it readily responds to the treatment. Numerous examples of this may be seen at the different spring meetings of the Royal Horticultural Society, where it often forms a noticeable figure among flowering shrubs. For the outdoor garden a good distinct three are this variety, with claret-crimson flowers; Abel Carrière, pink, and Candida, a particularly free-growing form with white blossoms.—W. T.

CULTURE OF CELERY.

This important crop has frequently been discussed in the pages of the Gardeners' Magazine, but that there are many new readers must be my excuse for again touching upon a subject in which I have taken considerable interest now for quite a number of years, as I firmly believe that if there is one crop which pays for thorough cultivation it is celery. For more reasons than one is this so, for not only by the best culture is larger growth obtained, superior in flavour to the small second-rate material, but the better and more thorough the attempt to excel with this plant the deeper cultivated and richer is the ground left for the succeeding crop.

Celery, whatever the size of the garden may be, is frequently in great demand, and is much esteemed early as well as late in the season, so that where kitchen garden space is limited every effort should be made to grow good material, as one perfect stick is worth three inferior ones, as well as being of far superior flavour.

Celery, when well finished, cannot be too large either for kitchen purposes or for exhibition. To obtain perfect specimens of good size the keynote of success is to keep the plants growing freely throughout the whole season of growth. It frequently happens that plants, especially in the young state, are allowed to become too large, and, consequently, starved, whilst in the seed bed or boxes. Such treatment is detrimental, and must be avoided. Copious supplies of water also are required to bring this plant to perfection, and drought is one of its worst enemies.

To provide a good succession of celery two or three sowings should be made. For the earliest supplies the sowing should have been made about the first week in February, in pans or shallow boxes in a light sandy compost passed through a fine-meshed sieve. Do not sow too thickly, as celery usually germinates freely. Raise the seedlings in a gentle heat, and as soon as these are visible put them near to the glass. Transplant into other boxes when large enough, and keep them sprayed over with the syringe, and gradually inure them to cooler conditions.

For later supplies make another sowing a month later, and raise as previously advised. Transplant the larger seedlings into boxes, afterwards pricking out a sufficient quantity into skeleton frames, or shallow pits. Keep close for a few days, and damp over with a rose-can as necessary, and keep the growth free from weeds to prevent their receiving a check.

The preparation of the ground is an important item to be observed, and it should be made as rich as possible. The method I adopt is to take out trenches to a depth of twelve inches, then break up the bottom as deeply as possible with a fork, and fill up with good decayed farmyard manure to within a few inches of the top. Tread firmly, and then cover with some of the finest and best of the soil thrown out on to the sides. Planting must be carefully done, and the roots kept intact by lifting with a good ball of earth; plant firmly and well with a garden trowel at a foot or so apart, and, except for the latest supplies, I prefer single rows. Upon the completion of a row make the surface neat and tidy with an iron rake, and give the ground a good watering. Encourage growth afterwards by occasional sprinklings in hot weather, and when the weather is showery give a dusting of soot. This does much to promote growth and also to render the plants immune from the attacks of the celery fly and other insects, which in some seasons and districts do much injury to the crop.

As the growth matures remove the side growths and any leaves that are split, and, whether required for exhibition or for the house, I prefer to blanch the growth with strips of brown paper, that is in the case of the earlier batch. For the former purpose this has much to recommend it, as the growth is kept free from the attacks of slugs, and it is further possible to undo the paper at any time and examine the stick to see that everything is proceeding well, while a further advantage is gained in that copious supplies of water and stimulant can be applied close to the roots. The strips of paper we use are about five inches in width, and, of course, as the length of the plant increases an extra strip is added, the whole thing being done piecemeal, and care taken not to injure the foliage or tie it in tightly.

The earthing up of the later supplies should not be commenced too early. Give plenty of manurial assistance, and thorough soakings of water in dry weather, especially just before beginning to blanch the plants with earth. Make sure, however, that the foliage is quite dry before doing this, otherwise failure may result, so, if possible, select a fine day. Stretch a garden line down on either side of the row, break up the soil finely, and place it well all round the stem of each plant. Do not use too great a bulk of soil at first, but do the work at intervals until the final earthing is completed.

The celery fly is in many places an abominable nuisance, and, as I have previously stated, soot I consider a hindrance to the fly, as is also an emulsion made by boiling a pound of soft soap in a quart of water, to which add half a pint of paraffin, and then dilute with eight gallons of water. Spray the plants with this, keeping the mixture well stirred.

There are many varieties on the market, and excellent strains, and if good celery is wanted seeds must be obtained from a reliable source. Cheap seeds are false economy. For general purposes Invincible White, Standard Bearer, and Aldenham Pink are each excellent. Major Clark, a red variety, is good for late supplies, and it is of importance that it should not be blanched too early. Edwin Beckett.

A FINE EXHIBIT AT TAGG'S ISLAND.

It was a capital idea to provide a big class in connection with the recent fine flower show held at Tagg's Island, Hampton Court, because such a class, as arranged, gave the nurserymen and market growers an opportunity to compete with each other on generous lines. The space allowed was 200 square feet, and the premier award was a silver cup, valued at £20, and given by Mr. H. O. O'Hagan. There were no fewer than six entries, and the cup was won by a well-known local grower, Mr. W. H. Page, Tangley Nursery, Hampton, with a splendid exhibit, in which pillar and weeping standard roses were the leading feature. Grouped under these were masses of pink spiræas, white liliums, yellow richardias, scarlet Pelargonium His Majesty, and carnations in great numbers, the latter disposed in vases. The front of the group was finished off with festoons of pink and white rambling roses. In these later days, when nurserymen and market growers appear, with rare exceptions, to be afraid of competing with each other, it was refreshing to find such a good turnout.

MR. W. H. PAGE'S SILVER CUP GROUP AT THE RIVER THAMES FLOWER SHOW, HELD AT TAGG'S ISLAND ON JUNE 7.

Rex Begonias. — These ornamental fine foliage plants well deserve special attention, and I am not acquainted with any which, considering their easy culture, so thoroughly merit the little extra attention. For autumn and winter decoration they are most valuable, and for grouping purposes they add a charming ground work for orchids, caladiums, etc. Rex begonias succeed best in a rich compost, and in order to bring out their best and brightest colours, they may be alternately supplied with liquid manure and clear water as soon as they have filled their pots with roots. A moderately shaded position in the intermediate stove will be found to be an ideal position for them. Their propagation may be easily effected at any season of the year by inserting the leaves singly in small pots and keeping them shaded for a few weeks; they will quickly form roots and develop into useful specimens in a very short time. If the leaf is laid upon cocoanut-fibre refuse, and the ribs nicked with a sharp knife on the under side, several plants may be raised from each leaf so treated.—J. D.

AMONG THE ROSES.

Although June is frequently called the month of roses, we do not have our full show of bloom until early in July during the average season, and it looks like being the same this year With the older roses we doubtless had a greater proportion of early bloomers, especially among the damasks, Bourbons and other ancient classes. The reputedly more tender teas and noisettes were also almost entirely confined to wall culture, and so were, necessarily, more early than the great quantities now grown in the open.

The present outlook is not bad, if we could be favoured with a few more genial showers. We have had but little rain for several weeks, and an easterly to north-easterly wind during the greater part of the time. This has undoubtedly had much to do with the enormous numbers of insect pests. Green-fly is so prevalent that the insects are actually pushing each other off the shoots, as they grow faster than the rose itself.

In spite of warm sunny days, the east wind and number of insects have not been very favourable to rose growth: the weather has been rather keen here at night and early in the morning, before the sun gains power. It has, however, been a grand season for killing weeds, and a constant use of the hoe has certainly helped the rose growth. I do not remember our surface soil being so dry and dusty at this season before. At the time of writing we have four inches of fine dust where the hoe has been freely used.

We found it necessary to water late-planted roses, also cuttings of roses and rose stocks put in during the autumn. A good soaking now will be a great help to these cuttings, as the present weather is drying up the moisture in them more rapidly than it can be replaced by the small quantity of new roots, and many might be saved by care now in the matter of watering and careful mulchings.

The standard stems of two-year-old plants are putting out an extra number of side growths below the point at which the rose was worked. These should be removed as quickly as possible or they detract from the support needed by the rose and soon starve it. I notice that a number of the points of young rose growth are so crippled by insects and the cold winds as to be quite spoilt; these had better be picked out or "headed" at once, when they will soon break again from the lower eyes with a much better prospect of success. Of course, washing must be practise more assiduously than ever during this trying plague of insects. Even if clear water alone is used, during evening or early morning, a great deal of good will result.

Shoulders upon standards that were not budded last summer may be worked this month, as they will run well now, and the one-year-old bark is sufficiently ripe for the purpose; buds from under glass should be available. Most of the pot roses should be ripening or finishing their growth in the open, being half plunged in a somewhat sheltered position.

We already have quite a show of the Scotch and Austrian briars, while Lady Penzance is quite a picture. Aglaia, Electra, and Gardenia, all primrose-yellow ramblers, are quite gay. So, too, is Tea Rambler and Paul's Carmine Pillar. One of the best whites in flower now is Waltham Bride, a grand rose for pillars. Chinas and dwarf polyanthas are also coming out rapidly while the earliest will soon be a mass of flower.

Upon walls we have quite a number of blooms, especially among such early climbers as Gloire de Dijon, Rêve d'Or, and Reine Olga de Wurtemburg. Dwarfer-habited varieties found so useful at the base or between these, like Madame Falcot, Rubens, Marie Van Houtte, Madame Lambard, and Anna Olivier, are in full beauty, where syringing and hand picking was closely attended to. ROSARIAN.

DOUBLE-FLOWERED PELARGONIUMS AT YORK.

First prize six, shown by Mr. J. W. Clarke on right hand, and the second prize six, shown by Mr. W. F. Crowther on the left.

FITTONIAS.

The admirable cultural notes on these beautiful foliage plants contributed by your correspondent "W. M.," page 412, leave nothing to be desired, but it may be as well to direct attention to a mistake in the nomenclature. In the first place, the species with the beautiful silvery veins is F. argyroneura; in fact, this feature is expressed by its specific name. That in which the leaves are of a very dark green, veined and reticulated with bright red, is F. Verschaffelti, known also as F. Pearcei. There is yet a third species, namely Fittonia gigantea, with larger leaves, and a more vigorous grower than either of the others. The leaves of this are green, with pale red veins, and altogether it is less effective than either of the two previously mentioned. These are the three species of the "Kew Hand List." The fittonias belong to the order Acanthaceæ, most members of which are remarkable for their showy blossoms, whereas in this genus the flowers are not at all attractive. The fittonias are all natives of Peru, and, as befits plants from that region, I have grown them beautifully without any fire heat whatever during the summer months. The main point to remember is that in a state of nature they occur in shady woods, hence plenty of atmospheric moisture and ample shale are necessary to their well-doing. Considering the great beauty of the fittonias and their adaptability for many purposes, it is a matter for surprise that they are not more often grown, but I suppose it is the old, old story—they are no good for cutting from.

W. T

GREENHOUSE MANAGEMENT.—THE AMATEUR'S GREENHOUSE, the popular book by T. W. Sanders, not only treats of the selection and cultivation of greenhouse plants and flowers, but gives full instructions how to build a greenhouse and how to heat it, as well as every detail as to the management of the plants and flowers grown in it. The price of this book of 416 pages is 5s. net, or by post 5s. 6d., from W. H. and L. Collingridge, 148, Aldersgate Street, London.

ISLE OF WIGHT BEE DISEASE.

The following particulars relating to the disease of bees, which is now inflicting such heavy losses upon beekeepers, has been issued by the Board of Agriculture, and should have the attention of all who keep bees.

For some years past an epidemic disease has attacked bees in the Isle of Wight, and has since reached the mainland, where it appears to be spreading. The epidemic has been under investigation for some time by the Board of Agriculture and Fisheries, but though a good deal of information has been accumulated, and some progress made with the study of the disease, it is not yet possible to say definitely what is the original cause of the disease, or how it may be checked, or even prevented. The investigation, however, is being continued, and it is hoped that eventually a remedy will be found.

In the meantime, it is important that beekeepers should watch their bees, and on the appearance of the symptoms described below, proceed to—

(1) Destroy the diseased colonies, and all combs, stores, and quilts.

(2) Paint the hive and all woodwork twice at intervals of 24 hours with a solution of one part strong carbolic acid and two parts hot water, and then expose the inside of the hive to light and air for several days. Alternatively the surface of the woodwork may be burnt by means of a painter's spirit lamp.

(3) Collect and burn the dead bees found on the ground. The ground should then be sprayed with some strong disinfectant, such as 8oz. carbolic acid to a gallon of water; or it may be covered with quicklime.

Symptoms.

1. The first symptom usually noticed is a disinclination of the bees to work. They fly about aimlessly and do not gather stores.

2. A little later they lose their power of flight, and are unable to travel more than a few yards without alighting.

3. As the disease progresses the bees are only able to fly a few feet, when they drop and crawl about the ground. They may be seen crawling up grass stems or other upright objects, such as the supports of the hive, but they soon fall down and die. Towards night some may be seen gathered in groups, but these usually die before morning.

4. The abdomen or hinder part of the body is often swollen, and the extreme segments or rings droop and are bent underneath the rest of the body.

5. The wings often appear to be disconnected, the upper wings lying flat above the body, while the lower wings stand out from the body as in flight. Sometimes the legs seem affected, and the bees stagger along in their attempts to walk.

6. Finally the whole colony of workers is found massed together in front of the hive or on the ground, except a few which are found crowded round the queen.

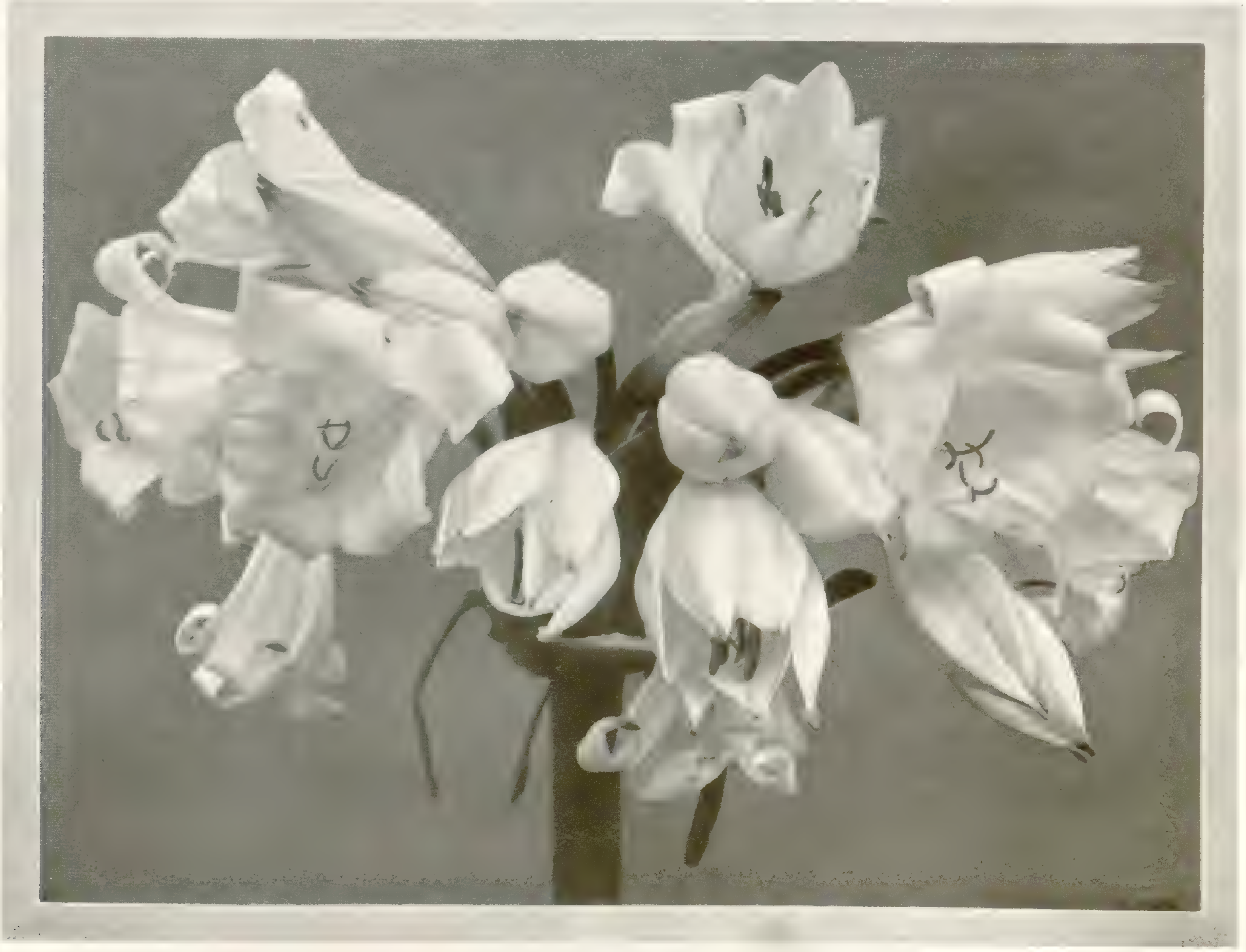
7. The foragers are always the first affected. The queen and the brood are not attacked, though "chilled brood" often appears subsequently, owing to there being insufficient bees to keep the hive warm.

8. In winter and early spring, when bees are often attacked, the walls, combs, and alighting board are frequently soiled by the bees. This seldom, if ever, takes place in the summer.

Although it is not certain what is the direct cause of this disease, it can be distinguished from some of the other diseases to which bees are liable. Thus, in cases of bee paralysis, the hinder part (abdomen) of the bees is discoloured and blackish. The bees tremble, and the wings are bent up in a way that is not the same as the distortion visible in Isle of Wight disease. In cases of "May pest" both young and old bees are affected, and their bodies are covered with a light grey dust. In cases of dysentery the bees soil the combs as in Isle of Wight disease, but the droppings are dark and muddy, and not of the yellow colour that is usual in the present disease. A course of treatment for all these diseases is given in the text books on beekeeping.

CRINUM JOHNSTONI.

This particularly fine species may be grown out of doors in the South of England in a sheltered and sunny border, such as is often available in front of a plant stove or other heated structure. At Burford Lodge, Dorking, Sir Trevor Lawrence's capable gardener, Mr. W. Bain, manages it well, and recently exhibited a grand inflorescence, carrying about two dozen flowers and buds. An Award of Merit was granted the specimen by the Floral Committee of the Royal Horticultural Society on June 6, and probably no one would have grumbled had the higher award of a First Class Certificate been granted. Our illustration shows the inflorescence staged on this occasion.



CRINUM JOHNSTONI.
A fine species, with white flowers tinged with rosy blush. A.M., R.H.S., June 6, Sir Trevor Lawrence, Bart. (gardener, Mr. W. Bain), Burford Lodge, Dorking.

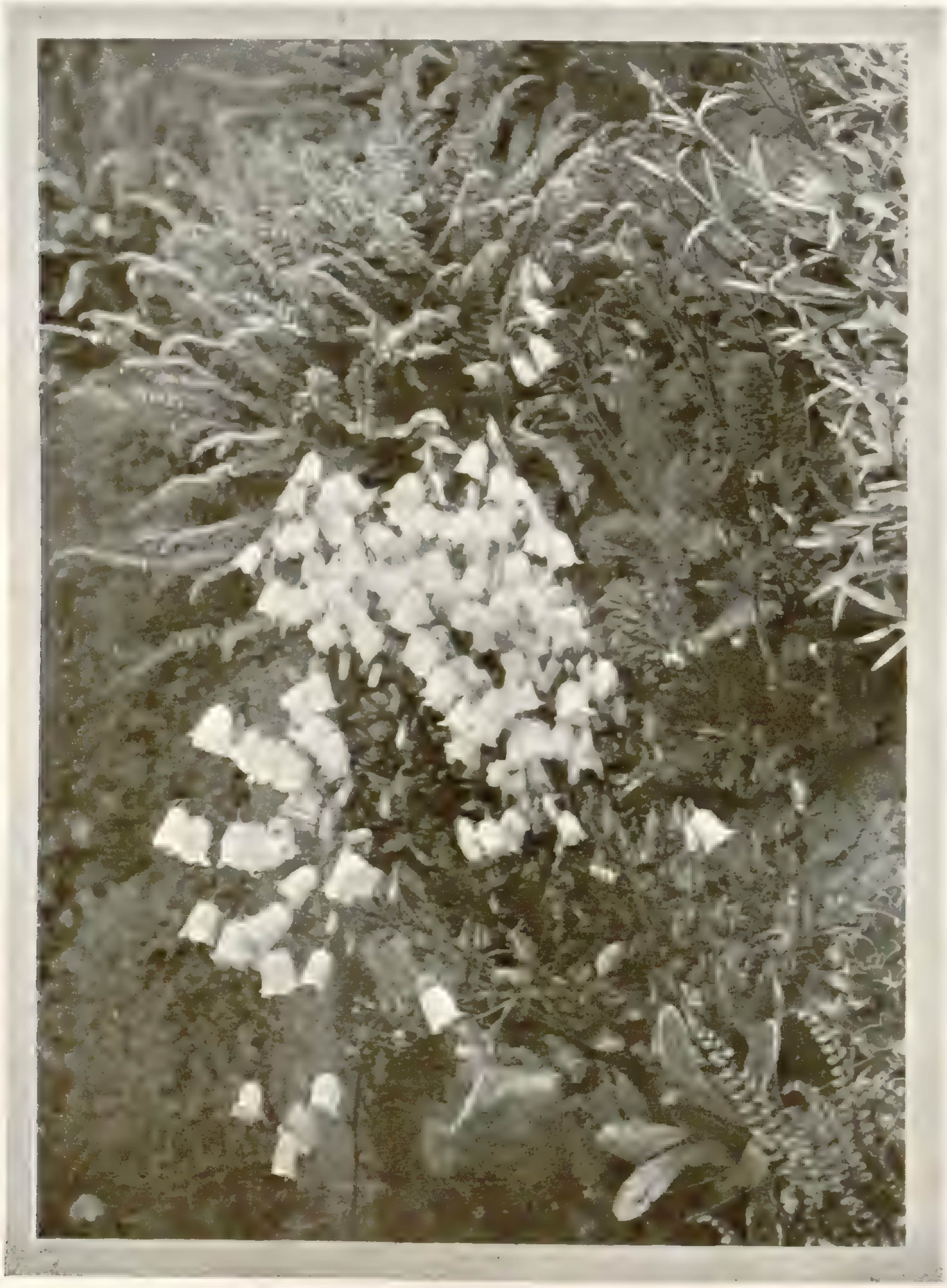
Crinum Johnstoni is a native of British Central Africa, and bulbs were first sent to Kew from Mount Zomba by Mr. McClonnie, in January, 1899. The species is intermediate between C. latifolium and C. longifolium, and its leaves are five or six feet long by two or three inches wide. The globose bulbs are of considerable size, but do not develop a neck, as in other well-known species. The flowers, each four inches or more in length, are white, tinged with rosy-blush, and are very beautiful. Crinum Johnstoni was named in compliment to Sir Henry H. Johnston, who has done good work in Central Africa.

CAMPANULA PUSILLA.

Dwarf campanulas nowhere appear to such charming advantage as when grouped in the rock garden. The beauty of form and graceful habit that invariably characterise the bellflower is present in most charming miniature in Campanula pumila, best known perhaps as C. pusilla. This dainty plant is variable both in the form and colour of the flowers, in the latter respect being represented by deep blue, lavender, and white varieties. The difference in form is not so readily apparent; in one form the flowers appear about equal in length and width, and have an inflated appearance; in the other form the length of the bell is greatest, so that it appears slender in comparison with the other; both come naturally from self-sown seed, and in this respect no plant exceeds them in rapidity of freedom in reproduction. Originally I had only the dark blue and white forms, which were planted in ordinary positions on the rock garden, and in a few years they became widely distributed, self-sown seedlings appearing in quite unexpected positions. Numbers clothed the sides of the paths, others strove to maintain a foothold among more vigorous subjects, while a few ensconced themselves in cracks and fissures among the rocks, and, when in flower, the dainty bells appeared to be tumbling in wildest profusion from many different points.

Campanula pusilla appears to succeed best in positions that are cool and well drained; in such it withstands the maximum amount of sun, and where it secures a suitable foothold it swells out into luxuriant cushions of low dense leafage, which later become aglow with flowers, the wealth of blossom presenting in its season a quite notable floral triumph.

Thomas Smith.



A SELF-SOWN CAMPANULA PUSILLA ALBA AMONG HARDY FERNS.

VEGETATION.

In considering the evolution of organic life on this wonderful world of ours, animal life, culminating in man himself, naturally occupies in our minds the first position, and vegetative life is equally naturally regarded as a mere means to an end, viz., the sustenance of the higher grades of existence. The scientist, however, recognises the fact that organic life in its origin must have been vegetative and not animal, since nutritive material must have existed in a digestible form suitable for the animal organisation when primal life branched off into the two directions, animal and vegetable, since it is the plant alone which can assimilate inorganic matter, and, by virtue of such assimilation, create animal food. Throughout creation, so far, at least, as this globe is concerned, the plant therefore constitutes the very foundation of life, and a world is perfectly conceivable in which animal life might be entirely absent, while an animal world by itself is an impossibility, since, though many animals prey upon each other or exist at their expense, the victims or hosts are primarily dependent upon vegetable food for their existence, and hence it is only a step from the carnivorous or parasitic animal to the primary necessity, viz., the food producing plant.

The cell which, by its capacity for absorbing nutrition and multiplying itself, is, throughout Nature the immediate formative agent, can only perform its functions, directly or indirectly, through the agency of chlorophyll, undoubtedly the most wonderful and most essential substance in the world, though popularly it is merely regarded as the green colouring matter common to the greater part of the plant world, and only absent in the rest of it by virtue of what we may term a parasitic capacity of utilising it indirectly. It is chlorophyll, and chlorophyll alone, which is gifted with the subtle power of utilising the vital energy of the sunbeam to break up and decompose purely inorganic material, carbonic acid gas and various salts into their constituents, and then to rearrange these into almost infinite combinations to form the building materials requisite for their multifarious work. No animal has this power; and, although every form of animal life exists by virtue of some sort of digestive apparatus which is capable of withdrawing the material its system requires from the food obtained, that food must first have been created by chlorophyllic action, and cannot possibly be assimilated in the raw form with which chlorophyll so successfully deals. It is obvious, therefore, that so far from vegetation being of secondary importance in the great scheme of Nature, it is really the first essential to organic existence.

From another point of view, viz., of ubiquity and abundance, vegetative life must certainly take precedence over animal life. Viewing the earth's surface as a whole, we see, practically everywhere, save in the Polar regions and on the watery areas which occupy so large a part of it, a practical infinity of forms of vegetation, from enormous areas densely clothed with forests millions of square miles in extent, to areas of mountain, valley, and plain of equal or greater area also covered with vegetation, to say nothing of the vast extent of cultivated land devoted to agriculture. Taking these land areas as a whole, the evidences of man's existence consist but of mere dots of cities and tracks of traffic, while if we descend to form a comparative estimate of the rest of animal life, it is found to be but a fraction in proportion to the abundance of vegetation.

Vegetation, indeed, more or less pervades immense regions scarcely trodden by the foot of man whom it far and away excels in the capacity of adaptation to adverse conditions, and thus holds its own practically everywhere where the sun can shine and a little rain can fall, or the dews of heaven can replace it. In taking a purview of the vegetation on the earth's surface, we have excepted the oceans and lakes, but even here, though less visible, vegetation must be on an enormous scale, the great Sargasso Sea, for instance, must form a fair aquatic parallel in the ocean to the huge areas of terrestrial forests, to say nothing of the coastal weeds and those which are known to prevail in deeper waters. Over and above all these, we have also to reckon with the microscopic plant world which to this day doubtless represents the progenitors of all existing life in these forms of simple and complex cellular organisms, diatoms, desmids, and an inconceivable host of others which inhabit every body of water, whether large or small, and play a by no means unimportant rôle, not merely as food for the animal section of creation, but even as contributing to the rock formations of the distant future by their insoluble secretions.

Chas. T. Druery, V.M.H., F.L.S.

CHRYSANTHEMUM PREALTUM.

Among the members of this genus are many useful and ornamental summer and autumn-flowering plants, not to mention the popular "mums." Probably the most familiar are the many forms of C. maximum, which is so popular as a border plant, and so useful for its cut flowers. C. lacustre and the tall-flowering C. uliginosum also claim their share of attention, the latter being valuable for its late autumn flowers.

The present species is closely allied to the well-known Feverfew (C. parthenium), being, in fact, the Caucasian form of it. It is a very attractive and free flowering plant, and is well worth a place in the herbaceous border, providing a profusion of flowers during the summer and autumn months. Of well-formed bushy habit, freely branching, it grows from two feet to three feet high, with flower heads about one inch across. Coming freely from seed, which is produced in abundance, C. prealtum is one of the easiest of plants to grow in any open, or even shady, border, while it is not at all particular as to soil. Seeds may be sown in the early autumn to produce plants for early summer flowering, while seeds sown in spring produce plants that will flower in the autumn.

C. prealtum differs from the European C. parthenium in having less finely-divided foliage, a stiffer, more erect habit, and larger flowers.

W. Irving.

CHRYSANTHEMUM PREALTUM.

SWEET PEA NOTES.

The long-continued spell of dry weather is in many districts causing considerable harm to vegetation, and as the sweet peas are moisture-loving plants, they, among other things, will be suffering, though probably not so much as the shallower-rooting subjects.

It is at such times as these that the benefits of deep cultivation are felt, and where the soil has been worked to the depth of two feet or more the plants should not be really suffering, although the abnormal heat of the last few days cannot have failed to test the plants severely, and the exhibitor especially cannot afford to lose any ground, so every effort must be made to keep the plants growing nicely.

On light shallow soils watering must be taken in hand at once if the vigour of the plants is to be maintained. If the plants have commenced to bloom, which they should by this time, weak liquid manure may be given them at each watering, say, twice a week, and though I am not generally in favour of very early feeding, yet a season such as this demands treatment quite out of the ordinary, so I would advise, in addition to the liquid manure, which may be made from either horse, cow, or sheep manure, a slight dressing of artificial once every week or ten days; but should the plants or flowers become too gross this latter should be discontinued for a time, or, in the event of a moist period intervening, it might not be necessary to give quite so much.

On heavier soils it may also not be necessary to water quite so often, but I have noted that many heavy soils have a decided tendency to crack during dry weather, and, consequently, lose a great deal of moisture by evaporation, and, though appearing moist, are in reality even drier than the lighter class of soils; in such cases frequent hoeings are absolutely necessary unless the ground has been mulched, and then one must not be lulled into too great a sense of security, but make quite sure that the ground is actually moist by examining the soil some little distance away from the plants.

Green-fly and thrips are often troublesome pests to the plants during hot dry spells, and as a preventive I would suggest that they be given a good syringing overhead after a hot drying day, the garden hose being the best thing for the purpose, and one can cover a lot of ground with this in a short time. If this is done two or three times a week it will go a long way towards keeping the pests down, but should it prove insufficient a light spraying with some insecticide should soon settle the matter, not forgetting that the young points of sweet peas are fairly tender subjects, and must not be treated to the same strength as one would use for fruit trees, etc.

Thomas Stevenson.

Lockerbie Sweet Pea Association.—A society, under the above title, commenced its existence a short time since as the result of a meeting held at Kintail Hall, Lockerbie. Sir George Watt presided, and was elected president of the new venture. Mr. G. L. Moffat, Lockerbie, was appointed secretary, and an exhibition is to be arranged for August.

Shrubberies.—This is a good time for giving the beds and borders a thorough cleaning. Some of the early-flowering shrubs will benefit by a little judicious pruning where the growth has become too thick. The old flowering wood may be thinned out in the case of the ribes to advantage, to allow the young growths more light and air. The early-flowering spiræas, such as Thunbergi, arguta, prunifolia fl. pl., and confusa, may be slightly thinned out after flowering, and where strong shoots are observed breaking at the base of the growth the same growth should be pruned down to the young shoot. The sucker growths which frequently appear round the stems of lilacs should be cut away, or they will eventually take possession. A liberal top-dressing of decayed manure is of great assistance to the lilacs, if given them when they have finished flowering. During dry spells all late-planted shrubs will require thorough soakings. Laurel hedges and screens will need to be trimmed occasionally to keep them tidy, also privet, box, and ivy. The strong flowering shoots of Buddleia variabilis, and its varieties magnifica and Veitchiana will also need support.—E. C. P.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

COOL HOUSE. — The excessive dryness prevailing for such a lengthened period, combined with hot scorching sunlight, renders it more than usually difficult this season to retain a desirable condition of the atmosphere inside the houses, such as is best suited to the different occupants of this division. Frequent damping of the floors, syringing between the pots, and spraying overhead have been necessary with us, notwithstanding we have had a permanent shade on the glass in addition to the ordinary blinds. We have found considerable advantage in that we have been able to dispense with all artificial heat at night, and with a liberal use of the lower ventilators a good amount of atmospheric moisture has been acquired by damping outside the houses with a hose during the evening, and I would advise, where this can be conveniently done during the summer months, to water each evening the paths and borders, and whatever space may be around the outsides of the orchid houses. The only disadvantage we have experienced from the dry weather is in the durability of the flowers, the blooms of Odontoglossum crispum seem no sooner expanded than they present a thin and transparent appearance, and only remain in good condition a very short time. I have no doubt we shall ultimately derive considerable benefit from the unusually dry period by the more robust appearance of the growths just advancing. There can be no doubt that the want of light, which was so pronounced last season, resulted in the production of more or less immature and unripened growths and pseudo-bulbs, and consequently, the quality of the flowers throughout the whole season has been more or less thin in texture, and in many cases wanting in the colour.

REPOTTING COOL HOUSE ORCHIDS —It frequently occurs that some of the odontoglossums require attention immediately after they pass out of flower. I do not consider that plants take any harm from repotting at this season of the year, providing they are actively rooting, and that conditions suitable to their requirements can be provided. I do not consider it advisable to repot when the conditions outside are such as we have experienced recently, scarcely any rain for five or six weeks. It is better to delay repotting until moister outside conditions obtain, and then during the summer the plants must be kept well shaded, and the atmosphere moist until the roots become established in the fresh compost. A sharp lookout must now be kept for thrips and other insect pests, but spraying with some safe insecticide at regular intervals will keep these pests in check.—H. J CHAPMAN, Oakwood Gardens.

STOVE PLANTS.

ALLAMANDAS are now making rapid growth, and the best shoots should be trained in their permanent positions, previously removing all the weakly and undesirable wood. This latter operation will well repay the cultivator while improving the general quality of the blooms, and, in addition, will greatly benefit the occupants of the plant stoves by allowing them more light. Plants that are grown for the purpose of forming specimens on balloon or other shaped trellis should have their growths removed from the strands of twine, and trained to the trellis as soon as sufficient flower buds are formed, and previous to their showing colour. A plentiful supply of water is now required, and good results will follow judicious feeding with some approved fertiliser with alternate applications of clear soot water and weak liquid manure.

THE VARIEGATED PINEAPPLE is exceptionally useful in decorations, and adds a distinct as well as interesting appearance to collections of stove plants. Its culture is comparatively simple, being much the same as that of the well-known pandanus. Suckers with a few roots attached may be removed at any season of the year, and if they are put into small thumb pots, and the pots plunged in a brisk hotbed, they will become well established in a few weeks. In order to ensure the development and rich colouring of the leaves the plants must have their roots somewhat restricted.

ASPARAGUS PLUMOSUS.—Spring-raised plants are now growing freely, and attention to repotting is advisable so as to have the plants thoroughly established before autumn. Fibrous loam and peat in equal parts with a small amount of dried sheep dung that has been rubbed through a fine sieve, and about one-fifth part of silver sand will make a suitable potting compost.

EDGING PLANTS.—In order to maintain a stock of these in a thrifty state for the stages it is necessary to propagate a few at intervals, the number being regulated by the demand. The following are especially useful: Selaginella cæsia, S. arborea, Panicum variegatum, fittonias, and tradescantias. Cuttings of these inserted in small pots from six to nine in each, and kept close for a few weeks, will quickly attain to a decorative size. —JOHN DONOGHUE, Bardon Hill Gardens, Leeds.

FRUITS UNDER GLASS.

EARLY GRAPES —The hot sunshine at the end of May and early in June, caused the crop of Black Hamburgh to finish up quickly, and now if any uneasiness prevails about the grapes keeping, let the roof be shaded either with netting or a little lime-wash, perhaps the latter is the more easily applied, and if it is washed off by a storm it can very soon be replaced. In dull weather shading is not required. Keep down the fire heat as advised in previous notes, only using a little in dull or damp weather, or of a cold evening. White grapes, such as Foster's Seedling or Buckland Sweet Water, require all the light possible to ensure their finishing properly, but direct exposure to the sun is harmful, especially after a dull spell, as we are apt to get.

MID-SEASON VINES.—Admit an abundance of air on all favourable occasions, and do not allow the temperature to rise too high before this is done. A little air should be admitted during the night, and in bright weather commence the ventilation as soon as possible in the morning, and increase it gradually, and damp the floors at once, as there is always a stuffy temperature in the morning, and this should apply to all fruit houses. Strict attention must be paid to syringing all available space under the vines, such as staging, floors, etc., at shutting-up time.

LATE GRAPES.—Pay attention to the final thinning, especially Alicante and Gros Colmar, and allow plenty of room for the berries to swell. When the bunches are overcrowded the grapes do not keep well. If one berry should, perchance, go wrong, the whole bunch quickly becomes affected. The berries should be about half an inch apart now, which will be about the amount of space requisite for these two grapes to have shapely bunches when finished. Market growers do not allow quite so much room on account of obtaining extra weight, and from these growers one can easily obtain some good lessons, as they obtain far more weight per foot of rod than do private growers.

LATE PEACHES AND NECTARINES must be brought along steadily to meet the demand, or for any special time or purpose. This can be regulated by airing and fire-heat. Late houses must have an abundance of air throughout the night, or the crop will be brought along too rapidly. Keep the growths thinned, and tied regularly, and do not tie in any more branches than is absolutely required for the well-being of the trees.

EARLY PEACHES.—When the crop has been gathered open the ventilators to the fullest extent, and if the roofs are movable take the lights off. This ripens and makes the wood quite hard. Keep the foliage well syringed twice daily, and attend to the watering with the same care as when the fruits were on the trees, as the latter are now completing their growth.

FIGS.—The hot sunshine of May and early in June caused the fruits to be very delicious. Gather the fruits as soon as they are ripe, and send them in for dessert fresh from the trees. Figs do not improve by being kept. Give abundance of water to the roots where a good second crop is in process of development, and shut up with a good brisk temperature; succession houses may be treated similarly. Figs in pots may be plunged to the rim in a bed of ashes outside in a sunny position, and must be regularly syringed. — W. A. COOK, Leonardslee Gardens.

THE FLOWER GARDEN.

FLOWER BEDS AND BORDERS which have been recently planted with the summer subjects will require copious waterings during dry weather. All plants needing support must be attended to at once before the winds break them down. All decaying flowers and foliage should be picked off to promote a tidy appearance, and the verbenas, phloxes, etc., pegged down. In places where there is sufficient room to work the hoe the surface of the beds should be stirred occasionally. The various designs in the carpet beds must be maintained in clear outline by pinching the plants to keep them in their places. Begonias of the tuberous rooted section will derive much benefit from mulching, and decayed hotbed material is excellent for the purpose. It conserves the moisture, and keeps the roots cool.

HERBACEOUS BORDERS.—The staking of the various plants must be attended to before they become too heavy. The methods of staking and supporting the growths have been advised in earlier calendars. The spent flowers and decaying foliage should be removed from all subjects which have finished flowering, excepting those of a bulbous nature. The dead blooms may be picked off, but the stems should be allowed to mature, as they prove of great assistance in ripening the bulbs. Abundance of water will be necessary during dry weather to keep the plants growing freely, and phloxes should be heavily mulched, especially on hot borders. Occasional hoeings are beneficial to all plants. The flowering period of pansies may be considerably extended if the seed pods are not allowed to remain on the plants.

RHODODENDRONS AND AZALEAS.— Immediately these cease flowering the old trusses should be removed from the plants so that the young shoots may obtain the benefit. The trusses will readily snap off immediately above the young growths if the operation is carefully carried out, and this also gives the shrubs a neat and tidy appearance. A top-dressing of peat should be given to all those which require it. Failing peat, leaf-soil, loam, and a small quantity of decayed cow manure provides an excellent substitute

WALLFLOWERS.—Seeds sown in May will by this time have produced plants large enough to transplant. If the young plants are to be put out now, where they are to remain until required for the beds in the autumn, then they must have from twelve to fifteen inches of space between them. When it is intended to transplant twice in the growing season they may be put out this time about four or six inches apart, lifting and planting again later on when they have filled out the space allowed. The advantage in transplanting twice is that more fibrous roots are obtained than when they are only shifted once. Whichever method is adopted it is necessary to put wallflowers in good soil that has been previously enriched with decayed manure.—E. C. POOLEY, [illegible] Gardens, Plymouth.

BATH CARNIVAL.

BATH GRAND ROSE SHOW
and
GENERAL SUMMER EXHIBITION.
WEDNESDAY and THURSDAY, JULY 12th and 13th.

Classes for Roses, Nurserymen and Amateurs.
Bouquets, Cut Flowers, Sweet Peas, Strawberries, and Tuberous Begonias.

Entries close Friday, July 7.

For Prizes, Schedules, etc., apply
B. R. F. PEARSON, Secy.
Office: 17, Argyle Street, Bath.

BLETCHLEY AND FENNY STRATFORD HORTICULTURAL SOCIETY.

BLETCHLEY PARK, BUCKS.

Magnificent grounds, adjoining Bletchley Junction, L. and N.W. Rly.

SECOND ANNUAL SHOW,

August 7th, 1911, Bank Holiday.

LARGE SPECIAL PRIZES
for
ROSES, CARNATIONS, TABLE DECORATIONS,
etc., etc.

ADDITIONAL CLASSES.

Schedules on application to Secretary,
THOS. BEST,
Bletchley.
June 16th, 1911.

CARDIFF FLOWER SHOW.
By kind permission.
SOPHIA GARDENS, CARDIFF.
WEDNESDAY and THURSDAY, July 26th and 27th, 1911.
The renowned Full Band of H.M. 19th Queen Alexandra's Own Royal Hussars.
Grounds and Tents brilliantly Illuminated.
Mr. John Studt's Complete and Extensive Amusements.
Every Particular and Schedule, Apply
A. MAURICE BAILEY, Secretary,
24, Duke Street, Cardiff.

HANLEY PARK, STAFFORDSHIRE.
JULY 5th and 6th, 1911.
FIFTEENTH GREAT
ANNUAL FLORAL FETE.

£650 in Prizes, Silver Cups, Gold and Silver Medals. Silver Challenge Cup, value £10 10s., offered for TRADE EXHIBIT.
(For particulars see page 8 in Schedule.)
Valuable Special Prizes offered by the Principal Firms in England.
Schedules post free on application to
WM. POULSON, Secretary.
Town Hall, Hanley.

LEICESTER.—ABBEY PARK FLOWER SHOW, 8th and 9th August next. Open Class, Group of Plants, £20, £15, £10, £6. Liberal prizes for Collections of Fruit, Displays of Roses; Silver Cup, Gold and Silver Medals for non-competitive exhibits. Schedules from JOSEPH BURTON, Supt.

NORTH LONSDALE ROSE SOCIETY,
ULVERSTON.
28th ANNUAL EXHIBITION of Roses, Sweet Peas, Violas, etc., Swarthdale Park, Ulverston, Wednesday, July 19th, 1911.
PROVINCIAL SHOW OF THE NATIONAL ROSE SOCIETY.
£5 and Gold Medal for a Single Bunch of Sweet Peas.
Over £300 in Cups, Medals, and Cash will be awarded.
Entries close July 15th.
For Schedules, etc., apply Hon. Secretaries,
County Square, Ulverston.

ROYAL HORTICULTURAL SOCIETY OF ABERDEEN.
THE ANNUAL FLOWER SHOW will be held in the DUTHIE PARK, ABERDEEN, on the 17th, 18th, and 19th August. Prize Schedules may be had from the Secretary, J. B. RENNETT, Advocate and C.A., 231, Union St., Aberdeen. Entries close on 10th August.

SHREWSBURY GREAT FLORAL FETE.
AUGUST 23 and 24, 1911.

£1,200 in Cash Prizes.

Schedules for this year are now ready, and may be had post free from—
Messrs. ADNITT and NAUNTON, Hon. Secs.,
Shrewsbury.

SALTAIRE, SHIPLEY, AND DISTRICT ROSE SOCIETY.

NINTH ANNUAL EXHIBITION
OF ROSES AND SWEET PEAS.

TUESDAY, JULY 11th, 1911.

TROPHIES, MEDALS, AND MONEY PRIZES TO THE VALUE OF £500.

Schedules and further particulars from
E. WRIGHT,
Hon. Secretary.
Rosedene, Shipley Glen,
Saltaire.

NATIONAL SWEET PEA SOCIETY.
ELEVENTH GREAT EXHIBITION AT ROYAL HORTICULTURAL HALL,
WESTMINSTER, JULY 11 and 12.
Entries Close July 5.
Join at once. Minimum Annual Subscription, 5s.
Schedules on application.
"Sweet Pea Annual" free to members; 2s., post free to non-members.
CHARLES H. CURTIS, Hon. Sec.,
Adelaide Road, Brentford, Middx.

EXHIBITIONS AND MEETINGS.

◆

Royal Horticultural Society.

Notwithstanding the attraction of Coronation decorations, the fact that this was Coronation week, and a very little in front of the forthcoming great Olympia Show, there was a full exhibition at Westminster on Tuesday, June 20, and a large attendance of Fellows and visitors. Hardy flowers, carnations, and roses were the great features of the meeting, and they were well shown. There were not many novelties, but one stood out conspicuously, and this was Philadelphus Lemoinei Virginal, a lovely, sweetly-scented, tree-flowering variety, shown by Sir Trevor Lawrence, Bart.; the flowers are large, pure white, and just double enough to give substance without detracting from the elegance of the bloom. This gained a F.C.C. Odontoglossum Europa, of bluish-purple hue, from Mr. Gurney Fowler, was also a distinct novelty, and Mr. Ferguson's Primrose Queen delphinium was very pretty.

The medal awards ranged rather lower than usual on this occasion, not because there was any lack of merit, but because the Council of the R.H.S. had reminded the committees that bronze medals might be awarded more often, so that the merit value of silver and higher medals might be enhanced.

FLORAL COMMITTEE.

Messrs. Barr and Sons, Covent Garden, were forward with a pretty exhibit of delphiniums, phloxes, the lovely pink Astilbe Arendsi Ceres, A. Arendsi grandis, a selection of English irises, with bunches of Iris ochraurea, I. Dorothy Foster, I. spuria, I. orientalis Snowflake, Lilium croceum, L. Szovitzianum, some graceful heucheras, and bright gerberas, and other good things.

Messrs. Dobbie and Co., Edinburgh, presented large stands of such fine sweet peas as Melba, May Campbell, Lady Knox (cream), Mrs. Cuthbertson, and Mrs. Heslington.

Messrs. Jas. Veitch and Sons, Chelsea, made a feature of standard fuchsias, the drooping flowers of Mrs. Marshall, Mrs. Rundle, Scarcity, Olympia, Charming, and Starlight attracting a great deal of attention; brilliant cannas with perpetual and Malmaison carnations, and the graceful Begonia Lucerna, which carries dense panicles of rich red-pink blooms.

Carnations from Mr. Charles Blick, Hayes, Kent, were attractively staged, and the group included excellent bunches of King Arthur, Solfaterre, Cyclops, Mikado, Sea Swallow, crimson and white fancy; Acheron, King Oscar, Nautilus, and the big yellow Cecilia.

Old-fashioned as are Canterbury Bells, they never fail to attract attention when a fine strain is well displayed, as was the case on this occasion, when Messrs. W. J. Godfrey and Sons, Exmouth, presented a big group of fine spikes of cup and saucer varieties; though blue shades and white varieties were good, probably the beautiful pink shades were the most admired.

The beautiful bright blue delphinium Rev. E. Lascelles, with its striking white, blue-speckled eye, was shown by Messrs. Alfred Walters and Son, Bath, who set up a score or more of vases of spikes of this variety.

Messrs. Stuart Low and Co., Enfield, filled the space across the top end of the hall with carnations. Malmaison and perpetual varieties in pots were chiefly staged, and these were set in little groups of a variety, in moss and ferns. A few palms were effectively used as a general background; notably fine varieties well represented in this way were Grace, C. P. Little, Jane Seymour, Sunset, King Arthur, Irene, H. J. Jones, Lady Rose, Nautilus, Horace Hutchinson, Duchess of Westminster, and the old Princess of Wales.

Roses from Messrs. B. R. Cant and Sons were of beautiful colour, and especially attractive were the vases of Madame Ravary, Nance Christy, La Tosca, Souv. de Catherine Guillot, Lady Hillingdon, Antoine Rivoire, the bedding semi-double variety, Rose de Barri, Betty, and Harry Kirk.

Messrs. Paul and Son, Cheshunt, submitted a collection of interesting garden roses that included Ariel, Crested Moss, Richmond, Purple East, The Wallflower, Sweet Lavender, Leuchtstern, etc. The same firm filled out a long table with sweetly-scented pæonies, elegant heucheras, verbascums, gaillardias, and other good hardy flowers.

Sheaves of delphiniums, and big branching inflorescences of Ferula glauca, were the features of the exhibit from Messrs. T. S. Ware, Lim., Feltham; gaillardias, phloxes, Campanula Moerheimi, and pæonies were also included.

Messrs. William Paul and Son, Waltham Cross, contributed beautiful roses, chiefly in baskets of a variety; Lyon Rose, Le Progres, Mdme. Segond Weber, Alice Cory Wright, the famous Juliet, and Florence H. Veitch, with pillars of Elsie behind the baskets.

Mr. G. Reuthe had a goodly display of pæonies, irises, ixias, Eremurus Bungei, Escallonia phillipinense, liliums, etc.

Mr. Maurice Prichard, Christchurch, made a bright show of good varieties of delphiniums, campanulas, liliums, etc.

Mr. James Box, Lindfield, put up a large bank of choice delphiniums, and sheaves of Spanish irises, pæonies, poppies, pyrethrums, and gaillardias. Mr. James Box also contributed a group of sweet peas, in which were Blue Flake Spencer, Constance Oliver, Zarina, Dazzler, Scarlet Monarch, Colleen, and Mrs. Townsend.

Mr. Robert Bolton, Warton, Carnforth, brought up a small exhibit of well-grown sweet peas, that included Chas. Foster, Thos. Stevenson, Clara Curtis, Earl Spencer, Stirling Stent, Tom Bolton, Mrs. Hardcastle Sykes, and the brilliant Dazzler.

Messrs. Whitelegge and Page, Chislehurst, showed a berry, a free fruiting and strong growing fruit after the character of Phenomenal berry, with long deep red fruits that are said to be sweeter than the logan and similar berries.

Adiantum cuneatum Matador and the new Glory Fern were shown by Mr. Fabius, Emsworth.

Mr. Clarence Elliott, Stevenage, presented a rock garden, with Campanula pulla, C. pulla Miss Willmott, Nierembergia rivularis, and Aster sub-caeruleus, in fine condition.

Mr. Amos Perry, Enfield, had a rare display of delphiniums, putting up huge sheaves of spikes, and arranging these in pleasing fashion. Perfection, King of Delphiniums, Rev. Lascelles, Mrs. Creighton, Julia, La France, St. Paul, Dragon Fly, Persimmon, and Carmen were a few of the more prominent varieties.

Mr. C. F. Waters, Balcombe, showed perpetual carnations in his usual good style, setting up big vases and stands of leading varieties.

Messrs. Phillips and Taylor, Bracknell, contributed a little water and bog garden, with beautiful nymphæas, irises, and other moisture-loving subjects; they also showed a bank of delphiniums, etc.

Mr. F. W. Smith, gardener to G. Ferguson, Esq., The Hollies, Weybridge, brought up a fine lot of new delphiniums, in which the improvement in the cream and yellow shades were very noticeable; Pandora, Primrose Queen (A.M.), Gentianella, Enchantress, Avalanche, Cecilia, and Anona were a few fine forms in these colours.

Tall stands of roses, from Messrs. W. Spooner and Son, Woking, were well set up, General McArthur, Le Progres, Mrs. A. R. Waddell, and Mrs. Alfred Tate being very prominent varieties.

Messrs. W. and J. Brown, Peterborough, were large exhibitors of roses, and they staged their flowers very effectively in vases and stands of varying heights; we noted Mildred Grant, Mrs. D. McKee, Marquis de Sinety, Wm. Shean, Mdme. Ravary, and Mdme. Melanie Soupert as especially bright.

Messrs. Frank Cant and Co., Colchester, presented such roses as Madame Ravary, Mdme. Melanie Soupert, Countess of Derby, J. B. Clark, Rouge Angevine, and Lyon Rose in excellent form.

Messrs. G. Jackman and Son, Woking, put up popular roses, chiefly in tall bamboo stands, with some flowers on boards and in small vases in the foreground; Lady Hillingdon was charmingly shown; this firm also contributed a bank of hardy flowers.

Messrs. George Mount and Sons, Canterbury, showed roses finely, and had Mrs. George Shawyer, General MacArthur, and Richmond in good condition.

Messrs. H. Cannell and Sons, presented cannas and Hydrangea paniculata grandiflora, and Calceolaria Triumph of the North, all good things.

Messrs. J. Cheal and Sons, Crawley, exhibited cut sprays of ornamental trees and shrubs, and these proved very interesting, especially the golden-leaved elder, elm, cornus, oak, etc., while kalmias, Azalea viscosa vittata, Robinia viscosa, and Olearia dentata were conspicuous among flowering shrubs.

The bold bank of hardy flowers from Messrs. G. Bunyard and Co., Maidstone, was gay with delphiniums, Campanula macrantha, Sidalcea candida, Spanish irises, Iris Monnieri, I. Dorothy Foster, ixias, and varieties of Lupinus polyphyllus.

Mr. H. Barnett, Guernsey, again made a rare show of carnations, his blooms of Marmion, R. F. Felton, Mikado, Mr. C. Raphael, and Mrs. C. W. Ward compelling admiration.

Choice ferns, with abutilons, crotons, Hibiscus Cooperi, and fragrant heliotropes made up an exhibit from Messrs. H. B. May and Sons, Edmonton.

The stately delphiniums from Messrs. R. H. Bath, Lim., Wisbech, proved a great attraction, especially the big spikes of Mrs. Creighton, Pannonia, Patansa, General Baden Powell, Donald McPherson, and Lize.

Among the carnations staged by Messrs. W. Cutbush and Son, Highgate, we were specially struck with Frank Galsworthy, Mrs. Fortescue, Alma Ward, Fortuna, and Mrs. Burnett.

Mr. E. J. Hicks, Twyford, contributed a goodly display of roses, and Mr. W. Easlea, Eastwood, Essex, filled a table with bright blooms, and trailing sprays of beautiful varieties of roses.

Messrs. Jones and Sons, Lim., Shrewsbury, displayed sweet peas prettily, and contributed popular varieties.

Mr. W. E. Alsen, Denmead, Hants, had a very effective exhibit of sweet peas, and made a good show of Stirling Stent, Tennant Spencer, Countess Spencer, Moneymaker, Dazzler, and Senator Spencer, all in fine form.

Mr. Allan, gardener to Lord Hillingdon, Hillingdon Court, Uxbridge, presented fine flowers of such nymphæas as N. atropurpurea, N. chromatella, N. Marliacea albida, N. Gladstone, and N. M. carnea, in trays of water.

Messrs. G. and A. Clark, Lim., Dover; Messrs. Wells and Co., Lim., Merstham; Mr. A. J. Harwood, Colchester; the Guildford Hardy Plant Co.; and Messrs. Carter Page and Co., London Wall, also made contributions of cut flowers.

Mr. J. MacDonald, Harpenden, made a very interesting exhibit of grasses, both mounted specimens and young seedlings, representing those kinds of special value for golf courses, tennis courts, croquet lawns, etc.

ORCHID COMMITTEE.

Messrs. Sander and Sons, St. Albans, had an orchid group that was interesting by reason of its specimens of Cycnoches pentadactyle, with four spikes, each nearly a yard long, Maxillaria Sanderiana, Broughtonia sanguinea, Odontioda Bradshawiæ, the beautiful Dendrobium thyrsiflorum, Brasso-cattleya Veitchi, and Odontoglossum ardentissimum Queen Alexandra.

Messrs. Charlesworth and Co., Haywards Heath, had a quite small group, but it contained the pretty brown and white Odontioda Lairessei, Mormodes pardinum unicolor, Angræcum Chaillanum, Chondroshyncha Chestertoni, Trichopilia Backhousiana, and Cypripedium Mrs. Lloyd magnificum.

From the Burford Lodge collection Mr. W. H. White, orchid grower to Sir Trevor Lawrence, Bart., brought up Catasetum Cliftoni, with a broad, flattish, greenish-yellow lip.

Cattleya gigas was a strong feature of Messrs. J. and A. McBean's group, from Cooksbridge; with these were Cattleya Mossiæ Wagneri, C. M. Reineckiana, and white forms of Odontoglossum crispum.

Messrs. Armstrong and Brown, Tunbridge Wells, showed a fine specimen of Masdevallia Harryana splendens, with thirty-four richly-hued flowers.

Mr. W. Stables, gardener to De Barri Crawshay, Esq., Rosefield, Sevenoaks, showed the fine Odontioda Rosefieldiensis, with large bright flowers; and Odontoglossum Queen Alexandra.

Mr. A. Young, gardener to E. R. Ashton, Esq., Broadlands, Camden Park, Tunbridge Wells, displayed Odontoglossum Williamsiana, Epidendrum vitellinum majus, Lælio-cattleya Canhamiana, L.-c. Martinetti, and the bright L.-c. Lady Miller, yellow and crimson, and Odontoglossum Fascinator.

Messrs. Stuart Low and Co., Enfield, contributed Odontoglossum Pescatorei, Oncidium macranthum, Cœlogyne pandurata, Renanthera Imschootiana, and the chaste Dendrobium nobile virginale, etc.

Mr. Edward V. Low, Haywards Heath, put up Cattleya Mossiæ Wagneri, C. M. Frou Frou, and a fine specimen of Cœlogyne pandurata.

Anguloa Cliftoni and Catasetum Clifton, both with yellowish flowers, were staged by Mr. Collier, gardener to Sir Jeremiah Colman, Bart., Gatton Park, Reigate; Sobralia Colmanæ, with four open, soft buff-coloured flowers, also came from Gatton Park.

FRUIT AND VEGETABLE COMMITTEE.

Messrs. J. Veitch and Sons, Chelsea, presented a very fine collection of vegetables, representing excellent varieties in good style; Wheeler's Imperial and Market Garden cabbages were excellent; Quite Content, Earliest Marrow, and Langley Gem peas; Improved Telegraph and Sensation cucumbers; Hastings and Golden Jubilee tomatoes; Parisian Forcing carrots; Early Dwarf Forcing carrots, and a host of potatoes, beans, radishes, and other good things were presented in the pink of condition.

Mr. S. Mortimer, Farnham, showed excellent fruits of Cynosure, Unrivalled, and Coronation, cucumbers.

CERTIFICATES AND AWARDS.

First Class Certificates.—To Philadelphus Lemoinei Virginal, from Sir Trevor Lawrence, Bart. (gardener, Mr. W. Bain), Burford Lodge, Dorking; to Odontoglossum Europa, from J. Gurney Fowler, Esq., Glebelands, South Woodford.

Award of Merit.—To Odontioda Rosefieldiense Crawshayana, from De Barri Crawshay, Esq., Rosefield, Sevenoaks; to Delphiniums Primrose Queen and Mauve Queen, from G. Ferguson, Esq. (gardener, Mr. F. W. Smith), The Hollies, Weybridge; to Sweet Pea R. F. Felton, from Mr. Robert Bolton, Carnforth; and to Carnations Charlotte Bronte and F. W. Goodfellow, from Mr. C. Blick, Hayes.

MEDALS.

Gold.—To Messrs. James Veitch and Sons, Chelsea, for vegetables.

Silver-gilt Flora.—To Mr. Amos Perry, Enfield, for delphiniums.

Silver-Gilt Banksian.—To Mr. J. Box, Lindfield, for sweet peas and hardy flowers; to Messrs. W. and J. Brown, Peterborough, for roses; to Messrs. G. Jackman and Son, Woking, for roses; to Mr. J. McDonald, Harpenden, for grasses; to Messrs. Stuart Low and Co., Enfield, for carnations.

Silver Flora.—To Mr. W. E. Alsen, Denmead, Hants, for sweet peas; to Mr. Chas. Blick, Hayes, for carnations; to Messrs. G. Bunyard and Co., Maidstone, for hardy flowers; to Messrs. J. Cheal and Sons, Crawley, for trees and shrubs; to Mr. E. J. Hicks, Twyford, for roses; to Messrs. Paul and Son, Cheshunt, for roses and hardy flowers; to Mr. Maurice Prichard, Christchurch, for hardy flowers; to Mr. G. Reuthe, Keston, for hardy flowers; to Mr. F. W. Smith, gardener to G. Ferguson, Esq., The Hollies, Weybridge, for delphiniums; to Messrs. Jas. Veitch and Sons, Chelsea, for carnations, fuchsias, etc.

Silver Banksian.—To Mr. H. Burnett, Guernsey, for carnations; to Messrs. B. R. Cant and Sons, Colchester, for roses; to Messrs. Frank Cant and Co., Colchester, for roses; to Messrs. William Paul and Son, Waltham Cross, for roses; to Mr. L. R. Russell, Richmond, for trees and shrubs; to Messrs. W. Spooner and Sons, Woking, for roses; to Mr. Allan, gardener to Lord Hillingdon, Hillingdon Court, Uxbridge, for water lilies; to Messrs. Sander and Sons, St. Albans, for orchids; to Messrs. Stuart Low and Co., Enfield, for orchids; to Mr. Young, gardener to E. Ashton, Esq., for orchids; and to Mr. S. Mortimer, Farnham, for cucumbers.

Bronze Flora.—to Messrs. Barr and Sons, Covent Garden, for hardy flowers; to Messrs. R. H. Bath, Wisbech, for delphiniums; to Messrs. W. Bull and Sons, Chelsea, for irises; to Messrs. W. J. Godfrey and Son, Exmouth, for Canterbury bells; to Messrs. George Mount and Sons, Canterbury, for roses; to Messrs. Phillips and Taylor, Bracknell, for water lilies, etc.; and to Messrs. T. S. Ware, Lim., Feltham, for hardy flowers.

Bronze Banksian.—To Messrs. H. Cannell and Sons, Swanley, for cannas, etc.; to Messrs. Carter Page and Co., London Wall, for dahlias, etc.; to Messrs. Wm. Cutbush and Son, Highgate, for carnations.

Yorkshire Floral Fete and Gala.

The following few items in connection with the great York Flower Show were unavoidably held over from our issue of June 17:

HARDY FLOWERS IN BUNCHES.

Mr. Walter Pybus, Monckton Moor, secured a first for twenty alpine and herbaceous plants, in pots or pans, and he had good examples of Mimulus Tillingi, Saxifraga pyramidalis, and Delphinium nudicaule. Mr. J. Pickering, Clifton, second; and Mr. J. Nicholson, White Cross Road, York, third.

There were numerous collections of hardy flowers, each arranged on a space 18ft. by 6ft., and here Mr. F. M. Bradley, Peterborough, gained first prize for a contribution that included a large number of roses, disposed in vases and tall stands; irises and pyrethrums, verbascums, scabious, and delphiniums were also effectively displayed. Messrs. G. Gibson and Co., Leeming Bar, were placed second for a fine bank, in which pæonies, Oriental poppies, Incarvillea Delavayi, and Eremurus robustus figured prominently; Messrs. Harkness and Sons, Bedale, third; and Messrs. W. Artindale and Son, Sheffield, fourth.

Messrs. C. Longster and Sons, Malton, secured premier award for twenty-four bunches of hardy flowers, and did so with grand bunches of poppies, pyrethrums, Japanese irises, gaillardias, Nepeta violacea, Inula glandulosa, etc.; Messrs. Harkness and Sons second with rather tightly-packed bunches; and Messrs. G. Gibson and Co. third.

PELARGONIUMS.

Though these were not shown so largely as of old, there were some good contributions. Mr. J. W. Clarke, Skelton Street, York, scored for half a dozen double zonal pelargoniums with grand flat examples of R. D. Sayers, F. Raspail, E. South, Mdme. Thibaut, Royal Star, and King of Denmark; he was followed closely by Mr. W. F. Crowther, Wigginton Terrace, York, whose Decorator and Gloire de France were particularly good; Mr. H. Pybus third. The best three specimen ivy-leaved pelargoniums were fine pyramidal examples of Joseph Hatfield, Baden Powell, and Souv. de Chas. Turner; Mr. H. Pybus, Wormald Green, Leeds, second, and Mr. J. W. Clarke third.

Mr. H. Pybus was to the front for three examples of zonal pelargoniums, and his 4ft. wide plants of Lady Reed, Lord Hopetoun, and Mrs. Kelly were smothered with flowers; Mr. Jas. Sunley second with smaller plants and finer trusses; Mr. J. W. Clarke third. Six single-flowered zonal pelargoniums were best staged by Mr. H. Pybus, whose varieties were Lady Reed, Wm. Newdigate, and Doris Clark; Mr. Jas. Sunley second, and Mr. J. W. Clarke third. Mr. Pybus scored for a dozen zonal pelargoniums, but his specimens were scarcely so good here as in other classes; Mr. J. Sunley second

Mr. W. F. Crowther, Wigginton Terrace, York, was the only exhibitor of six show pelargoniums, and he was worthily awarded the chief prize for his handsomely grown and freely-flowered specimens of Mrs. Pett, Ed. Perkins, Mdme. Thibaut, Countess of Warwick, Duchess of Teck, and Tommy Dodd.

VEGETABLES.

Mr. James Gibson, Welbeck Abbey Gardens, secured the first prize for six kinds of vegetables, in the class provided by Messrs. Sutton and Sons, Reading; he showed beautiful examples of Canadian Wonder dwarf beans, Ideal potatoes, Magnum Bonum cauliflowers, Perfection tomatoes, Favourite carrots, and Centenary peas; Mr. A. R. Searle, Castle Ashby Gardens, second; and Mr. W. Nicholls, gardener to the Hon. Lady Beaumont, Carlton Towers, third.

There was a similar class, in which prizes were provided by Messrs. Webb and Sons, Stourbridge, and here Mr. A. R. Searle led with Viceroy tomatoes, Defiance carrots, Early Mammoth cauliflowers, fine Stourbridge Marrow peas, very fine Supreme dwarf beans, and Colonist potatoes; Mr. W. Nicholls came second, and Mr. Hague third.

Mr. Brotherston, gardener to F. Samuelson, Esq., Breckenbrough Hall, Thirsk, led for a dish of tomatoes with capital smooth fruits of Brotherston's A1; Mr. J. Gibson second with Perfection, and Mr. Hague third with Regina.

National Vegetable Society.

The following preliminary report of the trials that are being conducted by this society has been received from Mr. Alexander Dean, V.M.H., chairman of committee:

These are now being conducted at Sutton Green, Surrey, at the "Times" Experimental Station. On the occasion of my visit early in June I found Mr. Harry Foster, the son of our deceased friend Mr. Charles Foster, who is now in charge of the trials, to have prepared them with much ability and care. The carrot trials comprise 61 stocks, from 20 seedsmen. Each stock was represented by two rows, each about 30 feet long. In scarcely a single instance was there other than a good plant, and at that moment men were engaged in thinning the rows. Generally the plants were about two inches in height. The entire breadth was very clean. I look for a specially important trial of carrots in due course.

Following the carrots came the beets, sown in two rows to each stock, of which there were 52. Of these there were 19 round or globe beets, the rest being long rooted. The plants were in every case good, and were about 1½ inches in height, all being very clean. The rows in both cases were about 15 inches apart. Again a very valuable trial of stocks should be, in due course, provided.

Of early peas there were 50 stocks, but in numerous cases varieties expected to be dwarf in habit, and staked accordingly, proved to be tall growers, being from 24 to 30 inches in height, and promising to go much higher. The greater portion of the stocks were well in bloom. Relatively but few were quite dwarf. In spite of the possible difficulty presented by this dwarf staking of tall growers there is every prospect of a most excellent trial.

With respect to cauliflowers, of which there were growing the astonishing number of 88 stocks, many of which were necessarily the same, the autumn-sown trial was unsatisfactory. The sowing of the seed for that trial was made on September 24 last, the plants being wintered in frames, and were planted out this spring. A considerable number of the stocks gave blind plants, thus showing that the varieties were unsuited for autumn sowing, as also were the first Early Snowball, Early Forcing, or Matchless type, several heading in whilst small. Just a few proved to be fairly good in growth.

With respect to the spring-sown trial of cauliflowers, that, I am pleased to say, seems full of promise. Of the plants there is quite a huge breadth, and should, in due course, present a trial of the greatest interest and value. The plants were put out on May 10, hence, when I saw them, they had been planted about 16 days. The ground throughout was very clean.

Whilst it may be possible to examine the autumn-sown trial of cauliflowers when inspecting the peas, I asked Mr. Harry Foster to kindly make notes in his trial book of those blind, or those with small heads, or of other defects, which we could later have for guidance. Still, I think for purposes of publication most weight should attach to the spring-sown trial. I need hardly say that it may be needful to pay some three or four visits to Sutton Green to see the trials, and it may be needful also to ask members of the committee to make some sacrifices to enable that to be done.

It may be added that an additional trial of beets is being conducted from the same stocks by Mr. W. Poupart, Marsh Farm, Twickenham, and an extra one of all the carrot stocks on stiff soil by Mr. G. Wythes, V.M.H., at Bovingdon, Hemel Hempstead, Herts.

East Anglian Horticultural Club.

There was a large gathering of members at the June meeting of this club to hear a paper given by Mr. John Clayton upon the subject of "Hardy Bulbs for Summer and Autumn Flowering." The essayist started with June flowers, and finished with September ones, covering a very wide range of subjects, including many of the rarer gems of this class of flower, which are only met in favourably situated gardens. He especially referred to the fame Mr. George Davison, Westwick Gardens, Norfolk, had achieved in the horticultural world with his montbretias. He—the essayist—also said that in travels in many counties up and down the country he had come across no county that lent itself to this class of flowers as Norfolk did. Notes on culture were listened to with deep interest, because they were so lucidly put before the members. A vote of thanks was heartily accorded Mr. Clayton after the subject had been well debated.

The club this year is fortunate in having permission to have its summer outing at the Royal Gardens, Sandringham, Thursday, August 31, being the date fixed. Mr. Thos. Cook, the head gardener, has promised to do all he can to make the visit interesting.

There were good exhibits in the several classes for the month, special mention being due to the several brace of cucumbers, Messrs. Daniels Brothers' variety Lord Roberts, for which they offered prizes. This is a clean, smooth, short-necked type. In the class for strawberries the colour of Kentish Favourite was a great feature.

Bournemouth Gardeners' Association.

At the recent meeting of the members Mr. Tompkins, gardener to the Dowager Lady Miller, presided.

Some very good exhibits were staged in competition for the principal prizes offered at the end of the year. The competitors who receive the highest number of points will be the winners. Mr. C. Nippard had some very finely-grown plants of Hydrangea hortensis in pots, also spiraeas in comparatively small pots. These were awarded the maximum (three) and two points, respectively. The spiraeas were S. Professor Sturingard, S. Queen of Holland, S. astilboides, and S. W. E. Gladstone. The maximum number of points were awarded the same exhibitor for a grand fern growing in a 12in. pot.

Mr. Tompkins staged forced vegetables and strawberries, also a grand vase of Incarvillea Delavayi. The crimson-purple of the flowers was very rich, the stems strong, and the individual blooms large. Three points were awarded for this, and also to his dishes of Royal Sovereign strawberries and Winter Beauty tomatoes. For Early Giant peas and Ninetyfold potatoes two points were awarded.

The evening was devoted to "Questions"; these being written on slips of paper and placed in a box for the purpose. "Should Potatoes be Earthed up in Dry Weather?" was the question which caused most discussion, the members being in favour of such earthing up. The Chairman was heartily thanked for presiding.

Dundee Horticultural Association.

The ordinary monthly meeting was held in the Technical College, and was devoted to questions by members. Four questions were asked, and fully debated upon. The first was in relation to "Cultivation and Cleaning of Honesty for Winter Decoration"; the second in relation to sea holly for the same purpose, both from the Secretary; while Mr. William Grant wished to know "The Possibilities of Streptocarpus as a Bedding Plant." He had information that in the Forres district they did remarkably well. The consensus of expressed opinion was that there was little chance of success except in some sheltered nook in and around Dundee.

Mr. James Bethel asked if it was necessary to delay bedding out until rain came? He said this question was forced upon him partly from weather conditions, waste of water, and the interest of the plants. At present the ground was very dry, and the heat was abnormal. There were two evils facing them, one in the boxes, and the other in the beds. He chose the lesser one, and was practically finished; briefly, his method was to water the beds, dig them over, do the planting, water each plant, let the soil settle, then hoe the spaces between, and in this way little difficulty was experienced in keeping the soil in a moist condition until root action had been well commenced; if watering had to be afterwards indulged in, his practice was to use the hoe to loosen the surface and check evaporation, as soon as the soil would work without clogging.

On the afternoon of the 10th inst. the members were afforded the opportunity of visiting the grounds of the University College. With Professor P. Geddes as guide and instructor a pleasant afternoon was spent.

NEW BOOKS.

THE BOOK OF HERBS.

By Frances Bardswell. (A. and C. Black, London and Edinburgh.) Price, 7s. 6d.

Of late years largely increased attention has been given to the cultivation of herbs that are useful medicinally or of value in the culinary art, and several books possessing much merit have been published on the herb garden and its occupants within a comparatively recent period. It is well that the more useful of the herbs should be held in higher estimation than was for a long time the case, and it is certainly desirable the cook should depend more upon fresh herbs culled from the garden for flavouring than upon the dried herbs that are now obtainable from grocers, and the various preparations that owe their origin to the recent advances in synthetical chemistry.

The fact that several additions have within recent years been made to the literature of herbs does not in any way detract from the merits of the book from the pen of Mrs. Bardswell, on the contrary, the works that have preceded it add to its value. The writers on herbs have been more fortunate than some of those who have contributed to the literature of other aspects of gardening, inasmuch as instead of following similar lines, they have dealt with the subject from wholly different standpoints. As the result the several works are distinct in character, as well as style, and in instituting comparisons between them it at once becomes evident that all might with advantage have a place on the same bookshelf. Mrs. Bardswell deals more with the practical side of the herb garden than do the other modern authors to whom we have access, but on every page there is evidence of her charming style and thorough acquaintance with the literature of herbs.

BRITISH FERNS AND THEIR VARIETIES.

By Charles T. Druery, V.M.H., F.L.S. (George Routledge and Sons, Lim., London and New York.) Price, 7s. 6d.

The cult of British ferns is rapidly attaining to the position it should occupy in the gardens of this country, and no better evidence of this could be desired than the substantial volume from the pen of Mr. Druery which is now before us. Many books on British ferns have been published during the half-century or so that have elapsed since the choicer varieties have been cultivated in gardens, but it is many years since a book of the size of that which we owe to Mr. Druery's untiring energy in the cause of his favourites has been issued from the printing press With a full acquaintance with the literature of British ferns we do not hesitate to say that no book has possessed the value, so far as the general body of cultivators is concerned, that this unquestionably possesses. Our pages testify in no uncertain manner to Mr. Druery's remarkable acquaintance with all that relates to British ferns and their cultivation, and to his ability in imparting his knowledge. It is, therefore, quite unnecessary to say that the pages of the book are equally remarkable for their brightness and for the value of the information they contain. The book contains about five hundred pages, and the reader will find therein all the information that could well be desired, both on selection and cultivation. The descriptive list of species and varieties occupies a large portion of the book, and is of much interest, and of great value to the cultivator who is anxious to limit his collection to the finest of the many varieties of the more valuable species. The illustrations form an important and attractive feature, as will be gathered from the statement that it contains forty coloured plates, ninety-six Nature prints, and three hundred and nineteen woodcuts and photographic reproductions. The Nature prints have been selected from some three hundred printed from the fronds by the late Colonel A. M. Jones, of Clifton.

ANSWERS TO CORRESPONDENTS.

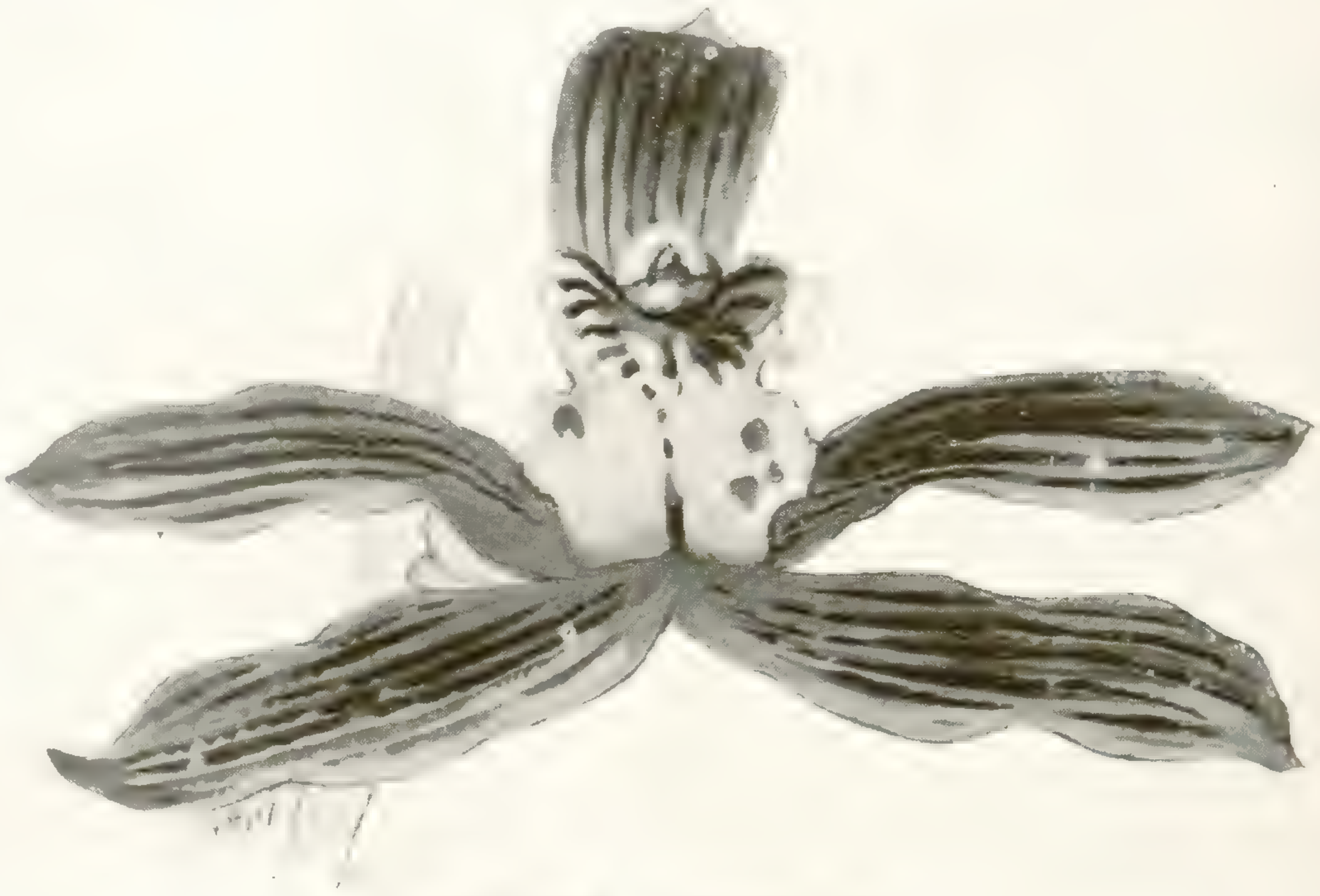
Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

CYMBIDIUM LONGIFOLIUM.—M. B. S., Oxford: This is not one of the most common of orchids in collections. It was introduced about 1873 from Northern India, and usually flowers towards the autumn. The flowers are of medium size, and are coloured green and brown, with a whitish ground colour to the lip; the general form of the flower is shown in the accompanying illustration. C. longifolium may be grown under the same conditions as C. Lowianum, where the latter is successfully managed.



CYMBIDIUM LONGIFOLIUM.

VIOLAS.—G. H. E., Caversham: Violas are remarkably good-tempered plants, and if sturdy plants wintered well, or young stock was planted out in well-prepared soil early in the spring, there should be no great difficulty in persuading them to continue flowering for several months yet. We are assuming you want a continuous display, rather than a few blooms for exhibition purposes. Cut off the dying flowers as regularly as possible, so as to prevent the formation of seed pods; keep the surface soil stirred as long as it is possible to work between the plants; water freely in dry weather, and at this time of the year a thorough soaking may well be followed by a light dressing of nitrate of soda, half an ounce to the square yard, this in turn being watered in. Follow with the hoe as soon as the soil can be worked, and then apply a mulch of old crumbly manure to reduce loss of moisture by evaporation. Weekly soakings of weak liquid cow manure will keep the plants growing well in dry weather. Remove some of the old growths occasionally, especially those that become straggling and give tiny flowers only.

DAMSONS NOT FRUITING. — E. W., Notts: As the trees have grown well without producing rank growth, it follows that something in the soil or climate is responsible for the lack of fruits over several years. Test the soil for lime, and if this is lacking apply a good dressing over the area occupied by the roots; use air slaked lime, and spread it half an inch thick, lightly forking it in at a later date. It is quite possible that the trees are in a position where keen cold winds affect them at flowering time; we have noticed on many occasions that cold winds and dull weather are almost as prejudicial to damson and plum crops as are frosts at flowering time.

LACK OF BEES.—B. R., Guildford: Probably the absence of bees in the garden is due to the disease that has destroyed so many of these little workers in the southern counties. Many of our correspondents have noticed the lack of bees among the flowers this year, and the shortage was especially noticeable in the springtime, when the fruit trees were in bloom.

FUNGUS ON ORCHIDS.—J. D., Uckfield: We hope to reply fully in our next issue.

LIFTING TULIPS.—C. S. J., Oswestry: As soon as the foliage has changed colour, and begun to shrivel up, and when a very slight pull will release the stem from the bulb, the tulips may be lifted. The work should be done carefully, and the bulbs should not be unduly exposed to strong sunlight. Remove them to an airy shed, place in single layers, and when the skin or tunic of the bulb is firm, the stock may be cleaned. Take care the varieties are kept distinct, and properly labelled.

GENETICS.—F. W., Aylesbury: You will find a great deal of information on this matter in several of the journals of the Royal Horticultural Society, notably in Volume XXIV., 1900; Vol. XXVI., 1901; Vol. XXVII., part 4, 1903; and The Genetic Conference Report, 1906.

RETARDING SWEET PEAS.—B. C. B., Skipton: Paradoxical though it may seem, yet the best way of retarding sweet peas is to keep them growing freely, but at the same time directing their energies into two or three leading stems. Remove all the side growths, and also every spike you can see, however small it may be, and then by watering, the application of liquid manure once a week, hoeing and mulching, strong growth will ensue, and provide good flowers towards the top a few weeks hence.

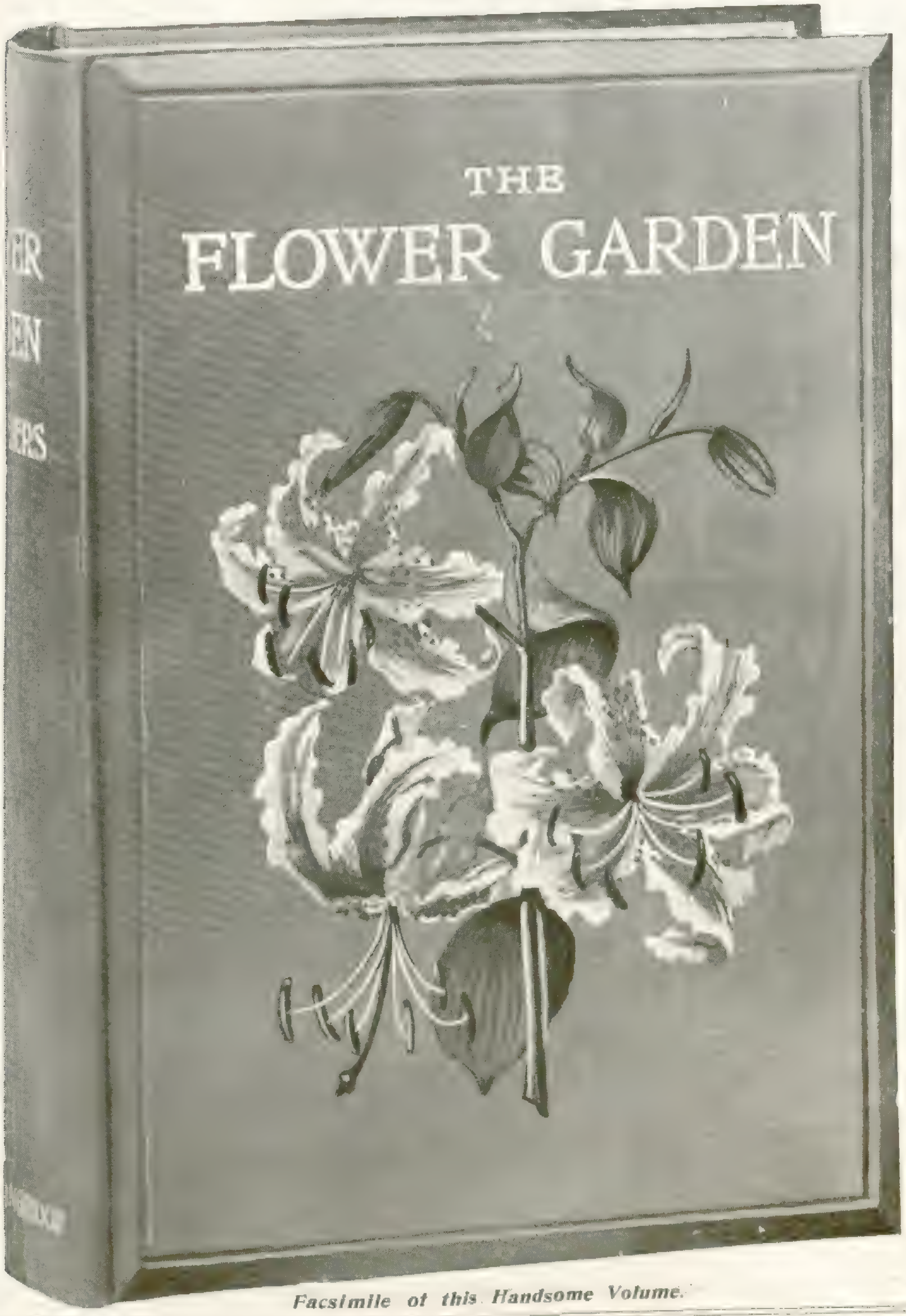
WATERPROOF COTTON FOR FRAMES.—J. C. D., Northumberland: Your best plan will be to find the exact area of the frames you wish to cover, and then purchase the requisite amount of waterproofed paper or calico through one of the sundriesmen who advertise in our columns; Willesden waterproof paper would answer your purpose. You can waterproof fine calico by loosely stretching it on a framework and brushing it over with a hot mixture composed of three pints of old linseed oil (pale), one ounce of powdered sugar of lead, and four ounces of white resin. The mixture must be used hot and

Lucidly Written! Profusely Illustrated!!
AN INVALUABLE GUIDE!!!

"THE FLOWER GARDEN," by T. W. Sanders, F.L.S.,

. . IS A . .

Complete Guide to the Culture of Outdoor Garden Flowers.



Facsimile of this Handsome Volume.

480 PAGES,
AND
64 PHOTO PLATES
of Garden Scenes,
Plants and Flowers.
Handsomely Bound in Cloth.

❧ ❧

CONTENTS.

- Fashioning the Garden.
- Beds and Borders.
- Walks and Paths.
- Lawns and Tennis Courts.
- Shrubberies.
- Rockeries and Ferneries.
- Water and Bog Gardens.
- Arbours and Summer-Houses.
- Arches and Pergolas.
- Edgings.
- Wild and Woodland Gardens.
- Walls and Fences.

Price **7/6** *Net.*

By post, packed in box, 8/-

- Garden Practice.
- Propagation.
- Colour Arrangement.
- Bedding.
- Annuals and Biennials.
- Bulbs.
- Hardy and Tender Border Plants and Flowers.
- Climbing Plants.
- Trees and Shrubs.
- Pests and Diseases.

Order Form.

To the Publishers of "THE GARDENERS MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

Please send me a copy of **The Flower Garden** by post, for which I enclose remittance of 8/-

Name ....

Address ....

it is a good plan to dress the calico a second time as soon as the first application is thoroughly dry.

NAMES OF PLANTS.

M. J. W., Homersham.—1, Scabiosa caucasica; 2, Iris florentina; 3, I. sibirica; 4, Vitis armata.

F. L. C., Launceston.—1, Menyanthes trifoliata; 2, Stylophôrum japonicum; 3, Phacelia campanularia.

J. L., Bucknell.—Laburnum alpinum; the variety sent is frequently grown under the name of L. hirsutum.

F. E. B., Monmouth.—1, Euphorbia splendens; 2, Gillenia trifoliata; 3, Hemerocallis flava; 4, Anchusa italica, Dropmore variety.

D. P. C., Shrewsbury.—1, Impatiens Sultani; 2, Trachelium cœruleum; 3, Bomarea Carderi; 4, Oncidium sphacelatum; 5, Spiræa ariæfolia.

H. H. C., Canterbury.—1, Schizanthus retusus; 2, Anchusa italica; 3, Thalictrum adiantifolium; 4, Stachys lanata; 5, a Hieracium, species not recognised.

A. B. C., Lincoln.—1, The white form of Polemonium cæruleum; 2, probably Orobus atropurpureus; 3, Viburnum plicatum; 4, Spiræa ariæfolia; 5, S. confusa; 6, not recognised; 7, probably Megasea Stracheyi—should be sent when in flower.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.
Height above sea-level, 150 feet.

DATE. 1911. JUNE 11 TO JUNE 17.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
June 11—Sunday	9 18	61	50	67	37
,, 12—Monday	2 54	58	52	71	44
,, 13—Tuesday......	10 6	55	49	64	50
,, 14—Wednesday..	12 24	53	47	64	38
,, 15—Thursday	12 24	57	50	66	36
,, 16—Friday........	2 24	58	54	70	46
,, 17—Saturday.....	6 0	62	59	68	55
Means	(total) 55 30	57	51	67	43

DATE. 1911. JUNE 11 TO JUNE 17.	RAIN.	TEMPERATURE OF THE SOIL AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg.
June 11—Sunday	—	61	60	57	29
,, 12—Monday	—	60	60	57	34
,, 13—Tuesday......	—	61	60	57	41
,, 14—Wednesday .	—	60	60	57	27
,, 15—Thursday	—	60	59	57	27
,, 16—Friday	0·50	62	60	57	40
,, 17—Saturday	0·02	62	60	57	54
Means ...	(total) 0 52	60	59	57	36

CONTENTS.

PAGE
A Fine Exhibit at Tagg's Island 463
Among the Roses 464
Answers to Correspondents 472
Campanula pusilla 466
Chrysanthemum prealtum 467
Culture of Celery 463
Exhibitions and Meetings 469
Great Rose Show at the Crystal Palace 460
Hardy Plant Chat 459
Notes of the Week 457
Rose American Pillar 461
Sweet Pea Notes 467
Work for the Week 468

ILLUSTRATIONS.

Portrait of Mr. Norman Davis, 457; Philadelphus Lemoinei Virginal, 459; A Group of Handsome Cups to be offered at the Festival of Empire Rose Show, 460; Single-flowered Rose American Pillar, 461; Mr. W. H. Page's Silver Cup Group, 461; Double-flowered Pelargoniums at York, 464; Crinum Johnstoni, 465; A Self-sown Campanula pusilla alba among Hardy Ferns, 466; Chrysanthemum prealtum, 467.

NOTES OF OBSERVATION.

Kerria japonica flore plena.—If this shrub was new it would form the subject of numerous eulogistic notes, for we have nothing else with which it can be compared at the present time. The pretty rose-like blossoms are of a rich shade of gold, and, what is more, they are borne in great profusion. True, when grown in the open the blossoms are sometimes crippled by late frosts and cold winds, but as a wall plant it is delightful. A peculiarity of this kerria is that the double-flowered form is altogether a far more vigorous plant than the typical kind with single blossoms, which is comparatively uncommon. There is a variety of this last with variegated leaves, but of them all the old double-flowered form is far and away the best.—W. T.

Tropæolum tricolorum.—This is one of the oldest of the South American tropæolums, and in days gone by it was frequently grown as a specimen plant. Like most members of the genus, it is of a climbing nature, and it may be trained in such a way as to cover a trellis of any particular form, or it can be treated as a rafter plant in the greenhouse. It produces quite a firm tuber from which is pushed up in autumn an exceedingly slender growth which lengthens rapidly and to a certain extent thickens. The small bright green leaves are composed of five or six divisions, and the flowers orange-scarlet tipped with black, are in the spring and early summer borne in great profusion. To succeed in the culture of this tropæolum it needs care, especially during the winter months, when it is growing.—W. T.

Saintpaulia ionantha.—This delightful little gesnerad, which was introduced from Eastern Tropical Africa in 1893, forms a charming feature in the stove or intermediate house, it being very rarely without blossoms. After its introduction it soon became popular, and is now extensively grown. The leaves are arranged in a rosette manner, and the pretty violet-like flowers nestle among the foliage in a charming manner. There are now several colour forms, some of a particularly rich tint. This saintpaulia is readily raised from seed, and the young plants quickly attain flowering size, but it can also be increased by single leaves, after the manner of a gloxinia. This last mode of propagation is particularly useful when a plant shows especial merit.—W. T.

New Hydrangeas.—New or comparatively new varieties of hydrangeas were much to the fore at the Temple Show. The variety Madame E. Mouillère, which was given an Award of Merit both last year and this, was shown in quantity. It is certainly a very desirable form, with massive heads of white or almost white flowers. The old and well-known H. paniculata grandiflora was as usual, well represented, but it has, at all events for flowering at this season, a formidable rival in that variety of the North American Hydrangea arborescens known as grandiflora. The typical H. arborescens has only a few large sterile flowers, the head or cluster being principally made up of insignificant fertile blossoms. In the variety grandiflora the sterile flowers form a large rounded cluster, and a specimen of it is remarkably effective. It was sent here from the United States a few years ago, and has since then been gradually advancing in popular favour. Being hardier than the common hydrangea it is also valuable as an outdoor shrub. I noted two varieties were placed before the Floral Committee, but neither of them gained an award. The best, to my thinking, was Mlle. Renée Gaillard, a large white flower with the edges of the petals much toothed. It, however, seemed to me a good deal in the way of the variety Ornement, which was given an award last year. The second variety noted was Bouquet Rose, like a rather deep-coloured form of the common hydrangea. The variegated Hydrangea nivalis, whose leaves have a large creamy-centre, was also shown, but the light-coloured blossoms were not particularly effective.—W. T.

MARKETS.

◆

COVENT GARDEN.

Flowers.

Flowers are in great demand this week, and prices rule firm for all but the lowest grades.

		s. d.		s. d.
Adiantum cuneatum ...	per doz. bun.	4 0	to	6 0
Arums	per doz.	2 6		3 0
Asparagus	per doz. bun.	10 0		10 0
Cattleyas	per doz.	8 0		12 0
Carnations	per doz.	1 2		2 6
,, ...	per doz. bun.	6 0		9 0
Cornflowers	per doz. bun.	1 0		1 6
Coreopsis	per doz. bun.	1 6		2 0
Croton leaves	per bun.	1 0		2 6
French fern	per doz. bun.	2 6		4 0
Gaillardias	per doz. bun.	1 6		2 0
Gardenias	per doz.	1 0		2 0
Gladiolus	per doz. bun.	3 0		4 6
Gypsophila	per doz. bun.	3 0		4 0
Iris, Spanish	per doz. bun.	3 0		6 0
Ixias	per doz. bun.	1 0		2 0
Lilium auratum	per bun.	3 0		4 0
,, candidum	per doz.	1 0		2 0
,, speciosum	per bun.	2 0		2 6
,, longiflorum	per bun.	2 0		3 0
Lily of the Valley	per doz. bun.	6 0		15 0
Marguerites	per doz. bun.	1 6		3 0
Mignonette	per doz. bun.	3 0		4 0
Odontoglossums	per doz. blms.	1 0		3 0
Paeonies	per doz. bun.	3 0		6 0
Pinks	per doz. bun.	3 0		4 0
Pelargoniums	per doz. bun.	3 0		4 0
Roses	per doz.	1 0		3 0
Smilax	per doz. trails	4 0		5 0
Stocks, white	per doz. bun.	3 0		4 0
Sweet Peas	per doz. bun.	1 0		2 0
Tuberoses	per doz.	0 4		0 6

Fruits.

There has been a good demand for Australian and Tasmanian fruits. For the best peaches and nectarines high prices have been asked; grapes and strawberries are plentiful, but the demand has been enormous this week.

		s. d.		s. d.
Apples, Australian	per case	8 6	to	15 0
,, Tasmanian	per case	8 6		15 0
Apricots, French	per box	0 9		1 6
Bananas	per bun.	4 0		10 [illegible]
Cherries, French	per box	0 9		1 3
,, ...	per ½-sieve	4 0		6 [illegible]
Cranberries	per case	9 0		10 [illegible]
Figs	per doz.	1 0		8 0
Gooseberries	per ½-sieve	3 6		4 6
Grapes, English	per lb.	1 0		4 [illegible]
,, Belgian	per lb.	0 8		1 6
Lemons	per case	13 0		22 0
Melons	each	1 0		2 6
Nectarines	per doz.	9 0		24 0
Oranges	per case	12 0		33 [illegible]
,, Jaffa	per case	12 0		14 [illegible]
,, Blood	per case	7 0		13 [illegible]
Peaches	per doz.	6 0		24 [illegible]
Pears, Australian	per case	10 0		21 [illegible]
Pineapples	each	2 0		5 [illegible]
Strawberries	per peck	1 6		2 [illegible]

Vegetables.

Business is brisk, and for the choicer vegetables there has been a keen demand.

		s. d.		s. d.
Artichokes, Globe	per doz.	2 0	to	4 [illegible]
Asparagus	per bundle	0 8		10 [illegible]
Beans, dwarf	per lb.	0 6		0 [illegible]
Beet	per bush.	2 0		3 [illegible]
Cabbage	per tally	2 6		3 [illegible]
Carrots, new	per pad	2 0		2 [illegible]
Cauliflowers	per doz.	2 0		2 [illegible]
Cucumbers	per flat	6 0		7 [illegible]
Endive	per doz.	1 6		3 [illegible]
Horseradish	per doz bun.	8 0		12 [illegible]
Lettuce	per doz.	0 6		2 [illegible]
Marrows	per doz.	4 0		6 [illegible]
Mint	per doz. bun.	1 0		2 [illegible]
Mushrooms	per doz. lb.	6 0		[illegible]
Onions, Egyptian	per case	4 [illegible]		[illegible]
,, Spanish	per case	5 0		[illegible]
Parsley	per ½-sieve	[illegible]		[illegible]
Peas	per bushel	4 [illegible]		[illegible]
Radishes	per doz. bun.	0 4		[illegible]
Rubarb	per doz. bun.	0 1[illegible]		[illegible]
Spinach	per bush.	1 [illegible]		[illegible]
Tomatoes	per doz. lb.	2 [illegible]		[illegible]
Turnips	per doz. bun.	3 0		[illegible]
Watercress	per doz. bun.	0 6		

LONDON POTATO MARKETS.

Supplies of potatoes are about equal to the [illegible] Jerseys are most in request.

		s. d.
Dunbars	per ton	100 0
Maincrops	per ton	100 0
Up-to-Dates	per ton	90 0
Jersey, new	per cwt.	12 0
Cherbourg, new	per cwt.	9 0
Lisbon, new	per box	5 0

FORTHCOMING ENGAGEMENTS.

MONDAY, June 26.—Royal Agricultural Society's Show at Norwich; great flower show and forest exhibition; five days.

THURSDAY, June 29.—Great Rose Show at the Crystal Palace, Sydenham, in connection with the Festival of Empire.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head, where several are kept), thoroughly experienced in all branches, Inside and Out, Grapes, Peaches, Melons, Stove and Greenhouse Plants, 4½ and 11 years excellent references as head, married family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working). H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 30; married when suited, excellent references. Address Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working).—Mr. GOULD, Shernfold Park, Frant, Sussex, highly recommends his Foreman, A. DAY, as above; thorough practical experience Inside and Out; excellent references; age 30.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 30, married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working, of two or three).—Mr. Clarke, Oakwood Gardens, Bath, highly recommends his Foreman, G. Longman, as above; 16 years' practical experience; age 29; married when suited. Apply LONGMAN, Stoney Stoke, Bruton.

GARDENER (Head Working, where two or more are kept); good all round; 14 years as head in large and well-kept establishments; married; age 40, excellent references. E. MAYLETT, Park Hall, Salford Priors, Evesham.

J. F. H. BANNATYNE, Esq., Haldon, [illegible] to recommend H. NICHOLSON as GARDENER (Head Working); thoroughly practical and reliable; life experience in all branches; 3½ years here; age 31. Address, NICHOLSON, Haldon Gardens, Exeter, Devon.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushroom, ridge or flat; Kitchen, Lawn, Flower Garden. Special Prize 1910. W. BLOOMFIELD, [illegible], Kent.

GARDENER [illegible] wise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. [illegible] Road, Watford.

GARDENER (Single-handed, or with help) seeks SITUATION; 14 years' experience; good references; age 27; married, no family. BISHOP, Stockwell Hall, Billericay, Essex. (No circulars.)

GARDENER [illegible] experience in flowers, fruit, [illegible] Road, Watford, Herts.

GARDENER (Single-handed or Second) seeks SITUATION; [illegible] Fruit, Flowers, Vegetables; age 2[illegible]; single; good references; seven years last place. STRUTT, 70, Croft Street, Ipswich.

W. CROFT, Gardens, Rheola, Neath, can highly recommend H. WATKINS as SECOND in good establishment; eight years' experience all branches. Apply to H. WATKINS, Red Marley, Newent, Glos.

ADVERTISER, who loves his profession, and who has had life experience in all branches of horticulture, outside and under glass, orchids, and [illegible], and perpetual flowering carnations, requires SITUATION; 9 years in present situation as Head. Apply HORTICULTURIST, [illegible] Street, Reading.

GARDENER (Under); private establishment or Grower Market Nursery; 11 years' experience, Inside and Out, private and nursery; good references. LEWINGTON, 169, High Street, Hampton Hill, S.W.

GARDENER (Under) seeks SITUATION, Inside and Out; age 24; good references. H. CARPENTER, 92, Richmond Road, W. Wimbledon.

GARDENER, or GROOM GARDENER; 9 years' experience; ride or drive; age 34; good references. Apply F. [illegible], Leigh, near Tonbridge, Kent.

JOURNEYMAN, under Foreman, in plant or fruit houses; [illegible] years' experience; Bothy preferred. W. INGRAM, [illegible] Gardens, Sevenoaks, Kent.

JOURNEYMAN (Inside) seeks SITUATION, six years' experience, inside and out, good references; Bothy preferred. E. ARCHER, Ockham, Woking, Surrey.

JOURNEYMAN (Second or Third, Inside), [illegible] 4½ years good experience; well recommended. A. MORRIS, Ridgway Vineries, near Malvern.

YOUNG MAN (19½) seeks SITUATION, Inside (or Inside and Out); excellent character; willing worker; Bothy preferred. V. MEPHAM, 3, High Path, Merrow, nr. Guildford, Surrey.

TO FLORISTS and FRUITERERS.—Disengaged MANAGER requires situation; seven years' experience; good salesman, window dresser, and maker-up; excellent references. CUSSONS, care of Rennison, Low Bondend, Knaresborough.

Situations Vacant.

WANTED (single), LEADING HAND, kitchen garden; £1 weekly.—Apply, with copies of references, to WM. LLOYD, Rushton Hall Gardens, Kettering.

SITUATION COUPON

To the Advertisement Manager of "The Gardeners' Magazine,"
148 & 149, Aldersgate Street, London, E.C.

For JULY 1, 1911.

Please Repeat my Advertisement.

Name..

Address..

....

Date..............................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue

REGISTERED

THE

APRON

That has Come to Stay.

WORN BY ALL THE LEADING GARDENERS.

LOOK AT THE PRICE.

In Dark Blue Ponicus Twills

1/9, Postage **3d.** extra.

Or in Dark Blue Ponicus Serge,

3/9, Postage **3d.** extra.

Write for One To-Day.

SHAW & MONTGOMERY
(PENMAN'S),
628, Argyle St., Glasgow, W.

PUBLISHERS' ANNOUNCEMENTS.

THE GARDENERS' MAGAZINE may be obtained by order from all Newsagents, price Twopence, every Saturday. If any difficulty be found, a copy will be posted weekly direct from the Publisher, 148 and 149, Aldersgate Street, London, on the following terms: Twelve Months, 10s. 6d.; Six Months, 5s. 6d.

INDEX and Title Page to Vol. LIII. (comprising the weekly numbers from January to December, 1910), price 2d., by post 2½d.

BINDING CASES for binding the 12 months' numbers, green cloth, ornamented in gold, price 2s., post free.

VOLUME LIII., bound in green cloth, containing the 52 weekly numbers, 1910. Price 12s. 6d.; by post, [illegible] 4d.

When answering Advertisements please mention "Gardeners' Magazine."

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

Extracts from 35th annual collection of reports:—

NATIVE GUANO for POTATOES, VEGETABLES, etc.

A. J. Beard, Erdington: "Potatoes, splendid, free from disease. Best I ever had."—H. Chester, Nantwich: "Best onion manure I ever used. Grand for onion fly."

NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc.

J. Cant, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. Frampton, Titchfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED,** 29, New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted.

ALL GARDEN LOVERS
SHOULD VISIT THE
FESTIVAL OF EMPIRE
AND
IMPERIAL
EXHIBITION
UNDER THE PATRONAGE OF HIS MAJESTY'S GOVERNMENT.
- - ON - -
JUNE 29th, 1911.

* * *

GREAT ROSE SHOW
TO BE HELD AT THE
CRYSTAL PALACE.

32 Silver Cups, 120 Gold and Silver Medals.

PRIZES ALTOGETHER TO THE VALUE OF £500.

Schedules will be sent by return of post to intending Exhibitors. Splendid awards in all Sections for large and small growers, Amateurs and Trade.

Secretary: T. GEOFFREY W. HENSLOW, M.A., Festival of Empire Offices, CRYSTAL PALACE, LONDON, S.E.

Printed and Published by W. H. & L. COLLINGRIDGE, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstal

ROYAL SHOW—Special Illustrated Report.

THE GARDENERS' MAGAZINE.

No. 3.009.
Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.)

SATURDAY, JULY 1, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S SEEDS FOR JULY SOWING.—Finest selected strains of Aquilegias, Begonias, Campanulas, Carnations, Delphiniums, Forget-me-nots, Hollyhocks, Lupins, Pansies, Hardy Primulas, Snapdragons, Stocks, etc. See Barr's Seed Guide, free. BARR and SONS, 11, 12, and 13, King Street. Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

DOUGLAS'S PERPETUAL CARNATIONS (British and American). Magnificent Stock of robust plants, now ready, all in perfect health, and guaranteed to give satisfaction. From 9s. per dozen. J. DOUGLAS, The Carnation Specialist, Edenside, Gt. Bookham, Surrey.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, S.W., wishes to call the attention of his customers, and of gardeners generally, to his Fruit Tree Protectors. Photographs and Blue-prints of these, with prices, will be sent on receipt of a postcard, telephone message (201 Western), or wire, "Gray, Chelsea, London."

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

GREENHOUSES and GARDEN FURNITURE. — Distinctive Designs and Finished Workmanship. Write NOW for illustrated Catalogue. CARTER and HOWARD, Fife House, Kingston-on Thames.

MUSHROOMS.—Now is the time to plant Spawn in pastures. To protect the crop by making it a cultivated one, get BARTER'S Specially-prepared Spawn, with instructions, in 10s. 6d., 21s., and 42s. cases. Carriage paid. Cash with orders to
JOHN F. BARTER, LTD., Wembley, Middlesex.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.
H. BURNETT,
Carnation Specialist, Guernsey.

PERENNIALS, UNIQUE COLLECTION,
including
ALPINES AND AQUATICS.
Also RARER SHRUBS, HIMALAYAN RHODODENDRONS, and Others.
Write for Catalogue. G. REUTHE, Keston, Kent.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-work, showing screens, wall panels, window surrounds, arches, arbors, etc., post free. BOULTON and PAUL, Ltd., Norwich.

FRUIT SAVED.—GARDEN NETTING as supplied by us to the Royal Gardens. SMALL MESH, satisfaction or cash returned, 100 by 1 yd., 3s. 3d. Any length and width supplied. Cheaper quality, 50 yds. 1s.
POTTER BROS.,
Dept. M, Net Makers. Shrewsbury. Est. 1855.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

WEBBS' CHOICE FLOWER SEEDS
FOR PRESENT SOWING.
Rose Queen Antirrhinum (rosa), 1s. per pkt.
Sceptre Antirrhinum (crimson), 1s. per pkt.
Guinea Gold Antirrhinum (yellow), 1s. pkt.
Golden Spur Aquilegia (golden yellow), 1s. pkt.
Pink Beauty Sweet William, 1s. per pkt.
Invincible Sweet William (mixed), 1s. per pkt.
Giant Crimson Polyanthus, 1s. per pkt.
Giant Yellow Polyanthus, 1s. per pkt.
Universal Wallflower (mixed), 1s. per pkt.
Double Mixed Wallflower, 1s. per pkt.
WEBB AND SONS, The King's Seedsmen,
WORDSLEY, STOURBRIDGE.

BUNYARD'S CATALOGUES
Free on Application.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

KENT STRAWBERRY PLANTS
NEW CATALOGUE READY.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

LAXTON'S STRAWBERRIES.—Fine early pot plants, for forcing, of Royal Sovereign and other varieties, 15s. 100. For new varieties see our catalogue, gratis on application.
LAXTON BROS., Bedford.

SASH BARS.—Special lines in certain lengths only, 1¼ by 1, 2s. 6d. 100ft.; 3 by 1¼, 5s. 9d. 100ft.: quotations for special lengths or for any kind of timber, garden lights, greenhouses and woodwork. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

CERTAIN SUCCESS WITH AUTUMN-FLOWERING BULBS, such as Colchicums, Autumn-flowering Crocuses, etc., etc., is assured if you plant Bees' Guarantested (guaranteed and tested) Bulbs in August. This you can readily do if you write NOW for the special list of bulbs for early forcing and autumn flowering.—BEES, LTD, 175E, Liverpool.

RUSTIC SUMMER HOUSES, trellis-work, Fencing, Pergolas, Arches, Seats, Bridges, Log Cabins, Loggias, etc. Send for our new LOG CABIN and RUSTIC CATALOGUE (just published), sent post free. BOULTON and PAUL, Ltd., Norwich.

CLAY'S MANURES, CRUSHED BONES
(See back page.)

CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

GARDEN NETS, Tanned, best quality, extra small mesh, bound all round, 56 yards by 15, 21s.; smaller sizes, ½d. sq. yard, for cash with order. TRAINER, St. Monance, Fifeshire.

IRON and WIRE FENCING for GARDENS. Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free. BOULTON and PAUL, Ltd., Manufacturers, Norwich.

WM. DUNCAN TUCKER and SONS. Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865. 1881. 1895. J. ATTWOOD Stourbridge

SUTTON'S PINK BEAUTY SWEET WILLIAM. A beautiful salmon-pink shade.
Per packet, 1s. and 1s. 6d., post free.

SUTTON'S SCARLET SWEET WILLIAM.
A most remarkable colour.
Per packet, 1s. and 1s. 6d., post free.

SUTTON'S SUPERB SWEET WILLIAM.
Mixed colours.
Per packet, 1s. and 1s. 6d., post free.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books, 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
From ———, Esq., Guildford.
"I may say that your Illustrated Catalogue is without doubt the finest book of the sort I have had the pleasure of seeing."

GARDEN NETTING (best tanned only).—25 yds. x 8yds.; 50 x 4yds.; 100 x 2 yds., 8s. each. 50 x 2 yds.; 25 x 4 yds.; 100 x 1 yd., 4s. each. All sizes, large or small, at 1s. 20 sq. yds. Quality guaranteed.—EVANS, 14, Beresford Rd., Lowestoft.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page iii.

WEEKS'S DUPLEX UPRIGHT TUBULAR BOILERS, for full advertisement see page v.

JAMES SENDALL and CO., Cambridge; Conservatories, Vineries, Garden Frames; Heating Engineers. Surveys made, and Plans prepared to suit any position. Illustrated List free. Telegrams: "Sendall, Cambridge." 'Phone, 511.

PROTECT YOUR FRUIT.—Herring Nets, 120ft. by 40ft., inch mesh, whole and fresh, 7s. 6d. each, cash with order. Satisfaction guaranteed or money returned. REID, Denmark Street, Fraserburgh.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise." 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

CARNATIONS.—Spiral Wire Stakes. No tying required. Will last a lifetime. 24 inches long, 7s. 6d. per 100; 30 inches, 8s. 6d. per 100; 36 inches, 10s. per 100; sample doz., 1s., 1s. 3d., and 1s. 9d. all carriage paid. Pea Trainers, 6ft. by 4ft., 2s. and [illegible] each. Garden Archways, Garden Edge and Croquet Bordering, 8 inches high, 8d.; 10 inches high, 10d. per yard. All cash with order. Catalogue free on application. J. PENKETH, Iron and Wire Works, Market Place, Manchester. Telg. [illegible] City

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.
XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.
XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown both poisonous and non-poisonous are XL ALL WEED KILLER, XL ALL FERTILISER. RICHARDS' ARSENATE OF LEAD PASTE. CUCASA POWDER (fungicide), etc. Don't forget to ask your N.S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London. S.E.

BUSINESS CARDS.

BEDDING PLANTS.

R. H BATH, Ltd., The Floral Farms. Wisbech.
The best New and Standard varieties of Chrysanthemums, Dahlias and Summer-Bedding Plants.

CARNATIONS.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS.
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

ROSES.

R. H. BATH, Ltd.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

SAMUEL M'GREDY & SON, Portadown, Ireland.
Raisers of famous Gold Medal Roses.
Finest Novelties yet seen. Lists free.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

W. ARTINDALE & SON

Nurserymen, **SHEFFIELD**

MAKERS and DESIGNERS
: of ALPINE GARDENS :

Old English Flower Borders.
Experts sent to any part.
Enquiries invited.

Our instructive and comprehensive list of Beautiful Hardy Plants sent on application. Over 200 pages of valuable information.

Primulas! Primulas! Primulas!

41st Year of Distribution.

OUR WELL KNOWN MAGNIFICENT STRAIN,
1/6 doz.; **2/6** 25; **10/-** 100. Package and Carriage Free.
Primula Obconica Gigantea Cineraria (Large-flowered) and **Stellata** at same prices.

JOHN STEVENS & SON, COVENTRY.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.

They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,

71, Newman Street,
LONDON, W., and BROXBOURNE.

Our Work has stood the test of time.

MERRYWEATHER'S

614 PUMP

IS THE

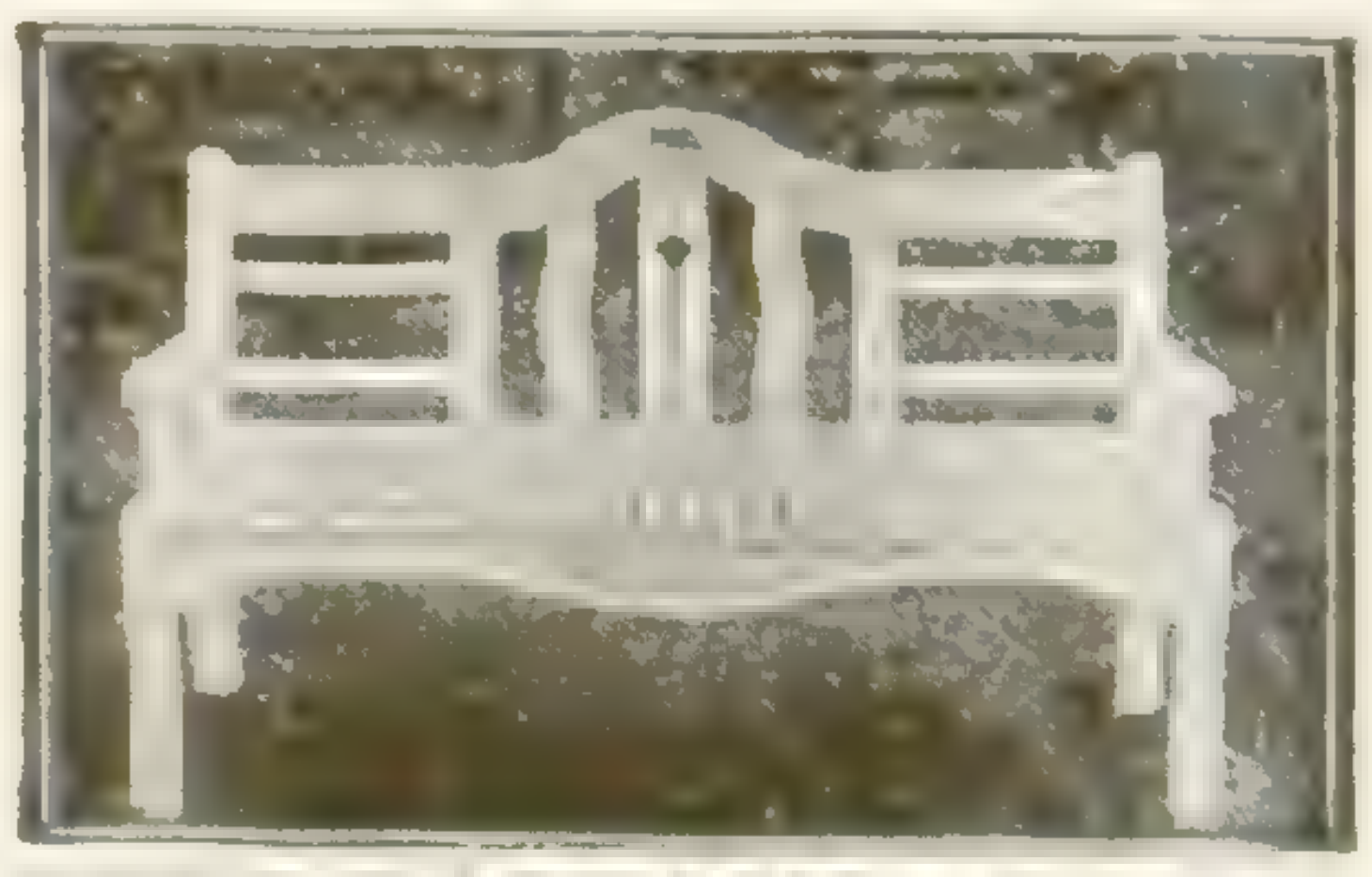
Gardener's Friend.

Easy to Work.
Simplicity Itself.

Write or Call—

63, Long Acre, LONDON, W.C.

WHARFEDALE. 5 ft. long.



In Best Redwood, painted two coats. White.
£1 15 0
Delivered any station.
Full Catalogue on application.

PETER PATRICK & SON, Otley, Yorks.

ORCHIDS

EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS**, and an endless variety of Choice **ORCHIDS**.

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

Please Write for List.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

AMERICAN TREE CARNATIONS

The Newest and Best Varieties.

Strong, healthy and well-rooted plants only supplied.

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

FINE NEW DOUBLE PINK PYRETHRUM.
Queen Mary, A.M. Birmingham, 1910.

A strong-growing plant, with large blooms of a new shade of pink, a free-flowering and good market variety; the earliest to bloom. Plants now ready 2s. 6d.; for early autumn delivery, 1s. 6d. each.

Other varieties of Pyrethrum, double and single in leading sorts, 6s. dozen.

Giant strain of Iceland Poppy seed, 1s. 6d. packet

G. W. MILLER, F.R.H.S.,
Clarkson Nurseries, WISBECH.

CHARGES FOR ADVERTISEMENTS IN THE GARDENERS' MAGAZINE.

Five Lines and under	£0 2 6
Per Line beyond	0 0 6
" Inch	0 6 0
" Half Column	1 10 0
" Column	3 0 0
" Page	9 0 0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed—

Telephone Numbers:
Editorial and Printing Depts. .. ... 831 Holborn.
Advertising and Publishing Depts. ... 2140 Holborn.

Offices: 148 and 149, Aldersgate Street, London.

100 NURSERIES, MARKET GARDENS, FLORIST AND SEED BUSINESSES TO BE DISPOSED OF.

MESSRS. PROTHEROE and MORRIS'S HORTICULTURAL REGISTER contains full particulars of the above, and can be obtained gratis at 67 and 68, Cheapside, E.C.

NOTICE.

The AZALEAS and RHODODENDRONS planted in Hyde Park, near Rotten Row, finest to be seen in London, are supplied by ANTHONY WATERER, whose only address is Knap Hill Nursery, Woking, Surrey.

No connection with any other firm of similar name.

For Landscape Gardening and General Estate Improvements consult

H. HEMSLEY, F.R.H.S.,
Crawley, Sussex.

VISITORS TO FESTIVAL OF EMPIRE, CRYSTAL PALACE, please see my Landscape Exhibits, adjoining the General Enquiry Offices, Grand Terrace, to which a Silver Cup and Gold Medal has been awarded

A NEW GARDEN SPADE (Carter's Patent):

This is claimed to be the most effective Spade on the market Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to
EPPS & CO., Ringwood, HANTS.

ONCE USED. ALWAYS USED. The 'PATTISSON' LAWN BOOTS

Fig. 1.

Simplest! Strongest! Most Economical! Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or Solid Rubber. Fig. 1 can be REFITTED repeatedly, equal to New Boots. Rubber Soles strongly recommended.

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS

Silver Medal—
Royal Horticultural Society.

HUNDREDS OF TESTIMONIALS.
The Field says: "As good as anything that could be devised."

Illustrated Price List from—

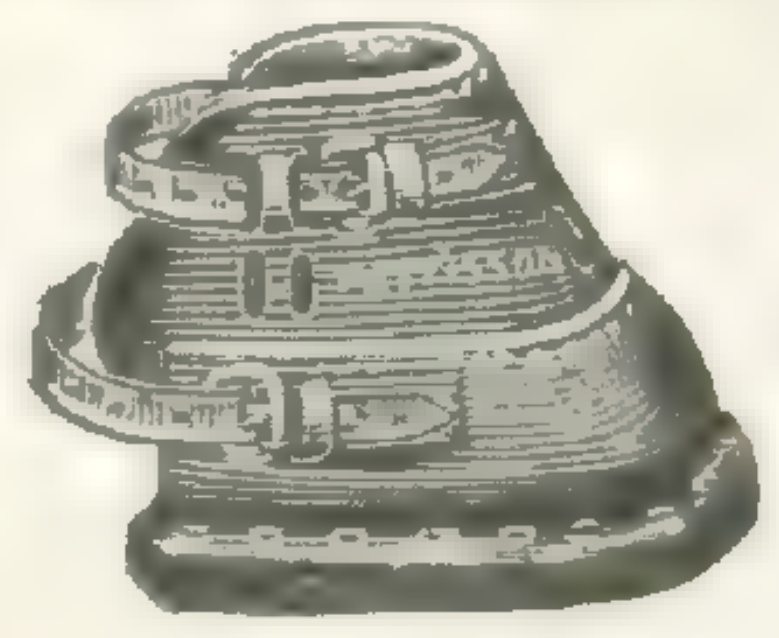


Fig. 2.

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM S.W.

GARDEN AND TENNIS NETS (best) tanned only, small mesh).—50 x 8yds., 17s.; 25 x 8yds., 50 x 4yds., 100 x 2yds., 8s. each; 100 x 1yd., 50 x 2yds., 25 x 4yds., 4s. each. Any size to order. Tennis Netting (corded), 25 x 2, 6s. 6d.; 25 x 3, 7s. 6d.; 25 x 4yd., 8s. 6d. Write for Price List. L. WREN and SON, Net Merchants, 139, High Street, Lowestoft. Established 1863.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S W.

PERPETUAL CARNATIONS.—Everyone interested in PERPETUALS should write for our 1911 Illustrated Catalogue, FREE. Read our "TREATISE ON CULTURE," 1s., post free. YOUNG and CO., Carnation Specialists, HATHERLEY, CHELTENHAM

RARE ALPINES CHEAP.—Profits devoted to Patriotic objects. Apply for list, LADY C., The Abbey, Much Wenlock, Shropshire, and please enclose fully addressed and stamped envelope.

THE NATIONAL HARDY PLANT SOCIETY.

CONSTITUTED for the encouragement, the extension and the improvement of Hardy Plant culture for the garden, for decoration purposes, and for exhibition. For particulars apply to the Hon. Secretary—FRANK BOUSKELL, Market Bosworth, Nuneaton.

THE CHEAPEST IN ENGLAND.

NO. 80.

Copyright Registered.

PORTABLE BUILDINGS. Made in complete sections, best quality Red Deal (not inferior Foreign Match Boards as other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

SIZES.		Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/6
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
ESTABLISHED 70 YEARS. BEDFORD.
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

HAYWARD'S
Eureka
WEED KILLER

insures clean paths, best known and most satisfactory. It is no new experiment. A Weed Killer that can be thoroughly relied upon to keep paths clear for 12 months with one dressing is most helpful, but under-strength articles with no reputation are an aggravation. The "Eureka" is sold everywhere, 1/9 for 100 sq. yards, 6/- for 400 yards, 49/- for 4,000 yards; intermediate sizes at suitable prices. The "Eureka" Lawn Sand, Soilfume, Quassia Extract, Bordeaux Mixture, etc., have been in regular use for years, and there is no better value. If any difficulty in obtaining apply only makers, TOMLINSON and HAYWARD, Ltd., Lincoln.

"EUREKATINE"
is the satisfactory fumigant for destroying
Greenhouse Pests.

GOLD MEDAL
Perpetual Flowering Carnations.
English and American.

Strong Plants in 3-inch pots, 50/- 100. Novelties and Flowering Plants at reasonable prices. See Catalogue.

A Magnificent New
ZONAL PELARGONIUM
"HIS MAJESTY," A.M., R.H.S.
Of perfect habit, immense size and glorious colour. (Royal Scarlet).

I am offering Silver Cup, Silver Medal, and Bronze Medal in open competition for three plants, also similar awards for 12 trusses, at the National Chrysanthemum Society's November Show.

Plants now ready 3/6 each, in 3in. pots.

W. H. PAGE,
TANGLEY NURSERIES, HAMPTON, MIDDLESEX.
Telegrams: Page, Hampton Telephone: P.O Molesey 166

THOMSON'S
Celebrated
VINE·PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES
UNRIVALLED ... ALL PURPOSES
SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE.

BENTLEY'S
WEED DESTROYERS

Utterly annihilate Weeds, Moss, Dandelions, and all other Weeds on Garden Walks, Carriage Drives, etc.

HAVE THE LARGEST SALE IN THE UNITED KINGDOM!
ARE THE MOST POWERFUL MANUFACTURED!
ARE THE MOST PERMANENT IN EFFECT!

LIQUID (Poison).

Double Strength (1 to 50).

3 gallons, to make 153 gallons ...	£0	10	0
6 ,, ,, 306 ,, ...	0	18	0
12 ,, ,, 612 ,, ...	1	13	0
20 ,, ,, 1,020 ,, ...	2	7	6
40 ,, ,, 2,040 ,, ...	4	12	6

Special Concentrated Strength (1 to 80).

3 gallons, to make 243 gallons ..	£0	14	6
6 ,, ,, 486 ,, ...	1	7	0
12 ,, ,, 972 ,, ...	2	6	0
24 ,, ,, 1,944 ,, ...	4	10	0

BENTLEY'S
COMPOUND LIQUID QUASSIA EXTRACT
(THE ORIGINAL).

The deadliest foe of Green, Black, and White Fly.

The insecticide of insecticides for roses, chrysanthemums, tomatoes wall and bush fruits, and other trees.

SAFE TO USE ANYWHERE AND EVERYWHERE
20 Galls., 3/6 per Gall.; 10 Galls., 3/7 per Gall.; 5 Galls., 3/8 per Gall.; 1 Gall., 4/2; ½-Gall. 2/6; 1 Quart, 1/6; 1 pint, 1/-.

Carriage Paid on 7/6 orders and upwards.

WHOLESALE MANUFACTURERS,
JOSEPH BENTLEY LIMITED,
Chemical Works,
BARROW-ON-HUMBER, HULL.

BRITISH COLUMBIA
THE ORCHARD OF THE EMPIRE.
Climate and Land Eminently Suitable for
Fruit Growing.
Dairying and Mixed Farming, Horse, Hog, and Poultry Raising.

Market near at hand and good prices obtainable. Production from Agriculture in 1910, $14,399,000.

Full particulars, free of charge, on application to
J. H. TURNER, Agent General for B.C.
Salisbury House, Finsbury Circus, London.

SPAR GRAVEL for Paths, Drives, &c. White, strong quality, broken and properly graded; also Rockery Stone.
BECK & CO., Stone Merchants, Matlock.

Please mention
THE GARDENERS' MAGAZINE
when writing to Advertisers.

GLASS. | GLASS. | GLASS.

NICHOLLS & CLARKE, LTD
Shoreditch, LONDON.

PAINT. Our List of PAINTS, COLOURS, VARNISHES, and BRUSHES on Application.
When sending please cut out this advt.

Daily Mail

£1000

Sweet Pea Prize

IMPORTANT NOTICE.

ENTRY FORMS ARE NOW READY, AND INTENDING COMPETITORS SHOULD APPLY FOR THEM AT ONCE.

WHEN the time approaches practical advice on all the details of packing and preparing for packing will be published in the "Daily Mail," and the many competitors who will compete from Ireland and the west of Scotland need have no fears of inequality of opportunity.

THE THREE COMPETITIONS.

Competitors must remember that there are three competitions, and they must make clear for which they are entering. The three are:

The competition for the £1,000 prize show, at which second and third prizes of £100 and £50 respectively and 1,000 medals are offered.

The children's prizes.

Prizes for bunches of artificial sweet peas made of British material in Britain.

Intending competitors should write as soon as possible to this effect: "Will you send me an entry form for the £1,000 prize competition," or for the children's competition, or for the artificial sweet pea competition, as the case may be.

The letter must be addressed to the Secretary, The Sweet Pea Show, Carmelite House, London, E.C., the name and address of the sender must be clearly written, and a stamped addressed return envelope MUST be enclosed.

VOL. LIV.—No. 3,009. SATURDAY, JULY 1, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

◆

Fruits and Seeds.

To the botanist the seed alone is properly the fruit of a plant, and what are popularly considered fruits are mere adjuncts provided by Nature in association with the seed in order to assist in various ways in their distribution. Seeds thus fall into two classes, viz., those which are unassociated with attractive pulp and those which are so associated to form the manifold fruits with which we are familiar. Of the former, the cereals are undoubtedly the most important, embracing as they do wheat, oats, barley, rye, rice, and other nutritious grains which form the mainstay of human food stuffs. Here it is the seed proper, which, by selective cultivation, has been induced to include within itself a larger and larger mass of starchy material primarily intended for the nourishment of the young plants when germination takes place, but which is diverted by man into a source of nourishment for himself. In this connection it is marvellous what selection has done in enlarging the normally small seeds of the wild progenitors, and so increasing the yield of nutritious matter. Turning to the other section, the popularly known "fruits," we see a similar effect on dissimilar lines, since here the selective cultivator practically ignores the seed proper, and has even, in some cases, contrived to eliminate it altogether by diverting all the vital energy to the formation of the pulp, which alone he aims to increase in bulk and improve in quality. In this way, we have acquired seedless oranges, cucumbers, bananas, etc., while, by dint of heterogeneous crossing and hybridising the seeds of many other fruits, though produced, are quite incapable of reproducing the parental type. To form an idea of what has been done in this way we have only to compare the wild fruits, cherries, sloes, crab apples, and so on, with the innumerable varieties of their kin in commerce, to see that a parallel between the small wild grass seeds and those of, say, pedigree wheat, has not only been reached, but has been virtually surpassed. It is a curious fact, seeing that the production of the pulp of an edible fruit is normally a secondary effect of the fertilisation of the seed, the envelope of which is thereby induced to grow into the many forms we know of, that in the case of seedless fruits the seed itself should be practically abortive, and the plant devote its energies to forming a purposeless product, the primary object of which has gone. The production of a seedless cucumber, for instance, is, from the point of view of the plant, absolute waste of energy and good material so far as reproduction is concerned, which is the primary object of the plant's existence. In the nut tribe we regard the seed as the fruit, and a different set of conditions prevail. As with the cereals, we have, but on a larger scale, a mass of nutritive matter of value to man, but in this case more exposed to the attacks of birds and other animals, and thus necessitating greater protection. Hence, the all-important seed is sheathed and armoured defensively, and in the process of evolution this sheathing and armouring has kept pace with the ever-increasing capacity for attack on the part of nut-devouring animals, much on the lines of the competition between greater guns and thicker armour in the realm of warfare. In our native nuts, we find the hazel, filbert, or cob sheathed with an intensely sour outer green husk until the inner shell has hardened, and when the nut falls, it is no longer green, and therefore conspicuous among dead leaves or on the soil, but has assumed a brown tint to fit its surroundings. The chestnut adopts similar tactics, with a densely thorny green envelope to match the foliage and a tough brown shiny coat within. The walnut has three defences, a bitter green husk, an adamantine brown inner shell, and within that an acrid skin over the seed itself. All these provisions must assist materially in protection of the precious kernels from injury here, but would little avail in the tropics where the ingenious monkey regards the nut tribe as legitimate provender. Here, then, we find the most formidable nut-armour in the world. There is the cocoa-nut, with its thick fibrous coating, inches thick, covered with a tough skin, and within that a thick shell as hard as iron, while the brazil nut packs its angular iron-plated seeds tightly within so bombshell-like a receptacle that Nature has practically overreached herself in the protection line, the majority of the seeds perishing through inability to break through their prison walls and germinate in the open; as an antithesis to these fruits are the inner tough seeds associated with pulp-forming fruits, which actually invite apparent demolition by fruit devourers, but, defying digestion, become eventually distributed far and wide, thus making their would-be destroyers unwitting agents in the survival of their race.

G M 1809

MR. WILL TAYLER.

Mr. Will Tayler, of Hampton, Middlesex, has for a long number of years greatly interested himself in all phases of rose culture, and has long occupied a seat on the managing body of the National Rose Society. He is a regular competitor at the exhibitions held by the latter body, and frequently brings roses and fruits to the meetings at Vincent Square. In the production of fruit trees for planting, and in the general business of fruit production, he is very keen, and behind his modest and unassuming manner he possesses a great fund of information that is readily set free for the questioner who is seeking for knowledge from a practical man. Mr. Tayler has introduced several new fruits, and in any fruit he distributes as a novelty one may expect high quality; two such fruits come to our mind just now, and they are the Reine Olga de Wurtemburg grape, a capital outdoor variety for the Southern Counties, and Libra peach, a variety that, as was recently shown in these columns, is fine in size and quality, and crops freely.

R.H.S. Flower Show at Olympia.—The summer exhibitions that have for many years past been held by the Royal Horticultural Society in the grounds of Holland House, have from the first been remarkable for their extent and excellence, and when it became known that these grounds were no longer available for the society's summer shows, some apprehension was felt by many horticulturists as to the effect a change of place would have. It is, therefore, especially gratifying to be in a position to state that the exhibition for the current season, which will be held at Olympia on Tuesday next and the two following days, has the promise of surpassing the finest of those held at Holland House. When it became known that the grounds of this historic mansion would be no longer available, the Council, anxious that the summer show of this year should be on a scale of magnificence and comfort hitherto unapproached, engaged Olympia, which possesses the advantages of affording abundant space and of being convenient of access. The body of the main hall, the annexe, and the balcony will be filled with exhibits on a fixed plan, whereby harmony of outline and arrangement will be secured. Summer being at its height, the exhibits will largely comprise plants, trees, and shrubs that thrive in the open, rock gardens, and water gardens. The whole of the annexe is to be devoted to rock gardens and rose gardens, while an amphitheatre of tiered groups, 15ft. high, of stove, greenhouse, and other plants, will form a distinct feature in the arena. On the first and second days the exhibition will remain open until 10 p.m., and on each day the admission will be one shilling after 6 p.m. We shall, as a matter of course, give a full report of the exhibition, with illustrations, in our next issue.

An Interesting Civic Ceremony.—A few days since a deputation from the Court of the Gardeners' Company waited on the Lord Mayor and Lady Mayoress, at the Mansion House, for the purpose of presenting flowers and fruit, in accordance with the ancient custom which was revived a few years since. The presentation was made by the Master of the Company, and to the Lord Mayor he offered English-grown flowers, such as were grown at the time when the company was incorporated, some two centuries ago, and to the Lady Mayoress he presented a bouquet of orchids. In accepting the gifts the Lord Mayor expressed his regret that the apples were not English, and he thought the matter was one which deserved the serious consideration of fruit growers. In his youth he understood that no country in the world could produce apples like those of home growth. Since the days to which the Lord Mayor referred, there has been an enormous development in apple culture in foreign countries, and in our Colonial possessions, but nowhere are apples of such high quality produced as in Great Britain. It should, however, have been remembered that, with the exception of two or three culinary varieties, apples cannot be kept in really good condition for a longer period than five or six months. The fact that Tasmanian apples were substituted for English fruit on this occasion does not in any way indicate a decadence of apple culture in this country.

The National Rose Society's Exhibition.—Writing to us with reference to the National Rose Society's Metropolitan Show, which will be held in the gardens of the Royal Botanic Society on Friday next, Mr. E. Mawley, V.M.H., observes: "All but the ladies' decorative classes and the new roses, for which separate tents will be provided, will for the first time be staged in one large and lofty canvas structure, recently used as a ballroom, and consequently having a level boarded floor. Therefore, however adverse the weather, it will be perfectly dry underfoot. This will allow for the first time of a view being obtained of virtually the whole of the exhibition. As the season is early this year, the coming show is likely to be a more representative one than usual, and that roses from all but the coldest districts of the British Isles will be staged. The new seedling roses will probably be more numerous than last year."

Exhibition of Gladioli.—Cultivators of these flowers will be interested in the announcement that the newly constituted National Gladiolus Society will hold its first exhibition at the Royal Horticultural Hall, Vincent Square, Westminster, on Tuesday, July 18. The schedule contains nine classes, six of which are limited to nurserymen, and the others are open, and entries should be sent to the secretary, National Gladiolus Society, The Flagstaff, Locksheath, Southampton.

Legacy for a Gardener.—The late Dowager-Duchess of Northumberland left a number of legacies to the heads of departments at Stanwick Park, and among them was a legacy of £500 and a year's wages to Mr. William Higgie, who has occupied the position of head gardener at Stanwick Park nearly fifty years. A correspondent who served under Mr. Higgie several years, and now occupies a prominent position in the world of horticulture, writes: "Mr. Higgie well deserves his legacy, for he was an excellent servant to the Duchess and a good master to his men."

School Gardening in Oxfordshire.—School gardening has undergone considerable development in Oxfordshire within recent years, and it is interesting to learn from the report that has been recently published by the Education Committee for the county that the interest in gardens attached to schools is fully maintained. Mr. S. Heaton, the horticultural instructor for Oxfordshire, states in his report that the school gardens have made unabated progress, and that the teachers, scholars, and parents have taken the greatest interest in all that has been done. Many useful and interesting experiments are now being carried out in the school garden and schoolroom by many of the teachers, which should prove of great help in educating the children. As the result of the progress that is being made, the use of, and the work done in, the demonstration garden becomes, in Mr. Heaton's opinion, more indispensable each year. There is now in this garden, in addition to trained and bush fruit trees, a number of flowering and foliage plants, both outside and in the greenhouse, which are specially suited for teaching purposes. Many of these have been propagated in quantity for distribution among the teachers. Tables of much interest are given, and of these one shows the points obtained by the several gardens for cropping, and for the produce from them contributed to competitive classes at the exhibitions. Gardens receiving the highest number of points for cropping and cultivation did not invariably obtain the highest number of points in competition, but they did remarkably well at the shows.

Dangerous Elms. — A Barming correspondent writes as follows with reference to the danger associated with old elm trees that occupy much frequented spots: "I should like to direct attention to the great danger there is in allowing elm trees to stand too close to the church and churchyard. The other Sunday evening, just before the evening service, some of our bellringers had a really wonderful escape. They were entering the churchyard about 6 p.m., when one of them had his attention called to a small piece of bark which fell from an elm tree, and they looked up, expecting to see a boy there. It appears that this was the only warning they had, as immediately after a bough some 30ft. in length, with a circumference of 40in. where it had broken off the tree, fell across the path with a great crash. The men, who barely escaped, were much shaken by what had happened, and had to wait to recover themselves before chiming. The elm tree from which the bough fell stands close to the path and entrance to the churchyard, and considering how many people have to pass it going to and from church it is wonderful that the accident should have happened without fatal results."

Strawberry Runner Experiments. — Trials conducted by the National Fruit and Cider Institute were begun in 1906 for the purpose of determining the relative merits of first and second runners, i.e., the first or second plantlets produced on a runner. A larger yield has been obtained from the first in all three years, 1907-9, and the difference in the last year was more pronounced than in either of the two previous years, so that the result is not merely on account of the "seconds," which, as might be expected, were more backward at the start, taking longer to reach full vigour. The total crop for the three years with five different varieties of strawberries was 1,517lb. from "first" runners, and 1,207lb. from "second" runners. Taking the varieties separately, President gave the greatest difference; while Royal Sovereign and Latest of All gave results definitely in favour of the "first" runners. There was a slight balance in favour of the "first" in the case of Monarch, but Paxton's gave practically the same yield for both sets. There is therefore good evidence that "first" runners tend to be more fruitful than "second," and there is a sufficient margin of difference in the yields to make it a matter of practical importance to the grower to select only "first" runners for planting.

New Remedies for Apple Sucker.—One of the inspectors under the Board of Agriculture has found two remedies very useful during the past few years in connection with attacks of the Apple Sucker (Psylla mali). These are, respectively, a nicotine wash of strength about 0.075 per cent., and a lime-and-salt wash containing 20 per cent. of lime and 2 per cent of salt. The nicotine wash has proved superior to paraffin emulsion, and is absolutely innocuous to leaves and flowers. It should be used after the young begin to hatch out. A solution of this strength was found very successful at Woburn in 1908, 99 per cent. of the psylla being killed in the case of ten dwarf apple trees sprayed on May 17, when the blossom buds were just open. The wash does not appear to be injurious to bees. The lime-and-salt wash should be applied in the middle of March, or even later. Theobald recommends its application between the time of the opening of the buds and about two weeks beforehand. The action of the wash is described as forming a coating over the egg, and so preventing the breaking of the shell and the escape of the young insect. Trees that have not borne fruit for several years have yielded after the use of this wash.

Centenary of the "Bloemhof" Nurseries.—In April last Messrs. E. H. Krelage and Son, of the Bloemhof Nurseries, Haarlem, celebrated their centenary, and within the past few days we have had the pleasure of receiving an illustrated brochure containing a historical sketch of the firm since its foundation in 1811. The author is Mr. Ernst H. Krelage, the present head of the firm, and it is of much interest for the light it throws upon the development of bulb-growing in Holland during the past 100 years. The hyacinths, which in the 18th century were chiefly double varieties grown for exhibition, became popular at the beginning of the 19th century for forcing for indoor decorations, and at the same time the single varieties began to receive the increased attention they so well deserved, and the cultivation of hyacinths generally rapidly extended. In 1808, or three years before the firm was founded, there were thirteen large bulb merchants at Haarlem. Mr. Ernst Krelage, the founder of the firm, and the father of the present proprietor, was the younger son of a farmer resident at Bramsche, in Hanover. On the death of his father, the farm passed into the possession of the eldest son, who sent his brother Ernst to Holland. The latter arrived at Haarlem in 1804, and here he occupied various positions as a head gardener until 1811, when his employer became bankrupt. Instead of his salary he obtained some pot plants, and these formed the modest stock with which he commenced business on April 11, 1811. Ernst H. Krelage must have possessed abilities of a high order, for in 1829, when Loudon described his nursery in the Gardeners' Magazine, he was well known throughout Europe, and enjoyed considerable fame as a raiser of new hyacinths. In 1850 his only son, Mr. Jacob H. Krelage, then in his twenty-first year, became a member of the firm, which has since been known as E. H. Krelage and Son. Five years later Mr. E. H. Krelage died, and his son, Mr. J. H. Krelage, became the head of the firm. The business rapidly extended under his management, and for forty years the greenhouse and stove plants were great features, and conifers, camellias, paeonies, and strawberries were specialities. Mr. J. H. Krelage did not devote his whole attention to his nurseries, but took a leading part in the various movements for the advancement of horticulture. In 1856 he organised the first flower show in the Haarlem deer park, and in 1865 he started the Dutch Bulb Growers' Society. Some four years later he founded the Bulb Exporters' Union and the Netherlands Horticultural and Botanical Society. He also devoted much attention to garden literature, and in the course of his long and active life formed a library that has long been famous for the old herbals and the books on bulbs that it contains. In 1901 Mr. J. H. Krelage passed away, and was succeeded by Mr. Ernst H. Krelage, who is worthily maintaining the traditions of the firm.

Yorkshire Gala.—Financially, this great horticultural event, of which a report was given in our issue of June 17, was not equal to some recent years, but this must not be taken as a decrease in the interest that is being taken by the Northern people in their great floral festival. On the first day the number of visitors was 9,804, as compared with 11,281, which established a record for the first day. The visitors numbered 24,415 on the second day, as compared with 27,349 the corresponding day of last year. The receipts were £546 and £740 on the first and second day respectively, as compared with £620 and £840 on the corresponding days of last year. The decrease in the attendance may be attributed in part to the fact that the Whitsun holidays were held in the previous week, and in part to the attention that was then being given in the North to the preparation for the Coronation festivities.

GOURDS IN THE GARDEN.

Considerable diversity is seen, in both the shape, colouring, and size of the various species of gourds, which form highly decorative material, and should be represented in every garden. Their value is clearly demonstrated at Kew, and a large collection may be seen in the herbaceous ground every summer, and the same applies to other botanic and many private establishments. Their cultural requirements are of a simple character, and given fairly good soil in which to grow, together with a sun-bathed position, success is ensured. Further, they are seen to advantage when trained to spurred poles, and then we may utilise them to cover mounds, banks, arbours, pergolas, arches, and outhouses.

The time has arrived when they should be placed in position, or permanent quarters, and immediately they become established, and commence to develop at a rapid rate, a dressing of any approved artificial manure should be applied, to be repeated at intervals of three weeks, until the fruits approach maturity. Overhead waterings are also decidedly beneficial, preferably in the evenings of hot days, and it is a very easy matter to give them, either with a syringe or hand pump. Having seen a number of very fine specimens completely destroyed by the wind in a Surrey garden last season, this leads me to say that steps should be taken to make every growth secure, and where poles are employed they must be of a fairly substantial character, because the strain is considerable when the plants are fully developed.

With regard to species and varieties, a few first-rate large-fruiting kinds are found in the Turk's-cap gourd, Hercules' club gourd, and bottle gourd, while the comparatively small-fruited kinds are well represented in the white pear, orange, snake, egg, bicolor, green-striped, and warted gourds. It is superfluous to say that the pumpkin must be accommodated on the ground, as it would be a source of danger if suspended from pergolas, arches, etc., unless very securely fixed.

Walter H. Aggett

MR. J. GIBSON'S FIRST PRIZE DISPLAY OF RIPE FRUIT AT NORWICH.

Mr. William Deal, F.R.H.S., "Brooklands," Kelvedon, Essex, gives a cordial invitation to all interested in sweet peas to inspect his crops growing for seed. He has about 12 miles growing on sticks, stocks equal to any in the country. Crops are about half-a-mile from Kelvedon station.—[Advt.]

ROSES AT KEW.

Of late years the roses at Kew have formed a far more attractive feature than was at one time the case, and a visit there during the rose season is time well spent, for not only are the finest of the popular varieties to be found there, but many of the more uncommon kinds are well represented.

While roses are scattered more or less freely over the greater part of the gardens, the three principal features of attraction are the numerous beds in the vicinity of the Palm House, the fine show of climbing roses adjoining the herbaceous ground, and the sunken rose garden near the Pagoda.

This, which occupies the site of an old gravel pit, forms a delightful feature that appeals especially to one by reason of its unorthodox arrangement. The sloping banks are furnished with large masses of the best of the rambler class, and others of a loose informal manner of growth, the foreground and the bays between some of the clumps of ramblers being occupied with others of a more bushy habit of growth, including many varieties very rarely met with.

Such well-known kinds as Crimson Rambler and Dorothy Perkins are not yet in bloom, but even without these there is even now (June 21) a magnificent display. Even without flowers the beautiful shining foliage of Dorothy Perkins is very handsome, and in direct contrast to a large bush of Rosa Soulieana, whose leafage is, when seen in a mass, of a peculiar greyish tint.

Of the roses in large masses especially attractive just now may be mentioned The Garland, with its masses of small semi-double white flowers; Tausendshon, glorious in its large soft pink flowers; Una, that delightful single hybrid briar, with its large single white blossoms, a hybrid between Rosa Wichuraiana and General Jacqueminot, a charming pinkish flower; Jersey Beauty, with rich leathery foliage and pale yellow blossoms; Alberic Barbier, whose semi-double flowers are of a canary yellow, with deeper coloured buds; American Pillar, with its large single rose-pink flowers; Claire Jacquier, whose small nankeen yellow flowers are borne in great profusion; Psyche, white, with salmon-pink centre; Edward Proust, whose pretty coppery-carmine flowers are just commencing to unfold, and the well-known Queen Alexandra, with its profusion of pale tinted blossoms. The crimson-lake flowers of the bush-growing variety Fellenberg also make a goodly show, and various uncommon kinds are the old York and Lancaster, Fimbriata, pink, much fringed, the old crimson and old purple Moss; Irish Brightness, a charming single rose, and Rose de Meaux, a delightful little Pompon variety. Rosa rugosa, with its varieties, and the hybrid kinds in the production of which it has played a part, form an attractive group at the entrance to the Rose Garden, and not far removed therefrom a large standard of Rosa rugosa repens alba shows this variety at its very best.

A special note must be accorded that distinct rose Soleil d'Or, which, with its long shoots pegged down, is flowering freely, the blooms showing the striking coppery-orange tint in a very pronounced manner.

The beds near the Palm House contain a grand selection of Hybrid Perpetuals, Teas, and Hybrid Teas, suitable for this mode of culture. The bright colours of Hugh Dickson and Liberty cause them to stand out in a very conspicuous manner, while the large bed of Gruss an Teplitz on the terrace of the Palm House, with its two or three flowers expanded, gives one a foretaste of what may be expected in a short time. K.

HARDY PLANT CHAT.

Anemone ranunculoides plena.

Those of us who have studied hardy flowers for a goodly number of years are occasionally amused to observe among the lists of "novelties" offered the names of some very old plants indeed. Some of these have been known long, long ago, but have become forgotten, although they may have been in some old garden where they were but seldom seen. Someone comes upon these old flowers, and they are put into the hands of the trade, and frequently appear among the new plants, although occasionally the qualifying phrase may be put after the word "novelties," to the effect that the list includes both "new and little-known plants." Now, the double variety of the ranunculus-like wood anemone, A. ranunculoides, is again making its appearance among the "novelties," although it was a plant known, and even figured, more than three hundred years ago. It has, however, been very scarce, and it was only in 1909 that I was able to purchase it, although I had long been on the look-out for this little flower. Opinions will certainly differ respecting its value as compared with that of the ordinary single A. ranunculoides or the still prettier A. r. pallida, to my mind the most beautiful of the three, but lovers of the uncommon flowers will be glad to avail themselves of the reappearance of the double one in the trade lists. It has small, very double bright yellow flowers, and has otherwise all the ordinary appearance of its single sister flower. It likes a cool position in a shady spot, and roots can be procured in autumn, or may even be purchased in pots now.

Larkspur Fanny Stormonth.

It is rather dangerous to write and single out for notice any special perennial larkspur or delphinium, but that called Fanny Stormonth is really worthy of the esteem of all who admire the old D. Bella Donna, which was for long unsurpassed for its beauty, but whose constitution was not all that could be desired. Many attempts have been made to raise one equal in beauty but of better constitution. Some promising seedlings have not maintained their high promise, but have proved too short-lived for ordinary garden conditions. In Fanny Stormonth, however, we have a variety which has stood the test of several years, and has come through it with flying colours. It is a seedling from Bella Donna, differing a little in its tone of colour, which is slightly deeper than that of the parent, and which shows up well the large white eye. Its gracefully arranged flowers, quite different from those of the close spikes so common among the modern delphiniums, render it valuable for cutting, this closeness of spike, although excellent for garden effect, being against the usefulness of some of the varieties for cutting for the decoration of the home. I have watched D. Fanny Stormonth for a few years, both in the nurseries of the raisers, and in several private gardens, and it appears to justify the claims made for it, the slightly different shade of colour not being sufficiently away from the old Bella Donna to materially reduce its value. It grows from three to four feet high.

Verbascum A. M. Burnie.

Assuredly the paths of the hardy plantsman of the future are laid through a pleasant land, although this fact in itself is not devoid of danger to his future. His Elysium is beset with the dangers of having too many varieties, inasmuch as there appears to be no limit to the new varieties of hardy flowers which will soon be within his command. The hybridiser of hardy flowers is evident everywhere, and in every genus of worth hybrids now begin to abound. The mulleins have lent themselves to his skill, and a goodly number of hybrid verbascums now appeal to the purchaser. One of the prettiest of these which has come under my notice has been that named A. M. Burnie, which is not an absolute novelty, as it was brought under my notice several years ago by the firm who sent it out, and in whose nursery, I think, it originated. This variety is making way, and its favour is deserved by the appearance of its long dense spikes of flowers of a rosy-fawn. The description may hardly convey the precise tint, but no more apt one occurs to me as I write this. It is one of the taller verbascums, and grows from five to six feet high. One cannot venture to suggest which mulleins are its parents, but V. phœniceum is probably one of these.

The Montpelier Flowering Rush.

Not a new plant, the Montpelier Flowering Rush, Aphyllanthes monspeliensis, keeps rather scarce, probably owing to the fact that it is not always planted in a happy position. The purchaser generally associates the name of rush with a moisture lover, and forthwith goes and plants his aphyllanthes in a moist part of the garden, as frequently as not one in which there is a considerable amount of shade. This is a mistake, as this native of the South of France delights in a dry soil and a sunny position. The writer well recollects an interested group of hardy plantsmen, most of them of considerable experience, who were gathered round a plant of this flowering rush in a northern garden, where it was perched high on a sunny rockwork bank, and growing and flowering with a freedom unknown to most of them. The fact is that it likes nothing well as a dry soil and plenty of sun, and that with these it is much hardier than its southern habitats would indicate. But it is not a showy plant, growing only to a foot or so in height, and giving rush-like leaves and stems tipped with nice blue flowers. It is a flower for the lover pretty, although not showy flowers.

Campanula turbinata Dicksoni.

An old, but little-known form of Campanula turbinata is that called Dickson which is not easily surpassed by any the rather numerous varieties of the dwarf bell-flowers of the carpathica type. It has been for a good number of years in the hands of a few of the trade, but has not received of late the recognition it deserves from the public. Its flowers are large, well-formed, and of a pure white, and the plant, as a whole, is one deserving of the consideration of those desiring to add to their dwarf campanulas for front of the border or the rockery. cultivation calls for no comments, that any good garden soil, not too heavy, will satisfy its requirements, and that can be cultivated in partial shade quite well as in sun, while in the former flowers last longer.

S. Arnot

Festival of Empire Awards.

Mr. H. Hemsley, of Crawley, has been awarded by the Council of the Festival of Empire the silver cup offered for the best rock and water garden, and also the gold medal for his fernery.

NEW PLANTS, ETC.

◆

PHILADELPHUS LEMOINEI VIRGINAL.

This splendid new flowering shrub, figured in our issue of June 24, is sure of a rare welcome in British gardens. It flowers with the freedom of the majority of philadelphuses, and its spikes of pure white blooms give out a delicious fragrance. Individually, the flowers are large for the genus, and they are double, but the doubling has not been carried so far as to make the blossoms heavy, yet far enough to give them substance and still retain a full measure of elegance and daintiness. F.C.C., R.H.S., June 20. Sir Trevor Lawrence, Bart. (gardener, Mr. W. Bain), Burford Lodge, Dorking.

ODONTIODA ROSEFIELDIENSIS CRAWSHAYANA.

This is one of the largest flowering odontiodas yet seen, and it is the result of crossing Cochlioda Noetzliana with Odontoglossum triumphans, the latter doubtless being represented by one of Mr. Crawshay's fine varieties. The flowers are about 3½ inches across, rounded, and of a curious orange shade, this hue practically covering the whole of the segments. A.M., R.H.S., June 20. De Barri Crawshay, Esq. (gardener, Mr. Stables), Rosefield, Sevenoaks.

ODONTOGLOSSUM EUROPA.

A remarkable odontoglossum, the parentage of which was given as O. gandavensis and O. crispum F. K. Sander. This newcomer was referred to on June 20 as the "blue odontoglossum," but, though the prevailing colour was bluish-purple, with shading of crimson-purple, it is evident a really blue odontoglossum is still to seek. The flowers were of medium size and good shape, and all the segments were edged with white, the lip having a white apex and deep yellow crest that well set off the purple middle portion. F.C.C., R.H.S., June 20. J. Gurney Fowler, Esq. (gardener, Mr. J. Davis), Glebelands, South Woodford.

DELPHINIUMS.

Primrose Queen.—A beautiful and stately double-flowered variety, with massive spikes of regularly placed flowers. The colour is primrose yellow, and this renders the variety particularly distinct among the myriads of blues and purples. A.M., R.H.S., June 20. G. Ferguson, Esq. (gardener, Mr. F. W. Smith), The Hollies, Weybridge.

Mauve Queen.—This is a handsome and elegant variety, with large spikes of big, rich mauve coloured flowers. The variety is evidently vigorous as well as handsome. A.M., R.H.S., June 20. G. Ferguson, Esq., Weybridge.

CARNATIONS.

F. W. Goodfellow.—This is a very fine yellow-ground picotee with a heavy rose edge, and a beautifully smooth petal, that will appeal strongly to florists. A.M., R.H.S., June 20. Mr. C. Blick, Warren Nurseries, Hayes, Kent.

Charlotte Bronté.—A clear and deep rose self, the flowers of fine size and substance, being borne on good stiff stems. This variety is very sweetly scented. A.M., R.H.S., June 20. Mr. C. Blick, Warren Nurseries, Hayes, Kent.

SWEET PEA R. F. FELTON.

This is a fine waved sweet pea of deep lavender shade; many ladies call the hue pale mauve. The flowers stand up well, and on the numerous spikes shown, they were well placed. A.M., R.H.S., June 20. Mr. Robert Bolton, Warton, Carnforth.

CLADOTHAMNUS PYROLÆFLORUS.

An Alaskan shrub, with light green leaves and buff-red solitary flowers, borne on the short and new leafy branchlets; is said to succeed under conditions found favourable to the growth of Rhododendron hirsutum. The species was found on the Isle of Sitka as far back as 1828, but it is a plant rarely found in gardens. "Bot. Mag.," t. 8,353.

DENDROBIUM DARTOISIANUM.

A rare and beautiful Indo-Chinese orchid, discovered in 1905 by Mr. G. Bronckart. It flowers with great freedom, and thrives under the same conditions as D. nobile. The yellow flowers, with purple tips to the sepals and petals, and purple marks at the base of the lip. Both sepals and petals are more or less twisted, and the latter have undulate margins. "Bot. Mag.," t. 8,352.

DELPHINIUM PRIMROSE QUEEN.

Flowers double, primrose-yellow. A.M., R.H.S., June 20. G. Ferguson, Esq. (gardener, Mr. F. W. Smith), The Hollies, Weybridge.

HOW TO GROW SWEET PEAS.—"Sweet Peas and their Cultivation," by C. H. Curtis (Secretary of the National Sweet Pea Society) is a complete guide to the successful culture of sweet peas for home or exhibition. Price 1s. net, by post 1s. 2d., or bound in cloth 1s. 6d., by post 1s. 8d., from W. H. and L. Collingridge, 148, Aldersgate Street, London

THINNING HARDY FRUITS.

The training of hardy fruit trees, especially the young ones, is now an important operation. Similarly, attention must be paid to the thinning of the shoots and the fruit. Rarely is the thinning of hardy fruits practised to the extent it ought to be, and this has been held responsible to some extent for the many poor samples of British-grown fruit which find their way to the markets. Fruits, such as grapes, peaches, nectarines, and others that are commonly grown under glass are always treated with due attention in regard to this important operation. Vines are only allowed to develop one bunch to a shoot, and as soon as the fruit is set, a moderate thinning is given. Similarly with nectarines, if the trees are in excellent health, the fruit is thinned out to about two or three to the square foot, and the young shoots to about five or six inches apart. These are pinned or nailed in as required.

No doubt, the quality of the hardy fruits, such as apples, pears, plums, gooseberries, raspberries, strawberries, etc., could be vastly improved if means were taken to prevent them becoming overcrowded, whereby they are reduced in size and deteriorate in quality and flavour. Instead of allowing these fruits to develop and ripen in this careless manner, they should be thinned out with a pair of scissors, leaving about three of the best fruits on a cluster; these must be left at proper distances apart in order to allow plenty of room for development. Thinning must, of course, be more severe in the case of young trees which are just commencing their fruiting stage, for the latter will then be assisted in the development of good healthy wood for future cropping. Apples, whether as standards, bush, espalier, or wall trees, should now receive attention in this way, both as regards the young wood and the fruit. Old and young trees that have been transplanted should be mulched and supplied with a judicious quantity of suitable liquid manure. The fruits and shoots of apricots may be thinned more freely, but the work must be done gradually. Two fruits to a square foot is considered a fair crop, and to leave the well-placed buds or shoots at the back will often be found to develop more than a sufficient supply of young wood. Cherries require a final dressing and netting, the latter in order to protect the fruit from birds. In the case of wall trees, forked sticks about eighteen inches long may be used against the walls, so as to keep the netting from pressing against the trees.

In order to secure large fruits of black, red, and white currants, similar attention must be paid to thinning, and the fruits will be enabled to swell more freely if a little liquid manure is supplied at the same time. Gooseberries bear their best fruits on the thickest and hardest portions of the branch, and the poorest on the partially ripened end of that branch. It is a good plan to take those required for such purposes as tarts by means of thinning, and a further thinning may be performed a little later on so as to reduce the number of fruits by about half. Pears must be denuded of all suckers, the grafts examined, and support given to any that need it. Plenty of young wood should be encouraged on those kinds which bear their fruit in this way. Plums require special attention in the way of thinning where the fruits are borne in clusters.

Every grower should carefully examine the crop that each tree is bearing, and any signs of overcrowding must be at once noted, and the surplus fruits cut off. These clusters are generally borne on spurs, a number being clustered together. The side ones should be removed by thinning, and the central ones retained. Raspberries should be securely staked and tied, and the suckers thinned out to about four or five. Seldom are the fruits of this bush given any attention in the way of thinning. The method to adopt in this case is to remove any surplus berries which are to be found at the extreme end of the cluster, for these do not ripen into fully-flavoured fruit, and also hinder the ripening of the better fruits on the cluster. Strawberries also respond to thinning, and if large splendidly-flavoured fruits are required, it will be well to thin out all the trusses of fruit, leaving those which give promise of making the best show.

J. C. N.

DAHLIAS TO PERFECTION.—A thorough guide to the successful culture of these popular flowers is "Dahlias and Their Cultivation," by J. B. Wroe, price 1s. net, by post 1s. 2d., bound in cloth 1s. 6d., by post, 1s. 8d., from W. H. and L. Collingridge, 148, Aldersgate Street, London.

GALEGA OFFICINALIS COMPACTA.

The original form of this plant was introduced into this country from Spain in Elizabethan times, and is still grown a good deal in cottage and other old-fashioned gardens, but the more compact form, growing about three feet in height, is much to be preferred, being not unworthy of a place in the hardy flower border. Like the type, there are both lilac and white forms. They are excellent for cutting, especially in sprays a foot or more in length, and as they continue in flower for a long time—June to August—they are often very useful, not so much for themselves, as a foil or foundation for other flowers, the lilac-mauve flowers of one making very pleasing harmonies with some of the numerous yellow flowers of summer.

The galega will grow in any ordinary garden soil, but, like most herbaceous perennials, does best in a deep rich loam in a sunny position, when it makes fine shrub-like bushes. As, however, such conditions are too precious, as a rule, to be spared for common plants, it may be grown in shady or damp positions if the ground is well cultivated, when it will do very well for a time, though it sometimes succumbs in an ill-drained soil in a damp winter after the first or second flowering season.

In any case, it does best when taken after the second season in late summer early autumn, and replanted in some fresh soil after being divided. It is one of the easiest things to raise from seed, spring seedlings flowering well the following year, and making fine plants. One essential in its cultivation is to give it support it falls down, as it soon does even the summer has come. A well-grown three feet in diameter, covered racemes of pea-shaped blossoms, is be despised.

ALGER P

ODONTOGLOSSUM EUROPA.

Flowers bluish-purple, crimson and white. F.C.C., R.H.S., June 20. J. Gurney Fowler, Esq. (gardener, Mr. J. Davis), Glebelands, South Woodford.

SWEET PEA NOTES.

The cooler weather recently experienced has had a very beneficial effect on the sweet peas, although more rain is needed to give them that vigorous growth which is quite necessary to produce the flowers such as we saw at the shows last season, not but what a little refinement was very necessary in a great many instances. Nothing can be done now to keep them growing other than giving plenty of water, with the weekly or bi-weekly feeding.

It seems hardly necessary to add that on no account should the plants be allowed to seed, as this is quite the beginning of the end in such a season as this. Therefore, the old flowers should be removed regularly two or three times a week, and even if they are attended to as often as this, such is the rate they are blooming that many will be found over and fast filling the seed pods.

The season is now far enough advanced for us to see how true our stocks are, and personally I am very pleased to find a decided improvement in many instances. There are still several very fine varieties that are very, very bad—in fact, practically hopeless. I am growing two or three such varieties this season, but they are now condemned.

A few varieties that are true, or practically true, may be worth noting even at this early season, and they include Earl Spencer, Evelyn Hemus, Edrom Beauty, Helen Grosvenor, Thomas Stevenson, Doris Burt, Sunproof Crimson, Maud Holmes, Edna Unwin, Clara Curtis, Winsome, Scarlet Monarch, Bertha Massey, Isabel Malcolm, Black Knight Spencer, Charles Foster, Red Chief, Hercules, Elsie Herbert, Dainty Spencer, Queen of Norway, Princess Victoria, Mrs. R. J. Hallum, Asta Ohn, Gladys Burt, Mrs. Hugh Dickson, Mrs. W. J. Unwin, Anglian Blue, and Doris Usher. There are probably several more, but the above come to mind as I write, and it is really pleasant to find that we have even such a list as this of really fine varieties that are true, as they include some of the best in each colour. Unfortunately, we cannot rely on them from year to year, as even after being true for one or two seasons they occasionally break up again.

In conversation with a large grower for market the other day on the subject of sweet peas, he mentioned that it does not pay to grow those varieties that fail to come true, as the extra labour involved in gathering the mixed ones is so great that it runs away with all the profits, and finished up by saying he would not buy any variety again where the seller would not guarantee the seed to produce a quite true stock. This is as we should like to have all the varieties, but I am afraid it might severely tax our patience when waiting a season or two for some really striking novelty that we had noted, but it would be a decided advantage in the long run

Thomas Stevenson.

Zonal Pelargonium Maxime Kovalevski.—This distinct pelargonium, which was given an Award of Merit by the Royal Horticultural Society on April 11, was looked upon by many as an absolute novelty, but, as a matter of fact, it was sent out by MM. Lemoine et Fils, of Nancy, in February, 1906. I obtained it in that year, and was much struck with its distinct orange shade, combined with a particularly good shape. I have not tried it for bedding purposes, but as a pot plant for greenhouse decoration it is a very desirable variety. It is very probably destined to find a place with the many high-class varieties that we owe to the house of Lemoine.—W. T.

THE DECORATIVE USE OF DRY WALLS.

An old moss-grown wall, with its natural covering of wild things springing spontaneously from the joints and courses, is at once suggestive, and forms a practical illustration in which we trace the origin and conception of all that is good in wall gardening. The idea of a wall garden or "dry wall," as it is more correctly styled, is but a modified form of the rock garden, inasmuch as the successive strata, or layers of rock, that in the former are more or less widely separated and spread over a larger surface in irregular larger masses, are here more uniform, and brought into close relations, so that they lie almost directly above each other. They thus form nearly a vertical wall, differing only from the familiar type in that soil displaces mortar; the stone courses represent rock strata, and the constricted face of the wall is the rock garden in miniature. Obviously "dry walls" may have a place in gardens when space cannot be found for the more elaborate style of rock garden, and the most acceptable form it may take is that of a retaining wall, as the mass of soil that the wall supports yields a constant degree of moisture that the majority of its occupants enjoy, while in the case of the sun-loving section the wall face enables them to obtain the maximum amount of sunshine.

The best constructive material for "dry walls" is rough, unhewn stone, of varying sizes and unequal lengths, as this material is both attractive in appearance, and the roots of plants enjoy contact with the cool surface. The foundation layer consists of the largest and roughest pieces, which are firmly embedded in the soil, the joints being packed with soil, while all vacancies behind are likewise filled and firmly rammed. An inch or two of good soil is then added, and the second layer placed in position, each successive layer being treated in a like manner until the desired height is obtained. "Dry walls" built for plants should not approach too near the vertical, nor have the courses laid absolutely level; in each case allow a slight dip backward, so that all moisture coming in contact with the wall will naturally find its way to the roots of the plants.

ANDROSACE SARMENTOSA GROWING ON A DRY WALL.

The planting of "dry walls" should take place concurrently with building, as this admits of larger plants being employed, and the roots being spread out into the soil behind begin to run freely at once, and the plants become established in a very short time. It is also a wise plan to have a rough sketch prepared showing the main groupings contemplated, particularly with reference to the colours, as then mistakes are less likely to occur; moreover, a well thought out system of planting, in which due recognition is given to the diversity of plant growth, is always more satisfactory as a composition than that obtained by haphazard planting.

One advantage of wall gardens over level planting is the ease with which many plants pass through the winter, starting away strong in spring, when those less happily placed are still dormant, and it is also noticeable that plants grown in a "dry wall" are less adversely affected by the changes of weather, which generally occur at this season to mar their beauty; further, "dry walls" offer the most economical way of growing a collection of rock plants, and exhibiting them to the fullest advantage.

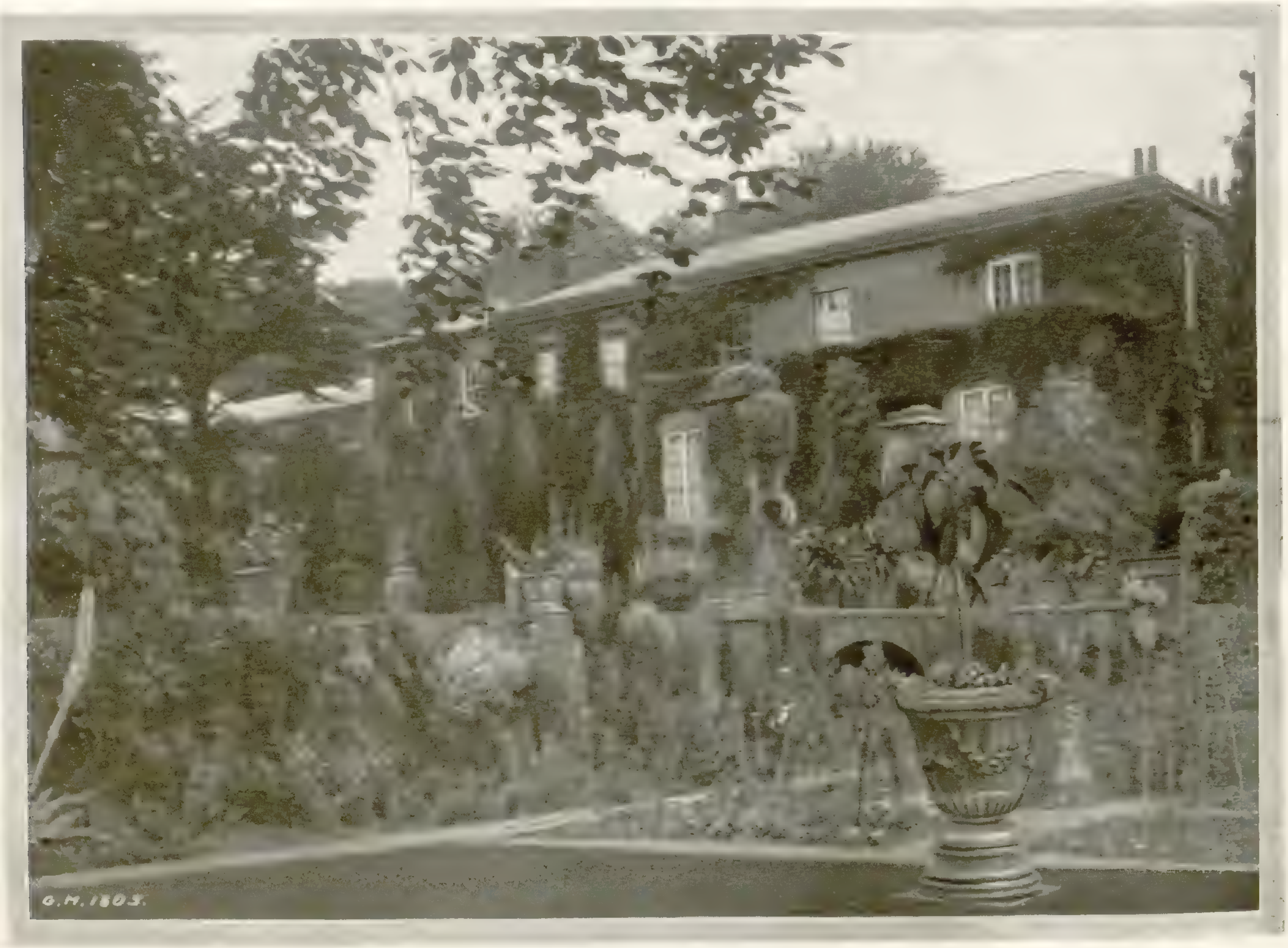
In regard to the plants that may be grown in "dry walls," there is no limit, for all the common kinds of rock plants revel under these conditions. Among those less frequently seen is Antirrhinum glutinosum, a trailing species, with grey-green hirsute leaves and medium-sized flowers of a cream-white colour, and of true snapdragon form; Artemisia brachyphylla splendens, a subject with intense grey leaves that spread out flat over the surface of the wall; Hypericum reptans, a charming miniature St. John's wort, whose leaves turn brilliant crimson in autumn, and in summer bears comparatively large yellow flowers on the terminal points of the branches; Androsace sarmentosa, with charming pink flowers in clustered heads; the lovely blue Lithospermum Gastoni, L. graminifolium, L. prostratum, and L. rosmarinifolium; silenes, onosmas, Dianthus deltoides and D. neglectus, and Tunica saxifraga fl. pl., accommodate themselves to the conditions of a dry wall, and the fascinating flowers of edelweiss are borne by plants that are true perennials in a sunny "dry wall."

With the rock wall in shade the character of the planting changes, for while sun plants will often succeed, yet so great is the material at command that repetition is best discouraged. Scolopendriums, Adiantum pedatum, trilliums, and Lenten roses are excellent subjects for the cool wall foot; while in the joints and courses asplenium, trichomanes, polypodium, ceterach, among ferns, and such flowering subjects as ramondias, haberlea, Campanula pusilla, Erodium Richeri, and Saxifraga longifolia, will find a place. The delicate stems of Arenaria balearica will clothe the wall face with exquisite tracery, and, in a lesser degree, Mentha Requini will effect a like purpose, the latter redolent with perfume when lightly bruised.

Where the rock wall is continually damp opportunity will occur to introduce Primula viscosa alba, P. farinosa, and P. Cockburniana, while at the wall foot Primula rosea, P. japonica, and P. sikkimensis, with American dodecatheons, will find a place.

Where the scheme of planting is restricted to a limited number of well-chosen subjects capable of adapting themselves to the prevailing conditions, a never-failing interest invests the garden, and the transition from one part to another will often be imperceptible, and the garden take on a charm that becomes perennial in the fullest sense.

Thomas Smith.



PART OF THE DRY WALL GARDEN AT WALMSGATE HALL.
The Residence of T. Dallas Yorke, Esq.

Ochna multiflora.—Several plants of this striking stove shrub were shown at one of the spring meetings of the Royal Horticultural Society. According to the authorities, it was grown in this country nearly a century ago, but it was quite unknown when shown by the late Mr. B. S. Williams, of Holloway, in 1879. It forms an upright shrub whose shoots are pushed out almost horizontally. The flowers are yellow, but do not last long. After they are over, however, the receptacle increases in size, after the manner of a strawberry, and becomes of a bright red colour. The seeds, which remain attached to the outside of the receptacle, are at first green, then purple, ultimately becoming black. This ochna is a native of the Sierra Leone district.—W. T.

GOOD GARDEN FEATURES.

The more the art of making gardens is learnt and practised, the greater becomes man's love for, and ability to enjoy, the open-air life that strengthens the body, clears the mind, and invigorates the soul. Every effort should be made by gardeners to create pleasure-grounds that are beautiful at all seasons, and that invite persons to spend leisure hours within them. The perfect culture of special trees, shrubs, plants, vegetables, and fruit is one branch of the art, but another, perhaps greater, aim, is the revealing the loveliness that can be written upon earth's surface by "those living tools, the flowers."

In order to fashion a garden well it must be built up of many features, some of them familiar, others perhaps novel. The shrubbery is a necessity in various positions; the rosery is excellent as affording a means of cultivating roses where soil, shelter, and situation have been obtained in as suitable a condition as possible; but for this object it may be doubted whether roses do not show themselves to greater effect when dotted over the garden, rising singly from lawns, springing up behind blossoms of gorgeous hues, trailing down old walls, or clambering up bank-sides. A pergola is now regarded as a fair feature that should not be lacking; the herbaceous border has become an institution; and upon visiting a large estate it is natural to ask, Where is the rock garden? Yet, in spite of all that the floriculturist's genius has invented, and the eager imitatory cleverness of working gardeners has achieved, the grounds might have so many beautiful adornments that do not appear.

Firstly, the best methods of conquering, or at least holding in check, the enemies of the garden, should be studied; not those insect pests and diseases to which so much attention is given, but the atmospherical influences and results before which man is too apt to own himself powerless. It cannot be summer always, spring winds are frequently bitter to the human being as well as devastating to vegetation; winds weary and depress mortals, even if they do not tear down climbers and uproot young trees; damp is a foe that no half measures can keep at bay. Is it possible to create a damp-proof garden? No; but the walks should be faultlessly hard and so drained that they can be happily traversed at times when roads and lanes are almost quagmires. There should be a special part of the grounds, too, adapted for exercise-taking between storms of rain, where wide paths are unshadowed by trees or arches that can precipitate damp, shielded on the south-west and north-east sides by high trellises set back in borders in which hardy plants, aye, and roses too, will revel. If this walk runs from north-west to south-east it may be draughty, but the protection afforded by those twelve-foot trellises will make up to the trees and plants for this slight evil, and if the path and borders are all wide there will be ample sunshine.

It should be remembered that this will be a garden spot of especial merit during spring and autumn. Summer has her own best places; winter, when frosty and bright, is best enjoyed in the open, or against a south wall shelter. All the fairest spring-blooming trees, shrubs, and perennials, with bulbous favourites by the thousand, should be massed.

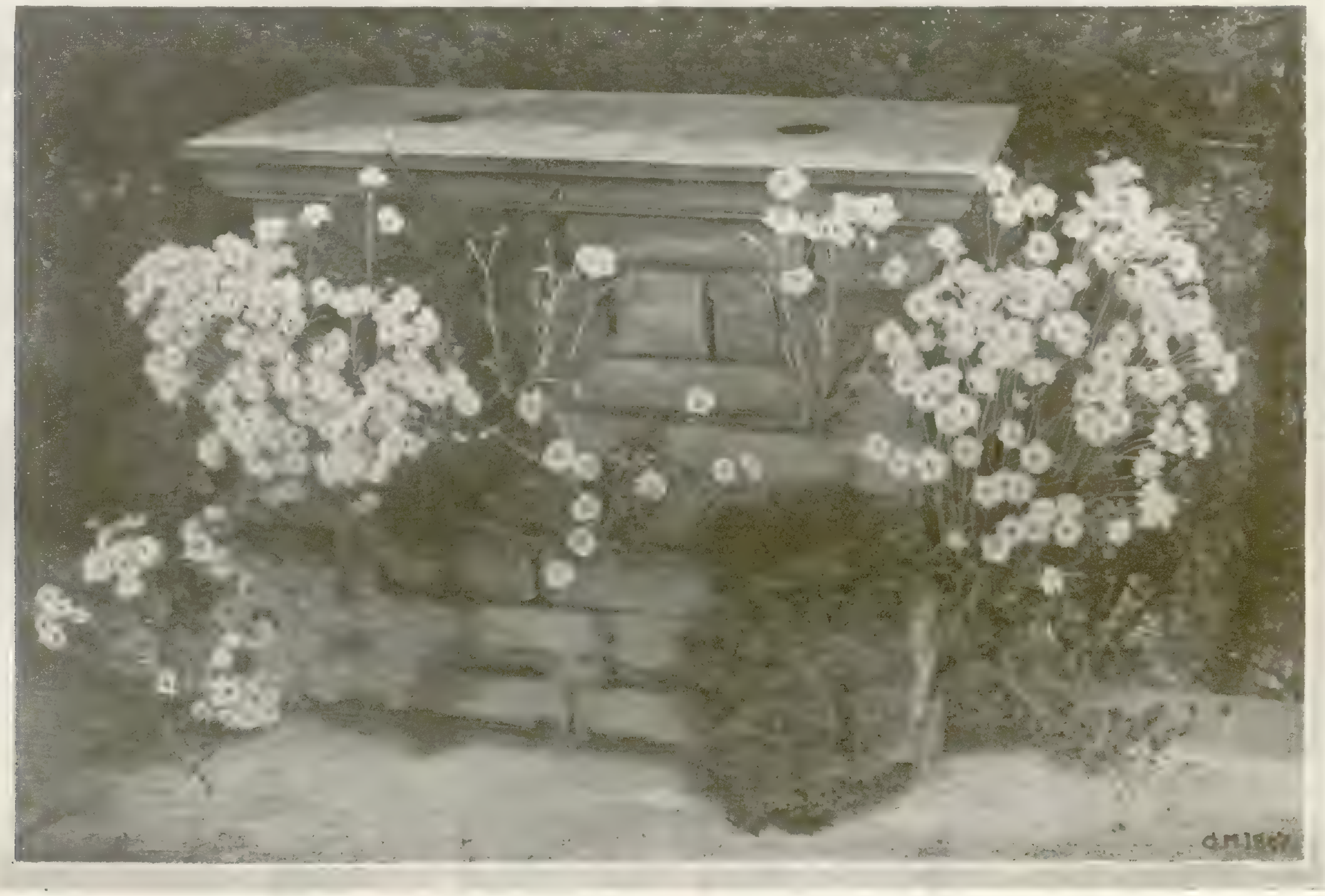
In the autumn the more beautiful trees, shrubs, and plants will include dahlias, chrysanthemums, Olearia Haasti, Veronica Traversi, Veronica glauco-cærulea, brooms, Michaelmas daisies, Pyrethrum uliginosum, late-flowering roses, briar and rugosa roses, sunflowers, clematises, and phloxes. So many of the shrubs and climbers are suitable also for the decoration of the winter garden that their merits are better mentioned in connection with this.

Where it is possible to set up a ten-feet brick or stone wall, running from east to west, with a wide border on the side facing south, and a hard concrete, well-drained path against this, a great deal will have been done to make life enjoyable during November, December, January, and February. The wall must not be built of crude new brick, however, a tall fence of old weather-stained wood will answer the purpose almost as well, while the next best substitute is a trellis twelve feet high, made of so fine a mesh that the apertures are very small, and boarded up three or four feet from the base. On the wall or fence many shrubs and climbers can be trained that would not be able to live, or certainly fail to give mid-winter blossom, on the trellis.

Upon the opposite side of the walk a shrubbery belt is safest, made chiefly of evergreens, none of them higher than four feet; in front of these low bulbous and other flowers should blossom early. The exquisite hues of some shrubs are not sufficiently recognised. We may have the Shrubby Honeysuckle, Lonicera Morrowi, carrying crimson berries on into winter; the Sea Buckthorn, Hippophae Rhamnoides, orange-fruited; the Red-stemmed Dogwood, Cornus siberica; Cotoneaster rigida, vermillion-berried; the greenish-catkined Garrya eliptica, and the fine Japanese Cherry, Cerasus serrulata alba fl. pl., that blossoms in white clusters each April, and produces a distinct effect.

Cool grottos and glens as retreats from summer heat must be fully considered, for the garden that is being planned, or is in due season to be should be so prepared as to give pleasure. A rocky glade, ten to twelve feet high in places, not running straight, but meandering, set lavishly with ferns and trailing plants, forms a feature of exceeding beauty. The perfect addition is, of course, a miniature stream running at the base of one rock-side, fed by a waterfall arranged to trickle from above over big slabs of stone fringed by greenery and flowers. For the larger spaces of the glade cotoneasters, and here and there Wichuraiana roses should be prominent. A group or two of the Royal fern and pampas grass, varied by bamboos and polygonums, will give dignity to the scene. Mosses, stonecrops and saxifragas may clothe whole stretches of the lower rockery; the golden-leaved Creeping Jenny is also a notable plant for this purpose. The end of the glade, giving the wandering path an object, may well be a grotto, within which is a stone seat boarded on the top, the wood painted to match the stone.

There can be a garden within a garden, designed especially to be a joy in foggy, dull days either of spring, summer, autumn, or winter. A trim series of bright red brick walks, set among neatly-kept grass plots and beds of the very gayest of dwarf shrubs and plants will answer the purpose best. Orange, scarlet, gold, should be the chief colours. Scented flowers will supply another kind of satisfaction, and not a decaying bloom or leaf should ever be left to drop to earth—indeed, earth had better not be visible, the whole surface being carpeted with such dwarfs as are always cheerful to look upon—sedums, variegated arabis, mossy saxifrages, etc. Golden privet, maple, euonymus, and Spiraea opulifolia, variegated veronicas, and aucubas, will be found serviceable for forming screens.



ALPINE PINKS ESTABLISHED ON A DRY WALL.

Iris Diseased.—A rhizome of Iris pumila attacked by "rhizome rot" was recently submitted to the R.H.S. Scientific Committee. This disease is due to a bacillus, and is very difficult to cure. The parts of the rhizome affected should be removed and burnt as soon as the disease appears.

DRY WEATHER JOTTINGS.

As I write these notes I look out over a garden that has known no rain for six weeks or more, which is a state of affairs I never remember before on the spring side of midsummer day. Not even a thunderstorm has come our way, though we have heard the rumblings, seen the flashes of lightning, and felt a few big spots of rain occasionally which we thought was the beginning of a downfall, but each time the clouds rolled away again, and left us with the sunshine and the drought. What a strange old unaccountable climate this is, to be sure! This time last year it was raining almost daily, and in between the storms we were shivering with cold and moping under cloudy skies, longing for a summer day. Now the whole country presents a thirsty, parched-up appearance, crops say, Water us, or we shall die, and we welcome with open arms one of those spells of rain which we grew so heartily sick of a year ago.

Look round at the lawns. Did you ever see lawns so brown and dry and parched up in the month of June? Which lawns are the worst in this respect? The poor lawns, of course, which are under the care of people who think that a lawn is like a paved yard, and never wants anything but sweeping. There are lawns poor in the herbage of which a lawn should be formed, destitute of clover, and what grass there is present is poor and of a coarse nature. It is all a story of neglect and want of manure, and what can be expected under such circumstances when even the very best kept lawns are suffering through the drought? On the other hand, of course, mowing is not the business it was last year when the great trouble was to keep the grass down, and for this gardeners are secretly thankful, for what with the watering and other extra work entailed by the dry weather, they would be overwhelmed if lawn mowing required the attention of a normal season.

What shall I do with them? said a neighbour to me the other evening. He had been away for a week's holiday. When he went he left a couple of promising rows of broad beans, and came back to find them sticky, dirty masses of black aphis all down the stems. What was he to do with them? There was only one course, i.e., consign them to the rubbish heap, which is the fate of many a broad bean row this year. When the aphis appears pinch off the tops of the broad beans, is a well-known garden precept, but not applicable in dozens of cases this year where the plants were infested with "blight" almost before flowering commenced. But, in spite of this general scene of woe one sees good rows of broad beans, with plenty of pods and very little aphis. In these instances, you see the results of sowing broad beans early, because they were well grown before the aphis appeared, and could be pinched without sacrificing the crop; and again there are those who have thought it worth while to syringe their beans with an insecticide. By doing this they checked the blight, saved the plants, and have got a crop.

In the case of certain vegetable crops one may notice this year the beneficial results of early sowing. Taking onions as a case in point, there are gardeners who follow the rule of sowing their onions on the first occasion in the year when the weather is favourable, and the soil dry enough. They do the same with parsnips and broad beans, but there are others who are not so particular, and argue that it is better to wait until the soil has become warmer. The laugh this time, however, is on the side of the early sower; the former paragraph states what he has gained in the matter of broad beans, and as I write early sown onions and parsnips are healthy and vigorous, while late sown onions are blue, puny, and maggot-ridden, and poor little parsnips, struggling to make headway, are blistered by the grub of the parsnip fly, and the young leaves are curled up with aphis. In this and other ways the drought has its lessons to teach, and the season proves the soundness of some of the rules which were established by gardeners who experienced dry seasons in the long ago.

It is in dry summers when we see more than at other times evidence of the correctness of the theory of the survival of the fittest, and a strawberry bed we saw the other day had its lesson to teach. This bed was made up partly of young plants and partly of older specimens which, in the ordinary way, should have been dug in, but they looked so well that it was decided to give them one more year. The old plants flowered as profusely as the young ones, and up to a certain point looked equally promising, but the dry weather found them out; they collapsed under the burning sunshine, and have produced nothing, while from the younger plants a good crop has been picked. The grower's excuse is that the old plants would have been all right if rain had come, which is logical, of course, but then we never know when we are going to have a dry time, and what is the good of running risk of failure by keeping old strawberry plants growing when the propagation of young stock that will repel drought is so little difficulty.

While trees and crops have languished under the scorching influence of the sunshine, insect pests in general, and aphides in particular, have had a glorious time of it, and I never remember seeing apple trees more badly infested with American blight. In some old orchards I have visited the hateful white cotton wool like substance simply hangs in huge bunches from the branches, and, though the injury it is capable of causing to these old specimens may not be very great, American blight spreads from old trees to young ones, and evidence of its effect will be seen later on in stunted growth and swollen nobs on the young shoots. Spraying with lime-wash and other preventive mixtures has had no effect on American blight, probably because the insects were safely secreted in the crevices and under rough bark, where they could not be touched, and encouraged by the warm sunshine they came out later and multiplied in overwhelming numbers. It is in this way that we observe how the old, gnarled apple trees in orchards are a source of danger to the young and valuable specimens growing near at hand.

Another lesson taught by the drought is the advantage of early digging in the case of soil that is retentive and clinging. Let me give an instance. In the same field are two big pieces of land which are used as garden ground. The occupier of one slogged away in the late winter, turned his ground up roughly, and at sowing time it broke down like powder, but for some reason or other the next man left his digging till the spring. I questioned the wisdom of it, but he assured me that the rough lumps would come down all right after the next shower. Doubtless, they would have done, but the man is still waiting for that shower, and, after delaying his seed sowing as long as he dare, his crops had to go in on a rough lumpy seed bed, with the result, of course, that half of them have failed, and the contrast between the two plots of ground is decidedly marked. In one case, the things have had to be left to struggle on as best they could; in the other flat hoeing of the crumbled surface has been possible throughout the dry spell, and the crops are coming gallantly through the crisis.

I hardly dare mention sweet peas when some friends of mine who have ambitions centred on the £1,000 prize are surveying their plants, all a-blooming in June, and wondering what the state of affairs will be at the end of July. It would look almost as if Dame Nature had herself ordained that the sweet pea should be the Coronation flower and had sent the sunshine on purpose to bring them on for the great event, for never in the history of modern sweet peas has there been such a display of flower at this time of the year. Would-be prize winners at July shows raised their plants early in pots after the orthodox way, and planted them out, and in many cases they are not half-way up the sticks, but in full flower. Will the July flowers be as large and good as these first editions? Much depends on the weather, of course, and, though I make no prophecy in respect of the £1,000 prize, I venture to express the opinion that some of the sweet pea awards at July shows will be won by flowers from plants that were raised from seed sown outdoors in March or April.

Apart from disappointments and worries the drought has brought a mountain of extra work to gardeners, who, after putting off the unwelcome task as long as they could, had to resort to outdoor watering What does this mean? Simply that gardeners have put in hours of overtime to which the majority of them neither get no expect any extra pay. Why do they do it For their own credit's sake, because th cannot stand by and see things suffe through drought if there is a hose-pip and water supply available. Sometimes hear pessimistic croakers comparing ga deners of to-day very unfavourably wi their predecessors, but the drought of 19 proves that they are suffering from warp and prejudiced minds. Head gardene and under-gardeners, journeymen, and some cases, garden labourers as well, ha spent their evening hours this sum manipulating the water-can or the h pipe, just as cheerfully and willingly their forebears did in the droughts of ye ago, and with the hope of no reward cept that they might keep crops grow and show as good results as possible un the adverse circumstances.

H

[The publication of this communicat has been unavoidably delayed.—ED.]

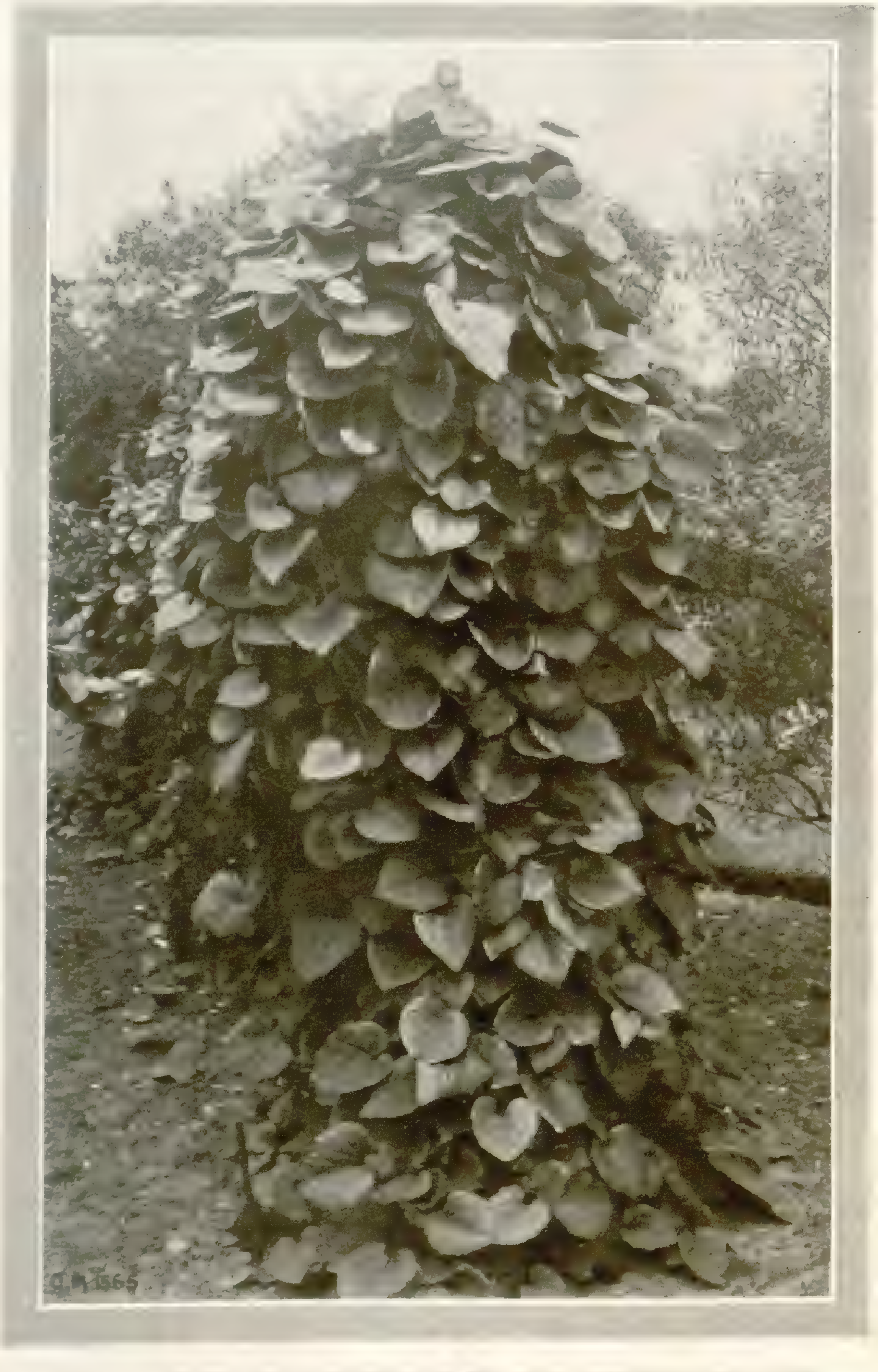
Rubus bambusarum.—To t who appreciate the distinctive forms of l age as aids to garden decoration, the ject under notice has much to comm Unlike the majority of the rubi, the l are the greatest attraction, the seg being exceedingly narrow, simple in and varying up to 8in. and 9in. in l thus rendering the plant most distinct. growths are extremely slender, and a off to best advantage when lightly tra over trellis work or allowed to ramble f over stumps, as in the case of clemati allied subjects. In a young state it is paratively slow of growth, but when e lished the shoots are developed with freedom. Ordinary soil and an ope tion in the shrubbery are its cultur quirements.—L. O. V.

THE HARDY ARISTOLOCHIAS

The several kinds of aristolochia which may be grown outside in this country form an interesting group of climbing plants, for, in addition to the peculiarity in shape and the curious colouring of their flowers, the foliage of one or two sorts is very handsome. Moreover, their culture does not offer any serious difficulties, for, given moderately good loamy soil, they grow vigorously, and soon clothe an unsightly fence or block out an undesirable object. They are also useful for planting on pergolas and summer-houses, while they may be planted at the foot of a large bush or low tree and allowed to cover it with their long slender branches. They are not very easy plants to propagate, though with a little care cuttings may be rooted if inserted in sandy soil in a close case in summer. Young plants ought to be placed in permanent positions as early in life as possible, and until sites for them are selected, it is just as well to keep them in pots.

There are only a few kinds of aristolochia which may be grown successfully out of doors, and the principal one is A. Sipho, of which an illustration is given. It is a native of the United States, and is recognised by its large, dark green, heart-shaped leaves and small yellowish-brown flowers, which have the appearance of a siphon or curly-stemmed pipe, and are responsible for the common names of Dutchman's Pipe and Siphon Flower, which have been applied to the species. The flowers are small, and not very conspicuous, as they are often shaded by the foliage; hence, if a person does not pay special attention, he might easily miss seeing them. Except in their peculiar shape and markings, they bear little resemblance to the immense showy flowers of some of the tropical species, for in the case of the tropical American A. gigas var. Sturtevanti, a single flower, including its tail-like appendage, may be anything between 3½ and 4½ feet long, and 12 to 15 inches wide in the widest part. A. Goldieana, again, from Old Calabar, is another with immense flowers. These large-flowered kinds are, however, more offensive than the small-flowered hardy ones, for the disagreeable carrion-like odour of the blossoms is very pronounced in their case, whilst it is not present to any great extent in the hardy ones.

A. californica and A. tomentosa, from California and the southern United States respectively, are two other species which are worthy of notice. They may be separated from A. Sipho on account of their hairy stems and leaves, but the differences between themselves is not well marked. Though two of the three species here mentioned have been in cultivation for more than a century they cannot be said to be common, though their bold foliage and curious and interesting flowers warrant them attention from garden lovers. A. altissima and A. sempervirens are sometimes spoken of as hardy plants, but there are few places where they grow satisfactorily. W. D.



A FORMALLY TRAINED SPECIMEN OF THE DUTCHMAN'S PIPE (ARISTOLOCHIA SIPHO).

Mushrooms.—During the autumn months mushrooms will probably be asked for, and preparation will have to be commenced to secure fermenting material for them. A north position is preferred during the hot months for preparing the material, and for the making-up of the beds, which may either be formed in trenches under a wall or made up in ridges in the usual way. See that the manure is thoroughly sweetened by continually turning it for at least a fortnight. It is apt during dry weather to become too dry, and in this case a slight watering during the process of making-up the bed is necessary.—C. F.

MOISTURE IN VINERIES.

The opinion of some of your able contributors who are noted grape growers on this subject would be both interesting and instructive. I have grown grapes on a fairly large scale (in private gardens) for twenty-five years, and have, during that time, been a close observer of the growth and condition of various sorts in different circumstances, and I have come to the conclusion that some varieties suffer somewhat if subjected to a certain amount of atmospheric moisture, while others growing under similar conditions appear to be receiving just what they require.

The majority of gardeners must be content to grow several varieties in the same house. Now it is accepted generally that certain varieties do very well indeed in the same structure. But it sometimes happens that the collection contains some varieties that do not thrive well together. Of course, I am not here referring to early and late grapes, but to varieties that ripen about the same time under identical treatment. We must consider ventilation along with the subject of atmospheric moisture. As regards warty leaves. The varieties Gros Colmar and Lady Hutt, grown under the same treatment as that meted out to Muscat of Alexandria, Lady Downes, and Alicante, have warty leaves, while the leaves of the three last named are free. The leaves of Appley Towers are also quite free from warts, while those of Gros Maroc are affected. Black Hamburgh foliage is affected very slightly indeed, while that of Madresfield Court is clear.

It seems to me to be a fact that some varieties require less moisture both at the roots and in the atmosphere than others. Ventilation is a very important matter, and has a very direct bearing upon the subject of warts on vine leaves. But I have long noticed the fact that under similar cultural conditions the leaves of some varieties become warty, while those of others do not, and I was always taught that warts on the leaves were the result of much atmospheric moisture and lack of sufficient ventilation. I confess to being rather puzzled about the matter. Geo. Garner.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

IMPORTED ORCHIDS.—Importations of Cattleya Mossiæ arrive at intervals during the summer season. Providing the plants have reasonable treatment after they have been taken from the cases, this species may be induced to establish itself under artificial conditions without much difficulty. The plants should be cleaned of all dead and decaying matter about the roots and bases of the pseudo-bulbs. Examine carefully beneath dead sheaths and leaf bracts for insect pests, and should any of the plants show signs of having been attacked with cattleya fly (which is easily distinguished by the perforation in the pseudo-bulbs), such plants should be isolated until they have grown sufficiently to show that they are free from the pest. Choose pots just large enough to contain the plant comfortably, drain to about one-half the depth with clean drainage, and fill in the remaining space with compost consisting of about equal portions of fibrous peat, osmunda fibre, and sphagnum moss, with ample broken crocks and charcoal added. The plants will not require much root moisture at first, but as soon as the new roots are growing freely and the young growths appear, it is necessary to increase the root moisture according to the requirements of the plants. It is a good plan to protect the foliage from strong light, as plants are liable to lose their foliage if exposed to excessive light.

PHALÆNOPSIS SCHILLERIANA, as well as P. grandiflora, P. amabilis, etc., are arriving in an imported condition at this season of the year. It is unfortunate that these lovely orchids are not more generally cultivated, but the condition suitable cannot always be found or provided in even our most up-to-date collections. It is all very well to say the plants do well under such-and-such conditions, but after a year, or perhaps two years, it is generally found that trouble is experienced in spite of all care bestowed on the plants. I remember taking charge of one collection where there were numerous plants of different kinds of phalænopsis, but for years before and for a considerable time after they came into my charge they just made a new leaf and lost the previous one, and so did not progress. A plant was hung from the roof of the house—only a matter of a few inches above the stage on which it had been before, and it found the conditions suitable, and grew away rapidly; needless to say, the remaining plants were transferred to similar conditions, with the result that the difficulty of years was removed. In dealing with imported phalænopsis, shallow pans should be used, and these well drained with clean crocks. The potting compost should consist entirely of chopped sphagnum moss and silver sand. Keep the plants in a hot, moist, shady position until the new roots get well away.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

ZONAL PELARGONIUMS.—Plants intended for winter flowering ought now to be ready for standing outside to receive the full benefit of the sun, which is a great factor in building up the plant for the production of fine blooms. A good ash bed should be provided on which to stand the plants. Keep all flower buds picked off during the summer, and stop all shoots which are growing out of proportion to the plant. Weak liquid manure may be given occasionally when the pots are filled with roots. Show pelargoniums should also be stood outside as soon as they have finished flowering. Gradually reduce the amount of water, so that by the end of July the wood is thoroughly ripened and ready for pruning back.

SALVIA SPLENDENS GRANDIFLORA.—This is most useful for providing a good display of colour in autumn and winter, when it is most needed. On no account must the plants be allowed to receive a check through being root bound, but they must be shifted into larger pots as soon as they require it. Liberal watering is necessary when the plants are in full growth, and, being a gross feeder, liquid manure may be given frequently. Red spider is a great enemy to salvias, and must be kept in check by syringing the plants at least twice a day.

BOUVARDIAS.—These may now be either shifted into their flowering pots or planted out in a frame. Very little ventilation will be required for a few days after planting, but this must be gradually increased as the plants grow, until the lights may be left off entirely. Solanum capsicastrum may be treated in the same manner.

ARUM LILIES.—Those plants which have been stood outside for a time may now be shaken from the soil, split up into single crowns, and planted out. Allow plenty of space between both rows and plants to enable the ground to be well worked with the hoe during the growing season. Arums delight in plenty of water.

HARD-WOODED PLANTS having now completed their growth, may be stood outside to mature. Select a situation which is shaded during the hottest part of the day. Careful watering is necessary, especially with azaleas. Strict attention must be paid to the insect pests which attack these plants. Thrips, scale, or red spider, if allowed to go unchecked, will soon render a plant useless.

GREENHOUSE CLIMBERS are now growing vigorously, and need regulation. Thin out any growths that are weak, and avoid overcrowding. Manurial assistance will be required in most cases.—A. Grubb, Porter's Park Gardens.

HARDY FRUITS.

TRAINING FRUIT TREES.—Young trees of any kind of fruit, and more especially trees that have been planted to provide espalier, cordons, etc., will need attention at this stage of their growth. The previous year's growths of horizontal trained trees should have been tied out at an angle of 45 degrees with the stems and the present growths lightly looped at the same angle, pinching the points of all strong growths to throw vigour into the leading shoots. In training cordons to form arches or pergolas, this will be found almost the only means of getting the trees to furnish the tops satisfactorily. All trees that are not well regulated may be set in order with much better effect by pinching at the present time than by pruning in winter. All side growths of strong branches may be pinched at the fifth or sixth leaf, allowing all growths on the weaker branches a full season's run. Trained apple trees are a prominent feature here, and on these are grown the best fruit, generally speaking; a few of the very strong varieties have been found not to succeed as trained trees, notably Bramley's Seedling, Striped Beefing, and one or two others; but others thrive and fruit abundantly, although many of them are aged trees. Apple trees trained as gridirons, with from ten to fourteen leads, or cordons, according to the vigour of each individual, are found most satisfactory; many of these are trained over pergolas, and are most attractive at blossoming time, form shady walks during the summer, and provide extra fine and well-coloured fruits in the autumn.

GRAFTED TREES.—These should now be examined, cleaning away with a sharp knife all parent growth, so that the growing grafts may receive the benefit of the full flow of sap. Standard trees that were grafted in the spring will soon need supports for the grafts, or much damage will be caused if rough winds are experienced. If American blight is prevalent this is almost sure to find its way to wounds on newly-grafted trees, and should be kept in check with methylated spirits slightly diluted with water, and applied with a stiff paint brush.

BORDEAUX MIXTURE.—Where scabby fruit has been the rule, a last spraying of Bordeaux mixture may now be given to apples or pears, using the finest nozzle possible to produce a mist-like spray. The mixture may be used as per my previous notes, using a weaker solution for Cox's Orange Pippin and other varieties with delicate foliage that are known to scald. The fine, dry weather experienced has been a great check to fungus growth, and where spraying with Bordeaux mixture has been well carried out for a year or two, further spraying may not be considered necessary for this season.

PEACHES AND NECTARINES.—Trees are now making clean and healthy growth, and these may now be tied, regulating them evenly over the trees so that overcrowding may not occur. Weak and useless growth should be cut away so that all parts of the tree may have the benefit of all possible light. Special attention should be paid to the borders in the way of watering; light dressings of an approved fertiliser will be of great benefit from now onward. When the weather is bright and warm syringe or hose down the trees with reasonable force to keep them free from red spider or aphis. The earlier varieties may have their fruits exposed by picking away a few leaves so that the sun and air may reach them.—J. Whittle, Cheveney Gardens.

THE KITCHEN GARDEN.

LATE PEAS.—Although so much depends upon the weather, generally speaking, peas do not pay for sowing much after this date. Therefore it is advisable to make a large sowing in prepared trenches of one of the following varieties—Autocrat, Gladstone, or Late Queen. If the soil is dry give it a thorough soaking previous to sowing the seed, or germination may probably be defective. It is wise to avoid crowding the plants, especially at this season, as light and air build up strong foliage to stand against mildew, which is so liable to attack late crops.

VEGETABLE MARROWS.—These plants are now making robust growth, and to secure a free set of the flowers and the rapid swelling of the fruits they will require a good soaking of water at intervals of about a week, accompanied by some manurial help. To prevent the plants becoming a dense mass of growth remove all useless shoots, and expose the vines and leaves to the sun. Cut the marrows as soon as they are of a usable size, so that they do not unnecessarily weaken the plants.

CUCUMBERS.—The early raised cucumbers will probably be getting past their best, and show signs of weakness; if so, sow seeds at once to secure strong plants for succession. Any plants that are in free bearing should be liberally top-dressed with good loam, and frequently watered with liquid manure; pay attention to syringing, and keep a moist atmosphere in the house.

SPINACH.—Fcr next winter's use make a sowing of perennial spinach; if sown now it attains to a good size before autumn. As every gardener knows its value, should the other spinach fail during the months of scarcity. Perennial spinach is not fastidious as to soil or position, and will thrive in moderately conditioned ground. Plant out the young plants as soon as possible, about a foot apart. Make frequent sowings of summer spinach in cool positions, such as north borders, during the next two months.

GENERAL REMARKS.—Remove the [illegible] plants of early cauliflowers as soon as the heads are cut, and have the ground manured and dug over to receive another crop. [illegible] other piece of land should be occupied in providing supplies for winter, as far as possible, as soon as it become vacant, until sufficient quantities are assured. Pull up shallots and lay them out in the open to dry previous to storing them. Remove all weeds before they reach seeding size, and keep the surface of the soil worked amongst growing crops as much as time will allow.—Charles [illegible], Cholmondely Castle Gardens.

THE GREAT ROSE SHOW OF THE YEAR
Will be held by the NATIONAL ROSE SOCIETY
in the
ROYAL BOTANIC GARDENS,
REGENT'S PARK, N.W.
ON FRIDAY, JULY 7TH.

The two Champion Challenge Trophies will be competed for, also numerous other Cups and Pieces of Plate, and Money Prizes to the value of £400.

NEW SEEDLING ROSES in a SEPARATE TENT.

BANDS OF SCOTS GUARDS AND ROYAL ARTILLERY.

Luncheons, Teas and Other Light Refreshments.

ADMISSION.
Noon to 3 p.m., 5s.; 3 to 5 p.m., 2s. 6d.; to 7 p.m., 1s.

E. MAWLEY, Hon. Secretary,
Rosebank, Berkhamsted.

BATH CARNIVAL.

BATH GRAND ROSE SHOW
and
GENERAL SUMMER EXHIBITION
WEDNESDAY and THURSDAY, JULY 12th and 13th.

Classes for Roses, Nurserymen and Amateurs. Bouquets, Cut Flowers, Sweet Peas, Strawberries, and Tuberous Begonias.

Entries close Friday, July 7.

For Prizes, Schedules, etc., apply
B. F. F. PEARSON, Secy.
Office: 17, Argyle Street, Bath.

HEREFORD AND WEST OF ENGLAND
ROSE SOCIETY.
THE 45TH ANNUAL EXHIBITION OF ROSES
(open to the United Kingdom)
Will be held in the SHIRE HALL, HEREFORD,
On WEDNESDAY, JULY 12th, 1911.
£120 in Prizes, and Four National Rose Society's Medals.

Prize Schedules, Entry Forms, and further particulars may be obtained from the Hon. sec., Mr. F. A. SPEER, Street Court, Kingsland, Herefordshire; or from Messrs. Jakeman and Carver, Booksellers, Hereford.

LEICESTER.—ABBEY PARK FLOWER SHOW, 8th and 9th August next. Open Class, Group of Plants, £20, £15, £10, £6. Liberal prizes for Collections of Fruit, Displays of Roses; Silver Cup, Gold and Silver Medals for non-competitive exhibits. Schedules from JOSEPH BURTON, Supt.

MALVERN
ROSE AND SWEET PEA
SHOW.
THURSDAY, July 13th.

TWO £5 NOTES FOR SINGLE BUNCHES OF SWEET PEAS.

TEN CLASSES FOR ROSES.

EIGHTEEN CLASSES FOR SWEET PEAS.

THREE CLASSES FOR CARNATIONS.

Send for Schedule to:
S. A. GRIFFITHS,
Assembly Rooms, Malvern.

Entries close Monday, July 10.

WOLVERHAMPTON.
GREAT FLORAL FETE,
July 11, 12, and 13, 1911.
[illegible] in Prizes.
Entries close July 3rd.
Schedules on application to the Secretary.

YORKSHIRE AGRICULTURAL
SOCIETY.

GREAT HORTICULTURAL EXHIBITION
WILL BE HELD AT
ROTHERHAM,
ON JULY 27th, 28th, and 29th, 1911.

For Schedules apply
PETER BLAIR,
Trentham Gardens, Stoke-on-Trent.

ENTRIES CLOSE JULY 8th.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

HANLEY PARK, STAFFORDSHIRE.
JULY 5th and 6th, 1911.
FIFTEENTH GREAT
ANNUAL FLORAL FETE.

£650 in Prizes, Silver Cups, Gold and Silver Medals. Silver Challenge Cup, value £10 10s., offered for TRADE EXHIBIT.
(For particulars see page 8 in Schedule.)
Valuable Special Prizes offered by the Principal Firms in England.
Schedules post free on application to
WM. POULSON, Secretary.
Town Hall, Hanley.

CARDIFF FLOWER SHOW.
By kind permission.
SOPHIA GARDENS, CARDIFF.
WEDNESDAY and THURSDAY, July 26th and 27th, 1911.
The renowned Full Band of H.M. 19th Queen Alexandra's Own Royal Hussars.
Grounds and Tents brilliantly Illuminated.
Mr John Studt's Complete and Extensive Amusements.
Every Particular and Schedule, Apply
A. MAURICE BAILEY, Secretary,
24, Duke Street, Cardiff.

EXHIBITIONS AND MEETINGS.

◆

The Royal Show (Norwich).

HORTICULTURAL SECTION.

If evidence were required of the ever-increasing popularity of horticulture in Britain, we might well instance the rapid and remarkable progress of the horticultural section of the Royal Agricultural Society's shows. But a few years ago little or no thought was given to horticulture by the organisers of the "Royal," but during the past few years the section has grown in importance and interest, and the exhibition of plants, flowers, and fruit which opened at Norwich on Tuesday last, and continued until Friday, was undoubtedly worthy a place among the finest flower shows in the kingdom, and constituted one of the most attractive sections of the whole show.

The Horticultural Committee, with Sir Gilbert Greenall, Bart., at its head, and Mr. Peter Blair, the genial and energetic manager, had everything arranged in a highly satisfactory manner, a word of praise for the latter being on everyone's lips, and the large body of exhibitors brought of their best, and transformed the large marquees into a perfect paradise of floral beauty.

The opening class was for a group of miscellaneous plants in and out of bloom, occupying 300 square feet of space. Messrs. J. Cypher and Sons, Cheltenham, took the lead with a very bright and lightly arranged group, in which highly-coloured crotons played an important part. A wide-spanned arch in the background surmounted by a noble Kentia Fosteriana, made a capital feature toward which the kalanchoes, orchids, ixoras, anthuriums, and fine foliage plants rose in billows, making what might in imaginative language be termed a sea of loveliness. Mr. W. A. Holmes, West End Nurseries, Chesterfield, was a very good second; he had excellent crotons, a good palm as a centrepiece, tall rambling roses, ivy-leaved pelargoniums, and a few nice orchids, all of which were used to the best advantage.

Messrs. Cypher were the only exhibitors of a table of orchids occupying 100 square feet, but their exhibit was worthily awarded first prize. Some large and well-flowered examples of Cattleya gigas, Miltonia vexillaria, Oncidium macranthum, and nice spikes of Epidendrum vitellinum majus were among the more prominent of the choice things staged.

A great deal of interest centred in the class for an exhibit of hardy plants and flowers arranged on ground space 30ft. by 10ft., the schedule stipulating that rock stone or other material might be used to obtain effect. Messrs. W. Artindale and Son, Sheffield, were victors, their efforts being in the way of a rocky bank furnished with a great assortment of alpine and herbaceous plants, with a water pool in front; nymphæas, arums, Japanese iris, sarracenias, and astilbes were used in and around the water, and variegated funkias finished off the edging in front. Second place was taken by Messrs. W. and J. Brown, Stamford, who carried out an entirely different plan with mounds of gaillardias, liliums, eremurus, Ostrowskia magnifica, and other good border flowers, arranged over a groundwork of heucheras, potentillas, dianthus, and other dwarf-growing subjects. Third went to Messrs. Whitelegge and Page, Chislehurst, who made a capital attempt at reproducing a bit of a herbaceous border.

Another highly successful class was that for a collection of cut hardy perennials arranged on table space 30ft. by 5ft. There were six competitors, every one of whom staged in a manner that was most praiseworthy. The first prize was won by Mr. G. Davison, gardener to Colonel B. J. Petre, Westwick House, Norwich. This exhibit was one of the finest displays of hardy flowers we have seen; such charming things as Orchis foliosa, Primula sikkimensis, Tropæolum polyphyllum, and Onosma taurica in front, were backed by Gillenia trifoliata, Lilium Hansoni, Iris spuria, and other equally good kinds, with delphiniums, Campanula latifolia, and a glorious mass of Tropæolum speciosum right at back. Messrs. G. Gibson and Co., Leeming Bar, Bedale, came second with a stand of excellent flowers. A number of new seedling gaillardias and campanulas were of much promise, and the newer delphiniums and poppies were prominent on the stand. Messrs. J. Harkness and Sons, Bedale, were third, their stand also being excellent.

Mr. Jas. Gibson, gardener to his Grace the Duke of Portland, K.G., Welbeck Abbey, Worksop, staged a fine collection of fruit which obtained first prize. Madresfield Court and Black Hamburgh grapes were well shown, with four large melons, and several dishes of highly-coloured apples, excellent peaches, strawberries, cherries, plums, and figs. Mr. Gibson also scored for a collection of eight vegetables, staging produce of a high degree of excellence. The cauliflowers, Centenary peas, and Perfection tomatoes were really splendid.

Two entries for a group of begonias found Messrs. Blackmore and Langdon, Bath, the leaders, and it may be said that the quality of their blooms was exceptionally high. Messrs. T. S. Ware, Lim., who followed, also staged really grand plants carrying immense, beautifully formed and delightfully tinted flowers. The exquisite Lady Cromer was prominent in the centre of the stand, where its delicate flesh-pink flowers showed up well.

Five excellent entries were made in the class for a collection of sweet peas occupying 100 sq. ft. of staging, and the exhibit of Mr. Robert Holmes, Tuckswood Farm, Norwich, stood well ahead. The quality of the flowers was exceptionally good, and the arrangement was very pleasing. A pea of brilliant colour labelled Seedling B 78, a vase of the salmon-coloured Earl Spencer, and some good flowers of Edith Taylor, particularly pleased us. Second prize went to Messrs. E. W. King and Co., Coggeshall, who had fine vases of such varieties as Queen Mary, Anglian Orange, Earl Spencer, and Mrs. William King. Messrs. S. Bide and Sons, Farnham, came third.

Mr. F. M. Bradley, Peterborough, took premier place for an exhibit of cut roses, occupying 15ft. by 5ft. Prominent in the centre was a tall stand of J. B. Clark, supported by Mdme. Ravary and Harry Kirk. The Lyon, G. C. Waud, and Mdme. Jules Gravereaux were other very beautiful things on the stand. Second prize went to Messrs. W. and J. Brown, Stamford, and Messrs. G. Mount and Sons, Canterbury, third.

Carnations were beautifully shown by Mr. C. F. Waters, Balcombe, Sussex, who was awarded first prize in the class for collections. Edith Waters, Carola, Rose Pink Enchantress, and most of the favourite varieties were well put up. Second prize went to Mr. W. Allan, gardener to Colonel the Hon. C. Harbord, Gunton Park, Norwich, whose flowers of Cecilia and King Arthur were simply superb. Mr. A. V. Coombe, gardener to the Right Hon. Lord De Ramsey, Haverland Hall, Norwich, was third.

NON-COMPETITIVE.

Excellent as were the exhibits in the scheduled classes they were quite surpassed by the great numbers, infinite variety, and charm of the non-competitive exhibits, chiefly from trade growers. From far and near, the leading firms in the United Kingdom brought of their best, and the result was a display of all classes of flowers and plants that could scarcely be surpassed anywhere at any time.

Messrs. James Veitch and Sons, Lim., Chelsea, staged a table of stove and greenhouse plants in exquisite taste. A central mound of orchids, backed up by Solanum Wendlandi, and supported on either side by crotons, kalanchoes, ferns, etc., constituted the more striking features of the group. A nice group of carnations, spiræas, roses, and decorative plants was put up by Messrs. W. Cutbush and Son, Highgate, N. The bright Orleans Rose contrasted well with White Pet; Hiawatha made a brave show in the background, and the tall vases of The President, Lady C. Waring, Mrs. Fortescue, and other carnations were arranged most effectively. Ornamental trees and shrubs were shown by Messrs. John Waterer and Sons, Lim., Bagshot. Kalmia latifolia in full bloom, acers with elegantly cut and beautifully tinted foliage, standard hollies, and clipped yews were all interesting items in the exhibit.

Messrs. Daniels Bros., Lim., Norwich, defended the honour of their city in a worthy manner, and arranged across the end of the big tent a grand display of rambler roses over a ground work of dwarf polyantha varieties and maidenhair ferns. Big banks of brilliant azaleas were placed beside the roses, with double stocks in the foreground. A crown of sweet peas was another attractive feature of this firm's elaborate exhibit. In another tent Messrs. Daniels showed a group of Hydrangea paniculata and a big bank of sweet peas.

Messrs. Sutton and Sons, Reading, made a bold and striking display of gloxinias and begonias. Each subject was arranged in a circular mound, and with ferns and small palms as a groundwork, the brightly-coloured flowers made a grand show. The begonias were all seedlings of the year, and the gloxinias were also flowering at less than six months old. Conifers and shrubs in excellent variety were grouped across the end of one of the tents by Messrs. Fisher, Son, and Sibray, Lim., Handsworth, Sheffield. Tall plants of rambler roses, with cut blooms and dwarf plants in the foreground, were put up in fine style by Messrs. A. J. and C. Allen, Earlham, Norwich. Hobbies, Lim., Dereham, had a rose garden with arches, pillars, and a central temple. The plants in pots were arranged in a manner that produced a very pleasing effect, and cut blooms of hybrid teas were deftly placed just where they showed to best advantage.

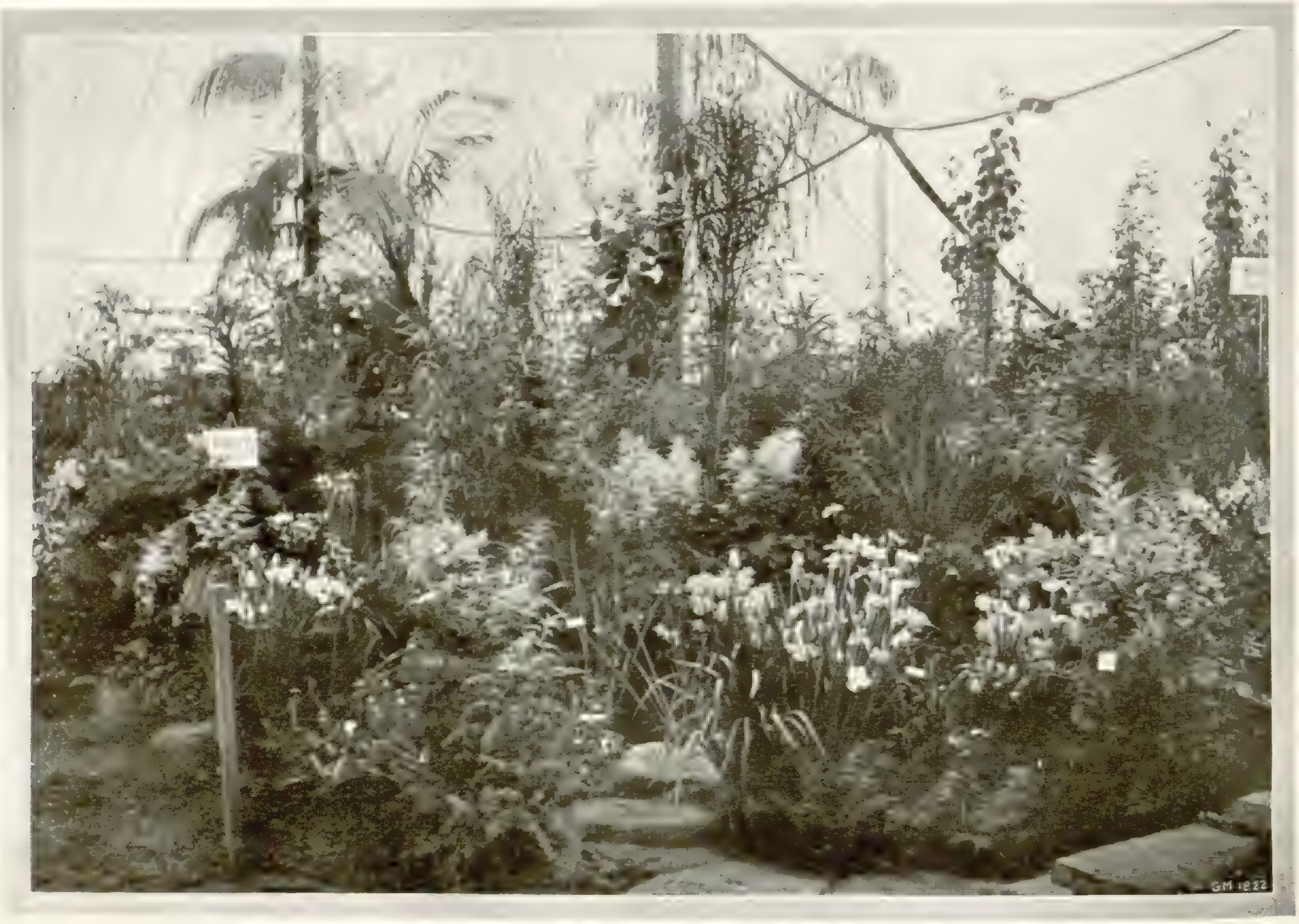
Messrs. R. Wallace and Co., Colchester, arranged a model garden of great extent and greater interest and merit. To fully describe the varied features of this exhibit would occupy more space than we can afford, but it may be said that it was without doubt one of the finest show gardens we have ever seen. At one end was a grass plot backed by a paved walk and stone wall, the walk leading to a raised terrace, which in turn led on to a water garden. In the crevices of the stone wall grew charming little alpines in endless variety, and above the wall was a border of choice hardy flowers such as Eremurus Bungei, and several varieties of distinct character; Lilium Hansoni, delphiniums, and a host of other good things. In the water garden stood a new astilbe named A. hybrida Crown Royal, a plant of great promise.

Roses and delphiniums were shown by King's Acre Nurseries, Lim., Hereford, who also had a big and attractive exhibit of pot fruit trees. Standard peaches and figs, pyramid plums, cordon apples, and trained currants, all carried excellent fruit. Messrs. Lilley, Guernsey, were exhibitors of early-flowering gladioli. Mr. H. Morse, Westfield Nurseries, Eaton, Norwich, brought a collection of roses, and Mr. W. J. Godfrey, Exmouth, showed pelargoniums, including a number of old-fashioned scented-leaved sorts not often seen nowadays. The Canterbury bells from the last-named firm were shown in fine style, and attracted much attention.

A beautiful table of orchids was exhibited by Mr. J. Collier, gardener to Sir Jeremiah Colman, Bart., Gatton Park, Surrey. There were arching racemes of odontoglossums and miltonias, massive cattleyas, and quaint bulbophyllums, brilliant odontiodas, and delicately tinted oncidiums, all arranged with artistic skill to make a glorious feast of lovely colour and graceful form. A massive bank of delphiniums came from Messrs. R. H. Bath, Lim., Wisbech. Dr. Bergmann, Lize, Donald McPherson, and Morena were a few varieties of different types, each beautiful in its way.

Perpetual carnations in all the popular varieties were well put up by Mr. C. Engelmann, Saffron Walden, his ever-popular Carola being well represented. Messrs. Forbe pentstemons, phloxes, delphiniums, an pansies were well shown. The Hawick fir maintain their position among the front ran of raisers and exhibitors of these and othe florists' flowers.

Sweet peas galore were staged in adm able fashion by our leading grower Robert Sydenham, Limited, Birmingham. up their flowers in the table decorations associated with their name. Maud Holmes, Thomas Stevenson, Earl Spencer, and other good sorts were well shown. Messrs. G. Stark and Son, Great Ryburgh, had a big stand with vases of Fair Maid, Loyalty, Hercules, and other sorts arranged with an eye to colour blending. Mr. C. W. Breadmore, Winchester, exhibited in his usual good style, his flowers being large and of capital substance. Mr. Robert Bolton, Warton, Carnforth, brought a splendid lot of flowers, Prince George, Olive Bolton, Stirling Stent, and Tom Bolton being a few among many of his good varieties. A display of large extent and superb quality came from Messrs. Dobbie and Co., Edinburgh. Big pyramids of Edrom Beauty, Lady Knox, Mrs. Hesling-



MESSRS. R. WALLACE AND CO.'S GOLD MEDAL HARDY FLOWER GARDEN AT NORWICH.

ton, and Mrs. Cuthbertson broke the level of the dwarfer vases shown in great numbers.

Mr. H. N. Ellison, West Bromwich, put up the best exhibit of ferns he has yet staged. Dicksonias and Polypodium glaucum crispum were the outstanding features, but many smaller kinds were equally beautiful and interesting, the arrangement of all being very tasteful. Messrs. Frank Cant and Co.'s roses were superb. Specimen blooms in boxes, bunches of garden roses, and tall stands of The Lyon and Hugh Dickson, all did credit to Colchester, the famous home of roses. Messrs. Pennell, Lincoln, showed a miscellaneous bank of flowers, among which English irises, roses, and hardy border flowers played their part.

Rockwork furnished with alpines, violas, and an assortment of hardy plants, came from Messrs. W. Fells and Son, Hitchin, Herts. Vegetables of many kinds were shown by Messrs. J. K. King and Sons, Coggeshall, who also had a quantity of sweet peas in the best varieties. Mr. G. W. Miller, Clarkson Nurseries, Wisbech, brought an interesting little group of orchids, among which odontoglossums and cattleyas were conspicuous. Hardy flowers, including Gaillardia Lady Rolleston, Dianthus Napoleon III., delphiniums, etc., were put up by Messrs. W. and J. Brown, Stamford, who also showed a collection of roses. A fine show of roses was made by Messrs. J. Burrell and Co., Cambridge. American Pillar, Trier, Mdme. Ravary, and Flower of Fairfield, in the background, were supported by well-known hybrid teas, both in bunches and single blooms.

MR. G. DAVISON'S FIRST PRIZE COLLECTION OF HARDY FLOWERS AT NORWICH.

The centaureas from Messrs. Jarman and Co., Chard, were as charming as ever, and on this occasion they were accompanied by a collection of zonal pelargoniums, which embraced the leading varieties of the day. A miscellaneous exhibit of flowers, vegetables, ferns, and foliage, was staged by Messrs. G. Massey and Sons, Spalding. Strawberries, such as The Bedford, Rival, Utility, and Reward were shown in capital manner by Messrs. Laxton Bros., Bedford. Mr. Theo E. Dawes, Syderstone Nurseries, Norfolk, displayed huge stalks of Dawes' Challenge Rhubarb, which were of handsome appearance.

Vegetables as near perfection as could be wished were shown by Messrs. Sutton and Sons, Reading. So many and varied were the dishes, and so good the quality of all that it would be trifling to single out one or two for special mention.

Messrs. Young and Co.'s carnations from Hatherley, Cheltenham, were once more put up in a masterly manner. The quality of flower and the artistic arrangement combined to make a capital exhibit.

One of the biggest exhibits of violas we have seen came from Messrs. W. Artindale and Son, Sheffield. The flowers were of large size and high quality, such distinct varieties as Blue King, Mrs. H. Pearce, Isolde, and Kathleen being strikingly represented. Messrs. Blackmore and Langdon, Twerton Hill Nurseries, Bath, showed some magnificent delphiniums; W. T. Ware, Daniel, Osiris, and Harry Smetham were remarkable both for size and colour.

Messrs. Young and Co.'s carnations from nymphæas in an improvised water garden with sarracenias, spiræas, funkias, and other moisture-loving plants around the margins. Delphiniums and other good border plants were grouped at either end of the exhibit.

Among some choice orchids put up by Messrs. Stuart Low and Co., Bush Hill Park, Enfield, some well-flowered examples of Renanthera Imschootiana were conspicuous by reason of the brilliant colour of the flowers. A splendid collection of Malmaison carnations and perpetual flowering varieties and some roses were other features of the extensive exhibit staged.

Messrs. Alex. Dickson and Sons, Lim., Newtownards, brought over from Ireland an exhibit of roses of good quality. Such favourites as Marquise de Litta, Marie Baumann, Ulrich Brunner, and Mrs. J. Laing, were accompanied by Mrs. Gordon Sloane, Viscount Carlow, Duchess of Westminster, and other varieties of recent introduction. Messrs. H. B. May and Sons, Dyson's Lane, Edmonton, showed some choice greenhouse ferns, the exquisite Nephrolepis Marshalli compacta being given the place of honour in the stand.

SEEDSMEN'S PAVILIONS.

The leading seedsmen in the Kingdom had, as usual, palatial pavilions, in which were displayed excellent samples of farm and garden seeds and their produce, the skilful manner in which the exhibits were displayed adding charm as well as educational interest to these stands.

Messrs. Sutton and Sons, Reading, had their well-known and spacious erection in the usual spot to the right of the main entrance. The floral decorations consisted of big batches of the beautiful Sweet William Pink Beauty, hybrid schizanthus, Canterbury bells, and other charming flowers. Melons, peas, tomatoes, and other vegetables, as well as farm roots, were well shown, and a feature of special interest was the collection of common pests which were exhibited, with concise hints as to methods of eradication.

A fine group of blue hydrangeas, and a group of English iris, with spiræas and roses behind, provided the decorative element of the stand from Messrs. Dickson and Robinson, Manchester. Growing samples of various grasses, clovers, etc., were an important feature of this firm's exhibit, and equally interesting were the plants of noxious and undesirable plants that trouble the farmer and gardener.

Messrs. E. Webb and Sons, Wordsley, Stourbridge, had a remarkable show of sweet peas, stocks, pelargoniums, lilies, celosias, and many other attractive flowers. Gloxinias were shown in glass cases, and on a tiered stage were arranged dishes of all manner of vegetables, among which may be mentioned Webbs' Improved Banbury onion, Prizewinner carrot, New Jewel and Regina tomatoes.

Messrs. J. Carter and Co., Raynes Park, S.W., decorated their extensive stand in fine style. They had a series of small groups of various floral subjects along the centre of the floor, one being filled with Calla Elliottiana, cannas, ericas, and ferns; others with irises and liliums, with arches of rambler roses. At the back were groups of sweet peas, delphiniums, clarkias, and early gladioli; and there were also collections of vegetables, melons, tomatoes, etc., put up in an attractive manner. Probably the most unique feature of the whole exhibit was a collection of about fifty varieties of potatoes of last year's growth, all in a perfect state of preservation. This is remarkable for this time of year.

Messrs. Dicksons, Lim., Chester, occupied the whole of their space with a gorgeous bank of delphiniums, a very complete collection of English iris, and groups of pelargoniums and other greenhouse plants. There were some remarkably attractive seedlings among the delphiniums, and a number of first-class named varieties.

Liliums, Spiræa Peach Blossom, and rambler roses were the floral features of Messrs. Dickson, Brown, and Tait's stand. The Manchester firm had the pillars of their pavilion nicely furnished with plumose forms of nephrolepis. There were also nice plants of Polypodium glaucum crispum and other ferns arranged in batches beneath the taller subjects, the whole providing an effective display of floral beauty. On a central stand were shown excellent examples of Victor tomato, Duke of Albany and Daisy peas, Blair's Prolific cucumber, Osberton melons, and some grand heads of White Star cauliflower. Tait's Best of All swede was represented by large, shapely roots, Conqueror being another fine type of swedes exhibited.

AWARDS TO NON-COMPETITIVE EXHIBITS.

Large Gold Medal.—Messrs. R. Wallace and Co., Colchester, hardy plants; Sir J. Colman, Bart., Gatton Park, orchids; Messrs. Sutton and Sons, Reading, flowers and vegetables.

Gold Medal.—Hobbies, Lim., Dereham, rose pergola and temple; Messrs. Dobbie and Co., Edinburgh, sweet peas; Messrs. Daniels Brothers, Norwich, cut flowers and roses; Messrs. B. R. Cant and Sons, Colchester, roses; Messrs. J. Veitch and Sons, Chelsea, stove and greenhouse plants; Messrs. Fisher, Son, and Sibray, Sheffield, hardy shrubs.

Silver-gilt Medal.—Messrs. A. J. and C. Allen, Norwich, pot roses; King's Acre Nurseries, Lim., Hereford, fruit trees and herbaceous; Messrs. Stuart Low and Co., Enfield, roses, carnations, and orchids; Messrs. H. B. May and Sons, Edmonton, choice ferns; Mr. R. Bolton, Carnforth, sweet peas; Messrs. R. H. Bath, Lim., Wisbech, pæonies and pyrethrums; Messrs. Blackmore and Langdon, Bath, delphiniums.

Silver Medals.—Mr. Engelmann, Saffron Walden, carnations; Messrs. W. Cutbush and Son, Highgate, roses and carnations; Mr. Ellison, West Bromwich, ferns and trained trees; Mr. R. C. Notcutt, Woodbridge, roses and herbaceous; Messrs. A. Dickson and Sons, Belfast, roses; Messrs. Bakers, Wolverhampton, hardy flowers; Messrs. Toogood and Sons, Southampton, sweet peas; Mr. C. W. Breadmore, Winchester, sweet peas; Mr. G. Massey, Spalding, flowers and vegetables; Messrs. Piper, Bayswater, trained box trees; Mr. G. Stark, Great Ryburgh, sweet peas; Messrs. J. K. King and Co., Coggeshall, sweet peas and vegetables; Messrs. W. Fells and Co., Hitchin, sweet peas and herbaceous; Messrs. Young and Co., Cheltenham, carnations; Messrs. Laxton Bros., Bedford, strawberries; Robert Sydenham, Limited, Birmingham, sweet peas; Messrs. W. Artindale and Son, Sheffield, violas, etc.; Messrs. J. Burrell and Co., Cambridge, roses; Messrs. Frank Cant and Co., Colchester, roses; Mr. H. Morse, Norwich, roses.

AWARDS TO NOVELTIES.

Award of Merit.—To Lilium Martagon the Hon. Mrs. Petre, from Colonel Petre; to Begonia Lady Cromer, from Messrs. T. S. Ware; to Begonia Mrs. Peter Blair, from Messrs. Blackmore and Langdon; to Sweet Pea Prince George, from Mr. R. Bolton; to the Newberry, from Messrs. Whitelegge and Page.

ANSWERS TO CORRESPONDENTS.

DISEASED CARNATIONS.—E. B., Aylesbury: We have been waiting for developments in the specimens sent, and now find that there is a slight attack of rust (Puccinia arenariæ), in addition to a weakening of the stems, and an eruption of cells at once suggest stigmonose. Remove the obviously affected portions, and then sponge the plants with a rose-red solution of permanganate of potassium, or spray with a weak Bordeaux mixture. Propagate only from clean, strong stock, and endeavour to improve the stock by obtaining new, healthy plants from a distance.

STREAK IN SWEET PEAS.—J. G. C., Limpsfield: Although the subject of "streak" in sweet peas has received the attention of eminent authorities, a definite and immediate remedy for the trouble seems yet to seek. Highly bred and highly cultivated plants often have to pay heavily to Nature for the additional size and quality of their blooms, and in this sense sweet peas do no doubt suffer in some measure and under certain circumstances from excessive cultivation. "Streak" so far appears to be nearly always accompanied by an attack of eelworm, and to combat eelworm it is necessary to sterilise the soil, and this is no easy matter in the open garden. A free use of lime certainly has a distinctly good effect, and has made it possible to grow sweet peas where they were previously not a success, and a correspondent who had "streak" badly last season and gave his ground a heavy dressing of fresh gas lime last autumn, tells us that the disease is so far conspicuous by its absence among his plants; he further adds that his sweet peas are particularly strong and healthy, and this he attributes to the gas lime, as all other cultural items have been the same as in previous years.

PACKING AND STAGING SWEET PEAS. —B. B., Derby: You will find these matters dealt with in an interesting and practical manner in "Sweet Peas and Their Cultivation," by Mr. C. H. Curtis; this you can obtain from the Gardeners' Magazine Office, 148 and 149, Aldersgate Street, E.C., post free for 1s. 2d.; or in cloth binding, post free, for 1s. 8d.

STAUNTONIA LATIFOLIA. — G. S., Ryde: Another and the more correct name for this plant is Holbœllia latifolia, and sometimes it is labelled H. acuminata. It is a free growing climber, and, doubtless, quite hardy at Ryde, but probably it would flower in a greenhouse, while content only to make growth out of doors. The flowers are green, produced in early spring, and they are not especially attractive, though their fragrance is usually appreciated. Probably your plants grow so freely that they do not find time to flower; if it is possible to do so, confine the roots of one of them by means of slates or bricks under and around it. This check to rampant growth may induce the plant to flower, provided the position is a sunny one. The Holbœllias are natives of Nepaul, and their fruits are eaten in India. Sandy loam and peat make a good rooting medium.

BEGONIA RUST.—J. H., Surrey: The trouble is due to the presence of a tiny mite, examples of which you will be able to find on the backs of "rusted" leaves by means of a lens, or even without its aid if your eyesight is good. We found numbers on the leaves sent, and some in the leafy sheaths around the joints of the stems. The pest is not an easy one to dispose of, but the frequent and regular use of tobacco powder, dusted on by means of one of the puff ball or bellows distributors, will eventually eradicate it.

SULPHUR FUMIGATION. — H. M., Hudd: You can doubtless obtain a fumigator from your nurseryman or sundriesman, with full instructions as to its use. With the grapes almost ripe a general fumigation might cause trouble. Use flowers of sulphur and dust it on the leaves, or sponge all the affected leaves with a sulphur mixture.

BLACK ROT IN CAULIFLOWERS.—F. E. S., Higham: This disease (Pseudomonas campestris) attacks various members of the cabbage family—indeed, all Crucifers are liable to attack. According to the Board of Agriculture, the lower leaves of the plants are usually infected first, the germs entering the substance of the leaf through minute openings (water stomata) situated along the margin, or through wounds caused by the punctures of insects, etc. In cases where the soil is infected the germs may gain an entrance to the plant through broken roots at the time of transplanting. When the bacteria are once inside the leaf they multiply rapidly, and are confined to the veins, from whence they pass down the leaf-stalk into the stem. From the stem they quickly pass into the stalks of other leaves, so that within a short time every leaf is infected. As the bacteria travel along the veins and the vascular bundles of the leaf-stalks and stem a dark-brown or blackish substance is deposited, which causes the veins to show up as a black network; the vascular bundles of the leaf-stalk and the stem also appear as black points or a blackened ring when cut across. The

The combination head of the Pine Spray Syringe

provides for every spraying requirement without the addition or removal of a single fitment. The change from "rose" to "spray" is made by merely turning the syringe, and delivery through either can be directed up or down by bending the adjustable joint. The

PINE SPRAY SYRINGE

can be instantly adapted to the needs of any particular plant, whether the spray required is coarse or the finest or the fine, or whether delivery of the fluid is needed straight, overhead, or underneath. Before you buy a syringe ask your ironmonger or seedsman to write to us for one on approval. The price is 10/6, the size 24in. over all, and 1¼in. diameter. Sole proprietors,

ROBINSON BROTHERS, LTD.,
WEST BROMWICH.

Robinsons'
PINE SPRAY
NON-POISONOUS
INSECTICIDE

In the Destruction of Greenfly

a little Pine Spray goes a long way. A syringe full of 1 part to 80 parts of water solution is enough to spray thoroughly an average bush rose and destroy all greenfly, while regular sprayings afterwards with the same strength wash will keep the tree free from parasites—clean, vigorous, and healthy.

Most seedsmen and ironmongers sell it, but if you have difficulty in obtaining it, send 7d. for large sample tin, to Robinson Brothers, Ltd., West Bromwich.

PINE SPRAY,
NON-POISONOUS — ABSOLUTELY SAFE.

BOULTON & PAUL, LTD., HORTICULTURAL BUILDERS, Norwich.

See our Stand at the Royal Agricultural Society's Show, to be held at Norwich in June.

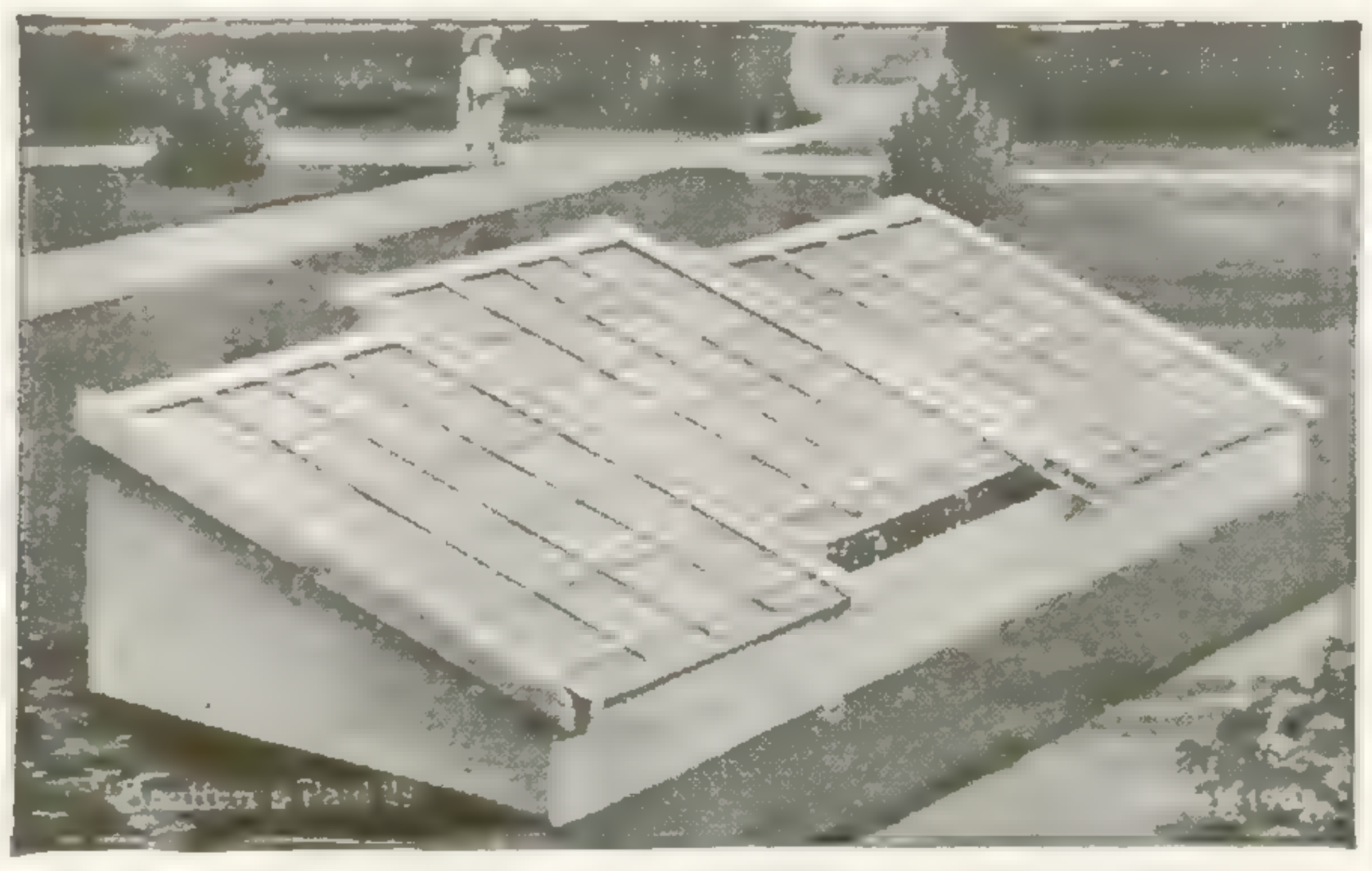
EFFECTIVE, PRACTICAL CONSERVATORIES.

Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of 40/- value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.

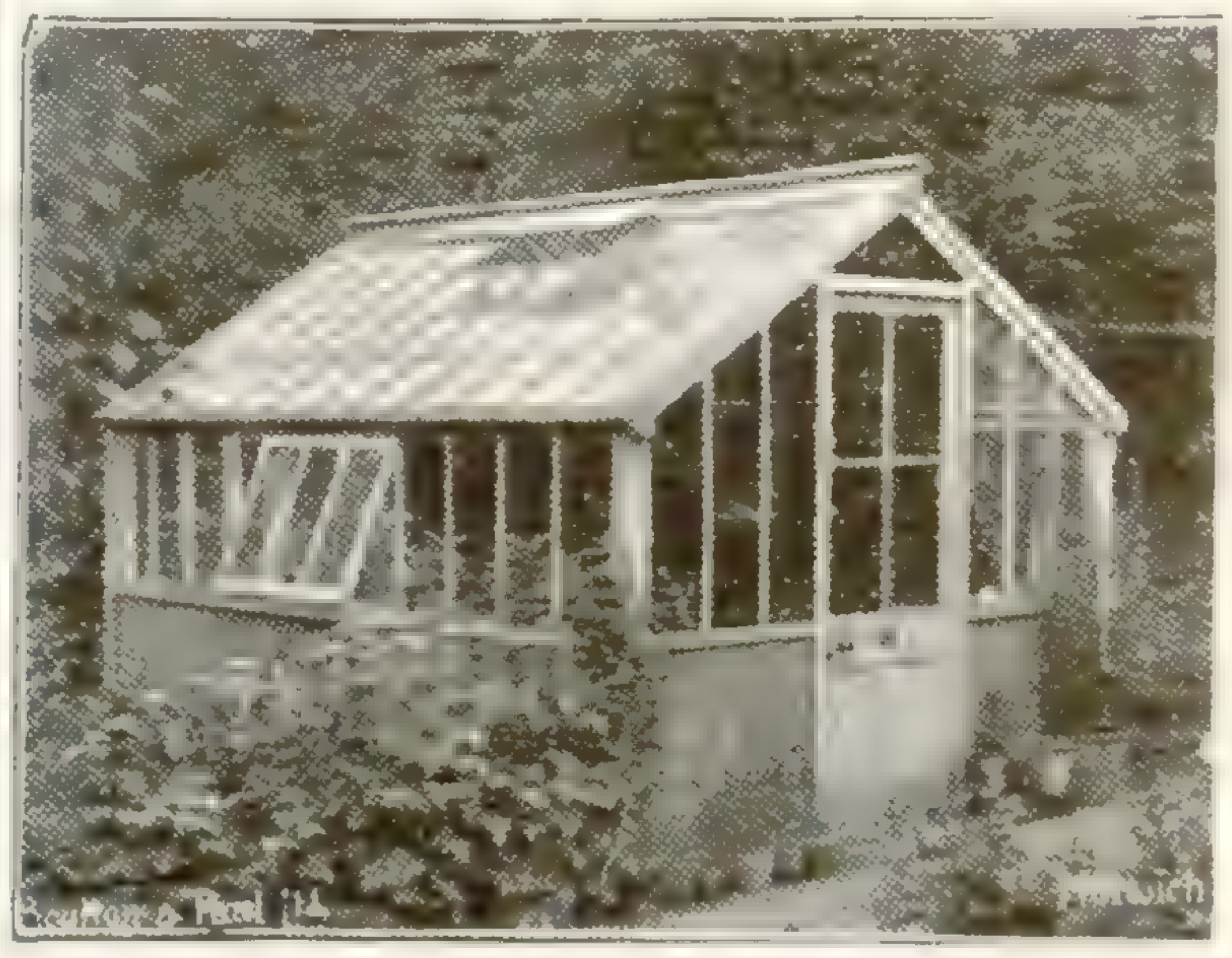


4ft. by 6ft. ... £2 0 0 | 8ft. by 6ft. ... 3 0 0
Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft. Similar to No. 75, with Two Lights... **35/-**

SEND FOR ILLUSTRATED CATALOGUES.

Every part of these Houses is thoroughly well made, painted three coats, GLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.



No. 49A.—Span, 10ft. by 8ft. £11 10 0
No. 47A.—Lean-to, 10ft. by 7ft. £9 10 0

All parts are numbered ready for easy re-erection by any handy man.

APPOINTED BY ROYAL WARRANT, HORTICULTURAL MACHINE MAKERS TO HIS MAJESTY KING GEORGE V.

GREEN'S LAWN MOWERS ARE UNEQUALLED.

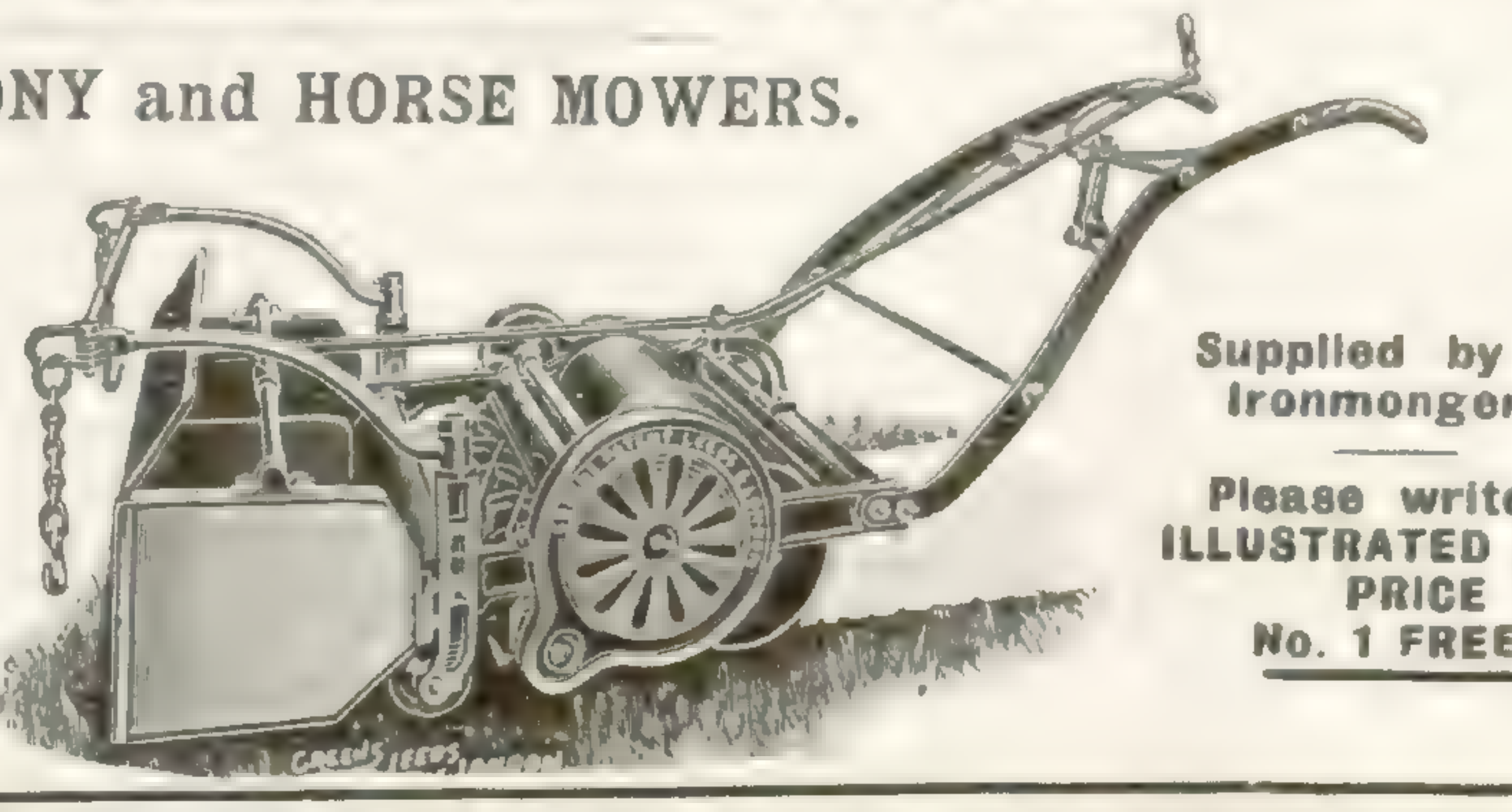
Hundreds of Thousands are in use. Established nearly a Century.

Highest Awards — Royal Botanic Society, Royal Horticultural Society, and numerous others.

"SILENS MESSOR" LAWN MOWER.

Telephone Numbers—
Leeds, 3580.
London, 2022 Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London

PONY and HORSE MOWERS.



Supplied by all Ironmongers.

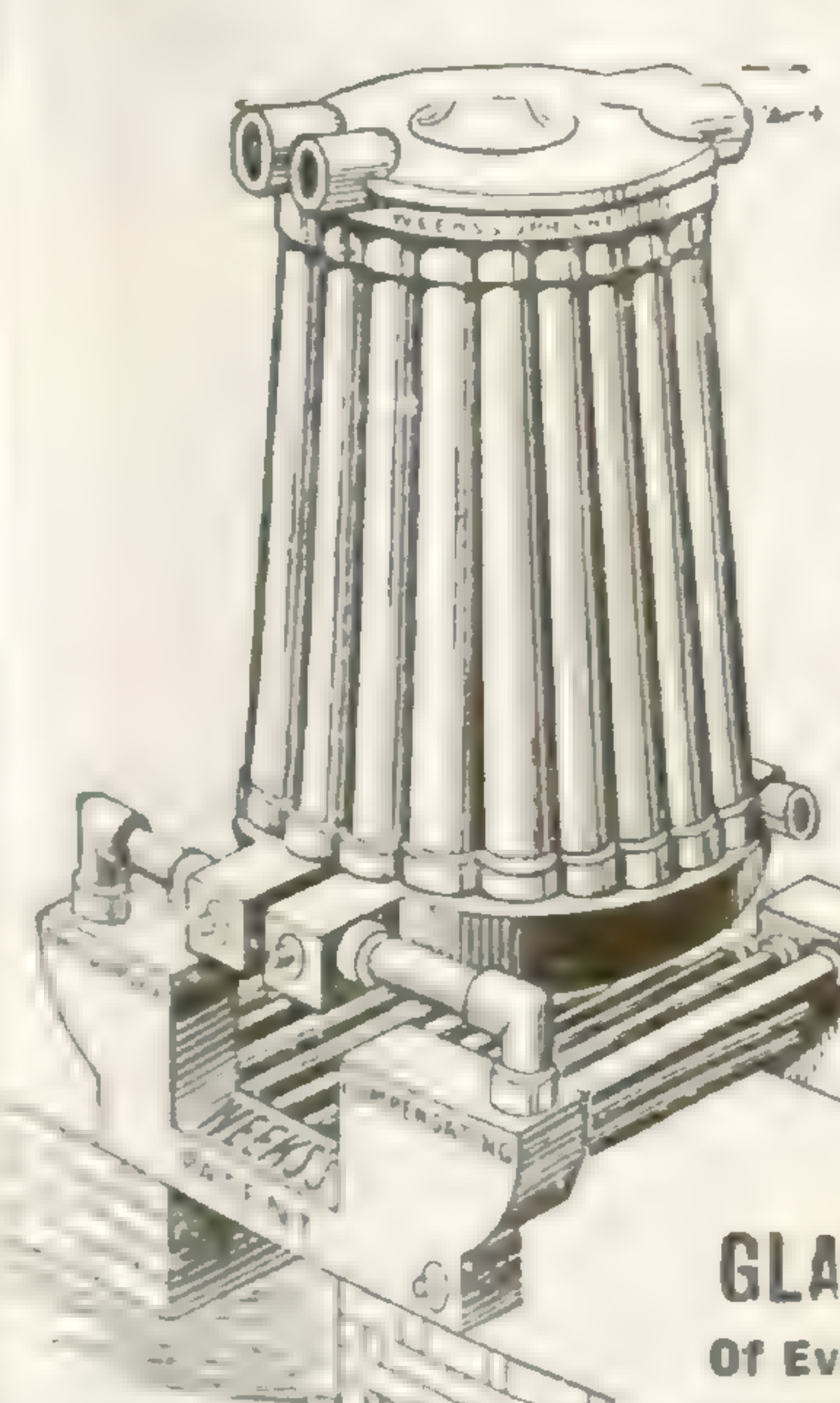
Please write for ILLUSTRATED PRICE LIST No. 1 FREE.

ORDINARY and WATER BALLAST ROLLERS.

MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E.

WEEKS'S BOILERS supplied from stock.



ESTIMATES GIVEN FOR COMPLETE HEATING APPARATUS

GLASSHOUSES.
Of Every Description.

J. WEEKS & CO.,
72, Victoria Street,
WESTMINSTER, S.W.

GARDEN NETTING. — Protect your Strawberries from the ravages of birds. Small mesh, 40 yds. long, 2 yds. wide, 2s.; 40 x 3, 3s.; [illegible] 4, 4s.; 40 x 5 [illegible]; 40 x 6 [illegible]; carriage paid on [illegible] and over. HENRY ROBINSON, Net [illegible] Rye, Sussex.

BEGONIAS.—Started Begonias, 12s.; 16s. [illegible] Gerberas, Adnet's Hybrids. Seed, 1s. 6d.; [illegible] 15s. 20s. doz. Japanese Davallia Ferns, [illegible] Elephants, Rabbits, Squirrels, Monkeys, [illegible] from 2s. ELLISON, 57. West Bromwich.

THE FAVOURITE WEED KILLER.

SANDWITH'S
PREMIER
WEED
KILLER

As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for 6/-; drum, 2/-. 12 galls. for 16/-; drum, 6/-. 20 galls. for 26/8; drum, 10/-. 40 galls. for 50/-; drum, 20/-.

EITHER LIQUID OR POWDER.
Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,
The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

STALKER'S Forest Trees, Fruit Trees Roses, Bulbs, and Seeds Are known all over the world, and cannot be surpassed for hardiness and quality.

Famous for Quality and Cleanliness

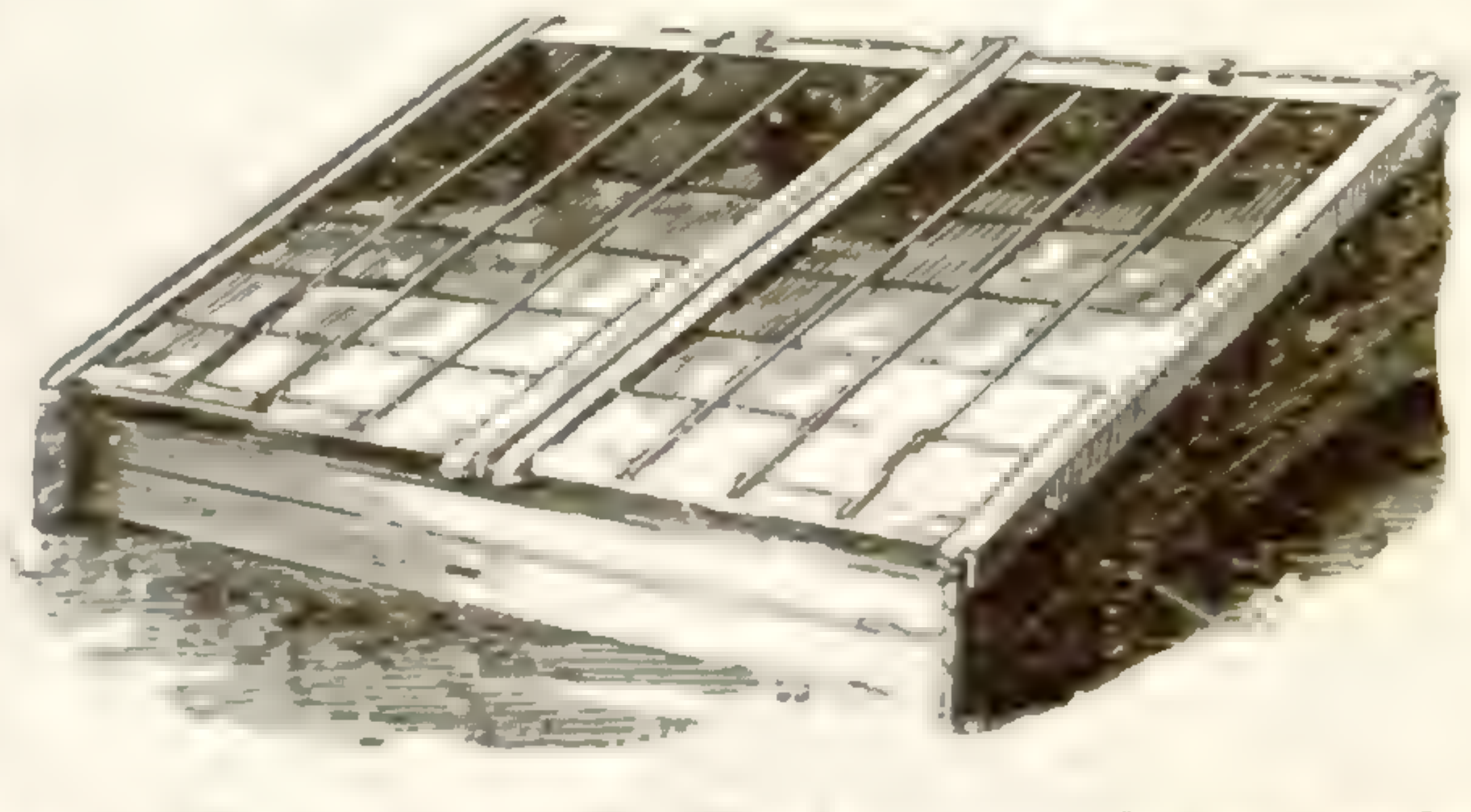
D. STALKER & SON,
Government Contractors,
Catalogues Free. NAIRN. N.B.

ORCHID PEAT.—Hardwood Brown Fibrous, RHODODENDRON and DUST PEAT. SPHAGNUM MOSS.
Apply C. HALL, 1, Worgret, Wareham, Dorset.

PORTABLE

CUCUMBER FRAMES.

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.		£	s.	d.
1 light 4 ft. by 6 ft.	CASH PRICES. CARRIAGE PAID.	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.		5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON, MANCHESTER.

PLEASE MENTION
THE GARDENERS' MAGAZINE
when writing to Advertisers.

presence of this blackening of the veins is a certain indication of the presence of the disease. As remedies and preventives, transplanting should be carefully done, so that the roots are injured as little as possible. Infected plants should neither be buried nor used as food for cattle or pigs, but should be promptly removed and burned, or infection of the land will follow sooner or later; and rotation of crops is advisable, cereals, potatoes, and legumes not being attacked. The following precautionary measure may also be suggested. Seed can be disinfected before sowing by soaking it for fifteen minutes in a solution consisting of one part of corrosive sublimate in 1,000 parts of water, or in a solution of 1lb. of formalin in 30 gallons of water. It is hardly to be expected that this treatment will prevent either leaf or root infection in infected soils, but it may be safely relied upon to prevent all danger from infected seed. It will not injure the germinating power of the seed.

LAYERING CARNATIONS.—P. T., Cambridge: The earlier you can layer your carnations now the better; we have an article in type on this subject.

NAMES OF PLANTS.

G. G., Chalfont St. Giles.—Orchis maculata.

E. C. C. D., no address.—Tellima grandiflora.

A. J. H., no address.—1, Bloomeria aurea; 2, Alchemilla vulgaris; 3, Geranium ibericum.

W. G. J., Ulverston.—1, Phyllanthus (or Reidia) glaucescens; 2, Cypripedium Goweri-anum.

G. S., Ryde.—1, Limnanthes Douglasi; 2, Sedum rupestris; 3, Alchemilla alpina; 4, Salix caprea.

M. E. K., Portland.—1, Statice Bonduelli; 2, Podophyllum peltatum; 3, Hydrocotyle asiatica; 4, Juniperus virginiana; 5, Buphthalmum cordifolium; 6, Butomus umbellatus.

W. C. B., Doncaster.—The broad-leaved saxifrage is S. Willkomiana, and the one with more divided leafage is S. Wallacei; the fine-leaved plant is Adonis vernalis, and the flowering specimen is Dracocephalum peregrinum.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above sea-level, 150 feet.

DATE. 1911. JUNE 18 TO JUNE 24.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
June 18—Sunday	9 48	60	57	67	55
,, 19—Monday	1 0	58	57	60	54
,, 20—Tuesday......	9 30	59	56	65	51
,, 21—Wednesday..	3 0	61	55	66	55
,, 22—Thursday....	—	58	56	62	52
,, 23—Friday........	1 12	61	58	64	56
,, 24—Saturday.....	7 36	53	52	64	52
Means	(total) 32 6	58	55	64	53

DATE. 1911. JUNE 18 TO JUNE 24.	RAIN.	TEMPERATURE OF THE SOIL AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg.
June 18—Sunday	·07	62	60	57	48
,, 19—Monday	·28	62	60	58	47
,, 20—Tuesday......	trace	60	59	58	46
,, 21—Wednesday..	—	62	60	58	49
,, 22—Thursday	·04	61	60	57	48
,, 23—Friday	·68	60	59	58	52
,, 24—Saturday	·11	60	59	58	52
Means ...	(total) 1 18	61	59	57	48

MARKETS.

◆

Fruits.

A steady business prevails, and cherries, red currants, and strawberries meet a brisk demand.

		s.	d.		s.	d.
Apples, Australian	per case	8	0	to	13	0
,, Tasmanian	per case	8	0		13	0
Apricots, French	per box	0	9		1	4
Bananas	per bun.	4	0		10	6
Cherries, French	per ½-sieve	3	0		6	0
,, English	per ½-sieve	3	6		7	0
Cranberries	per case	9	0		10	6
Currants, red	per flat	4	0		5	0
Figs	per doz.	1	0		3	0
Gooseberries	per ½-sieve	3	0		4	0
Grapes, English	per lb.	1	0		4	0
,, Belgian	per lb.	0	6		1	0
Lemons	per case	9	0		25	0
Melons	each	1	0		2	6
Nectarines	per doz.	3	0		20	0
Oranges, Denia	per case	12	0		30	0
,, Mercia	per case	16	0		22	0
,, Naples	per case	8	0		10	6
Peaches	per doz.	6	0		24	0
Pears, Australian	per case	10	0		21	0
Pineapples	each	2	0		5	0
Strawberries	per peck	1	6		2	6
,,	per basket	0	9		1	6

Vegetables.

An excellent demand continues, and there are ample supplies of good quality.

		s.	d.		s.	d.
Artichokes, Globe	per doz.	2	0	to	4	0
Asparagus	per bundle	0	8		10	0
Beans, dwarf	per lb.	0	4		0	8
Beans, broad	per ½-sieve	1	6		2	0
Beet	per bush.	2	0		3	0
Cabbage	per tally	2	6		5	0
Carrots, new	per pad	2	0		2	6
Cauliflowers	per doz.	2	0		2	6
Cucumbers	per flat	4	0		4	6
Endive	per doz.	0	9		1	6
Horseradish	per doz bun.	8	0		12	0
Lettuce	per doz.	0	6		1	3
Marrows	per doz.	2	0		6	0
Mint	per doz. bun.	1	0		2	0
Mushrooms	per doz. lb.	6	0		12	0
Onions, Egyptian	per case	4	6		6	6
,, Spanish	per case	5	0		6	6
Parsley	per ½-sieve	1	0		1	3
Peas	per bag	5	0		6	6
Radishes	per doz. bun.	0	4		1	0
Rubarb	per doz. bun.	0	10		1	6
Spinach	per bush.	1	0		2	0
Tomatoes	per doz. lb.	2	6		5	0
Turnips	per doz. bun.	3	0		6	0
Watercress	per doz. bun.	0	6		0	6½

FORTHCOMING ENGAGEMENTS.

SATURDAY, July 1.—Sutton Rose Show.
Northwood Rose and Sweet Pea Show.
TUESDAY, July 4.—Royal Horticultural Society's Great Show at Olympia, Kensington; judging commences at 10 a.m.; committees meet at 10.30 a.m.; exhibition opens to Fellows at 12 noon; luncheon to the committees, etc., at 1 o'clock; exhibition opens to the public at 2 p.m.; show continues for three days.
Gloucester Rose and Sweet Pea Show.
Scottish Horticultural Association.
WEDNESDAY, July 5.—Hanley Floral Fête; two days.
Dartford Horticultural Society.
Ealing Horticultural Society.
THURSDAY, July 6.—Newmarket Horticultural Society.
FRIDAY, July 7.—National Rose Society's Metropolitan Exhibition in the Royal Botanic Gardens, Regent's Park.
SATURDAY, July 8.—Chingford Horticultural Society.

CONTENTS.

PAGE
Answers to Correspondents 488
Dry Weather Jottings 482
Galega officinalis compacta 478
Good Garden Features 480
Gourds in the Garden 475
Hardy Plant Chat 476
Moisture in Vineries 483
New Plants, etc. 477
Notes of the Week 473
Roses at Kew 476
Sweet Pea Notes 479
The Decorative Value of Dry Walls 479
The Hardy Aristolochias 483
The Royal Show (Norwich) 485
Thinning Hardy Fruits 477
Work for the Week 484

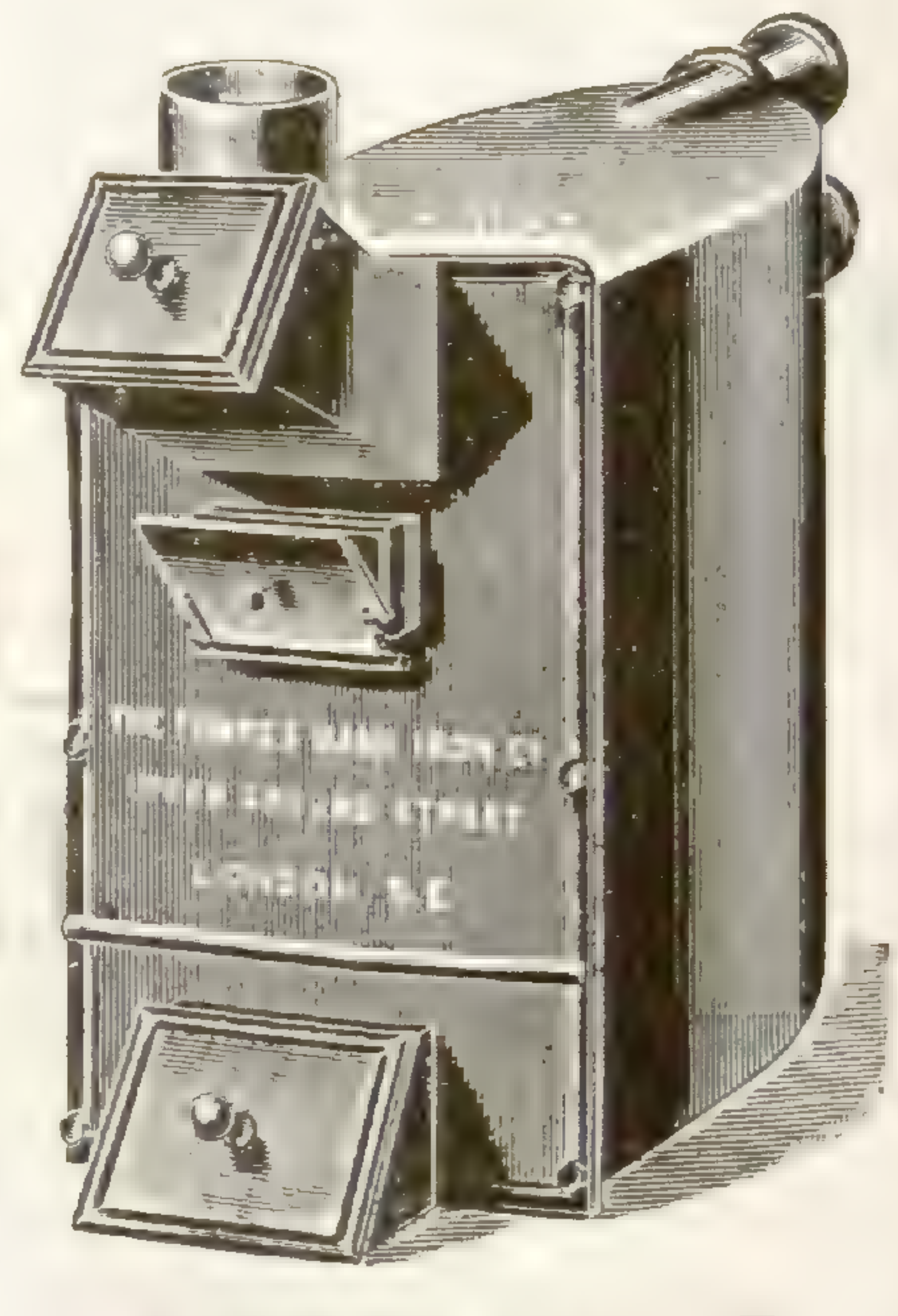
ILLUSTRATIONS.

Portrait of Mr. Will Tayler, 473; Mr. Gibson's First Prize Display of Ripe Fruit at Norwich, 475; Delphinium Primrose Queen, 477; Odontoglossum Europa, 478; Androsace sarmentosa growing on a dry wall, 479; Part of the Dry Wall Garden at Walmsgate Hall, 480; Alpine Pinks established on a dry wall, 481; A formally-trained specimen of the Dutchman's Pipe (Aristolochia sipho), 483; Messrs. Wallace and Co.'s Gold Medal Hardy Flower Garden at Norwich, 486; Mr. G. Davison's First-prize Collection of Hardy Flowers at Norwich, 487.

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.
The best and the cheapest.
Write for LISTS.
Quotations given for ANY Quantity, Carriage Free.
Appointed by Royal Warrant
Makers to His Majesty the late King.
Largest Manufacturers in the World.
Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

'Phone: Hop. 763.
When next a Small Boiler you require
TRY
THE HEEL



NONE TO BEAT IT.
THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.
4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

SMITH'S WEED KILLER
is absolutely "PERFECT."
4 Tins of Powder or
4 Gallons of Liquid
to make 100 Gallons.
6/6 Carriage Paid.
MARK SMITH, Ld. Louth, Lincolnshire.

When answering Advertisements please mention "Gardeners' Magazine."

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out. Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Chiston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working); life experience in all branches, land and stock if required; age 48; married, two children, age 6 and 10 years; excellent character. WILLIAM MARKELL, School House, Lovel Road, Winkfield, Berks.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working, where two or more are kept); good all round; 14 years as head in large and well-kept establishments; married; age 40; excellent references. E. MAYLETT, Park Hall, Salford Priors, Evesham.

J. F. G. BANNATYNE, Esq., Haldon, Exeter, will be pleased to recommend H. NICHOLSON as GARDENER (Head Working); thoroughly practical and reliable; life experience in all branches, 3½ years here; age 31. Address, NICHOLSON, Haldon Gardens, Exeter, Devon.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 31; married when suited; excellent references. Address, Closes Hall, Gisburn, Clitheroe.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushroom, ridge or flat; Kitchen, Lawn, Flower Garden. Special Prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

SITUATION WANTED as GARDENER (Head); eleven years in present place as Head of six; three years previous Head of eight; good all-round knowledge gained in first-class places; excellent testimonials, knowledge of landscape, poultry, bees, etc. WM. ATKIN, Haul-Fre Gardens, Llandudno.

GARDENER (Head Working). — Mr. GOULD, Shernfold Park, Frant, Sussex, highly recommends his Foreman, A. DAY, as above; thorough practical experience Inside and Out; excellent references; age 30.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F, OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (Single-handed, or with help) seeks SITUATION; 14 years' experience; good references; age 27; married, no family. BISHOP, Stockwell Hall, Billericay, Essex. (No circulars.)

GARDENER (Single-handed), seeks situation; 16 years' experience in flowers, fruit, vegetables; excellent references; age 30; single; disengaged.—F. HYDER, 7, Stamford Road, Watford, Herts.

GARDENER (Single-handed or Second); good reference; age [illegible]; married when suited. F. EAST, Kent Cottage, Chiswick House, Chiswick, S.W.

GARDENER (Single-handed or otherwise); over 2 years as Foreman in present situation; experienced Inside and Out; can be highly recommended by present employer. Apply W. BICKER, or Head Gardener, The Gardens, Avenue House, Church End, Finchley. Eastern Counties preferred.

GARDENER (Single-handed or otherwise); experienced Inside and Out; good references; 10 years previous; age 29. R. R., Crouch Cottage, Cranham, Upminster, Essex.

GENTLEMAN recommends his Single-handed Gardener, life experience, willing and obliging; good references; age 27; married, if suited. —A. TICKNER, 10, Gladstone Road, Ashtead, Surrey.

GARDENER (Under); private establishment or Grower Market Nursery; 14 years' experience, Inside and Out, private and nursery; good references. LEWINGTON, 169, High Street, Hampton Hill, S.W.

GARDENER (Under) seeks SITUATION where 2 or more are kept, or as First Journeyman in good place; age 21; good references. W. HART, 68, Northcote Road, New Malden, Surrey.

GARDENER or GROOM-GARDENER; 9 years' experience; ride or drive; age 34; good references. Apply F. FAUTLY, Little Barnetts, Leigh, near Tonbridge, Kent.

JOURNEYMAN, under Foreman, in plant or fruit houses; age 20; 5 years' experience; Bothy preferred. W. INGRAM, Montreal Gardens, Sevenoaks, Kent

SITUATION required as Nursery Hand or General Man, on small Hardy Nursery; well up in all branches of work, shrubs, roses, fruits; some knowledge of herbaceous. BEECH, 13, Primrose Hill, Chelmsford, Essex.

SITUATION as KITCHEN GARDENER and handyman; good alto chorister; married, age 25. F. AUGER, 22, Elm Grove, Bishop's Stortford, Herts.

YOUNG MAN seeks SITUATION in Garden (Inside and Out); age 18; good character. W. RANDALL, Buckland Common, near Tring.

YOUNG MAN seeks SIT. (30) to help in the Garden; not much exp., but willing to learn and make himself useful; good refs.; would start at £1 per week. Letters to J. E. J. VEAR, 8, Cromwell Road, Up. Holloway, N.

YOUNG MAN (19½) seeks SITUATION, Inside (or Inside and Out); excellent character; willing worker; Bothy preferred. V. MEPHAM, 3, High Path, Merrow, nr. Guildford, Surrey.

TO FLORISTS and FRUITERERS.—Disengaged MANAGER requires situation; seven years' experience; good salesman, window dresser, and maker-up; excellent references. CUSSONS, care of Rennison, Low Bondend, Knaresborough.

Situations Vacant.

HEAD GARDENER (Working) wanted at end of July or in August, two others kept, and extra hands at times; 11 miles from London. State wages, age, experience etc., at least 3 years' character from last place required. A. B. C., c/o Clarks, 49, Gt. Portland Street, W.

WANTED, Grower of Fruit Trees; also good grafter of roses, and able to superintend growing roses under glass; wages, 25s. Apply GIBSON and CO., Leeming Bar, Bedale.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For JULY 8, 1911.

Please Repeat my Advertisement.

Name..

Address..

....

Date........................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue

W. RICHARDSON & CO.,

MANUFACTURERS OF ALL KINDS OF

HORTICULTURAL BUILDINGS. Also HEATING ENGINEERS.

Recent Contracts for Horticultural Buildings and Heating include the following :—

H. M. Commissioners of Public Works, Royal Hospital, Dublin.
H. M. Office of Works, New Head Post Office, Newcastle-on-Tyne.
His Grace The Duke of Grafton, Wakefield Lodge, Stoney Stratford.
The Rt. Hon. The Earl of Donoughmore, Knocklofty, Clonmel, Ireland.
The Rt. Hon. The Earl of Durham, Lambton Castle, Durham.
The Rt. Hon. The Earl of Listowel, Convamore, Ballyhooly, Co. Cork.
The Rt. Hon. The Earl of Scarborough, Lumley Castle, Co. Durham.
The Rt. Hon. Lord Barnard, Raby Castle, Barnard Castle.
The Rt. Hon. Lord Glanusk, Glanusk Park, Crickhowell.
The Rt. Hon. Jonathan Hogg, Stratford, Rathgar, Co. Dublin.
The Rt. Hon. Lord Ravensworth, Eslington Park, Whittingham, [Northumberland.
W. A. Whitehead, Esq., Langley, Baildon, Yorkshire.
The Hon. Robert James, St Nicholas, Richmond, Yorks.
His Excellency Monsieur Tzokow, 21, Queen's Gate, London, S.W.
Lady Palmer, Grinkle Park, Loftus-in-Cleveland.
Sir William Eden, Bart., Windlesham Hall, Ferryhill.
Sir Lindsay Wood, Bart., The Hermitage, Chester-le-Street.
Sir Reginald Graham, Bart., Norton Conyers, Melmerby.
The Royal Horticultural Society, Wisley, Ripley, Surrey.
Colonel Napier Clavering, Axwell Park, Northumberland.
Colonel Scott, Penmaenucha, Dolgelly.
Major Stobart, Spennithorne House, Spennithorne, Leyburn.
Captain Freeman, Coulby Hall, Ormesby.
Captain Wainman, Otterington Hall, Northallerton.
Mrs. Lloyd Jones, Vronhaul, Llandinam.
Hy. Mitcheson, Esq., Baxterley, Atherstone.
W. Warde Aldam, Esq., Frickley Hall, Doncaster.
E. G. Wheler, Esq., Claverdon Leys, Warwick.
P. H. Ashworth, Esq., Horsley Hall, Gresford.
The Rev. James Farmer, Lucan House, Ripon.
Mrs. Jones, Glandenys, Lampeter.
R. A. England, Esq., Englethwaite Hall, near Carlisle.
The Rev. W. Ingham, The Vicarage, Old Malton, Yorkshire.
James Maunsell, Esq., Patrickswell, Co. Limerick, Ireland.
The Rev. J. Murray Dixon, Swithland Rectory, near Loughborough.
David Davies, Esq., M.P., Llandinam, Montgomeryshire.
David Richardson, Esq., Wheelbirks, Stocksfield-on-Tyne.
C. Lingford, Esq., Lancelands, Cotherstone.
E. W. Parker, Esq., Skirwith Abbey, Penrith.
C. L. B. Robinson, Esq., Brettanby Manor, near Darlington.
G. P. Roddam, Esq., Newtown, Stanhope.
H. Costobadie, Esq., Overdale, Mottram, Manchester.
I. J. Dewhurst, Esq., Whinmoor Lodge, Seacroft, Leeds.
J. Rossiter Hoyle, Esq., Grange Cliffe, Ecclesall, Sheffield.
W. Brown, Esq., Larne, Co. Antrim.
Mrs. Powell Price, Morganwg, Brecon.
W. J. Sharp, Esq., Bleasdale House, Silverdale, Carnforth.
F. Hartley, Esq., May Lodge, Bridlington.
J. A. Forster, Esq., Fernlands, Chertsey, Surrey.
W. Robson Hindmarsh, Esq., Ulleskelf.
J. W. Richardson Esq., Sowerby Grange Thirsk.
Hugh C. Fairfax Cholmeley, Esq., Brandsby Hall, Easingwold.
Harrison Benn, Esq., Holcombe Hall, Dawlish.
Miss Watt, Spott House Dunbar.
W. Loudin MacNeill, Esq., Shennanton, Kirkcowan, Wigtownshire.
W. H. St Quintin, Esq., Scampston Hall, Rillington, Yorks.
St. Mary's Convent, Chiswick.
The John Copeland Hospital, Gainsborough.
Ackworth School, Pontefract.
Shaftesbury Theatre, Shaftesbury Avenue, London.
Durham Cathedral, Durham.

LONDON OFFICE :—Belgravia Chambers, Victoria Street, S.W.

TELEGRAMS { "Richardson," Darlington. / "Horticraft," London. **NATIONAL TELEPHONE** } 17 Darlington.

LOWEST PRICES FOR GARDEN FRAMES AND WOOD LATH BLINDS.

PLANS and ESTIMATES PREPARED FREE of COST.

Representatives sent to any part of the Kingdom to advise and take particulars.

DARLINGTON.

CLAY'S FERTILIZER

CROWNS THE CORONATION YEAR WITH FLORAL TROPHIES.

CLAY'S LONDON FERTILIZER
TRADE MARK.

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags** :—7 lbs., **2/6** ; 14 lbs., **4/6** ; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK, AS AT SIDE.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. Fourth Editio (Second Reprint). 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for th amount direct from the Publishers as under :

CLAY & SON, Stratford, London, E.

HANDS SOILED

By **Fruit Stains**, or after **GARDENING**, **Golfing**, **Cycling**, etc., are thoroughly

CLEANSED and made **soft and velvety** by

A Perfumed Toilet Soap

PUMICE STONE O,B,& C's SOAP

A BOON TO LADIES.

Beautiful, Soft, White Hands ensured.

Of Chemists, price **6d.**, or post free **6** stamps.

OSBORNE, BAUER & CHEESEMAN
19, Golden Square, Regent Street, London.

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

Extracts from 35th annual collection of reports :—
NATIVE GUANO for POTATOES, VEGETABLES, etc

A. J. Beard, Erdington : "Potatoes, splendid, free from disease. Best I ever had."—H. Chester, Nantwich : "Best onion manure I ever used. Grand for onion fly."

NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc

J. Cant, Ipswich : "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. Frampton, Titchfield : "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED**, 29, New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted.

FOR ROSE MILDEW
use
V2K FLUID
THE BEST REMEDY FOR THIS PERSISTENT PEST.
Does not discolour the foliage.

OF AGENTS EVERYWHERE.

Sole Mfrs., Willm. Cooper & Nephews, Berkhamsted.

BOTTLING FRUIT.

Patent Apparatus Complete **5/6**

Efficient, Reliable, Simple, Easily Operated.
WICKHAM and Co., Dept. M, Ware, Herts.

City Press, 148 & 149, Aldersgate St., London, E.C., and Printed and Published by W. H. & L. Collingridge, sold by all Newsagents, and at all Railway Bookstalls.

GRAND ILLUSTRATED SHOW NUMBER:—

Olympia—Festival of Empire Rose Show—Richmond—Southampton.

THE
GARDENERS'
MAGAZINE.

No. 3,010. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, JULY 8, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S SEEDS FOR JULY SOWING.—Finest selected strains of Aquilegias, Begonias, Campanulas, Carnations, Delphiniums, Forget-me-nots, Hollyhocks, Lupins, Pansies, Hardy Primulas, Snapdragons, Stocks, etc. See Barr's Seed Guide, free. BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

DOUGLAS'S PERPETUAL CARNATIONS (British and American). Magnificent Stock of robust plants, now ready; all in perfect health, and guaranteed to give satisfaction. From 9s. per dozen. J. DOUGLAS, The Carnation Specialist, Edenside, Gt. Bookham, Surrey.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, S.W., would advise anyone who is considering the advisability of erecting Greenhouses to get plans and estimates for them now. The best advice with regard to building, all plans, estimates, and every attention can be secured by a postcard, telephone message (201 Western), letter, or wire to "Gray, Chelsea, London."

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

JAMES SENDALL and CO., Cambridge; Conservatories, Vineries, Garden Frames; Heating Engineers. Surveys made, and Plans prepared to suit any position. Illustrated List free. Telegrams: "Sendall, Cambridge." 'Phone, 511.

GREENHOUSES and GARDEN FURNITURE. — Distinctive Designs and Finished Workmanship. Write NOW for illustrated Catalogue. CARTER and HOWARD, Fife House, Kingston-on-Thames.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.
H. BURNETT,
Carnation Specialist, Guernsey.

PERENNIALS, UNIQUE COLLECTION,
including
ALPINES AND AQUATICS.
Also RARER SHRUBS, HIMALAYAN RHODODENDRONS, and Others.
Write for Catalogue. G. REUTHE, Keston, Kent.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-work, showing screens, wall panels, window surrounds, arches, arbors, etc., post free. BOULTON and PAUL, Ltd., Norwich.

FRUIT SAVED.—GARDEN NETTING as supplied by us to the Royal Gardens. SMALL MESH, satisfaction or cash returned, 100 by 1 yd., 3s. 3d. Any length and width supplied. Cheaper quality, 50 yds. 1s.
POTTER BROS.,
Dept. M, Net Makers, Shrewsbury. Est. 1855.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

SOW NOW.
WEBBS' EMPEROR CABBAGE.
BRITAIN'S GREAT CABBAGE.
Earliest and Best in Cultivation.
Remarkably free from any tendency to bolt.
6d. and 1s. per packet; 1s. 6d. per ounce, post free.
Mr. B. M'Evoy, Gardener to W. M'Cartney, Esq., writes: "I had a plot of 400 plants, and not one of them bolted. The hearts are of the finest size and shape I have ever grown."
Webbs' Favourite, 1s. per ounce.
Early Offenham, 8d. per ounce.
Ellam's Early, 10d. per ounce.

WEBB AND SONS, The King's Seedsmen,
WORDSLEY, STOURBRIDGE.

BUNYARD'S CATALOGUES
Free on Application.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

KENT STRAWBERRY PLANTS
NEW CATALOGUE READY.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

LAXTON'S STRAWBERRIES.—Fine early pot plants, for forcing, of Royal Sovereign and other varieties, 15s. 100. For new varieties see our catalogue, gratis on application.
LAXTON BROS., Bedford.

RUSTIC SUMMER HOUSES, trellis-work, Fencing, Pergolas, Arches, Seats, Bridges, Log Cabins, Loggias, etc. Send for our new LOG CABIN and RUSTIC CATALOGUE (just published), sent post free. BOULTON and PAUL, Ltd., Norwich.

CLAY'S MANURES, CRUSHED BONES
(See page iv.)
CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

POULTRY AND KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

GARDEN NETTING (best tanned only).—25 yds. x 8 yds.; 50 x 4 yds.; 100 x 2 yds., 8s. each. 50 x 2 yds.; 25 x 4 yds.; 100 x 1 yd., 4s. each. All sizes, large or small, at 1s. 20 sq. yds. Quality guaranteed.—EVANS, 14, Beresford Rd., Lowestoft.

CONSERVATORIES AND WINTER GARDENS, Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue free.—BOULTON and PAUL, Lim., Norwich. See our Stand at the Royal Agricultural Society's Show to be held at Norwich in June.

GARDEN ROLLERS, double cylinders, solid ends, rounded edges 14in. by 14in., 1¾cwts., 24s. 6d.; 16in. by 16in., 2cwts., 26s.; 20in. by 20in., 3cwts., 36s.; 24in. by 24in., 4½cwts., 50s. each; carriage paid any station in Great Britain. Lists free. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

SUTTON'S IMPROVED DELPHINIUM hybridum. Mixed colours.
Per packet, 1s., post free.

SUTTON'S LIGHT BLUE DELPHINIUM hybridum. Large-flowered. Comes quite true from seed.
Per packet, 1s. 6d., post free.

LUPINUS POLYPHYLLUS, PINK.
Per packet, 1s. and 1s. 6d., post free.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
From ———, Esq., Guildford.
"I may say that your Illustrated Catalogue is without doubt the finest book of the sort I have had the pleasure of seeing."

KELWAY'S LOVELY NEW DELPHINIUMS have this week been awarded ANOTHER Gold Medal, for Delphiniums alone.
Nearly all the sorts of Delphiniums on exhibition stands are varieties which ORIGINATED in Kelway's Nurseries.
A splendid collection of Kelway's choice named kinds, 34s. per dozen, carriage, etc., free, for remittance with order.

KELWAY AND SON, The Royal Horticulturists, LANGPORT.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page iii.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

CERTAIN SUCCESS WITH AUTUMN-FLOWERING BULBS, such as Colchicums, Autumn-flowering Crocuses, etc., etc., is assured if you plant Bees' Guarantested (guaranteed and tested) Bulbs in August. This you can readily do if you write NOW for the special list of bulbs for early forcing and autumn flowering.—BEES, LTD, 175E, Liverpool.

THE BOURNE DAFFODILS have gained the HIGHEST AWARDS wherever Exhibited. Send for my Illustrated and descriptive Catalogue of FIRST QUALITY BULBS at MODERATE PRICES.
Post Free from
CHRISTOPHER BOURNE,
The Daffodil Specialist, Simpson,
Bletchley.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.
XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.
XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N.S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

BEDDING PLANTS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Chrysanthemums, Dahlias and Summer-Bedding Plants.

CARNATIONS.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS.
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

ROSES.

R. H. BATH, Ltd.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

W. ARTINDALE & SON

Nurserymen, **SHEFFIELD**
MAKERS and DESIGNERS
: of ALPINE GARDENS :

Old English Flower Borders.
Experts sent to any part.
Enquiries invited.

Our instructive and comprehensive list of Beautiful Hardy Plants sent on application. Over 200 pages of valuable information.

Primulas! Primulas! Primulas!

41st Year of Distribution.
OUR WELL KNOWN MAGNIFICENT STRAIN,
1/6 doz.; **2/6** 25; **10/-** 100. Package and Carriage Free.
Primula Obconica Gigantea Cineraria
(Large-flowered) and **Stellata** at same prices.
JOHN STEVENS & SON, COVENTRY.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,

71, Newman Street,
LONDON, W., and BROXBOURNE.
Our Work has stood the test of time.

MERRYWEATHER'S

614 PUMP

IS THE

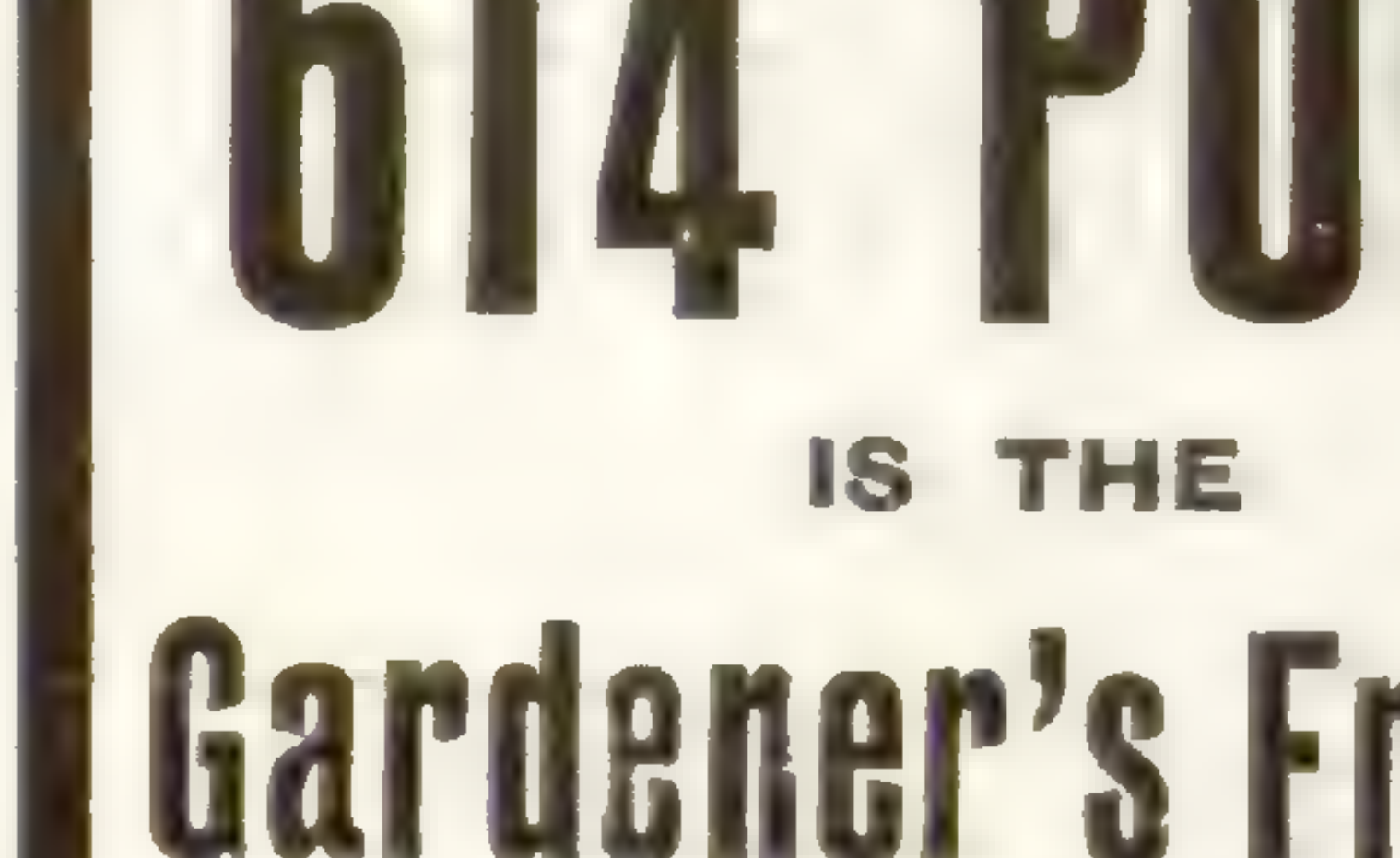
Gardener's Friend.

Easy to Work.
Simplicity Itself.

Write or Call—

63, Long Acre, LONDON, W.C.

WHARFEDALE. 5 ft. long.



In Best Redwood, painted two coats. White.
£1 15 0
Delivered any station.
Full Catalogue on application.

PETER PATRICK & SON, Otley, Yorks.

ORCHIDS

EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.** Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.
Telephone:—Enfield, No. 1 and 2.
STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

ORCHIDS, ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.
STOVE AND GREENHOUSE PLANTS OF ALL KINDS.
PLEASE WRITE FOR LIST.
JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

AMERICAN TREE CARNATIONS

The Newest and Best Varieties.
Strong, healthy and well-rooted plants only supplied.
Catalogues free.
E. J. WOOTTEN, Fairoak, EASTLEIGH.

CHARLES TURNER'S

Descriptive and Priced CATALOGUES of
ROSES, CARNATIONS, and STRAWBERRIES
are Now Ready, and can be had free on application.
The Royal Nurseries, SLOUGH.

CHARGES FOR ADVERTISEMENTS IN

THE GARDENERS' MAGAZINE.

	£	s.	d.
Five Lines and under	£0	2	6
Per Line beyond	0	0	6
" Inch	0	6	0
" Half Column	1	10	0
" Column	3	0	0
" Page	9	0	0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— & Co.

Telephone Numbers:
Editorial and Printing Depts. .. ... 831 Holborn.
Advertising and Publishing Depts. ... 2140 Holborn.

Offices: 148 and 149, Aldersgate Street, London.

ESSEX.—26 miles out, six-roomed house (brick), 2½ acres, 2 Hothouses, completely fitted (each 150 x 20), 300 fruit trees, 2 wells, reservoir. Freehold; bargain, £550. Easy terms, or part mortgage. J. ALLEN, 34, New Bridge Street, London, E.C.

HAMPTON COURT HOUSE, HAMPTON COURT, MIDDLESEX.
By order of Executors.

TO BE LET, on favourable terms, the whole, or part, of the Gardens and extensive Glasshouses and Vineries, fully cropped, Gardeners' Sleeping Cabins, etc., etc.

Apply to Messrs. LEE and PEMBERTONS, 44, Lincoln's Inn Fields, London, for terms and permission to inspect.

THOMSON'S Celebrated
VINE, PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES
UNRIVALLED FOR ALL PURPOSES
SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE.

GARDEN NETTING.

I do not require payment until you have seen and approved of the netting. **Others may try to copy me, but this Netting is the best stout small mesh, as supplied BY ME to the ROYAL GARDENS.** Will not rot. Can be sent on approval, 30 sq. yds, for **1s.**, any length or width made. Orders over **5s.** car. paid. List and Samples free. I can also supply commoner Netting at 50 sq. yds. for **1s.** Only Address—

H. J. GASSON, The Net Works, RYE.

Hundreds of Testimonials. Established 126 years.

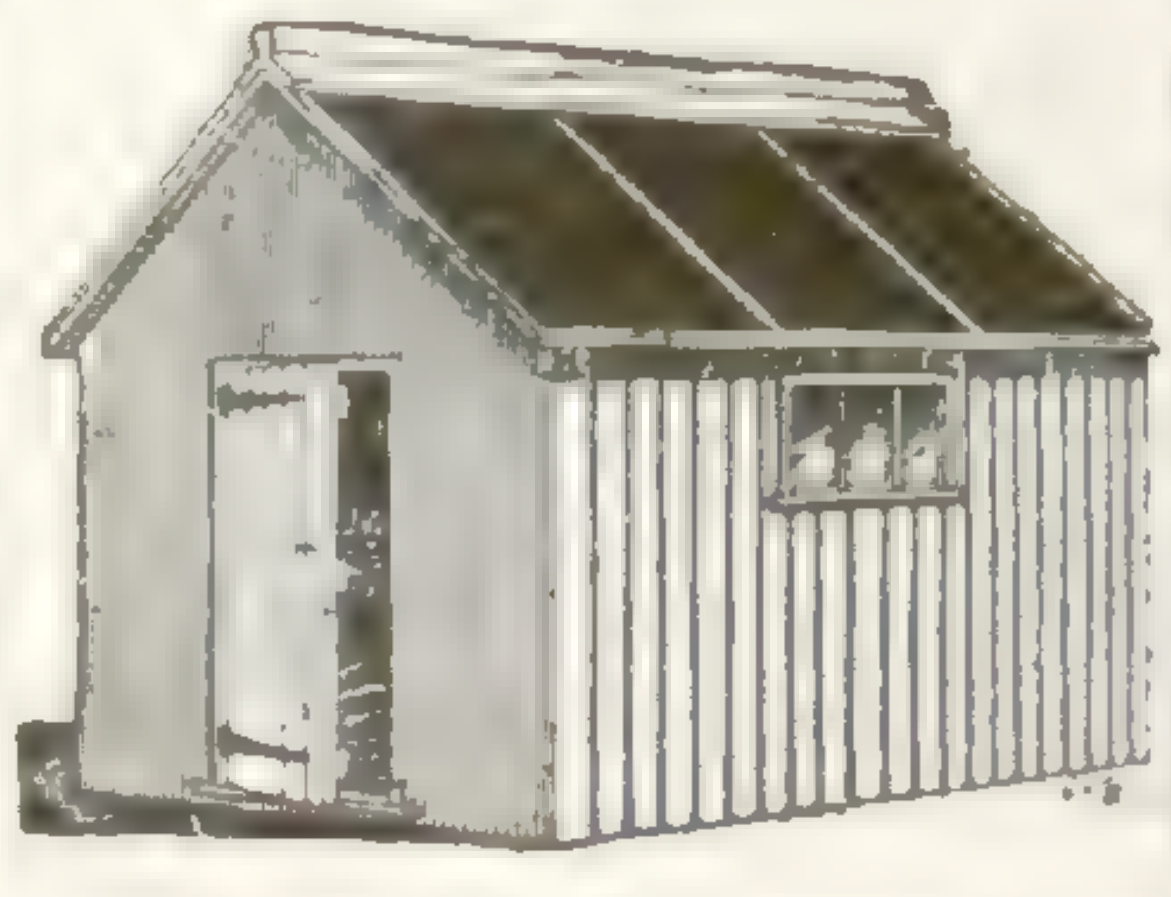
ROSE TRAINING.—I have a special Rope for training Roses. Quite new; rot-proof, though it holds the moisture, and is warmer than iron chain. 1½d. and 2½d. per yard; size, 3in. round. Recommended by leading experts. List and samples free H. J. GASSON, Garden Net Works, Rye.

RARE ALPINES CHEAP.—Profits devoted to Patriotic objects. Apply for list, LADY C., The Abbey, Much Wenlock, Shropshire, and please enclose fully addressed and stamped envelope.

CARNATIONS.—Spiral Wire Stakes. No tying required. Will last a lifetime. 24 inches long, 7s. 6d. per 100; 30 inches, 8s. 6d. per 100; 36 inches, 10s. per 100; sample doz., 1s., 1s. 3d., and 1s. 9d., all carriage paid. Pea Trainers, 6ft. by 4ft., 2s. and 3s. each. Garden Archways, Garden Edge and Croquet Bordering, 8 inches high, 8d.; 10 inches high, 10d. per yard. All cash with order. Catalogue free on application. J. PENKETH, Iron and Wire Works, Market Place, Manchester. Telp.: 3695 City.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

PORTABLE BUILDINGS. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

Sizes.	Cash with Order.	Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
ESTABLISHED 70 YEARS. **BEDFORD.**
Works, 6 acres. Stock of Wood in Sheds, 10,000 *tons.*

By Royal Warrants

To H.M. King George V. To H.M. Queen Alexandra.

The Best Remedy

FOR

MILDEW, GREENFLY, and all **INSECT BLIGHT,** is

Jeyes' Horticultural Wash

(Cyllin Soft Soap in liquid form).

Half Pints, Pints, Quarts, One Gall. Tins; also Two Gall., Five Gall., and Ten Gall. Drums.

From all Chemists, Seedsmen, and Florists.

Write for Pamphlet and Prices to

Jeyes' Sanitary Compounds Co., Ltd.,
64, Cannon Street, London, E.C.

GARDEN AND TENNIS NETS

(best) tanned only, small mesh).—50 x 8yds., 17s.; 25 x 8yds., 50 x 4yds., 100 x 2yds., 8s. each; 100 x 1yd., 50 x 2yds., 25 x 4yds., 4s. each. Any size to order. Tennis Netting (corded), 25 x 2, 6s. 6d.; 25 x 3, 7s. 6d.; 25 x 4yd., 8s. 6d. Write for Price List. L. WREN and SON, Net Merchants, 139, High Street, Lowestoft. Established 1863.

DICKSON'S
"HAWLMARK" ROSES
ALEX. DICKSON & SONS Ltd.,

WINNERS OF CHAMPIONSHIP 1910 NATIONAL ROSE SOCIETY'S CHALLENGE TROPHY.

This is our guarantee to all rose lovers that our "Hawlmark" Roses are the very finest that the world produces.

Write to-day, mentioning this Paper, for our New Rose Catalogue, containing valuable information on Rose Culture.

NEWTOWNARDS, CO. DOWN,
OAKLEY PARK, BLACKROCK, DUBLIN.

NOTICE.

The **AZALEAS** and **RHODODENDRONS** planted in Hyde Park, near Rotten Row, finest to be seen in London, are supplied by **ANTHONY WATERER**, whose only address is **Knap Hill Nursery, Woking, Surrey.**

No connection with any other firm of similar name.

SMITH'S WEED KILLER
is absolutely "PERFECT."
4 Tins of Powder or
4 Gallons of Liquid
to make 100 Gallons.
6/6 Carriage Paid.
MARK SMITH, Ld. *Louth, Lincolnshire.*

THE NATIONAL HARDY PLANT SOCIETY.

CONSTITUTED for the encouragement, the extension and the improvement of Hardy Plant culture for the garden, for decoration purposes, and for exhibition. For particulars apply to the Hon. Secretary—FRANK BOUSKELL, Market Bosworth, Nuneaton.

GLASS & PAINT.

NICHOLLS & CLARKE, LTD.,
15 oz. and 21 oz. Glass,
IN ALL THE USUAL SIZES.
Shoreditch, London.
When sending for list please cut out this advt.

SUBSCRIBER'S ORDER FORM

Every Saturday THE GARDENERS' MAGAZINE. Twopence

To W. H. AND L. COLLINGRIDGE,
148 AND 149, ALDERSGATE STREET, LONDON, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose________for________months in advance.

Name____________________

Address____________________

Date____________________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

* * If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.

C
L
A
Y'
S

CLAY'S FERTILIZER

THE FESTIVAL OF ROSES

What fragrance fills the air!
What beauty rare
This passing show discloses!
Whether as "pillars" grown,
Or, staged alone,
As dazzling blooms or posies,
A timely tribute this—
That none will miss—
In praise of

CLAY'S FOR ROSES.

It is Unsurpassed for all Horticultural Purposes.

Just ask your Seedsman or Nurseryman for "CLAY'S." He will know what you require at once.

CLAY & SON,

Manure Manufacturers, and Bone Crushers, **STRATFORD, LONDON, E.**

CLAY'S LONDON FERTILIZER
TRADE MARK.

Every Tin, Bag, and Seal bears this Trade Mark.—The only Guarantee of Genuineness.

Sold everywhere in TINS at 6d. and 1/-; and in BRANDED and SEALED BAGS.

7 lbs. ... 2/6
14 lbs. ... 4/6
28 lbs. ... 7/6
56 lbs. ... 12/6
112 lbs. ... 20/-

Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except 6d. Tins).

When cultivating all Garden Stock, read **"CLAY'S SUCCESSFUL GARDENING," the Horticultural Wonder-book,** 4th Edition (Second Reprint), by Eminent Writers, 2-6 pages, illustrated, cloth bound, **NINEPENCE NET,** of all Seedsmen, or Post Free for that amount from the Publishers.

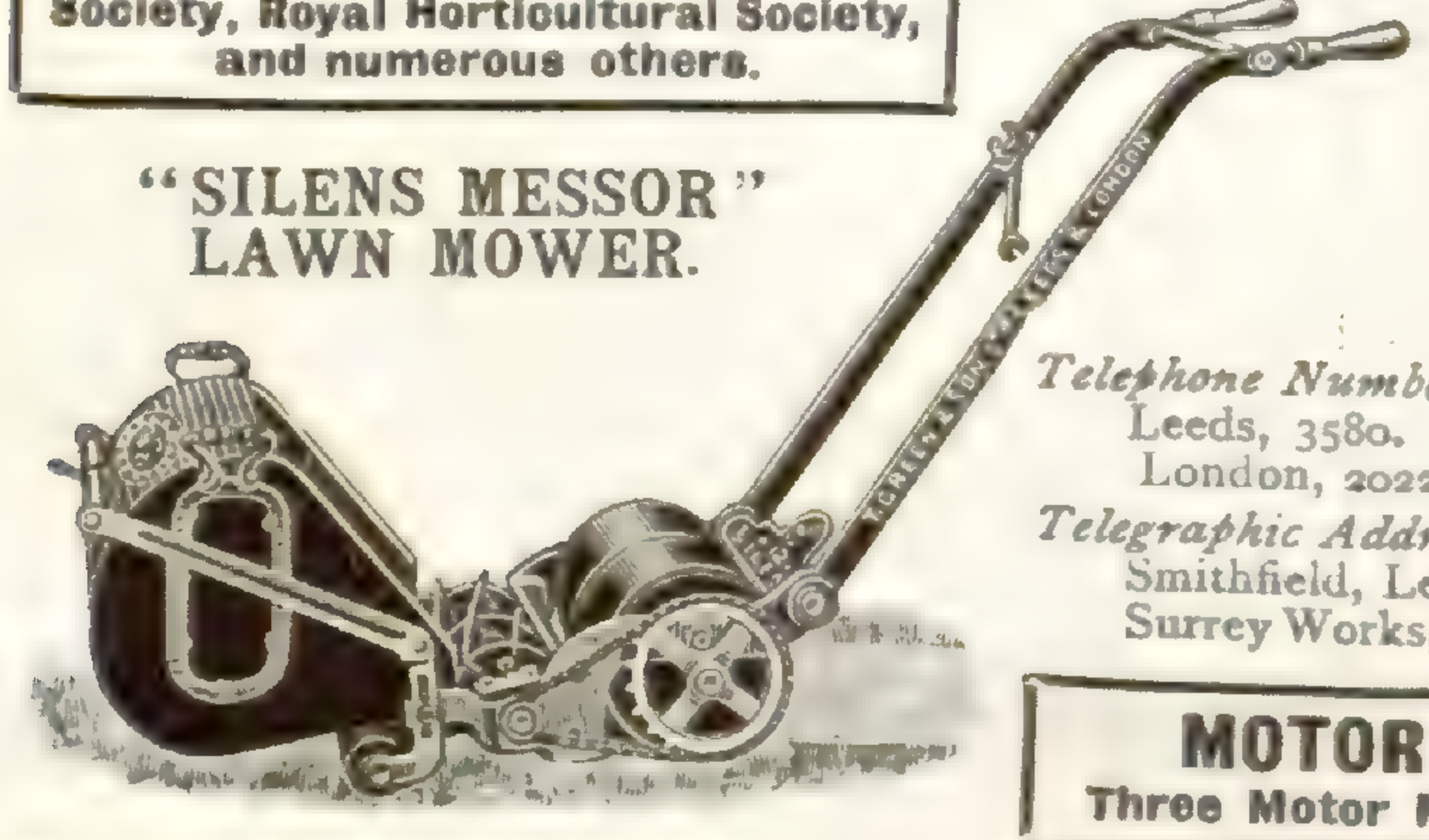
APPOINTED BY ROYAL WARRANT, HORTICULTURAL MACHINE MAKERS TO HIS MAJESTY KING GEORGE V.

GREEN'S LAWN MOWERS ARE UNEQUALLED.

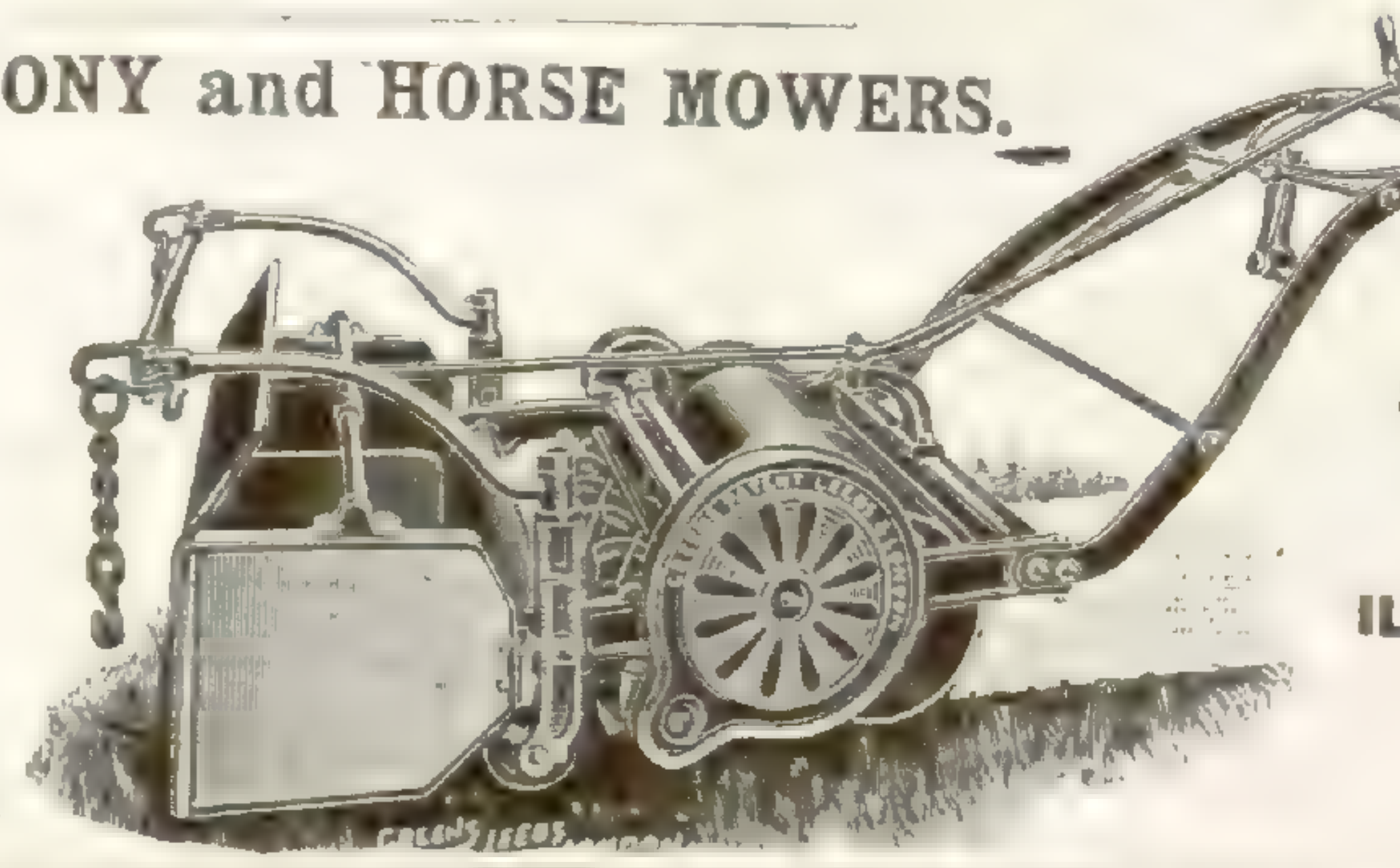
Hundreds of Thousands are in use. Established nearly a Century.

Highest Awards — Royal Botanic Society, Royal Horticultural Society, and numerous others.

"SILENS MESSOR"
LAWN MOWER.



PONY and HORSE MOWERS.

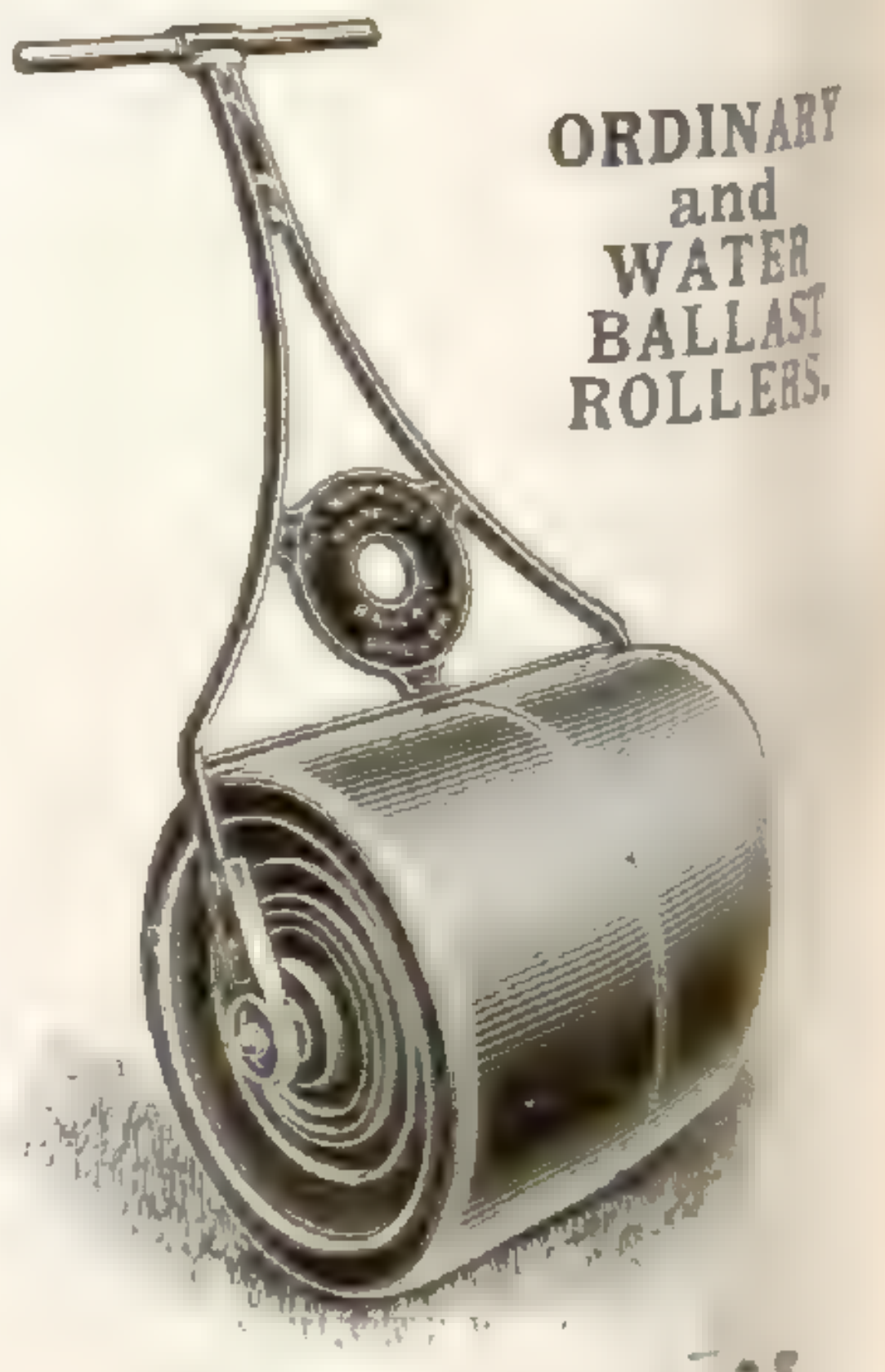


Telephone Numbers—
Leeds, 3580.
London, 2022 Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London

Supplied by all Ironmongers.

Please write for ILLUSTRATED PRICE LIST No. 1 FREE.

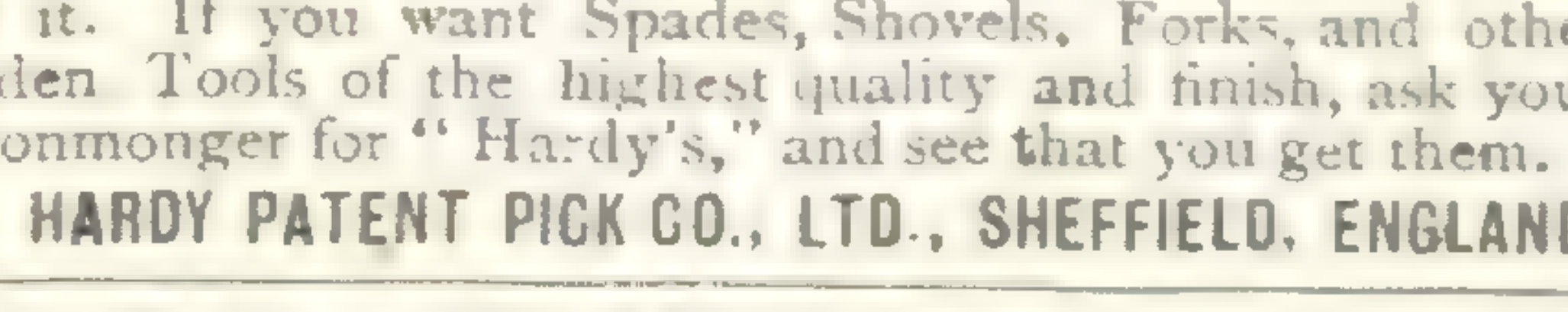
ORDINARY and WATER BALLAST ROLLERS.



MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E.

A NEW GARDEN SPADE (Carter's Patent):



This is claimed to be the most effective Spade on the market Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

SPAR GRAVEL for Paths, Drives, &c. White, strong quality, broken and properly graded; also Rockery Stone.

BECK & CO., Stone Merchants, Matlock.

GARDEN NETTING. — Protect your Strawberries from the ravages of birds. Small mesh, 40 yds. long, 2 yds. wide, 2s.; 40 x 3, 3s.; 40 x 4, 4s.; 40 x 5, 5s.; 40 x 6, 6s.; carriage paid on orders of 5s. and over. HENRY ROBINSON, Net Works, Rye, Sussex.

For Landscape Gardening and General Estate Improvements consult

H. HEMSLEY, F.R.H.S.,
Crawley, Sussex.

VISITORS TO FESTIVAL OF EMPIRE, CRYSTAL PALACE, please see my Landscape Exhibits, adjoining the General Enquiry Offices, Grand Terrace, for which a Silver Cup and Gold Medal has been awarded

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to
EPPS & CO., Ringwood, HANTS.

MANY YEARS REPUTATION.

EUREKA WEED KILLER

LASTING RESULTS – NO NEW EXPERIMENT.

1/9 TIN FOR 25 GALLONS
6/- TIN FOR 100 GALLONS
LARGER SIZES AT LOWER RATES

SOLD BY AGENTS.
MANUFACTURERS: TOMLINSON & HAYWARD Ltd. LINCOLN.
IF ANY DIFFICULTY SENT DIRECT - PAID

FERNS, FERNS, FERNS, etc.—Foliage Blooming Plants for stove, greenhouse den. 100,000 large garden Ferns, 20s. 100 sent off yearly. Amateur Catalogue Free. J. E. London Fern Nursery, Loughborough Junct

VOL. LIV.—No. 3,010. SATURDAY, JULY 8, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

◆

Town Trees.

There is now so high an appreciation of public parks and gardens by all classes of the community resident in urban areas that those in charge of open spaces have ample encouragement for making the most strenuous endeavours to render them as bright and attractive as the conditions that obtain will permit. That this fact is fully recognised by those concerned we have evidence on all sides, and those who are fully acquainted with what has been accomplished during the past quarter of a century will not be slow to acknowledge that immense improvements have been made in the management of parks and gardens that are open to the public. There may, in many cases, have been a material reduction in the area devoted to what is popularly known as summer bedding; but this would be a small matter were there no compensating advantage. As a rule, however, any reduction that has been made in the displays of summer flowers has been more than balanced by the largely increased use of bulbous and other plants that bloom during the spring months. The development of spring gardening is a distinct gain, for at no period of the year is bright colouring more highly appreciated than in April and May, when hyacinths and tulips yield of their floral wealth, and such fibrous-rooted plants as arabis and aubrietia, and wallflowers and violas, contribute liberally to the various colour schemes by great breadths of crimson, golden, and purple flowers. The greatest gain in connection with open spaces in and around towns has been the increased attention that has been devoted by those in charge to hardy trees and shrubs. As the result of this we see the commoner trees and shrubs being replaced by choicer kinds that give promise of thriving under the conditions that obtain, and it is not, therefore, difficult to realise that at no distant date the interest and attractions of public parks and gardens will be greatly enhanced. There is, however, one point in connection with tree life in towns from which it is not possible to derive a very large amount of satisfaction. It is, of course, gratifying to know that trees are being planted in the streets in much larger numbers than at any other period in the history of this country, and that the planting is done with much greater care, and efforts made to maintain them in a thriving state after they have become established. But an examination of the trees that have been planted alongside the roads in towns of importance suggests that tree life in relation to beautifying the streets has not been so closely studied as its importance would justify. We have been induced to take this view because of the small number of kinds that have within recent years been planted in towns, although the soil and climatic conditions that obtain within their areas show a wide difference. It would appear from observations made in different parts of the United Kingdom that planters have, generally speaking, followed each other much too closely in the making of selections. It has evidently been thought that because some thirty or forty years ago it was proved to demonstration that the London plane and the common lime are able to withstand the deleterious effects of the impurities with which the air of large manufacturing towns is so highly charged, they alone are suitable for planting in the streets of towns. These, and especially the first-named, with a few others known to thrive under similar conditions, should alone be planted in towns where the conditions are distinctly unfavourable to tree life. But there are hundreds of towns wherein there are no manufactures, and where the atmospheric conditions are hardly less favourable to the growth of trees than in the open country, and it should be obvious that in making a selection the planter is not restricted to smoke-resisting kinds. There is a great need for more diversity in the trees planted in the streets of towns, and even a greater need for selecting trees of a size suited to the space they are to occupy. If this were done a considerable saving in labour would be effected, and the trees will certainly present a more natural and pleasing appearance. It is well known that the London plane is one of the largest of forest trees, and yet every year hundreds are planted, the greater proportion in streets so narrow that trees of a quite small size would alone be really suitable. The London plane is indeed of so robust a growth that when in the widest of thoroughfares considerable pruning has to be done, but when in narrow streets they have to be pruned so severely that they are usually pitiable objects. It would not be difficult to enumerate a considerable number of ornamental trees of moderate stature that would thrive in towns of which the atmosphere is not greatly contaminated, but our object in referring to this question at the present time is not to give a list of trees that should be planted, but to suggest to those who are specially concerned with the arborescent features of towns the importance of carefully studying trees that are likely to be suitable for street planting for the purpose of determining the positions for which they are best adapted. For this purpose nurseries in which ornamental trees form a strong feature, and botani-

MR. F. BRIDGER.

cal gardens that are convenient of access, should be visited while the trees are in full growth, and careful note made of their characteristics. In many instances the public parks and gardens belonging to the respective towns, and private gardens within or immediately beyond their boundaries, will afford material assistance in formulating an opinion as to the relative merits of some of the kinds, and whatever help can be obtained should be taken full advantage of. It appears to us most desirable that in beautifying the streets of towns from which manufactories are absent a much larger number of kinds should be utilised than is now considered necessary, and that trees of moderate size, that are in other respects suitable for streets, should be taken full advantage of. The time has certainly arrived when the practice should be given up of planting forest trees in confined spaces, and then spending time and money in preventing their branches so extending as to impede the traffic or block out the light from business premises or dwelling houses that are alongside the streets in urban areas.

Mr. Frederick Bridger, whose portrait we have the pleasure of giving in this issue, has been so long associated with the horticultural activities of Penshurst Place, the historic seat of Lord de l'Isle, that he occupies among practical horticulturists a position that is by no means common, if not unique. For sixty-two years he has been closely associated with the gardens of Penshurst Place, and for about two-thirds of this long period he has occupied the position of head gardener. Mr. Bridger comes of a gardening stock, and in the year 1849 he left school to assist his father, who was head gardener at Penshurst Place forty-eight years, and he continued in the gardens, occupying, it need hardly be said, various positions of responsibility until 1869, when he succeeded his father. This point is of interest as a further proof of there being an exception to every rule. It is regarded as a good rule at the present time, as in the past, that every young man, when being trained for a gardening career, should have experience in several gardens in different parts of the country, and an excellent rule it unquestionably is; but we have a proof in the case of Mr. Bridger that it is possible, when the necessary ability is forthcoming, to obtain a high position without any change while in the probationary stage. Mr. Bridger's training was limited to the gardens of which he has for over four decades had charge, and throughout the thirty or more years the present writer has known them they have been regarded as prominent among the many important establishments in the district of which Tunbridge Wells is the centre. As the chief of gardens that bear the impress in a marked manner of skilful management Mr. Bridger has long been highly esteemed by those acquainted with his work, and at no period in his career has he been held in higher estimation than at the present time. There is no occasion that we should refer to the characteristic features of Lord de l'Isle's beautiful gardens, for they were described and illustrated in the Gardeners' Magazine of January 9, 1909; but it should be mentioned that they are in keeping with the ancient mansion to which they form so delightful a setting. At Penshurst we have a splendid example of the Old English garden, and this has, if we are not under a misapprehension, been created by Mr. Bridger, who has received the most generous encouragement from his noble employers. Judging by the results, Mr. Bridger must, in carrying out alterations in the flower gardens and pleasure grounds, have made careful note of the genius of the place, for everything is in keeping with a mansion whose history extends over several centuries. In other departments everything is carried out in accordance with the most modern methods.

Northern Fruit Congress.—It has been arranged to hold the Northern Fruit Congress at Newcastle-on-Tyne this year, and to carry it out under the auspices of the North of England Horticultural Society, the Newcastle Chrysanthemum Society, the Hexham Fruit Congress Committee, and the Four Northern Counties Scientific Committee in Horticulture. The congress and fruit show will be held in the Town Hall and Corn Exchange on November 15 and 16, in conjunction with the Newcastle Chrysanthemum Society's show. As at present arranged there will be afternoon and evening meetings on each of the two days. At the afternoon meeting on November 15, "Fruit Culture in the North" will be discussed. The discussion will be opened by Mr. J. S. Chisholm and Mr. W. B. Little. The evening meeting of the first day will be devoted to the all-important subject of "Horticultural Education." At the afternoon meeting of the second day there will be lectures on "Fruit Bottling," "Pruning," and "Soils and Food Supplies," and a lecture on "Diseases of Fruit Trees" will occupy the evening meeting on the second day.

Royal Horticultural Society. In connection with the Olympia Flower Show, the Council of the Royal Horticultural Society entertained at luncheon on Wednesday the Premiers, Governors, Commissioners, and other visitors from the British Colonies. Sir Trevor Lawrence, Bart., presided over a gathering that filled the Pillar Hall at Olympia, and was supported by several of the guests and members of Council. The toast list was a comparatively short one, and, as a matter of course, the loyal toast was proposed by the president. Sir Daniel Morris submitted the toast of "The Guests," and in the course of an excellent speech, referred to the work that had been accomplished by the Royal Horticultural Society in the furtherance of horticultural enterprise throughout the British Empire. The toast was acknowledged by the Premier of the Australian Commonwealth, who spoke in eloquent terms of the kindness received by the Colonial visitors during their stay in London. The other two toasts were the "Royal Horticultural Society" and "The President." The members of the gardening Press were placed in an unfortunate position, inasmuch as they were too far from the speakers to clearly hear them.

Origin of Darwin Tulips.—It is a matter of common knowledge to those who are interested in bulbous plants, that the Darwin tulips were introduced to cultivation by Messrs. E. H. Krelage and Son, of Haarlem, but the origin of this extremely beautiful section has hitherto been somewhat obscure. It is, therefore, of much interest to find in the sketch of the history of the firm during the past 100 years a reference to these tulips, in which their origin is given. Mr. Ernst Krelage, the present head of the firm, by whom the historical sketch has been compiled, writes: "The origin of this strain was a small collection of amateur tulips from the North of France, where in the 18th century the tulip had been a favourite flower. This strain, after having been improved and propagated, was quite distinct from everything known before as self breeder and mother tulips. Mr. Krelage at once realised the exquisite beauty of the dazzling colours for garden decoration and market purposes, and asked and obtained the permission to dedicate the strain to the memory of Darwin, these tulips having been improved by continuous hybridising, and so being a splendid example of the variability of plants which has been one of the important parts of Darwin's life work. Prof. Francis Darwin replied: 'If my father had been alive, I am sure he would willingly have consented to your proposal, and I think I may safely answer for the other members of the family, who, I am sure, will feel pleased, as I do, at the spirit and manner in which you propose to name your new strain.'"

Sweet Pea Outings.—Following its usual course, the National Sweet Pea Society has arranged two outings for the purpose of inspecting sweet peas. One of these will be to the "Times" Experimental Station, Sutton Green, near Guildford, on Thursday, July 13, to inspect the society's trials, nearly three hundred rows, that are being conducted by Mr. Harry Foster. On this occasion the charming gardens and grounds of Sutton Place, kindly thrown open to members by Lord and Lady Northcliffe, will prove an additional attraction. On the following day, Friday, July 14, there will be an outing to Messrs. R. H. Bath and Co.'s floral farms at Wisbech, on the invitation of the chairman of committee, Mr. G. W. Leak.

R.H.S. Exhibitions, 1912.—In consequence of the ever-increasing number of visitors to the fortnightly shows held by the Royal Horticultural Society, the Council have had under consideration for some time past the question of extending them over two days in the months of March, April, May, and June. It has been stated in some of our contemporaries that the Council have already decided to make the change, but this is not the case, for they have not as yet come to a final decision on the matter.

Blairgowrie Fruit Crops.—At the middle of June strawberries and raspberries were suffering so severely from prolonged drought that it was feared the crop would be light, and the fruit of small size. The rains that fell in the second half of the month have placed a quite different complexion on the plantations in the Blairgowrie district. The fruits have swollen up to an average size, and those that have attained maturity are of high quality. The prices of both raspberries and strawberries are higher than for several years past. At the recent sales strawberries realised £28 and £29 per ton, and raspberries from £26 to £28 per ton. The figures represent an increase of £9 or £ per ton, as compared with the prices obtained three years ago. The crop of black currants is very light in the Blairgowrie district, and the crops of apples and plums will be below the average.

Coronation Sweet Pea Buttonholes at Blackburn.—In honour of the Coronation of our King and Queen, the Blackburn and District Horticultural Society provided a buttonhole bouquet of sweet peas for each of the two hundred and fifty gentlemen who took part in the civic procession to the parish church at Blackburn on Coronation Day. The Blackburn Society has about 750 members, and it thought this would be a fitting occasion on which to show its loyalty to the throne and also its appreciation of the support it receives from the public. A few of the members provided the flowers, and the gifts were highly appreciated.

GREAT EXHIBITION AT OLYMPIA.

July 4, 5, and 6.

To take such an enormous building as the Olympia, at Addison Road, for a three-day flower show—July 4, 5, and 6—was a big venture on the part of the Royal Horticultural Society, and at the moment of writing we do not know whether it has proved a financial success. Be that as it may—and we must remember that the society has a big Fellowship to cater for, the move was enormously successful horticulturally, notwithstanding the need for improvement in arrangement and setting that became obvious when the exhibits were all staged and judged, and the people present in crowds. We congratulate the society and all its officers on the big effort made and the success achieved, and also the exhibitors for turning out in such large numbers.

The garden-like arrangement of the exhibits in the great annexe was capital, and if on a future occasion the centre of the great hall could be given up to equally artistic arrangements of plants and flowers, and the exhibits on tabling set up in the broad second gallery facing inwards to the centre, there would be a finer effect, as the lower tiered staging on which so fine an effect was produced on this occasion would then appear to join with the displays above and produce an immense bank of colour and beauty. This second gallery would even then accommodate such exhibits as were practically lost and spoiled in the top gallery on this occasion.

Those exhibitors who were placed in the upper gallery complained bitterly of their position and of the heat that so quickly spoiled large numbers of the flowers, but even greater was their complaint that so few of the people in the building came up to see what was staged.

The great building needs more or earlier ventilation in hot weather; but had the weather been cool or wet, everyone would have been loud in their praise of the warm, dry, and comfortable conditions prevailing under the great roof of Olympia. The strong light from the roof needs to be subdued something after the fashion adopted at the great Horse Show, or at the great Ghent Exhibition, while soft drapery over the girders that carry the galleries would be a further improvement, and, if centre tabling is to be followed in future, an avenue of very tall palms down the centre of the building would prove effective.

EXHIBITS IN THE GREAT HALL.

Mr. Amos Perry, Enfield, was a very large exhibitor, filling a big space on either side of the broad entrance way with huge sheaves of delphiniums, these representing a large number of the finest varieties in which, of course, the range of blue shades was very great; Amyas Leigh, Zaza, Midas, Gertrude, Belladonna semiplena, Antigone, Duke of Connaught, David, Carmen, and Portia were a few of the choicest forms, while Devonshire Cream, a cream-coloured form, was also conspicuous. Bamboos and a goodly collection of hardy ferns were associated with this huge exhibit of delphiniums and added greatly to the general effectiveness.

Messrs. James Veitch and Sons, Chelsea, contributed a large and brilliant group of stove plants, and here were grandly grown crotons, stately palms, bold caladiums, alocasias, and graceful ferns, with quaint nepenthes. There were groups of cannas, Solanum Wendlandi, anthuriums, and the bright Kalanchoe flammea, while the central feature was a showy grouping of choice orchids. Close by was a table filled with choice perpetual and Malmaison carnations, cannas, streptocarpuses, Exacum macranthrum, gloxinias, and standard and pillar-trained fuchsias; the latter trained on stakes as though on the rafters of a span-roofed greenhouse, were charming, the pendant blossoms being seen to full advantage under this system.

A particularly fragrant display of phloxes was contributed by Messrs Gunn and Sons, Olton, who always show these flowers finely. They had 6ft. high stands of such varieties as General van Hentz, Wilbur Wright, Elizabeth Campbell, Countess of Ilchester, Le Mahdi, and Molière, and great bunches of Esperance, Etna, Coquelicot, Tapis Blanc, Violet, G. A. Stroehlin, etc.; it was a very fine exhibit.

Messrs. Barr and Sons, Covent Garden, presented a rather formal bank of hardy flowers, but the several kinds were grouped together with considerable effect; tall spikes of Lilium giganteum rose in stately fashion from the centre, and there were good groups of L. Wilsoni, L. pardalinum, L. candidum, and L. croceum, with masses of Campanula pusilla, C. p. pallida, C. p. alba, C. carpatica Ditton Blue, Alstrœmeria lutea, Nepeta Mussini, Salvia virgala nemorosa, varieties of Gladiolus Colvillei, and a host of delphiniums. Just below this bank the Covent Garden firm staged a collection of dwarfed Japanese trees that appealed to many visitors by reason of their gnarled trunks and quaint forms.

Messrs. E. W. King and Co., Coggeshall, presented sweet peas in graceful style, arranging three large arches of bloom over stands and vases of such sorts as Anglian Blue, Anglian Orange, Clara Curtis, Evelyn Hemus, Helen Lewis, Mrs. Routzahn, Mrs. W. King, etc.

The roses from Mr. Chas. Turner, Slough, were associated with grouplets of Malmaison carnations, including the deep crimson Maggie Hodgson. The roses were presented in baskets of a variety, in growing pillars, standard and bush form, some of the weeping standards looking like lovely shower bouquets.

The large bank of Malmaison carnations staged by Mr. A. T. Paskett, gardener to E. J. Johnstone, Esq., Groombridge, Kent, was a fine effort from a private garden. The variety mostly in evidence was Princess of Wales, but there were a few crimson flowers here and there; with the exception of a stand of blooms in the centre, the whole group was of growing plants. The same exhibitor showed a quantity of sweet peas and per-

MESSRS. SUTTON AND SONS' SILVER CUP COLLECTION OF VEGETABLES AT THE OLYMPIA SHOW.

petual carnations. Mr. S. Larkin, Haslemere, had a few vases of good sweet peas.

A well arranged group of hardy flowers, from Mr. J. Box, Lindfield, Sussex, was a little weak in the foreground; the delphiniums were well set up at the back, and so were the gladioli, Iris Kæmpferi, and phloxes; violas and pansies were arranged in front, and if hardy instead of greenhouse ferns had been used as an edging the exhibit would have been improved.

Messrs. H. B. May and Sons, Edmonton, put up a superb group of ferns. In the matter of extent, culture, and variety this was one of the finest exhibits of its kind ever put up. In the middle were a dozen perfect examples of Nephrolepis Marshalli compacta, and all over the group were finely-developed examples of all the choicest plumose nephrolepis. Towards the back were huge plants of Davallia fijiensis, D. polyantha, D. pallida, Platycerium alcicorne, Phlebodium aureum, Polypodium Schneideri, Osmunda japonica, etc., while Dicksonias and lygodiums towered above everything else. Towards one end choice British ferns in wonderful variety, and showing the elegance and beauty of frilled hart's-tongues and plumose lady ferns, were arranged in such a way as to compel attention. This was a great effort, and well carried into effect.

MESSRS. DOBBIE AND CO.'S GOLD MEDAL COLLECTION OF SWEET PEAS AT THE OLYMPIA SHOW.

Messrs. R. H. Bath, Ltd., Wisbech, presented delphiniums in great variety, and associated these with roses and bunches of charming English irises; the cream-coloured delphiniums and the perpetual carnations were good features.

A magnificent exhibit of sweet peas from Messrs. Dobbie and Co., Edinburgh, was greatly admired, as much for its pleasing arrangement as for the fine colour and quality of the flowers. Stands of varying size, and vases of different heights were utilised with good effect, and a few small palms at the back and sprays of smilax in the front added immensely to the effect. Right in the foreground were broad baskets of beautiful blooms. A few specially effective varieties were Melba, Clara Curtis, Nubian, Zarina, Mrs. Hugh Dickson, the new May Campbell, Lady Knox, Sunproof Crimson, Edrom Beauty, Mrs. A. Ireland, and Elfrida Pearson.

A striking exhibit of roses and carnations from Messrs. W. Cutbush and Son, Highgate, occupied an end position just where the Great Hall opens into the annexe. A fine background of bamboos, and standards and pillars of Wichuraiana roses lent effect to the weeping standards and tall vases of perpetual carnations all over a carpeting of such polyantha roses as Jessie, Mrs. W. H. Cutbush, and Orleans rose. A few bright crotons and Coleus Cordelia added brilliance. Beacon, Rose Doré, White Perfection, Victory, Mrs. Belle, and Mrs. Fortescue were carnations well shown and in large numbers.

Messrs. G. and A. Clark, Dover, had a pretty little rock and water garden, and put up fine groups of Gilia coronopifolia, Lilium longiflorum, and Iris Monieri.

Sweet little violas and violettas, staged in low bowls, made up a pretty exhibit from Mr. Howard H. Crane, Highgate.

Messrs. G. Stark and Son, Great Ryburgh, exhibited sweet peas extensively and pleasingly, and had George Stark, Enchantress, Helen Lewis, and Premier in good form.

From the Tully Nursery, Kildare, came St. Brigid anemones, with batches of Campanula pusilla, C. p. alba, Hypericum fragilis, and Dracocephalum speciosum imbricatum.

Mr. L. R. Russell, Richmond, had a large group of specimen stove plants wherein the alocasias were splendid, and so were the examples of Dracæna Victoria and Anthurium crystallinum; crotons and anthuriums added rich colouring. A large exhibit of tree ivies also came from Mr. Russell.

The massive specimen caladiums from Messrs. J. Peed and Son, Norwood, were a bold feature, their huge leaves and varied and brilliant colouring, as well as delicate shades attracting great attention.

The little rock garden exhibit from The Craven Nursery Company, Clapham, Yorks, contained a collection of graceful campanulas, the pusilla forms being well represented. Ostrowskia magnifica, Lilium rubellum, edelweiss, and saxifragas were also included.

Hardy flowers in great variety, and making up a big bank, were exhibited by Messrs. T. S. Ware, Lim., Feltham. The leading features were delphiniums, Campanula persicifolia Moerheimi, Helenium Bigelowi, Aconitum napellus albus, and Malva moschata alba.

Messrs. R. Harkness and Co., Hitchin, needed a background to show off their roses effectively; they had cut blooms of prominent tea and H.T. varieties set in vases and stands.

Very fine were the double tuberous begonias exhibited by Mr. A. L. Gwillim, Sidcup, Kent, and especially good were the orange-coloured Sultan, the crimped pink Enchantress, and the salmon-pink Evening Glow.

Messrs. Whitelegge and Page, Chislehurst, contributed hardy flowers in quantity and edged their exhibit with bowls of violas. Campanula persicifolia Moerheimi, C. p. Coronata, liliums, Geum coccineum Mrs. J. Bradshaw, Dianthus Napoleon III., and Salvia sclarea were prominent subjects.

Mr. R. C. Notcutt, Woodbridge, filled a large space with hardy flowers and roses; the latter were shown in a cut state and also represented by weeping standards; Madame Melanie Soupert, Lyon Rose, and Madame Abel Chatenay were varieties well shown; while among hardy flowers we were struck by the sheaf of Kniphofia rufa.

The Misses Hopkins, Shepperton, built up a rock and water garden of large size with a winding rock pathway over it, from whence every part could be easily examined. Side by side with this and with the pathway continuing over it, was a rock and water garden arranged by Messrs. Heath and Son, Cheltenham. It was a capital idea for the two firm

(Continued on page 505.)

ROCK PINKS.

The various species of alpine pinks are extremely useful for rock garden planting and for wall gardening, in fact, many of them are more at home on the top of an old wall than anywhere else. The majority delight in a sharp gritty soil with plenty of old mortar rubble added to it, and the plants usually live longer in this than when grown in rich soil. When planting a sunny position should be selected where the soil is thoroughly drained, so that there is nothing approaching stagnation about the roots during the winter. The culture is simple, and propagation is readily accomplished both by seeds or cuttings.

In raising a stock of plants from seeds the best time to sow is the end of May or beginning of June, when a nice batch of flowering plants can be obtained either for autumn or spring planting. The seed is quick in germinating, and should be sown in light sandy soil. As soon as the seedlings attain a suitable size they should be transplanted into boxes, and if they are to be put out into their permanent quarters early in the autumn, may be safely planted direct from the boxes. Early in October is the most suitable time to do this, keeping them well watered until established.

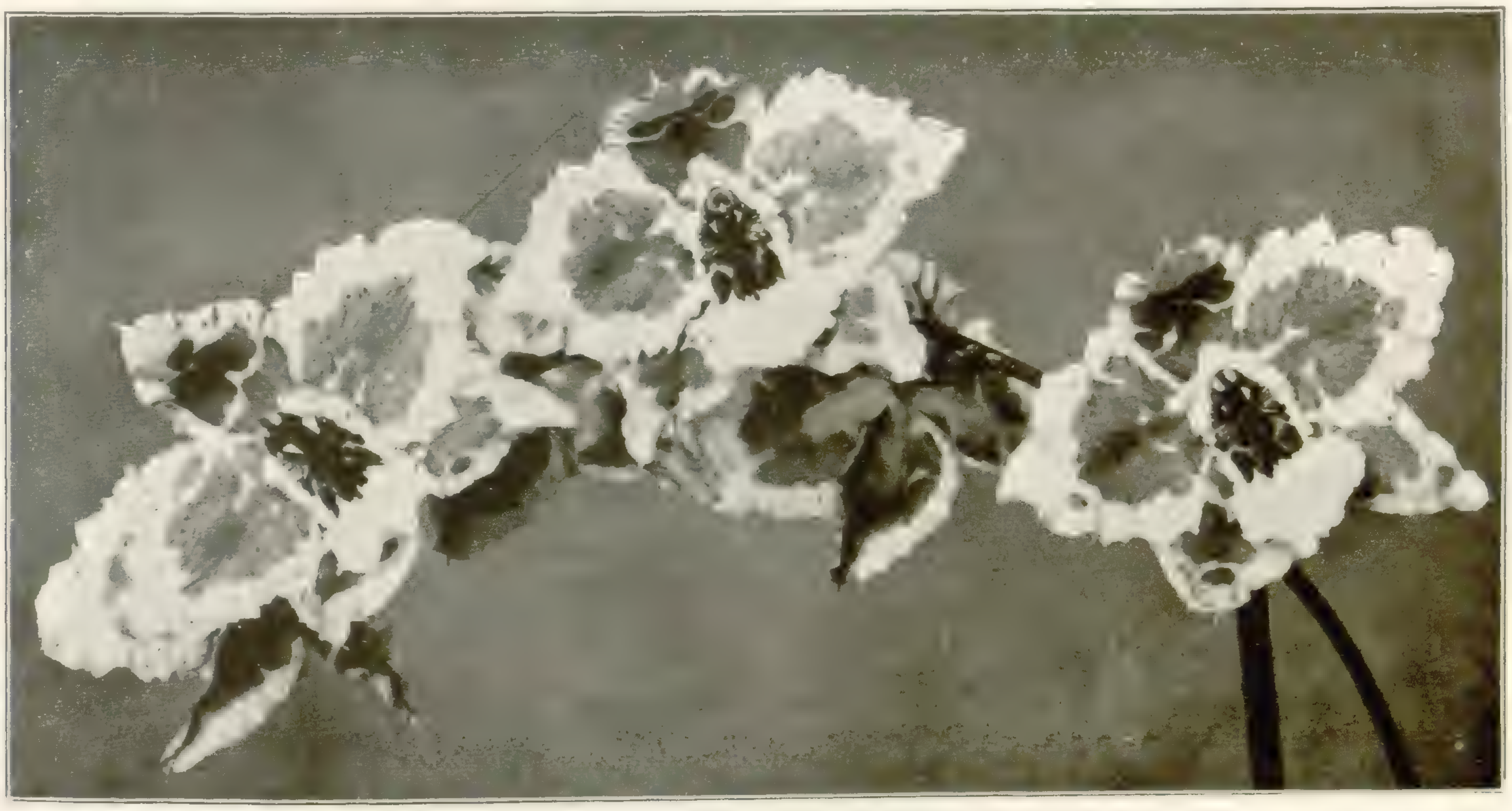
In damp localities it is often advisable to winter them in frames, and when this method has to be adopted the young plants should be potted up early in the autumn, deferring the planting until the spring. Pot-grown plants stand a much better chance of doing well when this has to be carried out, as the roots are not so much pulled about, and the plants are able to withstand the drying winds better than when taken direct from the boxes.

Increasing by cuttings or pipings is very simple, pulling off the small side shoots, in exactly the same manner as practised with the ordinary border pinks. This should be done about July, and the growths inserted in clean sand in a close frame. Here they will quickly form roots, if kept moist and shaded, and the young plants should be potted up immediately root action is seen. The most suitable potting material is a mixture of loam, leaf-soil, and old mortar rubble. In potting it is advisable to place a few pieces of limestone or mortar rubble round the collars of the plants to prevent undue moisture remaining in close proximity to the stem, for excessive moisture often causes decay in the earlier stages of growth. After potting the plants should be grown on in a frame until they are thoroughly established, after which time they may be gradually exposed to the air and sun.

In making a selection include D. alpinus, for it is one of the best; it forms neat cushions of foliage, and bears large flowers of a deep rose colour with a crimson ring at the base of the petals. In habit it is very sturdy, and hardy, also one of the easiest to cultivate. There are various forms of this species, ranging from white to deep rose. D. Cæsius (Cheddar Pink) is extremely useful for wall gardening; its rose-coloured flowers are borne in great abundance, and a good-sized group of plants will produce quite a sheet of colour. The flowers of D. deltoides are small, yet they are produced in large numbers, and it is a species well worth a place in any rock garden. There is a white form of this. D. neglectus is a choice species, with foliage resembling very fine grass. The flowers are rose on the upper side and buff underneath. This species is exceedingly liable to damping during the winter, and it is advisable to cover it with a sheet of glass to keep it drier. D. cruentus has crimson flowers, in dense heads, on stems about nine inches high. D. fragrans is prettily fringed, and sweetly scented.

Some interesting results are obtained from a batch of seedlings of D. superbus and D. sylvestris; they are beautifully fringed, and marked, and very free flowering. The flowers are borne on branching stems, and very fragrant. D. Knappi is a Hungarian species, bearing heads of pale yellow flowers. D, graniticus is similar to deltoides, both in flowers and habit. D. nitidus is sometimes said to be a form of alpinus; the foliage is similar to that of the latter, but the flowers are not so large, nor such a good colour, and the stems are longer. Whatever its origin, it is a good plant, and well worthy of cultivation.

E. C. Pooley.



ODONTOGLOSSUM ARDENTISSIMUM QUEEN MARY.

A handsome variety, the flowers rich purple with broad white margin to the petals and sepals. F.C.C., R.H.S., July 4. Messrs. Sander and Son.

THREE USEFUL BROOMS.

Many of the brooms are at their best during May, but there are a few kinds which bloom throughout June and early July. Three of these are Genista æthnensis, G. cinerea, and G. virgata. All are tall-growing species, and they form wide-spreading bushes, which, during the flowering period, are masses of gold. G. æthnensis is a native of Sicily and the adjoining mainland. It grows from fifteen to twenty feet in height, and is remarkable for its light and graceful habit, the branchlets being pendant and slender. The leaves are very small, and are sparingly produced. The golden blossoms appear with great freedom in July, and create a glorious display of colour. G. cinerea is found wild in South-west Europe. It grows twelve or fifteen feet high, and forms long slender branches clothed with small linear leaves. The golden blossoms are borne in short, axillary racemes, in June, and they create a fine display during the greater part of the month. G. virgata, a native of Madeira, is somewhat like the last-named, but is of stiffer habit. It grows into a bush twelve or fifteen feet high, and as far through. Its linear leaves are silvery on the undersurface by reason of numerous soft hairs. The golden flowers are borne freely in June, and are very effective. It is one of the best possible shrubs for planting in poor soil, and it thrives satisfactorily in the open, and also in partial shade. All three shrubs are readily increased by means of seeds, and quickly form good specimens. It is, however, necessary to transfer them to permanent situations when not more than two or three years of age, for large plants establish badly, and it is almost impossible to tranplsant a specimen six or seven years of age successfully. Plants that are newly put out establish best if supported by a stake each, in order that they may be kept quite firm. Young plants should be pruned over once or twice a year for the first three or four years to prevent their becoming leggy. Planted in the wild garden, G. virgata will reproduce itself naturally from the seeds dropped beneath the plants.

D. W.

NOTES FROM KEW.

Chrysanthemum Parthenium flore plena.

Under this name, which just signifies a double form of the common feverfew, a very ornamental plant is in flower in the Greenhouse. The plants, which are freely branched, are from eighteen inches to two feet in height, and each bears a profusion of little double rosette-like blossoms, about three-quarters of an inch across, and pure white in colour. It is a very effective decorative plant for the greenhouse at this season, and at Kew its beauty is enhanced by the fact that in a group it is associated with Clarkia elegans Firefly, the bright colours of which form a pleasing combination with the light tint of the chrysanthemum.

Sollya heterophylla.

This, the Blue Bell Creeper of Australia, is a twining plant of a ligneous character that will produce its pretty drooping bright blue flowers throughout the summer months. It may be grown in pots, trained around a few sticks, or planted out it will form a very pretty roof or pillar plant. For this last-named purpose it is employed in the greenhouse at Kew.

Diplacus glutinosus.

This old plant has flowers of a buff-yellow colour, but in the variety coccineus they are deep red with a yellow throat, and also larger in size, form good subjects for the embellishment of the greenhouse. A group of each in the house No. 4 is just now very effective, the plants being laden with blossoms, and a succession is likely to be kept up for a considerable time. Both are plants of very easy culture. Botanists now include the genus Diplacus with the Mimulus, and as such they are grown at Kew.

Hæmanthus Katharinæ.

Most of the hæmanthuses are very showy flowering plants, but many of them are not very amenable to cultivation. One of the least exacting in its cultural requirements, and also one of the finest, is H. Katharinæ, a native of Natal. Good examples of this may be grown in pots eight to ten inches in diameter, and such will produce three or four spikes of blossoms. These are of a bright red colour, and borne in globular heads. This species flowers when the handsome oblong-shaped leaves are fully developed, being in some respect totally different from some of the others. Now in bloom in the cool portion of the T range.

Anomatheca cruenta alba.

The charming little Anomatheca cruenta is a fairly well-known bulb, native of South Africa. The bulbs, which are a good deal like those of a freesia, are smaller; indeed, the whole plant when fully developed is not much more than six inches in height. The flower scape, which just overtops the sword-shaped leaves, bears several of its pretty bright coloured blossoms. They are nearly an inch across and of a bright carmine-red colour, the three lower segments being blotched with velvety crimson. The variety alba, which has pure white flowers, is very rare. It is now in flower in the cool portion of the T range. By botanists the genus Anomatheca is now merged into that of Lapeyrousia.

Pelargonium Stapletoni.

Many of the species of pelargonium are from their beauty well worth cultivation, and this is one of them. The stems are stout and club-like, while the lobed leaves present a somewhat silky appearance. The flowers, which are little more than half an inch across, are borne in branching umbels. In colour the flowers are bright rose with a dark blotch on the two upper segments. The name of P. Stapletoni does not occur in the "Kew Hand List." This species greatly resembles P. echinatum, but this last has the ground colour of the flower pure white. Now in bloom in the cool portion of the T range.

Chirita speciosa.

There are several species of chirita in cultivation, but this is a decidedly uncommon one, and, moreover, ornamental. It pushes up a stem clothed with oppositely arranged ovate leaves. The flowers borne on rather long peduncules from the axils of the leaves, are of a curved tubular shape, the inflated tube being violet-purple on the outside, while the expanded mouth is white. This, which is in flower in the intermediate portion of the T range, is a native of Java. It is referred to by the late Colonel Beddome in his "Annotated List of Gesneraceous Plants" as a lovely species, rare in cultivation.

Eranthemum tuberculatum.

In most of the eranthemums the flowers are produced in a terminal cone-shaped head or cluster, while in this species they are scattered over the shoots. It also differs considerably in habit from most members of the genus, for they commonly form upright sparely branching specimens, whereas this is of a free, dense, twiggy habit of growth. The flowers are pure white, and individually they suggest those of Bouvardia Humboldti. The eranthemum derives its name from the curious wart-like tubercules with which the stems are studded. It was introduced from New Caledonia nearly fifty years ago, and is now in flower in the intermediate portion of the T range.

Turneria ulmifolia elegans.

An uncommon plant in cultivation, but some of the Turneras are veritable weeds in the tropics. This, however, is a very pretty plant now in bloom in the intermediate portion of the T range. It is of a soft, rather erect growth, the leaves being oblong, serrated, about five inches in length, pubescent and soft to the touch. The flowers, which are freely borne from the axils of the leaves, are composed of five petals of a bright yellow colour. The expanded bloom is about a couple of inches in diameter.

Rhododendron Maddeni.

Of the numerous Himalayan rhododendrons in the Temperate House this is the last to unfold its blossoms. It forms a rather loose-growing bush, clothed with oblong-shaped leaves, scaly beneath, and about six inches in length. The flowers, which are borne in a loose corymb, are of an open funnel shape, about four inches in length, and as much across the expanded mouth. They are pink in the bud state, but become white after expansion. The edges of the segments are somewhat crisped. This species is also sometimes known as R. Jenkinsi.

Leptospermum Nicholli.

Nearly all the leptospermums have white or pale-coloured blossoms, but in this the flowers are of a deep red, as may be seen on a specimen in the Temperate House. It is of compact growth, and likely to prove a valuable greenhouse plant or outdoor shrub in the particularly favoured parts of the south-west.

K.

Mr. William Deal, F.R.H.S., "Brooklands," Kelvedon, Essex, gives a cordial invitation to all interested in sweet peas to inspect his crops growing for seed. He has about 12 miles growing on sticks, stocks equal to any in the country. Crops are about half-a-mile from Kelvedon station.—[Advt.]

GROUPING HARDY FLOWERS.

The report of York Gala in the Gardeners' Magazine of June 24 well describes a new class which introduced a new method of arranging hardy flowers, viz., their arrangement in bold groups of one kind on the ground, where they could be conveniently inspected. Although the premier exhibit at York, from Messrs. W. Artindale and Son, was very much admired as being uncommon and effective, even that left some room for improvement, and, naturally, it would, being the first attempt at an exhibition of the kind. On the principle that we are all copyists in horticultural tastes, I venture a few suggestions for improvement on this meritorious exhibit. The position at the end of the tent was not quite the most favourable, as the eaves of the canvas were not sufficiently high to allow a more suitable background. The acers and bamboos used were too light in colour and density to show off to best advantage the richly-coloured flowers in front. The introduction of some conifers or pines would have improved the background. Amongst the groups of flowers a few specimen bamboos or weeping or semi-weeping trees would have given additional grace. The arrangement of the groups of flowers might have been more undulating, as it was a little difficult to see many of the plants at the back. Let it be understood I greatly admired this attempt at reform in the arrangement of hardy flowers, but I think an improvement was possible, and merely offer these suggestions for the consideration of the exhibitors of hardy flowers.

E. Molyneux.

CANKER IN MELONS.

This dreaded disease is sometimes the cause of failure in melon culture; attacking the plants just as the fruits are about to ripen, it frequently prevents them from bringing the crop to maturity. Most growers have theories as to its cause and cure, but how far these are correct is another matter. There is one supposed cause that I think may be said to have failed to impress us, and that is the existence of moisture around the stem of the plant. Some growers recommend us not to wet the base of the stem, either by watering or syringing, but rather to water between the plants.

For the last two seasons we have grown melons in pots with entire success, in addition to those in borders. These have been watered in the usual way, and consequently water has been all around the stems, yet not one of these plants showed the least signs of canker, and all matured either three or four handsome fruits. The pots were twelve inches in diameter.

I am of opinion that canker is probably caused by an unsuitable rooting medium. A too rich compost, for instance, which creates a gross and unhealthy plant that collapses under the strain when its vigour is most needed. This points out how necessary it is to build up a sturdy, healthy specimen capable of resisting the dreaded disease.

Incidentally, I may remark that gumming is more liable to occur with a gross and sappy plant than with one of sturdy, firm growth. I find that pure yellow virgin loam, with a little mortar rubble or charcoal added, suits melons admirably, and our plants grown in that show no signs of canker. The varieties we grow are Eminence, The Peer, Royal Jubilee, and Superlative.

J. Gardner.

MULCHING.

Mulching is a very old and excellent means of retaining a steady supply of moisture about the roots of trees or plants. Evaporation is prevented by the natural process of covering the soil, and, apart from preserving a uniform degree of heat and moisture, this covering is also constituted so as to supply a substantial amount of nourishment. The common practice of placing a covering of long strawy manure around the stems of trees or plants is, in reality, copied from one of nature's most ingenious processes. The changes which occur in the condition of soil due to what is commonly known as "weathering," consist in the first place of a breaking-down or disintegration of the surface soil particles. And as soon as this fine covering is formed over the seed-bed, it naturally conserves warmth and moisture in the soil below, and so assists in the preparation of an ideal seed-bed. When it is remembered that the seed on germination first throws out delicate rootlets and root hairs, which explore the soil in every direction for moisture, it is easy to understand how necessary this natural mulch is in the process of germination.

The capillarity of the soil is a feature of soil science which is generally understood by most practical gardeners. More especially during periods of drought does this property of the soil come into prominence, for a fine surface assists in breaking the capillary tubes which bring supplies of moisture from the reservoir a little below the surface. Mulching has this effect even if it consists of no more than a slight stirring of the surface soil by means of the hoe; and indeed the usual purpose to which this work of hoeing is assigned, namely, the destruction of weeds, is comparatively unimportant when compared with the conservation of moisture and warmth that is also effected. Weeds are certainly a bad feature in any garden, but the unchecked effects of drought are likely to be a worse one.

Therefore, it is plainly seen that, by the simple process of hoeing the surface soil, the gardener may not only tap the moisture resources of the lower soil, and bring them to the surface for the roots of plants, but can at the same time prevent the evaporation of such moisture by undue heat. One of the best arguments against the neglect of hoeing and mulching is that the sun at its height draws the moisture from the soil, and takes with it the warmth, so that root action is hampered not only by lack of moisture, but also by a low temperature.

If the mulching consists of long manure or other material containing plant food in a sufficiently soluble state, it proves doubly beneficial by reason of its fertilising properties, which become washed down into the soil by rain or by artificial watering. It is usual to give a mulching of manure about four inches thick, and, if thought desirable, a slight covering of soil may be placed over to hide the manure. It is advisable in the case of an excessively dry soil to water it thoroughly before giving the mulch.

A favourite form of mulch consists of fresh horse manure that has been composted and well turned so as to induce uniform cooling. It is also recommended to add a little superphosphate, and in the case of fruit trees, a sprinkling of double sulphate of potash and magnesia. Excessively thick mulchings are not to be recommended on any account, neither must any material of this kind be used until fermentation has properly ceased; otherwise there will be a danger of a crop of weeds springing up from the seeds contained in the unfermented material. Not only this, but the complete fermentation of the manure renders its nutritive ingredients more available as plant food.

All newly-planted trees and shrubs are greatly benefited by a good mulching of fermented litter, partially rotted manure, leaves, and other suitable covering after the surface has been hoed a few times, so as to admit air and warmth into the soil. Mulchings should not be given too early, because they prevent the soil becoming warm near to the roots, but the proper time is usually just before the droughts of summer, and it is always advisable to apply them immediately after a good shower of rain, it being well borne in mind that this practice does not increase the store of manure in the soil, but merely conserves that amount of moisture which may be present at the time of its application. Fruit trees and bushes that are newly transplanted have their roots very near to the surface, and in a small compass; hence, it is easy to see how quickly they will become dried up by the heat of the sun on the surface soil. Mulching prevents this, and in the case of wall trees or roses in a south or south-west aspect, plenty of water must be given before the mulching is placed over the roots. Some growers use various forms of material, such as spent hops from the brewers, lawn mowings, or cocoanut-fibre refuse.

J. C. N

ROSE FRANCES CHARTRES SETON.

A beautiful hybrid tea, the flowers rich purple-rose. A.M., R.H.S., July 4. Messrs. William Paul and Son.

CENTRANTHUS RUBER.

One of the most familiar flowers of the garden is the red Valerian (Centranthus ruber). A chalk-loving plant and a Britisher, it is often met with growing wild in most uncongenial surroundings; it seeks a foothold where the necessaries of plant life seem almost denied, and yet with indomitable spirit it obtains and maintains a hold, contending successfully against all comers. A charming instance of the naturalising of this wilding, and most unconventional in character, is found on the chalk cutting above Guildford Railway Station, in Surrey, where its characteristic beauty is displayed, not in stunted, starved plants as the situation might warrant, but vigorous to the utmost degree, and in such quantity that the rugged face of the chalk cliff is painted with ruddy colour from top to bottom, presenting a picture of rare beauty among surroundings that do not lend themselves to floral effect in the slightest degree.

The possibilities of the valerian for naturalising have long been recognised, and considering that it embraces a rich crimson and white form, besides the type, the possibilities of these in combination should be great. Moreover, it covers an extended season when in flower, and is easily propagated by seeds, and in a soil such as it favours naturally, it is one of the most reliable of all perennials.

Thomas Smith.

RAMONDIAS FROM SEED.

One of the most fascinating branches of gardening is raising hardy plants from seed, among which we include ramondias, as they are most cherished occupants of the rock garden. Of conspicuous beauty when in flower, they are always interesting on account of the evergreen rugose leaves, which are arranged in rosettes, and having the underside of the leaves densely covered with a felt of tawny hairs that in times of drought protect the leaves from excessive transpiration. All the members of this genus succeed in good loamy soil mixed with peat; they require a shaded position, and to be planted in almost vertical positions among rockwork.

Ramondias are somewhat variable in colour from seed; this tends to increase interest, as it is exceptional to obtain any but pleasing colours in the flowers. Seed ripens freely on open-air plants, and when harvested may either be sown direct or deferred till spring. The latter is the best season, as it is of first importance to secure a full period of growth in the first year, and once the seed germinates growth should be encouraged to this end. For those who desire to sow the seed now I would mention that pots and pans of a small size are most suitable for seed sowing, and the soil may consist of loam, peat, and sand in equal parts, and is best passed through a fine sieve. Germination is hastened by placing in a warm greenhouse; but as soon as the seedlings are well through the soil a position in a cool greenhouse or sheltered garden frame, with the pots or boxes on a coal-ash bottom, is most favourable to growth. The seed pans must be kept free from weeds, and as soon as the seedlings can be handled transplant into shallow boxes, using soil slightly rougher than already recommended, and allow two inches between the plants. Having filled the space allotted them in the boxes the plants are then ready for potting up, and when established in these receptacles they may be used for permanent planting in the open.

Ramondias are exceedingly sensitive to drought, and rarely succeed in positions open to direct sunlight. Shade meets their requirements, and if planted in a well-drained position in a compost of rich loam, peat, and broken stone, they invariably succeed. Vertical planting is of great importance as it prevents the centres of the plants from becoming silted up with soil, which otherwise detracts from their appearance and causes the flowers to damp off. The majority of rare and choice hardy plants can be raised from seed, and, apart from the pleasure this work affords, there is the possibility of raising an improved form, or, it may be, a distinct variety.

Seedlings of ramondias flower in their third year, and increase in size for a number of years after.

THOMAS SMITH.

Carrots.—Owing to the continuous dry weather main crop carrots are in many cases a faulty crop. Where this is so, to ward off a scarcity, make a considerable sowing of a Shorthorn variety in ground that is in a rich condition. After the drills are drawn out pour water along them several times to ensure ample moisture. Also sow soot on the surface, and do everything possible that is conducive to the encouragement of growth. Where young crops are looking sickly dust them over with nitrate of soda and apply a light watering. And should the foliage be infested with fly a syringing with quassia extract will render valuable assistance in removing it.—C. F.

VARIATION IN HYBRIDS.

In the introduction to his comprehensive and highly interesting paper on variation in hybrids, which appears in the current issue of the Royal Horticultural Society's "Journal," Mr. A. Worsley writes:

I have experimented with several fertile hybrids and analysed the variations which take place in the ensuing generations, and in most of these experiments I found that the hybrids and their self-fertilised progeny are means between their parental extremes, although there are instances in which one parent influences the hybrid and its progeny to an extent exceeding that of the other parent. Now if we take one (suppositious) case and note eight divergent characteristics between the parents (inter se), we shall probably find that the hybrid holds a strictly equipoised position as regards the bulk of these characters, but may incline towards the female in some and towards the male in others. To reach this result it is not enough to examine the first few individuals of the hybrid race that come into flower, but we must wait until the whole of them have flowered and until a critical analysis of them all can be made.

To be sure of our ground we must also apply this analysis to the whole of those characters in which the parents differ inter se, and not merely to some of them. For if we submit a hybrid to an incomplete analysis we may conclude that the male is dominant, simply because we have taken no count of those other characters in which the hybrid inclines towards the female.

In the succeeding generations of self-fertilised plants we shall note some variation from the equipoised hybrid type. This variation may be great or small, and follows no known law. For instance, a true new species may result from hybridisation, such being the case when the subsequent variations from the hybrid type do not exceed about 3 per cent., and when the preference of individuals for the pollen of other individuals (in bi-sexual flowers) is sufficiently strong to ensure the breeding out of these variant characters. I have had no personal experience as to whether new species can be artificially produced by hybridisation among those bi-sexual plants which are normally self-fertilising.

When I have followed these hybrid progeny by critical analysis into the second and subsequent generations I have not been able to satisfy myself that reversion to certain specific characters follows the allegations of the Mendelian advocates. In the first place I have never been able to find in hybrids any characters that were absolutely dominant or recessive, but have only discerned a certain relative or partial inclination towards the specific characters. Nor have I as yet found a single instance of absolute reversion to either specific type; but I have found that, in the subsequent generations, all sorts of intermediate forms crop up equipoised between the hybrid type and either parent. For instance, if the hybrid type inclined towards the male in colour of flower and towards the female in another respect, I find that some individuals in subsequent generations will do just the opposite, as though the law of change indicated a course of variation which would in time fill up every gap between the two extreme forms represented by the species originally crossed.*

But to this consummation there is the evident bar of the association of different characters. We constantly find that certain pairs of characters cannot be dissociated from each other, but continually occur together in individuals. This association of certain characteristics (so long as it obtains) appears to rule out the possibility of the occurrence of certain conceptually possible intermediate forms. The antirrhinums give us one instance of this, for among the dwarf self-coloured forms every rogue as to height is also a colour-rogue, whereas those that are typical in stature will probably not produce 1 per cent. of colour-rogues.

If we define a species as "A group of closely related individuals as between whom procreative variation has suffered a temporary and partial arrest," we mean by this definition that we reserve the use of the term "species" to plants which reproduce themselves true from seed with the number of variants limited to (say) 3 per cent. But this, again, may mean no more than that the association of characters has been so extended as to include all the noticeable characteristics of the type. In this sense variation becomes a question of permutations and combinations, and in every "good" species all the characters hang together so that variation is brought to a standstill for the time being, or reduced within very narrow limits.

By hybridisation this fixity is broken up to some extent, or, in a few cases, a new set of associated characters supersede the old associations. Now if the hybrid is crossed with another hybrid, greater variation becomes evident, until in florists' plants we note an ever-growing inconstancy. All this hypothetical fixity in "good" species is, however, relative and not absolute. There exists a certain percentage of variants from the type, and I contend that we cannot foretell with certainty the trend of such variation. For as the germ-plasm of every plant contains within itself immeasurable possibilities of reversion to all or any of its ancestral characters, however remote, it is clear that the apparent fixity of any species is a something bounded by time and conditions. For the time variation is bounded by the association of certain characters, but how or when this association will be broken, or what variation or reversion may then ensue, cannot be foretold.

This question of variation depends entirely on parentage, and could probably be determined with some exactitude if the ancestry of any plant was known. But inasmuch as the complete ancestry of no plant can ever be known, and is, in fact, an impossible thought, all we can do is to imagine that the earliest-known ancestors of plants with which we deal possessed characters absolutely fixed and invariable, and from this false basis to deduce certain mathematical ratios of probable variation. On this assumption we may declare that a proportion will revert to one parental type, a proportion to another, and that such reverted individuals will have attained the same measure of fixity that their parental types possessed. This has been known for a very long time in a general way, and all the Mendelian advocates claim is that in certain already tested cases they now know in what ratio such reversions will occur; but they do not claim that this ratio is applicable in any general sense. My own experiments teach me that we can only reach an approximation, not any precisely known result; and that in different hybrids and cross-bred plants these results also vary, and are in great part dependent on the association of characters, and these again on pre-existing associations in their ancestors.

Violets.—The surface of the soil should be frequently broken with the hoe, and the plants liberally watered during dry weather. At the close of hot days damping overhead is beneficial, and if there is any appearance of red spider syringing with soot water will usually check it. Occasional waterings with liquid manure from the farmyard may be given.—E. C. P.

---

* As an example, I hybridized Hippeastrum vittatum with H. equestris and produced the hybrid H. × Mandevillei, which showed some inclination towards the female. There are eight divergent characters as between the species inter se, which I designate a b c d e f g h, or A B C D E F G H, using small letters if the characters of the second generation resemble those of the female species, and capital letters if resembling the male species. Now the Mendelian assertion of recessive characters would produce variants as they are here written (above); but I have found none such. The hybrid type produced $a\ b\frac{c}{2}\ \frac{d}{2}E\ F\ g\ h$ and the variants of the second generation such formulæ as $A\ b\frac{c}{2}d\ e\ f\ g\ \frac{H,}{2}$ etc.

BORDER CARNATIONS.

The popularity of border carnations is characterised by the manner in which their cultivation is taken up in almost every garden, large or small. It is unnecessary for me to attempt to describe their usefulness for both garden and indoor decoration, as this is so well known, but perhaps a few hints on their cultivation would not be out of place at this time of the year, when preparations have soon to be made for propagating young plants for the ensuing season.

It is not everywhere that one sees border carnations successfully grown; this is due in some instances to the unsuitable conditions of the soil, but in others to the unsatisfactory methods adopted in their cultivation, and many failures and poor results can be attributed to this latter cause.

One of the most important operations in connection with the culture of border carnations is the layering of the young shoots. This is often left until too late in the season. My experience is that the first half of the month of July is the best time for the work, as it then gives the layers ample time to root previous to their being planted out into their permanent quarters. In layering the operator should be most careful to make the cut in the stem of the young shoot quite three parts of the way through the stem, below a joint, and to continue it through the joint lengthways for about an inch. When pegging the layer down, the incision should be opened by making the layer beyond the peg to stand nearly upright; this part of the operation is very essential, as one often comes across layers badly rooted when lifting because the incision has not been made sufficiently deep, or opened enough when being pegged down.

Layers made early in July are by the first week in September ready for planting in their permanent quarters, and if a little care has been taken in previously preparing the soil for them, little fear need then be entertained as to their living through the winter and early spring. One often hears the remark, "Carnations stand badly here through the winter." Nine times out of ten the failure could be traced to late layering and necessarily late planting.

Much advantage is gained by early autumn planting, as it is not then necessary to pot the layers and winter them in frames; further, a spring-planted carnation never makes such a good plant as one planted early in the autumn, and, consequently, does not give the same wealth of bloom. I have often had as many as fifteen to twenty flower stems on an autumn-planted layer, but never remember seeing a spring-planted layer carrying nearly that quantity. I will admit that in some very cold, damp districts autumn planting is not practicable, neither is it always successful in the case of very tender varieties with weak constitutions.

T. B. Field.

Clerodendron myrmecophilum.—It is about seven years since public attention was directed towards this showy clerodendron, but up to the present it does not seem to be much grown. It is really a very beautiful plant, among whose desirable qualities is that it flowers freely in a comparatively small state. It is of upright growth, whose sturdy stem is clothed with long lanceolate leaves, and terminated by an upright pyramidal-shaped panicle of flowers disposed in regular whorls. The colour of the flowers is a bright orange-amber, and they are individually about one and a-half inches across. The long prominent stamens are red. This clerodendron is a native of Singapore, so that the temperature of a stove is necessary for its well doing.—W. T.

FEEDING AND TOP-DRESSING CHRYSANTHEMUMS.

Expert cultivators of these subjects can tell at a glance whether the plants are in a fit condition to be fed or not. Furthermore, they know exactly when the proper time has arrived to apply a top-dressing.

As a rule, the beginner is over eager to commence the work of feeding and top-dressing, with the result that harm may accrue to the plants.

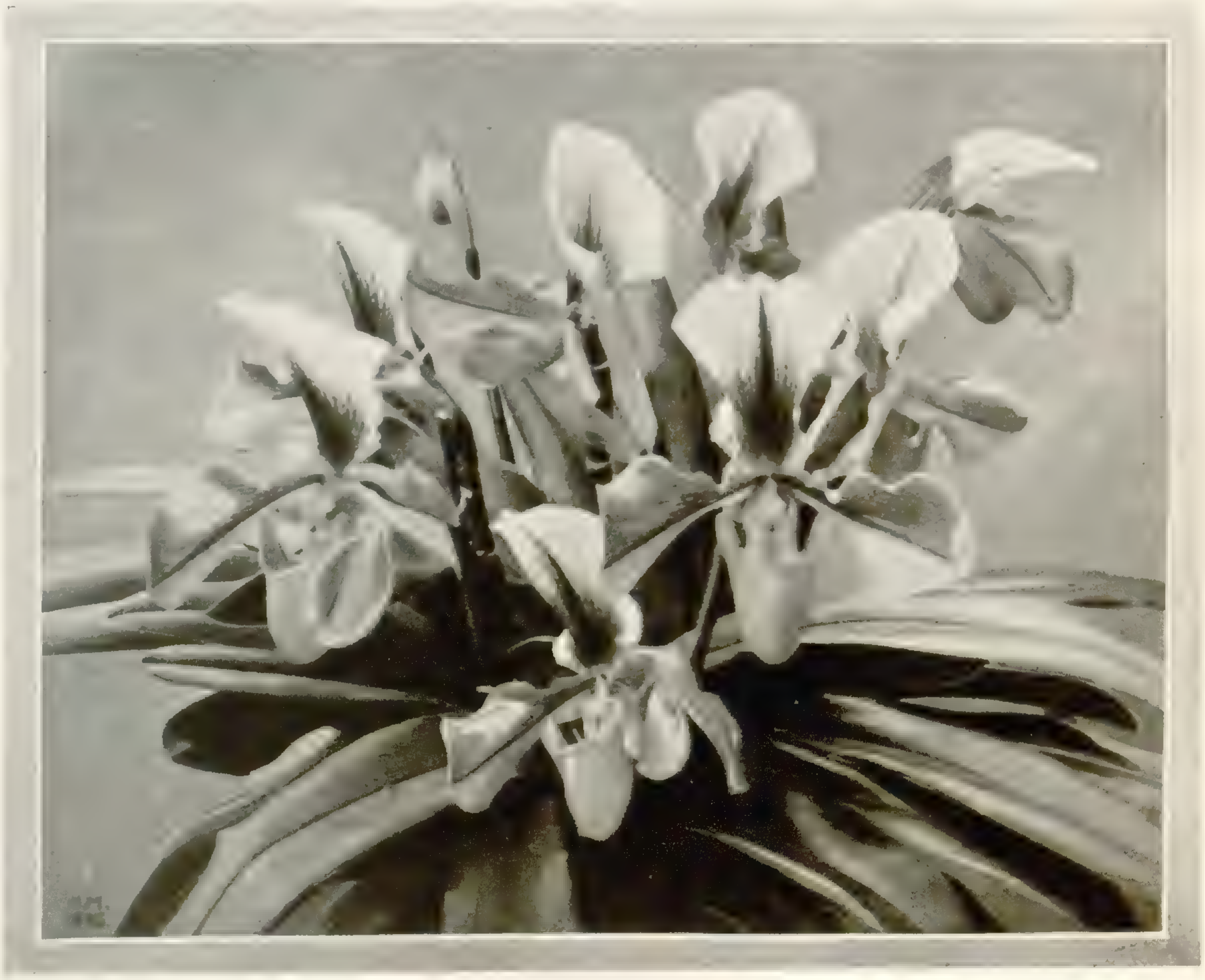
During the past two years those plants were the most satisfactory that were fed judiciously with cool artificials—mainly after the flower buds had been secured. But I know of instances where forcing manures, such as nitrate of soda, were applied several times during the month of July, and, as a spell of very dull, cool weather followed, the stems grew rapidly, the leaves being large and flabby, and the buds had extra long stems, and were very late in developing. We have recently experienced a long spell of hot, dry weather, followed by several weeks of moderately cool, wet weather, and in these circumstances the growth of the plants is very satisfactory. Now, it would be a pity for a beginner to spoil nice plants through over-feeding them. If the wood is moderately matured when the buds—the first crowns—appear, it will harden rapidly afterwards, and it is at this critical stage that judicious feeding does so much good in keeping the precious buds steadily progressing and strengthening their stems. Weak applications of clear soot water and liquid manure may be given after the middle of July, and sandwiched between the doses of artificials right up to the time that the flowers are half open. Concentrated manures must be applied according to the directions given with them.

An expert grower would not hesitate to put on some top-dressing material before the flower buds are secured, but I think a novice would act wisely if he waited until all early crown buds were taken before he applied a top-dressing, as it is more difficult to tell afterwards whether the soil beneath is dry or not. Incurved varieties, and many of the Japanese sorts, which show buds towards the end of August, may be top-dressed early in that month. Soak the fibrous loam in liquid manure before it is used, and lay the compost thicker near the rim of the pot than at the stem of the plant.

Geo. Garner.

CYPRIPEDIUM CHRYSOTOXUM.

Among those cypripediums that thrive under moderately cool conditions there is one that is at present not over-plentiful in collections, but which promises to become popular. It is C. chrysotoxum, a hybrid between such old favourites as C. Lathamianum and C. villosum. This appears to have been raised by M. Duval, and to have first flowered in 1900. The name given is a suitable one, inasmuch as the blooms are particularly bright, the lip and the petals being bright burnished yellow-green. The petals have a darker median band, and the large white dorsal sepal has deep yellow-green and brownish shading at its base and a purplish central line. C. chrysotoxum Victor is particularly well coloured, and though here, as in the type, the dorsal sepal is too much reflexed along the lateral margins to be regarded as quite in accord with the modern fashion, which demands a broad, rounded, flattened dorsal sepal, the variety is conspicuous in any collection of cypripediums, and is very attractive. The plant here represented is from Mr. J. Gurney Fowler's collection at Glebelands, South Woodford, and the gardener, Mr. J. Davis, was awarded a Cultural Commendation for it at the first meeting of the Royal Horticultural Society held during the present year; it then carried nine fine flowers.



CYPRIPEDIUM CHRYSOTOXUM VICTOR.
Flowers yellow-green, white, and purple.

HOW TO GROW SWEET PEAS.—"Sweet Peas and their Cultivation," by C. H. Curtis (Secretary of the National Sweet Pea Society), is a complete guide to the successful culture of sweet peas for home or exhibition. Price 1s. net, by post 1s. 2d., or bound in cloth 1s. 6d., by post 1s. 8d., from W. H. and L. Collingridge, 148, Aldersgate Street, London.

ROSE NOTES.

Since my last notes we have had some of the most welcome and delightfully steady summer rains I ever remember. Already the great benefit of these is apparent in the cleaner condition of growth. Fortunately it has arrived in time to make a considerable difference to the roses for most of the exhibitions, the prospects for which were far from good a week or so back from the time of writing (June 27). A sprinkling of artificial manure, and the hoe used once more to check seedling weeds that are certain to appear after these showers upon a warm soil, will be doing good in all ways.

I have often noticed the wonderful cleansing powers a summer rain has among our roses, but seldom more so than in the present instance. Whilst wandering among our roses to-day I was struck with the many varieties so aptly named as to almost describe themselves, Rainbow and Papillon, for example; also Sunset and Sunrise, Crepuscule, Milky Way, Snowstorm, Viridiflora, Boule de Neige, Flocon de Neige, and Goldfinch, are all aptly named, and describe themselves. Many others might be mentioned. Such names, with their brevity and descriptiveness, appeal to me far more than the extra-long foreign names too frequently given, which are difficult to write, or to pronounce. A person's name should be sufficient without describing him as the director of certain palm gardens, as in the case of Palmengarten-Director Liebert. Some names are much too long and troublesome for the average rose grower.

Of course, we shall be busy now with budding, and all stocks will run well after these genial showers. A very slight sprinkle of artificial manure will help any that are inclined to be backward owing to the rather unpropitious spring, when the cold, drying winds rather checked them. As a rule we do not manure our stocks, preferring to feed the plants as maidens, thus getting a stock more congenial to the bud, and not flooding it so much. We think, too, that such stocks and buds ripen better, and are helped to pass through the trials of winter. It also seems of little use to grow a lot of wood upon the stocks only to cut it clean away during the following winter or early spring.

A little more care in the selection of rose buds might be an advantage in some cases, and I believe much of the indifferent stock of some varieties is due to this point. To do the work mechanically is not sufficient. The bud itself should certainly be in the best possible condition, and this is not secured without close care. For example it is quite useless to insert a bud the seat of which is not properly formed so as to rest well upon the wood beneath the raised bark of the stock. Also, some varieties differ considerably as to the outside appearance of the bud when best suited for the operation. Only experience and careful observation can overcome this, and, as already noted, to put in a bud minus a prominent base or seat is useless. Any forcing in of the bud through the stock not having sufficient sap should be avoided. This can be remedied by free watering, or cutting the growth afresh so as to encourage more young wood, with its attendant flow of sap. In the case of buds being a little dry when received they should be cut off fresh at the bottom and top of the stick or shoot, and immersed in water for a time. Not only is an over dry bud almost impossible to remove from the rose shoot, but it is in the worst possible condition to grow, however carefully we may have succeeded in inserting it. A little more attention to these details are worth notice, and I feel sure many failures may be traced to their neglect.

Roses in pots, and now ripening their wood, should not be kept too dry at the roots. This does not matter so much when half plunged, otherwise much harm may be done. Overhead syringings will be beneficial, but at no time should the wood be allowed to shrivel.

Rosarian.

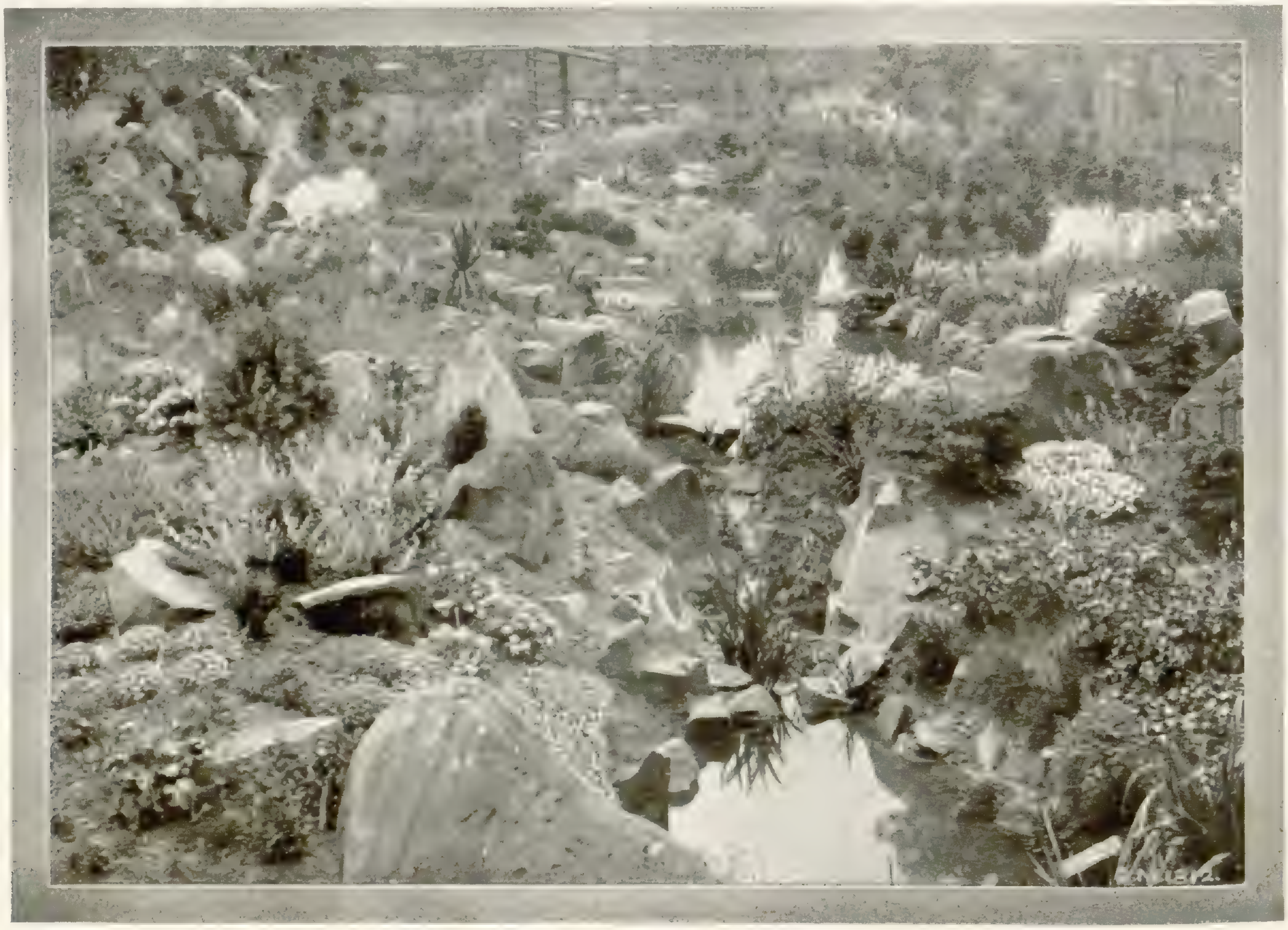
THE JAPANESE IDEAL IN PRACTICE.

The ever-increasing interest bestowed upon the garden art and floral beauties of Japan by English garden lovers has led us into many by-ways of garden adornment, and when the full force of the novel invasion has worn off, we shall awake to find our gardens better (or the reverse) for the potent influence of Japan.

I am one of those who firmly believe in the value of the interchange of ideas, and am fully of opinion that wisdom in horticultural, as in all other matters, is acquired by diligent research and enquiry; therefore, I have welcomed the inflowing tide of Japanese ideas.

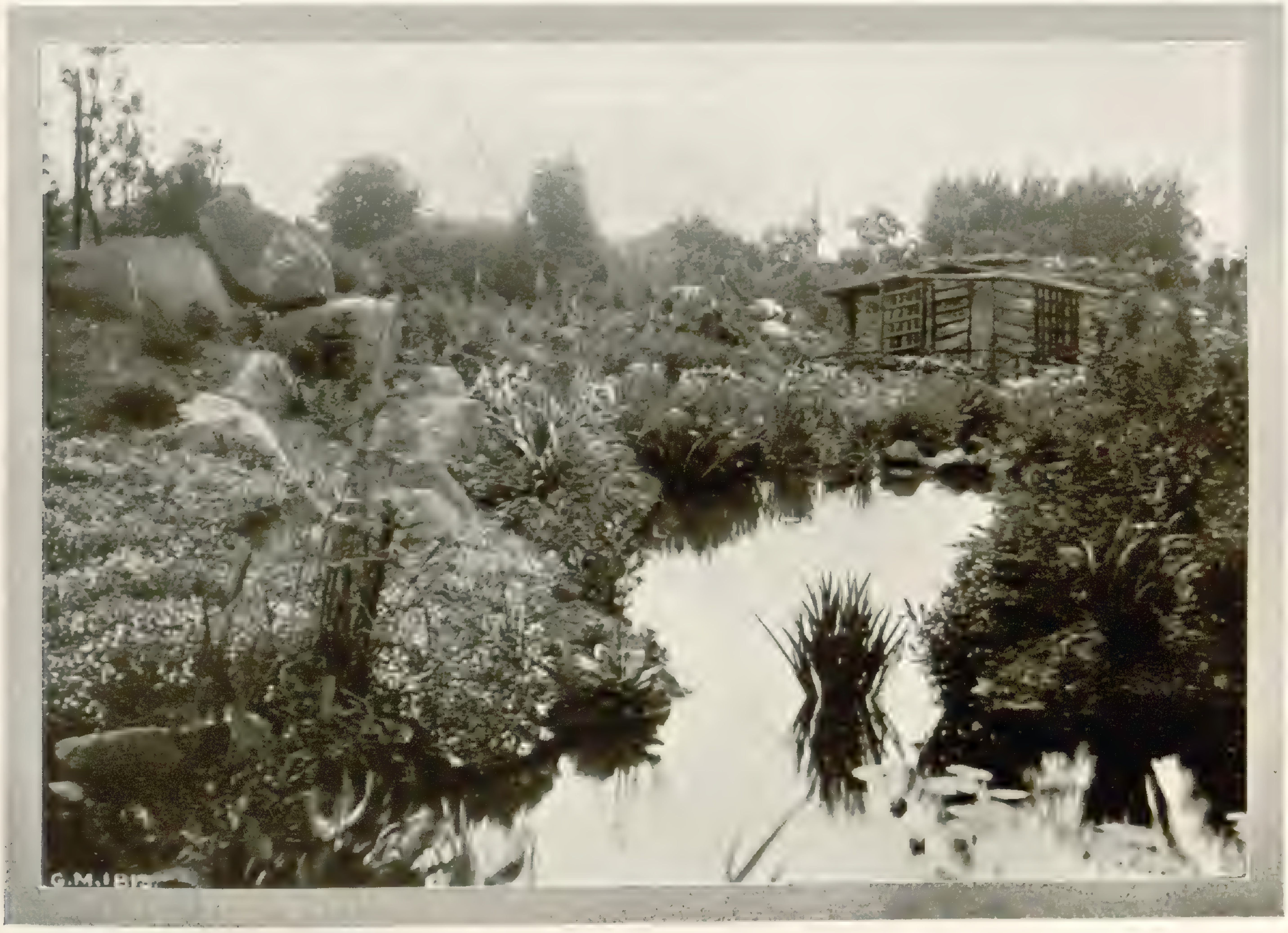
To those whose knowledge of Japanese ideals is confined to dwarf trees and lily bulbs I may be permitted to point out that as copyists of Nature the Japanese landscape gardeners have no equal. The fact that the leading exponents of the art can portray a native landscape, with hill and dale, woodland and winding river, on a piece of ground a few yards square, or on a stretch of a hundred acres, and equally well in either case, will give us an idea of the care and capabilities of the Japanese gardener. It has been my endeavour to bring the ideals of Japan into line with modern English requirements, and one rejoices to find that the blending of the best of both gives such happy results.

The extended use of water in garden scenery has ushered in the reign of entirely new groups of subjects, which have gone



VIEW IN THE BEAUTIFUL ROCK AND WATER GARDEN
Designed in accordance with the Japanese ideal, at Holland House, Southcliff, Essex, the residence of Mr. and Mrs. Lilley.

far to enhance the general interest. The use of rocks, and suitable shrubs and plants for the planting up of the same, and the free, unfettered display of the wild garden, are naturally fitted to co-operate with the Japanese ideals in the forming of an interesting garden. Picture "a garden where stepping-stones wind through drifts of blossoming plants, where sloping banks and valleyed depressions are the rule and not the exception, and where the limpid pools and rock-girt eminences are replete with life and beauty." Such is the garden in brief. It must give life and delight, and afford peace and repose. If a summer-house or tea-house be provided it must be in keeping with the garden scene and not violently opposed to it. The artificial must be obliterated by the natural. Flower and shrub groupings should look as though they had been disposed by Nature's hand, and the entire formation, whether of small extent or large, must not be cramped in appearance or formal in outline.



SUMMER HOUSE IN THE JAPANESE GARDEN AT HOLLAND HOUSE, SOUTHCLIFF, ESSEX.

I am able to emphasise my remarks by means of views of the semi-Japanese effect obtained in the making of the new gardens at Holland House, Southcliff, Essex, the residence of Mr. and Mrs. Lilley. The view looking south from the larger rock formations shows something of the effect of the waterways between the sloping mounds, with a vista of a portion of the valley garden beyond. The fact that two years previous to the penning of these notes the same ground was a flat stretch of grass land, overlying heavy clay, will give some idea of the possibilities of an uninviting site, and the charm of a garden which has been made as natural and as diverse as possible.

The intense interest attaching to such a garden, with the plantings specially arranged so as to give the longest possible period of blossom (practically the whole year through) will be apparent to all, while the desire for diverse formations, embodying hillocks, depressions, boulders, waterways, stepping-stones, streamlets, and wild garden effects, has provided the means of grouping alpines and rock plants, aquatics and waterside plants, shrubs and herbaceous subjects within the confines of a single garden.

I wish also to demonstrate the blending of the many features in a perfectly natural way. It is not necessary to shut the rock garden away from the wild garden, or either from the waterways. They can be blended into a perfectly fitting whole, with nothing to jar or offend the taste of the most fastidious of garden critics.

The second illustration gives the rustic tea-house amidst its setting of sloping banks and unfettered growth viewed from the island. Here, though the area pictured is not large, we have an effect which embodies harmony and simplicity. The lines of the tea-house are in keeping with the natural garden in which it is placed, and though the photograph does not show the depression in which it is situated, nor the pool below it, yet it is sufficient to indicate the peacefulness and charm of the garden.

The whole question is fraught with the deepest interest. In it we perceive the greatness of the movement, which is breaking away from the formal traditions of the past and its accompanying gaudy colour schemes. In the march forward we are utilising to the full the ideas and subjects which lie around us on every hand. Rigid lines and geometrical patterns have now but little weight. The formal pathway has to surrender to the charm of stepping-stones, where the blossoms can creep between. The stone fountain with its adornment of cupids, or similar additions, has little interest as compared to the streamlet with its vigorous growth of rushes, reeds, and sagittarias, its drifts of mimulus, myosotis, and ranunculus, its groups of irises, primulas, and astilbes, while the ever-attractive, ever-changing scenes of floral beauty in the natural garden give an abounding interest with which no formal design, be it ever so grand in conception, can really compete.

Returning momentarily to the garden illustrated, I may say that though it is exposed to the fury of the gales, being in a very wind-swept position, yet, by reason of broken outline, its protecting rocky slopes, and ridges that catch every glimmer of sunshine, we obtain a perpetual display of blossom, for even in the dullest time of the winter there is ever some beauty to brave the elements, and to entice the flower-lover from the house to the garden.

As in all gardens, the hand of time will add to the general effect, by the general increase of growth in plant and shrub life. The formal garden in many cases is good for but a few brief weeks, and then replenishing must take place, but with the natural ideal firmly established one has a garden for a life-time.

P. S. Hayward.

Coronilla glauca.—Before Cytisus racemosus became so popular as a market plant, this coronilla was often to be seen in Covent Garden Market. It is now, however, much less grown than formerly, still for greenhouse decoration the beautiful yellow blossoms and its continuous-flowering qualities stand it in good stead. The glaucous tint of its prettily-divided leaves form another pleasing feature. The cultural requirements of this coronilla are not at all exacting, as it will thrive in ordinary potting compost, and may be placed out of doors during the summer. In the extreme West of England it is looked upon as a hardy shrub. It is a native of the South of Europe, and was introduced in 1772.—W. T.

SWEET PEA NOTES.

The change in the weather from intense heat to cool and moist conditions has had a very beneficial effect on the growth of sweet peas, and the plants are now growing very much stronger, and the flower stems are lengthening nicely, and this is what is wanted, both from an exhibitor's point of view and for general cutting purposes, as stems under ten inches long are rather short for effective decoration.

The very strong winds are apt to blow the vine about considerably, and constant attention must be given to the ordinary rows to prevent the tops coming over.

Those that are being tied and trained for exhibition purposes will also need regular attention, as the softer growth will not stand up long under wind and wet, so all spare time must be given to keeping them in good order, and this is more essential just now than at any time, as the flowers now pushing forward will very probably be needed for exhibition, and once the vine gets out of an upright position the flower stems will become deformed and so prove useless.

In a previous note I recommended giving the plants a rest by taking off a few sets of flower buds, but, under the moister conditions now prevailing, and the resulting vigorous growth, any further thinning in this way should not be necessary, for it should be borne in mind by exhibitors that quality and substance in the flowers are the two chief points to be aimed at, and a too drastic mode of thinning does not tend to this end, but rather to a big, floppy, and ofttimes double standard flower, which is far from being beautiful.

With many people the matter of exhibiting will be uppermost in their minds, and, with so many shows offering good prizes for sweet peas, it ought not to be difficult for intending exhibitors to make up their minds where they will exhibit.

It must not be forgotten that competition in the sweet pea classes is now quite exceptionally keen, and exhibitors should be careful not to enter in more classes than they can manage thoroughly well, as it is certainly more gratifying to win in one good class than to enter in three or four, and probably go down in all of them; so beginners should select one or two classes in which they think they have a fair chance of winning, and use every endeavour to make their exhibits as strong as they possibly can. If they do not win, they should take a quiet look round afterwards with an unbiassed mind, and it is quite probable that they will see their own faults and their neighbours' strong points, and so prepare themselves for the next show, when previous errors (probably in arrangement) may be rectified, and possibly a prize or two will be the result.

Returning to points of culture, quite early in the spring I believe I gave a list of varieties that require shading so as to show them in perfect colour. I need hardly go over the ground again, but I would remind readers that all the salmons (including Stirling Stent) must be shaded, also many of the orange-shaded varieties; to these I would add the variety Charles Foster, as I doubt if this will ever be shown in good form without a little shade, as the flowers have a quite blue tint if exposed to much sun. It is quite easy, however, to overdo the shading, and for the salmons very thin tiffany or butter muslin is sufficient, and even less shading than this will do for the orange varieties, two or three thicknesses of fish netting being all that is required to keep most of them from burning. Three days previously is quite early enough to put on the shading before a show, and if it can be kept 3ft. or 4ft. above the flowers, so much the better, so that a good current of air can pass between the bloom and the tiffany, as I have found them scald as quickly with hot air as they do from the direct rays of the sun.

I have heard it said that flowers of the above-mentioned shades are much more brilliant if cut very young and opened in water, but my experience is very different to this; in fact, quite opposed to it, and, further, very young flowers never open properly, and certainly do not get nearly as large as when the spikes are left on the plants and cut just before the top bloom is at its best, or when this is about three parts open. However, to make quite sure, intending exhibitors might try this for themselves by cutting some very young blooms and opening them in water, and compare them with those opened on the plant under the shading as advised.

Another point: do not put the flowers in a dark place after cutting, but put them in a light, airy place away from the sun, and the size they will attain under this treatment is very often surprising.

T. Stevenson.

VISIT TO A SCOTTISH SCHOOL GARDEN.

A few days since I had the pleasure of being one of the guests of the Ellon and Deer branches of the Scottish Educational Institute, which met at Ellon, Aberdeenshire. The joint outing was under the auspices of the Aberdeen and North of Scotland College of Agriculture, and the Ellon School Board, and the main object was to view the success which has been achieved in the work of school gardens at Drumwhindle School under Mr. Lewis Gavin, head master. The day was an ideal one, and the large company of over eighty teachers were under the guidance of Mr. Gavin, and Mr. George G. Esslemont and Mr. F. A. Thomson, of the Aberdeen and North of Scotland College of Agriculture.

The company foregathered at Ellon, and a drive of a few miles to Drumwhindle, which was greatly enjoyed, brought the company to one of the finest school gardens in the three kingdoms. The garden measures a quarter of an acre, and is enclosed by a dyke on the sides touching the school grounds and the public road, while a close wooden fence, built by the boys of the school, borders the other two sides. At two corners of the garden there are neatly constructed rockeries. In one at the north side some rustic woodwork has been neatly wrought in, and the whole were planned and carried out by the boys. The plants for the rockeries were supplied by the Cruickshank Botanical Gardens, Aberdeen, and the herbaceous plants were obtained from gardens around Drumwhindle, while the rustic woodwork of the arches was supplied by the Earl of Aberdeen, from Haddo House. Coming now to details, we found in the first border all the plants prominently named on green labels of wood in white printing. Round the walls were trees comprising roses, apples, plums, and cherries. Later in the season, Mr. Gavin explained, it was the intention to experiment in budding and grafting, and budding had already been performed on thorn stocks. To the left of this border was a small plot in which the younger children were allowed to plant various specimens under the direction of the teachers, but the gardening otherwise is done and confined to the grant-earning pupils over 12. Next to be seen were a few hybrid perpetual roses and the various classes of herbaceous plants, as campanulas, veronicas, Michaelmas daisies, etc., with two beds of carnations, chrysanthemums, and dahlias.

Passing on to the centre of the garden, the members of the party were shown the ten vegetable plots, each measuring 30 feet by 9 feet, and each worked by a boy and girl in "partnership." Mr. Gavin explained to us that this system of partnership wrought exceedingly well; the boy did the hard work, while the girl did the tidying, for the girl would not be so inclined to leave the plot in a state of disorder as a boy might be. The plots contained cabbages, potatoes, shallots, onions, carrots, beetroot, parsley, turnips, and lettuces. In referring to the potatoes, Mr. Gavin pointed out that experiments had been made with planting out whole and cut potatoes for seed, and it was found that the whole potatoes planted produced almost twice the crop of that realised from the cut seed. For the growing of vegetables there was a system of granting marks to the scholars, and this had proved most encouraging to the enthusiastic pupils.

Near the south wall we found an admirably designed crown of violas, which had been planted in token of the Coronation year, and the decoration gave every sign of proving a beautiful display. In the work of designing, we were told, the scholars were left to their own initiative, and certainly the result reflected the highest credit on all concerned, and especially was this shown in the different seats and arches made in rustic work.

The company were then taken to a border of gooseberry bushes, which the pupils were taught to prune carefully. Here, also, we found raspberries nicely trained on wires with plenty of space between each plant and row. Next to this was a seed bed from which the pupils obtained the various seedling plants. Two neighbouring plots were devoted to experimental purposes—in one the growing of grains, supplied by the Aberdeen and North of Scotland College of Agriculture, and in the other turnips, the manure for which was kindly supplied by Provost Rae, Ellon. We also found here a small patch devoted to the growing of a huskless grain from Manchuria, and the results here are looked forward to with much interest. Adjacent to the foregoing we found a plot containing five different varieties of peas, to test the percentage of fertility and production. Then to the north is a plot of vegetable marrows, each pupil having the care of one marrow. We were then led to the carrot bed, where there were three rows sown without any manure, three other rows with rank farmyard manure, and three more rows with nitrate of soda.

The herb border was a source of much interest to the visitors. Here were found mints, thymes, rues, hyssop, sage, borage, etc., and the children are to have lessons in the various properties of the herbs. About 60 feet of the border facing south is devoted to biennials and annuals, all coming away capitally despite the dry weather. The wall facing the same direction is covered with rambler roses and various tropæolums.

Needless to add, the descriptive remarks and interesting information heard from Mr. Gavin were greatly enjoyed, and the hearty vote of thanks accorded to this gentleman for his afternoon's labour was nothing more nor less than value honestly received.

W. K.

Gentiana septemfida.—Ere the first flush of the rock garden display is over the charming crested gentian begins to unfold its flowers. It is one of the loveliest species in a genus replete with good things, and is of enhanced value owing to the period when it flowers, namely, June and July. It is a deciduous species, and forms a neat rounded bush of prostrate and erect stems some 9 to 12 inches in height; the flowers are large, cylindrical, azure blue with a white throat, and are arranged in clusters on the terminal points of the annual stems. Gentiana septemfida belongs to the stay-at-home section, and forms a tufted root stock which takes some time to establish, hence it is desirable to group several plants together in order to convey a lasting impression of its great beauty. It succeeds in a rich, gritty loamy soil, with or without limestone, requiring a plentiful supply of moisture during the growing season, and with these conditions present it withstands abundant sunshine.—Thomas Smith.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

CATTLEYA WARSCEWICZI (GIGAS), in its varied forms, is one of the most beautiful of the genus, and, as it flowers at the season of the year when other members of the family are growing, it is exceedingly useful. The plants now have their growths so far advanced that in most cases they are displaying their flower sheaths, and so must now be given every encouragement that will assist them to develop their growths and produce satisfactory flowers. There are several forms of C. Warscewiczi; some are exceedingly shy flowering, in fact, the majority of the plants fail to give satisfactory flowers unless their pseudo-bulbs are properly ripened, and even then a great deal will depend on the treatment given. There is no cattleya that derives greater benefit from the effects of strong light, all the protection needed is to prevent actual scorching of the foliage, and unless the shy-flowering kinds are grown under these somewhat hard conditions, they may be cultivated for years with most unsatisfactory results. I find it advisable to grow the whole of the varieties of this species suspended near the roof glass in shallow pans. With the early-flowering varieties, or in cases where plants have failed to bloom, there is a great difficulty in preventing the plants making a second growth, and in such cases it is advisable to select a position where the plants may be kept in a cooler state with a reasonably free and drier atmosphere about them. Root action usually commences with the maturing of the growths. Any plants that require repotting should be attended to as soon as they pass out of flower, using a lasting compost of about equal proportions of fibrous peat, osmunda fibre, and chopped sphagnum, with sufficient sand and broken charcoal added to render the compost porous. Give freshly potted plants every encouragement to root into the new compost.

CATTLEYA AUREA is another species which I have found to grow best and give most satisfactory results when grown in as small a receptacle as possible and suspended near the roof glass. From the time growth commences until this reaches maturity, the plants require a hot humid atmosphere, and a liberal amount of root moisture. Many of the plants flower before the actual completion of the growths, so that care must be taken not to commence resting conditions before growth is finished. The natural hybrid C. Hardyana, which is imported with C. aurea, varies very considerably in its time of flowering; in some cases it flowers even earlier than C. Warscewiczi, while others flower quite late in the autumn. The conditions and treatment required are the same as that found successful with the above-mentioned species.—H. J. CHAPMAN, Oakwood Gardens.

STOVE PLANTS.

NIDULARIUM MEYERDORFI. — The brilliant scarlet leaves which immediately surround the flower spike of this interesting stove plant, together with the base of the beautiful green foliage, render the plant most attractive and well worth a position in any collection of foliage plants. An intermediate temperature will be found suitable during its flowering season; our plants are now making an attractive display, after which the suckers will be removed from the parent plants and potted up singly; they may be kept close and freely growing during the autumn if it is desirable to flower them early next summer.

POINSETTIAS which are now well-rooted in sixty-sized pots may be shifted into four-inch or five-inch pots according to the size and strength of the stock treated; use the best procurable fibrous loam (yellow, if possible) and peat, with charcoal and sand to keep the compost porous and sweet. Poinsettias should not be allowed too much rooting space, as when cultivated in small pots with the assistance of regular but judicious feeding they become more thoroughly ripened, and consequently retain their foliage in a better condition, while the bracts are usually of better quality. Immediately after potting poinsettias must be shaded from the sun, and a gentle spraying overhead with the syringe will be beneficial and prevent damage to the foliage from insects. As the plants become established somewhat in the new soil they may be gradually hardened off to cool pits or frames, and kept as near the glass as circumstances permit; allow each plant to stand clear of its neighbour and admit air on all favourable occasions.

BOUVARDIAS are now ready for their final flowering pots, and it will be advisable, particularly in the north, to repot them without further delay, so that they may become well established before the winter months arrive. When they are not disposed to branch naturally, the extreme tips may be removed to induce the shoots to break into more bushy growth; this practice may be repeated again until the end of July, after which the flower spikes should be allowed to extend. Weak liquid manure may be applied occasionally, with an alternate application of clear soot water. A central stake should be firmly fixed to each plant, and the main shoots neatly looped to it. Red spider and aphis, which are often troublesome pests, must be kept in check by syringing with insecticide. The plants which are now in their cool pits or frames will require abundance of light and ventilation during favourable weather, but during excessive hot sunshine they need a thin shade. Close the frames early during the afternoon and syringe thoroughly to encourage free root action and assist the plants in maintaining that sturdy and healthy appearance which is so desirable.

ADIANTUM CUNEATUM.—When one is anxious to maintain a supply of this indispensable fern for winter decoration, it is advisable to subject the plants to somewhat cooler conditions, and for this purpose heated pits or frames are well adapted, using artificial heat only to counteract damping and during cold nights. The plants should be thinly disposed, and allowed ample ventilation. Cold draughts must be avoided. The ferns may also be exposed gradually to the sunshine, and where this method of procedure is practised an excellent supply of fronds will be obtained throughout the winter.—JOHN DONOGHUE, Bardon Hill Gardens.

FRUITS UNDER GLASS.

MELONS.—These are very delicious in hot weather when ripened up well, and at this season can well be grown in frames, and if planted as recommended in a former calendar the plants will be showing a goodly number of fruits. If planted in a pit as recommended there ought to be eight to twelve melons per light; give these liquid manure at every other watering, and a little top-dressing of a fertiliser will help the final swelling of the fruits. See that each melon is set upon a slate or pot to expose it to the sun and also to keep it from the soil. Prevent the foliage becoming too thick by constantly pinching out the laterals. When watering is being done do the work thoroughly. Syringe the plants well at shutting-up time, and if in unheated frames, this should be done earlier than is usual in frames that have hot-water pipes; if necessary give a light sprinkling at 7.30 to 8 o'clock. We have now begun to cut our second and third batches from the houses. Successional crops will now require supports, and I know nothing better than the melon nets, which can be bought cheaply and will last several years if rolled up and kept in a dry drawer when not in use. Lateral growths should be stopped as advised for frame culture, and sublaterals pinched close back, and if seed is required for stock, grow a batch of melons in a separate house, and pollinate with own pollen. Sow seeds now for the last crop, which should ripen in September and October; sow in small pots, and place in a warm pit, choose good sterling varieties for this crop.

STRAWBERRIES FOR FORCING.—No time should be lost now in preparing for a supply of layers. Early runners are not extra plentiful this season. Prepare a suitable compost, which should consist of maiden loam well broken up, and some decomposed horse manure, a 32 pot full of bone-meal to every wheelbarrow load of compost, and a 48 pot full of soot. This should be well mixed up. It is best to prepare enough for the whole series of layers. Small pots may be used for the runners, or the runners may be laid into the fruiting pots direct. If a hot season and when runners are late, the latter is perhaps the best method. If layered in small pots no crocks need be used; put a few loose lumps of soil in the bottom, fill up with soil, make firm, and fasten the layer on with a wire peg, which will keep it securely. Place as many pots as possible close together as this will save time in watering; do not layer from barren plants. In about a fortnight the plants will be ready for removal. If layered in the fruiting pots the pots must be well drained and the soil made very firm by ramming. Royal Sovereign, President, Keen's Seedling, and the old Vicomtesse Hericart de Thury are still unsurpassed.

ORCHARD HOUSE.—Keep the trees well supplied with liquid manure, and as soon as the cherries are finished, give the trees a thorough cleansing with a good insecticide. Keep the growths of plums and pears pinched in, so that too much growth is not made at the expense of the fruit; water thoroughly as often as necessary, and be quite sure that the water reaches all the roots, as nothing will cause the leaves to become a bad colour and the fruit to drop more quickly than excessive dryness at the roots.—W. A. COOK, Leonardslee Gardens.

THE FLOWER GARDEN.

ROSES.—The early-flowering varieties of the rambler section which have ceased blooming will now require attention with regard to pruning and thinning. In many cases the best results are obtained from the previous year's growth, therefore it is necessary to give the young shoots every encouragement by tying them in their permanent places at an early period. Where these are growing on arches or pergolas the growths should be taken quite off the supports, and sufficient of the old wood cut out to allow the young growths to be trained in thinly and evenly. A good top-dressing of well-decayed manure will prove of great benefit, and copious waterings should be given during dry weather. This latter remark also applies to all at this season of the year, as it greatly assists them in the production of the second crop of flowers and in the formation of new growth for next season's flowering. All decaying blooms should be removed, and the beds occasionally stirred over with a hoe. From the middle to the end of the month the budding operations may be proceeded with, the actual time to be decided upon by the way in which the bark leaves the wood. When it is found that the bark parts from the wood easily and cleanly budding should be proceeded with.

DAFFODILS.—When these become overcrowded, the flowers are naturally small, hence the need for lifting and dividing. If growing in beds or borders by themselves the task is an easy one, but when in grass the work is more difficult, and the grass is bound to have a patchy appearance after lifting. The poeticus section is the one which usually commences to grow first, and these should be the first to receive attention. It is not advisable to divide the roots too severely, as in many instances the wound caused by breaking off the side bulbs often induces disease or rot.

VIOLAS which are being grown for propagating purposes should be pruned by cutting off all the old growths close to the ground. This operation will encourage the plants to produce young shoots suitable for cuttings. Immediately these latter are large enough they should be taken off and inserted in sand in a cold frame, which should be kept close and shaded till root action commences.—E. C. POOLEY, Gnaton Gardens.

EXHIBITIONS AND MEETINGS.

Festival of Empire Rose Show.

A very extensive rose show, organised by Mr. Geoffrey Henslow for the Festival of Empire, was held at the Crystal Palace on Thursday, June 29, and, though there were few flowers of super-excellence, there was a very even range of quality all through, and everyone appeared to be very satisfied, both with the classes, the flowers, and the general arrangements. No cash prizes were offered, and there were nearly silver cups enough for everyone, and gold and silver medals galore, and, as a great number of these prizes were gifts the show was of unusual interest. So successful was this exhibition that we understand another display will be organised for September. Judges and exhibitors, officials and Pressmen were entertained at luncheon under the genial presidency of Lord Windsor, and afterwards Lady Plymouth distributed the prizes to the successful competitors.

NURSERYMEN.

The Canadian Pacific Railway Company's fine silver cup for forty-eight roses was won by Messrs. B. R. Cant and Sons, Colchester, with a fine set of blooms that contained Yvonne Vacherot, Lyon Rose, F. K. Druschki, White Maman Cochet, Bessie Brown, Captain Hayward, J. B. Clarke, Harry Kirk, Mdme. Jules Gravereaux, Maman Cochet, and B. Cant, particularly good; Messrs. Alex. Dickson and Sons, Newtownards, Co. Down, second, and Messrs. R. Harkness and Co., Hitchin, third.

The best three dozen blooms, distinct, which won Lord Northcote's silver cup, came from Mr. Hugh Dickson, Royal Nurseries, Belfast, who had a beautiful set of clean, fair-sized flowers, with J. B. Clarke, Mrs. David McKee, Horace Vernet, Bessie Brown, Lieut. Chauve, and Princess Beatrice as specially good; there were five competitors, and Mr. George Prince, Longworth, came second; and Messrs. G. and W. H. Burch, Peterborough, were third.

For two dozen flowers, distinct, Mr. J. Mattock, New Headington, Oxford, led, and he had Lyon Rose, H. Dickson, Charles Darwin, and Duke of Wellington in good form; Mr. Henry Drew, Longworth, second, and Mr. W. R. Chaplin, Joyning's Nurseries, Waltham Cross, third; seven entries.

The best sixteen varieties, three blooms of each, were shown by Messrs. A. Dickson and Sons, who led from six competitors, and had excellent flowers of Mrs. Theodore Roosevelt, Mrs. W. J. Grant, Horace Vernet, G. C. Waud, and Gloire de Chedane Guinoisseau; Messrs. Frank Cant and Co., Colchester, second, and Messrs. B. R. Cant and Sons, third. Of eight trebles there were fourteen entries, and the cup as first prizé was won by Mr. George Prince, Longworth, who scored with Mrs. T. Roosevelt, Avoca, Lyon Rose, J. B. Clarke, F. K. Druschki, Ulrich Brunner, etc.; Messrs. R. Harkness and Co., second, and Mr. Henry Drew third.

The Earl of Plymouth presented a silver cup for the best eighteen teas and noisettes, and this was won by Mr. George Prince, Longworth, with somewhat small but bright, clean flowers of Mrs. E. Mawley, Mdme. Constance Soupert, Comtesse de Nadaillac, The Bride, Mdme. de Watteville, etc.; Messrs. B. R. Cant and Sons second, and Mr. Henry Drew third. For a dozen tea or noisette roses there were five entries, and here Mr. John Mattock scored a first, and was followed in order by Messrs. J. Jefferies and Son, Cirencester, and the King's Acre Nursery Company, Hereford; in every case the flowers showed signs of the recent wind and rain. The gold medal for a dozen trebles, teas or noisettes, was won by Messrs. B. R. Cant and Sons, whose best flowers were of White Maman Cochet, Bridesmaid, Golden Gate, Maman Cochet, and Muriel Grahame; Mr. G. Prince second, and Messrs. A. Dickson and Sons, third. The gold medal for six trebles fell to Messrs. Robert Harkness and Co., Hitchin.

NURSERYMEN'S ROSES IN VASES AND DECORATIVE VARIETIES.

For a dozen varieties of exhibition roses in vases, seven blooms of each, the "Daily Telegraph" Cup was the premier award, and here the winners were Messrs. D. Prior and Son, Colchester, whose best vases were of Mrs. Theodore Roosevelt, Mrs. J. Laing, Lyon Rose, Avoca, Maman Cochet, and White Maman Cochet; Messrs. R. Harkness and Co. second, and Messrs. Alex. Dickson and Sons, third.

There were three entries of nine varieties of tea or noisette roses in vases, seven blooms of each, and here nearly all the flowers were badly weathered; Mr. J. Mattock led, winning Sir J. Lyons' cup; Medea and Mdme. Jules Gravereaux were good; Mr. Henry Drew second, and Mr. George Prince third.

There were five big banks of decorative roses, each composed of two dozen bunches in as many varieties, and here the Empire Festival Cup was won by Mr. John Mattock, New Headington, with a very fine display that included grand bunches of Crimson Damask, Peggy, Betty, Simplicity, Mdme. Abel Chatenay, Warrior, Mrs. Flight, and Leuchtstern; Messrs. Frank Cant and Co. second, and Mr. George Prince third. Messrs. W. Spooner and Son, Woking, came first for eighteen vases of decorative roses, with Messrs. J. Jefferies and Son second, and Messrs. G. Mount and Sons, Canterbury, third.

The best dozen flowers of any new rose were examples of Leslie Holland, crimson, from Mr. Hugh Dickson, Belfast; Messrs. Perkins and Sons, Coventry, second, with G. C. Waud, and Messrs. Harkness and Co third with Lyon Rose. Messrs. B. R. Cant and Sons led for a dozen roses, introduced during 1908 or later; Ethel Malcolm, Lyon Rose, Rhea Reid, and Claudius were the most striking; Messrs. A. Dickson and Sons second, and Mr. Hugh Dickson third.

The best dozen blooms of a H.P. rose were grand clear examples of Mrs. John Laing from Messrs. R. Harkness and Co.; Mr. J. Mattock second with the same variety; thirteen entries. Out of fifteen competitors Mr. J. Mattock led for a dozen blooms of a H.T. rose with Mrs. Theodore Roosevelt in fine condition; Messrs. Stuart Low and Co., Enfield, second, with Lyon Rose, and Messrs. G. Mount and Sons third with White Killarney. There were fifteen entries of a dozen blooms of a tea rose, and here Messrs. D. Prior and Son led with White Maman Cochet; with Messrs. B. R. Cant and Sons second, and Messrs. R. Harkness and Co., third with Mrs. E. Mawley.

AMATEURS.

In the open amateur division Mr. Conway Jones secured the Empire Festival Cup for three dozen roses with a moderate set, in which Mrs. E. Mawley, White Maman Cochet, and F. K. Druschki were good flowers; Rev. J. H. Pemberton second. Mr. Alfred Tate won the Duke of Fife's cup for twenty-four flowers, and he showed Helene Guillot, Mrs. T. Roosevelt, Bessie Brown, Florence Pemberton, Mdme. M. Soupert, and Mrs. J. Laing well; Mr. Skeys, gardener to F. Dennison, Esq., Cranford, Leamington, second; and Dr. T. E. Pallett, Earl's Colne, Essex, third.

For a dozen trebles Mr. Alfred Tate was again to the front, and the varieties noted in his previous win were also good here, with Mdme. Melanie Soupert also fine; Mr. F. Dennison second, and Mr. G. A. Hammond, Cambrian House, Burgess Hill, third. For a dozen blooms of any rose Mr. Alexander Hill Gray, Beaulieu, Bath, led with Lyon Rose in fine form; Mr. A. Tate second, with Bessie Brown, and Dr. Pallett third with Frau Karl Druschki.

In the section for growers of fewer than 3,000 plants, there were three entries of two dozen flowers, and here Mr. Burdfield, gardener to E. M. Eversfield, Esq., Denne Park, Horsham, won the King's Acre Nurseries' Cup with a good set of blooms; Mr. G. R. Bonnor, Barnwood, Gloucester, second, and Mr. J. A. L. Fellowes, Banwell Rectory, third. There was a rare competition in the class for eighteen blooms, and here Mr. H. Robins, Ingatestone, scored from thirteen entries with a very fine set in which A. K. Williams, Florence Pemberton, Mrs. T. Roosevelt, Mrs. J. Laing, G. C. Waud, and Mrs. Sharman Crawford were especially good; Mr. O. G. Orpen, West Bergholt, was a good second, and Mr. W. O. Times, Hitchin, came third.

Dr. Charles Lamplough, Alverstoke, led for eight trebles, followed by Mr. E. M. Eversfield and Mr. W. R. Hammond. Dr. Lamplough also led for six blooms of one variety with beautiful flowers of Frau Karl Druschki; Mrs. W. Upton, Belgrave, Leicester, and Rev. L. C. Chalmers Hunt, Willian Rectory, Hitchin, were also prize-winners in this section, while Messrs. J. Cheal and Sons' cup for six trebles was won by Mr. Wm. Upton, his J. B. Clarke and Mdme. Jules Gravereaux being fine; Mr. James Gibb, Westfield, Reigate, second, and Rev. F. R. Burnside, Great Stanbridge, Essex, third.

AMATEURS' TEA ROSES.

In the chief amateurs' class for tea roses, eighteen blooms were required, and the silver cup offered as first prize was won by Mr. A. Hill Gray, Bath, with Ernest Metz, Dr. F. Guyon, White Maman Cochet, Maman Cochet, Mrs. E. Mawley, R. W. Smith, and Baronne H. Snoy, in fine condition; Mr. Conway Jones second, and Mr. Alfred Tate third. Mr. Eversfield had the best dozen tea roses, and was followed closely by Mr. O. G. Orpen, with Dr. F. H. Cooke, Birch, third.

AMATEURS' DECORATIVE ROSES.

The Empire Cup for eighteen bunches of decorative roses was won by the Rev. J. H. Pemberton, Havering, who had a fresh set that included Gustave Regis, Electra, Macrantha, Aglaia, Una, and Lady Curzon; Mr. Mease, gardener to A. Tate, Esq., Downside, Leatherhead, second, and Mr. F. Chambers, gardener to H. V. Machin, Esq., Gateford Hill, Worksop, third. The N.R.S. Cup for a dozen varieties was annexed by Mr. Conway Jones, Heathcote, Gloucester, who was followed by Viscountess Enfield, Dancers Hill, Barnet, and Mr. O. G. Orpen, West Bergholt, Colchester.

For six bunches of decorative varieties Mr. F. A. George, Redhill, Worcester, beat Dr F. Cooke, Birch, Colchester, and Mr. J. Hart Lochmuir, Potters Bar. The Rev. J. H. Pemberton led for six vases of the sweetest-scented roses, winning with Seagull, Zepherine Drouhin, York and Lancaster, Moschata, Mdme. Alfred Carriere, and Rene Andre; Mr. A. Tate second, and Mr. F George, Worcester, third.

FLORAL ARRANGEMENTS.

Mr. Howard Williams, Willow Cottage, North Finchley, had the best vase of roses; Mr. O. G. Orpen led for ladies' sprays and also for gentlemen's buttonholes. Mr. H. Williams scored for a bowl of roses with Mrs. J. Laing well arranged, and Mr. Peters Wood, Broom Lodge, Weybridge, scored for a basket of roses, and in every case the competitor was good all through.

Mrs. Alex. Robinson, Norhyrst, Carshalton, led for a table decoration of roses, winning a silver cup for a design in Mdme. Abel Chatenay, croton leaves, and asparagus sprays; Miss Jessie Langton, Raymead, Hendon, second, and Mrs. Curnock Sawday, Rydal Mount, Weybridge, third.

NEW AND MEDAL ROSES.

The silver cup for the best new rose was won by Messrs. Alex. Dickson and Sons, Newtownards, with Queen Mary, a brilliant yellow and rose-shaded variety; Mr. Hugh Dickson second with the deep dark crimson King George V., and the same firm third with the Hon. G. Lawson Johnston.

The gold medal offered by Messrs. Clay and Son, Stratford, for the best bloom in the show, was won by Messrs. D. Prior and Son, Colchester, with a glorious flower of Frau Karl Druschki.

NON-COMPETITIVE.

Messrs. Kelway and Son, Langport, Somerset, contributed a large collection of delphinium spikes, showing all shades of blue from the palest shade to deep violet; Lord Napier, Lemberg, Knight of Langport, Star of Langport, Summer Sky, Dr. Lodwidge, and Empress Queen were a few particularly fine varieties. Messrs. A. A. Walters and Son, Bath, showed a large group of beautiful spikes of their exquisite blue and white delphinium named Rev. E. Lascelles.

Mr. A. Hemsley, Crawley, put up a little rock garden, the chief occupants of which were Gypsophila Stevensi, Aster alpinus, Primula Littoniana, P. Poissoni, Œnothera mexicana, dianthuses in variety, and Sedum Powelli. Mr. Walter Easlea, Eastwood, Essex, staged a large collection of roses, showing popular varieties in baskets and vases; Lyon Rose, Mdme. Jules Gravereaux, Marquis de Sinety, Charlotte Klemm, and General Macarthur were varieties well shown.

Richmond.

Favoured with fine weather, and held amid the most delightful surroundings in the famous Old Deer Park, the Richmond flower show was a good one on June 28, but not nearly so good as on some previous and recent occasions. Probably the Norwich Show kept back some of the traders, while Windsor, Walton, and other rose shows provided attractions which rosarians, trade and amateur, could not resist. Five big tents were used, and there was plenty to look at, to interest, and instruct, notwithstanding the slight falling off in entries.

GROUPS AND PLANTS.

In the open class for a group of plants arranged for effect on a space of 100 sq. ft. the premier award of £8 fell to Mr. H. Burfoot, gardener to Sir Max Waechter, The Terrace House, Richmond, who had a very pretty exhibit, elegantly composed of pink spiræas, bright crotons, liliums, humeas, palms, ferns, and gloxinias, with a veiling of gypsophila over the ferns and below the latter subjects. Messrs. Card and Denny, Thames Ditton, came second with a rather heavy group of crotons, palms, campanulas, begonias, liliums, pelargoniums, etc.; Mr. T. J. Broom, gardener to Miss Langworthy, Gays House, Holyport, third.

Mr. G. Hale, gardener to Samuel Larkin, Esq., The Ridgways, Haslemere, was easily first for a 60ft. group, winning with a pleasing arrangement, in which cattleyas, læliocattleyas, odontoglossums, phalænopsis, and miltonias were associated with the usual foliage plants; with the exception of spiræas orchids were the only flowering plants used; Mr. W. H. Keary, gardener to Mrs. Cowper Coles, Hedingham House, Twickenham, second.

For six palms there was but one entry, and for this Mr. H. Burfoot was awarded a second prize. Mr. H. Lawrence, gardener to Mrs. Vaughan Arbuckle, Stawell House, Twickenham, scored for half a dozen specimen ferns, and Mr. H. G. Worsfold, gardener to A. King Farlow, Esq., Teddington Hall, Middlesex, was a good second. Caladiums, always well shown at Richmond, were best displayed on this occasion by Mr. A. Allum, gardener to L. Warde, Esq., Petersham House, Petersham, who had six medium-sized, finely-coloured specimens; Mr. H. Lawrence was second. Coleuses were not so good as usual, and Mr. Lawrence and Mr. Allum were awarded second and third prizes respectively.

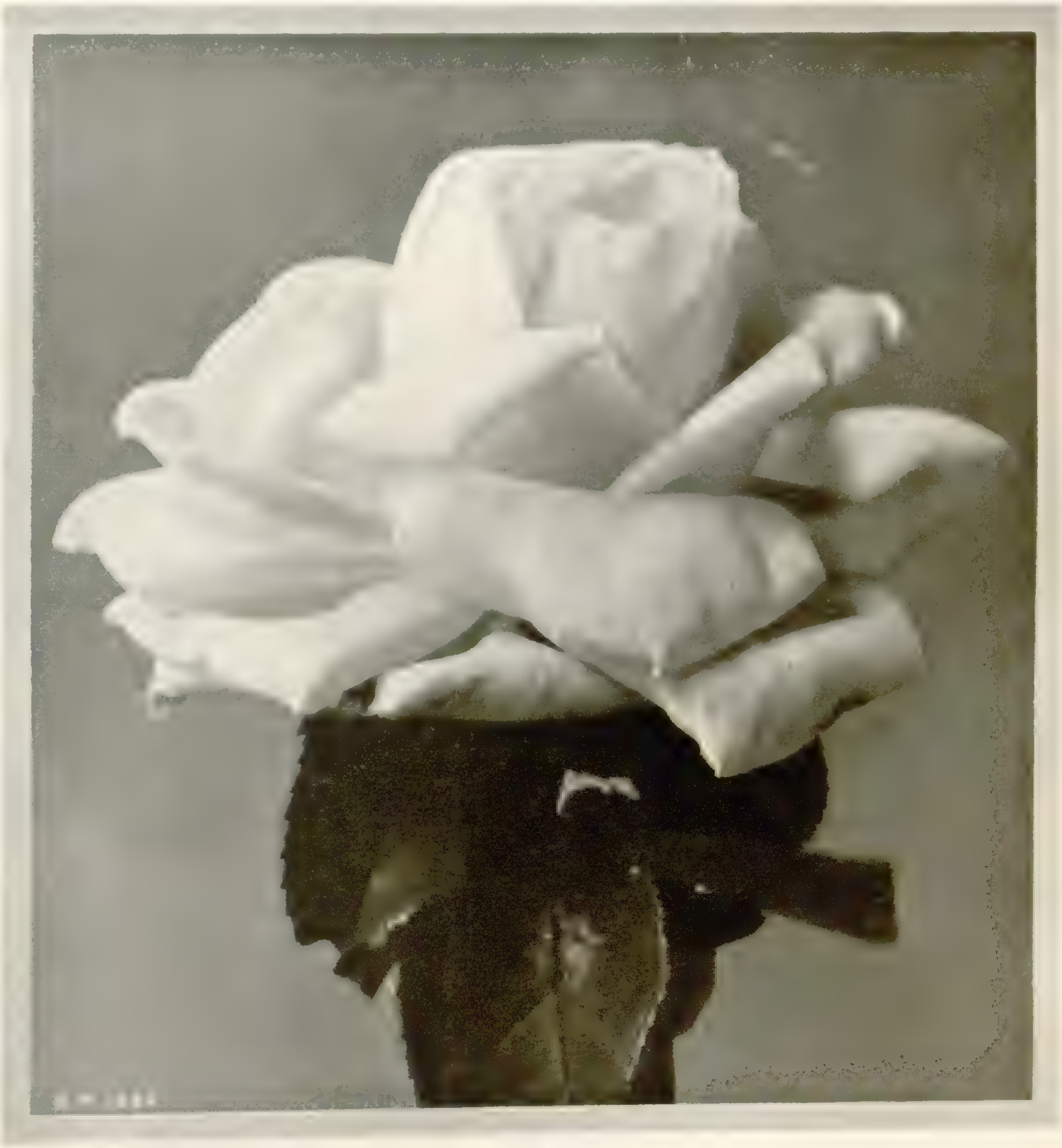
The graceful pillar-shaped fuchsias were very pretty, and for six specimens Mr. Keary led the way with very freely-flowered plants that included the old Rose of Castile; Mr. Lawrence second.

Mr. W. Chant, gardener to E. D. Bennett, Esq., Darby Lodge, Sunbury, had easily the finest half dozen gloxinias, perfect plants. Mr. W. J. Hill, gardener to G. Atkins, Esq., Manaton, East Sheen, led for six tuberous begonias, and the latter scored for streptocarpuses with big, freely-flowered plants.

The best half-dozen orchids, distinct, were from Mr. A. Howard, gardener to H. Little, Esq., Baronshalt, Twickenham, who presented Cattleya Gaskelliana, C. Mendeli, Lælia purpurata, L. Pacuvia, L.-c. Tyntesfieldense, and L.-c. Zephyra; Mr. S. Fiddeman, Franch Court Road, Tooting, second, and Mr. Hale third.

CUT FLOWERS.

The Gunnersbury Park Challenge Cup was easily won this year by Messrs. Frank Cant and Co., Colchester, as this firm had no competitors in the class for forty-eight trebles. Their best blooms were of Lyon Rose, Mdme. Melanie Soupert, Florence Pemberton, Mrs. Theodore Roosevelt, Bessie Brown, Mrs. J. Laing, Mrs. Cocker, Frau Karl Druschki, and Konigen Carola. For a dozen roses, three blooms of each, Messrs. W. Crisp and Sons, West Bergholt, scored a first, and had nice flowers of Bessie Brown, Lyon Rose, Mrs. J. Bateman, and Mrs. Theodore Roosevelt; Messrs. G. and W. H. Burch, Peterborough, second, and Mr. Henry Drew, Longworth, Berks, third.



BLOOM OF ROSE FRAU KARL DRUSCHKI.

Selected for the Award of the Gold Medal given by Messrs. Clay and Son for the best bloom in the Festival of Empire Rose Show. Exhibited by Messrs. D. Prior and Son.

For two dozen roses, three blooms each, Messrs. G. and W. H. Burch led the way, showing Lyon Rose, A. K. Williams, Frau Karl Druschki, Her Majesty, and Lady Ashtown well; Mr. Henry Drew came second, and Messrs. W. Crisp and Son, third. Messrs. Frank Cant and Co., Colchester, scored for a dozen hybrid teas, their Mrs. Roosevelt, Helen Guillot, and Florence Pemberton being the best examples; Messrs. G. and W. H. Burch, second, and Mr. Henry Drew third.

The best dozen H.P. or H.T. roses were fine examples of J. B. Clark, shown by Mr. Henry Drew, Longworth; Messrs. Frank Cant and Co., second, with Mrs. John Laing; and Messrs. G. and W. H. Burch third with the latter variety. For a dozen tea roses Mr. Henry Drew scored with Mdme. Jules Gravereaux in fine condition; Messrs. G. and W. H. Burch second, and Messrs. W. Crisp and Sons, third, all with the same variety. Mr. A. Gregory, gardener to W. J. Turner, Esq., Pallanga, Teddington; Mr. Allum, Mr. G. Farel, 71, High Street, Hampton Hill, were leading prize-winners in the amateur rose classes.

Floral arrangements were pretty numerous, but scarcely such a feature as on some previous occasions. Mrs. Martin, North Road, Richmond, had the best basket of flowers, a pretty combination of white liliums and golden Spanish irises. The Mayor's prize for a table decoration was won by Mrs. A. Robinson, Norhyrst, Carshalton, with roses, croton leaves, and sprays of Francoa ramosa; Mrs. A. Bide, Farnham, second, with the Lyon rose prettily set out. Mrs. Robinson was first in another class with roses and lily of the valley; Mrs. Bide second with pink and orange sweet peas. Mrs. Bide had the best basket of roses. Mr. W. Fromow, The Quadrant, Richmond, led for a rose bouquet.

In the Eckford class for nine bunches of sweet peas Mr. S. Jordan, Addlestone, was placed first, Mrs. A. Ireland, Helen Lewis, and Tenant Spencer being the best varieties; Mr. C. Howe second, and Mr. S. Fuller, gardener to J. N. Stuart, Esq., Broomhill, Northolt, third. Messrs. Webb and Sons' prizes for eight bunches of sweet peas were won by Mr. T. J. Broom, and Mr. E. Skelton, Townshend Terrace, Richmond. Sir Thomas Skewes Cox's prizes for nine bunches of sweet peas were won in a fine competition in order by Mr. G. Baldwin, Greenford Green; Mr. W. Mousley, West View, Ashford; and Mr.

T. J. Broom. Mr. Baldwin had a fine lot, and especially good were Constance Oliver, Helen Lewis, Sunproof Crimson, Elsie Herbert, and Maroon Paradise. For six bunches, distinct, Mr. Baldwin was again the leader, his Asta Ohn and Thomas Stevenson being particularly good; Mr. T. J. Broom second and Mr. W. Mousley, Ashford, third.

For hardy flowers, twelve bunches, Mr. Allum led the way, his gladiolus and Lilium croceum being well represented; Mr. Skelton second. Mr. Allum was the only exhibitor of two dozen bunches of hardy flowers, and here his campanulas, Lychnis chalcedonica, delphiniums, and English Irises were conspicuously good.

FRUIT AND VEGETABLES.

Mr. W. Lintott, gardener to Sir Walpole Greenwell, Bart., Marden Park, Caterham, was the only exhibitor of six dishes of dessert fruit, and he thoroughly deserved the first prize, which carries with it the Waechter Challenge Cup and a cash award; he had three excellent bunches each of Foster's Seedling and Black Hamburgh grapes, a Hero of Lockinge melon, fine Royal Sovereign strawberries, Brown Turkey figs, and Early Rivers nectarines.

Mr. Lintott was first for three bunches of black grapes with neat clusters of Black Hamburgh; Mr. F. M. Tayler, gardener to T. J. Messom, Esq., The Hut, Strawberry Hill, second, with heavier, smaller-berried bunches that had been rubbed somewhat in carriage; Mr. G. Baldwin, gardener to A. W. Perkin, Esq., Greenford Green, Harrow, third. Mr. Lintott scored for white grapes with heavy bunches of Foster's Seedling, and Mr. Baldwin was second. Mr. C. Howe, gardener to G. T. Biddulph, Esq., Douglas House, Petersham, was first for two dishes of strawberries, and he staged grand fruits of Waterloo and Latest of All; Mr. H. Riley, West Lodge, Kew Gardens, second with The Bedford and Bedford Champion.

There was good competition in the vegetable classes. For a dozen distinct kinds Mr. T. J. Broom was placed first, and he had excellent Reliance Globe beet, New Standard carrots, White Tripoli onions, and Stourbridge Marrow peas, etc.; Mr. C. Howe second, and Mr. E. Montague, gardener to Colonel Biddulph, Grey Court, Ham, third.

In the class provided by Messrs. James Carter and Co., for nine kinds of vegetables, Mr. T. C. Howe was first, Mr. T. J. Broom second, and Mr. R. Keene, Manor Grove, Richmond, third. Mr. Keene was first in a special class for nine kinds in a very keen local competition. Mr. Keene, Mr. T. J. Broom, and Mr. E. Watts, Audley Road, Richmond, won awards as placed for six kinds of vegetables in the class provided by Messrs. James Veitch and Sons.

NON-COMPETITIVE.

Mr. H. Eckford, Wem, Salop, presented a big group of sweet peas that included Luminosa, Nancy Perkin, Arthur Unwin, Maud Holmes, and a host of older popular varieties. Mr. L. R. Russell sent hardy flowers in big bunches; Mr. W. H. Young, Mercury Nurseries, Romford, exhibited bright coleuses and elegant ferns; Mr. Karl Therkildsen, Old Southgate, presented cut roses; Messrs. T. S. Ware, Lim., Feltham, put up a very big and attractive group of delphiniums and other useful hardy flowers.

In the large double tent Mr. L. R. Russell had a long range of semicircular groups of well-grown stove plants that made a most effective display; alocasias, crotons, caladiums, and choice dracænas were prominent, with ixoras and anthuriums as flowering plants. Mr. H. E. Fordham, Twickenham, had a beautiful group of gloxinias, ferns, and liliums. A group of Japanese maples from Messrs. Fromow and Sons, Sutton Court, Chiswick, showed the great diversity of form and colour these elegant little trees possess. Hydrangeas, roses, Lilium speciosum, and L. Henryi from Messrs. James Veitch and Sons, Chelsea, made up a beautiful light-coloured display. Mr. William Thompson, Sheen Nurseries, Richmond, contributed a group of Acer Negundo, big palms, and hydrangeas.

Southampton Flower Show.

JUNE 27, 28.

The annual summer show of this society was held on the County Cricket Ground, and was a decided success. The entries were not so numerous as in some previous years, but the quality was of a high standard. Roses showed the effect of recent cold showery weather, yet, in spite of this, there was a fine display in this section. Fruit and vegetables were of a high order of merit, and trade exhibits were numerous, adding much to the attractiveness of the show.

ROSES.

Roses occupied the principal place in the prize list, there being twenty-two classes provided for them. Many of these were open to all. The principal class was for forty-eight blooms distinct. There were three competitors, and Messrs. D. Prior and Son, Colchester, won the premier position with medium-sized, highly-coloured flowers, some few displaying the effects of adverse weather. The most noteworthy blooms were Lady Ursula, Mdme. Jules Gravereaux, Mrs. John Laing, G. C. Waud, White Killarney, Hugh Dickson, Maman Cochet, Mrs. Stewart Clark, Florence Pemberton, and Lady Ashtown. Mr. H. Drew, Longworth, Berks, was second with excellent blooms.

Three staged in the class for twelve triplets, Mr. G. Prince, Longworth, Berks, winning with nice clean specimens of J. B. Clarke, Avoca, Mildred Grant, Mrs. S. Crawford, Frau K. Druschki, White M. Cochet, and Hugh Dickson. Mr. H. Drew secured the second position with desirable blooms of the Lyon Rose, Mrs. J. Laing, and J. B. Clarke.

Tea or noisettes in twelve varieties were contributed by four entrants. Mr. G. Prince secured the leading position with Mrs. E. Mawley, Mrs. Myles Kennedy, Comtesse de Nadaillac, and Lady Hillingdon. Mr. H. Drew second. The last-named was first for six blooms of any one dark variety with medium-sized examples of J. B. Clarke, Mr. G. Prince coming second. Messrs. D. Prior and Son, with clean, shapely blooms of Frau K. Druschki, was first among seven competitors in the class for any one white rose. Mr. Prince second with the same variety. Although there were but two competitors in the class for a display of decorative roses, arranged in a space of 7 feet by 3 feet, they created much interest. Mr. Elisha J. Hicks, Twyford, was first with nicely-arranged bunches of popular sorts of H.T. and polyantha kinds. Mr. Ernest Hicks second.

For gardeners and amateurs there was much encouragement. The "Munt" silver cup was offered for eighteen distinct varieties, and seven entered. Dr. C. Lamplough, Kirkstall, Alverstoke, was an easy first prize winner with high quality, if not large, blooms of popular varieties, A. K. Williams, W. Shean, and Frau K. Druschki being noteworthy. E. Percy Sugden, Esq., Uplands, Wimborne, was a good second. Dr. Lamplough was also successful with six varieties, three of each, staging good blooms of Hugh Dickson, Dean Hole, and W. Shean. Mr. A. C. Gregory, gardener to H. D. Broughton, Esq., Beech Hurst, Andover, second. D. Seaton, Esq., Woodside Cottage, Lymington, won for twelve tea or noisettes with neat, if small specimens. Miss Helen C. Aylmer, West End, second. For two vases mixed roses Mr. G. Ellwood, gardener to W. H. Myers, Esq., Swanmore House, Bishop's Waltham, was distinctly ahead of the other five entrants with a nice selection of varieties, in which Lyon figured prominently. A. Fort, Esq., Winchester, second.

SWEET PEAS.

Sweet peas are here a great feature, as they have long been, the early date ordinarily suits this neighbourhood to a nicety. Messrs. Toogood and Sons, Southampton, offer liberal prizes. For six bunches distinct Mr. G. Hoar, gardener to F. G. Raidore, Esq., Woodfield, Havant, was placed first, a decision that did not meet with universal approval; many persons favoured the third prize set from Mr. Usher, gardener to Sir Randolph Baker, M.P., Branstone Manor, Lyndhurst, but no doubt the judge favoured the extreme freshness of the premier collection. Mr. Usher was particularly successful in other classes, winning the premier award in the special classes provided by Messrs. Sutton and Sons, Reading, for six bunches; Messrs. Webb and Sons, Stourbridge, for eight bunches; and also Messrs. J. Carter and Co.'s prize for six, with high-class blooms of such popular varieties as Mrs. H. Dickson, Evelyn Hemus, John Ingman, Edrom Beauty, Clara Curtis, Othello Spencer, and Mrs. Usher. Mr. H. H. Lees, Warblington Cottage, Havant, was a good second in several classes.

FRUITS AND VEGETABLES.

Fruit was not plentiful, but it was of good quality. Mr. Ellwood had the best black grapes, large, shapely bunches, with finely-developed berries of Black Hamburgh. Mr. Foskett, gardener to Mrs. Ubsdell, New Milton, showed the best white grapes—nice examples of Foster's Seedling. Peaches from Mr. Surjour, gardener to Mrs. R. S. Farman, Rownhams, were very fine Hale's Early. Mr. Usher was first for a dish of nectarines. Strawberries are expected to be well shown in this neighbourhood, and so they were on this occasion. For two dishes Mr. Westron, gardener to L. Walker Munro, Esq., Brockenhurst, was first with handsome fruit of Bedford Champion and Givon's Late Prolific.

Vegetables are here numerously and well staged. Messrs. Toogood and Sons offered ten prizes for six dishes, and Mr. Ellwood was easily first with medium-sized high quality examples of cauliflowers, potatoes, peas, carrots, and tomatoes, all unnamed. Mr. Mattingley, gardener to Admiral Sir J. Hopkins, Greatbridge House, Romsey, second. Mr. Ellwood also secured Messrs. Sutton's premier prize for six dishes with Magnum Bonum cauliflower, Ideal potatoes, White Leviathan onions, Centenary peas, and Perfection tomatoes. Mr. Mattingley again second. Mr. Ellwood was unapproachable also in Messrs. J. Carter and Co.'s class for six dishes.

MISCELLANEOUS.

Trade exhibits were numerous, and did much to render the show a success. Mr. H. Burnett, Guernsey, had carnations R. F. Felton, Mrs. C. F. Raphael, Mikado, Snow Queen, and Afterglow (gold medal). Messrs. B. Ladhams and Co., Shirley, contributed an interesting collection of herbaceous cu flowers as gaillardias, heucheras, scabious, hemerocallis, campanulas, and an extensiv collection of pinks (silver-gilt medal).

Mr. M. Prichard, Christchurch, had Japanese iris in find condition, delphiniums variety, amongst which the Rev. Lascell was conspicuous, dark blue, with a pu white centre, Kniphofias Goldelse and Ruf with choice campanulas and Lilium Harriso made up a fine exhibit (silver-gilt medal).

Mr. J. Stevenson, Wimborne, had swe peas in quantity and of conspicuous quali The leading varieties were Thomas Steven- Enchantress, Constance Oliver, Mrs. Dickson, and John Ingman (silver medal.

Messrs. Jarman and Co., Chard, had ro sweet sultans, etc. Mrs. Lumley, Hava displayed sweet peas in quantity. Stir Stent, Clara Curtis, Elsie Herbert, and Av lanche were the most prominent. Mess Toogood, Southampton, had a fine exhib sweet peas, the collection consisting of varieties as Mrs. Hugh Dickson, Elsie He bert, Gladys Bert, The King, Minnie good, and Princess Victoria.

Messrs. W. H. Rogers and Sons, Southa ton, contributed roses in pots and in gr of cut blooms, with trees and shrubs, and interesting and well planted rockery.

Messrs. Kelway and Son, Langport, had grand display of delphiniums, as many fifty varieties, such as Star of Lang lavender and blue; Lemberg, extra da purple-violet; Monarch of All, Royal B Dusky Monarch, Viscount Melville, Lovely. The latter mauve and blue.

CARDIFF FLOWER SHOW.
By kind permission.
SOPHIA GARDENS, CARDIFF.
WEDNESDAY and THURSDAY, July 26th and 27th, 1911.
The renowned Full Band of H.M. 19th Queen Alexandra's Own Royal Hussars.
Grounds and Tents brilliantly Illuminated.
Mr. John Studt's Complete and Extensive Amusements.
Every Particular and Schedule, Apply
A. MAURICE BAILEY, Secretary,
24. Duke Street, Cardiff.

LEICESTER.—ABBEY PARK FLOWER SHOW, 8th and 9th August next. Open Class, Group of Plants, £20, £15, £10, £6. Liberal prizes for Collections of Fruit, Displays of Roses; Silver Cup, Gold and Silver Medals for non-competitive exhibits. Schedules from JOSEPH BURTON, Supt.

SHREWSBURY GREAT FLORAL FETE.
AUGUST 23 and 24, 1911.

£1,200 in Cash Prizes.

Schedules for this year are now ready, and may be had post free from—
Messrs. ADNITT and NAUNTON, Hon. Secs.,
Shrewsbury.

WOLVERHAMPTON.
TWENTY-THIRD GREAT FLORAL FETE,
JULY 11, 12, 13, 1911.
NEXT WEEK.

YORKSHIRE AGRICULTURAL SOCIETY.
GREAT HORTICULTURAL EXHIBITION
WILL BE HELD AT
ROTHERHAM,
ON JULY 27th, 28th, and 29th, 1911.
For Schedules apply
PETER BLAIR,
Trentham Gardens, Stoke-on-Trent.
ENTRIES CLOSE JULY 8th.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

Great Exhibition at Olympia.

(Continued from page 492.)

to join in this fashion, as everyone profited by the arrangement.

In the rock garden furnished by Mr. Clarence Elliott, Stevenage, the chief subjects were Campanula pusilla alba, C. p. Miss Willmott, C. Standsfieldi, C. pulloides, C. glomerata, Saxifraga cochlearis minor, Sedum Liebmannianum, and the citron-scented variegated thyme.

Some beautiful carnations were shown by Mr. H. Lakeman, Thornton Heath, Surrey: Splendour, Linkman, Lady Hermione, The King, Winsor, Trojan, and Britannia were a few of the best.

Mr. A. F. Dutton, Iver, Bucks, presented perpetual carnations in good form, his most effective varieties being Victory, O. P. Bassett, Enchantress, Rose Doré, and Fair Maid.

A large table filled by Messrs. J. Carter and Co., Raynes Park, with begonias, a glowing set of sweet peas, streptocarpuses, gloxinias, and some excellent petunias, provided an effective contribution.

Mr. C. W. Breadmore, Winchester, brought sweet peas in fine condition, and showed them largely; a few varieties that especially appealed to us were Marjory Willis, Mrs. C. W. Breadmore, Charles Irving, A. N. Dickson, Princess Mary (a new blue), Scarlet Monarch, Edrom Beauty, Iris, Marjorie Linzee, and Dusky Monarch; altogether there were some hundred and fifty bunches and nearly fifty varieties.

Messrs. T. S. Ware, Lim., Feltham, filled a long table with finely-grown tuberous begonias, grand flowers of wonderful size, form, colour, and substance; the plants were pleasingly grouped and hanging baskets filled with drooping varieties were suspended over the rest. Lady Cromer, Patrick Ainslie, Captain Lafone, Thomas Rooney (beautifully crimped or frilled), Marjory Tait, and W. A. Ainslie were fine varieties, but the pink Lady Cromer was the outstanding one.

Cut roses were prettily disposed by Messrs. B. R. Cant and Sons, Colchester, and the brightness of their stands of Juliet, Mdme. M. Soupert, Mrs. Peter Blair, Mdme. Ravary, Lyon Rose, Mrs. Alfred Tate, and Harry Kirk made the group most attractive.

Conspicuous in Messrs. H. Cannell and Sons' group of begonias, from Swanley, were the big double flowers of a pure white variety named Snowden.

An interesting collection of gladioli from Messrs. William Bull and Sons, Chelsea, showed the range of colour now available in the Colvillei varieties.

Messrs. Robert Sydenham, Lim., Birmingham, put up a brilliant set of sweet peas, their Earl Spencer, Maud Holmes, Empress, Thomas Stevenson, Edith Taylor, and some new scarlet seedlings making a rare show.

Opposite their vegetable group Messrs. Sutton and Sons, Reading, put up a big collection of sweet peas, most effectively grouped, the tall stands of The King, Doris Usher, Southcote Beauty, Queen, Helen Lewis, etc., being connected with festoons of smilax. Mrs. Hugh Dickson, Masterpiece, Thomas Stevenson, Clara Curtis, Bobbie K., Mrs. Routzahn, Mrs. Hardcastle Sykes, and Marbled Blue were varieties finely shown in large vases.

The Oxford roses from Mr. G. Prince, Longworth, maintained their reputation for brilliance of colouring, the Lyon Rose being exceptionally well shown in the centre of the group.

A really good exhibit of cut carnations, representing the best of the perpetual varieties, was submitted by Mr. C. F. Waters, Balcombe; the flowers were associated with asparagus sprays; White Enchantress and the new Georgia were very fine.

Mr. A. E. Usher, gardener to Sir Randolf Baker, Bart., Ranston, Blandford, showed sweet peas in grand condition, and also effectively. It was a rare show from a private garden, and was greatly admired; Elsie Herbert, John Ingman, Tennant Spencer, Constance Oliver, Doris Usher, Mrs. A. Ireland, Helen Lewis, Earl Spencer, Clara Curtis, and Mrs. C. W. Breadmore were shown in great big stands, several hundred spikes in each, while other varieties were staged in vases.

Messrs. Frank Cant and Co., Colchester, had charming roses in abundance, and they made a feature of Lyon Rose, Antoine Rivoire, Countess of Gosford, Mdme. M. Soupert, Mrs. A. Tate, Elizabeth Barnes, G. C. Waud, and Gottfried Keller.

New roses from Messrs. Alex. Dickson and Sons, Newtownards, attracted rose-lovers, who feasted their eyes on Harry Kirk, Viscount Carlow, Betty, Duchess of Wellington, Alex. Hill Gray, Carine, Mrs. Cornwallis West, H. V. Machin, and other good varieties.

Roses were very boldly shown by Messrs. Stuart Low and Co., Enfield, this firm putting up well-filled stands and vases of such telling sorts as Mdme. Ravary, Mdme. Abel Chatenay, Lyon Rose, White Maman Cochet, Frau Karl Druschki, and the rich yellow Duchess of Wellington. Carnations were equally well shown by this firm, who had stands, bowls, and hanging baskets of popular perpetual and Malmaison varieties.

A sweet pea pergola was a novel feature, and this was arranged by Messrs. Kelway and Son, Langport, and connected their two tables of delphiniums; the latter were extensively displayed, and Beauty of Langport, Monarch of All, Lady Georgina, and Dusky Monarch were a few leading varieties.

Mr. Bertie E. Bell, Guernsey, exhibited carnations finely, both in size and colour; Britannia, Rose Doré, Winsor, Enchantress, Mikado, Mrs. C. W. Ward, and Alma Ward were very charmingly shown. Opposite these were the carnations from Mr. C. Engelmann, Saffron Walden, and here, of course, Carola was the centre of attraction, its big crimson flowers dominating everything else.

The violas and sweet peas exhibited by Messrs. Jones and Sons, Coton Hill, Shrewsbury, provided a fragrant and elegant show; the sweet peas were very fresh and clean.

Mr. Hillman, gardener to Wm. Gott, Esq., Frenython, Par Station, Cornwall, exhibited Malmaison carnations well, and there were no fewer than sixteen varieties in this contribution from the far west.

Mr. G. Lange, Hampton, had perpetual carnations in great beauty and variety, and the Somerford Nurseries, Christchurch, showed these beautiful flowers in bowls and baskets, making a variation from the usual stands and vases.

Very wonderful begonias were brought up from Twerton-on-Avon by Messrs. Blackmore and Langdon, the plants being superbly grown, and the flowers of grand size and colour. It was difficult to select, but Marie Nicholas, Mrs. T. W. Harrison, Black Knight, C. E. Small—very large, by the way—Pink Pearl, Mrs. W. C. Ainslie, Lady Tweedmouth, and Rose Superb, were a few extra fine varieties. The same firm presented a bold group of delphiniums.

The carnations from Mr. H. Burnett, Guernsey, were again good and well shown in large vases; Mrs. Raphael and Mrs. Burnett were in fine colour.

Clipped trees, cut to represent all manner of queer animals, steeple tops, chairs, boats, etc., etc., were exhibited largely by Messrs. Wm. Cutbush and Son, Highgate, N.; Messrs. Piper and Co., Bayswater, and Mr. Carlton White, New Bond Street, and each contribution had many admirers.

Mr. J. D. Webster, Chichester, brought up sweet peas and carnations; Mr. A. A. Fabius, Emsworth, sent ferns; Mr. H. Hemsley, Crawley, put up a rock garden with alpine and herbaceous plants; and Mr. G. Reuthe, Keston, showed hardy plants in great variety.

EXHIBITS IN THE ANNEXE.

Messrs. J. Cheal and Sons, Crawley, had a most interesting exhibit in the annexe; there was a summer house set in a pretty rock garden; an arbour round which was a dry wall furnished with neat little plants; belts and groups of ornamental trees and flowering shrubs; a long pergola, with its climbing roses, ornamental vines, and garden seats in sheltered nooks inviting everyone to test the comfort of the firm's handiwork. The pergola was a great attraction, and seemed to link up the big hall with the garden of the annexe.

Messrs. Hobbies, Lim., Dereham, arranged a rose garden with pillars, arbours, and temples clothed with rambling roses in variety; there were also arches of roses, while standards, weeping standards, dwarfs, and vases of roses filled up the ground-work.

Messrs. Wm. Paul and Son, Waltham Cross, had a large and wondrously beautiful group, in which weeping standard roses hung their lovely heads over a perfect riot of colour produced by dwarf plants, and baskets after baskets of fine flowers of all the best varieties of the Queen of Flowers. We cannot particularise much, but we must mention such varieties as Juliet, Lady Downe, Leuchtfleur, Mdme. M. Soupert, Mrs. Peter Blair, Lyon Rose, Mdme. Ravary, Harry Kirk, Mdme. Abel Chatenay, Hugo Roller, etc. This was a lovely exhibit, and the centre of admiring crowds all the time.

A large plantation of elegant Japanese maples associated with golden conifers and waving bamboos made a distinct and pleasing feature in the annexe, and it was pleasant to turn to it from the brilliance of the flowers. This was arranged by Messrs. Fromow and Sons, Chiswick.

Drifts of spiræas, and groups of delphiniums formed a backing for a little stream and pool furnished with reeds, hardy ferns, and lovely water lilies; this contribution was from Messrs. Phillips and Taylor, Bracknell.

Ferns were splendidly shown by Messrs. J. Hill and Sons, Edmonton, whose big dicksonias, blechnums, davallias, and cyatheas were a wonder unto many. A very large and bold group was this; in the foreground were elegant nephrolepises, gleichenias, gymnogrammas, adiantums, and platyceriums, all in the pink of health and condition.

Messrs. J. Jackman and Son's exhibit of clematises attracted attention, the big bright flowers, some as large as plates, showing up well over a groundwork of ferns.

Messrs. Pulham and Son, Broxbourne, had a fine pergola supported by rocky pillars, and furnished with roses. Behind it was a rock garden, prettily planted with choice hardy ferns, while in front was a water lily pool with its banks filled with suitable hardy flowers and flowering shrubs, with grassy plots between the rock masses.

Messrs. Paul and Son, Cheshunt, exhibited growing roses, as well as groups of cut flowers, and here the pretty variety named Cloth of Gold, and the equally beautiful Goldfinch were outstanding features of great merit.

Against a scenic background Messrs. R. Wallace and Co. grouped the choicest of hardy flowers into borders, divided in the centre by steps leading up to the gates of a pergola. Then came a grass walk bordered by a dry wall, fully furnished with neat plants, and with a grouping of choice hardy ferns along its base. Below this were stepping stones over a lily pool, the pathway leading prettily among groups of fine Kæmpfer irises, Spiræa palmata, Lilium myriophyllum, Orchis foliosa, Lilium superba, and drifts of Astilbe Rosy Morn. It was a charming garden, skilfully and yet naturally planned, and very finely executed.

Messrs. W. Cutbush and Son, Highgate, contributed a large pool of water lilies, with big gunneras, bamboos, and phormiums along the banks. Near the water were large groups of Kæmpfer irises, quaint sarracenias, pink spiræas, funkias, Lilium philippinense, L. speciosum, L. giganteum, L. Browni, and L. auratum; while beyond the bamboo bank was a herbaceous border that looked as though it had been in position for years.

Mr. Maurice Prichard, Christchurch, also had a pretty exhibit with fine groups of Iris Kæmpferi, banks of Spiræa palmata, and Kniphofia rufa, etc.; here also was a pleasing lily pool and a marginal rock garden, with big groups of bold hardy flowers beyond.

Messrs. T. S. Ware, Lim., Feltham, had their water lily pool surrounded by Japanese irises, and three distinct rock garden groups admirably furnished, and showing a finished appearance that lent to them a specially natural effect.

In the middle of the annexe Messrs. J. Carter and Co., Raynes Park, laid out a Japanese garden that was a miracle of ingenuity and a work of much skill and labour. An irregular stream meandered through it and under little bridges, passing through groves of hydrangeas and between banks of Japanese irises. Here was a rocky bank filled with cool ferns, and there some little groups of quaint, dwarfed trees. On mounds and occupying prominent positions were rare old Japanese stone lanterns, and by the waterside were bronze waterfowl. A beautiful Sciadopitys verticillata stood in splendid isolation. There was a well and stepping stones and other attractions, and the whole was ringed in by a bamboo fence, pierced here and there by gates, over which were pretty artistic porches.

The exhibit from Messrs. G. Bunyard and Co., Maidstone, consisted of a pool in which water lilies were numerous and beautiful; there were hosts of pink spiræas and astilbes along the banks, with bamboos for a background. A herbaceous border and rock garden formed a part of the display, and these were separated from the pool by a neat pathway. Carpenteria californica, Pinus Montezumæ, Campanula Hosti alba, and the English irises were notable flowers here displayed.

Messrs. Webb and Sons, Wordsley, had a temple of sweet peas, and under it grouped more sweet peas, and a choice collection of vegetables and fruits, the latter consisting chiefly of melons and tomatoes. The whole was very effective.

Phloxes and zonal pelargoniums made up a bright exhibit from Messrs. H. J. Jones, Lim., Ryecroft Nursery, Lewisham; Harry and Fred Gulliver were especially brilliant new varieties among many other good seedlings obtained from the fine Paul Crampell variety.

GALLERY EXHIBITS.

Messrs. S. Bide and Sons, Farnham, had two large exhibits, one of roses and one of sweet peas; the latter stood the heat well, and the flowers were bright and good, especially the bunches of Clara Curtis, Edna Unwin, Bertha Massey, Dudley Lees, and Sunproof King.

The Rev. E. Lascelles delphinium was the outstanding feature in Messrs. A. A. Walters and Son's exhibit of hardy flowers.

Messrs. G. Gibson and Co., Leeming Bar, had a grand lot of hardy flowers in the gallery, and here there were some excellent delphiniums, the showy Verbascum Caledonia, Campanula Moerheimi, C. Wm. Lawrenson—a new blue persicifolia seedling of great merit, and the handsome Gaillardia Lady Rolleston.

Messrs. Seagrave and Co., Gleadless, brought up a selection of cut zonal pelargoniums and an effective contribution of the finest violas.

Messrs. A. Young and Co., Hatherley, brought up a pleasing exhibit of perpetual carnations, where Duchess of Devonshire, Lady Audley Neild, Cheltonia, Mrs. Greswolde Williams, J. Whitcombe Riley, Alvina, and some new seedlings were the most attractive varieties.

The Guildford Hardy Plant Nursery sent hardy flowers, and Mr. Vincent Slade showed a group of cut zonal pelargoniums, chiefly double varieties.

Very bright were the gaillardias staged by Messrs. B. Ladhams, Lim., Shirley, Southampton; Aurora, Superb, Rownham's Queen Shirley, Sunset, and Southampton were all brilliant desirable varieties; Campanula persicifolia coronata was also good in this group.

Messrs. W. Wells and Co., Merstham, showed good phloxes and some especially good pentstemons; and from the Thatcham Fruit Farm, Newbury, came vases of popular perpetual carnations.

Mr. J. Mattock's fine exhibit of roses was rather wasted in the gallery; he had beautiful stands of Simplicity, Lyon Rose, Crimson Damask, and the single Lady Curzon.

M. Gebruder Teupel, Quedlinburg, Germany, showed new acalyphas, with pale greenish tassels; the best were named Acalypha A. Wagneriana, A. Dorothæ, and A. Tuscani.

Mr. Frank Lilley, Guernsey, was a large exhibitor of gladioli of the Colvillei section, English irises, and the graceful Sparaxis pulcherrima.

Mr. Hugh Dickson, Belfast, showed beautiful new roses, notable varieties being Mrs. E. Allen (A.M.), Lady Perrier, Frank Thorpe, Mrs. Sam Ross, Leslie Holland (A.M.), Mrs. R. W. McClure, and Mrs. P. H. Coutts; probably very few people saw this gold medal exhibit of new varieties owing to the unfortunate position it occupied in the gallery.

Messrs. J. Forbes, Lim., brought down from Hawick a collection of their beautiful phloxes, but by the time we reached the exhibit the flowers were suffering from the heat, but G. A. Stroehlin, Lady de Bathe, and Lady Raleigh kept up remarkably well.

Mr. William Deal, Kelvedon, had among popular varieties of sweet peas, good bunches of his special varieties Colleen, Bertrand Deal, Winifred Deal, and Scarlet Monarch, the latter a very rich colour.

Messrs. J. Godfrey and Sons, Exmouth, showed a good strain of Canterbury bells and violas. Other exhibitors were Messrs. F. Smith and Co., Woodbridge, hardy flowers; Messrs. Rich and Co., Bath, hardy flowers; Mr. H. N. Ellison, West Bromwich, new ferns, and Dracæna Braunti variegata; Messrs. Jarman and Co., Chard, sweet peas and sweet sultans, a pretty display; Messrs. J. K. King and Sons, Coggeshall, sweet peas, including the bright Nancy Perkin and St George; Messrs. Gilbert and Sons, Dyke, liliums and sweet peas; Messrs. W. and J. Brown, Peterborough, hardy flowers; Mr. J. Box, Lindfield, sweet peas; Mr. W. Alsen, Denmead, Hants, sweet peas, a fine collection, set up in a most unfortunate and dark position; and Messrs. J. Jackman and Son, Woking, who in an equally unfortunate position in the gallery set up a quantity of roses and cut hardy flowers.

ORCHIDS.

The wonderful group of orchids set up in the central avenue by Messrs. Charlesworth and Co., Hayward's Heath, was of a size and quality that one expects at the Temple Show. Phalænopsis Rimestadiana, associated with bright odontiodas, made up the centre, while all along the back were big oncidiums. At one end the graceful white spikes of phalænopsis hung out over choice odontoglossums, and at the other end white odontoglossums and phalænopsis were asociated. In one of the bays Cattleya Warscewiczi, Lælio-cattleya Martinetti King George (A.M.), and Cattleya Warneri alba were prominent, while in the other bay Odontioda Cooksoni, Cattleya Warscewiczi, Cattleya Mossiæ Aureole, L.-c. Sylvia (F.C.C.), Odontoglossum Olympia, red, brown, and blush (A.M.), Oncidium Lanceanum, and Disa grandiflora were all finely shown.

Messrs. Sander and Sons, St. Albans, had a few good things forward; Odontioda Bradshawiæ Sander's var. (A.M.), Odontoglossum eximium King George (A.M.), O. ardentissimum Queen Mary (F.C.C.)., a fine flower, with bluish-purple markings, and Cattleya gigas Sanderiana were all capitally shown.

Mr. Gurney Fowler showed Anguloa Cliftoni, with six big aromatic flowers, and also sent a grand plant of the old Oncidium macranthrum.

Mr. Harry Dixon, Spencer Park Nursery, Wandsworth Common, and Mr. C. F. Waters, Balcombe, also contributed groups of orchids.

Messrs. Mansell and Hatcher, Rawdon, Leeds, presented a large and very beautiful exhibit of orchids staged in elegant style. Phalænopsis, graceful odontoglossums, Cattleya gigas, and Lælio-cattleyas filled up the centre, and the flanking groups were composed chiefly of odontoglossums and Lælio-cattleyas. In the bays the masdevallias were particularly good, being very finely grown and flowered. Some of the gems in the collection were Odontioda Bradshawiæ, Cattleya Mossiæ Ashworthiæ, C. Gaskelliana alba, Cypripedium Rolfeæ, L.-c. Martinetti, Coryanthes speciosa, Odontoglossum Queen Alexandra, the beautiful Cattleya Mossiæ Queen Mary (A.M.), Cœlogyne pandurata, the rare Vanda Charlesworthi, and the miltonias.

Mr. E. V. Low, Haywards Heath, had in his group of orchids fine plants of Odontoglossum Vuylstekianum, Oncidium macranthum, Bulbophyllum virescens—a wonderful orchid, Cypripedium Sanderæ, and Cattleya Mossiæ Reineckiana.

From Gatton Park, Mr. Collier, gardene to Sir Jeremiah Colman, Bart., brought u Bulbophyllum virescens with two umbels quaint long-tailed flowers, Odontoglossu Thomsonianum, Anguloa Cliftoni, and othe rare orchids.

The showy group from Messrs. Stuart Lo and Co., Enfield, contained a central mou of the vivid Renanthera Imschootiana a abundance of Epidendrum vitellinum mai and odontiodas. Varieties of Cattleya Mossiæ, the fine Lælio-cattleya Eudora, Cattleya Warscewiczi, and the bold and striking Stanhopea tigrinum, were all backed up by tall and graceful oncidiums in great variety.

FRUITS AND VEGETABLES.

Choice fruits, as growing, in pots, were exhibited by Mr. G. Camp, gardener to S. Heilbut, Esq., The Lodge, Holyport, Maidenhead; the peaches, plums, and cherries were well furnished with fruits, and the Bohemian Black Bigarreau cherry was very fine; plums were fairly good, but the fine pineapples—Queen and Charlotte Rothschild—attracted most attention because they are now so seldom seen growing.

A standard Peregrine peach trained umbrella fashion, and carrying a good crop of fruits, was the centre of attraction in a group of pot fruit trees submitted by The King's Acre Nursery Co.; apples and pears, many of them carrying ripe fruits, made up the bulk of the display, but nectarines, plums, figs, and currants were included.

Strawberries were splendidly shown by Messrs. Laxton Brothers, Bedford, and conspicuously good were their baskets of Waterloo, Rival, Givon's Late Prolific, Utility, The Bedford, and Latest.

Mr. F. Streeter, gardener to H. S. Barton, Esq., Hewshott House, Liphook, brought up a goodly collection of vegetables, his cauliflowers, Standwell lettuces, Best of All tomatoes, and Duchess of York peas being among the best dishes.

Mr. A. Grubb, gardener to C. F. Raphael, Esq., Porter's Park, Shenley, showed a very fine collection of melons, and set the fruits up in good style; his principal varieties were Frogmore Scarlet, Countess. Hero of Lockinge, Rochford's Variety, A1, and Royal Jubilee. From the Horticultural College, Swanley, and from Messrs. Le Laicheur and Sherris, Henfield, came groups of melons. In addition to melons, Mr. Grubb presented a splendid collection of choice vegetables, and he arranged these so well that the ladies had to confess the group was a beautiful one; Quite Content, Duke of Albany, Alderman, and Stourbridge Marrow peas were very good; White Eclipse and Forerunner cauliflowers were also fine, and turnips, tomatoes, and potatoes were all so good that it is difficult to say which were the best dishes.

Mr. James Gibson, gardener to the Duke of Portland, Welbeck Abbey, Worksop, showed a collection of dessert fruit that made everyone's mouth water; it was a big display in which a few of the specially good dishes were of Hale's Early and Dymond peaches, Lord Napier nectarines. grand; Black Hamburgh and Foster's Seedling grapes, Lady Sudeley and James Grieve apples, Jefferson plums, Waterloo strawberries, Brown Turkey figs, Emperor Francis cherries, with melons galore. Mr. Gibson won the Sherwood Cup with this very fine exhibit.

Messrs. Sutton and Sons, Reading, set up vegetables in most attractive fashion, and their large collection of choice varieties proved very attractive; their collection of peas was also of special interest. Magnum Bonum and White Queen cauliflowers, Golden Wax Pod beans, Early Giant and Centenary Marrowfat peas, Perfection tomatoes, and Table Dainty marrows were a few dishes that appealed specially to us in a collection where everything was of first-rate quality.

A collection of fruits from the Locksheath Nurseries, Swanwick, was specially attractive by reason of the number of Cantaloup melons it contained. Apples from New Zealand, including good examples of Sturmer Pippin and Monroe Favourite, were shown by the New Zealand Government, 19, Victoria Street, S.W.

Choice fruits, growing on pot trees, came from Messrs. T. Rivers and Son, Sawbridgworth; it would be difficult to overpraise the pot vines, oranges, cherries, Lady Sudeley and Peasgood's Nonsuch apples, Bigarreau de Schreken cherries, and the Thomas Rivers, Sea Eagle, Late Devonian, and other fine peaches so splendidly shown by this firm.

SUNDRIES, APPLIANCES, ETC.

Almost as wonderful as the floral display, but, of course, in an entirely different way, was the huge and varied array of garden tools, implements, and requisites of every possible description. It seemed that the very best tool for every operation, the best ornament for every situation, and the best remedy for every plant disease was on view.

The Jeyes' Sanitary Compounds Company, Lim., 64, Cannon Street, E.C., exhibited samples of their horticultural specialities. Cyllin Soft Soap, Cyllin Fluid, and Jeyes' Horticultural Wash were all shown in tins of various sizes. A large variety of highly-polished brass-bound tubs were shown by Mr. Alex. Hamilton, 115, City Road, E.C., the designs, as well as workmanship, being such as to render the tubs suitable for conservatory, verandah, or drawing-room. Heating apparatus and small portable propagators were shown by Messrs. Charles Toope and Son, Stepney, E., the New Cult boiler and the "Toope Patent" being useful-looking constructions.

Both ornamental and plain pottery was shown by the Tilehurst Potteries, Lim., Reading. The coloured glazed ware was very artistic and beautiful. Messrs. Chas. P. Kinnell and Co., Lim., Southwark Street, S.E., had their well-known boilers on view. The Anglian and the Horseshoe are of excellent construction for private or nursery gardens, while the "Covent Garden," an immense horizontal tubular boiler, is the most up-to-date pattern for the large market grower. The Thames Bank Iron Company were also exhibitors of greenhouse boilers, the "Economic" tubular, and the "Heel" being both good boilers of high reputation. Messrs. Pearce and Co., Holloway Road, N., erected a very useful little span-roof greenhouse, made of good materials, and designed with a view of obtaining the maximum of light.

A big variety of pots, bowls, and vases were displayed by Messrs. D. Dowel and Son, Hammersmith. Plain garden pots, from one inch to two feet in diameter, and a series of very sensibly-made bulb bowls were the chief features. Messrs. Pulham and Son, 71, Newman Street, W., showed garden vases of elaborate and artistic character, the various pieces being grouped on a paved square with sun-dial in centre. Hawe's water cans were exhibited in a complete series of sizes, and in many new shapes. The Clapton firm has so long been noted for the excellence of their cans that we need not eulogise them here.

The GARDENERS' MAGAZINE and "Amateur Gardening" were represented by a table made attractive with coloured plates and photographic illustrations of flowers and plants. Books on almost every phase of gardening were also on view. Messrs. Liberty and Co., Lim., Regent Street, W., occupied a large space with an exhibit of large garden vases, pillars, balustrades, and terrace ornaments, the stand being made the more effective by the aid of palms, hydrangeas, and other suitable plants. Trellis-work, garden seats, large and handsome vases, sundials, and other garden furniture were admirably represented on Mr. J. P. White's stand. The Pyghtle Works, Bedford, always show well.

The cane chairs, stools, and tables known as Dryad furniture were exhibited by Mr. H. H. Peach, Dryad Works, Leicester. A great variety of beautifully made table vases, flower bowls, and ornaments came from the Coldrum Pottery, 11, Sloane Street, S.W. A roomy span-roofed greenhouse, and a smaller amateur's house, were erected by Messrs. W. Duncan Tucker and Sons, Lim., Tottenham, who also had on view span-roofed frames of substantial make and good pattern. Mr. G. Slatter, 4, Long Row, Nottingham, a new maker of lawn mowers, showed machines with attachments for edging, verge cutting, etc., the latter being a very ingenious and useful invention. The Abol syringes, insecticides, and spraying fluids were attractively displayed by Messrs. E. A. White, Lim., Paddock Wood, Kent. The small ladies' syringes and hose terminals were useful additions to the original set of patterns.

Chemicals of all descriptions, and for all manner of uses, were shown by Messrs. Walter Voss and Co., Milwall, E. Spraying machines were very largely in evidence.

TICULTURAL
PLIANCES.

MESSRS. E. WEBB AND SONS' SILVER CUP COLLECTION OF FLOWERS, FRUITS, AND VEGETABLES AT THE OLYMPIA SHOW.

Messrs. H. Hartjen and Co., 35-37, Noble Street, E.C., showed a number of machines which are worked by pneumatic pressure, each machine carrying its own pump. The Four Oaks Spraying Machine Company, Sutton Coldfield, Birmingham, showed machines for all purposes, their new Knapsack, furnished with an air chamber, which enables a pressure of 100lb. to be maintained, being a distinct advance. The well-made teakwood seats from Messrs. Castle's, Baltic Wharf, Millbank, were shown in a vast variety of sizes and shapes, the designs being contrived for comfort as well as appearance.

Whatever the owner of a garden is likely to require could surely be found among the hundreds of garden requisites or sundries displayed by Messrs. William Wood and Sons, Lim., Wood Green, N. To look for novelties on this firm's stand was to court confusion, for everything of the latest and most up-to-date character was represented. The firm also showed a fine group of garden ornaments, including figures in lead, which were reproductions of the Shepherd and Shepherdess in South Kensington Museum. A magnificent lead vase which attracted attention was of the same pattern as the well-known specimens at Hampton Court. The Brent Valley Bird Sanctuary Committee showed their nesting boxes, which are made in a manner that is calculated to attract the birds for which they are intended.

Paper pots, which are becoming popular both for seed raising and for packing plants, were shown by Messrs. Blake and McKenzie, Liverpool. The Permanent Printing and Process Company, Lim., 2, Sandland Street, Holborn, W.C., showed "Ivo" labels," which are of neat appearance, and very durable. The seats made of man-o'-war teak, by Messrs. B. Maggs and Co., Bristol, were shown in a number of very attractive styles. Rural table decorations, from Mr. J. Williams, 4a, Oxford Road, Ealing, were made beautiful with sweet peas and foliage. A bucket-like appliance made of perforated zinc on a galvanised frame, for soaking manures, was shown by Mr. A. H. Malden, Delamere, Poole, Dorset. Liquid manure can, with the aid of this infuser, be made in the space of a few hours, without the inconvenience of bags, etc. Wakeley's Hop Manure was on view, with pamphlets containing instructions for use, and testimonials from satisfied users.

Among spraying machines the Alpha forms were well to the fore. These excellent air-pressure machines have been described in our columns on several occasions, but it may be said that new sizes and shapes are being introduced as necessity demands. The Pattisson lawn boots, well known among our readers, were shown by the makers, Messrs. Pattisson and Co., 4, Greyhound Lane, Streatham, who also showed the Max water distributor, made in an improved form.

Samples of turf loam from Mr. M. Johnston, New Park, Cranleigh, Guildford, were of a quality that should make it possible to grow almost anything to perfection.

Mr. John Pinches, 3, Crown Buildings, Crown Street, Camberwell, S.E., exhibited the useful Acme labels, in sizes and shapes suitable for every purpose. Rose shades, trainers, and show boxes were also shown, as were flower holders, and a number of other useful things in the way of garden sundries. Messrs. James Crispin and Sons, Bristol, brought a span-roof greenhouse fitted with corrugated staging, and also a few models of garden frames. Flower pots, plain and ornamental, large and small, round, square, and, in fact, of all shapes, sizes, and designs, were shown by Messrs. Richard Sankey and Son, Lim., Royal Potteries, Bulwell, Notts. V2 and V2 K Fluids were brought up by Messrs. Wm. Cooper and Nephew, Berkhamsted. These popular insecticides were accompanied by other useful chemical preparations of horticultural value.

CERTIFICATES AND AWARDS.

Floral Committee.—Award of Merit to Rose Frances Charteris Seton, from Messrs. William Paul and Son, Waltham Cross; to Rose Mrs. Charles E. Allan, and to Rose Leslie Holland, from Mr. Hugh Dickson, Belfast; to Gladiolus nanus and Queen Mary, from Messrs. Smith and Son, Caledonia Nursery, Guernsey; to Dracæna Deremensis Warnecki, from Messrs. J. Veitch and Sons, Chelsea; to Sweet Pea Lady Knox, from Messrs. Dobbie and Co., Edinburgh; and to Pelargonium Lord Bute, from Mr. Treseder, Cardiff.

Orchid Committee.—First Class Certificate to Odontoglossum ardentissimum Queen Mary, from Messrs. Sander and Sons, St. Albans; to Lælio-cattleya Sylvia, from Messrs. Charlesworth and Co., Haywards Heath; and to Odontoglossum eximium King George, from Messrs. Sander and Sons, St. Albans.

Award of Merit to Odontioda Bradshawiæ Sander's var., from Messrs. Sander and Sons, St. Albans; to Odontoglossum amabile The Queen, from Messrs. Sander and Sons, St. Albans; to Cattleya Mossiæ Queen Mary, from Messrs. Mansell and Hatcher, Rawdon, Leeds; to Lælio-cattleya Martinetti King George V., to Odontoglossum Olympia, and to Cattleya Dupreana, all from Messrs. Charlesworth and Co., Haywards Heath.

Cultural Commendation to Mr. J. Gurney Fowler, for Oncidium macranthrum and Anguloa Cliftoni; and to Mr. H. S. Goodson, for Cattleya Mossiæ Wagneri Goodson's var.

Fruit Committee.—Award of Merit to Strawberry Peter's Olympia, from Mr. H. F. Sturgis, Leatherhead.

CUPS AND MEDALS AWARDED.

Gold Medal.—To Messrs. J. Carter and Co., Raynes Park and Holborn, for Japanese garden; Messrs. Charlesworth and Co., Haywards Heath, for orchids; Mr. Hugh Dickson, Royal Nurseries, Belfast, for roses; Messrs. Dobbie and Co., Edinburgh, for sweet peas; Mr. Amos Perry, Enfield, for delphiniums; Mr. L. R. Russell, Richmond, Surrey, for tree and standard ivies; Messrs. Thomas Rivers and Son, Sawbridgeworth, for fruit trees in pots; Messrs. James Veitch and Sons, Chelsea, for stove and greenhouse plants, fuchsias, etc.; Messrs. R. Wallace and Co., Colchester, for a natural water and formal garden.

Coronation Cup.—To Messrs. H. B. May and Sons, Edmonton, for ferns.

Olympia Cup.—To Messrs. William Paul and Son, for roses.

Sherwood Cup.—To the Duke of Portland (gardener, Mr. Gibson) for a collection of British-grown fruit.

Silver Cup.—To Sir Randolph Baker, Blandford (gardener, Mr. A. Usher), for sweet peas; to Cecil F. Raphael, Esq. (gardener, Mr. Grubb), Shenley, for fruit and vegetables; to Mr. B. E. Bell, Guernsey, for carnations; Messrs. Blackmore and Langdon, Twerton-on-Avon, for begonias; Messrs. W. Cutbush and Son, Highgate, for foliage and flowering plants; Messrs. W. Fromow and Sons, Chiswick, W., for Japanese maples; Messrs. J. Hill and Son, Lower Edmonton, N., for hardy and exotic ferns; Messrs. Gunn and Son, Olton, for phloxes; Messrs. S. Low and Co., Enfield, for orchids; Messrs. Paul and Son, Cheshunt, for roses; Messrs. Sutton and Sons, Reading, for fruit and vegetables; Messrs. Mansell and Hatcher, Rawdon, Yorks, for orchids; Messrs. E. Webb and Sons, Stourbridge, for vegetables and sweet peas; Mr. M. Prichard, Christchurch, for water garden; Mr. Charles Turner, Slough, for carnations and roses; Messrs. G. Bunyard and Co., Maidstone, for rock, water, and herbaceous garden; Mr. H. Burnett, Guernsey, for carnations; Messrs. J. Cheal and Son, Crawley, for garden and pergola; and to Messrs. Pulham and Son, New Street, W., for rock garden.

Silver-gilt Flora Medal.—To E. J. Johnstone, Esq., Groombridge (gardener, Mr. Paskett), for carnations; Messrs Barr and Sons, Covent Garden, for herbaceous plants and Japanese dwarf trees; Mr. A. F. Dutton, Iver, Bucks, for carnations; Messrs. Kelway and Son, Langport, for delphiniums, sweet peas, etc.; Messrs. E. W. King and Co., Coggeshall, for sweet peas; Mr. F. Lilley, Guernsey, for summer-flowering gladioli; Messrs. J. Peed and Son, Streatham, for caladiums and flowering plants; Messrs. Sander and Sons, St. Albans, for orchids; Messrs. T. S. Ware, Lim., Feltham, for begonias, herbaceous flowers, and alpines; and to Mr. J. Box, Lindfield, for herbaceous flowers and sweet peas.

Silver-gilt Knightian Medal.—To H. S. Barton, Esq., Liphook (gardener, F. Streeter), for vegetables; S. Heilbut, Esq., Maidenhead (gardener, G. Camp), for fruit trees in pots; and to King's Acre Nurseries, Lim., Hereford, for fruit trees in pots.

Silver-gilt Banksian Medal.—To Messrs. J. Carter and Co., Raynes Park, for flowering plants; Messrs. B. R. Cant and Sons, Colchester, for roses; Messrs. G. and A. Clark, Lim., Dover, for hardy herbaceous plants, etc.; Messrs. G. Jackman and Son, Woking, for clematis, herbaceous plants, etc.; Mr. J. Mattock, Oxford, for roses; Mr. R. C. Notcutt, Woodbridge, for roses and herbaceous plants; Mr. G. Prince, Oxford, for roses; and to Mr. C. F. Waters, Balcombe, for carnations.

Silver Flora Medal.—To Messrs. Jones and Sons, Lim., Shrewsbury, for sweet peas and carnations; Messrs. J. Piper and Son, Bayswater, W., for cut trees and fuchsias; Messrs. Carter Page and Co., London Wall, for sweet peas, etc.; Messrs. H. Cannell and Sons, Swanley, for begonias, etc.; Mr. G. Reuthe, Keston, for alpine and herbaceous plants; Mr. L. R. Russell, Richmond, for stove and foliage plants; Messrs. Robert Sydenham, Lim., Birmingham, for sweet peas; Mr. W. E. Alsen, Denmead, Hants, for sweet peas; Messrs. J. Forbes, Lim., Hawick, N.B., for phloxes, delphiniums, etc.; Messrs. A. Dickson and Sons, Lim., Newtownards, for roses; Mr. C. Engelmann, Saffron Walden, for carnations; Messrs. B. Ladhams, Lim., Southampton, for hardy flowers; Messrs. J. Veitch and Sons,

The combination head
the Pine Spray Syringe

provides for every spraying requirement without
addition or removal of a single fitment. The cha
from "rose" to "spray" is made by merely
turning the syringe, and delivery through either
be directed up or down by bending the adjust
joint. The

PINE SPRAY SYRINGE

can be instantly adapted to the needs of any par
cular plant, whether the spray required is coarse
the finest o. the fine, or whether delivery of the
is needed straight, overhead, or underneath. Be
you buy a syringe ask your ironmonger or seeds
to write to us for one on approval. The price
10/6, the size 24in. over all, and 1¼in. diame
Sole proprietors,

ROBINSON BROTHERS, LTD.,
WEST BROMWICH.

Lim., Chelsea, for flowering plants; Messrs. S. Bide and Sons, Lim., Farnham, for sweet peas, etc.; Mr. C. W. Breadmore, Winchester, for carnations and sweet peas; Messrs. Seagrave and Co., Sheffield, for violas, pansies, etc.; Messrs. F. Smith and Co., Woodbridge, for herbaceous plants; Messrs. G. Stark and Son, Norfolk, for sweet peas; and to Messrs. Hobbies, Lim., Norfolk, for roses.

Silver Banksian Medal.—To Mr. E. V. Low, Haywards Heath, for orchids; Mr. H. H. Crane, Highgate, for violas; Messrs. R. H. Bath, Lim., Wisbech, for carnations and herbaceous flowers; Messrs. W. and J. Brown, Stamford, for roses and hardy flowers; Messrs. G. Gibson and Co., Yorks, for hardy flowers; Mr. A. Ll. Gwillim, Sidcup, for begonias; Messrs. R. Harkness and Co., Hitchin, for roses; Mr. G. Lange, Hampton, for carnations; Mr. S. Mortimer, Farnham, for cucumbers; Mr. J. D. Webster, Chichester, for sweet peas and carnations; Messrs. Jarman and Co., Chard, for centaureas and sweet peas; Messrs. Young and Co., Cheltenham, for carnations; the Craven Nursery Company, Yorks, for rock garden; the Guildford Hardy Plant Nursery, Guildford, for herbaceous plants; the Somerford Nurseries, Christchurch, for carnations; Messrs. Whitelegge and Page, Chislehurst, for herbaceous flowers.

Silver Knightian Medal.—To Swanley Horticultural College, Kent, for fruit; the Locksheath Nurseries, Southampton, for fruit, etc.; the New Zealand Government, Victoria Street, S.W., for apples; and to Messrs. Laxton Bros., Bedford, for strawberries.

Bronze Flora Medal.—To Mr. H. Dixon, Wandsworth Common, for orchids; Mr. H. Hemsley, Crawley, for alpine and hardy flowers; Mr. H. J. Jones, Lewisham, for pelargoniums and phloxes; Messrs. J. K. King and Sons, Coggeshall, for sweet peas; Messrs. W. Wells and Co., Merstham, for phloxes and pentstemons; Messrs. Carlton White, New Bond Street, for clipped trees; and to Mr. Frank May, Herts (gardener, Mr. T. F. Stannett), for carnations.

Bronze Knightian Medal.—To Misses Le Lacheur and Sherris, Sussex, for melons.

Bronze Banksian Medal.—To Mr. Wm. Deal, Kelvedon, Essex, for sweet peas; the Tully Nurseries, Ireland, for anemones, delphiniums, etc.

GARDEN SUNDRIES SECTION.

Silver-gilt Flora Medal.—To Messrs. W. Wood and Son, Wood Green, for artificial manures, insecticides, and garden furniture.

Silver-gilt Banksian Medal.—To Messrs. C. P. Kinnell and Co., Southwark Street, S.E., for boilers, pump, etc.; Messrs. Liberty and Co., Regent Street, W., for terra-cotta garden pottery; and to Mr. W. Poupart, Twickenham, for bottled fruits and appliances.

Silver Flora Medal. — To Alpha Extinguisher Co., Hereford, for sprayers of all kinds; Castle's Shipbreaking Co., Millbank, for teakwood garden furniture; the Four Oaks Syringe Co., for spraying machines, etc.; Mr. J. P. White, Bedford, for garden seats, chairs, etc.

Silver Banksian Medal.—To Messrs. Abbott Bros., Southall, for table trays, bee hives, etc.; the Coldrum Pottery Co., Sloane Street, for Coldrum pottery; Mr. Alex. Hamilton, Great Portland Street, for tubs, seats, chairs, etc.; Messrs. H. Hartjen and Co., Noble Street, for spraying machines, etc.; the Leyton Timber Co., Leyton, for rustic goods; Messrs. Lloyd, Lawrence, and Co., Finsbury, for lawn mowers, etc.; Messrs. Maggs and Co., Bristol, for garden furniture; Messrs. Sankey and Son, Nottingham, for horticultural pottery; the Thames Bank Iron Co., Upper Ground Street, for boilers, etc.; Messrs. W. Duncan Tucker and Son, Cannon Street, for greenhouses, frames, etc.

Bronze Flora Medal.—To Messrs. Blake and Mackenzie, Liverpool, for patent flower pots; the Brent Valley Bird Nesting boxes; the Permanent Printing Co., Peterborough, for Ivo labels; Mr. J. Pinches, Crown Street, S.E., for labels, etc.; Messrs. Pulham and Son, Newman Street, W., for vases and garden ornaments; Messrs. C. Toope and Son, Stepney Square, for heating apparatus; Messrs. E. A. White, Paddock Wood, for insecticides.

Bronze Banksian Medal.—To Messrs. W. Cooper and Nephews, Berkhamsted, for spray fluids, pumps, etc.; Messrs. J. Crispin and Sons, Bristol, for portable conservatory; Messrs. D. Dowel and Son, Hammersmith, for pottery, bulb bowls, etc.; Mr. J. Hawes, Clapton, N.E., for water cans; Jeyes' Sanitary Compounds, Lim., Cannon Street, for sprayers, washes, etc.; Messrs. Jules Lang and Son, St. Mary Axe, for preserving jars, glass bowls, etc.; the Patent Safety Ladder Co., Peterborough, for extension ladders, etc.; Messrs. Pattison and Co., Streatham, for horse boots, rollers, etc.; Messrs. Pearce and Co., Holloway Road, for greenhouse and heating apparatus; the Tilehurst Pottery Co., Reading, for flower pots and pottery; Messrs. W. Voss and Co., Millwall, for fertilisers, fumigators, etc.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above sea-level, 150 feet.

Date.	Sunshine.	Temperature of the Air.			
1911. June 25 to July 1.		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
June 25—Sunday	—	54	53	56	50
,, 26—Monday	3 18	55	50	56	50
,, 27—Tuesday......	9 48	54	49	69	48
,, 28—Wednesday..	11 30	64	58	72	52
,, 29—Thursday	3 30	61	56	66	57
,, 30—Friday........	—	56	51	62	53
July 1—Saturday.....	3 54	57	54	66	54
Means ...	(total) 32 0	57.2	53.3	63.6	52

Date.	Rain.	Temperature of the Soil at 9 a.m.			Lowest Temperature on Grass.
1911. June 25 to July 1.		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
June 25—Sunday	·09	59	59	57	44
,, 26—Monday	·04	59	58	57	49
,, 27—Tuesday......	—	58	58	57	48
,, 28—Wednesday..	—	61	59	57	46
,, 29—Thursday	·20	62	60	57	51
,, 30—Friday	·02	61	60	57	52
July 1—Saturday	·01	61	60	57	53
Means	(total) ·36	60.1	59.1	57	49

FORTHCOMING ENGAGEMENTS.

MONDAY, July 10.—United Horticultural Benefit and Provident Society, Committee Meeting.

TUESDAY, July 11.—National Sweet Pea Society, Horticultural Hall, Westminster; two days.

Brighton and Sussex Horticultural Society; two days.

Wolverhampton Floral Fête; two days.

Saltaire Rose and Sweet Pea Show.

WEDNESDAY, July 12.—Bath Rose Show and Carnival; two days.

Hereford Rose Show; two days.

Elstree Horticultural Society.

Woodbridge Horticultural Society.

Beckenham Horticultural Society.

Cambridge Horticultural Society.

THURSDAY, July 13.—French National Horticultural Society.

Gresford Horticultural Society.

Leighton Buzzard Sweet Pea and Rose Show.

National Sweet Pea Society's Outing to Sutton Green, Guildford.

FRIDAY, July 14.—West of Scotland Rose Show.

National Sweet Pea Society's Outing to the Floral Farms, Wisbech.

SATURDAY, July 15.—Wood Green Horticultural Society.

MONDAY, July 17.—National Chrysanthemum Society's Outing to Cliveden.

TUESDAY, July 18.—Royal Horticultural Society; committees meet at 12 o'clock; lecture at 3 p.m., on "Irises," by Mr. W. R. Dykes, M.A.; Scientific Committee at 4 o'clock.

WEDNESDAY, July 19.—National Rose Society, at Ulverston, in conjunction with North Lonsdale Rose and Sweet Pea Show.

Newcastle Flower Show; three days.

Nottingham Horticultural Society.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

OLD CRESTED MOSS ROSE.—Mr. H. Fletcher, of Annesley, Notts, who tells us he has been a subscriber to the Gardeners' Magazine for nearly fifty years, sends a few fragrant flowers of the old Crested Moss rose, and asks whether the variety is at all well known in gardens. Probably most growers know this old rose, with its heavily-crested calyx divisions, but very few give the variety a place in their gardens nowadays.

DISEASED TOMATOES.—T. G., Weston: The specimen sent was suffering from an attack of bacterial disease (Bacillus solanacearum). There is no real cure for the disease, but its spread may be prevented if affected plants are removed and burned directly they are seen to be suffering from an attack. Rotation of crops should be followed if it is not possible to remove the old soil and use new, otherwise a more severe attack may follow another year. When removing a diseased plant, take away also the soil immediately around the base of the stem.

DISFIGURED ROSE LEAVES.—K. G., Red Hill: The disfigurement of the rose leafage is due to the work of the Rose Slugworm (Eriocampa rosæ), which eats away the upper skin or epidermis of the leaves and the tissue, usually leaving the lower epidermis intact and quite white. Where the attack is a severe one the health of the plants is seriously injured. As there are at least two broods each year a sharp lookout should always be kept when there has been one attack. Spray the bushes with a nicotine solution or a hellebore wash composed of three gallons of water, 2oz. of flour, and 1oz. of freshly-ground hellebore. In cases of very bad attacks it is a good plan to remove two or three inches of the surface soil in winter and burn it or bury it deeply so as to kill the pupæ; good clean soil should be spread over the rose roots directly the old is removed.

HOLES IN PEACH LEAVES.—W. J. M., Oxshott: The trouble is due to the action of the Shot Hole fungus (Cercospora circumscissa), a pest which often attacks peaches, almonds, nectarines, apricots, and cherries. Not only do the circular patches drop out of the leaves, but the leaves themselves invariably fall before wood growth is complete, and so the prospects of a crop of fruit the following year are small. Sometimes the disease spreads with great rapidity, especially if the leaves are allowed to fall and remain, or if the circular patches are allowed to remain where they fall. Hang muslin under the trees to catch the falling and diseased foliage, which should be burned each day. Spray the trees with an ammoniacal solution of copper carbonate at intervals. This is made by mixing ¼oz. of carbonate of copper and 2¼oz. of carbonate of ammonia with eight gallons of water. Dissolve the carbonates in hot water, and then add the necessary quantity of soft water.

GRUB-EATEN ROSE LEAVES.—A. J., City: Evidently more than one insect pest has been busy among your roses, but the chief damage is due to the work of the Rose Emphytus (Emphytus cinctus), the larvæ of which commences to eat the leaves at the margin, and works down between the leading veins to the midrib. It is one of the sawflies, and, unfortunately, it does not confine its attention to the leaves, but may when full grown enter the stems and kill all the growth above the point of entry. Spray with a nicotine wash or with a hellebore mixture, as suggested in another reply for the rose slugworm.

BLUE-FLOWERED PEAS. — E. J. S., Shanklin: The plant sent is the blue-flowered form of the chickling vetch (Lathyrus sativus), a fairly common plant, native of Southern Europe, and a hardy annual. It is, therefore, not a sweet pea (Lathyrus odoratus), and is of no value whatever for its flowers and of little merit as a garden plant.

LOSS OF LEAVES ON JUNIPERS.—M. W., Shrewsbury: The loss of leaves is due to an attack of a common fungus, Botrytis cinerea, and one that occurs during damp weather or in damp situations. The progress of the disease can be checked by spraying the trees and wetting the surroundings for some little distance with a mixture composed of 11lb. sulphate of copper, 16lb. carbonate of copper, 1lb. permanganate of potash, 3lb. soft soap, and 100 gallons of soft water.

HANDY DICTIONARY OF GARDENING.—C. P. H., Everton: The book which best provides the information you desire, and in the condensed and compact form mentioned, is the "Encyclopædia of Gardening," by Mr. T. W. Sanders, F.L.S.; it can be obtained from W. H. and L. Collingridge, 148, 149, Aldersgate Street, E.C., price 3s. 6d.

DISEASED FIG TREE.—W. L. C., Cheadle: The fig tree is suffering from the attack of a parasitic fungus named Libertella ulcerata, a pest that was first fully described and figured in the GARDENERS' MAGAZINE of July 23, 1898. The disease gains entrance through wounds in the bark, hence great care should be taken to prevent the growths from becoming bruised or broken, while all cut surfaces should be tarred over. The parasite cankers the bark and works round the branch attacked until it has encircled it; the portion above the cankered and diseased part then dies, and when it is dead the fungus produces its fruiting stage, and is then in a condition to infect healthy trees should these have wounded surfaces. The disease may be checked if affected branches are cut out and burned, the cut being made through the healthy wood well below the cankered portion. The knife used should be disinfected before a second branch is cut out, and the cut surface of a branch should be tarred over immediately.

RESIDUE FROM THE MANUFACTURE OF ACETYLENE GAS.—B. T. S., Guernsey: The residue from the carbide used in the production of acetylene gas is valuable in the garden provided it is exposed to the air for some time previous to use, so that any harmful substance may become oxidised. Three weeks will usually be a quite long enough exposure, and then the material may be applied to ground needing lime at the rate of about half a bushel to the square rod. After its exposure as suggested, the carbide refuse is practically identical with slaked lime, and may be used for all horticultural purposes to which the latter is put.

NAMES OF PLANTS.

C. A., Horsham.—1, Campanula lactiflora; 2, Melilotus indica; 3, Dimorphotheca aurantiaca.

H. D. S., Saltaire.—1, Piper ornatum; 2, Costus igneus; 3, Pilea muscosa; 4, Odontoglossum triumphans.

E. M., Worcester.—1, Valeriana officinalis; 2, Fedia cornucopiæ—this was formerly known as a Valeriana.

H. G. B., Stansted.—The shrub is Jasminum humilis and the herbaceous plant appears to be Galega pannonica.

G. R. W., Greenford.—1, Thalictrum glaucum; 2, Veronica Colensoi; 3, Lilium Hansoni; 4, Brachycome iberidifolia.

F. L. B., Ripon.—1, Astragalus alopecuriioides; 2, Galega officinalis; 3, Iris ochroleuca; 4, Morina longifolia; 5, Olearia Haasti; 6, Cupressus macrocarpa lutea.

CONTENTS.

PAGE
Border Carnations ... 497
Canker in Melons ... 494
Centranthus ruber ... 495
Cypripedium chrysotoxum ... 497
Exhibitions and Meetings ... 502
Feeding and Top-dressing Chrysanthemums 497
Great Exhibition at Olympia ... 491
Grouping Hardy Flowers ... 494
Mulching ... 495
Notes from Kew ... 494
Notes of the Week ... 489
Ramondias from Seed ... 496
Rock Pinks ... 493
Rose Notes ... 498
Sweet Pea Notes ... 500
The Japanese Ideal in Practice ... 498
Three Useful Brooms ... 493
Variations in Hybrids ... 496
Visit to a Scottish School Garden ... 500
Work for the Week ... 501

ILLUSTRATIONS.

Portrait of Mr. Frederick Bridger, 489; Messrs. Sutton and Sons' Silver Cup Collection of Vegetables, 491; Messrs. Dobbie and Co.'s Gold Medal Collection of Sweet Peas, 492; Odontoglossum ardentissimum Queen Mary, 493; Rose Frances Chartres Seton, 495; Cypripedium chrysotoxum Victor, 497; View in the Beautiful Rock and Water Garden, 498; Summer House in the Japanese Garden at Holland House, Southcliff, Essex, 499; Bloom of Rose Frau Karl Druschki, 503; Messrs. E. Webb and Sons' Silver Cup Collection of Flowers, Fruits, and Vegetables, 507.

New Potato and Charlock Sprayer.—To the Royal Cornwall Show, recently held at St. Austell, the Four Oaks Spraying Machine Company, of Sutton Coldfield, contributed a new potato and charlock sprayer, for which they were awarded a silver medal. This new machine can be used for potatoes or charlock, and will spray from six to eight rows of potatoes at a time. It can be readily attached to an ordinary farm cart, and is so constructed that it will pass through a narrow gateway. As potato spraying has now become general on farms, the introduction of this machine is most opportune, and, having regard to its efficiency and the facility with which it can be used, it can hardly fail to become popular among growers.

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant

Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

GARDEN NETS, Tanned, best quality, extra small mesh, bound all round, 56 yards by 15, 21s.; smaller sizes, ¼d. sq. yard, for cash with order. TRAINER, St. Monance, Fifeshire.

WHEELBARROWS. — Navvy, for building, 11s. 9d. each; general purpose, for farm use, 14s. 9d. each. 6 sent together, carriage paid some stations. Also timber, woodwork, all descriptions. O. JENNINGS and CO., Timber Merchants, General Wood-workers, 916, Pennywell Road, Bristol.

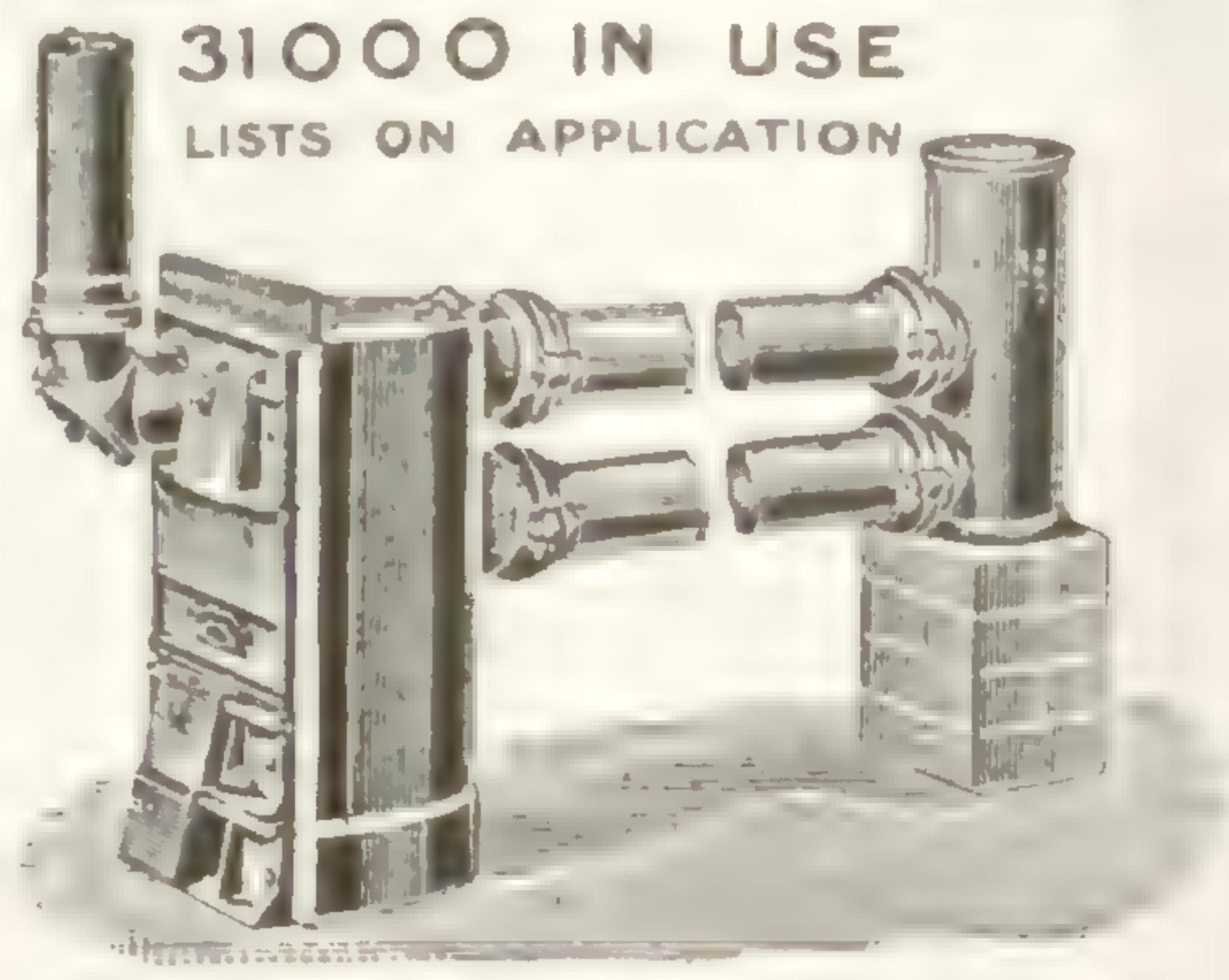
BEGONIAS.—Started Begonias, 12s.; 16s. 100. Gerberas, Adnet's Hybrids, Seed, 1s. 6d.; plants, 15s., 20s. doz. Japanese Davallia Ferns, Badgers, Elephants, Rabbits, Squirrels, Monkeys, Balls, etc., from 2s. ELLISON, 57, West Bromwich.

CACTI and SUCCULENTS.—Cuttings 1s. per doz.; plants, 2s. to 5s. per doz. Mesembryanthemums, rooted cuttings, 1s. per doz.; all different; carriage paid; cash with order. G. SMITH, London Road, New Thundersley, Essex.

The Loughborough BOILER

31000 IN USE

LISTS ON APPLICATION



The pioneer of cheap, simple and effective heating for small greenhouses. Complete Apparatus from £3. 19. 6. The immense sale of this boiler and its numerous imitations are the best testimony of its undoubted success

MESSENGER & CO. LTD.
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH · LEICESTERSHIRE
London Office, 122 VICTORIA ST · S · W

THE FAVOURITE WEED KILLER.

SANDWITH'S
PREMIER
WEED
KILLER

As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for 6/-; drum, 2/-. 12 galls. for 16/-; drum, 6/-. 20 galls. for 26/8; drum, 10/-. 40 galls. for 50/-; drum 20/-.

EITHER LIQUID OR POWDER.

Carriage Paid.

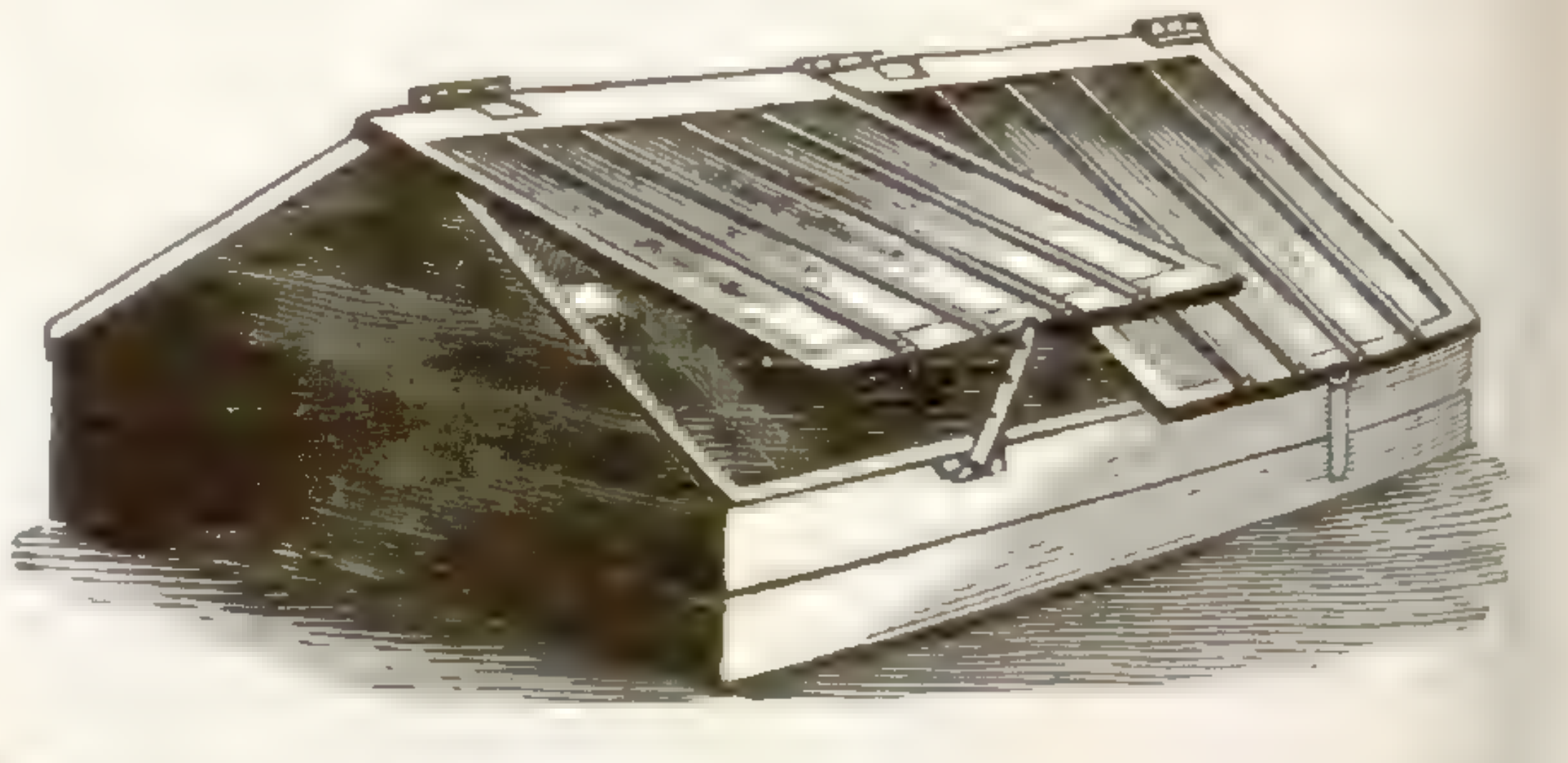
If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,
The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

PORTABLE PLANT FRAMES

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices. Glazed and Painted.		£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. „ 4ft. „		2	5	0
6ft. „ 5ft. „		2	15	0
12ft. „ 4ft. „		4	0	0
12ft. „ 5ft. „		4	15	0
12ft. „ 6ft. „		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
ROYAL HORTICULTURAL WORKS,
MIDDLETON, MANCHESTER.

When answering Advertisements please mention "Gardeners' Magazine."

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out. Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 30; married, one child. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working, where two or more are kept); good all round; 14 years as head in large and well-kept establishments; married; age 40; excellent references. E. MAYLETT, Park Hall, Salford Priors, Evesham.

J. F. G. BANNATYNE, Esq., Haldon, Exeter, will be pleased to recommend H. NICHOLSON as GARDENER (Head Working); thoroughly practical and reliable; life experience in all branches; 3½ years here; age 31. Address, NICHOLSON, Haldon Gardens, Exeter, Devon.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 31; married when suited; excellent references. Address, Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working), life experience Inside and Out; 5 years present situation as General Foreman; excellent refs.; disengaged when suited; age 28. T. CHAMBERLIN, Canons Park Gardens, Edgware, Middx.

GARDENER (Head Working); thoroughly experienced in Fruit, Flowers, Vegetables; Inside and Outside work, where two or three are kept; well recommended. Apply, F., care of Messrs. Charles Turner and Son, Royal Nurseries, Slough, Bucks.

GARDENER (Head Working or Good Second); 11 years' good all-round experience; highly recommended; abstainer; age 24; married when suited; disengaged. H. DRAPER, Maidwell, Northants.

GARDENER (Head Working), where one or two more are kept; life experience in all branches; aged 36; married, four children; 8½ years' excellent references. Apply GARDENER, The Wharf, Abingdon, Berks.

GARDENER (Head Working).—Gentleman recommends a good all-round Man, Inside and Out, where three or more are kept; used to Land and Stock if required; 12 years' good character; age 41. COLES, Sunbury Lodge, Sunbury-on-Thames.

GARDENER (Head or Single-handed); life experience in all branches; six years present situation; age 32; married, one child; good references. H. FORD, West Street, Harrow.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushroom, ridge or flat; Kitchen, Lawn, Flower Garden. Special Prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (Single-handed or otherwise); over 2 years as Foreman in present situation; experienced Inside and Out; can be highly recommended by present employer; age 28. Apply W. BICKER, or Head Gardener, The Gardens, Avenue House, Church End, Finchley. Eastern Counties preferred.

GARDENER (Single-handed, or with Son to help); life experience in all branches; age 37; disengaged; good references. E. LIMEHOUSE, 11, Charleville Road, West Kensington.

GARDENER (Single-handed), seeks situation; 16 years' experience in flowers, fruit, vegetables; excellent references; age 30; single; disengaged.—F. HYDER, 7, Stamford Road, Watford, Herts.

AS JOURNEYMAN under foreman in Plant or Fruit Houses; age 20; six years' experience; excellent references; bothy preferred. B. WEST, Radway, Kineton, Warwick.

JOURNEYMAN, as Inside or Inside and out; age 24; 6½ years at present place; can be highly recommended; disengaged when suited. Apply B. HAYES, Lofts Hall, Saffron Walden.

JOURNEYMAN (Inside) seeks SITUATION; six years' experience, Inside and Out; good references; Bothy preferred. E. ARCHER, Ockham, Woking, Surrey.

YOUNG MAN, age 20, seeks SITUATION as Journeyman, Inside and Out; four years' experience all round and one inside; good references. GOOD, Charing, near Ashford, Kent.

GARDENER (Under), single, well experienced under glass; good references; second. State wages, age, experience, etc; abstainer preferred. THATCHER. The Manor, West Lavington, near Devizes, Wilts.

GARDENER (Inside or Out) seeks SITUATION; age 25; single; disengaged; good references; 5 years previous. F. F., 39, Flask Walk, Hampstead, N.W.

AS GARDENER; used to pony; over two years in present situation; age 24. Near London preferred. Apply J. SCOTT, 51, Manor Park Road, East Finchley.

KITCHEN GARDENER; life experience; take Lead or Single-handed; good character; age 32; married, one child; abstainer. A. HOARE, 2, Elm Grove, Nutbourne, Emsworth, Hants.

SITUATION as KITCHEN GARDENER and handyman; good alto chorister; married, age 25. F. AUGER, 22, Elm Grove, Bishop's Stortford, Herts.

YOUNG MAN (19½) seeks SITUATION, Inside (or Inside and Out); excellent character; willing worker; tall. State wages. V. MEPHAM, 3, High Path, Merrow, nr. Guildford, Surrey.

MR. EUINTON, Ewell Court Gardens, Ewell, Surrey, wishes to recommend strong Youth as IMPROVER (Inside); age 18; 2½ years in these gardens; Bothy preferred.

OUTDOOR work in Nursery or Gentleman's Garden required by strong, willing lad, but slightly afflicted. 35, Broomwood Road, Clapham Junction.

Situations Vacant.

WANTED, Working HEAD GARDENER; married, small or no family; two under kept; thoroughly understand early and late forcing of fruits and vegetables; 24s. week, house, garden, and coals. SANDEMAN, Crickhowell.

WANTED, FOREMAN (Outside, Working); must be first-class Budder, Grafter, well up in Roses, Shrubs, Fruit, Herbaceous, etc., Training, Planting, etc.; energetic; abstainer; house provided. State wages, experience, and copies of testimonials. FRANK E. SMITH and CO., 15-17, High Street, Belfast.

WANTED.—Thoroughly reliable MAN to take entire charge of Fruit and Plant Houses; age 24 to 28; must be a good decorator. Wages, with Bothy, etc., and copies of testimonials to Mr. GOULD, Shernfold Park, Frant, Sussex.

WANTED, active Young Married Man for Pleasure Grounds and Conservatory; able to use Scythe and make himself generally useful, duty every other week; 17s. per week; to live in lodge; wife to attend lodge gate; one child not objected to. Apply to W. T. INNS, Sion Hill Gardens, Wolverley, Kidderminster.

WANTED, Young Man, for small Nursery; must be well up in Cucumbers and Bedding Plants. State age, experience, and wages, to G. H. GRIMES, Hadleigh, Rayleigh, Essex.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For JULY 15, 1911.

Please Repeat my Advertisement.

Name..

Address..

....

Date..

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue

MODERN GLASSHOUSES

as supplied by MESSENGER and CO., Ltd., are made of the best materials, and only capable and reliable workmen are employed in the erection thereof.

The following letter was recently received by us on the completion of a contract for a well-known Member of Parliament.

February, 1911.

"I should not be doing my duty to your workmen if I did not at once tell you, on the completion of your work, how pleased I have been with each and all of them.

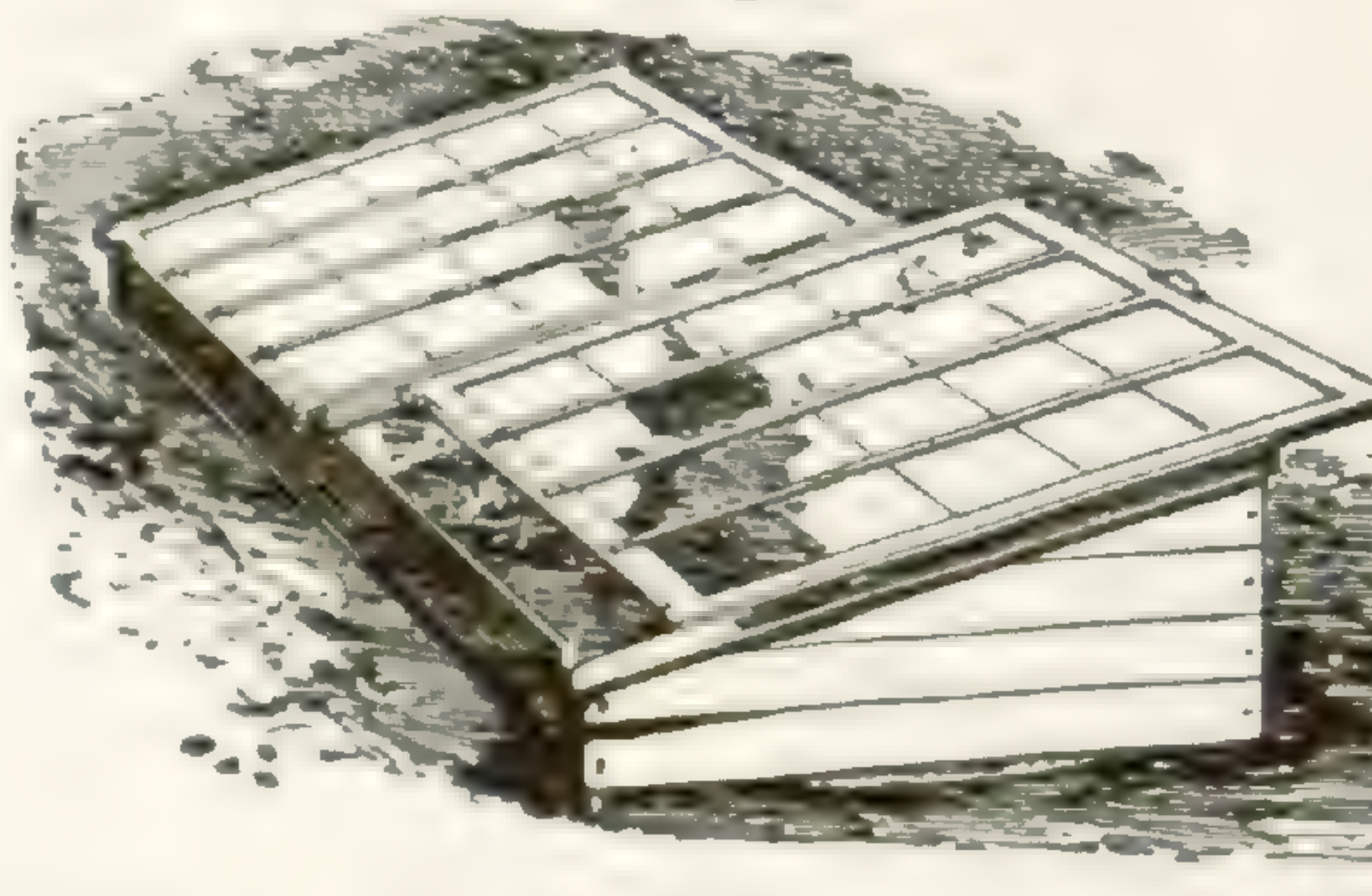
"They have been most obliging throughout the whole job, and have endeavoured to do everything in an efficient and thoroughly workmanlike manner, and I must congratulate you upon having such capable employees."

Catalogues and Estimates Free.

MESSENGER & Co Ltd.
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office 122 VICTORIA St S.W.

Wm. DUNCAN TUCKER & SONS, Ltd.

MELON AND CUCUMBER FRAMES.
No. 38.



6 ft. × 4 ft. ...	£1 14 0	12 ft. × 6 ft. ...	£3 14 0
8 ft. × 6 ft. ...	2 14 0	16 ft. × 6 ft. ...	4 14 0

Carriage Paid on 40/- Orders to most Stations.

Please mention this Paper.

27, CANNON STREET, LONDON, E.C. Works—Tottenham.

Ere ted at Berkhamstead.

ONCE USED. ALWAYS USED. **The 'PATTISSON' LAWN BOOTS**

Simplest! Strongest! Most Economical!

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

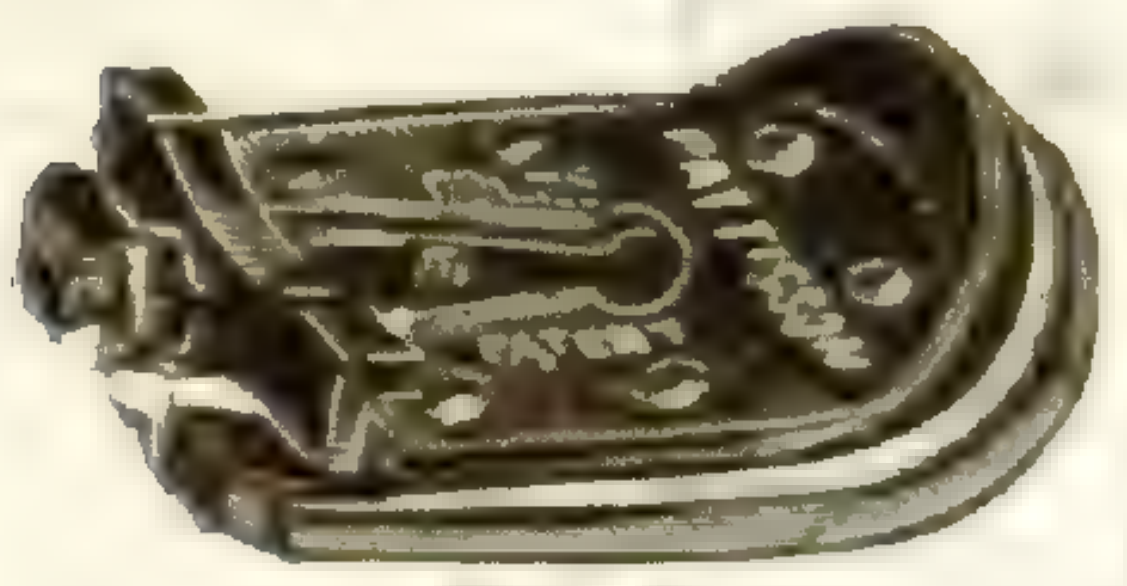


Fig. 1.

Used in the ROYAL and in thousands of the RINCIPAL GARDENS

Silver Medal—
Royal Horticultural Society.

Hundreds of Testimonials.
The Field says: **"As good as anything that could be devised."**

Illustrated Price List from—
PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM S.W.

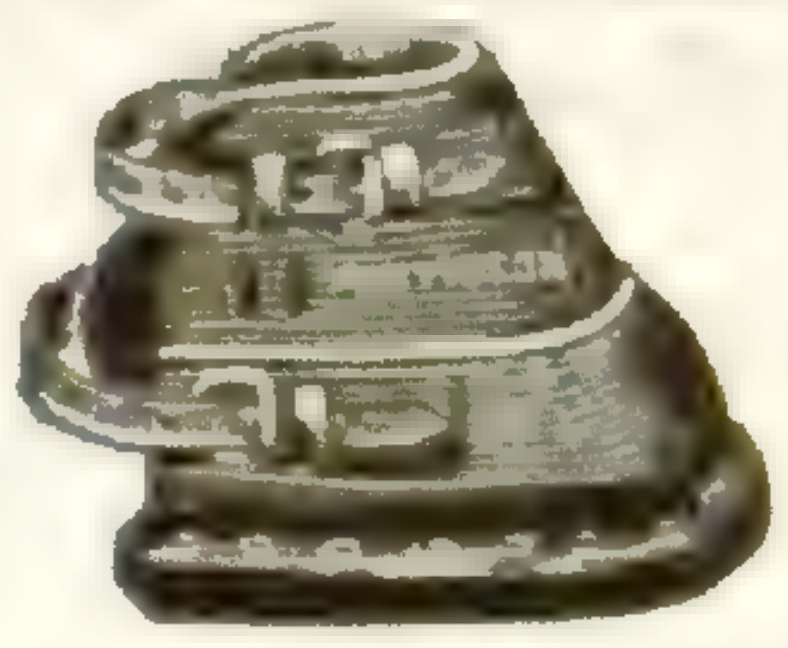


Fig. 2.

NATIVE GUANO

BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS.

Price **£3 10s.** per ton in bags at works. Lots under 10 cwt. **4s.** per cwt. at works; or **5s.** per cwt., carriage paid to any station in England.

Extracts from 35th annual collection of reports:—
NATIVE GUANO for POTATOES, VEGETABLES, etc.
A. J. Beard, Erdington: "Potatoes, splendid, free from disease. Best I ever had." H. Chester, Nantwich: "Best onion manure I ever used. Grand for onion fly."

NATIVE GUANO for FRUIT, ROSES, TOMATOES, etc.
J. Cant, Ipswich: "Tomatoes excellent. Roses grand. Cheapest manure in market."—W. Frampton, Titchfield: "Strawberries, splendid crop."

Orders to the **NATIVE GUANO CO., LIMITED,** 29, New Bridge Street, London, E.C., where 35th year's testimonials, etc., may be obtained. Agents Wanted.

FOR ROSE MILDEW
use
V2K FLUID
THE BEST REMEDY
FOR THIS PERSISTENT PEST.
Does not discolour the foliage
OF AGENTS EVERYWHERE.
Sole Mfrs., Willm. Cooper & Nephews, Berkhamsted

BOTTLING FRUIT.
Efficient, Reliable, Simple, Easily Operated.
WICKHAM and Co., Dept. M, Ware, Herts.
Paten
Apparat
Comple
5 6

City Press, 148 & 149, Aldersgate St., London, E.C., and Printed and Published by W. H. & L. Collingridge, sold by all Newsagents, and at all Railway Bookstalls

GRAND ILLUSTRATED SHOW NUMBER:—

National Rose Show—Wolverhampton—National Sweet Pea Society.

THE GARDENERS' MAGAZINE.

No. 3,011. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, JULY 15, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) Twopence

BARR'S SEEDS FOR JULY SOWING.—Finest selected strains of Aquilegias, Begonias, Campanulas, Carnations, Delphiniums, Forget-me-nots, Hollyhocks, Lupins, Pansies, Hardy Primulas, Snapdragons, Stocks, etc. See Barr's Seed Guide, free. BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, S.W., would advise any-one who is considering the advisability of erecting Greenhouses to get plans and estimates for them now. The best advice with regard to building, all plans, estimates, and every attention can be secured by a postcard, telephone message (201 Western), letter, or wire to "Gray, Chelsea, London."

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

GARDEN NETS, Tanned, best quality, extra small mesh, bound all round, 56 yards by 15, 21s.; smaller sizes, ½d. sq. yard, for cash with order. TRAINER, St. Monance, Fifeshire.

JAMES SENDALL and CO., Cambridge; Conservatories, Vineries, Garden Frames; Heating Engineers. Surveys made, and Plans prepared to suit any position. Illustrated List free. Telegrams: "Sendall, Cambridge." 'Phone, 511.

"WEEKS'S GLASSHOUSES and HEATING APPARATUS, for full advertisement see back page."

GREENHOUSES and GARDEN FURNITURE. — Distinctive Designs and Finished Workmanship. Write NOW for illustrated Catalogue. CARTER and HOWARD, Fife House, Kingston-on-Thames.

RUSTIC SUMMER HOUSES, trellis-work, Fencing, Pergolas, Arches, Seats, Bridges, Log Cabins, Loggias, etc. Send for our new LOG CABIN and RUSTIC CATALOGUE (just published), sent post free. BOULTON and PAUL, Ltd., Norwich.

PERENNIALS, UNIQUE COLLECTION,
including
ALPINES AND AQUATICS.
Also RARER SHRUBS, HIMALAYAN RHODODENDRONS, and Others.
Write for Catalogue. G. REUTHE, Keston, Kent.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-work, showing screens, wall panels, window surrounds, arches, arbors, etc., post free. BOULTON and PAUL, Ltd., Norwich.

FRUIT SAVED.—GARDEN NETTING as supplied by us to the Royal Gardens. SMALL MESH, satisfaction or cash returned, 100 by 1 yd., 3s. 3d. Any length and width supplied. Cheaper quality, 50 yds. 1s.
POTTER BROS.,
Dept. M, Net Makers, Shrewsbury. Est. 1855.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

SOW NOW.
WEBBS' EMPEROR CABBAGE.
BRITAIN'S GREAT CABBAGE.
Earliest and Best in Cultivation.
Remarkably free from any tendency to bolt.
6d. and 1s. per packet; 1s. 6d. per ounce, post free.
Mr. B. M'Evoy, Gardener to W. M'Cartney, Esq., writes: "I had a plot of 400 plants. and not one of them bolted. The hearts are of the finest size and shape I have ever grown."
Webbs' Favourite, 1s. per ounce.
Early Offenham, 8d. per ounce.
Ellam's Early, 10d. per ounce.

WEBB AND SONS, The King's Seedsmen, WORDSLEY, STOURBRIDGE.

BUNYARD'S CATALOGUES
Free on Application.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

KENT STRAWBERRY PLANTS
NEW CATALOGUE READY.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

LAXTON'S STRAWBERRIES.—Fine early pot plants, for forcing, of Royal Sovereign and other varieties, 15s. 100. For new varieties see our catalogue, gratis on application.
LAXTON BROS., Bedford.

PERPETUAL - FLOWERING CARNATIONS.—Send for Illustrated Catalogue, describing all best novelties. Awarded 15 Gold, 10 Silver-Gilt, 29 Silver Medals, and 3 Silver Cups, 1906-1910.
H. BURNETT,
Carnation Specialist, Guernsey.

CLAY'S MANURES, CRUSHED BONES
(See page iv.)

CLAY'S FERTILIZER is UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue Free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

CERTAIN SUCCESS WITH AUTUMN-FLOWERING BULBS, such as Colchicums, Autumn-flowering Crocuses, etc., etc., is assured if you plant Bees' Guarantested (guaranteed and tested) Bulbs in August. This you can readily do if you write NOW for the special list of bulbs for early forcing and autumn flowering.—BEES, LTD, 175E, Liverpool.

IRON and WIRE FENCING for GARDENS, Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free. BOULTON and PAUL, Ltd., Manufacturers, Norwich.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

THE BEST CABBAGES FOR AUTUMN SOWING.
SUTTON'S HARBINGER,
per packet, 1s. and 1s. 6d., post free.
Mr. H. Harris, Horsham, writes:—"Your New Cabbage, Harbinger, is a beauty. I planted out a bed of 600 last September, and they were ready for cutting early in April. They are really models of perfection, just the right size and quality for table, while the handsome leaves and habit of the plants are quite distinct features, and as they require very little room to develop a large number can be grown in a small space."

SUTTON'S APRIL,
per packet, 1s., post free.

SUTTON'S FLOWER OF SPRING,
per ounce, 1s., post free.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
From ———, Esq., Guildford.
"I may say that your Illustrated Catalogue is without doubt the finest book of the sort I have had the pleasure of seeing."

KELWAY'S LOVELY NEW DELPHINIUMS have this week been awarded ANOTHER Gold Medal, for Delphiniums alone.
Nearly all the sorts of Delphiniums on exhibition stands are varieties which ORIGINATED in Kelway's Nurseries.
A splendid collection of Kelway's choice named kinds, 34s. per dozen, carriage, etc., free, for remittance with order.

KELWAY AND SON, The Royal Horticulturists, LANGPORT.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page vi.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

THE BOURNE DAFFODILS have gained the HIGHEST AWARDS wherever Exhibited. Send for my Illustrated and descriptive Catalogue of FIRST QUALITY BULBS at MODERATE PRICES.
Post Free from
CHRISTOPHER BOURNE,
The Daffodil Specialist, Simpson,
Bletchley.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.

XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.

XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N.S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS.
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

ROSES.

R. H. BATH, Ltd.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

'Phone: Hop. 763.

When next a Small Boiler you require

TRY

THE

THE THAMES BANK IRON CO.
UPPER GROUND STREET
LONDON, S.E.

HEEL

NONE TO BEAT IT.

THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.

4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

NARCISSUS.—Tulips, Hyacinths, etc. All the leading and best varieties, from 4s. 6d. per 100. Ask for illustrated price list, post free. Satisfaction guaranteed. C. F. A. VAN DER SLUYS, F.R.H.S., La Ramée, Guernsey.

CARNATIONS Spiral Wire Stakes. No tying required. Will last a lifetime. 24 inches long, 7s. 6d. per 100; 30 inches, 8s. 6d. per 100; 36 inches, 10s. per 100; sample doz., 1s., 1s. 3d., and 1s. 9d., all carriage paid. Pea Trainers, 6ft. by 4ft., 2s. and 3s. each. Garden Archways. Garden Edge and Croquet Bordering, 8 inches high, 8d.; 10 inches high, 10d. per yard. All cash with order. Catalogue free on application. J. PENKETH, Iron and Wire Works, Market Place, Manchester. Telp.: 3695 City.

MERRYWEATHER'S

614 PUMP

IS THE

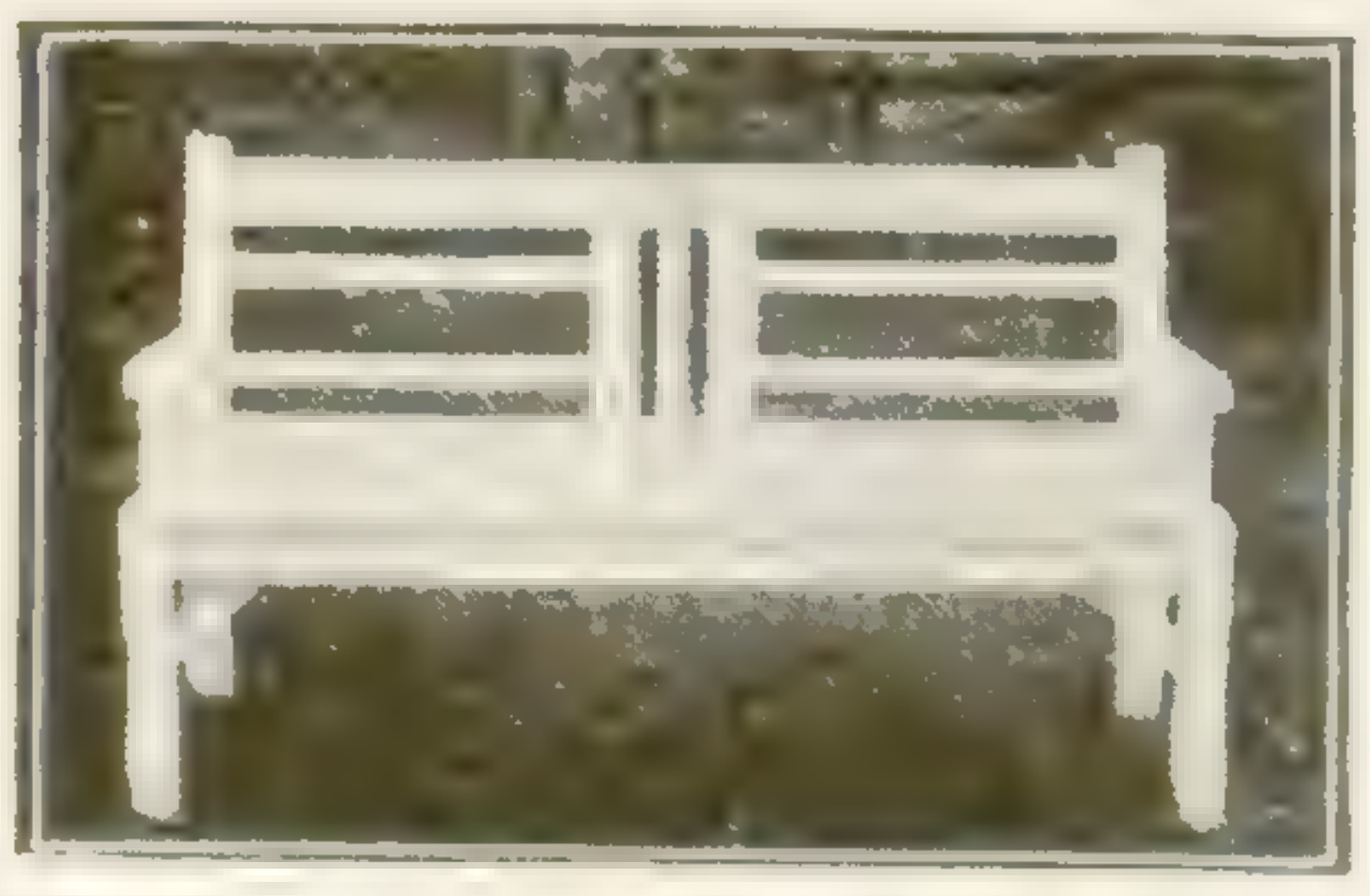
Gardener's Friend.

Easy to Work.
Simplicity Itself.

Write or Call—

63, Long Acre,
LONDON, W.C.

IDEAL, 5 feet long.



In best redwood, painted two coats white

£1:7:6.

Delivered any Station.

Full catalogue on application.

PETER PATRICK & SON, OTLEY, YORKS.

STALKER'S Forest Trees, Fruit Trees Roses, Bulbs, and Seeds
Are known all over the world, and cannot be surpassed for hardiness and quality.

Famous for Quality and Cleanliness.

D. STALKER & SON,
Government Contractors,
Catalogues Free. NAIRN, N.B.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.
Our Work has stood the test of time.

CHARGES FOR ADVERTISEMENTS IN

THE GARDENERS' MAGAZINE.

	£	s.	d.
Five Lines and under	£0	2	6
Per Line beyond	0	0	6
,, Inch	0	6	0
,, Half Column	1	10	0
,, Column	3	0	0
,, Page	9	0	0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— & Co

Telephone Numbers:
Editorial and Printing Depts. .. ... 831 Holborn.
Advertising and Publishing Depts. ... 2140 Holborn.

Offices: 148 and 149, Aldersgate Street, London.

BY APPOINTMENT.

New Roses.

Wm. PAUL & SON

Waltham Cross, Ltd.,

Beg to call attention to their extensive collection of New Roses, including Rambling varieties, good plants of which, in pots, are ready for delivery throughout the summer months :—

WM. PAUL & SON'S NEW VARIETIES.—Florence Haswell Veitch (H.T.), **7/6**; Frances Charteris Seton (H.T.), **7/6**; Lady Downe (H.T.), **7/6**; Sylvia (autumn-flowering Rambler), **7/6**; Alice Cory-Wright (H.T.), **3/6** to **5/-**; Elsie (Hybrid Wichuraiana), **2/6** to **5/-**; Juliet (Hybrid Briar), **3/6** to **10/6**; Portia H.T.), **3/6** to **5/-**.

New British and Continental varieties of other raisers, **2/-** to **7/6** each.

Priced Descriptive Catalogue post free on application.

Also a large general collection of Roses, in pots for filling vacancies in rose gardens and for pot culture, **12/-** to **42/-** per dozen; climbers and ramblers, **12/-** to **60/-** per dozen.

Pauls' Royal Nurseries

WALTHAM CROSS, HERTS.

ESSEX.—26 miles out, six-roomed house (brick), 2½ acres, 2 Hothouses, completely fitted (each 150 x 20), 300 fruit trees, 2 wells, reservoir. Freehold; bargain, £550. Easy terms, or part mortgage. J. ALLEN, 34, New Bridge Street, London, E.C.

HAMPTON COURT HOUSE, HAMPTON COURT, MIDDLESEX.
By order of Executors.

TO BE LET, on favourable terms, the whole, or part, of the Gardens and extensive Glasshouses and Vineries, fully cropped, Gardeners' Sleeping Cabins, etc., etc.

Apply to Messrs. LEE and PEMBERTONS, 44, Lincoln's Inn Fields, London, for terms and permission to inspect.

SMALL NURSERY and FLORISTS; four greenhouses, frames, etc., dwelling-house, shop, etc., as going concern, only £30; rent £38; no replies by post. 62, Windmill Road, W. Croydon.

THE CHEAPEST IN ENGLAND.

NO. 50.

Copyright Registered.

PORTABLE BUILDINGS. Made in complete sections, **best quality Red Deal** (not interior Foreign Match Boards as other makers), planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

SIZES.	CASH WITH ORDER.	Strong Floor.
6ft. long, 4ft. wide, 7ft. high	**£1 12 6**	**4/6**
7ft. long, 5ft. wide, 7ft. 6in. high	**£1 19 6**	**6/0**
8ft. long, 6ft. wide, 8ft. high	**£2 10 0**	**8/6**
9ft. long, 7ft. wide, 8ft. high	**£2 17 6**	**10/6**
10ft. long, 8ft. wide, 8ft. 4in. high	**£3 7 6**	**16/0**
12ft. long, 8ft. wide, 8ft. 6in. high	**£3 17 6**	**19/6**

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
ESTABLISHED 70 YEARS. **BEDFORD.**
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

ONCE USED. ALWAYS USED. **The 'PATTISSON' LAWN BOOTS**

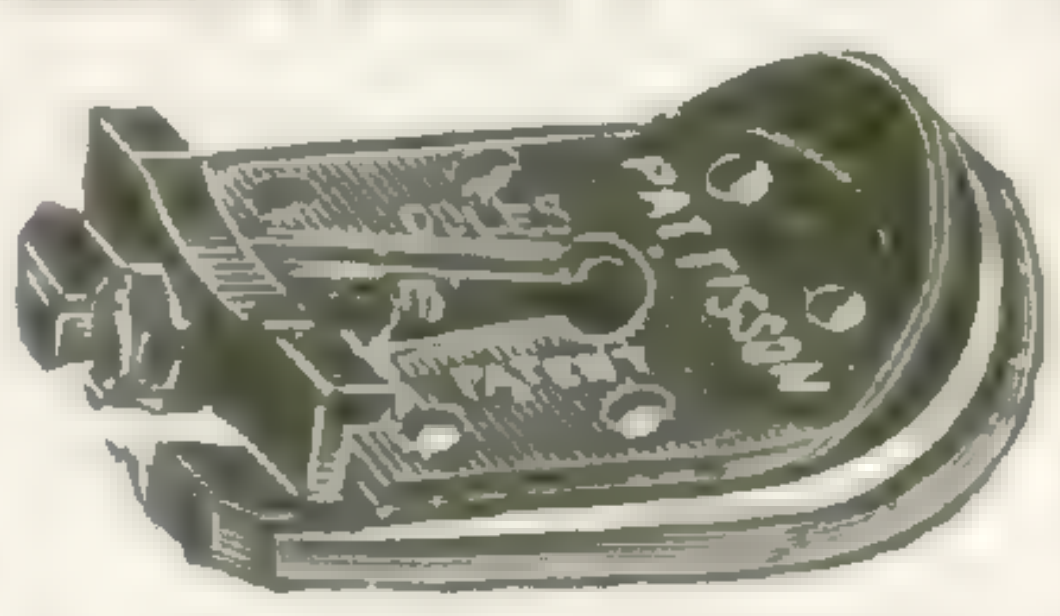


FIG. 1.

Simplest! Strongest! Most Economical!

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS

Silver Medal—
Royal Horticultural Society.
HUNDREDS OF TESTIMONIALS.
The Field says: **"As good as anything that could be devised."**
Illustrated Price List from—

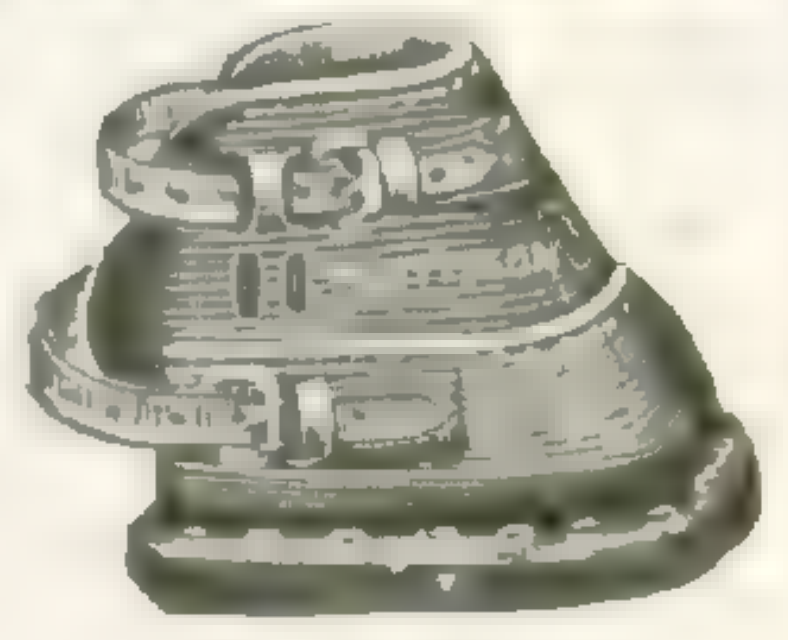


FIG. 2.

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM S.W.

GARDEN AND TENNIS NETS (best tanned only, small mesh).—50 x 8yds., 17s.; 25 x 8yds., 50 x 4yds., 100 x 2yds., 8s. each; 100 x 1yd., 50 x 2yds., 25 x 4yds., 4s. each. Any size to order. Tennis Netting (corded), 25 x 2, 6s. 6d.; 25 x 3, 7s. 6d.; 25 x 4yd., 8s. 6d. Write for Price List. L. WREN and SON, Net Merchants, 139, High Street, Lowestoft. Established 1863.

SEED AND NURSERY BUSINESS FOR SALE, favourable district, West of Scotland; low price; easily increased; reason for disposing. SEEDSMAN, (9), "Gardeners' Magazine" Office, 148-9, Aldersgate Street, London, E.C.

RARE ALPINES CHEAP.—Profits devoted to Patriotic objects. Apply for list, LADY C., The Abbey, Much Wenlock, Shropshire, and please enclose fully addressed and stamped envelope.

BENTLEY'S WEED DESTROYERS

Utterly annihilate Weeds, Moss, Dandelions, and all other Weeds on Garden Walks, Carriage Drives, etc.

HAVE THE LARGEST SALE IN THE UNITED KINGDOM!
ARE THE MOST POWERFUL MANUFACTURED!
ARE THE MOST PERMANENT IN EFFECT!

LIQUID (Poison).

Double Strength (1 to 50).

3 gallons, to make 153 gallons	...	£0	10	0
6 ,,	,, 306 ,,	...	0	18	0
12 ,,	,, 612 ,,	...	1	13	0
20 ,,	,, 1,020 ,,	...	2	7	6
40 ,,	,, 2,040 ,,	...	4	12	6

Special Concentrated Strength (1 to 80).

3 gallons, to make 243 gallons	..	£0	14	6
6 ,,	,, 486 ,,	...	1	7	0
12 ,,	,, 972 ,,	...	2	6	0
24 ,,	,, 1,944 ,,	...	4	10	0

BENTLEY'S
COMPOUND LIQUID **QUASSIA EXTRACT**
(THE ORIGINAL).

The deadliest foe of Green, Black, and White Fly.

The insecticide of insecticides for roses, chrysanthemums, tomatoes wall and bush fruits, and other trees.

SAFE TO USE ANYWHERE AND EVERYWHERE

20 Galls., **3/6** per Gall.; 10 Galls., **3/7** per Gall.; 5 Galls., **3/8** per Gall.; 1 Gall., **4/2**; ½ Gall. **2/6**; 1 Quart, **1/6**; 1 pint, **1/-**.

Carriage Paid on 7/6 orders and upwards.

WHOLESALE MANUFACTURERS,
JOSEPH BENTLEY LIMITED,
Chemical Works,
BARROW-ON-HUMBER, HULL.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to
EPPS & CO., Ringwood, HANTS.

NOTICE.

The AZALEAS and RHODODENDRONS planted in Hyde Park, near Rotten Row, finest to be seen in London, are supplied by ANTHONY WATERER, whose only address is Knap Hill Nursery, Woking, Surrey.

No connection with any other firm of similar name.

SMITH'S WEED KILLER is absolutely "PERFECT."
4 Tins of Powder or 4 Gallons of Liquid to make 100 Gallons.
6/6 Carriage Paid.
MARK SMITH, Ld. *Louth, Lincolnshire.*

— THE —
NATIONAL HARDY PLANT SOCIETY
Invites all lovers of Hardy Flowers to join its membership.
For particulars apply to the Hon. Secretary,
FRANK BOUSKELL,
Market Bosworth, Nuneaton.

PAINT & GLASS.
NICHOLLS & CLARKE, LTD
SHOREDITCH, LONDON.
PGLASS. When sending for Catalogue please cut out this advt

SUBSCRIBER'S ORDER FORM

Every Saturday THE GARDENERS' MAGAZINE. Twopence

To W. H. AND L. COLLINGRIDGE,
148 AND 149, ALDERSGATE STREET, LONDON, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose________ for________ months in advance.

Name________________
Address________________
Date____________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

* * If a receipt is required for amounts under 10s. a stamped envelope should be forwarded

CLAY'S FERTILIZER

CROWNS THE CORONATION YEAR WITH FLORAL TROPHIES.

CLAY'S LONDON FERTILIZER
TRADE MARK.

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK, AS AT SIDE.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. Fourth Edition (Second Reprint). 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Stratford, London, E.

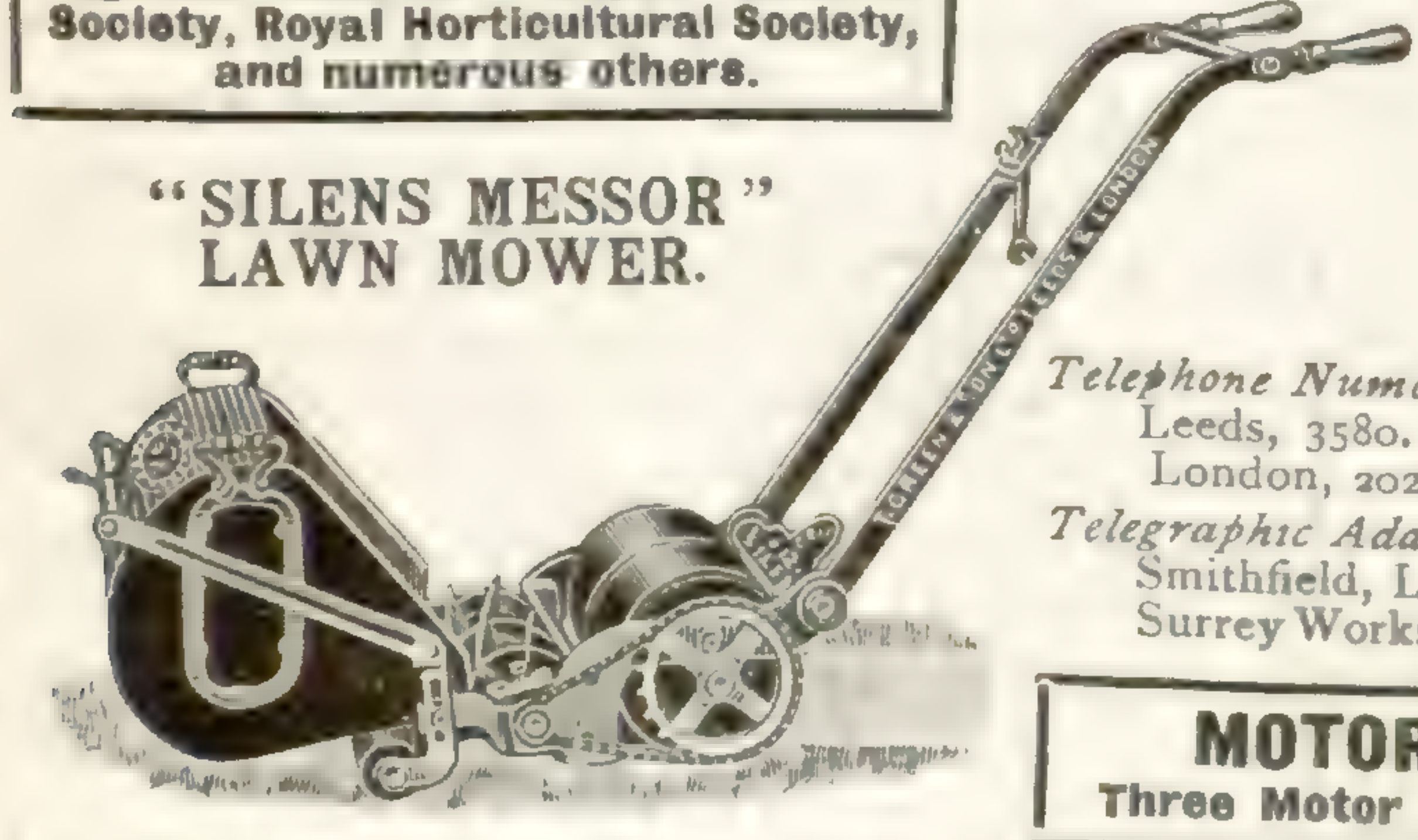
APPOINTED BY ROYAL WARRANT, HORTICULTURAL MACHINE MAKERS TO HIS MAJESTY KING GEORGE V.

GREEN'S LAWN MOWERS ARE UNEQUALLED.

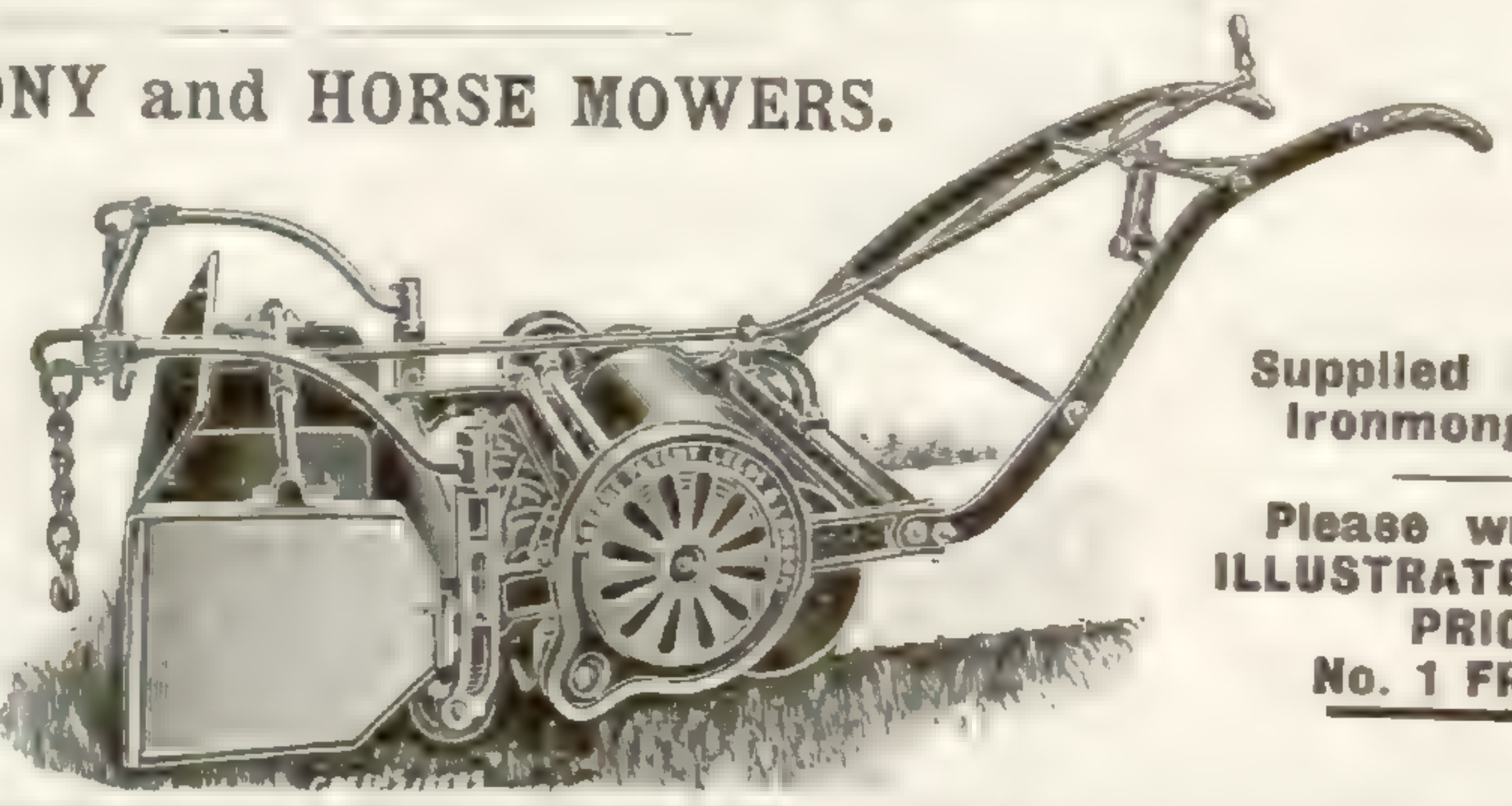
Hundreds of Thousands are in use. Established nearly a Century.

Highest Awards — Royal Botanic Society, Royal Horticultural Society, and numerous others.

"SILENS MESSOR" LAWN MOWER.



PONY and HORSE MOWERS.

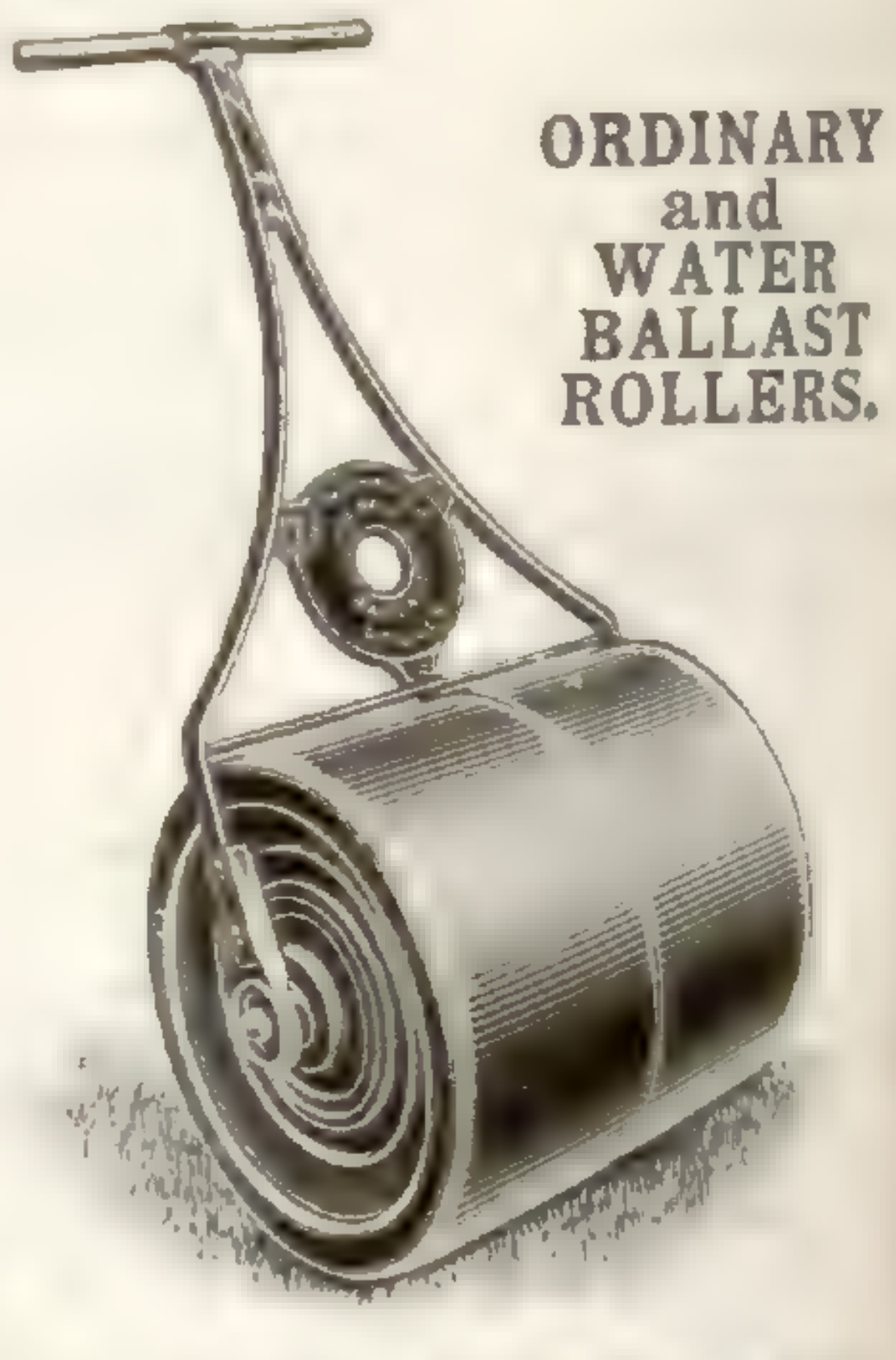


Telephone Numbers—
Leeds, 3580.
London, 2022 Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London

Supplied by all Ironmongers.

Please write for ILLUSTRATED PRICE LIST No. 1 FREE.

ORDINARY and WATER BALLAST ROLLERS.



MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.
Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.E.

Primulas! Primulas! Primulas!

41st Year of Distribution.

OUR WELL KNOWN MAGNIFICENT STRAIN,
1/6 doz.; **2/6** 25; **10**/- 100. Package and Carriage Free.
Primula Obconica Gigantea, Cineraria (Large-flowered) and **Stellata** at same prices.

JOHN STEVENS & SON, COVENTRY.

ORCHIDS

EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS**, and an endless variety of Choice **ORCHIDS**. Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.
Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

ORCHIDS, ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

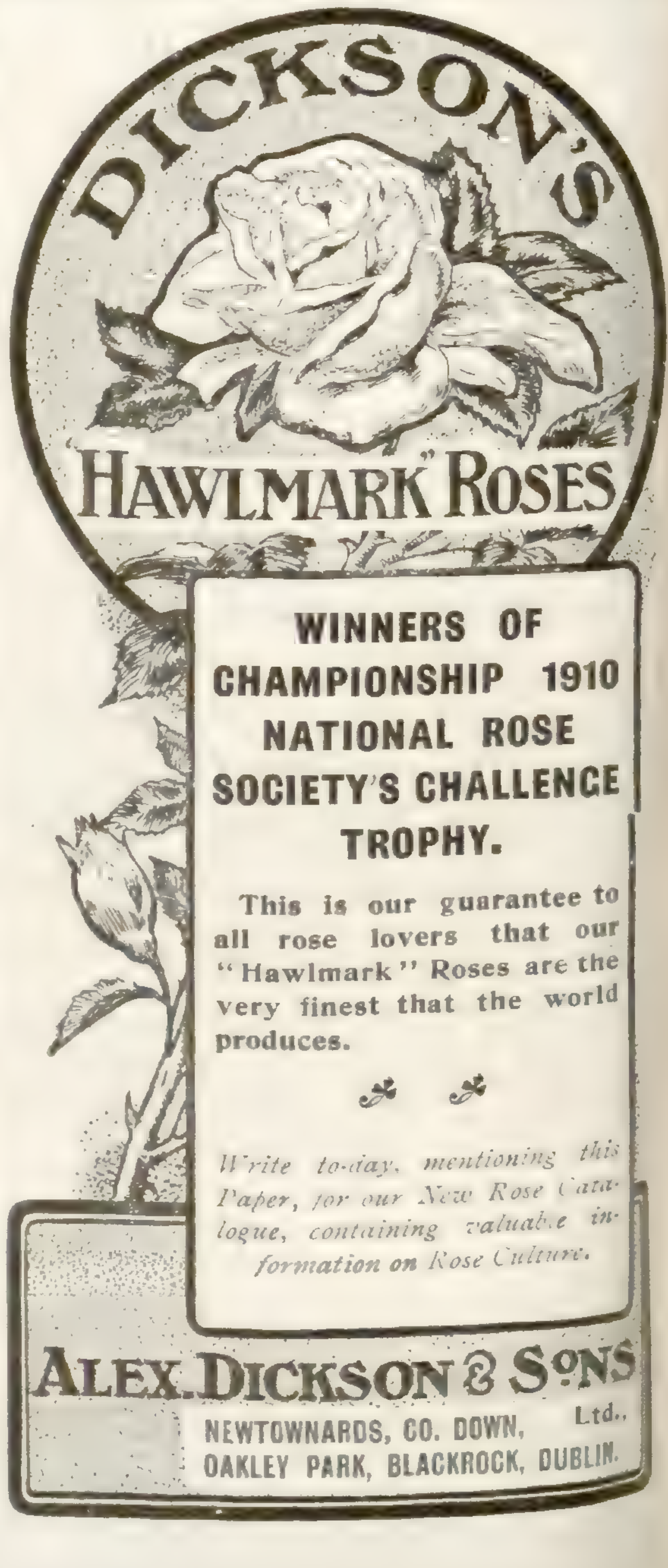
AMERICAN TREE CARNATIONS

The Newest and Best Varieties.

Strong, healthy and well-rooted plants only supplied.

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.



DICKSON'S
"HAWLMARK" ROSES

WINNERS OF CHAMPIONSHIP 1910 NATIONAL ROSE SOCIETY'S CHALLENGE TROPHY.

This is our guarantee to all rose lovers that our "Hawlmark" Roses are the very finest that the world produces.

Write to-day, mentioning this Paper, for our New Rose Catalogue, containing valuable information on Rose Culture.

ALEX. DICKSON & SONS Ltd.,
NEWTOWNARDS, CO. DOWN,
OAKLEY PARK, BLACKROCK, DUBLIN.

NEW ROSES.

We can now supply strong plants in 5 inch pots of the following New Roses.

- Lyon Rose
- Ethel Malcolm
- Mrs. Foley Hobbs
- Viscount Carlow
- Mrs. Leonard Petrie
- Mrs. Maynard Sinton
- May Kenyon Slaney
- Souvr. de Gustave Prat
- Soleil d'Angers
- George Ardens
- Duchess of Wellington
- Marquise de Sinety
- Mrs. Walter Easlea
- Mrs. Fred Straker
- Mrs. Arthur Coxhead
- Viscountess Enfield
- Orleans Rose
- Lady Hillingdon
- Mrs. Hubert Stevens
- Eugene Boullett
- Excelsa
- Mrs. Wilfred Lloyd
- Jessie
- Claudius
- Juliet
- Lady Pirrie
- Miss Muriel Jamison
- Marchioness of Waterford
- Mrs. James White
- Miss Alice de Rothschild
- Lieutenant Chaure
- Mrs. George Preston
- Mrs. C. C. Harrison
- Margaret
- Peerless

FRANK CANT & CO.,
Rose Growers, COLCHESTER.

VOL. LIV.—No. 3,011. SATURDAY, JULY 15, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Summer Flower Shows.

The recent summer exhibition held by the Royal Horticultural Society at Olympia has created a considerable amount of interest in the important question as to the best possible place in which to hold flower shows during the summer months. This question is one that has for a long series of years engaged the attention of horticulturists concerned with the management of societies having for their object the furtherance of gardening, without, it must be admitted, a satisfactory solution having been found. Whether such solution is possible has yet to be demonstrated. The question is not so simple as might appear to these who have not given it full consideration, but it bristles with difficulties, and we can hardly hope that the Olympia show will, owing to its exceptional character, render assistance of much practical value in any endeavour that may be made to remove them. If the only point to consider was the best method of presenting to public notice the products of the garden and nursery in the most interesting and attractive manner, as in the case of the fortnightly meetings at the Horticultural Hall, there would probably be no great difficulty in arriving at the conclusion that a spacious, well-lighted, and properly ventilated hall has the greater advantage. It might be urged by those who have a preference for the holding of exhibitions within four walls, that the success of such gatherings is less dependent upon the weather than is the case when the shows are held under canvas, and also that buildings possess conveniences that are in many cases wholly absent from sites in the open. The question, however, is too complex to be solved by conceding the point that, when exhibitions are held in spacious buildings the plants, flowers, fruits, and vegetables contributed to them can be inspected without any apprehension as to the health being impaired by walking in wet grass, or obtaining a wetting in passing from one part of the exhibition to the other during rainy weather. It is essential to recognise the fact that all the visitors to flower shows are not ardent horticulturists, and derive pleasure only from the products in competition. A large proportion of the visitors to these gatherings derive as much pleasure from meeting their friends and having a chat with them, or listening to the band amid pleasant surroundings, as from the floral display. This has been the case from the earliest days of horticultural exhibitions, and is likely to continue; and as these visitors contribute materially to the financial results the aid they render in this important particular must be fully recognised. Still keeping these visitors in view, it may with advantage be pointed out that, if the tents are unpleasantly hot, as is often the case in an ordinary summer, owing to indifferent ventilation, they can have a walk through them and then return to the open, find a seat in a shady position, and enjoy a conversation with their friends, or the music, as may be the most agreeable. The conditions under which summer flower shows are held in buildings are altogether different. Visitors have to remain within the walls of the latter from the time they enter the exhibition until they leave, and, however much they may be interested in the various objects, the time comes when a strong desire is felt to obtain a rest for both the mental and physical faculties, and preferably where the fresh air and blue sky can be enjoyed concurrently therewith. Moreover, the opportunities for pleasant conversation are not great, and unless we are much mistaken few ladies would consider a building a suitable place in which to display to the best advantage a summer frock. The exhibition at Olympia, as already intimated, may not be able to render so much assistance as could be desired in determining the relative advantages of holding summer flower shows in buildings and in tents in the open, because of the enormous proportions of the building, and the great wealth of material that was as usual placed at the disposal of the Royal Horticultural Society. For the purposes of horticultural exhibitions on a large scale, Olympia possesses possibilities that are probably unequalled by any other building in the United Kingdom; and it is unfortunate these were not more fully demonstrated on this occasion. The visitor on entering the large hall could not well fail in being impressed with the magnitude of the display and the high quality of the products, or to appreciate the thought and labour involved in carrying out the arrangements. It was unfortunate that a few meritorious collections were assigned a position in the gallery, and where they failed to receive the attention they so fully deserved, but it should be remembered that it is not easy to avoid a few slips in allotting the spaces at an exhibition of great magnitude. Much was done to make the exhibition attractive, but the efforts that were made in this direction fell short of the necessities of the case in two important particulars. Nothing was done to screen the plants and flowers from the sun's rays, or to break up the comparative uniformity of the huge banks that flanked the sides of the central walk in the great hall. The roof is partly of glass, and the glare of the sun was so strong as not only to materially reduce the duration of the freshness of the cut flowers, but to give flatness to the general effect and to render it impossible to enjoy the soft colouring which constitutes so great a charm of large numbers of flowers. A screen of canvas or muslin, or some other fabric, would have greatly improved the appearance of the whole of the products, and would have amply repaid its cost, which would probably not have been great, seeing that the committee of the Horse Show, held a few weeks since, provided such a screen for the protection of visitors from the rays of the sun. The fine banks of plants and flowers were impressive by reason of their magnitude, but their appearance generally would have been immensely improved by arranging on each side of the central walk a dozen or so of palms with feathery leafage, and from fifteen to twenty feet in height. Palms of this description placed on pedestals about three feet in height would have broken up the uniformity of the display without in any way interfering with the inspection of the various collections. It is somewhat strange there should in this country be so great a

MR. T. TURTON.

difficulty in appreciating the value of palms in preventing the inartistic uniformity characteristic of exhibitions in which the objects show but little variation in height. The National Rose Society had, for the purposes of its Metropolitan show, a structure of canvas and wood that was as nearly perfect for the purpose to which it was put as we can hope to see; but as the eye ranged over several long lines of boxes at one time the effect was somewhat monotonous. A few palms, about three feet high, placed down the centre of some of the tables would have changed all this, and greatly improved the general effect.

Mr. T. Turton, whose portrait is given in this issue, has achieved so high a degree of success as a cultivator and exhibitor of various kinds of fruit during the past thirty years, that he has become well known to a wide circle of horticulturists; and by those who are fully acquainted with his work, he is regarded, and properly so, as one of the foremost gardeners of his day. It would occupy much space to state in detail Mr. Turton's many achievements in connection with fruit culture since he first made his appearance as an exhibitor, but it may be mentioned that he has exhibited with success at the autumn fruit shows of the Royal Horticultural Society since they were re-established, now many years since. Mr. Turton was successful in winning the fruit packing prize offered some years since by Messrs. Webber, of Covent Garden, and it is not surprising he should remember with pleasure his success in this competition, for it afforded proof that he could pack, as well as grow, fruits in the best possible manner. It may be assumed that the winning of the prize was all the more gratifying from the fact that he had to contend with such strong competitors as the late Mr. Coleman, of Eastnor Castle. Although Mr. Turton has achieved so high a degree of success as an exhibitor of hardy and other fruits, it must be said that he has not been less successful in the cultivation of the other products that come under the gardener's care, and of this he has given ample proof both at Reading and Sherborne. It is of interest to mention that Mr. Turton, after the necessary preliminary training, spent between one and two years in the Royal Gardens, Kew, leaving at the end of 1872 to fill a position in the Grimston Park Gardens, which were then under the charge of Mr. H. J. Clayton. He remained at Grimston Park until 1875, when, on the recommendation of Mr. Clayton, he left to fill the position of foreman at Heckfield Place. This post Mr. Turton occupied three and a-half years, and in the performance of his duties he evidently satisfied that able gardener, Mr. W. Wildsmith, for in December, 1878, he was, on the recommendation of his chief, appointed head gardener at Maiden Erleigh, Reading, a position he occupied until January, 1899, when he succeeded the late Mr. W. G. Prognell as head gardener at Sherborne Castle, the seat of J. K. D. W. Digby, Esq., the position he holds at the present time.

The Potato Crop.—In its special report on the condition of British crops, "The Times" states that potatoes are not so good as they were last year, nor as in 1909—both good years. The frost of June 10 left its mark, especially upon early varieties. A note to this effect is common throughout all districts from North to South, and where the crop has escaped estimates are high. Reports are, in fact, very divergent, as, for example, in Kent, where one correspondent estimates his early crops at 25 per cent. of a full crop, several others use the satisfactory figure of 100. Bedfordshire reports vary between 60 and 105; Hunts and Essex between 90 and 100; Lincolnshire from 75 to 100; Norfolk and Suffolk from 80 to 100; Yorks, East and North Ridings, from 90 to 100; Berks, 70 to 105; Rutland, 80 to 105; Cornwall, 75 to 102; Dorset, 75 to 105; Gloucester, 50 to 100. Wilts supplies six reports all agreeing to 100, while Durham reports (11 in number) vary from 85 to 120. Wales sends 25 reports varying from 50 to 105; Scotland contributes 76, all between 75 and 110. It is evident that if it had not been for the late June frost potatoes would have been one of the most promising crops of the year.

The National Trust, which has for its object the preservation of places of historical interest or natural beauty, was held at Hinehead on the 8th inst., and the report presented to the members afforded abundant evidence of the excellent work that is being accomplished. Princess Louise (Duchess of Argyll), the president, was unable to be present through indisposition, and Sir Robert Hunter, chairman of the Executive Committee, presided. In moving the adoption of the report, Sir Robert Hunter said the income from annual subscriptions amounted to £466, while the total receipts were £1,688. The expenses for the maintenance of the properties of the Trust and general management amounted to £1,572, leaving a surplus of £116. The Trust had 35 different properties. During the year the council made special efforts for the purchase of Grange Fell and the Borrowdale Birches, in the Lake District. For the success of those efforts they were indebted mainly to Canon Rawnsley. Princess Louise had contributed £100 in memory of King Edward, after whom a portion of the Fell was to be named "The King's How." A similar memorial had been given to the Trust in Kent, where 34 acres on One Tree Hill had been presented by Dr. and Mrs. Jamieson Hurry in memory of Mr. Arthur Hill. Another important acquisition was 80 acres of Marley Common and Kingsley Marsh, which were to be purchased by the Trust from Lord Leconfield. It was the intention of Mr. and Mrs. Arthur Lee to transfer to the Trust, subject to their life interests, Coombe Hill, Bucks. The council also hope to acquire two buildings of antiquity—the Old Priest's House at Muchelney, in Somerset, and the Chantry Chapel at Buckingham.

Sir F. W. Moore, V.M.H.—Before leaving Dublin on Wednesday, the King held an investiture at the Castle, and conferred the honour of knighthood on Mr. F. W. Moore, director of the Glasnevin Botanic Gardens. We heartily congratulate Sir F. W. Moore on the distinction that has been so deservedly conferred upon him.

R.H.S. General Examination in Horticulture.—The report on the general examination in horticulture held by the Royal Horticultural Society in April last has been issued, and from this we learn that 202 candidates entered for the senior, and 68 for the junior examinations. Four of the seniors were unable to be present. The examiners, the Rev. Professor Henslow, V.M.H., and Mr. James Douglas, V.M.H., state that of the senior candidates obtaining a place in the pass list, 33, or 16 per cent., secured places in the first class; 95, or 48 per cent., in the second class; while 69, or 35 per cent., appear in the third class. Only one candidate failed altogether. The answers of the candidates in the first class are said by the examiners to have been remarkably good, and in dealing with the questions relating to horticultural practice, the candidates displayed a good practical knowledge of hardy fruit cultivation, and the various systems of training fruit trees to walls, and also of the chemical composition and the use of manures. Of the 68 juniors, four were placed in the first, 18 in the second, 25 in the third, and 19 in the fourth. Last year there were 112 junior candidates, and it is stated in the report that this falling off was in some measure due to those responsible for the entry of juniors failing in a large number of cases to acquaint themselves with the date of the examination until it had been held, although the syllabus was issued nine months previously. In the senior examination, G. M. Grover, Studley College, Warwickshire, was at the head of those who obtained a place in Class 1, and Mr. A. Bouston, Arlesley House, Hitchin; J. W. Hart, University College, Reading; and E. R. Taylor, Studley College, were bracketed for the second place. The juniors who obtained a place in the first class were H. C. Elsden, H. Germany, and H. Hammerston, all of the Technical School, Chelmsford; and F. R. Harding, of the Industrial School of the same town.

Wandsworth Common.—A strong opinion prevails in the district that the proposed sale of land adjoining the Royal Victoria Patriotic School, Wandsworth Common, should not take place. The Wandsworth Borough Council will at their next meeting consider the following recommendation from one of their committees: "That the London County Council be asked to receive a deputation from this council on the subject, and that the County Council be informed that this council (whilst still of opinion that if the land is to be alienated from the asylum, it should be restored to the common without purchase) would be willing to contribute £1,000 towards the purchase of the 20 acres of land in question, with a view to its being preserved as a public open space, subject to the Battersea Borough Council also contributing, to local subscriptions being made, and to the County Council contributing the greater part of the cost of acquiring the land." It has been stated that the Parks Committee of the County Council will be prepared to receive a deputation on July 21.

National Hardy Plant Society's Outing.—On the invitation of Sir Frank Crisp, the members of the National Hardy Plant Society will visit the beautiful gardens of Friars Park, Henley-on-Thames, to-day (July 15). The members of the party will meet at Henley Station at 1.15 p.m., and those coming from London will travel by the train leaving Paddington at 12.5 p.m., and return by the train leaving Henley at 6.35 p.m. The committee hope that a goodly number of members will take advantage of the opportunity thus afforded for inspecting the fine gardens and comprehensive collections of hardy plants at Friars Park.

Awards to Cucumbers.—A short time since a sub-committee of the Royal Horticultural Society's Fruit and Vegetable Committee visited Wisley, and recommended that Awards of Merit be made to Cucumber Pride of the Market (Messrs. Barr and Sons) and Telegraph Improved. This recommendation has been confirmed by the full committee, and approved by the council, and these excellent cucumbers have now received the recognition they so well merit.

NATIONAL SWEET PEA SOCIETY.

This youthful and vigorous society held its eleventh exhibition at the Royal Horticultural Hall, Westminster, in brilliant weather on July 11 and 12, and if the display was not quite the largest of the series it was one of the finest, the quality all through being superb. A point that struck us was the greater variety of colouring the flowers presented as compared with other years. Only a few years ago pink was the predominating sweet pea colour,but now there are good blue, orange, carmine, buff, purple, rose, cerise, mauve, lavender, maroon, and other shades. The show was very effective, the traders filling the spaces next the walls all around the competitive exhibits. The music gallery was tastefully decorated with palms and ferns and sweet peas.

The competition was excellent and the Irish flowers were superb. There was a good attendance.

TRADE EXCLUDED CLASSES.

The Sutton Cup for the best twenty-one varieties representing the finest varieties as indicated by the National Sweet Pea Society, was won by Mr. A. E. Usher, gardener to Sir Randolf Baker Bart., Ranston, Blandford, with rare spikes of big blooms; his Mrs. Townsend, Helen Lewis, Mrs. A. Ireland, J. Ingman, and Mrs. C. W. Breadmore were exceptionally good; Mr. Mosing, gardener to A. W. Stirling, Esq., Holm Lea, Goring, second, and Mr. G. F. Hallett, gardener to Sir Thomas Hesketh, Bart., Easton Neston, Towcester, third. For twenty-four bunches, Mr. Usher was again to the front, and here he had Othello Spencer, Helen Lewis, Senator Spencer, and Bertie Usher in good form; Mr. Tubb, Oakbank, Sevenoaks, second, and Mr. E. Keith, gardener to the Right Hon. Sir G. O. Trevelyan, Bart., Wallington Hall, Cambo, Morpeth, third.

Mr. Thomas Stevenson, gardener to A. G. Mocatta, Esq., Woburn Place, Addlestone, won the Eckford Cup with a dozen exquisite vases of Anglian Pink, Thomas Stevenson, Princess Victoria, Queen of Norway, Evelyn Hemus, Clara Curtis, Maud Holmes, Marjorie Linzee, Helen Grosvenor, and Nubian; Mr. Usher came second, Mr. A. Moring third, and Mrs. Bartlett, Tolleshunt Knights, Witham, fourth.

The Coronation Cup, presented by Mr. Sherwood, was won by Mr. E. Cowdy, Greenhall, Longhall, co. Armagh, with a dozen of the finest bunches of sweet peas ever seen, they were of marvellous quality, colour, form, and substance, and as fresh as the proverbial daisy; the varieties were Nubian, Mrs. C. W. Breadmore, Flora Norton Spencer, John Ingman, Countess Spencer, Sunproof Crimson, Elsie Herbert, Gladys Burt, Clara Curtis, Mrs. Hardcastle Sykes, Chas. Unwin, and Tennant Spencer. Mr. Thomas Jones, Ruabon, came second, Mr. Thomas Stevenson fourth, and Mr. W. H. Prophet, gardener to R. P. Brook, Esq., Par Station, Cornwall, third; about twenty-five entries. Mr. Cowdy annexed the Breadmore Challenge Plate for a dozen bunches with another grand lot, wherein Earl Spencer, Edna Unwin, Marjorie Linzee, and Mrs. W. J. Unwin were splendid; Mr. W. H. Prophet came second, and Mr. E. Broad, The Lawn, St. Austell, third.

In the six-bunch class Mr. Prophet led with fine examples of Doris Burt, Mrs. Hardcastle Sykes, Mrs. Chas. Foster, Helen Lewis, George Herbert, and Mrs. C. W. Breadmore; Mr. T. Vickers, gardener to W. H. Rawnsley, Esq., Well Vale, Alford, Lincs., second; and Mr. Usher third. Mr. Prophet scored for cream pink or pink varieties, three vases, with Mrs. Henry Bell, Constance Oliver, and Countess Spencer, and for three bunches of new varieties Dr. J. E. Phillips, Malpas, scored, with Chas. Foster, Mrs. R. Hallam, and Lancashire.

OPEN CLASSES.

The winner in the classification class was Mr. Usher, whose Helen Lewis, Dazzler, Mrs. Charles, Earl Spencer, and Asta Ohn were excellent; Mr. H. W. Tigwell, Greenford, Harrow, second, with smaller, bright blooms. Mr. L. G. Bealing, Burgess Street Nurseries, Bassett, scored in the class for twelve bunches, distinct, with a beautiful set; Mr. Fairbairn, gardener to E. Otter, Esq., Stanhope, Greenford, proved a capital second; Messrs. E. W. King and Co., Coggeshall, third. The best bunch of a new sweet pea was a grand vase of Bertha Massey shown by Mr. Stevenson; it is a beautiful light mauve; Mr. Bealing second, with Bertram Deal; and Mr. Broad third with Thomas Stevenson. A curious class was the one for a bunch of two varieties, and here Mr. Prophet led with Paradise Ivory and Nancy Perkins, a lovely blend; Mr. Vickers second with Paradise Ivory and Audrey Crier.

The Burpee cup class is for a display of waved sweet peas, arranged on a space 8ft. by 3ft., with a height not exceeding 4ft. Here Mr. C. W. Breadmore, Winchester, won this fine cup with a well set up table on which we noticed Elsie Herbert, Senator Spencer, Aurora Spencer, Mrs. C. W. Breadmore, Mrs. R. Hallam, Marjorie Linzee, Tennant Spencer, and Princess Juliana; Mr. J. R. Box, Lindfield, second; and Mr. W. E. Alsen, Denmead, third.

Mr. Usher had the best set of American sweet peas, and his selection included Senator Spencer, Mrs. Routzahn, Asta Ohn, Clara Curtis, and Othello Spencer; Mr. R. Wright, Formby, was a good second; and Mr. Tigwell third. Mr. Prophet showed the finest single bunch of Countess Spencer, all four-flowered spikes.

SWEET PEA DOBBIES' THOMAS STEVENSON.

A fine strain of this brilliant scarlet variety. F.C.C., N.S.P.S., July 11.
Messrs. Dobbie and Co.

Mr. R. Wright was unfortunately disqualified in the class for three varieties selected from a given list, and here Mr. Usher scored with Anglian Pink, Anglian Orange, and Queen Mary. The E. W. King challenge cup was annexed by Mr. W. H. Prophet, who has succeeded in converting his new employer, Mr. R. P. Brook, into a sweet pea enthusiast; in the space allowed there was not sufficient room for his great bunches and splendid blooms of Mrs. A. Ireland, Etta Dyke, Tom Bolton, Mrs. Hugh Dickson, King Edward Spencer, Elsie Herbert, Dazzler, Senator Spencer, Asta Ohn, Mrs. C. W. Breadmore, and Tennant Spencer; Mr. Vickers second; Mr. Broad, third.

SPECIAL VARIETIES.

In the trade-excluded class Messrs. Dobbie and Co.'s chief prizes were won in order by Mr. Thos. Jones, Ruabon, who showed Edrom Beauty, Masterpiece, Romani Rauni, Sunproof Crimson, Audrey Crier, and Isabel Malcolm; Dr. Phillips was a capital second, and Mr. A. L. F. Cook, Iver, Bucks, third, in a very keen competition. Mr. Unwin's prizes for six selected varieties fell in order to Mr. Usher, Mr. Thos. Jones, and Mr. Prophet; while Messrs. S. Bide and Sons' prizes for six bunches were secured by Mr. Usher and Mr. M. J. Green, Eynsford. In other classes provided by Messrs. Stark and Son, Mr. W. Deal, Mr. Dipnall, Robert Sydenham, Lim., and Messrs. Jones and Sons, the leading awards were made in favour of Mr. A. L. F. Cook, Mr. Usher, Mr. Green, Mr. Prophet, and Mr. Thos. Jones.

AMATEURS.

In the special amateurs' division the new Hawlmark cup, presented by Messrs. Alex. Dickson and Sons, Newtownards, for a dozen bunches, distinct, was properly enough won by Mr. Jas. Hall, of Moy, Co. Tyrone, so another cup went to Ireland, and in this case made the return journey. Mr. Hall had a fine set, Sunproof Crimson, Tennant Spencer, Mrs. C. W. Breadmore, and Asta Ohn being his best varieties. Mr. H. H. Lees, Warblington, Havant, was a good second, and Mr. F. J. Harrison, Roundens, Ulverston, was placed third in a keen competition. In the two other classes in this section Mr. J. Beach, Elphicks Farm, Horsmonden; Mr. H. H. Lees, and Mr. J. Haycocks, Gyfelia, Wrexham, scored well.

SWEET PEA BARBARA.

Flowers large, rich orange-red. F.C.C., N.S.P.S., July 11. Mr. Holmes.

SMALL GROWERS.

The small growers turned out in great numbers, and fought hard for the Horace Wright cup, this trophy falling to Mr. C. R. Jaggs, Hertford Heath, who had a finely-grown set of popular varieties; Mr. F. Green, Swaythling Lawn, Southampton, came second; and Mr. L. C. B. Hockin, High House, Sutton Green, Guildford, third. The Walter Voss cup for six bunches was annexed by Mr. J. Beech, Elphick's Farm, Horsmonden, with a most creditable exhibit of bright blooms; Mr. E. Waterman, South Cottage, Seal, second; Mr. Howard B. Young, Horfield, Bristol, third. Mr. F. Green, Southampton; Mr. W. H. Holloway, Shrewsbury; Mr. W. W. Powell, Gamlingay, Sandy; and Mr. Waterman, were other leading winners in this section.

DECORATIONS.

Mrs. Alex. Robinson, Carshalton, led in the table decoration class with a very light arrangement, in which greenery was freely used; Mrs. F. G. Bealing third. Miss M. E. Jones, Shrewsbury, led for a vase of sweet peas, a delightful arrangement of pink, cream, and blue flowers. Mrs. Maslin, Ongar Hill Cottages, Addlestone, scored for an epergne of sweet peas with a tasteful effort in cream and soft orange.

NEW VARIETIES.

First Class Certificates were awarded to Dobbies' Thos. Stevenson, a rich scarlet variety, reserved for the silver medal, from Messrs. Dobbie and Co., Edinburgh; and to Barbara, a rosy-salmon variety, from Messrs. Holmes, Norwich.

Awards of Merit, to F. Seymour Davies, a violet flushed elegant variety, from Mr. F. Seymour Davies, Farnham, Surrey; to Mauve Queen, a rich mauve variety, from Messrs. Dobbie and Co.; to Red Star, a vivid orange-scarlet variety, from Mr. A. Malcolm, Duns; to May Campbell, rosy flame on cream ground, from Messrs. Dobbie and Co., Edinburgh; to Mrs. B. Gilbert, a light marbled variety, from Messrs. Gilbert and Son, Dyke.

TRADE DISPLAYS.

The trade exhibited finely, and special mention must be made of the superb flowers contributed by Mr. R. Bolton, Carnforth. Medals were awarded as follows:

Large Gold.—Mr. Robert Bolton, Carnforth.

Gold.—Messrs. Dobbie and Co., Edinburgh; Robert Sydenham, Limited, Birmingham; Messrs. Jas. Carter and Co., Raynes Park.

Silver-gilt.—Messrs. Sutton and Sons, Reading; Mr. Wm. Deal, Kelvedon; Messrs. S. Bide and Son, Farnham; Mr. J. R. Box, Lindfield.

Silver.—Messrs. E. W. King and Co., Coggeshall; Mr. J. Stevenson, Wimborne; Messrs. Carter Page and Co., London Wall; Mr. C. W. Breadmore, Winchester; Messrs. Stark and Son, Great Ryburgh; Mr. W. E. Alsen, Denmead; Messrs. Jones and Sons, Shrewsbury.

Bronze.—Messrs. Jarman and Co., Chard; Messrs. Aldersey and Jones, Tilston; Messrs. W. Lumley and Co., Hayling Island; and Mr. W. Cantley, Bury St. Edmunds.

VIOLETS IN FRAMES.

I have not heard of anyone who did not love violets; but have had ample evidence of the fact that these flowers are very highly appreciated during the winter and spring months. They fill a big gap at that period when flowers are scarce and costly. Plants intended for frame cultivation should be well prepared; for more flowers and of better quality, can be obtained from three dozen plants properly prepared than from one hundred that may be lifted from a plantation grown without any special care being bestowed upon them. Probably many inexperienced cultivators fail to obtain satisfactory returns for their labour through procrastination in planting. I am a firm believer in getting the plants well established in their winter quarters by the end of October. It is neither necessary nor advisable to cover the plants in the frames thus early with the glass lights; but when the latter are put on the plants soon respond to frame treatment and yield an abundance of bloom.

During the summer time the plants in the garden must be kept quite free from all runners and flower buds, as it is important that the crowns be matured and very prominent, as in the case of strawberries for forcing. Furthermore, frequent applications of liquid manure and syringings with clear soot water will do a vast amount of good, and help materially to build up grand clumps for lifting.

The clumps should be planted in the frame during the latter part of August, or, at latest, the early part of September. There will not be any need for making a hotbed. I prefer a cool bed, and one composed of manure, the top portion of which should be well rotted, the lower part may be littery, but it must be made very firm. The compost should be a mixture of loam and leaf-soil, with sand or road-grit to ensure porosity; and it must be put on quite one foot deep over the manure bed, sloping from back to front, so as to be of equal distance from the frame-lights at all points. The leaves of the plants should just be free from touching the glass.

Ample space between the clumps is desirable; in the case of large-leaved varieties, such as Princess of Wales, 16 inches from centre to centre of the clumps will do, whereas one foot will be sufficient in the case of small-leaved sorts, such as Marie Louise. Firm planting is essential, but treading upon the soil between the plants afterwards should be avoided. Prepared clumps will not need any shading nor covering with the lights, a thorough watering and an occasional syringing during bright weather being sufficient, but unprepared plants should have the lights put over them and light shading afforded them also for a time—ten days or so—until they are somewhat recovered from the check given.

If the soil be of good quality and resting on a bed of rotted manure, there will not be any need to give manure water; and, although the compost must be made firm, the surface should be loosened from time to time to keep all sweet and clean around the plants.

Geo. Garner.

MALMAISON CARNATIONS.

Malmaison carnations are largely grown in most gardens of importance, as they are especially useful for a variety of decorative purposes. Well-furnished plants present an attractive appearance in the conservatory, and the blooms are invaluable for filling large vases in the dwelling-house. No other plant requires exactly the same treatment as Malmaison carnations, and on that account it is necessary to devote a house entirely to them to ensure a full measure of success. Probably no other subject needs more careful attention, but they will give an ample reward for the care and attention devoted to them.

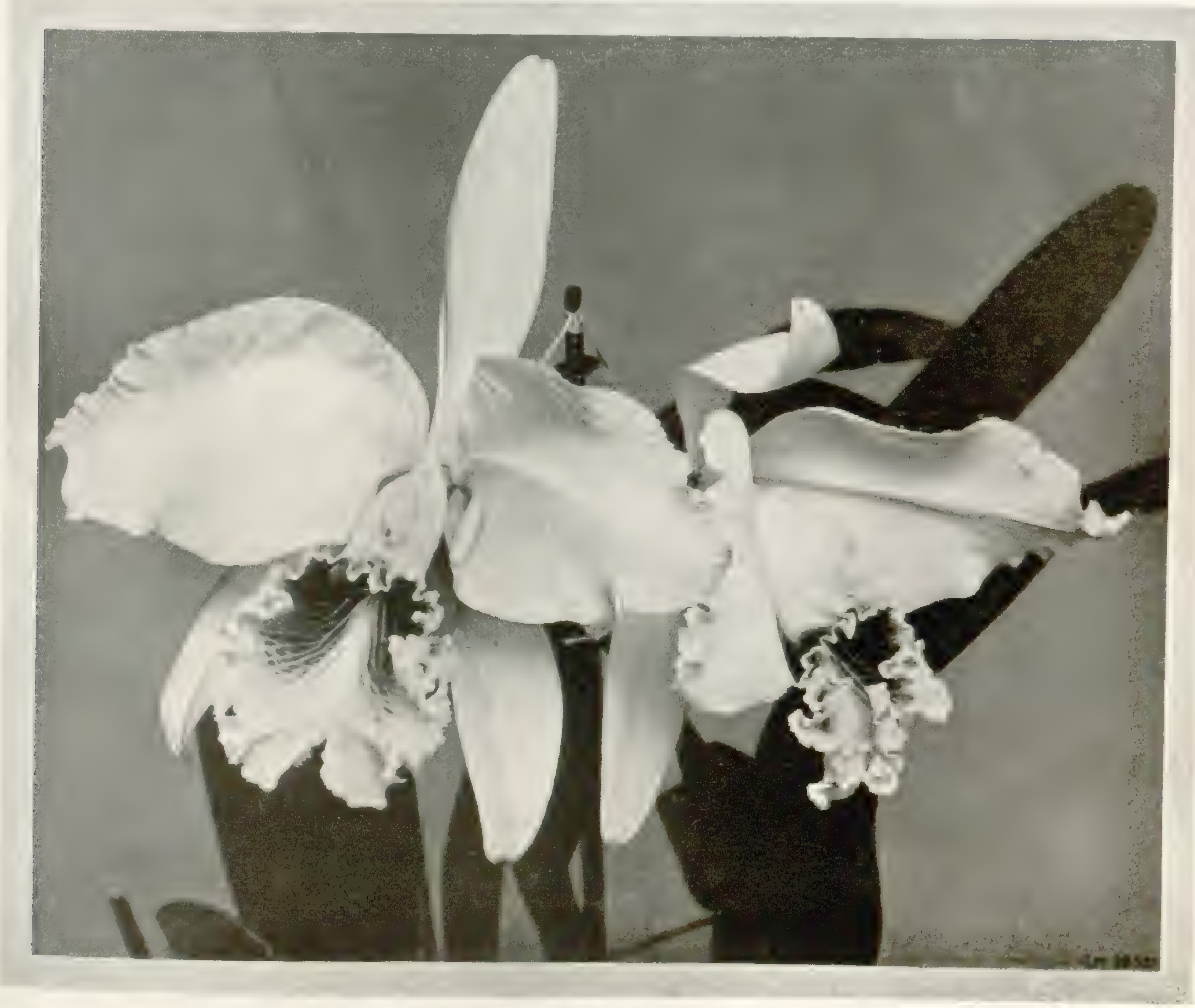
Malmaisons are propagated by layering in a cold frame in July, or as soon as the flowering season is over. Keep the layers shaded until they are rooted, then air may be freely admitted. Take care not to allow the layering compost to become dry. The layers root readily in light sandy soil, and a spraying with the syringe on a bright afternoon is highly beneficial. Put the young plants into 60-size pots, using a porous compost, and stand them in an unheated frame, which should be kept close and shaded until they are rooted. When they are well rooted put them in 32-sized pots, in which they will remain during the winter. A suitable compost consists of three parts good fibrous loam, one part leaf-soil, some wood ashes, broken bricks of a porous nature, and silver sand.

A good place to keep the young stock during the short days is a specially constructed span-roof pit provided with a heating apparatus. One can then ensure the maximum amount of light, while the temperature can be easily regulated, and this may range from 40 degrees to 45 degrees during the winter. Give attention to staking and tying as required, and remove all decaying leaves from the plants. In some localities, and especially low-lying districts, rust is very troublesome, while in other places it refuses to thrive. The best plan is to cut off the affected leaves and burn them. By removing infected leaves, maintaining a dry atmosphere during dull winter days, and by propagating from clean stock I am of opinion that it is possible to eradicate this disease. During the winter Malmaison carnations require watering with great care, as either a too dry or too wet condition of the soil about the roots is detrimental to them. Allow the soil to become moderately dry before giving water, and then supply sufficient to well moisten the soil.

With the lengthening days of February the plants will commence active growth, and, provided that they have received the right treatment during winter, will make rapid progress. About the end of that month it will be time to commence spring potting, using 9in. and 10in. pots, and the compost recommended above. Pot firmly, and exercise especial care with the watering, it being preferable to allow the plants to remain a few days before being watered in. Some growers prefer to let their plants flower in 32's, but the method here advised is preferable, as butter furnished and more vigorous plants are obtained. As the days lengthen admit air freely, and spray between the pots in bright weather, affording them shade from the sun during the middle of the day. As the side shoots develop place a separate stake to each, and tie them with green raffia. These plants may be allowed to produce a single bloom, but when an early batch is required the following season, it is an advantage to pinch out the tips of the main shoots in the previous February, as this causes them to break away stronger and rather earlier. Plants that are forming their flower buds should have a light top-dressing of artificial manure, and regular applications of soot water are very beneficial. Pay strict attention to disbudding, and fumigate occasionally to prevent an attack of green-fly.

There are numerous good varieties, amongst them being Princess of Wales, salmon-pink; Duchess of Westminster, rose-pink; Calypso, flesh colour; Mrs. Trelawny, dark salmon; Sir Charles Freemantle, deep rose; Lord Rosebery, salmon-scarlet; Maggie Hodgson, deep crimson; Yaller Gal; Nell Gwynne, pure white; and Nautilus, flesh pink.

J. Gardner.



CATTLEYA MOSSIÆ ALBA QUEEN MARY.

Flowers white with rose marking on the lip. A.M., R.H.S., July 4. Messrs. Mansell and Hatcher.

BUDDING.

The rose may be budded very well in the spring if the buds are extracted with a small portion of wood adhering to them, but, as a rule, it is usually done in the summer, and if grafting should fail in the spring, the plant may be budded in July, and a season so saved. Budding, in reality, is a means of inducing a kind of parasitic growth. The stock in which the bud is inserted supplies the nourishment which is to nourish the latter, and help it to become properly knitted together in the stock. This nourishment is given to it by the young outer wood of the stock, so that it appears of first importance that this outer wood should be in sap; the bark must part freely from the wood, and the sap should be in an active state. One important point about budding is that there is no transference of any kind of material or substance from the stock to the bud. The only material result is that a thin layer of wood develops between the line of junction. Below this line of junction the wood retains all the properties of the stock, and no other; above the line, except in a few instances, the wood retains all the properties of the tree from which the bud is taken, and no other. The commonest form of stock is a briar, while upon this stock may be developed any variety of rose.

In taking a bud preference should always be given to those which may be removed from summer shoots. They should be well grown, plump, and requiring no further development to bring them to maturity. As a rule, it is best to take the buds from medium-sized shoots, for gross shoots will bear soft, immature, and large buds, which rarely succeed. Similarly, the buds of weak, partially developed shoots will be small and difficult to handle properly. The best time at which to take these shoots for budding purposes is usually after mid-summer, during July or August. No time must be lost after removing the buds before inserting them in the stock, but, if necessary, the shoots may be preserved in damp moss or other suitable material in order to prevent them drying. Then, before taking the buds, the shoot may be placed in water for some little time, so as to plump up the buds.

The method of budding is as follows: First of all, a portion of the stock must be chosen wherein to insert the bud. When this is noted, a shoot well furnished with plump buds should be selected, and a clean-cut slip of bark and wood, about 1½ inches long, containing one of the buds at about the middle of the slice, removed from the shoot. This slip, which contains the bud, will have a kind of shield of wood attached to it, and by inserting the flattened haft of the budding knife between the bark at the upper end of the slip and the wood, the latter may be forced out with a sharp jerk. In the centre of the slip will be noticed the base of the embryo bud. This must not on any account be disturbed, otherwise the slip will be useless. Always choose the upper end of the slip for jerking out the wood, for some slight damage to the bark is unavoidable; and this end will be subsequently cut off when the bud is inserted in the stock.

To prepare the stock for the insertion of the slip, a cross cut must be made in it at the selected spot, and a slit about an inch long cut in a direction leading towards the stem in the case of a side shoot or downwards in the case of a vertical stock. The two cuts on the stock will be in the form of a long T, the knife just piercing the bark. Then, with the end of the budding knife the bark or rind on each side of this T cut should be raised slightly, and the slip containing the bud inserted under the two angles of the T-shaped cut, and pushed down into the bottom of the slit. The shield or bud may be readily handled by means of a leaf-stalk or petiole. Great care must be taken to fit the shield exactly in the slit made in the stock, and the topmost portion of the shield which overlaps the slit should be cut off, but not too closely to the bud. This should be done so that the inner bark of the bud will just rest on the outer wood of the stock.

To keep the shield in position, it may be bound on to the stock with raffia, bast, worsted, or cotton wick, or other suitable material. Anything that holds the bud down closely to the stock and does not cut into the bark is the best material to use. With a month or so after budding the bandage may be loosened or removed, although it is usually a sign of failure if the leaf-stalk or petiole shrivels up quickly. If the bud is a success the leaf-stalk will be retained for a week or two. About eight days after the insertion of the bud, some growers prune down the stock to the branch which is immediately above the bud on the opposite side, and this branch is stopped by being cut down to two or three eyes; all the side wood is destroyed, and when the bud has pushed its fifth leaf, it may be induced to branch by pinching it at the top. As a rule, it is advisable to be careful in shortening the stock, and generally this must be done very slightly, especially if the stock is a vigorous growing one and the bud has taken well. The latter is then apt to be started into growth, and this growth rarely has time to become well matured before winter.

J. C. Newsham.

WALL SHRUBS FOR A NORTH ASPECT.

Walls having a north aspect are admittedly the most difficult to clothe with vegetation, as little or no sun ever falls upon them, while in many instances buildings or trees encroach in such a manner as to cause draughts, against which none but the hardiest plants are able to succeed. So unfavourable are the conditions at times that one dare not venture beyond the various forms of climbing ivies (hedera), yet these, under systematic treatment, form an inimitable wall covering, and should have preference where the conditions are so adverse as to preclude more interesting plants.

Before planting wall shrubs on a north exposure the position should be carefully drained in order to ensure a warm root run, which, more than anything, favours success; if the natural soil is of a light character little preparation is called for beyond trenching and manuring, but with soil of a heavy nature and liable to become close or baked with rain or drought, a liberal dressing of gritty material should be added along with the manure; in this way a border some two feet in depth and three feet wide may be prepared in order for planting.

Of evergreen shrubs for such a position the well-known Berberis Darwini will grow to a height of 12 to 15 feet; progress at first is slow, but if the main shoots are early encouraged and trained, and the side growths stopped at an early stage so as to divert the strength into the main stems, it soon makes headway, and fills out into a dense close mass of branches, and its freedom of flowering in such a position is quite a revelation. Cotoneaster Franchetti and C. pannosa are admirable on a north wall; rapid in growth, neat, and most attractive in autumn when clothed with the conspicuous orange-red fruits.

Azara microphylla is one of the most ornamental of evergreen wall plants; the small glossy green leaves are closely set on the slender branches, and form an ideal wall covering. It is not suitable for a north aspect in cold localities, and where the soil is heavy, but in all seaside and favoured districts it is quite reliable in this position, succeeding best on a limestone or chalky soil. Bridgesia spicata (Ercilla) is a free-growing evergreen that clings as tenaciously as ivy, filling out well as it grows; the leaves are thick, leathery, roundish-ovate in form, and the flowers are of a purplish colour, borne in dense racemes. It is somewhat slow to start, but once established in good soil will cover from three to four feet in one season.

Of deciduous shrubs, Jasminum nudiflorum and J. officinale give excellent results when not overcrowded; the main stems should form a ground work, trained from 15 to 18 inches apart, and the lateral branches be pruned back to the first joint or lowest bud every year after flowering. Cydonias, treated on the same principle, will grow to 12 and 15 feet in height, and will flower much more freely on the spur system than when allowed to grow unrestrained. An excellent specimen of the old Cydonia japonica, over 10 feet high and planted in a north aspect, came under my notice last spring; it had been carefully trained as indicated, and the wealth of blossom could not readily be excelled. The varieties C. Maulei, alba, atrosanguinea, and superba should be given preference, as the flowers are of a large size and of conspicuous merit.

Buddleia Veitchiana and B. magnifica are excellent in a north aspect, when not overshadowed by trees and buildings. I tried them three years ago in a cold, sunless position, but fully open to air and daylight, and the result was most satisfactory; both plants are exceedingly vigorous in growth, and in order to give them justice a fair extent of wall should be at their disposal. Given conditions similar to those suggested for buddleias, the old favourite rose William Allen Richardson will generally succeed in a north aspect; the ideal position is the angle of a north and west wall, with the roots in the north border, training the shoots along the west wall. I have grown it on loam soil in Dumbartonshire and on chalky soil in Lincoln, and these conditions and such a position appear favourable to the development in the highest degree of the rich orange-apricot flowers for which this old favourite is so much esteemed.

The various forms of self-clinging ampelopsis are among the most brilliant of wall plants for a north aspect. Of these muralis and Veitchi are most reliable and constant in their leaf-colouring in autumn, and so certain are the results in this respect, even when the roots are in a sunless position, that it is quite unnecessary to assign it a south wall to the exclusion of much rarer and less vigorous plants, and especially those coming from somewhat warmer climes, and flourishing in sunny positions.

Local conditions, to some extent, influence the selection of plants for particular positions; some care and attention bestowed upon the initial planting of unfavourable sites results in much greater variety, with increased beauty and interest added to the garden. The plants suggested are representative of the hardiest and most reliable for the position thus briefly indicated.

Thomas Smith.

THE VALLEYED GARDEN.

The possibilities of a garden are largely influenced by the landscape it embraces. The garden on the flat must ever retain a certain formality, if it is to be effective. Where one can take an undulating stretch of land with characteristic rises, slopes, and depressions,one has indeed a first-rate basis for a natural garden.

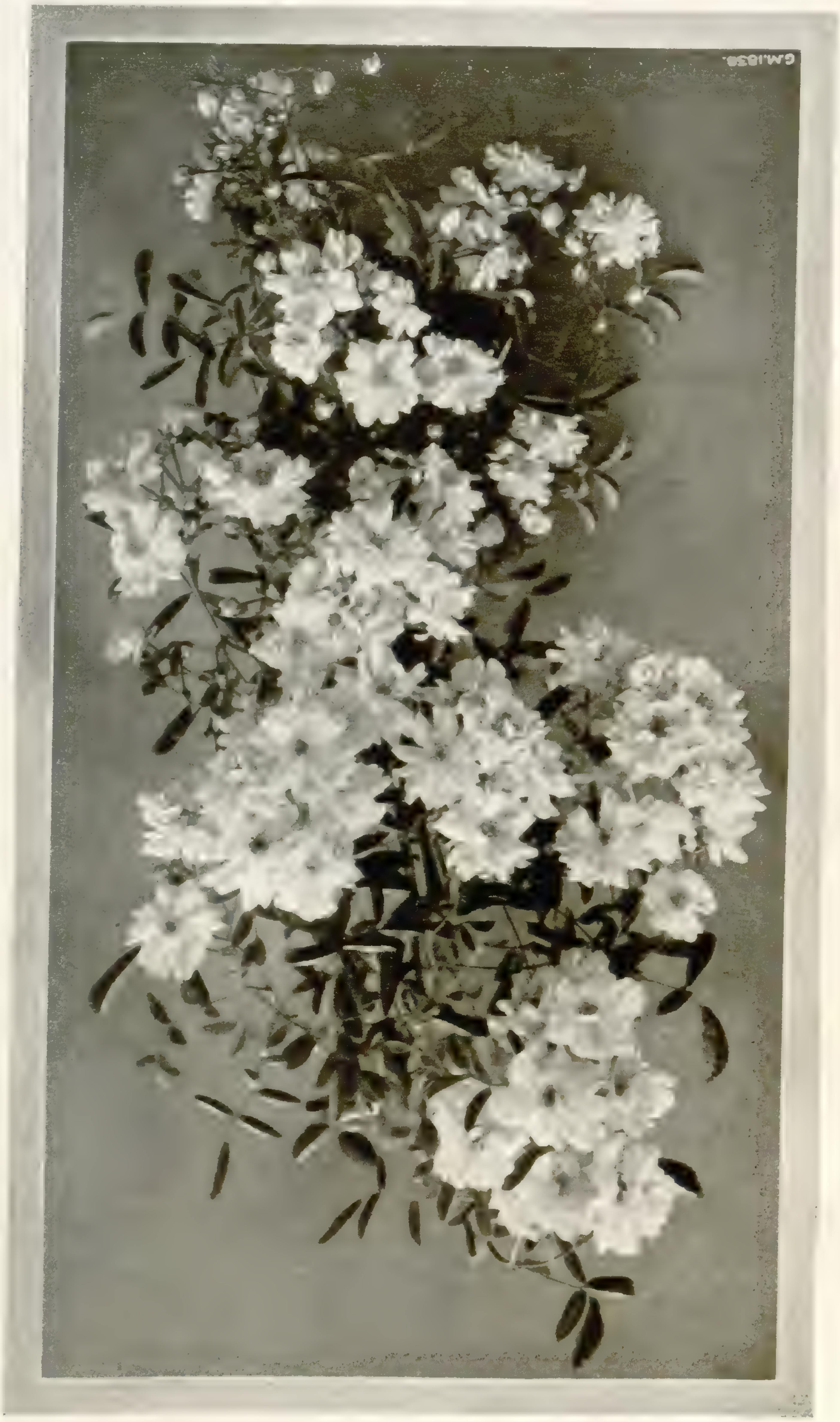
Often such undulating land will be partially wooded, and here again is offered a sterling asset to the making of a garden. By a judicious survey one is enabled to select trees to stand in isolated beauty. Others may be chosen to form groups or to act as windbreaks for the protection of shrubs and choice floral subjects. A treeless garden is the most difficult to bring into perfect beauty. In it one has to plant subjects that will take a generation to become effective. On the other hand, if goodly trees are existent, then one has a background to work to, the landscape is adorned, and the whole view can be broken up to give both colour and effect.

Even if the undulating site be not clothed with trees, even then it far surpasses, both in value and appearance, the site upon the level. Simple valleyed depressions break up the landscape charmingly, and throw into bold relief the higher ground and rising slopes. Shrub plantings show themselves far more effectively upon a sloping bank than elsewhere. Each member of the group is delineated in a way impossible with any level ground groupings,and each receding from its fellow according to its position on the slope,emphasises the distance admirably.

Then, again, the crowning of ridges will call for extended care, and will in the hands of the successful planter give splendid results in pictured beauty. I do not think these "ridges crowned" are fully appreciated in our English gardens. There are wonderful possibilities to be gained in way of picturesque beauty by the judicious crowning of the ridges with tree, shrub, or plant colonies. Whether it be a grand scenic background, encompassed by pines and firs, or a simple rockery ledge covered with mountain dianthus or alpine poppies, it is the tree or plant life that gives harmony to the scene. It is imperative that the high points are crowned, and crowned well. Whether one uses pines or cedars, azaleas or rhododendrons, scarlet oak or maple, the effect of foliage and blossom against the skyline provides a most telling feature.

Standing in the valley, with eyes turned upward to the high ridges, one can mark the beauty of the picture. Changing skies emphasise, accentuate, or contrast the masses of foliage in a most picturesque manner. Even if the ridges were crowned with berberis, with broom, or even ericas, even then the charm is great. It matters not whether the valley sides are faced with great rocks or simply planted with wild heaths, ferns, gorse, and similar subjects, the charm is retained in either case by the ground formation. It is, however, the garden maker's part to increase the beauties and to emphasise the natural effects. The Japanese idea of improving upon Nature can be followed successfully. Dominant points can be utilised to give the keynote to the whole scene. The effective clothing of these points must be the first objective of the planter, the rest can be filled in afterwards. The great thing is the correct treatment of the main points, and upon the success of this the whole scheme is dependent.

Then, again, if the question of water is entered upon in the valley garden scheme one must necessarily allow the existence of water in the base of the valley. It may be in the form of a running stream or a series of pools, or (even if space permits) a goodly sheet of water. In any case, if water comes into the valley garden, it must, of course, be shown in the lower levels. The question of furnishing such water-courses or pools will entail additional care from the planter. The disposition of the true aquatics, nymphæas, nuphars, villarsias, aponogetons, hottonias, Alisma natans, etc., together with such moisture-loving subjects as calthas, waterside irises, osmundas, typhas, saggittarias, butomus, ranunculus, gunneras, eulalias, astilbes, bog primulas, and many others will provide a thought-stirring task, if it is to be truly effective.



NEW WICHURAIANA ROSE ETHEL.
Flowers bright pink. Card of Commendation, National Rose Society, July 7.
Mr. C. Turner.

Paths for the valley garden will also require thought. In many the traditional gravelled path will still hold sway, being cleanly and serviceable at all seasons. Stepping stones may, perhaps, be favoured in others, and where the stones are carefully placed and set, they will furnish a dry, lasting footway that will be in complete harmony with the rest of the natural garden. One thing should be borne in mind, that flat, undressed stones are far better for forming a foot way in the valley garden than stones that have been squared and dressed. The rough surface of undressed stones affords a better foothold, especially during wet or frosty weather, and also are more natural in appearance.

Steps from the lower ground to higher levels may also prove necessaries. These can be let into the banks, with a draping of ferns or low shrubs flanking them. Waterways, if existent, should be crossed, and here stepping stones or bridges will be needed. With regard to the stepping stones they should be placed so as to give the surface two and a-half or three inches above the water-level. Bridges, if used, should be simple in design, the simpler the better. In a small garden a bridge of rustic timber "simply placed" is far more effective than an ornate design in stone. But in a large garden a stone bridge may not be out of place, especially if it is to support much traffic. In any case, it must be designed to be in keeping with the garden scene.

So the valleyed garden leads our thoughts into many details, bringing a host of requirements in its train. A mass of detail has always to be arranged even if the plan be ever so simple in effect. It may be thought, however, from these notes that the valley garden must inevitably be confined to the larger gardens where plenty of space is available. It is not so, although ample space means the attainment of finer effects. Why, even the most moderate garden could have its shaded dell for ferns and wood lilies. A rock-girt valley, with the sides adorned with campanulas, aubrietias, alyssums, lithospermums, saxifrages, and many other trailing rock plants, can be made even on a small scale. There is a great charm about some of these small rock valleys during spring and summer-time, when the display of blossom is profuse, and even during the dull days of winter there is more life and beauty in the little rock valley than in any other part of the garden.

It may be that the valley, with its diverse scenery, its sheltering influence, its warm nooks, where the spring flowers blossom first and the autumn flowers stay the latest, will become a more influential feature in our English gardens in the coming days.

P. S. Hayward.

SOPHORA VICIIFOLIA.

Although this shrub has only been in cultivation for a dozen years or so, it has been in the country quite long enough to prove that it will occupy a foremost place in the ranks of ornamental shrubs, while there can be no doubt as to its hardiness. A native of China, it grows into a medium-sized bush five or six feet high in the open ground, and several feet taller when planted against a wall. The branches are armed with short sharp spines, which appear here and there from the nodes. The pinnate leaves are one and a-half to two inches long, and they are made up of from eleven to fifteen oval leaflets. During June the flowers appear in profusion in axillary racemes. They are white, slightly shaded with violet, the calyx also being violet in colour. It is not a difficult shrub to grow, for, once established in loamy soil, it gives less trouble than a broom. As is the case with several other members of the same order however, it is rather difficult to establish, except it be placed in a permanent position when quite small. Seeds ripen freely, and form a ready means of increase. It may also be increased by means of cuttings of half-ripe wood taken in July, and inserted in pots of sandy soil in a close frame. Plants grown from cuttings blossom earlier than seedlings, and it is not an uncommon thing to find tiny plants a year or two old blooming freely. Anyone who is desirous of obtaining a choice June-flowering shrub for a lawn specimen might well choose this.

W. Dallimore.

For pretty gardens and lovely flowers read The Flower Garden, by T. W. Sanders, F.L.S. An up-to-date work on the formation, planting, and management of the garden, with description and cultivation of flowers and plants adapted for outdoor culture. Price 7s. 6d. net, by post, in box, 8s., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

NEW PLANTS, ETC.

◆

ODONTOGLOSSUM ARDENTISSIMUM QUEEN MARY.

This distinct form of a now very popular hybrid has large rounded flowers with a white ground and bright purplish-violet blotches. F.C.C., R.H.S., July 4. Messrs. Sander and Sons, St. Albans.

CATTLEYA MOSSIÆ ALBA QUEEN MARY.

An extremely beautiful and chaste variety; the sepals and petals are of purest whiteness, and the lip is white, faintly tinged with pink and with soft yellow centre. A.M., R.H.S., July 4. Messrs. Mansell and Hatcher, Rawdon, Leeds.

LÆLIO-CATTLEYA SYLVIA.

A handsome and showy hybrid derived from L.-c. Ascania crossed with L.-c. Hippolyta Phœbe. The shapely medium-sized flowers have rich yellow sepals and petals, shaded with rose-red, and a yellow lip with a large central area of brilliant crimson. F.C.C., R.H.S., July 4. Messrs. Charlesworth and Co., Haywards Heath.

ODONTOGLOSSUM AMABILE THE QUEEN.

In this shapely flower the ground colour is pure white, and on each sepal and petal is a central bright purple marking. A.M., R.H.S., July 4. Messrs. Sander and Sons.

ODONTIODA BRADSHAWIÆ SANDER'S VAR.

Another grandly coloured hybrid with flowers of good size and splendid shape. The general colour is orange-scarlet, but this is margined with rosy mauve. A.M., R.H.S., July 4. Messrs. Sander and Sons, St. Albans.

ODONTOGLOSSUM OLYMPIA.

This fine odontoglossum is a hybrid of unknown parentage. In shape and size it stands in the front rank; it has a white ground with heavy blotches and bars of reddish brown, and the colouring rivals that of a fine blotched O. crispum. A.M., R.H.S., July 4. Messrs. Charlesworth and Co., Haywards Heath.

ODONTOGLOSSUM EXIMIUM KING GEORGE.

This is a striking variety of the hybrid between O. ardentissimum and O. crispum. The intense claret-purple colouring covers the greater part of each segment, but is set off by a narrow white margin. A sturdy grower and with a handsome spike. F.C.C., R.H.S., July 4. Messrs. Sander and Sons.

CATTLEYA DUPREANA.

C. Warscewiczi and C. Warneri are the parents of this hybrid, and the latter species has shown a marked influence upon the progeny. C. Dupreana has flowers of the finest size and shape. The ample sepals and petals are lovely rosy purple, and the beautiful lip is crimson with whitish side lobes. A.M., R.H.S., July 4. Messrs. Charlesworth and Co., Haywards Heath.

PELARGONIUM LORD BUTE.

A decorative variety with medium-sized flowers of deep rich maroon shade, edged with rose. The plants are vigorous, free blooming, and carry the flowers in good trusses. A.M., R.H.S., July 4. Mr. W. Treseder, Cardiff.

SWEET PEA LADY KNOX.

A strong-growing variety, cream ground with rose flushing. A very pretty form. A.M., R.H.S., July 4. Messrs. Dobbie and Co., Edinburgh.

GLADIOLUS NANUS QUEEN MARY.

An early-flowering variety with elegant spikes of soft salmon-coloured flowers, with creamy blotches on the lower segments. A.M., R.H.S., July 4. Messrs. Barr and Sons, Covent Garden.

DRACÆNA DEREMENSIS WARNECKI.

An interesting as well as beautiful dracæna and one that promises to be very useful. The elegant leaves are a foot or so in length, and two or three inches wide. The colour is deep green along the margin, then comes a line of creamy white, and then the paler green central area of the leaf. A.M., R.H.S., July 4. Messrs. James Veitch and Sons, Chelsea.

STRAWBERRY OLYMPIA.

A late heavy-cropping strawberry derived from a cross between Givon's Late Prolific and St. Antoine de Padoue. The roundish fruits are of good size, bright red, and of fine flavour. A.M., R.H.S., July 4. Mr. Peters, Givon's Grove, Leatherhead.

ROSES.

Leslie Holland.—This deep glowing crimson H.T. variety has already been well shown this year, and it promises to be a first-class exhibition variety. The petals are broad and substantial, making up a bold flower. A.M., R.H.S., July 4. Mr. Hugh Dickson, Belfast.

Frances Charteris Seton. — A lovely new H.T. rose with pointed buds and shapely flowers that have slightly reflexing petals. The colour is rosy-cerise with purple shading. (See illustration on p. 495, July 8.) A.M., R.H.S., July 4. Messrs. Wm. Paul and Son, Waltham Cross.

Mrs. Charles E. Allan. — A charming rose of a pretty apricot-yellow shade. A.M., R.H.S., July 4. Mr. Hugh Dickson, Belfast.

Mrs. Sam Ross.—A hybrid tea rose of buff colour with a basal flaming of deep gold, and a pretty flesh pink flush over the centre. A wonderful colour combination. Gold Medal. N.R.S., July 7. Mr. Hugh Dickson, Belfast.

Mrs. R. Draper.—A very sweetly fragrant H.T. rose of large size and full form. The pale pink of the inner surface of the petals harmonises with the darker carmine pink shade on the exterior. Gold Medal, N.R.S., July 7. Mr. Hugh Dickson, Belfast.

Danae.—A perpetual-flowering cluster rose with yellow flowers, blooming from June to October. In the bud state the colour is quite deep yellow, but the fully-opened flowers are creamy white. Of vigorous habit. Silver-gilt medal, N.R.S., July 7. Rev. J. H. Pemberton, Havering, Essex.

Souv. de Portland, Oregon. — This is a pretty H.T. rose with moderate-sized prettily-shaped blooms, and slightly reflexed petals. It is a fragrant variety, and of fairly vigorous growth. Silver-gilt Medal, N.R.S., July 7. Mr. Hugh Dickson, Belfast.

Ethel.—A Wichuraiana variety with semi-double flowers of medium size, and of a lovely soft pink shade. The blooms are carried in large clusters, and are most effective. Card of Commendation, N.R.S., July 7. Mr. Chas. Turner, Slough.

Mrs. Muir Mackean.—A fine hybrid tea of brilliant rosy crimson shade; the flowers are of fair size, and excellent shape, broad petalled, and fragrant. Card of Commendation, N.R.S., July 7. Messrs. S. McGredy and Sons, Portadown.

Nancy Williams.—A very large flowered broad-petalled H.T. rose of full size and form, and making a deep bloom. The colour is deep flesh-pink, approaching the shade of Mdme. Abel Chatenay. Card of Commendation, N.R.S., July 7. Messrs. S. McGredy and Sons, Portadown.

British Queen.—A hybrid tea rose of purest whiteness; the blooms are of large size, fragrant, deep, and broad-petalled. Appears to be a vigorous grower. Card of Commendation, N.R.S., July 7. Messrs. S. McGredy and Sons, Portadown.

Sunburst.—A very showy H.T. rose of deep nankeen yellow shade, with long buds and broad petals. It is sweetly scented, and of vigorous habit. Card of Commendation, N.R.S., July 7. Messrs. G. Beckwith and Son, Hoddesdon.

Coronation. — A large full H.P. rose of silvery-pink shade; it has an excellent habit, and is of bold appearance; slightly fragrant. Card of Commendation, N.R.S., July 7. Mr. Hugh Dickson, Belfast.

THE USES OF LIME.

> "A reserve store of lime is as indispensable an adjunct to a well-managed garden as the manure heap."—Anon.

A very small minority of gardeners, probably, regard lime as a thing to be kept in stock, and never allowed to run out, but its uses are so important, and so various, that the need of it in most gardens is second only to that of stable or farmyard manure. A little book might well be written upon it, but all that can be done in the limited space at disposal is a general survey of the useful purposes it serves.

Its first and most important use is as a manure, it being one of the four most important plant foods in the soil. Heavy soils need it more than light ones, but there are few old garden soils—except those with a chalky subsoil, which is constantly being turned up to replace the loss of lime from the top soil—which, as a result of the application of animal manures for many years, do not tend to become poor in lime, at least in the top spit, lime being constantly lost by drainage, and removal by the crops, while organic manures do but little to make good the loss. Any gardener can readily test the condition of his soil in this respect by mixing together a dozen samples of the surface soil, putting a little of the mixture into a tumbler, and pouring on it enough hydrochloric acid to cover it. If the mixture effervesces freely the soil needs no lime, but if it is quite inactive, or only bubbles very feebly, lime is necessary.

The best way in which to apply lime is in the air-slaked lime form, at the rate of 10 to 20 lb. to 40 square yards (10 to 20 cwt. per acre), and the best time to apply it is in the autumn and winter, dusting it in the trench as digging proceeds. There are some plants to which lime is poison, notably the heath family, which includes rhododendrons and azaleas, while there are others to which an abundant supply is a necessity for the best results, as, for instance, gypsophila, the very name of which means lime lover. Humble plants like wallflowers, antirrhinums, and stocks are never at their best unless a sufficiency of lime is present in the soil, while to stone fruit trees nothing is a greater necessity. But the application of lime must not be overdone, or the soil will soon be impoverished.

We must next consider lime, not simply as a manure, but as a soil corrective. The action of lime in the soil may be likened to the humour of Falstaff, who, Shakespeare tells us, was not only witty in himself, but the cause of wit in other men. Similarly, lime is not only a manure, but its application to the soil serves to unlock the stores of plant food already existing there, but in a form in which plants cannot avail themselves of it. Reserves of potash in the soil are unlocked and set free, while the decay of organic matter is hastened, and nitrogen liberated ready for the plants' use. Besides this, soils which have been manured for years with animal manures tend to become sour, even sometimes when they are overlying chalk; and in a soil which is sour some of the most important kinds of germs, such as those concerned in the decay of organic matter —manures and the residues of crops—the breaking down of the humus, and the conversion of ammonia into nitrate, are hindered, or even stopped altogether in their work, as in the case of peat, and plants suffer in consequence from lack of available plant food, apart from the fact that they soon become unhealthy when growing in such a medium.

As a destroyer of pests, too, a supply of lime, always ready to hand, is scarcely less valuable, and it is the damp and heavy soils, for which lime is so especially necessary as a manure, that also suffer from those pests for which lime is such an antidote. Slugs, for instance, though not always, or even generally, killed by the first sprinkling, do not survive a second dose if it follows within a few minutes of the first. Thus, when a piece of slug-infested ground is cleared of carrots, turnips, violas, radishes, etc., in the dampness of the autumn, two dustings of lime over the ground, with an interval of five or ten minutes between them before the ground is dug, will fairly clear it of slugs if the application is made in the early morning when the slugs are all out, and will, at the same time, supply a constituent to the soil in which it is probably deficient.

Richly-manured ground, too, often becomes infested with grubs and soil pests of various sorts, such as turnip flea, clubbing and galling in the cabbage tribe, and the like, and a thorough mixing of lime with the soil will do more to alleviate this state of things than anything else. Among the other uses of this nature for which lime is valuable might be mentioned the limewashing of trees and the dusting of trees in damp weather with freshly-slaked lime to clean the stems and branches, and, incidentally, deter the birds from pecking the buds. It will also help to destroy moss on the lawn by its scorching effect and by drying and sweetening the soil.

A few general remarks must conclude these notes. As lime may injure the roots of growing plants it should not be used as a manure in the spring and summer. It should not be applied in lumps, not only because it is wasteful, but because where lumps go they may destroy the germ life of the soil. Where superphosphate of lime —a very acid manure is used on well-manured ground, it is a good plan to mix it with a quarter to a half its weight of lime, its acidity being thereby neutralised and the superphosphate producing a better effect. It has, in fact, in the operation of mixing, become basic superphosphate, combining the advantages of basic slag and superphosphate—solubility without acidity. Where lime cannot easily be obtained chalk will answer the same purpose as a manure, though less quickly. It should be applied at two or three times the rate of lime, say, one to two pounds to the square yard, and should be broken up as small as possible and well mixed with the soil. If left on the surface during the winter the weather will reduce it to a powdery state.

Gas lime may also be used, but with great care, as the fertility of a soil may be destroyed for a year by its indiscriminate use, as it contains such strong and poisonous compounds of sulphur. Another effect of lime which should be mentioned is its power to lighten clay soils by coagulating, or rendering friable, the clayey content which gives it its tenacious character. Basic slag deserves more than a passing mention when dealing with this subject, as a good sample should contain some 15 per cent. of free lime, besides the phosphate of lime of varying percentage according to the grade. It is therefore the best manure that can be applied to soils which have become black by reason of many years of animal manuring, and as it is so cheap—less than 5s. a cwt.—and can be stored indefinitely in the dry without deterioration, no gardener with anything but a sandy or chalky soil should be without it.

These remarks may fitly close with an old adage as a warning note:

"Lime without manure
Makes both garden and gardener poor."

Alger Petts.

PEACH TREES ON OPEN WALLS.

In former years both peaches and nectarines were well grown on the open walls in many districts, but now, even with all the up-to-date improvements, well-trained healthy peach trees are the exception rather than the rule. How is this? Have gardeners become less competent, or is there some agency at work that militates against the well-being of the trees? It is well to look into this matter closely, and see whether it is possible to find the cause of this seeming degeneration. I was walking round a garden a short time ago where at one time the peach trees were a picture of health, and their well-trained shoots and fine crops were a pleasure to behold. Now they are objects of misery and decay. It cannot be that the climate has changed, for the winters are no more severe than of old; it must therefore be the system of culture that has worked this difference in their health.

Why do we plant peaches and nectarines against south and south-west walls? Simply because they are tender fruits, and require the protection of these structures. Some of the walls in the old gardens were heated with flues to generate a little warmth in the early part of the year; the shoots were nailed close to them, so that they might benefit by this extra warmth. Now it would appear that instead of nailing the shoots close to the walls they are trained to wires, so that a cold current of air passes between the shoots and the wall. I have asked many gardeners what advantage there is in wiring walls, but none, so far, have been able to give me a satisfactory answer. Some will tell us that it saves time and trouble in nailing; others say that it looks neater, and so forth, but none have, so far as I recollect, been able to point out the advantages the tree derives from a wall being wired.

Has anyone ever seen a well-trained healthy peach tree on a wall in the open that is growing against a wire trellis? For my part I cannot call to mind one single tree in any garden that I have visited, and this has caused me to come to the conclusion that it is the cold current of air passing at the back of the shoots that, in a large measure, is the cause of failure.

The cold current counteracts the advantages and benefits that the trees would otherwise derive from the action of the sun upon the walls. If you place your hand on an exposed brick wall in the evening after a bright sunny day you will find that it retains the heat a long time after the sun has disappeared below the horizon, thus showing that trees trained close to its surface are benefited by this extra warmth.

I was much interested a while ago in the peach trees at Wych Cross Gardens, in Sussex, and anyone who is desirous of seeing well-trained highly cultivated, flourishing peach trees would do well to pay a visit to this place. Though the elevation is something like six hundred feet above the sea level, and the site is exposed to the elements, and though the soil is a cold hungry clay, here peach trees, under the skilful management of that able gardener Mr. Field, are luxuriating in a marvellous way, bearing full crops of fruit even in the worst of seasons. Here the walls are not wired; each shoot is secured in position by a nail and shred, the old cast nails being used, as these, if broken off, do not injure the wall. One wall, about one hundred yards long, is covered with some of the best trained and most fruitful trees it would be possible to find. Not far from this garden is one where the walls are wired, and though the trees are but young they are a picture of misery, not a fruit on them.

While writing about peaches let me add that disbudding is an all-important operation, and it is by selecting the most suitable young shoots that an evenly balanced tree is produced. No man, let him take as great an interest in training as he will, can make a tree look perfect if the shoots are in the wrong place. Select all shoots that are to be retained growing from the lower branches on the upper side, while those that are trained at an angle of 45 degrees should be taken from the lower side. This will cause them to grow more evenly, the more upright ones being less vigorous, while the lower ones will be more robust. Very little winter pruning will be needed on a well-cared-for tree, as all superfluous shoots will have been removed in the summer. The syringe should be frequently applied during the summer evenings to keep the foliage clean. If protection is given in spring against cold winds and frosts, the supplies of water ample in dry weather, and proper drainage provided for the borders, then peaches of the finest quality may be gathered in abundance.

H. C. Prinsep.

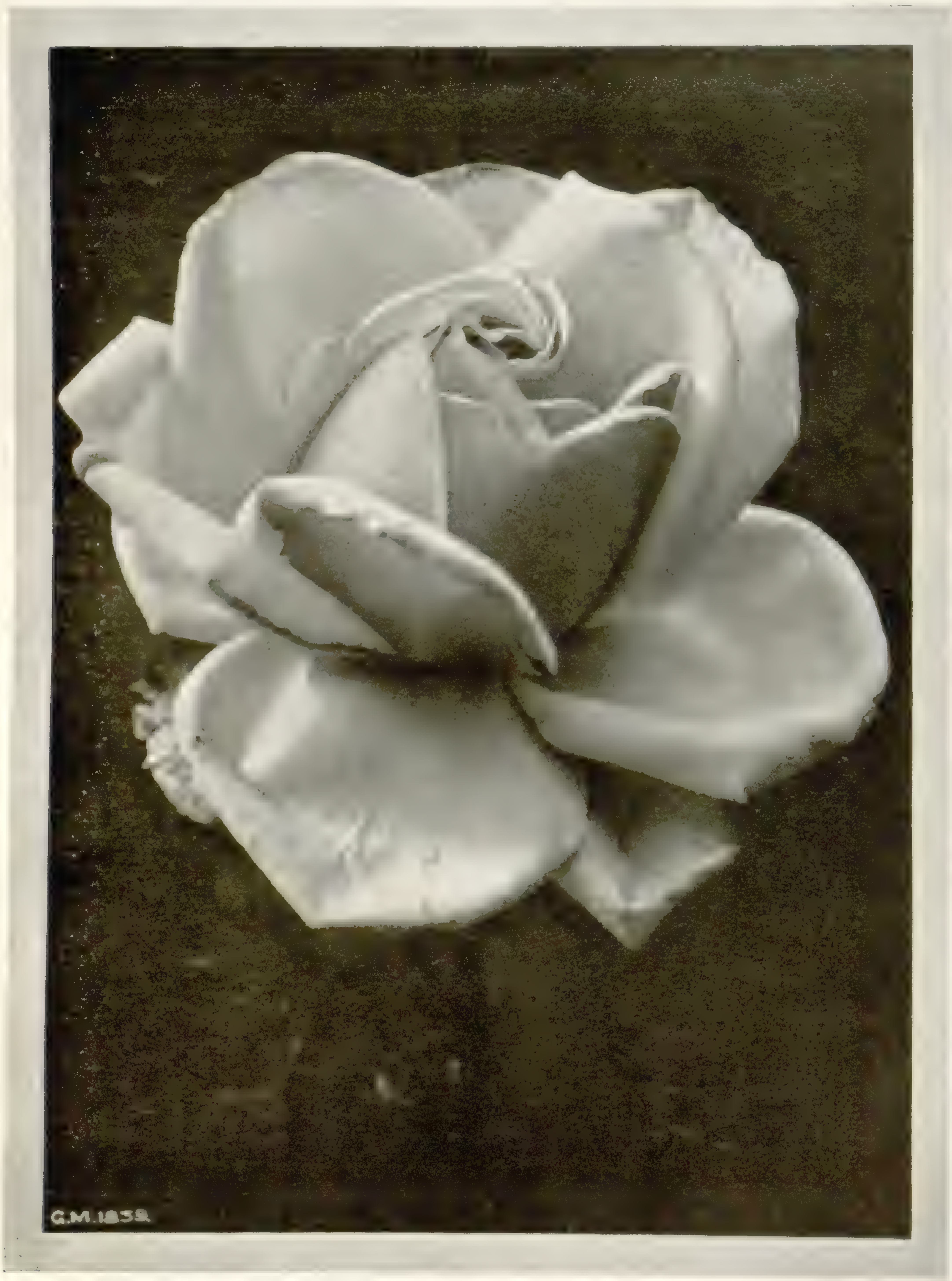
AFFORESTATION IN SCOTLAND.

A great and notable advance towards practical action for the afforestation of Scotland is made by Lord Lovat and Captain Stirling, of Keir, in the survey which they prepared for the Royal Scottish Arboricultural Society. What Lord Lovat and Captain Stirling have done is to prepare a scheme by which afforestation may proceed and the present value of the land not be seriously diminished, while ultimately, of course, it would be greatly increased. They have worked out the plan on a typical area on the line of the Caledonian Canal. They bring out very clearly the importance of the low ground for wintering sheep or deer, and they show that it would destroy the value of a sheep farm or deer forest to take all the low ground and plant it all at once. What they propose is a gradual process of planting, so that at no single moment would the grazing or sporting value of the land be seriously diminished.

Some may be inclined to think that the authors of the survey have been unduly solicitous for sporting interests, but it has to be recognised that, as things stand, the sporting value of the land is its greatest value, and, therefore, cannot be lightly pushed aside. Then, again, the authors show how intimately afforestation is bound up with the question of small holdings. Forest work would provide the part-time employment which would help a small holder to supplement his income and make a comfortable living. It is just because of the lack of such outside work that there is so little prospect for a small holder in the poorer parts of Scotland. In the survey now issued this aspect of the subject is fully dealt with, and for the first time we have a definite estimate of the amount of labour that would be required on a particular area, and of the means which a Government Forest Authority might take, on a commercial basis, to provide crofts and houses for these crofter-labourers. The great value of the survey lies in the fact that in this, as in other details, the authors have not indulged in mere generalities, but have given actual figures, and thus furnished tangible material upon which we may proceed to the practical consideration of the subject. No doubt their estimates will be subjected to criticism, but the important thing is that they are there, and that at last we have something to focus discussion upon.

With regard to the conditions upon which afforestation is to be carried on, Lord Lovat and Captain Stirling recommend that the Forest Authority should not purchase, but should lease, the land which it is going to plant. This course is much cheaper, as it does not involve the sinking of so much capital at the outset. Of course, there will be some who may think that many of the objections which apply to ordinary tenancies or dual ownership in agricultural land apply to this dual system of forestry. Apparently the State, which is in this case the tenant, is to embark capital in afforesting the land, and by so doing is to enormously improve the value of the land, and of the countryside generally. Yet this improvement, like a farmer's improvements before the passing of the Agricultural Compensation Acts, is to be allowed to pass to the landowner, like so much unearned increment. The point is one that will no doubt be kept in view when the powers that be come to close quarters with it, but meantime the Royal Scottish Arboricultural Society have to be heartily congratulated, and particularly Lord Lovat and Captain Stirling, upon the accomplishment of a survey that reflects the greatest credit on all concerned.

W. K.



H.T. ROSE MRS. R. DRAPER.
Flowers rich pink. Gold Medal, National Rose Society, July 7. Mr. Hugh Dickson.

OLEARIA HAASTI.

This is a grand flowering shrub for sandy soils and town gardens. In the southern counties the plants begin to flower during the latter part of July, and continue to blossom for about six weeks. During the past thirty years I have had some considerable experience in the planting of trees and shrubs near the sea in various parts of the country, and have never seen a better flowering shrub for growing in an exposed position where the soil is mainly sand, or very light loam.

In one case the plants formed a very effective dividing fence; they required very little pruning, being so very compact in habit, and withstood the strong gales without suffering any noticeable damage. Few plants possess more fibrous roots than these, and, consequently, when lifted and replanted in the right season, but few specimens fail to grow satisfactorily afterwards if they receive ordinarily good treatment.

For the filling of small borders in town gardens the Olearia Haasti, with its profusion of white flowers, is a most suitable shrub. Cuttings of young shoots, inserted in sandy soil under a handlight soon form roots, and make nice specimens.

G. B.

Mr. William Deal, F.R.H.S., "Brooklands," Kelvedon, Essex, gives a cordial invitation to all interested in sweet peas to inspect his crops growing for seed. He has about 12 miles growing on sticks, stocks equal to any in the country. Crops are about half-a-mile from Kelvedon station.—[Advt.]

AMONG THE ALPINE FLOWERS.

Blithe summer with all its joys is with us, though for the time happily at least, the drought and great heat which prevailed have passed away, to the pleasure of many of our alpine flowers. They have left indelible traces upon some few plants which could not be fully attended to in the pressure of other affairs, but, on the whole, we have little reason to sorrow for losses, while in many ways the glowing time was a welcome one. But with the change to cooler skies, and with the effects of the welcome rainfall visible, we cannot but appreciate some of the beauties displayed to us by our flowers. Many there are, and we take high pleasure in them and their ways.

Cytisus Schipkaensis.

Happily trailing over a low piece of rockwork is the pretty Cytisus Schipkaensis, which to those who followed with keen intensity the long-past grim struggle in the Schipka Pass during the Russo-Turkish War, always conveys a feeling of surprise and pleasure that the fateful ravine has given us this thing of beauty instead of some forbidding plant. Like the rose of the song which sprang from the breast of the beloved dead, so to us this little broom brings with it only thoughts of the heroes on either side who lost their lives in that dread conflict. The cytisus is in itself a thing of beauty which gives us lasting pleasure by its pleasing trailing branches clothed with pleasant foliage and with its clusters of white flowers freely borne at the extremities of these branches. My plant has been in position for some six years or so, and, though some assert that it is not hardy, yet it is enduring here in open soil, among stones, facing due south, and fully exposed.

Gypsophila repens rosea.

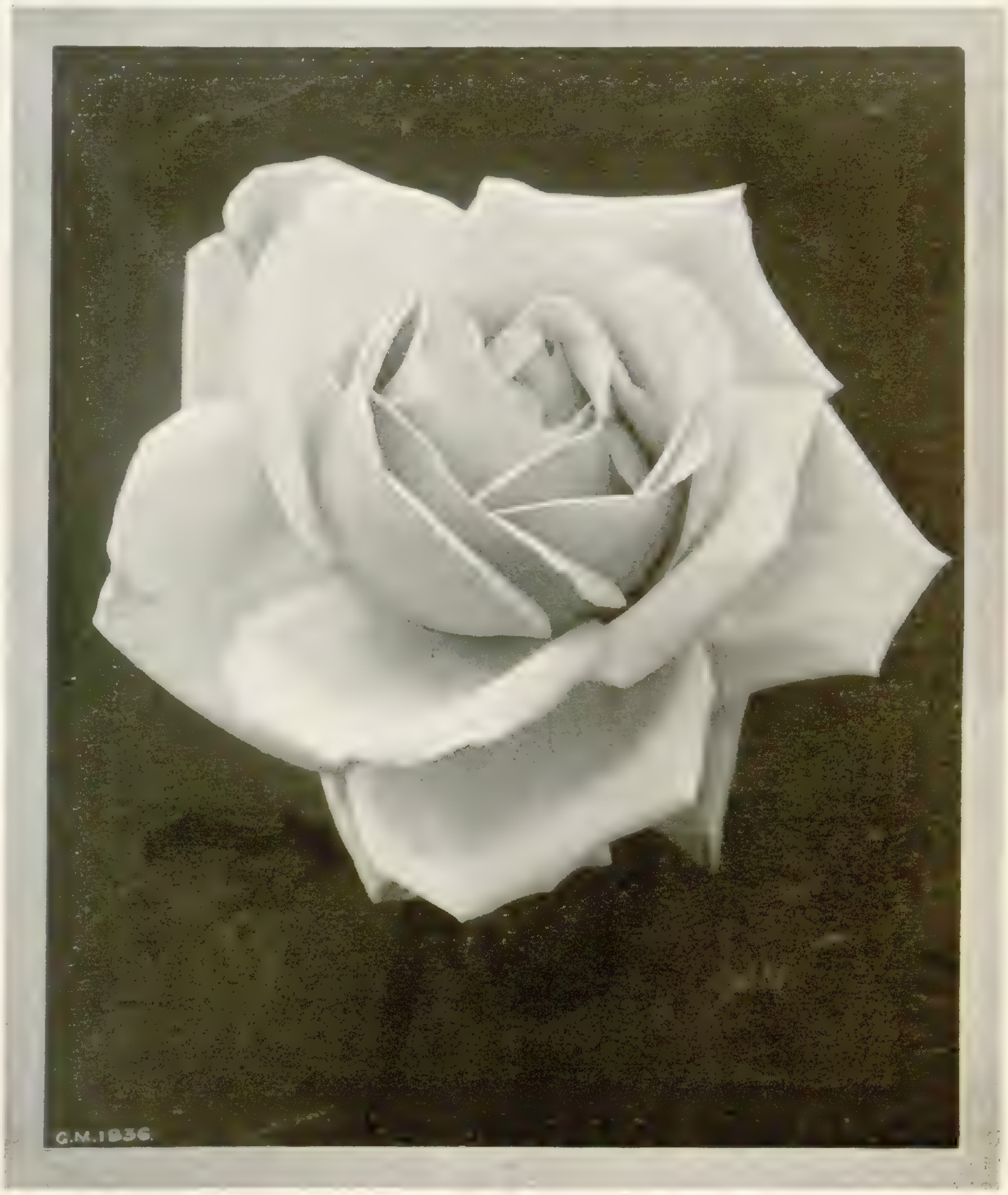
A lovely little thing is the rose-coloured variety of Gypsophila repens, which in summer clothes the portion of the rock garden in which it grows with neat leaves and crowds of lace-like flowers. It has even more than the refinement of inflorescence possessed by the popular G. paniculata, while for the alpinist it has the virtue of a dwarf, pendant, or prostrate habit, such as makes it more suitable for his wants. It is impossible to study it without keenly appreciating the loveliness of this denizen of the rockery, while even the casual passer by is inspired with admiration for this beauty. The white form is pretty, but that with rose-coloured flowers is exquisite, the contrast yet harmony between the glaucous leaves and the small rosy flowers being undeniably beautiful in the extreme. This is not a difficult plant to grow in the rock garden or over the stone edging of a border. It delights in sun, although not averse to partial shade, while it prefers lime or similar matter, although not resenting its absence. For covering some low stones or rock it is a plant of the first order. Free soil with plenty of grit about it will suit G. repens rosea well.

Hypericum coris.

One does not so often hear about this St. John's Wort as at one time, but it deserves recognition at our hands as much now as when it was more frequently seen. It is not a novelty now, and such species as Hypericums fragile and reptans have been more sought after, but H. coris is so distinct from either of these in the possession of a more erect habit and the small bright yellow flowers on its neat stems clad with narrow leaves, that we may well include it among the first half-dozen of the dwarf hypericums. It at one time bore a reputation for partial tenderness, but I do not think that this is justified, as I have seen it growing happily in a good many gardens under widely differing climatic conditions. It is an accommodating plant, liking, perhaps, a level spot in the rock garden, and giving there a greater abundance of its golden yellow flowers in summer. Any moderatedly light, well-drained soil will suit H. coris well. Nor does it appeal the less to us, but rather the more, because it is a member of a genus of plants to which much mystical power was accorded. Our little subject is not likely to be the precise St. John's Wort referred to in the following lines, but it is a sister flower, and as we think of it so may we recall the legends and superstitious practices of which the hypericum was the centre. On St. John's Eve the following rite was performed by the maiden of Lower Saxony:—

> "The young maid stole through the cottage door,
> And blushed as she sought the plant of power;
> Thou silver glow-worm, O, lend me thy light!
> I must gather the mystic St. John's wort to-night,
> The wonderful herb, whose leaf will decide
> If the coming year will make me a bride."

Smile as we may at such superstitions and practices, we cannot deny that even the little Hypericum coris with its modest beauty is all the more interesting because it belongs to the race which has such a powerful influence for good against the evil powers so feared in the olden times.



NEW H.T. ROSE MRS. S. ROSS.
Flowers rich cream colour tinted rose. Gold Medal, National Rose Society, July 7.
Mr. H. Dickson.

Dianthus petræus plenus.

It is many years since the writer first made acquaintance with a lovely little double white Pink, which was a gem of the first water for the rockery, although it is not everyone who cares for double flowers in the alpine garden. This flower was the double form of the white variety of Dianthus petræus, a lovely little alpine pink, not yet too much cultivated. This double white variety must have been in cultivation for many years, but it is now scarce, and it was with peculiar pleasure that I came across it the other day, and once again added it to my garden, whence it was lost years ago. I recollect that it was rather a favourite with our late departed friend, the Rev. Charles Wolley Dod, of Edge, Malpas, and he probably kept it in his garden after many others had neglected it. The growth is rather trailing, attains only a few inches high, and gives little pretty white fringed flowers on small grassy foliage. It is propagated by cuttings, but with reasonable care will last for years without renewal. It is to be hoped that this little alpine pink will once more be sought after and cultivated. We can hardly have too many of such charming flowers as the alpine dianthuses, of which this forms such an attractive member. Amid the many alpine flowers which come in June and last through July we have few finer in their own quiet way than Dianthus petræus plenus.

S. Arnott.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

DECIDUOUS CALANTHES.—Plants that were treated as advised in a previous note on calanthes will now have their growths advanced to the stage when the new pseudobulbs commence to form. It is at this stage that particular care is needed. I would point out the necessity of preventing any moisture accumulating in the centre of the developing growths; drip from the roof, careless watering or syringing of the leaves, will naturally convey moisture to the base of growth, where there is no possibility of evaporation, and where it will become stagnant and quickly subject the young growth to injury. This is especially the case where the growths are sappy as a result of heavy shading. Where moisture is observed in the centre of the growths, it is a good plan to lay the plants on their sides, so that the growths may hang at a proper angle to permit the moisture to drain away.

WATERING.—Calanthes having practically filled their pots with roots, they require much sustenance, and care must be observed that they are not permitted to remain in a dry condition at the roots for any lengthened period. It is difficult to lay down any hard and fast rules for watering, as such are liable to be misleading. Owing to the vastly different conditions under which the plants have to be grown, there is need for discretion; one can scarcely look for such rapid evaporation of moisture in the more or less smoke-laden atmosphere of manufacturing districts and the immediate neighbourhood of large towns as we find under brighter surroundings and a pure atmosphere. With bright and drying conditions, and the plants practically root-bound, they may require water daily or even twice in the day. With duller surroundings much less root moisture will be needed, and it should only be given when the plants require it.

INJURY TO FOLIAGE.—In the early stages of growth and up to the stage now under notice, the foliage of calanthes is particularly subject to injury from strong light. From now up to the time when the pseudo-bulbs reach maturity the light should be gradually increased; this will not only harden the foliage, but will also assist the ripening of the pseudo-bulbs as they advance. One frequently sees large sappy pseudo-bulbs producing flowers of inferior quality. It is better to risk the ripening and falling off of the leaves than to protect and retain the foliage at the cost of inferior colour and texture in the flowers.—H. J. CHAPMAN, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

MALMAISON CARNATIONS.—Layering must now be taken in hand, commencing with those which have stood outside, and continuing with others as they go out of bloom. Before layering, each plant must have a most careful examination for any signs of rust or disease, as it is most essential to the well-being of the young stock that the parent plant is absolutely clean and healthy. Allow about six or eight shoots to a plant, and do not overcrowd in the frame. After layering, the whole should be well watered. A little ventilation may be left on from the commencement and increased as the plants make roots. Syringe in the morning and evening, and shade during the hottest part of the day. When the layers have become nicely rooted they may be severed from the old plant

HERBACEOUS CALCEOLARIAS.—When sowing the seeds of these most useful greenhouse plants, rather more than ordinary care is necessary to obtain the best results. Prepare a seed-pan by well draining it, and fill with a mixture of loam and leaf-soil in equal proportions with a good supply of sand. Make moderately firm, and leave the surface rather fine. Well water with a fine-rosed can until the whole is moistened through. Leave the pan to drain for an hour or so, after which the seeds may be sown as evenly as possible, and not thickly. The merest sprinkling of fine soil is sufficient for a covering, as the seed is so very small and apt to be buried, which causes uneven germination. When sown, place a sheet of glass over the pan, which should again be covered with brown paper to prevent evaporation. Remove to a moist, shady corner in a cold frame. It is a good plan to place the pan on an inverted pot standing in water, as this will prevent slugs getting at the seedlings. As soon as germination takes place, remove the coverings, and admit air cautiously to harden the seedlings and enable them to bear the light, but they must be shaded from sunshine. Very great care in watering is necessary at this stage of growth.

GENERAL WORK. — Early-flowering climbers will require pruning to enable them to make new growths, which will ripen up before the winter season. Attend to potting and repotting of plants as soon as they become ready, also to staking and tying of such plants as may require it. Ventilate freely on all possible occasions in all houses which contain plants in full flower.—A. GRUBB, Porters' Park Gardens.

HARDY FRUITS.

APPLES FOR DESSERT.—The smaller varieties of apples include many of the best-flavoured ones, and to get them large enough to be presentable for the table a severe thinning should be carried out, it being now possible to tell which are likely to make good specimens. Margil, Lord Hindlip, Cockle's Pippin, and Braddick's Nonpareil are of excellent flavour in their season, but, excepting under the most favourable condition, they fail to grow to perfection. All malformed and the smaller fruits, where the trees are cropping heavily, may be removed, remembering that the trees will give almost the same weight in fruit, although perhaps half the number be cleared from the tree.

KITCHEN APPLES.—Many of the large cooking apples will, if thinned, be ready for use for sauce and tarts, and would in some cases also find a ready sale if sent to the market. In small gardens where but little room can be given to apple culture, early varieties could be easily dispensed with, as many of the long-keeping varieties will cook equally well, and in most instances both crops and trees would benefit by judicious thinning. If apples are required for exhibition purposes, thinning can be carried on gradually until within a fortnight or so of the finishing of the fruit, when but a few dozen specimens are left on the trees. The present is the most critical time for exhibition apples.

STRAWBERRIES.—The beds may now be cleared of all litter, hoeing off at the same time old plantations that are past their best, cutting away a few of the old and rusty leaves from the plants to be retained for next season's fruiting, thereby letting air and light to the crown of the plants. Beds may now be prepared for new plantations, and whatever the soil may be, whether light or heavy, it should have been broken up deeply during the winter in order to obtain the best results; in short, a deep well-tilled soil is not subject to extremes of temperature or moisture, but is maintained in a steady, regular, healthy condition. Where deep culture is systematically carried out, and strawberries come into a regular system of rotation, then, of course, little stress need be laid on the ground preparation, as highly cultivated ground is always in good condition. Room should, if possible, be found on a very warm border for a few early strawberries, preferably near a wall or greenhouse, as here ripe fruit may usually be found a fortnight in advance of that on the main beds; but to obtain such fruits young strong plants should be planted each season, and these may be placed a foot or fifteen inches apart.

WASPS AND OTHER INSECTS.—Wasps' nests should be sought after diligently and destroyed. In this locality they are already very numerous. On bright days they may be located by standing quietly facing a dark background, when the flight of the wasps may be traced to their nests. About half a pint of tar poured in their holes after dark and the nest dug out and burnt on the following day will be the surest way of avoiding annoyance later. Earwigs and woodlice should be trapped on peach walls by small pots filled with moss broad bean stalks, or the like, tucked among the branches; examine the traps on alternate days and destroy the vermin.—J. WHITTLE, Cheveney Gardens.

THE KITCHEN GARDEN.

CELERY.—The later plants will by this be ready for planting out into trenches. Use care in removing them by safeguarding their roots and securing a good ball of earth to each plant. The work is much assisted by giving a thorough soaking of water previous to disturbing them. Should the weather be hot and dry, pay strict attention to watering, and give a light shade until root action has commenced in the new soil. All crops of celery will be subject to attack from the celery maggot from now, consequently they will require frequent examination. Carefully remove the affected parts and give dustings of soot to the foliage when moist; this, if not actually destroying the pest, will greatly improve matters by assisting the plants to grow out of the attack. Liberal waterings should be given.

LATE BROCCOLIS.—These should now be planted out in their permanent bed, thus allowing them to become established before winter. Soft-grown pants rarely stand the winter satisfactorily, especially should i prove severe in wind and frost. Therefor it is an advantage to plant firmly and no too thickly, giving sufficient space to allo sun and light to reach the stems and foliag to ensure hard growth. Do not plant them in rich soil.

COLEWORTS AND COUVE TRONCHUDA.—Crops of these are invaluable f cutting during the autumn and early wint months. Where plants are in the seed be have them either pricked out in nursery be or planted out into open quarters. Groun at this season is mostly occupied with crop and there is yet time for planting fro nursery beds—if room is a consideration—for a month or so. Coleworts can be plante thickly at about one foot apart, but t tronchuda should be eighteen inches apar

ENDIVE.—Make a sowing of endive provide the early supply of this useful sal plant. It is not necessary for this sowin to occupy a south border, but an open quart of the garden will do, as the plants will gr to a large and profitable size before bei checked by extreme cold weather. Dr drills at fifteen inches apart and thin plants out when ready to at least twe inches in the row. The cut-leaved variety very decorative, and more suitable to at this season than later, being somew less hardy than the broad-leaved Batavian

TURNIPS. — If a substantial sowing turnips is made during the next week o to precede the winter crop, there wi time for the bulbs to develop and giv supply during the autumn and early wi Choose a rich soil, and give the surfa dressing of soot previous to drawing ou drills, which should be twelve inches a If the turnip fly shows itself give a dressing of soot, accompanied with a dusting of nitrate of soda. Dobbies' M Carter's Jersey Lily, and Snowball are varieties to sow for this crop.

COS LETTUCE. — From early Augus wards lettuces will grow slowly, which the need for a larger stock of plants on Make a good sowing now, prick out the plants as soon as ready into several to secure a supply over a long period CHARLES FLACK, Cholmondeley Castle dens.

EXHIBITIONS AND MEETINGS.

National Rose Society.

The National Rose Society's Metropolitan Exhibition was held in the Royal Botanic Gardens, Regent's Park, in brilliant weather, on July 7. A building that had been specially erected for a ball, with a raised boarded floor, and a soft canopy overhead, accommodated the vast majority of the exhibition blooms, and provided a rare feast of floral colour and fragrant beauty. All things considered, the flowers showed a high average of quality, and though there were few stands or flowers of extraordinary merit, everyone seemed surprised to see so many good blooms, the brilliance of the T. and H.T. roses causing much comment. The great heat of the day soon caused many flowers to collapse, and quite early in the afternoon blooms were withering badly. We may be wrong, but we fancy that rose competitors do not pay enough attention to the provision of a sufficiency of water in the tubes and stands.

The decorative exhibits were fairly good, and the table decorations rather better than usual. There was a rare crowd of visitors, and the gay summer frocks of the hosts of fair ladies who came to pay tribute to the Queen of Flowers added to the brilliance and effectiveness of this fashionable function. Once again the new roses were a great attraction, and the Floral Committee was liberal with awards. The arrangement of the show was good, and Mr. Mawley, and all who helped him, deserve congratulations.

There were a number of non-competitive displays, ranging from labels to orchids, but we have recently dealt at some length with similar exhibits, and practically the same exhibitors, in connection with the Olympia Show.

NURSERYMEN.

In the nurserymen's championship class the competition is always keen, and on this occasion there were six entrants for the trophy. Seventy-two roses, distinct, were required, and Mr. Hugh Dickson, Royal Nurseries, Belfast, was the winner. His best flowers were of Frau Karl Druschki, Coronation, Snowstorm, J. Bell, Chas. K. Douglas, Tennyson, Chas. de Lapize, Leslie Holland, Archie Gray, Mrs. D. McKee, King George V., Mdme. Maurice de Luze, Mrs. T. Roosevelt, Mrs. C. Ross, Mrs. Stewart Clark, Hugh Dickson, and Florence Pemberton. Messrs. Alex. Dickson and Sons, Newtownards, came second with a bright set, in which their own varieties figured well; Messrs. R. Harkness and Co., Hitchin, third; and Messrs. D. Prior and Son, Colchester, fourth.

For forty varieties, three blooms of each, Messrs. B. R. Cant and Sons, Colchester, led, and their best flowers were of Yvonne Vacherot, Her Majesty, O. Terks, Maman Cochet, Dean Hole, The Bride, Mdme. Jules Gravereaux, Mrs. T. Roosevelt, and Avoca; Messrs. Robt. Harkness and Co., Hitchin, second; and Messrs. Alex. Dickson and Sons third.

The China Trophy and first prize for forty-eight blooms, distinct, was annexed by Mr. G. Prince, whose flowers were very bright and fresh, especially his Comtesse de Nadaillac, White Maman Cochet, Bridesmaid, Mdme. Jules Gravereaux, Lady Ursula, and Kaiserin Augusta Victoria; there were nine entries; Mr. W. H. Frettingham, Beeston Nurseries, Notts, coming second; and Messrs. G. and W. H. Burch, Peterborough, third. Mr. W. R. Chaplin, Joyning's Nursery, Waltham Cross, came to the front for two dozen blooms, winning from seven competitors, Her Majesty, Dean Hole, and Miss Isabel Milner were good in this stand; Mr. E. J. Hicks, Hurst, Berks, second; and Mr. J. Mattock third.

The best set of sixteen trebles out of nine entries was from Mr. Hugh Dickson, who had a capital lot of Mrs. D. McKee, Hugh Dickson, Mrs. H. Dickson, Countess of Caledon, Leslie Holland, etc.; Messrs. G. and W. H. Burch second; and Messrs. Perkins and Sons, Coventry, third.

NEW GARDEN ROSE DANAE.

Flowers of medium size, soft cream-yellow. Silver-gilt Medal, National Rose Society, July 7. The Rev. J. H. Pemberton.

The D'Ombrain challenge cup for two dozen tea or noisette roses was won by Mr. G. Prince, Longworth, with some lovely flowers, some of the best being Niphetos, Mdme. Jules Gravereaux, Bridesmaid, Innocente Pirola, Mrs. E. Mawley, and White Maman Cochet; Mr. Henry Drew second; and Messrs. B. R. Cant and Sons third. The best dozen tea roses came from Messrs. Chapman and Collin, Royal Road, Leicester; Messrs. Jefferies and Son coming second; and Messrs. G. and W. H. Burch third.

Sixteen trebles of tea or noisette roses is a severe class, and here Mr. G. Prince scored with a set that contained fine examples of Mdme. Jules Gravereaux, White Maman Cochet, Mrs. E. Mawley, Molly S. Crawford, Souv. de Pierre Notting, and Muriel Grahame; Mr. Henry Drew second, and Messrs. W. Crisp and Sons, Colchester, third.

The premier award for a dozen vases of exhibition roses, seven flowers of each, fell to Messrs. Alex. Dickson and Sons, Newtownards, whose best examples were of Mabel Drew, Duchess of Wellington, Bessie Brown, Lyon Rose, Duchess of Portland, and Mrs. Cornwallis West; Messrs. D. Prior and Son second, and Messrs. G. Jefferies and Son, Cirencester, third. For nine vases under similar conditions Mr. G. Prince was an easy first, and his Mdme. Jules Gravereaux was very fine; Mr. J. Mattock second, and Mr. H. Drew, Longworth, third.

DECORATIVE ROSES.

There was a fine competition in the class for the President's prize for nine baskets of perpetual decorative roses, and here Mr. Walter Easlea, Eastwood, Essex, secured first prize for beautiful baskets of Mr. A. R. Waddell, Mdme. Melanie Soupert, Betty, G. C. Waud, Prince de Bulgarie, Gen. McArthur, Mdme. Abel Chatenay, and Lyon Rose; Mr. J. Mattock, Oxford, second, and Messrs. S. Bide and Sons, Farnham, third. For five baskets of perpetual decorative roses Mr. Hugh Dickson, Belfast, was to the front with lovely baskets of Lady Pirrie, Nellie Parker, Hugh Dickson, Sea Bird, and Mrs. James White, all new seedlings; Messrs. Spooner and Son, Woking, second, and Mr. James Pigg, Royston, third.

The best set of eighteen vases of perpetual decorative roses was from Messrs. J. Jefferies and Son, Cirencester; Lyon Rose, Mdme. Abel Chatenay were good, but none of the varieties were labelled; Mr. J. Barrow, Oadby, Leicester, second, and Mr. G. Prince third.

There were four competitors in the attractive class for thirty-six bunches of decorative roses, and these made a rare show. The Turner Challenge Cup given as first prize was won by Mr. J. Mattock, Oxford, with a grand set that included splendid bunches of Marquise de Sinety, Helene, W. A. Richardson, Maharajah, Legion d'Honneur, Gottfried Keller, Peggy, and Philadelphia Rambler. Mr. G. Prince was a good second, and Messrs. Paul and Son, Cheshunt, third. There were three entries of eighteen bunches, Messrs. W. Spooner and Son leading with a lovely set; Mr. J. Barrow second. For eighteen bunches of summer-flowering roses Messrs. W. Spooner and Son again scored, chiefly with fine bunches of rambling varieties; Messrs. Frank Cant and Co., second.

Mr. J. Pigg led for nine bunches of new decorative roses; and Messrs. Frank Cant and Co., Colchester, scored for a dozen bunches of Wichuraiana varieties, and they showed excellent bunches of Hiawatha, Leontine Gervaise, Alberic Barbier, and Dorothy Perkins.

Mr. T. Stevenson, gardener to E. G. Mocatta, Esq., Woburn Place, Addlestone, scored for five stands of decorative roses, and showed Hiawatha and Blush Rambler finely; Mr. J. W. Smith, Sparrows, Herne Hall, Bushy Heath, second, and Mr. O. G. Orpen, West Bergholt, Colchester, third.

GROUPS.

The premier award and gold medal for a representative group of roses arranged on a floor space of 250 square feet went to Messrs. Paul and Son, Cheshunt, who were especially strong in cut flowers and in the number of classes represented. The group was tastefully arranged, and highly attractive. The second award was made in favour of Messrs. Hobbies, Lim., Dereham; with a beautiful group in which weeping standards were freely used, and there were large groups of Lyon Rose, Mdme. Melanie Soupert, Joseph Hill, Lady Ashtown, etc.

The best-arranged and most representative group of cut roses was the one staged by Messrs. W. and J. Brown, Peterborough. This firm made a grand display with high stands of rambling varieties and lower stands and bowls of Lyon Rose, His Majesty, Mr. P. Blair, and a host of bright tea and H.T. varieties, with sprays of polyantha roses along the front. A Gold Medal was awarded; the Silver-gilt Medal was won by Mr. F. M. Bradley, Church Street, Peterborough, and the Silver Medal by Mr. J. Mattock, Oxford, each of whom showed well.

OPEN CLASSES.

Mr. W. Bentley, Leicester, led for a stand of a crimson rose, with J. B. Clarke finely shown; King's Acre Nursery Company, Hereford, second, with Hugh Dickson, and Messrs. Stuart Low and Co., Enfield, third with G. C. Waud. Premier award for eighteen blooms of any but a white, yellow, or crimson rose was won by Mr. W. Bentley, Belgrave, Leicester, with Mrs. Theodore Roosevelt; Messrs. S. McGredy and Son, Portadown, second, with Mrs. Amy Hammond, and Mr. Hugh Dickson, third, with Mrs. Theodore Roosevelt. Messrs. S. McGredy and Son led for a white or yellow rose in a stand with Lyon Rose; Mr. Hugh Dickson second with Mrs. D. McKee.

For nine flowers of any new rose the chief award was secured by Mr. Hugh Dickson with Leslie Holland, and Messrs. A. Dickson and Sons, Newtownards, second with Mrs. Cornwallis West. The best dozen blooms of new roses came from Messrs. A. Dickson and Sons, who showed Jewel, Mabel Drew, Mrs. E. J. Holland, Duchess of Westminster, Lyon Rose, etc.

AMATEURS.

The amateur championship for the best thirty-six roses, distinct, was won this year by Mr. E. B. Lindsell, who was in grand form, and set up beautiful examples of Mdme. Jules Gravereaux, Comtesse de Nadaillac, Mrs. Stewart Clark, Frau Karl Druschki, Ulster, Mrs. J. Laing, Her Majesty, Souvenir d'Elise Vardon, Mildred Grant, Dean Hole, and Bessie Brown; Mr. Mease, gardener to Alfred Tate, Esq., Downside, Leatherhead, second, and Mr. W. Boyes, Middleton, East Yorks, third.

Mr. Lindsell also had the best two dozen flowers, and was followed in this class by Mr. Tom Park, Asken Mill, Bedale, and Mr. F. Dennison, Crawford, Leamington. Mr. Alfred Tate annexed first prize for a dozen trebles, and he showed tea roses finely here, Yvonne Vacherot being very fine; Mr. Tom Park second, and Mr. E. B. Lindsell third.

Dr. Pallett, Earl's Colne, Essex, was first for a dozen flowers of any other than a tea rose, and he scored with Mrs. W. J. Grant; Mr. H. V. Machin, Gateford Hill, Worksop, second, with Bessie Brown. The Hobbies Cup for twenty-four blooms, open to growers of fewer than 3.000 plants, was won by Mr. H. A. Darlington, Park House, Potters Bar, who was followed in order by Mr. E. M. Eversfield, Denne Park, Horsham, and Mr. W. Boyes, Middleton. Mr. Boyes scored for a dozen blooms of a variety in this section with the popular Frau Karl Druschki, the Rev. R. Powley, Warminster, coming second.

The amateurs' tea rose trophy was won by Mr. O. G. Orpen, West Bergholt, Colchester, who had a lovely box of flowers, his best being Souv. de S. A. Prince, Medea, Muriel Grahame, Mdme. Hoste, Maman Cochet, White Maman Cochet, and Catherine Mermet; Mr. Conway Jones, Hucclecote, Gloucester, second, and Mr. Tom Park, Bedale, third; six entries. Mr. Eversfield led for a dozen tea roses, and he had a very large Maman Cochet; Mr. O. G. Orpen second, and Mr. Alfred Tate third.

For eight trebles Mr. O. G. Orpen scored with Mdme. Jules Gravereaux, White Maman Cochet, Maman Cochet, Maréchal Niel, The Bride, Catherine Mermet, Souv. de Pierre Notting, and Souv. de S. A. Prince; Mr. Eversfield second, and Mr. B. Fortescue, Dropmore, third. The Rev. J. B. Shackle, Dropmore Vicarage, Maidenhead, led for a dozen tea roses, and Mr. Conway Jones, Hucclecote, Gloucester, came to the front for exhibition roses in vases.

Decorative roses arranged in baskets were splendidly shown by Mr. H. V. Machin, whose sets of Pharisaer, Kaiserin Augusta Victoria, and Harry Kirk were very greatly admired. Mr. H. A. Darlington annexed the first prize for seven vases of decorative roses, and Mr. Orpen was first for six trebles. In other classes for decorative roses the leading competitors were Mr. Alfred Tate, Mrs. Whiteman, Bengeo, Herts, Mr. Edward Mawley, and Mr. A. H. Williams, Harrow.

Dealing briefly with the other amateur divisions, we may note that Mrs. E. Croft Murray, Pennall, Ryde, won the Christy Cup for two dozen flowers, and Mr. Courtney Page, Ridgeways, Enfield, won a piece of plate for twelve blooms, distinct. The Rev. Chalmers Hunt also secured a piece of plate, and so did Mr. H. Clinton Baker and Mr. W. Upton. The Grahame Memorial prize fell to Mr. W. Moore, Priest Hill, Caversham, for nine flowers, while the Rev. F. Kershaw, Corsley Rectory, Warminster, adds the Ben Cant Memorial Cup to his list of wins. In the maiden growers' class Mr. J. B. Walker, Market Deeping, won the piece of plate offered as chief award. Dr. Pallett won the Harkness Cup with a good set of twelve blooms in an open amateurs' class, and Mr. Boyes was successful in the class for six blooms, winning the Hammond Cup.

FLORAL ARRANGEMENTS.

The best round dinner table decoration was one of The Lyon Rose and Irish Elegance, arranged prettily by Miss Florence Molyneux, Swanmore Farm, Bishop's Waltham; Mrs. O. G. Orpen, West Bergholt, used the same varieties, and came second; Miss J. B. Langton, Raymead, Hendon, third, with a charming table of macrantha. Irish Elegance rose, most elegantly disposed by Mrs. H. A. Gerhold, Windsor Road, Penarth, secured first prize as a dinner table decoration. Mrs. Alex. Robinson, Norhyrst, Carshalton, second; and Mr. Howard Williams, Willow Cottage, Finchley, third with a pretty table of Blush Rambler.

Mr. Charles Turner, Slough, had the best arch of roses, and covered it entirely with Crimson Rambler; Mr. H. Drew, Longworth, was a good second. Mrs. G. A. Hammond, showed the best bowl of roses, and used The Lyon Rose effectively; many others used the same variety. Mrs. O. G. Orpen scored for a basket of roses, and here she used the varieties Mrs. O. G. Orpen and Blush Rambler.

MEDAL ROSES.

Silver medals were granted as follows in the amateur division: To H.T. rose Avoca, from Mr. E. B. Lehmann; best T. rose, White Maman Cochet, from Mrs. Aitchison, The Elms, Shenfield; and to H.P. rose Frau Karl Druschki, from Rev. J. H. Pemberton, Havering.

In the nurserymen's division the best H.T. rose was Mrs. Stewart Clark, from Mr. Hugh Dickson, Belfast; best T rose, Mdme. Jules Gravereaux, from Mr. G. Prince, Longworth; and best H.P. rose, Hugh Dickson, from Messrs. R. Harkness and Co., Hitchin.

Hanley Horticultural Fete.

JULY 5 and 6.

The show opened on July 5 for two days in Hanley Park, Staffs, was the fifteenth annual event under the auspices of the Hanley Horticultural Society, and in every way this year's show was worthy the society. Glorious weather prevailed, and the display in the five tents was of a high order of merit, although it must be admitted certain sections have been finer in former years than on this occasion. This remark applies chiefly to the roses, sweet peas, and the specimen plants. Mr. Poulson, the secretary, and his enthusiastic committee, were as ever genial and obliging. A deputation of the National Hardy Plant Society attended the show, and awarded a silver-gilt medal to Messrs. Harkness and Sons' fine collection of hardy flowers. Among the new plants that came before the deputation was Campanula glomerata superba from Messrs. W. Artindale and Son; Digitalis lanata and Clematis recta, from Mr. F. Boukell; and new varieties of delphiniums from Messrs. Harkness and Sons. No certificat were awarded.

PLANTS.

Five competitors contributed to what always the great feature of the show, t groups of stove and greenhouse plants. T judges on this occasion had little difficulty selecting the winner, for good as were t remaining four, the effort of Messrs. Cypher and Sons, Cheltenham, stood w ahead. As one stood on either side this gr the first point that impressed itself u one was that there was a sympathetic bl ing of colours throughout. The colours dominant were shades of yellow, orange, deeper terra cotta. Here and there a rac of white orchids, or a delicate mauve catt gave relief, but there were no violent c trasts or jarring clashes of colour. The tons, palms, caladiums, and other fo plants were well grown, and placed where they were most required. Mr. W. Holmes, West End Nurseries, Chester made a good second. He used some v good crotons, graceful oncidiums, and ever-useful Francoa ramosa to good pur but Hiawatha roses in the centre jarred little. Third position was taken by Mr. W Manning, Redford Villa, Dudley; fourt Mr. W. Vause, Leamington; and Messrs. R. Simpson and Sons, Selby, Yorks

For a group of orchids occupying 100 square feet, Messrs. Cypher and Sons had things their own way. Among the host of lovely things they staged were Cattleya Gaskelliana, Lælio-cattleya Canhamiana magnifica, a fine form of Vanda cærulea, many good odontoglossums and cypripediums. Mr. J. H. Goodacre, gardener to the Right Hon. Earl of Harrington, Elvaston Castle, Derby, was the only exhibitor of a group of Malmaison carnations; the flowers were of medium size, and of fresh appearance. For six flowering and six foliage plants, Messrs. Cypher and Sons, Cheltenham, scored, showing splendid Ixora Williamsi, Erica Bothwelli, and Allamanda nobilis, an example of Croton Montefortenensis of brilliant colour, and some noble palms. Second prize went to Mr. W. Vause, Leamington; third, Mr. W. R. Manning, Dudley.

In the section confined to gentlemen's gardeners and amateurs, some really excellent groups of plants were arranged, the winner being Mr. Ben Smith, gardener to A. H. Maddock, Esq., The Cedars, Alsager. The features of this group were a central mound of liliums and carnations surmounted by a Cocos Weddelliana, tall crotons at the corners, with crassulas at the base, and several tall plants of Hiawatha and other roses. Mr. Chas. Roberts, gardener to Mrs. Swann, Halston Hall, Oswestry, took second place, using a number of anthuriums, dracænas, and crotons among roses, schizanthus, begonias, and other flowering plants. Mr. G. F. Goodill, gardener to Mrs. Meakin, Darlaston Hall, Stone, secured third; and fourth prize went to Mr. A. Townsend, gardener to Bernard Howson, Esq., Market Drayton. Mr. Ben Smith scored both for twelve caladiums and for six hardy ferns.

ROSES

were not nearly so good as we have seen them at Hanley, the prevailing fault being lack of substance. The big class for seventy-two distinct varieties found Messrs. R. Harkness and Co., Hitchin, first. Among his best flowers were Maman Cochet, Prince Arthur, and Mrs. Myles Kennedy. Messrs. Alex. Dickson and Sons, Lim., Newtownards, Co. Down, came second; and Messrs. Perkins and Sons, Coventry, third.

Messrs. Alex. Dickson and Sons led for forty-eight, distinct, showing Wm. Shean, Mdme. Leon Pain, Her Majesty, and other fairly good flowers. Second went to Mr. W. H. Frettingham, Beeston Nurseries, Notts, Messrs. R. Harkness and Co. coming third. Messrs. Harkness and Co. again scored for the thirty-six triplets, staging some of the best varieties, but the heat of the tent sent the flowers to pieces before we were able to take notes of them. The Newtownards growers came a close second in this class, several of Messrs. Dicksons' recent introductions being included in their set. Mr. W. H. Frettingham was third.

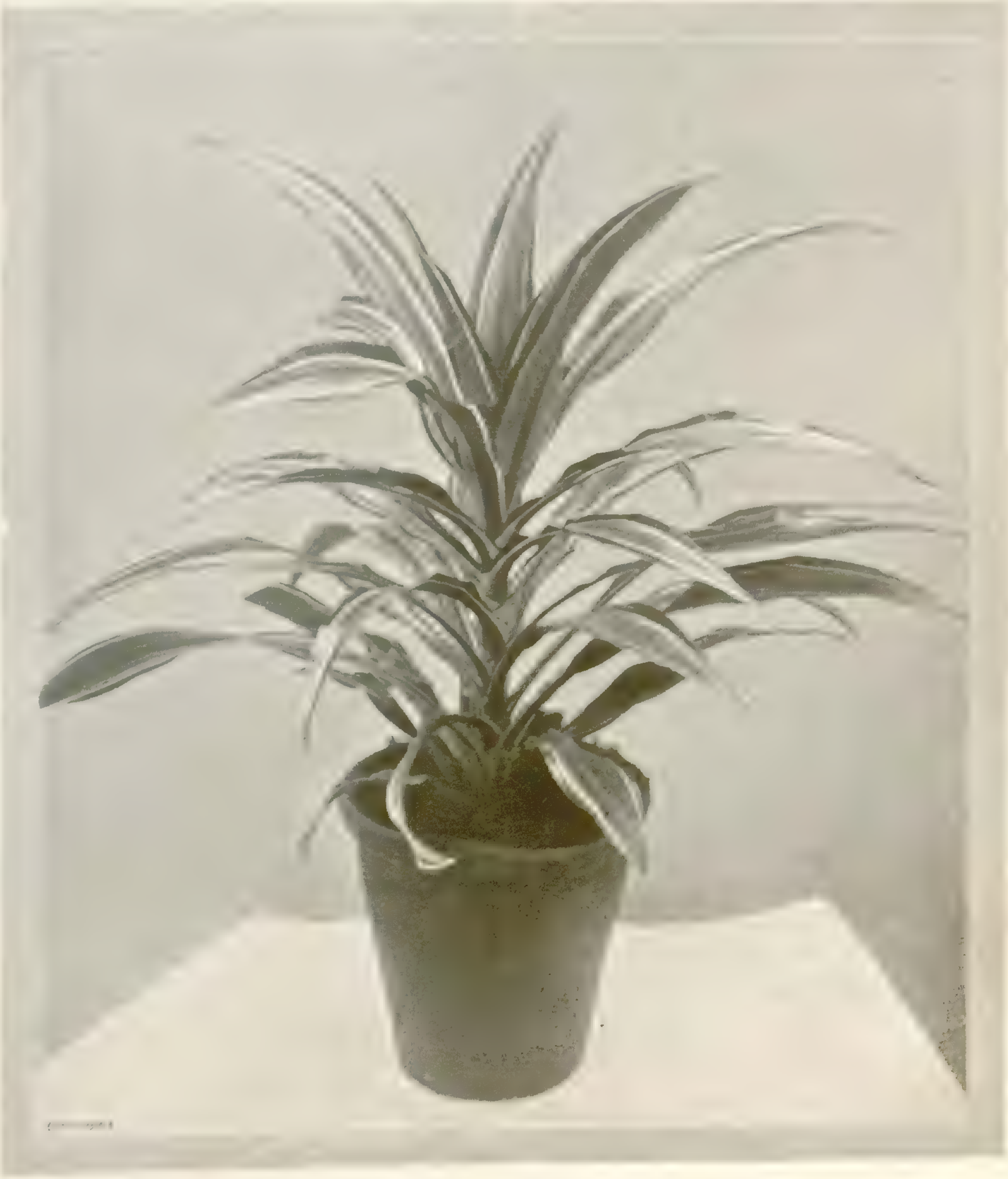
The Lyon Rose was shown by all the winners in the class for twelve yellows. We scarcely consider this variety to be yellow, but it was undoubtedly better shown than anything else in the class. Mr. W. T. Mattock, Barton End, Headington, Oxford; Messrs. Perkins and Sons, and Messrs. Alex. Dickson and Sons were the successful exhibitors in the order named. Mrs. Cornwallis West was adjudged the best white variety, Messrs. Alex. Dickson and Sons being the exhibitors. Teas and noisettes were shown in large numbers, but the flowers were small and weak. Messrs. Alex. Dickson and Sons scored for twenty-four varieties, and also for twenty-four hybrid teas.

The collections of hardy flowers put up for prizes, to the total value of £25, five in number, made a glorious display of colour. Messrs. W. Artindale and Son, Sheffield, were placed first, but subsequently disqualified through staging a mixed bunch of alstromeria, whereas the schedule stated no mixed bunches allowed. First, therefore, went to Messrs. Harkness and Sons, Bedale, Yorks; second to Messrs. Gibson and Co., Bedale; third to F. Bouskell, Esq., Market Bosworth. Messrs. Artindale were, on the recommendation of the judges, awarded a special prize.

SWEET PEAS

were a fairly good display, although not so numerous as we sometimes see. Mr. W. Davies, gardener to Dr. Phillips, Prospect House, Malpas, Cheshire, led in the class for eighteen varieties with a nice set, though staged somewhat flat. Mr. W. Marple, 27, Bristol Street, Wolverhampton, came second, his flowers being rather smaller and shorter on stem; third went to Mr. J. Bower, Woodseaver, Market Drayton. Mr. W. Davies again led for twelve varieties, showing beautiful flowers on fine stems, second going to Mr. E. Bebbington, Market Drayton, and third to Mr. H. S. Foster, gardener to F. E. Munley, Esq., Hockley Heath, Warwickshire.

In Mr. Eckford's class for twelve bunches the lead was taken by Mr. J. Bowler, followed by Mr. A. H. Hickman, Cookley, Kidderminster.



DRACÆNA DEREMENSIS WARNECKI.

Leaves deep green with longitudinal white lines. A.M., R.H.S., July 4.
Messrs. J. Veitch and Sons.

Decorative tables are always a big feature at Hanley, and on this occasion there were seven entries in the class confined to roses, and another seven in the class excluding roses, the whole series occupying the centre of the fruit tent. Mr. W. T. Mattock, Headington, Oxford, led the way in the first-mentioned class, using the lovely Irish Elegance on a tall centre stand with small vases of other varieties of suitable shades around. Flowers, foliage and arrangement were very pleasing. Mr. Stephen Sims, Borrowash, Derby, followed with a rather heavier arrangement of similar varieties of roses. Messrs. Townsend and Sons, Worcester, coming third. In the other class Enchantress carnations were very largely in evidence, there being but two tables of sweet peas in the class. Mr. A. J. Blair, Beech Hill, Cheddleton, took leading place, his blooms of Enchantress being set off by a somewhat lavish use of gypsophila. The conspicuous feature of Messrs. Lewis and Sproson's table was the great size of the carnations. Second prize was awarded this table, and third was secured by Mr. Stephen Sims, Borrowash, with his table of pink and mauve sweet peas with sprays of francoa and trails of lycopodium.

FRUIT.

The leading class in the fruit section was for a dessert table furnished with fruit and decorated with flowers, foliage, or plants. Mr. William Parker, gardener to J. Drake, Esq., Orford House, near Market Drayton, secured first prize. He had really good Madresfield and Buckland Sweetwater grapes, Taunton Hero melon, Royal George peach, beautifully-coloured apples, and fine strawberries. Pink carnations, sweet peas, and francoa were used as decoration. Mr. J. H. Goodacre, Elvaston Hall Gardens, Derby, took second, losing slightly on grapes. His total points were 113½ against 115. Malmaison carnations were well used on this table. Third place was taken by Mr. W. Nicholls, gardener to the Right Hon. Lady Beaumont, Carlton Towers, York. For a table of twelve dishes there were four good entries. Mr. N. F. Barnes, gardener to the Duke of Westminster, Eaton Hall, Chester, led the way with beautiful Muscat and Madresfield, Hambro', and Foster's Seedling grapes, Elruge nectarines of rich colour, fine Williams' Bon Chretien pears, Eaton Seedling melon, and other excellent dishes. Mr. W. Parker, Market Rasen, came second; Mr. Goodacre third. The special prizes for decoration were awarded: Mr. Goodacre first, who used odontoglossums and cattleyas; Mr. Barnes second for salmon-tinted carnations; Mr. Parker third.

VEGETABLES

made a good show. There were four entries for Messrs. Sutton's prizes offered for a collection of six varieties. Mr. W. Nicholls scored with Magnum Bonum cauliflower, White Leviathan onion, Early Giant pea, Sutton's Favourite carrot, Princess of Wales tomato, and May Queen potato. The remaining prizes went to Mr. H. S. Foster and Mr. A. H. Hickman, Kidderminster.

Mr. Nicholls won both the nine and six dishes in Messrs. Webb's class, showing capital stuff throughout.

MISCELLANEOUS.

A highly attractive exhibit was put up by Messrs. Sutton and Sons, Reading. It comprised a very fine collection of vegetables, groups of double begonias and beautiful annuals and perennial flowers, all raised from seed. This exhibit was awarded the silver challenge cup offered for the best non-competitive exhibit, and also the society's gold medal.

Messrs. W. Artindale and Son, Sheffield, filled a stage down the centre of a tent of a length of 110ft. The stage was filled with a series of distinct groups, each an exhibit of individual merit and interest. A variety of alpine and dwarf herbaceous plants finished off the frontage.

Mr. Henry Eckford, Wem. Shropshire, showed a very bright and charming lot of sweet peas, Dodwell F. Browne, Evelyn Hemus, Othello, and Constance Oliver were well represented. Another exhibit of sweet peas on an extensive scale was that arranged by Mr. Robert Bolton, Warton, Carnforth, who always shows flowers of high quality and tastefully arranged. A stand of useful border flowers, with roses in front, came from Messrs. Dicksons, Lim., Chester.

Mr. H. N. Ellison, West Bromwich, once again staged ferns in pleasing variety. The arrangement was very effective, and the group formed a welcome contrast to the surrounding blaze of colour.

Roses, perpetual carnations, and zonal pelargoniums were put up in distinct groups by Messrs. Jarman and Co., Chard, Somerset, who also had vases of their set of sweet sultans. Messrs. Seagrave and Co., Gleadless, Sheffield, and Mr. W. L. Pattisson, Cherry Orchard, Shrewsbury, were both exhibitors of violas.

On a wide stage across the end of the group tent Messrs. Aldersey and Marsden Jones, Tilston, Malpas, Cheshire, staged some lovely sweet peas.

Mr. William Lowe, Beeston, Notts, put up an extensive exhibit of roses, both in boxes and on bamboo stands. Messrs. William Conway and Sons, Lim., Halifax, Yorks, showed hardy herbaceous flowers in good style.

SPECIAL AWARDS TO TRADE EXHIBITS.

Silver Challenge Cup and Gold Medal to Messrs. Sutton and Sons, Reading.

Gold Medals.—Messrs. Artindale and Sons, Sheffield; Mr. H. N. Ellison, West Bromwich; Mr. R. Bolton, Warton, Carnforth; Mr. W. Lowe, Beeston, Notts.

Silver Medal.—Mr. H. Eckford, Wem; Messrs. Jarman and Co., Chard; Messrs. Dicksons, Lim., Chester.

Small Silver.—Mr. H. Pattisson, Shrewsbury; Mr. S. R. Compston, Macclesfield.

Scottish Horticultural Association.

The July meeting of this association was held in the Goold Hall, 5, St. Andrew Square, Edinburgh, on the 4th inst. Mr. Massie, the president, was in the chair, and there was an attendance of 65 members.

The Secretary gave an account, illustrated by a series of lantern slides, of Dr. Henry's experiments in the breeding of elms. The results obtained by Dr. Henry seem to show that there are two species only of elms native to the British Isles, viz., Ulmus montana (the Scotch or Wych Elm) and Ulmus glabra (also called Wych Elm in the East of England). The latter species occurs as a park and hedge row tree in the East of England, and is fairly common in Cornwall and the South of Ireland. The English elm (U. campestris) Dr. Henry considers to be a hybrid form, probably a descendant of a first cross between the above-mentioned species again crossed with U. montana. In the experiments the seed of this tree proved to be practically unfertile. The only two kinds which produced uniform seedlings were the two before-mentioned species. All the others produced mixed seedlings. In the case of the Huntingdon elm (U. vegeta), opposite-leaved seedlings of the U. glabra type and alternate-leaved seedlings of the U. montana type were produced in almost exactly the Mendelian ratio of 3 : 1, but taking into account the other points of difference in the two species there were possibly 64 kinds of seedlings. These experiments seem to show that what are generally looked upon as "varieties" are merely combinations of Mendelian unit characters, and all the forms of British elms met with have, no doubt, been produced by the interacting of these characters upon each other. Dr. Henry's theories regarding the origin of the Black Italian poplar and the cricket bat willow were also touched upon, and, after some discussion, a very hearty vote of thanks was accorded to the secretary on the motion of Mr. D. W. Thomson.

The exhibits were: Fine collection of roses, including Rhea Reid, Marquis de Sinety, Mrs. A. R. Waddell, My Maryland, Wm. Shean, Mdme. Melanie Soupert, Ecarlate, and Mrs. Aaron Ward, from Messrs. Dickson and Co., Edinburgh; begonia flowers and potato, Midlothian Early (tubers of two plants, weighing 10lbs.), from Miss Burton, Polton; fruit of Stephanotis floribunda, from Messrs. John Forbes, Hawick, Lim.; flowers of carnation Lady Hermione, from Queen Mary's Coronation Bouquet, from Messrs. Todd and Co., Edinburgh; seedling ox-eye daisies, from Mr. F. Bailie, Stenhouse, Liberton; new strawberry The Liberal, and pea Essex Star, from Mr. James Scarlett, Sweethope, Musselburgh; new marguerite Mrs. F. Sander, and hybrid passion-flower, from Messrs. James Grieve and Sons, Edinburgh; greenhouse rhododendron almost overtopped by a plant of common heather. The rhododendron was repotted when two feet high with peat brought from the Western Highlands eight years ago. The heather plant appeared in the following spring. The plants have been grown during the eight years in a dwelling-room window in Edinburgh. From Mr. A. Macmillan, Edinburgh (late of Trinity Cottage). Lathyrus rotundifolius (Drummondi), from the secretary.

At the meeting on August 1 a paper on perpetual-flowering carnations will be read by Mr. Thomas Hay, superintendent of Greenwich Park, late of Hopetoun Gardens. The arrangements for the excursion to Manduston, Duns, on August 19, were intimated. Five new members were elected.

Norwich Horticultural Society.

In addition to the great flower show held by the Royal Agricultural Society, which we duly reported, a local show was also held at the show grounds on Thursday, June 29, by the Norwich Horticultural Society. The display on this occasion was naturally much smaller than usual, for the committee and leading exhibitors had given their unstinted support to the larger show. Nevertheless, the exhibits of local amateurs made a bright and attractive display that was in every way creditable to our Norfolk friends.

One side of the tent was occupied by roses, the quality throughout being of a fairly high order. Mr. H. Youngman, gardener to R. Steward, Esq., Saxlingham Old Hall, Norwich, won first for thirty-six distinct varieties. He had Her Majesty, Lady Alice Stanley, Hugh Dickson, and Florence Pemberton among other good sorts; second prize went to Mr. Robert Balls, gardener to Miss E. V. Penrice, Witton House, Norwich. Six competitors staged in the class for eight triplets, and the successful one among these was Mr. Scurrell, gardener to Lieut.-Colonel M. L. McEwen, High House, Thorpe, Norwich; his flowers were of capital size, in nice condition, and well staged. Twenty-four distinct varieties found Mr. Youngman again to the fore, with Mr. R. Balls as runner up. Mr. Youngman also led for twelve distinct blooms, and for twelve of any one variety of tea rose, showing Souvenir de S. A. Prince; and for any one variety other than a tea with a fine box of Frau Karl Druschki.

Some good sweet peas were put up, and added considerably to the charm of the tent. The twelve bunches staged by Mr. M. Quinn, gardener to the Right Hon. Lord Stafford, Costessy Park, Norwich, which won first prize were of excellent quality. Countess Spencer, Arthur Unwin, Thomas Stevenson, and Earl Spencer were shown in pleasing style.

Hardy flowers made a creditable display there being four entries in the twelve-bunch class, but only one of twenty-four bunches. The latter was staged by Mr. Lewis Smith, gardener to Robert Fellowes, Esq., Shotesham Park, Norwich; Tropaeolum speciosum, big bunches of Heuchera Rosy Morn, and H. micrantha, Morina longifolia, and Iris ochroleuca were among the more prominent things in the collection which received first prize. In the class for twelve bunches the winner was Mr. F. W. Graveling, gardener to F. Newhouse, Esq., Bella Vista, Thorpe Road, Norwich; Frank Neave, Esq., Fingwood, near Norwich, coming second, and Mr. R. Goodson, gardener to R. Steadman, Esq., Woodhill, Gressenhall, Dereham, third.

Mr. W. Allan, gardener to Colonel the Hon. C. Harbord, Gunton Park, Norwich, received first for a collection of six dishes of fruit; his Gunton Scarlet melon, Violette Hative peaches, and Lord Napier nectarines were very good; Mr. W. Chettleburgh was second. Mr. Allen also scored for a collection of carnations with very well-grown flowers of up-to-date varieties. Mr. G. Davison, gardener to Colonel Petre, Westwick, Norwich, taking second place.

Wolverhampton Floral Fete.

A bright and very warm day saw the opening of a grand show of plants, fruits, roses, and other flowers held at West Park, Wolverhampton, on Tuesday, July 11, and the tw following days. For nearly a quarter century Wolverhampton Flower Show has bee an annual event, and during a greater par of that period the shows have been so larg and so excellent as to place them in the forefront of the finest flower shows in the country. Without a doubt the remarkable success and development of Wolverhampto Floral Fête is mainly due to the enterpris energy, and enthusiasm of a hard-workin committee, and we were glad to meet on more the same genial workers with Mr. Wi Barnett, the popular secretary, still holdin the reins, and conducting affairs as near to everyone's satisfaction as it is possible an individual to do. The arrangement the large tents and of the exhibits with was carried out in the admirable mann which has earned for Wolverhampton t reputation for being the best-arranged sh in the provinces.

As at most big shows, the grou of stove and greenhouse plants were prominent and highly interesting featu Everybody admired the tasteful arrange of beautiful foliage and flowers, and even uninitiated, who understood but little of t respective merits of the highly-colour crotons, the chaste caladiums and anth riums, or the distinctive characteristi the orchids, could nevertheless appre their exquisite grace and charm, that, after all, is one great object of th shows. Of the four groups put up, occupying 30ft. by 12ft. of space, Mess Cypher and Sons' exhibit was given pi place. The group was very bright wi cattleyas, oncidiums, ixoras, and hig coloured crotons, while the background palms was brightened up by carnations liliums, the permission to use cut th being taken advantage of by the introducti of two arches clothed with scarlet and whi carnations. Mr. J. V. MacDonald, garden to Sir G. H. Kenrick, Edgbaston was a good second. His crotons were very

CARDIFF FLOWER SHOW.
By kind permission.
SOPHIA GARDENS, CARDIFF.
WEDNESDAY and THURSDAY, July 26th and 27th. 1911.
The renowned Full Band of H.M. 19th Queen Alexandra's Own Royal Hussars.
Grounds and Tents brilliantly Illuminated.
Mr. John Studt's Complete and Extensive Amusements.
Every Particular and Schedule, Apply
A. MAURICE BAILEY, Secretary,
24, Duke Street, Cardiff.

LEICESTER.—ABBEY PARK FLOWER SHOW, 8th and 9th August next. Open Class, Group of Plants, £20, £15, £10, £6. Liberal prizes for Collections of Fruit, Displays of Roses; Silver Cup, Gold and Silver Medals for non-competitive exhibits. Schedules from JOSEPH BURTON, Supt.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

AN EXCEPTIONALLY FINE GROUP OF FOLIAGE PLANTS ARRANGED BY MESSRS. J. CYPHER AND SONS, CHELTENHAM. Awarded First Prize.

and bright, and arching racemes of odontoglossums and other orchids were well used. Mr. W. A. Holmes, Chesterfield took third, and Mr. W. Vause, Leamington, fourth.

Messrs. Cypher and Sons again led in the class for a group of foliage plants arranged at the side of the tent. The grand colours of the crotons, the glossy-leaved anthuriums and fine variegation of caladiums all told to great advantage in a very handsome group. Mr. W. A. Holmes, Chesterfield, followed with another nice group, in which similar subjects were arranged, third going to Mr. MacDonald, Mr. W. Vause bringing up the rear. In the class for twenty plants in 8in. pots, to include flowering as well as foliage plants, Messrs. Cypher and Sons still kept their lead, staging Ixora Regina, I. Williamsi, I. Pilgrimi, and I. coccinea, with Clerodendron Balfouri, C. fallax, and Acalypha Sanderiana among flowering plants, with beautifully-coloured Croton Inimitabilis. Dracæna Sanderiana, dieffenbachias, etc., as foliage. Mr. C. Weaver, gardener to B. H. Mander, Esq., Trepull, came second with smaller, but nicely grown stuff, Mr. W. Vause coming third.

King's Acre Nurseries, Lim., Hereford, arranged a circular group of well-fruited trees in pots. Gratioli of Guernsey, Doyenne Boussoch, and Conference Pears, carried remarkable crops, an umbrella trained Peregrine Peach, and the new King's Acre Berry were good. The latter is claimed to be both earlier and superior in flavour to the loganberry. First prize was awarded.

Interest is well maintained in the rock and water garden class that Wolverhampton has run so well for several years. Three really splendid exhibits competed for the prizes, which totalled £50. Messrs. J. Backhouse and Sons, Lim., York, once more took the lead, their exhibit being characteristic of the firm's distinctive style of work. The rocky bank in the background with a moist recess and dripping well on one side, and a cool peat bed in the opposite corner, were divided from the rock mound in front by a winding stream which accommodated nymphæas and other water plants. Sarracenias, Japanese iris, ferns, and orchids occupied the nooks where moisture was available, and in the chinks of the rocks grew campanulas, dianthus, saxifragas, and a mass of alpine plants disposed in a very natural manner. Mr. J. E. Knight, Tettenhall Nurseries, Wolverhampton, made a very close second, his arrangement of stone being very effective, and the dwarf shrubs and flowering plants were disposed with great skill. Messrs. Artindale and Sons' third prize exhibit was one of the most effective the Sheffield firm have put up, in fact it was as much a flower garden as a rock and water garden, spiræas, delphiniums, yellow callas, phloxes, and gladioli coming into the scheme and forming a bright array of colour.

For the group of flowering plants of one kind only there were four entries, among which the begonias from Messrs. Blackmore and Langdon, Twerton Hill Nurseries, Bath, were awarded first prize. To say the flowers were of tip-top quality is the least praise we can accord, and indeed it is difficult to imagine any great improvement upon flowers that have attained so high a degree of excellence in shape and colour. Mr. F. Davis, Pershore, stood second, also staging lovely begonias, Messrs. Cypher and Sons coming third with clerodendrons.

Mr. A. Cryer, gardener to J. A. Kenrick, Esq., Edgbaston, took firsts for coleus and for caladiums, and Messrs. J. Cypher and Sons, Cheltenham, scored for six specimen palms, Mr. Cryer taking second place, and Mr. Vause third.

ROSES.

Whatever the season or the weather the display of roses at Wolverhampton is always ahead of most provincial shows, and on this occasion the quantity was greater than ever. The quality, too, in spite of the recent drought, was very good, our Irish friends coming up particularly strong. The heat of the tent, unfortunately, told upon the flowers at an early hour, and the public lost the best view of a wonderful display. Mr. Hugh Dickson, Royal Nurseries, Belfast, took first in the class for seventy-two distinct varieties, there being five entries. Good flowers on the winning stand were Chas. K. Douglas, Queen of Spain, Lohengrin, and Florence Pemberton. Messrs. R. Harkness and Co., Hitchin, took second place, a few of their flowers being on the small side. Earl of Warwick, Jeannie Buatois, William Shean, and Florence Pemberton were nice. Mr. G. Prince, Longworth, Berks, was third, and Messrs. Perkins and Sons, Coventry, fourth. Mr. Hugh Dickson came out victorious among six competitors for forty-eight varieties, showing Leslie Holland, Caroline Testout, Bessie Brown, and Hugh Dickson in good form. Mr. Prince came second with several good teas on his stand, W. R. Smith being exquisite; third went to Messrs. R. Harkness and Co.; and fourth to Messrs. Perkins and Sons.

Mr. Dickson maintained his lead with twelve triplets, The Lyon, Hugh Dickson, Mrs. Theodore Roosevelt, and Mrs. Stewart Clark showing well. Messrs. Harkness and Co. followed closely with Bessie Brown, Dean Hole, Horace Vernet, and other nice blooms. Third was taken by Mr. W. H. Frettingham, Beeston, Notts, and Mr. Prince was fourth. Twenty-four distinct varieties were splendidly staged by Mr. Hugh Dickson, and Mr. J. Mattock, of Oxford, showed well for second place, Messrs. Harkness and Co. following.

Twelve varieties, introduced not earlier than 1908, formed a small but interesting class, Mr. Dickson still proving invulnerable. His varieties were Queen of Spain, President Taft, Mrs. Maynard Linton, La Galassiere, Mrs. Molly Hobbs, Margaret, Souvenir de M. Louis Perriere, Lyon, Lady Ursula, W. R. Smith, Mrs. James Craig, and Jonkherr J.

L. Mock. Messrs. Harkness and Co. and Messrs. Perkins and Sons followed in order named. The best twelve dark roses came from Mr. G. Prince, who showed Reynolds Hole, and Messrs. Perkins and Sons' Frau Karl Druschki scored for twelve light roses. Twelve distinct teas found Mr. Prince the victor, the same exhibitor winning for nine vases of teas. Mr. J. Mattock scored for twelve bunches of decorative roses, there being seven entries. His bunches of Betty, Mdme. Ravary, Lyon, and Mdme. A. Chatenay were effective. Mr. G. Prince took second in this class, Gottfried Keller, Maharajah, Mdme. Jean Dupuy, and others being nicely displayed. Mr. W. T. Mattock, Headington, Oxford, was third.

Three gorgeous banks of hardy flowers competed for the prizes in the collection arranged on a space 15ft. by 5ft. Messrs. J. Harkness and Sons, Bedale, Yorks, received the chief award with a lightly arranged collection of good delphiniums, malvas, verbascums, and a host of seasonable subjects fit to grace the finest gardens. Messrs. G. Gibson and Co., Leeming Bar, Bedale, were a fine second, their yellow verbascums, bright gladioli, and gaillardias were well used among campanulas, veronicas, and potentillas, as well as other useful things. Messrs. W. Artindale and Son, Sheffield, third. Messrs. G. Gibson and Co., Leeming Bar, led for a collection of delphiniums, staging Rev. Lascelles, Ustane, King of Delphiniums, and a number of other good sorts. Messrs. Harkness and Sons were second with massive spikes of Philemon, Satisfaction, Mrs. J. Harkness, and many others, third prize going to Messrs. Blackmore and Langdon, on whose stand Statuaire Rude stood conspicuous above all. The whole class was a grand display of these stately flowers.

For a collection of decorative plants and cut flowers, arranged on table space 6ft. by 4ft., Messrs. Bastock and Son, Moseley, took leading honours. Carnations, zonals, early gladioli, and liliums were grouped among ferns, small crotons, carex, etc. Mr. J. V. Macdonald took second place, using larger crotons, with orchids, Malmaison carnations, Chelone barbata, Humea elegans, etc., third prize going to Mr. C. Weaver. Only two entries for a collection of cut carnations were forthcoming, Mr. C. F. Waters, Balcombe, winning over Mr. J. E. Knight, Wolverhampton. Both stands had good flowers, Edith Waters on the winning stand being particularly well shown.

SWEET PEAS

were largely shown, and the competition was well sustained, both in the society's classes and in those provided by various seedsmen, the flowers being of good quality, considering recent scorching sunshine and drought. Mr. A. E. Usher, gardener to Sir R. L. Baker, Bart., M.P., Ranston, took first for eighteen varieties, his flowers being good throughout. Mr. W. Maiden, gardener to Dr. J. E. Phillips, Malpas, came second, and Mr. F. Hindley, Lymm, third. Mr. J. Watson, Wem, Salop, scored for twelve bunches, followed by Mr. C. Flaver, gardener to Mrs. Twentyman, Wolverhampton, and Mr. A. H. Hickley, Cookley. The prizes in this class were provided by Mr. H. Eckford. The best dozen in Mr. Sydenham's class came from Mr. D. Richards, Kingswinford; Mr. Blackburn, gardener to Captain Starkey, Leamington, second; and Mr. E. Tilt, Erdington, third, among five entries. Mr. A. E. Usher, Mr. H. Smart, The Weys, Wolverhampton, and Mr. W. Richards, of Kingswinford, were winners in the order named in Messrs. Bakers' class.

The most tasteful arrangement of violas and pansies on 7ft. by 3ft. of tabling was an excellent class. Messrs. W. Pemberton and Son, Bloxwich, received first for a very effective arrangement. The flowers were disposed in vases before a perpendicular mirror, and the quality of every variety staged was excellent. Messrs. Bastock and Son, Moseley, took second place with an arrangement on somewhat similar lines; Messrs. Seagrave and Co., Sheffield, were third, using boxes for their pansy blooms, and shallow bowls for the violas.

FRUIT.

This section has been stronger here than on this occasion, but this does not mean that the table of fruit with which Mr. S. Barker, gardener to the Duke of Newcastle, Worksop, won first was in any way inferior. Indeed, the peaches, melons, apples, and figs, as well as the grapes, were splendid. Mr. Barker also received first for decoration, using Malmaison carnations to capital purpose. Mr. W. Parker, gardener to J. Drake, Esq., Market Rasen, was second, showing Muscat of Alexandria and Madresfield Court grapes, Sutton's Scarlet Melon, Brown Turkey figs, and other nice dishes. The exhibit also taking third for decoration. Mr. N. F. Barnes, Eton Hall Gardens, Chester, took third, showing eight good bunches of grapes, and some pears, peaches, plums, etc.; second for decorations. Mr. W. Barker scored for four bunches of grapes, his followers being Mr. S. Barker, and Mr. N. F. Barnes. Mr. S. Barker led both for peaches and nectarines, Mr. H. Taylor, gardener to the Right Hon. Lord Hatherton, Penkridge, having the best strawberries. Mr. S. Barker was again to the fore with three varieties of tomatoes, showing Suttons' Best of All, Perfection, and Polegate.

VEGETABLES.

The prizes in these classes were provided by seedsmen, Messrs. Sutton and Sons' class for six dishes, distinct, bringing five entries, among which Mr. J. Gibson, gardener to the Duke of Portland, K.G., Welbeck, was accorded leading position. Centenary pea and Favourite carrot were grand. Mr. A. R. Searle, gardener to the Marquis of Northampton, K.G., Northampton, was second, and Mr. H. S. Foster, gardener to F. E. Muntz, Esq., Hockley Heath, third. Mr. J. F. Simpson, gardener to Sir C. T. Mander, Bart., Tettenhall Wood, Wolverhampton, had the best six dishes in Messrs. Webb and Sons' class, and Mr. Searle the best in the eight dishes, every item being of superb quality.

The gentlemen's gardeners' and amateurs' section occupied a great deal of space, the quality of the exhibits reflecting great credit on the exhibitors in all sections. For a group of plants occupying 250 square feet, Mr. A. Cryer, Edgbaston, took the lead with a nicely arranged group of well-grown flowering and foliage plants. Second prize was secured by Mr. W. R. Manning, Dudley. Gloxinias were well shown, Mr. W. B. Burchill, gardener to Captain Simpson, Perton, taking the lead among five exhibits of a dozen plants. Roses in this section were largely shown, the winning thirty-six, put up by Mr. W. H. Skeys, gardener to F. Dennison, Esq., Leamington, being a nice set; second prize in the class went to the Rev. J. H. Pemberton, Havering-atte-Bower; R. Foley Hobbs, Esq., Worcester, being third. Mr. Skeys again led for twenty-four blooms, R. Foley Hobbs, Esq., coming second. The last-named gentleman scored for twelve blooms, followed by the Rev. J. H. Pemberton.

Mr. W. Thorneycroft, gardener to D. Green, Esq., Compton, took first prize for twelve vases of sweet peas, staging in a very tasteful manner; Mr. A. E. Usher having to take second place; Mr. F. Hughes, Wolverhampton, bringing up the rear. First for twelve bunches of hardy flowers was secured by Mr. E. Walker, gardener to T. B. Adams, Esq., Compton, who showed some excellent flowers in good bunches; Mr. J. F. Simpson, Tettenhall Wood, came second; and W. R. Wilson, Esq., Compton, third. Mr. W. Parker, gardener to J. Drake, Esq., Market Rasen, was first for six dishes of fruit, showing four pairs of bunches of grapes and two melons, rather an exceptional interpretation of the term "six varieties." Mr. S. Barker, gardener to the Duke of Newcastle, Worksop, took second with Lady Sudeley apple, Mignonne peach, Dryden nectarine, a good melon and two dishes of grapes. First for decorations was awarded this exhibit; equal second for decorations was awarded Mr. N. F. Barnes, on whose exhibit was also a first prize card, although the same class number prevailed throughout. There was another second prize card awarded to Mr. L. Bayley, gardener to the Right Hon. Lady Hindlip, Worcester. Mr. J. Gibson, Welbeck, won for ten dishes of vegetables with splendid examples of peas, potatoes, cucumbers, marrows, tomatoes, beetroot, French beans, onions, carrots, and cauliflowers. Mr. A. R. Searle was second with another nice collection, and Mr. H. S. Foster, Hockley Heath, third.

NON-COMPETITIVE EXHIBITS.

These, as is always the case at this and other big shows, were a grand adjunct to the competitive classes, and were of sufficient extent, variety, and merit to make a good show in themselves. One of the first exhibits to demand attention was an exceedingly beautiful table of plants, cut flowers, vegetables, and fruit staged by Messrs. E. Webb and Sons, Wordsley, Stourbridge. A mound of brilliant gloxinias, arches, pillars, and vases of sweet peas, well-flowered plants of Spiræa Peach-blossom, Lilium auratum, and double clarkias constituted the flowering subjects, all arranged harmoniously behind and above a great variety of vegetables and tall epergnes filled with well-grown melons.

Mr. W. J. Unwin, Histon, Cambridge, showed sweet peas particularly well. King Edward Spencer, Constance Oliver, Edna Unwin, and W. J. Unwin were good, and so indeed was every vase on the stand.

Messrs. Bakers, Wolverhampton, carried out a model garden of extensive proportions and bold design. In the foreground was a formal lily pond, with paved walk backed by rock walls furnished with suitable alpines. The walk led on the one hand to a smaller, irregular pool and bog garden, in which spiræas, bamboos, rushes, etc., were the main features, and on the farther side were steps leading to a raised garden, where beds of roses were cut in a grass plot. The space behind the formal pond was utilised for a herbaceous border, in which such things as delphiniums, liliums, gaillardias, English iris, Eremurus Bungei, and many other usefu plants were dispersed in most pleasing style. It was a great effort, and the whole exhibit was well planned and executed.

Delphiniums were largely shown by Mr Amos Perry, Enfield. Gertrude, Carnegie, Queen Wilhemina, and Midas, among pa lavender and mauve shades, and Mrs. Rushton, W. B. Child, Falquire, and Candida among darks, were all striking and distinct. Mr. H. N. Ellison, West Bromwich, staged ferns in considerable variety, the various species and varieties of davallias being mo attractive. Gleichenias and plumose nephr lepis were other features of the exhibit.

Among the hardy border flowers shown Messrs. B. Ladhams, Lim., several remar ably distinct gaillardias occupied a prom nent position. Shirley, Brilliant, Rownham Queen, Superb, Aurora, and Sulphur G were all really good, whilst Charles L hams was a remarkably distinct break colour, salmon and terra-cotta being blend Good pinks were also shown by the So ampton firm.

A large and really fine group of pot-gr carnations was put up by Mr. F. Green, g dener to Lady Grey, Enville Hall, Staff The plants were of great size, carrying masses of flowers, and the varieties were first rate.

Floral designs of quite original charact were exhibited by Messrs. E. and H. Sec ling, 6, Lichfeld Street, Wolverhampt vase of doub'e white stocks contained a bunch of Mdme. A. Chatenay roses, a c of white asters had sprays of Crimson b'er twined around, and through stand roses were freely used to capital

Messrs. Jarman and Co., Chard, Som exhibited a very bright collection of zonal pelargoniums, among which Clevedon was perhaps the most brilliant. Duchess of burgh, a new salmon, and Sir T. Hanbury, a crimson, stood out boldly. The popular sweet sultans appeared to be finer than ever, and the carnations and roses that finished off the stand were useful additions. A group of choice ferns came from Messrs. H. B. May and Sons, Dyson's Lane, Edmonton, which included Platycerium grande, and other varieties of the Stag's Horn fern, as well as several gymnogrammas and choice adiantums, etc.

Tall stands of liliums, phloxes, delphiniums, and other border flowers were well arranged by Messrs. Dicksons, Lim., Chester, who also showed a collection of the newer H.T. roses, among which The Lyon figured prominently. Messrs. Seagrave and Co., Sheffield, staged violas in the form of fan-shaped bunches. Mrs. W. H. Gabb, Agnes Kay, Countess of Eglington, and Lady Grant were typical of the good varieties put up, and a new seedling named Willie Coe was of good form and distinct colour, rich purple on a white ground. Messrs. Clibrans, Altrincham, occupied a considerable length of tabling with a collection of cut roses, which embraced many of the most useful decorative or garden varieties. Violas were again seen in capital order on the stand occupied by Mr. H. Masters, Grove Lane Nurseries, Handsworth. Mr. John E. Knight, Wolverhampton, arranged floral designs on a table. A fan of pink stocks and lily of the valley, a Union Jack in cornflowers, white stocks and scarlet zonals, a lady's hat and satchel, and a chaplet of silvered foliage were original and tasteful. A pretty display of roses was made by Mr. E. Murrell, Shrewsbury, such varieties as Arthur R. Goodwin, Hugh Dickson, Amateur Teyssier, etc., being very nice.

MEDAL AWARDS.

Large Gold Medal.—Messrs. Bakers, Wolverhampton, for model garden; Messrs. E. Webb and Sons, Wordsley, for vegetables, fruit, and flowers.

Gold.—Messrs. H. B. May and Sons, Edmonton, for ferns; Messrs. Dicksons, Lim., for hardy flowers and roses; Lady Grey, for carnations.

Silver-Gilt.—Messrs. B. Ladhams, Lim., Shirley, Southampton, for hardy flowers; Messrs. E. and H. Suckling, Wolverhampton, for floral designs; Mr. H. N. Ellison, West Bromwich, for ferns; Messrs. Clibrans, for roses; Mr. W. J. Unwin, Histon, for sweet peas; Mr. E. Murrel, Shrewsbury, for roses; Mr. Amos Perry, Enfield, for delphiniums.

Silver.—Messrs. Jarman and Co., Chard, for zonals, centaureas, etc.; Messrs. Seagrave and Co., Sheffield, for violas; Messrs. Blackmore and Langdon, Bath, for carnations; Mr. J. E. Knight, Wolverhampton, for floral designs.

Bronze.—Mr. H. Masters, Handsworth, for violas.

Good Early Cauliflowers.—Some of the finest heads of cauliflowers we have ever cut are those of the variety White Queen, which produces a fine white head, and in size quite equal to the best autumn cauliflowers; and, moreover, it has stood the drought well. Our plants were from autumn-sown seeds. Magnum Bonum is an ideal type, with beautiful firm and close white heads of very fine flavour. Purity is of especial value, as it stands so long in good condition, and does not open as soon as ready like some of the early types; it is very strong and robust, and winters well. Those we are cutting now stood out unprotected. Favourite is an early and distinct variety, and should be a most popular one; it is producing fine heads of pure whiteness. Sutton's Universal will follow this, and is extremely promising, and has withstood the late hot weather in a marvellous manner. I have found that the autumn-sown varieties do not run or bolt so quickly as some of the very early spring-sown types. Carter's Forerunner is one of the very earliest to come into use, we were cutting it long before the broccoli had finished; it is also a real gem for forcing.—W. A. Cook, Leonardslee.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

DISEASED ONIONS.—Subscriber: The onions you have sent are seriously injured by onion mildew and onion smut, the two most destructive diseases of the cultivated onion. The fungus (Urocystis cepulæ) attacks the onion at a very early period of its growth, and usually the first leaf gives evidence of its presence before the second is developed. It then spreads through the tissues, as the growth proceeds, and finally it reaches the bulbs, when the outer tunic shows signs of its presence. It is a good rule when the seedling plants show signs of having been attacked, to draw them out and at once burn them, for when they remain on the ground until the fungus has attained full development the epidermis is ruptured and the spores are shed upon the ground. Where, as in your case, the soil has been infected by the spores of the fungus causing the disease care should be taken not to carry the soil from the area of the onion bed, by means of boots and tools, to other parts of the garden. It is also desirable not to grow onions on an infected quarter for several years. If this cannot be avoided, raise the seedling onions elsewhere, and plant out when they are fairly well advanced in growth, as it is only at the earliest stage that there is danger of infection. With reference to the onion mildew, you cannot do much at the present time beyond gathering up and burning the leaves, with a view to prevent an attack next year. The spread of the onion mildew may be checked by dusting the plants with a mixture of lime and sulphur, consisting of one part of sulphur and two parts of lime. The application will be more efficient if applied when the plants are moist with dew. Spraying with sulphide of potassium, prepared by the addition of one ounce of the sulphide to three gallons of water, can also be recommended.

HORTICULTURAL EXAMINATIONS.—F. B., Suffolk: The examinations in horticulture held by the Royal Horticultural Society take place early in the year. Preparations for next year's examination in which you wish to take part should be commenced at once. Write to the Secretary of the Royal Horticultural Society, Vincent Square, Westminster, S.W., enclosing a stamped and addressed envelope for a syllabus of the last examination; it will be a guide to the course of your studies.

PLANTING CHOICE DAFFODILS.—R. B. F., Herts: Such varieties as Emperor, Empress, and Sir Watkin will bloom satisfactorily when planted early in January, provided the bulbs were well ripened and stored under the best possible conditions, as we have proved to demonstration on several occasions. The Barri and incomparabilis varieties, which have small bulbs, on the other hand, will not bloom satisfactorily when planted after the end of November. In no case will late-planted bulbs make a vigorous growth in the season following their flowering, and, as a consequence thereof, they will bloom indifferently in the second year after late planting. It may be convenient, but there is no advantage in keeping daffodil bulbs out of the ground for any considerable period after lifting, and we should therefore strongly advise you to plant the bulbs of the choice varieties that you have purchased quite early in August. In the meantime select an open position in the kitchen garden or reserve ground, and if the soil was liberally enriched with manure during last winter or early in spring, it will not require manuring now. In no case should the ground be dressed with animal manure immediately before the bulbs are planted. If the ground requires enriching use a phosphatic manure, such as dissolved bones.

PLANTING WINTER GREENS.—A. B., Sussex: The planting of the various kinds of winter greens may be proceeded with during periods of dry weather such as we are now experiencing, provided they receive careful attention for a short time after they are planted. The best course is to draw drills about three inches deep, and at the proper distances apart, this latter point being determined by the space required by the several kinds. Then flood them with water, and when this has soaked into the soil, put the plants out along the trenches, and give them a watering. It will be an advantage to put out the plants in the evening, and it will be necessary to water them every day if the weather is dry, or on alternate days, until they are commencing to root into the new soil. This may appear tedious, but, if you put out a few rows each evening, and proceed according to the directions given, you will obtain an ample return for the additional labour involved as compared with the method usually adopted in seasons of average rainfall.

UNHEALTHY CATTLEYAS.—W. M. R., Devonshire: If the material you send is a fair specimen of that in which your cattleyas are growing, we are not surprised they are in an unsatisfactory condition. We are surprised that several of the plants have not died. In the ordinary way it would have been well had you stated in your letter what materials you have been using, but in this case it is not a matter of much consequence. We can see that you have used a liberal proportion of leaf-mould, and that you used the watering-pot more freely than would have been desirable in the case of plants growing in a mixture much more open than one containing a large proportion of leaf-mould. The material has evidently been kept in a constantly saturated state, for it has become thoroughly decayed, and so sour that healthy root action has been impossible. We should not be surprised to learn that many of the plants have lost a considerable proportion of their roots. We advise you to turn the plants out of the pots, carefully remove the material from about the roots, and then cut away such of the latter as are decayed, and then wash the remainder in tepid water. Repot, using pots that are just large enough to receive the roots, and a light, open material.

NEW SWEET PEA.—G. A., Leicestershire.—The flowers of the sweet pea you send bear so close a resemblance to those of the varieties of the same colour that have been bracketed by the National Sweet Pea Society as too much alike, that we have some doubts as to the variety being sufficiently distinct to possess any great value. Your best course will be to grow the variety another year, and also send it to the society mentioned for inclusion in their trials.

NAMES OF PLANTS.

R. S., Lancashire.—A poor variety of Cattleya Mossiæ.

M. A., Sussex.—Your plant is evidently Brugmansia Knighti. You should have sent a flower and leaf.

S. T., Surrey.—1, Campylobotrys refulgens; 2, Aralia filicifolia; 3, Gloriosa superba; 4, Acalypha musaica.

F. H., Cornwall.—1, Pteris leptophylla argentea; 2, Rhipidopteris peltata; 3, Nephrolepis rufescens tripinnatifida.

W. F., Dorset.—1, Picea Pinsapo; 2, Retinospora obtusa aurea; 3, Cupressus Lawsoniana erecta viridis; 4, Wellingtonia gigantea.

G. B., Luton.—The rose blooms had shed their petals in the box, and it was therefore impossible to differentiate them. We cannot, however, undertake to name florists' flowers.

THE SCLEROTINIA DISEASE OF THE GOOSEBERRY.

The sclerotinia (botrytis) disease of the gooseberry—or "die-back," as it is called in some districts in Kent—is widespread in England, and is liable to occur wherever gooseberries are grown, whether in plantations or in private gardens. It attacks bushes growing on stiffish clay as well as bushes growing on light, gravelly, or stony soils. In view of its destructive character the Board of Agriculture have issued a leaflet dealing with the disease, and from this we make the following extracts:

Description of the Disease.

The gooseberry bush may be attacked in four distinct places, viz., the main stem and the base of the branches, the young wood of the current year, the leaf, or the berry. As regards the main stem, the spawn (mycelium) of the fungus penetrates into the tissue (permeating the cortex and bast), and at the end of a season's growth causes the bark to crack and peel off, often in large pieces. The part of the stem first attacked is usually that portion situated at the ground level, or a little above it; eventually the spawn of the fungus "rings" the stem at this place, and the whole bush is killed. Before this occurs, however—and death does not occur, as a rule, in the case of a well-grown bush until after several seasons from the time it was first attacked—the spawn of the fungus spreads upward in the stem to the base of the branches. Here it frequently attacks some of the branches so severely that they die. The presence of dead branches in a few bushes, or the death of half the bush, is a characteristic sign of the first appearance of the sclerotinia disease in a plantation, And, as is noted below, it is at this time that steps should be taken to stop the disease.

Renewed growth of the spawn of the fungus in the stem takes place every spring, and it is at this time that the manner in which the fungus exists and spreads can be most easily seen. If a diseased stem be examined during a warm and damp spell of weather in the spring, the bark will be found to be peeling or cracking off, while greyish, fluffy patches of a "mould" have appeared at the edges of the peeling bark or in the fissures where the bark is cracked.

If there is a dead branch on the bush, then, as a rule, small greyish tufts or little cushions—which soon develop in suitable weather into fluffy patches—will be found scattered here and there over its surface. These tufts of the fungus occur both on the main branches nearly down to their base, and frequently also on the younger wood.

Little hard blackish bodies, of irregular shape, name sclerotia are also produced. They are extremely resistant to climatic conditions, such as frost, drought, etc., and serve to carry the fungus through all vicissitudes from one growing season to the next.*

If an affected bush has been weakened by the Sclerotinia disease in previous seasons, the renewed growth of the fungus during the spring will frequently cause the death of the bush. In the affected plantation gooseberry bushes here and there may suddenly wilt and die out in all stages of growth; this occurs most frequently at the time when the leaf-buds have just burst open, but often also at a later stage when the bush is in full flower or bearing young berries. If such bushes are examined the stem will be found to be "ringed" by the spawn of the fungus, and on the surface of the stem will be found the botrytis fructification. If the disease has not developed to a sufficient extent to kill the bush, the spores which are continually being produced throughout the spring and early summer serve to spread the disease to other parts of the bush.

Very commonly the spores affect the leaves, which then soon show a discoloration at their edges, which are first turned yellowish, and finally become ashy-grey or whitish. If the attack extends from the edge of the leaf inwards until the greater part of the leaf is affected, the fall of the leaf soon takes place; if, however, as is often the case, the injury remains restricted to the edges of the leaves, the latter remain on the bush until the usual time for the fall of the leaf. Whether the injury spreads over the leaf to such an extent as to make it fall prematurely seems to depend on the climatic conditions which prevail at the time. When a large number of leaves are attacked throughout a plantation and made to fall prematurely, serious damage is often inflicted: in such cases the berries produced are much smaller than on healthy bushes, and a quantity of unripened spindly shoots may be formed. The under-surface of the leaf is the part attacked, and during the months of June and July the botrytis fructification may be found on leaves.

Another part of the bush which may be attacked is the young wood. In the case of young bushes especially, a considerable proportion of the young shoots may be attacked and much weakened or killed—a fact which has caused growers to speak of the present disease as "die-back." Infested dead shoots may constitute a prolific source of infection. Prunings of botrytis-affected bushes left lying in a heap in a corner of the plantation or garden may develop during the following spring an abundant crop of powdery tufts of botrytis, the spores of which, carried by the wind in countless numbers, will spread the disease through the plantation. There is also the danger of cuttings being taken from botrytis-infected bushes, when many of the young bushes thus obtained will become diseased. In one case which was investigated it was found that a lot of 2,000 young bushes of Crown Bob, planted out direct from a nursery, were already diseased—the young shoots harbouring the botrytis stage of the fungus.

Lastly, the fungus occasionally attacks the berry and turns it rotten. The first sign of the appearance of the disease on the berry is the browning of the skin at some spot; this browning gradually extends until one side of the berry shows obvious signs of softening, and of being badly diseased. The botrytis fructification, in the form of the characteristic ashy-grey "mould," then soon appears on the surface of the discoloured portions, and the berry, in a week or so, is turned completely rotten, and decays.

(To be continued.)

---

* These sclerotia are also able under certain conditions to give rise to another form of fructification in which winter-spores (ascospores) are produced. In this stage the fungus has been known under the name of sclerotinia, while the name Botrytis has been applied to the stage where summer-spores only are produced. It is probable that the sclerotinia stage with its winter-spores, only rarely occurs. It is certain that the disease can be perpetuated from season to season in its absence by means of the Botrytis stage, which by means of summer-spores spreads the disease during the growing season, and then remains dormant in the form either of mycelium in the stem or of sclerotia on its surface—both enabling the fungus to hibernate during severe winters.

MARKETS.

◆

COVENT GARDEN.

Flowers.

Trade is good, but not quite so good as of late.

		s.	d.		s.	d.
Adiantum cuneatum	per doz. bun.	4	0	to	6	0
Arums	per doz.	2	6		3	0
Asparagus	per doz. bun.	10	0		10	0
Cattleyas	per doz.	8	0		12	0
Carnations	per doz.	1	2		2	6
,,	per doz. bun.	6	0		9	0
Cornflowers	per doz. bun.	1	0		1	6
Coreopsis	per doz. bun.	1	6		2	0
Croton leaves	per bun.	1	0		2	6
French fern	per doz. bun.	2	6		4	0
Gaillardias	per doz. bun.	1	0		2	0
Gardenias	per doz.	1	0		2	0
Gladiolus	per doz. bun.	3	0		4	0
Gypsophila	per doz. bun.	3	0		4	0
Iris, English	per doz. bun.	3	0		6	0
Ixias	per doz. bun.	1	0		2	0
Lilium auratum	per bun.	3	0		4	0
,, candidum	per doz.	1	0		2	0
,, speciosum	per bun.	2	0		2	6
,, longiflorum	per bun.	2	0		3	0
Lily of the Valley	per doz. bun.	6	0		15	0
Marguerites	per doz. bun.	1	6		3	0
Mignonette	per doz. bun.	3	0		4	0
Odontoglossums	per doz. blms.	1	0		3	0
Pelargoniums	per doz. bun.	3	0		4	0
Roses	per doz.	1	0		3	0
Smilax	per doz. trails	4	0		5	0
Stocks, white	per doz. bun.	3	0		4	0
Sweet Peas	per doz. bun.	1	0		2	0
Tuberoses	per doz.	0	4		0	6

Fruits.

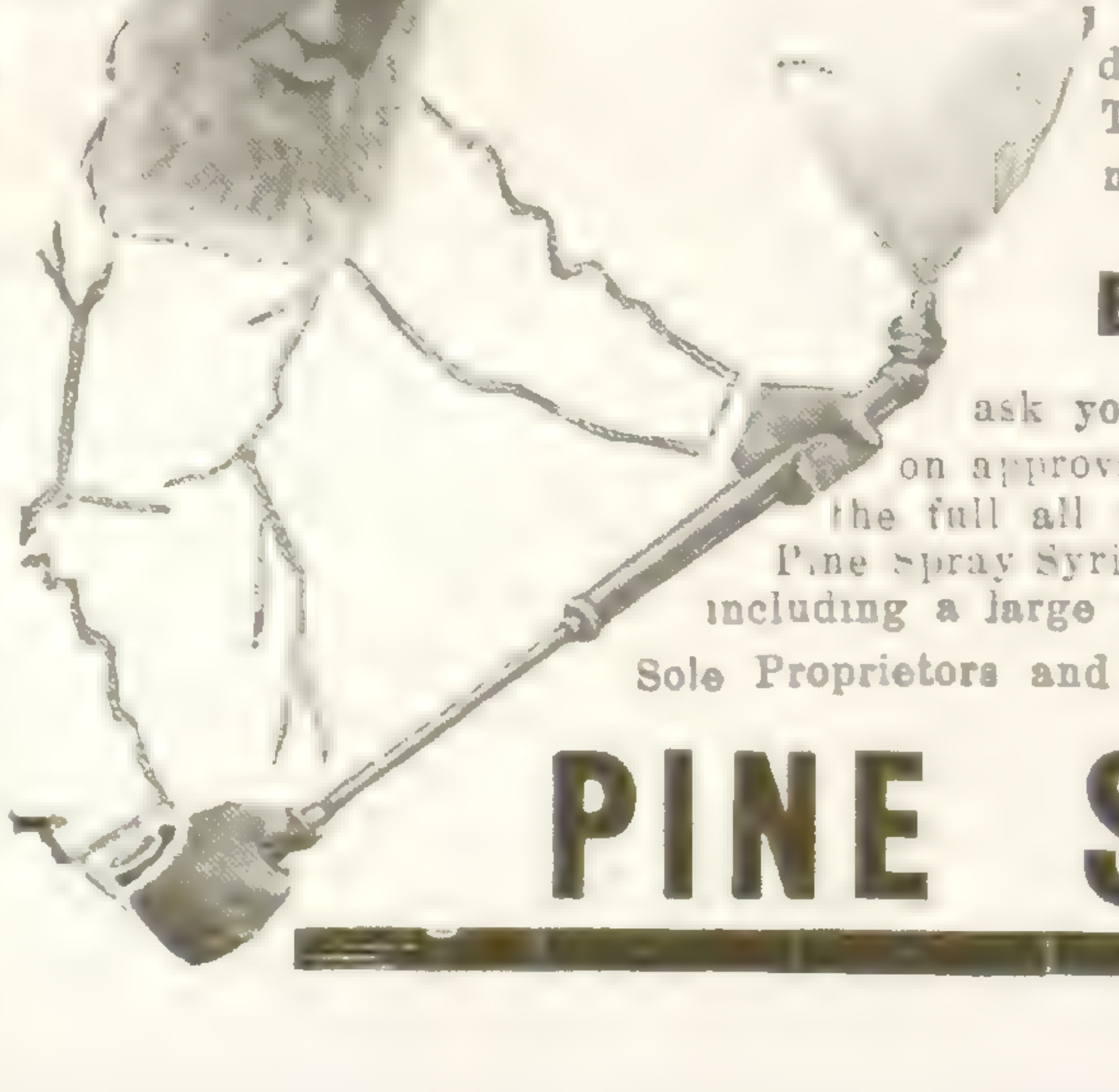
Fruits both for dessert and preserving find a ready sale. Cherries and gooseberries are excellent.

		s.	d.		s.	d.
Apples, Australian	per case	8	0	to	13	
,, Tasmanian	per case	8	0		13	
Apricots, French	per box	0	9		1	
Bananas	per bun.	4	0		10	
Cherries, French	per ½-sieve	3	0		6	
,, English	per ½-sieve	3	6		7	
Currants, red	per flat	4	0		4	
Figs	per doz.	1	0		3	
Gooseberries	per ½-sieve	2	6		4	
Grapes, English	per lb.	1	0		4	
,, Belgian	per lb.	0	6		1	
Lemons	per case	9	0		25	
Melons	each	1	0		2	
Nectarines	per doz.	3	0		18	
Oranges, Denia	per case	12	0		30	
,, Mercia	per case	16	0		22	
,, Naples	per case	8	0		10	
Peaches	per doz.	6	0		18	
Pineapples	each	2	0		5	

Vegetables.

Liberal supplies continue to arrive and business is steady.

		s.	d.		s.
Artichokes, Globe	per doz.	2	0	to	4
Beans, dwarf	per lb.	0	2		0
Beans, broad	per ½-sieve	1	6		2
Beet	per bush.	2	0		3
Cabbage	per tally	2	6		
Carrots, new	per pad	2	0		2
Cauliflowers	per doz.	2	0		2
Cucumbers	per flat	4	0		4
Endive	per doz.	0	9		1
Horseradish	per doz bun.	8	0		12
Lettuce	per doz.	0	6		1
Marrows	per doz.	2	0		
Mint	per doz. bun.	1	0		2
Mushrooms	per doz. lb.	6	0		12
Parsley	per ½-sieve	1	0		
Peas	per bag	5	0		
Radishes	per doz. bun.	0	4		
Spinach	per bush.	1	0		
Tomatoes	per doz. lb.	2	0		
Turnips	per doz. bun.	3	0		



Let those who will

disregard our offer to send a Pine Spray Syringe on approval. They will pay 10/6 for a syringe with none of its advantages—not so large, and not nearly so well made and finished.

Before you buy a Syringe

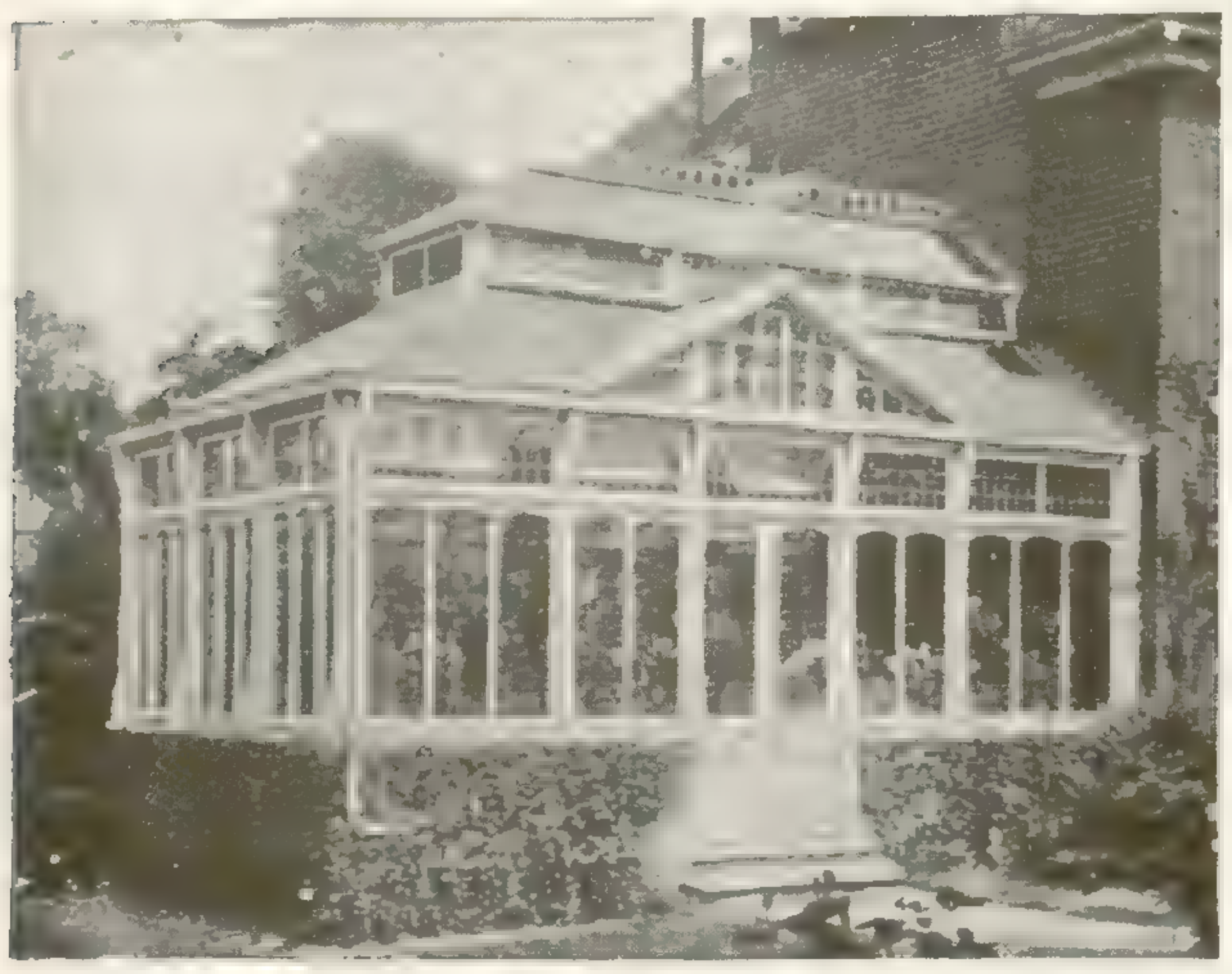
ask your seedsman or ironmonger to send for a Pine Spray Syringe on approval, so that you may at least be in a position to appreciate to the full all that the Instantly Obtainable Spraying Combinations of the Pine Spray Syringe-head would mean to you in garden or greenhouse. Price, including a large Sample Tin of Pine Spray Insecticide, 10/6.

Sole Proprietors and Manufacturers, ROBINSON BROS., LTD., West Bromwich.

PINE SPRAY SYRINGE.

BOULTON & PAUL, LTD., HORTICULTURAL BUILDERS, **Norwich.**

EFFECTIVE, PRACTICAL CONSERVATORIES.

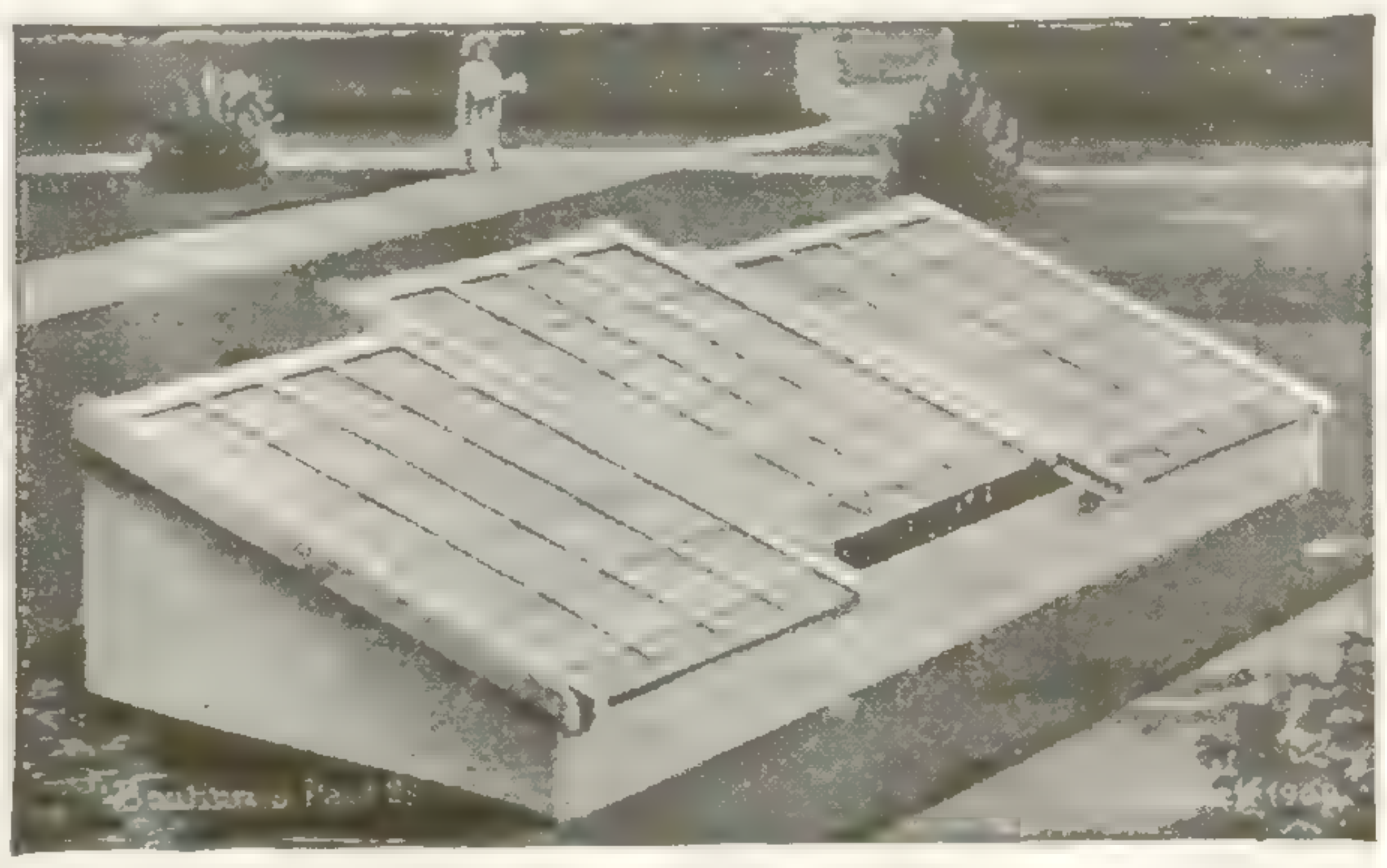


Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of 40/- value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.

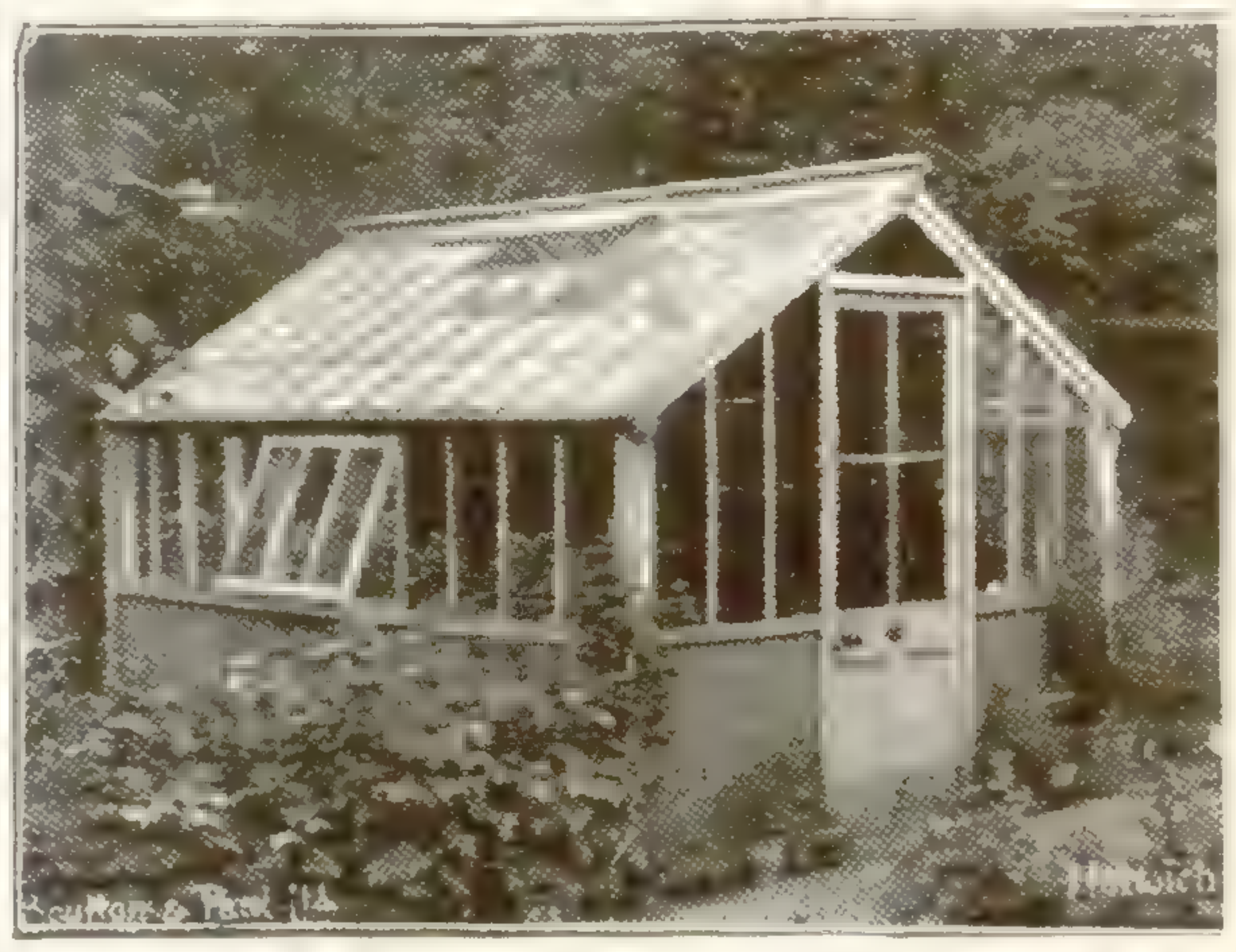


4ft. by 6ft. ... £2 0 0 | 8ft. by 6ft. ... 3 0 0
Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft. Similar to No. 75, with Two Lights... 35/-

SEND FOR ILLUSTRATED CATALOGUES.

Every part of these Houses is thoroughly well made, painted three coats, GLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.



No. 49A.—Span, 10ft. by 8ft. £11 10 0
No. 47A.—Lean-to, 10ft. by 7ft. £9 10 0

All parts are numbered ready for easy re-erection by any handy man.

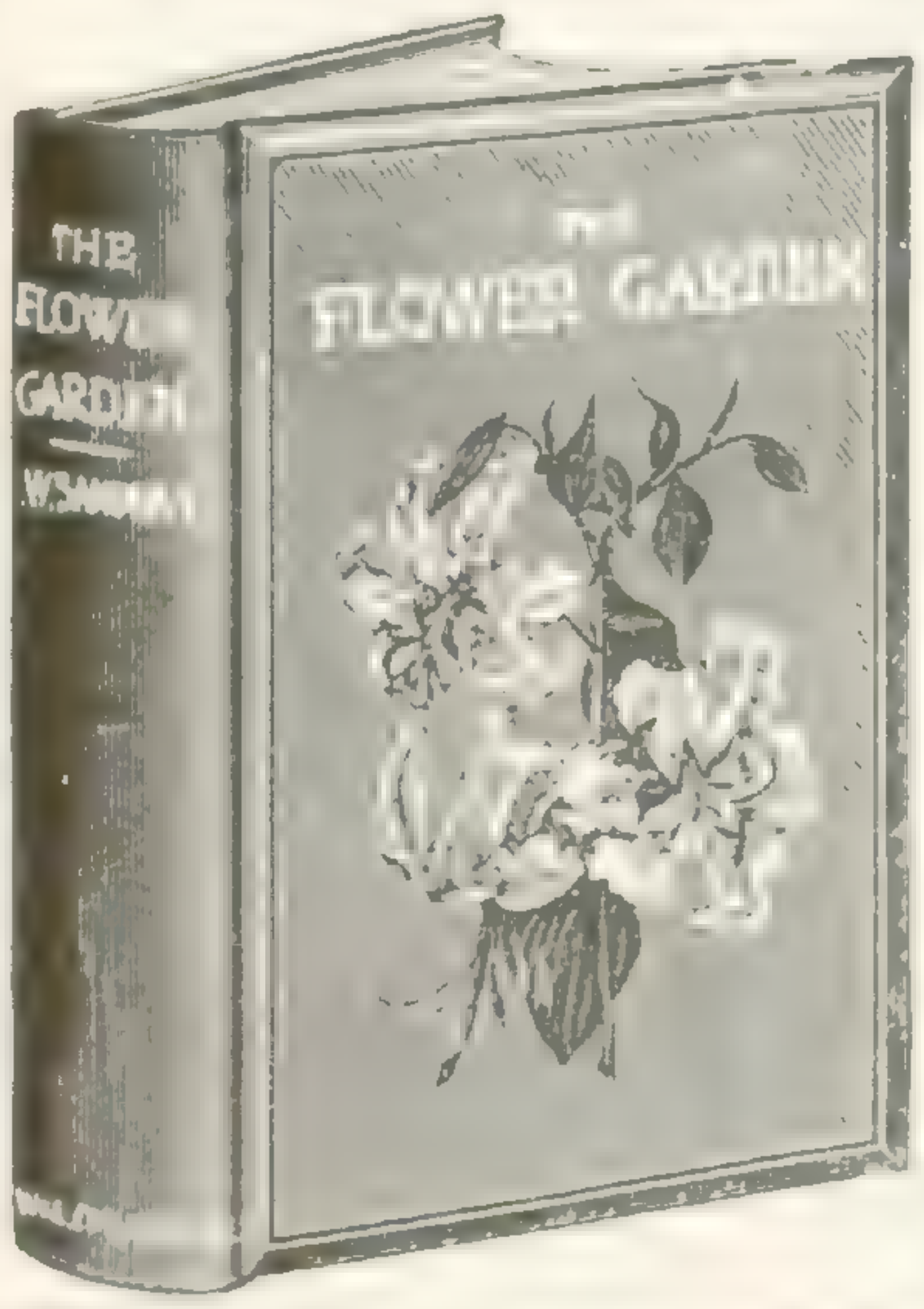
. . . There are no better . . .

GUIDES TO THE GARDEN

than those issued from the "Gardeners' Magazine" Office.

A COMPLETE GUIDE.

The FLOWER : : GARDEN.



By T. W. SANDERS, F.L.S.

Bound in cloth, bevelled edges 480 pages.

7/6 net;

By post, packed in box, 8/-.

SIXTY-FOUR PLATES of Beautiful Garden Scenes, Plants and Flowers, and FORTY EXPLANATORY DIAGRAMS.

A comprehensive work on the Formation, Planting, and Management of the Flower Garden, and the Cultivation of Flowers, Plants, &c., adapted for Outdoor Culture.

FOURTEENTH EDITION—REVISED ENLARGED—IMPROVED.

ENCYCLOPÆDIA OF GARDENING.

By T. W. SANDERS, F.L.S.

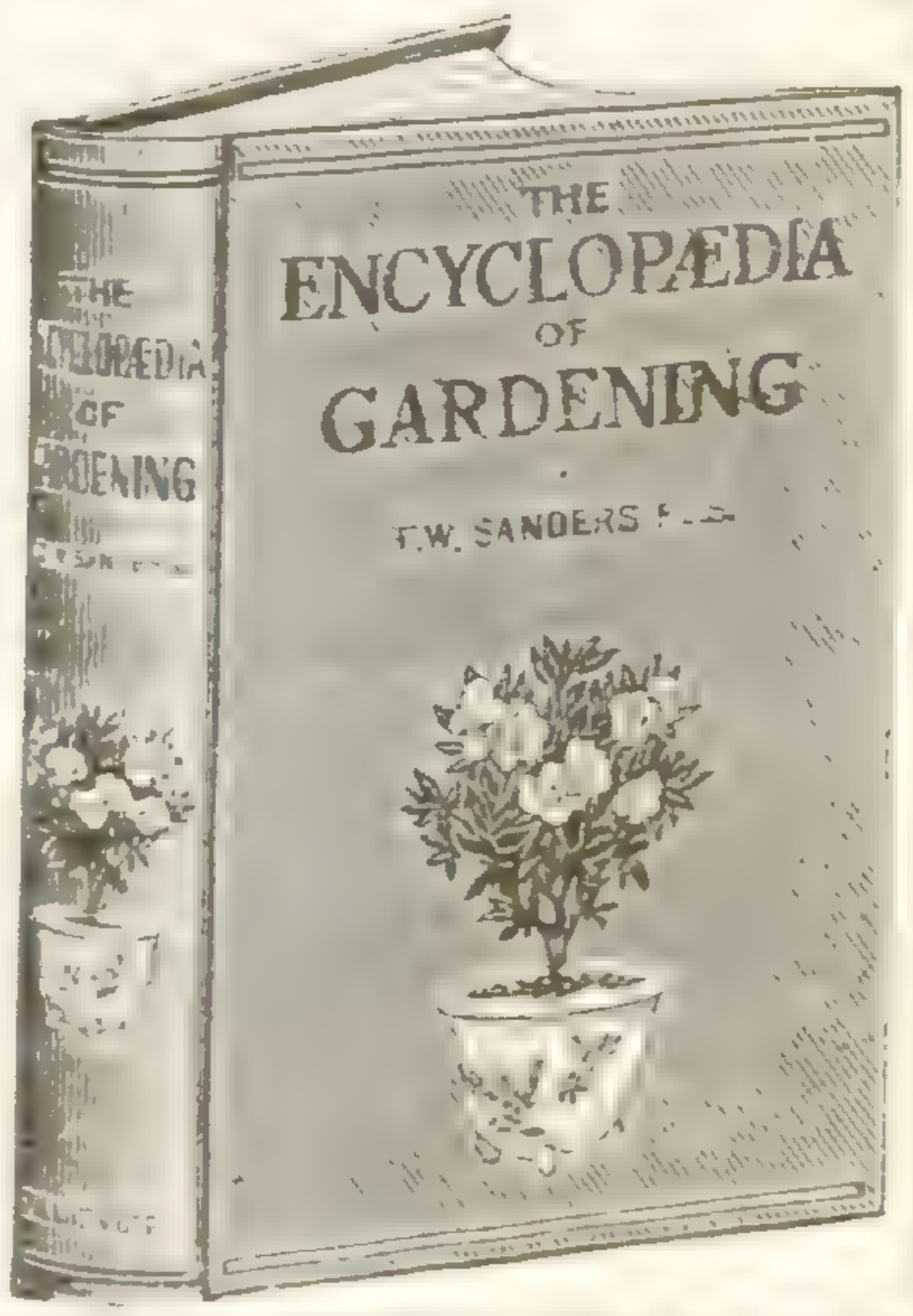
Bound in cloth, 482 pages.

3/6 net;

By post, packed in box, 3/10.

A complete Dictionary, giving at a glance the Cultivation and Description of every Flower, Fruit, Vegetable, Plant, Tree, or Shrub; Popular and Technical Names, Time of Planting, Colour of Flowers; Name of every Species, Suitable Soil, &c., &c.

A Popular Garden Guide.



CARNATIONS, PICOTEES AND PINKS.

By T. W. SANDERS, F.L.S.

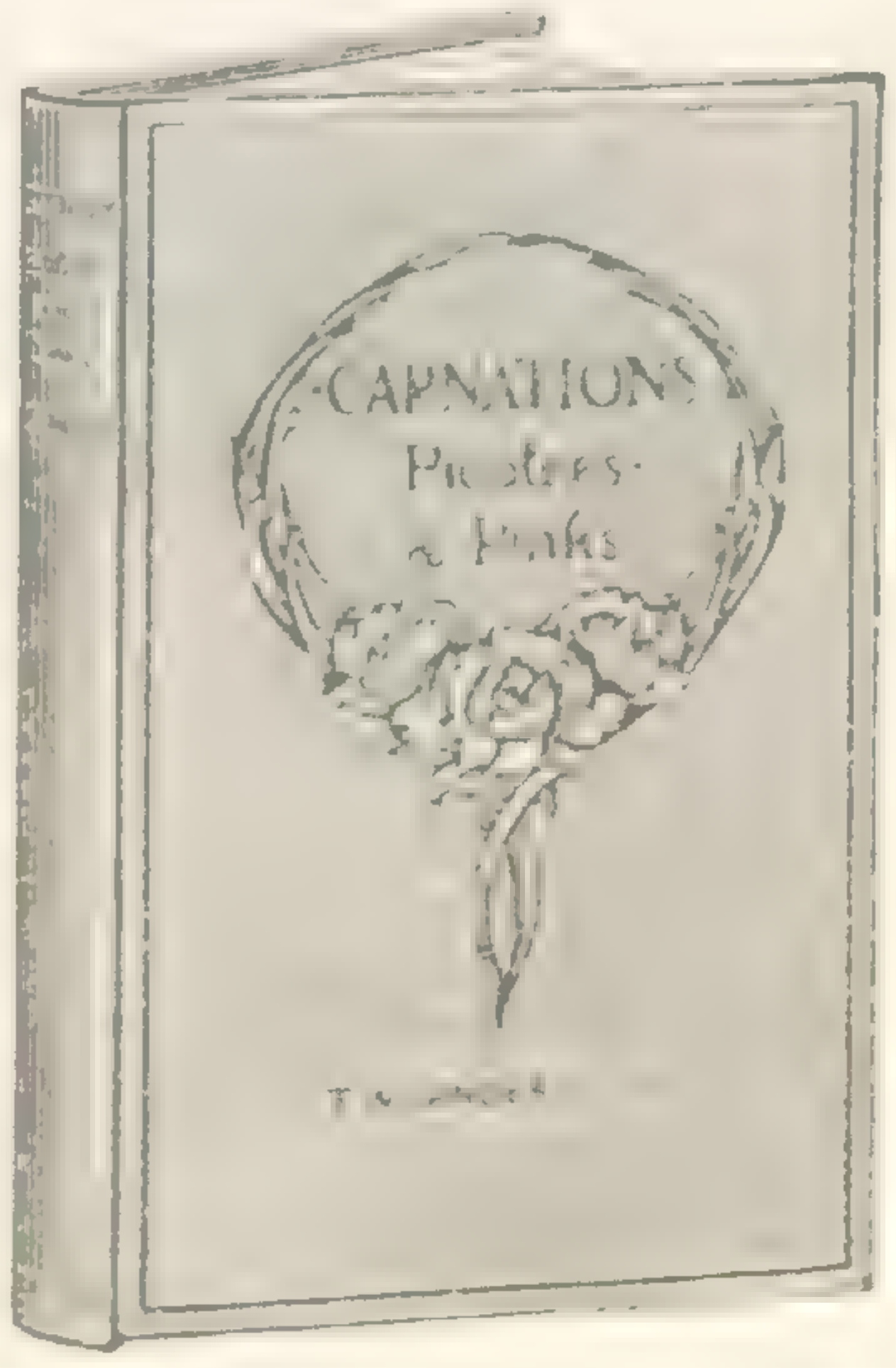
Bound in cloth, 188 pages.

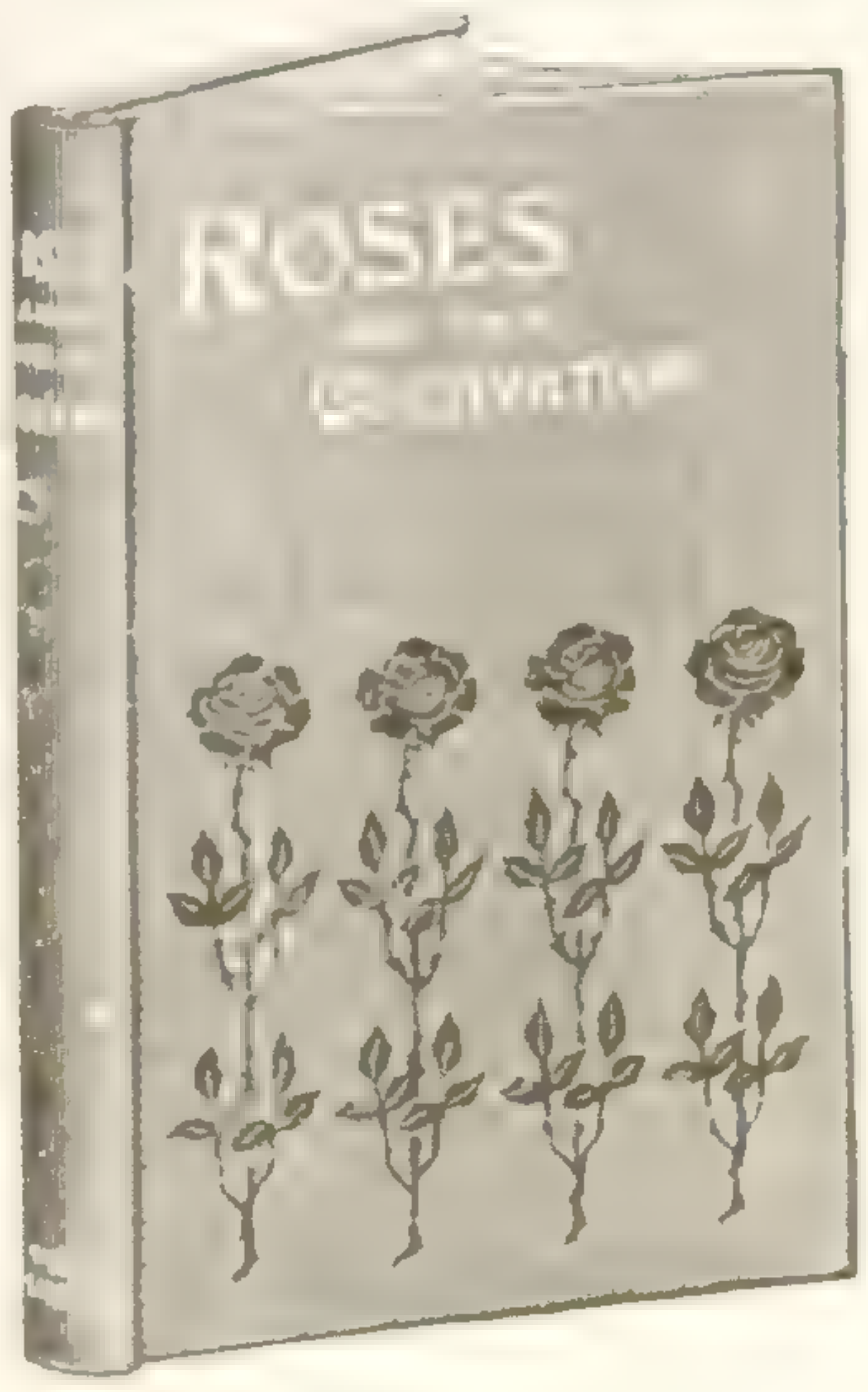
2/6 net;

By post, packed in box, 2/10.

BEAUTIFULLY ILLUSTRATED.

A Practical Guide to the Cultivation of Border, Perpetual and other Carnations, Picotees and Pinks; Lists of Varieties; Pests and Diseases, &c.





SEVENTH EDITION—INCLUDING REVISED LIST WITH DESCRIPTION OF 1,700 DIFFERENT ROSES.

ROSES and their CULTIVATION.

By T. W. SANDERS, F.L.S.

Bound in cloth, 198 pages, 67 illustrations.

2/6 net;

By post, packed in box, 2/10.

SEVENTEEN PHOTO PLATES and FRONTISPIECE.

A Practical Guide as to Growing Roses Outdoors and Under Glass; When to Plant; How to Prune, Bud, and Graft; Full list of 1,700 Cultivated Roses with description.

To the Publishers, W. H. & L. COLLINGRIDGE, 148 and 149, Aldersgate Street, London.

ORDER FORM.

Please send by post..............................
for which I enclose remittance of..............................
Name..............................
Address..............................

CONTENTS.

	PAGE
Afforestation in Scotland	518
Among the Alpine Flowers	519
Answers to Correspondents	527
Budding	514
Exhibitions and Meetings	521
Malmaison Carnations	513
National Sweet Pea Society	511
New Plants, etc.	516
Notes of the Week	509
Olearia Haasti	518
Peach Trees on Open Walls	517
Sophora viciifolia	516
The Uses of Lime	517
The Valleyed Garden	515
Violets in Frames	512
Wall Shrubs for a North Aspect	514
Work for the Week	520

ILLUSTRATIONS.

Portrait of Mr. T. Turton, 509; Sweet Pea Dobbies' Thomas Stevenson, 511; Sweet Pea Barbara, 512; Cattleya Mossiæ alba Queen Mary, 513; New Wichuraiana Rose Ethel, 515; H.T. Rose Mrs. R. Draper, 518; New H.T. Rose Mrs. S. Ross, 519; New Garden Rose Danae, 521; Dracæna Deremensis Warnecki, 523; Messrs. Cypher and Sons' Group of Foliage Plants, 525.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1911. JULY 2 TO JULY 8.	SUNSHINE.	TEMPERATURE OF THE AIR.			
		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
July 2—Sunday	11 36	60	52	64	50
,, 3—Monday	12 0	59	51	67	46
,, 4—Tuesday	10 54	63	56	71	47
,, 5—Wednesday	7 54	67	61	79	56
,, 6—Thursday	14 18	73	63	85	52
,, 7—Friday	11 24	71	65	84	55
,, 8—Saturday	10 18	75	65	88	55
Means	(total) 78 24	67	59	77	51

DATE. 1911. JULY 2 TO JULY 8.	RAIN.	TEMPERATURE OF THE SOIL AT 9 A.M.			LOWEST TEMPERATURE ON GRASS.
		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
July 2—Sunday	·05	60	59	57	45
,, 3—Monday	—	60	59	57	38
,, 4—Tuesday	—	62	61	58	41
,, 5—Wednesday	—	64	61	58	49
,, 6—Thursday	—	66	62	58	47
,, 7—Friday	—	67	63	58	52
,, 8—Saturday	—	67	63	59	50
Means	(total) ·05	63	61	58	46

FORTHCOMING ENGAGEMENTS.

MONDAY, July 17.—National Chrysanthemum Society's Outing to Cliveden.

TUESDAY, July 18.—Royal Horticultural Society; committees meet at 12 o'clock; lecture at 3 p.m., on "Irises," by Mr. W. R. Dykes, M.A.; Scientific Committee at 4 o'clock.

WEDNESDAY, July 19.—National Rose Society, at Ulverston, in conjunction with North Lonsdale Rose and Sweet Pea Show.
Newcastle Flower Show; three days.
Nottingham Horticultural Society.

THURSDAY, July 20.—Roehampton Flower Show.
Isle of Wight Carnation and Sweet Pea Show, at Newport.

FRIDAY, July 21.—Handsworth Horticultural Society; two days.
Ross Flower Show.

SATURDAY, July 22.—Paisley Horticultural Society.

TUESDAY, July 25.—National Carnation and Picotee Society, at Royal Horticultural Hall.

WEDNESDAY, July 26.—Cardiff Horticultural Society; two days.
Bishop's Waltham Flower Show.
Irish Gardeners' Association.
Chesterfield Horticultural Society.
Hayward's Heath Horticultural Society.

THURSDAY, July 27.—St. Ives Horticultural Society.

FRIDAY, July 28.—Southampton Carnation and Sweet Pea Show.

SANDWITH'S
PREMIER
WEED
KILLER

THE FAVOURITE WEED KILLER.

As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for 6/-; drum, 2/-. 12 galls. for 16/-; drum, 6/-. 20 galls. for 26/8; drum, 10/-. 40 galls. for 50/-; drum, 20/-.

EITHER LIQUID OR POWDER.

Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,
The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

Those TORMENTED by MIDGES, GNATS, MOSQUITOS and INSECT BITES should use

O B & Cº'S

"SAMBULINE"

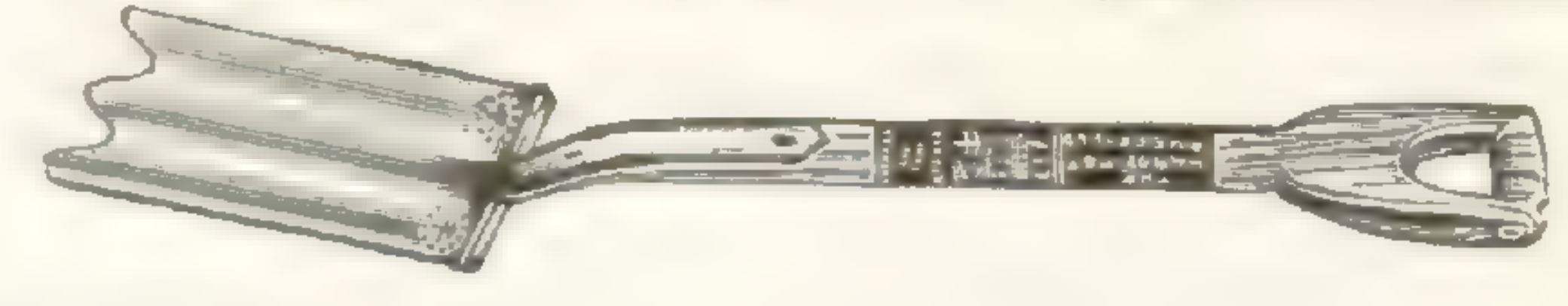
REGISTERED TRADE MARK No. 315,892.

An elegant preparation for IMPROVING THE SKIN and keeping it COOL and refreshed. Free from grease and stickiness. Allays irritation caused by Heat, CHAFING, through Exertion or EXPOSURE to the SUN, at Seaside, Motoring, Tennis, Cycling, Fishing, etc., or whilst GARDENING.

Of Chemists and Stores, in Metallic Tubes, 1/-, or post free 12 stamps from

OSBORNE, BAUER & CHEESEMAN,
19, Golden Sq., Regent St., London, W.

A NEW GARDEN SPADE (Carter's Patent):



This is claimed to be the most effective Spade on the market Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

FOR ROSE MILDEW
use
V2K FLUID
THE BEST REMEDY
FOR THIS PERSISTENT PEST.
Does not discolour the foliage.

OF AGENTS EVERYWHERE.

Sole Mfrs., Willm. Cooper & Nephews, Berkhamsted.

BOTTLING FRUIT. Patent Apparatus Complete. **5/6**

Efficient, Reliable, Simple, Easily Operated.

WICKHAM and Co., Dept. M, Ware, Herts.

SPAR GRAVEL for Paths, Drives, &c. White, strong quality, broken and properly graded; also Rockery Stone.

BECK & CO., Stone Merchants, Matlock.

SEED BOXES.—12 x 9 x 2in. timber, 8s. 9d. gross, made, 10s. 3d.; 15 x 9 x 2in., 10s. 3d., made 11s. 9d.; also flower sticks, trellis, greenhouses, garden lights, or timber of all description. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

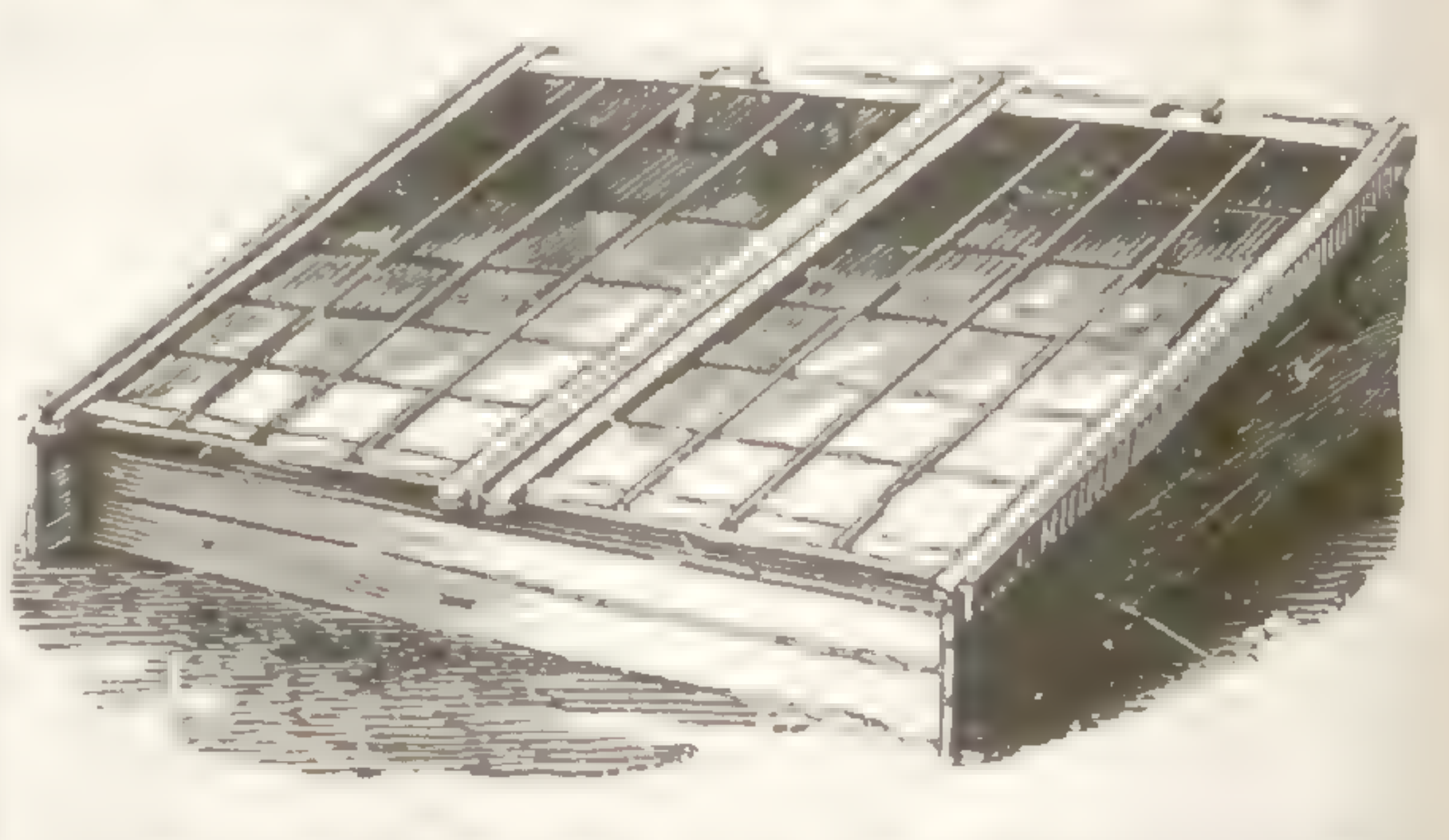
FLOWER POTS.—10 8¼in., 10 7in., 20 6in., 35 5in., 35 4¼in., 50 3½in., 25 3in., packed free, in crate (returnable), 7s. 6d. Illustrated List of Flower Pots, Poultry and Pigeon Appliances, free.—T. JEAVONS, Potteries, Brierley Hill.

WANTED TO PURCHASE.—"Gardener's Weekly Magazine," 1863-67 (Vols. 4, 5, and 7). THOMAS THORP, 109-110, High Street, Guildford.

PORTABLE

CUCUMBER FRAMES.

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.		£	s.	d.
1-light 4 ft. by 6 ft.	*CASH PRICES. CARRIAGE PAID.*	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.		5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON, MANCHESTER.

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant

Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

THOMSON'S
Celebrated
VINE·PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES
SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE.

MANY YEARS REPUTATION.

EUREKA WEED KILLER

LASTING RESULTS – NO NEW EXPERIMENT

1/9 TIN FOR 25 GALLONS | 6/- TIN FOR 100 GALLONS | LARGER SIZES AT LOWER RATES

SOLD BY AGENTS. MANUFACTURERS: TOMLINSON & HAYWARD LTD LINCOLN.
IF ANY DIFFICULTY SENT DIRECT – PAID

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out. Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working, where two or more are kept); good all round; 14 years as head in large and well-kept establishments; married; age 40; excellent references. E. MAYLETT, Park Hall, Salford Priors, Evesham.

J. F. G. BANNATYNE, Esq., Haldon, Exeter, will be pleased to recommend H. NICHOLSON as GARDENER (Head Working); thoroughly practical and reliable; life experience in all branches; 3½ years here; age 31. Address, NICHOLSON, Haldon Gardens, Exeter, Devon.

GARDENER (Head Working); thoroughly experienced in Fruit, Flowers, Vegetables; Inside and Outside work, where two or three are kept; well recommended. Apply, F., care of Messrs. Charles Turner and Son, Royal Nurseries, Slough, Bucks.

GARDENER (Head Working or Good Second); 11 years' good all-round experience; highly recommended; abstainer; age 24; married when suited; disengaged. H. DRAPER, Maidwell, Northants.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 31; married when suited; excellent references. Address, Cloees Hall, Gisburn, Clitheroe.

GARDENER (Head Working), life experience Inside and Out; 5 years present situation as General Foreman; excellent refs.; disengaged when suited; age 28. T. CHAMBERLIN, Canons Park Gardens, Edgware, Middx.

GARDENER (Head Working), where one or two more are kept; life experience in all branches; aged 36; married, four children; 8½ years' excellent references. Apply GARDENER, The Wharf, Abingdon, Berks.

GARDENER (Head Working, where two or three or kept); life experience; leaving through death; highest references; age 35; married. STEVENS, Thanes Croft, Shamley Green, near Guildford, Surrey.

GARDENER (Head Working); age 28; single; 14 years' experience Inside and Out; good references. J. FOX, St. Leonards, Windsor.

GARDENER (Head Working).—CAPTAIN USHER highly recommends R. Appleby as above; life experience in all branches: thoroughly understands Planning and Laying Out; also Land and Stock; many years' excellent character. Address APPLEBY, care of Captain T. Clemins Usher, Little Wymondley, Stevenage.

GARDENER (Head Working). — F. W. FLETCHER, Esq., Windmill, Enfield, Middlx., can highly recommend his HEAD GARDENER as a thoroughly trustworthy experienced good all-round man; age 45; married; one girl, 14 years; good personal character.

GARDENER (Head Working).—Mr. WATSON can highly recommond C. WALLIS, where two or three are kept; been here six years as Second of five; age 31; married, two children. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushroom, ridge or flat; Kitchen, Lawn, Flower Garden. Special Prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (Head or Single-handed); life experience in all branches; six years present situation; age 32; married, one child; good references. H. FORD, West Street, Harrow.

MR. A. LINDLEY recommends A. SIMMONS as GARDENER (First of two or Single-handed); life experience Inside and Out; two years present situation, six years previous; age 35; single. Apply, Silverton, Kenley, Surrey.

GARDENER (Single-handed or Second) seeks SITUATION; understands Fruit, Flowers, Vegetables; age 25; single; good references; seven years last place. STRUTT, 70, Croft Street, Ipswich.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (Single-handed or otherwise); over 2 years as Foreman in present situation; experienced Inside and Out; can be highly recommended by present employer; age 28. Apply W. BICKER, or Head Gardener, The Gardens, Avenue House, Church End, Finchley. Eastern Counties preferred.

GARDENER (Single-handed or otherwise); 12½ years' experience Inside and Out; good references; 4½ years last place; age 30; single. REYNOLDS, Sandy Hill, Beddington.

GARDENER (Single-handed. or with Son to help); life experience in all branches; age 37; disengaged; good references. E. LIMEHOUSE, 11, Charleville Road, West Kensington.

GARDENER (Single-handed), seeks situation; 16 years' experience in flowers, fruit, vegetables; excellent references; age 30; single; disengaged.—F. HYDER, 7, Stamford Road, Watford, Herts.

A. W. PERRY, Middleton Park Gardens, Bicester, wishes to recommend W. PRITLER as SECOND; 9 years' experience; age 25; highest references. W. PRITLER, 1, Mount Street, Ware, Herts.

GARDENER seeks SITUATION; life experience in well-kept establishments (Inside and Out); age 28; single; excellent reference; height 5ft. 8½in. F. HARDY, Canons Park Gardens, Edgware, Middlesex.

GARDENER; thoroughly experienced, seeks Single-handed place; married, no family; good reference. W. T., Ham, Beckenham, Kent.

H. BUGG, Head Gardener to M. Lancaster, Esq., Lendholme, Woking, can with confidence recommend W. Tullett to any Lady or Gentleman requiring first-class man; life experience; age 26; four years here.—Apply W. TULLETT, 28, Freemason's Road, Addiscombe, Croydon. (No circulars.)

KITCHEN GARDEN.—LEADING HAND; thorough knowledge of growing Vegetables, Fruit, etc.; over 10 years' experience; age 23½ years; abstainer; disengaged.—A. MORTIMORE, Northington, near Alresford, Hants.

AS JOURNEYMAN under foreman in Plant or Fruit Houses; age 20; six years' experience; excellent references; bothy preferred. B. WEST, Radway, Kineton, Warwick.

JOURNEYMAN, as Inside or Inside and out; age 24; 6½ years at present place; can be highly recommended; disengaged when suited. Apply B. HAYES, Lofts Hall, Saffron Walden.

JOURNEYMAN seeks SITUATION (Inside and Out); seven years' experience; age 21. E. BAILEY, The Garden, Swaffham Prior House, Cambs.

JOURNEYMAN.—Young Man, aged 25, desires engagement; 7½ years' nursery experience with plants, inside and out; abstainer; good character. Apply CHAS. NICHOLLS, 32, Orme Road, Worthing, Sussex.

AS GARDENER; used to pony; over two years in present situation; age 24. Near London preferred. Apply J. SCOTT, 51, Manor Park Road, East Finchley.

SITUATION as KITCHEN GARDENER and handyman; good alto chorister; married. age 25. F. AUGER, 22, Elm Grove, Bishop's Stortford, Herts.

MR. EUINTON, Ewell Court Gardens, Ewell, Surrey, wishes to recommend strong Youth as IMPROVER (Inside); age 18; 2½ years in these gardens; bothy preferred.

FLORIST and GARDENER.—Danish girl requires Situation in Nursery; speaks English; three years' experience in shop; thorough knowledge of growing Flowers, Fruit, Vegetables; good certificates and references. Apply, CORNELIUS WHEELER, Elmwood Nursery, Cosham, Hants.

Situations Vacant.

GARDENER (Under), single, well experienced under glass; good references; second. State wages, age, experience, etc.; abstainer preferred. THATCHER, The Manor, West Lavington, near Devizes, Wilts.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For JULY 22, 1911.

Please Repeat my Advertisement.

Name ....

Address ....

....

Date.................................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue

Telegrams: "Hortulanus, London."
Telephone: [illegible] Westminster.

J. WEEKS & Co. (CHELSEA),

The First Established Horticultural Building Firm in 1808. Foremost in 1911.

PATENTEES AND MAKERS OF WEEKS' PATENT "DUPLEX" UPRIGHT TUBULAR BOILERS.

ERECTED FOR CAPT. DALGETTY, LOCKERLEY HALL, ROMSEY.

THE MOST PERFECT SYSTEM of GLAZING

is our latest "Challis" system, as illustrated.

NO BARS. MORE LIGHT. NO DRIP. NO OUTSIDE ROOF PAINTING OR PUTTY.

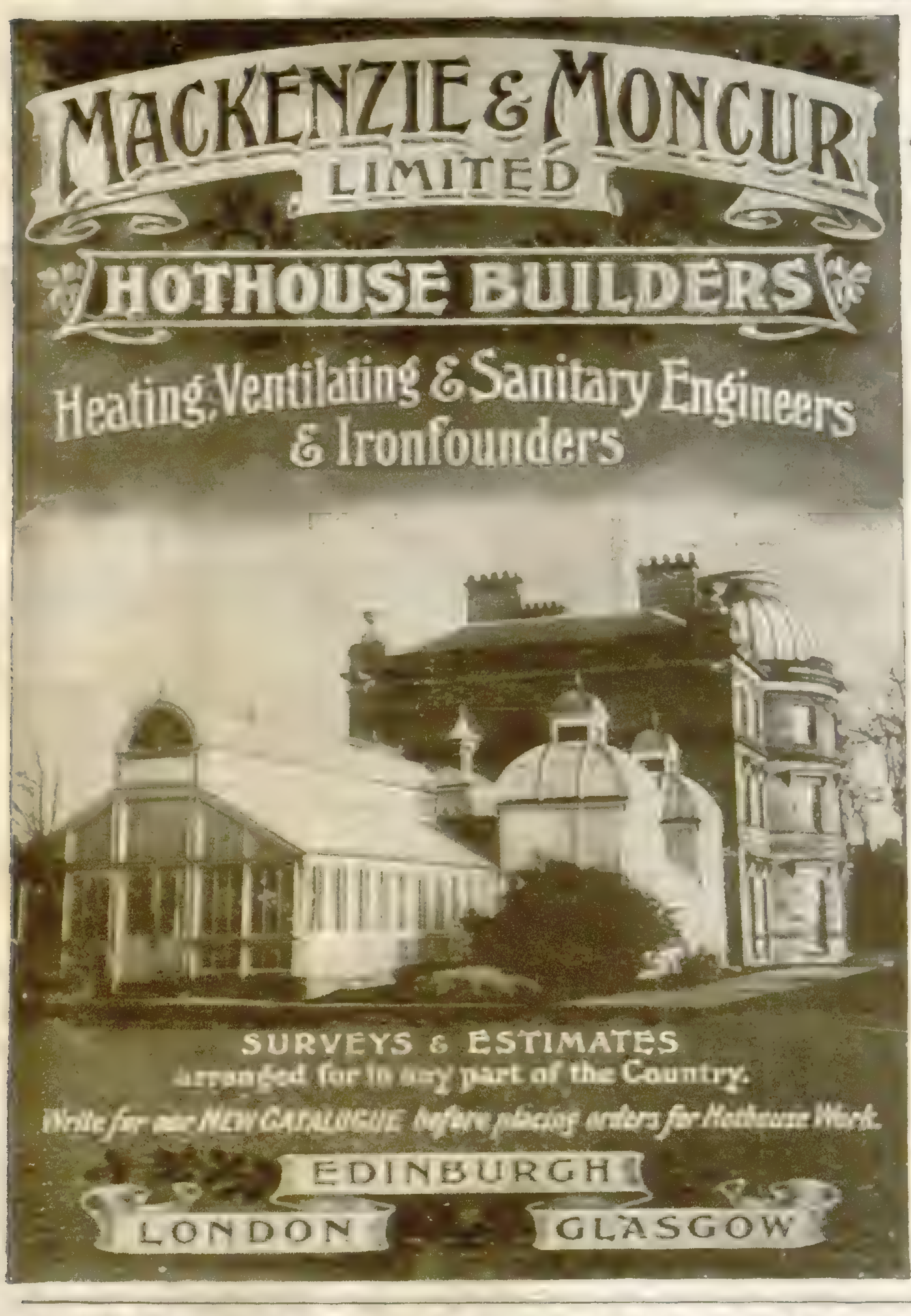
It has not the disadvantages of some other systems which involve great loss of heat, rattle in windy weather, and broken glass.

THE COST IS LESS THAN OUR STANDARD CONSTRUCTION. LET US SEND YOU A PRICE TO COMPARE WITH OTHERS.

We only use best materials, and spare no effort to uphold our reputation for first-class work, at lowest prices.

CATALOGUES, PLANS AND ESTIMATES, FREE.

Please address all Letters to HEAD OFFICE **72, VICTORIA ST., WESTMINSTER, S.W.**



MACKENZIE & MONCUR LIMITED

HOTHOUSE BUILDERS

Heating, Ventilating & Sanitary Engineers & Ironfounders

SURVEYS & ESTIMATES arranged for in any part of the Country.

Write for our NEW CATALOGUE before placing orders for Hothouse Work.

EDINBURGH
LONDON GLASGOW

THE ROSE-GROWER'S VADE MECUM.

Seventh Edition, Including New Features and Illustrations, and Revised List of 1,700 Different Roses.

ROSES AND THEIR CULTIVATION

200 Pages.
16 Plates.
Frontispiece and
67 Illustrations.

2/6 Net; By post, 2/1

By T. W. SANDERS, F.L.S.

A Complete Guide to the Selection and Culture of

- STANDARD ROSES.
- PILLAR ROSES.
- GREENHOUSE CLIMBERS.
- RAMBLING ROSES.
- ROSES FOR TRELLISES.
- CLIMBERS FOR PERGOLAS.
- POT ROSES.
- DWARF ROSES.
- ROSES FOR EXHIBITION.
- &c., &c.

LIST OF 1,700 CULTIVATED ROSES:
Showing Variety, Section or Class, Date Introduced, Colour, Habit of Growth, How Best Grown, Mode and Time of Pruning, Descriptio of Flower.

ORDER FORM.

To the Publishers of "The Gardeners' Magazine,"
148 & 149, Aldersgate Street, London, E.C.

Please send me a copy of **"ROSES AND THEIR CULTIVATION"** by post, for which I enclose remitt of **2/10.**

Name..

Address..

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C. and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 3,012.
Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, JULY 22, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S SEEDS FOR JULY SOWING.—Finest selected strains of Aquilegias, Begonias, Campanulas, Carnations, Delphiniums, Forget-me-nots, Hollyhocks, Lupins, Pansies, Hardy Primulas, Snapdragons, Stocks, etc. See Barr's Seed Guide, free. BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, S.W., would advise any-one who is considering the advisability of erecting Greenhouses to get plans and estimates for them now. The best advice with regard to building, all plans, estimates, and every attention can be secured by a postcard, telephone message (201 Western), letter, or wire to "Gray, Chelsea, London."

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

JAMES SENDALL and CO., Cambridge; Conservatories, Vineries, Garden Frames; Heating Engineers. Surveys made, and Plans prepared to suit any position. Illustrated List free. Telegrams: "Sendall, Cambridge." 'Phone, 511.

THE BOURNE DAFFODILS have gained the HIGHEST AWARDS wherever Exhibited. Send for my Illustrated and descriptive Catalogue of FIRST QUALITY BULBS at MODERATE PRICES. Post Free from
CHRISTOPHER BOURNE,
The Daffodil Specialist, Simpson,
Bletchley.

RUSTIC SUMMER HOUSES, trellis-work, Fencing, Pergolas, Arches, Seats, Bridges, Log Cabins, Loggias, etc. Send for our new LOG CABIN and RUSTIC CATALOGUE (just published), sent post free. BOULTON and PAUL, Ltd., Norwich.

CARNATIONS.—Spiral Wire Stakes. No tying required. Will last a lifetime. 24 inches long, 7s. 6d. per 100; 30 inches, 8s. 6d. per 100; 36 inches, 10s. per 100; sample doz., 1s., 1s. 3d., and 1s. 9d., all carriage paid. Pea Trainers, 6ft. by 4ft., 2s. and 3s. each. Garden Archways. Garden Edge and Croquet Bordering, 8 inches high, 8d.; 10 inches high, 10d. per yard. All cash with order. Catalogue free on application. J. PENKETH, Iron and Wire Works, Market Place, Manchester. Telp.: 3695 City.

PERENNIALS, UNIQUE COLLECTION, including
ALPINES AND AQUATICS.
Also RARER SHRUBS, HIMALAYAN RHODODENDRONS, and Others.
Write for Catalogue. G. REUTHE, Keston, Kent.

FRESH LAVENDER, 1s. for 220, post free. —BRAKEFIELD, Widdington, Newport, Essex.

FRUIT SAVED.—GARDEN NETTING as supplied by us to the Royal Gardens. SMALL MESH, satisfaction or cash returned, 100 by 1 yd., 3s. 3d. Any length and width supplied. Cheaper quality, 50 yds. 1s.
POTTER BROS.,
Dept. M, Net Makers, Shrewsbury. Est. 1855.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

SOW NOW.
WEBBS' EMPEROR CABBAGE.
BRITAIN'S GREAT CABBAGE.
Earliest and Best in Cultivation.
Remarkably free from any tendency to bolt.
6d. and 1s. per packet; 1s. 6d. per ounce, post free.
Mr. B. M'Evoy, Gardener to W. M'Cartney, Esq., writes: "I had a plot of 400 plants, and not one of them bolted. The hearts are of the finest size and shape I have ever grown."
Webbs' Favourite, 1s. per ounce.
Early Offenham, 8d. per ounce.
Ellam's Early, 10d. per ounce.

WEBB AND SONS, The King's Seedsmen, WORDSLEY, STOURBRIDGE.

BUNYARD'S CATALOGUES
Free on Application.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting

KENT STRAWBERRY PLANTS
NEW CATALOGUE READY.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

LAXTON'S STRAWBERRIES.—Fine early pot plants, for forcing, of Royal Sovereign and other varieties, 15s. 100. For new varieties see our catalogue, gratis on application.
LAXTON BROS., Bedford.

CLAY'S MANURES, CRUSHED BONES
(See page iv.)
CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

POULTRY AND KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

CACTI and SUCCULENTS.—Cuttings 1s. per doz.; plants, 2s. to 5s. per doz. Mesembryanthemums, rooted cuttings, 1s. per doz.; all different; carriage paid; cash with order. G. SMITH, London Road, New Thundersley, Essex.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue Free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

RARE ALPINES CHEAP.—Profits devoted to Patriotic objects. Apply for list, LADY C., The Abbey, Much Wenlock, Shropshire, and please enclose fully addressed and stamped envelope.

CONSERVATORIES AND WINTER GARDENS, Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs and Porches, Garden Frames, Greenhouse Fittings, etc., Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue free. BOULTON and PAUL, Lim., Norwich. See our Stand at the Royal Agricultural Society's Show, to be held at Norwich in June.

GARDEN ROLLERS, double cylinders, solid ends, rounded edges 14in. by 14in., 1¼cwts., 24s. 6d.; 16in. by 16in., 2cwts., 26s.; 20in. by 20in., 3cwts., 36s.; 24in. by 24in., 4¼cwts., 50s. each; carriage paid any station in Great Britain. Lists free. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

FOR AUGUST SOWING.
SUTTON'S HARBINGER CABBAGE.
Per packet, 1s. and 1s. 6d., post free.
The earliest and best.
Award of Merit, R.H.S., May 9, 1911, after trial at Wisley.
Mr. A. Edwards, Gardener to H. Steel, Esq., writes: "Your Harbinger Cabbage is weeks earlier than any other variety. I consider it the best spring cabbage I have ever grown. Not one of the whole lot bolted."

SUTTON'S APRIL CABBAGE.
Per packet, 1s., post free.

SUTTON'S FLOWER OF SPRING CABBAGE. Per ounce, 1s., post free.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

KELWAY'S LOVELY NEW DELPHINIUMS have this week been awarded ANOTHER Gold Medal, for Delphiniums alone.
Nearly all the sorts of Delphiniums on exhibition stands are varieties which ORIGINATED in Kelway's Nurseries.
A splendid collection of Kelway's choice named kinds, 34s. per dozen, carriage, etc., free, for remittance with order.

KELWAY AND SON, The Royal Horticulturists, LANGPORT.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
Capt. ———, Londonderry.
10th February, 1911.
I have received your Horticultural Manual, and on looking through it, I felt compelled to write and thank you for it. To an enthusiastic amateur gardener like myself who, through reading the weekly papers on the subject, is familiar with many of the names but not with the corresponding flowers, this book must be absolutely invaluable, and the artistic way in which it is got up, and the beautiful photographs with which it is embellished, make it a treasure well worth having. I have had the Catalogues of most of the leading firms sent to me, but nothing compares in the remotest way with yours."

PLANT NOW FREESIA REFRACTA ALBA, bulbs, 2s. 6d. per 100.
MARLOW'S NURSERIES,
Olton, Warwickshire.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page viii.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-work, showing screens, wall panels, window surrounds, arches, arbors, etc., post free. BOULTON and PAUL, Ltd., Norwich.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.

XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.

XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No [illegible] required to [illegible] this. Other preparations of great repute, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUOASA POWDER (fungicide), etc. Don't forget to ask your N.S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

ROSES.

R. H. BATH, Ltd.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

Primulas! Primulas! Primulas!

41st Year of Distribution.

OUR WELL-KNOWN MAGNIFICENT STRAIN,
1/6 doz.; 2/6 25; 10 - 100. Package and Carriage Free.
Primula Obconica Gigantea Cineraria (Large-flowered) and **Stellata** at same prices.

JOHN STEVENS & SON, COVENTRY.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

JUST PUBLISHED. 1911 EDITION.

67 Illustrations, 17 Plates and Frontispiece. 200 Pages. 2/6 net; by post 2/10.

ROSES AND THEIR CULTIVATION.

SEVENTH EDITION.

By T. W. SANDERS, F.L.S.

ROSES
and their
Cultivation

- How and When to Plant Roses.
- Propagation of Roses—Ways to Grow Them.
- How to Prune, Bud, and Graft Roses.
- Erection of Pergolas and Arches.
- How to Show Roses.
- Insect Pests and Fungoid Diseases—Remedies.
- Types of Roses, full description, Culture, etc.
- Soil and Manures for Roses.
- The Rose Grower's Calendar; showing what to do each month.

LIST OF OVER 1,700 CULTIVATED ROSES:

Showing Variety, Section or Class, Date Introduced, Colour, Habit of Growth, How Best Grown, Mode and Time of Pruning, Description of Flower.

ORDER FORM.

To the Publishers of **"THE GARDENERS' MAGAZINE,"**
148 and 149, Aldersgate Street, London, E.C.

Please send me a copy of "ROSES AND THEIR CULTIVATION," for which I enclose remittance of 2/10.

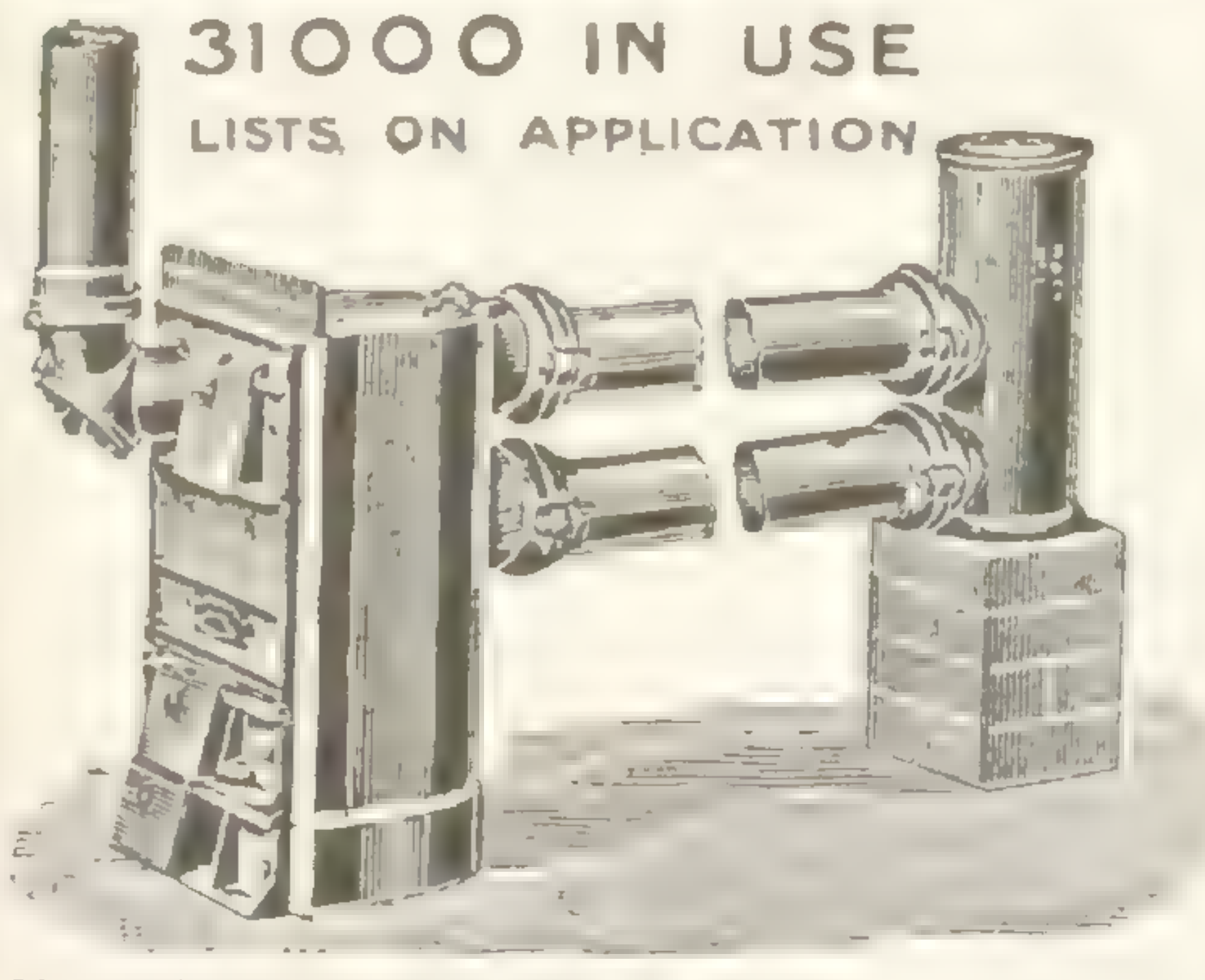
Name...

Address ....

The Loughborough BOILER

31000 IN USE

LISTS ON APPLICATION



The pioneer of cheap, simple and effective heating for small greenhouses. Complete Apparatus from £3.19. 6. The immense sale of this boiler, and its numerous imitations are the best testimony of its undoubted success

MESSENGER & CO. LTD

HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH · LEICESTERSHIRE
London Office, 122 VICTORIA ST · S · W

GREENHOUSE BARS.

5s. 0d.——100 feet——2½ × 1¼
6s. 3d.——100 feet——3 × 1½

LOWEST PRICES FOR GREENHOUSE MATERIALS.

HAWKINS LTD.,
109, Victoria Street, Westminster.

NARCISSUS.—Tulips, Hyacinths, etc. All the leading and best varieties, from 4s. 6d. per 100. Ask for illustrated price list, post free. Satisfaction guaranteed. C. F. A. VAN DER SLUYS, F.R.H.S., La Ramée, Guernsey.

ROYAL PARKS.

GRASS SEEDS.

The Commissioners of H.M. Works and Public Buildings are prepared to receive TENDERS for the supply of GRASS SEEDS for use in the Royal Parks, etc., during the year 1912.

Forms of Tender, Conditions of Contract, and all particulars may be obtained on application to the Principal Clerk, Contracts Branch, at this Office.

The Commissioners do not bind themselves to accept the lowest or any Tender.

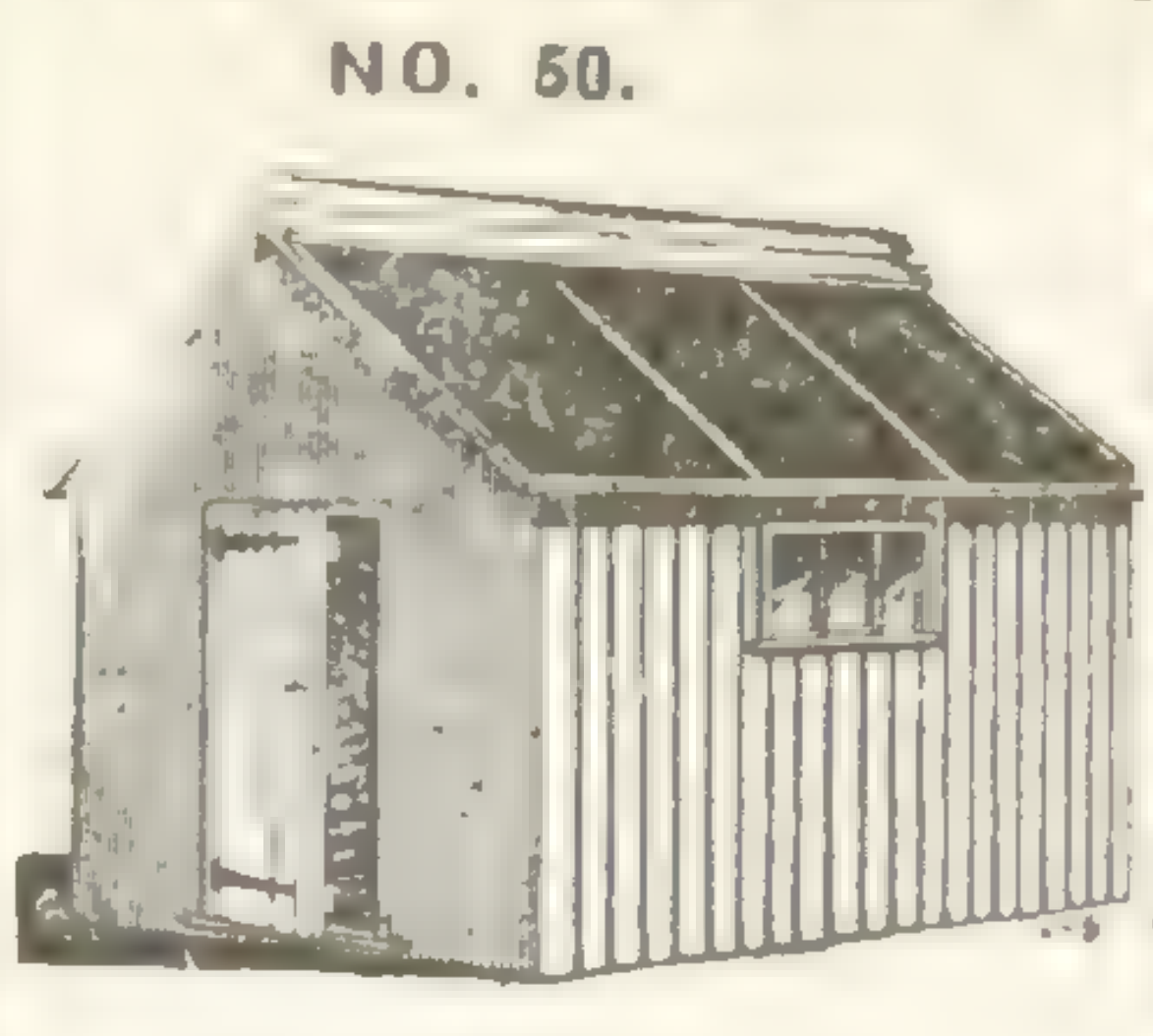
Tenders must be delivered before 11 a.m. on Friday, the 4th August, 1911, addressed to The Secretary, H.M. Office of Works, etc., Storey's Gate, London, S.W., and endorsed "Tender for Grass Seeds."

H.M. Office of Works, etc.,
13th July, 1911.

ESSEX.—26 miles out, six-roomed house (brick), 2½ acres, 2 Hothouses, completely fitted (each 150 x 20), 300 fruit trees, 2 wells, reservoir. Freehold; bargain, £550. Easy terms, or part mortgage. J. ALLEN, 34, New Bridge Street, London, E.C.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

PORTABLE BUILDINGS. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

Sizes.	Cash with Order.	Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
ESTABLISHED 70 YEARS. *BEDFORD.*
Works, 6 acres. Stock of Wood in Sheds, 10,000 *tons.*

ONCE USED. ALWAYS USED. The 'PATTISSON' LAWN BOOTS

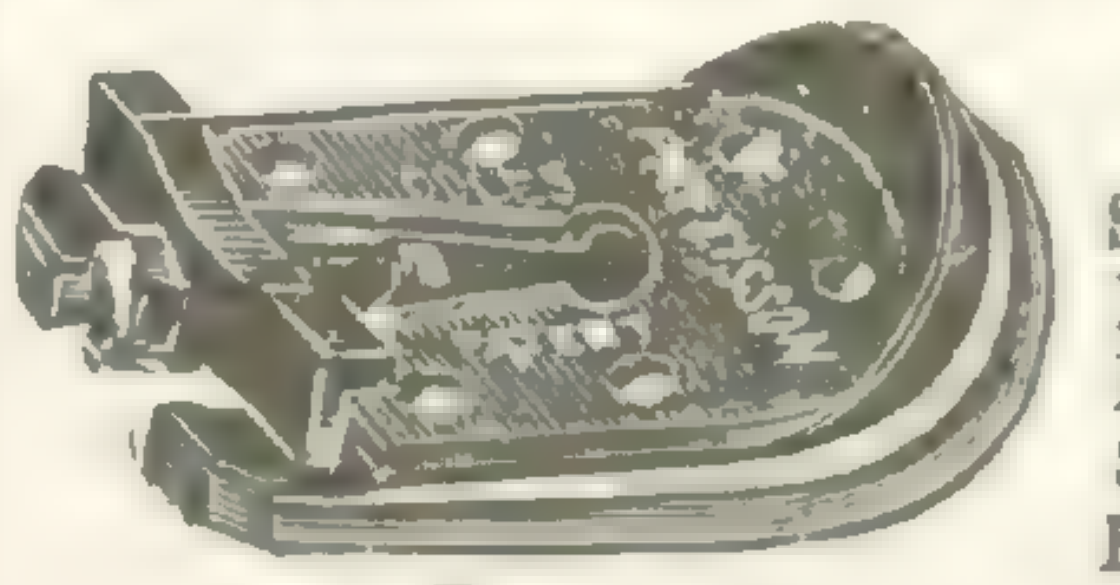


Fig. 1.

Simplest! Strongest! Most Economical!

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS

Silver Medal—
Royal Horticultural Society.

HUNDREDS OF TESTIMONIALS.

The Field says: **"As good as anything that could be devised."**

Illustrated Price List from—

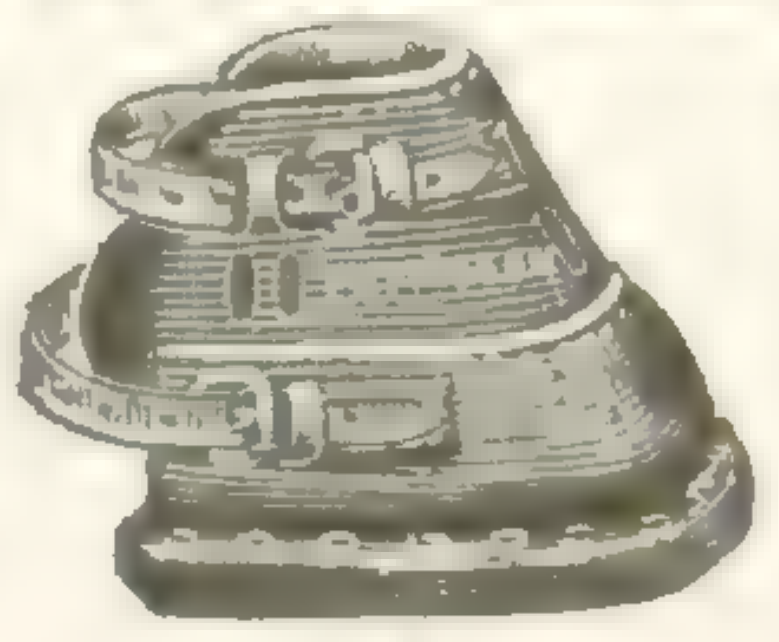


Fig. 2.

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM S.W.

GARDEN AND TENNIS NETS (best tanned only, small mesh).—50 x 8yds., 17s.; 25 x 8yds., 50 x 4yds., 100 x 2yds., 8s. each; 100 x 1yd., 50 x 2yds., 25 x 4yds., 4s. each. Any size to order. Tennis Netting (corded), 25 x 2, 6s. 6d.; 25 x 3, 7s. 6d.; 25 x 4yd., 8s. 6d. Write for Price List. L. WREN and SON, Net Merchants, 139, High Street, Lowestoft. Established 1863.

SEED AND NURSERY BUSINESS FOR SALE, favourable district, West of Scotland; low price; easily increased; reason for disposing. SEEDSMAN, 90, "Gardeners' Magazine" Office, 148-9, Aldersgate Street, London, E.C.

WANTED, Large Palms, Kentia Balmoreana, standing 15, 20 or 25 feet when open; Seaforthias, 15 to 20; Cocos Flexuosa and C. Plumosa, Areca Lutescens, Latanias (Chamærops) and (Musa sapientum), Phœnix Rœbelinii and large Ferns, must be well-established, strong, healthy, and clean plants. Write description and prices to H. W. DUDMAN, The Gardens, Norman Court, Salisbury.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.

Our Work has stood the test of time.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

NOTICE.

The AZALEAS and RHODODENDRONS planted in Hyde Park, near Rotten Row, finest to be seen in London, are supplied by ANTHONY WATERER, whose only address is Knap Hill Nursery, Woking, Surrey.

No connection with any other firm of similar name.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to
EPPS & CO., Ringwood, HANTS.

— THE —
NATIONAL HARDY PLANT SOCIETY
Invites all lovers of Hardy Flowers to join its membership.
For particulars apply to the Hon. Secretary,
FRANK BOUSKELL,
Market Bosworth, Nuneaton.

USE LINDSEY'S

SWEET PEA MANURE

And Extend the FLOWERING SEASON.

Essential for Late Exhibitions.

One customer says he picked a good bunch on the 5th of November last.

Scientifically compounded according to recommendations of Sweet Pea experts, and contains all the elements required to produce healthy plants, large brilliant flowers on long stems, and to extend the time of flowering. Should be used by all who wish to grow this lovely flower to perfection.

1lb.	7lb.	14lb.	28lb.	56lb.	1cwt.
3d.	**1/5**	**2/6**	**4/9**	**8/6**	**16/0**

Carriage Paid in lots of 28lb. and upwards; 14lb. and upwards in London Carriers' District.

T. C. LINDSEY & CO., LTD.,
Horticultural Chemists, 17, LEATHER LANE, E.C.

CELERY PLANTS, splendid large stuff, 100, 2s.; 50, 1s. 3d. Broccoli plants, early, mid-season, late, or graded for succession as desired, 100, 8d. All rail or post free, cash. PIKE, Thorold Nurseries, Bitterne Park, Southampton.

GLASS. | GLASS. | GLASS.

NICHOLLS & CLARKE, LTD.

Shoreditch, LONDON.

PAINT. Our List of PAINTS, COLOURS, VARNISHES, and BRUSHES on Application.
When sending please cut out this advt.

SUBSCRIBER'S ORDER FORM

Every Saturday THE GARDENERS' MAGAZINE. **Twopence**

To W. H. and L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose ________ for ________ months in advance.

Name ____________________
Address ____________________
Date ____________________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

* * If a receipt is required for amounts under 10s. a stamped envelope should be forwarded

BY APPOINTMENT.

New Roses.

Wm. PAUL & SON

Waltham Cross, Ltd.,

Beg to call attention to their extensive collection of New Roses, including Rambling varieties, good plants of which, in pots, are ready for delivery throughout the summer months :—

WM. PAUL & SON'S NEW VARIETIES.—Florence Haswell Veitch (H.T.), **7/6**; Frances Charteris Seton (H.T.), **7/6**; Lady Downe (H.T.), **7/6**; Sylvia (autumn-flowering Rambler), **7/6**; Alice Cory-Wright (H.T.), **3/6** to **5/-**; Elsie (Hybrid Wichuraiana), **2/6** to **5/-**; Juliet (Hybrid Briar), **3/6** to **10/6**; Portia H.T.), **3/6** to **5/-**.

New British and Continental varieties of other raisers, **2/-** to **7/6** each.

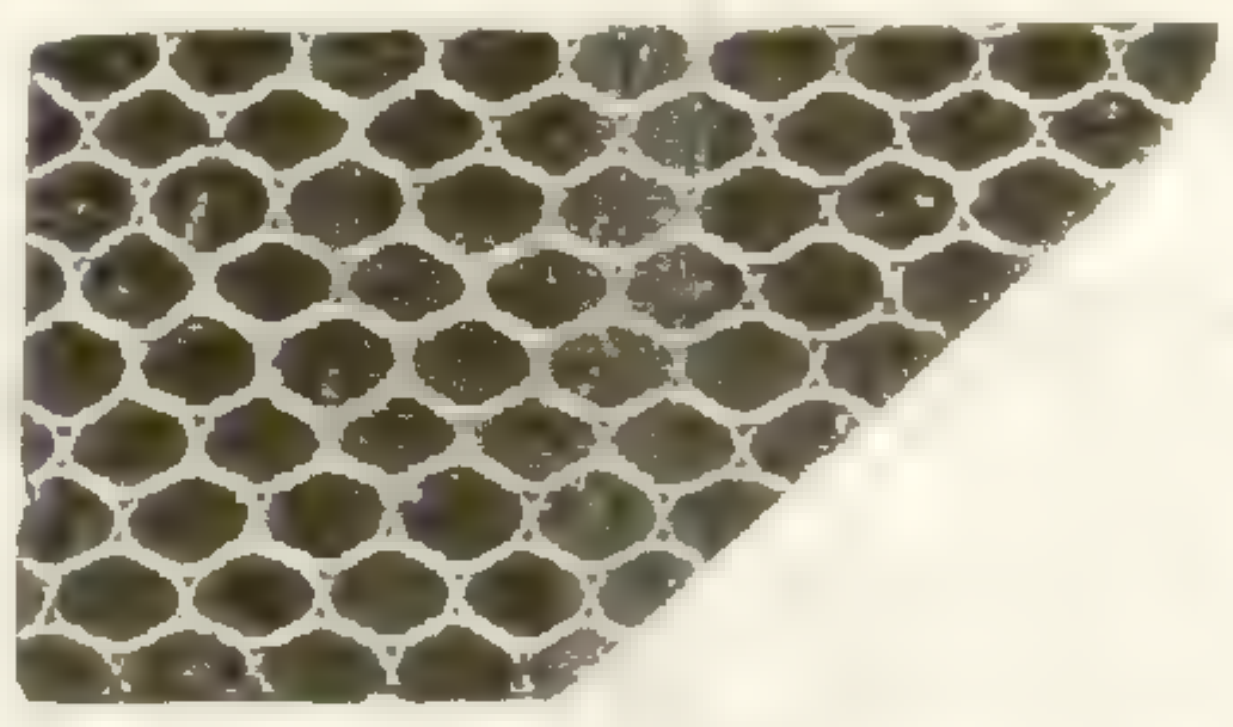
Priced Descriptive Catalogue post free on application.

Also a large general collection of Roses, in pots for filling vacancies in rose gardens and for pot culture, **12/-** to **42/-** per dozen; climbers and ramblers, **12/-** to **60/-** per dozen.

Pauls' Royal Nurseries

WALTHAM CROSS, HERTS.

Protect your Fruit from Wasps



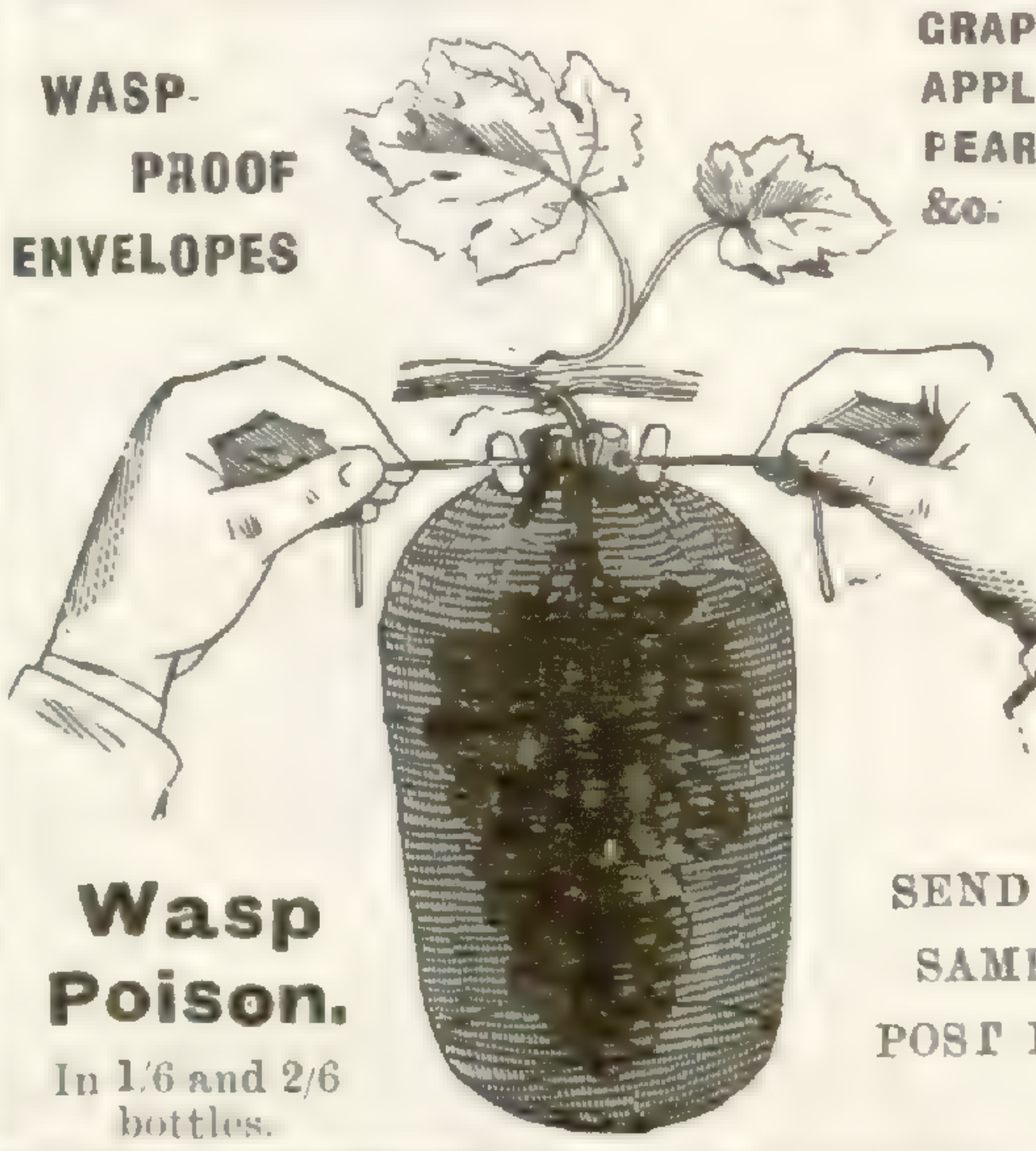
WASP PROOF SCRIM.

No. 1 (Fine), as shown above.		No. 2. (Rather Stronger)	
48 in. wide	**1/2** per yd.	48 in. wide	**1/4** per yd.
60 ,,	**1/6** ,,	60 ,,	**1/8** ,,
72 ,,	**1/10** ,,	72 ,,	**2/-** ,,
84 ,,	**2/6** ,,	84 ,,	**2/9** ,,

NEW INTRODUCTION.

For PROTECTING GRAPES, APPLES, PEARS, &c.

WASP-PROOF ENVELOPES



Wasp Poison.

In 1/6 and 2/6 bottles.

SEND FOR SAMPLE POST FREE.

Wm. WOOD & SON, Ltd., North British Wharf,
WOOD GREEN, LONDON.
Phone, Palmers Grn., 377-378 Tel., "Fungheto, London

BEGONIAS.—Started Begonias, 12s.; 16s. 100. Gerberas, Adnet's Hybrids, Seed, 1s. 6d.; plants, 15s., 20s. doz. Japanese Davallia Ferns, Badgers, Elephants, Rabbits, Squirrels, Monkeys, Balls, etc., from 2s. ELLISON, 57, West Bromwich.

HOLLAND IS THE GREAT BULB LAND.

ESTABLISHED 1832.

NO CONNECTION WITH ANY OTHER FIRM OF A SIMILAR NAME.

ANT. ROOZEN & SON'S

CELEBRATED BULBS

FOR

Early Forcing.

ROMAN HYACINTHS,
ROMAN NARCISSUS,
PAPER-WHITE NARCISSUS,
FREESIAS, &c.

OF THE FINEST QUALITY.

The above are now ready for delivery, and for full descriptive details of these and other SPLENDID BULBS for Forcing, etc., see our GENERAL CATALOGUE for 1911, which will be sent Free on application to our Offices at OVERVEEN, HAARLEM, HOLLAND; or to our General Agents,

MERTENS & CO.,
3, Cross Lane, London, E.C.

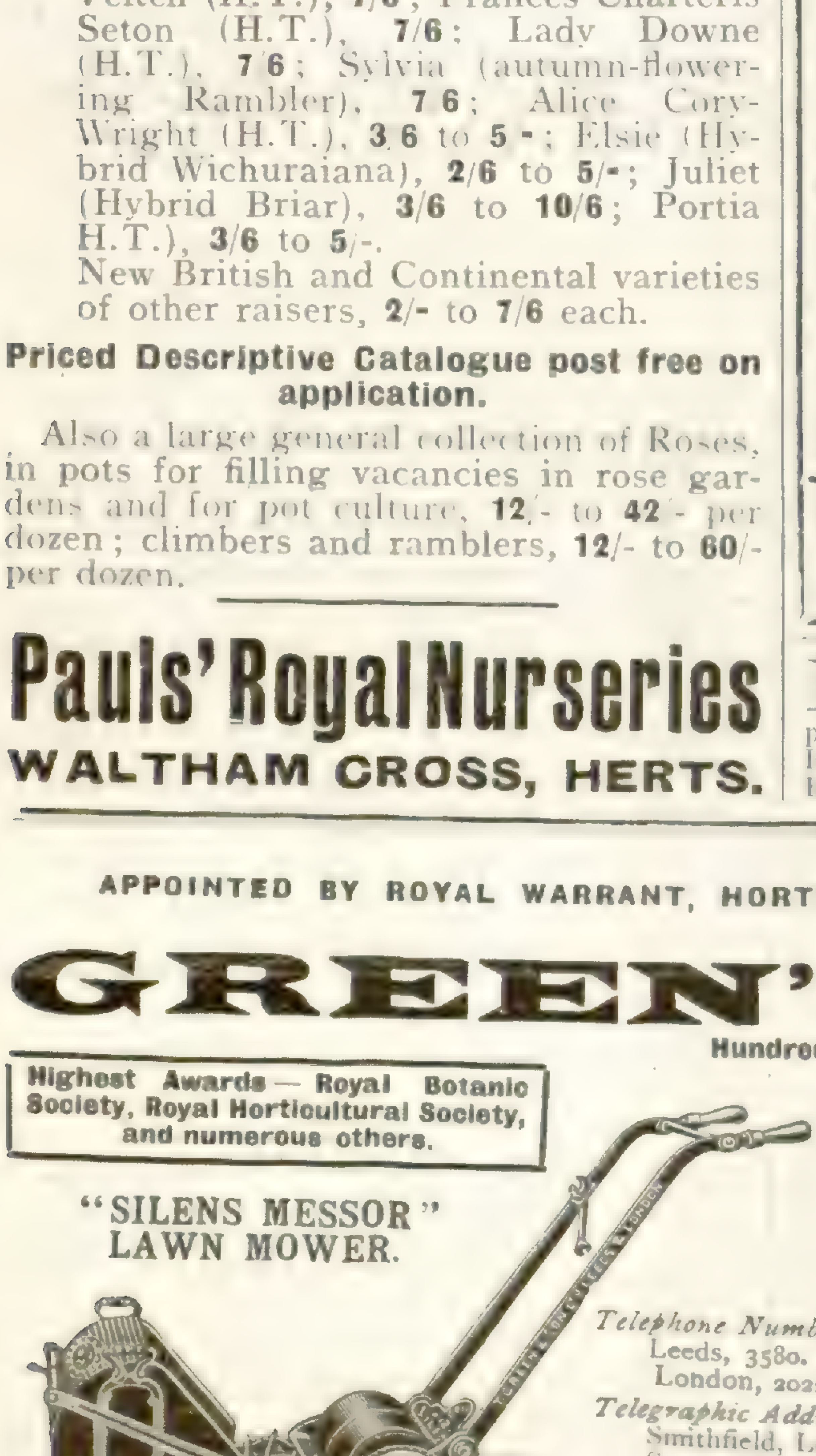
APPOINTED BY ROYAL WARRANT, HORTICULTURAL MACHINE MAKERS TO HIS MAJESTY KING GEORGE V.

GREEN'S LAWN MOWERS ARE UNEQUALLED.

Hundreds of Thousands are in use. Established nearly a Century.

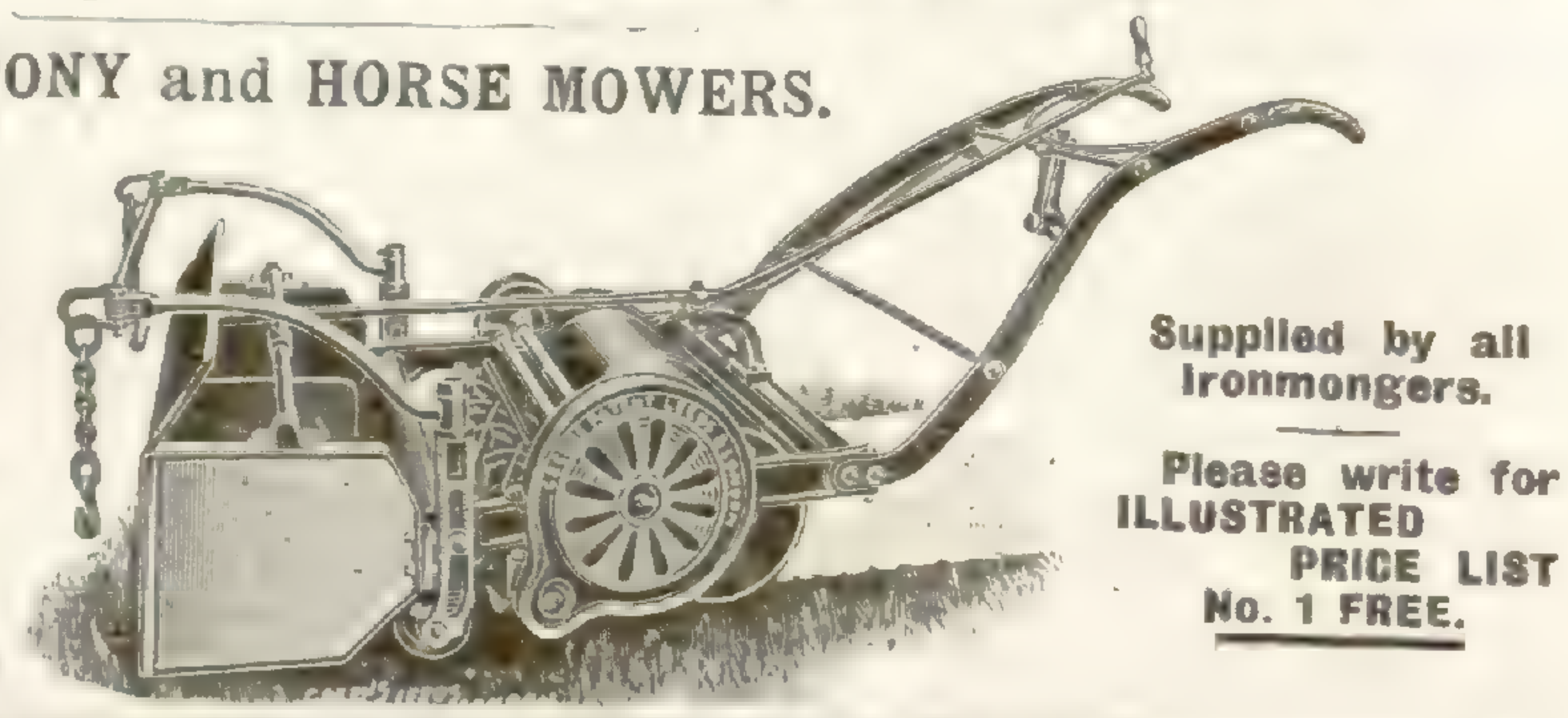
Highest Awards — Royal Botanic Society, Royal Horticultural Society, and numerous others.

"SILENS MESSOR" LAWN MOWER.



Telephone Numbers—
Leeds, 3580.
London, 2022 Hop.
Telegraphic Addresses—
Smithfield, Leeds.
Surrey Works, London

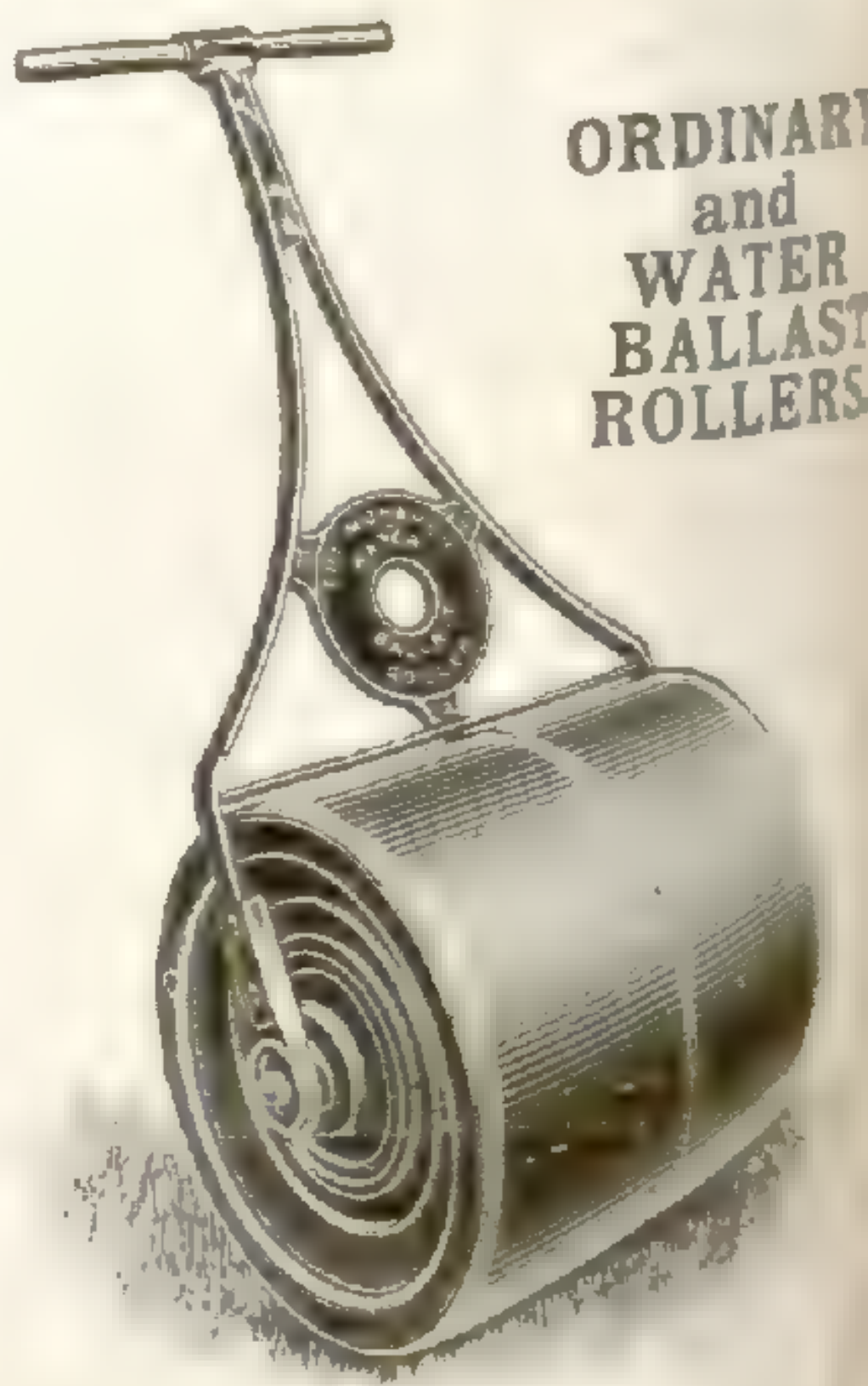
PONY and HORSE MOWERS.



Supplied by all Ironmongers.

Please write for ILLUSTRATED PRICE LIST No. 1 FREE.

ORDINARY and WATER BALLAST ROLLERS.



MOTOR LAWN MOWERS & ROLLERS MADE IN VARIOUS SIZES.

Three Motor Mowers and One Motor Roller supplied to His late Majesty King Edward VII.

THOMAS GREEN & SON, Ltd., Smithfield Ironworks, Leeds, & New Surrey Works, Southwark St., London, S.

CLAY'S FERTILIZER

CROWNS THE CORONATION YEAR WITH FLORAL TROPHIES.

CLAY'S LONDON FERTILIZER

TRADE MARK.

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6** 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK, AS AT SIDE.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. Fourth Edi (Second Reprint). 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for th amount direct from the Publishers as under:

CLAY & SON, Stratford, London, E.

VOL. LIV.—No. 3,012. SATURDAY, JULY 22, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Heat and Cold.

Although we speak of heat and cold as of two different things, cold is in reality a mere negation, and not a thing at all; it is simply a relative condition of temperature, implying such a low degree of heat as may affect us or our belongings, particularly in the way of plant life, unpleasantly or prejudicially. All terrestrial matter is suffused with a certain amount of heat, dependent superficially upon the amount absorbed from the sun, which is constantly sending us fresh supplies by its beneficent beams; while there is doubtless an enormous store of it in the earth's interior due to the same solar source, but acquired at the inconceivably distant period when our planet first became an intensely hot satellite of the sun itself. Ever since that period the earth has been cooling down stage by stage, until its surface froze, as it were, solid by the deposition of such materials as became solid at comparatively high temperatures, while subsequently the oceans were formed by the deposition of aqueous vapours at a very much lower temperature. At the present epoch these waters are still in an unstable condition, a comparatively small difference changing them, in one direction into solid ice, and in the other into invisible vapour. The retention of vitality of organic life is entirely dependent upon the presence of a certain but variable amount of heat, the variation depending upon the greater or less complexity of the organism in the case of animals, and also upon the nature of the environment in which they have been evolved and adapted thereto, this last also determining to a large degree the resistance of plants to cold conditions. With very simple organisms, such as bacteria, it has been found that these germs survive such extremes of cold as will freeze the air itself; but no active organism can do this or anything approaching it, as such cold naturally involves the solidifying of their vital fluids. In point of fact, so far as active life is concerned, prolonged exposure without protection to any temperature much below the freezing point of water is fatal, and in the other direction a hundred degrees above it is equally so if long continued. As regards organic life, therefore, it is seen that, apart from artificial protection, living existence lies between a very narrow range of temperature as compared with the difference between the actual zero, or no heat at all of stellar space, and the inconceivably high degree of heat which must rule in the sun, judging by the portion we receive across some 90 millions of miles. In this connection, however, solar heat must be regarded as a manifestation of force inherent in the sunbeam, and capable of being developed only under certain conditions. Between us and the sun lies, as we have said, about 90 millions of miles of space, which those beams do not heat at all in their transit. They only exercise their power of heat development when they enter our atmosphere, and the amount developed appears to depend very largely upon local conditions of the earth's surface, and the angle at which the rays strike it. That the heat increases in like ratio to the depth of the atmosphere traversed is obviously untenable, since in our cold seasons, when the rays reach us obliquely, they naturally pass through a much greater volume of air than when they traverse it perpendicularly, as in the tropics at noon. Such direct impact, of course, implies a concentration of energy, but the rays are equally concentrated upon the perpetual snows of the tropical mountains above the equatorial snowline, and yet fail to melt them, while in the deep valleys below the heat may be intense. Travellers, indeed, tell us that from a single point of view all grades of climate and, what is very interesting to the horticulturist, belts of varying vegetation to such, may be beheld at once in such regions. The development of heat indeed would appear to depend upon the presence of some body, gaseous, liquid, or solid, whose molecules it can affect to sympathetic vibration. The ether of space of which we know so little, appears to be entirely devoid of such sympathetic reaction, though capable of conveying those complex sets of waves which form the sunbeam, and embrace the heating waves as well as those of light. Analysing that beam by means of a prism we may separate the two kinds, and find perfectly invisible heat rays, which may be focussed by a lens, and set up heat vibration, which will speedily ignite inflammable materials or render metals incandescent. It is, in fact, these rays which do the work in an ordinary burning-glass, but the experiment is much more striking if the spectrum be employed, and the burning be effected by something we cannot see at all.

SIR F. W. MOORE, M.A., V.M.H.,
Keeper of the Royal Botanic Gardens, Glasnevin.

Sir F. W. Moore, M.A., V.M.H., is so highly esteemed by those who are acquainted with the splendid work he has accomplished during the many years he has occupied the important position of Keeper of the Royal Botanic Gardens, Glasnevin, that it is in no way surprising that the honour of knighthood conferred upon him by the King has evoked the warmest expressions of approval from both scientific botanists and practical horticulturists. We have had ample evidence of this in various ways, and since the announcement, in our issue of the 15th inst., of the honour that had been conferred upon him, almost every letter we have received has contained an expression of the pleasure felt that he had received a distinction he so well merited. Sir F. W. Moore affords us a splendid example of the advantages resulting from the combination of a thorough acquaintance with practical horticulture with a full knowledge of scientific botany. At Glasnevin both the scientific and practical work has been carried out with a degree of success that might well be regarded as exceptional, and in devoting close attention to scientific matters Sir F. W. Moore has constantly kept in view the desirability of botanical gardens being made as interesting and attractive as possible to the general public. In giving practical expression to his views he has been successful in rendering the gardens under his charge highly popular among the citizens of Dublin. Sir F. W. Moore has long enjoyed a high reputation for his remarkable knowledge of plants and their cultivation, and his success in the growing of what are generally known as botanical orchids is quite unique. Imbued with a strong belief in the possibilities of horticulture and agriculture in Ireland, Sir F. W. Moore has shown remarkable energy in the initiation and the support of the various movements that have for their object the development and improvement of these two important industries, and, as recorded in these pages, he has specially interested himself in the all-important question of fruit culture. It will be remembered that when the Victoria Medal of Honour in Horticulture was founded by the council of the Royal Horticultural Society in 1897, Sir F. W. Moore was included among the first sixty recipients of the medal; and that years since the Royal University of Ireland conferred upon him the degree of Master of Arts, Honoris causa.

British Association.—This year the British Association will meet at Portsmouth, and it is a point of some interest that this is the first time in its history the Association has held a meeting at this important centre. The meeting will open on Wednesday, August 30, when Sir W. Ramsey, the president-elect, will deliver his presidential address. In this he will urge the importance of scientific training, with a view to the future as well as present-day requirements. He will also pass under review modern conceptions of the nature and constitution of the elements, and will then pass on to a consideration of the available sources of energy in this country, and whether they are being utilised with due regard to economy. The president of the botany section will be Professor F. E. Weiss, and during the session a joint meeting of this section and the geographical and geological sections will be held for the purpose of considering the relation of the present plant population of the British Isles to the Glacial Period. A general discussion on this subject will, it is anticipated, be opened by Mr. Clement Reid. Much additional interest will be given to the work in the botany section by the presence of a number of American and Continental botanists who have attained distinction in connection with plant geography. There will be two papers on Jurassic plants, and papers on sand dunes, the vegetation of pebble beaches, the wilting of moorland plants, and numerous other subjects of interest to botanists. Mr. W. Bateson, V.M.H., will preside over the agricultural sub-section, which is now attached to the botany section, and will devote his opening address to a consideration of the proper scope of applied science, so far as it relates to the application of genetic research to horticulture and agriculture.

National Sweet Pea Society's Floral Committee.—The Floral Committee, elected rather late in the season, to adjudicate upon the sweet peas being tested by the society at Sutton Green, Guildford, consisted of the following experts: Mr. Robert Bolton, Mr. S. B. Dicks, Mr. George Herbert, Commander Humphery, R.N., Mr. Andrew Ireland, Mr. Thomas Jones, Mr. A. Malcolm, Mr. Herbert Smith, and Mr. Thomas Stevenson.

Summer Flowers at Bridlington.—Flowering and fine-foliage plants are liberally used in beautifying the open spaces at Bridlington, one of the several fine towns on the Yorkshire coast, and this year they have attained a high state of development, and at the present time produce a series of charming effects. The arrangements in the Princes Parade are the most noteworthy, and these include a floral clock and a floral crown. The clock has for some years been a distinct feature and of unvarying interest to visitors. The floral crown is a new creation, so far as Bridlington is concerned, and is proving very attractive. The crown has been made in one of the large beds to the right of the main entrance to the parade, and stands about five feet high. The floral arrangements generally are such as to reflect much credit on Mr. E. R. Crofts, the head gardener.

A Garden City at Walton.—Under the terms of the late Mr. William Whiteley's will, Mr. Justice Eve has sanctioned the purchase of a site between Walton and Weybridge, and near both Esher and Burhill. The estate in question extends to 220 acres, and it will, if the provisional agreement is confirmed, be laid out as a garden city for about 700 poor people. For such a site and purpose, and for the erection of homes for poor people the late Mr. Whiteley left the sum of £1,000,000.

The Walter Voss Cup for Sweet Peas, offered by the National Sweet Pea Society at its recent exhibition, was won by Mr. Lewis S. Peters, of Strathmore, St. Austell, and not by Mr. Beech as inadvertently stated in our issue of July 15; Mr. Beech won the Humphery Challenge Plate, and in both instances the prizes were secured with fine flowers in the face of severe competition.

Yield of a Small Mixed Orchard.—An interesting note on the actual yield of a cherry orchard in Kent has been supplied to the Board of Agriculture by Mr. C. H. Hooper. In his introductory remarks Mr. Hooper says: The following is a record of yields and prices of fruit for twenty-nine years (1882 to 1910) from a grass orchard chiefly planted with cherries, at Sheldwich, near Faversham, Kent. From this orchard are sent some of the best cherries that enter Covent Garden, and they are, in addition, carefully sorted and packed. In the opinion of the owner the prices received represent the average prices obtained for good quality fruit from this district. The area of the orchard is 4¼ acres, on loam over clay over chalk. The trees, which were mostly mature at starting, consist of 97 cherries, 61 apples, 27 pears, 96 plums, 2 quinces, 2 walnuts, altogether 285 trees, or 67 trees per acre. In the hedges surroundiing the orchard there are about 50 damson trees. The total net return from salesmen in Covent Garden in twenty-nine years is £1,762 6s. 5d., an average of £60 15s. 5d. per annum, or £14 6s. per acre. The owner says that, in addition, the value of fruit consumed by his household has been about £7 yearly, and he has received about £3 yearly for the grazing of the orchard by sheep.

Strawberries on Light Soils.—It appears that no matter what pains are taken to cultivate them, strawberries are not a success on the light soil in the Royal Horticultural Society's Gardens at Wisley. In the new "Journal," under the heading of "Commonplace Notes," by the secretary, superintendent, and editor, the varieties of strawberries grown are discussed, and it is stated that out of the forty tried there are only half a dozen which make really good rows and continue to fruit for two years, no matter what trouble we have taken. We are fortunate, however, in having in these half-dozen varieties all that is required for a supply of dessert fruit and fruit for jam-making. Our best six varieties are "Aprikose," "Climax," "Cropper," "Fillbasket," "Royal Sovereign," and "Scarlet Queen." Of these "Scarlet Queen," in company with "Royal Sovereign," supplies dessert fruit of the best, and both sorts will force well, whilst for cooking and preserving we have "Climax," "The Cropper," and "Fillbasket." These bear very heavy crops of fine fruit, and stand well on our soil, bearing good crops the third season, as no others do. "Bedford Champion," "Filbert Pine," "Kentish Favourite," "Monarch," "Mentmore," "The Laxton," and "Yarles," make moderately good growth, but before the fruit is gathered the second year many of the plants collapse.

British Pteridological Society.—The annual meeting of this society will be held this year at Barnstapl on Monday, August 7 (Bank Holiday), a it is hoped that a goodly number of me bers will be able to arrange to attend arriving, if possible, on the previous F day, and meeting in the evening at t Golden Lion Hotel, which will form t headquarters. As there is ample accom dation in the town no previous bookings needed, but the secretary (Mr. C. Druery, V.M.H., 11, Shaa Road, Ac will regard it as a favour if members vise him beforehand of their intentio be present. Members and friends are vited to bring fern plants or fronds naming.

Ibis Horticultural Society. Numbers of our readers would be greatly prised if they could see some of the horticultural exhibitions held during year in the great Metropolis. We d here refer to the displays under the control of the Royal Horticultural Society and the several national floricultural societies to the large number of shows held employees of large business houses an lic bodies. A few days ago the offic of the London County Council held commendable show in the County Spring Gardens, roses and sweet pe great features, and last Wednesday of the Prudential Assurance Compa their summer show—under the tit Ibis Horticultural Society—at H Bars, and here again roses and swe were greatly in evidence, and first-ra nary peas, tomatoes, etc., were also

People's Palace Horticultural Society held a very successful exhibition on the 14th inst. There were three thousand entries, of which two thousand were contributed by children. The Duke of Fife, who presided at the opening ceremony, spoke appreciatively of the excellent work the society is doing in the encouragement of the art of gardening among the dwellers in East London.

Royal Gardeners' Orphan Fund.—On and after Monday next, the 24th inst., the offices of this fund will be at 19, Bedford Chambers, Covent Garden, London, W.C.

Rose History.—In "A Natural History Note," contributed to the "Hampshire Advertiser," Mr. A. H. Swinton refers to the introduction of some of the older roses, and he states therein that "Wild roses are known to have been crossed with the beauties of the garden, which double from luxuriant growth on the mould, are not absolutely sterile." He also quotes a lengthy manuscript in which the famous Gloire de Dijon is mentioned. This commences as follows: "In the year 1841 my father, Mr. J. J. Gibb, decided on an Italian tour, with his wife and family, but among his business acquaintance he could only find one who had been there, and he gave him Mr. Starke's guide." The writer, who belonged to the fair sex, for "us girls" are mentioned, describes the journey, and states that the party met with an old General, who discoursed on roses, and "spoke with enthusiasm of a beautiful kind grown at Dijon, which we ought to see there, doubtless the yellow variety known to us as the Gloire de Dijon." The manuscript concludes with the statement that on the arrival of the party at Dijon "we wended our way to a garden and a pleasure ground, inquiring everywhere, but in vain, for that lovely rose, the Gloire de Dijon." The writer must have been blessed with a strong prophetic instinct to have known this rose, which was not raised until some years later. It was not, in fact, until the year 1853 that Jacotot introduced Gloire de Dijon to cultivation, and therefore it is not surprising that inquiries made for it in 1841 should have been in vain.

New Perpetual Carnations. Mr. Hayward Mathias, the hon. secretary of the Perpetual Flowering Carnation Society, informs us that the following new varieties have been registered by his society, namely, Afonwen (W. J. Smith), pink and mauve; Cheltonia (Young and Co.), Liberty red; Coronation (Bertie E. Bell), light pink; Hon. Lady Audrey Neeld (Young and Co.), carmine, with white margin; Judith (B. E. Bell), white; Lady Fuller (C. Wall), warm salmon; Mrs. F. C. Harwood (Harwood), purple; Mrs. C. F. Raphael (H. Burnett), cherry-red; Mrs. Greswold-Williams (Young and Co.), pink, passing to soft mauve; Pluto (H. Burnett), bright crimson; Princess (C. Wall), white, striped pink; Queen (Young and Co.), yellow, with pink markings; Queen Mary (A. Smith), pale pink; Sultan (H. Burnett), crimson; and White Chief (H. Burnett), white. Mr. Mathias also informs us that the Carnation Society has registered the undermentioned American varieties: Delhi, red; Elsie Grey, flesh-pink, splashed with deep pink; Vassar, white ground with pink; May Day, pure pink; Brooklyn, deep pink; Pink Supreme, flesh pink; Miss Dimple Widener, scarlet; Howard Gould, clear pink; Pennsylvania, cerise, brighter than Lawson; E. G. Gillett, scarlet; Minnehaha, cerise-pink; Neshaminey, white, mottled with pink.

VIEW OF THE NATIONAL SWEET PEA SOCIETY'S TRIALS AT SUTTON PLACE, GUILDFORD.

SWEET PEA OUTINGS.

The sweet pea week has now become a great institution, and many folks devote four days to the popular annual. Two days are filled up by the National Sweet Pea Society's Exhibition at Westminster, and with short private trips to the large growers of sweet peas resident within easy distance of London. The third day is generally devoted to an inspection of the society's trials at Sutton Green; and the fourth day to the inspection of some great trade or private grower's flowers. These outings are greatly enjoye for their educational value and for th opportunities they afford of meeting so many sweet pea celebrities.

The exhibition itself was a splendid triumph of cultural skill, while the elegance and fragrance of the blossoms and the wonderful variety and shade of colours they now present rendered the display at once interesting and attractive. Although there was an immense crowd during the earlier part of July 11, the paying attendance was not so great as last year, when a fine record was set up. The hot weather and the recent multitudinous festivities in connection with the Coronation had, doubtless, tired many folks who would otherwise have paid to attend. Of course the society's membership has increased, and Fellows of the Royal Horticultural Society are admitted on showing their passes, so if the "takings" were £20 less than in 1910 it does not suggest that the cult of the sweet pea is waning.

Immensely successful was the outing to Sutton Green and Sutton Place on Thursday, July 13. About a hundred members caught the 9.20 a.m. from Waterloo and arrived at Woking at 9.59 a.m., instead of 9.59 p.m., as per programme (printer's error, of course). A pleasant drive of between four and five miles landed the party at the gates of the Times Experimental Station, and soon the hon. secretary and Mr. Harry Foster were busy selling Trials Lists at 6d. each. Although there was a pleasant breeze, the day was intensely hot, the sun fierce, and the sky cloudless, but the members went religiously through the trials from 1 to 268. They said nice things about Mr. Harry Foster's conduct of the trials, suggested that a duplicate trial on heavy land would prove of great value, criticised the work of the Floral Committee, and wondered how it was that their own seedlings were mixed here and fixed at home, and voted the hon. secretary a general nuisance because he persisted in gathering in cash on the slightest pretext.

The trial rows were full of bloom, but the great heat of previous days had shortened the stems, made the flowers small, and rather spoiled the colours. Had there been some wet and cool days instead of hot and dry ones everyone would have exclaimed at the beauty of the blooms. But these things are not ordered for the N.S.P.S., and while we grumbled at the heat and its consequence we should have grumbled just the same if there had been cool, moist weather. Our American friends filled their books with notes, and both Mr. W. Atlee Burpee and his sons, Mr. David and Mr. W. A. B., jun., were as busy as bees.

By 12.45 we were all ready for luncheon, and when Mrs. C. Foster led the ladies across the fields to the recreation ground Lord Northcliffe has so generously provided for his employes, the men folk speedily followed. At the entrance to the ground Lady Northcliffe was waiting to receive the members, and Mr. H. J. Wright and Mr. Curtis were kept busy introducing the company, for every member of whom our lady president had a hearty handshake and a pleasant word of greeting. Lady Northcliffe presided over the luncheon, gave the usual loyal toasts, and proposed "The Society" in a charming little speech. She said how greatly she appreciated the honour of acting as president, how much she admired the grand flowers at the exhibition, and how delighted she was to know that the cult of the sweet pea was extending in the colonies, and that 260 new members had been, so far, added during her presidential year.

Mr. Cuthbertson responded for the society, and made a feeling reference to our late friend Mr. Charles Foster. Then Mr. Alfred Watkins proposed her ladyship's health, and Mr. W. Atlee Burpee, from Philadelphia, seconded the motion, and quite captured the audience when he said that if in America they had such a charming and generous lady president as Lady Northcliffe the question of a new president would never arise so long as she cared to occupy the position. The toast was received with acclamation, and cheers were given her ladyship and for Lord Northcliffe. After luncheon there was the inevitable photograph, and then followed a tour of the grand old house, built four hundred years ago. The splendid old tapestries, the oak panelling, and the old furniture were all greatly admired. Then we explored the garden, and those who had not previously seen Lady Northcliffe's natural garden, a quarter of a mile long, were astonished at its extent and beauty, while those who had seen it before enjoyed it as much as ever. The rose garden, the great hedge of Dorothy Perkins, the lily pool, the blue border composed of Salvia patens and Anchusa italica Dropmore variety, with Lilium Browni dotted all through, were all features of the greatest beauty. The shade of the cedars was grateful, and tea time was a delicious interval that everyone took full advantage of. Another parting look at the sweet peas, and we entered the brakes, gave a cheer to Mrs. C. Foster and Mr. Harry Foster, caught the 5.54 up to Waterloo from Woking, and, tired but having had a grand day, we went our various ways homewards.

Friday, July 14, provided a long-distance trip; this was to Messrs. R. H. Bath's Floral Farms, Wisbech. About fifteen members started from King's Cross, but there were others who came different ways, so that there were about thirty to partake of the sumptuous luncheon provided on arrival at the Ship Hotel. Mr. G. W. Leak presided, and after doing justice to the good things, we acknowledged his kindness, climbed into the brakes, and drove to the Floral Farms. Many acres are devoted to fruit culture, and other areas to cauliflowers, etc., for pickling. Daffodils, tulips, carnations, delphiniums, and hardy flowers in general are extensively cultivated, while fruit trees and roses occupy large breadths. The firm has altogether about 1,200 acres under cultivation.

The sweet peas were a great delight to everyone, though they would have been appreciated even more than they were had the sun been a little less ardent, and had there been a breeze across these broad fen lands. The sweet pea trials at Wisbech were just at their best, full of bloom and very healthy. Several miles of wide-meshed galvanised wire netting are used for supports, and the varieties are all grouped in their colours for close comparison. Seeds are purchased from the various raisers, and a good row planted, and at the time of our visit no roguing had been done. The need for more care in fixing and roguing sweet peas was here very patent, and the evidence of the Wisbech trials emphasised that given by the Guildford trials in numbers of instances.

About four hundred long rows were patiently examined, and Mr. Leak drew attention to various characters shown by certain varieties, and the particular colour rogue that comes in some sorts. To the seedsmen of the party these trials were of special interest and value, but the amateurs made notes freely, registering good marks against pure stock and black marks against unmixed ones. In every case the row bore a number, and in the lists provided there was a corresponding number with the name of the variety and that of the person or firm from whom the seeds of that particular stock had been raised. Surely there were miles of sweet peas. Well over two solid hours were occupied in inspecting them. Florence Wright, Nettie Jenkins, George Stark Improved, Mrs. Hugh Dickson, Earl Spencer, Anglian Pink, Tom Bolton, Sunproof Crimson, and Senator Spencer were a few among a goodly number of outstanding varieties that seemed to please everyone.

Never was tea more welcome than on this afternoon, after about two hours and a-half out in the broiling sunshine. Mrs. Leak and Mrs. Boyce dispensed the cup that cheers, not to mention strawberries and cream, but even in the spacious seed room we could not get away from sweet peas, for here on a long bench were hundreds of bunches of flowers, each bunch representing a distinct variety, or at least bearing a distinct name, and these were grouped in their colours. Mr. Herbert Smith returned thanks to the Messrs. Bath for their kindness and splendid hospitality, and to Mr. Leak for arranging everything so admirably. Mr. Leak, who has been chairman of the N.S.P.S. Committee during a somewhat trying time, appropriately responded, and then, after the photographer had worked his will and we had peeped into the carnation and tomato houses, we once more entered the brakes, started homewards, tired, but feeling that the sweet pea week of 1911 had come to an end all too soon.

Chas. H. Curtis.

Everyone interested in a garden should obtain a copy of the Alphabet of Gardening, by T. W. Sanders. Thoroughly practical information is given as to soils, manures, seed sowing, planting, potting, budding, pruning, grafting, forcing, hybridising, etc., with explanatory diagrams. Price, bound in cloth, 1s. 6d. net, post 1s. 9d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

PERSIMMONS.

In the interesting article on Persimmons, which Mr. W. Botting Hemsley, V.M.H., has contributed to the current issue of the "Kew Bulletin," the following interesting reference is made to the early history of Diospyros Kaki: "Although on the authority of Bretschneider, the Kaki is cultivated all over China, it does not figure among the vegetable products of China mentioned by Marco Polo, the pioneer of European travellers in that country, who resided there for a number of years towards the end of the thirteenth century. About the middle of the sixteenth century the first Jesuit missionaries landed in China, and it is to successive members of this order that we are indebted for our earliest knowledge of the Kaki. Bretschneider gives extracts from their writings, accompanied by comments in relation to his identifications. Ricci is the earliest (1615) cited, and he refers to a peculiar very common fruit which the Portuguese used to call Chinese Figs. Alvarus de Semedo (1643) has the following passage, as translated from the French by Bretschneider: 'There is a kind of fruit grown everywhere in China which they call su zu in their language. The Portuguese used to term it Red Fig. It bears, however, no resemblance to a fig, for it is of a red colour outside, contains a gold coloured pulp and seeds resembling almond kernels. Its shape is that of an orange, but it varies in size. It has the skin very soft, and is of a delicious flavour. The best are grown in the colder parts of China, namely, in the provinces of Honan, Shensi, Shansi, and Shantung, especially in the last-named, where they used to dry them and send them off to the other provinces of the Empire. When dried this fruit resembles somewhat our figs, but it is superior in flavour.' Bretschneider remarks: 'This is without doubt the Diospyros Kaki, Linn. f. (D. Schitze, Bunge), a very common fruit tree all over China, where a great many varieties of it are cultivated. The Chinese name of the fruit is schitze; in the Amoy dialect sutsu.'"

YUCCA GLORIOSA.

In the beautiful gardens of "Arcadia," the charming residence of G. H. Rolls, Esq., J.P. (chairman of the committee of the Bournemouth Horticultural Society) yuccas are a special feature. Magnificent giant spikes of flowers of Yucca gloriosa rear their heads in the herbaceous borders. Mr. Jones, the head gardener, told me that he had tried an experiment with these plants, lifting and replanting a number of them. Nearly every specimen so treated last autumn is now flowering. Those not lifted are not flowering. A number of spare plants were heeled in in the fruit garden, and the strongest of these, too, are also flowering. More lifting and replanting is to be done during the coming autumn, as Mr. Jones firmly believes that such treatment will induce freer flowering. Old plants, he thinks, ought to be lifted every two years. Furthermore, he favours rather dry borders—those that are well drained not unduly dry—and rather light.

Geo. Garner.

"**Kew Bulletin.**"—The principal contents of the current issue of this publication are the "Balsaminaceæ of the State of Chitral," by Sir J. D. Hooker; notes on "Trees Suitable for Experimental Forestry," by Mr. W. Dallimore; "Persimmons," by Mr. W. B. Hemsley, V.M.H.; "Fungi Exotici XII.," by Mr. G. Massee, V.M.H.; and "Diagnoses Africanæ XLII."

AN ATTRACTIVE LILY POOL.

As duly recorded in our report, rock and water gardens formed a distinct and attractive feature of the Royal Horticultural Society's Summer Show at Olympia, and the numerous arrangements were of much interest as evidence of the high degree of popularity which plants from alpine regions and from still and running water, or the margins thereof enjoy. They could hardly have failed to prove useful, for they were varied in design and admirable in execution, and visitors interested in these two important classes of plants had an opportunity of obtaining much information relating to rock and water gardening generally. We were equally interested in both the large and small gardens, and we selected for illustration one belonging to the latter class because of its adaptability to gardens of quite moderate dimensions.

This was exhibited by Messrs. G. Bunyard and Co., of Maidstone, who are not less successful with hardy plants than with hardy and other fruits, and was distinguished by simplicity of design and for its adaptability to the requirements of the several classes of plants that thrive in or near water. This is a point of some importance where the pleasure grounds have a comparatively small area, for in such cases water gardens that are elaborate in design either occupy so much space as to be out of proportion to the other features, or fail to afford room for a choice selection of water lilies. In Messrs. Bunyard's pool there was ample room for a goodly number of nymphaeas, and as it could be readily extended, should space permit, the design is one that has much to recommend it to the general body of cultivators. The general effect was, it should be mentioned, remarkably good, for in the pool were finely-flowered examples of numerous water lilies, and on the margin were well-developed examples of the best of the pink astilbes and spiræas, and as a background bamboos were freely and tastefully used. Contiguous to the lily pool, but separated from it by a neat pathway, Messrs. G. Bunyard and Co. had a tastefully-arranged herbaceous border and a well-planted rockery, both of which contained much to interest lovers of hardy plants.

A TASTEFULLY-ARRANGED LILY POOL.

Exhibited at the R.H.S. Show at Olympia by Messrs. G. Bunyard and Co., who were awarded a silver cup.

EUPHORBIA FULGENS.

It is very rare indeed that the gardener who has to do much house decoration during the winter months, and especially at Christmas time, has too many scarlet flowers. The latter are always welcome on account of their warm appearance and suitability for mixing with foliage plants, also for use in sprays and buttonholes.

Gardeners who have not had any experience in the cultivation of this euphorbia may find the following brief hints useful. When the flowers have faded water should be withheld from the soil for a time, but the plants must be kept in a warm house. New shoots will quickly grow from the top portion of the stem, and when they are about five inches long they should be taken off with a heel of hard wood attached and inserted as cuttings in a sandy compost. The moment the cuttings are severed from the parent plant, dip the ends in a heap of dust-dry sand for the purpose of stopping the flow of sap from the cut portion. Plunge the cutting pots in a brisk hot-bed in a propagating frame, and the cuttings will soon callus and form roots. When they are sufficiently rooted, transfer them to larger pots, using a compost of light fibrous loam two-thirds, peat one-third, and sufficient coarse washed sand to render the mixture porous. Pot lightly and replace the pots on the top of the plunging material in the frame for a few days, then gradually expose the young plants to the temperature of the warm stove.

As they require repotting use the same kind of compost, but a little rougher, and pot more firmly. Keep the young plants in a light position to prevent the stems being unduly drawn up. The old plants may be cut down when sufficient cuttings have been secured. Very shortly afterwards new shoots will grow from the old stems if the latter are left about six inches long; and where the young shoots are two inches long, greatly reduce the ball of soil, and repot, using a much smaller pot, in the same way that a fuchsia is dealt with. Use a similar compost to that employed for the potting of the young plants, and so grow them that the wood will be well ripened by the time autumn comes. The old examples may possess a number of shoots, and will be useful for associating with other subjects in the dwelling-house in the winter.

The young examples may be limited to a single stem, or be pinched to induce the growth of several. The finest batch of these plants I ever saw were grown in a garden in Lancashire. Early in the autumn they were placed in a pine-apple stove, and trained to an arched wire trellis at the back of the pines. They were grown in seven-inch pots, and mostly confined to single stems, which were from four to six feet long, possessing very long sprays of flowers.

This long row of plants, so profusely flowered, was very attractive behind the bed of pines.

G. B.

LYCHNIS CHALCEDONICA.

The well-known old flower of Constantinople, a showy border plant of many, many years standing, does not bulk so largely in the modern gardens as in those of long ago. An early recollection brings to us a long border, with big clumps of Lilium testaceum, and of tall-grown Campanula latiloba, or grandis, associated with large clumps of the old double Lychnis chalcedonica, and where the effect was truly fine. It doubtless took some time to raise all these big groups of this lychnis, but the garden was a very old one, and no doubt the plants had been there for many years. At any rate, they had been in that garden long before the regime of the then gardener, who had been in his post for more than ten years. Such big plants were worth having, and readers who want a brilliant scarlet flower for the border need not hesitate to secure either the double or the single scarlet Lychnis chalcedonica. How long they have been prized as garden plants is difficult to tell, but the student of old garden lore will find much to interest him in reading about the double one, while the admirer of bright flowers of bold habit will discover in this old, and not scarce, plant one which may be dear to him. As for the double white one, I think we prize it most because it is not so plentiful as the other. It appeals to me less than do the single and double scarlet forms, which are pretty well described somewhere as "the well known old 'geranium' scarlet lychnises." Any good border will grow these old-fashioned flowers.

S. A.

ROSES THAT ARE DOING WELL.

It almost invariably happens that a few varieties of roses do much better during one season than in others, so much so that they are almost unrecognisable as the same rose in its normal condition. We well remember years in which White Maman Cochet, Mrs. Edward Mawley, Earl of Warwick, A. K. Williams, Hugh Dickson, and Frau Karl Druschki came so exceptionally good that the seasons were respectively named after these varieties. It is a little too early to name one for the present, but as many are coming exceptionally good—all the more so when we consider the erratic character of the present summer—I propose a few notes upon them.

Lyon is very good, but I do not think the majority of the flowers, so far, have possessed so much of the fiery salmon noticeable in a cooler season. It was present before we had the very hot and sunny spell, and will probably be found again towards autumn attended with cooler nights and dewy mornings. For this glorious rose has the merit of being a good autumnal. I am also quite satisfied with Rayon d'Or this summer. We, and many others, had a little bother with this rose during winter propagation: but from observations and from notes my friends have kindly supplied, it appears most impatient of artificial heat, having done well where planted out carefully, and even better when the plants were potted up and kept quite cool and steady. It is notorious that the first plants received were very sappy and unripe through the wet summer and late growth of last season, and this will doubtless account for many failures. Beauté de Lyon, Viscountess Enfield, A. R. Goodwin, and Soleil d'Angers, other hybrid briar or Pernettiana roses, have also done remarkably well, and the dry atmosphere has been highly favourable for these slow openers. But an English-raised variety from Waltham Cross, named Juilet, has pleased as much as any. In some cases the sun has robbed the flowers of much of the charming gold shadings, but those coming during the cooler weather we could scarcely praise enough.

We have a beautiful yellow in Muriel Jamieson, a large single flower, produced in great profusion, and certain to become popular. Another taking decorative variety is Mrs. Arthur Tate. The buds are long and pointed, deep coppery-red when young, with fawn shadings with age. Not very full, but opening well and exceptionally free. We think it one of the prettiest of all the garden roses. Quite a different flower is found in Mrs. Arthur Munt, which is large, full, and with the most perfectly shaped high centre of any variety. When quite young we can discover soft peach on a deep cream ground, but as the flower develops it comes a clear ivory-white. Every growth carries a flower upon a long and stiff stalk, while from the very first they are of perfect form, finishing into one of the best exhibition whites.

Mary, Countess of Ilchester, with its erect growth and large crimson-carmine flowers, has been very conspicuous this season. So, too, has the beautiful yellow H.T. James Coey, one of the deepest golden yellows of all in the younger stages, but going lighter towards the edges with age. This variety blooms in large trusses, and is valuable for beds and for cutting. We have also been very pleased with Excelsa as a maiden dwarf. This very bright Wichuraiana begins to flower as a maiden almost as freely and early as those of the new and deep-coloured dwarf polyantha Jessie, and both have been exceedingly showy from the first. It is not often the extra strong growers, as maidens, flower so early and continuously as Excelsa. Some grafted plants in pots were also very pretty from the time they commenced growth. Theresa is a new hybrid tea that all should grow where bedding and decorative varieties are most in request. It is a very taking combination of orange-apricot, madder-pink, and carmine. Only semi-double, but produced in the greatest profusion, and of good habit. Messrs. Pernet-Ducher are most noted of late for giving us such beautiful and almost indescribable forms of orange and other yellows, but in Souvenir de Gustave Prat we have a light sulphur-yellow that might almost be called a white when the finely formed and large flowers are developed. This has a fine spreading habit, and is vigorous.

Among the new hybrid perpetuals the intense poppy or vermilion-scarlet of Rouge Angevine is most striking. It is better now than I have seen it hitherto. The petals are very large, buds long and pointed, but when fully expanded reminds one of a pæony. Of good but robust growth, and free flowering; a most striking scarlet in a bed.

The yellow Wichuraiana Aviator Bleriot is very good, and appears to be quite the best of its colour in this section. Another good yellow is Robert Craig. Our standard Wichuraianas were fully a fortnight earlier this year, and have been very showy. Among the newer varieties, Coquina, Excelsa, Elsie, and Troubador are really good. Many of the dark hybrid perpetuals were rather burnt, and I note that even Commandant Felix Faure was injured, which I have not found in this rose before. Just before the heat wave we had very intense coloured darks in Charles Lefebvre, Abel Carrière, Grand Mogul, Prince Camille de Rohan, Fisher Holmes, Victor Hugo, Crown Prince, and Horace Vernet.

But to return to some of the older hybrid teas. Kaiserin Augusta Victoria has been perfect. So, too, have Le Progres, Madame Melanie Soupert, George C. Waud, Mrs. Theodore Roosevelt, Dean Hole, Earl of Warwick, Harry Kirk, Mrs. Aaron Ward, Mrs. Peter Blair, Madame Ravary, Madame Segond Weber, Marquise de Sinety, Mrs. W. J. Grant, Pharisaer, and William Shean.

Anna Olivier, Lady Roberts, Medea, Bridesmaid, Maman Cochet, and its grand white sport Muriel Grahame, Molly Sharman Crawford, Mrs. Edward Mawley, Souvenir de Pierre Notting, and W. R. Smith have been good amongst teas.

At the time of writing (July 12) our plants are rather tried by the excessive sunshine, but the maidens are growing satisfactorily. I am, however, sorry to note the rapid advance of thrips in the blossoms, the more so because we cannot effectually combat this pest without more or less injury to the flowers.

A. P.

EARLY-RAISED WALLFLOWERS.

Seldom have wallflowers been in better condition than they were this spring. I think that cultivators are realising more and more every year the importance of raising the stock of plants early in the season. There is plenty of room for improvement in this direction yet, as I have seen many gardens in which the wallflowers were poor, indeed, which had been raised from seeds sown very late last year.

Some good cultivators sow the seeds in May; I have done so, and also in June, and, as far as my experience goes, the June-raised plants were in every way the most satisfactory. If carefully grown on such plants make fine bushy specimens by the end of September, and they are then in prime condition for planting in the flower beds directly the latter become vacant.

There are few persons who have had gardens to attend to who have not had som experience in the cultivation of wallflowe But probably many of them have not trie the plan of raising the seedlings in ope borders without any protection. I d not favour the plan of growing the plan in a poor soil, but rather that of raisin and cultivating them in a soil of mediu richness, but made firm.

A border having a west aspect is a sui able one; the soil must be deeply du liberally manured with decomposed manur which should be thoroughly mixed with t soil, and made firm while in a medium sta of moisture. The seeds may be sown thin broadcast, or in drills. The resulta seedlings should be duly transplanted fo inches apart in similar beds. Anoth shift will be beneficial before they a finally planted in their flowering quarte The second time the distance between t young plants should be seven inches ea way. One hundred plants so grown worth three hundred spindly examples, result of lack of attention as regards in raising the seedlings, and in transp ing. Specimens transplanted several t possess many fibrous roots, as well several branches, each one capable of bea ing a grand spike of flowers.

Geo. Garner

Anemones and Ranunculus will usually give better results if take and dried than when they are allowed t main in the ground all the year. All t may now be lifted, dried, and sorte— E. C. P.

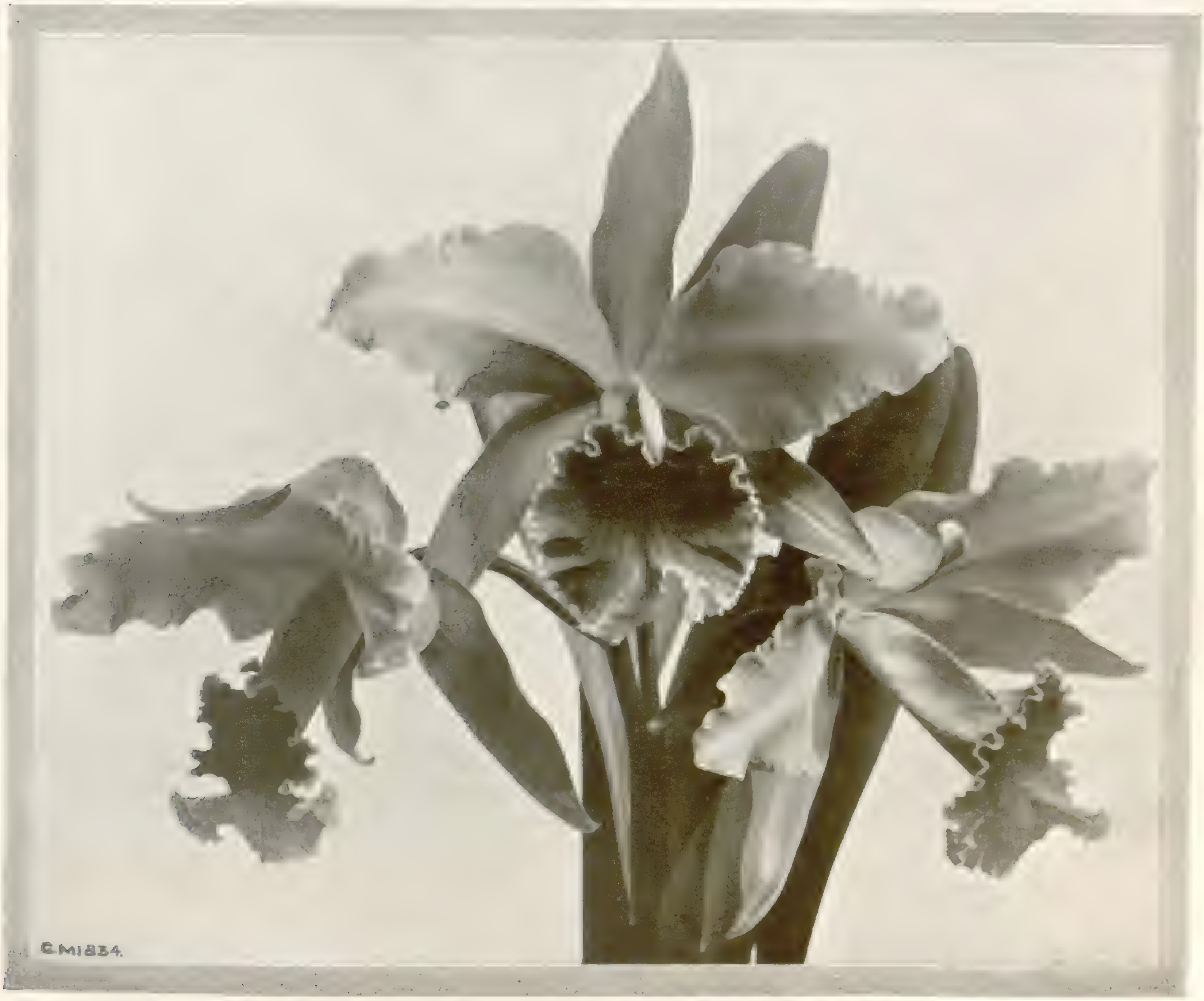
NEW PLANTS, ETC.

LÆLIO-CATTLEYA MARTINETTI KING GEORGE V.

A large-flowered variety and a very attractive one. The sepals and petals are rich rosy-purple, and the fine lip deep crimson-purple. One of the boldest and best forms of this useful hybrid. A.M., R.H.S., July 4. Messrs. Charlesworth and Co., Haywards Heath.

SWEET PEAS.

Barbara.—A distinct variety with comparatively large flowers of a rich salmon colour, tinted rose. See illustration page 512. F.C.C., N.S.P.S., July 11. Mr. R. Holmes, Norwich.



LÆLIO-CATTLEYA MARTINETTI KING GEORGE V.

Flowers large and the colouring rich rose-purple and crimson. A.M., R.H.S., July 4. Messrs. Charlesworth and Co.

Dobbies' Thomas Stevenson.—A fine strain of this brilliantly-coloured variety. The flowers are of large size and the colour rich scarlet. See illustration, page 511. F.C.C., N.S.P.S., July 11. Messrs. Dobbie and Co., Edinburgh.

F. Seymour Davies.—A beautiful variety with finely-formed flowers of a pleasing pink-lavender colour. A.M., N.S.P.S., July 11. Mr. F. S. Davies, Farnham.

Mauve Queen.—An effective variety, the flowers large and the colour rich mauve. A.M., N.S.P.S., July 11. Messrs. Dobbie and Co.

May Campbell.—Distinct and attractive, the flowers rich cream, the wings and standard marked with a rose flame. A.M., N.S.P.S., July 11. Messrs. Dobbie and Co.

Mrs. B. Gilbert.—An attractive marbled variety, the flowers large and marked with purple-violet on a light ground. A.M., N.S.P.S., July 11. Messrs. Gilbert and Son, Bourne, Dyke.

Red Star.—A finely formed flower of a bright rich crimson colour. A.M., N.S.P.S., July 11. Mr. A. Malcolm Duns.

NOTES OF OBSERVATION.

Tomatoes.—This is a good time to sow the seeds of tomatoes for winter stock, so that strong plants may be ready for the winter months. I find Sunrise a good variety, also Sutton's Winter Beauty, which is excellent for early spring supplies. The seedlings should be soon potted into small pots, and grown on outside, and they will make fine strong plants before being housed in September. I prefer growing tomatoes in pots through the winter, as they can then be shifted with more ease. Growing plants should now have the laterals constantly picked out. and be relieved of fruit as it becomes ripe. If the fruits are regularly picked as soon as ready, the plants will keep on growing with much more freedom than otherwise.—W. A. Cook.

Philadelphus purpureo maculatus.—First distributed by the raiser—M. Lemoine, of Nancy, in the autumn of 1902, this was some time before it made its way far in popular favour. Now it is very generally recognised as a break away from all the older forms of Philadelphus, as the flowers of these are white, whereas those of P. purpureo maculatus have a deep purple blotch at the base of each petal, thus giving, as it were, a purple centre to the flower. This coloured character was said by the raiser to be derived from the Californian P. Coulteri, which is tender in this country, but P. purpureo maculatus seems to be as hardy as the other hybrid forms. It may be of interest to note that M. Lemoine distributed last autumn another coloured variety under the name of Œil de Pourpre, but I have not yet flowered it.—W. T.

Geranium argenteum.—That size is no just criterion of merit is nowhere more clearly in evidence than in Geranium argenteum. The genus embraces many species, some of which attain a height of two and three feet, while the flowers are quite insignificant; in curious contrast to these is the present plant, which is one of the smallest and daintiest, and with flowers that are exceedingly large in comparison with the plant. The flowers are a rose shade with delicate veins of a deeper tint traversing the segments, and are usually borne in pairs on slender, erect stems, that scarcely exceed the leaves in height. It is also esteemed as a foliage plant, as the leaves are most intense silver-grey on both surfaces, and are divided into five to seven parts, with many secondary lobes. In habit it forms a low mound of silky grey leafage, growing freely in ordinary soil in a well-drained part of the rock garden, and is not averse to a strong limestone soil. It is a native of Northern Italy, and flowers during June and July.—Thomas Smith.

AVAILABLE PLANT FOOD.

(Continued from page 451.)

The element which is present in greatest amount in plants is carbon. This material is derived from the carbonic acid of the air. In order to become plant food this carbonic acid is first absorbed largely by the leaves, afterwards its usefulness depends upon the green colouring matter of the foliage, the chlorophyll, as it is called, and also upon the amount of bright sunshine.

The chlorophyll absorbs some of the heat rays of the sunlight, and by means of the energy thus provided the carbon unites, in some obscure way, with the elements of water, ultimately forming starch. The oxygen which has been taken up is thrown off through the pores of the leaves. This process of the formation of plant food from carbonic acid and water is called carbon assimilation.

Faulty preparation of the ground for seed sowing is the cause of more failures in plant growth than any subsequent treatment of the crop. The tillage of the soil for seeding should be governed by two factors, first by the needs of the particular crop which is to be grown, and, secondly, by the character of the land.

To properly prepare a seed bed for any crop the habits, likes, and dislikes of the plants should be studied. That is to say, it is not enough that the soil be well prepared; it should have the kind of preparation which is demanded by the crop.

While all plants need certain chemical elements for their growth, they cannot use these ingredients in their raw or uncombined form. In fact, the elements as such do not exist in the soil; they are united with each other in compounds, and it is by absorbing the compounds that the plants obtain the necessary elements. For example, phosphorus is essential to the life of all plants, but it is never used by them in the form of phosphorus. It is always taken up in the form of some compound, as phosphoric acid or a phosphate.

When the compounds exist in such condition as to be readily absorbed by the plant roots the soil is said to contain available plant food.

One problem for the gardener is to secure available plant food, and then to determine whether it is better to unlock the food in the soil by means of tillage, or by supplying the elements nitrogen, potash, and phosphoric acid, in some artificial manure.

In many gardening establishments, and especially in these days of motor cars, animal dung cannot be obtained in sufficient amount for the total requirements of plant food. In such cases it is necessary to obtain as a basis for the manuring some slowly-acting nitrogenous body of an organic origin which will provide a certain amount of humus matter, such as meat meal, fish guano, dried blood, rape dust, or shoddy. This should be dug into the ground in winter or early in spring, at the rate of 8lb. to 12lb. per square rod. With this should be applied 4lb. to 6lb. per square rod of a phosphatic manure, like steamed bone flour or phosphatic guano, also kainit at the rate of 6oz. to 8oz. per square yard, every other year or so. Finally, when the plants begin to grow a little active nitrogen, in the shape of sulphate of ammonia, nitrate of soda, or nitrate of lime, at the rate of 1½lb. to the square rod, or ½oz. in a gallon of water.

For plants in pots it is better to use manures in solution. For example, nitrate of soda and superphosphate, or 1oz. of sulphate of ammonia and 3oz. superphosphate, with a little soot, dissolved in ten gallons of water, making an excellent manure for finishing when buds are opening or fruit swelling. If a soil compost is to be enriched let the slowly acting forms of nitrogen, like the guanos or meat meal, be used with phosphates in corresponding quantities, and let the manures be mixed with the soil some time before the compost is wanted, because the early stages of decomposition in the soil of these concentrated manures are injurious to tender rootlets. One of the strongest and most powerful artificial manures in commerce can be made by mixing together equal quantities of nitrate ammonia and phosphate of potash. The chemical analysis of such a mixture is 17½ per cent. of nitrogen, 12 per cent. of potash, and 40 per cent. of phosphates. It may be applied at the rate of ½oz. in a gallon of water, once a week, to all plants requiring available food with the greatest success. Being a soluble well-balanced manure it will prove one of the best fertilisers for feeding plants in pots that a grower can have.

J. J. Willis.

SOME ROSE GARDEN FEATURES.

Glimpses at rosaries in different gardens reveal different uses made of the Queen of Flowers, and suggest, therefore, how the distant, even smaller, home rose gardens can be improved another season. There are some beautiful effects that can be imitated; one of these is the carpeting with eschscholtzias of one of the dwarfer types; sown late it will form an elegant grey-green mass during the chief rose show, the blooms can be picked off it after this, if preferred, but, at any rate, the growth will not be too vigorous. One of the best of all carpets is that of sown or transplanted Platystemon californicum, a handsome grey-leaved hardy annual, that has King's Cup shaped flowers of primrose-cream, a tint that suits with all but white roses.

Rose trees extra wide apart, in a rose garden on a giant scale, have been given a rockery border surrounding. The groups of grey stones are not built up high at any point, over most of the space the rocks are scattered, but they suffice even so to hold sun-heat off the light sandy soil that needs, otherwise, such constant hoeing and watering. Only dwarf light-growing plants are tolerated in the ground. These are irregularly grouped, mostly between and behind the stone groups, and include perennials, hardy annuals, and bedding plants; any subject, in fact, the appearance of which is desired just there. By this means exquisite colour schemes have been carried out: orange Erysimum Peroffskianum is near white roses, magenta Kaulfussia kermesina occupies patches of soil near the lemon teas, and in front of a pillar-trained yellow Rambler; Reine Marie Henriette's peculiar rosy-cerise is shown up by cream begonias and a few maroon nasturtiums, blue flax harmonises exquisitely with the apricot of Madame Falcot and Lady Roberts; the salmon-rose of Madame Abel Chatenay is seen above white Iceland poppies, while deep carmine roses have a setting of dwarf blue cornflowers, which minimise the unpleasant appearance of blue shadings in the petals of such roses as they fade.

Shading is essential to preserve the colours of some roses, and one gardener has achieved a beautiful success by growing different varieties of white clematises up twelve-foot poles at intervals along the outer edge of a giant round rose plot. The clematis branches are partly trained out from pole to pole at the top, but others are tied to strands of tarred string stretched bodly across the rosery, forming a skeleton roofing that affords just sufficient but not excessive shade. The similar employment of mauve and purple clematises, if only yellow roses were in the plot, would have a lovely result. Further combinations might be thought out; for instance, red clematises with white roses, blue clematises with pink, and only pale lilac ones with maroon roses, such as Xavier Olibo.

Formal rose gardens of stiff-shaped beds and tiled walks can well have groups of pot plants formed here and there, either against walls or in the path spaces. Palms, aralias, beets, Cineraria maritima, cannas, liliums, chrysanthemums, all will be of service among countless other charming plants.

M. H.

JAPANESE MAPLES.

Few shrubs make so bright a display in the garden at the present time as Japanese maples, their elegantly divided and attractively coloured foliage rendering them objects of much beauty, and gaining for them a prominent place in gardens where the more choice trees and shrubs are appreciated. Grown as single specimens on the grass, or arranged here and there near a stream in the water garden, they present a highly attractive appearance; while grouped in beds by themselves they are very effective. The colour of the foliage is frequently intensified when purple-shaded violas are grown as a carpet to them, and this combination is especially pleasing in the case of the more highly-coloured crimson forms. Viola gracilis is one of the best for this purpose, and it is seen to advantage under the maples.

Japanese maples succeed well in any good garden soil, but a medium loam that has been well cultivated probably suits them best. In the case of those growing on the lawn it is necessary to keep the grass away from them by cultivating the ground for a distance of two feet from the stems.

There are many really good varieties and amongst these are Acer palmatum sanguineum, which has richly coloured foliage it makes a good-sized specimen. A. p. palmatifidum is a lovely variety, with elegant cut dark green foliage. A. p. atropurpureum, A. p. aureum, and A. p. rufinerv are very showy. A. p. roseo-marginatu is a lovely plant; A. p. ampilopsifolium, A. p. dissectum, A. p. dissectum variegatum and A. p. septemlobum elegans, are a charming, with brilliantly coloured foliage A. p. ribesifolium is a distinct and ornamental maple; while A. japonicum aureu and A. j. laciniatum, form lovely specimens; the latter has beautiful green foliage, which turns a brilliant crimson i the autumn.

J. G.

Philadelphus Lemoinei Virginal.—The month of June must be regar as the season when most members of the m orange or philadelphus family are at th best. There have been great addition these beautiful flowering shrubs with re cent years, and the variety Virginal at the meeting of the Royal Hortic Society on June 20th, not only attra good deal of attention on the part o visitors, but it was also given the hon a First Class Certificate. Readers o Gardeners' Magazine will not need t any detailed description of this beaut variety, as it is so admirably portray the issue of June 24. Like so many novelties, this variety was raised and di buted by M. Lemoine, of Nancy, who wa first to raise hybrids from the pretty Philadelphus microphyllus. Virginal first distributed in the autumn of

W. T.

QUEENWOOD, ENGLEFIELD GREEN.

This, the residence of W. G. Rigan Esq., pleasantly situated on the outskirts of Windsor Great Park, is one of many beautiful places that abound in the neighbourhood of Englefield Green. Those who are acquainted with the district will know that the situation is fairly high, and, generally speaking, all kinds of vegetation flourishes exceedingly well, notwithstanding the fact that the natural soil is rather light and porous. Being so near the forest every opportunity is taken of adding leaves to the natural soil, and, judging by the results obtained this addition is very beneficial.

The owner of Queenwood is very fond of gardening in all its branches, and to this fact must be attributed much of the beauty and success of the garden, as he bought the house quite bare some thirty years ago, and the trees originally planted have now made some very fine specimens. At the time of planting these appeared to have plenty of room, but now, in one or two instances, they are just a little crowded, and, to some extent, cramp the outlook, though I noticed that where they can be best spared the trees are being gradually removed. It is, however, a hard matter to part with trees, etc., that have for a number of years been a source of pleasure.

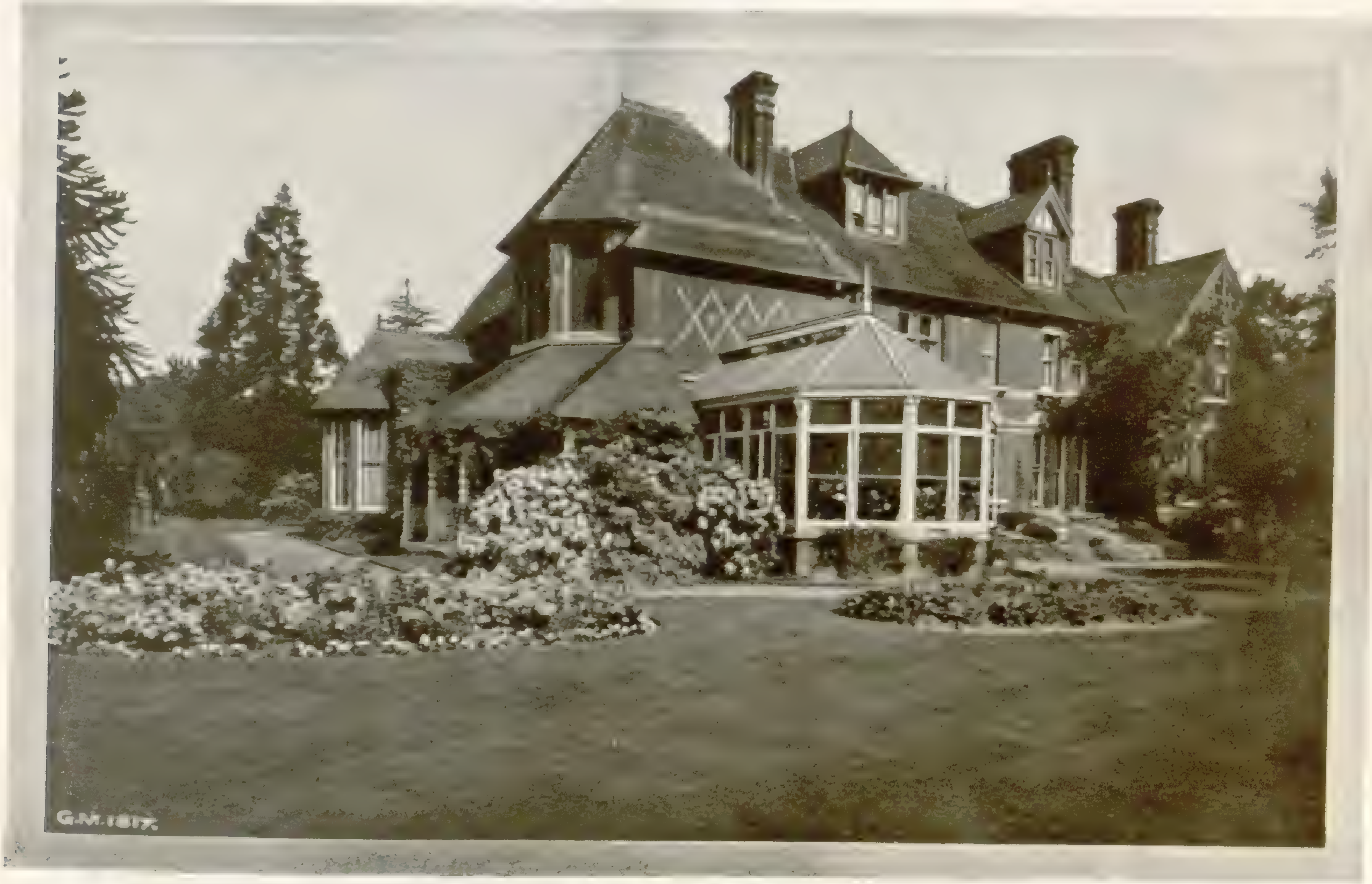
Amongst others, Araucaria imbricata, Pinus insignis, Cedrus Deodora, Wellingtonia gigantea, Thuya Lobbi, and Picea Nordmanniana have made really fine specimens, from 30ft. to 40ft. high, and in every instance are furnished down to the ground; and it is easy to imagine that a few of these appear to take up a quite large space in a garden which, at the most, covers only about five or six acres.

The small pleasure grounds are certainly the feature of the place, and much use has been made of beds of rhododendrons and azaleas, and, as may be seen by the illustrations, these plants do exceedingly well, planted as they are in leaf soil and peat. They would do credit to much larger establishments. The bed of Pink Pearl was planted some six years ago, and contains twenty-five plants, and, as will be seen, they now cover the whole of the bed, which is thirty yards in circumference, and at the time the photograph was taken the bed was a picture worth going a very long way to see, hardly any green being visible owing to the wealth of flowers. Other beds of rhododendrons doing equally well are Kate Waterer, Anthony Waterer, and John Waterer, while in another part of the garden specimens have been planted to great advantage, and from the windows of the house many fine displays of colour are seen in the spring.

Another feature of the pleasure grounds is the roses, which are planted in two or three very large scroll beds; these are almost entirely enclosed by pillars and arches of the more popular climbing varieties, whilst near the house there is a very fine weeping standard of The Garland. This stands from 10ft. to 12ft. high, and is about 6ft. to 8ft. in diameter.

The bedding here is very extensive for a garden of its size, and though the beds are few in number they nevertheless accommodate a quantity of plants. For spring display large quantities of tulips are used, the beds being carpeted underneath with aubrietia and Violas Maggie Mott, Bridal Morn, White Swan, Purity, and Sutton's Yellow Bedder, the latter variety being the one seen in the photograph. The four beds take upwards of 6,000 plants.

For summer bedding large quantities of Paul Crampel pelargoniums are used, and with dot plants of Lilium longiflorum, are most effective. Fuchsias, coleus, heliotropes, marguerites, iresine, etc., are also used in quantity, as also is the very bright Salvia Glory of Zurich.



QUEENWOOD, ENGLEFIELD GREEN,
The Residence of W. G. Rigan, Esq.

The kitchen garden is not extensive, but it is well cropped at all seasons, both with fruit and vegetables, and I have no doubt quite fulfils the requirements of the place.

The glass department, again, is not extensive, but here, as with every other part of the establishment, everything is exceptionally well done, and it is astonishing how many fine batches of plants are worked through the houses during the season. Where all things undertaken are well managed it is a difficult matter to pick out one or two, but such subjects as amaryllis, begonias, gloxinias, caladiums, gesneras, and streptocarpus are worthy of special mention, and at the present time a batch of the latter plants in 24-sized pots are literally one mass of bloom, many of them carrying from 17 to 20 blooms on a single stem.

Grapes, peaches, and melons have houses allotted to them, and all carry good crops, whilst the stove plants and orchids seem to revel in the treatment accorded them. Mr. J. Lingwood, the gardener, is a great believer in single chrysanthemums as decorative plants for the autumn, and so grows them well, and he has raised several good seedlings during the past three or four seasons, Willie Lingwood, Jack Alfred Aylett, and Lingwood's Pride being probably the best.

Mr. Lingwood is secretary of the Egham Gardeners' Association, his employer being president, as he also is of the Egham Flower and Industrial Society, which is probably the largest and most successful society of its kind in England. Mr. Lingwood does not exhibit in competition, but he puts up many fine exhibits during the season at the shows and meetings of the above-mentioned societies, and both he and his generous employer are to be congratulated on the excellent results obtained at Queenwood, and further for the way in which they support anything and everything pertaining to horticulture.

T. S.

SOME GREENHOUSE CLIMBERS.

Where a selection of climbers is made for a small or medium-sized structure a common mistake is to use plants of too vigorous a growth for the purpose. Such being the case, it is necessary to repeatedly cut them away in order to prevent encroachment on their neighbours, the result being that the climbers have not space to develop their true character, while the continual cutting necessary to keep them within bounds is detrimental to their flowering. This applies more particularly to such as the strongest growing of the passifloras, the tacsonias, Cobæa scandens, and its variegated variety, with others of this class. These, properly placed, are all very beautiful, but their use should be limited to a large structure, for among other considerations is the fact that when growing vigorously they obstruct a considerable amount of light, certainly far too much for the welfare of the plants underneath. The choice of subjects suitable for clothing the roof or rafters of a medium-sized conservatory is an extensive one, but a selection likely to suit all is not easily made, as it is very rare to find two persons who see eye to eye in such matters.

For all this the following may be relied upon as a good and representative selection.

Acacia Riceana is a very distinct member of the Australian acacias. If the main branches are trained to a roof the cord-like secondary shoots will hang down for a considerable distance, and when these are studded for the greater part of their length with pale yellow blossoms, a specimen of this acacia forms a very striking feature.

Clematis indivisa.—One of the most popular of conservatory climbers, and exceedingly pretty in the spring when the shoots are laden with their pure white starry flowers. This will attain a considerable size, but by judicious pruning immediately after flowering, it may be readily kept within moderate dimensions. In addition to this, it is often grown with success as a pot plant.

Fuchsias.—From the drooping character of their charming blossoms in no way are fuchsias seen to greater advantage than when trained to roof or rafter, as the charms of the individual flowers are then fully seen. All, except the dwarf-growing varieties, are available for the purpose, but those of a loose nature are decidedly preferable to the more compact growers. For this purpose, too, single flowers are, at least, from my point of view, preferable to double ones. Some of the species, particularly F. dependens, are also very fine when treated in this way.

Hibbertia dentata.—Trained to a rafter and allowed to depend therefrom for some little distance, this hibbertia forms a mass of handsome leafage, bronzy olive in the adult stage, but deeply suffused with red when young. The beauty of this hibbertia is greatly enhanced when studded with its bright golden blossoms, which are borne about the first three months of the year. They are from two to three inches in diameter, and somewhat suggestive of those of a hypericum.

Ipomæa rubro-cærulea.—An annual species of ipomæa, which, if raised from seeds in the spring, will keep up a succession of its fragile blossoms—in colour an indescribable blending of blue, red, and metallic purple, throughout the summer and well on into the autumn.

Jasminum grandiflorum.—Somewhat like our hardy jasmine, but with larger flowers, which have a reddish suffusion on the exterior. They are borne in late summer and autumn, and are very sweetly scented.

Kennedya Marryattæ.—An Australian member of the leguminosæ, with pretty trifoliate leaves of a silky nature, and a profusion of scarlet pea-shaped blossoms.

Lantana salviæfolia.—Notwithstanding the fact that the great value of this lantana as a rafter plant for the greenhouse has been for many years demonstrated at Kew, it is very seldom met with treated in this way. When the main shoots are trained to a rafter and the minor ones allowed to dispose themselves at will, they hang down for some distance and form quite a living curtain, which from spring till autumn is studded with rounded clusters of lilac flowers.

Lapageria alba and rosea.—To these must be assigned a place among the choicest of greenhouse climbers, yet at the same time they are more exacting in their cultural requirements than many others. They are natives of Chili, and, in common with many other subjects from that region, they prefer a liberal amount of atmospheric moisture. For this reason it is useless to employ them in a hot and dry situation, as then the foliage is particularly liable to be attacked by thrips. Conditions suitable to greenhouse ferns will suit the lapagerias well.

Lonicera sempervirens minor.—The tender member of the honeysuckle family will bloom from spring till autumn, and the plant can be readily kept within reasonable bounds. The tubular-shaped flowers are brightly coloured, showing a combination of red and yellow.

Manettia bicolor.—This is one of the most continuous flowering of all conservatory climbers, as where favourably situated it is rarely without blossoms. These last are tubular in shape, the colour being sca

A MAGNIFICENT BED OF RHODODENDRON PINK PEARL AT QUEENWOOD.

tipped with golden yellow. It is a delightful climber for a small structure, though its merits are too often overlooked.

Rhynchospermum jasminoides. — A charming evergreen, whose white jasmine-like flowers are freely borne. They have somewhat the fragrance, though in a less pronounced degree, of a gardenia.

Rhodochiton volubile.—A Mexican plant that flowers with great freedom. The blossoms, borne for a considerable distance along the slender shoots, are composed of a large reddish bell-shaped calyx from the centre of which protrudes a tubular corolla of a deep purple colour.

Solanum jasminoides.—Valued as an outdoor climber in the West of England, this white-flowered solanum is well suited for the embellishment of the greenhouse in the colder parts of the country.

G.M.1818

A VIEW IN QUEENWOOD GARDEN WITH RHODODENDRON PINK PEARL.

Of pillar plants may be particularly mentioned:

Clianthus puniceus, with its red lobster claw-like blossoms; Habrothamnus (cestrum) of sorts; Lasiandra macrantha, whose rich purple flowers are borne in late summer and autumn; Jasminum primulinum, often regarded as hardy, yet it appreciates a little protection; Mitraria coccinea, with scarlet tubular flowers, interesting as one of the few shrubby gesnerads; Plumbago capensis, a universal favourite; Plumbago capensis alba, a white counterpart of the preceding; pelargoniums, particularly the ivy-leaved varieties; Streptosolen Jamesoni, valued for its orange-red colour; and Thibaudia acuminata, a South American evergreen shrub, with tubular flowers and large reddish bracts. W. T.

BULBS.—A practical treatise on the cultivation of hardy, half-hardy and greenhouse bulbous and tuberous-rooted plants is "Bulbs and their Cultivation," by T. W. Sanders, price 2s. 6d. net, or by post 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

LITHOSPERMUMS.

Lithospermums are among the most desirable of rock garden plants, and particularly those having blue flowers, for, in a minor degree, they are reminiscent of the brilliant blue of the gentian. The majority of the species are hardy in this country, L. rosmarinifolium being an exception, as it requires some protection in winter. L. graminifolium at times suffers from excessive damp, and for this reason should always be planted on a sharp pitched sunny slope.

The most popular member of the genus is undoubtedly L prostratum, a species native of the Western Pyrenees, and having deep blue flowers. It forms a dwarf trailing sub-shrub, with prostrate branches clothed with evergreen leaves; it is admirably adapted for rockwork, and as it flowers more or less all the summer it merits a position of the greatest prominence. A distinct variety, with pale blue flowers, has recently originated from the type, and to it the name Heavenly Blue has been given. This is quite a notable addition to hardy plants, and a mass in flower is one of the floral triumphs of the rock garden.

L. prostratum and its variety are the only kinds I have found fail on limestone soil, as no amount of coaxing will induce them to make progress, whereas in any good sandy or loamy soil they are always certain, and generally the most vigorous and free flowering of the genus.

L. rosmarinifolium is a shrubby species, much more erect in habit than the last, and while it grows tolerably well in limestone (chalk) soil, it is much freer and healthier in soil where lime is practically absent. This species is rather tender, and must have a warm sheltered spot, and generally succeeds best against a wall, with some light protection in winter.

L. Gastoni is a herbaceous species, and grows with marked vigour on limestone soil; the flowers are produced in terminal heads on the extremity of the year's growths, and are purple-blue in bud, but open to a clear shade of blue, with a white eye. The leaves are dark green, hairy, and ovate-lanceolate in shape; it succeeds best in an exposed sunny position tightly wedged among stones.

L. graminifolium is a most distinct species, with tufted growths and narrow grey-green foliage, somewhat grass-like in appearance; the flowers are borne in scapes some six to nine inches in length, and recurve gracefully, with the flowers inverted on the stalk, and of a clear shade of blue. It is a most reliable species on limestone soil, provided some precautions are taken to guard it from the evil of winter damp.

L. purpureo-cæruleum is a rare native species, with creeping branches furnished with quantities of purple and deep blue flowers; it is not so partial to a sunny spot as the others, and succeeds in a position where it is subjected to a fair amount of shade.

Lithospermums are readily propagated from cuttings taken during July and August and inserted in sandy soil in a cold frame, and kept close until roots are formed, afterwards potting up the plants to establish, and subsequently planting in their permanent positions in spring. L. Gastoni and L. graminifolium will at times give a few good seeds, which are best sown as soon as ripe, standing the pots in a cold frame until germination takes place.

Thomas Smith.

ERRATIC FERN SPORES.

By the term "erratic" we mean in this case such spores from a constant parental form as will yield very diverse progeny, not merely on one occasion, but, as a rule, successive sowings from different annual crops yielding similar results. As is well known, when once the normal type of a plant has broken into an abnormal one, yielding a "sport," the seed or spore, as a rule, inherits the peculiarity; but it is also a well-recognised fact by all selective cultivators that the peculiarity may appear in different grades in the progeny, being more emphasised in some and less in others, the more emphasised cases constituting the selector's opportunities for improvement of type. In this way, sometimes by gradual steps and in others by more advanced ones, the greater part of our horticultural wealth of flower and foliage has been acquired.

In the cases, however, which we have in mind, the spores concerned have yielded such entirely unexpected results that the cultivator has been unable to satisfy himself of the origin of the plants obtained until a second sowing has convinced him by similar produce. Thus in the case of the Jones and Fox wonderful plumose Shield ferns, spores were sown from a wild decomposite or merely tripinnate form, the result being a batch of such finely dissected and feathery varieties, so widely differing from the parent that their origin seemed an entire mystery, until a second sowing from the same plant revealed the fact that its spores were endowed with the capacity of surpassing it to that extent, a similar lot arising.

These, however, resembled each other closely, varying only in fineness of cutting or density of foliage. Another form, however, known as Pearson's decompositum, while producing also a beautiful plumose form far surpassing it in delicacy and foliose character (Polystichum angulare divisilobum plumosus Pearson) regularly produces, in conjunction with a percentage of this plumosum and a number of the parental form, a very remarkable and distinct form of "grandidens," which no one ignorant of its origin could possibly impute to such a parent. In this the fronds are narrow, the pinnæ being short and somewhat irregular, while the pinnules, instead of being extra feathery, are all reduced to short pointed spikes, so narrow that the abundant fructification shows on the upper side of the frond. A greater contrast could not be imagined than there is between this and plumosum, and yet both forms arise from spores from one and the same frond or even pinnæ.

Here it will be observed a character comes into evidence of which there is absolutely no trace visible in the parent, which is in itself a thoroughbred constant form, with no eccentricities at all to which such results could be imputed by inheritance. Yet by repeated sowings it has been proved that the three forms—the parental, the plumose and the "grandidens" type arise in more or less the same proportions whenever the decompositum spores are sown. Pteris aquilina percristata is another fern which constantly produces two different varieties when sown—viz., the parental form quite truly, and a large percentage of "grandiceps," a quite barren variety, with the fronds consisting entirely of stalks and heavy crests, these also being quite alike. This being barren, it can only be propagated by sowing spores of the parental form when it is quite sure to appear again.

The superbum section of Lady Ferns arose first from a beautifully crested seedling raised from an entirely uncrested form (Athyrium filix fœmina elegans Parsons) raised from an equally uncrested wild find (A. f.f. plumosum Axminster). In this case the extraordinary feature was that over 90 per cent. of the same batch were crested also, only two of the parental form resulting, while most of them were more or less defective, only two being perfect, though no defects are visible in either parent or grandparent. Spores of the better of these two (superbum) being sown, the next unexpected result was the appearance of two distinct sections, one uncrested and extra plumose, and one crested on varied lines, some to the fourth degree (percristatum). Here again was a sudden divergence of type in two distinct directions in spores gathered from one and the same plant.

In the more recent case of Polystichum aculeatum pulcherrimum a similar divergence took place, some 20 per cent. of the plants assuming a quite distinct type, "gracillimum," in which half-inch pinnules were lengthened to two to three inches, quite transforming the plant, while one plant assumed a decomposite plumose form of quite distinct character, rivalling those of the Jones and Fox angulares. A subsequent sowing from another plant (of which the first was, however, a division) is now yielding the same results, so far as the gracillimum type is in evidence, though the possibility of further divergencies is evidenced by a very promising diversity in other directions in the young seedlings.

In Blechnum spicant, a long narrow variety (strictum Hartley) has in successive sowings yielded a percentage of a very dwarf congested variety (crispissimum Hartley), quite the antithesis of the parental form. Doubtless if fuller records had been kept regarding the origin of new forms, other cases could be cited; but there is no doubt that the above embrace the most remarkable. It will be noted that in every case Nature has started the ball rolling by providing an abnormal sport. Most of the types in cultivation are due to such, though the selective cultivator may have enhanced the original types through their spores. The plumose types, however beautiful, are extensions of Nature's "decomposite" inventions; but so far, with the exception perhaps of the mysterious A. f.-f. Kalothrix, we must credit the selective cultivator with the gracillimum type of Shield ferns which are here described.

Chas. T. Druery, V.M.H., F.L.S.

AN EFFECTIVE ARRANGEMENT OF VIOLAS AT QUEENWOOD.

Billbergia Rhodocyanea.—The handsome and unique markings of this bromeliad render its foliage most attractive and interesting. It succeeds best in good fibrous loam, and a little peat and sand. Propagation may be effected by the removal of suckers from the base of the old plant with a few roots retained on each piece, if possible; place them singly into small pots, plunge in brisk bottom heat, and remove to a light position near the glass as soon as the plants become established.—J. Donoghue.

RHODODENDRON GLORY OF LITTLEWORTH.

Of the several new rhododendrons noted at the recent Temple Show I should be inclined to give the first place to this beautiful variety, and it would not have surprised me in the least if the Floral Committee of the R.H.S. had given it a First Class Certificate. However, opinions vary, and probably the foliage was looked upon as its weakest point. This rhododendron is perfectly distinct from any of the others shown, and belongs to that section to which the name of Azaleodendron has been before now applied. As suggested by this name, it is the result of a cross between one of the evergreen and one of the deciduous members of the genus. These last are by botanists classed with the rhododendrons, but are always known in gardens are azaleas. Examples of these crosses are to be met with in two old forms, Smithi aureum and Broughtoni aureum, both of which have flowers of a buff-yellow colour. Another of this class is one of the oldest of hybrid rhododendrons. It bears the various names of Rhododendron azaleoides, R. hybridum, R. odoratum, R. fragrans, R. ponticum deciduum, and R. ponticum azaleoides. The flowers of this show various combinations of white and lilac. The variety Glory of Littleworth, so well illustrated in the Gardeners' Magazine (p. 415), has white or almost white, flowers, with a large blotch of orange on the upper part. The weakness of its leaf character above referred to is very apparent in the illustration. This is, however, characteristic of the azaleodendrons in general.

W. T.

A BEAUTIFUL BOWL OF ROSES.

The decorative side of rose showing was especially strong at the recent exhibition held by the National Rose Society in the Royal Botanic Society's Gardens, and the many beautiful arrangements in competition for the prizes formed one of the most attractive of the several features of this great gathering. There was a strong competition in the whole of the classes, and the decorated dinner tables and the baskets, bowls, and other receptacles filled with roses were equally remarkable for their beauty and the value of the object-lessons they afforded. This section of the exhibition was dealt with in the usual course in the report which appeared in our issue of the 15th inst., and we have now the pleasure of giving an illustration of the bowl of roses that formed the centre-piece of the round table for which Miss Florence Molyneux, Swanmore Farm, Bishop's Waltham, was awarded the first prize. We have seen a considerable number of floral arrangements with which Miss Molyneux has been successful in obtaining premier honours in keen competitions, and meritorious as they were, we have no hesitation in saying that on this occasion she surpassed herself. The arrangements were so delightful in their composition that we should have preferred illustrating the table; but photographs of round tables are invariably so unsatisfactory that we considered it advisable to illustrate the centre-piece which was so beautifully arranged as to obtain for Miss Molyneux's taste and skill the warmest praise. The roses used were The Lyon and Irish Elegance, which, in combination with bronzy foliage, produced as perfect a harmony of colour as we can well hope to see among roses, or, indeed, any other flowers.

A BEAUTIFUL BOWL OF ROSES

That formed the centre-piece of Miss Molyneux's first-prize round table at the N.R.S. exhibition.

PREPARING STRAWBERRIES FOR POT CULTURE.

To have a batch of strong plants for fruiting in pots, it is necessary to make a start at once by layering from plants that have been grown specially for the purpose, and these should have the flower trusses removed so as to strengthen the runners. Use 3in. pots, and place a piece of turf in the bottom of each, filling them firmly with old potting soil or other suitable material. There are frequently several plantlets on a runner, but only the first should be layered; peg it down firmly in the pot, and pinch the runner stem immediately beyond this. Spray them twice on bright days, and do not allow them to suffer from dryness of the soil. When they become established sever the runners from the parent plants, and should mildew appear dust them over with flowers of sulphur.

Early in August the young plants will be ready for their final potting, and for this use a compost consisting of three parts fibrous loam, one part old mushroom bed material, some road grit, and a 32in. pot full of bonemeal mixed with each bushel of the compost. The pots, which should be six inches in diameter, must be clean and well crocked. Some growers obtain good crops from plants grown in 48's, but these should only be used for early forcing, and it is a good plan to scatter some half-inch bones over the drainage. Pot firmly, and place the plants at such a depth that the roots are well below the surface with the crowns above. Give a good watering, and place the plants in a rather shady position until the roots are running freely in the new soil. Then they may be stood on a bed of ashes in an open position. Spray them over daily during bright weather, and when the pots are well filled with roots give weak liquid manure twice a week. Remove all runners and side shoots as they appear, and thus keep the plants to single crowns. When winter approaches they may be housed in cold frames, while those for late use should have the pots plunged up to the rims in ashes.

J. Gardner.

SWEET PEAS.

Sweet peas are now growing freely, and producing an abundance of fine flowers. Green-fly is rather troublesome, and may be removed by syringing with quassia extract. This pest may be readily detected by the presence of sparrows amongst the peas, and by the bruised buds which have been pinched by them in capturing the aphis. Watering is an important point, and, when considered necessary, should be accomplished thoroughly. Where one has the benefit of a hose for washing in a dressing of artificial manure, it is easily and quickly got over, but when one has to make use of a can the work takes some considerable time. The great thing is to give the plants a thorough watering, which will last a few days. The fact of giving water daily in driblets, which only penetrates about half an inch of the soil, is very harmful for the ground is constantly wet and cold. Great care must be exercised when artificial manures are used, or they will prove more harmful than beneficial. Liquid manure is an excellent stimulant, given in a diluted state, and an occasional watering with soot water proves of great assistance. Seed pods must not be allowed to form, or the plants will soon cease flowering. A mulching of farmyard manure will help to conserve the moisture, but this must not on any account be allowed to remain trodden tight to the ground; it will require to be loosened up frequently with a hoe or fork to allow the air to penetrate the soil.

E. C. P.

Mr. William Deal, F.R.H.S., "Brooklands," Kelvedon, Essex, gives a cordial invitation to all interested in sweet peas to inspect his crops growing for seed. He has about 12 miles growing on sticks, stocks equal to any in the country. Crops are about half-a-mile from Kelvedon station.—[Advt.]

TROCHODENDRON ARALIOIDES.

In European gardens this Japanese plant is cultivated solely on account of its evergreen foliage, for its flowers are so small that they scarcely warrant attention. Forming a comparatively low shrub, its rate of growth does not suggest that it will ever attain its largest natural proportions, which are from 15 to 25 feet in height with a trunk 9 to 12 inches in diameter, in this country. The obovate leaves are arranged in a sub-verticillate manner, and are up to six inches in length and two inches or so in width. They are thick in texture and glabrous. In its native country, however, the tree is put to a commercial use, for bird-lime is made from its bark. The species is cultivated specially for this purpose, and apparently somewhat largely. In the forestry section of the Japan-British Exhibition at Shepherd's Bush last year examples of the bird-lime were shown, also pictures representing the process of manufacture. For garden purposes it is well worth planting, for its glossy leaves are distinct, and it forms a change amongst other evergreens. W. D.

ROCK GARDEN NOTES.

Much attention is required at this season of the year by the occupants of the rock garden, especially with regard to weeding, pruning, propagating, etc. During dry weather a liberal quantity of water must be given the plants to assist them in the making of their growth. Although the early beauty has gone, there must be no neglect, for each plant will require attention in some form or other. The helianthemums should be cut over to clear off all the old flower stems, and, in many cases, will have to be pruned back to prevent any encroachment over the dwarfer subjects. Where the aubrietias and arabis have become old and straggly they should be cut back to advantage; this will induce them to produce young growths. Arenaria grandiflora sometimes requires the same treatment as the above when the stems become bare and untidy.

Top-dressing is an important matter now, and the enthusiast will see at a glance where this is necessary. Frequent waterings and heavy storms wash away much soil, and this must be made up again, for on no account must the stems be allowed to remain bare.

Propagation is the principal item of work, for to maintain a rock garden in a high state of keeping there must be a surplus supply of pot plants to fill up vacancies as they occur. Again, many plants become worn out with age, and it is necessary to replace them with young ones. In dealing with some subjects the young stock has to be raised from seeds, which should be gathered and sown as soon as they have ripened, especially so with the various primulas. Saxifraga pyramidalis is readily raised from seed, although it takes two or three seasons to obtain plants of a good size. Flowering plants of the edelweiss may be obtained in two seasons if the seed is sown immediately it is ripe. It is of quick germination, and the seedlings should be potted up singly when large enough to handle. The various dwarf phloxes can be easily increased either by cuttings or layers. Small pieces pulled off will quickly root in sand, and make nice plants for putting out next spring. Layering may be accomplished by working a liberal quantity of fine soil amongst the stems, which will soon produce roots if kept well watered. The amœna and canadensis varieties should be propagated by cuttings, but the sublata, or mossy section, can be rooted by following either method. The mossy section of saxifragas should be lifted and divided when the growths become crowded. Two or three growths should be potted into small 60's, and kept close, and shaded in an unheated frame until they are rooted. Androsace lanuginosa can be readily propagated by cuttings; it is one of the gems of the rock garden, and is also suitable for dry walls. Other subjects to propagate now are iberis, dianthus, silenes, saponarias, cheiranthuses, helianthemums, etc., all which can be easily increased by cuttings.

Amongst the many plants which produce their flowers at this season are the campanulas, a few of the best being garganica, garganica hirsuta, rhomboidalis, muralis, isophylla, and its varieties alba and Mayi. G. F. Wilson is of exceptional merit, having a close dense growth and large dark blue flowers. C. Riverslea, Isobel, China Cup, and White Star are all good, especially White Star, with its large saucer-shaped flowers. Cynanthus lobatus and Codonopsis ovata are both choice subjects, and belong to the campanula family. The latter requires a position on the higher part of the rockery to allow the insides of the pendent flowers to be seen to the best advantage. Antirrhinum glutinosum is a good wall plant, as well as being suited to the rock garden, delighting in a position in full sun. Haberlea rhodopensis is similar to the ramondias, and requires the same treatment. The dwarfer geraniums are very well adapted for sunny parts of the garden. G. sanguineum, G. lancastriense, and G. grandiflorum are three of the best. Erigeron mucronatus is a pretty prostrate species, bearing numerous daisy-like flowers in abundance. It is useful for drooping over a ledge or shelf in full sun. Myosotis azorica is one of the best of the genus, with dark blue flowers; it is fairly hardy, and well suited to half-shady damp positions. M. Welwitschi has a flat growth, and is excellent for covering stones.

Mimulus alpinus and M. Burnetti are useful for the bog garden, producing an abundance of flowers. In the south and south-western counties the mesembryanthemums are excellent for summer display; they all delight in a sunny position, and are wonderfully well adapted for dry walls. Calceolaria polyrhiza is an interesting slipperwort, and requires a half-shady position. It produces small rosettes of foliage from underground stems, and the flowers are borne on slender flower stalks about four inches high. At present it is rather rare and choice.

Convolvulus mauritanicus is rather tender, and probably would succumb to the frosts in cold localities, but it well repays the extra trouble of lifting annually and wintering in frames. Diascia Barberæ is a beautiful little plant, and one well suited for the rock garden. In the genial climate of the south-western counties it is perennial in character, but when it has to be treated as an annual it is well worth growing, making a useful addition to the summer-flowering plants. A few of the evening primroses are worthy of a place, such kinds as acaulis, macrocarpa, rosea, and cæspitosa are extremely useful. Cæspitosa is very beautiful, bearing large white flowers, which, with age, are slightly tinged with a pink flush and sweetly scented.

These, and many others, are welcome inmates of the rock garden during the summer months.

E. C. Pooley.

SUMMER PRUNING OF HARDY FRUITS.

Summer pruning of hardy fruit trees is practised for two reasons: to induce the formation of buds for another year, and to prevent the tree becoming overcrowded with a surplus growth of shoots. In some seasons there is an extraordinary profusion of clean, healthy foliage, and the work of disbudding or pruning is then not a little arduous. Summer pruning, as a matter of fact, is a kind of repressive and artificial system of training, which works on the same lines as disbudding. The first thing to be considered is whether the tree already bears more buds than it is properly able to mature. If this is so, pruning will consist of a thinning out of the weaker and badly placed shoots. It is a common practice to pinch the tips of shoots repeatedly, the same treatment being meted out to the little shoots which succeed them, but a better plan is to rub off all the secondary shoots as fast as they are produced, only the primary leaves being left. The chief object to aim at in summer pruning is to prevent the tree becoming overcrowded with more shoots and foliage than is actually necessary for its requirements. Vigour and fertility is then encouraged, and subsequently the tree should, as far as is possible, be kept in that condition during its growth. The work of summer pruning should not be commenced until the shoots have reached a certain stage, otherwise the buds at the base will burst into growth instead of remaining dormant and providing material for next season's fruit buds.

Severe cutting is quite unnecessary, and even harmful, for this work belongs properly to the annual winter pruning. As a rule, summer pruning is performed at the end of June or early in July.

In addition to the thinning of the shoots and fruit, and the pruning that may be necessary at the present season, protection must be given to the fruits against their numerous feathered enemies, such as sparrows, starlings, etc. The destruction of insects also calls for attention during the hot, dry summer months, when these pests become extremely troublesome. Water should not be given in any case when the fruit has commenced to ripen, but until then it may be applied occasionally for the benefit of the trees. Insecticides should be used to combat these insect pests, and traps may be set for earwigs, snails, and flies, all of which are extremely vicious enemies of open-air fruits. The feeding of hardy fruit trees is an item to which nearly every modern fruit-grower devotes considerable attention. The drainings from cow-sheds, stables, and piggeries, etc., are a most valuable source of liquid manurial stimulant for fruit trees growing in the open.

J. C. N.

Dahlias of all sections greatly appreciate liberal treatment, and when growing strongly, should receive frequent supplies liquid manure. The surface of the soil should receive a mulching of half-decayed manure, which must be frequently loosened wit fork to allow the air to have free access the soil. If exhibition blooms are required the quantity of shoots should be reduced about six, allowing no side shoots to gr on them. Disbudding will have to be attended to when the buds are in a small sta Supporting the growths must not be neglected, or they will split off from the ma stem when the foliage becomes wet heavy. When grown only for decorative poses such hard thinning and disbudding not required, merely a few growths removed where they are very thick.—E. C. P.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

ODONTOGLOSSUM GRANDE and its nearly allied species O. Insleyi and O. Schlipereanum are all autumn-flowering kinds, and where conditions suitable for their requirements are provided there is little difficulty found in their cultivation. These kinds are often found growing most satisfactorily in places where there is no pretence to orchid culture, and possibly few species are grown in these establishments. In practically all such gardens we find the plants cultivated all the year round in the ordinary plant stove, where they have an excessive amount of moisture during the summer, and until the growth has matured. After this they may be seen occupying an isolated position, where the only sustenance they obtain is from the moisture in the atmosphere. The plants often are used for decorative purposes in the house, and are found exceedingly useful. In orchid houses we generally give these kinds intermediate house treatment, and the plants are induced to grow and flower satisfactorily when we have a reasonably bright, sunny season. To flower them with any degree of certainty it is essential to freely expose them to light, and I find that where they can be accommodated under the same conditions as that usually provided for the successful flowering of Lælia anceps, they rarely fail to bloom satisfactorily. At the present season of the year the plants are in full growth, and some of the earlier-flowering kinds will soon be, if they are not already, showing their flower scapes. It is at this stage that they are particularly subject to the attacks of thrips. These soon do considerable damage, and constant observation is necessary. Dipping once or twice a week in some safe insecticide is a good method of destruction, but where regular fumigations and spraying are practised there is little likelihood of the thrips doing serious damage. We consider the best time to attend to repotting is when the new roots are pushing from the base of the new growth. This generally takes place about the flowering period, so that the plants may be conveniently attended to as soon as they pass out of bloom. They should not be disturbed for repotting more frequently than is necessary, so that good lasting material should be used. We use equal portions of fibrous peat, osmunda fibre, and finely chopped sphagnum moss, with sufficient broken crocks added to render the compost porous. Shallow pans are often found serviceable; these should be well drained, and have a suspending wire attached, so that they may be hung near the roof glass during the whole of the dormant season. Much of the success in flowering depends on the proper ripening and treatment through the resting season.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

BOUGAINVILLEAS. — These are now flowering freely, and producing an effective display. In a warm greenhouse or conservatory where they are used as roof climbers, the flowering shoots being allowed to hang loosely from the roof, they form a charming picture of floral beauty, and the flower sprays are most serviceable in a cut state. Specimens that are cultivated in large pots or tubs may be allowed to complete their flowering season in a cool house, and afterwards be transferred to outside, where they will have the young growths thoroughly ripened. Although I have seen bougainvilleas exposed to a few degrees of frost without injury, I would not recommend a temperature of less than 45 degrees for their winter quarters.

ACHIMENES.—As these pass out of bloom some attention should be given to the ripening up of the corms. Place them in a position near the glass, where they will obtain a free circulation of air, and treat somewhat drier at the roots until the growths die down. It will be advisable, and in some cases most convenient, to store the corms in dry sand for the winter, where they may remain until required for starting into growth again next spring.

CALANTHES.—These are now developing their new bulbs, and I find it essential to give alternate waterings of weak farmyard liquid. A top dressing of good lumpy compost will also be of assistance. In some cases where stimulants have not been employed at this stage with calanthes I have observed premature ripening of the bulbs, and usually a weak flower spike is the result.

MYRSIPHYLLUM ASPARAGOIDES (SMILAX). — Most gardeners are fully expected to produce a continuous supply of trails of this useful plant. In most establishments it is almost indispensable, and is constantly in demand for the greater part of the winter and spring months. A batch of seedlings can be raised from seed sown at this date. Use shallow pans or boxes, and thoroughly steep the seeds in water for twenty-four hours previous to the time of sowing for the purpose of assisting germination.

STEPHANOTIS FLORIBUNDA is now profusely blooming, and if careful attention is regularly paid to watering and feeding the usual flowering season will be considerably prolonged, and the vigour of the plants improved. Remove the weak and undesirable growths, and train the permanent shoots in position. A sharp and constant look out must at all times be observed for insect pests, mealy bug being almost invariably present. It will be advisable to occasionally syringe with some approved insecticide. — John Donoghue, Bardon Hill Gardens.

THE FLOWER GARDEN.

BORDER CARNATIONS.—No time must be lost now in carrying out the layering operations. The sole reason why so many people fail to grow these successfully is because the layering is done too late. The latter half of July is an ideal time for the work because root action is quicker than it is in August, and it is essential that the young plants should be well rooted before they are put out into their permanent quarters. In many cases it is necessary to thin the growths, allowing sufficient only to fill the available space without overcrowding. A suitable soil for the layers to root into may be made up with loam, leaf-soil, and sea sand in equal parts, and then thoroughly mixing them. Before placing this round the plants the ground should be slightly broken with a hand fork. It is desirable that a sharp knife should be used for the operation of cutting the shoots, which must be accomplished in the following manner. The knife should enter the stem of the shoot immediately below a joint, and cut half way through it, turning the knife in an upward direction, cutting up the centre and withdrawing it below the next joint. Gently press the tongue into the soil, and make secure with a peg, covering it with soil to prevent the shoot from swaying about. When layering is completed, give a good watering to settle the soil round the layers and help to keep them firm.

EARLY-FLOWERING GLADIOLI. — In gardens where they can be successfully grown in the open, these gladioli provide an abundance of cut bloom for decorative purposes. They delight in a light, rich soil, and increase rapidly. In the southern districts they thrive wonderfully well, but in cold localities it is almost useless trying to grow them, as they start early in the autumn, and consequently are cut down by frost. Lifting and dividing is necessary when the corms become overcrowded, and this should be accomplished immediately the foliage has died down. The corms should be sorted out, and the best replanted singly in rows twelve inches apart, allowing six inches between each corm. There are several varieties, some of the best being Colvillei The Bride, which is perhaps the best known of any, Ackermanni, Blushing Bride, Peach Blossom, Lord Grey, Rosy Gem, Ne Plus Ultra, Crimson Queen, and Salmon Queen.

IRIS, ENGLISH AND SPANISH.—These greatly repay for being lifted, divided, and replanted into fresh quarters. When they are allowed to remain in an overcrowded condition the flowers naturally become small.

IXIAS and SPARAXIS form two beautiful groups of summer flowering bulbous plants, and should be largely grown for cutting purposes. A light soil and sunny border is the most suitable place for them, and when the winter is very severe a covering of light litter will usually give them all the necessary protection.

HERBACEOUS BORDERS will demand much attention with regard to hoeing, weeding, etc. The flower spikes should be removed from the delphiniums immediately the blooms fade. This will often induce the plants to produce more spikes which will open late in the autumn. Of course, they will be considerably shorter than the first ones, yet the flowers are highly appreciated. During dry weather abundance of water must be given to keep the phloxes, Michaelmas daisies, etc., in a healthy growing condition. —E. C. Pooley, Gnaton Gardens, Plymouth.

FRUITS UNDER GLASS.

EARLY VINERY.—Admit an abundance of air by both top and bottom ventilators, and if birds are troublesome put some wasp-proof netting over the opening. This will keep out both birds and wasps should these become troublesome. As soon as all the fruit is used the house should be opened to the fullest extent to give the vines all the sun and air possible, and when the wood is sufficiently advanced the branches should be pruned back to admit more sun and light for ripening purposes. It is a good plan, as soon as all the fruit is removed, to prepare some insecticide, and with a garden engine give them a thorough washing, directing the liquid over and under the leaves. This will effectually eradicate every insect should there be any. I consider it the best time for doing the work of cleaning, as the pests are now active.

BORDERS.—In August the borders may be seen to if this is necessary from any cause, and some soil should be prepared as advised in a previous number for the renovation. Meanwhile keep the borders moist, but not wet, and, of course, much depends upon the nature of the soil used and its peculiar character, which must always be carefully considered.

MUSCATS.—Since the break in the weather much more fire-heat has been used to keep up the recommended temperature, viz., 70 deg., and not so much damping down has been requisite. This, however, must not be neglected with the return of bright, sunny weather, or the foliage will quickly fall a prey to red spider or thrips. Govern the inside conditions by those of the outside with regard to fire-heat, so that the temperature may not at any time fall below 70 degrees. The weather now (July 14) is hot and sultry, 75 to 85 degrees shade temperature, with 122-130 in the sun during the week. With this heat the outside walls became very hot, and a damping down outside is an advantage. Look over the bunches and cut out with a pair of scissors any small or stoneless berries, and keep on pinching out strong lateral growths, and more especially those that are touching the glass, and in the case of young vines, train up the rods straight and under the wires.

STRAWBERRIES FOR FORCING.—Pot up the runners as soon as possible—that is, as soon as they have enough roots, and in potting take care that the roots or the ball are not broken. Use good sweet soil, such as maiden loam, and in case of its being on the stiff side, use plenty of opening matter, such as old mortar rubble, wood ashes, and a fair proportion of bonemeal.—W. A. Cook, Leonardslee Gardens.

EXHIBITIONS AND MEETINGS.

Bath Summer Show.

JULY 12 and 13.

There is no place in England quite like Bath. In the first place, it is built of its own particular stone, which makes it unique; secondly, it has history which dates back to the Roman period; and thirdly, it occupies a sheltered position, protected, as it were, by the hills which surround it. Under ordinary circumstances Bath is warm, but on July 12 and 13, when the annual floral fête was held, it was hot, almost overpoweringly hot, and it is difficult to say who felt it most—the flowers or the visitors. There was one redeeming feature, however, the site of the show, for the Sydney Gardens is a place of trees and shade, and the tents were dotted about in a way which avoided any suggestion of monotony. The show was one of the events of the great Bath Carnival, which extends over a period of nine days, and on the opening day of the show Bath gave a hearty welcome to the guests from the overseas dominions of the Empire. The exhibits, which were of a most varied character and mostly floral, were arranged in three marquees, and, while two of these were well filled, the third presented a somewhat bare appearance, which is accounted for by the fact that this was mostly set apart for amateurs. Roses and the tropical weather had proved one too many for them. Variety was, perhaps, the leading feature of the show, and while we saw there roses which were splendid for the season, hardy flowers in great profusion, sweet peas as good as any we have met with this year, well-grown carnations, and splendid begonias, there were also collections of named wild flowers, artistically arranged table decorations, baskets of flowers, bouquets, sprays, and lastly, models of flower gardens, which reminded us of a feature of flower shows that was at one time very popular, but which in late years has dropped out of most exhibitions.

The luncheon was quite a happy little event of brief and pointed speeches. The Mayor of Bath presided, the Rev. R. Powley, a portly rose growing vicar from near Warminster, spoke on behalf of the rosarians, and that well-known amateur Mr. Conway Jones, of Gloucester, responding to the toast of "The Judges," enlarged on the excellence of the roses in the nurserymen's classes, despite the heat and the drought, and recounted a few anecdotes of the late Dean Hole. The veteran and highly-respected gardener, Mr. T. Challis, regretted the fact that specimen stove and greenhouse plants are no longer a feature of the Bath shows as they were in days of yore, and he pointed out how shows at the present time are largely made up of trade exhibits, and nurserymen have to a great extent taken the place of gardeners and wealthy amateurs, though Mr. Challis refrained from giving reasons for the change. No toast was received more enthusiastically than the vote of thanks proposed to Mr. B. R. F. Pearson, the worthy secretary, who maintained his genial urbanity of manner throughout, and this in spite of the complicated nature of his task and the sweltering conditions which prevailed. We hope the Bath show has proved as successful financially as it was in other respects.

ROSES, NURSERYMEN.

In the big class for seventy-two distinct blooms the task of placing the winner was not a difficult one, and Messrs. A. Dickson and Sons, Newtownards, won with a collection of beautiful flowers. The substance of the blooms helped them to withstand the great heat for quite a long time, and the best flowers on the stands were fine specimens of George Dickson (one of the finest blooms we have seen), Her Majesty, Marie Rady, Horace Vernet, madame Eugene Verdier, the new rose Brilliance, Charles J. Grahame, and a new pinkish-white rose Eric. Mr. John Mattock, of Oxford, was placed second, but the quality of bloom here fell short of the first prize exhibit, and the third prize collection exhibited by Mr. Rowland Adams, Bath, struck us as being a very fresh lot of flowers.

The class for thirty-six trebles brought out a very close competition, and here Messrs. Alex. Dickson and Sons were again victorious, winning with fine specimens of Charles Lefebvre, Dr. Andry, A. K. Williams, Brilliance, Tom Wood, and others. Mr. John Mattock again occupied the second position, his best flowers being A. K. Williams, Mildred Grant, Hugh Dickson, Mrs. W. J. Grant, and Earl of Warwick.

In the class for eighteen trebles Mr. H. Drew, Longworth, was victorious, and, considering the season, the flowers were quite good, the best specimens being Maman Cochet, Duchess of Bedford, Ethel Brownlow, and A. K. Williams. Messrs. A. A. Walters and Son, Bath, came second, and in this exhibit the Lyon Rose, Robert Scott, and Baroness Rothschild were the best flowers.

The box of teas and noisettes which won for Mr. H. Drew, Longworth, the first prize in the class for eighteen was one of the finest stands of flowers we have seen this season. Amongst the varieties shown Madame Constance Soupert was grand, and the same adjective might be used to describe Mrs. W. Kennedy, Maman Cochet, M. J. Dupuy, and Edward Mawley. Mr. J. Mattock was second with a moderate lot of flowers.

AMATEURS AND OPEN.

In the class for twenty-four distinct varieties there were two entries, and Mr. Conway Jones, Gloucester, easily defeated Mr. W. J. Ball, Chippenham. In the first-named stand there were good flowers of Mrs. John Laing, Hugh Dickson, and Ulrich Brunner. There was no entry for trebles, and in the class for eighteen varieties, Miss Fisher, of Potterne, won with a fresh and creditable stand of flowers, amongst which Maman Cochet, M. Joseph Hill, and Countess of Derby were good. The Rev. R. Powley, Warminster, was a very fair second, and Mr. W. J. Ball, Chippenham, third. The Rev. R. Powley was the only exhibitor in the class for eight trebles, and was deservedly given the first prize. There were two competitors in the class for nine hybrid teas and nine teas, but, as neither of them showed according to schedule, no awards were made.

In the classes open to growers of less than 1,000 plants, Mr. W. J. Ball, Chippenham, had the best twelve roses, the flowers in this stand being particularly fresh and good. Mr. A. Searle, Bassett, Hants, was a good second, and Miss Fisher third.

The Rev. J. T. Kershaw, Warminster, was easily first with six blooms, and Mr. R. H. Merrett came second. In the class for four lots of trebles the Rev. J. T. Kershaw won with a choice lot of flowers, Mr. W. J. Ball being second, and Mr. R. H. Merrett, third.

Quality in the local classes was very moderate, Mr. R. H. Merrett being first for twelve, this being the only notable stand.

Mr. Conway Jones had no rival in the class for eighteen tea and noisette roses, and was awarded first prize. In the class for twelve blooms, the Rev. R. Powley won with good flowers, and the second prize went to A. Searle, Esq. A moderate lot of trebles shown by Mr. Conway Jones won for him the first prize, the Rev. R. Powley being second. For six hybrid tea and tea roses, the Rev. J. T. Kershaw won the first with a very nice stand of flowers, in which a good bloom of F. Pemberton was conspicuous.

The class for a collection of garden roses shown in bunches was very effective, and the first prize was well won by Mr. John Mattock, who showed Betty, Countess of Gosford, Edu Meyer, Gottfried Keller, Madame Abel Chatenay, and Hiawatha in good style. Mr. Rowland Adams, of Bath, was a very creditable second, and Messrs. G. Cooling and Sons, third. One of the most pleasing classes in the show was that in which prizes were offered for the most decorative arrangement of roses, and Mr. R. Adams's display which won first prize was highly creditable. The flowers were of good quality and tastefully arranged in bamboo stands, etc. Messrs. G. Cooling and Sons were second, and Messrs. A. A. Walters and Son, third. Mr. J. Mattock was first for eighteen blooms of one variety, and Mr. Rowland Adams second.

The six bouquets of roses which won first prize for Mr. F. J. Cole, Bath, displayed unmistakable signs of the effects of the heat, and the same state of affairs was noticed in the class for one bouquet, where Mr. R. Adams came first, and Mrs. Colston Hale second. In the open class for twelve blooms of any rose except tea or noisette, Mr. J. Mattock won with Bessie Brown, and Messrs. Alexander Dickson second with Horace Vernet. Mr. H. Drew won with twelve blooms of one variety tea or noisette, and the same exhibitor had the best twelve blooms of any new rose, showing Mrs. Foley Hobbs.

In the class for twelve distinct varieties of exhibition roses, five blooms of each, shown in vases, Mr. H. Drew had the best blooms and first prize, but the arrangement of Mr. Rowland Adams's second prize exhibit was better, and Mr. J. Mattock came in third.

Mr. Conway Jones won in the amateurs' class for nine distinct varieties of garden roses, Miss Ashe, Chippenham, coming second, and Mr. W. A. Hick, Batheaston, third.

SWEET PEAS.

In the class for a collection of twelve varieties of sweet peas there was a splendid competition, and in a stiff fight Mr. F. G. Bealing, Southampton, won first honours. The quality of the flowers was superb, the best vases being Tenant Spencer, Etta Dyke, Scarlet Monarch, M. Beaver, and Othello. Mr. G. A. H. White was second with a tastefully arranged exhibit, in which the flowers were good, and Mr. G. Humphries, Chippenham, came in a creditable third. Mr. F. G. Dealing was also victorious in the class for six bunches of sweet peas, his flowers of Helen Lewis, and Mrs. C. Foster being very good. Mr. G. A. H. White was a good second, and Mr. G. Humphries third. There was a good competition in the class for the most tastefully arranged table of sweet peas, and Mr. J. T. Curtis, gardener to S. W. Howell Davies, Bristol, was awarded first prize. The blooms here were beautiful, but for a table decoration we thought there was rather too great a variety of colour. Mr. F. T. Cole, Bath, was placed second, but some of the visitors seemed to prefer Mr. Edward Fisher's table of pink sweet peas.

For an ornamental vase of sweet peas Mr. E. M. Mutlow, Hapsford, won with a pretty arrangement, Mrs. Vallis, Frome, being second, and Mrs. Colston Hale third. The last-named exhibitor also won first with a bouquet of sweet peas, Mrs. B. Hooper being second, and Mrs. M. L. Pierce third. Mrs. Colston Hale also had first for a bouquet of sweet peas arranged with fern. There was a good entry in this class, but none of the bouquets were very tastefully put together.

OTHER FLOWERS AND PLANTS.

Geraniums looked bright in the class for twenty-four bunches, Mr. G. McMurtrie, Radstock, coming in first, and Mr. J. Wi Tormarton, second. Baskets of cut flowers were pretty, Mr. E. Viner, Frome, being first, and for a basket of roses Messrs. A. A. Walters and Son, Bath, occupied the premier position.

The collection of carnations which won first prize for Mr. Charles Wall, Bath, was arranged in a very pleasing manner, and it was probably the arrangement that placed the exhibit in front of the carnations shown by the Duchess of Somerset. Mr. C. Wall also won first prize for twenty-four carnations and picotees. Mr. W. J. Ball second.

Not the least interesting class in the

CARDIFF FLOWER SHOW.
By kind permission.
SOPHIA GARDENS, CARDIFF.
WEDNESDAY and THURSDAY, July 26th and 27th, 1911.
The renowned Full Band of H.M. 19th Queen Alexandra's Own Royal Hussars.
Grounds and Tents brilliantly Illuminated.
Mr. John Studt's Complete and Extensive Amusements.
Every Particular and Schedule, Apply
A. MAURICE BAILEY, Secretary,
24, Duke Street, Cardiff.

LEICESTER.—ABBEY PARK FLOWER SHOW, 8th and 9th August next. Open Class, Group of Plants, £20, £15, £10, £6. Liberal prizes for Collections of Fruit, Displays of Roses; Silver Cup, Gold and Silver Medals for non-competitive exhibits. Schedules from JOSEPH BURTON, Supt.

NATIONAL VEGETABLE SOCIETY.—Entries close AUGUST 21st. Schedules of classes and prizes offered at the Society's
GREAT EXHIBITION OF VEGETABLES
to be held in the Royal Horticultural Hall, Westminster, on August 30th next, are now ready, and can be had on application to
HON. SEC., E. G. QUICK,
Kelmscott, Harrow View,
Wealdstone, Harrow.

SHREWSBURY GREAT FLORAL FETE.
AUGUST 23 and 24, 1911.

£1,200 in Cash Prizes.

Schedules for this year are now ready, and may be had post free from—
Messrs. ADNITT and NAUNTON, Hon. Secs.,
Shrewsbury.

THE THIRTY-SEVENTH ANNUAL EXHIBITION will be held in SWANMORE PARK, BISHOP'S WALTHAM, AUGUST 2nd, 1911.
Special Features: £10 0s. 0d. Table Decoration and many other valuable prizes in Floral Classes.
Schedules from
E. MOLYNEUX,
Swanmore Park,
Bishop's Waltham, Hants.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

show was that for a collection of hardy flowers, occupying a space of 12ft. by 3ft. Messrs. A. A. Walters and Son, Bath, were the winners with a beautiful lot of flowers, but overcrowding was the fault of the arrangement. Mr. F. Eames, Frome, was the second-prize winner, and here again a grand lot of flowers was rather spoilt by crowding. Messrs. Rich and Co. were placed third, and though the flowers were not quite so good as in the first and second prize lots we liked the arrangement better.

Mr. John Walter, Larkhall, showed six good single begonias, which won first prize, Mr. J. Dyke, of Bath, being second. Mr. A. C. Palmer, Tiverton, was the champion exhibitor in the class for double begonias, his plants being very fine. Mr. John Walter, Larkhall, was a creditable second, and Mr. J. Dyke third. The last-named exhibitor staged the best 36 double begonia blooms in twelve varieties, the flowers being very fine. Mr. A. C. Palmer was second, but he won in the class for twelve blooms, Mr. J. Walter coming second, and Mr. J. Dyke third. Mr. J. Walter had the best single begonia blooms, Mr. Herbert Pike, Radstock, taking the second place.

Two exhibitors competed in the class for a group of plants, and Mr. E. C. Pearce, gardener to W. Waite, Esq., was placed first for a pleasing arrangement of stove and greenhouse plants, which, if anything, was rather too flat. Mr. W. Sims, gardener to Major H. Doherty, was second, with a collection that was lacking in quality compared with the first-prize exhibit.

Mr. G. A. H. White had first prize for twelve bunches of hardy flowers, but the arrangement was somewhat stiff. Mr. W. A. Hick came second, and Lady Sybil Codrington, Badminton, third.

TABLE DECORATIONS.

This division created a good deal of interest, and for the most tastefully arranged floral decoration for a dinner table Mr. J. T. Curtis, Bristol, was first with an elegant arrangement, in which cattleyas, selaginella, and croton leaves were employed. Mr. E. Fisher, Batheaston, was second, with a pretty arrangement of roses, and Mr. F. J. Cole came third. In the ladies' class Mrs. E. Welden won with a pretty mauve and white sweet pea decoration, Miss Dobbs being second, and Miss B. Castellain third, but the last two tables were quite of an ordinary type.

FRUIT AND VEGETABLES.

Compared with the flowers the display of fruit and vegetables was small, but what was lacking in quantity was made up in quality, and some of the exhibits were extremely good. Mr. W. Strugnell, gardener to Rt. Hon. W. H. Long, M.P., of Rood Ashton, Trowbridge, easily won first prize for four dishes of dessert fruit with grapes, a melon, a dish of nectarines, and a good dish of figs. Mr. D. McIntosh, gardener to Rt. Hon. Lord Islington, was second, and Mr. E. Fisher, Batheaston, third. Mr. Herbert Pike, gardener to W. Wailes, Esq., Radstock, had the best melon; Mr. W. Sims, gardener to Major H. Doherty, second, and Mr. W. Strugnell third.

Strawberries were a fair lot for the time of year. Mr. J. Ricketts, Batheaston, was first for six dishes in not less than four varieties, and for three dishes of the same fruit Mr. W. Hood, Batheaston, was the victor. The same exhibitor also had the best single dish of strawberries, showing Sir Joseph Paxton, and for the twelve heaviest berries Mr. W. Hood was first.

Mr. George Horsell, jun., Bath, had the best collection of vegetables, cauliflowers and tomatoes being the best dishes, Mr. W. Burt, gardener to Miss Hamilton, Bath, being second, but he might with advantage have substituted something else for his pigmy kidney beans. Mr. A. J. Andrews, Batheaston, was first for cucumbers, Mr. Thomas Emm, gardener to Mrs. Hargood Ash led with tomatoes, and Mr. George Horsell, jun., had the best collection of salading, which even included salad cream and hard-boiled eggs, rather a novel departure in the exhibiting of salads.

Mr. W. Strugnell was successful in winning Messrs. Sutton and Sons' prize for a collection of vegetables, his best dishes being Sutton's Prizewinner scarlet runner beans, Ideal peas, and Magnum Bonum cauliflower. Mr. A. J. Andrews, Batheaston, was a good second, and Mr. T. H. Bolton, gardener to the Earl of Devon, Exeter, third. For the prizes offered by Messrs. Webb and Sons for a collection of vegetables Mr. A. J. Andrews, Batheaston, came out top, his marrows and peas being exceptionally good. Mr. W. A. Woodfield was placed second, but we fancied Mr. W. Strugnell's collection, which was awarded third prize.

There were several other classes in addition to the above, in which prizes were offered for table plants, collections of wild flowers, and model flower and ornamental gardens, and in each of these the competition was up to the average.

TRADE EXHIBITS.

Messrs. Cooling and Sons, Bath, set up a nice collection of roses, in which big bunches of Lady Grey, Hiawatha, and the new bedding rose Orleans were conspicuous. Messrs. Blackmore and Langdon, of Bath, were represented by a collection of border carnations tastily arranged in vases and bamboo stands, double and single begonia flowers of enormous dimensions, and mostly named, and a striking collection of delphiniums in different shades of blue and purple. Messrs. Jarman, of Chard, had a choice little lot of their well-known centaureas, a few roses, and a big display of their new sweet pea Mrs. Townsend. A little reminder of the Temple Show was made by Mr. J. Milburn of Bath, who put up a pretty arrangement of rockery. Messrs. Young and Co., Cheltenham, set up a most beautiful display of carnations, which was awarded a gold medal, and a nice lot of zonal pelargoniums were shown by Mr. Vincent Slade, Taunton. Mr. A. Edward Arnold, Notts, had specimens of Edwardian table decorations, and Messrs. Rich and Co., Bath, showed herbaceous flowers and roses.

Royal Horticultural Society.

There was a very small exhibition at Westminster on Tuesday, July 18, and a quite small attendance. Shows innumerable, the recent Coronation festivities and hot summer weather all contributed to this state of affairs; crowds of Fellows have gone for their holidays, and most of those present last Tuesday wished themselves far away in the country or by the seaside. Hardy flowers were moderately shown, and roses and phloxes showed the influence of heat and lack of rain. Some good carnations were on view, and a most interesting collection of Cape pelargoniums. The Gladiolus Society held its exhibition at the hall, but it was a tame affair.

FLORAL COMMITTEE.

Mr. Amos Perry, Enfield, presented a water garden with its complement of water lilies and a surroundng of Japanese irises, the bold golden Senecio macrophylla, pink astilbes, Lilium Humbolti, L. Krameri, Japanese maples, and hardy ferns. The latter occupied both ends of the group, and the crested and plumose lady ferns proved of great interest.

The stately white-flowered Eremurus Olgæ alba, shown by The King's Acre Nursery Co., Hereford, was greatly admired, and an Award of Merit was made in its favour; it has white blossoms, each segment with a green central line. The pink E. Olgæ was also well shown by the same firm.

Delphiniums and gaillardias, with a few gladioli made up an effective exhibit from Messrs. Kelway and Son, Langport; Queensland, Devonshire, Glory, Gold Standard, and Langport were a few gaillardias of exceptional merit.

Although there was nothing specially rare in the display made by Messrs. Thos. S. Ware, Lim., Feltham, this firm's exhibit of big bunches of popular and seasonable border flowers was a good one.

A rare exhibit of border carnations, filling one long table, was arranged by Mr. A. F. Dutton, Iver, Bucks. The splendid blooms were put up in big vases, and associated with asparagus sprays. Very fine were the vases of Marie Studholme, Hayes Scarlet, the yellow Mrs. Forbes, the crimson Mephisto, Ronny Buchanan, Graham White—a grand broad-petalled pure white variety; Bendigo—a new rich blue-purple variety; the pink Miss Schiffner, the crimson Agnes Sorrall, the scarlet Roy Morris, and the beautiful white, rose-flaked Herbert Newman (A.M.), a grand long stemmed border carnation.

No group was of greater interest than the one of Cape pelargoniums set up by Mr. Edwin Beckett, V.M.H., gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree. All the plants were well grown and chiefly in 32-sized pots, thus making neat and easily-handled specimens from 18in. to 2½ft. through. About eighty species and hybrids were shown, and they afforded ample evidence of the wonderful variety of form and habit the genus possesses. From the cactus-like P. tetragonum, with scarcely a leaf on its succulent square stems, to the downy broad-leaved P. tomentosum, was a far cry in the matter of appearance. P. crispum minor, P. artemisiodes, P. grossularioides, and P. terebintha, all had tiny leaves, while P. betulæfolia somewhat resembled beech leaves. P. multibracta with white flowers and purple-marked leaves, was striking, and so were P. radula, P. Blandfordiana, and P. glutinosus. Among the old hybrids we noticed Moore's Victor, Clyne Seedling, Shottesham Pet, Prince of Orange, Lady Plymouth Fair Emily, Lady Mary, Rollison's Unique, the bright scarlet Shrubland Pet, and Little Gem. We did not think such a grand collection of species and old hybrids was in existence, and it was a great treat to have the opportunity of seeing so many old friends. This exhibit gained the highest award of the day for plants and flowers.

A superb set of border carnations from Mr. Jas. Douglas, Great Bookham, was as remarkable for its arrangement of big bunches as for the beauty of the blooms. Elizabeth Schiffner, the pink Court Beauty, Agnes Sorrel, crimson; Cardinal, scarlet; Mrs. G. A. Reynolds, buff; Forester, yellow fancy; Mrs. Andrew Brotherston (A.M.), crimson and rose fancy; Mrs. Elliott Douglas, a fine clear yellow self (A.M.); Mrs. G. Marshall, deep crimson; and Robert Berkeley, soft scarlet, were a few of the very best.

An elegant new conifer of selaginella-like appearance was shown by Mr. A. J. Jones, gardener to Miss Weyburn, Hadley Manor, Barnet, Herts. This was Fokienia Hodginsi, a Chinese shrub that has yet to prove its usefulness in this country. Dr. Henry recently founded the genus Fokienia on this plant. Several small seedlings were shown, raised from seeds sown at Hadley Manor on April 4, 1910.

Messrs. W. Cutbush and Son, Highgate, presented a very fine group of cut carnations, putting up very large vases and bowls. Among the older sorts Winsor, White Perfection, Mikado, Cecilia, Beacon, and May Day were excellent, and among newer varieties we noticed Miss Winnie Pryor, red flaked on white; Edna, very large, heliotrope shade, good form; Countess of Bradford, buff and rose; and The Bell, a fringed white, very fragrant.

A number of new sweet peas were staged by Mr. William Deal, Brooklands, Kelvedon, and the most notable of these were Scarlet Monarch, very bright; Winifred Deal, blush and white; Colleen, two shades of bright rose; and Juliet, a cream pink.

The early flowering gladioli exhibited by Mr. Frank Lilley, Guernsey, were greatly admired, as also were the long, arching spikes of Sparaxis pulcherrima, the alstrœmerias, and liliums.

Messrs. Paul and Son, Cheshunt, showed a charming lot of roses, including Gustave Regis, Grus an Teplitz, Renée W. Urbar, and Caroline Testout, with ramblers behind and weeping standards towards the front. These latter were on very tall clean stems, the stock being a new one raised by the Cheshunt firm, and named the Rosite stock.

Especially good were the huge African marigolds, Lemon Queen and Prince of Orange, so well shown by Messrs. Dobbie and Co., Edinburgh.

Cannas were grandly staged by Messrs. James Veitch and Sons, Chelsea, and among them we were greatly struck by the new Fraulein E. Kracht (A.M.), a large-petalled variety with rosy-salmon colouring and an unusually elongated spike; Gaekwar of Baroda, yellow and vermilion, was also a grand variety. Border carnations, gloxinias, Exacum macranthum and Solanum Wendlandi were also contributed by the Chelsea firm.

Messrs. Stuart Low and Co. presented roses and carnations in tall vases; among the former Harry Kirk, White Killarney, and Duchess of Wellington were conspicuously good.

Mr. Maurice Prichard, Christchurch, exhibited large bunches of Crinum Powelli, Lilium testaceum, and phloxes, but the latter suffered from the heat.

The curious white-flowered campanula Vidati was a notable feature of the group of flowers staged by Messrs. G. and A. Clark, Dover; it has erect spikes and pendant flowers.

Duchess of Normandy, a soft yellow, pink shaded sport from the famous Dean Hole rose, was presented in excellent condition by Mr. P. Le Cornu, Jersey Nurseries, Jersey; all the flowers shown were cut at 5 a.m. the previous day.

Nerissa, a lovely full H.T. rose, of softest and palest peach yellow shade, tinted with pink, was well shown by its raisers, Messrs. William Paul and Son, Waltham Cross, and gained an A.M.

Plagianthus Lyalli, a white-flowered shrub that needs wall protection to be a success, was exhibited by Mr. C. J. Lucas, Warnham Court, Horsham, and gained an A.M.

Mr. Charles Blick, Hayes, Kent, had a few very fine carnations, and gained an Award of Merit for James Quin, a buff fancy with bright rosy markings; for King George, a clean petalled white border variety; and for Dora Blick, a beautifully formed variety that may perhaps be best described as orange terra-cotta.

A grand lot of herbaceous phloxes from Messrs. Gunn and Sons, Olton, also suffered somewhat from the heat, but Baron von Dedem, deep salmon red; Wilbur Wright, brilliant rosy-red; King Edward VII., scarlet; Mrs. Oliver, pink; and Elizabeth Campbell, salmon-pink, were a few that stood the heat well, and held up their fine trusses bravely.

A bold group of caladiums, backed by palms, and set up opposite the entrance by Mr. L. R. Russell, Richmond, was a feature of the show.

Other exhibitors included Messrs. Wells and Co., Merstham; Messrs. Phillips and Taylor, Bracknell; Mr. H. J. Jones, Lewisham; Messrs. Frank Cant and Co., and Messrs. B. R. Cant and Sons, Colchester, both firms staging cut roses; Messrs. H. B. May and Sons, Edmonton; Messrs. Whitelegge and Page, Chislehurst; Mr. G. Reuthe, Keston; Mr. A. J. Harwood, Colchester; Messrs. S. Bide and Sons, Farnham; and the Guildford Hardy Plant Company.

ORCHID COMMITTEE.

Particularly fine was the large specimen of Dendrobium Victoria Regina, carrying scores of fair-sized, blue-purple and white flowers, shown by Mr. W. H. White, orchid grower to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking; it secured a F.C.C. and also a Cultural Commendation.

In the small exhibit put up by Messrs. Charlesworth and Co., Haywards Heath, the finest things were Vanda cœrulea, the aromatic golden-flowered Anguloa Cliftoni, Cymbidium Huttoni, Odontoglossum Schleiperianum citrinum, Stanhopea oculata, and the handsome Lælio-cattleya Sibyl.

Mr. de Barri Crawshay, Sevenoaks, brought up a pale form of Odontoglossum Waltonense and a very richly-coloured O. Rosefieldiense. Cattleya Warscewiczi was well shown by Messrs. J. and A. A. McBean, Cooksbridge; with these were several good forms of Odontoglossum crispum.

Stanhopea tigrina was a striking plant in the collection of orchids submitted by Messrs. Stuart Low and Co., Enfield; Epidendrum vitellinum majus, Oncidium Lanceanum, the charming Disa grandiflora, Cattleya Warscewiczi, and the brilliant Renanthera Imschootiana were other good things.

From Messrs. Sander and Sons, St. Albans, came the rare Dendrobium regium, with large rosy-mauve flowers, the quaint Bollea cœleste the yellow fringed Brasso-cattleya Mrs. J. Leemann, Cattleya intermedia alba, and the long pendant spiked Acineta chrysantha.

FRUIT COMMITTEE.

The display of gooseberries made by Messrs. J. Veitch and Sons, Chelsea, was at once attractive and instructive. Along the back were trained gooseberries, each stem a cordon, and clothed with fine fruits. A few red and white currants similarly grown carried quantities of clean fine fruits. In front were baskets of beautiful fruit, and notable varieties of gooseberries on show were Langley Beauty, Langley Gage, Fearless, Golden Gage, Gipsy Queen, Warrington, Speedwell, Keepsake, the little dark-hued Ironmonger, Trumpeter, Criterion—a big golden-green form—and Leviathan, a still larger greenish berry.

Twenty-three excellent Queen pine apples, grown and exhibited by Mr. T. Coomber, gardener to Lord Llangattock, The Hendre, Monmouth, were very fragrant, and a great temptation on such a warm day.

Melons were exhibited from the Horticultural College, Swanley.

CERTIFICATES AND AWARDS.

First-class Certificate.—To Dendrobium Victoria Regina, from Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking.

Awards of Merit.—To Eremurus Olgæ alba, from The King's Acre Nursery Company, Hereford; to Carnations James Quin, King George, and Dora Blick, from Mr. Charles Blick, Hayes, Kent; to carnations Herbert Newman, Mrs. Elliott Douglas, and Mrs. Andrew Brotherstone, from Mr. James Douglas, Great Bookham; to Canna Fraulein E. Kracht, from Messrs. James Veitch and Sons, Chelsea; to rose Nerissa, from Messrs. William Paul and Son, Waltham Cross; to Fokienia Hodginsi, from Miss Wayburn, Hadley Manor, Barnet; to Plagianthus Lyalli, from Mr. C. J. Lucas, Warnham Court, Horsham. Awards made to the following culinary peas at Wisley were confirmed: America and The Caithness, from Mr. Holmes, Norwich; Eureka, King Edward, and Matchless Marrowfat, from Messrs. Sutton and Sons, Reading; Bell's Premier, from Messrs. Bell and Bieberstedt, Leith; and to The Cottager, from Mr. Yates.

MEDALS.

Silver-gilt Knightian.—To Mr. Coomber, gardener to Lord Llangattock, The Hendre, Monmouth, for pine apples; to Messrs. J. Veitch and Sons, Chelsea, for gooseberries.

Silver-gilt Flora.—To Mr. E. Beckett, gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree, for Cape pelargoniums.

Silver-gilt Banksian.—To Messrs. J. Veitch and Sons, Chelsea, for flowering plants; to Mr. A. F. Dutton, Iver, for carnations.

Silver Knightian.—To the Horticultural College, Swanley, for melons.

Silver Flora.—To Messrs. B. R. Cant and Sons, Colchester, for roses; to Messrs. William Cutbush and Son, Highgate, for carnations; to Mr. James Douglas, Great Bookham, for carnations; to Messrs. H. B. May and Sons, Edmonton, for ferns, etc.; to Mr. Amos Perry, Enfield, for hardy ferns, water lilies, etc.; to Mr. L. R. Russell, Richmond, for caladiums; to Messrs. W. Wells and Co., Merstham, for phloxes.

Silver Banksian.—To Messrs. Sander and Sons, St. Albans, for orchids; to Messrs. Stuart Low and Co., Enfield, for orchids and one for roses and carnations; to Mr. H. Jones, Lewisham, for herbaceous phloxes; to Messrs. Frank Cant and Co., Colchester, for roses; to Messrs. Gunn and Sons, Olton, for herbaceous phloxes; to Mr. F. Lilley, Guernsey, for gladioli; to Mr. M. Prichard, Christchurch, for hardy flowers.

Bronze Flora.—To Mr. G. Reuthe, Keston, for hardy flowers; to Messrs. Paul and Sons, Cheshunt, for roses.

National Gladiolus Society.

This society held its exhibition in conjun tion with the Royal Horticultural Societ Show on July 18. There was little to in cate what the various classes were. though there was plenty of literature re tive to the objects and rules of the so we could find no schedule. Some very flowers were staged, but so far as we c ascertain, the competition was confined tirely to nurserymen. Mr. Frank Lilley Messrs. Kelway and Sons, each secured silver medal for early gladioli, and in latter firm's exhibit the blood-red Vip fine. The Langport firm annexed the gilt Medal for three spikes of a new see with Cecilia Kelway, a splendid flowered deep pink variety, with the inner segments creamy yellow and pink red staining; the same firm secured a Banksian Medal for James William K a grand gladiolus with large blooms vivid crimson-scarlet hue; and they a a Bronze Medal for Bala, a deep rose splashed with scarlet, and with crim cream inner segments. Other prizes won by Messrs. J. Kelway and Son Frank Lilley, Guernsey, and Mr. K thuys, Hillegom.

East Anglian Horticultural Club.

A SWEET PEA MEETING.

At the Boar's Head Hotel, Norwich, on the 13th inst., the members of this club had a very interesting evening with the sweet pea. There was an essay competition upon its cultivation, and general and special prizes for cut blooms. Somewhat surprising was the fact that at this meeting no one had a sport or new variety which they claimed to be better than this or that existing variety. In the way of merit Mr. W. Laws, gardener to G. E. White, Esq., Eaton House, exhibited a spray of Etta Dyke with six perfect flowers, and a Maud Holmes with five double standard flowers. Mr. F. Williams, gardener, to Louis Tillett, Esq., Catton, had the boldest and freshest flowers, and secured the two first prizes in the classes he entered. Mr. F. Willey, gardener to F. A. Bainbridge, Esq., Hethercott, won the first prize given by Messrs. G. Stark and Son for four of their novelties.

The essay competition proved a great success, the five papers were read and proved thoroughly practical, and before the winners were made known an animated discussion took place. The three winners were as follows, in order named: C. Mathews, Mundesley; W. Laws, Eaton; and J. F. Ewing, Evington Place.

There were keen competitions in other sections, such as roses, culinary peas, tomatoes, stocks, and lettuce.

Mr. H. J. Clayton (Yorkshire), who was spending a holiday in the district, was a visitor to the meeting, and congratulated the members upon their interest in such a flourishing club. Permission has been given the club to have its summer outing to Sandringham on August 31, and a great day is being looked forward to by the members.

Formby.—JULY 12.

The annual exhibition of this society was held in the grounds of Briars Hey, by the kind permission of Mrs. F. A. Rockliff, and in the tent there was as usual a charming combination of colour, in which roses and sweet peas played a prominent part, although the former, after a short period, gave evidence of distress occasioned by the tropical heat. A firm stand was made with regard to adhering to the terms of the schedule. For example, in the class for 8oz. of currants dishes varying from 5 to 16oz. were staged, and those that were not of the correct weight were disqualified. This will undoubtedly induce exhibitors to follow the schedule more closely.

Roses formed the most important feature of the show, and the exhibits gave evidence of what can be accomplished, even on a sandy soil, when the cultivator is determined to succeed. For twelve distinct varieties, Mrs. Rockliff occupied the position of honour, having good blooms of Caroline Testout, Killarney, Mrs. W. J. Grant, and other well-known varieties. In the class for twelve trusses in six varieties Mr. Jos. Booth was first with a good lot, including J. B. Clark. For six distinct varieties Mr. Thomas, Carlisle was first. Six light-coloured roses, in three varieties, were well shown by Mr. H. S. Hodgkinson, Dean Hole and Mrs. E. Mawley being the most noteworthy. In the class for six dark roses Mr. E. Hacking was first. Mr. F. W. Passmore had the best six blooms in three varieties, and staged the Lyon rose in fine condition. For six blooms of any one variety Mr. A. E. Gunson won with Dean Hole.

For two vases, in which the blooms had to be shown as cut from the bush, Mrs. Rockliff obtained premier honours. Mrs. Storey was first for one vase of five blooms, and for one vase of cluster roses Mr. B. Kennedy was successful; and for one vase, not climbing, Mr. A. W. Ardran proved the winner. In this section Mr. Thomas Pugh led for the best bloom with Dean Hole.

For six light roses in not less than three varieties, and for six distinct varieties, Mr. L. Thomson was first, and had the best bloom in the section with Mr. Miles Kennedy. For a vase of five roses Mr. W. Beckett was adjudged the winner, and for the vase of cluster roses Mr. F. B. Jones took the premier award.

Sweet peas are largely grown in the district, and the entries were numerous and the blooms of good substance and colour. For twelve bunches the prize-men were Messrs. Ernest M. Allen, W. [illegible], and A. [illegible]. The winning collection had ten spikes of Dainty Spencer, Tennant Spencer, Dorothy [illegible], Arthur Unwin, and King Edward VII. For nine bunches the first and second prize-men in the former class occupied similar positions. For six bunches Mr. H. Thompson took the lead with good spikes, Mr. T. G. C. Fitzpatrick being second.

In the plant classes Mr. J. Booth came out strong with seven firsts, and Mr. W. McConnan with five; Mrs. Rockliff, Mrs. Storey, Mrs. W. Dodds and Mr. A. E. Gunson were also first-prize takers in several classes. Gloxinias were exceptionally good.

In the classes for miscellaneous cut flowers Mrs. Glynn and Messrs. F. A. Cook, W. McConnan, T. B. Jones, F. C. Calthrop, J. Gilbourne; and Mr. R. Williams shared the premier awards.

Mr. Thomas Norris led for six varieties of vegetables with a good collection, Mr. B. Burnett winning for three varieties of peas with pods of much merit.

Messrs. A. Dickson and Sons, Newtownards, contributed roses and hardy flowers, Mr. H. Middlehurst sweet peas, and Messrs. Woodward and Cuthbert cut flowers of hardy herbaceous plants.

Edgware Horticultural Society.

JULY 15.

The annual exhibition of this enterprising society was held on the above date, and was as usual attended with a full measure of success. Roses and sweet peas were the outstanding features, and there was a remarkably fine display of vegetables, of which some excellent collections were contributed by allotment holders.

The principal class for roses in the trade division was that for thirty-six blooms, in which the Edgware Challenge Cup, value ten guineas, was offered, in conjunction with a cash prize as the premier award. The entries were numerous, and the blooms of a high order of merit, and in the result Messrs. R. Harkness and Co., Hitchin, were successful in winning the cup. The blooms staged by this firm contained several of the highly coloured hybrid perpetuals in superb condition, Alfred Colomb, Horace Vernet, Comte de Raimbaud, A. K. Williams, and Madame C. Crapetel being especially noteworthy. Messrs. D. Prior and Son, Colchester, were a good second, with a collection in which the dark crimson Reynolds Hole was seen at its best, the bloom being selected as the best bloom of a hybrid perpetual in the trade division. Messrs. B. R. Cant and Sons, Colchester, were third. Messrs. D. Prior and Son obtained premier honours in the class for twelve teas or noisettes, closely followed by Messrs. W. and J. Brown, Peterborough, and Messrs. B. R. Cant and Sons, for second and third places. Messrs. W. and J. Brown were successful in obtaining premier honours for twelve bunches of garden roses with a highly meritorious collection.

In the amateurs' division Mr. E. B. Lindsell was first for twenty-four blooms, which far surpassed in quality those with which he won the champion trophy at the National Rose Society's Show on the 7th inst. The premier award in this class was the Edgware Challenge Cup, of the value of six guineas. The collection included a magnificent bloom of William Shean, which was selected as the best bloom in the amateurs' classes. Mr. H. R. Darlington, Potter's Bar, was a successful competitor in a number of classes, winning first for six teas, five blooms of one variety, and for four bunches of garden roses. In competition for the prizes for twelve blooms, Mr. J. Hart, Potters Bar, was first, Mr. H. R. Darlington second, and Mr. W. Fowler, Mill Hill, third.

Sweet peas were so largely shown and of so high a quality as to produce a fine display. There was a strong competition in the trade class for twenty-four bunches distinct, and the winner of the ten guinea cup was Mr. C. W. Breadmore, Winchester, who staged a collection of exceptional excellence. Mr. W. R. Hammond, Burgess Hill, was a capital second with finely developed flowers, and Mr. W. E. [illegible], Waterlooville, Hants, was a close third with a meritorious collection. In the class for twelve bunches, open to all amateurs, Mr. E. B. Lindsell was first with a magnificent collection. For nine bunches Mr. H. K. Judd, Edgware, obtained premier honours with splendidly developed flowers. Mr. H. R. Darlington was a close second with a collection remarkable for the success achieved in arranging the flowers. In the class for twelve bunches open to amateurs resident within ten miles of the place of exhibition, Mr. H. K. Judd won the Blair Challenge Cup with a magnificent collection. For a display of sweet peas, Mr. C. H. Wainwright, president of the society, was first with an arrangement remarkable alike for the high quality of the blooms and the taste evinced in their arrangement.

THE SCLEROTINIA DISEASE OF THE GOOSEBERRY.

(Concluded from page 528.)

Remedies.

1.—The best means of getting rid of the disease are the prompt removal and burning of all dead bushes or dead branches in the plantation. As soon as the leaves of bushes show signs of being diseased the bushes in the plantation generally should be examined, and any bush found with the main stem diseased should be grubbed up and burned. The prompt removal and burning of all dead (or dying) bushes, carried out for a few seasons, has proved more efficacious against this disease than spraying. It must not be forgotten that this fungus is capable of developing vigorously on dead parts of the bush. In nearly all cases—except in the comparatively rare ones where a plantation has been planted up with botrytis-infested young bushes—the disease appears first either on single bushes scattered here and there through the plantation, or on all the bushes over a small patch of ground in the plantation, while the surrounding bushes are healthy. If the disease on its first appearance is dealt with summarily by the burning of all dead bushes and dead branches, there is no need to spray or to take any other remedial measure, since the disease soon completely disappears.

2.—Where the disease has been allowed to become severe and widespread, or where it is not in the power of the grower to remove entirely the source of the disease, spraying must be resorted to—in addition, of course, to the prompt burning of all dead bushes. A heavy spraying with a solution of copper sulphate (4lb. dissolved in 100 gallons of water) should be given just before the buds burst, with the object of destroying the tufts of botrytis, care being taken to spray heavily the main stems of the bushes. The infection or premature falling off of the leaves may be prevented by spraying, directly the fruit is set, with Bordeaux mixture composed of 8lb. copper sulphate, 8lb. quicklime, and 100 gallons of water. In this spraying it is essential that the under-surface of the leaves should be sprayed as much as possible. No injury follows the application of Bordeaux mixture of this strength, and if the spraying is done at the time indicated no spotting of the berries occurs.

3.—It may be noted finally, that any treatment which induces the bushes to make vigorous growth tends to stop the attacks of the fungus.

SHADE AS A GARDEN BEAUTY.

The usual way in which shade in the garden is considered is as a factor of which special use must be made merely in the sense of bearing with an evil. Certain shrubs and plants are proved to live without sunshine, so are called into requisition for the improvement of these places; but the truth that some gardens are less fair than they should be, just for lack of shadow, seldom enters into the mind of their owners. Unmitigated sunshine is as wearisome in appearance on a summer's day as unmitigated colour. Providence gave foliage about flowers, clouds in the sky at times, and also, throughout natural scenery of greatly populated lands, those trees and hills that create welcome shade, both for yielding coolness and beauty. Looking over undulating country, how welcome to the eye is the outspread variation between bright plains and dark valleys; gazing through a woodland, how perfect is the effect where vistas of light intersect the dim mysterious avenues; even the hills and larger mountains have their alternative hollows and crests, and the latter would not charm us but for the contrast of the former. A desert, trackless, bare, is our name for a land that is wearisome; but as soon as civilisation touches the tract cultivation comes into being, and, no matter how this is obtained, its immediate result is the making of shade.

Gardeners who are thinkers may learn a useful lesson from facts such as these. The pleasure grounds that bask under summer suns must be given shadows by artificial means, unless natural undulations, or groups of trees of ancient grandeur, have already provided that needful beauty and refreshment. Many a small garden requires height just for this purpose; a flat expanse of lawn, beds, and borders, though brilliantly coloured, or even when tinted delicately enough by the employment of white blossom and grey, green, and bronze foliage among the vivid hues, will never be entitled to the fullest praise. Shade is wanted, whether it be cast by arches, pergola, pillars, shrubs, trees, trellises, walls, or hedges.

By moonlight, as by daylight, the scene of a garden is exquisite when each tall object gives its backward line of shadow; in summer evenings the streaks are very long, the masses broader as well as more extended than in winter, for the earth requires cool solace more. Let us all aim, then, at giving the lawns their beautiful lines or networks of shade.

Quick ways of introducing this improvement are sufficiently numerous. Summer climbers may be placed anywhere if given twelve-feet poles, up which they can be trained. A series of poles, two yards apart, may have fish-netting stretched between them, and Cobæa scandens or annual convolvuluses, Nasturtiums or Canary Creeper, will mount high with glorious rapidity.

Curved lengths of rustic fencing, six or more feet high, have a decided value. Pot roses may be sunk against these, and summer climbers used to give immediate luxury of foliage. Another admirable plan is to put out by them Plumbago capensis, or large eucalyptuses from the greenhouse, and tie the branches to the wood.

Rustic pillars may be set up on a lawn, with only the smallest bed cut in front of each to hold a climber or two. Two pillars, four or six feet apart, can have a cross-bar from which a fine hanging basket of begonias and trailing tradescantia is suspended.

M. H.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

FUNGUS ON CŒLOGYNE.—J. D., Uckfield: The fungus is Fulima septica, and it is not a parasitic one, but, as it spreads over the surface of plants like orchids, it may soon suffocate them; therefore, it should be sponged off, using a sulphide of potassium solution. Remove the old decaying wood and other material that is harbouring the fungus, and have a good clean up in the house, washing pots and staging, cleaning the orchids, etc., so that the plants may have a chance to grow. Frequent and regular sponging of the leaves and stems of orchids will work wonders.

FAILING CULINARY PEAS.—W. C., Bridgwater: The collapse is due to root rot which in turn is caused by eelworm. Severe weather such as long drought and sunshine coming just as the plants are feeling the strain of cropping also acts against the well-being of the peas, so that if there is any disease or eelworm trouble collapse inevitably follows.

WOOD-LICE IN VINERY.—A. C., Gillingham: If there is no risk of harm coming to human beings or domestic animals, slices of potato soaked in white arsenic or Paris green set in the places where wood-lice congregate will answer for large numbers of the pests. Pieces of old board, partly decayed, laid down in the vinery will attract crowds of wood-lice, and if a bucket of boiling water is at hand when the board is lifted at night or early morning then the pests can be swept off into the water. Little heaps of old leaves, dirty dry moss in a dirty pot, and, it is said, little heaps of wet grass, all prove attractive traps for wood-lice, but we have never used wet grass in this connection, so cannot speak from experience concerning its efficacy. Some patience must be exercised, and if the traps are varied frequently and examined regularly, the pests should soon be cleared out or at least reduced in number so as to cause no harm.

MILDEW ON CUCUMBERS.—S. E. J., Chesterfield: The whitish mould on the under surface of the leaves is due to the presence of a fungus named Peronospora cubensis, the cucumber mildew. It is not a particularly common disease in this country, but is common in America. Some cultural error, probably dryness at the roots and in the atmosphere, is the cause of the trouble. Spray with diluted Bordeaux mixture, making certain that the underside of every leaf is wetted.

VINES IN UNHEATED HOUSE.—F. T., Torquay: It is most probable that the vine roots have escaped beyond the border proper and have reached moist soil. This would cause excessive growth, shanking of the berries, and immature growth in the autumn. Directly the foliage of the vines changes colour this autumn at once proceed to find the actual condition of border and roots. It may be necessary to remake the border, or perhaps it will only be necessary to bring the roots nearer the surface after cutting away any that have gone astray. The work must be done carefully, the fibrous roots being kept moist while the work proceeds, and new, rather fine soil used in which to lay out these surface roots. The drainage must be examined and remedied if necessary, and if a concrete wall is built so as to confine the roots within the border so much the better. Write us again on this matter in early September.

CHLOROPHYTUM ELATUM AS A BASKET PLANT.—A. B., Leicester: We have seen the variegated form of Chlorophytum elatum used with great success for baskets. It is a good plan to select a strong young plant with a single crown, and plant it in a mixture of loam, leaf-soil, and sand, in a moss-lined wire basket. Place in a warm house, shade and syringe well for a few days, and then gradually harden it off so that it may be used in the conservatory or greenhouse or even out of doors, for the plant is nearly hardy.

ONCIDIUM CONCOLOR.—T. T. H., Exeter: At this season of the year Oncidium concolor should be growing freely and making new roots, therefore if your plants fulfil these conditions they should be at once potted if more room or fresh material are necessary. Pans are better than pots, and these should be wired so that the plants may be suspended. Drain the pans well, and use a mixture of polypodium fibre, sphagnum, finely broken crocks, and coarse sand. Pot firmly, suspend in a shady position at the warmest end of the cool house, and give water carefully.

TULIP TREE.—W. T., Beddington: The difference in the appearance of the leaves of the two trees is, no doubt, due to age, and probably also to soil and position. If the tree is healthy it should flower in due course.

GOOSEBERRIES.—W. T., Beddington: One gooseberry is not sufficient for purposes of identification, as the position of the berries and the position of the tree have considerable influence upon the fruits. If you care to send half a dozen firm clean fruits we will endeavour to name the varieties for you.

R.H.S. CERTIFICATE FOR CHILDREN.—M. E. J., Roade: You probably have in mind the card of "Recognition of Diligent Interest in Plants," issued by the Council of the Royal Horticultural Society, in response to frequent applications by school authorities for some token of encouragement of work with plants amongst scholars. It is to be awarded to the boy or girl (or both) who, in the yearly school competitions in plant cultivation, or garden plot-keeping, or nature study, has secured the first prize. The cards are 12 inches by 8 inches, and may be had on application to the Secretary, R.H.S., Vincent Square, London, S.W. (price 6d. each), signed by the head master or mistress, and a member of the educational authority concerned. The application should contain information as to (a) the nature of the competition, (b) the number of competitors, (c) the judges, (d) the number of prizes awarded in the competition, (e) the full name of the first prize winner. The Council of the R.H.S. will at their own absolute discretion grant or withhold this "recognition."

NAMES OF PLANTS.

W. H., Bury St. Edmunds.—Helxine S-lieroli.

P. H. W., Ruabon.—1, Lathyrus grandiflorus; 2, Bougainvillea glabra.

N. S. G., Wisbech.—1, Rudbeckia purpurea; 2, Inula glandulosa; 3, Polygonum Baldschuanicum.

C. H., Beddington.—1, Rosa Wichuraiana; 2, Vitis Labrusca; 3, Anguloa Clowesi; 4, Oncidium macranthum.

S. T., Dorking.—1, Centaurea macrocephala; 2, Physalis Franchetti; 3, Ceropegia Woodi; 4, Leucophyton Browni.

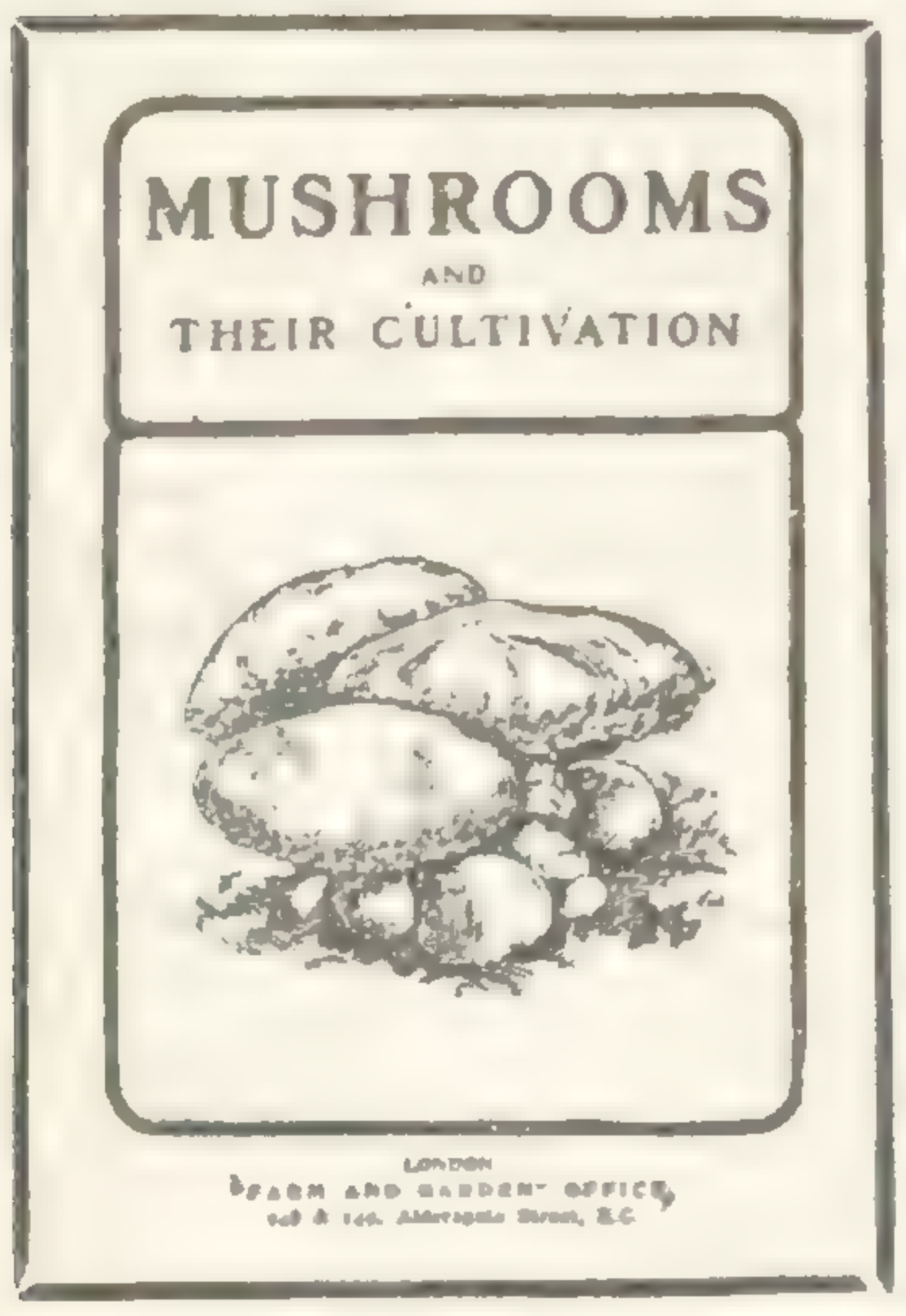
M. J., Royston.—1, Jasminum nudiflorum; 2, Jasminum officinalis; 3, Helenium Bigelowi; 4, Campanula persicifolia plena; 5, lactiflora.

L. T. S., York.—The sweet peas were so faded and shrivelled on arrival that identity was impossible; but we cannot undertake to name florists' varieties of flowers.

A NEW WORK by T. W. SANDERS, F.L.S., Editor of "Farm and Garden."

Price **ONE SHILLING** net, by Post **1/2**. Bound in Cloth, **1/6**, by Post **1/8**.

MUSHROOMS



.. AND ..

THEIR CULTIVATION.

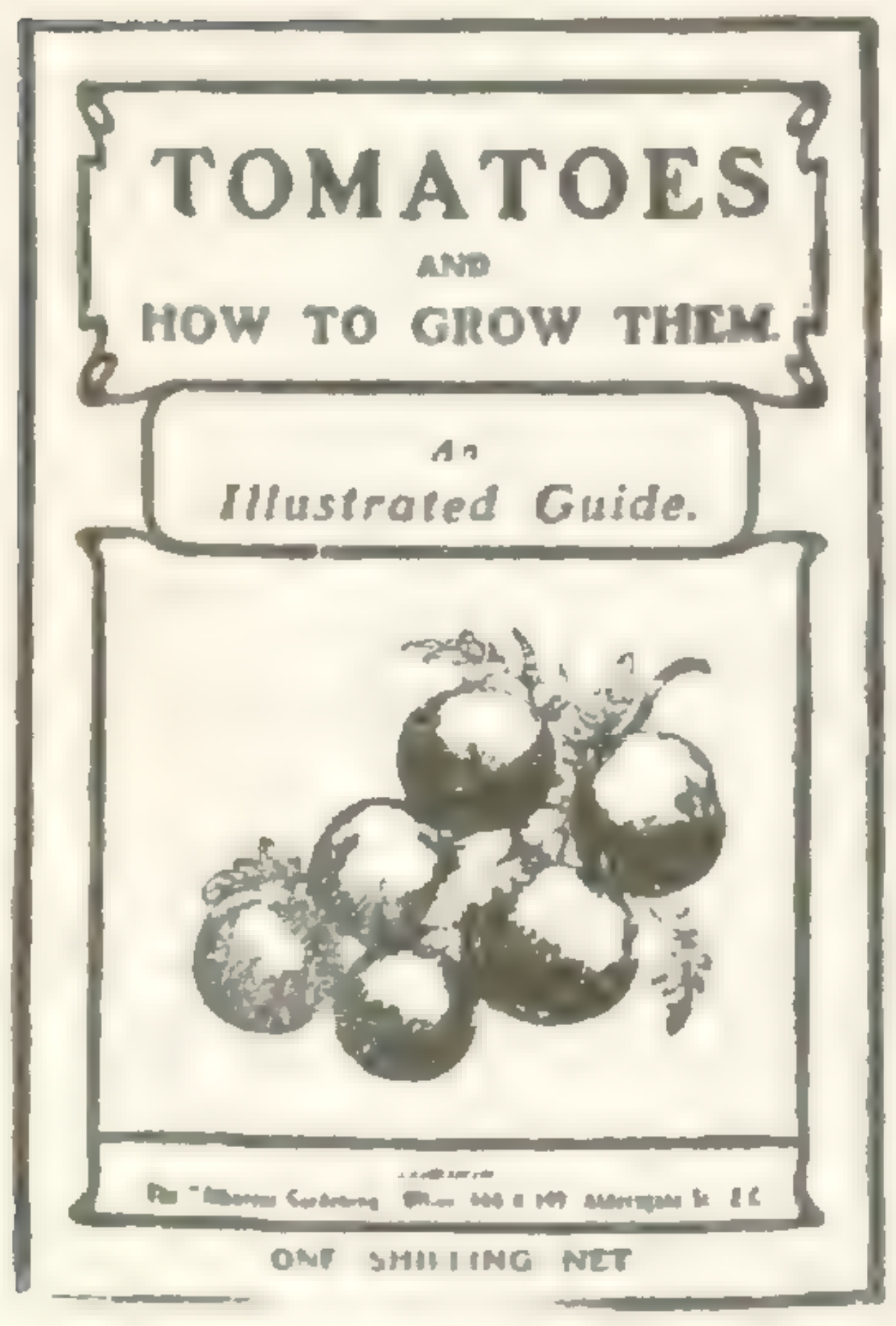
A COMPLETE ILLUSTRATED GUIDE TO CULTURE.

CONTENTS.

- MUSHROOM SPAWN: WHAT IT IS AND HOW OBTAINED.
- MANURES FOR BEDS.
- FORMING THE BEDS.
- SPAWNING THE BEDS.
- INDOOR CULTURE.
- TEMPERATURE.
- CULTURE IN CELLARS.
- CULTURE IN GREENHOUSES.
- HOW GROWN IN TUBS AND BOXES.
- MUSHROOMS IN ODD CORNERS.
- WATERING MUSHROOM BEDS.
- GATHERING.
- EXHAUSTED BEDS.
- LAW AS TO FIELD-GROWN MUSHROOMS.
- FUNGI POISONING.
- PESTS AND DISEASES.
- HOW TO COOK MUSHROOMS.
- MUSHROOM KETCHUP.
- EDIBLE FUNGI.
- THE TRUFFLE.

Price **ONE SHILLING** net, by Post **1/2**. Bound in Cloth **1/6**, by Post **1/8**.

TOMATOES



AND HOW TO GROW THEM.

By R. F. CASTLE.

A Practical and Illustrated Handbook on the Cultivation of the Tomato under Glass and in the Open Air.

. . . CONTENTS . . .

- Propagation.
- When and How to Sow Seeds.
- Treatment of Seedlings.
- The Best Soil and Manures.
- Varieties for Indoor Culture.
- Varieties for Outdoor Culture.
- Culture in Pots and Boxes.
- Training, Disbudding, and Watering.
- Removal of Foliage.
- Growing for Exhibition.
- Special Fertilisers.
- Gathering and Storing.
- Culture in Frames.
- Winter Tomatoes.
- General Garden Culture.
- Mulching and Feeding.
- Best System for Training.
- Fruitless Plants
- Pests and Diseases.
- Methods of Cooking the Fruits.

If you want to win prizes read the best book.

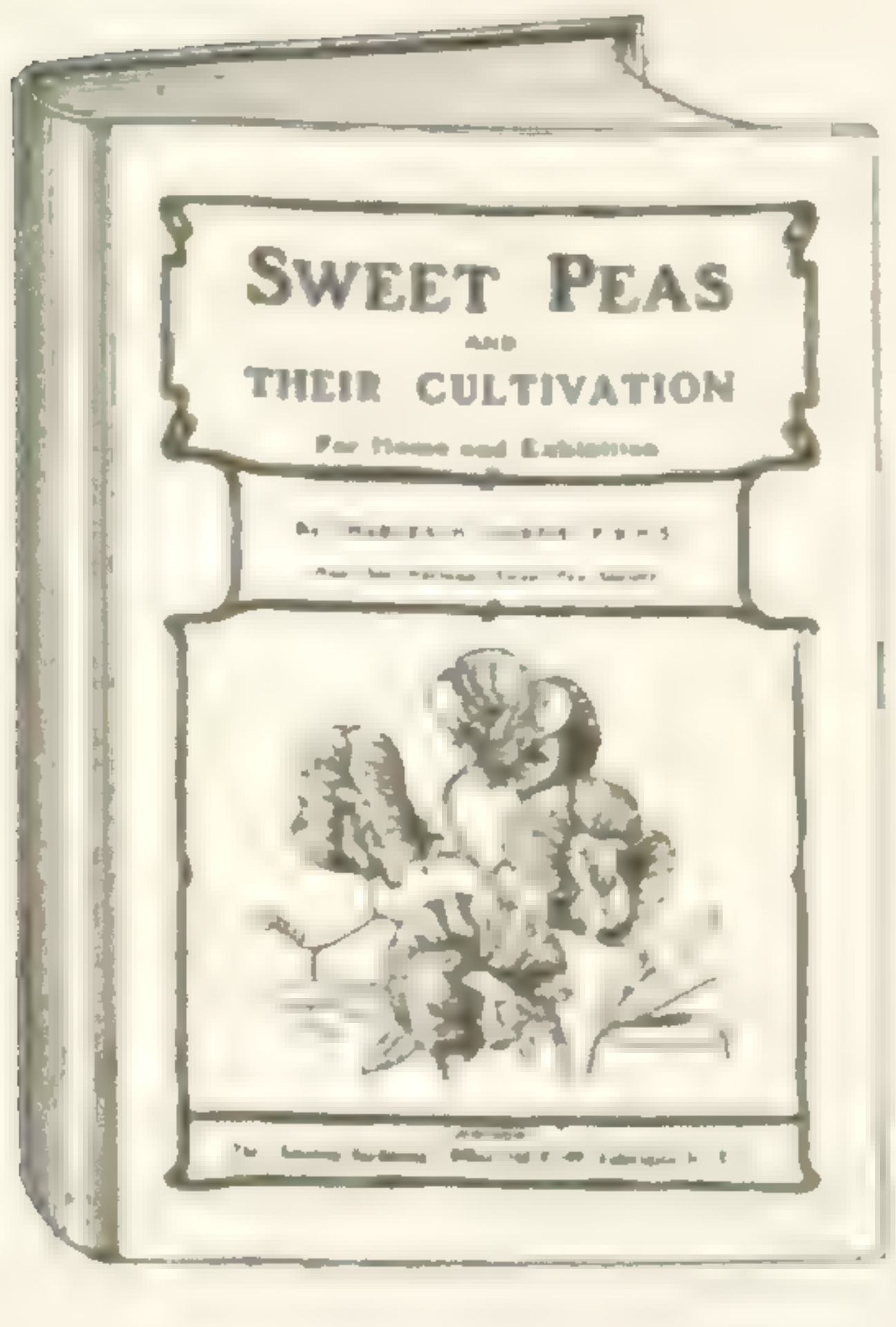
One Shilling: free by post, 1/2. Bound in cloth, 1/6: by post, 1/8.

SWEET PEAS AND THEIR CULTIVATION.

FOR HOME AND EXHIBITION.

By CHARLES H. CURTIS, F.R.H.S.,

Hon. Secretary National Sweet Pea Society.



- PREPARATION OF SOIL.
- SEEDS AND SEED SOWING.
- WATERING AND MANURING.
- GENERAL MANAGEMENT.
- HOW GROWN IN TUBS AND POTS.
- WINTER-FLOWERING SWEET PEAS.
- STAKING AND TYING.
- SWEET PEAS FOR SCREENS AND WINDOWS.
- THE BEST SWEET PEAS.
- RAISING NEW VARIETIES.
- CULTURE IN CONSERVATORY.
- CUPID AND BUSH SWEET PEAS.
- VASES AND STANDS.
- POINTS FOR EXHIBITORS.
- DEVELOPMENT OF SWEET PEAS.
- DISEASES AND PESTS.
- ETC., ETC.

◆ ◆ ◆

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE,"
148 and 149, Aldersgate Street, E.C.

Please send me a copy of ....

by Post, for which I enclose remittance of ....

Name ....

Address ....

MARKETS.

◆

COVENT GARDEN.

Flowers.

Business is rather slack and prices easy.

		s. d.		s. d.
Adiantum cuneatum	per doz. bun.	4 0	to	6 0
Arums	per doz.	2 6		3 0
Asparagus	per doz. bun.	10 0		10 0
Cattleyas	per doz.	8 0		12 0
Carnations	per doz.	1 2		2 6
,,	per doz. bun.	6 0		9 0
Cornflowers	per doz. bun.	1 0		1 3
Coreopsis	per doz. bun.	1 6		2 0
Croton leaves	per bun.	1 0		2 6
French fern	per doz. bun.	2 6		4 0
Gaillardias	per doz. bun.	1 0		2 0
Gardenias	per doz.	1 0		2 0
Gladiolus	per doz. bun.	3 0		4 0
Gypsophila	per doz. bun.	2 6		4 0
Lilium auratum	per bun.	3 0		4 0
,, candidum	per doz.	1 0		2 0
,, speciosum	per bun.	2 0		2 6
,, longiflorum	per bun.	2 0		3 0
Lily of the Valley	per doz. bun.	6 0		15 0
Marguerites	per doz. bun.	1 6		3 0
Mignonette	per doz. bun.	3 0		4 0
Odontoglossums	per doz. blms.	1 0		3 0
Pelargoniums	per doz. bun.	3 0		4 0
Roses	per doz.	1 0		3 0
Smilax	per doz. trails	4 0		5 0
Stocks, white	per doz. bun.	3 0		4 0
Sweet Peas	per doz. bun.	1 0		2 0
Tuberoses	per doz.	0 4		0 6

Fruits.

Cherries, gooseberries, and currants find a ready sale, as also do fine melons and peaches.

		s. d.		s. d.
Apples, Australian	per case	8 0	to	13 0
,, Tasmanian	per case	8 0		13 0
,, English	per bush.	3 0		6 0
Apricots, French	per box	0 9		1 4
Bananas	per bun.	4 0		10 6
Cherries, English	per ½-sieve	3 0		6 0
Currants, red	per flat	4 0		5 6
,, Black	per ½-sieve	5 0		7 0
Figs	per doz.	1 0		3 0
Gooseberries	per ½-sieve	2 6		4 0
Grapes, English	per lb.	1 0		4 0
,, Belgian	per lb.	0 6		1 0
Lemons	per case	9 0		25 0
Loganberries	per peck	2 0		2 6
Melons	each	1 0		2 6
Nectarines	per doz.	3 0		18 0
Oranges, Denia	per case	12 0		30 0
,, Mercia	per case	16 0		22 0
,, Naples	per case	8 0		10 6
Peaches	per doz.	6 0		18 0
Pineapples	each	2 0		5 0
Raspberries	per doz. pun.	1 0		1 6
Strawberries	per doz. pun.	3 0		6 0

Vegetables.

Salading and greenstuffs meet a steady demand.

		s. d.		s. d.
Artichokes, Globe	per doz.	2 0	to	4 0
Beane, dwarf	per lb.	0 2		0 4
Beans, broad	per ½-sieve	1 6		2 0
Beet	per bush.	2 0		3 0
Cabbage	per tally	2 6		5 0
Carrots, new	per pad	2 0		2 6
Cauliflowers	per doz.	2 0		2 6
Cucumbers	per flat	4 0		4 6
Endive	per doz.	0 9		1 0
Horseradish	per doz bun.	8 0		12 0
Lettuce	per doz	0 6		1 3
Marrows	per doz.	1 6		5 0
Mint	per doz. bun.	1 0		2 0
Mushrooms	per doz. lb.	6 0		12 0
Parsley	per ½-sieve	1 0		1 3
Peas	per bag	5 0		6 6
Radishes	per doz. bun.	0 4		1 0

FORTHCOMING ENGAGEMENTS.

TUESDAY, July 25.—National Carnation and Picotee Society, at Royal Horticultural Hall.

WEDNESDAY, July 26.—Cardiff Horticultural Society; two days.
Bishop's Waltham Flower Show.
Irish Gardeners' Association.
Chesterfield Horticultural Society.
Hayward's Heath Horticultural Society.

THURSDAY, July 27.—St. Ives Horticultural Society.

FRIDAY, July 28.—Southampton Carnation and Sweet Pea Show.

Continental Holidays have a great attraction for a large number of horticulturists, and especially those who desire to gain knowledge of wild plant life and of the ways and means followed in the adornment of Continental public and private gardens. But the journey is a matter for consideration, and nowadays one looks for comfort as well as speed and safety. A handy and helpful booklet, freely illustrated, issued by the Great Central Railway Company, should be consulted by those contemplating holidays, as it gives the fullest information concerning trips possible by the Grimsby route.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1911. July 9 to July 15.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
July 9—Sunday	11 12	64	58	72	54
,, 10—Monday	9 42	58	53	71	46
,, 11—Tuesday	13 0	64	58	80	46
,, 12—Wednesday	14 36	69	61	81	52
,, 13—Thursday	15 6	71	60	81	48
,, 14—Friday	13 42	69	63	83	53
,, 15—Saturday	5 12	68	62	70	54
Means	(total) 82 30	66	59	77	50

Date. 1911. July 9 to July 15.	Rain.	Temperature of the Soil at 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
July 9—Sunday	—	67	64	59	45
,, 10—Monday	—	65	64	60	38
,, 11—Tuesday	—	65	63	60	36
,, 12—Wednesday	—	66	64	60	41
,, 13—Thursday	—	66	64	60	38
,, 14—Friday	—	67	64	60	47
,, 15—Saturday	—	68	65	61	47
Means	(total) —	66	64	60	41

TRADE NOTE.

Mr. Montagu C. Allwood, who for some years past has been regarded as one of the leading authorities on perpetual-flowering carnations, has, we are informed, retired from the position of carnation specialist to Messrs. Hugh Low and Co., now Messrs. Stuart Low and Co., held during the past seven years. Mr. Allwood has taken up the joint management of the firm of Messrs. Allwood Bros., which was founded by Mr George W. Allwood, at Haywards Heath, on his return from America, where he spent several years in studying carnations and their culture.

OBITUARY.

◆

MR. GEORGE WOODGATE.

We regret to record the death of this able and highly esteemed horticulturist, which occurred early in this month at his residence, Kenley, Surrey. Mr. Woodgate was for some years head gardener at Warren House, Kingston Hill, and during some part of the period he was secretary of the Kingston Chrysanthemum Society, at the time it was one of the most important societies of its class in the United Kingdom. Leaving Kingston Hill, Mr. Woodgate was appointed head gardener to Sir Oswald Moseley, Bart., Rolleston Hall, Burton-on-Trent, where he remained fifteen years, retiring in 1910 owing to ill-health. During the greater part of the time he was at Rolleston Hall Mr. Woodgate was a contributor to this journal. The funeral took place at Bandon Hill Cemetery on the 10th inst.

GARDENING APPOINTMENT.

Mr. C. Foster Crump, for the past three years general foreman at Kingston Hall, Derby, and previously of the Royal Gardens, Windsor, has been appointed head gardener to Earl Spencer, at Althorp Park, Northampton.

CONTENTS.

PAGE
A Beautiful Bowl of Roses 541
An attractive Lily Pool 533
Available Plant Food 536
Erratic Fern Spores 540
Exhibitions and Meetings 544
Lithospermums 539
New Plants, etc. 537
Notes of the Week 529
Queenwood, Englefield Green 537
Rhododendron Glory of Littleworth ... 541
Roses That are Doing Well 534
Some Rose Garden Features 536
Summer Pruning of Hardy Fruits ... 542
Sweet Pea Outings 531
The Sclerotinia Disease of the Gooseberry .. 547
Work for the Week 543

ILLUSTRATIONS.

Portrait of Sir F. W. Moore, M.A., V.M.H., 529; View of the National Sweet Pea Society's trials at Sutton Place, 531; A Tastefully arranged Lily Pool, 533; Laelio-cattleya Martinetti King George V., 535; Queenw Englefield Green, 537; A Magnificent Bed Rhododendron Pink Pearl, 538; A View Queenwood Garden with Rhododendron P Pearl, 539; An Effective Arrangement Violas, 540; A Beautiful Bowl of Roses, 541.

Of course, it is sometimes necessary to INSIST upon your ironmonger or Seedsman getting a **PINE SPRAY SYRINGE** for your approval. it's worth while, and it would be a pity to buy a Syringe at the same price, arge or well-made, and with none of the Pine Spray's great advantages. The R particularly are going sick for the want of relief from greenfly and numerous o pests. Get to work on them at once with a **PINE SPRAY SYRINGE** and **PINE SPRAY INSECTICIDE.**

Insist upon your tradesman sending at once for the former on approval. A large sample tin of Insecticide will accompany it for acceptance if you approve the Syringe, and you will.

Size of Syringe, 24in. over all by 1¼. **PRICE 10s. 6d.**

ROBINSON BROS., Ltd., West Bromwich, STAFFS.

ROBINSONS PINE SPRAY SYRINGE (Patent).

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out, Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

J. F. G. BANNATYNE, Esq., Haldon, Exeter, will be pleased to recommend H. NICHOLSON as GARDENER (Head Working); thoroughly practical and reliable; life experience in all branches; 3½ years here; age 31. Address, NICHOLSON, Haldon Gardens, Exeter, Devon.

GARDENER (Head Working); thoroughly experienced in Fruit, Flowers, Vegetables; Inside and Outside work, where two or three are kept; well recommended. Apply, F., care of Messrs. Charles Turner and Son, Royal Nurseries, Slough, Bucks.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 31; married when suited; excellent references. Address, Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working), life experience Inside and Out; 5 years present situation as General Foreman; excellent refs.; disengaged when suited; age 28. T. CHAMBERLIN, Canons Park Gardens, Edgware, Middx.

GARDENER (Head Working), where one or two more are kept; life experience in all branches; aged 36; married, four children; 8½ years' excellent references. Apply GARDENER, The Wharf, Abingdon, Berks.

GARDENER (Head Working, where two or three or kept); life experience; leaving through death; highest references; age 35; married. STEVENS, Thanes Croft, Shamley Green, near Guildford, Surrey.

GARDENER (Head Working).—CAPTAIN USHER highly recommends R. Appleby as above; life experience in all branches; thoroughly understands Planning and Laying Out; also Land and Stock; many years' excellent character. Address APPLEBY, care of Captain T. Clemins Usher, Little Wymondley, Stevenage.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 31; married, two children. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working). — Mr. PHILIP ASHWORTH wishes to recommend W. H. SHAW as above; life experience; accustomed to large establishment; especially good at Laying Out new grounds; also Flowering Shrubs and Herbaceous Borders; married, family; many years' excellent character. Apply W. H. SHAW, The Lodge, Horsley Hall, Gresford.

GARDENER (Head Working).—F. W. FLETCHER, Esq., can highly recommend his Head Gardener as a thoroughly trustworthy experienced good all round man; age 45; married; one girl 14 years. F. GREENGRASS, 40, Primrose Terrace, Browning Road, Enfield, Middlesex.

GARDENER (Head or good Single-handed with help); well up in all branches; age 42; married, no encumbrances; good references. A. VENABLES, 6, Greatham Road, Bushey Hall Road, Watford, Herts.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushroom, ridge or flat; Kitchen, Lawn, Flower Garden. Special Prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (Head, or Single-handed with help); age 30; life experience in all branches; highly recommended. Near London preferred. GOLDSMITH, 55, Suffolk Road, Milton, Portsmouth.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (Single-handed or otherwise); over 2 years as Foreman in present situation; experienced Inside and Out; can be highly recommended by present employer; age 28. Apply W. BICKER, or Head Gardener, The Gardens, Avenue House, Church End, Finchley. Eastern Counties preferred.

GARDENER (Single-handed or otherwise); 12½ years' experience Inside and Out; good references; 4½ years last place; age 30; single. REYNOLDS, Sandy Hill, Beddington.

GARDENER (Single-handed, or with Son to help); life experience in all branches; age 37; disengaged; good references. E. LIMEHOUSE, 11, Charleville Road, West Kensington.

GARDENER (Single-handed), seeks situation; 16 years' experience in flowers, fruit, vegetables; excellent references; age 30; single; disengaged.—F. HYDER, 7, Stamford Road, Watford, Herts.

GARDENER (Single-handed or otherwise); 14 years' general gardening; used to gas engine; married, 2 children, youngest 4½; age 31. J. MOONEY, The Stables, East Moor House, Harpenden.

GARDENER, 40; Single-handed preferred; thoroughly experienced; excellent character; active worker; Inside and Out with early vegetables; abstainer; immediate. A. BISHOP, Windmill Hill, near Hailsham.

GARDENER (Single-handed, or with help); experienced, Inside and Out; age 30; married, no family; good references. H. CATLEY, The Lodge, Pilgrim's Holt, Margery, nr. Reigate, Surrey.

MR. A. LINDLEY recommends A. SIMMONS as GARDENER (First of two or Single-handed); life experience Inside and Out; two years present situation; six years previous; age 35; single. Apply, 6, Little-Roke, Kenley, Surrey.

GARDENER (Second, Inside or Inside and Out); age 25; good references; four years last. F. RANDALL, Isis Cottage, Tylers Green, near High Wycombe, Bucks.

GARDENER, Second in Kitchen Garden or Pleasure Grounds; good reference; age 26, married when suited. F. EAST, Kent Cottage, Chiswick House, Chiswick, S.W.

H. BUGG, Head Gardener to M. Lancaster, Esq., Lendholme, Woking, can with confidence recommend W. Tullett to any Lady or Gentleman requiring first-class man; life experience; age 26; four years here.—Apply W. TULLETT, 28, Freemason's Road, Addiscombe, Croydon. (No circulars.)

A. W. PERRY, Middleton Park Gardens, Bicester, wishes to recommend W. PRITLER as SECOND; 9 years' experience, age 25; highest references. W. PRITLER, 1, Mount Street, Ware, Herts.

GARDENER seeks SITUATION; life experience in well-kept establishments (Inside and Out); age 28; single; excellent reference; height 5ft. 8½in. F. HARDY, Canons Park Gardens, Edgware, Middlesex.

JOURNEYMAN seeks SITUATION (Inside and Out); seven years' experience; age 21. E. BAILEY, The Garden, Swaffham Prior House, Cambs.

JOURNEYMAN, age 22, seeks SITUATION, Inside; 5½ years' experience in Fruit and Plants; can assist in Decorating; full particulars. Apply, F. DEANEY, 19, Aldenham Road, Oxhey, Herts.

JOURNEYMAN (Inside) seeks SITUATION; six years' experience, Inside and Out; good references; Bothy preferred. E. ARCHER, Ockham, Woking, Surrey.

JOURNEYMAN.—Young Man, aged 25, desires engagement; 7½ years' nursery experience with plants, inside and out; abstainer, good character. Apply CHAS. NICHOLLS, 32, Orme Road, Worthing, Sussex.

AS GARDENER; used to pony; over two years in present situation; age 24. Near London preferred. Apply J. SCOTT, 51, Manor Park Road, East Finchley.

YOUNG MAN; French; experienced in Gardening, seeks Situation as UNDER or otherwise. CAPGRAS, 34, Raleigh Road, Enfield.

SITUATION as KITCHEN GARDENER and handyman; good alto chorister; married, age 25. F. AUGER, 22, Elm Grove, Bishop's Stortford, Herts.

WANTED, SITUATION as PLAIN GARDENER or Groom-Gardener; good ref. Apply, H. BRAKE, School House, Shroten, nr. Blandford, Dorset.

YOUNG MAN, age 26, seeks SITUATION on Pleasure Ground or assist in Kitchen Garden; 12 years' experience; good references; married when suited.—Apply, F. SLARKE, Silver Hill, Shenley, Barnet, Herts.

YOUNG MAN, age 23, seeks SITUATION in Kitchen Garden and Pleasure Grounds; able to take duty. B. HOBBS, Purley Chase Gardens, Atherstone, Warwickshire.

YOUNG MAN seeks SITUATION to look after Electric Light and Garden; well up in all branches; nine years last situation. EDWARD VILLA, Street Cobham, Surrey.

ESTATE CARPENTER and HANDYMAN, age 28, married, requires SITUATION; three years previous and 2½ years present situation. MILES, Flimwell Grange, Hawkhurst, Kent.

Situations Vacant.

WANTED, good SECOND; well up to his work Inside and Out; wages 20s. Apply, references and experience, to GARDENER, Perridge House, Shepton Mallet.

WANTED, YOUNG LADY to take charge of Florist's and Seed Shop; must thoroughly understand Seed and Bulb Trade. Apply SANDFORD and CO., LTD., Hall Green, Birmingham.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE," 148 & 149, Aldersgate Street, London, E.C.

For JULY 29, 1911.

Please Repeat my Advertisement.

Name ....

Address ....

....

Date ....

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue

MERRYWEATHER'S

614 PUMP

IS THE

Gardener's Friend.

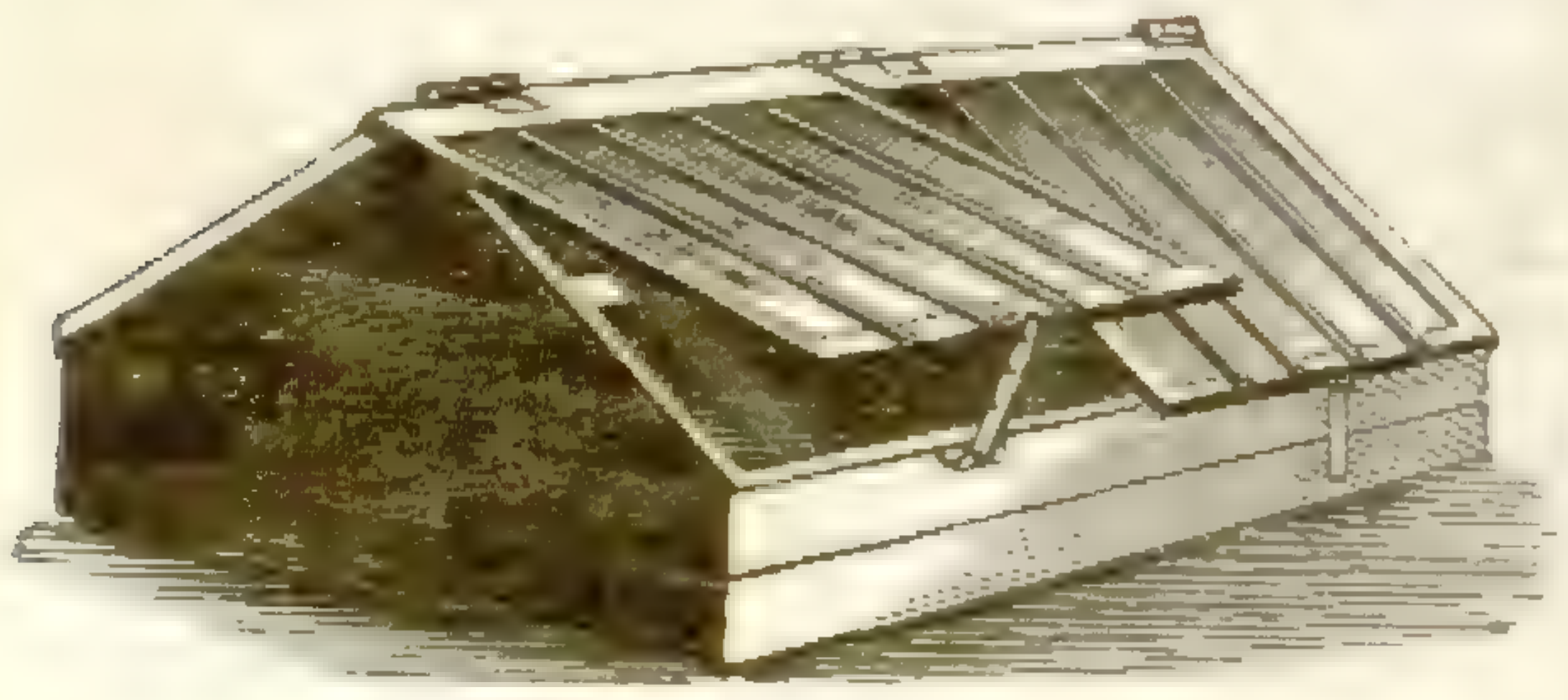
Easy to Work.
Simplicity Itself.

Write or Call—

63, Long Acre,
LONDON, W.C.

PORTABLE PLANT FRAMES

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices. Glazed and Painted.		£	s.	d.
6ft. long by 3ft. wide	Cash Prices.	2	0	0
6ft. ,, 4ft. ,,		2	5	0
6ft. ,, 5ft. ,,		2	15	0
12ft. ,, 4ft. ,,	Carriage Paid.	4	0	0
12ft. ,, 5ft. ,,		4	15	0
12ft. ,, 6ft. ,,		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
ROYAL HORTICULTURAL WORKS,
MIDDLETON, MANCHESTER.

IDEAL, 5 feet long.

In best red-wood, painted two coats white

£1 : 7 : 6.

Delivered any Station.

Full catalogue on application.

PETER PATRICK & SON, OTLEY, YORKS.

GARDEN NETTING.

[illegible] Others may try to copy me, but this Netting is the best stou small mesh, as supplied BY ME to the ROYAL GARDENS. Will not rot. Can be sent on approval, 30 sq. yds. for 1s., [illegible] 5s. [illegible] I can also supply [illegible] Netting at 50 sq. yds. for 1s. Only Address—

H. J. GASSON, The Net Works, RYE.
[illegible] Established 126 years.

By Royal Warrants

To H.M. King George V. — To H.M. Queen Alexandra.

The Best Remedy

FOR

MILDEW, GREENFLY, and all **INSECT BLIGHT,** is

Jeyes'
Horticultural Wash

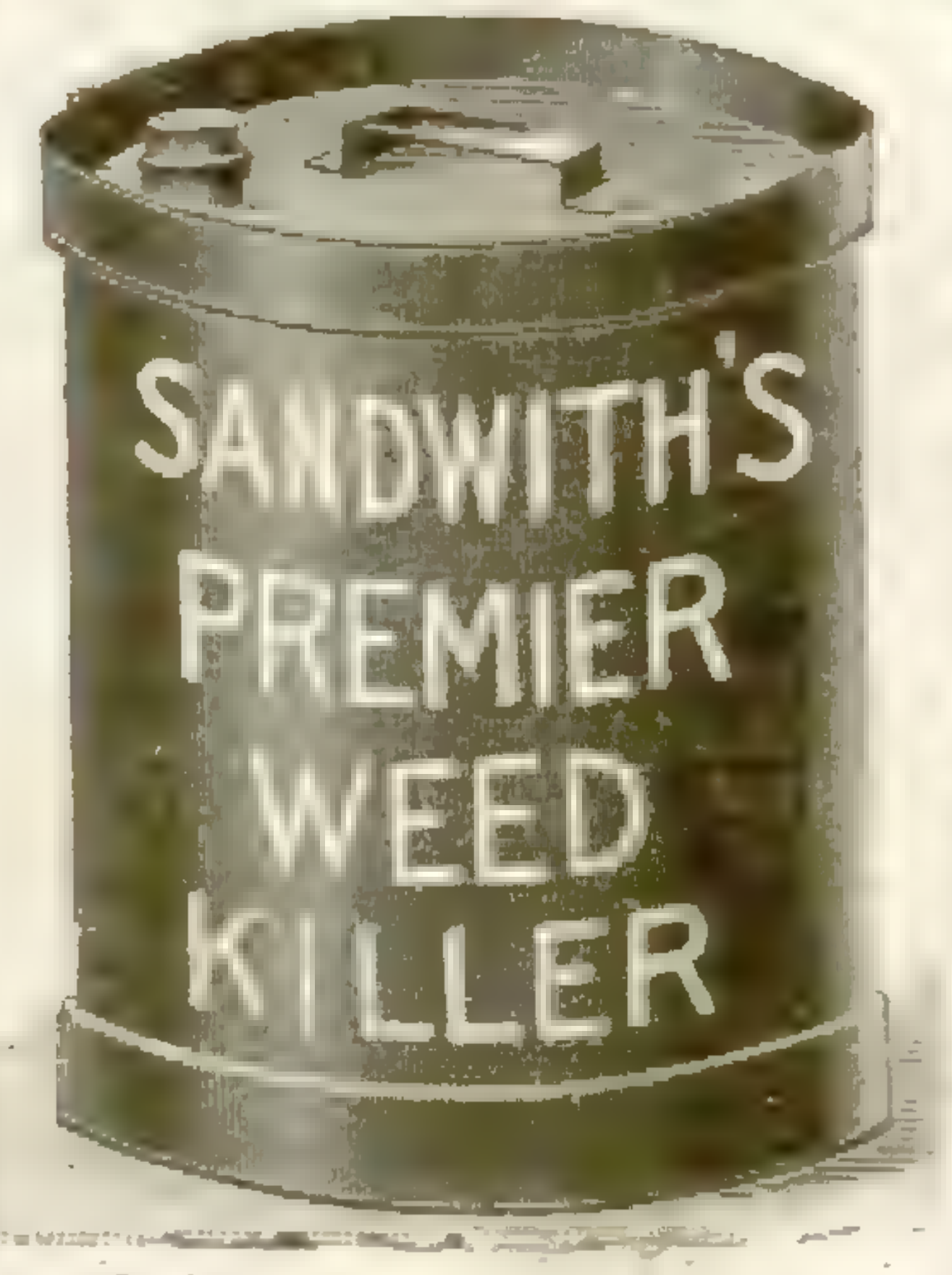
Cyllin Soft Soap in liquid form.

Half Pints, Pints, Quarts, One Gall. Tins; also Two Gall., Five Gall., and Ten Gall. Drums.
From all Chemists, Seedsmen, and Florists.

Write for Pamphlet and Prices to

Jeyes' Sanitary Compounds Co., Ltd.,
64, Cannon Street, London, E.C.

THE FAVOURITE WEED KILLER.



As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for 6/-; drum, 2/-. 12 galls. for 16/-; drum, 6/-. 20 galls. for 26/8; drum, 10/-. 40 galls. for 50/-; drum, 20/-.

EITHER LIQUID OR POWDER.

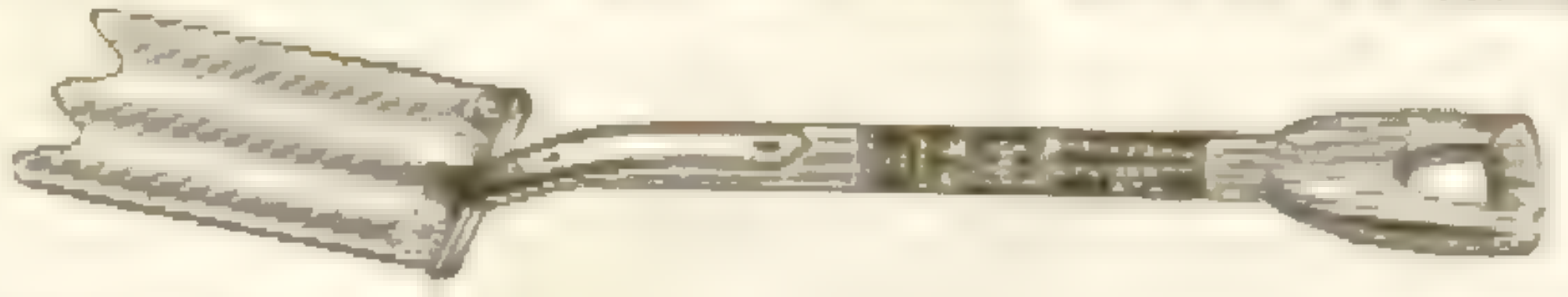
Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,
The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

A NEW GARDEN SPADE (Carter's Patent).



This is claimed to be the most effective Spade on the market. Try it. If you want Spades, Shovels, Forks, and other Garden Tools of the highest quality and finish, ask your Ironmonger for "Hardy's," and see that you get them.

THE HARDY PATENT PICK CO., LTD., SHEFFIELD, ENGLAND.

FOR ROSE MILDEW
use
V2K FLUID
THE BEST REMEDY
FOR THIS PERSISTENT PEST.
Does not discolour the foliage.

OF AGENTS EVERYWHERE.

Sole Mfrs., Willm. Cooper & Nephews, Berkhamsted.

BOTTLING FRUIT.

Patent Apparatus Complete.

Efficient, Reliable, Simple, Easily Operated.

WICKHAM and Co., Dept. M, Ware, Herts. **5/6**

FLOWER POTS.—10 [illegible] 16 7in., 20 [illegible] [illegible] 25 6in. [illegible] Illustrated List of Flower Pots [illegible] T. JEAVONS, Potteries, [illegible]

PIGSTYE TIMBER. [illegible] square foot. Portable houses of all kinds. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.

The best and the cheapest.

Write for LISTS.

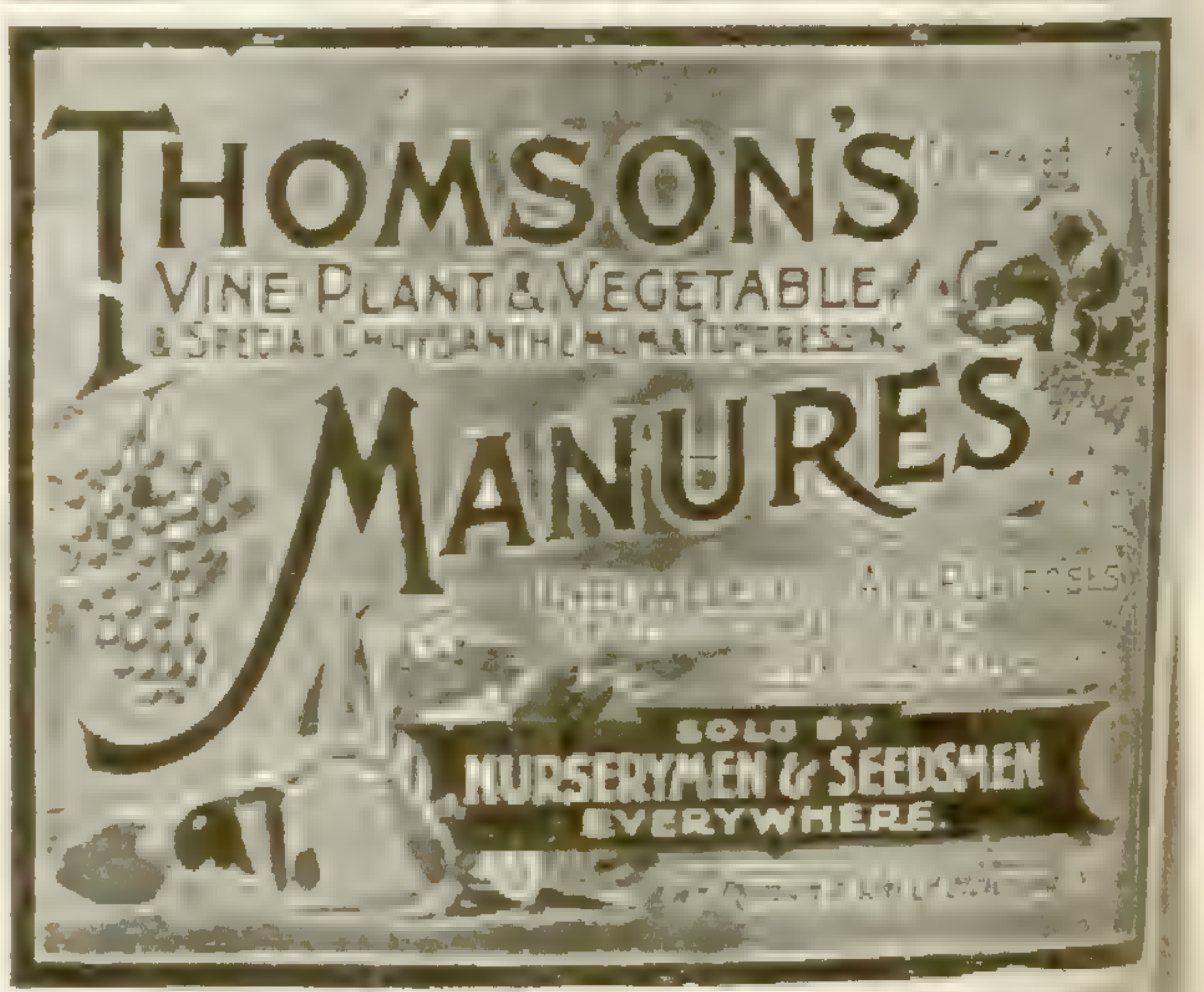
Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant — Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address

RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.



MANY YEARS REPUTATION.

EUREKA WEED KILLER

LASTING RESULTS – NO NEW EXPERIMENT.

1/9 TIN FOR 25 GALLONS — 6/- TIN FOR 100 GALLONS — LARGER SIZES AT LOWER RATES

SOLD BY AGENTS. MANUFACTURERS: TOMLINSON & HAYWARD LTD LINCOLN.
IF ANY DIFFICULTY SENT DIRECT – PAID

SPAR GRAVEL for Paths, Drives, & White, strong [illegible] broken and [illegible] graded; also Rockery Stone.
BECK & CO., Stone Merchants, Matlock.

CHARGES FOR ADVERTISEMENTS IN

THE
GARDENERS'
MAGAZINE

	£	s.	d.
Five Lines and under	£0	2	6
Per Line beyond	0	0	6
,, Inch	0	6	0
,, Half Column ...	1	10	0
,, Column	3	0	0
,, Page	9	0	0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed—

Telephone Numbers:
Editorial and Printing Depts. .. ... 831 Holborn.
Advertising and Publishing Depts. ... 2140 Holborn.

Offices: 148 and 149, Aldersgate Street, London

Printed and Published by W. H. & L. COLLINGRIDGE, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls

THE GARDENERS' MAGAZINE.

No. 3,013. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, JULY 29, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) Twopence

BARR'S SEEDS FOR JULY SOWING.—Finest selected strains of Aquilegias, Begonias, Campanulas, Carnations, Delphiniums, Forget-me-nots, Hollyhocks, Lupins, Pansies, Hardy Primulas, Snapdragons, Stocks, etc. See Barr's Seed Guide, free. BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from

PRICE'S PATENT CANDLE CO., LIM., LONDON

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, S.W., would advise anyone who is considering the advisability of erecting Greenhouses to get plans and estimates for them now. The best advice with regard to building, all plans, estimates, and every attention can be secured by a postcard, telephone message (201 Western), letter, or wire to "Gray, Chelsea, London."

SLUGS, SLUGS, SLUGS. — "SANITAS POWDER" will rid your garden of slugs. Mr. Walter P. Wright, of the "Garden Week by Week," says: "The particular hint that I was going to offer about slugs was to scatter 'Sanitas Powder' on the soil amongst the plants—slugs simply loathe it." Mr. E. Poulter, of Mayfield, Sussex, writes:—"I have found 'Sanitas Powder' most efficacious in keeping off slugs." "SANITAS POWDER," 6d. and 1s. tins, and 12s. 6d. per cwt.

THE SANITAS CO., Ltd., Limehouse, London, E.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

RARE ALPINES CHEAP.—Profits devoted to Patriotic objects. Apply for list, LADY C., The Abbey, Much Wenlock, Shropshire, and please enclose fully addressed and stamped envelope.

THE BOURNE DAFFODILS have gained the HIGHEST AWARDS wherever Exhibited. Send for my Illustrated and descriptive Catalogue of FIRST QUALITY BULBS at MODERATE PRICES. Post Free from

CHRISTOPHER BOURNE,
The Daffodil Specialist, Simpson,
Bletchley.

RUSTIC SUMMER HOUSES, trellis-work, Fencing, Pergolas, Arches, Seats, Bridges, Log Cabins Loggias, etc. Send for our new LOG CABIN and RUSTIC CATALOGUE (just published), sent post free. BOULTON and PAUL, Ltd., Norwich.

CARNATIONS.—Spiral Wire Stakes. No tying required. Will last a lifetime. 24 inches long, 7s. 6d. per 100; 30 inches, 8s. 6d. per 100; 36 inches, 10s. per 100; sample doz., 1s., 1s. 3d., and 1s. 9d., all carriage paid. Pea Trainers, 6ft. by 4ft., 2s. and 3s. each. Garden Archways, Garden Edge and [illegible] Bordering, 8 inches high 8d.: 10 inches high [illegible] per yard. All cash with order. Catalogue free on application. J. PENKETH Iron and Wire Works, Market Place, Manchester. Telp.: 3695 City.

PERENNIALS, UNIQUE COLLECTION,
including
ALPINES AND AQUATICS.
Also RARER SHRUBS, HIMALAYAN RHODODENDRONS, and Others.
Write for Catalogue. G. REUTHE, Keston, Kent.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

SOW NOW.
WEBBS' EMPEROR CABBAGE.
BRITAIN'S GREAT CABBAGE.
Earliest and Best in Cultivation.
Remarkably free from any tendency to bolt.
6d. and 1s. per packet; 1s. 6d. per ounce, post free.

Mr. B. M'Evoy, Gardener to W. M'Cartney, Esq., writes: "I had a plot of 400 plants, and not one of them bolted. The hearts are of the finest size and shape I have ever grown."

Webbs' Favourite, 1s. per ounce.
Early Offenham, 8d. per ounce.
Ellam's Early, 10d. per ounce.

WEBB AND SONS, The King's Seedsmen,
WORDSLEY, STOURBRIDGE.

BUNYARD'S CATALOGUES
Free on Application.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

KENT STRAWBERRY PLANTS
NEW CATALOGUE READY.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

LAXTON'S STRAWBERRIES.—Fine early pot plants, for forcing, of Royal Sovereign and other varieties, 15s. 100. For new varieties see our catalogue, gratis on application.
LAXTON BROS., Bedford.

CLAY'S MANURES, CRUSHED BONES
(See page iv.)

CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue Free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

LAWN BOWLS.—£2 2s. Tournament Set, noted maker, 8 selected polished Lignum Bowls, full size, medium bias, complete, in strong case, with two jacks, never used, price 27s. 6d. Approval. Box 442, GILYARD'S LIBRARY, Bradford.

GREENHOUSES and GARDEN FURNITURE. — Distinctive Designs and Finished Workmanship. Write NOW for illustrated Catalogue. CARTER and HOWARD, Fife House, Kingston-on-Thames.

JAMES SENDALL and CO., Cambridge; Conservatories, Vineries, Garden Frames; Heating Engineers. Surveys made, and Plans prepared to suit any position. Illustrated List free. Telegrams: "Sendall, Cambridge." 'Phone, 511.

NARCISSUS.—Tulips, Hyacinths, etc. All the leading and best varieties, from 4s. 6d. per 100. Ask for illustrated price list, post free. Satisfaction guaranteed. C. F. A. VAN DER SLUYS, F.R.H.S., La Ramée, Guernsey.

BEGONIAS.—Started Begonias, 12s.; 16s. 100. Gerberas, Adnet's Hybrids. Seed, 1s. 6d.; plants, 15s., 20s. doz. Japanese Davallia Ferns, Badgers, Elephants, Rabbits, Squirrels, Monkeys, Balls, etc., from 2s. ELLISON, 57, West Bromwich.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable Buildings, etc. Catalogue gratis.

FOR AUGUST SOWING.
SUTTON'S HARBINGER CABBAGE.
Per packet, 1s. and 1s. 6d., post free.
The earliest and best.
Award of Merit, R.H.S., May 9, 1911, after trial at Wisley.

Mr. A. Edwards, Gardener to H. Steel, Esq., writes: "Your Harbinger Cabbage is weeks earlier than any other variety. I consider it the best spring cabbage I have ever grown. Not one of the whole lot bolted."

SUTTON'S APRIL CABBAGE.
Per packet, 1s., post free.

SUTTON'S FLOWER OF SPRING CABBAGE. Per ounce, 1s., post free.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.

From ———, Esq.,
65, ——— Av.,
Ottawa, Ont., Canada.
1st December, 1909.

"I received your Manual for 1910, and consider it the very best you have ever produced, and think it the best on earth."

WHY BUY FOREIGN DOORS?—We make all kinds of woodwork to compete against foreign. Timber, portable houses, woodwork supplied for United Kingdom or export. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

IRON and WIRE FENCING for GARDENS. Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free. BOULTON and PAUL, Ltd., Manufacturers, Norwich.

CACTI and SUCCULENTS.—Cuttings, 1s. per doz.; plants, 2s. to 5s. per doz. Mesembryanthemums, rooted cuttings, 1s. per doz.; all different; carriage paid; cash with order. G. SMITH, London Road, New Thundersley, Essex.

RICHARDSON'S for GLASSHOUSES and HEATING APPARATUS, for full advertisement see back page. Darlington.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page v.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-work, showing screens, wall panels, window surrounds, arches, arbors, etc., post free. BOULTON and PAUL, Ltd., Norwich.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.

XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.

XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both [illegible] and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N.S. or Florist for Richards' small pink list.

G. H. RICHARDS, Manufacturer.
234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS.
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

ROSES.

R. H. BATH, Ltd.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Ros

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

CATALOGUE PRINTING.

W. H. & L. COLLINGRIDGE,
City Press, 148 and 149, Aldersgate St., London.
Horticultural Catalogues, Colour Printing for Seedsmen, Florists, &c.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**
Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.
Telephone:—Enfield, No. 1 and 2.
STUART LOW & Co., Royal Nurseries, BUSH HILL PARK, MIDDX.

Primulas! Primulas! Primulas!

41st Year of Distribution.
OUR WELL KNOWN MAGNIFICENT STRAIN,
1/6 doz.; 2/6 25; 10/- 100. Package and Carriage Free.
Cineraria (Large flowered) and **Stellata** at same prices.
JOHN STEVENS & SON, COVENTRY.

ORCHIDS, ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.
STOVE AND GREENHOUSE PLANTS OF ALL KINDS
Please Write for List.
JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

Every Man His Own Garden Doctor.

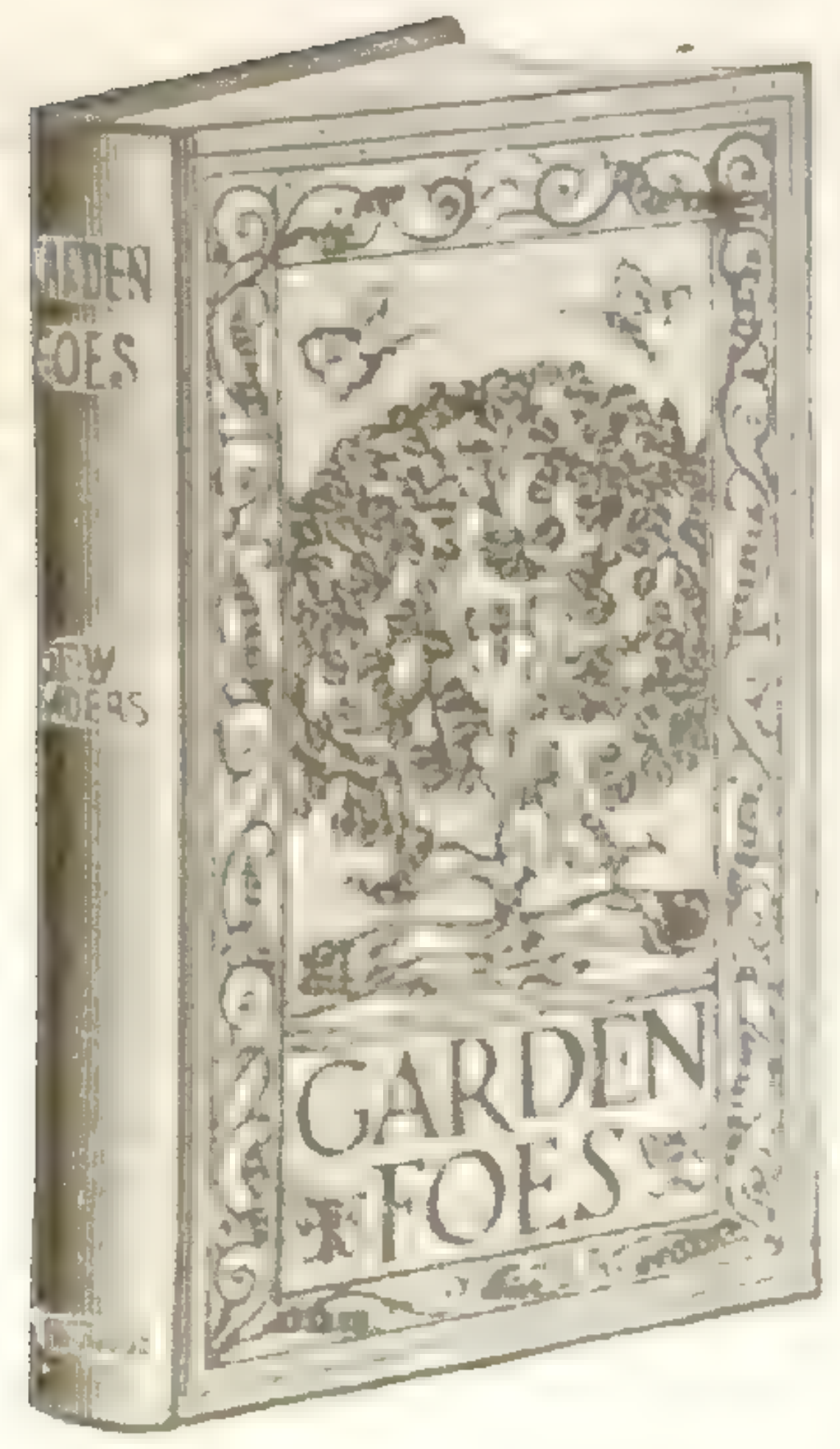
PRICE 2/6 net. By Post, 2/10.

GARDEN FOES

336 PAGES. 150 Illustration

By T. W. SANDERS, F.L.S. (Editor of "Amateur Gardening.")

A description of Insect, Animal and Fungoid Pests injurious to Fruit and Vegetable Crops, Hardy Plants, Trees, Shrubs, and Greenhouse Plants, with all the latest Remedies for their Eradication, etc.



CONTENTS:

- Fruit Pests and Diseases.
- Vegetable Pests and Diseases.
- Flower Garden Pests and Diseases.
- Greenhouse Pests and Diseases.
- Forest Tree Pests and Diseases.
- Rose Pests and Diseases.
- Miscellaneous Pests, etc.
- Insecticides and Fungicides.
- Insecticide Formulas.
- Proprietary Insecticides and Fungicides
- Spraying Apparatus.
- Powder Distributors.
- How and When to Spray.
- Fumigating.
- Cyaniding, etc., etc.

ORDER FORM.

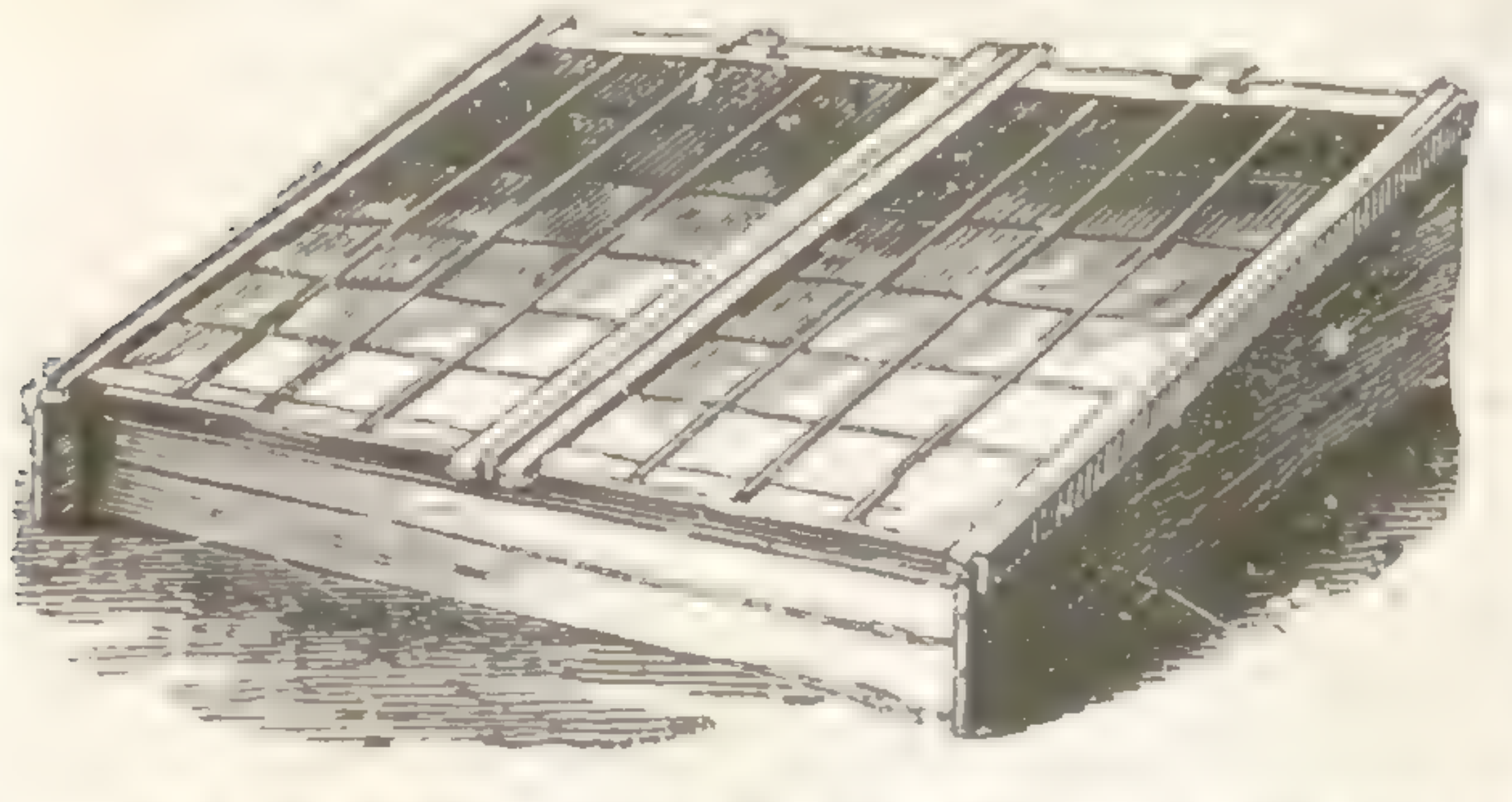
To the Publishers of "**GARDENERS' MAGAZINE,**" 148 & 149, Aldersgate St., London, E.C.

Please send me a copy of "GARDEN FOES" by Post, for whic
enclose remittance of 2/10.

Name ....

Address ....

PORTABLE
CUCUMBER FRAMES.
OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.		£	s.	d.
1-light 4 ft. by 6 ft.	CASH PRICES.	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.	CARRIAGE PAID.	5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON, MANCHESTER.

ROYAL PARKS.

GRASS SEEDS.

The Commissioners of H.M. Works and Public Buildings are prepared to receive TENDERS for the supply of GRASS SEEDS for use in the Royal Parks, etc., during the year 1912.

Forms of Tender, Conditions of Contract, and all particulars may be obtained on application to the Principal Clerk, Contracts Branch, at this Office.

The Commissioners do not bind themselves to accept the lowest or any Tender.

Tenders must be delivered before 11 a.m. on Friday, the 4th August, 1911, addressed to The Secretary, H.M. Office of Works, etc., Storey's Gate, London, S.W., and endorsed "Tender for Grass Seeds."

H.M. Office of Works, etc.,
13th July, 1911.

ESSEX. 26 miles out, six-roomed house (brick), 2½ acres, 2 Hothouses, completely fitted (each 150 x 20), 300 fruit trees, 2 wells, reservoir. Freehold; bargain, £550. Easy terms, or part mortgage. J. ALLEN, 34, New Bridge Street, London, E.C.

TO BE LET, on lease or freehold; may be purchased through death: Fern Lane Nursery, Heston, Middlesex; the nursery consists of 1¼ acres, contains two good cottages, 3-400 feet run of glass, frames, etc.; planted with Tomatoes, Roses, Plants for cut, and largely with Chrysanthemums, finest varieties suitable for the trade; rent and fixtures very low to an immediate purchaser. Apply, Mr. EDY, Fern Lane Nursery, Heston, Hounslow, Middlesex.

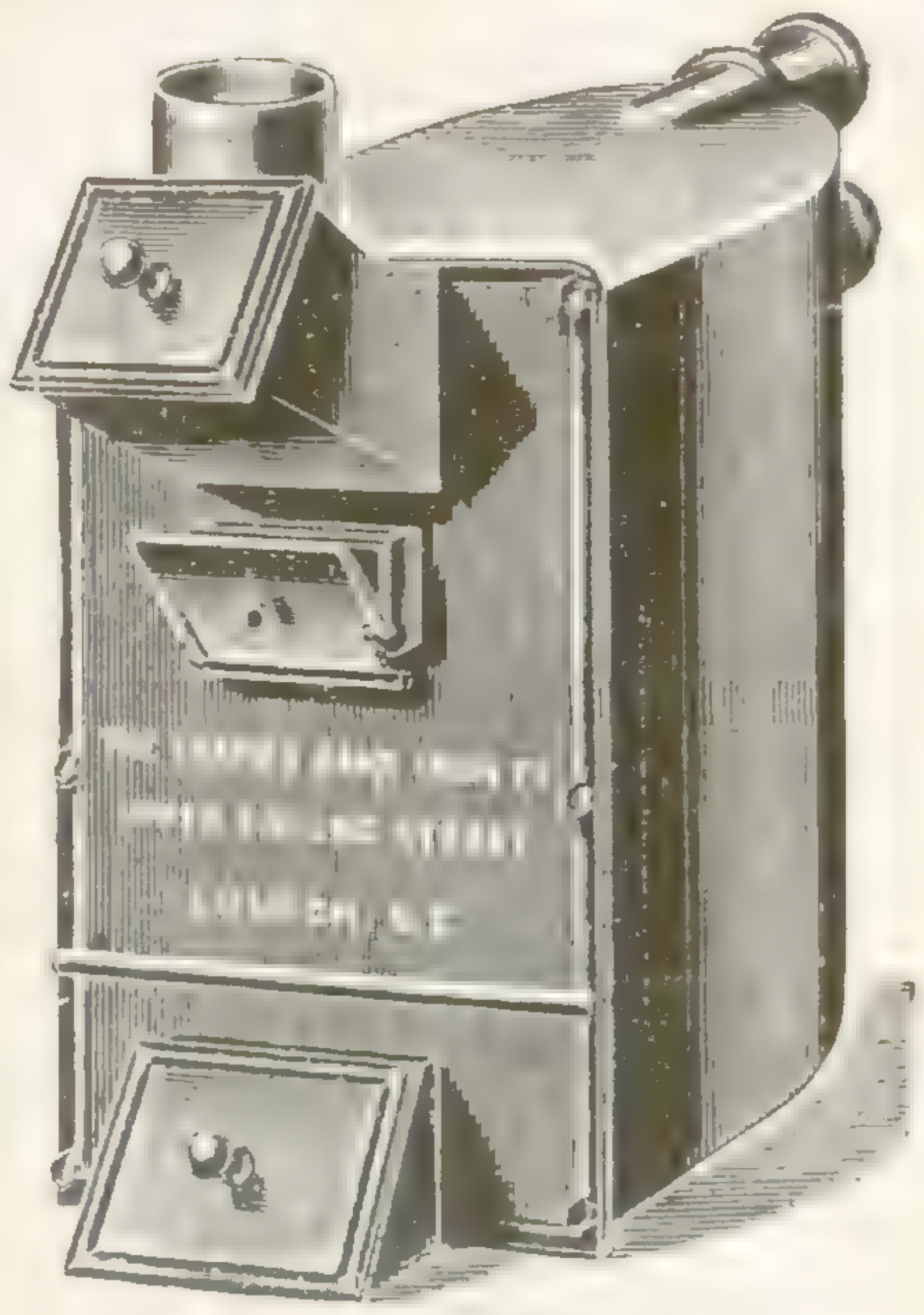
SEED AND NURSERY BUSINESS FOR SALE, favourable district, West of Scotland; low price; easily increased; reason for disposing. SEEDSMAN, 96, "Gardeners' Magazine" Office, 148/9, Aldersgate Street, London, E.C.

'Phone: Hop. 763.

When next a Small Boiler you require

TRY

THE HEEL



NONE TO BEAT IT.

THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.

4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

EPPS'S SELECTED PEAT
For Choice Plants, Ferns, Rhododendrons, &c., &c.
SPECIAL ORCHID PEAT.
Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to
EPPS & CO., Ringwood, HANTS.

GARDEN AND TENNIS NETS (best) tanned only, small mesh—50 x 8yds., 17s.; 25 x 8yds., 50 x 4yds., 100 x 2yds., 8s. each; 100 x 1yd., 50 x 2yds., 25 x 4yds., 4s. each. Any size to order. Tennis Netting (corded), 25 x 2, 6s. 6d.; 25 x 3, 7s. 6d.; 25 x 4yds., 8s. 6d. Write for Price List. R. WREN and SON, Net Merchants, 139, High Street, Lowestoft. Established 1863.

BENTLEY'S
WEED DESTROYERS
Utterly annihilate Weeds, Moss, Dandelions, and all other Weeds on Garden Walks, Carriage Drives, etc.
HAVE THE LARGEST SALE IN THE UNITED KINGDOM!
ARE THE MOST POWERFUL MANUFACTURED!
ARE THE MOST PERMANENT IN EFFECT!

LIQUID (Poison).
Double Strength (1 to 50).

		£	s.	d.
3 gallons, to make 153 gallons	...	£0	10	0
6 „ „ 306 „	...	0	18	0
12 „ „ 612 „	...	1	13	0
20 „ „ 1,020 „	...	2	7	6
40 „ „ 2,040 „	...	4	12	6

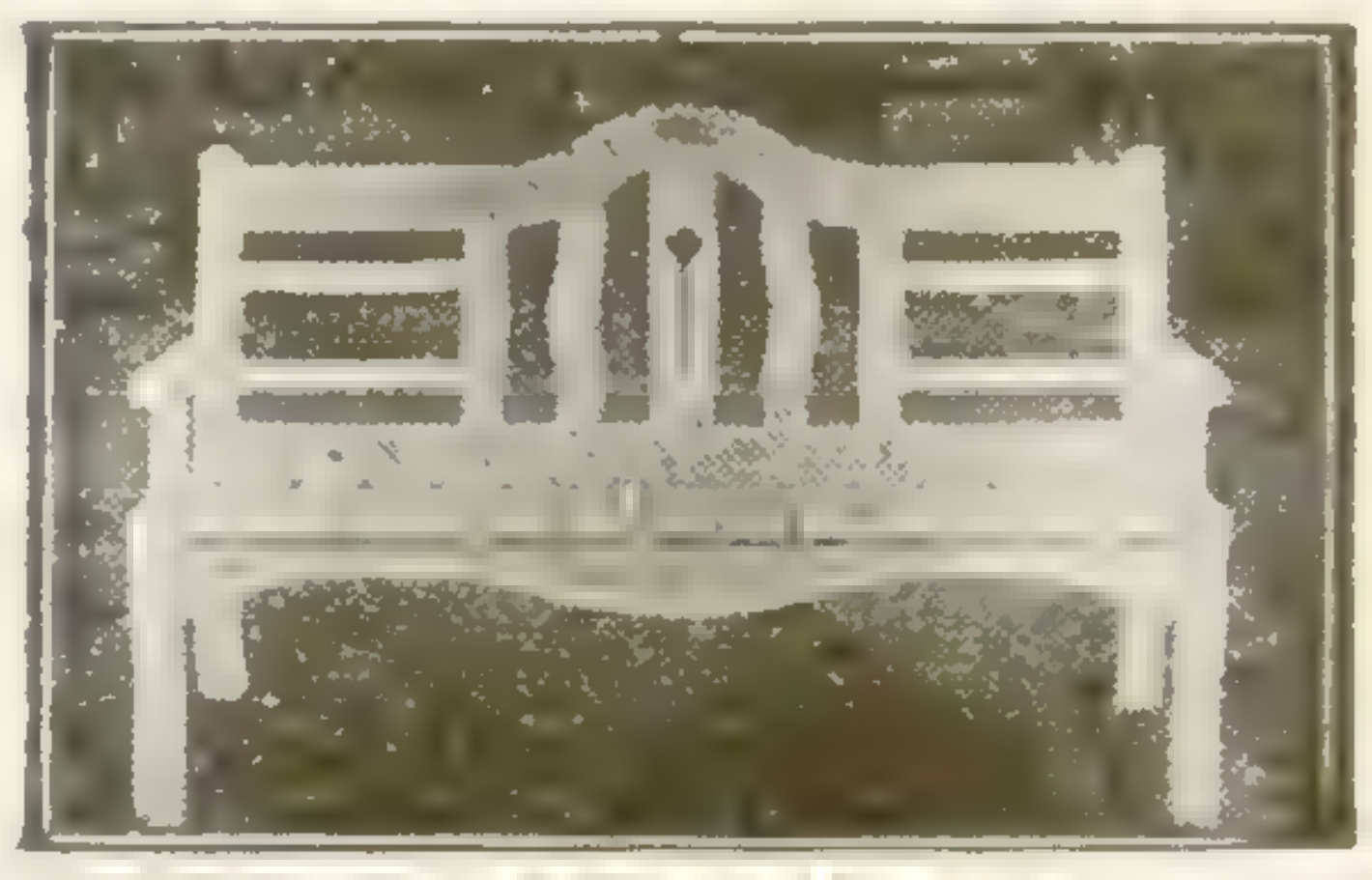
Special Concentrated Strength (1 to 80).

		£	s.	d.
3 gallons, to make 243 gallons	..	£0	14	6
6 „ „ 486 „	...	1	7	0
12 „ „ 972 „	...	2	6	0
24 „ „ 1,944 „	...	4	10	0

BENTLEY'S
COMPOUND LIQUID **QUASSIA EXTRACT**
(THE ORIGINAL).
The deadliest foe of Green, Black, and White Fly.
The insecticide of insecticides for roses, chrysanthemums, tomatoes wall and bush fruits, and other trees.
SAFE TO USE ANYWHERE AND EVERYWHERE
20 Galls., **3/6** per Gall.; 10 Galls., **3/7** per Gall.; 5 Galls., **3/8** per Gall.; 1 Gall., **4/2**; ½ Gall. **2/6**; 1 Quart, **1/6**; 1 pint, **1/-**.
Carriage Paid on 7/6 orders and upwards.

WHOLESALE MANUFACTURERS,
JOSEPH BENTLEY LIMITED,
Chemical Works,
BARROW-ON-HUMBER, HULL.

WHARFEDALE 5 ft. long.



In Best Redwood, painted two coats. White.
£1 15 0
Delivered any station.
Full Catalogue on application.

PETER PATRICK & SON, Otley, Yorks.

GREENHOUSE BARS.
5s. 0d.——100 feet——2½ × 1¼
6s. 3d.——100 feet——3 × 1½
LOWEST PRICES FOR GREENHOUSE MATERIALS.

HAWKINS LTD.,
109, Victoria Street, Westminster.

GARDEN NETTING. I do not require payment until you have seen and approved of the netting. **Others may try to copy me, but this Netting is the best stout small mesh, as supplied BY ME to the ROYAL GARDENS.** Will not rot. Can be sent on approval, 30 sq. yds. for **1s.**, any length or width made. Orders over **5s.** car. paid. List and Samples free. I can also supply commoner Netting at 50 sq. yds. for **1s.** Only Address—
H. J. GASSON, The Net Works, RYE.
Hundreds of Testimonials. Established 126 years.

FOR ROSE MILDEW
use
V2K FLUID
THE BEST REMEDY
FOR THIS PERSISTENT PEST.
Does not discolour the foliage.
OF AGENTS EVERYWHERE.
Sole Mfrs., Willm. Cooper & Nephews, Berkhamsted.

GLASS & PAINT.
NICHOLLS & CLARKE, LTD.,
15 oz. and 21 oz. Glass,
IN ALL THE USUAL SIZES.
Shoreditch, London.
When sending for list please cut out this advt.

SUBSCRIBER'S ORDER FORM

Every Saturday THE GARDENERS' MAGAZINE. Twopence

To W. H. and L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose________for________months in advance.

Name________________

Address________________

Date________________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

* * If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.

HOLLAND IS THE GREAT BULB-LAND.
ESTABLISHED 1832.
NO CONNECTION WITH ANY OTHER FIRM OF A SIMILAR NAME.

ANT. ROOZEN & SON'S
CELEBRATED BULBS
FOR
Early Forcing.

ROMAN HYACINTHS,
ROMAN NARCISSUS.
PAPER-WHITE NARCISSUS,
FREESIAS, &c.

OF THE FINEST QUALITY.

The above are now ready for delivery, and for full descriptive details of these and other SPLENDID BULBS for Forcing, etc., see our GENERAL CATALOGUE for 1911, which will be sent Free on application to our Offices at OVERVEEN, HAARLEM, HOLLAND; or to our General Agents,

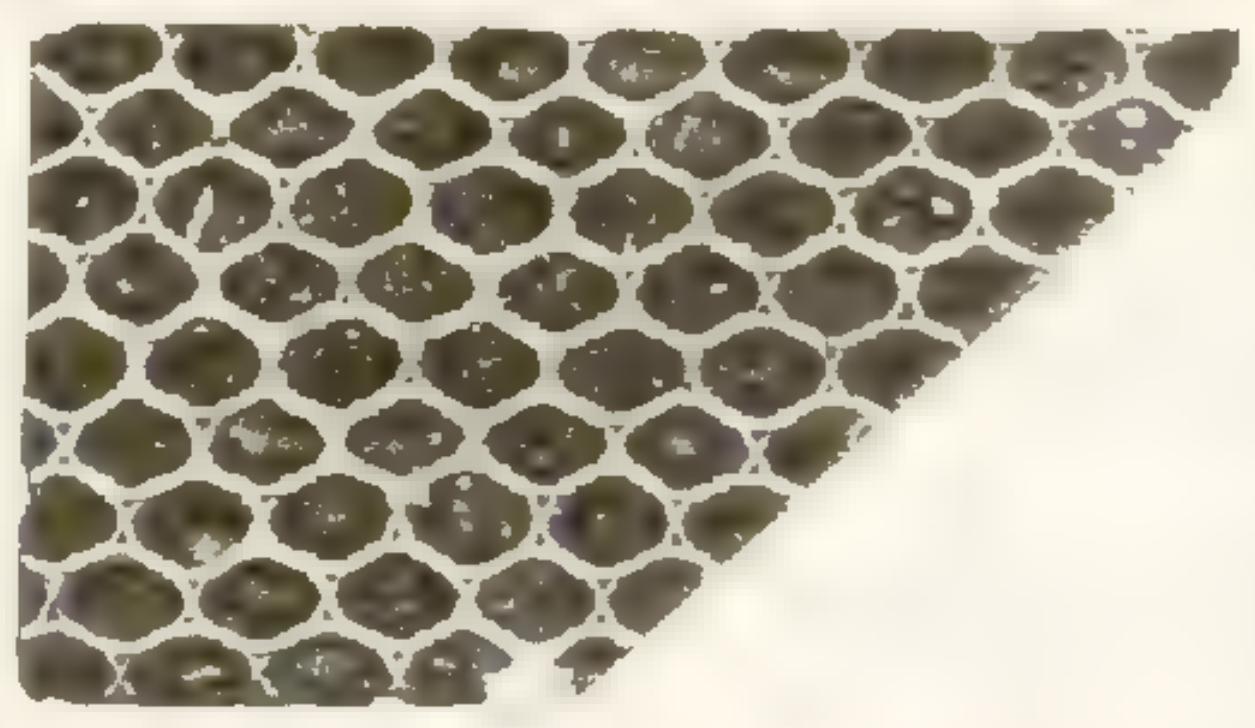
MERTENS & CO.,
3, Cross Lane, London, E.C.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.
Our Work has stood the test of time.

BOTTLING FRUIT. Patent Apparatus Complete. **5/6**
Efficient, Reliable, Simple, Easily Operated.
WICKHAM and Co., Dept. M, Ware, Herts.

Protect your Fruit from Wasps

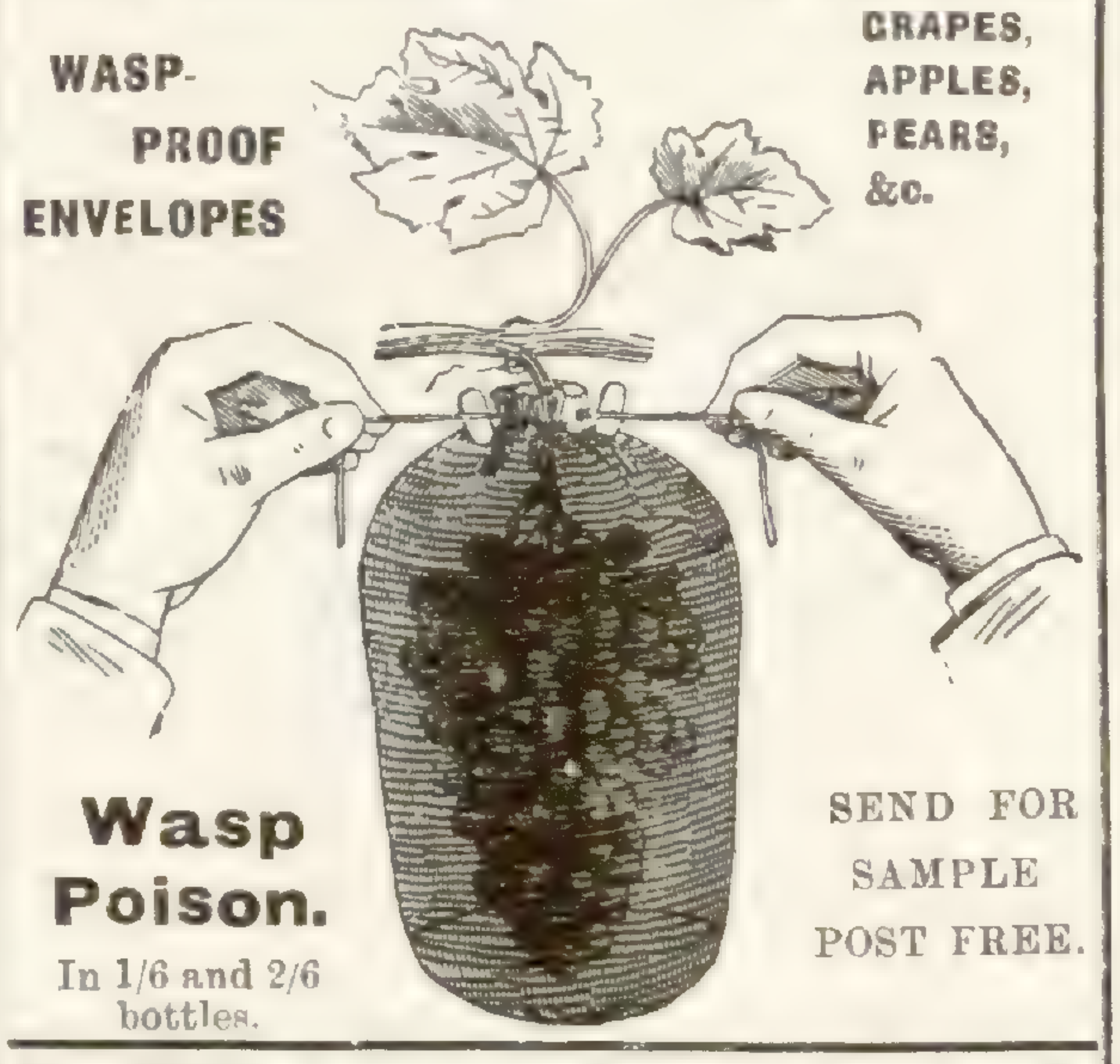


WASP PROOF SCRIM.

No. 1 (Fine), as shown above.		No. 2. (Rather Stronger)	
48 in. wide	1/2 per yd.	48 in. wide	1/4 per yd.
60 ,,	1/6 ,,	60 ,,	1/8 ,,
72 ,,	1/10 ,,	72 ,,	2/- ,,
84 ,,	2/6 ,,	84 ,,	2/9 ,,

Other widths can be supplied in proportion.

NEW INTRODUCTION.



WASP-PROOF ENVELOPES

For **PROTECTING GRAPES, APPLES, PEARS, &c.**

Wasp Poison.
In 1/6 and 2/6 bottles.

SEND FOR SAMPLE POST FREE.

Wm. WOOD & SON, Ltd., North British Wharf, WOOD GREEN, LONDON.
Phone, Palmers Grn., 377-378 Tel., "Fungheto, London.

Orchids ! Orchids ! !
THE LIVERPOOL ORCHID and NURSERY CO. (Cowan's) LTD.,
Gateacre Nurseries, Gateacre, near LIVERPOOL,
have an immense STOCK OF ORCHIDS in all the leading kinds. Inspection invited.
Catalogue post free on application.

STALKER'S Forest Trees, Fruit Trees, Roses, Bulbs, and Seeds
Are known all over the world, and cannot be surpassed for hardiness and quality.
Famous for Quality and Cleanliness.
D. STALKER & SON,
Government Contractors,
Catalogues Free. NAIRN, N.B.

— THE —
NATIONAL HARDY PLANT SOCIETY
Invites all lovers of Hardy Flowers to join its membership.
For particulars apply to the Hon. Secretary,
FRANK BOUSKELL,
Market Bosworth, Nuneaton.

SUTTON'S WHITE ROMAN HYACINTHS for forcing

THE FINEST BULBS OF THE YEAR.
From 10/6 to 21/- per 100.

Full particulars on application.
SUTTON & SONS,
The King's Seedsmen, READING.

TREE CARNATIONS
The Newest and Best Varieties.
Strong, healthy and well-rooted plants only supplied.
Catalogues free.
E. J. WOOTTEN, Fairoak, EASTLEIGH.

CHARLESWORTH & CO.,
Hayward's Heath, Sussex,
ORCHID SPECIALISTS.
IMPORTERS, EXPORTERS, RAISERS & GROWERS.
PRICED ILLUSTRATED CATALOGUE FREE.

CLAY'S FERTILIZER
CROWNS THE CORONATION YEAR WITH FLORAL TROPHIES.

CLAY'S LONDON FERTILIZER
TRADE MARK.

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags** :—7 lbs., **2/6** ; 14 lbs., **4/6** ; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK, AS AT SIDE.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. Fourth Edition (Second Reprint). 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under :

CLAY & SON, Stratford, London, E.

VOL. LIV.—No. 3,013. SATURDAY, JULY 29, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Gardening Excursions.

There is probably no section of the industrial community wherein so keen an interest is taken by the members in their avocations as in the case of those who are engaged in the several branches of practical horticulture. We have evidence of this on all sides, but there could not well be any proof more conclusive upon this point than the readiness with which advantage is taken of opportunities for visiting neighbouring and other gardens, nurseries, and seed grounds. Young gardeners who are imbued with a strong desire to fit themselves for a position of some importance, have very soon after they have entered on their training a wish to see what is being done in gardens of note within a convenient distance of those in which they are engaged. In this matter a convenient distance is interpreted somewhat liberally, and many of those who read this will call to mind walks of eight or ten miles that they have taken after the usual working hours for the purpose of visiting gardens they have been desirous of seeing. They will also remember the pleasure such visits gave them, and the useful information they obtained upon some of the many points of practice with which those engaged in gardening should be fully conversant. It need hardly be said that with increased knowledge of gardening and the difficulties associated therewith there is a stronger desire to take advantage of the object-lessons that are afforded by other gardens, and it may be to obtain help from those in charge in clearing up doubtful points, for the majority of those in charge of gardens make a practise of visiting their neighbours with some degree of regularity. For a long period it was the rule to make such visits alone, or in company with one or two friends, but now the general practice is to visit gardens of note in organised parties, and this is so great an improvement upon the older method that all concerned have good reason for congratulating themselves upon the change that has been brought about. The informal visits of one or two will continue to be made, and happily so, but parties properly organised by the various societies have a double advantage. They enable the visitors to see all that is to be seen, and they bring into close association the greater proportion of the gardeners in a given district, and amid more pleasant surroundings than is the case when they meet for the reading and discussion of papers. These excursions can hardly fail to be pleasant and instructive, whatever may be the status of those who take part in them, provided each member is desirous of contributing his share to the enjoyment of the others. Happily, this is the rule, and we recall with pleasure the fact that we have not as yet taken part in an excursion in which the proceedings from first to last have not been of the most pleasant character. We have been reminded of the important position occupied by excursions in the programmes of many societies by several that have been made within the past ten days. These included the visit of the members of the Horticultural Club and their lady friends to the beautiful gardens of Friar Park, Henley-on-Thames, the residence of Sir Frank Crisp, one of the most distinguished of amateur horticulturists; the excursion of the National Chrysanthemum Society to Cliveden; and the visit of the Exeter Gardeners' Association to the interesting gardens of Roby Hall, Torquay, the residence of Sir John Edwards Moss. The members of both the Horticultural Club and the National Chrysanthemum Society made some part of the journey by water, and they did well in taking advantage of the opportunities thus afforded for enjoying the beautiful river scenery in the neighbourhood of Henley and Cliveden. At Friar Park the visitors had an opportunity of seeing one of the finest examples of garden design in this country, and probably the most noteworthy rock garden that has a place in a private garden in the United Kingdom. The proportions of the rock garden are great, and the collection of alpines that have a place within its boundaries is quite unique. At Cliveden the visitors were able to enjoy to the full a garden rich in attractions, and of much interest for its historical associations. At Roby Hall the features are many, but those of outstanding importance are the large collection of splendidly-grown orchids, and the many rare and beautiful trees in the pleasure grounds; consequently, however diverse may have been the taste of the members of the party, there was more than sufficient to interest all of them. These excursions, it need hardly be said, occupied the whole of the day, but in many districts the practice has within recent years obtained of making afternoon or evening visits to gardens, and such visits have the advantage of not taking the members of the party away from their duties at home for any considerable period, and also of enabling the owners of the gardens to meet the parties and extend to the members a hearty welcome. Such excursions as these are organised with much success by the Croydon Gardeners' Association, and we have been assured on more than one occasion that they are both pleasant and profitable, and much appreciated by those who take part in them. These short excursions are especially adapted for districts where, as at Croydon, good gardens are numerous and situate within so short a distance of the centre that they can be readily reached in a comparatively short time. Some few good gardens are seldom if ever visited on the occasion of day excursions, a fact to which we have had our attention called more than once, but on enquiry it has invariably been found that they are situated some distance from the nearest railway station, and that the hire of carriages in addition to the cost of the railway tickets, would involve an expenditure beyond the means of some of those who would like to take part in the excursions. The question of cost is an important one, and we are

MR. D. WILLIAMS.

glad to know that in making their arrangements societies keep it in view.

Mr. D. Williams, who has had charge of the gardens of Duncombe Park, the seat of the Earl of Faversham, for nearly a quarter of a century, is a native of North Wales, and possesses in a marked degree the qualities that have contributed to the success achieved by many of his countrymen in various walks of life. Mr. Williams began well, for, after having served an apprenticeship in a good garden, he went as an improver in the Penrhyn Castle gardens under Mr. Speed, where he remained four years. Thence as journeyman to Chatsworth, where he remained a second period of four years, and then he went to Lockinge Park as foreman, a position he occupied for a similar period, and was then appointed head gardener to Lord Wimborne at Canford Manor, Wimborne, Dorset. Here he remained eight years, and then assumed charge of the important gardens of Duncombe Park. When at Canford Manor Mr. Williams obtained a high position among practical horticulturists in Dorset, and in Yorkshire he has not been less successful in commanding the esteem of those whose avocations are similar to his own. We could have no better proof of the thoroughness of Mr. Williams' training and his remarkable ability than the fact that he should be equally successful at Canford Manor and Duncombe Park, where the climate and soil conditions differ as widely as they well could do. During the long period Mr. Williams has been chief of the Duncombe Park gardens he has achieved much success in the cultivation of fruit under glass and in the open, and he has specially distinguished himself as a cultivator and exhibitor of chrysanthemums. Ample evidence of his ability is also found in the immense kitchen garden under the shadow of the ruins of Helmsley Castle and in the extensive flower garden and pleasure grounds that form so magnificent a feature of Duncombe Park.

Floral Decorations at Edinburgh.—On the occasion of the return of the King and Queen from Edinburgh on the 21st inst. the Waverley Station was tastefully decorated with flowers. In the scheme of decoration carried out on the platform white lilies, red roses, and blue lobelias were used with excellent effect, and the station offices were embellished with festoons of evergreens. Mr. J. F. McHattie, the City Gardener, brought to the Waverley Station two baskets of flowers, one tastefully filled with white carnations destined for the Queen, and the other contained white heather, which was presented to Princess Mary on her arrival by the Lord Provost of Edinburgh.

The Hot Weather that has been experienced over the greater part of the country during the current month reached its maximum intensity at the close of last week, when some exceptionally high temperatures were recorded. Previous to the 21st inst. the thermometer had on several days registered 80 degrees, but on that date it recorded 90 degrees, both in London and at Margate, and 92 at King's Lynn. The temperature in London was 15 degrees above the average, and was the highest recorded in the Metropolis since September 2, 1906, when the thermometer rose to 91 degrees. On the following day, July 22, the thermometer reached 93 degrees at South Kensington, and 94 degrees at Margate, but at Kew it touched 89 degrees. This proved the hottest day in London since July 15, 1881, when 95 degrees were recorded, and at Margate the temperature was also the highest recorded during the past thirty years. There have been light falls of rain in London, Wales, the western and northern parts of Scotland, and in some of the northern parts of England, but at Kew and in the southern counties of England there was practically an absence of rain for twenty-four days. So long a period of drought in July has not previously been experienced during the past forty years, and, as so well known to cultivators, has seriously affected growing crops of all kinds, and rendering the work of garden management extremely difficult. The dryness of the atmosphere has been a characteristic feature of the past drought, and on the 21st inst. the relative humidity at Kew was only 35 per cent. The drought practically came to an end on Tuesday, when rain fell heavily in various parts of the United Kingdom.

Horticultural Trade and Undeveloped Land Duty.—Some dissatisfaction has been felt by nurserymen and market gardeners for some time past with regard to the additional burdens thrown upon the trade by recent legislation. It is considered that undeveloped land duty on the difference between the agricultural value and the hypothetical value of the land, for building or for the purpose of any other trade, although levied at one halfpenny in the pound on such difference in the capital value, represents in effect a tax of nearly 1s. in the pound on rental value. The feeling of uneasiness has been intensified by the sympathetic reception given recently by the Prime Minister and the Chancellor of the Exchequer to a petition signed by 172 Members of Parliament, urging that increased taxation should be thrown upon land values. As the result of this feeling a special committee of those interested in commercial horticulture has been formed, with a view to resisting further impositions. The list of members comprises such well-known names as Messrs. G. Bunyard, W. Bull, R. Cobley, H. E. Honnor, George Monro, R. Piper, C. E. Pearson, S. Pickering, T. A. Rivers, J. Rochford, W. B. Randall, E. Sherwood, H. J. Veitch, J. G. Veitch, N. Sherwood, H. Morgan Veitch, A. Watkins, W. Poupart, W. Sams, B. Hurst, J. Sweet, H. O. Larsen, E. Rochford, R. W. Wallace, and W. R. Pennell. Arrangements have been completed by this committee for securing the assistance of the Land Union with its organisation of 140 branches throughout the country.

A Shakespearian Flower Border. We learn from the "City Press" that Mr. Henry Clarke, J.P., has in the gardens of his old-world Hampstead residence, Cannon Hall, a border containing specimens of the whole of the plants and flowers mentioned by Shakespeare in his works.

The Aperture of Stomata. To a recent meeting of the Royal Society Mr. Francis Darwin and Miss D. F. M. Peitz contributed a paper on a new method of estimating the aperture of stomata. The apparatus used is known as a porometer, and is similar in principle to that devised in 1873 by N. J. C. Müller, but differs from it completely in construction. By a simple arrangement a current of air is drawn through the stomata of a living leaf, its velocity being measured by the fall of a water-column. At a constant pressure the rate of air-flow is necessarily dependent on the size of the stomatal pores, and it is accordingly found that agencies such as darkness or loss of water supply, which are known to diminish stomatal aperture, cause a striking drop in the rate of air-flow as recorded by the porometer. In studying the effect of severing the leaf stalk, and thus cutting off the water supply, it has been proved that the first effect of withering is a wide opening of the stomatal pore. The porometer has been found of value in attacking the question of the causal relation between stomatal aperture and transpiration. A large number of observations have been made, but in the paper a single experiment was given as illustrating the parallelism between the transpiration rate and the condition of the stomata as revealed by the porometer.

Wye College.—At the meeting of the Governors of the South-Eastern Agricultural College, which was recently held at Wye, under the presidency of the chairman, Lord Ashcombe, the plans of the proposed new buildings, forming part of a new quadrangle, were passed, and orders were given to commence the work at once. It was decided to commence an investigation into the losses of sheep from parasitic worms, and Mr. Gardener, B.A. (Cantab.), was appointed to deal with the biological side of the enquiry. An exhibition of up-to-date farm implements has been established, and the leading implement makers have sent specimens of their manufactures. The college investigation work is being continued on tobacco, hops, digestive values of sheep foods, extraction of lavender and mint oils, use of lime-sulphur washes, cocoanut cake, Para rubber seed cake, and Durra for stock feeding, manurial trials on poor chalk land, etc.

Record Price for Peas. — Remarkable prices have been obtained for peas this season, but perhaps the "highest price on record" was realised at the sales conducted recently by Messrs. G. H. Banks, auctioneers, of Kidderminster, when a six-acre field of Senator made no less than £41 per acre; a 19-acre field of the same variety also fetched £25 per acre. Both crops were grown in the Stourport district. This fine pea was raised and introduced into commerce by Messrs. Webb and Sons, of Wordsley, Stourbridge, and has become exceedingly popular with growers for market and gardeners for private use on account of its remarkable productiveness and fine flavour. It was awarded a First Class Certificate by the Royal Horticultural Society.

Forestry Development.—With reference to the development of forestry in the United Kingdom the Development Commission has formulated the following principles: (a) That the first requirement for such development is effective education in forestry at suitable centres, regular and organised research and demonstration. (b) That no scheme of State afforestation on a large scale can be considered until investigation has shown where State forests might be economically and remuneratively provided (regard being had to the interests of other rural industries), and until a trained body of foresters has become available. (c) That for the present applications for grants for the above purposes should include provision for the creation and maintenance of such staff as may be necessary to give practical advice and assistance to those who desire to undertake afforestation or to develop existing afforested areas. The Commissioners state that, acting under the section of the Development Act which permits them to recommend advances for forestry, they appointed four of their number to form the Forestry Committee. This committee has drawn up the outlines of a policy which the Commissioners have approved as a guide in dealing with the applications for grants for the development of forestry in England, Scotland, and Wales, Ireland being dealt with separately. Communications have been opened up with

Board of Agriculture in England, the Scottish Education Department, and the Department of Agriculture in Ireland, with the following results: With regard to England and Wales, the Commissioners have received a comprehensive scheme from the Board of Agriculture and Fisheries. In the case of Scotland, they have agreed to the provision of a central demonstration area—for the acquisition of which preliminary steps are being taken—and of a forestry school in connection with it; and also to the provision of small forest gardens for the local use of the agricultural colleges. With regard to Ireland, they have agreed to advances of £25,000 or £30,000 for the purchase of land, and to further advances, as soon as formal and definite applications are made under the Act, for additions to staff and for the maintenance and management of small woodlands in the hands of county councils.

Queenswood.—In our issue of the 22nd inst., we gave a short account, with illustrations, of the gardens of Queenswood, the charming residence of W. G. Rigden, Esq., at Englefield Green, and made reference therein to the success achieved in the cultivation of various subjects under glass. It may now be mentioned as a matter of additional interest that all the greenhouses in the gardens were erected by Mr. J. Gray, the well-known horticultural builder, of Chelsea, and are admirable examples of his high-class work.

New Rock Garden at Derwent Hill.—The delightful gardens of Derwent Hill, Keswick, the residence of Mr. Robert Slack, have had their attractions and interest greatly enhanced by the creation of a new rock garden, which has been just completed by Mr. T. R. Hayes, landscape gardener, resident at Keswick. The work of construction has occupied a large body of men during the past eighteen months, and to show his appreciation of the admirable manner in which all concerned had discharged their duties Mr. Slack entertained Mr. Hayes and his staff at dinner a few days since. In the course of the after-dinner proceedings the speakers testified to Mr. Slack's interest in gardening, and to the success that had been achieved by Mr. Hayes in connection with the work he had just completed.

Importation of Plants into Canada.—Revised regulations have been issued under the Destructive Insect and Pest Act (Canada). The following is a summary, as given in the "Journal" of the Board of Agriculture of the regulations in so far as they relate to stock originating in this country. Nursery stock, including all trees, shrubs, plants, vines, grafts, scions, cuttings, and buds are to be imported only through certain ports at stated periods. The port through which the stock is to enter must be clearly stated on the package. Importers must give notice to the Dominion Entomologist, Experimental Farm, Ottawa, within five days from the date of ordering the stock, and transportation companies or other persons bringing the stock into Canada must give similar notice immediately the consignment is received by them. Nursery stock or other vegetable matter (coming from Europe) is exempt from fumigation, but is to be inspected either at the port of entry or at its destination. If it is found to be infected with certain specified diseases or insect pests it will be destroyed, together with the cases, compensation being allowed up to two-thirds of the value of the stock. The above regulations do not apply to greenhouse-grown plants, herbaceous perennials, herbaceous bedding plants, or bulbs and tubers.

NATIONAL CARNATION AND PICOTEE SOCIETY.

Held at the Royal Horticultural Hall on Tuesday, July 25, this society's show was scarcely up to the average of extent or quality. The great surprise everyone felt was that there were so many and such good carnations, considering the peculiarly drying and brilliant weather experienced of late. In the larger classes for blooms on boards the competition was very limited.

The silver cup for the highest aggregate of points in Division I. was won by Mr. Jas. Douglas, who also won the Cartwright Cup for the highest aggregate in the open classes: in Division II. Mr. Hayward Mathias won the cup for the highest points, while Mr. C. A. Linzee and Mr. Linington won the aggregate awards in their sections. For these cups a first, second, or third prize has a certain point value, and the highest points gained secured the cup.

PREMIER DIVISION.

The premier division of the schedule is for the stalwarts, and in it the competition is chiefly confined to the leading trade growers. Entrants are confined to one division, though all may meet on common ground in the open classes.

The best stand of eighteen bizarre and flake carnations was adjudged to be the one staged by Messrs. A. R. Brown, Lim., King's Norton, who showed clean flowers of Shamrock, G. Melville, Bo-Peep, Joseph Lester, Robert Houlgrave, Guardsman, E. Adams, J. S. Hedderley, Gordon Lewis, Briar Lea, Mrs. T. Lord, Meteor, Wilfred, and C. A. Herbert; second prize fell to Mr. Jas. Douglas, Great Bookham. The chief award for eighteen fancy carnations in not fewer than twelve varieties was won by Mr. Jas. Douglas, Great Bookham, with a very fine lot of flowers, the varieties being Lord Steyne, Linkman, Liberty, Erl King, Ironside, Pasquin, Mrs. Gardiner, Forester, Mrs. Paton, Orient, King Solomon, Sam Weller, Hidalgo, and Alice B. Stewart; Messrs. A. R. Brown, Lim., second.

Mr. Jas. Douglas secured first place for eighteen white-ground picotees in not fewer than a dozen varieties, with beautiful flowers of Fair Maiden, Polly Brazil, J. Smith, Fortrose, Queen of Spain, W. E. Dickson, Favourite, Mrs. Openshaw, Lena, Mrs. Herbert, Mrs. G. Chaundry, and Hon. Mrs. Kenyon; Mr. A. R. Brown, second. Yellow-ground picotees are always great favourites, their brilliant colouring appealing to everyone.

Five classes were provided in this division for flowers shown as grown. In four of these classes six varieties were asked for, three blooms of each, staged in vases with carnation foliage. For self carnations Mr. J. Douglas led with Daffodil, Mrs. G. Marshall, Mdme. Castrilo, Rosy Morn, Mrs. Griffith Jones, and Golden Oriole; Messrs. A. R. Brown, Lim., second. The same exhibitors occupied similar positions for fancies, and here Mr. Douglas had Forester, R. A. Rowberry, and Lord Steyne in good form. For white-ground fancies Mr. Douglas again beat Messrs. A. R. Brown, Lim. The Bride was a very beautiful flower in this set. The same order was held by these competitors in the class for yellow-ground picotees, Mr. Douglas's best varieties being John Ruskin, Onward, and Mrs. Lennox.

For a dozen varieties, four each of selfs, fancies, and yellow-ground fancies, and three

SELF CARNATION ELIZABETH SHIFFNER.

Miss Shiffner's first-prize vase in the class for any buff or terra-cotta carnation at the National Carnation Society's exhibition.

blooms of each variety, shown in vases, the first prize fell to Mr. Jas. Douglas, who showed Mrs. R. J. Reynolds, Lord Steyne, Daffodil, Mrs. G. Marshall, Forester, and Liberty finely; Messrs. A. R. Brown, Lim., second. In all these classes there were but the two competitors.

SECOND DIVISION.

In this division the classes were similar to those in the premier division, except that fewer flowers were required. Mr. H. R. Taylor, Cheam, led for a dozen flakes and bizarres in not fewer than nine varieties, his Bedouin, Gordon Lewis, and Mrs. T. Low were good examples; Mr. C. F. Thurston, Penn Fields, Wolverhampton, second, and Mr. H. Mathias, Medstead, third.

For a dozen fancies Mr. A. W. Jones, Stechford, led from five competitors with grand blooms of Lord Steyne, Hercules, Mrs. Leo Hunter, Linkman, Father O'Flynn, Deerslayer, Claude Egerton, Orlando, and Queen Eleanor—a splendid set; Mr. C. F. Thurston second, and Mr. W. H. Parton, Moseley, third. Mr. H. R. Taylor scored for white ground picotees, and here he had Mary D. Anstiss, Favourite, and Radiant in good form; Mr. C. F. Thurston second, and Mr. H. Mathias third. There were five entries of yellow-ground picotees, and the best set was from Mr. H. Mathias, who showed clean bright flowers of Gloria, Constance, Oriel, Exquisite, Corona, Togo, Santa Claus, Golden Pippin, Ida Pope, Libra, and H. Brown; Mr. C. F. Thurston second, and Mr. W. H. Parton, third.

SELF CARNATION DAFFODIL.

Mr. Lakeman's first-prize vase in the class for any yellow carnation at National Carnation Society's exhibition. The flowers are rich yellow.

In this section four varieties, three blooms of each, were required in the classes for flowers shown as grown. For selfs Mr. A. W. Jones led with Elizabeth Shiffner, Cardinal and Chrystal; Mr. R. Morton, Woodside Park, second, and Mr. H. Mathias third. Mr. H. Mathias led for fancies with Lord Steyne, Devonian, Linkman, and Liberté. Mr. A. W. Jones second, and Mr. W. H. Parton third.

Mr. Mathias was the only exhibitor of white-ground fancies, with seedlings. Mr. R. Morton led for yellow-ground picotees with bright blooms of John Ruskin, Santa Claus, Her Majesty, and Peregrine; Mr. W. H. Parton second, and Mr. H. Mathias third. The best set of nine vases, three each of selfs, fancies, and yellow-ground picotees, was from Mr. W. H. Parton, who put up a fine lot of blooms of popular varieties; Mr. H. Mathias second, and Mr. H. R. Taylor, Cheam, third.

THIRD DIVISION.

In the third division the smaller growers foregather, and four prizes are offered in each class. Mr. J. J. Sheldon, South Woodford, scored for six flakes and bizarres, with Mr. C. A. Linzee, Alresford, second. For six fancies Mr. F. W. Goodfellow, Walsall, led with fine blooms from among eight competitors, Mr. E. J. Price, Bourneville, following him closely. The best half-dozen white-ground picotees were clean, even, but rather small blooms from Mr. G. D. Ford, Acock's Green; Mr. F. W. Goodfellow second. Mr. Goodfellow was first and Mr. C. A. Linzee second for six yellow-ground picotees; there were seven entrants.

The chief prize-winner in this division, in the classes for flowers shown as grown, were Mr. F. W. Goodfellow, Walsall, who led for a pink self; Captain A. Gordon Russell, Wheatley, for white self; Mr. C. A. Linzee for crimson self with W. H. Parton, Captain A. G. Russell for a yellow self with Daffodil, Mr. F. W. Goodfellow for a scarlet self with Cardinal, Captain Russell for a yellow-ground picotee with Mr. W. Heriot, Mr. E. J. Price for a terra-cotta or buff self with Elizabeth Shiffner, Mr. C. A. Linzee for a yellow-ground fancy with Lord Steyne; Mr. Aubrey Spurling for a fancy other than a yellow, buff, or white ground, with a seedling of heliotrope colour, faintly splashed with red, Mr. F. W. Goodfellow for a white-ground fancy with grand examples of Nizam. For a self of any other colour than that previously mentioned, Mr. L. Hart, Queen's Hill, Hertford, led with a purple seedling. For six vases of selfs, fancies, and yellow-grounds Mr. C. A. Linzee was a capital first, Mr. C. J. Price coming second, and Mr. G. D. Ford, Acocks Green, third.

MARTIN SMITH CUP CLASS.

A keen competition is usually found in the class for a dozen distinct varieties, selfs, fancies, and yellow-ground picotees, three blooms of each variety, flowers shown as grown. The chief award is the Martin Smith challenge cup and medal. There were three competitors on this occasion, and the cup was won by Mr. R. Morton, Woodside Park, who had the largest flowers, and exhibited Liberté, Elizabeth Shiffner, Lord Steyne, John Ruskin, Daffodil, Erl King, Agnes Sorrel, Santa Claus, Togo, R. A. Rowberry, Onward, and Etna; Mr. W. H. Parton, Moseley, Birmingham, second, with smaller but very clean, well-marked flowers; Mr. H. R. Taylor, Cheam, third. We should add that this class is for amateurs only.

OPEN CLASSES.

By far the most attractive division was the open one, where vases of nine blooms were required, and these to be shown as grown. Wiring was allowed, and in many cases the wiring was too much in evidence. For a vase of a pink or rose self Mr. H. Mathias came first with Mrs. Flight, and Messrs. A. R. Brown, Lim., second, with Ayesha. For a white variety Mr. J. Douglas led with Kate Nickleby, and Captain Russell was second. Messrs. A. R. Brown, Lim., scored for a crimson self with Mrs. G. Marshall, and Mr. Douglas was second with the same variety. There were six competitors in the class for a yellow self, and here Mr. H. Lakeman, Thornton Heath, led with fine blooms of Daffodil, with Miss Shiffner, Lewes, second, also with Daffodil. Adonis was the best scarlet self, shown by Mr. J. Douglas; Messrs. A. R. Brown, Lim., second with Cardinal. Mr. H. Mathias scored for a yellow-ground picotee with Togo in good form; Mr. J. Douglas, second, with the same variety. For a terra-cotta or buff self Miss Shiffner, Lewes, was a capital first, with fine flowers of Elizabeth Shiffner; Messrs. A. R. Brown, Lim., second, with Ben[illegible]. In the yellow-ground fancy class Mr. Jas. Douglas was to the front with the handsome Pasquin; Mr. W. H. Parton second with R. A. Rowberry. With The Bride Mr. J. Douglas won the premier award for a fancy other than with a yellow or buff ground.

In the seedling classes the only two varieties of importance were Ariel, a pink-edged yellow picotee, from Mr. H. Mathias; and Mrs. F. J. Johnston, a deep crimson self, from Messrs. A. R. Brown, Lim., King's Norton.

PREMIER BLOOMS.

Undressed Flowers: Heavy-edged yellow-ground picotee—Her Majesty, from Mr. Robt. Morton, Woodside Park; self carnation—Mr. George Marshall, from Mr. A. W. Jones, Stetchford; fancy—Pasquin, from Mr. Jas. Douglas, Great Bookham; light-edged picotee—Togo, shown by Mr. H. Mathias.

Premier dressed flowers: Flake carnation—Gordon Lewis, from Mr. H. R. Taylor, Cheam; light-edged white-ground picotee—Lavinia, from Mr. E. J. Price, Bourneville; heavy-edged white-ground picotee—Mary D. Anstiss, from Mr. H. R. Taylor, Cheam; light-edged yellow-ground picotee—Onward, from Mr. J. Douglas, Great Bookham.

NON-COMPETITIVE.

Messrs. H. B. May and Sons, Edmonton, contributed a collection of choice and beautiful ferns.

Messrs. Barr and Sons, Covent Garden, were represented by a display of popular hardy flowers, wherein good varieties of phloxes were conspicuous.

Messrs. Stuart Low and Co., Enfield, brought up a few carnations, chiefly those of their own raising.

Mr. Chas. Blick, Hayes, put up a capital stand of carnations, in which there were vases of fine flowers.

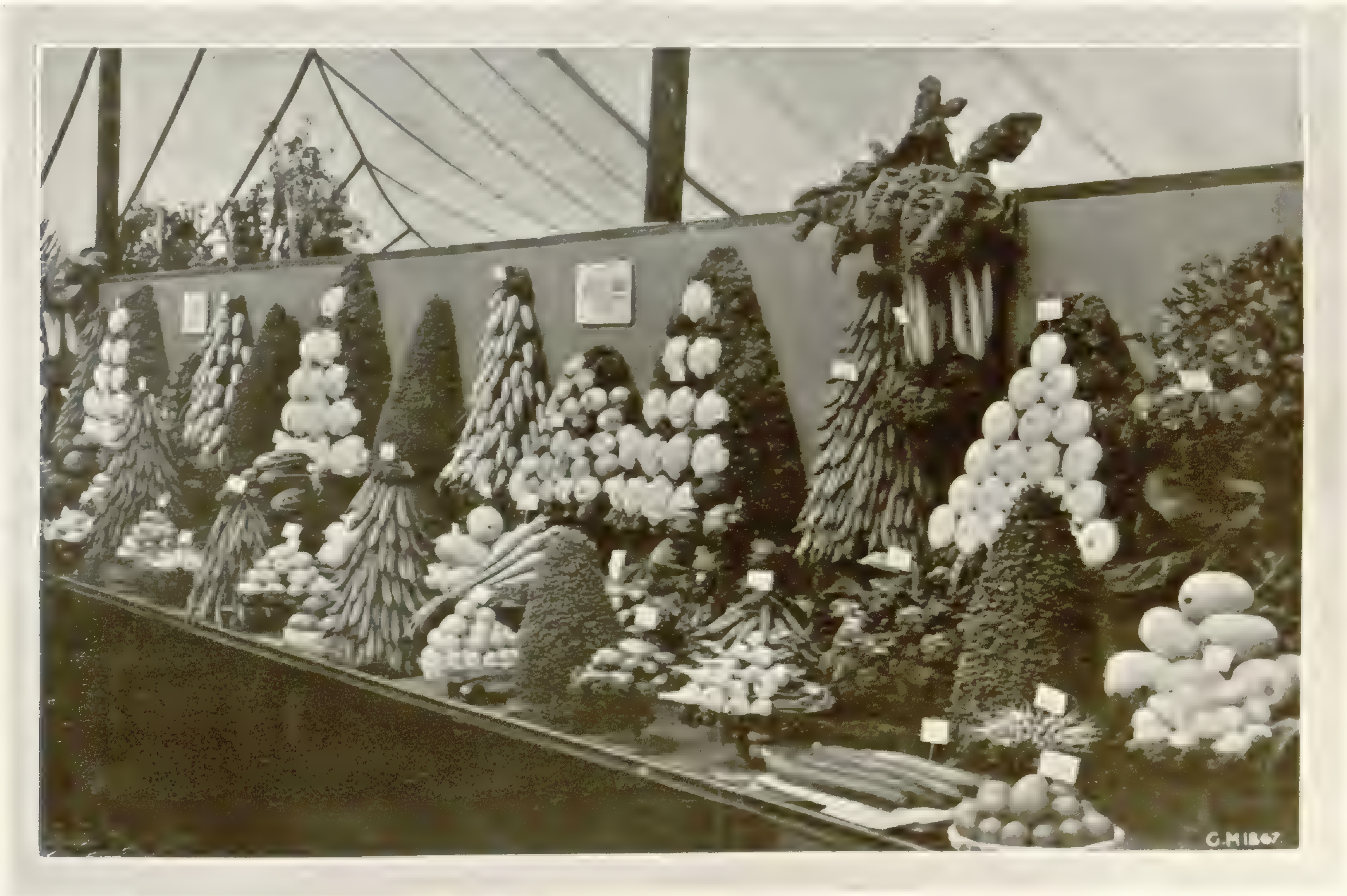
Mr. Lakeman, Thornton Heath, and Messrs. Phillips and Taylor, Bracknell, exhibited groups of cut carnations.

GOLD MEDAL VEGETABLES.

In the accompanying illustration we present our readers with a view of a most wonderful collection of splendidly grown vegetables exhibited by Mr. Edwin Beckett, V.M.H., gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree. Our readers are well aware that Mr. Beckett occupies an unique position as an exponent of the art of vegetable culture, while as an exhibitor he is second to none. Of course, at a great London or provincial show one expects Mr. Beckett to put forth all his strength for the sake of his generous employer and for his own reputation, but at a quiet local show there would be an excuse if some reduction of effort was apparent.

But at the Elstree and Boreham Wood Horticultural Society's exhibition, held a few days ago in the grounds of Aldenham House, the collection illustrated was arranged, and all who saw it, and have seen other displays made by Mr. Beckett, agree that never has he exhibited so finely. Most speakers like a good audience, at once large and influential; many actors fail to do themselves justice before a thin house, and probably a somewhat similar feeling exists in horticulture, therefore there is greater honour due to the Hon. Vicary Gibbs and his able gardener for their successful effort at Elstree. A gold medal was awarded — no other award was possible.

A few of the outstanding subjects shown included Centenary, Marrowfat, and Sutton's Selected Duke of Albany peas, Golden Waxpod dwarf beans, Sutton's Globe beet, Sutton's Earliest cabbage, Early Giant cauliflower, New Red Intermediate, and Favourite carrots, Delicacy cucumber, Earliest White Purple kohl rabi, Ideal lettuce, Improved Custard marrow, mushrooms, White Leviathan onions, Perfection, and Sunbeam, and Supreme and King Edward potatoes.



GOLD MEDAL COLLECTION OF VEGETABLES.
Exhibited at Elstree and Boreham Wood Show by Mr. Edwin Beckett, V.M.H., gardener to the Hon. Vicary Gibbs.

TIME OF PRUNING FRUIT TREES.

> "All superfluous boughs
> We lop away, that bearing boughs may live."
> —"King Richard II."

It is not proposed to embark upon that sea of contention, the summer pruning of fruit trees, but to discuss the best time for carrying out that operation which everybody believes to be necessary to some extent with bush and dwarf fruit trees, or, indeed, trained fruit trees of any sort, namely, the cutting out of the superfluous growth of one season before the next season's growth begins. It is obvious that if this operation is altogether neglected the trees soon cease to be either trained or dwarf. The practice of gardeners varies very much, and, apart from what is distinctively termed summer pruning, is in progress from September to March. I propose in these few notes to draw attention to the advantages of doing the final pruning of the year while the leaves are yet on the trees, preferably in August and September, though some amount of pruning which takes the form of cutting out old and exhausted wood must necessarily be deferred till the fruit has been all gathered, which means that there must be some of this work left till the latter part of October in the case of late varieties.

To the professional gardener who has daylight in the garden right through the winter there is not much to recommend this practice on the score of convenience, for though the work may be, and undoubtedly is, much pleasanter in the autumn, on the other hand, he has much less pressure of work in the winter. But for the amateur who likes to prune his own fruit trees, and, generally through stress of business, sees little of his garden from November to February, there is much to be said on this ground alone for doing the work in the late summer and early autumn. But there are stronger grounds than this. For one thing, with the foliage still on the pruner can form a much better judgment of which growths should be removed to keep the tree open, while this same pruning will enable the foliage and the wood which is left to make the most of the precious autumn sunshine, and sap will be diverted from superfluous wood to the swelling up of next year's fruit buds. Where the fruit will not be picked till late October pruning should still be done, as far as possible, at the time suggested, not only for the reasons stated, but for the stimulus it will give to the swelling of the fruit, while the removal of some of the growths will give the fruits in the inner parts of the tree a better chance of colouring. There is no danger of loss of sap by cutting out branches when the leaves are on, as some seem to think, and it is surprising how soon the edges of the wounds begin to form a callus. One should not, however, choose a time when the sap is in its most active state, say late May or early June. No matter how thoroughly summer pruning is done, there is always some final pruning to do after the summer's growth is over, often the removal of secondary growth, which is usually recommended to be cut off at a joint below its origin on the primary shoot. It is only in a very damp autumn that there is any likelihood of any buds bursting out into growth after the middle of September, with the exception of one or two late growers like Winter Nelis pear or Adam's Pearmain.

Another advantage of September pruning is that the new bark, which the month or more of the growing season yet remaining enables to be formed, lessens the risk of woolly aphis and other diseases and pests appearing next year, while with plums it decidedly lessens the chances of gumming. With the Victoria plum, for instance, which is rather notorious for losing its branches, this may be reduced to a minimum by finishing the pruning directly the fruit is picked, that is, about the middle of September. This is a point especially to be observed with the extra-strong growth. I have adopted this system for many years, and have rarely had a case of gumming. I have all my stone fruit trees pruned and nailed up for the winter as soon after August as the fruit is cleared. Stone fruits rarely make any fresh growth after the end of August, so that it is safer to do their pruning earlier than with apples and pears, while gooseberries and currants may be pruned any time in August. An exception may sometimes be made, however, in the case of gooseberries and red currants where birds are troublesome, partly because the closeness of the growth during the winter lessens the visits of the birds, and partly because it can be seen in the spring which branches have suffered most from loss of buds, and these can be selected for removal. Some lessen the risk of loss of buds by tying up into a sheaf for the winter the branches of such bushes as lend themselves to it.

Another qualification should perhaps be made, and that is, with varieties of weak growth, where we want to strengthen them as much as possible, it may be advisable to defer the pruning till the end of October so that the foliage may be using all the autumn sun for elaborating further material for building up into the tissues of the tree.

Alger Petts.

Pyrethrums.—This is an excellent time for lifting and dividing the old plants. Replant them in ground which has been thoroughly prepared by receiving a liberal dressing of decayed manure, and then deeply dug. Should the soil in the new quarters be infested with slugs, it will be necessary to make use of an approved soil cleansing product. The divided parts may be put out twelve inches apart each way and well watered in.—E. C. Pooley.

VIOLA GRACILIS.

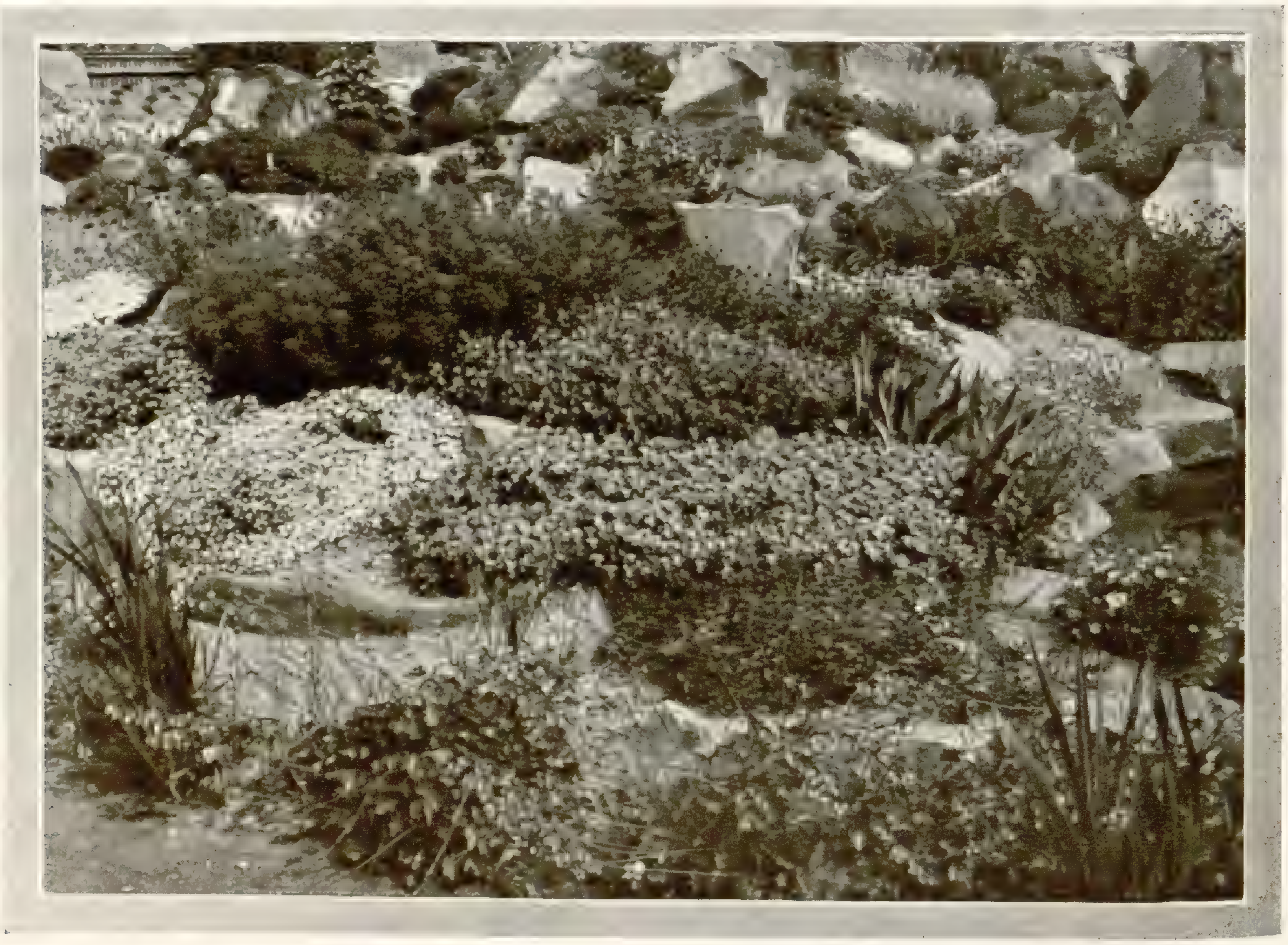
This sterling Grecian viola, distinguished by its charming mounds of low greenery, and its countless intense violet-hued blossoms (relieved simply by the tiny central white eye), is a first-rate subject for many phases of spring gardening. I have a good opinion of Viola gracilis, and would commend it for carpeting the ground planted by daffodils, tulips, and many other spring bulbs, especially those which are planted on sloping banks or ridges. It is fine also for a marginal plant for borders, especially if the borders are edged with natural stone, when the vivid masses of tiny violet blossoms, crowding over the grey stones, makes a distinctly meritorious and pleasing effect.

But perhaps of even greater importance is the value of the rock garden plantings of this exquisite viola. Here it can be planted well up among the rocks, where the blossoms can peer from the edge of the rock face on a level with the eye, the favourite position in which Mr. R. W. Wallace uses it.

The propagation of V. gracilis is very easy from cuttings, which can be rooted under the shelter of a handlight or frame at any time during late summer. The cuttings should be shaded from direct sunlight for a few days, and air must be given sufficiently to keep the young plants dwarf and sturdy. When rooted they can be transferred to small pots, or transplanted in prepared beds, as here they will make strong plants for late autumn or early spring planting. As for the time of blossoming, one cannot give a definite period, as its duration varies somewhat with the garden situation and weather conditions. This season one may put the flowering time as four months—i.e., March, April, May, and June. April is the month of months, the display then being very fine. At the end of June the plants should be cut over, and all old blossoms, seed-pods, etc., removed, the result being a few later flowers at intervals through the summer.

V. gracilis has hitherto been practically devoid of noteworthy varieties, if one excepts Purple Robe (which is really a ruby-purple), a truly valuable form. My own selection of Viola gracilis varieties which have been given considerable attention, include several meritorious varieties which may be of interest to lovers of rock gardens. Taking them in detail, we have Ruby, the nearest of all to Purple Robe, though with rather more of a warm reddish shade in the blossom, making it very effective in the sunlight. For freedom and good habit this is a very desirable form. Red Coronet is a lovely perpetual variety, and should become a useful rock plant in the near future. This has beautiful butterfly blossoms with ruby-red upper petals and lower petals of clear creamy-white, the one colour enhancing the other in a mos valuable degree.

Aurea is a free, continuous butt yellow variety, producing growth an blossoms freely for a long peri a very pretty little viola. Golde Fleece is the beau ideal of a roc plant, perfect to type, with the tinies leaves, and little violet-like blosso faintly rayed at the centre with tiny bla markings, being the finest yellow for colou ing in the series, a deep golden hue. Blue Jacket is a rich deep blue, without any trace of purple, an exact replica of V. gra cilis, save in its colour, and it has th making of an attractive little subject. Ex quisite is paler blue than the preced otherwise exactly similar; a pretty shad Grandeur, has a smaller, more perfect flow than the type, is very dwarf in habit, an rather bolder in foliage; it provides a ta ing deep rich blue with clear white e



VIOLA GRACILIS IN THE ROCK GARDEN, HOLLAND HOUSE, SOUTHCLIFF.
A distinct and beautiful free-blooming species bearing violet-purple flowers.

and is a model plant for rock garden or border, and practically perpetual.

Grandiflora gives the exact violet colouring, with clear white eye, and has the good habit of V. gracilis, with a flower of the approved florist's type in form and substance. It is good for practically all purposes to which the violas can be put.

These practically exhaust the notable forms we have secured here (as far as V. gracilis is concerned), but I should like to include with them in these notes the varieties raised as intermediate forms between V. gracilis and V. Papilio. These, though unnamed, are worthy of note, as they give the colourings near to V. gracilis with the size and continuous blossoms of V. Papilio.

Of varieties of papilio, true to type, we have selected three for further trial and extended planting. Two of these are under the labels of grandiflora and magnifica; the former is a large pale blue, not so washy as the type, and the latter a deeper colour with a tone of purple in it; both may be regarded as simply good, improved floriferous forms of the type. But the third, V. Papilio Brookside Fairy, is a lovely winged flower of great beauty, with a neat, prostrate, spreading habit. The blossoms are delightfully fragrant, with golden-yellow lower petals, and a ruby-red crown, having tiny black pencillings at the eye. For covering sloping banks, massing under taller plants, or for rock garden groupings, this truly butterfly form of V. Papilio will be of immense service.

In emphasis of my remarks as to the floriferous character of Viola gracilis, may I refer my readers to the accompanying illustration of a mass of V. gracilis upon one of the lower mounds in the rock garden at Holland House, Southcliff, as showing the floriferous character of the plant in question, though, unfortunately, without suggesting the intense colouring given by the countless blossoms.

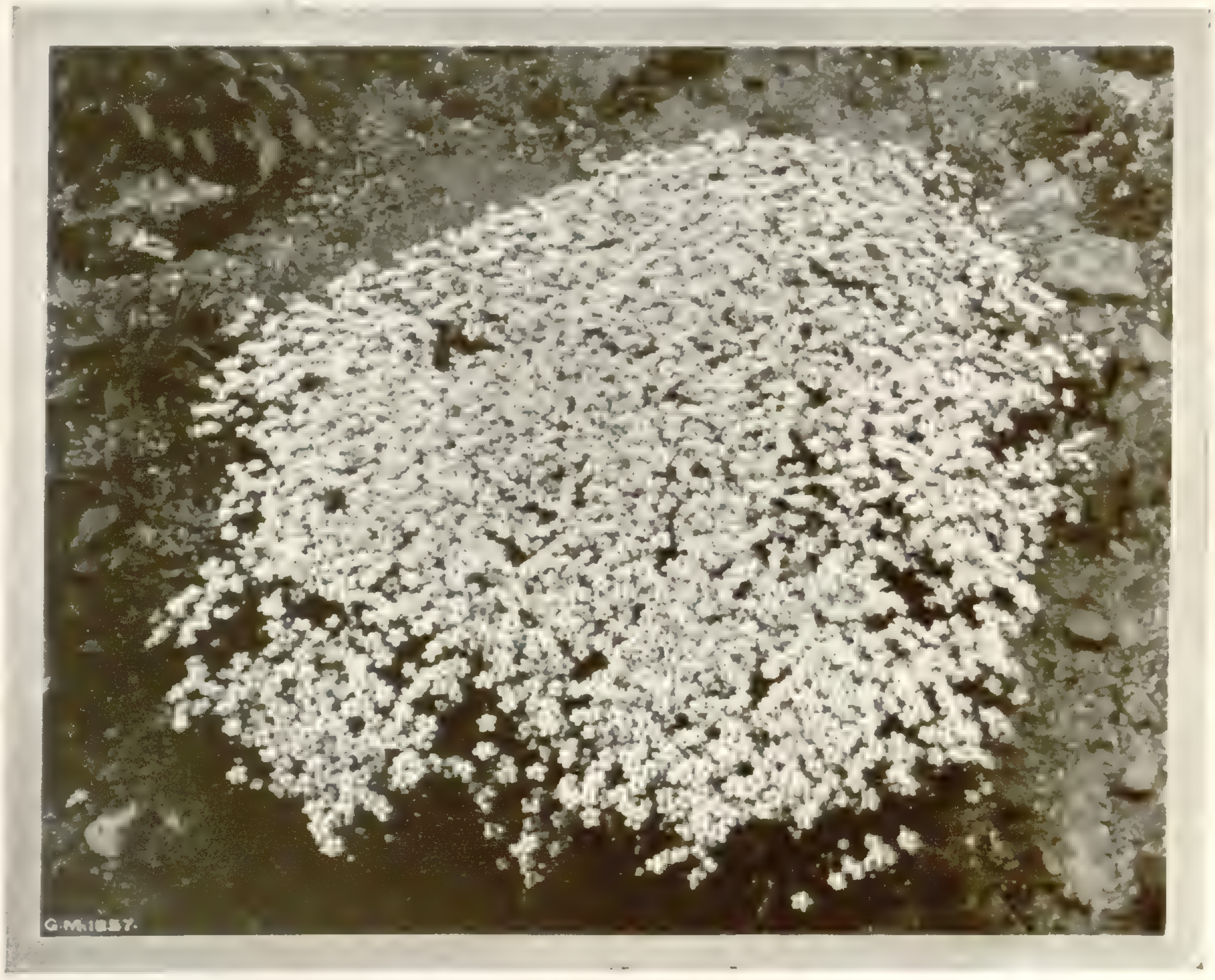
P. S. Hayward.

SAXIFRAGA EXARATA.

Like most of the other members of the mossy section of this genus, this species is a very variable one, and when Engler monographed the genus he divided it into several varieties. The present plant has been grown in gardens under the name of S. punctata, quite a distinct species of the umbrosa group from Siberia. Another name under which it is met with is S. pulchella, which is a synonym of S. exarata. The present plant agrees with authentic figures of S. exarata.

Very floriferous, the plant is a mass of pure white when in flower, the blooms being on stems about three inches high. In habit it is very compact, forming a mass of small rosettes that do not spread so readily as many of the other mossy kinds. The leaves forming the rosettes are each divided into three nearly equal narrow lobes, gradually becoming quite entire higher up the stem. S. exarata, in its various forms, is spread over the Alps of Europe at fairly high altitudes, and the form shown in the illustration is a first-rate garden plant suitable for the partially-shaded parts of the rock garden, where it remains in full beauty for a considerable period. It is also quite at home in the more open parts, provided that it obtains sufficient moisture. Propagation is readily effected by means of division in autumn or early spring. Seeds cannot be relied on, for, like all saxifrages, this kind readily hybridises with any other mossy member of the genus that happens to be planted near it.

W. Irving.



SAXIFRAGA EXARATA.
A distinct species producing a profusion of pure white flowers.

HYPERICUMS.

It is difficult to overestimate the value of hypericums in the summer garden. Their flowering propensities are notorious, nearly all are neat in habit, many being dainty as rock plants, while others are among the most elegant of shrubs. They are not particular as to soil, as many succeed under very indifferent conditions, although it always pays to prepare the ground by digging and manuring previous to planting.

All the species and varieties are readily increased by seeds, cuttings, or divisions, the former not infrequently germinate around the parent plant; cuttings are best inserted in late summer or autumn, in sandy soil, in a semi-shady border, while division of the plants may be carried out during the normal planting season.

Hypericum Androsæmum, the common Tutsau, is a plant of great merit, yet frequently neglected; the flowers are yellow, small, and are succeeded by oblong fruits which, at first, are a rich mahogany shade, but eventually change to an intense jet black. These fruits are exceedingly lasting, and branches of them are beautiful when arranged in vases indoors.

H. calycinum (Rose of Sharon) produces large yellow flowers, the centre being filled with a huge boss of delicate stamens, making a brilliant spectacle when in flower. The plant bears a large amount of shade, and the roots battle successfully with those of other plants, and for this reason it becomes a valuable subject to mass in woods and banks, where the natural conditions preclude the use of other subjects. It grows about 12in. high, and is almost evergreen.

H. Coris is a low shrub, only six to nine inches high, with narrow needle-like leaves of a grey-green colour. The flowers, though small, are large for the plant, and are borne on twiggy branches throughout summer. It makes one of the prettiest rock plants found in the genus.

H. Hookerianum, a Himalayan species, and somewhat tender, produces large flowers that are slightly cupped, on bushes some two feet high; it is one of the best for garden purposes, and is seen to advantage when freely massed as a foreground to other shrubs. H. oblongifolium is a synonym of this.

H. Kalmianum develops into a stiffly branched twiggy bush some two to four feet high, carrying its flowers in terminal corymbs during summer and autumn. The leaves are narrow and the growth is slow, so that it makes a capital subject for moderate-sized rock gardens. It is a North American species, and quite hardy.

H. fragile is prostrate in growth, the stems being terminated by clusters of rich golden flowers that almost hide the plants in June and July. The leaves are grey-green in colour, and are quite effective on the rock garden, even when the plant is out of flower.

H. patulum forms a spreading bush up to five feet in height; it is none too hardy, and occasionally suffers in a severe winter. The variety Henryi is hardier and more robust in growth, and succeeds if the stems are cut to the ground level each year in spring; the flowers are yellow, of medium size, and freely produced in late summer and autumn.

H. uralum (nepaulense) is much in the way of H. patulum in height, hardiness, and season of flowering. H. repens is a dwarf species from Eastern Europe, resembling H. fragilis in habit, but the foliage has not the glaucous tint of that species.

H. reptans is a slender creeping species with flexible stems and rounded box-like leaves, that present a vivid red-bronze colour in autumn; the flowers are large, cupped, and of a rich soft shade of yellow. A native of the Himalayas, it is quite distinct from any other member of the genus.

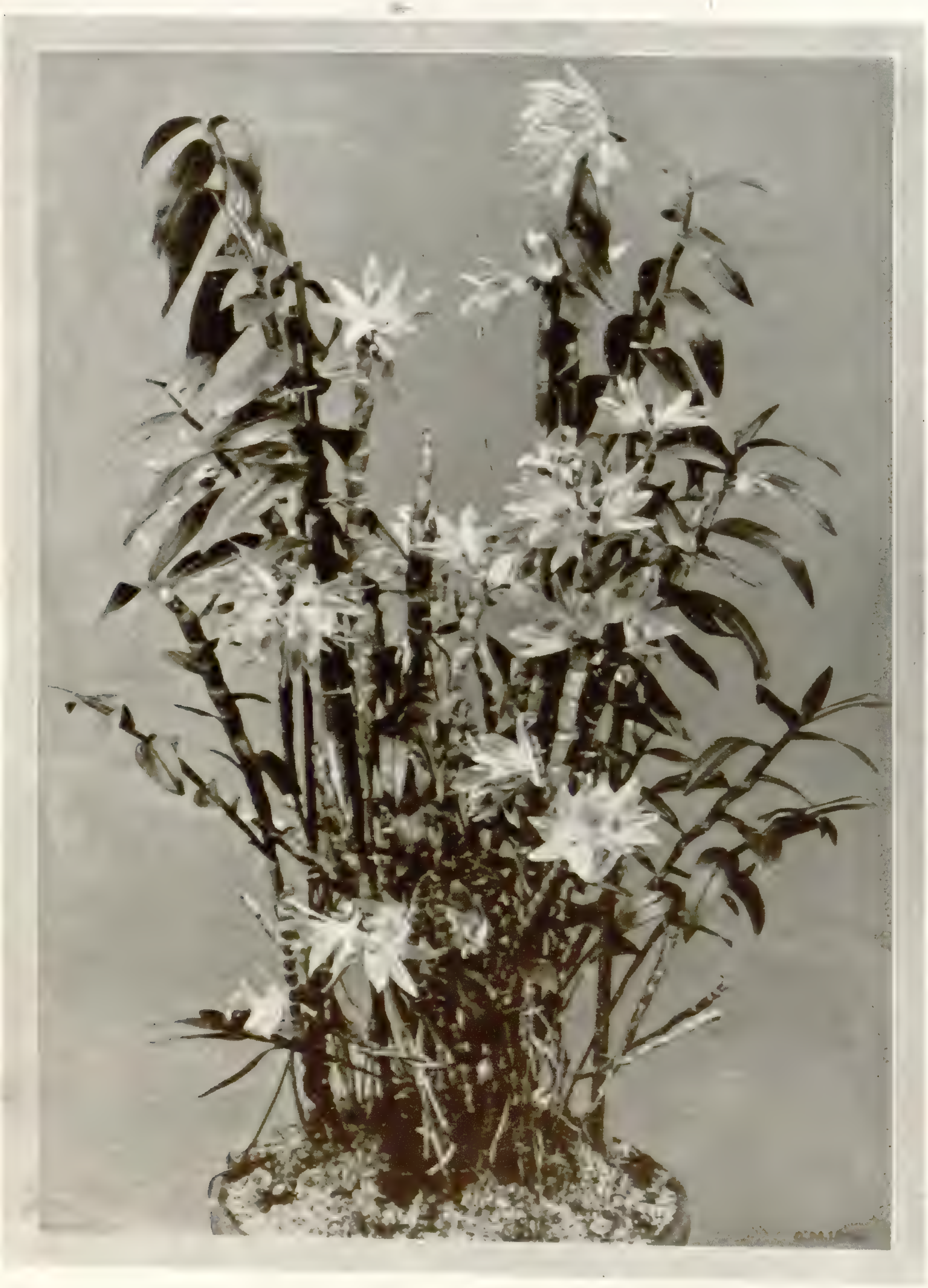
H. Moserianum is an evergreen, and the result of a cross between H. calycinum and H. patulum. It attains a height of four to five feet, and bears deep yellow flowers with red-tipped anthers that are in season during summer and autumn.

Thomas Smith.

NEW PLANTS, ETC.

DENDROBIUM VICTORIA REGINA.

Never has the blue Dendrobium Victoria Regina been seen in such fine form and condition as at the recent Royal Horticultural Society meeting. The species comes from Manila, and though it has been in cultivation some years it is rare, and not very popular. However, it is now obvious that a higher type of flower is available, and that cultural skill can evolve a good specimen. The flowers are of medium size, bright purplish-blue with white bases to the segments. F.C.C., and Cultural Commendation, July 18. Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking.



DENDROBIUM VICTORIA REGINA.

Flowers bright purplish-blue, with white bases to the segments. F.C.C., R.H.S., July 18. Sir Trevor Lawrence, Bart.; grower, Mr. W. H. White, Burford Lodge, Dorking.

PLAGIANTHUS LYALLI.

A malvaceous shrub that is hardy in this country only in particularly sheltered spots. At Kew and other southern gardens it grows well against a wall. The flowers are white, an inch or so across, have a central cluster of golden stamens, and are produced in the axils from the leaves. P. Lyalli is a native of New Zealand. A.M., R.H.S., July 18. Mr. C. J. Lucas, Warnham Court, Horsham.

CANNA FRAULEIN E. KRACHT.

A striking variety with large bold rosy-salmon flowers, borne on an unusually fine and elongated spike. So many varieties bunch their flowers thickly, whereas this one carries them in a large spike. A useful and handsome canna. A.M., R.H.S., July 18. Messrs. James Veitch and Sons, Chelsea.

FOKIENIA HODGINSI.

This is a new conifer from Fokien, and one on which Dr. Henry has founded a new genus. Evidently the plant has a close affinity with Libocedrus. The small plants shown were of elegant selaginella-like habit, and suggested that the species would do well in pots. Some of the plants exhibited had recently come from China, while the others, and quite small ones, had been raised from seeds at Barnet. A.M., R.H.S., July 18. Miss Weyburn, Hadley Manor, Barnet

CARNATIONS.

King George.—A very beautiful broad-petalled variety of purest whiteness; it has good form, size, and stem to recommend it. A.M., R.H.S., July 18. Mr. Charles Blick, Hayes.

James Quinn.—A showy buff ground fancy carnation with heavy markings of rich rosy-red. A.M., R.H.S., July 18. Mr. Charles Blick.

Dora Blick.—This very fine and distinct carnation appears certain of a great future. It is of fine form and substance, and of good size, while the colour is best described as orange terra-cotta. A.M., R.H.S., July 18. Mr. Charles Blick.

Herbert Newman.—A long-stemmed border variety, its large flowers being pure white, lightly flaked and splashed with soft scarlet. A.M., R.H.S., July 18. Mr. A. F. Dutton, Iver, Bucks.

Mrs. Andrew Brotherstone.—A bold fancy border carnation its showy flowers being coloured crimson and rose. A.M., R.H.S., July 18. Mr. James Douglas, Great Bookham.

Mrs. Elliott Douglas.—A splendid border carnation carrying its large, well-formed golden-yellow flowers on long stiff stems. A.M., R.H.S., July 18. Mr. James Douglas.

EREMURUS OLGÆ ALBA.

A charming new form that differs from the type in having white flowers and a green line down the centre of each segment, instead of pink flowers and a carmine line. It was collected in Persia, in a new district at an altitude of 7,000 feet, and is a desirable garden plant. A.M., R.H.S., July 18. The King's Acre Nursery Company, Hertford.

ROSES.

Nerissa H.T.—A lovely full-sized hybrid tea rose with palest peach-yellow petals exquisitely tinted with pink. Should make a good exhibition rose. A.M., R.H.S., July 18. Messrs. William Paul and Son, Waltham Cross.

George Dickson H.P.—A remarkably fine addition to the high coloured hybrid perpetuals; the blooms are large, of great depth, and of superb form, and the colour red glowing crimson. Gold Medal, N.R.S., July 19. Messrs. Alex. Dickson and Sons, Newtownards.

Mrs. David Baillie H.T.—A distinct and beautiful variety that has the promise of proving of much value for decorative purposes as well as for exhibition. The flowers are of medium size and fine form, and the colour rich glowing rose-red. Silver-gilt Medal, N.R.S., July 19. Mr. Hugh Dickson, Belfast.

Mrs. Muir Mackean H.T.—A charming variety, the blooms of good size and excellent form; the colour soft bright rose. Silver-gilt Medal, N.R.S., July 19. Messrs. S. McGredy and Son, Portadown.

Lady Dunleith T. — An effective variety, flowers comparatively large and good form, the colour bright yellow, deeper in the centre. Silver-gilt Medal, N.R.S., July 21. Messrs. Alex. Dickson and Sons.

Earl of Gosford H.T. — An attractive variety remarkable for its brilliance of colouring and also for its fragrance. The flowers are of large size and good form, and the colour rich crimson. Card of Commenda N.R.S., July 21. Messrs. McGredy and

---

Colchicum speciosum album —A plant of outstanding merit in the garden, Colchicum speciosum album has years stood at a premium, but is now the reach of almost every collector, a plant that should be acquired at the est possible moment. The well-known chicum autumnale gives but an idea of the glorious character present in variety, the flowers being thrice as and composed of bold, firm petals of white to which the golden-tinted afford a pleasing contrast. It is hardy, and increases at a moderate any good cultivated soil. It is best on the rock garden among dwarf similar subjects which protect the from soil washing, as these come of the leaves. The type with its flowers and the variety atrorubens be overlooked, but along with the constitute a group of bulbous plants that considerably to the beauty and interest the garden in autumn.—Thomas Smith.

HARDY PLANT CHAT.

Boltonia asteroides.

I do not think people are sufficiently well acquainted with the true value of this composite, which is rather aptly named "asteroides," seeing that its flowers resemble those of some of the finest of the perennial asters, or Michaelmas daisies. They are earlier, however, but last a long time in bloom, as the plants give a succession of flowers for several months. This year Boltonia asteroides has flowered in the very beginning of July, and, although other things in bloom are numerous, yet we ought always to have a welcome for such a good plant as this, which, by the way, is by some classed now as an aster, this species bearing the anomalous name of Aster asteroides. "The aster-like aster" is rather an absurd name for any flower, and I thus prefer the more familiar and appropriate enough one of Boltonia asteroides.

It is a handsome border plant, with branching stems of good daisy-like flowers of about two inches across, and with the narrow ray-petals which constitute such a charm of some of the erigerons. For cutting it is serviceable, and for the border in istelf it is a valuable plant.

Then it presents no difficulties in cultivation, contenting itself with a poor soil, although preferring a richer compost, and flowering happily in either. A native of moist soil, in which it grows in the Eastern United States, it is apparently indifferent to its supply of moisture, and thrives quite well in a dry place. By this, of course, I do not mean a dust-dry position, but one in which border plants of the ordinary class will exist and flower on, even though not the most congenial quarters. It is a variable plant, but is not often seen with us with a stature of about eight feet, one which some of the plants at home are said to reach. We are all the better satisfied when it flowers at a height of from two to four feet. This season, when other plants are shorter than usual on account of the drought, it is fully two feet high in a border of fairly good loam, but on the dry side.

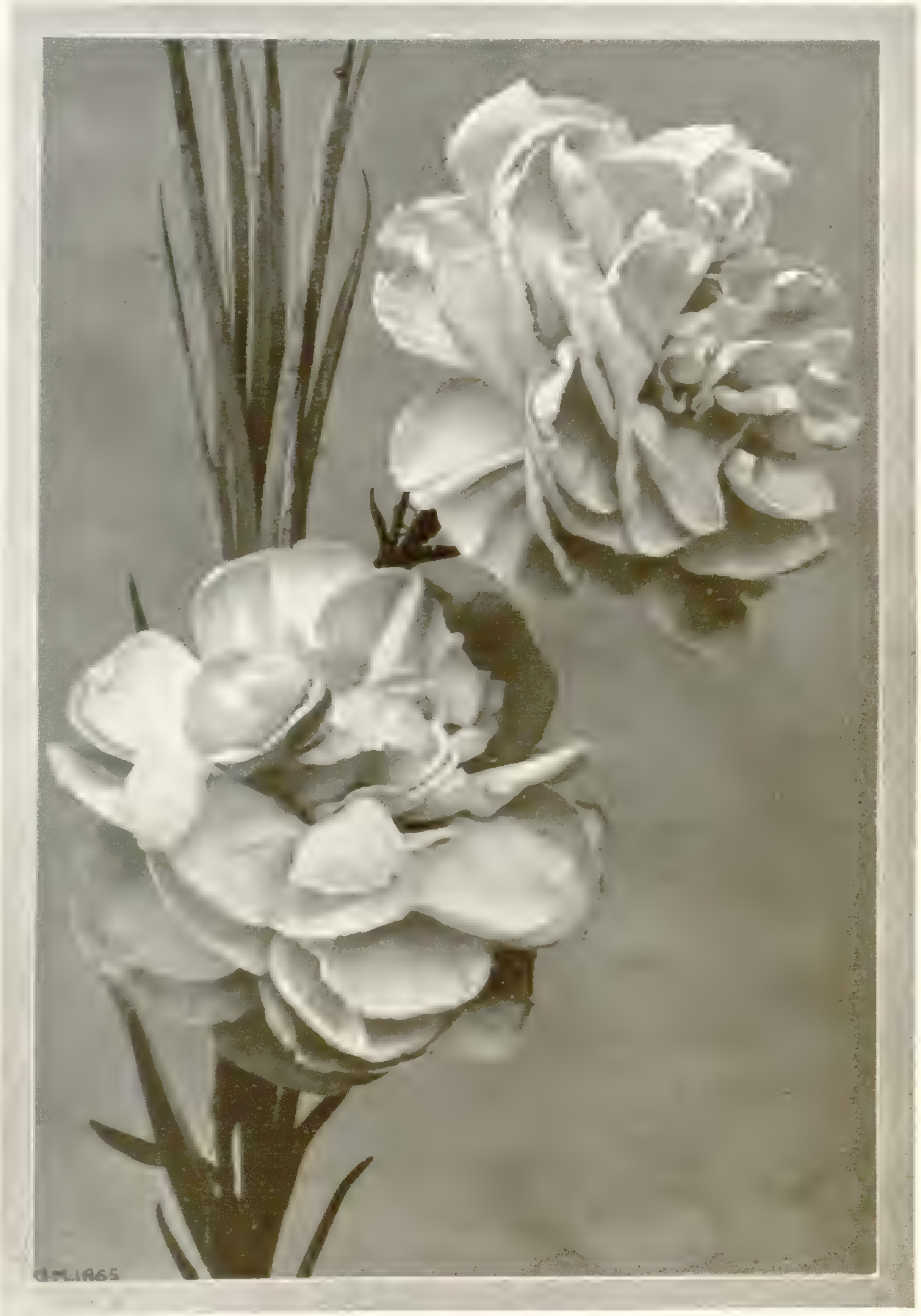
One can raise Boltonia asteroides (a name which, I am glad to see, is still retained even by some American botanists, who are a little fond of taking liberties with established names) by division in spring and summer, and by seeds.

Senecio clivorum.

Like many plants of its class, this bold, though possibly rather coarse hardy groundsel, is a lover of a good supply of moisture, and it makes a handsome specimen by the side of a pond or watercourse, positions its genus seems to lend itself better to than to the mixed border. It is not, however, everyone who can supply it with such a situation, and they can enjoy it in the mixed border, where its handsome orange-yellow flowers strike strongly upon the imaginations of people who have not seen it before. The foliage is bold, though coarse a bit, as I have suggested, and we have many worse plants in favour for border ornamentation than Senecio clivorum. But to do it justice even there it should have a deeply-dug soil, and a liberal supply of manure dug in, so as to support it in periods of weather when the ordinary supply of moisture is insufficient. In times such as this we are at present passing through, when the heat is intense and rain is scarce in the extreme, its leaves look flaccid and unhappy, and a good soaking of water, either pure or in the shape of weak liquid manure works an almost magical change. But this cannot be applied to everything in most gardens, so that when it is given this watering ought to be a really generous one—no grudging supply will be long beneficial. I see S. clivorum seems to be inclined to sow itself rather freely about the garden, and some seedlings are growing well which came up this spring. I am not highly enamoured of Senecio clivorum, yet it has a place in which to serve for the decoration of the garden, and to make it truly decorative it must not be starved or pinched in its supplies of nourishment.

Sidalcea candida.

When well grown and carefully attended to to prevent it from lying about and becoming almost prostrate, the White Sidalcea candida is a really good garden plant, with the beautiful formation of the mallows in its flowers, and with pleasing leaves and good racemes of flowers of a nice satin-like white. I do not think that it is a flower which is too widely known, but it is a good summer-flowering subject, and generally pleases those who have it, either in the border or for cut bloom. I have seen it well shown at exhibitions of hardy flowers, and I would commend it to the lovers of white flowers. It is a plant I have grown for a good many years, and have found thoroughly hardy, and of the most obliging nature in the way of its requirements. I do not suppose it will care for a moist soil, but in a dry one it does excellently, and gives every satisfaction.



CARNATION MRS. ELLIOTT DOUGLAS.
Flowers of large size and good form; golden yellow. A.M., R.H.S., July 18.
Mr. James Douglas, Great Bookham.

Leucojum vernum Vagneri.

May I suggest to lovers of bulbs, who ought to see and decide what they want as early as possible, seeing that bulbs have ripened early this season, the desirability of purchasing bulbs of the fine Leucojum vernum Vagneri? This is the finest form of the spring snowflake, coming earlier than the usual one, and generally giving a greater number of flowers, mostly two to a stem. I believe in the early planting of all very early bulbs, and as this blooms with the snowdrops, it is essential to give it as long a period after planting as possible. It may often be purchased as L. V. carpathicum, but the latter has yellow spots and one flower.

S. Arnott.

NOTES FROM HAMPTON COURT.

Even in the time of Cardinal Wolsey Hampton Court Gardens were remarkable for their flowers, and they have for many recent years justly enjoyed a great reputation for the excellence of their summer bedding, as well as for their other prominent floral arrangements. The dominant feature this season is the extensive use that is made of Humea elegans, as tall, symmetrically-shaped, and exceedingly graceful specimens are employed in large numbers. What is more, the inflorescences are of an unusually deep tone of red, probably owing to the fact that at least up to the present the summer has been particularly clear and bright.

One of the most striking beds is filled with noble examples of this humea springing from an undergrowth of the dwarfer cannas, the whole being edged with a broad band of deep blue viola.

So many of the beds are very attractive that it is difficult to single out any for especial mention, but the few given below cannot possibly be passed over. One is carpeted with Koniga maritima, thickly sprinkled over with that pretty double pink begonia Major Hope, while examples of the dazzling white Leucophyta Browni are employed as dot plants, the whole being edged with Echeveria secunda glauca.

Another of almost, if not quite, equal merit is planted with a mixture of the double red begonia Count Zeppelin with the rarely-seen variegated-leaved Phlox Comtesse de Jarnac, Abutilon Sawitzi, and Centaurea candidissima as dot plants edged with echeveria. Both these beds are low ones, and well designed for positions where they are brought in close contact with the spectator.

Two other designs formed by plants of much the same stature are Begonia Soleil d'Or, yellow, and Ceres, deep pink, carpeted with white lobelia, while Leucophyta Browni, Kochia scoparia, and Centaurea candidissima, and another in which dwarf plants of Leucophyta Browni and Begonia Lafayette present a curiously freckled surface, the whole being dotted over with Kochia scoparia and Fuchsia gracilis variegata. An edging of Saxifraga muscoides completes this arrangement.

A Coronation bed is in such a place as Hampton Court Gardens naturally looked for, and in this respect the seeker will not be disappointed, for there is a very effective one. The central portion has a groundwork of dark coloured alternanthera on which the letters G. R. are traced in a yellow-leaved variety, while the major portion of the bed is carpeted with the silvery-white Leucophyta Browni, on which the Prince of Wales' feathers, formed of a very dark alternanthera, stand out very conspicuously. A crown occupies each corner, and the date is seen very clearly near the edge. Beds of tall-growing subjects, now so popular, are of course freely represented, one of the most striking of this class being filled with large plants of the hoary-leaved Gnaphalium microphyllum, Streptosolen Jamesoni, Asclepias curassavica, and Swainsonia galegifolia, margined with a small pink petunia and edged with variegated anthericum. Another bed admired by many has large plants of the light-coloured Fuchsia Mrs. Marshall, with an undergrowth and edging of the dwarf-growing variety Alice Hoffmann, a bright-coloured flower with a clear white corolla. Among what may be termed the more unorthodox subjects must be especially mentioned a large bed of tall, stately specimens of Gilia coronopifolia, springing from an undergrowth of Arctotis grandis. Of the vast number of different subjects employed for bedding purposes this gilia supplies a tone of colour quite distinct from anything else, and whose identity is at a little distance somewhat puzzling.

Tender subjects do not monopolise the whole of the beds, for there is a very large one planted with the finest varieties of delphinium, the effect produced being very good. Roses, too, are freely represented, though by the middle of July—and that, too, with such weather as we have experienced this year—many of them are past their best. A choice selection of dwarfs, overtopped by standards of the rambler varieties, presents a very pleasing feature. At the time of my visit that charming yellow variety, Lady Hillingdon, was particularly noteworthy.

The beauty of the bedding at Hampton Court is greatly enhanced by the background of large trees, and the specimen yews which are freely sprinkled over the turf, both of which afford a pleasant retreat from the sun's rays, from which the floral display can be viewed in comfort.

Fuchsias are, as they have been for many years, freely represented in the different beds, and very fine many of them are, despite the hot weather, for it is generally recognised that fuchsias are seen at their best during a comparatively cool season. One can but note that, notwithstanding the great number of new varieties sent out within the last decade or so, nearly all those popular for bedding are old kinds. This is, to a great extent, owing to the fact that many of the new kinds are remarkable for their large blossoms, a by no means desirable feature in a bedding fuchsia, as small or medium flowers and large quantities of them are the qualities most sought after. The varieties generally employed for bedding are Mrs. Marshall, Lady Heytesbury, Scarcity, Mrs. Rundle, Marinka, Madame Cornellison, Ballet Girl, Alice Hoffmann, and the coloured-leaved kinds, such as Sunray, Gracilis variegata, and Cloth of Gold. Pelargoniums at Hampton Court are noteworthy from the fact that a trial is given to two varieties that have been a good deal shown this season, namely, Salmon Paul Crampel and the orange-coloured Maxime Kovalevsky. Both are very promising, and will doubtless soon become popular. Of the rest the old varieties fairly hold their own, that popular kind Paul Crampel being unapproached in its own particular colour. Beckwith's Pink, Salmon Vesuvius, and the white Queen of the Belgians are all good in their respective colours. Of ivy-leaved varieties apart from the old and well-known kinds, especial mention may be made of J. T. Hamilton, a deep scarlet flower. It partakes somewhat of the zonal character, and as seen at Hampton Court is decidedly promising.

The isolated beds by no means constitute the whole of the floral display, as the long border which extends from the Palace to the limit of the gardens in the direction of Bushy Park is very gay. The scheme of decoration there followed is to arrange a number of tender subjects (often as large plants) in bold masses or groups with, in some cases, a foreground of annuals, the whole being finished off by an edging of Veronica Andersoni pegged down. Prominent among the subjects employed are Verbena Miss Willmott, Heliotrope President Garfield and Piccoli, Calceolaria amplexicaulis and Burbidgei, fuchsias of sorts, pelargoniums in variety, Bouvardia Humboldti corymbiflora, Begonia Triomphe de Lorraine, a double red-flowered form of B. semperflorens, Swainsonia galegifolia and its white variety, Kalanchoe flammea, rarely seen treated in this way, Salvia Zurich, Salvia patens, Streptosolen Jamesoni, Humea elegans, Abutilon vexillarium variegatum, Cassia corymbosa, lantanas of sorts, Solanum jasminoides, Begonia ascotensis, Begonia fuchsioides, Impatiens Olivieri, Lilium longiflorum, Bougainvillea Sanderiana, Plumbago capensis, Carnation Britannia, and Carnation Mrs. Burnett, this last being quite free from the rust which troubles it in many places.

Of annuals associated with the above may be especially mentioned nemesias of sorts, salpiglossis, schizanthus, chrysanthemums, snapdragons, Brachycome iberidifolia, and sweet peas. Some beds of these last are, in another part of the gardens, very beautiful, while the different varieties of lantana, all in a most satisfactory state, deserve more than a passing notice. The long herbaceous border which extends from the Palace to the river is full of interest. A few of its occupants are now past their best, many are in the height of their glory, while there are a great number that promise to develop later on. One thing worthy of note is the manner in which Phlox Coquellicot flourishes there, for this rich-coloured variety is in some districts rather capricious in its behaviour, the light, warm surroundings at Hampton Court being apparently just to its liking.

These notes might be indefinitely extended, but as space limits, I will, with mention of the beautiful water lilies in the round pond opposite the Palace, draw them to a close.

W. Truelove.

THE HART'S-TONGUE FERN.

It seems a rather strong assertion to state that among all the ferns of the world this by no means uncommon native of Great Britain (Scolopendrium vulgare) stands absolutely alone in its capacity for sporting into innumerable and very diverse forms, but such is really the case. In making this statement, too, we do not take into consideration the many forms which have been obtained by selective spore sowing, but simply and solely those which may be termed purely natural ones, i.e., sports which have been found under quite natural conditions among those of the common, or normal type, which are so abundant in woods, hedges, and on rocks or old walls, wherever the species prevails.

The species itself is peculiar in its adaptation to very different environments. Most species confine themselves more or less to special conditions, some only being found in the chinks and crevices of rocks or old walls, and rarely or never in the soil itself, while others revel in deep deposits of a leafy character where ample root room is afforded. The Hart's-tongue, on the other hand, is equally at home under both conditions, thriving in a naturally smaller state, in the one case, in association with its near relatives, the Spleenworts, and assuming a very robust habit in the other, where those relatives fail to obtain a foothold. Normally, it is one of the simplest of ferns, its fronds being quite undivided, and, as its popular name implies, resembling a tongue, or strap, commencing with a stout stalk, which then continues to form a midrib, which may be as much as a yard long. From this midrib, on both sides, spring a continuous series of veins, at first single and then forked, which continue to the plain edges of the strap which they and the green tissue form. At the lower part, where the strap commences full width, four inches or more in full-sized plants, there are two rounded lobes, like the top half of a heart, and towards the tip of the frond, which is of even width for most of its length, it tapers to a bluntish point, like a sword. The surface is quite smooth, and we may examine many thousands of plants and find these features to be all perfectly constant in every case.

Examining the back of a frond we shall find a very characteristic type of fructification, in the form of long sausage-shaped brown masses of spore pods, arranged herring-bone fashion at short intervals from end to end on each side of the midrib. These masses extend from a short distance from the midrib to near the margins, so that they may be over an inch in length by an eighth of an inch wide, much larger and very dissimilar from the fructification of the rest of our native species. A peculiarity of the small genus to which the Hart's-tongue belongs is that each of these heaps is really a combination of two, which are situated on the twin veins produced by the forking we have mentioned. When the frond first uncoils these future heaps appear as whitish lines of thin semi-translucent skin, the indusia or spore c

These cover the intervening space between the two veins by springing from the inside of each pair, and, growing towards each other, their edges meet in the centre. As the spores grow and mature these covers are lifted, pushed aside, and eventually buried beneath the ripe mass formed by the two spore heaps, the twinship of which is now indistinguishable. In the Spleenworts the spore heaps are in similarly arranged lines, but the cover is single, one vein only being concerned

If we examine one of these brown heaps with a good lens we shall see that each one is built up of many hundreds of shining brown oval pods attached by a stalk, and as each pod contains a score or two of spores, and each frond may carry a score or two of heaps, a little calculation will show that millions, and many millions, are concerned in the annual crop of a full-sized Hart's-tongue.

Naturally, a fern which is so common has attracted the attention of variety hunters, and in Gerard's "Herbal" we find two varieties figured, viz., the frilled or crispum form, and the branched and tasselled. No long search is usually required in ferny districts to find a variety called lobatum, in which the normally single frond tip is split into several, the midrib dividing and carrying the tissue with it to form a sort of tassel. Such tasselling, however, may go much farther, and form either flat fan-shaped or bunched terminals of varied degrees of division. The main midrib also may start dividing lower down, and even from the outset, every grade involving distinct change of form, so that in extreme cases the strap may be transformed entirely, and a mass of almost moss-like foliage be created. Or, as in the crispum already cited, it may become frilled owing to the veins which build the frond forking repeatedly instead of only once, and so carrying the intervening tissue with them until the frond margin may become very much longer than the midrib, and a folding or frilling results. As a rule, this extra growth suppresses spore production, and all true crispums are perfectly barren

These formative veins may also fail to stop short at the normal place, so as to preserve an even edge, and in that case the margin becomes toothed in various ways and degrees, so that there are varieties where the simple Hart's-tongue does its best to imitate divided or pinnate species. The rounded lobes at the base of the frond are also sometimes lengthened, and even tasselled as well, and the very surface itself, in a considerable number of varieties, is broken up into apparent incrustations, marginal and intro-marginal ridges, and so on, accompanied by varying degrees of narrowness and thickness, rendering them very distinct.

Then there is that curious section known as the peraferens or pocket-bearing one, in which the frond ends abruptly with a pocket or pouch at the back or at the front, the midrib projecting as a thorn, and such pouches may appear on the basal lobes as well. Finally, some of these types are combined, and under cultivation many crosses have been effected between them, so that the name of those in collections is legion, all of which, be it remembered, have had their start from a wild sport, since man cannot originate new types but only follow them up and improve them (or otherwise) by selection of their offspring through the spores.

A little consideration, with these facts in view, will, we are sure, convince our readers of the correctness of our opening claim for the simple Hart's-tongue as the most variable fern in the world. The Hart's-tongue is quite evergreen, and makes very handsome pot plants, while in the open, in shady positions, it will make fine specimens. A little lime in the soil is beneficial, but not essential.

Chas. T. Druery, V.M.H.

A PRIVATE FIRE STATION.

The picturesque little building here illustrated represents the estate fire station at King's Walden Bury, Hitchin, the residence of T. Fenwick Harrison, Esq. The building was used as a dairy, and subsequently converted into a residence for one of the estate men. After he left it served as a storage, until it was put to its present use.

In the room shown in the picture the hose and other equipment are kept; the engine is kept in the other room. Just outside the door is an underground tank supplied by a 6in. pipe connected with the lake near by. On turning the valve, water comes quite fast enough to keep the engine going at full speed. Shortly after its purchase from the Messrs. Merryweather, the engine was instrumental in saving the mansion from destruction.

THE PRETTY PRIVATE FIRE STATION AT HERTINGFORDBURY.

Although the estate fire brigade had had but one hour's training, the members got the engine to work, and were throwing water into the rooms within twenty-five minutes from the call by fire-bell, a performance which was highly praised by the captain of a town brigade, who, on arrival, found the fire fully under control. Although damage to the extent of £1,000 was done, at least £30,000 worth of property had been saved; the station has therefore proved useful as well as ornamental.

The brigade consists of gardeners, carpenters, stablemen, and others near at hand. Mr. T. Fenwick Harrison is the captain, and the head gardener, Mr. Hartless, is sub-captain.

More recently another security against fire has been added, and this is a very fine water-tower, with a large tank holding about 15,000 gallons of water, and used as a supply for the gardens and stables. Fire plugs have also been put down around the mansion, stables, and other buildings, and immediately the alarm is given the hoses are placed in position, and the water from the high tank is of sufficient force to cover every necessary point. There is also an oil engine which can be used for pumping direct into the mains in case of fire, or for filling the tank as required. The oil engine can be started in five minutes, and the steam Merryweather fire engine in five to eight minutes.

A. J. H.

THE JUNE-BERRY.

Amelanchier canadensis, the June-berry of North America, sometimes called the Snowy Mespilus, is a conspicuous tree in many parts of the country during April, for its branches are densely laden with racemes of white blossoms. Unfortunately its flowers are rather fugitive, and a heavy rain or strong wind sometimes causes them to fall prematurely. As easily grown as a crab apple, there are few places in the country where it is unlikely to thrive, while in some quarters it is met with between 30ft. and 40ft. high, with a head as far through, and a trunk a foot or more in diameter. Scientists allow the species a wide range of variation, and forms may be noted which differ from each other to a remarkable degree. Perhaps the most distinct of all is the one to which the varietal name of oblongifolia has been given, for it is of bushy habit, and spreads by means of sucker growths. At its best it is about seven feet high. It is a very useful variety, and showy.

Towards June small red berries may be noted on the trees, which are sweet, and eagerly eaten by birds. In America these berries are gathered and used for making into cakes, etc. Autumn adds a further period of beauty to the trees, for it often happens that the leaves turn to a brilliant orange or orange-scarlet colour previous to falling.

W. D.

USEFUL GUIDE TO GARDEN WORK.—A handy all-round guide to work in the garden month by month is the Gardening Year Book, by George Gordon, V.M.H. [illegible] 1s. 3d., from W. H. and L. Collingridge, 148, Aldersgate Street, London. The book is freely illustrated and the cultural [illegible] up to date.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

SEASONABLE REMARKS.—The exceptionally fine and dry season we have had up to the present time has been particularly favourable to insect pests. If we examine deciduous trees or the flowers of herbaceous and other plants in the borders we find them literally infested with thrips and other insect pests, so that where the orchid houses are situated in close proximity to trees or flower borders the black thrips find their way through the open ventilators, or are carried by rains into the water tanks, and are thus easily transferred to the orchids. We have found that it takes closer observation than has usually been required to detect these pests before they have time to establish themselves under glass. The only safe remedy is to spray the plants overhead about once a week with some safe insecticide, and to give fumigations on alternate weeks. It is at this season there are so many young orchid growths in that stage when they are the most susceptible to attacks from insect pests, and great damage can be done in a short time. Where black or brown thrips have caused injury to cypripediums, for instance, it is best to dip the plants every two or three days for a time and then at regular intervals of about once a week until satisfied that the plants are free from insects. The larva of black thrips are generally deposited on the undersides of the leaves, and as they hatch out at intervals it is well to continue the repressive methods until well satisfied that no more remain.

WOOD-LICE do a deal more damage to young seedlings and the tender points of the new roots of orchids than many people give them credit for. We find that hollowed-out potatoes placed about the staging and possible haunts are a great attraction, and while feeding on the potatoes at night or first thing in the morning they may be caught and destroyed.

SLUGS AND SNAILS, owing to the dry conditions outside, have been attracted in large quantities to our cool houses. These must be kept down at all costs; careful search should be made on the plants, pots, and stages every night and morning. A few lettuce leaves placed on the stages and about the plants will offer a feeding ground, from which they are easily caught and destroyed; little patches of dry bran placed on pieces of glass or broken crocks and laid about the stages will also prove an attraction, and while feeding they may be caught and destroyed. The small flies which lay their eggs in the seedling pots of odontoglossums are among the worst pests we have to contend with, as the destructive maggot frequently destroys the whole seed bed. The outside of the pots should be kept clean and the plants sprayed about once a week.—H. J. CHAPMAN, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

PREPARATIONS FOR SPRING FLOWERS.—For the early display of flowers in the conservatory we are dependent to a great extent on bulbs and forced plants in their different sections and varieties. The earlier the bulb order is sent in the better satisfaction will be obtained in the execution of that order. In making out the list of bulbs, etc., required, the grower must be guided in his choice by his requirements. It is almost useless to try to recommend any particular varieties, as these are so numerous, and many possess equal merit. Hyacinths, tulips, narcissi, and freesias are a few that may be grown successfully, and with very little trouble. To obtain the best results it is necessary that they should be potted as soon as received to enable them to make plenty of roots before being subjected to any degree of forcing. The potting soil should be moist but not wet, and pressed firmly round the bulbs with the fingers, but not rammed. After potting, stand them closely together in a cold frame and cover with leaf-soil to a depth of three or four inches. In the case of tulips the cover should be six inches and the growth allowed to grow right through before the plants are removed. This will give a greater length of stem, which is very necessary in this flower. When uncovered, the bulbs should be shaded from strong light until the leaves attain their natural colour. After this they may be taken into a higher temperature in batches to suit the demand. One particular variety of narcissus which can be strongly recommended for producing a good supply of excellent blooms at Christmas is Trumpet Major. In the case of plants and trees for forcing these should also be potted immediately they are received, and stood outside. Plunge the pots in leaves before frost makes an appearance.

SCHIZANTHUSES.—Seeds of these most attractive subjects may now be sown for producing plants to flower in the spring. Sow in a pan of light sandy soil, and place in a cold frame. Shade from sunshine until germination takes place, and when the seedlings appear admit more light and air to strengthen them. Under no circumstances must they be kept close or coddled. When large enough to handle, pot off into thumb pots and place near the glass. Care must be exercised in watering the plants.

MIGNONETTE.—A good sowing of mignonette may be made now for early flowering. It may be either sown in small pots and potted on when ready or sown in the flowering pots and thinned out. In the latter case sufficient space should be left for top-dressing. Lime rubble mixed with the soil is very beneficial to mignonette. Brompton stocks should be sown outside for subsequent pot culture.—A. GRUBB, Porters Park Gardens.

HARDY FRUITS.

EARLY APPLES AND PEARS. — Early pears, and indeed other kinds also, being scarce, it will be necessary to lengthen out their season as much as possible. Jargonelle, Beurre Giffard, and the other early sorts may have their season much prolonged if they are gathered as soon as they part readily at the stem when held firmly and lifted to a horizontal position. No pears, and particularly the earliest kinds, can be said to have their full flavour if allowed to ripen on the trees, hence the desirability of looking over the trees often, and laying the fruit in single layers in a cool, airy fruit-room, where they will slowly gain flavour and finish. Many of the early apples are really at their best if taken from the tree and sent direct to the table. Red Juneating especially, if kept for a few days, will be quite unfit for use, the texture being woolly and the flavour altogether too acid. Trees of Beauty of Bath should be well littered down with hay or grass, and the fruits allowed to drop as they ripen, otherwise it will be necessary to look over the trees at least once a day, or the fruits, finishing as they do in a few hours, will drop to the ground and be spoiled.

WATERING.—Apples are suffering from the continued drought, and where possible, thorough soakings of water will be of great benefit; this should be applied even though a few showers occur, as nothing short of an inch or two of rainfall will moisten the soil deep enough to be of any very material advantage to the apple crop after such weather as has been experienced generally throughout the country. In showery weather opportunity should be taken to apply light dressings of approved artificial manures to any fruits that are required for special purposes. Any large apple or pear trees that were moved during the autumn or winter may have bands of hay or straw entwined around the stems and main branches, to assist the upward flow of sap and ward off the direct rays of the sun.

STONE FRUITS. — Finish tying in the shoots of peaches, etc., allowing only sufficient growth for next year's fruiting. Our chief anxiety now will be to get this sufficiently ripened; any very strong growths should be cut clean away, if this has not already been done, retaining only the medium wood for extension.

RED SPIDER ON APPLES.—Many apple trees are becoming infested with red spider, and watering, if well carried out, may be considered a good remedy. A good dusting of flowers of sulphur may be given early in the morning while the dew is still on the trees. This is best applied with a sulphurator, or bellows-like instrument, which may be obtained from any sundriesman at very little cost, and which no gardener should be without, as it is one of the most useful tools that could possibly be found.

RASPBERRIES.—Now that the fruiting season is over, raspberries should have all the old canes cut away close to the ground, and the young canes tied loosely to trellis or stakes, as the case may be, allowing light and sunshine to ripen the growth. Encourage weakly plants by giving periodically soakings of diluted liquid manure, and keep well mulched.—J. WHITTLE, Cheveney Gardens.

THE KITCHEN GARDEN.

SPRING CABBAGE.—Much depends upon the part of the country, but in most parts one cannot be wrong in making the main sowing of cabbage during the next week or two. Choose a rich, sweet piece of ground. The chief object is to obtain strong plants on sturdy, short-jointed stems for planting out in September to establish themselves before winter. Beginners, as a rule, make the mistake in sowing too thickly, which results in elongated stems and leaves. For this reason I recommend the seed to be sown evenly and thinly, broadcast, so that the plants stand more by themselves than they do in rows. Ellam's Early and Flower of Spring are, to my mind, two of the most reliable varieties grown.

FRENCH BEANS.—If a sowing of French beans is made on a high south border, where frames can be placed over them in September or later for protection, they will form a [illegible] succession to the exhausted crops outside and be found useful for supply through October. Some of the dwarf Prolific varieties are most suitable for this sowing.

WINTER LETTUCE. — This important crop must be now taken in hand. Make a substantial sowing in drills on a warm, [illegible] laying site where they can remain, so that the plants may be thinned out to the desired distance when large enough. The thinnings, too, can be planted then in suitable positions where they are likely to escape injury from frost. The climatic conditions during the autumn vary so much that it is good plan to make two or three sowings at intervals of several days during August, to have plants of requisite size for various uses during winter. Standwell, All the Year Round, and Stanstead Park are three kinds I recommend.

SPINACH.—This, on many soils, is [illegible] a precarious crop, being subject to [illegible] trouble during winter more than su[illegible]. Therefore it is very necessary to do all one can to make the ground as sweet as possible. A plot that has carried early potatoes [illegible] is, as a rule, the one chosen, being [illegible] well stirred for these crops. In making preparations for sowing give the surface a [illegible] dressing of soot, forking it in as the [illegible] proceeds. Draw out the drills from [illegible] to eighteen inches apart. Should dry weather continue water the drills to provide the [illegible]ful moisture for germination.

ENDIVE.—A larger sowing of endive [illegible] the one recommended in last calendar [illegible] now be required; and on a warm site [illegible] to carry a long supply through early [illegible]. As soon as the young plants are [illegible] couple of inches high have them thinned, and the plants that are over, if [illegible] planted in suitable places to grow [illegible]. If plenty of frames are at command a quantity may be planted in them direct [illegible] the lights, which may be placed over as required when frost arrives.—C[illegible] FLACK, Cholmondeley Castle Gardens.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

National Rose Society's Provincial Show.

JULY 19.

For the third time in its history the National Rose Society has held its provincial exhibition at Ulverston, and for the third time the officials and exhibitors have had ample evidence that the visits of the society are much appreciated by the northern rosarians and the general public, and that there was a strong desire on the part of the local society to make the show a complete success, and the visit of exhibitors and others concerned a pleasant one. The exhibition was held in Swarthdale Park, which is highly picturesque and well wooded, and may be described as an ideal spot for a flower show, and the long line of marquees that stretched through the valley suggested to visitors as they entered the park that the display was a large one. There was ample justification for any anticipation that might have been indulged in, for the four marquees, each of which had a length of 150 feet, were well filled, and the collections generally highly meritorious. Two of the tents were devoted to sweet peas, dinner-table decorations, and hardy flowers, and these were crowded to their utmost capacity. In the two marquees devoted to roses there were a few vacant spaces, and, having regard to the tropical weather that had been experienced, it is surprising the classes should have been so well filled as was the case on this occasion. For several years past the quality of the roses staged at the provincial shows has been higher than at the Metropolitan exhibitions, but on this occasion quality of the blooms was about equal to that of those staged at Regent's Park twelve days previously. That the show should have been of so high a degree of excellence is surprising, considering there were no roses from the southern counties, from the Colchester district, or from the North of Scotland. Usually the rosarians from Scotland are in strong force, both as regards the number of entries and the development of the blooms, but the effects of the drought have been hardly less severe than in England. The chief honours of the exhibition were taken by the Irish growers, both the challenge trophies going to Ireland. Much to the regret of all rosarians, Mr. E. Mawley, the highly-esteemed hon. secretary, was unable to be present owing to indisposition, from which we trust he will have recovered previous to the publication of this report. Happily, the Rev. J. H. Pemberton, president of the society, was present, and, possessing a wide experience of rose shows, was able to render valuable assistance in dealing with matters of a general character. The arrangements of the exhibition were in the hands of Mr. F. J. Harrison and Mr. F. W. Poole, honorary secretaries of the North Lonsdale Rose Society, and Mr. Mawley's secretary, and they were so admirably carried out as to bring these gentlemen much praise.

ROSES.—NURSERYMEN'S DIVISION.

The most important of the classes in this division was that for thirty-six blooms distinct, in which a fifty-guinea challenge trophy and a gold medal was offered as the premier award The competition was very keen, and in the result Messrs. Alex. Dickson and Sons, of Newtownards, obtained premier awards with highly-developed blooms of Lady Barham Marie Verdier, Edith D'Ombrain, George Dickson, a superb crimson variety, which, in the class for new roses, received the award of the gold medal, Mrs. Foley Hobbs, La Calissier, Earl of Warwick, Mrs. Myles Kennedy, Madame Vermorel, C. J. Grahame, Gladys Harkness, Emperor of India, deep rose-crimson; Mdme. Leon Constintin, Tom Wood, Gloire de Chedane Guinoisseau, Ulster, W. E. Lippiat, Her Majesty, Ulrich Brunner, Dr. O'Donell Browne, a rose-coloured bloom, which was adjudged the best hybrid tea in the trade classes; W. Shean, Xavier Olibo, Frau Karl Druschki, Star of Waltham, Juilet, Marie Baumann, Mrs. C. West, Mdme. C. Crapelet, Horace Vernet, Princess Mary, a light blush rose, the Lyon rose, and Lady Ashtown. The King's Acre Nursery, Hereford, were successful in obtaining second place with excellent blooms. Mr. Hugh Dickson, Belfast, staged a remarkably good set of blooms in this class, but unfortunately had duplicate blooms of one variety. In the set was a superb bloom of Horace Vernet, which was selected as the best bloom of any class other than tea, hybrid tea, or noisette. In the spirited contest for the prizes offered in the class for seventy-two blooms, distinct varieties, Messrs. Alex. Dickson and Sons were again successful in obtaining premier honours. The blooms were uniformly good, and among the varieties represented were Mdme. Segond Weber, C. J. Grahame, Earl of Warwick, La Calissier, Mrs. George Preston, Marchioness of Dufferin, Juliet, Mamie, and Lady Barham. Mr. Hugh Dickson was a capital second, and conspicuous in his collection were Lohengrin, a beautiful blush-coloured hybrid tea, and Mrs. Foley Hobbs, which was selected as the best bloom of tea-scented varieties in the division.

For thirty-six blooms the King's Acre Nursery Company occupied the first place with a stand in which the blooms of Mildred Grant, Dupuy Jamain, Marie Baumann, Captain Hayward, Dean Hole, The Lyon rose, and Frau Karl Druschki were conspicuous. Mr. H. Drew, Longworth followed closely for second place, and staged among others a fine bloom of Mdme. Eugene Verdier. Mr. W. Ferguson, Dunfermline, was third with blooms of average size and remarkable for their freshness. The prizes for twenty-four varieties, three blooms of each were strongly contested, and at the head of the competitors was Mr. H. Dickson, with splendidly developed blooms of Mildred Grant, Horace Vernet, Dean Hole, Mdme. Wagram, Gladys Harkness, Mrs. Stewart Clark, President Taft, Bessie Brown, Caroline Testout, and Captain Hayward. Messrs. A. Dickson and Sons and the King's Acre Nursery Company were second and third respectively. In the class for twelve trebles Mr. G. Prince was first with good blooms, conspicuous among them being Alfred Colomb, Avoca, Mrs. J. Laing, Mrs. David McKee, and Mrs. E. Roosevelt in a high state of development. Mr. W. Ferguson was a close second with a stand in which The Lyon rose was conspicuous.

Tea-scented and noisettes were well represented, and the leading position in the class for eighteen blooms, distinct, was taken by Mr. G. Prince, in whose set were excellent blooms of Mdme. C. Soupert, Niphetos, Mrs. F. Hobbs, Mdme. Jean Dupuy, Mrs. E. Mawley, Medea, Mdme. J. Gravereaux, Nita Weldon, Comtesse de Nadaillac, and Mrs. Myles Kennedy. Mr. H. Drew and the King's Acre Nursery Company were second and third. For twelve teas or noisettes Mr. J. Mattock, won with a box in which E. V. Hermanos, a fine yellow variety, was specially well represented.

Mr. G. Prince scored for twelve blooms of new roses with Jonkeer J. L. Monk, a good deep pink flower, Avoca, Mrs. Herbert Taylor, Margaret, Mrs. Herbert Stevens, The Lyon rose, G. C. Waud, White Killarney, His Majesty, Mdme. Valers, Baurez, and Queen of Spain. For twelve blooms of any new rose Messrs. A. Dickson and Sons were first with grand flowers of Mrs. Foley Hobbs, and Mr. J. Mattock and Mr. G. Prince were second and third. For twelve blooms of any white or yellow rose Mr. H. Dickson and Mr. G. Prince were first and second with Frau Karl Druschki, and Mr. J. Mattock followed for third place with Bessie Brown. A grand box of Her Majesty obtained for Mr. H. Dickson premier honours in the class for twelve blooms of a light pink or rose-coloured rose, and in the class for twelve blooms of any crimson rose the same exhibitor staged J. B. Clarke for first place. In the last-named class the King's Acre Nursery Company were second.

Roses in vases were well shown, and in the class for twelve varieties, five blooms of each, Mr. W. Ferguson won with excellent blooms of Frau Karl Druschki, Pharisaer, Earl of Warwick, Mrs D. McKee, and other well-known varieties. Messrs. Alex. Dickson and Sons were a good second. Mr. Ferguson also scored in the class for nine blooms, to be shown in a vase, of the fine yellow rose Harry Kirk, winning the challenge cup offered as the premier award with well-developed blooms. The King's Acre Nursery Company and Mr. Drew were second and third.

Baskets of perpetual-flowering decorative roses were well shown by Mr. J. Mattock, who was first for seven baskets, distinct varieties, staging Prince de Bulgarie, Simplicity, Jessie, the Lyon Rose, Mdme. Ravary, and Mdme. Segond Weber in excellent condition. Garden roses were largely shown in the trade division, and made a glorious display of colour. Mr. J. Mattock was first both for eighteen and twelve bunches, and Mr. G. Prince was second, the third prize for eighteen being awarded to the King's Acre Nursery Company, and third for twelve to Mr. W. Ferguson. The most noteworthy of the varieties in the several collections included Mdme. Jules Grolez, Lady Waterlow, Le Progres, Irish Elegance, Bardou Job, Margaret Molyneux, Newport Fairy, Dorothy Perkins, Gottfried Keller, White Dorothy, and L'Ideal.

ROSES.—AMATEURS' DIVISION.

The fifty-guinea challenge cup and gold medal offered as the premier award in the class for twenty-four blooms, distinct, created as usual much interest, and gave rise to a keen competition. Here, as in the trophy class, open to trade growers, the premier award was made in favour of roses of Irish growth. The winner of the trophy was Mr. W. H. Calvert, Banchory House, Helens Bay, co. Down, whose number of exhibition roses, does not, he informed us exceed two hundred. To have cut twenty-four blooms in an exceptionally high state of development from so small a number of plants in a season so unfavourable to roses as this may be well regarded as a triumph of cultural skill. The blooms were throughout of large size, well finished, and remarkable for their freshness, but the box was somewhat lacking in effectiveness owing to the absence of high-coloured blooms. The varieties were La France, W. Shean, White Maman Cochet, Frau Karl Druschki, Oberhofgartner Terks, Mrs. D. McKee, Queen of Spain, Lohengrin, Dean Hole, Madame E. Euler, Mildred Grant, Florence Pemberton, St. Rome, Yvonne Vacherot, Mdme. W. Bergin, Earl of Warwick, Maman Cochet, Grace Molyneux, H. Guillot, Souv. de P. Notting, and Mrs. Myles Kennedy, the last-named being selected as the best tea or noisette in the amateurs' division. Dr. Pallett, Earls Colne, occupied the second place with a fine box of blooms, from which Mildred Grant was selected as the best bloom shown by amateurs other than a tea or noisette; Mr. W. Boyes, Middleton-on-the-Wolds, Yorkshire, was third with blooms possessing much merit Not less spirited was the competition in the class for thirty-six blooms, distinct, in which the Rev. J. H. Pemberton obtained premier honours with grand blooms, including a goodly proportion of varieties remarkable for their rich colouring. Bessie Brown, G. C. Waud, Helen Keller, Mrs. J. Laing, Earl of Warwick, Charles Lefebvre, Marshall P. Wilder, Lady Ursula, Hugh Dickson, Lady Ashtown, Melanie Soupert, Marquis Jean de Chataigneraye, Dr. O'Donell Brown, W. R. Smith, Mdme Jules Gravereaux, Avoca, A. K. Williams, Fisher Holmes, Horace Vernet, Leslie Holland, and Countess of Shaftesbury were the most noteworthy. Mr. H. V. Machin, Gateford Hill, Worksop, and Mr. Conway Jones, Hucclecote, Gloucester, who were second and third, staged remarkably good sets of blooms.

For eight varieties, three blooms, Dr. Pallett won with well-known varieties in a high state of development; and Mr. H. V. Machin and Mr. W. Boyes, who were second and third, had blooms of much merit. In competition for the prizes of nine blooms of any one rose Mr. H. V. Machin obtained premier honours with splendidly developed examples of Frau Karl Druschki. Dr. Pallett followed for second place with Dean Hole, and Mr. Conway Jones was second with Oberhofgartner Terks.

The most successful exhibitor in the classes open to growers of fewer than two thousand plants of exhibition varieties was Mr. G. Speight, Market Harborough, who was first for eighteen blooms, distinct, six varieties, three blooms of each, and six blooms of any rose other than tea or noisette. His blooms were throughout of much merit, and included a superb bloom of Horace Vernet, which was selected by the Judges as the best bloom other than tea or noisette shown by amateurs. Mr. F. J. Harrison, Ulverston, also exhibited well in the division. In the classes open to growers of fewer than one thousand plants of exhibition varieties the most successful exhibitors were Mr. Hoffman, Baildon, Yorkshire; Mr. E. Russell, Manchester; Mrs. Henry Balfour, Headington Hill, Oxford; and Mr. M. Whittle, Leicester. Mr. W. Upton, Leicester; Mr. Godfrey Brown, Penrith; Mr. J. M. Tankard, Baildon, Yorkshire; and Mr. E. L. Collinge, Burnley, were also successful exhibitors in the smaller classes.

In the spirited contest in the class for nine new roses the Rev. J. H. Pemberton obtained the first place with a capital set, and Mr. M. Whittle, and Mr. Conway Jones followed closely for second and third places. Garden roses were finely shown in the amateurs' classes, and at the head of the several exhibitors of twelve varieties was the Rev. J. H. Pemberton with a collection of great excellence, and remarkable for the taste evinced in the arrangement. Conspicuous in the collection was the new light yellow hybrid tea Danae, which was awarded a silver-gilt medal at the Metropolitan Show on the 7th inst., and greatly improves on acquaintance. Mr. H. V. Machin was a good second, and Mr. Conway Jones a close third. Mr. R. L. Garnett, Wyreside, Lancaster, obtained premier honours in the class for six varieties, and staged among others a beautiful bouquet of the old moss rose, now so seldom seen at exhibitions.

The local classes, in which the competition was limited to amateurs resident within a specified distance of Ulverston, were well filled, and the several boxes formed a pleasing feature. The most successful of the several exhibitors was Mr. R. L. Garnett, who won the first prize for twelve blooms, distinct varieties, the Mrs. Myles Kennedy cup and silver medal for six blooms of teas or noisettes, the Myles Woodburn trophy and silver medal for the best bloom shown by an amateur, and in addition he was awarded for his collection of twelve blooms the gold cup and silver medal offered for the best box staged in the amateur classes. Mr. F. J. Harrison, Rosedean, Ulverston; the Rev. R. T. Langtree, Mr. J. H. Boolds, Furness Abbey; and the Rev. A. R. Tomlison, Bolton-le-Sands, were also successful in the local classes.

ROSES.—MEDAL AWARDS.

Silver medals for the best blooms were awarded as follows:—To Mr. Hugh Dickson for the best tea or noisette—Mrs. Foley Hobbs—and for the best rose other than tea, noisette, or hybrid tea—Horace Vernet—shown by nurserymen. In the amateurs' division the silver medals were awarded as follows:—To Mr. W. H. Calvert for the best tea or noisette—Mrs. Myles Kennedy—and to Dr. Pallett for the best rose other than tea or noisette, the variety being Mildred Grant.

A considerable number of new roses were shown, and the following awards were made: Gold medal to George Dickson H.P., shown by Messrs. Alex. Dickson and Sons. Silver-gilt medals to Mrs. David Baillie H.T., shown by Mr. Hugh Dickson; to Mrs. Muir Mackean H.T., from Messrs. S. McGredy and Son; and to Lady Dunleith, from Messrs. Alex. Dickson and Sons. A card of commendation was conferred upon Earl of Gosford H.T., Messrs. S. McGredy and Son; Mr. P. le Cornu exhibited under the name of Duchess of Normandy a sport from Dean Hole, which appears to be somewhat paler than that variety.

SWEET PEAS AND HARDY FLOWERS.

The classes for sweet peas and hardy flowers were provided by the North Lonsdale Rose Society. The classes were numerous and well filled, and the flowers in competition for the liberal prizes sufficed, with a few miscellaneous contributions, to fill a tent 150 feet in length and of a corresponding width to its utmost capacity. The quality of the blooms was surprisingly high, considering the trying weather that had been experienced, and the effect produced by the 1,800 vases of flowers was so extremely beautiful that it is not likely to be soon forgotten by those who are interested in these fragrant flowers.

The open classes, in which the prizes were provided by the society were five in number, and in that for twenty-four varieties Mr. R. Bolton, Warton, Carnforth, was first; Mr. R. Wright, Liverpool, second; and Messrs. Bolton and Sons, Warton, third. Mr. John Bryce, High Harrington, was first for twelve and six varieties; and Mr. E. M. Allen, Liverpool, was first for six new varieties. Other successful exhibitors in these classes were Mr. G. H. Garnett-Orme, Skipton; Mr. C. E. Taylor, Over Kellett; and Mr. S. Shackleton, Keighley. The premier award for the best sweet pea not in commerce was awarded to Mr. R. Bolton for an unnamed variety with purple-rose flowers. In the several classes provided by Mr. Mackereth the principal awards were made in favour of Mr. J. Bryce; Mr. J. Keay, Ulverston; Mrs. Atkinson, Croftlands, Ulverston; Mr. E. M. Allen, and Mr. J. H. Boolds. The Breadmore Challenge Plate for twelve varieties was won by Mr. F. J. Harrison. In the local classes for amateurs the last-named exhibitor was first for twelve and six varieties; Mr. E. L. Tosh, Whytam, Ulverston, was first for six bunches to comprise two each of white, red, and blue varieties. As the leading varieties were practically the same as those staged at the National Sweet Pea Society's exhibition, and recorded in our report, it is unnecessary to give the names.

The contributions to the hardy border flower classes were numerous, and for the most part tastefully set up. The finest collection in the exhibition was that of eighteen vases staged by Mr. R. L. Garnett. Miss H. Crossland, Armside, had an excellent collection for second place; and in the smaller classes the leading prizetakers were Mr. G. Anderson, Fair View, Dalton; Mr. E. T. Niven, Leeds; Mr. J. Sharp, Carnforth; and Mr. J. Wilson, Irton, Cumberland.

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, July 18.

Present: Mr. E. A. Bowles, M.A., F.L.S. (in the chair); Sir J. T. D. Llewelyn, Dr. A. B. Rendle, Dr. A. Voelcker, Messrs. J. T. Bennett-Poë, J. Fraser, W. Fawcett, E. M. Holmes, G. Wilson, R. H. Pearson, A. W. Sutton, A. W. Hill, and F. J. Chittenden (hon. secretary).

BOTANICAL CERTIFICATES.—Catasetum reflexum, a new species, from Peru, approaching Cycnoches in some of its characters, was sent from Glasnevin by Sir Fred. Moore. On the motion of Mr. O'Brien, seconded by Mr. Wilson, a botanical certificate was unanimously recommended to this plant.

A new dendrobium, from Java, was exhibited by Sir Trevor Lawrence, Bart. It had been described under the name of D. Annae J. J. Smith, and is nearly allied to D. mutabile, which was shown to compare with it, but about double the size. On the motion of Mr. O'Brien, seconded by Mr. Bennett-Poë, a botanical certificate was recommended.

SCALE ON GRASS.—Mr. E. M. Holmes showed a white scale insect attacking grass from Charing. This scale (Uriopeltis festucæ) appears to be common this season in places, and proves destructive to the grasses it attacks, causing them to become brown.

SWEET PEA ROOTS.—Mr. E. M. Holmes also showed dying roots of sweet pea. These, as is so frequently the case this year, were attacked by the fungus Thielavia basicola. The foliage of attacked plants turns yellow in patches, and finally dies, while the stem is often streaked with yellowish-brown. The fungus also attacks the culinary pea, and produces similar symptoms. In America and Italy it has proved extremely destructive to tobacco, and nothing short of sterilisation of the soil has proved an effective check to its ravages.

PAPAVER ORIENTALE WITH CLEISTOGAMOUS FLOWERS. — Mr. J. Fraser showed Papaver orientale with cleistogamous flowers. It had produced similar ones last year. The petals were linear oblong, not imbricate, and only as long as the sepals. The pollen was abundant, and both stamens and pistil appeared normal.

SPORT IN SHIRLEY POPPY.—Mr. Fraser also showed flowers of Shirley poppy having the usual yellow stamens, but with two of the petals red and the two alternate ones white.

MATRICARIA SUAVEOLENS. — Mr. Bowles showed specimens of Matricaria suaveolens (= M. discoidea), an introduced plant, which has now extended its range into many English counties, and as far north as Aberdeen. The specimens were collected in the neighbourhood of Epping.

CROWNGALL.—Mr. H. T. Gussow sent specimens of crowngall—large swellings on the roots or near the collar of trees, from Canada, where the attack is common. It has been shown by Dr. Erwin Smith to be due to the attack of Bacillus tumefaciens, though others, apparently without recourse to inoculation experiments, have ascribed it to the attack of a myxomycete. Numerous plants of widely distinct families are attacked by the bacillus; but it does not yet seem to be clearly established that it is often productive of great harm to the tree attacked.

FASCIATED ROSE.—Mr. Basham, Bassaleg, sent a fasciated rose-stem over an inch in diameter, and bearing at its apex about nine more or less developed buds.

Newcastle-on-Tyne.

The annual show of the Durham, North-umberland, and Newcastle-on-Tyne Botanical and Horticultural Society, which is one of the oldest societies in England, was held on Wednesday, July 19, and continued for the two following days.

Newcastle Flower Show was for many years one of the best and most popular shows in the country, but its management has passed into the hands of a committee whose members apparently have but little experience in show management. As a consequence there has not been the advancement of late years there might and should have been. Owing to an absurd rule, which excluded the Press from the tents until after judging, our notes were taken with quite unnecessary difficulty. We have never on any previous occasion experienced such treatment as that of our representative at Newcastle where, evidently, a full report is the last thing the society wishes to see.

GROUPS.

The opening class for a group of miscellaneous plants brought good entries, of which that arranged by Mr. T. Be[illegible] gardener to A. E. Bainbridge, Esq., L[illegible] Jesmond Park West, Newcastle, [illegible] His group was bright with orchids, [illegible] crassulas, and other flowering among which the foliage of crotons, caladiums, ferns, etc., showed to advantage. A shapely Cocos Weddelliana occupied the centre in front, and some tall palms and acers were well built up to form a background. The second prize went to Mr. W. A. Holmes, West End Nursery, Chesterfield, who had an effective arrangement of highly-coloured crotons, with a few cattleyas, ixoras, liliums, etc., scattered through to add variety to the colour effect. A wide-spanned arch occupied the background, surmounted by three good kentias with smaller plants in the intervening spaces. The mass of crotons outweighed all else in this exhibit. Mr. H. H. Hillier, Green Park Gardens, Darlington, took third, his group suffering from too much colour, such things as Hiawatha roses, bougainvilleas, carnations, and marguerites being too lavishly used. The fourth prize was awarded to Messrs. Carnegie and Co., Lim., St. Mary's Place, Newcastle.

There were two remarkably good entries for six specimen plants in bloom, and still more remarkable is the fact that both competitors are local pitmen, who showed in a truly professional manner. Mr. Joseph Ellison, 26, Shankhouse Terrace, Cramlington, had in his first-prize group Allamanda Hendersoni, Stephanotis floribunda, Clerodendrons fallax and Balfouriana, Dipladenia amabilis, and Hydrangea hortensis, all beautiful well-flowered specimens; whilst the second-prize collection, contributed by Messrs. Robert Arthur and Joseph Harrison, 55, West Wylam, near Prudhoe, contained a superb specimen plant of Oncidium flexuosum carrying about twenty-five flower stems, as well as good plants of similar subjects to those in the first-prize group. Mr. Ellison also scored for four plants in the class confined to amateurs, the second prize going again to Messrs. R. Arthur and J. Harrison. The best six table plants came from Mr. T. Bell, gardener to A. E. Bainbridge, Esq., Newcastle, who had a nice Phœnix Roebelliana and Pandanus Veitchi, as well as crotons, etc. Mr. H. H. Hillier, Darlington, was placed second, Mr. W. A. Holmes, Chesterfield, coming third.

Sweet peas made a bright display of colour down one side of a tent, the collection of twelve bunches bringing seven very good entries. Mr. Edward Keith, gardener to the Right Hon. Sir George Trevelyan, Bart., Wallington Gardens, Cambo, Morpeth, was a splendid first, his peas being of good size, carrying practically four blooms per stem throughout. Mrs. Hugh Dickson, Thomas Stevenson, Masterpiece, and Edrom Beauty were excellent. Mr. W. Lambert, gardener to the Right Hon. Earl Grey, Howick Gardens, Lesbury, Northumberland, stood second with a dozen vases that carried fine colour, and were beautifully fresh. Elsie Herbert and Marjorie Willis were very well shown; the third prize went to Mr. F. J. Bell, Crescent Nurseries, Whitley Bay, and the fourth to Mr. A. W. Appleton, gardener to Lacey Thompson, Esq., Farlam Hall Gardens, Brampton Junction. Six vases also made a good class, Mr. Edward Keith claiming first place again with a splendidly-grown and shown half-dozen; the second was secured by Mr. S. Russell, gardener to Mrs. Eustace Smith, Manor House, Whalton, Morpeth. Mr. J. Shaw, gardener to B. W. E. Hedley, Esq., Dilston Hall, Corbridge, being third. Mr. Keith won in both Messrs. Sutton and Sons' and Messrs Webb and Sons' classes.

ROSES.

The largest class in this section was for thirty-six blooms in not less than eighteen varieties. Messrs. R. Harkness and Co., Hitchin, were the winners, among their best blooms being White Maman Cochet, Mrs. J. Laing, Lohengrin, and Dean Hole; second place was taken by Mr. Arthur H. Bigg, Ardyng Nook Nurseries, Shipley Glen, Baildon; Messrs. G. Gibson and Co., Leeming Bar, Yorks, third. Messrs. Harkness and Co. again scored for twenty-four roses, Mr. Bigg coming second, and Messrs. Gibson and Co. third. The same order was continued for twelve blooms, no great quality being in evidence.

Eighteen bunches of hardy herbaceous flowers made a brave display, there being five entries, among which Messrs. G. Gibson and Co., Leeming Bar, Bedale, scored a good victory. They had splendid bunches of Gaillardia Carmine Gem, Sidalcea mexicana, Verbascum Caledonia, and other equally beautiful subjects. Messrs. Harkness and Sons, Bedale, had fine delphiniums, liliums, lupins, etc., on their second-prize stand, the other prizes going to Messrs. Longster and Sons, Malton, Yorks; Mr. G. Finley, Darlington; and Mr. F. Edmonton, Newcastle. A class was provided for a collection of cut carnations, the four entries making a very attractive display. Mr. J. E. Hathaway, gardener to J. Brennand, Esq., Baldersby Park, Thirsk, led the way with a bold arrangement of Princess of Wales and blush Malmaisons, Cecilia, Edith Waters, and several other fine varieties. Mr. William L. Lawrenson, Yarm-on-Tees, was second, his perpetual varieties being well shown, but the exhibit lacked the weight of the Malmaisons. The third prize was awarded to Mr. W. Smith, gardener to the Earl of Durham, Lambton Castle; and fourth to Messrs. George Fairbairn and Sons, Botcherby, Carlisle.

FRUIT.

There were three entries in the class for a collection of eight dishes of fruit, the winner being Mr. James E. Hathaway, gardener to J. Brennand, Esq., Baldersby Park, Thirsk. He had nice Madresfield Court and Muscat of Alexandria grapes, Universal melon, Royal George peaches, Lady Sudeley apples, Early Rivers nectarines, Czar plums, and Brown Turkey figs, the fruit being of good size and colour throughout. Mr. W. Parker, gardener to J. Drake, Esq., Oxford House Gardens, Market Rasen, took second, his Buckland Sweetwater and Madresfield Court grapes being stronger than the first-prize winner's, but his other dishes were over ripe throughout. Mr. William Nicholls, gardener to the Right Hon. Lady Beaumont, Carlton Towers, Carlton, S.O., followed for third place, his fruit being on the small side. Mr. Hathaway scored again for four dishes, putting up Nectarine Pitmaston Orange, Universal melon, and the two varieties of grapes as in the other class. Second again went to Mr. W. Parker, who had Dryden nectarine in capital form. Mr. Nicholls came third in this class also.

For four bunches of grapes, Mr. Hathaway secured first, showing Muscat Hamburgh, Canon Hall Muscat, Madresfield Court, and Lady Hutt. Mr. Parker, Market Rasen, was second, showing big bunches of Black Hamburgh, Madresfield Court, Muscat of Alexandria, and Buckland Sweetwater. Third was awarded to Mr. J. R. Gardener, gardener to Lady Cowell, Clifton Castle, Bedale, Yorks. Among five entries for two bunches of Muscat of Alexandria, Mr. G. Shotton, gardener to Mrs. H. F. Swan, Prudhoe Hall, scored, the second going to Mr. J. Snell, gardener to J. Knott, Esq., Close House, Wylam; Mr. W. Mark, gardener to Miss Muschamp, Fernley Hall, Corbridge, being third. Two bunches any other white grape did not form a strong class, but Mr. Hathaway's winning pair of Lady Hutt scored a good first, Mr. J. Snell coming second, and Mr. T. Bell third. Mr. W. Parker had the best two bunches of Black Hamburgh, the other prizes going to Mr. J. R. Gardener, and Mr. W. Lambert, gardener to the Right Hon. Earl Grey, Howick Gardens, Lesbury.

For any other black the prizes were given to Mr. Gardener, Mr. W. Parker, and Mr. W. Lambert, in the order named.

There were six decorated tables, flowers and fruit combined, the test of merit to be beauty of arrangement. Mr. W. Parker, Market Rasen, was the winner, his fruit being good, and his carnations, sweet peas, and francoas were all nice, but the table was heavy throughout. Second was given to Mr. R. Battersby, Hagg Hill, Blaydon-on-Tyne, who used salmon-tinted sweet peas, fern, and other foliage somewhat lavishly, and third prize to Mr. H. H. Hillier, Darlington.

NON-COMPETITIVE.

Trade exhibits of varied and interesting character came from far and near, a good number of Scottish growers crossing the border with choice collections of plants and flowers. Messrs. Sutton and Sons, Reading, arranged a table of vegetables, melons, tomatoes, etc., in their customary first-class style. Calabash gourds, sugar corn, Sunbeam tomato, Twentieth Century mushroom, and other more or less uncommon vegetables were included in the exhibit, the whole stand being beautifully decorated with vases of clarkias, larkspurs, stocks, and other annuals of excellent strain.

Grand delphiniums were staged by Messrs. John Forbes, Lim., Hawick, N.B., who also showed rare collections of phloxes, pentstemons, and violas. Their new Pentstemon King George V., was well shown. It is of great size, brilliant crimson with darker throat.

An interesting exhibit was that put up by Messrs. Laing and Mather, Kelso, N.B. It included hardy perennials, alpines, carnations, both border and perpetual flowering, and sweet peas. Among the perpetual carnations a new one named Guardsman was a finely-formed, smooth-edged flower of rich crimson. This is the type of which we want more.

A capital exhibit of vegetables and flowers came from Messrs. E. Webb and Sons, Wordsley, Stourbridge. The arrangement of plants and cut flowers was bold and striking, there being mounds of gloxinias, tall stands of liliums, hydrangeas, clarkias, etc., and wide-spanned arches furnished with the latest varieties of sweet peas. Fine melons, excellent peas, tomatoes, carrots, and every other seasonable vegetable were staged.

Mr. F. J. Bell, Crescent Nurseries, Whitley Bay, staged sweet peas and violas. The sweet peas were of good quality, and included many of the most up-to-date varieties. Among the violas we particularly noticed Moseley Perfection, Lady Grant, Lord Nelson, and Evelyn Bell, the last-named a new purple self of good form and substance.

Roses were nicely shown by Messrs. Clibrans, Altrincham. A mass of the increasingly popular Lyon Rose made a striking centrepiece, whilst tall stands of such good things as Madame Melanie Soupert, Marquis of Salisbury, and other free-flowering H.T.'s made up a pleasing display.

A miscellaneous group of ferns and flowering plants was arranged by Mr. William Lawrenson, 11, Pilgrim Street, Newcastle.

A small, but admirably-constructed rockery was exhibited by Messrs. Kent and Brydon, Darlington. Natural weather-beaten stone was used with much skill, and many very choice alpines were planted in the niches. Œnothera niparia, Hypericum repens variegata, Campanula mirabilis are but a few of the really good plants noticed.

Included among a choice collection of phloxes shown by Messrs. Charles Irvine and Sons, Jedburgh, we noticed Queen Alexandra, a beautiful white; Mrs. Pringle, and a rich violet-coloured variety named Mrs. Sinton. Delphiniums and pentstemons were also largely shown by this firm.

Messrs. Finney and Co., Lim., Newcastle-on-Tyne, had a big display of early-flowering gladioli, sweet peas, Lilium auratum, tuberoses, etc., the whole making a very attractive exhibit.

Roses and hardy perennials were put up by Messrs. Dicksons, Lim., Chester, the collection of roses being representative of up-to-date garden or decorative varieties.

One end of the big tent was occupied by Messrs. Ord Bros., West Chirton Nurseries, North Shields, who put up a miscellaneous group of useful greenhouse plants.

Messrs. G. Fairbairn and Sons, Carlisle, arranged sweet peas on a table, showing well-grown flowers of popular varieties.

BULBS.—A practical treatise on the cultivation of hardy, hothouse and greenhouse bulbous and tuberous rooted plants is "BULBS AND THEIR CULTIVATION," by T. W. Sanders, price 2s. 6d. net, or by post 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

Horticultural Club.

On Friday, the 21st inst., at the kind invitation of Sir Frank Crisp, a party of about eighty members and friends, including a large number of ladies, visited Friar Park and its peculiarly varied attractions, spending, by favour of their host and the clerk of the weather, one of the most enjoyable days conceivable. Taking previously-arranged saloon carriages at Paddington the party proceeded to Reading, where by Sir Frank's generosity a steam launch had been provided to take them down the river to Henley, where they were entertained at lunch, prior to being conducted over the park and its wonders by their host in person. The unrivalled Alpine rockery, with its choice collection of alpines combined with a marvellous representation of Alpine scenery, culminating in a distant view of the Matterhorn, was much appreciated, though the effect of three weeks' burning sunshine and continued drought heavily handicapped the normal freshness and beauty of the prospect. The visitors were then conducted through the underground caves and caverns with their eerie population of gnomes, bats, owls, and other weird creatures, and into the recesses of the ice beneath the glaciers of the Matterhorn, and then along the subterranean streams which connect the lake system of the mysterious country they were traversing. The new Japanese garden was also inspected and the beautiful conservatories, filled with botanical curios, were also not neglected. The beautiful house itself, with its riddles and puzzles deftly wrought into its sculptured walls, also evoked both admiration and amusement. This tour being ended, the visitors were conveyed back to the boathouse, and re-embarked in the launch for a further trip to Marlow, where, after partaking of tea at the Castle Hotel, the saloon carriages were waiting to transport them to Paddington, after what was unanimously pronounced to have been an absolutely ideal outing. To mark the occasion a rhymed and humorous description of Friar Park had been written by Mr. C. T. Druery, and printed by Sir Frank for distribution as a souvenir, but the printer having disappointed him, Sir Frank kindly announced that he would forward a copy to any of his guests on receipt of a postcard bearing name and address. It is needless to say that a most cordial vote of thanks was passed to both Sir Frank and Lady Crisp for their great kindness and to Mr. Harry J. Veitch for undertaking the necessary arrangements.

Liverpool Horticultural Association.

JULY 19.

This society held its third rose and sweet pea show in the Corn Market with an increased entry, and a greatly augmented attendance. The committee would be well advised to secure better means of ventilation both for the exhibits and visitors. The sweet peas were undoubtedly the most popular section, the Welsh exhibits gaining high appreciation, the flowers being good in colour, size, and substance. The roses were, owing to the hot, dry weather, few in number, and of only moderate quality. The herbaceous cut flowers, carnations, and pansies, contained specimens of merit.

In the class for twenty bunches of sweet peas, distinct, the leading award went to Mr. Forder, gardener to Colonel Cornwallis West, for a fine selection, the flowers splendidly developed, and tastefully staged; second, Dr. J. E. Phillips; third, S. Salisbury and Son. The same exhibitors also won in two classes for twelve vases, distinct. For twelve varieties there were only two entries, and the first and second awards were as in the former class. In another class for twelve bunches, Mr. R. R. Anderson scored; and for one vase of Sutton's Queen Mr. W. Bindloss took the lead.

For eighteen roses, distinct, Mr. J. Barker, gardener to F. R. Dixon-Nuttall, Esq., was the first and only exhibitor; his best blooms were Mrs. W. J. Grant, the Lyon Rose, and J. B. Clark. For twelve varieties the leading award went to the some exhibitor; and for six Mr. T. H. Jackson scored.

Twelve vases hardy herbaceous cut flowers, Mr. T. Henshaw took the lead; and for six vases, Mr. A. F. Sloane had the winning collection.

In the class for six varieties of carnations or picotees, Messrs. A. R. Brown, Lim., held their own with meritorious blooms; and for twelve blooms they again occupied the premier position. For six blooms, distinct, Mr. G. A. Turner took the lead; and for the dinner table decoration Miss Newsham secured the coveted position.

In the amateurs' section some pleasing exhibits were staged, and Mr. W. Bindloss secured the premier award for twelve vases of sweet peas, Mr. G. Faulkner for six blooms, and Mr. F. Hindley for six vases. Mr. H. S. Hodgkinson was first for twelve roses, Mr. L. Thomson first for six; and in the second class for six, Mr. F. Hindley obtained premier honours. Mr. L. Thomson was first for twelve bunches of herbaceous flowers, and Mr. W. A. Crippen for cut single begonias and double begonias. Mr. G. A. Turner was first for six carnations and for one vase of three blooms.

Mr. J. R. J. Turner had the best pansies, and Miss Newsham the best dinner table.

The Liverpool Orchid Company received the society's gold medal for orchids, and silver medals were awarded to Messrs. R. P. Ker and Sons, for stove and greenhouse plants, fruits, and vegetables; Messrs. Dicksons, Chester, for cut flowers of hardy plants; Bakers, Wolverhampton, for roses; Messrs. W. Conway and Sons, Halifax, for flowers of herbaceous plants; W. L. Pattison, Shrewsbury, for pansies; Mr. W. Rowland, Wavertree, for roses; Mr. R. Manson, Gateacre, for roses, and Mr. H. Middlehurst, for sweet peas.

Awards of Merit were make to Mr. C. A. Young, for carnations; to Mr. David Little, gardener to J. Smith, for cypripediums; to Messrs. Fishlock Bros., for cut flowers; and to the Covent Garden Seed Company, for herbaceous cut flowers and sweet peas.

FORTHCOMING ENGAGEMENTS.

TUESDAY, August 1.—Royal Horticultural Society; committees meet at 12 o'clock; lecture at 3 p.m. on "Tender Plants for a Warm Corner," by Mr. R. Irwin Lynch, M.A., V.M.H.; Scientific Committee at 4 o'clock.

WEDNESDAY, August 2.—Midland Carnation Show; two days.
Chesterfield Horticultural Society.
Bishops Waltham Horticultural Society.

FRIDAY, August 4.—Perthshire Sweet Pea Society; two days.

SATURDAY, August 5.—French Horticultural Society of London.

MONDAY, August 7 (Bank Holiday).—Andover Horticultural Society.
Bletchley and Fenny Stratford Horticultural Society.
Swanage Horticultural Society.

TUESDAY, August 8.—Leicester Flower Show; two days.
Northern Carnation Show, at Manchester Town Hall.

WEDNESDAY, August 9.—Brecon Horticultural Society.

THURSDAY, August 10.—Sevenoaks Horticultural Society; two days.
Taunton Deane Flower Show.
Prendergast Horticultural Society.
Border Horticultural Society, at Coldstream.

MONDAY, August 14.—United Horticultural Benefit and Provident Society, committee meeting.

TUESDAY, August 15.—Royal Horticultural Society; committees meet at 12 o'clock; no general exhibition; hall closed for redecoration.
Oxford Horticultural Society.
North of England Horticultural Society, at Harrogate.
Clay Cross Flower Show.

THURSDAY, August 17.—Aberdeen Horticultural Society; three days.
Deal and Walmer Horticultural Society.
Hawkeshead Horticultural Society.

SATURDAY, August 19.—Hugglecote Horticultural Society.

TUESDAY, August 22.—Royal Horticultural Society of Ireland.

WEDNESDAY, August 23.—Shrewsbury Floral Fête; two days.
Battle Horticultural Society.

THURSDAY, August 24.—Peebles Forticultural Society.

TUESDAY, August 29.—Royal Horticultural Society; committees meet at 12 o'clock; lecture at 3 p.m. on "Insect Pests" by Mr. Frederick Enock, F.L.S., F.E.S.; Scientific Committee at 4 o'clock.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1911. JULY 16 TO JULY 22.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
July 16—Sunday	13 36	65	56	78	45
" 17—Monday	7 48	63	57	76	52
" 18—Tuesday......	10 54	64	59	73	58
" 19—Wednesday..	10 12	65	59	75	52
" 20—Thursday....	6 18	73	63	83	55
" 21—Friday........	14 6	79	67	89	57
" 22—Saturday.....	13 54	80	68	91	53
Means	(total) 76 48	69	61	81	53

DATE. 1911. JULY 16 TO JULY 22.	RAIN.	TEMPERATURE OF THE SOIL AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg.
July 16—Sunday	—	65	64	61	37
" 17—Monday	—	66	64	61	43
" 18—Tuesday......	—	66	65	61	49
" 19—Wednesday..	—	66	64	61	45
" 20—Thursday	—	66	64	61	48
" 21—Friday	—	67	65	61	49
" 22—Saturday	—	69	66	61	49
Means	(total) —	66	64	61	45

Such a high maximum (91.1) as that recorded for Saturday has not been experienced at Wisley since September 2, 1906, when the maximum thermometer read 92.2.

ONCE USED. ALWAYS USED. The 'PATTISSON' LAWN BOOTS

Simplest! Strongest!
Most Economical!
Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or Solid Rubber. Fig. 1 can be REFITTED repeatedly, equal to New Boots. Rubber Soles strongly recommended.

SOLES
PATTISSON
PATENT

FIG. 1.

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS

Silver Medal—
Royal Horticultural Society.

HUNDREDS OF TESTIMONIALS.
The Field says: "As good as anything that could be devised."
Illustrated Price List from—

FIG. 2.

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM S.W.

CHARGES FOR ADVERTISEMENTS IN

THE GARDENERS' MAGAZINE.

Five Lines and under	£0 2 6
Per Line beyond	0 0 6
" Inch	0 6 0
" Half Column	1 10 0
" Column	3 0 0
" Page	9 0 0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

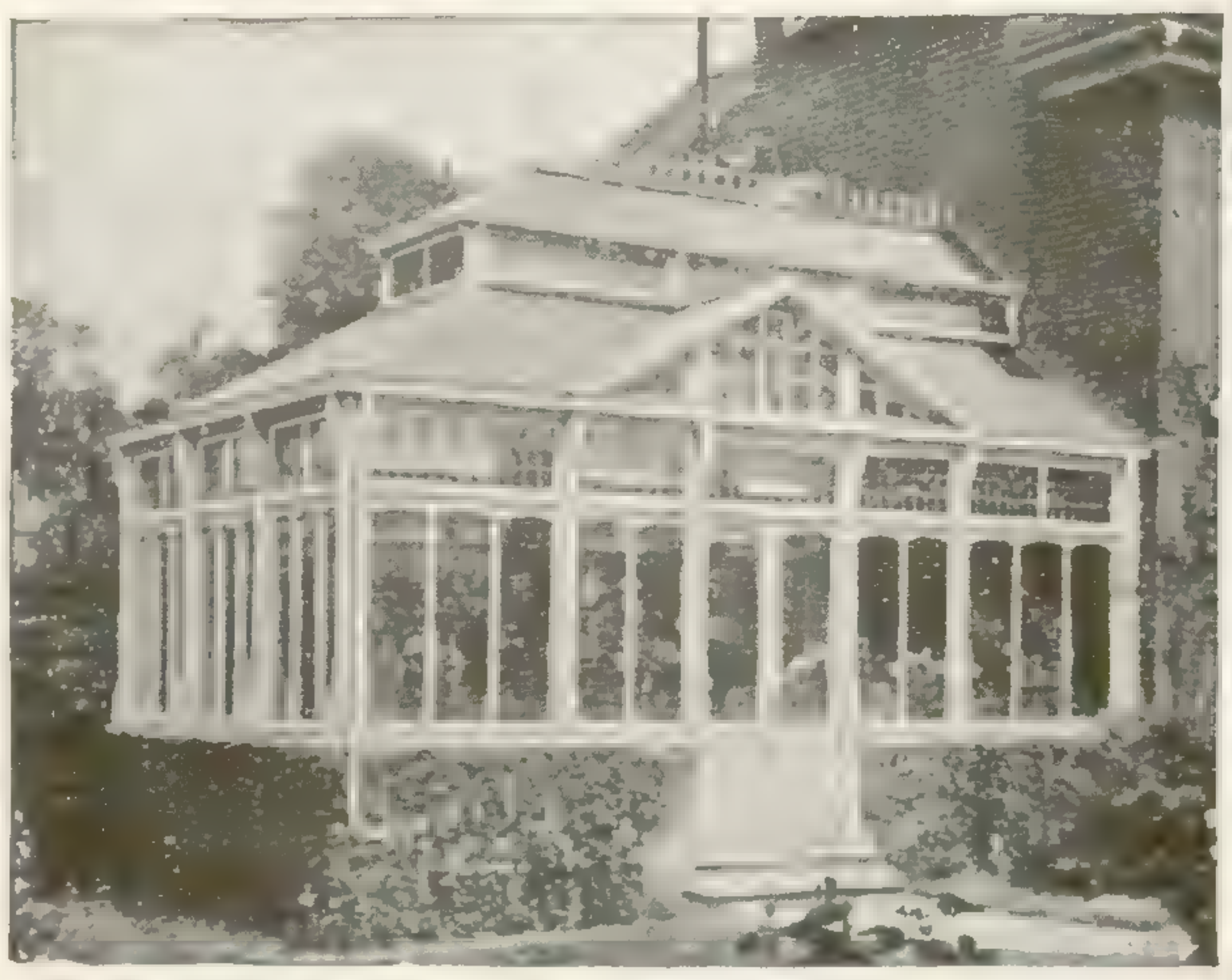
Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed—

Telephone Numbers:
Editorial and Printing Depts. .. ... 831 Holborn
Advertising and Publishing Depts. ... 2140 Holborn

Offices: 148 and 149, Aldersgate Street, London

BOULTON & PAUL, LTD., HORTICULTURAL BUILDERS, Norwich.

EFFECTIVE, PRACTICAL CONSERVATORIES.



Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of 40/- value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

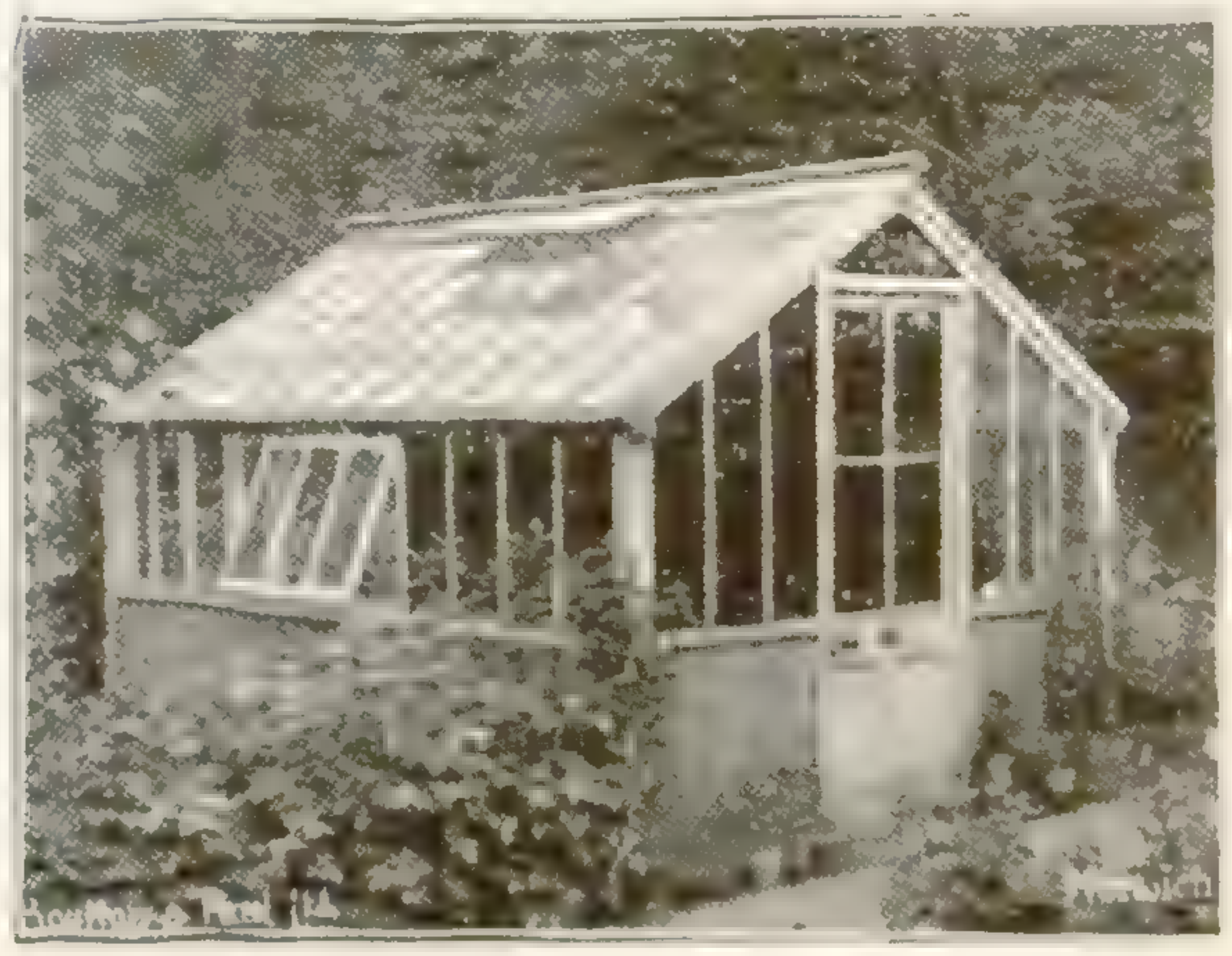
No. 75.—MELON and CUCUMBER FRAME.

4ft. by 6ft. ... £2 0 0 | 8ft. by 6ft. ... 3 0 0
Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft. Similar to No. 75, with Two Lights... **35/-**

SEND FOR ILLUSTRATED CATALOGUES.

Every part of these Houses is thoroughly well made, painted three coats, GLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.



No. 49A.—Span, 10ft. by 8ft. £11 10 0
No. 47A.—Lean-to, 10ft. by 7ft. £9 10 0

All parts are numbered ready for easy re-erection by any handy man.

MERRYWEATHER'S

614 PUMP

IS THE

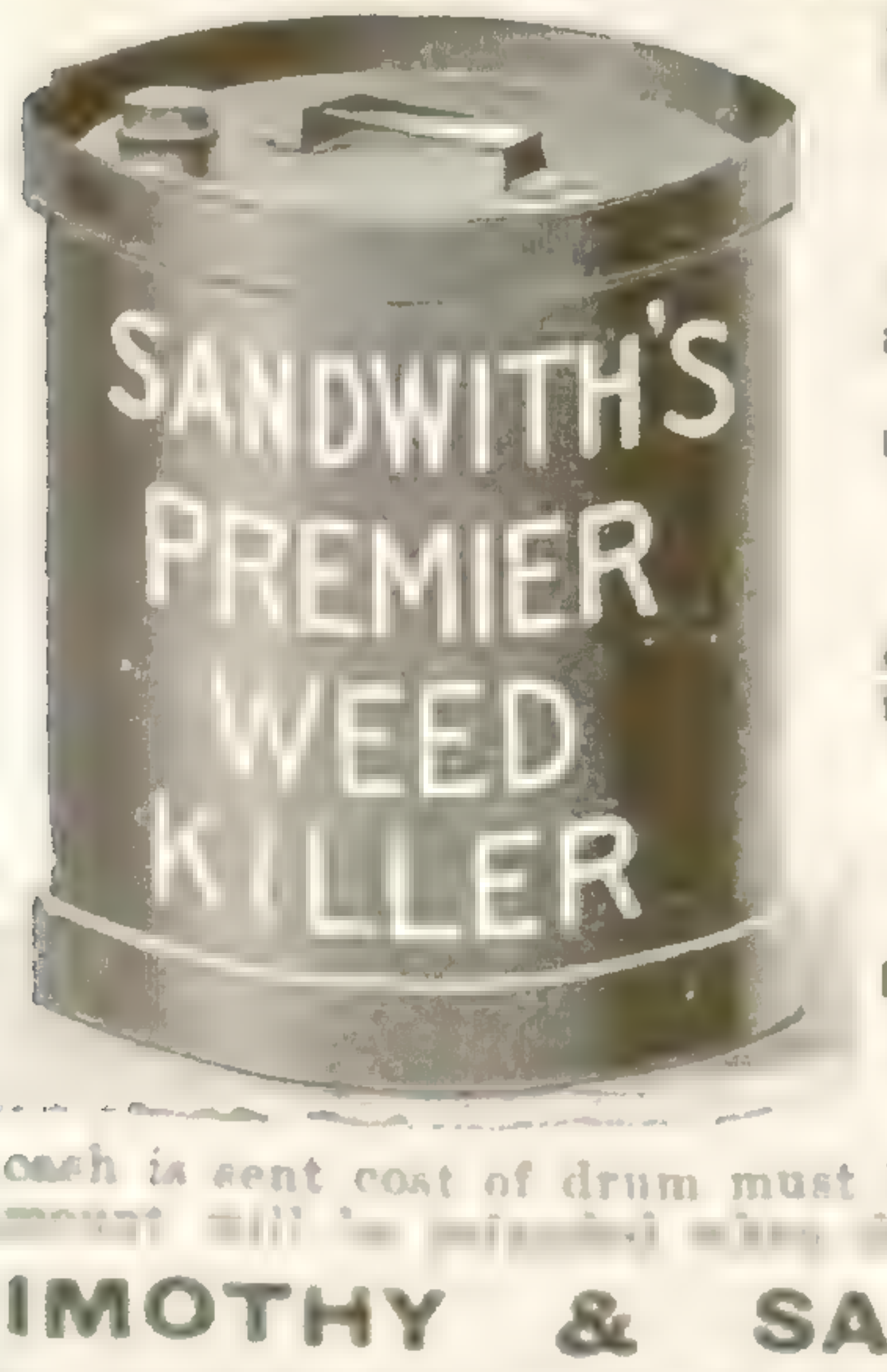
Gardener's Friend.

Easy to Work.
Simplicity Itself.

Write or Call—

63, Long Acre,
LONDON, W.C.

THE FAVOURITE WEED KILLER.



As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for 6/-; drum, 2/-. 12 galls. for 16/-; drum, 6/-. 24 galls. for 26/8; drum, 10/-. 40 galls. for 50/-; drum, 20/-.

EITHER LIQUID OR POWDER.

Carriage Paid.

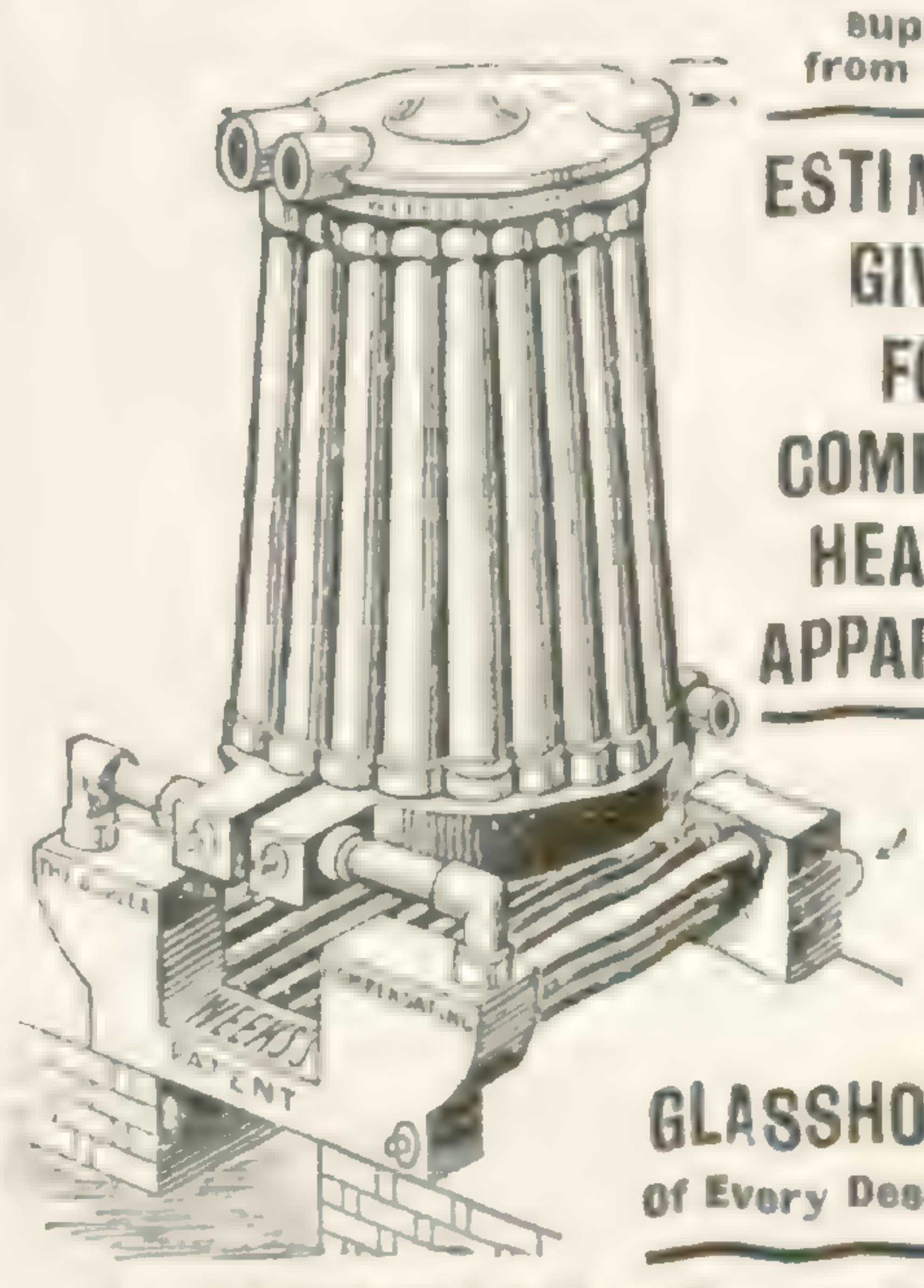
If cash is sent cost of drum must be included, which amount [illegible]

TIMOTHY & SANDWITH,
The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

WEEKS'S BOILERS

supplied from stock.



ESTIMATES GIVEN FOR COMPLETE HEATING APPARATUS

GLASSHOUSES.
Of Every Description.

J. WEEKS & CO.,
72, Victoria Street,
WESTMINSTER, S.W.

THE CHEAPEST IN ENGLAND.

NO. 50.

Copyright Registered.

PORTABLE BUILDINGS. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match boards, [illegible] planed and V jointed [illegible] framing [illegible] covering with [illegible] Asphalte [illegible] fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

Sizes.		Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, [illegible] high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. [illegible] high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings.
ESTABLISHED 70 YEARS. *BEDFORD.*
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

GARDEN HOSE and FITTINGS, all sizes and lengths, best quality; list free.
HEATHMAN,
Hose Factory, Parson's Green, London, S.W.

FLOWER POTS.

SANKEY'S
FAMOUS
GARDEN
POTS

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant

Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

THOMSON'S
VINE PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOP DRESSING
MANURES
SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE.

MANY YEARS REPUTATION.

EUREKA WEED KILLER

LASTING RESULTS—NO NEW EXPERIMENT.

1/9 TIN FOR 25 GALLONS | 6/- TIN FOR 100 GALLONS | LARGER SIZES AT LOWER RATES

SOLD BY AGENTS. MANUFACTURERS: TOMLINSON & HAYWARD LTD LINCOLN.
IF ANY DIFFICULTY SENT DIRECT—PAID

When answering Advertisements please mention "Gardeners' Magazine."

ANSWERS TO CORRESPONDENTS.

CROP REPORTS.—J. C. C., Newbury: The following statements may be obtained free of charge, and immediately on publication, by farmers and others interested, on application to the Secretary, Board of Agriculture and Fisheries, 4, Whitehall Place, London, S.W.: (1) Acreage under each kind of crop and number of each class of live stock in Great Britain. (2) Acreage under Hops in each county. (3) Production of Hops in each county. (4) Production of Corn, Pulse, and Hay crops in Great Britain. (5) Produce of Potatoes and Roots in Great Britain. (6) Reports on Crop prospects at the middle of July, August, and September. Statements 1 and 2 are usually issued about the end of August, Statement 3 about the middle of October, Statement 4 about the middle of November, and Statement 5 about the beginning of December. The reports on crop prospects (6) are issued about the 22nd of the month to which they refer.

LEUCOPHYTA BROWNI.—G. D. A., Apperley: The plant so popular for many years as a suitable subject for carpet bedding under the name of Leucophyton Browni should have been labelled Leucophyta Browni. But if the cultivator nowadays would be up to date in his nomenclature the label should read Calocephalus Browni. Under the latter name you will find it in the supplement to "Nicholson's Dictionary of Gardening," but you may look in vain for it in other dictionaries to which gardeners generally have access. This is the more remarkable when we remember how immensely popular this silver-leaved composite was in the days when carpet bedding was the rage, and how useful it is even now as a carpeting or edging plant.

LOGANBERRIES.—H. C., Burton: Cut out all or nearly all the canes that have borne fruit this year as soon as the crop is finished, and at once tie in loosely all the young canes there is room for. Loganberries pay for generous treatment.

PEACH TREES.—S. H. S., Dorset: In view of the heavy crop the trees are carrying and the long-continued dry weather, we are not surprised the trees are not growing so freely as you wish. The only course you can take for the purpose of assisting the trees in swelling up their fruits is to flood the borders with water two or three times with an interval of a week between the supplies. Previous to the second watering a thin coating of some good artificial spread over the soil will be of considerable value as an aid in the development of the fruit.

EUPHORBIA JACQUINÆFLORA. — J. B. B., Altrincham: Not a few names of plants common in gardens and nurseries are quite incorrect, and in some cases it would be difficult to find a good reason for the retention of the wrong name. Some names fit the plants very well, and hold their place for many years, when some botanical investigator discovers that another name was given previously, and so the older and practically unknown and unused name is given out as the correct one. This sort of thing does seem absurd, but priority of naming is the rule. In the case of the popular winter-flowering plant so well known as Euphorbia jacquinæflora, the better and correct name of E. fulgens has been quite well known for a long number of years to all who take sufficient interest in these matters and consult a good gardening dictionary. The article under the heading of Euphorbia fulgens that appeared in the GARDENERS' MAGAZINE of July 22, had, as you suspect, reference to what you know as Euphorbia jacquinæflora.

SECONDARY GROWTH ON TRAINED APPLE TREES.—D. T. P., Horsham: The secondary growths made since summer pruning should be pinched back to one leaf while soft enough to be dealt with by finger and thumb.

HORTICULTURAL PRESS AND EXHIBITIONS.—R. S., Durham: It is only on rare occasions that any attempt is made to exclude horticultural Press men from the show tent or hall during the time that judging takes place. All the leading societies are too well aware of the value they and their supporters derive from a good report of the show to do anything that would hamper the Press. During the time judging is in progress the horticultural Press have an opportunity of breaking the back of their work, provided the awards are placed on the winning exhibits directly a class is judged. In some few instances antiquated methods of making the awards known are adopted, and where this is so the work of the Press is hampered even when they are allowed in the tents while judging proceeds. Some years ago the committee of a well-known northern horticultural society decided that pressmen should not be permitted to enter the tents until judging was completely finished. As this would have meant their exclusion until the public was admitted, a great loss of valuable time, and an abbreviated report made under extreme difficulty, the pressmen representing all the leading horticultural journals promptly approached the committee and asked permission to do their work with some degree of comfort: this request being refused the scribes issued an ultimatum to the effect that unless the usual facilities were granted them within five minutes every man would return to town, and not a line of report concerning the show would appear. Needless to say, the facilities were granted, and ever since that time the relations between Press and committee have been of the most cordial nature. Pressmen are not out for a holiday when they attend to report flower shows; they are out on business, to provide information for their readers, and incidentally a good advertisement for the society holding the show.

BANKSIAN ROSE NOT FLOWERING.—W. E. S., Chester: It is probable that, in spite of a good position the situation is altogether too cold for the yellow Banksian rose, as this variety delights in shelter and abundance of sunshine to ripen up its growth; and only under these conditions does it flower successfully out of doors.

NEW ROSES.—C. W., Wolverhampton: The variety named Jonkheer J. L. Mock was sent out by Messrs. Leenders and Co. in 1909; it is a red variety, shaded on the outer side of the petals with silvery-pink. It is a fragrant H.T. rose, and said to be a vigorous grower. Mrs. Alfred Tate, from Messrs. S. McGredy and Son, Portadown, is a coppery-red H.T. rose, shaded with fawn, a very pretty decorative variety. Beauté de Lyon is a hybrid briar rose sent out by M. Pernet-Ducher last year; the colour is bright red with beautiful yellow shading. All these varieties can now be obtained through the British rosarians who advertise in our columns. Whether these roses are of first-rate value for bedding and cutting remains to be seen, as there has hardly been time yet to fully determine their value in these connections.

NAMES OF PLANTS.

R. S. R., Rhyll.—1, Olearia Haasti; Gentiana septemfida.

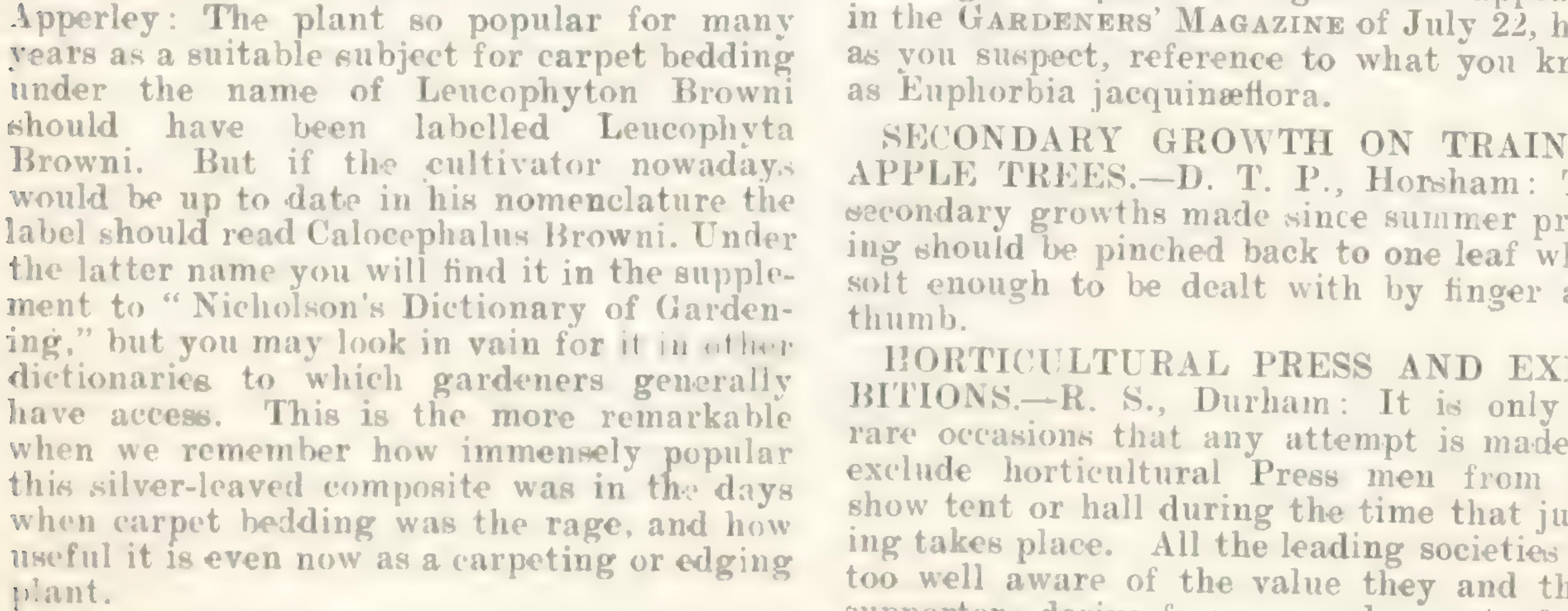
S. C. A., Rodmersham.—1, Veronica incana; 2, Saxifraga oppositifolia.

K. G., Red Hill.—The tree is Ulmus campestris variegata; have you a good photograph of the tree?

B. S. S., Ilfracombe.—1, Sidalcea candida 2, Œnothera Youngi; 3, Sedum anacampseros; 4, Tamarix gallica.

F. E. F., Harrow.—1, Chrysogonum virginicum; 2, Antirrhinum asarina; 3, Calandrinia umbellata; 4, Arenaria balearica.

R. P., Cheltenham.—1, Linum flavum; Swainsonia galegifolia; 3, Rondeletia speciosa; 4, Allamanda Hendersoni; 5, Streptosolen Jamesoni; 6, Campanula pulla.



Of course, it is sometimes necessary to INSIST upon your Ironmonger or Seedsman getting a **PINE SPRAY SYRINGE** for your approval, but it's worth while, and it would be a pity to buy a Syringe at the same price, not so large or well-made, and with none of the Pine Spray's great advantages. The Roses particularly are going sick for the want of relief from greenfly and numerous other pests. Get to work on them at once with a **PINE SPRAY SYRINGE** and **PINE SPRAY INSECTICIDE.**

Insist upon your tradesman sending at once for the former on approval. A large sample tin of Insecticide will accompany it for your acceptance if you approve the Syringe, and you will.

Size of Syringe, 24in. over all by 1¼. **PRICE 10s. 6d.**

ROBINSON BROS., Ltd., West Bromwich, STAFFS.

ROBINSONS PINE SPRAY SYRINGE (Patent).

CONTENTS.

PAGE
Answers to Correspondents ... ...
A Private Fire Station
Exhibitions and Meetings
Gold Medal Vegetables
Hardy Fruit Chat
Hypericums ... ...
National Carnation and Picotee Society
New Plants, etc. ... ...
Notes from Hampton Court
Notes of the Week ... ...
Saxifraga exarata ... ...
The Hart's-tongue Fern
The June-berry ... ...
Time of Pruning Fruit Trees
Viola gracilis ... ...
Work for the Week

ILLUSTRATIONS.

Portrait of Mr. D. Williams, 549; Elizabeth Shiffner, 551; Self Carnations, 552; Gold Medal Collection of Vegetables, 554; Viola gracilis in the Rock Garden, 554; Saxifraga exarata, 555; Dendrobium Victoria Regina, 556; Carnation Mrs. Elliott Douglas, 557; Pretty Private Fire Station at Hertingfordbury, 559.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out. Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

J. F. G. BANNATYNE, Esq., Haldon, Exeter, will be pleased to recommend H. NIOHOLSON as GARDENER (Head Working); thoroughly practical and reliable; life experience in all branches; 3½ years here; age 31. Address, NIOHOLSON, Haldon Gardens, Exeter, Devon.

GARDENER (Head Working); thoroughly experienced in Fruit, Flowers, Vegetables; Inside and Outside work, where two or three are kept; well recommended. Apply, F., care of Messrs. Charles Turner and Son, Royal Nurseries, Slough, Bucks.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 31; married when suited; excellent references. Address, Cloees Hall, Gisburn, Clitheroe.

GARDENER (Head Working).—CAPTAIN USHER highly recommends R. Appleby as above; life experience in all branches; thoroughly understands Planning and Laying Out; also Land and Stock; many years' excellent character. Address APPLEBY, care of Captain T. Clemins Usher, Little Wymondley, Stevenage.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 31; married, two children. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working).—Mr. PHILIP ASHWORTH wishes to recommend W. H. SHAW as above; life experience; accustomed to large establishment; especially good at Laying Out new grounds; also Flowering Shrubs and Herbaceous Borders; married, family, many years' excellent character. Apply W. H. SHAW, The Lodge, Horsley Hall, Gresford.

GARDENER (Head Working).—F. W. FLETCHER, Esq., can highly recommend his Head Gardener as a thoroughly trustworthy experienced good all round man; age 45, married; one girl 14 years. F. GREENGRASS, 40, Primrose Terrace, Browning Road, Enfield, Middlesex.

GARDENER (Head Working, where several are kept); life experience in good establishments, Inside and Out, well up in all branches including land and stock; married, no family. M.C., c/o. Haxton, Melton Road, Hampton-on-Thames.

GARDENER (Head of two or three, or Second where five or six are kept); life experience; age 28; Bothy preferred. A. FREESTONE, Little Chesterford, near Saffron Walden, Essex.

GARDENER (Head Working); life experience Inside and Out; 5 years present situation as General Foreman; excellent refs.; disengaged when suited; age 28. T. CHAMBERLIN, Harrow Road, Warlingham, Surrey.

GARDENER (Head or good Single-handed with help); well up in all branches; age 42; married, no encumbrances; good references. A. VENABLES, 6, Greatham Road, Bushey Hall Road, Watford, Herts.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushroom, ridge or flat; Kitchen, Lawn, Flower Garden. Special Prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (Head, or Single-handed with help); age 30, life experience in all branches; highly recommended. Near London preferred. GOLDSMITH, 55, Suffolk Road, Milton, Portsmouth.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; age 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (Single-handed or otherwise); 12½ years' experience Inside and Out; good references; 4½ years last place; age 30; single. REYNOLDS, Sandy Hill, Beddington.

GARDENER (Single-handed, or with Son to help); life experience in all branches; age 37; disengaged; good references. E. LIMEHOUSE, 11, Charleville Road, West Kensington.

GARDENER (Single-handed or otherwise); 14 years' general gardening; used to gas engine; married, 2 children, youngest 4½; age 31. J. MOONEY, The Stables, East Moor House, Harpenden.

GARDENER, 40, Single-handed preferred; thoroughly experienced, excellent character, active worker, Inside and Out with early vegetables; abstainer; immediate. A. BISHOP, Windmill Hill, near Hailsham.

GARDENER (Single-handed, or with help); experienced, Inside and Out; age 30; married, no family; good references. H. CATLEY, The Lodge, Pilgrim's Holt, Margery, nr. Reigate, Surrey.

GARDENER (Single-handed or Second) seeks SITUATION; understands Fruit, Flowers, Vegetables; age 2[illegible]; single; good references; seven years last place. [illegible]

GARDENER (Single-handed) seeks SITUATION; 16 years' experience in flowers, fruit, vegetables; excellent references; age 30; single; disengaged. F. HYDER, 7, Stamford Road, Watford, Herts.

MR. A. LINDLEY recommends A. SIMMONS as GARDENER (First of two or Single-handed); life experience Inside and Out; two years present situation; six years previous; age 35; single. Apply, 6, Little Roke, Kenley, Surrey.

RECTOR of EXFORD thoroughly recommends GARDENER for more important post; 12 years' good character, 30 years of age, thoroughly capable Inside and Out; free in September. F. ADAMS, The Cottage, Exford, Dunster.

GARDENER, as Single-handed or with help; as good all-round Gardener, 14 years' experience; age 28; married, no encumbrances. Excellent references. — JOYCE, 4, Hedge's Cottages, Bridge Street, Pinner, Middlesex.

AS GARDENER; used to pony; over two years in present situation; age 24. Near London preferred. Apply J. SCOTT, 51, Manor Park Road, East Finchley.

IMPROVER (Inside and Out); age 22; 3½ years in present situation; can be well recommended; bothy preferred.—Address H. PITMAN, The Gardens, Glencot, Wells, Somerset.

UNDER GARDENER. Respectable man, good references, requires employment; understands planting, bedding out, etc. Can look after horses. P., 55, Bryanston Street, W.

SITUATION as KITCHEN GARDENER and handyman, good alto chorister; married, age 25. F. AUGER, 22, Elm Grove, Bishop's Stortford, Herts.

YOUNG MAN seeks SITUATION as GARDENER (Second); age 24, 12 years' experience, abstainer, well recommended. B. LANE, Ivy Cottage, Smart's Heath, Mayford, Woking, Surrey.

YOUNG MAN (married) seeks a good SITUATION in Florist's Nursery, Head or Second; well up in all duties, in or outdoor; 16 years last place, two years present. W. WADEY, [illegible], Horsham.

YOUNG MAN seeks SITUATION to look after Electric Light and Garden; well up in all branches; nine years last situation. EDWARD VILLA, Street, Cobham, Surrey.

Situations Vacant.

HEAD WORKING GARDENER required within a fortnight or three weeks, 12 miles north-west from London. Married man without family; three others kept; three years' reference in last place required. State age, experience, and wages required—A B C, c/o Clark's, 40, Great Portland Street, London, W.

WANTED, IMPROVER, for the Houses; 12s. per week and bothy; apply, with references, to J. BRADLEY, Hopwood Hall Gardens, Middleton, nr. Manchester.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For AUGUST 5, 1911.

Please Repeat my Advertisement.

Name ……………………………………………

Address ……………………………………………

……………………………………………

Date …………… - ………

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue

W. RICHARDSON & CO.,

MANUFACTURERS OF ALL KINDS OF

HORTICULTURAL BUILDINGS. Also HEATING ENGINEERS.

Recent Contracts for Horticultural Buildings and Heating include the following:—

H. M. Commissioners of Public Works, Royal Hospital, Dublin.
H. M. Office of Works, New Head Post Office, Newcastle-on-Tyne.
His Grace The Duke of Grafton, Wakefield Lodge, Stoney Stratford.
The Rt. Hon. The Earl of Donoughmore, Knocklofty, Clonmel, Ireland.
The Rt. Hon. The Earl of Durham, Lambton Castle, Durham.
The Rt. Hon. The Earl of Listowel, Convamore, Ballyhooly, Co. Cork.
The Rt. Hon. The Earl of Scarborough, Lumley Castle, Co. Durham.
The Rt. Hon. Lord Barnard, Raby Castle, Barnard Castle.
The Rt. Hon. Lord Glanusk, Glanusk Park, Crickhowell.
The Rt. Hon. Jonathan Hogg, Stratford, Rathgar, Co. Dublin.
The Rt. Hon. Lord Ravensworth, Eslington Park, Whittingham, Northumberland.
W. A. Whitehead, Esq., Langley, Baildon, Yorkshire.
The Hon. Robert James, St. Nicholas, Richmond, Yorks.
His Excellency Monsieur Tzokow, 21, Queen's Gate, London, S.W.
Lady Palmer, Grinkle Park, Loftus-in-Cleveland.
Sir William Eden, Bart., Windlesham Hall, Ferryhill.
Sir Lindsay Wood, Bart., The Hermitage, Chester-le-Street.
Sir Reginald Graham, Bart., Norton Conyers, Melmerby.
The Royal Horticultural Society, Wisley, Ripley, Surrey.
Colonel Napier Clavering, Axwell Park, Northumberland.
Colonel Scott, Penmaenucha, Dolgelly.
Major Stobart, Spennithorne House, Spennithorne, Leyburn.
Captain Freeman, Coulby Hall, Ormesby.
Captain Wainman, Otterington Hall, Northallerton.
Mrs. Lloyd Jones, Vronhaul, Llandinam.
Hy. Mitcheson, Esq., Baxterley, Atherstone.
W. Warde Aldam, Esq., Frickley Hall, Doncaster.
E. G. Wheler, Esq., Claverdon Leys, Warwick.
P. H. Ashworth, Esq., Horsley Hall, Gresford.
The Rev. James Farmer, Lucan House, Ripon.
Mrs. Jones, Glandenys, Lampeter.
R. A. England, Esq., Englethwaite Hall, near Carlisle.
The Rev. W. Ingham, The Vicarage, Old Malton, Yorkshire.
James Maunsell, Esq., Patrickswell, Co. Limerick, Ireland.
The Rev. J. Murray Dixon, Swithland Rectory, near Loughborough.
David Davies, Esq., M.P., Llandinam, Montgomeryshire.
David Richardson, Esq., Wheelbirks, Stocksfield-on-Tyne.
C. Lingford, Esq., Lancelands, Cotherstone.
E. W. Parker, Esq., Skirwith Abbey, Penrith.
C. L. B. Robinson, Esq., Brettanby Manor, near Darlington.
G. P. Roddam, Esq., Newtown, Stanhope.
H. Costobadie, Esq., Overdale, Mottram, Manchester.
I. J. Dewhurst, Esq., Whinmoor Lodge, Seacroft, Leeds.
J. Rossiter Hoyle, Esq., Grange Cliffe, Ecclesall, Sheffield.
W. Brown, Esq., Larne, Co. Antrim.
Mrs. Powell Price, Morganwg, Brecon.
W. J. Sharp, Esq., Bleasdale House, Silverdale, Carnforth.
F. Hartley, Esq., May Lodge, Bridlington.
J. A. Forster, Esq., Fernlands, Chertsey, Surrey.
W. Robson Hindmarsh, Esq., Ulleskelf.
J. W. Richardson Esq., Sowerby Grange Thirsk.
Hugh C. Fairfax Cholmeley, Esq., Brandsby Hall, Easingwold.
Harrison Benn, Esq., Holcombe Hall, Dawlish.
Miss Watt, Spott House, Dunbar.
W. Loudin MacNeill, Esq., Shennanton, Kirkcowan, Wigtownshire.
W. H. St Quintin, Esq., Scampston Hall, Rillington, Yorks.
St. Mary s Convent, Chiswick.
The John Copeland Hospital, Gainsborough.
Ackworth School, Pontefract.
Shaftesbury Theatre, Shaftesbury Avenue, London.
Durham Cathedral, Durham.

LONDON OFFICE:—Belgravia Chambers, Victoria Street, S.W.

TELEGRAMS { "Richardson," Darlington. / "Horticraft," London.

NATIONAL TELEPHONE } 17 Darlington.

LOWEST PRICES FOR GARDEN FRAMES AND WOOD LATH BLINDS.

PLANS and ESTIMATES PREPARED FREE of COST.

Representatives sent to any part of the Kingdom to advise and take particulars.

DARLINGTON.

Catalogues and Estimates Free.

MESSENGER & Co. LTD
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office 122 VICTORIA ST S.W.

MODERN GLASSHOUSES

as supplied by MESSENGER and CO., Ltd., are made of the best materials, and only capable and reliable workmen are employed in the erection thereof.

The following letter was recently received by us on the completion of a contract for a well-known Member of Parliament.

February, 1911.

"I should not be doing my duty to your workmen if I did not at once tell you, on the completion of your work, how pleased I have been with each and all of them.

"They have been most obliging throughout the whole job, and have endeavoured to do everything in an efficient and thoroughly workman like manner, and I must congratulate you upon having such capable employees."

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway

THE GARDENERS' MAGAZINE.

No. 3,014. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, AUGUST 5, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S AUTUMN & WINTER-FLOWERING BULBS, including Crocus Species, Colchicums, Hardy Cyclamen, Freesias, Lachenalias, Roman Hyacinths, etc., for early planting. List on appletn. —BARR and SONS, King St., Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, LONDON, S.W., has a large number of first-rate Hot Water Men. This is an excellent time for having the Hot Water Heating Apparatus overhauled, and a reliable man can be secured by a postcard, telephone message (201 Western), letter, or wire, "Gray, Chelsea, London."

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

THE BOURNE DAFFODILS have gained the HIGHEST AWARDS wherever Exhibited. Send for my Illustrated and descriptive Catalogue of FIRST QUALITY BULBS at MODERATE PRICES. Post Free from
CHRISTOPHER BOURNE,
The Daffodil Specialist, Simpson,
Bletchley.

GREENHOUSES and GARDEN FURNITURE. — Distinctive Designs and Finished Workmanship. Write NOW for illustrated Catalogue. CARTER & HOWARD, Fife House, Kingston-on-Thames.

RUSTIC SUMMER HOUSES. trellis-work, Fencing, Pergolas, Arches, Seats, Bridges, Log Cabins, Loggias, etc. Send for our new LOG CABIN and RUSTIC CATALOGUE (just published), sent post free. BOULTON and PAUL, Ltd., Norwich.

CARNATIONS.—Spiral Wire Stakes. No tying required. Will last a lifetime. 24 inches long, 7s. 6d. per 100; 30 inches, 8s. 6d. per 100; 36 inches, 10s. per 100; sample doz., 1s., 1s. 3d., and 1s. 9d., all carriage paid. Pea Trainers, 6ft. by 4ft., 2s. and 3s. each. Garden Archways, Garden Edge and Croquet Bordering, 8 inches high, 8d.; 10 inches high, 10d. per yard. All cash with order. Catalogue free on application. J. PENKETH, Iron and Wire Works, Market Place, Manchester. Telp.: 3695 City.

NARCISSUS.—Tulips, Hyacinths, etc. All the leading and best varieties, from 4s. 6d. per 100. Ask for illustrated price list, post free. Satisfaction guaranteed. C. F. A. VAN DER SLUYS, F.R.H.S., La Ramée, Guernsey.

EARLY-FLOWERING BULBS. — Roman Hyacinths, 10s. to 21s.; Freesias, 2s. to 5s.; Tulips, 2s. 6d. to 5s.; Polyanthus Narcissus, Paper White, Double Roman, 4s.; Snowdrops, 2s. 6d. 100. 36-page Catalogue free.—ELLISON, 57, West Bromwich.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

SOW NOW.
WEBBS' EMPEROR CABBAGE.
BRITAIN'S GREAT CABBAGE.
Earliest and Best in Cultivation.
Remarkably free from any tendency to bolt.
6d. and 1s. per packet; 1s. 6d. per ounce, post free.
Mr. B. M'Evoy, Gardener to W. M'Cartney, Esq., writes: "I had a plot of 400 plants, and not one of them bolted. The hearts are of the finest size and shape I have ever grown."
Webbs' Favourite, 1s. per ounce.
Early Offenham, 8d. per ounce.
Ellam's Early, 10d. per ounce.

WEBB AND SONS, The King's Seedsmen,
WORDSLEY, STOURBRIDGE.

BUNYARD'S CATALOGUES
Free on Application.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

KENT STRAWBERRY PLANTS
NEW CATALOGUE READY.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

LAXTON'S STRAWBERRIES.—Fine early pot plants, for forcing, of Royal Sovereign and other varieties, 15s. 100. For new varieties see our catalogue, gratis on application.
LAXTON BROS., Bedford.

CLAY'S MANURES, CRUSHED BONES
(See page iv.)
CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue Free. J.E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

POULTRY AND KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

GREENHOUSES and CONSERVATORIES. Distinctive Designs and Finished workmanship. Write now for ILLUSTRATED CATALOGUE. CARTER and HOWARD, Horticultural Builders, Kingston-on-Thames.

JAMES SENDALL and CO., Cambridge; Conservatories, Vineries, Garden Frames; Heating Engineers. Surveys made, and Plans prepared to suit any position. Illustrated List Free. Telegrams: "Sendall, Cambridge." 'Phone, 511.

CONSERVATORIES AND WINTER GARDENS, Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue free.—BOULTON and PAUL, Lim., Norwich. See our Stand at the Royal Agricultural Society's Show, to be held at Norwich in June.

GARDEN ROLLERS, double cylinders, solid ends, rounded edges 14in. by 14in., 1¾cwts., 24s. 6d.; 16in. by 16in., 2cwts., 26s.; 20in. by 20in., 3cwts., 36s.; 24in. by 24in., 4½cwts., 50s. each; carriage paid any station in Great Britain. Lists free. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable buildings, etc. Catalogue gratis.

FOR AUGUST SOWING.
SUTTON'S HARBINGER CABBAGE.
Per packet, 1s. and 1s. 6d., post free.
The earliest and best.
Award of Merit, R.H.S., May 9, 1911, after trial at Wisley.
Mr. A. Edwards, Gardener to H. Steel, Esq., writes: "Your Harbinger Cabbage is weeks earlier than any other variety. I consider it the best spring cabbage I have ever grown. Not one of the whole lot bolted."

SUTTON'S APRIL CABBAGE.
Per packet, 1s., post free.

SUTTON'S FLOWER OF SPRING CABBAGE. Per ounce, 1s., post free.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
From Wm. ———, Esq.,
54, ——— Av.,
Rochester, N.Y., U.S.A.
25th April, 1911.
"Your catalogue is one of rare beauty and value, combining a splendid example of the printer's art with a most admirable manual for the garden lover."

RARE ALPINES CHEAP.—Profits devoted to Patriotic objects. Apply for list, LADY C., The Abbey, Much Wenlock, Shropshire, and please enclose fully addressed and stamped envelope.

GARDEN HOSE and FITTINGS, all sizes and lengths, best quality; list free.
HEATHMAN,
Hose Factory, Parson's Green, London, S.W.

LAWN BOWLS.—£2 2s. Tournament Set, noted maker, 8 selected polished Lignum Bowls, full size, medium bias, complete, in strong case, with two jacks, never used, price 27s. 6d. Approval. Box 442, GILYARD'S LIBRARY, Bradford.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page iii.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-work, showing screens, wall panels, window surrounds, arches, arbors, etc., post free. BOULTON and PAUL, Ltd., Norwich.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.
XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.
XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N. S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

ORCHIDS.

JAMES CYPHER & SONS.
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

ROSES.

R. H. BATH, Ltd.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS**, **DENDROBIUMS**, **ODONTOGLOSSUMS**, and an endless variety of Choice **ORCHIDS**.

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone :—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

Primulas! Primulas! Primulas!

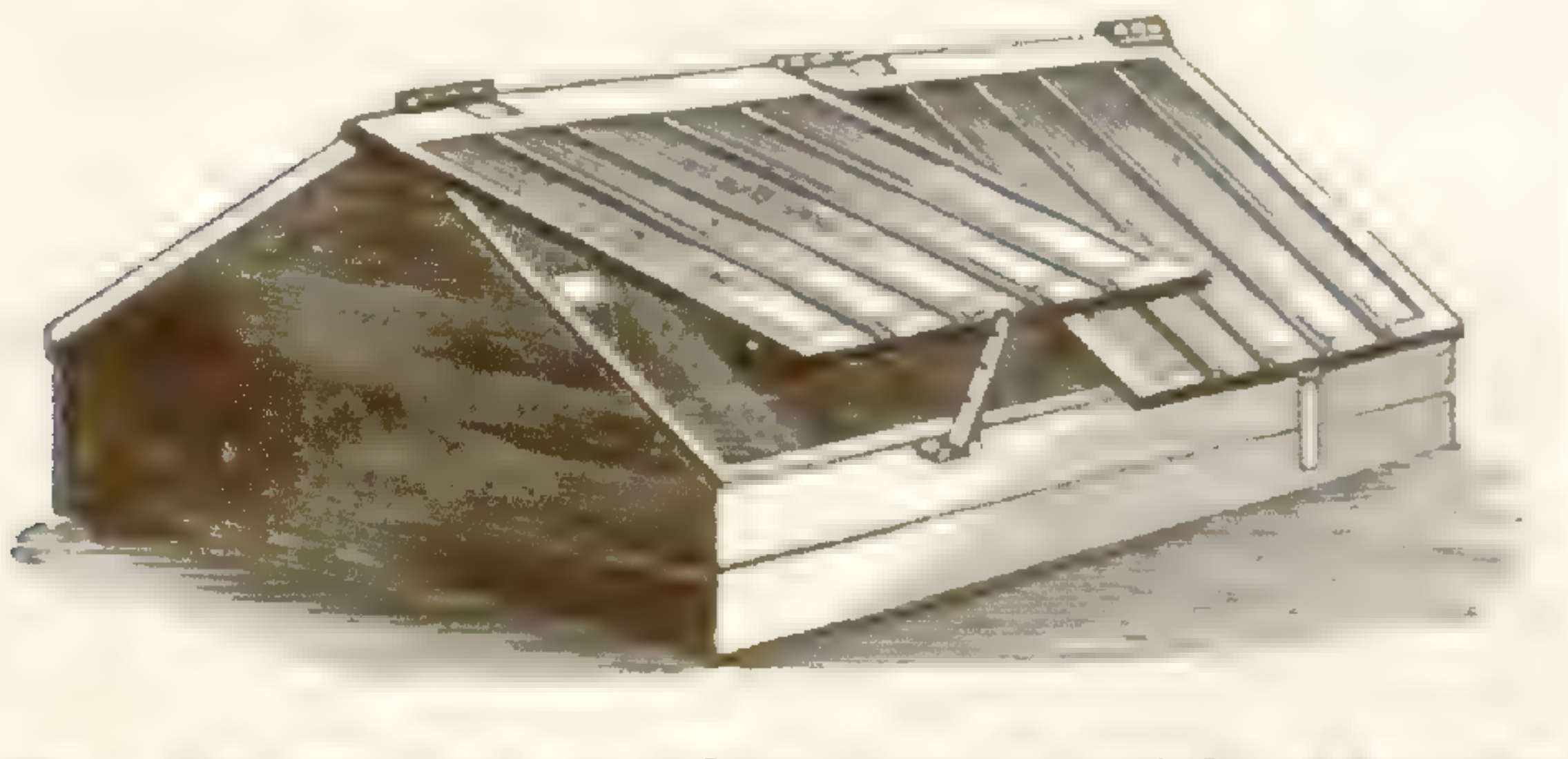
41st Year of Distribution.

OUR WELL-KNOWN MAGNIFICENT STRAIN,
1/6 doz.; 2/6 25; 10/- 100. Package and Carriage Free.
Cineraria (Large-flowered) and **Stellata** at same prices.

JOHN STEVENS & SON, COVENTRY.

PORTABLE PLANT FRAMES

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices.	Glazed and Painted.	£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. ,, 4ft. ,,		2	5	0
6ft. ,, 5ft. ,,		2	15	0
12ft. ,, 4ft. ,,		4	0	0
12ft. ,, 5ft. ,,		4	15	0
12ft. ,, 6ft. ,,		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
ROYAL HORTICULTURAL WORKS,
MIDDLETON, MANCHESTER.

NICHOLSON'S "Dictionary of Gardening": new; 12 vols.; cost 162s.; what offers?
T. CROSS,
Long Wittenham, Abingdon, Berks.

CARNATIONS. AURICULAS. PINKS.

The NEW ILLUSTRATED CATALOGUE of above is now ready, and has been posted to all customers. The newest and best varieties are sold at the most reasonable prices.

Best **CARNATION** and **PICOTEE SEED** ready in October. 1/6 and 2/6 per packet.

AURICULA (Show and Alpine), **PINK**, and **POLYANTHUS SEED** now ready. 1/-, 1/6, to 2/6 per packet.

Send for Catalogue to

J. DOUGLAS, Edenside, GREAT BOOKHAM.

Orchids! Orchids!! Orchids!!!

The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application. — **J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana, Vanda Cœrulea Lushai Hill variety, dark blue type; Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.

CHARGES FOR ADVERTISEMENTS IN THE GARDENERS' MAGAZINE.

	£	s.	d.
Five Lines and under	£0	2	6
Per Line beyond	0	0	6
,, Inch	0	6	0
,, Half Column	1	10	0
,, Column	3	0	0
,, Page	9	0	0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— & Co.

Telephone Numbers:

Editorial and Printing Depts. .. ... 831 Holborn.
Advertising and Publishing Depts. ... 2140 Holborn.

Offices: 148 and 149, Aldersgate Street, London.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

ORCHIDS, ORCHIDS,

Clean, healthy, well-grown Plants at reasonable prices.

Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

PLEASE WRITE FOR LIST.

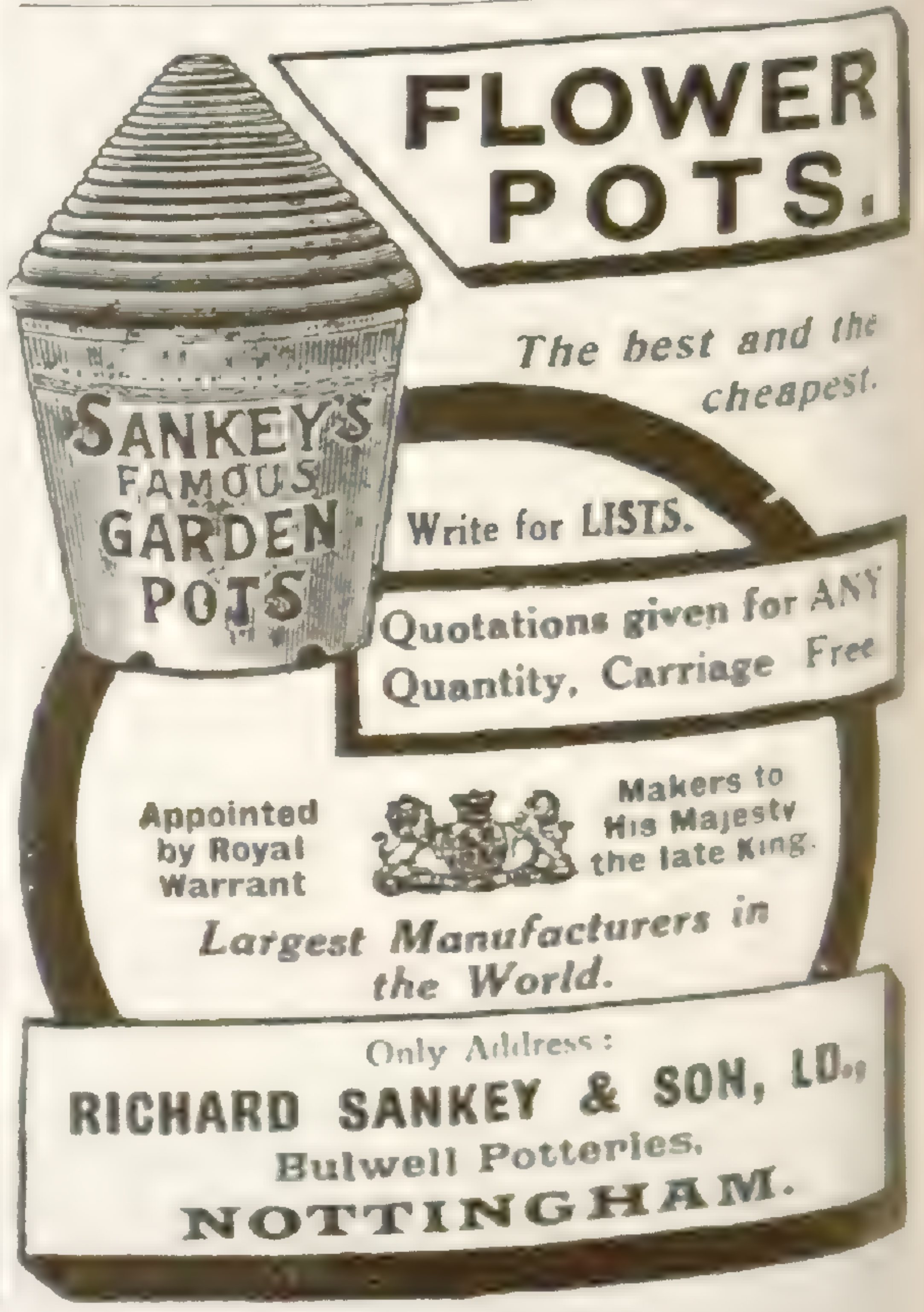
JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

GREENHOUSE BARS.

5s. 0d.——100 feet——2½ × 1½
6s. 3d.——100 feet——3 × 1½

LOWEST PRICES FOR GREENHOUSE MATERIALS.

HAWKINS LTD.,
109, Victoria Street, Westminster.



FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant

Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

100 NURSERIES, MARKET GARDENS, FLORIST AND SEED BUSINESSES TO BE DISPOSED OF.

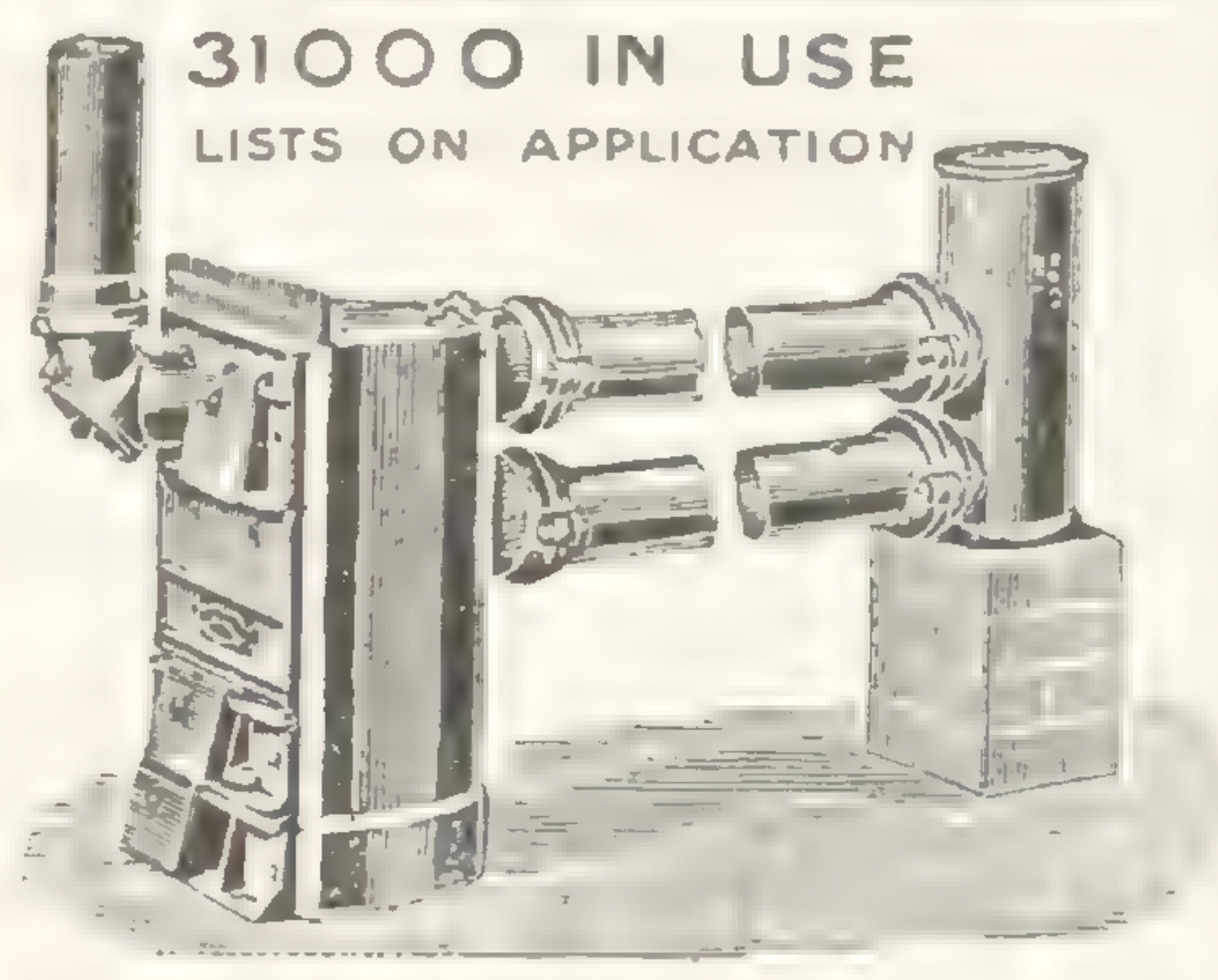
MESSRS. PROTHEROE and MORRIS'S HORTICULTURAL REGISTER contains full particulars of the above, and can be obtained gratis at 67 and 68, Cheapside, E.C.

ESSEX.—26 miles out, six-roomed house (brick), 2¼ acres, 2 Hothouses, completely fitted (each 150 x 20), 300 fruit trees, 2 wells, reservoir. Freehold; bargain, £550. Easy terms, or part mortgage. J. ALLEN, 34, New Bridge Street, London, E.C.

FREEHOLD NURSERY, about two acres for Sale, near Blackpool, doing large local trade. For particulars, P. VAWSER, Hykeham Road, Lincoln.

The Loughborough BOILER

31000 IN USE
LISTS ON APPLICATION



The pioneer of cheap, simple and effective heating for small greenhouses. Complete Apparatus from £3.19.6. The immense sale of this boiler, and its numerous imitations are the best testimony of its undoubted success.

MESSENGER & CO. LTD.
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH · LEICESTERSHIRE
London Office, 122 VICTORIA ST · S · W

WHARFEDALE. 5 ft. long.

In Best Redwood, painted two coats. White.
£1 15 0
Delivered any station
Full Catalogue on application.

PETER PATRICK & SON, Otley, Yorks.

OX-EYE DAISY, Early Queen, is an entire new strain of Marguerite, prettier, more refined, and bears more flowers than any other variety. One of the largest flower growers says: "It is the best ever yet introduced." 12 rooted offsets, 2s. 6d., post free. Plants not sold locally. F. BAILLIE, Stenhouse, Liberton, Edinburgh.

MERRYWEATHER'S
614 PUMP
IS THE
Gardener's Friend.

Easy to Work. Simplicity Itself.

Write or Call—

63, Long Acre, LONDON, W.C.

By Royal Warrants

To H.M. King George V. To H.M. Queen Alexandra.

The Best Remedy
for
MILDEW, GREEN FLY,
and all INSECT BLIGHT, is

Jeyes'
Horticultural Wash

A PERFECT INSECTICIDE.

From all Chemists, Seedsmen and Florists.

Write for Pamphlet and Prices to
Jeyes' Sanitary Compounds Co., Ltd.
64, Cannon Street, London, E.C.

SUBSCRIBER'S ORDER FORM

Every Saturday THE GARDENERS' MAGAZINE. Twopence

To W. H. AND L. COLLINGRIDGE,
148 AND 149, ALDERSGATE STREET, LONDON, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose_________for_________months in advance.

Name______________________________

Address______________________________

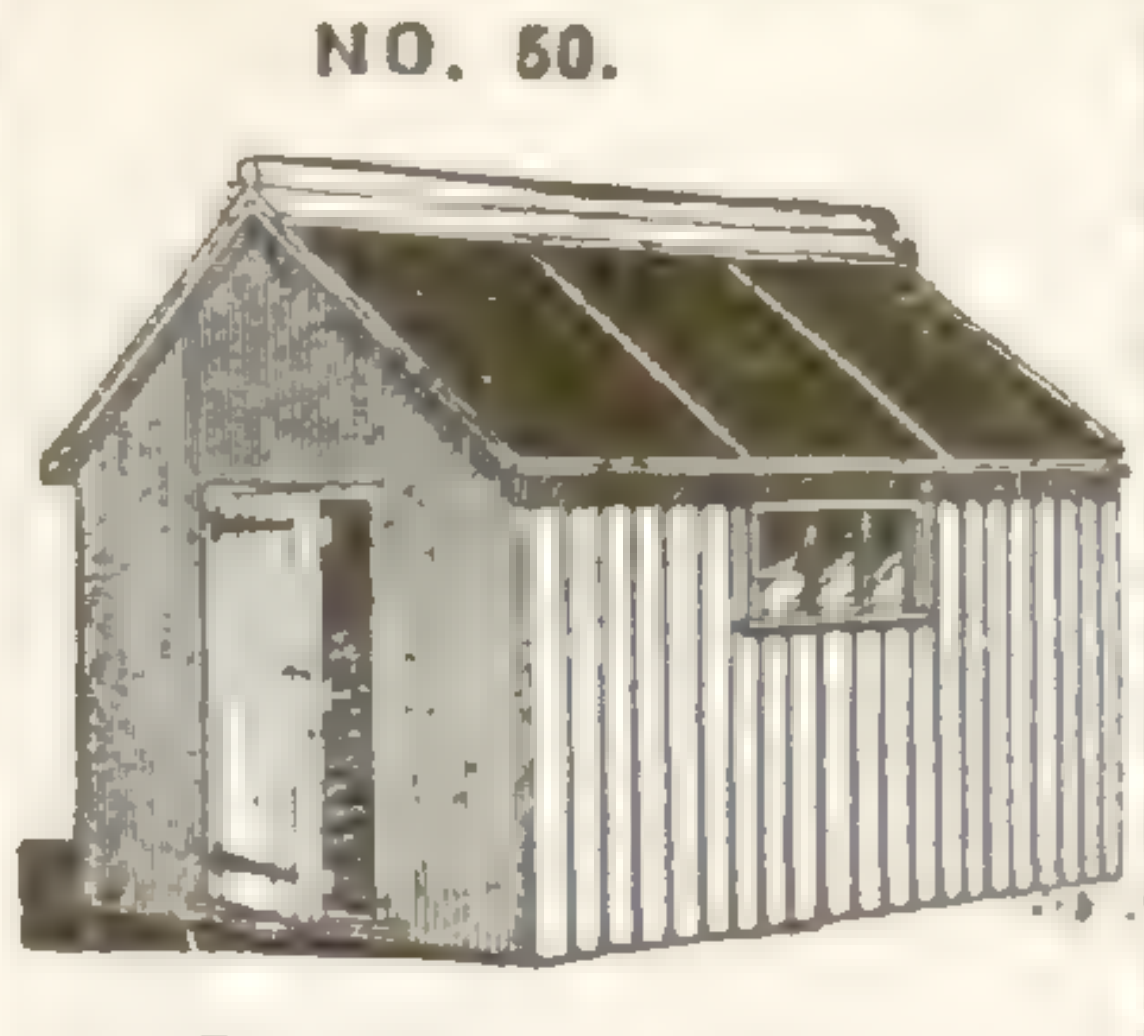
Date______________________________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

* * If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

PORTABLE BUILDINGS. Made in complete sections, **best quality Red Deal** (not interior Foreign Match Boards as other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

SIZES.	CASH WITH ORDER.	Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
ESTABLISHED 70 YEARS. BEDFORD.
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to
EPPS & CO., Ringwood, HANTS.

THE FAVOURITE WEED KILLER.

SANDWITH'S
PREMIER
WEED
KILLER

As supplied to His Majesty's Board of Works, Royal Parks, tc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for **6/-**; drum, **2/-**. 12 galls. for **16/-**; drum, **6/-**. 20 galls. for **26 8**; drum, **10/-**. 40 galls. for **50/-**; drum, **20 -**.

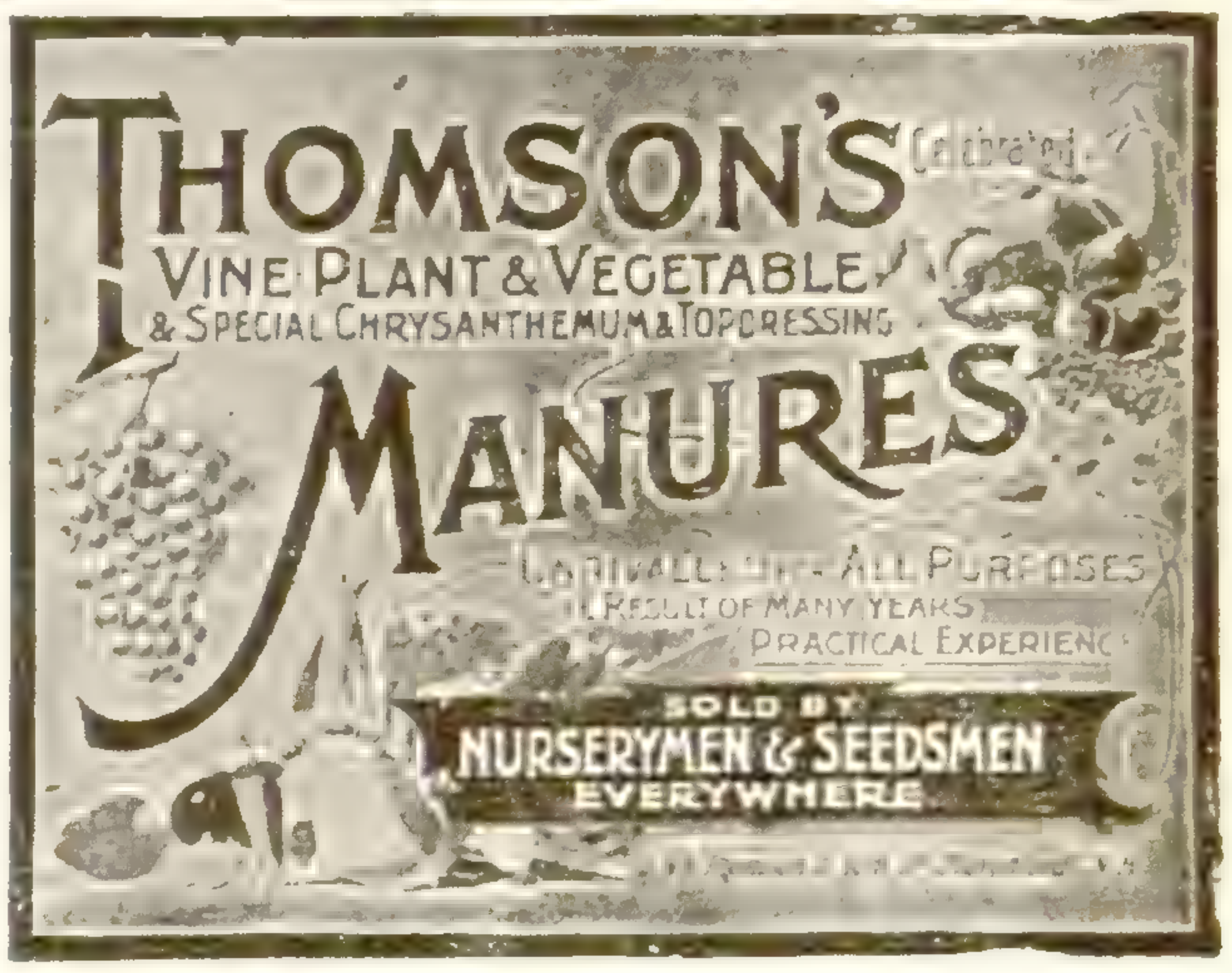
EITHER LIQUID OR POWDER.

Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,
The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.



PAINT & GLASS.

NICHOLLS & CLARKE, LTD
SHOREDITCH, LONDON.

GLASS. When sending for Catalogue please cut out this advt.

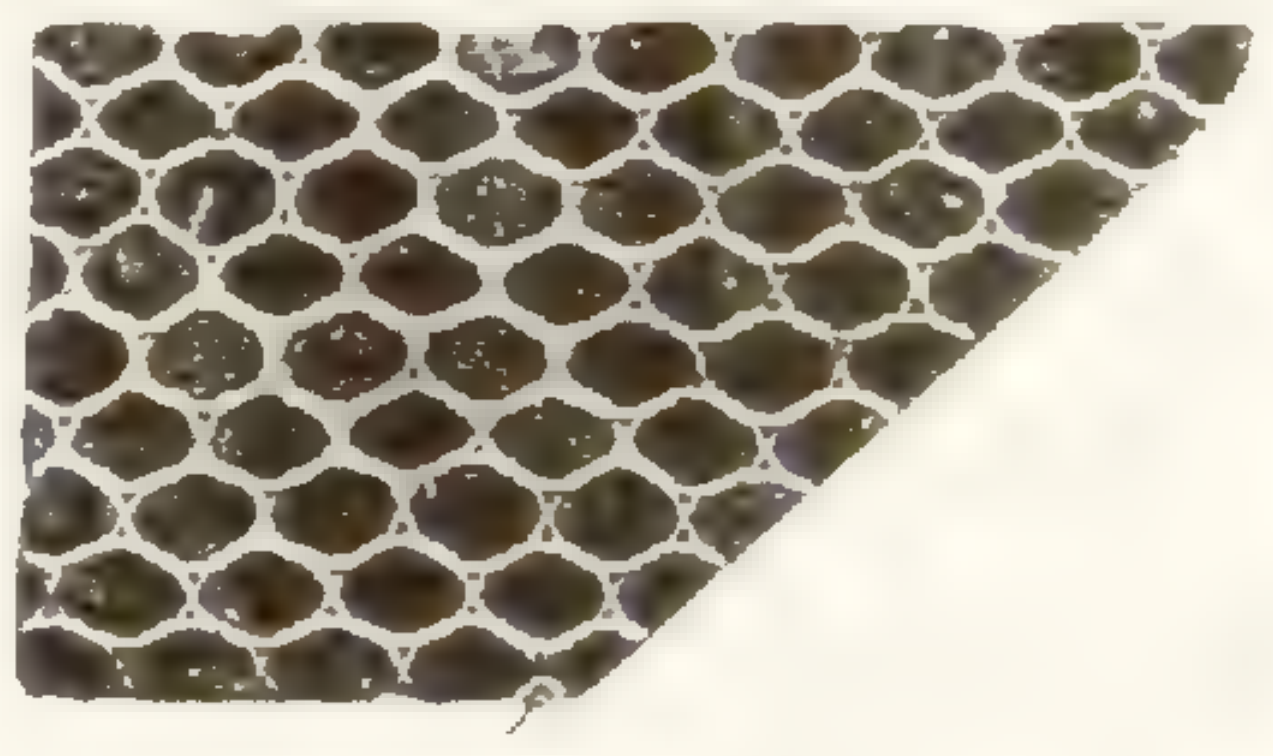
ESTABLISHED 1832.
NO CONNECTION WITH ANY OTHER FIRM OF A SIMILAR NAME.

ANT. ROOZEN & SON'S
CATALOGUE for 1911
(WITH CULTURAL DIRECTIONS)
OF
SPLENDID
DUTCH,
Cape, and Exotic
BULBS
Direct from the Growers,
Is Now Ready,
And will be sent Post Free on application to themselves at
OVERVEEN, HAARLEM, HOLLAND;
Or to their General Agents,
MERTENS & CO.,
3, Cross Lane, London, E.C.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∵ ROCKWORKERS ∵
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.
PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.
Our Work has stood the test of time.

BOTTLING FRUIT. Patent Apparatus Complete. **5/6**
Efficient, Reliable, Simple, Easily Operated.
WICKHAM and Co., Dept. M, Ware, Herts.

Protect your Fruit from Wasps

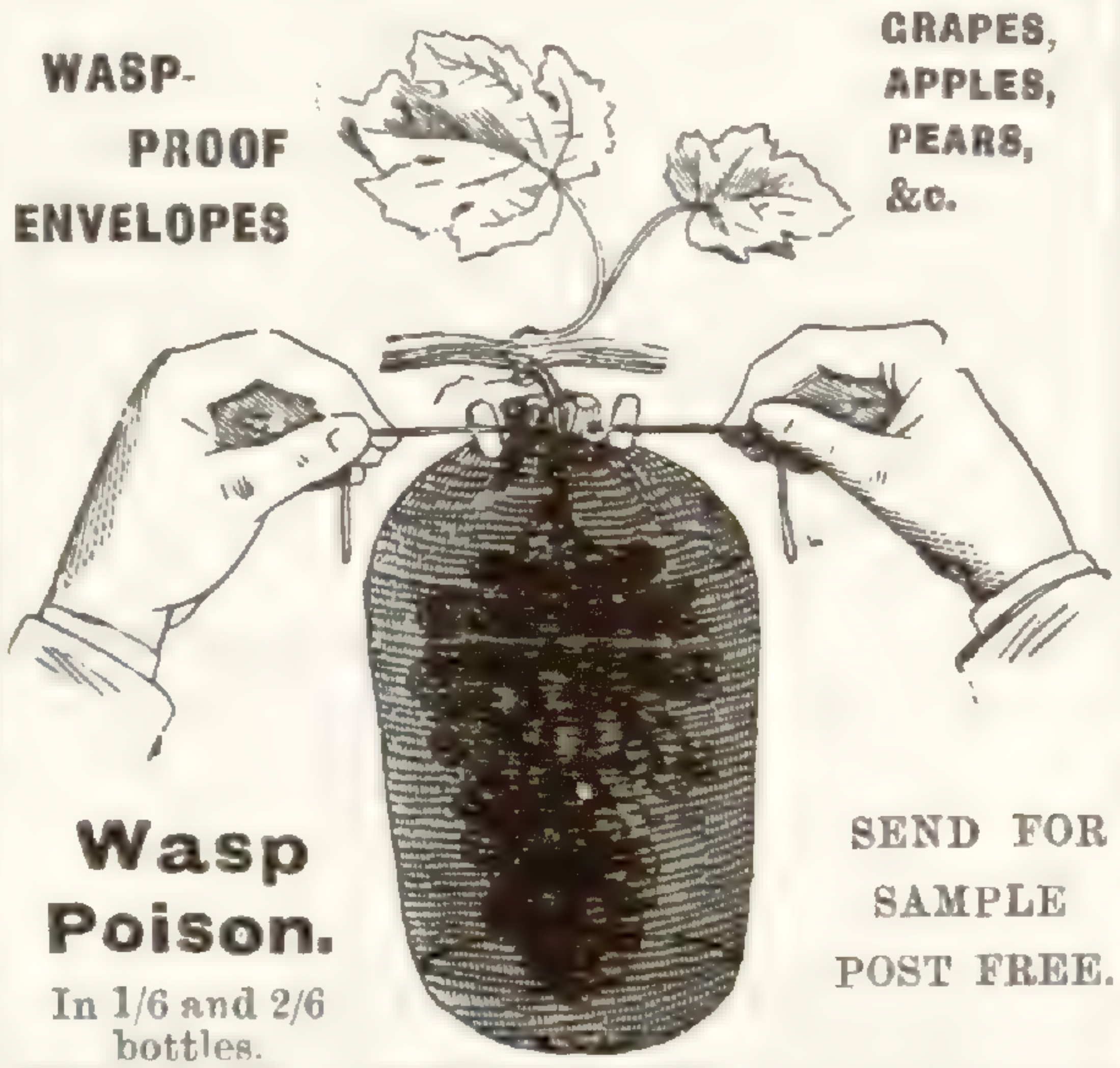


WASP PROOF SCRIM.

No. 1 (Fine), as shown above.		No. 2. (Rather Stronger)	
48 in. wide	1/2 per yd.	48 in. wide	1/4 per yd.
60 „	1/6 „	60 „	1/8 „
72 „	1/10 „	72 „	2/- „
84 „	2/6 „	84 „	2/9 „

Other widths can be supplied in proportion.

NEW INTRODUCTION.
WASP-PROOF ENVELOPES
For PROTECTING GRAPES, APPLES, PEARS, &c.



Wasp Poison.
In 1/6 and 2/6 bottles.
SEND FOR SAMPLE POST FREE.
Wm. WOOD & SON, Ltd., North British Wharf,
WOOD GREEN, LONDON.
Phone, Palmers Grn., 377-378 Tel., "Fungheto, London.

TREE CARNATIONS
The Newest and Best Varieties.
Strong, healthy and well-rooted plants only supplied.
Catalogues free.
E. J. WOOTTEN, Fairoak, EASTLEIGH

ONCE USED. ALWAYS USED. **The 'PATTISSON' LAWN BOOTS**

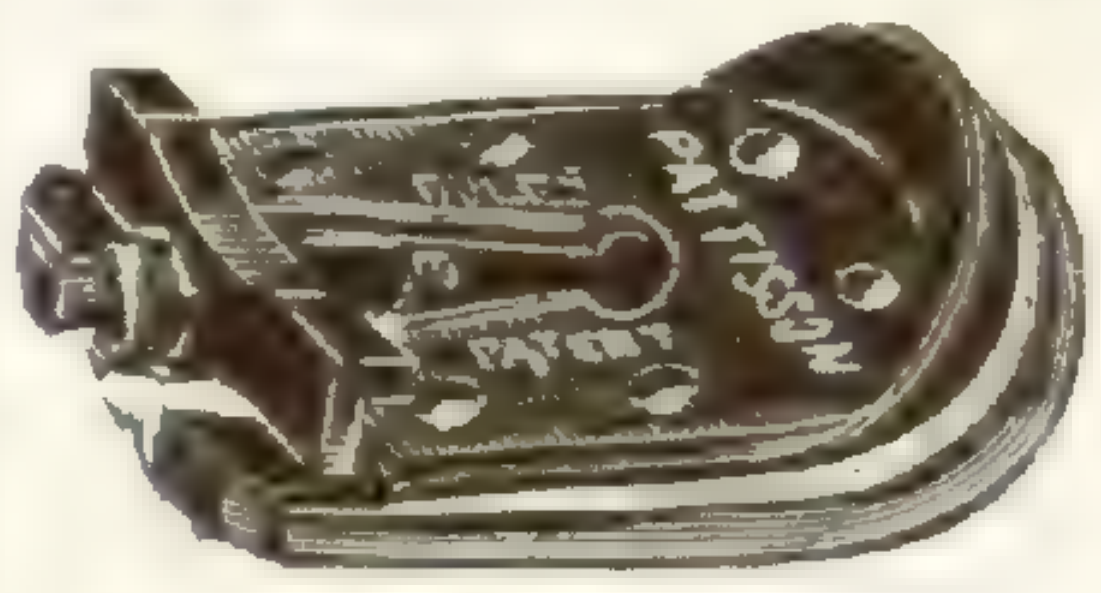


Fig. 1.

Simplest! Strongest! Most Economical!
Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or Solid Rubber. Fig. 1 can be REFITTED repeatedly, equal to New Boots. Rubber Soles strongly recommended.
Used in the ROYAL and in thousands of the PRINCIPAL GARDENS
Silver Medal—Royal Horticultural Society.
Hundreds of Testimonials.
The Field says: "As good as anything that could be devised."
Illustrated Price List from—

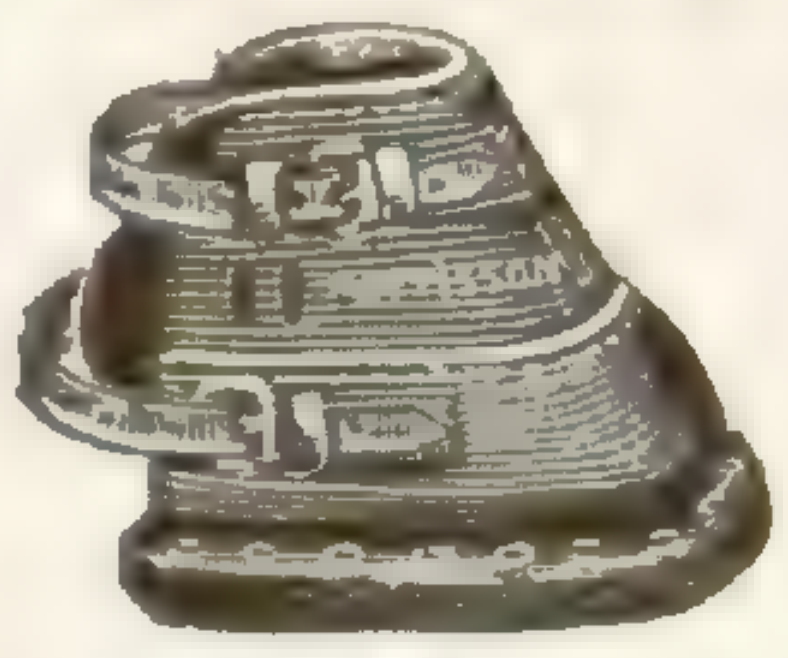


Fig. 2.

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM S.W.

SUTTON'S
WHITE ROMAN HYACINTHS
for forcing

THE FINEST BULBS OF THE YEAR.
From 10/6 to 21/- per 100.
Full particulars on application.
SUTTON & SONS,
The King's Seedsmen, READING.

FOR ROSE MILDEW
use
V2K FLUID
THE BEST REMEDY FOR THIS PERSISTENT PEST.
Does not discolour the foliage.
OF AGENTS EVERYWHERE.
Sole Mfrs., Willm. Cooper & Nephews, Berkhamsted.

THE NATIONAL HARDY PLANT SOCIETY
Encourages the Cultivation of Hardy Plants and Disseminates Information Helpful to Growers.
NEW MEMBERS WANTED.
Apply to the Honorary Secretary,
FRANK BOUSKELL,
Market Bosworth, Nuneaton.

Do not Neglect Your Plants during the Holidays.
CLAY'S FERTILIZER
WILL FEED THEM.
It produces FLOWERS, FOLIAGE, FRUITS, and VEGETABLES in PROFUSION and the HIGHEST PERFECTION.
CLAY'S LONDON FERTILIZER TRADE MARK.
Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., 12/6 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).
EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK, AS AT SIDE.
CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. Fourth Ed (Second Reprint). 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post amount direct from the Publishers as under:
CLAY & SON, Manure Manufacturers and Bone Crushers, **Stratford, London, E.**

VOL. LIV.—No. 3,014. SATURDAY, AUGUST 5, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

New Plants.

New plants, in these days of that abundance of floral and arboreal wealth which enables us to bring together such resplendent exhibitions of bloom and foliage as we have recently enjoyed at Olympia and elsewhere, fall into two distinct categories, viz., those for which we are indebted to the exploration of new regions of the earth's surface by competent botanists, and those which, having been acquired by such exploration in the past, have been modified and improved in type by selective cultivation through their seeds or spores, or through "sports" which have occurred under culture and given rise to new and unexpected strains provided spontaneously by Nature's own devising. Obviously, the first category is intrinsically the more important, since it provides the raw material, so to speak, of the second, while in innumerable instances this raw material is in itself, in the absolutely unsophisticated form, brought about by purely natural evolution, so beautiful as to rank fully equal in value with the best results of human selection. Now it is in this particular connection that the Royal Horticultural Society in the old days of its existence, prior to that decadence from which it has emerged during the last twenty years to such a pinnacle of success, did so much yeoman service to horticulture and arboriculture by commissioning and sending out several competent botanists on exploring expeditions, which resulted in the acquisition of many valuable trees and plants which are now familiar all over the country. Of late years, however, this indispensable branch of horticultural research has been entirely left to trade enterprise, and to it we owe a very large number of new introductions which are being constantly brought forward by leading firms. From the explorers themselves, such as Mr. Wilson and Dr. Henry, we learn that China, and especially the vast mountain area which stretches northward and is practically a continuation of the Himalayan range of India, presents an inexhaustible field of research, of which only the fringe has so far been explored. This partial exploration has revealed the fact that hitherto unknown forms of vegetation, many of great beauty, and all of interest, are found in every fresh area investigated, so that this region alone should well reward extended research, particularly as the climatal conditions, elevation, and latitude contributes to render the plants so found perfectly hardy, and hence of more general popular value than tropical introductions. China, too, is only one region on the botanists' lists which is largely virgin, and, in these days of improved travelling facilities, far more easy of access than in the early days when, despite many perils, and all but insurmountable difficulties, the old explorers managed to find and transmit the treasures we have alluded to above. The moral of all this, i.e., the question which it evolves, is, would it not be well for the Council of the Royal Horticultural Society, in view of its flourishing condition, and now ample funds, to consider the advisability of resuming this function of instituting exploration on the old lines which its pioneers considered so essential, and so effectually carried out? It has now the Wisley Gardens for the raising of seeds and the culture of imported plants, under more favourable conditions than those which obtained at Chiswick, and we have reason to know that many of its Fellows would highly appreciate the taking of such a practical step to introduce new material on its own account, instead of merely lending its aid, in the way of trial and judging of plants already introduced and under cultivation. Such action cannot, in view of the vast field of research we have indicated, clash with the interests of the trade, since new introductions would inevitably have to reach the public on commercial lines. This, however, need not be discussed here, our object is merely to make a suggestion, which has not entirely originated with ourselves, but is the outcome partly of the expression of outside views, with which we entirely agree.

MR. A. GRUBB.

Mr. Albert Grubb, head gardener to Cecil F. Raphael, Esq., Porter's Park, Shenley, Herts, has come prominently before the horticultural world in recent years as a grower of splendid carnations. But his reputation does not depend upon his skill as a cultivator of these popular and beautiful flowers, because he grows other flowers, fruits, and vegetables with equal success, and in addition, acts as steward of the Porter's Park estate, managing all save the farm work. Mr. Grubb hails from Herefordshire, and commenced his gardening career at Holm Lacy, under Mr. Charles Denning; his first move was to Ash Grove, Sevenoaks, and from thence he went to Gopsall Hall, Leicester, to act as carnation grower to Lord Howe, under Mr. Lee, the head gardener. After a stay at Gopsall, Mr. Grubb became head gardener to G. Moore, Esq., at Appleby Hall, where he remained seven years, and then came to Porter's Park, where he has now completed seven years of service. As he is still a young man, we may reasonably hope that Mr. Grubb has a long, useful, and successful career still before him. For melons, for carnations, and for vegetables, he holds high awards from the Royal Horticultural and other societies, and many of our readers will remember the excellent exhibits from Porter's Park that graced the recent Olympia Show.

The Weather of July.—The high temperature and brilliant sunshine for which July was remarkable was continued until the end of the month. Throughout the week ending July 29 the temperature was very high, and on the Monday, the 31st ult., the thermometer registered 82 degrees at Kew and 81 degrees at Kensington and Margate. At the St. James's Park meteorological station the mean maximum temperature was 78.9 degrees, or 6 degrees above the average. This is the highest mean that has been recorded in July during the past forty years, and it has only once been exceeded in any other month. This was in August, 1899, when the mean maximum temperature was 79 degrees. The mean minimum temperature in London was 58.1 degrees, or 3.7 degrees above the average, and the highest mean minimum recorded during the past forty years. The bright sunshine recorded at Westminster during the month amounted to 321 hours, or 140 hours above the average, and 60 hours more than has been recorded in any previous July during the period over which the records extend, and 24 hours more than in any other summer month during the past 28 years. The rainfall in July was very small in the London district; the average for the Metropolis is rather more than 2¼ inches, but at Kew the total was only 0.82 inch, and at Greenwich it was about 0.25 inch.

Sweet Pea Trial at Wisley.—This year a trial of sweet peas has been conducted at Wisley, and as the result of the skill brought to bear upon them the plants have made a vigorous growth, and produced a profusion of flowers of high quality. The varieties included in the trials are growing in clumps on the high ground to the left of the principal walk that intersects the gardens. A sub-committee of the R.H.S. Floral Committee visited Wisley on July 14 for the purpose of inspecting the trials, and in making their awards gave special attention to the value of the varieties for garden decoration. The awards made have been confirmed by the Floral Committee, and granted by the Council. Awards of Merit were made in favour of Helen Pierce, Marie Corelli, Nubian, and Queen of Spain Spencer, all of which were sent by Messrs. Dobbie and Co. The following were given three marks (xxx), and of these six had previously received Awards of Merit: Aurora Spencer, Princess Victoria (A.M., July 9, 1907), Ivanhoe (A.M., June 21, 1910), Elsie Herbert (A.M., July 9, 1907), Dorothy Eckford (A.M., September 2, 1902), Gladys Unwin, Isobel Malcolm, Mrs. Collier, Lady Althorp, Asta Ohn, Etta Dyke, Elfrida Pearson (A.M., July 19, 1910), Apple Blossom Spencer, Tennant Spencer, Dobbie's Sunproof Crimson (A.M., June 21, 1910), and Countess Spencer (true).

International Horticultural Exhibition, 1912.—A committee for Hampshire has been formed for the purpose of creating an interest in the county in the International Horticultural Exhibition which is to be held at Chelsea next year. The Earl of Northbrook is the chairman, and Mr. E. Molyneux, V.M.H., the honorary secretary, and arrangements are being made for holding within a short period a meeting at the Castle, Winchester, for the purpose of discussing the best means of promoting the success of the exhibition. We mention this with more than the ordinary degree of interest, because this, as far as we are aware, is the first time any local committee has sought publicity for its proceedings. Not even when a deputation from the Executive Committee visited York on the occasion of the gala and flower show held in the city does it appear that an endeavour was made by the local committee, or the central body, to make the fact of the meeting being held as widely known as possible. Mr. Henslow, the secretary of the Horticultural Department of the Festival of Empire at the Crystal Palace, has been appointed assistant secretary to the Executive Committee.

Fruit Culture in West Perthshire.—Within a quite recent period fruit culture has undergone considerable development at Auchterarden, and is proving as successful as in the Blairgowrie district, which has for many years past been famous as one of the great centres of the raspberry industry. A few years ago Mr. J. M. Hodge, a member of a firm of solicitors at Blairgowrie, who has devoted considerable attention to fruit culture, purchased the Drumtogle Farm, near Auchterarder, which has an area of 212 acres, and this was divided into fourteen holdings, ranging from two to forty acres each. These holdings were planted with raspberries, with the exception of one holding of ten acres, which is devoted to strawberries. It is of interest that only two of the holders are agricultural labourers, and this fact is attributed to the initial cost of planting raspberries, amounting to about £50 per acre. The holdings are conducted on cooperative principles, and they are managed by Mr. Hodge for the holders. The holdings have their own foremen, weighers, clerks, and pickers, but these are all grouped under the management of superintendents, who, in their turn, are responsible to the general manager. As evidence of the large amount of labour required on an area of rather more than 200 acres, it may be mentioned that during the picking season, which commenced a short time ago, the staff at Drumtogle numbers 68, and the pickers over 1,000. About 17,000 barrels are required for the conveyance of the fruits to the markets and jam makers, and rather more than 2,000 pails for the use of the pickers. One of the difficulties in the management of the holdings is obtaining the requisite number of pickers, but at Drumtogle those responsible for the management have been able to have the help of the boys from two industrial schools in the district in gathering the fruit. Owing to the great heat and prolonged drought the returns this year will be only about half those obtained in a normal season.

A Disease of Broad Beans.—The Bath and West of England Agricultural Society's Consulting Botanist, Mr. J. H. Priestley, is investigating the rust of broad beans (Uromyces fabae) which has been prevalent in the West of England, and the result of the investigations he has made are given in the society's journal. It has been found that the disease first attacks the leaves and haulm, upon which it appears as rusty spots, and the spores rapidly spread to the rest of the field. The fungus parasite is still under observation in the laboratory, but the following facts with regard to it are indicated as being the most important from the practical point of view: 1. Infection from year to year takes place from the diseased spots on the old haulm stored in the rick, so that, if the disease is noted one year, all possible care should be taken to diminish the danger of infection from this source. 2. The disease is seldom dangerous unless it attacks the beans at a very early stage, and in parts of Worcestershire where the trouble used to be serious, it has been almost completely avoided by sowing winter beans. Where this disease has done damage during 1910, early sowing is strongly recommended for later years.

School Gardens in Staffordshire.—The quarterly report of the Staffordshire Education Committee contains some interesting information relative to the progress of technical instruction in horticulture, this department being under the direction of Mr. J. Stoney. With reference to day-school gardens, the report states that during the past quarter the horticultural instructor visited 88 of the 200 classes where gardening is taught. In each case where the class was started this spring he conducted the lesson and gave general advice. Where the gardens have been established several years he found that the practical part of the teaching was all that could be desired, the boys showed skill in the handling of garden tools, were quick in carrying out important work in hand, but in several instances there was a tendency to leave the note-book work in abeyance until the practical work had been brought well up to date. In the majority of the classes, however, sufficient time had been found, while the work was in progress, to make brief notes of important data in rough note-books or slips of paper, and this work had afterwards been extended and correlated with drawing, arithmetic, and composition in the schoolroom. The garden teaching has a marked effect on dull children, and in one class eight of the dullest boys in the school were selected for the work. The teacher found that the boys became brighter after the first few lessons, their composition improved, and they took a deeper interest in general school work. The seeds have, on the whole, germinated well. There have been failures in several gardens with various kinds of plants, but the cause has been either a bad tilth when sowing the seeds, or an attack of birds and insects afterwards. Gardens recently started and those composed chiefly of sandy soil have been severely handicapped by the drought, but, on the whole, the general appearance of most gardens is very satisfactory. Deeper cultivation is practised than was the case a few years ago, with the result that during a dry time the crops have the advantage of the lower layers of the soil.

School of Horticulture at Wisley.—The Rev. W. Wilks writes: The value of the Royal Horticultural Society's School of Horticulture at the Wisley Gardens, Surrey, as a centre for training young men in scientific and practical horticulture, is widely recognised. The next two years' course will commence on September 25. There are now but six vacant seats, and intending students are therefore requested to communicate with the Secretary of the Society, R.H.S. Hall, Vincent Square, Westminster, S.W., as quickly as possible. Young men between 16 and 22 years of age are eligible. The only payment to the society is five guineas for entrance, and students provide their own lodgment in the cottages of the adjoining villages.

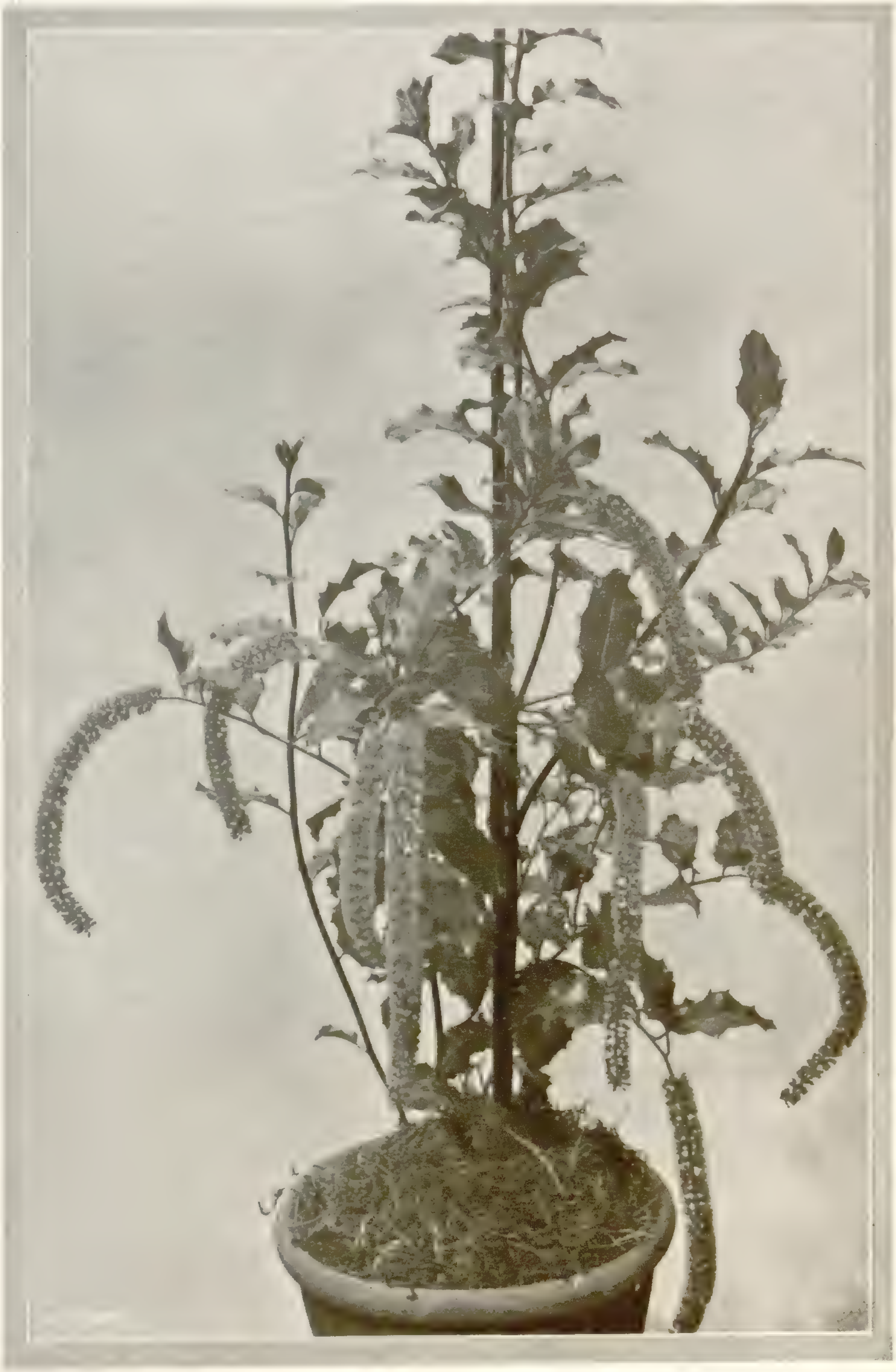
The Hampton Court Vine.—The venerable vine of the Black Hamburgh grape, which has for nearly one hundred and fifty years formed an interesting feature of the Hampton Court gardens, is this year bearing an excellent crop. There are about three hundred bunches, and these are of good size, and have the promise of finishing well. This vine has in some years borne as many as one thousand bunches, but this was much too heavy a crop for the vine to bring to a high degree of fection, and during the past two decades the number of bunches has been reduced, and fruit of much higher quality is obtained. The grapes will be ready for the table in two or three weeks hence, and a portion will, in accordance with custom, be sent by the King to the London hospitals for the use of the patients.

Culinary Pea Trial at Wisley.—A trial of culinary peas has been made at the R.H.S. gardens this year. A sub-committee of the Fruit Committee visited Wisley recently, and made the following recommendations for awards, which have been approved by the Fruit Committee and forwarded to the Council, who have granted the same. The Awards of Merit were made to the following varieties: America, Mr. Holmes, High Street, Tain; Eureka, King Edward, and Matchless Marrowfat, Messrs. Suttons, Reading; Bell's Premier, Messrs. Bell and Bieberstedt, Leith; The Caithness, Mr. Holmes; and The Cottager, Mr. S. Yates, Manchester. An Award of Merit has also been made in favour of the King's Acre Berry, King's Acre Nursery Company, Hereford.

Legacy to a Gardener.—Under the will of the late Mr. E. H. Hill, of Broadwas Court, Worcester, who died on April 19 last, Mr. Thomas Rutter, head gardener at Broadwas Court, has received a legacy of £400.

A Visit of Gardeners to Wilton House.—A few days since the members of the Reading Gardeners' Association visited the famous gardens of Wilton House, Salisbury, the seat of the Earl of Pembroke. The party, which numbered about 100, and was accompanied by the President, F. B. Parfitt, Esq., was, on arriving at the railway station, met by Mr. Challis, V.M.H., who has long had charge of the Wilton House Gardens, and it need hardly be said received a hearty welcome from him. Mr. Challis first conducted the members of the party to the stately mansion, which, by the generous kindness of the noble owner, was open for inspection. Having devoted some time to the inspection of the art treasures, in which Wilton House is especially rich, the party adjourned to the Pembroke Arms Hotel, where, by kind invitation of the vice-president of the Reading Gardeners' Association (Leonard Sutton, Esq.), the members sat down to an excellent luncheon. After luncheon the beautiful pleasure grounds and admirably-kept kitchen garden were inspected. The grand cedars and other ornamental trees, for which the grounds of Wilton House enjoy a well-deserved fame, attracted a full share of attention. Much interest was evinced in the kitchen garden with its numerous glass structures, and in the orchard. The day was drawing to a close before the inspection of the gardens was completed, and, in turning their faces homeward, all who had taken part in the excursion felt a strong sense of satisfaction with what they had seen, and with the excellence of the arrangements that had been made by the officials.

Euphorbias and Mimetic Resemblance.—Everyone who has an intimate acquaintance with plants knows that certain species have a resemblance to others belonging to quite different natural orders. That such is the case was brought out forcibly by Lieut.-Colonel Prain, Director of the Royal Gardens, Kew, a short time ago, at a meeting of the Royal Society, when he exhibited a dozen species of euphorbia, together with the plants that each resembles. E. Berthelotí is like Cotyledon lincolare, E. colletiodes resembles Rhipsalis macrantha, E. dendroides resembles Willow twigs, and E. Intisy has a likeness to Prunus twigs, E. hytrix mimics Cereus insularis, and C. polygonus is mimicked by E. polygona, E. Schimfenana resembles Ceropegia fusca, E. Sipolissi resembles Vitis quadrangularis, E. stapeliodes resembles Stapelia macrantha, while E. Tirncalli mimics Senecio junceus, and E. xyliphylloides resembles Epiphyllum truncatum, and an undetermined species of euphorbia has a likeness to a pelargonium.



ITEA ILICIFOLIA.

An evergreen shrub from China, bearing racemes of greenish flowers. A.M., R.H.S., August 1. The Hon. Vicary Gibbs (gardener, Mr. E. Beckett).

Fruit Trees in Grass Land.—The evils resulting from planting trees in grass, or allowing grass to grow around young trees, are now well known, but the National Fruit and Cider Institute has commenced an experiment to ascertain whether the gain in growth is sufficient to pay for the labour necessary to keep an area round each tree free from grass. Circles of 9ft. and 6ft. in diameter have been kept free from grass round the stems of apple trees of eight varieties since planting, and the effect produced has been measured by the diameter of the stems. The most interesting feature at present is that the advantage of the 9ft. area over the 6ft. area was almost entirely in the first two years that measurements were taken, i.e., the third and fourth years after planting. Each year there has been an appreciable gain with both free areas over the trees planted in grass land, but in the fifth and sixth years after planting it has only been enough to justify the labour of keeping the smaller area free. This leads to the suggestion that instead of planting directly in grass land, as is customary, the better plan may prove to be to plant in cultivated land, which may afterwards be sown to grass, since apparently it is during the first season or two after planting that the tree reaps most benefit from the absence of grass in its proximity.

BOTTLING VEGETABLES.

The system of preserving vegetables by the process known as bottling, though by no means so important as that in relation to fruits, has its advantages. Especially is this the case for long voyages and expeditions, and for enabling us to have many of our choicer kinds at such seasons of the year when fresh vegetables are scarce and almost impossible to produce. Quite the large majority may be treated in this way with the greatest success, and when carefully bottled one can hardly distinguish them from those freshly taken from the garden. Having met with a fair amount of success in this direction, I venture to relate my experience for the benefit of those who may wish to add bottled vegetables to their store.

Appliances.

It is of the highest importance at the commencement to secure the very best appliances, particularly the improved kind of bottles. There are several very excellent makes now on the market, and, though the initial outlay may be somewhat high, the fact must not be lost sight of that the same bottles will last for a considerable number of years if properly taken care of. It is well known that many of the more difficult kinds to preserve, such as peas and beans, for instance, can be easily and more effectively bottled by the use of chemicals, which are often applied, though for various reasons I never use and do not advocate any of such, even in the minutest form.

Selecting Vegetables.

The chief points to observe are to select the various vegetables of the very best quality, fresh and of uniform size. The majority of vegetables are far the best when partially boiled, and afterwards packed neatly and closely together in the bottles when they should be sterilised for an hour and a half. This will apply to carrots, leeks, turnips, celery, and similar kinds; but for asparagus, peas, and beans less time will suffice.

Beans and Peas.

As before mentioned, peas and French beans require very great care, and no vegetables that I am acquainted with are more difficult to bottle. The peas should be matured, but not in the least way on the old side. French beans and scarlet runners should be young and tender, the first-named preserved whole and the latter sliced thinly. Both peas and beans should be partially boiled for five minutes, adding a teaspoonful of salt to each pint of water. Strain off the water, filling the bottles whilst the vegetables are still hot, and fill with water near to the same heat. Stand the bottles when filled in the sterilizer, using water again of much the same temperature. Boil from 30 to 40 minutes, when they should be taken out and examined as to their being perfectly air-tight. Careful observation should be made for several days to be sure these remain so. One of the best varieties of peas for this purpose is Autocrat.

Tomatoes.

One of the most useful for bottling, as well as one of the most simple to preserve, is the tomato. Both the yellow and red varieties are desirable, as they are always appreciated at all seasons of the year, and with every prospect this season of immense crops, both inside and out, the fruits should be bottled in large quantities. Select small to medium-sized fruits of good shape, and arrange tightly in the bottles whole. Fill with cold water, add a teaspoonful of salt to each pound of fruit, and sterilise till the water reaches boiling point. As in the case of other vegetables, it is most imperative the bottles should be perfectly air-tight, when it will be found that they will remain in good condition for almost any length of time. Sunrise (red) and Sunbeam (yellow) are capital varieties for preserving thus, and when entering for competition the fruits of both are telling and attractive.

Asparagus.

This is another important vegetable always appreciated, and can generally be relied upon. At the right season select the finest heads of uniform size, and pack closely together with heads uppermost in the bottles. Cover with cold water, adding a teaspoonful of salt to each bottle, and sterilise for an hour after reaching boiling point.

Carrots and Turnips.

Young carrots are always held in high esteem in the kitchen, though not always so easy to produce at all seasons of the year. Consequently, by bottling these when plentiful, this difficulty is easily overcome. The best varieties for the purpose are those generally known as Shorthorns. These should be selected when about the size of one's thumb. Boil till tender, when the skins should be carefully removed, and then arrange them in the bottles. Turnips when quite young may be treated in the same way except that they should be peeled before boiling. The French variety with the long white roots, is best for this purpose. I have mentioned those that are generally regarded as most serviceable, though, if desired, nearly every kind of vegetable may be successfully treated in this way.

(Mrs.) E. J. Beckett.

SUMMER PICTURES IN THE GARDEN.

Day by day, week by week, month by month, we see outspread before us the pictures that the great artist Summer, inspired by God, paints for our delight within the four walls, fences, or hedges of our gardens. It seems marvellous that so short a time has passed since the bare scenes of winter were outspread in place of floral canopies and foregrounds. It seems equally incredible that in but a few months more the blossoms will have passed, the leaves fallen, the sunsets shifted, the light begun to fail, the birds have vanished with the bees and the butterflies, the earth be wrapped in frost and snow.

To thoroughly enjoy the present is every gardener's duty, whether he labour for pleasure, profit, or honourable wage, his flowers should be his joy and pride, his failures his accepted lessons for the future, his successes the rewards of a conscience well at rest. Yes, that is the grand secret: having worked, let us be at peace, not discontented, though our floral achievements have fallen short of the triumphs we desired, but gazing our full at every loveliness, not allowing days to pass without our paying the world our tribute of homage for its excellence. Restlessness, repining belongs to man alone; the beasts, birds, and insects pursue their avocations with a philosophical calm and gladness we should try to imitate, fulfil their little destinies gaily, and are gone:

"Grand is the leisure of the earth:
She gives her happy myriads birth,
And after harvest fears not dearth,
But goes to sleep in snow wreaths dim."

Turn where we will, even in the smallest garden, some fair picture greets us. Blue delphiniums against the paler azure of the sky, stand erect among the masses of fluffy white gypsophila all studded over by red-brown butterflies; the scarlet geums, heavy headed after rain, lie over the grass that seems marvellously greener just there by contrast, and have interlaced their buds, too, with the stiffer growth of snow-white marguerites; the yellow herbaceous scabious towers, with a splendour of form peculiar to it, over a bed of purple and mauve candytuft, one of the cheapest, easiest to cultivate of all our annuals, but a grand note of colour always.

Rose gardens have their unexpected beauties as well as those which have been prepared and coaxed into being; indeed, the former seem often fairer and more numerous than the latter. I knew one garden in which hundreds of trees were planted without any arrangement of colour, because the purchaser had never grown roses before, and did not consult a catalogue before placing them. Ramblers sprang up, yards high, here and there, in sides of beds, or border edges, as they chose, and were given stakes to support the lavish growth just as necessity demanded; Rugosas straggled half over the walks, small teas lived high on banks, and bent to show their blooms to passers-by; sturdy hybrid perpetuals appeared against house walls, so were nailed up to them, bushes of chinas and briars filled the places usually allotted to prim standards along the lawn sides. Was the result a failure? Assuredly not. Perhaps the excellent climate and soil were largely instrumental in the creation, but that rose garden remains one that provides the very grandest of summer pictures, painted in hues of pink and red, yellow and gold, cream, apricot, carmine, and deep maroon, copper, and salmon, scarlet, and blush.

Hollyhocks and sunflowers are landscape flowers beyond all others except climbing roses, but Lilium giganteum and Chimney campanulas aid them well, with delphiniums, of course, tall chysanthemums and Michaelmas daisies later on, and I would give the Oriental poppy the palm for a vivid splendour of colour in its early season. To have once seen a bank all covered by this poppy is to realise what vermilion can do to assert itself in a view across parklands and lawns. Hollyhocks are too seldom grouped in large numbers: we want a more royal style of planting before we shall form the most noble summer pictures. It seems as though we could not get rid of a cautious avoidance of bright colours, yet hollyhocks are never garish or vulgar, toned down as their tints are by a prodigality of foliage. There are few of their varieties, even among hybrids, that are inharmonious; the spectacle of a low-walled white cottage, surrounded by these stately blossoms save where the windows peep forth, is a picture of purest charm, whether the morning rose, the mid-day blue, the sunset gold, or evening grays and indigo are painted on the heavens above.

There are small as well as large pictures worthy the loving notice of the gardener who rests: a slope of pansies on a shady bank, backed by waving plumes of golden rod, glorify some nooks where seats are set beneath tall trees; the sun-blest crannies and slabs of rockeries are waving fairylands with the delicate pink and white alpine poppies; little pools are able to reflect the true forget-me-not, and the ground beyond is lilac with the moisture-loving annual Ionopsidium acaule. Then perhaps the figures of children, unconsciously graceful always, the gambling antics of pet dogs, or the dignified passage across the lawn of a Persian cat, will help to make a picture of interest.

M. H.

ROSES AT BRANCHES PARK SUFFOLK.

To breathe the rich fragrance and feast upon the lavish colours of the rose is a temptation no ordinary mortal can resist, and when the "Queen of Flowers" marshals her battalions to the strength of ten thousand, the sight, if not entirely unique, is at least worthy of record as being not altogether commonplace.

Branches Park, in the county of Suffolk, is the property of G. A. Tonge, Esq., and is distant from Newmarket some eight miles, being situated amidst richly wooded and pastoral scenery. The mansion is a stately Georgian structure, having an extensive frontage to the south, and opening upon spacious lawns that are clearly defined on either side by walks set at right angles to the main frontage, and parallel to each other. The architectural straight lines are likewise continued in an extensive border of perennials, and a retaining shrub border on the east and part of the south side, while on the west side the arrangement of the rose garden is equally in sympathy with the general scheme.

The collection of shrubs and border flowers is worthy of the best traditions of English gardens on a large scale, being alike extensive and thoroughly representative in character. But on the occasion of my visit the glamour of roses overpowered all else to such extent that other features appeared to be of minor importance.

As in other famous gardens, the dominant note appears to have been touched at quite an early stage, as the original rose garden is still in evidence, and bears testimony to the initial success with roses. The natural soil is a stiff, cold clay, exceedingly retentive of moisture in winter. In preparing this for the later and larger extension of the rose area resource has been made to the time-honoured practice of burning the soil, and one cannot view the results without acknowledging the wisdom and virtue of this practice, which, if expensive, becomes eventually the most economical method of treating such a soil. With the soil of each bed has been incorporated burnt ash, road grit, farmyard manure, and a liberal allowance of bonemeal, the whole being thoroughly mixed and aerated previous to planting. A striking feature is the manner in which the beds are raised, the soil being built up some nine inches above the level of the lawn. This method safeguards the plants from stagnant moisture in winter, and no drought appears to strain them in summer, as little or no mildew was in evidence.

The scheme of planting comprises regular oblong beds planted with one variety, each bed averaging forty-six plants. On three sides beds run the entire length of the garden; on the east side one variety only is employed, namely, Caroline Testout, numbering about 450 plants. On the south side three varieties are employed, in lines, giving a screen-like effect in crimson, the varieties being Marquis of Salisbury, Francois Crousse, and Gruss an Teplitz, the latter behind, as being tallest. At the north end a similar effect is obtained with Gloire Lyonnaise, Madame Ravary, and Bouquet d'Or, the colour effect being coppery-yellow. At regular intervals are arranged upright poles, with climbing varieties trained to form pillars, while an enclosing series is also arranged, but with chain connection, thereby forming a living floral festoon.

At the south extremity a lateral extension of the rose garden is devoted to old and new sorts of Bourbon, single, China, Provence, and other roses; part of this ground extends along the margin of the lake, hence the opportunity has been taken advantage of to group free rambling roses, allowing them to form tangles of luxuriant growth and a wonderful profusion of fragrant blossoms.

It is impossible to enumerate every variety that succeeds here, but of outstanding merit among bedding varieties were the following: Admiral Dewey, Antoine Rivoire, Celia, Corallina, Countess Cairns, Captain Hayward, Caroline Testout, Enchantress, Frau Karl Druschki, Florence Pemberton, Gottfried Keller, General McArthur, Hugh Dickson, Konigin Carola, Kaiserin Augusta Victoria, Lady Ashton, La Tosca, Le Progres, Madame Leon Pain, Madame Jenny Guillemot, Madame Abel Chatenay, Mrs. E. C. Hill, Mons. Paul Lede, Madame Jules Grolez, Pharisaer, Rhea Reid, Richmond, Reine Marguerite d'Italie, Souv. de Madame Eugene Verdier, Ulrich Brunner, and Warrior.

A WATERSIDE GROUP OF ROSES AT BRANCHES PARK.

The varieties depicted are Caroline Testout, the Garland, and Polyantha grandiflora.

Of rambling roses displayed on pillar, arch, or in tangled mass, the following were best: American Pillar, Alberic Barbier, Blush Rambler, Debutante, Dorothy Perkins, Elisa Robichon, Gardenia, Joseph Billard, Leopoldine d'Orleans, Psyche, Rambling Rector, Sweetheart, The Garland, The Farquhar, Tausendschon, Mrs. F. W. Flight, Rubens, and White Dorothy Perkins. With regard to the latter the stock was obtained from a sport that occurred in the gardens at Branches Park.

To secure such notable success as obtains at Branches Park with roses drawn from every class of this great genus, entails unremitting care and attention, with cultural ability of the highest order; not only is such everywhere in evidence, but in giving expression to the character of the various roses, Mr. C. W. Paxton—the gardener—has laboured after a natural effect, and has achieved results much above the average. Thomas Smith.

TREES AND SHRUBS SUBJECT TO SUNBURN.

His solar majesty has given us distinct proof of late that he still retains his power to scorch, and it is fairly safe to assume that our climate will go a long way towards retrieving its unenviable reputation and character this season. The burnt and badly disfigured foliage of many trees and shrubs that may now be seen serves to remind us that it is a huge mistake to plant species susceptible to injury from the direct rays of the sun in open and exposed situations. It is found that trees which possess golden or variegated leaves are the greatest sufferers, and, further, that sunburn is almost entirely confined to deciduous subjects.

I noted just recently specimens of the golden oak which presented a woebegone appearance and seemed to suggest that they had either been struck by lightning or that a fire had passed through them. Distress was written upon the golden sycamore which rejoices in the name of Acer pseudo platanus Worlei, while the Golden Elm (Ulmus campestris Louis Van Houtte) was badly hit. The same applies to other variegated varieties, and in a lesser degree the variegated beech, Fagus sylvatica albo marginata; Corylus avellana aurea and atropurpurea; the variegated horse chestnut, Æsculus hippocastanus fol. variegatis; Fagus albo marginata; Fraxinus americana variegata; and the sweet chestnut, Castanea sativa aureo marginata, have all suffered.

Other than in town gardens the golden elder appears unhappy, while it is positively painful to witness the sorry plight of the brilliant Diervilla japonica Looymanniana aurea. In a season such as we experienced in 1910, nothing, however sensitive, would be likely to suffer, but the present summer has served as a rude reminder that it is necessary to use careful discrimination and judgment in the allocation of sites for the trees and shrubs under notice. Walter H. Aggett.

TREES SUITABLE FOR EXPERIMENTAL FORESTRY.

In a highly interesting contribution to the current issue of the "Kew Bulletin" on trees suitable for experimental forestry, Mr. W. Dallimore suggests the following trees, all of which are natives of America, as worthy of a trial by those who are desirous of increasing the number of kinds grown for profit. We have found it necessary to materially abridge Mr. Dallimore's notes, and refer those of our readers who need fuller particulars relating to the economic value of the trees to the contribution as it appears in the publication mentioned.

Tulip Tree.

The Tulip Tree (Liriodendron Tulipifera, L.), is one of the most important broad-leaved timber trees of North America, and a large amount of timber finds its way annually into the markets of the United Kingdom under the names of yellow poplar, white poplar, canary whitewood, and white wood. The wood is described as being light, fine and straight-grained, easily worked, and yields a good finish. Some qualities are white, others pale yellow, and others marked with brown. It is in request for many of the uses to which the better classes of deal are put in the interior finish of houses, such as doors, panels, wainscoting and casing for electric-light wires, while it enters largely into the cabinet trade both as a foundation for veneer and for constructive purposes.

A BEAUTIFUL BED OF CAPT. CHRISTY ROSE AT BRANCHES PARK.

The species has a wide distribution in North America, for it occurs from Southern Canada to North Florida and South Alabama. Average-sized trees would appear to be from 100 to 125 feet high, with a diameter of from 3 to 6 feet, the boles being clear of branches for two-thirds of their height. Under the most favourable conditions, however, when growing in the valleys of the Southern States, it is found from 160 to 190 feet high with a trunk up to 10 feet in diameter.

For purposes of comparison, trees grown under ornamental conditions in the British Isles have been recorded from 80 to 107 feet in height, with girths ranging from 10 to 17 feet at 5 feet above the ground. These dimensions may be considered to compare with those of average-sized American trees. The largest specimens are met with from the North Midlands to the South of England, but good examples have been noted in Scotland. It is difficult to form an accurate idea of the age of the larger trees, but they probably range from 100 to 150 years. This would place the maturing age in England about on a level with that of beech.

A full account of the tulip tree and its behaviour in the British Isles, together with particulars of many large trees, is given in "Trees of Great Britain and Ireland," i., pp. 65-74. The largest tree mentioned, now dead, grew at Stowe, near Buckingham. Mr. Elwes found this tree to be 107 feet high with a clear bole of 30 feet and a girth of 13 feet at 5 feet from the base, and 21 feet 4 inches near the ground. A tree growing at Leonardslee, the seat of Sir E. Loder, Bart., near Horsham, when measured in 1903, was 97 feet high, with a clean straight trunk of from 25 to 30 feet. It was at that time considered to be about 90 years old. A fine tree nearly 100 feet high was noted at Margam in S. Wales a few years ago.

The best trees are found growing on well-drained, loamy soil, where plenty of moisture is obtainable, but good examples are to be met with on both clayey and very light soils. It does not thrive on wet, badly-drained ground, neither is it a success in soil of a limy character. Specimens at Kew may be noted growing on both light and heavy land. The old specimen near the north end of the Rhododendron Dell is on sandy ground, whilst the position occupied by a tall tree in the Azalea Garden is marked by the soil being of a clayey nature.

A "Forest Planting Leaflet," Circular 93, on this tree, has been published by the United States Department of Agriculture. In it the tree and its requirements are fully described. For the benefit of possible planters the following notes have been extracted. Seeds are produced abundantly nearly every year, though only 5 to 10 per cent. are fertile. Those sown as soon as ripe germinate the following spring, but if the seeds are kept and sown in spring they have a tendency to lie in the ground a year before germinating. Seedlings should not remain in the nursery for more than two years, for after that time they are difficult to transplant successfully. The tree is intolerant of shade and prunes itself well with even moderate side shade. Seedlings can endure moderate shade, but more light is demanded as the trees grow older. At maturity they are usually taller than their associates, and their crowns are fully exposed. Growth is rapid for 50 years, after which it gradually decreases. Spacing is recommended at 6 feet apart each way, and mixed planting is preferred to a pure stand. On rich land in sheltered valleys it is used as the predominant feature of plantations, but in more exposed positions other species are planted in excess. Any shade-enduring hardwood with white pine and Norway spruce are recommended as companion trees. For planting in this country it is probable that Scots or Corsican pine and spruce would form good nurses. An account of the species and details of its distribution in America may be found in the "Silva of North America," i., pp. 19-20.

Black Walnut.

There is reason to believe that the Black Walnut (Juglans nigra, L.) will be worth growing for its timber in certain parts of the British Isles, for it thrives in many localities, and appears to be no more susceptible to late spring frosts than the common walnut. American-grown timber is imported in large quantities, and is put to many purposes connected with the manufacture of the better classes of furniture. It is dark brown, or sometimes almost black, in colour, and may be obtained in wide boards or logs. The wood is often clean and straight-grained, though it may be finely figured. Burrs are produced, as in the common walnut, and these, and the best marked logs, command fancy prices for veneer. Elwes, in "Trees of Great Britain and Ireland," ii., p. 270, says that English-grown wood is quite equal to imported wood in colour, and when properly seasoned is as good as the best Circassian or Italian walnut.

This favourable opinion appears to have been formed by a London timber merchant also as long ago as 1883, for in a note in "Woods and Forests" for December 5 of that year, he recommends the tree to the attention of foresters as a suitable subject for forest planting. With regard to a tree growing at Syon, he gives the length of the trunk as 25 feet and its quarter girth as 24 inches, its market value being £25 or 5s. a cubic foot. At that time the tree was about 50 years old. He also refers to another black walnut as follows: "Singularly enough, I bought one as an elm out of a garden not 300 yards from my sawmill, so I am fortunately able to send you a specimen of English-grown wood; it was about 15 feet long by 20 inches quarter girth, and had forty annual rings. You will note that the wood has obtained from our English soil the very character American wood is so deficient in, viz., hardness and weight, approaching in this respect the character of Italian walnut, or what is represented by the words 'good quality.' I am now making from this tree a sideboard which will, I think, be a beautiful specimen of woodwork." A section of Kew-grown timber on view in the Forestry Museum, shows that the wood is capable of taking a high polish.

Juglans nigra is a native of N. America, being found widely distributed from Southern Ontario to the Southern United States. Details of its distribution and botanical charactistics are to be found in Sargent's "Silva of N. America," vii., pp. 121-124, while other information on these points, together with notes on the behaviour of the tree in this country, may be derived from "Trees of Great Britain and Ireland," ii., pp. 262-270. It is said to vary considerably in size, mature specimens being met with from 50 to 150 feet high, the girth varying from 6 to 20 feet. In England the largest trees vary from 80 to 116 feet in height, with girths from 10 to 14 feet. Two of the largest trees known are in Marble Hill Park, Twickenham, and Syon House Park, Brentford. The former when measured by Mr. Henry was 98 feet high by 14 feet 3 inches in girth, and the latter as recorded in "Trees and Shrubs at Syon House," 1910, 116½ feet high by 13 feet 7 inches in girth.

The cultivation of the black walnut in this country would probably need to be carried on below an elevation of 500 feet, the more sheltered positions being selected, and preference given to land such as may be expected to grow good oak. Planted 7 feet apart, with a silver fir or hornbeam between, should prove to be a suitable arrangement. Providing it is found possible to cultivate the species successfully under forest conditions, its timber ought to be more remunerative than that of oak, if present prices can be taken as a guide. Fertile nuts are produced freely by the older trees in this country. As an illustration of the rate of growth on light soil, a transverse section of a trunk measuring 2½ feet in diameter, grown at Kew, shows 95 annual rings.

White Ash.

As seen under cultivation in England, even when growing as an isolated tree, the white ash (Fraxinus americana, L.) rises with a clean, straight trunk to a considerable height, the branches being small and the head narrow. Compared with common ash, F. excelsior, L., growing under similar conditions at Kew, it is of more rapid growth, and appears less susceptible to attacks by scale insects. Several moderately young, healthy examples may be noted in the vicinity of the Azalea Garden, one isolated tree being 66 feet high with a girth of 2 feet 9½ inches at 5 feet from the ground. It has gained 3 feet in height and 4½ inches in girth since measured by Mr. Elwes in 1907. Unfortunately its age is not known, but, judging from its growth during the last 15 years it is probably about 40 years old. Two older specimens are to be seen on the south side of the mound near the Cumberland Gate. Both are upwards of 80 feet high and girth 8 feet 5½ inches and 8 feet respectively at 5 feet above the ground.

White ash timber may be used for all the purposes to which the wood of the common ash is put, whilst David Denning, in "The Art and Craft of Cabinet-making," 1891, says that "it is superior to English ash for furniture as it is usually of better colour." It is imported largely for numerous purposes. There is no reason to believe that it would command a better price than English ash, though it may be suitable to plant on account of its rapid and vigorous growth. "Forest Planting Leaflet," Circular 84, issued by the United States Department of Agriculture, is devoted to this tree, and the following remarks bearing upon its habit and growth are extracted therefrom. Its average height is from 70 to 80 feet with a diameter of from 2 to 3 feet. Plantations are found to give the best results in protected valleys on sandy loam that is light and easily worked. It will thrive, however, in less favourable and even in adverse localities. A porous subsoil is essential, and a water table at a depth of 10 or 12 feet is of decided advantage. Mature trees can endure only a moderate amount of shade, while young seedlings will start in dense shade but require considerable light for their perfect development. Its economic uses are referred to as follows: "The wood of the white ash is of great economic value. Its most valuable qualities are strength and elasticity, and these, combined with its ability to take a good polish and to season without injury, make it a timber of first rank for furniture, car, and vehicle construction, interior woodwork, agricultural implements and tools."

American-grown seeds would need to be obtained for starting a plantation, and care should be taken to order from a firm able to supply the true tree and not one of its near allies. The percentage of fertile seeds is said to be low, hence the necessity for rather thick sowing. Young trees are planted in permanent positions in America when a year old. In some instances it is planted as a pure crop, allowing spaces of from 4 to 6 feet between the trees, and at other times it is planted as a mixed wood; black walnut, black cherry, hackberry, hardy catalpa, Scots pine, and European larch being recommended for companion trees. It is probable that pure plantations in this country might be made at 3 or 3½ feet apart with success, whilst a mixed plantation might contain hornbeam and Corsican pine. Anywhere where ordinary ash grows would suit the white ash, and it might also be planted on lighter soil than that usually allotted to F. excelsior.

CHRYSANTHEMUMS.

Early and Late Buds.

The experienced cultivator of chrysanthemums will now be able to form a fairly good idea as to whether the greater number of his plants are bearing buds at the right time or not. The inexperienced grower will be very uncertain on this point. Last year the early crown buds proved to be the most satisfactory, generally; the second crowns were too late, and lacking in substance in many instances. The weather during the whole of the summer was cool, cloudy, and wet.

Readers of the Gardeners' Magazine know quite well how hot the present summer has been. The buds of some varieties are, as a result, showing very early, while those of others do not appear to have been hastened on at all.

Last year some plants of the variety Hon. Mrs. Lopes were stopped early in the first week in May; others early in the second week of that month. Result: The latest-stopped plants showed crown buds one month later than those stopped early in the first week of May. This year I can already see that there is to be much irregularity in the appearance of crown buds of this noble variety, but I feel sure that there will be finer blooms of it than was the case last year. Willie Rawlings will also bear more refined buds this year, many buds were taken too early last year. That charming variety Francis Jolliff is showing buds consistently with the stopping of the plants; some buds will be available the first week in August, others at intervals until the third week in the month. Grand buds of G. Rivol and Mdme. P. Radaelli should also be forthcoming on plants stopped early in the season. Purity, Master James, Master David, Mrs. R. H. B. Marsham, R. Vallis, F. S. Vallis, Lady E. Letchworth, Pockett's Crimson, and similar reliable varieties, are very promising, and should supply exhibitors with good blooms during the first half of November.

With regard to the treatment of the plants and buds, it is necessary to point out that both leaves, bark, and wood being rather harder than during the past two years, daily syringings will prove very beneficial. Towards the evening of a fairly hot day a thorough syringing will do more good than a watering, unless the soil be very dry; this applies especially in cases where plants have already lost many lower leaves. The syringing should be done on hot days, whether the plants are watered at their roots or not, as it softens hard buds, especially early crown buds, and so induces a freer growth—the buds swell more kindly.

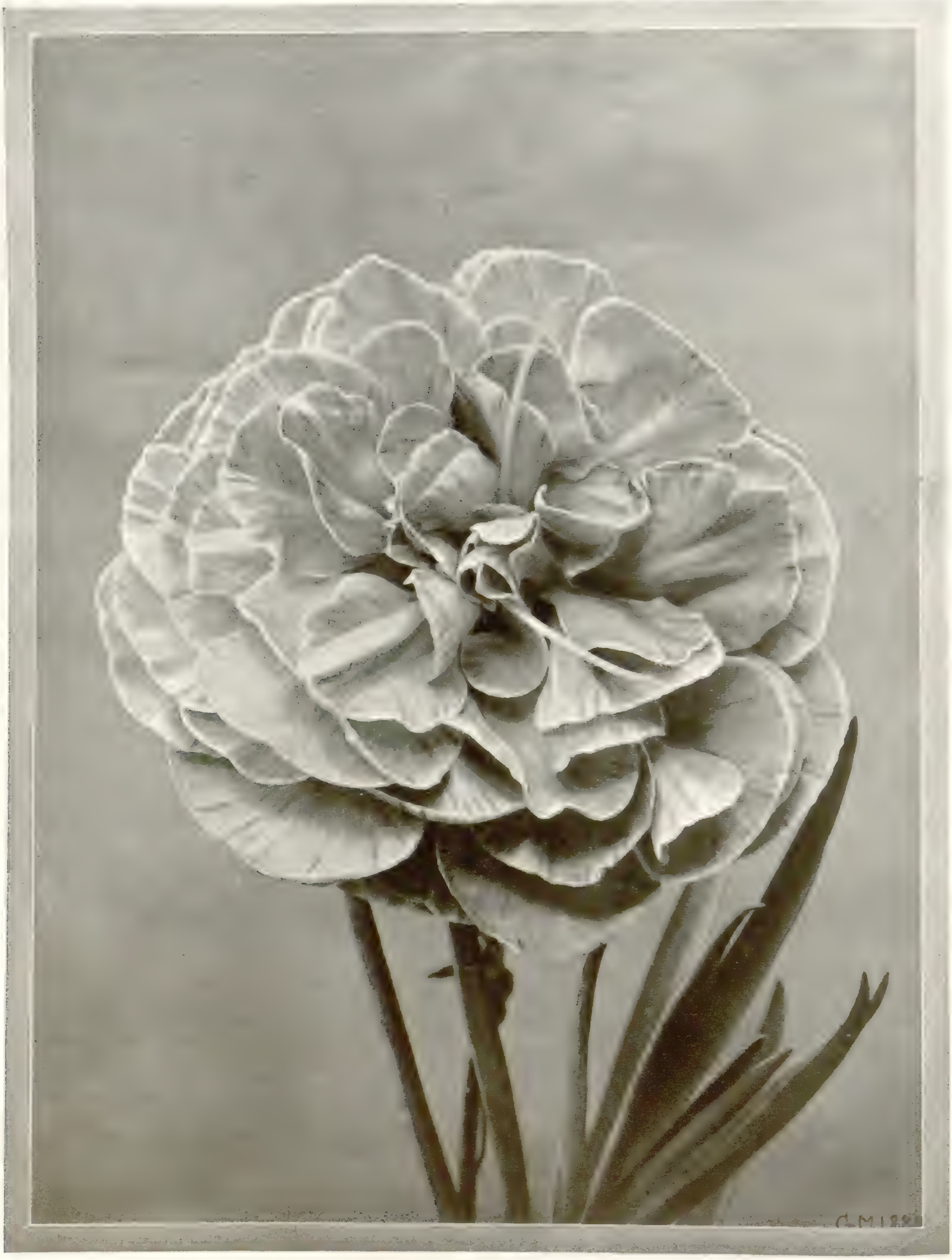
It is important that all points of shoots and newly-formed buds be kept quite free from green and black aphis. Earwigs eat away the sides of the buds, and the stems of the latter, and then the resultant flowers are nearly always one-sided or otherwise deformed. Trap and destroy the earwigs early in the morning and late at night. The shoots surrounding a bud must not be pinched off at one time; allow a period of about one week, removing one or two shoots each day, and directly it can be seen that the buds are swelling freely feed in earnest but judiciously. Geo. Garner.

FESTOON OF ALBERIC BARBIER AND LEOPOLDINE D'ORLEANS ROSES INSIDE THE WALLED GARDEN AT BRANCHES PARK.

Hydrangea Hortensis.—The present is a good time to insert cuttings to produce plants that will bear single heads next spring. Select only the strongest short-jointed shoots which have not flowered for this purpose. One cutting placed in a small pot is preferable to five or six in one of a larger size. Place them in a cool frame, and keep close for a time. When rooted, the amount of ventilation may be increased. Plants which carried single heads this spring may be potted on to make specimens.—A. G.

FANCY CARNATIONS.

Within recent years the improvements made in the yellow-ground fancy carnations have been such as to add immensely to their value both for exhibition and the garden, and to greatly increase the interest in carnations generally. There is yet another point in their favour, and that is the usefulness of the flowers in a cut state for the decoration of indoor apartments. In the earlier days of the yellow-ground fancy carnations the members of the household did not take very kindly to the flowers for use in floral arrangements; but now they are first favourites, and the selfs, which had long been held in the highest estimation, have lost some of their popularity. This point is mentioned as evidence of the usefulness of the fancies where cut flowers are in request, and not for the purpose of exalting them at the expense of the selfs, which I continue to hold in the highest estimation, notwithstanding the attractiveness of the many beautiful fancies. I grow the two classes in about equal numbers, endeavour to cultivate both as successfully as the time at my disposal will permit, and certainly an equal amount of pleasure is derived from the two classes.



FANCY CARNATION PASQUIN.

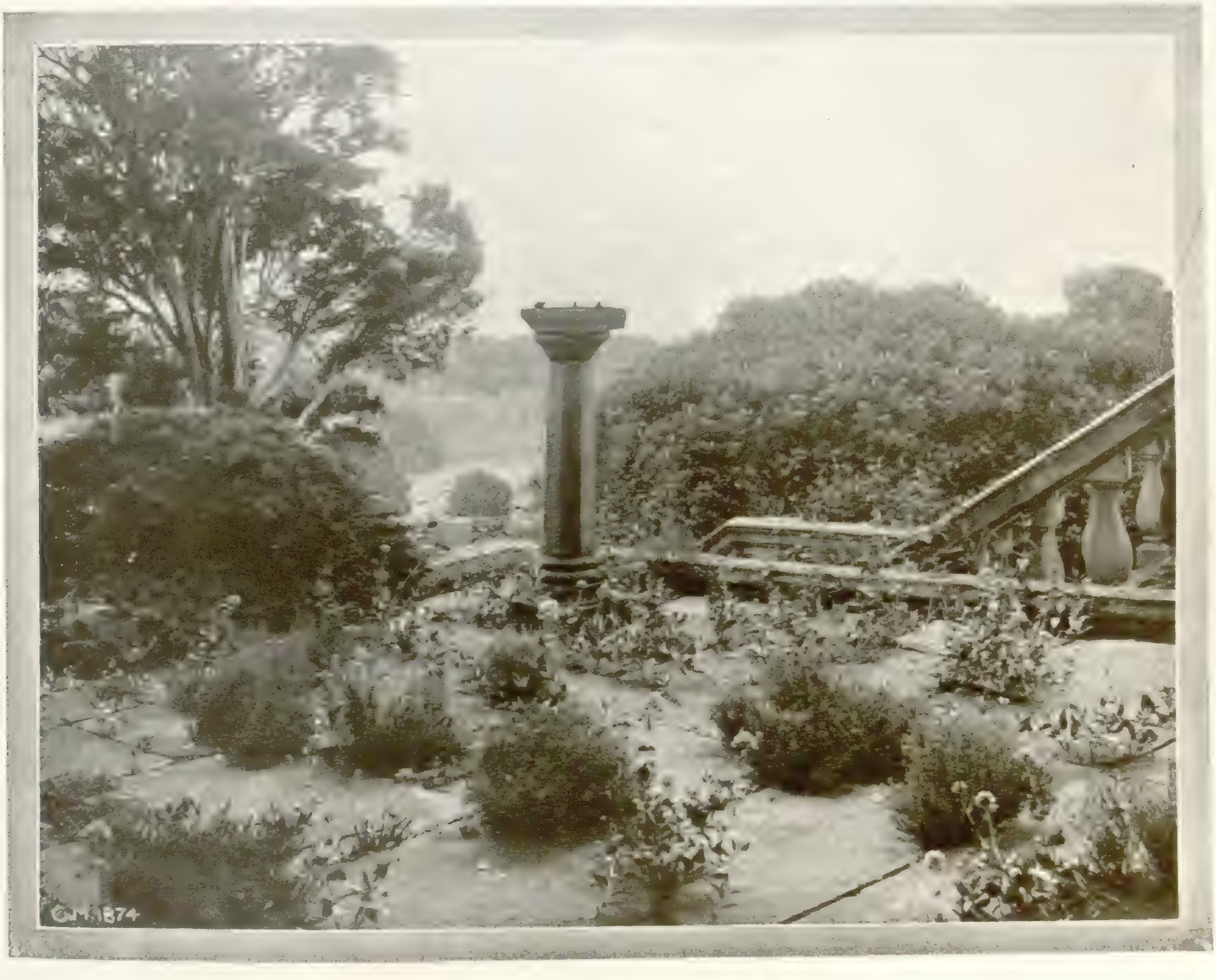
The premier bloom in the class for fancy carnations at the National Carnation Society's Exhibition. Shown by Mr. J. Douglas.

The advances in the development of the yellow-ground fancy carnations have been rapid as well as great, and to keep well abreast of the improvements that are being made it is necessary to revise one's selection at rather frequent intervals. Hence it is that I readily comply with the request to give a short selection of varieties that have in the course of my experience been found to possess exceptional merit. It is not an easy matter to make a short selection, because of the number of really high-class varieties that are at the command of cultivators, but the following twelve can be mentioned as of much value for forming the nucleus of a collection, for they are distinct as well as meritorious: Constantine, deep yellow-ground edged and suffused rose-red; Donald Macdonald, an effective flower, large in size and high in quality, the colour brilliant carmine-red with soft yellow ground; Erl King, bright yellow ground, richly margined and suffused rose; Elaine, a large finely-formed flower, freely marked with red and pale purple on yellow ground; Hercules, a finely formed flower, bright rose-red on yellow ground; King Solomon, rich scarlet and maroon on an apricot-coloured ground; Linkman, rich yellow with margin and markings of bright scarlet; Lord Steyne, a handsome and popular flower with margin and markings of purple-maroon on yellow ground; Margaret Thurstan, a superb variety freely coloured with scarlet on yellow ground; Mandarin, a distinct and attractive variety with rich rose-coloured markings and margin on light yellow ground; Pasquin, one of the finest of all the fancy carnations with yellow ground, the blooms are of the largest size, perfect in form and attractive in colour, the ground is a soft yellow, edged, marked, and suffused with lavender-blue and rose-pink; Sam Weller, marked with scarlet and maroon on a deep yellow ground. A. B.

Orchard House.—Trees in pots, as soon as divested of their fruits, can be put into the open, plunging the pots to the rims or they will become baked by the sun. The pots become quite hot unless protected, and will burn and destroy the small roots. Attend to watering and syringing twice daily. Pears and plums still ripening must be well supplied with liquid, and be kept clean by syringing.—W. A. COOK.

PAVED GARDEN AT POWIS CASTLE.

Many and varied are the features found in British gardens nowadays, and these vary in interest as much as they do in design and style. There are so many tastes to be considered that when space and opportunity permit most of these can find expression, and therefore we find in the large gardens of the land some features that are very beautiful, others that are wonderful, others quaint, some reminiscent of olden times, and some that scarcely seem to come within the scope of horticulture, notwithstanding the width of that scope in these times. In some instances the central walk of a rock garden is paved with flat stones, and suitable plants are planted in the crevices and between the loose joints of the stones, and such pathways are a delight when the paving is not too formal. The paved garden has followed and usually occupies a sunny position, forming a sheltered and pleasant spot in which to rest awhile in early spring or late autumn, when the air in the open garden is chill or damp, though the sun be still shining. Such a garden has been established at Powis Castle, Welshpool, the residence of the Earl of Powis, and the illustration given herewith shows a portion of the garden, with its sheltering trees, sun-dial, beautiful outlook over the estate and away to the distant hills, and also shows the thyme, valerians and dwarf veronicas growing between the broad flagstones that provide a dry footing in the wettest of weather. In certain cases a somewhat similar garden is devoted entirely to herbs.



THE PAVED GARDEN AT POWIS CASTLE.

PEACH TREES ON OPEN WALLS.

The interesting article on the above subject, on page 517, by Mr. Prinsep, is very much to the point, and I agree thoroughly with the writer's views. It must be admitted that it is a difficult matter to make outdoor peach and nectarine culture a success in some parts of the country, while in other districts the crops are a success even with comparative little care. In this neighbourhood there is much difficulty in growing peaches well in the open, as there are several conditions which do not favour their successful culture. The preparation of suitable borders is a matter within the reach of all, but atmospheric conditions are not so easily overcome.

Situated on the borders of the Cotswolds, at a height of 700 feet above sea level, we invariably experience cold biting winds about the time the trees are breaking into growth, and it is during that period that our trees suffer most, in spite of protection being afforded them. Many of the leaves blister very badly, and a number of the young shoots shrivel and die away just at the time when one thinks the trees are going to break away evenly. I am acquainted with outdoor peaches in several parts of the country, but do not know of any locality where they suffer so much as in this district. When once summer comes the trees do well, and make healthy growth, but there are always several gaps to be made good as a result of this perennial spring trouble. Perhaps some reader would be good enough to suggest a remedy.

J. GARDNER.

PRIMULA CAPITATA.

In view of recent additions to the genus Primula, which of late have been on a somewhat liberal scale, the beautiful Primula capitata has in no wise suffered by comparison with these newcomers. Introduced from the Himalayas in 1850, it is a replica in miniature of P. denticulata in all but colour, and, if anything, more refined; the round heads of intense violet flowers, sharply accentuated by the white farina that clothes the stems that spring from rosettes of leaves of a deep green shade, single it out as a subject of distinct merit. It succeeds under similar conditions to P. sikkimensis; a good loamy soil, well drained, yet holding abundance of moisture during the growing season, and planted in a position where it enjoys some shade. Seed ripens freely, and may either be sown at once or in the ordinary course in spring, as this species vegetates freely at all seasons. Seedlings are transplanted in due course either into boxes or to the open ground, and subsequently to their flowering position in early summer or autumn.

P. capitata is one of the finest species to grow in pots, succeeding to perfection in a cold frame or alpine house; it must not be subjected to fire heat or close confined conditions, as in a greenhouse, but must always enjoy the maximum amount of fresh air. T. S.

THE SCHIZANTHUSES.

There are few, if any, more useful flowering plants during the spring months than the schizanthuses. Their elegant habit of growth, the diversity of their colours, and the ease with which they can be grown, render them indispensable for decorative purposes in the conservatory and the dwelling house. There are several distinct forms possessing numerous charming shades of colour. The grandiflora hybrids are especially attractive, and are of compact habit, producing flowers that range from white to crimson and purple. Wisetonensis is a lovely dwarf type, and forms elegant specimens in quite small pots. S. Grahami possesses bright red and orange flowers, while S. retusus is erect in growth, and bears brilliant scarlet and orange flowers, and, on account of its erect and sturdy growth, is one of the best for supplying cut flowers. S. retusus Rosy Gem, is a very desirable addition. S. grandiflorus oculatus is a large-flowered variety with purple and mauve blossoms. S. pinnatus affords numerous shades of colour, and is capable of being grown into quite large specimens, plants six or eight feet in height being by no means uncommon in some gardens.

To have specimens of good size for early spring flowering seeds should be sown at the present time in an unheated frame, taking care to shade the seed pans lightly until after germination takes place. When the seedlings are large enough prick them out in small pots filled with a light, porous compost, and grow them on in a cool house. When they become well established give air freely on all favourable occasions, and lightly spray them during bright weather. When nicely rooted shift them on, using 48 or 32 size pots, in which they may be allowed to flower. If extra sized specimens are required, shift into pots one size larger. A suitable compost is one consisting of two parts good fibrous loam and one part leaf-soil, to which should be added some coarse road sand, and a 6-inch pot full of some approved fertiliser to each bushel of the compost. Do not pot too firmly, and take care not to allow the soil to become very wet, it being advisable to keep it rather on the dry side until root action becomes active in the spring.

The plants can be stopped by pinching out the points when about four inches high, and again later, to form extra sized specimens, or to regulate the flowering period. During the winter a perfectly cool house suits them best, a temperature of 45 degrees being quite sufficient, and a position near the glass is essential to ensure a short-jointed, vigorous growth. During the spring it is an advantage to syringe between the pots on bright days, and occasional doses of liquid manure and soot-water are helpful. Stake the specimens with neat bamboo canes, and tie carefully with green raffia, taking care not to draw the strands too tightly. It is not advisable to shade the schizanthuses until they are in full flower, as such treatment results in weak growth.

J. GARDNER.

THE VALUE OF THE GARDEN.

An oft-heard reproach against English national life is, "that we take our pleasures sadly." This may be partly true, but not altogether so, though the fact remains that we do not make the most of the possibilities afforded us in the attainment of healthful pleasure.

The doctrine of "making the most of life," is especially applicable to the garden, and its relationship and influence upon human life. The one great hindrance to garden appreciation to-day is the failure of many to take the garden at its full value, and this in itself is a factor which militates against the true pleasure of the frequenter of the garden. I would like to see more of the spirit of the American garden-lover, whose desire is that the garden shall be a living part of the home, and in its season the "best" part.

Properly considered, house and garden should be planned, if possible, to meet each other's needs. By this, I mean that the garden, with its living beauty, should be a place to "live" in, when the weather permits, an extension of the home without the confining walls and restraint of the house. In this matter the Americans are far in advance of us. Their extended use of wide verandahs, loggias, garden-rooms, pergolas, etc., is only a sign of their appreciation of a garden and its uses. To keep in touch with the garden; to obtain the utmost value from it, both in health and pleasurable enjoyment, seems to be a great aim with them, and the English garden-lover would do well to keep these ideas in view.

With all the progress made in horticulture and garden art, we are in danger of losing a good deal of our love of beauty. By this I mean, that, although colour effects, brilliant displays, and kaleidoscopic borders are studied, and brought to a large degree of perfection, yet many are losing their love of a beautiful outline, a pleasing form, or a dainty hue, which may be noted in the single blossom, but which is never seen in the mass. A hasty view of a garden will but reveal a mass of colour here, a blending of hues there, until the mind is satiated with a constant change of colour and outline, without fully realising any good points or appealing groupings which may happen to exist. On the other hand, a careful detailed study of the thousand and one treasures a good garden possesses will prove a mine of delight for many hours. The watching of dainty hues, of individual forms, the critical survey of leaf, bud, blossom, and seed, of rising stems and habit of growth, of fragrance and of effect, will afford a greater amount of real pleasure than any other pursuit extended over the same length of time.

The value of a garden lies, not in the monetary value of the land it covers, nor in the ornate embellishments or lavish expenditure which may be showered upon it, but simply in the return it gives to its owners of added health and enlivening interests. The garden should be an open-air dining hall, a place for recreation or for study; and, above all, a place for rest. A few hours culled from the exhausting demands of modern life are not wasted if spent in the quietude of the garden.

The resting of mind and body, bringing into repose a system subjected to a full strain in everyday life, is of the greatest benefit. These pauses in the quiet backwaters of life are of infinite value, and tend to revitalise one with a full meed of energy. It is sleep without the unconsciousness, or dreams without weakening the orderliness of the brain.

Among the haunting fragrance of carnations, stocks, sweet peas, roses, and other delightful summer blossom, with the accompaniment of the notes of feathered songsters, the flashing wings of dragon fly and butterfly, and the myriad hues and forms of the blossoms, one can realise to the full the value of the garden.

A collection of old masters, of Sevres and Dresden china, of statuary and antique armour, of tapestry, and valuable furnishings, are dull and lifeless compared with the living, changing beauty of the garden. Comparisons are sometimes odious, and leaving these thoughts in the mind of the reader, may I but utter the plea for a greater appreciation of the gardens of England, an appreciation which shall embrace every vestige of life and floral beauty in its comprehensive grasp.

I have rejoiced at the increasing sway of the natural garden, with its pleasant phases of lily pools and heath-clad slopes, its rugged flower-draped rocks and fern-clad dell, its wilderness of jungled growth, and marshy, flower-gemmed streams.

The widening of the garden beautiful to embrace the foregoing, together with the progress made in adapting the American and Japanese gardens to our English requirements, is good. The great thing needed now is to utilise these ideas to the full and closely study individual plant life.

And if I may further trespass upon the kindness and patience of my readers, it will be to voice the charms of the garden at eventide. To live in the garden at the hour of the setting sun, and later when the twilight deepens into starry night, is to "live indeed." Ushered in by the evensong of the birds, the blossoms again redole the fragrance of which the sun has robbed them in the day. The air alive with the swift movement of swallow and swift, which as the twilight deepens give way to the dusky bat and the droning of flying beetles, is heavy with the scent of stocks and mathiolas, of fragrant nicotianas and clove-laden carnations. Mignonette, sweet peas, roses, and a host of other charming subjects exude their sweetness for the evening zephyrs.

One loses from the vision the heavy-hued blossoms first. Purples, crimsons, dark blue, vanish under the deepening shadows, until at last the white blossoms alone attract through the night air. White masses of stocks, of alyssums, of scented tobacco, of ox-eye daisies, etc., gleam out in the garden of eventide, surely a suggestive hint for the maker of gardens. A white moonlight garden, a garden of fragrance and delight, in itself a striking testimony (if one were needed) of the value of the garden.

P. S. HAYWARD.

HERBACEOUS CALCEOLARIAS.

Only occasionally does one come across these plants in gardens nowadays, but when well grown they possess several distinctive features which attract attention. One of the finest batches of these plants I have seen for some time was at the Mote Park, Maidstone, the entire front stage of a long house being filled with fine specimens that included all the well-known shades of colour generally seen, as well as several new shades, which I do not recollect seeing before. The plants were splendid examples of good culture, compact in growth, with large blooms, both selfs and spotted forms, making up a charming display.

The strain is a selection of Mr. Bacon's, and, as these flowers appeal to his employer, he aims, and succeeds, in growing them well. The present day fashion of having to grow flowers chiefly for cutting has in many gardens pushed out these herbaceous calceolarias, but where large show houses have to be filled with flowering plants, these can still hold their own in the matter of display. Cool treatment from start to finish is essential, and where this cannot be given them the plants are not seen at their best. The condition of the gardens at Mote Park reflect great credit on Mr. Bacon, who excels in more than one branch of gardening.

Paul T. More.

VERONICA GENTIANOIDES.

A capital border plant is the Gentian-like veronica, and one that does not demand a particular position or possess a liking for a specially prepared soil. Any good garden soil suits it. One point to be remembered is that, as this veronica spreads with fair rapidity, it must be lifted and replanted frequently in light soils, otherwise it fails to realise its full beauty. A plant that produces tall, graceful spikes of porcelain blue flowers during May and June is worthy of attention, particularly when it is remembered that such a plant is one of the cheapest the nurseryman has to offer. A companion plant to this is Veronica gentianoides variegata, which has the leaves prettily marked with creamy-white, but otherwise it differs scarcely at all from the type, though, if anything, it is a trifle more robust. In either case the spikes rise to a height of about eighteen inches, and they are abundantly produced. The accompanying illustration represents the variegated form, and the spikes were photographed in May at Messrs. T. S. Ware's nurseries at Feltham.

More than one hundred years ago the "Botanical Magazine" contained an illustration of Veronica gentianoides, and the accompanying text contains the following passage: "This ornamental species of Veronica is a hardy alpine plant, of easy culture, and readily propagated by parting its roots; it was found by Tournefort and Forskohl in Cappadocia, by Buxbaum in Armenia, by the wayside and the margins of fields, and by Sibthorp on his journey to the East. Flowers in May and June. Communicated by Mr. Loddiges in 1805, who raised it from seeds received from Mount Caucasus."

"CARNATIONS, PICOTEES, AND PINKS" will tell you plainly how to propagate and grow these favourite flowers to perfection. The work is freely illustrated with plates of leading varieties, and explanatory diagrams as to layering, taking cuttings, fertilising blooms, etc. Price 2s. 6d. net, by post, in box, 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

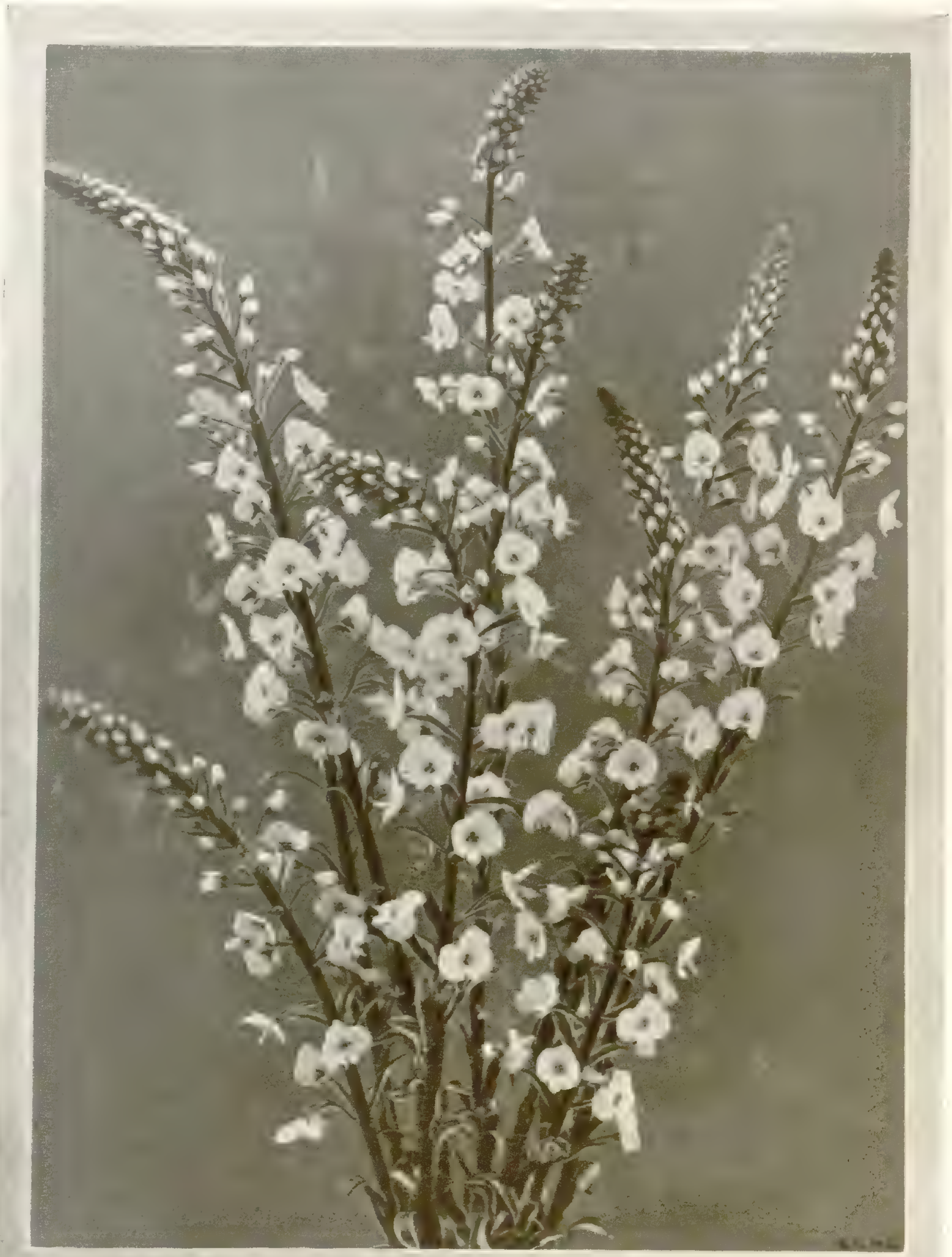
ROBINIA NEO-MEXICANA.

The several species of robinia are all handsome, free-flowering trees or shrubs which are popular for decorative gardening. Several have been known and grown for a long space of time, but the one under notice has not been in general cultivation for very many years. It is found in the Rocky Mountains, where it grows into a small-headed tree. Here it is of quite as rapid growth as the common False Acacia when young, and has been known to produce shoots six feet long in a single season. Its flowers are borne on shoots formed during the current season, and they are arranged in dense, more or less globular heads, the individual blossoms being larger than those of R. pseudacacia, and almost as large as those of R. hispida. They are a soft shade of rose, and very showy. The normal flowering period is June, but usually a second crop of flowers appears during August and September. The leaves on vigorous plants are from nine to twelve inches in length, and made up of twenty or more leaflets. As is the case with the common robinia, it is not fastidious regarding soil, for it grows quite well in poor sandy ground, though the best results may be expected from trees planted in heavier and richer land. D.

PERPETUAL CARNATIONS OUTDOORS.

The experience of another season in the cultivation of perpetual carnations in open beds and borders goes to show their value as outdoor bedding plants. In spite of the hot, dry weather experienced for so long a period, the plants are doing remarkably well, and producing a continuous supply of blooms. On a border facing almost due north we have a batch of 200 plants, some of which flowered during the winter in the houses, and have continued to bloom since November. There are now over 300 blooms fully expanded, and we are continually cutting from these for indoor decoration. The plants were put out in May, and no other attention has been given them beyond keeping them tied and supplied with water as required. The varieties that bloom most freely outside at Batsford Park are Britannia, Fair Maid, Enchantress, Winsor, Lady Bountiful, White Perfection, Harlowarden, and Harry Fenn. It is a good plan to strike cuttings from plants grown outside during August, as these take root and become well established in large 60's before winter, and are ready to pot on at an early date in the new year.

Batsford.



VERONICA GENTIANOIDES VARIEGATA.
Flowers porcelain blue; leaves green and creamy-white.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

SEED SOWING.—Capsules of seeds that are ripening at this season often require to be cut from the plants and suspended in a light, moderately dry position to enable them to dry out any sappy matter contained in the husks. It is advisable to sow the seed ripening at the present season as soon as possible after it can be shaken from the seed-pod. After the end of the present month the days begin to draw in very rapidly, and seeds sown during the closing season do not germinate anything like so rapidly as is found to be the case in the early months of the year. In the case of cattleyas, lælias, and others of the epidendreæ family, the conditions of the close propagating case are desirable. Failing this convenience choose a box partly filled with cocoanut-fibre refuse placed on the hot-water pipes or in a hot, humid house; in this the seed pans should be plunged, and a sheet of glass placed over the top will be found of great assistance to germination of the seeds. In the case of cypripediums, phaius and other terrestrial orchids, the seed may be sown on reasonably good surfaces of older plants of their own particular kinds. I do not consider it is advisable to sow any seed on newly-potted plants, and even where seed beds are prepared, the work should be done some considerable time before they are wanted. It is also advisable that the seed beds should be well watered some hours before the seed is sown; this will give time for the superfluous water to drain away, and yet leave the bed sufficiently moist to permit of the seed adhering to the surface after it has been shaken.

GERMINATION, ETC.—In the case of odontoglossums and allied genera, the season has with us been altogether too dry; every precaution has been taken, and nothing has been spared to procure suitable conditions. Other seedlings have given every satisfaction, but the odontoglossum seeds sown late in the spring have not made the progress one could have desired; in fact, I have seen the same class of seedlings make more progress in a few weeks in previous years than has taken place in as many months this season. Germination has been painfully slow, but as the seeds appear to be growing we may hope that a few days' moist weather outside will supply the needful conditions for more rapid development. The plants from the winter and autumn-sown seeds are making good progress, and those who have young plants developing the second or third leaf will do well to take advantage of the first moist weather to pot off what plants are required, selecting the most robust, permitting the others to remain until later in the season.—J. Chapman, Oakwood Gardens.

STOVE PLANTS.

PANCRATIUMS.—These bulbous plants have nearly all completed their flowering season, and may be brought to a state of rest by gradually withholding water, and allowing a free circulation of air, with more exposure to the sunshine. After they have undergone a thorough ripening process, they may be turned on their sides with the bulbs in a dry position. A temperature of 60 degrees will be found suitable for winter storage. The bulbs should be examined from time to time with a view to watering should they show any signs of excessive dryness or shrivelling. Should any pests, such as thrips, mealy bug, etc., be found, give a thorough cleansing with insecticide at intervals during the winter months, as time permits.

IXORAS.—These are now producing a valuable display of bloom, the colours being much appreciated. To provide stock for next summer's flowering, cuttings of half-ripened wood should be selected and placed singly in thumb pots, taking care that the cutting base rests firmly at the bottom of the hole made by the dibber. Give sufficient water to settle the soil, and plunge the pots up to the rim in tan bark or cocoanut-fibre refuse, with a bottom heat of 75 to 80 degrees. Keep the propagating case close for a few weeks until root action has commenced, afterwards admitting air gradually until the cuttings are hardened off sufficiently for removal to a position near the glass, where a more sturdy growth and short-jointed wood will be obtained. Ixoras are not disposed to branch out freely unless the tips of growth are occasionally removed. During the early stages of growth ample rooting space should be provided, but allow the plants to become well rooted before their season for flowering begins. A neat green stake should be provided for the centre of each plant, and the young shoots looped carefully to it. From cuttings taken at this season and required for early summer flowering, pots six or seven inches in diameter are quite large enough. Use a good compost of loam and peat in equal parts, with sufficient broken charcoal and lime rubble to render this open and porous. Pot moderately firm, and shade well afterwards until the plants have recovered from the check. Should larger specimens be required they may be obtained more quickly if a season's bloom is sacrificed and the plants shifted into larger pots as required. Another excellent plan is to pot up small plants immediately after flowering, prune back the flowering shoots to make them shapely, and grow them steadily throughout the winter. Mealy bug is by far the most troublesome insect pest, being almost inseparable from the growth of ixoras. It must be kept in check, or, as the flowering season appears the clusters of flowers become infested so badly that it is almost impossible to clean them without some injury. A thorough syringing with insecticide at intervals will greatly assist the grower in retaining a clean healthy stock.

GENERAL REMARKS.—All the stocks of winter-flowering subjects may now be allowed more ventilation, and as the season advances, be given more exposure to the sunshine. This will greatly assist the ripening of the wood ready for flowering. Liquid farmyard manure, well diluted, and soot water, may be used alternately with some approved chemical fertiliser as a change of diet; this treatment should be continued at weekly or fortnightly intervals until the plants develop their blooms. — John Donoghue, Bardon Hill Gardens.

FRUITS UNDER GLASS.

GENERAL REMARKS.—During the early part of July the sun was very powerful, and I am afraid in some cases the heat brought the dreaded red spider in to many vineries; it comes into the best regulated houses in such hot, sultry weather, and in many cases from outside sources, and that is the reason that I have mentioned the matter. I have traced it coming through the bottom ventilators, so I strongly advise the quick clearance of all leguminous crops, which invariably in their decline become a prey to red spider. I have several times suggested remedies for red spider, but the remedies must be persistently used in spite of pressing work, or the pest soon makes havoc of the foliage, and acts against the proper ripening or colouring of the grapes. It is a pitiful sight to see a house of grapes spoilt by this pest.

LATE GRAPES.—These should be examined occasionally to see that the berries are not pressing each other; a few may yet be removed, if it is necessary, as they have a long period yet before them. Keep the laterals well pinched, though during the bright sunny weather they need not be pruned quite so hard, as a little more shade is thus provided, and is necessary; but should the weather suddenly change, then more shortening will be necessary.

EARLY PEACHES.—Keep the foliage well syringed and the border supplied with moisture, and, also admit as much ventilation as possible day and night. Keep all laterals removed, and allow no more wood to remain than is really required. The branches will be more fully mature, and it is better to have a few branches ripen well than a mass of unripened shoots to be removed at the winter pruning. The only way to success with peaches is to have thoroughly ripened wood. Later and successional houses must have copious syringings, and even when ripe fruit is on the trees it is possible to syringe all around them in hot weather without at all damaging the fruit; all other portions of the house should be thoroughly damped in order to keep down pests. Gather all fruits as they become ready, carefully placing them on wood wool in a cool fruit room.

MELONS.—Plant out the last batch in the early house, where plenty of fire-heat can be use to ripen the fruits thoroughly in the early part of October; make the soil as firm as possible by ramming. Attend to stopping and tying those fruiting now, especially those in frames; melons have been most welcome this season, and have been easy to grow owing to the abundance of sun heat.

STRAWBERRIES.—Finish the strawberry potting, and stand the pots on a firm base; syringe the plants morning and night to keep them clean and growing.—W. A. Cook, Leonardslee Gardens.

THE FLOWER GARDEN.

SEEDLING CARNATIONS as a rule are healthier and stronger than plants propagated by layers, and it has been proved in many gardens that when the latter have failed, the former have been a success. Of course, one has to chance the varieties, and also to put up with a few singles, which, by the way, are very useful for decorative purposes. At the same time, an excellent range of colours is obtained, and an abundance of flowers. These will now be ready for planting, and may be given a little more room than the layers.

ANTIRRHINUMS.—The dry, hot weather experienced last month suited the antirrhinum wonderfully well, and the beds are a mass of flowers. They are, undoubtedly, excellent plants for bedding purposes, providing a grand display for some considerable time. When the centre spike shows signs of seeding it should be removed, thus throwing more strength into the side shoots. In fact, all spikes should be cut out immediately they finish flowering. By following up this method the plants remain in bloom longer. The intermediate forms are the most suitable for bedding purposes, and the improved strains come very true from seed as a rule; Orange King, Fire King, Coral Red, and Carmine Pink are splendid varieties.

DAHLIAS.—As growth advances the shoots will require extra ties to prevent the wind and rain from breaking them off. If blooms are required for exhibition purposes the buds must be thinned to one on each shoot. Much damage is sometimes caused by earwigs, and an inverted pot with some dry material in it should be placed on the top of a stake to form a trap.

PROPAGATION. — During the coming fortnight this operation will demand much attention, and it is essential that everything should be in readiness when a start in taking the cuttings is made. Pots and boxes should be filled with sandy soil and made firm. The growths of pelargoniums are in good condition this season for cuttings, being short-jointed and firm, and there should not be much difficulty in rooting them. Lobelia that is required for supplying cuttings should be cut down to induce the plants to make new growth. Heliotropiums, Salvia patens, and gazanias may be propagated at once, and the pots placed in a close cold frame. Cuttings of heliotropiums quickly root, and can be potted up singly into three-inch pots in which they may be wintered. When fresh growth commences early in the year these plants should be shifted into larger pots, when good sized examples will be obtained.—E. C. Pooley, Gnaton Gardens.

OBSERVATION.

He took such cognizance of men and things,
If any beat a horse you felt he saw;
If any cursed a woman, he took note;
Yet stared at nobody—you stared at him,
And found, less to your pleasure than surprise,
He seemed to know you and expect as much.
Browning.—"How it Strikes a Contemporary."

It is only of things that really interest us that we take observant note, most things passing before our gaze and leaving no more impression upon our minds than the fields of barley and rye upon that of the Lady of Shalott as she glided down the river to Camelot. The most familiar illustration of this is the manner in which a mere man is nonplussed when asked how a lady was dressed compared with the wonderfully detailed report which the same question will elicit when addressed to a lady. We learn from this not only that we must be interested in a thing, but that we must cultivate the faculty of observation, if we are to take accurate note of what we see. Doctor Johnson once remarked that few people could gather correct impressions from what they heard, and fewer still could convey those impressions correctly to others. The difference between the mental impressions we receive through the eye and those we receive through the ear is not great.

Few of us, perhaps, realise the important part observation plays in the education of the gardener, but when we do we see how necessary it is that a man should really love plants, for when this is the case he will be always looking at and observing them—there is a great difference between the two, almost that between the passive and the active—even getting off his cycle when passing a cottage garden to look at something which strikes him, and, if the opportunity offers, making inquiries about it, while Nature's own gardening is not without its influence upon him.

In this way a vast store of knowledge is obtained, and upon it the gardener, amateur or otherwise, can always draw when confronted with new problems. However valuable books may be, nothing can take the place of that accumulation of the results of observation which we call experience. This store will be increased every day by experimenting in different methods of cultivation with various kinds of plants, and taking careful note of the results. We want to know all about a plant's habitat in a state of nature, not only in regard to the part of the world in which it grows, but the aspect, elevation, kind of soil, etc., besides its manner of rooting and the climatic conditions to which it would be subject. Even then we shall not have obtained knowledge which will enable us to grow successfully all the members even of one species in some cases, so great is the diversity and individuality among varieties. Especially is this the case with the growth of fruit trees, there being as much difference in the family, for instance, of Worcester Pearmain, Bramley's Seedling, and Stirling Castle, as between a plum and a peach, and this has to be learned by observation of the results of different kinds of practice.

Observation of plant life means the end of the reign of rule-of-thumb practice, by which is understood the adoption of certain methods from habit or hearsay without knowing anything of the principles upon which they are based, and they often disappear when the reasons for them are inquired into and found wanting. When we study the growth of a plant, its roots, stem, leaves, flowers, and fruit, we get to know when it is best to do some things and avoid others. If several dwarf apple trees, for instance, are carrying heavy crops of fruit, and they are all fed alike in August, it will probably be found that the flavour of the early varieties among them is impaired and the size and quality of the mid-season varieties is increased; also that the stimulus given to the late roots will result in growth continuing so late in the autumn that the fruits will not finish properly, and consequently in February and March, when they should be just in season, they will be shrivelled as if picked a month too soon. A man who has had this experience—supposing him to be observant enough to associate cause and effect—will abstain from feeding some, if not most, varieties of apples in the latter part of the summer, not because he is told it is best not to do so, but because he knows it from past experience. This illustration is sufficient, and is applicable to the whole field of growing practice. But when we have collected the results of many years of observation, it depends then upon our inherent capacity to distil out of them that which is above rubies. Tennyson says that,

"Knowledge comes, but wisdom lingers,"

and we remember learning in our school days that a King of England was described by one of his contemporaries as "the most learned fool in Christendom."

We may fitly close these remarks with the lines of Cowper:

Experience, slow preceptness, teaching oft
The way to glory by miscarriage foul,
Must prompt him, and admonish how to catch
The auspicious moment.

Alger Petts.

LUCULIA GRATISSIMA.

This exquisitely fragrant subject was introduced into our gardens from the Temperate Himalyas as far back as 1823, and throughout the whole of this period it has been considered a "miffy" sort of shrub, and not by any means of easy propagation.

Failures to cultivate this winter-flowering shrub successfully are not rare, and the best flowered and finest specimens that have come under my notice have been planted out in a cool greenhouse, and against the ends of a peach house. It is now clearly understood that the plant resents transplantation or root disturbance, and, further, is exceedingly susceptible to extremes of any kind.

Whether planted out or grown in large pots or tubs, very thorough and efficient drainage is required, and as a medium nothing better can be found than equal parts fibrous peat and loam, with leaf-soil, charcoal, and sand added.

The luculia yields up its inflorescence at a season when choice and fragrant flowers are none too plentiful, namely, from October to January, and when its beauty is past the growths should be shortened but not severely dealt with, and, dating from this time until late in April, water should be sparingly applied. About that time the border should be top-dressed, and the supply of water be very gradually increased, with a view to the production of strong and vigorous growths that will be responsible for the next winter's display. I cannot call to mind any plant that so soon shows the ill-effects of insect attack as the luculia, hence cleanliness must be observed, including the sponging of the leaves from time to time to remove dirt deposits.

With regard to propagation experience goes to show that the cuttings should be inserted immediately they are removed from the parent plant, and be placed in a propagating case with a fairly strong bottom heat. While engaged in a well known nursery we experienced no difficulty in the matter when treated in this way. H. A.

HIBISCUS SYRIACUS.

This is a beautiful free-flowering deciduous shrub that should be grown in every garden where flowering shrubs are appreciated. It may not flower as freely in the northern as in the southern counties, but there is no question about its free-flowering propensities in the latter, and as there are in many gardens very dry banks and borders, where such subjects must be grown, I wish to draw the attention of readers to this species. I had several very fine specimens which flowered profusely every year for many years, and made moderate growth each season; the wood ripened well, of course, and this condition meant plenty of flowers. The soil, or, rather, rubble, in which one (the best) plant grew, was extremely poor, and I was surprised that so much growth and so many flowers appeared every year. The bush really seemed to depend upon the rains for sustenance, and on this account I recommend these free-flowering plants for poor soils. The flowers of H. syriacus are double, and, in appearance, closely resemble those of several varieties of show pelargoniums, being purple and white. Cuttings root freely if inserted in sandy soil under a handlight in August. The glass must be kept on until next spring. G. B.

THE NATIONAL VEGETABLE SOCIETY'S TRIALS.

Below will be found the society's official report on early peas sent for trial to the Times Experimental Station, Sutton Green, Surrey, and which were inspected by the committee on June 19, 1911.

The total number of stocks sent for trial was fifty, supplied by twenty-two diverse seedsmen. The sowings took place on March 19, in rows 20 feet in length, all being admirably grown and staked. For purposes of comparison the varieties were divided into dwarf and tall, the former ranging from 15 inches to 24 inches in height, the latter ranging from 2½ feet to 4 feet in height. Of the dwarf section three marks or highly commended were awarded to Daffodil, from Messrs. James Carter and Co.; The Laxton, from Messrs. Laxton Brothers; English Wonder, from Messrs. Dobbie and Co.; Peter Pan, from Messrs. Watkins and Simpson; and Little Marvel, from Messrs. Webb and Sons and Messrs. Barr and Sons. Of taller varieties Pilot, 3 feet in height, received three marks or highly commended, from Messrs. Dickson, Brown, and Tait, Messrs. Webb and Sons, Messrs. Alex. Dickson and Sons, Messrs. Hurst and Sons, and Mr. Yates, of Evesham. Three marks were also awarded to Gradus, 3½ feet, from Messrs. Dobbie and Co., Messrs. Dickson, Brown, and Tait, Messrs. Watkins and Simpson, Messrs. Alex. Dickson and Sons, and Robert Sydenham, Limited. Three marks were also awarded to Ready Reckoner of the Pilot type, from Mr. W. G. Holmes, Tain, N.B.; Early Primo, from Messrs. Dickson and Robinson and Messrs. Watkins and Simpson; Talisman, from Messrs. Sharpe and Co., of Sleaford; First and Best from Messrs. Dickson and Robinson; Ideal, from Messrs. Sutton and Sons; Glory of Devon and Western Express, from Messrs. Robert Veitch and Sons. Two marks were awarded to Giant Lightning, from Messrs. Barr and Sons; Vanguard, from Messrs. Sharpe and Co.; and Snowdrop, from Messrs. James Carter and Co.

A number of varieties sent were of the round-seeded, small-podded order, and these were greatly deficient in cropping qualities and in flavour. But, as almost one-half the whole number secured high commendation, it is obvious that the standard of edible peas is to-day a long way superior to what it was some thirty to forty years since.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

Royal Horticultural Society.

There was a holiday air about the meeting held at Westminster on August 1, and very few people seemed to take things seriously. The exhibition was a small one, visitors were few, and most of the regular habitués were away for their holidays. A scaffolding up under the roof of the hall, and other tokens, showed that the work of redecoration was in progress, and seemed to suggest that the show was a bit of a nuisance.

Some interesting plants were on view, but the groups were not of a very high quality.

FLORAL COMMITTEE.

A bank of hardy flowers from Messrs. T. S. Ware, Lim., Feltham, was notable for its sheaves of phloxes, scabious, Sedum maximum purpureum, Crinum Powelli, and Liatris spicata; in the centre of the group were large numbers of spikes of the old Agapanthus umbel atus and its white form.

In the contribution from Messrs. Jas. Veitch and Sons, Chelsea, the cannas were very gorgeous, and the variety named Terra Cotta (A.M.), with a great spike of orange-tinted terra-cotta-coloured flowers was a notable one; Begonia Lucerna with great pendant trusses of deep red-pink flowers; the red bracted Mussænda erythrophylla (A.M.); and the graceful Thalictrum dipterocarpum, some of the spikes of small bluish flowers being 10ft. high.

Cannas were well shown by Messrs. H. Cannell and Sons, Swanley, leading varieties being J. B. van. der Schoot, Gladioliflora, Mephisto, Juanita, and J. S. Boosig; with the cannas came large bunches of fruiting branches of Rubus palmatus.

One of the largest exhibits was that of herbaceous phloxes from Mr. James Box, Lindfield, who staged quantities of George A. Strohlein, Le Mahdi, Freifraulein Von Lassberg, the pink Lindfield Beauty, Dr. Konigshofer, a new deep salmon scarlet; Frau Hornung, Baron von Dedem, deep salmon, and the good Old Meteor.

Some excellent gloxinias, the results of seeds sown on January 3, were arranged in the centre of the hall by Messrs. Jas. Carter and Co., Raynes Park, and represented their Invincible Prize strain; the rich purples, pure whites, soft pinks, pretty lilacs, rich crimsons, and cherry reds were all greatly admired for the purity and substance of their colouring.

Messrs. Webb and Brand, Saffron Walden, showed their splendid double hollyhocks, staging individual flowers on boards in front of tall, stately spikes of fine blooms. Olive Chater, pink; Salmon Queen, salmon; Miss Lizzie King, yellow; Luna, cream white; Mulberry Gem, maroon; Crimson Queen, deep red; and Alba Superba, white, were among the best of the named sorts.

Old dwarfed Japanese trees in fancy pots were contributed by Mr. G. Koizum, 35, Bessborough Gardens, S.W.

Mr. G. Reuthe, Keston, brought up many interesting things, notably the double gypsophila, Crinum Powelli, Chelone barbata, Phygelius capensis, and Stokesia cyanea.

A collection of cut verbenas, set up by Mr. Edwin Beckett, V.M.H., gardener to the Hon. Vicary Gibbs, stood the heat badly, but it served to show the wide range of colouring in these useful flowers. From Aldenham came Itea ilicifolia (A.M.), an interesting Chinese shrub, with long pendant tassels of green flowers, acalypha-like, borne on an osmanthus-like shrub. Another good shrub was Cornus paucinervis (A.M.), an evergreen, with neat leaves, closely set on freely-branched reddish stems; the flattened inflorescence consists of a large number of cream-white flowers.

From the Tully Nurseries, Kildare, Mr. Paine brought over a large collection of gladioli, filling a large table with the spikes of showy flowers; a new deep crimson was named Sir Fred Moore, and a new salmon variety, with crimson and red blotches was named Lady Moore.

Mr. Batley, Shelton Castle, submitted a salmon-buff border carnation named Mrs. Wharton (A.M.).

Campanula isophylla, and C. i. alba were both well shown in pots by Messrs. H. B. May and Sons, Edmonton; these are capital window and window-box plants, and should not be despised because they are old.

Tunica Saxifraga alba fl.-pl., a particularly elegant and free-flowering hardy plant, with small double white blossoms, was contributed in quantity by Messrs. Bakers, of Codsall, Wolverhampton; this firm set up their flowers in a large mound, which attracted a great deal of attention. The plants secured an A.M. in August, 1909.

Messrs. H. Homan and Sons, Nordwyk, Holland, sent some pretty gladioli, the violet-purple Baron Hulot, the pale-yellow Primrose Queen, and the pure white Mont Cenis being three of the best.

Messrs. Paul and Son, Cheshunt, displayed a goodly collection of herbaceous phloxes, but the spikes nearly all succumbed to the heat quite early in the day.

ORCHID COMMITTEE.

A beautiful exhibit and one that attracted a great deal of attention by reason of its beauty and novelty, was the display of the grand old Disa grandiflora put up by Mr. A. Taylor, grower to Mrs. Bischoffsheim, Warren House, Stanmore. There were about a hundred pots, and about a hundred and ten spikes, each spike carrying from two to six splendid blooms. As shown, they displayed this grand orchid at its best, and must have inspired many of those present to take up its culture. Some variation in colour was evident, but those which had vivid orange segments, and some with unusually rich veinings on the big lip, were particularly fine.

The beautiful Anguloa eburnea, with white aromatic flowers, was conspicuous in the small group of orchids submitted by Messrs. Charlesworth and Co., Haywards Heath; Oncidioda Charlesworthi, the old Bollea cœlestis, and fine plants of Zygopetalum Roeblingiana, Lælio-cattleya Callistoglossa, and Cattleya gigas were also included.

A cultural commendation was granted to Mr. Alexander, orchid grower to Sir G. Holford, Westonbirt, Gloucester, for a splendid plant of Phalænopsis violacea Clifton var.

Mr. R. G. Thwaites, Chessington, Streatham Hill, presented about a dozen flowering plants of Odontioda Thwaitesæ, some of them carrying flowers of very deep purplish hue.

The few plants sent by Mr. E. V. Low, Haywards Heath, included Cypripedium Faire Maud, Cattleya Lord Rothschild var. splendens, and a fine C. Hardyana.

A number of interesting things were shown by Mr. Collier, gardener to Sir Jeremiah Colman, Bart., Gatton Park, Reigate, notably Catasetum Cliftoni (A.M.), Cycnoches chlorochilon, Eulophia maculata, Cirrhopetalum pulchrum, Spathoglottis Fortunei with yellow flowers, and the old but rather rare Lælia monophylla.

From Sir Trevor Lawrence's collection at Burford Lodge, Dorking, Mr. White brought up Eria mysorense and Lælia Bella.

Cattleya Warscewiczi was grandly shown by Messrs. Sander and Sons, St. Albans, a dozen fine plants making a great show of gorgeous blooms; C. Rex, C. Queen of Sheba, and Cypripedium Maudiæ.

Mr. G. E. Day, gardener to H. S. Goodson, Esq., West Hill, Putney, had a fairly large group of orchids on this occasion, and showed Cattleya Warscewiczi, C. Hardyana, C. Mdme. Melanie Beyrodt, Sophro-lælio-cattleya Elissa, Lycaste Skinneri, Odontioda Thwaitesæ, Anguloa uniflora, and Cypripedium Maudiæ.

A pretty little set of Disa grandiflora came from Mr. W. H. Smith, gardener to W. James, Esq., West Dean Park, Chichester; all the plants were well grown.

Odontoglossum Rolfeæ, Cattleya Hardyana, C. Lord Rothschild, and C. fulvescens were the chief subjects exhibited by Messrs. Stuart Low and Co., Enfield.

FRUIT AND VEGETABLE COMMITTEE.

Some unusually fine fruits of a yellow tomato named Golden Glow gained for Mr. E. Beckett a well-deserved Cultural Commendation; and an Award of Merit was granted to a yellow-fleshed kidney potato, named Arduthie Early, from "Mr. Smith."

AWARDS OF MERIT.

No first-class certificate was awarded on this occasion.

Award of Merit.—To Itea ilicifolia and to Cornus paucinervis, from the Hon. Vicary Gibbs (gardener, Mr. Edwin Beckett), Aldenham House, Elstree; to Carnation Mrs. Wharton, from Mr. Batty, Skelton Castle, Yorks; to Mussænda erythrophylla, and to Canna Terra Cotta, from Messrs. Jas. Veitch and Sons, Chelsea; to Catasetum Cliftoni, from Sir Jeremiah Colman, Bart. (gardener, Mr. Collier), Gatton Park, Reigate; and to Potato Arduthie Early, which, according to the official list, was sent by "Mr. Smith."

MEDALS.

Silver-gilt Flora.—To Mrs. Bischoffsheim (grower, Mr. Taylor), Warren House, Stanmore, for group of Disa grandiflora.

Silver Flora.—To Mr. Paine, Tully Nurseries, Kildare, for gladioli; to Messrs. H. B. May and Sons, Edmonton, for campanulas and ferns; to Mr. Jas. Box, Lindfield, for phloxes; to Messrs. Jas. Veitch and Sons, Chelsea, for greenhouse flowering plants; to H. S. Goodson, Esq. (gardener, Mr. Day), West Hill, Putney, for orchids.

Silver Banksian.—To Messrs. Charlesworth and Co., Haywards Heath, for orchids; to Messrs. H. Cannell and Sons, Swanley, for cannas; to Messrs. Jas. Carter and Co., Raynes Park, for gloxinias; and to Messrs. Sander and Sons, St. Albans, for orchids.

Bronze Flora.—To Mr. G. Reuthe, Keston, for hardy flowers; to Messrs. Thos. S. Ware, Lim., Feltham, for hardy flowers; to Messrs. Webb and Brand, Saffron Walden, for hollyhocks.

Bronze Banksian.—To Messrs. Stuart Low and Co., Enfield, for orchids.

Haywards Heath.

A society that has not as yet received the publicity its operations merit is the Haywards Heath Horticultural Society. It held its twenty-third annual exhibition on Wednesday, July 20, when the public Victoria Park was the venue. This undulating park, with its abundant trees and larch woods, is an excellent place in which to hold a show, and it afforded also ample space for roundabouts and the impedimenta of a country fair, as well as a clear and level area for carrying out the excellent programme of sports conducted by the Haywards Heath Athletic Club.

The exhibits were accommodated in several tents, so grouped that one almost opened into another. The schedule consisted of [illegible] classes, and especially large provision was made for herbaceous and other hardy flowers, including the inevitable sweet peas and roses. Vegetables formed a good portion of the show, and the number of classes was almost bewildering, as gardeners, single-handed gardeners, amateurs, and cottagers were catered for, and there were a few open classes. The table decorations are judged by a ballot of the visitors, a method that may prove satisfactory at Haywards Heath, but one that is not, as a rule, eloquent of good judgment. The children were not forgotten, and there were three classes for wild flowers, and one of these was especially interesting, as wonderful collections of the local flora had been made, well set up, and duly labelled with popular and scientific names.

GROUPS AND PLANTS.

Instead of groups arranged on the ground, the prizes at Haywards Heath are given for a collection of plants arranged for effect upon a table 8ft. by 4ft. The chief award fell to Mr. G. Smith for a pleasing group of schizanthuses, begonias, gloxinias, ferns, palms, and selaginellas; Mr. W. F. Elvey, gardener to R. Foster, Esq., Summer Hill, Lindfield, second; and Mr. J. Sands, third. In the local class for a table of plants, a space of 6ft. by 4ft. was allowed, and Mr. A. E. Mays was the first-prize winner, as he also was in the somewhat similar class open to single-handed gardeners and amateurs. In several instances the exhibits in these classes lacked finish, that is to say, more attention should have been paid to the provision of suitable plants for the edging of the tables.

Plants were not particularly good; Mr. G. Smith, gardener to S. T. D. Throwgood, Esq., Clevelands, Haywards Heath, led for caladiums; Mr. J. Sands, gardener to T. Bannister, Esq., Limehurst, had easily the best coleus, big, bright, bushy specimens; Mr. G. Smith scored for a dozen gloxinias with large freely flowered plants of a good strain, and he was first for four begonias and second for six begonias and first for six gloxinias.

CUT FLOWERS.

The silver challenge cup given by Sir Alexander D. Kleinwort, Bart., for the best eighteen bunches of hardy perennials, was won by Mr. J. E. Shirley, gardener to the Rev. T. G. Wyatt, St. Wilfrid's Parsonage, Haywards Heath, and his collection was as fine as one could wish to see; he had famous big bunches of Watsonia Ardernei, Erigeron speciosa, Achillea eupatorium, Lathyrus The Pearl, Bocconia cordata, Lilium chalcedonicum, Chrysanthemum maximum Rev. H. Sanders, Gladiolus America—magnificent; Crinum Powelli, Spiræa Silver Sheaf, Phlox Aphrodite, gaillardias, helianthuses, and pentstemons. This was a collection that would have done credit to any society in the kingdom. Mr. H. Cherriman, gardener to Lady Giffen, Chanetonbury, Haywards Heath, was second with a good set.

Mr. H. Cherriman annexed the chief award for a dozen bunches of hardy flowers, and he had fine lots of Helenium Bigelowi, Rose Dorothy Perkins, and Chelone barbata; Mr. G. Clarke, Glenthorpe, Haywards Heath, second; and Mr. A. E. Mays third. Mr. H. Rowland, of Cuckfield, had the best nine vases of phloxes, three spikes of each; this, by the way, is a good class, and would be a great success in an ordinary season.

Roses were poor, but the boxes from Mr. P. T. Davis, Burgess Hill; Mr. E. B. Lehmann, Ifield Lodge, Crawley; Mr. J. E. Shirley and Mr. E. Rutland, gardener to G. A. Hammond, Esq., Burgess Hill, were of fair quality for so late a date, and they all secured awards.

The silver cup presented by Mr. J. Box for the best eighteen bunches of sweet peas was won by Mr. F. Beech, gardener to Mrs. Kensington, Uckfield, with some good flowers of Mrs. W. J. Unwin, Helen Grosvenor, Etta Dyke, Audrey Crier, Clara Curtis, George Stark, finely waved, and Helen Lewis; Mr. W. H. Smith, Hailsham, second; and Mr. E. B. Lehmann third. For six bunches of sweet peas the awards fell in order to Mr. A. Hounsell, gardener to Major G. Talbot, Balcombe; Mr. H. Marchant, Lindfield, and Mr. R. Durrant, Lindfield; there were ten entries.

FRUIT AND VEGETABLES.

Mr. H. Lazell, gardener to H. Mansfield, Esq., Beech Hurst, scored for white grapes, with good clusters of Muscat of Alexandria, while Mr. Grubb, gardener to L. M. Schleisinger, Esq., Bedales, was second, but he was first for black grapes with finely berried Madresfield Court. Mr. Lazell beat Mr. Grubb for peaches with good examples of Bellegarde, but Mr. Grubb scored for nectarines with River's Orange, Mr. E. Fairbrother, gardener to Lieut.-Colonel Dudley Sampson, Buxshalls, coming second. Mr. Lazell had the best melon.

Mr. G. Mortimer, gardener to Mrs. Wrighton, Ockenden, Cuckfield, led for tomatoes with splendid examples of Comet. Gooseberries, red and white, red and black currants, and cherries were all largely and well shown. Dr. Walters, Haywards Heath, was the leading prize-winner. In Messrs. J. Cheal and Sons' class for eight kinds of vegetables Mr. C. H. Jenden, Horsham, led the way with good produce, and Mr. J. E. Reeves, gardener to Captain H. Acton Blake, Rusper, was placed second.

Messrs. Sutton and Sons' prizes for a collection of vegetables were secured by Mr. J. E. Shirley; Mr. H. Manton, gardener to W. A. Sturdy, Esq., Paxhill; and Mr. E. Fairbrother, Lindfield, in the order of mention. Mr. Shirley was first in the local district class for six kinds of vegetables, while in a similar class open to single-handed gardeners Mr. Harris was first.

TRADE DISPLAYS.

The trade displays are arranged in two classes, those on a ground space and those on staging, and medals are awarded according to order of merit. In the case of those on staging, the gold medal fell to Mr. C. F. Waters, Balcombe, for a beautifully arranged exhibit of perpetual and border carnations; the silver-gilt medal to Mr. J. Box, Lindfield, who had a very bright exhibit of hardy flowers, in which gladioli, Watsonia Ardernei, and phloxes were very fine features; and the silver medal went to Mr. Frank Woollard, Cooksbridge Nurseries, near Lewes, for roses.

Only one exhibit arranged on the ground came into line with the schedule, and this was a charming one, composed of sweet peas, fresh and bright, and unusually well arranged by Mr. J. Box, Lindfield; it was awarded a gold medal.

Messrs. J. Cheal and Sons, Crawley, contributed hardy flowers, and Messrs. William Cutbush and Son, Highgate, presented a striking group of stove and greenhouse plants, flowering and foliage, with large vases of perpetual carnations rising well above the lower plants. A special award of a gold medal was made to the Highgate firm, although the extent of their display placed them outside the competition already noted.

Handsworth Floral Fete.

The twenty-seventh annual exhibition of this society was held in the public park, Handsworth, and it was rendered additionally auspicious by its synchronising with the Corporate Union of Handsworth with Birmingham, and having Alderman Bowater, the Lord Mayor of Birmingham at the opening ceremony.

Despite the long-continued tropical-like weather and drought, the quality of the exhibits generally maintained the traditions of the society, but there was a falling away numerically, more especially in the non-competitive classes, owing partly to the unfavourable season, and to the number of exhibitions that were being held elsewhere on the same dates.

The open class for a group of plants arranged for effect, not to exceed 300 square feet, with double straight fronts, tempted three well-known cultivators to enter the lists, namely, Messrs. J. Cypher and Son, Cheltenham; Mr. J. V. Macdonald, gardener to Sir George Kenrick, Edgbaston; and Mr. W. Vause, Leamington. The first-named firm scored with one of their oft-repeated, well-known tasteful arrangements. Messrs. Cypher obtained by their taking first place the final possession of the silver challenge cup in addition to the first prize of £20. Mr. Macdonald was an excellent second, with a somewhat lighter arrangement than usual that evinced much artistic ability. Mr. Vause also arranged an excellent example of floral art. In the class for twelve stove or greenhouse plants Messrs. Cypher easily led with some of their mammoth specimens; second, Mr. W. Vause; and third, Mr. A. Cryer, gardener to Mr. J. A. Kenrick, Berrow Court, Edgbaston. Mr. Cryer was successful in the gentlemen's gardeners' and amateur classes (five mile radius).

There was a keen contest in the class for table decorations (orchids excluded), and more than one contestant was severely handicapped by the effect of the combined strong current of wind, air, and high temperature on their flowers prior to the time of adjudication. The premier prize was awarded to Mrs. Newbold, Derby; second, Mrs. Winchester, Rubery; third, Miss E. Reeves, Balsall Heath; and fourth, Mr. W. J. Mattock, Oxford. Roses, pinks, carnations, and sweet peas were severally laid under contribution by the winners. Vegetables were creditably staged by several of the leading growers. For nine kinds Mr. A. T. Rainbow, Northfield; Mr. E. Deakin, Hay Mills; and Mrs. E. Winchester were the respective winners.

Roses were very well staged, and for twenty-four varieties Messrs. Perkins and Sons, Coventry, were an easy first, with good and fresh blooms; second, Mr. W. H. Frettingham; and third, Messrs. Chapman and Collins, Leicester. Extra prizes were awarded to Messrs. W. and J. Brown, Peterborough; and King's Acre Nursery Co., Hereford. For a collection of roses, arranged in a space 8ft. by 4ft., for effect, Mr. J. Mattock, Oxford, and Messrs. W. and J. Brown were the first and second respectively, with tasteful arrangements. Bowls of roses were well staged by Messrs. Perkins and Sons, Mr. J. Mattock, and Mr. W. H. Frettingham. For twelve roses Messrs. W. and T. Mattock, Messrs. Perkins and Son, and Mr. Frettingham were the successful competitors. For twelve bunches garden roses, Messrs. J. Mattock, W. T. Mattock, and W. and J. Brown were the prize-takers. In the class for twelve tea roses distinct, the awards were made in favour of Mr. W. T. Mattock, Mr. J. Mattock, and Messrs. Chapman and Collins.

Carnations formed an interesting section. For twenty-four varieties, to be shown in vases, as grown, with own foliage, Messrs. A. R. Brown, Lim., King's Norton, were a capital first; second, Mr. J. C. White; third, Mr. W. H. Clements. For twelve border carnations, the foregoing winners repeated their success in the order named. Violas were well shown. For twelve bunches with foliage, Mr. F. Velly (a new exhibitor), King's Heath; Messrs. W. Pemberton and Sons, Bloxwich; and Mr. Howard Allen, Handsworth, were the respective winners. Sweet peas were for the season fairly well staged. For twenty-four bunches in not less than twelve varieties, twenty stems, arranged with suitable foliage in a space 6ft. by 4ft., Mr. R. Wright, Formby, led, with Mr. G. Deakin and Mr. W. Marple, Wolverhampton, following. In the class for twenty-four bunches hardy border flowers, the contest was keen, and the successful winners were Messrs. Bostock and Sons, Moseley; Messrs. Pemberton and Sons, Bloxwich; and Mr. C. Holder, Erdington.

Coleuses and caladiums are always in splendid condition at Handsworth. Mr. A. Cryer, gardener to Mr. J. A. Kenrick, Berrow Court, Edgbaston, scored for coleus. Mr. Joe Winter, gardener to Mr. C. A. Palmer, Handsworth, and Mr. J. Boston, Handsworth, being second and third. For six caladiums Messrs. A. Cryer and J. Winter were the successful competitors.

There was a number of classes provided for gentlemen's gardeners and amateurs within a radius of five miles of Handsworth Park, and in competition for the prizes for a group of plants arranged for effect Mr. Robert Usher, gardener to Mr. J. Archibald Kenrick, Harborne House, Harborne— a new exhibitor at Handsworth—scored with a highly creditable arrangement, and in which a fine specimen of cattleya was an outstanding feature. Mr. J. Winter and Mr. J. Boston second and third.

For six stove or greenhouse plants, Mr. A. Cryer, gardener to Mr. J. Arthur Kenrick, Berrow Court, led with meritorious examples; second, Mr. J. Waite; and third, Mr. A. Sanders. For six exotic ferns, Mr. A. Cryer won; Mr. J. R. Shand and Mr. J. Winter following closely; and for three ferns Mr. A. J. Rabone, Mr. R. Usher, and Mr. J. Boston were the respective winners. Zonal pelargoniums were well shown by Mr. J. Boston, Mr. A. Cryer, and Mr. R. Usher. For six gloxinias Messrs. A. Sanders, J. Boston, and R. Usher were the prize-takers, staging good examples. For six double begonias Messrs. R. Usher and A. Cryer annexed the prizes. For six single begonias Mr. A. Sanders and Mr. A. Cryer won. Liliums were well shown by Mr. A. Cryer and Mr. A. Hudson.

A silver cup, value five guineas, was awarded to Messrs. Artindale and Sons, Sheffield, for a display of carnations and violas, and a silver-gilt medal to Messrs. Young and Co., Cheltenham, for carnations; to Messrs. Simpson and Sons, Birmingham, for sweet peas; to Messrs. Grove and Son for herbaceous flowers.

Forestry at the "Highland" Show.

It was at the Highland and Scottish Agricultural Society's Show at Inverness in 1901 that a commencement was made with a forestry section, and since that time the "Highland" has not been without interesting exhibits organised by the Royal Scottish Arboricultural Society, whose president now is Sir John Stirling Maxwell, Bart. The results of these fine displays at the various centres at which the society's shows have been held have done much to increase the interest in arboricultural matters. This year the forestry exhibition, which was once more at Inverness, was one of the finest ever organised by the Royal Scottish Arboricultural Society. The exhibits were of a very practical character, designed to instruct the forester as to the trees he ought to plant, the soils most suited for different kinds of trees, and the various conditions that have to be taken into account in the successful production of timber.

Pride of place must be given to the Darnaway estate for the comprehensive and complete nature of its exhibits staged by Mr. Scott and his assistant, Mr. Watt. The display was most interesting and instructive, and included over 50 varieties of cones, and nearly 40 varieties of the finest quality of native-grown timber. The collection of plants, too, was very fine. There was a cut from a Pedunculate oak which was 200 years old when cut down, and a plank of a Spanish chestnut 114 years old, one of English elm of the same age, of Scots pine 130 years old, and a section of larch 95 years old. What added not a little to this fine entry was a series of some 30 photographs taken by Mr. Watt, which were greatly admired.

A most useful and interesting entry was that of Mr. Gilbert Brown, forester to the Countess Dowager of Seafield. The specimens shown were all grown in the famous Abernethy forest. Six sections of larch, three of which indicated decayed heart rot and the other three sound timber, showed to a certain extent the effect that different soils have on the health—and therefore on the quality—of timber. Those specimens showing heart rot were taken from trees grown on ground with a thin upper layer of medium forest soil with a very indifferent under-layer, this layer being either rock, pan, or gravel. It is not suggested that all the larch grown on this soil suffered from heart rot, but it is maintained that on areas which intersect woods containing soil of the nature just described, heart rot is common. The sound specimens were all taken from trees grown on soil that had a certain amount of depth, and with good natural drainage.

The composition of the soil varied. While, on the one hand, it was absolutely pure soil, on the other it was good soil with a certain amount of broken rock, and yet not close enough to check the growth of the tree in the least. The trees were all grown at an altitude of from 700 to 800 feet above sea level. Mr. Brown also showed samples of turf taken from localities being prepared for natural regeneration. These samples were divided into four classes: (1) Showing the effect of grazing in preparing the ground for natural regeneration by keeping the heather short, and otherwise breaking up the turf. (2) Showing the natural condition of the work and the herbage thereon after the cattle have been removed for a few years—the heather and moss having increased considerably. (3) Showing the condition of the wood after the cattle had been removed for about ten years—the plants are about 4ft. high, and the heather had grown so strong that natural regeneration with such a covering of herbage became impossible. (4) Samples of made soil from the natural woods. The judges thought very highly of Mr. Brown's display.

There were also on view some fine specimens of Scots pine, larch, and Norway spruce from the Earl of Moray, the Marquis of Graham, Lochiel, Captain Stirling of Keir, Sir William Gordon Cumming, Bart., Mr. C. W. Dyson Perrins, of Ardross, and Mr. David Leckie, Kippinross. Several of those gentlemen had also on exhibit splendid specimens of ash, elm, and oak. Two 50ft. specimens of the popular Japanese larch were on view from Beaufort Castle, Lord Lovat's Scottish seat. The Ardross estates were strongly in evidence in every section, showing fences, gates, sawn timber, cones, and diseased seedlings. Messrs. Howden and Co. contributed a particularly interesting and efficient collection of newest and best forest tools. The Durris estates (near Aberdeen), over which Mr. Crozier is forester, sent a fine display of over sixty varieties of exotic timbers. Altogether, it was a most interesting and instructive collection, and reflected the highest credit on all concerned.

Broughty Ferry Horticultural Association.

The members of this association, along with a few members from Dundee Horticultural Association, thoroughly enjoyed an outing in the picturesque and historical gardens and policies of Panmure House, kindly thrown open to them by the Earl of Dalhousie. At the east entrance Mr. John Simpson, head gardener, and Mr. William Davidson, head forester, received the visitors, and escorted them to the gardens, where Mr. Simpson conducted them through the extensive glass ranges, where there was a display of fruit and flowers which created much interest, the famous corridor coming in for a good deal of praise. In passing through the gardens a general halt was made at a brake of young roses budded last year, the newest and best in hybrid teas and teas being represented at their best. These are intended to augment the previous year's stocks already looking well in the flower garden, which, by the way, Mr. Simpson is converting into a rose garden of his own design. At the old castle ruins just outside the gardens the party had a commanding view of the picturesque glen with its winding stream and well-wooded slopes. Those interested in the historical associations of Panmure took a keen delight in inspecting the foundations and ruins of the old castle, which was razed to the ground in 1304. Tea was afterwards served on the lawn at the modern residential house of Panmure, a noble pile inhabited only by the caretakers. A ramble in the grounds under the charge of the forester, Mr. Davidson, revealed some eccentric mementoes of the noble barons who ruled. Before leaving, the President, Mr. James Bethel, expressed the company's thanks to the Earl of Dalhousie and his factor Mr. Robertson, for their kindness in throwing the gardens and grounds open for inspection. Mr. James Slater likewise returned thanks to Mr. Simpson and Mr. Davidson for their guidance and attention. Mr. Davidson replied for all, and expressed the pleasure with which they all welcomed the visitors.

Dundee Horticultural Association.

The members of this association, along with those of Broughty Ferry Association, had an enjoyable outing recently to Cortachy Castle (the residence of Lady Airlie), near Kerriemuir, an inland town made famous as "Thrums" by J. M. Barrie.

The party made the journey by motor 'bus, motor car, and cycle, and on arrival were conducted round the gardens and beautiful grounds by Mr. W. Reid, head gardener. The leading features noted in the rambles were the topiary work and yew hedges in the gardens, and the magnificent old specimen trees in the grounds, as well as those more youthful with every appearance of vigour. The castle is a splendid pile, resting on wide reaches of well-kept lawns near the brink of the South Esk, which at this part rushes wildly over the huge boulders in its course to the sea, and when in spate it must be a glorious spectacle from the windows. A ramble along its banks proved a treat to the botanist, geologist, artist,and angler, each of whom could help his neighbour to enjoy himself, or in turn exchange their thoughts and knowledge with each other for mutual benefit. Picnic tea, a little speechifying, and then homeward bound, filled with happy thoughts of another memorable Saturday afternoon well spent amid ennobling scenes.

The "Daily Mail" Sweet Pea Show.

The sweet pea competition instituted by the "Daily Mail," and held at the Crystal Palace, Sydenham, on July 28 and 29, excited much interest throughout the country, and there was an enormous number of entries, these coming from practically every part of the British Isles, and some 38,000 bunches were received.

It was a great and interesting show, and well managed. A committee of judges were working nearly all Thursday night selecting out the ten thousand best bunches, and this selection was staged in the broad transept of the Crystal Palace. At 8 a.m. on Friday morning a committee of ten judges set to work on the 10,000 bunches, and presently selected the 1,003 best. They then made a provisional selection of the best 103, and subsequently made their final selection. By about twelve o'clock the task was completed, but as the public was not admitted to the sweet pea show until 3 p.m., they did not see all the flowers at their best.

The £1,000 prize went to Mrs. J. H. Fraser, The Manse of Sprouston, Kelso, whose varieties were King Edward Spencer, Mrs. Hugh Dickson, John Ingman, and Nubian; second prize (£100) fell to Mr. H. W. Richards, Westridge, Ryde, Isle of Wight, who had bright flowers and neat, pleasing spikes of Nettie Jenkins, Thos. Stevenson, Clara Curtis, Mrs. Hugh Dickson, and Etta Dyke; the third prize (£50) was awarded to the Rev. D. D. Fraser, The Manse of Sprouston, Kelso.

The first reserve bunch came from the Rev. Harold Mayall, The Parsonage, Comrie, Perthshire; the second reserve bunch was sent by Miss Elsie Price, Craven Heifer Inn, Skipton, Yorks; and the third reserve bunch by Miss Kate Trotter, Langton Grange, Darlington.

These three latter were included in the one hundred bunches that secured silver medals, and then followed nine hundred bunches, to each of which bronze medals were awarded. Among the medalists were many amateurs well known in the sweet pea world as strong competitors, but evidently the long drought as well as the severe test of carriage through the post had distressed the flowers greatly. On the whole the Scottish and North of England flowers stood the journey best, and in many cases more care in packing would have placed the flowers in close contest with the best half dozen.

The only non-competitive exhibit of sweet peas was a large and delightfully fresh one from Mr. W. J. Unwin, Histon, Cambs., who contributed beautiful blooms of Nettie Jenkins, and Mrs. W. J. Unwin, as well as many of the older and very popular sorts.

From the Gardeners' Magazine Office came an exhibit of horticultural handbooks, including, of course, "Sweet Peas and Their Cultivation," farm and garden handbooks, and a selection of coloured plates that have appeared in our contemporary, "Amateur Gardening."

Into the children's competition one could read a vast amount of patient care, unremitting attention, and not a little pathos. Connie Bedford, 26, Polton End, Berkhamsted, won the premier award, and Herbert Quinton, 12, Rosebery Road, New Catton, Norwich, won the second prize.

The artificial sweet peas staged were not, in the opinion of many sweet pea experts, a great success.

Eastbourne Sweet Pea Show.

The show held in the Floral Hall at Devonshire Park last week was a great success. One contributing feature was the magnificent and suitable building in which the flowers remained fresh until the end of the second day, due to the cool temperature. With such excellent conditions prevailing and a magnificent array both of honorary and other exhibits, and the summer weather, there was a large and fashionable gathering of flower-lovers.

Among the trade exhibits that of Messrs. Sutton and Sons, was considered the best; it comprised handsome pyramids of clarkias, melons, and vegetables, and in addition to the gold medal award, won the special silver bowl given for the most meritorious display in the show. Mr. C. F. Waters, of Balcombe, Sussex, was also awarded a gold medal for a fine display of carnations. Silver-gilt medals were awarded to Mr. James Box, Lindfield, for a handsome group of herbaceous plants; Messrs. Young and Co., of Cheltenham, for carnations; and Messrs. G. and A. Clark, of Dover, for a picturesque rock garden exhibit.

Silver medals were awarded to Messrs. H. G. White and Co., of Eastbourne, for a tasteful arrangement of sweet peas and English fruit, including good dishes of pineapples, figs, peaches, and nectarines; Mr. T. Durrant Young, also of Eastbourne, showed roses, which were remarkably well staged and none the less well grown, and included all the best varieties. Mr. C. W. Breadmore, of Winchester, gained his medal for sweet peas.

Other exhibits which gained awards were those from Mr. Wm. Knight, Hailsham Nursery; Mr. G. T. Scott, Upperton Nurseries, and Mr. Chilvers, gardener to Cecil Chandless, Esq., of Berwick, each of whom contributed exhibits that were much admired.

In the open classes, trade excluded, the principal prize for sweet peas was won by Mrs. Kensington, Uckfield (gardener, F. Beale), who, in addition, won a silver bowl presented by Mr. Roland Burke. Mr. J. Allan, gardener to C. A. Morris Field, Esq., second, and Mr. G. Whitehorne, gardener to C. Diplock, Esq., Polegate, third. There were numerous other exhibits and classes provided for sweet peas, and, considering the drought, excellent examples were to be seen. The prizes for table decorations for ladies were keenly contested, and the several arrangements proved quite an attraction, there being eleven or twelve entrants.

Bristol Gardeners' Association.

The usual monthly meeting was held on July 27, at St. John's Parish Rooms. Mr. Perry presided over a good attendance. An interchange of lectures with Brislington was inaugurated, and Mr. W. J. Pollard, who represented that society gave a lecture on "Begonias." The lecturer advised sowing seed early in January, transferring to boxes when the seedlings are very small. Then he suggested transplanting them to other boxes when the plants have attained a good size, and bedding them out in summer quarters at the end of May. He advised mulching the beds heavily. For indoor decorations the tubers should be started in boxes, and put into pots when growing freely, and potting firmly at the final shift. A good discussion followed, the chairman and Messrs. Binfield, Bastin, Morse, Jennings, Garnish, Woodward, Shaddick, and Willcox took part. For four bunches of sweet peas Mr. Harford was first, and Mr. T. Clark second. Mr. Jennings was awarded three points for Odontoglossum tigrinum, and Mr. Garnish a certificate for the new double marguerite Mrs. F. Sanders.

Southampton Carnation Show.

The thirteenth annual exhibition of carnations and sweet peas was held on the Royal Pier, on the 28th ult., but no doubt owing to the extreme dry weather experienced of late, was short of entries, rendering the display less attractive than usual. A comprehensive schedule of prizes had been arranged, no fewer than thirty-three classes having been provided.

In Division I. nine classes were "open to all," five of these being for dressed flowers. For twelve distinct, flakes and bizarres, two entered, and Messrs. A. R. Brown, Lim., Wyehall Nurseries, King's Norton, were easy winners with fairly good blooms of Reliance, Mrs. T. Lord, Ethel Macrae, George Rudd, W. Prescott, and Cleopatra; Mr. Hayward Mathias, Medstead, second. The same exhibitors occupied similar positions for twelve fancies, distinct, Devonian, Alice Byron, Pasquin, Attraction, and Orlando were the more prominent blooms in the winning set. Messrs. Brown were also first for a dozen selfs, distinct, Daffodil, Hadzor, Aleppo, Major Galton, Alderman, and Iberia being especially noteworthy. For twelve yellow-ground picotees Mr. Hayward Mathias scored over his strong opponent with finely-developed blooms of Lady Douglas Galton, Gloria, Libra, Carona, and other well-known varieties. Messrs. Brown secured the leading award for a dozen white-ground picotees, and staged Silas Osbaldiso, Lady Ethel, Lottie, and Fair Maid in excellent condition.

The contributions to vase classes were highly attractive. For three distinct varieties, five blooms of each, three entered, the best coming from Messrs. A. and R. Brown, Lim., Canopia, Cambria, and W. H. Parton being the most noteworthy. Mr. W. H. Parton, Moseley, Birmingham, was second with good blooms of Margaret Thurston, Gaiety, and Clement. Messrs. Brown won for three fancies; Mr. Hayward Mathias occupying a like position for three yellow-ground picotees. In a small entry Messrs. A. R. Brown, Lim., obtained the premier award for twelve vases of selfs, fancies, and yellow-ground flowers; Mr. Hayward Mathias was a good second.

In the amateurs' section, Mr. W. H. Parton was the most successful exhibitor, winning for six fancies, six selfs, and six yellow-ground picotees, with medium-sized, neatly-dressed flowers. In the vase classes also Mr. Parton was invincible, securing first place for selfs, fancies, yellow, etc., flowers. Mr. J. H. Linnington, Newport, Isle of Wight, had the best of three entries for a vase of yellow self carnations, and also for a vase of blooms of a terra-cotta self.

American or tree carnations were well shown by Mr. F. Chandler, 75, Shirley Road, Southampton, who was first for six vases, three blooms of each.

The premier flowers were: Bizarre—Reliance, Messrs. A. R. Brown, Lim.; flake—Mrs. T. Lord, Messrs. A. R. Brown, Lim.; fancy—Hecla, Mr. Hayward Mathias; yellow-ground picotee — Lady Douglas Galton, Mr. H. Mathias; white ground picotee—Lady Ethel. Messrs. A. R. Brown, Lim. For a dinner table arrangement of carnations and picotees, with any foliage, Mrs. E. Ladhams, Shirley, was an easy first; Miss Taylor, Bemerton Rectory, Salisbury, second. Mrs. Bealing had the best stand or epergne of carnations and picotees, and also obtained the premier award for a table decorated with sweet peas.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

DISCOLOURED VINE LEAVES.—A. W. E., Holmwood: The discoloration of the vine leaves is due to the action of strong sunlight. In the earlier part of the season cold, dull weather necessitated the use of considerable fire heat; and, as a consequence, the leafage did not assume that firmness of texture which brighter light and less fire heat would have produced. The result is that the recent spells of brilliant weather have made the leaves blotchy. Double fish netting spread over the roof would have broken up the sun's rays; while a thin spraying of whitening over the roof-glass would have served a similar purpose. It is not too late to adopt either of these methods, and if dull weather should come, such thin shading can be removed in a few minutes.

VISIT TO LONDON PARKS AND GARDENS.—A. C., Notts: You should certainly allow yourself a full day for an inspection of the Royal Gardens, Kew; you would find much of interest and of educational value in the summer-bedding at Hyde Park, Regent's Park, Battersea Park, and Hampton Court. To the Royal Botanic Society's Gardens, Regent's Park, admission is by payment or by Fellow's order; the gardens contain many interesting trees and plants.

NEW SWEET PEAS.—D. T. H., Chesterfield: You cannot do better than place your orders at once for the new sweet peas you have selected as desirable, and if you do so, placing them with the several firms interested, you will then stand a chance of getting seeds early, provided the variety or varieties are to be sent out this autumn.

SANVITALIA PROCUMBENS.—J. B. C., Charlbury: Both the type and the double variety of Sanvitalia procumbens are very useful half-hardy annuals, the double form being especially good for planting in considerable masses on the rock garden, or for forming an edging to a border. Grown under the conditions so generally adopted for half-hardy annuals the sanvitalias are in no sense difficult to cultivate, and as they are low-growing and free-branching, they are not easily damaged by wind and rain, but soon cover a fair space. The flowers are deep yellow, and resembling small rudbeckias; and as these are produced freely, an attractive display is provided. So far as our experience goes, the sanvitalias are not utilised to the extent that they well might be in gardens, but this applies to almost all annuals, though, unfortunately, the present severely hot and dry season has shortened the lives of many, and consequently reduced their value.

CORDON GOOSEBERRIES.—C. E. L., Hull: A month ago the shoots should have been pinched back to within five or six leaves from the base. It is not too late to do the work now, but a knife will be needed, whereas finger and thumb would have sufficed before; further, the fullest possible development of the fruit buds at the base cannot now be obtained. However, do the work as soon as you can, and if any secondary growths advance presently pinch them back to one leaf before they are more than a couple of inches long. If summer pruning is practised the winter pruning consists in cutting back the shoots close to the basal clusters of fruit buds.

POTTING ARUM LILIES.—Y. C., Lincoln: The business of potting up arum lilies that have been rested should be taken in hand as soon as the foliage has quite died down, usually about the middle of August. If the old soil is at all tenacious it will be a good plan to give it a good watering a few hours before shaking it away from the roots, as this will save possible damage to new roots that have already formed. When the tubers are freed from the old soil, remove all side tubers, and set these aside for insertion in boxes to provide new stock. See that the tuberous root-stock is quite clean and healthy, and if any portion is diseased or damaged, remove it with a sharp knife and apply a dressing of powdered charcoal. Then proceed to the potting, using deep pots and substantial soil, but leaving room for a subsequent rich top-dressing. A layer of old manure over the crocks and a handful of sand immediately round the tuber will materially enhance the prospects of success. After potting, plunge the pots in ashes in a cold frame or out of doors, in a position that does not receive the full force of the sun; administer water with the greatest care until advancing growth and abundant roots demand a full supply.

NITROGEN IN ANIMAL MANURES.—H. H., Taplow: Writing in general terms, a ton of cow manure contains about 6lb. of nitrogen; a ton of horse manure, about 9lb.; a ton of sheep manure, about 11lb.; a ton of pig manure, 12lb.; and a ton of fresh hen manure, about 32lb. of nitrogen. Hen manure should be kept in a dry shed and mixed with a little finely sifted dry soil; it can then be finely broken down for use after a short period of storage.

LARGE FUNGUS ON POPLAR BRANCH.—M. E. M., Sevenoaks: The fungus is probably Polyporus sulphureus. Cut the affected branch well back—not less than six inches—behind the fungus, and at once paint the cut surface with tar. Take care that the tools used are disinfected before they are again utilised for cutting live trees.

COMPOSITION OF PEAS.—H. B. L., Exeter: The ash of pea straw contains about 21.8 per cent. of potash, 5.3 per cent. of soda, 7.7 per cent. of magnesia, 37.9 per cent. of lime, 7.8 per cent. of phosphoric pentoxide, 5.6 per cent. of sulphuric trioxide, 5.7 per cent. of silica, and 6.1 per cent. of chlorine. The ash of pea seeds contains the following percentages of the above constituents, taking them in the same order: 40.4, 3.7, 8.0, 4.2, 36.3, 3.5, 0.9, and 2.3. From these figures it will be gathered that potash, lime, and phosphates are needed in large measure for pea production.

BROWN VINE LEAVES.—T. B. H., Dulwich: The browning is probably due to the action of great heat and brilliant sunshine upon leaves, to which the roots could not supply sufficient moisture. Evaporation has been tremendous, and the roots of the vines have not yet become sufficiently numerous to meet the unusual demand. Rather heavy cropping would also account in some measure for the trouble.

RENOVATING VIOLAS.—R. T., Henley: Cut the plants over rather closely with a pair of small sheep shears, removing the greater part of the old growths and all dead flowers and seed pods. Thoroughly soak the beds with water, give a light dressing of some good fertiliser, hoe it in, mulch with leaf-soil or old manure, and water again. By this means the plants will be renovated and come again into bloom.

NAMES OF PLANTS.

L. G., Epsom.—1, Meconopsis Wallichi; 2, not recognised.

J. J., Hereford.—1, Populus tremula; 2, Juniperus chinensis.

J. S., Durham.—1, send when in flower or fruit; 2, Deutzia crenata fl. pl.; 3, Lysimachia thyrsiflora.

S. R. N., Birmingham.—1, Olearia Haasti; 2, Aloe verrucosa; 3, Francoa sonchifolia; 4, Leycesteria formosa.

H. C. W., Southall.—1, Cypripedium Lawrenceanum; 2, Struthiopteris germanica; 3. Pelargonium crispum.

W. S. B., Sidmouth.—1, Kalanchoe flammea; 2, Sedum pulchellum; 3, Azara microphylla; 4, Galtonia candicans; 5, Fuchsia Riccartoni.

F. T., Cheltenham.—1, Chelone barbata; 2, Erigeron speciosum; 3, Bocconia cordata; 4, Senecio clivorum; 5, Cochlioda Noetzliana; 6, Saxifraga oppositifolia.

MARKETS.

◆

COVENT GARDEN.

Flowers.

The drought has shortened the supplies of outdoor flowers, hence prices are firmer than is usual at this time of year.

		s. d.		s. d.
Adiantum cuneatum	per doz. bun.	4 0	to	6 0
Arums	per doz.	2 6		3 0
Asparagus	per doz. bun.	10 0		10 0
Cattleyas	per doz.	8 0		12 0
Carnations	per doz.	1 2		2 6
,,	per doz. bun.	6 0		9 0
Cornflowers	per doz. bun.	1 0		1 3
Coreopsis	per doz. bun.	1 6		2 0
Croton leaves	per bun.	1 0		2 6
French fern	per doz. bun.	2 6		4 0
Gaillardias	per doz. bun.	1 0		2 0
Gardenias	per doz.	1 0		2 0
Gladiolus	per doz. bun.	3 0		4 0
Gypsophila	per doz. bun.	2 6		4 0
Lilium auratum	per bun.	3 0		4 0
,, speciosum	per bun.	2 0		2 6
,, longiflorum	per bun.	2 0		3 0
Lily of the Valley	per doz. bun.	6 0		15 0
Marguerites	per doz. bun.	1 6		3 0
Mignonette	per doz. bun.	3 0		4 0
Odontoglossums	per doz. blms.	1 0		3 0
Pelargoniums	per doz. bun.	3 0		4 0
Roses	per doz.	1 0		3 0
Smilax	per doz. trails	4 0		5 0
Sweet Peas	per doz. bun.	1 0		2 0
Tuberoses	per doz.	0 4		0 6

Fruits.

Business is rather quiet with moderate supplies.

		s. d.		s. d.
Apples, Australian	per case	8 0	to	13 0
,, Tasmanian	per case	5 0		7 6
,, English	per bush.	3 0		6 0
Apricots, French	per box	0 8		1 0
Bananas	per bun.	4 0		10 6
Cherries, English	per ½ sieve	3 0		10 6
Currants, red	per flat	4 0		5 6
,, Black	per ½ sieve	5 6		7 6
Figs	per doz.	1 0		3 0
Gooseberries	per ½ sieve	2 6		5 0
Grapes, English	per lb.	0 10		3 0
,, Guernsey	per lb.	0 6		1 6
Lemons	per case	9 0		25 0
Loganberries	per peck	2 0		2 6
Melons	each	1 6		3 6
Nectarines	per doz.	3 0		15 0
Oranges, Denia	per case	12 0		30 0
,, Jamaica	per case	6 0		7 6
,, Mercia	per case	16 0		22 0
,, Naples	per case	8 0		10 6
Peaches	per doz.	6 0		15 0
Pineapples	each	2 0		5 0
Plums	per ½-sieve	3 6		6 6
Raspberries	per doz. pun.	6 0		8 0

Vegetables.

A brisk demand continues for greenstuffs and choice vegetables.

		s. d.		s. d.
Artichokes, Globe	per doz.	2 0	to	4 0
Beans, dwarf	per lb.	0 2		0 3
Beans, broad	per ½-sieve	1 6		2 0
,, runners	per bush.	3 6		4 6
Beet	per bush.	2 0		3 0
Cabbage	per tally	4 0		6 0
Carrots	per doz. bun.	1 0		1 6
Cauliflowers	per doz.	1 0		1 6
Cucumbers	per flat	4 0		7 6
Endive	per doz.	0 9		2 0
Horseradish	per doz bun.	8 0		12 0
Lettuce	per doz.	1 0		1 6
Marrows	per doz.	1 0		1 6
Mint	per doz. bun.	1 0		2 0
Mushrooms	per doz. lb.	6 0		12 0
Parsley	per ½-sieve	1 0		1 3
Peas	per bush.	3 0		4 0
Radishes	per doz. bun.	0 4		1 0
Spinach	per bush.	1 6		2 0
Tomatoes	per doz. lb.	2 6		4 0
Turnips	per doz. bun.	3 0		4 0

LONDON POTATO MARKETS.

The supplies are about equal to the demand, and prices are well maintained.

		s. d.	s. d.
Jersey	per cwt.	3 6	4 0
Cherbourg	per cwt.	3 0	4 0
English, rounds	per cwt.	3 6	4 6
English, kidneys	per cwt.	4 0	5 0

FORTHCOMING ENGAGEMENTS.

MONDAY, August 7 (Bank Holiday).—Andover Horticultural Society.

Bletchley and Fenny Stratford Horticultural Society.

Swanage Horticultural Society.

TUESDAY, August 8.—Leicester Flower Show; two days.

Northern Carnation Show, at Manchester Town Hall.

WEDNESDAY, August 9.—Brecon Horticultural Society.

THURSDAY, August 10.—Sevenoaks Horticultural Society; two days.

Taunton Deane Flower Show.

Prendergast Horticultural Society.

Border Horticultural Society, at Coldstream.

OBITUARY.

◆

MR. J. J. WILLIS.

It is with much regret that we record the death of Mr. J. J. Willis, which occurred at his residence at Harpenden on July 26. For a long period Mr. Willis occupied an important position at the Rothamstead Experimental Station, and possessed a remarkable knowledge of crop values, the influence of various manures upon crops, and especially their influence upon pastures. He took a keen interest in the practical side of his work, and also in the scientific aspects of horticulture. Mr. Willis has during the past twenty years been a regular and much valued contributor to the Gardeners' Magazine, and at all times was ready to place his wide knowledge at the disposal of our readers.

GARDENING ENGAGEMENT.

Mr. H. Nicholson, who has occupied the position of foreman in the gardens of Haldon House, Exeter, has been appointed head gardener to W. A. Glynn, Esq., Seagrove, Seaview, Isle of Wight, and enters on his duties on August 5.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1911. July 23 to July 29.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
July 23—Sunday	10 18	72	62	81	57
,, 24—Monday	11 6	71	61	80	59
,, 25—Tuesday	11 54	71	65	83	62
,, 26—Wednesday	7 24	59	59	75	57
,, 27—Thursday	14 30	71	66	80	57
,, 28—Friday	11 12	71	67	87	60
,, 29—Saturday	10 0	78	70	89	62
Means	(total) 76 24	70	64	82	59

Date. 1911. July 23 to July 29.	Rain.	Temperature of the Soil at 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
July 23—Sunday	—	70	66	62	49
,, 24—Monday	trace	70	67	62	55
,, 25—Tuesday	0·94	71	67	62	55
,, 26—Wednesday	0·07	69	67	63	52
,, 27—Thursday	0·07	68	66	63	49
,, 28—Friday	—	69	67	63	55
,, 29—Saturday	0·11	71	68	63	57
Means	(total) 1·19	69	66	62	53

CONTENTS.

PAGE
Answers to Correspondents ... 581
Bottling Vegetables ... [illegible]
Chrysanthemums ... [illegible]
Exhibitions and Meetings ... [illegible]
Notes of the Week ... [illegible]
Observation ... [illegible]
Paved Garden at Powis Castle ... [illegible]
Perpetual Carnations Outdoors ... [illegible]
Roses at Branches Park ... [illegible]
Summer Pictures in the Garden ... [illegible]
The National Vegetable Society's Trials ... [illegible]
The Schizanthuses ... [illegible]
The Value of the Garden ... [illegible]
Trees and Shrubs subject to Sunburn ... [illegible]
Trees suitable for Experimental Forestry ... [illegible]
Veronica gentianoides ... [illegible]
Work for the Week ...

ILLUSTRATIONS.
Portrait of Mr. A. Grubb, 565; Itea ilicifolia, A Waterside Group of Roses at Branches Park. 569; A beautiful Bed of Captain Christy 570; Festoon of Alberic Barbier and d'Orleans Roses, 571; Fancy Carnation 572; The Paved Garden at Powis Castle Veronica gentianoides variegata. 575.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out, Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working); thoroughly experienced in Fruit, Flowers, Vegetables; Inside and Outside work, where two or three are kept; well recommended. Apply F., care of Messrs, Charles Turner and Son, Royal Nurseries, Slough, Bucks.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 31; married when suited; excellent references. Address, Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working).—CAPTAIN USHER highly recommends R. Appleby as above; life experience in all branches; thoroughly understands Planning and Laying Out; also Land and Stock; many years' excellent character. Address APPLEBY, care of Captain T. Clemine Usher, Little Wymondley, Stevenage.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 31; married, two children. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working). — Mr. PHILIP ASHWORTH wishes to recommend W. H. SHAW as above; life experience; accustomed to large establishment; especially good at Laying Out new grounds; also Flowering Shrubs and Herbaceous Borders; married, family; many years' excellent character. Apply W. H. SHAW, The Lodge, Horsley Hall, Gresford.

GARDENER (Head Working).—F. W. FLETCHER, Esq., can highly recommend his Head Gardener as a thoroughly trustworthy experienced good all round man; age 45; married; one girl 14 years. F. GREENGRASS, 40, Primrose Terrace, Browning Road, Enfield, Middlesex.

GARDENER (Head Working, where several kept); life experience in good establishments, Inside and Out; well up in all branches, including land and stock; married, no family. M.C., c.o. Haxton, Melton Road, Hampton-on-Thames.

GARDENER (Head Working); South preferred; one or more under; life experience Fruit, Vegetables, Flowers, Glass; knowledge of Cows, Poultry; 32; married, three children; 3½ present place, seven and two previous; good references; photo. S. WAGHORN, Uppingham.

GARDENER (Head Working). Mr. THOMSON can with confidence recommend S. KNIBB as above; 4 years here as Head; life experience in all branches of horticulture; age 32; married. KNIBB, Pollards Wood Gardens, Chalfont St. Giles, Bucks.

GARDENER (Head Working); life experience in all branches; excellent characters; Head and Outside Foreman; age 33; married, small family. HUDSON, Wood Hall, Cupid Green, Hemel Hempstead.

GARDENER (Head Working, where several are kept); 22 years' practical experience in large establishments; highest references, character, ability; age 37; married. KING, Avenue, Stoke Prior, Bromsgrove.

GARDENER (Head Working); thoroughly experienced in all branches, desires Situation; certificated R.H.S.; formerly with Mr. E. Beckett, V.M.H.; married, no family; good characters. JOHN TAYLOR, The Gardens, Latchmere, Ham Common, Richmond, Surrey.

GARDENER (Head Working); life experience; 6½ years in last place; thoroughly understands Vines, Melons, Peaches, Flowers, etc.; knowledge of Stock; age 35; married, one child. GARDENER, Llangrwyney, near Crickhowel,

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushroom, ridge or flat; Kitchen, Lawn, Flower Garden. Special prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; aged 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

MR. A. LINDLEY recommends A. SIMMONS as GARDENER (First of two or Single-handed); life experience Inside and Out; two years present situation; six years previous; age 35; single. Apply, 6, Little-Roke, Kenley, Surrey.

WANTED, Situation as GARDENER, Single-handed or otherwise; handy, willing to be useful; single; life experience in all branches; understands horses, ride and drive; 5 years last situation. A, GRAY, Brookside Villa, Longham, Wimborne, Dorset.

GARDENER (Single-handed, or with Son to help); life experience in all branches; age 37; disengaged; good references. E. LIMEHOUSE, 11, Charleville Road, West Kensington.

GARDENER (Single-handed or otherwise); 14 years' general gardening; used to gas engine; married, 2 children, youngest 4½; age 31. J. MOONEY, The Stables, East Moor House, Harpenden.

GARDENER, 40; Single-handed preferred; thoroughly experienced; excellent character; active worker; Inside and Out with early vegetables; abstainer; married. A. BISHOP, Windmill Hill, near Hailsham.

GARDENER (Single-handed, or with help); experienced, Inside and Out; age 30; married, no family; good references. H. CATLEY, The Lodge, Pilgrim's Holt, Margery, nr. Reigate, Surrey.

GARDENER (Single-handed or Second) seeks SITUATION; understands Fruit, Flowers, Vegetables; age 25; single; good references; seven years last place. STRUTT, 70, Croft Street, Ipswich.

GARDENER (Single-handed) seeks SITUATION; 16 years' experience in flowers, fruit, vegetables; excellent references; age 30; single; disengaged. F. HYDER, 7, Stamford Road, Watford, Herts.

GARDENER or SECOND; in good place; well experienced in Fruit and general Plant routine; excellent references; married, one boy age nine. LEWINGDON, 26, Brighton Road, Earley, Reading.

GARDENER, Second (Inside or Out) well recommended by Head Gardener; age 26; married when suited. F. EAST, Kent Cottage, Chiswick House, Chiswick, S.W.

JOURNEYMAN, age 20, two years' good character; both Inside and Out; Bothy preferred. W. MEW, Bury Hall Lane, Alverstoke, Hants.

AS GARDENER; used to pony; over two years in present situation; age 24. Near London preferred. Apply J. SCOTT, 51, Manor Park Road, East Finchley.

MR. C. E. CRAWSHAY, of Gilstead Hall, South Weald, Brentwood, Essex, wishes to recommend his GARDENER (Under); five years' character, and leaving to better himself. Apply FRED. FURBANK, address as above.

UNDER GARDENER. — Respectable man, good references, requires employment; understands planting, bedding out, etc. Can look after horses.—P., 55, Bryanston Street, W.

IMPROVER, age 19, seeks SITUATION Inside; 4 years' experience in Garden Life; 3 years in present situation. Apply F. RICHARDS, Barlaston, Stoke-on-Trent, Staffs.

YOUNG MAN (21) seeks SITUATION under good Gardener; 8 years' experience, chiefly Outside; three years last place; willing to take duty. W. LEA, 18, Junction Road, Bath.

YOUNG MAN seeks SITUATION in Gardens (Inside and Out); height 6ft. 3in.; good references. Apply A. MAWSON, Mill House, Askham Richard, York.

YOUNG MAN, 28, single, seeks SITUATION, Inside and Out, or Kitchen Garden and Pleasure Grounds; Bothy preferred. Good references. Apply C. AVIS, Selsfield Common, West Hoathly, Sussex.

WANTED, Situation as GARDEN LABOURER, or as Single-handed; good experience; well used to garden work; married, no family; disengaged; good character. W. LING, Hunger Hill, Westcott, near Dorking.

YOUNG MAN (20) wants place in Houses; 6 years Outside, including over 3½ years last place. W. MONK, Lower Street, Stansted, Essex.

YOUNG MAN seeks SITUATION to look after Electric Light and Garden; well up in all branches; nine years last situation. EDWARD VILLA, Street Cobham, Surrey.

Situations Vacant.

HEAD GARDENER Wanted in September, where eight are kept; must be intelligent and possess special ability in Flower and Fruit Growing. Send copies of testimonials from employers only (present or past); originals will not be returned. Abstainer preferred. State wages, age, number of children, and age of eldest and youngest, to D. H., care of Street, 30, Cornhill, E.C.

WANTED, strong, active YOUNG MAN for Pleasure Grounds and Kitchen Garden; able to use Scythe and make himself generally useful under Gardener (Head Working); wages 16s. Apply, stating full particulars, to Kimsbury House, Gloucester.

BULB and SEED TRADE. — Wanted, ASSISTANT, accustomed to putting up Bulb orders; must be smart and with good references. Apply by letter with full particulars, stating age and wages expected, BARR and SONS (Private), 12 and 13, King Street, Covent Garden, London.

SITUATION COUPON

For AUGUST 12, 1911.

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

Please Repeat my Advertisement.

Name..

Address..

....

Date.........................

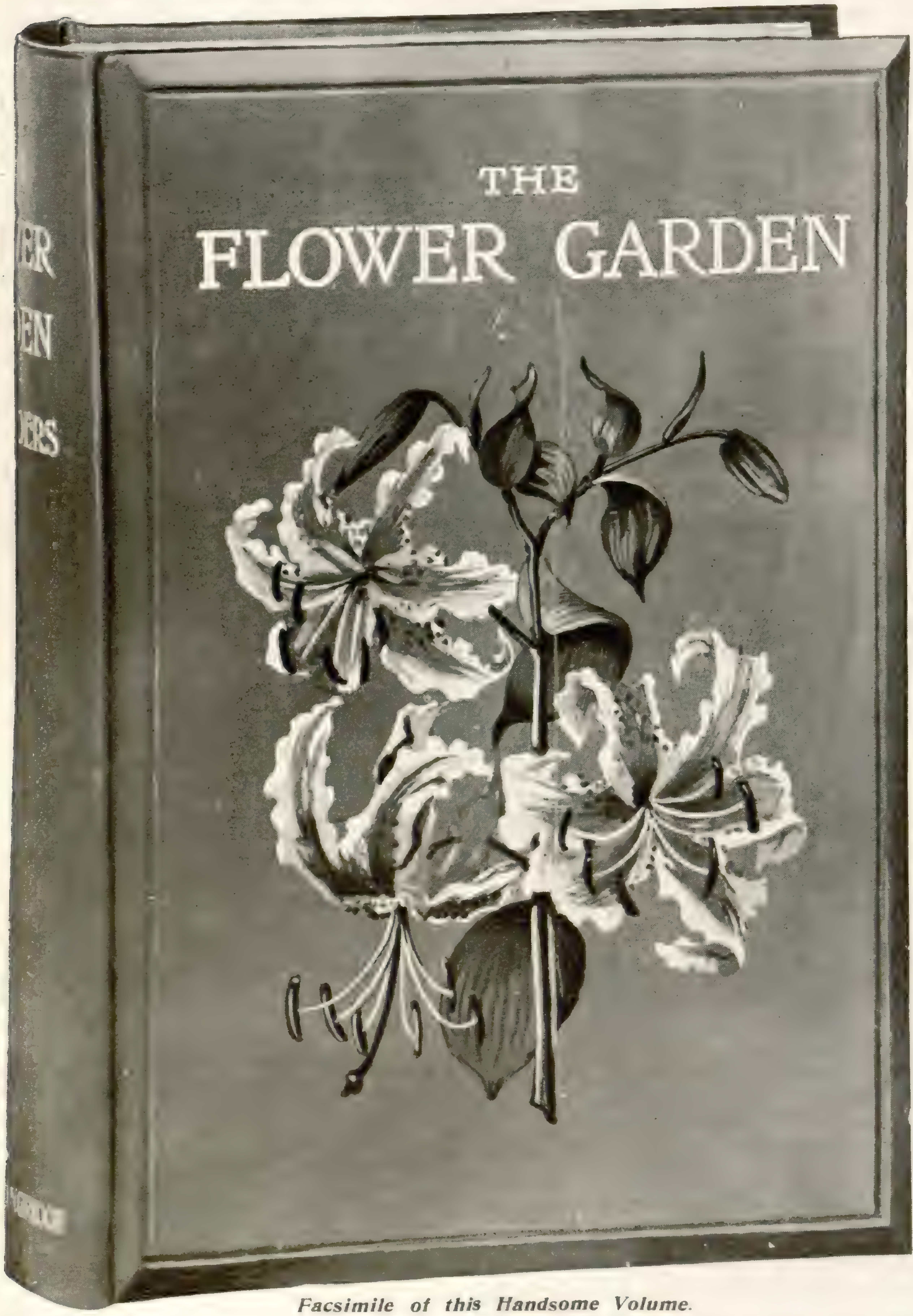
THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue

A COMPLETE GUIDE TO
MODERN GARDENING.

"THE FLOWER GARDEN," by T. W. Sanders, F.L.S.,

. . IS A . .

Complete Guide to the Culture of Outdoor Garden Flowers.



Facsimile of this Handsome Volume.

480 PAGES,
AND
64 PHOTO PLATES
of Garden Scenes,
Plants and Flowers.
Handsomely Bound in Cloth.

* *

CONTENTS.

- Fashioning the Garden.
- Beds and Borders.
- Walks and Paths.
- Lawns and Tennis Courts.
- Shrubberies.
- Rockeries and Ferneries.
- Water and Bog Gardens.
- Arbours and Summer-Houses.
- Arches and Pergolas.
- Edgings.
- Wild and Woodland Gardens.
- Walls and Fences.

Price **7/6** *Net.*

By post, packed in box, 8/-

- Garden Practice.
- Propagation.
- Colour Arrangement.
- Bedding.
- Annuals and Biennials.
- Bulbs.
- Hardy and Tender Border Plants and Flowers.
- Climbing Plants.
- Trees and Shrubs.
- Pests and Diseases.

Order Form.

To the Publishers of "THE GARDENERS MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

Please send me a copy of **The Flower Garden** by post, for which I enclose remittance of 8/-

Name..

Address..

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 3,015. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, AUGUST 12, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S AUTUMN & WINTER-FLOWERING BULBS, including Crocus Species, Colchicums, Hardy Cyclamen, Freesiae, Lachenalias, Roman Hyacinths, etc., for early planting. List on appletn. —BARR and SONS, King St., Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, LONDON, S.W., has a large number of first-rate Hot Water Men. This is an excellent time for having the Hot Water Heating Apparatus overhauled, and a reliable man can be secured by a postcard, telephone message (201 Western), letter, or wire, "Gray, Chelsea, London."

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

THE BOURNE DAFFODILS have gained the HIGHEST AWARDS wherever Exhibited. Send for my Illustrated and descriptive Catalogue of FIRST QUALITY BULBS at MODERATE PRICES. Post Free from
CHRISTOPHER BOURNE,
The Daffodil Specialist, Simpson,
Bletchley.

GREENHOUSES and GARDEN FURNITURE. — Distinctive Designs and Finished Workmanship. Write NOW for illustrated Catalogue. CARTER & HOWARD, Fife House, Kingston-on-Thames.

RUSTIC SUMMER HOUSES, trellis-work, Fencing, Pergolas, Arches, Seats, Bridges, Log Cabins, Loggias, etc. Send for our new LOG CABIN and RUSTIC CATALOGUE (just published), sent post free. BOULTON and PAUL, Ltd., Norwich.

CARNATIONS.—Spiral Wire Stakes. No tying required. Will last a lifetime. 24 inches long, 7s. 6d. per 100; 30 inches, 8s. 6d. per 100; 36 inches, 10s. per 100; sample doz., 1s., 1s. 3d., and 1s. 9d., all carriage paid. Pea Trainers, 6ft. by 4ft., 2s. and 3s. each. Garden Archways, Garden Edge and Croquet Bordering, 8 inches high, 8d.; 10 inches high, 10d. per yard. All cash with order. Catalogue free on application. J. PENKETH, Iron and Wire Works, Market Place, Manchester. Telp.: 3695 City.

NARCISSUS.—Tulips, Hyacinths, etc. All the leading and best varieties, from 4s. 6d. per 100. Ask for illustrated price list, post free. Satisfaction guaranteed. C. F. A. VAN DER SLUYS, F.R.H.S., La Ramée, Guernsey.

BULBS ON APPROVAL, carr. paid; reasonable prices, reliable quality. If you have not tried my bulbs you will be agreeably surprised at the splendid value. 24-page Catalogue Free.—ELLISON, [illegible], West Bromwich.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint. 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

LOVELY FLOWERS AT CHRISTMAS.
WEBBS' WHITE ROMAN HYACINTHS.

Extra large bulbs,	3s. per doz.;	20/- per 100.
Selected bulbs	2/- ,, ,,	14/- ,,
Good bulbs	1/6 ,, ,,	10/6 ,,

WEBBS' POLYANTHUS NARCISSI.
Paper White, 1/- per doz.; 6/6 per 100.
Paper White, large flowering, 1/3 per doz.; 8/6 per 100.

WEBB AND SONS, The Royal Seedsmen,
WORDSLEY, STOURBRIDGE.

BUNYARD'S CATALOGUES
Free on Application.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

KENT STRAWBERRY PLANTS
NEW CATALOGUE READY.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

LAXTON'S STRAWBERRIES.—Fine early pot plants, for forcing, of Royal Sovereign and other varieties, 15s. 100. For new varieties see our catalogue, gratis on application.
LAXTON BROS., Bedford.

CLAY'S MANURES, CRUSHED BONES
(See page iv.)
CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue Free. J.E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

JAMES SENDALL and CO., Cambridge; Conservatories, Vineries, Garden Frames; Heating Engineers. Surveys made, and Plans prepared to suit any position. Illustrated List Free. Telegrams: "Sendall, Cambridge." 'Phone, 511.

SLUGS, SLUGS, SLUGS. — "SANITAS POWDER" will rid your garden of slugs. Mr. Walter P. Wright, of the "Garden Week by Week," says:—"The particular hint that I was going to offer about slugs was to scatter 'Sanitas Powder' on the soil amongst the plants—slugs simply loathe it." Mr. E. Poulter, of Mayfield, Sussex, writes:—"I have found 'Sanitas Powder' most efficacious in keeping off slugs." "SANITAS POWDER," 6d. and 1s. tins, and 12s. 6d. per cwt.

THE SANITAS CO., Ltd., Limehouse, London, E.

SASH BARS.—Special lines in certain lengths only, 1¾ by 1, 2s. 6d. 100ft.; 3 by 1¾, 5s. 9d. 100ft.; quotations for special lengths or for any kind of timber, garden lights, greenhouses, and woodwork. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page iii.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable buildings, etc. Catalogue gratis.

FOR AUGUST SOWING.
SUTTON'S HARBINGER CABBAGE.
Per packet, 1s. and 1s. 6d., post free.
The earliest and best.
Award of Merit, R.H.S., May 9, 1911, after trial at Wisley.
Mr. A. Edwards, Gardener to H. Steel, Esq., writes: "Your Harbinger Cabbage is weeks earlier than any other variety. I consider it the best spring cabbage I have ever grown. Not one of the whole lot bolted."

SUTTON'S APRIL CABBAGE.
Per packet, 1s., post free.

SUTTON'S FLOWER OF SPRING CABBAGE. Per ounce, 1s., post free.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
Capt. ———, Londonderry.
10th February, 1911.
"I have received your Horticultural Manual, and on looking through it, I felt compelled to write and thank you for it. To an enthusiastic amateur gardener like myself, who, through reading the weekly papers on the subject, is familiar with many of the names but not with the corresponding flowers, this book must be absolutely invaluable, and the artistic way in which it is got up, and the beautiful photographs with which it is embellished, make it a treasure well worth having. I have had the Catalogues of most of the leading firms sent to me, but nothing compares in the remotest way with yours."

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-work, showing screens, wall panels, window surrounds, arches, arbors, etc., post free. BOULTON and PAUL, Ltd., Norwich.

GARDEN HOSE and FITTINGS, all sizes and lengths, best quality; list free.
HEATHMAN,
Hose Factory, Parson's Green, London, S.W.

IRON and WIRE FENCING for GARDENS, Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free. BOULTON and PAUL, Ltd., Manufacturers, Norwich.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

THE POPULARITY OF XL ALL SPECIALITIES increases every year All gardeners proclaim that nothing equals these celebrated preparations.

XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.

XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N. S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

ORCHIDS.

JAMES CYPHER & SONS.
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

BULBS.

R. H. BATH, Ltd.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Narcissi Tulips, Hyacinths, etc., Home-Grown.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

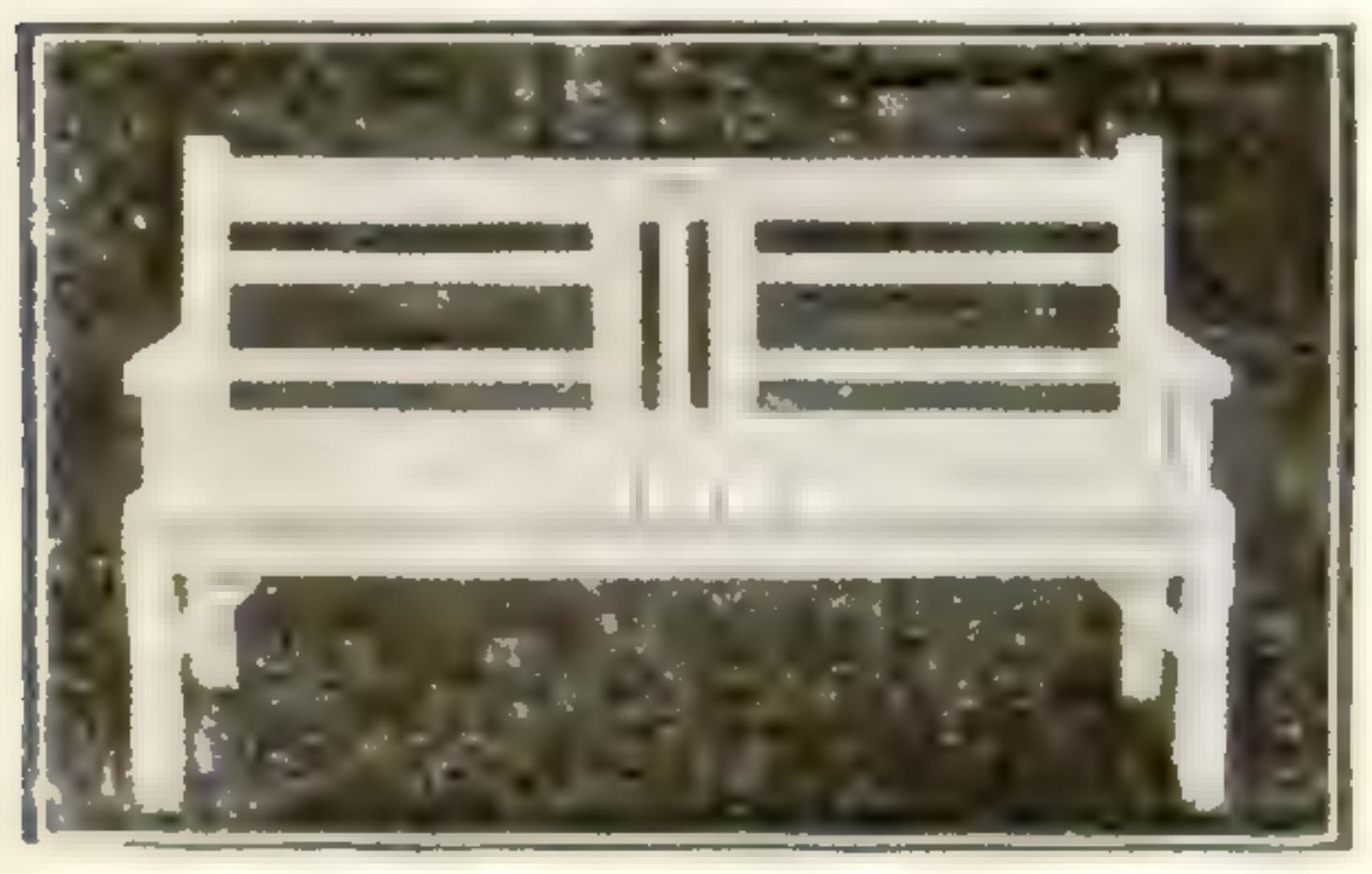
Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**
Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.
Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX

IDEAL, 5 feet long.



In best redwood, painted two coats white

£1 : 7 : 6.

Delivered any Station.

Full catalogue on application.

PETER PATRICK & SON, OTLEY, YORKS.

FOR ROSE MILDEW
use
V2K FLUID
THE BEST REMEDY FOR THIS PERSISTENT PEST.
Does not discolour the foliage.

OF AGENTS EVERYWHERE.

Sole Mfrs., Willm. Cooper & Nephews, Berkhamsted.

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant — Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

CHARLESWORTH & CO.,
Hayward's Heath, Sussex,
ORCHID SPECIALISTS,
IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

Orchids! Orchids!! Orchids!!!

The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application.—**J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana, Vanda Cœrulea Lushai Hill variety, dark blue type; Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.

STALKER'S Forest Trees, Fruit Trees. Roses, Bulbs, and Seeds
Are known all over the world, and cannot be surpassed for hardiness and quality.

Famous for Quality and Cleanliness.

D. STALKER & SON,
Government Contractors,
Catalogues Free. NAIRN. N.B.

J. J. THOOLEN, The EXPORT Nurseries,
Heemstede, Haarlem Holland,
Established 1884,

Has the honour to announce that his Illustrated Price List of Bulbs and Plants in English, Autumn, 1911, at lowest prices, will be sent post free on application. **No Charge for Packing. Orders of 10/- and above entirely Free to Destinations** in England, Scotland, and Ireland, etc. First Quality guaranteed.

Some sorts of Bulbs noted out of Price List.

	Per 100. s.	Per 100. d.	Per 1,000 s.	Per 1,000 d.
Hyacinths, in the finest mixture for bedding or forcing	7	8	72	4
Hyacinths, single, first size, named, in 25 leading sorts, red, white, and blue vars., equal quantities, my selection	15	0	—	
Tulips, single early, in the finest mixture	2	0	18	4
Tulips, Darwin, mixed	3	0	25	0
Tulips, double, in the finest mixture...	2	2	20	0
Anemones, single mixed	1	4	12	0
Anemone, The Bride, pure white ...	1	4	12	0
Crocus, 1st size, in the finest mixture	1	4	12	0
Crocus, 2nd size, in the finest mixture	0	9	7	0
Scilla campanulata, blue bells	2	0	—	
Scilla campanulata, white bells	2	0	—	
Scilla sibirica, rich blue	1	6	14	6
Iris, Spanish, mixed	0	7	5	0
Iris, English, mixed	2	0	16	8
Narcis., single, in the finest mixture...	1	4	12	6
Narcis., Trumpet, in the finest mixture	2	6	20	0
Narcis., double, fine mixture	2	6	20	0
Narcis-Polyanthus, finest mixed ...	3	6	30	0
Snowdrops, Elwesi, the Giant Snowdrop	1	6	13	6
Ranunculus, French, double mixed ...	0	9	7	0

250 Bulbs of the same kind will be charged at the 1,000 rate; 25 at the price per 100; 6 at the price per 12.

Ask for Illustrated Price List and see the Collections.

Primulas! Primulas! Primulas!
41st Year of Distribution.
OUR WELL-KNOWN MAGNIFICENT STRAIN,
1/6 doz.; 2/6 25; 10/- 100. Package and Carriage Free.
Cineraria (Large-flowered) and **Stellata** at same prices.

JOHN STEVENS & SON, COVENTRY.

TREE CARNATIONS
The Newest and Best Varieties.
Strong, healthy and well-rooted plants only supplied.

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

ORCHIDS. ORCHIDS.
Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.
STOVE AND GREENHOUSE PLANTS OF ALL KINDS
Please Write for List.
JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

BENTLEY'S
WEED DESTROYERS

Utterly annihilate Weeds, Moss, Dandelions, and all other Weeds on Garden Walks, Carriage Drives etc.

HAVE THE LARGEST SALE IN THE UNITED KINGDOM!
ARE THE MOST POWERFUL MANUFACTURED!
ARE THE MOST PERMANENT IN EFFECT!

LIQUID (Poison).

Double Strength (1 to 50).

	£	s.	d.
3 gallons, to make 153 gallons ...	£0	10	0
6 " " 306 " ...	0	18	0
12 " " 612 " ...	1	13	0
20 " " 1,020 " ...	2	7	6
40 " " 2,040 " ...	4	12	6

Special Concentrated Strength (1 to 80).

	£	s.	d.
3 gallons, to make 243 gallons ..	£0	14	6
6 " " 486 " ...	1	7	0
12 " " 972 " ...	2	6	0
24 " " 1,944 " ...	4	10	0

BENTLEY'S
COMPOUND LIQUID **QUASSIA EXTRACT**
(THE ORIGINAL).

The deadliest foe of Green, Black, and White Fly.

The insecticide of insecticides for roses, chrysanthemums, tomatoes wall and bush fruits, and other trees.

SAFE TO USE ANYWHERE AND EVERYWHERE

20 Galls., **3/6** per Gall.; 10 Galls., **3/7** per Gall.; 5 Galls., **3/8** per Gall.; 1 Gall., **4/2**; ½ Gall. **2/6**; 1 Quart, **1/6**; 1 pint, **1/-**.

Carriage Paid on 7/6 orders and upwards.

WHOLESALE MANUFACTURERS,
JOSEPH BENTLEY LIMITED,
Chemical Works,
BARROW-ON-HUMBER, HULL.

ESSEX.—26 miles out, six-roomed house (brick), 2¼ acres, 2 Hothouses, completely fitted (each 150 x 20), 300 fruit trees, 2 wells, reservoir. Freehold; bargain, £550. Easy terms, or part mortgage. J. ALLEN, 34, New Bridge Street, London, E.C.

FOR SALE.—First-class NURSERY, close to Blackpool, with 500 feet run of glass, well heated, with new up-to-date boilers. For price and particulars, apply P. VAWSER, Hykeham Road, Lincoln.

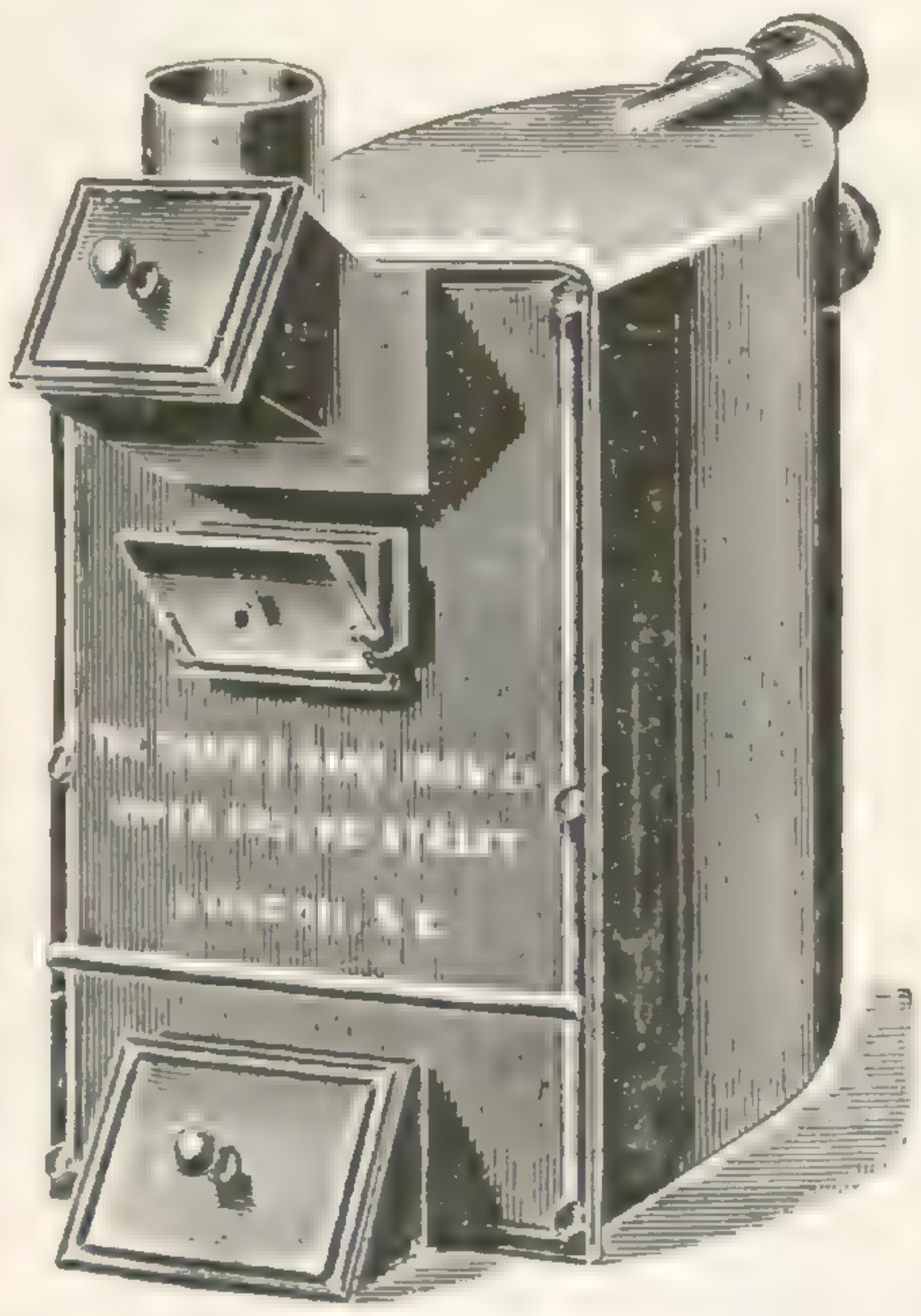
VERY High-class NURSERY BUSINESS; four acres, 700 feet glass, well stocked; good trade; long lease; low rent. Letters to INGLISH, 35, Hereford Road, Acton, W.

'Phone: Hop. 763.

When next a Small Boiler you require

TRY

THE HEEL


THE THAMES BANK IRON CO.
UPPER GROUND STREET
LONDON, S.E.

NONE TO BEAT IT.

THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.

4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

RARE ALPINES CHEAP.—Profits devoted to Patriotic objects. Apply for list, LADY C., The Abbey, Much Wenlock, Shropshire, and please enclose fully addressed and stamped envelope.

MERRYWEATHER'S 614 PUMP

IS THE

Gardener's Friend.

Easy to Work. Simplicity Itself.

Write or Call—

63, Long Acre, LONDON, W.C.

ONCE USED. ALWAYS USED.

The 'PATTISSON' LAWN BOOTS

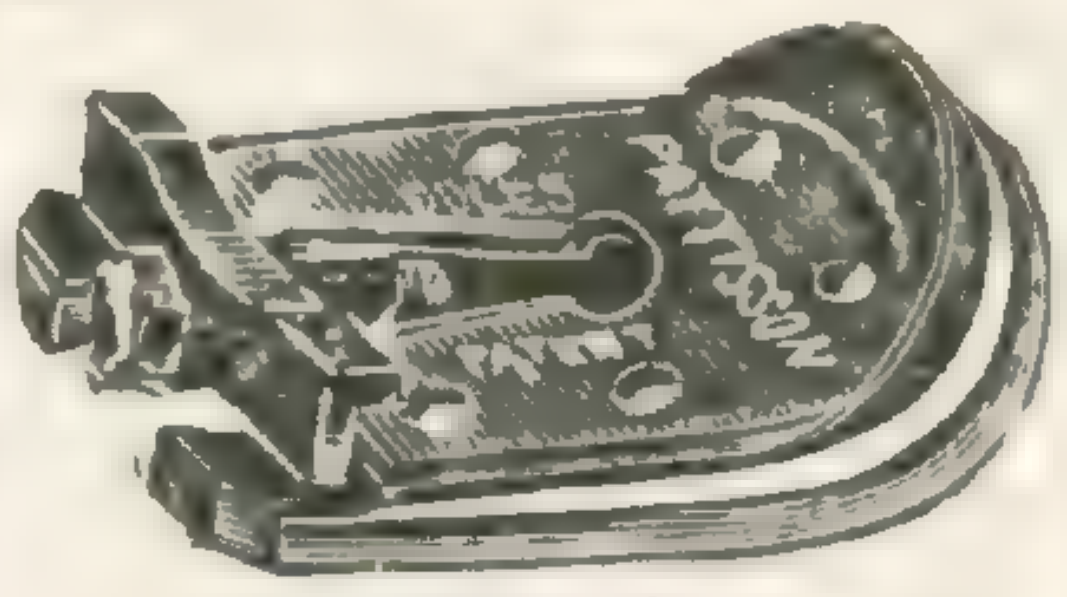


Fig. 1.

Simplest! Strongest! Most Economical! Soles of Best English Folk Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS

Silver Medal—
Royal Horticultural Society.
Hundreds of Testimonials.
The Field says: **"As good as anything that could be devised."**
Illustrated Price List from—

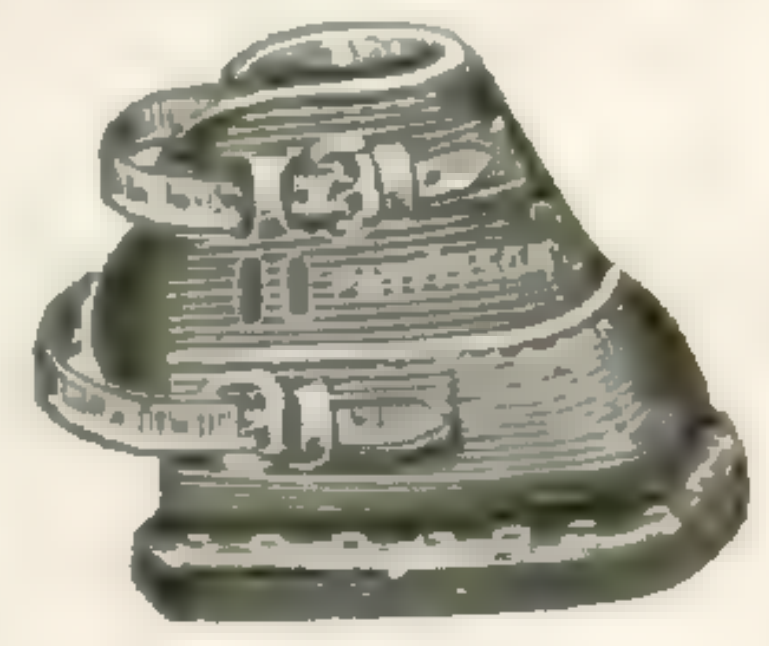


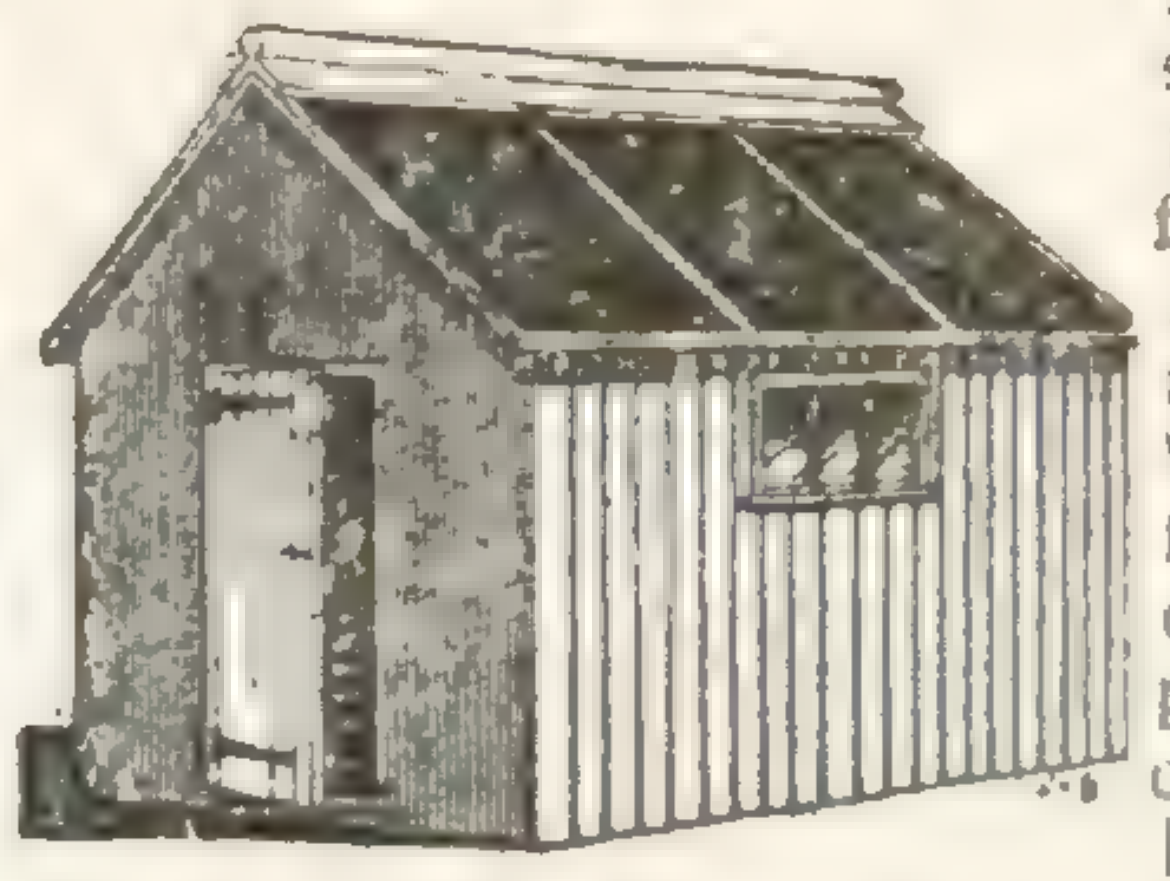
Fig. 2.

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM S.W.

Please mention
THE GARDENERS' MAGAZINE
when writing to Advertisers.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

Portable Buildings. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

Sizes.	Cash with Order.	Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
Established 70 Years. **BEDFORD.**
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to
EPPS & CO., Ringwood, HANTS.

THE FAVOURITE WEED KILLER.

SANDWITH'S
PREMIER
WEED
KILLER

As supplied to His Majesty's Board of Works, Royal Parks, &c., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for 6/-; drum, 2/-. 12 galls. for 16/-; drum, 6/-. 20 galls. for 26 8; drum, 10/-. 40 galls. for 50/-; drum, 20/-.

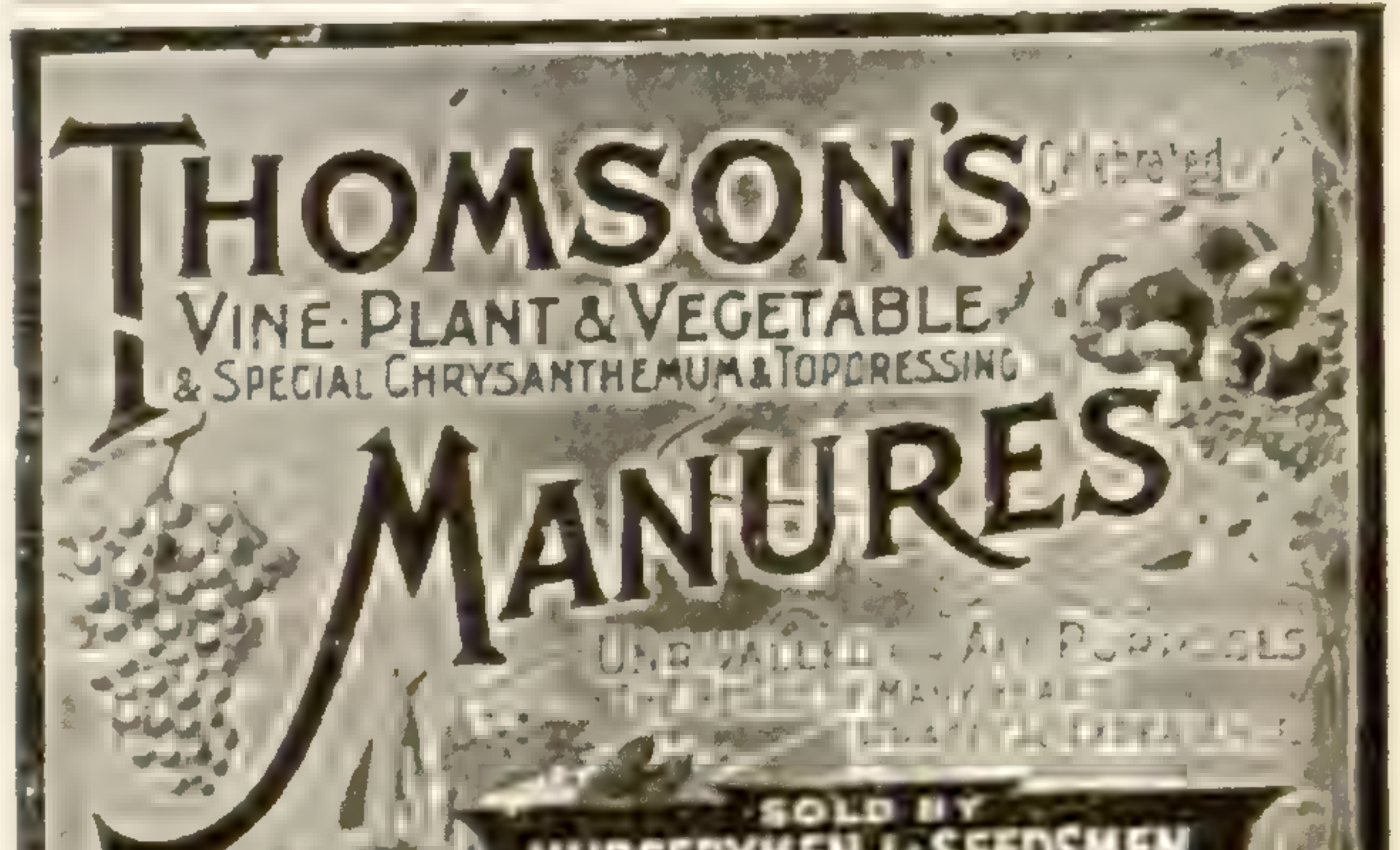
EITHER LIQUID OR POWDER.

Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,
The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.



THOMSON'S Celebrated
VINE, PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES
SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE.

GLASS. | GLASS. | GLASS.

NICHOLLS & CLARKE, LTD
Shoreditch, LONDON.

PAINT. Our List of PAINTS, COLOURS VARNISHES, and BRUSHES on Application.
When sending please cut out this advt.

SUBSCRIBER'S ORDER FORM

Every Saturday THE GARDENERS' MAGAZINE. Twopence

To W. H. and L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose ________ for ________ months in advance.

Name ____________________

Address ____________________

Date ____________________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

* * If a receipt is required for amounts under 10s. a stamped envelope should be forwarded

Veitch's Bulb Catalogue for 1911.

By Special Appointment to His Majesty the King.

JAMES VEITCH & SONS, Ltd.,

beg to announce that this

has now been posted to all their Customers, and respectfully request to be informed if the same has not been received that a copy may be at once forwarded.

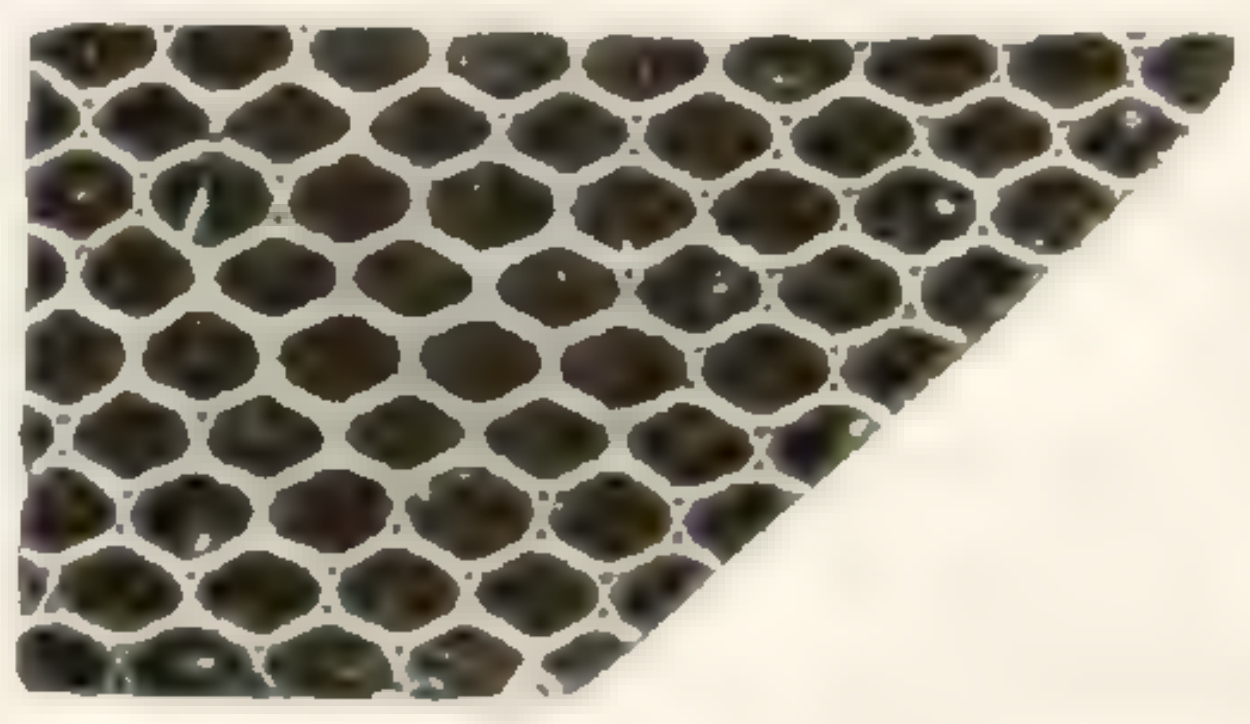
Royal Exotic Nursery, CHELSEA, LONDON, S.W.

ESTABLISHED 1832.
NO CONNECTION WITH ANY OTHER FIRM OF A SIMILAR NAME.

ANT. ROOZEN & SON'S
CATALOGUE for 1911
(WITH CULTURAL DIRECTIONS)
OF
SPLENDID
DUTCH,
Cape, and Exotic
BULBS

Direct from the Growers,
Is Now Ready,
And will be sent Post Free on application to themselves at
OVERVEEN, HAARLEM, HOLLAND;
Or to their General Agents,
MERTENS & CO.,
3, Cross Lane, London, E.C.

Protect your Fruit from Wasps



WASP PROOF SCRIM.

No. 1 (Fine), as shown above. No. 2. (Rather Stronger)

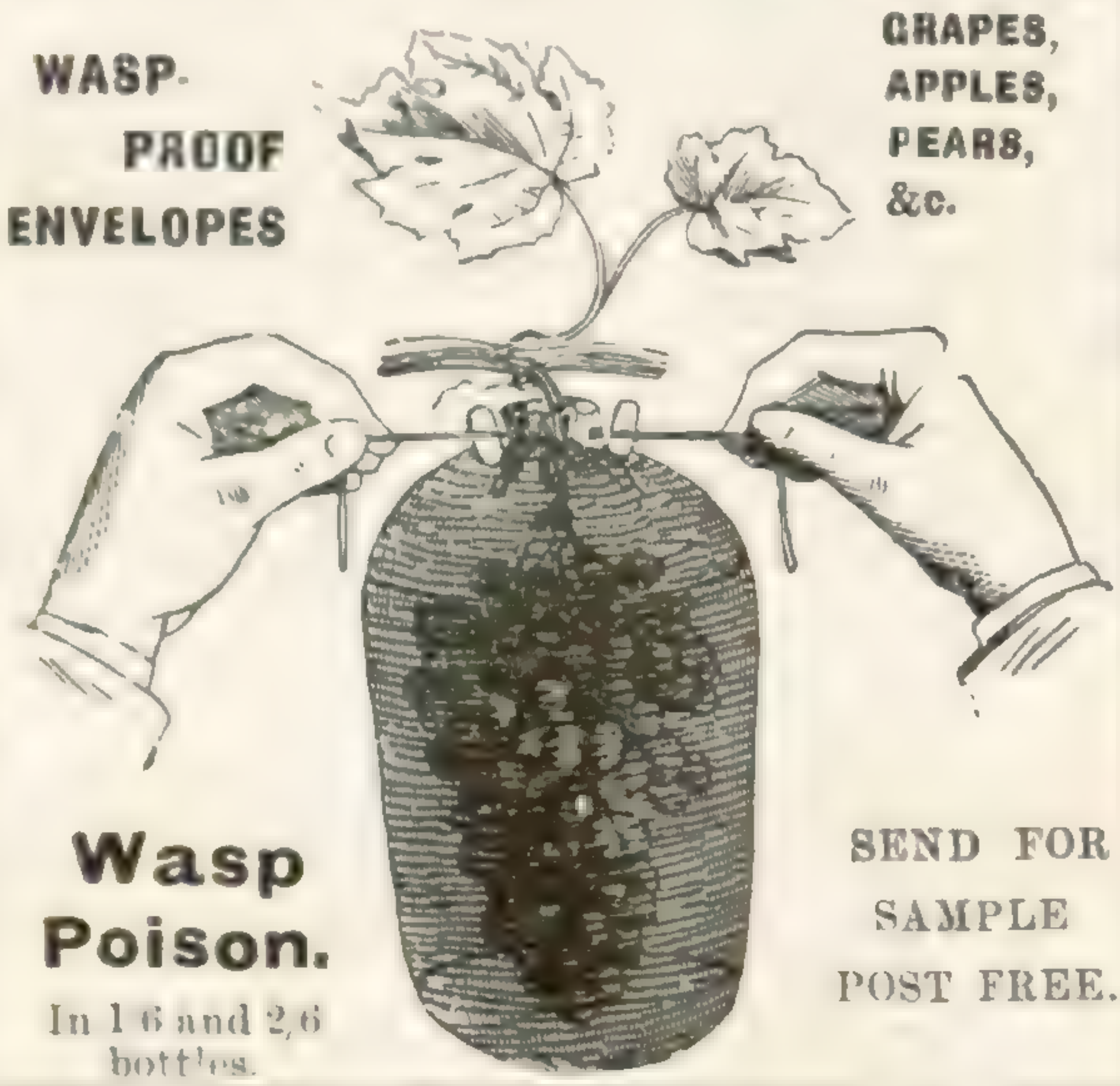
48	in. wide	1/2	per yd.	48	in. wide	1/4	per yd.
60	,,	1/6	,,	60	,,	1/8	,,
72	,,	1/10	,,	72	,,	2/-	,,
84	,,	2/6	,,	84	,,	2/9	,,

Other widths can be supplied in proportion.

NEW INTRODUCTION.

WASP-PROOF ENVELOPES

For PROTECTING GRAPES, APPLES, PEARS, &c.



Wasp Poison.
In 1/6 and 2/6 bottles.

SEND FOR SAMPLE POST FREE.

Wm. WOOD & SON, Ltd., North British Wharf, WOOD GREEN, LONDON.
Phone, Palmers Grn., 377-378 Tel., "Fungheto, London.

BOTTLING FRUIT. Patent Apparatus Complete. **5/6**
Efficient, Reliable, Simple, Easily Operated.
WICKHAM and Co., Dept. M, Ware, Herts.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.
Our Work has stood the test of time.

CARNATIONS.
AURICULAS. PINKS.

The NEW ILLUSTRATED CATALOGUE of above is now ready, and has been posted to all customers. The newest and best varieties are sold at the most reasonable prices.

Best **CARNATION** and **PICOTEE SEED** ready in October. **1/6** and **2/6** per packet.

AURICULA (Show and Alpine), PINK, and **POLYANTHUS SEED** now ready. **1/-, 1/6,** to **2/6** per packet.

Send for Catalogue to
J. DOUGLAS,
Edenside, GREAT BOOKHAM.

THE NATIONAL HARDY PLANT SOCIETY
Encourages the Cultivation of Hardy Plants and Disseminates Information Helpful to Growers.
NEW MEMBERS WANTED.
Apply to the Honorary Secretary,
FRANK BOUSKELL,
Market Bosworth, Nuneaton.

Do not Neglect Your Plants during the Holidays.

CLAY'S FERTILIZER
WILL FEED THEM.

It produces **FLOWERS, FOLIAGE, FRUITS,** and **VEGETABLES** in **PROFUSION** and the **HIGHEST PERFECTION.**

CLAY'S ✲ LONDON ✲ FERTILIZER
TRADE MARK.

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK, AS AT SIDE.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. Fourth Edition (Second Reprint). 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Manure Manufacturers and Bone Crushers, **Stratford, London, E.**

VOL. LIV.—No. 3,015. SATURDAY, AUGUST 12, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Drought.

The almost unprecedented spell of dry weather which we have recently experienced, and which, indeed, has only partially been broken so far as the whole of Great Britain is concerned, has given us a very vivid idea of the vital necessity of water to vegetative existence. In a temperate climate like ours, and in ocean begirt islands like ours, it is rare indeed for conditions to prevail which preclude the deposition of rain for so long a period. Our seasons are not determined as in many tropical and sub-tropical Continental areas into alternate wet and dry ones. Taking the year round, the monthly rainfall is fairly even on the average, and hence to experience practically a whole month at a stretch with no appreciable record, and that in the hottest period of the year, constitutes almost a calamity, since when the heat is greater and growth naturally more rapid, the drain upon the reservoir of soil moisture is at its maximum, and its exhaustion over large areas cannot possibly be combated by artificial means of irrigation. The heat of the sun, too, raises the temperature of the soil to such an extent that even at nightfall, under clear skies, the radiation is insufficient to induce that deposition of dew which does so much in ordinary seasons to maintain vegetative life and enable it the better to withstand the daily drain induced by transpiration. Hence it is that at present we see the normally green pastures in many places bare, brown, and scorched, while the cereal crops are precociously ripened, short strawed, and ready to shed their precious seed weeks sooner than the farmer would desire. The trees, too, having drained the soil of its moisture, display a liberal sprinkling of dead foliage, and dead leaves, which should still be exercising their function of wood forming and fruit maturing, are dropping in all directions as if it were autumn instead of practically mid-summer. Even the air-loving roses and their host of sister flowers have had short shrift as regards their period of perfection, the burning rays of the sun, unmitigated by clouds or refreshing showers, having all too speedily hastened their blossoming period, shrivelled their petals, and replaced their brilliant masses of colour with brown, unsightly débris. Fruits of many descriptions, through lack of the liberal sap supply through the roots and the check upon foliage growth induced by the same cause, are prematurely ripening or dropping from sheer exhaustion of the needful moisture supply. The horticulturist and garden lover have been sorely put to it to battle with these conditions, for the hose and watering-can are poor substitutes for the refreshing rain from heaven, since the thirsty soil, baked and cracked deeply by the persistent sunshine, is apt to absorb but little the bulk of the water passing away through the cracks into the subsoil leaving the intervening masses of soil pervaded with famishing roots as dry as a bone. Given, however, a steady rain of a whole night's duration, such as some favoured districts have enjoyed, and how different is the result. Every drop is absorbed where it falls upon the soil, the bone-dry masses gradually become thoroughly moistened and swell, until the cracks are filled up, the thirsty roots, instead of being rock-bound, find themselves in moist, soft, yielding material, and then the plants are revivified; and a little observation will show the rapid growth which results, as though the pent-up energies, released at last, were anxious to make up for lost time. It is, indeed, marvellous how Nature contrives to facilitate such work. In the tropical countries, where droughts are normal, and are followed by drenching rains, travellers are always struck by the fact that a few days suffice to cover apparent barren wastes with bush vegetation of which no sign was previously apparent. Seeds and dormant roots have, however, pervaded such areas, all ready at the first dash of vivifying moisture to germinate or revive, and to do their best to profit by the improved conditions. Even at home, those who have been blessed with the rain sufficiently abundantly recently, may note similar results, sickly-looking, stunted plants having vigorously grown, rapidly making sturdy growth with almost tropical speed, under the influence of the resumed sunshine and heat, now accompanied by abundant and sufficient humidity in the soil beneath. Even the worst sufferers by excess of sunshine may, however, in many cases, console themselves by the consideration that, as each year is largely dependent upon the amount of wood-ripening sunlight in the preceding year for its fruit crops, any deficit this season may reasonably be expected to be followed by an increased produce in the year to follow, and, in any case, it is far better to be philosophical and optimistic than to be despondent and grumble at what cannot possibly be remedied.

MR. EDWARD KEITH.

Mr. Edward Keith is exceedingly well known in the North of England as a very capable gardener and as an enthusiastic and instructive lecturer on horticultural subjects. He is head gardener to the Right

Hon. Sir George Otto Trevelyan, Bart., at Wallington Hall, Cambo, Morpeth, Northumberland, and has been in charge of the gardens for twenty years. He has a wide experience in all branches of horticulture, and he is able to present the results of that experience in first-rate practical form in the gardens he manages, and in an entertaining manner to a horticultural audience. For several years he has obtained wider notoriety because of his success as a cultivator and exhibitor of sweet peas. Probably no one has done more to extend the cultivation of the Queen of Annuals in the northern counties than Mr. Keith. Even as far south as London he has on several occasions won prizes for his sweet peas in the keen competition that attends the National Sweet Pea Society's exhibition, but usually the London show is a week or two too early for him. In the northern counties, however, Mr. Keith is a most formidable opponent, and anyone who can beat him for sweet peas may be justly proud of their achievement. Early in the present year a severe attack of influenza left Mr. Keith very weak for a considerable time, therefore his many friends were glad to see him well and as keen as ever at the great Metropolitan sweet pea show on July 11 and 12. Mr. Keith is a great worker, keen, quick, and observant, and modest withal; therefore, it is with much pleasure we give his portrait in the present issue.

"Gardeners' Magazine" Gold Medal at Harrogate.—At the great exhibition of the North of England Horticultural Society to be held at Harrogate on August 15, the Gardeners' Magazine Gold Medal will be added to the cash award as first prize for a circular group of not more than three kinds of hardy plants, arranged to show the bedding value of these subjects. Either cut flowers or pot plants may be used. As already noted in these columns, a deputation from the Royal Horticultural Society will attend the show, and award medals, etc., to meritorious exhibits. Lady Kathleen Pilkington will present the prizes during the afternoon.

Royal International Horticultural Exhibition, 1912.—The revised schedule for the International Exhibition, to be held at Chelsea in May next, is now ready for distribution, and copies may be obtained, post free, from Mr. T. Geoffrey W. Henslow, secretary, Royal International Horticultural Exhibition, 7, Victoria Street, Westminster. A preliminary schedule was distributed some months ago for the purpose of affording exhibitors some indication of the general nature of the competitive classes, but it was not possible at that time to enumerate the awards. These latter include presentation cups offered by his Majesty the King, the Duke of Portland (President of the Exhibition), and others, also a very large number of gold and silver medals. In some of the more exacting classes money prizes accompany the medals, in order that exhibitors may be compensated for expenses necessarily incurred. The present schedule contains this information, and it is therefore indispensable to those who contemplate making some contribution to the show.

Botany at the British Association.—The programme of Section K (Botany), at the meeting of the British Association, commencing at Portsmouth on August 30, is as follows: Presidential address, Professor F. E. Weiss. Joint meeting with Sections C and E on the relation of the present plant population of the British Isles to the Glacial period, opened by Mr. Clement Reid. Discussion on the principles of constructing phyto-geographical maps. Semi-popular lecture, by Mr. Francis Darwin. Papers: Some petrified Jurassic plants from Scotland, Profesor A. C. Seward; recent work on the Jurassic plants of Yorkshire, H. H. Thomas; the structure of the oldest known synangium, and its bearing on the origin of the seed, Dr. M. Benson; on the mode of formation of the Pettycur material as gathered from internal evidence; a fifteen-year study of advancing sand-dunes, Professor H. C. Cowles; new proposals in ecology, Professor F. E. Clements; phytogeography as an experimental science, Professor Massart; the vegetation of pebble beaches, Professor F. W. Oliver; the brown seaweeds of a salt-marsh, Miss S. M Baker; the Swiss National Park and its flora, Professor C. Schröter; the water-content of acidic peats, W. B. Crump; the wilting of moorland plants, W. B. Crump; the presumptive hybrid Anagall's carnea, Professor F. E. Weiss; the morphology of leguminous nodules, Professor Bottomley; nuclear osmosis as a factor in mitosis, A. A. Lawson; nuclear division in Spongospora, A. S. Horne; the polyphyletic origin of the Cornaceæ, A. S. Horne; the transference of sugar from the host plant to a parasitic Cuscuta, S. Mangham.

A Brilliant Holiday.—Throughout the greater part of the country splendidly brilliant weather prevailed during the "week-end" that included August Bank Holiday. In London there were 12.8 hours of bright sunshine, and the thermometer registered 81 or 82 degrees in the shade in the metropolitan area. Notwithstanding the hundreds of thousands who have recently gone to the seaside, into the country, or on the Continent, there were great crowds in all the London parks and open spaces, while the places of amusement where there is ample outdoor space were well patronised. Over 115,000 people visited the Royal Gardens, Kew, on the Bank Holiday; 200,000 spent their holiday on Hampstead Heath and Parliament Hill Fields; 60,000 went to Hampton Court; 200,000 found pleasure at the Crystal Palace, and there were big attendances at the White City and Earl's Court Exhibitions.

Sir Albert K. Rollit, the well-known member of the council of the Royal Horticultural Society, and president of the National Chrysanthemum Society, was the arbitrator appointed by the London Labour Committee and Conciliation Board to determine the points in dispute between the National Transport Workers' Federation and the shipowners, a dispute that gave rise to the Dock Strike in London. Sir Albert's award was in favour of the dockers, but at the time of writing it has not ended the strike.

Suggested Park for Shadwell.—A strong movement is on foot for the purpose of securing the Shadwell Fish Market estate of about eight acres as a riverside park for the East End of London. The proposal is to include such new park in the scheme for a memorial to King Edward VII. This fish market has never fulfilled its mission, notwithstanding its great cost and apparently good position. The market estate would provide a fine riverside park in a position where it would do an immense amount of good. So far the authorities concerned look favourably on the scheme.

Posthumous Care of Burial Ground.—The late Mr. Frederick J. Myers, of Charlton Lodge, Northants, left estate to the value of £119,955. From this estate he bequeathed to the vicar and churchwardens of Charlton £200, in trust, the income therefrom to be devoted to the upkeep of the new burial ground, "as though it were my garden, that the shrubs, conifers, and such-like trees be clipped or tied up, and the young deciduous trees removed before they shall do harm to the Irish yews, and, further, that the grass avenues shall be kept mown during the summer with a lawn mower to a width of not less than ten feet, and the rest of the grass kept short with the scythe."

Clusia grandiflora, a stove shrub from Guiana, is strikingly illustrated in the current issue of the "Botanical Magazine"; at the Cambridge Botanic Gardens it flowers annually, the male blooms being about four inches across, and having eight broad, rounded petals that are white, shading to rose; round a yellow centre are grouped about 500 white stamens. Other subjects figured in the same issue are Torenia atropurpurea, a purple-flowered Malayan perennial stove plant; Landolphia Petersiana, an East African climber, bearing panicles of fragrant white flowers, the five corolla segments having ciliate margins; Mormodes revolutum, a showy Peruvian orchid, producing spikes of deep red, yellow-lipped flowers; and Mutisia Clematis, an interesting and beautiful climbing composite from the high ranges of the Tropical Andes; it is a greenhouse subject, and bears pendulous flower heads, in which the broad, recurved ray florets are of a brilliant red colour.

The Effect of Grass on Apple Trees will be discussed in the Agricultural Section of the British Association at Portsmouth, by Mr. Spencer U. Pickering. Other subjects to be dealt with, and of interest to horticulturists, are cider sickness, bacterial diseases of plants, bacterial diseases of celery and swedes, bacterial diseases of the potato plant in Ireland, and experiments on the wart disease of potatoes.

Heath and Forest Fires on Bank Holiday.—As one result of the dry weather, coupled, doubtless, with the carelessness of holiday-makers, there were a number of fires at holiday resorts on August Bank Holiday. A large area, composed of gorse and tree, was burned at Epping Forest, close to Theydon Bois; on Mitcham Common and Blackheath there were several fires, while at Sidcup and Beckenham grass, heather, and trees suffered from the flames.

The Fruiting of the Tamarisk.—Mr. Clement Reid, F.R.S., of Milford-on-Sea, Hampshire, writes, in a letter to "Nature": "This exceptional season is having strange effects on many of our native plants and animals, and naturalists would do well to note these before it is too late. For many years I have tried without success to find Tamarix anglica in fruit in Britain. The absence of fruit, and the rarity of the tamarisk, except where obviously planted, seemed to support the idea that it was of fairly modern introduction. A few years ago, however, fragments of rope, found in Roman Pevensey and sent to Kew, were pronounced to be formed in part from the inner bark of tamarisk. This seemed to favour the inclusion of the tamarisk in the British flora, though rope found in a Roman seaport may quite well have been manufactured abroad. This season the negative evidence yielded by the absence of seed has also broken down; and if a plant seeds once in its lifetime, it may hold its own, and establish its right to a place in our flora—as the Cornish elm has done. I planted last spring some young tamarisks on a steep bank of loose sand in my garden at Milford. During the long drought they received no water; they are now seeding freely, and the winged seeds are being dispersed by the wind. If the plant reproduces itself from these seeds, sown under natural conditions, the cycle will be complete; but the garden is a quarter of a mile from the sea, and the test may be too severe a one. Tamarisk is essentially a desert and sea-coast plant, and it would be worth while to examine any tamarisks growing on sand-dunes, to see whether they also are seeding, and to see whether seedlings come up. Possibly the tamarisk may be a survivor from times when desert or "loess" conditions extended over Western Europe. We have found the fossil remains of many of the desert animals, but plants decay in porous deposits of dust, and desert plants are seldom washed into ordinary alluvial deposits."

Wimbledon Common Extension.—A few days ago the Lord Mayor of London formally dedicated to the public thirty-one acres of ground that have been added to Wimbledon Common as a result of the energy, business ability, and generosity of the residents in the surrounding districts. This additional area cost £7,840. The subscribers have also secured the option of purchase over a much larger area, for which £52,000 is required, and towards which about £14,000 has been promised already. The Lord Mayor promised to bring this larger scheme before the City Fathers, and expressed a hope that the London and Surrey County Councils and the Wandsworth Borough Council would assist it. The thirty-one acres now added to the fine common and heath will save both banks of the Beverley Brook from building encroachments.

New Park for Hemel Hempstead.—A few days ago Alderman William Randall, J.P., opened a new park and recreation ground at Hemel Hempstead. The park was his own gift to the town, and he also contributed £600 towards laying it out.

Mr. William Sim, of Cliftondale, Mass., has been elected president of the National Sweet Pea Society of America, in succession to Mr. W. Atlee Burpee. This society held its annual meeting and exhibition at Philadelphia on June 29. The members had an "outing" to the Fordhook Farms, where there were 900 trials of sweet peas.

Suggested New Stock for Pears.—Attention has lately been called by one of the Fellows of the R.H.S. to a new stock for pears—viz., Pyrus ussuriensis (=P. sinensis). We understand that it has hardly (if at all) been tried in this country, although for some years past hundreds of thousands of seedlings of it have been raised in the United States of America for grafting purposes, which fact alone would suggest that it must be in some way superior, or our very practical American cousins would not be so keen for it. It has also been somewhat extensively used in Australia, and is not unknown in South Africa. The United States alone is said, according to the "Commonplace Notes" in the "Journal of the Royal Horticultural Society," to take twelve to fifteen hundred pounds weight of seed a year. It is a fairly common plant in the Northern Island of Japan, from whence the seed is exported. It is described as being "a strong, healthy, vigorous-growing tree with good foliage calculated to withstand diseases and pests," and it is these qualities which, it is suggested, make it such a favourite stock in the States. We are a little sceptical of its merits, but it should certainly be tried in this country. We understand that sample seeds can be obtained from Mr. Unger, Schlierbach, Heidelberg, Germany.

NOTES FROM KEW.

Clematis.

The practice that prevails at Kew of allowing many of the clematis to ramble over a few rough sticks enables a collection to be grown on a piece of level ground, and in this way the prominent characteristics of each can be readily seen. In the spring the rose-coloured variety of Clematis montana forms an annual feature, and just now several striking kinds are at their best. That striking variety of Clematis flammula known as rubro marginata is now laden with blossoms, and there are several pretty forms of Clematis Viticella, notably C. Viticella alba; C. Viticella fl. plena Lamartine, with large pale blue double flowers; C. Viticella rubra grandiflora, whose comparatively large blossoms are of a showy red tint; and C. Viticella cærulea plena, less double than Lamartine. Other notable species are C. orientalis tangutica, with distinct yellow flowers and silky seed clusters; C. globosa, like a purple-flowered form of C. coccinea; and C. Durandi, with comparatively large purple blossoms.

Tamarix pentandra.

Some beds of this, in different parts of the gardens, and particularly one near the old Water Lily House (No. 15), serve to show what a desirable shrub it is for flowering during the latter part of the summer. The plants at Kew are cut back hard in the spring, under which treatment they form bushes about four feet in height. These are now freely laden with their pretty bright pink-coloured blossoms, which at a distance present the appearance of a rosy cloud. Unfortunately, this delightful tamarix has been given more than one name; and it is more often met with in gardens and nurseries as T. hispida æstivalis, or T. Pallasi rosea, than the name of T. pentandra, which it bears at Kew.

Origanum hybridum.

This member of the Marjoram family, and a near relative of the dittany of Crete, is very rarely seen employed for greenhouse decoration, but in the greenhouse it is very pretty when treated in this way. It is a plant of a neat, freely-branched habit of growth, thickly laden with clusters of pink flowers. The flower heads contain several large bracts, exactly as in the common hop; indeed, in some of the Surrey villages, where I have seen the allied Origanum dictamnus grown as a window plant, it is popularly known as the pink hop.

Isoloma hirsuta.

The various gesneraceous plants available for indoor decoration include this isoloma, of which quite a large group is in flower in the greenhouse. The plants are from two feet to two and a-half feet in height, the blossoms being freely borne on the upper part. The flowers, which are in shape a good deal like those of the garden varieties of tydæa, are of an orange-crimson colour, with the interior of the throat marked with yellow. The entire plant, leaves, stems, and flowers, is clothed with reddish hairs.

Vinca rosea.

This well-known tropical plant, introduced to our gardens over a century and a-half ago, used to be very often grown and exhibited as a specimen stove plant. It is just now, at Kew, employed as an edging to the border in the old Water Lily House, and very effective it is in this way. It forms a broad band, fifteen inches or so in height, thickly covered with its pretty pink blossoms. The variety grown at Kew seems to be an unusually fine form. K.

ANNUAL FLOWERS AT READING.

In common with other classes of flowering plants that are utilised in beautifying the garden during the summer months, these of annual duration have suffered appreciably from the great heat and long period of drought that have been experienced during the present summer. Some have not produced so great an abundance of flowers as usual, and not a few have had a shorter season than is customary; but where the plants have been given sufficient room and have had the advantage of other conditions favourable to their full development, they have as a whole been highly satisfactory. Visiting Messrs. Sutton and Sons' trial grounds at Reading a short time since we were much impressed with the rich display of colour that the annuals and other plants grown under similar conditions were producing. That there was an abundance of bloom is of some practical importance, because annual flowers are frequently described by those whose knowledge of them is of a superficial character as ephemeral under ordinary conditions, and quite unable to pass through a season that is distinctly unfavourable to their well-being. The season could not well have been less favourable to plants that pass through their life cycle within a period of eight or nine months, yet at Reading, where the soil is comparatively light, and not of exceptional depth, the majority of the kinds have given, and are giving, a very good account of themselves.

In this reference to the annual flowers and the other plants that are grown as such at Reading, it will not be possible to direct attention to any considerable proportion of the many kinds included in the trials, because of the large amount of space that would be required; and therefore nothing further will be attempted than to mention a few that appear to be of special importance at the present time. One of the first of the many beautiful kinds to attract attention was the antirrhinum, or snapdragon, in its many varieties. There are large breadths of antirrhinums which have bloomed freely and continuously from early in the season until the present time, and promise to give a succession of their attractively-coloured flowers until quite the end of the summer season. These useful flowers have undergone considerable improvement within recent years, and their value for garden ornamentation largely increased. The cultivator has now at his command varieties ranging in height from six inches to three feet, and the range of colouring is so wide as to be sufficient to satisfy a great diversity of tastes. The Tom Thumb varieties, of which Crimson King, White Queen, and Yellow Prince should have special mention, are admirably adapted for filling small beds or forming marginal bands to large ones. The tall varieties are useful for grouping in the mixed border, because of their attractive colouring and the length of their season of flower. The intermediate varieties, however, appeal the most strongly to cultivators, for the plants range from twelve to eighteen inches in height, are compact, and free branching, and bear finely developed flower spikes. For beds of average size, and for the front of mixed borders, they possess a value that would be difficult to overestimate. Especially noteworthy among the intermediate varieties are Apricot, pink, orange, and yellow; Coral Red, rose-red; Carmine Pink, colour indicated by its name; Fire King, orange-red with white throat; Orange King, brilliant orange-scarlet; and Rosy Queen, rose-pink on cream ground. Antirrhinums are, of course, biennials, but at Reading they are raised from seed sown early in the year, as in the case of annuals usually raised under glass.

Annual chrysanthemums have been so greatly improved of late years that they now form a group of much value. According to the evidence obtainable from the Reading trials, they suffer rather more from drought than some other of the plants of the same duration, but in all but the most exceptional seasons they can be depended upon to bloom freely and continuously throughout the summer months. The number of varieties possessing merit of a high order is considerable, but the "star" varieties are the most useful. There are Morning Star, primrose; Eastern Star, rich primrose-yellow; Evening Star, golden yellow; and Northern Star, ivory white with sulphur zone. The double-flowered clarkias have afforded this season ample proof of their being able to withstand the effects of drought, and a temperature far above the average, for they flowered freely and continuously for a long period, and are now producing a rich colour effect. The fine strains of Clarkia elegans that Messrs. Sutton and Sons have introduced within recent years are especially attractive in the open quarters at the present time, and their value is not limited to the displays of colour produced in the open. Plants raised from seed sown next month, and grown in a cool frame, will form bushes three or four feet in height, and be most useful for the conservatory in May. The colours include salmon-pink, white and pink, and crimson. The varieties of C. pulchella are also highly meritorious.

Coreopsis were also flowering freely, and of these the most effective were the deep yellow and chestnut C. Drummondi, the golden C. grandiflora, and the yellow and brown C. tinctoria, all of which are not less useful for the supply of cut flowers in quantities for indoor decorations than for the production of colour effects in the garden. The brilliantly coloured Orange Daisy (Dimorphotheca aurantiaca) has this season afforded further evidence of its value in the garden. Throughout the cold, wet summer of last year it was simply a blaze of colour at Reading, and we can speak from personal knowledge, and this season it is flowering not less freely. The fine form of the pot marigold known as Orange King, which also has orange-scarlet flowers, is producing a brilliant display of colour, the dry weather not having seriously affected the plants.

Very attractive were the great breadths of godetias at the time of our visit to Reading, for they had grown vigorously, if less robust than in the last summer of 1910, were blooming profusely, and the rich colouring of the flowers had suffered less from the scorching effect of the strong sunshine than might have been expected. Conspicuous among the many fine varieties in the collection were Sutton's Afterglow, Crimson King, Dwarf Pink, Ladybird, and Scarlet Queen. Afterglow and Ladybird grow to a height of six or seven inches, and have scarlet-crimson and white and crimson flowers respectively; the other varieties have an average height of twelve inches, and the colours are sufficiently indicated by the names; Duchess of Albany and its white form, which have an average height of twelve and six inches respectively are godetias of much merit.

Several of the mallows were so finely in bloom as to attract immediate attention, and of these note was made of Lavatera rosea splendens and L. alba splendens as being so highly attractive as to deserve the most widely extended culture. The plants attain a height of about three feet, and produce their large, handsome flowers freely and continuously throughout the season. The flowers of the two forms are bright pink and pearly white respectively, and when cut stand well in water. Very attractive also were the annual lupins, which now afford a considerable range of colours, the predominant shades being light and dark blue, pink, carmine, and red. Sunflowers, of which there are now a great diversity of forms, ranging from twelve inches to twelve feet in height, have withstood the heat and drought without injury, and demonstrated their claims to consideration in the planting of mixed borders. Primrose Perfection, Sutton's Earliest of All, and Sutton's Double are attractive varieties, attaining a height of about six feet; Stella, Stella Primrose, and Sutton's Miniature are three good forms with a height of about four feet. Highly interesting and attractive also was Sutton's Dwarf Miniature, which attains a height of about twelve inches, and produces in great profusion medium sized blooms of the richest yellow.

MODERN STRAWBERRY CULTURE.

The cultivation of strawberries for market has been a prominent industry in certain districts for the past twenty years. Hampshire, Kent, Sussex, Cambridge, and a few other districts are important centres of this culture. In Hampshire, for example, it is evident that the crop has proved a remunerative one to those early pioneers who prospected around the New Forest and in the southern parts of the county, for we discern on all sides abundant evidence of prosperity and advancement. Moreover, it is significant that since these early days of the strawberry-growing industry, considerable tracts of land have been put under the culture, even during the year that is just past. Southampton and the districts around, including Botley, Swanwick, Bursledon, Wickham, Fareham, and Sholing, etc., are now all important strawberry centres in Hampshire. The magnitude of the industry is but little known to the ordinary person, but one can judge of its importance by a perusal of the figures published in the report of the Swanwick and District Fruit Growers' Association, Lim. In the year that has just passed we understand that from one station of the London and South-Western Railway Company's line, Swanwick, over 115,000 baskets of strawberries were carried in a single day. Further, it is said that during the month of June, from that station alone, the railway company carried 1,107,350 baskets. It is also noted that during the month of June the L. and S.W. Railway Company also dealt with, and dispatched, over 3,000 tons of fruit from Botley and Swanwick Stations.

Yet, in spite of these astonishing figures from the Southampton district, the year 1910 is described as one of the worst of three successive bad years, from which it will be inferred that a plentiful season is not always a profitable one. Prices have been as low as ever, which gives every indication that the supply has been equal, if not greater than, the demand. It stands to reason that if strawberries are sold on barrows in the streets at 3d. and 4d. per lb. only a few days after the Southampton crop has made its first appearance on the market, there can be but small returns going into the pockets of the growers. It is said, on good authority, that if it had been remunerative to gather all the crop the year 1910 would have been a record one, but the prices were so low that for the last two weeks of the season it did not pay to pick, and tons of fruit were left to rot on the ground.

The methods of packing, transit, and marketing of strawberries have undergone many changes of late. The need for some improvement in this direction has manifested itself again and again, and there is even still further room for improvement. A difficulty which has been removed to a great extent in the marketing of this fruit is the varying capacity of the baskets and their disposal when empty. The slender wicker-handle basket is commonly used in the Southampton district but the basket has not yet been introduced that will enable the grower to provide the salesman with a guarantee as to the net weight of the fruit, the baskets used being of uniform size. The L. and S.W. Railway Company may charge additional rates for the transit of these handle baskets, for they have to fit up special vans with shelves to carry this sort of traffic, but the fact remains that there is considerable less injury to the fruit than where flat peck baskets are used; the latter are commonly employed in Kent and Sussex, and are of the ordinary flat market shape, as used for peas and other bulky crops. They contain 12lb. of fruit, and, of course, take up much less room, weight for weight, than the handle baskets The fruit, however, invariably arrives at its destination in a more or less damaged condition. Regarding the chip baskets, the Swanwick and District Fruit Growers' Association report that many growers have complained of the heavy bills which they have had to meet out of their diminished profits, for chip baskets, for which they say they get no return. The cost of these baskets works out at about a penny each when purchased in fifty-gross lots. But if it is possible to adopt the Continental custom of selling the fruit together with the baskets at an inclusive price, the cost of the latter will then be returned to the grower. Whether or not the chip can be made a chargeable package remains to be seen. At all events, it is the best-known form of package for strawberries. If wicker baskets are used it is essential to have a distinguishing mark upon them, and the growers should have a distinct and properly executed agreement with the salesmen for the return of their own baskets, or their value.

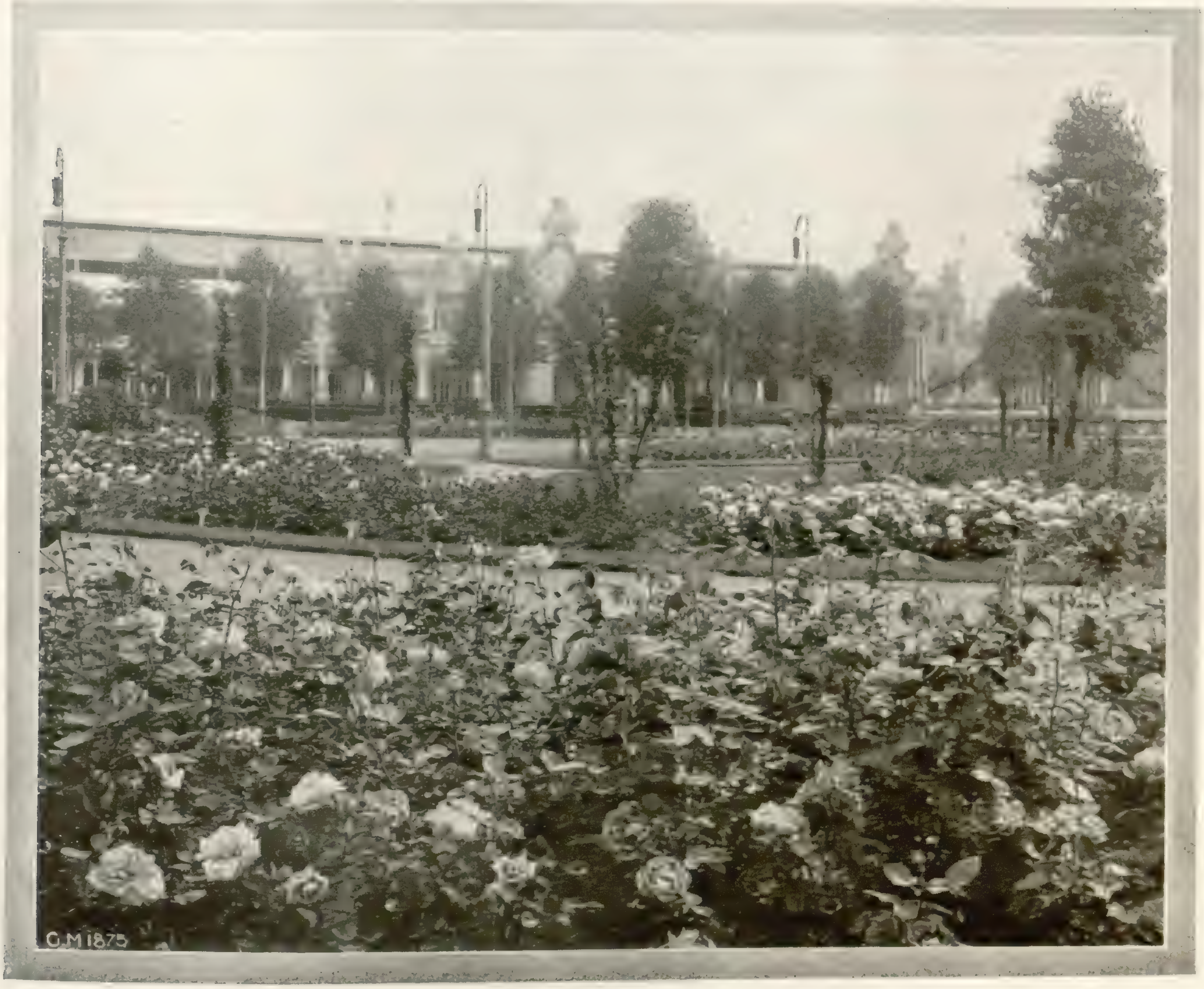
The Hampshire strawberry grower is invariably first on the market with his produce. The extensiveness of the culture in the Southampton district has necessitated special railway facilities, and the system now adopted is to arrange the towns to which fruit is sent into groups, but there seems to be a grievance regarding the short space of time between the departure of trains to the several groups. The growers find that they cannot return for another consignment in the allotted space of time, especially as they are sometimes kept for more than an hour before they can unload. Every facility, however, is being put in the way of the growers by the railway company, and the unloading and dispatching of fruit is now conducted with very little loss of time. The various centres to which fruit is sent include London (Covent Garden), Aberdeen, Belfast, Cardiff, Blackpool, Dundee, Glasgow, Leeds, and Manchester, etc. London takes about half the crop, while the rest goes to the large towns of the Midlands and the North.

The varieties of strawberries chiefly grown in the Hampshire districts are: Bedford Champion, Royal Sovereign, Laxton, Sir Joseph Paxton, and Leader. Of these, Bedford Champion, a variety that is distinguished for the immense size of its fruit, has gained much favour amongst growers of late. It is quite a distinct and vigorous-growing variety, the flesh being red throughout, and the outer skin of a glowing crimson colour. It also possesses a firm flesh, and therefore travels well. The Laxton, a cross between Sir Joseph Paxton and Royal Sovereign, is undoubtedly a good variety. It is early (though not quite so early as Royal Sovereign), prolific, a large handsome fruit, and excellent in flavour. Royal Sovereign is a variety of immense value to both field and garden cultivators. It is earlier than Sir Joseph Paxton, and has large, finely-coloured fruit, with firm flesh, which means that it travels well. It has been said by more than one authority that Royal Sovereign is the most valuable all-round strawberry now before the public. As a late kind, Givon's Late Prolific is a most meritorious variety.

(To be continued.)

ROSES AT THE WHITE CITY.

Visitors to the great exhibition at Shepherds Bush, London, popularly known as the White City, will have been struck by the fine development that has taken place this year in the horticultural features. The trees and shrubs, and the summer bedding, have been a great success, but perhaps the roses, especially those by the Club gardens, have proved more attractive than all else. Of course, the rose is our national flower, and it is very popular among all classes, whether they grow roses or not; but even a popular and national flower must be presented to the public attractively if it is to continue popular. The display at the White City could not have been in better hands than those of Messrs. William Paul and Son, of Waltham Cross, and, needless to say, this firm has spared no pains to make, and keep, this rose garden beautiful. The beds of roses, containing a large number of first-class varieties raised at Waltham Cross, as well as old tried sorts of home and Continental origin, have been grand; growth was rather late in the spring, but presently it came along sturdily, and a week or so ago, when photographed for the purpose of the above illustration, the plants presented a wonderful wealth of floral beauty, accompanied by the sweetest fragrance. Not only are the beds of dwarf roses a success, but the festoons, arbours, pillars, tripods, umbrellas, standards, and half-standards have added to the beauty of the scene, and given that diversity of height and form so essential in gardening. At the same time these various methods of training roses have proved a feature of considerable educational value, and one that visitors have not been slow to make note of. Altogether it must be conceded that the rose garden planned, and planted, and cared for, by Messrs. William Paul and Son, is one of the chief attractions at the White City, and one that horticulturists should not miss on any consideration.



THE ROSE GARDEN AT THE WHITE CITY.
Planned and planted by Messrs. Wm. Paul and Son, Waltham Cross

HELENIUMS.

The various members of the genus Helenium form an important and showy group of hardy herbaceous perennials, without which no garden is complete. They are plants of free growth, succeeding in ordinary garden soil that is thoroughly prepared by digging and manuring previous to planting, and beyond the routine work necessary to keep the plants clean and staked, little further attention is necessary; triennial lifting and division of the crowns is advisable in order to secure the maximum development, as increase is generally of a lavish character, and after the period named the size of the flowers begins to deteriorate on established plants.

Heleniums are most effective when planted in clumps of three or more of a kind, and as the mass of colour when in flower is great, they should not be lumped together when staking, but spread out lightly, supported by twiggy sticks, or tied out singly on light bamboo canes.

The earliest to flower is H. Hoopesi, a dwarf species, with golden-yellow flowers; this is followed by H. Bolanderi and H. Bigelowi, both yellow-flowered species, the first-named having a brown centre; these vary in height from one to two feet. None of them rivals H. pumilium magnificum in floriferousness; this subject attains a height of two feet, and begins to flower in June, continuing for about three months; the flowers are of a large size, soft rich yellow in colour, and with crimpled petals; it is altogether a first-rate and reliable plant for garden decoration, and grows to a height of three feet.

H. Riverton Gem shares all the good qualities of the last-named, but differs in the colour of the flowers, which are golden-yellow flushed by a clear shade of terracotta. Helenium autumnale and its varieties are conspicuous subjects in the autumn garden. H. cupreum commences to bloom in July, and continues until late in autumn; in height it rarely exceeds two feet, forming dense bushes, and bearing flowers of a lively copper-yellow colour. H. grandicephalum striatum is a taller-growing edition of the last-named, and flowers later, generally beginning in August; it attains a height of five feet, and has yellow flowers heavily striped with dark red. H. superbum produces self flowers of a beautiful yellow, and grows from five to six feet tall, being in season from July till September.

All the species and varieties of helenium are valuable for house decoration, being of great service where quantities of cut flowers are required, and particularly for large vases.

Thomas Smith.

WHITE GROUND FANCY CARNATIONS.

Although, as a class, the white ground fancy carnations are not so effective, either in the garden or on the exhibition stage, as the yellow ground varieties, they are by no means wanting in attractions or usefulness. So far from this being the case, they are so exquisitely beautiful that some of the finest varieties should be grown wherever carnations are cultivated in proportion to their merits, and their charms fully appreciated. The proportions in which the two classes should be represented in any one garden is a matter that must be determined by the owner, for much of the enjoyment of a garden depends upon it containing plants which one appreciates the most highly. A large selection will not in any case be required, and twelve varieties may be regarded as ample for a garden in which carnations are cultivated on a comparatively large scale.

The following are all of much merit, and may be suggested as the most suitable for forming a collection adapted to the requirements of the general body of cultivators. Carnace, a charming variety, the flowers of good form, and attractively marked with rose; Cæsar and Pompey, a very attractive flower, richly marked with crimson and maroon; Dainty Lady, a pleasing variety, flushed with rose; Lady Desborough, a finely formed flower of large size, the broad smooth petals freely marked with pink; Hon. Dorothy Legge, a charming variety, the flowers of medium size and fine form, well marked with rose; King Edward VII., a variety of great excellence, the flowers large, of fine form, and with scarlet and maroon margin and markings; Merele, an attractive flower, of average size, and effectively marked with scarlet; Mrs. W. H. Taylor, a pleasing variety, the flowers of average size, and marked and edged with scarlet; Millie, one of the most beautiful of the white ground fancies, the flowers are of fine form, and marked with pale rose-red; Queen Mary, a charming variety of recent introduction, the flowers are of full size and good form, with light red markings; Rhoda, a distinct variety, the flowers of fine form and attractively marked with lavender and rose; and The Nizam, which may be described as one of the finest of the white ground carnations. It has blooms of large size, good form, and lightly marked with bright red. The flowers of this variety, herewith illustrated, are those for which Mr. F. W. Goodfellow, of Walsall, was awarded the first prize for three undressed blooms of a white ground fancy carnation at the recent exhibition of the National Carnation Society.

CARNATION THE NIZAM.

A beautiful white ground fancy, for which Mr. F. W. Goodfellow, Walsall, was awarded the first prize in the class for undressed blooms of any white ground carnation at the National Carnation Society's exhibition.

AMONG THE ALPINE FLOWERS.

July draws to a close as this is written, and with the end of the month we are again in the midst of cloudy and showery weather. After a more congenial time for the flowers, drought again supervened, and plants suffered much. The rain which had fallen had not penetrated far into the soil, and it is wonderful how some flowers retained their lives, to say nothing of their beauty. Some of the saxifrages suffered considerably, and brown patches showed all too frequently among these favourite plants. The dry summer has left indelible traces on some of our masses of these saxifrages, especially the mossy ones, and it will be necessary to propagate a good number and to raise young plants which will be free from the burned patches in the centre.

Some other things show the stress they have undergone, and we shall have occasion to regret their diminished beauty for another year. It is hopeless to attempt to water a large collection, and we must, perforce, only attend to those which stand most in need of it. Yet nothing compensates for a natural supply, and we are glad indeed to see less trying times for our flowers.

Mimulus Burneti.

Among the many plants which disliked the drought, and required some care to keep supplied with water, was Mimulus Burneti, which hails from the North of Scotland, where it was raised by a gentleman named Burnet, and was, I understand, the result of a cross between Mimulus luteus and M. cupreus. In its way it partakes of both its parents, being very hardy, as is M. luteus, and with the stature of the latter rather reduced, but showing a portion of the colouring of M. cupreus. It likes a fair amount of moisture always, and in this respect seems very much akin to M. luteus, which, in some parts of the country, has become naturalised along the banks of rivers and streams. M. Burneti is a good doer, and a satisfactory plant for the moister parts of the rock garden or the little bog. It increases freely enough, and is one of the best growers among the hardy mimuluses. It would be interesting to know how far it reproduces itself from seeds—if it bears such, a point about which I have grave doubts.

Geranium lancastriense varieties.

It is somewhat venturesome to discuss this geranium under this name, inasmuch as authorities say that it is simply a variety of G. sanguineum. I am not disposed to cavil at their dictum, but it is for convenience that I adopt the present subtitle. The ordinary G. lancastriense has long been a favourite with me, and I have regarded it as practically fixed, seeing that seedlings invariably came true to the parent with me. Some time ago, however, I heard of some variations being found on Walney Island, the original home of G. lancastriense, and I had an opportunity of seeing more than one of these lately. They come considerably nearer G. sanguineum than G. lancastriense, but are of a prettier colour than that of the somewhat aggressive one of G. sanguineum. A very pretty one was in the Craven Nursery, and another in the garden of my friend, Mr. T. O. Walker, of Carnforth. These were both taller than G. lancastriense. Rather to my surprise on my return home I discovered, close to a plant of G. lancastriense, a seedling which apparently came between G. sanguineum and the former. It is slightly taller than G. lancastriense, and is of a warm, yet pleasant red. I have no plants of the typical G. sanguineum in my garden, so that the one must either be the direct progeny of G .lancastriense, or of G. sanguineum album, of which I have a good many plants, but which, up till now, has also always come true from seed. I am interested in this seedling, which will, I hope, turn out to be useful in the rock garden.

Rather curiously, a seedling from G. sanguineum album has just flowered beside a plant of this white variety of the blood-red Cranesbill, and it, again, is almost the colour of G. lancastriense, but has more the habit of G. sanguineum album, although dwarfer. These two give promise of adding to the beauty of the rock garden.

Erodium cheilanthifolium.

It is a surprise to see how few representatives of the charming erodiums, or Heron's bills, are to be met with. Not that they are generally unrepresented in good collections of alpines, but the wonder is that more members of the genus do not appear. It is hard to select among them for notice, so pretty is almost every one, although E. Manescavi, and a big one which passes by the name of E. hybridum (a name of which I have always grave doubts), are rather aggressive in their magenta tones. But I think that E. cheilanthifolium deserves a word or two when we are looking through our alpines to see which are flowering at a season when the rock garden is less interesting than at an earlier date. The fern-grower is possibly better able to give an opinion respecting the appropriateness of the specific name of cheilanthifolium, but it appears to a mere lover of alpine flowers that the lace-like, finely-divided leaves are not unlike those of some of the genus cheilanthes, lovely as are these ferns in their formation. With this dainty foliage we have the charm of a low-growing plant with its white petals prettily veined with dark purple.

Other Flowers.

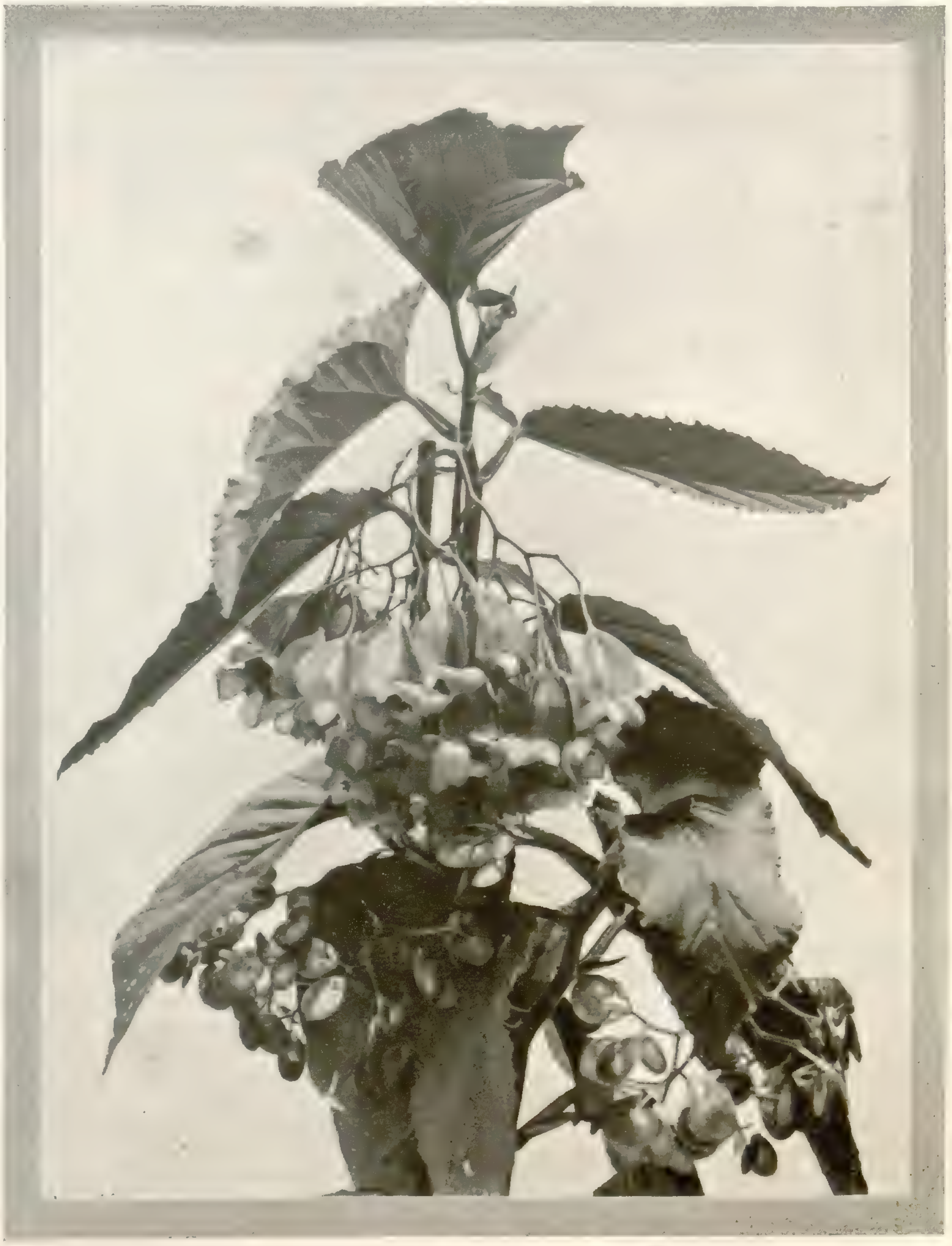
There are still numbers of flowers which, despite the stress of the times, give us much delight. There are yet some helianthemums, though the vast majority have bid us farewell for the year, or only yield us a few scattered blooms, as a reminder of their former glories, when they gave sheets of brilliant flowers; there are all the sisters of the geranium and the erodium referred to just now; there are dianthuses in great beauty still, although some of these, also, have bid, or are just in the act of bidding, us farewell. We have the dainty little Tunica saxifraga, some of the alpine gypsophilas, such as, for example, the spreading G. repens monstrosa, alpine bellflowers in considerable numbers, and fascinating as ever. Little St. John's-worts give us bright yellow blooms, and their taller sisters of more shrubby habit afford a bigger and brighter show of flower. Some of these hypericums have well-nigh finished their season's course, but others are keeping up the tale of the flower of St. John. Linarias, of several kinds, are pretty as of yore, and the collection of hardy heaths maintains its almost unbroken succession of flower. Earlier heaths have not finished, and now we see the varieties of Calluna vulgaris coming into blow, among them a nice dwarf white one—a gem for the rock garden.

These and many more gladden us as we pass through the garden, finding ever many of our favourites to welcome us, and to give us our daily delight in their beauties.

S. Arnott.

BEGONIA LUCERNA.

A begonia that has achieved a great deal of popularity for warm house cultivation is B. President Carnot, a variety raised on the Continent some years ago. Of somewhat similar habit is B. Lucerna, and it may be grown in the same way, and for the same purposes as B. President Carnot. The pendant trusses of bloom are very large, and the bright carmine-scarlet flowers cluster thickly together, as shown in the accompanying illustration. Although as a pot plant B. Lucerna is very effective, as evidenced by the handsome examples shown before the Royal Horticultural Society recently by Messrs. James Veitch and Sons, of Chelsea, the best way to grow this begonia, as in the case of B. President Carnot, is trained to a rafter or pillar in an intermediate house, as so well exemplified in the greenhouse at Kew, where plants of some age are trained to pillars eight or more feet in height, and are blooming with great freedom. Under this method the handsome panicles of bloom are shown off to the fullest advantage. In the greenhouse at Kew it is grown with much success. B. Lucerna offers no difficulties in the matter of culture, and can be easily managed along with other evergreen warmth-loving kinds. It is certainly a fine begonia.



BEGONIA LUCERNA.
Flowers carmine-scarlet, freely borne in large pendant trusses.

BULBS.

The experienced bulb grower can tell whether a bulb is a good one or not directly he sees it, but he rarely trusts to his eyesight, and therefore carefully handles it. The inexperienced cultivator may at once favour the large bulb, and, in due course, be disappointed with the result. A large bulb, if of good form and well matured, is almost sure to prove satisfactory. As a rule those bulbs, especially of hyacinths, that are rather over medium size, of good shape, and very heavy and firm, give us the best results. When bulbs of named hyacinths are of irregular shape they often throw up two spikes, and although a number of good spikes are appreciated growing from a Roman hyacinth bulb, two spikes from a named hyacinth bulb are rarely appreciated.

Although the inexperienced grower is right in ordering early, he must not allow the bulbs to remain unpotted for a long time after they come to hand. Lilium and narcissi bulbs deteriorate sadly if so kept. Potting in reasonably good time means early and steady growth, strong stems, and numerous roots. Such bulbs are mostly satisfactory, whether they be hard forced or allowed to grow slowly in a cool temperature, and there are very few failures.

Geo. Garner.

CEANOTHUSES.

The majority of the species of ceanothus, of which about a score are cultivated in our gardens, are not sufficiently hardy to plant in the open garden or border. It is quite true that many of the more tender kinds luxuriate in South Devon, Cornwall, and other favoured parts, but, speaking generally, these require the protection of a wall. The ceanothuses are well known as being very free flowering, and the best examples I have seen have occupied fully-exposed and very hot positions.

I have seen finely-flowered examples of C. azureus in the Peckham Rye Park in September, which indicates that this popular species is a good town shrub, more especially as the neighbourhood of Peckham is a very congested one. Both this and C. americanus, with their garden forms, have long occupied prominent positions in the shrubbery, and each and all flower from the current season's growth, while several varieties bloom continuously over a long period. C. Arnoldi is a very vigorous kind, and altogether very desirable, but perhaps the most beautiful of all is Gloire de Versailles, in colour light blue. It presents a very beautiful picture when literally smothered with its delicate inflorescence. There are several other varieties of varying merit, but none to equal the foregoing.

As regards the species that produce their flowers from the previous year's growth, we possess a number that bloom in the spring, including C. Veitchianus, C. dentatus, C. papillosus, and C. divaricatus. Both C. velutinus and C. rigidus also bloom in April and May. The first-named has pure white flowers that are borne in large-sized panicles, while C. rigidus is a dark shade of blue, and this colour in its various shades is seen in the majority of the species. Early in June C. thyrsiflorus is seen at its best in Southern England, and may be coupled with C. divaricatus as being sufficiently hardy to grow satisfactorily in the open border. It may be added that the ceanothuses are indigenous to North America, and for the most part natives of California, which boasts perhaps the finest and most equable climate in the world. In consequence it will be readily understood that they are more or less susceptible to the conditions that obtain in the English winters. We are glad to know that several have become acclimatised, and settled themselves down as naturalised British subjects with a good grace, and this without any protection whatever, while others suffer to the point of extinction if exposed, and these should occupy and are well worth the protection of a wall or fence and a warm position. Touching upon soil, they are not by any means fastidious. Turfy loam and short manure is usually employed, while the sites selected should be well drained, which, in conjunction with full exposure to the sun, will result in vigorous and thoroughly matured wood.

I heartily commend the ceanothuses to the attention of amateurs as being amongst the most delightful of shrubs of more or less large growth, and, in conclusion, must explain that the species which bloom on the previous year's growth should be rather severely pruned immediately after flowering, while the others should be cut back rather closely in March.

Walter H. Aggett.

THE PENSIONERS' GARDENS AT CHELSEA HOSPITAL.

BUDDLEIA VARIABILIS MAGNIFICA.

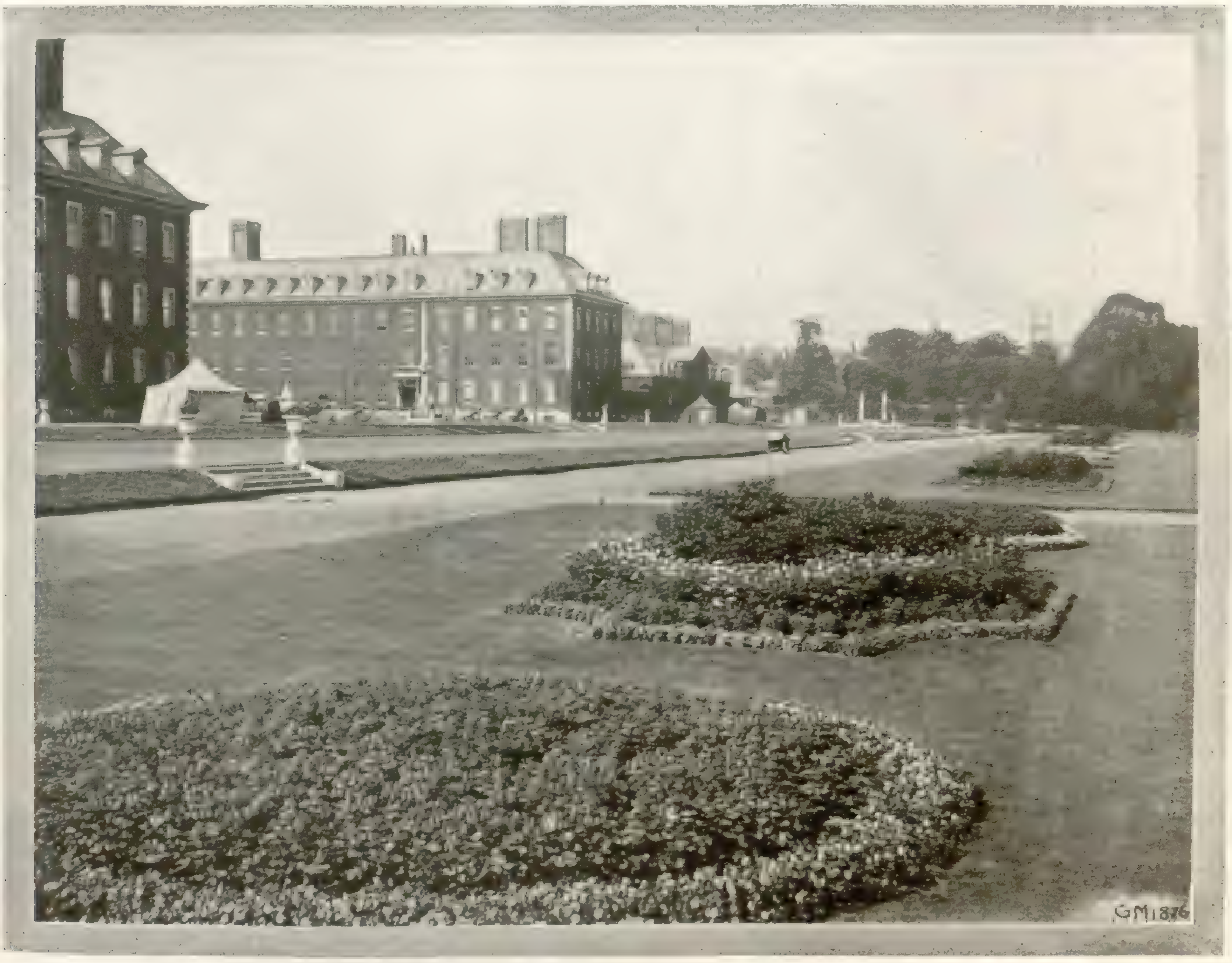
This is a really fine acquisition, and is worthy of a place in every garden where there are large borders. It is not suitable for very small borders, as it grows to a height of six feet or seven feet in a few years. A single specimen in a garden looks charming. The variety is very free flowering, nearly every well-matured young shoot bearing a flower spike. Strong branches have flower spikes eighteen inches long, the colour being blue-grey, very beautiful when seen in a subdued light, and in the evening.

In the southern counties I have seen fine plants growing in quite open positions, subjected to all the winds that blow. A deep friable loam forms a suitable rooting medium. Every autumn the plants must be cut hard back, as then strong shoots are produced, the flowers being borne on the current year's growths. Stock may be raised from seeds, or by inserting cuttings of ripened shoots at the end of August or during September. G. B.

Layering Thyme.—Very old clumps of thyme are not worth retaining in their present form, but where there is not any new stock the old clumps may be very successfully and simply made to provide one in a very short period. All dead stems must be carefully removed, and the healthy ones spread outwards in circular form, leaving the centre quite open. Equal proportions of good loam, leaf-soil, and sand should be passed through a half-inch sieve and be well mixed. First put a layer of the new compost under the thyme, and then well fill up the centre. If the whole, after being made firm, is kept nice and moist, nearly all the layered shoots will form roots.—G. B.

CHELSEA HOSPITAL GARDENS.

Although for a long number of years the gardens attached to the Royal Hospital, Chelsea, have been well known to many horticulturists, they occupy a position somewhat off the beaten track followed by those who inspect the horticultural features of the Metropolis, and, consequently, are not so well known as they deserve to be. They secured some prominence in 1905, when the Royal Horticultural Society held its summer show in them, but that prominence sinks into comparative insignificance before the glamour that already surrounds them as the venue of the great International Horticultural Exhibition of 1912, towards which we are all looking.



THE GARDEN FRONT AT CHELSEA HOSPITAL.

Everyone knows that the Royal Hospital, or Chelsea Hospital, as it is popularly called, is the home of the Chelsea Pensioners, all old warriors, who, after good service for their country, and having a blameless character, are here cared for in every possible way. The hospital and its surrounding gardens cover an area of about sixty acres, the whole forming a little town conducted on military lines, and comprising some 600 or 700 souls. The gardens and grounds are nearly all open to the public during the greater part of every day, hence they are a great boon to the people of Chelsea and Pimlico. But, being private property, in the sense that they belong to the hospital, the authorities may close the grounds at any time and for any purpose they think fit, and so it comes about that, subject to a handsome donation to the hospital funds, the forthcoming great exhibition will be held there.

The garden front of the Chelsea Hospital is quite private to the inmates. This is terraced, and on the upper terrace are tennis and croquet courts. Below is a broad roadway, and then another wide expanse of lawn, in which are cut large and imposing flower beds, some filled with rhododendrons, others with summer bedding plants. Beyond the beds is a long shrubbery border, with trees behind, these effectually enclosing the 800 feet long terrace, and keeping it quite private.

Visitors will notice at once that the grounds are divided from end to end by a broad roadway, that passes under an avenue of ancient pollarded lime trees, supported by lines of plane trees. Going towards the river, the open park-like expanse spreads away to the right, and is encircled by fine old plane and other trees. On the left-hand side of the avenue lies the Ranelagh Gardens, one of the best examples of Gibson's landscape work, and one that will add immensely to the interest and beauty of the forthcoming exhibition. The ground is laid out in undulating fashion, and there are many fine old beech, lime, plane, and elm trees. There is a splendid cut-leaved alder, a number of rare old thorns, ailanthuses, and dimorphanthus; hollies abound and stand the London heat and smoke well. The grouping of trees and shrubs is very fine, but in years gone by little attention was paid to thinning, and so many of the subjects have become spoiled by crowding. It is now a difficult matter to rectify this mistake without making unsightly gaps, but as far as circumstances permit, Mr. T. W. Turner, the garden superintendent, has effected many improvements in this direction. At one time the Ranelagh Gardens were a fashionable pleasure resort, and the creeper-covered summer house that now occupies a fairly central position is on the site of the old Rotunda, a building famous under the old régime.

Besides these interesting portions of the grounds there is a section, near Mr. Turner's house which must not be forgotten. It consists of one hundred and seventy plots, each one in charge of an old pensioner, and each one gardened according to the taste of its owner. Beyond keeping the broad walks in order, and caring for the surrounding trees and shrubs, Mr. Turner has nothing whatever to do with these plots, save that his advice is occasionally asked for, and given, to these old warrior gardeners. Some of the plots are evidently cultivated for the pleasure of gardening, others are very obviously managed with a view to profit. All are well tended, and the spirit of friendly rivalry is keen among the old pensioners. Some grow popular hardy flowers, and find no difficulty in selling their produce; a few give special attention to small salads; some specialise in dahlias, and others do quite a little business in pot plants. In most cases the impelling force appears to be tobacco, for many of these old soldiers are rare smokers, and the sum they obtain from the sales of garden produce enables them to add to their enjoyment in this direction.

Our readers will no doubt remember that the fine old soldier, Sir George White, the hero of Ladysmith, is the Governor of the Chelsea Hospital. C. H. C.

RODGERSIA PINNATA.

A member of the great Rockfoil family, one that has a greater likeness to the astilbes than to the saxifragas, and of special value to those who contemplate the formation or improvement of bog or water gardens, is Rodgersia pinnata. For a long number of years the only cultivated species of rodgersia was the Japanese R. podophylla, but during later times other species have been found in China, and R. pinnata is already becoming fairly popular. It is a plant that has many points of merit. The leaves are handsome, long-stalked, and divided into from three to five leaflets, the whole leaf being as large as that of a horse chestnut, but peltate rather than palmate. Sometimes the larger leaves have one or more of the lower leaflets divided, so that a leaf may appear to have six, or occasionally seven, lobes of leaflets. To the elegance of the leafage must be added rich green colouring, which changes in late summer and autumn to bronze and bronzy-purple. The inflorescence is a bold and yet graceful panicle, borne at the end of a leafy stem, that rises to a height of about three feet or four feet. The small flowers are crowded, astilbe or spiræa fashion, and are of a beautiful soft rosy-pink shade, and they last fairly well, and are followed by seed vessels that are themselves no mean attraction. There is a form with white flowers, now catalogued as R. pinnata alba.

RODGERSIA PINNATA.

A bog plant of great beauty, with pinnate leaves and large panicles of soft rose-pink flowers. The specimen shown is in a little bog in the Rock Garden at Kew.

A large plant of R. pinnata in the boggy, peaty soil close to the Dripping Well that is a feature of the rock garden at Kew, has done remarkably well this year, and is shown in the illustration given herewith. Moist peaty soil, a semi-shady position, and some slight shelter from strong winds, all aid the development of this handsome hardy plant, and a top-dressing of old manure or of leaf-soil when the leaves die down will serve as a winter protection, and also as food for the roots.

C. B.

OWN-ROOT ROSES.

Few phases of rose culture have been more discussed than that of "own-root" roses; and the variations of opinion are, indeed, great. Still, I think there can be little doubt that some roses thrive better in this form than when upon foster roots. Let us take the Chinas and most of the dwarf-growing polyanthas, for example. These can now be rooted very freely, and with the undoubted advantage of avoiding all stock suckers. Indeed, I think it is often the question of suckers from the various stocks roses are worked upon that has prejudiced many against roses so worked. At the same time, one must not lose sight of the fact that the nature of the soil has much to do with the benefits or otherwise, of own-root versus worked roses.

But it is not my wish to go deeply into this vexed question. I simply desire to call attention to the present as an excellent time for increasing such varieties as one may decide shall be grown in this way. Owing to the dry summer we have a larger amount of semi-ripened wood than usual, and this is the best possible material for our purpose. Take off portions of semi-ripened growth from almost any free grower, and insert these in a sandy loam. Always see that the base of the cutting is immediately below an eye or leaf; or else it should have a heel, i.e., a small portion of the older wood from which the lateral was produced.

It is not a good plan to take too large or long a portion of growth, or we are apt to get a somewhat leggy plant when placing the rooted cuttings into their permanent quarters. By the way, I would never put a rose cutting into what I intended to be its permanent quarters, as one cannot be certain of the percentage that will strike root. Besides this, we naturally want to supply a somewhat richer compost to the rooted plant than would be conducive to the striking of cuttings; as the latter have a great objection to rich, manure-laden soil at the first. Another reason is we can put a much larger number of cuttings in the space needed for permanent plants.

Do not select a border facing due south, as such a position is apt to be too drying for rose cuttings at this time of the year. On the other hand, one should avoid a wet and cold north border. Most gardens contain some little piece of ground between these extremes, and this would be the best position to choose. Always make the cutting firm, and be sure the base rests upon the soil. Should the soil not work very well, let a little sand be placed in the bottom of the hole you are putting the rose cuttings into. In any case, a little sand is a great help towards callusing and subsequent rooting. There is no need to remove all of the leaves from the cutting. I fancy a few of these help in many cases. But let the bottom one or more be taken off according to their closeness one to another. Upon no account allow the cuttings to become dry, while avoiding any suspicion of stagnant moisture. The distance apart must depend upon the nature of growth. For example, we should allow three times the room for Frau Karl Druschki and Dorothy Perkins as would be needed for the dwarf-growing polyanthas and Chinas. The latter may be three inches apart in the row, and rows about fifteen inches from each other. I know of some who put the rows closer than fifteen inches, but we cannot then use the hoe between them to the same advantage or safety; and it is very essential to keep them clean and the soil stirred all through the following summer.

The above advice refers to cuttings that can be obtained from the open ground, but many may be taken from ripened or semi-ripened wood upon plants in pots. These I would prefer to put into pots or pans, placing several around the edges. If kept close for a time, and the sun is not allowed to parch the cuttings, they quickly form roots; and, of course, it is only a matter of general culture after this. Personally, I should prefer the rooted cuttings in pots to remain there until ripened before any further disturbance takes place. In the case of those rooted in the open they should be ready for transplantation the following autumn from insertion, when each variety can be transplanted to its permanent quarters, according to its own strength and characteristics, at the same time affording a much stronger compost than would have been advisable for the unrooted cutting.

A. P.

CLEMATIS DURANDI.

People who have found any difficulty in growing the many garden varieties of Clematis Jackmani would do well to discard them altogether and try the variety under notice, for although it does not give such a range of colour as the Jackmani varieties it has a better constitution, and grows quite well in places where the other varieties fail to exist. Its leaves are larger and more robust than those of many garden varieties, and the whole aspect of the plant betokens strength. The bluish-purple flowers are four inches across, and borne freely during July and August. In the open ground it succeeds on a group of rough posts, whilst it is also well adapted for planting against a fence or trellis. A variety called pallida may be obtained. It has paler-coloured flowers than the type, otherwise it is a very similar-looking plant. As is the case with other kinds of clematis, it succeeds best in loamy soil which contains a fair amount of lime.

D.

NEW PLANTS, ETC.

ITEA ILICIFOLIA.

Among the many plants collected in China by Mr. E. H. Wilson, few can claim to be more striking than Itea ilicifolia. This is a shrub that can hardly be regarded as quite hardy, but it will evidently thrive against a warm wall in most parts of the country, while in the warmer southern counties it may prove successful out in the open. At Aldenham it has survived two winters out of doors, but the tips of growth have been sometimes injured. For the winter garden and large greenhouse it may also prove useful. The leaves are like those of some hollies, or like those of the well-known Osmanthus ilicifolius, but the inflorescence is very distinct, being long, spicate, and pendant, forming dense tassels of small green flowers. Imagine the tassels of a green-flowered Acalypha hispida placed at the ends of the growth of a loose holly-like shrub, and one has a very fair idea of the general appearance of this new Itea. A.M., R.H.S., August 1. The Hon. Vicary Gibbs (gardener, Mr. Edwin Beckett, V.M.H.), Aldenham House, Elstree. (See illustration in our issue of the 5th inst.)

CORNUS PAUCINERVIS.

This promises to be a useful shrub, and its dense evergreen habit and splendidly hardy constitution suggest its suitability for hedges, when it becomes plentiful. The narrowly lanceolate leaves are about an inch and a-half long, and closely set on reddish stems. The plant branches as freely and densely as a thorn or privet. The flattened heads of flowers are composed of numerous creamy-white blossoms, each with four segments, these heads are three or four inches across. Cornus paucinervis is also one of Mr. Wilson's finds, and hails from China. A.M., R.H.S., August 1. Hon. Vicary Gibbs (gardener, Mr. E. Beckett), Aldenham House, Elstree.

MUSSÆNDA ERYTHROPHYLLA.

The genus Mussænda (order Rubiaceæ) is widely distributed, species coming from Socotra, Sumatra, India, China, and Tropical Africa. The species under notice is a stove plant that should appeal to many growers because of the great beauty of its fairly large leaf-like bracts, these measuring about three inches across, and rather more deep. They are of a lovely bright carmine, or reddish pink shade, and most effective. The flowers are about an inch across, cream-coloured, with a rich deep crimson centre. A.M., R.H.S., August 1. Messrs. Jas. Veitch and Sons, Chelsea.

CANNA TERRA-COTTA.

This is not a new variety, if we remember rightly, but it is a fine one, and well worthy of recognition. The growth is strong, and the spike long and effective, the flowering portion being well filled with large flowers of a bright orange-shaded terra-cotta hue. Some recent varieties have more shapely flowers, but few carry a larger or more attractive spike. A.M., R.H.S., August 1. Messrs. J. Veitch and Sons, Chelsea.

CARNATION MRS. WHARTON.

This is a strong-growing border variety with flowers of good size and shape; the colour is salmon-pink overlying buff. A.M., R.H.S., August 1. Mr. Batty, Skelton Castle, Yorks.

CATASETUM CLIFTONI.

An attractive species that varies somewhat, and one that has been well shown on previous occasions. The flowers are large, fleshy, aromatically fragrant, and of a soft yellow colour, sometimes with a deeper orange-yellow shading in the centre. A.M., R.H.S., August 1. Sir Jeremiah Colman, Bart. (gardener, Mr. Collier), Gatton Park, Reigate.

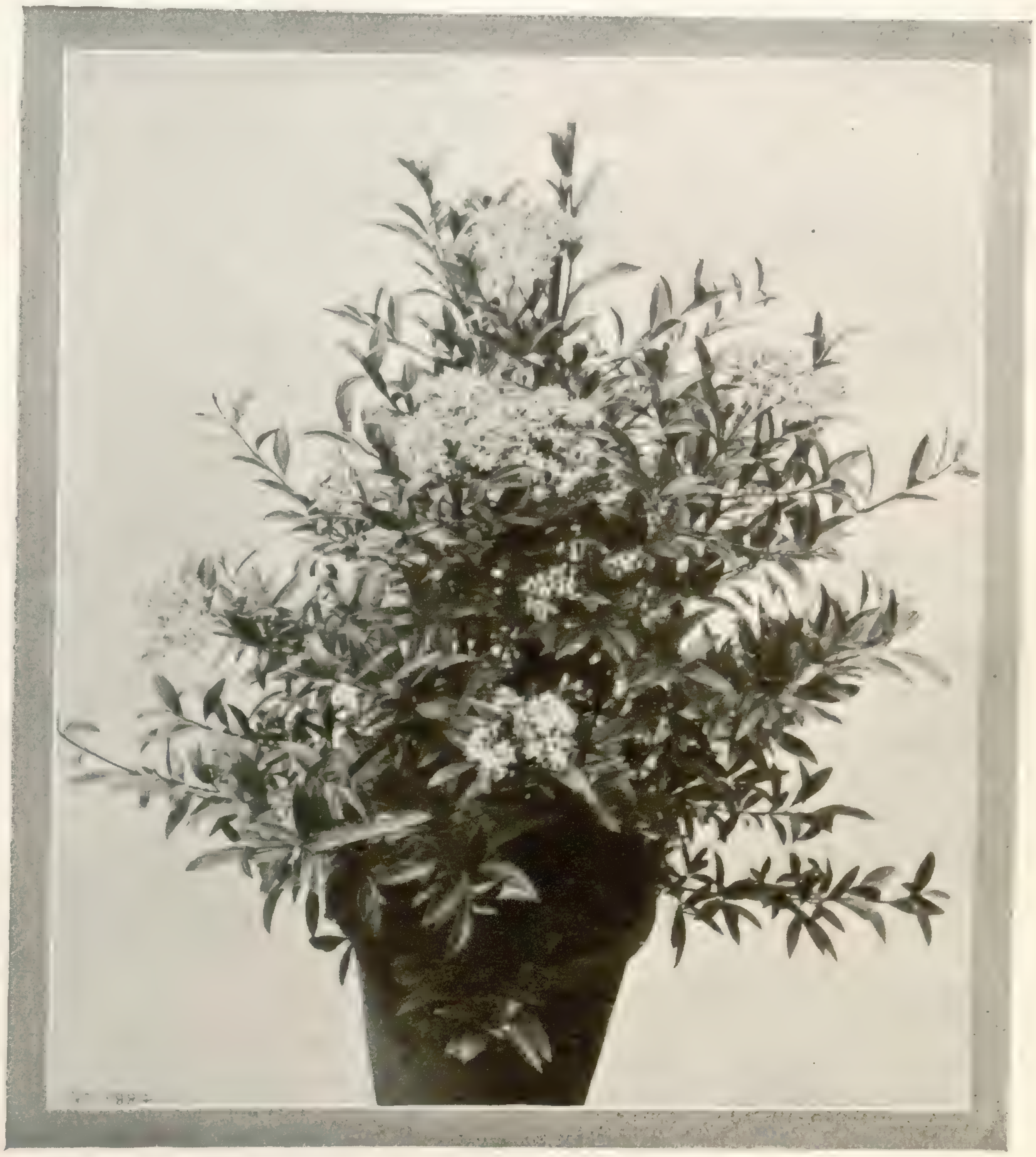
BLISTER-CANKER OF APPLE TREE.

The genus Nummularia is cosmopolitan in its distribution, and generally occurs under the form of black, hard, crust-like patches on dead bark or wood. These patches are usually quite flat, and more or less circular in outline, hence the generic name. N. discreta is readily distinguished from other species by the thick raised edge surrounding each patch or fruit-body, and by the compressed circular dark brown spores with an equatorial paler line. It occurs in France, Germany, Italy, United States, and Cuba, and was first met with in this country during the past year, on the fallen branch of an apple tree, at Sandsend, near Whitby, Yorkshire. As a rule the fungus is a saprophyte on various trees, as elm, magnolia, Judas tree, apple, etc., and is not recognised in Europe as a dangerous parasite, but in the Mississippi Valley apple-growing region of the United States it is a constant source of danger as a true parasite. The disease is usually found upon the larger branches, and, the mycelium being perennial in the tissues, a wound once formed continues to increase in size, until eventually the branch breaks away at the wounded part, and in many instances the entire tree is killed outright.

The first indication of infection is a brown and more or less sunken appearance of the bark in patches, which are usually scattered over a considerable area. These patches eventually become dry, cracked, and blackened, and the black fruit bodies of the fungus appear, at first as small globose bodies, which gradually expand into shallow saucer-shaped structures with a thick raised margin. Eventually the dry, dead bark falls away, but the fruit bodies of the fungus remain firmly attached to the wood. The mycelium present in the wood gradually encroaches on the surrounding healthy parts from year to year, hence the canker continues to increase in area until the branch is completely girdled and consequently dies.

The fungus is a wound parasite, and as spores are produced by the fruit-bodies in great abundance, the chances of infection through wounds caused by atmospheric agencies, birds, insects, etc., are unlimited.

Owing to the fact that this fungus has proved so destructive to apple trees in the United States, it is imperative that it should be removed and destroyed when met with in this country, as judging from analogy a fungus that has hitherto been known only as a harmless saprophyte may at any moment become a dangerous parasite.—"Journal of the Board of Agriculture."



CORNUS PAUCINERVIS.

A hardy Chinese shrub, with panicles of creamy-white flowers. A.M., R.H.S., August 1. Hon. Vicary Gibbs (gardener, Mr. E. Beckett), Aldenham House, Elstree.

Winter Onions.—About this date, to ensure the plants being of sufficient size to go satisfactorily through the winter, it will be necessary to make a sowing. Onions are perfectly hardy, yet it is wise to select a somewhat sheltered position on a border for their wintering, so as to have fine early stuff for planting in the spring. In preparing the seed bed make it firm by treading, and do not sow the seeds thickly. The present crop will be maturing their bulbs, especially on light soils, after the extreme heat. When they have finished growing have them pulled up and placed in a position to dry previous to storing.—C. F.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

ODONTOGLOSSUM HARRYANUM.—This late summer-flowering species is one of the most useful of the cool house orchids, and when well grown the plants produce large racemes of flowers that are exceedingly fragrant, and useful for exhibition and decorative purposes. There are only a few growers who succeed in growing the plants satisfactorily. I have on previous occasions pointed out in my notes to the Gardeners' Magazine that undoubtedly the want of success in the cultivation of O. Harryana has been caused by too cool treatment generally. We have found that a temperature of about 55 deg. suits the plants best. If the temperature is allowed to fall much below this, we find that not only do the leaves become spotted, but they diminish, and a weakly constitution follows. We find it advisable to repot annually, and this is best done immediately they pass out of flower, but as the roots are usually well advanced at such a period, it requires considerable care to prevent injury in the potting process. A compost consisting of about equal portions of fibrous peat, osmunda fibre chopped fine, and sphagnum moss, with sufficient broken crocks and sand added is a good mixture. The plants should be carefully shaded from strong light for a few weeks after repotting, and a humid atmosphere should be maintained until the roots get hold of the new compost.

HYBRIDS obtained from the use of O. Harryana form a race of robust and desirable additions well worthy of cultivation; the secondary hybrids display equal vigour, and as they have more or less lost the deflexed character of the petals of O. Harryana they are much more attractive than the primary hybrids, and also in cases where both parents have been hybrids there is an exceedingly wide variation in colour, which renders them all the more attractive and valuable. In the treatment of this section of hybrids we find that they, too, like the warmer conditions afforded O. Harryanum, and like reasonably moist and shady conditions, especially through the hottest months of the year. The reason shady conditions are mentioned is that the thick, fleshy leaves, are very liable to turn a reddish-brown colour, and if they become "over done" in this respect they quickly fall, and a considerable proportion of leafless pseudo-bulbs is not desirable in any odontoglossum. The hybrids and secondary hybrids flower at various seasons of the year, so that potting must be seen to according to the state of growth. There is one rule which may be followed with safety, and it is: Repot the plants that require attention as soon as the new roots make their appearance.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

CHRYSANTHEMUMS.—These having now filled their pots with roots must receive manurial assistance. It is advisable, when possible, to frequently vary the manure to enable the plants to benefit from the different properties each manure contains. Manure of any description should not be applied when the soil is dry, or more harm than good will be done. The "taking of the bud" or disbudding of those plants intended for large blooms, will now require regular attention. The smaller buds surrounding the main one must be removed as soon as possible, and also all side growths when in a small state. See that the main flowering growths are securely tied to the stakes. Earwigs are a great pest, and must be kept down by regular examination of the plants. They may be trapped by placing pieces of hollow bamboo amongst the foliage, in which they will hide themselves; examine the traps first thing in the morning, and drop the pests into a pail of hot water. Bush plants must be kept regularly tied to enable them to become uniform in shape and present a tidy appearance.

SHOW PELARGONIUMS.—The old plants should now have fully ripened their wood and be ready for pruning. Cut them back close to the base of last year's wood, and stand them in a frame, keeping them exposed to all fine weather. Syringe the stems daily, but give little or no water until the new growths appear, and then only sufficient to keep them plump. When the new growths have attained an inch in length, turn the plants out of their pots, and reduce the ball of roots to about one-half. Cut away all the longest roots, and repot, using a pot just large enough to allow a small quantity of new soil to be placed round the roots. Replace them in the frame, but do not keep them too close. When they have recovered from the check occasioned by potting, and have again commenced to grow, air should be freely admitted. If an increase of stock is necessary, this may be obtained by utilising the shoots which have been cut off the old plants as cuttings.

PERPETUAL - FLOWERING CARNATIONS.—These are now growing freely, and will require support. One strong stake placed in the centre of the pot is quite sufficient, to which the growths may be tied as they advance. Fortnightly sprayings should be given to prevent rust making an appearance. This is best done in the evening, as is also syringing with soot water. See to it that the plants do not suffer from dryness at the roots, but at the same time do not allow the soil to become sodden. Careful attention at this time of the year will bring its own reward in strong, healthy plants, capable of producing first-rate blooms. — A. Grubb, Porter's Park Gardens.

HARDY FRUITS.

SUMMER PRUNING.—The summer pruning of all apples may now be taken in hand, commencing in the case of bush and trained trees at the top at the first operation, leaving the lower half for the second operation, which may be done a week later. This will not only mean a less severe check than would be the case if the trees were stopped from top to bottom, but will direct the flow of sap to the lower and weaker branches. All useless side growths should be stopped by breaking them off with the knife, there being no necessity for clean cuts in this instance, it being taken for granted that all growth requiring summer pruning will also require shortening at a later date. The operator should be quite conversant with the habit of growth and mode of fruiting of each variety. The subject of pruning is often taken lightly, but experienced fruit growers will admit that in the case of apples especially, many of the varieties depend entirely on the way pruning is carried out to bring them to a fruitful condition. Bramley's Seedling, Newton Wonder, Lady Sudeley, and many others carry the finest fruit at the tips of growth that may at the present time be furnished with at least a dozen leaves, thus proving the futility of advising the stopping by summer pruning at the sixth leaf. Exhibitors of apples will have noticed that year after year the very finest specimens will be found on the same branch, and even on the same spur or growth, hence the advisability of the best attention being paid to both summer and winter pruning. It may safely be said that with judicious pruning the fruit crop throughout the country could be easily doubled. The weakness for a cleanly-trimmed-up, "nicely pruned" tree is the cause in many instances of less fruit being produced than would be the case if it were allowed to run wild.

NUTS.—All wands and sappy growth should now be cleared, if this has not already been done, giving the trees as much light as possible right to the centres. In Kent, where many acres are devoted to nut culture, the trees are trained vase-shape to about 7ft. in height; the land is well cultivated and manured, and in good seasons the crop well repays attention thus given.

SWEET CHERRIES.—In garden culture a certain amount of pruning will be necessary to keep these within bounds. This is best carried out at the present time; the trees being full of sap, and the foliage still vigorous, knife wounds will soon heal over and all will be well. If the pruning should be deferred until winter, much damage would probably be caused by gumming, cherries being the most impatient of all fruits to the use of the knife.

MORELLO CHERRIES.—The trees are bearing heavy crops this year, and will need relief as soon as the fruit is ripe, part of the crop may be picked and sent to the kitchen as convenience offers, covering the remainder with wasp-proof netting, where it will remain in good condition until late in September or the beginning of October.

FRUIT ROOMS.—An early opportunity should be taken to set the fruit room in order. The walls should be limewashed, defective shelves and drawers repaired. Keep the room entirely open in order to have it dry and well aired.—J. Whittle, Cheveney Gardens.

THE KITCHEN GARDEN.

RUNNER BEANS.—These are moisture-loving plants, and during summers like the present they do not set their flowers properly unless help is given. I have seen numerous cases this season already which show the necessity very plainly, and the loss that is experienced where watering is not carried out. If thorough soakings are given the plants now, accompanied by manurial help, there will probably be a plentiful supply of beans through September, especially if a mulching is applied to the surface to conserve the moisture in the soil.

WINTER GREENS.—The Brassica crops that were planted out last month will now be established in their permanent beds. Much benefit will be given if they are lightly forked through, slightly earthing-up the stems as the work proceeds. Should there be any gaps in the rows, this will be found a convenient time to fill them up from the nursery beds, giving an ample soaking of water to settle the roots as soon as planted.

TOMATOES.—Outside tomatoes are very satisfactory this year where properly planted; they are fruiting very heavily, and not making much useless growth, consequently the plants require more than the usual attention in the matter of assistance with water, and with applications of manure to swell up the heavy crops. The plants that were raised for fruiting in pots during winter should be potted on before they are too tightly packed with roots, or it will weaken them. Subject them also to an open position to ensure sturdy growth. Good loam made porous with mortar rubble and sand is the best potting mixture. Allow space at the top for top-dressings of soil when placing them in their final pots.

EARLY POTATOES.—Potatoes, owing to the forcing weather we have experienced, will mature their tubers earlier than usual, and where it is found the crop is ripe, have it lifted and stored in the cool for use; the tubers will then eat much better than if allowed to remain in the heat. Sets that are required for planting next year should be selected at this time. These may be exposed for a little while until their skins are hardened and ready for storing in boxes for the winter.

HERBS.—Many of the herbs will be in condition for harvesting. With some cooks this is an important item, the demand being heavy for particular kinds. The kitchen gardener will do well to consider what is likely to be in demand the most, and arrange his quantities accordingly.

GENERAL REMARKS.—The present season has been a very difficult one for kitchen gardeners. Those that have been blessed with a good water supply have been fortunate. With late crops do everything possible by mulching and watering to carry them on till rain comes. Disturb the surface soil as often as practical where it can be carried out, and whenever seeds are sown give a thorough soaking to the ground previously.—Charles Flack, Cholmondeley Castle Gardens.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C

EXHIBITIONS AND MEETINGS.

◆

Leicester Flower Show.

AUGUST 7 AND 8.

The exhibition held in the Abbey Park, Leicester, on Tuesday and Wednesday last was, as usual, eminently successful, and fully maintained the traditions of the town in its relations to flower shows. There was a big display of plants, flowers, fruits, and vegetables; the arrangements were, as is customary, remarkable for their completeness; the weather was all that could have been desired, except that the temperature was abnormally high, and the spacious Abbey Park, of which the Leicester people are justly proud, was crowded throughout the whole of the period over which the exhibition extended. It is a point of some interest that the Leicester flower shows are under the direction of a committee consisting of members of the Corporation, with Mr. Councillor Collier, the chairman of the Parks Committee, as chairman, and, judging by the results, no better governing body could be desired. The shows are in no way associated with the rates, but are wholly self-supporting, and the profits, which are usually considerable, are devoted to the improvement of the public parks. Mr. J. Staynes is the hon. secretary, and Mr. J. Burton the superintendent of the Leicester Public Parks and Gardens, is the superintendent of the flower shows, and the manner in which the committee and these two officials perform their respective duties is such as to deserve, as indeed it receives, the highest praise.

The exhibition, as already stated, was a great success, but, as in the case of other shows held during the past fortnight, there was evidence of the injurious effects of the great heat and prolonged drought upon some products of the garden. This was especially marked upon roses and sweet peas, which have for a long run of years formed two important features of these great gatherings. Roses, if considerably below the average of previous years, both in numbers and development, were sufficient to form a large and attractive feature; but sweet peas, which for some years have required a huge marquee for their accommodation, were not represented by more than a dozen collections in the several classes, and these, although much care and attention had been lavished upon them by the exhibitors, were much below the high average of former years. Carnations and picotees were practically over at the beginning of the week in all parts of the country, and were consequently but sparingly shown. Fruit and vegetables were staged in immense numbers, and in exceptionally fine condition, and were certainly equal to the high average of previous years.

CUT FLOWERS.

There was a spirited contest for the prizes offered in the trade class for twenty-four roses, and, considerin gthe season, the blooms were throughout of high quality. The premier award was made in favour of Mr. Hugh Dickson, Belfast, who had superb blooms of George V., a dark crimson hybrid perpetual, which has the promise of becoming popular; John Ruskin, Mdme. Hausmann, Avoca, Caroline Testout, Lohengrin, Cardinal, George Laing Paul, Lyon, Comtesse Ludre, Earl of Warwick, and Her Majesty. Mr. W. H. Frettingham, Beeston, followed closely for second place with blooms of medium size and excellent finish, the bloom of Mdme. Prosper Langier being of remarkably high quality. Messrs. Perkins and Sons, Coventry, were third with an even box of blooms. The class for twelve blooms of any one variety was well filled, and Mr. Hugh Dickson was again first with grand blooms of George V. Messrs. Perkins and Sons were second with medium-sized, fresh, and well-coloured blooms of The Lyon, and Mr. W. H. Frettingham was third with an excellent box of Mrs. J. Laing. In competition for the prizes for twelve blooms of any tea rose, Mr. W. H. Frettingham and Messrs. Perkins and Sons were first and second, both staging richly-coloured blooms of Maréchal Niel.

This year a class was provided for arrangements of tea, hybrid tea, and noisette roses, and the two collections in competition formed a delightful feature. Mr. J. Barrow, Oadby, Leicester, was successful in obtaining premier honours with an arrangement characterised by much taste, Irish Elegance, The Lyon, and Gruss an Teplitz being used with good effect. Mr. Hugh Dickson was a close second, with an arrangement remarkable for the high quality of the blooms, but rather heavy.

There was a considerable falling off in the entries in the classes for roses, in which the competition was limited to amateur cultivators, but the number of blooms staged was sufficient to produce an effective display. The first prize in the class for twenty-four blooms was taken by Mr. G. Speight, Market Harborough, with an even set of blooms. The same exhibitor was first also for twelve blooms, followed by Mr. Weston for second place with blooms of good quality, but not well staged. In a second class for twelve roses, Mr. R. Clark, Beeston, was a capital second. The best box of six teas and noisettes was shown by Mr. W. Upton, who had neat blooms of well-known varieties. The second award was made in favour of Mr. G. Speight, and the third prize was awarded to Mr. Weston. Mr. M. Whittle, Leicester, occupied the first place in the class for six blooms of any one variety with well-finished examples of Frau Karl Druschki, and Mr. R. Clark was the second with Mrs. J. Laing. The class for four varieties, three blooms of each, was an interesting one, and Mr. R. Clark was a capital first with good blooms of The Lyon, Alfred Colomb, and Frau Karl Druschki. Mr. Weston second.

The classes filled by gardeners resident in the county of Leicester contained some of the finest roses in the show. Mr. M. Whittle obtained premier honours in the class for eighteen, with blooms of good size, fresh, and otherwise meritorious. Mr. W. Upton followed for second place. Mr. G. Speight occupied the first place for twelve, Mr. W. Upton was a good second, and Mr. M. Whittle third. Mr. Upton, who was first for six distinct, staged blooms of high quality, and Mr. M. Whittle had a good set for the second place. The exhibitor last named had the best box of six teas, and Mr. W. Upton the second best. The best six blooms of any one tea-scented variety were contributed by Mr. G. Speight, the variety being Maman Cochet.

Sweet peas have so fallen away during the past fortnight that but few of those who had entered were able to fulfil their entries. In the class provided by Mr. W. J. Unwin for twelve bunches, Mr. E. Lee, Kibworth, was first, and Mr. J. W. Woodsend, East Bridgeford, second.

In the class for six varieties, in which Robert Sydenham, Lim., provided the prizes, the first and second awards were made in favour of Mr. C. Illston, Barkby; Mr. J. Hudson, and Mr. Mayes.

In competition for the prizes given by Robert Sydenham, Lim., for twelve bunches, Mr. R. Hallam was first with small, but fresh flowers.

Hardy flowers were so largely and well shown as to form an attractive and highly interesting feature. Messrs. T B. Grove, Wyndly, Sutton Coldfields, was first for a collection with an exceptionally fine group. In the set were very fine vases of Achillea ptarmica The Pearl, E. eupatorium, and Liatris pycnostachya, Veronica subsessilis, Montbretia crocosmæflora, Tritoma lachesis, Eryngium Oliverianum, Statice Smithi, phloxes in variety, and Ligularia stenocephala. Messrs. J. Wright and Son, Leicester, were a capital second; and Mr. C. F. Oliver, Leicester, third. The collections were throughout too crowded to admit of the several subjects being seen at their best.

Carnations and picotees were more strongly represented than might have been expected. Messrs. A. R. Brown, Lim., King's Norton, were first for twelve yellow ground carnations, twelve white ground picotees, twelve selfs, and in a number of other classes. Carnations and picotees were liberally contributed to the amateurs' classes for these flowers, and the principal prize-takers were Mr. R. Makepeace, Mr. F. G. Duffey, Mr. J. Lumley, Mr. J. Rudkin, and Mr. J. H. Hill. Violas were less plentiful than usual, but those staged were of good quality. Messrs. W. Pemberton and Son, Walsall, were first for twelve varieties. These were attractively arranged in vases, but the whole of the flowers were unnamed, and the exhibit thereby lost much of its usefulness.

FLORAL ARRANGEMENTS.

Floral arrangements were plentiful and good. Messrs. Perkins and Son were first for a basket with an arrangement in which orchids and crinums predominated, these being relieved by narrow-leaved crotons and Asparagus plumosa. The same firm was first also for a hand bouquet and for a bride's bouquet, in which exquisite arrangements in orchids were freely used.

Floral decorations were also largely shown by amateurs in the local classes, and the best of the half-dozen baskets in competition was that shown by Mr. J. W. Barker. Mr. H. Widdowson was a close second. Mr. Barker was also successful in a strong competition in taking the first prize for a hand bouquet and also for a bride's bouquet. Bowls of roses were particularly meritorious, and the premier place was occupied by Mrs. C. Burton, 148, Harrow Road, with a beautiful arrangement of The Lyon. Mrs. H. Lloyd was a capital second, and Mr. Stephen Sims, Borrowash, was third.

GROUPS AND PLANTS.

As in previous years the contributions to the group classes filled a large marquee, and formed a glorious feature. Messrs. J. Cypher and Son, Cheltenham, were first with an arrangement equally remarkable for its richness of colouring and lightness. As a centrepiece Messrs. Cypher had a rustic arch embellished with ferns, palms, crotons, and various flowering plants, and at intervals along each side were tall, narrow-leaved, high-coloured crotons. The intervening spaces were filled with orchids in variety, lilies, and vallotas. Mr. A. Holmes, Chesterfield, was second with a remarkably good arrangement, the design being somewhat similar to that of Messrs. Cypher's; Mr. R. Manning, Dudley, third, with an arrangement possessing much beauty, and Mr. Vause, of Leamington, fourth. In the local class for groups Mr. Weston was first with a somewhat formal arrangement.

Zonal pelargoniums were shown as large bushes, and were throughout splendidly flowered. Mr. H. Rogers, Leicester, was first with huge, splendidly flowered specimens. Mr. C. Ward was second, staging two fine doubles, and Messrs. J. Wright and Son were third, also with specimens possessing much merit. Exotic ferns were of much merit, and for six specimens Mr. Weston, Hughenden, Leicester, obtained premier honours with finely developed specimens. Mr. H. Rogers, who was second, also staged well-grown specimens. Tuberous begonias were well shown in the class for four, and Messrs. J. Wright and Son, and Mr. W. H. Allen, who were first and second respectively, staged large, finely-flowered specimens.

The class for eight miscellaneous plants brought out a strong competition, and Mr. A. Grace, who obtained premier honours, had zonal pelargoniums, begonias, ferns, and fuchsias in a high state of development. Mr. J. Moore was a very close second, having for his best plants Asparagus plumosa and A. Sprengeri.

FRUIT AND VEGETABLES.

The tables of dessert fruits were more numerous than usual, and on the whole were of high quality. For six kinds Mr. T. Ireland, Newstead Abbey, Notts, occupied the post of honour with Madresfield Court and Muscat of Alexandria grapes of high quality, and excellent peaches, nectarines, and plums. Mr. Parker, gardener to J. Drake, Esq., Market Rasen, was a capital second; and Mr. J. H. Goodacre, Elvaston Castle, Derby, third. The exhibitor last named was first for nine dishes with magnificent clusters of Muscat of Alexandria and Madresfield Court grapes, and excellent peaches, nectarines, and figs. Mr. Parker was first also for the floral arrangements of the table, as in the preceding class. Mr. Ireland, who was second, also staged well, and Mr. J. H. Goodacre was third.

Grapes, peaches, nectarines, melons, and apples were largely and well shown in the single-dish classes, the principal prize-takers being much the same as in the classes for dessert tables.

Vegetables were staged in immense quantities and of a high degree of excellence. In a strong competition for the prizes offered by Messrs. E. Webb and Sons for six kinds, Mr. J. Hudson, Leicester, was a splendid first with fine examples of Ailsa Craig onion, Webb's Emperor tomato, Defiance Marrowfat pea, and other well-known kinds. Mr. Owen Hartshorn, Thurmaston, was a good second, and Mr. N. Buxton, Gidling, Notts, third. Very keen was the competition in Messrs. Sutton and Sons' class for six kinds, and the premier place was occupied by Mr. J. Hudson, who had Gladiator potato, Sutton's A1 tomato, New Red Intermediate carrot, and peas at their best. Mr. J. Knight was a good second, and Mr. E. Jackson third. The contest was spirited in the class for ten kinds, in which the prizes were provided by Messrs. Harrison and Son. Here, as in the other classes, Mr. J. Hudson received the premier award for produce of exceptional merit. Mr. J. Cauk was second with a collection representing cultural skill of a high order.

The competition in the society's class for twelve distinct kinds was not less spirited than in those mentioned above, and the produce generally was exceptionally good for so trying a season. Mr. J. Hudson added to his many honours by taking the premier award with vegetables of the highest quality. The more noteworthy dishes were those of Centenary pea, Gladiator potato, New Red Intermediate carrot, Ailsa Craig onion, Matchless cucumber, Tender and True tomato, and pink celery.

MISCELLANEOUS CONTRIBUTIONS.

A magnificent collection of hardy flowers was exhibited by Mr. Frank Bouskill, Market Harborough, the hon. secretary of the Hardy Plant Society. The collection, arranged at the end of one of the large marquees, proved immensely attractive, and afforded a conclusive proof of the value of good cultivation in a season such as this. Very fine were the gaillardias, erigerons, tritomas, and single and double perennial sunflowers.

One of the most noteworthy of the many miscellaneous contributions to the exhibition was the magnificent collection of flowers and vegetables exhibited by Messrs. E. Webb and Sons, Wordsley. Especially conspicuous in the collection were Hero of Lockinge, Queen Victoria, Emperor, Sensation, and Viceroy tomatoes; Long White and Moore's Cream vegetable marrows; Reliance and Satisfaction beets; Webb's Distinction, Stourbridge Marrow, and New Defiance peas; Webb's Market Favourite and Defiance carrots; Masterpiece and Ringleader onions; Webb's Chieftain and Progress potatoes. Chief among the flowers used in beautifying the stages, in association with the vegetables, were the sweet peas. Messrs. Clibran, Altrincham, staged a large collection of sweet peas. Mr. F. E. Riddle, an amateur cultivator, 31, Belgrave Gate, Leicester, had collections of well-grown stocks and sweet peas. Messrs. Harrison and Son exhibited annual flowers, including sweet peas in great variety, and a large gathering of gaillardias, including Lady Rolleston, a distinct and attractive variety with large yellow flowers. In this class Mr. W. A. Ballard, 201, Abbey Lane, Leicester, exhibited an extensive collection of early-flowering chrysanthemums, which was tastefully arranged, and formed an attractive feature.

Exotic ferns in great variety were admirably shown by Mr. H. N. Ellison, West Bromwich, the newer varieties of the Nephrolepis exaltata being especially noteworthy for beauty and high culture. From Mr. L. S. Harbuth, Charnwood Street, Leicester, came a large and attractive collection of hardy flowers. Mr. Charles Warner, Abbey Nurseries, Leicester, staged a comprehensive collection of phloxes, in which the varieties were represented at their best. Messrs. J. Wright and Sons, Leicester, exhibited a tastefully arranged collection of plants at one end of the marquee devoted to groups. At the other end Mr. H. Rogers had an effective arrangement.

CUP AND MEDAL AWARDS.

Silver Cup.—Messrs. E. Webb and Son, for vegetables and flowers.

Gold Medals.—Messrs. J. Wright and Sons, for miscellaneous plants; Mr. C. Warner, for cut flowers and shrubs; Messrs. Clibran, for sweet peas; Mr. H. Rogers, for miscellaneous plants; Mr. F. Bouskill, for hardy flowers.

Silver Medal.—Mr. H. N. Ellison, for exotic ferns; Mr. F. E. Riddle, for cut flowers; Mr. A. W. Ballard, for early chrysanthemums; and Messrs. Harrison and Sons, for sweet peas, etc.

Bury.

AUGUST 3-7.

The third horticultural show held under the auspices of the Royal Lancashire Agricultural Society, in conjunction with their annual exhibition at Bury gave evidence of the season in a decrease of entries, although the quality generally was excellent.

In the class for a group of miscellaneous plants, Messrs. James Cypher and Sons, Cheltenham, occupied their usual leading position with a combination of great charm and brilliance. The crotons were highly coloured, and were the most prominent feature; these were backed up by caladiums, palms, and alocasias, with ixoras, cattleyas, and liliums as flowering plants. Mr. W. A. Holmes, Chesterfield, was second.

For twelve stove or greenhouse plants, the Messrs. Cypher again took the lead, staging fine plants of Croton Flambeau, C. Warreni, Kentia Fosteriana, K. australis, Latania borbonica, Chironia ixifera, Clerodendron Thomsonæ, Erica obbata magnifica, Statice intermedia, Rondoletia speciosa major, etc. For twelve stove or greenhouse plants, in pots not exceeding ten inches diameter, the Cheltenham firm was again first with good plants. Mr. W. Holmes scored for six exotic ferns, and showed a splendid plant of Adiantum cuneatum elegans. Messrs. Cypher and Sons were to the fore with six orchids, staging Cattleya Gaskelliana, Cypripedium Curtisi, Vanda cærulea, etc.

The class for a table of cut flowers, 100 square feet, led to a difficulty, as roses were competing against herbaceous and border flowers. Mr. Hugh Dickson, Belfast, was adjudged the winner of the silver cup and first prize for a splendid array of roses; and Mr. J. Saul, Preston, also scored with a fine table of liliums, gladiolus, etc.

Sweet peas were present in quantity, and in some cases of good quality. For eighteen varieties, Mr. F. Hindley, Lymm, was first with an excellent lot, and he also won for twelve varieties. In the amateurs' section Mr. Edgar M. Allen, Formby, had the best twelve varieties, and for six varieties was first with a grand lot, securing the silver cup for the best sweet peas cultivated in the county. In other classes, Messrs. C. E. Taylor, F. J. Smith, G. Laywell, J. N. Fell, and J. Howarth were first prizemen.

Mr. C. F. Waters, Balcombe, led for a collection of cut perpetual carnations, and Mr. J. Gibson, Bedale, led for hardy perennials with a grand lot. Roses were in fine form. For twenty-four, distinct, blooms, Mr. Hugh Dickson, Belfast, took the lead, whilst Messrs. Alex. Dickson and Sons led for a dozen blooms. In the amateur section, Mr. J. B. Walmsley, Bromley, took the lead, also securing the silver cup for the best in the county. Messrs. H. Clark, Leeds, secured four firsts with dahlias.

For twelve dishes of fruit, Mr. J. Gibson, gardener to the Duke of Portland, Welbeck Abbey, had the premier lot, with good Madresfield Court grapes, Crimson Galande peaches, Humbolt nectarines, etc.; Mr. G. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, second.

Gold medals were awarded to Messrs. Dickson, Brown, and Tait, Manchester, for a splendid collection of tomatoes, cut, and in pots, comprising about 100 varieties; to Mr. R. Bolton, Carnforth, for sweet peas; to Messrs. H. B. May and Son, Edmonton, for ferns; and to Messrs. Alex. Dickson and Sons, Newtownards, for a fine display of cut roses. Silver medals were awarded to Mr. H. Middlehurst for sweet peas; and to Messrs. Bolton Bros. for ferns.

The following firms made displays at their own pavilions: Messrs. Clibrans, vegetables and sweet peas; Messrs. Dicksons, liliums, gladiolus, and vegetables; Messrs. Toogood and Sons, gladiolus, spiræas, etc.; and Messrs. Dickson, Brown, and Tait, scabious, carnations, gladiolus, etc.

National Carnation Society.

(MIDLAND SECTION.)

Midland carnation growers had a woeful time on Wednesday, August 2, when their annual show was opened in the Botanical Gardens, Edgbaston, Birmingham. The season throughout has, as everyone knows, been one of the most trying on record, and not only have flowers opened early, but they have lacked the substance necessary to withstand great heat. This has, of course, resulted in a scarcity of flowers.

Notwithstanding these untoward circumstances, the display of flowers was a very attractive and interesting one, capable of exciting the enthusiasm of the gathering of keen florists who doted over their flowers and discussed their individual points and charms after the manner of the old-time florist, who, after all, will not become extinct in England so long as the Birmingham enthusiasts remain with us. Needless to say, the show was admirably managed, and everybody appeared to be very happy in spite of their struggles to keep their flowers in form.

DRESSED BLOOMS.

The first class in the schedule was for twelve blooms of selfs, distinct, shown on cards. There were five entries, the winning exhibit being staged by Messrs. A. R. Brown. Lim., King's Norton. Considering the season, the flowers were creditable examples. Sam Hathaway, Cambria, and Iberia were the yellows; Mrs. F. J. Johnston, W. H. Parton, and Mrs. Geo. Marshall, crimsons; the latter being of good size, beautiful rich colour and substance. The other flowers on the stand were Everest, Alfonso, Elizabeth Shiffner, Mrs. R. B. Waite, Sidney, and Royal Velvet, the last-named being a new purple of fine quality. Second prize went to Mr. C. J. White, Walsall, who showed passably good flowers of John Knox, Blazer, Medox, and others. Mr. C. H. Herbert, Acocks Green, was third; fourth going to Mr. H. Mathias, Medstead, Hants; and fifth to Mr. C. F. Thurston, Wolverhampton.

Twelve fancies saw Mr. A. W. Jones, Stechford, come to the front, his flowers being large, and shown in good style; the varieties were Mrs. Leo. Hunter, Erl King, Pathfinder, Linkman, Lord Steyne, Billy Barlow, Father O'Flynn, Gloriosa, Linkman (sport), Liberte, Hengist, and Queen Eleanor. Messrs. A. R.

Brown, Lim., made a good fight for second place, Westfield Seedling being particularly good on their stand. Third was taken by Mr. H. Mathias; and fourth by Mr. C. H. Herbert; Mr. C. J. White, Walsall, being fifth.

Mr. H. Mathias scored for twelve yellow-ground picotees, showing some good-petalled flowers of nice quality, and clean. Corona was good, winning premier in its class. Messrs A. R. Brown, Lim., were again second, their blooms being slightly smaller than those staged by the winner. Mr. C. H. Herbert claimed third, fourth going to Mr. C. F. Thurston, and fifth to Mr. C. J. White. In the white-ground picotees the winning dozen came from Messrs. A. R. Brown, Lim., who showed very neat, clean flowers of John Smith, Muriel Stevens, Lavinia, Duchess of York, and other varieties of up to date quality. Second went to Mr. C. H. Herbert, who had a nice bloom of Amy Robsart, and a pretty Carrie Goodfellow on his stand; the other prizes went to Mr. C. J. White and Mr. H. Mathias. Messrs. A. R. Brown maintained their lead in the twelve flakes and bizarres, being followed by Mr. C. F. Thurston and Mr. H. Mathias in the order named.

VASE CLASSES.

For the first time the open class for undressed flowers were all arranged in triplets of distinct varieties, the winners in the self class being Messrs. A. R. Brown, Lim., with a nice stand of blooms. Cambria, the perfectly formed and clear-coloured yellow, was well staged; the other varieties being Mrs. Geo. Marshall, Crystal, Miss Alley, Signal Light, and Ayesha. Mr. C. H. Herbert took second place, his blooms showing signs of suffering from the heat.

The Messrs. Brown could not be wrested from their leading position in the class for six fancies, although Mr. C. J. White showed very creditably for second place. Again, for both yellow and white ground picotees, the Messrs. Brown came off victorious. In the white-grounds the triplet of Lady Sybil was really exquisite. Mr. C. H. Herbert took second in the yellow-grounds, and Mr. H. Mathias third.

SECOND DIVISION (AMATEURS ONLY).

There was not the competition in this section we are accustomed to see, several well-known growers being unable to show this year. However, the display was not unworthy of praise, the real wonder being that growers could find flowers at all.

For the six selfs on cards, first prize went to Mr. F. W. Goodfellow, Walsall, with Blazer, Angelia, W. H. Parton, Hadzor, Miss Willmott, and Elizabeth Shiffner. Rev. C. A. Gottwaltz, Droitwich, second; and Mr. C. F. Budenberg, Marple, third.

Mr. Goodfellow scored again with six fancies, Erl King and Pathfinder being good. Rev. C. A. Gottwaltz still kept second place with neat flowers of nice quality; third place was given Mr. C. F. Budenberg, and fourth to Mr. E. J. Price, Bournville. Three entries for yellow ground picotees brought first for Mr. Goodfellow, Mr. C. F. Budenberg and Rev. C. A. Gottwaltz being second and third. Mr. Goodfellow took still another first for six white picotees, the second being claimed by Rev. C. A. Gottwaltz, and Mr. Budenberg bringing up the rear.

In the second division the undressed flowers were shown in triplets, three varieties being required in each class. Mr. C. F. Budenberg won for selfs with Elizabeth Shiffner, Mrs. George Marshall, and Daffodil; the second prize lot was staged by Rev. C. A. Gottwaltz, his varieties being John Pope, Sir Galahad, and Mrs. George Marshall. Mr. Budenberg came first again for three triplets of fancies, with Father O'Flynn, Mandarin, and The Seer. Mr. F. W. Goodfellow had Hidalgo, Linkman, and Mandarin for his second prize exhibit; Rev. Gottwaltz being third. Mr. Budenberg had the best yellow ground picotees, and also the best whites, but there was little real quality in either class.

THIRD DIVISION.

This division is open only to amateurs who do not employ a gardener regularly, nor advertise plants for sale; it might still be reckoned a section open only to specialists, for the amateur carnation grower, especially in the Midlands, is far removed from the ordinary amateur gardener. He knows his flowers as parents know their children, and stages with the utmost care.

Seven entries were forthcoming in the class for six white ground fancies or picotees on cards, Mr. J. B. Willetts, Yardley, leading with a neat stand. Mr. J. T. Sinister, Denstone was second, and Mr. W. Rogerson third.

Six selfs brought eleven entries, and there were a few fairly good flowers staged. Mr. J. H. Camm, 46, Broomfield, Smethwick, scored, Daffodil being quite a good flower. Mr. W. C. Flanders, Derby, was second, and Mr. W. Rogerson third. Mr. J. H. Camm led once more in the yellow grounds; second, Mr. J. B. Willetts, and third, Mr. J. L. Sinister.

In this section there were classes for six single blooms, distinct, shown in separate vases. Eight competitors staged in the six selfs, among whom Mr. W. Rogerson, Mellor, was first with Conrad, Elizabeth Shiffner, and other good varieties. Mr. J. B. Willetts stood second, and Mr. W. H. Clements, King's Norton, third. Among nine entries for the six fancies the winner was Mr. J. B. Willetts, second going to Mr. W. H. Bailey, Erdington, and third to Mr. W. Rogerson.

There were classes for triplets of any one variety, the best self being Elizabeth Shiffner, shown by Mr. J. B. Willetts. Mr. Rogerson showed Hidago in the fancy class, with which he secured first. Togo won the yellow picotee prize for Mr. W. C. Flanders, and W. E. Dickson was the winning white ground put up by Mr. W. Rogerson.

PREMIER BLOOMS.

The premier awards given for the best blooms staged in each separate section always create a great deal of interest, and it is here that one realises the intensity of the true florist's love for his flowers. Every grower and exhibitor hovers round the premier bloom in the class that claims his special affection, and it may be said that every petal of a winning flower is subjected to the closest inspection. The premier blooms on this occasion were as follows:

Dressed Flowers.—Bizarre: Robert Holgrave, exhibited by Mr. C. F. Thurston. Flake: George Melville, from the same exhibitor. Heavy-edged white ground picotee: Mr. F. W. Goodfellow's Clementine, who also had the premier wire-edged white ground in Fair Maiden. Mr. H. Mathias scored for both heavy and light-edged yellow grounds, the former being a good flower of Corona, the light-edged being Exquisite. Mrs. Leo Hunter was the premier yellow ground fancy, staged by Mr. A. W. Jones, Mr. J. H. Camm's Daffodil being given pride of place among the selfs.

Undressed Flowers.—Daffodil again won the selfs, the exhibitor being Mr. C. F. Budenberg. The best fancy was Hidalgo, staged by Mr. C. J. White, Exquisite again winning in the yellow ground picotees for Mr. H. Mathias, the award for white grounds going to Messrs. A. R. Brown's Lady Sybil.

The silver medal for most points in the first division was won by Messrs. A. R. Brown, Lim., who scored 204 points, Mr. C. H. Herbert winning the bronze medal with 84 points.

In the second division Mr. Budenberg took silver medal with 116 points, Mr. Goodfellow securing the bronze with 96 points.

Mr. J. B. Willetts received the silver medal in the third division, scoring 68 points against Mr. W. Rogerson's 60 points for second place.

Messrs. Gunn and Sons, Olton, were awarded a silver-gilt medal for a bright and attractive display of garden roses, a silver medal being allotted to Messrs. W. H. Simpson and Sons, Birmingham, for a big table of sweet peas.

Scottish Horticultural Association.

The August meeting of this association was held in the Goold Hall, 5, St. Andrew Square, Edinburgh, on the 1st inst. Mr. Massie, the president, was in the chair, and there was an attendance of 70 members.

Mr. Thomas Hay, Greenwich Park, late of Hopetoun Gardens, contributed a paper on "The Perpetual-flowering Carnation," which, in his absence, was read by the secretary. As regards a structure in which to grow and flower these plants, Mr. Hay considered a span-roof house, with side stages and a centre path running north and south so as to get the full benefit of the sun's rays in the autumn and winter months, to be the best. The stage should be covered with gravel or ashes, and there should be sufficient height at the back of the stage for the plants, which, when in flower, were from three to four feet high.

The best way to propagate was by cuttings taken with a "heel," and placed near the edge of a 3½in. pot, in a compost of loam, leaf-soil, and sand. These he placed in a temporary case on a melon-house stage, with a night temperature of 60 degrees, and after they were rooted they were potted off using 2in. pots, and placed on a shelf near the glass, where they remained for another three weeks, when they were removed to a cooler house. When about 6 to 8 inches high the growths were stopped, pinching hard so as to get well-shaped specimens, and when the young shoots were about an inch long the plants were shifted into 3½ or 4in. pots, a larger proportion of loam and a pinch of soot being used in the compost. At this stage an ordinary greenhouse would suit them, and in a month or six weeks the earliest rooted plants would be ready for their final potting 6, 7, or 8in. pots being used. Strong growers like Britannia and Mrs. Burnett required 8in. pots, but Mikado and Enchantress should be grown in 7in. pots. To prolong the flowering period, stopping at intervals was necessary, some shoots being stopped, while others were allowed to flower. September was soon enough for the first flowers, as there were plenty of other flowers earlier, and if the plants had been properly managed flowers would be provided all through the winter, and in abundance in March and April. Careful watering and abundance of fresh air, except during hard frost, was necessary, and for large, well-developed flowers it was necessary to disbud. He thought that when the preparation of the perpetual carnation for bedding purposes was properly understood it would be planted all over the country, and in time would supersede the border carnation altogether for outdoor decoration.

The president and several of the members made some remarks on the subject, and Mr. Hay received a very hearty vote of thanks.

The exhibits were: Dwarf polyantha rose Jessie and African and French marigolds from Messrs. Dobbie and Co., Edinburgh; strawberries Givon's Late and The MacMahon, tomato Gilbert's Improved Sunrise, and black currant Scarlett's Edina, from the City of Edinburgh Distress Committee's farm at Murieston, per Mr. Cairns; pyramid-trained gooseberries from Messrs. Storrie and Storrie, Glencarse, Perthshire; and Eucomis punctata, from Mr. A. Johnstone, Hay Lodge, Edinburgh.

Four new members were elected.

At the meeting on September 5, Mr. Porter, market gardener, Davidson's Mains, Midlothian, will read a paper on "Montbretias."

It was intimated during the evening that the following address of welcome had been forwarded to the Secretary for Scotland for presentation to the King on the occasion of their Majesties' first state visit to Scotland:

To the King's Most Excellent Majesty.

May it please your Majesty,

We, the office-bearers and members of the Scottish Horticultural Association, on the occasion of this the first state visit of your Majesty and Her Majesty Queen Mary to the capital of your ancient kingdom of Scotland since your accession to the throne, humbly offer to your Majesty and your Royal Consort our respectful greetings and a most cordial welcome, and we also desire to renew our assurance of loyalty to your Majesty's person and throne.

Representing as we do a large proportion of those of your Majesty's subjects who are engaged in horticulture, and recognising the ameliorating and refining influence which it has on the people generally, we rejoice to know that your Majesties take such a deep interest in everything which pertains to it, and we humbly venture to express the hope that during your sojourn in our midst your Majesties may receive a favourable impression of its prosecution in your northern kingdom. We also humbly venture to express the hope that this may be but the forerunner of many such visits to your historic palace of Holyrood.

It is our earnest wish and prayer that your Majesties may be long spared to reign over a happy and contented people, and that during your reign peace and prosperity may obtain in all the lands which own allegiance to your Crown.

Signed on behalf of the office-bearers and members of the association this fifteenth day of July, nineteen hundred and eleven,

W. H. MASSIE, President.
A. D. RICHARDSON, Secretary.

It was also intimated that a basket of Scotch-grown roses had been presented to Her Majesty the Queen by the president and Council. The roses, which were grown in their Royal nurseries at Craigmillar, were presented by Messrs. Dickson and Co., and the basket was arranged by Mr. Thomas Fortune, florist, Edinburgh. The following letter was received from Her Majesty's private secretary in acknowledgment of the flowers:

Holyrood Palace,
July 20, 1911.

Dear Sir,—I have handed to the Queen the beautiful basket of Scotch-grown roses which the president and you brought to the palace this morning.

Her Majesty is greatly pleased with the flowers, and commands me to write at once and ask you to be good enough to convey to the president and Council of the Scottish Horticultural Association her deep sense of appreciation of, and grateful thanks for, their kind and charming gift.—I am, yours faithfully,

E. W. WALLINGTON.

A. D. Richardson, Esq.

Broughty Ferry Horticultural Association.

The Sweet Pea, Rose, and Hardy Flower Conference in connection with this association was held on the 2nd inst. Taken as a whole, the quality of sweet pea flowers was not up to the standard of last year. This might be directly attributed to the long spell of drought and intense heat experienced on the east coast of Scotland, making watering by artificial means the main point in cultivation. Where anything like high-class quality was in evidence, one could trace success to the diligence and time at the disposal of the cultivator, and from the exhibits the following may be mentioned as the cream of the varieties shown: Mrs. Henry Bell, Mrs. C. W. Breadmore, Doris Burt, Mrs. Alic Ware, Helen Lewis, John Ingman, Edna Unwin, Nancy Perkin, Earl Spencer, Thomas Stevenson, Edrom Beauty, Maud Holmes, George Stark, Paradise Crimson, Tom Bolton, Othello Spencer, Florence Nightingale, Flora Norton, Mrs. Townsend, Etta Dyke, White Spencer, Picotee, Clara Curtis, Evelyn Hemus, Elsie Herbert, Mrs. Hardcastle Sykes, Asta Ohn, The Marquis, and Constance Oliver.

The principal medallists were: Messrs. Thyne and Son, Meric Muir Nurseries, Downfield; and Mr. Robert Brown, Eathiebeaton Gardens. Other prominent winners were: Messrs. George Reid, Invertay Gardens; George Masson, Aystrie Gardens; D. K. Meston, The Lodge Gardens; D. Kiellor, Seabourne Gardens; Wm. Grieve, Hazelwood Gardens; and P. Campbell, Forbescourt Gardens; all in Broughty Ferry. Some of these names could also be found amongst the winners for roses and hardy flowers, which, however, were only a poor display.

Non-competitive exhibits were a source of attraction, adding to the beauty of the show, and contributing to the general interest. The President's exhibit did credit not only to himself and the association, but to the Grange Gardens, where all-round good cultivation is always displayed. A table of dessert fruits consisted of Black Hamburgh and Foster's Seedling grapes, Barrington peaches, Pine Apple nectarines, Williams' Bon Chretien pears, Cox's Orange Pippin apples, etc., deftly arranged by Mr. Bethel with sweet peas Clara Curtis, Paradise Ivory, Nancy Perkin, and Earl Spencer.

Mr. William Grant, Fern Hall Gardens, set up a very effective table of sweet peas in about 60 varieties, which might have done him credit in competition in some of the classes. A table of sweet peas, apples in prolific abundance, still on the branches, vegetables, etc., made up a composite table from Mr. Wm. Christeson, Brackenbrae Gardens.

A large ripe melon, Sutton's Fertility, weighing 8lb., shown by Mr. George Masson, Aystrie Gardens, was a revelation to many in the matter of size. Cactus dahlias from Mr. D. Keillor, Seabourne Gardens, and two huge plants of well-flowered marguerites, growing in garden vases, from Mr. D. K. Meston, The Lodge Gardens, were a set off to the platform.

The trade was represented by Messrs. Laird and Sinclair, and Messrs. D. and W. Croll, the former exhibiting sweet peas, roses, and hardy flowers, in choice variety, well set up in artistic effect. The latter firm showed of their specialities in roses, Dorothy Perkins, Madame Ravary, The Lyon, Hiawatha, etc., making a bold background to the formal stands of handsome blooms, set out among vases of carnations, liliums, etc.

Mr. Robert Stewart, horticultural builder, had on view "Coronation" chairs, which are handsome and useful ornaments for the garden.

Prescot.

AUGUST 7.

This annual fixture was again held in Knowsley Park by kind permission of the Right Hon. Earl of Derby. A considerable falling-off in the exhibits was noticeable, leaving lengths of unfurnished tabling, which greatly detracted from the effect of the exhibition.

For a collection of plants arranged for effect, Mr. W. H. Roberts, gardener to F. Dixon Nuttall, Esq., was first with crotons, palms, carnations, caladiums, etc.; Mr. J. Barker, gardener to F. R. Dixon Nuttall, Esq., was second.

Two palms: Mr. J. George, gardener to T. Henshaw, Esq., was first, and for four stove or greenhouse plants, not less than two in flower, Mr. D. McKelvie, gardener to J. Stone, Esq., led with Clerodendron Balfouri, crotons, etc.; and Mr. W. H. Roberts was second.

For four greenhouse plants in flower Mr. W. H. Roberts proved the winner, and for one plant Mr. D. McKelvie scored with a well-flowered Gloriosa superba. For one foliage plant Mr. D. McKelvie led with a fair croton, and for one fern Mr. W. H. Roberts won with a well-grown nephrolepis. Four caladiums found Mr. C. Houghton, gardener to E. Shorrock Eccles, Esq., to the front with fine specimens; Mr. J. W. Barker second with plants of good merit. For one plant Mr. C. Houghton again led, and these two classes were the outstanding feature of the show.

For four stove or greenhouse ferns, Mr. W. H. Roberts led with fresh plants, and for four begonias Mr. E. Lambert, gardener to F. C. Hall, Esq., took the lead. Mr. J. Barker took the lead for four zonal geraniums, and for three fuchsias Mr. W. H. Roberts led with good plants.

Eighteen cut roses found Mr. J. Barker to the front, and for twelve Mr. C. Houghton led. In the class for a collection of hardy herbaceous cut flowers Mr. J. George led with good bunches, and for eight bunches of sweet peas and twelve dahlias Mr. J. George was the winner.

Four dishes of fruit brought Mr. D. McKelvie to the front with Madresfield Court grapes, Crimson Galande peaches, etc.; second, Mr. W. Oldham, gardener to J. Beecham, Esq. Mr. Oldham had both the leading black and white grapes, the latter well-coloured Buckland Sweetwater.

For a collection of vegetables, nine varieties, Mr. J. George was well ahead, having good cauliflowers, leeks, onions, etc. Mr. W. J. Roberts and Mr. J. Barker took the remaining awards.

Royal Scottish Arboricultural Society.

A general meeting of this society was held in the showyard of the Highland and Agricultural Society at Inverness, and there was a large attendance, including many gentlemen who are interested in the work of the society. Sir John Stirling Maxwell, Bart., of Pollok, president, occupied the chair.

In opening the proceedings, Sir John said he had to report what progress had been made in the steps towards sylviculture in Scotland, which the society had been pressing on the Government for years. He was glad to say that in the few months which had elapsed since the annual meeting in Edinburgh some progress had to be recorded. They had only within the last few days a report published on behalf of the Development Commissioners, in which they have laid down an outline of the policy of forestry development in Scotland, which he thought their society would be able to accept as intelligent and comprehensive in its character. That development grant was voted by Parliament, and one of the primary objects of its being voted was for the development of forestry. Therefore, the movement in which they were interested had a very early claim upon the assistance from that grant. The Development Commissioners had now happily laid down a general outline for the kind of development they considered possible, and this, he thought, their society would be able to accept without much reserve. Since their meeting in Edinburgh, the Secretary for Scotland (Lord Pentland), had already shown his interest in the movement, and had appointed a small committee to formulate a scheme which his department might lay before the Development Commissioners. That committee was composed of seven members, four of them being members of that society, and three of that four were members of the council of that society, so that their society might claim to be adequately represented.

The committee was now at work, and he hoped that before very long it would formulate a scheme for the development of forestry, which the Secretary for Scotland might lay before the Commissioners, and they might hope to see realised. Of course, their society had been working too long at that movement to mistake words for deeds, but he thought that they had never had the Government so friendly to the development of forestry. He expected the society would watch very anxiously everything that had been done in that direction, and he would add, for the benefit of any of the younger members, that the change they now saw in the attitude of the Government to their movement was not the result of this year or last year or the year before, but the result of the work the society had steadily done, and had been doing for more than a generation; and it must be a satisfaction to some of the older members for the energy they had devoted so long to the subject. He was reminded that since their last meeting Lord Lovat and Captain Stirling, of Keir, had made a survey of part of Inverness-shire, which had been published. He thought that from what he had learned on all sides, the society had no reason to regret having embarked on that enterprise.

The Secretary reported that the following had received Royal Scottish Arboricultural Society medals in connection with the essay competition: Class I.—"The raising and management of thorn hedges, and the comparative merits of various local methods": 1, silver medal, W. H. Whellens, Camlorgan Nursery, Ruthwell; 2, bronze medal, J. Ferguson, Gregynog Lodge, Newton, Montgomeryshire. "On the best method of planting at high altitudes and in exposed situations, together with the best species of trees to plant there with the object of procuring (a) shelter for stock, and (b) a profitable timber crop; with three illustrations"—2, silver medal, A. W. B. Edwards, Hollybank, Thirlmere. "The propagation in Wales of exotic conifers from seeds collected from trees grown in Wales"—bronze medal, J. Ferguson, Montgomeryshire. "The valuation of standing timber"—bronze medal, W. H. Whellens. Class II.—"A collection of notes of sylvicultural interest based on personal observation"—bronze medal, J. Brown Carmichael, Thorsby Park, Allerton.

Brodie of Brodie, who was one of the judges in connection with the forestry exhibition, gave in his report, which was exceedingly complimentary to all concerned, and he and the other judges were, on the motion of the chairman, heartily thanked by the meeting for their capital work. A hearty vote of thanks was also given to the Northern Branch of the society, who had given great assistance to the society in all the work connected with the arrangements for the show. A similar compliment was also paid the Highland and Agricultural Society of Scotland for providing prizes and giving space for their show.

With regard to the excursion for 1912, the Chairman said the council had come to the conclusion that Deeside (which embraces Aberdeenshire and Kincardineshire) would probably be a good district to visit. They thought of proposing an excursion abroad, but most people they consulted thought it would be rather too soon after their last one, and that it would be better to leave it over until the following year. The society had not visited Deeside since 1887, and it was considered that an excursion to that district now would be more interesting to those who had visited then than to those who had not visited it at all. The council would recommend that the excursion should be to Deeside, and, as usual, about the end of June or the beginning of July.

The appointment by the council of Mr. Fred Moon, Western Australia, as a correspondent of the society was confirmed. The Secretary said that a notice of motion had been given by Mr. Richardson for next meeting. Its effect would be to prevent the return of old members to the council, and to introduce new blood.

A hearty vote of thanks to Sir John for presiding was enthusiastically passed.

Bournemouth Gardeners' Association.

On August 1 the members of this association paid an evening visit to the Riverslea Nurseries, Christchurch, by kind permission of Mr. Maurice Prichard.

Every courtesy was shown to the visitors, and the most interesting features, which were many and varied, pointed out. Altogether about twenty acres of herbaceous and alpine plants are grown, and, considering the unusually dry spell of weather which we have lately experienced, the plants and flowers looked remarkably well. Altogether the outing was a very instructive and enjoyable one, and the thanks of the members were accorded Mr. Prichard and his assistants for the kindness shown them.

DAHLIAS TO PERFECTION.—A thorough guide to the successful culture of these popular flowers is "Dahlias and Their Cultivation," by J. B. Wroe. Price 1s. net, by post 1s. 2d., bound in cloth 1s. 6d., by post, 1s. 8d., from W. H. and L. Collingridge, 148, Aldersgate Street, London.

ANSWERS TO CORRESPONDENTS.

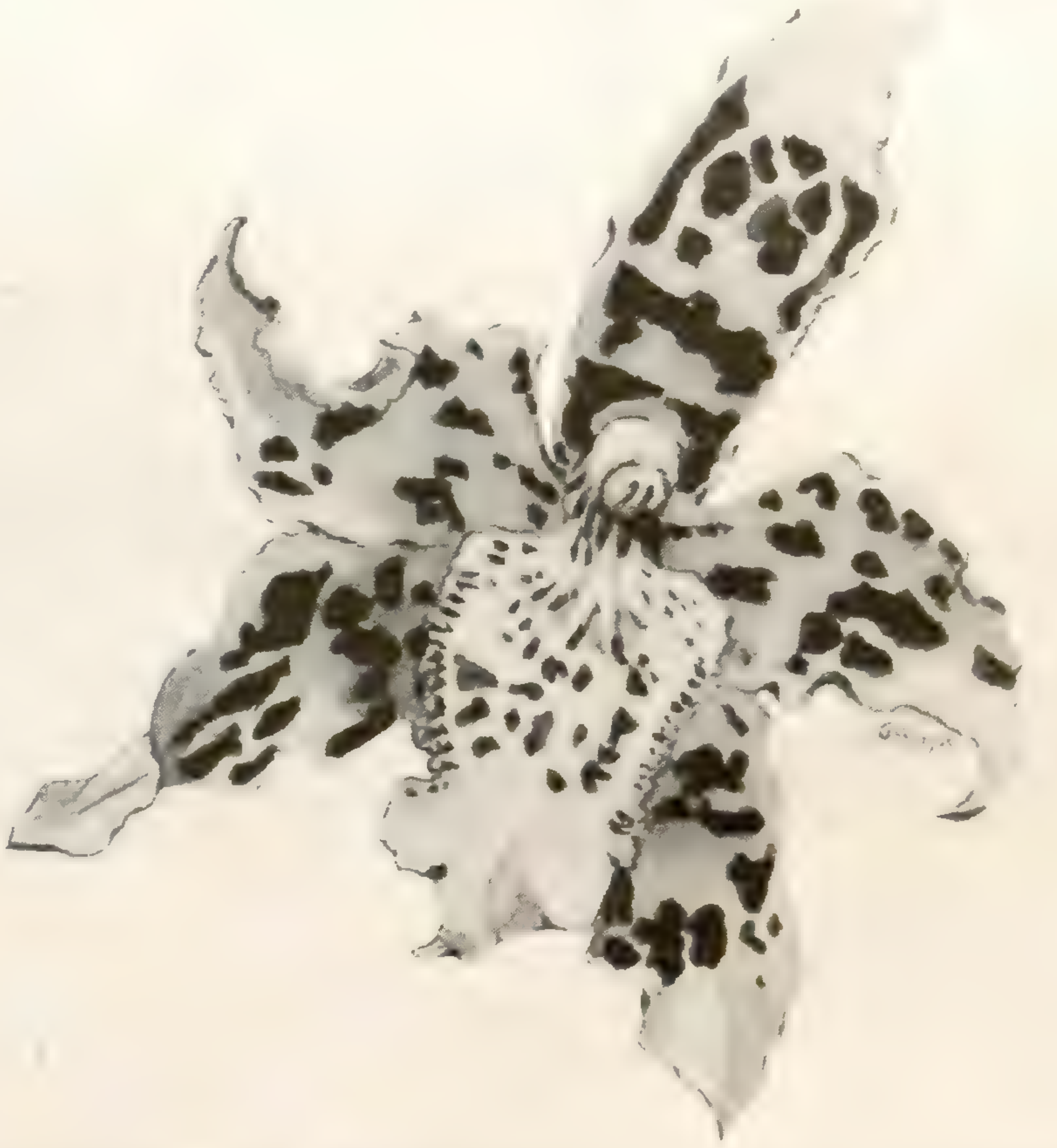
Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

SWAN RIVER DAISY.—J. T. H., Colchester: The pretty, blue-flowered Swan River Daisy is Brachycome iberidifolia, and we are not at all surprised that the few seedlings given you have excited your interest and admiration. In former years we have seen broad bands of this useful annual, surrounding shrubs or herbaceous plants, and only a few days ago we saw large breadths being cultivated for seed purposes, and noticed that very few half-hardy annuals had stood the test of open field culture so well as Brachycome iberidifolia. Sow seeds in March in gentle heat, and prick out the seedlings as soon as they can be conveniently handled. Gradually harden them and plant out during the first week in June. Another method is to sow the seeds in the open border in April, and thin the seedlings to six or eight inches apart. There is a white variety, and there is some difference in the shape of the flowers in different strains.



ODONTOGLOSSUM SPECTABILE (O. CRISPO-HARRYANUM).

CATTLEYA IRIS.—P. J. H., Vienna: This very fine hybrid was originally raised by Messrs. Charlesworth and Co., when at Heaton, Bradford, and it was obtained by crossing Cattleya bicolor with C. Dowiana. It appeared in 1901, and was figured in our pages during that year, specially fine varieties being also illustrated by us in 1902 and in 1907. In the latter year (p. 653) we figured the grand variety named His Majesty.

ODONTOGLOSSUM CRISPO-HARRYANUM.—F. E. G., Appleby: The handsome and variable hybrid between Odontoglossum Harryanum and O. crispum appeared in 1898; it was raised by M. Vuylsteke, of Ghent, and O. crispum was the seed parent. The better title for the hybrid is O. spectabile, but O. crispo-Harryanum is a name still used, just as O. Harryano-crispum is used sometimes to denote the reverse cross. O. Bræckmani is another name that has been given to the hybrid between O. crispum and O. Harryanum. Remembering how very variable O. crispum is, it is quite natural that O. spectabile should be equally variable. The accompanying illustration represents one of the older forms of the hybrid, and serves to show how well the parental characters are combined in the offspring. In this particular instance the colouring is white, yellow, and bright chocolate-red. In some of the rarer and more expensive varieties of O. spectabile the flowers are rounder and the colouring very bright. O. spectabile is a strong grower, and should be treated as suggested in the orchid notes under "Work for the Week" in the present issue.

RUST ON TOMATO LEAVES.—M. B., Rochdale: Tomato leaf rust does not appear to be so prevalent this season as in some previous years, judging from our own observation and from the letters we have received. The rusty patches on the under surface of the leaves spread rapidly, and some cause the leaf so attacked to turn brown or blackish, and die. Cut away, and at once burn, all affected leaves, and then spray the plants with a dilute solution of sulphide of potassium, repeating the application at intervals of a week or ten days until the disease is checked or the crop can be cleared. Wherever an attack of rust has occurred the young tomato plants should be sprayed with a sulphide of potassium solution next season, and spraying should be continued at intervals. This early spraying will keep the plants clean and healthy.

NAMES OF PLANTS.

J. T. H., Colchester.—Brachycome iberidifolia.

W. A. G., Stow.—1, Solanum Wendlandi; 2, Olearia Haasti.

M. E. T., Everton.—1, Herniaria incana; 2, Molucella lævis; 3, Chelone barbata; 4, Veronica spicata.

C. M., Bristol.—1, Calystegia pubescens fl. pl.; 2, Gentiana septemfida; 3, Menyanthes trifoliata.

D. S., Ryde.—1, Zygadenus elegans; 2, Saxifraga oppositifolia; 3, not recognised; 4, Campanula Portenschlagiana; 5, Myrica Gale.

V. B., Hull.—1, Saxifraga umbrosa; 2, Phyteuma campanuloides; 3, Ipomæa versicolor (or Mina lobata); 4, Carex paniculata; 5, Sparaxis pulcherrima.

MARKETS.

◆

COVENT GARDEN.

Flowers.

A very steady demand continues, though no doubt it will fall off during the next few weeks.

		s.	d.		s.	d.
Adiantum cuneatum	per doz. bun.	4	0	to	6	0
Arums	per doz.	2	6		3	0
Asparagus	per doz. bun.	10	0		10	0
Cattleyas	per doz.	10	0		20	0
Carnations	per doz.	1	2		2	6
,,	per doz. bun.	6	0		9	0
Corn-flowers	per doz. bun.	0	9		1	0
Coreopsis	per doz. bun.	1	0		1	6
Croton leaves	per bun.	1	0		2	6
French fern	per doz. bun.	2	6		4	0
Gaillardias	per doz. bun.	1	0		1	6
Gardenias	per doz.	1	0		2	0
Gladiolus	per doz. bun.	1	6		4	0
Gypsophila	per doz. bun.	2	6		6	0
Lapageria	per doz.	1	0		2	0
Lilium auratum	per doz.	2	6		4	0
,, speciosum	per doz.	1	0		2	0
,, longiflorum	per doz.	1	6		2	0
Lily of the Valley	per doz. bun.	6	0		15	0
Marguerites	per doz. bun.	1	6		3	0
Mignonette	per doz. bun.	2	0		3	0
Odontoglossums	per doz. blms.	2	0		4	0
Pelargoniums	per doz. bun.	3	0		4	0
Roses	per doz.	0	9		2	0
Smilax	per doz. trails.	2	0		4	0
Sweet Peas	per doz. bun.	2	0		4	0
Tuberoses	per doz.	0	4		0	6

Fruits.

A very brisk business in all kinds of fruits is attributable to the continued hot weather. Supplies are fairly good.

		s.	d.	s.	d.
Apples, Lisbon	per case	4	6	5	0
,, Tasmanian	per case	4	0	7	6
,, English	per bush.	2	6	10	6
Apricots, French	per box	0	8	1	0
Bananas	per bun.	4	0	10	6
Cherries, English	per ½ sieve	3	0	10	6
Currants, red	per flat	4	0	5	6
,, Black	per ½ sieve	5	6	7	6
Figs	per doz.	1	0	3	0
Gooseberries	per ½-sieve	2	6	7	0
Greengages	per box	0	9	1	6
Grapes, English	per lb.	0	10	3	0
,, Guernsey	per lb.	0	8	1	6
Lemons	per case	9	0	25	0
Loganberries	per peck	2	0	2	6
Melons	each	1	0	3	6
,, Cantaloupe	each	1	6	4	6
Nectarines	per doz.	3	0	18	0
Oranges, Denia	per case	12	0	30	0
,, Cape	per case	8	0	10	0
,, Jamaica	per case	6	0	10	6
,, St. Michaels	per case	8	0	10	0
Peaches	per doz.	4	0	15	0
Pineapples	each	2	0	5	0
Plums	per ½-sieve	3	0	6	0
Raspberries	per doz. pun.	6	0	8	0
Walnuts, pickling	per bush.	2	6	3	6

Vegetables.

An excellent demand prevails, and runner beans, marrows, lettuces, and tomatoes find a ready sale; the latter are cheapening, however, owing to the advent of outdoor crops.

		s.	d.		s.	d.
Artichokes, Globe	per doz.	2	0	to	4	0
Beans, dwarf	per lb.	0	2		0	3
Beans, broad	per ½-sieve	1	6		2	0
,, runners	per bush.	3	0		4	0
Beet	per bush.	2	0		3	0
Cabbage	per tally	4	0		7	0
Carrots	per doz. bun.	1	0		1	6
Cauliflowers	per tally	4	6		10	0
Cucumbers	per flat	4	0		7	6
Endive	per doz.	1	0		3	0
Horseradish	per doz bun.	8	0		12	0
Lettuce	per doz.	1	6		2	6
Marrows	per doz.	1	0		1	6
Mint	per doz. bun.	1	0		2	0
Mushrooms	per doz. lb.	6	0		12	0
Parsley	per ½-sieve	1	0		1	3
Peas	per bush.	3	0		4	6
Radishes	per doz. bun.	0	4		1	0
Spinach	per bush.	1	6		2	0
Tomatoes	per doz. lb.	2	6		4	0
,, Guernsey	per doz. lb.	2	0		3	0
Turnips	per doz. bun.	3	0		4	0

LONDON POTATO MARKETS.

Trade is steady; supplies somewhat limited owing to harvest operations.

		s.	d	s.	d.
Jersey	per cwt.	3	6	4	6
Cherbourg	per cwt.	3	0	4	6
English, rounds	per cwt.	3	0	4	6
English, kidneys	per cwt.	3	6	5	0

USEFUL GUIDE TO GARDEN WORK.—A handy all-round guide to work in the garden month by month is the GARDENING YEAR BOOK, by George Gordon, V.M.H., price 1s. net from booksellers, or by post 1s. 3d., from W. H. and L. Collingridge, 148, Aldersgate Street, London. The book is freely illustrated, and the cultural details thoroughly practical and up to date.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1911. JULY 30 TO AUGUST 5.	SUNSHINE.	TEMPERATURE OF THE AIR.			
		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
July 30—Sunday	12 0	68	64	75	60
,, 31—Monday	14 0	73	65	81	53
Aug. 1—Tuesday	5 51	70	65	81	54
,, 2—Wednesday	11 30	68	63	78	56
,, 3—Thursday	6 0	66	63	73	57
,, 4—Friday	10 18	68	62	75	55
,, 5—Saturday	1 30	67	63	76	60
Means	(total) 61 12	68	63	77	56

DATE. 1911. JULY 30 TO AUGUST 5.	RAIN.	TEMPERATURE OF THE SOIL AT 9 A.M.			LOWEST TEMPERATURE ON GRASS.
		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
July 30—Sunday	—	71	68	63	55
,, 31—Monday	—	69	63	64	47
Aug. 1—Tuesday	0·04	69	68	63	49
,, 2—Wednesday	—	68	67	64	49
,, 3—Thursday	trace	69	67	64	49
,, 4—Friday	—	67	66	64	41
,, 5—Saturday	—	68	66	64	53
Means	(total)	68	67	63	49

CONTENTS.

PAGE
Among the Alpine Flowers 588
Annual Flowers at Reading 585
Answers to Correspondents 599
Begonia Lucerna 589
Blister-canker of Apple Trees 593
Buddleia variabilis magnifica 590
Bulbs 589
Ceanothuses 590
Chelsea Hospital Gardens 591
Clematis Durandi 592
Exhibitions and Meetings 595
Heleniums 587
Modern Strawberry Culture 586
New Plants, etc. 593
Notes from Kew 585
Notes of the Week 583
Own Root Roses 592
Rodgersia pinnata 592
Roses at the White City 587
White Ground Fancy Carnations 588
Work for the Week 594

ILLUSTRATIONS.

Portrait of Mr. Edward Keith, 583; The Rose Garden at the White City, 587; Carnation The Nizam, 588; Begonia Lucerna, 589; The Pensioners' Garden at Chelsea, Hospital, 590; The Garden Front at Chelsea Hospital, 591; Rodgersia pinnata, 592; Cornus paucinervis, 593.

Border Carnations.—If it is intended to plant the layers direct into their flowering quarters as soon as they have made sufficient roots, it is necessary to prepare the ground at once. Carnations delight in well-drained soil, and if possible this should be afforded them, selecting a piece of open ground in preference to borders under a wall. In dealing with soil which is naturally drained and of a light character, a good dressing of well decayed manure should be given, adding wood ashes and sea sand, and thoroughly incorporating these with the soil. If the soil is inclined to be heavy, old mortar rubble may be added to the above dressing, and the sea sand used in larger quantities. In many gardens autumn planting is found to be an absolute failure; therefore the layers have to be potted, and planting out deferred until spring. As soon as the layers have made enough roots to allow them to be lifted, the ground should be worked down firm and level by treading and raking, when planting may commence. Although some varieties are more vigorous than others, generally speaking, the plants may be put out eighteen inches apart each way.—E. C. P.

FORTHCOMING ENGAGEMENTS.

MONDAY, August 14.—United Horticultural Benefit and Provident Society, committee meeting.

TUESDAY, August 15.—Royal Horticultural Society; committees meet at 12 o'clock; no general exhibition; hall closed for redecoration.
Oxford Horticultural Society.
North of England Horticultural Society, at Harrogate.
Clay Cross Flower Show.

THURSDAY, August 17.—Aberdeen Horticultural Society; three days.
Deal and Walmer Horticultural Society.
Hawkeshead Horticultural Society.

SATURDAY, August 19.—Hugglecote Horticultural Society.

TUESDAY, August 22.—Royal Horticultural Society of Ireland.

WEDNESDAY, August 23.—Shrewsbury Floral Fête; two days.
Battle Horticultural Society

THURSDAY, August 24.—Peebles Horticultural Society.

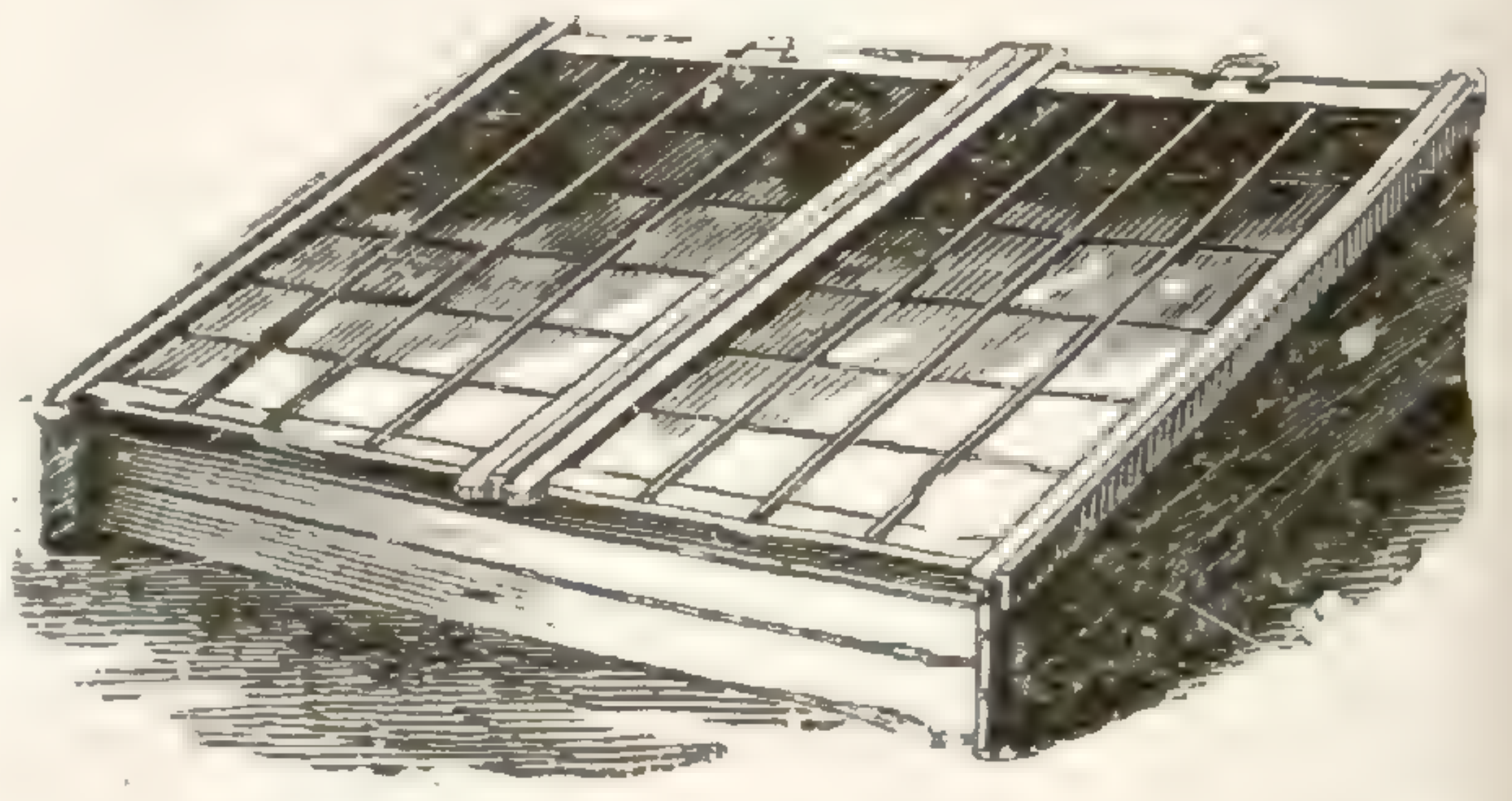
TUESDAY, August 29.—Royal Horticultural Society; committees meet at 12 o'clock; lecture at 3 p.m. on "Insect Pests" by Mr. Frederick Enock, F.L.S., F.E.S.; Scientific Committee at 4 o'clock

SATURDAY, August 26.—Glassford Horticultural Society.

WEDNESDAY, August 30.—National Vegetable Society' Show at the Horticultural Hall.
Irish Gardeners' Association.
Horticultural Exhibition in connection with the Cheshire Agricultural Society.

THURSDAY, August 31.—Dundee Horticultural Society; three days.
Sandy Horticultural Society.

PORTABLE
CUCUMBER FRAMES.
OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.		£	s.	d.
1-light 4 ft. by 6 ft.	CASH PRICES. CARRIAGE PAID.	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.		5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON, MANCHESTER.

CHARGES FOR ADVERTISEMENTS IN
THE GARDENERS' MAGAZINE.

	£	s.	d.
Five Lines and under	£0	2	6
Per Line beyond	0	0	6
,, Inch	0	6	0
,, Half Column	1	10	0
,, Column	3	0	0
,, Page	9	0	0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— & Co.

Telephone Numbers:
Editorial and Printing Depts. .. ... 831 Holborn.
Advertising and Publishing Depts. ... 2140 Holborn.

Offices: 148 and 149, Aldersgate Street, London.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out, Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 31; married when suited; excellent references. Address, Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working).—CAPTAIN USHER highly recommends R. Appleby as above; life experience in all branches; thoroughly understands Planning and Laying Out; also Land and Stock; many years' excellent character. Address APPLEBY, care of Captain T. Clemine Usher, Little Wymondley, Stevenage.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 31; married, two children. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working).—F. W. FLETCHER, Esq., can highly recommend his Head Gardener as a thoroughly trustworthy experienced good all round man; age 45; married; one girl 14 years. F. GREENGRASS, 40, Primrose Terrace, Browning Road, Enfield, Middlesex.

GARDENER (Head Working, where several kept); life experience in good establishments, Inside and Out; well up in all branches, including land and stock; married, no family. M.C., c.o. Haxton, Melton Road, Hampton-on-Thames.

GARDENER (Head Working); South preferred; one or more under; life experience Fruit, Vegetables, Flowers, Glass; knowledge of Cows, Poultry; 32; married, three children; 3½ present place, seven and two previous; good references; photo. S. WAGHORN, Uppingham.

GARDENER (Head Working). Mr. THOMSON can with confidence recommend S. KNIBE as above; 4 years here as Head; life experience in all branches of horticulture; age 32; married. KNIBB, Pollards Wood Gardens, Chalfont St. Giles, Bucks.

GARDENER (Head Working); life experience in all branches; excellent characters; Head and Outside Foreman; age 33; married, small family. HUDSON, Wood Hall, Cupid Green, Hemel Hempstead.

GARDENER (Head Working, where several are kept); 22 years' practical experience in large establishments; highest references, character, ability; age 37; married. KING, Avenue, Stoke Prior, Bromsgrove.

GARDENER (Head Working); has had wide experience in Stove, Greenhouse, and Orchard Houses, Outdoor Gardening in all its branches; excellent testimonials from employer of 13 years, and from former employers. Can commence duties without delay. ROBERT LESLIE, Ardargie Lodge, Forgandenny.

GARDENER (Head Working); life experience Inside and Out; thoroughly competent; personal references for 20 years for ability, etc.; abstainer; age 38. SMITH, The Gardens, Browninge Manor, Blackboys, Sussex.

GARDENER (Head Working), thoroughly experienced in all branches, desires SITUATION; certificated R.H.S.; formerly with Mr. E. Beckett, V.M.H.; married, no family; good characters JOHN TAYLOR, Gardens, Latchmere, Ham Common, Richmond, Surrey.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushroom, ridge or flat; Kitchen, Lawn, Flower Garden. Special prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (Head).—S. T. Martin, Head Gardener, Heythrop, Chipping Norton, Oxon, seeks re-engagement in good establishment; disengaged middle of September. Age 44; married, one daughter.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; aged 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

MR. A. LINDLEY recommends A. SIMMONS as GARDENER (First of two or Single-handed); life experience Inside and Out; two years present situation; six years previous; age 35; single. Apply, 6, Little-Roke, Kenley, Surrey.

GARDENER (Single-handed or otherwise); 14 years' general gardening; used to gas engine; married, 2 children, youngest 4½; age 31. J. MOONEY, The Stables, East Moor House, Harpenden.

GARDENER, 40; Single-handed preferred; thoroughly experienced; excellent character; active worker; Inside and Out with early vegetables; abstainer; married. A. BISHOP, Windmill Hill, near Hailsham.

GARDENER (Single-handed. or with help); experienced, Inside and Out; age 30; married, no family; good references. H. CATLEY, The Lodge, Pilgrim's Holt, Margery, nr. Reigate, Surrey.

GARDENER (Single-handed or Second) seeks SITUATION; understands Fruit, Flowers, Vegetables; age 25; single; good references; seven years last place. STRUTT, 70, Croft Street, Ipswich.

GARDENER or SECOND; in good place; well experienced in Fruit and general Plant routine; excellent references; married, one boy age nine. LEWINGDON, 26, Brighton Road, Earley, Reading.

GARDENER, age 27, requires Situation in Pleasure Grounds and assist in Kitchen Garden; good references; three years present situation. W. MUZZELL, 11, Tarring Road, Worthing, Sussex.

MR. C. E. CRAWSHAY, of Gilstead Hall, South Weald, Brentwood, Essex, wishes to recommend his GARDENER (Under); five years' good character; single; age 20; Bothy preferred. Apply F. FURBANK, White Horse Side, Navestock, near Brentwood, Essex.

YOUNG MAN (21) seeks SITUATION under good Gardener; 8 years' experience, chiefly Outside; three years last place; willing to take duty. W. LEA, 18, Junction Road, Bath.

YOUNG MAN seeks SITUATION in Gardens (Inside and Out); height 6ft. 3in.; good references. Apply A. MAWSON, Mill House, Askham Richard, York.

YOUNG MAN, 28, single, seeks SITUATION, Inside and Out, or Kitchen Garden and Pleasure Grounds; Bothy preferred. Good references. Apply C. AVIS, Selsfield Common, West Hoathly, Sussex.

YOUNG MAN (20) wants place in Houses; 6 years Outside, including over 3½ years last place. W. MONK, Lower Street, Stansted, Essex.

YOUNG MAN (20) seeks Situation as CHAUFFEUR-GARDENER; Motor Drivers' Union certificate; driven Star and Darracq cars. Apply B. SMITH, Widdington, near Newport, Essex.

YOUNG MAN (married) seeks a good SITUATION in Florist's Nursery, Head or Second; well up in all duties Inside and Out; 16 years last place; two years present. W. WADEY, Shiprods, Horsham.

YOUNG MAN (20) seeks SITUATION as Beginner in Kitchen Gardens or Pleasure Grounds; has some knowledge. F. WALKER, The Manor, Bucknell, near Bicester.

YOUNG MAN, age 20, seeks SITUATION as GARDENER (Under); used to Mowing Machines; two years' experience; good character; total abstainer. F. GRAY, Broom, near Biggleswade, Beds.

YOUNG MAN seeks SITUATION to look after Electric Light and Garden; well up in all branches; nine years last situation. EDWARD VILLA, Street Cobham, Surrey.

REV. R. HOLDEN recommends for employment in Garden, YOUTH, 17; strong; willing; excellent character; been with him 3½ years. E. ROBERTS, Gate House, Nuttall, Nottingham.

WANTED, Situation as GARDEN LABOURER, or as Single-handed; good experience; well used to garden work; married, no family; disengaged; good character. W. LING, Hunger Hill, Westcott, near Dorking.

Situations Vacant.

GARDENER. — WANTED, mid-August, Single-handed GARDENER, with knowledge of Cows; preference given where wife laundress; help given in garden; cottage provided. Monachty, Ciliau Aeron, Cardiganshire.

VACANCY.—Wanted, young man as OUTSIDE FOREMAN, with four as unders. Well able to look after young men; must understand Herbaceous Roses and Woody Plants, also Fruit, Bothy. Apply, stating wages required, to HEAD GARDENER, Pyrford Court, Woking.

WANTED, strong, active YOUNG MAN for Pleasure Grounds and Kitchen Garden; able to use Scythe and make himself generally useful under Gardener (Head Working); wages 16s. Apply, stating full particulars, to Kimsbury House, Gloucester.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For AUGUST 19, 1911.

Please Repeat my Advertisement.

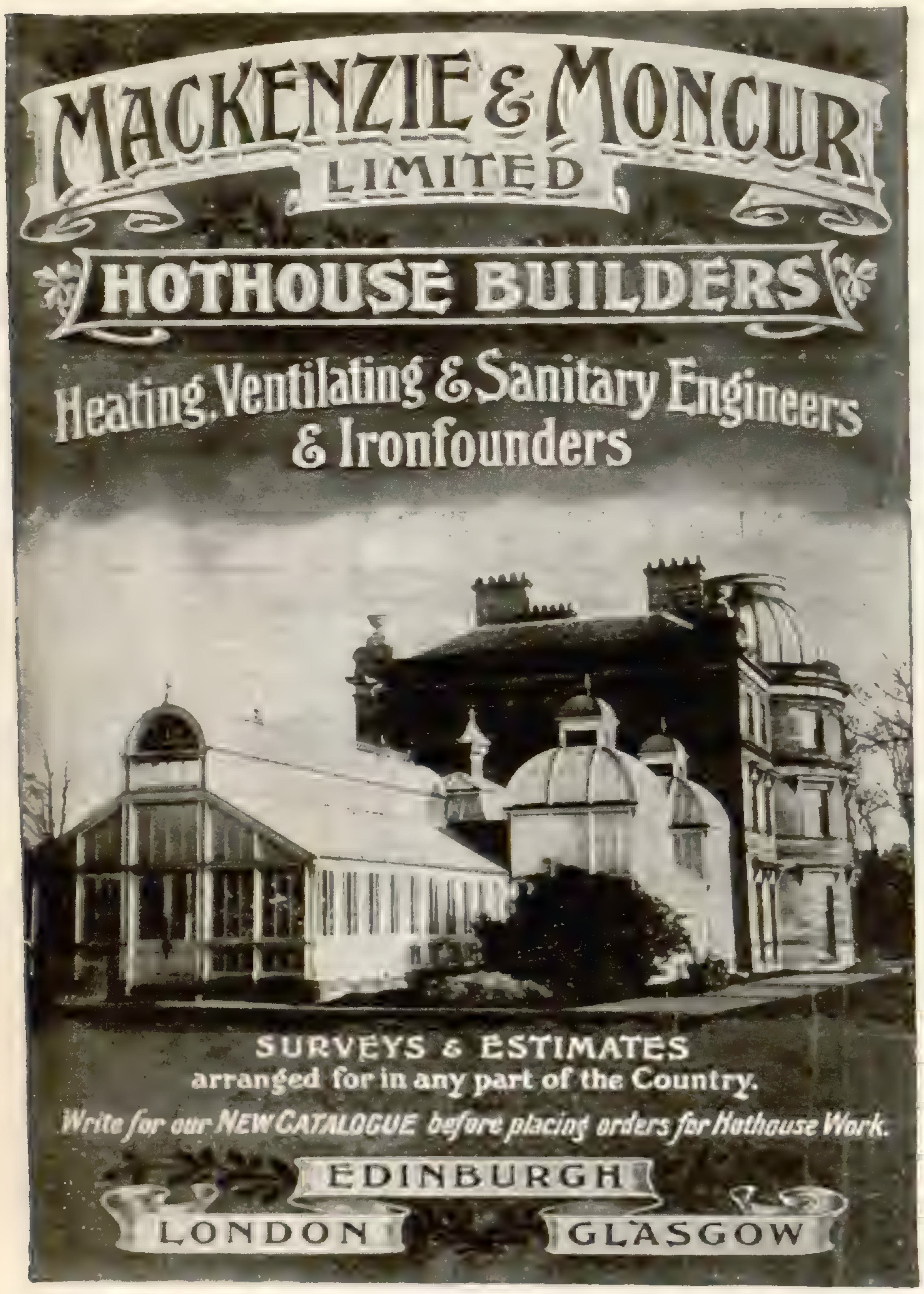
Name..

Address..

....

Date ....

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue



MACKENZIE & MONCUR
LIMITED
HOTHOUSE BUILDERS
Heating, Ventilating & Sanitary Engineers
& Ironfounders

SURVEYS & ESTIMATES
arranged for in any part of the Country.
Write for our NEW CATALOGUE before placing orders for Hothouse Work.
EDINBURGH
LONDON GLASGOW

THE ROSE-GROWER'S VADE MECUM.

Seventh Edition, Including New Features and Illustrations, and Revised List of 1,700 Different Roses.

ROSES
AND THEIR
CULTIVATION
By T. W. SANDERS, F.L.S.

200 Pages.
16 Plates.
Frontispiece and
67 Illustrations.

2/6
Net;
By post, 2/10.

A Complete Guide to the Selection and Culture of

STANDARD ROSES.
PILLAR ROSES.
GREENHOUSE CLIMBERS.
RAMBLING ROSES.
ROSES FOR TRELLISES.
CLIMBERS FOR PERGOLAS.
POT ROSES.
DWARF ROSES.
ROSES FOR EXHIBITION.
&c., &c.

LIST OF 1,700 CULTIVATED ROSES:
Showing Variety, Section or Class, Date Introduced, Colour, Habit of Growth, How Best Grown, Mode and Time of Pruning, Description of Flower.

ORDER FORM.

To the Publishers of "The Gardeners' Magazine,"
148 & 149, Aldersgate Street, London, E.C.

Please send me a copy of "ROSES AND THEIR CULTIVATION" by post, for which I enclose remittance of 2/10.

Name..

Address..

J. WEEKS & Co. (CHELSEA),

Telegrams: "Hortulanus, London."
Telephone: 5947 Westminster.

The First Established Horticultural Building Firm in 1808. Foremost in 1911.

PATENTEES AND MAKERS OF WEEKS' PATENT "DUPLEX" UPRIGHT TUBULAR BOILERS.

ERECTED FOR CAPT. DALGETTY, LOCKERLEY HALL, ROMSEY.

THE MOST PERFECT SYSTEM of GLAZING

is our latest "Challis" system, as illustrated.

NO BARS. MORE LIGHT. NO DRIP. NO OUTSIDE ROOF PAINTING OR PUTTY.

It has not the disadvantages of some other systems which involve great loss of heat, rattle in windy weather, and broken glass.

THE COST IS LESS THAN OUR STANDARD CONSTRUCTION. LET US SEND YOU A PRICE TO COMPARE WITH OTHERS.

We only use best materials, and spare no effort to uphold our reputation for first-class work, at lowest prices.

CATALOGUES, PLANS AND ESTIMATES, FREE.

Please address all Letters to HEAD OFFICE } 72, VICTORIA ST., WESTMINSTER, S.W.

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 3,016. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, AUGUST 19, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S Autumn and Winter-flowering BULBS, including Crocus Species, Colchicums, Hardy Cyclamen, Freesias, Lachenalias, Roman Hyacinths, etc., for early planting. List on application.

BARR'S DAFFODILS awarded 28 Gold Medals.—Descriptive Illustrated Catalogue of all the finest sorts in cultivation, for Pots, Exhibition, Flower Borders, or Naturalising, and including the finest selection of New Seedling Narcissi ever offered. Sent free on application.—BARR and SONS, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, LONDON, S.W., has a large number of first-rate Hot Water Men. This is an excellent time for having the Hot Water Heating Apparatus overhauled, and a reliable man can be secured by a postcard, telephone message (201 Western), letter, or wire, "Gray, Chelsea, London."

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

THE BOURNE DAFFODILS have gained the HIGHEST AWARDS wherever Exhibited. Send for my Illustrated and descriptive Catalogue of FIRST QUALITY BULBS at MODERATE PRICES. Post Free from
CHRISTOPHER BOURNE,
The Daffodil Specialist, Simpson,
Bletchley.

R.H.S. EXAMS.—Write the Premier Coach re up-to-date correspondence course. Success certain. Particulars free.—"MEDALLIST," "Ferndale," Pinfold Street, Darlaston.

RUSTIC SUMMER HOUSES, trellis-work, Fencing, Pergolas, Arches, Seats, Bridges, Log Cabins, Loggias, etc. Send for our new LOG CABIN and RUSTIC CATALOGUE (just published), sent post free. BOULTON and PAUL, Ltd., Norwich.

CARNATIONS.—Spiral Wire Stakes. No tying required. Will last a lifetime. 24 inches long, 7s. 6d. per 100; 30 inches, 8s. 6d. per 100; 36 inches, 10s. per 100; sample doz., 1s., 1s. 3d., and 1s. 9d., all carriage paid. Pea Trainers, 6ft. by 4ft., 2s. and 3s. each. Garden Archways, Garden Edge and Croquet Bordering, 8 inches high, 8d.; 10 inches high, 10d. per yard. All cash with order. Catalogue free on application. J. PENKETH, Iron and Wire Works, Market Place, Manchester. Telp.: 3695 City.

NARCISSUS.—Tulips, Hyacinths, etc. All the leading and best varieties, from 4s. 6d. per 100. Ask for illustrated price list, post free. Satisfaction guaranteed. C. F. A. VAN DER SLUYS, F.R.H.S., La Ramée, Guernsey.

BULBS.—If you want the best show of bloom in your district buy only Ellison's reliable bulbs. Prices reasonable. Quality A1. All Bulbs sent on Appro., carriage paid. Catalogue free. —ELLISON, 57, West Bromwich.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 8s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

LOVELY FLOWERS AT CHRISTMAS.
WEBBS' WHITE ROMAN HYACINTHS.
Extra large bulbs, 3s. per doz.; 20/- per 100.
Selected bulbs 2/- ,, ,, 14/- ,,
Good bulbs 1/6 ,, ,, 10/6 ,,

WEBBS' POLYANTHUS NARCISSI.
Paper White, 1/- per doz.; 6/6 per 100.
Paper White, large flowering, 1/3 per doz.; 8/6 per 100.

WEBB AND SONS, The Royal Seedsmen,
WORDSLEY, STOURBRIDGE.

BUNYARD'S CATALOGUES
Free on Application.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

KENT STRAWBERRY PLANTS
NEW CATALOGUE READY.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

LAXTON'S STRAWBERRIES.—Fine early pot plants, for forcing, of Royal Sovereign and other varieties, 15s. 100. For new varieties see our catalogue, gratis on application.
LAXTON BROS., Bedford.

CLAY'S MANURES, CRUSHED BONES
(See page iv.)

CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue Free. J.E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

GREENHOUSES and CONSERVATORIES. Distinctive Designs and Finished Workmanship. Write now for ILLUSTRATED CATALOGUE. CARTER and HOWARD, Horticultural Builders, Kingston-on-Thames.

JAMES SENDALL and CO., Cambridge; Conservatories, Vineries, Garden Frames; Heating Engineers. Surveys made, and Plans prepared to suit any position. Illustrated List Free. Telegrams: "Sendall, Cambridge." 'Phone, 511.

POULTRY AND KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

CONSERVATORIES AND WINTER GARDENS, Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue free.—BOULTON and PAUL, Lim., Norwich. See our Stand at the Royal Agricultural Society's Show to be held at Norwich in June.

WHEELBARROWS. — Navvy, for building, 11s. 9d. each; general purpose, for farm use, 14s. 9d. each. 6 sent together, carriage paid some stations. Also timber, woodwork, all descriptions. O. JENNINGS and CO., Timber Merchants, General Wood-workers, 916, Pennywell Road, Bristol.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page iii.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses. Portable buildings, etc. Catalogue gratis.

WHITE FLOWERS AT CHRISTMAS.
SUTTON'S WHITE ROMAN HYACINTHS
Extra large bulbs, per doz., 3s.; per 100, 21s.
Selected bulbs, per doz., 2s.; per 100, 14s.
Fine Bulbs, per doz., 1s. 6d.; per 100, 10s. 6d.

SUTTON'S BULB CATALOGUE FOR 1911.
Beautifully illustrated. Now ready, post free.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.

From ———, Esq.,
65, ——— Av.,
Ottawa, Ont., Canada.
1st December, 1909.

"I received your Manual for 1910, and consider it the very best you have ever produced, and think it the best on earth."

COLLECTION OF AURICULAS FOR SALE, Alpine and Stage.
Seedling, 4s. per dozen.
STAWARD, Highlaws, Ayton, N.B.

GRAPE VINES. — Stout Young Green Canes for present planting. FRUITING FIGS IN POTS. List on application. WILL TAYLER, Hampton, Middlesex.

ALPINES.—100 in 50 good varieties, carriage paid, £2. Half and quarter quantities at same rate.
WHITELEGG and PAGE, Chislehurst.

SIX INCHES ROUND, Roman Hyacinths, 21s.; 5ins. round, 12s. 100. Freesias, nearly 2½ins. round, 5s. 100. Paper White, Double Roman Narciss., 4s.; 6s. 100. Now in stock.—ELLISON, 57, West Bromwich.

THE WEST OF ENGLAND ROSE FARM, Limited. — In Voluntary Liquidation.—FOR SALE, as a going concern, the Rose Gardens and Nursery, situate at Henlade, near Taunton. There is a cottage, stable, packing sheds, with several acres of the choicest varieties of Roses, also Herbaceous and Alpine Plants, Fruit Trees, etc. Price for stock, utensils, lease, goodwill, £800. For further particulars apply to the Liquidator, M. H. Adams, Chartered Secretary, 38, Walbrook, London, E.C.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-work, showing screens, wall panels, window surrounds, arches, arbors, etc., post free. BOULTON and PAUL, Ltd., Norwich.

GARDEN HOSE and FITTINGS, all sizes and lengths, best quality; list free.
HEATHMAN,
Hose Factory, Parson's Green, London, S.W.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.

XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.

XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N. S. or Florist for Richards' small pink list.

G. H. RICHARDS, Manufacturer,
234, Borough High Street, London S E

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London. N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

BULBS,

R. H. BATH, Ltd.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Narcissi Tulips, Hyacinths, etc., Home-Grown.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

FLOWER POTS.

SANKEY'S
FAMOUS
GARDEN
POTS

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

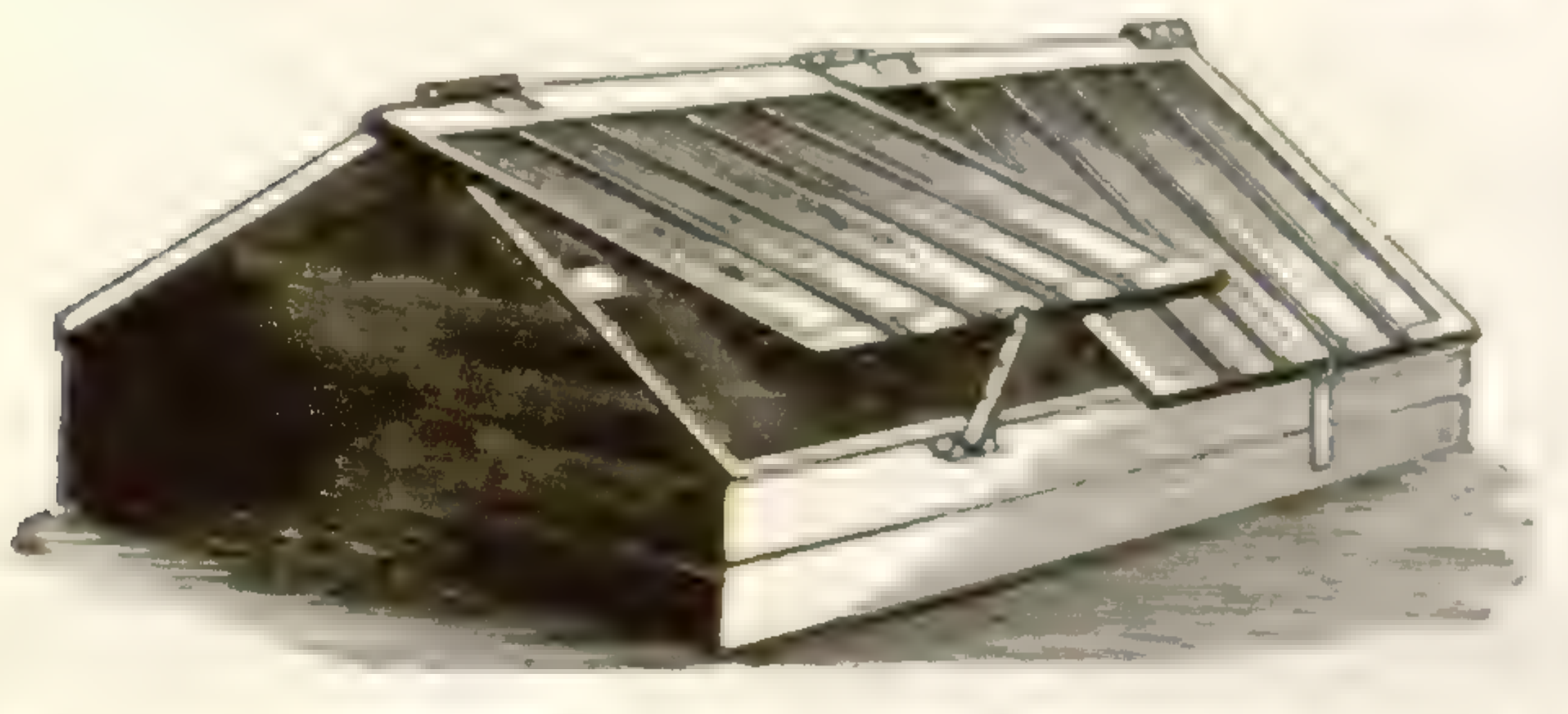
Appointed by Royal Warrant **Makers to His Majesty the late King.**

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

PORTABLE PLANT FRAMES

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices. Glazed and Painted.		£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. " 4ft. "		2	5	0
6ft. " 5ft. "		2	15	0
12ft. " 4ft. "		4	0	0
12ft. " 5ft. "		4	15	0
12ft. " 6ft. "		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
ROYAL HORTICULTURAL WORKS,
MIDDLETON, MANCHESTER.

BOTTLING FRUIT.

Patent Apparatus Complete. **5/6**

Efficient, Reliable, Simple, Easily Operated.
WICKHAM and Co., Dept. M, Ware, Herts.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

Orchids! Orchids!! Orchids!!!

The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application.—**J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana, Vanda Cœrulea Lushai Hill variety, dark blue type; Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.

NEW DAFFODILS, 1911.

Our revised Descriptive Catalogue of Rare Daffodils and May-flowering tulips is now ready, and we shall have pleasure in posting a copy to all applicants. Our South of Ireland grown Bulbs are acknowledged to be second to none. Write at once. Address—

WM. BAYLOR HARTLAND & SONS,
Bulb Growers,
33, PATRICK STREET, CORK.
Bulb Farm: ARD CAIRN, CORK.

J. J. THOOLEN, The EXPORT Nurseries, Heemstede, Haarlem, Holland,

Established 1884,

Has the honour to announce that his Illustrated Price List of Bulbs and Plants in English, Autumn, 1911, at lowest prices, will be sent post free on application. **No Charge for Packing. Orders of 10/- and above entirely Free to Destinations** in England, Scotland, and Ireland, etc. First Quality guaranteed.

Some sorts of Bulbs noted out of Price List.

	Per 100. s.	d.	Per 1,000 s.	d.
Hyacinths, in the finest mixture for bedding or forcing	7	8	72	4
Hyacinths, single, first size, named, in 25 leading sorts, red, white, and blue vars., equal quantities, my selection	15	0	—	
Tulips, single early, in the finest mixture	2	0	18	4
Tulips, Darwin, mixed	3	0	25	0
Tulips, double, in the finest mixture...	2	2	20	0
Anemones, single mixed	1	4	12	0
Anemone, Fire Bride, pure white ...	1	4	12	0
Crocus, 1st size, in the finest mixture	1	4	12	0
Crocus, 2nd size, in the finest mixture	0	9	7	0
Scilla campanulata, blue bells	2	0	—	
Scilla campanulata, white bells	2	0	—	
Scilla sibirica, rich blue	1	6	14	6
Iris, Spanish, mixed	0	7	5	0
Iris, English, mixed	2	0	16	8
Narcis., single, in the finest mixture...	1	4	12	6
Narcis., Trumpet, in the finest mixture	2	6	20	0
Narcis., double, fine mixture	2	6	20	0
Narcis-Polyanthus, finest mixed ...	3	6	30	0
Snowdrops, Elwesi, the Giant Snowdrop	1	6	13	6
Ranunculus, French, double mixed ...	0	9	7	0

250 Bulbs of the same kind will be charged at the 1,000 rate; 25 at the price per 100; 6 at the price per 12.

Ask for Illustrated Price List and see the Collections.

CARNATIONS. AURICULAS. PINKS.

The NEW ILLUSTRATED CATALOGUE of above is now ready, and has been posted to all customers. The newest and best varieties are sold at the most reasonable prices.

Best **CARNATION** and **PICOTEE SEED** ready in October. 1/6 and 2/6 per packet.

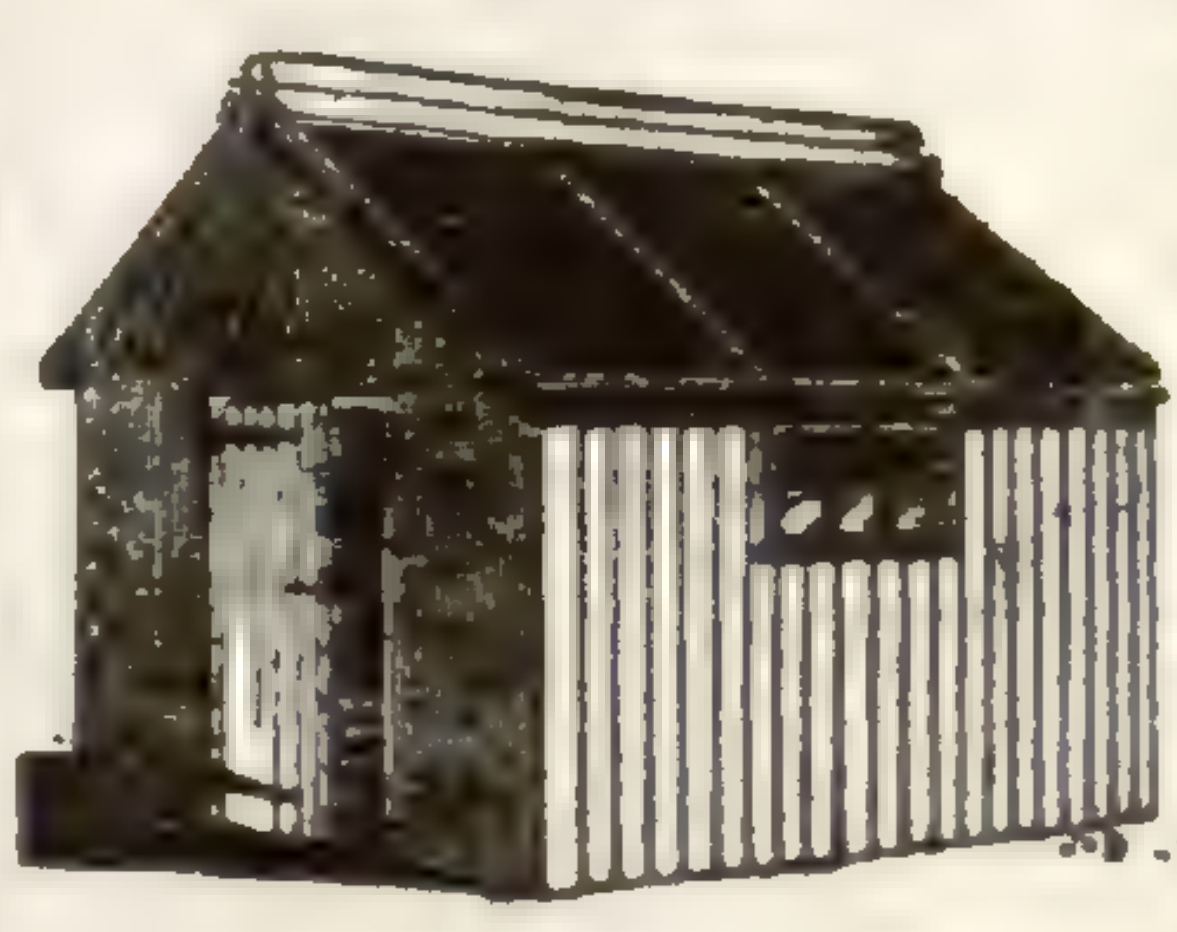
AURICULA (Show and Alpine), PINK, and **POLYANTHUS SEED** now ready. 1/-, 1/6, to 2/6 per packet.

Send for Catalogue to

J. DOUGLAS,
Edenside, GREAT BOOKHAM.

THE CHEAPEST IN ENGLAND.

NO. 59.



Copyright Registered.

Portable Buildings. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

Sizes.	Cash with Order.	Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/0
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
Established 70 Years. *BEDFORD.*
Works, 6 acres. Stock of Wood in Sheds, 10,000 *tons.*

ONCE USED. ALWAYS USED. The 'PATTISSON' LAWN BOOTS

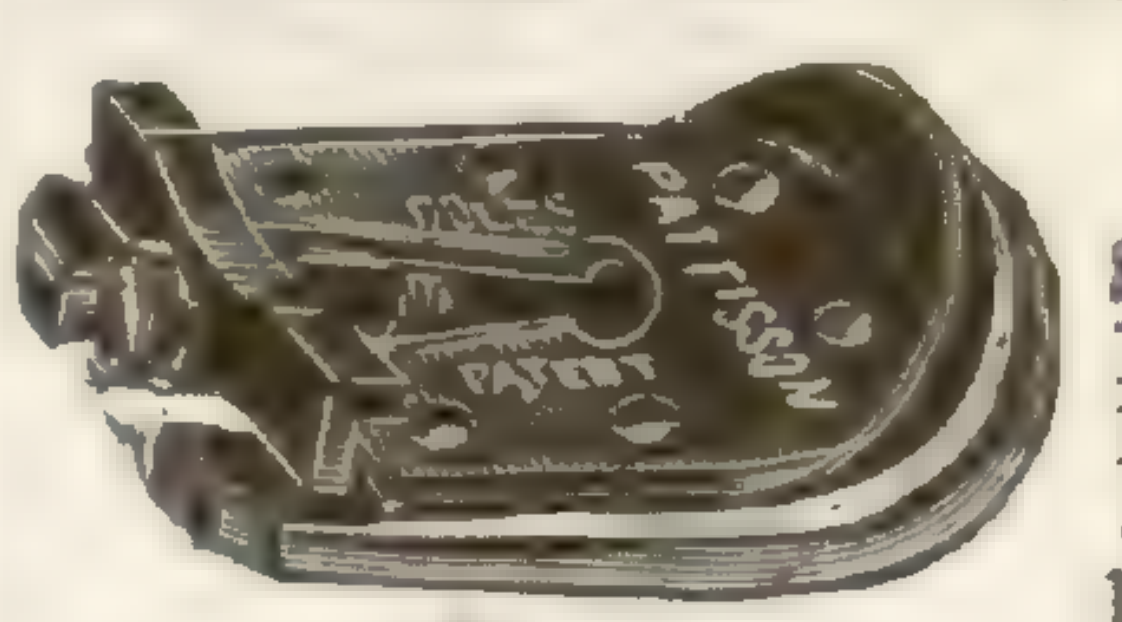


Fig. 1.

Simplest! Strongest! Most Economical!

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS

Silver Medal—
Royal Horticultural Society.

Hundreds of Testimonials.

The Field says: **"As good as anything that could be devised."**

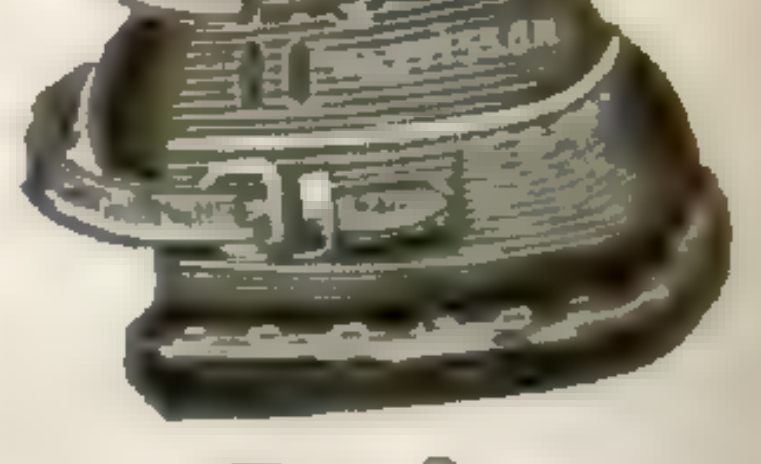


Fig. 2.

Illustrated Price List from—
H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM S.W.

Sales by Auction.

DUTCH BULBS.

MR. J. C. STEVENS begs to announce that his **Sales by Auction** will Commence on

WEDNESDAY, August 30.

Catalogues post free.

Lots purchased, packed, and forwarded to all parts.

STEVENS' AUCTION ROOMS
(Established 150 years),
38, King Street, Covent Garden, London, W.C.

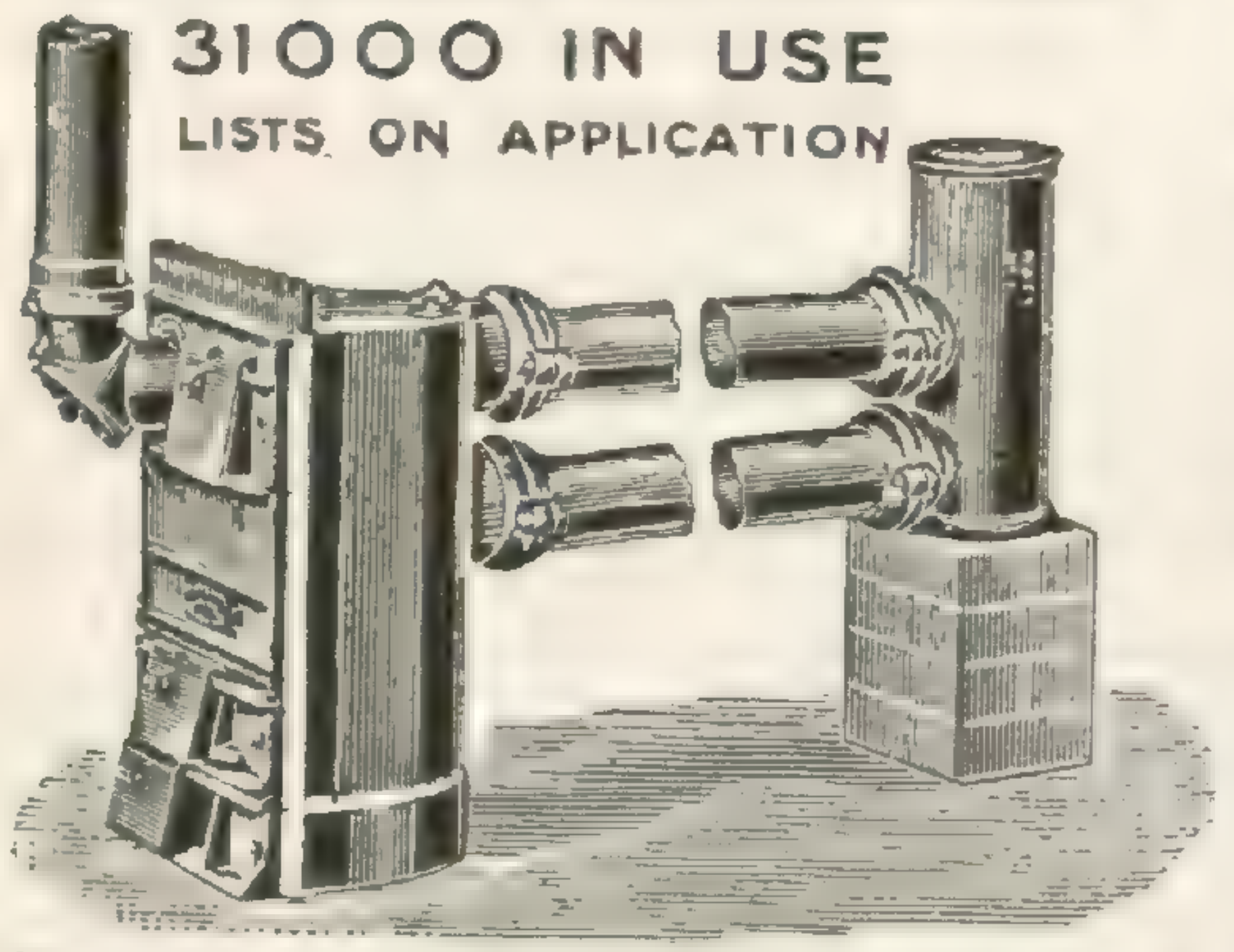
FOR SALE.—First-class NURSERY, close to Blackpool, with 500 feet run of glass, well heated, with new up-to-date boilers. For price and particulars, apply P. VAWSER, Hykeham Road, Lincoln.

RARE ALPINES CHEAP.—Profits devoted to Patriotic objects. Apply for list, LADY C., The Abbey, Much Wenlock, Shropshire, and please enclose fully addressed and stamped envelope.

£35.—The only Nursery in Woolwich; shop, greenhouses (tenant's fixtures), frames, and field; all well stocked; three minutes from Woolwich Market; call at 7 p.m. PYEFINCH, Seedsman, etc., 24, Sandy Hill, Woolwich.

The Loughborough
BOILER

31000 IN USE
LISTS ON APPLICATION



The pioneer of cheap, simple and effective heating for small greenhouses. Complete Apparatus from £3. 19. 6. The immense sale of this boiler, and its numerous imitations are the best testimony of its undoubted success

MESSENGER & CO., LTD.
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH · LEICESTERSHIRE
London Office, 122 VICTORIA ST · S · W

Bulbs *All best qualities at moderate prices Carriage paid.*

Illustrated priced Catalogue post free.

Dicksons *Bulb Growers* *Chester*

MERRYWEATHER'S

614 PUMP

IS THE

Gardener's Friend.

Easy to Work. Simplicity Itself.

Write or Call—

63, Long Acre, LONDON, W.C.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

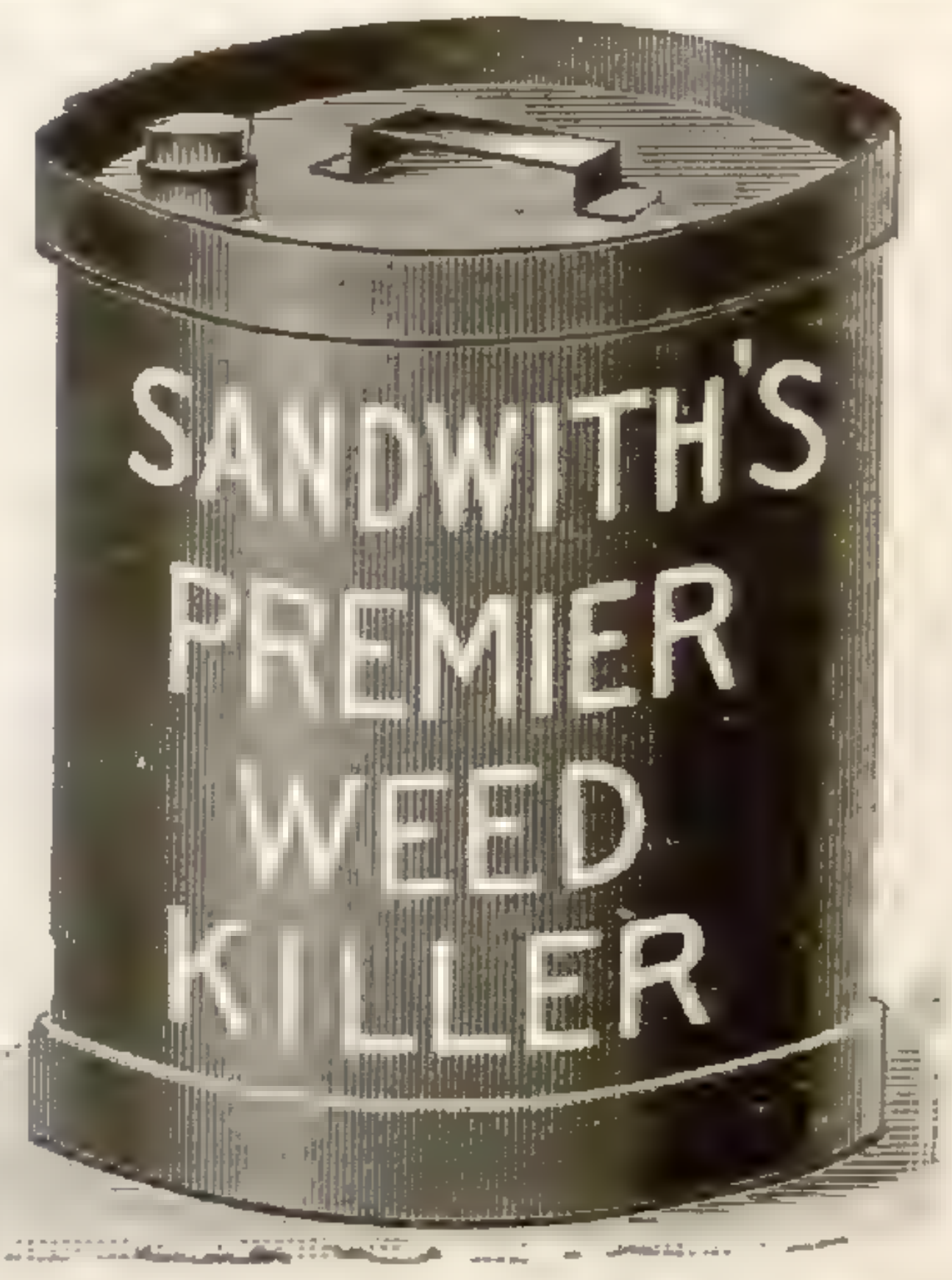
Prices on application to

EPPS & CO., Ringwood, HANTS.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ **ROCKWORKERS** ∴
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.
Our Work has stood the test of time.

THE FAVOURITE WEED KILLER.



As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for 6/-; drum, 2/-. 12 galls. for 16/-; drum, 6/-. 20 galls. for 26/8; drum, 10/-. 40 galls. for 50/-; drum, 20/-.

EITHER LIQUID OR POWDER.

Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,
The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

SUBSCRIBER'S ORDER FORM

Every Saturday **THE GARDENERS' MAGAZINE.** Twopence

To W. H. and L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose________ for________ months in advance.

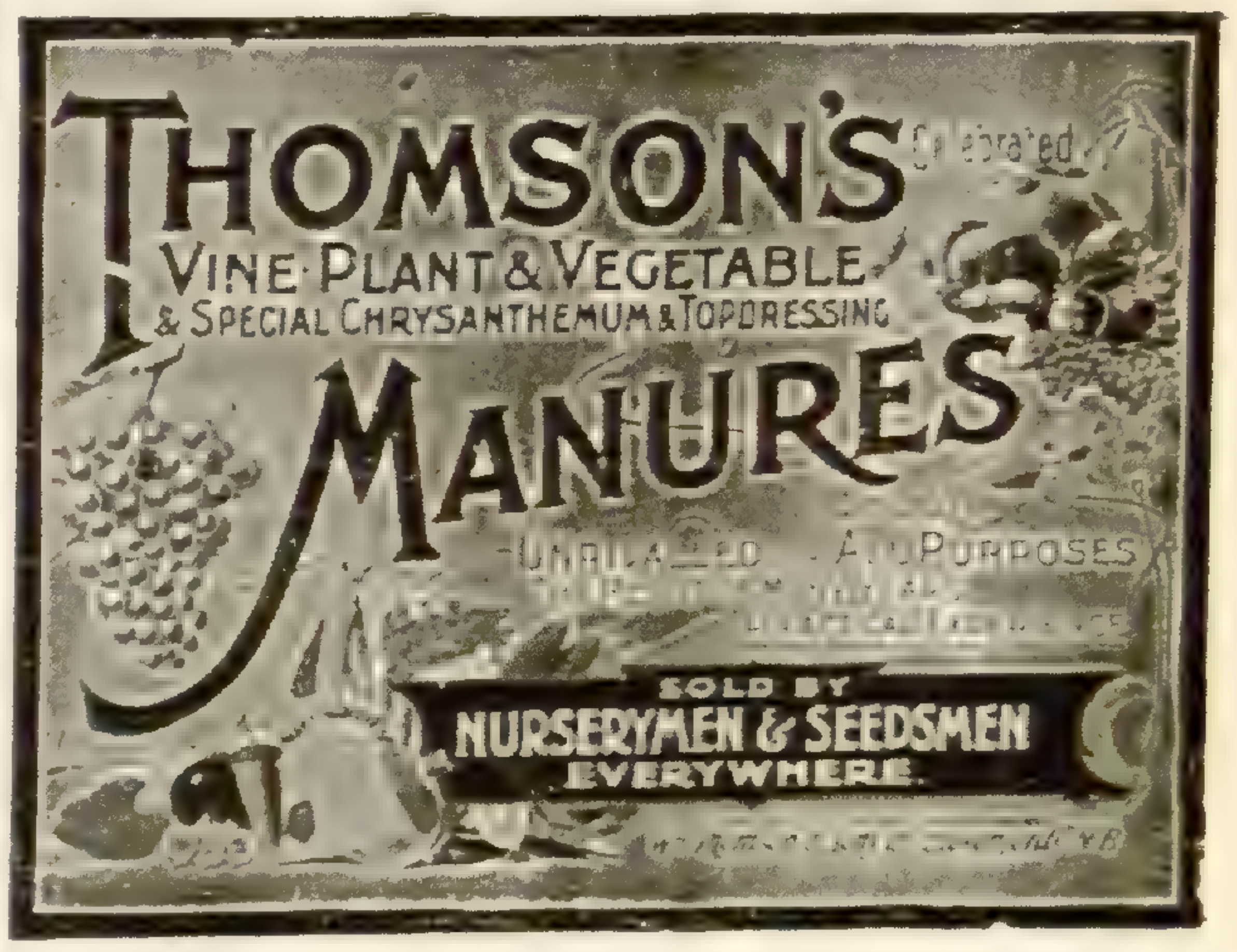
Name____________________

Address____________________

Date________________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

* * If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.



THOMSON'S Celebrated
VINE PLANT & VEGETABLE
& SPECIAL CHRYSANTHEMUM & TOPDRESSING
MANURES
SOLD BY
NURSERYMEN & SEEDSMEN
EVERYWHERE.

GLASS & PAINT.

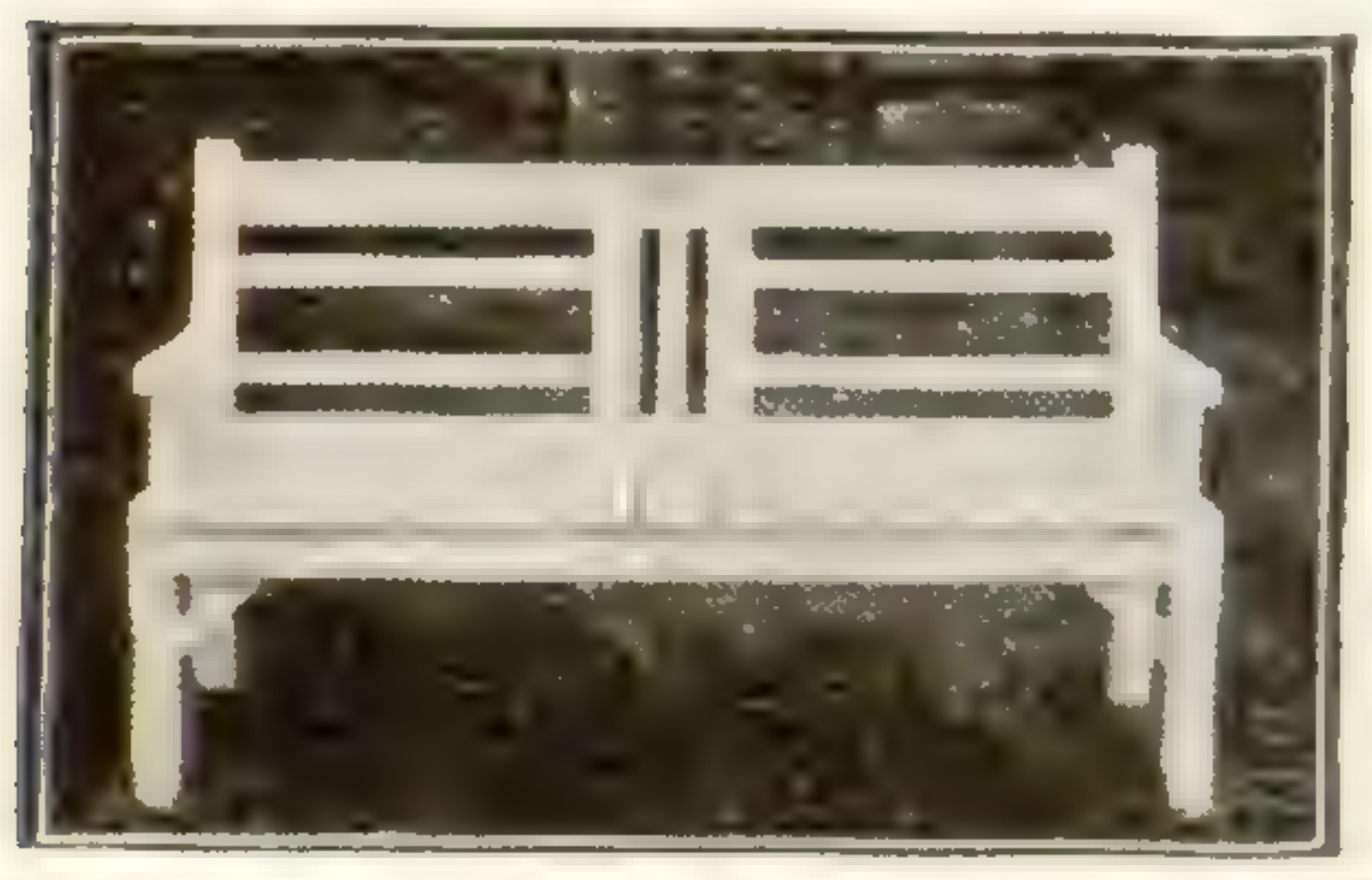
NICHOLLS & CLARKE, LTD.,
15 oz. and 21 oz. Glass,
IN ALL THE USUAL SIZES.
Shoreditch, London.
When sending for list please cut out this advt.

ESTABLISHED 1832.
NO CONNECTION WITH ANY OTHER FIRM OF A SIMILAR NAME.

ANT. ROOZEN & SON'S
CATALOGUE for 1911
(WITH CULTURAL DIRECTIONS)
OF
SPLENDID
DUTCH,
Cape, and Exotic
BULBS
Direct from the Growers,
Is Now Ready,
And will be sent Post Free on application to themselves at
OVERVEEN, HAARLEM, HOLLAND;
Or to their General Agents,
MERTENS & CO.,
3, Cross Lane, London, E.C.

Primulas! Primulas! Primulas!
41st Year of Distribution.
OUR WELL-KNOWN MAGNIFICENT STRAIN,
1/6 doz.; **2/6** 25; **10/-** 100. Package and Carriage Free.
Cineraria (Large-flowered) and **Stellata** at same prices.
JOHN STEVENS & SON, COVENTRY.

IDEAL, 5 feet long.



In best redwood, painted two coats white
£1:7:6.
Delivered any Station.
Full catalogue on application
PETER PATRICK & SON, OTLEY, YORKS.

BY APPOINTMENT.
Early
Forcing Bulbs.
Wm. PAUL & SON
Waltham Cross, Ltd.,
respectfully invite orders for the above, consisting of fine stocks of
WHITE ROMAN HYACINTHS,
13/6 to **16/6** per 100.
Extra large, **18/6** per 100.
LARGE-FLOWERED PAPER WHITE NARCISSUS,
Finest Selected, **6/-** to **7/6** per 100.
Other sorts, from **5/-** per 100.
FREESIAS,
Of Sorts, **4/6** to **7/6** per 100.
LILY OF THE VALLEY,
Retarded Crowns, **8/6** per 100
All other Bulbs in due season of the Best Quality and at very Moderate Prices.
Priced Catalogue Free on Application.
PAULS' ROYAL NURSERIES & SEED WAREHOUSE,
Waltham Cross, Herts.

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.
A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS**, and an endless variety of Choice **ORCHIDS.**
Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.
Telephone:—Enfield, No. 1 and 2.
STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX

TREE CARNATIONS
The Newest and Best Varieties.
Strong, healthy and well-rooted plants only supplied.
Catalogues free.
E. J. WOOTTEN, Fairoak, EASTLEIGH.

BULBS
HOLLAND IN IRELAND

Tulips, Narcissi, Iris, Anemones, etc., from the Bulb-Farms of Messrs. Hogg and Robertson equal, and even surpass, the Dutch Bulbs in their exquisite form and beauty of colouring.
The Booklet, "Holland in Ireland," fully illustrates and describes them; it is free on request.
HOGG & ROBERTSON, Ltd.
(Bulb-Growers & Seedsmen to H.M. the King),
Department G **DUBLIN.**

THE NATIONAL HARDY PLANT SOCIETY
Encourages the Cultivation of Hardy Plants and Disseminates Information Helpful to Growers.
NEW MEMBERS WANTED.
Apply to the Honorary Secretary,
FRANK BOUSKELL,
Market Bosworth, Nuneaton.

ORCHIDS, ORCHIDS.
Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.
STOVE AND GREENHOUSE PLANTS OF ALL KINDS.
Please Write for List.
JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

FOR ROSE MILDEW
use
V2K FLUID
THE BEST REMEDY
FOR THIS PERSISTENT PEST.
Does not discolour the foliage.
OF AGENTS EVERYWHERE.
Sole Mfrs., Willm. Cooper & Nephews, Berkhamsted.

There's a Call from the Garden for
CLAY'S..........
Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).
EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK, AS AT SIDE.
CLAY'S LONDON FERTILIZER
TRADE MARK.
CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. Fourth Edition (Second Reprint). 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:
CLAY & SON, Manure Manufacturers and Bone Crushers, **Stratford, London, E.**

VOL. LIV.—No. 3,016. SATURDAY, AUGUST 19, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

The International Horticultural Exhibition, 1912.

Within the past two or three months we have received a considerable number of inquiries relating to the schedule of the great horticultural exhibition that will be held at Chelsea in May next, and the only reply we could give our correspondents was to the effect that we believed it was in an advanced stage of preparation, and that it would probably be published at no distant date. We are now in a position to state that the schedule has been published within the past few days, and that it is so comprehensive in character, and, as a whole, so eminently satisfactory, as to be well worth waiting for. It would have been a great advantage to all concerned had the issue been made six months ago, but it must not be forgotten that the preparation of a schedule of a great international horticultural exhibition is a very different matter to the preparation of a list of prizes for an ordinary flower show, with the full experience gained in previous years to fall back upon. Many months have elapsed since we received, as duly announced in these pages, the full programme of the Ghent Quinquennial, to be held in 1913, but our Belgian friends have an experience extending over upwards of a century to guide them in making preparation for the next addition to the great horticultural gatherings that have contributed in no small degree to the fame which the city has so long enjoyed in its relation to the gardening art. It is interesting to observe that notwithstanding the prominence that hardy plants of all kinds have obtained during the forty-five years that have elapsed since the International Horticultural Exhibition at South Kensington was held, stove plants have pride of place, or, to be more exact, have the first section of the first division devoted to them. In the whole of the fifteen classes the exhibitors will have a given space allotted them, this being proportionate to the importance and characteristics of the subjects, and the capacities of the several classes of cultivators who are likely to take part in the competition. In the second section the classes are provided for specified numbers of plants, stove or greenhouse, and in some of these visitors may have an opportunity of seeing large specimens in a high state of development. In the regulations of the competition in these classes it is stipulated that "all plants other than foliage plants must be in flower," which is a very loose way of stating that plants other than those with fine foliage or ornamental leafage must be in bloom. All the plants that will be admissible to the classes in question have foliage, and if it had been stipulated that the foliage be "fine," or the leafage "ornamental," the exhibitors and the members of the jury would have known exactly what was intended. Orchids will occupy a different position in the exhibition to be held next year to that assigned them in 1866. Then there were a few classes for specified numbers of plants, none of the numbers being high; but for 1912 twenty-eight classes have been provided, and in two of these, one for amateurs and one for nurserymen, each group will have 500 square feet allotted to it. This section should be immensely attractive, and possess considerable educational value, although this aspect of orchid culture has not been quite so fully developed as could have been desired. With a full recollection of the glorious effect produced by the magnificent specimens of show and fancy pelargoniums that were contributed to the exhibitions thirty or forty years ago, we are pleased to see once again classes provided for these beautiful flowers, and trust they may be filled with specimens that will remind us of the efforts of the past generation of cultivators. The popularity of the rose is reflected in the schedule by the number of classes assigned this delightful flower. There may not be seen huge specimens such as those which delighted the visitors to the previous International Exhibition, and brought unbounded praise to the exhibitors; but it may be anticipated, with the full assurance of the anticipation being realised, that there will be displays of roses that will far surpass in beauty and interest those previously seen. The roses will, so far as international flower shows are concerned, form a new feature, as, indeed, will alpine and hardy border flowers, which have sufficient provisions made for them to encourage growers of these fine groups of plants to present their favourites to public notice in the best possible manner. In like degree the Schedule Committee have been careful to afford the utmost encouragement possible to the various classes of hardy shrubs remarkable for their ornamental leafage, or for the beauty of their flowers, and a unique opportunity will be afforded for becoming acquainted with the finest of the many kinds now at the command of planters. Fruits and vegetables occupy a position in the schedule commensurate with their importance, and there can be no doubt as to growers of both classes of products doing their best to maintain the traditions of British gardens in relation thereto. The perusal of the schedule has given us much satisfaction, for it represents an endeavour on the part of the executive to obtain an adequate represen-

MR. THOMAS ALFRED H. RIVERS.

tation of present-day horticulture, and we trust this endeavour will obtain a full reward.

Mr. Thos. A. H. Rivers, of Sawbridgeworth, Herts, bears an honoured name, and one that will always be remembered with respect in horticultural circles, and particularly among pomologists. He is the eldest son of the late Mr. T. Francis Rivers, so well known as a raiser of plums and peaches; in his earlier manhood Mr. T. A. H. Rivers spent some time in Western America, so that he is fairly conversant with the fruit growing and farming industry in many parts of the great Republic. Returning home in 1894, he actively associated himself with the work at Sawbridgeworth, and since the death of his father, in 1899, he has, in partnership with his brother, Mr. A. H. Rivers, conducted the business of Thomas Rivers and Son. We need hardly remind our readers that this firm has a very high reputation as cultivators of all kinds of fruit trees, roses, and hardy trees and shrubs, and that they occupy an unique position as raisers of peaches, nectarines, plums, pears, and apples. Mr. T. A. H. Rivers is a member of the council of the National Federation of Fruit Growers, and is also one of the directors of the Royal International Horticultural Exhibition of 1912. In local affairs Mr. T. A. H. Rivers has a seat on the Sawbridgeworth Urban District Council, he is overseer and churchwarden of High Wych, and on the Management Committee of three schools.

The Heat and Drought.—As we go to press it is satisfactory to have some promise of cooler conditions than those which have been experienced over the United Kingdom for some time past, but, unhappily, there are no signs of the general rain which is so greatly needed by all classes of cultivators. On Tuesday the weather was fine, with brilliant sunshine, but owing to the heat being tempered by a cool breeze from the northward the maximum temperature was about 10 degrees lower than that of Monday, and only about three degrees above the average. In London the highest temperature was 76 degrees, but at Portsmouth the thermometer reached 80 degrees. On Sunday, the 13th inst., the temperature exceeded 85 degrees over the greater part of Great Britain, and at several stations the temperature reached 90 degrees, and at Kew, Oxford, and Seaford 91 degrees were recorded. On Wednesday, the 9th inst., a record was established, inasmuch as at Kew and Hillington, near King's Lynn, 97 degrees were recorded, and 100 degrees at the Royal Observatory, Greenwich. This latter is the highest temperature that has yet been recorded in the United Kingdom, but 97 degrees were registered at Greenwich on July 15, 1881.

Layering of Carnations.—Mr. R. Morton, one of the most successful of the many growers of carnations, and an active member of the National Carnation and Picotee Society, writes with reference to the layering of carnations as follows: "I differ entirely in my views on cutting the stems of the plants when layering from the method usually advised by writers on the cultivation of these flowers. I therefore consider it advisable to suggest a quicker and better method. Annually I put down between 4,000 and 5,000 layers, and in order to expedite the work I have long since given up the tedious and rather clumsy way of cutting upwards through the stem. I would advise the operator to insert the knife, which ought to be a thin-bladed one, with an edge on both sides, immediately above the joint, cutting downwards, and bringing the knife out a short way below the joint. I can almost guarantee that he will put down three layers for every two that he will prepare by cutting upwards, with the additional advantage of spoiling but few layers. The cut should not be a long one, from half to three-quarters of an inch being quite sufficient, it being only necessary to cut through a joint."

Festival of Empire Rose Show.—The success of the rose show held in connection with the Festival of Empire, at the Crystal Palace, at the end of June, was such as to induce the authorities to hold a second exhibition at the end of the summer. Mr. T. Geoffrey W. Henslow, the secretary of the Horticultural Department of the Festival, with his characteristic energy, at once proceeded to make the necessary arrangements, and as one result of his activities we have before us an advance copy of the schedule of the exhibition, which is fixed for September 1. The schedule contains fifty-three classes, of which nine are for arrangements of roses in which the competition will be limited to ladies; twenty-one are set apart for nurserymen; and twenty-three for amateurs. Mr. Henslow assures us that the forthcoming exhibition has the promise of surpassing the show held in June, and that the principal feature will be formed by the groups of flowers from the nurserymen and amateurs. The prizes will consist of cups and medals, and, as on the occasion of the June show, Messrs. Clay and Son have presented a gold medal, which will be presented to the best rose in the whole exhibition. Schedules may be obtained from Mr. Henslow, Horticultural Department, Festival of Empire Offices, Crystal Palace, S.E.

The National Hardy Plant Society has arranged a conference, to be held at Shrewsbury on August 24 (the second day of Shrewsbury Flower Show), when papers on "Ways and Means of Advancing the National Hardy Plant Society" and "Possible New Methods of Exhibiting Hardy Flowers" will be read and discussed. The conference will be held in the concert room of the Old George Hotel, and the chair will be taken at four p.m. All members and prospective members of the society are cordially invited to attend. Full particulars may be obtained from the hon. secretary, Mr. Frank Bouskell, Market Bosworth, Nuneaton.

Use of Hot Water in Forcing.—In the report of the botanical department of the Wye College, Mr. S. T. Parkinson describes some interesting experiments in the use of hot water for the purpose of accelerating the growth of plants placed in the forcing pit. Two years since Professor Molisch, of Prague, published a paper in which he suggested that perennial plants, while in their resting stage, should be dipped in hot water previous to their being placed in the forcing pit or house. In his paper Professor Molisch distinguishes in the resting period, between the rest that is inherent to the plant and cannot be altered, and the rest that is dependent on external conditions and can be modified. By steeping the plant in hot water at the proper time the latter rest is eliminated, and its cells at once renew their activity. By this means the treated plant obtains a start over that which is untreated, and attains its full development in a much shorter period. Mr. Parkinson has carried out a number of experiments to test the efficacy of hot water, and in the course of these he found that an exposure of about twelve hours to a temperature of 95 degrees F., or, in the case of soft plants, such as seakale, to 85 degrees F., just after the period of "deepest rest," i.e., the end of November or beginning of December, led to very rapid growth. One of the illustrations accompanying the report shows that the effect of water on some astilbes (not spiræas, as stated in the report) was very considerable. Plants that were dipped in a quite dormant state on November 25 had made considerable growth on December 13, when they were photographed, while the untreated plants showed no signs of renewed activity.

The National Trust.—A movement is on foot for the purpose of securing a tract of land on the foreshore of Ullswater, and placing it in charge of the National Trust. A proposal was made to erect buildings on the land, which occupies a position between Stybarrow Cragg and Glencoin Park, and as the result thereof a local subscription was started with a view to purchasing the property; but difficulties arose, and the National Trust took the matter in hand, and the local scheme was left in abeyance. A few evenings since a well-attended meeting was held at Patterdale, under the presidency of Mr. W. H. Marshall, of Patterdale Hall. Canon Rawnsley, of Crossthwaite, who has taken an active part in the preservation of various open spaces in the Lakeland, was among the principal speakers. It was stated in the course of the proceedings, that the land has an area of five acres, and half a mile of foreshore, and that the owner was willing to take £250. In a very short time over £100 was subscribed in the room, and a committee was appointed to carry out the scheme.

Mechanism of Mitosis.—To a recent meeting of the Royal Society a paper was contributed by Dr. A. A. Lawson on nuclear osmosis as a factor in the mechanism of mitosis. The author stated that a study of the spore mother-cells of disporum gladiolus, yucca, and hedera, and the vegetative cells in the root tip of allium,has revealed a series of stages in the development of the mitolic spindle which has hitherto been overlooked. They are regarded as important and critical stages concerning the fate of the nuclear membrane, and are to be found in the early prophase, preceding the organisation of the equatorial plate. Contrary to the generally accepted view, it has been found that the nuclear membrane does not break down during spindle formation, but behaves as a permeable plasmatic membrane should behave under varying osmotic conditions. The interpretation of these stages throws an entirely new light on the problem of the "mechanism of mitosis," and necessitates a revision of the accepted views of nuclear phenomena. It goes to prove that osmotic conditions are active factors in the formation of the acromatic spindle.

An Interesting Fossil Fern.—The structure and affinities of Metaclepsydropsis duplex (Williamson) formed the subject of an interesting paper contributed by Dr. W. T. Gordon to the Royal Society. This Carboniferous fern was first recorded by Williamson in 1874, when he was investigating the structure of fossil plants from Pettycur, Fife, numerous petioles of the fern being discovered among his specimens. The same species has since been obtained near Régmy, in France; but in all these cases only fragments of petioles and pinnæ were discovered. Recently, however, stems and roots have been found at Pettycur. In a silicified mass of material several pieces of stems were obtained in close association with innumerable fragments of petioles and pinnæ. Certain emergences from the stem were noted, and an examination of the petioles soon established a series showing a continuous variation from the normal petiole trace to a trace which was identical with these emergences. In this way it was proved that the stems and petioles belonged to one and the same species. The stem stele is very simple in structure. The axis consists of a circular cylinder in which the outer zone is composed of long stout tracheides, while the inner zone is formed by a mixture of long narrow tracheides and conjunctive parenchyma. The stem emits petiole and root-traces at long intervals, and occasionally bifurcates dichotomously. In the theory of the medullation of the zygopterid stele, this stem is of some importance, since it exhibits a stage closely similar to that shown in the stem of Ankyropteris corrugata (Williamson). Like some other members of the Zygopterideæ, A. corrugata has a biseriate arrangement of the primary pinnæ, while in M. duplex and others a quadriseriate distribution of these appendages is shown. In both the quadriseriate and biseriate divisions it is now possible to arrange the stems in a series which demonstrates the gradual medullation of the stems, and is, at the same time, compatible with the geological age of the specimens.

Nicotine makes such an excellent wash, both for fruit trees and hops, that a supply at a lower price than that now ruling has become a matter of much importance to those engaged in fruit and hop culture. Hence the experiments that have been conducted by Mr. Garrad, at Wye College, are of much practical interest. In recording the experiments on the growth of tobacco for nicotine extraction, Mr. Garrad states that he produced it at a cost of 6s. per pound, as compared with 12s. per pound, the price usually charged. If this should prove to be the cost of production on commercial lines, a profitable industry might be developed with immense advantage to cultivators generally who have to combat insect pests.

Improvement of Old Pastures.—Experiments in the amelioration of the herbage of old pastures have been conducted under the auspices of the Edinburgh and East of Scotland College of Agriculture, and the report thereon by Mr. W. Bruce is of much interest. The field selected for the trials was on the boulder-clay soil, and about 500ft. above sea level. It had been many years in grass, and was clothed with a thick covering of soft inferior herbage composed chiefly of bent, Yorkshire fog, rye grass, and moss, with a sprinkling of stunted clover plants. Half the eight-acre field was left unmanured and the other four acres received superphosphate at the rate of 6½ cwt. per acre, three-fourths of the same area being dressed with sulphate of potash and two acres with half a ton of ground lime. Sheep were grazed on the manured and unmanured portions, and the influence of the fertilisers can be gathered from the fact that the four acres top-dressed carried a third more sheep than the other four acres, and the rate of increase in weight was also greater, showing that the quality of the herbage had been influenced as well as the quantity. The financial results are of interest as showing that an expenditure of £5 18s. in fertilisers produced in three years a gain of £9 11s. 0½d., giving a net profit of £3 13s. 0½d.

Messrs. Dickson and Robinson, of Manchester, were the exhibitors of the fine collection of scabious, carnations, gladioli, etc., at the Bury Flower Show, of which a report is given in our issue of the 12th inst.

ROSES IN POTS.

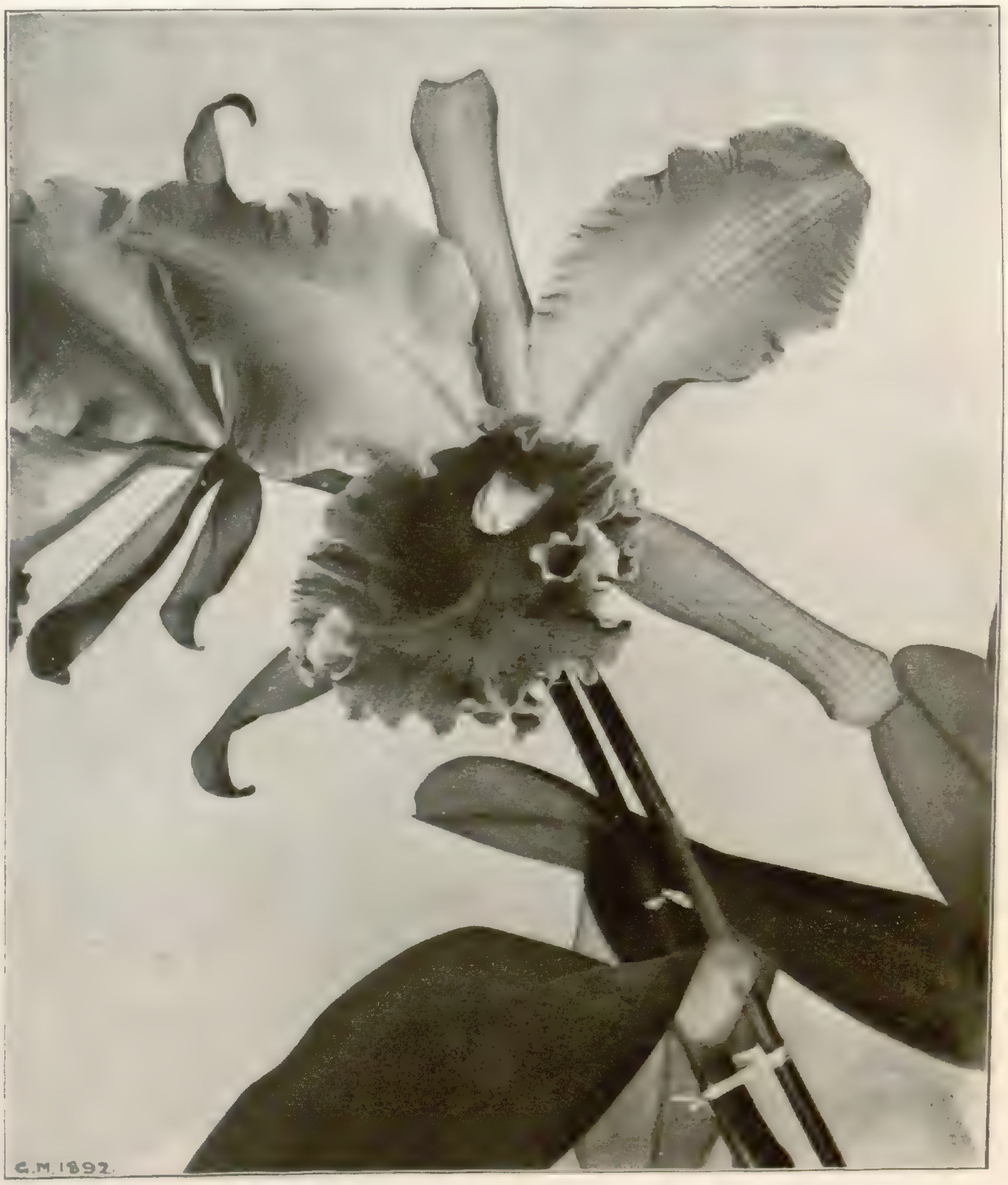
If we want a good display of cut roses during the winter months, we must look well ahead, and commence operations at once. Two plans may be adopted. We may start with ripened wood during November, or keep the plants growing steadily on the cool side of a wall or hedge until the cold nights warn us they must be housed, and so realise the last crop of blooms on teas and their hybrids. But if the same plants are wanted to give a second or third crop of bloom early in the year, I would prefer to start with plants that have had a partial rest.

When a batch of plants has once been used for forcing, they come to hand better for the same purpose a second time, as their early growth allows earlier ripening of the wood, and the consequent rest thus afforded. Plants that were growing all through winter and early spring may be stood out of doors by June, if given a sheltered position, when with careful watering the natural freedom of summer growth is somewhat checked. It is most essential to build up ripened wood for the following winter flowering. In fact, more depends upon the water supply than many apparently consider. If too dry, we injure the roots, and it is surprising how very quickly the soil in pots becomes parched during summer, much of which can be guarded against by partly plunging the pots. Less water will be needed to the soil the rose roots are in if we water the plunging material between the pots.

To stand the plants in a sunny position is favourable, but to allow sun and wind direct access to the outsides of the pots cannot fail to injure the roots upon many occasions, as a large proportion of the roots will be touching the inside of the pot. It is well to have the plants in two batches; the earliest being overhauled now, and what repotting that may be needed attended to at once. At the same time the ripest may be pruned. Keep the newly-potted plants by themselves. These will not want so much water until the fresh roots are at work, nor will they need stimulants until the fresh soil is thoroughly permeated with roots. Then there is the question of drainage, which must be complete. There is no need to turn the plants out of the pot to ascertain the condition of this, as it can generally be seen by laying the pot on one side and examining the drainage hole.

Where repotting is not considered necessary, it will be found an excellent plan to remove a little of the surface soil and mulch with a strong compost, which will not only support young roots as the plants commence to grow, but help those below by the steady feeding naturally washed down when watering. A deep pit or frame is a suitable place for the pot plants at this stage, as we can then keep off heavy rains, and also afford a little shade and shelter from wind.

A. P.



CATTLEYA RHODA ILLUMINATA.

Flowers large, the sepals and petals orange suffused with rose, the lip purple-crimson with golden throat. F.C.C., R.H.S., August 15. Messrs. Charlesworth and Co.

TAUNTON FLOWER SHOW.

Taunton was in gala dress on Thursday, August 10, its streets being gay with flags, bunting, arches, and other decorations. It was Flower Show Day, and as is always the case, the inhabitants, whether horticulturists or not, were as enthusiastic as usual.

PLANTS.

There were three pretty little groups of stove and greenhouse plants, arranged in oval form, and occupying a space of 13ft. by 10ft. Messrs. J. Cypher and Sons, Cheltenham, had a very effective arrangement of useful plants, and secured first prize. A big kentia surmounted an arch, overtopping brilliant crotons and choice liliums. The groundwork was well treated with cattleyas, small plants of Clerodendron fallax, ixoras, etc., with suitable ferns and foliage. Mr. C. J. Ellis, Weston Nurseries, Weston-super-Mare, was a good second.

In the amateurs' section, Mr. Chas. Cook, gardener to H. Cornelius, Esq., was first with a circular group arranged in pyramidal form, and containing some shapely furnishing plants, with acalyphas, etc., to add colour. Mr. Cox, gardener to Mrs. Bernard, was second, his little group being lightly set up, and very bright. Third was taken by Mr. Alfred Truman.

Twelve specimen stove and greenhouse plants in flower found Messrs. Cypher and Sons the victors. Their plants were big, well-grown specimens of Statice intermedia, Clerodendron Balfouri, Ixora Duffi, and other good subjects of similar character. Again for six specimens in bloom, Messrs. Cypher scored, showing profusely-flowered Erica Eweriana, Rondeletia speciosa major, and other choice subjects. The Cheltenham firm was also awarded the first prize for six fine foliage plants, and for four orchids, Mr. Alfred Truman coming second. Four dracænas found Mr. W. H. Bruford, gardener to Hon. H. P. Gore-Langton first, Mr. Truman again being second.

A fine lot of plants filled the centre of the amateurs' tent, the winner in the class for twelve stove and greenhouse plants being Mr. W. Cox, gardener to Mrs. Bernard, Bougainvillea Sanderiana, Alocasia metallica Rondeletia speciosa, Acalypha hispida, and some finely-coloured crotons constituting a collection of great merit. Mr. A. Truman had also good specimens, for which he received second prize. Mr. Chas. Cook, gardener to H. Cornelius, Esq., led for six plants, his specimen of Acalypha Sanderi being exceptionally fine. Some magnificent coleus were shown, Mr. P. Fawle, gardener to the Lady Abbess, Franciscan Convent, being the winner with beautifully-developed and richly-coloured plants. The three caladiums staged by Mr. Chas. Cook scored first among three entries, Mr. J. Stuckey taking second.

We are always pleased with the ferns shown by the Taunton amateurs and private gardeners, and this was a feature that was well maintained this year. Mr. W. Cox's winning half-dozen included: Adiantum Farleyense, Nephrolepis davallioides furcans, N. Whitmanni, and N. todæoides, and a grand example of Adiantum trapeziforme. Mr. W. H. Bruford was a capital second, showing a beautiful Dicksonia Balantinum ciliata, and other choice species and varieties. Mr. Bruford won first in a class for six smaller specimens with Woodwardia Orientalis Adiantum fragrantissimum, Asplenium lucidus, Nephrolepis Piersoni, etc.

CUT FLOWERS.

The collections of hardy flowers, occupying 12ft. by 3ft., were bright and showy, but would have been still more effective if staged in the centre of a tent with more head room than is available on the side tables. Mr. Fred Eames, The Nurseries, Frome, was first, his flowers being clean, fresh, and tastefully arranged. Scabiosa caucasia, gladiolus, and liliums were strong points. Messrs. Rich and Co., Bath, were well placed second, showing pentstemons, gaillardias, and other useful things; third went to Mr. Henry Corder, Bridgwater.

Dahlias are generally well shown at Taunton, but this year the blooms were small, and entries few. The best twelve shows came from Mr. J. Stuckey, gardener to B. C. Shepherd, Esq.; Mr. Geo. Humphries was awarded second, and Mr. A. P. Ironsides third. Mr. Humphries scored for twelve fancies, followed by Mr. Sidney H. Cooper and Mr. J. Stuckey. Cactus varieties were shown in triplets, Mr. Humphries being first for six varieties. C. E. Wilkins, Etruria, and Rev. J. W. Jameson were nicely shown; second went to Mr. Ironsides, Mr. Stuckey maintaining third position.

The class for twelve spikes of phloxes was disappointing owing to the heat, but Mr. Fred Eames staged a dozen capital trusses, which early in the day were very pleasing. Messrs. Rich and Co., and Mr. G. Humphries were the second and third prizewinners. Mr. Eames' twenty-four spikes of gladioli were worthily awarded first prize. Border carnations were well shown by Messrs. A. R. Brown, Lim., King's Norton; Mr. Charles Wall, Melrose Nursery, Bath; and Mr. C. J. Ellis.

Twelve bunches of cut stove and greenhouse flowers only brought two entries. Mr. W. H. Bruford, gardener to the Hon. H. P. Gore-Langton, came first, showing eucharis, anthuriums, lapagerias, Oncidium flexuosum, and other popular things; the second prize lot came from Mr. Samuel Kidley, gardener to Rev. P. B. Lloyd, containing gloriosas, orchids, stephanotis, etc. Five entries for twelve double begonia blooms on boards made a nice class. The first prize exhibit was that staged by Mr. W. Hayward, gardener to Miss Neal, his flowers being large, well-grown specimens of high quality. Mr. W. Stone, gardener to C. N. Bramfield, Esq., was second, and Mr. Bruford third. Asters were not equal to the usual run here shown, but Mr. Henry Corder's first prize dozen of Comets, and Mr. J. H. Merrett's winning stand of Victorias were good for the season. There were less than twenty stands of asters all told, whereas some years there are treble that number.

Dinner table decorations in two classes were good. The ladies' class for a table set for eight persons mustered three entries, Mrs. Woodland, Frome, leading. The scheme was worked out in delicate style, mauve orchids, pancratiums, and francoas being the material used. The fruit was not above average quality. The Misses Hill were second with a tasteful arrangement of sweet peas; Miss Mildred Lance third. In the open class Mr. J. T. Curtis, gardener to Sir W. Howell Davies, M.P., was awarded first. He had a tall rustic centrepiece furnished with oncidiums and lælias, with smaller receptacles of similar flowers at the corners. The fruit was of good quality, the whole table being attractively laid. Mr. F. J. Cole was second, his floral arrangement being on similar lines to first, but with glass centrepiece; Mr. C. F. Ellis, Weston-super-Mare, third.

FRUIT.

As might be expected, fruit was particularly rich in colour, but rather on the small side. The class for collections of eight dishes contained three entries, and Mr. G. Richardson, gardener to H. St. Maur, Esq., was the winner, his bunches of Mrs. Pince grape being well finished; Grosse Mignon peach, Superlative melon, and other dishes making a good collection. Mr. Thos. Turton, gardener to F. J. B. Wingfield Digby, Esq., was a good second. He had pretty fruits of apple Beauty of Bath, large Dymond peaches, and a big specimen of Sutton's Emerald Gem melon. Mr. T. Wilkinson, gardener to G. A. Gibbs, Esq., M.P., was third. There were five entries for four dishes, Mr. Thos. Turton leading with Muscat of Alexandria grapes, Dymond peach, Scarlet Rival melon, and Pitmaston Orange nectarine. Mr. G. Richardson came second; third went to Mr. F. Little, gardener to the Right Hon. Lord Justice Farwell. Mr. Jas. Webber showed the best three bunches of Black Hamburgh, and also the best three bunches of any other black with Madresfield Court in nice condition. The winner for three bunches Muscats was Mr. Thos. Turton, with beautiful bunches of well-coloured berries. Plums, cherries, apples, and other single dishes were staged in quantity, the names of Messrs. H. Dyer, T. Turton, F. Jenkins, Fredk. Jones, and G. Richardson appearing prominently among the winners.

VEGETABLES

are always a great feature at Taunton, but, like everything else, they could not quite equal previous records. In the collection of ten distinct kinds there were three entries, Mr. W. Cox, gardener to Mrs. Bernard, receiving first prize. The celery, leeks, and carrots were good, but the cauliflowers were poor. Mr. H. Bolton, gardener to the Right Hon. the Earl of Devon, was second, showing good tomatoes, beetroot, peas, carrots, and other dishes; Mr. Stuckey third. Mr. Stuckey was winner in the class for eight kinds provided by Messrs. Carter and Co., and Mr. Wm. Gold led in Messrs. R. Sydenham's class, Mr. Stuckey again coming to the front in Messrs. R. Veitch and Son's class, and also in Messrs. Sutton and Sons' and Messrs. Webb and Sons'.

NON-COMPETITIVE.

An exhibit of perpetual carnations was put up by Messrs. Young and Co., Hatherley, Cheltenham. This firm has a reputation for artistic staging, and on this occasion their fine flowers were set off to advantage by a background of ferns and foliage plants. Cut blooms of begonias were staged in clear glass vases by Messrs. Blackmore and Langdon, Twerton Hill Nurseries, Bath. The flowers were really fine, and the method of showing them was excellent.

Messrs. A. A. Walters and Son, Bath, were exhibitors of herbaceous flowers. Rudbeckia Golden Glow, Chelone barbata, several varieties of lobelias and pentstemons, were among the brightest subjects.

An elaborate and very interesting exhibit was staged by Messrs. R. Veitch and Son, Exeter. As usual, this firm's collection of rare rock and border plants was replete with gems of high merit. Tunica saxifraga, Origanum dictamnus, Hypericum Ægypticum, and Calandrinia umbellata were but a few of the good things. Gladioli were another fine feature, and a new rosy-coloured bedding lobelia named Prima Donna was distinct.

On Mr. Vincent Slade's stand of zonals such striking varieties as President Loubet, Kingswood, Hibernian, and Hopedene were well represented. A new ivy-leaved variety named Miss Popham, was worthy of note, its brilliant rose colour being most effective. Mr. Slade also showed a nice group of the extremely beautiful and useful hardy fern Polypodium cambricum. Zonal pelargoniums were a strong feature in Messrs. Jarman and Co.'s extensive exhibit.

The whole of one side of the non-competitive tent was occupied by a collection of gladioli from Messrs. Kelway and Son, Langport. The highest compliment we can pay the truly glorious spikes of bloom is to say we never remember seeing Messrs. Kelway stage finer flowers. Several novelties of exceptional merit were included, Queen Emprss, a faintly tinted white; Langport Blue, Flame of War, vivid scarlet; and Voluptuaire, very dark crimson, being some particularly striking varieties.

A bold and well-arranged stand of herbaceous flowers was exhibited by Mr. H. Clarke, The Nurseries, Taunton.

MEDAL AWARDS.

Gold.—Messrs. Kelway and Son, Langport; Messrs. Jarman and Co., Chard.

Silver.—Messrs. Young and Co., Hatherley; Messrs. Isaac House and Son, Westbury-on-Trym; Messrs. Clibrans, Altrincham; Mr. H. Clarke, Taunton; and Messrs. Robt. Veitch and Son, Exeter.

Bronze.—Messrs. W. E. and T. Cousins, Taunton, floral designs; and Messrs. A. A. Walters and Son, Bath.

ANTIRRHINUM ROSE DORE.

The popularity of antirrhinums grows apace, and deservedly so, because few flowers of such easy culture make such a fine display over a goodly period of the year, and few show such a wonderful range of colouring and of habit. There are tall, intermediate, and dwarf strains, and the colour ranges from pure white to deepest crimson. The self colours are now splendid, and to these have been added varieties and strains that give art shades. Antirrhinums come very true from seeds, and they also may be propagated by means of cuttings taken in the autumn. Either for beds or borders, or for groups in large herbaceous borders, they are excellent, but for pot culture they have not yet gained much popularity. This, however, is only a matter of time, especially in these days when so many amateurs possess an unheated greenhouse, and are looking out for hardy and half-hardy plants to grow therein for early flowering. Further, there is a market for early flowers of antirrhinums if the flower spikes are good and the colouring distinct. The variety Rose Doré has become fairly popular already because of the lovely rose shade of its fine blooms. It may be had in flower in May without difficulty, and then forms a useful subject for conservatory decoration. Strong cuttings or autumn-sown seedlings, wintered in frames, will provide good plants for such flowering, and at little cost of time and trouble. The spikes illustrated herewith were photographed at Messrs. T. S. Ware's nurseries at Feltham about the middle of May last.

LACHENALIAS.

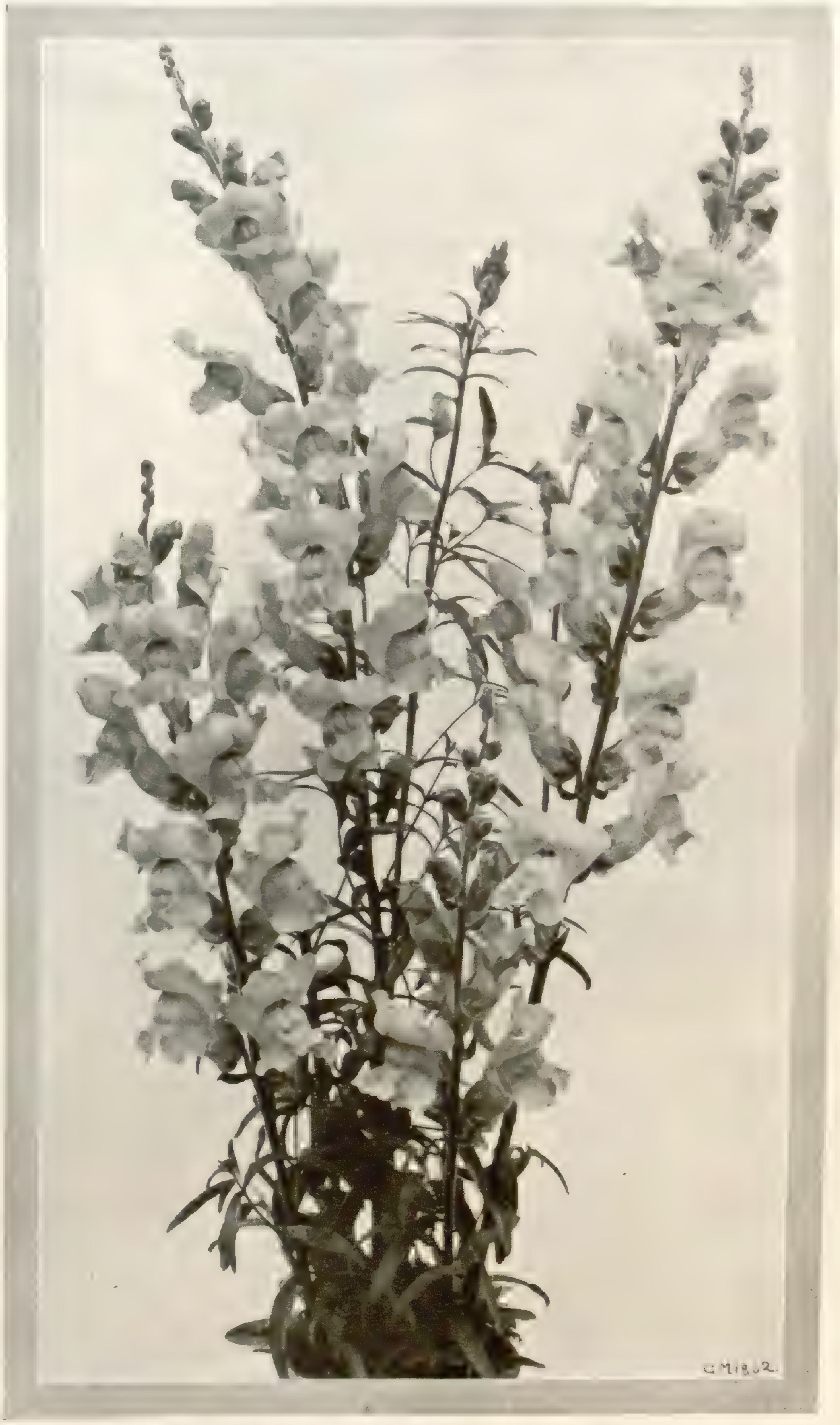
Lachenalias form a small group of bulbous plants occupying a position just beyond the pale of hardiness, consequently they require the protection of glass to bring them to perfection, yet no artificial heat is necessary beyond that actually required to keep out frost. Their culture is in every respect identical with that accorded to freesias; bulbs are potted up in August, using good fibrous loam, leaf-soil, and a little sand, placing six bulbs in a six-inch pot, and standing them on a cool bed in a shady place until evidence of growth is seen. With the advent of frost place them in a cool, airy structure, in a position open to the light, and maintain a temperature of about 40 degrees.

The flowering season extends over some three months in spring, when the bright yellow and scarlet-tipped flowers impart a welcome change to the ordinary run of greenhouse plants. All the species and varieties of lachenalia are worthy of cultivation, one of the best being Nelsoni, a hybrid form that attains a height of nine inches and yields fine spikes of apricot-lemon flowers.

After flowering lachenalias are treated similarly to freesias; gradually withhold water as the foliage shows signs of ripening, and finally stand the pots in a position exposed to sun until the advent of next potting season. Lachenalias are prolific in increase, and once having acquired a variety, only neglect and mismanagement should ever necessitate a second purchase.

Thomas Smith.

"CHRYSANTHEMUMS AND HOW TO GROW THEM FOR EXHIBITION," by J. B. Wroe.—Full details on timing and stopping for Northern, southern, and Midland growers, selections of the best varieties, illustrated instructions on taking the buds, cuttings, staging, etc. Prices 1s. net, by post 1s. 2d.; cloth, 1s. 6d., by post 1s. 8d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.



ANTIRRHINUM ROSE DORE.
A beautiful free-flowering variety with fine spikes of old-rose coloured blooms.

TREES SUITABLE FOR EXPERIMENTAL FORESTRY.

(Continued from page 571.)

Black Cherry.

According to reports from American sources the wood of the Black Cherry (Prunus serotina, Ehrh.) occupies a similar position in America to that of the common cherry in England, for it is used for cabinet-making, decorative work in houses, and various fancy articles. Being of a rich reddish-brown colour and finely grained, it may be manufactured with a handsome finish, and it is capable of taking a high polish. As is the case with our native species, however, it has been used so extensively that the present supply is limited. Though there is no reason to believe that it would possess any distinct advantage over the British species, it is well worth a trial, especially as it will bear a moderate amount of shade, and thus be able to act as a partner of the ground whereon some light-demanding subject is to be grown. American foresters recommend it for mixing with white ash, silver maple, and black walnut.

Under forest conditions in America the black cherry is said to have a long, slender trunk surmounted by a comparatively small, open crown, composed of large, irregular branches. The trunk is often free from branches for a distance of 70 feet. In New England it is said to be of medium size, from 30 to 50 feet in height, with a diameter of from 15 to 24 inches. In the Middle States a height of 60 feet and a diameter of 2½ feet is attained, but the best development is said to occur on moist residual soil of the upper slopes of the southern Alleghenies where a height of 90 feet and a diameter of 4 feet are not uncommon. In this country it will probably not attain more than average growth, although trees planted in poor, sandy soil have grown to a fair size. The larger trees at Kew measure from 45 to 63 feet in height, and are up to 4 feet 4 inches in girth. These are growing in poor sandy soil.

Under natural conditions this tree is found among beech, birch, oak, hickory, black walnut, and maple. The above-mentioned circular says that "the black cherry will grow fairly well on dry situations, but it is only in the moist, well-drained, rich soils of mild climates that the maximum development is reached. The tree thrives on bottom lands, yet makes a moderate growth on sandy or rocky upland if the soil is penetrable."

At the present moment the value of English cherry wood cannot be said to hold out any recommendation to planters. As with some other kinds of timber, however, the supply for some years past has been so small and so irregular that it has ceased to be looked on as a standard wood, and it is quite probable that were a good supply to be again obtainable prices would go up, and it would be sought after.

False Acacia.

Attempts were made a century or more ago to popularise the Black Locust or False Acacia (Robinia Pseudacacia, L.) in England for commercial purposes, and again in 1823 its merits were strongly advocated. Loudon, "Arboretum et Fruticetum," i., gives a considerable amount of information on the subject, and states that about the latter period one man alone sold 1,000,000 trees for the purpose. Unfortunately, no records appear to have been kept of these plantations, and apparently all the information that can be gleaned about them has to be extracted from short notes which were published from time to time in various periodicals, 40 to 60 years ago.

The species is a native of the Eastern United States, where it grows to a height of from 60 to 80 feet, with a trunk 2½ to 3½ feet in diameter under favourable conditions, though in some places it is much smaller. Its rate of growth in Great Britain compares favourably with American records, while as regards size, it grows almost as large in England as in its native country. The yellowish coloured timber is hard and durable. In America it is used for shipbuilding, tree-nails, hubs for wheels, posts for fencing, and various other purposes. In some Continental countries the wood of young trees is in demand, both round and split, for vine props, and older wood is used for spokes, etc. "Forest Service Circular," No. 64, United States Department of Agriculture, gives the life of a post made from the heart-wood as from 15 to 25 years.

It adapts itself to a variety of soils and conditions, for it flourishes on poor, light land and also in ground of a clayey character. Good specimens are notable both on low land and on hill sides where shelter from rough winds is provided. Suckers are produced freely, and for this reason it has been recommended for planting on loose banks to help to bind the soil. The timber ought apparently to be cut when the trees are between the ages of 35 and 55 years, for older trees often show signs of decay. The scarcity of the false acacia in our woods after being planted somewhat extensively, suggests that it is not suitable for forest planting. In the absence of any definite information on the subject, however, the usefulness of the timber makes it well worth a further trial.

Black Birch.

The Black or Cherry Birch (Betula lenta, L.) is one of the several American birches which supply a large amount of timber each year both for home consumption and for export. Some idea of the importance of our imports of American birch-wood may be gathered from the statement made in J. R. Batterden's book, "Timber," p. 104, that 1,500,000 cubic feet were imported into the Mersey in 1906. This wood is received partly in the log, partly as boards, and sometimes worked ready for use. It is employed for a variety of purposes, the better qualities being used in the manufacture of furniture and for cabinet work, while bobbins, shuttles, shoe lasts and other articles are made from the remainder.

B. lenta is described in the "Silva of N. America," as forming a tree 70 to 78 feet high with a trunk 2 to 5 feet in diameter. The wood is reported to be heavy, very strong, and hard, close-grained, with a satiny surface, susceptible of receiving a beautiful polish. A dark-brown or reddish heart-wood is contrasted with yellowish sap-wood. It is used largely for furniture, and in some of the provinces on the Canadian sea-board for ship-building. Hough, "American Woods," ii., p. 35, reports very favourably on the wood, and says that it makes a good imitation of mahogany and cherry when polished.

The species is found in Canada and the N.E. United States, and is distinguished from other birches by its aromatic bark and leaves. The bark is of commercial importance in America, for it is collected during late summer and by processes of maceration and distillation furnishes an oil, known as "oil of sweet birch" and "oil of betula," it is used for flavouring purposes. It is also said that beer is made from the sap of the tree.

Planting in this country appears to have been limited, for well-grown trees are rare. Representatives are to be found at Kew, but the older trees have hardly proved so satisfactory as some other American kinds. As the birches are usually fast growing trees a plantation would soon prove its worth. It would be well to try it on somewhat richer soil than that which is usually associated with the growth of birch.

Yellow Birch.

The distinguishing features of the Yellow Birch (B. lutea, Michx.) and B. lenta are less marked than is the case with other American birches, though the sweet bark of the cherry birch is a good character. Descriptions of both trees are to be found in the "Silva of N. America," vol. ix., and their botanical characteristics are also recorded in "Trees of Great Britain and Ireland," iv. It is found in the N.E. United States and Canada, the better developed trees being up to 80 feet high and 3 feet in diameter. Hough, "American Woods," i., pp. 64-65, refers to the timber as follows: "Wood hard, close-grained, tough, heavy, and very strong, compact, taking a beautiful satiny polish; heart-wood reddish-brown, sap-wood nearly white." Its uses are numerous, for in addition to being employed by wheelwrights and cabinet-makers, it enters largely into the manufacture of chair-bottoms, friction-pulleys, and small wooden articles. Young saplings are split for hoops for casks, and burrs from old trees make good mallets and beetles. It would probably succeed best as a fairly dense, pure stand. Pine and spruce might, however, be tried with it to form a mixed wood.

Paper Birch.

The Paper or Canoe Birch (Betula papyrifera, Marsh) is another of the American birches which appears to be worth a trial in British woodlands, for it grows quite as well as the common birch, and produces a good quality timber. Hough, ii., pp. 33-34, describes it as being a favourite timber for such small articles as clothes pins, spools, pill-boxes, shoe-lasts, and pegs; he also says that it is used for wood-pulp and for furniture. Its bark was formerly an object of considerable importance to the North American Indians, for in addition to fashioning their canoes from it, it furnished them with waterproof tent covering, baskets, and various other commodities. In Museum No. 1 at Kew an interesting series of articles manufactured from the bark of this tree may be seen.

The paper birch is found further north than any other deciduous American tree, and under favourable conditions grows to a height of 80 feet with a diameter of 3 feet. It is about equal to B. alba, L. for hardiness and stands better than either B. lenta or B. lutea. It grows well at Kew in poor, sandy soil. The largest specimen is 50 feet high, with a girth of 4 feet at 5 feet from the ground. All the birches are suitable for close planting in pure stands, and they may also be mixed with spruce or pine.

River or Red Birch.

Though of less importance than the birches already referred to, the River or Red Birch (Betula nigra, L.) grows freely enough to warrant a trial under forest conditions. Hough describes it as a tree 80 feet high by 2½ feet in diameter, extending from Massachussets southwards to Florida and westwards to Iowa, Kansas, and Texas. Its wood is said to be "rather hard, strong, close-grained, compact, with fine medullary rays, yielding a smooth finish; used in turnery, woodenware, shoe-lasts, etc." Under natural conditions it is found inhabiting moist land, such as banks of streams and marshy places. That it grows fairly well on dry ground, however, is shown by several good specimens which are growing in the natural sand at Kew. One of the best, standing near the Victoria Gate, is 55 feet high and 4 feet 10 inches in girth at 5 feet from the ground. B. nigra may be distinguished amongst other birches by its rough reddish-brown bark.

Oregon Maple.

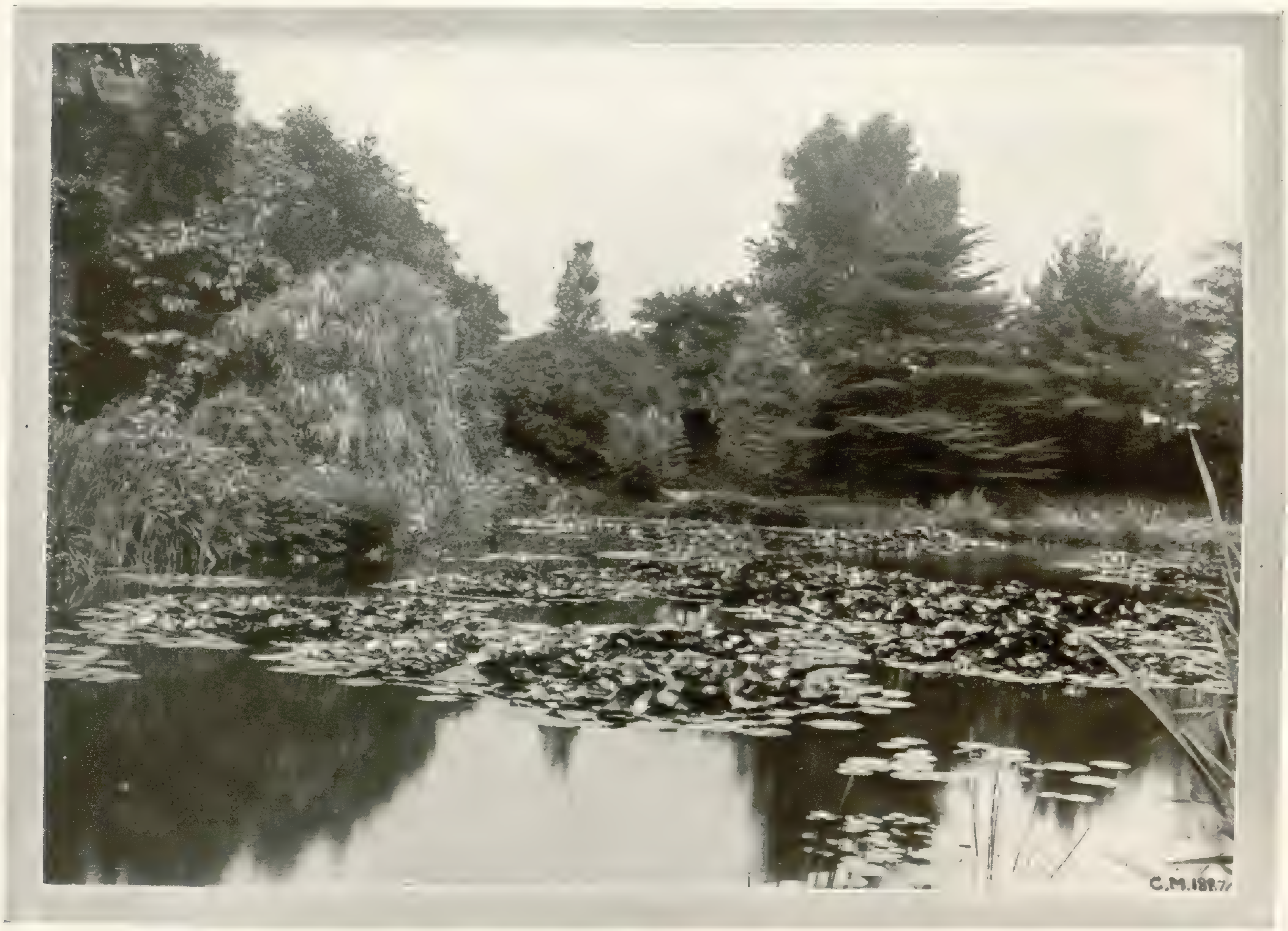
The Oregon Maple (Acer macrophyllum, Pursh.) is one of the most important of several American maples which are likely to prove useful for British woodlands, for it grows quickly, forms a large tree, and its timber is of good quality. Although introduced a century ago it is not common, but some good examples have been noticed in a few places. In the "Silva of N. America," ii., pp. 89-90, it is described as forming a tree up to 130 feet high with a girth of 15 feet. It is found along the Pacific coast, below 2,000 feet elevation from Alaska to S. California, and appears to reach its maximum dimensions in the moist climate of Vancouver Island and the adjacent mainland. The timber is said to be of good quality, light, soft, close-grained and capable of receiving a beautiful polish. The largest tree known to Mr. Elwes in this country is growing at Boynton, in Yorkshire. When measured a few years ago it was 70 feet high and 6 feet in girth, and had been planted about 60 years.

This species may be distinguished from others by means of its large sycamore-like leaves, which are sometimes 9 inches across, and by its hairy fruits. The pendulous racemes of fruits are sometimes very conspicuous, for they are from 6 to 9 inches long, and the wings are frequently red in colour. Fertile seeds are borne on trees at Kew. A. macrophyllum is likely to thrive under similar conditions to the common sycamore, and as its wood is apparently quite equal in quality, there would appear to be no reason to doubt of its proving a commercial success, providing it thrives satisfactorily under forest conditions. It could be grown as a pure wood or as a mixture with beech or silver fir for a companion. Planting might be done at 4 feet apart.

The Torenias.—Two at least of these, namely, T. Bailloni and T. Fournieri, are worthy of a place among the most select of tender annuals, and they are both very attractive in the greenhouse for a considerable period during the summer. The seeds should be sown in gentle heat in early spring, and when the young plants are large enough to conveniently handle they may be pricked off into 5in. pots. If half a dozen plants, equidistant from each other, are put into each pot pretty little specimens result therefrom. They do well in a mixture of loam, leaf-mould, and sand, and are benefited by an occasional stimulant when the pots are full of roots. T. Bailloni, also known as T. flava, has rich yellow flowers with a purple blotch, while T. Fournieri is strangely coloured in violet, white, yellow, and lilac. There is also a form of this last whose flowers are nearly white.—W. T.

WATER LILIES.

The season through which we are now passing is remarkable in many ways; and, without taking into account anything that has occurred outside the boundaries of the garden, it will long be remembered by those who take an intelligent interest in what is going on within them. The occupants of the garden are still suffering from the effects of one of the most severe, and practically one of the longest, of the droughts that have been recorded; and we have had opportunities for feeling the effects of a temperature ranging between 80 degrees and 100 degrees on so many occasions that comparatively little notice is taken of a temperature of 80 deg. Yet with these two serious drawbacks to the full development of useful crops and of ornamental plants that thrive under conditions which most generally prevail, aquatic plants have grown vigorously and bloomed profusely, and contributed more than their usual quota to the attractions of the pleasure grounds. All kinds of aquatics that have had access to a sufficient supply of water have been most satisfactory, but the water-lilies would appear to be revelling in the brilliant sunshine and the high temperature that now, as during the past six weeks, form such characteristic features of the English weather.



PART OF LAKE WITH WATER LILIES, GUNNERSBURY HOUSE.

There are but few years in which the temperature is not sufficiently high during the summer months to enable the most choice of the hardy nymphæas to produce with considerable freedom their finely-formed and exquisitely-coloured flowers; but it is in summers in which both the sunlight and heat are above the average that they attain their highest degree of development. It is certainly in hot, dry summers that the charms of the water garden are the most highly appreciated, and it would be difficult to imagine anything more delightful than to sit under the wide-spreading branches of a tree and enjoy the charms of

> “ Floating water-lilies broad and bright ”

in a neighbouring pool or wide-spreading lake. To have water-lilies in the highest degree of perfection possible, even in the most favourable seasons, good cultivation is essential. The varieties must be selected with due regard to the area of the pond or lake in which they are to be grown, and they require replanting as often as may be necessary to prevent their becoming crowded; for when overcrowded the plants push their leaves some distance above the surface of the water, and the flowers, which are produced in lessened numbers, are more or less hidden by the leaves. Moreover, where water-lilies are so crowded as to suggest a severe struggle for existence the effect is anything but pleasing. The illustration of a portion of the lake that is devoted to water-lilies in the gardens of Gunnersbury House, one of the residences of Leopold de Rothschild, Esq., will convey a much better idea than a written description of the manner in which water-lilies should be arranged to ensure the best results both in flower production and general effect. As a matter of course the several varieties are spaced according to the spread of their leaves when growing vigorously, and they are lifted and replanted at such intervals as may be found necessary to prevent overcrowding. Whether the replanting be done annually, biennially, or triennially will, of course, be determined by the characteristics of the varieties, and whether the several kinds are in a moderate or robust state of health. The accompanying illustration has been reproduced from a photograph taken a few days ago, and is therefore useful as showing the freedom with which the nymphæas are flowering in this time of heat and drought, as well as indicating the advantages of arranging the plants at the most suitable distances apart.

There is no occasion to refer at any length to the remarkable success that has been achieved by Mr. J. Hudson, V.M.H., in the cultivation of water-lilies, for he has long enjoyed a high reputation in connection with these beautiful flowers. He may, indeed, be described as one of the pioneers in the cultivation of water-lilies in this country; for within a very short period of the introduction of the earliest of the late M. Marliac's fine hybrids, the planting of the fine lake at Gunnersbury House was commenced. Since then the more noteworthy introductions have been added from time to time, and, as the result, the collection is not less remarkable for its comprehensive character than for the splendid condition of the plants that have a place in it. As evidence of the interest that has throughout been taken in the newer water-lilies by Mr. Hudson, it may be mentioned that of the awards made by the Royal Horticultural Society's Floral Committee for nymphæas, fully two-thirds have been conferred upon flowers shown by him. G.

Flowering Cannas.—It is questionable if even now these grand flowering plants are in many gardens appreciated to the extent they might be, for many of them must be regarded as simply gorgeous. They are also so continuous flowering that, apart from their value when bedded out, they are extremely valuable for the embellishment of the greenhouse or conservatory during the summer and early autumn months. Quite recently an Award of Merit was given to a distinct variety—Frau E. Kracht. In this the large flowers are of a distinct salmon-rose tint, a pretty shade, yet at the same time decidedly less showy than many of the others.—W. T.

DISA GRANDIFLORA.

No terrestrial orchid commands more attention than Disa grandiflora, the beautiful species found on Table Mountain, near Cape Town. Everyone who has seriously taken up the culture of orchids has at some time or other tried to cultivate this Disa, but, judging from the many poor specimens seen from time to time in collections, the results are very far from satisfactory, except in a few instances. The remarkable point about the culture of Disa grandiflora, however, is that where the plants do well they grow like the proverbial weeds, and under conditions that appear to be easily reproducible in other gardens. A moist atmosphere is one of the things to be provided, but too often this is accompanied by a stuffiness and high temperature that do not suit the plants. Wherever Disa grandiflora is grown the great point is to try plants in various situations until the most suitable is found, remembering always that it is a cool orchid and one that must not be severely rested, though naturally it does not require a large supply of water when not in full growth.

One plant in a pot and annual potting generally secure the best results, and this is the practice followed at Warren House, Stanmore, the residence of Mrs. Bischoffsheim, where, in a moderately cool greenhouse, this disa is a great success each year. A considerable quantity of plants are grown, and on August 1 Mr. A. Taylor, the grower, staged about a hundred examples, carrying fine spikes of orange and rose-coloured flowers. One spike is illustrated herewith.

DISA GRANDIFLORA.

A beautiful terrestrial orchid with large flowers coloured orange-scarlet and rose.

FORESTRY IN SCOTLAND.

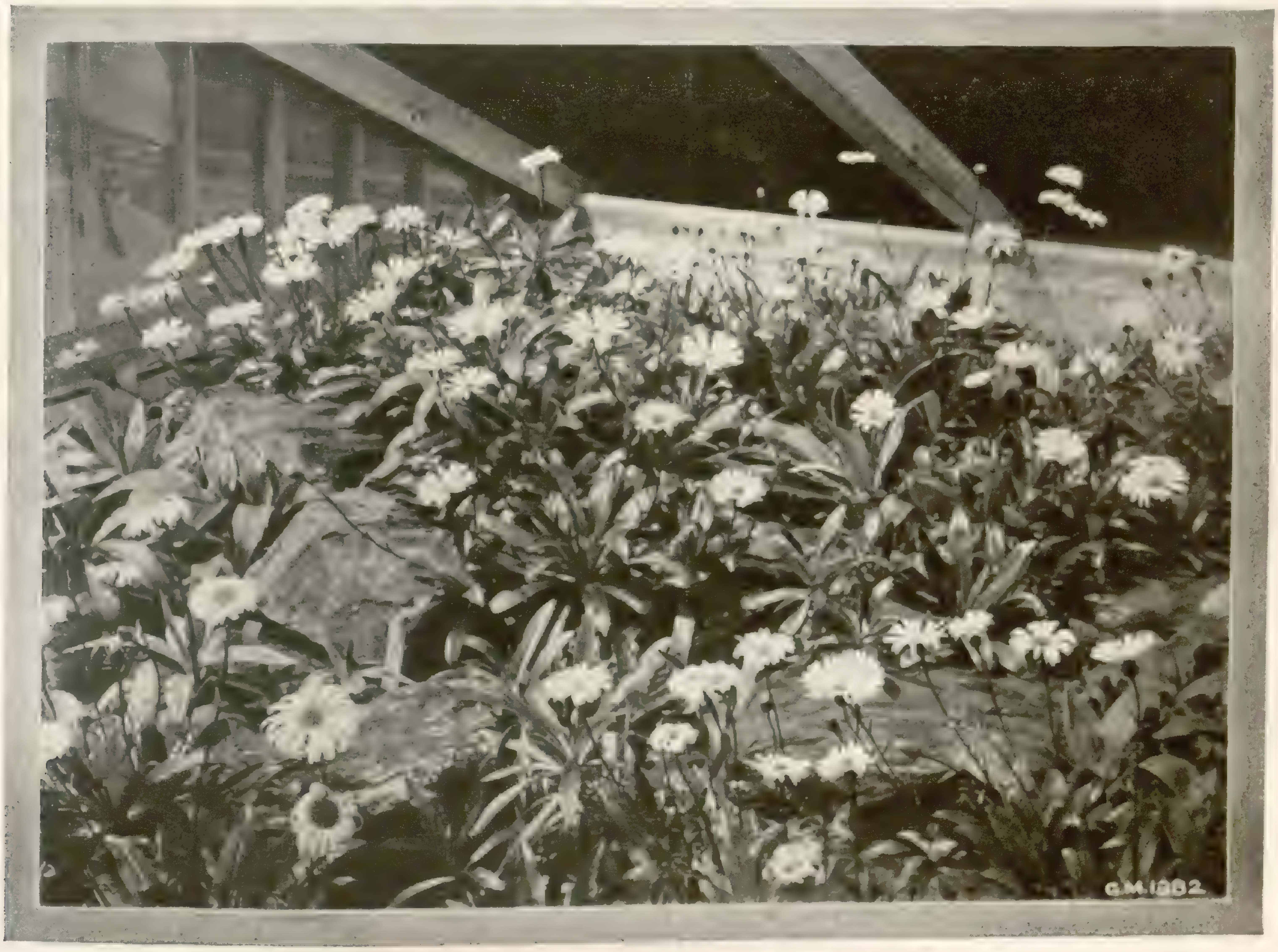
In anticipation of the meeting at Inverness, the Royal Scottish Arboricultural Society issued its summer volume of Transactions, edited by Lieutenant-Colonel F. Bailey, and containing a number of interesting papers and notes dealing with various aspects of forestry. Several of the papers submitted to the society during the year are reproduced, as, for instance, Mr. William Dawson's article on "The State and Private Woodlands," in which he describes some of the means taken by Continental countries to assist the private landowner in afforestation, and Mr. Donald Munro's paper on "The Home Timber Trade Outlook," in which, from his knowledge as a practical wood merchant, he suggests the trees that might be most profitably grown in this country. Mr. Munro urges the planting of larch, Scots fir, spruce, and Douglas fir. He believes that spruce would give better returns than any other timber he knows, and he cites a tract of it near Aberdeen which is worth £110 per acre. Mr. Dawson points out that in many Continental States newly-planted forest is exempt from taxation, a practice which he urges should be adopted in this country. With regard to State loans he points out that in Germany these are advanced less often to individuals than to communes, corporations, and local authorities. "In Hanover," he says, "where there are vast tracts of moorland, a system was introduced by which the State supplied, in the form of a premium, 40 per cent. of the cost of new plantations. The remainder, or any part of it, can be given in the form of a loan. The rate of interest charged on the loan is 2 per cent. to corporations or suitable local authorities, and 3 per cent. to private individuals, while in both cases an additional 2 per cent. is paid to a sinking fund. The work of afforestation and supervision is mostly done by the State authorities. This is really a very suggestive scheme, and is well worthy of our consideration." Replanting is compulsory in most German States, and fines are imposed where it is not carried out.

An interesting article is contributed by Mr. G. P. Gordon, describing the primeval forests or woodlands of Scotland. These are of three kinds, the birch woodlands, which are fairly common throughout the Highlands, the pine woods, which are found in such places as Ballochbuie and Glen Lui and Rothiemurchus, and of which the finest example is perhaps the Lochiel forest on Loch Arkaig, and the oak woods, which are generally found along a loch side or river side. Mr. Gordon enters in some detail into the flora or plant undergrowth which is typical of each of these classes of forest. This flora evidently persists for a considerable period after the trees have been changed. Thus at Achnacarry a larch forest from 40 to 60 years old has taken the place of a primitive oak forest. Yet the woodland flora has undergone no change, and remains typical of an oak wood. In connection with the pine forest at Loch Arkaig, it is noted that on an area felled about a hundred years ago, the few trees left are regenerating the area naturally. The same thing is mentioned in connection with Ballochbuie and Rothiemurchus. Value attaches to a paper by Mr. G. F. Scott Elliot on larch seed in view of the trouble which has arisen in recent years in Scotland through larch disease and the disappointing condition of larch woods. Some proprietors have ceased planting larch. Mr. Scott Elliot says the disease is not so much the enemy of the larch as a sign that the trees are unhealthy and wanting in natural vigour. "As a matter of personal observation," he says, "much of the injury seems to be due to careless sylviculture. I have myself seen larches planted in a perfectly flat peat moss, with a subsoil of stiff estuarine clay and in a sheltered place. They happened, in this case, to be attacked by insects rather than by Peziza, but it was obvious enough that whoever it was that planted larch in such a situation was guilty of arboricide. Mr. S. J. Gammell, of Drumtochty, also informs me that in humid, windless places, aphis and not peziza is usually the executioner selected."

Mr. Scot Elliot describes some of the researches which have been carried out by Scottish and by Continental authorities into larch seed, and he comes to the conclusion that the Scottish larch seed at present sold is inferior to European larch seed. He urges the use of Tyrolese or Japanese seed. Among the other papers is a discussion by Mr. A. D. Richardson of Mr. Augustine Henry's recent investigation of elm seedlings, a report upon the afforestation of water catchment areas by Mr. George Baxter, engineer to the Dundee Water Commissioners, who was asked to report to the Commissioners upon the planting of the Dundee catchment area, and notes by Mr. B. Ribbentrop, upon the influence of the origin of the seed of the future character of forest trees as illustrated by German researches on the subject. In the general notes, which along with reviews of recent books on forestry complete the Transactions, it is stated that the Development Commissioners have approved of the purchase of an area in Scotland to be converted into a demonstration forest, as soon as they are satisfied that a suitable tract of land can be obtained.

CELMISIAS.

In his "New Zealand Plants and their Story" Dr. L. Cockayne, of Christchurch, New Zealand, writes: "Generic names are frequently hideous, but in celmisia we have one dainty enough to take a foremost place among those feminine floral appellations now so popular. And well does a race of plants so beautiful deserve a fitting title. On every mountain side, at all seasons, it is the celmisias that give the characteristic stamp to the meadows, filling the air with aromatic fragrance, and delighting the eye with their beauty of form or abundance of flowers. With one exception all are true New Zealanders, and are probably a remnant of the long-vanished meadow plants of sunken southern lands. Two special classes occur—those with fine upright rosettes, and those which trail over a considerable area, forming round mats. Some, again, have quite small rosettes, and form dense silvery cushions, such as Celmisia sessiliflora and C. argentea. The most handsome of the celmisias is perhaps C. coriacea, a plant with large stiff silvery leaves, and flower heads several inches in diameter."



CELMISIAS AT THE ROYAL GARDENS, KEW.

This illustration represents a great cultural triumph. The species most in evidence is Celmisia holosericea.

Another authority, Mr. T. F. Cheeseman, curator of the Auckland Museum, says, in the "Manual of the New Zealand Flora," that, "The genus Celmisia, which is confined to New Zealand, with the exception of one species found in Australia and Tasmania, forms one of the chief ornaments of the montane and alpine flora of the colony, the various species usually composing a large proportion of the vegetation, especially in the South Island, where the mountain slopes and valleys are often whitened for miles from the abundance of their large daisy-like flowers." Many years before the above was written Sir Joseph D. Hooker (then Dr. Hooker) produced "The Botany of the Antarctic Voyage of H.M. Discovery Ships 'Erebus' and 'Terror.'" He was botanist to the expedition, and he described the celmisias as "Beautiful herbaceous plants, often forming dense patches on the boggy mountain tops, with spreading, radical leaves, grass-like, or oblong, covered underneath in almost every species with thick white wool; and single-flowered scapes." Dr. Hooker described ten species, and gave illustrations of C. holosericea, C. coriacea, C. spectabilis, C. hieracioides, and C. incana. This was in 1853. In 1906 Mr. Cheeseman described no fewer than forty-three species.

These references and quotations go to prove that the genus Celmisia is an important one, that many of its species are extremely beautiful, and therefore their culture in the United Kingdom is worthy of some effort. So many New Zealand plants are hardy, or nearly so, in this country, consequently such culture should not be attended with any great expense; but although this is granted, the celmisias have until recently been extremely difficult subjects to manage with any degree of success. At rare intervals specimens have been produced which served to whet the appetite of flower lovers, and set not a few to work upon an endeavour to grow the plants that, according to so many authorities, are so very beautiful and free-flowering in their native haunts.

Pot culture in cool greenhouses or cold frames, and the use of a peaty soil for rooting medium, pretty well sums up the methods generally tried with celmisias. In some favoured gardens outdoor culture on rockwork has been adopted, but with no great success, the plants succumbing to hot sunshine, on the one hand, and to the damp of winter on the other.

At Kew many variations of what may be called "half-hardy" treatment has met with varying success, and such success has never been maintained until now. A few years ago Mr. W. Watson, the curator of the Royal Gardens, Kew, resolved that if it were humanly possible celmisias should be grown so as to show what they are like in New Zealand; he fired the enthusiasm of Mr. Taylor, the skilful foreman of the Temperate House, various plans were formed, seeds were not difficult to obtain, and the work was set going that has resulted in a cultural triumph.

It may be urged that there is no need to go into ecstasies over the celmisias, as they are not likely ever to become popular, and their commercial value is very small. Just so. But remember Gerbera Jamesoni, a plant that presented many difficulties, practically all of which have been overcome, and now gerbera flowers are a marketable commodity of no mean value. There must be a beginning, and this has been made at Kew. It is now for the amateur plant lover and the traders to profit thereby.

There are two things that celmisias strongly object to in cultivation, indeed there are three. These are bright sunshine, drought at the roots, and overhead moisture in the winter. They are almost hardy, and, therefore, must not be coddled. A cool or moist rooting medium is essential, and the plants have a great dislike for frequent and abundant overhead watering. At Kew, one end of a span-roofed frame was boarded off for the celmisias, and a compost, consisting of about half good loam, and the other half leaf-soil, some peat, sand, and broken sandstone, was placed over moderate drainage, and built up in the form of a low rock garden, so as to secure a good depth of soil, and admit of the use of sandstone to keep the soil and roots cool. In this strong seedling plants were placed, and these, now three or four years old, are fine specimens, many of them forming masses of ten or a dozen growths, and in May last they were a picture of health and beauty, as the illustration will show.

The frame is heated, but it is obvious that artificial heat is not necessary. Even during the severest weather the celmisias receive ventilation, while during favourable weather the lights are thrown wide open, indeed, their chief use is to protect the plants from rain and snow. From flowering time until the early winter rains the lights are removed altogether, and a heavy shading is used over the plants. That hot sunshine is not desirable is proved by the fact that some plants on the south side have succumbed this season, whereas those on the shadier side are particularly robust. Further, that artificial heat and bright sunshine are unnecessary is also proved by the plants growing on a rockwork arrangement on the north-west side of the Temperate House, right in the angle formed by the entrance and the side of the central block of the building. Here the sun reaches the plants for a little while in the afternoon during the summer, but not at all during the winter and spring months. Of course, the position is sheltered by the Temperate House, and frame lights are placed well above the plants during winter and spring to throw off rain and snow. Here the celmisias grow practically as well as in the frame in the nursery, though they do not flower with quite so much freedom, and are, naturally, about a fortnight later in blooming.

Celmisias are slow to move in the small seedling stage, and so far plants have not been flowered until two years old. At Kew an ordinary greenhouse has been found a suitable place in which to raise seedlings, and that the seed pans, and also the pots of small seedlings, should be plunged in sphagnum, or some equally good moisture-holding material. In their earlier stages of growth the seedlings appreciate a little sphagnum in the compost. That they appreciate the sphagnum plunge bed was very evident a few days ago, when a few plants were lifted, and it was seen that the roots had passed six inches or so into the sphagnum, and laid hold of the moss in no uncertain fashion.

Very many species are now being tried at Kew, thanks to the kindness of the Dunedin authorities and to Captain Dorrien Smith. Those that have responded so well to the treatment at Kew are C. holosericea, the one most in evidence in the illustration; C. Munroi, C. coriacea, C. petiolata, C. Browni, C. Lindsayi, C. hieracifolia, and C. verbascifolia. A few others are in cultivation, but have so far scarcely passed the experimental stage, though all promise well. The following species are in cultivation:

C. Browni is a rare species from the Southern Islands, and has petiolate, leathery leaves, clothed on the underside with a greyish-white tomentum.

C. coriacea is from the North and South Islands, and ranges in altitude from 1,500 to 4,500 feet. It has large leaves, sometimes as much as two feet long, thick and leathery, silvery-green above, and white beneath. The flower heads are upwards of three inches in diameter.

C. hieracifolia is a native of the Southern Island; it is a smaller grower than many, and is apparently somewhat rare and local. The tomentum on the undersides of the leaves is buff, instead of the usual white or silvery-white. Its flowers heads are about one and a-half inches across.

C. holosericea is a handsome plant, found from sea level up to 4,000 feet, in the Southern Island of New Zealand. The leaves are from six to twelve inches long, and two inches broad, lanceolate, white beneath, and green, strongly veined above. The growths are a foot high, and the flower heads are carried about eighteen inches high, three inches across, white, with yellow disc. This species has so far shown itself the most amenable to cultivation.

C. Lindsayi is found on the cliffs of the south-east coast of the Southern Island, and forms large rounded masses of growth, evidently somewhat like C. holosericea, though its flower heads have but one series of ray florets.

C. Mackayi is found in the South Island, and is a distinct species, with long acuminate leaves that are glabrous and green on both surfaces. It has large flower-heads and long white ray florets. So far it has not, I think, flowered at Kew.

C. Munroi (or Monroi) comes from the northern half of the Middle Island of New Zealand, and was discovered by Dr. Munro on the Upton Downs, in the province of Marlborough. This species, with its large white, golden-disked flowers, has been in cultivation some time, and I remember it flowering in a greenhouse in the T-range at Kew about fifteen years ago. The stems and the undersides of the leaves are thickly clothed with a dense white silky wool that gives the plant a distinct appearance. Usually the flower-heads are two inches across, or a trifle more in some cases, and the white ray florets are about two-thirds of an inch long. We owe the introduction of this species to Messrs. James Veitch and Sons.

C. petiolata is found at an elevation of from 2,000 to 4,500ft. on the Southern Alps, from Lake Tennyson southwards to the west of Otago. It has white, yellow-disked flower-heads, and differs chiefly from other kinds in having long, slender, purplish petioles, and narrow, almost membranous, leaves.

C. spectabilis was figured in these pages as far back as July 25, 1891, shortly after its appearance at a meeting of the Royal Horticultural Society, when shown by the Chelsea firm. A First Class Certificate was awarded on June 9 of that year. It was stated at the time that "a large basket of small plants was exhibited, and at once compelled attention as being utterly unlike the usual run of things shown at the meetings. The plants were about six inches high, the leaves distinctly lanceolate, narrow, and covered on the under-surface with a down-like felt, the upper surface silvery, and in excellent contrast to the flowers. Each flower is erect, carried on a short, sturdy peduncle, and about two inches across, the ray florets numerous, pure white, the disc yellow, and making up a full, handsome, symmetrical bloom. It is very free-flowering, and the whole plant of a distinct tufted habit." Considerable success has attended the cultivation of this species in the Edinburgh Botanic Gardens, and even so far north its culture out of doors was more affected by the damp than by the cold of winter.

C. verbascifolia comes from the South Island, and is found from sea level up to 2,000ft. It has stout roots, and is a strong-growing, handsome species, with leathery leaves three inches wide, and from eight to thirteen inches long, covered on the under side with whitish down. The flower-heads are about four inches across.

C. viscosa, not yet flowered at Kew, is distinctly alpine, being found at from 4,000 to 6,500ft. elevation, in the South Island. It has short, narrow, erect, grooved, and viscid leaves, and tufted habit, and, without close inspection, suggests a primula. The flower-heads are about an inch and a half across.

C. H. Curtis.

FORCED LILY OF THE VALLEY.

The blossoms of the lily of the valley meet with favour at whatever season of the year they are produced; their rich perfume, chaste purity, and simple beauty, and the accompanying setting of pale green leaves, combine to render it one of the most graceful of all flowers, and a familiar object to almost every one. The natural flowering season of Lily of the Valley (Convallaria majalis) covers a brief period of only some three or four weeks, when it is grown in the open garden. For a supply at other seasons of the year resource is made to retarded crowns; by a special process the natural activity of the plant is arrested, but is immediately released on being taken from this sphere of influence. Consequently retarded crowns will, if desired, supply flowers every month of the year; so accurate, constant, and thoroughly reliable are the results obtained by this method that scarce any other calls for mention.

The best stock is that known as Berlin crowns. These are immediately potted up on receipt, twelve to twenty-five crowns being put in each pot, according to its size, or if in boxes then tolerably close together. A good loamy compost is necessary, which is carefully worked among the crowns, pressing the soil firmly into position, making the buds level with the top of the pot, and just clear of the soil. The pots are then plunged to the rim on a brisk bottom heat of 80 degrees to 90 degrees F. for winter and spring, each box or pot being darkened by another of the same size inverted on the top, and this is kept in position until the shoots are about two inches in length, after which light is gradually admitted, and these are dispensed with. A low temperature and insufficient moisture are the evils experience finds it essential to guard against in forcing retarded crowns. Hence the plants must be liberally supplied with water both at the roots and in the atmosphere, up till the time the flowers expand. Once the latter show colour the plants can be removed to a lower temperature and drier atmosphere, which hardens them off sufficiently to enable the spikes to retain their freshness longer when cut. The period in which lily of the valley may be had in flower under this system varies from about twenty-eight days in mid-winter to rather under twenty-one days in autumn and late spring.

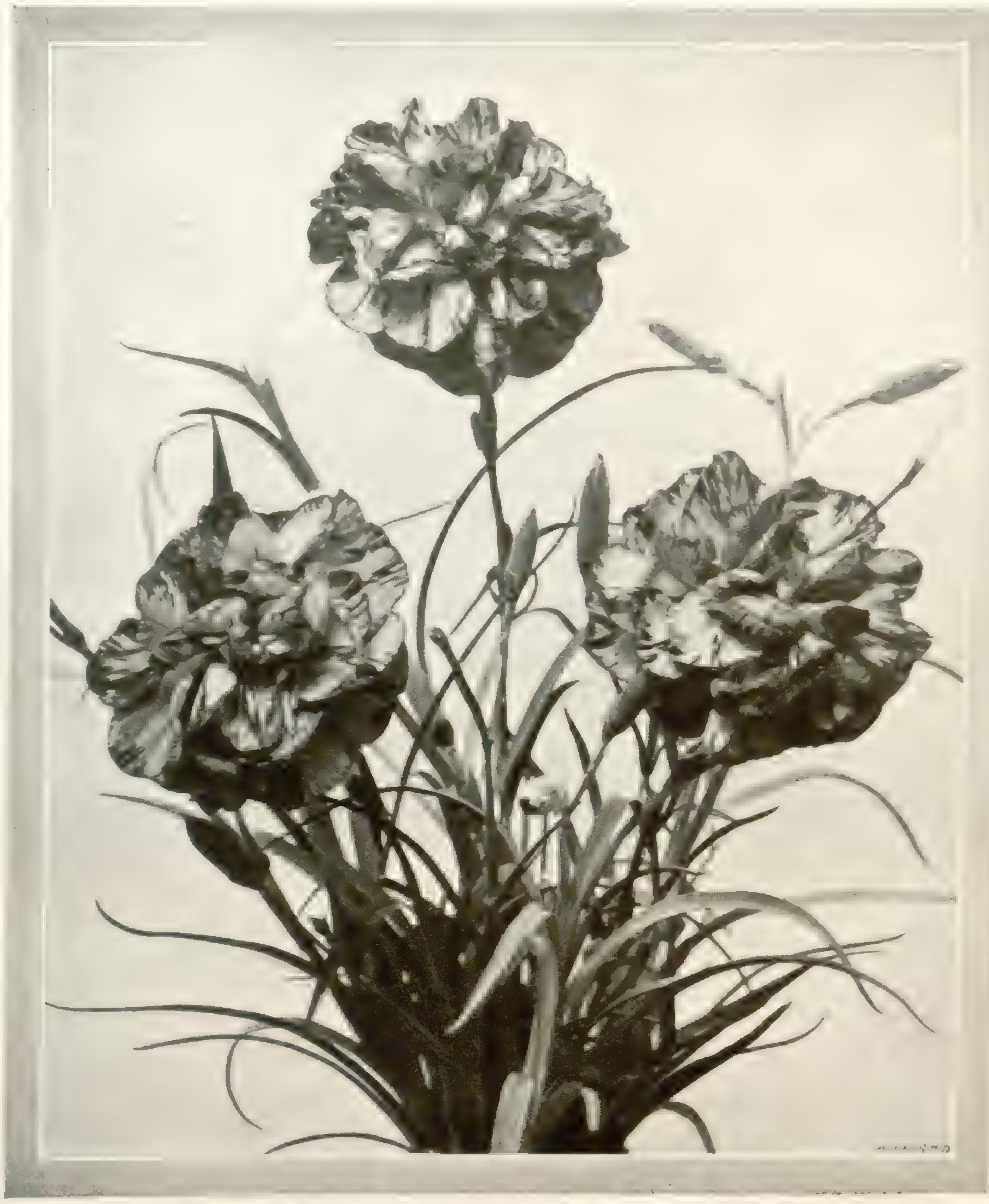
Natural prepared Berlin crowns, as also those of Fortin's Giant variety may also be forced into flower, not introducing these to heat earlier than February, otherwise the crowns are liable to go blind. A temperature of from 75 degrees to 80 degrees F. will most generally give good results at this season, treating the plants in other respects as advised for retarded crowns.

Thomas Smith.

BULBS.—A practical treatise on the cultivation of hardy, hothouse and greenhouse bulbous and tuberous rooted plants is "Bulbs and their Cultivation," by T. W. Sanders, price 2s. 6d. net, or by post 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

CARNATION LORD STEYNE.

In our issue of August 5 we gave an account of fancy carnations, and a list of the finest varieties. At the same time we gave an illustration of the splendid yellow ground fancy variety Pasquin, an illustration that has been greatly admired and pleasingly commented upon by our readers. Another variety of the same class, and one which is well deserving of culture, both by those who grow carnations for exhibition and those who grow them for garden decoration, is Lord Steyne. This is a strong grower, and produces a large flower of striking colouring. The ground colour is soft yellow, and this is margined and freely marked with crimson and purple maroon. Lord Steyne is one of the many fine varieties raised by the late Mr. Martin R. Smith, and it is deserving of every attention from prospective carnation cultivators. The flowers here represented are those that won the first prize for Mr. C. A. Linzee, Alresford, at the exhibition of the National Carnation and Picotee Society on July 25.



CARNATION LORD STEYNE.

A yellow-ground fancy, marked with crimson and purple-maroon. Mr. C. A. Linzee's first prize blooms at the National Carnation and Picotee Society's Exhibition.

THE LING.

We are so accustomed to seeing wide expanses of country clothed with this plant in a state of Nature that we are apt to forget that many thousands are disposed of annually for garden decoration, and that their raising and disposal form an important part of the business done by several nurserymen. A visit to the nursery of Messrs. Smith, of Darley Dale, would, however, convince one of the prominent position occupied by the ling, for many acres are devoted to its culture and to that of its varieties. For, looking over a collection such as one finds in a well-stocked nursery, one is struck by the great range of variation shown by the species, not only in colour of flowers, but also in habit. As regards colour, one finds many shades of red and pink, whilst white-flowered kinds are also prominent. In habit, one finds forms which at maturity are almost three feet in height, whilst others are tiny plants scarce a couple of inches high, looking more like moss than ling. Some of these varieties are more floriferous than others, and in the white-flowered varieties, those which when cut might look all alike, are abundantly distinct when growing side by side. Differences are also to be seen in the colour of the leaves, for in some cases the foliage differs from that of the type by being golden, copper, or silver hued.

The origin of these varieties is, in many cases, doubtful, though some of the best have originated as chance seedlings, and have been perpetuated by propagation. Others, which were originally wild forms, have improved under cultivation. Now and then a distinct form is found amongst the type on a common or hillside, and this is carefully tended, and a stock produced from it. Some positions are prolific in variations from the type, and half a dozen forms may be collected in a limited area. The writer once collected a form half an inch high growing in an exposed position in sandy ground in the Scilly Islands, whilst on the Cheshire hills, and also on Surrey commons, it is possible to cut ling branches between two and three feet in length. Owing to sentimental reasons white forms of ling are most eagerly sought after in a wild state, and they have become very scarce in places visited by large numbers of people. Tourists have, however, no reason to complain of a shortage of white ling, for a brisk trade has developed within the last few years in supplying cut branches of this to florists who cater for the wants of tourists and others during the months of August and September. In some nurseries wide areas are grown specially for the supply of cut flowers.

When making plantations of ling—or Calluna vulgaris, as it is rightly named—the taste of the planter will decide as to the arrangement of the plants. As a rule an irregular-shaped mass in the wilder parts of the garden finds most favour, though it is sometimes used in formal-shaped beds, or as masses near the front of shrubberies, which are filled for the greater part with peat-loving shrubs. The planting of distinct kinds in large masses is attended with good results, for then one obtains simple, but effective displays. Others may, however, favour a combination of the various colours. In such a case the inclusion of a number of varieties planted indiscriminately may be tried.

The original planting of ling need offer no serious difficulties, providing the ground is fairly free from lime, for if ordinary loamy or sandy soil is dug over the plants may be inserted straight away; any time will do for the work between October and the end of March. When preparing the ground the inclusion of a little peat or decayed leaves is attended with good results, though it is not absolutely necessary. Propagation of ling may be carried on in several ways. By sowing seeds from the various kinds a large stock of plants may be raised. If, however, the varieties are to be kept true to name, layers, or cuttings, must be resorted to. The former are branches weighted down into loose soil by means of pieces of stone in spring. They are left about two years before being severed from the parent plant. Cuttings are taken during July and August, and they are inserted in sandy peat in a cold frame or under a handlight out of doors. Roots are usually formed during winter. By placing the cuttings in pots and standing them in a slightly warm propagating case in July or August, roots may be expected in about six weeks' time. Plants raised from cuttings are, as a rule, superior to those produced from layers, therefore cuttings should be used whenever possible.

As regards varieties, the following may be taken as a good selection: Alba, alba pilosa, alba rigida, alba Serlei, and Hammondi, white; Alporti, flore pleno, rosea, rubra, and tenuis, red; alba minor, Foxi, hypnoides, and pygmæa, dwarf; and argentea, aurea, and cuprea, coloured foliaged kinds.

A certain amount of common ling is used for thatch for sheds, fruit rooms, and summer houses, and for the purpose it is excellent, whilst the branches are also used in some places for brooms. W.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

STANHOPEAS.—The highly-perfumed and richly-coloured stanhopeas are not so largely grown in orchid collections at the present time as was the case some few years ago, and why they fail to receive a full share of attention from the owners of collections is not probably difficult of explanation. The flowers of the stanhopeas are singular in form and rich in colour, but, unfortunately, they are of short duration, and they are quite unsuited to any of the various forms of floral decoration that find favour at the present time. On the other hand, there are immense numbers of orchids that bloom freely and produce flowers that are highly attractive, and have the merit of retaining their freshness and beauty for a very considerable period, and these are undoubtedly formidable rivals to the stanhopeas. In gardens where orchids are not extensively cultivated, we frequently find numbers of stanhopeas growing under varied conditions, but generally in the ordinary plant stove. They are best grown in baskets, and the drainage used must be so fixed as to permit the pendulous flower scapes obtaining egress through the bottoms of the baskets. This is practically the only special attention that is necessary. The plants are best repotted when the new roots are being produced. See that the potting compost used is of a durable nature, as it is not desirable to disturb the plants for repotting purposes more frequently than is absolutely necessary; unless they have outgrown their baskets or the compost has become sour, they need not be disturbed. We find that a mixture of good fibrous peat, osmunda fibre, and chopped sphagnum moss in about equal portions suitable. This should be made moderately firm. The compost should be well watered when the repotting has been completed. The conditions of an ordinary plant stove suits them well, but when grown in the orchid houses, the warm end of the cattleya or intermediate house will be the most suitable position. The baskets should be suspended within reasonable distance of the roof glass, the only protection necessary is to see that the foliage does not become injured by an excess of bright light during the growing season. An abundance of root moisture is required, and there should be a liberal degree of humidity in the atmosphere. The plants should be syringed overhead to keep down red spider and other insect pests on all favourable occasions. During the resting season only sufficient moisture is required to keep the foliage and pseudo-bulbs in a normally plump state, and cooler conditions should also be afforded.

ACINETAS.—A. Barkeri and A. Humboldti are the two species of this genus that are found most general in cultivation. These also produce their flower racemes from the base of the pseudo-bulbs, and push through the rooting medium in the same manner as the stanhopeas. Hence they require an outlet at the bottom of the receptacle in which the plants are growing. Baskets are the most suitable, especially as the plants when growing in them may be suspended from the roof. They do well under the same conditions as the winter-flowering cypripediums. The foliage being broader and of less texture than the stanhopeas they will not bear without injury so much strong light. The time of potting and the material used is the same as that given for stanhopeas.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

LUCULIA GRATISSIMA.—This is an excellent autumn-flowering subject, and as one considers its good qualities, combined with its comparatively easy culture, it most certainly appears to deserve more attention. Luculia gratissima may be successfully wintered in an intermediate plant stove, or even a warm greenhouse where the temperature does not fall below 50 deg. As the plants complete their season of blooming, the old flowering shoots may be somewhat shortened back, and by gradually reducing the supply of water, with a free circulation of air, the plants may be brought to rest. During this process excessive dryness of the roots must be avoided. Should mealy bug, red spider, or any other insect pest be found troublesome, it would be advisable to thoroughly syringe with an insecticide before storing the plants away for the winter's rest.

BEGONIA GLOIRE DE LORRAINE and its sports are now growing rapidly, and any batch of late plants may still be shifted into larger sizes, which must, of course, be their final stage. A central stake must be provided to each plant, and all the lateral growths looped carefully up with green raffia. Plants which have been previously treated as advised will now be filling their flowering-pots with abundance of roots, and will be greatly assisted by liberal applications of clear soot water and weak farmyard liquid manure given in alternate weeks. The stages and paths may also be damped down occasionally with farmyard liquid. During the growing season of this type of begonias abundance of heat and moisture are essential, with a good shade from the hot sunshine.

MARANTAS.—These ornamental fine foliage plants always command a fair share of attention, the distinct markings of their foliage being most interesting; they will continue to develop their foliage rather slowly for another month or so, after which the roots may be given less moisture so as to prepare them for their resting season a little later on. As time and opportunities present themselves the foliage may be sponged with soapy water which will greatly benefit the plants.

GENERAL REMARKS.—As the season advances the temperatures of the plant stoves may be gradually reduced in proportion to the shortening of the days, so that the occupants may be brought under the influence of a brief season of rest when the days are the shortest. The present season is also an excellent time for overhauling the plant stoves, and a tasteful rearrangement will provide an interesting change to the general appearance; this work when effectively carried out, after a thorough cleansing of plants and their surroundings, cannot fail to command appreciation.—John Donoghue, Bardon Hill Gardens.

THE FLOWER GARDEN.

SUMMER-FLOWERING CHRYSANTHEMUMS will now require attention with regard to staking, etc. One stake to each plant is quite sufficient, and should be placed in the centre and the growths looped to it. Some varieties will be improved by slightly disbudding where the buds are very thick. Liberal doses of liquid manure should be afforded the plants occasionally, which will prove of great assistance.

SPRING BEDDING plants must be given every encouragement to provide a good stock of healthy, sturdy plants for putting out later on. The success of the next spring display depends, in a great measure, on the way the various subjects are grown the previous summer. It is essential that hard, stocky plants should be provided to stand the wet and frosts of the winter. Cuttings of alyssum, arabis, and aubrietias, which were propagated as advised earlier in the season, will now be sufficiently rooted to plant out into nursery beds. Seedling plants of silene, myosotis, violas, pansies, etc., which are yet in boxes, must be planted out without delay.

ANTIRRHINUMS AND PENTSTEMONS.—Although these may both be successfully grown as annuals, yet it is sometimes desirable to raise a batch from cuttings. This operation should now receive attention, and plenty of shoots will be found at the base of old plants which will provide suitable material for the purpose. These should be prepared, and inserted in sand in a cold frame, where they will quickly root if kept moist and shaded.

PINKS, which were propagated as advised earlier, will be ready now for lifting from the frame and planted out in the nursery beds. Pinks are partial to a soil which contains lime, and should there be a deficiency of this, old mortar rubble may be added with advantage.

HARDY ANNUALS.—By making a sowing of this useful class of flowers towards the end of the month, an early supply of bloom can be obtained. The seeds should be sown thinly in beds where the plants are to remain, and the young plants thinned out as soon as they are large enough to handle. The following are useful, as they will provide an excellent supply of cut flowers: Cornflowers, annual chrysanthemums, coreopsis, gaillardias, larkspurs, lupins, scabious, poppies, sweet sultans, and linarias.

ANEMONES CORONARIA AND FULGENS should be planted in beds to provide a supply of cut flowers. St. Brigid is one of the finest varieties to grow, and a good strain has a remarkable effect when in bloom. They are extremely useful for decorative purposes, lasting for some time in a cut state. The intense scarlet of fulgens makes it very desirable and highly appreciated, coming into bloom as it does so early in the year. When preparing the soil for the roots, it will prove beneficial if well-decayed leaf soil and sand are incorporated with it. Ranunculus should also be treated in the same manner, —E. C. Pooley, Gnaton Gardens.

FRUITS UNDER GLASS.

POT VINES. — Where these have been brought along with the object of forcing for early fruit next season, the first consideration should be good growth; secondly, ripe wood; and with the hot, baking sun we have been subjected to this season, their ought not to be much difficulty about either. Give the vines now more air; in fact, as the growths are pretty well complete the ventilators should be kept open top and bottom, and after a fortnight of this treatment the plants may be taken outside and tied up to wires, where the ripening process will be carried on under quite easy conditions. The pots should, however, be plunged in coal ashes up to the rims, and in hot, bright weather the vines must receive a good syringing every afternoon. Be quite sure the roots receive enough moisture.

VINES.—The wasps are exceedingly numerous, and means have to be taken to prevent their ingress to the houses; and this is best done by fixing wasp-proof netting over the ventilators, by keeping the doors shut, and by destroying all the nests one can find. We have destroyed considerably over a hundred nests already.

CUCUMBERS.—Plants of Everyday or Improved Telegraph should now be raised for a winter supply. Sow singly in small pots, and grow along gently and sturdily, and as soon as the roots have reached the outside of the soil give another shift, so that there will be nice strong plants to put out in September. A thoroughly clean house should be made ready for their reception. Choose a house with a south aspect, and one which can command a temperature of 70 deg.

TOMATOES. — Keep the side growths pinched out as often as required, in order that no unnecessary strain be put upon the plants which are bearing fruits. Shift into fruiting pots as soon as ready those that are being prepared for winter use. Make the soil quite firm so as to encourage short-jointed growth. On the approach of damp nights shift the plants into a cool house, and allow them to remain there for as long a period as possible.

LATE MELONS.—Keep these well stopped and neatly tied up to the wires, and set the fruits as soon as a crop can be obtained, as they will need all the sunshine we can get during the next six weeks. Close the house earlier as the days shorten.—W. A. Cook, Leonardslee Gardens.

SANDY, BEDFORDSHIRE.

43rd ANNUAL SHOW, AUGUST 31st, 1911.
PLANTS, FLOWERS, FRUIT, VEGETABLES, etc.;
DOGS, POULTRY, PIGEONS, RABBITS, CATS, etc.
PRIZES VALUE £1,000, including
£70 for Groups of Plants, £9 for Roses.

Entries close August 24th.

Schedules and particulars of
W. GREEN, Sec., Sandy, Beds.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

North of England Horticultural Society.

This society continues to progress under the vigorous secretaryship of the Rev. J. Bernard Hall and its large committee. Its latest venture in the beautiful and fashionable town of Harrogate, in conjunction with the Harrogate Agricultural Society, on August 15, was a success horticulturally, and, we hope, financially as well. A large marquee was set apart for the accommodation of the numerous exhibits, and during the afternoon there was a good stream of visitors.

The exhibition was visited by a deputation from the Royal Horticultural Society, consisting of Sir Albert Rollit, Mr. H. B. May, V.M.H., Mr. James Hudson, V.M.H., Mr. G. Bunyard, V.M.H., Mr. E. A. Bowles, M.A., the Rev. F. Page Roberts, with Mr. A. Gaskell as secretary. There was also a deputation from the National Hardy Plant Society, which included Messrs. J. S. Brunton, Merryweather, Artindale, Gibson, and Harkness.

The exhibits were of varied interest, but hardy flowers were the prevailing feature.

An extensive exhibit from Messrs. William Artindale and Son, Sheffield, proved a great attraction by reason of its varied character. At one end perpetual carnations were effectively grouped in tall stands, with low vases, nephrolepis and gypsophila between. At the other end hardy border flowers were boldly grouped; the background consisted of large bunches of Lilium speciosum and L. s. rubrum, with great sheaves of deep rose, yellow, and white double hollyhocks. Below these were fine bunches of Pentstemon Torreyi, Lupinus roseus, the deep scarlet Montbretia germanica, Cimicifuga dahurica, Crinum Powelli, and an assortment of phloxes. Along the front the best things on view were Pentstemon Huntingdon Scarlet, the white P. Spitzberg, P. White Newbury Gem, and P. Southgate Gem, with some fine Gandavensis gladioli and Crinum Powelli album. Between these two groups was another composed of alpine plants, very well arranged on a low rockery.

In a particularly elegant fashion, entirely avoiding the evils of overcrowding, Messrs. Gibson and Son, Bedale, presented a collection of hardy flowers

Ferns in great variety and beauty were contributed by Messrs. H. B. May and Sons, Edmonton, who presented a large group composed chiefly of smaller plants than they usually show. Their central set of the lovely Nephrolepis Marshalli compacta was greatly admired for its mossy elegance.

Mr. C. F. Waters, Balcombe, Sussex, brought up a pleasing group of perpetual carnations, and arranged the flowers in his usual elegant style; among the good things forward he showed Mrs. H. Burnett, Enchantress, Edith Waters, Mikado, Winsor, the white and much-fringed Georgia, Marmion, the yellow ground fancy Aurora, and the new A. E. Manders.

A large and bright exhibit, arranged by Messrs. Dobbie and Co., Edinburgh, attracted attention by reason of its bright colouring. Roses were plentifully shown, notably such varieties as Countess of Derby, Madame C. Soupert, Hugh Dickson, Walter Speed, Edu Meyer, Prince de Bulgarie, and Le Progres; these and other beautiful varieties being disposed in small vases in front of good bunches of such useful early chrysanthemums as Leslie, Diana, Carrie, Connie, Polly, Abercorn Beauty, and Frankie.

Large masses of Lilium speciosum rubrum, L. s. album, L. longiflorum, Gloriosa superba, tuberoses, and Hydrangea paniculata grandiflora were grouped effectively with the newer plumose nephrolepis by Messrs. E. J. Batchelor and Sons, Harrogate.

Cut roses and hardy flowers from Messrs. Mack and Son, Darlington, made up a bright contribution; many of the roses were capital blooms for the time of year.

Messrs. Young and Co., Hatherley, once again demonstrated the decorative value of perpetual carnations by showing good flowers in well-filled vases. The firm had excellent representations of Queen, buff; Enchantress, Lady Audley Nield, Rose Doré, Mikado, Mrs. H. Burnett, Winsor, and Britannia.

Big masses of phloxes the Baron, Elizabeth Campbell, Aurore, Rosenberg, the vivid Firefly, the White Mdme. G. Marie, Selma, and G. A. Strohlein were set up in blocks by Messrs. Dickson and Robinson, Cathedral Street, Manchester; these were associated with a selection of scabiouses.

GOLD MEDAL ARRANGEMENT OF HARDY HERBACEOUS PLANTS.
Exhibited by Messrs. Gibson and Co. at the North of England Horticultural Society's Show on the 15th inst.

Mr. Wm. Bonsall, Roseville Nursery, Harrogate, showed Adiantum Glory of Noordwyk, plumose nephrolepises, perpetual carnations, etc., and edged the group with Campanula Mayi.

Mr. S. Bailey, Tentergate Gardens, Knaresborough, had a quite good group of sweet peas.

Orchids were not extensively shown on this occasion, only a few groups being presented. Messrs. Charlesworth and Co., Haywards Heath, Sussex, had, in their exhibit of about three dozen plants some good specimens of Vanda cærulea, V. Kimballiana, Lælio-cattleya callistoglossa, L.-c. Colmaniana, Cattleya Vesta, C. Rhoda, Brasso-cattleya Maroniæ, Odontoglossum armainvilliersense Xanthotes, Oncidium Lanceanum, and the graceful Odontioda Lairessæ.

Messrs. Mansell and Hatcher, Rawdon, Leeds, had a goodly exhibit of orchids, and made up an attractive display, consisting of Cattleya Atalanta superba, Vanda cærulea, the beautiful Brasso-cattleya Pocahontas, Dendrobium Phalænopsis, the quaint little Cypripedium concolor, Oncidium Lanceanum in good form, Miltonia vexillaria Queen Alexandra, Odontoglossum crispo-Harryanum, Vanda Kimballiana, the showy Cattleya Jean, and Odontioda Thwaitesi.

A few orchids shown by Messrs. A. J. Keeling and Sons, Westgate Hill, Bradford, included Cattleya Harrisonæ, Cypripedium Penelope, Cattleya Wavriniana, C. Masseanium, and Odontoglossum Harryanum.

Cattleya Gaskelliana alba, Brasso-cattleya Maronæ, Cypripedium Maudiæ, C. Wm. Lloyd, C. Lawrenceanum Ball's var., Cattleya Pittiana, and C. Iris excelsa with grand crimson lip, were the pick of the orchids shown by Mr. Edward V. Low, Vale Bridge, Haywards Heath.

A marginal rock garden, well filled with dainty subjects, fronted the display of hardy border flowers submitted by Messrs. James Backhouse and Son, Lim., York. Phloxes were prominent among the latter, and such varieties as Etna and G. A. Strohlein were especially bright for so dry a season. Rudbeckia purpurea, R. laciniata fl. pl., Chelone barbata coccinea, Lilium tigrinum, Helenium cupreum, and Acanthus mollis, were much in evidence, while in the little rockery arrangement the leading things were Helianthemum venustum, Campanula pusilla, C. turbinata, C. White Star, Erica McNabiana, Acæna microphylla, Viola cornuta, Mimulus cupreus, Menziesia polifolia, Ramondia pyrenaica, and numerous sedums.

A choice group of hardy plants was arranged to form a little rock garden by Messrs. William Conway and Sons, Lim., Halifax.

Messrs. Mawson Bros., of Windermere, contributed a collection of phloxes, and put up excellent bunches of Iris, Le Mahdi, F. Hornung, Selma, Tapis Blanc, Gen. Von. Hentsz, and the lovely white Frau von Lassberg. Fine bunches of Lilium tigrinum, L. t. plena, and L. t. splendens, and L. auratum lent a special grace and dignity to the display.

Facing the tent entrance was a very pretty exhibit of carnations, from Mr. William Lawrenson, Yarm-on-Tees, Newcastle.

A small collection of crotons, submitted by Messrs. Ker and Sons, Aigburth Nursery, Liverpool, was very interesting, as these handsome plants are not often shown otherwise than in groups. Some of the best were C. Thompsoni, C. Sinitzianum, C. superbum, C. Aigburthensis, C. Prince of Wales, C. Reidi, with its splendid broad bright leaves, C. aneitemense, and the useful C. Hawkeri. In another group the Aigburth firm showed the splendid Bignonia grandiflora, Phœnix Roebelini, and the variegated Hydrangea nivalis.

A large and bright contribution of hardy flowers from Messrs. Harkness and Sons, Bedale, gave ample evidence of cooler weather than the southern counties have of late experienced.

Mr. F. J. Bell, Crescent Nurseries, Whitley Bay, made up a pretty exhibit of sweet peas, pansies, and violas, etc.

Lord Faber's Silver Cup for the best amateur collection of fruits, etc., was won by Mr. Hathaway, gardener to J. Brennand, Esq., Baldersby Park, Thirsk, who contributed a high-class display, and one that was well arranged. The chief subjects shown were Lady Hutt, Muscat of Alexandria, Madresfield Court, and Barbarossa grapes; grand Souv. de Congres, Louise Bonne of Jersey, Doyenne Boussoch, Marguerite Marillat pears; Lord Suffield, Emperor Alexander, Lady Sudeley, Loddington, and Worcester Pearmain pears; Dymond, Golden Eagle, Royal George, and Noblesse peaches; Pitmaston Orange, Humboldt, and Pineapple nectarines; Bryanston, Green, and Oullin's Gage plums; and a number of melons, peas, carrots, tomatoes, onions, marrows, potatoes, celery, cucumbers, leeks, and cauliflowers were the vegetables submitted; while carnations, gypsophila, and francoa sprays provided the floral embellishment.

Mr. Haynes, gardener to W. D. Cliffe, Esq., staged excellent dishes of Rival apples, Marguerite Marillat, Souv. de Congres, and Mdme. Treyve pears, and Jefferson, Washington, Pond's Seedling, and other plums.

Messrs. Kelway and Son, Langport, filled a small tent with about 300 spikes of stately gladioli, displaying three spikes of a variety; a few of outstanding merit were Golden Measure, Lady Roberts, Kelway's Blue, Princess Victoria, King Edward, Miss M. Duncan, and Richard Martin.

Messrs. Wood and Son, Wood Green, were present with an attractive stand of horticultural sundries in great variety.

HARDY PLANT GROUPS.

A competition was arranged by the National Hardy Plant Society on this occasion, and it was for a circular group from 6ft. to 8ft. in diameter, so set up as to show the value of hardy herbaceous plants for bedding purposes. Four groups were staged out in the open, and the premier award, the Gardeners' Magazine Gold Medal and £3 was won by Messrs. Gibson and Co., Leeming, who used the graceful Hyacinthus candicans over dwarf plants of Phlox Le Siécle, and edged the whole with Nepeta Mussoni. The second prize, a silver-gilt Coronation medal and £2 fell to Messrs. Artindale and Son, Sheffield, who had a centre of the new Bidens dahliaoides, surrounded with Asclepias tuberosa, and a broad margin of Silene laciniata Purpusi; the third prize fell to Messrs. Dickson and Robinson, Manchester, whose subjects were scarlet gladioli, phloxes Mdme. G. Marie, The Baron, and E. G. Campbell, and Helenium pumilum magnificum, and H. cupreum.

The Hardy Plant Society awarded a silver-gilt Coronation medal to Messrs. W. Artindale and Son, Sheffield, for their collection of alpines.

ROYAL HORTICULTURAL SOCIETY'S AWARDS.

Silver Cups.—To Messrs. Harkness and Sons, Bedale, for gladioli and herbaceous plants; to Messrs. Artindale and Son, Sheffield, for hardy flowers and rock gardens; Messrs. Batchelor and Son, Harrogate, for ferns and hardy flowers.

Silver-gilt Flora Medal. — To Messrs. Charlesworth and Co., Haywards Heath, for orchids; to Messrs. H. B. May and Sons, for ferns.

Silver-gilt Banksian Medal.—To Messrs. Mansell and Hatcher, Rawdon, for orchids; to Messrs. Gibson and Co., for hardy flowers; to Messrs. Dobbie and Co., Edinburgh, for roses and gladioli; to Messrs. Jas. Backhouse and Son, Lim., York, for hardy flowers and apples; and to Messrs. Kelway and Son, Langport, Somerset, for gladioli.

Silver Hogg Medal.—To Mr. Hathaway, gardener to J. Brennand, Esq., Baldersby Park, Thirsk, for fruit and vegetables.

Silver Knightian Medal.—To W. D. Cliffe, Esq., for fruit.

Silver Flora Medal.—To Mr. E. V. Low, Haywards Heath, for orchids; to Mr. W. Lawrenson, Yarm-on-Tees, for carnations and phloxes; to Mr. C. F. Waters, Balcombe, for carnations; to Messrs. Ker and Son, Liverpool, for stove and greenhouse plants; to Mr. F. J. Bell, Whitley Bay, for sweet peas and violas; to Messrs. W. and J. Brown, Peterborough, for roses.

Silver Banksian Medal.—To Mr. S. Bailey, Knaresborough, for sweet peas; to Messrs. Young and Co., Hatherley, for carnations; to Messrs. Conway and Sons, for hardy flowers; to Messrs. Mack and Miln, Darlington, for roses and hardy flowers; to Mr. A. J. Hall, Harrogate, for coleus and fuchsias; and to Messrs. Mawson Brothers, Windermere, for phloxes, etc.

Bronze Flora Medal.—To Messrs. Keeling and Son, Bradford, for orchids; to Messrs. Dickson and Robinson, Manchester, for phloxes, etc.; to Mr. A. H. Rigg, Baildon, for roses; to Mr. W. Bonsall, Harrogate, for carnations and greenhouse plants.

Bronze Banksian Medal.—To Mr. W. J. Jarman, Ripon, for sweet peas and dahlias.

Cultural Commendation.—To Mr. W. S. Hannan, for peaches.

Certificate of Appreciation.—To the British Botanical Association, York, for an educational exhibit.

MEDALS.

The North of England Horticultural Society's awards were as follows:

Gold.—To Messrs. W. Artindale and Son, Sheffield.

Silver-gilt.—To Messrs. J. Kelway and Son[illegible]Langport; and to Messrs. H. B. May and Sons, Edmonton.

Large Silver. — To Messrs. W. and J. Brown, Peterborough.

Silver. — To Messrs. Harkness and Son, Bedale; to Mr. A. H. Rigg, Baildon; Messrs. Young and Co., Hatherley; Mr. C. F. Waters, Balcombe; and Mr. F. J. Bell, Whitley Bay.

Large Bronze.—To Messrs. Batchelor and Sons, Harrogate; to Mr. W. Lawrenson, Yarm-on-Tees; to Messrs. J. Backhouse and Son, Lim., York; to Messrs. Mawson Brothers Windermere; and to Mr. W. Bonsall, Harrogate.

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, AUGUST 1.

Present: Mr. E. A. Bowles, M.A., F.L.S. (in the chair), Messrs. E. M. Holmes, W. Cuthbertson, J. W. Odell, W. Hales, J. T. Bennett-Poë, J. Fraser, and F. J. Chittenden (hon. secretary).

UNCOMMON ORCHIDS.—Mr. J. O'Brien drew attention to two uncommon orchids shown by Sir Trevor Lawrence—Catasetum apterum, which he regarded as nearly related to C. splendens, several varieties of which had been described, and Eria mysorensis, bearing pretty small flowers, with a curious and rather unpleasant scent.

ANTIRRHINUM, ETC., MALFORMED.—Mr. Fraser showed a flower of Antirrhinum majus, with the petals separated nearly to the base, and therefore almost free. The flowers below it in the inflorescence were of normal structure. Two plants showed the peculiarity, but seed did not appear to be formed freely. He also showed gloxinia flowers having petaloid outgrowths from near the base of the corolla, on its outer side, similar to those previously exhibited by Mr. Odell in gloxinia and streptocarpus, and which Mr. Odell had found in the former plant to be produced regularly every year.

ACONITUM ROSTRATUM.—Canon Ellacombe sent a fasciated branch of this rare white-flowered aconitum.

CUCUMBER WITH PERSISTENT FLOWER.—Dr. G. Walker, of Wimbledon, exhibited fruits of cucumber, having the flower green, and persisting even when the fruit was fully grown. This is not a very uncommon occurrence in fruits of this family, but the plants sent showed it in a marked degree.

SWEET PEA WITH SUPERNUMERARY CARPELS.—Mr. W. Cuthbertson mentioned the occurrence in the garden of E. H. Christy, Esq., of Margaretting, of sweet peas, having three pods produced from every flower in the variety Mrs. Hugh Dickson. The flowers appeared to be otherwise normal, but every flower had produced three carpels on the plant, which had been noticed by Mr. A. Ireland when examining Mr. Christy's collection.

MEETING OF COMMITTEES, AUGUST 15.

Owing to the closing of the Horticultural Hall for the purpose of redecoration there was no exhibition on this occasion. The Floral, Fruit, and Orchid Committees met in the committee rooms upstairs for the purpose of dealing with novelties. The Orchid Committee had several meritorious novelties submitted to them; but the duties of the Floral and Fruit Committees were very light. The contributions to the Floral Committee were limited to a few seedling scented-leaf pelargoniums, but they were not considered sufficiently distinct from varieties already in cultivation to obtain recognition. Several tomatoes were shown, but no awards were made.

The most noteworthy of the novelties submitted to the Orchid Committee were Trichopilia Lehmanni, a beautiful white-flowered species exhibited by Sir Trevor Lawrence, Bart. (A.M.); Cattleya rhoda illuminata, a handsome form, exhibited by Messrs. Charlesworth and Co., Haywards Heath, the flowers large, with broad petals and sepals orange suffused rose, and the lip rich purple-crimson with orange throat. (F.C.C.) Sophro-cattleya Goodsoni, a distinct hybrid, exhibited by Mr. H. S. Goodson, Fairlawn, Putney; the flowers are of medium size, with crimson lip. (A.M.) Gongora leucochila, a distinct species from Messrs. Charlesworth and Co., with pendant racemes of white and purple flowers. (A.M.) Several new orchids were exhibited by Messrs. Stuart Low and Co., Bush Hill Park Nurseries; Messrs. Sander and Sons, St. Albans; Mr. J. Gurney Fowler, Glebelands. Messrs. Charlesworth and Co. and Mr. H. S. Goodson exhibited several novelties in addition to those which gained awards.

Basingstoke, AUGUST 7.

In Goldings Park the annual show was held on the 7th inst., and was a distinct improvement upon recent years. The entries were much more numerous, while the quality of the various exhibits left little to be desired. The hon. secretary, Mr. L. T. E. Llewelyn, and other members of the executive may be congratulated on the manner in which they performed their duties.

In the class for a group of miscellaneous subjects arranged for effect in a semicircle, there were three exhibitors, the first award going to Mr. W. Green, gardener to S. E. Bates, Esq., Manydown Park, Basingstoke, for a bright, tasteful arrangement of orchids, crotons, palms, ferns, and gloxinias; Mr. E. Wassel, gardener to Mr. W. H. McConnel, Baughurst, Basingstoke, second for a good arrangement, except that a white form of Phlox Drummodi, although singularly beautiful, was too plentifully employed. Mr. J. Keen, gardener to H. Welch Thornton, Esq., Beaurepaire Park, third. For nine specimens, in or out of bloom, three competed, and Mr. J. Keen was first. In his collection was a remarkably fine specimen of Cycas revoluta, good Stephanotis floribunda, and Allamanda Hendersoni. Mr. Wassel was second with good palms.

Tuberous begonias were a distinct feature, being numerous and good. Mr. F. Sweet, gardener to J. G. Holt, Esq., Kingsclere, was first for eight with large, finely-flowered specimens. Mr. Dean, gardener to L. de L. Simonds, Esq., Audley's Wood, Basingstoke, second with capital specimens. Pyramidal-trained coleus were very fine, Mr. W. Green winning for four with remarkable plants in size and colour. The plants were fully 6ft. high, and richly coloured. With an extremely fine specimen of Ixora Duffi, Mr. Learmouth, gardener to J. Liddell, Esq., Sherfield Manor, Basingstoke, won for a specimen flowering plant. Mr. Dean secured a similar honour for foliage plant with a good specimen of Latania borbonica; Mr. Wassel coming next with a richly-coloured specimen of Dracæna Lord Wolseley. Exotic ferns were admirably displayed by Mr. Keen in his first prize collection of six, Nephrolepis elegantissimum, Adiantum elegans, and a good Dicksonia were the leading kinds. Mr. Keen was also the only exhibitor of caladiums, and was awarded first for six specimens. Mr. Learmouth won for twelve table plants in a strong competition, and also for four pots liliums.

Roses were moderately shown, Mr. Dean winning for twelve, and also for twelve kinds of hardy flowers with popular varieties well staged. For a collection of flowers grown out of doors to fill a space of 6ft. run of tabling, five competed, making an interesting display; quality of flower and the general decorative effect were to be the leading features. Mr. Dean won with such subjects as phloxes, liliums, roses, carnations, and zinnias, all effectively displayed. Mr. G. Petty, gardener to Wilfred Buckley, Esq., Moundsmere, Basingstoke, was a good second. For twelve bunches, any distinct kinds, five entered, the best coming from Mr. Learmouth. Ixora Duffi, Gloriosa superba, hibiscus, cannas, liliums, etc., made a handsome display; Mr. Keen second. Sweet peas were fairly well shown. Mr. A. Child, gardener to the Hon. Mrs. Baring, Preston, Candover, won for six varieties (Messrs. J. Carter and Co.'s prize). Cactus dahlias were finely displayed, Mr. Child winning with a good set, as also he did with show varieties. Mr. Learmouth had the best carnations, thirty-six blooms in twelve varieties.

Fruit was finely shown, as it usually is here. For a collection of six dishes, pines excluded there were three contestants. Mr. Learmouth was first with Madresfield Court and Alexandrian Muscat grapes, Dymond peaches, Spencer nectarines, Brown Turkey figs, and Hemskirk apricots. Mr. J. Gardner, gardener to Colonel H. Walpole, Keckfield Place, Winchfield, was a close second. Muscat of Alexandria and Cooper's Black grapes, with Sutton's Scarlet melon were the most important dishes. Mr. F. West, gardener to Lord Curzon, Hackwood Park, Basingstoke, third. Eight entered for two bunches Black Hamburgh grapes. Mr. G. Wassel was first with large shapely bunches and berries, well coloured; Mr. Dean second with larger bunches, but less shapely. For two bunches, any other black, Mr. Green had the best of nine sets with Madresfield Court, Mr. Learmouth coming next with the same variety. In the class for two bunches, any Muscat, Mr. Gardner won with superb examples of Madresfield Court; Mr. Learmouth second with Alexandria. Melons were numerous and good. Mr. Green was first with Sutton's Superlative for scarlet flesh; Mr. Dean for green flesh. Mr. Keen, with handsome examples of Noblesse peaches, secured the award for a single dish, Mr. Learmouth occupying a like place with nectarines. Mr. Gardner was first for three dishes dessert apples; Mr. Learmouth for culinary; while Mr. West won for pears and plums.

AN EFFECTIVELY ARRANGED COLLECTION OF FRUITS, VEGETABLES, ETC.,
For which Mr. Hathaway was awarded Lord Faber's Silver Cup at the North of England Horticultural Society's Show on the 15th inst.

Harborne Gooseberry Show.

The exhibition of the Harborne Gooseberry Society's Show, which was founded ninety-seven years ago, was, as usual, held at the Green Man Inn, Harborne, on the 12th inst., and two following days. There were about one hundred plates of fruit awaiting the arduous trial of weighing, and considering the recent arid weather, many excellent examples were staged. A large proportion of the berries bore evidence of over-ripeness, and had to be tenderly handled in the gathering and weighing operations.

As for several years past, the champion, Mr. Emanuel Withers, was once again victorious in a keen contest. The premier berry, Bobby, 26dwt. 6gr., was contributed by Mr. E. Withers. In the class for twin berries, Mr. W. Smith led with Bobby, 25dwt. 21gr.; Mr. J. Davis second for King of Trumps, 24dwt. 17gr.; Mr. H. Eardley third for Fascinator, 22dwt. 17gr.

For a single red berry.—Mr. E. Withers scored with Bobby, 20dwt. 5gr.; Mr. W. Timmins second with Lord Derby, 17dwt. 4gr.; Mr. G. Nicholls third with Blucher, 14dwt. 12gr.; Mr. R. Sheppy fourth with Blucher, 14dwt. 12gr.; Mr. W. Smith fifth with Jumbo, 14dwt. 4gr.; Mr. J. Davis sixth with Jolly Potter, 13dwt. 5gr.

For one yellow berry.—Mr. W. Timmins first with Leveller, 18dwt. 4gr.; Mr. E. Withers second with Ringer, 17dwt. 22gr.; Mr. G. Nicholls third with Thatcher, 15dwt. 18gr.; Mr. W. Priest fourth with Goldfinder, 14dwt. 13gr.; Mr. R. Dix fifth with High Sheriff, 12dwt. 12gr.; Mr. R. Sheppy sixth with Lady Popham, 12dwt.

For one green berry.—Mr. G. Nicholls first with Shiner, 16dwt. 5gr.; Mr. E. Withers second with Surprise, 16dwt. 3gr.; Mr. W. Timmins third with Telegraph, 14dwt. 17gr.; Mr. W. Smith fourth with Stockwell, 14dwt.; Mr. C. Corbet fifth with British Oak, 13dwt. 22gr.

For one white berry.—Mr. G. Nicholls first with Fascinator, 17dwt. 12gr.; Mr. W. Smith second with Transparent, 16dwt. 6gr.; Mr. E. Withers third with Faithful, 14dwt. 6gr.; Mr. H. Eardley fourth with Careless, 13dwt 6gr.; Mr. J. Davis fifth with King of Trumps, 12dwt. 16gr.; Mr. C. Corbet sixth with Alice, 12dwt. 9gr.

For four colours berries.—Mr. E. Withers first with Bobby, Transparent, Leveller, 68dwt. 4gr.; Mr. G. Nicholls second with Bobby, Surprise, Leveller, 64dwt. 21gr.; and Mr. W. Timmins third with Stockwell, Fascinator, Bobby, and Leveller, 64dwt. 6gr.

For six red berries.—Mr. E. Withers first with Bobby, 108dwt.; Mr. W. Timmins second with Bobby, 100dwt. 12gr.; Mr. J. Davis third with Bobby, 90dwt. 12gr.

For six yellow berries.—Mr. E. Withers first with Ringer, 101dwt. 6gr.; Mr. J. Davis second with two Ringer and four Levellers, 87dwt. 16gr.; Mr. W. Timmins third with six Levellers, 86dwt. 21gr.; Mr. W. Priest fourth with six Levellers, 80dwt.

For six green berries.—Mr. E. Withers

first with British Oak, Matchless, and Surprise, 85dwt. 5gr.; Mr. G. Nicholls second with Volunteer, Telegraph, and Surprise, 80dwt.; Mr. W. Timmins third with three Stockwell and three Telegraph; Mr. H. Eardley fourth with British Oak, Shiner, and Telegraph, 76dwt. 18gr.

For six white berries.—Mr. W. Smith first with Transparent, 93dwt. 12gr.; Mr. E. Withers second with Transparent, 91dwt. 18gr.; Mr. J. Davis third with five Transparent and one Fascinator, 65dwt. 20gr.; Mr. G. Nicholls fourth with Fascinator, 65dwt. 4gr.

Atherstone, Warwickshire.

The annual exhibition of the Atherstone Horticultural Society was held on the 7th and 8th inst. in Meredale Park.

There were 212 classes, and close upon 2,000 entries, the products being staged in six large marquees picturesquely disposed about the show ground.

The chief feature of the show was formed by the four groups of plants arranged for effect. The pride of place was easily obtained by that well-known Midland exhibitor, Mr. J. Victor Macdonald, gardener to Sir Geo. H. Kenrick, Whetstone, Edgbaston. Conspicuous in the artistically-arranged group were the richly-coloured crotons; the second prize was awarded to Mr. W. R. Manning, nurseryman, Dudley; and third to Mr. William Vause, Leamington, both having highly meritorious arrangements. Stove and greenhouse plants were very well shown by Messrs. W. Vause, W. R. Manning, and Mr. Alfred Sale, Atherstone. In the class for single specimens in bloom, Messrs. W. Vause, W. R. Manning, and Mr. W. Hanson, Sale, were the respective prize-takers. For a single greenhouse plant Messrs. W. Vause, W. L. Ireland (Atherstone), and W. R. Manning won in the order named. Exotic ferns were largely and excellently shown by Mr. W. R. Manning, Mr. A. Sale, Colonel Hemming (of Mancetter), and Mr. W. L. Neland. Fuchsias were very creditably staged by Messrs. W. L. Ireland, Colonel Hemming, A. Sale, W. Pemberton, W. R. Manning, and T. Dolman. Single-flowering tuberous-rooted begonias were fairly well represented, Messrs. W. L. Ireland, Alfred Sale, and W. E. Oatley, Cliffe Castle, being the more successful exhibitors. For four double flowering begonias Mr. W. E. Oatley was first. Gloxinias were capitally staged by Messrs. W. S. Ireland, Alfred Sale, and Lady Agnes Peel, Mancetter.

There was a large display of herbaceous and annual flowers. Carnations and picotees formed an interesting feature, but these were staged on cards, there being no class for blooms as grown. For twelve yellow-ground carnations the respective winners were Messrs. Arthur R. Brown, Lim., Mr. C. J. White (Walsall), and Messrs. Wm. Pemberton and Sons, Bloxwich. For six selfs Mr. C. J. White led. Messrs. A. R. Brown, Lim., second; and Messrs. W. Pemberton and Son third. For six flakes or bizarres Messrs. A. R. Brown, Lim., and Messrs. W. Pemberton and Son, and Mr. C. J. White were the winners. For six picotees, yellow-grounds, the previous order of winners was repeated. For six white-ground picotees a similar repeat occurred. Sweet peas were not a very strong feature, otherwise, considering the adverse character of the season, the leading exhibits were fairly good. In the class for twelve varieties, arranged in a space 5ft. by 3ft., the winners were Mr. W. F. S. Dugdale and Lady Agnes Peel, of Mancetter. For a box of cut flowers of stove and greenhouse plants Mr. W. F. S. Dugdale, Mr. W. E. Oakley (Cliff House, Atherstone), and Mr. W. L. Ireland were the prizetakers in the order named.

For a collection of six kinds of flowers other than those named, own foliage only allowed, Mr. W. L. Ireland, Mr. W. F. S. Dugdale, and Mr. W. S. Allen (gardener, Mr. Joseph Green), were the winners with meritorious exhibits. In the class for a collection of twelve kinds of hardy herbaceous and perennial flowers, staged in vases (the trade excluded), the successful exhibitors were Sir Geo. Chetwynd, Lady Agnes Peel, and Mr. W. H. Sale.

There was a goodly display of grapes, and for two bunches of black varieties Mr. Wm. Turner, Atherstone (gardener, Mr. J. Black), was awarded the premier prize for large clusters of Black Hamburgh; Mr. W. F. S. Dugdale second, with fine bunches and berries; Sir Geo. Chetwynd, with smaller but well-coloured berries, third. For a single bunch of Black Hamburgh, Mr. Dugdale, Mr. G. H. Fowler, Hale End Hall, Tamworth (gardener, Mr. M. A. Sleath), and Sir Geo. Chetwynd were the winners. For two bunches of Muscat of Alexandria, Mr. G. H. Fowler, Mr. Dugdale, and Sir Geo. Chetwynd won in the order named with very good examples. For a single bunch of Muscat of Alexandria grapes, Mr. G. H. Fowler, Sir Geo. Chetwynd, and the Earl of Huntingdon obtained the awards with very good examples. Melons were excellently shown. Mr. Stanes Chamberlayne, Witherley Hall, Atherstone; Mr. W. F. S. Dugdale, and Mr. S. Allen, Rose Hill, Atherstone, were the successful contestants. Peaches were very fine, both in size and colour. There were six exhibits, and the Rev. Bramber Hall, Weddington Rectory, Nuneaton, was first, and Mr. Stanes Chamberlayne second.

Aberdeen Sweet Pea Exhibition.

AUGUST 11 and 12.

Under the auspices of the Aberdeen and Northern Counties Sweet Pea Society a fine exhibition of these beautiful flowers was held in the Music Hall Buildings, on the above dates, and the success which it attained must have proved exceedingly pleasing to the promoters. Not a little of the credit is due to Mr. M. H. Sinclair, who acted as secretary.

There were over 200 entries, comprising something like 500 separate exhibits. In the class for twelve varieties, with waved standards, the leading prize—a very handsome silver rose bowl—went to Mrs. Dunbar Dunbar, of Seapark, Forres, N.B. (gardener, Mr. John A. Grigor). Of the twelve, the best were Charles Foster, Edrom Beauty, Etta Dyke, Masterpiece, Earl Spencer, Unique, and Shrimp. Second honours went to Sir Thomas Burnett, Bart., of Leys, Crathes Castle (gardener, Mr. John Petrie), for a very fine group. Mrs. Davidson, of Dess, Dess House, Aberdeenshire (gardener, Mr. J. Ingram), took third place. For the best six vases of varieties with waved standards Mrs. Dunbar Dunbar, of Seapark, again won splendidly; Mr. A. M. Williamson, Monboddo House, Fordoun, N.B. (gardener, Mr. James Tullo), made a capital second. In the class for three vases with waved standards Mr. A. M. Williamson carried off first and second honours, his entries including some very fine specimens. In the competition for best three bunches, novelties of 1910 and 1911, Mrs. Dunbar Dunbar, of Seapark, scored; Mr. Alex. Grigor, Duff House, Banffshire, was second; and Mr. A. M. Williamson third. For the best bunch of lavender sweet peas leading place again fell to Mrs. Dunbar Dunbar, but she was closely run by Mr. A. M. Gordon, Newton House, Insch, Aberdeenshire (gardener, Mr. William Cameron), and Sir Victor Mackenzie, Bart., Brackley House, Ballater, Aberdeenshire (gardener, Mr. R. Gibson). For one bunch sweet peas Mrs. Davidson, of Dess, Mr. A. M. Williamson, and Sir Thomas Burnett, Bart., divided the honours. Mr. Williamson, Mrs. Dunbar Dunbar, and Sir Victor Mackenzie were the most successful for picotee-edged sweet peas.

A very good show was also put up by the amateurs, no little credit being due to Mr. R. M. Williamson, Rubislaw Den, Aberdeen; Mrs. Edwards, Beech Hill House, Aberdeen; Mr. James Mitchell, 3, Arbeadie Terrace, Banchory; Mr. G. Rhind, 42, Gordon Street, Huntly; Mrs. Mitchell, Sluivannachie, Ballater; Mr. W. Cormack, Dyce, Aberdeenshire; and Mr. Wood, 64, Hilton Place, Aberdeen, for the fine displays they made.

Some exceedingly fine work was shown in the section for floral decorations, which demonstrated how well the sweet pea lends itself to decorative effect. For the best dinner-table decoration of sweet peas Mrs. Porter, Monaltrie, Ballater, had a very fine win. Mrs. Milne, 357, Hardgate, Aberdeen, made a good second. The bowls of sweet peas proved a very fine item, and were greatly admired. Mrs. Edwards, Restalrig, Cults, Aberdeenshire, won first and second honours here with capital entries, and Mrs. Edwards, Beech Hill House, Aberdeen, was third. This last-named lady also carried off the first prize for the best vase of sweet peas, any two varieties. Baskets were few, but what there were were good. Mrs. Milne, 357, Hardgate, Aberdeen, had a very fine win here, and her exquisite taste was much admired. Mrs. Porter, Monaltrie, made a good second.

Lockerbie Sweet Pea Society.

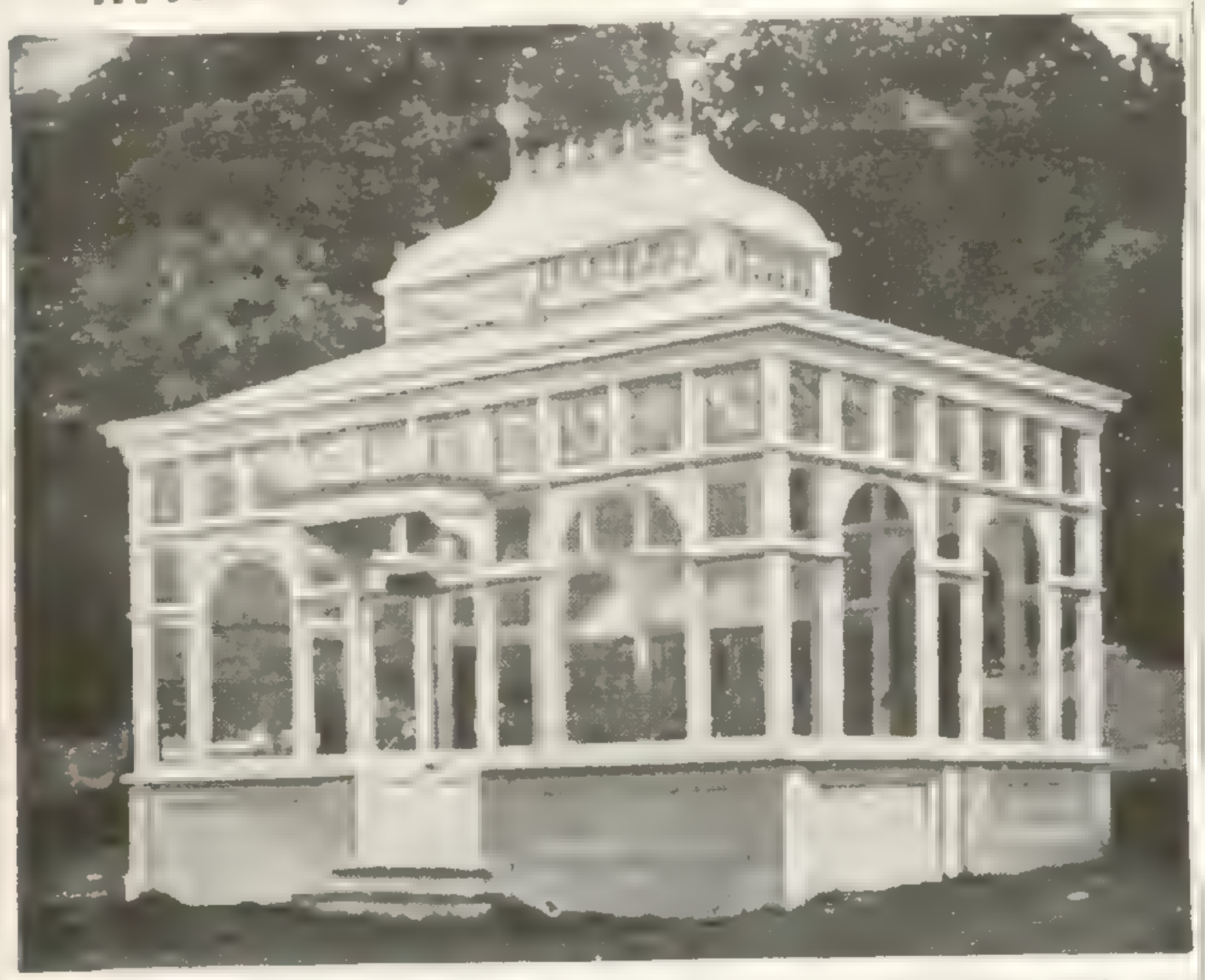
This society, which has been recently formed, inaugurated its career by holding its first show in the Town Hall, Lockerbie, on August 5. The exhibition was an excellent one, the flowers, as a whole, being fresh, clean, large, and showing every appearance of high cultivation; while a considerable number of the newest varieties showed that the exhibitors were in touch with the development of the sweet pea. The arrangements of the show were good, and reflected credit on the committee, of which Mr. A. Watt is chairman, and Mr. G. L. Moffat secretary. The prize for twelve vases of sweet peas, in twelve varieties, went to Mr. G. L. Moffat, who staged excellent flowers in good varieties. For nine vases Mr. Moffat was also first. The best six vases, distinct, came from Mr. Thos. Stoddart; and the best three were staged by Mr. Jas. K. Johnstone. Mr. W. Howie had the best vase of white, as well as that of crimson, carmine, or scarlet, and of one of lavender or blue. Mr. G. Wilson, Bridge Street, was first for a vase of picotee-edged. Mr. J. H. Tweedie won for a vase of pink or blush and for one of bronze or maroon; also for a lady's spray. Mr. J. K. Johnstone won for a vase of mixed sweet peas. The dinner-table competition was a good one, and Mrs. Mair, Ardyne, was first with remarkably pretty sweet pea decorations; Miss A. Halliday and Miss Murray being respectively second and third.

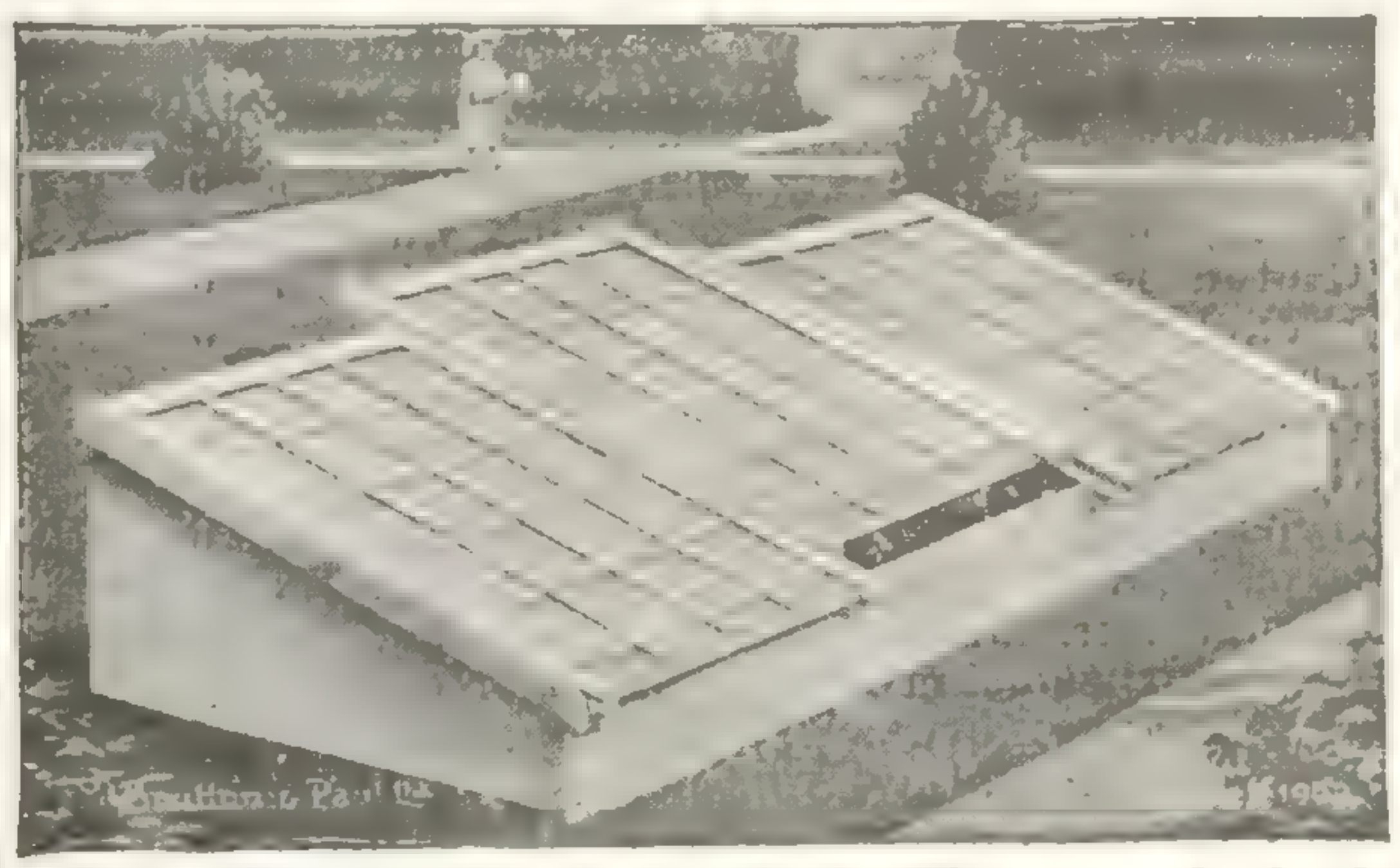
Solihull Horticultural Society.

AUGUST 7 and 8.

The seventh annual exhibition provided an opportunity for the cultivators in this district to produce an excellent display, and the executive had good reason to be well satisfied with the results of their labours. As usual the show and fête were held in the picturesque park of Malvern Hall. Non-competitive exhibits were not numerous, but lack in numbers was amply compensated for by the more than ordinary beautiful floral contributions of Messrs. Gunn and Sons, Olton, and Messrs. Hewitt and Co., Solihull. Messrs. Gunns' artistic arrangement comprised a lily pond bordered by rockery and furnished with suitable plants. To the right and left of the pond were disposed large groups of phloxes in good condition. On the extreme right were also bold sheaves of various coloured statices (sea lavender), and on the left-hand side were Japanese lilies in variety. A large gold medal was awarded this firm, and a similar award was made to Messrs. Hewitt and Co. for a splendid arrangement of liliums, begonias, carnations, ferns, etc. A silver-gilt medal was awarded Mr. H. N. Ellison, West Bromwich, for a really artistic arrangement of finely-grown exotic and other ferns.

A class was provided for groups of plants arranged for effect, 18ft. by 12ft., and in this there were three exhibitors. The premier position was occupied by Messrs. J. Cypher and Son, Cheltenham, with a surprisingly beautiful arrangement, in which richly-hued crotons played a conspicuous part; the second prize was awarded to Mr. W. Vause.





BOULTON & PAUL, LTD., HORTICULTURAL BUILDERS, Norwich

ATTRACTIVE, PRACTICAL GLASSHOUSES.

Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of **40**/- value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.

4ft. by 6ft. ... £2 0 0 | 8ft. by 6ft. ... 3 0 0

Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft. Similar to No. 75, with Two Lights... } **35/-**

SEND FOR ILLUSTRATED CATALOGUES.

Every part of these Houses is thoroughly well made, painted three coats, GLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.

No. 49A.—Span, 10ft. by 8ft. £11 10 0

No. 47A.—Lean-to, 10ft. by 7ft. £9 10 0

All parts are numbered ready for easy re-erection by any handy man.

Leamington, for a very meritorious exhibit; Mr. W. Saunders, gardener to Mr. J. Earle, King's Norton, being a close third. In the class for six stove or greenhouse plants Messrs. Cypher were the winners with medium sized specimens; Mr. W. Vause second, and Mr. W. Saunders third.

In the amateurs' class for a group of plants arranged for effect, the first prize and a silver challenge cup was awarded to Mr. H. F. Foster, gardener to Mr. F. E. Muntz, Umberslade Hall, with a most tasteful arrangement of well-grown plants; Mr. D. Bagg, gardener to Mr. W. E. Perks, Solihull, second; and Mr. T. Warner, gardener to Mrs. M. Davis, Solihull, third. For six foliage and flowering plants. Mr. F. E. Muntz was placed first; second, Mr. J. Warner, gardener to Mrs. C. T. Wade, Sandal House, Solihull. Ferns were well shown, and the first prize was annexed by Mrs. F. Yardley, Prospect House, Solihull (gardener, Mr. G. Mills). For three coleus, distinct, Mrs. M. Davis was first. Begonias were well staged by Mr. W. Hulse, Mrs. M. Davis, and Mr. Hugh Mitchell (gardener, Mr. T. Batchelor). Zonal pelargoniums were creditably shown by Mrs. M. Davis. Gloxinias were fairly good, the first prize being annexed by Mr. J. Warner, gardener to Mrs. C. T. Wade, Sandal House, Solihull; second, Mr. J. Taylor, gardener to Mr. Ed. Allday, Solihull. Fuchsias comprised well-grown specimens of large size, the first prize being won by Mr. F. Warner, gardener to Mr. M. Davis, Berry Hall, Solihull; and the second by Mr. J. Warner, gardener to Mrs. C. Wade, Sandal House.

Sweet peas were not very abundant. For twelve vases, distinct, Mr. Wm. Hulse, The Dingles, was first with fairly good blooms; second, Mr. E. Gladstone, Hampton-in-Arden (gardener, Mr. G. Thompson); and Mr. E. A. Grove third. A silver medal was awarded to Mr. G. F. Spittal, Glengariff, Solihull, for a collection of carnations arranged in vases, of exceptional merit.

Vegetables were strongly represented, and mainly of fine quality, and the special prizes offered by Messrs. Sutton and Sons, Reading, and Messrs. A. Webb and Sons, Wordsley, were keenly competed for.

FORTHCOMING ENGAGEMENTS.

TUESDAY, August 22.—Royal Horticultural Society of Ireland.

WEDNESDAY, August 23.—Shrewsbury Floral Fête; two days.

Battle Horticultural Society

THURSDAY, August 24.—Peebles Horticultural Society.

National Hardy Plant Society.—Conference at Old George Hotel, Shrewsbury, commencing 4 p.m.

SATURDAY, August 26.—Glassford Horticultural Society.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

PEACHES ON WALLS.—W. G., Derby: You cannot do better than well syringe the trees early in the evening after each hot day, expose the fruits to sunshine by adjusting leaves and growths, and keep the roots of the trees comfortably moist. A little nitrate of soda well watered in would help the fruits to swell up, but this must be carefully given, or it will excite growth too much, and thus possibly result in some amount of unripened wood should cool moist weather follow.

DISQUALIFICATION.—L. C. L., Wolverton: Competitors are not notified that they have won a prize until the prize is paid, nor is a competitor told he has been disqualified; he is expected to find out these things for himself. With reference to the other points raised, it is quite impossible for us to deal with them in the absence of the schedule, but we may state that distinct varieties and distinct kinds are two very different matters.

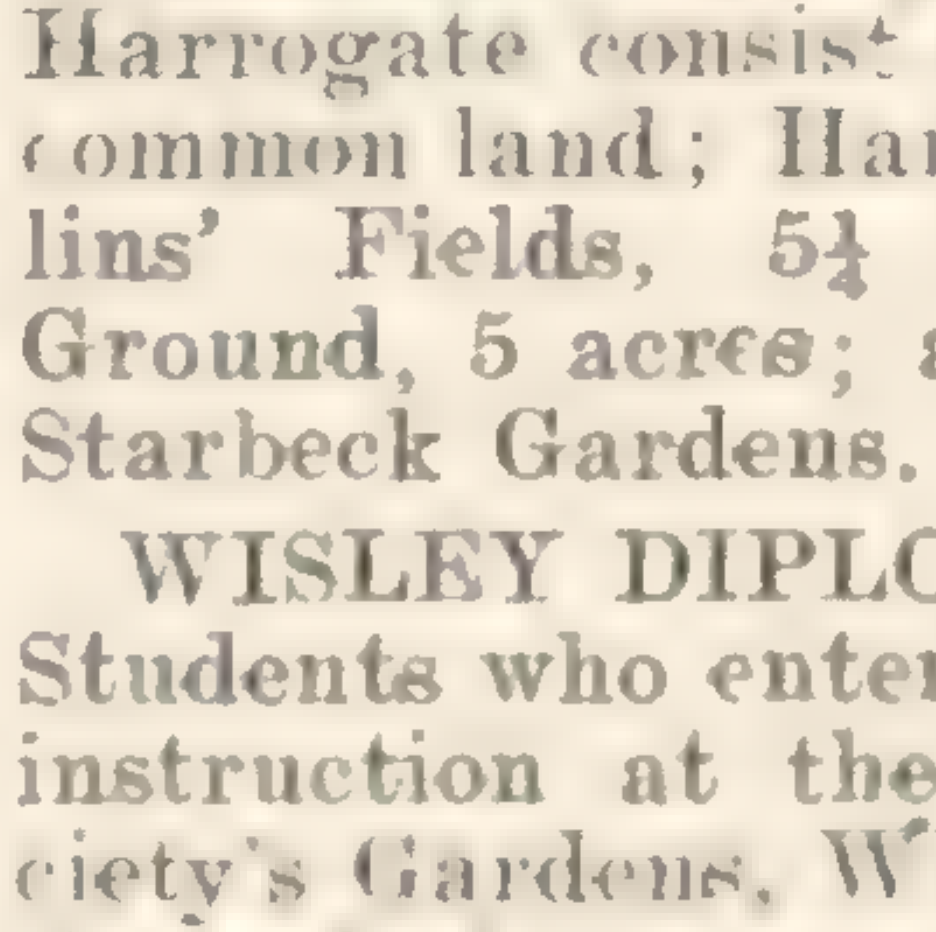
BLACK ROT IN TOMATOES. — B. N., Wantage: The specimens sent showed strong evidence of the presence of Macrosporium Tomato, a fungus pest known as Black Rot. Remove and burn all affected fruits, and spray the plants at intervals with a solution of potassium sulphide. Keep the house well ventilated, and maintain a dry buoyant atmosphere in the structure.

SAVING TOMATO SEEDS. — F. P. B., Nottingham: When the fruits are ripe enough for general use they are sufficiently ripe for the extraction of seeds. Cut the tomatoes through the middle, laterally, so as to expose all the interior divisions; then, with the handle end of a spoon, or with a knife point scoop out the seeds and pulp. Place the seeds in a finely-meshed wire sieve, and hold under a tap of water, at the same time working the pulp about with the fingers until it is parted from the seeds and passes through the sieve. It is practically impossible to wash out all the pulp, as this is very adhesive, but as soon as the seeds are well washed turn them out on a sheet of glass, spreading them thinly. Place the glass in the sunshine (with an inverted sieve over them, if out of doors, to keep birds away), until dry, when they should be removed, placed in dry, fine silver sand, and be well rubbed through so as to remove all bits of dry pulp. The sand can be easily sifted away from the seeds, leaving the latter quite clean and dry, ready for storing in a cool dry cupboard.

INEXPENSIVE HARDY FERNS.—E. R. K., Rotherham: The following varieties of hardy ferns come within your specification, as they are all of free growth, elegant, and inexpensive: Athyrium filix-fœmina (Lady fern) corymbiferum, A. f.-f. cristatum, A. f.-f. Elworthii, A. f.-f. grandiceps, A. f.-f. percristatum, A. f.-f.-plumosum Axminster variety, A. f.-f. ramo-cristatum, Lastrea filix-mas (Male fern) cristata, L. f.-m. cristata angustata, L. f.-m. grandiceps, L. f.-m. polydactala, L. f.-m. ramo-cristata, L. f.-m. sub-cristata, Lastrea dilatata (Broad Buckler fern) foliosa cristata, L. d. grandiceps, L. d. polydactala, Polystichum angulare (Soft Shield fern) acutilobum, P. a. cristatum, P. a divisilobum, P. a. grandiceps, P. a. latipes, P. a. pulcherrimum, P. a. tripinnatum, Scolopendrium vulgare (Hartstongue fern) capitatum, S. v. crispum, S. v. c. fimbriatum, S. v. c. grande, S. v. Edwardsi, S. v. grandiceps, S. v. ramo-cristata, S. v. ramo-marginatum, S. v. undulatum rigidum.

HARROGATE'S OPEN SPACES.—U. N., Holmfirth: The parks and open spaces at Harrogate consist of The Stray, 200 acres of common land; Harlow Moor, 52½ acres; Collins' Fields, 5¼ acres; Valley Pleasure Ground, 5 acres; and the Prospect Hill and Starbeck Gardens.

WISLEY DIPLOMA.—M. E. J., Rawdon: Students who enter for a two years' course of instruction at the Royal Horticultural Society's Gardens, Wisley, receive a diploma at the end of the course provided, in addition to conforming to the rules and regulations of the gardens, he (1) Pass written and practical examinations in the principles and operations of horticulture upon the syllabus laid down for study. (2) Present an essay



SCOTT'S WASP DESTROYER

has stood many years' test as the only effectual protection for Fruit Trees, &c., from Wasps and Flies.

Prices, 1/6 and 2/6 per bottle.

Makers—

CORRY & CO., Ltd., 13 & 15, Finsbury St., E.C.

SOLD BY ALL NURSERYMEN AND SEEDSMEN.

written by himself upon some approved horticultural or scientific subject. (3) Submit a collection of at least 200 properly dried, named and localised plant specimens collected outside the Wisley Gardens; and (4) submit a collection of insects either injurious or helpful to horticultural plant life. One or two student demonstratorships, or travelling scholarships, will be awarded by the Council, at their discretion, after considering the reports of the director, superintendent, and examiners, to enable the student to acquire special knowledge of some particular branch of horticulture. Students to whom these awards are made will receive a small remuneration and will be required to assist in demonstrating to the junior students. The following prizes are annually awarded: (1) The "Sutton" prizes to the value of £3 10s. divided between the most successful candidates at the diploma examination. (2) The "Nicholson" prize of the value of £2 2s. awarded to the student who shows greatest diligence in observation.

BRICK MEASUREMENTS.—L. S. A., Sutton Coldfield: Stock bricks should measure 8¾ inches by 4½ by 2¾ inches; Welsh fire bricks, 9 by 4½ by 2¾ inches, and paving bricks 9 by 4½ by 1¾ inches. An ordinary stock brick weighs about 7lb.

MELON AND MARROW SEEDS.—G. A., Shildon: If the seeds are kept dry and away from frost, they should retain their germinating power for several years; indeed, many growers prefer melon seeds that are two seasons old when sown, believing that a sturdier and more fruitful growth results than from quite new seeds.

FRENCH GARDENING.—F. L. C., Ludlow: It has been estimated that the equipment of a French garden of two acres, which is considered the best area when the produce has to be marketed, involves an expenditure of about £1,000, but the purchase of sufficient frames and cloches for a private garden is a small matter. As a proof of this, it may be mentioned that a three-light frame, 12ft. by 4ft., costs about £1 10s., and 100 cloches about £6. Consequently six frames, giving a run of 72 feet, and 100 cloches would cost about £15, and be sufficient for the majority of gardens. Commencing with the month of October, hotbeds are in use for about five months, and the collection of stable manure has to be commenced in September and be continued until February or March. In accordance with the practice that at present obtains in English gardens, the manure is turned over three or four times with a fork, and each time well shaken up in the process. The beds should be 5ft. 6in. wide, and run from east to west, and vary from 10in. to 20in. in depth, according to the season, and the crop, 10in., for example, being sufficient for the cabbage lettuces. The beds on which to place the cloches are made up in a similar manner to those for the frames. The manure is trodden firmly, as the beds are made up, and when they have been completed they are covered with soil, the layer ranging from 5in. to 8in. in thickness, according to the crop. The French practice is to mix with the soil an equal quantity of old manure, and this practice should be adopted in English gardens.

NAMES OF PLANTS.

D. D., Ashton.—Cattleya Rex.

L. L. J., Yarmouth.—1, Statice latifolia; 2, Sedum carneum; 3, Morisia hypogæa.

D. R. S., Leominster. — 1, Helenium autumnale; 2, Chironia ixifera; 3, Funkia Sieboldi.

W. R., Congleton. — 1, Selaginella Mertensi; 2, S. Kraussiana aurea; 3, Phyllanthus glaucescens; 4, Costus igneus.

S. K., Minehead. — 1, Escallonia macrantha; 2, Leycesteria formosa; 3, Colutea arborea; 4, Phormium tenax; 5, Piper ornatum.

C. E. M., Lincs.—1, Selaginella cæsia; 2, Eupatorium ageratoides; 3, Epilobium angustifolium; 4, Linaria alpina; 5, Dactylis glomerata variegata; 6, Diplopappus chrysophyllus.

MARKETS.

◆

COVENT GARDEN.

Flowers.

Supplies are a little short, but the demand is good.

		s. d.		s. d.
Adiantum cuneatum	per doz. bun.	4 0	to	6 0
Arums	per doz.	2 6		3 0
Asparagus	per doz. bun.	10 0		10 0
Asters	per doz. bun.	3 0		5 0
Cattleyas	per doz.	10 0		20 0
Carnations	per doz.	1 2		2 6
,,	per doz. bun.	6 0		9 0
Coreopsis	per doz. bun.	1 0		1 6
Croton leaves	per bun.	1 0		2 6
French fern	per doz. bun.	2 6		4 0
Gaillardias	per doz. bun.	1 0		1 6
Gardenias	per doz.	1 0		2 0
Gladiolus	per doz. bun.	1 6		4 0
Gypsophila	per doz. bun.	2 6		6 0
Lapageria	per doz.	1 0		2 0
Lilium auratum	per doz.	2 6		4 0
,, speciosum	per doz.	1 0		2 0
,, longiflorum	per doz.	1 6		2 0
Lily of the Valley	per doz. bun.	6 0		15 0
Marguerites	per doz. bun.	1 6		3 0
Mignonette	per doz. bun.	2 0		3 0
Odontoglossums	per doz. blms.	2 0		4 0
Pelargoniums	per doz. bun.	3 0		4 0
Roses	per doz.	0 9		2 0
Smilax	per doz. trails.	2 0		4 0
Stocks	per doz. bun.	4 0		5 0
Sweet Peas	per doz. bun.	2 0		4 0
Tuberoses	per doz.	0 4		0 6

Fruits.

Business has been good, and an improvement upon the previous week.

		s. d.		s. d.
Apples, Lisbon	per case	4 6		5 0
,, Tasmanian	per case	4 0		7 6
,, English	per bush.	2 6		10 6
Apricots, French	per ½-sieve	9 0		11 0
Bananas	per bun.	4 0		12 6
Cherries	per ½-sieve	3 0		7 6
Cranberries	per case	9 0		10 0
Figs	per doz.	1 0		3 0
Greengages	per ½-sieve	4 0		8 0
Grapes, English	per lb.	0 10		4 0
,, Guernsey	per lb.	0 8		1 6
Lemons	per case	9 0		25 0
Loganberries	per peck	2 0		2 6
Melons	each	1 0		2 6
,, Cantaloupe	each	1 6		3 6
Nectarines	per doz.	3 0		12 0
Oranges, Denia	per case	12 0		30 0
,, Cape	per case	8 0		10 0
,, Jamaica	per case	6 0		10 0
,, St. Michaels	per case	8 0		10 0
Peaches	per doz.	3 0		12 0
Pineapples	each	2 0		5 0
Plums	per ½-sieve	4 6		6 0
Raspberries	per doz. pun.	6 0		8 0
Walnuts, pickling	per bush.	2 6		3 6

Vegetables.

A steady all-round demand prevails, and prices are firm.

		s. d.		s. d.
Artichokes, Globe	per doz.	2 0	to	4 0
Beans, dwarf	per basket	1 6		3 0
,, broad	per bush.	3 0		4 0
,, runners	per bush.	4 0		4 6
Beet	per doz. bun.	2 0		3 6
Cabbage	per tally	3 0		5 0
Carrots	per doz. bun.	1 0		1 6
Cauliflowers	per doz.	1 0		1 6
Cucumbers	per flat	5 0		7 6
Endive	per doz.	1 0		3 0
Horseradish	per doz bun.	8 0		12 0
Lettuce	per doz.	1 6		2 6
Marrows	per doz.	1 0		1 6
Mint	per doz. bun.	1 0		3 0
Mushrooms	per doz. lb.	6 0		12 0
Onions, Lisbon	per case	4 0		5 0
Parsley	per ½-sieve	1 0		1 6
Peas	per bush.	3 0		6 0
Radishes	per doz. bun.	0 4		1 0
Spinach	per bush.	1 6		2 0
Tomatoes	per doz. lb.	2 6		4 0
,, Guernsey	per doz. lb.	2 0		3 0
Turnips	per doz. bun.	3 0		4 0

LONDON POTATO MARKETS.

Business has improved a little, and prices are firm.

		s. d	s. d.
Jersey	per cwt.	3 6	4 6
Cherbourg	per cwt.	3 0	4 6
Sharpe's Express	per cwt.	5 0	5 6
Eclipse	per cwt.	4 9	5 6
Epicure	per cwt.	4 6	4 9
Puritan	per cwt.	4 9	5 0

Geum Mrs. Bradshaw.—This has not been long before the public, but it has already become a general favourite, for its large, semi-double orange-red blossoms are particularly showy, while, provided the old flowers are cut off when their beauty is past, a succession is kept up for a long time. Taken altogether, the geums are certainly a very showy class of herbaceous plants. Even the old Geum coccineum will in the herbaceous border hold its own with many more expensive subjects.—W. T.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1911. August 6 to August 12.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	Temperature of the Air. At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Aug. 6—Sunday	9 12	67	60	74	53
,, 7—Monday	10 36	69	63	80	58
,, 8—Tuesday	13 18	73	63	87	53
,, 9—Wednesday	12 0	75	69	96	56
,, 10—Thursday	12 30	70	64	83	59
,, 11—Friday	7 48	64	62	84	59
,, 12—Saturday	12 6	73	66	91	55
Means	(total) 77 30	70	64	85	56

Date. 1911. August 6 to August 12.	Rain.	Temperature of the Soil at 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
Aug. 6—Sunday	—	67	66	64	48
,, 7—Monday	—	67	66	63	52
,, 8—Tuesday	—	68	66	64	46
,, 9—Wednesday	trace	70	67	64	49
,, 10—Thursday	—	71	68	64	51
,, 11—Friday	—	70	68	64	53
,, 12—Saturday	—	69	67	64	43
Means	(total) —	69	67	64	49

The maximum temperature of 96 deg. registered on Wednesday, 9th, is the highest maximum ever recorded at Wisley since observations have been taken there by the R.H.S.

CONTENTS.

PAGE
Answers to Correspondents ... 617
Antirrhinum Rose Doré ... 605
Carnation Lord Steyne ... 611
Celmisias ... 609
Disa grandiflora ... 608
Exhibitions and Meetings ... 613
Forced Lily of the Valley ... 610
Forestry in Scotland ... 608
Lachenalias ... 605
Notes of the Week ... 601
Roses in Pots ... 603
Taunton Flower Show ... 604
The Ling ... 611
Trees suitable for Experimental Forestry ... 605
Water Lilies ... 607
Work for the Week ... 612

ILLUSTRATIONS.

Portrait of Mr. Thomas Alfred H. Rivers, 601; Cattleya Rhoda illuminata, 603; Antirrhinum Rose Doré, 605; Part of Lake with Water Lilies, Gunnersbury House, 607; Disa grandiflora, 608; Celmisias at the Royal Gardens, Kew, 609; Carnation Lord Steyne, 611; Gold Medal arrangement of Hardy Herbaceous Plants, 613; An effectively-arranged Collection of Fruits, Vegetables, etc., at the North of England Horticultural Society's Show, 615.

No charge is made for having a Pine Spray Syringe on Approval, not even the postage. Considering this, and the enormous advantages of the Combination Spraying Head, it is in your best interests to at least see and try one before buying a syringe of another make. Price 10/6. Sole proprietors, **Robinson Brothers, Ltd., West Bromwich.**

PINE SPRAY SYRINGE

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out, Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head) wishes to recommend H. KNAPP as Inside or Inside and Out; age 20; Bothy preferred. Apply C. FOWLER, The Lodge, Priestwood Court, Bracknell.

GARDENER (Head where two are kept or Single-handed); age 45; married, two children, away from home; good references. A. W. BOAKES, 30, Hamilton Road, Harrow.

GARDENER (Head or good Single-handed with help); well up in all branches; age 42; married, no encumbrances; good references. A. VENABLES, 6, Greatham Road, Bushey Hall Road, Watford, Herts.

GARDENER (Head Working); life experience all branches; age 37; married, no family; well recommended by former employer; disengaged. LEWIS, Stone Cottage, Stow Bedon, Attleborough, Norfolk.

GARDENER (Head Working or Single-handed); married; no family; life experience in Vines, Peaches, Cucumbers, Melons, Tomatoes, Chrys., Kitchen and Flower Garden; good references. CURD, 36, Clarence Place, Gravesend, Kent.

GARDENER (Head Working).—CAPTAIN USHER highly recommends R. Appleby as above; life experience in all branches; thoroughly understands Planning and Laying Out; also Land and Stock; many years' excellent character. Address APPLEBY, 12, Brewster Gardens, North Kensington, London, W.

GARDENER (Head Working); life experience in all branches; excellent characters as Head and Foreman (Outside); age 33; married, small family. HUDSON, Woodhall, Cupid Green, Hemel Hempstead.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 31; married when suited; excellent references. Address, Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working).—F. W. FLETCHER, Esq., can highly recommend his Head Gardener as a thoroughly trustworthy experienced good all round man; age 45; married; one girl 14 years. F. GREENGRASS, 40, Primrose Terrace, Browning Road, Enfield, Middlesex.

GARDENER (Head Working): South preferred; one or more under; life experience Fruit, Vegetables, Flowers, Glass; knowledge of Cows, Poultry; 32; married, three children; 3½ present place, seven and two previous; good references; photo. S. WAGHORN, Uppingham.

GARDENER (Head Working, where several are kept); 22 years' practical experience in large establishments; highest references, character, ability; age 37; married. KING, Avenue, Stoke Prior, Bromsgrove.

GARDENER (Head Working); life experience Inside and Out; thoroughly competent; personal references for 20 years for ability, etc.; abstainer; age 38. SMITH, The Gardens, Brownings Manor, Blackboys, Sussex.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushroom, ridge or flat; Kitchen, Lawn, Flower Garden. Special prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (Head).—S. T. Martin, Head Gardener, Heythrop, Chipping Norton, Oxon, seeks re-engagement in good establishment; disengaged middle of September. Age 44; married, one daughter.

GARDENER (Head or Single-handed with help).—Mr. A. J. MOLYNEUX, Allithwaite Lodge, wishes to recommend J. GOLDSMITH; leaving his services after 2½ years for no fault; 15 years' practical experience Inside and Out; age 30; single. Apply J. GOLDSMITH, The Square, Allithwaite, Grange-over-Sands, Lancashire.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 31; married, two children. The Gardens, Bushey Down, Tooting Common.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; aged 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

MR. A. LINDLEY recommends A. SIMMONS as GARDENER (First of two or Single-handed); life experience Inside and Out; two years present situation; six years previous; age 35; single. Apply, 6, Little-Roke, Kenley, Surrey.

GARDENER, 40; Single-handed preferred; thoroughly experienced; excellent character; active worker; Inside and Out with early vegetables; abstainer; married. A. BISHOP, Windmill Hill, near Hailsham.

GARDENER (Single-handed, or with help); experienced, Inside and Out; age 30; married, no family; good references. H. CATLEY, The Lodge, Pilgrim's Holt, Margery, nr. Reigate, Surrey.

GARDENER (Single-handed or Second), 8 years' experience, Inside and Out; age 25; single; abstainer; 12 months present place; good references; leaving when suited. Near Brighton preferred. No circulars. C. BAGGS, Western Cottage, Peaslake, Surrey.

GARDENER (Single-handed, or with Son to help); life experience in all branches; age 37; disengaged; good references. E. LIMEHOUSE, 11, Charleville Road, West Kensington.

GARDENER (Second of three or four, Inside and Out); 9 years' experience; well recommended; used to Decorating. GARDENER, 79, Tabley Road, Holloway, London, N.

GARDENER.—Single-handed, or where help is given; 16 years' experience; age 30; married. HERBERT KING, Woodbury Lodge, Clay Hill, Enfield.

GARDENER or SECOND; in good place; well experienced in Fruit and general Plant routine; excellent references; married, one boy age nine. LEWINGDON, 26, Brighton Road, Earley, Reading.

THE REV. BLUCKE can highly recommend H. BRAKE as GARDENER or GROOM-GARDENER; leaving for no fault; three years present place; disengaged when suited. Apply H. BRAKE, School House, Shroton, Blandford, Dorset.

SIR THOMAS ELLIOTT, K.C.B., highly recommends his GARDENER, who has been with him 5½ years; willing and obliging; good worker; 47, no children; 11 years previous reference. HOPPER, 130, Walton Road, East Molesey.

YOUNG MAN requires situation as UNDER GARDENER; 2½ years' experience; good references; disengaged. S. TALBOT, Near School, Barrow, Bury St. Edmunds.

MRS. LAURENCE PHILLIPS wishes to recommend GEORGE PINK, who has been with her for two years, under her gardener; steady, hard-working lad. PINK, Deane, Whitchurch, Hants.

YOUNG MAN seeks Situation in Gentleman's Garden; age 18; Inside and Out; been doing General Garden work from age 15. F. HICKS, Horton-cum-Sudley, Oxon.

YOUNG MAN seeks Situation as GARDENER, Single-handed; can take charge of pony; good character; over two years in present situation; age 24; near London preferred. Apply J. SCOTT, 51, Manor Park Road, East Finchley.

YOUNG MAN, age 22, seeks Situation as GARDENER, Under; Inside and Out; 7 years' experience in good establishments; good references. L. HAWKER, Police Station, Westbury-on-Severn, near Newnham, Glos.

YOUNG MAN (20) seeks SITUATION as Beginner in Kitchen Gardens or Pleasure Grounds; has some knowledge. F. WALKER, The Manor, Bucknell, near Bicester.

YOUNG MAN, age 20, seeks SITUATION as GARDENER (Under); used to Mowing Machines; two years' experience; good character; total abstainer. F. GRAY, Broom, near Biggleswade, Beds.

YOUNG MAN seeks SITUATION to look after Electric Light and Garden; well up in all branches; nine years last situation. EDWARD VILLA, Street Cobham, Surrey.

WANTED, Situation as GARDEN LABOURER, or as Single-handed; would not object to a place in a nursery; good spade hand, etc., and well used to garden work; disengaged; good character. W. LING, Hunger Hill, Westcott, near Dorking.

Situations Vacant.

VACANCY.—Wanted, young man as OUTSIDE FOREMAN, with four as unders. Well able to look after young men; must understand Herbaceous Roses and Woody Plants, also Fruit, Bothy. Apply, stating wages required, to HEAD GARDENER, Pyrford Court, Woking.

SITUATION COUPON

For AUGUST 26, 1911.

To the Advertisement Manager of "The Gardeners' Magazine,"
148 & 149, Aldersgate Street, London, E.C.

Please Repeat my Advertisement.

Name...

Address ....

....

Date...

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue

Catalogues and Estimates Free.

MESSENGER & Co Ltd
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office 122 VICTORIA St S.W.

MODERN GLASSHOUSES

as supplied by MESSENGER and CO., Ltd., are made of the best materials, and only capable and reliable workmen are employed in the erection thereof.

The following letter was recently received by us on the completion of a contract for a well-known Member of Parliament.

February, 1911.

"I should not be doing my duty to your workmen if I did not at once tell you, on the completion of your work, how pleased I have been with each and all of them.

"They have been most obliging throughout the whole job, and have endeavoured to do everything in an efficient and thoroughly workmanlike manner, and I must congratulate you upon having such capable employees."

The Culture of any Flower, Fruit, or Vegetable at a Glance.

THE ENCYCLOPÆDIA OF GARDENING.

Crown 8vo, 482 pages, bound in cloth.
NET 3/6; by Post, 3/10.

By T. W. SANDERS, F.L.S., F.R.H.S.
Editor of "Amateur Gardening."

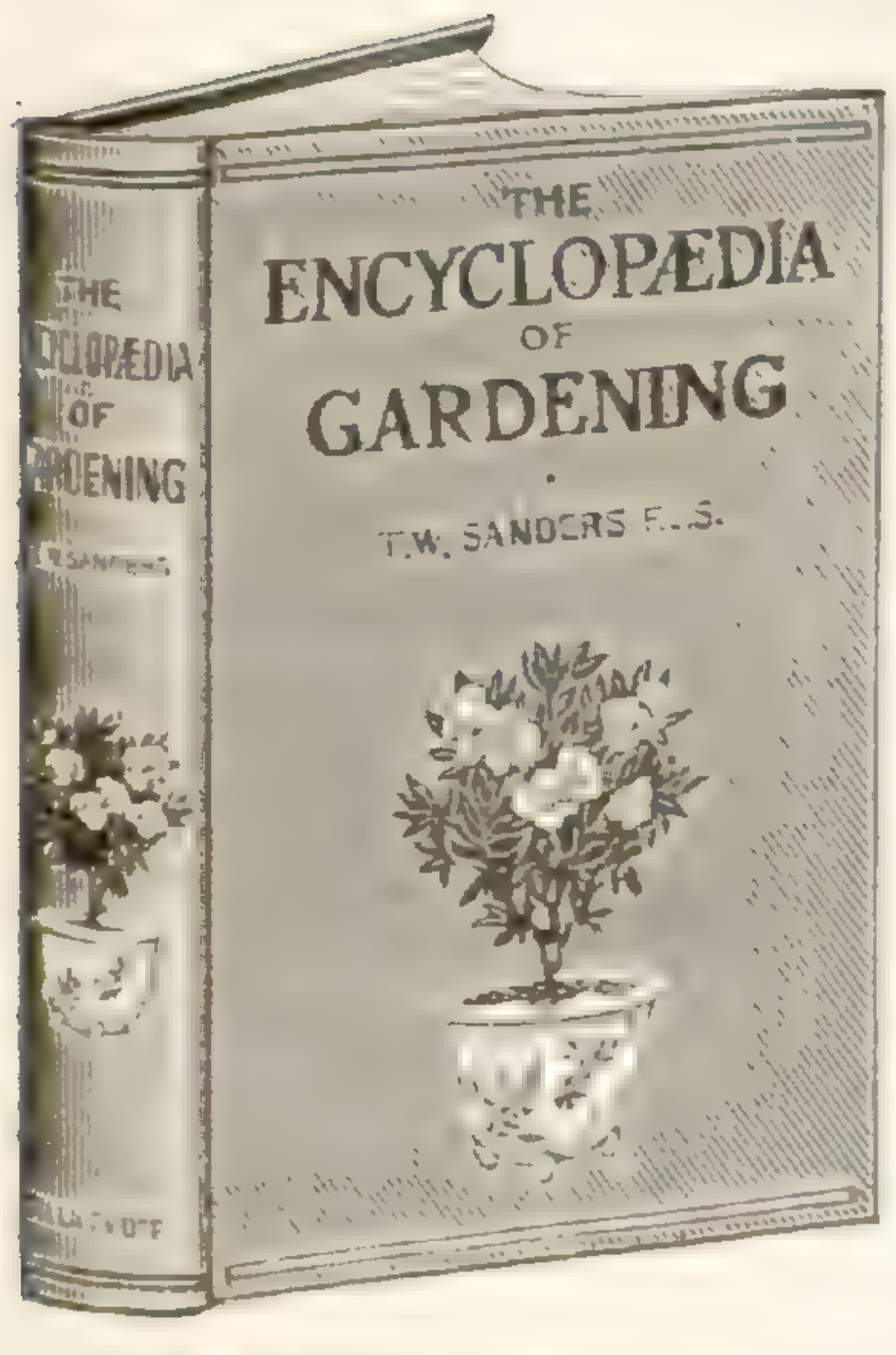
A COMPLETE GUIDE AND DICTIONARY to the Culture, Propagation and Description of Flowers, Fruit, Vegetables, Plants, Trees, Shrubs, etc.

. . . INCLUDING . . .

Time of Planting.
Position.
Soil.
Manures.
Temperatures.
Common or Popular Names.
Botanical Names.
Watering.
Natural Order.
Date of Introduction.
Species Cultivated.
Propagation.
Colour.
Height.
Time of Flowering.
Duration.
Forcing.
Potting. Pruning.
Cultural Details.

"Gardeners who want a really practical dictionary of their art will find all they need in this work."—*Sheffield Independent.*

Send Postcard for complete Catalogue of Books on all Garden Subjects.



FOURTEENTH — EDITION. —
Revised and Improved.

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE," 148 & 149, Aldersgate St., E.C.

Please send me a Copy of the New Edition of "THE ENCYCLOPÆDIA OF GARDENING," by post, for which I enclose remittance of 3/10.

Name ....

Address ....

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

SHREWSBURY FLORAL FETE—Illustrated Report.

THE GARDENERS' MAGAZINE.

No. 3,017.
Vol. LIV.
(Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, AUGUST 26, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

AWARDED TWENTY-EIGHT GOLD MEDALS.

BARR'S "GOLD MEDAL" DAFFODILS. Descriptive Illustrated Catalogue of all the finest sorts in cultivation, for Pots, Exhibition, Flower Borders or Naturalising, and including the finest selection of New Seedling Narcissi ever offered. Sent free on application.

BARR'S GENERAL BULB CATALOGUE contains a full list of the best Spring and Summer-flowering Bulbs, including Hyacinths, Tulips, Irises, Lilies, etc., for forcing and bedding. Sent free on application. BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON

JAMES GRAY, HORTICULTURAL BUILDER, CHELSEA, LONDON, S.W., has a large number of first-rate Hot Water Men. This is an excellent time for having the Hot Water Heating Apparatus overhauled, and a reliable man can be secured by a postcard, telephone message (201 Western), letter, or wire, "Gray, Chelsea, London."

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

SEED BOXES.—12 x 9 x 2in. timber, 8s. 9d. gross, made, 10s. 3d.; 15 x 9 x 2in., 10s. 3d., made 11s. 9d.; also flower sticks, trellis, greenhouses, garden lights, or timber of all description. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

THE BOURNE DAFFODILS have gained the HIGHEST AWARDS wherever Exhibited. Send for my Illustrated and descriptive Catalogue of FIRST QUALITY BULBS at MODERATE PRICES. Post Free from
CHRISTOPHER BOURNE,
The Daffodil Specialist, Simpson,
Bletchley.

R.H.S. EXAMS.—Write the Premier Coach re up-to-date correspondence course. Success certain. Particulars free.—"MEDALLIST," "Ferndale," Pinfold Street, Darlaston.

RUSTIC SUMMER HOUSES, trellis-work, Fencing, Pergolas, Arches, Seats, Bridges, Log Cabins, Loggias, etc. Send for our new LOG CABIN and RUSTIC CATALOGUE (just published), sent post free. BOULTON and PAUL, Ltd., Norwich.

CARNATIONS.—Spiral Wire Stakes. No tying required. Will last a lifetime. 24 inches long, 7s. 6d. per 100; 30 inches, 8s. 6d. per 100; 36 inches, 10s. per 100; sample doz., 1s., 1s. 3d., and 1s. 9d., all carriage paid. Pea Trainers, 6ft. by 4ft., 2s. and 3s. each. Garden Archways, Garden Edge and Croquet Bordering, 8 inches high, 8d.; 10 inches high, 10d. per yard. All cash with order. Catalogue free on application. J. PENKETH, Iron and Wire Works, Market Place, Manchester. Telp.: 3695 City.

NARCISSUS.—Tulips, Hyacinths, etc. All the leading and best varieties, from 4s. 6d. per 100. Ask for illustrated price list, post free. Satisfaction guaranteed. C. F. A. VAN DER SLUYS, F.R.H.S., La Ramée, Guernsey.

NOT a large Advert., or an elaborate Catalogue, but you can depend upon getting absolutely reliable bulbs at most reasonable prices, when ordering from ELLISON'S, 57, West Bromwich, or I should not offer to send on Appro. Cg. Pd.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

LOVELY FLOWERS AT CHRISTMAS.

WEBBS' WHITE ROMAN HYACINTHS.
Extra large bulbs, 3/- per doz.; 20/- per 100.
Selected Bulbs, 2/- ,, 14/- ,,
Good Bulbs 1/6 ,, 10/6 ,,

WEBBS' POLYANTHUS NARCISSI.
Paper White, 1/- per doz.; 6/6 per 100.
Paper White, large flowering,
1/3 per doz.; 8/6 per 100.

WEBBS' BULB CATALOGUE for 1911.
Beautifully illustrated, Post Free.
WEBB and SONS, The King's Seedsmen,
Wordsley, Stourbridge.

BUNYARD'S CATALOGUES
Free on Application.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

KENT STRAWBERRY PLANTS
NEW CATALOGUE READY.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

LAXTON'S STRAWBERRIES.—Fine early pot plants, for forcing, of Royal Sovereign and other varieties, 15s. 100. For new varieties see our catalogue, gratis on application.
LAXTON BROS., Bedford.

CLAY'S MANURES, CRUSHED BONES
(See page iv.)

CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

GREENHOUSES and CONSERVATORIES. Distinctive Designs and Finished Workmanship. Write now for ILLUSTRATED CATALOGUE. CARTER and HOWARD, Horticultural Builders, Kingston-on-Thames.

LUPINUS Polyphyllus, Pink; Senecio Clivorum, Delphinium hybridum.
Strong plants of the above, 2s. per doz.; seed, 9d. per pkt.
CHAS. CUNDY,
Nurseryman and Seedsman, Sudbury, Suffolk.

SLUGS, SLUGS, SLUGS. — "SANITAS POWDER" will rid your garden of slugs. Mr. Walter P. Wright, of the "Garden Week by Week," says:—"The particular hint that I was going to offer about slugs was to scatter 'Sanitas Powder' on the soil amongst the plants—slugs simply loathe it." Mr. E. Poulter, of Mayfield, Sussex, writes:—"I have found 'Sanitas Powder' most efficacious in keeping off slugs." "SANITAS POWDER," 6d. and 1s. tins, and 12s. 6d. per cwt.

THE SANITAS CO., Ltd., Limehouse, London, E.

GRAPE VINES. — Stout Young Green Canes for present planting. FRUITING FIGS IN POTS. List on application. WILL TAYLER, Hampton, Middlesex.

WINTER-BLOOMING SWEET PEAS.— The "Télemly" Sweet Peas gained the Gold Medal (1907) of the Hort. Soc. of Algeria, and the
LARGE NEW WAVED VARIETIES
the Gold Medal of 1911. If sown in August or September will flower from December till May in Southern Europe, N. Africa, Madeira, etc. In England must be sown in pots and protected from frost till the end of February, and will flower in April in the open, or at Christmas in a sunny greenhouse. 12 seeds each of 4 plain and 3 waved varieties will be sent on receipt of 4s. by the Rev. E. ARKWRIGHT, 36, Seymour Street, W.

THOMSON'S CELEBRATED MANURES
For full advertisement see page iii.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses. Portable buildings, etc. Catalogue gratis.

WHITE FLOWERS AT CHRISTMAS.

SUTTON'S WHITE ROMAN HYACINTHS.
Extra large bulbs, per doz., 3/-; per 100, 21/-.
Selected bulbs, per doz., 2/-; per 100, 14/-.
Fine bulbs, per doz., 1/6; per 100, 10/6.

SUTTON'S PAPER WHITE NARCISSI.
Pure white, per doz., 1/-; per 100, 7/-.
Large-flowered, pure white, per doz., 1/6; per 100, 10/6.

SUTTON'S BULB CATALOGUE for 1911.
Beautifully illustrated. Now ready.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
From Wm. ———, Esq.,
54, ——— Av.,
Rochester, N.Y., U.S.A.
25th April, 1911.
"Your catalogue is one of rare beauty and value, combining a splendid example of the printer's art with a most admirable manual for the garden lover."

SIX INCHES ROUND, Roman Hyacinths, 21s.; 5ins. round, 12s. 100. Freesias, nearly 2½ins. round, 5s. 100. Paper White, Double Roman Narciss., 4s.; 6s. 100. Now in stock.—ELLISON, 57, West Bromwich.

ALPINES.—100 in 50 good varieties, carriage paid, £2. Half and quarter quantities at same rate.
WHITELEGG and PAGE, Chislehurst.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-work, showing screens, wall panels, window surrounds, arches, arbors, etc., post free. BOULTON and PAUL, Ltd., Norwich.

NEW CYCLAMEN, "Mrs. Buckston," a great novelty, "Low's Salmon King," "Giant White," "Deepest Red," ready now in packets, 1s. 6d. and 2s. 6d. Sow early! Also Schizanthus Wisetonensis and Perpetual-flowering Carnation Seed, 1s. 6d. and 2s. 6d. per packet. STUART LOW and CO., Bush Hill Park, Middlesex.

GARDEN HOSE and FITTINGS, all sizes and lengths, best quality; list free.
HEATHMAN,
Hose Factory, Parson's Green, London, S.W.

CARNATIONS AND PICOTEES.—Best named varieties only, 3s. per doz. List free.
A. and C. TAYLOR,
Carnation Specialists,
Somercotes, Derbyshire.

IRON and WIRE FENCING for GARDENS, Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free. BOULTON and PAUL, Ltd., Manufacturers, Norwich.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.

XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.

XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N. S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London S.E.

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

ORCHIDS.

JAMES CYPHER & SONS.
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London, N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

BULBS.

R. H. BATH, Ltd.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Narcissi Tulips, Hyacinths, etc., Home-Grown.

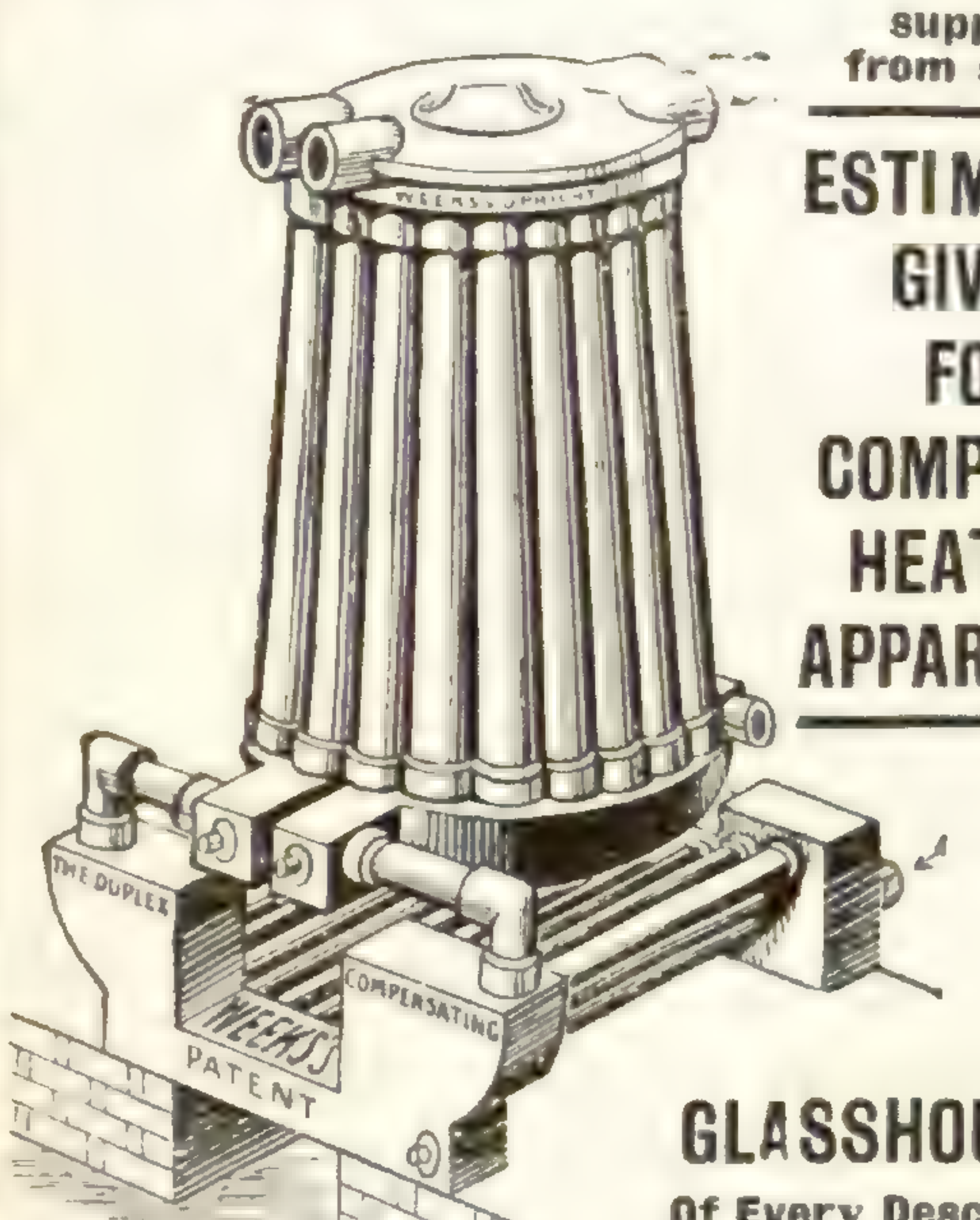
ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

WEEKS'S BOILERS

supplied from stock.



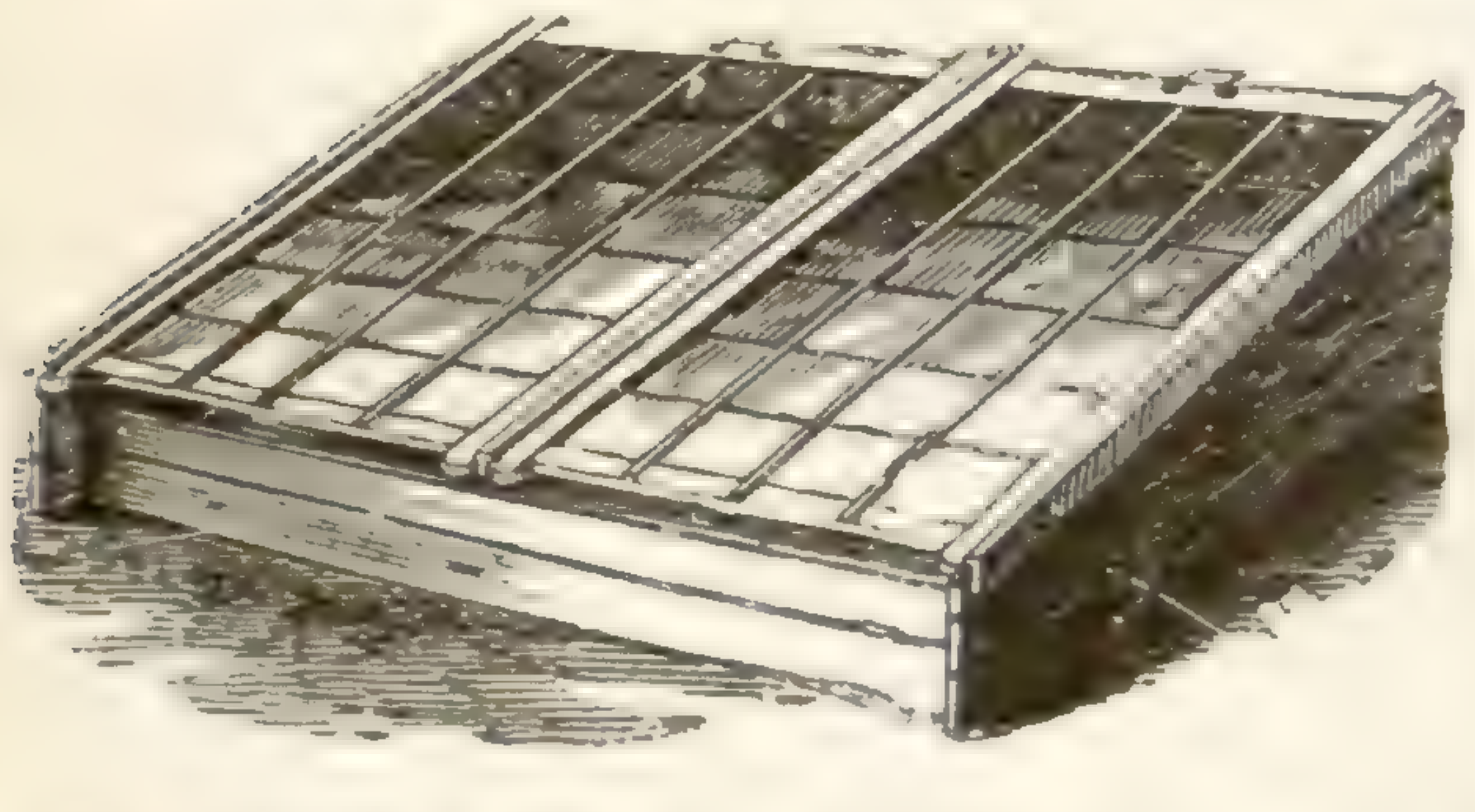
ESTIMATES GIVEN FOR COMPLETE HEATING APPARATUS

GLASSHOUSES.
Of Every Description.

J. WEEKS & CO.,
72, Victoria Street,
WESTMINSTER, S.W.

PORTABLE CUCUMBER FRAMES.

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.

		£	s.	d.
1-light 4 ft. by 6 ft.	*CASH PRICES.*	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.	*CARRIAGE PAID.*	5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON, MANCHESTER.

CARNATIONS.
AURICULAS. PINKS.

The NEW ILLUSTRATED CATALOGUE of above is now ready, and has been posted to all customers. The newest and best varieties are sold at the most reasonable prices.

Best **CARNATION** and **PICOTEE SEED** ready in October. 1/6 and 2/6 per packet.

AURICULA (Show and Alpine), PINK, and **POLYANTHUS SEED** now ready. 1/-, 1/6, to 2/6 per packet.

Send for Catalogue to

J. DOUGLAS,
Edenside, GREAT BOOKHAM.

Orchids! Orchids!! Orchids!!!

The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application.—**J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana. Vanda Cœrulea Lushai Hill variety, dark blue type; Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue Free. J.E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

J. J. THOOLEN, The EXPORT Nurseries,
Heemstede, Haarlem, Holland,
Established 1884.

Has the honour to announce that his Illustrated Price List of Bulbs and Plants in English, Autumn, 1911, at lowest prices, will be sent post free on application. **No Charge for Packing. Orders of 10/- and above entirely Free to Destinations** in England, Scotland, and Ireland, etc. First Quality guaranteed.

Some sorts of Bulbs noted out of Price List.

	Per 100. s.	d.	Per 1,000 s.	d.
Hyacinths, in the finest mixture for bedding or forcing	7	8	72	4
Hyacinths, single, first size, named, in 25 leading sorts, red, white, and blue vars., equal quantities, my selection	15	0	—	
Tulips, single early, in the finest mixture	2	0	18	4
Tulips, Darwin, mixed	3	0	25	0
Tulips, double, in the finest mixture...	2	2	20	0
Anemones, single mixed	1	4	12	0
Anemone, The Bride, pure white ...	1	4	12	0
Crocus, 1st size, in the finest mixture	1	4	12	0
Crocus, 2nd size, in the finest mixture	0	9	7	0
Scilla campanulata, blue bells	2	0	—	
Scilla campanulata, white bells	2	0	—	
Scilla sibirica, rich blue	1	6	14	6
Iris, Spanish, mixed	0	7	5	0
Iris, English, mixed	2	0	16	8
Narcis., single, in the finest mixture...	1	4	12	6
Narcis., Trumpet, in the finest mixture	2	6	20	0
Narcis., double, fine mixture	2	6	20	0
Narcis-Polyanthus, finest mixed ...	3	6	30	0
Snowdrops, Elwesi, the Giant Snowdrop	1	6	13	6
Ranunculus, French, double mixed ...	0	9	7	0

250 Bulbs of the same kind will be charged at the 1,000 rate; 25 at the price per 100; 6 at the price per 12.

Ask for Illustrated Price List and see the Collections.

ORCHIDS

EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

NEW DAFFODILS, 1911.

Our revised Descriptive Catalogue of Rare Daffodils and May-flowering tulips is now ready, and we shall have pleasure in posting a copy to all applicants. Our South of Ireland grown Bulbs are acknowledged to be second to none. Write at once. Addrese—

WM. BAYLOR HARTLAND & SONS,
Bulb Growers,
33, PATRICK STREET, CORK.
Bulb Farm: ARD CAIRN, CORK.

ONCE USED. ALWAYS USED. **The 'PATTISSON' LAWN BOOTS**

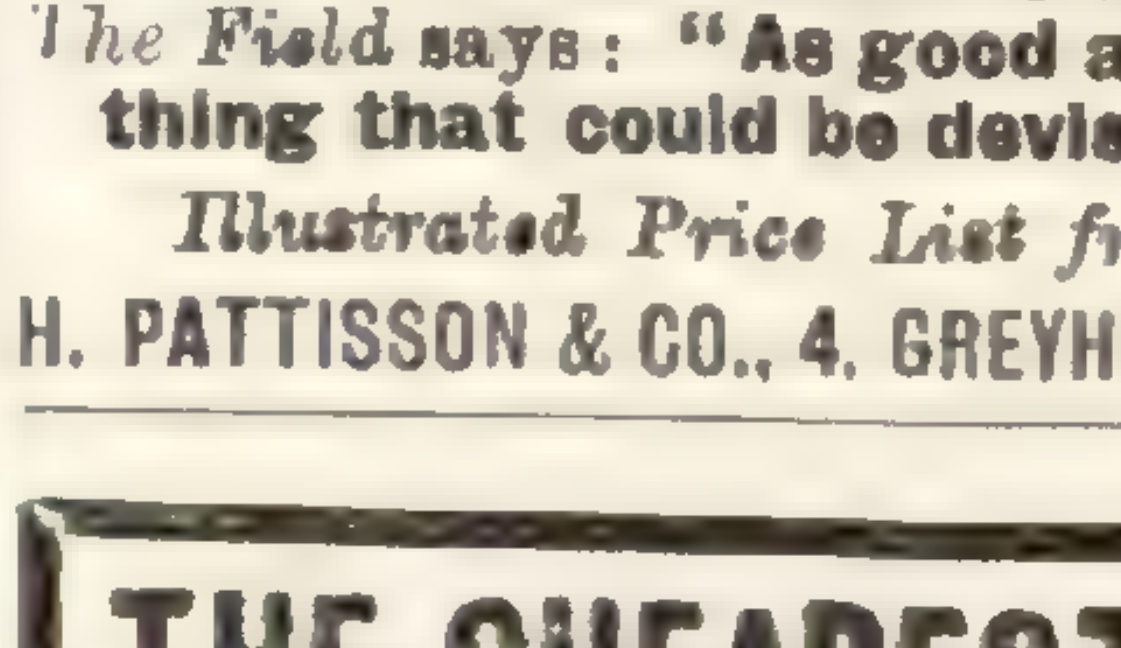


Fig. 1.

Simplest! Strongest! Most Economical!

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS

Silver Medal—
Royal Horticultural Society.

Hundreds of Testimonials.

The Field says: **"As good as anything that could be devised."**

Illustrated Price List from—

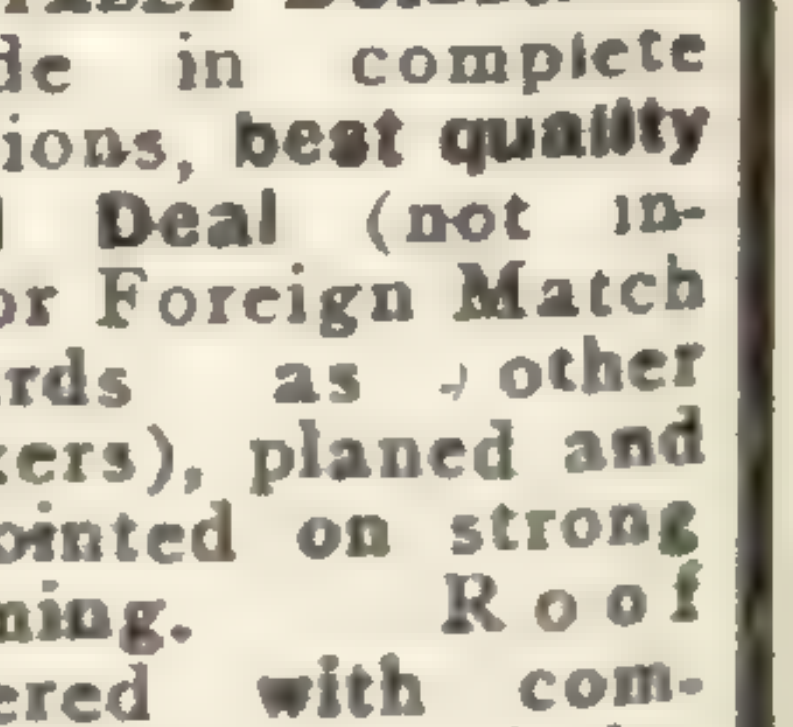
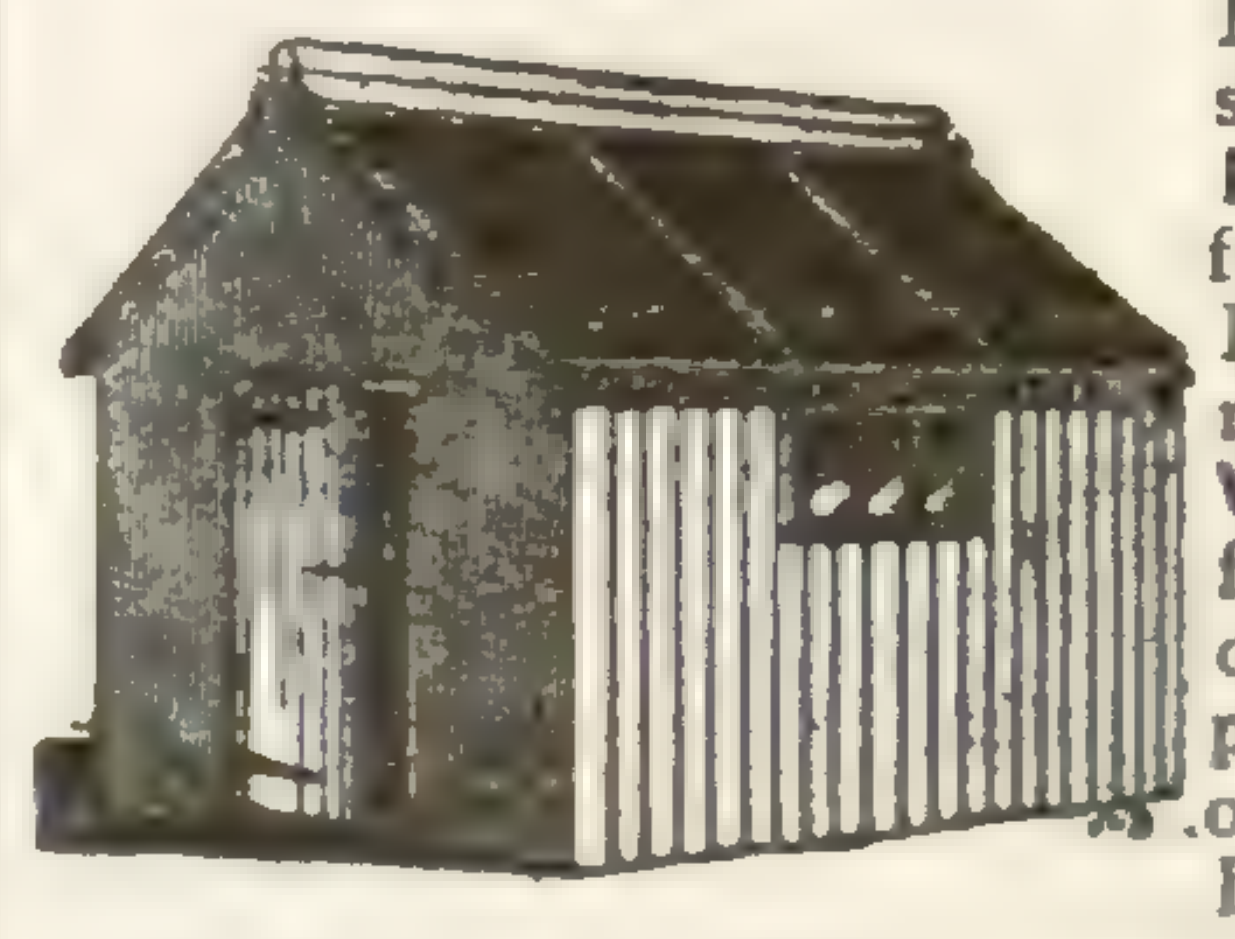


Fig. 2.

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM S.W.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

Portable Buildings. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

Sizes.	Cash with Order.	Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
Established 70 Years. *BEDFORD.*
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

Sales by Auction.

DUTCH BULBS.

Mr. J. C. STEVENS begs to announce that his **Sales by Auction** will Commence on

WEDNESDAY, August 30.

Catalogues post free.

Lots purchased, packed, and forwarded to all parts.

STEVENS' AUCTION ROOMS
(Established 150 years),
38, King Street, Covent Garden, London, W.C.

DUTCH BULBS
10,000 Lots Sold Weekly.

SALES EVERY DAY
(Saturdays Excepted),
At 10.30 o'clock, at
PROTHEROE and MORRIS'
Central Sale Rooms,
67 & 68, CHEAPSIDE, LONDON, E.C.
Catalogues Free.
Commissions Executed.

FOR SALE.—First-class NURSERY, close to Blackpool, with 500 feet run of glass, well heated, with new up-to-date boilers. For price and particulars, apply P. VAWSER, Hykeham Road, Lincoln.

RARE ALPINES CHEAP.—Profits devoted to Patriotic objects. Apply for list, LADY C., The Abbey, Much Wenlock, Shropshire, and please enclose fully addressed and stamped envelope.

CHARGES FOR ADVERTISEMENTS IN THE GARDENERS' MAGAZINE.

Five Lines and under	£0	2	6
Per Line beyond	0	0	6
" Inch	0	6	0
" Half Column	1	10	0
" Column	3	0	0
" Page	9	0	0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— & Co.

Offices: 148 and 149, Aldersgate Street, London.

THOMSON'S Celebrated MANURES

Still the best: In greater demand every year.

SAFE, SURE & LASTING.

The result of many years' **practical** experience.

VINE, PLANT, AND VEGETABLE MANURE.
1 cwt., **20/-**; ½ cwt., **10/-**; ¼ cwt., **6/-**; 14 lbs., **3/6**; 7 lbs., **2/6**; Tins, **2/6, 1/-**, and **6d.** Carriage paid on 1 cwt. anywhere.

SPECIAL TOP-DRESSING MANURE.
1 cwt., **20/-**; ½ cwt., **11/-**; 14 lbs., **6/-**; 7 lbs., **3/6**; Tins, **1/-**. Carriage paid on ½ cwt. anywhere.

Also Thomson's Book on the Vine. Thomson's Styptic.

SOLD BY NURSERYMEN & SEEDSMEN EVERYWHERE.

Write for Pamphlets, Price Lists, etc., to

Wm. THOMSON & SONS LIMITED 1868 1911

SOLE MAKERS: **WM. THOMSON & SONS, Ltd., Clovenfords, Scotland.**

MERRYWEATHER'S 614 PUMP

IS THE

Gardener's Friend.

Easy to Work. Simplicity Itself.

Write or Call—

63, Long Acre, LONDON, W.C.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.
Our Work has stood the test of time.

STALKER'S Forest Trees, Fruit Trees Roses, Bulbs, and Seeds
Are known all over the world, and cannot be surpassed for hardiness and quality.

Famous for Quality and Cleanliness.

D. STALKER & SON,
Government Contractors,
Catalogues Free. **NAIRN, N.B.**

THE FAVOURITE WEED KILLER.

SANDWITH'S
PREMIER
WEED
KILLER

As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for **6/-**; drum, **2/-**. 12 galls. for **16/-**; drum, **6/-**. 20 galls. for **26/8**; drum, **10/-**. 40 galls. for **50/-**; drum, **20/-**.

EITHER LIQUID OR POWDER.

Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,
The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

PAINT & GLASS.

NICHOLLS & CLARKE, Ltd
SHOREDITCH, LONDON.

When sending for Catalogue please cut out this advt

SUBSCRIBER'S ORDER FORM

Every Saturday THE GARDENERS' MAGAZINE. Twopence

To W. H. and L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose________for________months in advance.

Name________________________

Address______________________

Date______________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

** If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.

ESTABLISHED 1832.
No connection with any other Firm of a similar name.

ANT. ROOZEN & SON'S

SPLENDID

HYACINTHS, TULIPS,

AND OTHER

DUTCH, CAPE,

AND EXOTIC

BULBS AND PLANTS.

All of the Finest Quality.

Our Descriptive CATALOGUE *of the above, containing* FULL CULTURAL DIRECTIONS *and particulars as to* FREE DELIVERY, *will be sent post free on application to our offices, at OVERVEEN, HAARLEM, HOLLAND, or to our General Agents,*

MERTENS and CO.,
3, Cross Lane, LONDON, E.C.

Primulas! Primulas! Primulas!

41st Year of Distribution.

OUR WELL-KNOWN MAGNIFICENT STRAIN,
1/6 doz.; **2/6** 25; **10/-** 100. Package and Carriage Free.
Cineraria (Large-flowered) and **Stellata** at same prices.

JOHN STEVENS & SON, COVENTRY.

WHARFEDALE. 5 ft. long.

In Best Redwood, painted two coats. White.
£1 15 0
Delivered any station
Full Catalogue on application.

PETER PATRICK & SON, Otley, Yorks.

BY APPOINTMENT.

Early Forcing Bulbs.

Wm. PAUL & SON

Waltham Cross, Ltd.,

respectfully invite orders for the above, consisting of fine stocks of

WHITE ROMAN HYACINTHS,
13/6 to **16/6** per 100.
Extra large, **18/6** per 100.

LARGE-FLOWERED PAPER WHITE NARCISSUS,
Finest Selected, **6/-** to **7/6** per 100.
Other sorts, from **5/-** per 100.

FREESIAS,
Of Sorts, **4/6** to **7/6** per 100.

LILY OF THE VALLEY,
Retarded Crowns, **8/6** per 100.

All other Bulbs in due season of the Best Quality and at very Moderate Prices.

Priced Catalogue Free on Application.

PAULS' ROYAL NURSERIES & SEED WAREHOUSE,
Waltham Cross, Herts.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

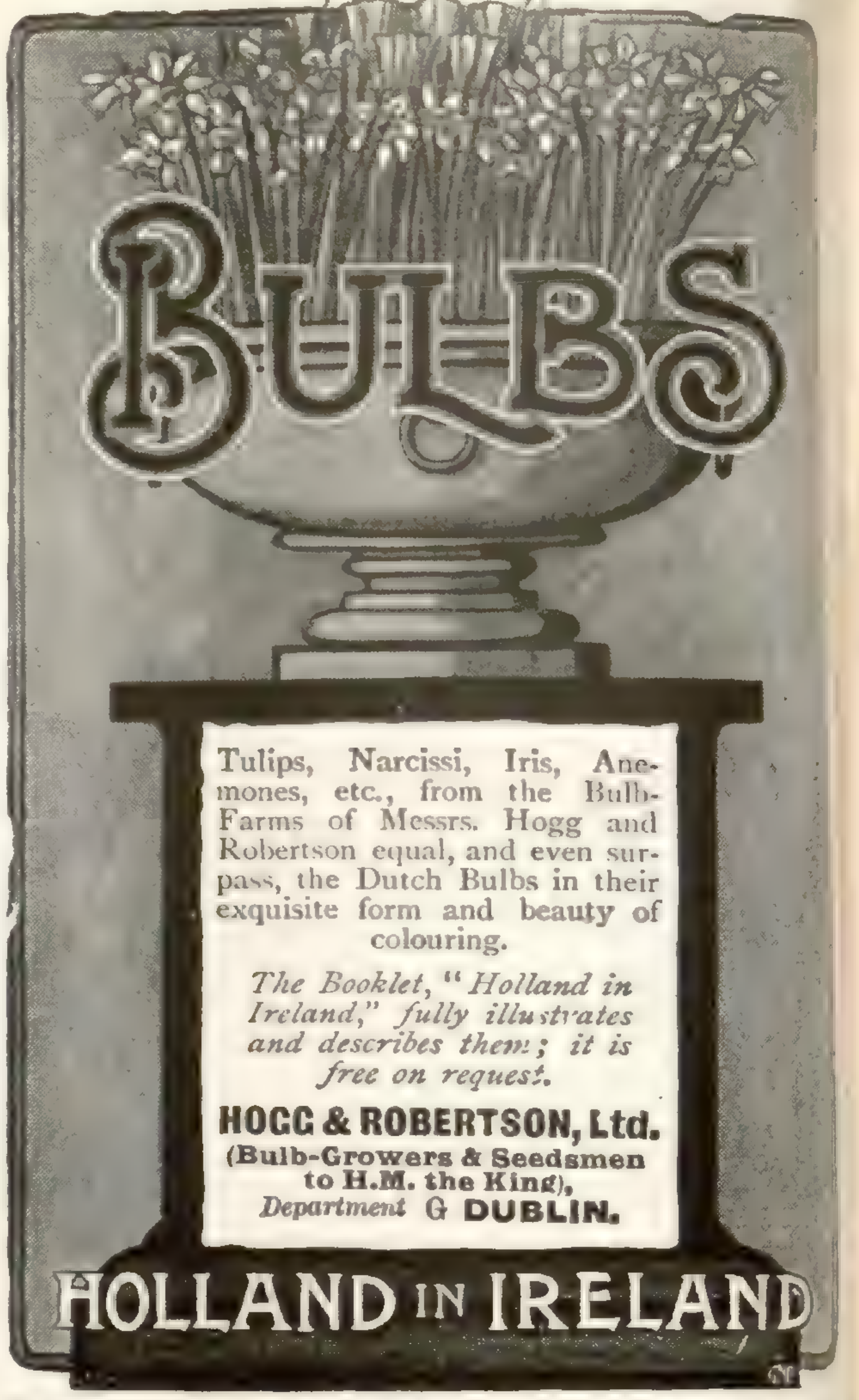
TREE CARNATIONS

The Newest and Best Varieties.

Strong, healthy and well-rooted plants only supplied.

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.



Tulips, Narcissi, Iris, Anemones, etc., from the Bulb-Farms of Messrs. Hogg and Robertson equal, and even surpass, the Dutch Bulbs in their exquisite form and beauty of colouring.

The Booklet, "Holland in Ireland," fully illustrates and describes them; it is free on request.

HOGG & ROBERTSON, Ltd.
(Bulb-Growers & Seedsmen to H.M. the King),
Department G **DUBLIN.**

THE NATIONAL HARDY PLANT SOCIETY

Encourages the Cultivation of Hardy Plants and Disseminates Information Helpful to Growers.

NEW MEMBERS WANTED.

Apply to the Honorary Secretary,
FRANK BOUSKELL,
Market Bosworth, Nuneaton.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices. Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

INFALLIBLE

SCOTT'S

WASP DESTROYER

has stood many years' test as the only effectual protection for Fruit Trees, &c., from Wasps and Flies.

Prices, 1/6 and 2/6 per bottle.

Makers—
CORRY & CO., Ltd., 13 & 15, Finsbury St., E.C.
SOLD BY ALL NURSERYMEN AND SEEDSMEN.

Do not Neglect Your Plants during the Holidays.

CLAY'S FERTILIZER

WILL FEED THEM.

It produces **FLOWERS, FOLIAGE, FRUITS,** and **VEGETABLES** in **PROFUSION** and the **HIGHEST PERFECTION.**

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

CLAY'S LONDON FERTILIZER
TRADE MARK.

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK, AS AT SIDE.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. Fourth Edition (Second Reprint). 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Manure Manufacturers and Bone Crushers, **Stratford, London, E.**

VOL. LIV.—No. 3,017. SATURDAY, AUGUST 26, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Surplus Sunbeams.

That it is possible to have too much even of a good thing is being exemplified by the abundance of sunshine experienced, coupled, naturally, with such an absence of rain that most vegetation is suffering terribly from the drain upon the foliage by the ever-thirsty sunbeams and the lack of moisture in the soil to enable the thirsty roots to find any equivalent supply of humidity as a counterpoise. Without going into meteorological data and records it may safely be stated that for very many years there has been no such long-continued spell of practically cloudless skies as have prevailed this summer. The old saying that an English summer consisted of three bright days and a thunderstorm has been signally contradicted, so far as this summer is concerned. Almost unprecedented thermometrical records on the one hand, and an almost unappreciable rainfall on the other, are stamping the season as a really phenomenal one. Pasture and grass lands generally, which usually manage to retain some verdure even in ordinary droughts, are as brown and burnt up as one would expect in the driest tropical regions, while the poor trees and shrubs in many places are miserably parched and shrivelled, and the very bark seems imperilled by the abnormal shrinkage involved in the impoverished supply of sap. The foliage of many kinds of trees is commencing to fall as rapidly as it should in October, while where irrigation or artificial watering is impracticable the very fruits are ripening ere fully developed, or falling in showers at every breeze. The garden lover is at his wits' end to preserve his plants, for of what use is a watering can, or even a hose, when the soil is so baked as to be full of deep fissures, which carry off the would-be refreshing flood as fast as it falls into the recesses of the subsoil, and leaves the surface with but a glistening skin-deep film of water, which simply does more harm than good by attracting the superficial roots to the surface only to be scorched and destroyed by the next day's sun. Meanwhile, the weather prophets are assiduously studying the cyclones and anticyclones of the world around us in the hope that some advancing depression may bring the much-needed rain in its train; but all in vain, each one recorded hopefully as trending this way is deflected in its course or mysteriously disappears. The accumulated heat of the soil itself is probably a factor in the continuance of these conditions, since ordinarily rainfall is induced by the warm vapour-laden ocean breezes becoming cooled on reaching the land, and, consequently depositing the bulk of their watery burden owing to the lowering of their temperature. Obviously, if the land be abnormally warm, this cannot happen, clouds are not induced to form, and, not only is no rain shed, but the sunheat is increased by the absence of shade, and so it goes on. The only happy plants, so to speak, are the xerophytic, or drought-loving ones, whose natural habitats are sunburnt rocky or desert places. These are truly in their element, but in a normally humid climate like ours they form the minority of outdoor cultivated plants, the large majority of which are of the opposite nature, and demand a fairly liberal rainfall as a condition of healthy existence. In agricultural districts the harvest of cereals has been abnormally early, and, of course, the bright weather has been in favour of the harvester; but when we turn to the crops of succulent roots, such as turnips, or of foliaceous market vegetables, there is quite another tale to tell; and as for pasture lands, as we have already said, they are, in most parts of the country, only so in name, and the stock farmer is sorely put to it to find provender for his beasts. Unhappily, too, there is some reason to believe that the persistently tropical conditions have affected humanity in other ways by inducing a truly southern frame of mind, coupled with an unreflecting impulsiveness and irrationality, more fitted for a Republic in some semi-tropical region than for the usually more sober Britain. The surplus sunbeams, in short, would seem to have had an unfortunate effect on the temperament of mankind with which we could well dispense, as well as the strain upon most vegetative life, under which the gardener and farmer are at present suffering so severely. It is highly gratifying to be able to state that within the past week the conditions all round have been immensely improved, although neither gardener nor farmer is able to feel satisfied with the amount of rain that has fallen.

MR. JOHN HIGHGATE.

Mr. John Highgate, whose portrait we have the pleasure of giving in this issue, has for some years occupied a prominent position among the many distinguished gardeners resident within a comparatively short distance of Edinburgh, and has throughout been not less highly esteemed for his personal qualities than for the evidence he gave at Yester House of his remarkable abilities in all that relates to garden management. Probably no better proof of the high estimation in which Mr. Highgate has been held could be given than his appointment in succession to Mr. T. Hay, now superintendent of Greenwich Park, as chief of the famous gardens of Hopetoun House, Linlithgowshire, the palatial seat of the Marchioness of Linlithgow, and the satisfaction his appointment gave to his many friends. We are not quite certain as to the number of years Mr. Highgate was head gardener at Yester House, Haddington, the fine seat of the Marquis of Tweeddale, but we know that he had charge of them for a considerable period, and also that by his splendid work in various directions he contributed in no small degree to the fame that they now, as for a long time past, so deservedly enjoy. While all departments of the Yester House gardens received a full share of attention, Mr. Highgate specially distinguished himself as a cultivator of fruits, and obtained many honours for them at the Edinburgh exhibitions. In the interest of the great gardens of which he has now charge, and of himself, we trust that Mr. Highgate may long occupy his present position.

The Break in the Weather which occurred on Monday has been disappointing to those who were hoping that the rainfall would be sufficient to moisten the soil to an appreciable depth, and render substantial assistance to all forms of vegetation in the garden and on the farm. The rainfall in the metropolis on Monday was comparatively light, except in the southern and south-western suburbs. There was a very light fall in London on Tuesday, which was remarkable as being the first day for nearly two months in which no bright sunshine has been recorded at South Kensington. In the North-East and South of England, and in Scotland, a considerable amount of rain was registered on the day last named. The atmospheric conditions that obtain at the time of going to press suggest that the break in the weather is not likely to be of long continuance.

Tree Pruning in London Parks.—The report of Professor I. Bayley Balfour, F.R.S., on tree pruning in the Royal Parks and Gardens has been issued as a White Paper. Dealing with the trees in the Mall, he says he has been impressed by the evidence of the application of sound practical knowledge, combined with scientific principles in the pruning of the trees in relation to their environmental conditions. "That four unbroken lines of shapely, symmetric, healthy trees of the size they have now attained have been established in the Mall," he states, "is a tribute to the skill with which they have been handled." He also observes, "I say without qualification that the trees in the Mall are a picture of the correct art of pruning in relation to environment." Professor Balfour directs attention to the fact that, in the case of these trees, the excess of lateral branches has been properly diminished, and the head of the tree has, therefore, been adequately lightened in relation to wind currents, so that risk of upset of the whole tree and of breaking of branches have been lessened. The branches which remain have been selected with judgment so as to form a right framework for the future extension of the crown of the tree and their lateral extension has been checked judiciously, so that they have been stimulated to produce quantities of well-placed leafy shoots. So well has the natural development of the growth-form of the tree, in Professor Balfour's opinion, been encouraged, that he expresses the hope that photographs of the trees with and without foliage be taken and copies be transmitted to every local body to which the care of trees in thoroughfares is entrusted as an example of what should be aimed at. In contrast with the trees in the Mall and Parks he directs attention to the young plane trees in Piccadilly opposite Hamilton Place, which show mutilation by unscientific pruning. This type, he considers, is too commonly found in thoroughfares, and is the cause of the frequent condemnation of the use of the pruning knife. In conclusion, Professor Bayley Balfour states that he makes no suggestion of alteration in the procedure in the treatment of the trees. The staff which has brought the trees so successfully through their first juvenile stages may be safely trusted to apply sound scientific principles in the treatment of the trees through their later years of adolescence, and to modify, practise, and adjust it to the immediate and prospective requirements of the trees

The National Vegetable Society will hold its second annual exhibition at the Royal Horticultural Hall, Vincent Square, Westminster, on Wednesday next. We understand that notwithstanding the very dry weather that has been experienced over the whole of the United Kingdom, an excellent display is anticipated. In any case the exhibition will be of interest as evidence of the possibilities of high-class vegetable culture in a dry season

The Pageant of Empire Rose Show.—In our issue of the 19th inst. we called attention to the schedule of prizes offered for competition at the exhibition of roses that had been arranged for August 31 and September 1. We have since received a letter from Mr. T. Geoffrey Henslow, secretary of the Horticultural Department of the Festival of Empire, stating that owing to the continuance of the drought, which has so greatly checked the growth of roses, it had been decided to defer the holding of the exhibition until the end of September. We were pleased to receive this intimation, because had the original date been adhered to the show must have been more or less a failure. At present there are, as the result of the prolonged drought, but few roses, but with the aid of the moister conditions that now obtain in many parts of the country, and the exceptionally high temperature of the soil, the plants may be expected to at once commence to make new growth, and produce an abundance of good blooms towards the end of September. Much will, of course, depend upon the weather that will be experienced during the next month, and whether the rainfall during the next few days is sufficient to reach the lower roots. It is proposed, Mr. Henslow informs us, to increase the number of classes for displays of roses.

The National Dahlia Society will hold its annual exhibition at the Crystal Palace, on September 7 and 8, and the blooms will be arranged in the central transept of the Palace.

Fruit Packing in British Columbia.—Those of our readers who have seen the large displays of well-packed apples that have been made by the Government of British Columbia will be interested in knowing that special efforts are made by the authorities to impart to those engaged in the fruit industry a sound knowledge of the art of packing. They fully recognise the fact that it is not less necessary in commercial fruit culture to pack well than to produce good crops. Consequent thereon the Department of Agriculture for the Province conducted last season thirty fruit packing schools in convenient centres. The schools were attended by four hundred pupils of various ages, and diplomas were given to those who showed the greatest proficiency. It is satisfactory to know that in distant parts of our Empire the necessity of grading fruit properly and packing it in the best possible manner is being recognised, but it would have given us more satisfaction had fruit growers in this country given many years ago proper attention to this important aspect of the fruit industry. It would certainly have added appreciably to their profits, and rendered the fruit more valuable to the general body of consumers. Their failure to do this has not been because of any want of advice from those having sufficient breadth of view to give due consideration to each of the many points on which success depends.

The Nursery Industry in America.—Mr. J. W. Hill, in acknowledging the welcome accorded by the Mayor of St. Louis to the American Association of Nurserymen, on the occasion of the St. Louis Convention, took occasion to emphasise the importance of the nursery interests of the country by citing that there were over 2,300 nurseries in the United States, aggregating a capital of 30,000,000 dollars (about £6,000,000), turning out an annual produce valued at, at least 15,000,000 dollars (about £3,000,000), and employing labour to the amount of three or four million dollars (or about £700,000) per annum. He closed with a strong statement of the place of the nurserymen in the economy of the country, as affecting its material, esthetic, and moral welfare.

Importation of Potatoes into Australia.—We learn from the "Journal" of the Board of Agriculture that by a proclamation dated March 17, 1911, the importation of potatoes from any country into the Commonwealth of Australia is prohibited unless they are accompanied by an official certificate, dated and signed by a responsible officer of a Government Department of the country of origin, identifying the potatoes, specifying the quantity, and certifying: (a) That at the date of the issue of the certificate they were free from the disease caused by Phytophthora infestans (known as Irish blight), and from the disease Chrysophlyctis endobiotica (known as potato canker, black scab, warty disease, and cauliflower disease in potatoes); (b) that they were grown in the country named; (c) that they were grown at least twenty miles from any place known, after due investigation, to be or to have been within five years infected with either of the said diseases; (d) that they were packed in the country of origin in clean, new packages. The bags, crates, or other packages containing the potatoes must be marked on the outside with the name of the country of origin and with other distinguishing mark or marks. The above restrictions are relaxed in respect of potatoes imported for food.

Advice to Property Owners.—Provisional valuations are now being served in considerable numbers throughout the country. The values shown are intended to be the basis for levying all the new duties on land and property introduced by the Budget of 1909. Under these circumstances, the secretary of the Land Union strongly advises property owners to scrutinise carefully the valuations served upon them, as, after the expiration of sixty days, unless an objection is lodged, the values will be fixed against them for all time. Owners in doubt should communicate with their professional advisers, with the hon. secretary of any local branch of the Land Union, or with the secretary of that organisation in London, at St. Stephen's House, Westminster, S.W.

SHREWSBURY FLORAL FETE.

On Saturday, August 19, the possibility of the Shrewsbury Floral Fête of 1911 in any degree approaching the extent and importance of its predecessors seemed very remote, owing to the great railway strike. We deeply sympathise with the genial and capable secretaries of this great show, Messrs. Adnitt and Naunton, who must have had an extremely anxious time of it at the end of last and the beginning of the present week. Telegrams and letters poured in upon them on Friday and Saturday, all containing expressions of regret and inability to exhibit because of traffic troubles. But on Sunday things brightened up, and on Monday, August 21, telegrams and letters came thick and fast, all expressing a hope that the senders would be able to come themselves and bring their exhibits. Messrs. Adnitt and Naunton worked like Trojans on the Sunday as soon as they heard the strike was over, and their entreaties to competing and non-competing exhibitors met with a response as hearty as it was pleasing. Midday on Monday many exhibitors could not tell whether they would be able to reach Shrewsbury, but by Wednesday morning there were few absentees.

The exhibition was a splendid one, especially when we remember the difficulties of the season and the railway troubles. Groups were excellent, and the plant classes were well filled. Cut flowers showed a little falling off owing to the drought, and roses were quite poor, though sweet peas were delightful. Fruits were shown in grand style, and the competitions were especially keen; grapes were, perhaps, just a little below the Shrewsbury high-water mark.

There is one point we venture to direct attention to, and it is the impossibility of having the judging finished by the early hour 11.30 a.m., at which visitors are admitted to the show. Judging begins at 9.45, which really means 10 o'clock, and the hour and a-half is not sufficient time for the completion of the judges' duties in certain sections. It seems desirable to commence judging earlier, or delay the opening for half an hour.

FIRST PRIZE GROUP OF HARDY BORDER FLOWERS, AND ROCK AND WATER GARDENING AT SHREWSBURY FLORAL FETE, EXHIBITED BY MESSRS. GUNN AND SONS, OLTON, WARWICKSHIRE.

CHAMPION DECORATED FRUIT TABLE.

The great attraction in the fruit classes at Shrewsbury nowadays is the one for a decorated table of thirty dishes of ripe fruit, in not less than ten distinct kinds, staged on a space 10ft. by 4ft. 3in. The chief award is the twenty-five guinea silver challenge cup and £20. There were five competitors, and the successful one was Mr. N. F. Barnes, gardener to the Duke of Westminster, Eaton Hall, Chester, who, having won the cup in 1908 and in 1910, now holds it for good. We congratulate Mr. Barnes upon this splendid achievement and upon the magnificent fruit he staged. He secured a total of 278½ points. He showed: Muscat of Alexandria, 8½, 9, 9, 9½; Madresfield Court, 8, 8, 9, 8½; Appley Towers, 8½, 8, 7½, 8½; and Chasselas Napoleon grapes, 5½, 7; Cox's Orange Pippin, 6½ and 6½; Gascoigne's Scarlet, 6; and Emperor Alexander apples, 6; Transparent Gage plums, 5; Dymond, 7; Royal George, 7 and 7½; and Belle Bance peaches, 7; Humboldt, 7½ and 7½; and Pineapple nectarines, 7½ and 7½; Marguerite Marillat, 7 and 6½; Triomphe de Vienne, 7; and Doyenne du Comice pears, 7; Brown Turkey figs, 6; cherries, 4; melons, 6, 7, 7, and 6; beauty of flowers and foliage, 6; general arrangement for effect, 5½; total, 278½ points.

Mr. J. H. Goodacre, gardener to the Earl of Harrington, came a good second with a total of 258½ points; he had fine examples of Black Hamburgh grapes, Ribston Pippin, Washington, and Peasgood's Nonsuch apples, Souv. de Congres and Williams' Bon Chretien pears, Barrington and Thomas Rivers peaches, and Transparent Gage plums. Mr. Parker, gardener to J. H. Drakes, Esq., Market Rasen, third, with 238½ points. Mr. G. Mullins, gardener to Lady Henry Somerset, Ledbury, fourth, with 221½ points.

CHAMPION GRAPE CLASS.

There were no fewer than ten entries in the champion class for a dozen bunches of grapes, florally decorated, and arranged on a space 6ft. by 4ft. 6in. The premier award of £20 was made in favour of Mr. S. Barker, gardener to the Duke of Newcastle, Worksop, for an excellent collection, but one that scarcely came up to the best we have seen at Shrewsbury in previous years. His bunches were as follows:

Variety.	Maximum Points.	Points Awar'd.
(1) Muscat Hamburgh ...	10 ...	7
(2) Muscat of Alexandria ...	11 ...	8½
(3) Madresfield Court ...	10 ...	9
(4) Black Hamburgh	10 ...	9
(5) Muscat of Alexandria ...	11 ...	8½
(6) Muscat Hamburgh ...	10 ...	8
(7) Muscat Hamburgh ...	10 ...	8
(8) Muscat of Alexandria ...	11 ...	9
(9) Madresfield Court	10 ...	8½
(10) Madresfield Court	10 ...	8½
(11) Muscat of Alexandria ...	11 ...	8½
(12) Madresfield Court	10 ...	8½
	124	101

The second prize of £16 fell to Mr. J. Dixon, gardener to Lord Rowallan, Kilmaurs, Ayr, who had quite heavy bunches, but some of these were not shapely, and colour was distinctly lacking in several instances. Taking the bunches in their order they came as follows: Muscat Hamburgh (possible 10), 6½; Muscat of Alexandria (11), 8; Black Hamburgh (10), 8; Madresfield Court (10), 8½; Muscat of Alexandria (11), 7½; Muscat Hamburgh (10), 8½; Madresfield Court (10), 8½; Black Hamburgh (10), 9; Black Hamburgh (10), 8½; Muscat of Alexandria (11), 8½; Madresfield Court (10), 9; Muscat Hamburgh (10), 10; total, 100½. The third prize fell to Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby; fourth, Mr. W. Parker, gardener to J. H. Drakes, Esq., Market Rasen; fifth, Mr. T. Ireland, gardener to Miss Webb, Newstead Abbey; sixth, Mr. W. H. Cooke, gardener to

Lord Belper, Derby. Mr. Barker was also first for floral decorations, and Mr. T. Ireland second.

COLLECTION OF FRUIT.

The best collection of nine dishes of dessert fruit, florally decorated, was the one submitted by Mr. J. Mills, gardener to Captain Heywood Lonsdale, Shavington Hall, who presented fine specimens of Madresfield Court and Muscat of Alexandria grapes; Allington Pippin apples, a seedling melon, Bellegarde peaches, Pitmaston Orange and Stanwick Elruge nectarines, and Souv. de Congres pears. Mr. W. Catt was placed third, and Mr. C. Roberts, Halston Hall, second; Mr. Catt led for floral decorations in this class.

Four competitors came forward in the important class for a collection of a dozen dishes of dessert fruit, not less than nine kinds, and all distinct varieties, and the £10 prize fell to Mr. S. Barker, gardener to the Duke of Newcastle, Worksop, who scored with Madresfield Court, Black Hamburgh, and Muscat of Alexandria grapes, neat, well-coloured clusters; Humboldt nectarines, Transparent Gage plums; Dymond peaches, Triomphe de Vienne and Souv. de Congres pears, Ribston Pippin apples, Brown Turkey figs, Sutton's Scarlet and a seedling melons. Second prize fell to Mr. Cotton, gardener to Lord Biddulph, Ledbury Park, who had fine Duke of Buccleuch grapes, and Souv. de Congres and Marguerite Marillat pears; Mr. J. Jones, gardener to Mrs. F. Need, Great Malvern, third; and Mr. A. H. Cooke, Derby, fourth. The prizes for decoration fell in order to Mr. Cotton, who used Lilium speciosum, francoa sprays, and pink carnations; Mr. S. Barker second with white Lilium speciosum, white carnations and sprays of francoa and Chelone barbata; Mr. W. Parker, Market Rasen, third.

GRAPES.

Premier award for four bunches of grapes was won by Mr. T. Lambert, gardener to Lord Harlech, Brogyntyn, for large clusters of Madresfield Court and Muscat of Alexandria; Mr. W. Wilkins, gardener to C. Tangye, Esq., Knowle, came second with broader bunches of the same varieties; and Mr. W. Dawes, gardener to Lord Trevor, Brynkinalt, Chirk, third, also with the same varieties.

Mr. S. Barker, gardener to the Duke of Newcastle, Worksop, led for two bunches of Black Hamburgh grapes with heavy, large-berried bunches, well coloured; Mr. J. H. Goodacre, second, and Mr. A. H. Hall, gardener to Colonel France Hayhurst, Middlewick, third. Mr. W. Parker, gardener to J. Drakes, Esq., Market Rasen, led for one bunch of Black Hamburgh, and was followed by Mr. Goodacre and Mr. T. Lambert; ten entries.

Mr. A. H. Hall annexed the leading prize for two bunches of black Muscat grapes with Madresfield Court in good style; Mr. W. Parker second, and Mr. S. Barker third. Mr. Hall was also first for a pair of clusters of Madresfield Court, and scored with grand bunches, well filled and coloured; Mr. S. Barker second, and Mr. W. H. Faulkner, West Kirby, third; nine entries. The best pair of bunches of Alicante grapes came from Mr. A. H. Hall, who again showed finely, and he was followed in order by Mr. W. Parker and Mr. S. Barker. For two bunches of white Muscats, Mr. Barnes, gardener to the Duke of Westminster, Eaton Hall, scored with Muscat of Alexandra, finely coloured; Mr. W. Parker second, and Mr. J. H. Goodacres third; ten entries. Mr. Barnes had also the finest single bunch of a white Muscat, Mr. W. Parker coming second, and Mr. G. Richardson, gardener to H. St. Maur, Esq., Newton Abbott, third. For "any other white grapes," two bunches, Mr. W. Oldham, gardener to J. Beecham, Esq., Huyton, led with the showy Buckland Sweetwater; Mr. T. Wilkinson, gardener to A. Gibbs, Esq., Tyntesfield, Flaxbourton, second, and Mr. T. Ireland, gardener to Miss Webb, Newstead Abbey, third. Mr. S. Barker led for the heaviest bunch of grapes with a 7lb. cluster of Gros Guillaume; Mr. A. H. Hall second with Alicante, 5¼lb., and Mr. G. Richardson third, with Mrs. Pince.

MISCELLANEOUS FRUITS.

Mr. W. H. Cooke, gardener to Lord Belper, Derby, had the best white-fleshed melon—Eminence; for a scarlet-fleshed variety Mr. H. Forder, gardener to Col. Cornwallis West, Ruthin, was second, and for a green-fleshed melon Mr. J. Stalker, gardener to W. J. Legge, Esq., Madeley, led; there were splendid entries in each case. Major A. H. Lloyd, Shrewsbury, scored for apricots. There were eleven entries of a dish of nectarines, and here Mr. N. F. Barnes scored with Pineapple in grand condition; Mr. G. Mullins, gardener to Lady Somerset, Ledbury, second, and Mr. W. Catt, gardener to A. H. Heber Percy, Esq., Hodnet, third. There were a dozen dishes of peaches, and numbers of splendid fruits were staged. Mr. H. Weaver, gardener to Sir C. A. Smith, Bart., Bangor, was first with an unnamed variety, Bellegarde probably; Mr. N. F. Barnes second with Barrington, splendid fruits; Mr. S. Barker, Clumber, third with Dymond. Mr. G. Davies, gardener to Mr. F. Alderson, Oswestry, led for a collection of hardy fruits, six dishes; Mr. Mills coming second, and Mr. W. Catt third.

GROUPS.

In the principal group class for an arrangement for effect upon a space of 250 square feet, there were four competitors, and here Messrs. J. Cypher and Sons, Cheltenham, secured the premier award, and in doing so presented a delightful display. An arched background was clothed with small crotons, palms, and liliums, with a towering central Kentia. Below this were some gorgeous examples of Croton Thomsoni, while tall spiral-leaved crotons of the Warreni type occupied the chief points throughout the big group. Lilium speciosum and its white variety, and Lilium longiflorum, were freely used in the foreground, with cattleyas, lælio-cattleyas, Vanda cœrulea; Oncidium flexuosum, and other bright and graceful orchids. Alocasias, caladiums, and marantas were also freely and advantageously used to complete the groundwork. Mr. J. F. Macdonald, gardener to Sir G. H. Kenrick, Whetstone, Edgbaston, Birmingham, gained second place, and his beautifully coloured crotons were a great feature, as also was Oncidium flexuosum. Mr. W. R. Manning, Dudley, came third, and Mr. W. Vause, Leamington, secured an extra prize.

The class for a group of hardy herbaceous and perennial plants and flowers, with a background of decorative plants, bamboos, etc., and a rockery, pool of water, water plants, etc., all arranged for natural effect, brought out but two competitors, and the chief award of £25 was awarded to Messrs. Gunn and Sons, Olton, Warwickshire, for a display that admirably fitted the class specification. A thin background of bamboos lent a veiling of green to a mass of Lilium speciosum and L. auratum, in front of which were splendid groups of helianthuses, rudbeckias, pink astilbes, bright montbretias, phloxes, and a base of hardy ferns just as the rockwork surrounding the pool was reached. In the pool were exquisite white and flesh-coloured water lilies, and surrounding the pool a low rockwork filled with heaths, saxifragas, sedums, and other dainty alpines. Mr. Swann, Halston Hall, was placed second, but he seemed to have exceeded the specification, as he had crotons, alocasias, palms, etc., with his hardy flowers.

PLANTS.

Fifteen stove and greenhouse plants, especially large specimens, make a feature, and on this occasion there were three competitors. Messrs. J. Cypher and Son led, and showed, among their best examples, Croton angustifolium, C. Countess, Ixora Duffi, Rondeletia speciosa, Allamanda nobilis, Statice profusa, and Stephanotis floribunda, with giant kentias. Mr. W. Vause, Leamington, second; and Mr. Manning third. Messrs. J. Cypher and Sons were first, and Mr. Vause second for thirty stove and greenhouse plants in 10in. pots, and they exhibited a great variety of useful subjects, all in fine condition, ixoras figuring largely.

For six stove and greenhouse plants Messrs. J. Cypher and Sons scored with grand examples of Rondeletia speciosa major, Ixora Duffi (2), Allamanda nobilis, Clerodendron Thompsonæ, and Statice intermedia, all splendidly in flower; Mr. Wm. Vause, Leamington, came second, and Mr. W. R. Manning, Radford Villas, Dudley, third. Mr. T. Lambert, Brogyntyn, scored for a dozen stove and greenhouse plants with a set of very useful stuff; Mr. W. R. Manning second.

Messrs. Blackmore and Langdon, Bath, had an easy task in the class for a group of begonias, as they presented wondrously fine flowers on finely-grown plants, and overhead they had baskets of drooping varieties; for size and colour this was a tip-top exhibit.

The best miniature rock garden was one well filled with dwarf campanulas, saxifragas, heaths, etc., by Mr. T. R. Hayes, Keswick; Messrs. Caldwell and Sons, Knutsford, were second.

DAHLIAS AND SWEET PEAS.

The principal prize for a collection of cactus and other dahlias, arranged for effect on a space having a frontage of 8ft. 6in., was won by Mr. John Walker, Thame, who had particularly fine flowers of Mrs. A. Dyer, Phineas, White Lady, H. F. Robertson, and other cactus varieties, set up in tall stands with grasses and asparagus sprays; it was a splendid arrangement of fine blooms; Messrs. Keynes Williams and Co., Salisbury, came second; and Mr. John E. Knight, Wolverhampton, third. Five entries.

Mr. J. Walker, Thame, had the best two dozen show and fancy dahlias, and staged remarkably fine examples of T. J. Saltmarsh, Mrs. Saunders, Mabel, J. Bennett, Golden Fleece, etc.; Messrs. H. Clark and Sons, Rodley, second, and Messrs. Bottomley and Burton, Elland, third. Messrs. Bottomley and Burton led for a dozen bunches of cactus dahlias with bright clean flowers of Advance, Iolanthe, Snowdon, Red Admiral, W. Marshall, Stormer, F. M. Quade, Dreadnought, etc.; Mr. G. Bowness, Busby, second, and Messrs. M. Campbell and Son, High Blantyre, third.

Mr. H. Berman, Nantwich, had the best dozen cactus dahlias on boards, and Mr. J. C. White, Bramley, came second. Messrs. Henry Clark and Sons, Rodley, were easily first for two dozen cactus dahlias on boards, and they scored with a beautiful set of clean, fresh, and bright flowers; Messrs. Bottomley and Burton second.

Mr. H. Peerman, Nantwich, was to the front for eighteen cactus dahlias, single blooms of the same number of varieties; Mr. J. E. White, Bramley, second.

Mr. G. L. Moffat, Lockerbie, led for a dozen bunches of sweet peas, with some fine bunches of Chas. Foster, Edrom Beauty, Mrs. W. J. Unwin, Maud Holmes, Clara Curtis, etc.; Dr. Rambaut, Bicton, second. Mr. Moffat also led for six bunches with Romani Rauni, and Etta Dyke in grand form; Mr. A. Brydon second; Mr. D. Williams, Aberdare, third.

Eighteen bunches of sweet peas was a fine class, and there was a splendid competition. The leading prize of £5 was awarded to Mr. H. Forder, gardener to Col. Cornwallis West, Ruthin Castle, for Mrs. H. Bell, Mrs. C. W. Breadmore, Marjorie Willis, Asta Ohn, Mrs. H. Dickson, Mrs. W. J. Unwin, etc. Mr. G. Bamfield, Kington, second, and Mr. H. Weaver, gardener to Sir C. A. Smith, Bart., Bangor, third.

CUT FLOWERS.

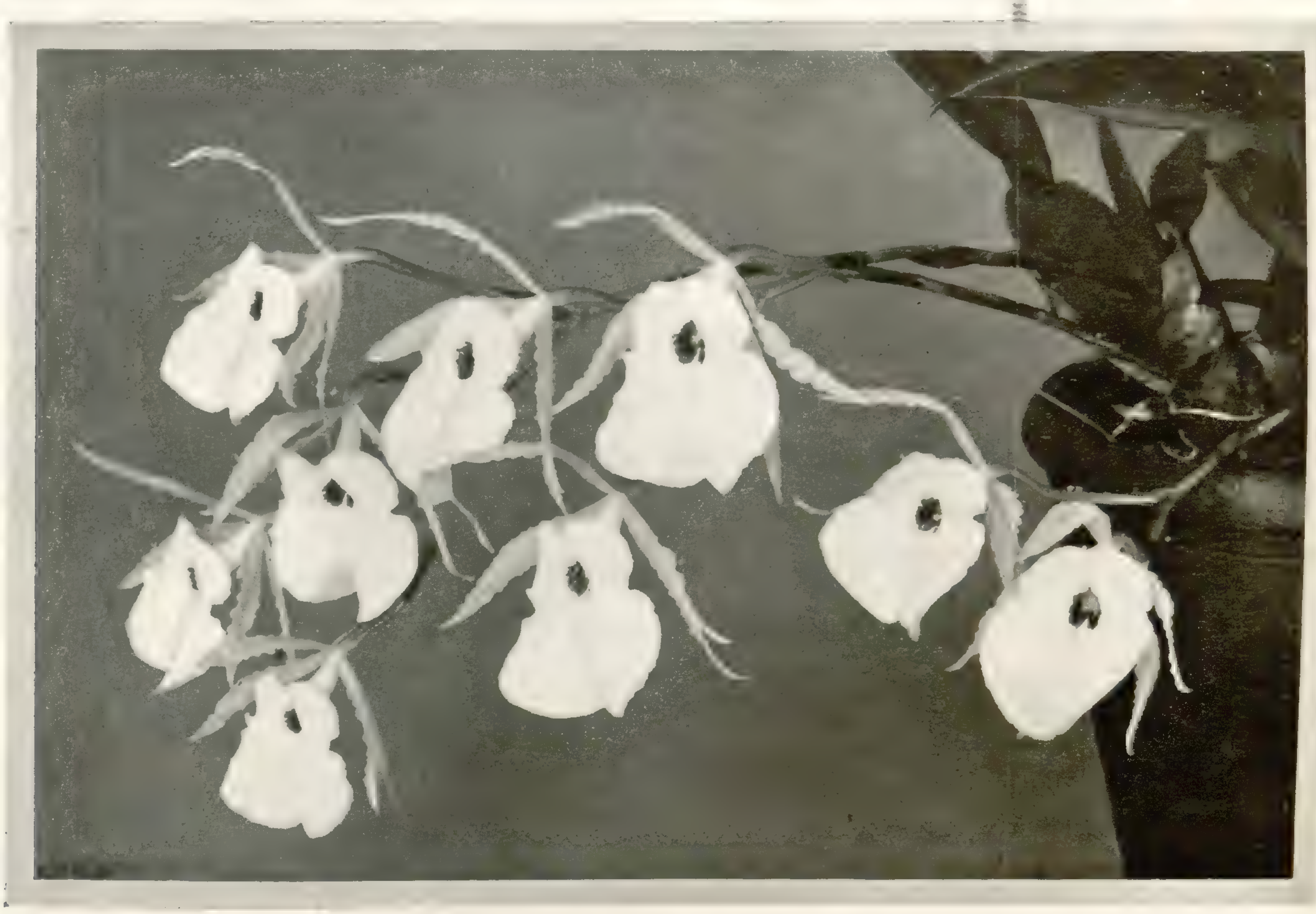
Messrs. Harkness and Son, Bedale, led for gaillardias, followed by Messrs. G. Gibson and Co. and Dr. D. F. Rambaut, Bicton. Mr. A. Brydon, Inverleithen, N.B., had the finest dozen spikes of gladioli; and Messrs. George Mair and Sons, Prestwick, N.B., had a superb set of twenty-four spikes, wherewith they won first prize in that class; in one

(Continued on page 631.)

NEW PLANTS, ETC.

TRICHOPILIA LEHMANNI.

A beautiful species belonging to the Pilumna section of the genus. The flowers are produced from three to four on a spike, and the sepals and petals are narrow, slightly undulate, and of a pale fawn colour; the large lip is pure white with orange-coloured blotch at the base. A.M., R.H.S., August 15. Sir Trevor Lawrence, Bart., Burford Lodge, Dorking (grower, Mr. W. H. White).



TRICHOPILIA LEHMANNI.
Flowers pure white and pale buff. A.M., R.H.S., August 15. Sir Trevor Lawrence, Bart.

DEINANTHE CÆRULEA.

An interesting and attractive species introduced from China by Mr. E. H. Wilson, who re-discovered it at Nant'o in Hupeh, where it grows in wet places on the cliffs. From some of the seeds then obtained plants were raised in the gardens of Colesborne, the residence of Mr. E. J. Elwes, V.M.H., where it first flowered in 1909. At Colesborne the plant makes the most satisfactory growth in a moist position on the north side of a wall. The leaves are ovate or elliptic, bifid at the tip, and the flowers, which have from six to eight petals, are bright blue. "Bot. Mag.," t 8,373.

CATTLEYA RHODA ILLUMINATA.

A remarkably handsome hybrid obtained from a cross effected between C. Hardyana and C. Iris. The flowers are of large size, the sepals and petals broad and of a rich orange suffused with rose, the lip is purple-crimson, with orange-coloured tube. F.C.C., R.H.S., August 15. Messrs. Charlesworth and Co., Haywards Heath.

RHODODENDRON LACTEUM.

A handsome species raised in the Jardin des Plantes from seeds sent from Western China to Paris by the late Abbé Delavay. It first flowered in Europe in the garden of Mr. P. L. de Vilmorin at Verrières-le-Buisson in 1908, and last year it bloomed in the gardens of South Lodge, Horsham, the residence of F. D. Godman, Esq. The flowers are campanulate, white with a large crimson blotch in the upper portion of the tube, and borne in large corymbs. It is regarded as about equal in hardiness to R. Falconeri, and R. grande. "Bot Mag.," t. 8,372.

GONGORA LEUCOCHILA.

A distinct and beautiful species producing its relatively large flowers in pendulous racemes; the sepals and petals are white and purple, and the lip white with chocolate-coloured blotch on each side. A.M., R.H.S., August 15. Messrs. Charlesworth and Co.

SOPHRO-LÆLIO-CATTLEYA GOODSONI.

A distinct hybrid with Sophro-Lælia Heatonensis and Lælio-Cattleya luminosa as its parents. The flowers are of medium size, the sepals rich rose-purple, and the lip crimson-purple. A.M., R.H.S., August 15. Mr. H. S. Goodson, Fairlawn, Putney (gardener, Mr. J. Day).

DROUGHT-RESISTING GARDEN PLANTS.

That a number of plants possess remarkable powers of endurance under adverse or exceptionally hot and dry conditions has been very clearly demonstrated this summer. Over the greater part of the country no rain worth speaking about has fallen since early in June, while the sun has shone brilliantly, and done his best to bring things to maturity at the earliest possible moment.

With reference to plants that have been subjected to identical conditions, and have received a very fair amount of artificial watering, we find that no inconsiderable number have suffered severely, and present a woebegone appearance, while others appear perfectly happy. In a fairly moist and cool season tuberous begonias are seen at their best, and geraniums are then obliged to take second place, but their behaviour this summer clearly demonstrates their inferiority under tropical conditions and long-continued drought. The improved scabious have led us to expect an uninterrupted display extending over two or three months, but their season of beauty has been a very short one, and, on the other hand, zinnias have grown and developed in luxuriant fashion, and appear just as happy as at the beginning of the drought.

And what a glorious display tropæolums have made, and, further, colonies in exposed situations, that have received no attention in the matter of watering, are in the zenith of their beauty and vigour. The same applies to verbenas, and with regard to fibrous begonias it is very clear that they are capable of coming through a severe drought unscathed. Under the most careful management violas have suffered severely, while fuchsias, that are now so extensively employed for garden decoration, are a partial success only. It is well worthy of note that Ballet Girl, Marinka, and Madame Corneilson have been a failure in town gardens, and the kinds that have given, and are still giving, a fairly good display are Lye's Own, Mrs. Marshall, Charming (this being certainly the best of all the brightly-coloured varieties), and Lord Beaconsfield.

The French marigolds are indifferent to drought and great heat, but the roasting has been too severe and prolonged for petunias, and, except where they have been deluged with water from time to time, both flowers and leaves have become very small. The perennial phloxes and spiræas are well known to be impatient of drought, and they have experienced a very trying time, more especially where the soil is of a light nature. Sweet peas were driven into flower prematurely, and I hardly think we shall hear of many ten and twelve feet high colonies this season.

Among shrubs rhododendrons and lilacs are the greatest sufferers, and in exposed situations, with little or no attention to artificial watering, they present a pitiable appearance.

Walter H. Aggett.

COTTAGE GARDENS AND VILLAGE SHOWS.

All gardeners have been hard hit by the drought this summer, and none more so than the cottagers and allotment holders who contribute to the hundred and one shows that are held in as many villages in the month of August. Evidence of the effects of the drought may be seen in certain bare spaces on the tables in the show tent, and the secretary's book containing a smaller number of entries than usual; and, considering the conditions, the wonder is that many local societies have been able to hold their annual show at all. But has any single village society failed to keep its annual engagement through lack of produce? I have never heard of a case, but more than once I have heard competent gardeners acting as judges marvel at the produce set out on the tables, and wonder where it has come from. The cottagers and allotment holders could answer the question, but it would take them a long time if they recounted the hours they have spent early in the morning and late in the evening, watering, tending, and watching, scheming and manipulating, in order to get a few things for the show.

They will admit that it has been a long, weary task fighting the drought, and it is a usual thing in the village during a season like this to anticipate the failure of the show. If you had called on any one of the little circle of exhibitors a few weeks before the event, they would one and all have told you that So and So would have it all his own way this year, as they would not have anything good enough to put in. But when a cottage gardener talks like that, you must not take him too seriously, because it is part of his nature to keep something up his sleeve, and on the show morning he turns up as usual, and if his vegetables are not quite up to the usual standard, they are good enough to do him credit, and to prove his capability for getting over difficulties.

With a Mark Tapley-like spirit, our enthusiastic cottager feels that there is some credit in showing in the usual classes in a season like this, and a short time ago a member of the labouring fraternity was bemoaning his unlucky fate because the peas which he had sown and timed to come in on show-day had reached maturity a week before the event. He hoped to save a few, however, and began scratching with his hands in the loose soil near to the pea row. As he moved the soil he brought to light, first a little bundle of pea haulm, then a slate covering a receptacle buried in the ground, and finally a pail containing a number of green, well-filled pods of peas. They were for the show. Did I think they would remain fresh? In other years he had kept them for a fortnight in the same way, and the only thing he feared was that they would get overheated. Evidently they did not, for I noticed on the day of the show that the name of our friend appeared as winner of first prize for green peas. Some of his neighbours were uncharitable enough to say that the man hadn't grown these peas, because his rows in common with the rest had dried out; but he preferred to let them think so rather than give away his method of keeping peas.

The village flower show is one of those homely institutions which never seems to change much, and yet it comes round every year with renewed freshness and interest. Anywhere else but in an English village it would probably have died out years ago; but here it is a tradition, something that belongs to the place and the people, and to let it go would reflect discredit on the fraternity. Morning and evening, from the early days of the spring, the keen spirits of the district are busy in their gardens preparing for that eventful day in August, and it is a relief to their wives when it is over, because the latter can then take their toll of the produce in the garden without fear or question.

Steadily the men go on, peeping at quiet moments over hedges and walls to view each other's operations, but not in a general way paying mutual visits; and if one man happens to get a good exhibition variety of any vegetable, he does not publish the name from the house-tops, but has a convenient way of forgetting it if any of his neighbours should ask him what it is. Without any commotion the white tent appears one day in the usual show field, a noisy traction engine announces the approach of the roundabouts and swing boats—for where would the amusement come in without the travelling showman who provides this side of the entertainment. On the morning of the event men and women hurry too and fro, some carrying, others wheeling the cleanly washed potatoes, etc., and the fresh-cut flowers upon which so much care has been bestowed. Unless the secretary happens to be a very orderly individual there is generally some confusion over the staging, but matters have a way of righting themselves, and the judges can generally begin their duties somewhere within an hour of the appointed time. We can pass over this part of the proceeding, and the next time you see the enthusiastic cottage exhibitor he is dressed in the suit he was married in, which is only worn, by the way, on high days and holidays, and with a thumbed schedule and half-inch stump of lead pencil, he is marking off his winnings as he works round the tables, stopping now and then to make a closer inspection when he doesn't quite see eye-to-eye with the judges.

This in a few words is the story of the village show, and as you look round the tables you must give the cottager credit for being a master hand at growing vegetables. He has improved considerably in recent years, for judges and lecturers have taught him that it is not the biggest but the best vegetables that are favoured at shows, and fortunately there are not so many judges nowadays who make it a point of duty to drop the prize cards on the biggest and coarsest vegetables if they happen to be in the cottagers' class. Speaking of this type of judge, it is curious how inconsistent they are, and I heard of one the other day who made a little mistake in the schedule, and gave first prizes to all the smallest potatoes in the cottagers' class, and to the largest in the division set apart for gentlemen's gardeners, which was, of course, quite opposite to his principles, and as he was judging alone, he couldn't put the blame on to his colleague. Needless to say, he hasn't heard the last of that little error yet.

One thing that annoys you at the village show is the way flowers are staged, and show committees should bring pressure to bear on cottage exhibitors to mend their ways here. The ugly show board is still an orthodox institution, year after year you see such things as twelve little carnations or zinnias dotted on the face of a board that was made for a dozen huge chrysanthemums, and even after all these years of showing, exhibitors stick to their old idea that such things as asters and carnations look all the better if they are exhibited with paper collars round their necks. It is time the advent of the sweet pea as an exhibition flower has done something to improve method of arrangement, and so far as I know, no one has ever yet insulted sweet peas by exhibiting them on an ugly show board. The example of the sweet pea, however, should be followed by other flowers; less crowding and cramming is desired, and if some enterprising local society would pass a resolution that all show boards should be chopped up, the appearance of the annual show would gain by the destruction.

Village shows in late years have been improved in interest and value by the introduction of industrial exhibits of an educational character. One sees collections of vegetables, grown by the boys in the garden at the village school, which is a step in the right direction, considering that we want these lads to be the adult exhibitors of the future; there are also useful articles in woodwork turned out from the school workshop, needlework and specimens of cookery shown by the girls, nature drawings, essays, and collections of specimens, all of which go to show parents and others that honest attempts are being made to give rural education that rural bias which has been wanting for so long. In many shows you see exhibits of wild flowers from the children, not the besom-like bundles of flowers as they used to be, but arranged with some taste, and in some instances you will find the common names of the flowers attached to the exhibits. This is as it should be, and in this way the flower show is made more and more an institution for the education of the rural community.

Inseparably associated with the show are the gardens and allotments where the produce is grown, and in not a few cases prizes are offered for the best kept plots. One gets a bit of humour sometimes in connection with these garden competitions, and one hot day in July, after I had inspected half a dozen plots in a hamlet which possesses only one water supply, and that not a very reliable one in dry weather, I was asked by an old woman who sat at the cottage door whether I was the "gentleman who was judging the gardens." On replying in the affirmative, she observed. "Thank the Lord for that; we shall p'raps get a drop o' water now. Bless you, they've bin sittin' up at nights takin' the drop o' water for their precious gardens, and in the mornin' there's bin none to boil the kettle with." These are the little incidents which crop up in connection with garden competitions; but when you look round plots in the pink of condition, profitably cropped, tidy, and in good order, where no weed is allowed to make its unwelcome appearance, you admit that every penny distributed in prize money in the best kept garden class is spent to good purpose.

H.

CLARKIAS AS POT PLANTS.

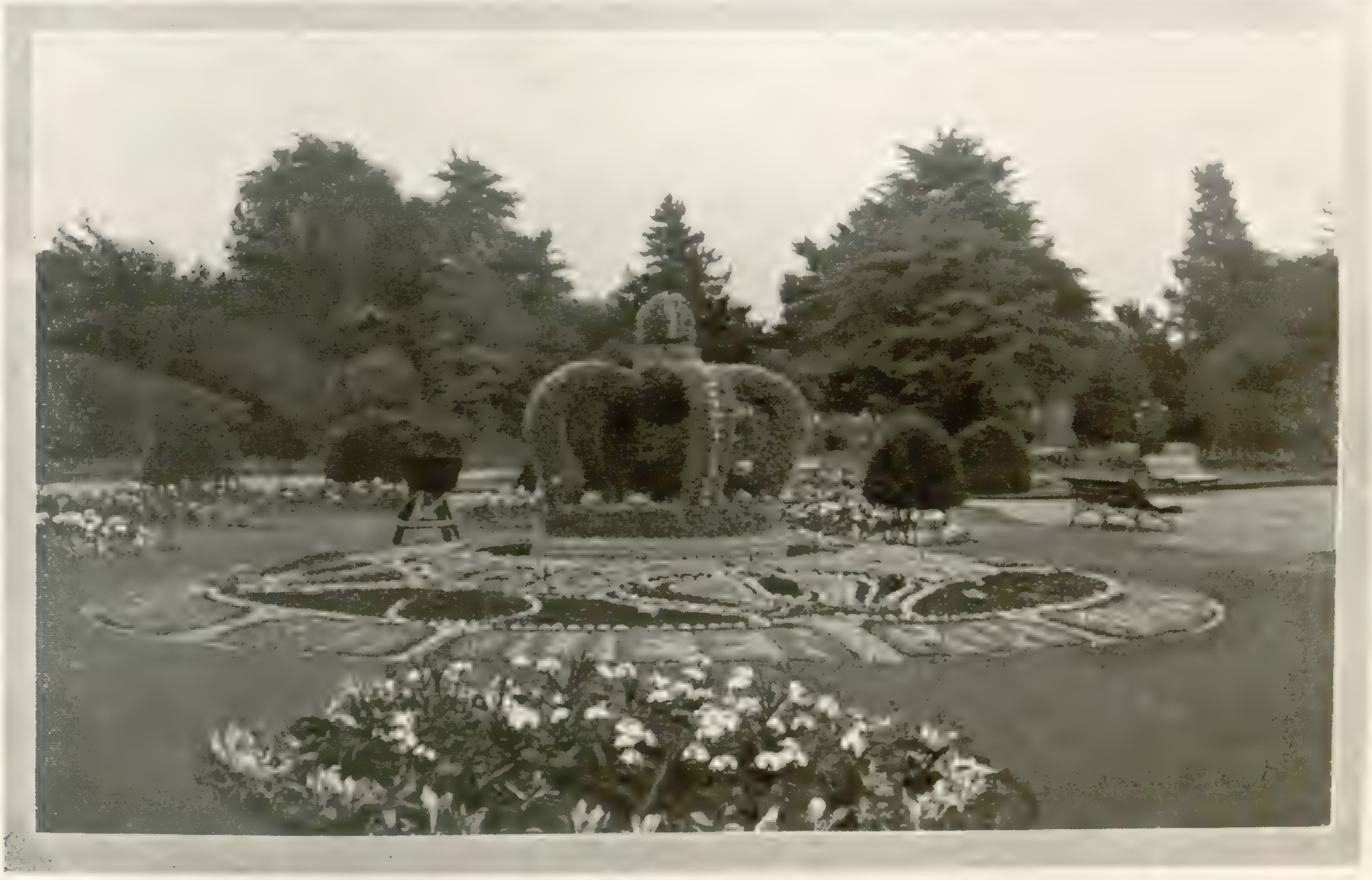
The clarkias are among our most charming hardy annuals, and when grown as pot plants for greenhouse decoration they are especially lovely. C. elegans Firefly is one of the best for this mode of culture, and from seeds sown at the present time well-furnished plants a yard high may be had in bloom during April and May. Sow in a shallow box or pan, and place in a cold frame to germinate, and when the seedlings are large enough prick them out separately into three-inch pots. They should be pinched when about three inches high, and again later, to form bushy plants. Pot them into 48's, in which size they will flower, using a light rich compost. Grow them on in a cool house during the winter months, and stake and tie as required. As the flowers develop weak doses of liquid manure will be beneficial. For conservatory decoration clarkias are found very useful, and used in a cut state for dinner-table decoration they look especially lovely.

J. Gardner.

THE CROWN FLOWER BED AT WOLVERHAMPTON.

One of the most important of the open spaces belonging to the Corporation of Wolverhampton is that known as West Park, wherein is held the great floral fêtes that have brought much fame to the town. This park has many attractions, and not the least important of these is the beautiful display of summer flowers that is annually produced for the enjoyment of visitors. This year this fine open space has been made additionally attractive by the creation of a flower bed expressive of the loyalty of the people of Wolverhampton. This bed, which is usually spoken of as the "Crown" bed, is so admirable in design and execution that there is no occasion for surprise that it should be regarded with much interest by visitors, or that it should have brought Mr. Water Felstead, the superintendent, much praise.

As will be readily seen from the accompanying illustration, this bed is circular in form, and of large size, and in the centre is an admirably executed crown standing six and a-half feet high. The skeleton was formed with iron bars and stout wire netting, but long since this has been hidden by the plants used. The principal lines of the crown are marked out with the well-known Mesembryanthemum cordifolium variegatum. This is dotted at intervals with Echeveria secunda glauca, which is intended to represent the pearls in the crown. The cushion is formed with the crimson-leaved Iresine Lindeni. The base of the crown is formed with the above-mentioned echeveria. Surrounding the central object is an elaborate and highly effective design in what is popularly known as carpet bedding, in which the Royal monogram, "G. R." is worked. The colours used in the design are blue, red, and yellow, and the plants chiefly employed are alternantheras, blue lobelia, and Golden Feather. Enclosing the design is a green band, in which is the legend, "God Bless Our King and Queen."



THE CROWN FLOWER BED IN THE WEST PARK, WOLVERHAMPTON.

MODERN STRAWBERRY CULTURE.

(Concluded from page 386.)

Rich loamy soils, or those commonly described as "fatty," are generally considered best for strawberries, but in the Hampshire strawberry growing districts one rarely comes across such soil conditions. There, the soil is very gravelly, and may consist of a sandy peat mixed with flints of various sizes. The greater portion of the subsoil is sand and gravel, but in some districts the gravel does not extend downwards to any appreciable depth. In contrast to such sandy soils, there are black, peaty, and waterlogged soils that have been quite easily adapted to strawberry growing. Considerable tracts of land in this district are covered with gorse, furze, and heather, and the greater portion of it is unsuitable for farming. The extension of the strawberry growing industry, however, has embraced many acres of these heath lands, and where the ground has been cleaned and broken up, and plantations made, there appears to be every sign of strong and healthy growth. Indeed, it is a somewhat remarkable fact that the gravelly soil around Southampton is fit for very little else except strawberry growing. That the value of the land round about is steadily increasing is not surprising, for farmers, small holders, market gardeners, and other prospective strawberry growers are making great inroads upon these unreclaimed heath lands. There is little doubt that where such light land lies in a fairly warm aspect it is almost ideal strawberry soil. The usual practice is to trench it two or three feet deep, and in this way splendid crops are produced for five or six years from the same plants. Of course, the deep cultivation assists this long fertility, for when the ground is prepared by the plough, or one spade deep, the ordinary useful life of the plant is only about three years. One drawback on light land is the unretentiveness of the soil, and deep cultivation is solely to be depended upon to remedy this drawback. Some people assert that heavy soil is more economical than light soil for strawberries, when one takes into consideration the durability of the plant and yield of fruit. There seems to be no objection to a clayey soil, provided the situation is warm, for such soil retains moisture, and never requires so much manure as land that quickly "dries out."

Strawberries display an immense amount of vigour on stiff soils, if provided with a limited quantity of dung, and little harm comes to them in such situations during a dry season. Before planting the usual practice is to give sometimes as much as 20 to 30 tons of London dung per acre, but frequently the plants are over-stimulated, with the result that the foliage develops at the expense of the fruit. Three or four tons of lime per acre, and 7½cwt. of superphosphate (where 30 tons of manure have been used), the latter applied in February, will invariably prove beneficial. Whether or not the softness of flesh and coarseness of flavour which are so characteristic of some crops are due to over-manuring, is a question to be solved by the grower himself. Naturally there is every inducement to provide the plant with as much nourishment as possible during the first three or four years, for it is particularly difficult to maintain the fertility of the strawberry bed by subsequent manuring. An alternate practice is, of course, to reduce the amount of London dung, supplementing it with a dressing of suitable "artificials." Nitrogen will be supplied in abundant proportions by the dung, and nitrate of soda or sulphate of ammonia will be simply wasted on the crop. Phosphates and potash, however, are particularly necessary, and valuable in the form of superphosphate or sulphate of potash. Strawy manure is sometimes used as bedding for the plants, and is placed on the ground in early spring so as to allow the rains to wash the straw before the fruits appear. It is not advisable, however, to adopt this method of bedding in a moist season, for the growth of weeds and oats which result from the seeds in the manure will ruin the crop. The best material for bedding strawberries is clean, baled barley straw; oat straw is sometimes used in cases of need, but it is liable to stain the fruit badly in a wet season

Strawberry crops are assailed by numerous different species of insect and fungoid diseases. Wireworm plays havoc amongst the plants on freshly-cleared ground, and the dreaded eelworm has also to be reckoned with. The ground beetles make nocturnal ravages amongst the strawberries, and both the fruit and the leaves are a prey to slugs and snails. The green rose chafer, both in the grub and beetle stage, is also particularly destructive. Of fungoid diseases the worst that has been experienced during recent years is Botrytis cinerea. This is a very dangerous disease, and every care should be taken to check it early, as the results are likely to be disastrous. It has been surmised that the fungus spores come through the medium of badly-prepared manure. The latter must be worked up into a good compost in order to avoid trouble of this kind. Another injurious fungus attacking strawberry plants is Sphærella fragariæ, known in this country as strawberry leaf spot. This fungus attacks the leaves, and forms small reddish-brown spots which often encroach on each other and form irregular patches. Later in the season these patches become bright red, which has caused it to be known as "bird's-eye spot" in some parts of the country. The variety Royal Sovereign is particularly susceptible to this disease, and the crop may be seriously reduced and the plants weakened for the following season. Some growers combat the fungus by mowing the beds soon after the fruit has been gathered, and burning some straw or dry litter over them. Others recommend spraying with potassium sulphide one ounce to three gallons of water, when the leaves are quite young. This should be continued at intervals until the flowers commence to open. The "cauliflower" disease of strawberries is caused by a species of eelworm, Aphelenchus fragariæ. Plants so affected should be removed immediately and burnt so as to prevent the spread of the disease, and an effective preventive is said to be one cwt. of sulphate of potash per acre.

J. C. N.

AMONG THE ALPINE FLOWERS.

Some day perhaps a poet will arise who will do for the alpine flowers what so many have done for the lily and the rose, and for the other favourite flowers of long ago and of the present. A few have depicted the beauties of a small number of our favourites, but the great poets have left them "unhonoured and unsung." And thus it is left for the poor scribes who love these flowers, but who cannot put into fitting language an impression of their beauties, to speak of them in their own halting way.

PELARGONIUM BLANDFORDIANUM.
Greyish-green leaves and pink flowers.

Thus do we think, as we wander among our flowers in these August days. True, they are not so bright and happy as they are wont to be. We generally have reason to grumble that Jupiter Pluvius has too much dominion over us in dear old Britain, but this season Phæton would seem to have seized the car of his father Helios, and to be threatening the garden with fire. We have been more fortunate than many in the way of rain, but as this is written it has passed away, and the flowers are again suffering from the intense heat and the absence of moisture. A considerable number we are wont to have at this time have vanished for the season, and others are evidently unable, or unwilling, to open their blossoms. We are thus without some of our usual flowers; while plants which are wont to be mounds of verdure seem unhappy, and unfit to please our eyes with their wonted greenery.

Yet we are not without something to cheer us, and to grant us compensation for the absence of many treasures.

Potentilla Tonguei.

Among the plants which are not now too plentiful is the pretty alpine potentilla called P. Tonguei. Some may possibly cavil at us calling it an "alpine potentilla," seeing that it is not a natural wilding, but that it is the product of the hybridiser's skill. Yet it is alpine in its genius, and is as much entitled to the term as are any of those garden varieties of well-known flowers of the high mountains. So far as regards its aspect it is a true alpine, as we use the word in our gardens. As we see it in the rock garden, with its neat leaves and its rather trailing stems, yielding freely the pretty apricot - coloured or coppery - coloured flowers, we recognise its beauty, and wonder why it seems going out of cultivation. It is growing on a low flat terrace of one of my rockeries, and for a long time has given, and will continue to afford us its pretty flowers. There can be no doubt of its hardiness, and it is not difficult to cultivate. At the same time I think it is a little unhappy in this unusually dry season, and that it would welcome a place where it would obtain more moisture at the roots than it usually receives. I have so far been content to follow the practice of an old grower of alpines, in whose garden I met it for the first time—how many years ago I am somewhat afraid to tell, seeing that it would make one think sadly of the lapse of time, and its serious lessons. But the experience of this season leads one to think that Potentilla Tonguei would relish a little more moisture in an average season.

Oxalis rosea.

Undeniably happy, however, in this torrid time, is the little Oxalis rosea, one of the few really hardy wood sorrels from South America, and it is a pleasure to see it daily opening its deep rose flowers, with perhaps a tinge of magenta about the hue, to the ardent approaches of the luminary it loves so well. It is a poor wet or dull-weather plant, just as it is of little value as a bloomer after the sun leaves it for the day. But even then it is interesting to study the wonderful "packing" of the petals, and the manner in which they are disposed for the time, to await the sun's return once more. We are surprised at the marvellous way in which many of our flowers are packed in the buds, but it is, I think, more wonderful still, to see this shown in the case of a flower which closes at least once a day, and may open and shut several times, as the sun becomes obscured and a passing shower falls on the blooms, and to observe how these open again without apparent loss of energy. There is no doubt that this oxalis revels in sun and heat, and it is a pleasure to see it happy and flourishing as it opens to our eyes daily.

Oxalis corniculata.

The dark-leaved wood sorrel, known as Oxalis corniculata rubra, is another dry weather plant, and it has become somewhat of a weed in many places, although it is useful as a summer carpeter of some of the smaller bulbs. Curiously enough, however, the green-leaved form, O. corniculata, itself, is not much seen, yet it is, I think, prettier than the other. It is understood to be an annual, but I find that it often survives the winter in dry places, and makes nice masses of considerable beauty, the fresh green, small, prettily shaped leaves looking always well even without the dainty little stars of gold which spangle this verdant carpet. I have been trying it between the stones of the little rough steps leading through one part of my rock garden, and there it looks very pretty indeed.

Erodium trichomanefolium.

The trichomanes-leaved heron's bill is a very lovely plant for the rock garden, and one also which seems to delight in a dry season—a sign that it is suitable for a part of the rock garden where moisture is generally at a premium. At the present time it would be difficult to find any moisture about the roots of a specimen growing here among sandstone rubbish, grit, and poor loam, yet it is flourishing, and still flowering, although its zenith time of bloom is over now. It has flowered from June onwards, and through all the drought it has thriven and looked as if it were enjoying it. Not a drop of water has been supplied artificially, and it is even now bearing a good number of its pretty flesh-coloured flowers, with darker lines, above its charmingly cut and finely divided foliage. It is a native of Mount Lebanon, I understand, and, like a goodly number of plants which hail from there, it seems to take a pleasure in a dry and sunny summer.

Other Flowers.

Other flowers there are, such as different species of erodiums, with some of the allied geraniums; a few other hardy oxalises, including, by the way, the annual self-sowing Oxalis valdiviana; and a sprinkling of other things, such as helianthemums, violas, the first of the meadow saffrons, a few campanulas, comprising, among others, C. excisa, a dainty thing indeed. There is a second bloom on Saponaria ocymoides. The autumn heaths are delightful as ever, and give us a perennial delight. Silene Schaftæ is bright, as of yore. The blue flowers of Linum alpinum look cool and refreshing on their dainty foliage. Then some gypsophilas yet trail over the stones, a few veronicas afford us pretty flowers, the quaint Origanum hybridum is revelling in the dry and bright weather, golden St. John's worts, or hypericums, give their gay flowers, and the blue spikes of Horminium pyrenaicum help the supply of bloom, although they do not claim to be among the élite of our alpine flowers.

Geums, potentillas, Iceland and alpine poppies, a few dwarf late alliums, and some other plants, show us that, late as has become the season for alpine flowers, and trying as has been the time for many, there are yet some which defy the elements to give us pleasure. S. Arnott.

DAFFODILS IN THE GRASS.

When once established daffodils do remarkably well in grass land, both in dry and moist positions. For a number of years I had considerable experience of these bulbs in such quarters, watching those already established, and planting and treating others. In low-lying places, where there is much natural moisture in winter time, it is advisable to put in the bulbs as early as possible, so that they may make some roots before the surrounding soil becomes very moist. I have found that bulbs so treated generally bear extra large flowers and leaves, and if the position is at all shaded the flowering period is rather late, thus prolonging the season when there are bulbs growing also in drier and more exposed borders. It is very important, however, that the bulbs be given a good start as regards soil. If the latter is naturally poor some fresh must be added to it. Organic manure is not required, but sweet fibrous loam and leaf-soil. Mix the ingredients some time before they are required for use, and then allot to each clump of bulbs a good spadeful at planting time. This assistance to the bulbs will be well repaid. G. B.

CAPE AND SCENTED PELARGONIUMS.

Though these plants are by no means of recent introduction, they have during the past few years become popular, and, in my opinion, deservedly so. The large majority of them are very interesting, varying very much in habit, perfume, and foliage. They may be successfully cultivated even by the most humble of our populace, many thriving splendidly in a cottage window, thus they are equally valuable to the amateur, who possesses only a small greenhouse, or to the more wealthy owner of a large amount of glass.

PELARGONIUM CORDATUM.

A variable species, with heart-shaped leaves, and, usually, pink flowers. Also known as P. betulæfolium.

Grown as large specimen plants for the embellishment of the flower garden and terrace in summer, as has been so amply demonstrated by the magnificent specimens often brought before the public by that capable gardener, Mr. J. Hudson, V.M.H., of Gunnersbury House, Acton, they are splendid. Numbers of these grand specimens are many years old, and they probably constitute the finest in the country.

A collection of smaller plants, when a house can be devoted to them, always attract much attention, and are exceedingly beautiful. For bedding purposes they are equally well suited, and unless I am much mistaken, they will in the near future be more largely employed for this purpose than hitherto. For cutting and association with cut flowers, many of them are invaluable at all seasons of the year. Though several only produce quite insignificant flowers, others have flowers that are extremely beautiful, both in the arrangement in the truss, and in the colour.

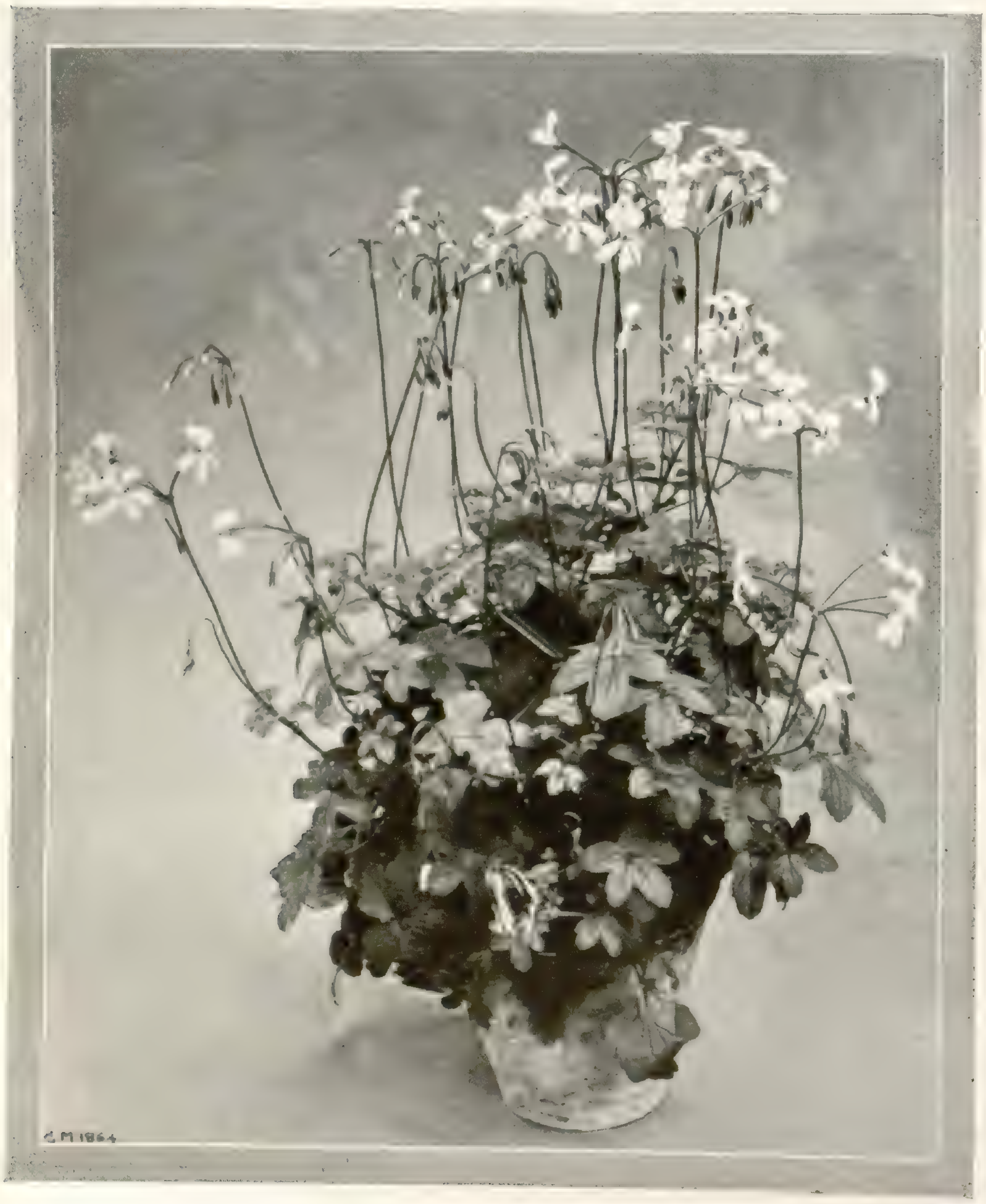
About four years since we commenced to form a collection here, and I am deeply indebted to many kind friends who have been good enough to assist me in getting together about ninety species and varieties.

The culture of Cape pelargoniums is generally most simple, but a few of the most beautiful have not a very robust constitution, consequently more care has to be bestowed on these in the way of drainage, potting, and watering. The latter carelessly done, frequently means the death of the plants. Perhaps the most important point to observe is the cleanliness of the foliage, the most troublesome pest being green aphis, but this is easily combated by frequent fumigation.

Since we exhibited our collection at the Royal Horticultural Society's meeting on July 18, I have received many congratulations, and I have also had numerous enquiries as to culture and the names of some of the more beautiful. For the benefit of those who intend taking up Cape pelargoniums I will deal briefly with what I consider to be their right mode of culture, and give a list of those I think the more beautiful sorts to the readers of the Gardeners' Magazine. Unfortunately many species and varieties bear several titles, which are practically synonymous, and I have taken a great deal of pains to ascertain as far as possible the correctness of those I use.

Now is a splendid time to make a beginning. Cuttings should be inserted in a good sandy compost, in small pots, well drained. These should be put in firmly, thoroughly watered, and rooted in the open, or, better still, in a cold shallow frame, where the light can be placed over them in case of heavy rains, removing them to a quite cool greenhouse about the end of September. They must be potted in the spring, and grown in a light position in a greenhouse temperature, and potted as required, when, by July or August, they will have developed into interesting plants.

Unless very large specimens are required, the plants should be cut back annually during the autumn, water being withheld somewhat—though the soil must not be allowed to become dust-dry—and syringe twice daily. After the plants have nicely broken they should be turned out, have the old soil shaken away, the roots trimmed back, and be then repotted into the smallest pots possible. Always make sure the pots are well drained. A suitable compost consists of three parts good fibrous loam, and one part each of well-decayed leaf-mould and cow manure, with a liberal supply of coarse silver sand



PELARGONIUM MULTIBRACTA.

Handsome dark-marked foliage, and white flowers carried on tall stems.

During the spring, after active growth has commenced, the plants should be shifted into larger pots; and after these become well filled with roots liquid manure may be liberally given, nothing being more suitable than that made from horse and cow droppings with a little soot added, and properly diluted. At all seasons of the year allow a free circulation of air, and place the plants as near to the light as possible. As previously stated, frequent fumigations must be given, or the growths will be severely disfigured and much of their beauty lost.

P. tetragonum is perhaps the most distinct, and its growth suggests that of a succulent plant, the stems being almost devoid of leaves, upright, and quadrangular. The flowers are of medium size. P. saxifragoides is a miniature-leaved species, well named, and the plant naturally assumes a trailing habit. P. tomentosum is an old favourite, both leaves and stalks being densely tomentose; its very strong scent resembles peppermint.

P. cordatum, as the name implies, has medium sized foliage, distinctly heart-shaped; also known as P. betulæfolium. P. Blandfordianum is a good grower, with very distinct leaves of a greyish colour, and small pink flowers. P. terebentha is a free grower, and one of the earliest to flower; it has small foliage, dense growth, and a peculiarly distinct aroma. P. radula has elegant foliage, and the var. minor has finely cut fern-like foliage. P. diadematum has very pretty flowers, rosy-pink, delicately suffused.

P. echinatum has very distinct thorny stems, and elegant trusses of flower, prettily marked, and borne on long stems. P. artemisioides resembles the well-known artemisia in foliage and scent. P. grossularioides variegata makes a pretty plant, being compact and bushy. P. Lady Plymouth is one that ought to be included in every collection, as it has finely variegated foliage and pleasant perfume. P. crispum maximum has erect growth and small foliage. P. Attar of Roses we consider the finest scented pelargonium we have. P. Stagshorn has large leaves, often nine inches across, deeply palmate. P. Clorinda is wonderfully free flowering, and a conspicuous plant.

Other kinds include P. Prince of Orange, and the variegated form (quite one of the best); P. ardens, and P. ardens major, P. capitatum, and P. cuculeatum (good in flower); P. pinnatum, P. Miss White, P. Endsleigh, P. Fair Rosamond, P. Major Clarke, free in growth, and with flowers of medium size; P. Lothario, P. Purple Unique, vigorous habit and fine in flower; P. Rollisson's Unique, with bright scarlet flowers; P. Moore's Victor, with scarlet flowers, not very large, but effective; P. Lady Mary, very pretty in flower, and of good bushy growth; P. Mrs. Kingsbury, with distinct dark foliage, and flowers that are very conspicuous; P. multibracta, a distinct plant, both in flower and foliage; P. Shrubland Pet, P. mollis, P. Kimberley, P. Little Gem, P. Clyne Seedling, P. Mrs. Jenkins, P. loundifolium, P. Pretty Polly, P. Fair Ellen, P. Paddy, P. aspera, and P. jatrophæfolium.

E. Beckett.

MARGUERITE CARNATIONS.

A nice batch of Marguerite carnations is very quickly raised from seeds, and where cut flowers are in great demand the cultivator cannot do better than secure one batch in the open border and another in pots. When I first commenced to grow Marguerite carnations seeds were procured from several reliable firms, but the percentage of double flowers was very low; the single ones, however, amply repaid me for my trouble. Of late years the strains have been much improved, and at the present time one can easily obtain a high percentage of double flowers.

A large nurseryman in the North of England once showed me a grand lot of pot plants placed in a house in September. They were beginning to flower freely, and were expected to do so during the early part of winter. He favoured pot culture throughout in the case of plants required for flowering under glass in the autumn. I followed the system, and also preferred it to the lifting of the plants from the borders. Specimens for this purpose need not be raised as early in the year as those required for blossoming in the open borders.

A friend of mine in Lancashire annually raised a large stock for supplying cut flowers from September to Christmas. He cultivated his plants in beds in frames, which he could deepen as required; boards were fixed on the top of the frames after the end of September, the lights put on when necessary, and the frosts and cold winds excluded. I never saw as much blossom produced in a similar space before, nor since. It was a wonderfully successful plan. If he had had hot-water pipes in the frame he could have made certain of flowers until February.

In cool, sunless summers I have found it a good plan to plunge plants in pots in flower beds instead of turning them out of the pots. They commence to bloom earlier, and all the best buds have developed before the end of the summer bedding season.

Several distinct colours may be obtained and devoted to separate beds, but the mixed colours are the most interesting and useful, where they are being grown for a supply of cut flowers. Geo. Garner.

FRUIT BOTTLING FOR SMALL HOLDERS.

The following instructions for the preservation of fruit by the process known as bottling have been issued by the Board of Agriculture for the guidance of small holders; but as they will be equally useful to all who are desirous of bottling fruit for use when ripe fruit is not available, we reproduce them with the hope that they will prove useful to many of our readers:

Among the industries to which the small holder should direct his attention fruit bottling is worthy of wider consideration than it at present receives. This method of preserving fruit is quite distinct from jam-making, and is more simply carried out.

It enables the grower to make the utmost use of all fruit which reaches maturity, for in a year of abundant crops all surplus fruit, and in any year fruit which cannot be sold at a fair price or consumed, can be preserved for future home requirements or for sale during the months when fresh fruit is unobtainable. Bottled fruit, properly preserved, is a wholesome and valuable food, which finds a ready and profitable sale.

There are probably two reasons why fruit bottling is not yet so common as it deserves to be:—(1) the process is considered to be difficult; and (2) there is a general impression that a special and costly sterilising apparatus is absolutely necessary.

With regard to the first point it is only necessary to say that few tasks could be more simple or easy to perform than fruit bottling, which requires only the care and attention of an ordinarily intelligent person. As to the second point, a patent steriliser is not necessary where only small lots of fruit are to be bottled, a large saucepan, boiler, fish-kettle, or similar vessel for heating water alone being requisite. When, however, the small holder finds that he can profitably dispose of a fairly considerable quantity of bottled fruit, a larger type of boiler holding one or two dozen bottles, or a small sterilising outfit, may usefully be employed. A few shillings will purchase a suitable flat-bottomed iron pot to hold several bottles, while a small steriliser holding about a dozen bottles for use with an oil or gas stove or a kitchen fire may cost £1 5s. to £3 3s. If it be desired to preserve several hundred bottles of fruit in one season it may be worth while to invest in a steam steriliser holding three or four dozen bottles, or even more.

THE OBJECT OF STERILISING OR "PRESERVING."

When it is desired to keep fruit until the fresh article is not available, some means is necessary which will arrest the ordinary processes of decay or "rotting" induced by a variety of low forms of life—bacteria, yeasts, fungi, and possibly even minute larvæ of insects. The most convenient plan is to employ heat to destroy such agents of decay as are present, and prevent the subsequent access of others to the fruit by enclosing it in hermetically sealed or perfectly air-tight vessels. This accomplished, practically in one operation, fruit will remain sound and good for a considerable period, even several years. The desired result is usually attained by placing the fruit in glass bottles having air-tight caps, subjecting the whole for a certain time to a given temperature by means of water or steam, and closing the bottles while still surrounded by steam.

BOTTLES.

Wide-mouthed bottles specially made for the purpose may be obtained through almost any ironmonger at from 3s. to 6s. 6d. per dozen complete, the price varying with the size and quality of the bottles. Many persons have a decided preference for bottles with glass tops instead of metal tops, and some like the "screw" tops; whilst others prefer the bottles whose tops, covers, or discs are held in position by "spring" clips. When counting the cost of the process of bottling it is well to remember that the same bottles, when once obtained, may be used repeatedly until broken; the chief renewals required are rubber rings, which are used with bottles for rendering them air-tight.

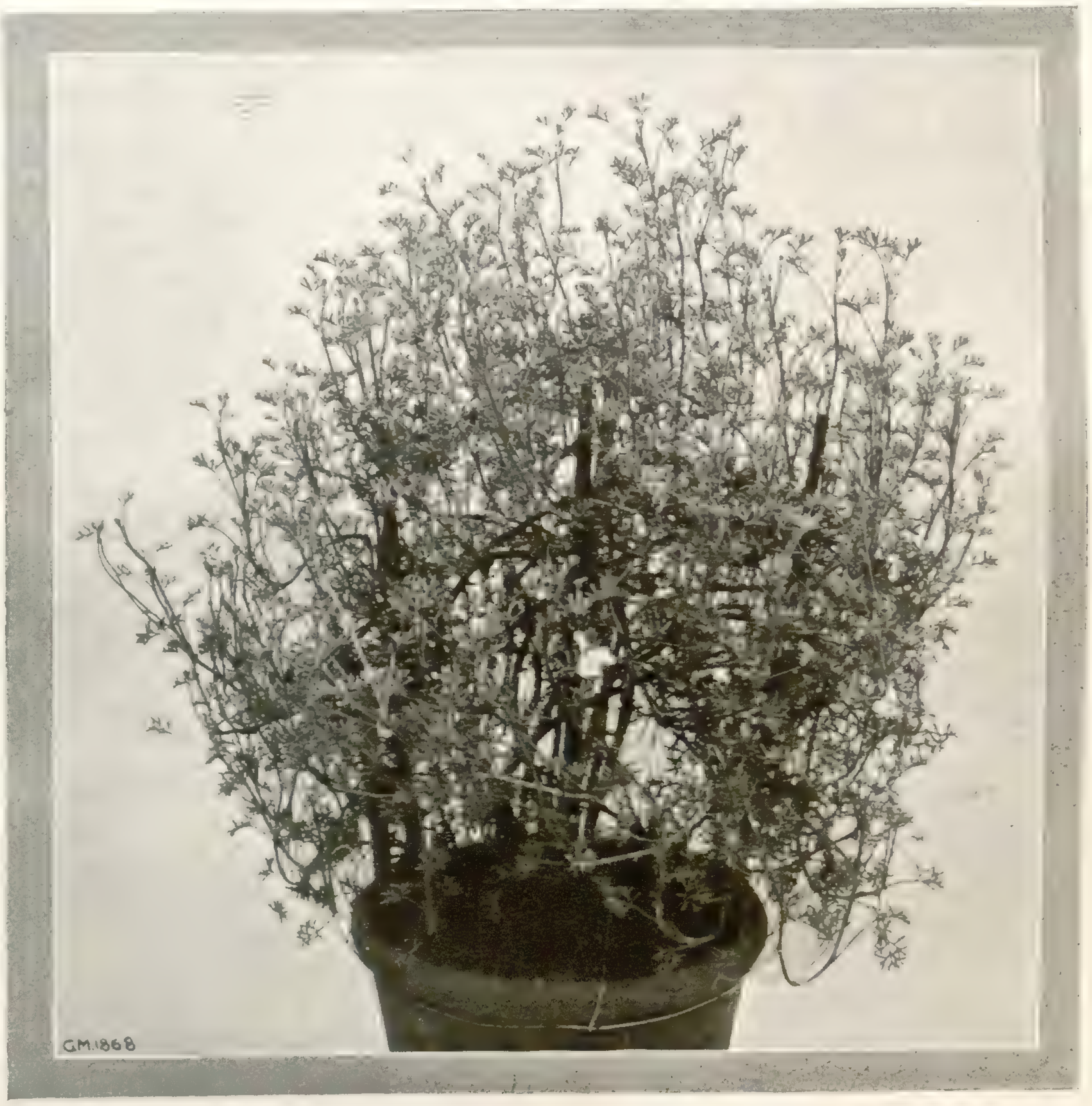
It is absolutely essential that the bottles should be air-tight. An imperfectly-fitting rubber ring or cover may be sufficient to cause failure after perfect sterilisation; the rings and covers must, therefore, fit perfectly. As this cannot always be guaranteed, there will be an occasional bottle which will not be successful. This should be used at once, or the contents may be emptied into a new bottle and re-sterilised.

THE BOILER OR STERILISER.

As stated above, in the case of small lots an ordinary saucepan, boiler, or fish-kettle may be employed to hold the bottles. While such a vessel is over the fire the bottles should be raised somewhat above the bottom of the vessel, or some of them may crack; this may be arranged by placing in the vessel a false wire bottom or a board ¾-inch thick, and standing the bottles on this. The bottles should then be "shoulder-deep" in the water. The temperature should be slowly raised to the desired point, and the caps should be fastened tightly before the vessel is removed from the fire. For fruit-bottling on a somewhat larger scale, a boiler or steriliser may be constructed to hold a dozen or fourteen bottles. Different types of these have been placed on the market.

Where large quantities of fruit are to be bottled, a steam boiler may usefully be employed in conjunction with a steriliser, which may be described as a galvanised iron vessel about four feet long, two feet wide, and two feet high, raised somewhat from the ground on four legs. The lid consists of a galvanised iron plate fitting over a number of bolts on the rim of the steriliser, and screwed down by means of winged screws; two handles serve to remove it or place it in position; a perforation allows the insertion of a thermometer; and a perforated brass or copper vent in the centre allows the escape of steam. The steam is admitted at the bottom by means of a pipe from the boiler, and is equally distributed round the steriliser by a perforated pipe running round near the bottom. Cold water can also be admitted at the bottom by a tap and pipe connected with the usual water supply. An overflow is provided at one end for the water, and a tap for the purpose of emptying the steriliser at the bottom. Bottles when filled are placed in rows in the steriliser on a perforated galvanised iron sheet or false bottom raised about four inches above the bottom of the steriliser on a ledge; they should not be fastened down, but caps should be as nearly as possible in position. The lid is screwed on and the thermometer inserted (the bulb standing in a jar of water inside the steriliser), and steam is then gradually admitted in increasing amount to raise the temperature slowly to the desired point. After maintaining such temperature for the requisite time steam is partly shut off, the lid is removed, and the bottles quickly closed down by means of the gloved hands while the live steam is still playing round the bottles. Steam and cold water are now admitted together, the water being gradually increased and the steam decreased in order to reduce the temperature quite slowly and avoid breakage of bottles. Finally, when the cold water reaches the shoulder of the bottles, these may be removed to finish cooling while another batch is treated. Such a steriliser will hold from six to eight or nine dozen bottles according to their size, and may cost about £20 to £24.

(To be Continued.)



PELARGONIUM ARTEMISIOIDES.

A slender-growing, fine-leaved species, with white flowers.

Roses may be grown to perfection by following the instructions given in Roses and their Cultivation, by T. W. Sanders. A selection is given, with description of all the best varieties, and full details for culture outdoor and under glass. Price 2s. 6d. net. by post in box 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

WORK FOR THE WEEK.

CONSERVATORY AND GREENHOUSE.

MALMAISON CARNATIONS.—As soon as the layers have become sufficiently rooted they should be severed from the parent plant. After the lapse of a week potting may be commenced. The best compost for the purpose is one consisting of good fibrous loam, a small quantity of leaf-soil, some finely broken charcoal, and a good supply of clean, sharp silver sand. The loam should be pulled to pieces by hand and carefully examined for the detection of wireworms, which are a great enemy to all carnations. Select only those layers which are absolutely free from disease, and pot moderately firm using 60-sized pots. After potting stand the plants in a cold frame, and shade for a few days. Do not keep them too close, and when growth has re-commenced, admit an abundance of air on all favourable occasions. Watering must be carefully attended to at this period of growth.

CYCLAMEN.—Young plants in frames will derive benefit from an application of liquid manure. Keep all flower buds picked off as they appear, and syringe frequently to keep down red spider. Those grown from seeds every year are far preferable to old plants grown on; for this purpose a sowing should be made about the present time. Sow thinly in well-drained pans filled with light sandy soil, and place in a temperature of 60 degrees. Cover each pan with a piece of glass over which a sheet of paper should be laid until germination has taken place, when the paper may be removed and the glass tilted to admit air.

FUCHSIAS.—Those who require large plants for next year's flowering should make provision now by inserting a batch of cuttings. Select those shoots which are free from flower buds, and not hard. If placed in a propagating pit they will soon root, when they may be potted off singly, and kept growing all through the winter in a warm, moist atmosphere. Heliotropes may be treated in the same manner.

ZONAL PELARGONIUMS.—The young plants at present standing outside should now be allowed to flower. As soon as they show colour take them inside. Cuttings taken from plants which have been flowering all the summer should be put in to provide plants for the same purpose next year.

CAMELLIAS.—These will now require manurial assistance to build up their flower buds. The trees must be kept well watered as drought at the roots generally causes the buds to fall. Disbudding is advisable on trees which have set an extra heavy crop. Camellias are subject to attack from mealy bug and scale, and this must be prevented by occasional sponging.—A. Grubb, Porters' Park Gardens.

HARDY FRUITS.

THE DROUGHT.—The long-continued drought is now telling on all kinds of fruit trees, particularly where they have been recently removed, or the soil is light. If carrying crops of fruit some additional mulching, not necessarily stimulating, will be of great benefit, and water should be given as often as the supply will admit. Red spider being very prevalent on apples, a check of some description will be necessary to keep them under. If a good supply of water is laid on, a good drenching may be applied to the foliage late in the evening. A flexible hose, if at command, will be of great service, as the under side of the foliage can be more easily reached, providing, of course, a reasonable force can be obtained.

PEACHES AND NECTARINES.—The fruits of peaches and nectarines are best gathered slightly under ripe, when they are less susceptible to bruising; use shallow trays for the convenience of handling, which should have just sufficient wood wool or other packing material to keep the fruits from coming into contact with the wood. These, if placed in a cool fruit room and handled as little as possible, will in a few days be ready for use. All trees as they are cleared of fruit should be carefully examined and have all growth cut away that has borne fruit, as well as other useless growth. The late varieties will need exposing as much as possible; pick off a few leaves immediately overhanging the fruits. Trees that have carried a very light crop are inclined to throw much more lateral growth than usual, but all lateral and sub-lateral growth must be kept regularly pinched, and notes may be taken of trees that will benefit by being root-pruned a little later in the season, and preparations made accordingly. Keep all trees well watered, and the foliage free from spider, so that the wood may be well ripened and set with buds.

YOUNG ORCHARD TREES.—Frequent attention should be given to ties of fruit trees, and especially is this necessary in the case of young standards, or the stems may be much damaged by the ties becoming too tight, or giving way through strain during such heavy winds as may reasonably be expected at this time of year. Water any trees that are showing signs of distress through drought.

LOGANBERRIES, ETC.—Now that the fruiting season is over loganberries, wineberries, and blackberries in their turn should have all the old canes cut away close to the ground, and treated with the same consideration and attention as is generally given to the raspberries, the cultural requirements of all being exactly the same. Blackberries deserve to be cultivated to a much greater extent than is generally the case, especially Rubus laciniatus, or the parsley-leaved variety, for if given good cultivation fine luscious fruits are obtained, and these are much appreciated because they come in at a time when soft fruits are scarce.—J. Whittle, Cheveney Gardens.

THE KITCHEN GARDEN.

CAULIFLOWERS.—The late-planted cauliflowers will need special attention to keep them growing satisfactorily, or they will turn in too soon as a consequence of the continued drought. Give them a good soaking of water at least once a week until rain in sufficient quantity falls; also frequently stir the surface soil to retain the moisture. If a sowing is made now of an early kind, such as First Crop, Early Snowball, or Early London, and the plants as they arrive at a suitable size are pricked out into frames in the autumn, they probably will be found very useful in forming valuable plants for spring planting. In a cold spring they usually surpass those reared under glass in the new year.

WINTER CUCUMBERS.—Preparations should be complete for planting so as to have the plants firmly established before the short days set in. A low, sunny house should be selected where possible for this crop. Pests of every kind are very numerous this year, which makes it necessary that every particle of the structure should be thoroughly cleaned, by washing the glass and wood with hot water, with petroleum added in such quantity as to kill them. Whiten the walls with fresh lime. Where wireworm is prevalent in the soil it may be well to burn it before making it into beds for planting. Do not subject the plants to too high a temperature, but encourage a slow, sturdy growth during the next two months, and crop very lightly.

MUSHROOMS.—The mushroom house should be cleared of all rubbish, the walls lime-washed, and everywhere made clean and sweet for commencing another season. Collect manure in sufficient quantity for the fresh bed, which should be turned frequently until it is certain that all impurities have escaped, and it is sweetened, to make up in the house. Owing sometimes to the weather, manure at this time of year is liable to become too dry, and where this is so, give a watering to the layers as they are formed into beds. Avoid spawning at too high a temperature, and secure new spawn from a reliable source, as failure is often very inconvenient and troublesome.

TURNIPS.—The sowing of Orange Jelly turnip made early in the north will have produced plants ready for thinning out at about six inches apart. Afterwards give them a good dusting of soot, and ply the Dutch hoe between the rows at intervals of a few days. If through any reason growth is slow, apply a dressing or two of nitrate of soda. The earlier sown turnips, if of good usable size, should be lifted and stored in sand in a cool place for present use.

PARSLEY.—Plants raised for winter stock will be of a suitable size for replanting either into frames or other positions to stand the winter under protection of some kind. Parsley is somewhat slow in growth until established. Lift with plenty of roots, and give attention to watering, etc., until they become active in the new soil. Part of the old bed may be cut down and the young leaves allowed to shoot up and grow sturdy before frost arrives.

GENERAL WORK.—Old crops, such as peas, beans, cabbage, etc., should be cleared from the quarters and burnt at once. Apply sulphur to the foliage of late supplies of peas, and water them freely. Remove all weeds from the ground while they are young.—Charles Flack, Cholmondely Castle Gardens.

NATIONAL VEGETABLE SOCIETY'S TRIAL OF GLOBE BEETROOTS.

Included with a much larger one of long-rooted beets, which will be dealt with later in the season, were some seventeen stocks of Globe or round-rooted varieties, kindly sent for trial by sixteen diverse seedsmen. Trials of the entire stock were conducted simultaneously on sand at "The Times" Experimental Station, Sutton Green, Surrey, under the control of Mr. Harry Foster, and on loam at Marsh Farm, Twickenham, under the control of Mr. William Poupart. At Sutton Green the rows were 22 feet long and sown in duplicate. At Marsh Farm the rows were single and rather shorter. In both cases germination was excellent, the plants later being moderately thinned, as no effort was made to secure large roots by excessive thinning. That the unusually long spell of drought and heat experienced during the growing season materially checked the growth there can be no doubt, but under the circumstances the roots were excellent. In few cases were there very uneven stocks among the round-rooted section. The sowing was made in both cases early in the month of May. The primary tests were of the roots in form, and of the flesh in colour and in fineness of grain, as these features, and especially the latter, are of special importance. Consequently, of each stock several roots were pulled and cut to make the tests complete. After the most careful scrutiny of the roots of both trials, three marks or very highly commended were given to The Sutton Globe, from Messrs. Sutton and Sons, Reading; Crimson Globe, from Messrs. Dickson and Robinson, Manchester; Early Globe, from Messrs. Yates, of Evesham; Early Red Globe, from Messrs. Barr and Sons, Covent Garden; and Blood Red, from Messrs. Hurst and Co., Houndsditch. Two marks or highly commended were given to Globe Witham Fireball, from Messrs. R. Veitch and Sons, Exeter; Selected Globe, from Messrs. Dobbie and Co., Edinburgh; Deep Blood Red, from Messrs. Alex. Dickson and Sons, Newtownards, County Down; and Crimson Globe, from Messrs. Toogood and Sons, Southampton. With respect to these latter four it is but fair to say that on other soils their flesh may equal in colour those of the first group; but it was obvious the results of the two trials named could only be adopted in this case. Several stocks showed the root flesh to be far too white or coarse to merit cultivation. The firms contributing seeds have the society's warmest thanks.

SHREWSBURY FLORAL FETE.

(Continued [illegible] page 622.)

case there were nineteen expanded flowers on a spike; Mr. A. Brydon was second, and Messrs. Harkness and Son third.

The best dozen bunches of hardy flowers were from Mr. A. Brydon, who presented Lobelia Firefly, Lilium tigrinum, etc., in grand condition; Mr. Butler, gardener to C. H. H. Shorting, Esq., Broseley, second. The class for two dozen bunches of hardy flowers found Mr. A. Brydon again to the front, and here he had Eucomis regia, Lilium tigrinum, Heuchera sanguinea, Rudbeckia laciniata plena, Montbretia Germania, etc., in splendid form. There were numerous competitors, and second prize fell to Mr. F. Eames, Frome, who had gladioli, Crinum Powelli and gaillardias in good form; Messrs. G. Gibson and Co., Bedale, third.

Twelve bunches of choice cut flowers was a good class, and first prize fell to Mr. A. R. Searle, gardener to the Marquis of Northampton, Castle Ashby, for carnations (three bunches), Cassia corymbosa, Anthurium atrosanguineum, Lilium auratum, L. speciosum, Begonia corallina, Stephanotis floribunda, Hedychium coronarium, hydrangeas, and Bougainvillea speciosa; Mr. J. W. Barker, gardener to J. R. Dixon Nuttall, Esq., Prescot, second. For six bunches of choice cut flowers Mr. T. Lambert, and Mr. W. Taylor, gardener to F. Bibby, Esq., Hardwicke Grange, Salop, were first and second respectively.

MESSRS. DICKSON AND ROBINSON'S GOLD MEDAL EXHIBIT OF LILIUMS, CARNATIONS, MELONS, ETC., AT SHREWSBURY FLORAL FETE.

Annuals, in twelve bunches, proved an attractive class, and Mr. Oakley, gardener to A. E. Humphrey Owen, Esq., Berriew, was a capital first with African marigolds, sweet sultans, Phlox Drummondi, asters, coreopsis, salpiglossis, cosmos, zinnias, lavateras, Cacalia coccinea, and Rudbeckia amplexicaule; Mr. G. Bamfield, gardener to W. H. Banks, Esq., Kington, second; and Mr. Forder, gardener to Colonel Cornwallis West, Ruthin Castle, third. We want more classes for annuals at summer shows.

Messrs. M. Campbell and Son, High Blantyre, scored for a collection of carnations, and proved that cooler weather has prevailed of late in Scotland than in the South; Messrs. A. R. Brown, Lim., second. Mr. C. F. Waters, Balcombe, led for a collection of perpetual carnations with a goodly set of popular varieties, well staged; Mr. W. Angus, Penicuik, second. Messrs. M. Campbell and Son, High Blantyre, scored for a dozen vases of carnations and picotees, with a bright set, and was closely followed by Messrs. Arthur R. Brown, Lim., King's Norton.

Messrs. Gunn and Sons, Olton, led for a collection of roses arranged for effect, and they confined their attention almost entirely to hybrid tea roses, making therewith a pretty and fragrant exhibit. In the other rose classes the flowers were poor; Messrs. A. Dickson and Sons, Newtownards; Messrs. G. Gibson and Co., Leeming Bar; Messrs. J. Cocker and Sons, Aberdeen; and Mr. G. Speight, Market Harborough, were the most successful competitors.

FLORAL DESIGNS.

Floral designs were once more finely shown. Mr. W. H. Garner, Altrincham, scored for a floral harp, with a beautiful contribution that had a foundation of white asters, with a base of cattleyas, cypripediums, and liliums; Messrs. Gunn and Sons, Olton, second with a foundation of stocks, and a base of small cattleyas; Mr. W. H. Banks, Kington (gardener, Mr. Bamfield), third.

The class for one bride's bouquet and two bridesmaid's bouquets is always an attractive one, and on this occasion there were three competitors. Miss E. E. Todd, Musselburgh, N.B., scored with one bouquet of Odontoglossum crispum, and Dendrobium formosum giganteum, and two of pink carnations; Mr. W. H. Garner, Altrincham, came second with very similar material, and Mr. J. E. Knight, Wolverhampton, was third. Mr. A. Adshead, Gatley, Chester, scored for one bride's bouquet, with a design in white orchids, carnations, and pancratiums: Mr. W. J. Garner second; and Miss E. E. Todd, Musselburgh, third.

Mr. Adshead also led for a bouquet of flowers with a graceful and gorgeous design of golden oncidiums and purple cattleyas; Mr. W. J. Garner second with somewhat similar flowers, but scarcely so bright. In the bouquet class, orchids excluded, Mr. Garner led with a light bouquet of Gloriosa superba and asparagus; Mr. Adshead second with bright pink carnations; and Mr. Broadway, gardener to Mrs. H. Greaves, Warmington, third with gloriosas.

The best dahlia bouquet was a charming one of a yellow, pink-tipped variety, arranged in a most elegant fashion by Mr. W. Treseder, Cardiff; Mr. A. Adshead second.

Mr. W. J. Garner won first for a basket of flowers with a delightful exhibit of Cattleya Trianæ, cypripediums, odontoglossums, and croton and caladium leaves, the whole producing a grand effect. Mr. Garner was again first in the class for a basket of flowers, orchids excluded, with Gloriosa superba and croton and caladium leaves; Mr. Adshead second; and Mrs. H. Greaves third.

For a table decoration premier honours fell to Mrs. Garner, Altrincham, who used Gloriosa flowers and yellow carnations, with small asparagus and caladium foliage; Mrs. H. Greaves, Warmington, second, with Gloriosa superba flowers, montbretias, and sweet sultans; Miss Jenks, Codsall, third. There were many entries, these filling one side of a tent.

VEGETABLES.

In the open section there were vegetables worthy of highest praise, for nothing has been more difficult this season than to get real quality and nice finish into vegetables, but the winning exhibits at Shrewsbury proved that some growers, at any rate, can master a trying and difficult season.

In the open class for a collection of vegetables, twelve distinct kinds, Mr. J. Gibson, gardener to the Duke of Portland, Welbeck Abbey, scored a good first. His Ailsa Craig onions, Gladstone peas, Sutton's Black beet, and Student parsnips were models of what such things should be, and the other dishes were also first-rate. Mr. J. Hudson, Leicester, was second with another nice lot of stuff; and Mr. J. R. Tooley, gardener to H. Andrews, Esq., Toddington Manse, third. In the collection of nine kinds Mr. J. Mills, gardener to Captain Heywood Lonsdale, Shavington Hall, was first, and Mr. W. Dawes, gardener to Lord Trevor, Brynkinalt, second; and Mr. Ed. Jones, gardener to the Misses Howell, Berriew, coming in third.

Numerous classes were provided by seedsmen, and the competition was well sustained, the winners in every class putting up really excellent stuff. Mr. R. H. Smith, gardener to Mrs. Arbuthnot, Newtown Hall, scored first in Messrs. Dickson and Robinson's class for nine kinds; Mr. J. W. Barker, gardener to J. R. Dixon Nuttall, Esq., Prescot, won first in Messrs. Clibran's class for twelve kinds; and Mr. G. W. Robinson, Burton-on-Trent, led in Messrs. Carter's class for six kinds.

Messrs. Webb's class for nine kinds brought four entries, among which that put up by Mr. J. Hudson, Leicester, was accorded highest honours. Mr. T. H. Pugh, Newtown, took the lead in the class provided by Messrs. Robert Sydenham, Limited, the leeks, celery, and tomatoes in this exhibit being of outstanding merit. Messrs. Sutton and Sons' class was especially good, and Mr. J. Gibson's winning collection was a masterpiece, both for quality of produce and skilful staging. There were six good entries in this class.

NON-COMPETITIVE.

The traders turned up in great force, and very materially assisted in making the show the success it was, and, as usual, they staged good material in excellent style.

Very bright and gay was the stand of vegetables, fruit, and flowers set up by Messrs. E. Webb and Sons, Wordsley. Mammoth Red onions, Scarlet and Golden capsicums, rich red tomatoes, and purple beet carried almost as much colour as the sweet peas, liliums, and spiræas that were tastefully arranged in mounds and on arches throughout the exhibit. Mr. Edwin Murrell, Shrewsbury, filled their usual bay in the big tent with a good display of roses, gladioli, and herbaceous flowers. Prince de Bulgarie rose showed up remarkably well on a tall stand in the centre of the group. Miss S. S. Thompson, Alfred Road, Handsworth, put up a stand of choice and well-grown cacti. There were some exceptionally good specimens of Echinopsis gemmata, and quite a number of uncommon things on the stand.

King's Acre Nurseries, Ltd., Hereford, brought an extensive collection of fruit trees in pots. Beurre Bosc, Marie Benoist, and Doyenne du Comice pears were carrying good crops, as also were The Queen and other apples, and several good plums. About the best exhibit of antirrhinums we remember having seen was staged by Messrs. Bakers, Wolverhampton. There were fair-sized batches of plants in separate varieties, about thirty in number, each beautiful and distinct. Particularly striking were Glow, Codsall Rose, and Dazzler. Messrs. Bakers also showed a big collection of asters, which were of fine habit and colours.

Mr. H. N. Ellison, West Bromwich, staged ferns in his customary good style, the various plumose nephrolepis being as usual a leading feature.

Hardy flowers were well shown by Messrs. Dicksons Lim., Chester, who, in spite of drought and drawbacks, had Lilium auratum and its varieties, Helianthus multiflorus maximus, sidalceas, and other popular subjects in excellent form. This firm also had a display of floral designs, which were well executed. Mr. Albert Myers, Sutton Lane Nurseries, Shrewsbury, showed zonal pelargoniums in great variety. Messrs. Jones and Son, Lim., Shrewsbury, had a nice display of sweet peas, and also choice American carnations and gladioli. On the opposite side of the table there were nephrolepis and the beautiful Polypodium crispum in capital form. A small but choice group of orchids came from Mr. E. V. Low, Vale Bridge, Haywards Heath. Cattleya Iris, C. Adula, Brasso-cattleya Mdme. C. Maron, and other fine things. were included in the exhibit.

The elaborate exhibit staged by Messrs. Sutton and Sons, Reading, was remarkably well arranged. Mounds of gloxinias at either end, and begonias in the centre, were supported by fine melons and a series of dishes of vegetables of high quality. Messrs. Hobbies, Lim., Dereham, filled one of the bays in the big tent with roses. Tall weeping standards overtopped a bed of dwarfs, which comprised such well-known things as Ulrich Brunner, Frau Karl Druschki, Juliet, Irish Elegance, and many others. Messrs. Hobbies also had on the centre tabling of the same tent a distinctly good exhibit of pæony-flowered, decorative, and cactus dahlias. The flowers were clean and fresh, and the manner in which they were staged reflected great credit upon the firm's staff. Messrs. Dobbie and Co., Edinburgh, had not so large a display of sweet peas as they generally show here, but what they did stage were excellent. They had in addition a big and very effective bank of dahlias, among which collarette and pæony-flowered varieties were well represented.

One of the most effective displays in the show was made by Messrs. Dickson and Robinson, Manchester. Tall stands of Lilium longiflorum and speciosum occupied the background, with vases of perpetual carnations in front, the colours being beautifully blended, and set off to greatest advantage by the use of smilax and small ferns. About a dozen fruits of "The Manchester" melon were put up in the centre of the stand, and were, without doubt, fine examples of a really good variety. The silvered rustic ware associated with the firm of Robert Sydenham, Lim., Birmingham, was on this occasion filled with carnations. The flowers stood well, and demonstrated the fact that the receptacles are equally as well adapted to receive carnations as sweet peas. Roses were the chief feature of the exhibit put up by Messrs. W. and J. Brown, Stamford. The Lyon, Mdme. Melanie Soupert, M. Constant Soupert, and His Majesty were in good form. Liliums, gaillardias, and other perennials were used in the background.

Messrs. Aldersey and Marsden Jones, Tilston, Malpas, staged hardy flowers, the arrangement being rather thin and flat. There were, however, some good phloxes, chelones, and statice, as well as a good variety of hardy annuals. A very creditable display of sweet peas was made by Messrs. W. H. Simpson and Sons, Birmingham, who have evidently been among the favoured few who have been able to obtain a continuous supply of flowers this season. Messrs. Jarman and Co., Chard, showed their well-known centaureas and representative collections of cactus dahlias and zonal pelargoniums. There were also good apples on the stand, Lady Sudeley being brightly coloured. Messrs. Young and Co., Hatherley, Cheltenham, staged perpetual carnations, among which Mikado, Britannia, and Mrs. H. Burnett were very well shown.

A big batch of gladioli came from Messrs. Kelway and Son, Langport. The delicate shades of some, and the intense, dazzling hues of others were delightful, but, of course, the size of bloom was not so fine as in a kinder season. Messrs. Alex. Dickson and Sons, Newtownards, brought over a good collection of garden roses, among which Duchess of Wellington, Alex. Hill Gray, and Arthur R. Goodwin were prominent. Sweet peas were staged in considerable quantity by Messrs. Herd Bros., Penrith. Mrs. Chas. Foster. Miriam Beaver, and other light-coloured varieties were good. Messrs. Isaac House and Son, Westbury-on-Trym, had a couple of new tomatoes on view, which showed remarkable cropping qualities. Devonia, a smooth round of moderate size, carried about a dozen fruits per truss. Fonthill, grown outdoors, was very heavily fruited. Messrs. H. B. May and Sons, Dysons Lane Nurseries, Edmonton, showed ferns, among which various platyceriums were very well represented. Adiantum Farleyense gloriosum and Nephrolepis Neuberti were other choice things on the stand.

Mr. T. R. Hayes, Keswick, the well-known heather specialist, had a capital exhibit of his speciality, which was worthy of more than a passing glance. In addition to the pink and white forms of E. vulgaris, there were E. vulgaris alba gracilis,, E. v. Alporti, Menzesia alba globosa, etc. Mr. Hayes also had a very fine lot of phloxes. Messrs. Clibrans, Altrincham, put up one of their very elaborate displays of vegetables, which worthily attracted a great deal of attention. The style adopted was almost as light and fanciful as could be used for a dessert table.

Mr. E. Beckett, gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree, arranged an exhibit of vegetables that included perfect examples of Webb's Purple Kidney, Provider, and other potatoes, beautiful peas, Ailsa Craig onions, and Royal Favour cucumber. In fact, everything one could wish for appeared to be included on the stand, which was, needless to say, arranged in tip-top style. Messrs. Isaac House and Son, Westbury-on-Trym, had a stand of phloxes, gaillardias, heleniums, and other border flowers in good varieties, and also a table of sweet peas, which included Mrs. James C. House, a new heliotrope variety of considerable merit. Messrs. John Forbes, Lim., Hawick, N.B., showed phloxes in big bold bunches, such varieties as Mrs. Oliver, Paul Fliche, Aurora, and Lady Menzies being grand. The pentstemons and carnations on this stand were also good.

An exhibit of more than ordinary merit was the group of fine foliage and choice flowering plants, arranged in a recess of the group tent by Messrs. Jas. Veitch and Sons, Lim., Chelsea. Anthurium Veitchi, Alocasia Thibautiana, crotons in many varieties, and graceful aralias were tastefully dispersed over a groundwork of smaller ferns, etc. In the centre of the group a batch of cattleyas, oncidiums, and other orchids made a bright bit of colour, and some plants of Thalictrum dipterocarpum claimed the attention of all. Among the host of phloxes shown in baskets by Messrs. Gunn and Sons, Olton, Warwickshire, there were some very striking things. Countess of Ilchester, Matador, Coquelicot, and King Edward VII. were all aglow with brilliant tints.

Messrs. Pritchard and Sons, Shrewsbury, showed some nice plants of the plumose nephrolepis, and a number of alpine plants in pots and pans. Some of the choicer encrusted saxifragas, sempervivums, and sedums were well done. One end of a tent was occupied by a fine exhibit from Mr. Amos Perry, Enfield. Delphiniums, grand for so late in the season, and water-lilies in a shallow tank were the chief features, the water being surrounded by osmundas, crested scolopendriums, and other hardy ferns. Violas were shown by Mr. W. L. Pattisson. Cherry Orchard, Shrewsbury, and Messrs. Harkness and Sons, Bedale, showed about twenty-five varieties of gaillardia, some of which were exceptionally fine and distinct. A big bold group of herbaceous flowers was put up by Mr. Fred Eames, Frome, the gladioli, Scabiosa caucasica, aconitums, and phloxes, all showing up well among a number of smaller but equally interesting subjects.

MEDALS.

Large Gold.—Messrs. Clibrans, Altrincham; Messrs. Sutton and Sons, Reading; King's Acre Nursery Company, Hereford; Mr. E. Beckett, gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree; Messrs. Jas. Veitch and Sons. Chelsea; Messrs. E. Webb and Sons, Stourbridge.

Gold.—Messrs. H. B. May and Sons, Edmonton; Messrs. Dickson and Robinson, Manchester; Messrs. Dicksons, Chester.

Silver-Gilt.—Messrs. Isaac House and Son, Westbury-on-Trym; Messrs. Herd Brothers, Penrith; Mr. T. R. Hayes, Keswick; Messrs. Bakers, Codsall; Messrs. Caldwell and Sons, Knutsford; Messrs. Hobbies, Lim., Dereham; Messrs. Gunn and Sons, Olton; Mr. Amos Perry, Enfield; Messrs. Alex Dickson and Sons, Newtownards; Messrs. J. Forbes, Lim., Hawick; Messrs. Dobbie and Co., Edinburgh; Mr. H. N. Ellison, West Bromwich; Messrs. Pritchard and Sons, Shrewsbury; Messrs. H. Jones and Son, Lim., Shrewsbury; Messrs. W. and J. Brown, Stamford; Messrs. A. Young and Co., Hatherley; Messrs. Kelway and Son, Langport.

Silver.—Messrs. Simpson and Sons, Birmingham; Mr. E. Murrell, Shrewsbury; Mr. A. Myers, Shrewsbury; Messrs. Jarman and Co., Chard.

Bronze.—Mr. E. Low, Hayward's Heath; Messrs. G. Mair and Son, Prestwick, N.B.; Mr. F. Eames, Frome; Messrs. G. Gibson and Co., Leeming Bar; Mr. F. W. Johnston, Manchester; Mr. W. Pattisson, Shrewsbury; Robert Sydenham, Lim., Birmingham.

THE
NATIONAL VEGETABLE SOCIETY.
will hold their
SECOND ANNUAL SHOW
at the ROYAL HORTICULTURAL HALL, Vincent
Square, Westminster, on
WEDNESDAY, AUGUST 30th, 1911.

Open One o'clock.

Hon. Sec., E. G. QUICK, "Kelmscott," Harrow View,
Wealdstone, Harrow.

SANDY, BEDFORDSHIRE.

43rd ANNUAL SHOW, AUGUST 31st, 1911.
PLANTS, FLOWERS, FRUIT, VEGETABLES, etc.;
DOGS, POULTRY, PIGEONS, RABBITS, CATS, etc.
PRIZES VALUE £1,000, including
£70 for Groups of Plants, £9 for Roses.

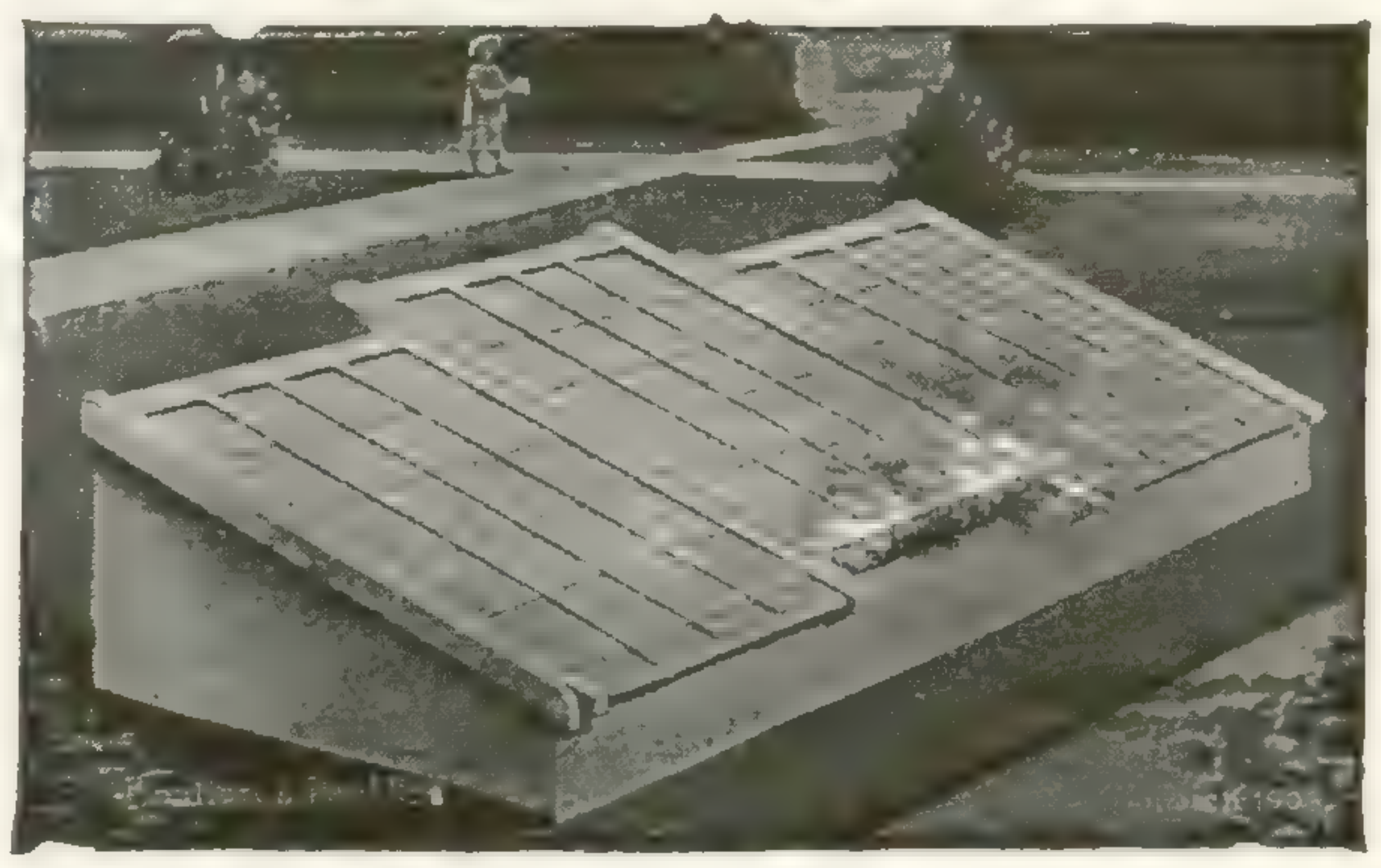
Entries close August 24th.

Schedules and particulars of
W. GREEN, Sec., Sandy, Beds.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

PRESERVE YOUR PLANTS
during the Winter Months by using our well made

No. 75. MELON AND CUCUMBER FRAME.
Painted three coats, glazed 21 oz. glass.



4 ft. by 6 ft. ... £2 10 0 | 8 ft. by 6 ft. ... £3 0 0

Garden Frames
in every variety always in stock.
High-class Finish in the Very Best Materials.

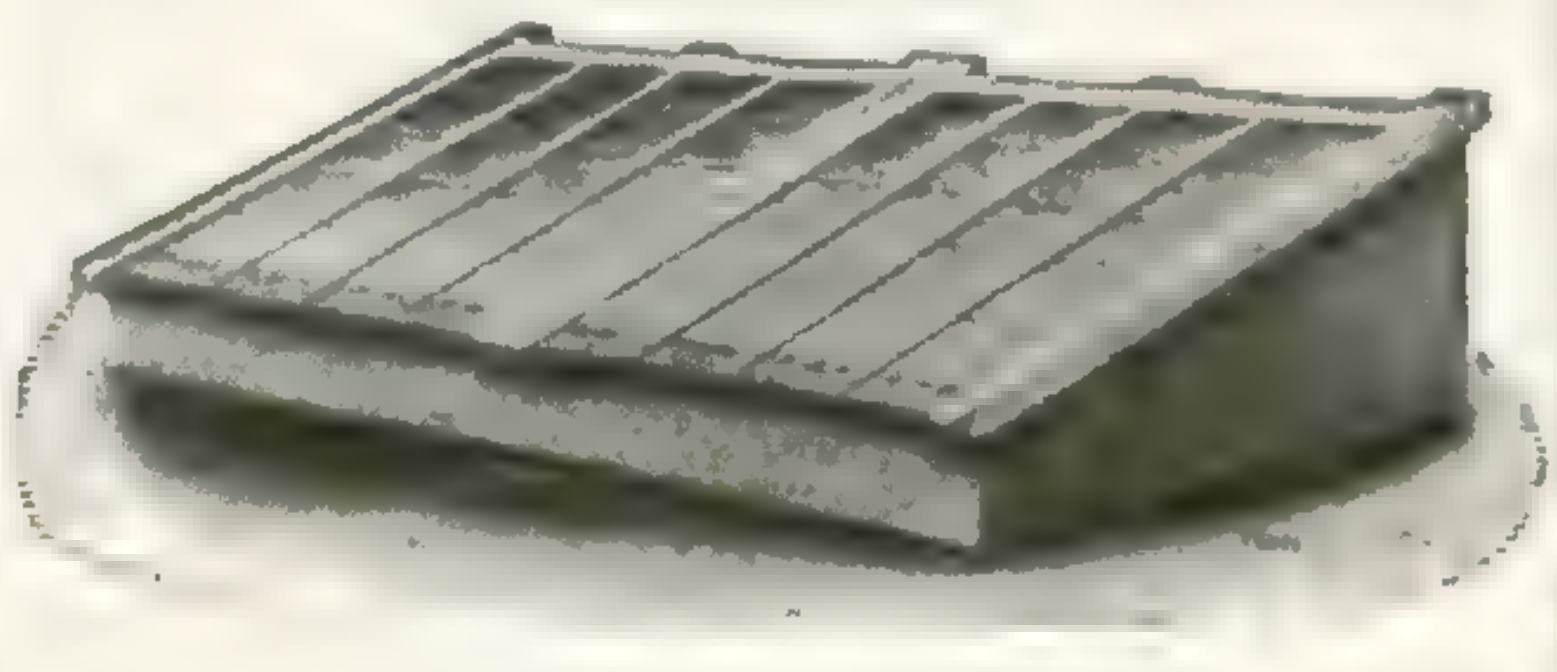
Pit Lights.
6 ft. 1½ in. by 4 ft. Painted and Glazed 14/- each
Unpainted and Unglazed ... ... 5/- „

Double Glazed Lights.
4 ft. 7in. by 4 ft. 3 in. Painted and Glazed, 15/6 each

Improved Fruit Trays.
30 in. by 19 in., 18/- doz.; 24 in. by 15 in., 15/- doz.
Carriage Paid on one dozen Trays and over.

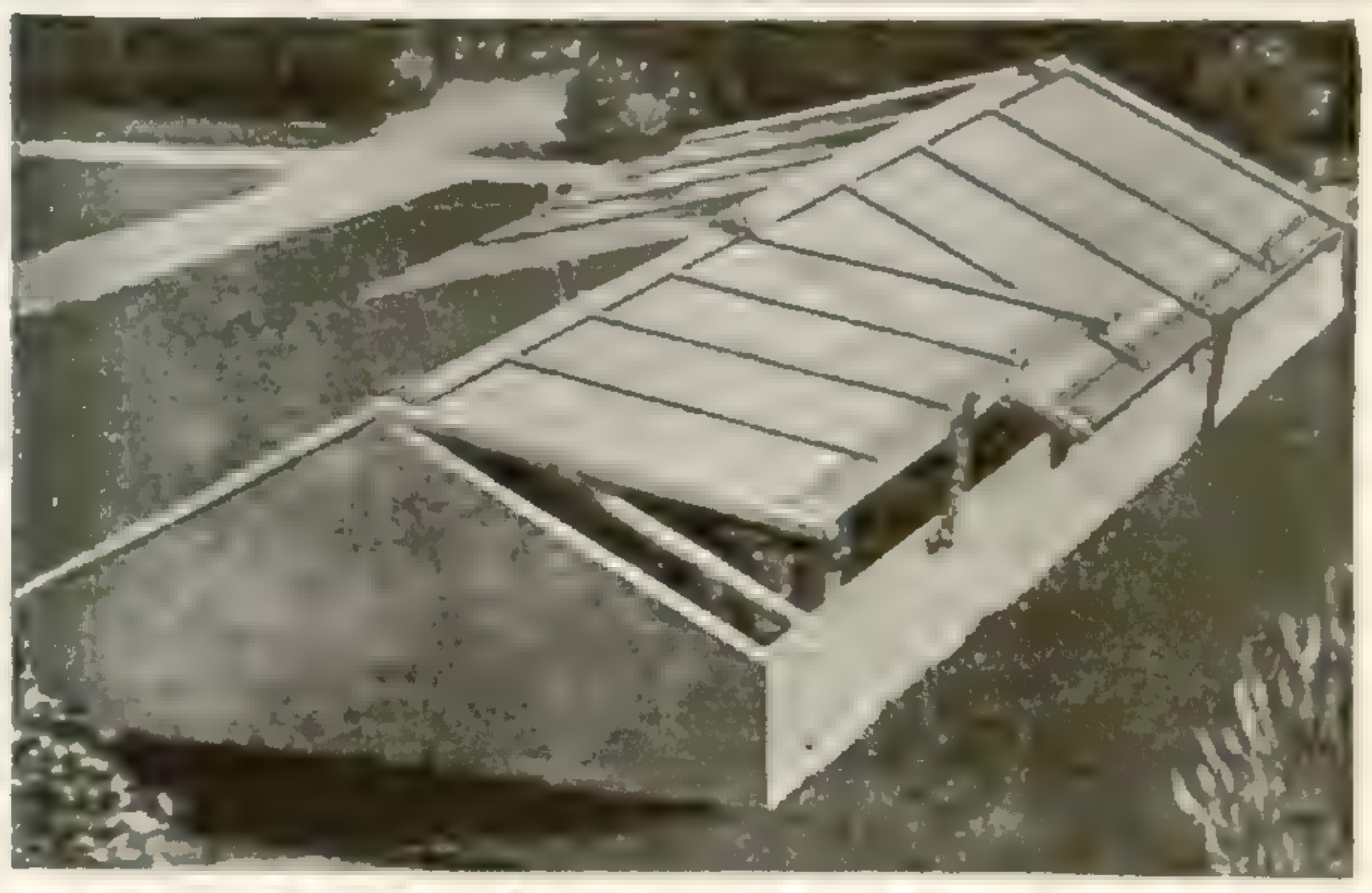
Reed Mats. 4 ft. 6 in. square, 20/- doz.

SEND FOR PRICE LISTS.



No. 77. VIOLET FRAME
(as illustrated).
6 ft. by 4 ft. £1 15 0
9 ft. by 4 ft. 2 7 6

No. 60.
PORTABLE PLANT PRESERVER
6 ft. by 3 ft. £1 14 0
6 ft. by 4 ft., £2 5 0
All Frames and lights Painted three coats. Glazed with 21 oz. glass.



Carriage Paid on Orders of 40/- value to most Goods Stations in England and Wales.

BOULTON & PAUL, LTD., NORWICH.

EXHIBITIONS AND MEETINGS.

◆

Perthshire Sweet Pea Society.

The second exhibition of this society in the City Hall, Perth, was formally opened by Lady Dewar, who was introduced by the President, Rev. Harold Mayall. The entries, considering the exceptionally dry season, were fairly large, the number being 229, which was an increase of nearly 30, compared with last year. The quality of the flowers was very high throughout.

Messrs. Thynne and Son, Dundee, were awarded a gold medal for a very fine exhibit of sweet peas, and the second prize, a silver-gilt medal, went to Messrs. Young and Sons, Elgin, for a capital display. A gold medal was also awarded to Messrs. Dobbie and Co., Edinburgh, for an exhibit of sweet peas, which included all the newest and best of the novelties, including Mrs. Cuthbertson, a useful pea for decorations, a clear rose pink standard, white wings flushed pale rose; Lady Knox, a charming variety for decorations; Melba, a fine pale Earl Spencer, raised by Mr. Malcolm; Mr. Heslingter, a beautiful lavender; and Red Star, which has good colour and substance. Messrs. Cocker, Aberdeen, were also awarded a gold medal for a first-class display of roses. This firm put up nearly 300 blooms, including a lovely box of The Lyon and pillars of Caroline Testout, Hugh Dickson, and Gloire de C. Guinoisseau, etc. A silver medal was awarded to Messrs. R. Hadeson and Sons, Perth, for a fine display of carnations and sweet peas.

The blue ribbon of the show, in the shape of the society's cup, was won by Mr. John A. Grigor, Forres, with a beautifully staged collection, arranged in the following order: Mrs. Hugh Dickson, Dobbie's Sunproof Crimson, Nubian, Elsie Herbert, Masterpiece, Mrs. W. J. Unwin, Etta Dyke, Countess Spencer, Isobêl Malcolm, Edrom Beauty, John Ingman, and Earl Spencer, all perfect flowers; the two outstanding vases were those of Countess Spencer and Earl Spencer, the former was an ideal vase, and the latter was absolutely perfect. The second prize was awarded to Mr. Young, Falkland Palace, who showed in capital form Nubian, Dobbie's Sunproof Crimson, Elsie Herbert, Marjorie Willis, Geo. Herbert, Mrs. H. Dickson, Edrom Beauty, Isobel Malcolm, Paradise Apple Blossom, Mrs. Breadmore, and Thos. Stevenson. The third prize collection was also remarkable for high quality, and was staged by Dr. Temple, Comrie.

In the class for six vases Mr. J. Grigor again led the way with another perfect lot, including Constance Oliver, Moneymaker, Asta Ohn, John Ingman, Princess Victoria, and Clara Curtis. Mr. J. F. Adams, Brechin, was second, staging a collection of exceptional merit; Mr. Wm. Young, Falkland Palace, was third. In the competition for the prizes for three varieties, Mr. J. Grigor, Forres, ran in first with King Edward Spencer, Arthur Unwin, and Edrom Beauty; Dr. Temple, Comrie, was second. In the class for six bunches of novelties, 1910 and 1911, Mr. J. Grigor was again first with Isobel Malcolm, Dobbie's Sunproof Crimson, Elfrida Pearson, Edrom Beauty, Anglian Pink, and Chas. Foster. Mr. Thos. Kirkwood, Cultoquhay, followed for second place with beautiful flowers of Maori Belle, Sunproof Crimson, Mrs. H. Dickson, Earl Spencer, Edrom Beauty, and Freda; Mr. Geo. Reid, Downfield, third.

In the small growers' class for six bunches, Mr. G. Milne, Dunnauld, Montrose, showed a remarkable lot of perfect flowers in Dobbie's Sunproof Crimson, Etta Dyke, Evelyn Hemus, Mrs. H. Dickson, Tennant Spencer, and Edrom Beauty; Mr. Fulton, Crieff, second, with a nice clean set; and Mr. J. Duthie, Claverhouse, Dundee, third. For three bunches, Mr. G. Milne was first with grand vases of Mrs. H. Sykes, Isobel Malcolm, and John Ingman; Mr. J. Duthie second; Mr. J. H. Crosby, Comrie, third. For one bunch of a lavender variety, Mr. J. Duthie, Dundee, first; Mr. J. H. Crosby, second; and Mr. J. Robertson, Meiklour, third. The premier award for a bunch of a pink variety was easily won by Mr. G. Milne, Montrose, with a glorious bunch of Stark's Hercules; Mr. J. Duthie, second; and Mr. J. Robertson, third. In the class for a bunch of picotee-edge or cream pink, Mr. G. Milne was first with Elsie Herbert in grand form; Mr. J. Duthie second, and Mr. J. H. Crosby third. In the class for six bunches, open to Perthshire growers only, Mr. Thomson, Bridgend, was first; Mr. G. L. Morrison, Craigie, second; and Mr. J. Bissett, Hillyland, third. For three vases for decorative effect, the prizetakers were: Mr. W. Robertson, Perth; Mr. A. M. Mechie, and Mr. W. Thomson. The prizes for six vases for decoration, open to Perthshire growers only, were keenly contested, and at the head of the several competitors was the Rev. H. Mayall, Comrie; Mr. A. Glass, Birnam, second; and Mr. J. Dempster, Dalguise, third. For one vase for decorative effect, the Rev. H. Mayall was again first, and Mr. J. Dempster and Mr. J. Kirkwood were second and third.

The post of honour in the class for a decorative display of sweet peas, occupying 4ft. 6in. by 3ft. of staging, was occupied by the Rev. H. Mayall; and Messrs. Alfred Young and Co., Elgin, and Mr. Geo. Reid, Downfield, were second and third.

A class was provided for school children for three vases to be arranged for decoration on the morning of the show. This was a most satisfactory class, there being thirteen competitors, who showed great taste in arrangement, and set up their flowers in a way that might well be copied by many older exhibitors.

Manchester and North of England Orchid Society.

At the meeting held on Thursday, August 10, the members of committee present were: Rev. J. Crombleholme (in the chair), R. Ashworth, C. Parker, Z. A. Ward, J. Evans, W. Holmes, A. J. Keeling, F. K. Sander, and H. Arthur (secretary).

Colonel J. Rutherford, M.P., Blackburn (gardener, Mr. Lupton), staged a very nice group, to which a silver medal was awarded; several plants of Cattleya Gaskelliana alba, and a well-flowered specimen of the type, a good form of Brasso-cattleya Maronæ, Cattleya gigas, L.-c. Calistoglossa, Cypripedium Maudæ, and several others.

Z. A. Ward, Esq., Northenden (gardener, Mr. Weatherby), was also awarded a silver medal for an excellent group of cattleyas and cypripediums, including two good plants of Cattleya Atalanta, one a good dark form, L.-c. Calistoglossa, a plant of Hardyana x Harrisonæ, bearing two well-formed bright flowers, several plants of Cattleya Harrisonæ, Cypripedium "Lord Derby," Rothschildianum, Burtoni, Tixalleuse, and others.

R. Ashworth, Esq., Newchurch (gardener, Mr. Gilden), staged an excellent group, to which a silver medal was awarded, miltonias being a feature; the cypripediums were also good, C. Rothschildianum and several hybrids from same, including a nice plant of C.

Transvaal, Odontoglossum crispum Xanthotes, a very nice form, O. Harryanum, and others; Lælio-cattleya Bletchleyensis and the Ashlands var. of C. Gaskelliana alba. (A.M.), Bollea Lalindei var. Cœlestis (A.M.), and Cypripedium Godefroyæ leucochilum var. Perfection (A.M.).

W. R Lee, Esq., Heywood (gardener, Mr. Woodhouse), staged Odontoglossum crispum Perfection and O. vexillarium superbum.

Messrs. Charlesworth and Co., Haywards Heath, staged nice plants of Odontoglossum Aireworth (Lambeauianum x crispum), O. crispum, with an exceptionally large flat lip, Sophro-cattleya Marathon, and Cattleya Smilax, of the Charlesworthi type.

Messrs. Keeling and Sons. Bradford. staged an excellent form of Cattleya Harrisonæ, named Grand Duke, a good dark colour, and Cattleya Vulcan.

Mr. J. Birchenall, Alderley Edge, staged several interesting plants, Stanhopea Rodigasiana, Bollea Lalindei, Anguloa Clowesi, and a good form of Cypripedium Bellatulum.

AWARD OF MERIT.

Cattleya Gaskelliana alba, Ashlands var., from R. Ashworth, Esq., Newchurch (gardener, Mr. Gilden), a fine flower of the variety; Bollea Lalindei, var. Cœlestis, a flower of deep colour with bands of intense purple; Cypripedium Godefroyæ leucochilum, var. Perfection, with ground colour of deep cream, regular markings, the petals and dorsal being very broad, forming a good round flower. All these were from the same exhibitor.

The next meeting will be held in the Coal Exchange, Manchester, on Thursday, September 14, 1911.

Llanishen.—AUGUST 7.

The annual show was again held by the kind permission of the Rev. R. L. Rhys, in the Vicar's Field, and though, owing to the weather lately experienced, the sweet peas and some other cut flowers were not equal to their usual high standard of quality, the exhibits were generally, nevertheless, of much merit.

In the class for a group of miscellaneous plants, fifty square feet, there were four entries, all of circular form, arranged along the centre of a tent, the leading one coming from Mr. W. H. Cullen, Llanishen, in which were employed with good taste, as chief subjects, palms, ferns, crotons, Francoa ramosa, celosias, gloxinias, etc.; Mr. J. E. Turner, Lisoane, was placed second with a similar arrangement, in which caladiums were somewhat too freely used. Mr. W. H. Cullen again scored in a class for six specimen ornamental plants and ferns, his ferns being his strong point; Mr. J. E. Turner was again a close second. Twelve tuberous-rooted begonias, as is invariably the case at Llanishen, made a strong class; four splendid sets were staged, and Mr. W. H. Cullen, with large plants, carrying plenty of blossoms of first-rate quality, was again deservedly placed first, and was followed by Mr. G. Robertson, Llanishen, and Mr. H. F. Ensor. For four zonal pelargoniums, there were three good lots staged, Mr. A. F. Hill securing chief honours with well-blossomed unnamed double varieties; Mr. J. A. Hossington second with smaller plants of single varieties.

Six gloxinias were best shown by the Right Rev. Bishop Hedley, and Mr. W. H. Cullen; three ferns, by Mr. T. C. Kirk, who had fine plants of Adiantum cuneatum, A. formosum, and Davallia fijiensis; and three begonias by Mr. W. J. Gunstone. For six greenhouse plants, Mr. T. C. Kirk led with nice examples of Plumbago capensis, a tuberous begonia, gloxinia, fuchsia, adiantum, and a palm.

Cut flowers were not so numerous as is usually the case. Six carnations were staged in fairly good condition by Mr. W. H. Cullen, who was the only exhibitor. There were three exhibitors of twelve cactus dahlias, Mr. H. Watkins being placed first, with Mr. W. Boulton a close second. Twelve blooms of pansies or violas were best staged by Mr. J. H. Ferry, who staged a good set of violas, Mr. R. Scoble being second with good blooms of pansies. Asters made a rather poor class, Mr. G. Robertson leading amongst four entrants; Mr. W. Boulton second. Mr. E. H. Page and the Rev. R. L. Rhys had the best and second best twelve vases of stocks, and Mr. R. Morgan took the lead for twelve bunches of perennials or annuals, the Rev. R. L. Rhys second. The best nine vases of sweet peas were staged by Mr. J. E. Turner, Mr. W. H. Cullen second. There were no entries for twelve roses, but Mr. G. Robertson led for six blooms.

Only seventeen classes were devoted to fruit, and these in all cases were not well filled. Mr. W. H. Cullen was first, and Mr. J. E. Turner second for grapes, each staging fairly good Black Hamburgh. Mr. G. E. Downing led amongst four exhibitors, followed by Mr. H. F. Ensor, with scarlet-flesh melons; and Mr. N. Lewis scored for a white-fleshed. Mr. J. H. Mullens was placed first for a dish of peaches, and had Crimson Galande in good condition; Mr. J. E. Turner coming second with Barrington. For dessert apples, Mr. G. E. Downing and Mr. W. E. Nicholls won in the order named, each staging splendid dishes of Beauty of Bath; while for a dish of culinary, Mr. W. B. Fabian was first.

Vegetables formed one of the most satisfactory divisions of the show. For a collection of six kinds, Mr. J. E. Turner staged creditable dishes of onions, potatoes, cauliflowers, beans, peas, and tomatoes; Mr. A. F. Hill second. Mr. W. Boulton scored with both kidney and round potatoes, and also with carrots, leeks, and broad beans. Mr. W. H. Cullen led with cucumbers, runner beans, and parsnips. Mr. H. A. Gerhold led with spring-sown, and Mr. H. W. Davey with autumn-sown onions.

Mr. G. Wells, The Nursery, Llanishen, was awarded a gold medal for a large and meritorious group of miscellaneous plants; and Messrs. W. and H. Evans, nurserymen, Llanishen, secured a similar award for a bank of hardy cut flowers.

Scottish Horticultural Association.

On August 19 about seventy members of this association, including the president, Mr. Massie, and several of the other office-bearers, paid a visit to Manderston, the Berwickshire seat of the Hon. Lady Miller. On the way from Duns Station, where they arrived at midday, the party made a halt at Mr. Malcolm's garden in order to see his fine collection of sweet peas which he had kindly invited them to inspect, and amongst which some interesting novelties, including a very fine flesh-coloured flower named Lady Miller, were seen. Passing through Duns Public Park they made their way to Manderston, where, on arrival, they were kindly entertained to lunch by Lady Miller, and thereafter, under the guidance of Mr. Marshall, the head gardener, and Mr. Moir, they made an inspection of the gardens, dairy, etc. Lady Miller accompanied the party through the flower garden, in which she takes a great interest, and pointed out its leading features, including, besides the plant collections, the fine wrought-iron gateway at the entrance, the pergola, some fine Roman statuary, etc. On the motion of the president a very hearty vote of thanks was accorded to Lady Miller for her kindness and hospitality.

FORTHCOMING ENGAGEMENTS.

TUESDAY, August 29.—Royal Horticultural Society; committees meet at 12 o'clock; lecture at 3 p.m. on "Insect Pests" by Mr. Frederick Enock, F.L.S., F.E.S.; Scientific Committee at 4 o'clock.

WEDNESDAY, August 30.—National Vegetable Society' Show at the Horticultural Hall.

Irish Gardeners' Association.

Horticultural Exhibition in connection with the Cheshire Agricultural Society.

THURSDAY, August 31.—Dundee Horticultural Society; three days.

Sandy Horticultural Society.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

THRUM EYE AND PIN EYE.—A. W., Knaresborough: The terms "thrum eye" and "pin eye" are used in connection with the flowers of the primula family, and chiefly in connection with auriculas. A "pin-eyed" flower is one in which the pistil is elongated so as to carry the pin-headed stigma up into the mouth or eye of the bloom, whereas a thrum-eyed flower is one in which the pistil is short, and the stamens are placed so high in the flower tube that they fill up the eye or tube mouth. In the case of a thrum-eyed flower the stamens are placed about half-way down the tube. These two methods of producing stamens and stigma are for the purpose of securing cross-fertilisation; a bee or other insect with a long proboscis carries the pollen from the thrum-eyed flower to the stigma of a pin-eyed flower, on its head; and, on its proboscis it carries the pollen from the pin-eyed flower and deposits it on the short stigma of a thrum-eyed flower, when searching for nectar.

GRUBS IN ROSE LEAVES. — C. P., Wetherby: The leaves sent show plainly the work of the grubs of the Rose-leaf Miner Nepticula anomalella. The moth is a very tiny one, and appears in May; it deposits an egg on the underside of a leaf, and from this the grub quickly hatches, and enters the leaf; here it eats its way, serpentine fashion, over the leaf, and when fully grown it comes out through the upper epidermis, spins a cocoon on the leaf stock, and pupates. Two or three weeks later the moth appears, and it lays eggs that give rise to a second brood, but the latter remain in pupa form all through the winter, either in the ground or in cocoons attached to the rose trees. The removal and burning of leaves containing grubs, or crushing the grubs in the leaves between thumb and finger are methods to be adopted; removal of surface soil in winter should be carried out where there has been a severe attack. Spraying with arsenate of lead early in May should act as a preventive, and it would act as a deterrent to caterpillars.

FUNGUS ON ELDER STEM.—D. S. C., Montgomery: We cannot be certain what the fungus is from the description sent, but believe it must be Hirneola auricula-judæ, the Jew's Ear fungus. This is a wound parasite, fairly common in Britain on live branches of the elder. Cut the infected stems back to perfectly clean, healthy wood, and tar the cut surface at once; remove the diseased portions carefully, and at once burn them.

GANDAVENSIS GLADIOLUS HYBRIDS.—M. E. B., West Runton: It is on record that Gladiolus gandavensis was raised in 1837 by M. Beddinghaus, gardener to the Duke of Aremberg, at Enghien, by crossing G. psittacinus with G. cardinalis. The race of hybrids, however, now distinguished as gandavensis, has no doubt resulted from the introduction of other species, as well as those named, and from the careful selection and re-selection of crossbred seedlings. Souchet of Fontainebleau, Standard of Ascot, and Kelway of Langport, have all assisted in the development of these useful and showy garden flowers.

VARIETIES OF BRITISH FERNS.—S. M. W., Portsmouth: A very large number of people are now taking up the culture of hardy ferns, especially British kinds, and we are glad to know that they are giving more and more attention to the very beautiful varieties to which we have so repeatedly drawn attention in the pages of the Gardeners' Magazine. The difficulty that

THE ROSE-GROWER'S VADE MECUM.

Seventh Edition, Including New Features and Illustrations, and Revised List of 1,700 Different Roses.

ROSES

AND THEIR

CULTIVATION

200 Pages.
16 Plates.
Frontispiece and
67 Illustrations.

2/6
Net ;
By post, 2/10.

By T. W. SANDERS, F.L.S.

A Complete Guide to the Selection and Culture of

- STANDARD ROSES.
- PILLAR ROSES.
- GREENHOUSE CLIMBERS.
- RAMBLING ROSES.
- ROSES FOR TRELLISES.
- CLIMBERS FOR PERGOLAS.
- POT ROSES.
- DWARF ROSES.
- ROSES FOR EXHIBITION.
- &c., &c.

LIST OF 1,700 CULTIVATED ROSES:
Showing Variety, Section or Class, Date Introduced, Colour, Habit of Growth, How Best Grown, Mode and Time of Pruning, Description of Flower.

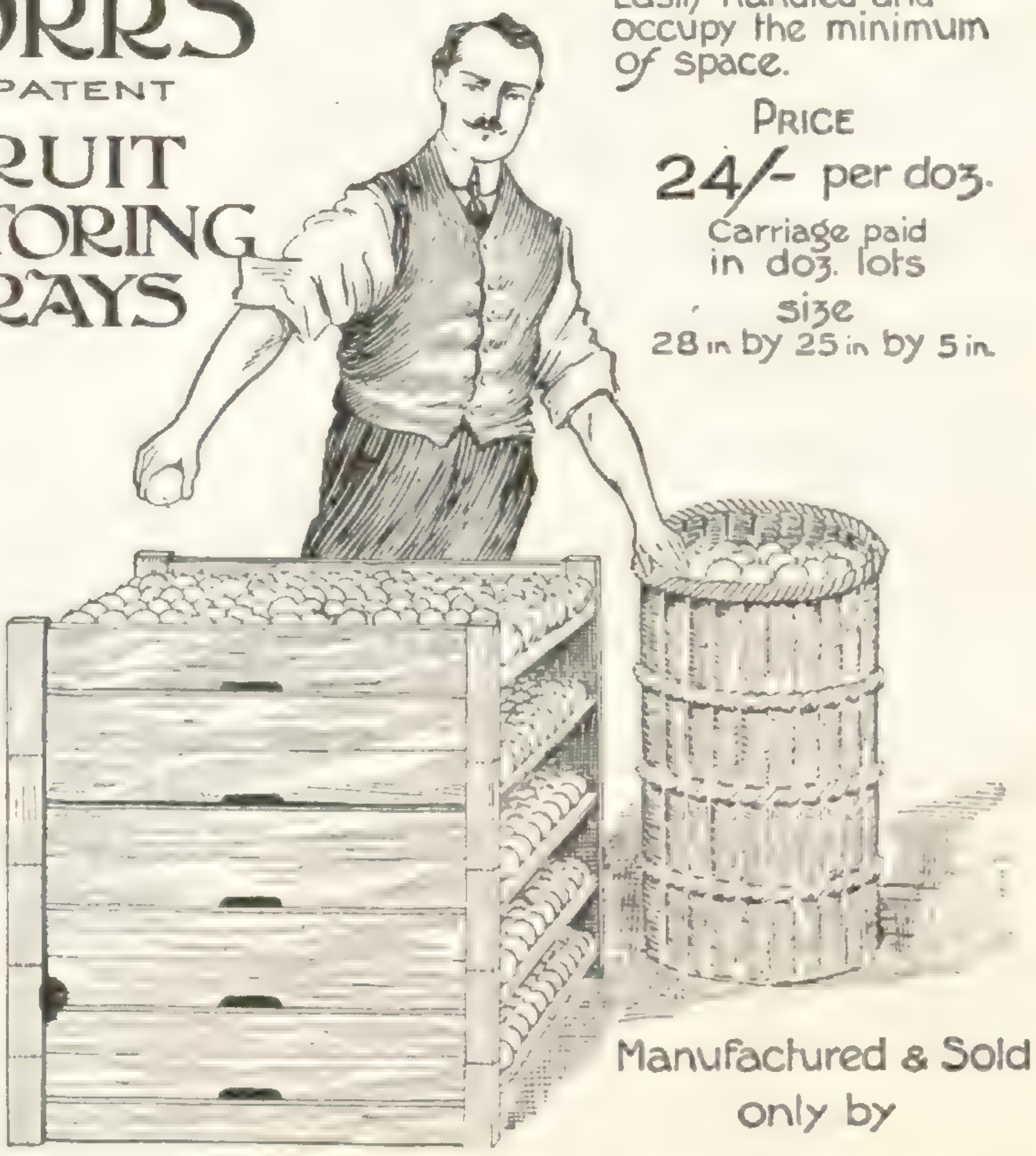
ORDER FORM.

To the Publishers of "The Gardeners' Magazine,"
148 & 149, Aldersgate Street, London, E.C.

Please send me a copy of **"ROSES AND THEIR CULTIVATION"** by post, for which I enclose remittance of **2/10.**)

Name..

Address...



STORE YOUR FRUIT
IN
ORR'S
PATENT
FRUIT
STORING
TRAYS

Easily handled and occupy the minimum of space.

PRICE
24/- per doz.
Carriage paid in doz. lots
size
28 in by 25 in by 5 in.

Manufactured & Sold only by

JOHN P. WHITE & SONS LTD.,
THE PYGHTLE WORKS, BEDFORD.

THE BEST BOOKS ON CHRYSANTHEMUM CULTURE.

Cloth, 208 pages, 47 Illustrations and Frontispiece.
PRICE 2/6; by Post, 2/10

CHRYSANTHEMUMS
FOR
GARDEN AND GREENHOUSE.

By D. B. Crane, F.R.H.S.

A practical treatise on the Culture of early Flowering and Decorative Chrysanthemums—How and when to Plant—Management for the whole year—List of Varieties, with Description, Colour, Habit, Time of Flowering, etc.

Sixth edition. 110 pages. Fully Illustrated.
PRICE 1/-; by Post, 1/2 (Bound in Cloth, 1/6; by Post, 1/8).

CHRYSANTHEMUMS
AND HOW TO GROW THEM
FOR EXHIBITION.

By J. B. Wroe.

A Complete Guide to Growing for Exhibition—Propagation—Potting—Feeding—Timing and Stopping for Northern, Southern, and Midland Growers, etc., etc.

The two Books post free for 3s. 10d.

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

Please send me by Post, ...

for which I enclose remittance of ....

Name..

Address...

others in common with yourself have experienced is that of distinguishing between the really beautiful varieties and those that are merely curious and interesting, from the names as set forth in a catalogue or book. That titles have been given in unsparing fashion to the different variants from the wild type is obvious to anyone who has taken the smallest interest in hardy ferns. For instance, Blechnum spicant is the only member of its genus found in this country, and its fertile and also unfertile fronds are familiar to all who know anything of the West Country or the Lake District. We do not pretend to give a complete list, but the following names have been given to forms of B. spicant: Aitkinianum, anomalum, anomalum multifidum, bellum, biceps, bifidum, caudatum, concinnum, concinnum Druery, confertum, confluens, congestum, contractum, contracto-ramosum, crenato-congestum, crispato-imbricatum, crispissimum, crispum, cristata-gracile, cristatum, cristatum Barrandæ, cristatum Huddart, conciato-plumosum, elegans, flabellatum, furcans, giganteum, glomeratum, heterophyllum, imbricato-erectum, imbricatum, lancifolium, lineare, Monkmanni, multifurcatum Barnes, multifurcatum Symons, Padleyense, parviceps, paradoxum, plumosum Airey, ramo-cristatum, ramo-cristatum Kinahan, ramo-cristatum Sinclair, ramosum, ramosum Clifti, rotundatum, serratum, serratum Airey, serrulatum, strictum, subserratum, trinervium, and trinervium Hodgsonæ. But even this variation and naming is as nothing compared with a catalogue of varietal forms of that most variable of ferns, the Hart's-tongue. You should obtain "British Ferns and Their Varieties," by C. T. Druery. (Routledge and Sons.)

EARLY FIG TREES IN POTS.—W. S. R., Didcot: Figs in pots, used for early forcing should by this time have become sufficiently hardened off to stand open air treatment. Select for them a sunny sheltered position, and, having made sure the drainage is in every case satisfactory, plunge the pots up to their rims in ashes. Abundance of water will be necessary, but liquid manures and stimulants of all kinds must not be given. Any repotting necessary may be done now, and with rare exceptions the plants treated may have the ball of soil and roots so reduced that pots of similar size to those previously occupied may be used. Keep the potted plants separate from the rest, water carefully, spray overhead twice a day in suitable weather, and give a little shade during the brightest hours of very hot days.

RED SPIDER ON RUNNER BEANS.—B. R., Louth: Remove and burn a number of the leaves that are badly disfigured by the attack of red spider, and then hose the rows early every evening, taking care to use a fine movable nozzle so that the underside of every leaf may be thoroughly wetted. Spraying with a potassium sulphide solution at intervals of ten days is another method of settling accounts with red spider.

NAMES OF PLANTS.

R. G., Warwick.—1, Acanthus mollis; 2, Campanula turbinata.

J. L., Ware.—Sorry we are unable to identify the plant from the sketch sent.

D. S. G., Llanishen.—1, Ceterach officinalis; 2, Clematis viticella; 3, Menyanthes trifoliata.

F. V., Canterbury.—1, Bocconia cordata; 2, Rudbeckia laciniata fl.-pl.; 3, Menziesia polifolia; 4, Erica vagans.

R. R., Horsham.—1, Valeriana officinalis; 2, Pinguicula caudata; 3, send when in flower, appears to be Sarmienta repens.

P. T. F., Morpeth.—1, Cassia corymbosa; 2, Swainsonia galegifolia; 3, Cypripedium œnanthum superbum; 4, Diervilla Looymanei; 5, Nertera depressa.

GARDENING ENGAGEMENT.

Mr. Thomas Smith, for six years head gardener to Mrs. Dallas Yorke, Walmsgate Hall, Louth, Lincs, has been appointed head gardener to the Marquis of Ripon, at Coombe Court, Kingston Hill, Surrey.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1911. AUGUST 13 TO AUGUST 19.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Aug. 13—Sunday	11 12	80	70	90	59
,, 14—Monday	12 48	74	67	85	56
,, 15—Tuesday	12 18	65	60	77	53
,, 16—Wednesday	12 42	62	56	76	47
,, 17—Thursday	9 42	68	61	81	53
,, 18—Friday	10 54	71	65	82	56
,, 19—Saturday	8 12	66	62	80	53
Means	(total) 77 48	69	63	81	53

DATE. 1911. AUGUST 13 TO AUGUST 19.	RAIN.	TEMPERATURE OF THE SOIL AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg.
Aug. 13—Sunday	—	70	68	64	51
,, 14—Monday	—	69	68	64	46
,, 15—Tuesday	—	69	68	64	43
,, 16—Wednesday	—	68	68	64	39
,, 17—Thursday	—	69	67	65	45
,, 18—Friday	—	69	67	65	47
,, 19—Saturday	—	69	67	65	47
Means	(total) —	69	67	64	45

CATALOGUES RECEIVED.

WM. PAUL AND SON, WALTHAM CROSS, HERTS.—Besides a well-arranged bulb list, this catalogue contains descriptive lists of camellias, spring flowering trees and shrubs, and strawberries.

GEORGE BUNYARD AND CO., LIM., ROYAL NURSERIES, MAIDSTONE.—A descriptive and cultural list of strawberries, grape vines, figs, violets, and carnations, that is especially deserving of attention.

SUTTON AND SONS, READING.—A handsome, finely illustrated and descriptive catalogue of bulbs; collections are arranged for various purposes, and there are lists of hardy perennials, forcing plants, climbers, forcing potatoes, and sundries.

DICKSON AND ROBINSON, CATHEDRAL STREET, MANCHESTER.—This well illustrated bulb catalogue also includes descriptive lists of strawberries, roses, and sundries.

CHRISTOPHER BOURNE, SIMPSON, BLETCHLEY.—Mr. Bourne's second catalogue is a very handy and useful production, descriptive, informing, and well illustrated. Only daffodils are listed, and these are arranged according to the R.H.S. classification.

WM. BULL AND SONS, CHELSEA, S.W.—Bulbs of all kinds for spring flowering are catalogued and illustrated; collections for various purposes, and hippeastrums are specially dealt with.

E. H. KRELAGE AND SON, HAARLEM, HOLLAND.—This Dutch firm issues a very comprehensive catalogue of bulbs, in which a large number of subjects not usually listed are described, in addition to the general collections.

JAMES VEITCH AND SONS, LIM., CHELSEA.—A beautifully illustrated catalogue showing special varieties, and also the effects of planting in beds, borders, and masses. Retarded bulbs are given special attention.

STUART LOW AND CO., BUSH HILL PARK, ENFIELD.—A thoroughly well illustrated and amply descriptive list of perpetual, Malmaison, and border carnations, the former occupying the post of honour.

BEES, LIM., MILL STREET, LIVERPOOL.—The special early bulb list is of great interest, as attention is directed to irises, colchicums, nerines, and the earliest of tulips, hyacinths, and narcissi.

G. REUTHE, FOX HILL, KESTON.—This is a combined catalogue of bulbs, new and rare hardy plants, and flowering trees and shrubs. It is an interesting production.

CARTER AND HOWARD, FIFE HOUSE, KINGSTON-ON-THAMES.—A catalogue of distinctive designs of pergolas, summer houses, tea houses, plant and fruit houses, water gardens, and conservatories, and frames and pits. Heating apparatus is included, and a section is devoted to rustic garden furniture.

ARTHUR R. BROWN, LIM., WYCHALL NURSERIES, KING'S NORTON.—A particularly useful catalogue of carnations, the varieties described and arranged in their several sections. New varieties are included, and there is a list of discarded varieties that must prove useful to beginners.

MARKETS.

◆

COVENT GARDEN.

Fruits.

Both supplies and business have improved with the resumption of railway traffic and cessation of labour troubles.

		s. d.		s. d.
Apples, Lisbon	per case	4 6	to	5 0
,, Tasmanian	per case	4 0		7 6
,, English	per bush.	3 0		10 6
Apricots, French	per ½-sieve	9 0		11 0
Bananas	per bun.	4 0		12 6
Figs	per doz.	1 0		3 0
Greengages	per ½-sieve	4 0		8 0
Grapes, English	per lb.	0 10		4 0
,, Guernsey	per lb.	0 8		1 6
Lemons	per case	9 0		25 0
Melons	each	1 0		2 6
,, Cantaloupe	each	1 6		3 6
Nectarines	per doz.	3 0		12 0
Oranges, Denia	per case	12 0		30 0
,, Cape	per case	8 0		10 0
,, Jamaica	per case	6 0		10 0
,, St. Michaels	per case	8 0		10 0
Peaches	per doz.	3 0		12 0
Pears, English	per ½-sieve	3 0		6 0
,, French	per crate	5 0		10 0
,, Californian	per case	6 0		8 0
Pineapples	each	2 0		5 0
Plums	per ½-sieve	3 6		8 0
Walnuts, pickling	per bush.	2 6		3 6

Vegetables.

A good demand prevails for the holiday season, and supplies are now steady again.

		s. d.		s. d.
Artichokes, Globe	per doz.	2 0	to	3 0
Beans, dwarf	per basket	1 6		3 0
,, broad	per bush.	2 0		4 0
,, runners	per bush.	5 0		10 0
Beet	per doz. bun.	2 0		3 6
Cabbage	per tally	3 0		8 0
Carrots	per doz. bun.	1 0		1 6
Cauliflowers	per doz.	1 0		2 6
Cucumbers	per flat	5 0		7 6
Endive	per doz.	1 0		3 0
Horseradish	per doz. bun.	8 0		12 0
Lettuce	per doz.	1 0		3 0
Marrows	per doz.	1 0		1 6
Mint	per doz. bun.	2 0		5 0
Mushrooms	per doz. lb.	6 0		12 0
Onions, Spanish	per case	4 0		6 0
Parsley	per ½-sieve	1 6		2 0
Peas	per bush.	3 0		6 0
Radishes	per doz. bun.	1 6		2 6
Spinach	per bush.	2 0		3 0
Tomatoes	per doz. lb.	2 6		3 6
,, Guernsey	per doz. lb.	2 0		3 0
Turnips	per doz. bun.	3 0		4 0
Watercress	per doz. bun.	0 6		0 6½

CONTENTS.

PAGE
Among the Alpine Flowers 626
Answers to Correspondents 634
Cape and Scented Pelargoniums 627
Cottage Gardens and Village Shows 624
Daffodils in the Grass 627
Drought-resisting Garden Plants 623
Exhibitions and Meetings 633
Fruit-bottling for Small Holders 629
Marguerite Carnations 628
Modern Strawberry Culture 625
National Vegetable Society's Trial of Globe Beetroots 630
New Plants, etc. 623
Notes of the Week 619
Shrewsbury Floral Fête 621
The Crown Flower Bed at Wolverhampton 625
Work for the Week 630

ILLUSTRATIONS.

Portrait of Mr. John Highgate, 619; Trichopilia Lenmanni, 623; The Crown Flower Bed in the West Park, Wolverhampton, 625; Pelargonium Blandfordianum, 626; Pelargonium cordatum, 627; Pelargonium multibracta, 628; Pelargonium artemisioides, 629.

The only resemblance between a Pine Spray Syringe and others is in the shape of the barrel. The metal is more substantial. For the rest, the combination spraying head renders Spray, Rose, and Bend instantly obtainable without the addition or removal of a single fitment, while the adjustable leather bucket plunger gives perfect suction, never allows water to escape past it and up your sleeve, and wears interminably.

A written request from your ironmonger or seedsman, and a Syringe will be sent in 24 hours for your approval. Price **10/6.** Sole proprietors and manufacturers, **Robinson Bros., Ltd., West Bromwich.**

PINE SPRAY SYRINGE (patent).

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out, Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working).—CAPTAIN USHER highly recommends R. Appleby as above; life experience in all branches; thoroughly understands Planning and Laying Out; also Land and Stock; many years' excellent character. Address APPLEBY, 12, Brewster Gardens, North Kensington, London, W.

GARDENER (Head where two are kept or Single-handed); age 45; married, two children, away from home; good references. A. W. BOAKES, 30, Hamilton Road, Harrow.

GARDENER (Head Working) requires Situation, where two or more are kept; life experience; age 29; married when suited; good references. A. MOSS, The Gardens, Grenden Hall, Aylesbury.

GARDENER (Head Working); life experience all branches; age 37; married, no family; well recommended by former employer; disengaged. LEWIS, Stone Cottage, Stow Bedon, Attleborough, Norfolk.

GARDENER (Head Working or Single-handed); married; no family; life experience in Vines, Peaches, Cucumbers, Melons, Tomatoes, Chrys., Kitchen and Flower Garden; good references. CURD, 36, Clarence Place, Gravesend, Kent.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 31; married when suited; excellent references. Address, Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working, where several are kept); 22 years' practical experience in large establishments; highest references, character, ability; age 37; married. KING, Avenue, Stoke Prior, Bromsgrove.

GARDENER (Head), seeks RE-ENGAGEMENT; experienced in all branches, Inside and Out; has had from 8 to 12 men under; 5 years present place; excellent references; married, no family; age 34. WESTRON, Rhinefield, Brockenhurst, Hants.

GARDENER (Head Working). — F. W. FLETCHER, Esq., can highly recommend his HEAD GARDENER as a thoroughly trustworthy, experienced, good all-round man; 20 years head; married, one daughter, 14 years. F. GREENGRASS, 40, Primrose Terrace, Browning Road, Enfield, Middlesex.

GARDENER (Head Working) seeks SITUATION; experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants. Flower and Kitchen Garden, etc.; excellent references; married, no family. WM. GIBSON, 128, Lansdowne Road, Leicester.

GARDENER (Head or Single-handed); experienced in Garden and Hothouse; many years' character; middle age; married, one son age 20. E. PUSEY, Evelyns, Uxbridge.

GARDENER (Head Working); life experience Inside and Out; thoroughly competent; personal references for 20 years for ability, etc.; abstainer; age 38. SMITH, The Gardens, Brownings Manor, Blackboye, Sussex.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushroom, ridge or flat; Kitchen, Lawn, Flower Garden. Special prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (Head).—S. T. Martin, Head Gardener, Heythrop, Chipping Norton, Oxon, seeks re-engagement in good establishment; disengaged middle of September. Age 44; married, one daughter.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 31; married, two children. The Gardens, Bushey Down, Tooting Common.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; aged 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER, 40; Single-handed preferred; thoroughly experienced; excellent character; active worker; Inside and Out with early vegetables; abstainer; married. A. BISHOP, Windmill Hill, near Hailsham.

GARDENER (Single-handed, or where help is given); 11 years' experience Inside and Out; age 30; married; excellent references. E. CHAPMAN, Sandgate, Kent.

GARDENER, single, seeks SITUATION; Single-handed or with Help; life experience Inside and Out; last place three years; good at landscaping; good character; age 30. PULLINGER, The Lodge, Strood Park, Horsham.

GARDENER (Single-handed); good all-round Working Gardener seeks SITUATION; age 25; single; good references. W. HAYDEN, Hardley Green, Hythe, Southampton.

GARDENER seeks SITUATION as Second; five years last place; experienced Inside or Inside and Out; age 22. Apply, W. DRAPER, c/o Mrs. Norriss, 157, Victoria Road, Woolston.

GARDENER, 15 years' good experience, understands Landscape work, also the making of Japanese Gardens; age 30; married; private or otherwise. GARDENER, 5, Park Terrace, Archway Road, Highgate, N.

COL. R. J. COOPER, C.V.O., will be pleased to recommend his late Second Man, Inside or Inside and Out, where three or four are kept; 12 years' references. COOKE, Blackwell Hall, Chesham.

SIR THOMAS ELLIOTT, K.C.B., highly recommends his GARDENER, who has been with him 5½ years; willing and obliging; good worker; 47, no children; 11 years previous reference. HOPPER, 130, Walton Road, East Molesey.

GROWER, take charge or otherwise; 32; single; experienced leading London firms; market and retail; Pot Stuff, Garden, Contract, Wreaths, Decorations. Abstainer. M., 6, Curzon Cottages, Curzon Street, Leicester.

ASSISTANT FLORIST.—Young Man (20) requires Situation as above; well up in Wreaths, Crosses, etc., also Seeds, Bulbs, Sundries, and Decorating. H. I., 50, Lyndhurst Road, Chichester.

YOUNG MAN seeks SITUATION in kitchen garden and pleasure grounds, where three or four are kept; good references. W. PECK, Fair Oak, Eastleigh, Hants.

YOUNG MAN, age 21, seeks SITUATION, Inside and Out; seven years' general experience; 2½ years present place; strong and willing; abstainer. E. STOPPS, Stowe, Weedon, Northants.

YOUNG MAN seeks Situation as GARDENER, Single-handed; can take charge of pony; good character; over two years in present situation; age 24; near London preferred. Apply J. SCOTT, 51, Manor Park Road, East Finchley.

YOUNG MAN requires situation as UNDER GARDENER; 2½ years' experience; good references; disengaged. S. TALBOT, Near School, Barrow, Bury St. Edmunds.

YOUNG MAN (20) seeks SITUATION as Beginner in Kitchen Gardens or Pleasure Grounds; has some knowledge. F. WALKER, The Manor, Bucknell, near Bicester.

YOUNG MAN seeks SITUATION to look after Electric Light and Garden; well up in all branches; nine years last situation. EDWARD VILLA, Street Cobham, Surrey.

REV. R. HOLDEN recommends for employment in Garden, YOUTH, 17; strong, willing; excellent character; been with him 3½ years. E. ROBERTS, Gate House, Nuttall, Nottingham.

WANTED, Situation as GARDEN LABOURER, or as Single-handed; would not object to a place in a nursery; good spade hand, etc., and well used to garden work; disengaged; good character. W. LING, Hunger Hill, Westcott, near Dorking.

Situations Vacant.

SECOND of Four Wanted, inside and out; wages nineteen shillings, no bothy. Write, stating age and qualifications, HEAD GARDENER, Elemore Hall, Co. Durham.

VACANCY.—Wanted, young man as OUTSIDE FOREMAN, with four as unders. Well able to look after young men; must understand Herbaceous Roses and Woody Plants, also Fruit, Bothy. Apply, stating wages required, to HEAD GARDENER, Pyrford Court, Woking.

SITUATION COUPON

For SEPTEMBER 2, 1911.

To the Advertisement Manager of "THE GARDENERS' MAGAZINE," *148 & 149, Aldersgate Street, London, E.C.*

Please Repeat my Advertisement.

Name..

Address..

....

Date ....

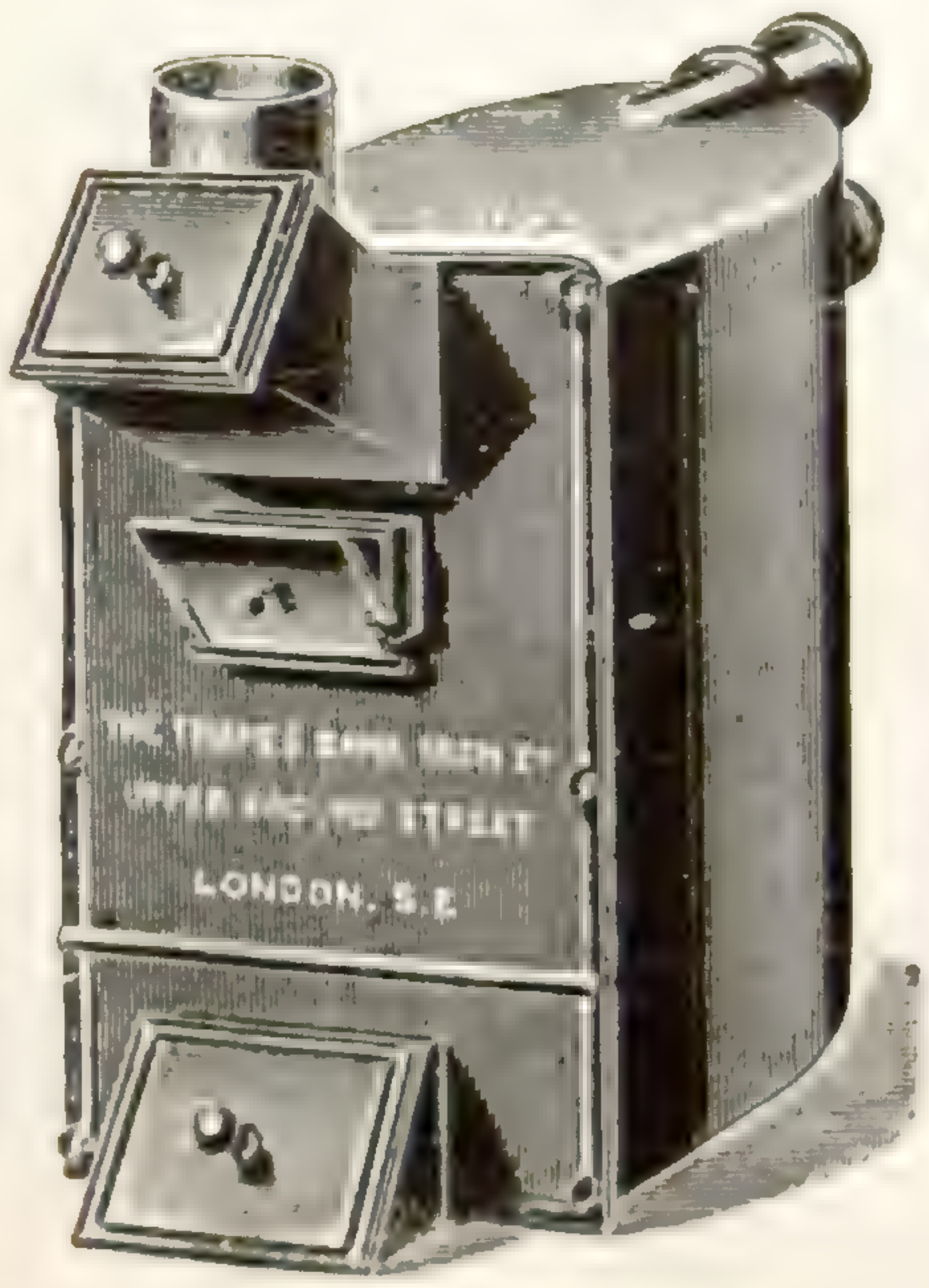
THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue

'Phone : Hop. 763.

When next a Small Boiler you require

TRY

THE HEEL



NONE TO BEAT IT.

THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.

4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

BENTLEY'S WEED DESTROYERS

Utterly annihilate Weeds, Moss, Dandelions, and all other Weeds on Garden Walks, Carriage Drives, etc.

HAVE THE LARGEST SALE IN THE UNITED KINGDOM!
ARE THE MOST POWERFUL MANUFACTURED!
ARE THE MOST PERMANENT IN EFFECT!

LIQUID (Poison).

Double Strength (1 to 50).

3 gallons, to make 153 gallons ...	£0	10	0
6 ,, ,, 306 ,, ...	0	18	0
12 ,, ,, 612 ,, ...	1	13	0
20 ,, ,, 1,020 ,, ...	2	7	6
40 ,, ,, 2,040 ,, ...	4	12	6

Special Concentrated Strength (1 to 80).

3 gallons, to make 243 gallons ..	£0	14	6
6 ,, ,, 486 ,, ...	1	7	0
12 ,, ,, 972 ,, ...	2	6	0
24 ,, ,, 1,944 ,, ...	4	10	0

BENTLEY'S COMPOUND LIQUID QUASSIA EXTRACT
(THE ORIGINAL).

The deadliest foe of Green, Black, and White Fly.

The insecticide of insecticides for roses, chrysanthemums, tomatoes wall and bush fruits, and other trees.

SAFE TO USE ANYWHERE AND EVERYWHERE

20 Galls., **3/6** per Gall.; 10 Galls., **3/7** per Gall.; 5 Galls., **3/8** per Gall.; 1 Gall., **4/2**; ½ Gall. **2/6**; 1 Quart, **1/6**; 1 pint, **1/-**.

Carriage Paid on 7/6 orders and upwards.

WHOLESALE MANUFACTURERS,
JOSEPH BENTLEY LIMITED,
Chemical Works,
BARROW-ON-HUMBER, HULL.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to
EPPS & CO., Ringwood, HANTS.

FLOWER POTS.

SANKEY'S
FAMOUS
GARDEN
POTS

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant

Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

GARDENERS should write the man behind this boot for illustrated catalogue of reliable footwear.

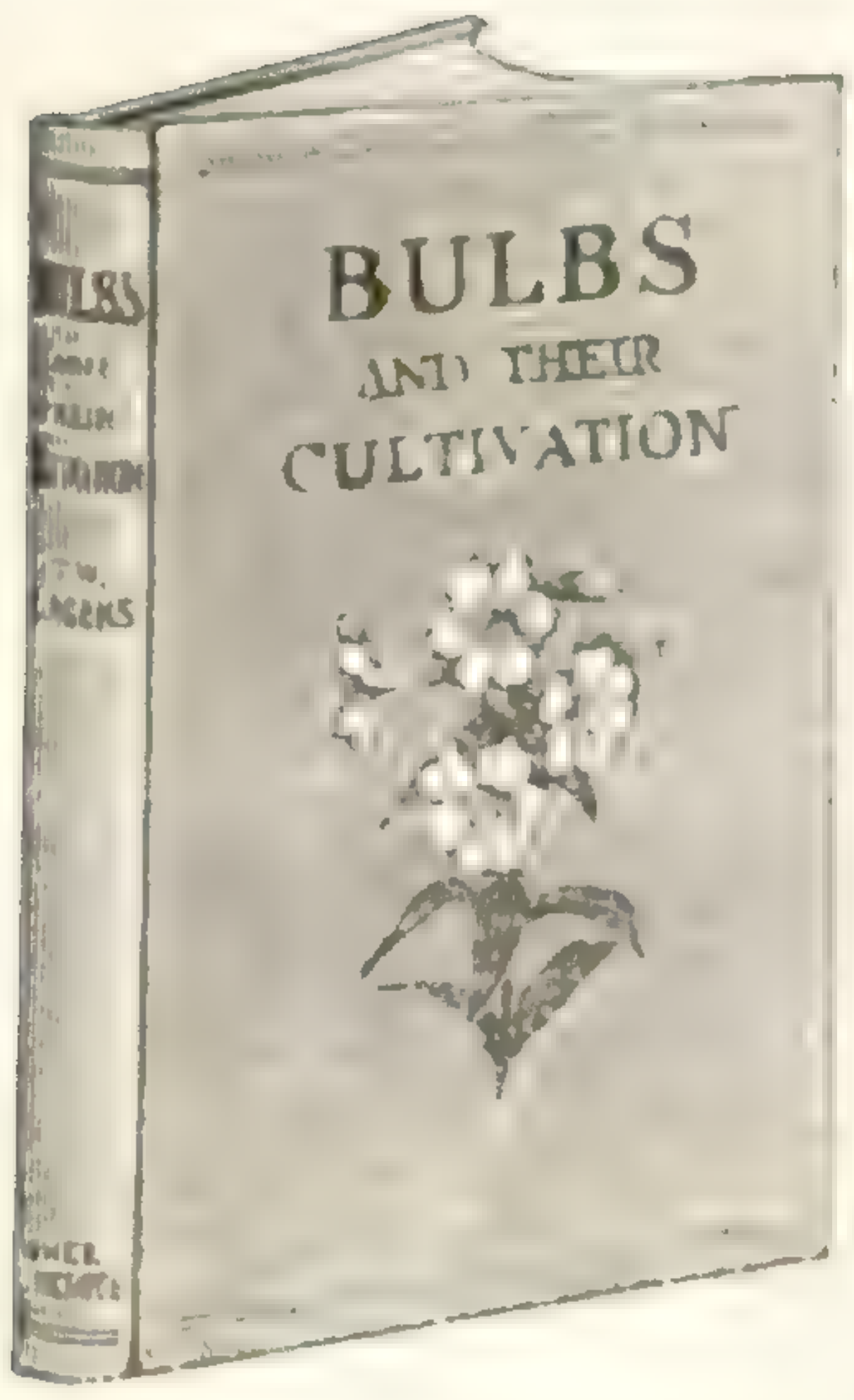
We make sound, Scotch durable boots for the whole family. A joy to the feet.

Our "Gardener" Boots at **10/9** are a revelation.

NORWELL'S, PERTH, SCOTLAND.
C1 Established over 100 years.

WHY NOT GROW BULBS TO PERFECTION?

Crown 8vo., 212 pages, 31 page plates and 30 illustrations, bound in cloth,



Price **2/6** Net.

BULBS AND THEIR CULTIVATION.

By Post 2/10.

By T. W. SANDERS, F.L.S.,
Editor of "Amateur Gardening," &c.

A Practical Guide to the Cultivation and Propagation of Bulbs, Tubers, &c., in the Open-Air and in the Greenhouse. Lists of all the varieties worth growing.

"Describes what should be done, and how to do it, in order to ensure a good show of flowers in the early spring."—*Yorkshire Post.*

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

Please send me a copy of "BULBS AND THEIR CULTIVATION," for which I enclose remittance of 2/10.

Name ____________________

Address ____________________

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 3,018. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, SEPT. 2, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

AWARDED TWENTY-EIGHT GOLD MEDALS.

BARR'S "GOLD MEDAL" DAFFODILS. Descriptive Illustrated Catalogue of all the finest sorts in cultivation, for Pots, Exhibition, Flower Borders or Naturalising, and including the finest selection of New Seedling Narcissi ever offered. Sent free on application.

BARR'S GENERAL BULB CATALOGUE contains a full list of the best Spring and Summer-flowering Bulbs, including Hyacinths, Tulips, Irises, Lilies, etc., for forcing and bedding. Sent free on application. BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, Horticultural Builder, Chelsea, S.W., wishes to point out that this is a good month for painting and repairing greenhouses, as the inside of many houses can be spared for internal work. He has a large number of excellent workmen, and immediate attention can be obtained by means of a postcard, telephone call (201 Western), letter, or wire to Gray, Chelsea, London.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

WANTED, Cuttings of Jacoby, Denmark, Crampel, and good single white Geraniums. Price per 100 or 1,000 to J. PROCTOR, Florist, Newmarket.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

THE BOURNE DAFFODILS have gained the HIGHEST AWARDS wherever Exhibited. Send for my Illustrated and descriptive Catalogue of FIRST QUALITY BULBS at MODERATE PRICES. Post Free from
CHRISTOPHER BOURNE,
The Daffodil Specialist, Simpson,
Bletchley.

FOR SALE.—First-class NURSERY, close to Blackpool, with 500 feet run of glass, well heated, with new up-to-date boilers. For price and particulars, apply P. VAWSER, Hykeham Road, Lincoln.

RUSTIC SUMMER HOUSES, trellis-work, Fencing, Pergolas, Arches, Seats, Bridges, Log Cabins, Loggias, etc. Send for our new LOG CABIN and RUSTIC CATALOGUE (just published), sent post free. BOULTON and PAUL, Ltd., Norwich.

WHY BUY FOREIGN DOORS?—We make all kinds of woodwork to compete against foreign. Timber, portable houses, woodwork supplied for United Kingdom or export. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

POULTRY AND KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

NARCISSUS.—Tulips, Hyacinths, etc. All the leading and best varieties, from 4s. 6d. per 100. Ask for illustrated price list, post free. Satisfaction guaranteed. C. F. A. VAN DER SLUYS, F.R.H.S., La Ramée, Guernsey.

NOT a large Advert., or an elaborate Catalogue; but you can depend upon getting absolutely reliable bulbs at most reasonable prices, when ordering from ELLISON'S, 57, West Bromwich, or I should not offer to send on Appro. Cg. Pd.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

LOVELY FLOWERS AT CHRISTMAS.

WEBBS' WHITE ROMAN HYACINTHS.
Extra large bulbs, 3/- per doz.; 20/- per 100.
Selected Bulbs, 2/- ,, 14/- ,,
Good Bulbs 1/6 ,, 10/6 ,,

WEBBS' POLYANTHUS NARCISSI.
Paper White, 1/- per doz.; 6/6 per 100.
Paper White, large flowering,
1/3 per doz.; 8/6 per 100.

WEBBS' BULB CATALOGUE for 1911.
Beautifully illustrated, Post Free.
WEBB and SONS, The King's Seedsmen,
Wordsley, Stourbridge.

BUNYARD'S CATALOGUES
Free on Application.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

KENT STRAWBERRY PLANTS
NEW CATALOGUE READY.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

LAXTON STRAWBERRIES for immediate planting. Fine plants of all the leading varieties in little pots, 15s. 100. Open ground runners, 5s. 100. Catalogue with full particulars gratis
LAXTON BROTHERS, Bedford.

CLAY'S MANURES, CRUSHED BONES
(See page iv.)

CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

GREENHOUSES and CONSERVATORIES. Distinctive Designs and Finished Workmanship. Write now for ILLUSTRATED CATALOGUE. CARTER and HOWARD, Horticultural Builders, Kingston-on-Thames.

WINDSOR CASTLE POTATO SEED.—Wanted, Four Bags guaranteed true to name. Quote prices and send sample to
GEORGE GROVES,
Temple House Gardens, Marlow, Bucks.

NEW CYCLAMEN, "Mrs. Buckston," a great novelty, "Low's Salmon King," "Giant White," "Deepest Red," ready now in packets, 1s. 6d. and 2s. 6d.. Sow early! Also Schizanthus Wisetonensis and Perpetual-flowering Carnation Seed, 1s. 6d. and 2s. 6d. per packet. STUART LOW and CO., Bush Hill Park, Middlesex.

CONSERVATORIES AND WINTER GARDENS, Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue free.—BOULTON and PAUL, Lim., Norwich. See our Stand at the Royal Agricultural Society's Show, to be held at Norwich in June.

WINTER-BLOOMING SWEET PEAS.—The "Télemly" Sweet Peas gained the Gold Medal (1907) of the Hort. Soc. of Algeria, and the
LARGE NEW WAVED VARIETIES
the Gold Medal of 1911. If sown in August or September will flower from December till May in Southern Europe, N. Africa, Madeira, etc. In England must be sown in pots and protected from frost till the end of February, and will flower in April in the open, or at Christmas in a sunny greenhouse. 12 seeds each of 4 plain and 3 waved varieties will be sent on receipt of 4s. by the Rev. E. ARKWRIGHT, 36, Seymour Street, W.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page iii.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable buildings, etc. Catalogue gratis.

WHITE FLOWERS AT CHRISTMAS.

SUTTON'S WHITE ROMAN HYACINTHS.
Extra large bulbs, per doz., 3/-; per 100, 21/-.
Selected bulbs, per doz., 2/-; per 100, 14/-.
Fine bulbs, per doz., 1/6; per 100, 10/6.

SUTTON'S PAPER WHITE NARCISSI.
Pure white, per doz., 1/-; per 100, 7/-.
Large-flowered, pure white, per doz., 1/6;
per 100, 10/6.

SUTTON'S BULB CATALOGUE for 1911.
Beautifully illustrated. Now ready.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.

Capt. ———, Londonderry.
10th February, 1911.

"I have received your Horticultural Manual, and on looking through it, I felt compelled to write and thank you for it. To an enthusiastic amateur gardener like myself, who, through reading the weekly papers on the subject, is familiar with many of the names but not with the corresponding flowers, this book must be absolutely invaluable, and the artistic way in which it is got up, and the beautiful photographs with which it is embellished, make it a treasure well worth having. I have had the Catalogues of most of the leading firms sent to me, but nothing compares in the remotest way with yours."

ALPINES.—100 in 50 good varieties, carriage paid, £2. Half and quarter quantities at same rate.
WHITELEGG and PAGE, Chislehurst.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-work, showing screens, wall panels, window surrounds, arches, arbors, etc., post free. BOULTON and PAUL, Ltd., Norwich.

LUPINUS Polyphyllus, Pink; Senecio Clivorum, Delphinium hybridum.
Strong plants of the above, 2s. per doz.; seed, 9d. per pkt.
CHAS. CUNDY,
Nurseryman and Seedsman, Sudbury, Suffolk.

FRUIT ROOMS, Game Larders, Garden Huts, Potting Sheds, Workshops, Cycle Houses, Boot-rooms, Servants' Mess-rooms, Children's Playrooms, etc. Illustrated Catalogue post free. BOULTON and PAUL, Ltd., Norwich.

GARDEN HOSE and FITTINGS, all sizes and lengths, best quality; list free.
HEATHMAN,
Hose Factory, Parson's Green, London, S.W.

CARNATIONS AND PICOTEES.—Best named varieties only, 3s. per doz. List free.
A. and C. TAYLOR,
Carnation Specialists,
Somercotes, Derbyshire.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.

XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.

XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N. S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer.
234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London, N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

BULBS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Narcissi Tulips, Hyacinths, etc., Home-Grown.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

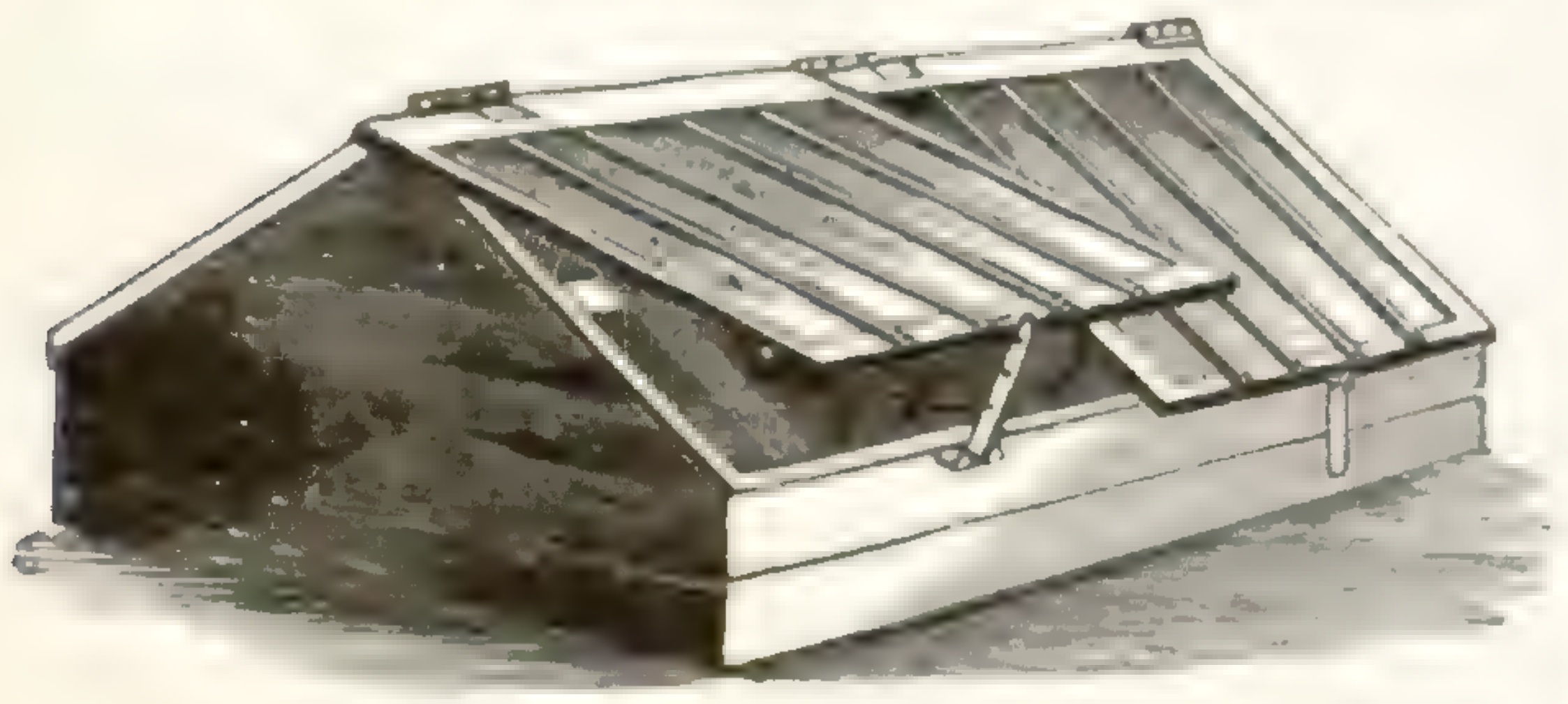
ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

PORTABLE PLANT FRAMES

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices. Glazed and Painted.		£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. ,, 4ft. ,,		2	5	0
6ft. ,, 5ft. ,,		2	15	0
12ft. ,, 4ft. ,,		4	0	0
12ft. ,, 5ft. ,,		4	15	0
12ft. ,, 6ft. ,,		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,

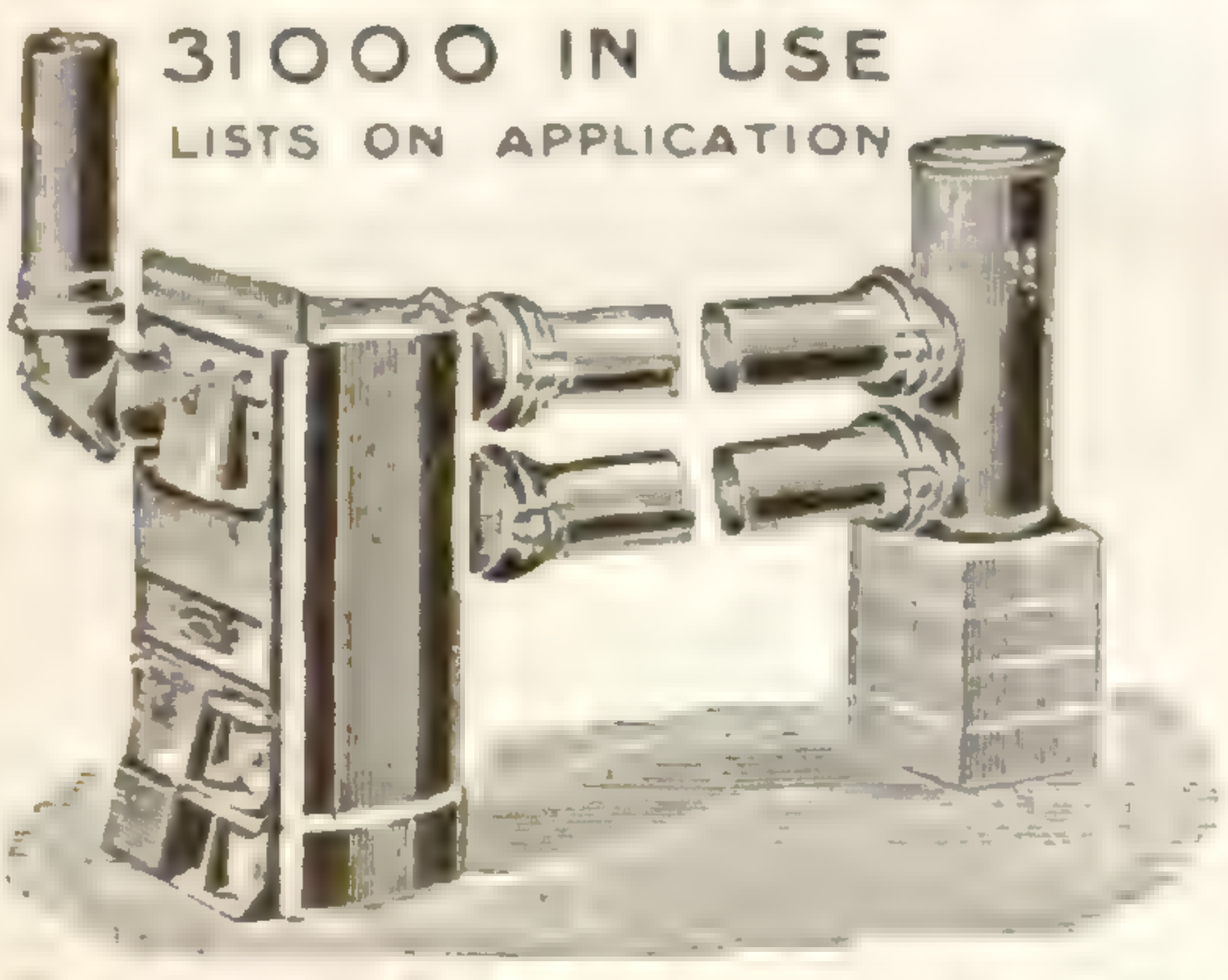
ROYAL HORTICULTURAL WORKS,

MIDDLETON, MANCHESTER.

The Loughborough BOILER

31000 IN USE

LISTS ON APPLICATION



The pioneer of cheap simple and effective heating for small greenhouses. Complete Apparatus from £3.19. 6. The immense sale of this boiler and its numerous imitations are the best testimony of its undoubted success

MESSENGER & CO. LTD.

LOUGHBOROUGH · LEICESTERSHIRE
London Office, 122 VICTORIA ST · S · W

R.H.S. EXAMS.—Write the Premier Coach re up-to-date correspondence course. Success certain. Particulars free.—"MEDALLIST," "Ferndale," Pinfold Street, Darlaston.

CARNATIONS. AURICULAS. PINKS.

The NEW ILLUSTRATED CATALOGUE of above is now ready, and has been posted to all customers. The newest and best varieties are sold at the most reasonable prices.

Best **CARNATION** and **PICOTEE SEED** ready in October. 1/6 and 2/6 per packet.

AURICULA (Show and Alpine), PINK, and POLYANTHUS SEED now ready. 1/-, 1/6, to 2/6 per packet.

Send for Catalogue to

J. DOUGLAS,

Edenside, GREAT BOOKHAM.

Orchids! Orchids!! Orchids!!!

The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application.—**J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana, Vanda Cœrulea Lushai Hill variety, dark blue type; Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue Free. J.E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

J. J. THOOLEN, The EXPORT Nurseries,

Heemstede, Haarlem, Holland,

ESTABLISHED 1884.

Has the honour to announce that his Illustrated Price List of Bulbs and Plants in English, Autumn, 1911, at lowest prices, will be sent post free on application. **No Charge for Packing. Orders of 10/- and above entirely Free to Destinations** in England, Scotland, and Ireland, etc. First Quality guaranteed.

Some sorts of Bulbs noted out of Price List.

	Per 100. s.	d.	Per 1,000 s.	d.
Hyacinths, in the finest mixture for bedding or forcing	7	8	72	4
Hyacinths, single, first size, named, in 25 leading sorts, red, white, and blue vars., equal quantities, my selection	15	0	—	
Tulips, single early, in the finest mixture	2	0	18	4
Tulips, Darwin, mixed	3	0	25	0
Tulips, double, in the finest mixture...	2	3	20	0
Anemones, single mixed	1	4	12	0
Anemone, The Bride, pure white ...	1	4	12	0
Crocus, 1st size, in the finest mixture	1	4	12	0
Crocus, 2nd size, in the finest mixture	0	9	7	0
Scilla campanulata, blue bells	2	0	—	
Scilla campanulata, white bells	2	0	—	
Scilla sibirica, rich blue	1	6	14	6
Iris, Spanish, mixed	0	7	5	0
Iris, English, mixed	2	0	16	8
Narcis., single, in the finest mixture...	1	4	12	6
Narcis., Trumpet, in the finest mixture	2	6	20	0
Narcis., double, fine mixture	2	6	20	0
Narcis-Polyanthus, finest mixed ...	3	6	30	0
Snowdrops, Elwesi, the Giant Snowdrop	1	6	13	6
Ranunculus, French, double mixed ...	0	0	7	0

250 Bulbs of the same kind will be charged at the 1,000 rate; 25 at the price per 100; 6 at the price per 12.

Ask for Illustrated Price List and see the Collections.

ORCHIDS

EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS**, and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

NEW DAFFODILS, 1911.

Our revised Descriptive Catalogue of Rare Daffodils and May-flowering tulips is now ready, and we shall have pleasure in posting a copy to all applicants. Our South of Ireland grown Bulbs are acknowledged to be second to none. Write at once. Address—

WM. BAYLOR HARTLAND & SONS,
Bulb Growers,
33, PATRICK STREET, CORK.
Bulb Farm: ARD CAIRN, CORK.

100,000 BORDER CARNATIONS.

EVERY GOOD VARIETY IN COMMERCE.

Healthy Plants. Popular Prices.

Largest Growers and Most Successful Exhibitors in the United Kingdom.

ARTHUR R. BROWN, Ltd.,
Wychall Nurseries, KINGS NORTON.
Catalogue on Application.

MERRYWEATHER'S

614 PUMP

IS THE

Gardener's Friend.

Easy to Work.

Simplicity Itself.

Write or Call—

63, Long Acre, LONDON, W.C.

Sales by Auction.

DUTCH BULBS.

MR. J. C. STEVENS begs to announce that his **Sales by Auction** are held every **MONDAY, WEDNESDAY** and **THURSDAY** at **12.30.**

Catalogues post free.

Lots purchased, packed, and forwarded to all parts.

STEVENS' AUCTION ROOMS
(Established 150 years),
38, King Street, Covent Garden, London, W.C.

DUTCH BULBS
10,000 Lots Sold Weekly.

SALES EVERY DAY
(SATURDAYS EXCEPTED),
At 10.30 o'clock, at
PROTHEROE and MORRIS'
Central Sale Rooms,
67 & 68, CHEAPSIDE, LONDON, E.C
Catalogues Free.
COMMISSIONS EXECUTED.

100 NURSERIES, MARKET GARDENS, FLORIST AND SEED BUSINESSES TO BE DISPOSED OF.

MESSRS. PROTHEROE and MORRIS'S HORTICULTURAL REGISTER contains full particulars of the above, and can be obtained gratis at 67 and 68, Cheapside, E.C.

FLOWER POTS.

SANKEY'S
FAMOUS
GARDEN
POTS

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant

Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

Bulbs *All best qualities at moderate prices Carriage paid.*

Illustrated priced Catalogue post free.

Dicksons *Bulb Growers* *Chester*

THOMSON'S Celebrated MANURES

Still the best: In greater demand every year.

SAFE, SURE & LASTING.

The result of many years' **practical** experience.

VINE, PLANT, AND VEGETABLE MANURE.
1 cwt., **20/-**; ½ cwt., **10/-**; ¼ cwt., **6/-**; 14 lbs., **3/6**; 7 lbs., **2/6**; Tins, **2 6, 1/-,** and **6d.** Carriage paid on 1 cwt. anywhere.

SPECIAL TOP-DRESSING MANURE.
½ cwt., **20/-**; ¼ cwt., **11/-**; 14 lbs., **6/-**; 7 lbs., **3/6**; Tins, **1/-**. Carriage paid on ½ cwt. anywhere.

Also Thomson's Book on the Vine. Thomson's Styptic.

SOLD BY NURSERYMEN & SEEDSMEN EVERYWHERE.

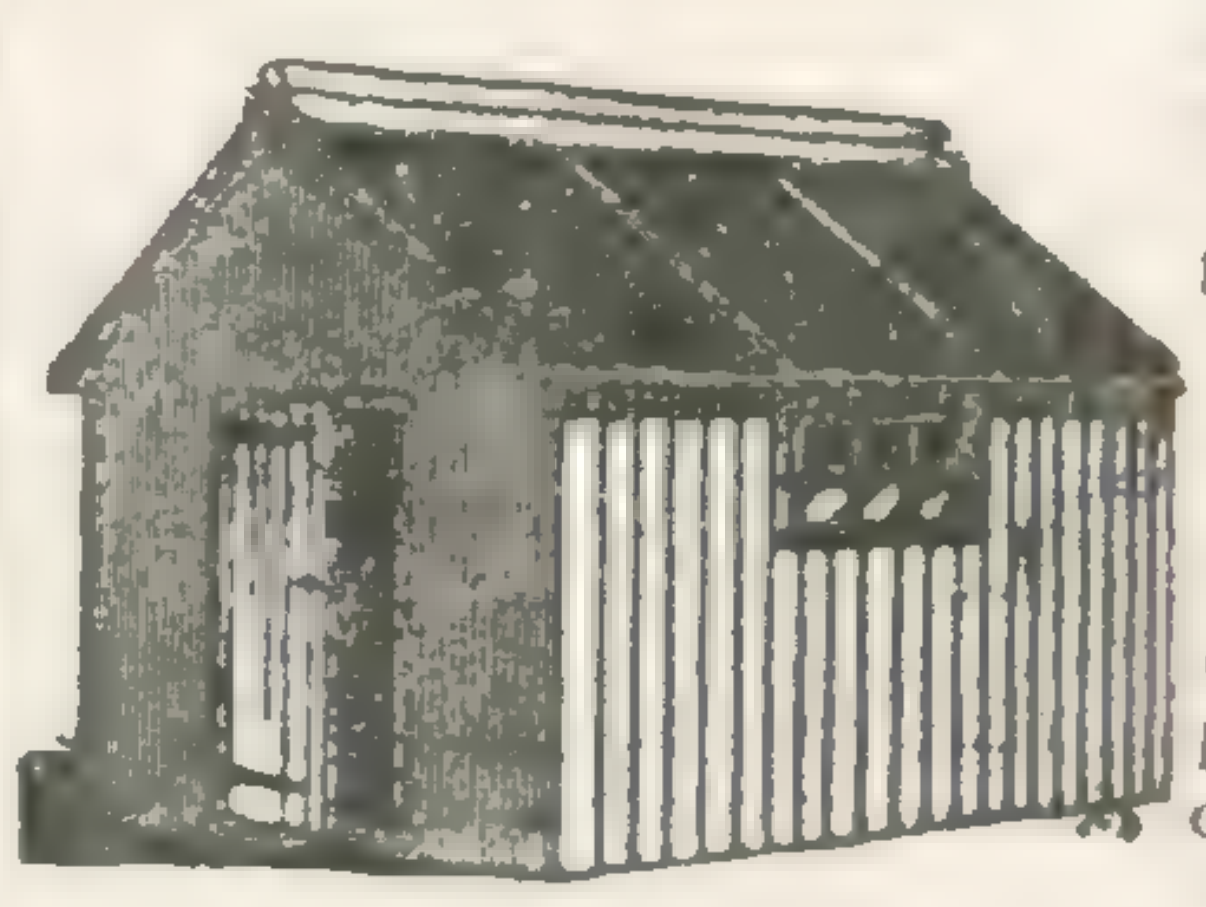
Write for Pamphlets, Price Lists, etc., to

WM. THOMSON & SONS LIMITED 1868 1911

SOLE MAKERS: **WM. THOMSON & SONS, Ltd., Clovenfords, Scotland.**

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

PORTABLE BUILDINGS. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

SIZES.	CASH WITH ORDER.	Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
ESTABLISHED 70 YEARS. **BEDFORD.**
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

THE FAVOURITE WEED KILLER.

SANDWITH'S
PREMIER
WEED
KILLER

As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for **6/-**; drum, **2/-**. 12 galls. for **16/-**; drum, **6/-**. 20 galls. for **26 8**; drum, **10/-**. 40 galls. for **50/-**; drum, **20/-**.

EITHER LIQUID OR POWDER.

Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,
The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

SUBSCRIBER'S ORDER FORM

Every Saturday **THE GARDENERS' MAGAZINE.** Twopence

To W. H. AND L. COLLINGRIDGE,
148 AND 149, ALDERSGATE STREET, LONDON, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose________for________months in advance.

Name________________________

Address________________________

Date________________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

* * If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.

ONCE USED. ALWAYS USED. The 'PATTISSON' LAWN BOOTS

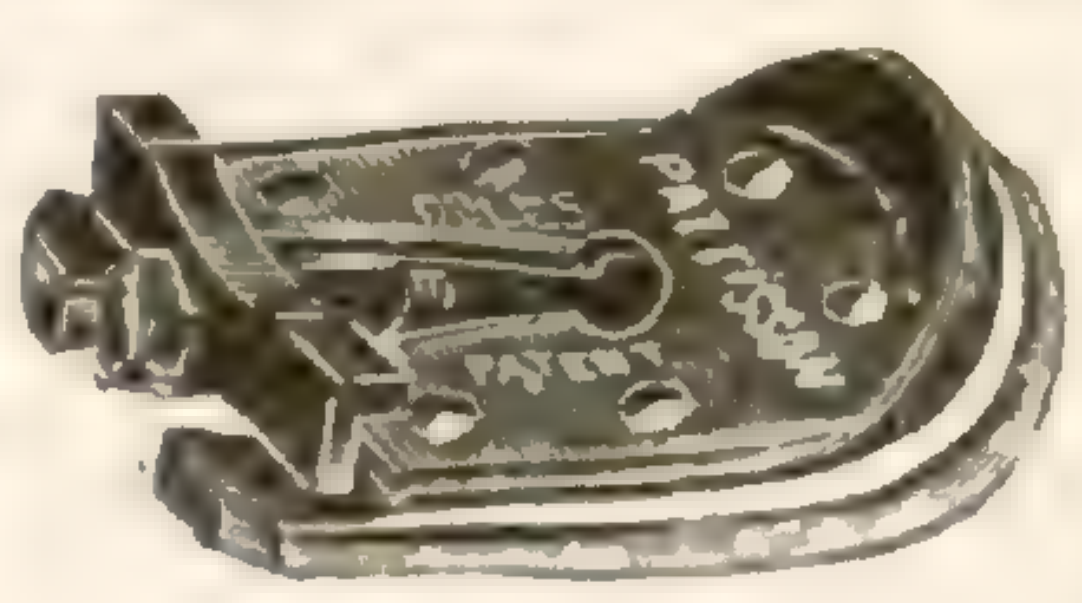


FIG. 1.

Simplest! Strongest! Most Economical!

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS

Silver Medal—
Royal Horticultural Society.

HUNDREDS OF TESTIMONIALS.

The Field says: **"As good as anything that could be devised."**

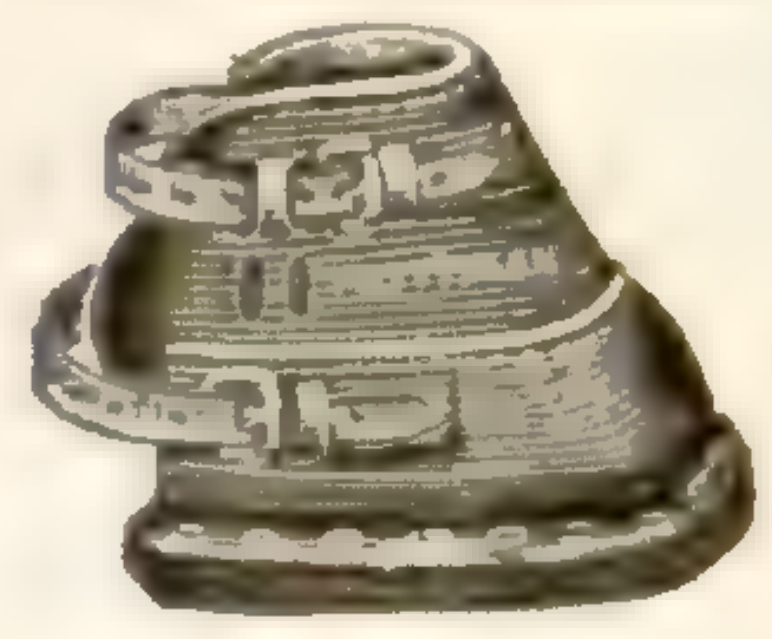


FIG. 2.

Illustrated Price List from—

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM S.W.

GLASS. | GLASS. | GLASS.

NICHOLLS & CLARKE, LTD.
Shoreditch, LONDON.

PAINT. Our List of PAINTS, COLOURS, VARNISHES, and BRUSHES on Application.

When sending please cut out this advt.

ESTABLISHED 1832.
No connection with any other Firm of a similar name.

ANT. ROOZEN & SON'S
SPLENDID
HYACINTHS,
TULIPS,
AND OTHER
DUTCH, CAPE,
AND EXOTIC
BULBS AND PLANTS.

All of the Finest Quality.

Our Descriptive CATALOGUE *of the above, containing* FULL CULTURAL DIRECTIONS *and particulars as to* FREE DELIVERY, *will be sent post free on application to our offices, at OVERVEEN, HAARLEM, HOLLAND, or to our General Agents,*

MERTENS and CO.,
3, Cross Lane, LONDON, E.C.

EPPS'S SELECTED PEAT
For Choice Plants, Ferns, Rhododendrons, &c., &c.
SPECIAL ORCHID PEAT.
Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to
EPPS & CO., Ringwood, HANTS.

INFALLIBLE

SCOTT'S
WASP DESTROYER
has stood many years' test as the only effectual protection for Fruit Trees, &c., from Wasps and Flies.

Prices, 1/6 and 2/6 per bottle.

Makers—
CORRY & CO., Ltd., 13 & 15, Finsbury St., E.C.
SOLD BY ALL NURSERYMEN AND SEEDSMEN.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.
Our Work has stood the test of time.

CHARLESWORTH & CO.,
Hayward's Heath, Sussex,
ORCHID SPECIALISTS,
IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

TREE CARNATIONS
The Newest and Best Varieties.
Strong, healthy and well-rooted plants only supplied.
Catalogues free.
E. J. WOOTTEN, Fairoak, EASTLEIGH.

By Royal Warrants
To H.M. King George V. To H.M. Queen Alexandra.

Why wait until your garden is in danger of destruction?

Prevent Mildew, Green Fly, and all forms of Insect Blight by using

Jeyes'
Horticultural Wash

An efficient safeguard against all garden pests.
From all Chemists, Seedsmen and Florists.

Write for Pamphlet and Prices to
Jeyes' Sanitary Compounds Co., Ltd.
64, Cannon Street, London, E.C.

BUNYARD'S
FRUIT . .
TREES . .

EARLY ORDERS RECEIVE FIRST ATTENTION WHEN PLANTING SEASON ARRIVES.

WRITE FOR CATALOGUE.

Geo. Bunyard & Co., LTD.,
Royal Nurseries,
MAIDSTONE.

ORCHIDS, ORCHIDS.
Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.
STOVE AND GREENHOUSE PLANTS OF ALL KINDS.
PLEASE WRITE FOR LIST.
JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

WHARFEDALE. 5 ft. long.

In Best Redwood, painted two coats, White.
£1 15 0
Delivered any station
Full Catalogue on application.

PETER PATRICK & SON, Otley, Yorks.

There's a Call from the Garden for

CLAY'S

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK, AS AT SIDE.

CLAY'S LONDON FERTILIZER
TRADE MARK.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. Fourth Edition (Second Reprint). 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Manure Manufacturers and Bone Crushers, Stratford, London, E.

VOL. LIV.—No. 3,018. SATURDAY, SEPTEMBER 2, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

The Plane Trees in the Mall.

So frequently do we hear complaints of the want of skill shown in the pruning of trees growing alongside the roads in or adjacent to towns, and open spaces generally, that it is extremely pleasant to read now and again of those under the care of public authorities that afford evidence of the application of sound practical knowledge, combined with scientific principle, in the pruning of trees in relation to their environmental conditions. There are in the Mall four rows of young plane trees that we have frequently admired for their symmetrical form and healthy appearance, and our admiration has also extended to the skill displayed by those responsible for their welfare and training, which, necessarily, has to be accomplished by the use of the knife. Early in the year they received their annual pruning, and as this operation attracted the attention of some Members of Parliament many were the questions asked in the House of Commons; and, evidently with a view to allay the fear that the trees had not been skilfully pruned, the First Commissioner of Works undertook to have a report from a leading authority on the manner in which the pruning had been done. In giving effect to this promise he commissioned Professor I. Bayley Balfour, F.R.S., Regius Keeper of the Royal Botanic Gardens, Edinburgh, to report upon the pruning of these planes, and, as briefly stated in our last issue, the report has been recently published. In his opening remarks Professor Bayley Balfour states that he cannot subscribe to the criticism that the trees have been overpruned, for there is no immediate evidence of overpruning in the present condition of the trees, nor suggestion of it in their promise for the future. The plane tree in its youth, it is pointed out, naturally develops an exuberance of primary lateral branches on its stem, and there is a contest for leadership amongst those at the top. As in the case of some other trees, no one of these branches continues its growth by a terminal bud. Arrest and self-pruning takes place, and the elongation of the shoots proceeds from lateral buds nearer to, or farther from, the primary tip. The continuation bud may be the one immediately behind the point of abscission of the shoot tip, but, as is often the case, the shoot may die back to some distance behind the normal abscission line of self-pruning, and, consequently, the elongation of a shoot in any one season is no measure of the permanent addition in length that is to be made to the axis. If the tree grows freely without natural or artificial curtailment a relative heavy brush head is formed of intricate zig-zag branches, of which the tips of some of them may be dead. In the case of trees that are allowed to form these close heavy heads, the surface exposed to the wind is large, with the consequent risk of injury. Many of the primary branches do not survive, in whole or in part, the struggle for air and light with their fellows, and interfere with the development and leafage of the branches that are ultimately successful. In rich soils these characters are naturally exaggerated, and, as a consequence, there is increased risk of injury to the trees from high winds. Necessarily, the art of pruning takes into account all these characters in each individual tree in relation to the conditions both above and below ground, and it is highly gratifying to read that, in Professor Bayley Balfour's opinion, the trees in the Mall "are a picture of the correct art of pruning in relation to environment." The chief factors in the situation in the Mall which have had full consideration from Professor Bayley Balfour in connection with the pruning of the trees are: The soil conditions are such as to promote vigorous growth, with all its advantages and disadvantages; and, planted as isolated specimens in line to form an avenue, the trees are individually exposed in this wide thoroughfare to the full force of the gusty, dust-laden winds that sweep down it. The discipline to which the trees have been subjected in the circumstances of their growth has, in Professor Bayley Balfour's opinion, been admirably adapted to this environment, and in dealing with the details he states that: "(1) The excess of lateral branches has been properly diminished, and the head of the tree has, therefore, been adequately lightened in relation to wind currents, so that risk of upset of the whole tree, and of breaking of branches, has been lessened. (2) There is practically no dead wood on the trees to interfere with the development of healthy branches, or to serve as a seat of infection of disease. (3) The branches which remain have been selected with judgment so as to form a right framework for the future extension of the crown of the tree, and their lateral extension has been checked judiciously so that they have been stimulated to produce quantities of well-placed, leafy shoots which, by their distribution, more than make up for the struggling feeble shoots lost by the removal of the surplus primary lateral branches and the trimming of weak branchlets. No feature of the pruning struck me so forcibly as this one. The checking of these laterals has been most skilfully performed through careful continuous tending of the trees; there has been no vicarious heroic lopping of the kind which frequently passes for pruning. There is no mark of mutilation on the branches; the development of feathery twigs is wonderfully perfect, and an ample leaf surface for the work of the tree in water lifting, breathing, and assimilation has been maintained. (4) The pruning of the laterals has encouraged the steady upward growth of the main stem without forking or divarication of the top. The

MR. R. P. BROTHERSTON.

exuberance of apical growth has, however, been wisely kept in check, and a balance between the apical growth and development of laterals has been thus maintained." Considerable space is devoted in the report to the development of the leaders of plane trees, the manner in which trees in a state of Nature check their leaders, and the necessity of systematically shortening them in the case of trees growing under artificial conditions for the purpose of reducing the risk of their being injured by the wind, and of maintaining a proper balance between the apical and lateral growth. Nothing is said with reference to the proportions of the trees, and it will, therefore, be of interest to mention that, assuming the trees have a height of sixteen feet, the main stem and head are six and ten feet respectively, and the lateral spread of the lower branches is seven feet. These dimensions give as perfect a specimen of the London plane as is possible under the environmental conditions that obtain in towns, and the planes in the Mall may therefore well serve as models for the pruning of this popular tree.

Mr. R. P. Brotherston, the chief of the gardens of Tynninghame, the fine East Lothian seat of the Earl of Haddington, is so well known and highly esteemed throughout the United Kingdom that in presenting our readers with his portrait there is no occasion we should refer to his career otherwise than in the briefest manner. When undergoing the training which fitted him for the important position which he has now for so long a period occupied, Mr. Brotherston had the advantage of spending a portion of his time in good gardens on both sides of the Border. For example, he served his apprenticeship with Mr. Thom, gardener to Lady Eleanor Balfour, at Newtown, Don, and as both mistress and servant were keen gardeners he profited accordingly. Subsequently he went to the gardens of Loxford Hall, which were then under the charge of Mr. James Douglas, V.M.H., and famous for florists' flowers, orchids, chrysanthemums, grapes, and not a few other subjects. At Loxford Hall Mr. Brotherston spent five years, and passed through all the departments, and it is evident that the stay was both pleasant and profitable, for he invariably speaks in appreciative terms of that period in his gardening career. After occupying the position of head gardener for about two years in an establishment near Wimbledon, Mr. Brotherston received in 1874 the appointment of head gardener at Tynninghame, where, with the highly appreciative support of his noble employers, he has done splendid work. Tynninghame gardens are of great extent, and during the past thirty-seven years the walled garden has been greatly altered, and long stretches of hedges, yew, box, and others, with specimen cut cypresses, yews, etc., introduced. There have been other additions, such as a lengthy covered walk of apple trees, herb gardens, little orchards, extensive borders of herbaceous plants, rose and honeysuckle walks, gravel walks altered to others of grass, and borders of rare flowering shrubs. The flower garden proper has not undergone any change in the groundwork, but the schemes of planting and the plants employed are frequently altered. Mr. Brotherston has achieved much distinction as a writer on horticultural subjects, and in the course of his writings, both in his books and his contributions to periodic literature, he has displayed a remarkable knowledge of the old works of gardening. Mr. Brotherston regards himself as having been very fortunate in securing employment with delightful people, and in not having experienced any of the drawbacks or the uncomfortable situations that some have had to bear with. At Tynninghame he has always been treated with, not consideration, but the greatest kindness and indulgence. With such experience it is not surprising he should consider few avocations more desirable than that of a gardener who secures a standing with a good family.

Presentation to a Scottish Amateur Gardener.—A deputation waited upon Mr. William Kilgour, Kincardine, Blair Drummond, Perthshire, the other evening, and presented him with a purse of sovereigns, on the occasion of his retiring, after thirty-six years' service, from the post of head master of Kincardine School, and going to reside in Glasgow. Highly appreciative references were made to Mr. Kilgour's services, and he made a suitable reply. Mr. Kilgour also received a handsome present from Lady Georgina Home Drummond and Captain Home Drummond Moray, of Blair Drummond, and the pupils of the school gave him a rose bowl. Mr. Kilgour is one of the most experienced and able Scottish amateur gardeners, and his acquaintance with his brethren of the craft—professional and amateur—is a wide one. Long ago he entered on the cultivation of the auricula and other florists' flowers, and he has not lost his liking for these early favourites of his, although he has cultivated well many other subjects. He is highly esteemed by all his brother gardeners.

The Charms of Alpine Scenery should, in the opinion of some writers, be enjoyed by those only who have ample leisure and sufficient means to enable them to travel considerable distances in mountainous regions without the aid of railways; and usually we have in the holiday season at least one expression of opinion upon this point. In this connection it is interesting to recall the fact that Ruskin states as his opinion, in "Modern Painters," that "The best image which the world can give of Paradise is in the slope of the meadows, orchards, and cornfields on the sides of a great Alp, with its purple rocks and eternal snows above; this excellence not being in any wise a matter referable to feeling or individual preferences, but demonstrable by calm enumeration of the number of lovely colours on the rocks, the varied grouping of the trees, and the quantity of noble incidents in stream, crag, or cloud presented to the eye at any given moment." Whether able to accept Ruskin's views of the Alps or not, there is no difficulty in giving expression to the opinion that it is impossible for anyone possessing ordinary intelligence and some love of Nature to visit alpine regions, with their wondrously beautiful scenery and wealth of flowers, without having the mind refreshed and the body strengthened. If this be so, why object to those who have but little time for holiday-making visiting them? Dr. Horton tells us, in a recent issue of the "Sunday at Home," that an "awful depression" settled upon his mind as he realised when in Switzerland last year what holidays are making of that country. "Holidays," he writes, "like a colossal and miasmatic mist, have crept over even the Alps." Then, after giving vigorous expression to his views on what is being done as the result of ordinary folks spending their holidays in Switzerland, he states: "Trains run everywhere, not only along the valleys, but up the mountains"; and then he asserts: "Boring through the mountains, they worm their way up the summits. The foul smoke of the engines defiles the cowl of the Mönch and the stainless robe of the Jungfrau." But we would remind Dr. Horton that assertion is not necessarily fact, and ask him since when has the Jungfrau Railway reached the summit of that mountain? Also since when have "engines" deriving their motive power from electricity given off "smoke," foul or otherwise, that has ascended to a height of between 3,000 and 4,000ft.? It is beyond our province to discuss holidays and railways in a general way, but we hold very decided views as to the enormous advantage of spending holidays, whether at home or abroad, where it is possible to fully enjoy the varied charms of Nature.

The Pageant of Empire Rose Show, to which reference was made in our last issue, will, according to the present arrangement, be held on September 28 and 29.

Proposal to Replant the Appian Way.—A wealthy lover of the civilisation of ancient Rome has proposed to the city that if the city will take out the acacias and other plants which now encumber the Appian Way, the "Queen of Roads," he will present to the city a thousand cypress and umbrella pines, that the road may be replanted as it was in the great days of Rome.

Weeds of Ontario.—The Ontario Department of Agriculture has issued a bulletin (No. 188) devoted to the weeds with which cultivators in Ontario have to contend. The bulletin has been prepared by Mr. J. E. Howitt, who may be heartily congratulated on the success he has achieved in his endeavour to provide both gardeners and farmers with trustworthy information on "plants out of place," which, in Ontario, as elsewhere, add materially to both difficulties and cost of crop productions. The bulletin is freely illustrated, the descriptions are clear, and the directions for the eradication of the several kinds are of an essentially practical character.

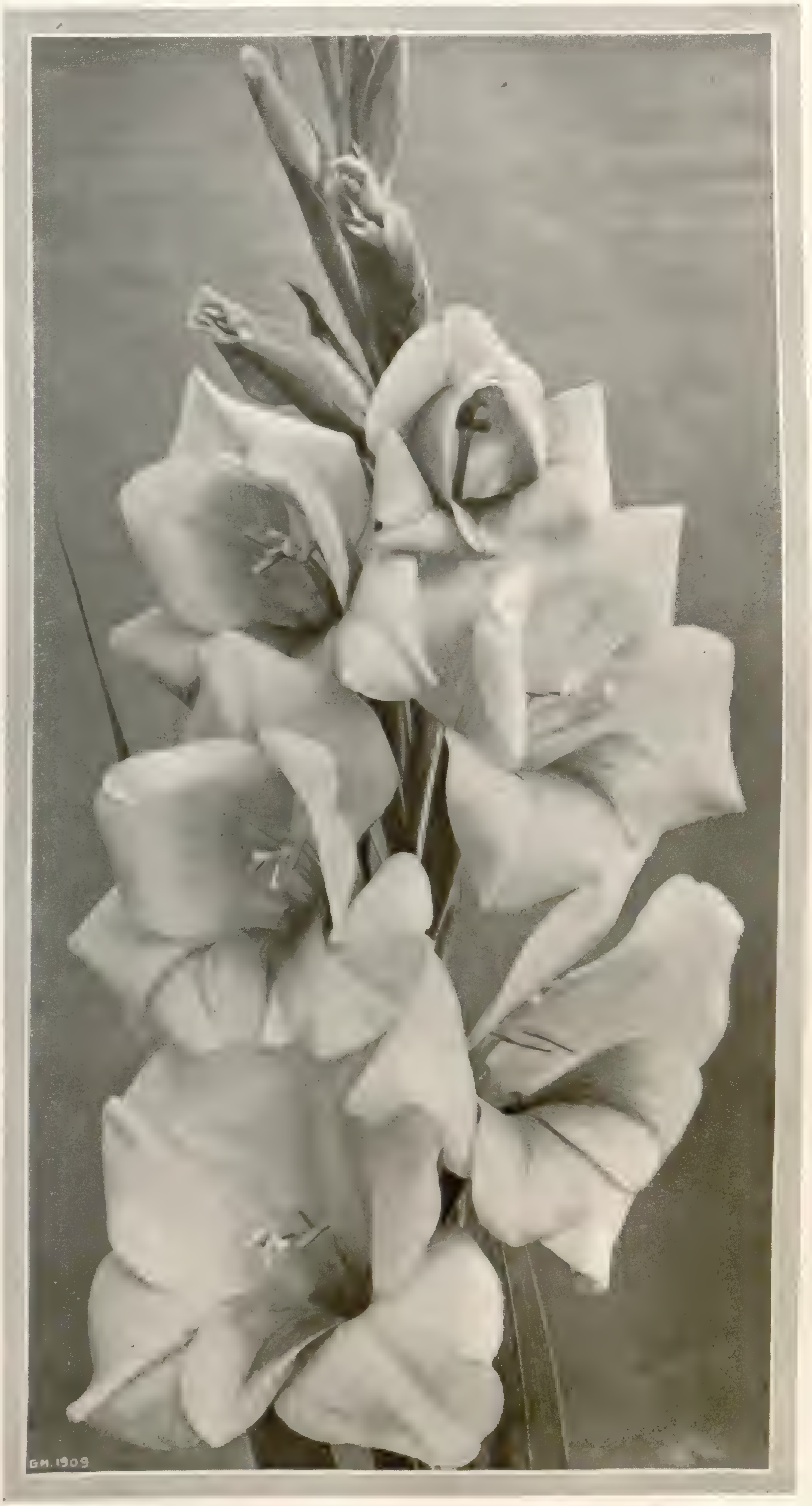
Apple Orchard Competitions in Ulster.—With a view to bringing about an improvement in the management of orchards in the North of Ireland, the Ulster Horticultural Society instituted, some eight years ago, a series of competitions among owners of orchards, which have created much interest, and proved highly beneficial in their influence upon orchard management. The society offered two challenge cups, known respectively as the Aberdeen and Gibson Cups, with substantial prizes in cash. For a time the competition for these prizes was limited, but it has increased so rapidly of late years that there were sixteen competitors for the two challenge cups and the cash prizes. The Aberdeen Cup is offered for competition among owners of orchards without limit as to their area; and the competition for the Gibson Cup is limited to those whose orchards do not exceed three acres. Until last year the society mentioned provided the whole of the prizes, and defrayed the cost of making the awards, but this season, the Department of Agriculture, recognising the immense influence for good that the competitions are exercising, has rendered substantial assistance, financially and otherwise. Two-days were devoted to the judging, and the judges were accompanied by representatives of the Department of Agriculture, and Ulster Fruit Growers' Association, and the committee and secretaries of the Ulster Horticultural Society. The orchards were judged by a scale of points as under: 1. Cultivation and treatment of ground: (a) Cleanliness, 15 points; (b) condition, 20 points; (c) freedom of apple trees from injury caused by cultivation or cropping, 15 points—total, 50 points. 2. Treatment of apple trees above ground: (a) Health, freedom from moss, lichen, insect, and fungoid pests, 30 points; (b) pruning and training, 20 points—total, 50 points. 3. Quantity of apples, irrespective of age or variety of tree, 40 points. 4. Quality of apples: (a) Size, colour, freedom from blemish, or disease, 30 points; (b) commercial value per acre, 30 points—total, 60 points. Total, 200 points. At the close of the tour of inspection the judges made their awards as under: Aberdeen Cup.—First prize, Mr. Felix Coyne, Moy, 179 points; second prize, Mr. J. Bonis, Moy, 157 points; third prize, Mr. J. Donnelly, Blackwater Town, 151 points. Gibson Cup.—First prize, Mr. J. Moffett, Lisnamintry, 168 points; second prize, Mr. R. Graham, Tydannet, 166 points; third prize, Mr. Thomas Lavery, Summer Island, 157 points.

Reading Horticultural Society will not hold an exhibition this year, and with reference to this matter Mr. Herbert W. Dunlop, chairman of the committee, has issued a circular intimating that in consequence of the trying season and its effects upon horticultural produce generally, it is considered very doubtful whether it would be at all possible to obtain a really representative or successful exhibition this year. The committee, he states, have, therefore, very reluctantly decided not to hold a show, as they consider they would, under the circumstances, be running great risk in attempting it. They trust that both exhibitors and subscribers, who have a full knowledge of the society, will appreciate the position, and agree that the decision is a wise one. The committee express the hope that the supporters of the society will continue their subscriptions although there will be no show, as the financial position is not a strong one, and this will enable them to make renewed efforts another season.

Prize-winning Station Gardens.—The annual competition for the prizes offered for the best-kept station gardens along the line of the Glasgow and South-Western Railway has been concluded, and the awards of the judges have been published. The gardens along the railway are generally maintained in good order, and some are the object of high praise on the part of travellers along the system. According to the rules, so many stations at which prizes have been previously awarded are ruled out for the year, and the following have been awarded the premiums: First Class, £6.—Dalmellington, Mr. Taylor; Racks, Mr. Craig; Mountgreenan, Mr. Blackwood; Lochanhead, Mr. Mirrey; Cunninghamhead, Mr. Hamilton; Glenside, Mr. Stewart. Second Class, £4.—Sanquhar, Mr. Yeudall; Maxwelltown, Mr. Faulds; Maybole, Mr. Kerr; Moniaive, Mr. Macdonald; Saltcoats, Mr. Frew; Closeburn, Mr. Faulder; Killywhan, Mr. Kelly; Paisley West, Mr. Hay. Third Class, £3.—Carronbridge, Mr. Dunlop; Kirkgunzeon, Mr. Patrick; Kilkerran, Mr. Reid; Maidens, Mr. Taylor; Dunure, Mr. Bechet; Alloway, Mr. Gillies. Fourth Class, £2.—Gretna Green, Mr. Gibson; Tarbolton, Mr. Reid; Mauchline, Mr. O'Hagan; Houston, Mr. Harvey. Fifth Class, £1.—Auchincruive, Mr. Walker; Southwick, Mr. Wallace; Holywood, Mr. M'Cardle; Pinmore, Mr. Dunlop; Newtonairds, Mr. M'Dougall; Knoweside, Mr. Stoddart.

WINTER SALADS.

The seemingly ever-increasing demand for material to replenish the salad bowl entails upon the grower a considerable amount of forethought and painstaking labour to maintain a full supply the whole year round. This, of course, is more difficult of accomplishment at midwinter and early spring than at other times; although, in many places, the present summer, owing to the excessive heat and lack of moisture, has proved very unfavourable to the quality and lasting properties of many plants, notably lettuces, which are regarded as the mainstay at this season. The cause of this was not due to paucity of growth, but the reverse—the plants advancing to the seeding stage ere they attained a useful size, and the crisp succulent heart so much prized in hot weather was wanting.



GLADIOLUS YELLOW BEAUTY.

A beautiful variety, the flowers soft sulphur yellow, lemon yellow at the base of the lower segments. A.M., R.H.S., August 29. Messrs. Kelway and Son, Langport.

Lettuces and Endive.

Seeds of both of these committed to the soil in a partially shaded position a short time ago will now have produced seedlings, and every possible care, by way of timely thinning out, waterings, and frequent stirring of the surface soil should be carried out. The surplus plants withdrawn from the rows may with advantage be replanted upon a well-prepared site, taking the precaution before doing so to immerse the roots for a time in a mixture of soot, soil, and water of due consistency, and if temporary shade can be afterwards afforded until re-establishment takes place much benefit will accrue therefrom.

Lettuces thus manipulated will probably have to be removed in due course to some form of shelter, where they will be safe from excessive wet and severe frost. In this way frames at present containing various seasonal crops can be turned to good account as these are cleared, the plants referred to being lifted with a ball of soil attached to each, and, after being divested of decaying leaves, be planted in such a way that space for growth and a circulation of air is left between them.

Endive, being considerably hardier than lettuce, is correspondingly of less trouble to grow, though it is not advisable to leave the early curled forms unprotected during frost, and all full-grown plants, even of the Batavian variety, which is the most enduring of any, should be efficiently protected by the middle of November, previous to which date mats or other coverings placed over the plants during the short sharp spells of frost that may occur are sufficient.

As the early-sown plants become developed some means of blanching the central part, or heart, must be devised. This may be done in various ways, as by placing an inverted flower pot over them, or by gently drawing the outer leaves together in the form of a cone, and making secure with a strip of matting. When the season becomes further advanced the best course is to lift the plants, whether from the open or frames, and place them in a quite dark position in a slightly heated room, stable, or outhouse, where, in about ten days, the leaves become white, and quite crisp. The number of plants thus treated should be carefully regulated by the demand, thus preventing waste, for when thoroughly blanched symptoms of decay soon appear.

Whichever method is adopted, interference with the plants should be carried out only when these are quite dry. A further sowing of both lettuce and endive seed for obtaining plants for spring and early summer use may now be made, as with slight protection in very inclement periods these will pass through the winter safely, and prove very useful at the seasons named. Of the former Bath Cos and All the Year Round cabbage are reliable, while Batavian is, as already stated, the most hardy endive.

Beetroot.

Small, well-tapered roots are preferable to large ones, hence late sowing in moderately rich, well-worked soil gives the best results. Where specially grown for salad a portion of the crop may with but little risk of injury from frost be left where grown until wanted for use, better flavour and higher colour being thereby assured.

Onions.

In the young state these are often in request for mixing with other ingredients, consequently sowings at various times, from early spring until September, should be made to maintain a regular supply. The earliest sowings may be made in boxes in a brisk warmth in January, while later, and throughout the summer, the usual methods of open-air culture may be adopted.

Radishes.

With many these are considered indispensable, and they are not difficult to cultivate in spring and early summer. In very hot weather the roots become tough and unpalatable rather quickly, even when grown in a cool situation. For earliest use the smaller types, like Giant Forcing, French Breakfast, and Wood's Frame are best. For summer the Crimson Olive-shaped is unequalled, while for autumn and early winter the last-named, the turnip-rooted, and Black Spanish, will carry on the longest possible supply. Any of the three latter may be sown this month, after which outside sowings are valueless.

Celery.

This moisture-loving crop has, owing to the drought, caused much labour this season, but where the work of watering has been well carried out ample reward will doubtless be forthcoming. From now onwards, next to water supplies, will be the need of properly blanching the plants. A soil fairly free from worms and grubs, or that can be rendered so by applications of soot or salt, may be placed directly around the plants after cleaning the latter of any side growths or bad leaves, using not more than six inches in depth of soil in the first instance, but adding more from time to time until the head of foliage only appears above. In soil much infested with insect life a sheet of brown paper folded neatly around each plant previous to soiling is of great assistance in obtaining the desired length and purity of blanched stalk.

Mustard and Cress.

This well-known combination is quickly and easily grown where slight warmth and moisture are available, and the modes of culture vary considerably. In general a level surface of rich soil, upon which the seeds may be thickly sown, and simply pressed in, applying shade and moisture as may be necessary, is the most certain of any.

Besides the foregoing such adjuncts as tarragon, chervil, chives, and garlic are often asked for, though probably less frequently at the present time than formerly. All are of easy culture, and, with the exception of chervil, are lasting when once planted. The last-named must be sown several times during the growing season to maintain a continuous supply.

James Day.

BACTERIOSIS OF THE POTATO AND TOMATO.

The disease termed bacteriosis of the potato and tomato has been known for some time in the United States, where it has been carefully studied by Dr. Erwin F. Smith. The organism concerned is called Bacillus solanacearum, E. F. Smith. Potatoes, tomatoes, and egg-plants are attacked, sometimes on a large scale, in America. In Great Britain the disease was first observed in 1902 in small quantity on potatoes grown in the North of England and in Scotland. During 1910 it attacked tomatoes to a somewhat serious extent, examples having been received at Kew from two localities, where it was stated to be present in an epidemic condition.

Description.

Tomatoes.—The symptoms indicating the presence of the disease on tomatoes are well marked. Infection usually takes place at or near the tip of the stem, the disease gradually working downwards, passing into the leaves and flowering shoots as it does so, until the root is reached. Shortly after infection the uppermost leaves commence to wilt, curl up, and turn yellow. The leaves become marked with many rather small, scattered, blackish-brown blotches, and long dark-brown streaks appear on the surface of the stem. If the stem be cut across, the vascular bundles or woody portions present a brown appearance, and on microscopic examination the vessels are found to be teeming with bacteria. The fruit also becomes more or less covered with dark-coloured blotches, which at first are quite superficial, but gradually increase in size and assume a watery consistence, finally collapsing and forming irregular pits on the surface of the fruit. After the spots on the fruit, which are at first crowded with bacteria, have collapsed, various kinds of fungi and bacteria gain an entrance through the broken fruit, which is speedily reduced to pulp. Diseased plants gradually droop and die from the top downwards.

Potatoes.—In potatoes the symptoms are somewhat similar to those described above. The uppermost leaves droop first, and the stem becomes very conspicuously marked with blackish longitudinal streaks. The vascular bundles are also browned, owing to the presence of the bacteria, which travel along the vessels of the underground branches and pass into the tubers, where their presence is indicated by a more or less decided brown ring situated a small distance from the outside of the tuber, and corresponding to the position of the vascular-bundle ring of the tuber. As an infected tuber increases in size the bacteria encroach on the central mass enclosed by the vascular ring; the central mass then gradually assumes a brown colour, and finally becomes soft and rotten, leaving a thin outside crust intact. This shell is usually broken when the potatoes are lifted, and its contents, swarming with bacteria, remain in the land.

Preventive and Remedial Measures.

1.—Bacteria have occurred abundantly in the substance of partly ripe tomatoes; hence, owing to the difficulty experienced in thoroughly removing the glairy coating from the seed, it is highly probable that bacteria would become locked up in this substance as it dried round the seed, and on being released during germination would endanger the crop. Seed obtained from fruit grown in an infected area should therefore not be used.

2.—In the case of potatoes, Dr. Smith has shown that the rapid spread of the disease is caused by insects of various kinds, which feed alternately on diseased and healthy plants. The numerous isolated patches of disease on the fruit and leaves of the tomatoes examined at Kew support this view. To prevent this the plants should be sprayed with Bordeaux mixture containing an insecticide, such as Paris green, which would answer the double purpose of warding off insects and preventing the appearance of Phytophthora infestans, Cladosporium fulvum, and other pests. A suitable mixture for the purpose may be made as follows:

Paris Green and Bordeaux Mixture.

Quicklime	10 lb.
Bluestone (copper sulphate)	10 lb.
Paris green	8 ozs.
Water	100 gallons.

Mix the Paris green into a paste with a little warm water, then add to the Bordeaux mixture, and stir thoroughly.

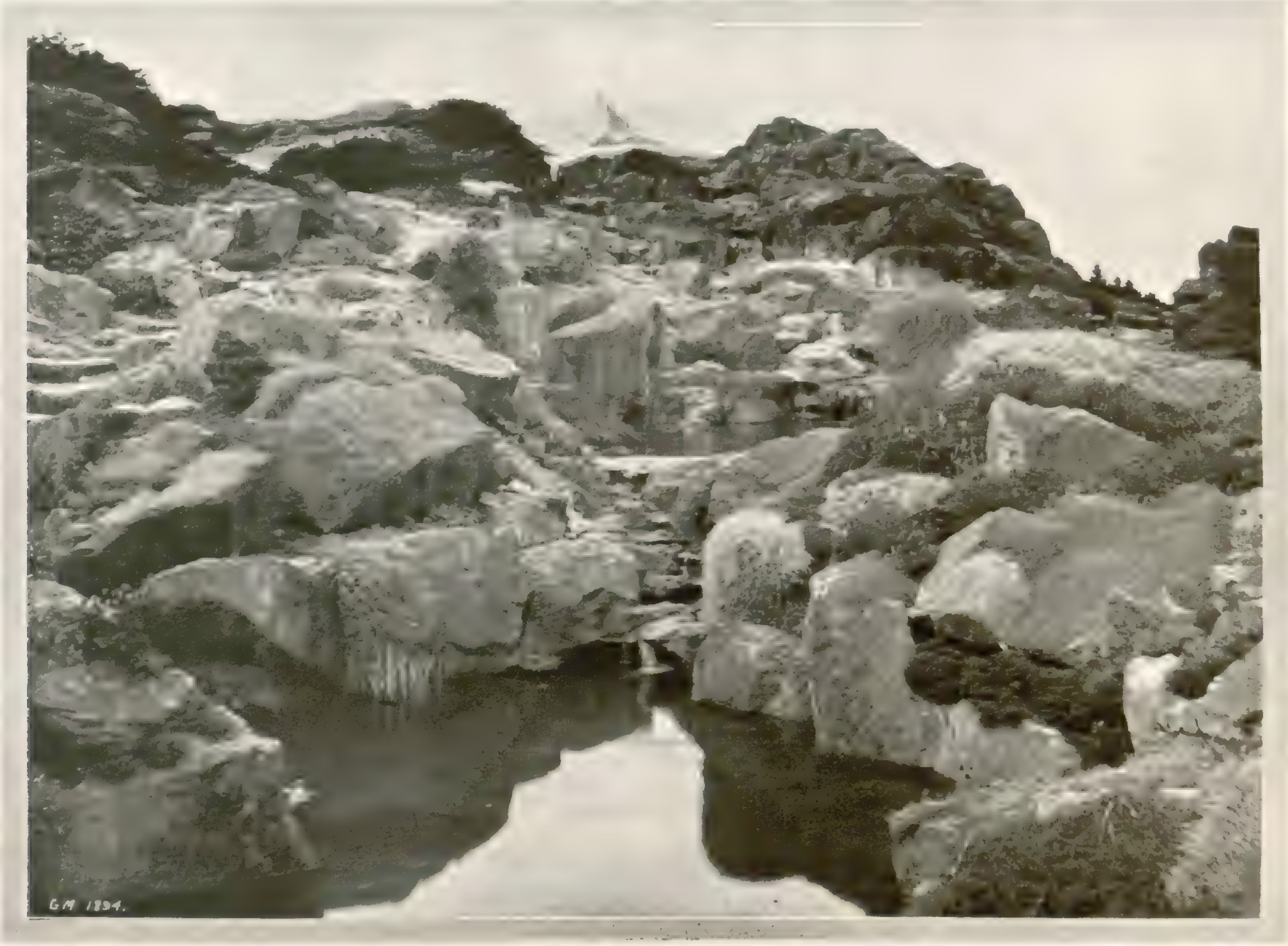
3.—Potato tubers showing the slightest trace of an internal brown ring should not be used for "sets"; in fact, potatoes from an infected district should be avoided.

4.—Soil that has produced a diseased crop should be treated with gas-lime or with superphosphate of lime.—Board of Agriculture Leaflet.

Begonia Triomph de Lorraine.—This is one of the best of the double-flowered forms of Begonia semperflorens, several of which were put into commerce a few years ago. Triomph de Lorraine is of somewhat upright growth, reaching a height of eighteen inches or thereabouts. The foliage under exposure to the sun acquires a rich bright crimson tint, and, as a contrast to light-foliaged subjects, it is for bedding much appreciated. From the fact that the flowers are of somewhat the same colour as the leaves the foliage is regarded as the main attraction.—W. T.

FRIAR PARK ROCK GARDEN.

Friar Park, Henley-on-Thames, the home of Sir Frank Crisp, by virtue of its immense collection of plants, both rare and familiar, represents an absolute Paradise, not only for the botanist, but for everyone inspired by a real love for Nature's unsophisticated vegetation, and the result of man's intervention as a selective factor. When it is stated that at least some fifteen thousand different species and varieties of plants find there a congenial home, whether as tree, shrub, or minuter specimens, it is clear that anything like a comprehensive description of the place and its contents would mean volumes, and that an article can only embrace a section, and even then only treat it superficially. When Sir Frank first took up his residence at Friar Park the spot now occupied by his world-renowned rock garden which has been selected as my theme was but an open sloping area, entirely unbroken; a faint idea of what it is now may be gathered by the two illustrations given herewith. None, however, but the contriver and his able assistant, his head gardener, Mr. Knowles, can grasp the amount of careful study of geological conditions, and the needs of alpine plants, destined to occupy it, together with the pains involved in the arrangement of bold rockery scenery, and means of access to all points by apparently natural and entirely unobtrusive pathways and steps which were involved in carrying out the bold conception whose fulfilment was aimed at.



[Photo: H. N. King.

A VIEW IN THE ROCK GARDEN, FRIAR PARK, WITH A GLIMPSE OF THE MATTERHORN.

Many thousands of tons of huge rock masses, many of them seven or more tons in individual weight, had to be brought hither from long distances, mostly from Yorkshire, and an immense excavation was necessary to form a veritable valley, whose sides were destined to be walled in and diversified on natural lines with such material. Over and over again these unwieldy masses had to be shifted and rearranged to satisfy the fastidious taste of the owner, and, meanwhile, as we have said, it was not a mere question of picturesque massing, but also of contriving the myriad congenial nooks, recesses, pockets, and tiny platforms, in and on which alpine plants could thrive, and make themselves truly at home. Bit by bit, however, the desired end was accomplished, and, finally, as a crowning touch to the whole, the bold idea was conceived of creating the "Matterhorn" on the highest point.

The result is nothing less than wonderful. Seated in or near to the pretty châlet deep down the valley, we now gaze up a deep tortuous ravine, traversed by a stream which forms a series of cascades and still pools in which the trout are entirely at home, while all around the rock faces and recesses are clothed with lovely vegetation. Nowhere can there be detected a trace of artificiality, and, looking upward and around, it is indeed all but impossible to divest oneself of the belief that the whole "creation" is not the outcome of a human idea, but the work of purely natural forces. Leaving the châlet, we find that innumerable mountain paths and stepping stones permit of easy access to the botanical treasures which peep everywhere from minute chinks and crannies, fill larger recesses beneath the sheltering rocks, sweep in veritable sheets of intermingled flower and foliage over the rocky slopes, or tower upwards as shrubs, or even trees where the circumstances permit of bolder growth, to form a background.

On the bare crests of some of the rock masses the sedums, saxifrages, androsaces, and other more or less dwarf gems of alpine vegetation form beautiful clumps and clusters. The arabis, aubrietias, alyssums, and similar more spreading growths form vegetable cascades down precipitous slopes, and in the late spring clothe them with brilliant sheets of flowers, to be followed later on by even more glowing displays of the dianthus, or pink family, which then forms one of the most attractive features of the glen. Every nook we pass has its appropriate tenant, and out of sight, but always there, we may find its name on an unobtrusive, but imperishable label. Devious side paths conduct us to ever-new surprises; one near the bluffs which terminate the prospect below the "Matterhorn" peak reveals a fine collection of native ferns in all their beauty, sheltered from sun and wind by huge masses of rock, and rooting in carefully prepared mould between their gaps and crevices.

Everywhere, indeed, we see the most assiduous care devoted to the individual needs of the plants concerned, as regards soil, position, and the other factors which mean successful culture. Quite recently this rockery has been largely extended beyond the "Matterhorn" peak, and to the left of our picture, thus affording room for a largely increased number of plants, whose name is already legion. One of the greatest charms of the valley described is the fact that at no point is anything visible to clash with the illusion; the very entrance to it from the adjacent mansion, which entrance is depicted in the second of the illustrations, is built up of huge rocks, through which a devious path, lined with ferns and other naturally located plants, leads us to a point just above the châlet. Here the jocular side of our host is probably evidenced by the loan of an opera glass, through which we not merely see the "Matterhorn" in detail, but even a group of chamois on the heights below the snowfield, at its foot, these, of course, consisting of tiny models placed there to enhance the illusion, but often the source of considerable amusement, and sometimes amazement, to puzzled visitors who do not suspect a joke. In the pools of the stream we see the beautiful waxen flowers of Aponogeton distachyon, some choice water lilies, and a number of rare aquatic plants, while here and there on the slopes, near the pools, water turtles may be seen basking in the sun. In short, when the visitor considers the transformation implied in our short description of the original site of this extraordinary rockery and its present appearance, he can hardly fail to be astounded at the natural result; but he is likely to be still more astonished when told that much of the natural scenery beheld is permeated below by labyrinthine caves, caverns, grottoes, and icy recesses, forming an underland as marvellous almost in its artificiality and humorous contents and contrivances as the "overland" in front of him.

It is not, however, our province to deal with this "section" of the attractions of Friar Park. It would demand an article to itself, in which, with humour and a love for the grim and weird, would be exemplified quite outside our own special domain of horticulture. Suffice it to say with regard to this, and the many other wonders of Sir Frank Crisp's domain, that he very kindly permits the public to visit them every Wednesday from May to September from 2 p.m. to 6 p.m. for a small fee imposed for the benefit of certain charities, and that he has written a "Guide" which in itself is an epitome of learning, humour, and botanical lore.

Chas. T. Druery, V.M.H., F.L.S.

THE TURNIP FLY AND GREEN CROPS.

It has been a very difficult matter, during the recent dry weather, to rear seedlings of green crops, especially those of turnips. In the "Chester Chronicle," the writer of "Farm Notes" refers to the experience of a Wiltshire farmer who drilled in four pounds of black sulphur per acre last year, and did not lose any plants, although in the same neighbourhood where the plants were not thus treated, the fly did great havoc amongst them. Other cultivators have acted on his advice this year with equally satisfactory results. I have also heard that if the seeds are first soaked in turpentine for a few hours, then allowed to dry in a cool place for a similar period before being sown, that the fly will not touch the young seedlings. I have not tried the remedy, or rather, preventive; it may act very well, but I would advise inexperienced cultivators to try it on a very small scale first. I have had much experience in growing turnips in a very light soil, and I found that if road dust was sprinkled over the seedlings very early in the morning, while they were moist with dew, the fly did not do them much damage. The frequent use of the Dutch hoe is also a deterrent.

G. B.

The Chimney Campanula (Campanula pyramidalis).—When the summer is on the wane many of the occupants of the greenhouse that have done duty for some time lose their freshness, and it is then that this campanula is particularly valuable. It is a plant that well repays attention, for if starved during its most critical period, that is as the spikes are developing, it will give a comparatively poor display. Not only is this campanula of value for the embellishment of the greenhouse, but it is often used to break up the formal outline of groups of plants at many of the exhibitions, which are so numerous at the period when it is at its best. Some magnificent examples were shown last August at a meeting of the Royal Horticultural Society, and one of them was illustrated in the Gardeners' Magazine of October 15.—W. T.

AUGUST IN THE WILD GARDEN.

A few notes upon the wild garden just at the present time may perhaps be of interest to garden-lovers. The drought that prevailed from the beginning of July has hastened the departure of many blossoms, and trees and plants are alike suffering for the want of rain.

Gladioli, which give such glorious colourings grouped upon the slopes among other subjects, were early in coming into beauty. In effect the tall spikes of blossom are decidedly pleasing, especially if grouped near lighter habited and paler hued flowers. Gauras, which are always a delight when grouped by the sides of the stone pathways, or with the astilbes at the waterside, have not failed to make good growth again this season, but the great heat and soil dryness have tended to shorten the duration of the blossoms more than usual. The large numbers of the sprays of white butterfly blossoms form an attractive feature in any garden, and this species and its companion, Gaura coccinea (which unfortunately is so rarely offered), are deserving of far greater appreciation than they receive at the present day.

I must record, too, the value of the "blue thistles" for wild gardening. Take, for instance, the blue globular blossoms of Echinops ritro, and the exquisite metallic blue shades, and interesting forms of Eryngium amethystinum, E. Oliverianum, E. planum, and E. tripartitum. These are superb arranged in bold groups, and if one adds the silvery Echinops sphærocephalus, and the ivory-hued Eryngium giganteum and E. spinosum, the blues of the foregoing forms are greatly enhanced by the contrast with the latter.

Though the main display of the delphiniums was greatly affected by the dryness, the plants produced secondary spikes of great beauty. It is notable that young plants bedded out in spring are much better for producing successional blooms than older established clumps, proving the advantage of a frequent renewal of stock by propagation and transplanting. We have now the spring-raised plants of the Belladonna hybrids in flower, and the dainty spikes of pale blue, in combination with the very similar continuous spikes of Persimmon, produce a quite pleasing effect in the garden.

Very notable also were groups of the annual Statice sinuata, sinuata alba, and S. Bonduelli, which luxuriate in the dry, warm soil of the banks. The pink-flowered S. Suworowi does not withstand drought so well, but appears from self-sown seeds each spring, and blossoms freely throughout the summer.

Dwarf campanulas arranged on the high banks between the ericas, veronicas, and other dwarf shrubs, are of the utmost value at this period. To my mind they are seldom used freely enough, and plantings should always include C. profusion, C. muralis, C. G. F. Wilson, C. turbinata, C. rhomboidalis, C. pulla, C. pusilla, C. pusilla alba, and the best forms of C. carpatica. From these one obtains those haunting shades of blue just as in the taller campanulas, and the effect of these hues upon a landscape is always good.

Tritomas, ever pleasing, lift their glowing torches above companion plants. Nowadays we usually write of them as kniphofias, but the better-known names of tritoma and torch lilies will remain as long as a love of the plants exists. Few plants, if any, create more striking effects than the torch lilies, and no garden should be without them. A few especially good forms are John Benary, Beacon, Lemon Queen, Star of Baden-Baden, Redcap, Leda, R. Wilson Ker, Solfatare, and R. C. Affourtit. These are all telling varieties, and light up a landscape splendidly. The small-flowered light-habited species and varieties, such as T. pauciflora, T. breviflora, T. rufa, T. modesta, T. Goldelse, T. Torchlight, etc., are delightful in many situations, and give sheaves of blossoms of the daintiest character.

Phloxes gave a series of rich colourings, and did well in a fairly moist situation. So many fine varieties are in existence that one has little difficulty in making a good choice of colours. The pure white, bright scarlets, and the clear pink and rose shades are the most desirable for garden decoration, and wherever possible, they should be grouped against a background of foliage. Michaelmas daisies and early-flowering chrysanthemums are coming on apace, and have withstood the drought pretty well. A good selection of both groups contribute greatly to the glory of the late summer garden. Gaillardias are still covered with richly-coloured blossoms, while heleniums, romneyas, senecios, mimulus, and many other plants are still very attractive.

Lilium Batemanni is fully out now, and the earliest of the tigrinum and speciosum groups are following them rapidly. Lilies of almost all types are valuable for planting in the wild garden, but many of them require special attention in the matter of soil and situation.

Hardy heaths are rapidly pushing forward their blossoms, soon to render effective assistance to the landscape. The heaths are almost invaluable at this season, and give breadths of dainty blossom, which is particularly attractive when the area devoted to them is broken and undulating. With heaths one can associate many things (choosing subjects, of course, that harmonise), especially plants that blossom at other seasons.

P. S. Hayward.

THREE GOOD ORNAMENTAL GRASSES.

Elymus glaucus giganteus is a most ornamental grass with long narrow leaves of intense glaucous blue-grey colour, and attaining a height of four to five feet when in flower. It forms an ideal subject to group beside water, but should not be planted in ground constantly wet, as the plant succeeds best in ordinary soil, and is liable to die off if kept too damp in winter.

Eulalia japonica variegata is another excellent and most distinct grass for ornamental planting; in this case the canes rise to a height of five and six feet with leaves of medium length that gracefully recurve; they are striped with broad bands of white that impart a silvery aspect to the leaves. It stands a greater degree of moisture than the elymus, and, like it, is excellent for waterside planting.

Arundo Donax macrophyllus glauca is a distinct form of the "Great Reed," a plant common on the Mediterranean regions; the canes rise to a height of eight to ten feet, and are clothed with broad-pointed leaves of a rich glaucous blue-grey colour, that flutter as pennons in the lightest breeze. It requires a rich, heavy soil, with plenty of water during the growing season, but in winter somewhat drier conditions should prevail. The old canes are best retained during winter, as these protect the fresh shoots that appear somewhat early in spring, and, as its habitat indicates, the plant is none too hardy under the extreme variableness of our English winters.

Thomas Smith.

ARISARUM PROBOSCIDEUM.

From the height of beauty to the fantastic in Nature seems but a step, so in the garden we do not wander far until we come upon a plant at the base of a slope of the rock garden, a plant which appears to have been created in one of Mother Earth's frolicsome moods, and which is always intensely amusing, yet strange, to those who see it in flower. True, it shares some of its peculiarities with others of the aroids, but it is one of the few which can be placed with profit among the alpine flowers. Singular though it is, however, this Arisarum proboscideum, it carries with it but little suggestion of its singularity when we observe its pretty masses of what a writer of excellent books calls "mats and beds of emerald arrows." Its fresh green, glossy leaves are arrow-shaped, and the effect of a group is decidedly pretty, and not in the least out of harmony with the neighbouring alpines—chaste, charming, or gay as they may be. The little chocolate and white hoods which form the flower have their extremities lengthened into a thin proboscis-like feeler. What the precise purpose of this is I know not, but this is thrown through the foliage, and looks like some little tentacle of brown. Draw the leaves aside, and we shall see in their season the quaint flowers, which the writer referred to has likened to "a mouse, with waving tail, diving down some hole." Hear what he says in his unconventional way! It forms "great mats and beds of emerald arrows, among which the diving brown mice frisk and sport in the most exciting manner, waving their tails in every direction." There is here, perhaps, a little pardonable picturesque word painting, but at all events, the little Arisarum proboscideum will not disappoint those on the look-out for singular plants for the alpine garden which will not fail to interest. Then it is an accommodating plant, apparently hardy everywhere. I first saw it years ago in a cold Leeds garden, and I have grown it since then. In a dry place it will grow well; in a moister one it will flourish; and in a bog it will thrive apace indeed.

S. A.

STRAWBERRIES.

Except for a few showery days, the weather was exceedingly favourable for strawberries this season. Many of the larger growing kinds not only produced heavy crops, but the individual berries grew to an enormous size, the flesh being solid and the flavour excellent. The soil at Wrotham is rather light and porous, resting on gravel and sand, so that a heavy mulching of manure is most essential, and not less necessary are copious supplies of water at the roots at intervals during dry weather. Our best late variety this season was Laxton's Latest, a very large-fruiting kind, and Givon's Prolific. Reward, although not as late as Laxton's Latest, produced fine fruits that ripened after several of the midseason kinds were over. President and Sir Joseph Paxton both cropped heavily, the flavour of the former, it is needless to say, leaving little to be desired. Louis Gauthier did very well on young plants, but, owing to drought, the older plants did not yield the crop they usually do. Viscomtesse Hericart de Thury is grown chiefly for preserving; the fruit is not too large, the colour good, and the crop is generally very heavy—in fact, for preserving, etc., I prefer this variety to all others I have grown.

We do not grow a large number of varieties, but a few of those that are best adapted for our soil and purposes. Our earliest variety from which to gather in the open is Royal Sovereign, and of this we prepare and plant annually a goodly number to meet rather a large demand. The variety Leader succeeds well here, ripening a few days later than Royal Sovereign. This year our first fruits ripened about June 10, coming in nicely after those forced, and thus preventing a break in the supply. The individual berries grew to a large size, and especially where the fruits and trusses had been thinned. Strawberries, like most other fruits, derive much advantage from a change of soil and stock, and should not be neglected in this respect. I know only too well that snug borders are not at all times available, and that the old site must be utilised for several years in succession. When this is the case, much can be done to assist the plants by the introduction of a little fresh sweet soil at the time of planting the young stock. In our case, as soon as the fruits have been gathered, the plants are immediately removed, the land carefully cleaned, and then well dressed with soot, lime, wood ashes, and fresh soil, and deeply dug, so that by the time the young stock raised in another part of the garden is ready to plant, the soil has become somewhat settled. At the time of planting around the balls of roots is placed two or three handfuls of fresh prepared soil, rammed tight, well watered, and, subsequently, the soil between the plants is kept clean, and any runners removed, so as to encourage good sturdy crowns.

H. Markham.

[Photo: H. N. King.

A PATHWAY UP THE SLOPES OF THE ROCK GARDEN, FRIAR PARK.

"CARNATIONS, PICOTEES, AND PINKS" will tell you plainly how to propagate and grow these favourite flowers to perfection. The work is freely illustrated with plates of leading varieties, and explanatory diagrams as to layering, taking cuttings, fertilising blooms, etc. Price 2s. 6d. net. by post, in box, 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

NOTES FROM KEW.

Achimenes.

Extensive use is made at Kew of these beautiful summer-flowering gesnerads, and a large number are now in bloom in the cool compartment of the T range. Particularly noticeable among those now in bloom are A. gloxiniæflora discolor, a ruby-red flower, with a bright orange throat; A. grandiflora, a tall-growing kind, with large mauve-purple flowers; A. longiflora and its varieties, the pure white alba being very noteworthy; A. coccinea, a West Indian species, with very small flowers, but they are of a very bright crimson or deep scarlet colour, and borne in great profusion; and a striking garden variety, De Stopfi, the flowers of which are of a French-white tint, veined with blue, especially towards the mouth.

Jacobinia suberecta.

This is a very uncommon species of jacobinia, and still more rarely does it flower. It is, however, in bloom in the old Water Lily House No. 15. The plant is growing in a suspended basket, for which mode of culture its procumbent habit eminently fits it. This jacobinia, which is a native of Uruguay, has a spreading stem, furnished with small ovate leaves clothed with a whitish down. The flowers, borne in terminal spikes or clusters, are reddish, and not particularly showy, but for all this it is a very interesting plant, being so different in general appearance from the other and more generally cultivated Jacobinias.

Dissotis plumosa.

This West African melastomaceous plant is a first-rate subject for growing in suspended baskets, under which conditions it is now seen to considerable advantage in House No. 15. The long, slender shoots hang down for at least four feet, and are thickly clothed with small, neat, deep green leaves. Among these nestle the flowers, which are about one and a-half inches in diameter, and of a bright magenta-rose colour. It is very uncommon, and I have not met with it elsewhere than at Kew, but its value as a basket plant should lead to its extended cultivation.

Cannas.

The garden varieties of canna are sometimes referred to as dwarf-growing, and this term, when the plants are limited to comparatively small pots, does not seem at all inappropriate. Some specimens, however, standing in the tank of House No. 15, at Kew, have, under the influence of ample root room, plenty of moisture, and a stove temperature, developed to such an extent that one scarcely recognises them as the varieties we are accustomed to see. They are flowering freely, and certainly look very happy in their unusual surroundings.

Solanum aviculare.

In one of the sheltered bays outside the Temperate House this New Zealand species of solanum is flowering freely. It is a shrubby species, with divided leaves about a foot in length, and of a very deep green colour. The flowers, which are borne in clusters, are in size, colour, and general appearance, very suggestive of the well-known S. Wendlandi, but in S. aviculare the clusters are fewer flowered. Under favourable conditions the flowers are succeeded by egg-shaped seed pods, which become yellow when ripe. In the extreme South-west of England this solanum is much valued as an outdoor shrub. It is there only injured during severe winters, and young plants are readily obtained from seed.

Sutherlandia frutescens.

Some specimens of this, in close proximity to the solanum just mentioned, show well the appropriateness of its popular name, as the comparatively small plants are each bearing several large inflated seed pods just as in the case of the coluteas. The greyish pinnate foliage of this sutherlandia is very pretty, and the flowers are a good deal like small examples of Clianthus puniceus. This sutherlandia is sometimes bedded out during the summer months.

K.

TREES AND SHRUBS TO FLOWER DURING JULY AND AUGUST.

A census of the trees and shrubs which blossom during July and August reveals the fact that while the number is considerably less than in the two previous months there is still a fair number upon which we may rely. Early in July few more charming sights can be found than the golden-flowered Genista æthnensis, for it rises to a height of fifteen or eighteen feet, with slender pendant branches, each one of which is covered with flowers. About the same time the Japanese Syringa japonica produces its large panicles of cream-coloured blooms. This is a rather rare plant, and one which might be more widely planted with advantage. Contrasted with this we have Styrax japonicum, a shrub whose beauty lies in its pendant white blossoms. Another styrax, S. obassia, is also an ornamental shrub or small tree, but, unfortunately, one rarely sees it to advantage. Both are of Japanese origin. In Cornus macrophylla we have another showy shrub bearing cream-coloured flowers. This differs from the majority of the dogwoods by being of tree-like habit. In addition to its showy flowers it is notable on account of its large distinct leaves.

The privets, though common, and often despised, produce several species which are of decorative presence. It is only necessary to direct attention to such species as Ligustrum sinense, which blooms freely during the early part of July; japonicum, which blooms in August; and lucidum, which blossoms towards the end of August. The last two are evergreen, and are worthy of consideration from gardeners for that reason alone. A charming plant during July and August is found in Tamarix pentandra, or T. hispida var. æstivalis, as it is often called. This is one of the showiest introductions of recent years, for shoots three feet or so in length, which have been formed during the current year, are clothed throughout three parts of their length with axillary racemes of showy rose-coloured blossoms, each shoot forming a large inflorescence. The best results are obtained by cutting the shrub hard back each spring. The dwarf Chestnut, Æsculus parviflora, is very ornamental about the end of July and early August, for many of the shoots are terminated with inflorescences nine to twelve inches long of white flowers. Two other kinds may be noted early in July, for the Indian Chestnut, Æsculus indica, a large-growing tree, and the smaller Æ. californica, both bloom at that period.

Where good-sized examples of Koelreuteria paniculata exist their terminal panicles of yellow flowers may be looked for in August, and the same may be said of Sophora japonica during a sunny summer. Very often, however, the cream-coloured flowers of this tree do not open before September. One of the aristocrats of the shrub world may be looked for in August, for at that period the large white camellia-like flowers of Eucryphia pinnatifolia are at their best. Good examples of this Chilian shrub are rare. Three kinds of Stuartia, namely, pentagyna, pseudo-camellia, and virginica, bloom during July and August. All bear large showy white blossoms, but good examples are scarce. The various hypericums provide a display of yellow-flowered shrubs. Such dwarf kinds as calycinum, Moserianum, Bucklei, and olympicum are good subjects for positions where low-growing plants only may be used, while stronger-growing sorts, such as elatum, hircinum, Hookerianum, patulum, Henryi, and uralum may be used where shrubs from two to three feet high are required. Another group of hypericums is that made up of small-leaved kinds, such as prolificum, densiflorum, galioides, and kalmianum. All are very floriferous, and are suitable for the front of a shrubbery or border.

The genus Spiræa again offers a wide selection of species. On the one hand we have strong-growing kinds, such as Aitchisoni and Lindleyana, with terminal panicles of white flowers, sometimes between one and a-half and two feet in length, and discolor, with panicles of cream-coloured blossoms, and, on the other hand, the group composed of such sorts as Douglasi, salicifolia, japonica, Menziesi, etc., and their respective varieties, which have an extended flowering period from early July until September.

Among magnolias there are several which bloom during July and August. M. grandiflora is perhaps the most showy one. Its large white blossoms are conspicuous in many a garden either on plants grown against walls or on trees or bushes in the open ground. Lovely, however, as the type is, it is eclipsed in beauty by the shapely flowers of the variety gloriosa. Other kinds on which blossoms may be found are M. tripetala, M. glauca, M. hypoleuca, M. Thompsoniana, and M. macrophylla. Turning to the erica family, we find a number of very showy plants; Erica cinerea and its numerous varieties are very beautiful; the same may be said of E. vagans, E. ciliaris, E. Mawiana, and E. tetralix, while Calluna vulgaris and Dabœcia polifolia are responsible for a briliant display over a period of six or eight weeks at least. On many commons and hillsides the French Gorse, Ulex Galli, is conspicuous by reason of its rich golden blossoms. Where this does not exist in a state of Nature it might readily be introduced into the more natural parts of a garden.

In the southern counties, and more particularly in the vicinity of the sea, several escallonias make a brave display. E. macrantha, E. exoniensis, E. philippiana, and E. rubra are specially worthy of notice. Olearia Haasti is another free-flowering July shrub suitable for many gardens. Hydrangea Hortensia is conspicuous in many gardens in the milder parts of the country, as also are the various shrubby veronicas and the hardier kinds of fuchsia. Further north Hydrangea paniculata and the variety grandiflora thrive well, and bloom profusely during August, whilst in many gardens Clerodendron trichotomum and C. fœtidum are conspicuous in August. The end of August sees the various clethras in bloom, while the catalpas are at their best about the end of July and early in August. These serve to show that an extensive variety of flowering shrubs may be had in July and August, but those named by no means exhaust the list. W. D.

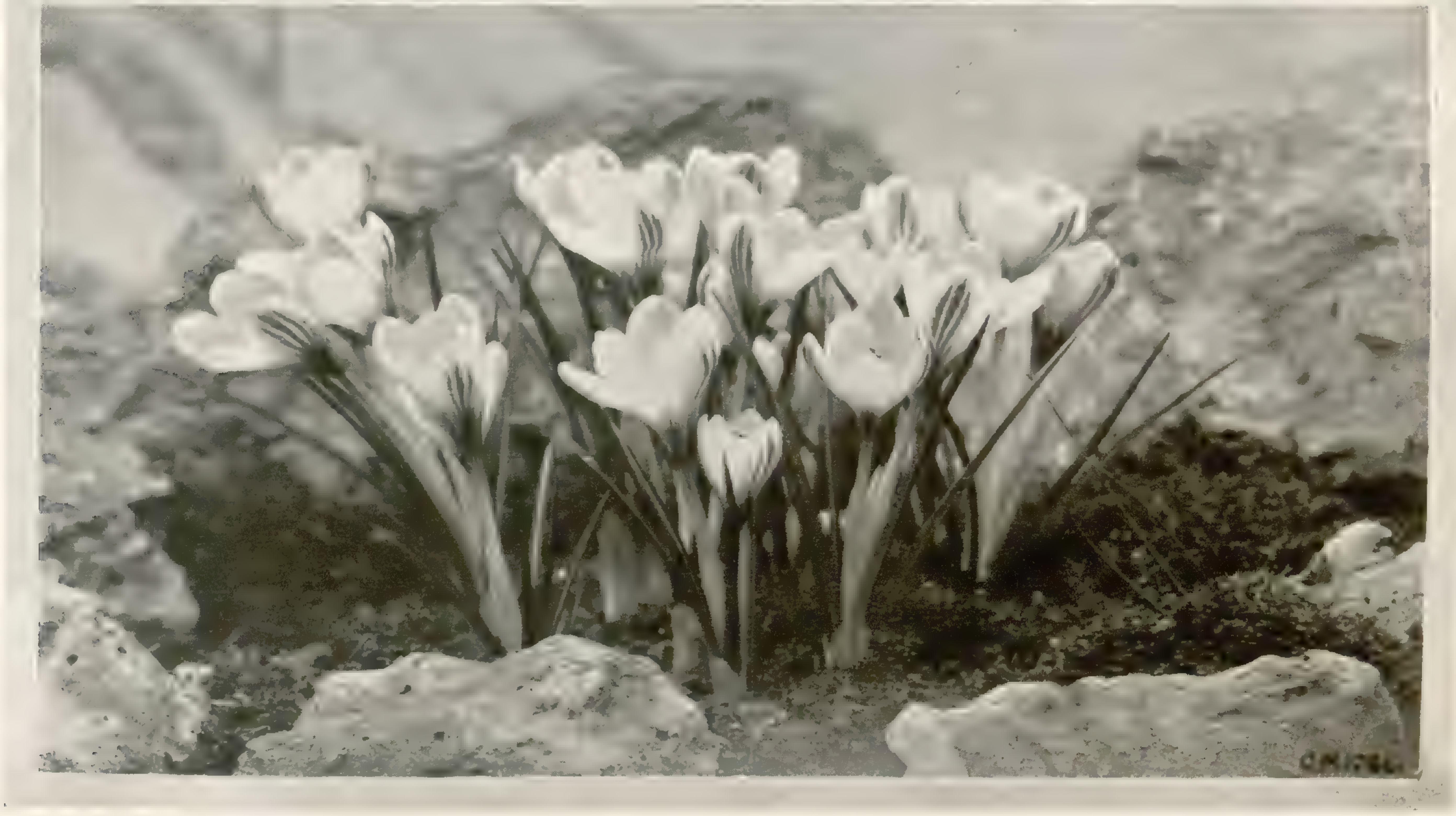
CROCUS VERSICOLOR.

Probably one of the reasons why alpine gardening has made such headway recently is that it enables one to find congenial homes for so many and varied early spring-flowering plants. The quick drainage of the rock garden prevents the soil lying unduly wet in the winter months, while many of the sheltered corners and nooks formed by adjacent rocks enables many dainty and early flowers to stand for a considerable time without undue damage from cutting winds and driving rains, thus contrasting favourably with the wind-swept border, where all too soon these early visitors are laid by the wintry gust.

One of these charming harbingers of spring is Crocus versicolor, inhabiting the sunny South of France. It is really surprising that it should take so kindly to our climate, and delight us with its glistening flowers so early as January and February. It is best planted in little colonies, where it will receive what small amount of wintry sunshine is available, and if the soil is composed of sandy loam and a little leaf-mould it thrives amazingly.

The appearance of the clump is considerably enhanced if some carpeting plant, such as Arenaria balearica, is planted over the place where the bulbs have been inserted. It is indeed a welcome sight when these lovely little plants bloom, with their white or faintest lavender petals veined with rich purple-blue, while glistening within this beautiful protecting cup the golden stamens gleam forth when the day is fine enough for the flowers to open wide.

Reginald A. Malby.



[Photo: R. H. Malby.

CROCUS VERSICOLOR.

Flowers white veined with purple-blue.

Watering Vine Borders.—When watering the borders the liquid should not be used indiscriminately, but some system of measuring the quantity given should always be used, or in hot weather more moisture may be given than is really necessary; every portion of the border should have an equal supply, and if a fertiliser is used, this should not be given at every watering, but a damping-down with soot water several times a week will keep the foliage healthy.—W. A. Cook.

AMONG THE ROSES.

July and August were, up to the last few days of the second month, so hot and dry that few of our roses could grow away with their usual freedom. I am alluding to the increasing number of teas and their hybrids, which, with a few hybrid perpetuals, such as Mrs. R. G. Sharman-Crawford, Victor Hugo, Ben Cant, Ulrich Brunner, and Frau Karl Druschki afford us a continuation of flowers almost unknown before their introduction. The usual continuous crop of blossoms upon these has been almost entirely stopped by the heat and drought. In the case of hybrid perpetuals that were largely grown upon the Manetti stock a few decades ago, we did not look for many flowers after the first main crop, but with the more general use of seedling and cutting briers as stocks, with their extended time of active growth, together with the introduction of more suitable varieties, our roses have afforded an almost uninterrupted display of blossom from early in June until the first frosts arrive.

It is these facts that make the present check of blossom and growth so noticeable. But there is, fortunately, every prospect of a grand autumnal crop if we have cooler and moister weather. The present semi-ripened wood will probably respond to such conditions even better than usual, and with the many free autumnal bloomers now grown, I look forward with some confidence to a good autumnal display.

I have noticed how exceptionally well a few of our older, and, in many cases, almost extinct roses have done during this peculiar season. I may particularly mention Madame des Tartas, introduced by Bernède in 1860, and difficult to find in the present-day catalogues. We have also found a great difficulty, both here and on the Continent, in procuring a few more plants than our own stock afforded last winter. Comparatively speaking, this variety has been unaffected by the weather, and at the time of writing, is carrying many of its immense trusses that will certainly extend well into the autumn. Such free and constant bloomers as G. Nabonnand, Madame Ravary, Peace, and Madame Antoine Mari have not given such universal satisfaction during the season as the old and rather despised Madame des Tartas. In this neighbourhood, too, it is doing well upon a wall, which is not only red brick, but faces due south, so that it is evidently a variety that will stand hot weather with impunity. Many of these almost forgotten roses appeal to me quite as much as the newer and more lauded kinds.

Although there is every prospect of continuous bloom upon Mrs. Aaron Ward, Madame Ravary, Madame Antoine Mari, Corallina, Madame Paul, General MacArthur, and a few more, they have not, and at present do not approach the dwarf forms of polyanthas, which have been the most continuous during this trying season.

We found some difficulty with the budding this summer, and have not finished yet. Scarcely any of the stocks made the necessary growth to provide sap enough for lifting the bark, and I fear not a few others had the same experience. Indeed, constant watering was necessary to keep the stocks alive upon some quarters. Still, on the whole, the buds inserted first have a promising appearance, and the "take" seems well up to the average.

Favourable as cuttings of brier and other stocks looked in the late spring and early summer, they have suffered greatly during the last month of hot weather. It is not surprising when we find a number of well-established trees dying that almost unrooted stocks failed to pass through such an ordeal.

The absence of mildew is pretty general in this district; indeed, in many cases it would not be easy to find young foliage for this disease to feed upon.

A. P.

Roses may be grown to perfection by following the instructions given in Roses and their Cultivation, by T. W. Sanders. A selection is given, with description of all the best varieties, and full details for culture outdoor and under glass. Price 2s. 6d. net, by post in box 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

FRUIT BOTTLING FOR SMALL HOLDERS.

(Concluded from page 629.)

Any fruit may be preserved by the bottling process, either whole, or sliced. Apples, pears, apricots, peaches, limes, shaddocks, and lemons may all be used, though the bulk of bottled fruits consists of plums, gooseberries, cherries, raspberries, loganberries, and currants. Plums and gooseberries are probably most largely used. When once properly sterilised and the bottles quite airtight, the fruit will keep almost indefinitely, plums, gooseberries, raspberries, blackberries, and currants bottled in 1903 being quite good in the winter of 1910-11.

THE USE OF SYRUP.

The use of syrup is not essential, pure water being equally as suitable and a little more transparent, and thus improving the appearance of the fruit after sterilisation. Moreover, a thin syrup spoils the natural flavour of the fruit without making it sufficiently sweet to render further sweetening unnecessary when used. Sugar, therefore, should either not be used, or it should be used at the rate of from ½ to 1 lb. (according to the acidity of the fruit) of pure cane sugar to one quart of water. Raw beet sugar should not be used, as it renders the syrup "cloudy," but pure cane sugar leaves the syrup tolerably clear.

SELECTING AND PREPARING THE FRUIT.

The degree of ripeness of the fruit has a considerable effect on the appearance of the fruit after the bottling process is completed. Fruit should be slightly under-ripe for bottling, as the skin does not then break so readily during the process of preservation; with ripe fruit, breaking of the skin can hardly fail to occur, and the appearance is apt to be spoiled. In this respect under-ripe fruit will bear a higher temperature without injury than ripe fruit; but in no case need the temperature rise higher than 200 deg. F., and in practically all cases 190 deg. F. is sufficient. All fruit used should be sound and without speck or injury of any kind. It is best gathered dry; but if it be damp or wet it should be heated a little longer. All fruit should be carefully graded, only that of equal size being placed in the same bottle. Good results are not attained by mixing large and small fruits, while such mixtures have not a satisfactory appearance. "Windfall" apples and pears may be bottled if damaged portions are rejected.

Preparation before bottling varies somewhat according to the fruit concerned—for instance, gooseberries should be topped and tailed; currants shredded from their stalks with light fingers; rhubarb skinned and cut into pieces of a uniform size; cherries must be stalked, and, if possible, stoned; the hull should be removed from raspberries; plums, greengages, and damsons must have their stalks removed; large juicy plums may be cut in halves before being placed in the bottle; peaches and nectarines should be skinned, stoned, and halved; apples and pears must be peeled and "quartered." A silver or plated knife only should be used for preparing fruit.

Great care should be taken in placing the fruit in the bottles, for if these are imperfectly filled some fruits (e.g., strawberries) after sterilisation will rise, and leave a large space at the bottom without fruit. Many have experienced this in their first attempts at fruit bottling. A stout stick or piece of wood, about twelve inches in length—blunt at one end and rather pointed at the other—is very useful in arranging and gently pressing fruit into position in regular layers. The fruit should be selected of nearly equal size and then arranged in the bottles systematically, pressing it into place by means of the stick when necessary. The bottles should be filled to the top of the neck, still using a little force in packing if requisite. Soft fruits like gooseberries and currants require shaking together in order to ensure close packing; rhubarb should be placed as far as possible in upright rows; plums should be arranged in rows, as by this means more fruit can be placed in the bottles.

As the bottles are filled with fruit, water may be added to within half an inch of the rim, or syrup as described above may be used. In the case of bottles with screw caps, the latter may be placed on loosely and partly screwed down in order that they may be readily screwed down tightly directly the sterilising process is completed. In the case of bottles with caps (either glass or metal) and springs the rubber rings should be softened in hot water, the cap should be placed on, and the spring placed in position ready for fastening down directly sterilisation is completed.

STERILISING.

When the bottles of fruit are ready they should be placed in the boiler or steriliser and the temperature raised quite slowly, perhaps at a rate of 2 deg. F. per minute, otherwise bottles may crack and the skin of the fruit may break and the appearance of the produce be spoiled. The temperature necessary will vary with the kind and ripeness of the fruit; but a lower temperature than 165 deg. F. is quite unreliable, and a higher temperature than 190 deg. F. or 200 deg. F. is unnecessary. The necessary temperature should be maintained for a time suitable for the fruit being sterilised, and the bottles then securely fastened down; in the case of screw caps the tops should be screwed further if possible as the bottled fruit cools. Each lot of bottled fruit should be examined two or three times during the first day or two, and if any doubt is entertained as to the condition of any of it the doubtful bottles should be re-sterilised at once. This may sometimes be necessary owing to faulty caps.

TEMPERATURES FOR STERILISING.

The temperatures at which fruits are bottled will in part depend on the period for which such temperatures are to be maintained. One authority states that the temperature should be maintained for fifteen or twenty minutes at about 165 deg. F. in the case of small fruits, such as gooseberries, currants, cherries, and raspberries, and at any temperature between 165 deg. and 190 deg. F. in the case of plums, apricots, peaches, and pears. For sterilising the latter fruits forty minutes at a temperature of about 165 deg. F. to 170 deg. F. will answer. As a result of experiments with plums sterilised in screw-top bottles in 1908, at various temperatures, it was found that sterilisation at 165 deg. F. to 170 deg. F. for 10 minutes produced more satisfactory results than sterilisation at 190 deg. F. to 200 deg. F. and 212 deg. F. respectively; and the samples were as beautiful in December, 1910, as they were immediately after bottling. In these trials the largest varieties of plums were most admired, the best of those sterilised at 165 deg. F. to 170 deg. F. being Belle de Louvain, Grande Duke, Monarch, Pond's Seedling, Washington, White Magnum Bonum, Coe's Golden Drop, Curlew, Diamond, Pershore, Sultan, and Abricotée de Braunau. Of those sterilised at 190 deg. F. to 200 deg. F. the following, out of 10 varieties, were preferred: Belle de Louvain, Reine Claude de Bavay, Red Magnum Bonum. Of seven varieties sterilised at 212 deg. F. one bottle only kept its good appearance, viz., Red Magnum Bonum. The whole of the bottles were kept at the different temperatures for the same length of time, viz., 10 minutes, after which they were taken from the fire and lifted out of the hot water a few minutes afterwards. Fruit in bottles filled with plain water kept as well as fruit bottled in thin syrup.

The following table of approximate temperatures and length of time to maintain the maximum temperature, may be useful:

Gooseberries (140-150° F.), 30-45 minutes, according to degree of ripeness.
Red currants (140-150° F.), 20-30 minutes, according to degree of ripeness.
Raspberries (140-150° F.), 20 minutes.
Black currants (150-160° F.), 30-45 minutes. (These may be treated a second time.)
Plums (150-160° F.), 30-45 minutes.
Apricots (160-180° F.), 45 minutes.
Peaches (160-170° F.), 45 minutes.
Tomatoes (170-180° F.), 30 minutes. (Treat twice.)
Gooseberries, currants, cherries, and raspberries (165° F.), 15-20 minutes.
Plums, apricots, peaches, and pears (165-190° F. or 165-170° F.), 15-20 minutes, or 40 minutes.

The temperatures can only be given approximately, as the quality of the fruit, the season, and a variety of causes must leave much to the common sense and intelligence of the worker.

Most of the varieties of fruit referred to above can be satisfactorily bottled by slowly raising them to the boiling point and keeping them at that temperature for ten minutes.

COST OF STERILISING.

The approximate cost of appliances is as follows:

A.—Cost of small steriliser for household use to hold ten bottles	£1	5	0
One gross of bottles, metal top	1	14	6
Oil stove (or gas ring) ...	0	9	9
	£3	9	3
B.—Cost of steriliser for work on a commercial scale to hold 14 bottles	£3	3	0
Two gross of bottles, glass top (these are recommended) at 50s. per gross	5	0	0
Oil stove (a gas ring is preferable)	0	12	0
Iron stand for steriliser ...	0	4	0
	£8	19	0

An outlay of £3 10s., or even £9, is not a large one, especially when the direct advantage of having good, wholesome fruit for use all the year round is taken into consideration. Small growers, however, may still find it difficult to spare the necessary capital, and in such an event co-operative methods may be employed. A small steriliser of this type could be used by several small growers, or if the amount of fruit to be bottled warranted it a larger outfit could be purchased.

In such a way several small holders and others may, by working conjointly, bottle the whole of their surplus fruit for winter use or for sale as the case may be, instead of selling it at a loss, or, as too frequently happens, allowing it to rot owing to heavy crops and unremunerative prices for the fresh article.

Though the word "sterilise" is employed it is not to be understood that the process of fruit bottling involves complete sterilisation, for some organisms may not be destroyed by heating to the temperatures suggested. Owing, however, to the absence of oxygen, the relatively high percentage of organic acids present, and the small amount of soluble nitrogenous matter in the fruit juices, such organisms are rendered incapable of further development, except in occasional instances, which do not necessarily arise from any defect in the process. For peas, beans, and other vegetables sterilisation should be complete; to effect this higher temperatures are necessary, for not only do these vegetables contain abundant nitrogenous matter, but they are deficient in organic acids.

Abutilon Triomphe.—Most of the garden varieties of abutilon are from the pendulous nature of their bell-shaped blossoms very graceful when in full bloom, a remark that does not apply to a few of the newer varieties, of which A. Triomph is one. The blooms of this are very large, and composed of an unusual number of petals. In shape they are far more shallow than those of the older kinds, being, in fact, somewhat saucer-like, and are semi-pendulous rather than strictly drooping. The colour is pink. Personally I much prefer the older type.—W. T.

PERPETUAL CARNATIONS AND SUMMER PESTS.

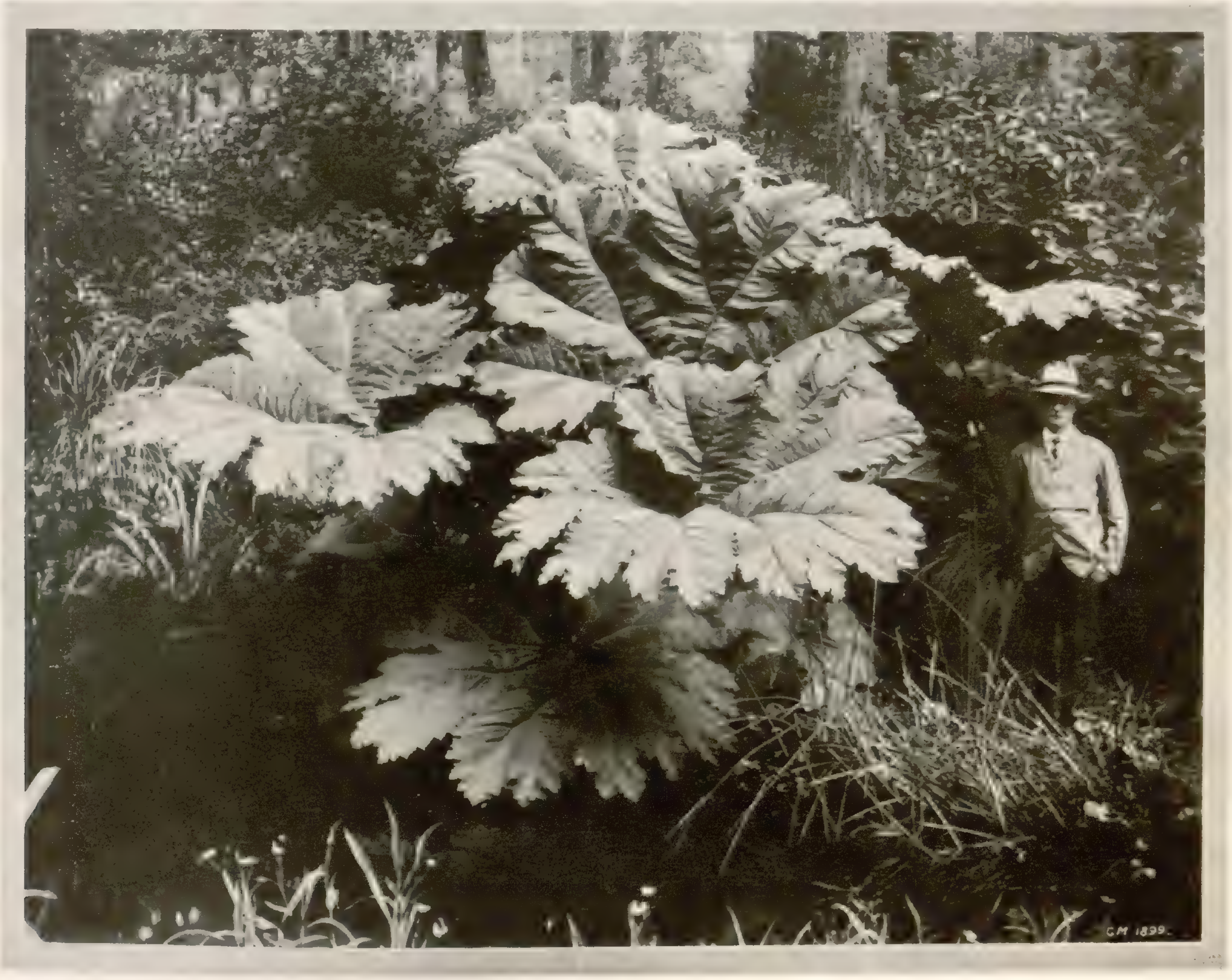
I am not a prophet, nor the son of a prophet yet for one to say that thrips are everywhere this dry season, and will spoil many of the early flowers this fall, does not require the gift of prophecy. It is a generally accepted fact. But the careful cultivator will guard against these common enemies. In a season such as the present one it is hopeless to try and keep your plants free from thrips out of doors, for every gust of wind that blows brings in thousands, and this little mite, which hides itself in the folds of the young leaves, or the basal bracts of the young buds, is difficult to reach and destroy by spraying. Practically the only means, therefore, at this present season of the year to free your plants from thrips, and thus ensure the autumn flowers coming unmarked, is to house your plants where fumigating and vaporising can be employed as destructive agencies. Naught but eternal vigilance can gain the reward of freedom from these pests. We have found that very early in the morning, how early I dare not say for fear of being disbelieved, but certainly before five o'clock, is the most effective time to wage war against thrips, both by spraying and vaporising.

In cases where it is impossible to house the plants persistency in spraying with some nicotine extract, or other reliable insecticide, regularly each week will check the thrip, but in very bad cases it will be best to remove the early buds, as the flowers will be practically useless if allowed to develop.

Red spider must have considered the present summer quite an excellent one, from their point of view, and most favourable to their prosperity. Unless the carnation grower is waging a ceaseless war against them, now that their extermination is more easy than later when less spraying can be done, he will be laying up trouble for the winter. A powerful spray of clean water will, I believe, do as much good as anything to destroy this bane of carnation life. I have often used with good effect a spray of one ounce of common salt to one gallon of water, sprayed on in early morning, and washed off two hours later with clean water. We also hear of other positive cures, but, in my opinion, the spray must strike direct upon the insect at a high pressure to be effective. Persistency is also essential. If all the stocks of perpetual carnations in Great Britain were examined, I venture to remark that one-half would be found to be affected with red spider. It is not enough for them to be invisible, they must not exist, for if they become so established as to be visible then the victory is theirs, and it will be most difficult, if not impossible, to free your plants of the pest and restore them to their normal vigour.

Red spider is very different to thrips, inasmuch as it attacks the old, fully-developed leaves, while the thrips prefer the tender young growths. The heavy dews of evenings have a check upon red spider, but these are not sufficient to destroy them, so that this pest is perhaps more easily coped with under glass, provided that the paths and stages are kept moist and the plants well sprayed on every favourable occasion, particularly the underside of the leaves.

Montagu C. Allwood.



A SPLENDIDLY-DEVELOPED SPECIMEN OF GUNNERA MANICATA
In the gardens of Leonardslee, Horsham, the residence of Sir E. Loder, Bart.

GUNNERA MANICATA.

The merits of this stately Brazilian plant are now so fully recognised by those who have a knowledge of the kinds with handsome leafage that are sufficiently hardy to be grown out of doors in this country, that there is no occasion to dwell upon them at the present time. It is, however, necessary in the interests of owners of gardens who have not a full acquaintance with hardy plants with ornamental foliage to keep its distinctive characteristics constantly in view, and probably there is no better way of doing this than by means of illustrations of specimens remarkable for their exceptional development. Hence we give herewith an illustration of the magnificent specimen that forms so noteworthy a feature of the waterside vegetation in the fine gardens of Leonardslee, the residence of Sir Edmund Loder, Bart. This, as so admirably shown, is of enormous proportions, the leaves being numerous, and individually of immense size. It will also be readily understood from a glance at the illustration that such specimens as this produce a striking effect when growing in association with other suitable vegetation on the margin of a running stream or silent pool. The conditions most favourable to the development of Gunnera manicata are a rich soil, a partially-shaded position, and a liberal amount of moisture. The position of the Leonardslee specimen is an ideal one, for the shade of the neighbouring trees is exactly adapted to its requirements, the roots have an abundance of moisture within their reach, and it may be assumed, judging from the dimensions of the leaves, that Mr. W. A. Cook, the head gardener, has been careful to enrich the soil.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

DECIDUOUS CALANTHES.—Plants of the deciduous species and their hybrids will in most cases have completed the development of their pseudo-bulbs, and some of them have their flower scapes well advanced with us. The sunny season appears to have suited them, and, as in similar seasons, there is very little of the unsightly spotting to be observed, either on the pseudo-bulbs or the foliage. I have invariably seen that, when we have comparatively sunless seasons, as was the case in this district last year, the unsightly spotting is most in evidence. It is very pleasant to record the fact that even the most delicate constitutioned among the inbred hybrids are free from spot, and that the pseudo-bulbs are larger than we have previously had them. I do not consider that with the more robust kinds there is any advantage in having extremely large pseudo-bulbs. We may procure a gigantic flower scape, but it is frequently the case that when the flowers have expanded they are generally wanting in texture and colour. I have no doubt this may be accounted for by the insufficient maturity of the pseudo-bulbs. There is always a difficulty in ripening the huge sappy pseudo-bulbs of calanthes, and, unless they are properly matured, it is scarcely reasonable to expect flower scapes of a satisfactory nature. To ensure the perfect ripening of large pseudo-bulbs, it is advisable to take full advantage of the assistance of the sun during the next few weeks. The plants should be placed in a position within reasonable distance of the roof glass, where they will be fully exposed to the light, only sufficient shade being used to prevent actual scorching of the foliage. Water must be freely given while the plants are in an active state of growth. Indeed, they must not be permitted to remain dry at the roots for any period until after the flowers have expanded. There is ample time to give the plants resting conditions after the flowering period is over.

MANURES FOR ORCHIDS.—As in previous years, I have been requested to state on more than one occasion what manures we use, and what we find most beneficial to the different kinds of orchids. I have repeatedly stated in my notes to the GARDENERS' MAGAZINE in past years that we do not make a practice of using artificial manure of any description. No manure has been used during the ten years I have had charge of this collection on any orchid; but, while abstaining from the use of anything except rain water from our tanks, there is no reason why others should not use suitable fertilisers who find them beneficial. There can be no doubt that many of the most successful growers find a great advantage from the use of soot water and cow manure liquid, and under favourable situations advantages are derived from these reasonably safe solutions after the plants have filled their pots with roots.—H. J. CHAPMAN, Oakwood Gardens.

STOVE PLANTS.

CLIMBING PLANTS that have almost completed the season's growth may now be overhauled and have the weakly or undesirable wood removed. the permanent shoots being shortened and made secure in proper positions. September is an ideal month for autumn planting of creepers. Old-established plants growing in borders that have become sour may now be replanted in a newly prepared border. The compost should be made with fibrous loam and peat, with lime rubble and broken charcoal thoroughly incorporated. By planting climbers early in the autumn their roots become partly established before the time for starting them into growth next spring. Climbing plants that have been grown in large pots or tubs may with advantage be removed to a warm greenhouse to complete the ripening of the wood.

GLOXINIAS.—As their flowering season is over, gloxinias may be transferred to a fully exposed position where they will enjoy a free circulation of air and have a reduction in the supply of water at their roots.

CALADIUMS may be treated similar to gloxinias with the exception of the temperature, it not being safe to subject the tubers to a temperature lower than 55 degrees. Before storing away the tubers for the winter it may be found advisable to thoroughly cleanse them with a weak insecticide wash as a preventive of the attacks of insect pests.

HIPPEASTRUMS (Amaryllis). — Spring raised seedlings will now be ready for repotting, using pots of three or four inches in diameter. Extreme care must be exercised in watering, as the roots are so sensitive to over-much water. A temperature of 55 degrees with a minimum of 50 degrees at night will be found most suitable for the remainder of the year. Old-established bulbs will now be fully exposed to the sunshine; they will only need sufficient water to prevent shriveling. Throughout their resting period a minimum temperature of 50 degrees will be quite safe for their storage.

AUTUMN-RAISED SEEDLINGS of gloxinias, streptocarpuses, etc., are now almost ready for transplanting into shallow pans or boxes prepared for their reception. These will need a light shade for a few days until root action has been restored, after which they must be afforded a position near the glass and well exposed to the light.—JOHN DONOGHUE, Bardon Hill Gardens.

FRUITS UNDER GLASS.

STRAWBERRIES IN POTS. — These will now require a little more room if the layering and potting has been done as advised. The plants have grown very strongly and well, and have now filled the space given them. Therefore to afford them more light and air they must be placed just far enough apart for the foliage of one plant to be clear of that of its neighbour. Keep the pots on a firm bed of coal ashes, and when requiring more room sprinkle a little soot among the ashes. As a means of checking red spider, syringe between the plants every day in bright, hot weather, and syringe the plants morning and evening. This will keep them fresh and clean. There ought to be no trouble in building up good crowns this season, for I have not seen strawberries grow away better. As the pots become full of roots liquid manure should be given them about once a week, and a further watering with soot water also once weekly. Keep all small weeds pulled out of the pots as soon as seen, for when left to become established a good portion of the soil will be pulled up with them.

LATE GRAPES.—These are finishing up very finely, the tropical weather having brought them along quickly. During the continuation of the hot weather very little, if any, fire heat will be necessary, but if there is a sudden change to wet, then by all means use a little fire heat at night. Water thoroughly whenever necessary, and this will apply to all vine borders even if the fruit is cut, as upon no account must the soil be allowed to become quite dry, or much damage will be done to the vines.

MUSCAT OF ALEXANDRIA.—The houses in which Muscats that are intended to be kept through the winter are ripening must be freely ventilated. The crop is fast approaching maturity, and in order to lessen the evaporation of water give the border a heavy top-dressing. Cut out any stoneless and shanked berries. Young vines sometimes shank through overcropping, or too much water, or ineffective ventilation. Whatever the cause, it should be noted and corrected another season. The fruit should be closely protected from wasps by netting. I do not like bags, for they are apt to destroy the bloom when removed to examine the bunches, even by the most careful handling, unless they are unduly large. Keep the roots well supplied with water, and on no account suffer the border to crack, as that means a considerable injury to the roots. If outside borders exist, see that these have a plentiful supply, for borders in the front of a range of houses must have been much dried up during the late tropical sunshine. We have registered 95 deg. in the shade, and 141 deg. in the sun.

LATE MELONS.—Push these along rapidly now, as the days are rapidly declining, and with a return to dull weather we shall note it still more. Set the fruit on the latest plants as fast as possible. These will be useful for dessert about the middle of October. Those swelling away must be nourished by a stimulant about once weekly. Keep the laterals pinched off in the early stages, and admit all the light possible. The melons have suffered this season with too much sun in lean-to's facing south.—W. A. COOK, Leonardslee Gardens.

THE FLOWER GARDEN.

VIOLETS.—Frames must now be prepared for the winter violets, and the plants put in as soon as possible. The bed should consist of leaves, which must be well trodden in, and on this the soil for planting is to be placed. A suitable compost for violets is prepared with two-thirds loam, one-third well decayed manure, and a sprinkling of soot. This should be thoroughly mixed and put on the leaves to a depth of about six inches, and the whole allowed to remain for a week to settle before planting. The frames should be so prepared as to ensure the leaves being as close to the glass as possible without their touching it. If the weather is dry the plants should be given a good soaking daily for at least three days before being required for lifting. All runners must be trimmed off before replanting, and, in lifting, it is desirable to allow a fair amount of soil to remain on the roots. After planting it is necessary to give a good watering, and the frames should be kept fairly close and shaded for a few days until the plants recover from the removal and become accustomed to their new quarters, after which time the lights may be entirely removed and allowed to remain off until protection against the weather is necessary. Watering must not be neglected during dry weather.

THE NATURALISATION of bulbs in grass and woodland is deservedly popular, and many charming effects are obtained by planting a good selection from the many bulbous plants now offered. Woodland walks and glades are made beautiful and interesting, and grass meadows and banks transformed into flower gardens. An endless variety of narcissi may be obtained, using the strong-growing and handsome trumpets for exposed positions, and the more delicate Leedsi, etc., for the sheltered corners. Apart from daffodils, there are the anemones, snowdrops, winter aconites, muscari, leucojum, etc. A good group of Trillium grandiflorum growing in conjunction with the Ostrich Feather fern (Struthiopteris germanica) produces a very pleasing effect. Chionodoxas, scillas, and other bulbous plants of dwarf habit should be planted close to the paths in liberal quantities, so that good sized breaks or drifts are obtained. Before planting is attempted it is often necessary to break up the ground and prepare the soil by adding decayed leaf-soil. In many instances the ground is so hard that it is impossible to use a trowel or dibber before breaking it with a fork. With regard to planting daffodils in the rough grassy pasture, it is necessary first to cut the glass.

PROPAGATION. — This operation should be continued until the required numbers of the various plants are obtained. If much wet weather prevails, then it will be advisable to place all cuttings under cover, otherwise if allowed to remain exposed to too much rain they are liable to damp. Cuttings of calceolarias may be inserted in sandy soil in an unheated frame. C. amplexicaulis is so beautiful that it should be largely grown. It is not quite so hardy as the ordinary varieties, and frequently damps off if left in an unheated frame through the winter. If the cuttings are inserted in pots it is an easy matter to remove them to the greenhouse late in the autumn.—E. C. POOLEY, Gnaton Gardens.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

Royal Horticultural Society.

AUGUST 29.

The exhibition held by the Royal Horticultural Society on Tuesday last was a material advance upon several of its immediate predecessors, and very considerably above the average for August. The Horticultural Hall was well filled, and the exhibits were, for the most part, of much interest and highly attractive. A considerable number of the leading nursery firms were represented by contributions of much merit, and the most noteworthy of the exhibits from private gardens were the immense collection of new Chinese trees and shrubs exhibited by the Hon. Vicary Gibbs, Aldenham House, Elstree (gardener, Mr. E. Beckett), the splendidly grown standard specimens of Acalypha hispida, shown by Colonel Lockwood, Bishop's Hall, Romford (gardener, Mr. Craddick), and the bank of finely flowered plants of Vanda cærulea staged by the Duke of Marlborough, Blenheim Palace, Woodstock (gardener, Mr. J. Hunter).

FLORAL COMMITTEE.

Messrs. James Veitch and Sons, Lim., Chelsea, presented a miscellaneous display of flowering plants, the cannas being a fine feature, the varieties Geheimrat Borsig, Mrs. F. Dreer, A. Grimminger, Ottawa, and Duke Ernst being most conspicuous. Standard plumbagos, both blue and white, were very fine. Hibiscus in variety were well flowered, as were also plants of Solanum Wendlandi, and a collection of warm greenhouse rhododendrons nicely in flower.

Mr. James Box, Lindfield, Surrey, occupied a corner of the hall with a fine group of hardy flowers. Tall pyramids of rudbeckias, heleniums, and pentstemons occupied the background, while mounds of Gladioli America and Princeps were conspicuous features. Gaillardias, delphiniums, and montbretias were also in fine form. The same firm also had an extensive exhibit of phloxes, which included Iris, Dr. Charcot, General Van Hentry, Antonia Mercia, and Elizabeth Campbell.

From Messrs. Whitelegg and Page, Chislehurst, Kent, came a nice display of Salmon Paul Crampel pelargonium. This variety bids fair to become as popular as the well-known scarlet variety.

Messrs. W. Cutbush and Son, Highgate, presented a fine group of hardy flowers, arranged lightly and effectively. Lilium sulphureum was presented in splendid form, while Helenium Riverton Gem was most striking, as were also the groups of gladioli, pentstemons, delphiniums, and asters.

An immensely attractive collection of cannas from Messrs. H. Cannell and Sons, Swanley, received much notice, not only for their brilliant colours, but also the splendid condition of the plants. A few of the best of the many fine varieties were Carl Hansman, Niagara, J. B. van der Schoot, Venus, R. Wallace, and Herman Fischer.

Mr. G. Reuthe, Plant Farm, Keston, contributed a collection of hardy flowers.

Messrs. Kelway and Son, Langport, occupied an entire table with a fine selection of gladioli. These were remarkable for splendid development of the spikes, and the informal arrangement contributed materially to the beauty of the display. Some of the most striking varieties were Eugene Sandow, Rider Haggard, Peace Envoy, Princess Victoria, Mrs. F. Field, The Sirdar, and Lord Milner. Chief among the new varieties was Yellow Beauty, which is remarkable for the large size, fine form, and exquisite colouring of the flowers.

The dahlia season has opened well as far as the southern districts, at all events, are concerned, Messrs. J. Cheal and Sons, Lowfield Nursery, Crawley, staging a fine table of singles, pompons, pæony-flowered, cactus, and pompon cactus varieties. The single varieties included Lady Bountiful, Elaine, Mrs. Joynson Hicks Betty, Althæa, and Flora. The best forms of cactus were Mrs. Douglas Flemming, Prima Donna, Indomitable, H. H. Thomas, The Imp, Red Admiral, and Mrs. Landale. The most striking of the pæony-flowered varieties were Glenton, Bertha Von Suttner, The Geisha, Queen Emma, and Merveille.

The Guildford Hardy Plant Company, Guildford, had a nice exhibit of hardy flowers, in which were noted some good gladioli, delphiniums, phloxes, montbretias, and heleniums.

Mr. G. Koiginni, 35, Bessborough Gardens, S.W., had a small exhibit of Japanese dwarf trees growing in quaint receptacles.

Hardy flowers were staged in fine style by Messrs. T. S. Ware, Lim., Feltham. The chief features were masses of Liatris pycnostachya, heleniums in variety, phloxes, gaillardias, asters, and montbretias. Messrs. H. B. May and Sons, Upper Edmonton, had an exhibit of veronicas in a variety of colours, which were arranged in blocks, each consisting of one colour. The veronicas were arranged in association with decorative ferns and palms. A glorious bank of delphiniums came from Mr. Amos Perry, Enfield. The various shades of blue were blocked in masses relieved with grasses and bamboos. A few of the best forms were Persimmon, Carmen, Maggie Perry, Mrs. Creighton, Sultana, Gloriosa, and Jubilee, with a few really good seedlings. The same firm also had a nice pool of nymphæas surrounded with hardy ferns.

From Colonel M. Lockwood, M.V.O., Bishop's Hall, Romford (gardener, Mr. G. Craddick), came a fine group of standard Acalphya hispida, which attracted much attention. The plants were fully six feet high, with large heads, and a profusion of their crimson flower spikes presented a very fine appearance. They were marvels of cultural skill, nothing of the sort having been seen before at Westminster, or indeed at any other exhibition in this country.

The great feature of the show was undoubtedly the collection of trees and shrubs, exhibited by the Hon. Vicary Gibbs, Elstree (gardener, Mr. E. Beckett). All were raised during the past three years from seeds collected in China by the well-known collector, Mr. E. H. Wilson. They formed a wonderful exhibit, making a broad belt the whole length of the hall. Many of the specimens were twenty feet high. This applies chiefly to the forms of Vitis and Rubus, some of which have not as yet received specific names. A few of the former were most striking, especially V. armata, V. sinensis, and V. megalophylla. Other attractive subjects were Rhus Henryi, Rubus omiense, Liriodendron chinensis, acers in variety, cotoneasters, Hydrangea Sargenti, Actinidia chinensis, ligustrums, betulas, cydonias, viburnums, and smilax. The whole forming a wonderful collection of new plants. The cultural skill displayed in their growth must have been pleasing to all concerned.

Messrs. Jas. Stredwick and Son, Silverhill Park, St. Leonards-on-Sea, exhibited a dozen new seedling cactus dahlias, which included some very promising varieties. The best appeared to be Mrs. Stephens, Miss Hills, Golden Plover, Coronet, Turtle Dove, and Auckland.

Mr. H. Shoesmith, Woking, also sent a few seedling cactus varieties, the most promising being Florrie Wells and Nora Hopkins.

Mr. James Hudson sent from the Gunnersbury House Gardens cut flowers of several of the newer nymphæas, and of these the grand white N. Gladstoneana, and the rich pink, Mrs. Richmond, received distinction from the committee. Very fine also was N. Attraction, a magnificent variety with large, superbly-formed claret-coloured flowers, and much superior to the other high-coloured water lilies.

ORCHID COMMITTEE.

A beautiful bank of Vanda cærulea came from His Grace the Duke of Marlborough, Blenheim, Woodstock (gardener, Mr. G. Hunter). The plants were fine examples of cultural skill, and were effectively displayed with ferns and palms.

Messrs. Stuart Low and Co., Bush Hill Park, staged a small collection of orchids, which included some well-coloured plants of Vanda cærulea, Oncidium luridum, Cattleya Whitei—a finely coloured form, also C. Granulosa x Hardyana, and Dendrobiums Deari and D. formosum giganteum.

Mr. Edward V. Low, Vale Bridge, Haywards Heath, exhibited a small group, chiefly cattleyas. Some of the best were C. Gaskelliana Phyllis, C. adula var. E. V. Low—a highly-coloured variety, C. Dowiana x C. Granulosa, also well-flowered plants of Lælio-cattleya Bletchleyensis.

Mr. R. G. Thwaites, Chessington, Christchurch Road, Streatham, staged a few fine cattleyas, which included C. adula in various shades, C. Roupelliana, C. Pittiana, and C. Euphrosia.

From Messrs. Charlesworth and Co., Haywards Heath, came a small collection, in which were noted Stanhopea oculata, Brasso-cattleya Maroniæ, Vanda cærulea, Ærides Sanderiana with four good spikes, Miltonia Schroderiana, and Sophro-cattleya Marathon.

From Messrs. Hassall and Co., Southgate, N., came a small collection. The chief features were the Lælio-cattleyas, which included Walter Gott, a fine deeply-coloured form, also Cattleya Schofieldiana, C. Thurgoodi, C. Adula, and C. iridescens.

FRUIT AND VEGETABLE COMMITTEE.

From Messrs. Dobbie and Co., Edinburgh, came thirty-six baskets of potatoes, all in high condition, every tuber being perfect in development. Some of the best baskets were those of The Admiral, The Factor, Mr. Bresee, Dobbie's Red King, Dobbie's Favourite, Crimson Beauty, Midlothian Early, and Dobbie's Prolific; needless to add, the whole exhibit was staged in the most attractive manner.

Messrs. H. Cannell and Sons, Eynsford, Kent, presented a fine exhibit of apples, and a few dishes of plums. The former were of large size, and as clean and bright as could have been desired. Some of the best were Rival, Norfolk Beauty, Worcester Pearmain, Williams' Favourite, The Queen, Lady Sudeley, Peasgood's Nonsuch, Benoni, Titowka, and Duchess Favourite. The background was formed by apple and pear trees in pots, which were carrying fine crops.

Messrs. Laxton Bros., Bedford, exhibited fruiting growths of the Laxtonberry, the result of a cross between Raspberry Superlative and the Loganberry. The fruits, which are produced in abundance, appear to follow the former rather than the latter, both in the berry and the growing canes. They also submitted fruits of two new plums, one of which had an Award of Merit made in its favour.

Messrs. Jas. Veitch and Sons, Lim., Chelsea, occupied the end of the hall with a splendid collection of fruit trees in pots. In the centre of the group were fine specimen peach trees, all literally loaded with fruit. The varieties were Duchess of York, Sea Eagle, Marquis of Downshire, Thos. Rivers, and Late Devonian. The pears were next in importance, for though the trees were not large, they were all carrying a wonderful crop of good clean fruits, especially the varieties Dr. Jules Guyot, Triomphe de Vienne, Marguerite Marillat, Souvenir du Congres, Conference, and Doyenne du Comice. The plums were equally remarkable, especially the Early Transparent gages. Plants of the Canadian Huckleberry were a mass of their black berries, while mention should also be made of the fine clean apples, also two standard trees, richly endowed with mistletoe.

AWARDS.

Awards of Merit.—To Gladiolus Yellow Beauty, from Messrs. Kelway and Son; single dahlias, Bridesmaid and Killarney, from Messrs. J. Cheal and Sons; cactus dahlias, Turtle Dove and Mrs. Stephens, from Messrs. J. Stredwick and Son; nymphæas Mrs. Richmond and Gladstoneana, from Leopold de Rothschild, Esq. (gardener, Mr. J. Hudson, V.M.H.), Hibiscus syriacus Snowdrift, from Mr. Notcutt; Houlletia Wallisi, from Messrs. Charlesworth and Co.; and plum Laxton's Blackbird, from Messrs. Laxton Brothers.

Gold Medal.—To Hon. Vicary Gibbs (gardener, Mr. E. Beckett, V.M.H.), for collection of Chinese trees and shrubs; Messrs. J. Veitch and Sons, Lim., for fruit trees in pots.

Silver-gilt Knightian Medal.—To Messrs. H. Cannell and Sons, for fruit trees in pots.

Silver-gilt Flora Medal.—To Colonel Lockwood (gardener, Mr. Craddick), for acalyphas; Messrs. Carter Page and Co., for dahlias; Duke of Marlborough (gardener, Mr. Hunter), for Vanda cærulea.

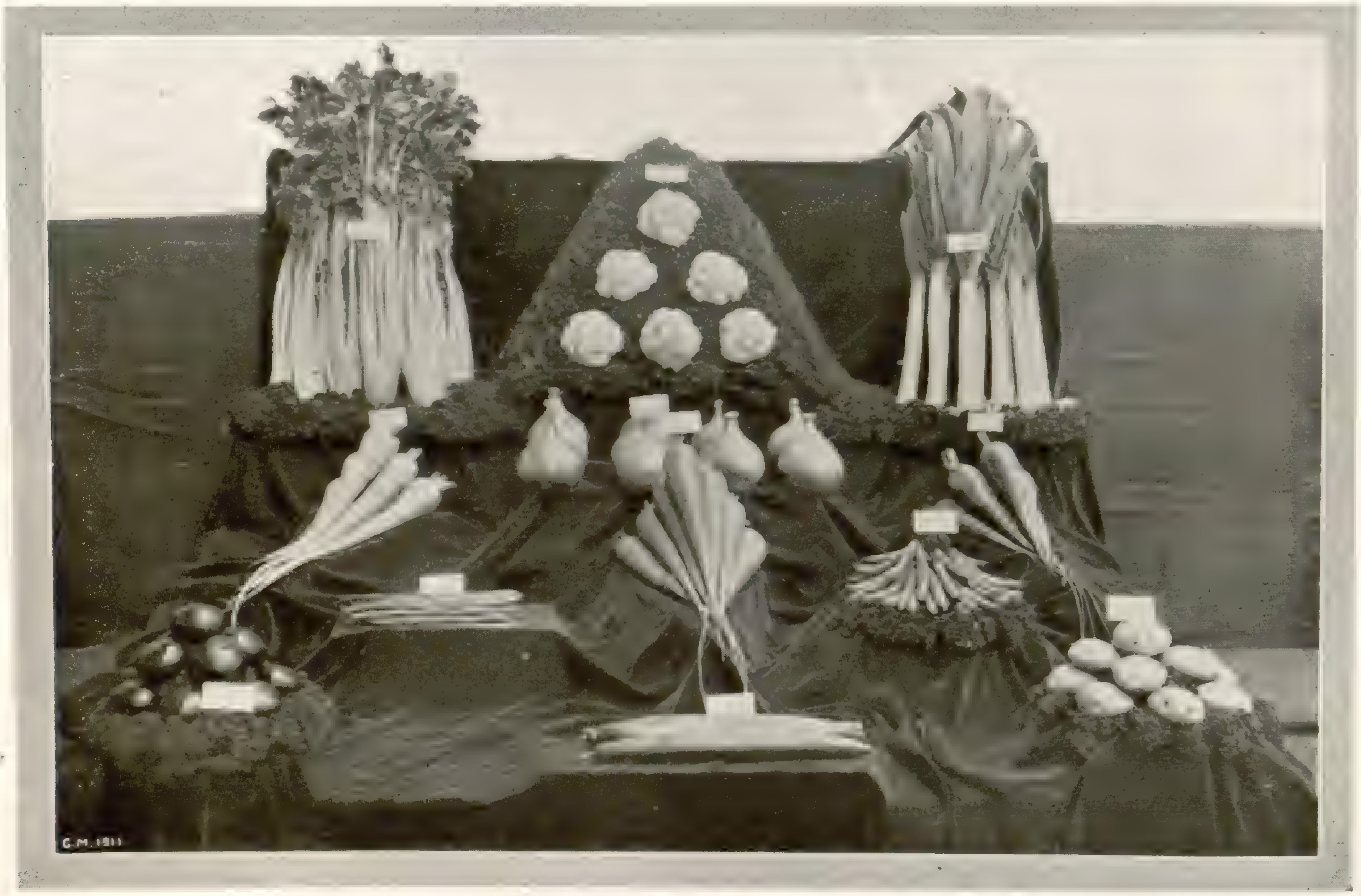
Silver Flora Medal.—Messrs. Charlesworth and Co., for orchids.

Silver Knightian Medal. — To Messrs. Spooner, for apples.

Silver-gilt Banksian Medal. — Messrs. Dobbie and Co., for potatoes.

Silver Banksian Medal.—To Messrs. J. Cheal and Sons, for dahlias; Messrs. W. Cutbush and Son, for hardy plants; Messrs. H. Cannell and Sons, for cannas and begonias; Messrs. Kelway and Son, for gladioli; Messrs. H. B. May and Sons, for veronicas and ferns; Messrs. J. Veitch and Sons, Lim., for cannas and miscellaneous plants; Mr. J. Box, for delphiniums and phloxes; Messrs. Stuart Low and Co., for orchids; Mr. E. V. Low and Messrs. Hassell and Co., for orchids.

Bronze Banksian Medal.—Messrs. T. S. Ware, Lim., for hardy herbaceous flowers; and Mr. Amos Perry, for delphiniums and nymphæas.



NATIONAL VEGETABLE SOCIETY—MR. J. GIBSON'S FIRST-PRIZE COLLECTION OF TWELVE KINDS OF VEGETABLES.

The British Pteridological Society.

The annual meeting of the members of this society was held this year at Barnstaple to enable the members to judge of the ferny possibilities of the Southern Counties of England, their visits hitherto having been confined to the Lake District or Scotland. Prior to the actual business meeting at the Golden Lion Hotel, at which Mr. Alex Cowan, as president, took the chair; several informal ones were held on the previous days, and a very large number of fern fronds were exhibited by Mr. Cowan on behalf of himself and Mr. Phillips, these embracing a number of remarkably fine varieties, clearly evidencing immense progress in the development of superior forms by selection, and some new "finds" of great merit. The most noteworthy were a splendid form of Osmunda regalis undulata, found by Mr. Phillips, and far excelling in foliose character an otherwise similar variety of that name found many years ago in the Azores. Lastrea dilatata crispa ochracea, shown by Mr. Cowan, had beautifully crispate fronds, liberally and constantly splashed with golden yellow. A cross effected by Mr. Cowan between presumably P. v. cornubiense and P. v. grandiceps Fox or Forster, has yielded a very fine "grandiceps" form of cornubiense, cutting P. v. c. grandiceps Cowan. Another very fine variety was a sub-plumose form of Lastrea filix-mas of a very promising type for cultural selection. Various excursions were made to Woody Bay, Helensmouth, and other ferny districts in the locality, but owing to the intense and long continued drought, hunting was severely handicapped, the ferns in many places being scorched and flaccid, and their growth so stunted as to mask their varietal character, if any, to an unrecognisable extent. Dr. Stanfield, however, found an Asplenium adiantum nigrum with multifid frond tips throughout, and some very foliose forms of L. montana. Mr. Druery, among other minor finds, discovered a Hart's-tongue on lobatum lines, but with all frond terminals symmetrically rounded off with sori radiating round the abruptly shortened midrib, like the figures on a clock dial, a rare variant which he named Scolopendrium v. lobatum radiosorum. Mr. W. B. Cranfield was the most fortunate, alighting upon two remarkably fine varieties, one a wild deltoid foliose form of Lastrea filix-mas with broad dilatata-like basal pinnæ, and the other, on private ground, a peculiarly fine foliose and imbricate variety of P. aculeatum on truly handsome lines, which had been found many years ago near Holsworthy.

National Vegetable Society.

AUGUST 30.

This new and vigorous society held its second annual exhibition at the Royal Horticultural Hall on Wednesday last, and, if the display was not quite equal to the magnificent show held last year, it far surpassed general expectations. The collections were especially noteworthy for the remarkable development of the various kinds of vegetables represented in them; and, in a careful inspection, one might have overlooked the fact that great heat and long-continued drought add materially to the difficulties experienced by growers in bringing vegetables to a high degree of perfection. The majority of the single-dish classes were also well filled; and, considering the character of the summer now rapidly coming to a close, the quality of the products was such as to reflect the highest credit on the numerous exhibitors. The arrangements were admirably carried out, and the members of the executive responsible for them are deserving of the highest praise.

The premier class for twelve kinds of vegetables, arranged in a space of twenty-four square feet, with prizes of ten, seven, and four guineas respectively, secured an entry of four contestants. The first prize, however, was easily secured by the Duke of Portland, Welbeck Abbey (gardener, Mr. J. Gibson). He staged a perfect collection, arranged tastefully on a base of green velvet. The dishes were celery Superb Pink, cauliflower Early Giant, leek Prizetaker, parsnip The Student, onion Ailsa Craig, Sutton's Black Beet, Red Intermediate carrots, pea The Gladstone, runner beans, Best of All, tomato Perfection, cucumber Delicacy, and potato Superlative. Mr. W. Folkes, Ampthill, Beds, was second with a nice exhibit, but the products were not named. Mr. W. J. Lobjoit, Heston Farm, Hounslow, was third with good potatoes, carrots, and parsnips; again no names. There were but two entries for nine dishes, and the first prize was well won by Mr. H. J. Tatham, Kendall Hall, Elstree (gardener, Mr. W. Grainger), who staged a fine even collection. His best kinds were Ailsa Craig onions, Giant White celery, A1 tomato, Satisfaction potatoes, and The Gladstone pea. Mr. John Keen, Loudwater, Rickmansworth, was awarded third prize with a nice even collection, the onions

NATIONAL VEGETABLE SOCIETY—REV. A. TURNER'S FIRST-PRIZE COLLECTION OF POTATOES IN MESSRS. CLAY AND SON'S CLASS.

being especially good, but the collection was unnamed.

There were four entries for six dishes of tomatoes, distinct, and all were of good quality. Mr. J. Gibson won first prize with fine even dishes of Princess of Wales, Eclipse, A1, Perfection, Best of All, and Polegate. Mr. J. Hudson, 7, Gimson Road, Leicester, was second with fine examples of Sensation, New Emperor, and Regina; while Mr. R. Stannard, The Gardens, Panshanger, Hertford, secured third with good clean fruit. There were no less than fourteen entries for a dish of nine tomatoes, to be judged for quality and flavour. The first prize was awarded Mr. J. Hudson for a fine dish of Webb's Conqueror. The second prize fell to Mr. E. G. Mocatta, Woburn Place, Addlestone (gardener, Mr. T. Stevenson), and the third to Mr. C. Newington, The Holme, Regent's Park (gardener, Mr. T. Abbott), who staged Moneymaker.

Lord Northcliffe's prizes for six kinds of vegetables secured three competitors. Mr. R. H. Comyns, Heath Farm House, Watford (gardener, Mr. W. Waterton), won first position with a nice level exhibit. His best kinds were: Celery, Pink Perfection; onion Ailsa Craig; and potato, Wordsley Pride. Mr. E. Deakin, Hay Hall, Birmingham, was second; and Mrs. Lewis Davis, Brynderwin, Hindhead (gardener, Mr. W. H. Masters), third.

For three tomato plants in pots there were two contestants, Mr. T. Abbott easily scoring first prize for well-fruited plants of Moneymaker, Monarch, and Queen Alexandra; the plants carried heavy crops, but splitting was rife among them, due to the late weather. Mr. S. Mortimer, Rowledge, Farnham, was second with Garrick, Fillbasket, and Ailsa Craig.

Of collections of six dishes of peas, there were two, Mr. J. Gibson winning handsomely with bright, well-filled pods of Duke of Albany, Centenary, Peerless, Alderman, The Gladstone, and Superlative. Mr. W. Waterton was second with smaller examples, though very bright and fresh. There were four collections staged in the class for three dishes of minor vegetables, Mr. W. Grainger winning first with nice clean examples of Silver Seakale beet, Kohl rabi, Earliest White, and celeriac. The Rev. A. Turner, Woborn Park, Weybridge, followed with fine celeriac and kohl rabi purple; while Mr. W. J. Lobjoit brought up the rear.

In the class for six dishes of potatoes, distinct, the prizes were given by Messrs. Clay and Son, and there was a splendid entry of fifteen competitors, the quality being excellent throughout. Mr. A. Turner won first with splendid dishes of Sensation, The President, The Factor, Windsor Castle, Progress, and Up-to-Date. The second prize was won by Mrs. Austen, Capel Manor, Horsmonden, Kent (gardener, Mr. A. Woodgate), who had fine dishes of Table Talk, British Queen, and The Scot. Third prize, Viscount Goschen, Seacox Heath, Hawkhurst (gardener, Mr. J. Gilmour), with fine table quality. Mr. T. Stevenson had to be content with fourth place, although he had tubers of high quality.

The prizes in the class for six dishes, distinct, open to cottagers and allotment holders in the county of Surrey, were given by Mr. A. Dean, V.M.H., and brought out five entries. Mr. J. Childs, Cranhurst Farm, Milford, won first place with good Factor potatoes, Ailsa Craig onions, and Intermediate carrots; Mr. R. Spooner, Park Cottage, Hambledon, was second; and Mr. C. Peacock, 39, Richmond Grove, Surbiton Hill, third.

The prizes in Classes 11 to 20 were offered by Messrs. Barr and Sons. Mr. W. Gaiger was the only entrant for six heads of celery, and was awarded first prize for New Solid Pink. There were six entries for a dish of Snowdrop potatoes, and capital examples were staged. Mr. J. Gilmour was first, Mr. T. King, New Road, Broomham, Chippenham, second, and Mr. J. H. Gilmour third. For six stump-rooted carrots Mr. A. Woodgate proved the victor with a splendid dish; Mr. T. White, Sandford Cottage, Bampton, Oxford, was second, and Mr. T. King third. For three heads of celery, Lord Curzon, Hackwood Park, Basingstoke (gardener, Mr. F. West), won first with fine heads; while Mr. W. Humphreys, 3, Ward's Lane Cottages, Elstree, was second.

Messrs. W. Cutbush and Son provided the prizes for a collection of vegetables, twenty-five dishes. Strange to say, there was but one entrant—the Hon. Vicary Gibbs, Elstree (gardener, Mr. E. Beckett), who staged a fine collection in his well-known style. The varieties represented were: Celery—Aldenham Pink and Matchless White; cauliflower—Snowball and Autumn Giant; leek—Prizetaker; parsnip—The Student; onions, which were superb—Barnet Hero and Ailsa Craig; beet—Cutbush's Black; pea—The Gladstone; carrot—Main Crop; Giant Brussels sprouts; egg plant—Long Purple; Exhibition marrow; runner bean—Champion; tomato—King of the Yellows and First and Best; Giant French beans; potatoes—Carltonian and King Edward VII.; Eclipse cucumber, Red Globe beet; and turnip, Model White Stone—the whole forming a fine example of cultural skill.

For two bunches of Moneymaker tomatoes Mr. T. Abbott won hands down with a fine exhibit, though the fruits were badly cracked. The second prize was won by Mrs. Bernard, Oakfield, Bridgewater (gardener, Mr. W. Cox); while Mr. E. H. Caterer was third.

Messrs. Dickson and Robinson provided the prizes in several classes, and in these the competition was keen and the quality high. There were fifteen entries for Messrs. Dickson and Robinson's Premier onion, Mr. F. West winning with enormous bulbs; Mr. E. Johnston, gardener to Mr. A. Gallials, Slough, was second; and Mr. T. Avery third. Mr. S. Barker, Clumber Gardens, Worksop, was first with Exhibition leek, staging clean, well-grown specimens. Mr. W. Cox was second; and Mr. J. Orton (gardener to Colonel Cox, Harefield Place, Uxbridge), third. Carrots secured a good entry, Mr. J. T. Jeeves, Holbeach, Lincs, winning first with Perfection Intermediate; Mr. F. West was second, and Mr. T. King third.

Mr. F. West led off for six neads of celery, Prize Pink, followed by Mr. T. Avery and Mr. S. Barker in the order named. Mr. T. Avery won first with beet Market Favourite; while Mr. W. Coleman was first for Giant Exhibition runner bean, in a competition of eleven entries. Mr. W. Waterton won first position for six sugar loaf cabbages with good green hearts; Mr. A. Basile was second, and Mr. R. Stannard third. Parsnips formed a fine class, Mr. F. West winning well with Hollow Crown; Mr. A. Basile was second, and Mr. W. Cox third.

Messrs. Dobbie's prizes brought out large entries. For six International leeks, Mr. R. Stuart, Thistlestone Castle Gardens, Lauder, Berwick, won first with clean, long stems. Mr. J. E. Ellison, Haydon Bridge, was second; and Mr. R. H. Thompson, Little Haywood, Staffs, third. (Twenty-five entries.) The competition for two dishes was equally keen, Mr. A. Basile being placed first with grand examples of The Chapman and The Factor. Mr. M. Hood, 86, Hythe Road, Willesborough, Kent, was second with the same varieties.

There were nine entrants for Mr. R. Sydenham's prizes for nine varieties of vegetables. Here Mr. E. Beckett won first place, staging excellent onions, potatoes, carrots, and leeks. Mr. W. Folkes was second, and Mr. T. White third. Mr. G. W. Bedford was first for a collection of six varieties, staging fine dishes of potato The Factor, onion Ailsa Craig, and tomato Holmes' Supreme. Mr. E. Deakin, Hay Mills, Birmingham, was a capital second, and Mr. A. Moring third. Mr. W. Folkes secured first position for eight onions with Ailsa Craig, beautifully finished; Mr. A. Turner was second, and Mr. D. W. Bedford third. For two dishes of potatoes, Mr. A. Turner led off with Windsor Castle and Up-to-Date. Mr. J. White was second; while Mr. T. Stevenson brought up the rear. Mr. E. Beckett was first for six heads of celery, staging Clayworth Prize; Mr. J. A. White was second, and Mr. W. E. Deakin third. Mr. A. Turner exhibited the best parsnips, having fine examples of Hollow Crown, followed by Messrs. E. Deakin and J. White in the order named.

There were two collections in Messrs. R. Veitch and Sons' class for six varieties, distinct. Mr. W. Cox was first with fine dishes of Sultan Prize celery, Veitch's Improved parsnip, and Cranston's Excelsior onions. Dr. Sandeys, Knowle, Exeter, was second.

The class for four dishes of tomatoes brought out a good competition, Mr. T. Sparkes, gardener to Mrs. Von Hartmann, Wimblehurst, Horsham, who had excellent dishes of Best of All, Invicta, and May's Favourite, being first; Mr. E. Beckett was second, and Mr. H. Folkes third.

Messrs. Wood and Son's class for four dishes of potatoes brought out a fine competition, Mr. A. G. Gentle, gardener to Mrs. H. Dennison, Little Gaddesden, Berkhampstead, who staged Royalty, Monarch, Goldfinder, and The Canon, being first. Mr. T. Stevenson was second with fine dishes of Sir J. Llewelyn and Mayfield Blossom; Mr. A. A. Humphreys third. Mr. H. Folkes won first prize for six onions, staging fine, well finished specimens of Ailsa Craig; Mr. T. West was second, with a fine half-dozen, though hardly so well finished. Mr. H. Wheeler, gardener to Mrs. Jenner, Wenroe Castle, Cardiff, third. (Fifteen entries.)

The amateurs' and cottagers' classes were well filled for the most part. Mr. W. Humphreys' first prize collection of vegetables were well grown and staged also, as were also the six onions from Mr. T. Jones, Ruabon, which won first prize. Many of the other classes were well filled with very creditable produce in such a dry season.

NON-COMPETITIVE.

Messrs. Barr and Sons, King Street, Covent Garden, staged a most attractive display of vegetables, the background being occupied with celery Barr's Champion, Solid White, Covent Garden, Tall White, and New Solid Pink, splendid heads of Silver Sea Kale beet and its red variety, cabbage Little Queen and Autumn Exhibition, beautiful hearts that knew not the drought, with leeks, marrows, and onions. The table itself was laden with tomatoes of various varieties, fine examples of onion Nelson's Selected and Ailsa Craig, parsnips, carrots, a fine variety of radishes, with Best of All runner beans, cucumbers, excellent dishes of potatoes, and fine lettuces.

From Messrs. Sutton and Sons, Reading, came a magnificent exhibit. The vegetables were arranged in tiers. On the top were well-set-up examples of Indian corn, with huge examples of onions, Ailsa Craig, Giant Rocca (grand), and Sutton's A1, with celery, leeks, marrows, and kohl rabi, splendid specimens of Sutton's new red Intermediate carrots, parsnips Tender and True, Early Giant cauliflowers, tomatoes in fine variety, beets, potatoes, peas, radishes, and cabbages. The minor subjects were well represented by capsicums, ornamental gourds, aubergines, maize, celeriac, butter beans, and other items, the whole making a fine representative display.

From the Mid-Kent Nurseries, West Wickham, came a couple of dozen fruits of melons, The Manchester. The fruits were of good size and well finished.

Mr. S. Mortimer, Rowledge, Farnham, exhibited four boxes of his new cucumbers, Cynosure and Unrivalled, both varieties were in splendid form, the former being the larger fruit.

Messrs. S. Spooner and Sons, Hounslow, staged a nice collection of fruit, arranged in baskets and dishes. The apples were very clean and bright, especially Early Strawberry, Middle Green, Williams' Favourite, and Lady Sudeley. Dishes of plums and pears were also in fine condition.

Messrs. Dobbie and Co., Edinburgh, had their exhibit of potatoes left from the previous day, and needless to add they proved a source of attraction with the vegetable experts present.

Messrs. W. Cutbush and Sons, Highgate, exhibited their group of hardy flowers from the previous day, except that they had renovated it for the occasion. It made a pleasing change from the long lines of potatoes and onions, etc.

From Mr. Robert Holmes, Tuckswood Farm, Norwich, came splendid bunches of his new tomato Kondine Yellow. The bunches varied from ten to twenty fully-developed and ripe fruits per bunch. The fruit itself resembled egg plums. Messrs. D. Dowel and Son, Hammersmith, had a large display of bowls for bulbs, and a large variety of horticultural sundries.

At the close of the judging the members of the executive, with the judges and the members of the Press, had luncheon at the Hotel Windsor. Mr. W. J. Lobjoit presided, and was supported by Sir John Llewelyn, Bart., Mr. Owen Thomas, V.M.H., Mr. W. Poupart, Mr. J. Gibson, Mr. E. Beckett, V.M.H., and Mr. George Gordon, V.M.H. The toast list was short and the speeches brief, among the speakers being the Chairman, Mr. A. Dean, V.M.H., Sir John Llewelyn, Bart., Mr. Robinson, Mr. E. Beckett, Mr. George Gordon, Mr. J. Gibson, and Mr. G. Wythes.

Royal Horticultural Society of Aberdeen.

Opened by a Princess, favoured with delightful weather throughout, and a turnout of some 1,600 entries, this exhibition proved a grand success. Than the Duthie Public Park, Aberdeen, kindly lent to the society by the Town Council, no more charming site could be wished for such an event.

PLANTS.

While there was a fine display in this section, it is evident that the times are changing, and the fine tall specimens of Seaforthia elegans or other graceful palm; the yellow-flowered allamanda, the well-trained Lapageria alba, or other hothouse-reared plants, are seldom seen. Their places have been taken by more modest examples of cultural art. In the class for the best four specimen plants in flower (orchids excluded), Mr. J. Leggat, gardener, Balgownie House, Aberdeen, was first with a finely-grown Statice profusa as his best specimen. Mr. John Elder, Norwood, Cults, Aberdeenshire, had a good win for four best specimen foliage plants, his entry comprising some fine dracænas and palms. Mr. Alexander Brebner, gardener to Colonel W. S. Gill, of Dalhebity, Aberdeenshire, won handsomely for the best specimen plant in flower with a well-grown Disa grandiflora. For best specimen foliage plant, Mr. Alex. Duncan, gardener to Mr. Adam Maitland, Rubislaw Den House, Aberdeen, was first with a maranta. Ferns were a capital lot, and for these Mr. Brebner, Dalhebity, was a fine first. Zonal geraniums were a good feature, and must certainly be classed amongst the best ever seen in Aberdeen. They were well flowered and finely coloured. In this section Mr. J. D. Brechin, gardener, Ardoe, Belhelvie, Aberdeenshire, carried off first and second honours. Pelargoniums, considering we are so far over in the season, made a wonderfully good show. Here, again, Mr. Brechin had the best. Fuchsias, although well grown and fairly well flowered, were not so large as we have seen them at Aberdeen. Mr. Gillespie (an amateur, be it noted), Northfield Place, Aberdeen, had the finest entries here. For liliums, Mr. J. D. Brechin, Ardoe, led the way. For six plants for dinner-table decoration not more than two of any one species, Mr. John Petrie, gardener, Crathes Castle, had matters pretty much his own way. Begonias, single and double, were fairly well shown, Mr. William Dick, 96, Queen's Road, Aberdeen, and Mr. George Davie, Hilton House, Woodside, Aberdeen, sharing the leading honours. Orchids were short in number, but the quality was good. Mr. Alexander Duncan, Rubislaw Den House, took first place here with fine, well-grown specimens of Epidendrum nemorale and Cattleya Harrisoni. Gloxinias were specially fine, and Mr. Alex. Brebner was first with finely flowered specimens.

CUT FLOWERS.

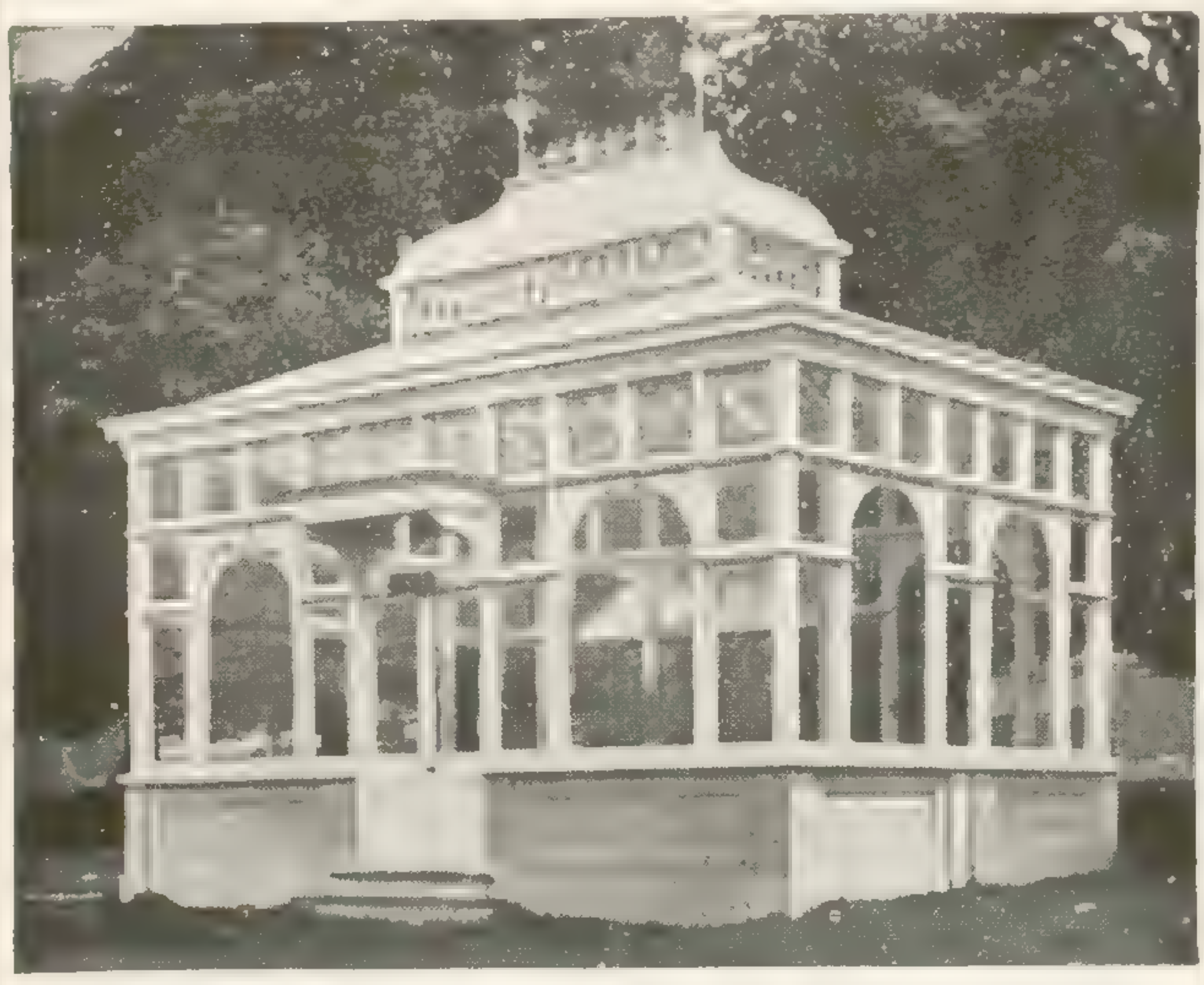
The marquee devoted to this section was well filled, the entries being of a high standard. Perhaps the outstanding feature was the fine table decorations, composed chiefly of self-coloured sweet peas set in sprays of gypsophila. For eighteen rose blooms, H.P. and H.T., or either, named, distinct varieties, a silver cup was offered by Messrs. James Cocker and Sons, and it was worthily won by Mr. A. Brebner, Dalhebity. There was a large number of entries for the trophy. For six bunches of decorative roses, Mr. Brebner again led, carrying off the society's silver medal with capitally-grown blooms. Pompon dahlias were fairly numerous, Mr. J. M. Dunn, Nellfield Place, Aberdeen, taking first place. There were a large number of cactus dahlias, Mr. W. Flockhart, Craigiebuckler Cottage, Rubislaw, Aberdeen, winning with flowers of rare beauty. Mr. Brechin, Ardoe, Belhelvie, made a capital second. A specially good feature was the collection of twenty varieties of cut flowers and fine foliage bedding plants, including annuals. Here Mr. Alexander Douglas, gardener to Mr. Thomas Ogilvie, Kepplestone House, Aberdeen, led with a very choice collection, which made a grand show of colour. Mr. W. Dick, gardener to Mr. Ledingham, 96, Queen's Road, Aberdeen, proved a worthy second. One of the most attractive parts of this section was the sweet peas. Evidently this flower has become very popular both with professionals and amateurs, and the flowers they put up on this occasion reflected the greatest credit on Northern growers. Mr. John Grigor, gardener to Mrs. Dunbar Dunbar, of Seapark, Forres, N.B., who has been having matters pretty much his own way of late in the north-east and midlands of Scotland where the sweet pea is concerned, won the handsome cup presented for the best sixteen bunches of sweet peas, distinct varieties, with a fine entry. His blooms were of great size and fine colour. He was run pretty close, however, by Mr. Petrie, Crathes Castle, whose second-placed entry was much admired. Mr. John Roy, Kingsford, Alford, N.B., had a well-deserved third. In competition for the prize for table decorations Mr. W. Cormack, Prospect Cottage, Dyee, Aberdeenshire, led with an entry that for colour, variety, and tasteful arrangement left nothing to be desired. Other leading prize-takers in the cut-flower section worthy of special mention were Mr. J. Davidson, Ferryhill Lodge (gladioli); Mr. John Reid, Woodside (French marigolds); Mr. Douglas, Kepplestone House (hardy herbaceous flowers); Mr. A. Duncan, Rubislaw Den House (carnations and picotees); Mr. J. W. Brechin (phloxes); Mr. J. Anderson, Aberdeen (chrysanthemums); Mr. J. D. Smith, 275, Union Grove, Aberdeen (hand bouquets and bride's bouquets).

FRUIT.

Here there was a very fine display, especially of hardy fruit, the single dishes being uncommonly fine. As is his wont, Mr. Harper, gardener, Tulliebelton, Perth, obtained premier honours in the class for hardy fruit, six varieties, with a capital collection, consisting of Kirk's plum, Hale's Early peach, Victoria plum, Lord Suffield apple, Williams' Bon Chretien pear. Apricots and plums were fair. Strawberries were few, but

BOULTON & PAUL, LTD., HORTICULTURAL BUILDERS, Norwich.

ATTRACTIVE, PRACTICAL GLASSHOUSES.

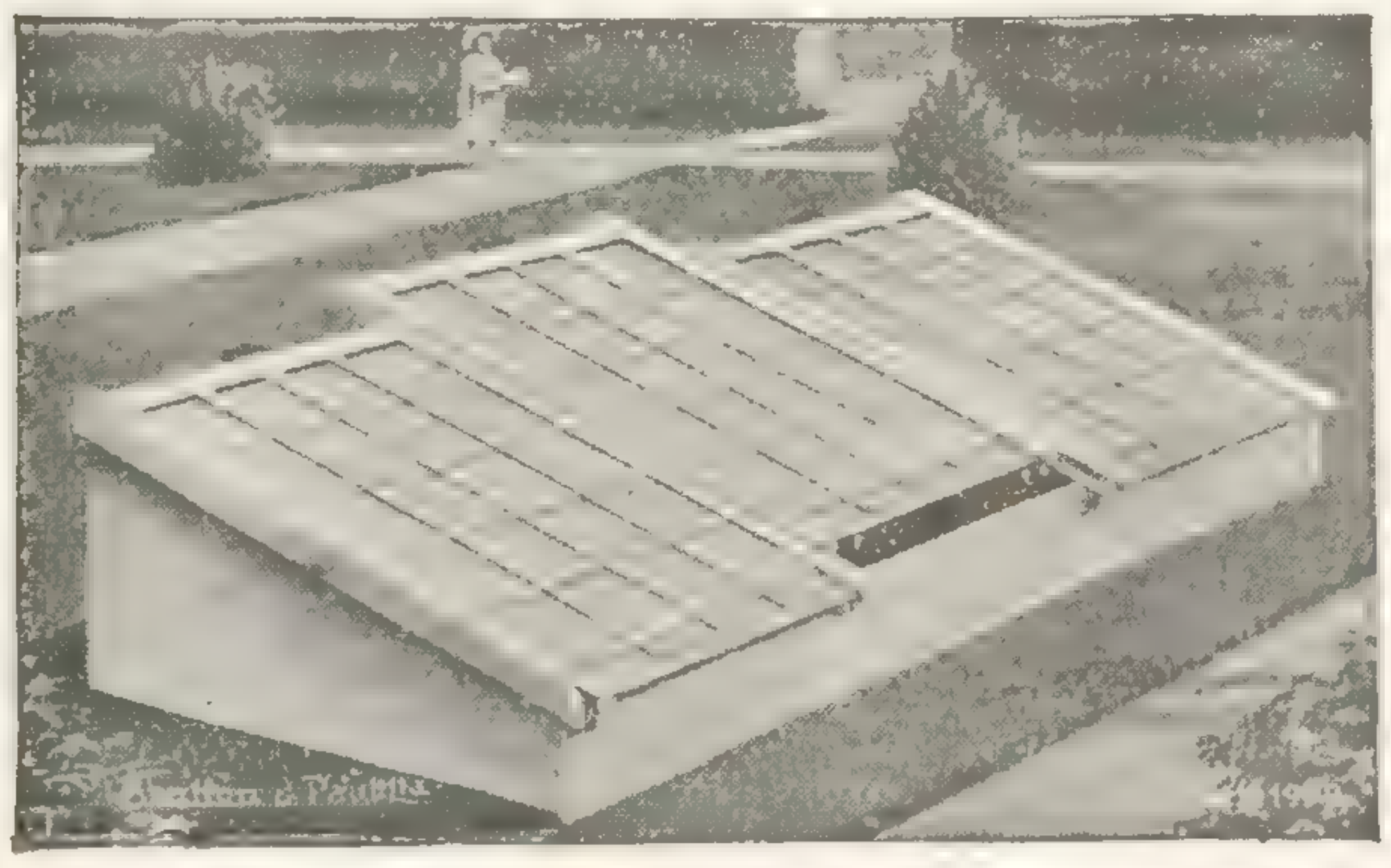


Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of 40 - value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.



4ft. by 6ft. ... £2 0 0 | 8ft. by 6ft. ... 3 0 0
Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft. Similar to No. 75, with Two Lights... 35/-

SEND FOR ILLUSTRATED CATALOGUES.

Every part of these Houses is thoroughly well made, painted three coats, GLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.

No. 49A.—Span, 10ft. by 8ft. £11 10 0
No. 47A.—Lean-to, 10ft. by 7ft. £9 10 0

All parts are numbered ready for easy re-erection by any handy man.

there never have been finer black currants seen in the North. Those sent in by Mr. James Ferguson, Linton Gardens, Sauchen, Cluny, N.B., were of large size, and easily gained for him pride of place. The fine summer we have experienced was reflected by the splendid display of apples and pears. Gooseberries, cherries, raspberries, red and black currants, all of which were well shown. Grapes were short in number, but good. Mr. John Petrie, Crathes Castle, led with well-grown, finely-formed bunches of Muscat Alexandria and Appley Towers. Mr. John Elder, Norwood, Cults, second, with Foster's Seedling and Black Hamburgh, the latter especially being well finished, made a good second. Other prominent winners here were Mr. J. Leggat, Balgownie House (cherries); Mr. Alex. Mortimer, 602, Holburn Street, Aberdeen (gooseberries); Mr. W. Scorgie, Springhill (melons); Mr. William Smith, Fintray House, Aberdeenshire (peaches and nectarines); Mr. George McLennan, Fetteresso House, Stonehaven, Kincardineshire (strawberries and baking apples): Mr. W. B. Greig, Balmedia House (pears and nectarines); and Mr. John A. Grigor, Seapark (tomatoes).

VEGETABLES.

Considering the season the display made here was very good. The outstanding feature was the magnificent display of potatoes; the quality was high, and the entries were very numerous. The prize-takers were: Mr. H. B. Smith, Burdshaugh, Forres; Mr. J. Ferguson, Linton House; Mr. Alex. Douglas, Kepplestone House; Mr. William Milne, Corsindae House, Midmar; Mr. John A. Grigor, Seapark; and Mr. William Webster, Muiresk, Turriff, N.B. For the best collection of vegetables, Mr. Scorgie, Springhill, occupied the post of honour. Mr. William Lawson, Cornhill, Aberdeen, gained first place for best collection confined to market gardeners. Both of these entries were very meritorious, and reflected no little credit on the growers.

NURSERYMEN AND FLORISTS.

This was a greatly admired section. The Messrs. James Cocker and Sons, Springhill and Sunnyside, Aberdeen, carried off for the third year in succession the society's silver challenge cup for best thirty-six rose blooms. The cup now becomes the property of the firm. Very tastefully were the blooms staged, and they were remarkable for their exquisite beauty in colour and form. Messrs. Adam and Craigmile took second place with a very meritorious exhibit. This last-named firm were first for twenty-four tea or noisette roses, with very fine blooms, and they also took the leading place for wreaths and ladies' sprays. Hand bouquets, although not numerous, were a very fine entry. For best hand bouquet (coloured) Miss Burns, 89, Victoria Road, Torry, Aberdeen, was first. Mr. Alex. Burns, jun., New Market, Aberdeen, had matters pretty much his own way for shower bouquets (white), and floral designs, being first and third for first-named, and first and second for designs.

MISCELLANEOUS DISPLAYS.

These formed a great attraction to the public. Messrs. W. Smith and Sons, seedsmen and nurserymen, Aberdeen, had an unusually large and excellent display of wreaths and other floral arrangements.

Messrs. James Cocker and Sons, Springhill and Sunnyside Nurseries, Aberdeen, staged a large collection of roses, the blooms being throughout of high quality. They also arranged a fine display of herbaceous flowers.

Mr. M. H. Sinclair, F.R.H.S., seedsman, Aberdeen, had an attractive display, the sweet pea section being specially worthy of notice. He had also a miniature pond furnished with aquatic plants, which formed a unique feature.

Messrs. Ben Reid and Co., Pinewood Nurseries, Aberdeen, were, as usual, well to the front with up-to-date varieties of herbaceous plants, autumn-tinted foliage, roses, very fine specimens of weeping standard roses, sweet peas, etc.

Mr. Dustan, Holburn Nurseries, Aberdeen, who makes a speciality of dahlias and early-flowering chrysanthemums, put up a very fine exhibition of these flowers.

As a whole, the show was one of the best ever held in the long history of the society, and to Colonel Gill, of Dalhebity, chairman; Mr. Alexander Milne, vice-chairman; Mr. J. B. Rennett, advocate, Aberdeen, secretary, with their hard-working committee, the highest praise is due.

Begonia Dregei.—This is a South African species of an old plant in gardens, and though viewed in the light of many hybrid varieties it cannot be considered showy, yet it is of neat, compact growth, well furnished with pretty leafage, and the pure white flowers are freely borne over a lengthened period. It forms a pleasing feature in the greenhouse during the summer, and apart from its intrinsic merit is of especial interest, as being one of the parents of the now universally grown B. Gloire de Lorraine, the other parent being B. socotrana, while in conjunction with the orange-coloured B. Sutherlandi it (more than forty years ago) yielded the pretty pink-flowered B. Weltoniensis, which for a long time was extensively grown.—W. T.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Specimens of plants, flowers, and fruits for naming send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

AUTUMN-SOWN ONIONS.—P. R. T., Emsworth: A few days earlier would have been preferable, but if the work of sowing seeds is immediately taken in hand, there should be no real loss of time or crop. Level a piece of ground from which potatoes have been lifted or peas cleared, make it quite firm, and sow the seeds thinly in shallow drills. After sowing again make the surface firm. Sow such varieties as Ailsa Craig, Giant Rocca, or White Leviathan.

OLEARIA SEMIDENTATA. — H. K., Cork: You will find a full account of the attempt made by Captain Dorien Smith to introduce Olearia semidentata into this country from the Chatham Islands in the GARDENERS' MAGAZINE of July 2 and July 16, 1910.

NORTH OF ENGLAND HORTICULTURAL SOCIETY.—A. W. A., Durham: The secretary of this society is the Rev. J. Bernard Hall, Rawdon, Leeds. The subscriptions to the society are as follows: Life Fellows, £10 10s. (or more if desired): Fellows, £1 1s. per annum; Fellows of the Royal Horticultural Society, 10s. 6d.; amateurs employing a regular gardener and nurserymen, 10s. 6d.; amateurs not employing a regular gardener and working gardeners, 5s.; affiliated societies (membership over 50), £1 1s.; and affiliated societies (membership under 50), 10s. 6d. per annum. Individual members of such affiliated societies are entitled to be Associate members on payment of 2s. 6d.

SLUG WORMS ON ROSES.—J. E. B., Devonport: The slug worms or larvæ of Eriocampa rosæ do a vast amount of damage to roses in some districts and in some seasons. There are two broods each year, occasionally three. The slug worms eat away the upper epidermis and leaf tissues, leaving the foliage very disfigured and quite incapable of performing its functions. Leaves so attacked become bleached, and then die. These larvæ when full fed fall to the ground, form oval cocoons, and pupate in the soil. The best method of checking an attack is to spray the roses with hellebore wash, and, if the attack is a very severe one, remove the surface soil around the roses in winter and burn it, putting new material in its place.

HELLEBORE WASH.—J. E. B., Devenport: Mix one ounce of fresh hellebore powder and two ounces of flour in a little water until the whole is worked down to a smooth thin paste; then add sufficient clear water to make up three gallons of mixture. Keep well stirred, and apply through a fine spray nozzle.

HORTICULTURAL AND AGRICULTURAL LEAFLETS.—W. G., Haywards Heath: The Board of Agriculture and Fisheries is now drawing attention to the reduction in price of the sectional volumes of leaflets useful to farmers, gardeners, teachers, etc. The reduced price of a full set of the twelve volumes is 9d., post free. Large quantities of any particular volumes for distribution to allotment holders, schools, etc., may also be obtained at the reduced rate of 9d. per dozen copies, carriage paid. Remittances should be in the form of cheques, money or postal orders, made payable to the Secretary, Board of Agriculture and Fisheries, 4, Whitehall Place, London, S.W., and crossed "Bank of England." Letters so addressed need not be stamped.

NAMES OF PLANTS.

W. W. H.—1, Abies pectinata; 2, A. nobilis; 3. A. brachyphylla.

F. K. — 1, Goniophlebium sepultum; 2, Didymochlæna truncatula; 3, Gleichenia flabellata.

H. S.—1, Rhociton volubile; 2, Ophiopogon Jaburan argenteo-variegatum; 3, Tremandra verticillata.

INQUIRER.—1, Hydrangea vestita; 2, Hypericum Henryi; 3, H. androsæmum; 4, Hibiscus elegantissima.

R. B.—1, Solanum Wendlandi; 2, Vanda cærulea, a poor variety; 3, Statice Holfordi; 4, Jacaranda mimosæfolia.

M. A.—Your plant is unquestionably Vallota purpurea, and not a hybrid between the vallota and a crinum, as you suppose.

R.—The small specimens you send are not sufficient for identification. If you will send larger specimens taken from those parts of the trees where they have been able to develop their characteristic features we shall be pleased to assist you.

FORTHCOMING ENGAGEMENTS.

SATURDAY, September 2.—Ibstock Horticultural Society.

Border Horticultural Society at Coldstream.

MONDAY, September 4.—National Chrysanthemum Society's Floral Committee.

TUESDAY, September 5.—Scottish Horticultural Association, 8 p.m.

WEDNESDAY, September 6.—Royal Caledonian Horticultural Society's Exhibition in Waverley Market, Edinburgh; two days.

Glasgow Horticultural Society; three days.

THURSDAY, September 7.—National Dahlia Society's Exhibition, Crystal Palace; two days.

MONDAY, September 11.—United Horticultural Provident and Benefit Society: Committee meet.

TUESDAY, September 12.—Royal Horticultural Society: Floral, Fruit, and Orchid Committees, noon; General Meeting with lecture on "The Small Holdings Movement," by Mr. T. Smith, 3 p.m.; Scientific Committee, 4 p.m.

Woodstock Horticultural Society.

WEDNESDAY, September 13.—Messrs. Dickson and Robinson Vegetable Competition at Manchester.

THURSDAY, September 14.—National Rose Society: Autumn Exhibition Horticultural Hall.

SATURDAY, September 16.—Paisley Florist Society.

MARKETS.

◆

COVENT GARDEN.

Flowers.

The demand for choice flowers continues and prices are well maintained.

		s.	d.		s.	d.
Adiantum cuneatum	per doz. bun.	4	0	to	6	0
Arums	per doz.	2	6		3	0
Asparagus	per doz. bun.	8	0		10	0
Asters	per doz. bun.	3	0		6	0
Cattleyas	per doz.	7	6		15	0
Carnations	per doz.	1	2		3	0
,,	per doz. bun.	6	0		9	0
Coreopsis	per doz. bun.	1	0		2	6
Croton leaves	per bun.	1	0		2	6
French fern	per doz. bun.	2	6		4	0
Gardenias	per doz.	1	0		2	0
Gladiolus	per doz. bun.	1	6		4	0
Gypsophila	per doz. bun.	2	6		6	0
Lapageria	per doz.	1	0		2	6
Lilium auratum	per doz.	2	6		4	0
,, speciosum	per doz.	1	0		2	0
,, longiflorum	per doz.	1	6		2	0
Lily of the Valley	per doz. bun.	6	0		15	0
Marguerites	per doz. bun.	1	6		3	6
Mignonette	per doz. bun.	2	0		3	0
Odontoglossums	per doz. blms.	2	0		4	6
Pelargoniums	per doz. bun.	3	0		4	0
Roses	per doz.	1	0		2	6
Smilax	per doz. trails	2	0		4	0
Stocks	per doz. bun.	4	0		7	0
Tuberoses	per doz.	0	4		0	6
Sweet Peas	per doz. bun.	2	0		4	0
Statice	per doz. bun.	3	0		4	0

Fruits.

Supplies are fairly liberal with a good demand.

		s.	d.		s.	d.
Apples, Lisbon	per case	4	6	to	5	0
,, Tasmanian	per case	4	0		7	6
,, English	per bush.	3	6		10	6
Bananas	per bun.	4	0		12	6
Cob nuts	per doz. lb.	5	0		6	0
Figs	per doz.	1	0		2	6
Greengages	per ½-sieve	4	0		8	0
Grapes, English	per lb.	0	10		3	6
,, Guernsey	per lb.	0	8		1	6
Lemons	per case	9	0		25	0
Melons	each	1	0		2	6
,, Cantaloupe	each	1	6		3	0
Nectarines	per doz.	3	0		10	0
Oranges, Denia	per case	12	0		30	0
,, Cape	per case	8	0		10	0
,, Jamaica	per case	6	0		9	0
,, St. Michaels	per case	8	0		10	0
Peaches	per doz.	3	0		10	0
Pears, English	per ½-sieve	3	0		6	0
,, French	per crate	5	0		10	0
,, Californian	per case	6	0		8	0
Pineapples	each	2	0		5	0
Plums	per ½-sieve	3	0		8	0

Vegetables.

Supplies of most kinds are fully equal to the demand.

		s.	d.		s.	d.
Artichokes, Globe	per doz.	2	0	to	3	0
Beans, dwarf	per basket	1	6		3	6
,, runners	per bush.	6	0		10	0
Beet	per doz. bun.	2	0		3	6
Cabbage	per tally	4	6		7	6
Carrots	per doz. bun.	1	0		1	6
Cauliflowers	per doz.	1	0		2	6
Cucumbers	per flat	5	0		7	6
Endive	per doz.	1	0		3	0
Horseradish	per doz. bun.	8	0		12	0
Lettuce	per doz.	1	0		3	0
Marrows	per tally	7	0		10	0
Mint	per doz. bun.	2	0		5	0
Mushrooms	per doz. lb.	6	0		12	0
Onions, Spanish	per case	4	0		6	0
Parsley	per ½-sieve	1	6		2	6
Peas	per bush.	3	6		6	0
Radishes	per doz. bun.	1	6		2	6
Spinach	per bush.	2	0		2	6
Tomatoes	per doz. lb.	2	6		3	6
,, Guernsey	per doz. lb.	2	0		3	0
Turnips	per doz. bun.	2	0		3	0
Watercress	per doz. bun.	0	6		0	6½

The only resemblance between a Pine Spray Syringe and others is in the shape of the barrel. The metal is more substantial. For the rest, the combination spraying head renders Spray, Rose, and Bend instantly obtainable without the addition or removal of a single fitment, while the adjustable leather bucket plunger gives perfect suction, never allows water to escape past it and up your sleeve, and wears interminably.

A written request from your ironmonger or seedsman, and a Syringe will be sent in 24 hours for your approval. Price **10/6.** Sole proprietors and manufacturers. **Robinson Bros., Ltd., West Bromwich.**

PINE SPRAY SYRINGE (patent).

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1911. AUGUST 20 TO AUGUST 26.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	TEMPERATURE OF THE AIR. At 9 a.m. Wet Bulb.	TEMPERATURE OF THE AIR. Day Highest.	TEMPERATURE OF THE AIR. Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Aug. 20—Sunday	8 48	72	66	85	55
,, 21—Monday	0 30	64	63	71	63
,, 22—Tuesday	—	62	61	66	62
,, 23—Wednesday	5 12	59	58	70	52
,, 24—Thursday	5 12	66	61	71	53
,, 25—Friday	7 6	65	61	74	55
,, 26—Saturday	6 6	67	59	73	52
Means	(total) 32 54	65	61	73	56

DATE. 1911. AUGUST 20 TO AUGUST 26.	RAIN.	TEMPERATURE OF THE SOIL AT 9 A.M. At 1 ft. deep.	TEMPERATURE OF THE SOIL AT 9 A.M. At 2 ft. deep.	TEMPERATURE OF THE SOIL AT 9 A.M. At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg.
Aug. 20—Sunday	0·06	69	68	64	48
,, 21—Monday	0·21	69	68	65	48
,, 22—Tuesday	trace	68	67	65	59
,, 23—Wednesday	—	64	66	65	46
,, 24—Thursday	0·01	65	65	64	47
,, 25—Friday	trace	64	65	64	48
,, 26—Saturday	trace	64	64	64	42
Means	(total) 0·28	66	66	64	49

A thunderstorm lasting from 7 till 8 p.m. occurred on Sunday, August 20.

CONTENTS.

PAGE
Among the Roses ... 645
Answers to Correspondents ... 653
Arisarum proboscideum ... 643
August in the Wild Garden ... 642
Bacteriosis of the Potato and Tomato ... 640
Crocus versicolor ... 645
Exhibitions and Meetings ... 649
Friar Park Rock Garden ... 641
Fruit Bottling for Small Holders ... 646
Gunnera manicata ... 647
Notes from Kew ... 644
Notes of the Week ... 637
Perpetual Carnations and Summer Pests ... 647
Strawberries ... 643
Three Good Ornamental Grasses ... 642
The Turnip Fly and Green Crops ... 642
Trees and Shrubs to Flower during July and August ... 644
Winter Salads ... 639
Work for the Week ... 648

ILLUSTRATIONS.

Portrait of Mr. R. P. Brotherston, 637; Gladiolus Yellow Beauty, 639; A View in the Rock Garden, Friar Park, 641; A Pathway up the slopes of the Rock Garden, Friar Park, 643; Crocus versicolor, 645; A Splendidly-developed Specimen of Gunnera manicata, 647; National Vegetable Society—Mr. J. Gibson's First-prize Collection of Twelve Kinds of Vegetables, 650; National Vegetable Society—Rev. A. Turner's First-prize Collection of Potatoes in Messrs. Clay and Son's Class, 651.

Campanula Vidali.—This Azorean species of the Bellflower family is totally distinct from any other kind, and withal a charming summer-flowering subject, either for the greenhouse or the open ground. It is one of the few tender members of the genus, and must be free from frost to keep it safely through the winter. Campanula Vidali forms quite a woody stem, about six or eight inches high. From the upper part of this stem numerous branches are produced which reach a height of 18 inches to 2 feet. Their lower half is furnished with oblong-shaped fleshy leaves, and on the upper portion bare of foliage, the flowers are produced. They are of an inverted urn shape, contracted just below the middle, from 1½ to 2 inches long, and of an ivory-white tint, with an orange ring near the base of the interior. Unusually thick in texture, they last a long time.—W. T.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head, where two are kept, or good Single-handed with help); experienced in all branches; age 29; two in family; excellent references including Cliveden. G. BYE, George Green, near Langley, Bucks.

GARDENER (Head Working); thoroughly experienced in growing choice Fruits, Flowers, Vegetables, Orchids, etc.; well recommended; energetic; good manager; previously Foreman Petworth Park, Sussex, Walton Hall, Lancs. H. MUNCEY, 3, Finstock Road, Oxford Gardens, W.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out, Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working or Single-handed); married; no family; life experience in Vines, Peaches, Cucumbers, Melons, Tomatoes, Chrys., Kitchen and Flower Garden; good references. CURD, 36, Clarence Place, Gravesend, Kent.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 31; married when suited; excellent references. Address, Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working, where several are kept); 22 years' practical experience in large establishments; highest references, character, ability; age 37; married. KING, Avenue, Stoke Prior, Bromsgrove.

GARDENER (Head), seeks RE-ENGAGEMENT; experienced in all branches, Inside and Out; has had from 8 to 12 men under; 5 years present place; excellent references; married, no family; age 34. WESTRON, Rhinefield, Brockenhurst, Hants.

GARDENER (Head Working). — F. W. FLETCHER, Esq., can highly recommend his HEAD GARDENER as a thoroughly trustworthy, experienced, good all-round man; 20 years head; married, one daughter, 14 years. F. GREENGRASS, 40, Primrose Terrace, Browning Road, Enfield, Middlesex.

GARDENER (Head Working) seeks SITUATION; experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants, Flower and Kitchen Garden, etc.; excellent references; married, no family. WM. GIBSON, 128, Lansdowne Road, Leicester.

GARDENER (Head Working) seeks Engagement with Lady or Gentleman desirous of working their establishment on a business principle; life experience all branches; age 30; married, no family; excellent references. NASH, Gardens, Woodgreen Park, Cheshunt.

GARDENER (Head or Single-handed); life experience, Flower, Fruit, and Vegetables; married, no family; age 27; good references; life abstainer. VINALL, Terry Villa, Knaphill, Woking.

GARDENER (Head Working); life experience Inside and Out; thoroughly competent; personal references for 20 years for ability, etc.; abstainer; age 38. SMITH, The Gardens, Brownings Manor, Blackboys, Sussex.

GARDENER (Head Working). Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 31; married, two children. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working).—CAPTAIN USHER highly recommends R. Appleby as above; life experience in all branches; thoroughly understands Planning and Laying Out; also Land and Stock; many years' excellent character. Address APPLEBY, 12, Brewster Gardens, North Kensington, London, W.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushroom, ridge or flat; Kitchen, Lawn, Flower Garden. Special prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; aged 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER, 40; Single-handed preferred; thoroughly experienced; excellent character; active worker; Inside and Out with early vegetables; abstainer; married. A. BISHOP, Windmill Hill, near Hailsham.

GARDENER (Single-handed, or where help is given); 17 years' experience, Inside and Out; age 32; married, no family; good references. G. EUDEN, 11, Clifton Road, Spring Grove, Isleworth.

GARDENER (Single-handed, or where help is given); 11 years' experience Inside and Out; age 30; married; excellent references. E. CHAPMAN, Sandgate, Kent.

FOREMAN (Working); over 30 years' experience; Tomatoes, Chrysanthemums, Ferns, Bedding Stuff, Climbers, Bulbs, Floral Work, etc.; London district or South preferred. ROBERTS, 13, Eastcote Road, Harrow, Middlesex.

FOREMAN (Inside); good establishment; 15 years' experience Fruit and Plant Houses, Carnations, Chrysanthemums, Decorations, etc.; age 28. W. HARRIS, Gardens, Chearsley Hill House, Aylesbury, Bucks.

COL. R. J. COOPER, C.V.O., will be pleased to recommend his late Second Man, Inside or Inside and Out, where three or four are kept; 12 years' references. COOKE, Blackwell Hall, Chesham.

GARDENER, 15 years' good experience, understands Landscape work, also the making of Japanese Gardens; age 30; married; private or otherwise. GARDENER, 5, Park Terrace, Archway Road, Highgate, N.

GARDENER seeks SITUATION as Under (Inside); 6 years' experience (Inside and Out); excellent references; age 24; married, no family.—WILLIAMS, Trallwyn Gardens, Chwilog, S.O., North Wales.

JOURNEYMAN (Inside and Out), or would take Lead (Outside); well recommended; age 25½. G. BENFORD, Temple Newsam Gardens, near Leeds.

THE REV. BLUCKE can highly recommend H. BRAKE as GARDENER or GROOM-GARDENER; leaving for no fault, three years present place; disengaged when suited. Apply H. BRAKE, School House, Shroton, Blandford, Dorset.

GROWER, take charge or otherwise; 32; single; experienced leading London firms; market and retail; Pot stuff, Garden, Contract, Wreaths, Decorations. Abstainer. M., 6, Curzon Cottages, Curzon Street, Leicester.

IMPROVER (18½) seeks SITUATION, Inside or Inside and Out; 2½ years' experience; can be highly recommended; Bothy preferred. J. GILL, Towlers Cottage, Askew, Bedale, Yorkshire.

YOUNG MAN, age 21, seeks SITUATION, Inside and Out; seven years' general experience; 2½ years present place; strong and willing; abstainer. E. STOPPS, Stowe, Weedon, Northants.

YOUNG MAN seeks Situation as GARDENER, Single-handed; can take charge of pony; good character; over two years in present situation; age 24; near London preferred. Apply J. SCOTT, 51, Manor Park Road, East Finchley.

YOUNG MAN requires situation as UNDER GARDENER; 2½ years' experience; good references; disengaged. S. TALBOT, Near School, Barrow, Bury St. Edmunds.

YOUNG MAN seeks SITUATION to look after Electric Light and Garden; well up in all branches; nine years last situation. EDWARD VILLA, Street Cobham, Surrey.

REV. R. HOLDEN recommends for employment in Garden, YOUTH, 17; strong, willing; excellent character; been with him 3½ years. E. ROBERTS, Gate House, Nuttall, Nottingham.

YOUNG MAN, age 18, requires SITUATION in Gentleman's Garden; Bothy preferred; three years with successful gardener; good references. E. J. SCRIVENER, Church Street, Eye, Suffolk.

YOUNG MAN seeks SITUATION as Journeyman, second or third (Inside); age 28; nine years' experience; good references; Bothy preferred; disengaged. J. HOARE, West Lavington, near Devizes.

YOUNG MAN requires SITUATION in Gardens as Under where three or four are kept; five years' experience; age 20. A. BISHOP, Comb Cross Gardens, Horsington, Templecombe, Somerset.

YOUNG MAN seeks SITUATION as SECOND GARDENER, Inside and Out; or Third where five or six are kept; three years at last place and over two at present as third; abstainer; good character. NEWMAN, Colonge, Layard Road, Forty Hill, Enfield.

YOUNG MAN (20) seeks SITUATION; three years thorough training in general Nursery work; well up in Cucumbers, Chrysanthemums, Tomatoes, Bulbs, etc.; excellent references. B., 11, Derby Villas, Forest Hill, S.E.

YOUTH, age 18, seeks SITUATION in Garden; Bothy preferred; four years' good reference. A. LUFF, The Lodge, Thursley Hall, Haslemere, Surrey.

WANTED, Situation as GARDEN LABOURER, or as Single-handed; would not object to a place in a nursery; good spade hand, etc., and well used to garden work; disengaged; good character. W. LING, Hunger Hill, Westcott, near Dorking.

Situations Vacant.

TO GARDENERS.—Wanted, in September, a strong, active MAN for the Pleasure Grounds; must have a good knowledge of Roses, Rock, and Herbaceous Plants. Wages, 21s. a week; no bothy. Apply THOS. COX, The Gardens, Manor House, Basingstoke.

WANTED, Journeyman, glass, principally Vines, Peaches, Plants. Wages 17s.; bothy, vegetables. Apply GEO. PICKER, The Gardens, Hesslewood, Hull.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For SEPTEMBER 9, 1911.

Please Repeat my Advertisement.

Name..

Address..

....

Date...............................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue

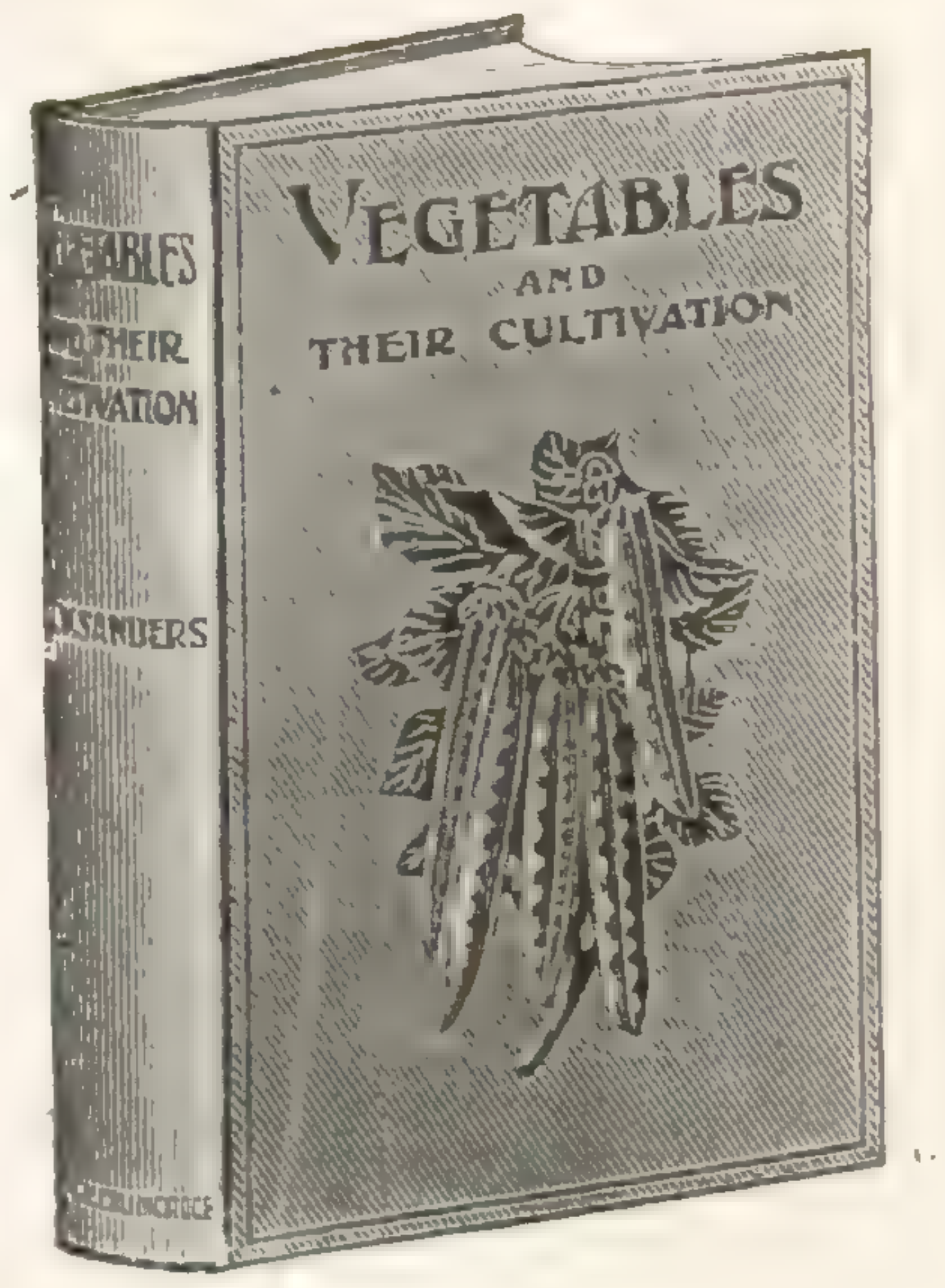
THE BEST PRACTICAL GUIDE.

"This volume will be most useful for those who wish to possess a really well-cultivated kitchen garden."—*The Queen.*

VEGETABLES
AND THEIR
CULTIVATION.

A COMPLETE GUIDE TO THE KITCHEN GARDEN.

By **T. W. SANDERS, F.L.S.,**
Editor of "Amateur Gardening," etc.


VEGETABLES AND THEIR CULTIVATION
VEGETABLES AND THEIR CULTIVATION
SANDERS
COLLINGRIDGE

Crown 8vo.; Cloth; 464 Pages.
140 ILLUSTRATIONS.

5/– NET.
By Post, 5/6.

8 PHOTO PLATES
and 5 COLOURED PLATES.

CONTENTS.

FORMATION OF THE VEGETABLE GARDEN.—Site—Shelter—Plans of one acre, half-acre, and quarter-acre Gardens—Drainage—Paths—Edgings—Boundary Hedges and Fences, with approximate cost of same.

SOILS AND THEIR TREATMENT.—Clay Loam, Sandy, and old Garden Soils—Testing Paring and Burning—Trenching—Ridging and Digging—Amelioration and Nitrification.

MANURES AND THEIR USES.—Nitrogenous Phosphatic and Potassic—Natural and Artificial—Mixing and Application of Manures—Every kind of Manure described.

CROPS AND THEIR ROTATION.—Three and Four Course Systems—Catch Crops Successional Cropping,

GENERAL OPERATIONS. — Planting — Watering—Seed Sowing—Seed Saving—Thinning Crops—Tools and their Uses—Seed Store—Mulching, Forcing, Retarding, etc.

EXHIBITING.—Growing—Staging—Packing, etc.

PESTS AND DISEASE.—Every prominent Pest and Disease fully described, and remedies for their eradication or prevention given.

POPULAR VEGETABLES.—Common Names—Botanical Names—Foreign Names—Natural Order—Native Habitat—History—Duration—Uses, etc.

CULTURAL DETAILS FOR EACH VEGETABLE.—Suitable Soil—Manures for Sowing—Planting—Propagation—Forcing—Lifting and Storing—Gathering, etc.

SELECTION OF VARIETIES.—List of best kinds for Culture for Home use and for Exhibition.

GARDEN FRIENDS. — Birds—Earthworms—Frogs and Toads—Hawkflies—Ladybirds—Lace-wing Flies—Tiger Beetle—Devil's Coach Horse Beetle—Garden Spider—Testacella Slug.

USEFUL TABLE FOR VEGETABLE GROWERS.—Name—When to Sow or Plant—When ready for use—Number of days seeds take to germinate—Time crop takes to reach maturity—Longevity of Seeds—Quantity of Seeds, Tubers, etc., to sow or plant a row of 50 ft.

CALENDAR OF OPERATIONS.—Showing work to be done in connection with each Vegetable during each month in the year.

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE," 148 and 149, Aldersgate Street, London, E.C.

Please send me a copy of "VEGETABLES AND THEIR CULTIVATION," by post (in box), for which I enclose remittance of 5/6.

Name ____________________

Date ____ **Address** ____________________

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 3,019.
Vol. LIV.
(Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.)
SATURDAY, SEPT. 9, 1911.
(10/6 per Ann. Post Free. To Foreign Countries, 15/-.)
Twopence

AWARDED TWENTY-EIGHT GOLD MEDALS.

BARR'S "GOLD MEDAL" DAFFODILS. Descriptive Illustrated Catalogue of all the finest sorts in cultivation, for Pots, Exhibition, Flower Borders or Naturalising, and including the finest selection of New Seedling Narcissi ever offered. Sent free on application.

BARR'S GENERAL BULB CATALOGUE contains a full list of the best Spring and Summer-flowering Bulbs, including Hyacinths, Tulips, Irises, Lilies, etc., for forcing and bedding. Sent free on application. BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON

JAMES GRAY, Horticultural Builder, Chelsea, S.W., wishes to point out that this is a good month for painting and repairing greenhouses, as the inside of many houses can be spared for internal work. He has a large number of excellent workmen, and immediate attention can be obtained by means of a postcard, telephone call (201 Western), letter, or wire to Gray, Chelsea, London.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

NEW CYCLAMEN, "Mrs. Buckston," a great novelty, "Low's Salmon King," "Giant White," "Deepest Red," ready now in packets, 1s. 6d. and 2s. 6d. Sow early! Also Schizanthus Wisetonensis and Perpetual-flowering Carnation Seed, 1s. 6d. and 2s. 6d. per packet. STUART LOW and CO., Bush Hill Park, Middlesex.

BULBS ON APPROVAL.—This offer I have made for 12 years. During that time only 3 lots have been returned. This is absolute proof of the quality. My prices are most reasonable. Catg. of 400 vars. free. ELLISON, 57, West Bromwich.

ROMAN HYACINTHS, 10s.; Freesias, 2s.; Alliums, 1s. 6d.; Early Flowering Tulips, 2s. 6d.; Paper White Double Roman Narcissus, 4s.; named Tulips from 2s. 100. Guaranteed flowering size. ELLISON, 57, West Bromwich. Established 1890.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

THE BOURNE DAFFODILS have gained the HIGHEST AWARDS, wherever Exhibited. Send for my Illustrated and descriptive Catalogue of FIRST QUALITY BULBS at MODERATE PRICES. Post Free from
CHRISTOPHER BOURNE,
The Daffodil Specialist, Simpson,
Bletchley.

FOR SALE.—First-class NURSERY, close to Blackpool, with 500 feet run of glass, well heated, with new up-to-date boilers. For price and particulars, apply P. VAWSER, Hykeham Road, Lincoln.

NARCISSUS.—Tulips, Hyacinths, etc. All the leading and best varieties, from 4s. 6d. per 100. Ask for illustrated price list, post free. Satisfaction guaranteed. C. F. A. VAN DER SLUYS, F.R.H.S., La Ramée, Guernsey.

NOT a large Advert., or an elaborate Catalogue; but you can depend upon getting absolutely reliable bulbs at most reasonable prices, when ordering from ELLISON'S, 57, West Bromwich, or I should not offer to send on Appro. Cg. Pd.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

LOVELY FLOWERS AT CHRISTMAS.

WEBBS' WHITE ROMAN HYACINTHS.
Extra large bulbs, 3/- per doz.; 20/- per 100.
Selected Bulbs, 2/- ,, 14/- ,,
Good Bulbs 1/6 ,, 10/6 ,,

WEBBS' POLYANTHUS NARCISSI.
Paper White, 1/- per doz.; 6/6 per 100.
Paper White, large flowering,
1/3 per doz.; 8/6 per 100.

WEBBS' BULB CATALOGUE for 1911.
Beautifully illustrated, Post Free.
WEBB and SONS, The King's Seedsmen,
Wordsley, Stourbridge.

BUNYARD'S CATALOGUES
Free on Application.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting

KENT STRAWBERRY PLANTS
NEW CATALOGUE READY.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

LAXTON STRAWBERRIES for immediate planting. Fine plants of all the leading varieties in little pots, 15s. 100. Open ground runners, 5s. 100. Catalogue with full particulars gratis
LAXTON BROTHERS, Bedford.

CLAY'S MANURES, CRUSHED BONES
(See page iv.)
CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

GREENHOUSES and CONSERVATORIES. Distinctive Designs and Finished Workmanship. Write now for ILLUSTRATED CATALOGUE. CARTER and HOWARD, Horticultural Builders, Kingston-on-Thames.

WALLFLOWERS.—Sutton's Giant Blood Red; also Sutton's Superb Mixed; seeds direct from Sutton's; large plants, 50, 10d.; 100, 1s. 6d., free. ROGERS, Tennyson Road, Hutton, Essex.

SLUGS, SLUGS, SLUGS. — "SANITAS POWDER" will rid your garden of slugs. Mr. Walter P. Wright, of the "Garden Week by Week," says:—"The particular hint that I was going to offer about slugs was to scatter 'Sanitas Powder' on the soil amongst the plants—slugs simply loathe it." Mr. E. Poulter, of Mayfield, Sussex, writes:—"I have found 'Sanitas Powder' most efficacious in keeping off slugs." "SANITAS POWDER," 6d. and 1s. tins, and 12s. 6d. per cwt.

THE SANITAS CO., Ltd., Limehouse, London, E.

RUSTIC SUMMER HOUSES, trellis-work, Fencing, Pergolas, Arches, Seats, Bridges, Log Cabins, Loggias, etc. Send for our new LOG CABIN and RUSTIC CATALOGUE (just published), sent post free. BOULTON and PAUL, Ltd., Norwich.

WINTER-BLOOMING SWEET PEAS.— The "Télemly" Sweet Peas gained the Gold Medal (1907) of the Hort. Soc. of Algeria, and the
LARGE NEW WAVED VARIETIES
the Gold Medal of 1911. If sown in August or September will flower from December till May in Southern Europe, N. Africa, Madeira, etc. In England must be sown in pots and protected from frost till the end of February, and will flower in April in the open, or at Christmas in a sunny greenhouse. 12 seeds each of 4 plain and 3 waved varieties will be sent on receipt of 4s. by the Rev. E. ARKWRIGHT, 32, Seymour Street, W.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses. Portable buildings, etc. Catalogue gratis.

Now is the Time to Sow

SUTTON'S CYCLAMEN.
New Seed Ready.
SUTTON'S GIANT SALMON PINK.
SUTTON'S GIANT WHITE.
SUTTON'S GIANT CRIMSON.
Each, per packet, 2s. 6d.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
From ———, Esq.,
65, ——— Av.,
Ottawa, Ont., Canada.
1st December, 1909.
"I received your Manual for 1910, and consider it the very best you have ever produced, and think it the best on earth."

ALPINES.—100 in 50 good varieties, carriage paid, £2. Half and quarter quantities at same rate.
WHITELEGG and PAGE, Chislehurst.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-work, showing screens, wall panels, window surrounds, arches, arbors, etc., post free. BOULTON and PAUL, Ltd., Norwich.

LUPINUS Polyphyllus, Pink; Senecio Clivorum, Delphinium hybridum.
Strong plants of the above, 2s. per doz.; seed, 9d. per pkt.
CHAS. CUNDY,
Nurseryman and Seedsman, Sudbury, Suffolk.

FRUIT ROOMS, Game Larders, Garden Huts, Potting Sheds, Workshops, Cycle Houses, Boot-rooms, Servants' Mess-rooms, Children's Playrooms, etc. Illustrated Catalogue post free. BOULTON and PAUL, Ltd., Norwich.

GARDEN HOSE and FITTINGS, all sizes and lengths, best quality; list free.
HEATHMAN.
Hose Factory, Parson's Green, London, S.W.

IRON and WIRE FENCING for GARDENS, Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free. BOULTON and PAUL, Ltd., Manufacturers, Norwich.

R.H.S. EXAMS.—Write the Premier Coach re up-to-date correspondence course. Success certain. Particulars free.—"MEDALLIST," "Ferndale," Pinfold Street, Darlaston.

To Head Gardeners, etc.

WANTED, good healthy, Geranium Cuttings, 10,000 each Paul Crampel, Raspail, W. Brighton, Christine, Queen of White, Jacoby, Vesuvius, Hieover, Macmahon, Crystal Palace, Pollocks. Prices per 100 or 10,000 and samples. H. S. HOLMESTED, Bretby Nurseries, Burton-on-Trent.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.

XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.

XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N. S. or Florist for Richards' small pink list.

G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

BULBS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Narcissi Tulips, Hyacinths, etc., Home-Grown.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

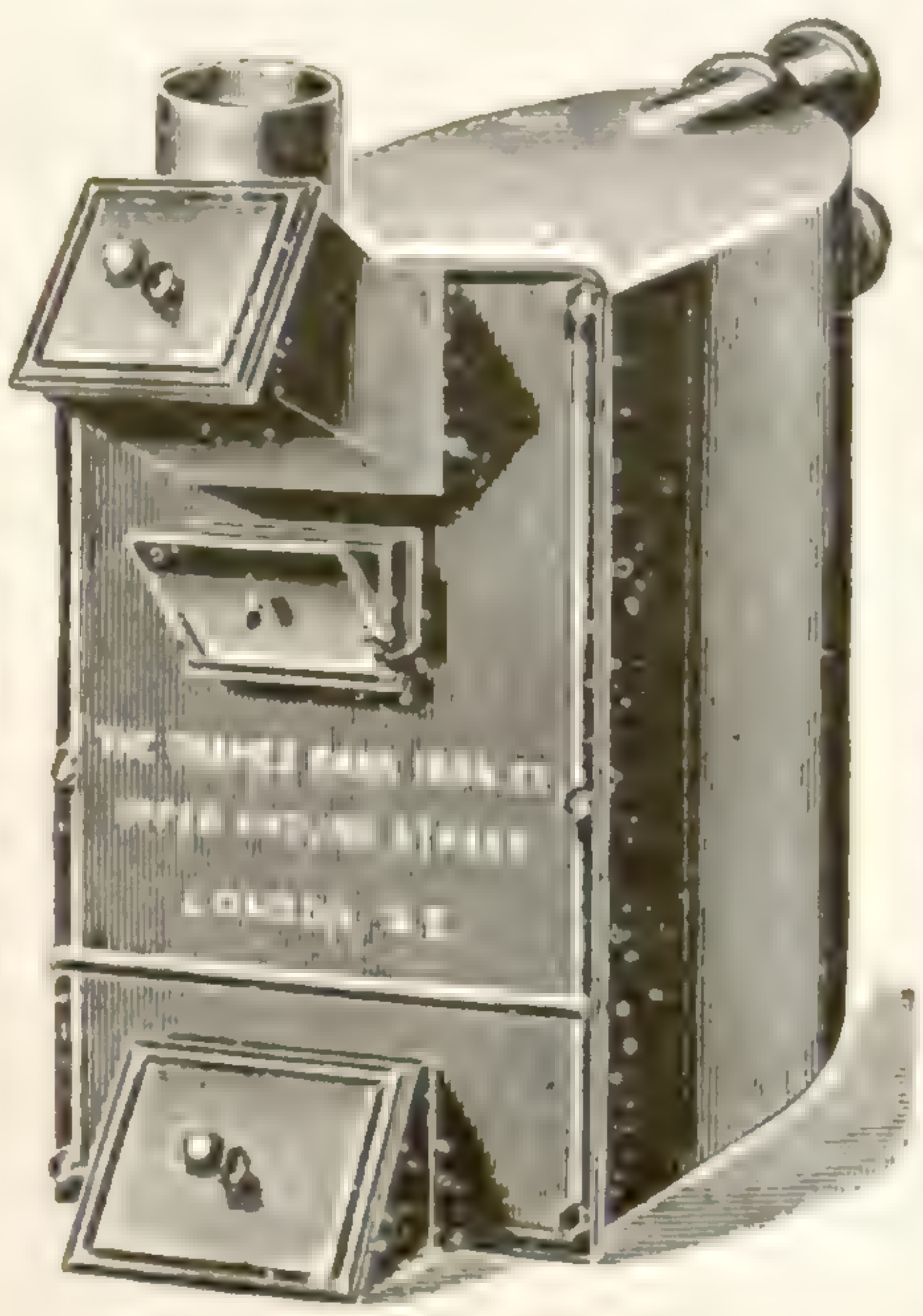
Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

'Phone: Hop. 763.

When next a Small Boiler you require

TRY

THE



HEEL

NONE TO BEAT IT.

THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.

4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

GARDENERS should write the man behind this boot for illustrated catalogue of reliable footwear.

We make sound, Scotch durable boots for the whole family. A joy to the feet.

Our **"Gardener" Boots** at **10/9** are a revelation.

NORWELL'S, PERTH, SCOTLAND.
C1 Established over 100 years.

CARNATIONS. AURICULAS. PINKS.

The NEW ILLUSTRATED CATALOGUE of above is now ready, and has been posted to all customers. The newest and best varieties are sold at the most reasonable prices.

Best **CARNATION** and **PICOTEE SEED** ready in October. **1/6** and **2/6** per packet.

AURICULA (Show and Alpine), PINK, and **POLYANTHUS SEED** now ready. **1/-, 1/6,** to **2/6** per packet.

Send for Catalogue to

J. DOUGLAS,
Edenside, **GREAT BOOKHAM.**

Orchids! Orchids!! Orchids!!!

The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application. — **J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana, Vanda Cœrulea Lushai Hill variety, dark blue type; Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue Free. J.E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

J. J. THOOLEN. The EXPORT Nurseries,
Heemstede, Haarlem Holland,
ESTABLISHED 1884.

Has the honour to announce that his Illustrated Price List of Bulbs and Plants in English, Autumn, 1911, at lowest prices, will be sent post free on application. **No Charge for Packing. Orders of 10/- and above entirely Free to Destinations** in England, Scotland, and Ireland, etc. First Quality guaranteed.

Some sorts of Bulbs noted out of Price List.

	Per 100. s.	d.	Per 1,000 s.	d.
Hyacinths, in the finest mixture for bedding or forcing	7	8	72	4
Hyacinths, single, first size, named, in 25 leading sorts, red, white, and blue vars., equal quantities, my selection	15	0	—	
Tulips, single early, in the finest mixture	2	0	18	4
Tulips, Darwin, mixed	3	0	25	0
Tulips, double, in the finest mixture...	2	2	20	0
Anemones, single mixed	1	4	12	0
Anemone, The Bride, pure white ...	1	4	12	0
Crocus, 1st size, in the finest mixture	1	4	12	0
Crocus, 2nd size, in the finest mixture	0	9	7	0
Scilla campanulata, blue bells	2	0	—	
Scilla campanulata, white bells	2	0	—	
Scilla sibirica, rich blue	1	6	14	6
Iris, Spanish, mixed	0	7	5	0
Iris, English, mixed	2	0	16	8
Narcis., single, in the finest mixture...	1	4	12	6
Narcis., Trumpet, in the finest mixture	2	6	20	0
Narcis., double, fine mixture	2	6	20	0
Narcis-Polyanthus, finest mixed ...	3	6	30	0
Snowdrops, Elwesi, the Giant Snowdrop	1	6	13	6
Ranunculus, French, double mixed ...	0	9	7	0

250 Bulbs of the same kind will be charged at the 1,000 rate; 25 at the price per 100; 6 at the price per 12.

Ask for Illustrated Price List and see the Collections.

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

NEW DAFFODILS, 1911.

Our revised Descriptive Catalogue of Rare Daffodils and May-flowering tulips is now ready, and we shall have pleasure in posting a copy to all applicants. Our South of Ireland grown Bulbs are acknowledged to be second to none. Write at once. Address—

WM. BAYLOR HARTLAND & SONS,
Bulb Growers,
33, PATRICK STREET, CORK.
Bulb Farm: ARD CAIRN, CORK.

STALKER'S Forest Trees, Fruit Trees. Roses, Bulbs, and Seeds
Are known all over the world, and cannot be surpassed for hardiness and quality.

Famous for Quality and Cleanliness.

D. STALKER & SON,
Government Contractors,
Catalogues Free. NAIRN. N.B.

MERRYWEATHER'S

614 PUMP

IS THE

Gardener's Friend.

Easy to Work.
Simplicity Itself.

Write or Call—

63, Long Acre,
LONDON, W.C.

Sales by Auction.

WEDNESDAY NEXT, Sept. 13th, at Two o'clock. A CONSIGNMENT of 26,645 LILIUM HARRISII, 3,200 Japanese Lilium Longiflorum formosum, 13,000 Roman Hyacinths, many thousands of Polyanthus and other Narcissus, Galanthus Elwesii, Italian and other Hyacinths, English-grown Tulips, Scillas, Freesias, Amaryllis, Cyclamen, Lilium candidum, etc.; also Palms and other foliage plants. Azaleas, Standard and other Bays from Belgium.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, London, E.C. On view morning of sale, and catalogues free.

DUTCH BULBS
10,000 Lots Sold Weekly.

SALES EVERY DAY
(SATURDAYS EXCEPTED),
At 10.30 o'clock, at
PROTHEROE and MORRIS'
Central Sale Rooms,
67 & 68, CHEAPSIDE, LONDON, E.C
Catalogues Free.
COMMISSIONS EXECUTED.

DUTCH BULBS.

MR. J. C. STEVENS begs to announce that his **Sales by Auction** are held every **MONDAY, WEDNESDAY** and **THURSDAY** at **12.30**.

Catalogues post free.

Lots purchased, packed, and forwarded to all parts.

STEVENS' AUCTION ROOMS
(Established 150 years),
38, King Street, Covent Garden, London, W.C.

STEVENS' AUCTION ROOMS. Estd. 1760.
BAY TREES, PALMS, ASPIDISTRAS.

MR. J. C. STEVENS will SELL BY AUCTION, on WEDNESDAY NEXT, at Half-past One o'clock, a fine consignment of LATANIAS, Kentias, Coryphas, Azaleas, Araucarias, Aspidistras, trained Bay Trees, etc., just received from Belgium. On view morning of sale. Catalogues on application to 38, King Street, Covent Garden, London, W.C.

IMPORTANT.

MESSRS. DOBBIE and CO are now executing orders for all varieties of SWEET PEAS from this season's crop, saved in Essex. Send for List and have your Seeds for Autumn sowing delivered in good time.

DOBBIE and CO., THE ROYAL SEEDSMEN,
EDINBURGH.

BUNGALOW, 5 rooms, garden, one-sixth acre, at 10s. per week. Cottage, just built, 6 rooms, garden, one-eighth acre, £26 per annum and taxes. Bolstead Cottages, Grove Road, Mitcham, near Streatham Common Station. Owner on premises Saturday 4 to 7, or write 12, Thurlow Hill, Dulwich.

A BARGAIN.—To be Sold, owing to the owner leaving the country, capital NURSERYMAN'S BUSINESS in the flourishing town of Rugby; price for quick sale, including the Freehold, greenhouse, stock, etc., £900. Full particulars from
JAMES STYLES and WHITLOCK, Rugby.

Bulbs

All best qualities at moderate prices Carriage paid.

Illustrated priced Catalogue post-free.

Dicksons *Bulb Growers* **Chester**

ONCE USED. ALWAYS USED. **The 'PATTISSON' LAWN BOOTS**

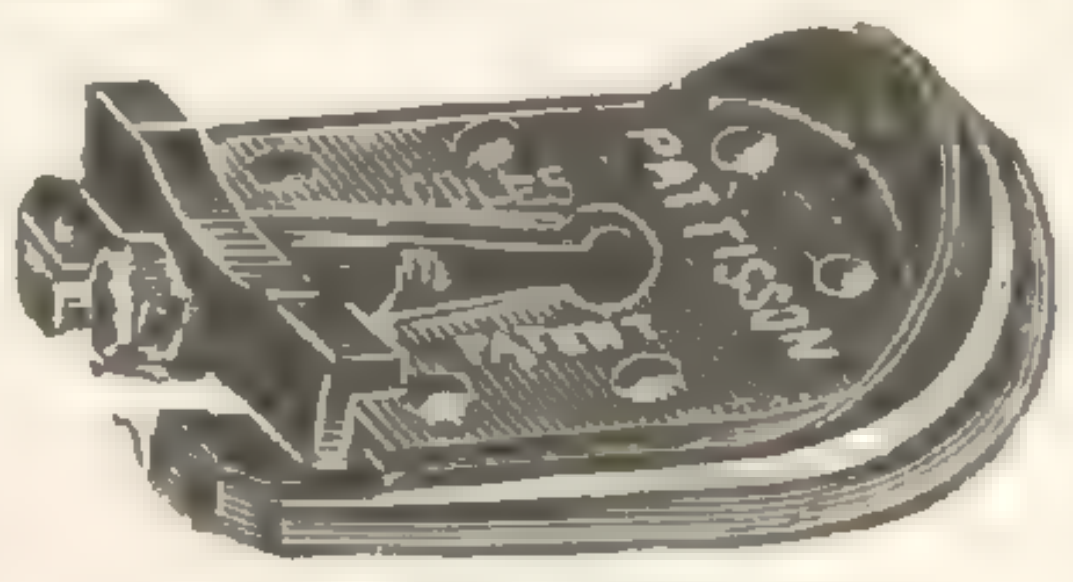


FIG. 1.

Simplest! Strongest! Most Economical!

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS

Silver Medal—
Royal Horticultural Society.
HUNDREDS OF TESTIMONIALS.
The Field says: **"As good as anything that could be devised."**

Illustrated Price List from—

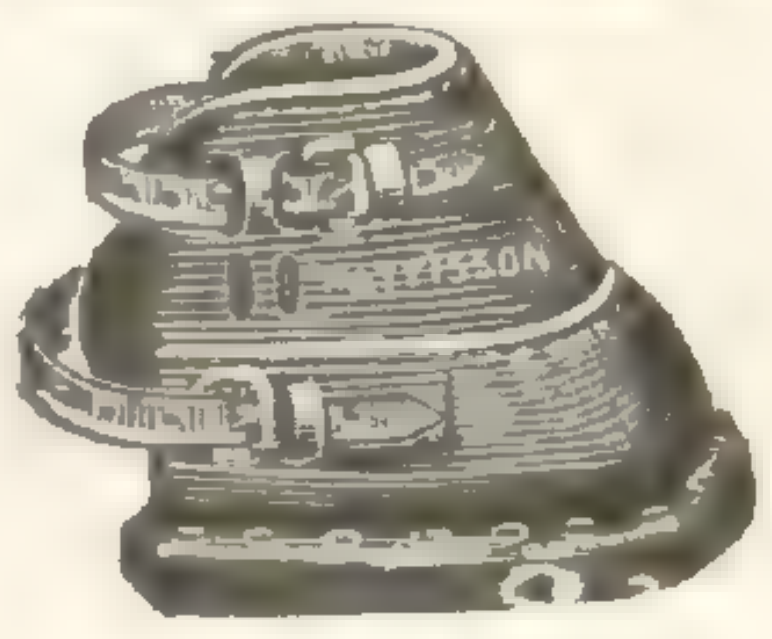
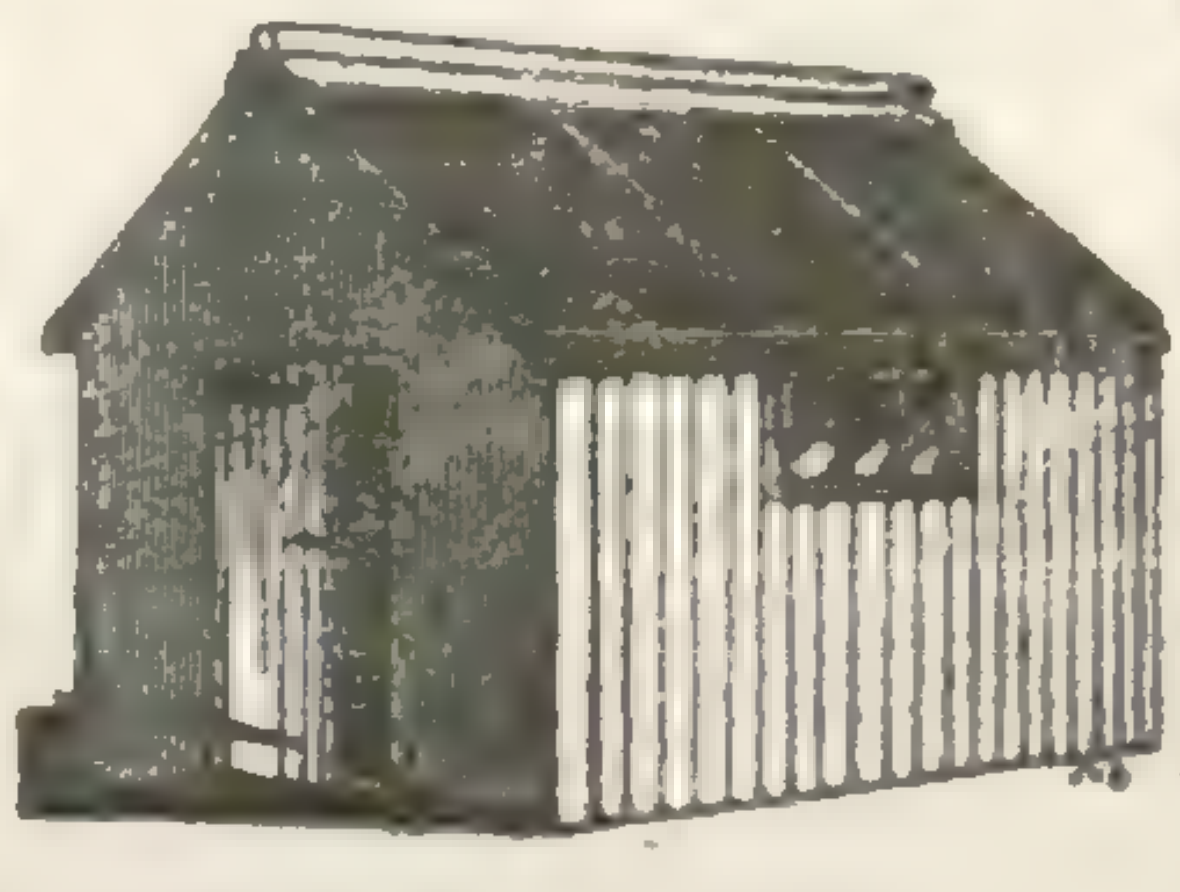


FIG. 2.

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM S.W.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

PORTABLE BUILDINGS. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

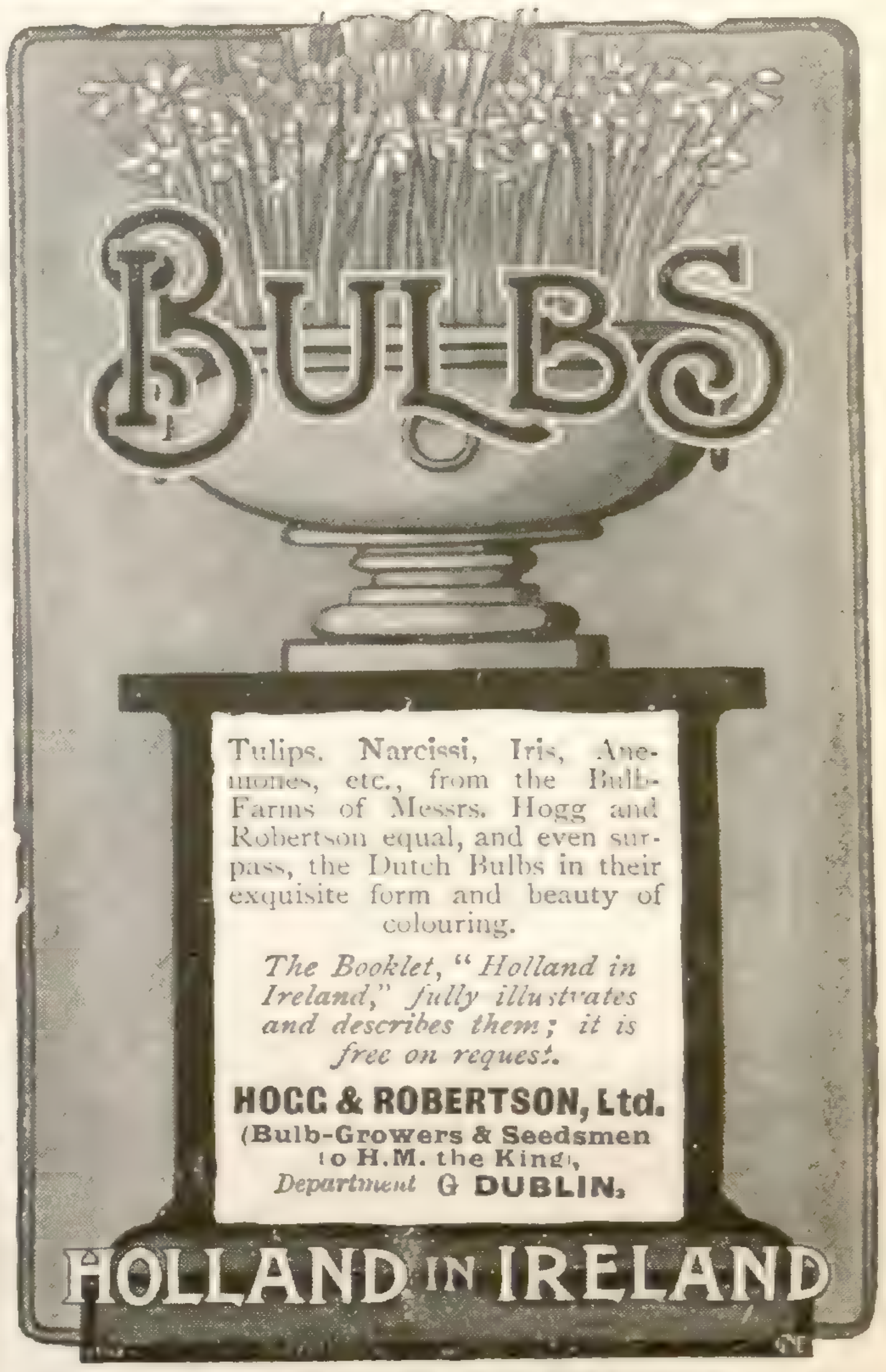
SIZES.	CASH WITH ORDER.	Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 18 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	16/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	19/6

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
ESTABLISHED 70 YEARS. ***BEDFORD.***
Works, 6 acres. Stock of Wood in Sheds, 10,000 *tons.*

PIGSTYE TIMBER, 1½in., Elm, 1½d. square foot; also 1in. cheap rough shelding boards, 1d. square foot. Portable houses of all kinds. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.



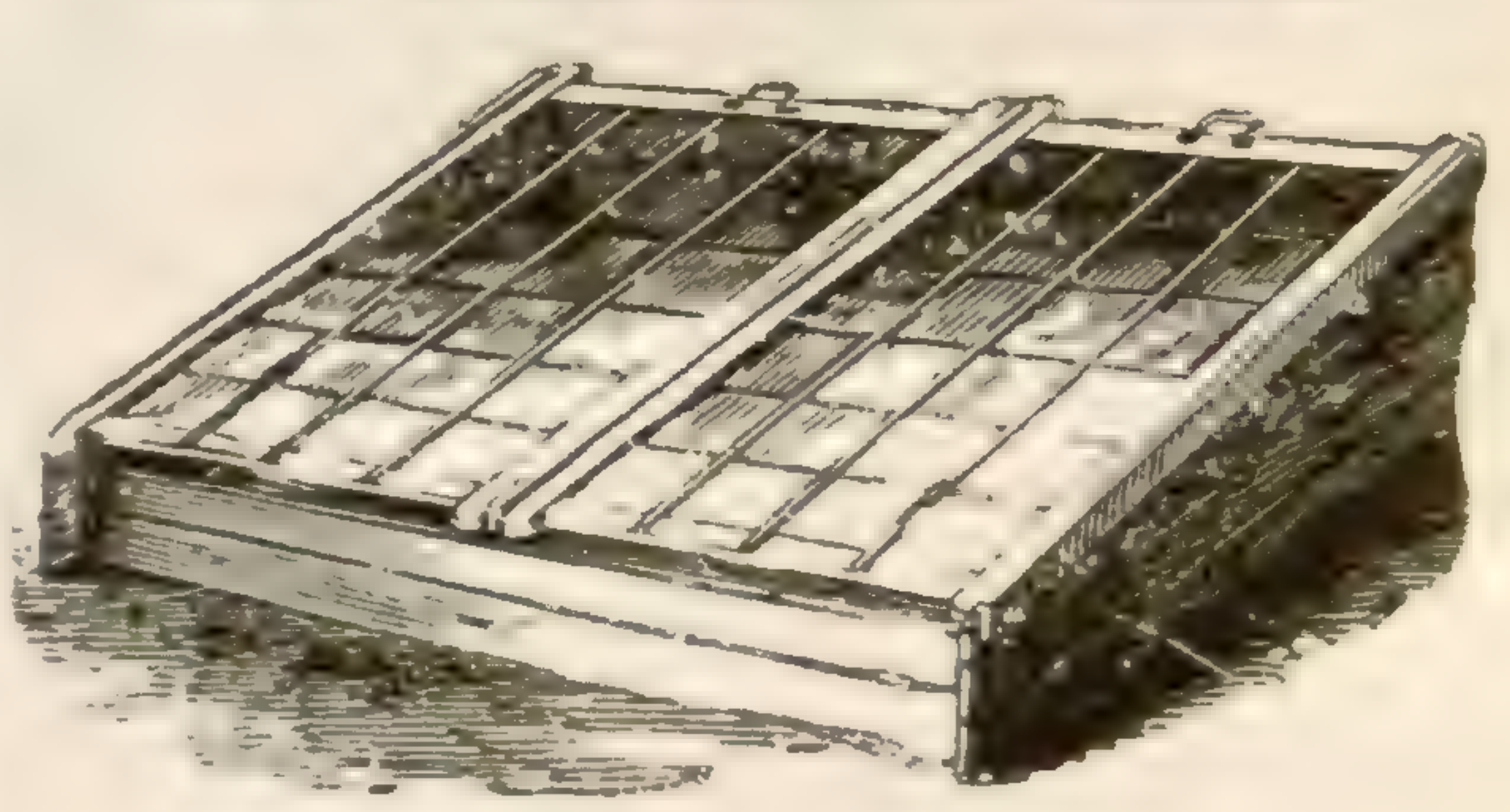
Tulips, Narcissi, Iris, Anemones, etc., from the Bulb-Farms of Messrs. Hogg and Robertson equal, and even surpass, the Dutch Bulbs in their exquisite form and beauty of colouring.

The Booklet, "Holland in Ireland," fully illustrates and describes them; it is free on request.

HOGG & ROBERTSON, Ltd.
(Bulb-Growers & Seedsmen to H.M. the King),
Department G **DUBLIN.**

PORTABLE CUCUMBER FRAMES.

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.		£	s.	d.
1-light 4 ft. by 6 ft.	CASH PRICES. CARRIAGE PAID.	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.		5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON, MANCHESTER.

GLASS & PAINT.

NICHOLLS & CLARKE, LTD.,
15 oz. and 21 oz. Glass,
IN ALL THE USUAL SIZES.
Shoreditch, London.
When sending for list please cut out this advt.

SUBSCRIBER'S ORDER FORM

Every Saturday THE GARDENERS' MAGAZINE. Twopence

To W. H. AND L. COLLINGRIDGE,
148 AND 149, ALDERSGATE STREET, LONDON, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose ________ for ________ months in advance.

Name ____________________

Address ____________________

Date ____________________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

* * If a receipt is required for amounts under 10s. a stamped envelope should be forwarded

ESTABLISHED 1832.
No connection with any other Firm of a similar name.

ANT. ROOZEN & SON'S

SPLENDID HYACINTHS, TULIPS,

AND OTHER

DUTCH, CAPE,

AND EXOTIC

BULBS AND PLANTS.

All of the Finest Quality.

Our Descriptive CATALOGUE *of the above, containing* FULL CULTURAL DIRECTIONS *and particulars as to* FREE DELIVERY, *will be sent post free on application to our offices, at OVERVEEN, HAARLEM, HOLLAND, or to our General Agents,*

MERTENS and CO.,
3, Cross Lane, LONDON, E.C.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

TREE CARNATIONS

The Newest and Best Varieties.

Strong, healthy and well-rooted plants only supplied.

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

Bulbs: NARCISSUS, DAFFODILS, TULIPS, &c.

All Good Flowering Bulbs; Worth Double.

NARCISSUS

100	Emperor	3/0
100	Empress	3/0
100	Henry Irving ...	4/0
100	Golden Spur ...	4/0
100	Horsfieldii	3/0
100	Victoria	3/0
100	Obvallaris	3/0
100	Grandis	3/0
100	Sir Watkin	3/0
100	Stella	1/6
100	Princeps	2/6
100	Ornatus	2/6
100	Double Daffs ...	4/0
100	Dbl. White Narcis.	2/6
100	Pheasant Eyes	2/6
100	Frank Miles ...	1/6

TULIPS

100	La Reine	3/0
100	Cottage Maid...	3/0
100	Chrysolora	3/0
100	D. de Parma ...	3/0
100	Keizerkroon ...	4/0
100	Golden Crown...	3/0
100	Picotee	4/0
100	Bouton d'Or ...	3/0
100	Prince de Ligny	4/0
100	Duc Van Thol, sgl	4/0
100	,, ,, dbl	3/0
100	King of Yellows	4/0
100	Mixed Tulips ...	1/6
100	Mixed Darwins	4/0
100	Darwins to name	10/6
100	Parrot Tulips to colour	2/6

Special offer in Mixed Narcis. and Daffodils, also Tulips for planting in grass, shrubberies, hedge rows, etc.

HYACINTHS

		per 100
12—1/9	to name in colours...... or	10/0
12—1/3	mxd in cols. or	9/0
12—1/9	Roman White or	12/0
100	Iris, Spanish, to name	1/6
12	Iris, German do.	6/0
12	Iris, English do.	1/6
100	Anemones, Scarlet	4/6
100	,, The Bride	1/9
100	,, St. Brigid	5/0
100	Scilla Siberica...	3/0
100	Freesia	3/0
100	Summer Snowflakes	5/0
12	Lilium Candidum	2/6
12	,, Crown Imperial ...	2/0
12	,, Auratums	7/0
12	,, Croceums	4/0
12	,, Longiflorums	4/0
100	Snowdrops	1/6
100	Ixias, to cols.	2/6
100	Crocus, in cols.	1/3
100	Lily of Valley ...	2/6
100	Jonquils	4/6
100	Ranunculus ...	3/0
100	Montbretia	3/0
100	Aconites	3/0
100	Chionodoxa ...	2/6
100	Polyanthus Narcis	3/0
100	Alliums	3/0
12	Begonias, choice	1/6
12	Violets, in sorts	1/6
12	Xmas Roses ...	4/0

Narcissus and Daffodils,	5/-, 7/6, 10/0 per 1,000
Tulips	10/-, 15/-, 20/- per 1,000

Many other varieties to offer; also all kinds of Herbaceous plants. Any of the above, half quantities at half price.

FRUIT TREES.—Apples, Pears, and Plums, all fruiting trees, **9/-** per dozen. Gooseberries, Currants (black, red, white), **3/-** per dozen. Loganberries and Raspberry-Strawberry, **9d.** each. Raspberry canes, **3/-**, **4/-**, per 100. Strawberry Plants, **1/6** per 100.

All kinds of Flower and Garden Seeds, also POTATOES. Send for List,

J. W. CROSS, Old Grammar School, WISBECH.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.

Our Work has stood the test of time.

COACHING by Correspondence; class for the R. H. S. Exam. Intending students should note brilliant past successes. Prospectus from MEDALLIST, Letheringsett, Holt, Norfolk.

BUNYARD'S FRUIT . . TREES . .

EARLY ORDERS RECEIVE FIRST ATTENTION WHEN PLANTING SEASON ARRIVES.

WRITE FOR CATALOGUE.

Geo. Bunyard & Co., LTD.,
Royal Nurseries,
—MAIDSTONE.—

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices. Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

Please Write for List.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

PERGOLAS.
Larch Poles at 1d. per foot. List Free.
PATRICK'S, Otley, Yorks.

OAK CRAMBLES.
Peeled and dry at ½d. per foot.
PATRICK'S, Otley, Yorke.

ROSE ARCHES.
Larch Poles, at 1d. per foot.
PATRICK'S, Otley, Yorke.

TREE STAKES AND GARDEN RODS.
Lists free.
PATRICK'S, Otley, Yorke.

There's a Call from the Garden for

CLAY'S

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK, AS AT SIDE.

CLAY'S LONDON FERTILIZER
TRADE MARK.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. Fourth Edition (Second Reprint). 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Manure Manufacturers and Bone Crushers, **Stratford, London, E.**

VOL. LIV.—No. 3,019. SATURDAY, SEPTEMBER 9, 1911.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

The "International" Admission Charges.

The charges that have been fixed for admission to the International Horticultural Exhibition to be held at Chelsea in May next is at the present time being much discussed in horticultural circles, and the trend of opinion is in the direction of their being too high. A few of those who hold decided views on this question have given public expression to them, and we learn on good authority that the Birmingham Committee have written to the directors urging them to adopt a lower scale than that to which objection is being taken. In discussing a question of this kind, there is no occasion to indulge in strong language such as some of the writers appear to have considered necessary in expressing their views, but there is an objection thereto, inasmuch as they are more likely to hinder than bring about a satisfactory solution of the question. As at present arranged, the charges are £2 2s. for the first day, £1 1s. the second, 10s. the third, 5s. the fourth, 2s. 6d. the fifth, and 1s. for the sixth, seventh, and eighth. That they are decidedly high, even for so important an exhibition as we trust this will be, there can be no doubt; but it is doubtful whether, with such scale, the general public will be present in sufficient numbers to make the exhibition a great financial success. The discussion has so far been limited to the charges of £2 2s. and £1 1s. for the first and second days respectively; but it appears to us that the charges for subsequent days should have further consideration. The exhibition opens on a Wednesday, with the result that 5s. will be charged on Saturday and half-a-crown on Monday, and the "splendid shilling" be unable to assert its power on either of the popular days during which the exhibition will be open. Financially this arrangement is likely to prove a mistake; for, owing to the practice now so general of spending the week-end out of town, Saturday's entertainments are largely dependent upon the middle classes of moderate means, who, whether they can afford it or not, will hesitate to pay 5s. for admission to a flower show. We believe that the best results financially would be derived from an admission fee of half-a-crown on the Saturday, as immense numbers of amateurs would be able to visit the show on that day who could not well afford to pay the higher fee, and one shilling for the Monday and the following days. If this revision be effected it will necessarily follow that the charges for the earlier days must be revised, as it is clear they should be, not in the interest of this or that section of the community, but because of the probability of the financial results proving more satisfactory. It is a point of some importance that the proposal for holding this exhibition originated with the Council of the Royal Horticultural Society, who undertook to contribute £1,000 and guarantee £4,000, on condition that the Fellows would receive admission tickets—not necessarily for the first day—according to the amount of their subscriptions, the rate specified being a ticket for each guinea paid annually. It was not assumed by the Fellows that the tickets would be presented to them gratuitously, but would be supplied at a price showing a substantial reduction as compared with the charge to the outside public. The directors have arranged to supply them at half-price to the two-guinea and four-guinea Fellows for the first and second days, but owing to the price of the tickets having been fixed so high there is a strong feeling among the Fellows that the sum they will have to pay is excessive. The one-guinea Fellows will not fare so well, for they will have to pay £1 10s. for admission on the first day, and 10s. on the second. The charges for an exhibition of this character must of necessity be higher than at an ordinary flower show, but they ought not to be so high as to prevent all but a comparatively small number seeing the products in their freshness and full beauty. We shall hope that long before the opening day of the exhibition wiser counsels will prevail, and the directors will adopt a scale such as will be readily accepted by the general public and the Fellows of the Royal Horticultural Society, and at the same time safeguard the financial success of the exhibition.

MR. WILLIAM J. MARLOW.

Bacterial Plant Diseases.

One of the sittings of the agricultural subsection at the British Association's meeting at Portsmouth was devoted to a consideration of bacterial diseases of plants, and, although no new discoveries relating to them were announced, much useful information was given in the course of the meeting. Professor M. C. Potter, of Newcastle, in opening the discussion, said the existence among plants of diseases that were caused by parasitic bacteria would hardly be questioned at the present day. The belief once generally held that the special features of plant structure, as the nature of the sap and the impervious character of the cell-wall rendered the plant immune to bacterial attack, had been shown to have no foundation in fact. It had, indeed, been proved by careful experiment, that certain bacterial diseases could be reproduced in healthy tissues with absolute certainty. The plant it has been proved possesses many vulnerable points of attack, and infection has been shown to take place through the water-pores, the stomata, the floral nectaries, and wounds, the last-named being very frequently used as a means of ingress by parasitic organisms. It had also been demonstrated that certain bacteria had the power of secreting a toxin and cytolitic enzyme which effected the destruction of the protoplasm and the degeneration of cellulose; moreover, the actual penetration of the bacterium through the cell-wall had been observed. Bacterial diseases of plants had been studied chiefly, though not exclusively, in cultivated forms. Those under cultivation differed materially from the wildings from which they had been derived, and the modification of cell structure, with the systems of cultivation which resulted in rapid growths of succulent tissue, rendered them more liable to attack. In Professor Potter's opinion, and those who have given any considerable share of their attention to the subject will not question its correctness, the diseases contracted by cultivated plants might be likened to those which were prevalent in human life under artificial conditions of modern civilisation. In combating these ills of humanity much had been accomplished, by attending to hygienic laws, improved sanitation, and the enforcement of methods of isolation, in lessening the evils arising from the activities of various bacteria. In the plant world, also, it was evident that much of the loss sustained by cultivators was due to the neglect of essential precautions and wrong cultural treatment. Until this is thoroughly understood and acted upon, cultivators will fail to grapple with the problems associated with plant diseases, and to appreciably diminish the losses from which they suffer. Professor Potter also pointed out that various beetles, slugs, and other pests, carried pathogenic germs, and by their bites, or by depositing them on wounds, enabled the bacteria to gain an entrance into the host in a manner similar to that of the carriage of malaria by mosquitoes. Many germs are, it was suggested, spread by man, and the careless handling of diseased material was regarded as responsible for much trouble. Attention was also directed by Professor Potter to the fact that susceptibility to disease was influenced by methods of manuring, and to the lowering of the power of the plant to resist disease by the too liberal use of nitrogenous manures. The injurious influence of the last-named fertilisers in the garden when used in excess is well known to experienced cultivators, but it is of the highest importance that it should be known to all, and Professor Potter did well to call prominent attention to the point.

Mr. William J. Marlow, whose splendid work at Hampton Court has been referred to in these pages on more than one occasion, has practically spent the whole of his life in the public service of England, Scotland, and Cape Colony, and the rapid progress he has made therein affords ample evidence that he has from the first shown abilities of a high order. Mr. Marlow first entered the service of the Royal parks and gardens from the Glasgow Botanic Gardens, where he occupied an important position for several years. Leaving Glasgow, Mr. Marlow received an appointment in the Hampton Court gardens, where he remained until he was promoted to the position of Superintendent of Greenwich Park. Five years later he succeeded Mr. W. Gardiner—who had been appointed to the charge of Hyde Park—as superintendent of the Hampton Court Park and Gardens, and during the four years that have elapsed since he assumed his higher responsibilities he has rendered services in the cause of the decorative aspects of the flower garden that could not well be overestimated. If mistakes are made in the preparation of a colour scheme for a private garden, it may be regrettable, but the consequences are not, as a rule, serious, because the scheme, when carried out, is seen by a limited number only. But in the case of great public gardens such as those of which Mr. Marlow has charge, it is a very different matter. Hampton Court Palace is annually visited by many thousands, the visitors embracing all classes of the community and coming from various parts of the United Kingdom. It is therefore of the highest importance that the whole of the arrangements should be bright, effective, and artistic, for it is impossible for large numbers of visitors to leisurely inspect an extensive garden without being greatly influenced by what they see. Whether the influence be good or otherwise, it will be reflected in many gardens in the following year. It has, therefore, been with much satisfaction that we have from time to time directed attention to the success achieved by Mr. Marlow in the embellishment of the Hampton Court Gardens in spring and summer, because we know that those who would be induced by our remarks to visit them would not only derive much pleasure from the varied and tasteful arrangements, but would obtain object-lessons of the most useful character.

"Gardeners' Magazine" Bulb Number.—Although we are still enjoying the brilliant sunshine and the high temperature that are usually regarded as characteristic of July, the time has arrived when due consideration must be given to the preparations essential to the production of displays of spring-flowering bulbs. We shall therefore devote our issue for the 16th inst. chiefly to the more important of the various classes of bulbous plants that bloom during the spring months. The contents will include papers on the notable daffodils of 1911, raising new daffodils, daffodils in the pleasure grounds; tulips, the value of Darwin tulips, good bedding tulips; spring-flowering bulbs by the waterside; poppy anemones, hyacinths for the conservatory and exhibition, hyacinths for bedding, Roman and Italian hyacinths, forced lily of the valley, and ixias and sparaxis in pots. The whole of the articles are written by well-known experts, and the issue will be profusely illustrated.

National Rose Society's Autumn Show. — Mr. E. Mawley, V.M.H., in writing to remind us that the autumn exhibition of the National Rose Society will be held at the Horticultural Hall on Thursday next, 14th inst., states that, owing to the drought, there will this year be a shortage in the roses from southern growers. To counteract this, as far as is practicable, several new classes have, he informs us, been provided, with a view to give growers a greater latitude in exhibiting than would have been possible under the original arrangements.

The Cornish Heaths.—A large number of members of the International Phytogeographical Society recently paid a visit to Cornwall and devoted several days to the investigation of the native flora, and were much interested in the heaths that are characteristic of the county. The foreign members of the excursion included: Professor F. E. Clements, Minneapolis; Professor H. C. Cowles, Chicago; Professor Drude, Dresden; Dr. Graebner, Berlin; Dr. Lindman, Stockholm; Professor Massart, Brussels; Dr. Ostenfeld, Copenhagen; Dr. Rubel, Zurich; Professor Schroter, Zurich; Professor Warming, Copenhagen; and Dr. Webber, Bremen. On the last day of the visit the members of the party were entertained at dinner at Truro, by the Royal Cornwall Institution. Mr. A. G. Tansley, lecturer in botany at Cambridge, said, in the course of the after-dinner proceedings, that the efforts of the Society for the Survey and Study of British Vegetation had brought a number of distinguished foreign botanists to England for a month to investigate the vegetation and discuss the various problems involved. The members of the committee and their foreign colleagues were delighted with the vegetation of the western-most county of England. They came particularly to see the heaths of the Lizard peninsula, with the glorious Cornish heath stretching over so many acres, almost square miles, and also to see the heath that grew in several places between Truro and Falmouth—Erica ciliaris.

New Open Space for Newmarket. For some years past the need of an open space for public use has been keenly felt by the residents in Newmarket, but hitherto it has not been found practicable to provide a suitable site without incurring a larger expenditure than the town could afford. The difficulty has now been removed by Sir Ernest Cassel presenting to the town Grafton House and grounds, which were the property of the late King Edward. The grounds have an area of about two and a-half acres, and are very convenient of access.

Trials of Potato Diggers and Sorters.—The Royal Agricultural Society have arranged for trials of potato diggers and potato sorters to take place on Mr. William Dennis's farm at Littleworth, Lincolnshire, commencing on Tuesday, the 26th inst. The fields on which the trials will be conducted are near the Littleworth station on the Great Northern Railway, and about six miles from Spalding. The trials should be of much interest to those concerned with the commercial culture of potatoes, for there are fourteen entries from seven different firms in the class for potato diggers, and six entries from five firms in the class for potato sorters.

Dundee Flower Show, which was held on August 31 and the two following days, was a great success. The entries amounted to 2,278, or 170 more than last year, and the exhibits were highly meritorious, plants and fruits being of great excellence. The Corporation Cup, which was offered as the premier award in the class for six bunches of grapes, was won by Mr. James Dickson, gardener to Lord Rowallan, Kilmaurs, with splendidly finished clusters.

Croydon Gardeners' Association.—The members of this association had their annual excursion a few days since, and as permission had been obtained to visit the Royal gardens at Windsor and Frogmore, a very enjoyable day was spent. Arriving at Windsor shortly after ten o'clock the forenoon was devoted to an inspection of the State apartments at the Castle, and, after lunch, a visit was made to the gardens. Need it be said that the members were much interested in the rock garden at Windsor, or that they greatly enjoyed the beautiful display of summer flowers on the East Terrace and the magnificent view obtained therefrom. From Windsor the party proceeded to the Frogmore gardens, and devoted several hours to an inspection of the objects of interest in the fine ranges of houses devoted to the cultivation of the various classes of plants.

flowers, and fruits that are grown under glass: to the magnificent herbaceous borders, and to the large walled-in enclosures wherein vegetables and hardy fruits are grown on a large scale, and to a high degree of perfection. At the close of a long and enjoyable day the members of the party turned homewards, much impressed with what they saw in the gardens over which Mr. Mackellar so ably presides.

The King's Acre Nursery Company, Lim., have been awarded the Grand Prix for their model orchard and collection of fruit trees in pots at the Festival of Empire Exhibition that is being held at the Crystal Palace.

Horticultural Sundries will have space provided for them at the International Horticultural Exhibition to be held at Chelsea next year, and those who purpose exhibiting in the sundries section are advised to make application for particulars before the 30th inst. By the term horticultural sundries is to be understood all subjects relating to a garden other than plants, flowers, trees, shrubs, seeds, and such like. Garden houses, garden furniture and ornaments, glass houses, heating apparatus, implements, appliances, tools, manures, insecticides, and garden recreations and games, etc., will be considered as sundries. Particulars can be had from Mr. Arthur J. Gaskell, Royal Horticultural Hall, Vincent Square, Westminster, London, S.W., to whom all communications respecting sundries, should be addressed.

The Blairgowrie Raspberry Harvest, which is now practically over, has been one of the most eventful since the cultivation of raspberries was developed in the district on commercial lines. The raspberry plantations in Perthshire extend over an area of 1,933 acres, and for a considerable period the raspberry industry was very profitable; but of late years, owing to over production or a want of co-operation among the growers, the profits have been very small. According to a correspondent of the "Scotsman," the total quantities of fruit despatched from Blairgowrie this year approached 2,400 tons, as compared with 3,100 tons last year, and 3,300 tons in 1909. During the season the prices have fluctuated in a remarkable manner. Early in the year a sale was reported at £12 per ton, which evoked much comment, because it is generally agreed that the cost of production is not less than £15 per ton. In the previous year the price dropped to £8 per ton, or only £3 per ton more than the cost of gathering the fruit. As the time for picking approached the price remained for a considerable period about £18 per ton. Subsequently the prices began to improve, and when the drought made evident the possibility of a short crop, they rapidly increased until £45 per ton was reached. The rains had the effect of lowering the prices somewhat, but the trade continued active at about £40 per ton. It is believed by those who are conversant with market conditions that next year's supply will be short of the requirements of buyers, as the boilers will not be able to carry over any portion of this season's stock to next year. The low prices of 1910 and 1909 had the effect of causing much land being devoted to other purposes, and, in some instances, prevented the growers properly manuring and cultivating the plantations. As raspberry growers are practically free from foreign competition, it should be possible to devise some means of co-operation in a district such as that of Blairgowrie, that would enable them to obtain remunerative rates for their fruit.

ROSE GARDEN GLEANINGS.

It is of no consequence if a rose has a park to look across or a wayside plot railed primly in as its surroundings; the tree, leaves, and blooms may be perfect; that is, perhaps, the chief reason for the popularity of the Queen of blossoms. As beautiful as the orchid, she needs no glass screen between the heavens and herself; for a shilling or two the same variety can be purchased that won the triumphs of all the great shows; and the cottage gardener may possibly cause it to exceed all previous records as to size and colour.

> "Whether by lake or velvet fields
> Of em'rald lawn, where sunshine yields
> Plumed shadows not a few;
> Or in the environs of thatch,
> Where not a window smiles to match—
> Of ev'ry tint but blue;
> The Roses laugh, and glow, and bless,
> Making all Summer one caress."

When we wish to glean information respecting roses, therefore, we can seek it far and wide; the tiny villa may be climbed by such Captain Christys as make us vow never again to taboo this rose on account of its short bloom season, or the new red walls may act as background to the glorious snowy cups of the Water-lily—resembling Frau Karl Druschki. A village smithy in the Midlands has become noted throughout several counties because of the scarlet-crimson masses of Gruss an Teplitz, aided by those of Cheshunt Hybrid, that completely canopy its roof. A humble little shop in a London suburb is yearly framed in such glorious rose-flushed Gloire de Dijon flowers as few country growers ever succeed in obtaining.

Neglected kinds of roses have, in many instances, proved themselves possessed of most valuable qualities this year. Cooling's Single Crimson Bedder has aroused immense enthusiasm for garden decoration, the large blossoms coming in trusses, and giving a feast of the true carmine shade that is always certain of appreciation; this is a Bourbon rose (known to not one cultivator out of ten), and belongs, therefore, to the class of Madame Isaac Perière and Mrs. Paul, Souvenir de Malmaison and Catherine Guillot.

The heat of sunshine generally faded all the coppery roses directly they unfurled, but it has been said that never have buds of Leonie Lamesch shown such rich vermilion as this season; their employment in quite a juvenile stage, without any opened blooms, with maidenhair fern, for table decoration, produced many a sensation. This dwarf polyantha seems to prefer to grow tall, and then gives many side-branching sprays of blossom; it is a charming variety for pot culture, and revels in a cool greenhouse. Window boxes of Baby Dorothy, a very dwarf polyantha, perpetual blooming, achieved another triumph; there is no reason why other of the miniature varieties should not be similarly employed, for though the trees will not thrive more than two years with roots so cramped, they can bo then added to the garden. Windows opening upon pink Mignonette, crimson Red Pet, or the double white, The Pet, would have an exceedingly fascinating foreground view.

The summer growth of ramblers has been slight in most places, owing to the lack of rain; it will be followed by prodigious blossoming next season in the opinion of scientists. Bushes, or pillars against walls, have such a rich effect, whether of ramblers or climbing hybrid perpetuals and hybrid teas, that lovers of artistic training of roses should bear the fact in mind. The trees, planted against a wall, as usual, are simply pruned, and tied so as to form huge sheaves of foliage and flower, instead of having their branches extended. H. S.

MODERN GENETIC SCIENCE.

Mr. W. Bateson, F.R.S., who was president of the agriculture sub-section of the British Association's meeting at Portsmouth, devoted his opening address to a consideration of the present position of genetics. The Council Chamber of the Town Hall, in which the sub-section held its meetings, was crowded, and the audience evinced much interest in the address, and heartily applauded the president at its close. The address was of equal interest to both agriculturists and horticulturists, and we give herewith a summary of the passages having special reference to genetics in relation to horticulture.

Research a Slow Process.

In his opening remarks Mr. Bateson said they were at the present time witnessing an outburst of activity in the promotion of science in its application to agriculture and horticulture. He therefore considered it necessary to point out, as a means of preventing disappointment hereafter, that in all sciences, whether pure or applied, research was nearly always a slow process, uncertain in production, and full of disappointments. Material advance must be especially slow in the case of an ancient art like agriculture, where practice represented the casual experience of untold ages and accurate investigation was of yesterday. The opportunities of discovery were so few that they could not afford to miss any, and it was to the man of trained mind who was in contact with the phenomena of a great applied science that such opportunities were most often given. Through his hands passed precious material, the outcome sometimes of years of effort and design. To tell him that he must not pursue that inquiry further because he could not foresee a direct and immediate application of the knowledge he would acquire was, he believed, almost always a course detrimental to the real interests of the applied science. In this country where the Development Commission would presumably for many years be the main instigator and controller of agricultural research, the constitution of the Advisory Board, on which science was largely represented, formed a guarantee that broader counsels would prevail, and it was to be hoped that, not merely this inception of the work, but its future administration also, would be guided in the same spirit. Let them, however, beware of giving false hopes.

He read lately in a newspaper an interview with a fruit farmer who was being questioned as to the success of his undertaking, and spoke of the pests and difficulties with which he had had to contend. He was asked whether the Board of Agriculture and the scientific authorities were not able to help him. He replied that they had done what they could, that they had recommended first one thing and then another, and he had formed the opinion that they were only in an experimental stage. He was perfectly right, and he would hardly have been wrong had he said that in these things science was only approaching the experimental stage. This should be notorious. There was nothing to extenuate. To affect otherwise would be unworthy of the dignity of science. Those who had the means of informing the public mind on the state of agricultural science should make clear that, though something could be done to help the practical man already, the chief realisation of the hopes of that science was still far away, and that it could only be reached by long and strenuous effort, expended in many various directions, most of which must seem to the uninitiated profitless wandering.

Application of Genetics to Practice.

With reference to the application of Genetics to practice, Mr. Bateson stated that when he went to the Temple Show or to a great exhibition of live stock, his first feeling was one of admiration and deep humility. Where all was so splendidly done and results so imposing were already attained, was it not mere impertinence to suppose that any advice they were able to give was likely to be of value?

But as soon as one entered into conversation with breeders, one found that almost all had before them some ideal to which they had not yet attained, operations to perform that they would fain do with greater ease and certainty, and that, as a matter of fact, they were looking to scientific research as a possible source of the greater knowledge which they required. Could scientists without presumption declare that genetic science was now able to assist these inquirers? In certain selected cases it undoubtedly could. On the other hand, it was equally clear that in a great range of examples practice was so far ahead that science could scarcely hope in finite time even to represent what had been done, still less to surpass the performance. They could not hope to improve the flavour of the Muscat of Alexandria grape or to excel the orange and pink colouring of the rose Juliet. Nothing that they knew could have made it easier to produce the rambler roses, or even to evoke the latest novelties in sweet peas, though it might be claimed that the genetic system of the sweet pea was as things go fairly well understood. To do any of these things would require a control of events so rare that for ages they must probably remain classed as accidents. On the other hand, the modes by which combinations could be made, and by which new forms could be fixed, were through Mendelian analysis and the recent developments of genetic science now reasonably clear, and with that knowledge much of the breeder's work was greatly simplified.

An interesting example was furnished by the work which Mr. H. M. Leake was carrying out in the case of cotton in India. The cottons of fine quality grown in India were monopodial in habit, and were consequently late in flowering. In the United Provinces a comparatively early flowering form was required, as otherwise there was not time for the fruits to ripen. The early varieties were sympodial in habit, and the primary apex did not become a flower. Hitherto no sympodial form with cotton of high quality had existed, but Mr. Leake had now made the combination needed, and had fixed a variety with high-class cotton and the sympodial habit which was suitable for cultivation in the United Provinces. Until genetic physiology was developed by Mendelian analysis, it was safe to say that a practical achievement of this kind could not have been made with rapidity or certainty.

"Rogues" in Crops.

One of the greatest advances to be claimed for the work was that it should induce raisers of seed crops especially to take more hopeful views of their absolute purification than had hitherto prevailed. It was at present accepted as part of the natural perversity of things that most high-class seed crops must throw "rogues," or that at the best the elimination of these waste plants could only be attained by great labour extended over a long period of time. Conceivably that view was correct, but no one acquainted with modern genetic science could believe it without most cogent proof. Far more probably they should regard these rogues either as the product of a few definite individuals in the crop, or even as chance impurities brought in by accidental mixture. In either case they could presumably be got rid of. The first question was to determine whether a given rogue had in it any factor which was dominant to the corresponding character in the typical plants of the crop. If it had, then they might feel considerable confidence that these rogues had been introduced by accidental mixture. The only alternative, indeed, was cross fertilisation with some distinct variety possessing the dominant factor, or crossing within the limits of the typical plants themselves occurring in such a way that complementary factors had been brought together. This last was a comparatively infrequent phenomenon, and need not be considered till more probable hypotheses had been disposed of. If the rogues were first crosses the fact could be immediately proved by sowing their seeds, for segregation would then be evident. Cross-fertilisation in culinary peas was excessively rare, but it was certainly sometimes effected, doubtless by the leaf-cutter bee or a humble-bee visiting flowers in which for some reason the pollen had been inoperative. But in peas crossing was assuredly not the source of the ordinary rogues, and he could not find any valid reason for doubting that the rogues were really recessives to the type. Whether this was the true account or not they would know for certain next year. Mr. Arthur Sutton had given him a quantity of material which they were now investigating at the John Innes Horticultural Institution, and by sowing the seed of a great number of individual plants separately, he anticipated that they would prove the rogue-throwers to be a class apart. The pure types then separately saved should, according to expectation, remain rogue-free, unless further sporting or fresh contamination occurred. If it proved that the long and attenuated rogues were really recessive to the shorter and more robust type, the case would be one of much physiological significance.

Academic Science and Practice.

There was another large and important class of cases to which similar considerations applied. He referred to the bolting or running to seed of crops grown as biennials, especially root crops. It had hitherto been universally supposed that the loss due to this cause—amounting in sugar beet as it frequently did to 5 or even more per cent.—was not preventable. This might prove to be the truth, but he thought it was not impossible that the bolters could be wholly, or almost wholly, eliminated by the application of proper breeding methods. If it proved to be so, they would have another remarkable illustration of the direct applicability of knowledge gained from a purely academic source. They had now the power to formulate rightly the question which the breeder was to put to nature; and this power and the whole apparatus by which he could obtain an answer to his question—in whatever sense that answer might be given—had been derived from experiments designed with the immediate object of investigating that scholastic and seemingly barren problem, "What is a species?" If Mendel's eight years' work had been done in an agricultural school supported by public money he could imagine much shaking of heads on the county council governing that institution, and yet it was no longer in dispute that he provided the one bit of solid discovery upon which all breeding practice would henceforth be based. He knew few lines of pure research more attractive, and at the same time more likely to lead to economic results, than an investigation of the nature of variation in size of the whole organism or of its parts. By what factors was it caused? By what steps did it proceed? By what limitations was it beset?

After referring at some length to animal life on the farm, Mr. Bateson said the question arose in regard to flax—How should a strain be bred which should combine the maximum length with maximum fineness of fibre? Now in this problem of the flax, and not impossibly in the others he had named, they had questions which could in all likelihood be solved in a form which would be of general, if not of universal, application to a host of other cognate questions. By good luck the required type of flax might be struck at once, in which case it might be fixed by ordinary Mendelian analysis; but, if the problem was investigated by accurate methods on a large scale, the results might show the way into some of those general problems of size and number which made a great part of the fundamental mystery of growth. That in all such examples the objective phenomena they saw were primarily the consequence of the inter-action of genetic factors was almost certain. In the economies of breeding a thousand phenomena were waiting for analysis and reference to their specific causes. What, for instance, was self-sterility? The phenomenon was very widely spread among plants, and was far commoner than most people supposed who had not specially looked for it. Why was it that the pollen of an individual in these plants failed to fertilise the ova of the same individual? A sexual multiplication seemed in no way to affect the case. The American experimenters were doubtless right in attributing the failure of large plantations of a single variety of apples or of pears in a high degree to this cause. If they could grasp the rationale of self-sterility they opened a new chapter in the study of life. It might contain the solution of the question, What was an individual?—no mere metaphysical conundrum, but a physiological problem of fundamental significance.

Increased Yields.

What, again, he asked, was the meaning of that wonderful increase in size or in "yield" which so often followed on a first cross? They were no longer content, as Victorian teleology was, to call it a "beneficial" effect and pass on. The fact had long been known and made use of in breeding stock for the meat market, and of late years the practice had also been introduced in raising table poultry. Mr. G. N. Collins, of the United States Department of Agriculture, had recently proposed, with much reason, that it might be applied in the case of maize. The cross was easy to make on a commercial scale, and the gain in yield was striking, the increase ranging as high as 95 per cent. These figures sounded extravagant, but from what he had frequently seen in peas and sweet peas he was prepared for even greater increase. But what was this increase? How much of it was due to change in number of parts, how much to transference of differentiation or homœosis, as he had called it—leaf-buds becoming flower-buds, for instance—and how much to actual increase in size of parts? To answer these questions would be to make an addition to human knowledge of incalculably great significance.

In the application of science to the arts of agriculture, chemistry—the foundation of sciences—very properly and inevitably came first, while breeding remained under the unchallenged control of simple common sense alone. The science of genetics was so young that when they spoke of what it also could do they must still for the most part ask for a long credit; but he thought that if there was full co-operation between the practical breeder and the scientific experimenter they would be able to redeem their bonds at no remotely distant date.

At the close of the address a vote of thanks was, on the motion of Mr. A. D. Hall, seconded by Mr. Leonard Sutton, accorded Mr. Bateson.

OBITUARY.

MR. ROBERT LAIRD.

It is with much regret that we have to record the death of Mr. Robert Laird, who died at his residence at Pinkhill, Corstorphine, on the 2nd inst., in his 52nd year. Mr. Laird was the second son of the late Mr. R. B. Laird, and occupied a prominent position in horticultural circles, and was held in high estimation by all who had the pleasure of knowing him. Mr. Laird was secretary of the Scottish Horticultural Association from 1891 to 1900, and subsequently was elected to a seat on the Council, and later as a vice-president of that important body. For many years he was a member of the Council of the Royal Caledonian Horticultural Society, a position from which he retired last year. Mr. Laird leaves a widow and six children, and to them we tender our heartiest sympathy in the great loss they have sustained.

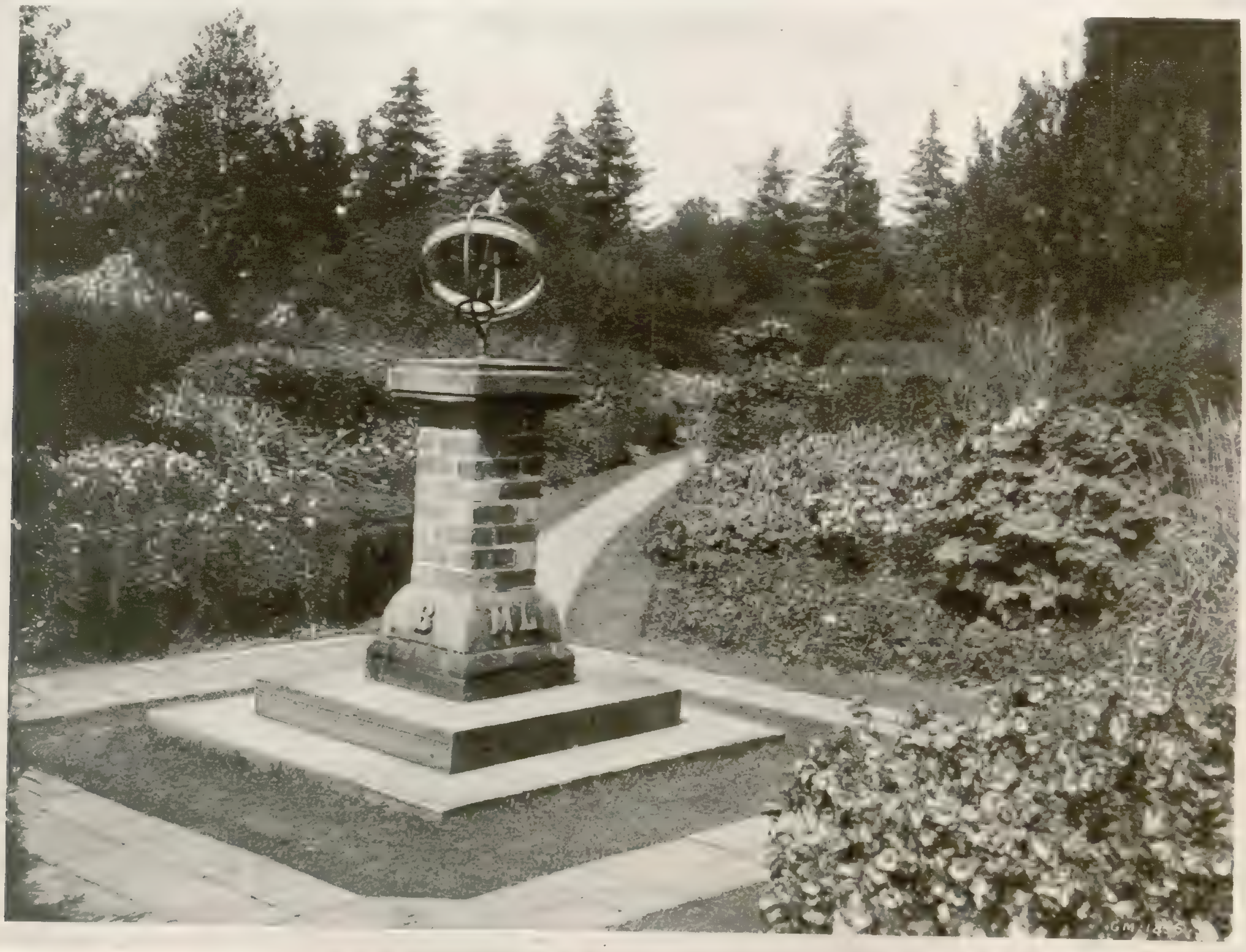
DAHLIAS TO PERFECTION.—A thorough guide to the successful culture of these popular flowers is "Dahlias and Their Cultivation," by J. B. Wroe, price 1s. net, by post 1s. 2d., bound in cloth 1s. 6d., by post, 1s. 8d., from W. H. and L. Collingridge, 148, Aldersgate Street, London

THE SUN-DIAL GARDEN, MADRESFIELD COURT.

The sun-dial garden, of which one-half is shown in the accompanying illustration, is only one of a number of surprise gardens that, with no repetition of anything, constitutes one of the chief characteristics of the horticultural aspects of Earl Beauchamp's famous Worcestershire seat. We reach this attractive garden by a curved path, passing amongst large irregular beds of lavender, rosemary, santolina, southernwood, and specimens of other fragrant subjects planted in the grass, leaving the celebrated maze on the left. In the sun-dial garden proper there is a magnificent collection of true herbaceous plants only, arranged in large irregular groups, according to the height and habit of the plants, of which no one variety is repeated or duplicated. The chief object aimed at is to have as varied and as long a succession of bloom as possible

The central part of the path is partly tiled, laid on dry gas ashes, so as to be comfortable to walk on during wet weather. The outer parts are of short-mown grass, which sets off the beauty of the flowers, and is available for walking on when the weather is dry and hot. The borders are about fifteen feet in width, enclosed between holly hedges, and trimmed carefully with the knife, and without formality.

Leading out of the sun-dial garden another surprise is Lady Mary's garden, the outer hedges of trimmed yew forming a Greek "M." planted entirely with hardy and half-hardy annuals, these being arranged in large groups, irregular in shape and size, and in accordance with a clearly defined colour scheme. These groups are intersected by well-kept grass walks. This garden of annual flowers has, during the past two months, been the gayest part of the gardens. That this should have been the case in such a hot and dry summer as the one we have experienced this year may come as a surprise to many of our readers, but those who have a feeling of surprise in reading this statement should remember that Mr. W. Crump, V.M.H., who has for a long period had charge of the Madresfield Court gardens, is, by common consent, one of the most able of present-day gardeners.



VIEW IN THE SUN-DIAL GARDEN, MADRESFIELD COURT. [Photo: H. N. King.
The seat of the Right Hon. Earl Beauchamp, K.C.M.G.

GLOXINIAS.

It seems to be a doubtful question to what genus the beautiful flowering subjects so much grown in gardens as gloxinias rightfully belong, but however botanists may differ, it is scarcely likely that the name fixed by long use will be generally superseded.

By some authorities the only recognised species of gloxinia in general cultivation is G. maculata, introduced from South America in 1739. This reaches a height of a couple of feet, the flowers being borne on the upper part of an erect leafy stem. They are of a purplish-blue colour. This gloxinia, which derives the specific name of maculata from the spots on the stem, especially on the lower half, varies a good deal in colour, some of the forms being quite pale compared with others. It flowers, as a rule, towards the end of the summer. According to the late Colonel Beddome, F.L.S., it is very commonly distributed throughout Southern India, where it grows like a weed, and flowers profusely.

The gloxinias of gardens, which are among the most beautiful of flowering subjects under glass during the summer months, belong to quite a different race from G. maculata. As one whose experience of these charming plants dates back many years it is impossible to overlook the fact that considerable improvements have been effected within recent times. This is particularly manifest in the manner in which gloxinias are now raised from seeds, for whereas at one time all the best forms were propagated by means of leaf cuttings, now seedlings from a reliable source can be depended upon to come true to character. However fine a collection is grown, and however large a quantity may be in bloom, gloxinias cannot be cut in sheaves for decorative purposes, and this is perhaps the reason that they are not more often met with. Again, they are looked upon as requiring a great deal of heat, but this is altogether a fallacy. True, they will readily respond to warm treatment, and, on the other hand, they may be grown comparatively cool. I have had them in good condition in summer without any artificial heat whatever after the month of May, not seedlings of the same year, of course, but strong one-year-old tubers.

An instance of the rapid development of gloxinias when raised from seed, and placed under favourable conditions, was shown at the meeting of the Royal Horticultural Society on July 18, when groups of the most strongly marked forms were exhibited. The flowers were very large, and represented altogether the finest things in gloxinias. These plants, which were in four-inch pots, were raised from seed sown a little less than six months previously, and were flowering freely.

W. T.

NEW PLANTS, ETC.

HOULLETIA WALLISI.

An attractive and rare species which was discovered by Wallis upwards of forty years ago, but for a long period has been lost to cultivation. The plant is of moderate growth, and has decumbent spikes bearing comparatively large waxy flowers, which are soft yellow, freely marked with light purple on the inner side of the segments. A.M., R.H.S., August 29. Messrs. Charlesworth and Co., Haywards Heath.

NYMPHÆAS.

Gladstoneana.—A beautiful white water lily; the flowers are larger than those of the other white varieties, and are of the finest form, and freely produced. A.M., R.H.S., August 29. Leopold de Rothschild, Esq., C.V.O., Gunnersbury House, Acton (Mr. J. Hudson, V.M.H., gardener).

NYMPHÆA MRS. RICHMOND.
Flowers of large size, soft pink, with carmine-pink centre. A.M., R.H.S., August 29. Leopold de Rothschild, Esq., C.V.O.

Mrs. Richmond.—One of the latest and finest of the many beautiful water lilies raised by the late M. Latour-Marliac. The flowers are of large size and superb form, and the colour is soft pink with deep carmine-pink centre. A.M., R.H.S., August 29. Leopold de Rothschild, Esq., C.V.O.

GLADIOLUS YELLOW BEAUTY.

A remarkably beautiful variety; the flowers large and of superb form; the colour pale sulphur yellow, with lemon-yellow blotch on the lower segment, and a few purple markings in the centre. An illustration of this gladiolus was given in our last issue. A.M., R.H.S., August 29. Messrs. Kelway and Son, Langport.

PLUM BLACKBIRD.

An excellent culinary plum raised from a cross effected between The Czar and Curlew, and, as evidenced by the branches shown, highly productive. The fruits are of medium size, ovate, and with deep purple skin, covered with a fine bloom; the flesh yellow, juicy, and richly flavoured. A.M., R.H.S., August 29. Messrs. Laxton Bros., Bedford.

DAHLIAS.

Bridesmaid.—A distinct single variety, remarkable for its high quality; the blooms are of medium size, even in outline, and the colour is a pleasing shade of salmon-rose. A.M., R.H.S., August 29. Messrs. J. Cheal and Sons.

Mrs. Stephens.—A cactus variety, equally remarkable for its fine form and high finish, the colour, pale yellow, passing to deep lemon-yellow in the centre. A.M., R.H.S., August 29. Messrs. J. Stredwick and Sons, St. Leonards.

Killarney.—An attractive single variety, with blooms of fine form, the colour light terra-cotta suffused rose, with crimson zone round the disc. A.M., R.H.S., August 29. Messrs. J. Cheal and Sons, Crawley.

Turtle Dove.—An attractive cactus variety, the flowers of good form, suffused with crimson. A.M., R.H.S., August 29. Messrs. J. Stredwick and Son.

CYPRIPEDIUM SPECIOSUM.

A handsome Japanese lady's slipper, which has been confused with Cypripedium macranthum, and also with C. Thunbergi, but it is now regarded as quite distinct from both species. The flowers are whitish or pale flesh-colour, veined with rose. "Bot. Mag.," t. 8,386.

ONCIDIUM SANDERÆ.

A handsome species of the same general character as the well-known O. Papilio, but more effective in colour. It is a native of Peru, and was found in the Mayobamba district some two years ago by Mr. Forget. The flowers are large; the petals are long and narrow, and reddish-brown, and the sepals are broad, much undulated, and bright yellow, freely spotted with brown, and the broad waved lip is yellow freely spotted at the margin with red-brown. Bot. Mag., t., 8,374.

LONICERA HENRYI.

A handsome species discovered by Mr. A. Henry in Hupeh, where it was subsequently found by Mr. E. H. Wilson, when collecting for the Arnold Arboretum. This honeysuckle has been in cultivation at Kew during the past three years, and promises to prove hardy in this country. Vigorous in growth, and blooming freely, it is regarded as a valuable addition to the evergreen climbers. The flowers are of medium size, pale yellow, the upper surface of the corolla lobes light red. Bot. Mag., t. 8,375.

VILLARARESIA MUCRONATA.

An interesting Chilian tree, with leathery dark green leaves that closely resemble those of a green-leaved holly, and bearing clusters of short racemes of white flowers. There is a fine tree at Abbotsbury, the residence of the Earl of Ilchester, which was planted in 1840, and has attained a height of between fifty and sixty feet, but the species is only hardy in England in favoured positions in the south-western districts. Bot. Mag., t. 8,376.

CATTLEYA REX.

A distinct and handsome cattleya, which was discovered by Mr. Bungeroth on the western slopes of the Peruvian Andes, and introduced to cultivation by Mr. Lucian Linden about twenty-one years since. It became rare in cultivation until nearly two years ago, when Messrs. Sander and Sons obtained a consignment from Mayobambo, in the Upper Amazon region. The flowers are ivory-white, with rose-coloured lip, veined with dark red. "Bot. Mag.," t. 8,377.

COLUMNEA GLORIOSA.

One of the most handsome of the species that have been introduced to cultivation, and were stove plants popular, it would be regarded with much favour by cultivators. It is of trailing habit, has opposite ovate-oblong leaves, densely hairy on the upper surface, and the flowers are axillary, standing erect on short peduncles, and are brilliantly coloured scarlet and yellow. "Bot. Mag.," t. 8,378.

PROSTANTHERA PULCHELLA.

A New Zealand under-shrub of considerable interest. It is of slender growth, and bears a profusion of light purple flowers. In the gardens of Tresco Abbey it grows freely in the open borders, but at Kew it has a place in the Temperate House, where it makes a satisfactory growth and blooms freely. "Bot. Mag.," t. 8.379.

SAUSSUREA VEITCHIANA.

A species of a genus of composites that is of considerable interest, and may prove useful in the wild garden. The flower heads are rather small, purple, and more or less enclosed in membranous veined bracts or upper leaves, which are coloured green and rose. "Bot. Mag.," t. 8,381.

VIBURNUM RHYTIDOPHYLLUM.

An evergreen shrub distinct in character and handsome in aspect, introduced from Western China some years since, and now generally known. It is quite distinct from all the other viburnums, and has large oblong-lanceolate rugose leaves, and bears terminal cymose flower heads, which are followed by bright red fruits which, with age, become quite black, and are much polished. "Bot. Mag.," t. 8,382.

THE SILVER WATTLE IN NEW ZEALAND.

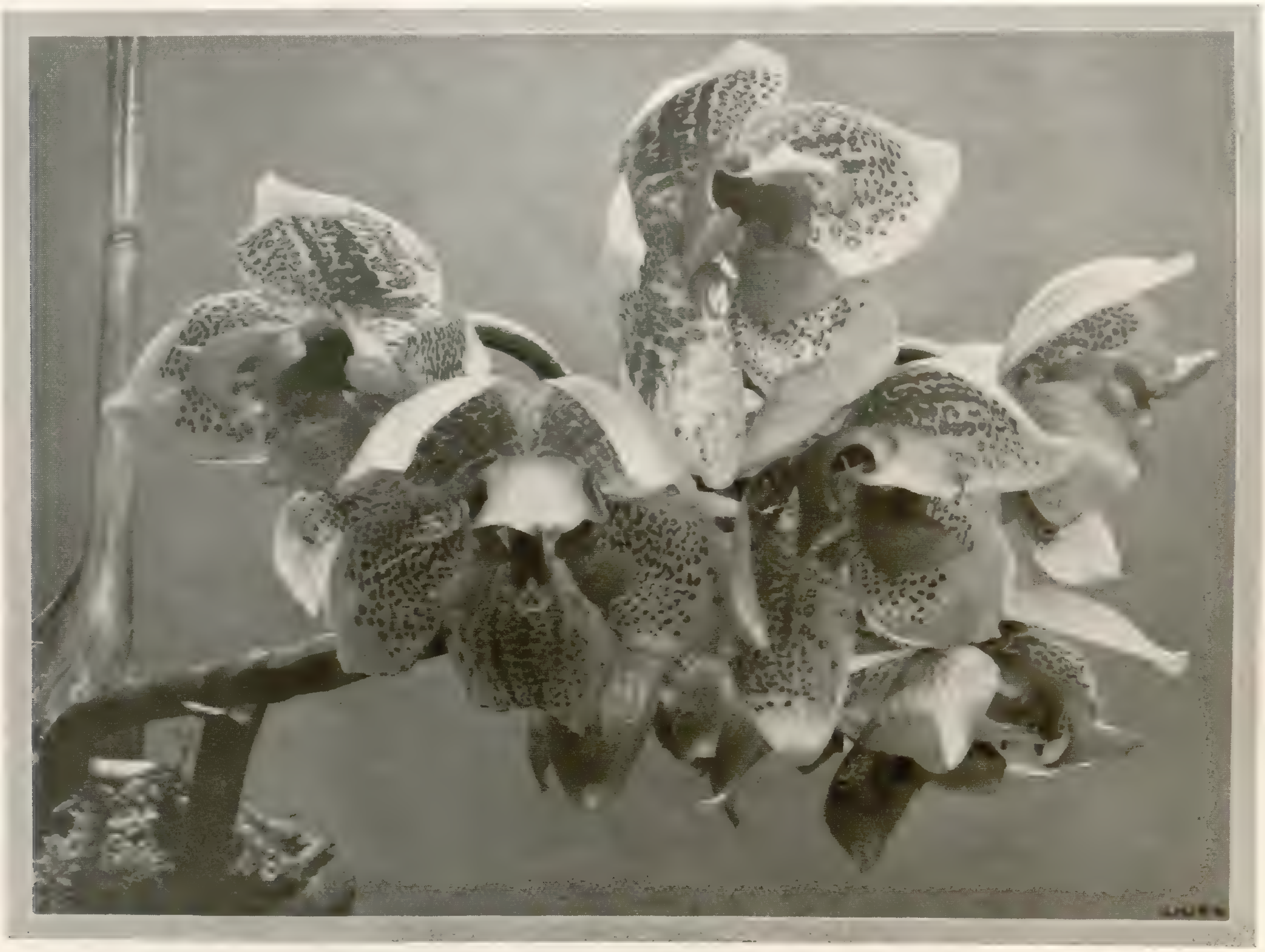
I was much interested in an article that appeared in the Gardeners' Magazine a short time since, on the Silver Wattle (Acacia dealbata), and its value as a decorative plant, and I thought that the following might interest some of your readers. In this district (Auckland, N.Z.) large quantities of the Black Wattle (Acacia decurrens) are grown commercially for the bark. The bark is stripped from the tree when about eleven years old, and when the tree is from six to nine inches in diameter. After drying the bark is ground, and used for tanning purposes.

The silver wattle contains so little active tanning principle that it is commercially of no value, and if once introduced becomes a pest, and extremely hard to exterminate. When the industry was first started here by some means a quantity of silver wattle seed was sent in place of black wattle, and wherever it was sown it remains a perfect pest. It is no use cutting or firing it, as every root will throw out shoots, and it will come up as thick as couch.

It is a pity that such a beautiful flowering tree should become such a nuisance; it is but another illustration of how very careful people should be in introducing new plants, particularly to tropical or sub-tropical districts. The silver wattle, if allowed to grow, makes a splendid upright tree, having a trunk several feet in diameter, and with the trunk perfectly upright, and up to 100 feet high.

There is another acacia out here which is a splendid variety, in fact, one of the best; I speak of Acacia Baileyana. It does not make as tall or as fine a tree as the silver wattle, but the silvery-grey foliage, and the deep golden flowers, make it a perfect picture when in bloom. It flowers here during the winter, and for that reason is doubly welcome.

G. Mills.



HOULLETIA WALLISI.

Flowers pale yellow, freely marked with purple. A.M., R.H.S., August 29. Messrs. Charlesworth and Co.

THE POTATO CROP IN SCOTLAND.

The present season of abnormal spells of drought and excess of warmth, however inimical it may have been to certain crops, has, upon the whole, proved favourable to the potato, and should the remaining portion of the growing period be fairly genial, large crops of fine quality will undoubtedly result. On very shallow or light land the tubers, though numerous, will most likely be on the small side, but where conditions the reverse prevail, or upon well-manured and deeply-worked soils, sound and bountiful crops are pretty well assured.

Garden Crops.

Of these the more precocious kinds were ready for raising ten days or a fortnight earlier than usual, and, although the produce from the warmer sites, as raised borders having a southern aspect, was not, as stated, particularly large, on the other hand, there were but few very small or unusable tubers, and the quality throughout was of the best.

Second earlies followed very closely upon these in regard to maturity, and occupying, according to custom, a somewhat cooler site in the more open quarters of the garden, these have, and are still being, turned out of the soil in the best possible condition, and it would be difficult to particularise any one of the well-known varieties as being of outstanding merit. All are good both in regard to crop and in cooking qualities. The sorts grown comprise Sharpe's Express, Midlothian Early, Sir John Llewelyn, British Queen, Sutton's Abundance, and a few others. All of them are ready for raising, the haulm in most cases being decayed or fast approaching that condition.

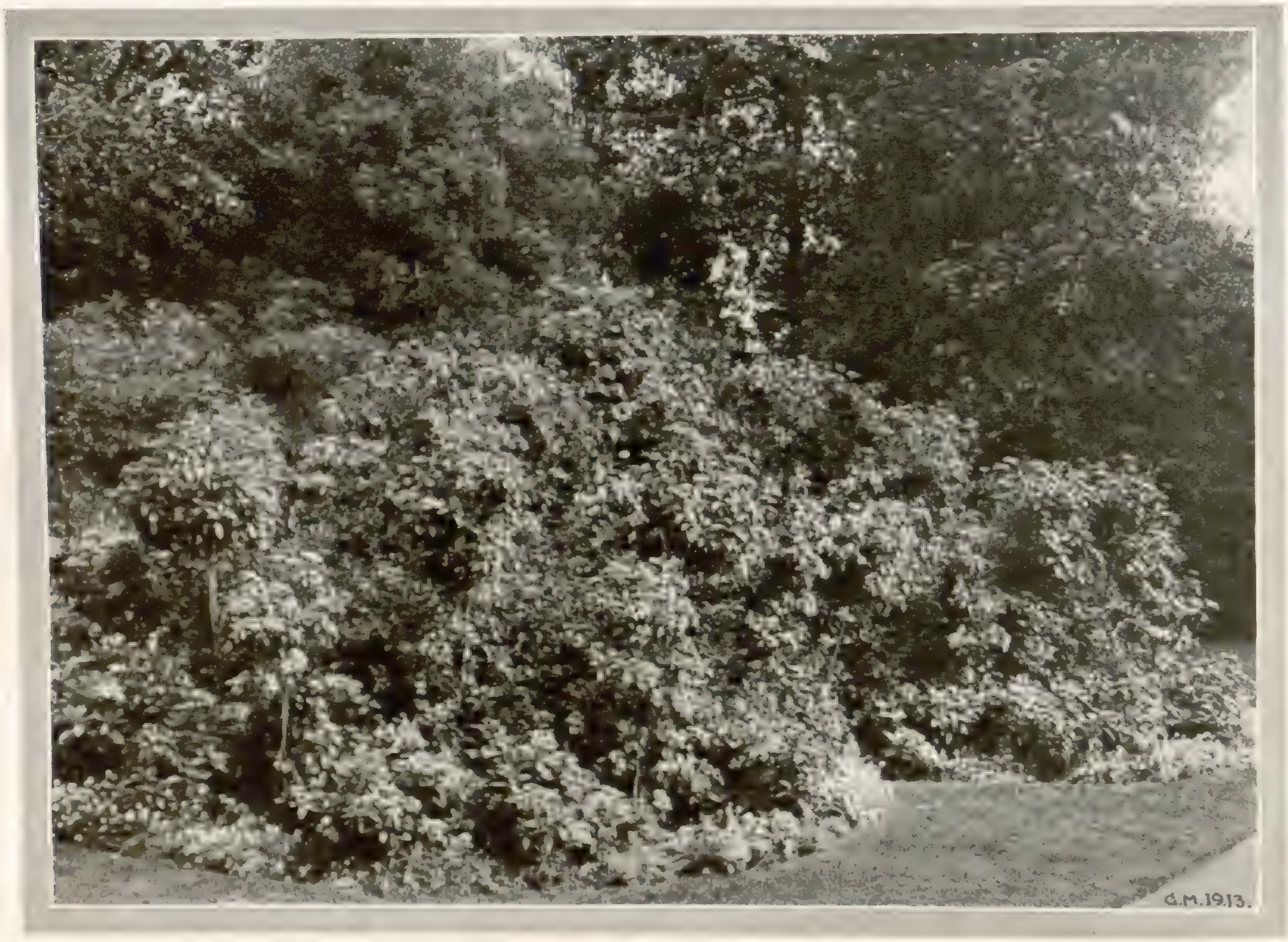
Field Crops.

As the later varieties constitute the greater portion of these, it is too early as yet to dwell very closely upon the eventual yield, but if strong and healthy growth hitherto can be taken as a guide the results in due course should be very satisfactory. This season apparently less use than usual has been made of the spraying machine, which may probably be accounted for owing to the dry, warm weather, growers considering spraying as a preventive of disease unnecessary. Whether the course adopted was correct remains to be seen, but at present there are not lacking signs that the foliage of these later crops will very rapidly disappear, when further swelling of the tubers must cease. Spraying with the usual mixture might or might not have prevented this early loss of foliage, but it evidently arises from a cause other than maturity or ripeness of the crop. For several years past this early shedding of foliage in the southern counties of Scotland has been very noticeable, as it takes place from a fortnight to three weeks earlier than is the case with the same variety of potato growing, say, in the Lothians, where soil and climatic conditions are very similar. Around Dunbar and Haddington the potato haulm continues healthy and fairly verdant until late in September, long after it has disappeared in Wigtownshire.

James Day.

A FINE LAWN GROUP OF HELIOTROPIUMS.

In a brief reference to the illustration herewith of the beautiful group of heliotropiums which, at the present time, forms so delightful a feature of the gardens of Gunnersbury House, the residence of Leopold de Rothschild, Esq., C.V.O., it is not necessary to dwell upon the exquisite colouring and the grateful perfume of these flowers. That they possess the charms of colour and fragrance in a marked degree is a matter of common knowledge, and we need not do more than express a strong sense of satisfaction that the heliotropiums are being freely used in beautifying the flower garden during the summer months, and in a manner that displays their distinctive characteristics to the best advantage. Within recent years we have had opportunities for seeing a considerable number of excellent beds and groups of heliotropiums, and we cannot call to mind one that has not favourably impressed us, or failed to contribute appreciably to the colour-scheme of which they formed a part. In some cases the groups have been formed with tall pyramidal and dwarf bushy plants; in others pyramidal heliotropiums have been associated with similarly trained specimens of other subjects; and in, comparatively speaking, a few instances, dwarfs and standards are associated in the formation of groups. The Gunnersbury House group belongs to the latter category, and a more valuable object-lesson in the use of heliotropiums in the embellishment of the flower garden could not well be had or desired. As will be seen, Mr. J. Hudson used standards of varying heights, and dwarfs that must have been of goodly proportions when they were bedded out and probably differed somewhat in size. The result is a group that is free from formality, and as both dwarfs and standards are flowering with the greatest profusion, the colour effect is such as to at once attract attention, and for a considerable distance around the group the air is laden with their characteristic perfume. The situation occupied by the group is somewhat secluded, at the head of the lake, in which all the newest and best of the water lilies have a place, and with the foliage of trees and shrubs as a background, the soft colouring of the flowers is seen at its best.



A BEAUTIFUL ARRANGEMENT OF DWARF AND STANDARD HELIOTROPIUMS.
In the gardens of Gunnersbury House, the residence of Leopold de Rothschild, Esq., C.V.O.

SUMMER BEDDING.

It seems but a short time ago that we were in the midst of bedding out, yet one's attention will soon be drawn to propagating for another season's display. Before this actually commences it behoves everyone to consider the points of this year's plan, and make notes of any little alteration or improvement which may be made for next year. A change here, something different there, greatly adds to the charm of every garden, disturbing the monotony caused by the same things or colours being in the same places year after year. Perhaps it is not always a decided improvement, yet it is a change. When this is well thought out beforehand one knows how to propagate, and in what numbers, the various subjects that will be required. Close attention must be paid to the beds now to maintain a neat appearance. All decaying blooms and discoloured foliage should be removed, and the beds kept clear of weeds. Where there is any space to work a small hoe, the surface of the soil should be frequently stirred.

E. C. Pooley.

STANDARD SPECIMENS OF ACALYPHA HISPIDA.

This denizen of tropical regions, which also passes under the name of Acalypha Sanderi, is so well known that there is no occasion to refer in a general way to its usefulness in contributing to the attraction of the plant stove and for decorative purposes. But a few particulars of the manner in which it may be successfully grown in standard form can hardly fail to prove of interest or to be useful. It is evident the suitability of this acalypha for culture as standards is not generally known, for many of my gardening friends whom I met at the Horticultural Hall on August 29, when I exhibited a group of specimens grown in that form, expressed surprise that the plant could be so grown, and made inquiries of my method of procedure. Well-flowered standards are so distinct from anything I know, and are, moreover, so effective, that they invariably attract much attention from those who have not previously seen Acalypha hispida grown in that form.

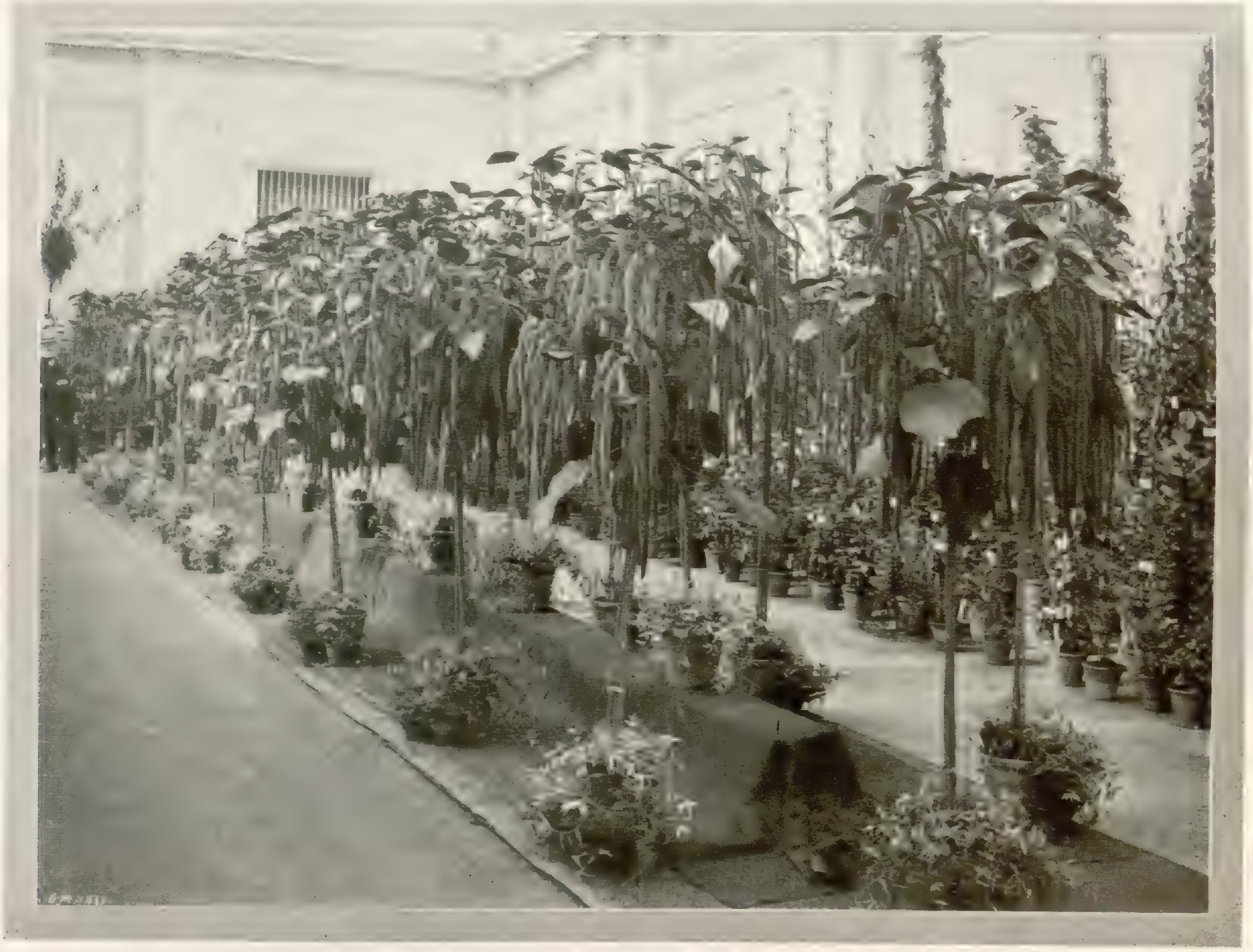
The first step is to raise a stock of plants from cuttings, and the best time for doing this depends upon the time when the specimens are required at their best. September and October are probably the best months in which to root the cuttings; they are certainly good ones, for the results are invariably satisfactory. The tops of good shoots should be secured, and after the removal of the lower leaf, or leaves, as the case may be, be inserted singly in large 60's, that have been filled with a mixture of fibrous loam, peat, leaf-soil, dried cow manure, and sand. Put the pots in a rather close warm corner of the plant stove, and spray them overhead with tepid water at such intervals as may appear desirable.

When nicely rooted remove them to a rather lighter position, and when the pots are filled with roots, but before they have become potbound, shift into others six inches in diameter. The compost used for this shift should be the same as that used in filling the cutting pots, but as a matter of course, the loam and peat should be used in a rougher state. The final shift should be given into ten or twelve-inch pots, and it may be direct from the six-inch pots, provided, and this is a most important point, the watering is done with special care until the roots are running freely in the new soil. The compost should be similar to that advised for the first shift, but to the other materials a little nitrogenous fertiliser may be added.

With regard to the training, which requires careful attention throughout, the first step will be to put a stake to each plant when potted off, and, as the growth increases, stronger stakes of greater length must be used. Four feet is the most suitable height for the stem, and seven branches make a finely-developed head. Remove the side shoots carefully when quite small, but if tails are required the whole length of the stem leave one quarter of an inch of each shoot.

The plants should be grown in the stove, or in some other structure in which a similar temperature is maintained. Syringe them liberally, give plenty of water, and shade the base of the stem if leaves are required throughout the whole length. Eight weeks should be allowed for development, and during this period we assist the plants with artificial manure.

G. Cradduck.



A GROUP OF FINELY-GROWN STANDARDS OF ACALYPHA HISPIDA.

Exhibited at the Royal Horticultural Society's Meeting, August 29, by Mr. G. Cradduck, gardener to Colonel Lockwood, Bishop's Hall, Romford.

DWARF CAMPANULAS.

Campanulas are among the choicest and most valued of our garden flowers, and those which are of dwarf habit may be ranked as including the most fascinating of the race. They are truly indispensable for the garden, and there are few who have ever cultivated them who have not a great affection for these charming flowers.

In dealing with them now it has been necessary to strike an arbitrary line of demarcation, and only those which do not generally reach more than a foot in height are mentioned, although under certain conditions of soil and moisture some may exceed this at times.

Campanula Allioni.—This is a lovely species, with quite close mats of foliage and handsome rosettes of silvery leaves whence rise a solitary large bloom of violet and of a fine bell shape. This is choice, but scarce, both in and out of cultivation, and difficult to keep in a garden. It thrives with the writer on a very dry, sunny bank, in sand and grit with a little loam, and top-dressed twice a year with similar material. It wants thorough drainage, and the modern treatment in a moraine is certainly the best for this lovely bellflower.

C. alpina.—It is difficult to obtain the true C. alpina, which is a neat thing, with small tufts of hairy leaves and little spikes of drooping bells of a deep steely blue. The plant generally known as C. alpina is only a handsome form of C. rotundifolia, well worth having, and a really better grower than the true alpine, but very different in its way. The true one has a bad habit of dying after flowering, and of leaving no offsets to perpetuate the race. It is otherwise easy to grow, except that it is a plant which dislikes lime.

C. barbata. The bearded bellflower is one of the most lovely of all, with its large pale porcelain-blue bells hanging from their stems, and all beautifully fringed at the mouth with hairs. It is some six or nine inches high, and not difficult to cultivate, always provided that it is kept dry at the neck in winter, when it is liable to rot off if the season is wet, and the surface of the earth retentive of moisture. It, also, seems to do well on a moraine, and I have seen excellent self-sown plants on a gravel path. There is a beautiful white form.

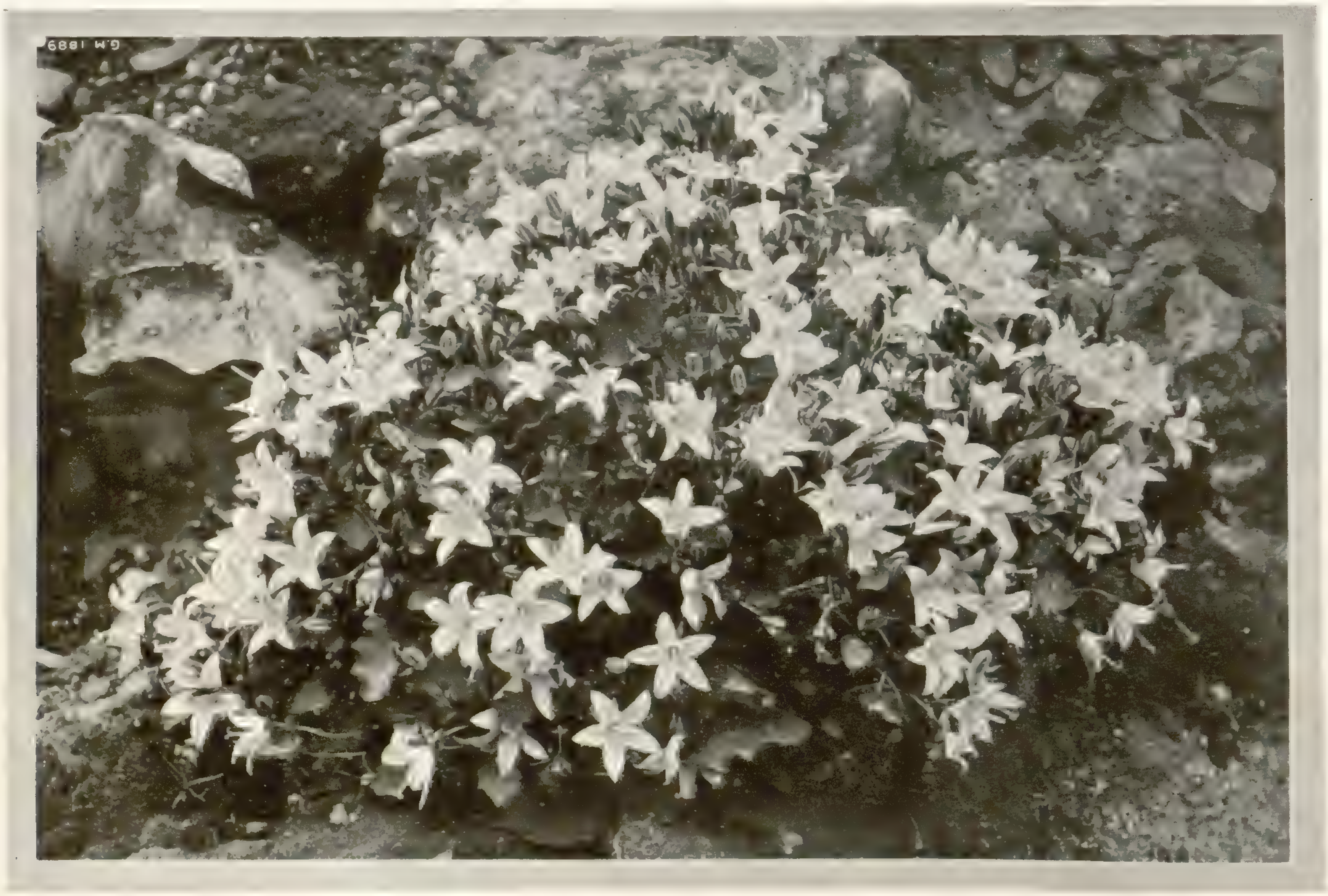
C. carpatica.—This is a species which admits of some discussion, e.g., whether we should include the C. turbinata forms when dealing with it or not. For convenience, it will be better to speak of them both at once. For garden purposes the true C. turbinata will be found distinct in its lower-growing habit, its somewhat hairy leaves, and its only bearing one flower on a stem. It is a lovely thing, indeed. C. carpatica itself is well known, and varies very largely in height; so much so, indeed, as almost to render some of its forms properly out with this review of the dwarf campanulas. It is a beautiful thing, with upright flowers of varying shades of blue. There are, the type with good blue flowers; pallida, pale blue; and alba, white. There are also Dickson's variety, white; and Parker's one, of a fine blue. New varieties derived from these are the open-flowered Isabel, blue; White Star, a replica of this in white; and a distinct, pretty variety seemingly rather scarce, with very pale blue, flat flowers, and called pelviformis.

Riverslea is a very handsome new blue variety.

C. cenisia.—This is another difficult plant except on a moraine, and is after the fashion of C. Allioni, but has small open cups of a hard, rather steel-blue. It makes close carpets of little tufts of leaves, and is a lime-lover, although not actually requiring that constituent in the soil.

C. elatines and C. elatinoides.—Rather like each other, and both rather troublesome subjects, inasmuch as they seem to detest our wet seasons, are these two. They must have plenty of sun, and thorough drainage, and should either be tried in a hot chink or in the moraine. Slugs are their great enemies and difficult to ward off these choice plants with their neat growth and branching stems of light and dark blue flowers.

C. excisa.—A dainty little campanula is C. excisa, whose wiry stems rise only a little above the soil, and give attractive little pale blue, deeply lobed bells, each lobe having, as it were, a little round hole cut out at the end. It is a creeping species, and is one which seems to like the moraine, although it will also succeed on a dry bank with some gravel about it. It is supposed to be a lime hater.



CAMPANULA GARGANICA.
A handsome species of trailing habit, bearing blue flowers with light centre.

C. garganica.—This is a lovely and most useful bellflower, with trailing branches of glossy leaves and pretty blue flowers. It is well shown in the accompanying illustration, and is an excellent subject for the rockery or for pots. There is also a good white variety. Of even greater beauty is the variety hirsuta, which has greyish hairy leaves and blue and white flowers. There is also a white variety of this. The plant sold as Erinus is understood to be a form of it, and fragilis, Barriereli, and others are allied but more tender.

C. muralis or portenschlagiana.—One can hardly overpraise this handsome bellflower with its shiny leaves and its fine blue flowers. It is an excellent front row or rock garden plant, but its variety called bavarica is still finer. Easy doers both, they are excellent in every way.

C. planiflora.—This quaint little miniature of C. persicifolia is not so plentiful as at one time, but is worthy of being searched for. It has longish leaves, and little six-inch spikes of flat open flowers. There are four forms at least: one with single blue flowers; another with these of white, and two respectively with semi-double blue or white blooms. It is not difficult to cultivate if top-dressed annually and not in too dry a place. It is often known as C. nitida.

C. pulla and pulloides.—In Campanula pulla we have one of the gems of the alpine world, but one, unfortunately, difficult to retain in some places, while in others it spreads rapidly. What is established, however, is that it is a lime-hater, and that it likes a peaty or sandy soil, with a cool place to live in. C. pulloides is a hybrid with much of the character of pulla, but even more charming, and apparently requiring the same treatment.

C. pumila.—With this we may rank cæspitosa, pusilla, cochliarifolia, and one or two others. They vary but little, and in nurseries and gardens the names are far from definite. All are lovely little fairy bellflowers, making close carpets of foliage, and carrying multitudes of little bells of blue, pale blue, or white. Miss Willmott is the name of a new pale blue variety now being offered.

C. Raddeana.—This is a beautiful and attractive little subject, which thrives well in ordinary rockwork, and is a charming thing, with its neat leaves and its purple blue flowers. It seems a good doer, and one of the best of recent years' introductions.

C. Raineri.—The true C. Raineri is a scarce plant, and not one of the most desirable, with its little turbinata-like flowers, but it is not so good as that pretty campanula. A more ornamental thing is one known as pseudo-Raineri, but this is now difficult to secure. They can be well grown if top-dressing is attended to, and water supplied in dry weather, but they dislike excessive winter wet.

C. rotundifolia.—This is the common harebell. It has many forms, some of which are very beautiful, and all are of easy cultivation in sun or shade. A good white variety is C. r. alba major; while the double variety of C. r. soldanellæflora is a beauty, the single one being a curious, but not pretty flower. There is a dainty double form of the common harebell, but Hosti and the variety called alpina, or Valdensis, are the gems of the set. Hosti is a magnificent thing, with dark blue bells, and alpina has hairy leaves and deep bells.

C. tommasiniana and C. waldsteiniana.—These are often said to be synonymous, but, as I know them, they are different, although the former is very scarce. It has neat little bushes, with erect stems of drooping tubes of light purple; while the latter has six-inch bushes of stiff stems and pretty light blue flowers set off by a white eye. Neither is difficult to cultivate in gardens.

C. Zoysi.—This is a lovely plant, with small leaves, and quaintly-shaped narrowed bells of a pretty blue. It is said to be an easy plant to grow, but slugs are fond of it, and it is thus difficult to keep.

Hybrids and Other Species.—Hybrids have been raised, and several of these are very pretty. Among these may be named C. G. F. Wilson, of which there are two forms, both raised by Mr. Anderson-Henry. They have nice blue flowers, but one has yellowish leaves, of a rather unhealthy colour. Both have been sold as C. Raineri. C. haylodgensis, another of Mr. Anderson-Henry's, is a nice plant, with trailing growth and yellowish leaves and light blue flowers. It seems practically the same as C. Profusion, raised by Mr. E. H. Jenkins. Stansfieldi is another lovely dwarf hybrid campanula, and delights in a cool place, where it gives pretty lilac flowers of tapering bell shape.

S. Arnott.

ANEMONE NEMOROSA THE QUEEN.

Some years ago the late Mr. James Allen, of Shepton Mallet, raised several seedlings from Anemone nemorosa Alleni, a lovely variety in itself. Some of these were of a charming blue of different shades, but among them was a magnificent white one, which the raiser, with true loyalty and with real appreciation of its rare and surpassing beauty, named The Queen. It has now been in the writer's garden for a good few years, and, from a little plant giving only a flower or two, it has increased until there is each year a goodly number of the charming blossoms. It is a vastly glorified variety of our ordinary wood anemone, which makes our woodlands in so many places delightful with its chaste and fragile flowers. This variety, The Queen, is much more vigorous, giving larger leaves on a taller plant and an abundance of large, well-formed flowers of great substance and perfect purity. In the convulsion caused by the removal of my plants to my present garden a few years ago, The Queen was not given a place entirely suited to her queenly mien, but this is now to be remedied, and in time to come I hope to have it in quarters more in unison with the regal magnificence of this lovely wood anemone. S. A.

MESSRS. E. WEBB AND SONS' EXHIBIT AT SHREWSBURY.

The non-competitive contributions to the Shrewsbury Flower Show were numerous, and, as a whole, of a high order of merit, and prominent among them was the extensive, interesting, and attractive arrangement of melons, flowers, and vegetables for which Messrs. E. Webb and Sons, of Wordsley were awarded the gold medal. This remarkably fine exhibit was duly referred to in the report of this exhibition, which appeared in our issue of August 26, and there is consequently no occasion to do more in presenting the illustration herewith than to say that it fully maintained the high reputation of the Wordsley firm, both as regards the great excellence of the various stocks of flowers and vegetables with which their name is associated, and the tasteful manner in which they were presented to public notice. With the aid of the illustration our readers will have no difficulty in obtaining an adequate idea of the style of arrangement that was adopted, and of its suitability for the effective display of garden products.

Cabbage.—The planting out of the main crop of cabbage should not be delayed. The position from which the onion crop is removed is always suitable to receive spring cabbages. Failing this ground that which has carried peas or potatoes is excellent. It is a good plan to select the extra large plants, and form a plantation of them on a south border at one foot apart each way. These will then turn in early for the first cuttings in April, and give a supply until the main crop is ready. The cabbage revels in rich soil, and this should be taken into consideration at this time for the main plantation. If the land chosen is not in good condition, or if of a light nature, then a good dressing of manure should be given and forked in. Plant in rows at two feet apart, and at one foot apart in the row. Medium-sized plants are perhaps less subject to go to seed, and are to be preferred for the large and principal bed.—Charles Flack, Cholmondeley Castle Gardens.

THE ADVENT OF AUTUMN.

Autumn comes in, not by any date of calendar, but gradually, with the passing of summer flowers, the unclosing of September blosoms, the tint-deepening and changing of many leaves, the falling dead-ripe of some berries, and the colouring of others; there are other indications too numerous to describe in detail, such as the extension of shadow lines across the lawns and meadows, the change in the songs and habits of birds, the appearance of special insects, the dewy mistiness of mornings, and the chill of evenings.

Happy is the gardener who has well prepared for autumn during the hot summer time. An overcrowded border at this season does not mark neglect if perennials grow there, for the time for lifting and dividing those has not yet come; but either borders or beds crowded up with spent annuals, or choked by spring subjects, such as pinks, arabises, and alyssums, that could have been removed, not only betrays the owner's indolence, but means that the soil is in an unexhausted state.

MESSRS E. WEBB AND SONS' GOLD MEDAL EXHIBIT AT THE SHREWSBURY SHOW.

Then the latest flowers of the year cannot be obtained in their best condition unless the plants have received liquid manure and a sufficiency of water during summer; autumnal splendours, in some gardens, far exceed those of others for this reason, that they have been zealously prepared for. While buds are forming and opening on late Michaelmas daisies, heleniums, rudbeckias, Pyrethrum uliginosum, and chrysanthemums, supplies of liquids should be continued.

After beds have been cleared of spent plants there is often a bare look, even when planting has been of the wise artistic kind that mingles autumn species with those of summer and of spring in all arrangements. One very successful scheme adopted by a Northern gardener is the inclusion of dwarf early chrysanthemums in every ornamental bed; the geraniums, marguerites, asters, stocks, salpiglossis, heliotropes, cannas, and marigolds look all the better for the association with the soft neutral gray of the chrysanthemum foliage, and when the failures among them have been lifted there is budding promise of beautiful colours. Another plan well worth adopting is the bedding out in autumn of pot plants of chrysanthemums, the simple sinking of these wherever gaps are noticeable, or a want of rich or brilliant colour, or of the relief of white, can be discerned. When violas are used for carpets or edgings there ought to be an increased yield of bloom late in the year; if the plants have been picked over, mulched, and kept from drought or seeding, this will not fail to be the case.

Do we make enough use of autumn-tinted shrubs and plants? On the whole, it seems to be only in the gardens of great estates that the value of coloured leaves is understood, and exhibited, yet the smallest plots require even more careful preparation for the passing of summer splendours unless they are to show a premature dreariness. Rugosa roses are of such distinct merit as providers of orange-shaded leaves and ruddy fruits that room in the worst parts of small pleasure grounds should always be given them; their habit of spreading underneath the soil renders them unfit for the near neighbourhood of any but the most robust plants, but there are usually shaded or sun-scorched bits of border, overgrown by ivy, privet, London pride, periwinkles, or a prodigality of sunflowers, where a bush or two of these Japanese roses would thrive, and be productive of far more pleasure.

The Guelder Rose, Viburnum opulus, gives autumn tints and effective berries; the leaves of Stephanandra Tanakæ become bronze, and remain brown-red of stem all winter; the double Spiræa, S. prunifolia fl. pl., can be especially recommended; the Sumach, Rhus typhina laciniata, becomes gorgeous; the golden-flowering shrub known as Koelreuteria paniculata turns to bronze; the common berberis has a real splendour of crimson; but Berberis Thunbergi is yet more handsome, and Berberis dichtyophylla lasts longer, in orange and scarlet tintings. Finally, no garden should be without Sorbus discolor, the species of mountain ash that has cut leaves of every imaginable autumnal tint, and the incomparable Maple, Acer ginnæ, that flames up into vermilion, amber, and carmine at this same season. M. H.

"CHRYSANTHEMUMS AND HOW TO GROW THEM FOR EXHIBITION," by J. B. Wroe.—Full details on timing and stopping for Northern, Southern, and Midland growers, selections of the best varieties, illustrated instructions on taking the buds, cuttings, staging, etc. Prices 1s. net, by post 1s. 2d.; cloth, 1s. 6d., by post 1s. 8d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

COOL HOUSE ORCHIDS.—The unusually dry season will have delayed the general repotting of the odontoglossums, masdevallias, and other cool house orchids. It is many years since we have experienced a summer with so little rainfall, and the dryness of the outside atmosphere has been such that where it has been absolutely necessary to repot plants in this division, considerable difficulty has been experienced in assisting them to retain their normal plump state. Extreme measures are not always beneficial to the future well-being of orchids, for, unless particular care is taken in the shading, the leaves quickly change their colour and fall. With the recent rains and the cooler and more favourable outside conditions, the work of repotting the odontoglossums may be proceeded with without delay. In dealing with the annual general repotting of odontoglossums, I have on previous occasions pointed out the impossibility of dealing with all the plants in one's charge at the same season. This is owing to their flowering at different periods. It is therefore impossible for all of them to be in the most desirable condition for repotting at this or any other season of the year. The greater proportion of them are either just commencing to form their pseudo-bulbs or are in a rather more advanced stage of development. It is at this stage we find the plants beginning to root or to be furnished with roots in an active state. In dealing with all sappy cool house orchids, experience teaches us that the season to repot is at the time when repotting may be done with the least possible check, which is generally admitted to be when root action commences. By attending to repotting when the plants are just commencing to root, we avoid to some extent the danger of injury which is possible in the process of repotting when roots have become more advanced. In dealing with the general annual repotting it is best to carefully examine every plant, although many will not require repotting, and remove any dead leaf bracts about the base of the pseudo-bulbs, and also decaying matter on the surface. It may not be necessary to repot all, but some will require the surface moss removed and replaced with new material. This is particularly desirable when dealing with larger specimens. Smaller examples are best suited by annual repotting. The quantity of root moisture given during a year generally renders it desirable that the material should be annually renewed. See that the pots used are perfectly clean inside, place a single crock over the hole at the bottom, and fill to at least one-third the depth with chopped bracken roots. We find that a mixture of about equal portions of fibrous peat and moss, with a liberal sprinkling of broken oak or birch leaves, and sufficient sand to render the whole porous, suits our plants best. They must be kept well shaded after repotting, and ample moisture be maintained in the atmosphere.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

PERPETUAL - FLOWERING CARNATIONS.—By this time all these carnations should be housed and placed in their permanent winter quarters. Each plant must be carefully examined in the removal for any signs of disease or rust, and if diseased leaves are found they must be picked off and burnt. In staging allow plenty of space for the air to circulate freely among the foliage. The house must be liberally ventilated to secure a buoyant atmosphere throughout, so that the plants do not feel any inconvenience by being removed inside. One of the chief essentials in the successful cultivation of carnations is the maintenance of a free circulation of air on every possible occasion. Watering must be carefully done, aiming at a medium between wet and dry. As soon as the plants are housed, a light fumigation should be given to prevent thrips, greenfly, etc., doing serious damage.

WINTER-FLOWERING PLANTS.—Such subjects as callas, bouvardias, solanums, eupatoriums, and marguerites that are grown for winter flowering which have been planted out in frames and borders, may now be taken up and potted. The plants are more likely to lift with a better ball of soil if well watered a few days before potting commences. When this is finished stand them on the north side of a wall, where they will be shaded during the hottest part of the day. This will prevent their flagging, and allow them to overcome the check before being removed indoors. A light spraying overhead twice a day will greatly assist them.

TUBEROUS BEGONIAS. — The earliest batch of these will now be passing out of flower, and water must be gradually reduced. A light airy position near the glass should be given them to enable the tubers to ripen thoroughly.

HARD-WOODED PLANTS. — Advantage should be taken while these subjects are still outside of giving a thorough cleaning, to rid them of all insect pests. Lay each plant on its side, and give a good syringing with an approved insecticide, paying particular attention to the underside of the foliage.

LILIUMS. — Directly the bulbs are received they should be potted, as there is the risk of their deteriorating if kept out of the soil any length of time. A good sandy loam with peat in equal quantity, leaf-soil, and sharp sand form a good potting compost. Place the bulbs low down in the pots, leaving room for subsequent top-dressings. Stand the pots in a cold frame, but give very little water until the growths show through the soil. Before potting the bulbs dust a little powdered charcoal between the scales as a preventive of disease. Lilium longiflorum and L. Harrissi may be forced so as to be in flower by Christmas, when they will be found very valuable.—A. Grubb, Porter's Park Gardens.

HARDY FRUITS.

STRAWBERRIES.—Some difficulty has been experienced this year in securing sufficient runners of many varieties of strawberries, even Royal Sovereign, one of the most prolific of parents, producing but few. This has no doubt been caused by the strain upon them in ripening such extraordinary crops of fruit. Where new plantations have not already been formed, the work should be pressed on, and planting be done without delay immediately the layers have sufficient roots to ensure success. The preparation of the site having been previously carried out, a final dressing of soot, burnt refuse, or dried mud, the latter excellent on light soils, may be applied. Rake over the surface, and tread the beds quite firm, planting the layers at an equal level, pressing the soil well about them with the fingers, and finish by giving a good soaking of clear water.

MANURES.—Artificial manures carefully applied to fruit tree borders at the present time will be found very helpful in finishing this season's fruit, and also assist the trees to develop the fruit buds for next season's crop. Nitrate of soda is an excellent stimulant, acting at once by liberating the manurial properties already in the soil, particularly where the land has received liberal dressings of farmyard manure. It is best applied during light showers, and better results are usually obtained by applying it in small dressings at intervals of a week rather than in one large dressing. Apples will be found especially responsive, but great care must be taken not to use an excess or allow the nitrate to come in contact with the foliage or fruit.

LIQUID MANURE.—Every encouragement should be given to all trees that are finishing their fruit. A good liquid stimulant may be obtained by collecting manure from the cattle yards or poultry pens. This may be put in bags and immersed in water for a day or two, when the liquid will be ready for use. Soot water will also be a great help, either given separately or in conjunction with liquid manure, a thorough soaking of this will be more effectual than if given in driblets.

GATHERING FRUIT.—Much time and care must of necessity be devoted to this most important detail. All fruits require careful handling, but those for the winter supplies especially so. Allow the fruit to become quite dry before gathering for storing. Apples for late supplies will keep longer and in much better condition if stored in quantities rather than in layers, there being less evaporation and consequently less shrivelling. Pears should part from the twig quite readily when lifted to a horizontal position, and it will be found that many of the late varieties may not be in the right condition until the end of October. The secret of having very late pears, such as Josephine Malines, Glou Morceau, or Duchess de Bordeaux fit for dessert is in allowing them to hang on the trees as long as possible. Peaches and plums, if gathered a little under ripe and stored in a cool, dry place will have their season much prolonged.—J. Whittle, Cheveney Gardens.

THE KITCHEN GARDEN.

CARROTS.—The main crop of carrots will have sufficiently completed their growth for lifting, and to be stored away for the winter. They are liable to crack if left too long, especially if the weather is wet. Allow the roots to dry somewhat for a few days, and afterwards store them in the root house or shed in moderately dry sand. See that only sound specimens are packed away. Those that are slightly damaged may be utilised for rough culinary purposes by the cook.

ONIONS.—These will be ready for pulling, as after the hot summer they will be thoroughly ripened. It is very important that this crop is stored away in a dry condition. If the weather is suitable, the bulbs may be left for a few days on the ground and frequently turned; if not, a vinery or peach house that is at rest will serve to dry them in. Afterwards they may be roped at convenience, and placed in a cool, dry, airy room or shed to keep through the winter.

TOMATOES.—Outside tomatoes grown against walls have in most cases been a success this summer. Remove all fruit that is approaching ripeness, and place it under glass to finish. It will relieve the plants, and enable them to swell up the less developed fruit. The plants that have been grown on in pots outside for winter cropping will need to be placed under glass in a light, airy house. Top-dress the plants to assist root action, and give weak applications of manure water at short intervals.

POTATOES.—Lift the main crop of potatoes as soon as the tubers are ripe. With the ground at a high temperature and heavy rain following, there will very probably be a "steamy atmosphere" conducive to the spreading of disease. Carefully sort over and remove the unsound potatoes to prevent their contaminating the good ones, and see that they are not too damp before storing. A quantity for present use may be kept in the store-house, and covered with straw, and the bulk of the crop clamped in the usual way. This is a good time to select sets for next year's planting. Subject these to exposure for a short time to harden their skins before placing them in boxes for the winter.

CELERY.—The principal batch of celery will be growing freely. All side growths and yellow leaves should be removed. A good dusting of soot, with a watering or two with liquid manure will render substantial aid. A commencement will need to be made with blanching by adding a little soil to the plants. Beginners must be reminded of the necessity of being careful to keep the soil from the hearts by tying them up or holding the leaves erect firmly with the hand while the soil is being placed round. A dry day is essential for earthing-up purposes.—Charles Flack, Cholmondeley Castle Gardens.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C

EXHIBITIONS AND MEETINGS.

National Hardy Plant Society Conference at Shrewsbury.

On the second day of the Shrewsbury Show, August 24, the members of this society met in conference in the Concert Room of the George Hotel, Mr. A. J. Macself occupying the chair.

In accordance with the announcement that had been made, two papers were read, one on "Ways and Means of Advancing the National Hardy Plant Society," and the other on "Possible New Methods of Exhibiting Hardy Flowers."

Mr. W. H. Paine, of Tully Nurseries, Kildare, dealt with the first topic in an extempore address, and he included in his fifteen minutes' discourse many really excellent ideas and suggestions, which provided ample food for thought and discussion. First of all, said Mr. Paine, the National Hardy Plant Society should find out exactly what is being done by other special societies, such as the National Carnation Society, the Midland Daffodil Society, and other bodies whose work was devoted to one particular class of plants. That would safeguard the National Hardy Plant Society from duplicating or overlapping, and enable all energy to be directed to work that does not come within the province of existing societies. So far as the Royal Horticultural Society is concerned, it can scarcely be expected that hardy flowers shall be treated by them as other than an item in the programme, and there was without doubt need for a body of specialists and experts to protect and foster the interests of hardy flowers, and that was work the National Hardy Plant Society could do.

Mr. Paine favoured the idea of sending deputations to provincial shows, and suggested that the work in this direction would be enhanced in value if the deputation could co-opt some of the judges appointed by the society holding the show. It would be advisable, in Mr. Paine's opinion, to establish branches in various parts of the kingdom, with local secretaries and committees to keep things in their particular district up to the mark. The holding of migratory provincial shows in conjunction with established flower shows would, Mr. Paine thought, be an excellent means of advancing the society, as it had been in the case of the National Rose, Sweet Pea, and other societies. He emphasised the importance of educational work. We must realise that the society's existence will not be justified unless it does good work in disseminating knowledge and information on all matters relating to hardy plants. He was of opinion that steps should be taken to organise a series of lectures by prominent authorities on various sections of the hardy plant world, to be delivered under the auspices of the National Hardy Plant Society before gardeners' societies throughout the kingdom. Another good plan would be to arrange for a lecture to be given wherever a large and important show was being held.

Mr. Paine's address was listened to with keen interest, and a brisk discussion followed. Mr. Pinches was of opinion that the ideas brought forward were in the nature of ideals that would be difficult of realisation owing to the lack of funds that would be necessary to meet the heavy expenditure involved. He thought at present the most pressing consideration was how to obtain new members and subscriptions. Mr. Brunton supported Mr. Pinches' contention, while he greatly admired the enthusiasm of Mr. Paine, and remarked that the excellent ideas put forward should be kept on record, and would no doubt be fully considered as soon as the society could afford to launch out.

Mr. Harkness was much impressed by the address, and hoped the society would be able to proceed along those lines before long.

Mr. Matthew Todd, Edinburgh, thought that the growth of the society would only become satisfactory when it is seen that members will obtain some real benefit from the society. The difficulty is that nothing can at present be shown to prospective members as to what advantage they will gain by subscribing to the society's funds. Mr. Todd approved the idea of lectures, and stated that if the society would send a lecturer to Edinburgh, he would undertake to see that a good audience was forthcoming.

In a brief reply to the comments upon the address, Mr. Paine said he did not think the expense involved in carrying out his suggestions would be at all heavy. In fact, he believed most of his ideas could be carried out with no more expense to the society than a trifle to cover postages. At any rate, if the society is to be a powerful and useful society, it most certainly must adopt a bold, progressive policy.

Mr. A. J. Macself followed with a paper on

POSSIBLE NEW METHODS OF EXHIBITING HARDY FLOWERS.

Without a doubt we see more glorious banks of hardy flowers at the leading shows to-day than ever before, but I have the hope of seeing great improvements yet in methods of staging.

What, then, are the defects in the present methods adopted? First, to my mind, too many flowers are crowded on to a restricted space, producing, it is true, gorgeous banks of colour, but not a graceful and artistic display. The prevalent tiered staging renders it practically impossible to so arrange the flowers as to demonstrate their natural habit and charm; in fact, we do not obtain a natural effect.

Those of us who were at York saw something of an attempt at natural arrangement in the new class provided for a display on the ground. It was a step in the right direction, although the class was not treated quite in the manner it was intended it should be. What is needed is to so arrange the flowers as to represent a bit of an actual border of growing plants. I am firmly convinced that in this direction lie the greatest possibilities for future advancement. Anyone who is capable of arranging plants in a border to produce a pleasing effect should be able to display flowers of those plants on a stretch of ground to reproduce the effect of the border. I advocate not only these mixed borders, but beds of individual subjects. A bed of delphiniums, a bed of phloxes, or of any plant suitable to the purpose would do much toward popularising hardy flowers for use on lawns, terraces, or where striking effects are desired. It should be the work of this society to have new classes introduced to schedules, and if our members support us by exhibiting in new classes when obtained progress will be assured.

Colour schemes are another departure that could well be taken up, and here unlimited scope would be found for the floral artist as well as the cultivator. Most growers have collections of certain familes of plants, such, for instance, as veronicas, campanulas, primulas, etc., and I should very much like to see classes for the most complete collection of any one family.

Again, in the case of new and unproved varieties of hardy flowers it should become the general practice to show these side by side with the older types or varieties from which they have been obtained, or to which they are held to be superior. This would greatly facilitate comparison, and ensure fair judgment when under consideration for awards.

Alpine and rock plants are exhibited in a manner far in advance of border flowers, for we see them now exhibited on improvised rockeries, the plants being placed in the nooks and crevices between the stones. No new method can well be recommended to supersede this, but a good deal of improvement might be effected by exercising greater care in placing the plants in appropriate positions, and in the more rigid exclusion of shrubs and other subjects that do not properly belong to the rock garden. If I were judging a class for a rock garden, I should deal rather severely with an exhibit that had such things as standard roses, Hydrangea hortensis, etc., wedged between stones, or, as occasionally seen, big plants of Abies pungens glauca on the top of a mound where there is no more root run than would properly accommodate a helianthemum. However lengthy may be my remarks, I cannot go far beyond the central idea that all the new methods we require are methods by which we can show the uninitiated the natural beauty and real purpose of the flowers shown, whether for border, bed, rockery, or damp morass.

In the discussion which followed, Mr. Frank Bouskell said he wished to fully endorse the remarks that had just been listened to. It would, without doubt, add considerably to the interest of the hardy flowers at a show if they were shown on the ground after the manner suggested. Mr. Bouskell mentioned that he had arranged an exhibit on these lines at Leicester, and found it possible to make a good show with about a quarter the flowers required for a collection on staging, and consequently the system was to be recommended on the score of economy, as well as on æsthetic grounds.

Mr. Harkness considered the reader of the paper had been unnecessarily hard on present-day methods of staging, which, after all, have served good purposes, and been largely responsible for the growing popularity of hardy flowers. He had, however, no doubt some change on the lines suggested would be beneficial, and, although he thought it would mean more expense in conveying material for these border exhibits with full length of stem, etc., he hoped we should see some good classes of the kind. There is also, the speaker said, much need for more concise wording of schedules, and he would like to see a limit of either three or four inches diameter put upon the tubes and receptacles used. This, he thought, would largely check the heaviness and overcrowding that had been complained of.

Mr. Paine was of opinion that natural effect could not really be obtained from cut flowers at all, and that it would be necessary to have pot-grown plants. The expense involved would be prohibitive, and he thought the evils of to-day could largely be overcome by limiting either the number of stems or the size of the vases, and by having stages about 1½ft. above ground level, instead of 4ft.

Mr. Brunton mentioned that, after all, an exhibit of the border style would only represent the flowers in bloom just at the time of the show, and could not serve as a reliable guide for the formation of a general herbaceous border. It would, however, be possible to demonstrate the value of a mass of any given subject.

At the close of the discussion, a vote of thanks to the readers of the papers was proposed by Mr. Brunton, and seconded by Mr. J. Harkness, and carried unanimously.

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, August 29.

Present: Mr. W. Botting Hemsley, F.R.S. (in the chair), and Messrs. J. W. Odell, J. Fraser, W. Hales, J. O'Brien, R. Hooper Pearson, and Gurney Wilson.

"BITTER PIT" OF APPLE.—Mr. W. A. Voss submitted specimens of tall, oval and flattened round apples gathered from the same tree (Old Hawthornden). Practically all the former were attacked by "bitter pit," whilst the latter were in no case affected by the disease. The taller fruits develop no colour, while the flatter ones do.

WHEATEAR CARNATION.—Mr. Chittenden sent an example of the well-known "wheatear" carnation. The present examples differed from the usual form, in having not only the continued repetition of the bracts, but above these of the calyx. The first few whorls had the bracts arranged opposite to one another as usual, above these were some not so regularly arranged and occasionally connate below, while above, the leaves were in whorls of five and connate as the calyx is usually.

NARCISSUS FLY IN HABRANTHUS.—Mr. Chittenden also sent some bulbs of Habranthus pratensis, from Norwich, attacked by the grubs of the narcissus fly, Merodon equestris. This insect appears to be extending its feeding habits to several other bulbs besides the narcissus.

ADIODA X "ST. FUSCIEN."—This new bigeneric hybrid (Cochlioda Noezliana x Ada aurantiaca) was exhibited by Monsieur Henri Graire of St. Fuscien, Amiens.

OAK GALLS.—Mr. Hales showed specimens of the common oak attacked by the artichoke gall (Aphilothrix fecundatrix), the Oyster gall (Leuroterus ostreus), and the Spangle gall (Leuroterus numismatis). Mr. Odell also showed shoots of Quercus coccinea, Q. cerris, and Q. Robur, collected from trees growing in the immediate vicinity to one another, but whilst the two former were healthy and green, the common oak was badly galled with Leuroterus ostreus (Oyster gall), and the leaves were browned.

MINTS.—Mr. Fraser called attention to the many mints in general use for culinary purposes, and submitted several specimens of different forms. Mentha spicata is the mint for sauce as generally sold in the markets, whilst M. longifolia is the one generally found in private gardens. He had tested the various forms, and concluded that M. spicata is the best flavoured. Mr. Odell said he considered M. candicans the very best of all, as the result of trials he had made.

BRITISH ORCHID HYBRID.—Mr. Botting Hemsley showed a figure of a British orchid found on Reigate Hill in the third week of April last. It had three spurs, no pollen, and many other abnormalities. It was somewhat like Habenaria viridis, but the labellum rather more resembled that of an orchis. It was apparently a hybrid, and too abnormal to connect with any British species.

Sandy.

The forty-third show held by the Sandy and District Floral and Horticultural Society took place on Thursday, August 31, in the park of Sandye Place, kindly lent by Mrs. Graves. A more suitable place for a big show it would be difficult to find, and the committee is fortunate in having such a friend as Mrs. Graves. Sandy show is an extensive one, and about a score of tents are needed to house it. Poultry, pigeons, cats, dogs, and rabbits are exhibited in large numbers, and attract fanciers from all parts of the country, and also add materially to the crowds of visitors.

Five big tents held the bulk of the horticultural exhibits; one was devoted to fruits and vegetables, one to groups and plants, one to cut flowers, one to table decorations, and one to market garden and farm produce.

The present season has not been a good one for the later shows, and so at Sandy there was a great falling-off in the cut flower, fruit, and vegetable classes. Still, there was a good display, and as the day was a fine one, there were crowds of visitors.

GROUPS AND PLANTS.

Messrs. Jas. Cypher and Sons, Cheltenham, secured the first prize for a large group of miscellaneous flowering and foliage plants with a fine exhibit that was arranged somewhat after the style of their group at Shrewsbury. Crotons were fine, and such flowering plants as Brasso-cattleyas, oncidiums, Dendrobium Phalænopsis, Cattleya Iris, liliums, and ixoras were used with great effect. Mr. Macdonald gardener to Sir G. H. Kenrick, Whetstone, Edgbaston, Birmingham, a good second, and Mr. W. Vause third.

In the special class for a group arranged on 75 square feet, Mr. J. Macdonald won chief honours with a rich arrangement of ixoras, palms, crotons, liliums, oncidiums, and bamboos. Mr. H. Tysoe, gardener to the Misses Fitzpatrick, Bedford, second, his Acalphya hispida and dracænas being particularly good; Sir C. S. Hamilton, Bart., Hatley Park, third.

The finest group of foliage plants was a very beautiful one, set up with great taste by Mr. J. Macdonald; this occupied 150 square feet, and the premier award was £10. Crotons were lavishly used on the arching background, as well as in the foreground; caladiums, selaginellas, alocasias, and ferns were the other subjects used. Messrs. J. Cypher and Sons came second, their group lacking something in colour; Mr. W. Vause third.

In the plant classes Viscount Peel beat Mr. Lockie, gardener to A. J. Thornhill, Esq., Diddington Hall, for six specimen zonal pelargoniums, and each contributed huge plants. Specimen fuchsias were good, and for one example Miss Cormick, Sandy; and Viscount Peel were first and second respectively. Viscount Peel also led for six ivy-leaved pelargoniums, for six begonias, and for six hardy ferns.

Mr. Tysoe was a capital first for six stove and greenhouse ferns, and he showed some excellent nephrolepis; Viscount Peel second, and Mr. W. Vause third. Mr. Tysoe was successful for one specimen foliage plant with a fine Dracæna Victoriæ, and also for one stove or greenhouse plant in flower, with a big standard Acalypha hispida.

The class for six foliage plants found Messrs. J. Cypher and Sons, Cheltenham, to the front, with Mr. Vause second, and Mr. Tysoe third; all showed well, and the class made a good display.

CUT FLOWERS.

Dahlias were good, and Mr. John Walker, Thame, led in the class for thirty-six show and fancy blooms with splendid examples of Purple Prince, T. J. Saltmarsh, J. Cocker, D. Johnson, T. W. Girdlestone, Mrs. Saunders, Emin Pasha, Dandy, Golden Gem, etc.; Mr. H. Tysoe, gardener to the Misses Fitzpatrick, second. Mr. M. V. Seale, Sevenoaks, was the only exhibitor of two dozen show and fancy dahlias, and he was deservedly awarded the first prize.

For twenty-four cactus dahlias, on boards, distinct varieties, Mr. J. Walker was a capital first, with Dr. Roy Appleton, Helium, Thos. Parkin, Red Admiral, H. F. Robertson, Ivernia, New York, Mercury, etc.; Mr. M. V. Seale was placed second; and Mr. A. Moules, Stebbing, Stevenage, third.

Messrs. Burrell and Co. were a capital first for twelve bunches of pompon dahlias, ten blooms in a bunch, and they set up pretty flowers of Nerissa, Louise, Bacchus, Tommy Keith, Little Beeswing, Mariette, Daisy, Amelie, Censor, Annie Doncaster, Adelaide, and Queen of Whites; Mr. J. Walker, second; and Mr. M. V. Seale third.

Mr. H. Tysoe scored in the amateurs' section for a dozen show dahlias, and he was followed by Mr. J. W. Cooper, Houghton Conquest. For three fancy dahlias, Mr. R. H. Harrison, Bedford, won first prize with excellent blooms. Mr. A. Brown, Leagrave, scored for six bunches of pompon dahlias, and was followed closely by Mr. H. Brown, Luton, and Mr. R. H. Harrison.

Roses were not in good form. There were four entries in the class for forty-eight blooms in not fewer than thirty varieties, and here Mr. F. M. Bradley, Peterborough, obtained the lead, and his best flowers were of Mdme. J. Dupuy, Horace Vernet, Dupuy Jamain, Chas. Lefebvre, and Frau Karl Druschki; Messrs. G. and W. Burch, Peterborough, came second, and Messrs. W. Crisp and Son, Colchester, third.

In the amateurs' section, Mr. W. O. Times, Hitchin, was the only exhibitor in the class for two dozen roses, in not fewer than a dozen varieties; he had a very fair set of blooms, and staged good specimens of Dean Hole and Hugh Dickson.

Double zinnias were very fine, the blooms being of splendid colour and great depth, the florets piled upon each other in handsome fashion. There was a close competition for six blooms, and the awards were made in order of merit to Mr. B. J. Walker, Market Deeping; Mr. M. Sadler, Bucklersbury; and Mr. J. E. Roddis, Bedford. Viscount Peel, The Lodge, Sandy, was placed first for a dozen zinnias, with fine flowers.

In the class for twenty-four bunches of cut hardy herbaceous and bulbous flowers, Messrs. W. and J. Brown gained the first prize. Mr. T. Lockie, the veteran exhibitor from Diddington Hall Gardens, won first prize for a dozen bunches of stove and greenhouse plants with an interesting collection.

FRUIT AND VEGETABLES.

Mr. Birkenshaw, gardener to Sir G. Hunter, Bart., Hatley Park, had the best collection of six kinds of dessert fruits; he also scored for two bunches of Black Hamburgh grapes; for "any other black," with Alnwick Seedling, for two bunches of Muscat of Alexandria, and for "any other white" with Chasselas Napoleon. Mr. R. Waters, gardener to C. W. Stanley, Esq., Merton Grange, had the best peaches (indoor), and Mr. G. W. Newton, Croxton Park, the best outdoor peaches. Mr. Lockie led for nectarines and for plums, while Mr. Birkinshaw led for dessert apples, and Mr. A. Briscoe, Longstowe Hall, scored for kitchen apples.

Messrs. Sutton and Sons offered special prizes for six kinds of vegetables, and here Mr. Lockie was first, showing splendid onions and tomatoes; Mr. Tysoe second. In Messrs. J. Carter and Co.'s class Mr. Tysoe scored, and here his Ailsa Craig onions were grand. Mr. Tysoe was again first for six kinds in a class provided by Messrs. E. Webb and Sons.

In the other vegetable classes Mr. T. Lockie was a persistent first prizewinner, but Mr. Tysoe and Mr. T. Chennells, Wheathampstead, were also successful.

NON-COMPETITIVE.

There were a few effective non-competitive displays, notably those of roses from Messrs. W. and J. Brown, Peterborough (gold medal); of carnations, from Messrs. W. Cutbush and Son, Highgate (silver-gilt medal); of sweet peas, from Messrs. H. Simpson and Sons, Birmingham (silver-gilt medal); of dahlias, from Mr. J. Knight, Wolverhampton (silver medal); of roses, from Mr. F. M. Bradley, Peterborough, and Messrs. W. Crisp and Son, Colchester (bronze medal to each).

The Horticultural Trades' Association.

ANNUAL GATHERING.

The thirteenth annual meeting of nurserymen and seedsmen took place this year at Exeter, under the presidency of Mr. Peter Veitch, proprietor of the famous Exeter nurseries. The visitors were favoured by ideal weather, which helped to make the meeting one of the most enjoyable ever held. The first day was filled by business meetings, and inspection of the local nurseries, Cathedral, and the old Guildhall with its interesting Stuart portraits, regalia, etc., etc. The second day was spent at Bicton, by kind permission of Lord Clinton, where the magnificent colletion of conifers, and gardens filled with rare plants and flowers which require the shelter of glass in the north, provided a horticultural feast, of which a glorious plant of the lovely single white Macartney rose was an item which will perhaps linger longer in the memories of those present than any other. A steam along the coast from Exmouth to Dartmouth, and up the Dart, to Totnes, was the concluding item of the programme, providing a varied panorama of exquisite scenery which defies adequate description. These gatherings, in addition to affording opportunity for the discussion of trade problems and difficulties, bring together members of the nursery and seed trades from every part of the United Kingdom, and by pleasant social intercourse promote a feeling of good fellowship and harmony beneficial to all concerned. Mr. A. W. Paul (Waltham Cross) was elected president for the coming year.

NOTES OF OBSERVATION.

Erythrina Humei. — During the latter part of the summer Erythrina crista-galli may often be met with bedded out in our public parks. The comparatively large bright red flowers make a goodly show, and from their uncommon character they arrest attention. In E. crista-galli the flower stems are of annual duration, and after flowering die back to the thickened root stock. E. Humei, however, behaves in a different manner, and forms quite a woody trunk, that branches out usually at a height of 6ft. or thereabouts, and towards the upper part of its sturdy branches bears erect spikes of scarlet flowers. In its native country of South Africa it becomes quite a tree in stature.—W. T.

Solanum Wendlandi.—When this solanum was first introduced, or rather when public attention was first directed to its merits, it was regarded solely as a vigorous climber suitable only for a good-sized structure. Treated in this way it forms a really magnificent object when in flower, but at the same time it may be grown in a perfectly satisfactory manner in a more limited space. Comparatively dwarf examples, each carrying a large head of blossoms, are now frequently seen at the summer exhibitions, where, owing to their distinct colour and striking appearance, they are often employed for grouping. Thorough ripening of the wood seems to be very essential to the production of flowers in a small state.—W. T.

Lilium candidum.—Many failures to grow this lily may be attributed to the fact that the bulbs are planted in December instead of August. Being an almost evergreen species, it is naturally injured by the bulbs remaining out of the ground any length of time; in fact, unnecessary disturbance of the bulbs is injurious. Of course, for commercial purposes, the bulbs are bound to become dried to a certain extent, yet, even then, much loss could be averted if the purchaser would obtain and plant the bulbs as early as possible. When an established clump has become overcrowded, it is necessary to divide the bulbs and replant. This operation should be carried out carefully, and the bulbs must not be allowed to remain out of the ground a minute longer than necessary. No hard and fast rule can be laid down as to when to lift, only by the condition of the roots, which should be in as dormant a state as possible. This stage is usually reached immediately flowering ceases, and as this is governed by season and locality, it is advisable to examine the bulbs to discover when they are in a suitable state to lift. An ordinary free garden soil will grow them, and the bulbs should be planted quite nine inches below the surface, and as they increase, they push their way towards the surface.—E. C. Pooley.

Fig Trees in Pots.—Trees which are to be forced next season should now be examined and potted if necessary. Small trees may have pots a size or two larger, especially if the idea is to grow them larger, but it the trees are in large pots it is not by any means necessary to repot every year, as much can be done by top-dressing, and the drainage is perhaps the most essential thing with these established plants. The top-dressing should consist of some good fibrous loam with a good sprinkling of horse manure and bone-meal, and a little old mortar rubbish. With a pointed stick prick off as much as possible of the old soil, and place with the fresh mixture in position, ramming it as firmly as possible. Water sparingly, and the roots will soon permeate the fresh soil. In the case of young plants take care that the soil is well worked down by the side of the pots, so that the plants are not what is usually termed "hung"—water carefully till root action has commenced. Permanent trees, planted out and now yielding a second crop must be kept somewhat drier, and water and liquid manure should be given during the day while full ventilation is on the house.—W. A. Cook.

ANSWERS TO CORRESPONDENTS.

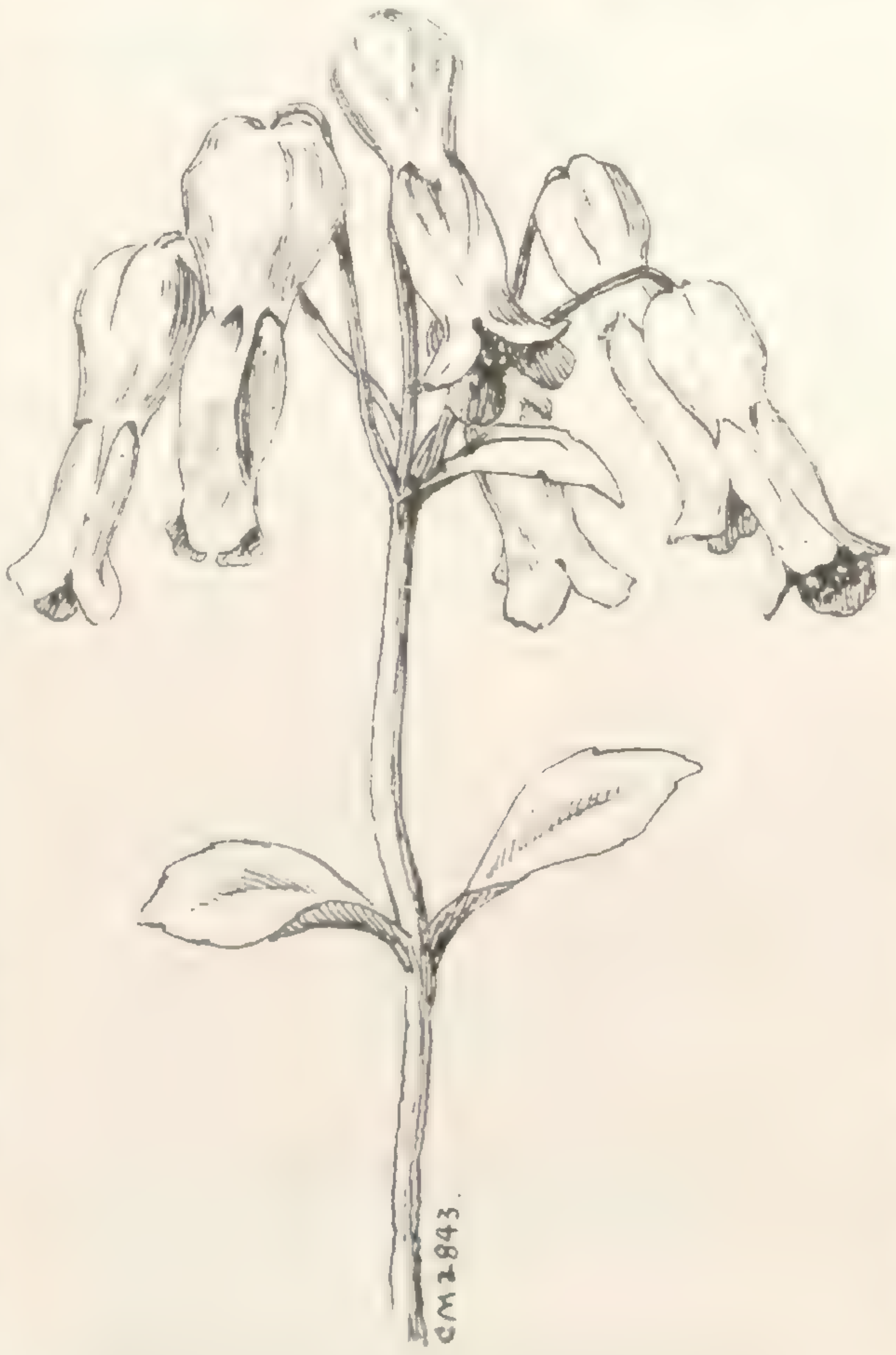
Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Specimens of plants, flowers, and fruits for naming send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

BRYOPHYLLUM CALYCINUM. — S. W. A., Southsea: This old warm greenhouse plant is a succulent subject, and one by no means difficult to cultivate. It carries terminal clusters of pendulous flowers of yellowish or greenish-red hue. The great interest of the plant, however, lies in its capacity for producing plantlets from the indentations of the crenately margined leaves; these latter are not shown in the present illustration. The genus was founded by Salisbury, and the name was happily conceived from bryo, to sprout, and phyllon, a leaf; "for this plant possesses the singular property of germinating from the dark spot observable at the base of every indentation in the margin of the leaf, not only whilst growing, but as it decays. Thus, in attempting to dry a specimen, little germinating bulbs were produced in abundance, though there was no appearance of any before the plant was deposited between papers." This quotation is from the "Botanical Magazine" of just one hundred years ago. For compost use light, rich soil, and avoid overwatering.



BRYOPHYLLUM CALYCINUM.
Flowers yellowish-red; leaves proliferous.

PEAR TREES NOT FRUITING.—J. W., Dronfield: It is extremely difficult to assign a cause for the failure of your trees of Pitmaston Duchess pear to bear satisfactorily, because you omit to refer to two essential points. You do not say whether the trees are trained to a wall or growing in the open, or whether they annually make a moderate or an excessively vigorous growth. A gravelly soil is not one that is likely to promote an excess of vigour in pear trees, but a "rather gravelly soil" is somewhat indefinite, and it might by the liberal use of manure be made so rich as to promote a very vigorous growth. As the trees have occupied their present position fifteen years and are of large size, and have not produced two dozen fruits throughout the whole period, we are inclined to the opinion that they are growing too vigorously, and that judicious root pruning would be beneficial. It would probably not be well to prune the whole of the roots of the trees in one season, and we suggest that you prune the roots on one side of each tree at the end of October next, and those on the other side at the same period next year. An east aspect is not specially favourable to pears, and it may be that the flowers and embryo fruits are much injured by cold winds and spring frosts. If you will kindly send us two or three typical shoots of this season's growth, and give us information on the two points mentioned, we may be able to further advise you.

SPRAYING SOLUTION.—W. H. T., High Wycombe: In the preparation of solutions for the spraying of chrysanthemums, as of other plants, it is advisable to use materials that have passed through the whole of the processes of manufacture. We therefore advise you to use sulphide of potassium in its most refined form. If you have a few plants that you can spare for experimental purposes, you might prepare a solution with the material you mention, and spray them with it, and then compare the results with those obtained in the use of potassium sulphide.

PLANTS FOR AN AMATEUR'S GREENHOUSE.—M. G. W., Bicester: A good work on greenhouse plants is "The Amateur's Greenhouse" (post free 5s. 6d.; W. H. and L. Collingridge, 148, 149, Aldersgate Street, E.C.), which contains descriptions and cultural advice concerning a very large number of plants suitable for the greenhouse or conservatory of an amateur like yourself.

NATIONAL HARDY PLANT SOCIETY. —F. E. S., Bideford: This new society exists for the encouragement, the extension, and the improvement of hardy plant culture—whether for the garden, for decorative purposes, or for exhibition. Hardy plants shall be deemed to include hardy border, alpine, and bulbous plants. The objects of the society are: (1) To encourage the production of new and improved varieties of hardy plants by examining and reporting upon the merits of such as may be submitted to the society for the purpose. (2) To collect and disseminate trustworthy information respecting the adaptability of particular kinds of plants to the varied conditions of soil, and locality, throughout Great Britain and Ireland. To undertake trials of plants and families of plants as occasion demands and when circumstances permit. (4) To report, for publication in the annual "Journal" of the society, on such plants as have received recognition by the society during the year. (5) To give advice through the solicitor to the society to members on points of horticultural law, and at the discretion of the Council to prosecute in flagrant cases of dishonest trading. Mr. F. Bouskell, Market HarHarborough, is the secretary of the society.

INSECT STINGS.—D. L., Cheriton: Some folks suffer far more than others from the attentions of insects, but few escape altogether. The best thing we can suggest is the use of liquid ammonia, rubbing this well into the affected parts of the body.

GARDEN TRELLISES.—E. D., Leytonstone: Trellises are useful for ensuring the seclusion of the garden, shutting out unsightly objects, and as wind screens. The dimensions of these will depend upon the position they are to occupy, but they should be substantial in construction, for when clothed with the plants, the strain imposed upon them in windy weather is very great. They may be made of wood in classic or rustic design, or of wire or lattice work. The wire squares are preferable to stout wire netting, because of their greater strength; the latter may be used, but it should have a mesh of four inches, and be of the highest strength. For the support of the wire work and the wood lattice uprights four or five inches square should be provided, and let two feet into the ground.

SCAB ON APPLES.—N. B., Repton: The scab marks on the apples are caused by a fungus named Fusicladium dendriticum. This is one of the most destructive of pests which attack apples and pears, as it renders the fruits practically worthless from a market point of view, especially in the case of dessert varieties. The disease attacks both growth and fruit, thereby injuring the tree and spoiling the crop. The best method of attack is spraying the trees three times with Bordeaux mixture, the first time just before the flowers open, the second time when the petals have fallen, and the third time when the fruits are about as big as small gooseberries.

NAMES OF PLANTS.

G. C., Ipswich.—1, Colutea arborea; 2, Senecio clivorum; 3, Pteris scaberula.

A. L. D., Haywards Heath.—1, Asclepias tuberosa; 2, Habrothamnus elegans; 3, Cosmos bipinnatus.

O. F. E., Hastings.—1, Prunus Pissardi; 2, Acer Negundo variegata; 3, Iresine Herbsti; 4, Acalypha Macafeeana.

L. E. C., Lynn.—1, Selaginella cæsia; 2, Monstera deliciosa; 3, Costus igneus; 4, Sonerilla Hendersoni; 5, Garrya elliptica.

T. H., Sandy.—1, Helenium autumnale; 2, not recognised; 3, Berberis Wallichiana; 4, Epilobium angustifolium; 5, Trachelium cæruleum.

FORTHCOMING ENGAGEMENTS.

MONDAY, September 11.—United Horticultural Provident and Benefit Society: Committee meet.

TUESDAY, September 12.—Royal Horticultural Society: Floral, Fruit, and Orchid Committees, noon; General Meeting with lecture on "The Small Holdings Movement," by Mr. T. Smith, 3 p.m.; Scientific Committee, 4 p.m.

Woodstock Horticultural Society.

WEDNESDAY, September 13.—Royal Caledonian Horticultural Society's Exhibition in Waverley Market, Edinburgh; two days.

Glasgow Horticultural Society; three days.

Messrs. Dickson and Robinson's Vegetable Competition at Manchester.

THURSDAY, September 14.—National Rose Society: Autumn Exhibition Horticultural Hall.

SATURDAY, September 16.—Paisley Florist Society,

National Vegetable Society's Exhibition.—At the exhibition of this society, of which a report was given in our issue of the 2nd inst., the following awards were made for non-competitive exhibits: Gold medals to Messrs. Sutton and Sons, Reading; Messrs. Barr and Sons, King Street, Covent Garden; and Messrs. Dobbie and Co., Edinburgh. Silver medals to Messrs. Spooner and Son, Hounslow; Messrs. Carter Page and Co., London Wall; and Mr. S. Mortimer, Farnham. A cultural commendation was awarded to Mr. R. Holmes, Tuckswood Farm, Norwich, for his new yellow tomato.

CONTENTS.

PAGE
A fine Lawn Group of Heliotropiums 662
Answers to Correspondents 669
Dwarf Campanulas 663
Exhibitions and Meetings 667
Gloxinias 659
Messrs. E. Webb and Sons' Exhibit at Shrewsbury 665
Modern Genetic Science 657
New Plants, etc. 660
Notes of the Week 655
Standard Specimens of Acalypha hispida ... 662
The Advent of Autumn 665
The Potato Crop in Scotland 661
The Silver Wattle in New Zealand 661
The Sun-dial Garden, Madresfield Court ... 659
Work for the Week 666

ILLUSTRATIONS.

Portrait of Mr. W. J. Marlow, 655; View in the Sundial Garden, Madresfield Court, 659; Nymphaea Mrs. Richmond, 660; Healleria Wallisi, 661; A beautiful arrangement of Dwarf and Standard Heliotropiums, 662; A Group of finely-grown standards of Acalypha hispida, 663; Campanula garganica, 664; Messrs. E. Webb and Sons' Exhibit at the Shrewsbury Show, 665.

MARKETS.

◆

COVENT GARDEN.

Flowers.

The demand is moderate but prices are well maintained.

		s. d.		s. d.
Adiantum cuneatum ...	per doz. bun.	3 0	to	4 0
Arums	per doz.	2 6		3 0
Asparagus plumosus	per doz. bun.	1 6		2 0
,, sprengeri	per doz. bun.	8 0		10 0
Asters	per doz. bun.	3 0		6 0
Carnations	per doz.	1 0		3 0
,, Perpetual	per doz. bun.	6 0		9 0
Coreopsis	per doz. bun.	1 6		2 6
Croton leaves	per bun.	1 0		1 6
French fern	per doz. bun.	2 6		4 0
Gardenias	per doz.	1 6		2 0
Gladioli	per doz. bun.	1 6		6 0
Gypsophila	per doz. bun.	4 6		6 0
Lapageria	per doz.	1 6		3 0
Lilium auratum	per doz.	2 6		3 0
,, speciosum	per doz.	1 6		2 6
,, longiflorum	per doz.	2 6		3 6
Lily of the Valley	per doz. bun.	9 0		15 0
Marguerites	per doz. bun	1 6		2 0
Mignonette	per doz. bun.	2 6		3 0
Odontoglossums	per doz. blms.	2 0		4 6
Pelargoniums	per doz. bun.	3 0		4 0
Physalis	per doz. bun.	7 0		10 0
Roses	per doz.	1 0		2 6
Smilax	per doz. trails	2 0		4 0
Stocks, white	per doz. bun.	5 0		7 0
Tuberoses	per doz.	0 4		0 6
Statice	per doz. bun.	3 0		4 0
Viola, small blue	per doz. bun.	0 9		1 3

Fruits.

Supplies continue fairly liberal with a good demand.

		s. d.		s. d.
Apples, English, dessert ...	per ½-sieve	2 0	to	3 6
,, Cooking	per ½-sieve	2 0		3 0
Bananas	per bun.	4 0		12 6
Blackberries	per peck	1 6		2 0
Cob nuts	per doz. lb.	5 0		6 0
Damsons	per ½-sieve	2 0		3 0
Figs	per doz.	0 9		2 0
Greengages	per ½-sieve	4 0		8 0
Grapes, English	per lb.	0 10		4 6
Lemons	per case	9 0		25 0
Melons	each	1 0		2 0
,, Cantaloupe	each	1 6		4 0
Nectarines	per doz.	3 0		15 0
Oranges, Denia	per case	12 0		30 0
,, Cape	per case	8 0		10 0
,, Jamaica	per case	6 0		9 0
,, St. Michaels	per case	8 0		10 0
Peaches	per doz.	3 0		15 0
Pears, English	per ½-sieve	2 6		4 0
,, French	per crate	3 0		9 0
Pineapples	each	2 0		7 6
Plums	per ½-sieve	2 0		4 0

Vegetables.

Green vegetables are scarce and high in price.

		s. d.		s. d.
Artichokes, Globe	per doz.	2 0	to	3 0
Beans, dwarf	per basket	3 0		4 6
,, runners	per bush.	9 0		12 6
Beet	per doz. bun.	2 0		3 0
Cabbage	per tally	7 0		10 6
Carrots	per doz. bun.	1 0		1 6
Cauliflowers	per doz.	4 0		6 0
Cucumbers	per flat	3 0		5 0
Endive	per doz.	1 6		3 0
Horseradish	per doz. bun.	8 0		12 0
Lettuce	per doz.	1 6		3 0
Marrows	per tally	10 0		12 0
Mint	per doz. bun.	4 0		5 0
Mushrooms	per doz. lb.	9 0		12 0
Onions, Spanish	per case	4 0		6 0
Parsley	per ½-sieve	1 6		2 6
Peas	per bush.	6 0		7 0
Radishes	per doz. bun.	1 6		2 6
Spinach	per bush.	2 6		4 6
Tomatoes	per doz. lb.	2 6		3 6
,, Guernsey	per doz. lb.	2 0		3 0
Turnips	per doz. bun.	3 0		3 6
Watercress	per doz. bun.	0 6		0 6½

LONDON POTATO MARKETS.

There has been a considerable increase in the supplies with a decline in prices.

		s. d.		s. d.
Blackland	per ton	70 0	to	75 0
British Queen	per ton	80 0		90 0
Epicure	per ton	70 0		75 0
Essex	per ton	70 0		75 0
Evergood	per ton	70 0		75 0
Kents	per ton	80 0		85 0
Up-to-Date	per ton	80 0		90 0

CATALOGUE RECEIVED.

THE YOKOHAMA NURSERY COMPANY, LIM., 21-35, NAKAMURA, YOKOHAMA, JAPAN, send us their comprehensive and attractive catalogue of bulbs, plants, seeds, etc., and we commend it to the notice of those of our readers who are interested in Japanese gardening.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1911. AUGUST 27 TO SEPTEMBER 2.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Aug. 27—Sunday	3 42	66	64	73	63
,, 28—Monday	2 48	66	62	72	59
,, 29—Tuesday	10 48	64	60	72	55
,, 30—Wednesday	5 12	61	58	72	54
,, 31—Thursday	10 42	61	57	73	43
Sept. 1—Friday	12 36	64	58	78	49
,, 2—Saturday	11 18	75	63	81	47
Means	(total) 57 6	65	60	74	53

DATE. 1911. AUGUST 27 TO SEPTEMBER 2.	RAIN.	TEMPERATURE OF THE SOIL AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg.
Aug. 27—Sunday	trace	65	64	64	57
,, 28—Monday	0·28	65	64	63	51
,, 29—Tuesday	—	63	64	63	48
,, 30—Wednesday	0·02	63	64	63	48
,, 31—Thursday	—	62	63	63	37
Sept. 1—Friday	—	62	63	63	36
,, 2—Saturday	—	64	63	63	41
Means	(total) 0·30	63	63	63	45

Variegated Leaved Fuchsias. We have not many varieties of fuchsia with variegated leaves; indeed, only two may be regarded as in general cultivation. They are that clearly marked form of the pretty little Fuchsia gracilis, and the tricolor-leaved F. Sunray. Both are extensively used for summer bedding, under which conditions the foliage acquires a brightness of colouring which is not to be found under glass. Considering the number of fuchsias raised within recent years, it is somewhat surprising that we have not more variegated leaved kinds, for the two above-mentioned are very old. Fuchsia gracilis variegata has been in cultivation considerably over 40 years, and F. Sunray was distributed by Mr. William Bull, of Chelsea, about the early '70's. With regard to this last-named I have raised seedlings from F. Sunray, but have not obtained one therefrom which showed the least trace of variegation in the leaves, while the flowers showed no improvement. Large plants of these two fuchsias bedded out during the summer show both of them in a very favourable light, and when, as frequently happens towards the end of the season F. gracilis is laden with its little graceful blossoms, it is really charming. There are several kinds with coloured leaves, that is to say, in which the foliage is more or less suffused with red or yellow, but the true variegated kinds in general cultivation are limited to these two.—W. T.

The only resemblance between a Pine Spray Syringe and others is in the shape of the barrel. The metal is more substantial. For the rest, the combination spraying head renders Spray, Rose, and Bend instantly obtainable without the addition or removal of a single fitment, while the adjustable leather bucket plunger gives perfect suction, never allows water to escape past it and up your sleeve, and wears interminably.

A written request from your ironmonger or seedsman, and a Syringe will be sent in 24 hours for your approval. Price **10/6.** Sole proprietors and manufacturers, **Robinson Bros., Ltd., West Bromwich.**

PINE SPRAY SYRINGE (patent).

THE ROSE-GROWER'S VADE MECUM.

Seventh Edition, Including New Features and Illustrations, and Revised List of 1,700 Different Roses.

ROSES AND THEIR CULTIVATION

200 Pages.
16 Plates.
Frontispiece and
67 Illustrations.

2/6
Net ;
By post, 2/10.

By T. W. SANDERS, F.L.S.

A Complete Guide to the Selection and Culture of

STANDARD ROSES.
PILLAR ROSES.
GREENHOUSE CLIMBERS.
RAMBLING ROSES.
ROSES FOR TRELLISES.
CLIMBERS FOR PERGOLAS.
POT ROSES.
DWARF ROSES.
ROSES FOR EXHIBITION.
&c., &c.

LIST OF 1,700 CULTIVATED ROSES:

Showing Variety, Section or Class, Date Introduced, Colour, Habit of Growth, How Best Grown, Mode and Time of Pruning, Description of Flower.

◆

ORDER FORM.

To the Publishers of "The Gardeners' Magazine,"
148 & 149, Aldersgate Street, London, E.C.

Please send me a copy of **"ROSES AND THEIR CULTIVATION"** by post, for which I enclose remittance of **2/10.**)

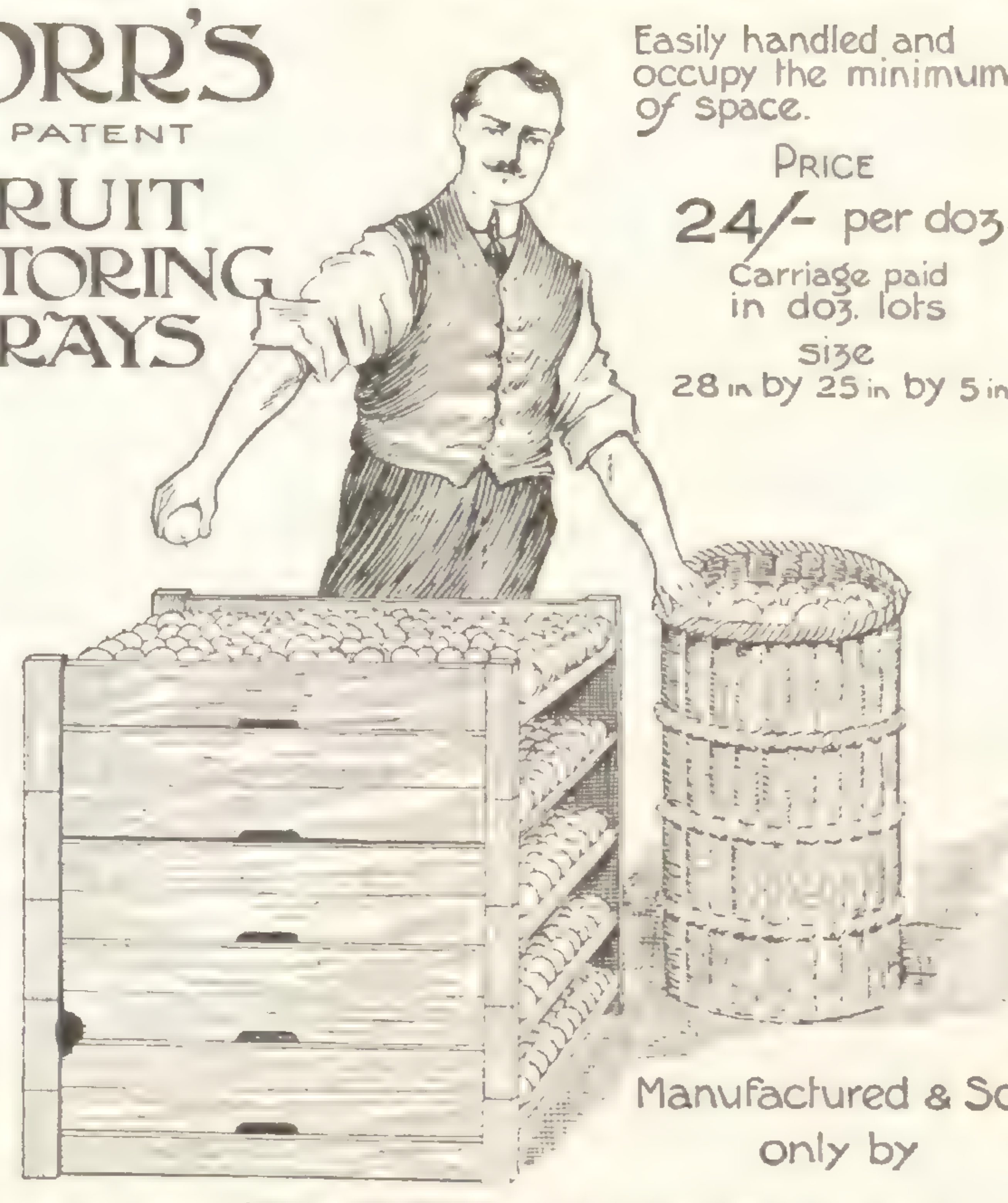
Name..

Address...

STORE YOUR FRUIT

IN

ORR'S PATENT FRUIT STORING TRAYS



Easily handled and occupy the minimum of space.

Price
24/- per doz.
Carriage paid in doz. lots
size
28 in by 25 in by 5 in.

Manufactured & Sold only by

JOHN P. WHITE & SONS LTD.,
THE PYGHTLE WORKS, BEDFORD.

BENTLEY'S WEED DESTROYERS

Utterly annihilate Weeds, Moss, Dandelions, and all other Weeds on Garden Walks, Carriage Drives, etc.

HAVE THE LARGEST SALE IN THE UNITED KINGDOM!
ARE THE MOST POWERFUL MANUFACTURED!
ARE THE MOST PERMANENT IN EFFECT!

LIQUID (Poison).

Double Strength (1 to 50).

3 gallons, to make 153 gallons ...	£0	10	0
6 ,, ,, 306 ,, ...	0	18	0
12 ,, ,, 612 ,, ...	1	13	0
20 ,, ,, 1,020 ,, ...	2	7	6
40 ,, ,, 2,040 ,, ...	4	12	6

Special Concentrated Strength (1 to 80).

3 gallons, to make 243 gallons ...	£0	14	6
6 ,, ,, 486 ,, ...	1	7	0
12 ,, ,, 972 ,, ...	2	6	0
24 ,, ,, 1,944 ,, ...	4	10	0

COMPOUND LIQUID **BENTLEY'S QUASSIA EXTRACT**

(THE ORIGINAL).

The deadliest foe of Green, Black, and White Fly.

The insecticide of insecticides for roses, chrysanthemums, tomatoes wall and bush fruits, and other trees.

SAFE TO USE ANYWHERE AND EVERYWHERE

20 Galls., **3/6** per Gall.; 10 Galls., **3/7** per Gall.; 5 Galls., **3/8** per Gall.; 1 Gall., **4/2**; ½ Gall. **2/6**; 1 Quart, **1/6**; 1 pint, **1/-**.

Carriage Paid on 7/6 orders and upwards.

WHOLESALE MANUFACTURERS,
JOSEPH BENTLEY LIMITED,
Chemical Works.
BARROW-ON-HUMBER, HULL.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

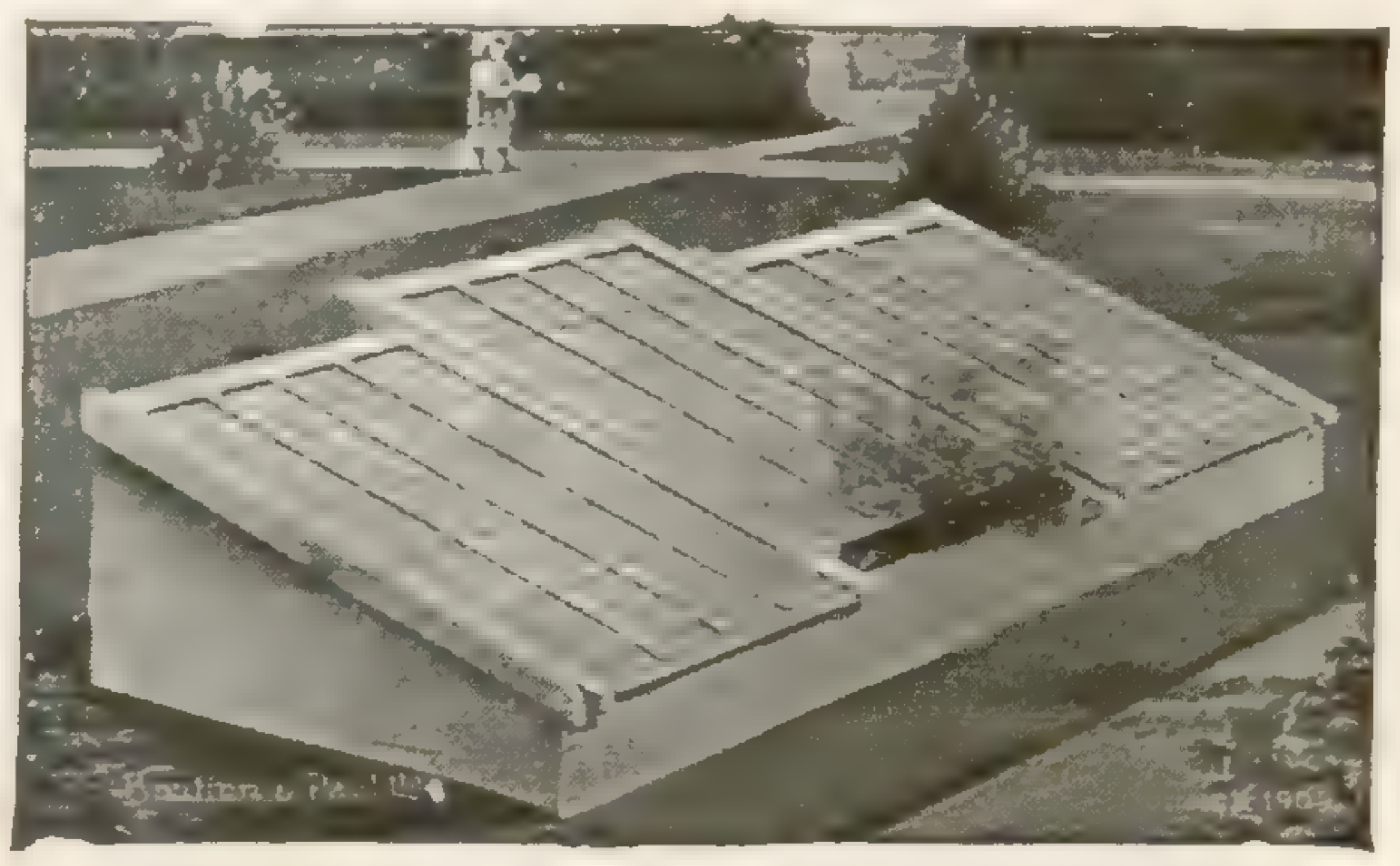
Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to
EPPS & CO., Ringwood, HANTS.

PRESERVE YOUR PLANTS

during the Winter Months by using our well made

No. 75. MELON AND CUCUMBER FRAME.
Painted three coats, glazed 21 oz. glass.



4 ft. by 6 ft. ... £2 0 0 | 8 ft. by 6 ft. ... £3 0 0

Garden Frames

in every variety always in stock.
High-class Finish in the Very Best Materials.

Pit Lights.

6 ft. 1½ in. by 4 ft. Painted and Glazed 14/- each
Unpainted and Unglazed ... ... 5/- ,,

Double Glazed Lights.

4 ft. 7 in. by 4 ft. 3 in. Painted and Glazed, **15/6** each

Improved Fruit Trays.

30 in. by 19 in., **18/-** doz.; 24 in. by 15 in., **15/-** doz.
Carriage Paid on one dozen Trays and over.

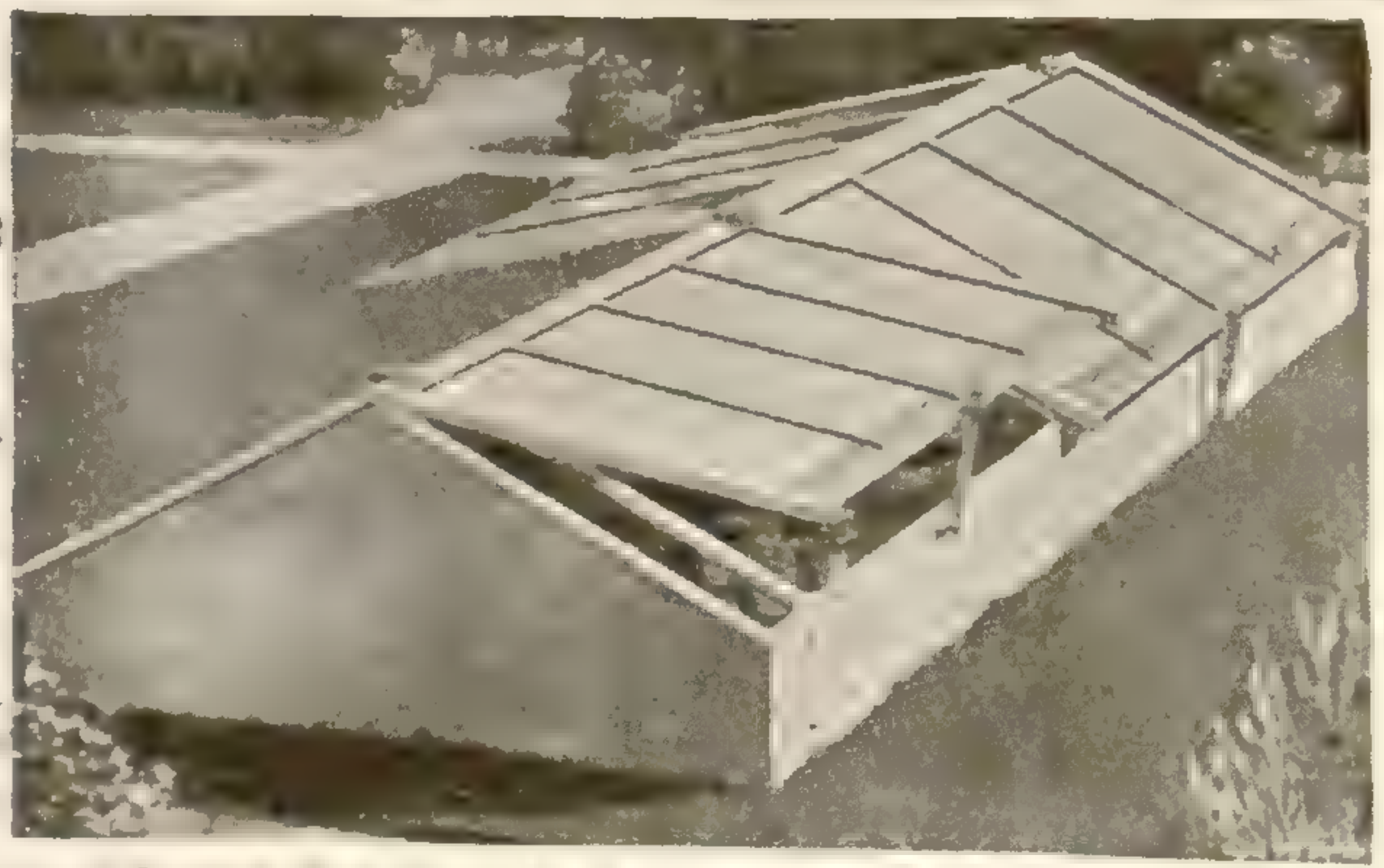
Reed Mats. 4 ft. 6 in. square, **20/-** doz.

SEND FOR PRICE LISTS.

No. 77. **VIOLET FRAME**
(as illustrated).

6 ft. by 4 ft. £1 15 0
9 ft. by 4 ft. 2 7 6

No. 60.
PORTABLE PLANT PRESERVER
6 ft. by 3 ft.
£1 14 0
6 ft. by 4 ft.
£2 5 0
All Frames and lights Painted three coats. Glazed with 21 oz. glass.



Carriage Paid on Orders of 40/- value to most Goods Stations in England and Wales.

BOULTON & PAUL, LTD., NORWICH.

PLEASE MENTION
THE GARDENERS' MAGAZINE
when writing to Advertisers.

LOAM. LOAM. GOOD OLD FIBROUS YELLOW LOAM.

Quotations given for wagon loads to any station, or supplied in one cwt. bags.

Loam Merchants: L. G. SIMMONS & Co.,
YORK ROAD, KETTERING.

"We strongly recommend this volume to the consideration of both amateur and professional growers."—*Yorkshire Herald.*

Crown 8vo, Bound in Cloth, 208 pages, 47 Illustrations and Frontispiece.

CHRYSANTHEMUMS
. . FOR . .
GARDEN and GREENHOUSE.

SECOND EDITION.

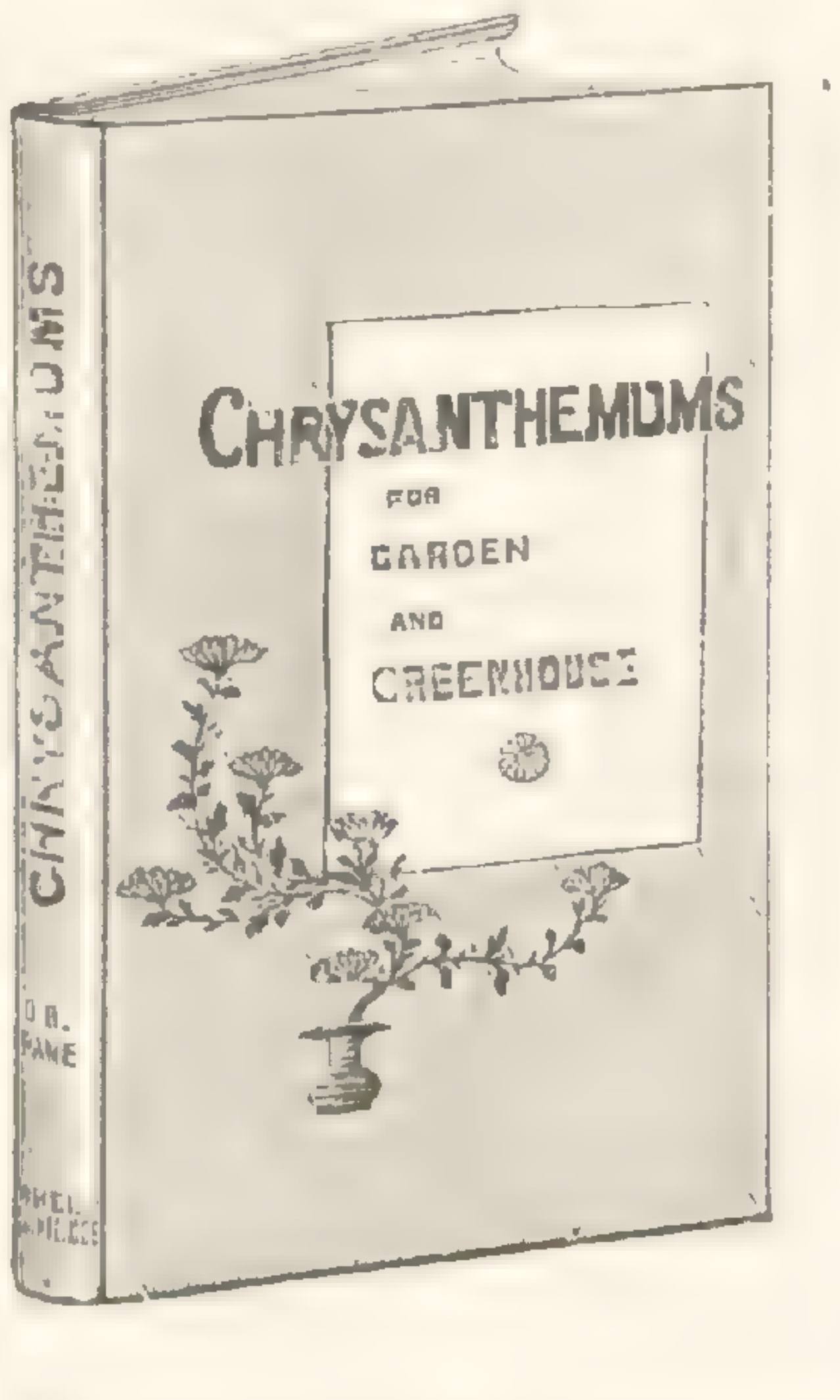
Price **2/6** Net;

By post, 2/10.

By D. B. CRANE, F.R.H.S.,

Chairman of the Floral Committee of the National Chrysanthemum Society.

A COMPLETE AND PRACTICAL GUIDE to the Propagation and Culture of Early-Flowering and Decorative Chrysanthemums, Outdoors and in the Greenhouse.



THE CONTENTS INCLUDE—

Propagation—Outdoor Culture—Planting—Culture Against Walls—Greenhouse Culture and Best Varieties—Final Potting—Lifting Plants—Summer and Autumn Treatment—Market Culture—Selling the Flowers—Floral Decorations—Exhibiting—Pests and Diseases, with Remedies.

COMPLETE LIST OF GARDEN CHRYSANTHEMUMS, with Description, Colour, Habit, Time of Flowering, etc.

◆ ◆ ◆

ORDER FORM. ☞

To the Publishers of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

Please send me "CHRYSANTHEMUMS FOR GARDEN AND GREENHOUSE" by post, for which I enclose remittance of 2/10.

Name..

Address...

Date ....

THE FAVOURITE WEED KILLER.

SANDWITH'S
PREMIER
WEED
KILLER

As supplied to His Majesty's Board of Works, Royal Parks, etc., etc.

Use once a year, and your garden paths will be always clean and bright.

4 galls. for **6/-**; drum, **2/-**. 12 galls. for **16/-**; drum, **6/-**. 20 galls. for **26/8**; drum, **10/-**. 40 galls. for **50/-**; drum, **20/-**.

EITHER LIQUID OR POWDER.

Carriage Paid.

If cash is sent cost of drum must be included, which amount will be refunded when drum is returned.

TIMOTHY & SANDWITH,

The Horticultural Specialists, BRACKNELL, BERKS.

Send for our Illustrated Catalogue of Horticultural Specialities, it will interest you. Post free.

FLOWER POTS.

SANKEY'S
FAMOUS
GARDEN
POTS

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant **Makers to His Majesty the late King.**

Largest Manufacturers in the World.

Only Address:

RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

RATS Exterminated by "LIVERPOOL" VIRUS without danger to other animals and without smell from dead bodies. In tins ready prepared with the bait. Virus for Rats, **2/6** and **6/-**; for Mice, **1/6.**

Of all Chemists. *Write for particulars to*—
EVANS SONS LESCHER & WEBB, Ltd.,
56, Hanover Street, LIVERPOOL.

WILLIAM BARRON & SON, Ltd.

SEND FOR OUR NEW ROSE CATALOGUE (FREE).
IT INCLUDES 98 NEW VARIETIES.

ELVASTON NURSERIES,
BORROWASH, near DERBY.

Please mention
THE GARDENERS' MAGAZINE
when writing to Advertisers.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

Situations Wanted.

GARDENER (Head Working); thoroughly experienced in growing choice Fruits, Flowers, Vegetables, Orchids, etc.; well recommended; energetic; good manager; previously Foreman Petworth Park, Sussex, Walton Hall, Lancs. H. MUNCEY, 3, Finstock Road, Oxford Gardens, W.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out, Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working or Single-handed); married; no family; life experience in Vines, Peaches, Cucumbers, Melons, Tomatoes, Chrys., Kitchen and Flower Garden; good references. CURD, 36, Clarence Place, Gravesend, Kent.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 31; married when suited; excellent references. Address, Closes Hall, Gieburn, Clitheroe.

GARDENER (Head Working) seeks SITUATION; experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants, Flower and Kitchen Garden, etc.; excellent references; married, no family. WM. GIBSON, 128, Lansdowne Road, Leicester.

GARDENER (Head or Single-handed); life experience, Flower, Fruit, and Vegetables; married, no family; age 27; good references; life abstainer. VINALL, Terry Villa, Knaphill, Woking.

GARDENER (Head Working); life experience Inside and Out; thoroughly competent; personal references for 20 years for ability, etc.; abstainer; age 38. SMITH, The Gardens, Brownings Manor, Blackboye, Sussex.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 31; married, two children. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working); 18 years' practical experience growing high-class Flowers, Fruits, and Vegetables; thoroughly understand Lawns, Flowering Shrubs, Roses, Herbaceous Borders, Water and Rock Gardens; excellent characters; Head and Foreman; married; age 33; three children. HUDSON, Cupid Green, Hemel Hempstead.

GARDENER (Head Working, where 2 or 3 are kept); 22 years with last employer; married, one daughter, aged 10. G. COLLARD, 28, Ellen Avenue, Purley, Surrey.

GARDENER (Head Working, or good Single-handed); age 37 years; married, 2 in family; 22 years' experience Inside and Outside; leaving through death in family; good testimonial from present employer; disengaged when suited. H. VINCE, 80, Woodside Road, Ashley Terrace, Sidcup, Kent.

GARDENER (Head Working, or Single-handed with help). F. W. Fletcher, Esq., can highly recommend F. GREENGRASS as a thoroughly trustworthy, experienced, good all-round Man in all branches. At liberty. Married, one daughter, 14 years. F. GREENGRASS, 40, Primrose Terrace, Browning Road, Enfield, Middlesex.

GARDENER (Head Working).—CAPTAIN USHER highly recommends R. Appleby as above; life experience in all branches; thoroughly understands Planning and Laying Out; also Land and Stock; many years' excellent character. Address APPLEBY, 12, Brewster Gardens, North Kensington, London, W.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushroom, ridge or flat; Kitchen, Lawn, Flower Garden. Special prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

MR. ROBERT TAYLOR, Kytes, Watford, highly recommends WALTER REYNOLDS as GARDENER (Head Working); life experience in all branches; 14 years' reference; age 30; married when suited.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; aged 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER, 40; Single-handed preferred; thoroughly experienced; excellent character; active worker; Inside and Out with early vegetables; abstainer; married. A. BISHOP, Windmill Hill, near Hailsham.

GARDENER (Single-handed, or where help is given); 17 years' experience, Inside and Out; age 32; married, no family; good references. G. EUDEN, 11, Clifton Road, Spring Grove, Isleworth.

GARDENER, single, seeks SITUATION; Single-handed or with Help; life experience Inside and Out; last place three years; good at landscaping; good character; age 30. PULLINGER, The Lodge, Strood Park, Horsham.

FOREMAN (Inside); good establishment; 15 years' experience Fruit and Plant Houses, Carnations, Chrysanthemums, Decorations, etc.; age 28. W. HARRIS, Gardens, Chearsley Hill House, Aylesbury, Bucks.

COL. R. J. COOPER, C.V.O., will be pleased to recommend his late Second Man, Inside or Inside and Out, where three or four are kept; 12 years' references. COOKE, Blackwell Hall, Chesham.

YOUNG MAN seeks SITUATION as SECOND GARDENER, Inside and Out; or Third where five or six are kept; three years at last place and over two at present as third; abstainer; good character. NEWMAN, Colonge, Layard Road, Forty Hill, Enfield.

GARDENER, 15 years' good experience, understands Landscape work, also the making of Japanese Gardens; age 30; married; private or otherwise. GARDENER, 5, Park Terrace, Archway Road, Highgate, N.

JOURNEYMAN (Inside and Out), or would take Lead (Outside); well recommended; age 25½. G. BENFORD, Temple Newsam Gardens, near Leeds.

W. TURNER, Winthorpe House Gardens, Newark, Notts, wishes to recommend E. GODSON as JOURNEYMAN (First, Inside) in good establishment; age 25; 10 years' experience; present situation 2¼ years; Bothy preferred.

GARDENER, with good all-round experience, wishes for change; age 28; married, one child; can be well recommended for place where two or three are kept. GARDENER, care of Dobies, Seedsmen, Chester.

AS GARDENER; good all-round man; married, no incumbrances; excellent references, personal if desired. WRIGHT, 29, North Road, Highgate.

LANDSCAPE GARDENING. — SITUATION required to gain knowledge in the above, have been three years articled with Town Surveyor; experience in Surveying, Plotting, etc.; age 23. R. WILLSON, Silver Street, Bradford-on-Avon.

FRENCH MARAIS GARDEN. — Anyone wishing to secure the services of a young and energetic Frenchman, married, and speaking English, already in charge of a French garden in England, may apply for particulars to G. SCHNEIDER, 17, Ifield Road, Fulham Road, London, S.W.

GARDENER seeks SITUATION as Under (Inside); 6 years' experience (Inside and Out); excellent references; age 24; married, no family.—WILLIAMS, Trallwyn Gardens, Chwilog, S.O., North Wales.

MRS. MONCKTON, of Stretton Hall, Stafford, recommends a Youth, age 18, good character, as GARDENER (Under); Bothy preferred; disengaged now.

YOUNG MAN seeks Situation as GARDENER, Single-handed; can take charge of pony; good character; over two years in present situation; age 24; near London preferred. Apply J. SCOTT, 51, Manor Park Road, East Finchley.

YOUNG MAN requires situation as UNDER GARDENER; 2½ years' experience; good references; disengaged. S. TALBOT, Near School, Barrow, Bury St. Edmunds.

YOUNG MAN seeks SITUATION to look after Electric Light and Garden; well up in all branches; nine years last situation. EDWARD VILLA, Street Cobham, Surrey.

REV. R. HOLDEN recommends for employment in Garden, YOUTH, 17; strong, willing; excellent character; been with him 3½ years. E. ROBERTS, Gate House, Nuttall, Nottingham.

YOUNG MAN (27) seeks SITUATION; 14 years' experience Inside and Out; good references; 6 years last situation; disengaged. C. WOOLFORD, 3, Park Terrace, Ryde, I.W.

YOUNG MAN (20) seeks SITUATION in General Nursery work; well up in Cucumbers, Chrysanthemums, Tomatoes, Bulbs, etc.; excellent references. B., 11, Derby Villas, Forest Hill, S.E.

YOUNG MAN, age 21, wants SITUATION in Gentleman's Garden as Inside and Out; 13 months at present situation; disengaged and good references. Apply J. ABBOTT, 38, High Street, Chesham, Bucks.

YOUNG MAN (19), two years' horticultural College and one year Tomatoes, desires SITUATION in Nursery or Market Garden. GOLDEN, Stockport Road, Levenshulme.

YOUNG MAN seeks SITUATION as under-gardener; Inside or Out; 2 years present place; age 23; single; good references. A. HUTCHINS, 3, Beavers Cottages, Beavers Farm, Hounslow, Middlesex.

YOUNG MAN, age 18, requires SITUATION in Gentleman's Garden; Bothy preferred; three years with successful gardener; good references. E. J. SCRIVENER, Church Street, Eye, Suffolk.

YOUNG MAN seeks SITUATION as Journeyman, second or third (Inside); age 28; nine years' experience; good references; Bothy preferred; disengaged. J. HOARE, West Lavington, near Devizes.

YOUNG MAN requires SITUATION in Gardens as Under where three or four are kept; five years' experience; age 20. A. BISHOP, Comb Cross Gardens, Horsington, Templecombe, Somerset.

YOUTH, age 18, seeks SITUATION in Garden; Bothy preferred; four years' good reference. A. LUFF, The Lodge, Thursley Hall, Haslemere, Surrey.

WANTED, SITUATION as GARDEN LABOURER; no objection to a nursery; good spade hand; well used to the work; married, no family; good character. W. LING, Hunger Hill, Westcott, near Dorking.

GERMAN (27), single, seeks SITUATION as KNIFES-MAN or in office as FOREIGN CORRESPONDENT; 10 years' experience Tree Nursery work; 18 months in school for gardeners and 18 months in office; speak German, French, English; botanical knowledge; first-class references. GEIDELE, 139, Newark Road, Lincoln.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For SEPTEMBER 16, 1911.

Please Repeat my Advertisement.

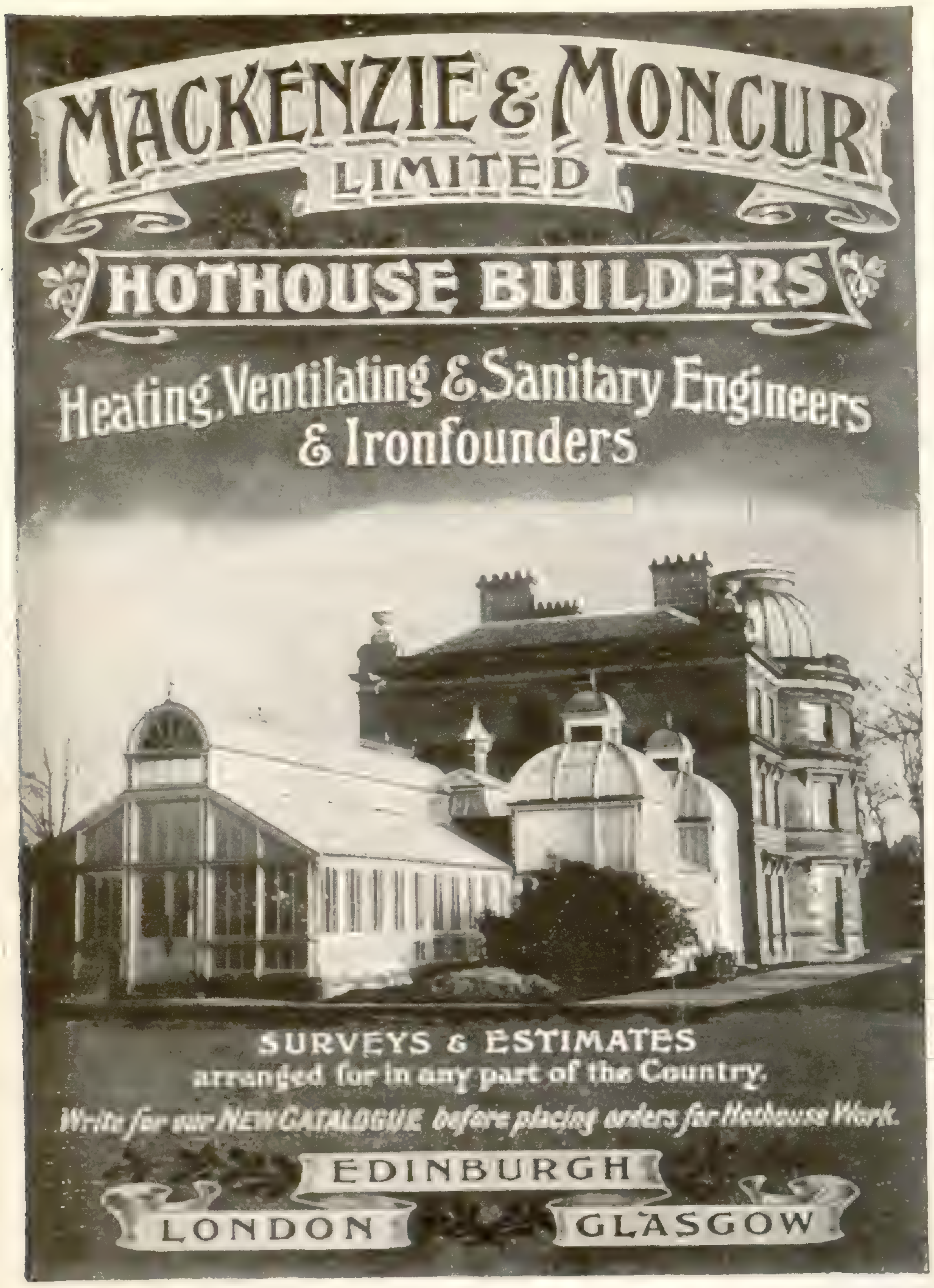
Name ....

Address ....

....

Date........................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

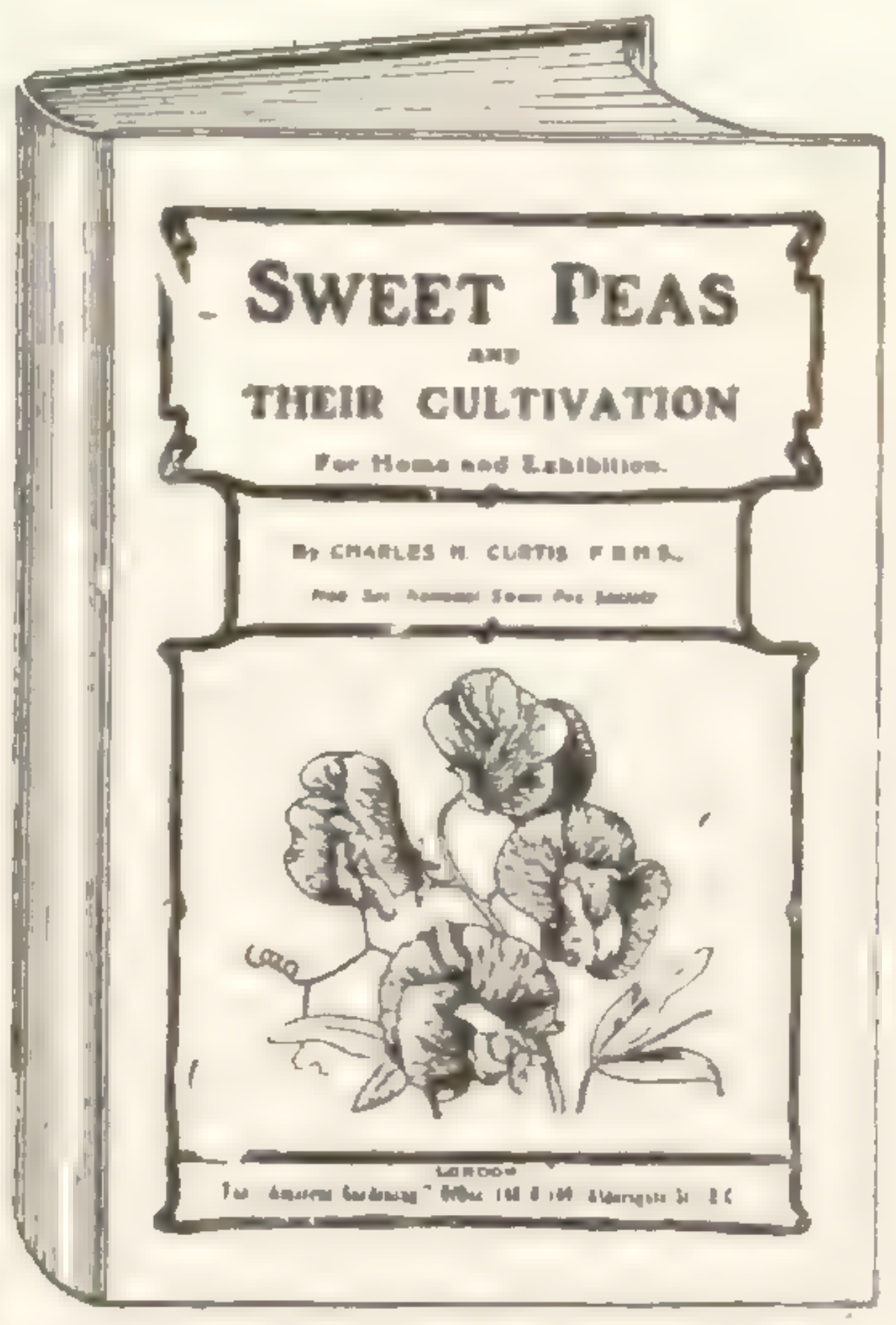

MACKENZIE & MONCUR
LIMITED
HOTHOUSE BUILDERS
Heating, Ventilating & Sanitary Engineers
& Ironfounders

SURVEYS & ESTIMATES
arranged for in any part of the Country.
Write for our NEW CATALOGUE before placing orders for Hothouse Work.
EDINBURGH
LONDON GLASGOW

THE BEST BOOK ON THE SUBJECT.

THIRD EDITION. Price **1/-** net, by post **1/2**. Cloth **1/6**, by post **1/8**

SWEET PEAS
AND THEIR
CULTIVATION
FOR HOME AND EXHIBITION.
By
CHAS. H. CURTIS, F.R.H.S.,
Hon. Sec. National Sweet Pea Society.



THE BEST SWEET PEAS.
HOW TO GROW THEM.
MANURING.
WATERING.
STAKING AND TYING.
RAISING NEW VARIETIES.
DISEASES AND INSECT PESTS.
EXHIBITING.
Etc., Etc.

Fully Illustrated.

ORDER FORM.

To the Publishers, "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, LONDON.

Please send me a copy of "SWEET PEAS AND THEIR CULTIVATION" by post, for which I enclose remittance of 1/2 (if bound in cloth, 1/8).

Name ....

Address ....

....

Catalogues and Estimates Free.

MESSENGER & Co Ltd
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office 122 VICTORIA St S.W.

MODERN GLASSHOUSES

as supplied by MESSENGER and CO., Ltd., are made of the best materials, and only capable and reliable workmen are employed in the erection thereof.

The following letter was recently received by us on the completion of a contract for a well-known Member of Parliament.

February, 1911.

"I should not be doing my duty to your workmen if I did not at once tell you, on the completion of your work, how pleased I have been with each and all of them.

"They have been most obliging throughout the whole job, and have endeavoured to do everything in an efficient and thoroughly workmanlike manner, and I must congratulate you upon having such capable employees."

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls

AUTUMN BULB NUMBER.

THE GARDENERS' MAGAZINE.

No 3,020.
Vol. LIV.
(Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.)
SATURDAY, SEPT. 16. 1911.
(10/6 per Ann. Post Free. To Foreign Countries, 15/-.)
Twopence

BARR'S BULBS for BOWLS and VASES. List of most suitable varieties of Hyacinths, Daffodils, Polyanthus Narcissi, Tulips, Lilies of the Valley, etc., with full particulars of culture and illustrations of the best bowls for Bulbs. Post free. BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON

JAMES GRAY, Horticultural Builder, Chelsea, S.W., wishes to point out that this is a good month for painting and repairing greenhouses, as the inside of many houses can be spared for internal work. He has a large number of excellent workmen, and immediate attention can be obtained by means of a postcard, telephone call (201 Western), letter, or wire to Gray, Chelsea, London.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

BULBS ON APPROVAL.—This offer I have made for 12 years. During that time only 3 lots have been returned. This is absolute proof of the quality. My prices are most reasonable. Catg. of 400 vars. free. ELLISON, 57, West Bromwich.

ROMAN HYACINTHS, 10s.; Freesias, 2s.; Alliums, 1s. 6d.; Early Flowering Tulips, 2s. 6d.; Paper White Double Roman Narcissus, 4s.; named Tulips from 2s. 100. Guaranteed flowering size. ELLISON, 57, West Bromwich. Established 1890.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

IMPORTANT.

MESSRS. DOBBIE and CO are now executing orders for all varieties of SWEET PEAS from this season's crop, saved in Essex. Send for List and have your Seeds for Autumn sowing delivered in good time.
DOBBIE and CO., THE ROYAL SEEDSMEN,
EDINBURGH.

£10 TO ANY CHARITY.—Send 1s. for parcel finest FLOWER BULBS and Plant Lovers' Brochure, full of garden talks and novelties, Aspidistra hints, etc., etc. C. F. BASTOW, Seedsman, 70, Kensington, Liverpool.

ASHBY'S PATENT BULB PLANTER. Specially designed for planting in grass. Equally useful as a weed extractor, 10s. 6d. each; 11s. carriage paid. Sole Maker: G. PAWLETT, Belton, Grantham.

SASH BARS.—Special lines in certain lengths only, 1½ by 1, 2s. 6d. 100ft.; 3 by 1½, 5s. 9d. 100ft.; quotations for special lengths or for any kind of timber, garden lights, greenhouses, and woodwork. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Fennywell Road, Bristol.

NARCISSUS.—Tulips, Hyacinths, etc. All the leading and best varieties, from 4s. 6d. per 100. Ask for illustrated price list, post free. Satisfaction guaranteed. C. F. A. VAN DER SLUYS, F.R.H.S., La Ramée, Guernsey.

NOT a large Advert., or an elaborate Catalogue; but you can depend upon getting absolutely reliable bulbs at most reasonable prices, when ordering from ELLISON'S, 57, West Bromwich, or I should not offer to send on Appro. Cg. Pd.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

LOVELY FLOWERS AT CHRISTMAS.

WEBBS' WHITE ROMAN HYACINTHS.
Extra large bulbs, 3/- per doz.; 20/- per 100.
Selected Bulbs, 2/- ,, 14/- ,,
Good Bulbs 1/6 ,, 10/6 ,,

WEBBS' POLYANTHUS NARCISSI.
Paper White, 1/- per doz.; 6/6 per 100.
Paper White, large flowering.
1/3 per doz.; 8/6 per 100.

WEBBS' BULB CATALOGUE for 1911.
Beautifully illustrated, Post Free.
WEBB and SONS, The King's Seedsmen,
Wordsley, Stourbridge.

BUNYARD'S CATALOGUES
Free on Application.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

KENT STRAWBERRY PLANTS
NEW CATALOGUE READY.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

LAXTON STRAWBERRIES for immediate planting. Fine plants of all the leading varieties in little pots, 15s. 100. Open ground runners, 5s. 100. Catalogue with full particulars gratis
LAXTON BROTHERS, Bedford.

CLAY'S MANURES, CRUSHED BONES
(See page v.)

CLAY'S FERTILIZER is
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

GREENHOUSES and CONSERVATORIES. Distinctive Designs and Finished Workmanship. Write now for ILLUSTRATED CATALOGUE. CARTER and HOWARD, Horticultural Builders, Kingston-on-Thames.

RICHARDSON'S for GLASSHOUSES and HEATING APPARATUS, for full advertisement see back page. Darlington.

PERRY'S NEW CATALOGUES now ready.

BULB CATALOGUE. PERENNIAL CATALOGUE. DELPHINIUM CATALOGUE. IRIS CATALOGUE. FERN CATALOGUE.	Free. on application.

PERRY'S HARDY PLANT FARM, Enfield, Middx.

CONSERVATORIES AND WINTER GARDENS, Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue free.—BOULTON and PAUL, Lim., Norwich.

WINTER-BLOOMING SWEET PEAS.— The "Télemly" Sweet Peas gained the Gold Medal (1907) of the Hort. Soc. of Algeria, and the
LARGE NEW WAVED VARIETIES
the Gold Medal of 1911. If sown in August or September will flower from December till May in Southern Europe, N. Africa, Madeira, etc. In England must be sown in pots and protected from frost till the end of February, and will flower in April in the open, or at Christmas in a sunny greenhouse. 12 seeds each of 4 plain and 3 waved varieties will be sent on receipt of 4s. by the Rev. E. ARKWRIGHT, 36, Seymour Street, W.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses. Portable buildings, etc. Catalogue gratis.

White Flowers at Christmas.

SUTTON'S WHITE ROMAN HYACINTHS.
Extra large bulbs, per doz., 3s.; per 100, 21s.
Selected bulbs, per doz., 2s.; per 100, 14s.
Fine bulbs, per doz., 1s. 6d.; per 100, 10s. 6d.

SUTTON'S PAPER WHITE NARCISSI.
Pure white, per doz., 1s.; per 100, 7s.
Large-flowered, pure white, per doz., 1s. 6d.; per 100, 10s. 6d.

SUTTON'S BULB CATALOGUE for 1911.
Beautifully illustrated. Now ready.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.

From Wm. ———, Esq.,
54, ——— Av.,
Rochester, N.Y., U.S.A.
25th April, 1911.

"Your catalogue is one of rare beauty and value, combining a splendid example of the printer's art with a most admirable manual for the garden lover."

ALPINES.—100 in 50 good varieties, carriage paid, £2. Half and quarter quantities at same rate.
WHITELEGG and PAGE, Chislehurst.

THOMSON'S CELEBRATED MANURES.
(For full advertisement see page 695.)

WALLFLOWERS.—Sutton's Giant Blood Red; also Sutton's Superb Mixed; seeds direct from Sutton's; large plants, 50, 10d.; 100, 1s. 6d., free. ROGERS, Tennyson Road, Hutton, Essex.

FRUIT ROOMS, Game Larders, Garden Huts, Potting Sheds, Workshops, Cycle Houses, Boot-rooms, Servants' Mess-rooms, Children's Playrooms, etc. Illustrated Catalogue post free. BOULTON and PAUL, Ltd., Norwich.

POULTRY AND KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

GARDEN HOSE and FITTINGS, all sizes and lengths, best quality; list free.
HEATHMAN,
Hose Factory, Parson's Green, London, S.W.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

THE POPULARITY OF XL ALL SPECIALITIES increases every year All gardeners proclaim that nothing equals these celebrated preparations.

XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.

XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N. S. or Florist for Richards' small pink list.

G. H. RICHARDS, Manufacturer,
234, Borough High Street London, S.E.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out, Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working or Single-handed); married; no family; life experience in Vines, Peaches, Cucumbers, Melons, Tomatoes, Chrys., Kitchen and Flower Garden; good references. CURD, 36, Clarence Place, Gravesend, Kent.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 31; married when suited; excellent references. Address, Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working) seeks SITUATION; experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants, Flower and Kitchen Garden, etc.; excellent references; married, no family. WM. GIBSON, 128, Lansdowne Road, Leicester.

GARDENER (Head or Single-handed); life experience, Flower, Fruit, and Vegetables; married, no family; age 27; good references; life abstainer. VINALL, Terry Villa, Knaphill, Woking.

GARDENER (Head Working). Mr. WATSON can highly recommond C. WALLIS, where two or three are kept; been here six years as Second of five; age 31; married, two children. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working); 18 years' practical experience growing high-class Flowers, Fruits, and Vegetables; thoroughly understand Lawns, Flowering Shrubs, Roses, Herbaceous Borders, Water and Rock Gardens; excellent characters; Head and Foreman; married; age 33; three children. HUDSON, Cupid Green, Hemel Hempstead.

GARDENER (Head Working, where 2 or 3 are kept); 22 years with last employer; married, one daughter, aged 10. G. COLLARD, 28, Ellen Avenue, Purley, Surrey.

GARDENER (Head Working, or good single-handed); age 37 years; married, 2 in family; 22 years' experience Inside and Outside; leaving through death in family; good testimonial from present employer; disengaged when suited. H. VINCE, 80, Woodside Road, Ashley Terrace, Sidcup, Kent.

GARDENER (Head Working, or Single-handed with help). F. W. Fletcher, Esq., can highly recommend F. GREENGRASS as a thoroughly trustworthy, experienced, good all-round Man in all branches. At liberty. Married, one daughter, 14 years. F. GREENGRASS, 40, Primrose Terrace, Browning Road, Enfield, Middlesex.

GARDENER (Head Working).—CAPTAIN USHER highly recommends R. Appleby as above; life experience in all branches; thoroughly understands Planning and Laying Out; also Land and Stock; many years' excellent character. Address APPLEBY, 12, Brewster Gardens, North Kensington, London, W.

GARDENER (Head, where several are kept).—Mr. EVANS, Picton Castle, Haverfordwest, can with every confidence recommend his Foreman (age 30) to any Lady or Gentleman requiring a good man; life experience in all branches.

GARDENER (Head); can be highly recommended from first-class places; life experience in all branches; holder of R.H.S. Certificate; age 32; married, no family. C. BALDOCK, Kyoto, Boughton, near Faversham.

GARDENER (Head Working); life experience Inside and Out; thoroughly competent; personal references for 20 years for ability, etc.; abstainer; age 38. SMITH, 21, Robertson Road, Preston Park, near Brighton.

GARDENER (Head Working), thoroughly experienced; for the last 16 years in good places; 5 years last place, and excellent characters; age 30; married when suited. E. PIKE, 1, South Street, St. Marks Road, Fulham Road, London, S.W.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushroom, ridge or flat; Kitchen, Lawn, Flower Garden. Special prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (Single-handed, or where help is given); 17 years' experience, Inside and Out; age 32; married, no family; good references. G. EUDEN, 11, Clifton Road, Spring Grove, Isleworth.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; aged 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER, 40; Single-handed preferred; thoroughly experienced; excellent character; active worker; Inside and Out with early vegetables; abstainer; married. A. BISHOP, Windmill Hill, near Hailsham.

GARDENER, single, seeks SITUATION; Single-handed or with Help; life experience Inside and Out; last place three years; good at landscaping; good character; age 30. PULLINGER, The Lodge, Strood Park, Horsham.

COL. R. J. COOPER, C.V.O., will be pleased to recommend his late Second Man, Inside or Inside and Out, where three or four are kept; 12 years' references. COOKE, Blackwell Hall, Chesham.

GARDENER, 15 years' good experience, understands Landscape work, also the making of Japanese Gardens; age 30; married; private or otherwise. GARDENER, 5, Park Terrace, Archway Road, Highgate, N.

AS GARDENER; good all-round man; married, no incumbrances; excellent references, personal if desired. WRIGHT, 29, North Road, Highgate.

GENTLEMAN wishes to highly recommend thoroughly practical Man; age 27; married; experienced Farm Bailiff; understands Kitchen Garden, Engine Driving Machinery; handy man. TURNER, Boughbeech, Edenbridge, Kent.

GARDENER (under), 22, seeks RE-ENGAGEMENT; Inside and Out; 4 years' excellent refs.; well recommended present situation; 6 years' experience. E. EGGLETON, 77, Martins Road, Shortlands, Kent.

YOUNG MAN requires situation as UNDER GARDENER; 2½ years' experience; good references; disengaged. S. TALBOT, Near School, Barrow, Bury St. Edmunds.

MR. GOULD, Shernfold Park, Frant, Sussex, recommends F. BROAD as IMPROVER (Inside); strong and willing; age 20; Bothy preferred.

IMPROVER (Inside or Inside and Out); age 18; three years' good experience; can be well recommended; Bothy preferred. G. SMITHERS, St. Katherine's Cottage, Hook Heath, Woking.

YOUNG MAN seeks SITUATION to look after Electric Light and Garden; well up in all branches; nine years last situation. EDWARD VILLA, Street Cobham, Surrey.

REV. R. HOLDEN recommends for employment in Garden, YOUTH, 17; strong, willing; excellent character; been with him 3½ years. E. ROBERTS, Gate House, Nuttall, Nottingham.

YOUNG MAN (20) seeks SITUATION in General Nursery work; well up in Cucumbers, Chrysanthemums, Tomatoes, Bulbs, etc.; excellent references. B., 11, Derby Villas, Forest Hill, S.E.

YOUNG MAN seeks SITUATION as under-gardener; Inside or Out; 2 years present place; age 23; single; good references. A. HUTCHINS, 3, Beavers Cottages, Beavers Farm, Hounslow, Middlesex.

YOUNG MAN, age 18, requires SITUATION in Gentleman's Garden; Bothy preferred; three years with successful gardener; good references. E. J. SCRIVENER, Church Street, Eye, Suffolk.

YOUNG MAN requires SITUATION in Gardens as Under where three or four are kept; five years' experience; age 20. A. BISHOP, Comb Cross Gardens, Horsington, Templecombe, Somerset.

YOUNG MAN (24) seeks SITUATION; Pleasure Grounds and Kitchen Garden; 9 years experience; good references; Bothy preferred. W. WELLS, Jutland Place, New Road, Windsor, Berks.

YOUNG MAN (27) seeks SITUATION; 14 years' experience Inside and Out; good references; 6 years' last situation; disengaged. CHARLES WOOLFORD, Park View, Nettlestone, I.W.

GARDEN LABOURER, married, no family; good scythe and spade hand; life experience; Private Gardens and Nursery; references; well recommended. W. LING, Hunger Hill, Westcott, near Dorking.

GERMAN (27), single, seeks SITUATION as KNIFESMAN or in office as FOREIGN CORRESPONDENT; 10 years' experience Tree Nursery work; 18 months in school for gardeners and 18 months in office; speak German, French, English; botanical knowledge; first-class references. GEIDELE, 139, Newark Road, Lincoln.

Situations Vacant.

WANTED, GARDENER, Scotchman preferred; Single, or, if married, no family; to live near Paris; experience in all branches Inside and Out; capable of laying out grounds and garden; character indispensable. Apply, state last employer, wages required, etc., F. LYNHAM, Rottingdean, Sex.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For SEPTEMBER 23, 1911.

Please Repeat my Advertisement.

Name ....

Address ....

....

Date ....

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London, N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

BULBS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Narcissi Tulips, Hyacinths, etc., Home-Grown.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

Sales by Auction.

DUTCH BULBS
10,000 Lots Sold Weekly.

SALES EVERY DAY
(Saturdays Excepted),
At 10.30 o'clock, at
PROTHEROE and MORRIS'
Central Sale Rooms,
67 & 68, CHEAPSIDE, LONDON, E.C
Catalogues Free.
Commissions Executed.

DUTCH BULBS.

MR. J. C. STEVENS begs to announce that his **Sales by Auction** are held every **MONDAY, WEDNESDAY** and **THURSDAY** at **12.30.**

Catalogues post free.

Lots purchased, packed, and forwarded to all parts.

STEVENS' AUCTION ROOMS
(Established 150 years),
38, King Street, Covent Garden, London, W.C.

SALES DAILY (SAT. EXCP.) AT 12.30.
First Size Hyacinths, Tulips, Daffodils, Narcissi, Crocus, Snowdrops, etc.

BULB SALES BY AUCTION.

Lotted to suit all Buyers.
Catalogues of Auctioneers,
JOHNSON DYMOND & SON,
"City Auction Rooms" (est. 1793),
38 and 39, Gracechurch Street, LONDON, E.C.

ORCHIDS

1,000 DUPLICATES, CYPRIPEDIUMS AND ODONTOGLOSSUMS, Very Cheap.

Some Valuable Exemplars amongst them.
Write for List to—

REV. J. CROMBLEHOLME, CLAYTON-LE-MOORS, ACCRINGTON.

CHARLES TURNER'S

DESCRIPTIVE and PRICED CATALOGUES of
BULBS, ROSES, CARNATIONS, & STRAWBERRIES
are now ready, and can be had free on application.
THE ROYAL NURSERIES, SLOUGH.

Bulbs

All best qualities at moderate prices Carriage paid.

Illustrated priced Catalogue post-free.

Dicksons *Bulb Growers* ***Chester***

Bulbs: NARCISSUS, DAFFODILS, TULIPS, &c.

All Good Flowering Bulbs; Worth Double.

NARCISSUS

100	**Emperor**	3/0
100	**Empress**	3/0
100	**Henry Irving** ...	4/0
100	**Golden Spur** ...	4/0
100	**Horsfieldii**	3/0
100	**Victoria**	3/0
100	**Obvallaris**	3/0
100	**Grandis**	3/0
100	**Sir Watkin**	3/0
100	**Stella**	1/6
100	**Princeps**	2/6
100	**Ornatus**	2/6
100	**Double Daffs** ...	4/0
100	**Dbl. White Narcis.**	2/6
100	**Pheasant Eyes**	2/6
100	**Frank Miles** ...	1/6

TULIPS

100	**La Reine**	3/0
100	**Cottage Maid...**	3/0
100	**Chrysolora**	3/0
100	**D. de Parma** ...	3/0
100	**Keizerkroon** ...	4/0
100	**Golden Crown...**	3/0
100	**Picotee**	4/0
100	**Bouton d'Or** ...	3/0
100	**Prince de Ligny**	4/0
100	**Duc Van Thol**, sgl	4/0
100	,, ,, dbl	3/0
100	**King of Yellows**	4/0
100	**Mixed Tulips** ...	1/6
100	**Mixed Darwins**	4/0
100	**Darwins** to name	10/6
100	**Parrot Tulips** to colour	2/6

Special offer in Mixed Narcis. and Daffodils. also Tulips for planting in grass, shrubberies, hedge rows, etc.

HYACINTHS

		per 100
12—1/9	to name in colours...... or	10/0
12—1/3	mxd in cols. or	9/0
12—1/9	**Roman White** or	12/0
100	**Iris, Spanish,** to name	1/6
12	**Iris, German** do.	6/0
12	**Iris, English** do.	1/6
100	**Anemones, Scarlet**	4/6
100	,, **The Bride**	1/9
100	,, **St. Brigid**	5/0
100	**Scilla Siberica...**	3/0
100	**Freesia**	3/0
100	**Summer Snowflakes**	5/0
12	**Lilium Candidum**	2/6
12	,, **Crown Imperial** ...	2/0
12	,, **Auratums**	7/0
12	,, **Croceums**	4/0
12	,, **Longiflorums**	4/0
100	**Snowdrops**	1/6
100	**Ixias,** to cols.	2/6
100	**Crocus,** in cols.	1/3
100	**Lily of Valley** ...	2/6
100	**Jonquils**	4/6
100	**Ranunculus** ...	3/0
100	**Montbretia**	3/0
100	**Aconites**	3/0
100	**Chionodoxa** ...	2/6
100	**Polyanthus Narcis**	3/0
100	**Alliums**	3/0
12	**Begonias,** choice	1/6
12	**Violets,** in sorts	1/6
12	**Xmas Roses** ...	4/0

Narcissus and Daffodils,	5/-, 7/6, 10/0 per 1,000
Tulips	10/-, 15/-, 20/- per 1,000

Many other varieties to offer; also all kinds of Herbaceous plants. Any of the above, half quantities at half price.

FRUIT TREES.—Apples, Pears, and Plums, all fruiting trees, **9/-** per dozen. Gooseberries, Currants (black, red, white), **3/-** per dozen. Loganberries and Raspberry-Strawberry, **9d.** each. Raspberry canes, **3/-**, **4/-**, per 100. Strawberry Plants, **1/6** per 100.

All kinds of Flower and Garden Seeds, also POTATOES. Send for List,

J. W. CROSS, Old Grammar School, **WISBECH.**

When answering Advertisements please mention "Gardeners' Magazine."

BULB PLANTER.

Send stamp and address for illustrated descriptive circular, to
LOCKWOOD,
63, John Street, Glasgow, Patentees' Agent.

WARE'S BULBS FOR

Early & Late Forcing, Flower Beds & Borders, Naturalising in Woods, Shrubberies, &c.

Strong Flowering Bulbs, well ripened, Home Grown and from the Best Dutch Farms.

Collections a Speciality.

Catalogue now ready, post free.

Special Booklet on Rock Gardens, Herbaceous Borders, & Water Gardens.
Write for Copy at once, post free.

Address Dept. No. 2 :—

THOMAS S. WARE, LTD.,
FELTHAM, MIDDX.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

Please Write for List.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

PAINT & GLASS.

NICHOLLS & CLARKE, LTD
SHOREDITCH, LONDON.

GLASS

When sending for Catalogue please cut out this advt

THE BOURNE DAFFODILS

have gained many of the highest Awards at all the principal Exhibitions wherever shown. This is convincing proof of the **High Quality** of the bulbs and the care with which they are cultivated.

The **DAFFODIL** is the **QUEEN** of Spring Flowers, and can be grown by everyone, as the bulbs will grow in practically any soil.

But to secure success, either in the Garden or Conservatory, or at the Shows, it is essential that you should

(1st) Buy your Bulbs from a RELIABLE SOURCE, and

(2nd) Learn the elementary principles of cultivation.

YOU CAN DO THIS by (1) buying **THE BOURNE DAFFODILS**, which include all the best of the newest and choicest introductions as well as the older and cheaper varieties.

(2) by purchasing a copy of **The Book of the Daffodil**, by the late REV. S. E. BOURNE, which contains the fullest and the simplest information on everything that has to do with Daffodils. (**2s. 9d.** post free; if ordered with bulbs, **2s. 6d.**)

Send at once for my Illustrated and Descriptive Catalogue, post free from

CHRISTOPHER BOURNE, The Daffodil Specialist, **Simpson, BLETCHLEY.**

Premier Honours Great Show, Haarlem.

ESTABLISHED 1832.
No connection with any other Firm of a similar name.

ANT. ROOZEN & SON'S GUINEA PACKAGE

(Delivered Entirely Free in London)
OF

CHOICE HARDY BULBS.

COLLECTION "F" FOR SPRING GARDENING

Contains **1,140** Bulbs.

48 Hyacinths, distinct colours.
50 Tulips, single early.
50 Tulips, double.
50 Tulips, single, late.
50 Narcissus, best mixed.
30 Narcissus incomparable
24 Narcissus poeticus.
24 Anemones, double.
50 Anemones, single.
50 Gladiolus nanus.
300 Crocus, in 4 distinct colours.
100 French Ranunculus.
50 Snowdrops, single.
100 Spanish Iris.
36 Scilla sibirica (2 colours)
4 Lilium umbellatum.
50 Eranthis hyemalis (Winter Aconite).
50 Ixias, best mixed.
24 Triteleia uniflora.

HALF OF THE ABOVE FOR **11s.**

Our Bulbs are Perfect Bulbs direct from Holland—THE Great BULB LAND.

The above Package may be had from our Agents.

MERTENS & Co.,
3, Cross Lane, London, E.C.,
On Receipt of Cheque or Post Office Order.

Our **DESCRIPTIVE CATALOGUE** of SPLENDID BULBS (100 pages in English), containing FULL CULTURAL DIRECTIONS, will be sent post free on application to our Agents, as above, or ourselves direct at
OVERVEEN, HAARLEM, HOLLAND.

BUNYARD'S FRUIT . . TREES . .

EARLY ORDERS RECEIVE FIRST ATTENTION WHEN PLANTING SEASON ARRIVES.

WRITE FOR CATALOGUE.

Geo. Bunyard & Co., LTD.,
Royal Nurseries,
—MAIDSTONE.—

WINTER

At no time of the year are flowers in the garden and the house better appreciated than in the Winter months and early Spring, and NOW must preparation be made. Bulbs are the mainstay. We have of them excellent variety The finest and most reliable of Hyacinths and Tulips for bedding and pots; of Narcissi; of Crocus. Darwin Tulips choice and varied. Liliums for pots and the garden. We have, too, grand, well-budded Azaleas, Lilacs, etc., for forcing. Lily of the Valley crowns, ordinary and retarded. We cater for that cleanly and interesting way of growing bulbs in fibre in vases. We supply varieties the most suitable, a special compost, and dainty bowls. For Amateurs we have Bulb Collections specially advantageous in numbers of bulbs, quality and price. We will send our Catalogue free.

DICKSON & ROBINSON,
The King's Seedsmen,
MANCHESTER.

VOL. LIV.—No. 3,020. SATURDAY, SEPTEMBER 16, 1911.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Seed Dispersion.

In the plant world, where successive generations are produced by means of seeds or spores, which, to obtain a fair start in life when they germinate, benefit greatly by wide dispersion, the innumerable contrivances which have been evolved to effect this form a most interesting branch of study. Every garden worth the name will display many examples, quite sufficient, indeed, to give an idea of the great diversity existing, since it is not merely our pet garden plants, but also the weeds, which, indeed, as a rule, are the past masters in the art of self-distribution. In the thistles, dandelion, and groundsel we see types of the plants which provide their seeds with downy plumes, which, when the seed is thoroughly ripe, expand, and, being carried off by the passing breeze, are wafted far and wide on their colonising mission. We may, on a windy day, see the air literally dotted as with floating downy snowflakes, careering wildly over the landscape, and every here and there being caught by some obstacle, when the shock will, in all probability, detach the comparatively heavy seed, the now unburdened plume flying away literally with the speed of the wind, while the precious seed has fallen to the soil, to declare itself as a plant in due course, miles, it may be, from its parent. If we have a damp place in our garden we may see the beautiful little Woodsorrel, Oxalis acetosella, and from amid its dense trifoliate leafage and snowy little flowers we may note the little seed capsules projecting here, there, and yonder. Touch one of these, and if it be fully ripe it will explode like a tiny bomb, and fire its shrapnel loading far and wide, not, indeed, so far as the "downy" dandelion and its like, but still, quite far enough to engender new colonies well away from the parental one, and hence achieve the object in view of a non-handicap to existence of the future brood. The balsams, the "noli me tangere" tribe, afford the most striking examples of this type of explosive scatterers, but some of the pea tribe manage to do the same thing on somewhat varied lines; the pods, for instance, of gorse or broom set up, when ripe and drying, so great a strain between their two divisions or shells that, sooner or later, these fly asunder, twisting as they do so, and thus violently fling out the peas within to considerable distances. Turn we now to the poppy, whether wild or cultivated, single or double matters not in this case, and we find on a calm day a large seed vessel, mounted stiffly on a long stalk, and devoid of any removable cap or apparent means of spreading the innumerable tiny seeds within. Closer examination however, reveals a row of small holes just beneath the rim of the seed vessel, and if we gently sway and swing this round and round or back and forth, as the wind will surely do instead, if we do not interfere, we shall see the seed scattered precisely as if from a pepper castor, through the holes in question, and thus sown more or less evenly over a large circular area. Among the weeds, the common burr and goosegrass are particularly cunning in their contrivances for securing foreign aid in seed dispersal. Both provide their seeds with tough bristly husks, each bristle having a curved tip forming a hook. Any furry or woolly animal, or even tailor-clad man himself, coming into contact with these plants at seed time, is fairly sure to have fur or clothing caught by these hooks, the result being the detachment of the seed, and its conveyance far away, until, accidentally or purposely, they are removed from their involuntary transporter. Wide scattering, however, would not always be advantageous to the plants, and those, for instance, whose habitats are walls or rocky clefts are apt to merely drop their seeds in their immediate locality. The little wall toadflax, for instance, Linaria cymballaria, does so, but in a clever and economical fashion. The little round seed pods are furnished like the flower itself, with a stalk, but this stalk bends so as to come in contact with the wall, and exercise some pressure on it; as it lengthens therefore in the maturing process, or is moved by the wind, it has a good chance of finding a chink or crevice in its way, which it then enters, and in which eventually the seed is shed. Obviously, did this plant scatter its seed like the oxalis aforesaid, the great majority would fall on the soil and germinate under conditions entirely unfitted for development. Despite, however, the general benefit accruing to seed distributed abroad, and thereby not only freeing the parental plant eventually from undue competition with its own offspring, but also profiting probably by its own isolation, there are some plants which sow or deposit their seeds on restricted lines. With the cyclamen, to wit, as the seed pods ripen the long straight flower stalk becomes a spiral and eventually carries the seed pod down, as it were, into the heart of the parent plant. The violet also produces seed pods which mature and shed their contents in a similar fashion. Every kind of plant, indeed, has its own peculiar way, and a little study will show many variants of the types which we have described, which are

MR. CHRISTOPHER BOURNE.

common to many species. There is, however, another type to which we have not alluded. This embraces seeds which, in themselves hard shelled and indigestible, are associated with pulps of a sweet and attractive character, which are consequently attacked and devoured by birds or other animals, the result being the eventual wide distribution of the resistant seeds under conditions which are highly favourable to germination. Fruit-eating birds particularly play a very important rôle in this connection, and are terrible rivals to man himself in their taste for the precious and luscious fruits which he cultivates for his own particular behoof, and, as a rule, without any idea that, primarily, in Nature's eyes, the sweet additions to the seed of pear, plum, apple, and all their kin, are of no importance at all except as mere secondary lures to assist in the distribution of the, to him, more or less obnoxious "pips."

Mr. Christopher Bourne, whose portrait we have the pleasure of giving herewith, has already obtained considerable prominence among the ever-increasing band of daffodil experts, and as he takes a keen interest in the flower, and possesses ability of a high order, there is full justification for anticipating that he will accomplish much useful work in the improvement of the flower, as well as in the distribution of its varied and beautiful forms. A son of the Rev. Eugène Bourne, who was one of the highest authorities on daffodils, and a successful cultivator, Mr. Bourne became at an early age greatly interested in the cultivation of daffodils in the garden of his father's rectory, and this interest has steadily increased until the present time, as evidenced by the fact that he now devotes the whole of his time to the flowers for which he has so strong an affection. Mr. Bourne considers that he learned all that he knows about daffodils from his father, with whom he was closely associated in their culture, and a better teacher he could not well have had. He left home to acquire a knowledge of estate management on Lord Londesborough's Yorkshire estate, where he acted several years as assistant manager, but with a still keener interest in daffodils, he started two years ago a specialist daffodil business at Simpson, near Bletchley. Since commencing business Mr. Bourne has been very successful as an exhibitor, a point of importance as evidence that he is fully acquainted with the details essential to the production of bulbs of the highest class, and of finely developed flowers. Mr. Bourne has not been at work long enough to enable him to introduce varieties of merit of his own raising, but he purposes devoting a considerable share of his time and attention to the hybridisation of daffodils, in which he is much interested, not only as a trader, but as a flower lover. In this aspect of his work we may with full justification anticipate that Mr. Bourne will obtain a full measure of success, for the collections that he has staged at the exhibitions have afforded the best possible proof that he has a full knowledge of varieties and rare judgment in selecting. His catalogue affords further proof upon this point, inasmuch as besides containing all the best varieties new and old that are in cultivation, it includes several remarkably fine varieties of which he holds the stock. One of these is the surpassingly beautiful Queen of Hearts, which obtained for Mr. Bourne an Award of Merit from the R.H.S. Daffodil Committee in April last, and is illustrated on another page of this issue. Dewdrop, an exquisitely beautiful Leedsi; Lemon Belle, a valuable addition to the triandrus section; and Tritoma, a handsome variety with bright orange-red bell-shaped crown, are hardly less noteworthy.

R.H.S. Exhibition of Bulbs, 1912.—A special exhibition of forced spring bulbs will be held by the Royal Horticultural Society on March 5 and 6, 1912, with the object of demonstrating the varieties best suited for gentle forcing, and large and small collections are invited from amateurs and trade growers. To such collections R.H.S. medals will be awarded according to merit. There will, in addition to the foregoing, be nine competitive classes, of which seven will be for hyacinths, and one each for tulips and narcissi. As preparations should be made at once by those who may desire to take part in the competition we suggest that full particulars be obtained from the Rev. W. Wilks, R.H.S. Offices, Vincent Square, Westminster, with as little delay as possible.

Summer Weather in Great Britain.—In a recent issue of the Weekly Weather Report the Meteorological Office gives a summary of the weather for the summer, comprised by the thirteen weeks from June 4 to September 2. The mean temperature for the period was above the average over the entire kingdom, the excess ranging from about 4 degrees in the East of England to rather more than a degree in the North of Scotland. The extreme temperature exceeded 90 degrees in all the English districts, and was as high as 98 degrees in the Midlands and 97 degrees in the East of England. The rainfall was deficient over the entire country, except in the North of Scotland, where the excess was only 0.05 inch. The largest deficiency was 3.16 inches in the South-East of England, and 3.00 inches in the South-West of England. The aggregate measurement of rain ranged from 3.34 inches in the South-East of England to 10.62 inches in the North of Scotland. The number of rainy days was everywhere deficient, the greatest deficiency being 19, in the Channel Islands. The duration of bright sunshine was everywhere largely in excess of the average, the greatest excess being 225 hours in the South-East of England. The absolute duration ranged from 476 hours in the North of Scotland to 861 hours in the Channel Islands, and 838 hours in the South-East of England.

Festival of Empire Rose Show.—The schedule of this exhibition, which is to be held on September 28 and 29, has been issued, and, as in the case of the schedule of the exhibition of roses held at the Crystal Palace in June last, is comprehensive in character and sufficiently liberal to stimulate a keen competition among those cultivators who are fortunate in the possession of roses of exhibition quality. There are upwards of fifty classes, and the first prizes include twenty-seven silver cups and pieces of plate, and Messrs. Clay and Son offer a large gold medal as a prize for the "best rose in the show." Schedules may be obtained from Mr. T. G. W. Henslow, Festival of Empire Offices, Crystal Palace, S.E.

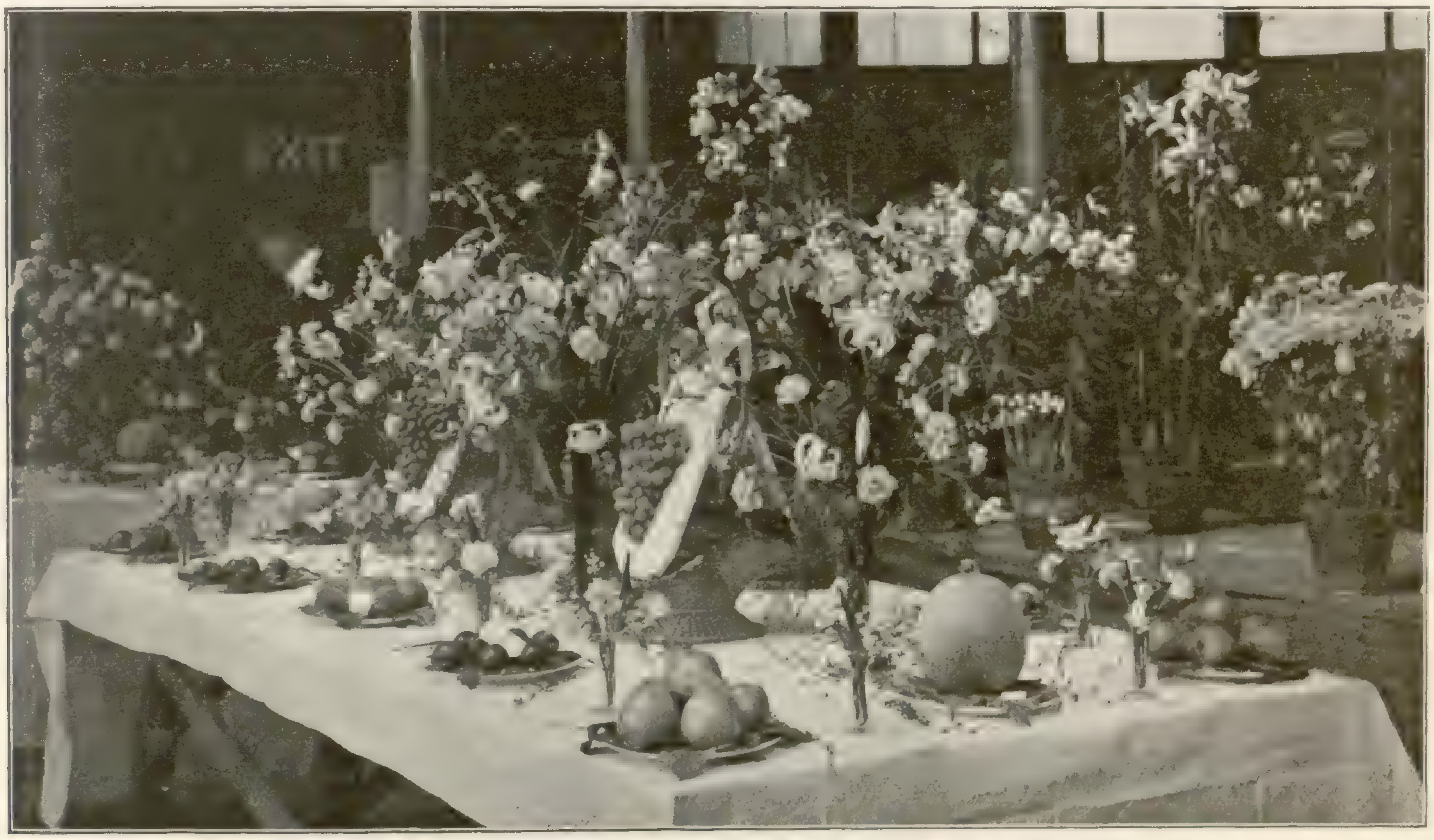
Teaching Museums.—Mr. Jonathan Hutchinson, of Haslemere, has written a somewhat lengthy letter to the "Times" of the 11th inst., in which he advocates the employment of some portion of the £50,000 that has been allocated by the Government to research in, and local investigation of, such subjects as plant physiology, plant pathology, mycology, plant breeding, fruit culture, plant nutrition and soil problems, to the formation of local museums. These museums are not to be wholly devoted to miscellaneous natural history objects or curiosities, as in the case of many of the local museums at the present time, but chiefly to objects that are of special interest and practical importance to those engaged in gardening and farming. It is suggested that these museums should be placed under the charge of curators, whose qualifications should include a general knowledge of natural history and of the pursuits of the farmer and gardener. The duties of the curators would include the superintendence of the exhibits, which should have a direct bearing upon the above-named subjects, to answer questions, and give lectures from time to time. Mr. Hutchinson does not suggest that the duty of lecture-giving should be wholly left to the curators, but considers that a staff of lecturers on special subjects should be provided by the Board of Agriculture. He states that a large and important part of the museums as contemplated would consist of recent specimens not fitted for permanent display. No expense, and but little trouble, need be incurred in reference to the supply of abundant material. Zealous specialist observers abound, and there is a wholy army of gardeners, foresters, and others more or less skilled in botany and plant observation. To these we might look without risk of disappointment for production from time to time of much valuable material which the curator would be well able to utilise for teaching purposes. "In venturing on these statements," Mr. Hutchinson observes, "I am availing myself with confidence of the experience which we have gained during the last ten years at the Haslemere Educational Museum. This museum has become a local centre of reference for a wide district, and in all departments of natural history, especially in reference to such subjects as injurious insects and plant parasites, our curator is constantly referred to. Our museum has been enriched by specimens which have been brought merely for temporary exhibition; and, what is best, general interest in scientific observation on all matters concerning farming and gardening has been widely diffused in our district. It has become the habit whenever anything unusual is observed in farm, garden, or plantation, to bring it to the museum for identification, where it is usually made a matter of instructive demonstration, not only to those who bring it, but to all visitors who may be present."

British Pteridological Society.—The current issue of the "British Fern Gazette" is of special interest to those who appreciate the charms of the more beautiful of the varieties of the ferns indigenous to this country. It contains a considerable number of contributions on fern growing, fern hunting, etc., from well-known authorities, and a full report of the Barnstaple meeting. From the balance-sheet and list of members we learn that the society has now 122 members, and a balance of £74 6s. 9d. These figures are of much interest as evidence of the increased attention that is now being paid to British ferns.

Fungus Forays.—A fungus foray in connection with the Yorkshire Naturalists' Union, will take place in Mulgrave Woods, Sandsend, near Whitby, on Saturday, the 23rd inst., and from the 25th to the 28th inst. At several of the evening meetings papers will be read, and on the 25th inst. Mr. George Massee will lecture on diseases of plants caused by fungi. The annual fungus foray of the South-Eastern Union of Scientific Societies will be held at Hastings, on Saturday, the 30th inst. On the evening preceding the foray a popular lecture on fungi will be given by Mr. E. W. Swanton, at the Museum, Hastings.

ROYAL CALEDONIAN HORTICULTURAL SOCIETY.

On Wednesday and Thursday, September 13 and 14, the spacious Waverley Market was occupied to its fullest extent by the plants, flowers, fruits, and vegetables in competition for the prizes offered in the comprehensive schedule issued by the Royal Caledonian Horticultural Society, and the non-competitive contributions from nurserymen. Consequently, the Scottish horticulturists, and, indeed, visitors of all classes, had an opportunity of seeing one of the finest flower shows that have been held in Edinburgh within recent years, excepting, of course, that with which the society celebrated its centenary. Not only were the entries more numerous than usual, but the products were, on the whole, considerably above the average in point of merit. This improvement was especially noticeable in the case of fruits, for in the classes for these there was an increase in the entries of 250 as compared with last year, and on no occasion during the past thirty years have we seen hardy fruits of Scottish growth staged in so high a state of development as on this occasion. The heat and drought for which the past summer has been remarkable has been felt in Scotland, but not to the same extent as south of the Border, and the increase in bright sunshine has greatly assisted growers in bringing hardy fruits to a high state of perfection. Hardy flowers were shown, more particularly in the non-competitive exhibits, in a manner that could hardly have failed to surprise many visitors from the southern counties. We confess to having been somewhat surprised by the remarkably fine display of sweet peas, which filled a table extended the greater part of the length of the market, and occupied a prominent position in several of the non-competitive exhibits. Vegetables were plentiful, and of high quality, and in the majority of the collections the cauliflowers were as near perfection as we can hope to see them. The plant classes were better filled than usual, and there appeared to be a distinct improvement in development in several of the sections.


DECORATED DESSERT TABLE ARRANGED AND EXHIBITED BY MR. W. GALLOWAY, OF GOSFORD, AT THE EDINBURGH SHOW.

The arrangements were, as is customary at Edinburgh, admirably carried out, and the visitors on the opening day appeared to be more numerous than usual.

DESSERT TABLES.

The decorated dessert tables formed an attractive and highly interesting feature. These tables had to contain sixteen varieties of fruit selected from a list given in the schedule, and had to be judged by points in accordance with the scale prepared by the society. The decorative arrangements have marks assigned them irrespective of the quality of the fruit, and the maximum points on this occasion were: Beauty of flowers and foliage, 8; harmonious blending of colours, 10; and general arrangement for effect, 10; the total being 28. In the result Mr. J. H. Goodacre, Elvaston Castle Gardens, Derby, was awarded the first prize for quality of fruit with 99 points out of a possible maximum of 128. Of remarkably high quality were the clusters of Black Hamburgh, Madresfield Court, and Muscat of Alexandria grapes, and not less remarkable for their splendid development were Princess of Wales and Nectarine peaches. Albert Victor and Victoria nectarines, Magnum Bonum plums, Taunton Hero and The Peer melons, Brown Turkey figs, Marguerite Marrilat and Pitmaston Duchess pears; and Washington and Cox's Orange apples were also meritorious. Mr. Goodacre was second for decorations with 19½ points out of a possible maximum of 28. Lilium speciosum was chiefly used, and the large vases were somewhat overpowering, and not well suited for a dessert table. Mr. W. Galloway was second for fruit, and staged grapes, peaches, nectarines, pears, and melons of high quality. He obtained 85 points from a possible maximum of 124. Mr. Galloway scored for decorations with 20 points from a possible maximum of 28. The flowers used were chiefly those of Lilium speciosum album, pink carnations, and the elegant Bridal Wreath, and with these were associated light sprays of Asparagus plumosus. The table was light and elegant, and afforded an excellent example of what a dessert table should be. Mr. George Mackinlay, gardener to the American Ambassador, Wrest Park, Ampthill, was third both for fruit and decorations. For fruit he was awarded 74 points out of a possible 124, and 13 points for flowers. Mr. Mackinlay used pink carnations exclusively, but it appeared to us that he used too many, and put them in vases of too large a size; moreover, covering the vases with smilax gave them a rather heavy appearance.

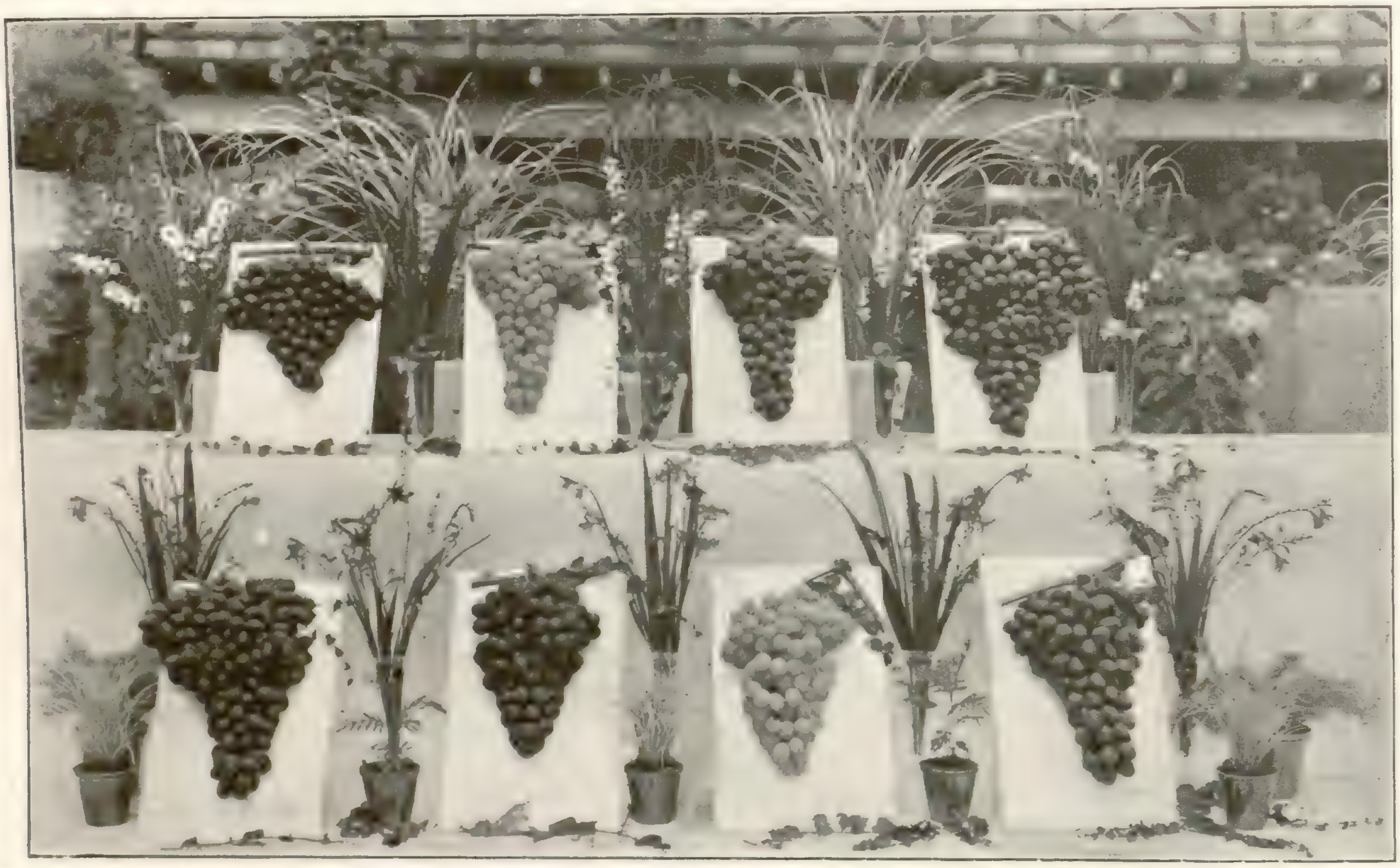
GRAPES.

Grapes, as is customary at the autumn exhibition of the society, formed a strong feature, for in the majority of the classes the competition was of the keenest and the quality was remarkably high. The most important of the several classes was that for eight bunches, in which the premier award consisted of a magnificent fifty guinea silver challenge vase, presented by Mr. W. H. Massie, and a cash prize. There were four entries, all more or less good, and at the head of the several competitions was Mr. James Dixon, gardener to Lord Rowallan, Kilmauns, who on this occasion surpassed himself as an exponent of high-class grape culture. Every variety was remarkable for its high quality as a table fruit, and every bunch was of large size and perfect in finish. The judging was by points, and the numbers awarded the several bunches were as under, the maximum points being given in brackets: Black Hamburgh (9), 7 to each of the two bunches; Muscat of Alexandria (10), 8 one bunch and 6 to the other; Madresfield Court (9), 8 to both bunches; Muscat Hamburgh (9), 7½ one bunch and 7 to the other. Mr. J. H. Goodacre followed for second place with well-finished clusters of medium size. His points were: Muscat Hamburgh (9), 7 both bunches; Black Hamburgh (9), 6½ both bunches; Madresfield Court (9), 6½ both bunches; Muscat of Alexandria (10), 7½ one bunch and 6½ the other. Mr. S. Gordon, gardener to Sir H. G. Maxwell, Bart., Monteith, Whauphill, was third, his clusters of Black Hamburgh and Buckland Sweetwater being the most noteworthy. For one of the bunches of each of these two varieties he obtained 7½ points.

In competition for the prizes for four bunches of grapes, distinct varieties, Mr. D. Kidd, gardener to Lord Elphinstone, Carberry Towers, Musselburgh, occupied the first place, with superb clusters of Gros Maroc, Muscat of Alexandria, Black Hamburgh, and Alicante, Mr. G. Pirrie, gardener to C. W.

Cowan, Esq., Dalhousie Castle, was a capital second, with a collection in which the bunch of Muscat of Alexandria was the most noteworthy. Mr. J. Middleton, gardener to W. Forbes, Esq., Callender House, Falkirk, was a close second. The class for two bunches of Muscat of Alexandria was well filled, and the entries were remarkable for their exceptional quality. Mr. J. Buchanan, gardener to the Earl of Mar and Kellie, Alloa, was first with rather large and finely-coloured bunches. Mr. W. Campbell, gardener to Col. J. Stuart-Mackenzie, Brahan Castle, was an extremely close second, and Mr. W. Galloway followed for second place. Very strong was the competition in the class for two bunches of Black Hamburgh, and the more perfect of the clusters of this useful grape were those shown by Mr. W. Galloway, who obtained premier honours. Very fine also were the two bunches from Mr. J. H. Goodacre, who was second. Mr. S. Gordon had good bunches for third, although rather lacking in colour.

The single bunch classes were better filled than usual, and occupied a long run of table. To particularise is not possible, but it may be mentioned that Mr. J. Buchanan was first for Muscat of Alexandria, Mr. J. H. Goodacre for Black Hamburgh, Mr. F. M. Urquhart for Alicante, Mr. J. Duff for Alnwick Seedling, which was particularly fine; Mr. J. Beisant, Castle Huntley, Dundee, for Gros Colman; Mr. D. Kidd for Lady Downes; Mr. J. Dixon for Madresfield Court, with a superb bunch; Mr. J. Middleton for any new grape, with a medium-sized bunch of Diamond Jubilee; Mr. Frann, gardener to Lord Balfour of Burleigh, Kennet Gardens, Alloa, for Gros Maroc, very fine in finish; Mr. Urquhart for any white grape, not specified, with Buckland Sweetwater, the colour particularly rich; Mr. J. McNeill, gardener to Major Thorburn, for the best bunch, remarkable for its bloom, variety unnamed, but probably Madresfield Court.



MR. J. DIXON'S COLLECTION OF EIGHT BUNCHES OF GRAPES, WITH WHICH HE WON THE SCOTTISH CHALLENGE TROPHY AT THE EDINBURGH SHOW.

FRUITS.

There was a good array of melons, and the premier award for green flesh was made in favour of Mr. Goodacre, who had a handsome and finely-flavoured fruit of The Countess; Mr. D. Kidd second with Best of All. In the class for scarlet-fleshed melons, Mr. Goodacre was again first, staging Manchester Red in fine form. Mr. Ness, gardener to the Earl of Stair, Oxenford Castle, was second with Gunton Scarlet.

There was a strong competition in the class for a dish of peaches, the entries being numerous and the fruit of large size and splendidly coloured. Mr. J. H. Goodacre scored with a grand dish of Sea Eagle; Mr. Ness second with Bellegarde, and Mr. G. Mackinlay third with Princess of Wales. Nectarines were less plentiful than peaches, but they were equal in form. Mr. Goodacre was first, staging large, finely-coloured fruit of Albert Victor; and Mr. Ness was second with Humboldt. Mr. J. Wood, Larbert, and Mr. T. Gordon were first and second for figs with excellent fruit of Brown Turkey.

There was a large display of culinary and dessert plums. Mr. J. Vert, gardener to Lord Howard de Walden, Audley End, Saffron Walden, scored for a dish of a gage plum with fine fruit of Reine Claude de Comte Althens. Mr. MacKinlay second with Transparent. The best dish of yellow plums was that of Jefferson's, exhibited by Mr. Duff. The best dish of red plums was Pond's Seedling, shown by the last-named exhibitor, who had this handsome variety at its best. Mr. Urquhart scored in the class for purple plums with Kirke's in exceptionally fine condition.

The prizes for a collection of four dishes of plums resulted in a spirited contest, and the premier award was made in favour of Mr. J. Vert, who staged Jefferson's, Golden Emperor, Late Orange, and Reine Claude de Comte Althens. Mr. A. McKinnon, Clifton Park, Kelso, was a close second. Mr. Vert was first also for four dishes of culinary plums, the varieties being Primate, Monarch, President, and Pond's Seedling; Mr. G. Mackinlay following closely for second place.

There was but one entry in the class for a collection of twelve kinds of fruit, and the first place was awarded to Mr. Goodacre, who had good clusters of Muscat of Alexandria and Madresfield Court grapes, large, richly coloured fruit of Lady Palmerston and Princess of Wales peaches, Victoria nectarine, Cox's Orange and Gascoigne's Scarlet apples, and good examples of Louise Bonne of Jersey and Williams' Bon Chretien pears.

Mr. Goodacre was first also for twelve dishes of orchard house fruit with a collection in which the peaches, apples, and pears were the most noteworthy. Mr. G. Mackinlay was second with fruit of much merit.

The contributions to the class for twelve dishes of apples were so numerous as to fill a large area of table room, and to form a most interesting and attractive display. The post of honour in this class was occupied by Mr. J. Lee, Kingscroft, Cheshire, with a collection that merited the highest praise. The fruit was throughout of the largest size, free from blemish, and highly coloured. Chief among the varieties were Charles Ross, Worcester Pearmain, James Grieve, Emperor Alexauder, Peasgood's Nonsuch, Gascoigne's Scarlet, Norfolk Beauty, Catshead, and Warner's King. Mr. R. Sinclair, Drem, was a close second with finely-finished fruit; Mr. Craddick, Ross, Herefordshire, third, with fruit rather smaller than in the above-mentioned collections, but superb in colour and finish. Even more severe was the competition in the class for twelve dishes of apples grown in Scotland, and Mr. Duff obtained premier honours with magnificent fruit, that was not less remarkable for its brilliant colouring than for its immense size. The varieties included Yorkshire Beauty, Peasgood's Nonsuch, Lord Suffield, The Queen, Cox's Pomona, and Duchess of Oldenburgh. Mr. R. Sinclair, Drem, was a capital second with fruit of superb quality, Lady Sudeley and Tibbet's Pearmain being especially remarkable for high colour. In the class for six dishes of apples Mr. Craddick was a capital first, and Mr. J. Lee a close second.

The classes for single dishes of dessert and culinary apples contained an enormous number of entries, and, as in the case of that staged in the collections, the fruit was of a high order of merit. Pears were staged in considerable numbers, and, if less attractive than the apples, they proved highly interesting. Mr. R. M. Whiting, Credenhill, Hereford, was first for a collection with splendidly grown fruit of the leading varieties. Mr. W. Galloway was a good second, and Mr. G. Mackinlay third.

ROSES AND SWEET PEAS.

Roses were admirably shown for so dry and hot a season. In the classes limited to amateurs and gentlemen's gardeners there were many good boxes; Mr. J. Simpson, gardener to the Earl of Dalhousie, Carnoustie, was first for twelve teas with good blooms. Mr. J. Black, Kinglossie, scored for the same number of varieties without restrictions as to class, and Mr. J. Simpson was second and Mr. J. Darling, Harward, Hawick, third. For twenty-four roses, Mr. Virtue, Lanark, was placed second,

(Continued on page 692.)

THE VALUE OF DARWIN TULIPS.

If I had a fairy godmother, and if, acting up to the traditions of her race, she offered me certain fulfilment of three wishes, for one I should unhesitatingly demand the stoppage of the clock for six weeks in the third week of May. It usually happens that by then the spell of N.E. wind and sunless cold days that always come in May (and no one seems to remember as occurring when they were young, in the good old days), has given place to the pleasantest sample of climate old England gives us in the whole year. The apple blossom, double cherries, Berberis stenophylla, and many flowering shrubs and trees are then at their best; it is not for their sakes I wish time to stand still, but because it is the moment when the Darwin tulips are in full bloom, and are so beautiful in their varying delights that I have never yet had sufficient time to fully enjoy them. Certainly, they last in beauty for at least ten days, but there are varying phases in that beauty. The effect of a bed of newly-opened buds, with small, stiff cups of a colour somewhat softened in tone by the waxy meal on the outside of a young flower, though perhaps equally charming, is quite different from that of the same bed in its later stage of widely-opened full-grown blossoms, each of which now displays the deeper or brighter hues of the inside of the flowers, and also the conspicuous eyes of varying shades of blue, or white, or combinations of both, that adds so greatly to the beauty and variety of the Darwins. For instance, Europe and Laurentia are much alike viewed from a distance, but at close quarters are easily distinguished, Europe by its white base or eye, Laurentia by a soft blue replacing the white. Again, they possess a double entity, depending on whether we view them in full sunlight or shade, and those who have not noticed these different effects will be astonished and delighted if they look at the same group lit up by the overhead light of noon and again at evening when the setting sun glows through them. Truly, then, we may say that for this period of the year Darwin tulips are indispensable for the pleasure they can give to those who will watch their varying phases.

Their greatest value in the garden lies, perhaps, in their suitability for massing in beds, and the best effects are attained by using only one variety for a bed. I have tried many flowering plants as a carpet for such beds, and have discarded all, including Alyssum saxatile, double arabis, polyanthus, primroses, and others in favour of the best dark forms of Myosotis alpestris, such as Warley Blue or Indigo Queen. The varieties of Darwin I prefer for this bedding are of distinct and uniform shades of colour rather than those which shade off to lighter tints at their edge or show a distinctly paler band up the centre of the segments.

I should advise Clara Butt, a tender pink; Europe, a rich salmon-scarlet; Mr. Farncombe Sanders, rosy-crimson, and one of the largest and most stately, perhaps the best of all for a distant effect. Erguste I prefer to all others of mauve or lilac shades, but I know that H. Ewbank is more popular, possibly only because better known. White Queen, also known as La Candeur, the nearest approach to a white, is effective for a small bed, but not good in a large mass. Zulu, if a tall habit is not objected to, or Faust, are both good as dark purples. Isis is undoubtedly the finest bright red, and King Harold as a dark ruby crimson cannot be beaten. All these I have named are now sufficiently reasonable in price to admit of their being planted in numbers, but for those who care to spend a larger sum, La Tulipe Noire is the finest dark flower, nearly black; Franz Hals, the best violet; and Yolande, or Duchess of Westminster, as it is now called, a magnificent salmon-pink.

Another important use is for cutting, and for this purpose I grow them in rows alternately with carnations, chiefly for economical reasons to save space, much on the same lines as the child who, when scolded for eating butter and jam together, said the same piece of bread did for both. I find if the tulips are lifted just before the carnations are layered, and both replanted in early October, all works well. An annual change of ground is beneficial to both. Besides those already mentioned, the following are especially useful: Suzon, Margaret, and Flamingo, soft pinks; La Tristesse, Mauve Clair, and Lantern, shaded lilacs; Henner, Heela, Dom Pedro, and Nigrette, for shades of brown and dark red; Mme. Krelage, Edmée, and perhaps Louis Mimmerel, for rose-pink, shading paler at the edge.

Yet, again, those who care for pot plants for decorating the house or conservatory cannot do better than to grow some Darwin tulips in pots, but they must not be forced to flower earlier than the third week in March. Here I should not recommend the later-flowering varieties, but such as Mme. Krelage, Painted Lady, which treated thus is almost pure white; William Copeland and Fraulein Amberg, for mauve and smoky grey; Professor Rauwenhoff, the best forcing red; Zanzibar, Zulu, and Donders, for dark shades; and Suzon and Fanny, for pale pink.

Lastly, I would like to speak of a little experiment I have been making, and which thus far has been so successful that I think others might like to try it, too. It is to plant Darwin tulips singly among herbaceous plants in the mixed borders. I find that by planting them rather deeper than usual they will throw fine flowers each year, and make but little increase. This saves the necessity of disturbing the permanent occupants of the border, and at the same time a fine bloom appears annually instead of several small ones, or possibly eventually only leaves. As an instance of the effect thus obtainable, I would suggest the dotting of a dozen or so Clara Butt among groups of grey-leaved plants, such as Cerastium tomentosum, Artemisia Stelleriana, and Santolina incana. E. A. Bowles.

AN EFFECTIVE ARRANGEMENT OF DARWIN TULIPS IN THE FORMAL FLOWER GARDEN, KEW.

ROMAN AND ITALIAN HYACINTHS.

The first-mentioned of these two hyacinths are general favourites, a position they rightly hold through the free production of delightfully scented and elegant spikes of flowers, which are much used in light decorative arrangements; and also for the comparatively easy manner in which they are obtained through the dullest season of the year when the supply of flowers is none too plentiful. With careful management it is possible to have them in bloom from the beginning of November to well into the New Year.

The Italian hyacinths, though very much resembling the Romans, grow somewhat stronger, producing more foliage and stouter flower stems, but any attempt at hard forcing will be disastrous; in fact, they give the best results when brought along steadily in a cool temperature. Nevertheless, they are very useful, and might with advantage be more largely grown than they are at the present time, coming in, as they do, when the last of the Romans are over, and, to a great extent, taking their place. I have in my mind while writing this note a lively recollection of the pleasure I had at a market nursery last spring in viewing several thousands of these hyacinths growing in shallow boxes. They had been brought along with scarcely any artificial heat, and they appeared to be simply oblong masses of flower, so profusely were they blooming. This at once removed the doubt I previously had respecting their free-flowering qualities. The grower informed me that he had undertaken to grow them that season as an experiment; he was more than satisfied with the result.

The most essential part in forcing hyacinths is, in the first place, to procure well-ripened and sound bulbs, and to have them well rooted before introducing them into heat. This can only be accomplished by early potting or boxing; so to have Roman hyacinths in flower at the beginning of November early ordering of the bulbs is necessary, as well as attention to potting or boxing immediately on their arrival. It is usual to try to extend their flowering season as far as possible into the New Year. This is greatly aided by potting the bulbs in batches at intervals of two to three weeks. A fairly rich and light compost will be found the most suitable, and it is advisable to use a fair amount of drainage to ensure the ready escape of surplus water, and thus admit of a generous use of stimulants in a liquid state when they are producing their flower spikes. Pots varying in size from three to six inches in diameter may be advantageously used, these being the most useful sizes for grouping, and from three to six bulbs should be put in each, according to its size. Where a quantity is grown for cutting it is the usual, and, indeed, the best, practice to grow them in shallow boxes, from which they can be readily transferred to china or fancy bowls for house decoration. If this is carefully done, and the roots not damaged, they are not in the least affected by the removal.

As the operation of boxing and potting proceeds care should be taken to make the soil firm round the bulbs, and to leave just the top of each uncovered. When this is finished give a thorough watering, and subsequently plunge the boxes and pots containing the bulbs, using either leaf-soil, sand, or ashes for the purpose. The plunging material should be about six inches above the bulbs. When treated in this way growth soon commences, therefore it is essential to examine them frequently, for if neglected at this stage the growths become drawn, and are liable to damage when removing them from the plunge bed. By taking them out when the growths are about an inch in length there will be no risk of injury, and it will be found on examination, that the bulbs are rooting freely. They should then be placed in an unheated frame, whence they can be removed to a structure in which a brisk temperature and a moist atmosphere are maintained to bring them into flower as required. Although they force readily when removed to the forcing house or pit, perhaps the best results are obtained by bringing them on gradually in a cool temperature.

Italian hyacinths require treatment similar to that advised for the Roman hyacinths as regards potting and plunging, but, as already stated, they are not so suitable for early forcing.

Much pleasure is derived by amateurs nowadays in growing hyacinths in shallow ornamental pans, and either of the types referred to will be found suitable for this very interesting manner of flowering them.

T. B. Field

TULIPS.

Regarded from any aspect of garden ornamentation tulips are a power to conjure with; few bulbous plants equal them in decorative qualities, none are more useful. The genus is a large one, and within it is found practically every tone of colour-value; in the self flowers this is full and brilliant, and in those having two or more shades the combination is usually of great beauty; a large number are richly perfumed, and it is this trait, in conjunction with long, stiff stems, and general lasting qualities, that win them such ready welcome in the open garden, and as cut flowers in the decoration of the home.

The natural flowering season of tulips is limited to some three months of the year, but under systematic pot culture this period is greatly extended, and the flowers may be enjoyed for quite six months by the aid of artificial heat. Bulbs, to produce the earliest flowers, are potted up early in August, using a compost of fibrous loam, leaf-soil, and sand, with the addition of some decayed cow manure, or that from a spent mushroom bed; pots or boxes are employed, the bulbs being potted firmly, and the apex kept level with the soil when finished. Water is applied once, and, after draining, the pots or boxes are plunged in cocoanut fibre or similar material, where they remain for a period of from six to eight weeks. Only the best-rooted samples should be subjected to early forcing, those indifferently rooted being returned to the plunge bed till a later date.

Bulbs of the Duc Van Thol class are most reliable for the production of early flowers, and can be had in bloom at Christmas; in habit the plants are dwarf and neat, having long pointed buds, the flowers for the most part are self coloured, represented by white, scarlet, yellow, blush, orange, and cerise-purple. Early single tulips to follow in succession include Duc de Berlin, Montresor, Proserpine, Vermilion Brilliant, Pottebakker White, all of which may be readily forced into flower for January, after which date the majority of single and double Dutch tulips respond to forcing.

Darwin and May-flowering tulips are valuable for carrying the display through April and May. These require rather more room in the pots, with a long growing season, and must not be subjected to any great amount of fire heat, but allowed to unfold their flowers by the aid of sun heat alone.

Tulips are extremely hardy, and the majority are inexpensive, so that one naturally exacts full measure from them in the open garden. Not only are they ideal subjects for formal spring bedding, but many of the species, along with the Cottage and Darwin sections, succeed either in grass, semi-shady woods, or grouped among shrubs in beds, and, when carefully placed in bold, informal groups, in positions as indicated, the result is altogether pleasing. In preparing positions for tulips in the open it is advisable to dig the ground deeply, working in a quantity of farm manure, which should always be in a thoroughly decayed state. The ground should lie at least ten days before planting, in order to allow it to settle. Bulbs may either be planted alone or in conjunction with some low carpeting plant, which, affording a dual display, at the same time keeps the soil more open by preventing the surface from being beaten by heavy rains. Geum montana, Festuca glauca, Arabis albida fl. pl., Santolina incana, aubrietias in variety, and similar subjects are suitable for this system, while in woodland glades a most delightful picture results from the free use of primrose and polyanthus, with Cottage and Darwin tulips.

Among tulipa species there are several dainty members that appear to best advantage in the rock garden. These include Biflora major, with cream flowers; Clusiana (the Lady Tulip), red and white, with violet centre; Greigi, enormous orange-scarlet flowers; Haageri nitens, orange-scarlet, with dark centre; Kaufmanniana (the Water Lily Tulip), having flowers that are creamy-white suffused with carmine-red; Lownei, rose-pink; and montana, brilliant scarlet. These should be planted in warm sheltered spots in a compost of light soil.

In considering a scheme of spring bedding with tulips alone much depends on individual taste as to the colours likely to prove acceptable. But little, if any, fault can be found with any of the varieties, so that one may safely be guided by a catalogue of repute, choosing such colours as appeal to personal taste. Single and double Dutch tulips flower in advance of the Cottage and Darwins, and may conveniently be planted in beds to be followed by summer bedding plants as soon as the flowers are past their best. The tendency of recent years, however, is to prolong the spring season in the formal garden, and the practice is becoming quite common to bed entirely with Cottage and Darwin varieties, and so prolong the display into the early days of June. This system, while yielding the happiest results, so far as a floral display is concerned, is not entirely to the gardener's interest, or that of the summer plants, which are generally ready for their quarters by the first of June. Rather than inflict a long list of catalogue names of tulips, I have given below a list of cottage and Darwin varieties that were incorporated in a charming bedding arrangement last season: Darwins.—Europe, rich carmine-rose; Margaret, flesh-pink; Clara Butt, delicate rose and blush; George Maw, deep rose-pink; Rev. Ewbank, silvery-heliotrope, a lovely shade; Pride of Haarlem, salmon-rose and scarlet; William Pitt, full blood-crimson, extra fine; La Tulipa Noire, very dark, almost black; Valentine, light violet and metallic blue. Cottage.—Parisian White, clear pure white, petals pointed; Bouton d'Or, deep golden-yellow; Inglescombe Pink, delicate rose-pink and salmon; Primrose Beauty, soft primrose and cream; Picotee, white, margined rose.

Thomas Smith.

CLAY'S LONDON FERTILIZER TRADE MARK. —EVERY—BAG—TIN—AND—SEAL—BEARS—THIS—TRADE—MARK— CLAY'S LONDON FERTILIZER TRADE MARK.

—THE—WORLD—RENOWNED—PLANT—FOOD—

—FOR—ALL—HORTICULTURAL—PURPOSES—

CLAYS'

"The judicious use of CLAY'S FERTILIZER will develop the bloom of all Bulbs to the greatest perfection it is possible to attain."—GEORGE TRINDER.

CLAY'S FERTILIZER—A perfectly safe and useful manure containing the three chief elements of plant foods, viz., nitrogen, potash and phosphoric acid. It is a proprietary specific in general use, adaptable to all forms of soil preparation, and is applied with advantage to plants in pots, and for the production of flowers, fruits and vegetables grown in the open. —*Cassell's Dictionary of Gardening, page 217.*

FOR YOUR

BULBS

CLAY'S FERTILIZER is used in the Royal Gardens, in Horticultural and Botanical Establishments throughout the world, and by leading Professional and Amateur Growers.

Sold Everywhere in Tins, 6d. and **1/-**; **Branded and Sealed Bags**: 7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20/-** Or direct from the Works, carriage paid in the United Kingdom, for Cash with Order (except **6d.** tins.)

CLAY'S SUCCESSFUL GARDENING. A complete Guide to Gardening, including directions as to the use of CLAY'S FERTILIZER. 4th Edition (Reprint). 276 pages, Clear Print, Good Paper, Bound in Cloth, NINEPENCE NET. Of Seedsmen, &c., or direct from the Publishers, Post Free, on receipt of above amount.

CLAY & SON, Manure Manufacturers and Bone Crushers, **STRATFORD, LONDON, E.**

—EVERY—BAG—TIN—AND—SEAL—BEARS—THE—ABOVE—TRADE—MARK—

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.
Our Work has stood the test of time.

CHARLESWORTH & CO.,
Hayward's Heath, Sussex,
ORCHID SPECIALISTS,
IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

PERGOLAS.
Larch Poles at 1d. per foot. List Free.
PATRICK'S, Otley, Yorks.

OAK CRAMBLES.
Peeled and dry at ½d. per foot.
PATRICK'S, Otley, Yorke.

ROSE ARCHES.
Larch Poles, at 1d. per foot.
PATRICK'S, Otley, Yorke.

TREE STAKES AND GARDEN RODS.
Lists free.
PATRICK'S, Otley, Yorke.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue Free. J.E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

CARNATIONS.
AURICULAS. PINKS.

The NEW ILLUSTRATED CATALOGUE of above is now ready, and has been posted to all customers. The newest and best varieties are sold at the most reasonable prices.

Best **CARNATION** and **PICOTEE SEED** ready in October. **1/6** and **2/6** per packet.

AURICULA (Show and Alpine), PINK, and POLYANTHUS SEED now ready. **1/-, 1/6,** to **2/6** per packet.

Send for Catalogue to

J. DOUGLAS,
Edenside, GREAT BOOKHAM.

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

NEW DAFFODILS, 1911.

Our revised Descriptive Catalogue of Rare Daffodils and May-flowering tulips is now ready, and we shall have pleasure in posting a copy to all applicants. Our South of Ireland grown Bulbs are acknowledged to be second to none. Write at once. Address—

WM. BAYLOR HARTLAND & SONS,
Bulb Growers,
33, PATRICK STREET, CORK.
Bulb Farm: ARD CAIRN, CORK.

Orchids! Orchids!! Orchids!!!

The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application.—**J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana, Vanda Cœrulea Lushai Hill variety, dark blue type; Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.

J. J. THOOLEN, The EXPORT Nurseries,
Heemstede, Haarlem Holland,
ESTABLISHED 1884,

Has the honour to announce that his Illustrated Price List of Bulbs and Plants in English, Autumn, 1911, at lowest prices, will be sent post free on application. **No Charge for Packing. Orders of 10/- and above entirely Free to Destinations** in England, Scotland, and Ireland, etc. First Quality guaranteed.

Some sorts of Bulbs noted out of Price List.

	Per 100. s.	d.	Per 1,000 s.	d.
Hyacinths, in the finest mixture for bedding or forcing	7	8	72	4
Hyacinths, single, first size, named, in 25 leading sorts, red, white, and blue vars., equal quantities, my selection	15	0	—	
Tulips, single early, in the finest mixture	2	0	18	4
Tulips, Darwin, mixed	3	0	25	0
Tulips, double, in the finest mixture	2	2	20	0
Anemones, single mixed	1	4	12	0
Anemone, The Bride, pure white	1	4	12	0
Crocus, 1st size, in the finest mixture	1	4	12	0
Crocus, 2nd size, in the finest mixture	0	9	7	0
Scilla campanulata, blue bells	2	0	—	
Scilla campanulata, white bells	2	0	—	
Scilla sibirica, rich blue	1	6	14	6
Iris, Spanish, mixed	0	7	5	0
Iris, English, mixed	2	0	16	8
Narcis., single, in the finest mixture	1	4	12	6
Narcis., Trumpet, in the finest mixture	2	6	20	0
Narcis., double, fine mixture	2	6	20	0
Narcis-Polyanthus, finest mixed	3	6	30	0
Snowdrops, Elwesi, the Giant Snowdrop	1	6	13	6
Ranunculus, French, double mixed	0	9	7	0

250 Bulbs of the same kind will be charged at the 1,000 rate; 25 at the price per 100; 6 at the price per 12.

Ask for Illustrated Price List and see the Collections.

TREE CARNATIONS
The Newest and Best Varieties.
Strong, healthy and well-rooted plants only supplied

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

LOAM. LOAM. GOOD OLD FIBROUS YELLOW LOAM.

Quotations given for wagon loads to any station, or supplied in one cwt. bags.

Loam Merchants: L. G. SIMMONS & Co.,
YORK ROAD, KETTERING.

PEARSONS'
DAFFODILS

for Exhibition, Forcing, Borders & Grass Planting.

Being large GROWERS of Daffodils we are able to offer them on advantageous terms. Our stocks are absolutely true to name, and as free from "rogues" as it is possible to get them. The prices will speak for themselves.

A SMALL SELECTION FOR EXHIBITORS.

CIRCLET.—A fine Engleheartii, **5/-** each.

DUKE OF BEDFORD.—A large bold bicolor trumpet, **4/6** each.

EVANGELINE.—A fine well-formed Leedsii, **5/-** each.

FIREBRAND.—One of the richest coloured red-cups, **9/-** per dozen.

HOMESPUN.—A perfectly formed Incomp., **7/6** each.

LADY MARGARET BOSCAWEN.—A fine bicolor Incomp., **6/6** each.

LORD ROBERTS. — The finest Daffodil of the Emperor type, **6/6** each.

SCARLET EYE.—A good Parvi, with brilliant scarlet eye, **5/-** each.

ALBATROSS.—A fine Barrii, **8/-** doz., **9d.** each.

ARGENT.—A beautiful semi-double, very free, **6/-** doz., **7d.** each.

BLACKWELL.—One of the earliest red cups, **10/-** doz., **1/-** each.

BRANSTON.—A white Barrii Conspic., **18/-** doz., **1/9** each.

CROWN PRINCE. — Very good Barrii, **2/6** doz.

GLORIA MUNDI.—Very fine Incomp., with orange cup, **10/-** doz., **1/-** each.

GLORY OF LEIDEN. — A fine trumpet Daffodil, **5/-** doz., **6d.** each.

LUCIFER.—One of the best red cups, **10/-** doz., **1/-** each.

Mme. DE GRAAFF.—Still one of the best white trumpets, **5/-** doz., **6d.** each.

SEAGULL.—A good variety for any purpose, **4/-** doz., **5d.** each.

POETS.—Cassandra, **1/6** each; Chaucer, **1/-** each; Epic, **1/-** each; Homer, **1/3** each; Horace, **1/-** each; Virgil, **2/-** each.

Send for our full Catalogue containing nearly 200 varieties ranging in price from £32 10 0 per bulb to sixpence per dozen; besides a selection of Hyacinths, Bedding, May-flowering, and Darwin Tulips, etc., etc.

The Cheapest House in the Trade for Really Reliable Bulbs.

J. R. PEARSON & SONS,
LOWDHAM, NOTTS.

In writing please mention this paper.

IXIAS AND SPARAXIS IN POTS.

Although hardy in the favoured parts of these islands, especially where grown in a warm border, these charming bulbous plants must in most districts be looked upon as greenhouse subjects. In the greenhouse their delightful blossoms are sure to be much appreciated, not only from the light and graceful manner in which they are borne, but also from the charming colours which are to be found amongst them, while one of the ixias, namely I. viridiflora, is unique in the colour of its blossoms. They are of a distinct emerald green tint, with a dark centre, and conspicuous yellow anthers. Generally speaking, both the ixias and sparaxis (for they are nearly allied) have but small bulbs, from which rise grass-like leaves and firm wiry flower spikes. On the upper part of the spike, which often arches over in a pleasing fashion, the flowers are produced. They vary in colour from white, or nearly so, to deep crimson, different intermediate shades of pink, cerise, yellow, and orange, being also very plentiful.

An essential point to bear in mind in the cultivation of both ixias and sparaxis is that the bulbs are small, and quickly deteriorate if they are kept out of the ground too long. Such being the case, they should be potted as soon as possible, at all events before the month of September has left us. Effective specimens which are of considerable use for decorative purposes can be grown in pots five inches in diameter, from eight to ten bulbs being put in each. A very suitable compost is one consisting principally of good yellow loam, lightened by an admixture of leaf-mould, dried cow manure, and silver sand, the loam forming about two-thirds of the whole. The pots should be effectually drained, and the bulbs placed at such a depth that the upper part is about an inch below the surface of the soil.

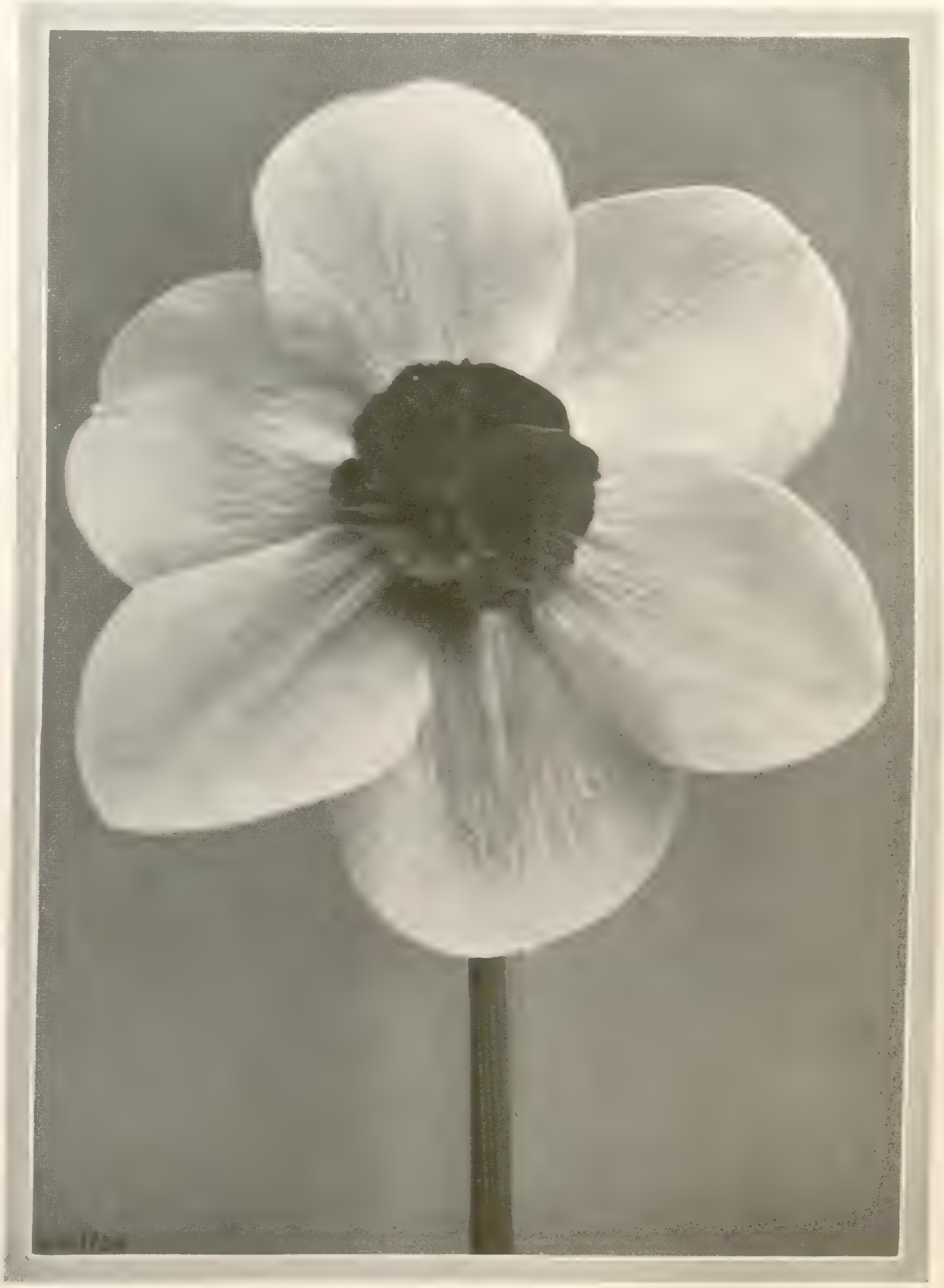
When potted place in a cold frame, giving just enough water to keep the soil slightly moist, and allowing plenty of air, the object being to encourage free root action before the leaves make their appearance. As the season advances and the foliage develops frost must be especially guarded against, a good plan being to take them into the greenhouse before there is any danger of their being frozen, giving them a light position therein, and so situated that air may be given whenever it can be done with safety. The object of this is to obtain a sturdy growth, for, like the well-known freesias, if grown too weakly they are apt to topple over. To obviate this, it is advisable, as the flower stems lengthen, to give them support. If four neat unobtrusive stakes are inserted equidistant from each other around the side of the pot and a band of stout neutral-coloured thread passed from one stake to the other, a good support will be afforded without being in any way conspicuous. Apart from their value as flowering specimens in pots, these bulbs are, from the firm wiry nature of their stems, and the pleasing manner in which the flowers are arranged thereon, of considerable value for supplying cut flowers.

There are a number of varieties of each of the two genera, but those of the ixias predominate. One which is probably grown more than any other is Ixia crateroides, a true species, which is by some authorities referred to I. speciosa. The flowers of this are of a bright cerise-scarlet colour. While bulbs of the different named ixias and sparaxis can be bought cheaply, mixed seedlings can be obtained even cheaper, and from the great variety which prevails among them they will by some be preferred.

After the flowering season of these bulbs is past it is very essential that they are allowed to perfect their growth under favourable conditions, otherwise, if dried off too rapidly, the bulbs will be greatly weakened, and the chances of their flowering another season much impaired.

W. T.

Crotons and Dracænas.—The excessive sunshine we have experienced for such a long period has been most beneficial in colouring crotons. I cannot call to mind any season in which such highly-coloured foliage has been developed, and this gives the plants a handsome and distinct appearance amongst other stove subjects. I am of opinion, however, that we shall suffer a loss of leafage throughout the winter months. Dracænas or crotons that have become unsightly through loss of foliage at the base may be notched, mossed up, and rooted before the winter arrives. Plants which are intended to be so treated may be removed from the general collection to the propagating houses where their unsightly appearance is not so much under notice.—J. Donoghue.



NARCISSUS QUEEN OF HEARTS.

A remarkably handsome variety of the Barri type, the flowers are large, with white perianth and shallow cup of an intense red. Received an A.M. from R.H.S., April 25, when it was finely shown by Mr. C. Bourne.

THE NOTABLE DAFFODILS OF 1911.

In making a few notes under this heading, I will not promise to adhere strictly to such varieties as have made their début this season, but will confine myself principally to the really new ones, leaving the older varieties for a future occasion.

Uncle Robert has been extremely fine with me; I measured one flower 4¾in. across the perianth, trumpet 1¾in. long, and 2¼in. across. It is a very pale bicolor trumpet, described by some as a white. It is the finest flower in size and shape of the Weardale type, though "Much the Miller," of Messrs. Cartwright and Goodwin's raising, runs it very close. Miss Willmott, though exhibited several years ago, has only just been put upon the market; it is a hybrid Poet, a fine large flower with a long and strong stalk, and should become a very popular variety when it gets within the reach of the many.

Crœsus is one of the very finest of the orange-cupped section. It is an Incomparabilis of large size, the segments being perfectly rounded and overlapping, of a creamy-white tint; the cup is very large and much expanded, and of a deep orange throughout; a perfect exhibition flower. Ormolu is a new Poet, really distinct even among the host of Poets now scattered about the country. It is a well-formed flower of the Poetarum type, with a lovely eye of russety-red. It was beautifully shown at the Midland Daffodil Show by Mr. A. Wilson, of Bridgwater.

NARCISSUS MISS WILLMOTT.

A beautiful Barri variety; the flowers very large, with white perianth and lemon-yellow cup, margined orange-red. Awarded F.C.C., R.H.S., in April last, when exhibited by Messrs. Walter T. Ware, Lim.

In Empire we have one of Mr. Crosfield's best things, and one of the best giant Leedsi's yet seen. I say this rather reluctantly, being responsible for a goodly number of giant Leedsi's, and feeling naturally jealous of the reputation of my own "children." Mrs. W. O. Wolseley is another beauty of the same class, shown at Birmingham this year by the Rev. Jos. Jacob. Challenger is a really magnificent Engleheart, and one of which Mr. Crosfield may be justly proud. I cut some quite tight buds of this, and took them to Birmingham this spring. On reaching the Edgbaston Gardens I put them into a greenhouse in a temperature of about 70 degrees, and they opened perfectly, and lasted the two days of the exhibition, a journey back to Lowdham, and only expired on the following Saturday, some ten days after being cut. The fine white perianth of this flower shows off to perfection the beautiful disc, which is yellow, edged with bright orange-red. Firetail, by the same raiser, is a very fine flower, and also a good laster. It comes very near to the Poets; the large, perfectly formed perianth is creamy-white, the flat disc is of a deep red throughout.

Sheba was shown by Messrs. Barr and Sons at Birmingham; it is a large pure white flower with an intensely brilliant red cup, about the sharpest contrast of colour I have yet seen. Queen of Hearts, shown by Mr. Bourne, is a fine red-cupped variety, with a pale maize-coloured perianth. Maud Müller, one of Mr. Wilson's flowers at Birmingham this spring, is a remarkably perfect pale bicolor or white trumpet daffodil. White Wolf, May Hanson, and Princess Ena, are all triandrus hybrids of great beauty, shown by Messrs. Cartwright and Goodwin this year at Birmingham. King Solomon, shown by the same firm, caught my eye as a new bit of colour in trumpet daffodils; it is a fair sized flower of P. R. Barr shape, and of a uniform clear lemon-yellow. White Star, also exhibited by them, is one of the finest and most refined flat-crowned daffodils in existence.

Picador, shown by Miss Currey, from Ireland, is a very bright and pleasing bit of colour; it has a well-formed creamy-white perianth, and a flat orange cup deeply stained scarlet. Miles Standish raised and exhibited by Mr. Mallender, of Scrooby, and purchased by my own firm, is a very refined pale bicolor trumpet, which I think is bound to make its mark upon the show bench in the near future. Marie Louise, exhibited by Messrs. Barr and Sons, gives us a wonderful bit of colour, a pure white perianth contrasted with a vivid orange disc. Macebearer, which was put upon the market for the first time this season, is a flower of great substance, the perianth segments are broad, thick, and overlapping, of a creamy-white shade. The cup is large and much expanded, pale yellow with a band of orange-red. This is a variety which is bound to come to the front as an exhibition flower.

King George, I must not say too much about, as it is one of my own productions; but I think it will earn its own reputation when seen in perfection; at present it has only been exhibited once, at Norwich, this year. It is a very large trumpet daffodil of a uniform clear bright yellow. A plant of extreme vigour. Westwick Giant is an enormous deep yellow trumpet variety, raised by Mr. Davison, noted as a raiser of new montbretias. It has now passed into the hands of my firm, but will probably not be seen for some time, as the stock consists of one bulb only. The flower, as grown by Mr. Davison, measured 5in. across the perianth, the trumpet being 1¾in. long, and 2in. across; while the stalk—as much as Mr. Davison brought to the show—was 23 inches long, truly a giant, but without a suspicion of coarseness.

Of really new Poets, the finest of all is Coronation, one of Mr. Engleheart's productions, and exhibited by Mr. Crosfield. Sarchedon, by the same raiser, and also exhibited by Mr. Crosfield, is also very fine, a late recurvus type of flower with a very deep band of crimson round the large eye. Other fine Poets which have not long been "out" are Snow King, Socrates, Hildegarde, Matthew Arnold, and Ruskin. I was forgetting to give a word to Whitewell, a very fine incomparabilis, lately sent out by the Rev. J. Jacob; it is a very bold and well-formed flower, good for the exhibition table, but its future lies on the lines of a garden plant; it is large enough to make a show in the distance. Miss Curry had a superb example of this variety on her stand at Birmingham. Prima Donna might also be mentioned; it is certainly not quite new, but only one bulb has been sold up to date. It is an absolutely distinct thing. The flower is perfectly round, of a pale maize colour, the flat disc, which measures 1½in. across, is yellow edged with orange. I had this variety very good either last season or the one before, and it caused more comment than any novelty of its year.

I feel sure that many good things have been missed in these few notes, but it is a long while since the spring shows and many things have happened to dull—if not efface—the memory of the many beautiful things then put before us.

One thing is quite certain, the limit in size, colour, and form in the daffodil has by no means been reached, as was plainly shown this season, especially at the Midland Daffodil exhibition at Birmingham, where a wonderful wealth of novelties was brought together. Of course, the steps in improvement are not now so great as they have been in the past, but though slower they are none the less sure, and with the host of hybridists now at work we may confidently look forward each returning season to novelties which shall quite outshine those of past years.

I hope I may yet live to see, if not a daffodil with a scarlet trumpet, at least a huge white incomparabilis with a scarlet cup as large as Sir Watkin. What a wonderful fascination our favourite flower has for its votaries! We may groan at the weather, and declare that growing daffodils means eleven months' waiting and one month's pain; yet, all the same, no sooner has one season passed than we begin to plan for, and anxiously await, the next, always hoping that it may prove the one perfect season we have so long awaited in vain.

J. D. Pearson.

GOOD BEDDING HYACINTHS.

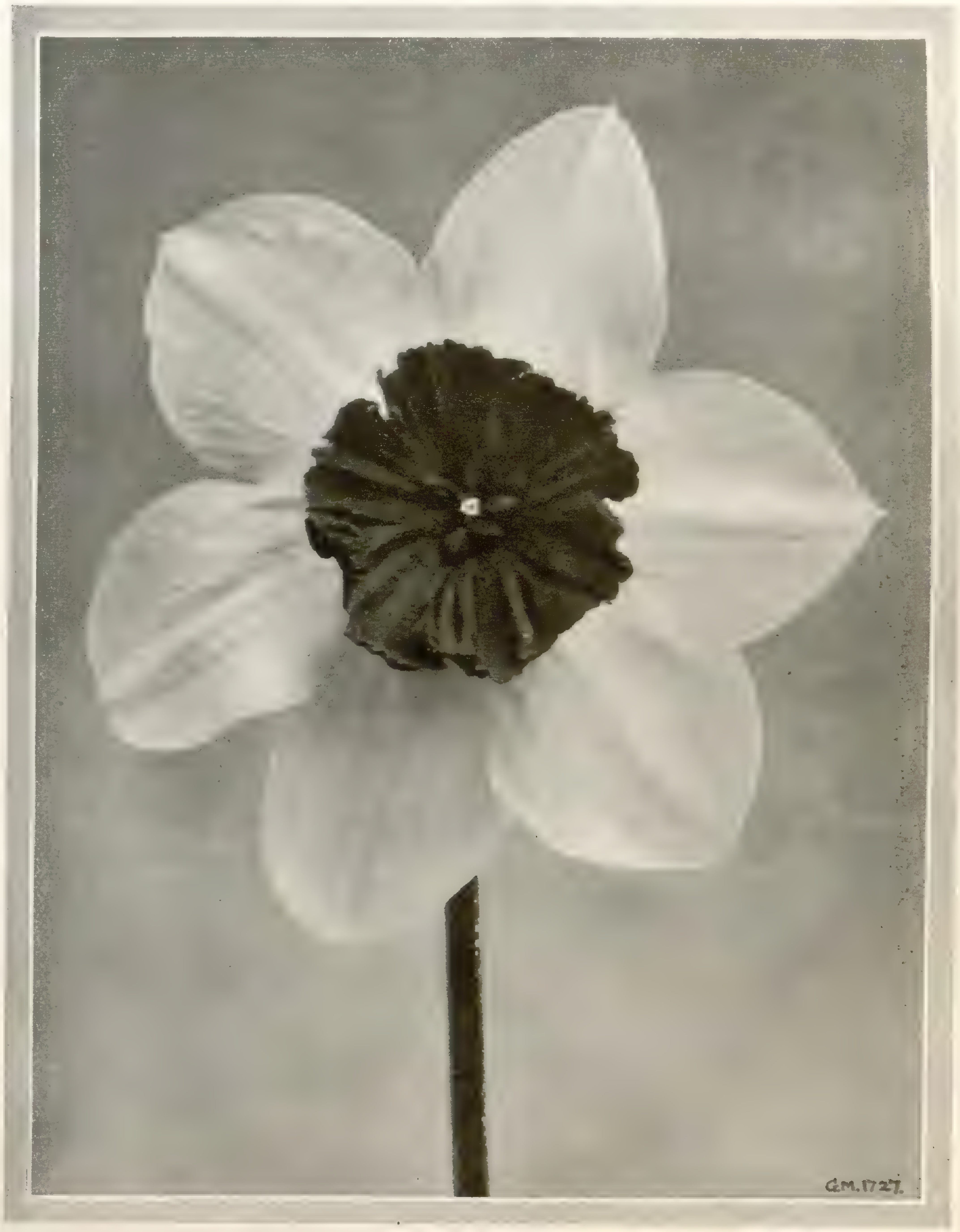
There are numerous varieties of hyacinths suitable for bedding purposes, and these create charming effects in the spring when planted in beds of bold design. They are especially useful for the furnishing of beds near the dwelling-house, where their full beauty can be readily seen. They are also very effective in masses in the front of shrubberies, the green background bringing out their various hues to the best advantage.

Bedding hyacinths may be had in all shades of colour, and some nurserymen make a speciality of the most approved varieties that are of uniform height, and flower at the same time. Uniformity of height and colour is most important, as the effect of the series of beds may be spoiled by one or more of those employed not being in bloom at the same time as the majority. Dark blue, porcelain blue, crimson, bright red, dark rose, light rose, yellow, and pure white are some of the most attractive colours in hyacinths. These can be planted in beds of one colour, or intermixed at the planter's discretion. Probably, masses of distinct colours are the most effective; but really charming combinations of colour can be formed, and these will probably be much appreciated provided they are used in the right place. For instance, a round bed with a star-shaped centre, composed of crimson, and the remainder filled in with light blue, is very distinct and pleasing. Other colours can be combined with good effect, and pretty designs created, or they may be arranged in circles; in fact, there is practically no limit to the combinations that can be effected.

The single hyacinths are the most satisfactory for bedding, as they bloom more regularly, and produce finer flower spikes than the doubles. Amongst the best-named varieties are L'Ornement Rose, a lovely pale rose variety; Rosy Gem, bright rose; Schotel, pale lilac-blue; King of the Belgians, crimson; Queen of the Blues, light blue; Marie, dark blue; Gertrude, dark rose; City of Haarlem, clear yellow; and L'Innocence, pure white.

The best time to plant hyacinths is in October, after the beds are cleared of their summer occupants. Any ordinary garden soil that has been well cultivated will give good results, but in cases where this is of a heavy nature, a liberal amount of coarse sand and leaf-soil can be incorporated with advantage. A little sand should be placed under each bulb as it is planted. Place the bulbs six or eight inches apart each way, and plant them four or five inches deep, pressing the soil firmly around them. The time of their flowering can be regulated by the planting, for if buried deeper they will be later coming into bloom. If the beds are covered with some fibre or similar material when the planting is completed, it will afford protection to the bulbs against severe frost, and can be gradually removed when growth commences in the spring. Should the weather be dry when they are coming into bloom, a thorough watering will assist them to develop their flower spikes, and help to prolong the period of bloom. There are several fibrous-rooted plants that may with advantage be associated with the hyacinths as they add materially to the general effect. Double white arabis, polyanthuses, violas, alyssum, iberis, saxifragas, and primroses are some of the most useful of these, and help to give a finish to the whole arrangement. When used as a carpeting to the beds of hyacinths great care will be necessary to select colours that will properly harmonise. It is also essential to allow the hyacinths an additional amount of space to adequately show off the groundwork. Red or crimson hyacinths look well set in a groundwork of white arabis, while the latter forms a charming margin to a bed containing dark blues. One of the purple-shaded violas is very pleasing in association with a white variety, such as L'Innocence. Myosotis and white hyacinths are also very attractive. The polyanthuses and primroses are the most appropriately used with blue hyacinths like Marie and Queen of the Blues.

J. Gardner.



NARCISSUS MARIE LOUISE.

A beautiful Barri variety, the blooms of large size, with white perianth and rich scarlet cup. Finely exhibited by Messrs. Barr and Sons, last season.

BULBS.—A practical treatise on the cultivation of hardy, hothouse and greenhouse bulbous and tuberous rooted plants is "Bulbs and their Cultivation," by T. W. Sanders, price 2s. 6d. net, or by post 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

PYRUS NIEDZWETZKYANA.

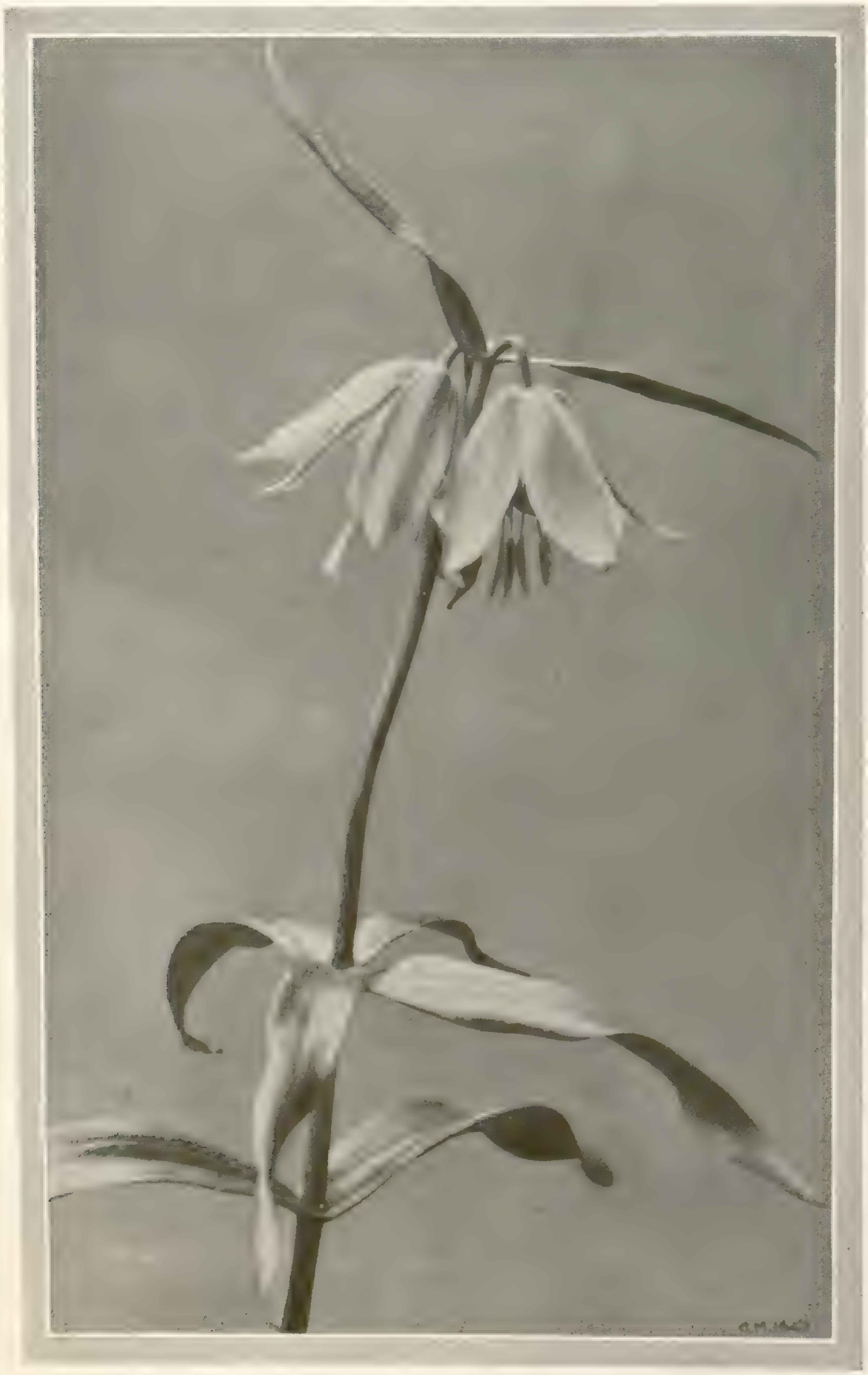
Within a short distance of the main gate at Kew a specimen of this showy pyrus may be seen bearing a considerable number of fruits. These fruits are quite as remarkable in colour as the flowers were at an earlier date, for they are of a deep red, or reddish-purple, hue, without any of the green colouring which is usually evident on fruits of apples and crabs. It is interesting to note that the red colour is found throughout the flesh of the fruit, though this is brighter in colour than the outer part, and more closely resembles that which is peculiar to the flower. The tree is also characterised by having its branches, roots, and leaves stained with red. Apart from the colour, it bears a striking resemblance to an ordinary crab apple, and seems as if it will grow into a tree of similar size.

P. Niedzwetzkyana was introduced from the Caucasus a few years ago, and has been called a variety of P. malus. There appears to be good reason for it being considered a variety, and not a good species, for from seeds ripened in this country a percentage only of the young trees have come true. It is a tree which deserves general cultivation, for it is distinct from any other crab.

W. Dallimore.

FRITILLARIA IMPERIALIS CHITRALENSIS.

This distinct and beautiful fritillary is one of the most noteworthy of the bulbous plants flowering early in the spring months that have been introduced to cultivation within the past few years, and has the promise of becoming popular when generally known. It was first introduced to public notice in this country on February 22, 1910, when Miss Watson, of North Court, Finchampstead, Hants, submitted specimens to the Royal Horticultural Society's Floral Committee. The members of that body were much impressed by its distinctive charms, and resolved that specimens shown be sent to Kew for identification, and, subject to it being named, it should receive an Award of Merit. At the meeting of the Floral Committee held on March 8 of the same year, a report was received from Kew to the effect that this fritillary was a geographical form of the well-known Crown Imperial (Fritillaria imperialis), and had received the varietal name of Chitralensis. The bulbs were sent to Miss Watson by her brother, Colonel H. D. Watson, C.I.E., when serving with his regiment, the 2nd King's Own Ghoorkhas, in Chitral, where this variety is said to be hardly less plentiful than is the daisy in this country. In general character it differs materially from Fritillaria imperialis, being much dwarfer and more slender in growth; the leaves are greyish-green, and the pendulous flowers are rich yellow. The specimen herewith illustrated was one of several exhibited by Messrs. R. Wallace and Co. at a meeting of the R.H.S. held in the spring of this year.



FRITILLARIA IMPERIALIS CHITRALENSIS.
A geographical form of the Crown Imperial, bearing rich yellow flowers; introduced to cultivation by Colonel H. D. Watson, C.I.E.

Kalanchoe flammea.—It is given to very few plants to attain the amount of popularity achieved by this kalanchoe in so short a time after their introduction, for it soon became a universal favourite. Such a result is not at all surprising, as it is a very beautiful subject for the embellishment of the greenhouse during the summer, and, is also very distinct from the plants commonly employed for the purpose.—W. T.

POPPY ANEMONES.

There is no gainsaying the fact that the Poppy Anemone, as Anemone coronaria is called, is not so popular as it was at one time. It is a little difficult to account for this, except on the assumption that we find in many gardens it is not long-lived without renewal, and that there are many who have formed an erroneous idea regarding the supposed difficulties attached to its cultivation.

Many of the plants will remain good and in sound flowering condition in soils which suit them without any trouble of lifting and replanting, and we find in warm sandy soils that there are poppy anemones which have lived and flowered for long years.

At the same time they are all the better for annual lifting, resting, and replanting in well-manured soil, so as to ensure the finest flowers and increased vigour on the part of the plant.

Soil and Position.

A sandy soil, well enriched with a liberal dressing of old manure, preferably that from the cowhouse, is the best, but the poppy anemones can be successfully grown in other soils, although they do not like those of a cold clayey nature. There are some gardens where no pains will induce the flower to thrive, and, as a case in point, we may mention that the late Mrs. Laurenson, the lady who raised the lovely St. Brigid anemones, while living at Howth, in Ireland, could not grow them when she removed to another garden near Bray.

These anemones will thrive well in an open position, but one learns that they do very satisfactorily if in a half-shaded one, such as under the partial shade of apple trees in a border, such as we see in many gardens. The writer knows of a fine display of St. Brigid anemones in such a position, where they lived and throve for years.

Cultivation.

The soil should be prepared in good time, and the tubers planted in autumn, say in October, although some delay doing so until spring, and thus secure flowers during summer. In the latter case the position should be more shaded. The soil ought to be deeply dug, and as the work proceeds a good quantity of thoroughly rotted manure should be added. The tubers may then be planted, choosing for the purpose a day when the soil is moderately dry, and planting the tubers about two inches deep, covering them with similar soil to that in the beds. In autumn no watering will be required, but with spring planting it may be needed if the work is left until March or April. In spring the anemones may receive good waterings, using pure water, with, at intervals, an application of weak clear liquid manure. The tubers may be increased by division when they are of good size and of a form adapted for dividing.

Raising from Seeds.

Poppy anemones are easily raised from seeds, and these, which are difficult to separate so as to sow thinly, should be well mixed with dry sand, separating the seeds as much as possible, and sowing them very thinly in sandy soil in small drills about a quarter of an inch deep, and covering with similar soil. Press down the soil, and water in dry weather. Seedlings should be pricked out when they have made three or four rough, or true, leaves, and watered carefully after the operation. The best time to sow seeds is in spring, and they come freely when sown in the open. In autumn the young plants may be allowed to remain, and many will flower the next spring.

After Treatment.

When the leaves have withered the anemones may be raised, and stored in a cool place in dry sand or earth until planting time in autumn. As already indicated there are gardens where they may be left undisturbed for years.

In order to maintain the quality of the strain the seeds should be collected only from the best flowers, of the finest and most varied colours, marking with a piece of twine or a bit of coloured wool the plants from which the seed is to be gathered. This seed saving should be performed every day while the seeds are ripening, as they blow readily away, and many will be lost if this is neglected.

Varieties.

In former times the cult of the anemone was largely in the hands of florists, who cultivated the double forms. These were magnificent flowers to which names were often given, but they were not so suitable for the ordinary lover of flowers, and they have largely fallen into unmerited neglect. Double varieties can still, however, be obtained under name, and are comparatively cheap.

The St. Brigid anemones, readily raised from seeds, are, as it were, the golden mean between the single and the double varieties, and are handsome flowers, a large proportion being semi-double, and of the most varied and brilliant colours, ranging from white, through flesh colour, pink, and rose, to the most brilliant scarlets and crimsons, with blues of the most varying tints, while some are prettily zoned or striped.

The single varieties are in many cases of charming form, and of the most varied colouring. Some are cup-like in their formation, and, like the finest doubles, received the fervent admiration of the older florists. A splendid strain is that known as the French de Caen, but there are now really few poor strains of poppy anemones, while the prices of tubers and seeds are wonderfully low.

For bedding or for lines of one colour some of these flowers are sold to colour under name. A lovely single white one is The Bride.

The writer has been a lover and a cultivator of the poppy anemone for many years. His affections are shared by many other flowers, but he has never lost his old love for the charming Anemone coronaria in all its varied forms and hues.

S. Arnott.

PRIMULA LINDSAYI.

A pretty primula is the hybrid called Lindsayi, after its raiser, Mr. R. Lindsay, of Kaimes Lodge, Edinburgh, who has raised many excellent hybrids, and whose work deserves mention now that the introduction of so many new Chinese primulas bids fair to increase the taste for these delightful flowers, which, it is only right to say, need a little more attention than is necessary for, say, a mossy saxifrage, or a free-growing alpine of the same character. In Primula Lindsayi we have a pretty plant with neat foliage and flowers of a kind of deep crimson and a purplish yellow eye. It likes a fairly good place in entire or partial shade in a sunny garden, but will do with less shade in a place where the sun's rays are not so powerful or are not so freely given. A good loam will grow it well, and it is all the better for occasional division and replanting—treatment which suits so many of its sister flowers. Now that primulas, especially hardy kinds, are so popular, P. Lindsayi should not be overlooked.

L. T.

DAFFODILS IN THE PLEASURE GROUNDS.

There would be no difficulty in writing a lengthy essay in praise of the beauty of daffodils and their value in contributing to the interest and attractions of the flower garden and pleasure grounds during the spring months. There is hardly a position where they would be out of place, or to which they would not give an added charm. Wondrously beautiful are large breadths on wide spreading lawns, and in open areas in woodlands and plantations; highly attractive are groups of moderate size arranged on the margins of pool or stream; exquisitely beautiful are small clumps of the smaller kinds nestling amid the rocks in the alpine garden; and very effective are bold masses in the flower garden, formal or otherwise. Much might be written in commendation of each of these ways of utilising the daffodil in beautifying the surroundings of the houses, but with so many matters associated with spring flowering bulbs requiring attention at the present time, it is necessary to be brief and practical. Bearing this in mind, we may with advantage turn our attention to the consideration of the best methods of procedure in the production of colour effects in the flower garden with daffodils either alone or in association with other spring flowers.

A SUCCESSFUL EXAMPLE OF CULTIVATING DAFFODILS IN THE GRASS.
At Hillingdon Court, the residence of Lord Hillingdon.

First of all, it may be at once stated as a general principle that the varieties selected for beds and borders should have a good constitution, bear flowers that are effective in masses, and be moderate in price. Other points for consideration are the preparation of the soil and the time and manner of planting. The simplicity of these points will render any lengthy reference to them quite unnecessary. With regard to the time of planting, the importance of this being done immediately the beds and borders can be prepared for their reception cannot be too strongly insisted upon. Daffodils having large firm bulbs, such as those of the Emperor and Empress, may be planted at Christmas with the full assurance of their producing a pleasing colour effect; but the flowers will not be so large in size or so stout in substance as those of similar bulbs planted two or three months earlier. The bulbs deteriorate more or less rapidly after, say, the middle of October, and those who would obtain the most ample return for their expenditure of time and money should make strenuous endeavour to have the planting completed by that period. If its completion can be effected earlier so much the better, especially in the case of the Barri and poeticus varieties, which suffer severely when kept out of the ground until the autumn season is considerably advanced. For this reason when delay is unavoidable plant the varieties belonging to these two sections first.

HYACINTH LA VICTOIRE.
A splendidly developed specimen of this fine red variety from Mr. E. Beckett's first-prize collection at the R.H.S. Bulb Show in March last.

In the preparation of the beds it will be simply necessary to dig them over to a depth of about twelve inches, and if the soil has been much impoverished, to previously give a moderate dressing of some good artificial fertiliser. Thinly-planted beds are seldom so effective as one could wish, and, excepting where fibrous-rooted plants are associated with them, from six to eight inches is a good distance at which to put the bulbs apart, the smaller space being given to the Barri and poeticus varieties and others of similar growth, and the greater to the strong-growing trumpet varieties. The following can be specially recommended for massing in beds and borders, for while beautiful and effective, the bulbs are obtainable at a price that admit of the stock being renewed annually at a comparatively small cost. Trumpet varieties: Emperor, Empress, Grandis, P. R. Barr, W. P. Milner, and Victoria. Incomparabilis varieties: Sir Watkin and Stella superba. Barri varieties: Barri conspicuus, Falstaff, John Bain. Leedsi varieties: Maria Magdalene de Graaff and Mrs. Langtry. Poeticus varieties: Ornatus and poetarum.

In the cultivation of daffodils in the grass two methods of procedure are open. One is to arrange them in broad irregular groups, each consisting of one variety, and the other to plant them somewhat irregularly over the whole area, and to use one, two, three or more varieties. The arrangement in groups is perhaps the best where the area is large and broken up by trees and shrubs in groups or otherwise; but in small areas the second of the two methods is in some respects preferable. In either case the bulbs should be rather thinly and irregularly planted. In planting daffodils on the lawn and in the wild garden an endeavour should be made to imitate Nature, which does not, as a rule, arrange daffodils or other flowers in such manner as to suggest a series of nursery beds. The daffodils growing on one of the lawns at Hillingdon Court, Uxbridge, the residence of Lord Hillingdon, and herewith illustrated, affords an excellent example of successful planting. In the illustration they appear rather thin, but in a critical inspection of the flowers there was no suggestion of thinness, but, on the contrary, it was seen that there were more than enough to produce a rich display.

Planting in the grass should be done as early in the autumn as convenient and the condition of the soil will permit. It is not advisable to attempt this work when, as at the present time, the soil is dry and hard, for it is then difficult, and the bulbs are not committed to Mother Earth under the most favourable conditions. It will therefore be wise to wait until the rains come and moisten the ground. The planting is more easily done with a dibber fitted with a tread, such as used for planting potatoes, than with an ordinary hand dibber, and if shod with iron so much the better. Still more useful is a bulb planter fitted with an iron scoop, which when thrust into the ground cuts a small circular piece of turf, and this it brings out with it when drawn back. When the second hole is made the first piece of turf is pushed out, and then lies ready for filling in the hole after the bulb has been dropped into it.

The varieties recommended for beds are admirably adapted for grass culture, but there are a number of others that are suitable for the purpose. In select positions groups of the choicer varieties, such as Beauty, Madame de Graaff, Madame Plemp, Glory of Leiden, and Santa Maria would form a feature of much interest. G.

RAISING DAFFODILS FROM SEED.

One of the remarkable features of gardening in recent years is the number of amateurs who have successfully taken up the hobby of raising new daffodils from seed, and few flowers have been more improved during the last few years. There is still, however, room for development, and the object of this communication is to induce everyone who cultivates this lovely queen of spring flowers to try his or her hand at hybridising

It is impossible in the limited space at my disposal to treat the subject fully, but the following simple directions may help those who have had no experience of the operation to make a beginning. The necessary outfit is simple and inexpensive. In the first place, the beginner must have a good stock of patience, for it takes from three, or more often four, to six years for a daffodil raised from seed to produce a flower. But, if an annual sowing is made, after the first three years there will always be something new coming on. And when the new flower appears it is fixed.

The only other requisites are a pair of forceps (supplied by most of the special daffodil firms for about two shillings) for removing the anthers and a small camel-hair paint brush. Nature has provided the daffodil with means to reproduce itself from seed by self-fertilisation. In the centre of every daffodil flower there is a long slender style, flattened out at the end into what is called a stigma, round which are clustered six stamens with enlargements at the end of each called anthers. When the flower is fully developed the stigma becomes viscid, or slightly sticky, and the anthers burst, shedding a quantity of fine yellow dustlike substance called pollen, which, on coming into contact with the stigma, adheres to it, causing self-fertilisation to take place.

In order to produce a new variety we must resort to cross-fertilisation. We first select two varieties for parents: one of them being the seed-bearer, which we must prevent from fertilising itself by removing the anthers before they have burst, (i.e., before the flower is quite open) by means of the forceps mentioned above. This process is called de-anthering. In about two days (more or less according to the atmospheric conditions) the flower will be fully developed, and the stigma in a condition to receive the pollen from the flower selected for the second or pollen-bearing parent. This pollen is then collected on a camel-hair brush, and applied to the stigma of the de-anthered flower. Nature will do the rest.

The flower operated upon should then be marked by a label placed in front of it and a note should be made of the cross. If all goes well, and the cross has "taken," the seed pod will begin to swell. The best time to carry out cross-fertilisation is on bright mornings; and it is advisable to repeat the operation on each flower to make sure that the stigma has been in the right condition for pollination. Pollen will keep fresh for about a fortnight or more, so by keeping the anthers in small pill-boxes it can be used on a flower which was not expanded at the time the pollen was collected.

The seed pod generally begins to turn yellow as soon as the seed is ripe, and by making a small incision with a knife we can see the seed, which when ripe is black and shiny.

It should then be gathered, and sown as soon as possible, in boxes of any convenient size—but not less than 4in. deep. These must be well drained, and filled to within an inch and a-half of the top with good turfy loam, with plenty of sand to keep it open. The seeds should be sown an inch or rather more, apart, and covered with about one inch of soil. The boxes should then be plunged to the upper edge in a cold frame and the soil kept just moist. All the air possible should be given, only using the lights to protect from heavy rains and frost.

During the winter the slender grasslike seedlings will appear at irregular intervals, and the boxes should then be lightly top-dressed with cocoanut fibre to prevent mossing of the soil.

In two years' time the seedlings can be transplanted direct from the boxes to a raised bed in the open, in rows about nine inches apart, and three inches apart in the rows. The soil must be kept well hoed and free from weeds. In these beds the seedlings will flower, and the promising ones can be marked for removing at the usual time for lifting (i.e., when the leaves are beginning to die down) to another bed.

Of course, we cannot expect all the seedlings to be first-rate. Sad to say, the proportion of really good flowers is very small. But we can provide against certain failure by making our crosses from flowers of good form and substance only. The beginner should not use flowers of poor constitution or those that have weak perianths as parents. No hard-and-fast rule can be laid down as to how the parent flowers will influence the result of the cross, but, generally speaking, the male gives colour and the female form.

Many of the modern daffodils are very shy seeders, and others seem to produce pollen which is not fertile, but experience will show what varieties are not suitable for cross-fertilisation.

It is encouraging to the beginner to know that it is not by any means necessary for him to buy the most expensive varieties to ensure success; some of the best of the newer varieties were raised from quite ordinary varieties.

Much might be written as to the best varieties to use, and in what direction the present-day hybridist should aim, but I must conclude by urging all daffodil lovers to follow the advice of the late Mr. Burbidge—"Raise seedlings—hybrids, if you can—but raise seedlings."

Christopher Bourne.

THE CULTURE OF HYACINTHS.

Though these are not so universally grown as they were some few years since, they still form one of our most beautiful and important plants for early spring decorations. For the embellishment of conservatories, reception rooms, and even the cottage window, they are of the highest value. Fortunately, the price is not prohibitive, or closely approaching thereto, as was the case in the distant past, and many of the most beautiful varieties may be purchased for a quite small sum, and they are now well within the range of even our humblest enthusiastic horticulturists. Their culture is simple, and by observing the principal rules anyone, and, indeed, even children, may cultivate them satisfactorily. There are many ways of growing these flowers, but unquestionably the most satisfactory way is to grow them either in pots or pans. And, in my opinion, the best results can be obtained by growing them singly in medium-sized pots, those known as forty-eights, or five-inch, being best.

HYACINTH CORREGIO.
A new and valuable addition to the Single White Hyacinths. This fine specimen formed part of Mr. E. Beckett's first-prize collection at R.H.S. Bulb Show in March last.

Potting.

The bulbs should be procured as early in September as possible, and potted up immediately they are received, it being of the utmost importance that they should have a long season of growth before being forced into flower, and that none of their vitality should be lost before potting. The pots should be clean, and well drained, placing some coarse material from the potting soil over the crocks to ensure a perfect waterway. A good mixture of soil should be used, the best being one consisting of rich fibrous loam three parts, and one part each of well-decayed cow manure and leaf-mould, with a small quantity of coarse sand, the whole being thoroughly well mixed, this being best done a week or so beforehand. Turn over once or twice, and see, when using, that it is moderately moist only. The soil should be pressed fairly firm, and the crown of the bulb be just above the level of the pot. When potted they should receive a thorough watering in, filling up the pots three or four times, and, after these have become drained and nicely dried, place them in a cool position on a bed of ashes or boards, and over each bulb put an inverted three-inch pot, a small piece of slate being placed over the hole of this. Then cover the pots to a depth of five or six inches with finely-sifted cinder ashes.

After Management.

After the bulbs become well rooted, and active growth commenced, which will, generally speaking, be, if they are potted early, from five to eight weeks, remove to a cold frame or shelves near to the glass in the greenhouse. Do not allow them to suffer from an insufficiency of water, and make sure that every particle of the soil is moistened when watered. Immediately the development of the spike commences liquid manure should be liberally given; that made from animal manure, such as that of cows and horses, being decidedly the best, with a little soot added. Most varieties respond to forcing quite easily, consequently by introducing them in batches at intervals the flowering season is much prolonged. The spikes will need a neat support, and a slight shading should be given the plants, especially the red varieties, immediately their flowers commence to show colour. A splendid method of showing these off, especially in large conservatories, and even suitable places in the house, is to group them in pans, ten plants in each, using one variety only. These may be taken out of the pots and arranged in the pans just before the spikes are fully developed, filling between the bulbs with fine soil, and then giving a thorough watering. The flowers of these will be found to last if they are carefully handled equally as well as if left undisturbed in the pots.

Hyacinths in Glasses.

This used to be quite a common method of growing hyacinths, but is very little practised in these days. Nevertheless, it is simplicity in itself, and anyone may succeed if suitable glasses are obtained and the following details observed. The glasses made for the purpose should be nearly filled to the top with water, enough, in fact, to just allow the bulb to stand clear of the water, and a few pieces of charcoal placed in each glass. The bulbs should then be placed in position, and the glasses may be stood in a dark room or cupboard. When they are rooting freely they should be gradually inured to more light, and finally be given plenty of air. The water will require replenishing occasionally, and I prefer to change it entirely two or three times during the growing period. As the spikes advance they will need supporting, this being best done with thin wire stakes, which may be pierced through the bulb without injury.

Varieties.

There are large numbers of beautiful varieties, but the cultivator will be well advised in selecting a few of the best and most distinct, and growing several of these rather than numerous sorts. Having during the past few years tested many of the most popular varieties, I will name those which, in my opinion, are among the very best for general decoration. They are nearly all single.

Jacques, fine pink; Lady Derby, beautiful pink; La Victoire, rather new, quite the finest red in cultivation; Moreno, a good pink of easy culture; Vuurbaak, a beautiful red, rather thin spike. The best whites are: La Grandesse, an old, but still one of the best of the white varieties; L'Innocence, excellent pure white, and Correggio, a magnificent new pure white variety, which came to the front last year. It is unquestionably one of the finest ever raised, and is bound to become popular. Blue shades: Enchantress and Electra, both charming light blues; Ivanhoe, a fine dark blue, very attractive, new; King Menelik, nearly approaching black, a magnificent variety, very large truss; King of the Blues, another very fine old variety, very dark blue, fine truss, should be grown in every collection; Lord Balfour, fine large bells, very distinct colour, which is nearly mauve; Schotel, beautiful light blue. There are many yellow varieties, but I consider only one really worth cultivating, and that is City of Haarlem, which has flowers of a lovely shade of primrose yellow, fine spikes, and for a yellow very easily produced. The only semi-double I recommend is Koh-i-noor, a beautiful rose colour, but the flowers take a very long time to develop.

EDWIN BECKETT.

SPRING-FLOWERING BULBS BY THE WATERSIDE.

The important question of planting bulbs by the waterside deserves some attention at this period, when bulbs and bulb planting are uppermost in the gardener's thoughts. The subject of bulbs for waterside planting is as yet in its infancy, and few have realised the value of bulbous flowers for this purpose as fully as they might. One has only to look at the banks of the woodland stream in spring to note the value of our own wildling bulbs for adorning the water margins. Be it daffodils, anemones, bluebells, or other subjects, the exquisite carpeting of the banks by masses of colouring is both pleasing and effective. In confining myself to spring-flowering bulbs I am reluctantly forced to exclude many later-flowering species, which we esteem of especial value for the purpose in hand.

In most cases bulb planting will be a supplementary help to existent arrangements of herbaceous, foliage, and other plants. In very few instances will the planter desire to depend upon the displays of bulbs alone, so that the subjects must be considered simply as an adjunct to existing arrangements. Two strong reasons are apparent for bulb planting. To secure adequate covering for bare spaces during early spring, and to obtain a wealth of blossom before flowers appear in quantity.

Waterside planting should be made as bold as possible, because tiny colonies of small subjects would appear "lost." Thus for preference select few subjects, and plant them boldly.

Daffodils, when used, should, for preference, run in great drifts, in and out amongst the waterside plants and ferns. Choose free-growing showy varieties. Trumpets, like Maximus, M. J. Berkeley, Emperor, Empress, Albicans, Madame Plemp, etc.; incomparablis, such as Sir Watkin, Figaro, Cynosure, and Frank Miles; Leedsi, including Minnie Hume, Katherine Spurrell, Duchess of Westminster, Amabilis, and M. M. de Graaff. The stronger, free-flowering forms of poeticus, and the best of the double narcissi, are not to be despised for the work in hand.

Fritillarias of the meleagris type should be freely used, as they love a fair amount of moisture. Once established they will take care of themselves for a long period, and delight the eye every spring with their quaint pendant blossoms and rare colourings.

Irises I would recommend to be freely used, English irises in particular, which I have found succeed very well just above the water margin. Spanish irises do not afford quite the same dainty colourings as the English irises, but are extremely valuable for their richer hues. There is no need for me to give an extended list of either, as gardeners are usually well acquainted with both groups. A few other irises I should like to recommend are I. filifolia, I. Lusitanica, I. tingitana, and I. t. Danfordiæ; these should be kept a little above the water margin.

Tulips are not specially adapted for waterside work, because of their failure to ripen their bulbs in much moisture, though on raised ground a little away from the water the May-flowering Cottage and Darwin tulips are superb. If tulips are to be used one should secure some of the tall grand varieties associated with these two divisions, while for a shady, semi-moist spot I can find no tulip to surpass the sweetly fragrant, golden-hued Tulipa sylvestris, which is delightful when well grown.

I would further urge a trial for some of the ornithogalums, which do well in partial shade and moisture. A selection, say, O. lacteum, O. pyramidale, O. umbellatum, and O. nutans, would suffice to make a planting amongst waterside ferns and similar subjects. A few of the best of the alliums may be used, also those very pretty anemones, A. nemerosa alba, A. n. rosea, A. n. Robinsoniana, and A. n. flore-pleua, together with the moisture-loving A. sylvestris and A. ranunculoides, these anemones being a delight when well massed upon half-shady banks.

Especially noteworthy are the camassias, which are splendid close in by the water margin. We group them among waterside primulas, Japanese irises, and astilbes, and they give charming effects with their starry blossoms before their associates are showing flower. We use chiefly C. esculenta, C. esculenta alba, and the pretty forms of C. Leichtlini. C. Cusicki and C. Fraseri should also be included, though the latter is dwarfer than the majority.

Puschkinia libanotica and P. scilloides are good in moist situations, and are useful for drifting through colonies of low plants. Muscari and scillas are good, if used in the foreground at a little distance from the pools, and the leucojums, or spring snowflakes, are charming en masse a few inches above the water.

I have also found triteleias do well in cool, moist spots, but they are so small, and the same remark applies to the exquisite wood lilies, trilliums, which could be readily naturalised by the sides of small streams. Dodecatheons invariably do well in moist boggy places near to the water, but stagnant conditions must not prevail. Erythroniums can be grouped near them in a slightly drier spot, some of the newer forms being particularly pleasing. Eremuri, though not strictly speaking waterside subjects, can be introduced so as to dominate water scenery if desired, the fine height of these subjects allow them to be arranged a fair distance from the pool or stream, and yet give their own telling effect to the scene. The bold and most robust forms should be used, say, E. robustus, E. himalaicus, and E. Elwesianus, would be grand if properly arranged.

The foregoing will suffice to show that bulbs and tubers can be freely used. There are others which go to swell the list at later periods. Some of the American lilies, selected gladioli, montbretias, callas, watsonias, etc. which give charming pictures by the waterside. The soil should in all cases be good, deeply worked, and planting should be carried out as early as possible in autumn.

P. S. HAYWARD.

Pelargonium tetragonum.—Among the numerous plants composing that most interesting series of pelargoniums sent up from Aldenham Gardens at the meeting of the Royal Horticultural Society on July 18, was this quaint and uncommon species. Out of flower it would not for one moment be taken for a pelargonium, consisting as it does of a cluster of succulent stems almost devoid of foliage. The flowers are as strange as the plant itself, for the lower petals are almost suppressed, and the two large, erect upper ones are pinkish, veined with a deeper hue. This species is often noticeable at Kew, but outside of a botanic garden it is rarely seen.—W. T.

GOOD BEDDING TULIPS.

The tulips create a brilliant effect in gardens at a season of the year when Nature is seen at her best; and in view of the fact that gardeners generally will be despatching their bulb orders very shortly, I propose to offer a few remarks as to varieties of proved worth and merit. In speaking of single varieties it is superfluous to give more than passing notice to such fine standard sorts as Keiserskroon, Duchesse de Parma, a beautiful and cheap variety, Thomas Moore, Joost van Vondel, Bacchus, Rembrandt, Vermilion Brilliant, Cottage Maid, Chrysolora, Mon Tresor, White Swan, etc., so we pass on to note others that are less known but well worthy of extended cultivation, being both distinct and beautiful.

AN EFFECTIVE YELLOW BEDDING TULIP, MON TRESOR.

I would strongly advise that, in addition to White Swan and the superlatively beautiful White Joost van Vondel, a comparatively new sort named White Hawk be given a trial. It is of strong growth, long lived as regards its season of beauty, and of great purity. To extol the merits of Proserpine is unnecessary, but attention should be drawn to La Rêve, which has flowers that are soft rose suffused with orange. The colour may be termed an art shade, and it is difficult to understand why it fell out of cultivation for a time. I have failed to note Fabiola, a fine variety in violet and white colouring, in many large parks and gardens, and surely it must rank amongst the very best. I have nothing but praise for Prince of Austria, fragrant, fine shape, and possessed of soft orange-red colouring. It is wonderfully effective when massed. Very effective is Couleur Cardinal, the beauty of the rich crimson colouring being enhanced by a plumlike bloom on the outer petals. Another splendid variety in rich maroon and scarlet is named Koh-i-Noor, but up to the present it is high priced. I noted a bed of La Remarquable at Kew last spring, and was much impressed with its strikingly beautiful appearance, and it was very clear that it found many admirers. The flowers are of large size, rich plum colour, with a silver margin, and I predict that it will be extensively planted in future.

There are a number of very fine scarlet varieties in commerce, but where great brilliance is desired, Maas should be employed; it quite dazzles one when the sun is shining upon it. A very refined flower is Claremont Silver, which has pink and white blooms, and, as a bedder, it leaves nothing to be desired, and the same applies to Grace Darling in nasturtium red. Pink Beauty and Maréchal Niel should be given a place in every garden, their colouring is deep rose flushed white, and orange-red shaded yellow respectively. Brightly coloured tulips are considered or voted vulgar by many people, but they will find nothing to grumble about in Superintendent, a delicate variety in violet and white.

AN ADMIRABLE BED OF TULIP KEIZERSKROON NEAR KEW PALACE.

A word as to double varieties, and what a glorious wealth of colour and beauty can be had at a comparatively trifling cost when such kinds as Titian and Gloria Solis are brought together in big masses. Let Vuurbaak in fiery scarlet be toned down through rubbing shoulders with Rose Blanche, of snowy whiteness, or again to tower above a carpet of double arabis. "Superb" is a mild term for El Toreador in chestnut and orange colouring, and it should be allotted a prominent position in the bedding arrangements. The same holds good of Marriage de ma Fille, white, striped rose, while Bleu Celeste is worthy of its name. Yellow Tournesol is a splendid bedder, and should be associated with Myosotis Royal Blue.

The Darwins must now be briefly considered in relation to bedding, and no one will disagree with me when I say that they place the ordinary tulip completely in the shade from an artistic point of view. At the same time they are imposing to a degree. Beds that are intended for tender subjects in summer such as celosias, may well be devoted to them, as also the more distinct and beautiful amongst the May-flowering section. Having grown a large number of Darwins for this purpose I can recommend the following as being quite first-rate: Early Dawn, rose-pink; Margaret, blush, and very fine; The Sultan, deep maroon; White Queen, white, tinted blush; Carmen, brilliant scarlet; Mr. Farncombe Saunders, intense crimson.

Beds of Cottage tulips in Picotee, creamy-white, edged pink; The Inglescombe varieties; Vitellina, sulphur and white; Gala Beauty, vermilion on gold ground; Elegans and Elegans alba, and La Merveille, terra cotta, shaded orange, will find many admirers, and when their beauty is past the bulbs may be transferred to borders with a view to becoming naturalised colonies.

Walter H. Aggett.

Calceolaria integrifolia.—The date of the introduction of this calceolaria does not seem to be generally known, at all events it is only within the last few years that its merits have been recognised to any extent. Like most of the calceolarias it is, no doubt, a native of South America, but is of a more decided shrubby character than many other members of the genus. It first came prominently forward as an outdoor shrub in the West of England, but it is also valuable in all districts for the embellishment of the greenhouse or conservatory. In this way it may be grown as a good-sized bush, and will then keep up a supply of its golden yellow blossoms throughout the summer and autumn months.—W. T.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

HEATING APPARATUS.—At this season repairs that are necessary should be attended to, and a general survey of the boilers and hot-water pipes be made. Those who have had long experience with low-pressure boilers will generally agree that it is desirable the whole of the water should be drained from the boilers and pipes at least once a year. This removes the rust and dirt, and prevents, to some extent, corrosion and rust which are so detrimental when permitted to remain. When the boiler and pipes are emptied an opportunity is afforded to attend to any alterations required, the stopping of any leaky joints, and split collars made good. It is better to have the fires out for one night at this season than to take any risks of a breakdown during the winter when the conditions are the least favourable. In dealing with hot-water pipes provided for heating houses that have been built some years, one finds that in many cases they have in passing from the main into sectional houses been embedded in the brick work. This is a most undesirable practice; it checks expansion and contraction, and it is usually in these places that spit collars are found. If this does not occur, the mortar and moisture combined rusts away the pipes, and generally causes leakages. In fixing pipes it is advisable they should be kept clear of everything; ashes especially should not be permitted to remain in contact with them. See that any leaky valves are repacked, oil others, and see that the air taps and outlets are in working order before the pipes are refilled. Flues and chimneys should be swept and made clean, and the fire-bars replenished. This last-named is frequently a serious item in garden expenditure, for where the fires have to be driven during the greater part of the year, the bars quickly burn through or become distorted, so that new ones are frequently required. This is generally found to be the case where the ordinary dry ash-pits are in use. Some six years ago the late Mr. Norman Cookson had two large size Robin Hood boilers fixed for some of our orchid houses, and he insisted on having the ash pits made in concrete sufficiently deep to hold nine inches of water. To show the advantage of this from the point of fire-bar saving, I might mention that one set of fire-bars were ordered extra, to come with the boilers, and it is worth recording that we have more than one-half of that set still by us. The steam rising from the hot ashes dropping into the water prevents the fire forming clinkers, and seldom is one of any size taken from the fires, although coke is used. I would advise all who are fixing new boilers to have water ash-pits beneath.—H. J. CHAPMAN, Oakwood Gardens.

STOVE PLANTS.

BOUVARDIAS.—These are now showing abundance of flower buds, and their flowering shoots should be made secure to a neat green stake, which has been placed previously in the centre for the support of the plant; thin strands of green raffia tape may be used for this purpose. Thoroughly overhaul the plants with a view to destroying insect pests; and after the pots have been cleansed they may be taken to their winter quarters, in which a temperature of about 55 deg. should be maintained. At intervals of ten days or a fortnight top-dress with some approved artificial fertiliser. The foliage and the general appearance of the stock will be much improved by watering alternately with clear soot water and an occasional watering of a weak solution of farmyard liquid.

SELAGINELLAS.—These are most serviceable for decoration, both as an edging to plant stages to which some of its forms are well adapted, and for association with cut flowers arranged in vases. Selaginellas have a distinct advantage over most other similar foliage subjects, being of easy culture. They succeed admirably in almost any kind of compost, providing it is porous, and propagation is easily effected. Insert four to six pieces of the stem or the extreme growing tips in small pots or shallow pans filled with light soil; place them in a shady position until root action has commenced. With few exceptions, most of the species and their varieties will thrive in an intermediate stove temperature provided they are well shaded from strong sunshine. If S. cæsia is placed upon a shelf near the glass, kept somewhat on the dry side, and exposed to the sun, the foliage will attain a beautiful rose-pink colour, resembling autumn tints, the long trails of foliage, if cut and tastefully arranged with white flowers for dinner-table decoration, cannot fail to command appreciation.

SHADING MATERIALS.—These may now be removed without delay, selecting a dry day, when all the materials may be rolled up, labelled for each house, and stored in some suitable position. The light at this season is most beneficial to plant life, and whenever possible advantage should be taken of all that now remains before the dull days of winter come upon us.

CLERODENDRON BALFOURI. — Specimen plants that have completed their flowering season may now be gradually brought to a state of rest by a reduction of water and temperature. The flowering stems and all weak or undesirable wood should be cut away so as to induce the permanent shoots to become thoroughly well ripened. During the ripening off process the shoots must not be allowed to suffer seriously through excessive dryness at the roots. A temperature of 50 deg. to 55 deg. is ample during their resting period. After the foliage has ripened off very little water will be required until they are started into growth again early next spring. They may, however, be examined occasionally with a view to watering if the wood shows signs of shrivelling.—JOHN DONOGHUE, Bardon Hill Gardens.

THE FLOWER GARDEN.

SHRUBBERIES.—Where new beds and borders of shrubs are to be made the preparation of the ground should be commenced. Considerable advantage is gained by well working the soil sometime beforehand, for it will then become settled by the time for commencing planting. The ground should be trenched to the depth of two feet, and if the soil is poor it is advisable to enrich it by adding a liberal quantity of decayed manure, such as that from an old hotbed, or burnt garden refuse, and thoroughly incorporating it with the soil. In designing new borders avoid straight lines where possible, although in some cases formality will to a certain extent be necessary. An inspection of existing borders and beds must be made before the leaves fall to note any alteration that may be considered necessary. In some instances plants will have overgrown the space allotted to them, and must be rearranged. If this is carried out, the surplus will be useful in making the new beds. By examining the shrubberies and deciding what is to be done early in the autumn, the actual lifting and replanting is made much easier, and mistakes are not so likely to occur.

ROCK GARDEN.—The principal work at present in this department consists in cleaning up the plants and top-dressing where necessary. Many subjects growing in the crevices will have become loose through the soil being washed away by continuous waterings. These must be made firm again with soil and stones, wedging the latter in tightly to withstand the heavy rains. All decaying matter, dead flowers, and weeds should be removed. There must be no delay in propagating any plants that have been overlooked. The reserve plants will require attention, some will want repotting or top-dressing, especially those which are intended for spring planting. Many of the young plants that were raised from cuttings and seeds earlier in the year will require more root room, and should be repotted. At the end of the month some of the hardiest may be planted. These include aubrietias, alyssums, helianthemums, arabis, iberis, etc. In refilling spaces in which the plants have died out it will be advisable to replace the old soil with fresh.

LAWNS.—Frequent sweepings will be necessary now to keep the grass clear of leaves, also the roller will have to be brought more frequently into use. The bare patches caused by the continuous dry weather must be sown with grass seeds. Loosen the surface of the bare places with a rake, and sow the seeds, covering them with a small quantity of finely-sifted soil. If the birds are troublesome cover the seeds with netting.—E. C. POOLEY, Gnaton Gardens.

FRUITS UNDER GLASS.

LATE PEACHES.—As soon as the crop has been gathered, open the house to the fullest extent, or take off the lights if practicable, so as to give the trees a thorough rest and full benefit of sun and air. At the same time see that roots and leaves do not lack sufficient moisture. A suitable preparation for cleansing the trees of insect pests should be applied to them with force from a garden engine. A solution of paraffin and soft soap is a fine cleansing medium when used with discretion, and if applied a few times will be effectual in clearing away insect pests. Preparations for lifting and replanting any trees that require renovation should soon be taken in hand, and when a house is to be replanted with new trees, the old ones should be taken out at once and the formation of a new border be commenced, and I would strongly advise the whole border being taken out, and then have the walls touched up and pointed if necessary, and the wood and iron work painted. Then prepare the soil for the new border, which should only be made large enough for two years. Provide an adequate supply of clean drainage materials, and see that there is a drain to carry off superfluous water. Then put in about a twelve-inch layer of the materials, the lower six inches to be rough, and the other part finer. Over the drainage place some good turves grass side downwards. These will last a surprisingly long time, and will keep the finer soil from being washed down amongst the drainage. The best compost for a peach border is good maiden loam, to which should be added mortar or lime rubble—that from old buildings preferred—wood ashes and bone-meal, the latter at the rate of one in fifty, and a good sprinkling of soot. Well mix by turning the mixture over several times, and keep dry till used in making the border.

VINERIES. — Carefully examine the bunches once a week and remove all decayed berries, as one that is decayed will soon injure a number of others. As the sun declines in power begin to take away newly-formed laterals, and those that were left to afford shade in the tropical weather we have experienced. This should be done gradually.

EARLY HOUSE.—If the vines are cleared of fruit the shoots may be pruned back to three or four eyes, as the wood is quite ripe and the foliage turning colour. Continue to syringe in the case of insect attacks, especially mealy bug, as now is the very best chance of ridding the vines of it. Use a wash consisting of half a pint petroleum emulsion to about twenty gallons of water. Apply with the garden engine, and with considerable force, directing it into all crevices and holes, and do the work carefully and skilfully, when it will be found that the extermination will be nearly perfect, or at any rate, the numbers be brought so low that it should be an easy matter to permanently eradicate the insects at a later period.

ORCHARD HOUSE.—Keep the house cool and airy, and prevent the entry of wasps by means of netting. Cherries have remained in splendid condition this season under the protection of muslin; we have only recently sent our last supplies to table.—W. A. COOK, Leonardslee Gardens.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C

EXHIBITIONS AND MEETINGS.

Royal Horticultural Society.

The meeting held on September 12 was a moderately good one, so far as the display was concerned, but it was not especially large nor were there many novelties of outstanding merit. Dahlias provided by far the greater part of the exhibition, and they were remarkably good for so dry a season.

ORCHID COMMITTEE.

Messrs. Hassall and Co., Southgate, contributed a neat little group, wherein were Lælio-cattleya Dominiana, L.-c. Walter Gott, Cattleya Adula, and the pretty C. iridescens —the latter derived from C. bicolor and C. Eldorado.

From Mr. R. G. Thwaites, Christchurch Road, Streatham, came a very fine old-gold coloured form of Cattleya Adula, and good examples of C. Dusseldorfi Undine, Lælio-cattleya Bletchleyensis, L.-c. Ophir, L.-c. Euphrosia, and other good things.

Cattleya Carmen, carrying four beautiful mauve-purple flowers, with bright purple-and-yellow tip, was shown by Messrs. James Veitch and Sons, Chelsea.

Mr. Barker, gardener to W. P. Burkenshaw, Esq., Hessle, sent the white Cypripedium Venus Hessle var., and C. Fascination and C. Dallas were sent by Lady Audley Neild, Gortleton, Chippenham.

Conspicuous in the group staged by Messrs. Charlesworth and Co., Haywards Heath, were Brasso-cattleya Digbyano-Mossiæ, the handsome B.-c. Thompsoni, C. Gaskelliana alba, C. Rhoda, Lælio-cattleya Phryne, Miltonia Bleuiana nobilior, and a particularly handsome hybrid derived from crossing Lælio-cattleya Martinetti and Sophronitis grandiflora and named Sophro-lælio-cattleya Jeanette (F.C.C.) This had a spread of four inches, and the colour is a lovely soft shade of crimson-tinted scarlet, with golden shading in the lip—a splendid acquisition.

Sir Trevor Lawrence, Bart., Dorking, sent up a finely-flowered specimen of Dendrobium glomeratum, with a profusion of rosy flowers.

Mr. G. Day, gardener to H. S. Goodson, Esq., had Cypripedium Lord Derby and Lælio-cattleya Colmani, Goodson's var., on view.

The group from Mr. Hale, gardener to S. Lakin, Esq., Ridgeway, Haslemere, included numerous lælio-cattleyas, oncidiums, and cypripediums.

Cattleya Thurgoodiana was conspicuously good in the attractive little contribution from Mr. E. V. Low, Vale Bridge, Haywards Heath. One plant carried two spikes,each with four fine flowers. Cattleya Adula, C. Grossi, C. Gaskelliana alba, Cypripedium James H. Veitch, and the curious Bulbophyllum grandiflorum were other good and interesting subjects.

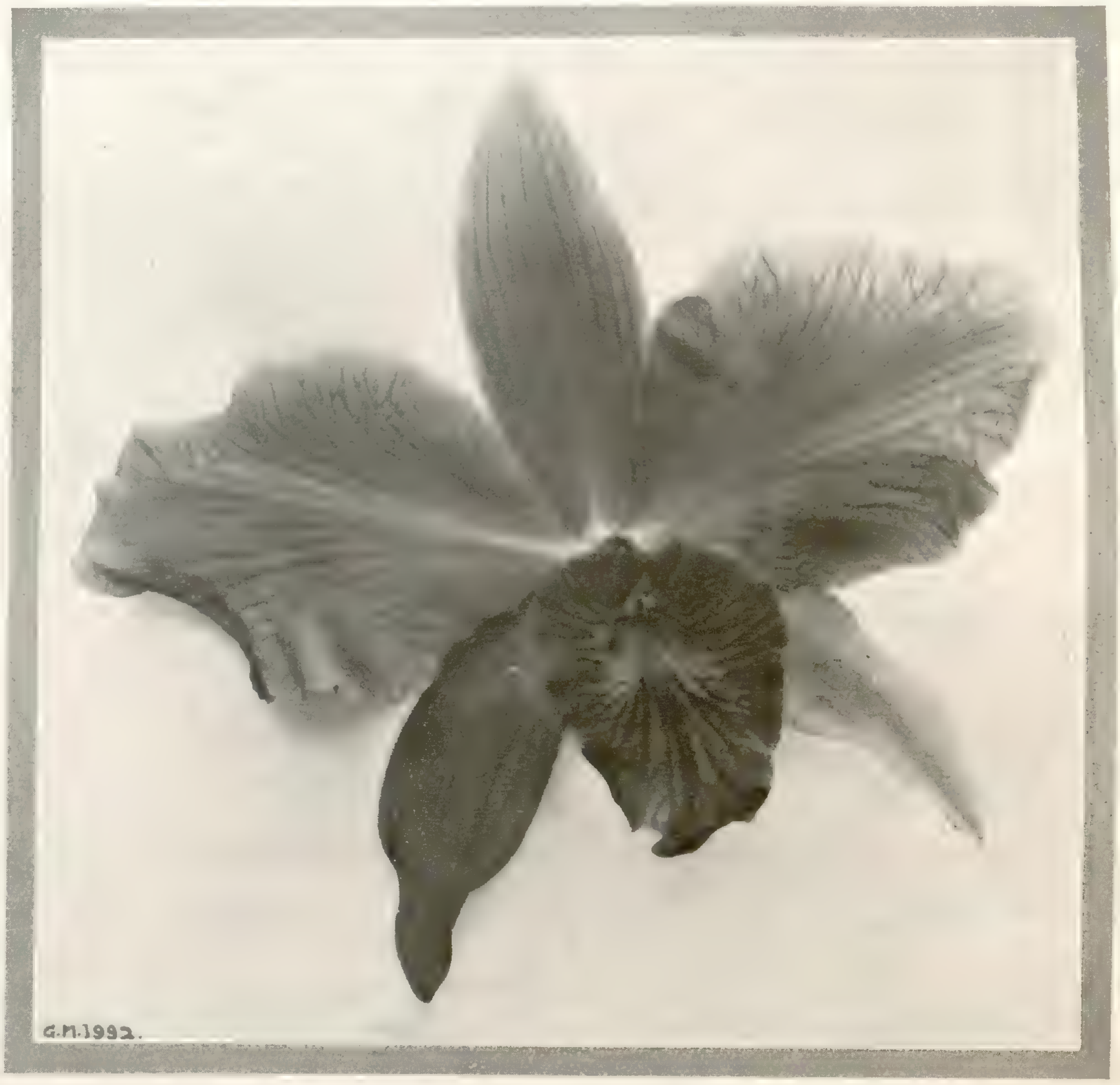
Messrs. Sander and Sons, St. Albans, were represented by a quite attractive exhibit, in which the plants were pleasingly disposed with maidenhair ferns. Cattleya Ella, C. Wavriniana, C. Hardyana, Lælio-cattleya Lord Rothschild, L.-c. Colmaniana. L.-c. Fabius, L.-c. Britannia, Sophro-lælio-cattleya Medea, with dark bronzy-purple flowers; the handsome Vanda Sanderiana ,the old Cypripedium Parishi, and Cycnoches maculatum were also included.

Oncidium varicosum, O. ornithorhynchum, Cattleya Pittiana, Houlletia Brocklehurstiana, the lovely Vanda cærulea, Odontoglossum grande. and other beautiful things were exhibited largely by Messrs. Stuart Low and Co., Bush Hill Park, Enfield

FLORAL COMMITTEE.

A remarkable exhibit of dahlias was finely staged right across the top end of the hall by Messrs. Carter Page and Co., London Wall. There were over two hundred varieties on view, representing cactus, pompon, collarette, single, and pæony-flowered sections. The latter were set up in large stands to form a background and centre, and on either side were baskets of the leading cactus forms, about a dozen and a half flowers of each. At the ends were the single and pompon varieties. Among the cactus dahlias Mrs. Shoesmith (white), Faunus (buff), J. H. Jackson (maroon). Caradoc (yellow), John Peel (scarlet), Ibis (scarlet), Snowdon (white), Echo (mauve), and Mrs. Mawley (soft yellow) attracted our attention.

Dahlias were shown extensively by Messrs. Hobbies, Lim., Dereham, who filled tall stands with the leading pæony-flowered and collarette kinds, and set up lower stands of cactus varieties between the rest. The collarette dahlias attracted a great deal of attention, notably such sorts as Souv. de R. Bernardin, Comte de Nodler, Maurice Rivoire (A.M.), Le Congo Belge, Henri Farman, Mdme. Gygax, Meteor, and Rhein Krone.



SOPHRO-LÆLIO-CATTLEYA JEANETTE.

A beautiful hybrid, with large crimson-scarlet, orange shaded flowers. F.C.C., R.H.S., September 12. Messrs. Charlesworth and Co., Haywards Heath.

Pæony-flowered dahlias from Mr. Chas. Turner, Slough, made a good display, set up with sprays of asparagus and purple plum foliage; Bella Donna, Sunstar, Salome, Bayard, Duke Henry, Berthe von Suttner, buff and pink; Solfaterre, Geisha, and Eleanor, are varieties worthy of special mention. With these were some charming pompon forms, and the single decorative variety Union Jack (A.M.), white and scarlet, with occasionally a purplish petal.

The varieties of Aster amellus, from Messrs. G. Bunyard and Co., Maidstone, served to show the range of form and colour now to be found in this autumn-flowering subject; macrantha major, maximus, Purple Queen, Stone, and bessarabicus, were a few of the best and most distinct forms.

Messrs. J. Cheal and Sons, Crawley, staged a group of dahlias, consisting of half a dozen pyramids of blooms; several sections were represented, but pompon and single varieties were most attractive. Among the latter we made note of Betty, Formosa, Leander, Miss Roberts, Brilliant, Owen Thomas, Stromboli, Columbine, Lady Bountiful, and Flora as particularly beautiful, while Albatross, Mahdi, Bridesmaid, Killarney, Minerva, and Theresa are new varieties to be kept in mind.

Messrs. Allwood Brothers, Wivelsfield Nurseries, Haywards Heath, brought forward two new carnations named White Wonder (A.M.), and Gloriosa; the former is a very fine white, sweetly scented, and the latter is a lovely shade of pink.

Mr. J. R. Box, Lindfield, appears to have made special arrangements with the clerk of the weather, as he was able to put up a really fine exhibit of hardy flowers; he showed masses of late spikes of a fine selection of delphiniums, good vases of gaillardias, a central mass of excellent phloxes, and a background of Solidago Golden Wings; Gladiolus princeps was fine, and so was the splendid golden Helianthus sparsifolius, a plant that everyone interested in hardy flowers for autumn blooming should certainly possess.

The varieties of Amaryllis Belladonna shown by Mr. J. Hudson, gardener to Leopold de Rothschild, Esq., Gunnersbury House, were of great interest. Particularly fine was the Kew variety, carrying an umbel of thirty flowers and buds, the blooms rich pink, with a soft orange tint in the base of the tube (A.M.). Sir Charles Strickland's var., rosea superba and rosea perfecta were also submitted, but the Kew variety, as shown (and which Mr. Watson believes to be Amaryllis Parkeri), was ahead of the rest. Mr. H. J. Elwes sent a few flowers of Amaryllis Belladonna, but these had suffered in transit.

Messrs. Sander and Sons showed Brunsdonna Sanderæ and B. Sanderæ alba, and gained an A.M. for the latter. The parentage given was Brunsvigia Josephinæ and Amaryllis Belladonna; these appear to be excellent garden plants, and seem to be well-nigh identical with the form of A. Belladonna known as the Kew variety, which was at one time considered to be a hybrid between the plants above-mentioned.

A bank of the handsome and useful Gesnera Orange King proved the value of this showy plant, and had many admirers; this and a group of clematises were staged by Mr. L. R. Russell, Richmond.

Mr. Bradford, gardener to E. H. Brown, Esq., Highwood, Roehampton, presented a large, elegant and attractive group, consisting chiefly of brilliantly coloured and finely cultivated crotons in great variety; these were pleasingly grouped with palms, aralias, Dracæna Sanderiana, and Lilium speciosum arranged over a groundwork of maidenhair ferns and Caladium argyrites.

Another dahlia exhibit of considerable size and composed wholly of the big showy pæony-flowered varieties, was set up by Messrs. Bakers, Wolverhampton, and it included a wide range of colour.

The delphiniums set up by Mr. Amos Perry, Enfield, were very effective, while the fern-edged pool of water-lilies lent an air of coolness to the gallery end of the hall; Kosteletzkia virginica, with large white hibiscus-like flowers, was also shown by Mr. Perry, and it is an interesting and rarely seen plant.

Begonia Washington, carrying a profusion of neat double scarlet flowers, and a selection of varieties of Rex begonias, all with handsome silvery foliage, formed a group from Messrs. H. Cannell and Sons, Swanley.

A large dahlia exhibit from Messrs. T. S. Ware, Lim., was effective chiefly by reason of the big blooms of such pæony-flowered dahlias as Mrs. G. Gordon, Mrs. Alfred Platt, Admiration, Klondyke, and Mrs. Ainslie.

Some new cactus dahlias raised by Messrs. James Stredwick and Son, St. Leonards, included Yellow Wave, rich yellow; Richard Box, soft lemon-yellow (A.M.); Miss Stredwick, rich mauve-pink, with soft yellow shading in the centre (A.M.); Golden Plover, and the crimson Auckland.

Messrs. W. Cutbush and Son, Highgate, submitted a miscellaneous group of liliums, crotons, palms, heaths, etc., and Messrs. H. B. May and Sons, Edmonton, demonstrated the usefulness of the varieties of Veronica Andersoni, and the beauty of plumose ferns. Mr. G. Reuthe, Keston, showed alpines and the golden Sternbergia macrantha.

Mr. J. T. West, Tower Hill, Brentwood, presented dahlias in good style, and was especially successful with the neat pompon and pompon cactus varieties; among the former we made note of Sunny Daybreak, Adelaide, Nelly Fraser, Queen of the Whites, Ideal, Little Bugler, Bacchus, and Little Dorrit.

FRUIT AND VEGETABLE COMMITTEE.

Onions are of immense value, and a gardener always endeavours to provide a full supply of these edible bulbs. There is now a great number of varieties, and it is only when a goodly collection is staged that the differences can be properly estimated. On this occasion Mr. Stanard, Hertford, put up fifty baskets of clean, well-grown specimens; besides the small pickling and other varieties there were handsome sets of Ailsa Craig, Magnum Bonum, Giant Red Rocca, Sutton's Perfection, Sutton's A1, Improved Reading, and Sutton's Globe; the red rocca varieties and the silver skins lent colour to a capital display.

Ten dishes of tempting nectarines from Gunnersbury Park, Acton, were brought up by Mr. G. Reynolds, gardener to Leopold de Rothschild, Esq., and there were good fruits of Spenser, Byron, Albert Victor, Pineapple, Humboldt, Darwin, Stanwick Elruge, Goldoni, and Pitmaston Orange.

The plum trees in pots submitted by Messrs. Wm. Paul and Son, Waltham Cross, together with a few apple trees, filled one corner of the hall. The plums were splendidly cropped, and such an exhibit should still further increase the popularity of orchard house methods of culture; Jefferson, Pond's Seedling, Monarch, Late Green Gage, Victoria, Coe's Golden Drop, Cox's Emperor, Grand Duke, Prince Englebert, and white Magnum Bonum were the leading varieties of plums so well represented.

Mr. T. Heron, gardener to H. B. Brandt, Esq., Capenor, Nutfield brought up nine bunches of Alicante, six of Alnwick Seedling, nine of Appley Towers, three of Lady Downes, four of Golden Queen, and also four bunches of Muscat of Alexandria grapes; the black grapes showed good colouring, and were of fair size and carried excellent berries.

Apple and pear trees in pots, carrying goodly crops of fruit, made up an interesting exhibit from Messrs. Stuart Low and Co., Enfield; in front of the trees were dishes of picked fruits, chiefly of Jas. Grieve, Jolly Beggar, Cellini, Peasgood's Nonsuch, Bramley's Seedling, Chas. Ross, Rival, and Bismarck apples.

Mr. G. W. Miller, Clarkson Nurseries, Wisbech, brought up several dishes of his Red Victoria apple, an early and brilliant variety.

Mr. Stapleton, headmaster at the Purfleet School Garden, Essex, sent up a collection of hardy fruits grown by boys from 11 to 14 years of age; there were nice dishes of Colonel Vaughan, Lady Sudeley, Lord Derby, New Hawthornden, and Beauty of Kent apples; Thompson and Souv. de Congres pears; Jefferson, Admiral, and other plums. In each case the dishes were carefully labelled, and the season of the variety indicated.

CERTIFICATES AND AWARDS.

First-class Certificate. — To Sophro-lælio-cattleya Jeanette, from Messrs. Charlesworth and Co., Haywards Heath.

Award of Merit.—To Amaryllis Belladonna, Kew variety, from Mr. J. Hudson, gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton; to Amaryllis Kewensis alba from Mr. A. Worsley, Isleworth; to Brunsdonna Sanderæ alba, from Messrs. Sander and Sons, St. Albans; to perpetual carnation White Wonder, from Messrs. Allwood Brothers, Haywards Heath; to Collarette dahlia Maurice Rivoire, from Messrs. Hobbies, Lim., Dereham; to cactus dahlias, Miss Stredwick and Richard Box, from Messrs. J. Stredwick and Son, St. Leonards; and to single decorative dahlia Union Jack, from Mr. Chas. Turner, Slough.

MEDALS.

Silver-gilt Flora.—To Messrs. Carter Page and Co., London Wall, for dahlias; to Messrs. Hobbies, Lim. Dereham, for dahlias; to Messrs. Sander and Sons, St. Albans, for orchids.

Silver-gilt Knightian.—To Mr. Stanard, Hertford, for onions.

Silver-gilt Banksian.—To Mr. J. R. Box, Lindfield, for hardy flowers; to Mr. Bradford, gardener to E. H. Brown, Esq., Roehampton, for group of crotons, etc.; to Mr. J. T. West, Brentwood, for dahlias.

Silver Flora.—To Messrs. Charlesworth and Co., Haywards Heath, for orchids.

Silver Knightian.—To Mr. G. Reynolds, gardener to L. de Rothschild, Esq., Gunnersbury Park, Acton, for nectarines; to Messrs. William Paul and Son, Waltham Cross, for fruit trees in pots; and to Mr. Heron, gardener to H. P. Brandt, Esq., Nutfield, for grapes.

Silver Banksian.—To Messrs. J. Cheal and Sons, Crawley, for dahlias; to Messrs. Wm. Cutbush and Son, Highgate, for miscellaneous plants; to Messrs. H. B. May and Sons, Edmonton, for veronicas and ferns; to Mr. Ames Perry, Enfield, for water lilies and delphiniums; to Mr. L. R. Russell, Richmond, for clematises and gesneras; to Mr. Chas. Turner, Slough, for dahlias; to Messrs. Hassall and Co., Southgate, for orchids; to Mr. E. V. Low, Haywards Heath, for orchids; to Messrs. Stuart Low and Co., Enfield, for orchids; to Mr. Hale, gardener to S. Larkin, Esq., Haslemere, for orchids; to Messrs. S. Low and Co., Enfield, for fruit trees in pots; and to Mr. Stapleton, Purfleet School Garden, for fruits.

Bronze Flora.—To Messrs. H. Cannell and Sons, Swanley, for begonias; and to Messrs. T. S. Ware, Lim., Feltham, for dahlias and asters.

National Dahlia Society.

It could hardly be expected that this show, held at the Crystal Palace on September 7 and 8, should be quite up to the average of recent years, for the excessively dry weather during the past two months has not been at all suitable for dahlias, but, although the entries in the open classes were not so numerous as usual the quality of the flowers was good.

TRADE CLASSES.

Mr. J. Walker, Thame, was awarded first prize for forty-eight show varieties, for a fine level display. The varieties employed were T. J. Saltmarsh, Colonist, Mrs. Gladstone, Claret Cup, The Reverend, Purple Prince, Charles Wood, Virginale, Comte de la Saux, J. Nicholson, Duchess of York, Golden Fleece, Harry Keith, Mrs. C. Noyes, Mabel Stanton, Duke of Fife, Dr. Keynes, Henry Clark, Watchman, James Cocker, William Rawlings, W. Powell, Harrison Weir, Standard, Ethel Britten, A. Rawlings, T. W. Girdlestone, Marjorie, Bloodhound, J. T. West, Gracchus, Miss Cannell, Mrs. J. Downie, Tom Jones, Prince of Denmark, T. Pendered, Florence Tranter, Southern Queen, David Johnston, Dandy, Victor, Perfection, Diadem, John Walker, Imperial, Mariner, and Mrs. Kendall. Mr. J. Walker was deservedly awarded first prize for eighteen fancy varieties, distinct. Although the flowers were not quite so large as usual, they were of good colour and well finished. The finest examples were Mrs. Saunders, Edmund Boston, W. Sheldon, Comedian, Mrs. J. Downie, H. Eckford, Hercules, Mabel, J. Forbes, Emin Pasha, and Goldsmith.

For twelve show and fancy varieties Messrs. C. Carrington and Son, nurserymen, Derby, won first prize with some good heavy flowers, in which were noted Rev. J. B. M. Camm, Perfection, Wm. Keith, Duchess of York, and Mrs. Saunders. Messrs. J. Cheal and Sons, second. In the premier class for eighteen bunches of cactus varieties of six blooms each, there were two entries, Messrs. James Stredwick and Son, St. Leonards-on-Sea, once more carrying off the first prize with a really fine display; all the more remarkable in such a season. The varieties were Mrs. D. Fleming, Marquis, Golden Plover, H. H. Thomas, Miss Hills, Lodestar, Miss Stredwick (very fine), Vanity, Mrs. Stephens, Uranus, Orion, Indomitable, Dr. R. Appleton, Wm. Marshall, Red Admiral, Satisfaction, Mynora, and Elite. Messrs. J. Cheal and Sons were second with a very nice display, though hardly as large as the winners. Their best bunches were Red Admiral, Satisfaction, The Imp, Rev. T. W. Jamieson, Debutante, and Snowdon.

In the class for twenty-four blooms, distinct, Messrs. C. Carrington and Son were first, having good deep flowers of Brigadier, Conquest, Mary Perrier, Glory of Wilts, Pride of Essex, Joan of Arc, and Nelson. Mr. M. V. Seale, Vine Nurseries, Sevenoaks, followed, having good typical blooms of The Lion, Mary Perrier, Johannesburg, and H. H. Thomas.

Messrs. J. Cheal and Sons were the only competitors in the class for twelve vases of garden cactus varieties, and were deservedly awarded first prize. The vases were all beautifully set up with appropriate foliage. The varieties employed were Mrs. Paton, Mrs. T. H. Cook, Mauve Queen, Mrs. Freeman Thomas, Mrs. Usmar, Lustre, Gold Crest, Mrs. Landale, J. H. Jackson, Snowdon, and the Hon. Mrs. Greville.

Messrs. J. Cheal and Sons were the only exhibitors of twenty-four bunches of pompon varieties, distinct. The exhibit was very fine, the blooms being neat and in perfect condition. Some of the best were Jessica, Elsa, Little Mary, Girlie, Nora, Ivy, Hecla, Mars, Marietta, Glow, Adelaide, Ideal, Zerlina, and Cyril.

For twenty-four bunches of single varieties, distinct, Messrs. Cheal and Sons were awarded first honours with a beautiful set, the most conspicuous being Eclipse, Rosebank Scarlet, Peggy, Eric, Rosemary Bridge, Betty, Kitty, Fugi San, Miss Roberts, Snowdrop, Miss Moreland, and Lady Bountiful.

The class for pæony-flowered varieties was patronised by Messrs. J. Cheal and Sons, who won first prize for good vases of The Geisha, King Leopold, Empress, Bertha Von Suttner, South Pole, and Hampton Court.

AMATEUR CLASSES.

These were well filled, and in many instances the competition was excellent.

For twelve blooms, show or fancy, Mr. G. Densley, Nags Head Hill, St. George's, Bristol, won first prize with deep, well-finished flowers. His best varieties were Colonist, Lord Salisbury, Tom Jones, Henry Clark and Victor. Mr. A. P. Ironsides, West End Cottage, The Hamlet, Chippenham, was second, having neat examples of John Walker, Majestic, and Florence Tranter. Mr. H. S. Cooper, The Hamlet, Chippenham, was third; there were five entrants.

Mr. S. H. Cooper led off with twelve fancy varieties; his best flowers were Rev. J. B. M. Camm, Professor Fawcett, Lottie Eckford, and Mrs. Saunders. Mr. G. Densley was second.

The silver challenge cup for six vases of garden cactus varieties was secured by the Rev. A. Bridge, Worth Rectory, Crawley, Sussex, with good examples of White Ensign, Golden Eagle, Mary Perrier, Arthur Pickard, Snowdon, and the Hon. Mrs. Greville.

The silver challenge cup for nine varieties of cactus dahlias, three blooms each, was keenly contested. Mr. F. Grinstead, Beaufort Park, Battle, captured it with good examples of C. E. Wilkins, Indomitable, H. H. Thomas, Mrs. D. Fleming, Rev. A. Bridge, Satisfaction, Beauport Beauty, Red Admiral, and H. Peerman. Mr. F. W. Fellowes, The Lane House, Kings Walden, Hitchin, was second with a capital set, Glory of Wilts, Red Admiral, H. H. Thomas and Monarch being especially good. Third, Rev. A. Bridge.

Mr. H. Peerman, Glencross, Nantwich, led off for twenty-four distinct cactus varieties with a really good collection. His best were Thomas Parkin, Joan of Arc, Mary Perrier, Mrs. C. Wyatt, Crystal, Prima Donna, and H. H. Thomas. Mr. J. Bryant, 5, St. Martin's Terrace, Salisbury, had a good display for second place, having nice flowers of H. H. Thomas, Rev. T. W. Jamieson, Debutante, Snowdon, and Indomitable.

For twelve distinct varieties there were seven competitors, Mr. H. Peerman again being placed first with a good even display. Mrs. C. G. Wyatt, H. H. Thomas, H. Peerman, and Thos. Parkin being especially good. Mr. F. Grinstead was second, and Mr. G. Davidson, 68, Benshaw Manor Road, Thornton Heath, third.

The pompon class only secured two entries, Mr. A. P. Ironsides being to the fore with small, though well-developed flowers. The best bunches were Darkest of All, Douglas, Ideal, Ivy, and Marietta. Mr. H. Brown, Havelock Road, Luton, was second.

The Rev. A. Bridge won first prize for twelve bunches of singles, staging in first-rate style, a few of the best being Leslie Seale, Columbine, Lady Bountiful, Princess of Wales, Betty, and Cardinal.

The following classes were for amateurs who cultivate their plants unaided. For twelve blooms, distinct, show or fancy, Mr. G. Densley won first prize with fair blooms of Goldsmith, Colonist, Warrior, and Dr. Keynes. Mr. E. T. Matthews, 48, Lewis Road, Derby, followed, and Mr. W. Marks, Rownhams, Southampton, third.

In the class for six cactus varieties, three blooms each, Mr. C. Luckin, Apsley, Pulborough, won well with Indomitable, Red Admiral, H. L. Brousson, and Dr. Roy Appleton. Mr. A. Langridge, 39, Brownlow Road, Dalston, was second, lacking a little in the staging, while the third prize was awarded to Dr. R. Appleton.

OPEN CLASSES.

Pompon cactus varieties were represented by two exhibitors. For twelve varieties, distinct, six blooms in a bunch, Messrs. J. Cheal and Sons were placed first with typical blooms of these charming flowers. They were Little Fred, Mignon, Modesty, Mrs. H B. Brandt, Molly, and Firefly. Mr. M. V. Seale followed with nice bunches of Cecilia, Firefly, and Abundance.

Mr. H. Peerman won handsomely for six cactus blooms, one variety, with H. H. Thomas, while Mr. M. V. Seale was second with Glory of Wilts.

For a similar number of show varieties Mr. J. Walker was awarded first for Wm. Powell in good form. Mr. G. Densley second with The Reverend, and Mr. M. V. Seale third with Tom Jones.

In the class for six bunches of single fancy varieties Messrs. J. Cheal and Sons led with good bunches of Owen Thomas, Lady Bountiful, Leslie Seale, and Marjorie. Mr. M. V. Seale was second. Messrs. J. Stredwick and Son were most successful for fancy cactus varieties, having fine bunches of Orion, Magpie, Uranus, Elf, and Jupiter. Mr. M. V. Seale was second.

NON-COMPETITIVE EXHIBITS.

Messrs. Hobbies, Lim., Dereham, arranged a large exhibit, chiefly composed of pæony-flowered and collarette varieties. The whole were tastefully displayed in tall stands and mounds. In the former section the most prominent varieties were London, Warrior, South Pole, Leveller, and Dr. Hogg, while the latter included the well-known varieties Mons. L. Ferard, Maurice Rivoire, Gallia, and Meteor. The cactus varieties were also well represented. The whole exhibit was beautifully arranged, and received the premier award. Mr. J. Walker, Thame, contributed a display that was conspicuous for its quality, the cactus varieties being especially good, while the double forms were quite a feature.

Messrs. H. Cannell and Sons, Swanley, again contributed a fine display of cactus, decorative, single, and collarette varieties. The chief cactus sorts were White Progenitor, Fredya, Mrs. Douglas Flemming, Iolanthe, and Beryl. The collarette section included disbudded examples of Maurice Rivoire, Albert Naumene, Mons. Martinet, and Le Negro. The same firm also had a really fine collection of apples, which were beautifully clean and bright. From Mr. M. V. Seale, Sevenoaks, came a beautifully arranged exhibit of cactus, single, pompon, and double varieties.

Mr. J. T. West, Tower Hill, Brentwood, had a splendid display; the cactus, pæony-flowered, and pompon sorts were the best features. Among the pæony varieties were noted fine specimens of Turner, Holman Hunt, Liberty, Rembrandt, Lord Milner, and Raphael.

Mr. C. Turner, Slough, presented a fine exhibition of pæony-flowered dahlias nicely displayed with grasses and other suitable foliage. Some of the best varieties were Eleanor Lamartine, Bertram, Lemberg, Sunstar, and Bertha von Suttner.

From Mr. J. B. Riding, Chingford, came a large exhibit of collarette and pæony-flowered dahlias. The former were exhibited in about thirty varieties, and included Crown Princess Charlotte, Leuchfleur, Diamant, Maurice Rivoire, Madame Porrier, Mons. L. Ferard, Orphee, and Souv. de Chabanne.

Messrs. Keynes, Williams, and Co., Salisbury also had a nice exhibit of cactus varieties with some good pompons. The former were good and tastefully displayed. Messrs. Carter and Co., Raynes Park, also had an effective display of cactus and pæony-flowered varieties, in a setting of maidenhair ferns, which gave a cool and pleasing effect in spite of the terrible heat.

AWARDS.

First-class Certificate.—To cactus dahlias Uranus and Miss Stredwick, from Messrs. J. Stredwick and Son; Collarette dahlia Maurice Rivoire, from Messrs. Hobbies, Lim.

Large Gold Medal.—To Messrs. Hobbies.

Gold Medal.—To Messrs. H. Cannell and Sons; Mr. J. T. West, Brentwood; Mr. J. Walker, Thame; Mr. M. V. Seale, Sevenoaks.

Silver-gilt Medal.—To Mr. C. Turner, Slough; Mr. J. B. Riding, Chingford.

Silver Medal.—To Messrs. Carter and Co., Raynes Park; Messrs. Keynes, Williams, and Co., Salisbury.

Scottish Horticultural Association.

The September meeting of this association was held in the Goold Hall, 5, St. Andrew Square, Edinburgh, on the 5th inst. Mr. Massie, the president, was in the chair, and there was an attendance of 80 members.

Mr. Alex. Porter, market gardener, Davidson's Mains, read a paper on "Montbretias." The most important use of the montbretia was, he thought, as a decorative subject for the flower garden, but it was also useful as a pot plant, and for cut flowers. As a flower garden subject it supplied shades of colour rarely met with in other flowers, and planted in isolated groups on the lawn it formed a pleasing feature. The origin of the numerous varieties now in existence was Montbretia crocosmæflora, a hybrid between M. (Tritonia) Pottsi and Crocosmia (Tritonia) aurea, which was raised by M. Lemoine, of Nancy, and sent out by him in 1882; but with the advent of Crocosmia aurea imperialis, a form obtained by Max Leichtlin, of Baden-Baden, by selection, and C. aurea maculata, a South African variety, the hybridists were put in possession of new factors, and by crossing the older varieties with these, Lemoine obtained some magnificent sorts, with almost perfectly symmetrical flowers, with petals of splendid substance and striking and distinct colours, and with well branched spikes. The next raiser of note was Mr. Davison, of Westwick House Gardens, Norfolk, among whose productions was Prometheus, perhaps the largest flowered montbretia ever raised. Another Continental raiser was Herr Pfitzer, of Stuttgart, among whose productions was the popular Germania.

Montbretias would thrive on various soils, but the ideal rooting medium was a sandy loam, and as to cultivation all that was necessary was to manure and dig in the usual way; but in light sandy soils plenty of well decayed manure or leaf-mould should be added as a safeguard against drought. The time of planting would vary with soil and locality. In light soils in mild localities planting might be done in November or December, but if the soil was heavy and the locality cold, it should be delayed till April. Even in mild localities, plants put in in autumn should be protected by litter or bracken, or some other light material. The distance apart of the plants would, of course, depend on the object. If a display of colour was wanted in the flower garden, three to four inches would not be too close, but for exhibition spikes the distance should not be less than four to five inches. As the plants increase rapidly, they should be lifted and replanted annually. Lifted in November, they should be stored in shallow boxes in some light sandy soil in a cool place where frost could not reach them, and in March they might be allowed a little heat to start them, hardened off in a cold frame, and planted out in April. For pot culture, they should be grown in fibrous loam, with some well decayed manure and sand, and a little bone-meal. They might be potted any time during the winter or early spring, and treated in the same way as those for outdoor use, but when the pots become well filled with roots, a little artificial manure might be given at intervals of eight or ten days. When the spikes show flower the plants should be removed to the conservatory. For pot cultivation, those with rings or markings on the perianth should receive first consideration, but these kinds were not so appropriate for bedding purposes. Varieties suitable for pot cultivation are Aureole, Lothario, Tête Couronne, Anneau d'Or, and Globe d'Or; and among the most select for bedding purposes were Vulcan, Brilliant, Germania, Feu d'Artifice, Eldorado, Crœsus, Messidor, King Edmund, Norvic, and Ernest Davison. An interesting discussion followed, and on the motion of Mr. Todd, a very hearty vote of thanks was accorded to Mr. Porter for his interesting paper.

The exhibits were: Montbretias and Aster Abendroete, from Mr. Porter; Liliums sulphureum and nepalense and dwarf Tritoma Marie Dirken, from Messrs. Dicksons and Co., Edinburgh; perpetual-flowering carnations grown in a small greenhouse in a back garden, from Mr. John Fraser, East Norton Place, Edinburgh; American seedling tomato, from Mr. W. Williamson, Logie Green Nursery, Edinburgh; large polyporous (versicolor ?), and Bladder Senna (Colutea) in fruit, from Messrs. James Grieve and Sons, Edinburgh.

The Chairman made sympathetic reference to the death of Mr. Robert Laird, who for ten years was secretary of the association, and the secretary was instructed to convey to Mrs. Laird and her family the sincere sympathy of the members in their sad bereavement.

The Secretary read to the meeting the following letter from Lord Pentland, the Secretary for Scotland, in reply to the address of welcome presented to the King on the occasion of the recent Royal visit to Edinburgh:

"Scottish Office, Whitehall,
"August 4, 1911.

"Sir,—I am commanded by the King to thank the office-bearers and members of the Scottish Horticultural Association for their address of loyalty and welcome upon the occasion of the first visit of their Majesties the King and the Queen to Scotland after their Coronation. I had the honour to lay the address before His Majesty, who was pleased to receive the same in the most gracious manner.—I am, Sir, your obedient servant,

"(Signed) Pentland.

"W. H. Massie, Esq.,
"President of the Scottish Horticultural Association,
"19, Waverley Market, Edinburgh."

On the motion of Mr. Fife, a very hearty vote of thanks was accorded to the Honourable Lady Miller and to Mr. Malcolm for their kindness on the occasion of the visit of the members to Manderston and Duns on August 19.

At the next monthly meeting, on October 3, the evening will be devoted to a conference and discussion on early-flowering chrysanthemums.

Eight new members were elected.

MESSRS. G. BUNYARD AND CO.'S FINE COLLECTION OF FRUIT AT THE EDINBURGH SHOW.

Royal Caledonian Horticultural Society.

(Continued from page 676.)

and Mr. J. Simpson third, but, having regard to the season, it appeared to us that the first and second awards might have been made. Roses in vases were largely shown, but space will not admit of their being referred to in detail. It must, however, be mentioned that Mrs. Russell, Rosegarth, Newton Mearns, was successful in securing the premier award for six vases with blooms remarkable for their high development.

Roses were plentiful and of good size and colour in the trade classes, and at the head of the competitors in the class for thirty-six were Messrs. Adam and Craigmile, Aberdeen, with large, fresh, and superbly coloured blooms. Conspicuous in the collection were the blooms of Rev. Allan Cheales, Gloire de Chedane Guinoisseau, George C. Waud, Madame Ravary, C. J. Grahame, Hector Mackenzie, Mrs. Isabella Milner, Killarney, Captain Hayward, Caroline Testout, and Dean Hole. Messrs. Cocker and Sons, Aberdeen, were second with large and otherwise well-developed blooms of Earl of Warwick, Gustave Piganeau, Frau Karl Druschki, C. J. Grahame, His Majesty, Hugh Dickson, Lady Ursula, and Madame Wagram. The Killermont Nursery Company, Bearsdel, Dumbartonshire, third. For eighteen blooms Messrs. D. and W. Croll, Dundee, were first with a fresh lot of flowers, The Lyon being very conspicuous. Mr. R. Ferguson, Dunfermline, second.

In the classes for twelve blooms of distinct varieties the Killermont Nursery Company was first for white varieties with Frau Karl Druschki. For red roses Messrs. J. Cocker and Sons were first with bright blooms of Hugh Dickson. For twelve pink roses Messrs. D. and W. Croll were awarded the first prize for The Lyon, which, whatever may be its colour, is assuredly not pink. The class for twelve vases of decorative roses was a good one, and the three or four dozen vases, arranged in a single line along the centre of the principal table devoted to roses, produced a pleasing effect. Mr. W. Ferguson was successful in securing the principal award with bold arrangements, and Messrs. J. Cocker and Sons were a capital second.

For a collection of roses arranged for effect Mr. W. Ferguson had a large and tasteful display, and well merited the first prize awarded him. The flowers were arranged in pyramids and in boxes, and attracted a full share of attention.

Sweet peas were largely shown, and, if not equal to those we have seen at Edinburgh in more favoured years, they were sufficient both in numbers and merit to form a very pleasing feature. For twelve vases Mr. T. M. Kirkwood, Crieff, was first with a remarkably fine collection, the flowers of good size and brightly coloured. Mr. J. Fletcher, Auchenheath, was a very close second, his collection consisting chiefly of high-coloured flowers, and it was interesting to note that the orange varieties, in the way of Earl Spencer, were perfect in colour. Mr. J. Loan, Coldstream, was third with a collection of much merit.

OTHER CUT FLOWERS.

Hardy flowers were plentiful and well staged. For a collection of twelve vases Mr. J. Richardson, School House, Manot, was first with a tastefully-set-up lot, in which montbretias, herbaceous lobelias, Veronica longifolia subsessilis were conspicuous. Mr. J. Bryden, Inverleithen, secured the second award with a capital set. Annual asters in vases were not particularly attractive, for the majority of the vases contained mixtures, and the colours most favoured by the exhibitors were red, white, and blue. Perennial asters, on the other hand, were very attractive. Mr. J. Loan, Kirkcaldy, had the best six, and Mr. J. Richardson and Mr. Duff were second and third respectively with good sets.

Cactus dahlias, set up in vases, produced a good display of colour, and afforded an excellent object-lesson in staging these flowers at competitive gatherings. They were shown in collections of six varieties, six blooms of each in separate vases, and the blooms were cut with sufficient length of growth to stand about fifteen inches above the vase. As a matter of course, they were cut with a portion of the branch and wired, but until such times as we have varieties with long stems we must be satisfied with this method of staging, which is far preferable to that of facing the blooms now so general. Messrs. M. Campbell and Son, High Blantyre, obtained premier honours in the class with an effective set; Mr. J. Bowness, Busby, was a good second.

Roses may be grown to perfection by following the instructions given in Roses and their Cultivation, by T. W. Sanders. A selection is given, with description of all the best varieties, and full details for culture outdoor and under glass. Price 2s. 6d. net, by post in box 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

Early-flowering chrysanthemums were so largely and well staged as to produce a fine effect. The practice at Edinburgh is to arrange the flowers in large vases with sufficient stem to form large sheaves, with the top flowers two feet or so above the mouth of the vase. The chief class was for eighteen vases, and in this the premier place was taken by Mr. John Smellie, who had a collection of great excellence. The varieties included Improved Polly, rich golden-yellow and bronze; Dolly Reeves, rose; Leslie, bright yellow; Hector, lilac; Nora Blick, rich red; Elstob Yellow, bright yellow; Improved Masse, red rose; White Masse, Caledonia, creamy white, a pretty variety with buff with red centre. Mr. G. Bowness second.

PLANTS.

Stove and greenhouse plants in bloom were represented by a considerable number of medium-sized and well-flowered specimens. Mr. J. McNiell was first for four with a good collection in which an ixora and a statice were the best. The same exhibitor was first for a single specimen with a large, finely-flowered statice. The competition in the classes for ornamental-leaved plants was more spirited than usual, and in that for six Mr. Millan, gardener to the Earl of Home, Douglas Castle, was a splendid first with huge specimens of Alocasia spectabilis, Anthurium crystallinum, Calathea zebrina, Dieffenbachia magnifica, and other of the finer kinds. Mr. J. Thorn, Carlowrie, was a good second with a six in which dracænas and crotons were prominent. Mr. A. Knight, Brayton, was third with neat specimens. There were classes also for crotons and dracænas, and the exhibits in them contributed their full share to the attractions of the exhibition. Mr. Thorn scored for two dracænas, and Mr. Millan for a pair of crotons, the plants in each case being finely grown and richly-coloured.

Classes are provided for begonias, fuchsias, British ferns, zonal pelargoniums, early-flowering chrysanthemums, liliums, and several other classes of plants that are of value for the conservatory, and as a whole did credit to the cultural skill of the several exhibitors.

VEGETABLES.

Vegetables were shown in large quantities, and in excellent condition, and were of much interest as evidence of the possibilities of high-class culture under untoward conditions. There was a keen competition in the larger of the two classes for displays of vegetables; the several kinds being staged in capital order throughout, and the taste shown in the arrangement of the displays reflected much credit upon the several exhibitors.

In the class for eighteen dishes, not less than twelve kinds, grown in Scotland, Mr. Robert Stuart, gardener to Lord Lauderdale, Chilestone Castle, obtained premier honours with a collection of quite exceptional excellence. The collection comprised magnificent bulbs of Cranston's Excelsior and Ailsa Craig onions, Sutton's Autumn Mammoth, and Magnum Bonum cauliflowers of great excellence, the heads being the finest that have come under our notice this season. Dobbie's Selected parsnip, a yard or so long, and perfect in shape; Gladstone pea, the pods of immense size, well filled, and of the deepest green; Britannia and White City potatoes, the tubers rather on the large size and perfect in shape; beet, good in shape and colour; red and white celery of high quality; Lyon leek, of large size; and cucumbers, tomatoes, and French beans that were in keeping with the other kinds. Mr. J. E. Davis, gardener to Colonel E. R. Stewart Richardson, Ballathie, was second with a highly meritorious display, in which the cauliflowers, potatoes, runner beans, and tomatoes were the most noteworthy. Mr. Stewart arranged his vegetables on black velvet; while Mr. Davis employed velvet of a light green colour, and the darker colour was by far the best for the display of the various kinds of vegetables.

In the class for twelve kinds the premier place was occupied by Mr. S. Gordon, gardener to Sir E. Maxwell, Bart., Whauphill, Wigtonshire, who had a display in which the whole of the kinds staged represented cultural skill of a high order. Of exceptionally high quality were the celery, leeks, cauliflowers, Tender and True parsnips, potatoes, and carrots. Mr. F. W. Urquhart, gardener to H. Mungall, Esq., Melrose, staged a remarkably fine collection for second place, and Mr. A. Morrison, who was third, staged a display of the most meritorious character. Mr. Thomas Lockart, Dalmeny Park, scored for twelve varieties of potatoes with a grand lot of tubers, and Mr. J. Cassar, Dunbar, and Mr. J. M. Stewart were second and third, both showing well.

NON-COMPETITIVE EXHIBITS.

Messrs. G. Bunyard and Co., Maidstone, contributed, not for competition, a remarkably fine collection of fruit, comprising about one hundred varieties of apples, pears, plums, and decorative crabs. Conspicuous in the collection were such noteworthy varieties as Peasgood's Nonsuch, Norfolk Beauty, Lady Sudeley, Gascoigne's Scarlet, James Grieve, Mère de Ménage, Rival, Cockle's Pippin, King of the Pippin apples, Marguerite de Marillat, William's Bon Chretien, and Beurre d'Amanlis pears.

Messrs. E. Webb and Sons, Stourbridge, exhibited a comprehensive collection, comprising melons, tomatoes, and vegetables in great variety, and including a large number of the fine types with which the name of the firm is associated. With the vegetables, etc., were excellent sweet peas, lilies, and other flowers, and arranged with their well-known taste the effect was marvellously beautiful.

Messrs. Cunningham, Fraser, and Co., Edinburgh, contributed a very large and highly meritorious display of hardy flowers, as also did Mr. McOmish, Crieff.

Messrs. Dobbie and Co., Edinburgh, made a glorious display of dahlias, in which all the best of the show, fancy, collarette, pæony, and cactus varieties were represented at their best. Messrs. Dobbie also had a big collection of sweet peas, a bank of miscellaneous flowers, and a collection of potatoes.

Messrs. J. Veitch and Sons, Chelsea, exhibited a collection of pot fruits, which by reason of its extent and the splendid condition of the heavily-fruited trees, formed one of the most important of the many features of interest.

Mr. John Forbes, Hawick, Lim., contributed a magnificent collection of hardy flowers, in which many of the choicer varieties of pentstemons, phloxes, and hollyhocks were splendidly represented, with displays of dahlias, violas, and verbenas.

Messrs. W. Cutbush and Son, Highgate, tastefully arranged on the floor of the hall a big collection of cut flowers, with a lily pool as a centrepiece.

Mr. Proctor, Portobello, contributed an effective group of early-flowering chrysanthemums.

Messrs. Storrie and Storrie, Glencarse, Perthshire, exhibited a large table of fruit trees in pots, all bearing crops of great excellence, and a considerable collection of apples, pears, plums, and other fruits, arranged on plates. The exhibit was one of much interest, and was rendered additionally attractive by the groups of brightly-coloured celosias in association with the pot trees.

Messrs. M. Campbell and Son, of Blantyre, had an attractive table of cactus dahlias and early-flowering chrysanthemums. Messrs. Lang and Mather, Kelso, exhibited hardy flowers in quantity. Messrs. W. and D. Croll, Dundee, staged a large collection of apples.

Mr. R. Bolton, Carnforth, presented a fine display of sweet peas, the high-coloured varieties being particularly attractive. Messrs. Gunn and Sons, Olton, staged herbaceous phloxes in quantity and of much merit.

Pansies and French marigolds were finely shown by Mr. M. Cuthbertson, Rothesay, who had cut flowers of other good things, notably early-flowering chrysanthemums. Pansies were also contributed by Messrs. Lister and Son, of Rothesay.

Messrs. Young and Co., of Cheltenham, exhibited a large collection of cut flowers of perpetual-flowered carnations, which was equally remarkable for the high quality of the blooms and the taste shown in their arrangement.

Messrs. T. S. Ware, Lim., Feltham, staged a magnificent bank of tuberous begonias, which were admirably grown and splendidly flowered.

Messrs. J. Cocker and Sons exhibited a very fine display of hardy flowers, in which many of the finest of the subjects now in bloom were represented.

Messrs. R. Laird and Sons, Lim., Pinkhill Nurseries, had a bold group of coniferous trees, with arrangements of roses and dahlias. Mr. John Downie, Edinburgh, contributed a charming display of fine foliage plants and ferns. Messrs. T. Methven and Sons, Edinburgh, had an attractive group of lilies and clematis.

Messrs. J. Fairley and Co., Cairneyhill, Fifeshire, arranged a group of roses that was distinct in style and attractive.

Messrs. G. Gibson and Co., Leeming Bar, contributed hardy flowers in abundance and in good style. Messrs. Fairbairn and Sons, Carlisle, had a bright display of dahlias, in which the cactus varieties predominated.

MEDAL AWARDS.

Gold Medal.—Messrs. J. Veitch and Sons, fruit trees in pots; Messrs. Dobbie and Co., cut flowers; Messrs. Storrie and Storrie, fruit trees, etc.

Silver-gilt Medal.—Messrs. E. Webb and Sons, melons, vegetables, and sweet peas; Mr. J. Forbes, Hawick, Lim., phloxes and pentstemons; Mr. John Downie, plants, etc.; Mr. D. M'Ormish, phloxes and pentstemons; Messrs. Young and Co., Cheltenham, carnations; Messrs. Cutbush and Son, cut flowers, etc.; Messrs. Clibrans, vegetables.

Silver Medal.—Rev. J. Hast, apples; Messrs. Cunningham, Fraser, and Co., herbaceous plants; Messrs. G. Gibson and Co., hardy flowers; Messrs. J. Fairley and Co., roses; Messrs. Thomas Methven and Sons, clematis and lilies; Mr. R. Stannard, onions; Messrs. Laing and Mather, cactus dahlias, etc.; Messrs. G. Fairbairn and Sons, dahlias; Messrs. G. Bunyard and Co., hardy fruit; Messrs. M. Campbell and Sons, dahlias and chrysanthemums; Messrs. Gunn and Sons, phloxes; Messrs. T. S. Ware, Lim., begonias; Mr. R. Bolton, sweet peas; Rev. H. Mayall, sweet peas; Messrs. Myer and Son, sweet peas; Messrs. J. Cocker and Son, hardy flowers.

NEW PLANTS, ETC.

PTERONIA INCANA.

A South African shrub having a wide range within the area occupied by the genus. The flowers are yellow, and the small linear leaves are grey. "Bot. Mag.," t. 8,380.

DRACOCEPHALUM ARGUNENSE.

A handsome perennial labiate, a native of Dahuria, Mandshuria, and the Amur region of China, which has been known in European gardens about ninety years, and was reintroduced by Messrs. J. Veitch and Sons about thirty years ago. The plant attains a height of about two feet, and the flowers are deep lavender and borne in small whorls. "Bot. Mag.," t. 8,384.

SPIRÆA VEITCHI.

A distinct and handsome species, resembling in some respects S. canescens, from which, however, it is distinguished by its glabrous leaves. The species was discovered by Mr. E. H. Wilson in Western Hupeh, and introduced to European gardens by Messrs. J. Veitch and Sons. This fine shrub attains a height ranging from eight to ten feet, bears a profusion of creamy-white flowers, and has proved hardy in this country. "Bot. Mag." t. 8,383.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Specimens of plants, flowers, and fruits for naming send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

DISEASED CELERY.—G. M., Northampton: The celery is suffering from an attack of a fungus named Cercospora api, and commonly known as Celery Leaf Blight. This disease is most common in wet seasons, and then spreads rapidly, especially during the earlier stages of celery growth. As carefully as possible remove the infested leaves, and place them in a vessel as they are cut, and as soon as the work is complete burn the diseased foliage in the boiler furnace. It is probable that little can be done at this date to prevent the spread of the disease, but an ammoniacal carbonate of copper solution sprayed on will check the trouble when the plants are young. Spray the healthy rows with a solution of potassium sulphide. Keep a sharp look-out for evidence of attack, and do not hesitate to remove and burn any leaf that shows the slightest sign of infection.

BITTER ROT IN APPLES.—J. B., Harrow: The specimens of Warner's King apples sent afford ample evidence of the work of Glœsporium fructigenum, a fungus that produces the all-too-familiar brown patches that commence as mere dots when the fruits are about half grown. Where this disease is troublesome, the trees should be frequently examined, and all fruits showing signs of the disease should be promptly picked, and so far as possible used (an extra thick peeling will remove all the affected parts), the rejected portion being burnt at once. Diseased fruits should not be stored with healthy ones, neither should they be allowed to remain on the ground as they fall, or be allowed to remain on the trees if, as sometimes happens, they shrivel up. Thorough cleanliness, winter spraying, and spraying with potassium sulphide or copper carbonate solutions in July have resulted in a vast improvement in the crops.

LOGANBERRIES. — E. A. S., Woodbridge: We have frequently drawn attention to the merits of the loganberry, as it is a free cropping fruit, and one of great value for tarts and for preserving. It was raised in California from a cross between the raspberry and the blackberry. The fruits are similar in colour and character to those of the raspberry, but they are much larger and of greater length, full-sized berries having a length of 1¼ inches. In flavour the fruits most closely resemble the raspberry, but they are more acid, and for that reason they are preferred to raspberries by many when cooked, and they are more refreshing when used for dessert, but for the latter purpose they should not be gathered until quite ripe. For bottling loganberries are of immense value, and their cultivation for this purpose is rapidly extending. The soil for loganberries should be prepared as for raspberries, and the plants should be put out at the same time, and in much the same manner as advised for these fruits, one-year-old plants being the best. Owing to their more vigorous growth they require more space between the rows than do the raspberries, and also strong supports. Where there is more than one row on the same plot the rows should be eight feet apart. For supporting the growths a trellis six feet high should be provided, and this should be formed with stout posts and strong wires stretched between them at distances of twelve inches apart, commencing from the strand of wire stretched along the top of the posts. The plants should be eight feet apart in the rows, and seven or eight shoots be allowed to each, the others being removed at a quite early stage. The canes remaining from fruiting in the following year should be loosely tied to the wires or other support as growth progresses, and after the fruiting period the old canes should be cut away, as in the case of raspberries.

HOUSING PERPETUAL CARNATIONS. —T. D., Plymouth: You cannot be too careful in the preparation of the house in which the perpetual carnations are to remain all the winter. Assuming the stock to be in a cold frame, the plants will receive no harm therein for another two or three weeks if the weather continues open. Give the house a thorough cleaning inside and out. Scrub the inside with hot soapy water after removing the old ashes from the stages. When all the glass, woodwork, and walls have been cleaned down, proceed to limewash all the wall spaces, adding some paraffin to the wash. Put new clean ashes on the stages, shut the house up as tightly as possible, and fumigate it thoroughly with sulphur. After this has been done open all the ventilators and doors, and as soon as the atmosphere in the house is sweet, the carnations should be housed. See that all pots are well washed, the drainage clear, the plants clean, and the surface soil lightly stirred before housing commences.

FIG FAILING TO RIPEN FRUITS. —A. J. H., York: The fruits arrived in such a bad condition that they gave us no clue to the trouble. We gather from your remarks, however, that the trees do not receive a full share of sunshine. This would naturally have a bad influence, because the ripening of the growths as well as the ripening of the fruits would suffer, and if growth is not fully matured the crop cannot be large or properly perfected. A large and rich root run may also add to the difficulty of securing perfect fruits, and most likely if the roots were restricted a fair crop of fruits would result, even if the other conditions are not the most favourable.

NAMES OF PLANTS.

G. S., Ryde.—1, Buddleia variabilis; 2, probably Abelia rupestris.

W. O., Brinksway.—Both specimens are garden varieties of Hibiscus syriacus.

H. L., Stone.—1, Pteris serrulata; 2, Adiantum formosum; 3, A. aneitense; 4, Doodia aspera; 5, Pteris serrulata cristata; the flower is Hibiscus syriacus.

T., Kells.—We have carefully compared the specimen with growing plants and herbarium specimens, and find it to be Poterium tenuifolium; it is too slender, and the leaves too narrow and too deeply incised to be P. canadense.

C. E. M., Lincs.—The specimens sent were not sufficient for proper identification; 1, Polystichum angulare proliferum; 2 and 6 are probably euonymuses the latter a form of E. latifolia; 3, a linaria, species not recognised; 4, send in flower; 5, Lonicera japonica aureo-reticulata.

NAMES OF FRUITS.

G. F. Guildford —1, Warner's King; 2 and 3, Worcester Pearmain.

G. C. G., Bury St. Edmunds.—Probably a Pershore plum with curious malformation; there is no disease present, and the peculiarity may be confined to the tree in question.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1911. September 3 to September 9.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Sept. 3—Sunday	8 0	65	58	75	55
,, 4—Monday	6 6	66	58	74	50
,, 5—Tuesday......	10 0	65	60	79	53
,, 6—Wednesday..	10 36	64	58	86	46
,, 7—Thursday....	11 18	71	61	89	43
,, 8—Friday........	10 48	66	60	91	47
,, 9—Saturday.....	—	63	61	66	54
Means ..	(total) 56 48	65	59	80	50

Date. 1911. September 3 to September 9.	Rain.	Temperature of the Soil at 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
Sept. 3—Sunday	—	65	64	63	48
,, 4—Monday	0·01	64	64	63	43
,, 5—Tuesday......	—	63	64	63	44
,, 6—Wednesday..	—	64	63	63	39
,, 7—Thursday	—	64	64	63	39
,, 8—Friday	—	64	64	63	40
,, 9—Saturday	—	65	64	63	46
Means ...	(total) 0·01	64	63	63	42

SANKEY'S FAMOUS GARDEN POTS
FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant

Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:

RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

COUNTY BOROUGH of SOUTHAMPTON.
TO FLORISTS AND OTHERS.

The Corporation invite TENDERS for the SUPPLY and DELIVERY of 1,000 dozen of BEDDING PLANTS, in accordance with particulars to be obtained at the Town Clerk's Office. The plants are to be delivered in May, 1912, and the Contractor whose tender is accepted will be permitted to remove from the Parks, about the middle of October next, the plants or cuttings he may require free of cost.

Tenders, endorsed "Tender for Bedding Plants," must be delivered at the Town Clerk's Office by the 21st instant.

No pledge is given to accept the lowest or any tender.

R. R. LINTHORNE,
Town Clerk.

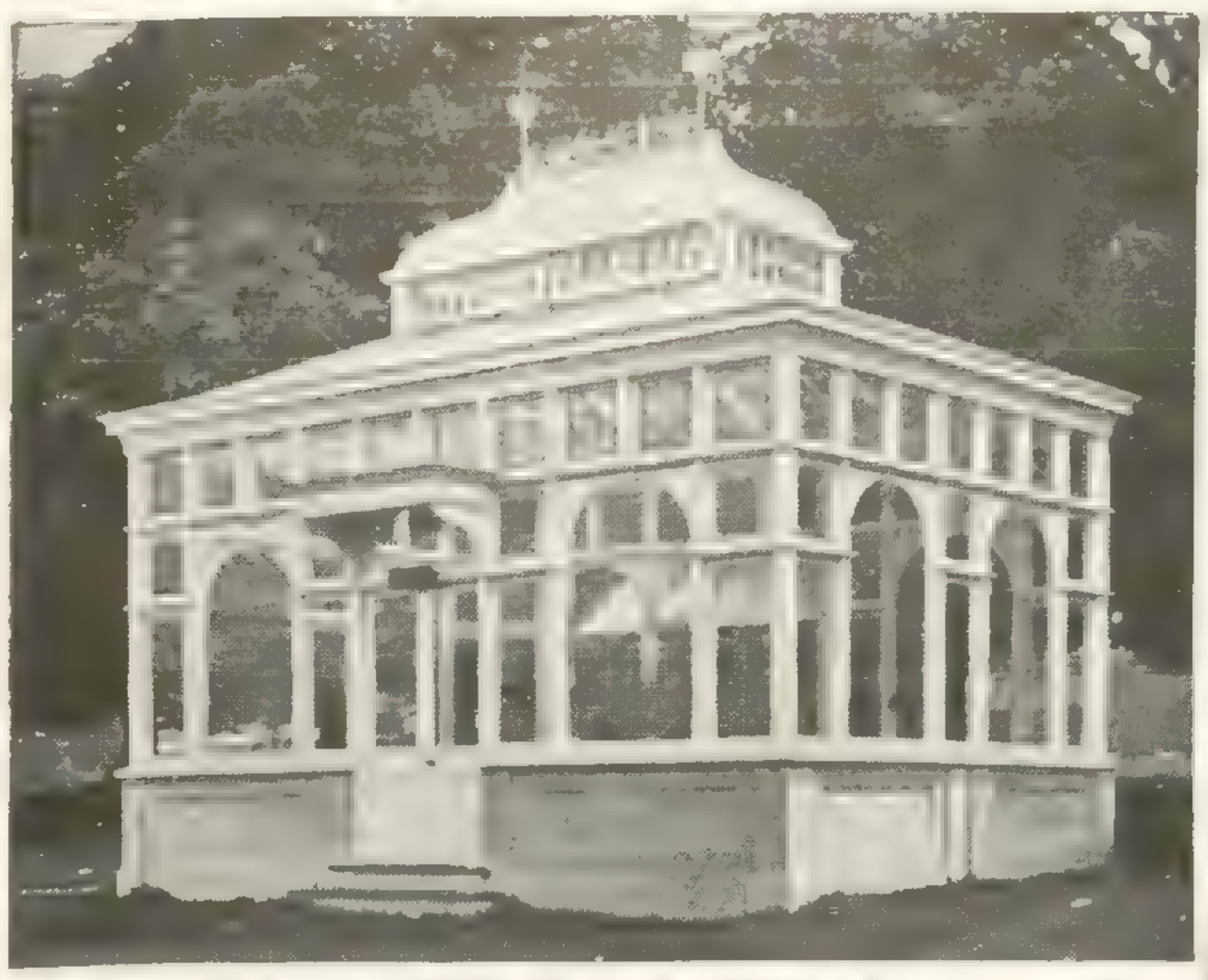
Town Clerk's Office,
Municipal Offices, Southampton.
8th September, 1911.

ESSEX EDUCATION COMMITTEE.
ORSETT DISTRICT.

WANTED, an INSTRUCTOR in GARDENING for boys attending the Elementary Schools at Grays and East Thurrock. It is essential that applicants should have some experience in teaching the subject. The person appointed will be required to devote the whole of his time to the duties. Salary £80 per annum. Applications, giving particulars of qualifications and experience, together with copies of testimonials, to be sent to Mr. T. JESSOP, Clerk to the Orsett D.S.C., School Office, Grays.

BOULTON & PAUL, LTD., HORTICULTURAL BUILDERS, Norwich.

ATTRACTIVE, PRACTICAL GLASSHOUSES.

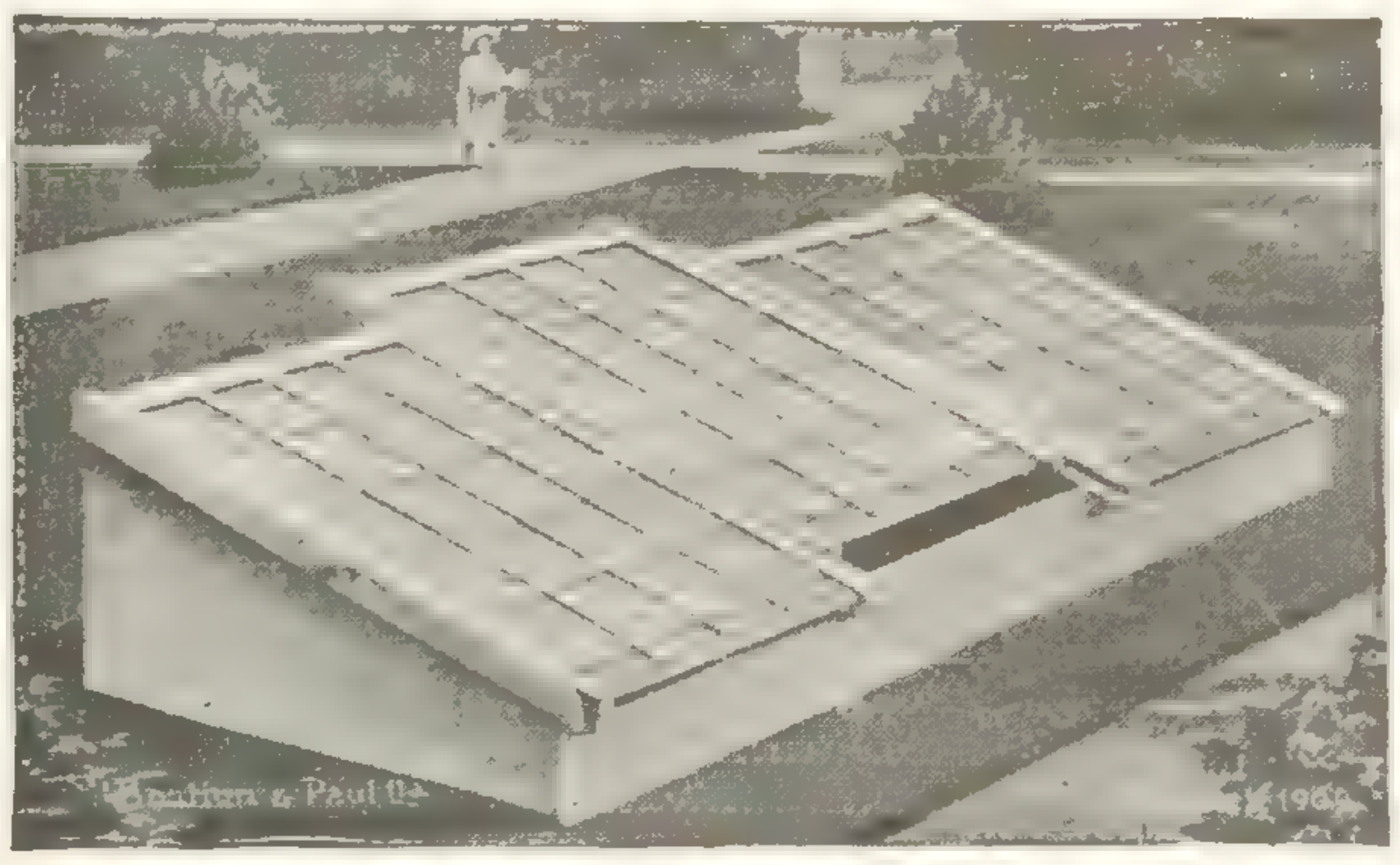


Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of 40/- value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.



4ft. by 6ft. ... £2 0 0 8ft. by 6ft. ... 3 0 0
Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft. Similar to No. 75, with Two Lights... **35/-**

SEND FOR ILLUSTRATED CATALOGUES.

Every part of these Houses is thoroughly well made, painted three coats, GLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.

No. 49A.—Span, 10ft. by 8ft. **£11 10 0**
No. 47A.—Lean-to, 10ft. by 7ft. **£9 10 0**

All parts are numbered ready for easy re-erection by any handy man.

THOMSON'S Celebrated MANURES

Still the best: In greater demand every year.

SAFE, SURE & LASTING.

The result of many years' **practical** experience.

VINE, PLANT, AND VEGETABLE MANURE.
1 cwt., **20/-**; ½ cwt., **10/-**; ¼ cwt., **6/-**; 14 lbs., **3/6**; 7 lbs., **2/6**; Tins, **2/6, 1/-,** and **6d.** Carriage paid on 1 cwt. anywhere.

SPECIAL TOP-DRESSING MANURE.
½ cwt., **20/-**; ¼ cwt., **11/-**; 14 lbs., **6/-**; 7 lbs., **3/6**; Tins, **1/-**. Carriage paid on ½ cwt. anywhere.

Also Thomson's Book on the Vine. Thomson's Styptic.

SOLD BY NURSERYMEN & SEEDSMEN EVERYWHERE.

Write for Pamphlets, Price Lists, etc., to

Wm. THOMSON & SONS LIMITED 1868 1911

SOLE MAKERS: **WM. THOMSON & SONS, Ltd., Clovenfords, Scotland.**

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to

EPPS & CO., Ringwood, HANTS.

WANTED:

Every reader of the "Gardeners' Magazine" to write for our New Autumn Catalogue at once (one of the best and most complete publications in the Trade). It contains special offers of all manner of Bulbs, Lilies, Hardy Flowers, Hardy Shrubs, Fruit Trees, Roses, Sweet Peas, Bulb Fibre, Bulb Bowls, Manures, etc. Also 1,000 sorts of Vegetable and Flower Seeds, all in Penny Packets from Orchids to Mustard and Cress, post free, on application to EDMUNDS and CO., Alexandra Nurseries, Milton, Cambridge.

SUBSCRIBER'S ORDER FORM

Every Saturday THE GARDENERS' MAGAZINE. Twopence

To W. H. and L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose ________ for ________ months in advance.

Name ________________

Address ________________

Date ________________

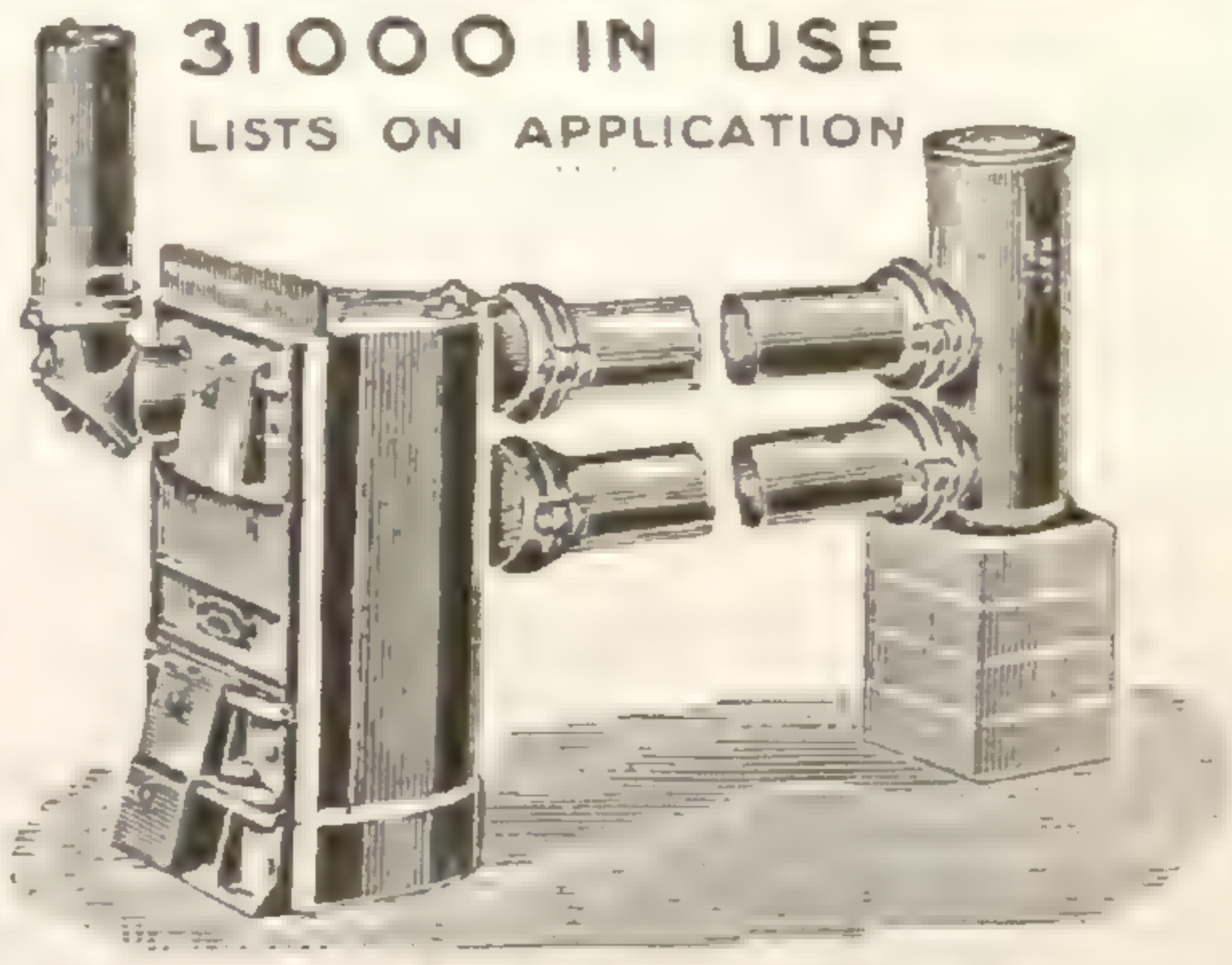
1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

* * If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.

The Loughborough BOILER

31000 IN USE

LISTS ON APPLICATION



The pioneer of cheap simple and effective heating for small greenhouses Complete Apparatus from £3.19.6. The immense sale of this boiler, and its numerous imitations are the best testimony of its undoubted success

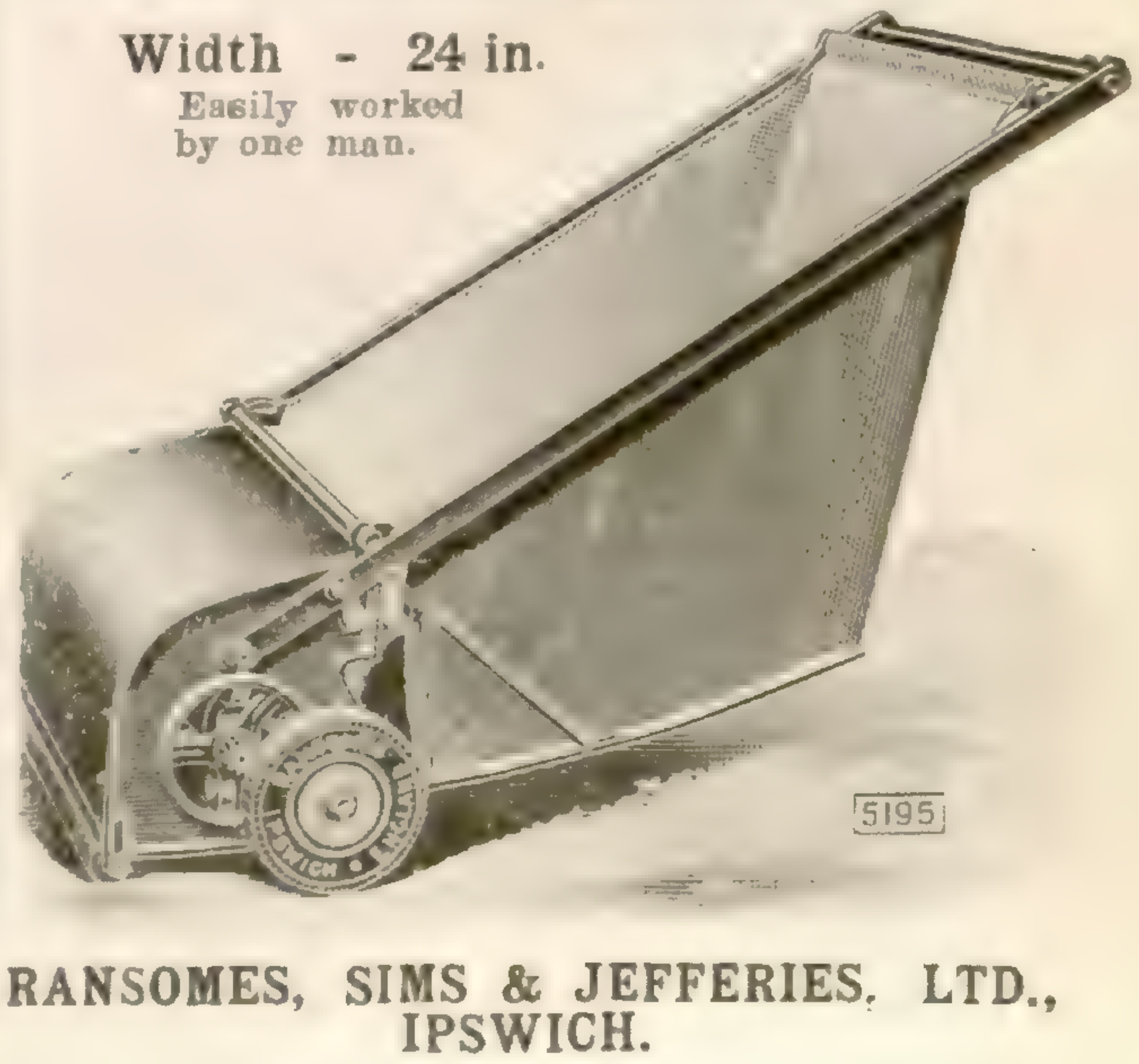
MESSENGER & CO., LTD.

LOUGHBOROUGH · LEICESTERSHIRE
London Office, 122 VICTORIA ST · S · W

RANSOMES' LAWN SWEEPERS

have proved themselves most effective in use, and economical in time, as compared with the tedious process of sweeping by hand. To meet the demand which has arisen for a lighter and cheaper machine, R. S. & J., Ltd., have brought out the one illustrated, in which the driving is done by two side wheels, and a canvas collector is fitted so that the weight is reduced and the draught considerably lightened.

Width - 24 in.
Easily worked by one man.



RANSOMES, SIMS & JEFFERIES, LTD., IPSWICH.

MARKETS.

COVENT GARDEN.

Flowers.

A fair request is easily met, but there are comparatively few outdoor flowers.

		s. d.		s. d.
Adiantum cuneatum	per doz. bun.	3 0	to	4 0
Arums	per doz.	2 6		3 0
Asparagus plumosus	per doz. bun.	1 6		2 0
,, sprengeri	per doz. bun.	8 0		10 0
Asters	per doz. bun.	3 0		5 0
Carnations	per doz.	1 0		3 0
,,	per doz. bun.	6 0		10 0
Chrysanthemums	per doz. bun.	6 0		8 0
,,	per doz. blooms	1 0		2 6
Coreopsis	per doz. bun.	1 6		2 6
Croton leaves	per bun.	1 0		1 6
French fern	per doz. bun.	2 6		4 0
Gardenias	per doz.	1 6		2 0
Gladioli	per doz. bun.	1 6		6 0
Lapageria	per doz.	1 6		3 0
Lilium auratum	per doz.	2 6		3 0
,, speciosum	per doz.	1 6		2 6
,, longiflorum	per doz.	2 6		3 6
Lily of the Valley	per doz. bun.	9 0		15 0
Marguerites	per doz. bun	1 6		2 0
Mignonette	per doz. bun.	2 6		3 0
Odontoglossums	per doz. blms.	2 0		4 6
Pelargoniums	per doz. bun.	3 0		9 0
Physalis	per doz. bun.	7 0		10 0
Roses	per doz.	1 0		2 6
Smilax	per doz. trails	2 0		4 0
Statice	per doz. bun.	3 0		4 0
Stocks, white	per doz. bun.	5 0		7 0
Tuberoses	per doz.	0 4		0 6
Viola, small blue	per doz. bun.	0 9		1 3

Fruits.

The continuous hot weather has increased the demand for fruits, and there is no difficulty in disposing of good produce at firm rates.

		s. d.		s. d.
Apples, English, dessert	per ½-sieve	2 0	to	3 6
,, Cooking	per ½ sieve	1 6		3 0
Bananas	per bun.	4 0		12 6
Blackberries	per peck	1 6		2 0
Cob nuts	per doz. lb.	5 0		6 0
Damsons	per ½-sieve	2 0		3 0
Figs	per doz.	1 6		3 0
Greengages	per ½-sieve	3 0		8 0
Grapes, English	per lb.	0 10		4 0
Lemons	per case	9 0		25 0
Melons	each	1 0		2 0
,, Cantaloupe	each	1 6		3 0
Nectarines	per doz.	3 0		15 0
Oranges, Denia	per case	12 0		30 0
,, Cape	per case	8 0		10 0
,, Jamaica	per case	14 0		16 0
,, St. Michaels	per case	8 0		10 0
Peaches	per doz.	3 0		18 0
Pears, English	per ½-sieve	2 0		4 6
,, French	per crate	3 0		9 0
Pineapples	each	2 6		7 6
Plums	per ½-sieve	2 0		4 0

Vegetables.

The scarcity of greenstuffs continues, and prices remain high as a consequence.

		s. d.		s. d.
Artichokes, Globe	per doz.	2 0	to	3 0
Beans, dwarf	per basket	3 0		4 6
,, runners	per bush.	9 0		12 6
Beet	per doz. bun.	2 0		3 0
Cabbage	per tally	7 0		10 6
Carrots	per doz. bun.	1 0		1 6
Cauliflowers	per doz.	4 0		6 0
Cucumbers	per flat	4 0		6 0
Endive	per doz.	1 6		3 0
Horseradish	per doz. bun.	8 0		15 0
Lettuce	per doz.	1 6		3 0
Marrows	per tally	5 0		12 0
Mint	per doz. bun.	4 0		5 0
Mushrooms	per doz. lb.	9 0		12 0
Onions, Spanish	per case	4 0		6 0
Parsley	per ½-sieve	1 6		2 6
Peas	per bush.	6 0		7 0
Radishes	per doz. bun.	1 6		2 6
Spinach	per bush.	2 6		4 6
Tomatoes	per doz. lb.	2 6		3 6
,, Guernsey	per doz. lb.	2 0		3 0
Turnips	per doz. bun.	3 0		3 6
Watercress	per doz. bun.	0 6		0 6½

Azalea balsaminæflora.—Botanically this is a form of the Indian azalea, its real name being Rhododendron indicum balsaminæflorum, but it is generally known by that at the head of this note. In habit it is quite different from most varieties of the Indian azalea, forming as it does a dwarf, somewhat spreading shrub, clothed with small narrow leaves. A striking feature is furnished by the blossoms, which are quite double, about two inches across, and of a beautiful salmon tint. It is hardy in many districts, but the flowers develop best with glass protection. This azalea is also known as Azalea rosæflora, an appropriate name, as the partially expanded blossoms resemble little rose buds.—W. T.

LONDON POTATO MARKETS.

There are now ample supplies, and prices are easy.

		s. d.		s. d.
Blackland	per ton	70 0	to	80 0
British Queen	per ton	75 0		85 0
Eclipse	per ton	75 0		85 0
Epicure	per ton	70 0		75 0
Essex	per ton	70 0		75 0
Evergood	per ton	70 0		75 0
Kents	per ton	80 0		85 0
Up-to-Date	per ton	80 0		90 0

FORTHCOMING ENGAGEMENTS.

MONDAY, September 18.—International Conference on Genetics in Paris; six days.

National Chrysanthemum Society: Floral Committee at 3 o'clock; Executive Committee at 7 o'clock.

WEDNESDAY, September 20.—National Dahlia Society's Exhibition at Royal Botanic Society's Gardens.

North of England Horticultural Society's Meeting at Leeds.

TUESDAY, September 26.—Royal Horticultural Society; Committees meet at 12 o'clock; Lecture on "Salads" at 3 p.m., by Mr. H. Senn; Scientific Committee at 4 o'clock.

WEDNESDAY, September 27.—Irish Gardeners' Association.

Watford Horticultural Society.

CONTENTS.

PAGE
Answers to Correspondents 694
Daffodils in the Pleasure Grounds 683
Exhibitions and Meetings 689
Fritillaria Imperialis Chitralensis 682
Good Bedding Hyacinths 681
Good Bedding Tulips 687
Ixias and Sparaxis in Pots 679
Notes of the Week 673
Poppy Anemones 682
Primula Lindsayi 683
Pyrus Niedzwetzkyana 681
Raising Daffodils from Seeds 684
Roman and Italian Hyacinths 678
Royal Caledonian Horticultural Society ... 675
Spring-flowering Bulbs by the Waterside ... 686
The Culture of Hyacinths 685
The Notable Daffodils of 1911 679
The Value of Darwin Tulips 677
Tulips 678
Work of the Week 688

Autumn preparation of the soil.

The destruction of soil insect pests—the Gardener's greatest scourge.

Don't wait until your crops are spoiled before you apply CLIFT'S MANURIAL INSECTICIDE, and then grumble because it will not transform them to what they *should* have been.

When digging this autumn enhance the value of every other measure you adopt for the benefit of future crops, and assure successful fruit flower and vegetable fields by dressing the soil with CLIFT'S MANURIAL INSECTICIDE.

Two to three ounces to the square yard dug in to a depth of three or four inches will effect a clean sweep of soil insects—wireworms, millipedes, centipedes, leatherjackets, wood lice, etc., *before* you sow or plant. The soil can be cropped within 24 hours of application.

Do it now! the cost is small and the trouble nil.

CLIFT'S MANURIAL INSECTICIDE.

PRICES: 1 ton, £9 0 0; ½ ton, £4 15 0; 1 cwt., 10/6: ½ cwt., 6/6; 28 lbs., 4/6; 14 lbs., 3/6

CARRIAGE PAID.

Booklet "Garden Enemies" and Special Leaflet on Winter Preparation, FREE ON REQUEST, to—

ROBINSON BROTHERS, LIMITED, WEST BROMWICH.

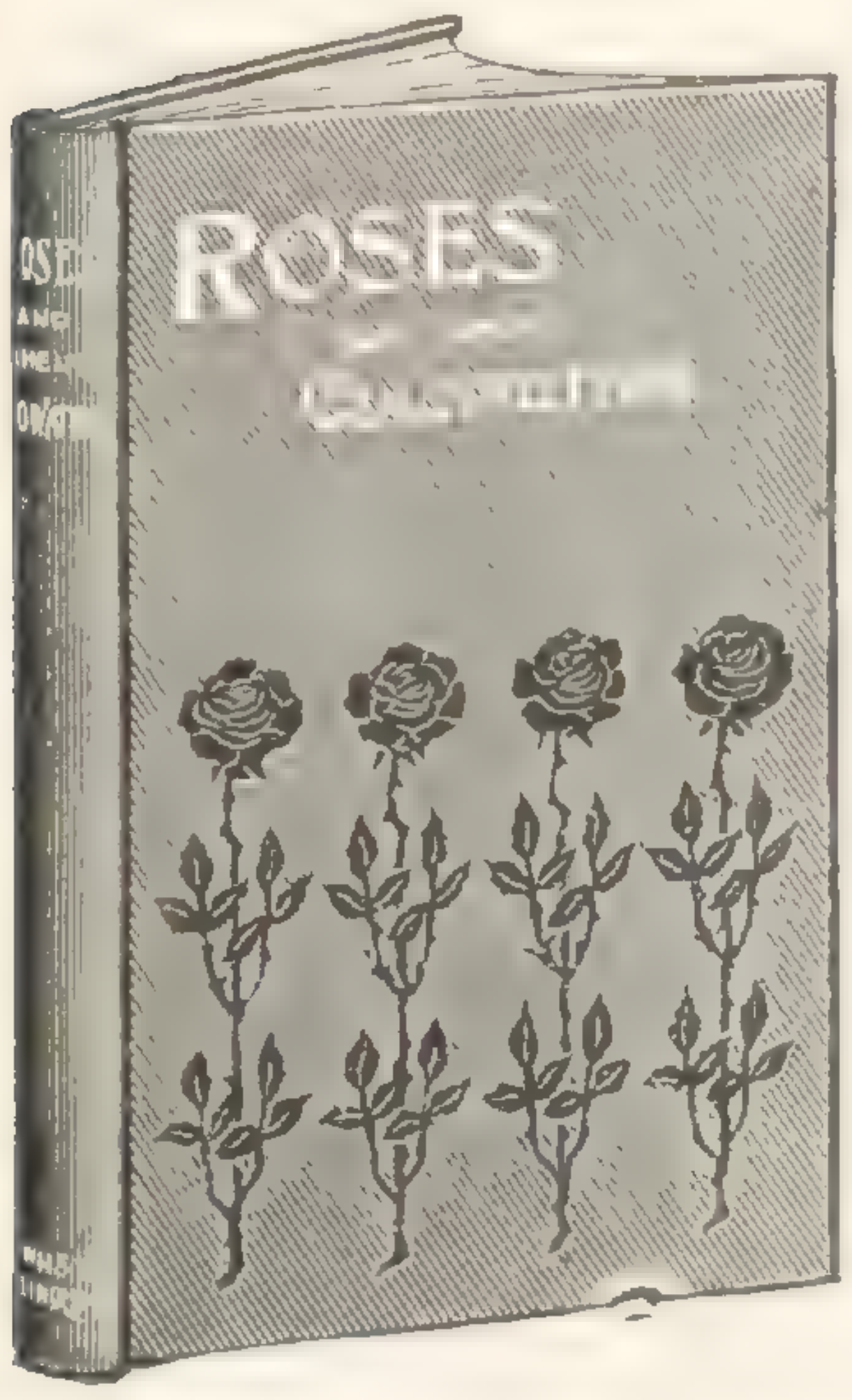
The Best Guide to Growing Roses.

67 Illustrations, 17 Plates and Frontispiece. 200 Pages. 2/6 net; by post 2/10.

ROSES AND THEIR CULTIVATION.

SEVENTH EDITION

By T. W. SANDERS, F.L.S.



- How and When to Plant Roses.
- Propagation of Roses—Ways to Grow Them.
- How to Prune, Bud, and Graft Roses.
- Erection of Pergolas and Arches.
- How to Show Roses.
- Insect Pests and Fungoid Diseases—Remedies.
- Types of Roses, full description, Culture, etc.
- Soil and Manures for Roses.
- The Rose Grower's Calendar; showing what to do each month.

LIST OF OVER 1,700 CULTIVATED ROSES:

Showing Variety, Section or Class, Date Introduced, Colour, Habit of Growth, How Best Grown, Mode and Time of Pruning, Description of Flower.

◆ ◆ ◆

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE," 148 & 149, Aldersgate St., London, E.C.

Please send me a copy of "ROSES AND THEIR CULTIVATION," by Post, for which I enclose remittance of 2/10.

Name ....

Address ....

WINTER-FLOWERING SWEET PEAS.

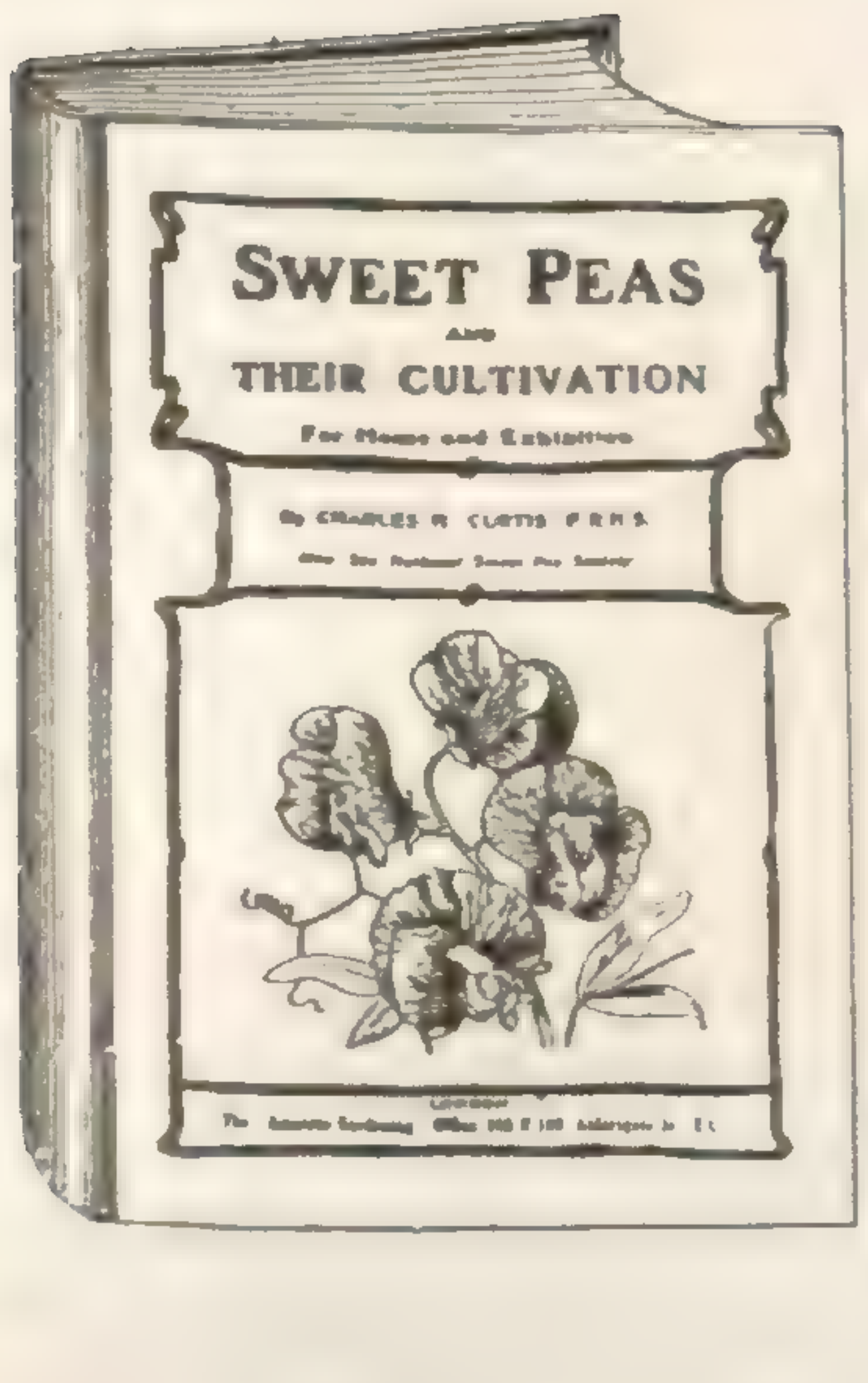
One Shilling: free by post, 1/2. Bound in cloth, 1/6; by post, 1/8.

SWEET PEAS AND THEIR CULTIVATION.

FOR HOME AND EXHIBITION.

By CHARLES H. CURTIS, F.R.H.S.,

Hon. Secretary National Sweet Pea Society.



- PREPARATION OF SOIL.
- SEEDS AND SEED SOWING.
- WATERING AND MANURING.
- GENERAL MANAGEMENT.
- HOW GROWN IN TUBS AND POTS.
- WINTER-FLOWERING SWEET PEAS.
- STAKING AND TYING.
- SWEET PEAS FOR SCREENS AND WINDOWS.
- THE BEST SWEET PEAS.
- RAISING NEW VARIETIES.
- CULTURE IN CONSERVATORY.
- CUPID AND BUSH SWEET PEAS.
- VASES AND STANDS.
- POINTS FOR EXHIBITORS.
- DEVELOPMENT OF SWEET PEAS.
- DISEASES AND PESTS.
- ETC., ETC.

◆ ◆ ◆

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE,"
148 and 149, Aldersgate Street, E.C.

Please send me a copy of "SWEET PEAS AND THEIR CULTIVATION," *by Post, for which I enclose remittance of* **1s. 2d.** (*if bound in cloth,* **1s. 8d.**)

Name ....

Address ....

W. RICHARDSON & CO.,

MANUFACTURERS OF ALL KINDS OF

HORTICULTURAL BUILDINGS. Also HEATING ENGINEERS.

Recent Contracts for Horticultural Buildings and Heating include the following :—

His Grace The Duke of Grafton, Wakefield Lodge, Potterspury, Stoney Stratford.
Rt. Hon. Lord Glanusk, Glanusk Park, Crickhowell.
Rt. Hon. Lord Ravensworth, Eslington Park, Whittingham, Northumberland.
The Hon. Mrs. Parsons, Ray, Kirkwhelpington, Northumberland.
Colonel the Hon. Chas. Crichton, Mullaboden, Ballymore Eustace, Ireland.
The Hon. F. G. Wynn, Bodfean Hall, Pwllheli, No. Wales.
Sir Hy. Lawson, Bart., Brough Hall, Catterick, Yorkshire.
Sir Robert Walker, Bart., Sandhutton Hall, York.
Sir John Ramsden, Bart., The Pickeridge, Stoke Poges, Bucks.
Sir Lindsay Wood, Bart., The Hermitage, Chester-le-Street.
Sir W. C. Plowden, K C.S.I., Aston Rowant, Oxfordshire.
Colonel Sidebottom, Harewood, Broadbottom, Lancashire.
Captain Watts-Russell, Biggin Hall, Oundle.
J. W. Summers, Esq., M.P., Emral Hall, Wrexham.
Mrs. Owbridge, Kings Tree House, Cottingham, Hull.
G. H. Johnstone, Esq., Trewithen, Grampound, Cornwall.
F. W. Taylor, Esq., Cresswell Villa, Sunderland.
W. J. Sharp, Esq., Bleasdale House, Silverdale, Carnforth.
J. P. Goodbody, Esq., Inchmore, Clara, King's County.
C. Warley Pickering, Esq., Hutton Hall, Guisborough, Yorks.
Kenneth Foster, Esq., Egton Lodge, Grosmont, Yorkshire.
F. Carrick, Esq., The Elms, Gosforth, Newcastle-on-Tyne.
Joseph Short, Esq., Sea View, Sunderland.
T. W. Paul, Esq., Cookridge Tower. Horsforth, Leeds.
Geo H. Waddilove, Esq., Brunton, Wall, North Tyne.
Edgar Lupton, Esq., Headingley Castle, Leeds.
W. Eustace Firth, Esq., Rochead, Mirfield.
D. J. Pullinger, Esq., Moray Lodge, Kensington, London, W.
Ward Jackson Park, West Hartlepool.
J. A. Paul, Esq., Bramhope Hall, near Leeds.

Lords of the Admiralty, Torpedo Factory. Greenock.
H. M. Office of Works, New Head Post Office, Newcastle-on-Tyne.
,, ,, New Post Office, North Shields.
Dr. Dale, Scalby, Scarborough.
B. J. Whitaker, Esq., Hesley Hall, Tickhill, Rotherham.
W. Harry, Esq., Falconhyrst, Penarth, So. Wales.
J. A. Mullens, Esq., Long Cross, Surrey.
J. M. Howell, Plas, Penhelig, Aberdovey.
W. Rippon. Esq., Cedar Grove, Edgerton, Huddersfield.
Thos. Maunsell, Esq., Patrickswell, Co. Limerick.
R. A. England, Esq., Englethwaite Hall, Cotehill, near Carlisle.
The Rev. James Farmer, Lucan House, Ripon, Yorkshire.
The Rev. W. Ingham, Old Malton, Yorkshire.
P. H. Ashworth, Esq., Horsley Hall, Gresford, Chester,
P. D. Stange, Deanfield, Henley-on-Thames.
E. G. Wheeler, Esq., Claverdon Leys, Warwick.
W. Warde Aldam, Esq., Frickley Hall, Doncaster.
David Richardson, Esq., Wheelbirks, Stocksfield.
Joseph Lingford, Esq., Bishop Auckland.
F. W. Spruce, Esq, Roundhay, Leeds.
Mrs. Cavendish, Crakemarsh Hall, Uttoxeter.
Miss Chapman, St. Andrew's, Linton Road, Oxford.
J. E. Moberley, Esq., Cladda House, Cairnryan, Stranraar.
J. P. Yeoman, Esq., The Close, Brompton.
Hugh C. Fairfax Cholmeley, Esq., Brandsby, Easingwold.
H. A. Bromet, Esq., Highfield, Tadcaster.
A. S. Hay, Esq., Sacombe Park, Ware, Herts.
Grammar School, Northallerton.
Lincoln Cathedral, Lincoln.
Durham Cathedral, Durham.

LONDON OFFICE :—Belgravia Chambers, Victoria Street, S.W.

TELEGRAMS { "Richardson," Darlington. "Horticraft," London. **NATIONAL TELEPHONE** } 17 Darlington.

LET US OVERHAUL YOUR HEATING APPARATUS BEFORE THE COLD WEATHER ARRIVES.

PLANS and ESTIMATES PREPARED FREE of COST.

Representatives sent to any part of the Kingdom to advise and take particulars.

DARLINGTON.

MERRYWEATHER'S

614 PUMP

IS THE

Gardener's Friend.

Easy to Work.
Simplicity Itself.

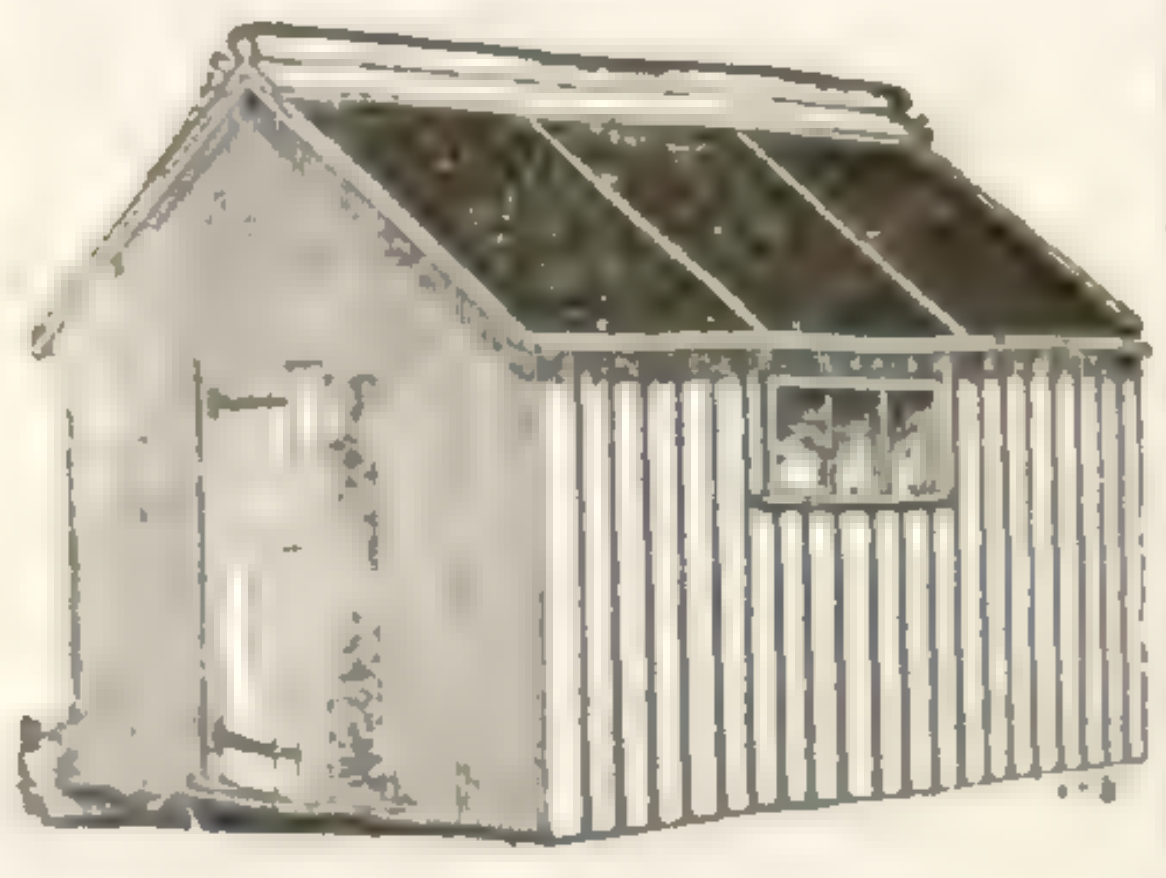
Write or Call—

63, Long Acre,
LONDON, W.C.

Please mention
THE GARDENERS' MAGAZINE
when writing to Advertisers.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

Portable Buildings. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

Sizes.	Cash with Order.	Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	17/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	20/0

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
Established 70 Years. ***BEDFORD.***
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

ONCE USED. ALWAYS USED. **The 'PATTISSON' LAWN BOOTS**

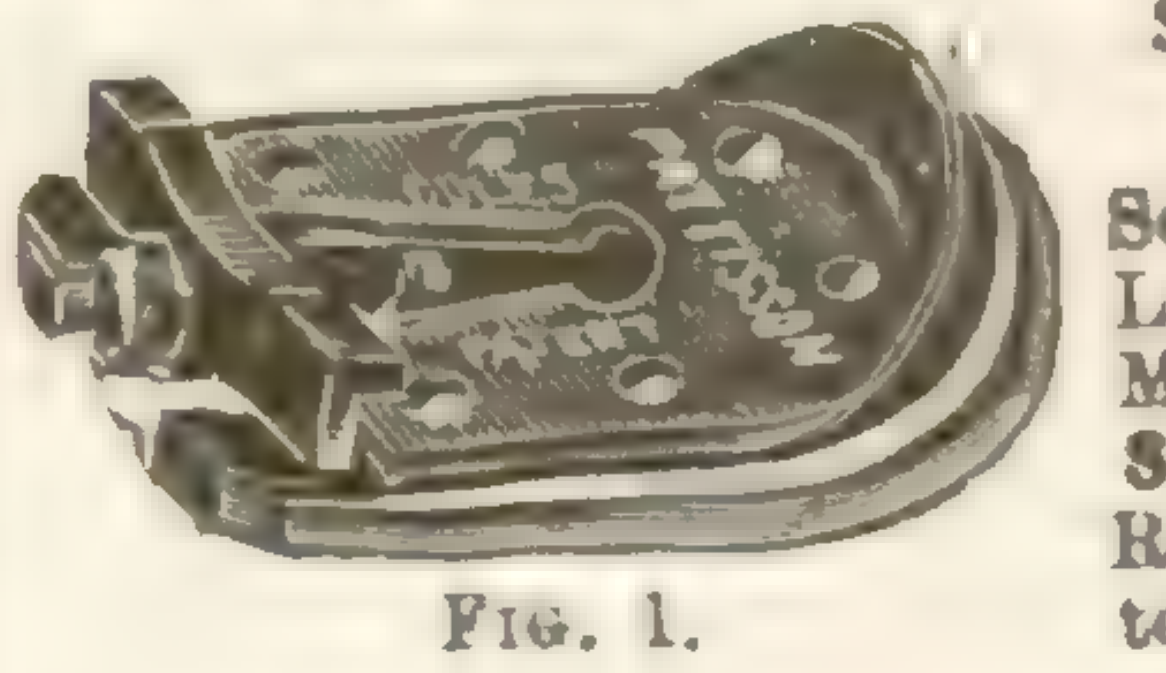


Fig. 1.

Simplest! Strongest! Most Economical!

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS

Silver Medal—
Royal Horticultural Society.

Hundreds of Testimonials.

The Field says: **"As good as anything that could be devised."**

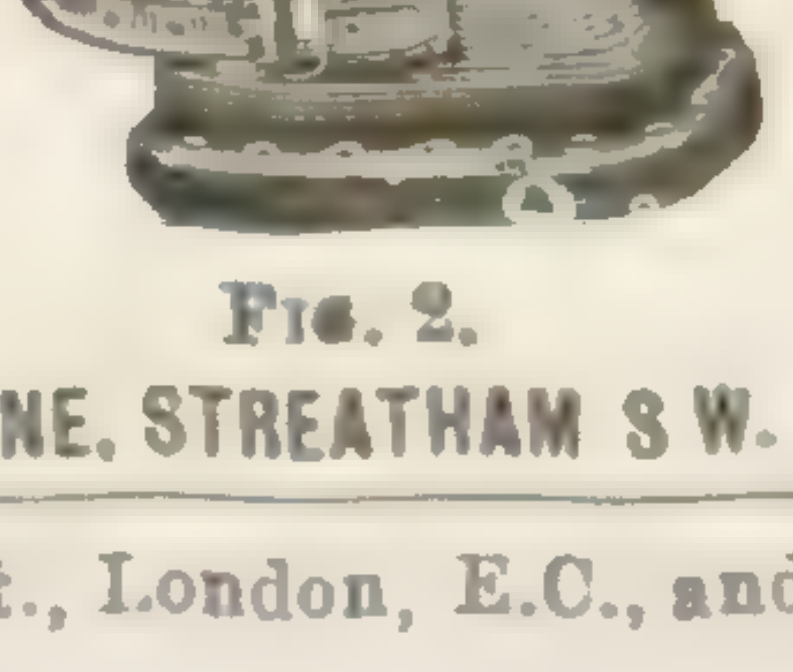


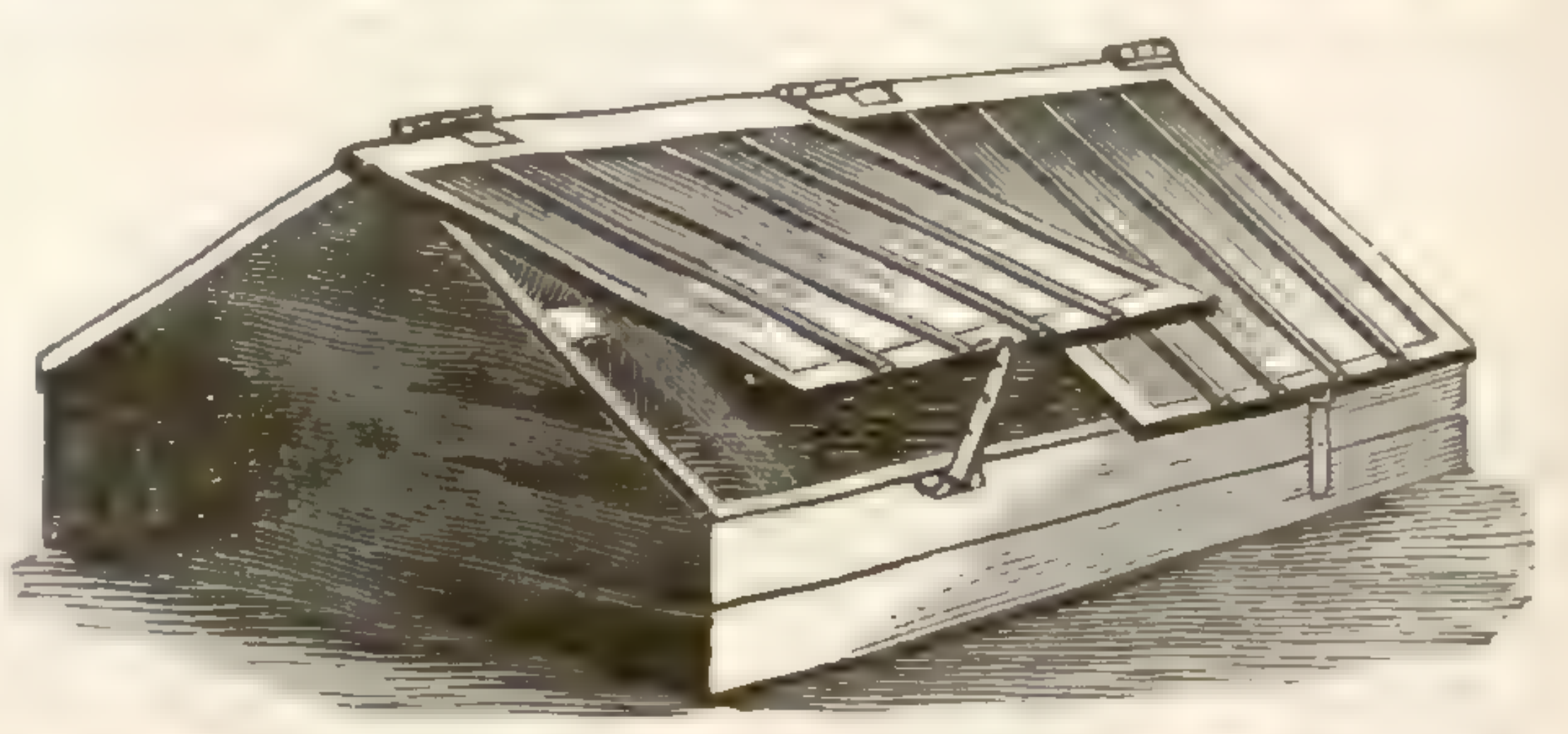
Fig. 2.

Illustrated Price List from—

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM S W.

PORTABLE PLANT FRAMES

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices. Glazed and Painted.		£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. ,, 4ft. ,,		2	5	0
6ft. ,, 5ft. ,,		2	15	0
12ft. ,, 4ft. ,,		4	0	0
12ft. ,, 5ft. ,,		4	15	0
12ft. ,, 6ft. ,,		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,

ROYAL HORTICULTURAL WORKS,

MIDDLETON, MANCHESTER.

PUBLISHERS' ANNOUNCEMENTS.

THE GARDENERS' MAGAZINE may be obtained by order from all Newsagents, price Twopence, every Saturday. If any difficulty be found, a copy will be posted weekly direct from the Publisher, 148 and 149, Aldersgate Street, London, on the following terms: Twelve Months, 10s. 6d.; Six Months, 5s. 6d.

INDEX and Title Page to Vol. LIII. (comprising the weekly numbers from January to December, 1910), price 2d., by post 2½d.

BINDING CASES for binding the 12 months' numbers, green cloth, ornamented in gold, price 2s., post free.

VOLUME LIII., bound in green cloth, containing the 52 weekly numbers, 1910. Price 12s. 6d.; by post, 13s. 4d

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls

THE GARDENERS' MAGAZINE.

No. 3,021. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, SEPT. 23, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) Twopence

BARR'S BULBS for BOWLS and VASES. List of most suitable varieties of Hyacinths, Daffodils, Polyanthus Narcissi, Tulips, Lilies of the Valley, etc., with full particulars of culture and illustrations of the best bowls for Bulbs. Post free. BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON

JAMES GRAY, Horticultural Builder, Chelsea, S.W., wishes to point out that this is a good month for painting and repairing greenhouses, as the inside of many houses can be spared for internal work. He has a large number of excellent workmen, and immediate attention can be obtained by means of a postcard, telephone call (201 Western), letter, or wire to Gray, Chelsea, London.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

BULBS ON APPROVAL.—This offer I have made for 12 years. During that time only 3 lots have been returned. This is absolute proof of the quality. My prices are most reasonable. Catg. of 400 vars. free. ELLISON, 57, West Bromwich.

ROMAN HYACINTHS, 10s.; Freesias, 2s.; Alliums, 1s. 6d.; Early Flowering Tulips, 2s. 6d.; Paper White Double Roman Narcissus, 4s.; named Tulips from 2s. 100. Guaranteed flowering size. ELLISON, 57, West Bromwich. Established 1890.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

WALLFLOWERS.—Sutton's Giant Blood Red; also Sutton's Superb Mixed; seeds direct from Sutton's; large plants, 50, 10d.; 100, 1s. 6d., free. ROGERS, Tennyson Road, Hutton, Essex.

WANTED, 1,000 Paul Crampel CUTTINGS, also good prepared clumps for frames of Marie Louise and De Parma Violets.—Samples to C. PRAGNELL, Cranbourne, Winkfield, Berks.

GARDEN HOSE and FITTINGS, all sizes and lengths, best quality; list free.
HEATHMAN,
Hose Factory, Parson's Green, London, S.W.

RUSTIC SUMMER HOUSES, trellis-work, Fencing, Pergolas, Arches, Seats, Bridges, Log Cabins, Loggias, etc. Send for our new LOG CABIN and RUSTIC CATALOGUE (just published), sent post free. BOULTON and PAUL, Ltd., Norwich.

DAFFODILS AND NARCISSI. — Irish-grown Bulbs, large; all had beautiful blooms last spring. First orders supplied at once. Victoria, Stella, Sir Watkin, Empress, Poet Narcissus, Ornatus, Pheasant's Eye, 10d. per doz.; 3s. 6d. per hundred, post paid. Cash with order.—GARDENER, Plantation House, Lisburn, Ireland.

WEEKS'S DUPLEX UPRIGHT TUBULAR BOILERS, for full advertisement see page vi.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue Free. J.E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

NARCISSUS.—Tulips, Hyacinths, etc. All the leading and best varieties, from 4s. 6d. per 100. Ask for illustrated price list, post free. Satisfaction guaranteed. C. F. A. VAN DER SLUYS, F.R.H.S., La Ramée, Guernsey.

NOT a large Advert., or an elaborate Catalogue; but you can depend upon getting absolutely reliable bulbs at most reasonable prices, when ordering from ELLISON'S, 57, West Bromwich, or I should not offer to send on Appro. Cg. Pd.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

LOVELY FLOWERS AT CHRISTMAS.
WEBBS' WHITE ROMAN HYACINTHS.

Extra large bulbs,	3/- per doz.;	20/- per 100.
Selected Bulbs,	2/- ,,	14/- ,,
Good Bulbs	1/6 ,,	10/6 ,,

WEBBS' POLYANTHUS NARCISSI.
Paper White, 1/- per doz.; 6/6 per 100.
Paper White, large flowering,
1/3 per doz.; 8/6 per 100.

WEBBS' BULB CATALOGUE for 1911.
Beautifully illustrated, Post Free.
WEBB and SONS, The King's Seedsmen,
Wordsley, Stourbridge.

BUNYARD'S CATALOGUES
Free on Application.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting

KENT STRAWBERRY PLANTS
NEW CATALOGUE READY.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

LAXTON STRAWBERRIES for immediate planting. Fine plants of all the leading varieties in little pots, 15s. 100. Open ground runners, 5s. 100. Catalogue with full particulars gratis
LAXTON BROTHERS, Bedford.

CLAY'S MANURES, CRUSHED BONES
(See page 711.)

CLAY'S FERTILISER IS
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

PERRY'S NEW CATALOGUES now ready.
BULB CATALOGUE.
PERENNIAL CATALOGUE.
DELPHINIUM CATALOGUE.
IRIS CATALOGUE.
FERN CATALOGUE.
Free. on application.
PERRY'S HARDY PLANT FARM, Enfield, Middx.

ALPINES.—100 in 50 good varieties, carriage paid, £2. Half and quarter quantities at same rate.
WHITELEGG and PAGE, Chislehurst.

HOW TO MAKE, PLANT, and KEEP a ROCKERY.—Concise and useful pamphlet, with List of Rock Plants, post free on application. PHIPPS and IRELAND, F.R.H.S., Barnham, Sussex.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-work, showing screens, wall panels, window surrounds, arches, arbors, etc., post free. BOULTON and PAUL, Ltd., Norwich.

SLUGS, SLUGS, SLUGS. — "SANITAS POWDER" will rid your garden of slugs. Mr. Walter P. Wright, of the "Garden Week by Week," says:—"The particular hint that I was going to offer about slugs was to scatter 'Sanitas Powder' on the soil amongst the plants—slugs simply loathe it." Mr. E. Poulter, of Mayfield, Sussex, writes:—"I have found 'Sanitas Powder' most efficacious in keeping off slugs." "SANITAS POWDER," 6d. and 1s. tins, and 12s. 6d. per cwt.

THE SANITAS CO., Ltd., Limehouse, London, E.

WINTER-BLOOMING SWEET PEAS.—The "Télemly" Sweet Peas gained the Gold Medal (1907) of the Hort. Soc. of Algeria, and the
LARGE NEW WAVED VARIETIES
the Gold Medal of 1911. If sown in August or September will flower from December till May in Southern Europe, N. Africa, Madeira, etc. In England must be sown in pots and protected from frost till the end of February, and will flower in April in the open, or at Christmas in a sunny greenhouse. 12 seeds each of 4 plain and 3 waved varieties will be sent on receipt of 4s. by the Rev. E. ARKWRIGHT, 36, Seymour Street, W.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses. Portable buildings, etc. Catalogue gratis.

White Flowers at Christmas.
SUTTON'S WHITE ROMAN HYACINTHS.
Extra large bulbs, per doz., 3s.; per 100, 21s.
Selected bulbs, per doz., 2s.; per 100, 14s.
Fine bulbs, per doz., 1s. 6d.; per 100, 10s. 6d.

FREESIAS, SUTTON'S HYBRIDS.
The shades range from yellow to bronze, bronzy-pink, orange, and deep rose, making a delightful colouring.
Per doz., 5s. 6d.

SUTTON'S BULB CATALOGUES for 1911.
Beautifully illustrated. Now ready.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.

Capt. ———, Londonderry.
10th February, 1911.

"I have received your Horticultural Manual, and on looking through it, I felt compelled to write and thank you for it. To an enthusiastic amateur gardener like myself, who, through reading the weekly papers on the subject, is familiar with many of the names but not with the corresponding flowers, this book must be absolutely invaluable, and the artistic way in which it is got up, and the beautiful photographs with which it is embellished, make it a treasure well worth having. I have had the Catalogues of most of the leading firms sent to me, but nothing compares in the remotest way with yours."

CARNATIONS AND PICOTEES for Exhibition or Border, 12 lovely kinds for 5s., carriage paid, for cash; 25s. to 35s. per 100. List free.
CHAS. WALL,
CARNATION GROWER, BATH.

ASHBY'S PATENT BULB PLANTER. Specially designed for planting in grass. Equally useful as a weed extractor, 10s. 6d. each; 11s. carriage paid. Sole Maker: G. PAWLETT, Belton, Grantham.

WANTED, good healthy Geranium Cuttings, 10,000 each Paul Crampel, Raspail, W. Brighton, Christine, Queen of White, Jacoby, Vesuvius, Hieover, Macmahon, Crystal Palace, Pollocks, King of Denmark. Prices per 100 or 10,000 and samples. H. S. HOLMESTED, Bretby Nurseries, Burton-on-Trent.

GREENHOUSES and CONSERVATORIES. Distinctive Designs and Finished Workmanship. Write now for ILLUSTRATED CATALOGUE. CARTER and HOWARD, Horticultural Builders, Kingston-on-Thames.

IRON and WIRE FENCING for GARDENS, Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free. BOULTON and PAUL, Ltd., Manufacturers, Norwich.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

THE POPULARITY OF XL ALL SPECIALITIES increases every year All gardeners proclaim that nothing equals these celebrated preparations.

XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.

XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N. S. or Florist for Richards' small pink list.

G. H. RICHARDS, Manufacturer,
234, Borough High Street London, S.E.

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

BULBS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Narcissi Tulips, Hyacinths, etc., Home-Grown.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

NOW IS THE TIME TO SOW

CALCEOLARIA GOLDEN GLORY

Hardy Hybrid (Seed of this year's saving).
1/- per packet.

The following Catalogues just published:
HARDY TREES AND SHRUBS.
ROSES, FRUIT TREES, AND CHOICE SHRUBS.
BULBS, GLADIOLI, AND OTHER FLOWER ROOTS.
All Catalogues Free on Application.

ROBERT VEITCH & SON,
Royal Nurseries, EXETER.

TREE CARNATIONS

The Newest and Best Varieties.
Strong, healthy and well-rooted plants only supplied

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

STALKER'S Forest Trees, Fruit Trees. Roses, Bulbs, and Seeds
Are known all over the world, and cannot be surpassed for hardiness and quality.

Famous for Quality and Cleanliness.

D. STALKER & SON,
Government Contractors,
Catalogues Free. NAIRN. N.B.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

PERGOLAS.
Larch Poles at 1d. per foot. List Free.
PATRICK'S, Otley, Yorks.

OAK CRAMBLES.
Peeled and dry at ½d. per foot.
PATRICK'S, Otley, Yorke.

ROSE ARCHES.
Larch Poles, at 1d. per foot.
PATRICK'S, Otley, Yorke.

TREE STAKES AND GARDEN RODS.
Lists free.
PATRICK'S, Otley, Yorke.

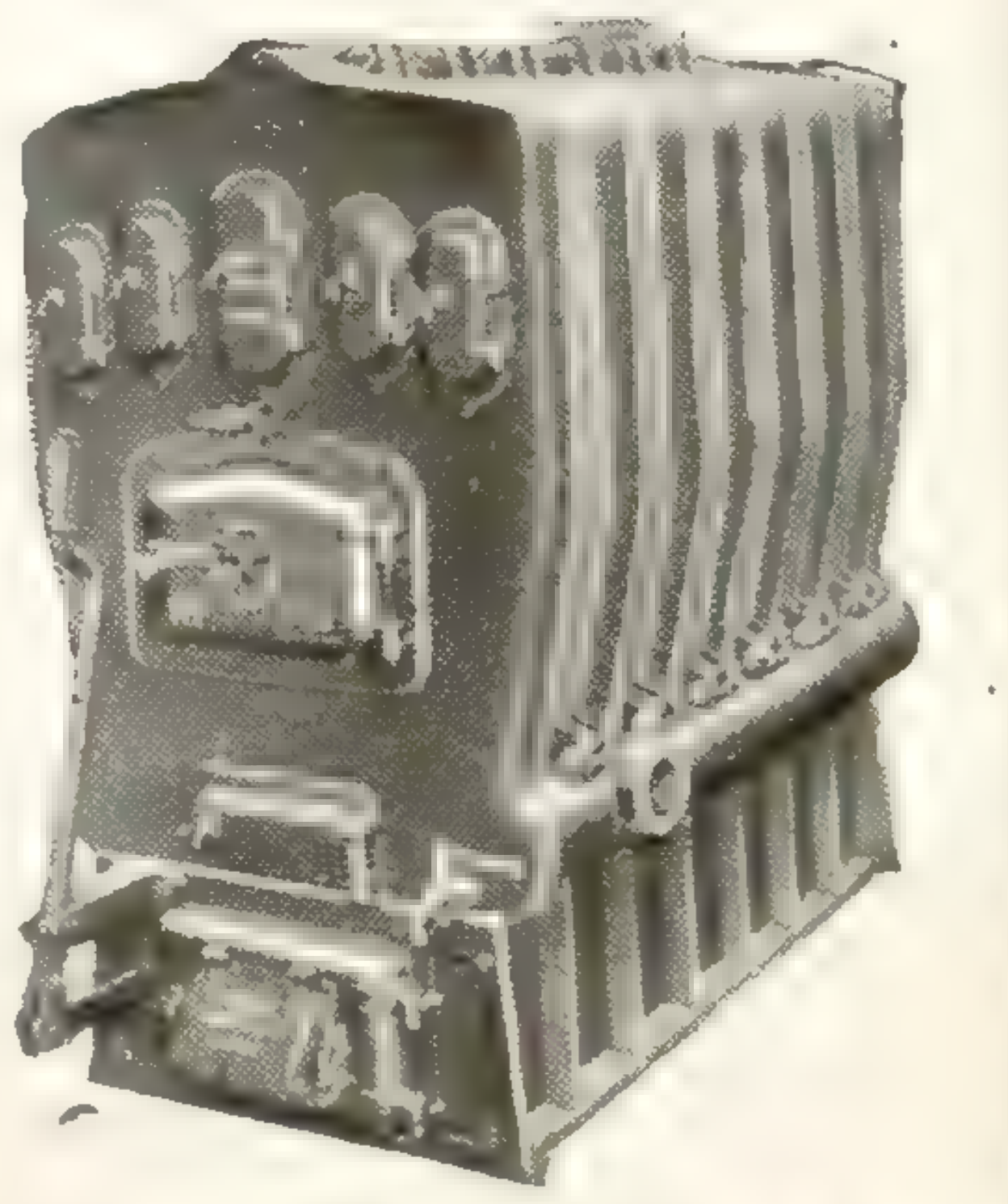
Bulbs

All best qualities at moderate prices Carriage paid.

Illustrated priced Catalogue post-free.

Dicksons *Bulb Growers* Chester

Kinnell's Boilers



THREE LEADING TYPES:—
The **"ANGLIAN,"** **Sectional**, heats 800 to 8,000 ft. 4in. pipe.
The **"ROCHFORD,"** **Tubular**, heats 600 to 8,000ft. 4in. pipe.
The **"HORSE-SHOE"** For the small Greenhouse.
Saddle Boilers, Trentham Boilers and all classes of pipes, fittings etc., ready for immediate despatch
Write for List No. 77, post free.
CHARLES P. KINNELL & Co., Ltd., 65, & 65a, Southwark St., London, S.E.

NEW DAFFODILS, 1911.

Our revised Descriptive Catalogue of Rare Daffodils and May-flowering tulips is now ready, and we shall have pleasure in posting a copy to all applicants. Our South of Ireland grown Bulbs are acknowledged to be second to none. Write at once. Address—

WM. BAYLOR HARTLAND & SONS,
Bulb Growers,
33, PATRICK STREET, CORK.
Bulb Farm: ARD CAIRN, CORK.

Orchids! Orchids!! Orchids!!!

The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application.—**J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana. Vanda Cœrulea Lushai Hill variety, dark blue type; Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.

DAFFODILS AND NARCISSUS.

Sir Watkin, very free flowering, 3s. 100. Horsfieldii, handsome bloom, 2s. 6d. 100. Mrs. Langtry, very choice, 2s. 6d. 100. Gardenia, double white flower, 1s. 100. Double Daffodil, 1s. 100. Crocus, all colours, 9d. 100. Snowdrops, 5s. to 7s. 6d. 1,000. Tulips, splendid colours, 2s. 100. Narcissus, large trumpet, 7s. 6d. 1,000. Narcissus, mixed (10 sorts), 5s. 1,000. Spanish Iris, 7s. 6d. 1,000. Pheasant-eye, 5s. to 7s. 6d. 1,000.

Send for Lists before ordering elsewhere.
CROSS & SON, Daffodil Nurseries, WISBECH.

WILLIAM BARRON & SON, Ltd.

SEND FOR OUR NEW ROSE CATALOGUE (FREE).
IT INCLUDES 98 NEW VARIETIES.

ELVASTON NURSERIES,
BORROWASH, near DERBY.

WANTED:

Every reader of the "Gardeners' Magazine" to write for our New Autumn Catalogue at once (one of the best and most complete publications in the Trade). It contains special offers of all manner of Bulbs, Lilies, Hardy Flowers, Hardy Shrubs, Fruit Trees, Roses, Sweet Peas, Bulb Fibre, Bulb Bowls, Manures, etc. Also 1,000 sorts of Vegetable and Flower Seeds, all in Penny Packets from Orchids to Mustard and Cress, post free, on application to EDMUNDS and CO., Alexandra Nurseries, Milton, Cambridge.

A SPECIALITY FOR MORE THAN 50 YEARS.

POT VINES

Exceptionally Fine this Season.
Inspection Invited.

J. R. PEARSON & SONS, LOWDHAM, Notts.

Sales by Auction.

DUTCH BULBS
10,000 Lots Sold Weekly.

SALES EVERY DAY
(Saturdays Excepted),
At 10.30 o'clock, at
PROTHEROE and MORRIS'
Central Sale Rooms,
67 & 68, CHEAPSIDE, LONDON, E.C
Catalogues Free.
Commissions Executed.

DUTCH BULBS.

MR. J. C. STEVENS begs to announce that his **Sales by Auction** are held every **MONDAY, WEDNESDAY** and **THURSDAY** at **12.30.**

Catalogues post free.

Lots purchased, packed, and forwarded to all parts.

STEVENS' AUCTION ROOMS
(Established 150 years),
38, King Street, Covent Garden, London, W.C.

SALES DAILY (SAT. EXCP.) AT 12.30.
First Size Hyacinths, Tulips,
Daffodils, Narcissi, Crocus,
Snowdrops, etc.

BULB SALES BY AUCTION.

Lotted
to suit all Buyers,
Catalogues of Auctioneers,
JOHNSON DYMOND & SON,
"City Auction Rooms" (est. 1793),
38 and 39, Gracechurch Street, LONDON, E.C.

—ORCHIDS—

1,000 DUPLICATES, CYPRIPEDIUMS AND ODONTOGLOSSUMS, Very Cheap.
Some Valuable Exemplars amongst them.
Write for List to—
REV. J. CROMBLEHOLME, CLAYTON-LE-MOORS, ACCRINGTON.

J. J. THOOLEN, The EXPORT Nurseries,
Heemstede, Haarlem, Holland,

Established 1884,

Has the honour to announce that his Illustrated Price List of Bulbs and Plants in English, Autumn, 1911, at lowest prices, will be sent post free on application. **No Charge for Packing. Orders of 10/- and above entirely Free to Destinations** in England, Scotland, and Ireland, etc. First Quality guaranteed.

Some sorts of Bulbs noted out of Price List.

	Per 100. s.	d.	Per 1,000 s.	d.
Hyacinths, in the finest mixture for bedding or forcing	7	8	72	4
Hyacinths, single, first size, named, in 25 leading sorts, red, white, and blue vars., equal quantities, my selection	15	0	—	
Tulips, single early, in the finest mixture	2	0	18	4
Tulips, Darwin, mixed	3	0	25	0
Tulips, double, in the finest mixture...	2	2	20	0
Anemones, single mixed	1	4	12	0
Anemone, The Bride, pure white ...	1	4	12	0
Crocus, 1st size, in the finest mixture	1	4	12	0
Crocus, 2nd size, in the finest mixture	0	9	7	0
Scilla campanulata, blue bells	2	0	—	
Scilla campanulata, white bells	2	0	—	
Scilla sibirica, rich blue	1	6	14	6
Iris, Spanish, mixed	0	7	5	0
Iris, English, mixed	2	0	16	8
Narcis., single, in the finest mixture...	1	4	12	6
Narcis., Trumpet, in the finest mixture	2	6	20	0
Narcis., double, fine mixture	2	6	20	0
Narcis-Polyanthus, finest mixed ...	3	6	30	0
Snowdrops, Elwesi, the Giant Snowdrop	1	6	13	6
Ranunculus, French, double mixed ...	0	9	7	0

250 Bulbs of the same kind will be charged at the 1,000 rate; 25 at the price per 100; 6 at the price per 12.

Ask for Illustrated Price List and see the Collections.

ORCHIDS, ORCHIDS,

Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

Please Write for List.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

By Appointment.

IRISH ROSES

ALL COLLECTIONS CARRIAGE PAID FOR CASH WITH ORDER.

SPLENDID PLANTS

ESPECIALLY HARDY AND SUITED TO ANY LOCALITY.

Collection A—24 Hybrid Tea Roses selected from the finest varieties only, including many of the newer varieties - - 20/-
Collection B—24 H.P.'s as above - 15/-
Collection C—12 Climbing Roses for Pillars or Pergolas 10/-
,, D—12 Climbers for Walls 10/-
,, E—12 Tea Roses - - 12/-
,, F—100 Roses, H.P., H.T., and Tea, fine garden sorts - - 60/-

Catalogue containing Coloured Plates of new Gold Medal Roses, Leslie Holland, and Countess of Shaftesbury, free on application to—

HUGH DICKSON,
ROYAL NURSERIES,
BELFAST.

Bulbs: NARCISSUS, DAFFODILS, TULIPS, &c.

All Good Flowering Bulbs; Worth Double.

NARCISSUS		
100	**Emperor**	3/0
100	**Empress**	3/0
100	**Henry Irving** ...	4/0
100	**Golden Spur** ...	4/0
100	**Horsfieldii**	3/0
100	**Victoria**	3/0
100	**Obvallaris**	3/0
100	**Grandis**	3/0
100	**Sir Watkin**	3/0
100	**Stella**	1/6
100	**Princeps**	2/6
100	**Ornatus**	2/6
100	**Double Daffs** ...	4/0
100	**Dbl. White Narcis.**	2/6
100	**Pheasant Eyes**	2/6
100	**Frank Miles** ...	1/6
TULIPS		
100	**La Reine**	3/0
100	**Cottage Maid...**	3/0
100	**Chrysolora**	3/0
100	**D. de Parma** ...	3/0
100	**Keizerkroon** ...	4/0
100	**Golden Crown...**	3/0
100	**Picotee**	4/0
100	**Bouton d'Or** ...	3/0
100	**Prince de Ligny**	4/0
100	**Duc Van Thol,** sgl	4/0
100	,, ,, dbl	3/0
100	**King of Yellows**	4/0
100	**Mixed Tulips** ...	1/6
100	**Mixed Darwins**	4/0
100	**Darwins** to name	10/6
100	**Parrot Tulips** to colour	2/6

Special offer in Mixed Narcis. and Daffodils, also Tulips for planting in grass, shrubberies, hedge rows, etc.

HYACINTHS		per 100
12—1/9	to name in colours...... or	10/0
12—1/3	mxd in cols. or	9/0
12—1/9	**Roman White** or	12/0
100	**Iris, Spanish,** to name	1/6
12	**Iris, German** do.	6/0
12	**Iris, English** do.	1/6
100	**Anemones, Scarlet**	4/6
100	,, **The Bride**	1/9
100	,, **St. Brigid**	5/0
100	**Scilla Siberica...**	3/0
100	**Freesia**	3/0
100	**Summer Snowflakes**	5/0
12	**Lilium Candidum**	2/6
12	,, **Crown Imperial ...**	2/0
12	,, **Auratums**	7/0
12	,, **Croceums**	4/0
12	,, **Longiflorums**	4/0
100	**Snowdrops**	1/6
100	**Ixias,** to cols.	2/6
100	**Crocus,** in cols.	1/3
100	**Lily of Valley ...**	2/6
100	**Jonquils**	4/6
100	**Ranunculus** ...	3/0
100	**Montbretia**	3/0
100	**Aconites**	3/0
100	**Chionodoxa** ...	2/6
100	**Polyanthus Narcis**	3/0
100	**Alliums**	3/0
12	**Begonias,** choice	1/6
12	**Violets,** in sorts	1/6
12	**Xmas Roses** ...	4/0

Narcissus and Daffodils, 5/-, 7/6, 10/0 per 1,000
Tulips ... ... 10/-, 15/-, 20/- per 1,000

Many other varieties to offer; also all kinds of Herbaceous plants. Any of the above, half quantities at half price.

FRUIT TREES.—Apples, Pears, and Plums, all fruiting trees, **9/-** per dozen. Gooseberries, Currants (black, red, white), **3/-** per dozen. Loganberries and Raspberry-Strawberry, **9d.** each. Raspberry canes, **3/-, 4/-,** per 100. Strawberry Plants, **1/6** per 100.

All kinds of Flower and Garden Seeds, also POTATOES. Send for List,

J. W. CROSS, Old Grammar School, **WISBECH.**

W. SEABROOK & SONS

We have 50 acres of young Fruit Trees in the pink of condition to offer this season. Our **Specialities** are Cordons, Bushes, and Pyramids, and Trained Trees worked on selected **Fruiting Stocks.**

FRUIT TREES
and ROSES.

Write for our Illustrated Catalogue, containing Cultural information, post free.

CHELMSFORD

PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY
CATALOGUE FROM J.R. PEARSON & SONS
LOWDHAM, NOTTS.

CARNATIONS.
AURICULAS. PINKS.

The NEW ILLUSTRATED CATALOGUE of above is now ready, and has been posted to all customers. The newest and best varieties are sold at the most reasonable prices.

Best **CARNATION** and **PICOTEE SEED** ready in October, **1/6** and **2/6** per packet.

AURICULA (Show and Alpine), PINK, and POLYANTHUS SEED now ready. **1/-, 1/6,** to **2/6** per packet.

Send for Catalogue to

J. DOUGLAS,
Edenside, GREAT BOOKHAM.

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone :—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, **BUSH HILL PARK, MIDDX.**

GLASS. | GLASS. | GLASS.

NICHOLLS & CLARKE, LTD.
Shoreditch, LONDON.

PAINT. Our List of PAINTS, COLOURS, VARNISHES, and BRUSHES on Application.
When sending please cut out this advt.

BY APPOINTMENT.

ROSES IN POTS

Wm. Paul & Son

WALTHAM CROSS, LTD.

Respectfully invite attention to their magnificent stock of the above, which they believe to be unrivalled in quality and extent.

Dwarfs or bushes, extra strong, in 8 in. pots, for forcing and green-house culture	30/- to 60/- per doz. £12 and upwards per 100.
Climbers and Ramblers in 8 in. pots, for forcing and out-door planting on pergolas, arches, etc., with shoots ...	6 to 12 ft. long, 30/- to 60/- per doz. 12 to 16 ft. long, 72/- to 90/- per doz. Price per 100 on application.
Dwarfs and Climbers, smaller plants, in 5 in. pots	10/6 to 18/- per doz. 75/- to £6 per 100.

Priced List Post Free on application.

Inspection of Stock Invited.

The Nurseries are twelve miles from London, four minutes' walk from Waltham Cross Station, G.E.R.

Sole Postal Address—

PAULS' ROYAL NURSERIES

AND SEED WAREHOUSE,
WALTHAM CROSS, HERTS.

ESTABLISHED 1832.

No connection with any other Firm of a similar name.

ANT. ROOZEN & SON'S

SPLENDID

HYACINTHS,

TULIPS,

AND OTHER

DUTCH, CAPE,

AND EXOTIC

BULBS AND PLANTS.

All of the Finest Quality.

Our Descriptive CATALOGUE *of the above, containing* FULL CULTURAL DIRECTIONS *and particulars as to* FREE DELIVERY, *will be sent post free on application to our offices, at OVERVEEN, HAARLEM, HOLLAND, or to our General Agents,*

MERTENS and CO.,
3, Cross Lane, LONDON, E.C.

BUNYARD'S FRUIT . . TREES . .

EARLY ORDERS RECEIVE FIRST ATTENTION WHEN PLANTING SEASON ARRIVES.

WRITE FOR CATALOGUE.

Geo. Bunyard & Co., LTD.,
Royal Nurseries,
—MAIDSTONE.—

MERRYWEATHER'S ROSES.

All Strong and Home-grown Plants.

COLLECTION "H" of NEW ROSES.

WONDERFUL VALUE.

EVERY ONE A GENUINE NOVELTY.

This superb collection of the **BEST 18 NEW ROSES** in dwarf plants. The price of this wonderful collection is **27/6,** carriage and packing free for cash with order (with Acme Labels, **29/6**). The varieties are:

Arthur R. Goodwin, P.
Duchess of Wellington, H.T.
Entente Cordiale (Ducher), H.T.
George C. Ward, H.T.
Jessie, Dwarf Poly.
Lady Alice Stanley, H.T.
Lyon, H.T.
Margaret, H.T.
Margaret Molyneux, H.T.
Miss Cynthia Ford, H.T.
Mrs. Alfred Tate, H.T.
Mrs. A. Munt, H.T.
Mrs. E. J. Holland, H.T.
Mrs. W. Christie-Miller, H.T.
Marquis de Sinety, H.T.
Molly Sharman Crawford, H.T.
Souv. of Stella Gray, T.
White Killarney, H.T.

FRUIT TREES

OF ALL KINDS TO SELECT FROM.

A GRAND STOCK OF
SHRUBS & ORNAMENTAL TREES.

HERBACEOUS PLANTS in great variety.

Send for Catalogue No. 26, full of interesting information and cheap prices, post free on application to

MESSRS.
H. MERRYWEATHER & SONS, LTD.,
(Dept. 1A), **GARDEN SPECIALISTS,**
SOUTHWELL, NOTTS.

BORDER CARNATIONS.

1795. CARNATION BROWN. QUALITY. COURTESY DESPATCH. KINGS NORTON. 1911.

WILLIAM BROWN
was foremost among Carnation Growers in 1795.

ARTHUR R. BROWN, Ltd.,
are the Champion Exhibitors to-day.

We devote ourselves entirely to

BORDER CARNATIONS

and have an unrivalled collection. Our stock consists of **100,000** strong healthy plants in the finest **500** varieties.

Write for Catalogue giving full cultural details.

Sample dozen in 12 good Standard varieties, 6/-

Only strong healthy plants sent out or cash returned

Carnation Seed from finest varieties 2/- and 1/- per packet.

ARTHUR R. BROWN, LTD.,
Wychall Nurseries,
KINGS NORTON.

EXTRACTS

FROM OUR BULB CATALOGUE.

Hyacinths for bedding, various shades of blue, red, white, etc., each 1/9 per doz., 12/- per 100. Hyacinths, in distinct colours, 2/6 per doz., 17/6 per 100 Hyacinths for pots from 3/6 per doz., 24/- per 100. Single Tulips, in mixture, 6d. per doz., 3/6 per 100. Darwin Tulips in fine mixture, 9d. per doz., 5/- per 100. Narcissi, finest mixed Trumpet varieties, 1/- per doz., 6/- per 100. Star Mixture of Narcissi, 6d. per doz., 3/- per 100. Crocus, various shades of blue, white, etc., each 1/9 per 100, 14s. per 1,000. We have excellent stocks and excellent variety of all bulbs, and shall be pleased to send our Bulb Catalogue to anyone interested.

DICKSON & ROBINSON,
The King's Seedsmen,
MANCHESTER.

VOL. LIV.—No. 3,021. SATURDAY, SEPTEMBER 23, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Roses.

In June and July, when the glorious Queen of Flowers is resplendent in her innumerable forms, decking, in the shape of bush or standard, or rambling climber, a myriad gardens with brilliant colour and a thousand and one varying arrangements of delicate petal and grouping, our minds are naturally preoccupied with that particular branch of the great rose family which affords us so much visual enjoyment. Floral charm, delicacy of odour, and brilliancy of petal constitute, however, quite secondary items in the value to humanity of the rose family as a whole, as we shall presently see. The order of Rosaceæ is a very extensive one, consisting of eight suborders, about 82 known genera, and at least 1,000 species, each characterised by some peculiarity of structure; but the arrangement of five petals to form the corolla and a cup is the predominant feature. The mode in which the seed is borne upon the plant varies enormously, as may be gathered from the fact that a very large number of our fruits belong to the rose family, viz., raspberries, strawberries, blackberries, plums, apples, pears, medlars, quinces, cherries, almonds, peaches, nectarines, and apricots, all of which produce flowers that are easily recognised as roselike, though when we come to the seed, as we have said, the diversity is great. In the Queen of Flowers, we see a tough, somewhat pear-shaped leathery receptacle, inside which are tightly packed a number of rough, hard seeds, unassociated, as a rule, with anything of an edible or attractive character; but in Rosa rugosa we see at once a strong link with the apple, since the seeds are enveloped in an edible and somewhat sweetish pulp of a bright red colour. When, however, we study the strawberry or other berries akin thereto, we find a far greater number of quite small seeds arranged on the surface or just embedded in the fruits on entirely different lines. In the apples, pears, medlars, and quinces, we find the seeds or pips in the very heart of a thick mass of pulp, which constitutes what we consider to be the fruit proper, and in each of these fruits there is a number of seeds. Turn we now to the other fruits mentioned, plums, cherries, almonds, and the modified almonds, the peaches, nectarines, and apricots, and in each fruit the centre is occupied by one seed only, protected by a very hard shell, so hard that this section of the rose tribe is termed "stone fruit," and, as compared with the numerous tiny surface seeds of the strawberry, presents probably a greater contrast in the form of the seed as could be found in any other order of vegetation. In this connection of stone fruit, the almond, with its normally repellent, leathery skin, adapted like the husks of the walnut, chestnut, and other nuts solely for the protection of its precious contents, the reproductive kernel, has been transformed by selection into the peach, nectarine, and apricot, each producing a highly attractive pulp, which invites attack both by bird and animal, to say nothing of mankind; but as a counterpoise to this we have only to examine these thickened and hardened stones and compare them with the comparatively frail one of the almond to see that Nature, after all, has taken her precautions. She has, indeed, taken other precautions, since the precious seed contains an appreciable quantity of one of the deadliest poisons known, viz., prussic acid, the presence of which gives rise to the peculiar odour of the almond tribe and its flowers. One section of the rose family therefore gives us a deadly but perfumed poison, and another the attar of roses, an innocuous and delicious odour produced by the Queen of Flowers in propria persona. Among the flowers which deck our gardens and our landscapes it is the rose which has given us our hawthorns—whitethorn or blackthorn—which render the earlier months of the year resplendent with masses of tiny blossoms, each a true rose in miniature, and in the late autumn and winter yielding the bird world its feast of brightly coloured haws, with which we have only to compare the larger ones of our finest roses to recognise the relationship from another point of view. The geums and potentillas are roses; the spiræas, different as they appear, are roses, as are all the rubus family. The common bay laurel and the Portugal laurel are both roses. If, therefore, in travelling through the country during the summer season, feasting our eyes on the wealth of rose blossoms with which it is lavishly besprinkled, we also remember that all the orchards we pass are presumably perfecting the fruit which is succeeding the earlier spring outburst of snowy white or literally rosy-pink inflorescence, and that we owe all this to the one great rose family we have treated of, we shall certainly the more appreciate the goodness of that Creator, who, from unappreciable beginnings, has fashioned forth so inestimable a gift to humanity as that family, as a whole, represents.

MR. ROBERT LAMB.

Mr. Robert Lamb, who has for the comparatively long period of a quarter of a century been actively engaged in the management of the parks and gardens belonging to the City of Manchester, has achieved so high a degree of success in the performance of his various duties as to have obtained the esteem of the citizens, and a foremost position among the large body of men who at the various provincial centres are busily engaged, in bringing, as far as is practicable, the amenities of the country into town life. After some years' experience in such gardens as those of Cullen House, Hopetoun House, Possingworth, and Buckingham Palace, and in several of the leading nurseries at Edinburgh and London, Mr. Lamb entered the service of the Manchester Corporation in 1886 as superintendent of Phillip's Park. Here he would appear to have afforded ample evidence of his remarkable ability, for in 1892 he was appointed general superintendent of the Manchester Parks. At that time Manchester only possessed three parks and two or three recreation grounds, and now they number sixty-five. This immense increase is a matter of much interest as evidence of the great change which public opinion has undergone with regard to the importance of open spaces in populous centres. The additions that have been made since Mr. Lamb assumed his present position are also of interest from the fact that they have all been planned and laid out by him, with the exception of a few minor spaces that were taken over at the time of the amalgamation of several out-townships. Both in the preparation of the plans and their execution Mr. Lamb evinced rare taste and judgment, and it is not surprising that the citizens of Manchester are proud of the beautiful parks which have been provided for their enjoyment. In several of the principal parks the permanent attractions are enhanced by the displays of summer bedders, notably Phillip's, Queen's, Alexandra, Crumpsall, Cheetham, Crowcroft, Birchfields, Gorton, and Heaton parks. With the exception of Alexandra and Heaton Parks, bulbous plants are freely used for beautifying the several parks during the spring months. In addition to forming the many new parks Mr. Lamb has introduced the system of preparing the necessary trees and shrubs at the Corporation's own nurseries, which extend over about sixty acres. During the past twelve months an eighteen-hole golf course, with an area of about 120 acres, has been laid out in Heaton Park under the supervision of Mr. Lamb; this was opened on the 7th inst., and described in one of the papers devoted to golf as "probably one of the finest links in the country." Ample provisions have been made for those interested in the games of bowls and quoits as evidenced by the fact that last year the total number of players was 146,431, while there were 33,643 players in the numerous tennis courts. There are also some 50 cricket and football pitches, and at Platt's Fields and Boggart Hole, Clough, two lakes have been recently opened for boating. We mention this as showing what has been done in Manchester in the provision of facilities for open-air recreations, and the necessity of great business abilities as well as horticultural knowledge of a high order by the occupant of a position such as that filled with so much ability by Mr. Lamb, who also has to annually supervise upwards of 500 band and other musical performances.

Calceolaria Golden Glory.—From Messrs. R. Veitch and Son, of Exeter, we have received a gathering of flowers of their hardy calceolaria, Golden Glory, which present a highly attractive appearance on our table, and confirm in a marked manner the high opinion we have had of this fine hybrid from the first. The flowers we have received have been gathered from plants that have ripened a crop of seed, and are now blooming with the same degree of freedom as early in the summer, while the individual trusses are equal to the finest of those that have as yet come under our notice. This free and continuous habit of flowering greatly enhances the value of the hybrid, which is rapidly increasing in popularity.

Evaporation from Leaves.—In the course of a lecture at Portsmouth on the "Balance-sheet of a Plant," Dr. Francis Darwin said the balance-sheet of organisms in a state of Nature was a highly complex thing, and all they could do was to hope that every accurate study of structure or function and environment might serve as a contribution to the knowledge thereof. The leaf was well known to be built up of cells which did not fit together with absolute accuracy. In the intracellular spaces evaporation went on, and it was through the stomata, or minute holes in the surface of the leaf, that water vapour escaped from the spaces by diffusion. The stomata were capable of opening and shutting like little windows, and it was in this way that the evaporation from a leaf was said to be regulated. He said that with some degree of nervousness. A few years ago no one would have hesitated to say baldly and plainly that the stomata were undoubtedly the regulators of transpiration or evaporation. But this was not now so certain. The conception on which they had all been brought up—namely, that apart from the physical surroundings (the dryness or dampness of the air) transpiration was regulated by the aperture of the stomata—was now being attacked. Investigations had been carried out by Mr. Francis Lloyd at the Desert Laboratory, in Arizona, with the view of testing the regulatory capacity of stomata. Mr. Lloyd's work was excellent, but he was not convinced that his conclusion was just —that conclusion being broadly that transpiration was not regulated by the stomata, but by some unknown physiological property of the plant. He believed they were on the right road in adhering to the old-fashioned view of the importance of the stomata in regulating transpiration. But there was still much travelling to be done on that road, and in attempting to take his audience with him along it he recognised that he had failed to bring them to any definite conclusion as to the balance-sheet of plants in the matter of water.

First College Garden in Scotland.—On the 16th inst. Lord Pentland formally opened the first college garden that has been formed in Scotland. The scheme was formulated by the St. Andrew's Committee for the Training of Teachers, and nearly four acres of land was obtained on lease for the purposes of the garden near Dundee. This land has been laid out as a garden and equipped with various glass structures and the necessary potting shed and a lecture hall. In the course of the opening ceremony, Lord Pentland said the idea embodied in the scheme was that those teachers who were likely to be occupied in rural places should so qualify themselves that they might turn their surroundings to the best account for the benefit of their ordinary pupils. Carried on in the right spirit a course of school gardening could not fail to foster a healthy respect for honest manual work; and its usefulness as an educational instrument would be enhanced in direct proportion to the degree in which it was interwoven with the other work of the pupils.

The Small Holdings Problem.—In the course of an address given at the general meeting of the Royal Horticultural Society on the 12th inst., Mr. Thomas Smith directed attention to the insufficiency of the Small Holdings Act as a means of inducing people to go back to the land. He said that, in his opinion, no permanent improvement in the situation is possible until every worker on the land is assured of an existence under better material conditions and given more frequent opportunities of associating with his fellow men. At present small holders are not, as a rule, much better off than the farm labourers. These aspects of the question were, according to Mr. Smith, ignored in the Small Holdings Act, which, to be a success, must be supplemented by a fund to place the necessary holdings within the reach of eligible men. In addition to the provision of land and money the small holders should be educated in the knowledge of how to use both to the best advantage, and this pointed to the necessity for regular and systematic courses on the numerous branches into which agricultural and horticultural pursuits and rural industries are divided. To secure intercourse between the small holders themselves and other sections of the community, Mr. Smith suggested that holdings should be grouped into small communities of from 100 to 200 families, all engaged in some main industry, with land held in reserve to provide for expansion that would take place both for subsidiary and complementary enterprises and for social purposes.

Horticultural Education in Scotland.—In the recently-issued calendar of the Edinburgh and East of Scotland College of Agriculture, particulars are given of the courses which may be taken at the central institution in the departments of agriculture, horticulture, and forestry. In horticulture, during the coming session a commencement will be made with the newly-instituted two years' course leading up to a special certificate. It is hoped that this course, which has been established at the instance of the Scottish Horticultural Association, will be taken advantage of by intending nurserymen, market and estate gardeners, and others. Under the new arrangements with the University of Edinburgh, the teaching in forestry subjects is to be shared between the University and the College, and details are given of the courses offered in the combined forestry school.

N.C.S. Chrysanthemum Conference.—The National Chrysanthemum Society has arranged to hold a conference at Carr's Restaurant, Strand, W.C., on December 4, at 7 p.m. Two papers will be contributed, and their titles and authors are "The Culture of Disbudded and Spray Flowers," by Mr. F. W. Ladds, of Swanley Junction; and "Soil Preparation for Chrysanthemums and the Use of Some Chemical Plant Foods," by Mr. Percy Cragg, of Heston.

Honey Harvest in the North.—The honey harvest in the North-east of Scotland is now practically finished, and, after a succession of profitless years beekeepers are able to report a substantial balance on the right side. The dry, warm weather in May this year enabled the bees to make an early start in accumulating stores. Swarming was common about the end of May, and beekeepers looked forward with confidence to a successful and remunerative season, for stocks were daily growing stronger, and there was an indication of plenty of clover blossom. There was a rich flow of clover honey in July, and some beekeepers reported stores of 70 to over 100 lbs. per hive as having been obtained from clover alone. The chief difficulty was, of course, the prevention of excessive swarming and the loss of bees. Reports from various places are, on the whole, highly satisfactory, and, taken all over, the average yield is calculated at from 70 to 80 per cent. in excess of the average of the two past seasons. The harvest in heather honey is not quite finished. Some strong stocks have already accumulated stores of 70 lbs. to 90 lbs., and in certain instances nearly 1 cwt. per hive. Clover honey is not finding a ready sale at high prices; it can be obtained at 6d. to 8d. per lb. Heather honey is more in demand, and is bringing from 1s. to 1s. 3d. per lb., although in some places it may be got at 10d. per lb.

Wart Disease of Potatoes in Cheshire.—The Agricultural Sub-Committee of the Cheshire Education Committee having come to a decision adverse to the appointment of an inspector under the destructive Insect and Pests Acts, the Board of Agriculture have written to that body strongly urging a reconsideration of the matter. The Board, in the course of their letter, pointed out that the interests of the county were very largely agricultural and horticultural, and among the crops grown, potatoes held a very important place, the area planted being over 20,000 acres—a figure which was exceeded in England only by Cambridgeshire, Lancashire, Lincolnshire, and the West Riding of Yorkshire. Wart disease, which the Board were anxious to stamp out, is, so far as their inspector's investigations had gone, present in Cheshire to an alarming extent. No fewer than 202 parishes were believed to be more or less seriously affected, and in certain places the disease had reached a higher density than anywhere else, except the part of Lancashire which immediately adjoined the eastern part of Cheshire. Moreover, the disease, which in other counties was confined mainly to allotments and cottage gardens, had appeared in many of the fields cultivated by the farmers in Cheshire, so that the loss incurred by this disease was probably greater in Cheshire than anywhere else in Great Britain. The Board had for some time arranged for experiments to be made for remedies for this disease, and these experiments showed that if certain measures were adopted to secure the destruction of infective material, and if certain varieties of potatoes were grown on infective soils, healthy crops of potatoes could be grown, and there was good reason for hoping that the disease might eventually be kept under, and perhaps exterminated by these means.

St. Ignatius' Bean.—The current issue of the "Kew Bulletin" contains much that is of botanical interest, the most important of the contributions being the account of Strychnos Ignati and other East Indian and Philippine species of Strychnos. An account of Strychnos Ignati was published in Hooker's "Icones," April, 1892, based on material collected in Mindanao, Philippine Islands, by Boxall in 1891. Owing to a statement of Boxall that there is another species of Strychnos known as St. Ignatius' bean, which is much more plentiful than the plant figured, and that it is the seeds of this species which are exported as St. Ignatius' beans, some uncertainty exists as to the identity of the true Strychnos Ignati. This uncertainty has been increased by the description and figure given by Vidal, as his plant is very different from Boxall's, both in floral and in foliage characters. In the course of his review of the several species Mr. A. W. Hill considers that the question of the exact identity of S. Ignati remains to some extent an open one: but he considers it is now quite clear that the plant figured in "Icones" does yield the St. Ignatius' beans of commerce.

THE WEATHER IN THE NORTH.

A Record Summer.

The past summer, writes our Aberdeen correspondent, has been one of the most remarkable experienced in the North of Scotland for many years. The figures given below were supplied by the meteorological station attached to King's College, Aberdeen University, and are very interesting.

In these northern regions the possible amount of sunshine for the month of July is 16.9 hours per day, and the actual amount registered during the past July was 7.7 hours per day, or 47 per cent. of the possible. This is no less than 15 per cent. above the normal, the general average being taken for a series of twenty-four years from 1881 to 1905. The first fortnight of July was really the most brilliant of the year, especially the second week, from the 9th to the 15th, when the amount of sunshine was no less than 38 per cent. above the average. In the first week ending the 8th, the amount of sunshine registered was 14 per cent. above the average. The second fortnight of the month was less brilliant than the first, and the third week showed actually 1 per cent. less sunshine than the average, while in the last week the sunshine was only 2 per cent. above the average. August was also a month of brilliant weather, although there was somewhat less sunshine than in July, the average being 5.8 hours per day out of a maximum of 14.9 hours per day, or 39 per cent. of the possible, giving a figure of 6 per cent. above the general average amount of sunshine according to the standard established during the years referred to.

The Temperature.

As may be supposed, the temperature was also higher than usual. The warmest day was on Wednesday, July 5, when the temperature registered was 80.6 degrees Fah. The minimum temperature for the month was 43 degrees Fah. on Monday, the 10th. The mean air temperature for the month was 65.3 degrees, and the minimum 50 degrees, giving a mean of 58.2 degrees. In August the maximum temperature was 77.3 degrees Fah. on Wednesday, the 9th. That day, it may be noted, preceded a remarkably brilliant display of lightning and severe thunderstorm.

The Rainfall.

While the distinguishing feature of July and August was the exceptional amount of sunshine, the paucity of the rainfall in those months is another noteworthy fact. The total rainfall in July in the North-eastern district was only 1.50 inches, as compared with the average of 2.90 inches for the period from 1871 to 1905. In August the rainfall was only 1.12 inches, and the average for that month in the period referred to is 3.08 inches. The rainfall during the great thunderstorm on August 9 was .32 inch, and was the biggest fall of any night during the month, the rest of the small total being made up of comparatively light showers. The readings of the hygrometer for July showed that the greatest rainfall on any day in the month was .30 inch on the 16th—the day after St. Swithin's Day. On seven days of the month there was a clear sky, on six days the sky was overcast, and on only one was there any mist.

The Wind.

Another feature of the weather during this remarkable summer was the comparative absence of strong winds. Calm weather prevailed on no fewer than fifteen days of July, and only on three days did the force of the wind extend to from four to seven miles an hour. The force of wind recognised by meteorological authorities as constituting a gale is twelve miles per hour. Here there were in July six days when the wind blew from the north, and on a similar number it came from the north-east, and on eight from the east. On twelve days the wind blew from the south-east, and on twenty from the south. On twenty days the wind was from the south, and on eleven days the direction was from the south-west. Pleasant breezes blew from the west on seven days, and from the north-west on eight days. Be it noted that on several days the wind varied, and this accounts for the greater number of days mentioned than there are days in the month. In August the number of days on which the wind blew at a rate of over twelve miles an hour was seven, but on only one of those day could the velocity be reckoned as constituting a gale. On the other hand, there were eleven calm days in August. Giving the most prevalent wind on any one day, the winds of August may be stated thus: From the south, 16 days; from the north, 7 days; from the east, 5 days; from the west, 3 days.

HYPERICUM PATULUM VAR. HENRYI.

Hypericum patulum has long been known in gardens as a handsome flowering shrub, but it could never be very widely grown as it was liable to injury from a moderate amount of frost, and killed by a frost of more than average severity. It, however, served a good purpose, for when mated with the common H. calycinum it was instrumental in producing the hybrid H. Moserianum, which is a very beautiful and floriferous shrub. H. patulum is a native of India and China. The variety under notice, H. patulum Henryi, also from China, is found in a somewhat cooler region, therefore it has proved hardier in this country, and is easily one of the most useful of the many kinds of St. John's wort which may now be obtained. Growing to a height of two or two and a half feet, it is of vigorous constitution, with dark green ovate leaves rather more than an inch long. The golden flowers are borne in clusters from the points of the branches, and the blossoming period extends from July until September.

Cuttings root with ease if inserted in sandy soil in a close case in July, and plants so raised are large enough in twelve months' time to be transferred to permanent places. As is the case with other hypericums, it succeeds in light loamy soil. If the older branches are thinned out, and the others shortened in February, the health of the plants is improved thereby.

-W. D.

Variegated Ivy-leaved Pelargonium L'Elegante.—While innumerable varieties of ivy-leaved pelargoniums have been sent out within the last 40 years, at which time L'Elegante was well known, we have still none to approach it as a variegated leaved kind. It is extremely useful as a basket plant, the habit of growth being free and spreading without any of the stiffness to be found in some of the double-flowered varieties of this section. In this variety the leaves are freely variegated with white, which, when fully exposed, becomes heavily suffused with rose, and it is then lovely. The flowers are whitish, and not particularly attractive. Of course, they are single, as double-flowered forms were not known when this was sent out.—W. T.

NATIONAL DAHLIA SOCIETY.

The second exhibition of this society for the season was held at the Royal Botanic Gardens, Regent's Park, on September 20 and 21. The trade exhibits were splendid, and the amateur classes were fairly well filled with good flowers, but in the open competitive classes the traders seemed to fight shy of each other, for rarely were there more than three competitors. On the whole the show was a good one, and visitors found the Victoria regia and the fruiting bananas additional attractions.

OPEN CLASSES.

In the open class for three bunches of cactus dahlias, varieties introduced for the first time in 1909-10, Mr. M. V. Seale, Sevenoaks, gained a first with handsome bunches of Johannesburg, Prima Donna, and Mary Purrier, the flowers pleasingly associated with foliage and grasses. He was the only exhibitor. The neat pompon cactus dahlias are delightful, and the best set of twelve bunches came from Mr. M. V. Seale, whose Firefly, Martha, Dandy, Alwyn, and Nain were very pretty; Messrs. J. Cheal and Sons, second.

Messrs. J. Stredwick and Son, St. Leonards, presented the best set of a dozen bunches of cactus dahlias, winning with handsome flowers of H. H. Thomas, Mrs. D. Fleming, Jupiter, Satisfaction, Elite, Golden Wave, Orion, the lovely Miss Stredwick, Olympic, Uranus, Indomitable, and Snowdon; Messrs. J. Cheal and Sons, second. Mr. Seale scored for two dozen cactus blooms on boards, and it was a pity he had no competitors in such a class. For a dozen cactus dahlias, on boards, Mr. Charles Turner was to the front, and had Glory of Wilts and Red Admiral in excellent form; Messrs. J. Cheal and Sons, second.

There were two exhibitors of three vases of mixed cactus dahlias, arranged with foliage and grasses, and premier honours fell to Mr. M. V. Seale for an effective exhibit; Mr. Charles Turner, second. Mr. Seale was the only contributor of six cactus dahlias, one variety, and he was awarded first prize for Snowstorm.

Mr. Mortimer led for two dozen show dahlias, and some of his best examples were J. Hickling, Red Cap, James Cocker, and Shotteshan Hero; Mr. M. V. Seale, Sevenoaks, second. The Messrs. Cheal had the best dozen show dahlias, and Mr. Mortimer scored for six show blooms with his new crimson Edward Lee.

Pompon dahlias were not quite so good as usual; Mr. Seale led for a dozen bunches, and his leading varieties were Cyril, Midget, Daisy, Edith Bryant, and Blush Gem; Messrs. J. Cheal and Sons, second.

Twelve bunches of single dahlias usually makes up a fine class, but on this occasion there were only two competitors. Messrs. J. Cheal and Sons came first with beautifully clean and bright examples of Lady Bountiful, Elaine, Mrs. Joynson Hicks, Winona, Kitty, Cardinal, Owen Thomas, Stromboli, Miss Roberts, Columbine, Miss Morland, and Rosemary Bridge; Mr. Seale second.

Mr. Charles Turner was a capital first for six vases of pæony-flowered dahlias, with splendid flowers of Salome, Seedling, Eleanor, Geisha, Bayard, and Bertha Von Suttner; Messrs. J. Cheal and Sons second. Mr. Turner also gained a first for six bunches of giant decorative varieties, and here Loveliness and Yellow Colosse were the leading sorts.

AMATEURS.

Mr. S. H. Cooper, The Hamlet, Chippenham, gained first prize for a dozen show and fancy dahlias with capital flowers; Mr. A. Robbins, Prospect Place, Keynsham, second, and Mr. A. P. Ironsides, West End Cottage, Chippenham, came third. There were four entrants in the class for three vases of cactus dahlias, ornamental foliage allowed, and here the awards were made in favour of the Rev. A. Bridge, Worth Rectory, Three Bridges—whose varieties were Hon. Mrs. Greville, White Ensign, and Arthur Pickard—Mr. G. Stevenson, Chadworth Cottage, Esher, and Mr. C. J. Blake, Clovelly, West Hill, Putney.

Four sets of nine bunches of cactus dahlias, three blooms per bunch, were staged, and the best set came from Mr. F. W. Fellowes, Lane House, King's Walden, who staged Monarch, Rev. J. Jamieson, Snowdon, Satisfaction, Harold Peerman, Indomitable, Mrs. D. Fleming, H. H. Thomas, and Jupiter in fine form; the Rev. Arthur Bridge second, and Mr. F. Grinstead, Beauport Park, Battle, third. For a dozen blooms, on boards, Mr. H. Peerman, Glenross, Nantwich, scored with big blooms of Joan of Arc, Wm. Marshall, Advance, H. Peerman, Gwendoline Tucker, etc.; Mr. W. Lockyer, gardener to the Rev. J. Twentyman, Greenhill Park, New Barnet, second; and the Rev. A. Bridge third.

The best twelve cactus dahlias, in four varieties, came from Mr. Charles Luckin, Apsley, Thakenham, and were Snowdon, Red Admiral, Rev. T. Jamieson, and H. H. Thomas; the Rev. A. Bridge second, and Mr. F. W. Fellowes, third.

The Dean Gold Medal and first prize for a dozen cactus dahlias, distinct, fell to Mr. F. W. Fellowes, King's Walden, and his selection was Satisfaction, H. H. Thomas, Ivernia, Indomitable, Dr. R. Appleton, Prima Donna, Rev. T. Jamieson, Monarch, Glory of Wilts, Jupiter, Red Admiral, and Mrs. Fleming; Mr. Charles Luckin second, and Mr. H. Peerman third; five entries. Mr. C. Luckin led for six bunches of cactus dahlias, three blooms of each, with fine specimens of C. E. Wilkins, Red Admiral, Mrs. D. Fleming, Dr. R. Appleton, H. H. Thomas, and Satisfaction; Mr. S. H. Cooper was second, and Mr. A. Langridge, Brownlow Road, Dalston, N.E., third.

Mr. Luckin, Mr. S. H. Cooper, and Mr. A. P. Ironsides were placed in the order of mention for a dozen show and fancy dahlias. The Rev. A. Bridges was the only exhibitor of a dozen bunches of single dahlias, and he deservedly received the first prize for a good set of Brilliant, Owen Thomas, Rosebank Scarlet, etc.

Out of nine competitors Mr. S. H. Cooker, Chippenham, led for six cactus dahlias with beautiful flowers of C. E. Wilkins, Clincher, R. Grinsted, Glory of Wilts, H. Peerman, and Nelson; Mr. A. H. Farmer, Kitchener Road, Walthamstow, second; and Mr. G. Davidson, Bensham Manor Road, Thornton Heath, third. Mr. A. Brown, Seagrave, Beds, had the best six bunches of pompon dahlias, Mr. S. H. Cooper coming second, and Mr. A. Robbins, Keynsham, third. Mr. A. Brown was the only exhibitor of six bunches of single dahlias, and received the first prize.

Mr. A. P. Ironsides scored for a dozen bunches of pompons, and was followed by Mr. H. Brown, Havelock Road, Luton, and Mr. S. H. Cooper, Chippenham.

In the maiden classes Mr. H. C. Keen, Middleton Road, Dalston; and Mr. H. P. Howard, Chesham, were the leading prize winners.

NEW VARIETIES.

First Class Certificates.—To Collarette dahlias Diadem and Leitstern, from Messrs. Dobbie and Co., Edinburgh; the former has rosy and the latter crimson flowers. To Golden Wave and Frederick Wenham, respectively yellow and fawn pink cactus varieties, from Messrs. J. Stredwick and Son, St. Leonards; to garden cactus dahlia Sunlight, from Messrs. J. Stredwick and Son; and to Florrie Wells, a ruby-coloured cactus dahlia from Mr. H. Shoesmith, Woking.

NON-COMPETITIVE.

Messrs. T. S. Ware, Lim., Feltham, presented an attractive exhibit of dahlias, making a bold effect with tall stands of Geisha, Mrs. A. Platt, Mrs. Gordon, and other bold pæony-flowered varieties; between these stands they put up vases of the beautiful and graceful Solidago Golden Wings; along the front the popular cactus varieties were grouped in small vases. Messrs. James Carter and Co., Raynes Park, had a very pleasing exhibit, in which pæony-flowered dahlias were lightly associated with Solidago Golden Wings, graceful single sprays of this fine perennial making up the background. The foreground of the group was composed of cactus dahlias set in a groundwork of maidenhair fern.

From Chingford, Mr. J. B. Riding brought up a large collection of pæony-flowered decorative and collarette dahlias; of the latter he has a fine collection, and on this occasion he displayed about three dozen varieties, these including such striking sorts as Maurice Rivoire, Gallea, Madame Gygax, etc. A particularly bold and striking exhibit came from Mr. J. T. West, Tower Hill, Brentwood, who had cactus, pompon cactus, decorative, pompon, show and pæony-flowered varieties. Mr. West had a charming lot of pompon cactus sorts, and displayed very pretty sets of Wm. Marshall, Flash, Snowbird, Cheerful, Vivid, and Norah. The fine Brentwood Yellow, a fine dwarf decorative dahlia, was represented by plants as well as flowers, and was greatly admired.

Messrs. Dobbie and Co., Edinburgh presented a very striking lot of collarette dahlias, staging the blooms in masses of a variety; a few of the finest were Maurice Rivoire, Diadem, and Leitstern, the latter a very elegant and striking form, crimson and white.

Among the pæony-flowered dahlias shown by Mr. Charles Turner, Slough, the beautiful Loveliness stood out conspicuously; Sunstar, Leander, Coriande, and Hermosa were others possessing many attractions.

In the great conservatory a huge exhibit from Messrs. Hobbies, Lim., Dereham, provided the finest feature of the show. In nearly every case each variety was set up in quantity in a tall stand, with asparagus and other light foliage among the blooms. Each stand would be from 4ft. to 6ft. high and 2ft. wide when filled, and when we state there were thirty-eight of these stands some idea of their importance may be formed. All the front stands were filled with collarette sorts, and the back ones with pæony-flowered varieties; among the latter Sunset, Catherine, Loveliness, Mrs. Cragg, Careless, Leveller (fine crimson scarlet), Dr. Van Gorkem, Fanny, Geisha, and Magnet were uncommonly fine. In another group the Dereham firm had a display of roses.

Some delightful flowers of good cactus dahlias figured in the centre of a group from Messrs. J. Burrell and Co., Cambridge, and Indomitable, Florid, Fulgent, Glory of Wilts, Red Admiral, Prima Donna, Esther, and Lurid were especially worthy of note; very neat were the pompon and pompon cactus varieties in this exhibit. Messrs. Spooner and Son, Hounslow, contributed a fine table of hardy fruits.

MEDALS.

Large Gold.—Messrs. Hobbies, Lim., Dereham.

Gold.—Mr. J. T. West, Brentwood; Messrs. Burrell and Co., Cambridge; Messrs. T. S. Ware, Lim., Feltham; Messrs. W. Spooner and Son, Hounslow, for fruits.

Silver Gilt.—Messrs. Dobbie and Co., Edinburgh; Messrs. J. Carter and Co., Raynes Park.

Silver.—Mr. Charles Turner, Slough; Mr. J. B. Riding, Chingford.

Crossandra undulæfolia.—This belongs to the order acanthaceæ, and is therefore a near ally of the justicias, eranthemums, aphelandras, and other popular garden plants. It is very closely related to the aphelandras, and like most members of that genus the flowers are borne in terminal spikes, protected when in the bud state by large bracts. In the case of this crossandra the flowers, which are very freely borne, are of an uncommon shade of orange-salmon. It is a native of the East Indies, and succeeds best in an intermediate temperature. Given this it will with ordinary treatment flower more or less throughout the summer. Cuttings of the young growing shoots strike roots very readily during the spring and early summer months.—W. T.

NEW PLANTS, ETC.

SOPHRO-LÆLIO-CATTLEYA JEANETTE.

This is unquestionably one of the very finest of the hybrids derived from Sophronitis grandiflora. The second parent is Lælio-cattleya Martinetti. The flower shown (see p. 689) was fully four inches wide, shapely, and brilliant. The colouring is difficult to describe, but light and bright crimson-scarlet, with a suggestion of orange give a good idea of the shade. The neat lip is bright ruby-crimson with orange-yellow base and throat. F.C.C., R.H.S., September 12. Messrs. Charlesworth and Co., Haywards Heath.

CARNATION WHITE WONDER.

A finely-formed and fragrant white perpetual carnation that promises to be of great value. The flowers are of good size and borne on long stiff stems. White Wonder is regarded as one of the very best of the new American seedlings. A.M., R.H.S., September 12. Messrs. Allwood Brothers, Wivelsfield Nurseries, Haywards Heath.

DAHLIAS.

Maurice Rivoire.—A showy collarette dahlia with large flowers and broad ruby-crimson, purple-tinted ray florets, a yellow disk, and several white "collar" florets. This is a very decorative variety, and one that lasts in good condition much longer than the single varieties. F.C.C., N.D.S., September 7; A.M., R.H.S., September 12. Messrs. Hobbies, Lim., Dereham.

Union Jack.—A decorative single variety, but one that is not quite up to exhibition form. The segments are white, broadly edged with scarlet, and occasionally a flower carries a purplish segment, and it is to this peculiarity that the variety owes its name. A.M., R.H.S., September 12. Mr. Charles Turner, Slough.

Miss Stredwick.—A large and handsome cactus dahlia, with long florets that incurve at the tips. The colour is mauve-pink, with a yellowish glow at the base of the central florets. F.C.C., N.D.S., September 7; A.M., R.H.S., September 12. Messrs. James Stredwick and Son, St. Leonards.

Richard Box.—A beautiful cactus variety with deep elegant blooms and incurving florets. The colour is a charming shade of soft yellow. A.M., R.H.S., September 12. Messrs. James Stredwick and Son, St. Leonards.

Uranus.—A large fancy cactus dahlia of excellent form. The ground colour is creamy white, and on this are laid innumerable light splashes of rose-pink. F.C.C., N.D.S., September 7. Messrs. James Stredwick and Son, St. Leonards.

BRUNSDONNA SANDERÆ ALBA.

The parentage of this plant was given as Brunsvigia Josephinæ and Amaryllis Belladonna, but it differs from Amaryllis Parkeri, which is supposed to be of similar origin. Both in B. Sanderæ and B. S. alba the flowers are produced as in the case of A. Belladonna, and not in the circular umbel of A. Parkeri. The flowers are white, with very pale orange shading at the base. The combination title given is a bad one, and its only merit is its euphony; Brunsyllis or Amaryvigia would have been according to precedent and in some degree indicative of the genera combined. A.M., R.H.S., September 12. Messrs. Sander and Sons, St. Albans.

AMARYLLIS PARKERI.

Shown under the name of Amaryllis Belladonna Kew variety, and subsequently considered to be A. Parkeri. Mr. Hudson presented the finest inflorescence of a Belladonna lily we have seen. The flower stem was a yard high and very stout, and at its apex it carried a circular umbel of thirty flowers and buds, thus differing considerably from the usual forms of A. Belladonna, which carry their flowers in a half circle. A. Parkeri is considered to be a hybrid between Brunsvigia Josephinæ and Amaryllis Belladonna, but the plant shown was received by Mr. Hudson from New Zealand under the name of A. Belladonna Kew variety. The flowers are bright rose coloured, with pale orange shading in the base of the tube and also on the exterior. Whatever its origin (and it is to be hoped that this will be discovered), the plant is a first-rate one, and will probably secure the higher award some day.. A.M., R.H.S., September 12. Mr. James Hudson, V.M.H., gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton.

AMARYLLIS PARKERI ALBA.

This was exhibited as A. Belladonna Kewensis alba, and it is evidently a white form of A. Parkeri, as it is like the Gunnersbury plant in all but colour, its flowers being white, with pale orange shading in the base and exterior of the tube. A.M., R.H.S., September 12. Mr. A. Worsley, Mandeville House, Isleworth.

APPLE CHARLES EYRE.

A fine and extremely promising culinary apple of conical shape and regular outline. It has a pale green skin, and solid flesh of excellent flavour. Without any special treatment the tree has produced fruits of 12oz. weight and upwards. The variety was raised by Mr. Chas. Ross. A.M., R.H.S., September 12. Mr. W. Pope, The Gardens, Welford Park, Newbury.

CUCUMIS METULIFERUS.

This species, which is commonly known as the Horned Cucumber, was originally discovered by Diège in Pondoland in the vicinity of St. John's River. The plant has not been met with in South-East Africa by any subsequent collector; but in tropical Africa it is very widely distributed. When grown under the conditions favourable to the ordinary cucumber, the species grows vigorously, and bears freely. At first the short fruits are olive-green, and when they attain maturity they become rich scarlet. "Bot. Mag.," t. 8,385.

CARNATION WHITE WONDER.
A fine new white perpetual variety, sweetly scented. A.M., R.H.S., September 12, 1911. Messrs. Allwood Brothers.

The Jerusalem Sage (Phlomis fruticosa).—This, the principal shrubby member of the genus, cannot be regarded as showy, yet it has a decidedly uncommon appearance, and when in bloom is by no means unattractive. It is a member of the Labiate family, and forms a bush a yard or more in height, whose woolly stems are clothed with oblong wrinkled leaves.—W. T.

NOTES FROM HERE AND THERE.

We are drawing near to the end of this dry but glorious summer, and it looks as if it intends to keep up its reputation to the very finish, as September has made its entry dry, sunny, and warm. It is September, nevertheless, and in some respects the conditions are more autumnal than they are at this time of the year in a normal season. You look out on cornfields and see no standing sheaves, for the harvest is in, and in many cases the stubble has been broken up in preparation for the next crop. Prematurely ripe foliage falls from the trees to the ground with a rustling pitter-pat, and the foliage on the oaks looks as brown as if it had been seared by a scorching fire. In the early morning or late evening there is a misty chilliness in the air, which at times is suggestive of frost, and the ingathering of the shadows a bit sooner to-day than yesterday remind one that the long evenings are coming. These are the signs of the season, and it is not without some tinges of regret that we hail the close of this glorious summer.

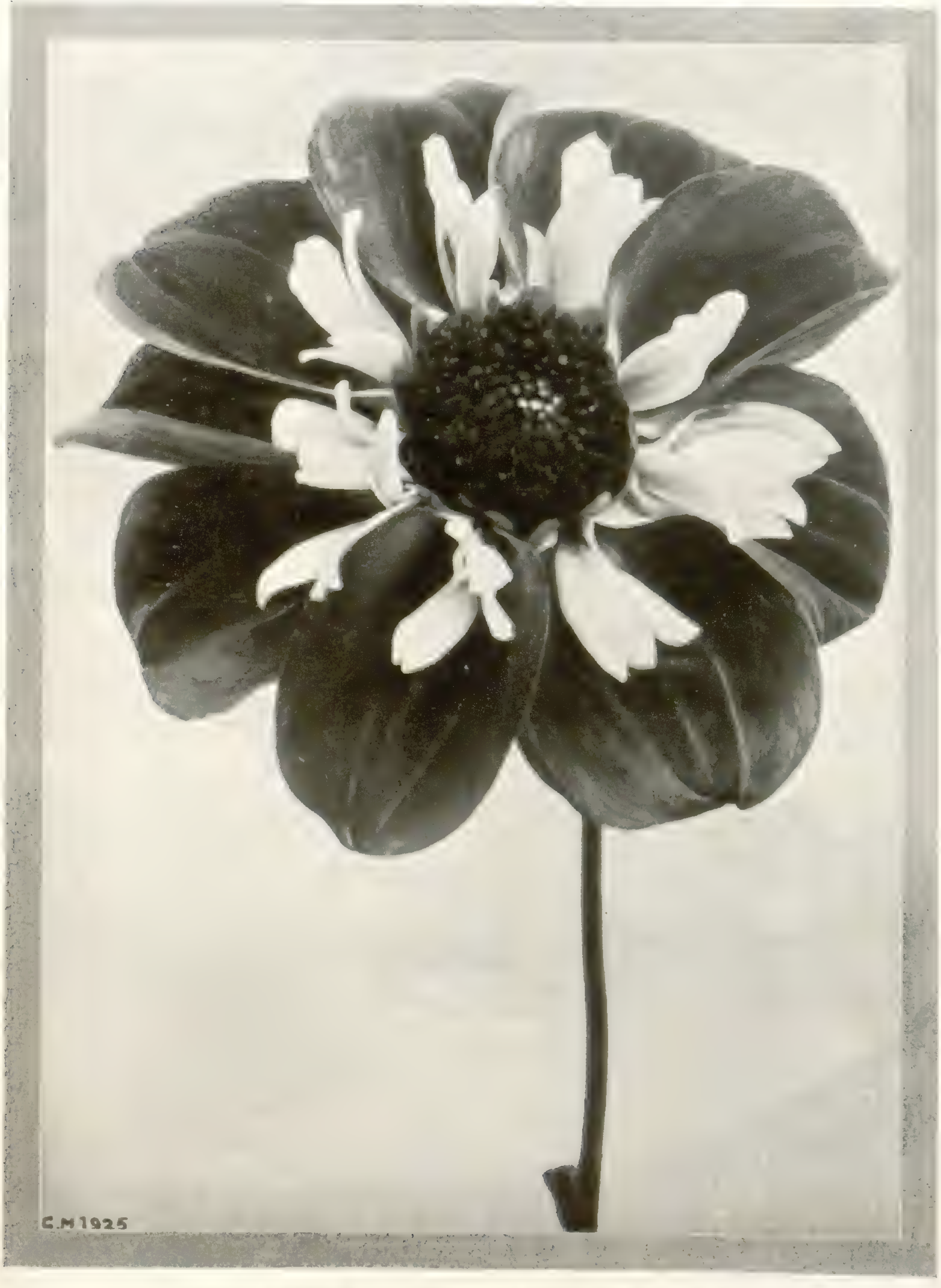
We have learnt this season to be thankful for small mercies in the way of rain, and it is surprising what an effect even a light shower or two has on vegetation, particularly if the downfall is followed by a cloudy day. Look at the pastures and the lawns. A few weeks ago they looked so brown and dry that it hardly seemed possible that the grass could grow again, but it has, and in glancing over a landscape the monotonous brown is intermingled with the fresh green of growing grass, and farmers are hopeful now of getting pasturage for their stock before the winter comes on. What is apparent in the field may also be observed in the garden, and though it will take days of rain to penetrate the dry soil, one can hardly overestimate the good that the few spasmodic showers have done. Gardeners have had such a heavy amount of watering to do this season, which at its best is weary work, that no wonder they have become tired of it, and even in some cases given it up as a bad job. And, after it all, we cannot help but notice that one of Nature's showers does more for vegetation than hours of watering.

Scarcity of vegetables is the general complaint just now, and perhaps the individual who feels the pinch most is the man who has to depend on the greengrocer for these commodities. The latter complains that he cannot obtain vegetables to supply his customers, while the market gardener compares the yield of this season with last and blames the drought; but, of course, there is another side to the story, because by the law of supply and demand when commodities are scarce you have to pay more for them. As a case in point, I was chatting the other day with a small holder who grows scarlet runner beans, but he was not worrying himself because his output is not one-quarter what it would have been in a normal season, for his little lot was fetching more money than a full crop would have done in an ordinary season. What a run there is just now on vegetable marrows, and how many a grower wishes that he had some of those marrows which went on the manure heap last year as unsaleable; but there, if he had the quantity, he would not get the price, and that is just the difference.

The outlook for winter greens is anything but rosy this year, and it will be surprising if a few months later on the story of scarcity is not general. Never, perhaps, was there a more trying summer for winter vegetables, and to-day there are thousands of plants still standing in the nursery bed because the conditions have not been favourable for planting them out. What is the prospect for autumn cauliflower? Poor, I am afraid, and the supply of established Brussels sprouts, savoys, etc., is far below the average. Some have mastered the difficulty by puddling in plants and watering afterwards, but in many cases the water supply ran out, and what was to be done then? Fortunate were those people who took advantage of the rains which fell copiously about Coronation time, and planted their winter greens, for these are the only ones which look really well. The experience is not without its lesson, which is to look ahead, and miss no opportunity of planting when plants and ground are ready, for one never knows what this uncertain climate has in store for us.

Most of us know from painful experience how insect pests flourish under the condition of a sunny summer like this, and there is a tendency to treat everything that crawls or flies as an enemy. For instance, I met with a man the other day who was in trouble about a piece of turnips which somehow or other had managed to pull through the drought. It is true that at first the flea had riddled the leaves with little holes, and later the foliage became infested with aphis, but the man knew these pests, and was not so much perturbed; but one day he came across a horde of crawling insects with which he was unfamiliar, and at once concluded that another foe had come to put an end to his turnip crop. He hardly stopped to examine or consider, his one anxiety being to kill the intruders, and he was not easily persuaded that they were not enemies but friends, for, as a matter of fact, the insects were the larvæ of the ladybird, and a careful inspection showed, much to the satisfaction of the grower, that they were feeding voraciously on the turnip aphis.

H.



COLLARETTE DAHLIA MAURICE RIVOIRE.

An attractive variety of this increasingly popular section; it has ruby-red flowers and white "collar" florets. F.C.C., N.D.S., September 7: A.M., R.H.S., September 12. Messrs. Hobbies, Lim.

"CHRYSANTHEMUMS AND HOW TO GROW THEM FOR EXHIBITION," by J. B. Wroe.—Full details on timing and stopping for Northern, Southern, and Midland growers, selections of the best varieties, illustrated instructions on taking the buds, cuttings, staging, etc. Prices 1s. net, by post 1s. 2d.; cloth, 1s. 6d., by post 1s. 8d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

A COMBINATION OF LILIUMS AND ANEMONES.

In the arrangement of hardy plants in flower beds it is of the utmost importance that the subjects used shall carry on the display for as long a period as possible, and also that all shall be complementary to each other. For several reasons which need not now be detailed, liliums are not a complete success when planted alone in beds on the lawn, and therefore we find them frequently planted among low-growing shrubs that flower in spring or early summer. A quite new combination, however, is Lilium Hansoni and Anemone japonica alba. This we have seen and admired at Kew. The ample leafage of the Japanese anemone forms a splendid groundwork for the lilies, which rise well above their later flowering companions. We have on numerous occasions drawn attention to pleasing and useful combinations of hardy plants, and as the one now illustrated could be adopted in most gardens we feel sure many of our readers will welcome this brief reference to it.

SNOWDROPS.

The snowdrop is generally regarded as a type of modest beauty; as such it appeals to every class of flower lover. It is extremely easy to grow, and increases fast, having every claim to be considered a subject offering success to those having only an elementary knowledge of gardening. For those gardening under the difficulties of a town no other spring flower rewards their efforts in a more generous way than the snowdrop. All it asks for is some slight protection in the open from atmospheric deposits, so that its flowers may be kept unsullied from dirt; even where limitations of space prevent its enjoyment in the open it is still possible to grow snowdrops in pots or window boxes, as all the forms of galanthus are amenable to this treatment.

When grown under restricted conditions a rich loamy soil will give the best results, the bulbs being planted or potted up early in autumn, the latter being placed in a cool window until growth appears; water will only be required at intervals, as the soil much not remain saturated. Once the shoots appear above the soil the plants may be transferred to a living room, there to unfold their flowers. Snowdrops are best planted in the open during early autumn, the depth to plant the bulbs being from four to six inches; as a rule deep planted bulbs yield the finest flowers.

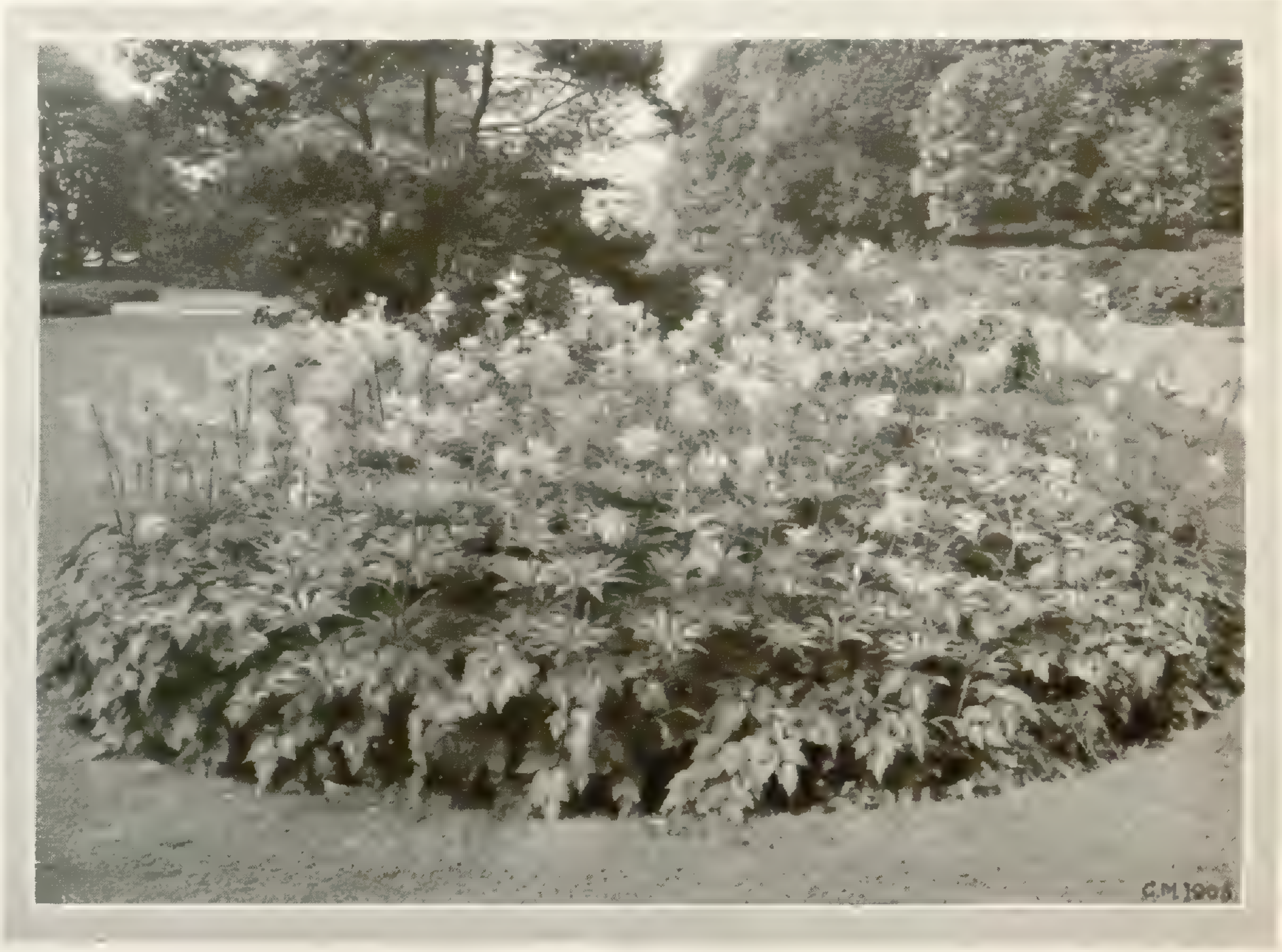
The common Snowdrop (Galanthus nivalis) is represented by double and single forms, and is the freest and cheapest kind to plant in quantity, figuring largely in country districts around cottage gardens; the milk-white flowers produce perfect snowdrifts in February, so that they transform their surroundings into picturesque scenes of more than ordinary beauty.

Galanthus Elwesi is a selected form, with large flowers on stout stems, and very broad leaves. It will not succeed under the same trying conditions as the type, but more generally prefers a good garden soil, and in such it flowers and increases freely. G. Cassaba and G. Erithræ are even finer forms than the last, differing in small details, the flowers being very large and globular. G. Cassaba has erect, broad glaucous leaves, in strength resembling those of a daffodil, and its flowers appeal to me as being more refined than those of G. Erithræ.

G. Fosteri is a fine free species, with glossy green leaves and shapely flowers, carried on tall stems, and very freely produced; a most admirable subject for pots and boxes. G. Ikariæ is the freest of all to flower; the foliage is pale green, broad and recurving; the flowers large and pointed, hang like pendant pearl drops from slender stems, and when in bloom the plant presents one of the most charming and distinct examples of these modest hardy flowers.

The choicer forms of snowdrops are all very effective in a cool greenhouse in winter, where the purity of the flowers is also appreciably increased. Grown in the open they are most effective when grouped as colonies in warm nooks on the rock garden, and with a carpet of mossy phlox or saxifrage through which to grow one gets the utmost from them in effect.

Thomas Smith.



LILIUM HANSONI GROWING WITH ANEMONE JAPONICA ALBA AT KEW.

RUST AND PERPETUAL CARNATIONS.

This disease (Uromyces caryophillinus) has used up as much printer's ink as any disease I know, and yet to-day our knowledge of it is but very limited. Certainly the dread of rust has greatly subsided since the year 1890. In fact, the present danger is that all too many treat its presence far too lightly, and particularly is this true of the market growers. Undoubtedly rust is not nearly the awful disease it was once supposed to be, yet it is sufficiently serious to warrant all good growers using every means within their power to keep their stock perfectly free from it.

Certain varieties are more prone to this disease than others. This is particularly noticeable by those who raise seedlings, as some plants become affected and others remain perfectly healthy under precisely the same conditions. Of course, any seedling prone to disease should be destroyed, for no matter how good its flowers may be, it is constitutionally weak, and the Floral Committee of the Perpetual Flowering Carnation Society intend in the future to ignore all varieties which fail to come up to their standard in this respect, now that we have the choice of so many good novelties annually.

Rust is developed in nearly all cases by either excessive moisture on the foliage or in the atmosphere, and it can hardly exist in a dry, buoyant air.

The dews of late summer and autumn develop rust on several varieties, therefore these should not be exposed to dews, but should be cultivated entirely under glass. Personally, I strongly favour early housing for all varieties. We commence gentle fire heat at night after the middle of September, and for three winters we have not been troubled with any fungoid disease, and yet the Sussex air is what might be termed humid. Good stock, of course, plays its part, but my argument is that under correct conditions, which can be promoted almost anywhere, rust ought not to exist.

The best remedy for rust is, in every case, first to remove all affected leaves, and then to dust the plants with a mixture of equal parts of sulphur and air-slaked lime. This will work marvels. To paint some lengths of the hot-water pipes with a mixture of sulphur and lime is also an excellent remedy for winter. I do not favour any liquid remedy, as the principle of the whole thing seems contrary to plants with glaucous foliage. Some growers of repute, however, recommend Bordeaux mixture; and liver of sulphur, used at the rate of about one ounce to ten gallons of soft water, with a little soft soap in it, is becoming increasingly popular in the United States. This mixture should be sprayed on when the sun is shining.

To sum the whole matter up, it is safe to say that plenty of ventilation, causing a dry, buoyant atmosphere, and houses thoroughly cleaned each year, will do much to prevent disease. We lime-wash all our walls and stages during each summer, as cleanliness is the great secret of good carnation cultivation. Montagu C. Allwood.

Asparagus.—The past summer has apparently suited this crop, and rarely has it made better growth. As soon as growth has died have the tops removed and the beds cleared of all weeds. The soil is unusually dry for the time of the year, and a good watering will assist in swelling the crowns for next season's supply. Afterwards mark out the alleys and cover the crowns with the soil, putting the beds in order for the winter.—C. Flack, Cholmondeley Castle Gardens.

BULBOUS PLANTS IN THE ROCK GARDEN.

Now that the bulb planting season is with us, a few remarks may not be out of place concerning those bulbs which are suitable for cultivation in the rockery. They should take a prominent position, and, with careful arrangement, will greatly add to the interest of this popular phase of gardening. There is a wonderful selection to choose from, some kinds adapting themselves to the nooks and crannies amongst the rocks, others to the grass slopes and banks.

The genial climate of the south and south-western counties offers a splendid opportunity to those who wish to grow the choice and tender varieties which cannot be managed in gardens in cold localities. But even for these latter there are many hardy species proof against any weather. For instance, a colony of Narcissus cyclamineus growing in the grass at the base of a stone is very effective. There are also N. triandrus (Angel's Tears), N. minimus, and N. bulbocodium, all most suitable for the purpose. The hardy cyclamen provide an interesting group, and will thrive in the pathway, when planted in a nook at the base of a rock out of harm's way.

Among the anemones we have A. appennina blanda, which is one of the best; it makes a beautiful bit of colour, which is highly appreciated. Others are A. pulsatilla, A. fulgens and fulgens græca, A. nemerosa fl. pl., and A. Robinsoniana. The species of tulips include some rare and beautiful flowers, and a grand effect is obtained by planting T. Griegi in a carpet of Aubrietia Dr. Mules. T. Kaufmanniana is a handsome species, and should be planted at the base of the rockery to enable one to see the full beauty of the blossoms when they are quite expanded. T. Clusiana, the Lady Tulip, is small and pretty, and we also have T. Ostrowskiana, T. Didieri alba, T. Tubergeniana, T. Haageri, T. præstans, and T. saxatilis.

The Calochortus family comprises many choice and beautiful plants. They require a light, sandy, and well-drained soil, with a sunny aspect, one of the chief points being to keep the bulbs as dry as possible in the winter. They are quite hardy when afforded suitable situations, but failures are bound to occur if planted in wet, cold soils. The erythroniums are very suitable for the rock garden, and make themselves quite at home. A cool spot in the lower part of the rockery should be afforded them, and their requirements regarding soil are loam and peat. The most natural effect is obtained when they are associated with dwarf rhododendrons, azaleas, etc.

Chionodoxas and scillas are highly appreciated when seen growing in large groups or drifts in the grass. They can also be planted in a carpet of dwarf sedum or saxifrage, through which they will push their slender growths and flower stems. The muscari are another class of bulbous plants which require to be massed to obtain the necessary effect. The beauty of these is absolutely lost when planted in small clumps. It is much better to make one drift of a hundred bulbs than to split up the same number into several small lots. Tecophilæa cyanocrocus is a choice and rather tender spring-flowering bulb. In the mild climate of the southern counties it will thrive outdoors, and should be planted in well-drained sandy loam in a sunny position.

There are many kinds of iris which adapt themselves exceedingly well to rock garden adornment. Generally speaking a light sandy soil suits the bulbous kinds when given a warm position. Some are rather tender, and require a little protection in the winter. I. reticulata and its varieties Krelagei and histrioides, are very beautiful, and they flower in the early part of the year. I. alata flowers even earlier than the above, and often one sees the fine blue blossoms in January. It is a tender species, and should be afforded some protection. The lovely Algerian Iris tingitana is rather tall for the rockery, yet if a warm sunny nook can be found for it it should certainly be grown. Iris bucharica is another choice species which requires a warm position. We have also I. sindjarensis, I. Vartani, I. Bakeriana, and I. Warleyensis. I. Susiana, the Mourning Iris, is a magnificent flower, and is a plant which well repays a little extra trouble in its cultivation. A warm corner should be afforded it, with a light and thoroughly drained soil. In damp, cold localities it is advisable to afford it the protection of a handlight during the late autumn and winter. The chief point in the successful cultivation of the bulbous species is to keep the bulbs dry in autumn and winter and allow them to thoroughly ripen and rest. To accomplish this artificial means often have to be resorted to, such as covering the soil with a small handlight or a sheet of glass. These irises strongly dislike any disturbance, and when a clump is found to be growing well it should be left severely alone.

IRIS BUCHARICA.

An interesting and beautiful species with white and yellow flowers. The group illustrated was exhibited in the spring of this year by Messrs. W. Cutbush and Son, Highgate.

The trilliums are beautiful plants for moist and shady situations, where they will grow freely. A mixture of peat and loam suits them.

E. C. Pooley.

THE ORANGE-BERRIED PYRACANTHA.

On several occasions within the last few years attention has been drawn to this plant, both in the horticultural press and by specimens exhibited at the Horticultural Hall. It has appeared as Cotoneaster angustifolia, the name by which Mr. M. L. de Vilmorin distributed the plant from his arboretum at Les Bavies. On the occasion of a plate being published in the "Botanical Magazine," t. 8,345, in 1910, its botanical affinities were worked out, and it was found to agree closely with the plant known in gardens as Cratægus pyracantha; therefore, as that plant possessed characteristics which were not shared by other species of cratægus, the generic name of Pyracantha given by Roemer was revived for the three species which had been known as Cratægus pyracantha, C. crenulata, and Cotoneaster angustifolia respectively.

Seeds of P. angustifolia were sent to Les Bavies from Eastern Tibet in 1895, and a few years later a well-fruited branch exhibited at the Horticultural Hall, in London, created much favourable comment, for it was as well fruited as we usually find the common pyracantha to be, and the colour was a rich orange. The species may be easily distinguished from the older one on account of the greyish appearance of its narrow evergreen leaves. For planting against a wall it makes an excellent companion for the ordinary pyracantha, or "Buisson ardent," but it is less useful for the open border, for although it grows with the greatest freedom, a moderate amount of frost injures it rather severely. It will therefore be understood that it must have wall protection, except in the warmer parts of the country.

W. DALLIMORE.

WAXPOD, OR BUTTER BEANS.

There are two distinct types of waxpod beans in cultivation, one a dwarf grower and the other belonging to the climber, or runner, type. It is to the merits of the latter that I more particularly wish to direct the attention of those in search of fresh delicacies for the table. I am sure that, were their superb qualities better known, their cultivation would be widely extended, even to the curtailment of the space now devoted to so many of the older forms, both dwarfs and climbers. That these would be entirely superseded is very improbable; in fact, such procedure would be unwise until at least a thorough trial of the butter beans had been carried out.

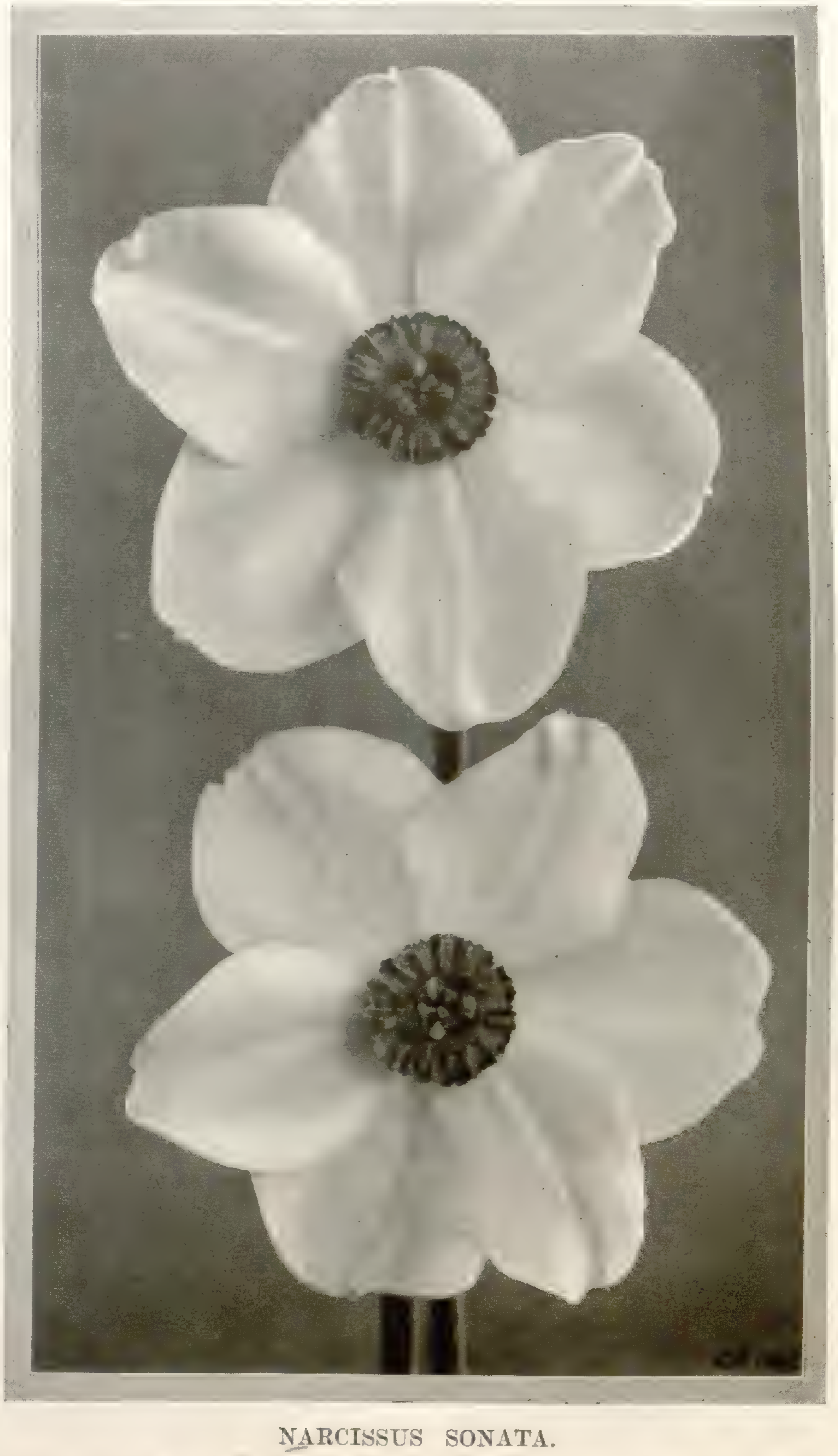
The present season, with its excess of heat and bright sunlight, appears to have been highly favourable to butter beans, of which the golden-podded variety Mont d'Or is, perhaps, the best of a somewhat limited class, owing to its free growth and bearing capacity, and to the pale yellow colour of the pods as they become fully grown.

In their preparation for table the pods may either be cut in the usual way or boiled whole, the latter course being most in favour, as thereby the colour is partly retained and the rich flavour more pronounced. In northern gardens a rich, well-exposed site, where sunlight and air obtain free access to the rows, is most essential, and in seasons of drought occasional sprinklings overhead greatly aid the proper setting of the flowers; and copious root waterings, whenever possible, will prolong growth, and consequently the supply and quality of the pods.

JAMES DAY.

A NEW POET'S NARCISSUS.

The chaste beauty and sweet fragrance of the Poet's Narcissus have always found favour among lovers of spring flowers, and it is small wonder that a narcissus possessing so many good qualities as it does should have attracted the attention of raisers. It was early used as a parent for the production of a new race of daffodils, but in more recent years the several varieties have been intercrossed for the purpose of obtaining new and improved forms of pure poeticus type, and great success has attended the work. The one unfortunate part about the increase of Poet's Narcissi is that so many of them vary so little from each other that only the ultra-expert can distinguish one from the other. It must not be forgotten, however, that the raising of true Poet's daffodils has already produced a desirable effect in the cut flower markets, as considerable stocks of large-flowered, finely-formed, long-stemmed, and substantial varieties are now in cultivation, and these splendid flowers are eagerly purchased by the leading florists.



NARCISSUS SONATA.

A beautiful poeticus variety raised by Mr. F. H. Chapman; the stock was purchased by Messrs. R. H. Bath, Lim. A.M., R.H.S., May 9, 1911.

To the daffodil fancier these varieties of Narcissus poeticus appeal strongly, and every new one that appears is closely scanned, and its qualities estimated to the last degree. Among those that have passed muster this year is the one figured in the present issue. At the meeting of the Royal Horticultural Society's Daffodil Committee, held on May 9, Mr. F. H. Chapman submitted the variety named Sonata, which had an Award of Merit made in its favour. This, as will be seen, is of beautiful form, while the crimson and orange cup is unusually beautiful in shape and colour. This fine variety passed into the hands of Messrs. R. H. Bath, Lim., of Wisbech.

CHRYSANTHEMUMS.—For full instructions on the Culture of Early-flowering Chrysanthemums in beds or borders for garden or greenhouse decoration, read the Second Edition of CHRYSANTHEMUMS FOR GARDEN AND GREENHOUSE, by D. B. Crane, price 2s. 6d. net; or by post 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

SWEET PEAS FOR FLOWERING UNDER GLASS.

The cultivation of sweet peas for early blooming indoors is annually increasing, and I have no doubt will continue to do so as long as these flowers continue in popular favour. The beautiful displays of indoor-grown sweet peas at the Temple Show this year was ample evidence that they can be as well grown indoors as outside. Although most of the exhibits were from nurserymen or market growers, such displays must tend to increase their cultivation in private gardens generally under glass, and those who have good lofty houses available might with advantage utilise one or more of them in the cultivation of sweet peas.

BASKET OF ROSE KAISERIN AUGUSTA VICTORIA.

One of the set of five baskets of roses that secured first prize at the National Rose Society's Autumn Show for Messrs. W. Spooner and Sons.

The flowers in one or two of the best exhibits at the Temple Show were, from my personal knowledge, cut from plants that were planted out in the houses and trained in just the same manner as those grown for exhibition in the open. No wonder, therefore, that we saw some really excellent examples of sweet peas; but for the supply of cut flowers for general decorative purposes such a system is not necessary, for by utilising ten or twelve inch pots much more bloom may be obtained in a given height than from those planted out. In the latter case the house or houses must practically be given up to the peas from January to early in June, which is a quite long time, and really extra good results are required to warrant such a course being adopted. When grown in pots they only take up a small amount of room during the winter and early spring months; in fact it is not till about the first week in April that they need much spacing out, although, of course, everyone with a practical knowledge of sweet pea culture is aware that the more light and air given them the better will be the results.

For this phase of sweet pea cultivation it is quite essential that early sowings should be made. The third week in September is probably the best time to sow to ensure really first-class results, although sowings made from that date till the middle of October will prove satisfactory.

I prefer to sow in 48-size pots, placing from four to six seeds in each pot, and using a moderately light compost, not too rich. The pots when filled may be placed out of doors, but as at this time of the year we often have wet spells of weather, it is advisable to place them in a frame where lights can be put over them when necessary. When this is done there is no danger of the soil becoming excessively wet, which is very detrimental to germination. After a season such as the present one the seeds will no doubt be exceptionally hard and ripe; therefore to assist germination a very small portion of the outer skin should be shaved off. This, however, is only necessary in the case of the larger, hard-seeded varieties, and should not be practised with those having white or lavender flowers. It is hardly necessary to say that as soon as the young plants appear through the soil full exposure to light and air should be given them to ensure a strong, short-jointed growth quite from the outset.

With the advent of very cold weather the pots should be partly plunged in ashes, allowing a little space between each one; this prevents the soil becoming dry, also in the event of it being frozen it keeps the pots from breaking. It is not advisable to have the soil or plants frozen if it can be avoided, and arrangements should be made to cover them with mats or some other protective material in the event of very cold weather. With a little protection the plants may with advantage be left in the cold frames till the middle or even the end of January. By this time they should be strong and bushy plants, and from five to six inches in height, with plenty of roots. They should then be removed to a light, airy house, and here they will soon begin to grow quite freely. At this stage no artificial heat should be used except, of course, when the frosts are very severe.

Early in February they may be shifted into their flowering pots, ten or twelve inch being the best sizes. The compost should not be too rich, but just a nice friable loam to which have been added some bone meal, lime rubble, and enough spent hotbed manure to keep the loam moderately open. Pot rather firmly, after which the pots may be placed quite close together for a time, and if they are fairly wet at the time of potting they may not require water for a few days, but after this they must have a good soaking, and this will be found to last them some time, as the growth will be slow. As necessary small twigs should be placed around them to keep them in position, using those about eighteen inches long. They will require spacing out as growth proceeds, and quite early in April they must be given all the room that is to be allotted them, and the permanent stakes put to them.

It is an advantage to stand them at this stage on a cool surface, and if an inch or two of short manure can be placed under the pots it will be found a good rooting medium when they are coming into bloom, as it is just then that they require a good root run and plenty of moisture. If they have to be stood in a house with stages, a turf turned upside down under each pot will help to conserve the moisture, and thus save time with the watering-pot.

As I already mentioned, up to the time the plants are in bloom watering must be carefully done, not only to keep a stocky growth, but also to try and prevent bud-dropping. Once they are well in bloom there is no fear of this, and, being well rooted, they will take almost an unlimited amount of water and liquid manure, and if either is neglected they will very quickly suffer. The matter of ventilation is an important one, and as the plants are coming into bloom great care is necessary to see that the temperature does not rise unnecessarily high, this being also one of the chief causes of bud-dropping indoors.

The choice of varieties must, of course, be left to the individual, but it is not wise to grow too many nor those of very delicate shades of colouring, as the colours are not apt to improve under glass, although in some instances they do so. Those I have noted doing really well under glass are Sunproof Crimson, Thomas Stevenson, Earl Spencer, Doris Usher, Mrs. Henry Bell, Frank Dolby, Constance Oliver, Gladys Burt, Clara Curtis, Moneymaker, and Nettie Jenkins.

If well managed, sweet peas under glass will continue in bloom for a considerable time, and may be done quite well in any cool house where there is plenty of head room, the critical time with them being just as they commence flowering, but once this is passed they are no trouble whatever. Greenfly is the only insect likely to trouble them, but a good syringing or two or a slight fumigation will soon get rid of this pest, and even after they are turned out of doors the plants will continue blooming, and if the flowers are not wanted will often set a really good crop of seed, and this on varieties from which one has a great difficulty in obtaining seed when growing in the open ground.

THOMAS STEVENSON.

WYCHALL NURSERY, KING'S NORTON.

The last day of July will linger long in my memory as one of the most enjoyable days I spent during the present summer. It was on that day I visited Wychall Nurseries, King's Norton, where Messrs. A. R. Brown, Lim., cultivate an extensive and very fine collection of border carnations and picotees. Mr. A. R. Brown has breathed the perfume of carnations from his earliest days, and may well claim to have inherited his love for these flowers. His father was prominent among the leading florists of the last century, whilst his grandfather was growing and showing carnations away back in 1795. That our friend made good use of his opportunities for acquiring knowledge of this particular branch of floriculture ample evidence is afforded by the robust health of the plants forming the collection at King's Norton, and by the fact that since the year 1886, when he started in business for himself, the firm has won over 2,000 prizes and five champion medals. Mr. Brown was exhibiting long before the year 1886, and, in fact, has still in his possession a pair of ivory tweezers that were made for him when five years old. As might be expected, Mr. Brown has many an interesting tale to tell of his experiences, and recollections of shows attended in his boyhood, when he came into close contact with such men as Dodwell, Simonite, Moreton, and others who were prominent as cultivators in those days. Mr. Brown himself retains many of the characteristics of the florists of the old school. His intense interest in his flowers, and hearty goodwill toward all who have a kindred spirit makes a visit to the Wychall Nursery most pleasant. Mr. F. J. Johnston, who recently joined Mr. Brown in partnership, is also ever ready to welcome visitors, and, being a keen business man, is equally alert to attend to the needs of clients whose orders come by post.

The houses at Wychall Nurseries are light, airy structures, built expressly for carnation growing, and at the time of my visit the strong, healthy plants were, in spite of the blazing sun and tropical heat, carrying a grand crop of lovely flowers. Would that I could adequately describe the delightful display of flowers in the several houses. Were that possible, anyone who had not before thought of growing carnations would be eager to make a start forthwith. The best that can be done is to mention a few of the more distinct and beautiful varieties in the collection.

Following the bent of my own particular inclination, attention was first given to the yellow-ground fancies, and one of the first to catch my eye was Clement, a variety raised by the Rev. C. A. Gottwaltz, and introduced to commerce last year by Messrs. Brown. It is a flower of handsome build and petal, heavily marked with mahogany on a clear yellow ground. James Butler is one that will be sent out this autumn, and it should have the attention of growers. The markings are purple, and the flower may be described as an improved Henry Gough. Becky Sharp is another that calls for mention. It is a sport from Lord Steyne, maintaining the large size and fine form of its parent, but having the chaste crimson edge and markings of Sam Weller. Linkman, Hercules, Liberté, and Gaiety are a few other yellow-ground fancies of merit.

The yellow-ground picotees were naturally the next section to claim my attention, and we lingered long among them discussing the points and varying charms of the heavy-edged, medium, and wire-edged varieties. There were some wonderful flowers here, despite the fact that the heat was very trying to carnations, and many flowers were prematurely opening, and withering with equal rapidity. Among them all, Archie Brown was conspicuous for the perfection of its fine purple edge, whilst Ida Pope was pointed out as the best heavy-edged Mr. Brown has yet raised. It is bright scarlet on a rich yellow ground. A very pretty flower is Molly Dalrymple, raised by Rev. Gottwaltz. Its large smooth petals have the finest bright red wire edge, on a rich apricot ground. This should become popular. Togo, Lady Gascoigne, and Mrs. Kearley were distinct and beautiful in their way, but I must leave them to deal with white-ground picotees.

Among heavy-edged scarlets Duchess of York would be difficult to surpass, the edge is so well defined, and the broad petals are of a glistening whiteness. For outdoor culture W. H. Johnstone cannot be surpassed, and Mrs. Crooks is a capital show flower. Lady Ethel is edged with clear rose, and Silas Osbaldiston is of rich purple. Maud Brown is one of the best wire-edged, its rosy tint being clearly defined against the pure white ground. Mention must be made of Muriel Stevens, it being a perfectly built bloom with a wire edge of purple; a glance at a fully-developed bloom is sufficient to captivate anyone who knows the points of a show carnation. A lovely heavy-edge purple is Lady Sybil, the variety that won premier for Messrs. Brown at the Midland Carnation Show on August 2. The flakes and bizarres, once so highly prized by every grower, appear to have lost to some extent the affection erstwhile bestowed upon them. Where our forefathers saw in a well-balanced bizarre, or sharply-defined flake the very acme of perfection, it is not heard of to-day, for even prominent growers express the view that these are too hard and artificial-looking. For my part, however, the old-time show flowers are very attractive, and I was pleased to find at King's Norton such good old varieties as Gordon Lewis, a purple flake introduced by Dodwell many years ago. Robert Houlgrave, a fine scarlet bizarre; Ophelia, sent out by Martin Smith; George Rudd, and Brier Lea, both pink and purple, the latter of Messrs. Brown's raising; with Guardsman, the best of the scarlet flakes; and Mrs. T. Lord, a rose flake, will make a nice little set for anyone to start with, but the catalogue contains the names of a good many more of various colours and distinctive form.

There are still to be mentioned the selfs, which at the present day are the most popular of all. There are selfs to suit everybody at King's Norton, whether for colour, size, or form, but it must be added that unless a variety is particularly good in all particulars its career in Messrs. Brown's nursery is short, for every season the collection is subjected to severe scrutiny, and there is an annual weeding out of superseded varieties. Several selfs raised by Mr. Brown occupy foremost positions among the varieties in their particular colours, and of these Alba, a capital white; Rosemary, a rose self; Aleppo, deep crimson; Iberia, one of the best yellows in cultivation; and Alderman, a flower with fine broad petals of a vivid scarlet, can be thoroughly recommended. Alma is another good rose-coloured variety of exceptional brightness, and this completes a splendid half dozen.

My notebook contains the names of many more, but it must suffice to mention Cambria as a most perfectly-modelled yellow; Crystal, as one of the finest whites; and Conrad, the most pleasing of the heliotrope shades.

Of the novelties one of the first to attract attention was a large, beautifully-formed flower of a brilliant cerise shade that caught the eye as soon as the house was entered. Signal Light is the name aptly given. It should be an extremely popular variety. Royal Velvet is so named because its colour is Royal purple, and the petals carry a beautiful sheen. Another very fine variety, Mrs. F. J. Johnstone, is a crimson self of rare richness. Wyatt is a very broad-petalled rose-coloured flower that is possessed of all the qualities of a good carnation. A yellow-ground picotee with a purple wire-edge, and bearing the name of Alec, attracted my attention, and at the Midland Show Alec was a variety around which the experts lingered to discuss the points. VISITOR.

BASKET OF ROSE COUNTESS OF SHAFTESBURY.

One of the set of nine baskets of roses that won first prize at the National Rose Society's Autumn Show for Mr. Hugh Dickson.

Fokienia Hodginsi. — In the younger days of many of us, the introduction of a new conifer, more particularly a new genus of coniferæ, would have aroused a great deal of interest. It is different now, and it is questionable if the specimens shown at a recent meeting of the Royal Horticultural Society, when it was given an Award of Merit, were not simply passed over by the majority of visitors. As shown, the little specimens, at least from a horticultural standpoint, bore a great resemblance to the comparatively new Libocedrus macrolepis, which also is a native of China.—W. T.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

MASDEVALLIAS. — The robust growing masdevallias, such as M. Veitchiana, M. coccinea, M. Davisi, M. ignea, and the other species and hybrids of this section may now be examined preparatory to repotting. Before repotting it is advisable that all the leaves of the plants should be carefully sponged to remove dust and insect pests. In most hot, dry seasons, such as we have experienced this year, it will be found that, should the atmosphere become at all dry, the under sides of the leaves will become attacked by red-spider, and so a sharp look-out for these must be kept, and where found, a weak solution of soft soap will aid in their destruction. Where the plants are cleansed before potting it prevents any possibility of disturbance, which is so easily done where the plants have been recently repotted. In dealing with large specimens it is not advisable to repot more frequently than is absolutely necessary. Where the potting compost is in a good state of preservation carefully remove any dead leaf bracts, old flower scapes, and decaying matter about the base of the leaves. Where the moss has become overgrown, carefully remove this, and replace with fresh chopped moss and potting compost as the case may require, but be particularly careful that the centre of the plants is made firm.

POTTING.—Where the plants have outgrown their receptacles, or in cases where the potting compost has become decomposed, it is best to turn the plants carefully out of their pots. Where the new roots are well advanced, and there is likelihood of damage being caused in removing the old compost in the ordinary way, it is a good plan to procure a pail of rain water, and, by immersing the roots in the water, the compost may generally be washed clean away. As this section of masdevallias require an abundance of root moisture during the greater portion of the year, one of the principal essentials to successful cultivation is clean and ample drainage. Fill the pots to at least two-thirds of their depth with drainage. Peat and sphagnum moss, two parts of the former to one of the latter, with sufficient sand and finely-broken crocks added to render the whole porous, make a good compost. See that the peat used is of a durable quality, especially where dealing with large specimens. Press the compost firmly about the base of the plants, mounding it slightly to the centre. After potting water with rain water, wetting the compost through, shade for some days from glaring light, and maintain a humid atmosphere about the plants by damping and syringing among the pots, stages, etc., and should the outside conditions be at all dry, a spraying overhead once or twice a day will be beneficial. The stronger growing kinds, such as M. macrura, M. elephanticeps, M. gargantua, M. cucullata, and others may also be attended to at the present season, but the small-growing kinds, and the M. Chimæra section should have potting delayed until the early spring. —H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

CHRYSANTHEMUMS.—The early-flowering bush varieties should now be placed indoors, and, if possible, in a house by themselves, so that they may be followed by the later varieties. The Japanese and incurved sections are now rapidly developing their buds, and preparations should be made for housing them when this becomes necessary. Vineries and peach houses are generally used for this purpose, so that it is advisable to remove all unnecessary foliage to secure as much light as possible for the plants. Give the house a good syringing, and if the borders are at all dry let them have a thorough watering, so that by the time the plants are brought in the atmosphere will be as dry as possible. Mildew often makes an appearance soon after housing, and as a preventive a syringing with sulphide of potassium, using half an ounce to a gallon of soft water, will be found effective. Overcrowding must be avoided, and a free circulation of air secured on all possible occasions. Continue to feed the plants until the buds show colour, when it must be discontinued. Artificial heat is not necessary until the blooms begin to expand, and then only sufficient to keep the atmosphere dry or exclude frost. More care must be exercised in watering after the plants are housed.

POT ROSES.—The whole batch of these should now be overhauled and the weak ones discarded. Where repotting is necessary this should be done at once. The remainder will need to be turned out of their pots to see that the drainage is clear and clean. Remove a portion of the top soil, and top-dress with fibrous loam, adding a little bonemeal and charcoal. When this work is finished the pots should be plunged in leaves in an open position. This will prevent the new soil drying quickly, and also assist in the formation of new roots. Care must be taken to keep the plants free from insect pests and mildew.

CINERARIAS. — The most forward of these plants should now be potted into their flowering pots, using a fairly rich compost for the purpose, and potting rather firmly. Before replacing the plants, the bed of the cold frame should be sprinkled with soot or lime to prevent slugs doing damage to the foliage. Keep down close to the glass by standing them on inverted pots. Ventilation and shading must be carefully attended to until the plants recover from the check occasioned by potting, after which a plentiful supply of air may be admitted. Rearrange the plants frequently, and give more room as the foliage develops.

VIOLETS IN POTS. — Where these are desired they should be lifted with a good ball of soil and potted. Stand them in a shady corner, where they will soon recover from the check.—A. Grubb, Porter's Park Gardens.

HARDY FRUITS.

THE FRUIT ROOM.—Continue to gather apples and pears as they become fit, arranging them in the fruit rooms to the best advantage; loose strips of wood an inch or two square will be found useful to separate the varieties, and where many are grown they should be carefully labelled, both for instruction and appearance sake. The floor should be damped down morning and evening, or as often as it becomes dry, giving plenty of ventilation till the first sweating of the fruit is over, which will continue for three or four weeks, but after that preservative conditions are best assured by opening the ventilators for a few hours during the middle of the day whenever the weather is favourable.

PLUMS.—Plums are generally bearing a very satisfactory crop. Victoria, Transparent Gage, Monarch, and Coe's Golden Drop may be considered the most reliable kinds for general purposes. Too many varieties will but prove an encumbrance, taking up valuable space that could oftentimes be used to better advantage. These varieties will invariably be found carrying heavy crops if the season is at all favourable. The last-named variety is one of the very best late dessert plums grown. Lose no time in making preparations for planting any wall trees that are required; old worn-out trees should be grubbed out, and when planting time arrives select a few reliable varieties that will maintain a long and continuous supply.

PEACHES AND NECTARINES. — Trees that are making a too luxuriant growth should receive attention by being root-pruned as soon as the borders are sufficiently moist. The general plan of doing this is to dig out a trench from three to six feet from the stems of the trees to be operated on according to their size, severing all the large woody roots at this distance, and preserving the small fibrous ones as much as possible. These should be laid back in new material, or in any case a goodly addition of maiden loam and plenty of lime rubble must be intermixed with the old soil. This should be thoroughly rammed, and too much emphasis cannot be laid on the necessity of having the soil well consolidated to ensure success in cropping. It would be no exaggeration to say that if young trees of stone fruits were annually root-pruned for three or four years this would be most beneficial to their health and cropping capabilities.

AUTUMN PLANTING. — Preparations should be made wherever possible for any new plantations of fruit, as autumn planting is the most satisfactory unless the soil is practically unworkable, when it may be an advantage to postpone the work until early spring. Where new orchards are being formed the drainage in the first place must not be forgotten, as it must carry away any excess of water and keep the land sweet. The cultivation of the land must of necessity be carried out according to the soil and conditions. Provide good square holes, trenched at least two spits deep, and if of very close texture add lime rubble or burnt earth to the staple soil; avoid the use of rank manure, even if the soil is of the poorest description at planting time, the soil being more regularly enriched, and kept sweet by periodical surface dressing.—J. Whittle, Cheveney Gardens.

THE KITCHEN GARDEN.

FRENCH BEANS. — Owing to the continued drought a scarcity of vegetables is within view in many gardens, and much forethought will be needed to secure a supply through the winter. Sow a good batch of French beans in eight-inch pots at the present time, and grow the plants on sturdily in a light house with a temperature of about 55 degrees, allowing plenty of air during fine days, and affording moisture to the foliage accordingly. The plants that have been grown on the south border as advised, and protected by frames, will need to be covered by mats at night.

ENDIVE. — The plants that have sufficiently completed their growth should be lifted carefully with balls of earth to their roots, and planted in frames rather thickly, but not so as to cause them to damp. They can here be protected as necessary against frost. Quantities may be taken to the mushroom house or suitable cellar to blanch as they are required, allowing about a fortnight for each batch to become ready for use. The later stock, if growing in the open, will also require some form of protection, such as planting them in frames with room for development, or placing them closely under the shelter of a south wall, where further coverings can be given during extreme weather.

BEET.—Before sharp frosts set in have this crop pulled and stored. It is very necessary to use care when carrying out this work to keep the roots intact, or they will deteriorate, and not keep a satisfactory colour when cooked. As far as I am aware, there is no better way of storing them than in moderately dry sand in a frost-proof root house.

LEEKS.—These will now be advanced in growth, and a final watering of liquid manure should encourage them to further development. Afterwards draw soil up to the stems with a hoe on a dry day, taking care not to fill the centre of the plants with soil.

CABBAGE.—If the old cabbage plot has been retained for cutting, it will most probably prove very valuable during the autumn and early winter months, there being a great scarcity of greens in most places.

GENERAL REMARKS. — The annual kinds of herbs should be harvested by this. Any that are not dry may be finished in a cool vinery or peach house to make up the stock. A sowing of mustard and cress may now be made under glass for the next supply, as it will only grow very slowly outside after this date. Place handlights over any young radishes that may be partly grown. — C. Flack, Cholmondeley Castle Gardens.

THE NATIONAL CHRYSANTHEMUM SOCIETY,
EARLY AUTUMN SHOW
will be held at the CRYSTAL PALACE
on
OCTOBER 4th and 5th, 1911.
Schedule and full particulars post free from the Secretary,
RICHARD A. WITTY,
72, Savernake Road,
Gospel Oak, London, N.W.

BIRMINGHAM CHRYSANTHEMUM SHOW.
BINGLEY HALL, NOVEMBER 7, 8, and 9, 1911.

Schedules now ready, and all particulars may be obtained on application to
ALFRED NOAKES.
Secretary,
148, Bristol Street,
Birmingham.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

National Chrysanthemum Society.

The Floral Committee met at Essex Hall on Monday, September 18, signed the attendance book, had a brief chat on various points in the work of the society, and then went its way; there was not a bloom on the tables, and nearly everyone was complaining that the early chrysanthemums were late and poor this year, owing to the drought.

In the evening there was a good attendance at the meeting of the General Committee. Owing to the efforts of Mr. Ballantine and Mr. C. H. Curtis, the society now has a complete set of its schedules; these have been bound up, and now form an interesting record of proceedings. Mr. Witty, the secretary, reported a balance in hand of £93 9s. 7d., and a profit of £2 9s. on the society's outing; he also stated that the net cost of the publication of the Conference Proceedings was £21 12s. 10d.

Arrangements were completed for a Chrysanthemum Conference at Carr's Restaurant on December 4 at seven o'clock, when papers will be read by Mr. F. W. Ladds and Mr. Percy Cragg. The society's annual dinner will be held at the Holborn Restaurant on November 23. Judges were elected for the October and November shows, and it was decided that all prize monies be paid to the successful competitors immediately after each exhibition.

National Rose Society.

The autumn show held at the Royal Horticultural Hall on Thursday, September 14, was a great and pleasant surprise to everyone who saw it, and probably the exhibitors themselves were most surprised. The competition was good, with a few exceptions, and both trade and amateur growers turned up splendidly; not only did they come, but they brought flowers, and in a very large number of instances the flowers were quite good; while, if we make allowances for the extraordinary and rainless summer, it must be conceded that in extent and quality the show was a fine one. The day was fairly cool, the roses kept well, and there were plenty of visitors.

NURSERYMEN.

In the premier trade class for three dozen blooms, distinct, Mr. Hugh Dickson, Royal Nurseries, Belfast, was a capital first with fairly large and handsome flowers, among which Mrs. Wagram, C. J. Grahame, Ards Pillar, Gladys Harkness, May Miller, Mrs. David M'Kee, Frau Karl Druschki, and J. B. Clark were exceptionally fine: Messrs. J. Cocker and Sons, Aberdeen, obtained second prize and the silver medal for the best H. T. rose with Earl of Warwick, and silver medal for the best H. P. rose with the beautiful crimson Gloire de Chedane Guinoisseau. Messrs. Alex. Dickson and Sons, Newtownards, co. Down, third; and Messrs. Adam and Craigmile, Rubislaw, Aberdeen, fourth.

The class for eighteen tea or noisette roses brought out five competitors, and premier honours fell to Mr. G. Prince, Longworth, for a set that included excellent examples of White Maman Cochet, Madame Constance Soupert, W. R. Smith, and Souv. de Pierre Notting; Messrs. J. Jefferies and Son, Cirencester, came second, and Mr. Henry Drew, Longworth, third. Messrs. Adam and Craigmile, who were not placed, obtained the silver medal for the best tea rose with a fine Molly Sharman Crawford. Unusually attractive was the first-prize set of twelve vases of exhibition roses, seven blooms of each, staged by Mr. Hugh Dickson; some of the blooms had a few damaged petals, but the flowers were of splendid size for the time of year, particularly those of Lyon Rose, Caroline Testout, Mrs. J. Laing, J. B. Clark, Mrs. Wagram, Ulrich Brunner, Mrs. Stewart Clark, and Frau Karl Druschki; Messrs. J. Cocker and Sons took second place. The best vase of a dozen blooms of any rose was from Mr. Hugh Dickson, and the variety, appropriately, was Hugh Dickson, presented in beautiful form; Messrs. H. Lane and Son, Berkhamsted, second with Marechal Niel, and Messrs. W. Crisp and Sons, Colchester, third.

There were two entries of twenty-four bunches of decorative roses, and first prize fell to Mr. John Mattock, New Headington, Oxford, for a pretty set, in which Duchess of Wellington, Lady Waterlow, Teresa Bevan, La Tesca, and Irish Elegance were good; Mr. John Pigg, Royston, Herts, came second. For a dozen bunches the awards fell in order of mention to Messrs. W. Spooner and Son, Arthur Bridge, Woking; Mr. Frank Woollard, Lewes Road, Brighton; and Mr. Chas. Turner, Slough.

There were three sets of twelve bamboo stands filled with decorative roses, and Mr. John Mattock's premier collection would have looked better had a little more room been allowed it; Felicite Perpetne, Dorothy Perkins, Madame Antoine Marie, Madame Jean Dupuy, Baby Dorothy, Marie Van Houtte, Gustave Regis, and Irish Elegance were his leading varieties; Mr. W. Bentley, Belgrave, Leicester, a capital second, and Mr. H. Drew, Longworth, third. The class for a dozen varieties of polyantha roses brought out four competitors, and Messrs. W. Spooner and Son, Woking, secured the first prize, and showed Leonie Lamesch, Mrs. Wm. Cutbush, White Pet, Jessie, etc.; Mr. G. Prince, Longworth, second, and Messrs. S. Bide and Sons, Farnham, third.

A really superb collection of three dozen bunches of roses, arranged on a space 12ft. by 3ft., won for Mr. John Mattock, New Headington, the premier award in what was a striking and effective class. Mr. Mattock presented particularly good bunches of E. V. Hermanos, Pharisaer, Medea, La Tosca, Lyon Rose, Maman Cochet, Paula, Lady Ashtown, Irish Elegance, Souv. de Pierre Notting, Florence Pemberton, and Reine Carola de Saze; Mr. G. Prince, Longworth was not far behind, and showed grand bunches of Marquis de Sinety, Souv. de Pierre Notting, Marie Van Houtte, Madame Jules Gravereaux, Lyon Rose, Gottfried Keller, and the crimson Chateau de C. Vougeot; Mr. R. Adams, White Wells Nurseries, Bath, third.

Rose hips are always attractive, and have a distinct decorative value, especially when shown in bunches. Messrs. Paul and Son, Cheshunt, had the best nine bunches, distinct, and especially effective were R. microphylla, R. rugosa alba, and R. rubrifolia. Mr. George Prince was second, and he had a splendid bunch of sprays of R. rubrifolia.

BASKETS AND VASES OF ROSES.

Unquestionably the method of showing roses in sprays, as cut, staged in broad baskets, one variety in a basket, is a most effective one, as from it one obtains a fair idea of the manner in which the roses bloom, as well as of their effect en masse.

Mr. Hugh Dickson, Belfast, was a capital first for nine baskets of roses, any sections, one variety in a basket, and he had a grand lot of blooms of Frau Karl Druschki, Countess of Shaftesbury, Hugh Dickson, Irish Elegance, Simplicity, General Jacqueminot, Mrs. Frank Workman, Lady Pirrie, and La Tosca; Mr. John Mattock annexed the second award, and Messrs. Paul and Son came third. The best five baskets of roses were those from Messrs. W. Spooner and Sons, Woking, who led from three competitors with Mons. J. Hill, Caroline Testout, Lyon Rose, Kaiserin Augusta Victoria (very fine), and Prince de Bulgarie; Mr. H. Drew second, and Mr. J. Pigg third.

Three baskets of cut roses (amateurs) found the Rev. J. H. Pemberton to the front with such free-flowering sorts as Ecarlate, Earl of Warwick, and Florence Pemberton; Mrs. H. Balfour, Headington Hill, Oxford, second.

Nine roses of distinct varieties made a good class, and Mr. Hugh Dickson led with Mrs. Aaron Ward, Mrs. David McKee, Betty, W. K. Smith, etc.; Mr. J. Mattock, second, and Mr. W. Bentley, Leicester, third.

GROUPS OF ROSES.

The gold medal for a corner group of roses, tastefully arranged, and representing practically all sections of the flower, was well won by Messrs. Paul and Son, Cheshunt, who set up bowls and stands of Frau Karl Druschki, Mdme. J. Guinnoisseau, Mdme. Melanie Soupert, Lyon Rose, Mdme. Abel Chatenay, etc., over a groundwork of polyantha roses and ferns. The silver-gilt medal offered as second prize was won by Messrs. Hobbies, Lim., Dereham, with an elegant display, in which standard weeping roses, and berried sprays of briar roses played a conspicuous and pretty part.

As usual, there were several competitors in the class for a representative group of cut roses set out on a table space 18ft. by 6ft. These, four in number, made a rare display opposite the main entrance. The gold medal and first prize fell to Messrs. W. and J. Brown, Peterborough, for a very artistic display carried to a considerable height; the stands and tubes were thinly disposed over a groundwork of low vases, and the leading varieties were Lyon Rose, Florence Pemberton, K. A. Victoria, Mdme. Abel Chatenay, Mdme. Jean Dupuy, and Mdme. Constant Soupert. The second prize fell to Messrs. Gunn and Sons, Olton, who were very close competitors, and put up a very handsome and effective display; Messrs. J. Jefferies and Co., Cirencester, came third. Messrs. Alex. Dickson and Sons, Newtownards, were awarded an extra prize.

The finest group of cut roses, arranged on a table space of 60 square feet, was set up by Messrs. George Jackman and Son, Woking; the large bamboo stands of Caroline Testout, K. A. Victoria, Lady Ashtown, Lyon Rose, and White Maman Cochet formed the feature of this exhibit. Second prize went to Mr. F. M. Bradley, Peterborough, whose tall stands were scarcely so well filled as on former occasions.

AMATEURS.

Mr. Eversfield, Denne Park, Horsham, obtained premier honours in the open amateurs' class for eighteen blooms, distinct, and in his set the best specimens were of White Maman Cochet, Perle von Godesberg, Frau Karl Druschki, Mdme. Jules Gravereaux, Lady Ashtown, and W. R. Smith; Mr. Conway Jones, Gloucester, came second; and the Rev. J. H. Pemberton, Havering, had to be content with third place, and Mr. Lindsell failed to secure an award. Mr. G. Speight, Market Harborough, had a fine dozen blooms, and his Horace Vernet secured the silver medal as the best H.P. in the amateurs' section; Mr. W. O. Times, Hitchin, second.

In the class for eighteen roses, distinct, Mr. Mahlon Whittle, Leicester, put up a very beautiful set, his examples of Mdme. Constant Soupert (silver medal, amateurs' tea rose), Lyon Rose, Bessie Brown, Mdme. Jules Gravereaux, Mdme. Hast, Mdme. Pierre Notting, and Florence Pemberton;

Mr. W. Upton, Leicester, second; and Mr. E. B. Lehmann, Ifield Lodge, Crawley, third; eight entries. Mr. B. J. Walker, of Market Deeping, secured the first prize for six blooms, distinct, in a class open to growers of fewer than 500 plants; he had eight competitors. In a class for the same number of blooms, open to growers of fewer than 200 plants. Mr. Whitcombe, Kateshill, Bewdley, was the chief prizewinner.

The best set of a dozen teas and noisettes came from Mr. Conway Jones, Gloucester, and he had lovely examples of W. R. Smith, Maman Cochet, Nita Weldon, White Maman Cochet, and Auguste Comte; Mr. E. M. Eversfield, Horsham, second. Mr. M. Whittle, Belgrave Avenue, Leicester, led for nine teas and noisettes with lovely blooms of Mdme. Jules Gravereaux, Maman Cochet, White Maman Cochet, and Souv. de Pierre Notting; Mr. G. Speight, Market Harborough, second; and Mr. H. R. Darlington, Potter's Bar, third. Mr. W. Upton, Leicester, and Mr. J. Hart, were first and second respectively for six blooms among growers of fewer than 200 tea roses; twelve entries.

Mr. E. M. Eversfield led for four vases of teas and noisettes with Mdme. Jean Dupuy, Mdme. Jules Gravereaux, Maman Cochet, and Souv. de S. A. Prince; Mr. Conway Jones second; and Mr. A. Seale, Bassett, Hants, third. Mr. Eversfield also scored for six vases of roses, and had in his set the premier amateurs' H. T. rose, a fine flower of Earl of Warwick; Mr. G. A. Hammond, Burgess Hill, a good second; and Mr. Conway Jones, third.

For a dozen vases of decorative roses the Rev. J. H. Pemberton had matters all his own way, and in the class for six vases, distinct, the prizewinners in order of merit were Mrs. J. W. Smythe, Sparrows Herne Hall, Watford; Mr. J. Hart, Little Heath, Potter's Bar; and Mr. H. R. Darlington, Potter's Bar.

A splendid set of a dozen bunches of roses, arranged on a space 6ft. by 3ft., won first prize for Mr. T. Stevenson gardener to E. G. Mocatta, Esq., Woburn Place, Addlestone; the varieties, finely shown, were Souv. de Pres. Carnot, Rhea Reid, Maman Cochet, K. A. Victoria, Earl of Warwick, Caroline Testout, Lady Ashtown, Pharisaer, Molly Sharman Crawford, Mary Countess of Ilchester, Madame Ravary, and Mrs. T. Roosevelt; Rev. J. H. Pemberton second, and Mr. Conway Jones, Hucclecote, Gloucester, third. Mr. Thomas Stevenson, Woburn Place Gardens, Addlestone, led in the class for six bamboo stands of decorative roses, with well-filled arrangements of White Pet, Prince de Bulgarie, Orleans Rose, Madame Abel Chatenay, Gruss au Teplitz, and Papillon; Mrs. J. Walter Smythe, Sparrows Herne Hall, Watford, second; and Mr. Conway Jones third.

The Rev. J. H. Pemberton led in the class for seven bunches of roses, in vases, and here he had Earl of Warwick, Frau Karl Druschki, and Florence Pemberton in good form; Mr. H. R. Darlington secured second award, and Mr. Conway Jones was third. For five vases of roses Mr. H. Robins, Ingatestone, was first with E. G. Mocatta, Esq., Addlestone, second; and Miss Beatrice Langton, Raymead, Hendon, third. For three vases Mr. S. W. Burgess, Old Bank House, Tonbridge; Rev. L. Chalmers Hunt, William Rectory, Hitchin; and Mr. W. P. Packridge, Petersfield, secured the prizes as mentioned.

NEW ROSES.

Not many new varieties were submitted on this occasion. Sunburst, raised by M. Pernet-Ducher, we have seen before, and its charming colouring is very attractive. The only variety gaining official recognition was Mrs. Muir Mackean, a splendid broad-petalled H. T. rose, with deep rose-red colouring that is suffused with crimson-scarlet in the newly opening blooms. If this will keep its colour during unkind weather it should become popular. The variety was shown by Messrs. S. McGredy and Sons, Portadown, Ireland, and gained a silver gilt medal.

DECORATIVE EXHIBITS.

First prize for a table decoration of roses fell to Mrs. G. A. Hammond, Cambrian House, Burgess Hill, for a design of Irish Elegance, but one which was, to our way of thinking, somewhat weak; Mrs. Tisdall, Woodford Green, was placed second with Lyon Rose and Mrs. Frank Tisdall; the colours blended well, and this table attracted more attention than any other from the visitors; Miss Beatrice Langton, Hendon, third.

The bowls of roses (amateurs') were not, on the whole, particularly striking; Mrs. Courtney Page, Earldoms, Enfield, led with blooms of Kaiserin Augusta Victoria in fine condition; Mrs. Tisdall came second with Edward Mawley; and Mrs. G. A. Hammond was placed third. For a bowl of exhibition roses Mrs. Tisdall was again first, and she used the variety Mrs. A. Tate; Mrs. J. W. Smith second with Irish Elegance; and Mrs. J. Davis, Burgess Hill, third with a bowl of Lady Pirrie.

In the open class for a bowl of roses Mr. Hugh Dickson led the way, followed by Mr. E. J. Hicks, with the pretty Comtesse de Cayla; Messrs. S. Bide and Son coming third.

East Anglian Horticultural Club.

There was a goodly number of members to support the president (Mr. L. Smith) at the September meeting of this club. The weather report for the past month, supplied by Mr. John H. Willis, revealed some phenomenal figures in temperature and sunshine. The exhibition tables were well filled in all sections. Of the more prominent of these a word of special praise was due to Mr. F. Williams, gardener to Louis Tillett, Esq., Catton, for his fine pot of Cypripedium insigne. Mr. W. Shoesmith, gardener to F. W. Harmer, Esq., Cringleford, also staged a very good cypripedium. Mr. D. Howlett, Thorpe, was great with dahlias, securing the principle prizes, and also an award of merit for a new pink seedling pæony-flowered variety. Mr. S. Hunt brought up a grub, which is attacking narcissus bulbs, and those plants allied to it, causing serious loss. He also brought up two fine fruits of Cox's Orange Pippin, infected by a new form, locally, of a fungus that spots the fruits a deep crimson under the epidermis.

Mr. C. H. Fox, gardener to Lady Mansel, Old Catton, read a paper upon the subject of "Stove and Greenhouse-Flowering Plants." The paper was not given for its botanical value, the writer said, but to give practical experience upon some of the choicer subjects which should be grown for table and other decoration. Throughout it was practical, and gave cultural hints on every side of the plants' treatment.

A large number of members took part in the very educational discussion which followed.

Reading Gardeners' Association.

By the kind invitation of the President, the members of this association were recently afforded the opportunity (a treat enjoyed more than once before) of inspecting his fruit plantation at Caversham, and considerably more than 100 availed themselves of Mr. Parfitt's hospitality. Assembling at five p.m., the party were received by their host, and under his personal conduct proceeded at once to inspect the heavily-laden trees, which bore silent witness to Mr. Parfitt's careful and thorough cultivation. An hour was quickly passed rambling through the orchard, and during this time many were busy with pencil and note-book making copious observations to be used either in the planting or growing season to follow. Shortly after six p.m. tea, thoughtfully provided by Mr. Parfitt, was taken in a shady corner of the plantation, and afterwards the President announced that he had received letters from the Vice-president (Mr. Leonard Sutton) and Mr. W. Pole Routh expressing regret at their unavoidable absence.

Mr. Parfitt then expressed the pleasure it gave him to see a large number of members present, and pointed out that although his orchard was principally devoted to the cultivation of that splendid apple Cox's Orange Pippin, many other well-known favourites also found a place. Mr. Parfitt explained that although, early in the year, he had grave doubts about securing a crop, by careful handling, copious watering, and heavy mulching, he had succeeded in supplying what nature, in this marvellous year, had so largely withheld, and this, in combination with the glorious sunshine and great heat, had produced a record crop for quality and "complexion." Mr. Parfitt informed his guests that during June, July, and August he had used 380,000 gallons of water, equal to 1,700 tons, and equivalent to a rainfall of eight inches. Many tons of stable manure were used as a mulch to prevent loss of moisture from evaporation.

Mr. Powell, in proposing a vote of thanks to the President for his kindness, said that all would go away wiser for the splendid object-lesson they had enjoyed, which proved that expenditure in the right direction had been repaid ten-fold.

The vote was carried with acclamation, and cheers having been given for the President, the party dispersed.

United Horticultural Benefit and Provident Society.

The monthly committee meeting of this society was held at the Royal Horticultural Hall, Vincent Square, Westminster, on Monday evening, September 11, Mr. Charles H. Curtis in the chair. The death certificate of the late Mr. George Attrill was produced, and the sum of £42 4s. 8d. standing to his credit was granted his nominee, Mrs. Attrill. The death certificate of the late Mr. George Thompson was also produced. Two amounts of interest on deposit accounts were granted to members, as per Rule 18. The amount of sick pay for the past month was £30 10s. Another discussion took place on the National Insurance Bill as affecting this society, pending a further communication from the Treasury.

North-East of Scotland Horticultural and Arboricultural Association.

A meeting of those interested in the resuscitation of this association was held in the Aberdeen Corn Exchange on Saturday evening, 2nd inst. There was a somewhat poor attendance, and Mr. David Edwards presided. The Chairman explained the object for which the meeting had been called together, and said that the association had now been in abeyance for seventeen years. For some time past there had been a desire on the part of several of the old members that the association should once more be brought into existence, and, in his opinion, there was a wide field in Aberdeen for the work of such an association in disseminating among young gardeners information that would be of value to them in their profession. That the desire to resuscitate the association was an earnest one was proved, he thought, when he informed them that they had with them that night Mr. Reid and Mr. Wyllie, who had discharged the duties of secretary and treasurer of the association seventeen years ago. They had also with them one of their oldest members in the person of Mr. France. Mr. Wyllie referred to the small attendance at the meeting, and said that much more enthusiasm would have to be manifested before the association could be resuscitated. Mr. France spoke of the needs of such an association, and said they had the funds for the working of the association, and all they required was energy and enthusiasm on the part of the members to bring the success it deserved. Mr. J. B. Rennet, the secretary of the Aberdeen Horticultural Society, also referred to the help which the association would be to horticulturists in the way of initiating them into the scientific work of their profession.

After further discussion it was agreed

Dont Buy

ORNAMENTAL TREES and SHRUBS,

FRUIT TREES or ROSES,

WITHOUT FIRST SEEING

J. CHEAL & SONS' STOCK

. . AT . .

Lowfield Nurseries, CRAWLEY,

OR SENDING FOR CATALOGUE.

113 Acres of the Finest Stock. ***New Illustrated Catalogue Post Free***

There's a Call from the Garden for

CLAY'S

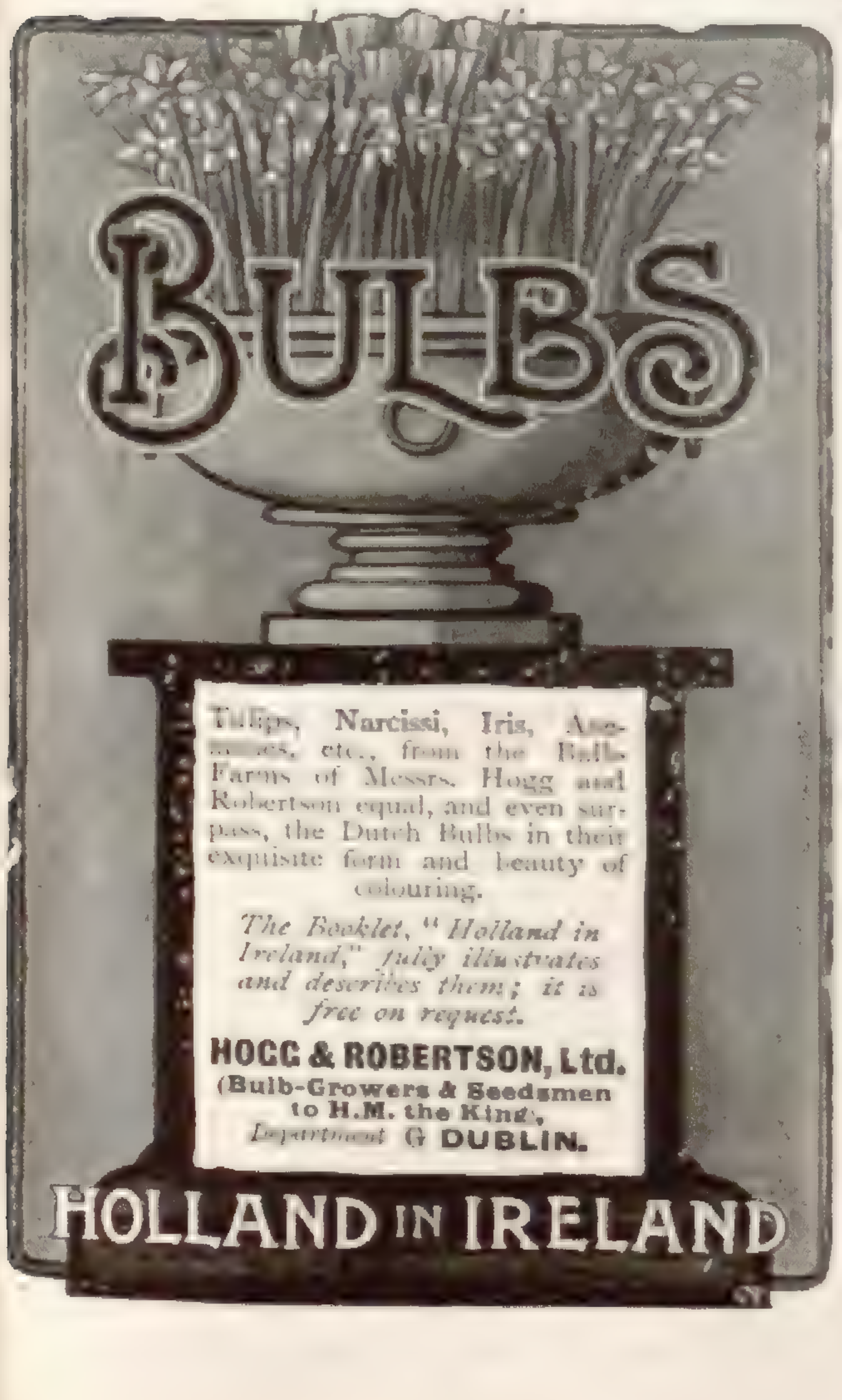
CLAY'S LONDON FERTILIZER
TRADE MARK.

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK, AS AT SIDE.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. Fourth Edition (Second Reprint), 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Manure Manufacturers and Bone Crushers, **Stratford, London, E.**



Tulips, Narcissi, Iris, Anemones, etc., from the Bulb Farms of Messrs. Hogg and Robertson equal, and even surpass, the Dutch Bulbs in their exquisite form and beauty of colouring.

The Booklet, "Holland in Ireland," fully illustrates and describes them; it is free on request.

HOGG & ROBERTSON, Ltd.
(Bulb-Growers & Seedsmen to H.M. the King),
Department G DUBLIN.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.

Our Work has stood the test of time.

ONCE USED. ALWAYS USED. **The 'PATTISSON' LAWN BOOTS**

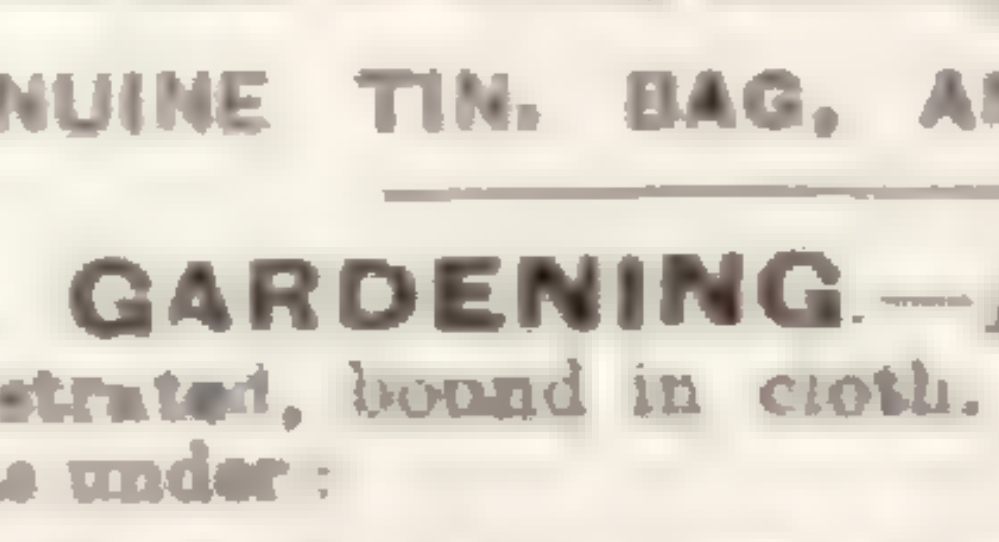


FIG. 1.

Simplest! Strongest! Most Economical! Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or Solid Rubber. Fig. 1 can be REFITTED repeatedly, equal to New Boots. Rubber Soles strongly recommended.

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS

Silver Medal—Royal Horticultural Society.

HUNDREDS OF TESTIMONIALS.

The Field says: "As good as anything that could be devised."

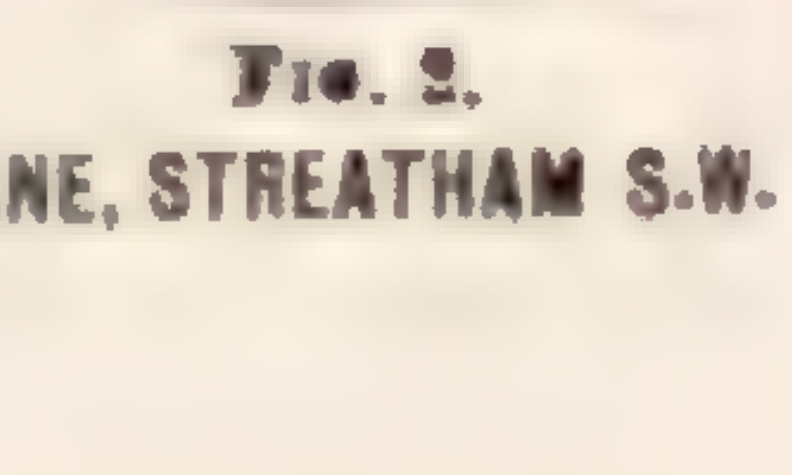


FIG. 2.

Illustrated Price List from—

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM S.W.

BENTLEY'S
WEED DESTROYERS

Utterly annihilate Weeds, Moss, Dandelions, and all other Weeds on Garden Walks, Carriage Drives, etc.

HAVE THE LARGEST SALE IN THE UNITED KINGDOM!
ARE THE MOST POWERFUL MANUFACTURED!
ARE THE MOST PERMANENT IN EFFECT!

LIQUID (Poison).

Double Strength (1 to 50).

			£	s.	d.
3 gallons, to make	153	gallons ...	£0	10	0
6 ,,	,, 306	,, ...	0	18	0
12 ,,	,, 612	,, ...	1	13	0
20 ,,	,, 1,020	,, ...	2	7	6
40 ,,	,, 2,040	,, ...	4	12	6

Special Concentrated Strength (1 to 80).

			£	s.	d.
3 gallons, to make	243	gallons ...	£0	14	6
6 ,,	,, 486	,, ...	1	7	0
12 ,,	,, 972	,, ...	2	6	0
24 ,,	,, 1,944	,, ...	4	10	0

BENTLEY'S
COMPOUND LIQUID **QUASSIA EXTRACT**
(THE ORIGINAL).

The deadliest foe of Green, Black, and White Fly.

The insecticide of insecticides for roses, chrysanthemums, tomatoes, wall and bush fruits, and other trees.

SAFE TO USE ANYWHERE AND EVERYWHERE

20 Galls., 3/6 per Gall.; 10 Galls., 3/7 per Gall.; 5 Galls., 3/8 per Gall.; 1 Gall., 4/2; ½ Gall., 2/6; 1 Quart, 1/6; 1 pint, 1/-.

Carriage Paid on 7/6 orders and upwards.

WHOLESALE MANUFACTURERS,
JOSEPH BENTLEY LIMITED,
Chemical Works,
BARROW-ON-HUMBER, HULL.

that a circular should be issued to all those in Aberdeen interested in the work requesting their attendance at a further meeting to be held a fortnight hence, when the question of resuscitating the association would again be considered. Mr. Wyllie afterwards intimated that the funds standing to the credit of the association amounted to £14 2s. 5d. The meeting closed with a vote of thanks to Mr. Edwards for presiding.

Messrs. Dickson and Robinson's Vegetable Show.

Three years ago Messrs. Dickson and Robinson, of Manchester, inaugurated an onion show, for the purpose of inducing a little friendly rivalry among the wide circle of gardeners who grow their well-known Premier onion. The success that attended that venture was duly recorded in the pages of the Gardeners' Magazine. Encouraged by repeated success last year, the firm decided that their third show should follow the lines of a general vegetable show, with classes for all seasonable vegetables, and on Wednesday, September 13, the show was opened in a spacious building secured for the purpose, situated in close proximity to the Manchester Cathedral.

In common with all horticultural shows held during the latter half of this phenomenal season, entries suffered somewhat in consequence of drought, but in spite of this, the display that came before the judge and the goodly crowd of visitors was of great excellence, reflecting credit upon the exhibitors for skilful cultivation under difficulties, and upon the firm for the high quality and stamina of their strains of vegetables.

Three classes were provided for "Premier" onions, one for four bulbs, open to the United Kingdom, a second class for four bulbs, open only to growers in or north of Birmingham; and a third for the heaviest single bulb. There were forty entries in the first class, and really handsome onions were staged throughout. Almost every entry brought uniform and symmetrical bulbs of good size, the most conspicuous fault being a trifle of scorching and blistering that was here and there apparent. The first prize was secured by Mr. F. West, The Gardens, Hackwood Park, Basingstoke, who showed four beautiful globular bulbs of even size, clear skinned, and well finished; Mr. W. H. Davis, Castle Hill Gardens, Buckland Newton, Dorchester, was second with another good dish; Mr. Arthur Cobb, The Gardens, Duffryn, near Cardiff, had four solid bulbs with good shoulders, for which he secured third prize; and Mr. Thos. Jones, Bryn Penylan, Ruabon, came fourth, losing points through one or two soft spots in his otherwise good bulbs. Fifth prize went to Mr. Henry Folkes, Gaddesden Place, Hemel Hempstead; sixth to Mr. H. Tysoe, The Gardens, The Lodge, Bedford; and seventh to Mr. Thos. Sparkes, Wimblehurst, Horsham, Sussex.

Nineteen entries in the class for growers north of Birmingham, made a good display, Mr. T. Jones, Ruabon, scoring with four beautiful specimens; second prize was awarded Mr. R. H. Smith, Newton Hall Gardens, Newton, his bulbs, though smaller, being models of what an onion should be. Mr. J. Kean, The Gardens, Ford House, Ulverston, was third, good weight being spoilt by coarseness; fourth went to Mr. E. Winchester, Brookside, Rubery, Birmingham; Mr. E. Jones, Rhiewport Gardens, Bevnew, Montgomery, fifth; Mr. Mills, The Gardens, Shavington Hall, Market Drayton, sixth; and Mr. Ibbs, Shavington, seventh. Mr. Arthur Cobb, The Gardens, Duffryn, Cardiff, scored for the heaviest onion, the weight being 3lb. 2oz.; the bulb was, however, a coarse one, and roughly finished.

One bunch of tomato, "Moneymaker" brought thirteen entries, and some wonderful bunches were shown; the winning lot had twenty-one symmetrical fruits, eighteen of which were ripe. Mr. Thos. Abbott, The Holms Gardens, Regent's Park, London, was the exhibitor; Mr. Thos. Heaman, The Gardens, Poynton Towers, near Stockport, came second. Mr. G. L. Blackburn, Bericote House Gardens, Leamington, was third, his fruit being green; fourth; Mr. E. H. Caterer, Dunoran, Tunbridge Wells, and Mr. Barker, Clumber Gardens, Worksop, fifth.

Twenty-two dishes of runner beans faced the judge, and a capital lot they were. Mr. John Tomlinson, Foxes Green Farm, Whitegate, near Northwich, was the premier winner, his beans being quite a foot long and very crisp; second prize was taken by Mr. H. Folkes, Hemel Hempstead, the other prizes going to Mr. F. West, Hackwood Park; Mr. W. Cox, Oakfield Gardens, Bridgwater; and Mr. G. W. Young, Rampton Manor, Lincoln. Six roots of Market Favourite beet made another strong class, Mr. J. Oakes, 60, Carrington Road, Flixton, Manchester, scoring first, and followed by Mr. G. W. Young; Mr. Mills, Shavington; Mr. Wm. Hester, Inwood Gardens, Templecombe, Somerset; and Mr. H. Bishop, The Gardens, Birch Hall, Colchester, in the order mentioned.

The first prize for three Sugarloaf cabbages was secured by Mr. George Ashby, Prospect Grange, Irlam; Mr. Levi, Brazendale, second with three of the hardest-hearted specimens one could wish for; third prize went to Mr. W. Bricknell, Sherston Manor, Northenden; Mr. Thos. Guy, The Gardens, Halsall House, Ormskirk, fourth; and Mr. R. Walker, Altrincham, fifth. Mr. T. Jeeves, Holbeach, led for six Perfection carrots; second going to Mr. E. Jones, Berriew, Montgomery; third to Mr. W. Hooper, Radlett Lane, Shenley, Barnet; fourth to Mr. H. Tysoe, Bedford; and fifth to Mr. Corbett, Mulgrave Castle Gardens. For Matchless Shorthorn carrots the prizes were awarded to Mr. Jackson, Greg-y-Nog, Newtown, Montgomery; Mr. Jees, Holbeach; Mr. H. Tysoe; and Mr. E. Winchester. Snowdon cauliflowers came up very well, the entries numbering eleven, and the whole of the exhibits being of better quality than we have seen at many an open show this season. Mr. Jackson, Greg-y-Nog, Newtown, was the winner, his trio being close, white, and of good size; Mr. Geo. Ashley, Irlam, was a good second; and the others went to Mr. Hooper, Mr. A. Leary, The Gardens, Swanscoe Park, Macclesfield; and Mr. T. Jones, Ruabon.

The Prize Pink celery exhibited were fine, well-blanched sticks, the seven entries all running close for the coveted awards. Mr. Winchester led, with Mr. H. Tysoe a close second; third going to Mr. Bishop, with Mr. Hooper fourth, and Mr. Barker fifth. Another interesting class was that for Exhibition leeks, and here Mr. H. Tysoe scored a well-merited victory with half a dozen splendid specimens; Mr. Miller was a good second, just losing points on evenness; Mr. E. Jones, Berriew, Montgomery, third; Mr. Wm. Hester, Templecombe, fourth; and Mr. J. Oakes, Flixton, fifth. Parsnips filled a long table, and included some fine roots, especially those for which Mr. H. Bishop, Colchester, was awarded first prize. Other classes were for savoys, turnips, and peas, the names of Messrs. T. Guy, A. Cobb, E. Jones, and R. Walker figuring among the winners.

The only resemblance between a Pine Spray Syringe and others is in the shape of the barrel. The metal is more substantial. For the rest, the combination spraying head renders Spray, Rose, and Bend instantly obtainable without the addition or removal of a single fitment, while the adjustable leather bucket plunger gives perfect suction, never allows water to escape past it and up your sleeve, and wears interminably.

A written request from your ironmonger or seedsman, and a Syringe will be sent in 24 hours for your approval. Price **10/6.** Sole proprietors and manufacturers. **Robinson Bros., Ltd., West Bromwich.**

PINE SPRAY SYRINGE (patent).

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

LABURNUM FLOWERING IN SEPTEMBER.—T. H., Tewkesbury: The flowering of the laburnum at so late a date is due to the prolonged dry and bright weather, coupled with some suitable local condition. The buds that should have remained dormant through the winter have extended, expanded, and produced flowers; it will be interesting to know how the tree will act in the coming year, and we shall be glad if you would make a note of its subsequent behaviour for us. A fortnight ago we saw a bush tree of Warner's King apple, about 9ft. high, and as much through, carrying scores of clusters of blossom. The tree was lifted last autumn for the purpose of checking excessive growth, and also because it was extending over a pathway; this season it carries a few fruits, has made little growth, and, as indicated, many of the buds have already produced flowers. Doubtless somewhat similar occurrences are numerous this season.

DISEASED CUCUMBERS. — R. M. P., Leicester: Eelworms are the cause of the trouble, and at this date it is useless to attempt a cure. Take out the plants and burn them, and thoroughly sterilise the soil with gas lime or great heat. Clean the pit thoroughly, not missing any part of it. If the pit needs painting let this work follow the cleaning, and then, with a coat of hot limewash on all the brickwork, the structure should be fit for occupation again. Next spring obtain soil from a new source, or else sterilise the compost before use.

NEW GARDEN WITH CHALKY SOIL.—M. M., Bucks: A garden at an elevation of 550ft. above sea level, on the chalk, facing north, and with a distinct slope towards the north, is in no sense an ideal one. One important bit of information you have omitted is the depth of soil over the chalk; so very much depends upon this, for unless you can trench the ground all over, or at least double dig it, the prospects of successful gardening are small. Pig and fowl manure are useful, but must be used sparingly, but leaf-mould, which you say can be easily obtained, should be added as freely as opportunity permits, while farmyard manure should also be used if obtainable. Arrangements must be made for the rapid removal of surface water at the lower levels. If the ground is terraced across the middle this would save labour eventually and serve to prevent the rainfall from passing too quickly from the upper portion; a wall or stout fence at this point would also afford opportunities for the culture of choice fruit trees on the southern exposure and hardier subjects on the northern side. If you can obtain a fair depth of soil practically all kinds of fruit trees could be cultivated, but stone fruits, such as cherries, plums, and damsons, would find the chalky soil to their liking. Bush trees would be preferable to standards on such a soil, and at such an elevation. If you take a quiet walk round the neighbourhood, and make notes of the crops that do best in the surrounding gardens, you will have an excellent guide for planting, and subsequent experience will soon enable you to add to the list of subjects. You have two great advantages to set against the several disadvantages, and these are a plentiful supply of fowl manure and leaf-mould. After the initial working, use leaf-soil freely for mulching any and every kind of crop, and, if the fowl manure is mixed with about twice its bulk of dry soil, and stacked in a dry open shed, it will provide excellent material for top-dressing in spring and summer for the purpose of accelerating growth and increasing the size of fruits.

IVY ON YOUNG TREE.—S. J. W., Minehead: It would be a great mistake to allow the ivy to strangle the tree. It will not be sufficient to sever the ivy at the tree base, and fork out the roots; every branch must be pulled from the tree trunk, or the aerial roots may keep them alive.

RED-PLUMED GRASS ON THE BROADS.—C. L. B., Derby: The strong-growing grass that is so common throughout The Broads of Norfolk and Suffolk, and which is particularly elegant at this season of the year, with its graceful red-purple plumes, is Phragmites communis. It grows in or close to water, and is widely distributed from Shetland to the Channel Islands, and found in all the Continents. It has many uses; in water gardening it occupies no mean position, provided there is room for it; as shelter for water fowl it is especially good; and the reeds are extensively utilised for thatching. On estates where the phragmites is plentiful the dried reeds provide a handy means of protection against frost and biting winds, as they can easily be made up into hurdles or into mats.

CHERRIES NOT CROPPING.—C., Kettering: Cherries are not a success everywhere; they like a goodly proportion of lime in the soil, ample drainage, and protection from cold winds when flowering. Bees do play a considerable part in the distribution of pollen, so that they are both useful and profitable in the garden and orchard.

NAMES OF PLANTS.

W. E. S., Chester.—Odontoglossum Lindleyanum.

T., Wells.—Your specimen was named in our issue of September 16.

C. O., Fairford.—Veronica anomala; see next issue for name of other specimen.

I. S., Croydon.—1, Calceolaria thyrsiflora; 2, Rudbeckia laciniata fl.-pl.; 3, Hibiscus syriacus.

C. G. B., Oswestry.—1, Sedum Ewersi; 2, Verbena venosa; 3, Colchicum autumnale; 4, Alyssum incanum.

P. P., Saxmundham.—1, Phragmites communis; 2, Ceratostigma plumbaginoides; 3, Solidago californica.

G. H. G., Devizes.—Hibiscus syriacus; there are a number of garden varieties of this useful autumn-flowering shrub, and they are all flowering well this warm season.

NAMES OF FRUITS.

D. S., Ipswich.—Lady Sudeley.

W. W. M., Aberystwith.—1, New Hawthornden; 2, Colonel Vaughan.

T. B., Medmenham.—1, Worcester Pearmain; 2, Warner's King; 3, King of the Pippins.

F. F. J., Leatherhead.—1. Golden Noble; 2, Peasgood's Nonsuch; 3, Catillac; 4, Blue Imperatrice.

W. K. E., West Bromwich.—1, Ribston Pippin; 2, not recognised; 3, Dumelow's Seedling; 4, Cox's Pomona; 5, Golden Noble.

R. M., Gosport.—1, Bismarck; 2, Worcester Pearmain; 3, not a good specimen, probably Bismarck; 4, Beurre Diel; 5, Louise Bonne of Jersey.

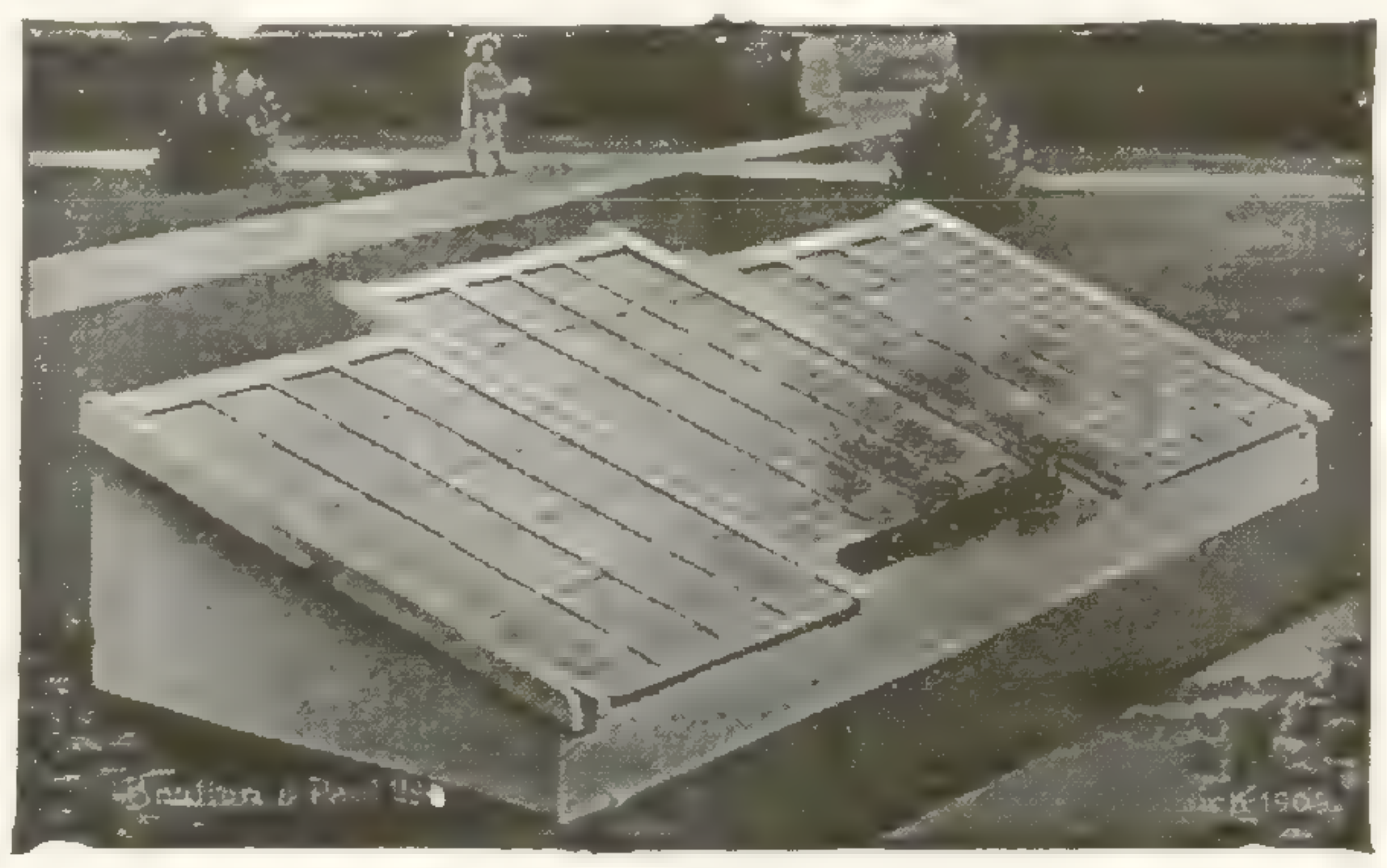
GARDENING ENGAGEMENTS.

Mr. J. J. Nock, a member of the gardening staff of the Royal Botanic Gardens, has been appointed by the Secretary of State for the Colonies, on the recommendation of Kew, Curator of the Hakgala Gardens, Ceylon.

Mr. William F. Rowles, for some years general foreman at Ickworth Gardens and previously of Tranby Croft Gardens, has been appointed head gardener to the Right Hon. Lord Ninian Crichton-Stuart, Falkland Palace Gardens, Falkland, Fifeshire. He enters upon his duties September 25.

PRESERVE YOUR PLANTS
during the Winter Months by using our well made

No. 75. MELON AND CUCUMBER FRAME.
Painted three coats, glazed 21 oz. glass.



4 ft. by 6 ft. £2 0 0 | 8 ft. by 6 ft. ... £3 0 0

Garden Frames
in every variety always in stock.
High-class Finish in the Very Best Materials.

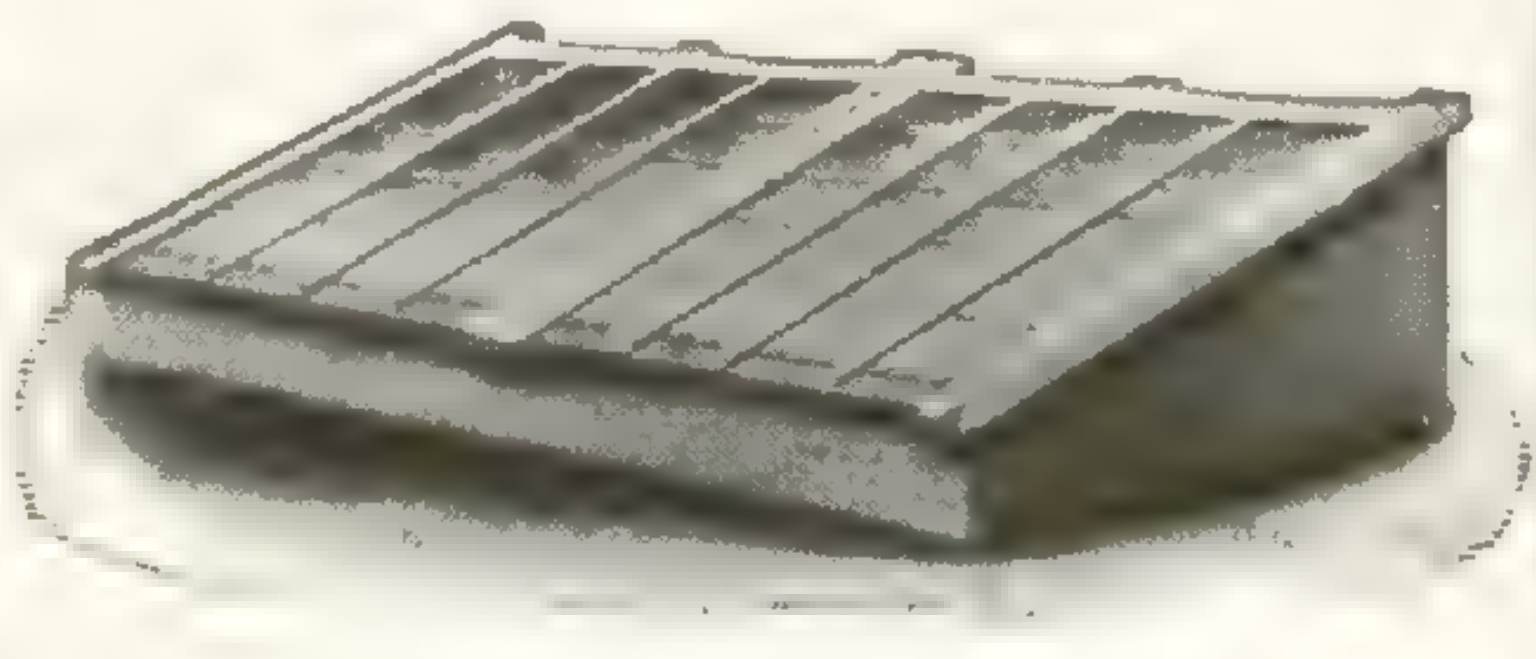
Pit Lights.
6 ft. 1½ in. by 4 ft. Painted and Glazed 14/- each
Unpainted and Unglazed ... ... 5/- „

Double Glazed Lights.
4 ft. 7in. by 4 ft. 3 in. Painted and Glazed, 15/6 each

Improved Fruit Trays.
30 in. by 19 in., 18/- doz.; 24 in. by 15 in., 15/- doz.
Carriage Paid on one dozen Trays and over.

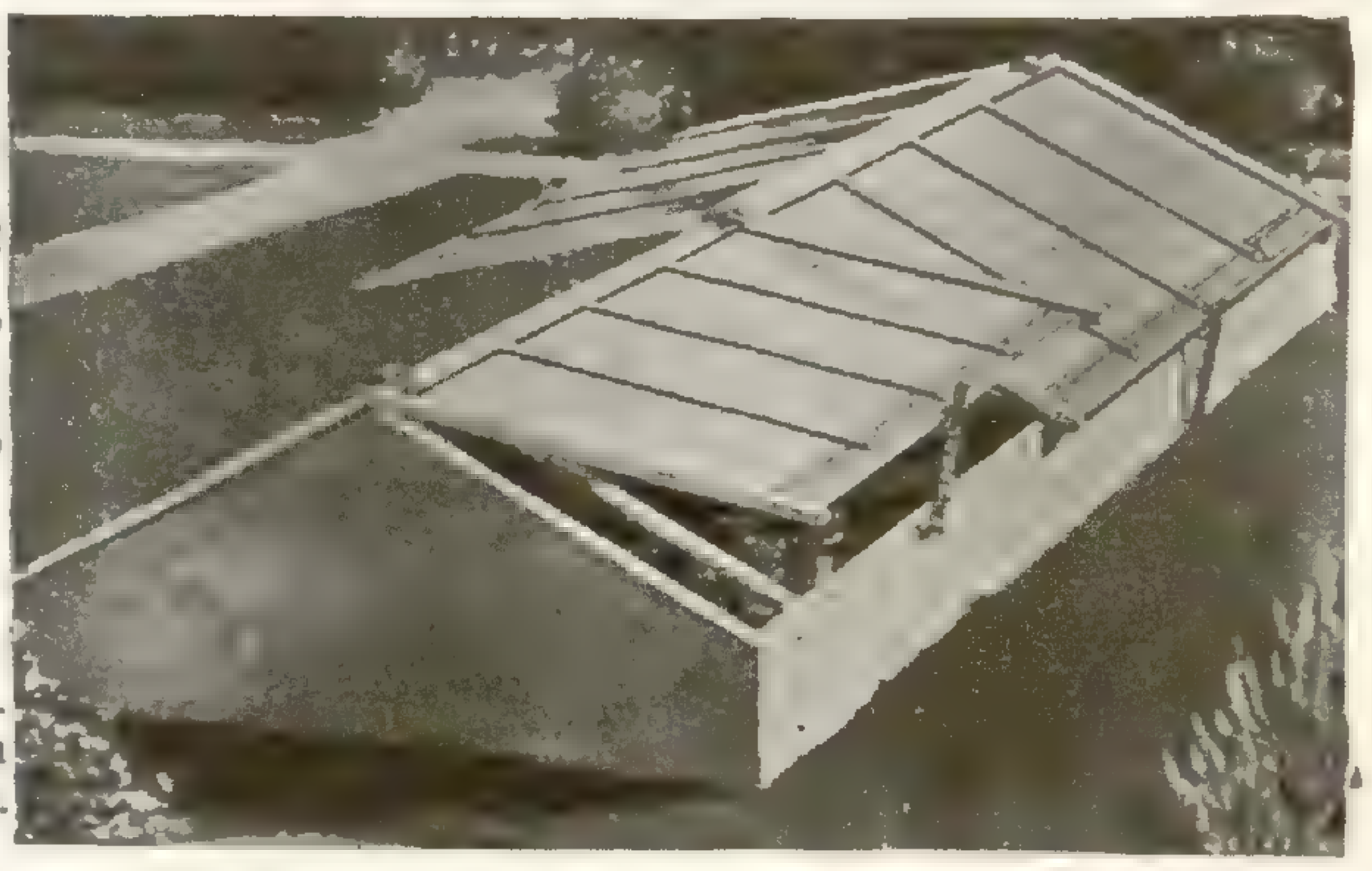
Reed Mats. 4 ft. 6 in. square, 20/- doz.

SEND FOR PRICE LISTS.



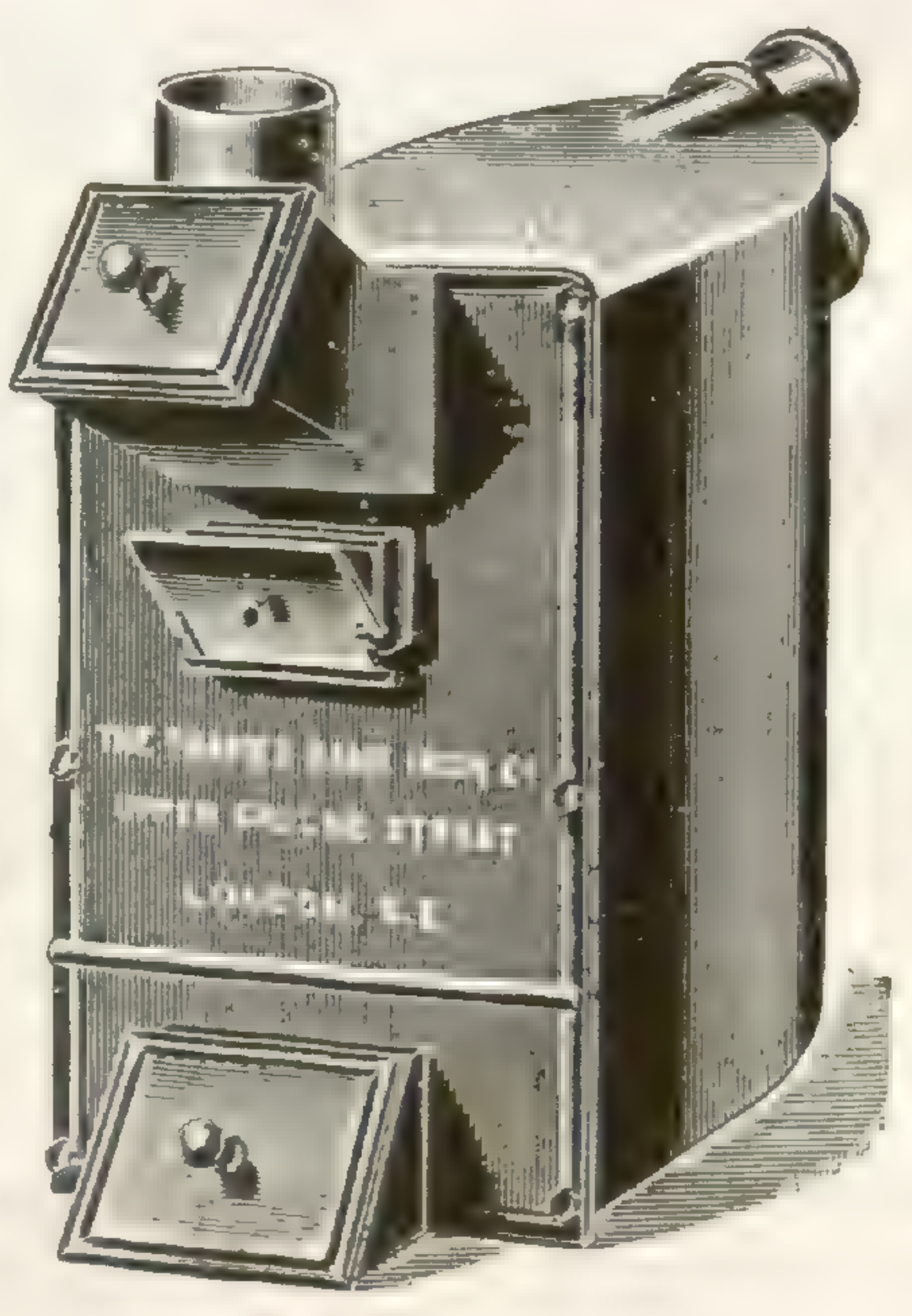
No. 77. VIOLET FRAME
(as illustrated).
6 ft. by 4 ft. £1 15 0
9 ft. by 4 ft. 2 7 6

No. 60.
PORTABLE PLANT PRESERVER
6 ft. by 3 ft., £1 14 0
6 ft. by 4 ft., £2 5 0
All Frames and lights Painted three coats. Glazed with 21 oz. glass.



Carriage Paid on Orders of 40/- value to most Goods Stations in England and Wales.
BOULTON & PAUL, LTD., NORWICH.

'Phone: Hop. 763.
When next a Small Boiler you require
TRY
THE HEEL

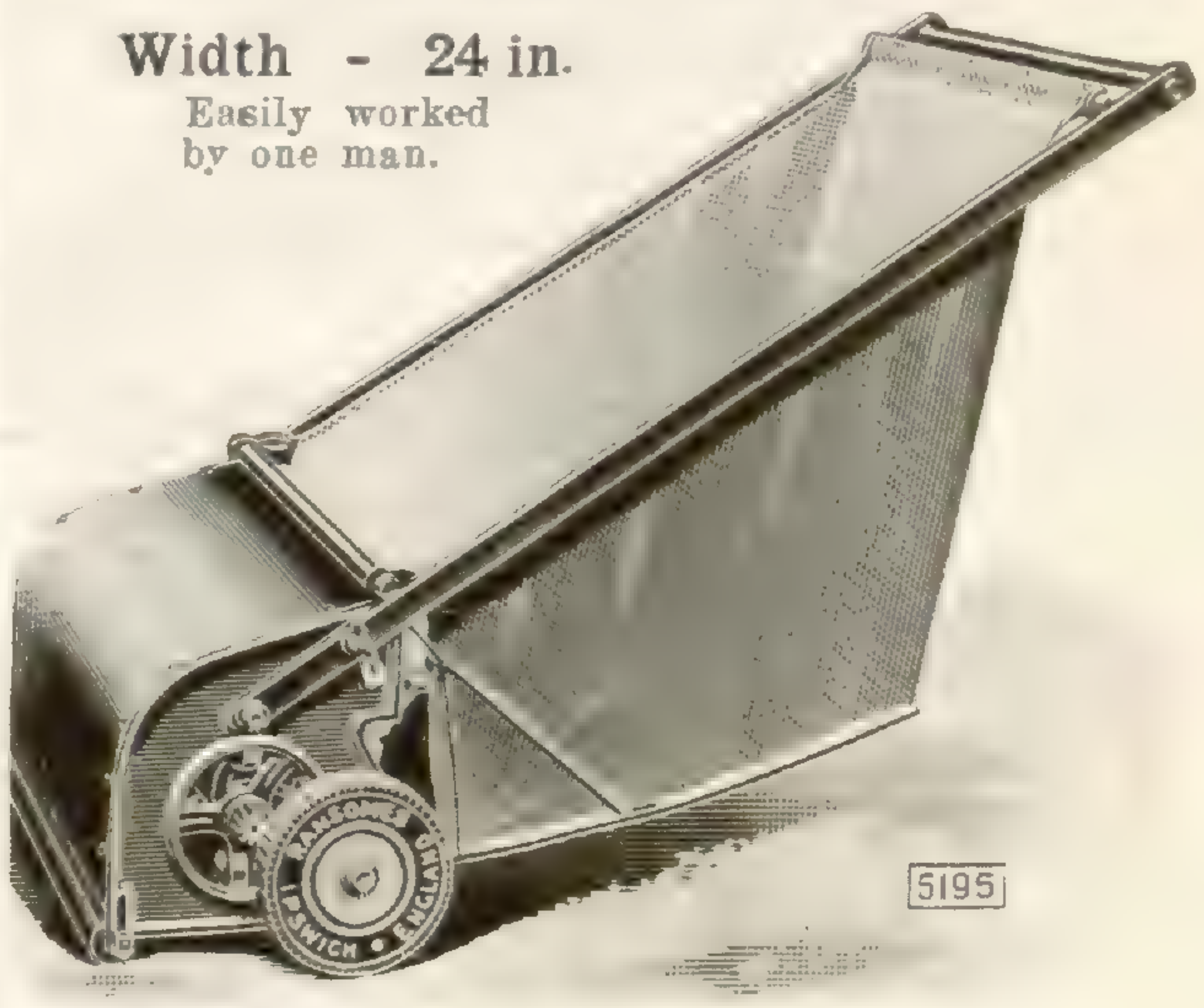


NONE TO BEAT IT.
THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.
4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

LOAM. LOAM. GOOD OLD FIBROUS YELLOW LOAM.
Quotations given for wagon loads to any station, or supplied in one cwt. bags.
Loam Merchants: L. G. SIMMONS & Co.,
YORK ROAD, KETTERING.

RANSOMES' LAWN SWEEPERS
have proved themselves most effective in use, and economical in time, as compared with the tedious process of sweeping by hand. To meet the demand which has arisen for a lighter and cheaper machine, R. S. & J., Ltd., have brought out the one illustrated, in which the driving is done by two side wheels, and a canvas collector is fitted so that the weight is reduced and the draught considerably lightened.

Width - 24 in.
Easily worked by one man.



RANSOMES, SIMS & JEFFERIES. LTD., IPSWICH.

RATS Exterminated by "LIVERPOOL" VIRUS
without danger to other animals and without smell from dead bodies. In tins ready prepared with the bait. Virus for Rats, 2/6 and 6/-; for Mice, 1/6.
Of all Chemists. *Write for particulars to—*
EVANS SONS LESCHER & WEBB, Ltd.,
Dept. G.M., 56, Hanover Street, LIVERPOOL.

EPPS'S SELECTED PEAT
For Choice Plants, Ferns, Rhododendrons, &c., &c.
SPECIAL ORCHID PEAT.
Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.
Prices on application to
EPPS & CO., Ringwood, HANTS.

INTERNATIONAL HORTICULTURAL EXHIBITION, 1912.

To the Editor of The Gardeners' Magazine.

Sir,—The good people who are responsible for the management of the International Horticultural Exhibition of 1912 seem to have looked upon themselves as of so much importance that they could do just what they please—but I venture to think they are mistaken. We ordinary mortals who have to earn our bread and butter are not disposed to "table our dust" to the tune of two pounds for the privilege of entering the sacred precincts on the opening day, or for thirty shillings if we can proudly write F.R.H.S. after our humble names. I have talked to many an enthusiastic garden-lover—I am not thinking of our good friends in the trade—and they, one and all, are agreed that the promoters of the exhibition, if they persist in their course, are "riding for a fall." I would like my man to see the show, and would gladly give him a day off and pay his railway fare, but it is simply ridiculous to think of sending him up to town on the fourth or fifth day when every competitive exhibit would be as dead as mutton! For two guineas the promoters of the exhibition should issue a season ticket for the duration of the show. As an F.R.H.S. I am to lose my Temple Show, and I must pay £4 4s. if I wish to visit the exhibition on each day. I think there is a sixpence "thrown in," but that doesn't warm me in the least!—Yours etc.,

F. R. H. S.

MARKETS.

◆

COVENT GARDEN.

Fruits.

Prices have altered little during the week; supplies are good, and the demand very fair for the season.

		s.	d.		s.	d.
Apples, English, dessert	per ½-sieve	2	0	to	3	6
,, Cooking	per ½-sieve	1	6		3	6
,, Nova Scotia	per barrel	8	0		14	0
Bananas	per bun.	4	0		8	6
Blackberries	per peck	1	6		2	0
Cob nuts	per doz. lb.	5	0		6	0
Damsons	per ½-sieve	2	0		3	0
Figs	per doz.	1	6		3	0
Grapes, English	per lb.	0	8		3	6
Lemons	per case	9	0		25	0
Melons	each	0	6		2	0
,, Valencia	per case	4	0		6	6
Nectarines	per doz.	3	0		15	0
Oranges, Denia	per case	12	0		30	0
,, Cape	per case	8	0		10	0
,, Jamaica	per case	6	0		8	6
,, St. Michaels	per case	8	0		10	0
Peaches	per doz.	3	0		18	0
Pears, English	per ½-sieve	2	0		6	0
,, French	per crate	3	0		9	0
Pineapples	each	1	6		3	0
Plums	per ½-sieve	2	0		5	0

Vegetables.

Prices are still high, but runner beans are more plentiful and meet an eager demand. Supplies are generally below the average.

		s.	d.		s.	d.
Artichokes, Globe	per doz.	2	0	to	3	0
Beans, dwarf	per basket	3	0		4	6
,, runners	per bush.	5	0		8	0
Beet	per doz. bun.	2	0		3	0
Cabbage	per tally	7	0		10	6
Carrots	per doz. bun.	1	0		1	6
Cauliflowers	per doz.	4	0		6	0
Cucumbers	per flat	4	0		6	0
Endive	per doz.	1	6		3	0
Horseradish	per doz. bun.	8	0		15	0
Lettuce	per doz.	1	6		3	0
Marrows	per tally	5	0		12	0
Mint	per doz. bun.	4	0		5	0
Mushrooms	per doz. lb.	9	0		12	0
Onions, Spanish	per case	4	0		6	0
Parsley	per ½-sieve	1	6		2	6
Radishes	per doz. bun.	1	6		2	6
Spinach	per bush.	2	6		4	6
Tomatoes	per doz. lb.	2	0		3	6
,, Guernsey	per doz. lb.	1	6		3	0
Turnips	per doz. bun.	3	0		3	6
Watercress	per doz. bun.	0	6		0	6½

FORTHCOMING ENGAGEMENTS.

TUESDAY, September 26.—Royal Horticultural Society; Committees meet at 12 o'clock; Lecture on "Salads" at 3 p.m., by Mr. H. Senn; Scientific Committee at 4 o'clock.

WEDNESDAY, September 27.—Irish Gardeners' Association.

Watford Horticultural Society.

THURSDAY, September 28.—Festival of Empire Rose Show at the Crystal Palace; two days.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date.	Sunshine.	Temperature of the Air.			
1911. September 10 to September 16.		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Sept. 10—Sunday	11 0	66	57	74	44
,, 11—Monday	9 18	69	59	82	53
,, 12—Tuesday	4 6	72	60	84	52
,, 13—Wednesday	—	60	59	63	60
,, 14—Thursday	5 18	57	55	62	52
,, 15—Friday	9 36	54	50	61	43
,, 16—Saturday	10 30	54	50	61	41
Means	(total) 49 48	61	55	69	49

Date.	Rain.	Temperature of the Soil at 9 a.m.			Lowest Temperature on Grass.
1911. September 10 to September 16.		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
Sept. 10—Sunday	—	63	63	63	37
,, 11—Monday	—	63	63	63	41
,, 12—Tuesday	0·07	64	63	62	46
,, 13—Wednesday	0·33	65	64	62	54
,, 14—Thursday	—	62	63	62	48
,, 15—Friday	—	59	62	62	34
,, 16—Saturday	—	57	61	62	30
Means	(total) 0·40	62	62	62	41

CATALOGUES RECEIVED.

WILLIAM PAUL AND SON, WALTHAM CROSS, LIM.—This new catalogue of roses is as interesting and instructive as its many handsome predecessors. The varieties of roses listed and described are grouped in their several sections. The accompanying order sheet has all the varieties arranged in alphabetical index form, so that it is easy to find any special sort. Sylvia, Florence, and Haswell Veitch are represented in colours, and there are numerous black and white illustrations.

H. N. ELLISON, WEST BROMWICH.—Mr. Ellison issues a bulb catalogue that will especially appeal to those who do not want to wade through a large and complete list of varieties; he has seeds, ferns, and cacti, and for these two latter he has gained no fewer than five gold, seven silver-gilt, and ten silver medals during this season.

J. R. PEARSON AND SONS, LOWDHAM, NOTTS.—This firm has a long and excellent reputation for fruit trees, and their catalogue is a very useful one, because of the selection of varieties given, and the descriptive notes attached to each. Roses occupy the latter half of the catalogue.

J. A. COOPER, LISSADELL, SLIGO.—A pocket list devoted entirely to daffodils, this catalogue from the Lissadell Bulb Farm appeals alike to the specialist and the general cultivator; the choicest of varieties are included, many of them quite new.

THOS. S. WARE, LIM., FELTHAM.—A remarkable point about this autumn catalogue is its completeness. One section is devoted to bulbs, it includes the rare subjects, and is well illustrated; then follows sections on hardy perennials for autumn planting, carnations and picotees, roses, climbing plants, and fruit trees.

CONTENTS.

PAGE
A Combination of Lilies and Anemones ... 703
A New Poet's Narcissus ... 705
Answers to Correspondents ... 712
Bulbous Plants in the Rock Garden ... 704
Exhibitions and Meetings ... 709
Hypericum patulum var. Henryi ... 699
National Dahlia Society ... 700
New Plants, etc. ... 701
Notes from Here and There ... 702
Notes of the Week ... 697
Rust and Perpetual Carnations ... 703
Sweet Peas for Flowering under Glass ... 706
The Weather in the North ... 699
Work for the Week ... 708
Wychall Nursery, King's Norton ... 707

ILLUSTRATIONS.

Portrait of Mr. Robert Lamb, 697; Carnation White Wonder, 701; Collarette Dahlia Maurice Rivoire, 702; Lilium Hansoni growing with Anemone japonica alba at Kew, 703; Iris Bucharica, 704; Narcissus Sonata, 705; Basket of Rose Kaiserin Augusta Victoria, 706; Basket of Rose Countess of Shaftesbury, 707.

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.
The best and the cheapest.
Write for LISTS.
Quotations given for ANY Quantity, Carriage Free.
Appointed by Royal Warrant
Makers to His Majesty the late King.
Largest Manufacturers in the World.
Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

MERRYWEATHER'S
614 PUMP
IS THE
Gardener's Friend.
Easy to Work.
Simplicity Itself.
Write or Call—
63, Long Acre,
LONDON, W.C.

Trust the firm behind the boot.
To be comfortable: to keep your feet dry, wear
NORWELL'S
PERTH BOOTS.
These have a century's reputation for wear, for comfort. Norwell's make a speciality of boots for gardeners and can give you better value than anyone.
The "Perth" Gardener Boot .... 10/9.
For Strong Wear.
The "Perth" Calf Skin Gardener Boot 11/9.
For Greenhouse Wear.
Send to-day for illustrated price list.
C2 NORWELL'S PERTH, N.B.

WHEELBARROWS. — Navvy, for building, 11s. 9d. each; general purpose, for farm use, 14s. 9d. each. 6 sent together, carriage paid some stations. Also timber, woodwork, all descriptions. O. JENNINGS and CO., Timber Merchants, General Wood-workers, 916, Pennywell Road, Bristol.

COMPACT LEASEHOLD NURSERY, Freehold House adjoining; established 23 years by present owner who is retiring; 350 feet run glass; shop; jobbing and retail trade. SHEAHAN. Hartfield Road Nursery, Wimbledon

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out, Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent reference as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 31; married when suited; excellent references. Address [illegible] Hall, Gisburn, Clitheroe.

GARDENER (Head Working) seeks SITUATION; experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants, Flower and Kitchen Garden, etc.; excellent references; married, no family. WM. GIBSON, 128, Lansdowne Road, Leicester.

GARDENER (Head or Single-handed); life experience, Flower, Fruit and Vegetables; married, no family; age 27; good references; abstainer. VINALL, Terry Villa, Knaphill, Woking.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS where two or three are kept; been here six years as Second of five; age 31; married; two children. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working, where 2 or 3 are kept); 22 years with last employer; married, one daughter aged 16. G. COLLARD, 28, Elles Avenue, Purley, Surrey.

GARDENER (Head Working).—CAPTAIN USHER highly recommends R. Appleby as above; life experience in all branches; thoroughly understands Planting and Laying Out, also Land and Stock; many years excellent character. Address APPLEBY, 12, Brewster Gardens, North Kensington, London, W.

GARDENER (Head, where several are kept); life experience in all branches, Early Forcing of Fruit, Flowers and Vegetables; especially well up in Herbaceous Plants, Shrubs and Alpines; 14 years Head Gardener to the late G. F. Wilson, Wisley, and 7½ years at [illegible] Park; first-class references; age 49; married, no family. TATNALL, 30, Askew Road, Shepherd's Bush, London, W.

D. SKINNER, Head Gardener Lord Barrymore's Estate, [illegible] Gardens, Tipperary, Ireland, strongly recommends M. Coffey to any Gardener requiring good Man for Pleasure Grounds and Kitchen Garden; age 24; married. Present address, COFFEY, 56, Bridgewater Street, Deansgate, Manchester.

GARDENER (Head of two or more) seeks RE-ENGAGEMENT; life experience, Inside and Out; 23 years Head in last place; good references. J. KIGHTLEY, Roade, Northamptonshire.

GARDENER (Head Working where two or three are kept); age 30; married, no family; life experience in all branches in good establishments; good references. WALKER, Holncroft, Burnham, Bucks.

GARDENER (Head) seeks RE-ENGAGEMENT with Lady or Gentleman requiring thorough practical Man in all branches; last place 5 years Head with 12 to 8 men under; highest references from all employers; age 34; married, no family; abstainer.—F. WESTRON, Sunnybrae, Cippenham, Slough, Bucks.

GARDENER (Head, where several are kept).—Mr. EVANS, Picton Castle, Haverfordwest, can with every confidence recommend his Foreman (age [illegible]) to any Lady or Gentleman requiring a good man; life experience in all branches.

GARDENER (Head Working), thoroughly experienced; for the last 9 years in good places; 4 years last place, and excellent characters; age [illegible]; married when suited. E. FIKE, 1, South Street, St. Mark's Road, Fulham Road, London, S.W.

GARDENER (Head); good Single or Fruit Gardens Manager, Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushrooms, ridge or flat; Kitchen, Lawn, Flower Garden. Special prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (Single-handed, or where help is given); 17 years' experience, Inside and Out; age [illegible]; married, no family; good references. G. EUDEN, 11, Clifton Road, Spring Grove, Isleworth.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; aged 41; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER, 40; Single-handed preferred; thoroughly experienced; excellent character; active worker; Inside and Out with early vegetables; abstainer; married. A. BISHOP, Windmill Hill, near Hailsham.

GARDENER (Single-handed, or Kitchen); life experience; good references; age 28; married when suited; abstainer. T. C., 1, Providence Cottages, Pyrford, Surrey.

AS GARDENER; good all-round man; married, no encumbrances; excellent references, personal if desired. WRIGHT, 28, North Road, Highgate.

GENTLEMAN wishes to highly recommend thoroughly practical Man, age 27, married, experienced Estate Bailiff; understands Kitchen Garden, Engine Driving, Machinery; handy man. TURNER, [illegible], Edenbridge, Kent.

GARDENER (Under) seeks SITUATION; three years' experience in the garden; excellent references; age 18. E. APPLEBY, Little Rissington, Bourton-on-Water, Gloucester.

GENTLEMAN strongly recommends young Married Man as good practical GARDENER; thoroughly competent to take charge in all branches Inside and Out; age 27; no family. G. DUMBRELL, 49, Birkbeck Road, Mill Hill, N.W.

TEMPORARY Employment wanted by practical GARDENER; competent to take charge of alterations of all kinds; Ornamental Planting, Formation of Herbaceous Borders, and Rock Gardens; good references. GARDENER, 10, Finborough Road, South Kensington, S.W.

JOURNEYMAN (Inside and Out), 23, seeks SITUATION in good establishment; 9 years' experience; well recommended; Surrey preferred. E. CLARKE, 41, Trentham Street, Southfields, Wandsworth, S.W.

JOURNEYMAN (Second. Inside) in good establishment; age 21; 5½ years' experience; good references. A. SOLLEY, Long Copse, Sherfield-on-Loddon, Basingstoke, Hants.

JOURNEYMAN (Inside or Inside and Out); seven years' experience; can be confidently recommended; age 21. J. SWAN, care of Mr. Woodward, Godden Green, Sevenoaks, Kent.

T. BOLTON, Powderham Gardens, Exeter, would be pleased to recommend Young Man as JOURNEYMAN (Inside under Foreman); age [illegible]; strong, active and obliging; Bothy preferred.

YOUNG MAN requires situation as UNDER GARDENER; 2½ years' experience; good references; disengaged. S. TALBOT, Near School, Barrow, Bury St. Edmunds.

MR. GOULD, Shernfold Park, Frant, Sussex, recommends F. BROAD as IMPROVER (Inside); strong and willing; age [illegible]; Bothy preferred.

IMPROVER (Inside or Inside and Out); age 18; three years' good experience; can be well recommended; Bothy preferred. G. SMITHERS, St. Katherine's Cottage, Hook Heath, Woking.

YOUNG MAN (19) as GARDENER-IMPROVER (Under); willing to make himself useful. Apply T. GUBB, Upper Hayne, [illegible], Cullompton.

YOUNG MAN seeks SITUATION to look after Electric Light and Garden; well up in all branches; nine years last situation. EDWARD VILLA, Street, Coldham, Surrey.

REV. R. HOLDEN recommends for employment in Garden, YOUTH, 17; strong, willing; excellent character; been with him 3½ years. E. ROBERTS, Gate House, Nuttall, Nottingham.

YOUNG MAN requires SITUATION in Gardens as Under where three or four are kept; five years' experience; age 20. A. BISHOP, Comb Cross Gardens, Horsington, Templecombe, Somerset.

YOUNG MAN (24) seeks SITUATION, Pleasure Grounds and Kitchen Garden; 9 years' experience; good references; Bothy preferred. W. WELLS, Jutland Place, New Road, Windsor, Berks.

YOUNG MAN (27) seeks SITUATION; 14 years' experience Inside and Out; good references; 6 years' last situation; disengaged. CHARLES WOOLFORD, Park View, Nettlestone, I.W.

SITUATION required by YOUNG MAN, age 25, any capacity, inside or out; 7½ years' experience; good references. Apply C. NICHOLLS, 32, Orme Road, Worthing.

YOUTH (17) seeks SITUATION at once in Gentleman's Garden, Inside or Out; two years in garden; can be well recommended. E. JONES, Highland Place, Fownhope, Hereford.

GARDEN LABOURER, married, no family; good scythe and spade hand; life experience; Private Gardens and Nursery; references, well recommended. W. LING, Hunger Hill, Westcott, near Dorking.

DAIRYMAN requires SITUATION, thoroughly experienced with Jersey Cows and Poultry; first-class Butter Maker; kill and dress Sheep and Pigs; married. MUNDAY, High Street, Selborne, Alton.

Situations Vacant.

WANTED, GARDENER (Head Working, where another is kept); experienced in orchids and all branches, inside and out. Apply by letter, state age and wages required, etc. E. REEVE, Heatherley, Wigston Magna.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE," 148 & 149, Aldersgate Street, London, E.C.

For SEPTEMBER 30, 1911.

Please Repeat my Advertisement.

Name……………………………………

Address……………………………………

……………………………………

Date……………………

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

ALL GARDEN LOVERS

SHOULD VISIT THE

FESTIVAL OF EMPIRE

AND

IMPERIAL EXHIBITION

Under the Patronage of His Majesty's Government.

On THURSDAY and FRIDAY,
September 28th and 29th, 1911.

GREAT AUTUMN ROSE SHOW

TO BE HELD AT

THE CRYSTAL PALACE.

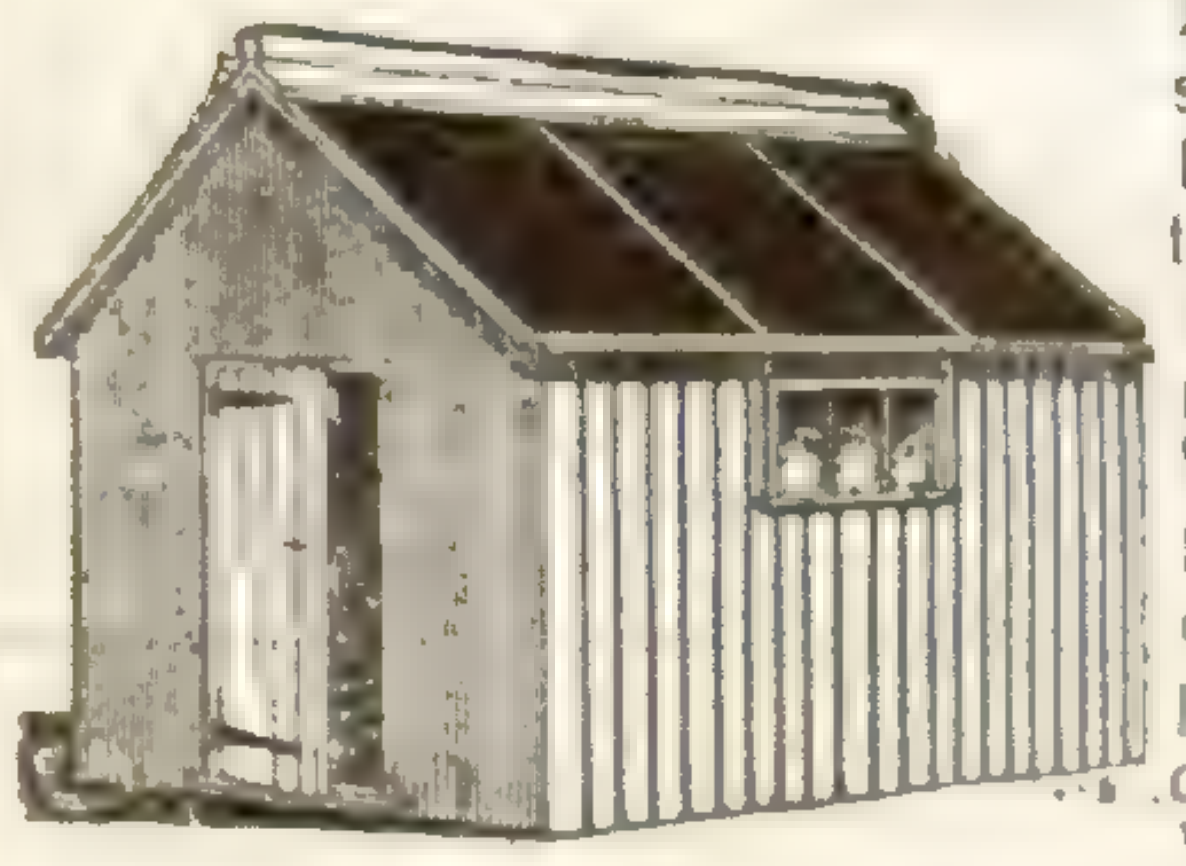
51 Silver Cups & Pieces of Plate ; 110 Gold, Silver, & Bronze Medals.

Schedules will be sent by return of post to intending Exhibitors. Splendid Awards in all Sections for large and small Growers, Amateurs and Trade.

Secretary : T. GEOFFREY W. HENSLOW, M.A., Festival of Empire Offices, CRYSTAL PALACE, LONDON, S.E.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

PORTABLE BUILDINGS. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

SIZES.	CASH WITH ORDER.	Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	17/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	20/0

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.

Largest Makers of Portable Buildings,

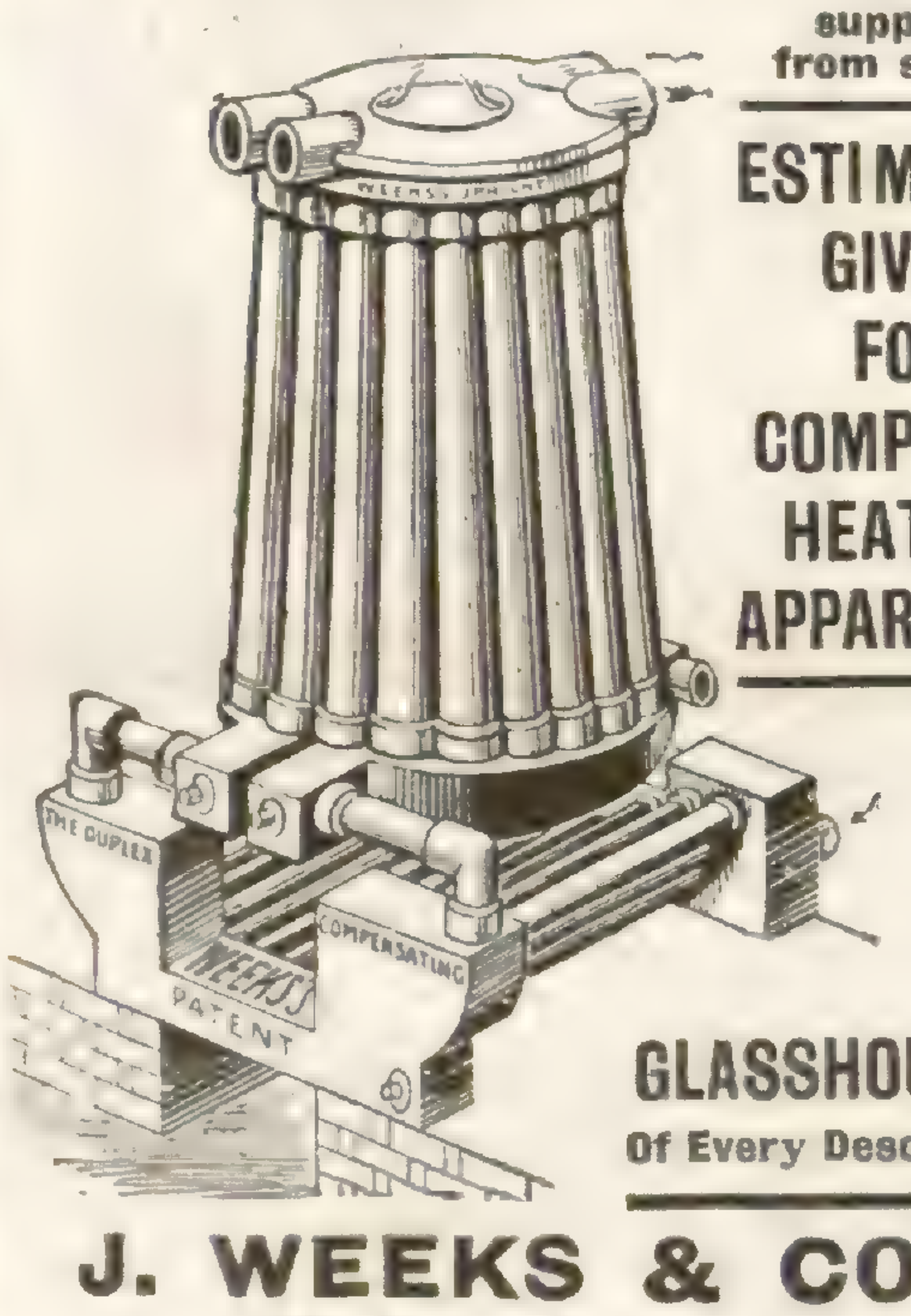
ESTABLISHED 70 YEARS. *BEDFORD.*

Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

PLEASE MENTION
THE GARDENERS' MAGAZINE
when writing to Advertisers.

WEEKS'S BOILERS

supplied from stock.



ESTIMATES GIVEN FOR COMPLETE HEATING APPARATUS

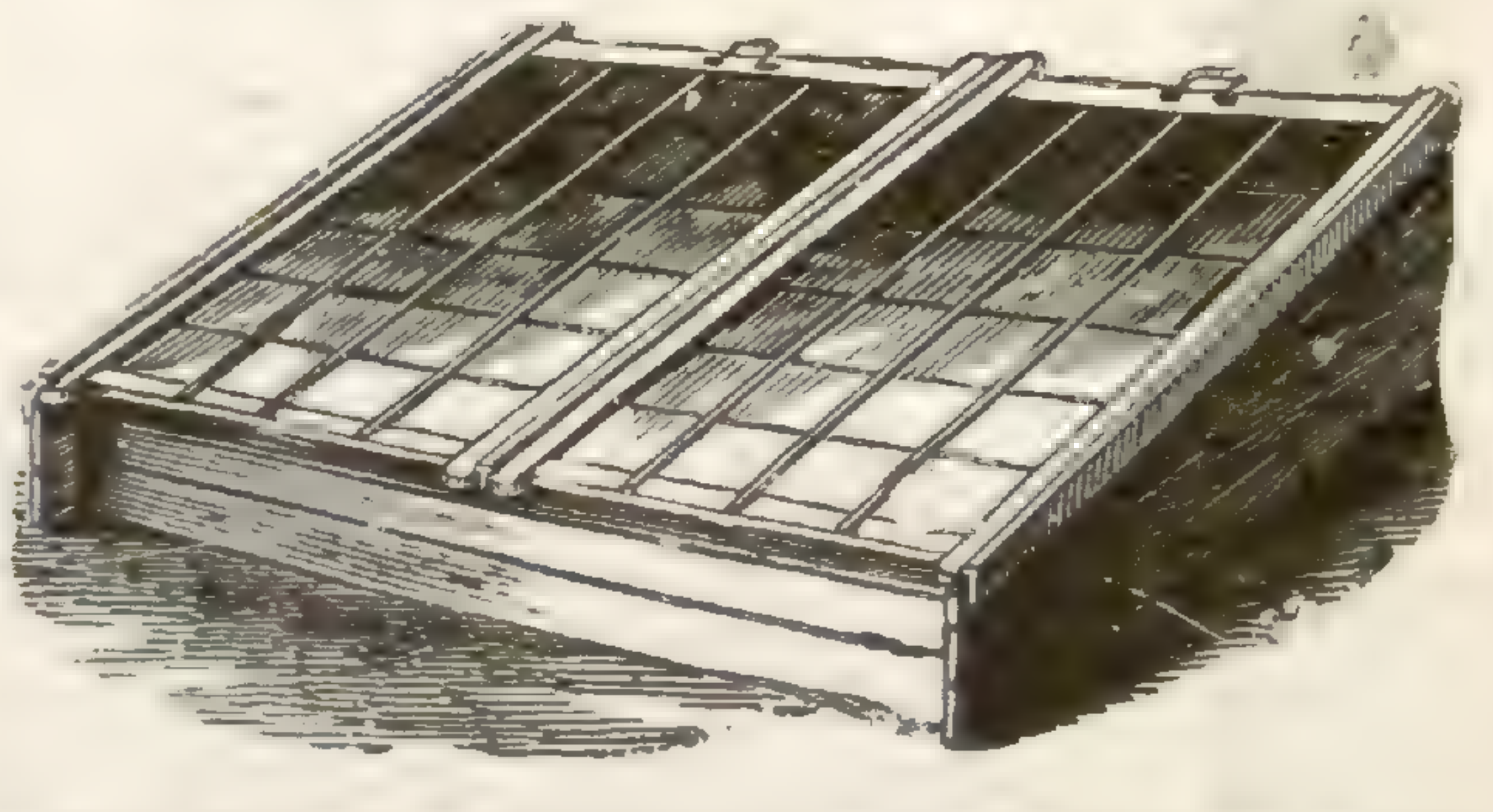
GLASSHOUSES.
Of Every Description.

J. WEEKS & CO.,
72, Victoria Street,
WESTMINSTER, S.W.

PORTABLE

CUCUMBER FRAMES.

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.		£	s.	d.
1-light 4 ft. by 6 ft.	*CASH PRICES.*	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.	*CARRIAGE PAID.*	5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON MANCHESTER.

Printed and Published by W. H. & L. COLLINGRIDGE, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls

THE GARDENERS' MAGAZINE.

No. 3,022.
Vol. LIV.
(Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.)
SATURDAY, SEPT. 30, 1911.
(10/6 per Ann. Post Free. To Foreign Countries, 15/-.)
Twopence

BARR'S BULBS for BOWLS and VASES. List of most suitable varieties of Hyacinths, Daffodils, Polyanthus Narcissi, Tulips, Lilies of the Valley, etc., with full particulars of culture and illustrations of the best bowls for Bulbs. Post free.
BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON

JAMES GRAY, Horticultural Builder, Chelsea, S.W., wishes to point out that this is a good month for painting and repairing greenhouses, as the inside of many houses can be spared for internal work. He has a large number of excellent workmen, and immediate attention can be obtained by means of a postcard, telephone call (201 Western), letter, or wire to Gray, Chelsea, London.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

BULBS ON APPROVAL.—This offer I have made for 12 years. During that time only 3 lots have been returned. This is absolute proof of the quality. My prices are most reasonable. Catg. of 400 vars. free. ELLISON, 57, West Bromwich.

ROMAN HYACINTHS, 10s.; Freesias, 2s.; Alliums, 1s. 6d.; Early Flowering Tulips, 2s. 6d.; Paper White Double Roman Narcissus, 4s.; named Tulips from 2s. 100. Guaranteed flowering size. ELLISON, 57, West Bromwich. Established 1890.

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, and ORCHARD-HOUSE TREES. A large and select stock always on view. Illustrated and descriptive catalogue, post free, 3d. THOMAS RIVERS and SON, Sawbridgeworth, Herts. Station: Harlow, G.E.R.

WALLFLOWERS.—Sutton's Giant Blood Red; also Sutton's Superb Mixed; seeds direct from Sutton's; large plants, 50, 10d.; 100, 1s. 6d., free. ROGERS, Tennyson Road, Hutton, Essex.

GARDEN HOSE and FITTINGS, all sizes and lengths, best quality; list free.
HEATHMAN,
Hose Factory, Parson's Green, London, S.W.

CONSERVATORIES AND WINTER GARDENS Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue free.—BOULTON and PAUL, Lim., Norwich.

FOR SALE, Chrysanthemum King Edward and Maurice Pritchard (Shasta Giant Daisies), fine strong plants, 12s. 6d. per 100; 7s. per 50. HAY, Guyhirn, Wisbech.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue Free. J.E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

SEED BOXES.—12 x 9 x 2in. timber, 8s. 9d. gross, made, 10s. 3d.; 15 x 9 x 2in., 10s. 3d., made 11s. 9d.; also flower sticks, trellis, greenhouses, garden lights, or timber of all description. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

NARCISSUS.—Tulips, Hyacinths, etc. All the leading and best varieties, from 4s. 6d. per 100. Ask for illustrated price list, post free. Satisfaction guaranteed. C. F. A. VAN DER SLUYS, F.R.H.S., La Ramée, Guernsey.

NOT a large Advert., or an elaborate Catalogue; but you can depend upon getting absolutely reliable bulbs at most reasonable prices, when ordering from ELLISON'S, 57, West Bromwich, or I should not offer to send on Appro. Cg. Pd.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

LOVELY FLOWERS AT CHRISTMAS.
WEBBS' WHITE ROMAN HYACINTHS.
Extra large bulbs, 3/- per doz.; 20/- per 100.
Selected Bulbs, 2/- ,, 14/- ,,
Good Bulbs 1/6 ,, 10/6 ,,

WEBBS' POLYANTHUS NARCISSI.
Paper White, 1/- per doz.; 6/6 per 100.
Paper White, large flowering, 1/3 per doz.; 8/6 per 100.

WEBBS' BULB CATALOGUE for 1911.
Beautifully illustrated, Post Free.
WEBB and SONS, The King's Seedsmen, Wordsley, Stourbridge.

BUNYARD'S CATALOGUES
Free on Application.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

KENT STRAWBERRY PLANTS
NEW CATALOGUE READY.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

LAXTON STRAWBERRIES for immediate planting. Fine plants of all the leading varieties in little pots, 15s. 100. Open ground runners, 5s. 100. Catalogue with full particulars gratis
LAXTON BROTHERS, Bedford.

CLAY'S MANURES, CRUSHED BONES
(See page 731.)
CLAY'S FERTILISER IS
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

PERRY'S NEW CATALOGUES now ready.
BULB CATALOGUE.
PERENNIAL CATALOGUE.
DELPHINIUM CATALOGUE.
IRIS CATALOGUE.
FERN CATALOGUE.
} Free. on application.
PERRY'S HARDY PLANT FARM, Enfield, Middx.

ALPINES.—100 in 50 good varieties, carriage paid, £2. Half and quarter quantities at same rate.
WHITELEGG and PAGE, Chislehurst.

HOW TO MAKE, PLANT, and KEEP a ROCKERY.—Concise and useful pamphlet, with List of Rock Plants, post free on application. PHIPPS and IRELAND, F.R.H.S., Barnham, Sussex.

GREEN-FLOWERED AMARYLLIS.—For Sale, 12 two-year-old Bulbs of this highly-scented and unique plant, 5s. each. GARDENER, Wellingtons, Southminster, Essex.

THOMSON'S CELEBRATED MANURES.
(For full advertisement see page ii.)

WINTER-BLOOMING SWEET PEAS.—The "Télemly" Sweet Peas gained the Gold Medal (1907) of the Hort. Soc. of Algeria, and the
LARGE NEW WAVED VARIETIES
the Gold Medal of 1911. If sown in August or September will flower from December till May in Southern Europe, N. Africa, Madeira, etc. In England must be sown in pots and protected from frost till the end of February, and will flower in April in the open, or at Christmas in a sunny greenhouse. 12 seeds each of 4 plain and 3 waved varieties will be sent on receipt of 4s. by the Rev. E. ARKWRIGHT, 36, Seymour Street, W.

POULTRY AND KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses. Portable buildings, etc. Catalogue gratis.

White Flowers at Christmas.
SUTTON'S WHITE ROMAN HYACINTHS.
Extra large bulbs, per doz., 3/-; per 100, 21/-.
Selected bulbs, per doz., 2/-; per 100, 14/-.
Fine bulbs, per doz., 1/6; per 100, 10/6.

SUTTON'S HYBRID FREESIAS.
The shades range from yellow to bronze, bronzy-pink, orange, and deep rose, making a delightful colouring. Per doz., 5/6.

SUTTON'S BULB CATALOGUE for 1911.
Beautifully Illustrated. Now ready.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
From ———, Esq.,
65, ——— Av.,
Ottawa, Ont., Canada.
1st December, 1909.
"I received your Manual for 1910, and consider it the very best you have ever produced, and think it the best on earth."

CARNATIONS AND PICOTEES for Exhibition or Border, 12 lovely kinds for 5s., carriage paid for cash; 25s. to 35s. per 100. List free.
CHAS. WALL,
CARNATION GROWER, BATH.

"WEEKS'S GLASSHOUSES and HEATING APPARATUS, for full advertisement see back page."

FRUIT ROOMS, Game Larders, Garden Huts, Potting Sheds, Workshops, Cycle Houses, Boot-rooms, Servants' Mess-rooms, Children's Play-rooms, etc. Illustrated Catalogue post free. BOULTON and PAUL, Ltd., Norwich.

PERGOLAS.
Larch Poles at 1d. per foot. List Free.
PATRICK'S, Otley, Yorks.

OAK CRAMBLES.
Peeled and dry at ½d. per foot.
PATRICK'S, Otley, Yorks.

ROSE ARCHES.
Larch Poles, at 1d. per foot.
PATRICK'S, Otley, Yorks.

TREE STAKES AND GARDEN RODS.
Lists free.
PATRICK'S, Otley, Yorks.

GREENHOUSES and CONSERVATORIES. Distinctive Designs and Finished Workmanship. Write now for ILLUSTRATED CATALOGUE. CARTER and HOWARD, Horticultural Builders, Kingston-on-Thames.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

THE POPULARITY OF XL ALL SPECIALITIES increases every year All gardeners proclaim that nothing equals these celebrated preparations.
XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.
XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N. S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street London, S.E.

BUSINESS CARDS.

CARNATIONS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations. Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors. The Largest Prize Winners every year since 1905.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

BULBS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Narcissi Tulips, Hyacinths, etc., Home-Grown.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

TREE CARNATIONS

The Newest and Best Varieties.

Strong, healthy and well-rooted plants only supplied

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

Orchids! Orchids!! Orchids!!!

The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application. — **J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana, Vanda Cœrulea Lushai Hill variety, dark blue type; Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.

ORCHIDS

1,000 DUPLICATES, CYPRIPEDIUMS AND ODONTOGLOSSUMS, Very Cheap.

Some Valuable Exemplars amongst them.
Write for List to—

REV. J. CROMBLEHOLME, CLAYTON-LE-MOORS, ACCRINGTON.

DAFFODILS AND NARCISSUS.

Sir Watkin, very free flowering, 3s. 100. Horsfieldii, handsome bloom, 2s. 6d. 100. Mrs. Langtry, very choice, 2s. 6d. 100. Gardenia, double white flower, 1s. 100. Double Daffodil, 1s. 100. Crocus, all colours, 9d. 100. Snowdrops, 5s. to 7s. 6d. 1,000. Tulips, splendid colours, 2s. 100. Narcissus, large trumpet, 7s 6d. 1,000. Narcissus, mixed (10 sorts), 5s. 1,000. Spanish Iris, 7s. 6d. 1,000. Pheasant-eye, 5s. to 7s. 6d. 1,000.

Send for Lists before ordering elsewhere.

CROSS & SON, Daffodil Nurseries, WISBECH.

ORCHIDS, ORCHIDS,

Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,

Exotic Nursery, Cheltenham.

WANTED, GERANIUM CUTTINGS. P. Crampel, W. B. Gem, H. Jacoby, Ch. Turner, King Edward, Denmark; cheap; cash or exchange. TAYLOR, Florist, Meridian Place, Clifton, Bristol.

Bulbs

All best qualities at moderate prices Carriage paid.

Illustrated priced Catalogue post-free.

Dicksons Bulb Growers Chester

THOMSON'S Celebrated MANURES

Wm THOMSON & SONS LIMITED
1868 1911

Still the best: In greater demand every year.

SAFE, SURE & LASTING.

The result of many years' **practical** experience.

VINE, PLANT, AND VEGETABLE MANURE.
1 cwt., **20/-**; ½ cwt., **10/-**; ¼ cwt., **6/-**; 14 lbs., **3/6**; 7 lbs., **2/6**; Tins, **2/6, 1/-,** and **6d.** Carriage paid on 1 cwt. anywhere.

SPECIAL TOP-DRESSING MANURE.
½ cwt., **20/-**; ¼ cwt., **11/-**; 14 lbs., **6/-**; 7 lbs., **3/6**; Tins, **1/-**.
Carriage paid on ½ cwt. anywhere.

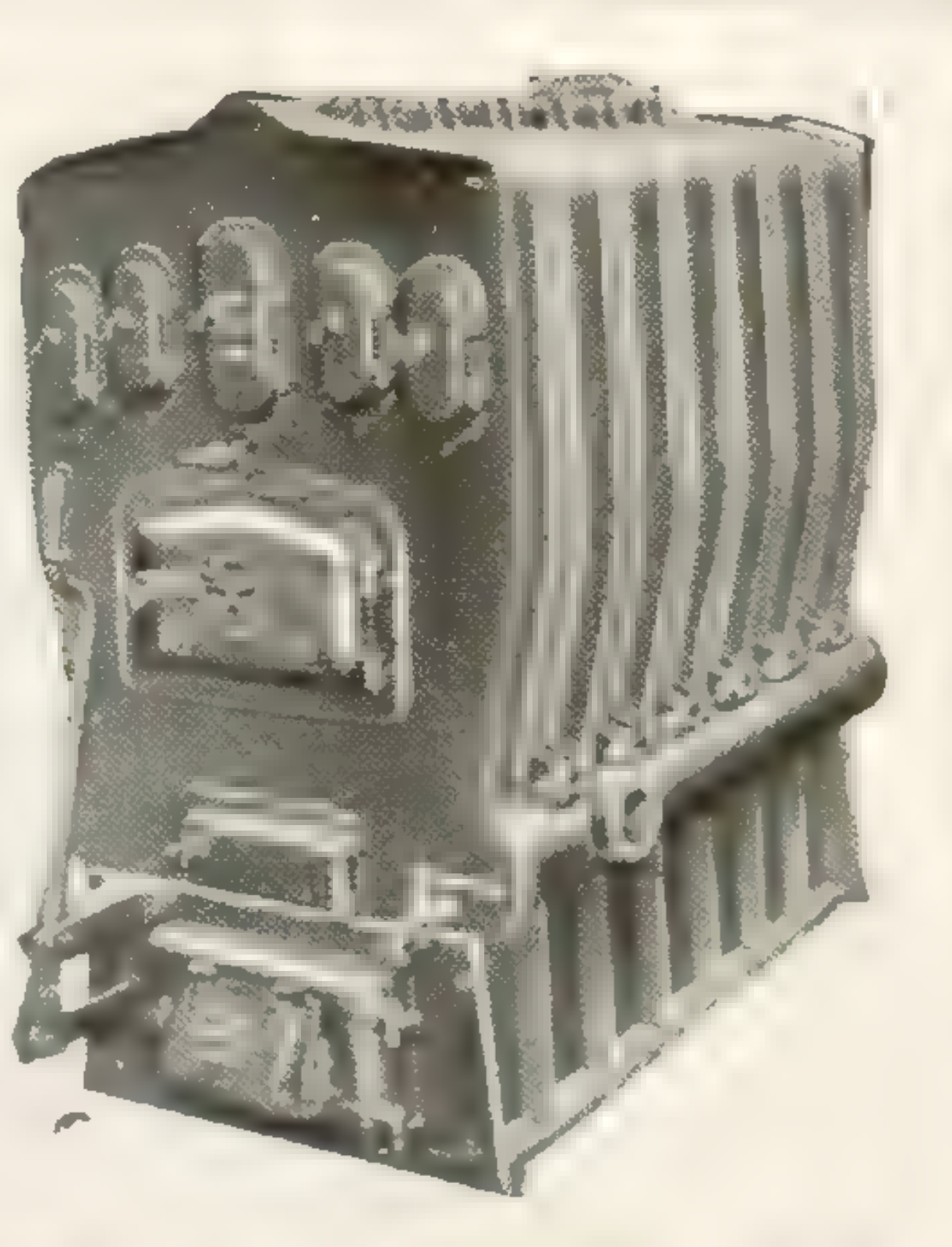
Also Thomson's Book on the Vine. Thomson's Styptic.

SOLD BY NURSERYMEN & SEEDSMEN EVERYWHERE.

Write for Pamphlets, Price Lists, etc., to

SOLE MAKERS: **WM. THOMSON & SONS, Ltd., Clovenfords, Scotland.**

Kinnell's Boilers



THREE LEADING TYPES:—

The **"ANGLIAN," Sectional,** heats 800 to 8,000 ft. 4in. pipe.
The **"ROCHFORD," Tubular,** heats 600 to 8,000 ft. 4in. pipe.
The **"HORSE-SHOE"** for the small Greenhouse.

Saddle Boilers, Trentham Boilers, and all classes of Pipes, Fittings, etc., ready for immediate despatch.

Write for List No. 77, post free.

CHARLES P. KINNELL & Co., Ltd., 65, & 65a, Southwark St., London, S.E.

Please mention THE GARDENERS' MAGAZINE when writing to Advertisers.

WANTED, Viola Cuttings. Archie Grant, Mrs. Chichester, White Swan, Marchioness, Admiration, Hector McDonald, Miss Proctor, Stanley Saul, Lizzie Paul, King Cup, Kitty Bell, Isolde, Royal Sovereign, Sydney, Rufford Abbey, Bronze Kintore, Willie Farmer, White Empress, Goldfinch. Cash, or Exchange. Price and quantity to H. B. MAY and SONS, The Nurseries, Chingford.

Sales by Auction.

SUNNINGDALE NURSERIES, WINDLESHAM, SURREY.

37th Annual Sale of NURSERY STOCK, comprising an extra fine lot of Rhododendrons, mixed seedlings in various colours, Pontica, and others; Kalmias and Azaleas, for which these nurseries have been famous for many years; a large quantity of dwarf and climbing Roses; many thousands of Portugal and other Laurels, Oval-leaved Privet, Cupressus, Thujas, etc., Ornamental, Evergreen, and Flowering Shrubs, Limes, Planes, Poplars, Silver Birch, Maples, Scarlet Oaks, and other general Nursery Stock.

MESSRS. PROTHEROE and MORRIS will SELL BY AUCTION, at the above Nurseries (Sunningdale Station, L. & S.W.R.), on TUESDAY and WEDNESDAY NEXT, October 3rd and 4th, at 12.30 o'clock. May be viewed. Catalogues had at the Nurseries; and of the Auctioneers, 67 and 68, Cheapside, E.C.

DUTCH BULBS
10,000 Lots Sold Weekly.

SALES EVERY DAY
(SATURDAYS EXCEPTED),
At 10.30 o'clock, at
PROTHEROE and MORRIS'
Central Sale Rooms,
67 & 68, CHEAPSIDE, LONDON, E.C.
Catalogues Free.
COMMISSIONS EXECUTED.

DUTCH BULBS.

MR. J. C. STEVENS begs to announce that his **Sales by Auction** are held every **MONDAY, WEDNESDAY** and **THURSDAY** at **12.30.**

Catalogues post free.

Lots purchased, packed, and forwarded to all parts.

STEVENS' AUCTION ROOMS
(Established 150 years),
38, King Street, Covent Garden, London, W.C.

SALES DAILY (SAT. EXCP.) AT 12.30.
First Size Hyacinths, Tulips, Daffodils, Narcissi, Crocus, Snowdrops, etc.

BULB SALES BY AUCTION.

Lotted to suit all Buyers.
Catalogues of Auctioneers,
JOHNSON DYMOND & SON,
"City Auction Rooms" (est. 1793),
38 and 39, Gracechurch Street, LONDON, E.C.

J. J. THOOLEN, The EXPORT Nurseries, Heemstede, Haarlem, Holland,

ESTABLISHED 1884,

Has the honour to announce that his Illustrated Price List of Bulbs and Plants in English, Autumn, 1911, at lowest prices, will be sent post free on application. **No Charge for Packing. Orders of 10/- and above entirely Free to Destinations** in England, Scotland, and Ireland, etc. First Quality guaranteed.

Some sorts of Bulbs noted out of Price List.

	Per 100. s.	d.	Per 1,000 s.	d.
Hyacinths, in the finest mixture for bedding or forcing	7	8	72	4
Hyacinths, single, first size, named, in 25 leading sorts, red, white, and blue vars., equal quantities, my selection	15	0	—	
Tulips, single early, in the finest mixture	2	0	18	4
Tulips, Darwin, mixed	3	0	25	0
Tulips, double, in the finest mixture...	2	2	20	0
Anemones, single mixed	1	4	12	0
Anemone, The Bride, pure white ...	1	4	12	0
Crocus, 1st size, in the finest mixture	1	4	12	0
Crocus, 2nd size, in the finest mixture	0	9	7	0
Scilla campanulata, blue bells	2	0	—	
Scilla campanulata, white bells	2	0	—	
Scilla sibirica, rich blue	1	6	14	6
Iris, Spanish, mixed	0	7	5	0
Iris, English, mixed	2	0	16	8
Narcis., single, in the finest mixture...	1	4	12	6
Narcis., Trumpet, in the finest mixture	2	6	20	0
Narcis., double, fine mixture	2	6	20	0
Narcis-Polyanthus, finest mixed ...	3	6	30	0
Snowdrops, Elwesi, the Giant Snowdrop	1	6	13	6
Ranunculus, French, double mixed ...	0	9	7	0

250 Bulbs of the same kind will be charged at the 1,000 rate; 25 at the price per 100; 6 at the price per 12.

Ask for Illustrated Price List and see the Collections.

FREEHOLD RESIDENCE, modern, three reception, 5 bed rooms, boudoir, kitchen and scullery, splendid grounds, 10 acres, 7 greenhouses, stabling, cow-sheds, calf-shed; every convenience and comfort; choice fruits, large orchard. H. THOMLINSON, Four Marks, Alton.

LAXTON'S
FRUIT TREES
IN ALL SHAPES
CATALOGUES GRATIS
LAXTON BROS
BEDFORD

CHEALS'

FOR FIRST-CLASS
ORNAMENTAL TREES,
ROSES, FRUIT TREES,
AND
HARDY FLOWERS, etc.

NURSERIES 113 ACRES.
CATALOGUES FREE.

J. CHEAL & SONS,
The Nurseries, CRAWLEY.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
ROCKWORKERS
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.
Our Work has stood the test of time.

MY SWEET PEA LIST

will be the most time-saving, interesting, profitable, and pleasure-giving list in the world. Post-card commands it.

I am being honoured with **novelties** from Aitken's, Chapman, Cole, Burpee, Deal, Dobbies, Hemus, Lumley, Stark, Trevethick, Ward, and many others.

My stock of last year's novelties are, with few exceptions, English grown and rogued by **genuine Sweet Pea lovers.**

My Special Spencer Mixture contains Earl Spencer, Nancy Perkin, Syeira Lee, Thomas Stevenson, Dainty, and Helen Pierce Spencers, etc. This I **guarantee. 1s.** per oz., **1s. 10d.** per 2oz., **3s. 6d.** per 4oz., post free.

My Helen Pierce Spencer Seedlings will be a source of profit and pleasure to the grower. The stock has been rogued down to Spencers at great expense. A selection from this mixture properly fixed will make a small fortune for the owner. **1s. 6d.** per oz., **2s. 6d.** per 2oz., post free.

My Special Seedling Spencer Hybrid Mixture is from two of our keenest British hybridists, who have more stock than they can possibly handle as it ought to be. **Such seed never offered before. 1s. 6d.** per oz., 2oz. for **2s. 5d.,** post free, worth 10s. per oz., as it is absolutely the result of their life's work. Virtually selling proverbial £1 for one penny.

Sole distributing agent for Mr. F. Herbert Chapman's Iolanthe, the most opaque white Sweet Pea in existence. 8 seeds, **6d.;** 20 seeds, **1s.**

I hope to have my list ready early in October.

G. H. MACKERETH,
The Sweet Pea Clearing House, ULVERSTON.

W. SEABROOK & SONS

We have a large stock of young Fruit Trees in excellent condition to offer this season. Our **Specialities** are Cordons, Bushes, and Pyramids, and Trained Trees worked on selected **Fruiting Stocks.**

FRUIT TREES and ROSES.

Write for our Illustrated Catalogue, containing Cultural information, post free.

CHELMSFORD

PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J.R. PEARSON & SONS
LOWDHAM, NOTTS.

CARNATIONS.
AURICULAS. PINKS.

The NEW ILLUSTRATED CATALOGUE of above is now ready, and has been posted to all customers. The newest and best varieties are sold at the most reasonable prices.

Best **CARNATION** and **PICOTEE SEED** ready in October. 1/6 and 2/6 per packet.

AURICULA (Show and Alpine), PINK, and **POLYANTHUS SEED** now ready. 1/-, 1/6, to 2/6 per packet.

Send for Catalogue to

J. DOUGLAS,
Edenside, GREAT BOOKHAM.

ORCHIDS

EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

A SPECIALITY FOR MORE THAN 50 YEARS.

POT VINES

Exceptionally Fine this Season.
Inspection Invited.

J. R. PEARSON & SONS, LOWDHAM, Notts.

GLASS & PAINT.

NICHOLLS & CLARKE, LTD.,
15 oz. and 21 oz. Glass,
IN ALL THE USUAL SIZES.
Shoreditch, London.
When sending for list please cut out this advt.

PLANTING SEASON.

BY APPOINTMENT.

WM. PAUL & SON, WALTHAM CROSS, Ltd.

Nurseries twelve miles from London; south entrance four minutes' walk from Waltham Cross Station (Great Eastern Railway); west entrance five minutes' walk from Tramway Terminus.

SPECIALITIES:

ROSES in all forms, from open ground and in pots. Roses in pots, both dwarfs and climbers, extra fine this season.

FRUIT TREES, for the Orchard Garden, and Forcing House.

HARDY TREES, for Street, Park, and General Planting.

SHRUBS, Evergreen and Deciduous, for General Planting.

HARDY CLIMBING PLANTS for all purposes.

RHODODENDRONS, CAMELLIAS, AND AZALEAS. Rhododendrons from loam, extra fine this season.

HERBACEOUS PLANTS in great variety.

BULBS AND SEEDS and all Garden Sundries.

PRICE LISTS ON APPLICATION.
Inspection Invited.

Upwards of 1,000 Gold Medals, First Prizes, and other Awards at Leading Exhibitions during the past 50 years.

Sole Postal Address—

PAULS' ROYAL NURSERIES,
Waltham Cross, Herts.

Premier Honours Great Show, Haarlem.

ESTABLISHED 1832.
No connection with any other Firm of a similar name.

ANT. ROOZEN & SON'S GUINEA PACKAGE

(Delivered Entirely Free in London)
OF

CHOICE HARDY BULBS.

COLLECTION "F" FOR SPRING GARDENING

Contains **1,140** Bulbs.

48 Hyacinths, distinct colours.
50 Tulips, single early.
50 Tulips, double.
50 Tulips, single, late.
50 Narcissus, best mixed.
30 Narcissus incomparable
24 Narcissus poeticus.
24 Anemones, double.
50 Anemones, single.
50 Gladiolus nanus.
300 Crocus, in 4 distinct colours.
100 French Ranunculus.
50 Snowdrops, single.
100 Spanish Iris.
36 Scilla sibirica (2 colours)
4 Lilium umbellatum.
50 Eranthis hyemalis (Winter Aconite).
50 Ixias, best mixed.
24 Triteleia uniflora.

HALF OF THE ABOVE FOR **11s.**

Our Bulbs are Perfect Bulbs direct from Holland—THE Great BULB LAND.

The above Package may be had from our Agents,

MERTENS & Co.,
3, Cross Lane, London, E.C.,
On Receipt of Cheque or Post Office Order.

Our **DESCRIPTIVE CATALOGUE** of SPLENDID BULBS (100 pages in English), containing FULL CULTURAL DIRECTIONS, will be sent post free on application to our Agents, as above, or ourselves direct at

OVERVEEN, HAARLEM, HOLLAND.

BUNYARD'S FRUIT TREES . . . .

EARLY ORDERS RECEIVE FIRST ATTENTION WHEN PLANTING SEASON ARRIVES.

WRITE FOR CATALOGUE.

Geo. Bunyard & Co., LTD.,
Royal Nurseries,
—MAIDSTONE.—

Bulbs: NARCISSUS, DAFFODILS, TULIPS, &c.

All Good Flowering Bulbs; Worth Double.

NARCISSUS

100	**Emperor**	3/0
100	**Empress**	3/0
100	**Henry Irving** ...	4/0
100	**Golden Spur** ...	4/0
100	**Horsfieldii**	3/0
100	**Victoria**	3/0
100	**Obvallaris**	3/0
100	**Grandis**	3/0
100	**Sir Watkin**	3/0
100	**Stella**	1/6
100	**Princeps**	2/6
100	**Ornatus**	2/6
100	**Double Daffs** ...	4/0
100	**Dbl. White Narcis.**	2/6
100	**Pheasant Eyes**	2/6
100	**Frank Miles** ...	1/6

TULIPS

100	**La Reine**	3/0
100	**Cottage Maid...**	3/0
100	**Chrysolora**	3/0
100	**D. de Parma** ...	3/0
100	**Keizerkroon** ...	4/0
100	**Golden Crown...**	3/0
100	**Picotee**	4/0
100	**Bouton d'Or** ...	3/0
100	**Prince de Ligny**	4/0
100	**Duc Van Thol,** sgl	4/0
100	,, ,, dbl	3/0
100	**King of Yellows**	4/0
100	**Mixed Tulips** ...	1/6
100	**Mixed Darwins**	4/0
100	**Darwins** to name	10/6
100	**Parrot Tulips** to colour	2/6

Special offer in Mixed Narcis. and Daffodils, also Tulips for planting in grass, shrubberies, hedge rows, etc.

HYACINTHS

		per 100
12—1/9	to name in colours...... or	**10/0**
12—1/3	mxd in cols. or	**9/0**
12—1/9	**Roman White** or	**12/0**
100	**Iris, Spanish,** to name	1/6
12	**Iris, German** do.	6/0
12	**Iris, English** do.	1/6
100	**Anemones, Scarlet**	4/9
100	,, **The Bride**	1/9
100	,, **St. Brigid**	5/0
100	**Scilla Siberica...**	3/0
100	**Freesia**	3/0
100	**Summer Snowflakes**	5/0
12	**Lilium Candidum**	2/6
12	,, **Crown Imperial** ...	2/0
12	,, **Auratums**	7/0
12	,, **Croceums**	4/0
12	,, **Longiflorums**	4/0
100	**Snowdrops**	1/6
100	**Ixias,** to cols.	2/6
100	**Crocus,** in cols.	1/3
100	**Lily of Valley** ...	2/6
100	**Jonquils**	4/6
100	**Ranunculus** ...	3/0
100	**Montbretia**	3/0
100	**Aconites**	3/0
100	**Chionodoxa** ...	2/6
100	**Polyanthus Narcis**	3/0
100	**Alliums**	3/0
12	**Begonias,** choice	1/6
12	**Violets,** in sorts	1/6
12	**Xmas Roses** ...	4/0

Narcissus and Daffodils,	5/-, 7/6, 10/0 per 1,000
Tulips	10/-, 15/-, 20/- per 1,000

Many other varieties to offer; also all kinds of Herbaceous plants. Any of the above, half quantities at half price.

FRUIT TREES.—Apples, Pears, and Plums, all fruiting trees, **9/-** per dozen. Gooseberries, Currants (black, red, white), **3/-** per dozen. Loganberries and Raspberry-Strawberry, **9d.** each Raspberry canes, **3/-, 4/-,** per 100. Strawberry Plants, **1/6** per 100.

All kinds of Flower and Garden Seeds, also POTATOES. Send for List,

J. W. CROSS, Old Grammar School, **WISBECH.**

BORDER CARNATIONS.

1795. CARNATION BROWN. QUALITY. COURTESY DESPATCH. KINGS NORTON. 1911.

WILLIAM BROWN
was foremost among Carnation Growers in 1795.
ARTHUR R. BROWN, Ltd.,
are the Champion Exhibitors to-day.

We devote ourselves entirely to

BORDER CARNATIONS

and have an unrivalled collection. Our stock consists of **100,000** strong healthy plants in the finest **500** varieties.

Write for Catalogue giving full cultural details.

Sample dozen in 12 good Standard varieties, 6/-

Only strong healthy plants sent out or cash returned.

Carnation Seed from finest varieties 2/- and 1/- per packet.

ARTHUR R. BROWN, LTD.,
Wychall Nurseries,
KINGS NORTON.

BULBS

for growing in fibre in vases, in pots, out of doors—everywhere.

Our Bulb Catalogue tells you all about them, and gives prices.

We send it free and post free.

DICKSON & ROBINSON,
Seedsmen to H.M. King George V.
MANCHESTER.

VOL. LIV.—No. 3,022. SATURDAY, SEPTEMBER 30, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

The Storage of Hardy Fruits.

Fortunately for the owners of gardens and those responsible for their management, the crops of apples and pears, if not excessive, are sufficient to necessitate the fullest consideration being given to the question of fruit storage. The preservation of hard fruits, such as apples and pears, in the best possible condition over a long period, has so important a bearing upon the fruit supplies that it should be constantly kept in mind by cultivators until the best possible method has been devised for keeping the several kinds in really good condition throughout their respective seasons. It has been said on more than one occasion by those who take an active interest in this aspect of the fruit supply, that it is of little avail to make strenuous endeavour to produce abundant supplies of high quality if a considerable proportion is wasted through defective storage; but this truism is one that will bear repetition when the preservation of fruit in a fresh state is under discussion. Within recent years there has been a considerable improvement in methods of storage, but these have not kept pace with the improvements in cultural details, and therefore more has yet to be done before they can be regarded as satisfactory. This aspect of fruit production is still suffering from the mistaken views that were held by garden architects and others some fifty or sixty years ago. As shown by the gardening books of note that were published about the middle of last century and fruit rooms that are still in existence in some great gardens, it was held that the fruit room could not well be too dry and airy, and that structures in which provision was not made for a free circulation of air through them were regarded as quite unsuitable for fruit storage. In many cases the fruit room had a place in the upper part of a large building used for various purposes, and practically all that were specially built were provided with several windows, and fitted with stages of lattice work which had wide spaces between the bars, the object being to fully expose the fruit on all sides to the air. As provisions, such as double or thatched roofs or hollow or covered walls, were seldom made for the maintenance of an equable temperature, and the atmospheric moisture reduced to a minimum, the shrivelling of the fruit commenced early in the winter. As this shrivelling proceeded rapidly with the increase of temperature outside in February, much fruit that should have been at its best in March was quite worthless before that month had run its course. Very different views are now held as to the conditions under which fruit should be kept; and it is generally recognised by experienced cultivators that hard fruits, particularly apples, will remain in a sound state over the longest period when the temperature of the place of storage ranges between 40 and 45 degrees and there is a liberal percentage of moisture in the atmosphere. Then, with regard to ventilation there is a consensus of opinion that, instead of the free circulation of air which in the past was considered essential, sufficient air should be admitted from the outside, and no more, to maintain the atmosphere in a sweet state. "Take advantage of warm, dry mornings for ventilating fruits rooms," was the advice given by some of the old writers; but at the present time a writer who is really an authority on the subject will tell us that the ventilation should be given at such times when air can be admitted without appreciably raising the temperature. Such advice is sound, and should invariably be acted upon, for it is necessary, not only to prevent decay, but to check the evaporation of the juices upon which the value of the fruit depends. There is some difference of opinion as to whether the fruit room should be partly below the ground, or whether it should be above the surface, and the fact that there is a difference upon this point is a proof that, provided it is built in accordance with modern ideas, it is really of no consequence whether it is above or below the surface. Within recent years we have had opportunities for seeing a considerable number of modern fruit rooms, and the condition of the fruit in them was such as to show that this is really the case. Structures that are built above ground are the most convenient, and certainly the most desirable where large quantities of fruit have to be dealt with; and as evidence of the length of time that fruit can be kept in good condition in them, it may be mentioned that the exhibitors of the fine collections which are usually seen at the exhibitions and meetings of the Royal Horticultural Society in April and May store their fruit above ground. With regard to those built below the ground level it may be mentioned that we have for some years past utilised a spacious cellar as a fruit room with much success, and not so long since we saw in the North of England a fruit room that had been formed in a disused ice cellar, and had proved in every way satisfactory. The construction of a fruit room of the most approved description is not costly, as both design and fittings are of the simplest. A span-roof about twenty feet long and ten feet in height and width will store large quantities of fruit, and will suffice for the majority of gardens. The frame-work should be substantial and of wood, and both sides and roof be covered with $\frac{3}{4}$in. matchboards. The roof should have a thatch about fifteen inches in thickness, and this may be of reed, heather, or wheat straw, the relative merits of these materials being in the order in which they are placed. The sides and ends should be covered to a thickness of six inches of the same material as that used

MR. A. E. BURGESS.

for the thatch. The door should be well made, and fit close and have a sufficient width to allow a hand barrow to pass readily through it, and thus admit of the fruit being taken direct from the trees to the store. Necessarily, the central pathway should not have a less width. The shelves on either side may be twelve inches above each other, commencing at two feet from the ground level, and be formed with close-fitting boards or lattice-work, with narrow spaces between the bars. This is a matter of personal taste, as the fruit will keep equally well on each with a layer of clean wheat straw over the woodwork. An opening with closely-fitting shutter in the angle of the roof at each end will be required for the purposes of ventilation, and a window, fitted with a shutter, will be necessary for the admission of light when the fruit is being selected for use or examined for the removal of unsound specimens. It need hardly be said that the fruit should be gathered for storage when dry, but it is of some importance to state that it is not necessary to adopt the practice, still general, of arranging apples in single layers. Exceptionally fine specimens may be so disposed, but they will keep equally well placed two or three deep, and the late culinary varieties may be stored in layers from fifteen to eighteen inches in thickness, and preferably on the lower shelves. The most careful handling is necessary, even in the case of the hardest of the cooking apples, for if bruised they will not remain sound for any considerable period, and it is essential also that all fruits which have been bruised, or injured by birds or the larvae of insects, be put on one side for early use. To gather when the fruits have attained maturity as indicated by the pips assuming a brown colour is essential, and, speaking generally, it is better to lose a few fruits from falling than to gather the whole crop before it has reached the proper degree of ripeness. With regard to ventilation it will suffice to point to the fact that the admission of a moderate amount of air at rather long intervals will suffice to maintain the atmosphere in a satisfactory state, and that the ventilation should be done quite early in the day when the temperature is as nearly 40 degrees as possible.

Mr. Arthur E. Burgess, the Superintendent of School Gardening and Lecturer in Horticulture and Nature Study in Surrey, has for many years taken a prominent part in the work of horticultural instruction as conducted under the Educational Committees of various County Councils. He is a capable and enthusiastic teacher, and since his appointment to his present position in 1909 he has done a vast amount of good work. Mr. Burgess commenced the business of life at Messrs. J. Carter and Co.'s seed grounds at St. Osyth, and while with that firm he studied hard, and presently won a scholarship at the Essex County School of Horticulture. Here, in addition to studying and practising horticulture he underwent a long course of nature study, having already in view the profession of a teacher in these subjects. At twenty-four years of age Mr. Burgess had succeeded so well that he was appointed head gardener and assistant instructor at Chelmsford, and for about six years he had charge of over three acres of gardens, with a range of glass, and botanical, fruit, flower, and vegetable sections. It was in 1892 that he became Instructor in Horticulture and Nature Study under the Hertford County Council, and this appointment gave him his opportunity. Energetic and enthusiastic, and with a capital training for such a post, it was small wonder that Hertfordshire was sorry to lose him, when, in 1909 he migrated to Surrey, there to continue the work so ably begun years previously by Mr. John Wright, V.M.H. In the past two years he has given considerable time during the winter months to lectures and classes for school teachers, and, as a result of his work in this direction, about eighty teachers have obtained the R.H.S. Certificate; he hopes that before many years have passed all the teachers in the rural districts of the county will have qualified to teach school gardening and nature study. Mr. Burgess has 135 elementary school gardens to supervise, and in these gardens 2,600 scholars are receiving instruction, each having a separate plot; there are also fourteen groups of evening continuation classes, with about 190 pupils. From these few notes it will be gathered that Mr. Burgess' task is no light one, and that he is keeping up the high standard of horticultural education so long associated with the County of Surrey.

National Rose Society's Provincial Show, 1912.—We understand that at a meeting held on Tuesday last the Council of the National Rose Society unanimously resolved to accept the invitation that had been received from the local society to hold next year's exhibition at Belfast. The date, we learn, has not yet been fixed, but the show will probably be held in the third week in July.

Summer Bedding in Regent's Park.—The arrangements of tender and other flowering and ornamental-leaved plants in Regent's Park during the past summer were highly successful, and have been a source of pleasure to visitors throughout the season. As usual, Mr. A. D. Webster, the superintendent of this fine park, was careful in carrying out the arrangements to have them varied as well as tasteful, and the diversity of style has added much to the attractiveness of the general display, and greatly enhanced its educational value. Especially attractive have been the large groups formed chiefly with stove and greenhouse plants, for many of those from tropical regions, such as the acalyphas and crotons, have grown as freely as in the plant stove, and the leaf-colouring has been exceptionally rich. The quiet colouring of the bold group of succulents has been most pleasing, and the quaint forms of many of the plants have been a constant source of interest to the visitors not well acquainted with the varied forms of plant life. Cannas have been used freely, and with the aid of the high temperature that was experienced over so long a period, and it may be assumed liberal supplies of water, they grew vigorously and their richly-coloured flowers produced a fine effect. Fuchsias have constituted a distinct and beautiful feature, for the plants in beds and the specimens grouped on the lawn with the pots partly sunk in the turf have grown and flowered most satisfactorily. Altogether, the display is one that has fully maintained the traditions of Regent's Park for its summer arrangements of flowering and fine foliage plants.

Gardeners' Association for Midsomer Norton.—A meeting of gardeners and others interested in horticultural matters was held at Midsomer Norton a few days since for the purpose of considering the advisability of forming a gardeners' association. After a full discussion the meeting decided that it was desirable such association should be established, and proceeded to elect Mr. J. Boulter chairman, Mr. George McMurtie vice-chairman, and Mr. W. C. Scadding hon. secretary. It was further resolved that meetings should be held on the first and third Thursdays of each month, and that exhibits of plants, flowers, fruits, and vegetables be invited.

National Sweet Pea Society.—The next annual exhibition of this society will be held at the Royal Horticultural Hall, Westminster, on Tuesday and Wednesday, July 9 and 10, 1912.

Fungus Foray in Somerset.—The British Mycological Society, of which Professor E. S. Salmon is the president, held its fungus foray last week in West Somerset. At one of the evening meetings at Taunton, Mr. E. W. Swanton, of the Haslemere Educational Museum, gave an illustrated lecture on the fungoid diseases of fruit trees. He stated in the course of his lecture that the majority of the Somerset orchards were infected with fungi more or less injurious, and urged the importance of systematic spraying as a means of keeping the trees healthy. In the case of apple scab, which is so prevalent in all parts of the country, spraying would, it was suggested, result in the production of 99 per cent. of sound fruit.

National Chrysanthemum Society.—Mr. R. A. Witty informs us that the annual dinner of this society will be held at the Holborn Restaurant on Wednesday, November 29, and not on November 23, as originally arranged.

Victoria regia at Regent's Park.—Visitors to the exhibition of dahlias held by the National Dahlia Society in the gardens of the Royal Botanic Society Regent's Park, had an opportunity of seeing at its best one of the finest specimens of Victoria regia that has been seen in British gardens. For some years past this magnificent water lily has been grown in the Royal Botanic Society's gardens with quite exceptional success, but this year the specimen has attained so high a state of development as to surpass the plants of previous years. The specimen was raised from seed in February last, and has borne thirty flowers, and now covers the surface of the large tank with fifteen finely-developed leaves, which have a diameter ranging from six to eight feet.

The Mansfield Horticultural Society sustained a considerable loss on their show this year, and the Duke of Portland has generously forwarded through his agent a cheque to the secretary of the society for £24 1s. 3d. to balance the deficit.

Utility of School Gardens.—In speaking at Mains the other day on the nature and objects of school gardening, Lord Pentland pointed out that courses in gardening were not included in the school curriculum with a view to turning out full-fledged gardeners, and this fact, he thought, could not be too clearly stated. He wished to attack that prejudice, because he believed that was the last enemy in the way of development of school gardens. It was urged that all our boys and girls could not be gardeners, and the question was put—Why should they study gardening? It would require a treatise on the aims of education to give a complete answer to those objections, but he should like to point out that besides sowing the seeds of an enthusiasm that might be a recreation and a delight to the end of one's life, precisely as was a love of literature and books, a course of school gardening might be made an admirable discipline of character. Carried out with the right spirit, it would provide abundant openings for cultivating the powers of observation, and for exercising the qualities of care and patience. The reasoning faculty, too, would be called into play, although in a fashion less direct and obvious than that which one was accustomed to associate with some of the older school subjects. And lastly, it was not possible to imagine a training in gardening which was not also, in some measure at least, a training in good taste. It was not, therefore, on utilitarian but on general educational grounds that school gardening rested its claims to the consideration of those who were responsible for the framing of supplementary courses suitable to the needs of the locality in which a particular school might be situated. Its usefulness as an educational instrument would be enhanced in direct proportion to the degree to which it was interwoven with the rest of the work of the pupils. It should be founded firmly on the nature study which was appropriate to the Junior Division, and the numerous points of interest which it would suggest as it developed could readily be made to yield excellent results.

The Pruning of Fruit Trees was the subject of an instructive lecture given before the members of the Brighton Horticultural Society on the 20th inst. by Mr. F. Phillips, of Craigen-Dowie Gardens, Reigate. The several kinds of hardy fruit in general cultivation were passed under review, and the most suitable methods of pruning were described in a clear and essentially practical manner.

Wenatchee Peaches in London.—During the past week there have been on sale in London considerable quantities of peaches of foreign growth that have been of medium size, good appearance, and fair quality. These peaches had formed part of the large consignment of 2,000 cases that arrived at Covent Garden from the Wenatchee Valley in the State of Washington, on the 19th inst. This valley has for a long period been known for the high quality of its apples, and it has of late years obtained a considerable reputation for its peaches, upwards of 8,000 acres being devoted to these fruits. The fruits were carefully packed in cases, and the cases put in ice cars attached to the mail train and sent to New York, whence they were shipped to England. They were delivered in Covent Garden within thirteen days of the date of dispatch, a fact worthy of note, seeing that the distance covered was 3,000 miles. This is the first time American peaches have been placed on the London markets, although peaches from the Ontario orchards have been imported for some years past.

Glasgow Fruit Market. The Corporation of Glasgow has provided in the Bazaar a spacious fruit auction room for the purpose of giving increased facilities for the expeditious handling of large quantities of fruit. The seating provided consists of tip-up chairs, which rise from the floor level tier upon tier in the form of an amphitheatre, thus affording buyers an uninterrupted view of the sample lifts which are situated in the front of the auctioneer's rostrum. The room has ample accommodation for 500 persons, and it is hoped that the traders in fruits who have for some time past been advocating its provision will take full advantage of the opportunities it gives for the quick dispatch of business.

American Apple Crop.—In summarising a series of reports on the prospects of the fruit crop in America and Canada, the editor of "The National Nurseryman" states that it appears from the reports that the crop of winter apples is less this year than the crop gathered in 1911.

SUTTONS
G.M.1935

MESSRS. SUTTON AND SONS' GOLD MEDAL COLLECTION OF VEGETABLES at the Royal Horticultural Society's Vegetable Show, September 26.

NOTES FROM KEW.

Impatiens Kewensis.

To Kew we are within recent years indebted for many hybrids which have eventually proved themselves to be thoroughly useful, and this new impatiens is one that will probably in time be added to the list. It is the result of a cross between Impatiens platypetala, an old species introduced over 60 years ago from Java, and the comparatively new I. Herzogi, a native of New Guinea. The flowers of I. platypetala are of a bright rosy-lilac colour, while those of I. Herzogi are brilliant orange-scarlet. Strange to say, the union of these two has resulted in the production of a variety with bright crimson flowers with, in some instances, a magenta suffusion. Though the several plants now in bloom in the intermediate portion of the T range were all the product of a single pod, the flowers show a certain amount of variability in their colouring, some individuals almost suggesting the fairly well-known I. Hawkeri. In habit this new hybrid partakes more of the upright character of I. Herzogi than the spreading growth of I. platypetala. Being both an interesting and a pretty form, I. Kewensis will no doubt soon become generally grown. Should it not produce fertile seeds to admit of its wholesale propagation, cuttings will, no doubt, as in the case of the others, strike root very readily.

Clerodendron ugandense.

The clerodendrons are an extremely variable race, but this comparatively new species is in the colour of its blossoms a decided break away from any of the varieties in general cultivation. It is a free, loose-growing shrub, and in the cool portion of the T range associated with pelargoniums and various other South African plants it is just at home. Trained to a rafter it is seen to considerable advantage, the long, slender, leafy branches being terminated by loose racemes of blossoms. These are individually about an inch across, and are of a pleasing shade of light blue, except the lowermost lobe, which is disposed in the form of a lip, and is of a dark blue tint, thus affording a marked contrast to the rest of the flower. Being of ready propagation and simple cultural requirements this clerodendron should before long be more generally cultivated. It is, as implied by its specific name, a native of the Uganda district of Africa, and was first raised at Kew from seeds sent by Mr. M. T. Dawe, who collected them in a spot about 2,000 feet above the sea level. Judging by its behaviour at Kew it is essentially a greenhouse plant, and where it has plenty of light and air the flowers are better coloured than in a warmer and more shaded structure. In a fully-exposed position and spurred back it might be grown in bush form, but as a rambler for the roof or rafter it is certainly very pleasing.

Gerbera Jamesoni and Zephyranthes candida.

The custom that now prevails at Kew of placing at the entrance gates a notice of the different subjects of especial interest at the time is of great service to the casual visitor. In this list the gerberas and zephyranthes in the narrow border adjoining the orchid houses are mentioned, and deservedly bracketed together, as the two form a delightful and most uncommon feature. The gerberas are brilliant in their colouring, and as an edging thereto and a foil to their vivid tints we have the white crocus-like flowers of the zephyranthes springing from a dense tuft of deep green grasslike leaves. Such an effective combination as these two form is well worth going some distance to see.

Crotolaria capensis.

This leguminous shrub is a native of South Africa, from whence it was introduced in 1774. As flowering in the cool portion of the T range, it is certainly well worthy of note for the embellishment of the greenhouse at this season; yet, apart from Kew, and last year in Messrs. Veitch's nursery at Chelsea, I have not met with it so employed. It somewhat suggests a specimen of the Bladder Senna (Colutea arborescens). The leaves are trifoliate, and the flowers, which are borne in terminal drooping racemes, are bright yellow when fully expanded, but in an undeveloped state are tinged with green. It is a plant of easy culture, for cuttings are not at all difficult to strike, after which they will grow well in ordinary potting compost.

Oxalis Bowieana.

Many occupants of the greenhouse that have contributed to its embellishment for a long time are now past their best, and the question of their successors becomes an important item. A group of this oxalis in the cool portion of the T range shows well its value in this respect, the mass of large green trifoliate leaves forming in themselves a delightful feature, whose beauty is considerably enhanced by the profusion of rich rosy-red blossoms with which they are overtopped. This oxalis can be bought at a cheap rate, and its cultural requirements are simple, both of which are important matters in many places. In the Kew Hand List O. purpurata is given as the correct name of this species, but it is generally known as O. Bowieana, in fact, the term purpurata as applied to the blossoms is a misleading one.

Cæsalpinia Gilliesi.

The specimen of this cæsalpinia trained to the front of the Museum No. 2 is this season unusually floriferous, probably owing to the great heat we have experienced. Out of flower this cæsalpinia suggests a rather attenuated specimen of Acacia lophantha, but when in full bloom it is a really striking object. The flowers, which are borne in large terminal racemes, are bright yellow, and each has a cluster of long, prominent bright red stamens, thus yielding a startling contrast in colour. The Kew plant has this year about 50 flower clusters, either expanded or approaching that stage. Cæsalpinia Gilliesi is a native of Mendoza, South America, and is said to have been introduced in 1829. The Kew specimen has been in its present position, and flowered more or less freely, for several years. It is a near relative of the Royal Peacock Flower (Poinciana regia), which is so much admired in tropical countries; indeed, cæsalpinia is sometimes included in the genus Poinciana. K.

ORNAMENTAL CRABS.

The various kinds of crab apples form an interesting and showy feature in gardens during the autumn, for in many instances the fruits are highly coloured, and they are usually borne in sufficient numbers to create a good display. In some parts of the country the common crab, Pyrus malus, is found wild about fields and hedgerows, but its rosy-cheeked fruits, though showy, are less ornamental than those of various other species and hybrids. There are several distinct varieties of P. malus, which are of more decorative appearance than the type, and those are to be commended for garden purposes. Unfortunately, it is not possible to use the best of the crabs satisfactorily in public gardens, for the fruits offer such an attraction to children that trees are frequently damaged, and sometimes ruined, during raids on the fruit. There are, however, other gardens where they may be grown, and, in addition to the beauty of the fruits, they are useful for making into jelly, while a few are distinctly palatable when raw.

One item must be borne in mind respecting the culture of these trees, for, like the apple, all the members of the malus section of Pyrus are attacked by American blight, and if a sharp look-out is not kept, and means taken to check it when it first appears, the health of the trees may be seriously imperilled. Any garden where the ordinary apples give good results may be expected to be suitable places for the culture of the crabs, while, given loamy soil they generally grow vigorously.

Pyrus malus is well known by reason of its pretty delicate pink and white flowers in spring and its applelike, red and green, rather bitter and very sour fruit in autumn. The variety astracanica is the parent of the Red Astracan apple, and is recognised by its intensely red fruit. It is a desirable variety for general cultivation. Coccinea, another kind noted for its red fruit, is also a showy variety of P. malus, while Bertini, flexilis, pendula, and rosea all bear showy fruits. P. malus flore albo pleno differs from other kinds by having semi-double white flowers: a few fruits of a yellowish colour are borne, but they have no great pretensions to beauty.

Pyrus baccata, the Siberian crab, is a well-known decorative tree, whose fruits are esteemed by cooks for making into jelly. Its red and yellow fruits are round, hard and glossy, and they are about three-quarters of an inch in diameter. The fruits are not troubled much by birds, and it is not uncommon for them to hang on the trees until mid-winter, whilst they have been noted as late as March. There are several well-marked varieties, which are distinguished either by shape, size, or colour of the fruits. Thus, cerasifera has red cherry-like fruits, and xanthocarpa yellow fruits.

P. prunifolia, a Siberian species, very closely allied to P. baccata, is also a very ornamental tree. So far as habit, flowers, and foliage are concerned, it is very difficult to distinguish the two species, but a well-marked difference is noticeable in the fruits, for whereas in the case of P. baccata the calyx lobes are deciduous and the apex of the fruit forms a small hollow, in P. prunifolia the calyx lobes are persistent and terminate the fruit, as in the case of the apple. It is prolific in varieties; cerasiformis and fructu coccinea are two of the more showy kinds, the fruit being of a rich red colour.

The curious red fruits of P. Niedzwetzkyana have been very noticeable this year. They attain a length of two inches, and are wide in comparison. The deep red colour of the skin is noticeable, not only to the centre of the fruit, but is also found in branches and roots.

P. coronaria, the American crab apple, differs from P. malus in bearing small fruits, which, when ripe, are a vivid shade of green. It is not included among the more ornamental kinds, and, so far as flowering is concerned, its variety flore pleno is far in advance of it. P. Ringo is a very beautiful Japanese crab. It very rarely fails to bear a good crop of fruits, which, when ripe, are of a rich orange colour. P. sikkimensis differs from all the other kinds in general appearance, for its rather small fruits are borne on long slender stalks, and bear very long calyx lobes. The colour is dull red and green.

Such beautiful flowering kinds as P. spectabilis, P. floribunda, and P. Scheideckeri are less showy in autumn than those already mentioned, and they would hardly be planted for the sake of their fruit. There are, however, several other large-fruited crabs which have been raised by hybridists, which are exceedingly showy. The fruits are as large as those of small apples. All may be used for jelly-making, whilst some are eatable. Good ones are John Downie, Dartmouth, Victoria, and Imperial, with red fruits, and Transparent, Transcendent, The Fairy, and Mrs. John Seden with yellow or red and yellow fruits. These are all well worth conspicuous positions, for the fruit is very highly coloured, and, as a rule, a good crop is borne. W. DALLIMORE.

The Aperture of Stomata.—With the object of estimating the aperture of stomata, Dr. Francis Darwin, assisted by Miss D. F. M. Pertz, has devised an ingenious apparatus that he calls a porometer. It consists, according to "Nature," of a small campanulate glass vessel attached to an air chamber. The glass vessel is fixed to a leaf, and pressure in the chamber is reduced, whereby air is drawn through the stomata. The rate of flow of the air into the chamber is measured, and supplies a comparative indicator of changes in the apertures of the stomata. The porometer provides a continuous method; it indicates the movements of a group of living cells, and possesses a great advantage over the horn hygroscope and cobalt paper, inasmuch as the readings of the instrument are independent of transpiration.

NEW PLANTS, ETC.

DAHLIAS.

Diadem.—A large collarette variety with rather pointed ray florets of a beautiful rose-pink shade: the collar florets are white. A very attractive form. F.C.C., N.D.S., Sept. 20. Messrs. Dobbie and Co., Edinburgh.

Leitstern.—This is a rather small collarette dahlia, with deep crimson pointed ray florets, and a very highly developed set of white collar florets that form quite a frill round the yellow disc. F.C.C., N.D.S., September 20. Messrs. Dobbie and Co., Edinburgh.

Golden Wave.—A large cactus variety of first-rate exhibition form, and of a pretty soft shade of golden-yellow. F.C.C., N.D.S., September 20. Messrs. Jas. Stredwick and Son, St. Leonards.

Frederick Wenham.—This is a particularly large and handsome cactus dahlia, with incurving florets. The colour is warm fawn-pink, with soft salmon glow at the centre. F.C.C., N.D.S., September 20. Messrs. J. Stredwick and Son, St. Leonards.

Florrie Wells.—A showy and finely formed cactus variety, with stiff, pointed florets. The colouring is a pleasing combination of crimson and purple. F.C.C., N.D.S., September 20. Mr. H. Shoesmith, Woking.

Sunlight.—A good name for a long and stiff-stemmed garden cactus dahlia; the flowers, freely produced well above the foliage, are of medium size and good form, and the colour is a bright combination of yellow and orange. F.C.C., N.D.S., September 20. Messrs. Jas. Stredwick and Son, St. Leonards.

SPIRÆA VEITCHI.

This very handsome spiræa somewhat resembles S. canescens. One of the features of this Chinese shrub is that all the flowering twigs on a branch become erect, and each carries its head of white flowers into the same plane as its neighbour does, and so a long branch becomes, so to speak, one beautiful inflorescence. The species grows to a height of 10ft. or 12ft., and was discovered by Mr. E. H. Wilson. At Kingston this spiræa has proved quite hardy. Bot. Mag., t. 8,383.

DRACOCEPHALUM ARGUNENSE.

A perennial herbaceous plant that grows about 2ft. high, and bears violet white-spotted flowers in whorls grouped in a terminal raceme. Each flower, of pentstemon-like shape, is about 1½ inches long. Bot. Mag., t. 8,384.

CHICORY.

This easily-grown plant is invaluable for winter salads, and if seeds were sown, as is customary, early in May, large roots, with a considerable amount of top growth, will now be in evidence. Owing chiefly to the long-continued warmth seed stems may be more than usually prevalent. All such should be pulled out, thus giving more room for the plants remaining, and the soil about them be kept clear of weeds. The roots must remain where growing until the foliage shows signs of dying off, when slight disturbance with the spade will facilitate this process. Later supplies may remain in the ground until wanted, the roots being quite hardy.

To obtain stout, well-blanched heads slight warmth, and a dark position, are necessary. The roots, when raised from the open ground, may be reduced in length if desired, and have every vestige of summer foliage removed. Place the roots in moist earth in a box or other receptacle that will exclude the light, in a temperature of about 55 degrees. Growth is slower at first than later in the season, until, in spring, an upturned box in the open air is all that is required to induce growth and the necessary blanching.

J. Day.

SECONDARY GROWTH IN CATTLEYAS.

A correspondent writes that he has, unfortunately, not been able to prevent a number of his plants of Cattleya Loddigesi, C. labiata, and C. Percivaliana from making secondary growths on "leads," and he asks whether it would facilitate flowering if these new growths, now about 1½ inches high, were pinched out.

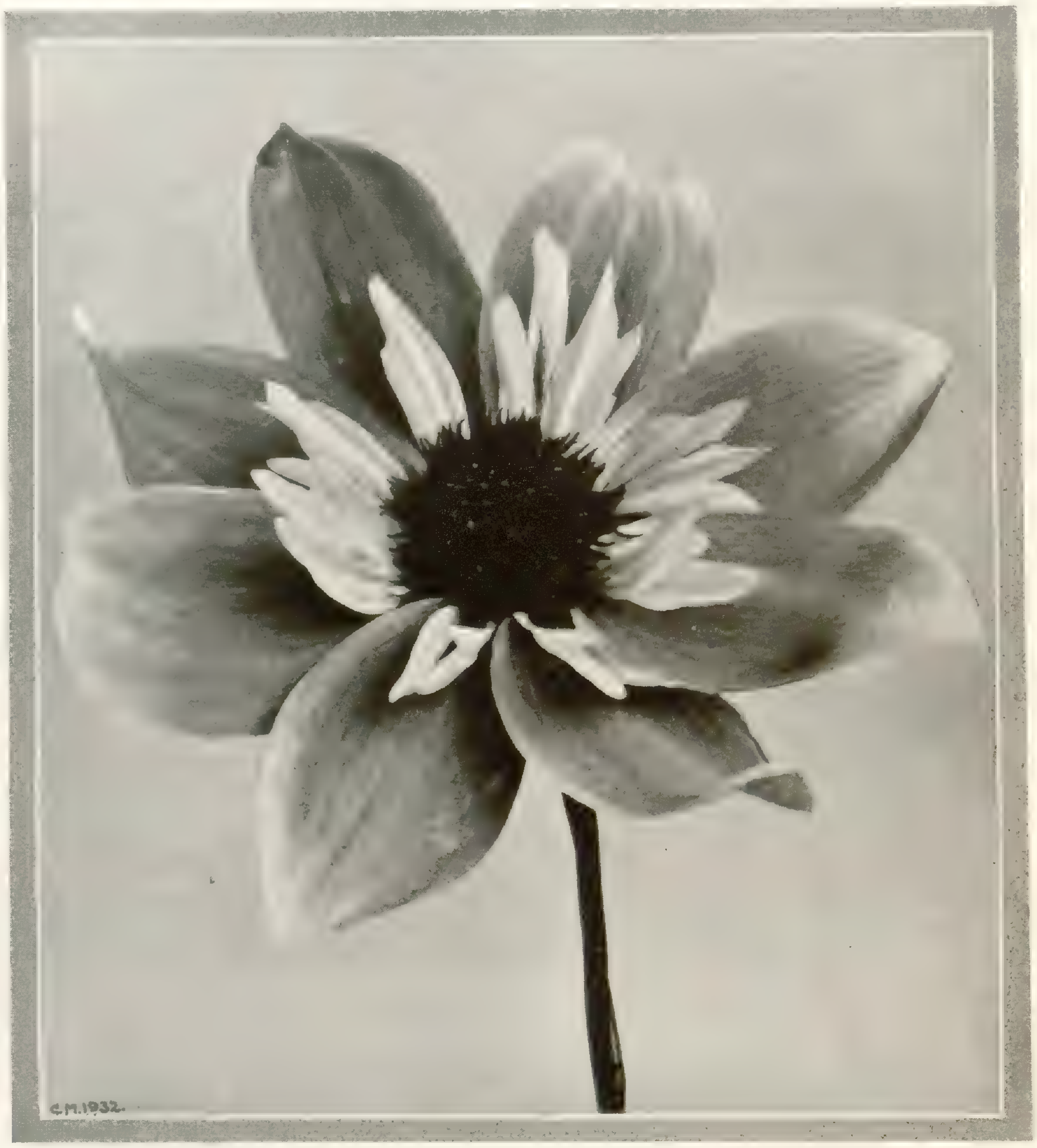
The subject of secondary growth is an interesting and important one, and the cattleyas mentioned are particularly liable to produce such growths, and in my notes to the Gardeners' Magazine I have frequently referred to the matter in the past.

Secondary growth may be attributed to more than one cause. If the plants are imported ones, excess of vigour, combined with a rapid growth generally induces secondary breaks to appear. The want of light (too much shade being used), combined with a hot, moist atmosphere, produces a large, sappy first growth, and the subsequent undesirable conditions referred to. The whole cause may be summed up as insufficient maturity or ripening of the pseudo-bulbs.

It is necessary with practically all summer-growing cattleyas to pay particular attention to the completion of growth, and if growth is too early, and there is a possibility of secondary growth commencing, it is advisable to place the plants in more exposed positions, where there is a drier and cooler atmosphere. I have known instances in the South of England where some cultivators of Cattleya gigas have suspended their plants under the trees in their garden during late summer to prevent secondary growth. While not advocating such a course one may say that some method of retarding must be devised whereby, while assisting the proper ripening and maturing of the seasonal growths, one may also prevent the secondary growth commencing. The cattleyas mentioned by my correspondent should not have their young growths cut away. The best method is to place the plants in the warmest and lightest place available, so that every encouragement is given to rapid development while there is time to obtain some benefit from the sun's rays. If the growths are retarded now, it becomes a far more difficult matter to deal with young growths later on, in November and December. There are about six weeks left during which some assistance may be looked for from the outside conditions, but there is very little movement in plant life after that until the turn of the year; during this dull and quiet period one has to be particularly careful to keep the plants supplied with just sufficient moisture to keep them plump, any excess of moisture causes damping and blackening of the bracts at the base of the growth.

I would advise my friend to keep his plants which have matured their growth as free from root moisture as possible, and place them in a light position at the coolest end of the house. He will find that the moisture in the atmosphere will be almost enough to keep the foliage and bulbs plump and healthy.

H. J. Chapman.



NEW COLLARETTE DAHLIA DIADEM.

Blooms rose-pink and white. F.C.C., N.D.S., September 20. Messrs. Dobbie and Co.

LILIUM HARRISI.

When bulbs of this lily were first sent here from Bermuda, now nearly thirty years ago, an immense amount of interest was centred around it, for it was by some claimed as a distinct species. Time has, however, altered this opinion, and it is now proved to be but a form of the Japanese Lilium longiflorum. From the fact that in the climate of Bermuda the bulbs ripen sufficiently early for them to reach this country by the end of July or early in August, Lilium Harrisi can be had in bloom much earlier than bulbs from Japan, unless these last are retarded, and it must be borne in mind that when L. Harrisi was first sent here retarding was not then practised.

The bulbs from Bermuda are in nearly every case packed in fine stone dust, which, being dry, and of an absorbent nature, takes a good deal of nourishment from them if they are allowed to remain therein too long. For this reason the bulbs should be obtained and potted as early as possible, otherwise they will suffer a good deal. By the time they reach this country the bulbs will have been dormant a long while, and the basal roots are ready to start away at once directly they are placed under conditions favourable to growth. As Lilium Harrisi from the Bermudas became so popular, owing to its early-flowering qualities, the name was, in time, for trade purposes, applied to the Japanese bulbs, which, though they may not be botanically distinct from the others, are grown under such different conditions that they cannot be had in flower till a much later period than L. Harrisi itself; in fact, the Japanese bulbs do not reach here till months afterwards.

As the retarding process is now so generally followed, and Japanese-grown bulbs readily lend themselves to this treatment, there is a large demand for them, but, still, Lilium Harrisi from Bermuda is appreciated by many who depend upon it for their earlier displays.

W. T.

HIBISCUS SYRIACUS.

Your correspondent, "G.B." (page 577), appears to be acquainted with only one form of this hibiscus, and that with double blossoms, whereas there is really a long list of garden varieties, in some of which the flowers are single, and others double. Personally, I prefer the single kinds, but that, of course, is only a matter of taste.

One of the most striking of all is flowering just now in many places with great freedom. This is the variety Cœleste, with large single blossoms of a very pleasing shade of dark lavender-blue with a reddish metallic suffusion in the centre. The typical Hibiscus syriacus bears single flowers, in colour white, or nearly so, with a crimson blotch at the base of each segment, thus forming a coloured centre to the flower. The variety Painted Lady is a very good form of this type. Another single flower, with pure white blossoms, is Totus albus, quite distinct from the others previously mentioned.

The double varieties in cultivation are very numerous, different shades of purple, red, pink, and blush being represented among them. Though wanting in a few most of them possess the dark-coloured centre in a more or less pronounced degree. A very fine pure white variety, with double blossoms, is Admiral Dewey, of transatlantic origin. There are varieties with variegated leaves, but at the time of the year the blossoms are produced the variegated portions of the foliage, especially during a hot summer, is apt to become discoloured, hence they are less effective than the green-leaved kinds.

This hibiscus is a very old plant in gardens, having, according to the "Dictionary of Gardening," been introduced in 1596. Even as long ago as Loudon's time no less than seven varieties were mentioned. It may be noted that this hibiscus was formerly known as Althæa frutex, and as such it is still occasionally met with in catalogues. Although bearing the specific name of syriacus, it has been questioned if this hibiscus is a native of Syria, or whether it originally came from the farther East. In this country, as stated by your correspondent, it prefers a well-drained warm soil, for in damp, cold districts it is not satisfactory. Some of the single kinds ripen seeds freely, but the progeny is more or less variable. I was once very interested to see in a French nursery a vast number of the different varieties of this hibiscus, every one of which was grafted on to seedlings of the common kind, and plants from eighteen inches to two feet high were sold at a very cheap rate.

W. T.

GARDEN NOTES FROM EAST ANGLIA.

Readers of the GARDENERS' MAGAZINE will doubtless store away in memory, or notebook, many items and incidents in connection with the record-breaking summer of 1911. And in this they will be justified.

A few notes from the driest part of the East Coast may be of interest, if only for the purpose of a brief comparison with the preceding year.

With reference to annuals: They have been shorter in duration than usual, owing to the great heat and lack of moisture. Sweet peas were very good for a fair period, and retained their colours well, partly owing to a position which broke the fierceness of the morning sun, and partly to deep cultivation. Stocks, of which we grow a goodly number, have succeeded beyond expectation. Frame-raised and transplanted varieties are at the moment of writing passing their best, but those sown in the borders where they stand are now at their zenith, really grand, almost, if not quite, up to the high standard of 1910, when these flowers were really exceptional. Nemesias have been disappointing, except in half-shady places, where they are still in bloom. In a fairly moist season these charming annuals reach a high order of merit, but in a year of drought they cannot be regarded as dependable plants.

Antirrhinums have been really good, both in growth and blossom, and further emphasise their value for a dry year or a dry position. Asters were good where the beds have been thoroughly worked, but those who did not attend to this point lacked the strong plants necessary to the production of good blossom. Pentstemons from seed are in flower, though not so fine in spike as last season; yet many of the forms are very pleasing, those of the Gem type being the most interesting. Among these latter are some good pure whites, which will another season be used for bedding.

Brachycome iberidifolia in variety, and Linaria maroccana have been consistently good, and both are worthy of greater appreciation. Annual statices have done better this season, the individual plants being of fine size and the blossoms most profuse, evidently approving of the dry conditions. Delphinium Belladonna, treated as an annual, is quite a success, fine free spikes of blossom being plentifully produced at the present time. D. Blue Butterfly, however, has been severely treated, though some of last year's seedlings, planted on a sloping bank, passed through the winter unharmed, and have made fine patches of deep gentian-blue.

Several other plantings of annuals, Virginian stocks, clarkias, etc., etc., have been short-lived, in spite of a good early growth. As we use breadths of annuals to carpet shrub and tree plantings we have felt this shortness of duration, but console ourselves with the reflection that probably another season will be less dry and exacting. Verbenas have afforded another instance of success. By making a careful selection from a good strain last season we have secured a pleasing range of colourings, which have done grandly. These, when reselected, will give grand material for next year's use. It is distinctly pleasing to see these old-fashioned favourites still being improved, and more widely grown.

Leaving the annuals for perennials, a few especial points intrude upon the notice. Michaelmas daisies are from ten days to a fortnight earlier than last year, and the same may be said of early chrysanthemums, both groups having made good growth for the season, and the cooler weather will ensure good blossoms upon the latter. Delphiniums are giving a good supply of secondary spikes, which, if not so tall, yet are certainly better than the main display, but it is noticeable that the spring-raised stock is far superior in the matter of continuous flowering than established plants. The value of some seedling varieties of Moon Daisies (raised from the variety Mrs. Lowthian Bell) is apparent at the present time, for while all of the established groups are out of blossom, the seedlings are just coming into full beauty. Gaillardias have been very good, and are still gay, the many fine forms of G. grandiflora being extremely decorative, and very useful for cutting.

Anchusa italica Dropmore variety is another plant which should be renewed as time goes on, for young plants are of greater value, and give a much longer display than old ones. Montbretias are now in evidence, and make a gay picture, but they are not up to the usual high standard unless planted by the waterside, for they suffer severely from drought. Germania is one of the most effective of the year, and the brilliant Lutetia is also very noteworthy. The yellows, George Davison, St. Botolph, Lady Hamilton, etc., are also very good. Gladioli have in the main been good, but in the great heats the blossoms faded very quickly, so that one obtained but a fleeting reminder of their real value for garden decoration. Gauras are again good, and the same remark applies to Artemisia lactiflora, the growth of the vernonias, and eryngiums, and echinops.

In the pools the nymphæas have given a record display of blossom. Throughout the display has been continuous, and at the moment of writing bud and blossom seem more profuse than ever. It would be difficult to choose the most effective water-lilies of the season, but Chromatella, Lucida, James Brydon, Seignoureti, Marliacea albida, Carnea, Rosea, and Colossea are among the most floriferous. Villarsias, nuphars, sagittarias, and a host of other subjects in the waterways have made record growth, while waterside plants generally have given no cause for complaint, save for the rapid passing of blossom time in some of them.

P. S. HAYWARD.

BULBS.—A practical treatise on the cultivation of hardy, hothouse and greenhouse bulbous and tuberous rooted plants is "BULBS AND THEIR CULTIVATION," by T. W. Sanders, price 2s. 6d. net, or by post 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

BORDER CARNATION NOTES.

Growers of border carnations will now be rapidly pushing forward their autumn work. The making-up of new beds and plantations to accommodate the rooted layers must be the first consideration. If not already prepared, the work should be quickly done, thoroughly digging the whole and incorporating a moderate dressing of decayed manure (preferably cow manure), together with turfy loam, crushed bones, and sand.

If insects are troublesome, a scattering of a soil insecticide previous to the digging, will alleviate the trouble, while for heavy ground there is nothing better than a quantity of wood ashes or mortar rubble to assist in lightening and sweetening the soil.

Autumn planting I believe to be far preferable to wintering them in pots and planting out in early spring, but on this point growers must follow their own ideas, for it is somewhat difficult to winter some varieties in the open ground in certain districts. Growths were very hard, and rather over-ripened at the time of layering, but this has not affected their rooting capacity, and we have been practically free from loss, and at the moment of writing —September 20—all varieties seem to be well rooted. The carnations are short in growth, but beautifully healthy and vigorous, and give promise of better material than ever for the next season's display.

The only trace of disease we have is in two or three seedlings, which have the rust, a disease which the general stock have not shown the least trace of, and which is hardly ever noted among border varieties. My old theory, that this disease can be transmitted from one generation to another by the seed alone, I hold as of yore, and I would advise growers, if they have infected stocks, not to save seed from them, but rather to do all they can to eradicate the disease.

It should be remembered that work done now is of the utmost importance for the success of next season's blooms. All work must be thorough. Sever the layers cleanly, using a keen-edged knife. A good cut heals infinitely quicker and better than a bad one. Make the beds moderately firm, and plant firmly. Loose planting has resulted in many carnation losses, and the grower must particularly avoid it.

It is well to study the effect of the varieties. A good arrangement as to colour and height will be far more telling than a haphazard planting. Plenty of space for development must be allowed. Good varieties should always be given the preference over weaker or less attractive ones, and a good collection is only built up by good selection and keeping the plants in robust health.

A few words concerning varieties worth growing may perhaps be acceptable to those just commencing a collection. Yellow grounds are given a high place nowadays, but one must also secure sufficient selfs and fancies in other colourings to ensure a wide range of beauty.

Charming novelties are Mrs. Henwood, a lovely white of perfect form; Mrs. Robert Berkeley, an exquisite self in apple-blossom pink; Lass of Gowrie, a pretty fancy, white marked with red; Forester, a fine yellow ground marked with red; Ilene, a superb white, with a distinct blush shading; Amazon, a glorious orange-buff, suffused with scarlet toning; Maggie Morton, pure white, marked with bright rose; and Mrs. Penton, a fine buff variety, heavily marked with rose. Very fine, too, are Chocolate, a good form in its "name" colour; T. E. Henwood, a bright salmon-pink; Mrs. Geo. Marshall, a splendid rich crimson; Lady Roscoe, a first-class blush white; Daffodil, doubtless the finest yellow in existence; Cardinal, a glowing scarlet of perfect form; Robert Bruce, a grand apricot self; Sweet Briar, white, marked with lavender and rose; and Kate Nickleby, a large pure white.

Lack of space forbids an extended notice of many fine carnations. But those who plant Agnes Sorrel, Ashantee, Banner, Benbow, Bob Acres, Ellen Douglas, Elizabeth Shiffner, Heather Bell, Helen Countess of Radnor, Hercules, King Solomon, Kissing Cup, Liberté, Miss Willmott, Miss Maud Sullivan, Mrs. Robert Morton, Pasquin, Purple Emperor, Sam Weller, Trojan, Sir Galahad, and Splendour will have the basis of a first-rate collection.

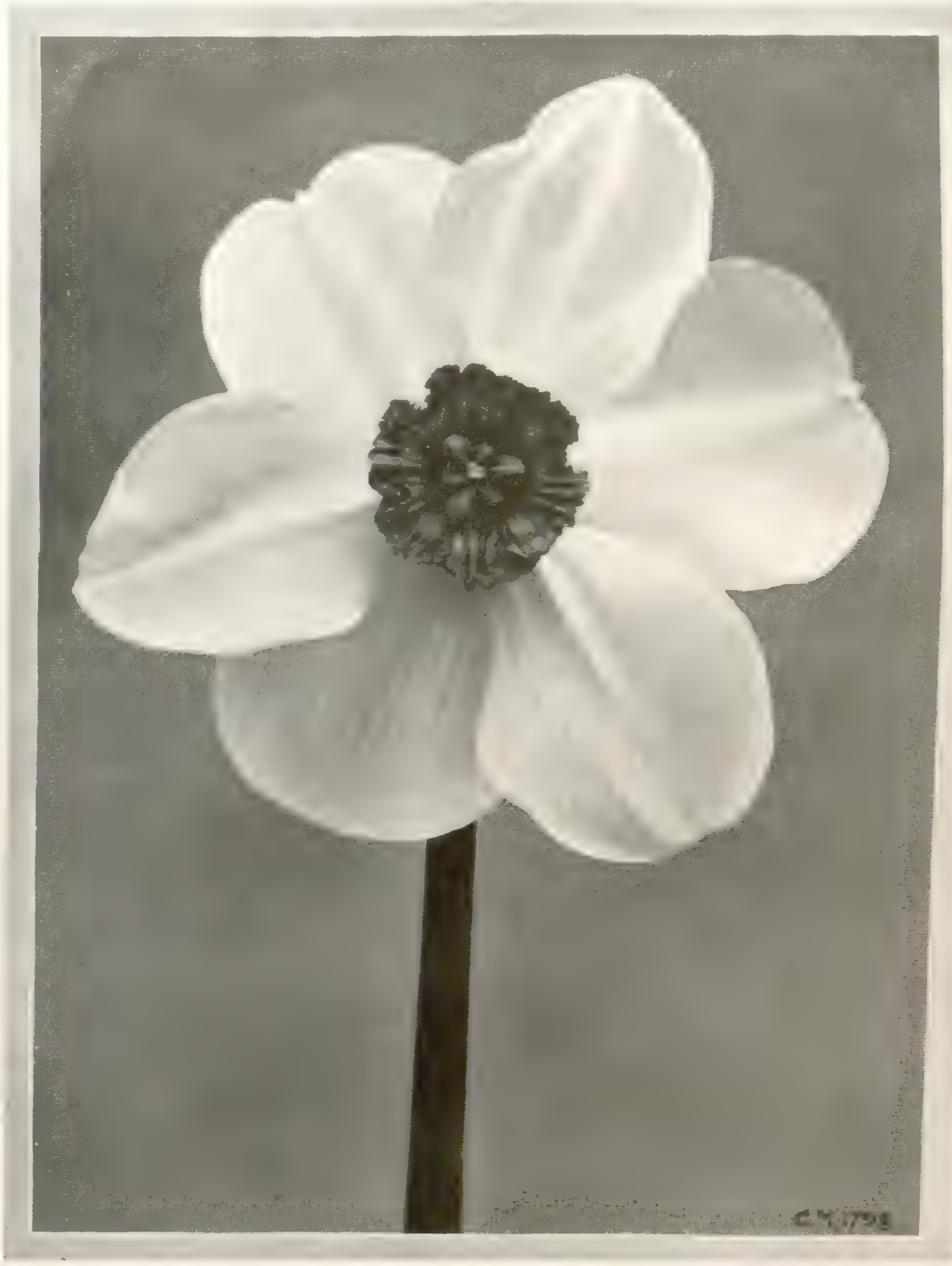
Apart from a little trouble with rust, the necessity of keeping a close look-out for insect pests and the inevitable rabbit in some districts, I think that carnations will give the grower very little anxiety this season, as stocks are so exceptionally clean and the soil is yet warm for planting. With a little showery weather after planting, the carnations will be given a good start, in readiness for the winter's rigour and cold.

Finally, it is important that all carnations be properly labelled, as this keeps the collection in perfect order, and adds to the interest from a visitor's point of view.

H. C.

NARCISSUS SOCRATES.

Another fine new Poet's Narcissus is Socrates, a variety that has received well-merited awards from the Royal Horticultural Society and at the Birmingham Daffodil Show this year. It is in the hands of Messrs. Barr and Sons, of Covent Garden, who exhibited it finely in the spring. The solid white flowers measure three inches across, and the segments overlay so as to form a bloom of great beauty and fine form. The cup, or crown, is deep yellow, with an unusually wide border of dark rich crimson-scarlet. Socrates grows about fourteen inches high, and promises to be a very useful addition to the already considerable list of dainty and fragrant varieties of Narcissus poeticus.



NARCISSUS SOCRATES.
A fine poeticus variety; A.M., R.H.S., April 25, 1911.

Exacum macranthum.—In the intense bluish-purple of its blossoms this Gentianwort stands out markedly from most other flowering plants at this season, while an additional feature is furnished by the golden anthers towards the centre of the flower. Of late years Messrs. J. Veitch and Sons have shown us that it is not nearly so difficult of cultivation as was at one time considered to be the case. A native of Ceylon, it used to be regarded as a stove plant, but coming from mountainous regions it may with advantage be grown much cooler, in fact, Messrs. J. Veitch and Sons look upon it as a subject for the warm greenhouse only. Treated in this way it keeps quite free from thrips, which often play havoc with it in a warmer structure. A mixture of loam, peat, leaf-mould, and sand will suit it well. —W. T.

PROPAGATION OF ROSES BY GRAFTING.

The increase of roses by budding in the summer and cuttings during autumn having been treated upon, a few notes upon grafting through the winter may prove useful. Although it may appear a little early to deal with the matter, the first stages must be entered upon now.

Stocks resulting from cuttings inserted last autumn must be lifted and potted at once, or we shall not have them moving sufficiently for the first batch of grafting. Various stocks can be used, and, although the Manetti is not so popular now, because of its alleged coarseness, this stock is by no means so rampant when its roots are confined to pots, and it still makes a most serviceable one for all but a few of the delicate teas and noisettes. Cutting briars are a little better, and are suited to all classes or sections. Then there is the seedling briar; and I have little hesitation in writing that three times as many of these are used annually as in the case of all other stocks put together. First of all, they are much cheaper, the crown is minus any semblance of pith, the scion can be placed actually upon the roots, and no rose dislikes it.

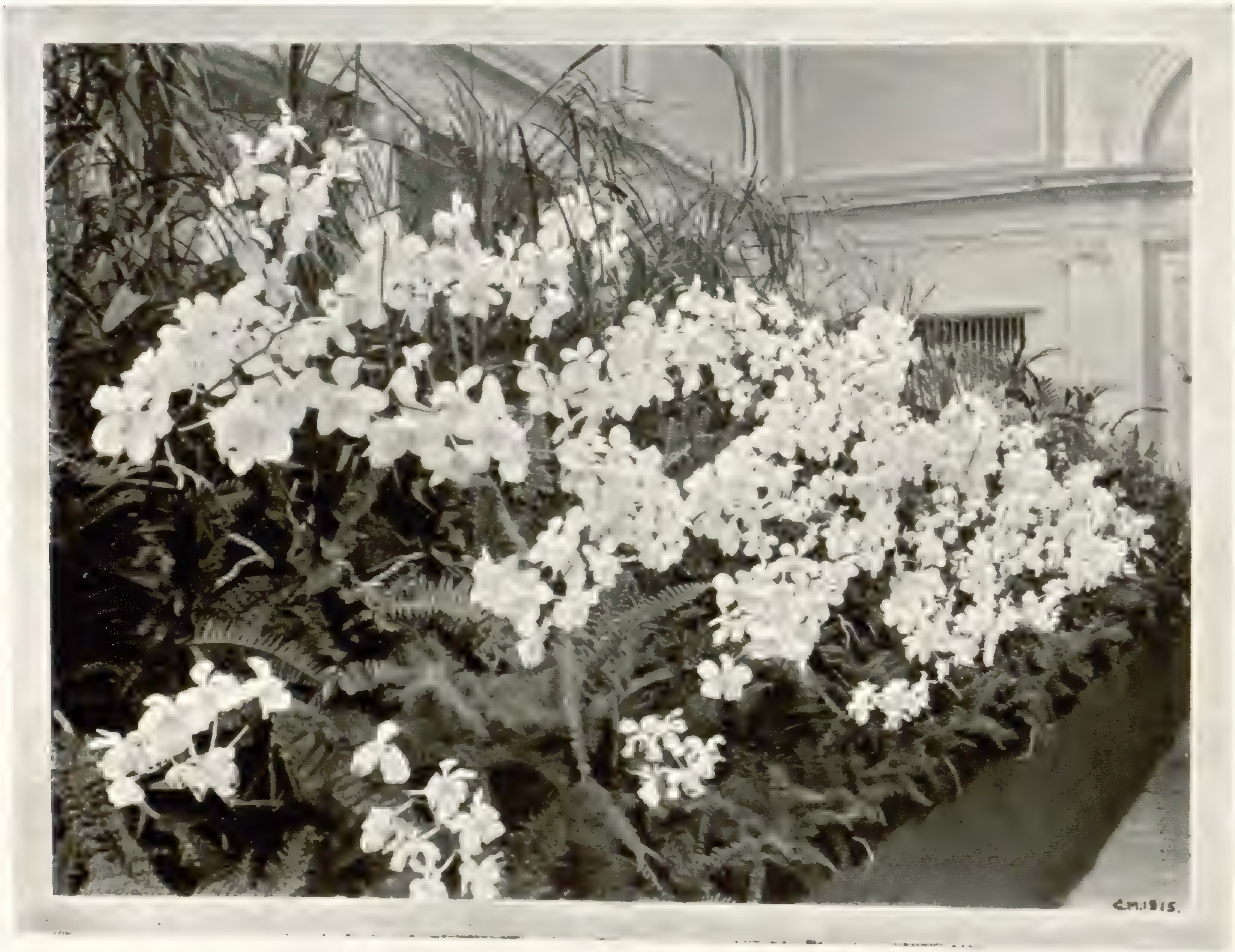
Use a compost of yellow loam with only just a little sand to keep it open. Leaf-soil and manures of all descriptions must be avoided, because they have a great tendency to produce fungus when in the close atmosphere of the propagating case. In our own case we use tiles, with a few washed ashes or fresh sand to stand the pots on.

When the stocks are potted, they should be plunged into some frame or pit, deep enough to cover the portion the rose graft is to occupy. Give a thorough watering, and let them be exposed to all except very bad weather. Here they will remain until batches are wanted for working. The first of these should be brought into a warmer house about a fortnight before they are to be grafted. I am aware that many advocate the graft and stock being in the same position, but my own experience is in favour of a little advance in the case of the stock, as the graft needs some support immediately the sap remaining in it becomes active. Future batches of stocks are introduced to a spell of warmth as needed, for I do not like them too forward. In spring, however, when using half-ripened wood, the stock may be a little more active, so as to be more in keeping with the condition of the green graft.

The propagating case should be perfectly clean. In fact, pots and all surroundings of the plants must be exempt from any suspicion of mustiness. Place the case so that a regular bottom-heat can be secured. Pipes enclosed beneath it are very good; but at the same time one should be able to get a drier atmosphere when needed. Much of this can be done with only one pipe, which I would not have inside the case, because we can regulate the latter by a little exposure so long as the outer atmosphere is in a fit condition. The glass over the case should tilt at a rather acute angle, so that the condensed moisture may not fall upon the grafts. There would appear to be something deadly to the young plants in the moisture on the glass. We have a small strip of wood for the bottom of the glass to rest upon, and this is so arranged that the drip runs out of the case. The top of the glass squares may rest upon anything most convenient, but I prefer a span-roofed case, the centre of which may be anything from six inches to a foot wide. This width will be found very convenient as a shelf to stand the young plants upon for a time when removing a few as they progress, and need a rather different atmosphere than would be suitable for the remainder; because all will not come on alike.

There are several forms of grafting. The two most generally used I will endeavour to describe. In the first we cut off the stock as closely to the root as possible, still allowing room for the graft to be fixed. This naturally depends upon the size of the scion used, which, again, depends upon the variety. If the graft is much smaller than the stock, the graft is cut wedged-shape and slipped into a corresponding cut in the stock. This method is more used now than a few years back, and is almost the only one among French and German growers. It makes a good union, and I do not think it quite so liable to break out in future handling as the older plan known as side or whip grafting. This last is simply the old form used in other subjects, and consists of a slanting cut upon the graft, with one of corresponding length on the side of the scion. It is certainly better in this form if the stock is not much larger than the scion.

One drawback to cutting brier stocks is their tendency to pith or soft centre. In this case, it is well to cut right through and fix the graft as if it was a continuation of the stock; choosing, of course, both of the same size. A sounder or less pithy stock may be used for side or cleft grafting. It is here, as I previously hinted, the value of firmness throughout, found in the seedling brier, is so appreciated.



FINELY-FLOWERED SPECIMENS OF VANDA CÆRULEA.

As exhibited by the Duke of Marlborough, Blenheim Palace, Woodstock (gardener, Mr. G. Hunter), at a recent meeting of the Royal Horticultural Society, when the award of a silver-gilt Flora Medal was made. Tastefully associated with elegant ferns, the soft blue flowers produced a delightful effect.

Make all firm with raffia and do not go to the quite unnecessary labour of waxing around the graft. It is not needed if the plants are placed in a case and treated as I will show. I have sometimes thought they do better without wax than with, believing the callus forms much quicker when more exposed to the genial temperature of the case.

Always make the top cut of the stock a trifle on the slant, and never place the graft upon the lower side of this. The object is to prevent moisture penetrating between graft and stock, which is very harmful. For this reason, the plants should not be watered overhead, but any necessary water must be applied to the soil carefully. Not much of this should be needed if the soil in the pots was a little more than moist and the bottom of the case not too dry to begin with.

Keep them quite close at first, and also dark until the callus forms. At no time should a bright light or sun come upon them until some progress is made. We like to remove the shading at night, and let a little subdued light reach them after callus has progressed. At any time when condensed moisture appears upon the glass it should be wiped off at once. As the grafts progress air admitted from the house itself in the early morning for a few minutes will do good. Some growers do not pay much attention to drying the glass with a cloth, but simply turn the glass over and allow the moisture to evaporate.

As the plants progress a little air may be allowed, and this is most readily done by leaving a small space between the squares of glass, more or less, as the plants are able to bear it. Even after the most forward plants have been taken from the case they must be carefully shaded from sun. At this period frequent overhead sprinklings will be beneficial; for now there will be no possibility of moisture penetrating between the stock and scion, as these have completely joined and no cavity remains.

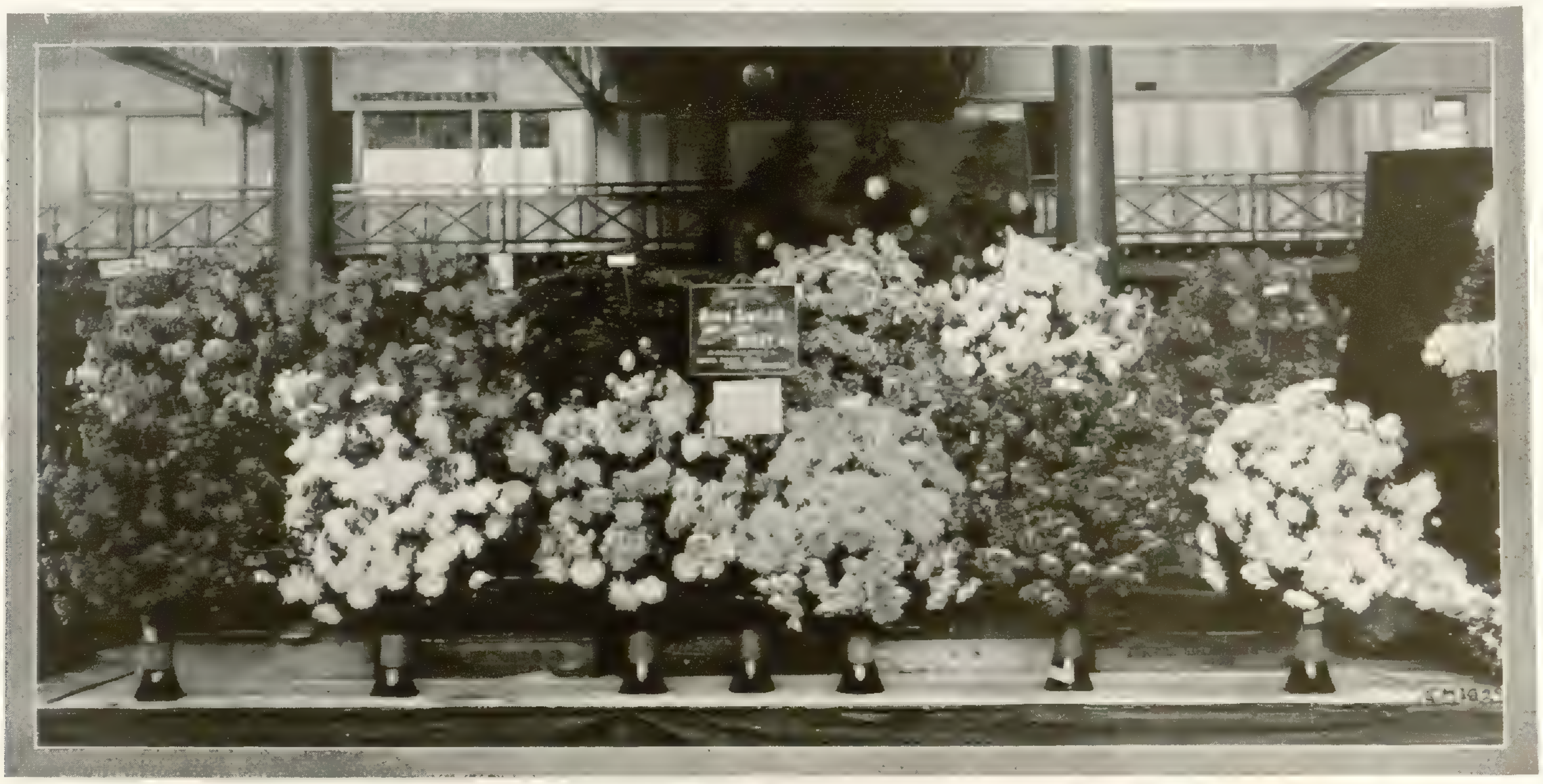
The after-treatment of the tiny plants depends upon the variety and also the purpose they are required for. They are potted on as growth demands and treated in the ordinary way. As one batch comes out of part of the case it may be occupied with the second lot of grafted stocks, and so on in rotation.

As I previously remarked one is not likely to get a batch of any one variety to come out all together. The plants should be selected, and the rest set up closer, so that they can still have the benefit of more or less close conditions. ROSARIAN.

AN EFFECTIVE EXHIBIT OF CHRYSANTHEMUMS.

There are two essentials to success in the exhibition of early-flowering chrysanthemums, as in the case of other flowers, one being the production of blooms of high quality, and the other the arrangement of the collections in such manner as to favourably impress the judges. The necessity of staging blooms in a high state of development is generally recognised, and cultivators usually make strenuous endeavours to obtain blooms that evince high-class cultural skill. But with regard to staging there does not appear to be a very general agreement as to the method of arrangement by which the best effect can be produced. Hence we see at exhibitions collections differing appreciably in style, and also in the manner in which the several styles are carried out. In the case of the flowers with which we are now immediately concerned we see, on the one hand, vases filled with blooms that have been grown under a system involving severe disbudding and high feeding, and on the other, collections that consist of flowers that have been naturally grown. In some cases the vases are so tightly packed with blooms as to produce a heavy effect, while in others they are so few as to present an ineffective appearance. We have, indeed, ample evidence each season that in the presentation of the early-flowering chrysanthemums to public notice a middle course is in every way the best for the display of their distinctive charms. There is no occasion in the cultivation of this section to endeavour to obtain, for example, blooms of Madame Marie Masse and its sports of the dimensions of one of the largest of the Japanese varieties, nor, indeed, is it desirable. The proper course is to give the plants the advantage of a moderately rich soil, and to remove sufficient buds on each branch to enable those remaining to attain their full development. With sprays of this kind far more effective and tasteful arrangements can be formed than is possible with sprays carrying large single blooms, or with those bearing a number of blooms only partly developed.

One of the most satisfactory collections of early-flowering chrysanthemums that we have met with at the exhibitions was that with which Mr. John Smellie, of Busby, obtained premier honours in the class for eighteen vases at the recent exhibition of the Royal Caledonian Horticultural Society at Edinburgh. The flowers were shown in vases that had a diameter of six inches, and the exhibitors were allowed full discretion as to the number of sprays used in filling the vases. Therefore, no restriction was placed upon the exhibitors in the exercise of their taste, and the judges were saved the trouble of counting the stems. As so frequently happens when exhibitors are allowed to use any number they please, there was some overcrowding in the several collections, and Mr. Smellie was not able to wholly avoid such mistake, but the overcrowding was much less than is suggested in the accompanying illustration. The sprays in the centre of the vase were cut with sufficient length of stem to stand about two feet above the top of the vase, and enough were used to form a rather loosely-arranged pyramidal bouquet, with a diameter at the base of about eighteen inches. The set of eighteen formed a rich display of colour, and were highly effective, although probably less so than would have been the case had they been arranged in three, instead of two tiers. This, however, was a small point, and the slight decrease in effectiveness was more than counterbalanced by the vases being so arranged as to be equally attractive on either side of the table. The collection, if not perfect in every particular, was immensely attractive, and afforded a valuable object-lesson in the arrangement of early-flowering chrysanthemums at exhibitions.



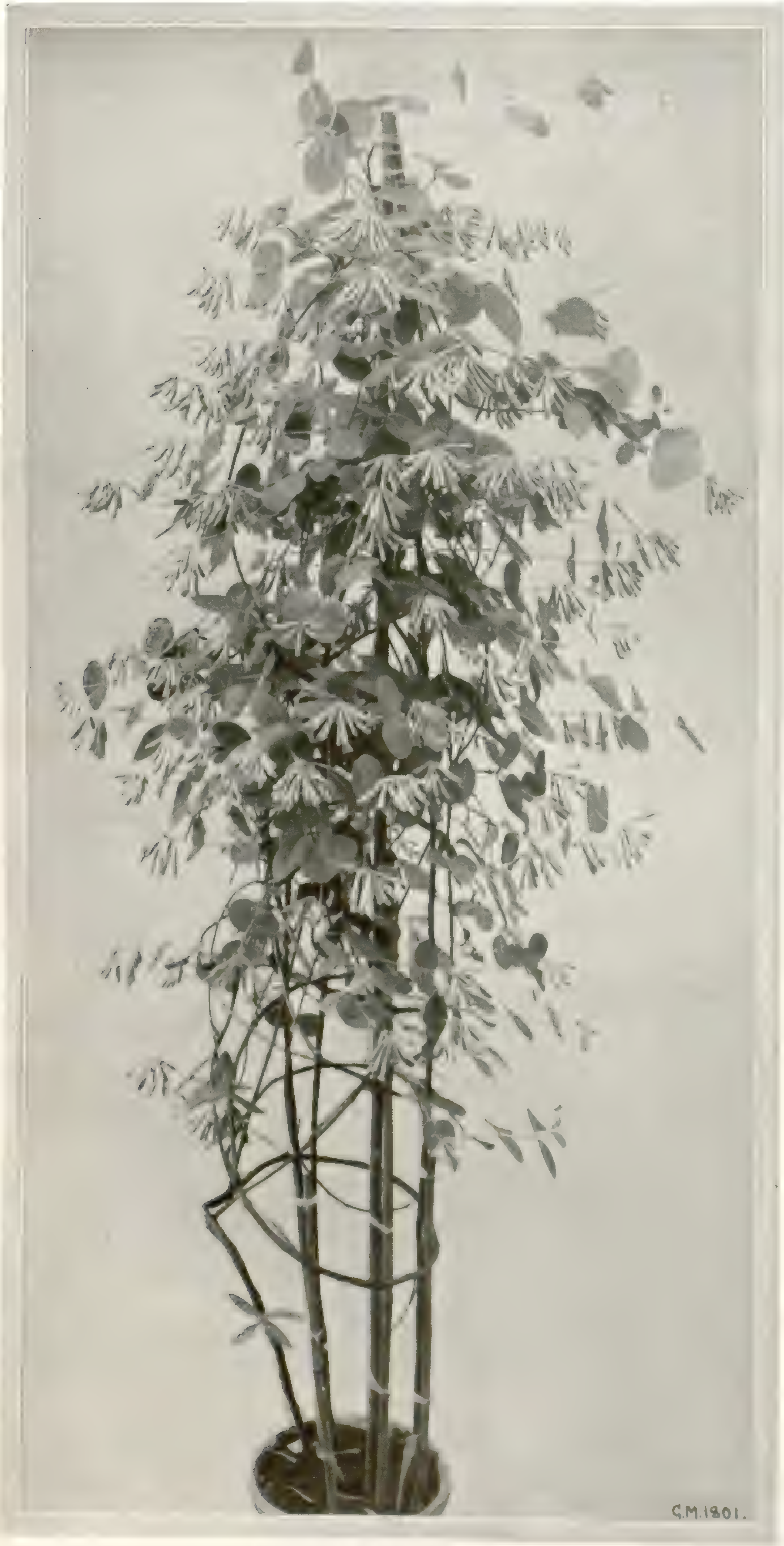
AN EFFECTIVE ARRANGEMENT OF EARLY-FLOWERING CHRYSANTHEMUMS.

For which Mr. J. Smellie was awarded the First Prize in the class for eighteen vases at the Edinburgh Flower Show.

Tomatoes. — These should now be moved inside and placed in their winter quarters, and if a house can be afforded it is a good plan to train them up the roof, but not nearer than eighteen inches to the glass. They may also be trained to stout stakes in a large house, on the stage, where they can receive full light. As soon as fruits have set give liquid manure or a little fertiliser, but upon no account overwater. — W. A. Cook.

LONICERA SEMPERVIRENS.

What a great pity it is that this beautiful climbing plant is not hardy in all parts of the country. It has so many good qualities worth a little care, even where the local conditions are against its culture out of doors. About a hundred years ago this species was regarded as "a good climber for the conservatory, and its beauty renders it worthy of such a situation," and the remark is equally true to-day. Except in the sunny south and in many parts of the Emerald Isle, where I have seen it growing in great beauty against the end walls or sides of plant houses, the Trumpet Honeysuckle is best considered as a conservatory or greenhouse climber. In the usual course of things one expects a climber to climb, and to be planted against a wall or where it can be trained up a pillar or under a rafter, and we only look with toleration upon climbing plants grown in pots and trained around stakes. And yet such pot-grown specimens are not to be despised, especially when they are so beautiful as the one here illustrated. In addition to the grace and beauty of Lonicera sempervirens so grown, such a method of culture permits the removal of the plant or plants out of doors during the summer and early autumn; indeed, it may very well go outside, in a sunny sheltered spot, as soon as it be finished flowering in May or June, and so make room for other things. Any way, a plant in a ten-inch pot, 5ft. or 6ft. high, and carrying a profusion of flowers, as shown, is beautiful. This plant was one of many equally beautiful seen at Messrs. William Paul and Son's nurseries, Waltham Cross, at the end of May last.



LONICERA SEMPERVIRENS.
An evergreen greenhouse climber, with clusters of scarlet and yellow flowers.

that it merits attention from all who love climbers; evergreen, free-flowering where it thrives, and producing clusters of scarlet blooms, each of tubular shape, and with a yellow interior, Lonicera sempervirens is

CRAB APPLES.

Crab-apple trees form a very effective feature in a garden, and combine the useful with the ornamental. In spring the flowers are charming, and in the autumn the highly-coloured scarlet-yellow fruits are very attractive. The fruits are useful when ripe for making a delicious jelly. But it is on account of their highly decorative qualities in the flower garden and pleasure-ground that I wish to draw the attention of readers of the GARDENERS' MAGAZINE to them in this note. In the beautiful gardens of Arcadia, the residence of Mr. G. H. Rolls, J.P., near Bournemouth, the variety John Downie does remarkably well in the shrubberies and other portions. The trees are objects of beauty which attract the eye from a considerable distance. The fruits are medium in size, conical in shape, borne in clusters in profusion, and are very richly-coloured. The Dartmouth variety has larger fruits of a rich crimson colour. Prolific is also a large-fruited, highly-coloured sort, and the Siberian Cherry has small fruits, rather yellow, but beautifully streaked with red.

In positions where the whole of the tree can be seen quite plainly pyramids are the best to grow, as all the varieties seem to be well adapted to this form. But in some shrubberies standards are the most effective. Where the soil is naturally good manures must not be added, as it is undesirable that a very strong growth be encouraged. In poor soils some good loam should be used at planting time to give the trees a start as it were, and afterwards, to maintain a satisfactory growth, surface mulchings may be relied upon. As little pruning as possible must be done.

GEO. GARNER.

Plagianthus Lyalli.—Among the subjects noted at one of the July meetings of the Royal Horticultural Society was this New Zealand member of the Mallow family. It was on that occasion given an Award of Merit. Introduced many years ago, this plagianthus was at first looked upon as tender, but now, at least in the southern counties of England, it has proved to be hardy. It forms a good-sized shrub of a somewhat loose habit of growth, whose branches are clothed with rugose leaves. The flowers, which depend from the axils of the leaves, and are supported by rather long pedicils, are individually about an inch across, pure white in colour, with yellowish anthers. Flowering as it does about the middle of July, it is of additional value.—W. T.

NOTES FROM HERE AND THERE.

The knowledge of the daily Press on matters of a rural character is simply marvellous, and whether the vein is optimistic or pessimistic, there is something about the way in which the information is given that is equally impressive. For instance, I remember reading some months ago an alarming article in an influential morning paper dealing with a new disease amongst bees, which, according to the paper, threatened to wipe these useful little creatures off the face of the earth. The other day in the same paper appeared another article which described the honey harvest of this season as the best on record, and never a word appeared about the disease. I cannot say anything as to the true state of affairs in respect of the latter, but I do know that bee-keepers are happy in their harvest, for never have the hives given a bigger supply or better honey. This condition of things is very gratifying, for the good honey harvest will have the effect of giving an impetus to bee-keeping, and be a means of inducing cottagers and small holders to take it up.

* * *

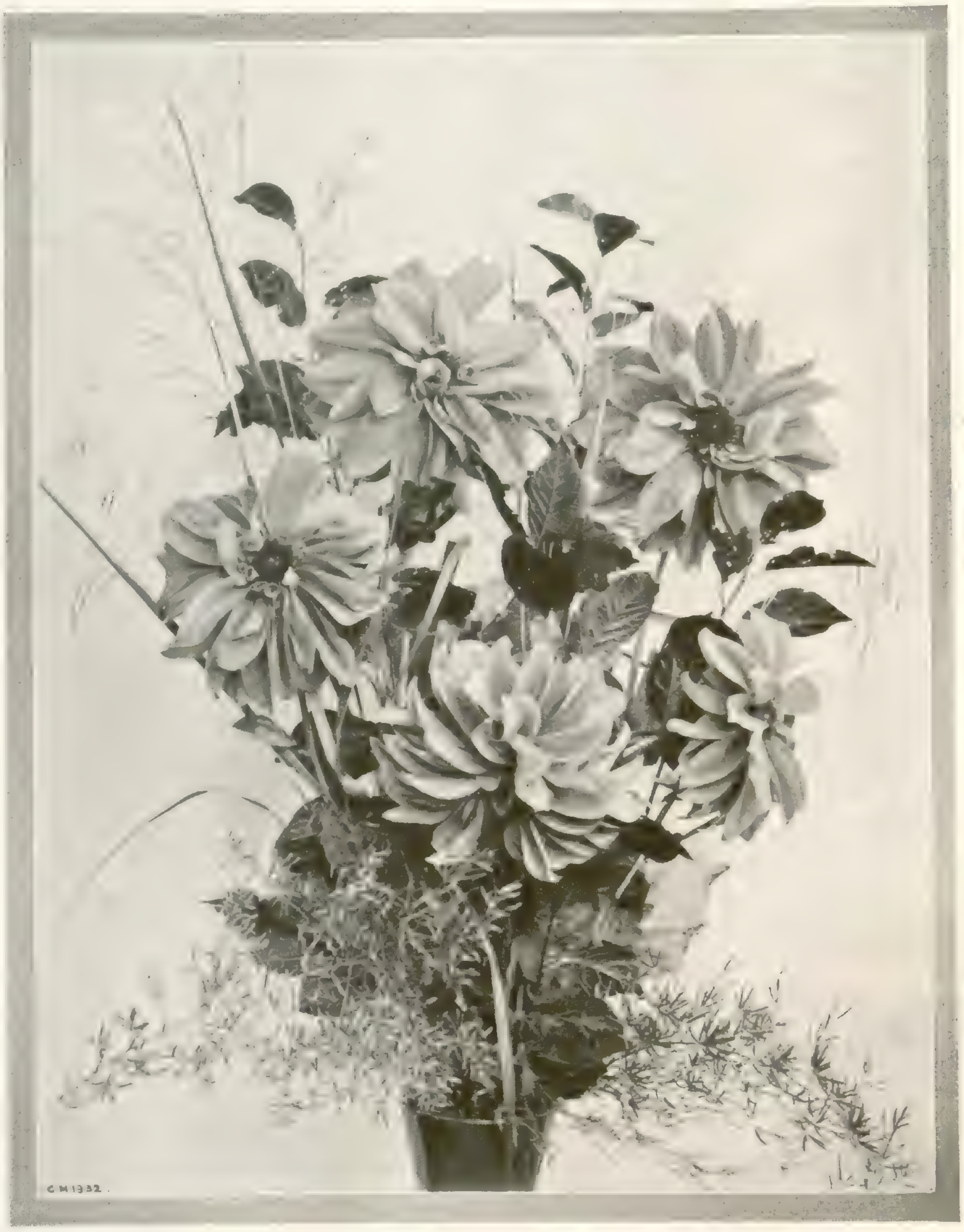
As a rule, we associate blackberry picking with the latter half of September, but this year the harvest of the hedgerows, like that of the fields, is early, and before August was out splendid blackberries were offered for sale in fruiterers' shops. In its way, too, this blackberry harvest is an important one, and by law of custom it belongs to the people. I happen to know something of a blackberrying district, and day by day I see women and children starting out in the morning with baskets and returning with them full. It cannot be said that farmers favour blackberry pickers, for reasons that are obvious, and notice-boards appear warning would-be trespassers of the fate that is in store for them if they enter certain fields. It is one thing to warn, however, but it is another to abolish a privilege which people have enjoyed for generations, and it is an easy matter not to see a notice-board if you don't wish to. Perhaps this explains the reason why warnings and notice-boards do not deter blackberry pickers, for tons of fruit are put into the market during the season, and the picking of it means boots and shoes for the winter in many a labourer's family.

* * *

Away down in the West Country there is a mellowness of harvest stealing over the orchards where the sun has painted rosy tints on the cheeks of apples, many of which, however, are deceptive, for, though inviting to look at, even the most hardened schoolboy would refuse them after the first bite. In short, it is the cider apples I refer to, and this year the harvest of the same is looked forward to with more than usual interest, because hogsheads are empty, and there is a scarcity of cider in the land. This to some extent is due to the consumption this thirsty season being greater than usual in the West Country, but there are also signs which indicate that the public taste for good cider is on the increase outside the counties where it has for generations been a household beverage. At any rate, cider has sold well this year, there is not much left, the somewhat decrepit-looking orchards on many farms have yielded useful profits, and it is anticipated that the sun which has painted the cheeks of the apples has also added to their composition those qualities which are essential for making good cider. H.

A HANDSOME VASE OF DAHLIAS.

Well-grown dahlia blooms, if borne on long stems, are particularly fine when carefully arranged in large vases with suitable foliage. To the florist who can only see beauty in a flower when it just fills a circle the newer pæony-flowered and giant decorative dahlias are beneath contempt, and we can enter into their feelings. But it must not be forgotten that crowds of flower lovers show a decided preference for unordered elegance in blooms, as against the primness and regularity of form so greatly admired and worked for by the florist. This being so, it is useless to shut one's eyes to the merits which, say, a pæony-flowered dahlia possesses, and which render it attractive to so many people. As has been shown in these pages on many occasions, pæony-flowered dahlias have a distinct value for large beds in public parks and gardens, and in the pleasure grounds of many private establishments. Even when considered as cut flowers for home use, or for decorative arrangements at exhibitions, these same varieties have many good qualities. They would look ridiculous on the dinner table except at some big public function, but for the sideboard, the hall table, a corner in the drawing-room, or a recess on the staircase, they may be used with advantage, and not many flowers will be needed to make up a bold and pleasing design.



A VASE OF PÆONY-FLOWERED DAHLIA SALOME.
One vase of a first prize set of six, staged at the National Dahlia Society's Show by Mr. Chas. Turner, Slough.

At the recent exhibition of the National Dahlia Society Mr. Charles Turner, Slough, won first prize for six vases of pæony-flowered dahlias, and every vase was a delight. With the flowers were associated a few grasses, some long growths of Prunus Pissardi, and some sprays of Asparagus Sprengeri. One vase attracted very general attention and admiration, and this is depicted in the present issue. The variety used was Salome, the flowers of wonderful size and brilliance, the colour being golden-orange shaded with buff; it has long, stout stems, and carries its big bright flowers erect without any assistance from wire or stick. The length and stiffness of the flower stems also add much to the value of the variety in the garden.

Pot Strawberries.—These have now well filled the pots with roots, and are in good condition to be supplied with liquid manure, which may now be given at every other watering, taking care the plants receive a real soaking, and on fine days syringing the foliage if dry weather continues, and damp the ashes about the pots with soot water.—W, A, Cook.

WORK FOR THE WEEK.

ORCHIDS.

CYPRIPEDIUM SEEDLINGS.—Most of the early sown cypripediums will now have formed a second leaf, and the young roots will be advancing from the base of the plants. With the cooler weather prevailing outside, and the small amount of artificial heat that is required at night, the conditions are most favourable for removing the young plants from their seed beds and transplanting them into pots. Where there are large quantities of seedlings the question of space becomes a serious question, and there is no alternative but to plant several of the seedlings together in the same pot; but where the question of room is not pressing, it is desirable the plants should be potted singly. There can be no doubt that the requirements of individual plants are more readily met when given a separate existence, as compared with the method of growing several together in store pots. There is always a great amount of difference between the vigour of plants, and to give the necessary conditions to the more robust generally ends in disaster to the weaker ones. Where there is lack of space little consideration is given to the weaker plants. the whole aim being to encourage those that are growing with the greatest vigour, so that the earliest possible flowering results may be obtained.

POTTING.—See that ample drainage is provided whichever method is adopted; the pots should be filled to about two-thirds their depth with clean drainage. The potting compost may be varied according to the section to which the seedlings belong. In the case of the winter-flowering, plain-leaved section, in all localities where the atmosphere is pure, I would advise the inclusion of some fibrous loam with the chopped peat and sphagnum (the latter being finely chopped to prevent its growing rapidly), with sufficient sand added to render the compost porous. Press the material moderately firm. The pots should be filled a few hours before they are wanted, and watered, as this will permit of drainage before the seedlings are pricked out. We find this a more suitable method than watering after they have been transplanted. For seedlings from C. bellatulum, C. niveum, C. Curtisi, C. Lawrenciarum, and others of the tesselated foliage section, and also for C. Rothschildianum seedlings, no loam should be included in the potting compost, and thus two portions of peat to one of finely chopped sphagnum moss is recommended.

SEEDLINGS OF ADVANCED GROWTH, in fact, all that are not likely to flower this season, may be repotted, if necessary, as there can be no doubt that the greatest advance of growth takes place in the autumn months. When repotting those that are likely to reach the flowering stage soon, see that the compost is of a lasting nature, and that reasonable root room is afforded. Water thoroughly as soon as potting is completed, and shade the plants from strong light for a time.—H. J. CHAPMAN, Oakwood Gardens

STOVE PLANTS.

BEGONIA GLOIRE DE LORRAINE and its varieties may now be allowed to develop their flower buds with a view to providing a display during the latter months of the season. The flowering house may be kept cooler and drier, a minimum temperature of 55 degrees being ample at this stage; the ventilators may be left open a little day and night, allowing a free and pleasant circulation of air without subjecting the plants to any cold draughts. Ample water may still be given to the roots, and fertilisers may be employed to prolong the flowering season. When arranging begonias in their flowering quarters some care should be taken to display every plant to the best possible advantage. A few light feathery plants of Arundinaria falcata will relieve the mass of colour. A few dwarf foliage plants, such as Rex begonias, Panicum variegatum, Fittonia argyroneura, with dwarf ferns, may be used as a groundwork, and also for the edging of the stages. Where these and similar plants are tastefully associated with the pink blooms of begonias the whole present a charming and pleasing effect which at this season cannot fail to be appreciated. Should thrips or greenfly be found at all troublesome, a thorough fumigation with nicotine compound will prove most beneficial.

PANCRATIUMS.—These useful bulbous plants will have completed their season of flowering, and they may be more fully exposed to the sunshine in a position near the glass, and, if convenient, raised above the stage so that their roots may be kept somewhat drier; this treatment will greatly benefit the ripening-up process. As soon as the foliage has decayed the pots may be stored in the intermediate stove in a dry position, and only sufficient water must be given to prevent the shrivelling of the bulbs.

GENERAL REMARKS.—Now that the season has so much advanced, preparations for providing the later display must be made by housing all the winter-flowering subjects. Poinsettias and euphorbias in particular must be transferred to their winter quarters, these are always most sensitive to a check from low temperature or cold draughts. Attention must be also given to artificial feeding, and extreme care must at all times be taken to avoid an excessive application of water to poinsettias and euphorbias during their flowering period, when growth of foliage is almost entirely suspended. Should any traces of insect pests be observed these must at any cost be eradicated before the plants commence to develop their blooms.—JOHN DONOGHUE, Bardon Hill Gardens.

FRUITS UNDER GLASS.

THE ORCHARD HOUSE.—A good supply of soil should now be made ready for potting any of the trees that may need it. This should be of a rich character, for when the roots are rigidly confined the food must be of the very best. A good and suitable mixture is the one recommended in the last calender for peach borders, i.e., good fibrous loam (not broken up too much) four parts, and one part of wood ashes and lime rubble and soot, and with a little bone-meal. Mix well, and, if desirable, let it be watered and then covered over to keep it in fit condition for use. Trees in large pots, and not intended to be shifted, should have as much of the surface soil removed as possible, and then be top-dressed; those in smaller pots should be given a small increase of rooting space, the soil being made firm between the old ball of soil and the pot. Over-potting is a mistake. Peaches, nectarines, apples, pears, plums, etc., can all be grown in pots successfully, and, if choosing a new stock from the nursery, choose trees of good shape and well furnished with fruit buds. After the potting and top-dressing give a thorough watering, syringe the trees each day, and they will soon become established. Let the pots stand on a good hard base in a somewhat sheltered corner, and, if possible, plunge the pots to save watering, as at this season the trees do best when not watered too freely.

TREES PLANTED OUT should also be dealt with, if any require root-pruning or thinning, as it is very necessary to keep plenty of space between orchard house trees, so that one tree does not deprive its neighbours of light and air. When trees become too large they should be turned out in the open, and smaller ones substituted. Trees grafted upon suitable stocks for early fruiting do not last long, as the stocks wear out quickly; for instance, pears on the quince stock do not last nearly so long as when on the pear stock; of course, they bear earlier, and that is the sole reason for utilising these early stocks. Good varieties for the orchard house are: Beurre Giffard, Clapp's Favourite, William's Bon Chretien, Souv. du Congrès, Louise Bonne of Jersey, Doyenne Boussoch, and Doyenne du Comice pears; Angelina Burdett, Denniston's Superb, Jefferson's, Reine Claude de Bavay, Transparent Gage, Oullin's Golden Gage, Golden Drop, and M'Laughlin Gage plums.

CUCUMBERS.—If these are not yet planted out, let them be dealt with at once. Train them carefully up to the wires by means of a neat stake. Give top-dressings in small quantities regularly, using sweet loam with a little spent mushroom bed manure or decomposed cow dung. The temperature should be kept at about 70 to 75 degrees by means of artificial heat.—W. A. COOK, Leonardslee Gardens.

THE FLOWER GARDEN.

FLOWER BEDS.—Specimen plants of heliotrope, ivy-leaf pelargoniums, fuchsias, etc., which have been growing in the beds during the summer months, should now be lifted and potted. The heliotropiums are the most tender, and should be taken in hand first. All subtropical plants must be removed and placed under cover where they will be out of danger from frosts. As the beds become vacant they should be refilled with wallflowers, bulbs, polyanthuses, or whatever subjects are to be used for the spring display. All beds that are in a poor condition must be enriched with a liberal supply of decayed manure, that is, when wallflowers or polyanthuses are to be grown, as both plants appreciate a rich soil, the polyanthuses preferring decayed cow manure. It is not advisable to add manure to the soil in beds intended for narcissi, but burnt garden refuse and well-rotted leaf-soil can be used instead. When lifting wallflowers one should always endeavour to retain a fair amount of soil about the roots, and if possible a dull day should be chosen for planting. It must be borne in mind that the less check the plants have the quicker they will re-establish themselves, and the loss of foliage will be small. Being such a hardy subject the wallflower is often roughly handled, and consequently does not become sufficiently rooted before the severe weather sets in. Firm planting is another point to remember. A little care and attention goes a long way towards the success of the spring display, and one is amply repaid for the extra time and trouble taken. Regarding bulbs, unless they are planted thickly, it is necessary to carpet the beds to cover the soil; plants suitable for the purpose are aubrietias, arabis, Viola gracilis, myosotis, the mossy saxifragas, and other plants of dwarf habit.

GLADIOLI.—When the foliage shows signs of ripening, the corms should be lifted, as it is not necessary to leave them in the ground until the foliage is absolutely decayed. The best plan is to tie them up in bundles and hang them up in an airy, frost-proof shed, carefully labelling the bundles to prevent confusion when they are being prepared for planting.

ANCHUSA ITALICA and its varieties may be readily propagated now, by cutting up the fleshy roots in exactly the same manner as seakale sets are prepared. These pieces of roots or sets should be dibbled into seed boxes which have been previously filled with sandy soil, and placed in a cold frame.

DELPHINIUMS.—Where it is considered necessary to lift and replant delphiniums the work should be accomplished without delay, so that the plants may become established before the severe weather sets in. As they will probably remain undisturbed for three or more seasons, it is important the ground should be thoroughly dug or trenched and enriched with well-decayed manure before replanting. Great care must be exercised if the roots are to be divided. or much damage will result. A fork thrust into the clump sideways will usually split the woody parts, and one can then pull the pieces apart by hand. Slugs eat the young growths underground during the winter months and early spring, therefore every precaution should be taken to prevent the ravages of these pests. There are several preparations on the market which may be used for the purpose.—E. C. POOLEY, Gnaton Gardens,

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

Royal Horticultural Society.

On Tuesday, September 26, the Royal Horticultural Hall was filled from end to end with exhibits of varied character and interest. The dahlias and orchids provided rare colour, and ornamental plants and gourds were not less attractive. Vegetables and fruits added their quota of beauty and usefulness, and hardy autumn flowers filled up all the rest of the space.

There was a vegetable show on this date, and the many classes provided were fairly well filled.

FLORAL COMMITTEE.

Across the end of the hall Messrs. Jas. Veitch and Sons, Chelsea, put up a magnificent exhibit of stove and greenhouse plants, one that was excellent both from a cultural and artistic point of view. The background was composed of very tall cocoses with big specimens of Dracæna Goldieana, D. Godseffiana, D. Sanderiana, Anthurium Veitchi, Cocoloba pubescens—with huge leaves, Heliconia illustris rubricaulis, Croton Thompsoni, C. Reidi, etc. In the foreground were splendid examples of nepenthes raised on tall asparagus-clad stands, and these commanded great admiration, especially such handsome kinds as N. Curtisi superba, N. Sir William Thiselton Dyer, N. Mastersiana, N. elegans, N. mixta, and N. Tiveyi. A bright central group of hybrid orchids, with small flanking groups of Lilium speciosum, and cannas and nerines, formed with baskets of choice Rex begonias, bertolonias, Dracæna deremensis Warnecki, crotons, ferns, and selaginellas, a fine frontage to a grand effort.

Michaelmas daisies were extensively shown by Messrs. Barr and Sons, Covent Garden, and their exhibit included Solidago Golden Wings, phloxes, the graceful Vitis Lowi, colchicums, Sternbergia lutea, tritomas, etc.

Mr. Lister, gardener to the Earl of Warwick, Easton Lodge, Dunmow, brought up some very beautiful water lilies of the Stellata section, and two of these named respectively, Listeri and Lord Brooke, were very beautiful; and each gained an A.M.; the latter has deep rosy-mauve orange-centred flowers, and the former is deep blue with a yellow centre. Nymphæa stellata rosea (A.M.) was well shown by Mr. J. Hudson, V.M.H., Gunnersbury House Gardens.

Messrs. Allwood Brothers, Haywards Heath, showed May Day, Mrs. C. F. Raphael, White Wonder, and other good perpetual carnations, including a pale yellow variety of French origin, named Le Jaune Reanente.

Nerine Veitchi (A.M.), a new species with quite large blush white flowers, was shown by Messrs. R. Veitch and Sons, Exeter, who also presented a beautiful new bigeneric hybrid between Cyrtanthus sanguinea and Vallota purpurea; it had semi-pendulous flowers of a pleasing soft orange colour. Nerine Bowdeni and Veronica Veitchi with deep blue flowers were also shown by the Exeter firm.

Messrs. Thos. S. Ware, Lim., Feltham, made a goodly display with pæony-flowered and cactus dahlias, many of their own raising. A very bold display of dahlias from Mr. M. V. Seale, Sevenoaks, was notable for its pretty frontage of small cactus and pompon cactus varieties arranged in baskets of a variety. A big and brilliant bank of great bunches of popular cactus, single, pæony-flowered, and decorative dahlias from Messrs. Carter Page and Co., London Wall, provided a magnificent blaze of colour. Mr. J. T. West, Brentwood, made a great show of dahlias, and put up his new Brentwood Yellow and new pæony-flowered varieties in fine form.

A group of verbenas, in pots, staged by Mr. E. Beckett, V.M.H., gardener to the Hon. Vicary Gibbs, Elstree, once more brought under notice the usefulness of these old florists' flowers. Mr. J. B. Riding, Chingford, again submitted an interesting collection of collarette dahlias. Messrs. Bakers, Wolverhampton, produced a fine blaze of colour with about fifty large bunches of big pæony-flowered dahlias, the colours ranging from white to deep crimson, and including some lovely pink, rose, and fawn shades.

Exquisitely beautiful was the wide run of splendid colchicums from Messrs. James Backhouse and Son, Lim., York. The flowers were grand in their simple loveliness, especially those of C. speciosum album. The typical C. speciosum, C. autumnale, C. a. floribunda, and Crocus speciosus were included in an exhibit that, among hardy flowers, had no equal in the hall. Michaelmas daisies were shown from Mr. H. J. Jones' nurseries, Lewisham, who staged the varieties in large graceful bunches, Ringdove, Mrs. Duncombe Mann, Grace, Grandis, Gaiety, and Perfection, were small-flowered sorts of special elegance and beauty.

Messrs. H. Cannell and Sons, Swanley, contributed a bank of dahlias, and gained an A.M., for a bright crimson-scarlet collarette variety named Hon. Vicary Gibbs. Messrs. J. Cheal and Sons, Crawley, were also extensive exhibitors of dahlias, and made a special feature of pompon-cactus varieties.

Autumn flowers were grouped in quantity by Messrs. William Cutbush and Son, Highgate, and in their display solidagos, Michaelmas daisies, Crinum Powelli alba, Colchicum Bornmulleri, C. speciosum, tritomas, and pentstemons were the leading subjects. Mr. James Box, Lindfield, filled a corner with a very bright group of Michaelmas daisies, Solidago Golden Wings, Artemisia lactiflora, and Helianthus sparsifolius; all good things.

Messrs. H. B. May and Sons Edmonton, once again contributed a large collection of choice ferns. Phloxes, elegant Michaelmas daisies, carnations, and early chrysanthemums, from Messrs. W. Wells and Co., Merstham, made a bright display.

Mr. G. Reuthe, Keston; Messrs. G. and A. Clark, Dover; and Mr. L. Russell, Richmond (clematis) were also exhibitors.

ORCHID COMMITTEE.

Among the orchids exhibited by Messrs. Sander and Sons, St. Albans, a few of the finer things were Brasso-cattleya Veitchi, Vanda Sanderiana, Cattleya Thayeriana, C. bellatula, C. Dowiana aurea, and Cypripedium insigne Sanderæ.

Oncidium varicosum Rogersi made a pretty background for the group of orchids submitted by Messrs. S. Low and Co., Enfield; here also were Cattleya Gaskelliana alba, C. Iris, Lælio-cattleya Luminosa, Odontioda Thwaitesi, and other good things.

Messrs. Charlesworth and Co., Haywards Heath, presented a few very fine orchids, notably Vanda Marguerite Maron, Cattleya Venus—a glorious variety. Oncidium Lanceanum, and Odontoglossum Harwoodi The Shrubbery var. (F.C.C.), a superb orchid, with yellow flowers, and deep red-brown markings; the three big blotches of velvety red-brown on the broad, rounded lip were wonderfully attractive.

Mr. G. M. Hale, gardener to S. Larkin, Esq., Haslemere, put up a small group of orchids, in which Cattleya Iris and Phalænopsis violacea were leading subjects. From Sir Trevor Lawrence's collection at Burford Lodge, Dorking, Mr. W. H. White brought up finely-grown specimens of Zygopetalum maxillare with about a dozen and a-half spikes (Cultural Commendation); Epidendrum floribundum, Epidendrum Lauchianum (A.M.), with two long pendulous spikes of small brown and green and yellow-green flowers.

Mr. Hopkins gardener to Francis Wellesley, Esq., Westfield, Woking, submitted Cattleya Mrs. Frederick Sassoon (aurea x Mantini nigrescens), which gained an A.M., and is a very hadsome purple and old gold-coloured variety; Cypripedium Dowleri, and Cattleya Gaskelliana Delight.

Mr. J. Hudson, gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton, submitted a basket of flowering plants of the bright orange-coloured Habenaria militaris, and a Cultural Commendation was granted. From Messrs. Hassall and Co., Southgate, came some well-grown examples of Cattleya Minucia, C. Fabia, C. Nestor, C. Mantini nobilior, L.-c. Walter Gott, and other fine autumn-flowering subjects.

Cypripedium Wiertzianum, with four spikes, and a total of eight big flowers, was the chief attraction among the orchids staged by Mr. E. V. Low, Haywards Heath; C. Rossetti Westonbirt var., C. triumphans, and Cirrhopetalum ornatissimum were included in the exhibit. A plant of Odontoglossum Memoria Baron Schröder, the committee asked to see again, as the flowers were not yet fully open.

Mr. J. Day, gardener to H. S. Goodson, Esq., brought up Lælio-cattleya St. Gothard, and a few other good things.

FRUIT AND VEGETABLE COMMITTEE.

A vastly interesting and extensive exhibit of ornamental gourds from Mr. Thos. Stevenson, gardener to E. A. Mocatta, Esq., Woburn Place, Addlestone, was a distinct feature of the show. The display filled a space about 36ft. by 6ft., and there were about two tons of gourds, many of them two feet and upwards in diameter; while others were quite tiny, only an inch or so across. Some were so heavy, like the Giant Red Etampes, Giant Paris, Portuguese, Grey Boulogne, and other huge gourds, that they tipped the beam at from 50lb. to 89lb. each. In shape, too, there was a wonderful variety, some were round, others like the Snake Gourd, measured 5ft. in length; some were like Indian clubs, others resembled oranges, gooseberries, pears, dumb-bells, eggs, bottles, clubs, pipes, syphons, etc. In colour there was a range from white and pale-green to deep crimson, bright gold, and dark purple. The arrangement of the group was excellent, and we feel sure no such collection of ornamental gourds as this one of some seventy varieties has ever been placed before the public in this country. Our readers will remember that at Woburn Place a big pergola is annually devoted to these gourds.

Mr. James Whittle, gardener to Lieut.-Colonel A. C. Borton, Chevening, Hunton, Maidstone, put up an unusually fine exhibit of fruit, and tastefully disposed his splendid samples in flat, handled, and round baskets, and on dishes of various sizes. Apples, pears, plums, damsons, crabs, blackberries, nuts, and peaches were included. Among apples we noted superb fruits of Mère de Ménage, Warner's King, Newton Wonder, Wealthy, Belle Dubois, Gascoyne's Scarlet, Rival, Emperor Alexander, Lady Henniker, The Queen, Alfriston, Allington Pippin, Blenheim Pippin, Cox's Orange Pippin, King of the Pippins, Mabbot's Pearmain, and Ribston Pippin.

A large and particularly well displayed collection of vegetables from Messrs. Sutton and Sons, Reading, was a very attractive and interesting feature. The numerous kinds were arranged in three broad tiers, and every dish was of the finest quality. The staging was most tasteful. A few vegetables that commanded special attention were Michaelmas White broccoli and Autumn Mammoth cauliflowers; Satisfaction, Abundance, Perfection, and Eclipse tomatoes; A1., Sutton's Scarlet, Prizewinner, and Best of All runner beans; Ailsa Craig onions; Gladstone peas; Sutton's Black beet—very fine; Sutton's Heartwell lettuce; and radishes in great variety.

The large and well-arranged collection of vegetables contributed by Messrs. James Veitch and Sons, Chelsea, was bright with baskets of Invicta, Ham Green Favourite, The Hastings, Sunset, and Sunnybank tomatoes, Autumn Giant cauliflowers, Hackwood Park runner beans of great length and very

WORK FOR THE WEEK.

ORCHIDS.

CYPRIPEDIUM SEEDLINGS.—Most of the early sown cypripediums will now have formed a second leaf, and the young roots will be advancing from the base of the plants. With the cooler weather prevailing outside, and the small amount of artificial heat that is required at night, the conditions are most favourable for removing the young plants from their seed beds and transplanting them into pots. Where there are large quantities of seedlings the question of space becomes a serious question, and there is no alternative but to plant several of the seedlings together in the same pot; but where the question of room is not pressing, it is desirable the plants should be potted singly. There can be no doubt that the requirements of individual plants are more readily met when given a separate existence, as compared with the method of growing several together in store pots. There is always a great amount of difference between the vigour of plants, and to give the necessary conditions to the more robust generally ends in disaster to the weaker ones. Where there is lack of space little consideration is given to the weaker plants, the whole aim being to encourage those that are growing with the greatest vigour, so that the earliest possible flowering results may be obtained.

POTTING.—See that ample drainage is provided whichever method is adopted; the pots should be filled to about two-thirds their depth with clean drainage. The potting compost may be varied according to the section to which the seedlings belong. In the case of the winter-flowering, plain-leaved section, in all localities where the atmosphere is pure, I would advise the inclusion of some fibrous loam with the chopped peat and sphagnum (the latter being finely chopped to prevent its growing rapidly), with sufficient sand added to render the compost porous. Press the material moderately firm. The pots should be filled a few hours before they are wanted, and watered, as this will permit of drainage before the seedlings are pricked out. We find this a more suitable method than watering after they have been transplanted. For seedlings from C. bellatulum, C. niveum, C. Curtisi, C. Lawrenciarum, and others of the tesselated foliage section, and also for C. Rothschildianum seedlings, no loam should be included in the potting compost, and thus two portions of peat to one of finely chopped sphagnum moss is recommended.

SEEDLINGS OF ADVANCED GROWTH, in fact, all that are not likely to flower this season, may be repotted, if necessary, as there can be no doubt that the greatest advance of growth takes place in the autumn months. When repotting those that are likely to reach the flowering stage soon, see that the compost is of a lasting nature, and that reasonable root room is afforded. Water thoroughly as soon as potting is completed, and shade the plants from strong light for a time.—H. J. CHAPMAN, Oakwood Gardens.

STOVE PLANTS.

BEGONIA GLOIRE DE LORRAINE and its varieties may now be allowed to develop their flower buds with a view to providing a display during the latter months of the season. The flowering house may be kept cooler and drier, a minimum temperature of 55 degrees being ample at this stage; the ventilators may be left open a little day and night, allowing a free and pleasant circulation of air without subjecting the plants to any cold draughts. Ample water may still be given to the roots, and fertilisers may be employed to prolong the flowering season. When arranging begonias in their flowering quarters some care should be taken to display every plant to the best possible advantage. A few light feathery plants of Arundinaria falcata will relieve the mass of colour. A few dwarf foliage plants, such as Rex begonias, Panicum variegatum, Fittonia argyroneura, with dwarf ferns, may be used as a groundwork, and also for the edging of the stages. Where these and similar plants are tastefully associated with the pink blooms of begonias the whole present a charming and pleasing effect which at this season cannot fail to be appreciated. Should thrips or greenfly be found at all troublesome, a thorough fumigation with nicotine compound will prove most beneficial.

PANCRATIUMS. — These useful bulbous plants will have completed their season of flowering, and they may be more fully exposed to the sunshine in a position near the glass, and, if convenient, raised above the stage so that their roots may be kept somewhat drier; this treatment will greatly benefit the ripening-up process. As soon as the foliage has decayed the pots may be stored in the intermediate stove in a dry position, and only sufficient water must be given to prevent the shrivelling of the bulbs.

GENERAL REMARKS.—Now that the season has so much advanced, preparations for providing the later display must be made by housing all the winter-flowering subjects. Poinsettias and euphorbias in particular must be transferred to their winter quarters, these are always most sensitive to a check from low temperature or cold draughts. Attention must be also given to artificial feeding, and extreme care must at all times be taken to avoid an excessive application of water to poinsettias and euphorbias during their flowering period, when growth of foliage is almost entirely suspended. Should any traces of insect pests be observed these must at any cost be eradicated before the plants commence to develop their blooms.—JOHN DONOGHUE, Bardon Hill Gardens.

FRUITS UNDER GLASS.

THE ORCHARD HOUSE.—A good supply of soil should now be made ready for potting any of the trees that may need it. This should be of a rich character, for when the roots are rigidly confined the food must be of the very best. A good and suitable mixture is the one recommended in the last calender for peach borders, i.e., good fibrous loam (not broken up too much) four parts, and one part of wood ashes and lime rubble and soot, and with a little bone-meal. Mix well, and, if desirable, let it be watered and then covered over to keep it in fit condition for use. Trees in large pots, and not intended to be shifted, should have as much of the surface soil removed as possible, and then be top-dressed; those in smaller pots should be given a small increase of rooting space, the soil being made firm between the old ball of soil and the pot. Over-potting is a mistake. Peaches, nectarines, apples, pears, plums, etc., can all be grown in pots successfully, and, if choosing a new stock from the nursery, choose trees of good shape and well furnished with fruit buds. After the potting and top-dressing give a thorough watering, syringe the trees each day, and they will soon become established. Let the pots stand on a good hard base in a somewhat sheltered corner, and, if possible, plunge the pots to save watering, as at this season the trees do best when not watered too freely.

TREES PLANTED OUT should also be dealt with, if any require root-pruning or thinning, as it is very necessary to keep plenty of space between orchard house trees, so that one tree does not deprive its neighbours of light and air. When trees become too large they should be turned out in the open, and smaller ones substituted. Trees grafted upon suitable stocks for early fruiting do not last long, as the stocks wear out quickly; for instance, pears on the quince stock do not last nearly so long as when on the pear stock; of course, they bear earlier, and that is the sole reason for utilising these early stocks. Good varieties for the orchard house are Beurre Giffard, Clapp's Favourite, William's Bon Chretien, Souv. du Congrès, Louise Bonne of Jersey, Doyenne Boussoch, and Doyenne du Comice pears; Angelina Burdett, Denniston's Superb, Jefferson's, Reine Claude de Bavay, Transparent Gage, Oullin's Golden Gage, Golden Drop, and M'Laughlin Gage plums.

CUCUMBERS. — If these are not yet planted out, let them be dealt with at once. Train them carefully up to the wires by means of a neat stake. Give top-dressings in small quantities regularly, using sweet loam with a little spent mushroom bed manure or decomposed cow dung. The temperature should be kept at about 70 to 75 degrees by means of artificial heat.—W. A. COOK, Leonardslee Gardens.

THE FLOWER GARDEN.

FLOWER BEDS. — Specimen plants of heliotrope, ivy-leaf pelargoniums, fuchsias, etc., which have been growing in the beds during the summer months, should now be lifted and potted. The heliotropiums are the most tender, and should be taken in hand first. All subtropical plants must be removed and placed under cover where they will be out of danger from frosts. As the beds become vacant they should be refilled with wallflowers, bulbs, polyanthuses, or whatever subjects are to be used for the spring display. All beds that are in a poor condition must be enriched with a liberal supply of decayed manure, that is, when wallflowers or polyanthuses are to be grown, as both plants appreciate a rich soil, the polyanthuses preferring decayed cow manure. It is not advisable to add manure to the soil in beds intended for narcissi, but burnt garden refuse and well-rotted leaf-soil can be used instead. When lifting wallflowers one should always endeavour to retain a fair amount of soil about the roots, and if possible a dull day should be chosen for planting. It must be borne in mind that the less check the plants have the quicker they will re-establish themselves, and the loss of foliage will be small. Being such a hardy subject the wallflower is often roughly handled, and consequently does not become sufficiently rooted before the severe weather sets in. Firm planting is another point to remember. A little care and attention goes a long way towards the success of the spring display, and one is amply repaid for the extra time and trouble taken. Regarding bulbs, unless they are planted thickly, it is necessary to carpet the beds to cover the soil; plants suitable for the purpose are aubrietias, arabis, Viola gracilis, myosotis, the mossy saxifragas, and other plants of dwarf habit.

GLADIOLI.—When the foliage shows signs of ripening, the corms should be lifted, as it is not necessary to leave them in the ground until the foliage is absolutely decayed. The best plan is to tie them up in bundles and hang them up in an airy, frost-proof shed, carefully labelling the bundles to prevent confusion when they are being prepared for planting.

ANCHUSA ITALICA and its varieties may be readily propagated now, by cutting up the fleshy roots in exactly the same manner as seakale sets are prepared. These pieces of roots or sets should be dibbled into seed boxes which have been previously filled with sandy soil, and placed in a cold frame.

DELPHINIUMS.—Where it is considered necessary to lift and replant delphiniums the work should be accomplished without delay, so that the plants may become established before the severe weather sets in. As they will probably remain undisturbed for three or more seasons, it is important the ground should be thoroughly dug or trenched and enriched with well-decayed manure before replanting. Great care must be exercised if the roots are to be divided, or much damage will result. A fork thrust into the clump sideways will usually split the woody parts, and one can then pull the pieces apart by hand. Slugs eat the young growths underground during the winter months and early spring, therefore every precaution should be taken to prevent the ravages of these pests. There are several preparations on the market which may be used for the purpose.—E. C. POOLEY, Gnaton Gardens.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

Royal Horticultural Society.

On Tuesday, September 26, the Royal Horticultural Hall was filled from end to end with exhibits of varied character and interest. The dahlias and orchids provided rare colour, and ornamental plants and gourds were not less attractive. Vegetables and fruits added their quota of beauty and usefulness, and hardy autumn flowers filled up all the rest of the space.

There was a vegetable show on this date, and the many classes provided were fairly well filled.

FLORAL COMMITTEE.

Across the end of the hall Messrs. Jas. Veitch and Sons, Chelsea, put up a magnificent exhibit of stove and greenhouse plants, one that was excellent both from a cultural and artistic point of view. The background was composed of very tall cocoses with big specimens of Dracæna Goldieana, D. Godseffiana, D. Sanderiana, Anthurium Veitchi, Cocoloba pubescens—with huge leaves, Heliconia illustris rubricaulis, Croton Thompsoni, C. Reidi, etc. In the foreground were splendid examples of nepenthes raised on tall asparagus-clad stands, and these commanded great admiration, especially such handsome kinds as N. Curtisi superba, N. Sir William Thiselton Dyer, N. Mastersiana, N. elegans, N. mixta, and N. Tiveyi. A bright central group of hybrid orchids, with small flanking groups of Lilium speciosum, and cannas and nerines, formed with baskets of choice Rex begonias, bertolonias, Dracæna deremensis Warnecki, crotons, ferns, and selaginellas, a fine frontage to a grand effort.

Michaelmas daisies were extensively shown by Messrs. Barr and Sons, Covent Garden, and their exhibit included Solidago Golden Wings, phloxes, the graceful Vitis Lowi, colchicums, Sternbergia lutea, tritomas, etc.

Mr. Lister, gardener to the Earl of Warwick, Easton Lodge, Dunmow, brought up some very beautiful water lilies of the Stellata section, and two of these named respectively, Listeri and Lord Brooke, were very beautiful; and each gained an A.M.; the latter has deep rosy-mauve orange-centred flowers, and the former is deep blue with a yellow centre. Nymphæa stellata rosea (A.M.) was well shown by Mr. J. Hudson, V.M.H., Gunnersbury House Gardens.

Messrs. Allwood Brothers, Haywards Heath, showed May Day, Mrs. C. F. Raphael, White Wonder, and other good perpetual carnations, including a pale yellow variety of French origin, named Le Jaune Reanente.

Nerine Veitchi (A.M.), a new species with quite large blush white flowers, was shown by Messrs. R. Veitch and Sons, Exeter, who also presented a beautiful new bigeneric hybrid between Cyrtanthus sanguinea and Vallota purpurea; it had semi-pendulous flowers of a pleasing soft orange colour. Nerine Bowdeni and Veronica Veitchi with deep blue flowers were also shown by the Exeter firm.

Messrs. Thos. S. Ware, Lim., Feltham, made a goodly display with pæony-flowered and cactus dahlias, many of their own raising. A very bold display of dahlias from Mr. M. V. Seale, Sevenoaks, was notable for its pretty frontage of small cactus and pompon cactus varieties arranged in baskets of a variety. A big and brilliant bank of great bunches of popular cactus, single, pæony-flowered, and decorative dahlias from Messrs. Carter Page and Co., London Wall, provided a magnificent blaze of colour. Mr. J. T. West, Brentwood, made a great show of dahlias, and put up his new Brentwood Yellow and new pæony-flowered varieties in fine form.

A group of verbenas, in pots, staged by Mr. E. Beckett, V.M.H., gardener to the Hon. Vicary Gibbs, Elstree, once more brought under notice the usefulness of these old florists' flowers. Mr. J. B. Riding, Chingford, again submitted an interesting collection of collarette dahlias. Messrs. Bakers, Wolverhampton, produced a fine blaze of colour with about fifty large bunches of big pæony-flowered dahlias, the colours ranging from white to deep crimson, and including some lovely pink, rose, and fawn shades.

Exquisitely beautiful was the wide run of splendid colchicums from Messrs. James Backhouse and Son, Lim., York. The flowers were grand in their simple loveliness, especially those of C. speciosum album. The typical C. speciosum, C. autumnale, C. a. floribunda, and Crocus speciosus were included in an exhibit that, among hardy flowers, had no equal in the hall. Michaelmas daisies were shown from Mr. H. J. Jones' nurseries, Lewisham, who staged the varieties in large graceful bunches, Ringdove, Mrs. Duncombe Mann, Grace, Grandis, Gaiety, and Perfection, were small-flowered sorts of special elegance and beauty.

Messrs. H. Cannell and Sons, Swanley, contributed a bank of dahlias, and gained an A.M., for a bright crimson-scarlet collarette variety named Hon. Vicary Gibbs. Messrs. J. Cheal and Sons, Crawley, were also extensive exhibitors of dahlias, and made a special feature of pompon-cactus varieties.

Autumn flowers were grouped in quantity by Messrs. William Cutbush and Son, Highgate, and in their display solidagos, Michaelmas daisies, Crinum Powelli alba, Colchicum Bornmulleri, C. speciosum, tritomas, and pentstemons were the leading subjects. Mr. James Box, Lindfield, filled a corner with a very bright group of Michaelmas daisies, Solidago Golden Wings, Artemisia lactiflora, and Helianthus sparsifolius; all good things.

Messrs. H. B. May and Sons, Edmonton, once again contributed a large collection of choice ferns. Phloxes, elegant Michaelmas daisies, carnations, and early chrysanthemums, from Messrs. W. Wells and Co., Merstham, made a bright display.

Mr. G. Reuthe, Keston; Messrs. G. and A. Clark, Dover; and Mr. L. Russell, Richmond (clematis) were also exhibitors.

ORCHID COMMITTEE.

Among the orchids exhibited by Messrs. Sander and Sons, St. Albans, a few of the finer things were Brasso-cattleya Veitchi, Vanda Sanderiana, Cattleya Thayeriana, C. bellatula, C. Dowiana aurea, and Cypripedium insigne Sanderæ.

Oncidium varicosum Rogersi made a pretty background for the group of orchids submitted by Messrs. S. Low and Co., Enfield; here also were Cattleya Gaskelliana alba, C. Iris, Lælio-cattleya Luminosa, Odontioda Thwaitesi, and other good things.

Messrs. Charlesworth and Co., Haywards Heath, presented a few very fine orchids, notably Vanda Marguerite Maron, Cattleya Venus—a glorious variety, Oncidium Lanceanum, and Odontoglossum Harwoodi The Shrubbery var. (F.C.C.), a superb orchid, with yellow flowers, and deep red-brown markings; the three big blotches of velvety red-brown on the broad, rounded lip were wonderfully attractive.

Mr. G. M. Hale, gardener to S. Larkin, Esq., Haslemere, put up a small group of orchids, in which Cattleya Iris and Phalænopsis violacea were leading subjects. From Sir Trevor Lawrence's collection at Burford Lodge, Dorking, Mr. W. H. White brought up finely-grown specimens of Zygopetalum maxillare with about a dozen and a half spikes (Cultural Commendation); Epidendrum floribundum, Epidendrum Lauchianum (A.M.), with two long pendulous spikes of small brown and green and yellow-green flowers.

Mr. Hopkins, gardener to Francis Wellesley, Esq., Westfield, Woking, submitted Cattleya Mrs. Frederick Sassoon (aurea x Mantini nigrescens), which gained an A.M., and is a very hadsome purple and old gold-coloured variety; Cypripedium Dowleri, and Cattleya Gaskelliana Delight.

Mr. J. Hudson, gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton, submitted a basket of flowering plants of the bright orange-coloured Habenaria militaris, and a Cultural Commendation was granted. From Messrs. Hassall and Co., Southgate, came some well-grown examples of Cattleya Minucia, C. Fabia, C. Nestor, C. Mantini nobilior, L.-c. Walter Gott, and other fine autumn-flowering subjects.

Cypripedium Wiertzianum, with four spikes, and a total of eight big flowers, was the chief attraction among the orchids staged by Mr. E. V. Low, Haywards Heath; C. Rossetti Westonbirt var., C. triumphans, and Cirrhopetalum ornatissimum were included in the exhibit. A plant of Odontoglossum Memoria Baron Schröder, the committee asked to see again, as the flowers were not yet fully open.

Mr. J. Day, gardener to H. S. Goodson, Esq., brought up Lælio-cattleya St. Gothard, and a few other good things.

FRUIT AND VEGETABLE COMMITTEE.

A vastly interesting and extensive exhibit of ornamental gourds from Mr. Thos. Stevenson, gardener to E. A. Mocatta, Esq., Woburn Place, Addlestone, was a distinct feature of the show. The display filled a space about 36ft. by 6ft., and there were about two tons of gourds, many of them two feet and upwards in diameter; while others were quite tiny, only an inch or so across. Some were so heavy, like the Giant Red Etampes, Giant Paris, Portuguese, Grey Boulogne, and other huge gourds, that they tipped the beam at from 50lb. to 89lb. each. In shape, too, there was a wonderful variety, some were round, others like the Snake Gourd, measured 5ft. in length; some were like Indian clubs, others resembled oranges, gooseberries, pears, dumb-bells, eggs, bottles, clubs, pipes, syphons, etc. In colour there was a range from white and pale-green to deep crimson, bright gold, and dark purple. The arrangement of the group was excellent, and we feel sure no such collection of ornamental gourds as this one of some seventy varieties has ever been placed before the public in this country. Our readers will remember that at Woburn Place a big pergola is annually devoted to these gourds.

Mr. James Whittle, gardener to Lieut.-Colonel A. C. Borton, Chevening, Hunton, Maidstone, put up an unusually fine exhibit of fruit, and tastefully disposed his splendid samples in flat, handled, and round baskets, and on dishes of various sizes. Apples, pears, plums, damsons, crabs, blackberries, nuts, and peaches were included. Among apples we noted superb fruits of Mère de Ménage, Warner's King, Newton Wonder, Wealthy, Belle Dubois, Gascoyne's Scarlet, Rival, Emperor Alexander, Lady Henniker, The Queen, Alfriston, Allington Pippin, Blenheim Pippin, Cox's Orange Pippin, King of the Pippins, Mabbot's Pearmain, and Ribston Pippin.

A large and particularly well displayed collection of vegetables from Messrs. Sutton and Sons, Reading, was a very attractive and interesting feature. The numerous kinds were arranged in three broad tiers, and every dish was of the finest quality. The staging was most tasteful. A few vegetables that commanded special attention were Michaelmas White broccoli and Autumn Mammoth cauliflowers; Satisfaction, Abundance, Perfection, and Eclipse tomatoes; A1., Sutton's Scarlet, Prizewinner, and Best of All runner beans; Ailsa Craig onions; Gladstone peas; Sutton's Black beet—very fine; Sutton's Heartwell lettuce; and radishes in great variety.

The large and well-arranged collection of vegetables contributed by Messrs. James Veitch and Sons, Chelsea, was bright with baskets of Invicta, Ham Green Favourite, The Hastings, Sunset, and Sunnybank tomatoes, Autumn Giant cauliflowers, Hackwood Park runner beans of great length and very straight and fleshy, Ailsa Craig onions, Defiance marrows, and ornamental gourds, with carrots, beet, potatoes, etc., made up a fine display.

The exhibit of vegetables from Messrs. Barr and Sons, Covent Garden, was a good one, and of special merit were the dishes of Invincta runner beans, Winningstadt cabbages, Ailsa Craig onions, Autumn Giant cauliflowers, Corn Cobs, and Solid Pink celery.

Mr. Harris, gardener to A. W. Sutton, Esq., Bucklersbury Place, Reading, showed excellent orchard fruits of Lord Derby, New Hawthornden, Lady Sudeley, Gascoyne's Scarlet, and Newton Wonder apples.

Mr. E. Neal, gardener to J. A. Nix, Esq., Tilgate, Crawley, showed a collection of fruits wherein apples were the chief features, but with these were good bunches of Alicante, Madresfield Court, Mrs. Pince, and Gros Maroc grapes; Nectarine, Walburton Admirable, and Princess of Wales peaches; as well as melons, pears, and plums.

Mr. G. Reynolds, gardener to Leopold de Rothschild, Esq., Gunnersbury Park, Acton, presented an exhibit of very choice fruits that included ten Queen pineapples, seven fine specimens of Gunnersbury Whiteflesh melons, and good dishes of Lady Palmerston, Albatross, Gladstone, Thomas Rivers, Nectarine, and Princess of Wales peaches.

Hardy fruits were excellently well shown by Messrs. G. Bunyard and Co., Maidstone, the examples being large, clean, and bright; Twenty-ounce, Norfolk Beauty, Emperor Alexander, Prince Alfred, Wealthy, Gascoyne's Scarlet, and Peasgood's Nonsuch were grand among the apples, while of pears the best were Marguerite Marillat, White Doyenne, Durondeau, Pres. Osmanville, Conference, and seven fruits of Uvedale's St. Germain that weighed 12lbs. together.

Messrs. Laxton Bros., Bedford, exhibited their new Laxton Berry, the result of crossing Superlative raspberry with the Loganberry. The fruits are of raspberry character, and come away from the core freely; they are reddish, and though not so sweet as raspberries, they are more pleasant than those of the loganberry. It has the habit of growth of the loganberry, and is perpetual fruiting from June to November—we saw the parent plant in fruit at Bedford in early November two years ago. Large fruiting sprays were submitted on this occasion.

A score of handsomely netted fruits of Barnet Hill melon, exhibited by Mr. Mitchelson, gardener to F. H. Cook, Esq., Guildford, merited a silver Banksian medal.

CERTIFICATES AND AWARDS.

First-class Certificate.—To Odontoglossum Harwoodi, The Shrubbery variety, from Messrs. Charlesworth and Co., Haywards Heath.

Award of Merit.—To Cattleya Mrs. Frederick Sassoon, from F. Wellesley, Esq., J.P., Westfield, Woking; to Epidendrum Laucheanum, from Sir Trevor Lawrence, Bart., Burford Lodge, Dorking; to Nerine Veitchi, from Messrs. R. Veitch and Sons, Exeter; to Collarette dahlia Prince de Venosa, from Messrs. Dobbie and Co., Edinburgh; to single dahlia Queen of the Mauves, from Mr. M. V. Seal, Sevenoaks; to single dahlia Mahdi, from Messrs. J. Cheal and Sons, Crawley; to cactus dahlias Uranus, Golden Wave, and Stability, from Messrs. J. Stredwick and Son, St. Leonards; to Nymphaea Listeri and N. Lord Brook, from Mr. Lister, gardener to the Earl of Warwick, Easton Lodge, Dunmow; to Nymphaea stellata rosea, from Mr. J. Hudson, gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton; to Rose Rayon d'Or, from Messrs. Paul and Son, Cheshunt; to potato Dobbies' Prolific (after trial at Wisley, and cooking test at Westminster), from Messrs. Dobbie and Co., Edinburgh.

MEDALS.

Gold.—To Messrs. J. Veitch and Sons, Chelsea, for stove and greenhouse plants; to Messrs. Sutton and Sons, Reading, for vegetables; to Mr. Stevenson, gardener to E. G. Mocatta, Esq., Woburn Place, Addlestone, for ornamental gourds.

Silver-gilt Knightian.—To Messrs. G. Bunyard and Co., Maidstone, for fruits; to J. A. Nix, Esq., Crawley, for fruits.

Silver-gilt Banksian.—To Messrs. J. Cheal and Sons, Crawley, for dahlias; to Messrs. W. Cutbush and Son, Highgate, for autumn flowers; to Messrs. J. Veitch and Sons, Chelsea, for vegetables; to Mr. G. Reynolds, gardener to Leopold de Rothschild, Gunnersbury Park, Acton, for peaches and pineapples.

Silver Flora. — To Messrs. J. Backhouse and Son, York, for colchicums; to Messrs. Carter Page and Co., London Wall, for dahlias; to Mr. E. Beckett, gardener to the Hon. Vicary Gibbs, Elstree, for verbenas; to Messrs. H. B. May and Sons, Edmonton, for ferns.

Silver Knightian.—To Messrs. Barr and Sons, Covent Garden, for vegetables.

Silver Banksian.—To Mr. J. Box, Lindfield, for hardy flowers; to Messrs. H. Cannell and Sons, Swanley, for dahlias; to Mr. M. V. Seale, Sevenoaks, for dahlias; to Mr. J. T. West, Brentwood, for dahlias; to Messrs. Sander and Sons, St. Albans, for orchids; to Messrs. S. Low and Co., Enfield, for orchids; to Messrs. Charlesworth and Co., Haywards Heath, for orchids; to Messrs. Hassall and Co., Southgate, for orchids; to S. Larkin, Esq., Haslemere, for orchids; to Mr. Mitchelson, gardener to F. H. Cook, Esq., Guildford, for melons.

Bronze Flora.—To Messrs. Bakers, Wolverhampton, for dahlias; to Mr. L. R. Russell, Richmond, for clematis; to Mr. C. Turner, Slough, for pampas grass.

Bronze Banksian.—To Messrs. Barr and Sons, Covent Garden, for hardy flowers; to Messrs. Thomas S. Ware, Lim., Feltham, for dahlias, etc.; to Messrs. W. Wells and Co., Merstham, for hardy flowers, etc.; to Mr. J. B. Riding, Chingford, for dahlias.

VEGETABLE SHOW.

The competitive classes for vegetables on September 26 were in most cases well filled, though this could hardly be said of those for collections. On the whole, the quality was quite up to the average, especially was this noticeable in the bulb and root classes.

In the premier class for twelve distinct kinds there were but three competitors. The first prize was awarded Mr. J. Gibson, gardener to the Duke of Portland, Welbeck Abbey, who had a superb collection. His examples of Solid White celery, Autumn Mammoth cauliflower, Prizetaker leeks, Black beet, Ailsa Craig onions, The Student parsnip, Perfection tomato, Delicacy cucumber, New Red Intermediate carrot, and Satisfaction potatoes were almost perfect.

The silver cup for nine kinds, distinct, was awarded to Mr. E. Beckett, gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree, who staged a splendid collection of Superb Pink celery, Early Giant cauliflower, Prizetaker leeks, Tender and True parsnips, Ailsa Craig onions, New Red Intermediate carrots, Dwarf Gem Brussels sprouts, Satisfaction tomatoes, and Windsor Castle potatoes. Mr. W. Gaiger, gardener to Mr. H. T. Tatham, Kendall Hall, Elstree, was a good second, his special features were Lyon leeks Ailsa Craig onions, Autumn Giant cauliflower, and Cheltenham Green Top beet. Mr. W. Folkes, Ampthill, Beds, was a good third, his carrots being very fine.

For six distinct kinds there was a good competition, but Mr. Geo. Ellwood, gardener to Mr. W. H. Myers, Swanmore Park, Bishop's Waltham, won first position with good clean examples of Superb Pink celery, Prizetaker leeks, Autumn Mammoth cauliflower, Sutton's Superlative potato, Ailsa Craig onions, and Perfection tomato. Mr. T. Avery, gardener to Mr. J. Kerr, Loudwater, Rickmansworth, came second with good examples of Ailsa Craig onion, Perfection tomatoes, and good carrots. Mr. A. Keep, Aldermaston, near Reading, was third; and Mr. H. Smith, gardener to Mr. B. Henderson, Epping House, Little Berkhamsted, fourth. There were but three collections of potatoes, six varieties, but all were of excellent quality. Mr. E. Beckett was awarded first with good clean tubers; the varieties were Windsor Castle, King Edward VII., Sutton's Ideal, Abundance, Edgecote Purple, and Early Puritan. Mr. George Ellwood was second with splendid dishes of Superlative, Ideal, and White City; while Mr. W. Gaiger was third.

The collections of six varieties of onions appeared to be popular, judging by the entries. Mr. E. Beckett won first prize with large, well-finished dishes of Improved Reading, Perfection, Ailsa Craig, Sutton's A1., Sutton's Globe, and Red Rocca. Mr. J. Gibson was a capital second; his best dishes were The Globe, Magnum Bonum, and Ailsa Craig. Mr. G. Hatch, gardener to Mr. A. B. H. Goldschmidt, Caverham Park, Mildenhall, proved a good third.

For a collection of nine kinds of salads Mr. E. Beckett won premier honours with quite a smart exhibit. It consisted of lettuces, endive, celery, beet, mustard, cress, tomatoes, radishes, and cucumbers. Mr. W. Gaiger was second with good lettuces, tomatoes, and endive. Mr. Geo. Ellwood led off for a similar class of six varieties with a nice well-grown collection. The best dishes were French Breakfast radish, Sutton's Black beet, and Batavian endive. Mr. H. Smith was placed second with good endive and tomatoes.

For six other vegetables than these scheduled distinct, Mr. E. Beckett was again most successful, staging Egg Plant Long Purple, Celeriac, Purple Kohl Rabi, scorzonera, salsify, and Golden Dawn Capsicum. Mr. Geo. Ellwood was second with fine dishes of Long Red Chili, Celeriac, and Kohl Rabi. Mr. R. Brown, gardener to Lady Tress Barry, St. Leonards Hill, Windsor, was third.

The competition for a dish of scarlet runners brought out a large display, Mr. J. Gibson securing first for Prizewinner, a very fine bean; Mr. E. Beckett was second. Mr. J. T. Tubb, gardener to Mr. J. D. Alexander, Oakbank, Sevenoaks, won first prize with Tender and True, a beautiful colour. Mr. J. Gibson was most successful in beet with fine long roots of Sutton's Black. The same exhibitor also secured the first prizes for a dish of sprouts, and three plants, in both cases staging Dwarf Gem, some wonderful buttons for the season. Cabbages were good, Mr. A. Basile winning well with Early Rainham, perfect models, without a caterpillar mark. The best savoys were from Mr. J. Gibson, who had really good specimens of Perfection. There were eleven entries. Mr. E. Beckett was again to the fore for a brace of cucumbers with a pair of Matchless; Mr. T. Avery was a close second.

Although there were only three entries for leeks, the specimens staged were superb, Mr. E. Beckett securing first with Prizetaker. Mr. G. Ellwood following with the same sort. Mr. A. Basile was first for three marrows with a level trio; some of the others were quite ripe. Mrs. H. Pryce, 43, Willow Street, Westminster, was awarded first prize for mushrooms, a very good lot. For a dish of round onions Mr. G. W. Taylor, gardener to Mr. A. Banks, Wolfeton House, Dorchester, was awarded first for six splendid bulbs of Ailsa Craig, Mr. J. T. Tubb being second, and Mr. E. Beckett third. Mr. G. Ellwood was most successful in the flat type with well-finished examples of Sutton's A1. Mr. J. Gibson second with the same variety. There was a good entry for parsnips, Mr. E. Beckett having good examples of Tender and True. Mr. G. Ellwood followed, and Mr. J. Gibson brought up the rear.

Mr. J. Gibson led for carrots with New Red Intermediate; Mr. A. G. Gentle, gardener to Mrs. Denison, Little Gaddesden, Berkhamsted, being second with Red Elephant. Mr. G. Ellwood won first place in the stump-rooted class; while Mr. J. Gibson was most successful with peas, staging The Gladstone; Mr. E. Beckett was second. There were five dishes of turnips, Mr. E. Beckett being first with Early Snowball. Red tomatoes were very good. Mr. E. Beckett led off with a fine dish of Satisfaction; Mr.

Ellwood second with the same variety. Mr. Beckett was again to the fore with a good, well-coloured dish. For a dish of "Any other vegetable," Mr. E. Beckett led with some splendid Corn Cobs: Mr. R. Brown second with Silver Spinach beet; and Mr. A. G. Gentle third with red cabbage. The prize for kale was won by Mr. W. Gaiger.

SCIENTIFIC COMMITTEE.

September 13.—Present: Mr. A. W. Hill, M.A. (in the chair); Messrs. J. O'Brien, J. Fraser, and F. J. Chittenden (hon. sec.).

BULBOPHYLLUM ORTHOGLOSSUM.—Mr. J. O'Brien drew attention to this uncommon species (figured in the "Gardeners' Chronicle" some time ago) shown by Sir Jeremiah Colman, Bart., which had been imported from the Phillipine Islands.

GALL ON TANACETUM, ETC.—Mr. J. Fraser showed specimens of a gall on Tanacetum vulgare formed by the fly Hormomyia tanaceticola, both on the stem and in the leaf axils. It had been collected on the Thames bank near Richmond. He also showed the fasciated stem of a vegetable marrow showing about forty ridges. Mr. Fraser remarked concerning the perpetuation of abnormalities that many appeared to depend upon merely local conditions, and could not be perpetuated, e.g., although he made cuttings from the abnormal stem of the mint he showed last year with leaves displaced and showing other abnormalities, they had reproduced the normal type entirely this season.

QUINCE WITH FELTED GROWTH.—Mr. Fraser also showed a quince covered with hairy growth, somewhat similar to that seen on the young fruits, but here persisting to a late period.

OATS AND BARLEY SHOOTING AFTER HARVEST.—Mrs. E. Robertson sent specimens of oats and barley making a second growth after the harvest had been cut. The growth sprung from below the main stem, and bore flowers at the height of about a foot. They were collected at Limavady, Co. Derry.

Manchester and North of England Orchid Society.

At the meeting held at the Coal Exchange, Market Place, Manchester, on Thursday, September 14, the members of committee present were: Z. A. Ward, Esq. (in the chair), Messrs. R. Ashworth, W. R. Lee, C. Parker, H. Thorp, J. C. Cowan, J. Cypher, W. Holmes, A. J. Keeling, F. K. Sander, and H. Arthur (secretary).

Z. A. Ward, Esq., Northenden (gardener, Mr. Weatherby), was awarded a silver gilt medal for a magnificent group of cattleyas of the Iris section, prominent amongst which was a fine form, Ward's var., to which a F.C.C. was given—a large flower, brilliant in colour, with intense lip. Amongst the cypripediums were noticed C. Rossetti, C. triumphans, and C. Leeanum var. Corona. A cultural certificate and bronze medal were granted to the gardener for the excellent growth of the cattleyas in the group.

Colonel J. Rutherford, M.P., Blackburn (gardener, Mr. Lupton), staged a nice group, to which a silver medal was awarded, cattleyas and cypripediums being represented; Cattleya Gaskelliana alba, C. Dominianum Langleyense, and C. Iris sanguineum were very good, as were also Cypripedium Rossetti, C. Chorltoni, and Lycaste Skinneri alba.

W. R. Lee, Esq., Heywood (gardener, Mr. Woodhouse), was awarded a silver medal for a group of choice plants; Cattleya Thurgoodianum, var. nobilior (F.C.C.), C. Gaskelliana alba, C. Mrs. John Leeman (aurea x Digbyana), C. Maqueda (A.M.), Dendrobium phalænopsis Colmani (F.C.C.), Cypripedium Rossetti, C. Iris (Plumpton Hall var), and C. Bingleyense, amongst others, making a nice display.

Dr. Hodgkinson, Wilmslow (gardener, Mr. Moore), staged an interesting plant of Lælia tenejalis (grandis tenebrosa x majalis). A.M. R. Ashworth, Esq., Newchurch (gardener, Mr. Gilden), staged a plant of Catasetum macrocarpum, an unnamed var. (A.M.) J. McCartney, Esq., Bolton (gardener, Mr. Holmes), staged Lælio-cattleya rubens, var. magnifica (A.M.), a good variety.

Messrs. J. Cypher and Sons, Cheltenham, were awarded a silver medal for a group containing some nice Cypripedium triumphans, C. Niobe superbum, C. Milo, C. Leonæ, C. Farrieanum, Miltonia spectabilis Morelliana, a nice dark variety, Vanda cærulea, Odontoglossum grande, and a nice plant of Phaio-Cymbidium Chardwarense.

Messrs. Keeling and Sons, Bradford, staged a group to which a bronze medal was awarded, cypripediums predominating; C. Kimballianum, C. Lord Derby, C. Rolfæ superbum, C. Charlesworthi, C. Milo superbum, C. Arthurianum, C. Hitchensæ, and C. gigas, Corndean var., being the best; Oncidium microchilum, with a fine spike, was very interesting.

Messrs. Hassall and Co., Southgate, staged a few plants of merit, a plant of Cattleya iridescens (bicolor x Eldorado), var. cuprea (A.M.) being especially noticeable; with other new hybrids not named.

Mr. Edward V. Low, Haywards Heath, staged Cattleya Gaskelliana, var. Phyllis, Cattleya Adula, a fine variety, Cypripedium mirabilis, and C. Amboyne. Mr. W. Shackleton, Great Horton, Bradford, staged a plant of Cypripedium Lord Ossulston, Chillingham var.

The next meeting will be held in the Coal Exchange, Manchester, on Thursday, September 28th, 1911.

AWARDS.

First-class Certificate. — To Cattleya Thurgoodianum, var. Nobilior, from W. R. Lee, Esq., Heywood (gardener, Mr. Woodhouse), a splendid flower of good form and substance; to Dendrobium Phalænopsis Colmani, from the same exhibitor, a large full flower, well lined in the lip. To Cattleya Iris, Ward's var., from Z. A. Ward, Esq., Northenden (gardener, Mr. Weatherby), one of the finest forms of the type seen, sepals and petals very brilliant in colour and intense colour in lip.

Award of Merit.—To Lælio-cattleya Maqueda (Geo. Woodhams x Lord Rothschild), from W. R. Lee, Esq. (gardener, Mr. Woodhouse), an excellent form, very even in colour; to Cattleya Adula, var. Maroni, from Z. A. Ward, Esq. (gardener, Mr. Weatherby); to Cattleya Iris, St. Giles, and C. No. 3, both fine forms, from the same exhibitor; to Lælia tenejalis (grandis tenebrosa x majalis), from Dr. Hodgkinson, Wilmslow (gardener, Mr. Moore), a large flower of deep colour; to Catasetum macrocarpum, from R. Ashworth, Esq. (gardener, Mr. Gilden), a well-flowered plant of a supposed new variety; to L.-c. Rubens, var. magnifica, from J. McCartney, Esq., Bolton (gardener, Mr. Holmes), a very nice variety, of good form; to Cattleya Iridescens, var. cuprea (bicolor x Eldorado), from Messrs. Hassall and Co., Southgate, a very nice form, brilliant in colour; to Miltonia Crashlayana, var. albus, from Messrs. A. J. Keeling and Sons, Bradford.

Reading Gardeners' Association.

The opening meeting of the autumn session of this association was held in the Abbey Hall (by kind permission of Messrs. Sutton and Sons). The President (Mr. F. B. Parfitt, J.P.), occupied the chair, and there was a very large attendance. Among the matters which received attention previous to the usual lecture was the presentation of certificates to the successful candidates at the examination held at the conclusion of the evening classes conducted under the auspices of the Reading University College last winter and spring. The successful members were Messrs. B. Fletcher, F. H. Fordham, P. Judd, E. J. Dore, and G. Chambers. A hearty vote of thanks was accorded Mr. F. G. Drew, horticultural instructor at the College, for so kindly undertaking this course of lectures.

The speaker for the evening was Mr. Alexander Dean, V.M.H., who was listened to with close attention by the large and appreciative audience. His subject was "Floral Ideals," and after a short introduction, in which he explained the meaning of the term "florist flowers," as generally understood, he proceeded to give an exhaustive address exemplifying the long and patient efforts of the horticulturists of fifty or sixty years ago in the production of what they considered to be perfection of form and colour in various flowers. Their ideals demanded perfect symmetry in appearance with precision and regularity in marking. Modern ideas of artistic beauty tend in the opposite direction; indeed, the lecturer remarked, the shaggy and uneven cactus and other dahlias which were staged before him would appeal but little to Glenny and his contemporaries, and he (Mr. Dean) confessed that his sympathies were all with the old notions, and contended that many beautiful ideals of the florist of fifty or sixty years ago had been by his modern successor "improved" (?) almost beyond recognition. The present generation aimed at size, and to secure this was prepared to sacrifice not only form but that delightful attribute of nearly all flowers, their lovely perfume. As types of successful culture and selection he instanced auriculas, gold-laced polyanthus, carnations, hollyhocks, dahlias, pansies, violas, pentstemons, primulas, sweet peas, and roses, fully explaining the points aimed at by the florists in the production of perfect blooms of each species.

At the conclusion of his remarks Mr. Dean was loudly applauded, and, on the proposition of the Vice-chairman, seconded by Mr. Tunbridge, a vote of thanks was accorded him.

A certificate of cultural merit was awarded to Mr. A. Giles, gardener to Mr. H. Dunlop, for an exhibit of twelve cactus dahlias. Mr. F. Townsend, head gardener to the vice-president, staged some very fine blooms of seedling dahlias, which were greatly admired, and Mr. Bailey, gardener to H. Collins, Esq., exhibited interesting flowers of Nerine Fothergilli majus.

TRADE NOTE.

Mr. James Box, of Lindfield, sends us a very appreciative letter anent our report of his exhibit at the recent R.H.S. meeting. He humorously remarks that his "special arrangement with the Clerk of the Weather" was the acquisition of 4½ acres of meadow land last winter, trenching 3ft. deep, and adding plenty of manure during the process. This spade work has kept his hardy perennials going strong all through the dry weather, for at Lindfield there has not been two inches of rain since April 5.

FORTHCOMING ENGAGEMENTS.

TUESDAY, October 3.—Scottish Horticultural Association.
WEDNESDAY, October 4.—National Chrysanthemum Society, Crystal Palace; two days.
SATURDAY, October 7.—French Horticultural Society of London.

CATALOGUES RECEIVED.

DANIELS BROTHERS, LIM., NORWICH.—Commencing with bulbs for forcing, and running through the various kinds of bulbs, this catalogue also includes lists of fruit trees, roses, ornamental trees and shrubs, hardy perennials, and stove and greenhouse plants, and therefore makes a very comprehensive list; there are numerous illustrations.

A. BERNAIS, LYONS, FRANCE.—Rose growers will find this catalogue, printed in English, an interesting one, because it contains descriptions of a large number of Continental roses, as well as British ones.

JOHN K. KING AND SONS, COGGESHALL, ESSEX.—Of handy size for the pocket, this catalogue of bulbs comes to us under the title of "Beautiful Heralds of Spring." Roses, fruit trees, and herbaceous plants are also listed.

CHARLES TURNER, SLOUGH.—Hyacinths, retarded bulbs, and roots for forcing, irises and liliums, are special features of the bulb catalogue from Slough.

DICKSONS, CHESTER.—The illustrations of hyacinths and tulips, as well as those of other bulbs, make the Chester list a very attractive and useful one.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

NATIONAL SWEET PEA SOCIETY.—C. H. H., Eastbourne. Your letter has been forwarded to the proper quarter, and no doubt you will have received an answer ere these lines appear.

POTERIUM TENUIFOLIUM.—T., Kells. A white variety of Poterium tenuifolium is recognised, and you will find it listed in the "Kew Handlist of Herbaceous Plants." The type has pink or purplish flowers.

BULB CULTURE.—M. E. M., Altrincham: A useful book for your purpose is "Bulbs and Their Cultivation," to be obtained, post free, for 2s. 10d., from W. H. and L. Collingridge, 148, 149, Aldersgate Street, E.C.

CLIMBER FOR OLD PEAR TREE.—R. N. B., Haslemere: There are numerous climbers which, if carefully planted near the foot of the dead pear tree, would soon cover the trunk and chief branches with beauty. Clematis montana, C. m. rubens, C. flammula, C. vitalba, and C. Jackmanni would be all suitable. Another delightful climber for such a purpose is Polygonum baldschuanicum.

SECONDARY GROWTH IN CATTLEYAS.—A., Manchester: You will find the matter dealt with in detail and at some length in a special article in the present issue.

WEED KILLER.—G. E. S.: We do not know the composition of the lawn sand used for the destruction of daisies, etc., on lawns.

HARDY YELLOW JASMINES.—M. E. G., Hemel Hempstead: There are four or five hardy jasmines in addition to the ever popular winter-flowering Jasminum nudiflorum, and excluding the semi-hardy J. primulinum. These are J. floridum, a useful Chinese shrub; J. fruticans, a semi-climbing native of Southern Europe; J. humile, a deciduous Indian species, that like all the former, is summer flowering; J. odoratissimum, a Madeiran plant that is not hardy in the north; and J. revolutum, an evergreen fragrant species that needs wall protection in the north.

THE BLUE THROAT-WORT.—H. G., Boston: Many years ago the Blue Throatwort, Trachelium cæruleum, was a very popular greenhouse plant, and was quite largely grown for the decoration of the conservatory in the summer. It is a most easily-grown plant, and may be propagated from seeds sown in the autumn or spring, in a warm greenhouse; cuttings of young growth inserted in sandy soil in early summer offer another means of increase, while division of the roots some while after the flowering stems have been cut down generally proves successful. For the greater part of the year established plants need nothing more than cold frame protection. Plants in 48-sized pots are quite large enough for general decorative purposes. Sandy loam and leaf-soil form a suitable compost.

CANKER IN LORD SUFFIELD APPLE.—P. C., Dunoon: It appears that in the North this fine apple rarely lives to a good age, but mostly succumbs to canker about ten or a dozen years after planting, or, if it does not succumb to the disease it is so debilitated as to be unprofitable. Under fairly good conditions it becomes established early, and grows freely, and crops well for the first eight or nine years, but usually soon loses vigour after that period. It is, however, such a free bearer that it would probably pay to keep up a young stock of trees in a private garden, and regularly discard those beginning to fail. James Weish is considered an excellent variety to substitute for Lord Suffield in the South of Scotland.

NAMES OF PLANTS.

H. B. M., Bersted.—Nandina domestica.

G. L. S., Petersfield.—1, Pyrus aucuparia; 2, P. Aria.

M. C., Norwich.—1, Phygelius capensis; 2, Chrysanthemum uliginosum.

H. B., Nottingham.—1. Artemisia lactiflora; 2, Cornus Spathi; 3, Olearia Haasti.

E. B., Bognor.—We cannot undertake to name florists' flowers; your best plan will be to send blooms to a nurseryman who specialises in dahlias.

C. O., Fairford.—The plant is an Asarum, probably Asarum canadense, the Canadian Snakeroot. The asarums belong to the natural order Aristolochiaceæ.

NAMES OF FRUITS.

Correspondents not answered in the present number will please consult subsequent issues.

S. S., Leeds.—Peasgood's Nonsuch.

A. D. L., Huntstanton.—1, Blenheim Pippin; 2, Warner's King.

F. E. J., Cleethorpes.—1, Beurre Clairgeau; 2, Beurre Diel; 3, Lane's Prince Albert.

V. F., Ipswich.—1, Hollandbury; 2, Ribston Pippin; 3, Louise Bonne of Jersey; 4, Ecklinville.

F. R. O., Reading.—1, Cox's Orange Pippin; 2, King of the Pippins; 3, Adam's Pearmain; 4, Marie Louise; 5, Blue Imperatrice.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1911. September 17 to September 23.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Sept. 17—Sunday	8 36	53	50	62	37
„ 18—Monday	10 48	58	50	68	38
„ 19—Tuesday	9 30	57	52	66	42
„ 20—Wednesday..	1 30	61	58	65	56
„ 21—Thursday	6 18	52	49	61	43
„ 22—Friday	8 0	44	43	63	35
„ 23—Saturday.....	7 6	59	52	65	40
Means	(total) 51 48	54	50	64	41

Date. 1911. September 17 to September 23.	Rain.	Temperature of the Soil at 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
Sept. 17—Sunday	—	56	60	62	31
„ 18—Monday	—	56	59	61	30
„ 19—Tuesday	0·21	57	59	61	31
„ 20—Wednesday..	0·01	60	60	61	53
„ 21—Thursday	—	57	59	60	36
„ 22—Friday	—	55	59	60	28
„ 23—Saturday	0·10	54	58	60	31
Means ...	(total) 0·32	56	59	60	34

CONTENTS.

PAGE
A Handsome Vase of Dahlias 725
An Effective Exhibit of Chrysanthemums ... 723
Answers to Correspondents 730
Border Carnation Notes 721
Chicory 719
Crab Apples 724
Exhibitions and Meetings 727
Garden Notes from East Anglia 720
Hibiscus syriacus 720
Lilium Harrisi 720
Lonicera sempervirens 724
Narcissus Socrates 721
New Plants, etc. 719
Notes from Here and There 725
Notes from Kew 717
Notes of the Week 715
Ornamental Crabs 718
Propagation of Roses by Grafting 722
Secondary Growth in Cattleyas 719
Work for the Week 726

MARKETS.

COVENT GARDEN.

Flowers.

Some slight improvement is noticeable in the flower trade, and those who have good flowers are doing well.

		s.	d.		s.	d.
Adiantum cuneatum ...	per doz. bun.	3	0	to	4	0
Arums	per doz.	2	6		3	0
Asparagus plumosus	per doz. bun.	1	6		2	0
„ sprengeri	per doz. bun.	8	0		10	0
Asters	per doz. bun.	3	0		6	0
Carnations	per doz.	1	0		3	0
„	per doz. bun.	6	0		12	0
Cattleyas	per doz.	4	0		15	0
Chrysanthemums	per doz. bun.	4	0		8	0
„	per doz. blooms	1	0		2	6
Coreopsis	per doz. bun.	1	6		2	6
Croton leaves	per bun.	1	0		1	6
French fern	per doz. bun.	2	6		4	0
Gardenias	per doz.	1	6		2	0
Gladioli	per doz. bun.	1	6		2	0
Lapageria	per doz.	2	0		3	0
Lilium auratum	per doz.	2	6		3	0
„ speciosum	per doz.	1	6		2	6
„ longiflorum	per doz.	2	6		3	6
Lily of the Valley	per doz. bun.	9	0		15	0
Marguerites	per doz. bun	1	6		2	0
Mignonette	per doz. bun.	2	6		3	0
Odontoglossums	per doz. blms.	2	0		4	6
Pelargoniums	per doz. bun.	3	0		9	0
Physalis	per doz. bun.	7	0		10	0
Roses	per doz.	1	0		2	6
Smilax	per doz. trails	2	0		4	0
Statice	per doz. bun.	3	0		4	0
Stocks, white	per doz. bun.	5	0		7	0
Tuberoses	per doz.	0	4		0	6
Viola, small blue	per doz. bun.	0	9		1	3
Violets	per doz. bun.	2	0		6	0

Fruits.

Excellent supplies are on offer, and apples are very good.

		s.	d.		s.	d.
Apples, English, dessert ...	per ½-sieve	2	0	to	5	6
„ Cooking	per ½-sieve	1	6		3	6
„ Nova Scotia	per barrel	9	0		14	0
Bananas	per bun.	4	0		8	6
Blackberries	per peck	1	6		2	0
Cob nuts	per doz. lb.	5	0		6	0
Damsons	per ½-sieve	2	0		3	0
Figs	per doz.	1	6		3	0
Grapes, English	per lb.	0	8		3	6
Lemons	per case	9	0		25	0
Melons	each	0	6		2	0
„ Valencia	per case	4	0		6	6
Nectarines	per doz.	6	0		24	0
Oranges, Denia	per case	12	0		30	0
„ Cape	per case	18	0		20	0
„ Jamaica	per case	7	0		13	0
„ St. Michaels	per case	8	0		10	0
Peaches	per doz.	3	0		18	0
Pears, English	per bush.	5	0		8	0
„ French	per crate	3	0		9	0
Pineapples	each	1	6		6	0
Plums	per ½-sieve	3	0		8	0

Vegetables.

The limited supply continues, and prices are well maintained.

		s.	d.		s.	d.
Artichokes, Globe	per doz.	2	0	to	3	0
Beans, runners	per bush.	5	0		10	0
Beet	per bush.	3	0		5	0
Cabbage	per taily	7	0		10	6
Carrots	per doz. bun.	1	0		1	6
Cauliflowers	per doz.	1	6		3	0
Cucumbers	per flat	4	0		6	0
Endive	per doz.	1	6		3	0
Horseradish	per doz. bun.	8	0		15	0
Lettuce	per doz.	1	6		3	0
Marrows	per tally	5	0		12	0
Mint	per doz. bun.	4	0		5	0
Mushrooms	per doz. lb.	9	0		12	0
Onions, Spanish	per case	4	0		6	0
Parsley	per ½-sieve	1	6		2	6
Radishes	per doz. bun.	1	3		2	6
Spinach	per bush.	2	6		4	6
Tomatoes	per doz. lb.	2	0		3	6
„ Guernsey	per doz. lb.	1	6		3	0
Turnips	per doz. bun.	1	6		3	6
Watercress	per doz. bun.	0	6		0	6½

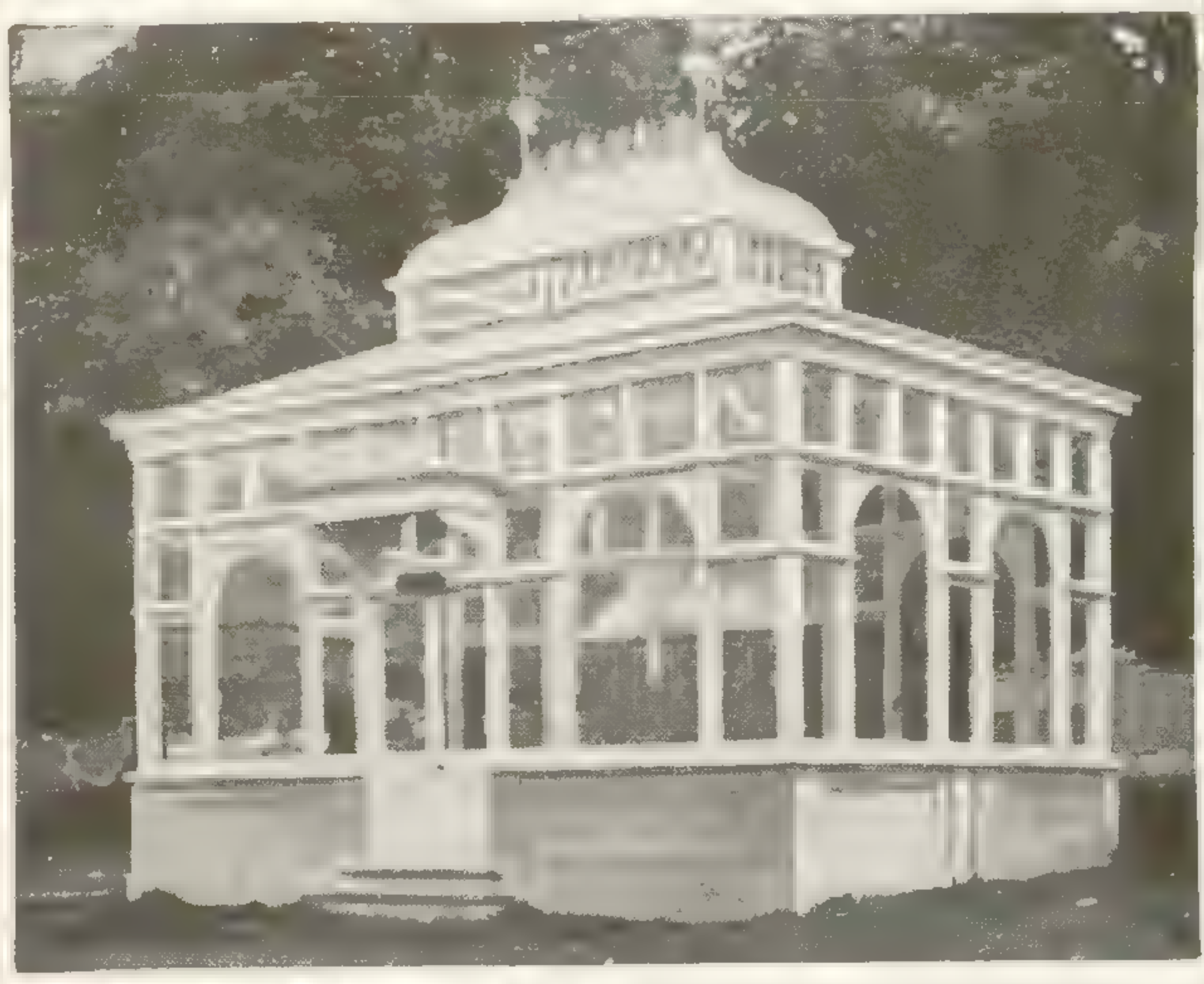
The only resemblance between a Pine Spray Syringe and others is in the shape of the barrel. The metal is more substantial. For the rest, the combination spraying head renders Spray, Rose, and Bend instantly obtainable without the addition or removal of a single fitment, while the adjustable leather bucket plunger gives perfect suction, never allows water to escape past it and up your sleeve, and wears interminably.

A written request from your ironmonger or seedsman, and a Syringe will be sent in 24 hours for your approval. Price **10/6.** Sole proprietors and manufacturers, **Robinson Bros., Ltd., West Bromwich.**

PINE SPRAY SYRINGE (patent).

BOULTON & PAUL, LTD., HORTICULTURAL BUILDERS, Norwich.

ATTRACTIVE, PRACTICAL GLASSHOUSES.

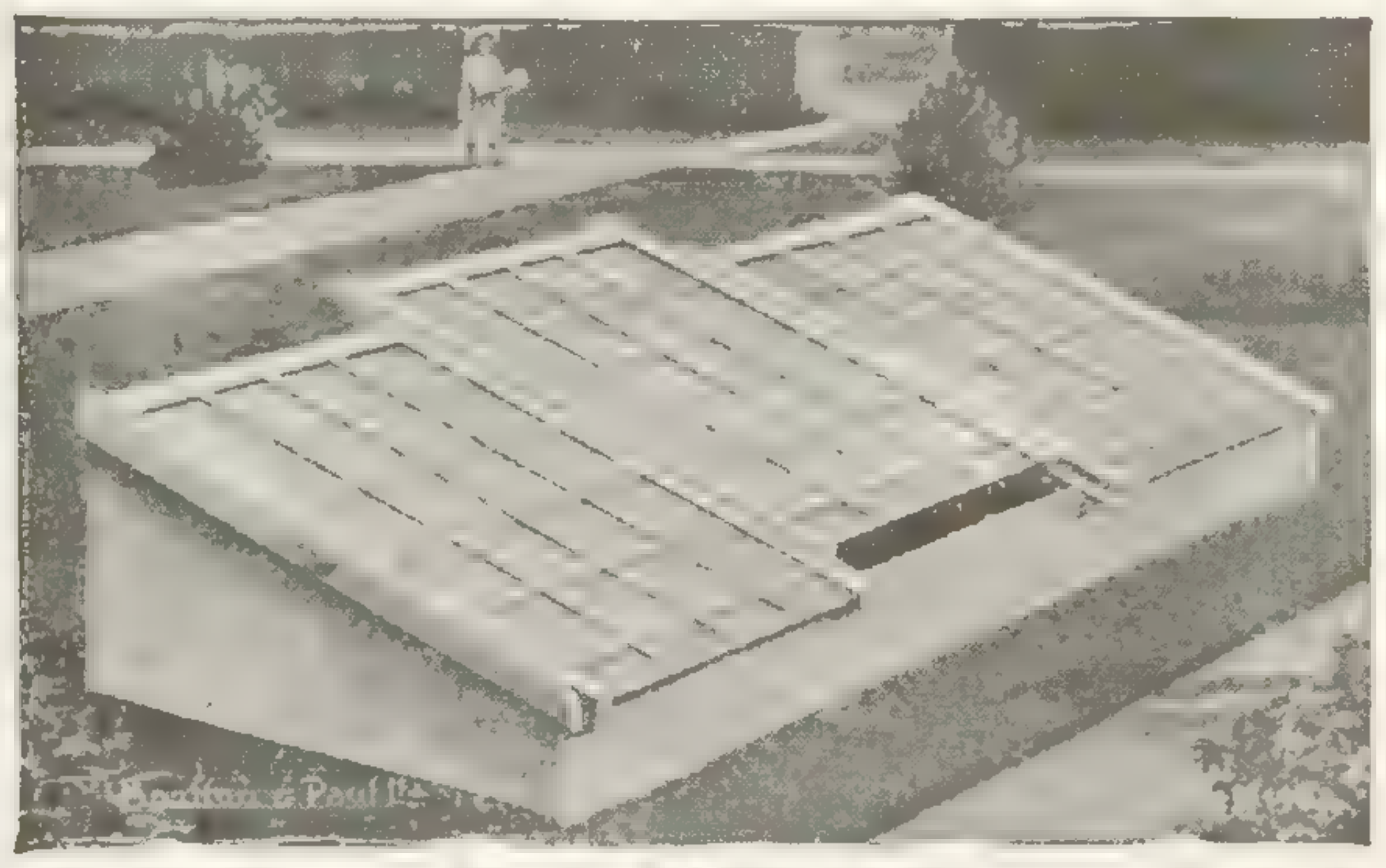


Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of **40**/- value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.

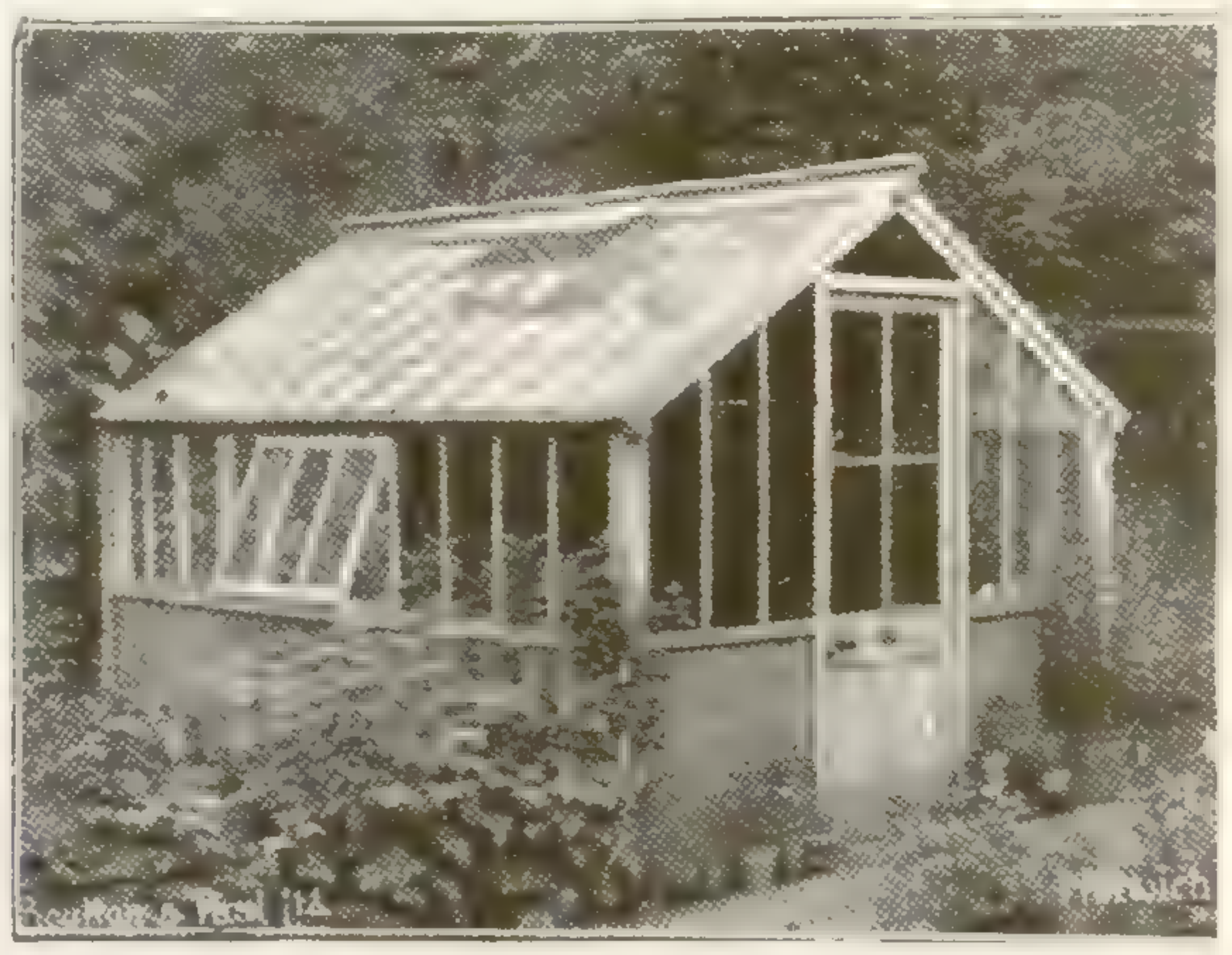


4ft. by 6ft. ... £2 0 0 | 8ft. by 6ft. ... 3 0 0
Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft. Similar to No. 75, with Two Lights... **35/-**

SEND FOR ILLUSTRATED CATALOGUES.

Every part of these Houses is thoroughly well made, painted three coats, GLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.



No. 49A.—Span, 10ft. by 8ft. £11 19 0
No. 47A.—Lean-to, 10ft. by 7ft. £9 10 0

All parts are numbered ready for easy re-erection by any handy man.

There's a Call from the Garden for

CLAY'S

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK, AS AT SIDE.

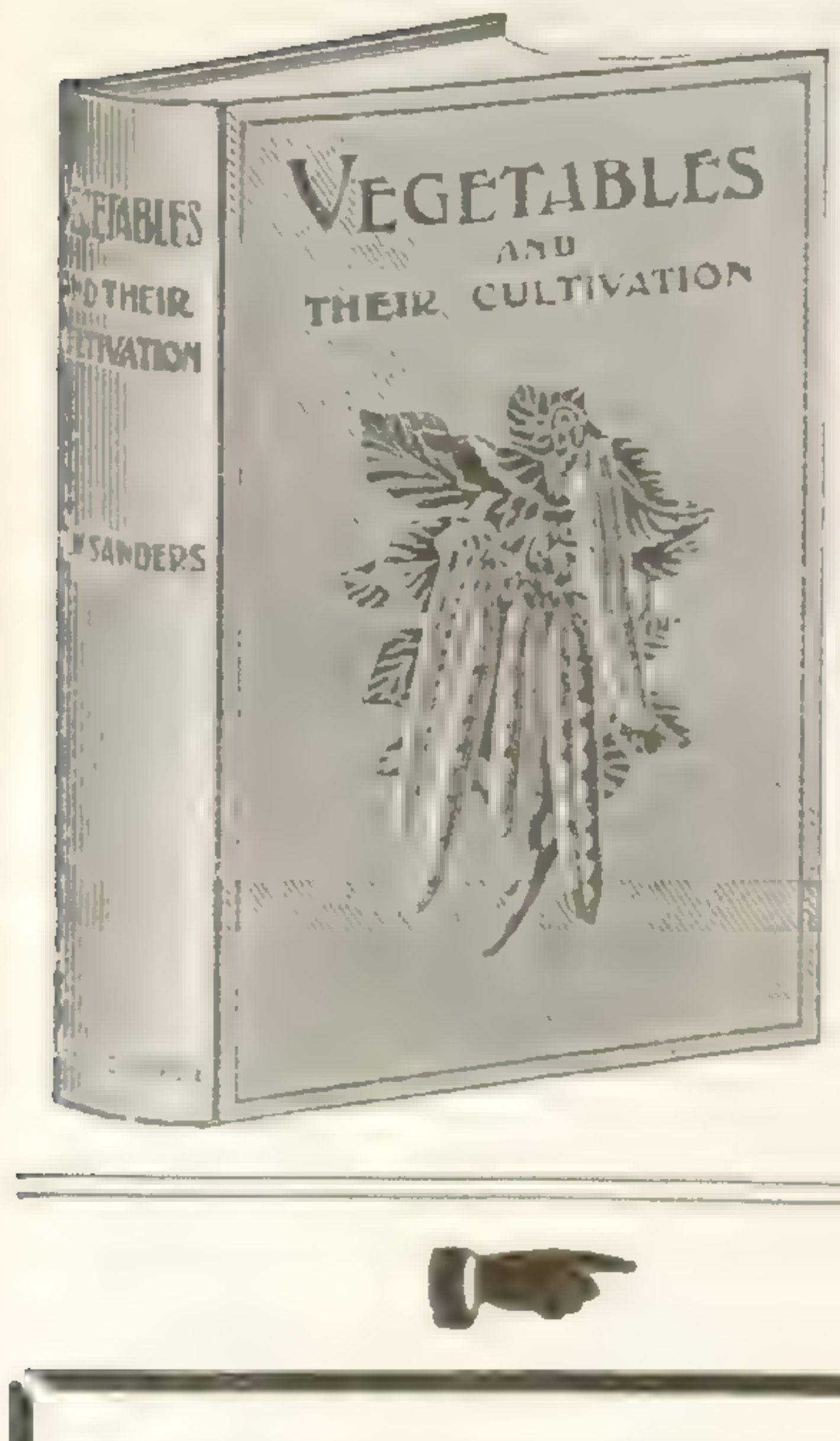
CLAY'S LONDON FERTILIZER
TRADE MARK.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. Fourth Edition (Second Reprint). 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Manure Manufacturers and Bone Crushers, **Stratford, London, E.**

"A book that should have a place in every library of garden literature, and it should be purchased not to look at but to read."—AGRICULTURAL ECONOMIST.

VEGETABLES AND THEIR CULTIVATION



By T. W. SANDERS, F.L.S., Editor of "Amateur Gardening," etc., etc.

Formation of the Vegetable Garden.
Soils and Their Treatment.
Manures and Their Uses.
Crops and Their Rotation.
Calendar of Garden Work.
Cultural Details for Each Vegetable.
Planting, Forcing, etc.
Selection of Best Varieties.
Exhibiting—Packing.
French Gardening.
Etc., Etc.

"Mr. Sanders has done his work very thoroughly in this book, and his directions are as clear and explicit as they could be."—*Agricultural Gazette.*

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE,"
148 and 149, Aldersgate Street, London, E.C.

Please send me a copy of "VEGETABLES AND THEIR CULTIVATION" by Post, for which I enclose remittance of 5/6.

Name ....

Address ....

ONCE USED. ALWAYS USED. **The 'PATTISSON' LAWN BOOTS**

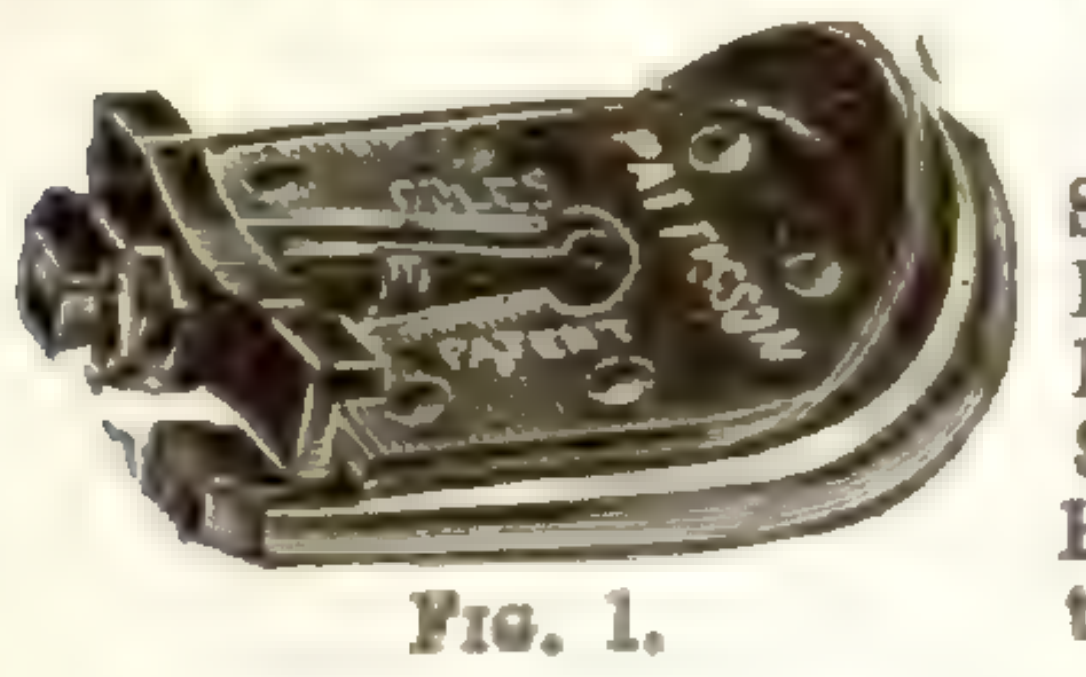


FIG. 1.

Simplest! Strongest! Most Economical! Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or Solid Rubber. Fig. 1 can be REFITTED repeatedly, equal to New Boots. Rubber Soles strongly recommended.

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS

Silver Medal—Royal Horticultural Society.

HUNDREDS OF TESTIMONIALS.

The Field says: "As good as anything that could be devised."

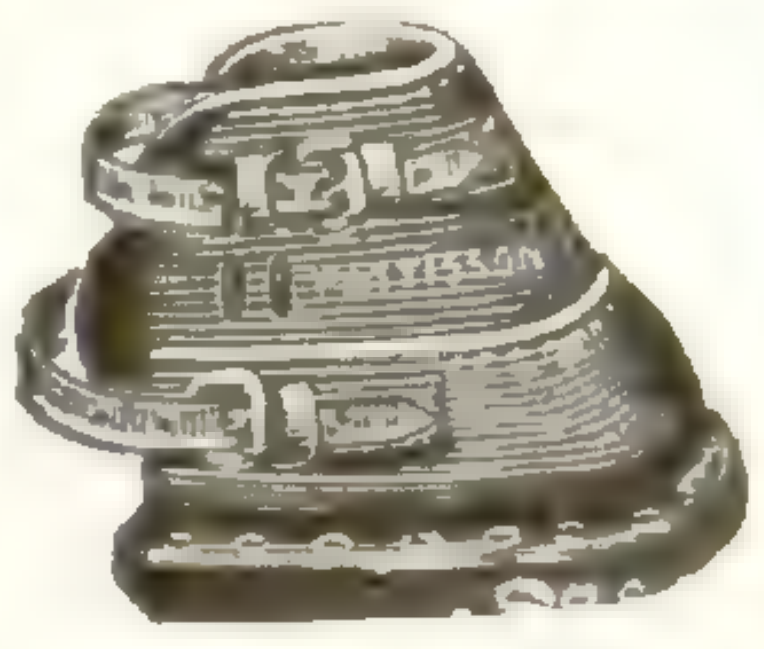


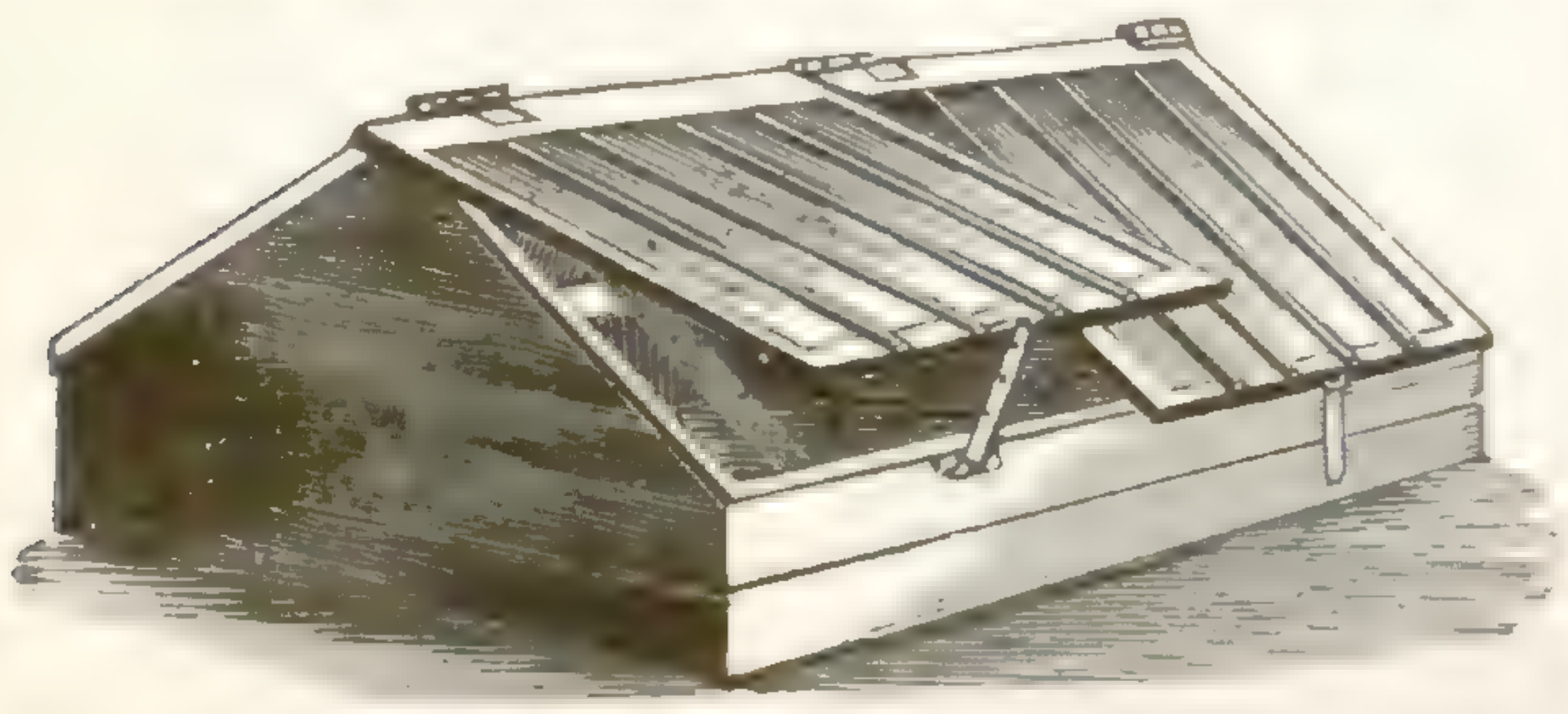
FIG. 2.

Illustrated Price List from—

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM S.W.

PORTABLE PLANT FRAMES

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices. Glazed and Painted.		£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. ,, 4ft. ,,		2	5	0
6ft. ,, 5ft. ,,		2	15	0
12ft. ,, 4ft. ,,		4	0	0
12ft. ,, 5ft. ,,		4	15	0
12ft. ,, 6ft. ,,		5	12	6

Larger sizes at proportionate prices.

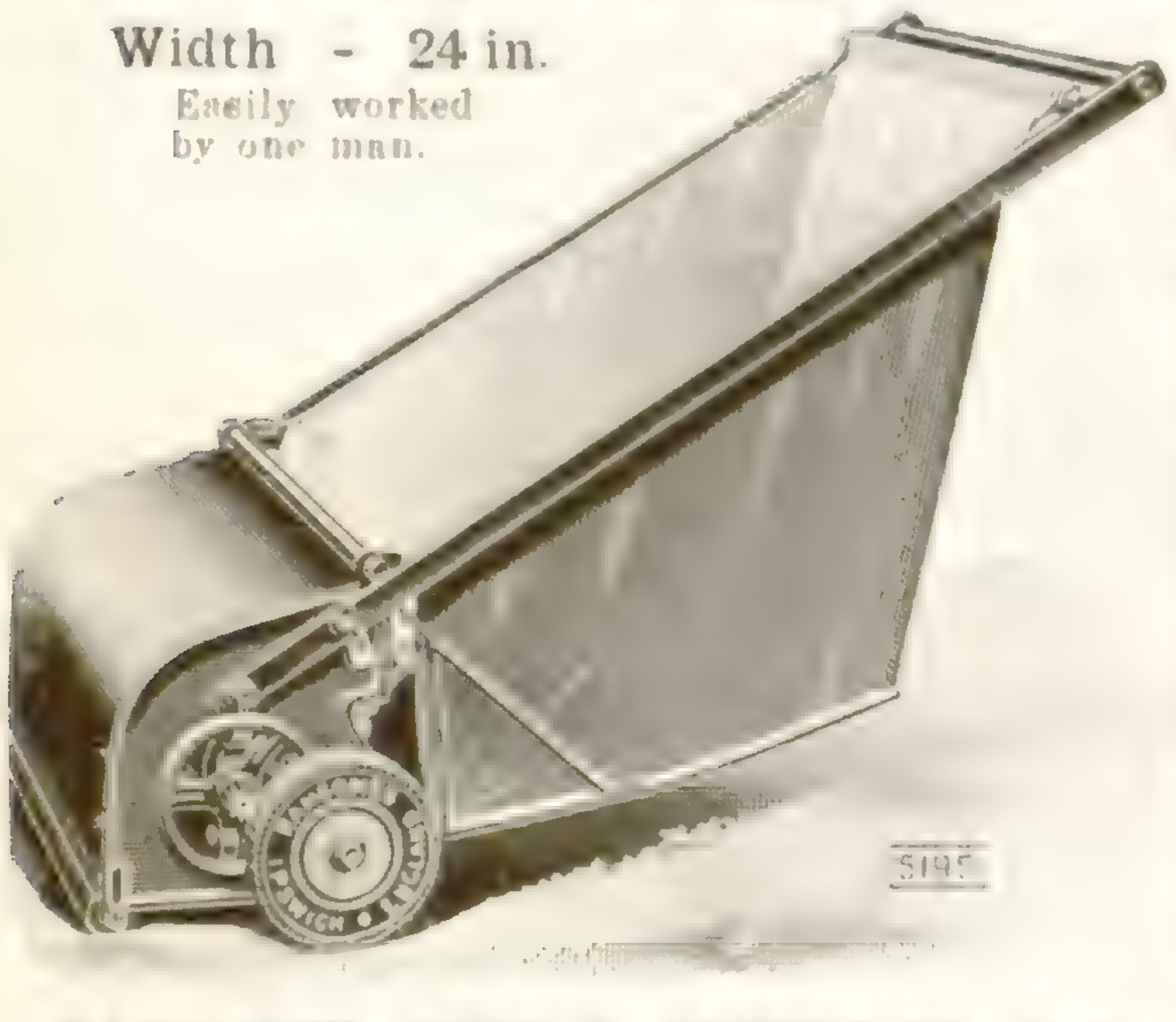
R. HALLIDAY & CO.,

ROYAL HORTICULTURAL WORKS,
MIDDLETON, MANCHESTER.

RANSOMES' LAWN SWEEPERS

have proved themselves most effective in use, and economical in time, as compared with the tedious process of sweeping by hand. To meet the demand which has arisen for a lighter and cheaper machine, R. S. & J., Ltd., have brought out the one illustrated, in which the driving is done by two side wheels and a canvas collector is fitted so that the weight is reduced and the draught considerably lightened.

Width - 24 in.
Easily worked by one man.



RANSOMES, SIMS & JEFFERIES, LTD., IPSWICH.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to

EPPS & CO., Ringwood, HANTS.

MERRYWEATHER'S 614 PUMP

IS THE

Gardener's Friend.

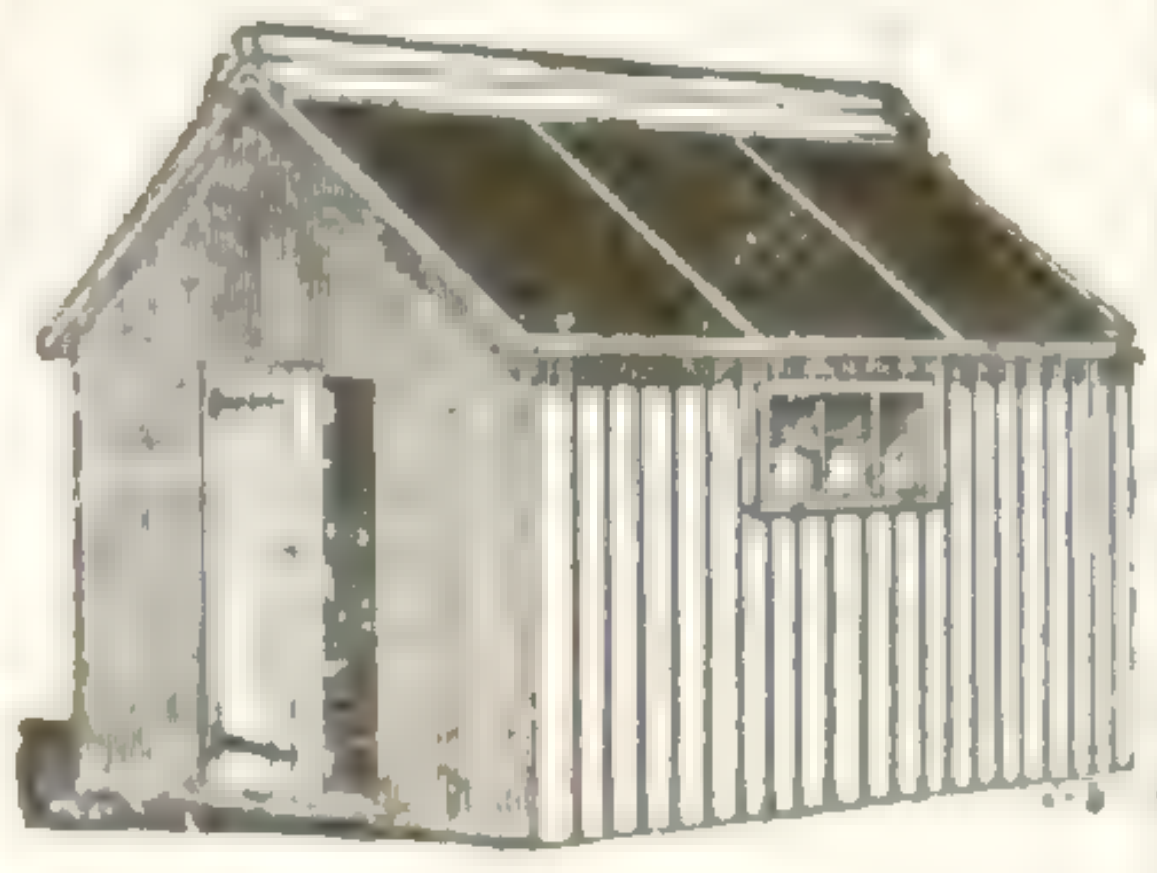
Easy to Work. Simplicity Itself.

Write or Call—

63, Long Acre, LONDON, W.C.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

PORTABLE BUILDINGS. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

SIZES.	CASH WITH ORDER.	Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	17/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	20/0

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.

Largest Makers of Portable Buildings,

ESTABLISHED 70 YEARS. **BEDFORD.**

Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant — Makers to His Majesty the late King.

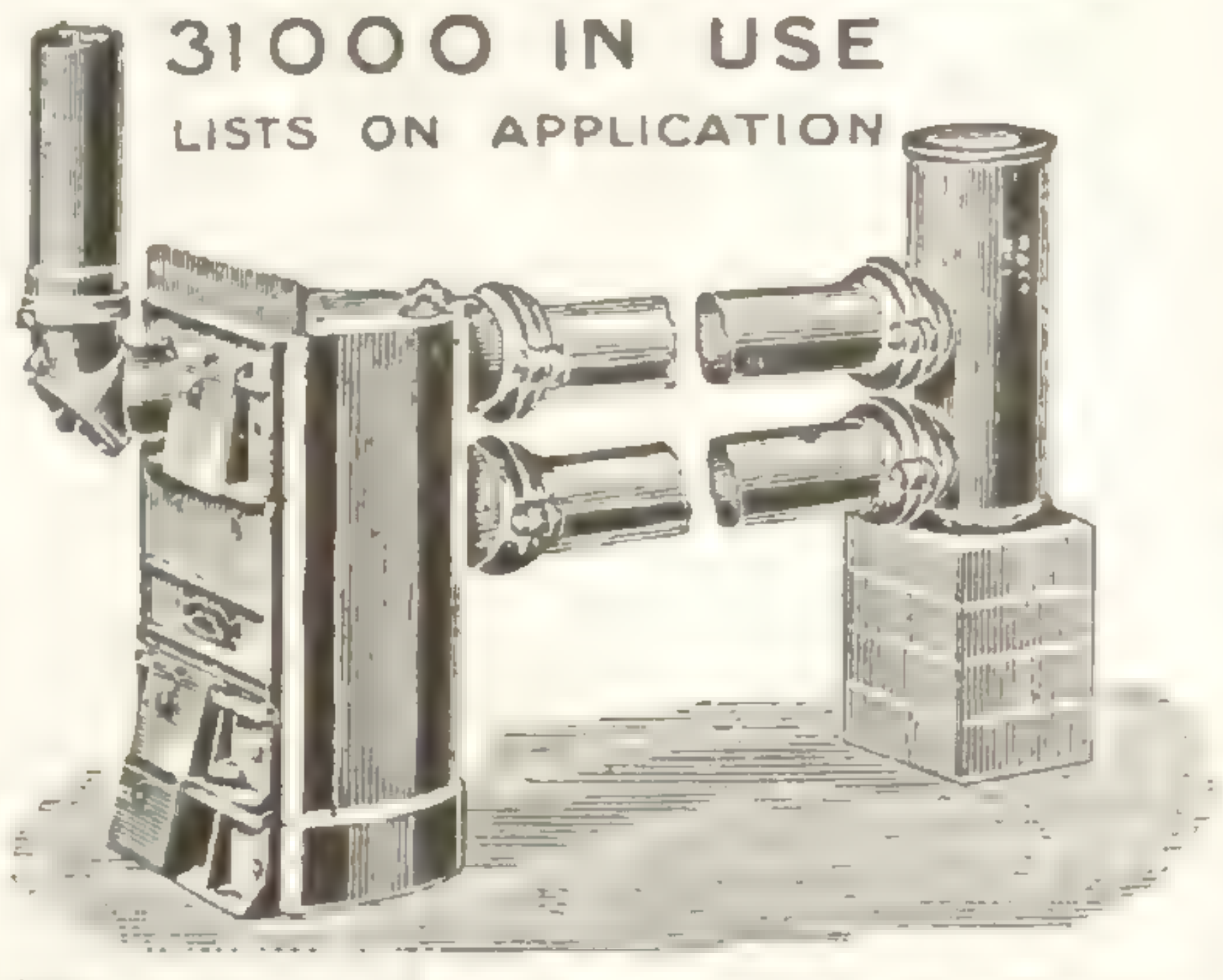
Largest Manufacturers in the World.

Only Address:

RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

The Loughborough BOILER

31000 IN USE
LISTS ON APPLICATION



The pioneer of cheap, simple and effective heating for small greenhouses. Complete Apparatus from £3.19.6. The immense sale of this boiler and its numerous imitations are the best testimony of its undoubted success

MESSENGER & CO. LTD.
[illegible] ENGINEERS
LOUGHBOROUGH · LEICESTERSHIRE
London Office, 122 VICTORIA ST · S · W

LOAM. LOAM. GOOD OLD FIBROUS YELLOW LOAM.

Quotations given for wagon loads to any station, or supplied in one cwt. bags.

Loam Merchants: **L. G. SIMMONS & Co.,** *YORK ROAD, KETTERING.*

SUBSCRIBER'S ORDER FORM

Every Saturday — THE GARDENERS' MAGAZINE — Twopence

To W. H. AND L. COLLINGRIDGE,
148 AND 149, ALDERSGATE STREET, LONDON, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose ________ for ________ months in advance.

Name ____________________

Address ____________________

Date ____________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

** If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out, Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 31; married when suited; excellent references. Address, Closes Hall, Gisburn, Clitheroe.

GARDENER (Head or Single-handed); life experience, Flower, Fruit, and Vegetables; married, no family; age 27; good references; life abstainer. VINALL, Terry Villa, Knaphill, Woking.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 31; married, two children. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working).—CAPTAIN USHER highly recommends R. Appleby as above; life experience in all branches; thoroughly understands Planning and Laying Out; also Land and Stock; many years' excellent character. Address APPLEBY, 12, Brewster Gardens, North Kensington, London, W.

GARDENER (Head, where several are kept; life experience in all branches; Early Forcing of Fruit, Flowers, and Vegetables; especially well up in Herbaceous Plants, Shrubs, and Alpines; 11 years Head Gardener to the late G. F. Wilson, Wisley, and 7½ years at Bosworth Park; first-class references; age 49; married, no family. TATNALL, 30, Askew Road, Shepherd's Bush, London, W.

GARDENER (Head of two or more) seeks RE-ENGAGEMENT; life experience, Inside and Out; 23 years Head in last place; good references. J. KIGHTLEY, Roade, Northamptonshire.

GARDENER (Head) seeks RE-ENGAGEMENT with Lady or Gentleman requiring thorough practical Man in all branches; last place 5 years Head with 12 to 8 men under; highest references from all employers; age 34; married, no family; abstainer.—F. WESTRON, Sunnybrae, Cippenham, Slough, Bucks.

GARDENER (Head Working or Single-handed); married; no family; life experience in Vines, Peaches, Cucumbers, Melons, Tomatoes, Chrys., Kitchen and Flower Garden; good references. CURD, 35, Clarence Place, Gravesend, Kent.

GARDENER (Head Working); experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants, Flower and Kitchen Gardens, Hardy Fruit, etc.; previously at Welbeck and Newstead Abbey; excellent references; age 23; married, no family. WM. GIBSON, 128, Lansdowne Road, Leicester.

GARDENER (Head Working) requires SITUATION; thoroughly experienced all branches; married, no family; highly recommended; disengaged. W. H., 3, Gipsy Lane, Wokingham.

GARDENER (Head, or good Single-handed); life experience; middle age; married, no encumbrance; well recommended. J. G., 101, Liverpool Road, Watford, Herts.

GARDENER (Head Working); experienced all round; 19 years in past situation; excellent references. Apply, STONE, Charminster, Dorchester.

GARDENER (Head Working), thoroughly experienced; for the last 16 years in good places; 5 years last place, and excellent characters; age 30; married when suited. E. PIKE, 1, South Street, St. Marks Road, Fulham Road, London, S.W.

GARDENER (Head); good Single or Fruit Gardens Manager; Budder, Grafter, Pruner, Cucumbers, Melons, Vines, Chrys., Bedding Plants, Roses, Mushroom, ridge or flat; Kitchen, Lawn, Flower Garden. Special prize 1910. W. BLOOMFIELD, Staplehurst, Kent.

GARDENER (Single-handed, or where help is given); 17 years' experience, Inside and Out; age 32; married, no family; good references. G. EUDEN, 11, Clifton Road, Spring Grove, Isleworth.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; aged 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER, 40; Single-handed preferred; thoroughly experienced; excellent character; active worker; Inside and Out with early vegetables; abstainer; married. A. BISHOP, Windmill Hill, near Hailsham.

GARDENER (Single-handed); 20 years' experience in Fruit, Flowers, and Vegetables, Lawns, Cows, etc.; good references; age 37; widower, one daughter. MARKHAM, 16, Elands Road, Aldershot.

YOUNG MAN seeks SITUATION as SECOND. Inside, good Plantsman, good reference; abstainer. STOCKBRIDGE, Melbourn Bury, Cambs.

GARDENER (Second or Single-handed) seeks SITUATION; nine years' experience; Inside and Out; good references; age 24½; disengaged. Apply, H. DUDLEY, Remenham Hill, Henley-on-Thames.

AS GARDENER; good all-round man; married, no incumbrances; excellent references, personal if desired. WRIGHT, 29, North Road, Highgate.

GARDENER and BAILIFF seeks SITUATION; well up in Gardening in all its branches; nine years' excellent character, and several good testimonials of previous places. F. J. ASHDOWN, Chiddingfold, Surrey.

GENTLEMAN strongly recommends young Married Man as good practical GARDENER; thoroughly competent to take charge in all branches Inside and Out; age 27, no family. G. DUMBRELL, 49, Birkbeck Road, Mill Hill, N.W.

JOURNEYMAN (Inside or Inside and Out); seven years' experience; can be confidently recommended; age 21. J. SWAN, care of Mr. Woodward, Godden Green, Sevenoaks, Kent.

JOURNEYMAN, Inside, seeks SITUATION; five years' experience, good reference. Apply T. HAYTER, Huntsham Court Gardens, Bampton, N. Devon.

JOURNEYMAN, Inside, age 25, good experience and good references; 2 years and 10 months last place. Apply, A. FUZZENS, 31, Stamford Road, Chelsea, S.W.

T. BOLTON, Powderham Gardens, Exeter, would be pleased to recommend Young Man as JOURNEYMAN (Inside under Foreman); age 22; strong, active, and obliging; Bothy preferred.

D. SKINNER, Head Gardener Lord Barrymore's Estate, Cordangan Gardens, Tipperary, Ireland, strongly recommends M. Coffey to any Gardener requiring good Man for Pleasure Grounds and Kitchen Garden; age 24, married. Please address, COFFEY, 35, Bridgewater Street, Deansgate, Manchester.

GARDENER (Under) seeks SITUATION; Inside and Out, where 3 or 4 are kept, age 32; ; well recommended; 4 years last place. ALLEN, 158, Station Road, Addlestone, Surrey.

YOUNG MAN seeks Situation as GARDENER (Under) in Market Glasshouses; age 19; five years' experience; Bothy preferred. WILLIAM TOWNSEND, Garsington, near Wheatley, Oxon.

MRS. WATSON-KENNEDY recommends IMPROVER (Inside or Inside and Out); age 18; four years' experience, can be well recommended by Head Gardener. B. GIBBS, Wiveton Hall Gardens, Cley, Norfolk.

MR. LOCK, Head Gardener to the Earl of Lovelace, Horsley Towers, Leatherhead, Surrey, can thoroughly recommend M. BUCKMER to any Gardener requiring a strong lad, age 17 in November; nearly three years here.

YOUNG MAN (23) seeks SITUATION; 3 years Second of three; willing, industrious; 8 years' experience. A. BERRYMAN, 14, Brownhill Road, Catford, S.E.

YOUNG MAN (27) seeks EMPLOYMENT; 14 years' experience Inside and Out; six years last situation; good references; disengaged. CHARLES WOOLFORD, Park View, Nettlestone, Isle of Wight.

YOUNG MAN (19) as GARDENER-IMPROVER (Under); willing to make himself useful. Apply T. GUBB, Upper Hayne, Craddock, Cullompton.

YOUNG MAN seeks SITUATION to look after Electric Light and Garden; well up in all branches; nine years last situation. EDWARD VILLA, Street Cobham, Surrey.

REV. R. HOLDEN recommends for employment in Garden, YOUTH, 17; strong, willing; excellent character; been with him 3½ years. E. ROBERTS, Gate House, Nuttall, Nottingham.

YOUTH (17) seeks SITUATION at once in Gentleman's Garden Inside or Out; two years in garden; can be well recommended. E. JONES, Highland Place, Fownhope, Hereford.

DAIRYMAN requires SITUATION, thoroughly experienced with Jersey Cows and Poultry; first-class Butter Maker; kill and dress Sheep and Pigs; married. MUNDAY, High Street, Selborne, Alton.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For OCTOBER 7, 1911.

Please Repeat my Advertisement.

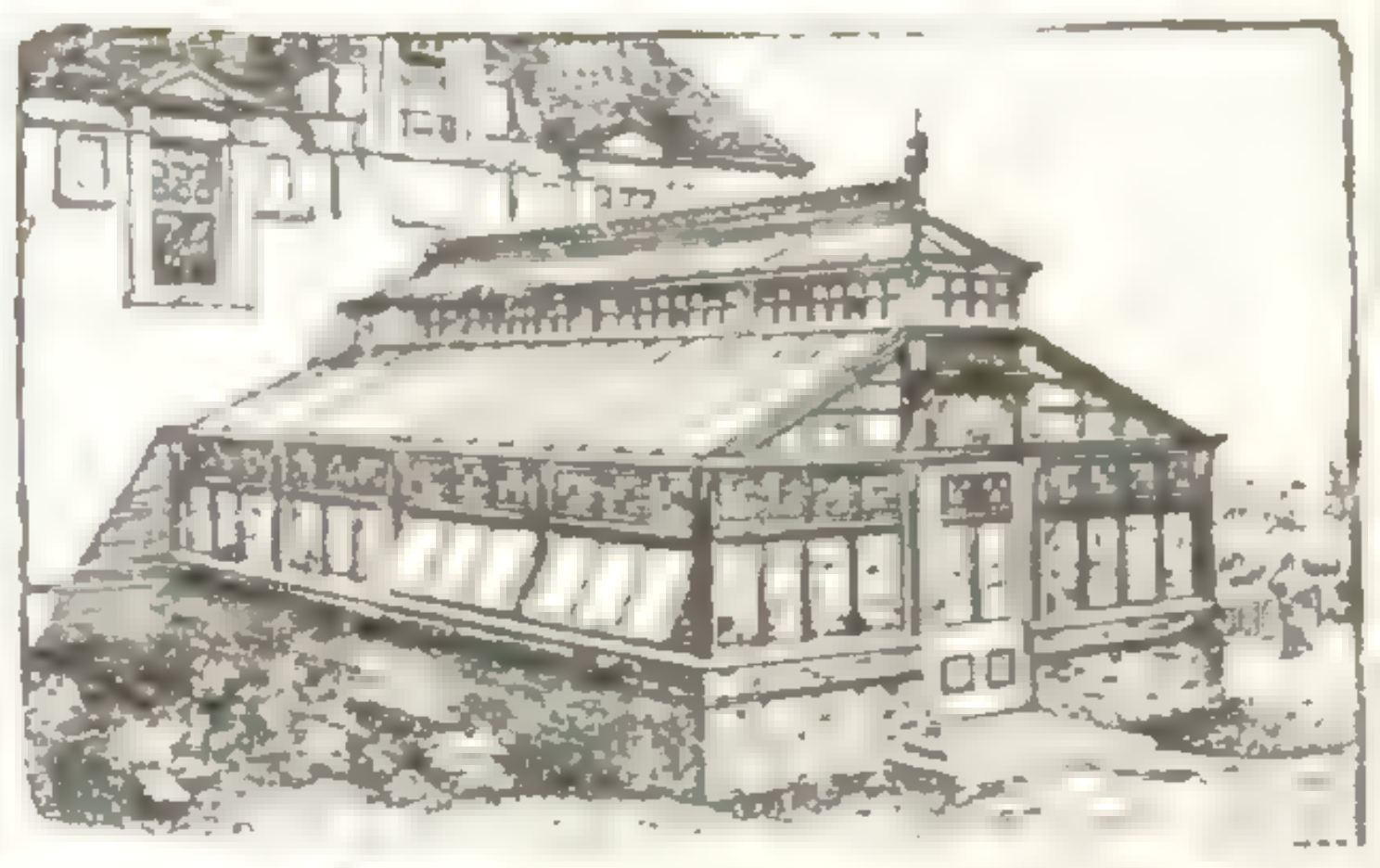
Name..

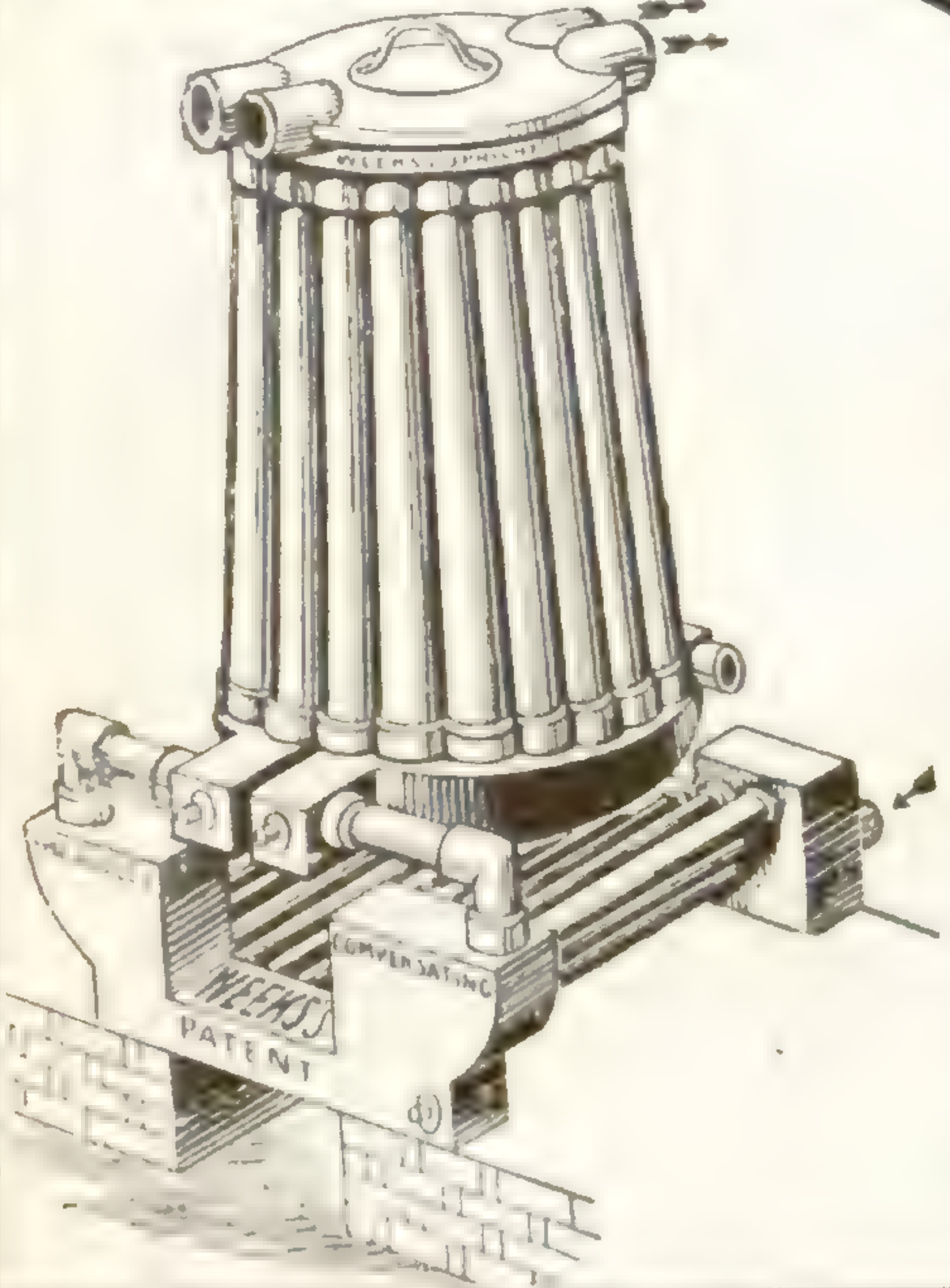
Address...

....

Date.........................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.





J. WEEKS & CO. (CHELSEA).

Established 1808.

Plans and Estimates prepared for
**CONSERVATORIES,
RANGES,
GREENHOUSES, FRUIT,
ORCHID, and
CARNATION
HOUSES.**

Head Office: 72, VICTORIA STREET, S.W.

PATENT
DUPLEX
UPRIGHT
TUBULAR BOILER.

THOUSANDS
SUPPLIED DURING
THE PAST 50 YEARS.

LET US OVERHAUL
YOUR HEATING
BEFORE THE COLD
WEATHER ARRIVES.

ESTIMATES GIVEN
FOR COMPLETE
HEATING APPARATUS.

**BULBS
AND THEIR
CULTIVATION.**

During the next two months tons of Bulbs will be imported and distributed to growers in all parts of the country. Many from long experience will know how to grow these to perfection; thousands of others will not. Hence the utility of the volume by

T. W. SANDERS, F.R.H.S.

(Editor of "Farm and Garden"),

a storehouse of practical information. To possess a copy is to gain knowledge and save money by avoiding errors in cultivation. The book is well illustrated, and the price is half-a-crown (post free **2/10**) from Publisher, 148-9, Aldersgate Street, London, E.C.

Catalogues and Estimates Free.

MESSENGER & Co LTD
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office 122 VICTORIA ST S.W.

**MODERN
GLASSHOUSES**

as supplied by MESSENGER and CO., Ltd., are made of the best materials, and only capable and reliable workmen are employed in the erection thereof.

The following letter was recently received by us on the completion of a contract for a well-known Member of Parliament.

February, 1911.

"I should not be doing my duty to your workmen if I did not at once tell you, on the completion of your work, how pleased I have been with each and all of them.

"They have been most obliging throughout the whole job, and have endeavoured to do everything in an efficient and thoroughly workmanlike manner, and I must congratulate you upon having such capable employees."

Printed and Published by W. H. & L. COLLINGRIDGE, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls

THE GARDENERS' MAGAZINE.

No. 3,023. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, OCT. 7, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S Hyacinths, Tulips, Daffodils, etc., for pots and bedding. Finest quality. Moderate prices. Descriptive Catalogue free.
BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, Horticultural Builder, Chelsea, S.W., advises Gardeners to watch their Hot Water Heating Apparatus this month. If boilers show signs of wear, it would be wise to have them examined at once. Attention can be obtained by means of a postcard, telephone call (201 Western), letter, or wire, to Gray, Chelsea, London.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

CHRYSANTHEMUM TUBES for exhibiting; highly commended by N.C.S. Apply SPRINGTHORPE, F.R.H.S., St. Albans Road, Kingston-on-Thames.

GARDEN HOSE and FITTINGS, all sizes and lengths, best quality; list free.
HEATHMAN,
Hose Factory, Parson's Green, London, S.W.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue Free. J.E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

CABBAGE PLANTS (Prize Stock).
McEwan's Earlies and Early Yorks.
4s. per 1,000.
WOODS, Fruit Bazaar, Glasgow.

MARLOW-ON-THAMES.—FOR SALE, an old-established GREENGROCERS, FLORIST, and FRUITERER'S BUSINESS with good Landscape Gardening connection; heated greenhouse; garden well stocked with winter produce; goodwill, fixtures, and stock, £85; rent £20 per annum. Apply, GEO. KENDALL, Estate Office, Marlow, Bucks.

MALMAISON CARNATION LAYERS, well rooted, at 2s. 9d. per doz., carriage paid for cash with order.
D. HAZELWOOD,
Parlington Gardens, Aberford, Leeds.

GREENHOUSE and Garden bright and gay if you grow Ellison's Reliable Bulbs and Seeds. Tulips are exceptionally cheap this Season. 70 best named varieties, from 2s. 100. 5 Gold, 7 Silver Gilt, and 10 Silver Medals awarded me during 1911. ELLISON, 57, West Bromwich.

ABSOLUTE satisfaction for you by planting Ellison's Reliable All-flowering-size Bulbs, on approval. Only three lots returned in 12 years, which proves that quality is as reliable as prices are reasonable. Catg. free. ELLISON, 57, West Bromwich. Estab. 1890.

PIGSTYE TIMBER, 1½in., Elm, 1½d. square foot; also 1in. cheap rough shedding boards 1d. square foot. Portable houses of all kinds. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-work, showing screens, wall panels, window surrounds, arches, arbors, etc., post free. BOULTON and PAUL, Ltd., Norwich.

NARCISSUS.—Tulips, Hyacinths, etc. All the leading and best varieties, from 4s. 6d. per 100. Ask for illustrated price list, post free. Satisfaction guaranteed. C. F. A. VAN DER SLUYS, F.R.H.S., La Ramée, Guernsey.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

LOVELY FLOWERS AT CHRISTMAS.
WEBBS' WHITE ROMAN HYACINTHS.
Extra large bulbs, 3/- per doz.; 20/- per 100.
Selected Bulbs, 2/- ,, 14/- ,,
Good Bulbs 1/6 ,, 10/6 ,,

WEBBS' POLYANTHUS NARCISSI.
Paper White, 1/- per doz.; 6/6 per 100.
Paper White, large flowering,
1/3 per doz.; 8/6 per 100.

WEBBS' BULB CATALOGUE for 1911.
Beautifully illustrated, Post Free.
WEBB and SONS, The King's Seedsmen,
Wordsley, Stourbridge.

BUNYARD'S CATALOGUES
Free on Application.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

KENT STRAWBERRY PLANTS
NEW CATALOGUE READY.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

LAXTON STRAWBERRIES for immediate planting. Fine plants of all the leading varieties in little pots, 15s. 100. Open ground runners, 5s. 100. Catalogue with full particulars gratis
LAXTON BROTHERS, Bedford.

CLAY'S MANURES, CRUSHED BONES
(See back page.)

CLAY'S FERTILISER IS UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

PERRY'S NEW CATALOGUES now ready.
BULB CATALOGUE.
PERENNIAL CATALOGUE.
DELPHINIUM CATALOGUE.
IRIS CATALOGUE.
FERN CATALOGUE.
Free on application.
PERRY'S HARDY PLANT FARM, Enfield, Middx.

SLUGS, SLUGS, SLUGS. — "SANITAS POWDER" will rid your garden of slugs. Mr. Walter P. Wright, of the "Garden Week by Week," says:—"The particular hint that I was going to offer about slugs was to scatter 'Sanitas Powder' on the soil amongst the plants—slugs simply loathe it." Mr. E. Poulter, of Mayfield, Sussex, writes:—"I have found 'Sanitas Powder' most efficacious in keeping off slugs." "SANITAS POWDER," 6d. and 1s. tins, and 12s. 6d. per cwt.

THE SANITAS CO., Ltd., Limehouse, London, E.

WALLFLOWERS.—Sutton's Giant Blood Red, magnificent, planting size, very choice. 50, 1s. 3d.; 100, 2s., free. Money returnable if not satisfied. ROGERS, Tennyson Road, Hutton, Essex.

ALPINES.—100 in 50 good varieties, carriage paid, £2. Half and quarter quantities at same rate.
WHITELEGG and PAGE, Chislehurst.

RUSTIC SUMMER HOUSES, trellis-work, Fencing, Pergolas, Arches, Seats, Bridges, Log Cabins, Loggias, etc. Send for our new LOG CABIN and RUSTIC CATALOGUE (just published), sent post free. BOULTON and PAUL, Ltd., Norwich.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses. Portable buildings, etc. Catalogue gratis.

SUTTON'S NAMED HYACINTHS.
(For pots and glasses).
12 named Hyacinths, in 12 good varieties, 5s.
24 named Hyacinths, in 12 good varieties, 10s. 6d.

SUTTON'S DAFFODILS (mixed).
Suitable for effective masses in the border.
Per 100, 3s.; per 1,000, 27s. 6d.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

NOW IS THE TIME TO PLANT
Kelway's lovely Pæonies, Delphiniums, and their celebrated Artistic Hardy Borders; packed ready for planting.
KELWAY'S CHOICE named Pæonies, from 27s. per doz.
KELWAY'S CHOICE named Delphiniums, from 24s. doz.
For information about the Colour Borders send 6d. for "Gardens of Delight."
KELWAY AND SON,
The Royal Horticulturists,
LANGPORT, SOMERSET.
230 Grand Prizes, Gold Medals, etc.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.

From Wm. ———, Esq.,
34, ——— Av.,
Rochester, N.Y., U.S.A.
25th April, 1911.

"Your catalogue is one of rare beauty and value, combining a splendid example of the printer's art with a most admirable manual for the garden lover."

IRON and WIRE FENCING for GARDENS, Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free. BOULTON and PAUL, Ltd., Manufacturers, Norwich.

AMERICAN TREE CARNATIONS, fine bushy plants, for winter flowering, in 5 inch pots, best varieties, 10s. 6d. per dozen. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

EVERLASTING LAWN BROOMS are those made by Dunford, at Ilford. Flat, fan-shaped, and refilled in a trice. Only 1s. 4d. each, carr. paid on doz. Sole Maker, DUNFORD, 11, Ley Street, Ilford, E.

CARNATIONS AND PICOTEES for Exhibition or Border, 12 lovely kinds for 5s., carriage paid for cash; 25s. to 35s. per 100. List free.
CHAS. WALL,
CARNATION GROWER, BATH.

GREENHOUSES and CONSERVATORIES. Distinctive Designs and Finished Workmanship. Write now for ILLUSTRATED CATALOGUE. CARTER and HOWARD, Horticultural Builders, Kingston-on-Thames.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.

XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.

XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N. S. or Florist for Richards' small pink list.

G. H. RICHARDS, Manufacturer,
234, Borough High Street London. S.E.

NERINE VEITCHII

(Award of Merit, R.H.S.).

A New Species from South Africa with flowers 2¼ inches across, having recurved segments. In colour it is quite distinct, being a clear flesh shade. It has a hardy and strong constitution, being allied to N. Bowdeni, which does so well out of doors in the West of England.

Strong plants, **21/-** each; smaller, **10/6** each.

ROBERT VEITCH & SON,

Royal Nurseries,

EXETER.

Orchids! Orchids!! Orchids!!!

The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application. — **J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana, Vanda Cœrulea Lushai Hill variety, dark blue type; Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.

ORCHIDS

1,000 DUPLICATES, CYPRIPEDIUMS AND ODONTOGLOSSUMS. Very Cheap.

Some Valuable Exemplars amongst them.

Write for List to—

REV. J. CROMBLEHOLME, CLAYTON-LE-MOORS, ACCRINGTON.

DAFFODILS AND NARCISSUS.

Sir Watkin, very free flowering, 3s. 100. Horsfieldi, handsome bloom, 2s. 6d. 100. Mrs. Langtry, very choice, 2s. 6d. 100. Gardenia, double white flower, 1s. 100. Double Daffodil, 1s. 100. Crocus, all colours 9d. 100. Snowdrops, 5s. to 7s. 6d. 1,000. Tulips splendid colours, 2s. 100. Narcissus, large trumpet 7s. 6d. 1,000. Narcissus, mixed (10 sorts), 5s. 1,000. Spanish Iris, 7s. 6d. 1,000. Pheasant-eye, 5s. to 7s. 6d. 1,000.

Send for Lists before ordering elsewhere.

CROSS & SON, Daffodil Nurseries, WISBECH.

ORCHIDS, ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices. Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

Please Write for List.

JAMES CYPHER & SONS,

Exotic Nursery, Cheltenham.

PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY
CATALOGUE FROM J. R. PEARSON & SONS
LOWDHAM, NOTTS.

CARNATIONS.
AURICULAS. PINKS.

The NEW ILLUSTRATED CATALOGUE of above is now ready, and has been posted to all customers. The newest and best varieties are sold at the most reasonable prices.

Best **CARNATION** and **PICOTEE SEED** ready in October. 1/6 and 2/6 per packet.

AURICULA (Show and Alpine), PINK, and POLYANTHUS SEED now ready. 1/-, 1/6, to 2/6 per packet.

Send for Catalogue to

J. DOUGLAS,

Edenside, GREAT BOOKHAM.

ORCHIDS

EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS**, and an endless variety of Choice **ORCHIDS**.

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX

SWEET PEAS.

SPECIAL OFFER FOR AUTUMN SOWING.

20 SEEDS EACH OF THE FOLLOWING VARIETIES 2/-

ETTA DYKE, white.
MAUD HOLMES, crimson.
JOHN INGMAN, carmine.
MARIE CORELLI, rose.
EVELYN HEMUS, picotee.
ELSIE HERBERT, picotee.
HELEN LEWIS, orange.
COUNTESS SPENCER, pink.
MRS. HUGH DICKSON, pink.
ASTA OHN, lavender.
EDNA UNWIN, orange scarlet.
ZEPHYR, blue.
PARADISE IVORY, cream.
ARTHUR UNWIN, creamy pink.

Catalogues Post Free

Satisfaction Guaranteed.

S. MILLER,

Sweet Pea Specialist, **NEWPORT, I.W.**

LAXTON'S
FRUIT TREES
IN ALL SHAPES
CATALOGUES GRATIS
LAXTON BROS
BEDFORD

BULBS
HOLLAND IN IRELAND

Tulips, Narcissi, Iris, Anemones, etc., from the Bulb-Farms of Messrs. Hogg and Robertson equal, and even surpass, the Dutch Bulbs in their exquisite form and beauty of colouring.

The Booklet, "Holland in Ireland," fully illustrates and describes them; it is free on request.

HOGG & ROBERTSON, Ltd.
(Bulb-Growers & Seedsmen to H.M. the King),
Department G **DUBLIN.**

EARLY-FLOWERING CHRYSANTHEMUMS

(See illustration page 723 last week's "Gardeners' Magazine.")

3/- and 5/- per dozen.

New List of Prize Dahlias, Early Chrysanthemums, Pansies, Violas, and Sweet Peas, ready in December. Send for one, post free.

JOHN SMELLIE,
PANSY GARDENS, BUSBY, N.B.

BUSINESS CARDS.

CARNATIONS.

ALLWOOD BROS., Haywards Heath, Sussex.
Perpetual Flowering Carnation Specialists, [illegible]

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year [illegible]

BULBS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Narcissi Tulips, Hyacinths, etc., Home-Grown.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London, N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 1st Prizes, 3 2nds, at N.R.S. Shows, 1910. Ctlg. Free.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

Sales by Auction.

SALES NEXT WEEK.

WEDNESDAY NEXT, October 11th, at Two o'clock.—An importation of JAPANESE LILIUMS, received direct, Chinese Sacred Lilies, Lilium Harrisii, many thousands of Narcissus in variety, Roman Hyacinths, Jonquils, Tulips, Freesias, Galanthus, and other bulbs, at Five o'clock. Ornamental and Decorative Palms and Plants, Azaleas, Standard Bays, etc., from Belgium.

FRIDAY NEXT, October 13th, at a Quarter to One o'clock.—350 lots of established ORCHIDS, from the Oakdene Collection, by order of Major E. C. Rogerson; a fine importation of 550 Miltonia Vexillaria, and 145 Oncidium Krameri, established Orchids in variety, Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above, BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view mornings of sale and catalogues had.

100 NURSERIES, MARKET GARDENS, FLORIST AND SEED BUSINESSES TO BE DISPOSED OF.

MESSRS. PROTHEROE and MORRIS'S HORTICULTURAL REGISTER contains full particulars of the above, and can be obtained gratis at 67 and 68, Cheapside, E.C.

DUTCH BULBS

10,000 Lots Sold Weekly.

SALES EVERY DAY
(SATURDAYS EXCEPTED),
At 10.30 o'clock, at
PROTHEROE and MORRIS'
Central Sale Rooms,
67 & 68, CHEAPSIDE, LONDON, E.C.
Catalogues Free.
COMMISSIONS EXECUTED.

DUTCH BULBS.

MR. J. C. STEVENS begs to announce that his **Sales by Auction** are held every **MONDAY, WEDNESDAY** and **THURSDAY** at **12.30.**

Catalogues post free.

Lots purchased, packed, and forwarded to all parts.

STEVENS' AUCTION ROOMS
(Established 150 years),
38, King Street, Covent Garden, London, W.C.

SALES DAILY (SAT. EXCP.) AT 12.30.
First Size Hyacinths, Tulips,
Daffodils, Narcissi, Crocus,
Snowdrops, etc.

BULB SALES BY AUCTION.

Lotted
to suit all Buyers,
Catalogues of Auctioneers,
JOHNSON DYMOND & SON,
"City Auction Rooms" (est. 1793),
38 and 39, Gracechurch Street, LONDON, E.C.

J. J. THOOLEN, The EXPORT Nurseries,
Heemstede, Haarlem, Holland,
ESTABLISHED 1884,

Has the honour to announce that his Illustrated Price List of Bulbs and Plants in English, Autumn, 1911, at lowest prices, will be sent post free on application. **No Charge for Packing. Orders of 10/- and above entirely Free to Destinations** in England, Scotland, and Ireland, etc. First Quality guaranteed.

Some sorts of Bulbs noted out of Price List.

	Per 100. s.	d.	Per 1,000 s.	d.
Hyacinths, in the finest mixture for bedding or forcing … … .. …	7	8	72	4
Hyacinths, single, first size, named, in 25 leading sorts, red, white, and blue vars., equal quantities, my selection … … … … … … … …	15	0	—	
Tulips, single early, in the finest mixture	2	0	18	4
Tulips, Darwin, mixed … … … …	3	0	25	0
Tulips, double, in the finest mixture…	2	2	20	0
Anemones, single mixed … … … …	1	4	12	0
Anemone, The Bride, pure white …	1	4	12	0
Crocus, 1st size, in the finest mixture	1	4	12	0
Crocus, 2nd size, in the finest mixture	0	9	7	0
Scilla campanulata, blue bells … …	2	0	—	
Scilla campanulata, white bells … …	2	0	—	
Scilla sibirica, rich blue … … … …	1	6	14	6
Iris, Spanish, mixed … … … … …	0	7	5	0
Iris, English, mixed … … … … …	2	0	16	8
Narcis., single, in the finest mixture…	1	4	12	6
Narcis., Trumpet, in the finest mixture	2	6	20	0
Narcis., double, fine mixture … …	2	6	20	0
Narcis-Polyanthus, finest mixed …	3	6	30	0
Snowdrops, **Elwesi**, the Giant Snowdrop	1	6	13	6
Ranunculus, **French**, double mixed …	0	9	7	0

250 Bulbs of the same kind will be charged at the 1,000 rate; 25 at the price per 100; 6 at the price per 12.

Ask for Illustrated Price List and see the Collections.

ORCHIDS.

If you have a Greenhouse sufficiently heated to keep out the frost, write for our

Amateur's Guide,

giving treatment and all particulars. Illustrated.

MANSELL & HATCHER, LTD.,
RAWDON, via LEEDS.

SWEET PEAS.

The Exhibitor's House for true stocks of English-grown Seeds.
Awarded 90 Gold Medals.

Novelties for 1912:
AFTERGLOW, PRINCE GEORGE, DOROTHY, R. F. FELTON, CORONATION, FLORRIE.
1/- per packet.

For other Novelties and all the latest varieties in cultivation, see Catalogue, post free.

ROBERT BOLTON, F.R.H.S.,
The Sweet Pea Specialist,
WARTON, CARNFORTH.

CHEALS'

FOR FIRST-CLASS
ORNAMENTAL TREES,
ROSES, FRUIT TREES,
AND
HARDY FLOWERS, etc.

NURSERIES 113 ACRES.
CATALOGUES FREE.

J. CHEAL & SONS,
The Nurseries, CRAWLEY.

MY SWEET PEA LIST

will be the most time-saving, interesting, profitable, and pleasure-giving list in the world. Post-card commands it.

I am being honoured with **novelties** from Aitken's, Chapman, Cole, Burpee, Deal, Dobbies, Hemus, Lumley, Stark, Trevethick, Ward, and many others

My stock of last year's novelties are, with few exceptions, English grown and rogued by **genuine Sweet Pea lovers.**

My Special Spencer Mixture contains Earl Spencer, Nancy Perkin, Syeira Lee, Thomas Stevenson, Dainty, and Helen Pierce Spencers, etc. This I **guarantee. 1s.** per oz., **1s. 10d.** per 2oz., **3s. 6d.** per 4oz., post free.

My Helen Pierce Spencer Seedlings will be a source of profit and pleasure to the grower. The stock has been rogued down to Spencers at great expense. A selection from this mixture properly fixed will make a small fortune for the owner. **1s. 6d.** per oz., **2s. 6d.** per 2oz., post free.

My Special Seedling Spencer Hybrid Mixture is from two of our keenest British hybridists, who have more stock than they can possibly handle as it ought to be. **Such seed never offered before. 1s. 6d.** per oz., 2oz. for **2s. 6d.,** post free, worth 10s. per oz., as it is absolutely the result of their life's work. Virtually selling proverbial £1 for one penny.

Sole distributing agent for Mr. F. Herbert Chapman's Iolanthe, the most opaque white Sweet Pea in existence. 8 seeds, **6d.**; 20 seeds, **1s.**

I hope to have my list ready early in October.

G. H. MACKERETH,
The Sweet Pea Clearing House, ULVERSTON.

A SPECIALITY FOR MORE THAN 50 YEARS.

POT VINES

Exceptionally Fine this Season.
Inspection Invited.

J. R. PEARSON & SONS, LOWDHAM, Notts.

W. SEABROOK & SONS

We have a large stock of young Fruit Trees in excellent condition to offer this season. Our **Specialities** are Cordons, Bushes, and Pyramids, and Trained Trees worked on selected **Fruiting Stocks.**

FRUIT TREES
and ROSES.

Write for our Illustrated Catalogue, containing Cultural information, post free.

CHELMSFORD

Bulbs: NARCISSUS, DAFFODILS, TULIPS, &c.

All Good Flowering Bulbs; Worth Double.

NARCISSUS

100	**Emperor** ……….	3/0
100	**Empress** ……….	3/0
100	**Henry Irving** …	4/0
100	**Golden Spur** …	4/0
100	**Horsfieldii** …….	3/0
100	**Victoria** ……….	3/0
100	**Obvallaris** …….	3/0
100	**Grandis** ……….	3/0
100	**Sir Watkin** …….	3/0
100	**Stella** ………….	1/6
100	**Princeps** ……….	2/6
100	**Ornatus** ……….	2/6
100	**Double Daffs** …	4/0
100	**Dbl. White Narcis.**	2/6
100	**Pheasant Eyes**	2/6
100	**Frank Miles** …	1/6

TULIPS

100	**La Reine** ……….	3/0
100	**Cottage Maid…**	3/0
100	**Chrysolora** …….	3/0
100	**D. de Parma** …	3/0
100	**Keizerkroon** …	4/0
100	**Golden Crown…**	3/0
100	**Picotee** ……….	4/0
100	**Bouton d'Or** …	3/0
100	**Prince de Ligny**	4/0
100	**Duc Van Thol,** sgl	4/0
100	,, ,, dbl	3/0
100	**King of Yellows**	4/0
100	**Mixed Tulips** …	1/6
100	**Mixed Darwins**	4/0
100	**Darwins** to name	10/6
100	**Parrot Tulips** to colour ……….	2/6

Special offer in Mixed Narcis. and Daffodils, also Tulips for planting in grass, shrubberies, hedge rows, etc.

HYACINTHS

per 100

12—1/9	to name in colours…… or	10/0
12—1/3	mxd in cols. or	9/0
12—1/9	**Roman White** or	12/0
100	**Iris, Spanish,** to name …………	1/6
12	**Iris, German** do.	6/0
12	**Iris, English** do.	1/6
100	**Anemones, Scarlet**	4/6
100	,, **The Bride**	1/9
100	,, **St. Brigid**	5/0
100	**Scilla Siberica…**	3/0
100	**Freesia** ……….	3/0
100	**Summer Snowflakes** ……….	5/0
12	**Lilium Candidum**	2/6
12	,, **Crown Imperial** …	2/0
12	,, **Auratums**	7/0
12	,, **Croceums**	4/0
12	,, **Longiflorums**	4/0
100	**Snowdrops** …….	1/6
100	**Ixias,** to cols.	2/6
100	**Crocus,** in cols.	1/3
100	**Lily of Valley** …	2/6
100	**Jonquils** ……….	4/6
100	**Ranunculus** …	3/0
100	**Montbretia** …….	3/0
100	**Aconites** ……….	3/0
100	**Chionodoxa** …	2/6
100	**Polyanthus Narcis**	3/0
100	**Alliums** ……….	3/0
12	**Begonias,** choice	1/6
12	**Violets,** in sorts	1/6
12	**Xmas Roses** …	4/0

Narcissus and Daffodils,	5/-, 7/6, 10/0 per 1,000
Tulips … … … … …	10/-, 15/-, 20/- per 1,000

Many other varieties to offer; also all kinds of Herbaceous plants. Any of the above, half quantities at half price.

FRUIT TREES.—Apples, Pears, and Plums, all fruiting trees, **9/-** per dozen. Gooseberries, Currants (black, red, white), **3/-** per dozen. Loganberries and Raspberry-Strawberry, **9d.** each. Raspberry canes, **3/-, 4/-,** per 100. Strawberry Plants, **1/6** per 100.

All kinds of Flower and Garden Seeds, also POTATOES. Send for List,

J. W. CROSS, Old Grammar School, **WISBECH.**

SELECTED SEED POTATOES.

All varieties grown on finest soil in Scotland and Lincolnshire.

Any weight supplied at low prices.

Prizes given for best results.

Before ordering elsewhere write for Catalogue.

A. J. SOLE, Seed Potato Grower,
PETERBOROUGH.

PAINT & GLASS.

NICHOLLS & CLARKE, LTD
SHOREDITCH, LONDON.

GLASS. When sending for Catalogue please cut out this advt.

BY APPOINTMENT.

ROSES IN POTS

WM. PAUL & SON

WALTHAM CROSS, LTD.

Respectfully invite attention to their magnificent stock of the above, which they believe to be unrivalled in quality and extent.

Dwarfs or bushes, extra strong, in 8 in. pots, for forcing and greenhouse culture	30/- to 60/- per doz. £12 and upwards per 100.
Climbers and Ramblers in 8 in. pots, for forcing and out-door planting on pergolas, arches, etc., with shoots ...	6 to 12 ft. long, 30/- to 60/- per doz. 12 to 16 ft. long, 72/- to 90/- per doz. Price per 100 on application.
Dwarfs and Climbers, smaller plants, in 5 in. pots	10/6 to 18/- per doz. 75/- to £6 per 100.

Priced List Post Free on application.

Inspection of Stock Invited.

The Nurseries are twelve miles from London, four minutes' walk from Waltham Cross Station, G.E.R.

Sole Postal Address—

PAULS' ROYAL NURSERIES
AND SEED WAREHOUSE,
WALTHAM CROSS, HERTS.

ESTABLISHED 1832.

No connection with any other Firm of a similar name.

ANT. ROOZEN & SON'S

SPLENDID

HYACINTHS,

TULIPS,

AND OTHER

DUTCH, CAPE,

AND EXOTIC

BULBS AND PLANTS.

All of the Finest Quality.

Our Descriptive CATALOGUE *of the above, containing* FULL CULTURAL DIRECTIONS *and particulars as to* FREE DELIVERY, *will be sent post free on application to our offices, at OVERVEEN, HAARLEM, HOLLAND, or to our General Agents,*

MERTENS and CO.,
3, Cross Lane, LONDON, E.C.

BUNYARD'S FRUIT TREES . . . .

EARLY ORDERS RECEIVE FIRST ATTENTION WHEN PLANTING SEASON ARRIVES.

WRITE FOR CATALOGUE.

Geo. Bunyard & Co., LTD.,
Royal Nurseries,
MAIDSTONE.

MERRYWEATHER'S ROSES.

All Strong and Home-grown Plants.

COLLECTION "H" of NEW ROSES.

WONDERFUL VALUE.

EVERY ONE A GENUINE NOVELTY.

This superb collection of the **BEST 18 NEW ROSES** in dwarf plants. The price of this wonderful collection is 27/6, carriage and packing free for cash with order (with Acme Labels, **29/6**). The varieties are:

Arthur R. Goodwin, P.
Duchess of Wellington, H.T.
Entente Cordiale (Ducher), H.T.
George C. Ward, H.T.
Jessie, Dwarf Poly.
Lady Alice Stanley, H.T.
Lyon, H.T.
Margaret, H.T.
Margaret Molyneux, H.T.
Miss Cynthia Ford, H.T.
Mrs. Alfred Tate, H.T.
Mrs. A. Munt, H.T.
Mrs. E. J. Holland, H.T.
Mrs. W. Christie Miller, H.T.
Marquis de Sinety, H.T.
Molly Sharman Crawford, H.T.
Souv. of Stella Gray, T.
White Killarney, H.T.

FRUIT TREES

OF ALL KINDS TO SELECT FROM.

A GRAND STOCK OF

SHRUBS & ORNAMENTAL TREES.

HERBACEOUS PLANTS in great variety.

Send for Catalogue No. 29, full of interesting information and cheap prices, post free on application to

MESSRS.
H. MERRYWEATHER & SONS, LTD.,
(Dept. 1A), **GARDEN SPECIALISTS,**
SOUTHWELL, NOTTS.

BORDER CARNATIONS.

1795. CARNATION BROWN. QUALITY. COURTESY DESPATCH. KINGS NORTON. 1911.

WILLIAM BROWN
was foremost among Carnation Growers in 1795.

ARTHUR R. BROWN, Ltd.,
are the Champion Exhibitors to-day.

We devote ourselves entirely to

BORDER CARNATIONS

and have an unrivalled collection. Our stock consists of **100,000** strong healthy plants in the finest **500** varieties.

Write for Catalogue giving full cultural details.

Sample dozen in 12 good Standard varieties, 6/-

Only strong healthy plants sent out or cash returned.

Carnation Seed from finest varieties 2/- and 1/- per packet.

ARTHUR R. BROWN, LTD.,
Wychall Nurseries,
KINGS NORTON.

CLEANLY

AND INTERESTING, A CHARMING WAY OF GROWING BULBS FOR TABLE AND ROOM DECORATION.

—— a dainty bowl, a few bulbs of either Hyacinths, Tulips, Narcissi, Crocus, Scillas, Jonquils, and others, or a few Lily of the Valley crowns, a compost we specially prepare, and regular attention to watering, and there will result an effective group of beautiful flowers and clean bright foliage, which can be placed anywhere without the least risk of damage to covering or furniture. We offer the bowls in a variety of shapes and colours, each with sufficient of our compost, at 1/6, 2/-, 2/6, 3/- each, and upwards, and we have an excellent range of suitable bulbs.

See page 2 of our Catalogue (free) for fuller particulars.

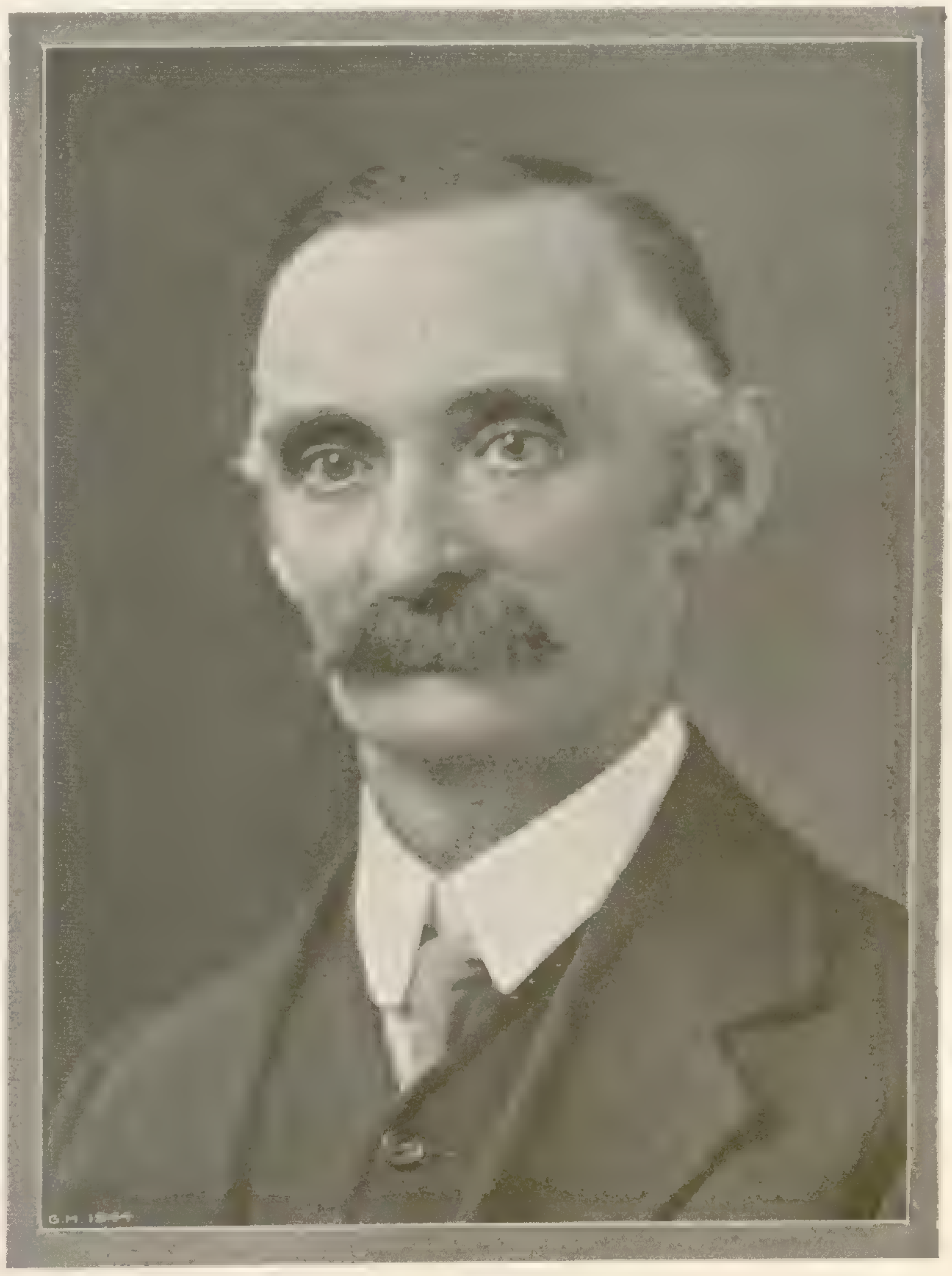
DICKSON & ROBINSON,
Seedsmen to H.M. King George V.,
MANCHESTER.

VOL. LIV.—No. 3,023. SATURDAY, OCTOBER 7, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Sunbeams.


MR. J. T. BARKER.

The abundance, indeed we may almost say superabundance, of sunbeams, with which we have been blest, or otherwise, during the past months, has been without equal during the lives of most of us, and we have, therefore, had a special opportunity of judging of its effects. On the whole, of course, it has undoubtedly been beneficial; sunshine is the source, or rather medium, of all vitality, so far as the earth is concerned; its rays bring to us all the stimulant energy by virtue of which we exist. The very rainfall, which modifies its otherwise drastic effects, is lifted up and wafted to us by its influence: and all the wonderful diversity, not merely of organic life, but of inorganic existence, as exemplified by our hills and vales, mountains, deep ravines, and canons, etc., has been shaped, and even created, by the subtle influence of the sunbeam working through æons of time, both on the liquids and solids, which constitute the terrestrial crust. In point of fact, there is no effect of which search sufficiently deep would not reach the sunbeam as the cause. Its potency underlies everything on earth, and constitutes, the Creator of the Universe apart, the great primary cause of everything. Withdraw its heat entirely and we have a frozen lifeless world; and trace back the history of that world and science will tell us that it begins practically as a mass of ethereal sunshine, the very matter incorporated with it existing then as intangible luminosity. Leaving, however, these somewhat recondite considerations, we will confine ourselves to present conditions. As regards the climate, which is entirely determined by solar action, the surface of the world at all times is the scene of all sorts of climatic conditions. At the Poles, where the sunbeam least penetrates, since even at midsummer the sun but swings round the horizon, perpetual frost practically prevails, and the land is buried beneath accumulated ice, born of unmelting snows. At the Tropics contrary conditions obtain, since the sun rises about due east all the year round, soars perpendicularly to the zenith, and sets about due west with monotonous regularity. In the Temperate regions wherein we dwell, the swing of the earth's axis as it rolls round the sun causes an alternation of warmer and colder seasons by exposing its surface to longer or shorter periods of sunshine, according to the inclination of the axis in question. The globe, in fact, is like a top spinning aslant, and as this slant is alternately towards and away from the sun the top half and bottom half receive alternately more sunshine or less, according as the season is summer or winter. These may sound like commonplaces, but they serve to illustrate our theme. All these revolutions, oscillations, and alternations of sunshine exposure are cosmically exactly reproduced every year, with practically no change, and the question, therefore, arises, "Why do our annual meteorological records display such diversity?" One year we have an abnormally heavy rainfall, almost constantly cloudy skies, and comparatively little bright sunshine, accompanied by persistent coolness, or even cold, while the very next year, such as we have recently experienced, may yield a record of sunshine, heat, and drought hardly equalled in man's memory. Week follows week of cloudless skies, and month after month succeeds on similar lines, until our normally green fields are drained both of surface and underground moisture to such an extent that they are brown and arid almost as the sandy deserts of the parching East. Trees, which normally should be retaining their foliage fresh and green, are perforce shedding it a month or six weeks in advance, the lack of moisture at the roots, coupled with scorching heat, having practically burnt it up. All succulent vegetables have suffered terribly, creating an absolute dearth in many places, though succulent plants of the sedum, mesembryanthemum, and other drought-resisting or drought-loving plants, have been entirely in their element. The damp and shade-loving fern tribe has been terribly handicapped, and since the abnormal heat and drought induced by the ever-persistent sunbeams have not spared our Western counties and coasts, where an ample rainfall is the rule, the havoc has been great indeed, particularly among the youngsters. It has indeed been a drastic struggle involving the survival of the fittest under extreme conditions which are rarely experienced in this fairly equable climate of ours. Shallow-rooting plants, with large areas of foliage, and consequent great demand for water to make up for extra transpiration, have had no chance, all the soil within their reach having been baked and deprived of even that small modicum of moisture which suffices to keep them, at any rate, alive, though growth be checked, or entirely stayed, and if any have survived that survival has been due to artificial irrigation, which, on a sufficiently liberal scale, has been often quite impracticable. The sunbeam, in short, has distributed its favours very unequally; the corn-growing farmer had his crops precociously ripened, but otherwise unharmed; though favoured with ideal weather for harvesting, the cattle owner and dairymen have suffered terribly by the check on grass growth, which forms the staple food of their stock, a boon in one direction, and a bane in the other.

Mr. J. T. Barker is well known in the broad shire of York as head gardener to W. P. Burkinshaw, Esq., West Hill, Hessle. Among horticulturists at large Mr. Barker's reputation is chiefly in connection with orchids, his charge at West Hill including a large and comprehensive collection of these handsome and increasingly popular plants. Of choice plants and rare varieties there are many, so that the collection is well above the ordinary in point of merit, as well as extent. Mr. Barker commenced his horticultural career at Hassobury, Bishops Stortford, and proceeded from thence to Harewood House, Leeds, where he laid the foundation of his wide experience. After a stay as journeyman at Harefield Grove, Rickmansworth, he served as plant foreman at Cyfarthfa Castle, Merthyr Tydvil, a place famous for good gardening. His next appointment was at Tyntesfield, Bristol, another famous garden; his next move was to Hoar Cross, Burton-on-Trent, where he acted as foreman for over four years, leaving this establishment to take charge of the gardens at Burton Closes, Bakewell. Here another four years were spent, and then a couple of years in the Isle of Wight. With this experience in various parts of the country Mr. Barker was well fitted for the position he occupies, and which he has filled for nearly seventeen years, to his own great credit, and the satisfaction of his employer.

Postponement of R.H.S. Lecture.—We are informed by the Rev. W. Wilks that Mr. Henry Hooper's lecture on "Science and Practice—Their Relation in Horticulture," which was to have been delivered on Tuesday next, the 10th inst., has been postponed.

"**The Botanical Magazine.**"—The issue of this venerable publication for the current month contains coloured illustrations of Lissiochilus stylites, Aphelandra fascinator, Spiræa Wilsoni, Rhododendron ambiguum, and Buddleia officinalis. The first-named is a handsome species, introduced from Southern Nigeria, attaining a height ranging from three to five feet, and bearing spikes of rose-purple flowers. Aphelandra fascinator is a handsome species bearing brilliant scarlet flowers, and has been in cultivation many years and is much appreciated where plants from tropical regions are grown. Spiræa Wilsoni is a shrubby species, introduced from Central China, and is closely allied to S. Henryi and S. Veitchi, which also are natives of China. The flowers are pure white, and freely produced. Rhododendron ambiguum is a distinct species with yellow flowers, and is a valuable addition to the small group of yellow-flowered species and varieties. It was introduced from Western China by Mr. E. H. Wilson, when collecting for Messrs. J. Veitch and Sons, and has the promise of proving quite hardy. Buddleia officinalis was originally discovered by Dr. Piasezki in the provinces of Shensi and Kansu in Northern China, and has also been found by Mr. A. Henry in the province of Hupeh in Central China. It has since been met with in the Yang-tze Valley by Mr. E. H. Wilson when collecting on behalf of the Arnold Arboretum and to him belongs the honour of introducing it to cultivation. The flowers are pale lilac and borne in medium-sized thyrses, and with reference to the usefulness of the species it is stated that it "promises to be a useful winter-flowering plant for greenhouse decoration, a class to which additions are always welcome." It is thought that it may prove hardy in the South-west of England.

"**Gardeners' Magazine" Fruit Number.**—In view of the commencement of the planting season, we shall devote our next issue (October 14) chiefly to fruits and fruit culture. The subjects that will be dealt with will include the best apples for bush culture, the newer culinary apples, successful fig culture, successional peaches for open walls, some good late dessert pears, culinary plums, and fruit trees in the flower garden. We shall also give a full report of the Royal Horticultural Society's exhibition of British-grown fruit. The number will, as usual, be freely illustrated, and the illustrations will include several of the more noteworthy contributions to the fruit show.

Notification of American Gooseberry Mildew. — The "Gazette" of September 29 contains an Order by the Board of Agriculture and Fisheries dealing with the disease affecting gooseberry and currant bushes, known as American gooseberry mildew. The Order, which came into operation on the 30th ult., and may be cited as the American Gooseberry Mildew Order, 1911, provides that the occupier of any premises on which there is a bush which is, or appears to be, diseased shall forthwith notify the fact to the Board of Agriculture or to the local authority for the district, under the Diseases of Animals Act, 1894. The local authority, on receiving such notice, shall take such steps as may be necessary to determine in what gardens the disease exists, and shall cause notice of such determination to be served on the occupier of each of such gardens, which shall thereupon become "infected premises." Other provisions deal with the action to be taken by the local authority, after preliminary investigation, for the prevention of the spread of the disease. Every person who fails to comply with the provisions of the Order is liable, on conviction, to a penalty not exceeding £10 on each offence. Copies of this Order, which is to be carried into effect by the local authorities, who have power to appoint such inspectors or other officers for the purpose as may be necessary, can be obtained on application to the Secretary, Board of Agriculture and Fisheries, 4, Whitehall Place, S.W.

Salvia Glory of Zurich at Gunnersbury House.—We have in the course of the past summer briefly referred to two or three of the many features of interest in the gardens of Gunnersbury House, the well-known residence of Leopold de Rothschild, Esq., notably the fine collection of water lilies and the beautiful grouping of heliotropiums. No mention has, however, been made of the glorious colour effects that Mr. J. Hudson produced during the latter part of the summer, chiefly with the aid of that fine form of Salvia splendens known as Glory of Zurich. This salvia is remarkable for its neat habit and the profusion with which it produces its fine spikes of brilliant scarlet flowers, and Mr. Hudson was one of the first of the English cultivators to fully recognise its merits, and to grow it on a comparatively large scale. For several years past it has been freely utilised in the furnishing of the wondrous roof garden at Gunnersbury House, and in beautifying the terrace, and, it should be mentioned, with a full measure of success. This year the salvia has been employed in the decoration of the bridge at the foot of the lake in the lower part of the grounds, and nowhere does it appear to greater advantage. Planted in boxes on the top of the wall on either side of the bridge, the plants have made a free, yet compact growth, and, rising from the broad belt of closely-set foliage, there have been during the latter part of the summer and until the present time, many thousands of flower spikes. When we saw the bridge a week ago they formed a belt of flowers about three feet in width and produced a colour effect of great beauty. It being desired to have the plants at their best late in summer, the earlier flower spikes were removed.

Examination in Gardening.—The British Gardeners' Association held an examination in horticulture for professional gardeners on Wednesday, April 26, and from the report now published we learn that twenty-nine candidates entered for the examination, and that twenty-eight sat in as many different centres in England and Wales. There was one candidate in Scotland and none in Ireland. Nine were placed in the first class, ten in the second, and eight in the third. One candidate failed to obtain a place. The candidates who were successful in obtaining a place in the first class, with the number of their marks, were as follows: Mr. Harry Chandler, Great Bookham, 249; Mr. Charles Elsley, Hayward's Heath, 245; Mr. Matthew Ward, Hexham, 230; Mr. Charles Lewis, Penarth, 216; Mr. George Henry Payne, Leicester, 212; Mr. Gerald Butcher, Kew, 209; Mr. Ernest Smallman, Birmingham, 207; Mr. George Rimmer, Rochdale, 205; Mr. Arnold Duley, Cardiff, 201. Mr. H. Chandler, having obtained the highest number of marks, has been awarded the British Gardeners' Association's gold medal. The other candidates who obtained a place will receive a special examination certificate.

Orchards in the Teme Valley.—In an interesting article on hops and fruit in the West of England, the special correspondent of "The Times" makes the following reference to the orchards in the Teme Valley: "Worcestershire is one of the six counties containing more than 20,000 acres of land under fruit. The great part of this area is occupied by grass orchards growing cider fruit, though in more than any other county west of Kent do wo find new plantations of highly-farmed table fruit occurring in the Teme Valley, as well as about Evesham and Droitwich. In Kent 40 per cent. of the fruit is grown on tilled land and 60 per cent. in grass orchards. Worcestershire has 23 per cent. of its fruit on tilled land, but Hereford only 13 per cent., Gloucestershire and Devon about the same, while practically the whole area of the Somerset fruit land is under grass. On the whole, fruit trees in the Teme Valley, with the rich soil and the softer atmosphere, tend to make more vigorous growth than they do in Kent. In consequence they do not come into bearing quite so early, and require a little different system of management and pruning in order to make them fruitful, their tendency being to run to wood rather than to fruit. In the Teme Valley the more recently planted land generally carries apples, with a smaller proportion of plums than in other districts where railway facilities are better; cherries are not so much grown, and pears in England rarely form a very profitable market crop. Perry pears are, however, a great feature of the district, being confined to the

Worcester, Hereford, and Gloucester area, and occurring rarely in the other cider-making counties of Devon and Somerset. We heard, however, of very little planting of vintage fruit; in the old orchards worn-out trees may be replaced from time to time by new ones, but in general the tendency is for the cider fruit to give place to table fruit. The pear trees in particular are generally very old; indeed, on our way to Tenbury we passed what is reputed to be the largest pear tree in Great Britain, still in full vigour and yielding an enormous weight of fruit in a favourable season."

Trials of Potato Diggers and Sorters. The trials of potato diggers by the Royal Agricultural Society were carried out at Littleworth, near Spalding, in accordance with the arrangements to which we directed attention in a recent issue. The trials were carried out under favourable conditions, and the results generally were regarded as of a most satisfactory character. Fourteen machines were entered for the trials of potato diggers, and the judges awarded the first prize of £20 to Martin's Cultivator Company, Lim., Stamford, and the second prize of £10 to Messrs. Blackstone and Co., Lim., Stamford. In competition for the prizes for the potato-sorting machines six were entered. About two tons of potatoes were dealt with by each machine, and in most cases the work was satisfactorily performed. The first prize of £10 was awarded to Messrs. Cooch and Son, of Northampton, and the second prize of £5 to Mr. Walter Ness, of King's Kettle, Fife.

September Sunshine.—Notwithstanding the changeable weather which prevailed during the second half of the past month, the record of bright sunshine was very large. At Westminster the duration of bright sunshine aggregated 215 hours, or 98 hours in excess of the average, and 21 hours in excess of the highest record for September since 1883, when regular observations commenced. Since the year mentioned the only Septembers in which the duration exceeded 150 hours were those of 1895, 1898, and 1906, the respective amounts being 194 hours, 172 hours, and 158 hours. The total record of bright sunshine for June, July, August, and September has surpassed all previous records for corresponding periods. At Westminster the total duration was 989 hours, giving a daily mean of rather more than eight hours. The average for the four months mentioned is 633 hours, or a daily mean of about 5½ hours. There were only three sunless days, as compared with an average for the past 32 years of nine days, in which bright sunshine was not recorded.

Pentstemons from Hawick.—At the present time we have on our table a vase of pentstemons, which is equally remarkable for its interest and attractiveness. The splendidly developed spikes of flowers with which the vase is filled were received from John Forbes (Hawick), Lim., and include many of the finest varieties that have been introduced to cultivation, and they show that this well-known firm continues to devote a full share of attention to pentstemons, for which they have long been famous. Conspicuous among the many varieties that are now before us are the brilliant scarlet Professor Pozzi, Crimson Gem, and Sandringham; the rich pink and white John Ruthven, bright rose-red Garth and Lady Noble; the charming picotee-edged Schwesser Sophie, which may be described as one of the finest of the light varieties; the deep crimson J. A. Clyde and John Decan, the latter remarkable for its pure white throat; the orange-red Marchioness of Linlithgow and Crown Princess of Sweden, and the deep purple Adjutant Cincent and Colonel Seeley. Although we have linked together the varieties that are closely allied in colour, it should be understood that they are all perfectly distinct. The free branching of the spikes that is characteristic of the Hawick varieties adds immensely to their effectiveness both in the garden and decorative arrangements.

A Bacterial Disease of the Cherry.—In the course of the proceedings of the British Association Mr. F. T. Brooks called attention to the fact that Aderhold and Ruhland had recently proved that a disease of cherry trees in Germany was caused by a bacterium which they named Bacillus spongiosus. Affected trees exhibit symptoms similar to those of pear trees attacked by "pear blight," which was also a bacterial disease. Young trees were attacked, shoots and entire trees being sometimes killed. Profuse gumming occurred in the affected parts. Aderhold and Ruhland isolated Bacillus spongiosus from the masses of gum and grew this organism in pure culture. Inoculation experiments clearly showed that this bacterium was the cause of the disease. But this organism was not the only cause of gumming, for certain injurious fungi were known to induce similar exudations from cherry trees.

EVOLUTION AND POLLINATION OF SWEET PEAS.

Mr. Alvin C. Beal, of the Cornell University, Ithaca, New York, has had the care of the sweet pea trials conducted by the National Sweet Pea Society of America, and at Philadelphia in June last, at the society's convention, he read the following paper:

During the first 100 years of the history of the sweet pea only three varieties or colours were known; namely, purple with blue wings, pale red with white wings (Painted Lady), and white. The black and scarlet appeared in the last years of the eighteenth century. It is quite probable that the scarlet was far from what we conceive a scarlet sweet pea should be to-day. In Martyn's edition of "Miller's Gardeners' Dictionary," 1807, we find the white, the Old Painted Lady, the New Painted Lady, the latter with a rose-coloured standard and pale rose wings, Old Purple, and a variety having a violet keel and wings and purple standard. Sayers describes the scarlet sweet pea as Lathyrus flore rosea, while the Painted Lady is described as "fleshed" colour. From this we may conclude that the New Painted Lady, a rose-coloured variety, was sometimes called scarlet.

Improvement in Colour.

The first of the striped varieties was offered in 1837, and since that date this group has been augmented until the classification now includes striped and flaked (red and rose, purple and blue). This classification, however, does not express the real range of colour in this group, for we have crimson stripes—for instance, America; red and rose stripes on white—Aurora; red and rose stripes on primrose—Jessie Cuthbertson; mauve stripes—Gaiety; blue stripes—Prince Olaf and Hester; maroon-flaked, like Senator. The American growers have introduced the majority of the best varieties of this group, among which are America, Aurora, Columbia, Daybreak, Gray Friar, Juanita, Pink Friar, Ramona, and Wawona. Many of these are now procurable in the waved form.

The Blues and Pinks.

The variety Blue Edged, the probable forerunner of the picotee forms, appeared in 1860. This was a white variety with a well-defined blue edge, a probable hybrid between L. magellanicus and a white variety of L. odoratus. The variety, at all events, was the first to exhibit a distinct blue colour among sweet peas. Later it was known as Blue Hybrid, under which name it won an award from the Royal Horticultural Society. Sutton and Sons sent out Butterfly in 1878, which somewhat resembled Blue Edged. The so-called blues that followed were Invincible Blue, Madame Carnot or Imperial Blue, and Captain of the Blues, all of which had considerable red in the standard. It was not until 1899 that a good blue, in Navy Blue (Lord Nelson) appeared.

The first of the soft pink varieties was Crown Princess of Prussia, 1868-9. Isa Eckford, Peach Blossom, and Lovely are the improved varieties of this colour.

Improvement in Form.

The efforts of the breeders of sweet peas have not all been directed toward the development of new shades of colour. The form of the flower has also received attention. The earliest representations of sweet pea flowers show a loose, irregular bloom, with the edges of the standard turned back; that is, reflexed. Often, if not always, the standard had the notch in the apex and frequently in the margin. The standard, which is the principal part of the flower, has been improved in substance and the notches have been eliminated. The old type had a narrow base, and with the improvement noted has come a filling out of the lower edges of the standard so that the outline approaches a circle.

In their efforts to secure varieties of the best expanded or open form, many beautiful hooded varieties were originated. While this form was condemned as inartistic by many sweet pea specialists, it nevertheless secured a permanent place. Prima Donna, Lovely, and Countess of Radnor are of this form.

The Spencer Type.

When many had reached the conclusion that no further advances in either size or form were to be expected, and that the efforts of future breeders would be directed toward securing new colours and more flowers per stem, Nature demonstrated that she had other surprises in store.

In 1901 the Countess Spencer variety was exhibited, and caused quite a sensation. The National Sweet Pea Society of Great Britain awarded it the highest honours. This variety was distinct from all preceding introductions because the standard and wings were waved. The flowers were large, and borne in fours on stout stems. It was introduced in 1904.

The parentage of this variety has been given as Lovely x Triumph (1898) x Prima Donna, 1899. However, there appeared in 1905 a variety named Gladys Unwin, which was the same colour, but smaller and less waved than Countess Spencer, and which was a selection from Prima Donna without known crossing being effected. These varieties, however, were forerunners of the new type which revolutionised sweet pea culture in England, and has revived and quickened the interest in America.

Pollination.

We have previously noted that the pistil and stamens are enclosed in the keel formed by the partial coalescing of the two lower petals. A slight pressure upon the base of the keel will cause the pistil to appear suddenly in the tip of the keel. The stigmatic surface is usually covered with pollen, and at the same time the stamens appear to view. If the pressure is released, these organs disappear as suddenly from view.

Process of Self-fertilisation.

Those who are looking for flower adaptations for the promotion of cross-fertilisation would say at once that here we have a mechanism which is operated by the weight of the bee alighting on the keel, and the pistil and stamens rise up, striking it upon the body, receiving and giving pollen. Thus, as the insect visits flower after flower, natural cross-fertilisation is carried on.

This, however, is not the case. In the first place, if we examine flowers in the bud stage, we find the pollen ripe. The position and condition of the stigma changes, for before the maturation of the pollen the stigma is below the anthers. A day or two later the stigma has risen to a position among the anthers and is viscid enough to hold the pollen grains.

In another day or two it has grown beyond the anthers. Self-fertilisation has taken place, and the development of the legume begun. This process has taken place before the flower is fully open. Some time later the pistil is pushed out of the protecting keel by the developing pod.

Not Dependent on the Bees.

Such is the normal fertilisation of sweet peas, as observed upon examination of the flowers. Attention has been called to the fact that the sweet pea stood practically still for 150 years, and the question is asked how this can be reconciled with natural cross-fertilisation.

During the writer's experience in the field last season for three months, studying varieties and recording observations, not a single instance occurred of a bee alighting upon the keel of the flower, nor were any observed crawling between the wings. All the bees observed visiting the flowers alighted on the outside of the wings, and in practically every case thrust the proboscis down between the right wing and the standard. In this connection it may be mentioned that the bees did not show a preference for any particular colour, but flew from row to row and from colour-section to colour-section.

T. H. Dipnall has observed that bees attack sweet pea flowers. The bee, a yellow and white banded species, alighted on the calyx crawled around to a certain position, and cut a hole through the calyx so that it could thrust its proboscis through and suck the nectar at the base of the pod. The reason is not clear why the insect prefers one side of the flower, since the structure is similar on each side.

It is to be remembered in this discussion that sweet peas grown under glass in winter are not visited by bees, but every flower in sunny weather will set seed if the blooms are not kept cut.

Trouble in Fixing Varieties.

Since the introduction of the waved type there has been much discussion about the difficulty in fixing varieties and the reasons for it. Some growers, having secured what was to all indications a fixed stock, discovered after sending it out that it was not fixed. Some growers thought it only occurred when the novelty was sent to California to work up a large stock of seed, or after it had passed into the hands of the Californian growers. One of the theories advanced to explain this was that an insect in California was responsible for some cross-pollination of flowers. In our own trials this past season no differences were observed between English or American grown stock, since we had seeds of novelties direct from the originators and our varieties were from the introducers. Others say that bees visit the flowers, and they believe that crossing takes place in the waved type, which, it is maintained, does not produce normal flowers, in that the pistil sometimes projects beyond the keel.

Poor Setting of Seed.

It appears that, if this view is correct, the poor seeding of the waved type would not occur, or at least that the worse the fault of the flowers the greater the crop of seed. Thus the varieties which seeded freely would become cheap and drive out the others. The writer thinks that the results obtained by the seed growers contradict the theory. It appears that the poor setting of seed may be due to the fact that the pistil may grow out beyond the anthers before the latter are mature, and thus fertilisation be prevented by irregular development of the parts. Otherwise the pollen may be impotent in some varieties, but this does not occur so far as the writer has studied the reports of the sweet pea breeders. The writer did not observe any pistils showing the defect mentioned, but, as our season was extremely dry, our plants did not make an exceptional growth which would be likely to express itself in abnormal flowers. However, it was observed that some varieties seeded more freely than others. We have planted most of the varieties this year from seeds saved in 1910, and, knowing those which were fixed last year as well as those with rogues of certain colours, we think that some light may come upon this matter of cross-fertilisation, if any, in the sweet pea.

HIGHER EDUCATION OF GARDENERS.

Quite recently I have come to reside in the North of England, where I find the education of gardeners is receiving the interest of public men, and a scheme for their advancement is being formulated. This subject of education embraces many practical means whereby a young gardener may procure knowledge more readily; amongst them is travel, not necessarily abroad, but in this part of the world—the British Isles. I have considered various plans which might more or less successfully be advocated, and foremost is the formation of a "National Guild of Gardeners," or "The Institute of British Gardeners," or "The Horticultural Labour Exchange." These three titles have been put forth by three great enthusiasts in the horticultural world, either of which would embody a step in the right direction for the ultimate well-being of the fraternity.

I have been in communication with the Rev. J. Bernard Hall, the secretary of the North of England Horticultural Society, a gentleman who has the welfare of gardeners and gardening at heart, and who would be pleased to receive any suggestions from gardeners and horticulturists of all ranks with a view to the formation of a National Society; or names for membership, or any offers of assistance to formulate such a scheme.

Such an institution should include quite young gardeners, nursery employees, under and head gardeners, nurserymen, and, as hon. members, the wealthy friends of gardening. A nominal annual fee would be demanded from young men, and an annual subscription or a good donation from others to form the nucleus of a fund.

The object to comprise:

(a) A method whereby a young or under-gardener might improve his knowledge by interchange of work with a fellow member, either in a nursery or a private establishment, viz., a young man, after spending 1½ years or thereabouts in a Southern county, might exchange places with another member in the Eastern, Midland, or Northern counties.

In this matter no better opportunity could be afforded to gain an insight into different methods of forcing, floral work, hardy fruit cultivation, or any of the numerous branches appertaining to the profession.

(b) Arrange for an annual conference in a different large centre annually.

(c) If sufficiently supported, to establish branches in all large centres, or at least a branch in each county.

(d) Form a circulating library.

(e) Arrange for lectures, correspondence classes, facilities for the preparation for examinations in order to qualify for important posts; these and other suggestions may be arranged for, and a staff appointed to organise and carry to a successful issue, such a scheme as herewith set forth, would tend to promote horticulture generally to a higher level.

John Smith,

County Council Lecturer, and Instructor in Horticulture to the Durham County Council.

SCHOOL TEACHERS' EXAMINATION IN GARDENING.

In looking through some back numbers of your magazine this week, I came across an article in your issue of June 17 by Mr. G. H. Hollingworth, criticising the questions set at the above examination of the Royal Horticultural Society last April. I read his criticisms of the questions set by this body with very much interest, especially as I was a candidate at that examination. Mr. Hollingworth is evidently very courageous in attacking the form of questions set by a society established in 1804! I must at once say I entirely agree with every word of his article.

The examination is supposed to be held for school teachers, but I fail to find in a single question anything which an ordinary amateur gardener could not answer, even if he had never seen a class of boys in his life.

How this examination can be a test of capacity to teach school gardening, I do not know. Gardening, as taken in primary schools to-day, is a very different thing from cottage gardening. You cannot satisfy his Majesty's Inspector that the subject is properly taught unless you fulfil, in some measure, the "suggestions of the Board of Education for the teaching of gardening."

I have already stated that any amateur gardener can pass this R.H.S. examination if he can write English correctly, but few amateur gardeners could satisfy the demands of the Government Inspector that they had taught the subject satisfactorily.

Why, to-day, teachers must not only teach gardening, so that boys can appreciate it as a manual process of hand and eye training, but the intellectual and educational value must be apparent in the schoolroom. In what part of this examination (which of the questions) seeks to discover whether the candidate is alive to this part of the boys' training?

Although the Board of Education's "Suggestions" are valuable, I do not know of any books yet published which give assistance to teachers in the educational side of the question; but, in the county in which I teach, this deficiency is made up by the eminently valuable suggestions given by our horticultural expert, and, also, the Director of Education, both of whom recognise and appreciate the relation of the garden to our other school work.

I do not know whether any county experts who organise school gardening are consulted by the Royal Horticultural Society respecting the questions set in this examination, but it does not appear so, and if they were, then perhaps the R.H.S. school teachers' examination questions would be drawn up on more educational and less bookish lines. Until something of this kind is done, I fear Mr. Hollingworth's hope, that after passing the examination teachers will be better teachers of gardening, will not be realised.

R. H. S. Qualified Teacher.

Calceolaria Burbidgei. — This hybrid calceolaria, which is so much used for summer bedding in the shape of large plants, is also equally valuable for the embellishment of the greenhouse during the autumn and winter months. For this purpose it is best grown out of doors and given much the same summer treatment as a chrysanthemum.—W. T.

Shrubby Veronicas.—In the West of England and other favoured spots, the different shrubby veronicas are particularly valuable as outdoor shrubs, while in other parts they are equally serviceable for the decoration of the greenhouse. There is now a long list of varieties in which the blossoms vary in colour from white to deep crimson and purple, while the habit of the plants is compact, so that they can be grown into neat little bushes that will flower well.—W. T.

TREES AND SHRUBS WITH ORNAMENTAL FOLIAGE.

When planting deciduous trees and shrubs, it is well to bear in mind those kinds conspicuous on account of their brilliantly-coloured or otherwise ornamental foliage, for many of these contribute as largely to the beauty and character of the garden during the late summer and autumn as do the numerous flowering subjects in the spring. The recent continuous sunshine has contributed largely to the brilliant colouring of some of our most handsome trees, and at the time of writing many have assumed a splendour only equalled in exceptional seasons.

Among these charming subjects nothing is more rich and effective in its colouring than Berberis Thunbergi, which has assumed a most vivid crimson. There are numerous beds of this lovely berberis in the gardens here, but the most attractive of all is one huge mass against a background of Forsythia suspensa, and being in a conspicuous position this is greatly admired. Berberis atropurpureum is another kind with ornamental foliage. Liquidambar styraciflua is now at its best, its foliage being a lovely purple hue, and several tall pyramidal specimens in a shrubbery produce a very fine effect. This tree likes a rich loamy soil, and succeeds well in a rather moist situation. Aralia chinensis (Dimorphanthus) is a striking object with its bronze-tinted foliage, and needs a sunny, sheltered aspect to colour well. Castanea sativa is a handsome tree, as its glaucous green foliage sets off the ornamental golden fruit to advantage.

The foliage of most of the flowering cherries is now especially showy, many being a pleasing bronze shade. Cratægus crus-galli is very fine, being heavily laden with crimson berries, and the common hawthorn has rarely presented such a picturesque appearance, with its crimson crop. Rhus cotinus and R. toxicodendron are both a brilliant crimson, and so form especially striking objects. The latter makes a good climber, and is especially suitable for training on a low wall or balustrade Quercus coccinea, the Scarlet Oak, and Q. concordia, a yellow foliaged kind, are both handsome and effective trees. Euonymus europæus is a lovely colour at the present time, and its fruits are almost as showy as the foliage. Paliurus aculeatus is very picturesque, its yellow fruit showing conspicuously against the green leaves, which also turn a lovely yellow shade.

Populus canadensis aurea and Prunus Pissardi retain their colour throughout the season, and are especially effective for grouping. Hamamelis arborea and Viburnum plicatum have assumed a beautiful crimson hue, the foliage of the latter being almost as effective as are its flowers in June. The common beech is very handsome in the autumn, and is then almost a rival to the picturesque copper and purple beeches. Another effective shrub is the golden Cut-leaved Elder (Sambucus racemosa serratifolia foliis aureis), and planted in masses it is especially ornamental. Rosa rubrifolia is well adapted for planting in the wild garden. Cornus alba Spathi is a finely variegated dogwood, and planted in beds associated with Prunus Pissardi is most effective.

Corylus avellana purpurea is very ornamental for a prominent place in the shrubbery, and looks well used in conjunction with variegated foliaged subjects like Acer negundo variegata. Probably nothing surpasses the Japanese maples among deciduous shrubs, in point of colour.

J. Gardner.

THREE GOOD NEW SWEET PEAS.

There are several sweet peas that have done well in the terrible season just over, and many new varieties that have attracted considerable attention by reason of their fine form and colour. The following three are not here referred to as standing head and shoulders above all other new sorts, but attention is drawn to them because they possess high merit and distinctness, and are thoroughly well worthy of cultivation.

Afterglow, one of the novelties from Mr. Robert Bolton, Warton, Carnforth, met with general approval on the occasion of the National Sweet Pea Show in July last. It was well shown in Mr. Bolton's stand, and one of his baskets is herewith illustrated. The variety has good form, size, and excellent stems, and it presents a novel and pleasing shade of colour that is best described as deep mauve-purple. There is such a softness of shade and such a beautiful sheen over the blooms that almost everyone admires the variety; certainly it did not lack admirers at the great London show.

Bertha Massey is a charming sweet pea, and its exquisite shade of bright mauve-lilac has already made it a first favourite in the estimation of ladies. As an exhibition flower, however, it stands out well, and it is especially valuable in, say, a class of twelve varieties, because of its attractive colouring, and the way in which it lights up deeper-hued sorts. Messrs. S. Bide and Sons, Farnham, are the raisers of this fine waved novelty, but the bunch illustrated was one exhibited splendidly by Mr. Thomas Stevenson at the National Show.

Thomas Stevenson, raised by Mr. Robert Holmes, of Norwich, bears the name of our able contributor, Mr. Thomas Stevenson, head gardener to E. G. Mocatta, Esq., Woburn Place, Addlestone. Mr. Stevenson's knowledge of sweet peas is particularly wide, and his success as an exhibitor is so well known that when we say he wished this variety to bear his name, it may be taken for granted that in colour and size and form, this sweet pea stands in the first rank. The variety was shown well this year, and one of Mr. Stevenson's bunches of it is herewith illustrated. The colour of Thomas Stevenson is variously described as orange-scarlet and orange-salmon, and these descriptions convey a very good idea of the shade seen in this brilliant variety.

SWEET PEA BERTHA MASSEY.

A charming variety with large mauve-lilac flowers of great beauty; raised by Messrs. S. Bide and Sons, Farnham.

FRITILLARIA CONTORTA.

Lovers of bulbs in the alpine garden are not generally aware of the existence of a singular, yet rather pretty white fritillaria, to all appearance one of the Meleagris section, and probably only a variety of that plant. It is not generally mentioned, but is, I observe, described in the last supplement to Mr. Nicholson's "Dictionary of Gardening," where, I notice, it is said to have been introduced in 1886, which is, I am pretty confident, an error, as I had seen it before that time. It is there said to be of unknown origin, and I have no record of its first appearance. But this matters little, and it is sufficient to say that it is very distinct in the appearance of its flowers from the ordinary bell-shaped blooms of the white varieties of F. Meleagris. The flowers are more tubular, and the segments are united, not separate, this being, to a great extent, the cause of the shape of the flower. There is also a slight twist in the segments, this giving the plant the name of contorta. The bells are very wax-like in their aspect, and the plant generally attracts notice when seen, even by one not too well versed in flowers of its kind. The species is one that should, in the course of the season, be planted by those who appreciate the charms of the fritillarias.

S. A.

AUTUMN SOWING OF SWEET PEAS.

The demand for sweet peas is now so great that every advantage must be taken not only to secure flowers of good quality, but also to obtain them as early as possible. Consequently, the autumn sowing of sweet peas is becoming more popular each season, and whether the cultivator grows for the market or for home decoration, or purely for exhibition purposes, he cannot afford to ignore this very easy means of obtaining supplies of blooms that are both early and good.

Sowing in the Open.

On fairly light, well-drained soil, and in districts where the frosts are not too severe, the seed may be sown in the open, but I would not advise this except for market or ordinary cutting purposes. Even in favourable localities the risk is too great for sowing the seed of high-priced and newer exhibition varieties out of doors. There is not only a risk of losing the plants by frosts and cold winds, but when large quantities are sown in the open the losses from birds, mice, and wire-worm are pretty considerable. It will therefore not be wise to sow other than the cheaper sweet peas in this way, except when so small a number is grown that it is a quite easy matter to protect them. The best date for sowing in the open ground is about the second week in October or even the third or last week in a season such as this, when the soil must still be in a very warm condition.

The greatest mistakes with autumn sowing is committing the seed to the ground too early. Fairly strong, sappy plants often suffer to a greater extent than do nice little seedlings ranging from two to three inches high. If they are about the height mentioned by the end of November, they will stand a far better chance of passing through the winter successfully than would those more advanced in growth.

The ground for autumn sowing should have been prepared some little time beforehand by trenching, and not too liberally manured near the surface; but plenty of good rich manure should be incorporated with the lower spit of soil, which the roots will reach towards the end of the spring and fully utilise in promoting a vigorous growth and the continuous production of flowers. Before sowing the surface of the ground should be well broken, so that the seed may be sown in very fine soil. This is quite essential, especially if heavy; the more it is broken the less harbour will there be for slugs.

I prefer to sow in narrow drills, usually two drills one foot apart to make a row. The depth of sowing should vary according to the character of the soil, the rule being the lighter the soil the deeper the drills. In the case of the cheap varieties the seed should be sown rather thickly to allow for losses, it being quite an easy matter to thin in the spring if the plants are too crowded. Soot I find is one of the best preventives of damage by birds and slugs, and as soon as the plants appear above the ground a slight dusting should be given, repeating it as often during the winter as may be necessary.

A protection in the form of a few small bushy stakes will sometimes be useful to sweet peas in their earlier stages of growth, especially if placed a few inches away from the rows on the windy side. Apart from this there is very little to be done to them during the winter, but occasionally the spaces between the rows may be hoed if the state of the weather permits, but care must be taken not to use the hoe during what one might term the catchy weather in the spring. I have often seen peas badly frozen where the ground has been recently loosened, while others have come through quite well.

Sowing in Pots under Glass.

As an alternative to sowing in the open ground, sowing in pots and wintering them in unheated frames may be tried, and this I consider the most economical method, and in nine seasons out of ten it will be found the most satisfactory. The best time of sowing is about the same as in the open ground, but not later. I find a few days makes a very great difference in the constitution of the plants, and on no consideration would I advise sowing for wintering in pots after the third week in October. If the sowing cannot be made until after this period, I consider it preferable to wait till the early spring.

For extra good results and for exhibition purposes single pots may be used, but when five or six seeds are sown in each 48-sized pot really excellent results will be obtained. Fairly light soil, not made too firm, answers very well, and the young plants can be shaken out from this quite easily, and it is necessary, as by far the best results are obtained when the young plants are carefully separated and planted singly. When grown for market purposes this practice is said not to pay so well as when planted pretty thickly, thereby obtaining a heavy crop of flowers during the first week or two of their being in bloom.

After sowing the seed pots should be placed in an unheated frame, keeping the lights on till germination takes place, when they should be removed entirely on all favourable occasions. In fact, the lights should only be put on during wet or very frosty weather. About the end of November or early in December the pots should be plunged in coal ashes or other material, allowing a little space between them. This will allow the air to circulate between the seedlings, and do away with the necessity of water till quite late in the spring.

It may be necessary to place a few very small twigs among the plants to keep them upright, but these ought not to be wanted till the end of February when the growth will be active. Precautions must be taken against the depredations of birds and mice, also a covering of mats may be necessary in the event of severe frost, for, although a little frost will do them no material injury, it is not wise to expose them to a severe one. They may as well be sown in the open ground if they are to be fully exposed to the wintry weather.

As mentioned earlier, the advantages of autumn sowing are many. In the first place, they come into bloom earlier in the South —here, quite by the end of May; secondly, the quality of the bloom is infinitely better; and, lastly, they go on blooming over a much longer season, and, as I have mentioned before, the plants do not seem so subject to attacks of the dreaded streak disease, as do the spring-grown plants.

The matter of varieties is quite a personal one, and what may be selected for sowing in the spring may well be sown in the autumn, and the seedsmen, I find, are doing their best to cope with the growing demand for seeds for autumn sowing. The past hot summer has been beneficial in some respects, and as regards its influence on sweet peas, all the seedsmen of my acquaintance have good stocks of new seed which they are already distributing to their customers.

Thomas Stevenson.

DAHLIAS TO PERFECTION.—A thorough guide to the successful culture of these popular flowers is "Dahlias and Their Cultivation," by J. B. Wroe, price 1s. net, by post 1s. 2d., bound in cloth 1s. 6d., by post, 1s. 8d., from W. H. and L. Collingridge, 148, Aldersgate Street, London

VERBENAS IN POTS.

Not often do we see verbenas in pots in private gardens, but I do not see why they should not be more common, because for the months of September and October they cannot be other than useful. With the protection of a cold frame from heavy rains the flower trusses are more pure in colour than when growing in the open exposed to heavy rains and soil splashings.

At Aldenham Mr. Beckett has a big batch of verbenas in 6in. pots, as well as many planted on a south border, where they have succeeded remarkably well. Those growing in pots were raised from cuttings struck in the autumn in the usual way; the stoutest plants selected were topped occasionally, and now they are furnished with a dozen or so handsome trusses, especially bright in colour. As the plants have enjoyed abundant space during growth they are not in any way "drawn," but are stocky and well furnished with foliage which enhances the effect of the blossoms above.

The following are some of the most conspicuous varieties. Amongst blues with a white eye Dana and Servilla are noteworthy. In the purple section Arluc, E. Madelaine, Mysole, and A. de Lorde are conspicuous. Miss Willmott is still the best pink; Magique, rosy-purple; Ophelie, deep rose; Jomini, Parega, and Cadol, scarlet, with white eye; Bettina, rosy-purple; Chloris, dark chocolate-red, with a small white eye, are all good. King of Scarlets is still the finest self of that hue. Mesange, rose, with white eye, is very pretty. Snowflake is white, though at times tipped with pink. Halesque is probably the best white, and Zampa bright red with white eye, while A. Blondin, rose with white eye, is very effective in a mass. E. Molyneux.

LACHENALIAS.

The lachenalias are amongst the hardiest of our indoor bulbous plants, and requiring very little artificial heat, can be successfully cultivated by almost every gardener. The flowers are quaint in colour, and, the foliage being attractively marked, the whole plant proves itself a great favourite wherever grown. Being very accommodating, it can be grown either in pots or baskets. The bulbs should be planted in August, or early in September. A compost which is rich and fairly porous is the best rooting medium for them. In pot culture put five or six bulbs in a five-inch pot, and stand the pots in a cold frame, where they may remain until the frosts commence, when they must be removed to a cool greenhouse and given a light position.

The most striking effect is obtained when they are cultivated in baskets. For this purpose the basket is well lined with rough portions of loam, over which a thin layer of the rooting soil is placed. The bulbs must be planted with the crowns looking outwards, and towards the bottom, and in a position to allow the growths to come through the meshes of the basket. When the planting is finished, and the soil has been well watered, place a slate over the top and stand the basket upside down on pots in a cold frame. When the growths have come through, and made some progress, the basket may be hung in its normal position in a cool greenhouse. The plants will in process of development cover both the sides and bottom of the baskets, and when in bloom a very pretty and pleasing effect is obtained. When growing freely the water supplies should be liberal.

NOTES FROM SCOTLAND.

Vegetable Crops and the Past Season.

The Gardeners' Magazine of September 23 (page 702) contains an interesting, though somewhat doleful, article by "H." upon the excessive heat and drought of the past summer, and the adverse influence exercised thereby upon certain crops, but more particularly those of vegetables. As a few notes by way of comparison between the district "H." had in mind when writing (though he does not tell us where it is) and South-West Scotland may be of interest, I will endeavour to take up a few of the main points mentioned by "H.", and show the great difference there has been, and which apparently still exists, between the two places and in the crops produced.

SWEET PEA THOMAS STEVENSON.

This is a fine orange-scarlet variety of great brilliance; raised by Mr. R. Holmes, of Norwich, and introduced by Robert Sydenham, Limited, of Birmingham.

Vegetable Marrows and Beans.

Both of these crops were specially referred to by "H." as having been much below the average of previous seasons. Here I may safely state that, taking a retrospect of a long series of years, I have never known either to have been so plentiful or of such excellent quality, which is attributed solely to the increased amount of heat and sunshine. The crops of marrows mentioned by "H." may possibly have been those under field culture, where the restricted root run would prove inadequate to sustain the plants, whereas here, heaps of manure and old hotbeds, that afford plenty of nutriment, and do not quickly part with moisture, were, following upon custom, utilised for the purpose.

Beans of all kinds produced crops far above the average, and so much was this the case that, although no more than the usual area of ground was occupied by the crop, great quantities of pods had of necessity to be gathered and destroyed to keep the plants in bearing. This refers to both dwarf and runner types: each commenced to bear much sooner than usual, and still continues to do so at the present date, September 25. Except in private establishments there is but little demand for these vegetables in Scotland, although the Broad, or Longpod type of bean finds considerable favour.

Winter Crops of Vegetables.

Cauliflowers, Brussels sprouts, and winter greens in general are mentioned by "H." as being very unsatisfactory. Here the promise could hardly be better. The first-named, which consists mainly of the Autumn Giant type, is now at its best, and plenty of close, massive heads are available. Breadths of these, planted as second crops (following early potatoes, peas, etc.) have done exceedingly well, and give the prospect of abundance for some time to come. The same remark applies to the broccoli family, which, if anything, is too robust to withstand frost, should the winter prove very severe. Brussels sprouts, kales, and savoys are equally satisfactory, having made strong growth.

That the drought of the past summer has been very trying to cultivators none can deny, and in this part, at the present time, the scarcity of water in wells, brooks, and streams is such that no one remembers a similar occurrence. The rainfall of the past four months approximates six inches, of which September, though scarcely run its course, will probably be accredited with the least of any.

The Rainfall and Planting.

In some respects cultivators in this district were favoured by having a short period of moist weather from the middle to the end of June, which enabled those having ground in readiness to get the autumn and winter crops of vegetables planted, and the plants, having thus a good start, seemed afterwards to revel in the heat with pleasing results.

The wearying occupation of applying water to vegetable crops by the ordinary means of can and barrow would be greatly lessened were more use made of the various instruments now upon the market for stirring the surface soil, a fact that has probably been impressed this season upon many, when the water supply has given out or has been so much reduced that its use in this way had to be discontinued. In the past the hoe, in various forms, was the favourite implement for summer cultivation, but there are now several machines having hooks or tines, lightly constructed, and so easily manipulated that a large area of ground can be worked in a very short time with great benefit to the crops and pleasure to the workman. **James Day.**

Galloway House, Garlieston, N.B.

SWEET PEA AFTERGLOW.

A beautiful mauve-purple variety of fine size and form, raised by Mr. Robert Bolton, Warton, Carnforth.

EARLY CHRYSANTHEMUMS IN THE SOUTH-WEST OF SCOTLAND.

In too many gardens early chrysanthemums have failed to give their usual quota of pleasure to their owners, the long drought having had a great retarding effect upon them, and in quite a number of places they will give few flowers this season unless the frost delays its coming longer than usual. There are, however, a good many exceptions, and the writer himself has no reason to complain, while the garden of a specialist in growing early chrysanthemums which he visited the other day shows that with careful treatment and reasonable care in the way of watering, even 1911 will have proved a satisfactory season, although a fortnight or more late, and a good many of the plants may be overtaken by the frost before they can open.

AN EFFECTIVE DISPLAY OF EARLY-FLOWERING CHRYSANTHEMUMS IN THE QUEEN'S PARK, GLASGOW.

The garden is that of Mr. Joseph Black, Maxwelltown, Dumfries, a small one, yet presenting a collection of varieties such as is seldom seen in the garden of an amateur. There are upwards of 200 varieties this season, and those which were in flower when I visited the place were in magnificent condition, the blooms being very large, of great substance, and of grand colour; while in all the grower's long experience he has never had plants showing so many flowers and buds. A good number were in flower in the last week of September, but many more were to open. Even those which were in bloom would require too much space to detail, but a few notes on some of the varieties may be of service to cultivators. I may add that Mr. Black is a believer in early propagation, and a goodly number of his cuttings were in process of rooting in a frame and under hand lights.

Among the newer varieties to be seen were Belle Mauve, not yet in flower; Fleure de Pecher, just beginning; both being described by their names; Poupre Rose, also late, and of a kind of purple-rose. Rose d'Argent, a lovely white with a blush tinge was very fine, and promises to be a good variety. White Queen is very good, with handsome white flowers, and Thomas Cullen, pink, is capital.

Pluie d'August, white, was truly fine; and Thetis, terra cotta, with a biscuit reverse, was exceptionally good. A magnificent plant of Nat Wheeler was giving no fewer than 220 flowers and buds, and Mrs. W. Sydenham was noted as one of the most floriferous this season, bearing as it did an almost countless number of its flowers and buds of a fine crimson. Mary Sydenham is late, and was not open at the end of September this autumn; while the deep golden-yellow Carmelite, a good flower, though in bloom, was also late. All the Masses are late, but the earliest seem to be White Masse and Improved Masse, with Elstob Yellow. All of these, though late, are very good. White flowers are strongly represented, and have done well, the fine weather having given these flowers greater purity than would have been the case in a wet season, especially as Mr. Black's garden is in a populous part of the town, where there is a good deal of smoke. Cranford White, White Prince, Market White, Parisienne, an old but good flower; Goacher's Pride, very fine; Fred Goacher, really grand; and Emily are all splendid, as are others among the numerous white varieties grown. The weak flower-stalks of Owen's Perpetual lessen the value of an otherwise good variety; but the old pompone, White Pet, is very fine indeed, although its blooms look small beside the magnificent Japanese varieties seen. Ethel Blades, chesnut-scarlet, is grand; Chaldon, reddish-crimson, tipped with gold; Mrs. Howard Jacques, bronze; and the marble-white, lilac-shaded La Tamise are among the best of coloured varieties.

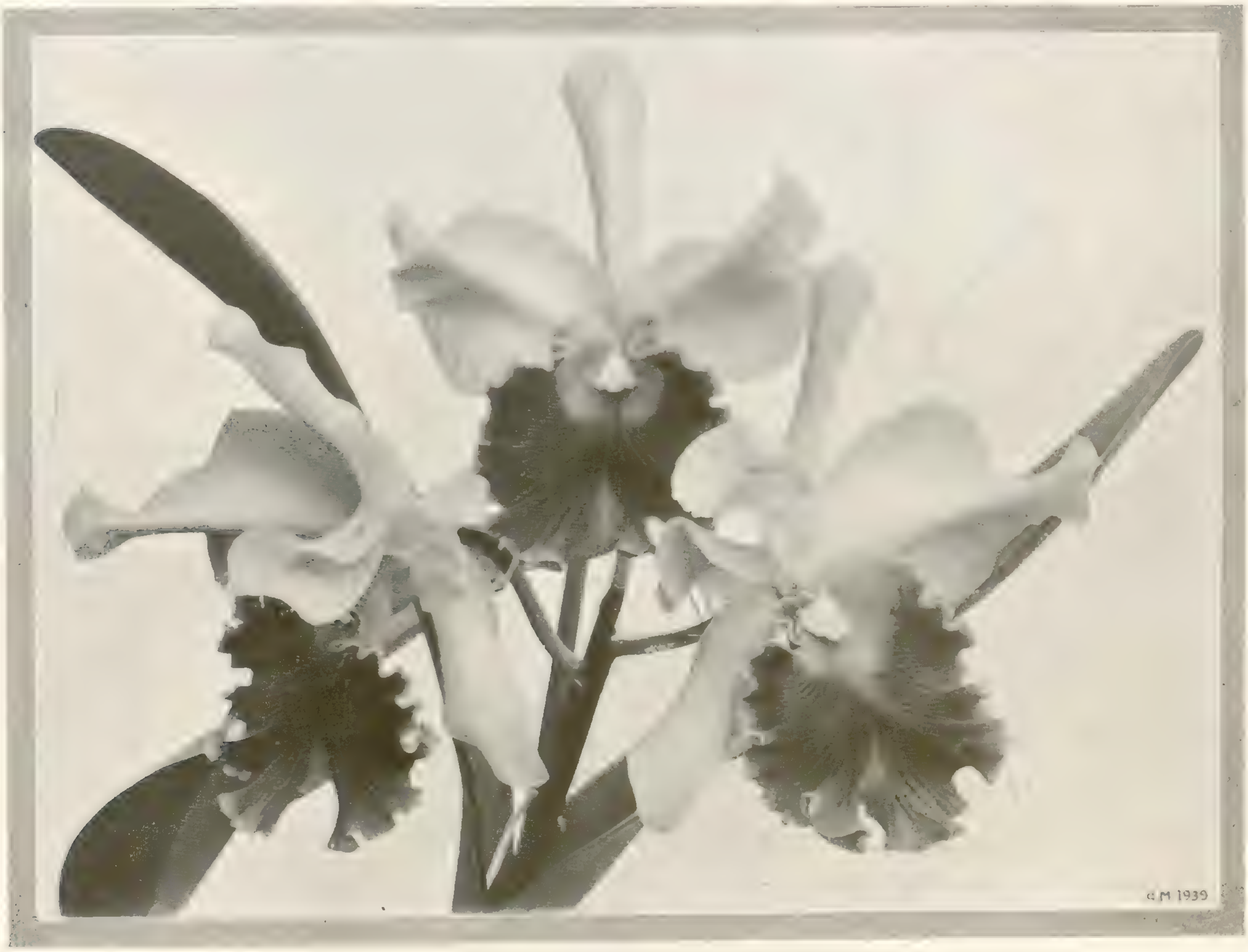
All such good varieties as Polly, Jimmie, Tottie, Maggie, Connie, and several sports from these, are doing in a very satisfactory way, although some of them are later than one would expect. The bronze sport from Polly, called Abercorn Beauty, is excellent. Caledonia, which has promised so well, is late this year, unfortunately, but it is likely to be good should frost delay its more serious approaches.

An exception to the successes is Matthew Pollock, a sport from Lizzie M'Neil, and this will not be tried again, but the lovely Normandie, its second season here, is a valuable acquisition with its fine pink flowers. James Bateman, pink, and Norbet Purvis, golden salmon, are still proving worth their room, with the yellow Leslie and Sybil Quint, which have done splendidly indeed. Mrs. H. Duncan, white, tinted with blush, is excellent, and the lovely porcelain Touraine is one of the best of its colour this year. White Point, although not very large, is pretty and rather better than last season, its pleasing reddish-lilac flowers, with white points, being excellent; while Connie, a good variety for the border, with its nice primrose flowers, was already over, after having flowered very early in summer. Horace Sanders is not quite of the dark rosy-salmon which is said to be its true colour, but since it first flowered in July, shows more sign of realising its proper hue. It is darker than the description would imply. Polly is grand as usual, and is giving magnificent orange-yellow blooms, the yellows, by the way, being truly finely tinted in this dry season. Jenny, orange, is good, as is the old Jimmie, with its crimson-purple reflexing flowers. Horace Martin has been capital, and Rabbie Burns has begun to give a profusion of its fine flowers. Tottie, reddish-orange, is fine, and a sport of Mr. Black's with pure yellow blooms, is an excellent variety of that useful early chrysanthemum.

But time and space would fail one to treat in detail of all the flowers open at the time of my visit; these included such as Carrie, the fine yellow Champ-d'Or; Chatillon, salmon on gold ground; Crimson Diana, and Diana itself, two good flowers (the latter of bronzy orange and the former of the hue the name would suggest), or the bright Dolly Prince, yet holding its own, though late this year. Ethel and Ethel Blades were good; so was Goacher's Crimson and Harrie.

There are many others, while all around the sturdy, healthy plants, the very picture of health, are bristling with buds or laden with bloom. Mr. Black, though an invalid, and often attending to his flowers while racked with pain, is a grower of the first rank, and many professionals might be gratified could they obtain the results he achieves in his small town garden.

S. Arnott.



CATTLEYA MRS. FREDERICK SASSOON.

A beautiful and finely-formed hybrid, with rose-purple flowers, veined in the throat with old gold. A.M., R.H.S., September 26. Francis Wellesley, Esq. (gardener, Mr. W. Hopkins), Westfield, Woking.

[Mr. Arnott's contribution is of special interest to us, for during the past few weeks we have had opportunities for seeing some remarkably fine displays of early-flowering chrysanthemums in the South-west of Scotland, where, generally speaking, the climatic conditions have been more favourable to these flowers than in England. The most effective of the displays that came under our notice was in the old garden that forms so interesting a feature of the Queen's Park, Glasgow, which is one of the most notable of the numerous fine open spaces that are under the skilful management of Mr. J. Whitton. The two borders are wholly planted with forms of Madame Marie Masse, and their high state of development indicates culture of a high order on the part of Mr. McIver, the head gardener at Queen's Park.—Ed. "G.M."]

NEW PLANTS, ETC.

◆

ODONTOGLOSSUM HARWOODI THE SHRUBBERY VAR.

Those who had begun to imagine that hybridisation among odontoglossums could scarcely produce anything finer or more distinct than the beautiful flowers already in cultivation, received a rude shock at the recent R.H.S. meeting, when confronted with the above-named form of the hybrid between O. maculatum auriferum and O. Wiganianum. It is evident that great things may yet be expected from secondary hybrids. O. Harwoodi gained a F.C.C. on January 31, but, fine as it was, this second form is much finer. The flowers are of good size, and the lip is especially broad and attractive; all the segments open out well, so that the blooms are flattish. Bright yellow is the ground colour, and on this there are spottings of dark red-brown (almost black) on the sepals and petals, these markings being mostly on the basal halves. On the lip there are three conspicuous irregular blotches of this dark colour, one on either side of the crest, and one down the centre; the central blotch is sometimes a thick band, but on some of the flowers two shorter bands appear towards the base of the principal one. A few small spots of dark colour are dotted over the rest of the lip. F.C.C., R.H.S., September 26. Messrs. Charlesworth and Co., Haywards Heath.

CATTLEYA MRS. FREDERICK SASSOON.

This handsome cattleya is a particularly fine variety, selected from a batch of seedlings raised at Westfield from a cross between C. Mantini nigricans and C. Dowiana aurea. Three fine flowers were shown, all in the same spike; in form they were up to the highest standard. The sepals and petals are rich rosy-purple, and the broad, open lip is deep rich crimson-purple, with old gold veinings at the base. A.M., R.H.S., September 26. Francis Wellesley, Esq., J.P. (gardener, Mr. W. Hopkins), Westfield, Woking.

EPIDENDRUM LAUCHEANUM.

A very distinct species of exceptional grace. It carried a pair of long, pendulous racemes, crowded for about fifteen inches of their two-feet length with small greenish flowers, each with a yellow-green lip. One spike carried well over a hundred flowers. A.M., R.H.S., September 26. Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking.

NYMPHÆAS.

N. Earl of Warwick.—A very beautiful new variety of similar character to the foregoing, but with blooms of rosy-mauve colour, with orange centre. A.M., R.H.S., September 20. Earl of Warwick, Dunmow.

N. stellata rosea.—A beautiful and rosy-hued form of the blue N. stellata; the large blooms carried on long, erect stems. A.M., R.H.S., September 26. Leopold de Rothschild, Esq. (gardener, Mr. Jas. Hudson, V.M.H.), Gunnersbury House, Acton.

ROSE RAYON D'OR.

A very pretty new rose, about which a good deal has been said and written of late. It is a member of the new Pernettiana group, and its colour is rich orange-tinted yellow. As shown, the blooms were not very double. A.M., R.H.S., September 26. Messrs. Paul and Son, Cheshunt.

NERINE VEITCHI.

This is regarded as a new species from South Africa, but it has very much the appearance of N. Bowdeni, except that the blooms are of a very soft and delicate blush white colour. The segments are fairly broad, and each bloom has a spread of nearly 2½ inches. A.M., R.H.S., September 26. Messrs. Robert Veitch and Son, Exeter.

DAHLIAS.

Prince de Venosa.—A collarette dahlia of good shape, the inner row of partly-developed white florets showing up strongly against the rich red of the rounded ray florets. A.M., R.H.S., September 26. Messrs. Dobbie and Co., Edinburgh.

Uranus.—See p. 701. A.M., R.H.S., September 26. Messrs. J. Stredwick and Son, St. Leonards.

Golden Wave.—See p. 719. A.M., R.H.S., September 26. Messrs. J. Stredwick and Son, St. Leonards.

Stability.—A stiff-stemmed garden cactus variety, with neat mauve-pink flowers of great beauty. A.M., R.H.S., September 26. Messrs. J. Stredwick and Son, St. Leonards.

Mahdi. — A finely-formed deep maroon single variety. F.C.C., N.D.S., September 20. A.M., R.H.S., September 26. Messrs. J. Cheal and Sons, Crawley.

Queen of the Mauves.—A beautiful single dahlia of bright mauve hue. A.M., R.H.S., September 26. Mr. M. V. Seale, Sevenoaks.

RASPBERRIES.

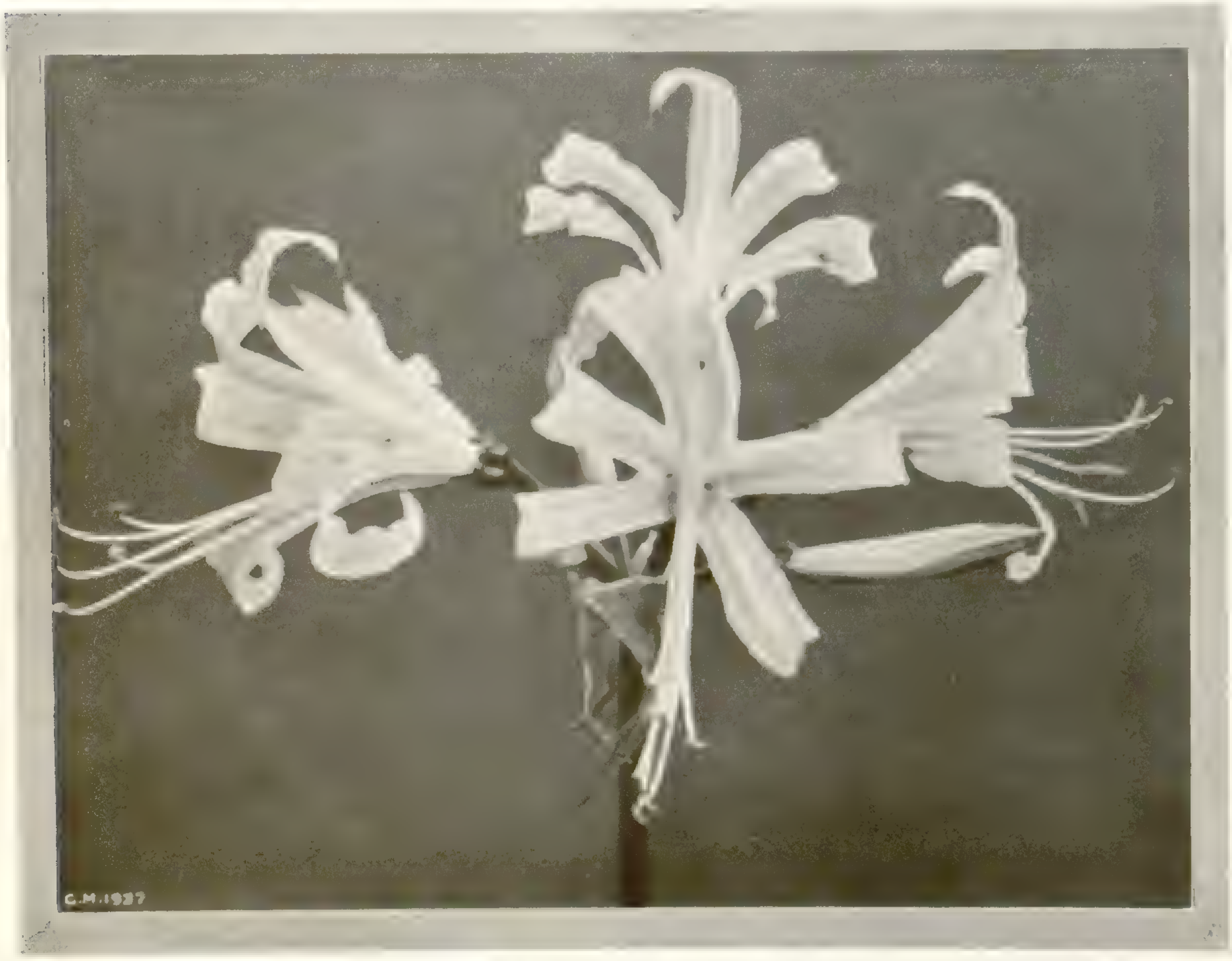
After trial at Wisley, the following varieties of autumn fruiting raspberries were granted an A.M. on September 26; fruiting canes were shown, but scarcely any fruits were left for the general public to see after the committee had risen: Surpasse d'Automne, Surpasse Merveille Rouge, Everlasting Fieldbrummer, and Perpetual de Serriere, from Mr. J. Burn, Cromer; Rouge Merveille from Messrs. G. Bunyard and Co., Maidstone; and Surpasse Fastolf, from Mr. Wilhelm Pfitzer, Stuttgart.

POTATOES.

After cropping tests at Wisley, and cooking tests at Westminster, the following potatoes were each granted an A.M. on September 26: Balgownie Seedling, from Mr. J. Lyule, Aberdeen; Dobbie's Prolific, from Messrs. Dobbie and Co., Edinburgh; Erin's Queen, from Mr. W. E. Sands, Hillsborough, Ireland; Great Scott, from Messrs. R. Veitch and Son, Exeter; and Tremendous, from Messrs. Toogood and Sons, Southampton.

CARROT EARLY GEM

An early and quick-cropping, stump-rooted variety. A.M., R.H.S., September 26. Messrs. Sutton and Sons, Reading.



NERINE VEITCHI.

This new species has blush-white flowers that are as large or larger than those of N. Bowdeni. A.M., R.H.S., September 26. Messrs. Robert Veitch and Sons, Exeter.

MORE BULBS FOR THE ROCKERY.

Many of the smaller bulbous plants are seen to the best advantage when arranged in more or less extensive colonies in the rock garden, and as seen rising above a carpet of greenery, supplied or furnished by suitable alpines, they present a charming picture. In such cases the bulbs should be inserted not less than four inches deep, while regular distribution must be avoided, simply taking advantage of small openings as they occur among the legitimate inmates. A top-dressing of leaf-soil and cocoanut-fibre refuse will act in a dual capacity, namely, protection and the supply of food.

Where space will admit by all means loosen the ground deeply, and add a liberal quantity of screened soil from underneath the potting bench to the staple. It may be explained that the most convenient method of planting small bulbs in colonies on the rockeries is to place four inches of the top soil in a basket or wheelbarrow, when the bulbs may be arranged and the soil returned.

The more refined amongst the narcissi appear quite at home, and are eminently adapted for our purpose. N. triandrus albus (Angel's Tears), N. cyclamineus, N. nanus, N. minor, N. Johnstoni, Queen of Spain, N. gracilis, N. pallidus præcox, and N. juncifolius should be employed with a view to permanent colonies. A nice group of dog's-tooth violets (erythroniums) will arrest attention and excite admiration, and in addition to the ordinary form, E. dens-canis, the following should be planted—E. revolutum, E. giganteum, E. Hartwegi, E. albidum, and E. grandiflorum. From South Africa we get the urepetalums, which are finely represented in U. hyacinthoides and U. viride. They are not perfectly hardy, but are safe enough in a sheltered nook in the rockery.

To ensure success with the watsonias they must be planted in a light sandy soil, and be protected with fibre in winter. Great brilliance is seen in W. humilis, while W. iridiflora O'Brieni is of snowy whiteness. I would strongly advise that Iris reticulata and its varieties be planted, and so arranged that they will be secure from cold winds and heavy rains, preferably under the shelter of boulders. The crocus species afford delightful material both for spring and autumn effects, and they must not be confused with colchicums. By the time these notes appear the autumn bloomers will have done their duty, and they are generally planted early in August, while the spring flowerers receive attention in October and November. C. Balsanæ, C. alatavicus, C. banaticus, C. reticulatus, and C. chrysanthus albidus are first-rate among spring bloomers, the other section being well represented in C. cilicius, C. speciosus, C. longiflorus, C. ochroleucus, C. asturicus, and C. zonatus.

Delicately beautiful are the puschkinias, which contribute their quota of charm to the garden in early spring, and great is the pity that amateurs cannot be induced to take up the culture of not only these, but a host of floral gems that are available for a trifling sum. P. scilloides and P. libanotica are exceedingly pretty. Schizostylis coccinea often presents a stunted and unhappy appearance in the open border, while it luxuriates and yields a wealth of floresence on the rockery, and the same applies to Brodiæa coccinea, which hails from Australia, and calls for a mixture of peat, leaf-soil, and sand.

The delightful little Anomatheca cruenta must not be forgotten, and worthy of mention, too, are the more choice snowdrops. The distinct characteristics of Galanthus Ikari, I. Elwesi, and I. plicatus are seen to advantage in the rock garden. It is true that both the scillas and chionodoxas are happy enough in a well-drained border, but they yield to none for beautiful effect amongst the inmates of the rockery in their season. There are several kinds in each case, and amateurs will find it a good investment to plant a fully representative collection. Walter H. Aggett.

NYSSA AQUATICA.

Though introduced as long ago as 1739 very few really good examples of this tree are to be found in England. This may in part be due to the fact that it is a native of the Southern United States, hence it is hardly likely to thrive in the colder parts of the country. There are, however, many places where it might reasonably be expected to thrive, and, though it may not attain to the size that it grows to in its native habitat, it will form a moderate-sized tree. The flowers are small and inconspicuous, and the ovate or oblong leaves have nothing to redeem them from the ordinary, throughout the summer. On the approach of autumn, however, they assume a vivid shade of red, and it is doubtful whether any other tree is more brilliant during late September and early October.

In America the species is known as the Tupelo Tree, and it assumes its best proportions in swampy ground in Virginia, Carolina, and other southern States. At the present time the wood is being imported into this country as a substitute for the wood of the Tulip Tree (Liriodendron tulipifera), better known amongst timber merchants as yellow poplar. The wood of N. aquatica has several fancy trade names, such as tupelo, bay poplar, etc. It is used for cheap kinds of cabinet work, drawers, house fittings, and various other purposes. In gardens that are of large-size sites on the banks of a lake or stream might with advantage be selected for a few specimens.

W. D.

WALL GARDENING.

Wall gardening has greatly advanced in popular favour during late years, and has proved to be an exceedingly interesting feature. The opportunities offered by a dry wall are many. As the autumn is the most favourable season for planting, it is advisable for those who are contemplating such work to commence at once. The advantages gained by autumn planting over spring planting are not few. In the first place, the autumn atmosphere is humid and more conducive to rooting than the drying winds of spring. When the operation is delayed until the latter season, continual syringings and waterings are necessary to assist the plants, wheras those put out in the autumn will have made sufficient roots to withstand the drying winds. Furthermore, there is not such a press of work in the autumn, and more time can be given to the operation.

When building a dry wall the base should be wider than the top, which means the sides will be slanting. This greatly adds to the stability of the structure, and also offers better facilities for watering as the stones will have a slight downward pitch on the outside. The aspect of the wall must be determined by the space and position at the disposal of the builder. It may be practicable to wall up a shrubbery bank or any steep slope, thus having but one side instead of two. If the wall is built in the open, that is, having two sides, and running east and west, there is abundant material at one's disposal for planting the shady as well as the sunny side.

When one is making a beginning at wall gardening it is best to start with the hardy and easily-grown plants, and add the choicer subjects at a later date. Antirrhinums and wallflowers, of course, are well known and deservedly popular, providing a splendid show when in flower. The rock pinks are extremely useful, adapting themselves well to this method. Aubrietias, helianthemums, alyssums, arabis, and armerias should be largely planted to obtain a quick effect. The edelweiss grows uncommonly well on the top of the wall, fully exposed to the sun, and should have plenty of old mortar rubble mixed with the soil. Antirrhinum glutinosum is an excellent wall plant, delighting in a hot, sunny position. Mesembryanthemums thrive on the sunny parts, but, unfortunately, they are not all quite hardy enough to stand our winters, and should be propagated annually each autumn or late summer. They will winter well in cold frames, provided they are covered during severe weather, and should be planted out the following May. Saponaria ocymoides splendens, Gypsophila repens, Silene Schaftæ, and S. alpestris all adapt themselves to the sunny side of the wall.

There are many choice plants which often succumb to dampness during the winter when grown in the rock garden, yet when established in a wall will give splendid results. These include Edraianthus dalmaticus, E. serpyllifolius, Androsace sarmentosa, A. lanuginosa, A. Chumbyi, Eritrichium nanum, and Æthionema cordifolium.

The campanula family is very accommodating, as it provides material for the shady as well as the sunny side. The beautiful Italian Harebell, C. isophylla makes itself very happy in a sunny position, as also do C. garganica, C. fragilis, C. muralis, and C. Raineri. The encrusted saxifrages, sedums, and sempervivums will be found to thrive wonderfully well in the wall garden.

With regard to planting, undoubtedly the best method is to put the plants in their places as the work of building proceeds. The roots of various subjects can be laid out better, and the plants made tighter, than when the operation is deferred until the wall is completed. What is more, it allows one to provide the soil most suitable for the several kinds. For instance, if ramondias are to be planted in the shady side, peat will be wanted, and if the wall is all filled up with the ordinary soil, that part would have to be removed, consequently the wall must be weakened. This shows the advisability of carrying on the building and planting at the same time. It can be easily accomplished, providing one is careful in handling the stones and soil, so that the plants are not damaged in any way.

ROSE GLOIRE DE CHEDANE GUINOISSEAU.

The splendidly-developed bloom of this fine crimson rose, for which Messrs. J. Cocker and Son were awarded the Gold Medal offered by Messrs. Clay and Son, for the best bloom at the Festival of Empire Rose Show.

Apart from the building of a new wall, there are many old weather-beaten structures existing, which with a little handling offer ample opportunities for planting. In many cases these old walls will be found only partly filled up in the centres, thus providing space for abundance of soil. The rough ridge or top portion should be removed, and the soil well rammed into all the cavities, placing the stones and plants in their positions on the top. For the sides the hammer and chisel will have to be brought into use to provide spaces to accommodate the roots. Additional interest will be afforded by using a few dwarf climbing flowering kinds at intervals, planting them at the base and training the growths over the face of the wall. Plants of coarse or rapid growth should be avoided, or too much space will be required for their development. If desired, a narrow border may be made at the base of the wall, and planted with various dwarf plants and bulbs.

For the shady side of the wall a good selection of hardy ferns should be used, as well as ramondias, corydalis, Arenaria montana, A. grandiflora, and A. balearica. The aubrietias will flower equally as well in the shade as in the sun: in fact, A. Dr. Mules keeps a much better colour in the shade. Primulas viscosa, marginata, involucrata, and nivalis are quite happy in such a position. The mossy saxifrages make a splendid effect in this portion of the wall, and Campanula carpatica, C. pusilla, C. cæspitosa, and C. rhomboidalis are equally at home. An important point to remember when planting is not to place a plant of hanging growth directly above one which has a dwarf spreading habit: thus aubrietia and such kinds should not be arranged so that they cover the mossy saxifrages or ramondias.

Various seeds which may be sown, such as those of erinus, Ionopsidium acaule, Linaria alpina and L. rosea, Dianthus deltoides, Alyssum saxatile, and others. The seeds should be mixed with a little soil, and placed in the crevices or joints of the wall.

E. C. Pooley.

Funkia grandiflora.—Complaints are often made that this funkia does not flower freely, but no exception can be taken this autumn, as probably, owing to the hot season, the long trumpet-shaped silvery-white fragrant blossoms are very numerous. —W. T.

WORK FOR THE WEEK.

CONSERVATORY AND GREENHOUSE.

MALMAISON CARNATIONS.—Some cultivators of Malmaison carnations are forced to defer the potting of this year's layers into larger pots until spring, through lack or space for wintering them, but wherever possible this work should be carried out without delay to enable the plants to root into the new soil before the dull days appear. When potting, especial care must be taken not to bury the collar below the surface, or break the existing ball. Loose potting must be avoided. Providing the potting soil is comfortably moist watering will not be required for a few days. Good plants for next season's flowering will greatly depend on their management during the winter months. They should be given a position as close to the glass as possible. Where shelves are not available they winter very well in frames where a little heat may be afforded in case of frost. Fresh air must be freely admitted on all possible occasions. As the days become shorter and colder the carnations will become less active, therefore the supply of water must be limited, and care exercised in its application. It is preferable to keep the soil rather dry. Excessive damp will produce the much-dreaded disease and rust, and must be avoided; what watering is necessary should be done as early in the morning as possible.

SCHIZANTHUSES. — Plants raised from the early autumn sowing will now be ready for shifting into their flowering pots. The potting material should be fairly rich and porous, and the pots well drained, as schizanthuses resent stagnation. Keep the plants as cool as possible, making no attempt to force them. A position close to the glass where they may receive plenty of light and air is the most suitable. Later-sown batches will be ready for pricking off. A sowing made now will provide stock for flowering next spring.

REHMANNIA ANGULATA.—These will now be ready for a shift into five or six inch pots. As it is a half-hardy subject, no great amount of heat is necessary, although an even temperature must be maintained.

FORCING PLANTS.—As soon as these come to hand they should be potted up. Examine the roots, and if any are found dry they should be soaked before potting. Among the many shrubs which will be found useful for forcing are lilacs, both single and double flowered, laburnums, Deutzia gracilis, Prunus triloba, Pyrus floribunda, Staphylea colchica, Viburnum opulus, Azalea mollis, and A. pontica, and rhododendrons. Among roots we have Dielytra spectabilis, Solomon's seal, spiræas, and lily of the valley.—A. Grubb, Porters Park Gardens.

ORCHIDS.

IMPORTED ORCHIDS.—It is rarely that importations of orchids commence to arrive so early in the autumn as is the case this season, and, judging from the lists that have reached me, it is many years since the importations were so extensive as they appear to be this year. In the case of cattleyas we find such species as C. Trianæ, C. Percivaliana, C. Schroderæ, C. Gaskelliana, C. labiata, C. Warscewiczi (gigas), and C. aurea offered. This will afford opportunities for replenishing the stock, or adding thereto. Few cattleyas retain the robust constitution of their native habitat for many years after importation; there are exceptions in all cases, but I think this will be the general experience. It is not always an easy matter to deal with imported cattleyas at this season of the year, and it is advisable to do no more than encourage a little root action, delaying as far as possible the appearance of new growth until after the turn of the days, when they are less subject to injury from damp, etc.

TREATMENT.—When dealing with imported cattleyas, it is advisable to examine them closely for insect pests, especially the cattleya fly. This is not difficult to detect, as plants that have been attacked have perforations of various sizes in the pseudobulbs; the roots may also be knotted, and if one of these knots is cut asunder the insects may be found in different stages of development. Where these indications are present it is not advisable to introduce the plants to the cattleya house, for if once introduced it is a long time before the pest can be exterminated. It is far better to isolate imported plants than to run any possible risk.

POTTING.—At this season pots just large enough to hold the plants should be used. Plenty of drainage must be introduced, and very little compost should be placed about the roots, the object being to induce root action, and allow a reasonably quick passage of water during the dull winter season. Secure the plants in position by means of sticks sufficiently strong to hold them there being driven among the crocks. Permanent potting may be done after the turn of the year. The plants should not be subjected to over much light when they are first received, as they will have been in the cases for some weeks, and the foliage is liable to become discoloured, and in all probability will die should any sudden or too rapid change be made. It is also better to gradually change from one temperature to another until the desired position is reached. Some of the species will have completed their growth when collected, and some will produce flowers. If rational treatment is afforded to those that have flowers in sheath, quite good blooms are obtainable, which will generally be found sufficient to determine the quality of the variety procured.—H. J. Chapman, Oakwood Gardens.

HARDY FRUITS.

BUSH FRUITS.—New plantations, and the re-arrangement of existing plots of bush fruits may receive attention as soon as the leaves commence to fall freely. The bush form of gooseberries and currants is the most generally adopted, and may be used where sufficient space is available between other fruit trees, such as apples or pears, bush fruit not objecting to a reasonable amount of shade. There is much to be said in favour of the cordon system on wirework for gooseberries, especially where late dessert fruits are required. These through being spurred back, will produce much larger fruits than are obtained from bushes, but naturally the crop will not be so heavy per tree; at the same time every foot of space can be used up and, moreover, by this mode of planting and training, protection by netting against birds can be more easily given.

APPLES.—Only those who have but one or two trees of a variety, especially the later varieties, can know how difficult it is to manage a collection of many sorts; the time wasted at gathering, besides waste that is entailed by having so many little lots is great. It would be much better to give preference at planting time to good, reliable sorts that are known to do well in the district. With cooking varieties this will be a comparatively easy task, as we have at the present time a dozen or two varieties that, with good cultivation and management may be relied upon to give the utmost satisfaction. But a much more difficult problem confronts us in the selection of good reliable dessert varieties. One of the newer ones, James Grieve, promises well, being excellent in every way. Many of the others only justify their existence by being very handsome on the show table, but varieties of apples seen frequently at the fruit shows must not be taken as a reliable guide to their value for home use. Beauty of Bath, American Mother, Allington Pippin and Brownlees Russet, have something to recommend them, and, as this is Cox's Orange Pippin year, many will still have hope, and plant a few more trees of this variety, only to meet with disappointment later, in all probability.

PEARS.—The above remarks on apples do not apply in the same sense to pears. To keep up a succession of dessert pears many varieties will be required, their season in most instances being of short duration. Walls with an east or west aspect are usually given up to pear trees, and if cordons are adopted many varieties can be grown in a given space. The smaller fruiting varieties are usually the most reliable croppers, and, after all, pears a pound weight and upwards can scarcely be considered good for dessert; I have in my mind such varieties as Pitmaston Duchess, Beurre Mortilet, Beurre Baltet Père, and a dozen others, all very gratifying to the eye; but when planting the chief consideration should be flavour, hardiness, and cropping capabilities. Marie Louise, Beurre Superfin, Beurre Hardy, Conference, Doyenne du Comice, and Glou Morceau are all first-class, and with, perhaps, the exception of Marie Louise, all may be grown in the open as bush, pyramid, or cordons with success. There are very many other excellent dessert pears, both early and late, which, if wall space can be devoted to them, will prove of the greatest service in keeping up a regular supply.—J. Whittle, Cheveney Gardens.

THE KITCHEN GARDEN.

CAULIFLOWERS.—Seeds sown last month will have produced plants sufficiently large to prick out into cold frames for protection. Select an open, porous, and sweet soil, and add to it soot or wood ashes. Allow a space of about six inches between the plants, and grow them along as hardy as possible by exposure until frost arrives; then the lights may be placed on the frames, and protection given according to the severity of the weather, but always during fine days give the plants plenty of air. The Autumn Giant cauliflowers have, owing to the long drought, been almost a failure in many places. Where the heads are turning in break some foliage down over them to protect from frost. Should sharp weather set in it will be better to lift them and plant thickly in sand or ashes in an open shed.

GLOBE ARTICHOKES.—Where the stock requires replenishing now is a good time to secure good strong off-sets. They can be potted up and placed in a cold frame for protection during the winter months. If everything has gone well, they will be satisfactory plants for planting out in April or May, and will fruit the first year. The old plants, too, will need protection; dry leaves packed round the crowns, with a covering of straw to keep them in position, will be sufficient in most parts of the country.

CHICORY.—From now onward lettuces will be scarce, and chicory will be required, to some extent, as a substitute for them in the salad bowl. Have a portion of the roots lifted and planted in the mushroom house. In about three weeks they will give useful blanched leaves. The main batch of plants will yet grow and improve if left in their present position.

CELERY.—The late celery will be growing freely now, and a beginning will be necessary with the blanching process. It is much the best plan to add small quantities of soil at short intervals.

TRENCHING.—Many crops will be cleared from the ground after this date, and the work of manuring and trenching can be commenced. I am aware that it cannot always be carried out, but so far as possible a definite plan should be made for next year's cropping. Then the manuring, trenching, or digging can be arranged accordingly. The deep-rooting plants should occupy the rich trenched land, and the less particular ones the ordinary dug positions. Where possible, too, it is better to take in hand the heavier ground first, and allow it to have the longer season for exposure.

GENERAL REMARKS.—As the staff can be spared from the urgent work in the garden, and during bad weather, there will most probably be old hotbeds that are most valuable, and will require turning over to encourage further decomposition, or can be mixed with other manure. The rubbish heap, too, is of great value to the kitchen garden, and will require attention in turning and picking over. Protecting material will need to be in stock. Bracken, if cut before frost, is valuable for the rougher positions in the frame ground.—Charles Flack, Cholmondely Castle Gardens.

CROYDON CHRYSANTHEMUM SOCIETY.
24th AUTUMN SHOW, ADULT SCHOOL. PARK LANE. WEDNESDAY and THURSDAY,
OCT. 25th and 26th.
Challenge Cups, £35, with £20 money. Total Prizes over £100.
Entries close Oct. 19th.
W. B. BECKETT, "Woodcote," Purley.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

Festival of Empire Rose Show.

The autumn exhibition held at the Crystal Palace on September 28 and 29, was arranged in the centre of the great building, and proved an attractive function.

The schedule consisted of fifty-three classes, and not a single cash prize was offered, all the awards being cups, plate, or medals, and these were in nearly every case presented by amateur or trade rosarians, Festival officials, and friends. In the matter of quality the roses were something of a surprise, not a few being really good, and exceptionally so if the season is duly considered. In the matter of arrangement, the show left something to be desired, as many of the "display" classes were set upon the central tables against a high background of green material and woodwork, the scaffolding of which was patent to everyone on the hither side, rising above smaller exhibits behind. Such classes should have had a place along the sides, or at the end in front of the Royal Box, where they would have been very effective.

In the following notes we refer to the chief classes and exhibits, as it is not possible for us to deal with every class.

NURSERYMEN.

Premier award for the best thirty-six blooms, distinct, fell to Messrs. J. Cocker and Sons, Aberdeen, for some beautiful flowers, notably of Lyon, Gloire de C. Guinoisseau, Captain Hayward, Yvonne Vacherot, Frau Karl Druschki, and Mrs. T. Roosevelt; Messrs. Adam and Craigmile, Rubislaw, Aberdeen, came second; and Mr. Hugh Dickson, Belfast, third. We venture once more to raise a protest against the excessive dressing of the blooms in this class.

For twenty-four blooms, distinct, Messrs. D. Prior and Sons, Colchester, led from eight other competitors, and their best blooms were of Maman Cochet, W. R. Smith, White Maman Cochet, Mdme. C. Guinoisseau, and Oberhofgartner Terks; Mr. George Prince came second; and Mr. Frank Woolard, Lewes Road, Brighton, was third.

Mr. Hugh Dickson contributed a grand set of eighteen blooms, and was easily first in this class, with rare flowers of Konigin Carola, Gladys Harkness, Caroline Testout, Lieut. Chaure, Lohengrin, W. E. Lippiatt, Frau Karl Druschki, Lyon, Mrs. D. McKee, Leslie Holland, Earl of Warwick, Cardinal, Marquis de Ganz, J. B. Clark, Mdme. J. Combet, Hugh Dickson, Mdme. Wagram, and Lady Alice Stanley; Messrs. J. Cocker and Sons, Aberdeen, second, and in their set they had a magnificent flower of the crimson Gloire de Chedane Guinoisseau, which gained Messrs. Clay and Son's Gold Medal as the best flower in the show; Messrs. Adam and Craigmile third.

In the dozen bloom class, Mr. Henry Drew, Longworth, Berks, annexed the chief award with good clean blooms, and was followed by Mr. J. Mattock and Mr. W. Tayler, Hampton. There were eleven entries in the class for twelve blooms of one variety, and here Messrs. Alexander Dickson and Sons, Newtownards, scored with very clean examples of Frau Karl Druschki; Messrs. D. Prior and Son second, and Mr. F. Wooland third, each with the same variety. Messrs. Prior and Sons had the finest set of twelve blooms of a tea rose, and they showed Maman Cochet well; Mr. Prince second, and Mr. H. Drew third, each with White Maman Cochet.

Messrs. J. Cocker and Sons scored for eight trebles, and were followed in order by Mr. Hugh Dickson and Messrs. A. Dickson and Sons. In the class for a dozen trebles there were four competitors, and Messrs. Jas. Cocker and Sons again led, their set including Lyon, Mdme. Wagram, Mdme. J. Combet, and Frau Karl Druschki in fine form; Mr. Hugh Dickson second, and Messrs. Adam and Craigmile third. Six competitors entered for six varieties, three blooms of each, and Messrs. S. Treseder and Son, Cardiff, led with Marie Van Houtte, Florence Pemberton, Medea, Maman Cochet, Earl of Warwick, and White Maman Cochet; Messrs. D. Prior and Sons, Colchester, second; and Mr. G. Prince, Longworth, third.

In the leading tea rose class, for eighteen blooms, distinct, Mr. G. Prince was the best of three entrants, and he presented charming flowers of W. R. Smith, Mrs. E. Mawley, Souv. de Pierre Notting, Maman Cochet, and White Maman Cochet; Messrs. J. Jefferies and Son, Cirencester, second; and Messrs. W. Crisp and Sons, Colchester, third. For a dozen teas Messrs. Adam and Craigmile scored with a very clean set of W. R. Smith, Mdme. Louise Leroy, Nita Weldon, Mdme. Constant Soupert, etc.; Messrs. Frank Cant and Co., Colchester, second; and Messrs. Stephen Treseder and Son, third.

Mr. Hugh Dickson was a capital first for a dozen vases of exhibition roses, seven blooms in each; Lyon, Frank Thorpe, Miss Cynthia Forbes, and Mrs. D. McKee were very well shown; Messrs. G. Prince second. Messrs. J. Cocker and Sons scored for a vase of any rose with big flowers of Frau Karl Druschki. Mr. J. Mattock, Headington, Oxford, who has not been beaten this year for decorative roses, led on this occasion with a display of twenty-four bunches with charming flowers of Betty Berkeley, Mrs. A. Tate, Mdme. Ravary, Mdme. Jules Grolez, Betty, Lady Battersea, Gustave Regis, etc.; Mr. George Prince, and Messrs. Frank Cant were placed second and third respectively. Messrs. B. Cant and Sons, Colchester; Messrs. W. Spooner and Sons, Woking; and Mr. George Prince, Oxford, were placed as mentioned, for a dozen bunches of polyantha roses, while for a similar number of bunches of decorative roses, Messrs. W. Spooner and Sons, Mr. F. M. Bradley, and Messrs. S. Bide and Sons, Farnham, scored as placed.

Messrs. W. Spooner and Sons were easily first for a dozen bunches of decorative roses, their General McArthur, Mdme. Abel Chatenay, and Ecarlate being especially good; Mr. F. M. Bradley, Church Street, Peterborough, second; and Messrs. S. Bide and Sons, Farnham, third.

Mr. Hugh Dickson scored for a dozen blooms of new roses, and his best were Miss Cynthia Forbes, Marchioness of Waterford, Duchess of Wellington, Mrs. H. Stephens, and Colonel Leclerc; Messrs. Alex. Dickson and Sons, second; and Messrs. S. Bide and Sons, third. First prize for a new rose fell to Messrs. Alex. Dickson and Sons, Newtownards, for the yellow A. Hill Gray; Mr. Hugh Dickson coming second with Souv. de Portland, Oregon; and third with Mrs. J. W. Parker.

Messrs. W. and J. Brown, Peterborough, won the trophy offered for the best representative collection of roses arranged on a space 18ft. by 6ft.; at the back they had sprays of rose hips carried up 8ft. or 10ft. high, and in front they put up big stands of Lyon, White Maman Cochet, Pharisaer, J. Hill, Maman Cochet, and La Tosca, with small vases making up the groundwork; Messrs. B. Cant and Sons came second with a lower group.

A group of roses to fill a space of 60 square feet, is a fairly big order at this time of the year, but two competitors came forward in such a class, and Messrs. J. Jefferies and Son, Cirencester, won first place with a capital exhibit of popular roses, arranged in stands and vases of varying height, but one that was somewhat marred by the tall stand of Perle des Jardins, wherein the flowers were disposed in three rigid vertical lines; Messrs. Jackman and Son, Woking, second.

AMATEURS.

Mr. Conway Jones, Gloucester, was to the front for twenty-four blooms, distinct, and he set up good flowers of Maman Cochet, White Maman Cochet, and Madame Jules Gravereaux, but he, like his competitors, had a number of poor flowers; the Rev. J. H. Pemberton, Havering, second, and Mr. W. Boyes, Middleton, Yorks, third. Mr. G. A. Hammond, Burgess Hill, was the only exhibitor of a dozen flowers. The Rev. J. H. Pemberton and Mr. Conway Jones took first and second places for a dozen trebles. Frau Karl Druschki won first place for the Rev. J. H. Pemberton in the class for a dozen flowers of one variety; Mr. Boyes was second here with the same variety, and Mr. Conway Jones third with Souv. de Pierre Notting.

Mr. F. Slaughter, Steyning, won the cup for eighteen blooms, while Mr. Raman de Escott, Kingsley Dene, Dulwich, and Mr. H. R. Darlington were first and second respectively for twelve blooms. In the smaller growers' sections we noticed that Mr. E. B. Lehman, Hield Lodge, Crawley; Mr. J. N. Stuart, Mount Park, Harrow; Mr. F. Thorpe, Victoria Terrace, Enniskillen; Mr. P. S. Davis, Burgess Hill, Sussex; Mr. W. Fowler, Mill Hill; M. Panckridge, Petersfield, won leading prizes.

Mr. Conway Jones and Mr. Slaughter had no competitors in classes for eighteen and twelve tea roses respectively, while in the tea rose classes, the Rev. F. P. Burnside, Great Stambridge Rectory, Essex, led.

Mr. S. W. Burgess, Old Bank House, Tonbridge, beat Mr. Conway Jones for seven vases of roses, and each put up a good set. Mr. Hammond beat Mr. Conway Jones for three vases of tea roses, and he had lovely flowers of Maman Cochet, White Maman Cochet, and Madame Jules Gravereaux. For one vase of a tea rose, Mr. P. S. Davis, Burgess Hill, scored with White Maman Cochet.

Mr. Conway Jones's first-prize exhibit of a dozen bunches of garden roses was a capital one, and his vases of Anna Olivier and Madame Antoine Marie were very fine; Mr. H. R. Darlington came second, and the Rev. J. H. Pemberton third. For six bunches Mrs. J. Walter Smith, Sparrows Herne Hall, Bushey, won first prize.

DECORATIVE CLASSES.

In the decorative classes Mrs. J. Bride, Cathcart, Uxbridge, had the best vase of roses, one variety, showing Lady Hillingdon; Mrs. Tisdale, Woodford Green, came second with Maman Cochet, Mrs. G. W. Cook, Radstock, Whetstone, obtained the chief award for a basket of roses, and scored with Lady Hillingdon; Mrs. A. R. Bide, Farnham, second. Mrs. J. Bide had the best bowl of roses, winning with a pleasing arrangement of Mrs. George Shawyer; Mrs. A. R. Bide second. Mrs. G. W. Cook was first for buttonhole sprays.

Mrs. J. Bide's table decoration of yellow Lady Hillingdon was a very pretty one, and Mrs. Bide wins a handsome green bowl in a silver stand; Mrs. A. R. Bide won second prize, and Mrs. G. W. Cook third.

NON-COMPETITIVE.

Hardy fruits were finely displayed by Messrs. W. Seabrook and Sons, Chelmsford, who set up very bright and large samples of Blenheim Pippin, Lord Suffield, The Queen, Peasgood's Nonsuch, Ribston Pippin, Newton Wonder, and other popular apples in heaped-up baskets of a variety.

An especially large and interesting contribution of fruit came from the Herefordshire Fruit Growers' Association, Hereford; this consisted of well over a hundred 28lb. boxes of finely-graded apples, as well as numerous dishes of extra fine samples. Altogether, there was about two and a-half tons of first-class fruit for the best-class markets. The exhibit was a grand advertisement for Herefordshire-grown and packed fruits. The varieties shown were almost all well-known sorts, but we may make special mention of the splendid specimens of Peasgood's Nonsuch, Stirling Castle, Blenheim Pippin, Broad Oaks, Allington Pippin, Cox's Orange Pippin, Tom Putt (very brilliant), Warner's King, Tyler's Kernel, Loddington, Bramley's Seedling, Mère de Ménage, James Grieve, Bismarck, Devon Red, Annie Elizabeth, and Gascoigne's Scarlet. About fifty varieties were exhibited and sent by a total of twenty-two growers, chiefly from the Ross and Hereford districts.

Mr. Neal, gardener to J. A. Nix, Esq., Tilgate, Crawley, brought up a fine collection of fruit, showing as large a display as at the R.H.S. meeting of the previous Tuesday; there were apples, pears, peaches, nectarines, melons, and grapes, in choice selection.

Mr. J. Box, Lindfield, had a quite large and very graceful group of Michaelmas daisies, phloxes, solidagos, delphiniums, and early chrysanthemums, the whole forming a display of great beauty and interest at this season of the year. Mr. A. Edwards, Arnold, Notts; Mr. J. Pinches, Camberwell; and Messrs. White and Son, Paddock Wood, were also exhibitors on this occasion.

Messrs. J. Jefferies and Son, Cirencester, were exhibitors of well-grown hardy fruits, their contribution consisting of about a hundred dishes of apples and pears. A circular central exhibit, temple fashion, from Messrs. James Carter and Co., Raynes Park, was composed of dahlias in great variety, with a central mass of Solidago Golden Wings, and the arches well furnished with bowls and baskets of Comet, quilled, plumed, and single asters in a great range of colouring. Mr. H. Morse, Eaton, Norwich, staged a few dozen low bowl-like arrangements of roses that formed a pleasing exhibit.

Manchester and North of England Orchid Society.

At the meeting held on Thursday, September 28, the members of committee present were Rev. J. Crombleholme (in the chair), Messrs. R. Ashworth, W. R. Lee, C. Parker, H. Thorp, Z. A. Ward, J. Cypher, J. Evans, W. Holmes, A. J. Keeling, D. McLeod, W. Stevens, and H. Arthur (secretary).

W. R. Lee, Esq., Heywood (gardener, Mr. Woodhouse), was awarded a silver medal for a group of plants, consisting of cattleyas and cypripediums, the most noticeable cattleyas being C. St. Gothard, F.C.C., C. Iris var. Cæsar, F.C.C., C. Iris var. Ixion, A.M., C. Priam, and C. Venus, Plumpton Hall var. Of the cypripediums, C. Boltoni and C. gigas Corndean Hall var. were well shown.

Z. A. Ward, Esq., Northenden (gardener, Mr. Weatherby), was awarded a silver medal for a group—quite a collection—of Odontoglossum grande, with cattleyas and cypripediums, making a fine display; Cattleyas Ashtonæ, C. Germania, A.M., and C. Iris, var. G. Weatherby, A.M., were the most noteworthy; several hybrid cypripediums were of high quality.

J. McCartney, Esq., Bolton (gardener, Mr. Holmes), staged a good group, to which a silver medal was awarded consisting principally of cattleyas and hybrids of the section, John Baguley, Mrs. Pitt, Princess Patricia, and Minuca were amongst the best; several cypripediums, including C. callosum Sanderæ, were also exhibited in capital style.

Colonel J. Rutherford, M.P., Blackurn (gardener, Mr. Lupton), was awarded a bronze medal for a small mixed group, including a fine form of Cattleya Maroni, Odontoglossum ardentissimum, a good O. crispum, Lycaste Skinneri alba, and several excellent cypripediums.

J. J. Holden, Esq., Southport (gardener, Mr. Johnson), staged splendid forms of Cattleya Iris, var. Golden Queen A.M., C. Adula Auburn House var. A.M., and a good example of Cypripedium Juliet.

William Thompson, Esq., Walton Grange (gardener, Mr. Stevens), contributed Cypripediums Germain Opoix and Gaston Bulteel—very fine forms. H. J. Bromielow, Esq., Rann Lee (gardener, Mr. Morgan), also staged a good plant of C. Germain Opoix.

Messrs. Stuart Low and Co., Bush Hill Park, submitted a fine form of Cattleya Hardyana, var. Enfieldensis, F.C.C., and C. Gaskelliana var. Delight A.M. Messrs. A. J. Keeling and Sons, Bradford, had Cypripedium Actæus, Westgate var. A.M., and Curtisi x vexillarium, A.M.

AWARDS.

First-class Certificates.—Cattleya St. Gothard, from W. R. Lee, Esq., Heywood (gardener, Mr. Woodhouse), a noble flower, very even colour, with intense lip. Cattleya Iris, var. Cæsar, from the same exhibitor—a well-formed flower, almost round, sepals and petals plum colour, with deep lip. Cattleya Hardyana, var. Enfieldensis, from Messrs. Stuart Low and Co., Bush Hill Park—a very fine type, large flower, good colour, and well lined in the lip.

Award of Merit.—Cattleya Iris, var. Ixion, from W. R. Lee, Esq., Heywood (gardener, Mr. Woodhouse)—a flower of good shape and rich in colour. Cattleya Germania, a good specimen, well flowered, very bright. Cattleya Iris var. G. Weatherby, one of the largest forms of the type yet seen; and Cypripedium Euryades x Parkerianum—a massive bloom, following almost entirely the Parkerianum parent, from Z. A. Ward, Esq., Northenden (gardener, Mr. Weatherby). Cattleya Iris, var. Golden Queen—a most delightful variety, of a bright golden colour; and Cattleya Adula, Auburn House var., a well-set flower, very distinct in colour, from J. J. Holden, Esq., Southport (gardener, Mr. Johnson). Cattleya Gaskelliana, var. Delight, from Messrs. Stuart Low and Co., a pleasing flower with white sepals and petals and lip faintly lined. Cypripedium Acteus, Westgate var.—a fine, well-balanced flower, good colour; and Cypripedium Curtisi x vexillarium—a good form, and finely-coloured, from Messrs. A. J. Keeling and Sons, Bradford.

National Chrysanthemum Society.

The early exhibition of this society, held at the Crystal Palace on Wednesday and Thursday, October 4 and 5, was not such a good one as many of its predecessors, owing to the effects of the hot and dry summer upon plants in southern gardens. Competition was very poor, but the trade exhibits lent importance to the exhibition, and Mr. Smellie's Scottish-grown flowers were a fine feature.

There was only one entry in the class for a dozen Japanese blooms, distinct, and this, from Mr. W. Mease, gardener to A. Tate, Esq., Downside, Leatherhead, was awarded first prize; his best flowers were of White Queen, Miss A. Finch, Mary Poulter, Mrs. H. Thornton, and Mrs. L. Thorn. For six blooms, Mr. F. Cordell, gardener to A. F. Blades, Esq., Rookfield, Reigate, was a very capital first with fine flowers of Mrs. L. Thorn, J. H. Molyneux, Hon. Mrs. Lopes, Mrs. A. T. Miller, Rose Pockett, and Mrs. F. C. Stoop; Mr. A. Dyer, gardener to E. Wood, Esq., The Tyrol, Upper Norwood, came second; and Mr. W. A. Ballard, Abbey Lane, Leicester, was a long way behind for third place.

The Scottish flowers saved the situation on this occasion. Mr. J. Smellie, Busby, near Glasgow, was the only exhibitor of a dozen bunches of early-flowering pompon chrysanthemums, not fewer than eight varieties, and gained the first prize with beautiful bunches of Fred Pelé, Mignon, St. Crouts, Scarlet Gem, Bronze Blushing Bride, W. Piercy, and the old Piercy's Seedling.

Mr. J. Smellie had matters in his own hands in the class for a dozen bunches, distinct, of early-flowering chrysanthemums grown in the open. Probably no finer set than that with which he won first prize has ever been seen at a Southern show; he put up large and very beautiful bunches of White Masse, Dolly Reeves, Estob Yellow, Crimson Diana, Caledonia, Nina Blick, Hector, Leslie, Roi des Blancs, Lillie, Diana, and Hecuba; Mr. W. A. Ballard, Leicester, came second, but he was awarded first prize for a dozen bunches undisbudded, and was the only exhibitor in the class.

Mr. J. Smellie scored for six bunches of early-flowering pompons, and his set consisted of Bronze Blushing Bride, Scarlet Gem, Blushing Bride, Mignon, St. Crouts, and La Luxembourg. For a similar number of bunches of disbudded early chrysanthemums, Mr. Smellie won with graceful flowers of Jas. Bateman, Caledonia, Hector, Dolly Reeves, Hecuba, and Lillie; Mr. W. A. Ballard, second.

The best bunch of one Japanese variety, three blooms, came from Mr. W. Mease, who scored with the popular White Queen; Mr. C. Fox, second; and Mr. A. Smith, gardener to Mdme. Stuart, The Convent, Roehampton, third; there were five entries. Mr. W. H. Newton, Potter's Bar, had the best vase of single early blooms, yellow or bronze, with Mr. Smellie second.

Mr. Smellie led for white single varieties, one bunch, with Mr. F. Brazier second. Mr. Smellie and Mr. Brazier were first and second respectively for one bunch of mixed early single varieties, and Mr. Smellie's was a very handsome bunch.

Mr. Brazier was the only exhibitor of a group of flowers and foliage, and he was awarded first prize.

In the amateur division, Mr. C. Fox, Linden Gardens, Tunbridge Wells, led for six bunches of early chrysanthemums with good blooms, rather too closely packed into the vases; Mr. F. Cordell second. One vase of single chrysanthemums was staged, and this from Mr. W. H. Newton, gardener to Mrs. McDowell Nachan, Potter's Bar, was granted a first prize. Mr. Fox and Mr. Cordell were first and second respectively for three bunches of early varieties.

FLORAL DECORATIONS.

Mr. F. Brazier, Caterham, secured first prize for a table of floral designs, with harps, bouquets, and vases of chrysanthemums neatly arranged. Mr. A. W. Trossall, The Parade, Beckenham, was placed first for three epergnes with arrangements of yellow and red-bronze flowers lightly disposed; Mrs. A. Robinson, Norhyrst, Carshalton, was second with a very pleasing set, and Mr. T. W. Stevens, gardener to W. H. Stone, Esq., Donnington, Laurie Park, Sydenham, third.

Mrs. Maslin, Addlestone, was placed first for a basket of autumn foliage and berries, and she used pernettya sprays largely; Mr. F. Brazier second, with a rather stiff design. Mrs. Martin led for a vase of chrysanthemums suitable for table decoration, with a handsome set of rich bronze and yellow blooms; Mr. C. Fox second, and Mr. T. W. Stevens third.

For an epergne of blooms Mr. C. Fox, Mr. A. W. Trossall, Beckenham, and Mr. T. W. Stevens were placed in the order given. Mr. F. Brazier was first for abasket of chrysanthemums, and he used red-bronze and white flowers with sprays of oak leaves and kochia.

NEW VARIETIES.

First Class Certificate.—To Bronze Goacher's Crimson, from Messrs. W. Wells and Co.; to Miss E. Finch, a terra-cotta single, from Mr. Brazier, Caterham; to Emperor, crimson and gold, and to an unnamed white, from Messrs. Lowe and Shawyer, Uxbridge.

Commendation.—To Phœbe, pink Japanese, from Mr. H. W. Thorpe, Durrington, Worthing; to Roundabout, a golden-bronze border variety, from Mr. H. W. Thorpe; and to Eskimo, large cream-white, from Messrs. Lowe and Shawyer, Uxbridge.

NON-COMPETITIVE.

Mr. Norman Davis, Framfield, Sussex, had a large and very bright display, wherein, backed by tall palms and associated with suitable greenery, there were numerous tall, well-filled stands of such chrysanthemums as White Queen, David Ingamells, Framfield Early White, and D. B. Crane. Smaller early varieties and good bunches of amellus varieties of perennial asters made an excellent ground work. A very bright group of chrysanthemums, perennial asters, solidagos, phloxes, etc., was put up by Messrs.

W. Wells and Co., below the Royal Box; These subjects were well displayed around a central group of White Queen chrysanthemums, and at one end of the exhibit perpetual carnations figured largely.

Mr. H. J. Jones, Ryecroft Nursery, Lewisham, presented a collection of Michaelmas daisies, and, as usual, put up a charming exhibit. A few vases of a fine early white Japanese chrysanthemum named White Queen stood out splendidly among the other flowers, as also did a central batch of this variety growing in 32-sized pots. Delight, Edwin Beckett, Star Shower, Gaiety, and ericoides were very pretty among the graceful small-flowered perennial asters.

Messrs. W. Seabrook and Sons, Chelmsford, contributed a very handsome set of apples and pears, and put up fine specimens in a most tempting fashion. Of special interest were the baskets of The Queen, Blenheim Orange, Cox's Orange Pippin, Newton Wonder, Lord Suffield, Fearn's Pippin, and Ribston Pippin, while among pears Beurre Hardy, Dr. Jules Guyot, Emile d'Heyst, and Souv. de Congrès were notably good.

Mr. Brazier, of Caterham Valley, presented a collection of perennial asters and plants of the fragrant Clematis paniculata. Hardy shrubs and fruit came from Mr. D. Russell, Brentwood, and a set of collarette dahlias from Mr. J. B. Riding, Chingford, attracted a good deal of attention.

Messrs. James Carter and Co., Raynes Park, put up a temple-like exhibit of pæony and cactus dahlias and a collection of dwarfed trees, while, in front of the orchestra, Messrs. J. Cheal and Sons set up sprays of coloured foliage, among which the acers, prunus, koelreuteria, cratægus, rhus, pyrus, and oaks were particularly brilliant.

Messrs. Cragg, Harrison, and Cragg, Heston, Hounslow, showed a good set of bunches of early chrysanthemums suitable for market; Moneymaker, Cranford Pink, Cranford Yellow, Roi des Blancs, H. W. Thorpe, and Tom Edwards were specially notable.

MEDALS.

Gold.—Mr. Norman Davis, Framfield, Sussex.

Small Gold.—Messrs. W. Wells and Co., Merstham; Mr. H. J. Jones, Lewisham.

Silver-gilt.—Messrs. W. Seabrook and Sons, Chelmsford (fruit); Messrs. James Carter and Co., Raynes Park (dahlias and dwarfed trees).

Large Silver.—Messrs. Cragg, Harrison, and Cragg, Heston, Hounslow; Messrs. J. Cheal and Sons, Crawley (autumn foliage); Mr. David Russell, Brentwood (hardy shrubs); Mr. J. Brazier, Caterham (Michaelmas daisies).

Silver.—Mr. J. B. Riding, Chingford, (dahlias).

Bristol and District Gardeners' Mutual Improvement Association.

At the monthly meeting held on September 28 at St. John's Parish Rooms, a good attendance gathered to hear a lecture by Mr. Biss, from the Bath Gardeners' Debating Society. The subject was the "Winter Moth." He gave a very interesting lecture, and described the winter moth in the various stages of its life history. He strongly advised grease bands to be put round all fruit trees to catch the female moth as the only means by which it can, unaided, reach the branches to lay its eggs is by crawling up the trunk. The males are provided with wings, but many of them are also caught on the grease bands. He advised all fruit growers to try their best to exterminate these pests, and not leave it to a few only, and he expressed the wish that an Act of Parliament would render it compulsory on the part of all fruit growers to do their part in this matter. He explained the difference between the codlin and the winter moth; both females are wingless, but when the caterpillars of the codlin are developed they eat their way to the core of the apples, then the fruits fall, and if they are not picked up the caterpillars escape. The caterpillar of the winter moth eats its way out, and lets itself down with a thread. Mr. Biss maintained that the British fruit growers lost quite half of their fruit crop from the ravages of the larvæ of the winter moth, and yet do nothing to help themselves. A good discussion followed.

For three bunches of perennials Messrs. Binfield, Scott, and Springham were placed in the order given. Mr. Jennings was awarded four points for Oncidium varicosum Rogersi. Mr. Springham five points for a fine dish of culinary peas.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1911. September 24 to September 30.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Sept. 24—Sunday ……	8 6	58	55	65	54
,, 25—Monday ……	9 24	57	54	66	42
,, 26—Tuesday……	10 30	58	55	68	52
,, 27—Wednesday..	8 18	60	56	69	49
,, 28—Thursday….	2 30	54	52	60	52
,, 29—Friday……..	8 42	49	46	59	39
,, 30—Saturday…..	4 48	58	55	61	48
Means	(total) 52 18	56	53	64	48

Date. 1911. September 24 to September 30.	Rain.	Temperature of the Soil at 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
Sept. 24—Sunday ……	—	58	58	59	53
,, 25—Monday ……	trace	56	58	59	32
,, 26—Tuesday……	—	58	58	59	45
,, 27—Wednesday..	0·10	58	59	59	39
,, 28—Thursday….	—	59	59	59	50
,, 29—Friday……..	0·16	55	58	59	28
,, 30—Saturday….	0·02	56	57	59	46
Means …	(total) 0·28	57	58	59	42

FORTHCOMING ENGAGEMENTS.

MONDAY, October 9.—United Horticultural Benefit and Provident Society: Committee Meeting.

TUESDAY, October 10.—Royal Horticultural Society's Fruit Show: two days. There will be no general exhibition or lecture, but the Standing Committees will meet at 12 o'clock to consider novelties.

International Horticultural Exhibition 1912: Meeting of Surrey Committee at Hotel Windsor, 12 noon.

Horticultural Club, Hotel Windsor, Westminster; dinner at 6 o'clock, to be followed by a lecture on "Rhododendrons" by Mr. C. P. Raffill, of Kew.

WEDNESDAY, October 11.—Annual Conference of Delegates from affiliated Societies, at Royal Horticultural Hall, 3 p.m.

THURSDAY, October 12.—National Horticultural Society of France (Paris).

WEDNESDAY, October 18.—North of England Horticultural Society, at Leeds.

MONDAY, October 23.—National Chrysanthemum Society; Floral Committee at 3 o'clock at Essex Hall, Strand; General Committee at 7 o'clock at Carr's Restaurant, Strand.

The only resemblance between a Pine Spray Syringe and others is in the shape of the barrel. The metal is more substantial. For the rest, the combination spraying head renders Spray, Rose, and Bend instantly obtainable without the addition or removal of a single fitment, while the adjustable leather bucket plunger gives perfect suction, never allows water to escape past it and up your sleeve, and wears interminably.

A written request from your ironmonger or seedsman, and a Syringe will be sent in 24 hours for your approval. Price **10/6**. Sole proprietors and manufacturers, **Robinson Bros., Ltd., West Bromwich.**

PINE SPRAY SYRINGE (patent).

ANSWERS TO CORRESPONDENTS.

CHINESE PRIMULAS.—K. M. B., Durham: There seems to be no weak point in the methods you adopt for the production of Chinese Primulas to bloom about Christmas and the New Year. Local conditions do very often have a very marked and curious influence upon plants, and it is a matter of common knowledge that until such conditions are fully understood and allowed for, certain plants grown with the utmost ease in one garden are more or less a failure in a garden but a short distance away. In your case we can only suggest a few points for consideration. Sow the seeds a fortnight later in future; prick out and pot off the seedlings directly they are large enough, because if the young plants suffer ever so little from lack of food and moisture, they never completely recover from the check, and such check has a tendency to produce early and unsatisfactory flowering. If special attention is paid to the drainage of the pots, you may very well dispense with peat and charcoal in the compost used at the final potting, increasing the amount of loam, and, if the latter is not of the very best quality, adding a little dried cow manure or old hot-bed manure.

H.T. ROSE RICHMOND.—M. E. J., Dorking: This beautiful rose was first distributed in America, in 1905, so that it is in no sense an old variety. Its parents were Lady Battersea and General Jacqueminot. It is a first-rate garden rose, but flowers so freely that in many places, especially on light soils, it appears to exhaust itself, hence it is sometimes regarded as lacking in constitution. A good deep rich loam suits it best, and even under these conditions the plants do not retain their vigour for many years. On light soils, and in positions where the atmosphere is rather dry, the occasional renewal of stock is necessary.

FUNGUS ON TREE ROOTS. — F. S. E., Lynn: The conifer roots have been subjected to expert investigation, and found to be suffering from the attack of a very common British toadstool, a fungus named Armillaria mellea. Wherever this appears, although it may seem to rise from the soil alone, close examination will show that roots of trees or buried wood are the point of origin. The fungus is capable of doing a vast amount of damage, hence, whenever it is found, great care should be taken to collect and burn the specimens, and thus reduce the possibility of infection. Any damage to the base of the trunk or the partly-exposed roots of lawn or orchard trees, due to mowing, hoeing, etc., should be carefully avoided, as it is by means of such wounds that the fungus finds a ready means of entrance; from the roots the mycelium passes up the base of the trunk, attacking the young wood, the cambium layer, and the bark, and as at this point the attack is made over the entire circumference of the stem, the tree soon dies. It is impossible to save a tree that is already in a state of collapse, but whenever a tree is known to be attacked, it should be at once isolated by means of a trench cut some distance from the trunk, so as to prevent the fungus from passing along to the roots of neighbouring trees. In the case of a lawn specimen that dies from the disease, every part should be burned, and special care should be taken to follow up, remove, and burn all its roots.

BRUSSELS SPROUTS IN CABBAGE CROP.—R. A., Keighley: The presence of some Brussels sprout plants among your cabbages may be due to one of several causes. If the seed beds were close together a few seeds of sprouts may have fallen during sowing upon the cabbage bed; plants from the extreme edges of adjacent seed beds may have been carelessly pulled up together, and so become mixed; a few seeds of the one crop may have become mixed accidentally with the bulk of the other; and then there is the possibility of seed crops having been grown too near each other, though this is a remote one, as all seed growers know the tendency of cabbage crops to cross-fertilise if growing near one another, and they guard against it. We fancy the trouble arises in your own garden.

NAMES OF PLANTS.

E. C. F., Chichester.—Ilex dipyrena.

L. C., Bromley.—1, Mussænda frondosa; 2, Ipomæa Horsfalliæ.

B. J., Whitchurch.—1, Coreopsis grandiflora; 2. Rhus Cotinus.

A. D., Cardiff.—1, Diplopappus chrysophyllus; 2, Retinospora obtusa.

N. L. M., Lymington.—1, Odontoglossum ardentissimum; 2, Oncidium varicosum Rogersi; 3, Cattleya Harrisonæ.

L. C. H., Sunbury.—1, Dracæna Godseffiana; 2, Thyrsacanthus rutilans; 3, not recognised, send when in flower; 4, Impatiens Roylei.

NAMES OF FRUITS.

G. B., Dublin.—Your pear is Marie Louise.

H. B., Chester.—1, Bess Pool; 2, Tyler's Kernel.

G. O., Stoke-on-Trent.—1, Hollandbury; 2 and 3, not recognised; 4, Rosemary Russet,

D. W., Hugglescote.—Uvedale's St. Germain—a stewing and baking pear, very fine specimen.

F. M. B., Ipswich.—1, Cox's Orange Pippin; 2, Catillac; 3, not recognised; 4, Blenheim Pippin.

D. R. S., St. Albans.—1, Adam's Pearmain; 2, Roundway Magnum Bonum; 3, Mère de Ménage.

A. P. U., Sussex.—1, Brabant Bellefleur; 2, Bismarck; 3, not recognised; 4, Rymer; 5, Norfolk Beefing; 6, Bedfordshire Foundling.

C. N., Essex.—2, Beurre Gris d'Hiver; 3, not recognised; 4, Gold Medal; 5, Sheepsnose; 6, Beauty of Bath; 7, Doyenne du Comice.

T. H., South Devon.—1, Ecklinville; 2, Souvenir du Congrès; 3, Figue de Naples; 4, Bergamot; 5, not recognised: 6, Doyenne Boussoch.

M. H., Sherborne. — 1, Lane's Prince Albert; 2, Baumann's Winter Reinette; 3, Golden Noble; 4, small specimen, probably The Queen.

J. S., Faringdon.—The specimens were so small and scabby, and consequently altogether out of character, that they could not be identified.

R. U., Maldon. — Unfortunately in the course of transmission through the post, the numbers became separated from the specimens. We are therefore unable to give the names.

J. H., Woolton.—1, Bellissime d'Hiver; 2, Broom Park; 3, Beurre Gris d'Hiver; 4, Des Deux Sœurs; 5, 11, and 13, Beurre Diel; 6, 8, 12, and 17, Marie Louise; 7 and 15, not recognised; 9, Zephirin Gregoire; 10, Beurre de Capiaumont; 14, Baronne de Mello; 16, Thompson's; 18, Belle Julie; 19, Swan's Egg.

CONTENTS.

PAGE
Answers to Correspondents 747
Autumn Sowing of Sweet Peas 738
Early Chrysanthemums in the South-West of England ... [illegible]
Evolution and Pollination of Sweet Peas ... 735
Exhibitions and Meetings 745
Fritillaria contorta 737
Higher Education of Gardeners 736
Lachenalias 738
More Bulbs for the Rockery 742
New Plants, etc. 741
Notes from Scotland 739
Notes of the Week 733
Nyssa aquatica 742
School Teachers' Examination in Gardening 736
Three good New Sweet Peas 737
Trees and Shrubs with Ornamental Foliage .. 737
Verbenas in Pots 738
Wall Gardening 743
Work for the Week 744

ILLUSTRATIONS.

Portrait of Mr. J. T. Barker, 733; Sweet Pea Bertha Massey, 737; Sweet Pea Thomas Stevenson, 73[illegible]; Sweet Pea Afterglow, 739; An effective display of Early-flowering Chrysanthemums in the Queen's Park, Glasgow, 740; Cattleya, Mrs. Frederick Sassoon, 741; Nerine Veitchi, 742; Rose Gloire de Chedane Guinoisseau, 743.

OBITUARY.

◆

MR. WILLIAM EARLEY.

It is with deep regret we have to announce the death, at Croydon, on Wednesday, September 27, of Mr. William Earley. Mr. Earley reached his seventy-sixth birthday the day previous to his death. Until within the last ten years he was a prominent figure in horticultural circles, especially in the London district, where his wide knowledge, genial character, and goodly presence made him very well known. Despite his father's efforts to the contrary, Mr. Earley made gardening his life work, and, after service in numerous establishments, he had charge of the gardens at Digswell House, Welwyn, and subsequently was head gardener at Valentine's, Ilford, a place famous for its very old Black Hamburgh vine, which is supposed to have been the parent of the even more famous great vine at Hampton Court.

Until increasing age rendered the reduction of work imperative, Mr. Wm. Earley was a regular contributor to the Gardeners' Magazine. Many years ago Mr. Earley edited a sixpenny monthly journal, entitled "The Villa Gardener," and he also edited a penny weekly gardening paper, which, if memory serves us rightly, was known as "The Horticultural Record." Our old friend had a happy knack of redeeming the lowlier matters of horticulture far above the common place, and he would find subjects of interest where most people saw nothing worth recording.

After retiring from the charge of gardens, Mr. Earley acted as horticultural adviser, and his services were much in request for the construction of new and the improvement of old gardens. As a judge he was well known, and here again his wonderfully genial manner won him many friends even among those who failed to win prizes under his judgment.

To the general public Mr. W. Earley was best known through the medium of "Lloyd's Weekly News," to which paper he had regularly contributed the weekly "Gardening Notes," over a period of nearly forty years. As a contributor of the "Gardening Notes" to "Lloyd's" he succeeded that famous old florist, George Glenny, and continued to occupy that position until the time of his death, his last contribution appearing in the issue of that journal for October 1.

CATALOGUE RECEIVED.

E. WEBB AND SONS, WORDSLEY, STOURBRIDGE.—Few bulb catalogues are so well got up, so freely illustrated, or so comprehensive as the one from Wordsley.

RIVERS'
Fruit Trees, Roses,
Vines, Figs, Oranges,
AND
Orchard House Trees.

A LARGE AND SELECT STOCK
ALWAYS ON VIEW.

ILLUSTRATED AND
DESCRIPTIVE CATALOGUE.
POST FREE 3d.

THOMAS RIVERS & SON
Sawbridgeworth, Herts.
STATION: HARLOW, G.E.R.

SURREY GROWN SWEET PEAS.

BERTHA MASSEY.

(First in Novelty Class—National Sweet Pea Society, 1911.)

This variety is a distinct break, being quite a new art shade of pale mauvy-lilac, fine Spencer form. Is absolutely fixed, a very strong grower, and is fine for exhibition or for garden decoration. Repertoire de Coleurs, 186 to 187, No. 1. 12 seeds, 1s.

BLUE BELLE.

A most attractive pea of the grandiflora type. Standard opens purplish-mauve, passing to blue, the finished flower being a very pleasing bright blue. Repertoire de Coleurs, standard opens, 186 No. 2; wings, 202, No. 4. 20 seeds, 6d.

ORANGE KING.

A bright deep salmon self of the grandiflora type. Needs good culture and slight shading from the sun's rays. It is undoubtedly the brightest and deepest salmon or orange pea extant. Repertoire de Coleurs, 74, No. 4. 12 seeds, 6d.

MRS. STEWART CHAMPION.

A giant among sweet peas, true Spencer form, cream ground, overlaid soft rosy-pink. A strong grower, producing mostly three, but sometimes four, flowers on a stem. Is quite fixed, and is altogether a fine introduction. Repertoire de Coleurs, 118, No. 1. 12 seeds, 1s.

The following is a list of special varieties extracted from our handy pocket list:—

	Seeds.	Price.
Arthur Unwin, the finest bicolor	20	4d.
Betty Cantley, pale salmon-apricot	15	4d.
Constance Oliver, bright pink	25	3d.
Clara Curtis, deep primrose, true certificated stock	25	4d.
Elsie Herbert, giant-flowered blush	30	3d.
Edna Harland, carmine-pink Countess Spencer	15	4d.
Edrom Beauty, re-selected Helen Lewis, very fine	20	4d.
Edna Unwin, glowing orange-scarlet	20	4d.
Eric Harvey, white ground, bright rosy-pink edge	10	6d.
Etta Dyke, beautifully waved white	25	3d.
Flora Norton Spencer, lovely waved sky-blue	25	3d.
Florence Nightingale, the best waved lavender	20	4d.
Giant Cream Waved, one of the finest waved primrose peas	20	4d.
Gladys Burt, lovely pale pink	20	4d.
Helen Grosvenor, bright shining orange-pink	20	6d.
Mrs. Townsend, white ground, violet edges	20	4d.
Mrs. Hardcastle Sykes, one of the best very pale pinks	40	3d.
Maud Holmes, giant deep crimson	20	4d.
Mrs. C. W. Breadmore, cream ground, edged pink	25	3d.
Mrs. W. J. Unwin, white ground, flaked orange-scarlet	10	6d.
Masterpiece, waved lavender	20	4d.
May Farquhar, Spencer form of Lord Nelson	15	6d.
Mrs. R. H. Carrad, rosy-lilac	15	6d.
Mrs. Hugh Dickson, beautiful cream-pink ...	20	4d.
Nubian, the finest maroon	10	6d.
Nettie Jenkins, lovely pale lavender	15	6d.
Paradise Ivory, ivory-white, very strong grower	25	3d.
Sunproof King, grand, deep crimson, waved	20	4d.
Scarlet Monarch, lovely bright waved scarlet	10	6d.
Tennant Spencer, deep mauve	25	2d.
Thomas Stevenson, the finest orange-scarlet waved	15	6d.
Zero, the earliest-flowering waved pea ...	25	2d.

The Novelties are nett prices as quoted. All varieties in general list subject to a cash discount of 20 per cent., 4s. in the £, for 2s. 6d. value and over. Carriage and postage free on all orders 1s. and upwards.

The quality and fixity of our Sweet Peas cannot be beaten.

The above complete collection, 36 varieties, post free, 12/-.

S. BIDE & SONS, Ltd.,
Sweet Pea Growers,
FARNHAM.

TREE CARNATIONS
The Newest and Best Varieties.
Strong, healthy and well-rooted plants only supplied
Catalogues free.
E. J. WOOTTEN, Fairoak, EASTLEIGH.

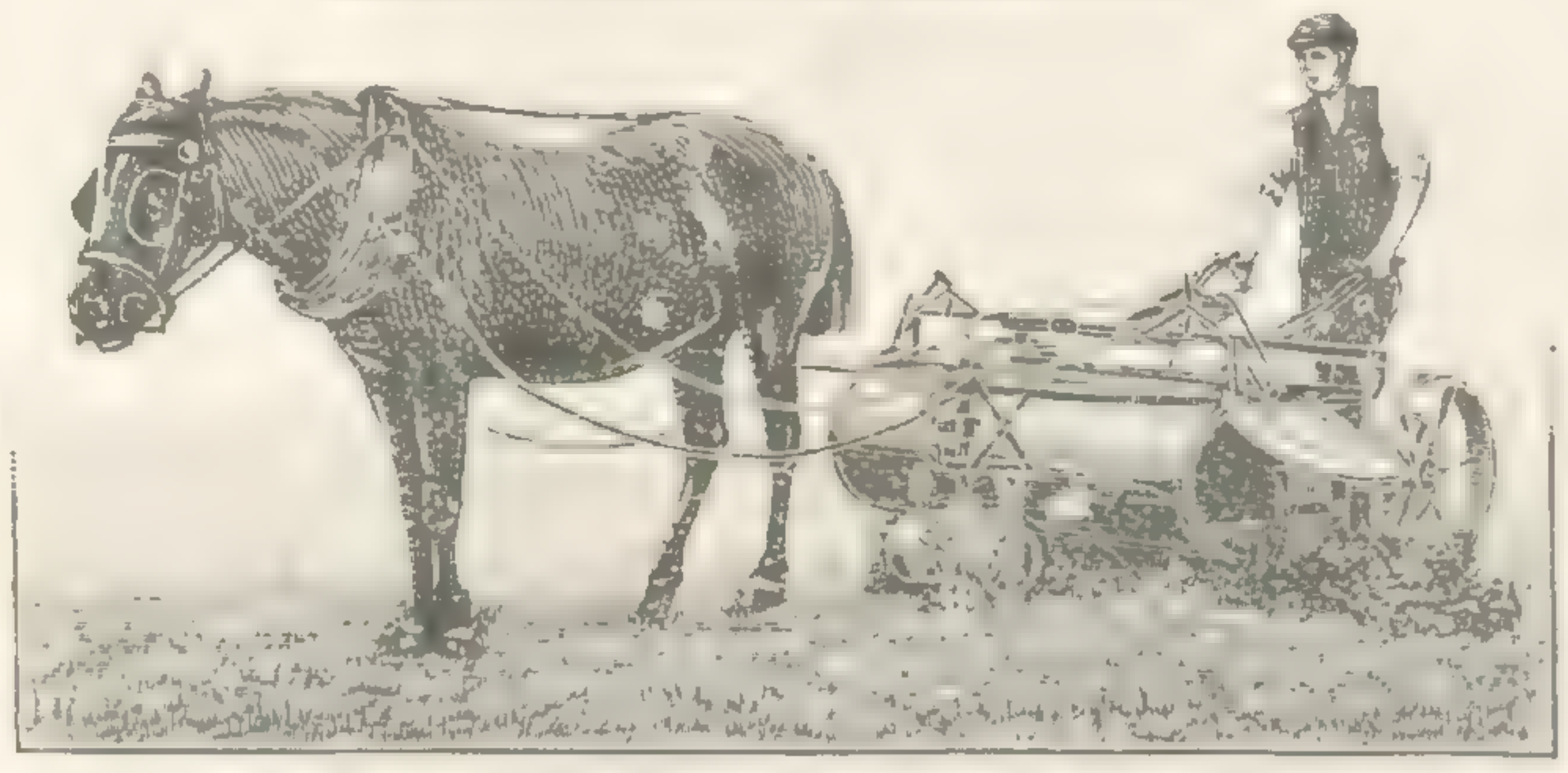
CHARLESWORTH & CO.,
Hayward's Heath, Sussex,
ORCHID SPECIALISTS,
IMPORTERS, EXPORTERS, RAISERS & GROWERS.
PRICED ILLUSTRATED CATALOGUE FREE.

LAWN
Sweeping Machine

Challis' Patent Side-Delivery
Lawn Sweeping Machine

is the only Lawn Sweeping Machine manufactured whereby the leaves and rubbish can be instantly deposited into compact heaps while the machine is in motion, thus effecting an enormous saving in time and labour as compared with any other machine on the market.

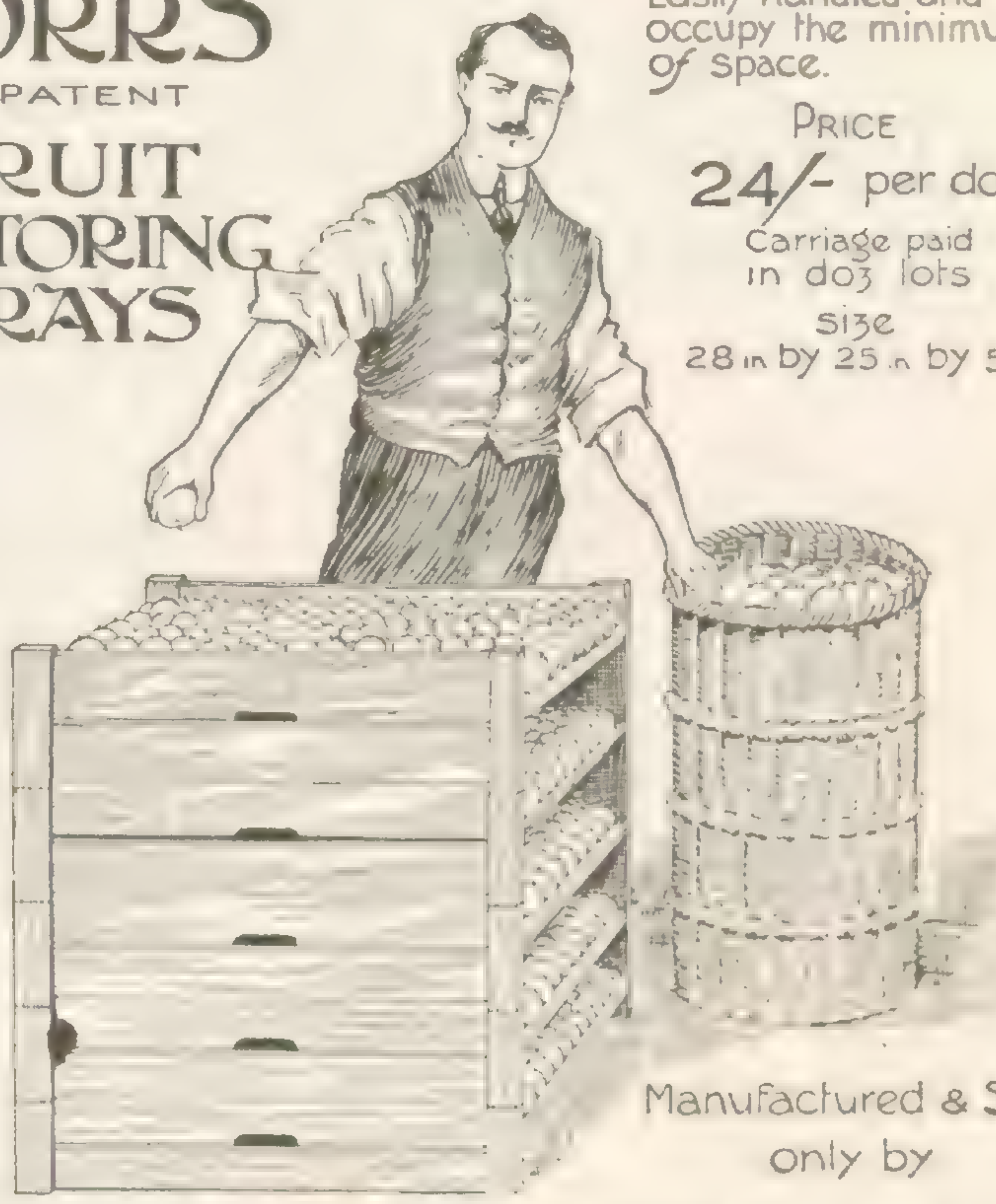
Made in all sizes from 18 in. to 6 ft.



T. CHALLIS,
Wilton, Salisbury.

STORE YOUR FRUIT
IN
ORR'S
PATENT
FRUIT
STORING
TRAYS

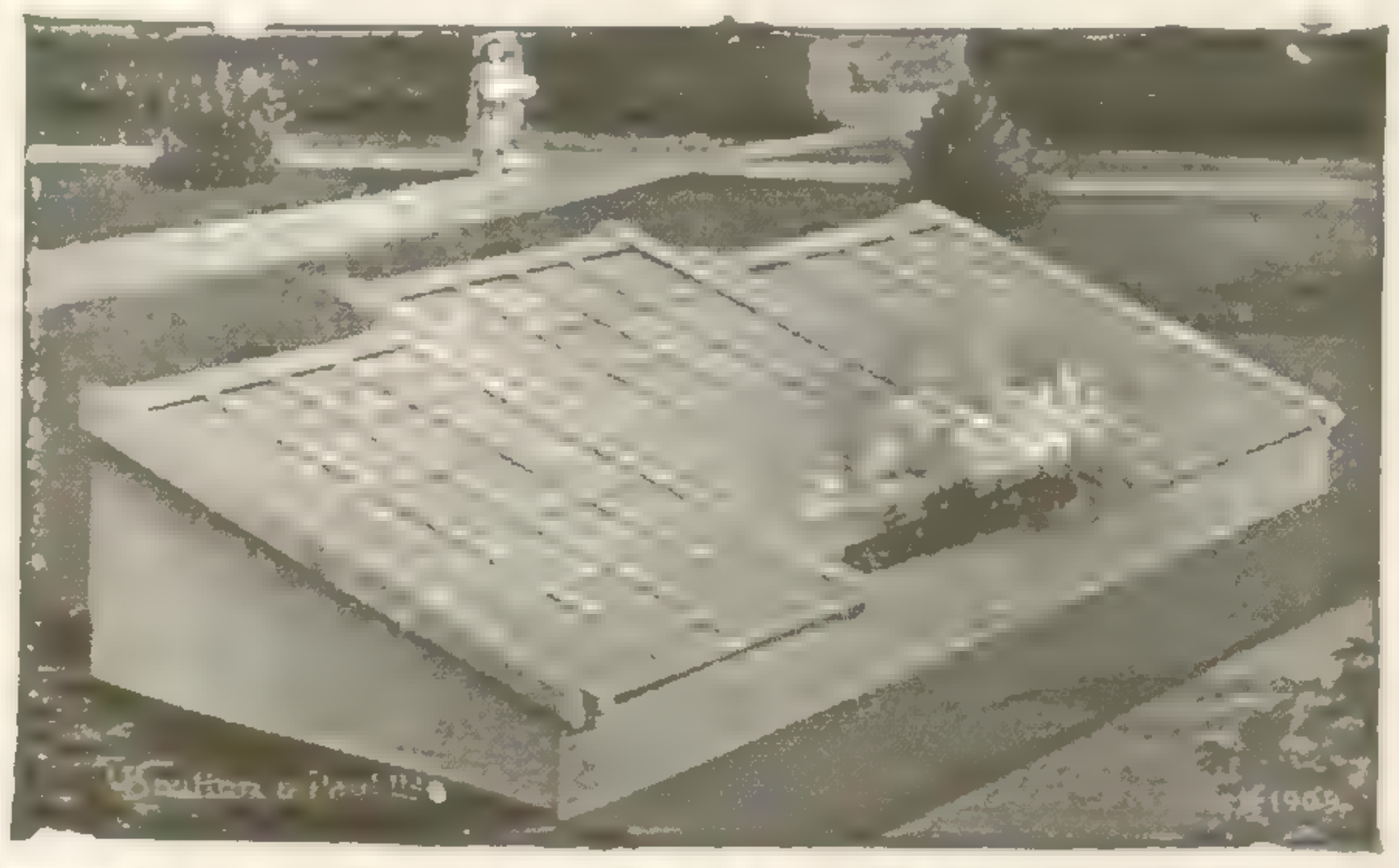
Easily handled and occupy the minimum of space.
PRICE
24/- per doz.
Carriage paid in doz lots
size
28 in by 25 in by 5 in.



Manufactured & Sold only by
JOHN P. WHITE & SONS LTD.,
THE PYGHTLE WORKS, BEDFORD.

PRESERVE YOUR PLANTS
during the Winter Months by using our well made

No. 75. MELON AND CUCUMBER FRAME.
Painted three coats, glazed 21 oz. glass.



4ft. by 6ft. ... £2 10 0 8ft. by 6ft. ... £3 0 0

Garden Frames
in every variety always in stock.
High-class Finish in the Very Best Materials.

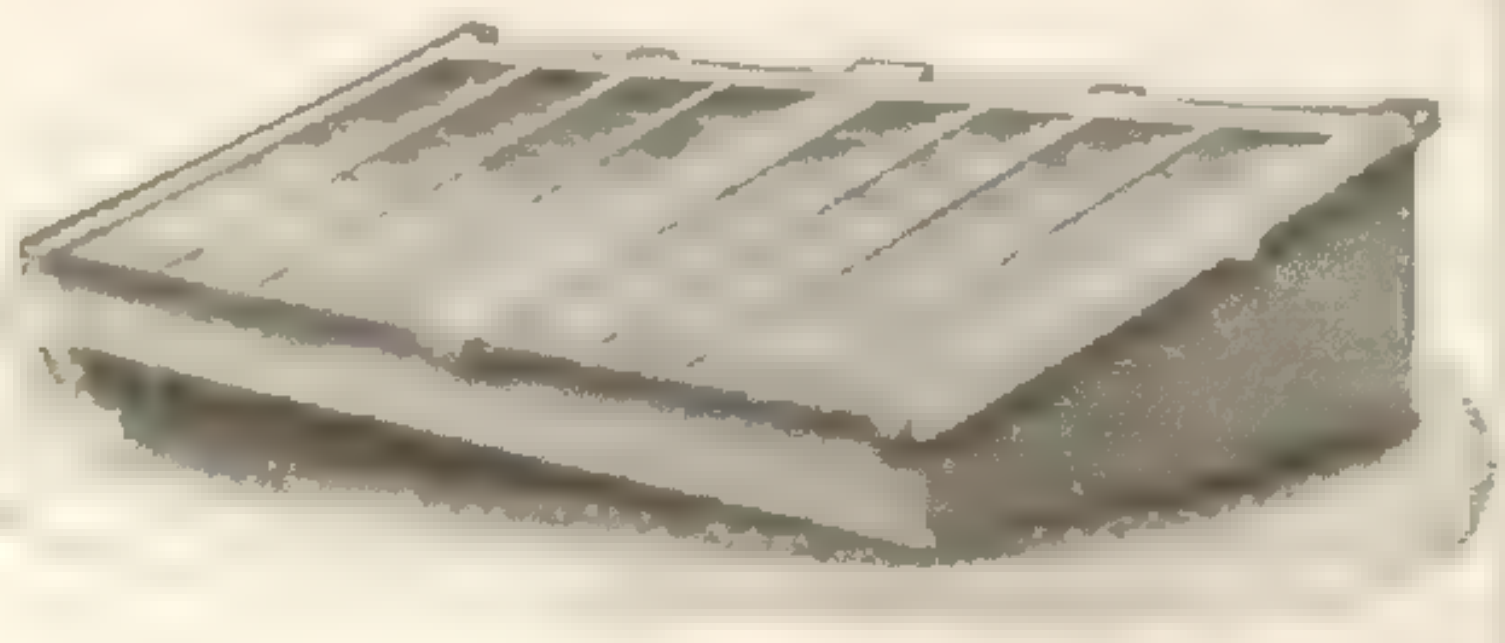
Pit Lights.
6 ft. 1½ in. by 4 ft. Painted and Glazed 14/- each
Unpainted and Unglazed ... ... 5/- „

Double Glazed Lights.
4 ft. 7in. by 4 ft. 3 in. Painted and Glazed, 15/6 each

Improved Fruit Trays.
30 in. by 19 in., 18/- doz.; 24 in. by 15 in., 15/- doz.
Carriage Paid on one dozen Trays and over.

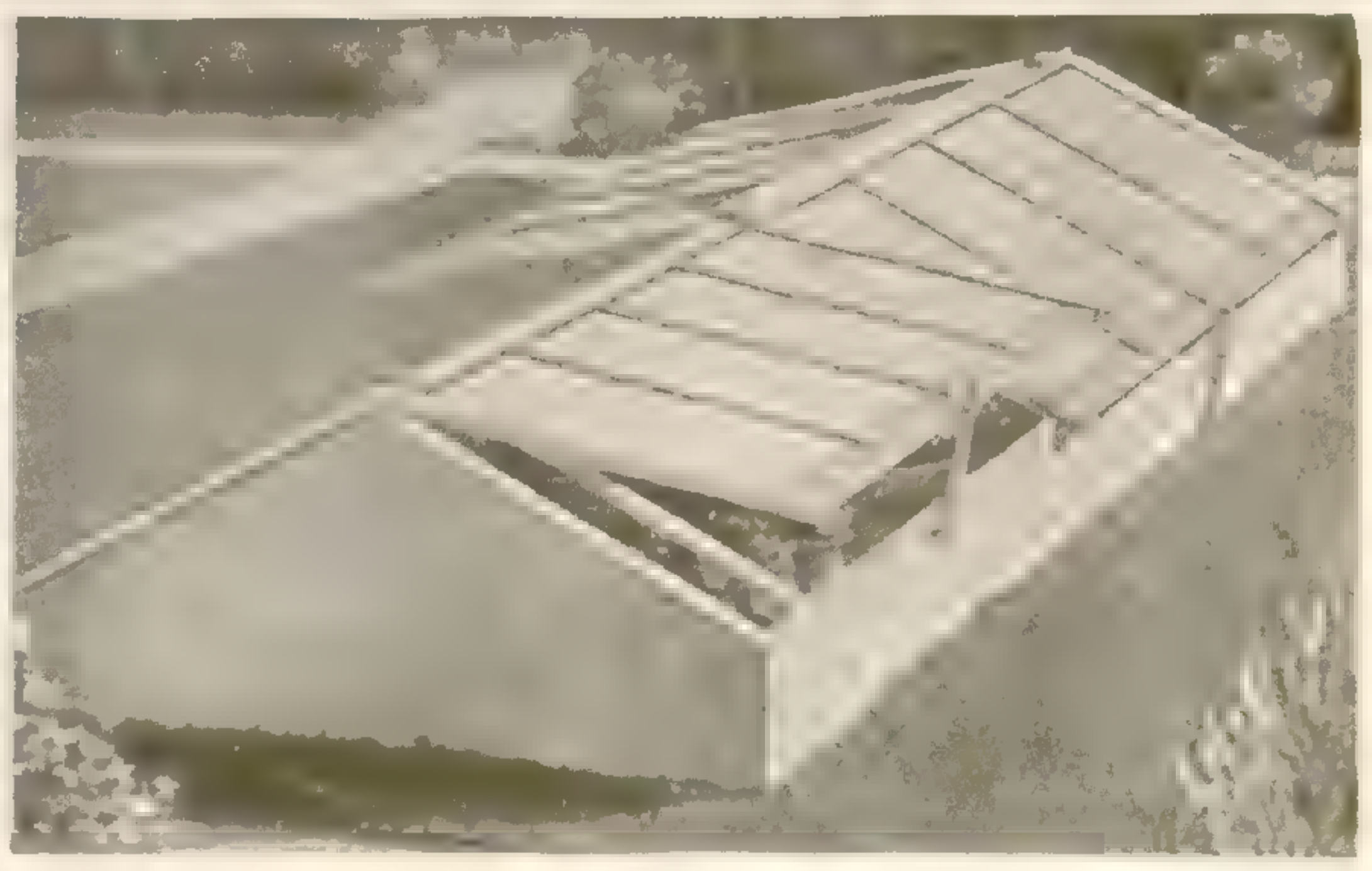
Reed Mats. 4 ft. 6 in. square, 20/- doz.

SEND FOR PRICE LISTS.



No. 77. VIOLET FRAME
(as illustrated).
6 ft. by 4 ft. £1 15 0
9 ft. by 4 ft. 2 7 6

No. 60.
PORTABLE PLANT PRESERVER
6 ft. by 3 ft., £1 14 0
6 ft. by 4 ft., £2 5 0
All Frames and lights Painted three coats. Glazed with 21 oz. glass.



Carriage Paid on Orders of 40/- value to most Goods Stations in England and Wales.
BOULTON & PAUL, LTD., NORWICH.

BENTLEY'S
NICOTINE COMPOUND
This Vaporiser contains a higher percentage of Pure Nicotine than any other.

BENTLEY'S
INSECTICIDE. An ideal non-poisonous Plant Cleanser for general use under glass.

BENTLEY'S
CONCENTRATED ALKALI.
A perfect Winter Wash. Destroys mosses, lichens, fungi and their spores.

BENTLEY'S
CARNATION MANURE.
Universally popular. All Carnation Specialists admit its excellence.

BENTLEY'S
DAISY KILLER (LAWN SAND).
A most effective Weed Destroyer. Completely transforms lawns.

General Catalogue sent on application to the manufacturers
JOSEPH BENTLEY LIMITED,
Chemical Works,
BARROW-ON-HUMBER, HULL.

FREEHOLD RESIDENCE, modern, three reception, 5 bed-rooms, boudoir, kitchen and scullery. Splendid grounds, 10 acres, 7 greenhouses, stabling, cowsheds, calfshed; every convenience and comfort; choice fruits and large orchard. H. THOMLINSON, Four Marks, Alton.

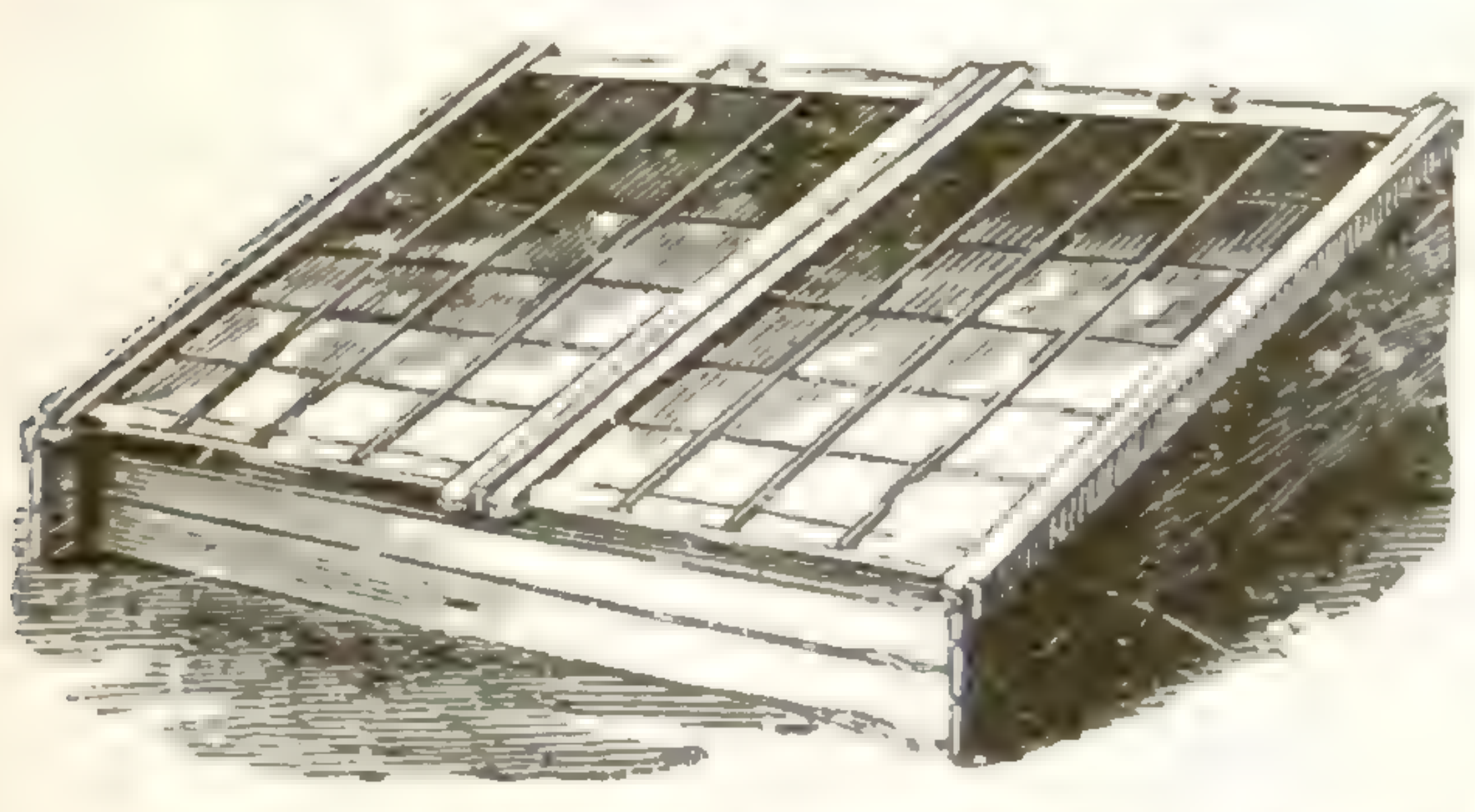
PLEASE MENTION
THE GARDENERS' MAGAZINE
when writing to Advertisers.

NEW TEA and H. TEA ROSES.
The following splendid set of 12, comprising the Cream of New Roses, 10/- per doz., 5/6 per half-doz.: The Lyon, Mrs. A. R. Waddell, Molly S. Crawford, Duchess of Wellington, Lady Hillingdon, His Majesty, Mrs. Alfred Tate, George C. Waud, Lady A. Stanley, Miss Eva, Mrs. D. Jardine, Hugo Roller.
LISTS FREE.
C. & N. HARRISON, *Rose Growers*,
Aylestone Park, LEICESTER.

PORTABLE

CUCUMBER FRAMES.

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.		£	s.	d.
1-light 4 ft. by 6 ft.	*CASH PRICES.*	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.	*CARRIAGE PAID.*	5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON MANCHESTER.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
ROCKWORKERS
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.

Our Work has stood the test of time.

EPPS'S SELECTED PEAT

For Choice Plants, Ferns, Rhododendrons, &c., &c.

SPECIAL ORCHID PEAT.

Loam, Leaf-mould, Sand, C.N. Fibre, Sphagnum, Charcoal, and all kinds of Garden Sundries.

Prices on application to
EPPS & CO., Ringwood, HANTS.

RATS Exterminated by "LIVERPOOL" VIRUS without danger to other animals and without smell from dead bodies. In tins ready prepared with the bait. Virus for Rats, 2/6 and 6/-; for Mice, 1/6.

Of all Chemists. *Write for particulars to*
EVANS SONS LESCHER & WEBB, Ltd.,
Dept. G.M., 56, Hanover Street, LIVERPOOL.

CHARGES FOR ADVERTISEMENTS IN

THE GARDENERS' MAGAZINE.

	£	s.	d.
Five Lines and under	£0	2	6
Per Line beyond	0	0	6
" Inch	0	6	0
" Half Column	1	10	0
" Column	3	0	0
" Page	9	0	0

A reduction from above is made when a series is taken.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— & Co.

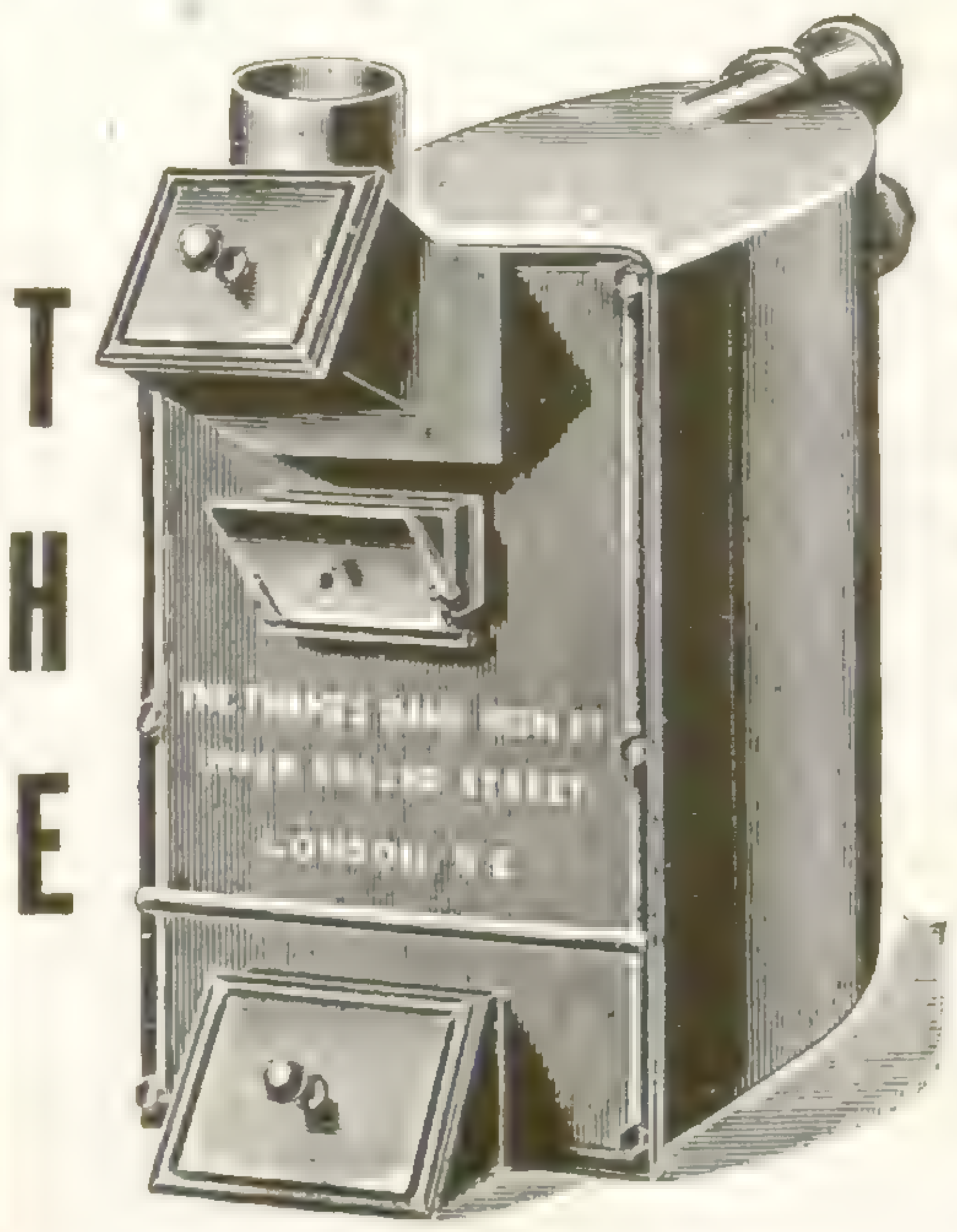
Offices: 148 and 149, Aldersgate Street, London

'Phone: Hop. 763.

When next a Small Boiler you require

TRY

THE


THE THAMES BANK IRON CO.
UPPER GROUND STREET
LONDON, S.E.

HEEL

NONE TO BEAT IT.

THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.

4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

By Royal Warrants

To H.M. King George V. To H.M. Queen Alexandra

A necessity for every up-to-date gardener

Jeyes' Horticultural Sprayer

Price 25/- Complete

Easy to work. Effective in use. Simple to keep in order. Easy to clean. Better in every way than the ordinary hand syringe.

For use with Jeyes' Horticultural Wash

Write for Pamphlet and Prices to
Jeyes' Sanitary Compounds Co., Ltd.
64, Cannon Street, London, E.C.

GARDENERS should write the man behind this boot for illustrated catalogue of reliable footwear.

We make sound, Scotch durable boots for the whole family. A joy to the feet.

Our "**Gardener" Boots** at **10/9** are a revelation.

NORWELL'S, PERTH, SCOTLAND.
C1 Established over 100 years.

MERRYWEATHER'S

614 PUMP

IS THE

Gardener's Friend.

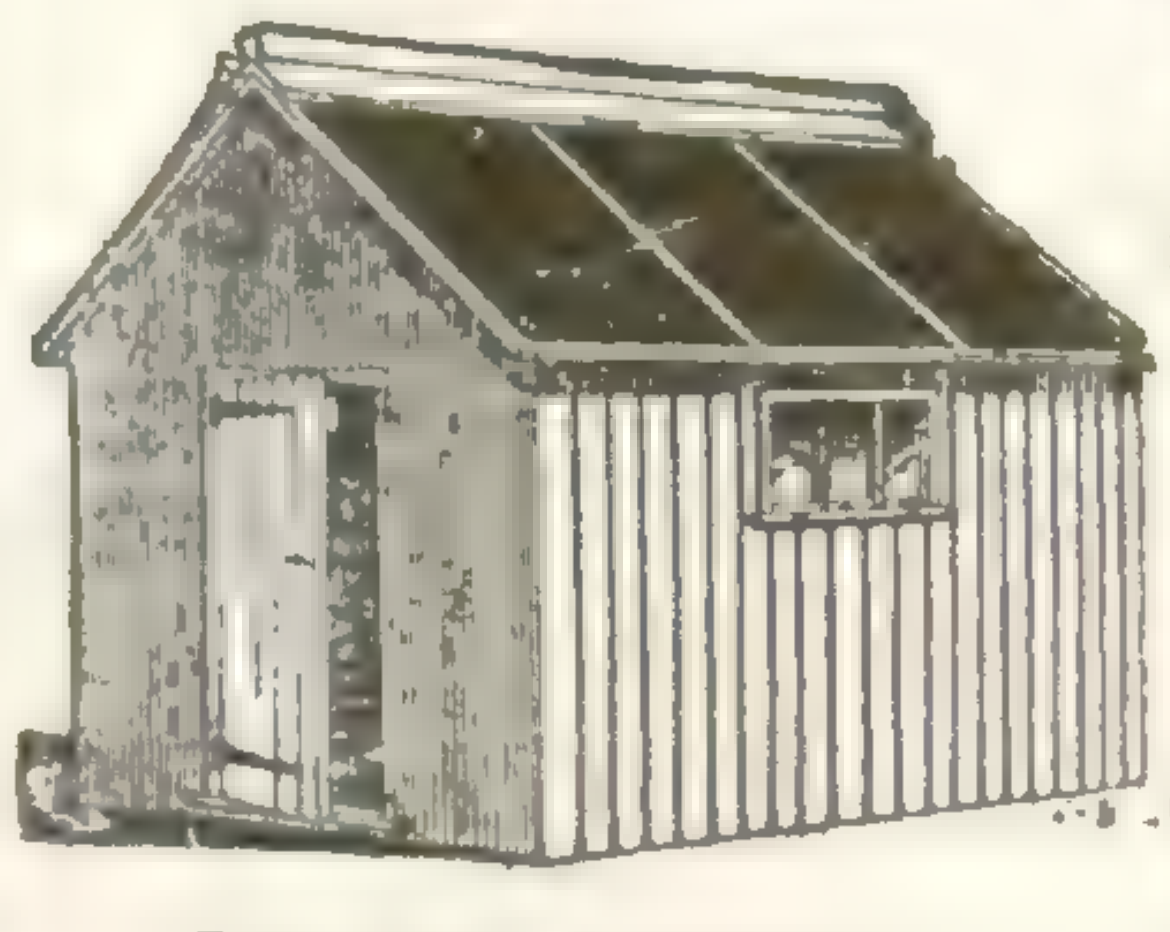
Easy to Work. Simplicity Itself.

Write or Call—

**63, Long Acre,
LONDON, W.C.**

THE CHEAPEST IN ENGLAND.

NO. 60.



Copyright Registered.

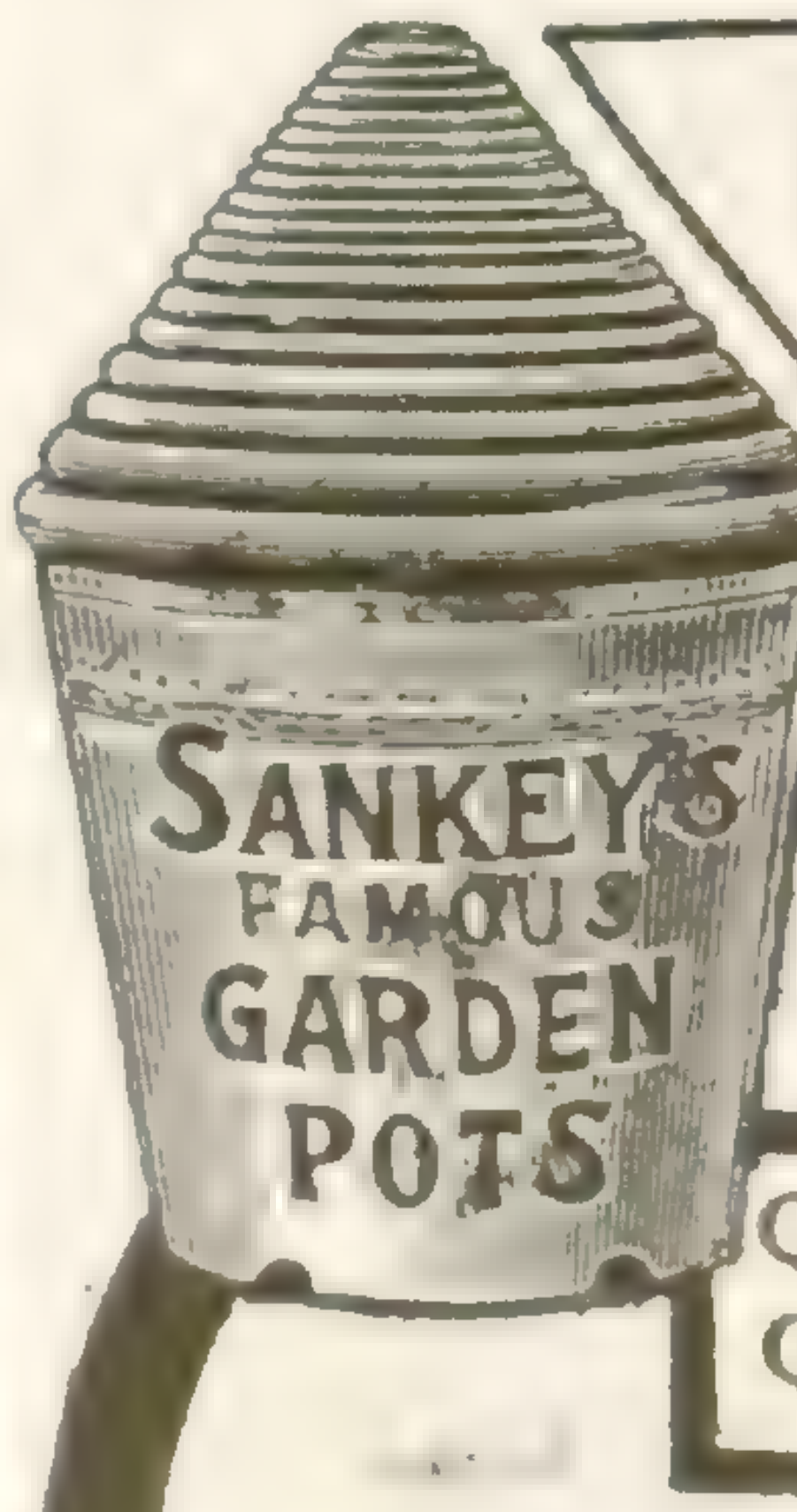
Portable Buildings. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

Sizes.	Cash with Order.	Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	17/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	20/0

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
Established 70 Years. *BEDFORD.*
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.



FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant — Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 31; married when suited; excellent references. Address, Closes Hall, Gisburn, Clitheroe.

GARDENER (Head or Single-handed); life experience, Flower, Fruit, and Vegetables; married, no family; age 27; good references; life abstainer. VINALL, Terry Villa, Knaphill, Woking.

GARDENER (Head Working).—Mr. WATSON can highly recommend C. WALLIS, where two or three are kept; been here six years as Second of five; age 31; married, two children. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head Working).—CAPTAIN USHER highly recommends R. Appleby as above; life experience in all branches; thoroughly understands Planning and Laying Out; also Land and Stock; many years' excellent character. Address APPLEBY, 12, Brewster Gardens, North Kensington, London, W.

GARDENER (Head of two or more) seeks RE-ENGAGEMENT; life experience. Inside and Out; 23 years Head in last place; good references. J. KIGHTLEY, Roade, Northamptonshire.

GARDENER (Head) seeks RE-ENGAGEMENT with Lady or Gentleman requiring thorough practical Man in all branches; last place 5 years Head with 12 to 8 men under, highest references from all employers; age 34; married, no family; abstainer.—F. WESTRON, Sunnybrae, Cippenham, Slough, Bucks.

GARDENER (Head Working); experienced in Vines, Peaches, Melons, Cucumbers, Stove and Greenhouse Plants, Flower and Kitchen Gardens, Hardy Fruit, etc., previously at Welbeck and Newstead Abbey; excellent references, age 33, married, no family. WM. GIBSON, 128, Lansdowne Road, Leicester.

GARDENER (Head Working) seeks RE-ENGAGEMENT; thoroughly experienced all branches; 5 years as Head; energetic; highest references; age 32; married. WARNER, Road Manor Gardens, Bath.

GARDENER (Head Working); 17 years' experience in all branches; 5 years Head; age 34; married, one child; good references. NELLER, 49, Carnot Street, Leeman Road, York.

GARDENER (Head Working, where one or 2 kept); 10 years in present situation; 5 years as Second; age 31; single. Apply A. GIBBS, 68, Pope Road, Bromley, Kent.

GARDENER (Head, or good Single-handed); life experience; middle age; married, no encumbrance; well recommended. J. G., 101, Liverpool Road, Watford, Herts.

GARDENER (Single-handed, or where help is given); 17 years' experience, Inside and Out; age 32; married, no family; good references. G. EUDEN, 11, Clifton Road, Spring Grove, Isleworth.

GARDENER (Single-handed, or where help is given); 12 years' practical experience; 4 years in last situation; good references; single; age 36; abstainer. J. CHAPMAN, Ferry Hill, Chatteris, Cambs.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; aged 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (Second, Inside or Inside and Out); 16 years' good all-round experience; age 31; excellent references. W. PACKHAM, The Gardens, Moonhill Place, Cuckfield, Sussex.

JOURNEYMAN (Third), three years present situation; age 20. SYDNEY DRURY, Ivy Hatch, near Sevenoaks.

D. SKINNER, Head Gardener Lord Barrymore's Estate, Cordangan Gardens, Tipperary, Ireland strongly recommends M. Coffey to any Gardener requiring good Man for Pleasure Grounds and Kitchen Garden; age 24, married. Please address, COFFEY, 35, Bridgewater Street, Deansgate, Manchester.

GARDENER and BAILIFF seeks SITUATION, well up in Gardening in all its branches; nine years' excellent character, and several good testimonials of previous places. F. J. ASHDOWN, Chiddingfold, Surrey.

GARDENER (Under) seeks SITUATION; Inside and Out, where 3 or 4 are kept; age 32; ; well recommended; 4 years last place. ALLEN, 158, Station Road, Addlestone, Surrey.

GARDENER (Under) seeks SITUATION. three years' experience in the garden; excellent reference; age 18. E. APPLEBY, Little Rissington, Bourton-on-Water, Gloucester.

PRACTICAL MAN requires work as GARDENER (Help or with Nurserymen). Address, GREENSTONE, 3, William Street, Commercial Road, London, E.

MR. HARRIS, Serlby Gardens, Bawtry, wishes to recommend E. SPENCER, age 18, for Inside or Inside and Out; 2 years here; Bothy preferred.

MRS. WATSON-KENNEDY recommends IMPROVER (Inside or Inside and Out); age 18, four years' experience; can be well recommended by Head Gardener. B. GIBBS, Wiveton Hall Gardens, Cley, Norfolk.

COWMAN seeks SITUATION (Single-handed or Second); age 20; single; 6 years' experience with Cows, Pigs, Poultry, and used to Horses; please state wages. G. DOLLEY, High Street, Down, Kent.

YOUNG MAN seeks SITUATION to look after Electric Light and Garden; well up in all branches; nine years last situation. EDWARD VILLA, Street Cobham, Surrey.

YOUNG MAN (28) seeks SITUATION; help in garden; understands Horses, Cows; good references. E. TUGWELL, Friday Street, Holbrook, Horsham, Sussex.

YOUNG MAN, age 21, seeks SITUATION. Inside and Out; strong, willing, abstainer, 7 years general experience; 2½ years last place; disengaged. E. STOPPS, Stowe, Weedon, Northants.

REV. R. HOLDEN recommends for employment in Garden, YOUTH, 17; strong, willing; excellent character, been with him 3½ years. E. ROBERTS, Gate House, Nuttall, Nottingham.

SITUATION COUPON

For OCTOBER 14, 1911.

To the Advertisement Manager of "THE GARDENERS' MAGAZINE," 148 & 149, Aldersgate Street, London, E.C.

Please Repeat my Advertisement.

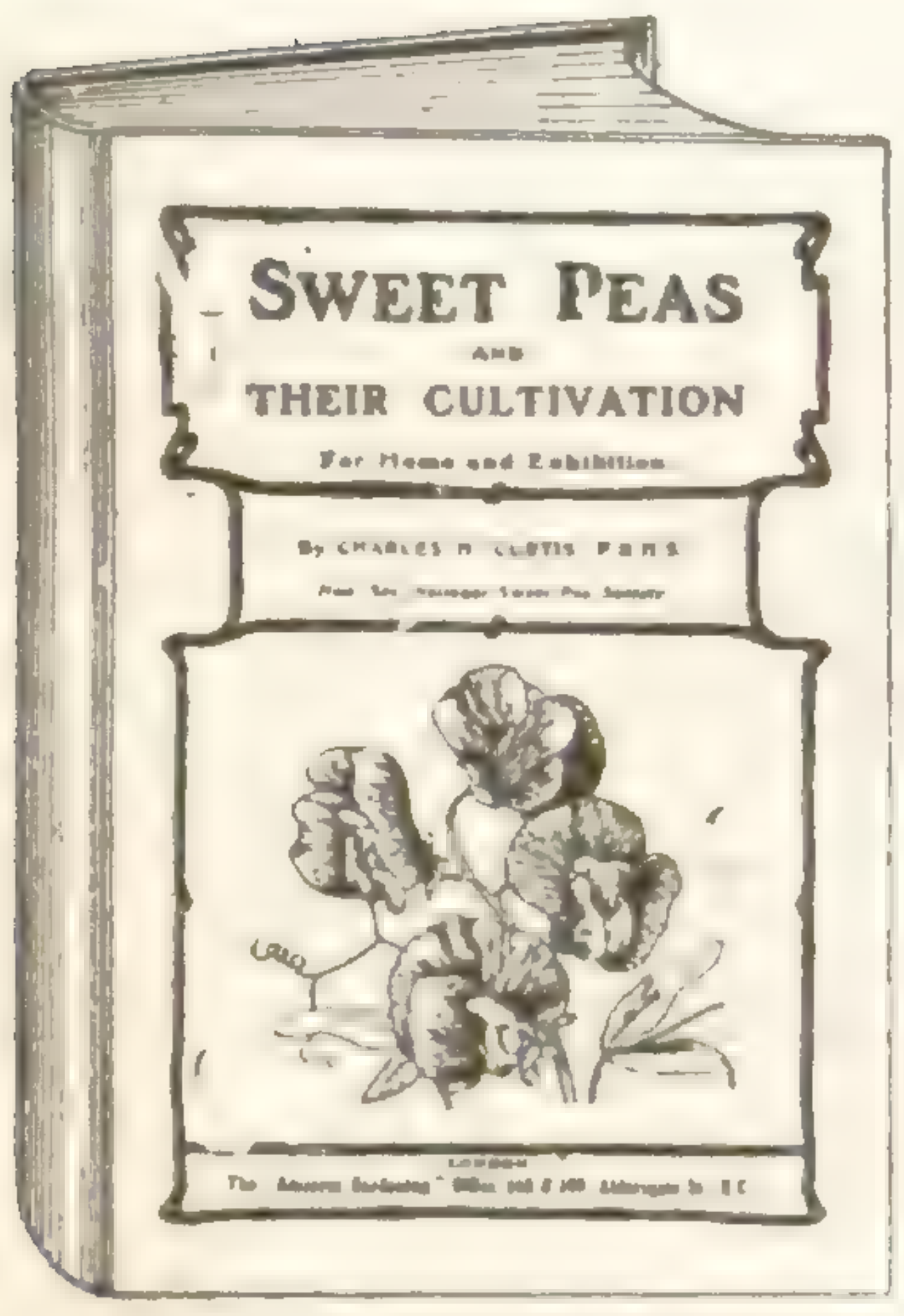
Name..

Address..

....

Date..........................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.



FOR AUTUMN SOWING.

THIRD EDITION. Price 1/- net, by post 1/2.

SWEET PEAS
AND THEIR
CULTIVATION
FOR HOME AND EXHIBITION.

By
CHAS. H. CURTIS, F.R.H.S.,
Hon. Sec. National Sweet Pea Society.

- THE BEST SWEET PEAS.
- HOW TO GROW THEM.
- MANURING.
- WATERING.
- STAKING AND TYING.
- RAISING NEW VARIETIES.
- DISEASES AND INSECT PESTS.
- EXHIBITING.
- Etc., Etc.

Fully Illustrated.

ORDER FORM.

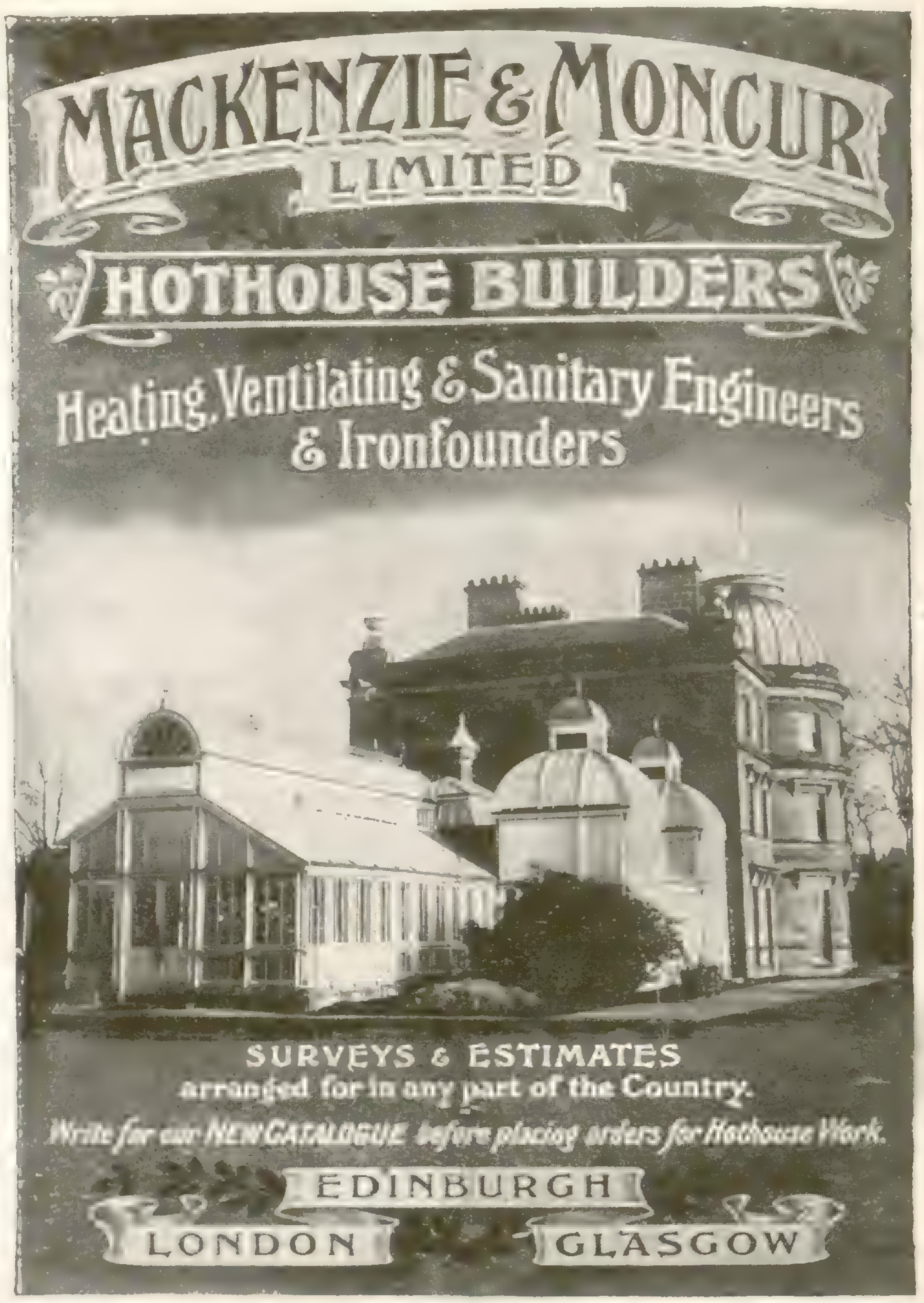
To the Publishers, "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, LONDON.

Please send me a copy of "SWEET PEAS AND THEIR CULTIVATION" by post, for which I enclose remittance of 1/2.

Name ....

Address ....

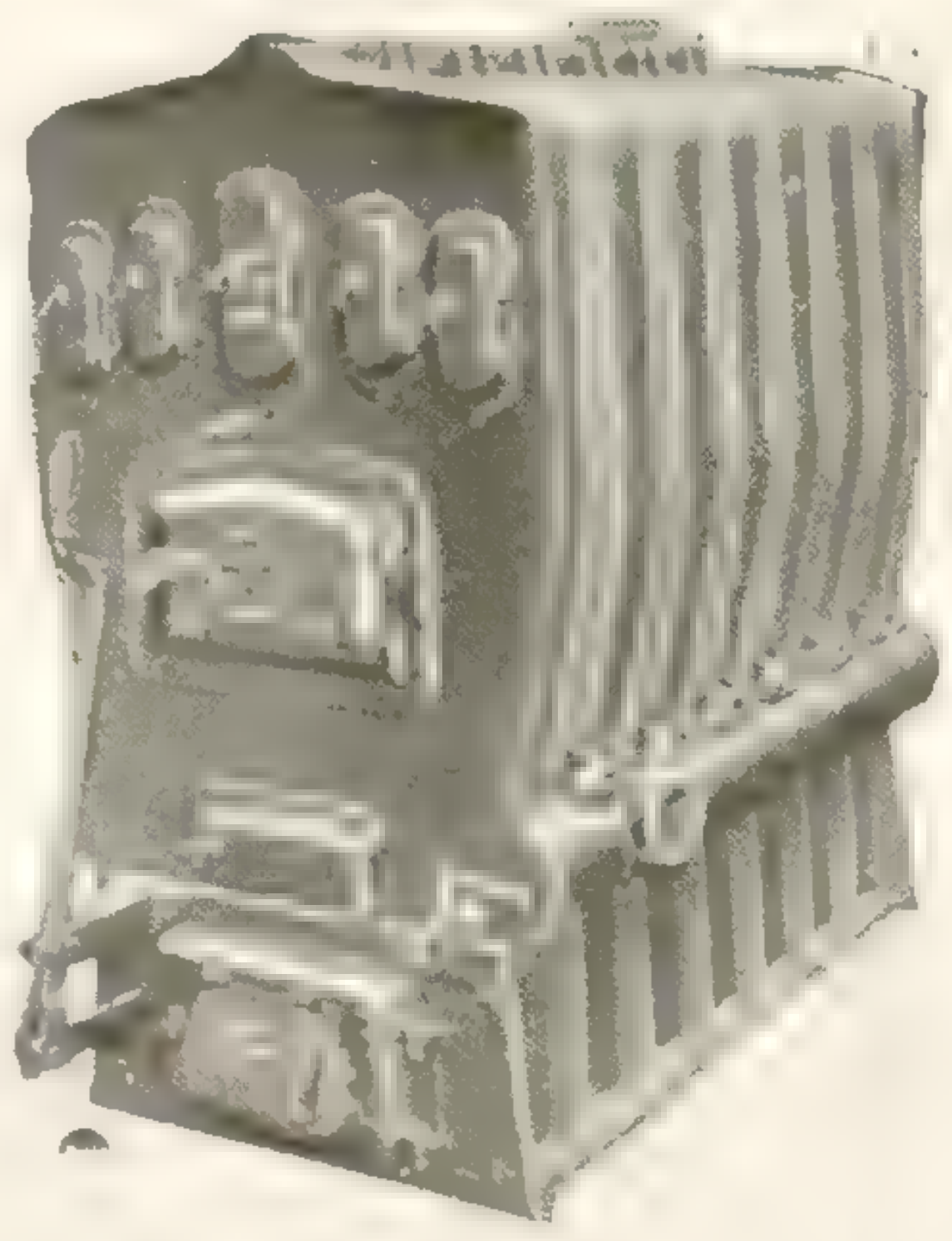
....



MACKENZIE & MONCUR
LIMITED
HOTHOUSE BUILDERS
Heating, Ventilating & Sanitary Engineers
& Ironfounders

SURVEYS & ESTIMATES
arranged for in any part of the Country.
Write for our NEW CATALOGUE before placing orders for Hothouse Work.

EDINBURGH
LONDON GLASGOW



Kinnell's Boilers

THREE LEADING TYPES:—

The **"ANGLIAN," Sectional,** heats 800 to 8,000 ft. 4in. pipe.
The **"ROCHFORD," Tubular,** heats 600 to 8,000 ft. 4in. pipe.
The **"HORSE-SHOE"** for the small Greenhouse.

Saddle Boilers, Trentham Boilers, and all classes of Pipes, Fittings, etc., ready for immediate despatch.

Write for List No. 77, post free.

CHARLES P. KINNELL & Co., Ltd., 65, & 65a, Southwark St., London, S.E.

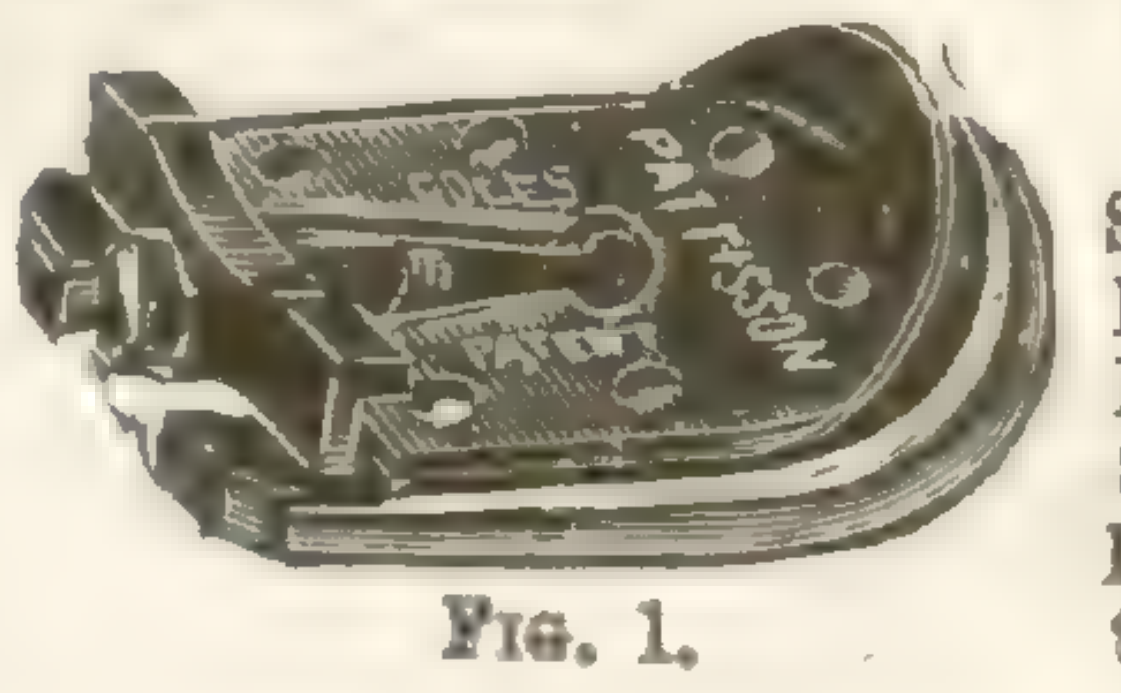


Fig. 1.

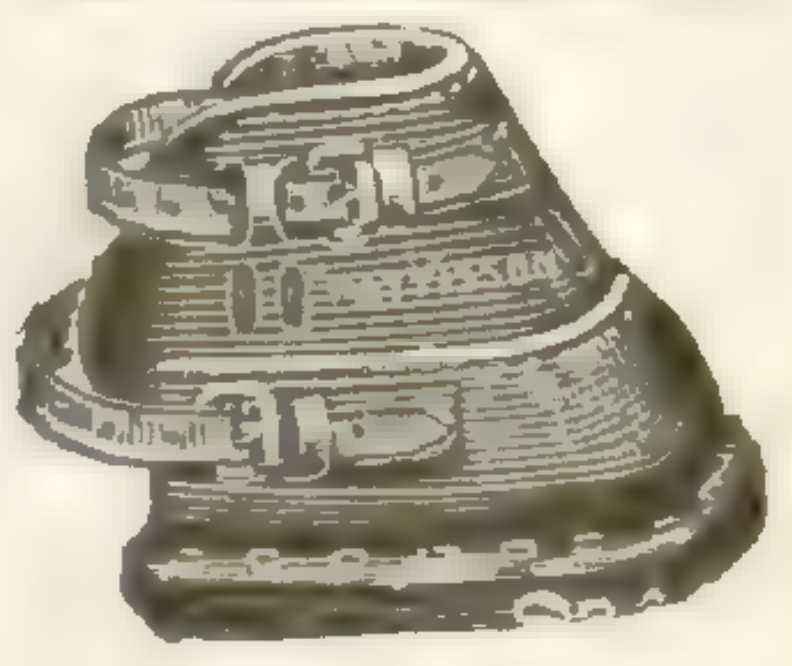


Fig. 2.

ONCE USED. ALWAYS USED. The 'PATTISSON' LAWN BOOTS

Simplest! Strongest!
Most Economical!

Soles of Best English Sole Leather (Waterproofed) with Motor Tyre Rubber Studs or **Solid Rubber.** Fig. 1 can be REFITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Used in the ROYAL and in thousands of the PRINCIPAL GARDENS

Silver Medal—
Royal Horticultural Society.
Hundreds of Testimonials.
The Field says: **"As good as anything that could be devised."**

Illustrated Price List from—
H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM S.W.

There's a Call from the Garden for

CLAY'S

Sold everywhere in **6d.** and **1/- Tins**; and **in Branded and Sealed Bags**:—7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs., **7/6**; 56 lbs., **12/6**; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

EVERY GENUINE TIN, BAG, AND SEAL BEARS THE TRADE MARK, AS AT SIDE.

CLAY'S LONDON FERTILIZER
TRADE MARK.

CLAY'S SUCCESSFUL GARDENING.—A thoroughly comprehensive, informing, up-to-date Publication. Fourth Edition (Second Reprint). 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under:

CLAY & SON, Manure Manufacturers and Bone Crushers, Stratford, London, E.

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls

ILLUSTRATED FRUIT NUMBER.

THE GARDENERS' MAGAZINE.

No. 3,024. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, OCT. 14, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) Twopence

BARR'S Hyacinths, Tulips, Daffodils, etc. for pots and bedding. Finest quality. Moderate prices. Descriptive Catalogue free. BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON

JAMES GRAY, Horticultural Builder, Chelsea, S.W., advises Gardeners to watch their Hot Water Heating Apparatus this month. If boilers show signs of wear, it would be wise to have them examined at once. Attention can be obtained by means of a postcard, telephone call (201 Western), letter, or wire, to Gray, Chelsea, London.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

CHRYSANTHEMUM TUBES for exhibiting; highly commended by N.C.S. Apply SPRINGTHORPE, F.R.H.S., St. Albans Road, Kingston-on-Thames.

GARDEN HOSE and FITTINGS, all sizes and lengths, best quality; list free.
HEATHMAN,
Hose Factory, Parson's Green, London, S.W.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue Free. J.E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

BORDER CARNATIONS.—12 finest vars. ever offered, 5s. 6d.; pairs, 10s. 6d., carr. paid: Elizabeth Shiffner (golden-orange), Linkman, King Edward, T. E. Henwood, Cardinal, The King (brilliant scarlet), Agnes Sorrel, Splendour (purple), Santa Claus, Pathfinder, Duchess of Wellington, Hildegarde, or Sir Galahad. Also 12 fine vars, 4s. 6d.; pairs, 8s. 6d., car. paid: Cardinal, The Stoker, Mrs. R. Morton, Agnes Sorrel, Hildegarde, Pagan, Rony Buchanan, Mrs. Guy Sebright, Hesperia, Santa Claus, Duchess of Wellington, Bonnie Dundee, or others. Strong rooted layers. Lists free from H. LAKEMAN, Carnation Specialist, Thornton Heath, Surrey.

CONSERVATORIES AND WINTER GARDENS, Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue free. BOULTON and PAUL, Lim., Norwich.

RETARDED LILY OF VALLEY. I. Qual., 5s. 6d. 100. Supply short: order early. Greenhouse Climbers, in 20 varieties, 7s. 6d. doz. Herbac. Calceolarias and Streptocarpus Kewensis 1s. 6d. doz., carr. paid KOERING, The Nursery, 110, Brockley Road, S.E.

WHY BUY FOREIGN DOORS?—We make all kinds of woodwork to compete against foreign. Timber, portable houses, woodwork supplied for United Kingdom or export. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

NARCISSUS.—Tulips, Hyacinths, etc. All the leading and best varieties, from 4s. 6d. per 100. Ask for illustrated price list, post free. Satisfaction guaranteed. C. F. A. VAN DER SLUYS, F.R.H.S., La Ramée, Guernsey.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

WEBBS' NAMED HYACINTHS FOR POTS AND GLASSES.
12 Hyacinths, 12 good varieties, 5s.
24 Hyacinths, 12 good varieties, 10s. 6d.

WEBBS' EARLY SINGLE TULIPS FOR BEDDING AND POT CULTURE.
9d. per doz.; 4s. 6d. per 100; 40s. per 1,000.

WEBBS' MIXED DAFFODILS FOR MASSING IN THE MIXED BORDER, etc., 2s. 6d. per 100; 21s. per 1,000.
WEBB and SONS, The King's Seedsmen.
WORDSLEY, STOURBRIDGE.

BUNYARD'S CATALOGUES
Free on Application.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

KENT STRAWBERRY PLANTS
NEW CATALOGUE READY.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

LAXTON STRAWBERRIES for immediate planting. Fine plants of all the leading varieties in little pots, 15s. 100. Open ground runners, 5s. 100. Catalogue with full particulars gratis
LAXTON BROTHERS, Bedford.

CLAY'S MANURES, CRUSHED BONES
(See page vii.)

CLAY'S FERTILISER IS UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

WALLFLOWERS.—Sutton's Giant Blood Red, magnificent, planting size, very choice. 50, 1s. 3d.; 100, 2s., free. Money returnable if not satisfied. ROGERS, Tennyson Road, Hutton, Essex.

RICHARDSON'S for GLASSHOUSES and HEATING APPARATUS, for full advertisement see back page. Darlington.

PERRY'S NEW CATALOGUES now ready.
BULB CATALOGUE.
PERENNIAL CATALOGUE.
DELPHINIUM CATALOGUE.
IRIS CATALOGUE.
FERN CATALOGUE.
} Free on application.
PERRY'S HARDY PLANT FARM, Enfield, Middx.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page viii.

WANTED, Viola Cuttings, Archie Grant, Mrs. Chichester, White Swan, Marchioness, Admiration, Hector McDonald, Miss Proctor, Stanley Saul, Lizzie Paul, King Cup, Kitty Bell, Isolde, Royal Sovereign, Sydney, Rufford Abbey, Bronze Kintore, Willie Farmer, White Empress, Goldfinch. Also Cuttings of Calceolaria Golden Gem. Cash or Exchange. Price and quantity to H. B. MAY and SONS, The Nurseries, Chingford.

ALPINES.—100 in 50 good varieties, carriage paid, £2. Half and quarter quantities at same rate.
WHITELEGG and PAGE, Chislehurst.

POULTRY AND KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses. Portable buildings, etc. Catalogue gratis.

SUTTON'S NAMED HYACINTHS.
(For pots and glasses).
12 named Hyacinths, in 12 good varieties, 5s.
24 named Hyacinths, in 12 good varieties, 10s. 6d.

SUTTON'S DAFFODILS (mixed).
Suitable for effective masses in the border.
Per 100, 3s.; per 1,000, 27s. 6d.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

NOW IS THE TIME TO PLANT
Kelway's lovely Pæonies, Delphiniums, and their celebrated Artistic Hardy Borders: packed ready for planting.
KELWAY'S CHOICE named Pæonies, from 27s. per doz.
KELWAY'S CHOICE named Delphiniums, from 24s. doz.
For information about the Colour Borders send 6d. for "Gardens of Delight."
KELWAY AND SON,
The Royal Horticulturists,
LANGPORT, SOMERSET.
230 Grand Prizes, Gold Medals, etc.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
Capt. ———, Londonderry.
10th February, 1911.

"I have received your Horticultural Manual, and on looking through it, I felt compelled to write and thank you for it. To an enthusiastic amateur gardener like myself, who, through reading the weekly papers on the subject, is familiar with many of the names but not with the corresponding flowers, this book must be absolutely invaluable, and the artistic way in which it is got up, and the beautiful photographs with which it is embellished, make it a treasure well worth having. I have had the Catalogues of most of the leading firms sent to me, but nothing compares in the remotest way with yours."

CARNATIONS AND PICOTEES for Exhibition or Border, 12 lovely kinds for 5s., carriage paid for cash; 25s. to 35s. per 100. List free.
CHAS. WALL,
CARNATION GROWER, BATH.

GREENHOUSES and CONSERVATORIES. Distinctive Designs and Finished Workmanship. Write now for ILLUSTRATED CATALOGUE. CARTER and HOWARD, Horticultural Builders, Kingston-on-Thames.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.

XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.

XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, RICHARDS' ARSENATE OF LEAD PASTE, CUCASA POWDER (fungicide), etc. Don't forget to ask your N. S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street London. S.E.

PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J. R. PEARSON & SONS,
LOWDHAM, NOTTS.

ORCHIDS

1,000 DUPLICATES, CYPRIPEDIUMS AND ODONTOGLOSSUMS. Very Cheap.

Some Valuable Examples amongst them. Write for List to—

REV. J. CROMBLEHOLME, CLAYTON LE MOORS, ACCRINGTON.

DAFFODILS AND NARCISSUS.

Sir Watkin, very free flowering, 3s. 100. Horsfieldii, handsome bloom, 2s. 6d. 100. Mrs. Langtry, very choice, 2s. 6d. 100. Gardenia, double white flower, 1s. 100. Double Daffodil, 1s. 100. Crocus, all colours, 9d. 100. Snowdrops, 5s. to 7s. 6d. 1,000. Tulips, splendid colours, 2s. 100. Narcissus, large trumpet, 7s. 6d. 1,000. Narcissus, mixed (10 sorts), 5s. 1,000. Spanish Iris, 7s. 6d. 1,000. Pheasant-eye, 5s. to 7s. 6d. 1,000.

Send for Lists before ordering elsewhere.

CROSS & SON, Daffodil Nurseries, WISBECH.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices. Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

CORONATION CARNATIONS.

I am proud to inform my patrons and friends that the unique honour and privilege of supplying the Carnation Blooms for the Coronation bouquets was entrusted to me in its entirety, a fact which speaks volumes for the unequalled excellence of my flowers, and places my culture on the topmost rung of the Carnation ladder.

Catalogue of the finest collection ever offered, free on application to

CHARLES BLICK, Warren Nurseries, Hayes, Kent.

FOR SALE, [illegible] Backer's Cups and Tubes; Also Thompson's "Gardener's Assistant," [illegible] also "Cassell's Popular Gardening." What offers?

TURNHAM, [illegible]

J. J. THOOLEN, The EXPORT Nurseries,
Heemstede, Haarlem, Holland,

ESTABLISHED 1884,

Has the honour to announce that his Illustrated Price List of Bulbs and Plants in English, Autumn, 1911, at lowest prices, will be sent post free on application. **No Charge for Packing. Orders of 10/- and above entirely Free to Destinations** in England, Scotland, and Ireland, etc. First Quality guaranteed.

Some sorts of Bulbs noted out of Price List.

	Per 100. s.	d.	Per 1,000 s.	d.
Hyacinths, in the finest mixture for bedding or forcing	7	8	72	4
Hyacinths, single, first size, named, in 25 leading sorts, red, white, and blue vars., equal quantities, my selection	15	0	—	
Tulips, single early, in the finest mixture	2	0	18	4
Tulips, Darwin, mixed	3	0	25	0
Tulips, double, in the finest mixture...	2	2	20	0
Anemones, single mixed	1	4	12	0
Anemone, The Bride, pure white ...	1	4	12	0
Crocus, 1st size, in the finest mixture	1	4	12	0
Crocus, 2nd size, in the finest mixture	0	9	7	0
Scilla campanulata, blue bells	2	0	—	
Scilla campanulata, white bells	2	0	—	
Scilla sibirica, rich blue	1	6	14	6
Iris, Spanish, mixed	0	7	5	0
Iris, English, mixed	2	0	16	8
Narcis., single, in the finest mixture...	1	4	12	6
Narcis., Trumpet, in the finest mixture	2	6	20	0
Narcis., double, fine mixture	2	6	20	0
Narcis-Polyanthus, finest mixed ...	3	6	30	0
Snowdrops, Elwesi, the Giant Snowdrop	1	6	13	6
Ranunculus, French, double mixed ...	0	9	7	0

250 Bulbs of the same kind will be charged at the 1,000 rate; 25 at the price per 100; 6 at the price per 12.

Ask for Illustrated Price List and see the Collections.

CHEALS'

FOR FIRST-CLASS

ORNAMENTAL TREES,
ROSES, FRUIT TREES,
AND
HARDY FLOWERS, etc.

NURSERIES 113 ACRES.
CATALOGUES FREE.

J. CHEAL & SONS,
The Nurseries, CRAWLEY.

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS**, and an endless variety of Choice **ORCHIDS**.

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX

AMERICAN TREE CARNATIONS, fine bushy plants for winter flowering, in 5-inch pots, best varieties, 10s. 6d. per dozen. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

LAXTON'S
FRUIT TREES
IN ALL SHAPES
CATALOGUES GRATIS
LAXTON BROS
BEDFORD

MY SWEET PEA LIST

will be the most time-saving, interesting, profitable, and pleasure-giving list in the world. Post-card commands it.

I am being honoured with **novelties** from Aitken's, Chapman, Cole, Burpee, Deal, Dobbies, Hemus, Lumley, Stark, Trevethick, Ward, and many others.

My stock of last year's novelties are, with few exceptions, English grown and rogued by **genuine Sweet Pea lovers.**

My Special Spencer Mixture contains Earl Spencer, Nancy Perkin, Syeira Lee, Thomas Stevenson, Dainty, and Helen Pierce Spencers, etc. This I **guarantee. 1s.** per oz., **1s. 10d.** per 2oz., **3s. 6d.** per 4oz., post free.

My Helen Pierce Spencer Seedlings will be a source of profit and pleasure to the grower. The stock has been rogued down to Spencers at great expense. A selection from this mixture properly fixed will make a small fortune for the owner. **1s. 6d.** per oz., **2s. 6d.** per 2oz., post free.

My Special Seedling Spencer Hybrid Mixture is from two of our keenest British hybridists, who have more stock than they can possibly handle as it ought to be. **Such seed never offered before. 1s. 6d.** per oz., 2oz. for **2s. 6d.**, post free, worth 10s. per oz., as it is absolutely the result of their life's work. Virtually selling proverbial £1 for one penny.

Sole distributing agent for Mr. F. Herbert Chapman's Iolanthe, the most opaque white Sweet Pea in existence. 8 seeds, **6d.**; 20 seeds, **1s.**

I hope to have my list ready early in October.

G. H. MACKERETH,
The Sweet Pea Clearing House, ULVERSTON.

Orchids! Orchids!! Orchids!!!

The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application.—**J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana, Vanda Cœrulea Lushai Hill variety, dark blue type; Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.

FREEHOLD RESIDENCE, modern, three reception, 5 bed-rooms, boudoir, kitchen and scullery; splendid grounds, 10 acres; 7 greenhouses, stabling, cowsheds, calf-shed; every convenience and comfort; choice fruits and large orchard. H. THOMLINSON, Four Marks, Alton.

BUSINESS CARDS.

CARNATIONS.

ALLWOOD BROS., Haywards Heath, Sussex.
Perpetual Flowering Carnation Specialists, Raisers and Growers.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex.
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners [illegible]

BULBS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Narcissi Tulips, Hyacinths, etc., Home-Grown.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London, N. (Tel.: [illegible] Palmers Green.)
Hybrids in flower, in great variety.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 1st Prizes. 3 Golds, at N.R.S. Shows, 1910. Ctlg. Free.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

Sales by Auction.

SALES NEXT WEEK.

WEDNESDAY NEXT, Oct. 18th, at Five o'clock.—Ornamental Palms and Plants, Azaleas, Rhododendrons, Camellias, Aspidistras, Standard Bays, etc., from Belgium.

THURSDAY and FRIDAY NEXT, Oct. 19th and 20th, at One o'clock.—The entire collection of Orchids, formed by Mr. H. Little, Esq., who is giving up their cultivation owing to ill-health. Mr. Little has been an ardent collector for over 30 years, and the collection, which is well known, contains a magnificent batch of 160 Lælia purpurata, including many of the finest varieties of this Orchid that are known. There are also numerous Lælio-cattleyas and Cattleya hybrids, Cypripediums, etc. Orchids in flower and bud from various sources.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view mornings of sale and catalogues had.

NURSERY STOCK.

Forthcoming Sales of Conifers, Evergreens, Ornamental and Forest Trees, Fruit Trees, Roses, etc.

Important to those engaged in Planting.

MESSRS. PROTHEROE and MORRIS desire to call attention to the following AUCTIONS:—

Oct. 16.—HAMPTON COURT.—At the Royal Gardens, by order of Mr. J. Naylor.
Oct. 17 to 20.—SOUTH WOODFORD.—At the Nurseries, by order of Mr. John Fraser.
Oct. 18.—CHART SUTTON, near Maidstone.—At Ladds Court, by order of Mr. A. Miskin, 34,000 Maiden Apples.
Oct. 23 to 25.—MILFORD, near Godalming.—At Milford Nurseries, by order of Messrs. Maurice Young and Son.
Oct. 26 and 27.—GROOMBRIDGE, near Tunbridge Wells.—At the Nurseries, by order of Mr. E. Hollamby.
Nov. 1.—SHORTLANDS, Kent.—At the Shortlands Nursery, by order of Mr. J. Bryant.
Nov. 2.—UPTON COURT, Slough.—At the Nurseries, by order of the Executors of B. F. Slocock, deceased.
Nov. 3.—CROWBOROUGH.—White Hill Nursery, by order of Mr. A. Welfare.
Nov. 6 to 8.—CHERTSEY.—At the Ottershaw Nurseries, by order of Messrs. Fletcher Bros.

Other Sales are in course of arrangement. Catalogues of any sales forwarded free by post on application to the Auctioneers, 67 and 68, Cheapside, E.C.

DUTCH BULBS

10,000 Lots Sold Weekly.

SALES EVERY DAY
(SATURDAYS EXCEPTED),
At 10.30 o'clock, at
PROTHEROE and MORRIS'
Central Sale Rooms,
67 & 68, CHEAPSIDE, LONDON, E.C.
Catalogues Free.
COMMISSIONS EXECUTED.

DUTCH BULBS, PERENNIALS, ROSE TREES, SHRUBS.

MR. J. C. STEVENS begs to announce that his **Sales by Auction** are held every **MONDAY, WEDNESDAY** and **THURSDAY** at **12.30.**

Catalogues post free.

Lots purchased, packed, and forwarded to all parts.

STEVENS' AUCTION ROOMS
(Established 150 years),
38, King Street, Covent Garden, London, W.C.

SALES DAILY (SAT. EXCP.) AT 12.30.
First Size Hyacinths, Tulips,
Daffodils, Narcissi, Crocus,
Snowdrops, etc.

BULB SALES BY AUCTION.

Lotted
to suit all Buyers,
Catalogues of Auctioneers,
JOHNSON DYMOND & SON,
"City Auction Rooms" (est. 1793),
38 and 39, Gracechurch Street, LONDON, E.C.

A SPECIALITY FOR MORE THAN 50 YEARS.

POT VINES

Exceptionally Fine this Season.
Inspection Invited.

J. R. PEARSON & SONS, LOWDHAM, Notts.

MESSRS. PULHAM & SON
Have been honoured with a Warrant of Appointment as
∴ ROCKWORKERS ∴
to His Majesty King George V.
They are now engaged in the construction of the extensive Rock Garden at Wisley, for the Royal Horticultural Society.

PULHAM & SON,
71, Newman Street,
LONDON, W., and BROXBOURNE.
Our Work has stood the test of time.

TREE CARNATIONS

The Newest and Best Varieties.
Strong, healthy and well-rooted plants only supplied
Catalogues free.
E. J. WOOTTEN, Fairoak, EASTLEIGH.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,
ORCHID SPECIALISTS,
IMPORTERS, EXPORTERS, RAISERS & GROWERS.
PRICED ILLUSTRATED CATALOGUE FREE.

RIVERS'

Fruit Trees, Roses,
Vines, Figs, Oranges,
AND
Orchard House Trees.

A LARGE AND SELECT STOCK ALWAYS ON VIEW.

ILLUSTRATED AND DESCRIPTIVE CATALOGUE.
POST FREE 3d.

THOMAS RIVERS & SON
Sawbridgeworth, Herts.
STATION: HARLOW, G.E.R.

100,000 BORDER CARNATIONS
EVERY GOOD VARIETY IN COMMERCE.
Healthy Plants. Popular Prices.
Largest Growers and Most Successful Exhibitors in the United Kingdom.

ARTHUR R. BROWN, Ltd.,
Wychall Nurseries, Kings Norton.
Catalogue on Application.

TURF.

suitable for Lawns, Bowling Greens, etc.; a quantity of splendid old Turf for Sale, cheap on rail.
Sample and price—
HOLMES, Station Road, Letchworth.

W. SEABROOK & SONS

offer a very fine stock of
FRUIT TREES
AND ROSES.
Fully Illustrated Catalogue sent post free on application.

CHELMSFORD

PLANTING SEASON.
SEND FOR OUR
Descriptive Catalogue
OF
Ornamental Trees and Shrubs, Roses, Rhododendrons, Climbers, Fruit Trees, Forest Trees, Herbaceous and Alpine Plants.

Advice given on all matters appertaining to
LANDSCAPE GARDENING.

GEO. JACKMAN & SON,
Woking Nurseries, Surrey.
Established over a Century. (Nurseries 200 acres)

ORCHIDS.

If you have a Greenhouse sufficiently heated to keep out the frost, write for our

Amateur's Guide,

giving treatment and all particulars. Illustrated.

MANSELL & HATCHER, LTD.,
RAWDON, via LEEDS.

CARNATIONS. AURICULAS. PINKS.

The NEW ILLUSTRATED CATALOGUE of above is now ready, and has been posted to all customers. The newest and best varieties are sold at the most reasonable prices.

Best **CARNATION** and **PICOTEE SEED** ready in October. 1/6 and 2/6 per packet.

AURICULA (Show and Alpine), PINK, and **POLYANTHUS SEED** now ready. 1/-, 1/6, to 2/6 per packet.

Send for Catalogue to

J. DOUGLAS,
Edenside, GREAT BOOKHAM.

SELECTED SEED POTATOES.

All varieties, grown on finest soil in Scotland and Lincolnshire.
Any weight supplied at low prices.
Prizes given for best results.
Before ordering elsewhere write for Catalogue.

A. J. SOLE, Seed Potato Grower,
PETERBOROUGH.

GLASS. | GLASS. | GLASS.

NICHOLLS & CLARKE, LTD.
Shoreditch, LONDON.

PAINT. Our List of PAINTS, COLOURS, VARNISHES, and BRUSHES on Application.
When sending please cut out this advt.

Flowers all the Year.

Now is the time to plant Kelway's Artistic Colour Borders to secure a profusion of rich, many-hued bloom throughout the year from early spring to late autumn. These borders, which can be planned to fill any space, are composed of the famous Kelway Pæonies, Delphiniums, Pyrethrums, Gaillardias, and other hardy herbaceous plants, and they thrive well, with a minimum of attention, in almost any soil.

NOW is the Time to Plant.

The cost is **15/-** or **25/-** for 10 square yards, according to selection. The plants are labelled and numbered in order of planting.

KELWAY and SON,
The Royal Horticulturists,
LANGPORT, SOMERSET.

Bulbs: NARCISSUS, DAFFODILS, TULIPS, &c.

All Good Flowering Bulbs; Worth Double.

NARCISSUS

100	**Emperor**	3/0
100	**Empress**	3/0
100	**Henry Irving** ...	4/0
100	**Golden Spur** ...	4/0
100	**Horsfieldii**	3/0
100	**Victoria**	3/0
100	**Obvallaris**	3/0
100	**Grandis**	3/0
100	**Sir Watkin**	3/0
100	**Stella**	1/6
100	**Princeps**	2/6
100	**Ornatus**	2/6
100	**Double Daffs** ...	4/0
100	**Dbl. White Narcis.**	2/6
100	**Pheasant Eyes**	2/6
100	**Frank Miles** ...	1/6

TULIPS

100	**La Reine**	3/0
100	**Cottage Maid**...	3/0
100	**Chrysolora**	3/0
100	**D. de Parma** ...	3/0
100	**Keizerkroon** ...	4/0
100	**Golden Crown**...	3/0
100	**Picotee**	4/0
100	**Bouton d'Or** ...	3/0
100	**Prince de Ligny**	4/0
100	**Duc Van Thol,** sgl	4/0
100	,, ,, dbl	3/0
100	**King of Yellows**	4/0
100	**Mixed Tulips** ...	1/6
100	**Mixed Darwins**	4/0
100	**Darwins** to name	10/6
100	**Parrot Tulips** to colour	2/6

Special offer in Mixed Narcis. and Daffodils, also Tulips for planting in grass, shrubberies, hedge rows, etc.

HYACINTHS

		per 100
12—1/9	to name in colours...... or	10/0
12—1/3	mxd in cols. or	9/0
12—1/9	**Roman White** or	12/0
100	**Iris, Spanish,** to name	1/6
12	**Iris, German** do.	6/0
12	**Iris, English** do.	1/6
100	**Anemones, Scarlet**	4/3
100	,, **The Bride**	1/9
100	,, **St. Brigid**	6/0
100	**Scilla Siberica**...	3/0
100	**Freesia**	3/0
100	**Summer Snowflakes**	5/0
12	**Lilium Candidum**	2/6
12	,, **Crown Imperial** ...	2/0
12	,, **Auratums**	7/0
12	,, **Croceums**	4/0
12	,, **Longiflorums**	4/0
100	**Snowdrops**	1/6
100	**Ixias,** to cols.	2/6
100	**Crocus,** in cols.	1/3
100	**Lily of Valley** ...	2/6
100	**Jonquils**	4/6
100	**Ranunculus** ...	3/0
100	**Montbretia**	3/0
100	**Aconites**	3/0
100	**Chionodoxa** ...	2/6
100	**Polyanthus Narcis**	3/0
100	**Alliums**	3/0
12	**Begonias,** choice	1/6
12	**Violets,** in sorts	1/6
12	**Xmas Roses** ...	4/0

Narcissus and Daffodils,	5/-, 7/6, 10/0 per 1,000
Tulips	10/-, 15/-, 20/- per 1,000

Many other varieties to offer; also all kinds of Herbaceous plants. Any of the above, half quantities at half price.

FRUIT TREES.—Apples, Pears, and Plums, all fruiting trees, **9/-** per dozen. Gooseberries. Currants (black, red, white), **3/-** per dozen. Loganberries and Raspberry Strawberry, **9d.** each. Raspberry canes, **3/-**, **4/-**, per 100. Strawberry Plants, **1/6** per 100.

All kinds of Flower and Garden Seeds, also POTATOES. Send for List,

J. W. CROSS, 10ld Grammar School, **WISBECH.**

Telegrams:
FRANK CANT,
COLCHESTER.

Telephone
No. 182.

CANTS' CHAMPION ROSES

THE FINEST STOCK IN THE KINGDOM.

Direct from

FRANK CANT & CO.,

Dept. B., **BRAISWICK ROSE GARDENS, COLCHESTER.**

Our Illustrated Catalogue post free on application.

VOL. LIV.—No. 3,024. SATURDAY, OCTOBER 14, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

◆

Fruit Trees in the Flower Garden.

While strongly advocating the planting on a liberal scale in the flower garden and pleasure grounds the finest of the trees remarkable for the beauty of their flowers, we have not at any time lost sight of the attractiveness in their season of blossoming of many of the fruit trees that are held in high estimation for their economic value. We have, indeed, on more than one occasion called attention to the charms of apple, cherry, pear and plum trees when enwreathed in their delicately-tinted or snowy-white flowers, and suggested that in many gardens some at least of them might with advantage be assigned positions in those parts where beauty rather than usefulness has first consideration. Within recent years our views on this aspect of fruit growing have been considerably strengthened, and, as the result of widely-extended observations, we are fully convinced that in gardens well-nigh innumerable fruit trees might with advantage be planted for the dual purpose of enhancing their charms in spring and contributing to the fruit supplies during the summer and autumn, and indeed to those of the winter also. While having no doubt as to the desirability, in many instances, of planting in the flower garden fruit trees that possess a high degree of utility, we regard the question associated therewith as one that should have the most careful consideration. It is not sufficient to say that because the beauty of the flowers of certain fruit-bearing trees is great, the trees should therefore be selected for the flower garden instead of those of kinds that are now being planted in large numbers for the production of colour effects. It is, for instance, advisable to take into account the difference between the great garden wherein there is ample space for placing each of the several classes of subjects that come under the gardener's care, in the positions most conducive to their attaining to a high state of development. There could not well be any objection to the arrangement in moderate numbers of groups of fruit trees in the pleasure grounds of large extent. On the contrary, they will add to their attractions and interest provided they are grouped with due regard to tasteful effect. But they ought not to be planted in such large proportions in relation to the other trees with which they will be associated as would be admissible, and indeed be advisable in gardens of moderate dimensions. From no garden, whatever its size, do we desire to see the magnolias, the scarlet chestnuts, the laburnums, the thorns, the amelanchiers, or the lilacs, which, although properly classed with the shrubs, may be grown into trees if so desired, wholly banished for the purpose of providing space for apple, cherry, pear, and other fruit trees. These kinds may be appreciably reduced in the smaller gardens, but in few of the larger ones will there be an occasion for reduction, as in most cases there will be no difficulty in providing room for a few groups of fruit trees. With regard to the relative merits of the ornamental kinds and those grown for their fruit, there is really no great difference in the attractiveness when in bloom of the apple trees and the ornamental crabs, but in effectiveness the double-flowered cherries are much superior to those grown for their fruits, beautiful as they unquestionably are. In the case of the pears and plums it is not possible to institute comparisons that would have any practical value, and the useful kinds of these fruits may be planted with the assurance that they are at least equal in beauty in their season of flowering to those which have no value as fruit bearers. In turning from a general consideration of the case in favour of the growth of fruit trees in the flower garden, to its bearing on the interest and usefulness resulting from the practice in gardens of moderate dimensions, much might be written in advocacy thereof. There is, however, no occasion to labour this point, but attention may be directed to the fact that the blossom of such apples as Blenheim Pippin, Golden Noble, Lane's Prince Albert, and Worcester Pearmain, to take a few at random, is not less beautiful than that of the species and varieties of Pyrus which have obtained much favour. There is no great difference, if any, in the length of the period over which the respective seasons of flowering extend, but the apples have an advantage, as in the majority of seasons the flowers will be followed by fruits which will give rise to more or less interest in the process of development, and it may be take on colouring, as in the case of Scarlet Pearmain, sufficiently bright to convert the trees into objects of great beauty. If the owner of a garden has an objection to apple trees in his flower borders or on the lawn, it is open to him to take a middle course, and plant such crabs as the Dartmouth, John Downie, and Transcendent, which are elegant in habit, profuse in flowering, and bear, in favourable seasons, an abundance of fruits that are remarkable for their brilliant colouring; and in the autumn the leaves take on tints of great beauty. The fruits of these crabs are useful as well as beautiful, as when ripe they are equally suitable for

MR. W. SEABROOK.

conversion into jelly and preserving whole. There is probably no object more beautiful than a cherry tree cultivated for its fruit when enwreathed in its snowy blossoms, but the flowers retain their freshness and beauty for a short period as compared with the double flowers of the ornamental kinds, whether of British or Japanese origin. But, as in the case of the apples, the flowers are followed by a crop of fruits which, if it escapes the birds that appreciate the rich flavour of cherries, will be attractive when ripening and useful when that process is completed. It is advisable not to plant cherry trees other than in limited numbers, for the blackbirds and thrushes are so partial to the fruits that they commence their attacks immediately they begin to change colour, and it is difficult to resort to protective measures on a large scale without some disfigurement of the flower garden. The Morello is the best kind for lawn planting, for the tree has an elegant habit, and the birds do not commence their attacks upon the crop at so early a stage as they do upon the sweet cherries. Usually very little damage is done until the Morellos are ripe enough for bottling and other purposes in the kitchen, and if gathered immediately on reaching this stage there will be no great loss. Pears and plums are attractive when in bloom, and of interest throughout the summer, and require no special reference except to say that the latter are the most profitable. In the selection of varieties and methods of planting the same course of procedure should be followed as in forming plantations in other parts of the garden, but an endeavour should be made to so arrange the trees as to produce a somewhat natural and picturesque effect.

Mr. W. Seabrook, the founder of the firm of W. Seabrook and Sons, The Nurseries, Chelmsford, has devoted many years of his life to the subject of dwarfing stocks for fruit trees. About thirty-five years ago he started experiments in the selection of paradise stocks for apples, and succeeded in securing a strain that produces excellent results. He was one of the first to anticipate the modern methods of fruit growing, which the paradise stock subsequently brought about. At that time the system of dwarf, quick-fruiting trees was in its infancy, as regards the market grower, at any rate, and orchards of dwarf trees were practically unknown. At the present time all the keenest growers are planting up dwarf trees. Mr. Seabrook was one of the first fruit growers to pack and grade the finest selected fruit in single layer boxes for Covent Garden, he having early realised that enhanced prices could be obtained by attractive packing and careful grading. For five or six years his firm has exported apples to the Colonies and other countries in yearly increasing quantities, the packing and grading being done on the Australian and Californian systems. The Home Nurseries at Chelmsford contain the experimental department, and here the questions of insecticides, fungicides, and manures have been studied for many years. Mr. Seabrook has always been one of the strongest advocates of spraying. During the last few years the nurseries have been greatly enlarged, and now comprise over sixty acres. Large areas are planted with cordon trees of Cox's Orange Pippin and other sorts of apples, and these are a feature of the place; this form of tree is greatly favoured by Mr. Seabrook, not only as being almost indispensable to the private gardener, but also for the production of first-grade fruit for market. Remembering the fine fruit shown, and splendid exhibits made by the Chelmsford firm, our readers will understand that Mr. Seabrook is an enthusiastic believer in an excellent future for fruit growing in this country.

"Gardeners' Magazine" Rose Number.—To fully meet the large and ever-increasing demand at this season of the year for information on the selection and planting of roses, we shall devote the issue for the 21st inst. chiefly to roses and rose culture. The contents will have special reference to the work requiring attention at this season of the year, and will include articles on "The Newer Roses," "Roses for Forcing," "Rampant Climbing Roses," "The Best Twelve Wichuraianas," "Preparation of Rose Beds," "How and When to Feed Roses," "Roses for House Walls," and "Grouping Roses."

The Times Experimental Station.—We have much pleasure in announcing that Mr. Harry Foster, son of the late Mr. Charles Foster, has been appointed director of the Times Experimental Station, Sutton Green, Guildford, and that he assumed full control of the important work on October 1. The protracted illness of the late Mr. Charles Foster threw the burden of responsibility on the shoulders of his younger son, and he acquitted himself with all credit. In addition to the general work of the station the trials of sweet peas for the National Sweet Pea Society and of vegetables for the National Vegetable Society, were conducted with marked skill and accuracy, and received the unanimous approbation of the committees and members of those bodies. Mr. Harry Foster completed his education at the Reading Collegiate School, subsequently gaining valuable scientific knowledge under Mr. F. J. Chittenden at Wisley, and practical experience under his late father at the station to the directorate of which he is now called. The high esteem and respect in which his late father was held will ensure for the son a welcome into horticultural circles, and a general wish that he may achieve a full measure of success in the discharge of his important duties.

Roses at the Coronation Exhibition.—As we have already stated in these pages, roses constituted a glorious feature throughout the summer months at the Coronation Exhibition, and the magnificent rose garden formed by Messrs. William Paul and Son, Waltham Cross, Herts, proved an immense attraction, and was regarded as a triumph in outdoor rose culture. Not so long since we had the pleasure of illustrating a portion of this beautiful garden. We therefore have much pleasure in stating that the firm have received a Diploma for Grand Prize from the Council of the exhibition.

First Congress on Small Holdings.—A committee associated with the Festival of Empire, Crystal Palace is for the first time bringing together a congress of those interested in agricultural matters, particularly as connected with small holdings. The congress is to be of a non-political character, and its deliberations are being devised upon the broadest lines. The opening of the congress is fixed for October 18, when Lord Carrington, the President of the Board of Agriculture, will deliver the inaugural address. The deliberations of the congress will extend over October 19 and 20. Subjects for discussion have been arranged in the following order: Opening Day.—Lord Carrington's address and a discussion upon "Credit, as Applied to Small Holdings"; October 19, "Production and Co-operation," "Marketing and Transportation"; October 20, Morning.—"Equipment of Small Holdings"; afternoon.—"Education from the Small Holders' Standpoint." The details of this congress have been delegated to a committee, of which Mr. R. A. Sanders, M.P., is chairman, and Mr. G. Montagu Harris, secretary of the County Councils' Association, is vice-chairman. Mr. W. H. Jones, Festival of Empire, Crystal Palace, is secretary to the congress.

"**R.H.S. Journal.**"—The first part of Vol. XXXVII. of the Royal Horticultural Society's "Journal" has been issued, and contains much that is of interest to horticulturists. The contents include summaries of the two Masters' Lectures given by Mr. G. F. Scott Elliot, one on "Single Seed Selection," and the other on the "Changing of Species," and papers on "Electricity in Relation to Horticulture," "Plants of Chatham Island," "Alpine Plants in their Native Haunts," "Alpine Gardens," and the "Origin and Structure of Aquatic Flowering Plants." Mr. E. A. Bunyard contributes an index to the illustrations of apples that have been published in the older pomological works. It is remarkably well done, and should prove useful to those who devote some share of their attention to the historical aspects of fruit culture.

Trial of Decorative Dahlias.—During the past season Messrs. H. Cannell and Sons, with a view to assist the National Dahlia Society in its endeavour to bring into prominence the dahlias especially adapted to garden decoration, conducted a comprehensive trial of decorative varieties in their home nurseries at Swanley. On the 5th inst. the executive committee visited the trials for the purpose of selecting the varieties of special excellence for the garden. Notwithstanding the unsatisfactory character of the past season, the whole collection of dahlias was found in a most satisfactory condition, and the heartiest thanks were accorded to Messrs. H. Cannell and Sons for their assistance in the preparation and cultivation of the plants under trial. Three marks of distinction were given to the following varieties for their effectiveness in the garden: Collarettes—Negro, Mad. Porrier, Mr. E. D. Till, Mons. Hugonard, A. Normene, H. Tarne, and Souv. de Chaubanne. Decorative—Kaiserin Augusta Victoria. Giant Decorative—Phenomané, Ethel May, Le Grand Manitou, F. Grinsted, Papa Charmet, and Gloire Lyonaise. Giant Single—Mrs. W. C. Jackson, White Cloud, and Evelyn Jackson. Pæony-flowered—Geisha, South Pole, Golden West, Glenton, Dr. Hogg, and Madame J. Coissard. Garden Cactus—Amos Perry and Effective.

Dinner to a Scottish Gardener.—On a recent evening Mr. Young, who has during the past three years occupied the post of gardener to the directors of the Crichton Royal Institution, Dumfries, and is leaving to take up an Irish appointment, was entertained at dinner by his brother gardeners and personal friends. There was a large attendance, presided over in a genial manner by Mr. J. Hutchison, Terregles, Gardens, Dumfries. During the evening, the Chairman proposed the health of Mr. Young, and presented him, on behalf of the company, with a smoker's companion as a memento of the function. Mr. Hutchison referred in fitting terms to Mr. Young's good qualities as a gardener and as a man, and assured him that the good wishes of many would go with him in his new appointment. Mr. Young made a suitable reply.

GREAT EXHIBITION OF BRITISH-GROWN FRUIT.

Some of the earlier exhibitions of British-grown fruit held under the auspices of the Royal Horticultural Society may have been more extensive than the one held on October 10 and 11, but we believe none was ever better than this in the matter of high quality.

The apples were superb in size, colour, and finish, and there was a marked absence of inferior and spotted examples; pears left little to be desired, and grapes were present in numbers and quality far ahead of anything seen for many years. The competition in trade and general classes was excellent, and everyone who took part in the provision and management of the display is deserving of congratulation.

COLLECTIONS OF DESSERT FRUIT.

The opening class in the schedule was for nine dishes of ripe dessert fruits, and here the premier award was a silver cup and £5. There were five entries, and Mr. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby, came first with large clusters of Muscat of Alexandria and Alicante grapes, and fine dishes of Golden Eagle and Princess of Wales peaches, Pitmaston Duchess and Doyenne du Comice pears, Cox's Orange Pippin apples, and Victoria nectarines; second award fell to Mr. S. Barker, gardener to the Duke of Newcastle, Clumber, Worksop, whose Madresfield Court grapes, Doyenne du Comice and Emile d'Heyst pears, and Ribston Pippin apples were very good; Mr. C. A. Cain, gardener to T. Pateman, Esq., Node Gardens, Welwyn, third.

Mr. J. Kidd, gardener to G. Meller, Esq., Newberries, Radlett, was awarded first prize for a good set of six dishes, consisting of large bunches of Alicante and Muscat of Alexandria grapes, Cox's Orange Pippin, and Ribston Pippin apples, Pitmaston Duchess pears, and The Countess melon. Mr. Prime, gardener to the Marquis of Salisbury, Hatfield House, Herts, second, and Mr. J. Vert, gardener to Lord Howard de Walden, Saffron Walden, third.

GRAPES.

There were three entries of five varieties of grapes, two bunches of each, and the veteran grower, Mr. J. H. Goodacre, secured the silver cup and first prize with nicely finished clusters of Muscat of Alexandria, Madresfield Court, Alicante, Muscat Hamburgh, and Chasselas Napoleon; Mr. S. Barker, Clumber Gardens, came second with very heavy bunches of Barbarossa, and neat, well-coloured examples of Madresfield Court, etc.; there were only two prizes offered, so Mr. J. Kidd's set of grapes received no recognition.

For four varieties of grapes, selected from a specified list, two bunches of each, Mr. J. Shelton, gardener to Lord Hillingdon, Wildernesse, Sevenoaks, was the only exhibitor, and he was awarded first prize for Muscat of Alexandria, most beautifully golden coloured; Muscat Hamburgh, Madresfield Court, and Mrs. Pince.

Mr. J. Shelton led for a pair of bunches of Black Hamburgh, with large-berried clusters; Mr. A. Heald, gardener to Rev. W. Becker, Wellow Hall, Newark, second, and Mr. J. H. Goodacre, third. Mr. J. Doe, gardener to Lord Savile, Rufford Abbey, Ollerton, led for Mrs. Pince, with large, long clusters; Mr. C. Earl, gardener to O. E. d'Avigdor Goldsmid, Esq., Tonbridge, Kent, second; five entries.

In the class for a pair of bunches of Alicante grapes there were ten entries; Mr. J. Kidd was first with wide-shouldered clusters; Mr. K. H. Smith, gardened to W. James, Esq., West Dean Park, Chichester, second; and Mr. C. L. Branson, gardener to G. Hanbury, Esq., Hitcham, Maidenhead, third. Madresfield Court was staged by five competitors; Mr. Goodacre was first prize-winner with very large-berried bunches; Mr. S. Barker second, and Mr. Shelton third.

Mr. J. Doe led for Prince of Wales, from four competitors, with wonderfully fine bunches of big plum-like berries, deeply coloured; Mr. J. C. Sutton, gardener to Earl Stanhope, Chevening, Sevenoaks, second. For "any other black grape" Mr. Goodacre scored with Muscat Hamburgh, among eight entrants; Mr. J. Kidd second with Appley Towers. In the class for Muscat of Alexandria grapes there were six competitors, and the awards fell in order to Mr. C. Earl, and Mr. W. Lane, gardener to Sir E. Durning Lawrence, Bart., King's Ride, Ascot. For "any other white" variety Mr. W. Howe, gardener to Lady Tate, Park Hill, Streatham, led with Dr. Hogg; Mr. S. Barker was second with Buckland Sweetwater; and Mr. Pike, gardener to H. W. Henderson, Esq., King's Langley, second with Foster's Seedling.

APPLE LORD SUFFIELD.
A fine dish of this free-bearing culinary apple, exhibited by Messrs. W. Seabrook and Sons, Lim., at the R.H.S. Fruit Show.

COLLECTIONS OF APPLES.

Six competitors came forward in the class for two dozen dishes of apples, sixteen culinary and eight dessert varieties. Premier honours fell to Mr. J. Whittle, gardener to Colonel Borton, Cheveney, Hunton, Kent, who had a marvellously fine set of full-sized, clean, and beautifully-coloured fruits of Bismarck, Lord Derby, Mère de Ménage, Peasgood's Nonsuch, Newton Wonder, Warner's King, Emperor Alexander, Belle Pontoise, Golden Noble, Alfriston, Lane's Prince Albert, Bramley's Seedling, Annie Elizabeth, Belle Dubois, Gascoigne's Scarlet, Lady Henniker, Allington Pippin, American Mother, King of Tompkins County, Wealthy, King of the Pippins, Melon Apple, Cox's Orange Pippin, and Charles Ross. We doubt much whether there has ever been quite as fine a set, considering quality, colour, and size, ever staged before. Second prize fell to Mr. W. H. Bacon, gardener to Sir Marcus Samuel, Maidstone. Mr. R. Alderman, gardener to C. R. Adriane, Babraham, Cambridge, was placed third with a very clean set of bright even-sized fruits; Mr. Henry Whiteley, St. Mary Church, Torquay, was awarded an equal third prize as he had a splendid set of dessert varieties, notably Charles Ross, Houblon, Coronation, and Cox's Orange Pippin, though his culinary sorts were not very large. Mr. A. Carlisle, Biggleswade, was given an extra prize; he failed to show quite in accordance with the schedule, having included Blenheim Orange as a culinary variety, whereas, according to the R.H.S., it must be classed as a dessert variety.

For eighteen dishes of apples, distinct, a dozen of cooking and six dessert, Mr. E. A. Cain led the way, and presented excellent dishes of Peasgood's Nonsuch, Lane's Prince Albert, Newton Wonder, Bedfordshire Foundling, Cox's Orange Pippin, and Rival; Mr. F. G. Gerrish, gardener to J. G. Williams, Esq., Pendley Manor, Tring, a good second, and Mr. J. W. Barks, gardener to A. P. Brandt, Esq., Bletchingley, third.

Premier award for a dozen dishes of apples, four varieties to be suitable for dessert, was secured by Mr. F. Cornford, gardener to Major Powell Cotton, Quex Park, Thanet, with fine examples of Lady Henniker, Bramley's Seedling, Peasgood's Nonsuch, Charles Ross, and King of the Pippins; Mr. H. Learmouth, gardener to J. Liddell, Esq., Sherfeld Manor, Basingstoke, second (he had a grand dish of Peasgood's Nonsuch); and Mr. Strugnell, gardener to the Right Hon. W. H. Long, Trowbridge, third. The best collection of six dishes of culinary apples, distinct, came from Mr. J. Whittle, whose varieties, represented by very heavy fruits, were Mère de Ménage, Warner's King, Belle Dubois, Emperor Alexander, Bismarck, and Peasgood's Nonsuch; Mr. A. Carlisle, second. For six dishes of dessert fruits Mr. Whittle was well ahead among four entrants with lovely fruits of King of the Pippins, Allington Pippin, Wealthy, Rival, American Mother, and Cox's Orange Pippin; Mr. A. Carlisle second.

COLLECTIONS OF PEARS.

The leading pear class was for eighteen dishes, and the Hogg Gold Medal and £2 provided a tempting first prize, which was won by Mr. Bacon. His varieties, all splendidly staged, were Souv. du Congres, Beurre Fouqueray, Beurre Baltet Père, Marguerite Maillat, Marie Benoist, Pitmaston Duchess, Beurre Alexandre Lucas, Conference, Marie Louise d'Uccle, Beurre Bosc, Doyenne Boussoch, St. Luke, Princess, Durondeau, Doyenne du Comice, Directeur Hardy and Emile d'Heyst; Mr. Whittle had to be content with second place.

The best dozen dishes of pears were from Mr. F. Cornford, who had very clean, delicate-skinned dishes of Beurre Alexandre Lucas, Pitmaston Duchess, Duchesse d'Angoulême, Charles Ernest, Durondeau, Beurre Diel, Doyenne du Comice, Beurre Bachelier, Princess, Beurre Hardy, and Beurre Baltet Père; Mr. C. A Cain was second.

In the class for nine dishes of pears Mr. W. Strugnell led with very bright specimens of popular sorts, nicely staged on bright ampelopsis leaves; Mr. J. W. Banks second. Mr. Carlisle scored for six dishes of pears with a good set, and was followed closely by Mr. G. Mackinlay, Wrest Park Gardens, Ampthill. Mr. Strugnell was ahead for three dishes of stewing pears with Beurre Clairgeau, Catillac, and Bellisime d'Hiver; Mr. F. Cornford second.

APPLE FOSTER'S SEEDLING.

A handsome apple useful for both cooking and dessert, and free in bearing, exhibited by Messrs. G. Bunyard and Co., at the R.H.S. Fruit Show.

PLUMS.

There were a dozen good entries of three dishes of plums, and once more Mr. J. Vert scored, this time showing beautiful fruits of Coe's Violet, Coe's Golden Drop, and Primate. Mr. W. Messenger, gardener to C. H. Berners, Esq., Woolverstone Park, Ipswich, second. Mr. Whittle was awarded a first prize for three dishes of bullaces or damsons, and Mr. Gerish, gardener to J. G. Williams, Esq., Pendley Manor, Tring, led for Morello cherries.

DISTRICT COUNTY CLASSES.

In all the following classes the first prize was £1, and third-class single fare from exhibitor's nearest station, and 15s., and third-class rail fare for second prize.

In the division open to Kent growers, Mr J. Bond, gardener to W. E. S. Erle Drax, Esq., Wye, led for four dishes of culinary, and two dishes of dessert apples—this specification applied all through the section—with grand dishes of Mère de Menage, Peasgood's Nonsuch, Hambling's Seedling, Chas. Ross, Allington Pippin, and Lord Derby; Mr. B. J. Mercer, Wierton Place Gardens, Maidstone, second. In the dessert pear class, six dishes, Mr. J. Bond was prizewinner.

There were two entries of pears from the growers of Sussex, Surrey, Hants, Dorset, Somerset, Devon, and Cornwall; Mr. Turton, gardener to F. J. Digby, Esq., Sherborne Castle, Dorset, came first with splendid dishes of Durondeau, Beurre Baltet Père, etc., and Mr. A. Tidy, gardener to Chas. H. Combe, Esq., Cobham Park, Surrey, was a close second. In the apple class Mr. D. Brock, gardener to the Duke of Richmond and Gordon, Goodwood, was a capital first with splendid fruits of Royal Jubilee, Allington Pippin, etc.; Mr. J. Copp, Ferndale, Teignmouth, second; seven entries.

Mr. A. R. Allan, gardener to Lord Hillingdon, Uxbridge, scored for pears in the division open to growers in Wilts, Gloucester, Oxford, Bucks, Berks, Beds, Herts, and Middlesex; and Mr. Markham, Wrotham Park, Barnet, was second, and both had very bright clean fruits of popular sorts. For apples Mr. T. J. Finch, gardener to the Earl of Suffolk, Malmesbury, Wilts, led and he had Mère de Ménage, Peasgood's Nonsuch, Royal Jubilee, Bramley's Seedling, Cox's Orange Pippin, and Rival in good form; Mr. C. Page, gardener to J. B. Fortescue, Esq., Dropmore, Maidenhead, second.

The next section was for growers from Essex, Suffolk, Norfolk, Cambridge, Hants, and Rutland, and in the pear class Mr. G. Davison, gardener to Colonel Petre, Westwick, Norwich, led with famous dishes of Pitmaston Duchess, Marguerite Marillat, Doyenne du Comice, Durondeau, Conference, and Emile d'Heyst; Mr. W. Messenger, Woolverstone Park Gardens, second. For apples Mr. Davison again led, and here he had big, clean, heavy fruits of Peasgood's Nonsuch, Mère de Ménage, Bramley's Seedling, Bismarck, Ribston Pippin, and Allington Pippin. Mr. A. Andrews, gardener to the Hon. W. Lowther, Campsea Ash, Suffolk, second.

In the section open to Lincoln, Northampton, Warwick, Leicester, Notts, Derby, Staffs, Shropshire, and Cheshire, Mr. James Gibson, gardener to the Duke of Portland, Welbeck, led the way with beautiful fruits of Tyler's Kernel, Lord Derby, Peasgood's Nonsuch, Gascoyne's Scarlet, Cox's Orange, and Ribston Pippins; Mr. J. Taylor, gardener to F. Bibby, Esq., Hardwicke, Shrewsbury, was second. For pears Mr. Gibson was easily first with heavy specimens of Beurre Diel, Marie Benoist, Pitmaston Duchess, Doyenne du Comice, Emile d'Heyst, and Chas. Ernest; Mr. Bibby a good second.

Mr. F. P. Norbury, of Malvern, was the only exhibitor in the class open to Worcester, Hereford, Monmouth, Glamorgan, Carmarthen, and Pembroke, and he only showed apples; he was awarded the first prize for a very fair set.

The Welsh counties formed the next section, and here Mr. H. Forder, gardener to Colonel Cornwallis West, Ruthin, exhibited apples, and gained first prize for a moderate set; he was also the only exhibitor of pears, his best dishes being of Souv. du Congrès and Pitmaston Duchess.

Mr. J. E. Hathaway, gardener to J. Brennard, Esq., Baldersley Park, Thirsk, was the only exhibitor of apples from the Isle of Man and the six northern English counties, and he showed excellent dishes of Lord Derby, Bramley's Seedling, Mère de Ménage, Bismarck, Rival, and King of Tompkin's County; the same competitor brought the only set of pears, and these included a fine dish of Marechal de la Cour.

From Scotland, Mr. J. Duff, gardener to Colonel Gordon, Castle Douglas, brought fine brilliantly coloured examples of The Queen, Allington Pippin, Cox's Pomona, King of the Pippins, Peasgood's Nonsuch, and Warner's King apples, and was deservedly awarded the first prize.

Only one Irish grower turned up, and he only contributed apples, but these were handsome dishes of Loddington, Bismarck, Peasgood's Nonsuch, Cox's Orange Pippin, and Lord Derby, shown by Mr. T. E. Tomalin, gardener to the Earl of Bessborough, Piltown.

NURSERYMEN.

The principal class open only to nurserymen was for an exhibit of hardy fruits arranged on a space 20ft. by 6ft., and here there were five entries, these in themselves making a good fruit show. The competition was wonderfully keen, especially between the first three sets. After considerable deliberation the premier award of a gold medal was made in favour of Messrs. G. Bunyard and Co., Maidstone, who had a brightly-coloured and well-arranged group set up in three tiers, the front lines consisting of dishes of fruits and the central lines of elevated piled-up baskets of apples. Some few of the finest apples were Hambling's Seedling, Lane's Prince Albert, Warner's King, Rambour Franc d'Hiver, Gascoyne's Scarlet, Emperor Alexander, Wealthy, Royal Jubilee, Smart's Prince Arthur, Mère de Ménage, Brabant Bellefleur, Foster's Seedling, a handsome and highly productive variety, Transparent de Croncels, James Grieve, Winter Ribston, Lady Henniker, King of the Pippins, Cox's Orange Pippin, Ribston Pippin, and Rival. Some dishes of plums, nuts, medlars, etc., completed the exhibit. The second prize fell to Messrs. H. Cannell and Sons, Swanley, who had a grand lot of fruit, and received the silver-gilt Hogg medal; the bloom on the cheeks of such apples as Allington Pippin, Smart's Prince Arthur, Blue Pearmain, Emperor Alexander, Gascoyne's Scarlet, Brabant Bellefleur, King of Tompkin's County, Mère de Ménage, Hoary Morning, Winter Peach, and Fraise d'Hoffingear added much to their attractiveness. The whole of the fruits were wonderfully clean and bright, both apples and pears. A silver-gilt Hogg medal also fell to the King's Acre Nursery Company, whose well-disposed collection contained fine baskets of Baxter's Pearmain, Admiration, Lawry's Cornish Giant, Schoolmaster, James Grieve, Blenheim Pippin, Allington Pippin, Rival, Sandringham, and Blue Pearmain. Messrs. J. Cheal and Sons, Crawley, and Messrs. W. Seabrook and Sons, Chelmsford, were also exhibitors in this class.

In the class for 20ft. run of fruit Messrs. Laxton Brothers, Bedford, secured the silver Hogg medal, and set up some splendid bas-

(Continued on page 766.)

SOME OF THE NEWER CULINARY APPLES.

Anyone accustomed to examine the catalogues of the leading firms of fruit tree specialists will not have failed to observe the very praiseworthy efforts that, in recent years, have been made to bring more into order the unduly extended lists of varieties of hardy fruits. This applies more particularly to apples. To assert that all, or even most, of the old varieties of these are inferior would be altogether too sweeping, but all the same there are great numbers still cultivated merely encumberers of the situation that should long ago have given place to others of well tried merit. That small, badly shaped, or inferior flavoured apples are now unremunerative to cultivate becomes more and more in evidence yearly, and as time goes on, and the splendid varieties that have been introduced in quite recent years become better known, a rigid selection and weeding out of old-time favourites must assuredly take place, and in many gardens and orchards the process would be highly beneficial. Subjoined are a few notes upon some of the newer culinary fruits, and their qualities for use, bearing and keeping qualities, as demonstrated in a Northern garden.

James Welsh.

This is an early apple of much promise, being of excellent quality for cooking, and the tree very healthy in growth. Like many of the early varieties the fruit buds are produced principally upon the points of the shoots, hence in pruning a thinning out of these where thickly placed is preferable to much reduction in the length of the branches, except of any that are inclined to gain an undue lead of others. The fruit is conical in shape, medium to large in size, the flesh white, firm in texture, and richly flavoured when cooked. The bearing qualities of the tree are all that could be desired; left to itself, too many fruits are produced for all to attain full size, hence the necessity for the thinning of these in good time. As a bush or pyramid, with the last-named attention being paid to the crop, the paradise stock may with advantage be employed, but for standards, where this course becomes wellnigh impracticable, the crab stock would prove more satisfactory.

Baillie Neilson.

A broad, rather flat fruit, in use from October onwards. Against a wall the fruits attain a beautiful yellow colour, which, however, is equally as prominent a feature this season in the open. The tree is very prolific, bearing freely when quite young. Though not a large fruit, and perhaps a trifle too broad compared with height to make a good market fruit to please all tastes, yet it is a grand variety for a private garden.

Early Victoria.

This very early variety is sure to replace several of the older sorts that for long have been held in esteem, as it possesses all the desired qualities as a cooking fruit, and has a very taking appearance. It succeeds well on either stock, and crops freely as a cordon or as bush or espalier trained.

Rivers' Early.

This is a noteworthy addition to the Codlin class, and one of the earliest to arrive at maturity; in fact, the fruits may be used whenever large enough to undergo the necessary ordeal of preparation in the kitchen. Size, colour, and firmness of flesh are well combined in this, and as cordons against walls, or the espalier railing, the strikingly beautiful, and for the season, large fruits, always secure admiration.

Norfolk Beauty.

Another season, and certainly a most favourable one for the apple crop, gives convincing proof that this is one of the most worthy additions to the list of midseason apples. Compared with Warner's King it is of better shape, quite as large individually, and equally as prolific, while it has the advantage of being a better and longer keeper, and does not show dark spots or markings under the skin, which so often occurs with the last-named after being stored for a time. I consider this a most desirable fruit, in use from September to Christmas.

Charles Ross.

Though classed as a dessert apple, this is more fit for culinary use in Scotland. For dessert size is against it, although it is of noble appearance, and worthy of cultivation as a show fruit. This year it is equally as large and well shaped as Peasgood's Nonsuch, and the latter is finer, more free from flaws, and of better colour from purely open-air trees than ever I saw it before, yet it is run very close indeed by the one under notice.

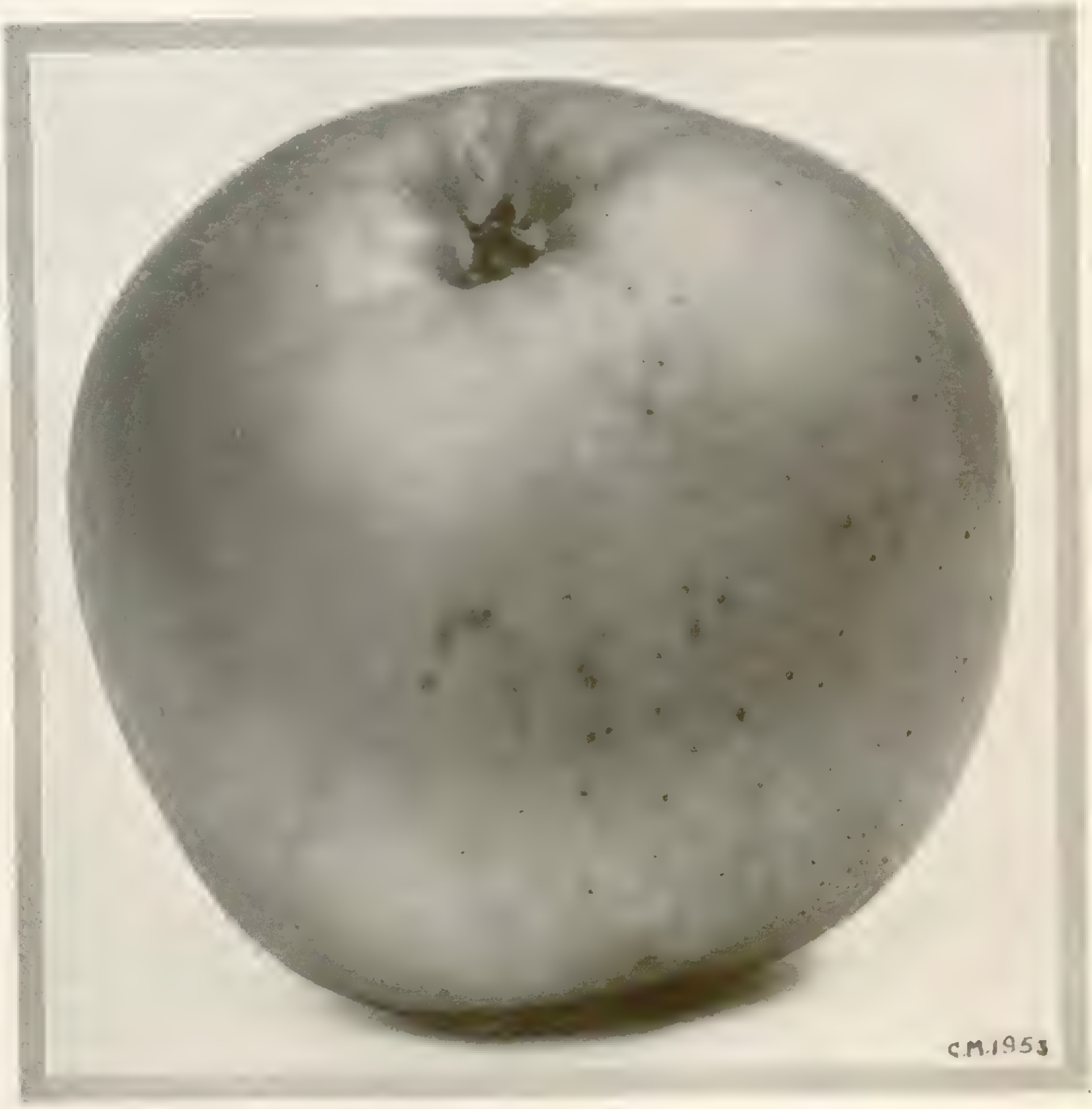
Newton Wonder.

For very late keeping this is sure to be valued when better known. The trees are of open, spreading habit of growth, and, trained in bush form, become in course of a few years very handsome objects, more particularly so when laden with shapely, high-coloured fruits. These should be left as long as possible upon the trees, and when gathering great care should be taken to avoid bruising the fruit, which, however, is not easily done, as for weight and solidity at the time this apple is almost unsurpassed. Kept in a cool room or store it may be depended upon to provide a supply either for culinary use or dessert when most other varieties are long since past. I have found this to be one of the very latest keeping apples, and it possesses all the good points looked for in a first-class fruit.

Edward the Seventh.

This is very large, and of bright yellow colour when fully matured, and one that seems to thrive under any form of training. So far it has not proved so fruitful in its earlier stages as some others planted at the same time in similar conditions, a defect, however, that may be overcome as time goes on.

JAMES DAY.



APPLE JAMES WELSH.

A culinary variety of great merit introduced by Messrs. Dickson and Co., of Edinburgh.

Eriostemons.—The Eriostemons are a very ornamental class of evergreen shrubs, all natives of Australia, and consequently they need in this country the protection of a greenhouse. They are exceedingly floriferous, so that most of them will bloom in a perfectly satisfactory manner as neat little bushes in pots five inches in diameter. Under more liberal treatment they will, however, attain a considerably larger size. There is a fairly long list of species and varieties, but through them all there runs a strong family likeness, they being for the most part of a dense twiggy growth, while the starry flowers are either white or pinkish. Eriostemons thrive in a mixture of loam, peat, and sand, and may be stood out of doors during the summer months.—W. T.

A FEW GOOD LATE DESSERT PEARS.

To have late pears in good condition and fit for the table throughout the winter and well on into March and April should be the aim of all who have to keep up a constant supply of dessert fruits. But this can on'y be done by allowing all late pears to hang on the trees as long as possible, and the grower will be called upon to exercise much patience, especially where tits are troublesome, the impulse being to get the crop stored before the greater part is lost. The penalty of early gathering, however, will be immature and flavourless fruit, doomed to shrivelling or decay.

Doyenne du Comice, rightly described as the best pear, may be considered late, as its season can be extended well on to Christmas by careful finishing and storing it. This variety, in constitution, fertility, and quality, is unsurpassed, making excellent trees in all forms, except perhaps as standards, few pears being rea!ly adaptable to this form. Le Lecteur, one of the newer varieties, will follow close upon Doyenne du Comice, and is really of first-class quality, resembling a small Pitmaston Duchess, except that the skin is of a greener tint. This variety is unfortunately not a heavy cropper, but coming into use when pears are getting scarce, room should, if possible, be found for a tree or two on an east or west wa'l. Glou Morceau is another pear worthy of a good position, as a well-finished fruit in January is delicious, and being a regular cropper and of excellent constitution this variety should be grown if a warm position can be given up to it; no other pear I know can quite take its place.

Josephine de Malines, one of the best known of all late pears, is another indispensable variety, its cropping capabilities and quality being good. It will do well grown as a bush or pyramid, often carrying heavy crops of rather small fruits. The trees need liberal feeding, and should be judiciously thinned to secure good quality. Duchesse de Bordeaux is a pear not so generally grown as it ought to be; all through February, and well into March, this variety, by being introduced into gentle heat in batches, according to demand, may be had in perfection. In such cases I have found it best to wrap late pears in paper and pack them as if for transit, placing the box in a temperature of about 55 degrees, where the fruits will gradually ripen.

Of great importance is the storing of the fruits when gathered; a dark place that is uniformly cool and moist is most suitable for late pears. I usually lay a coup'e of thicknesses of ordinary brown paper on the lattice-work stages, or shelves, and at the first spell of very sharp weather large sheets of the same kind of paper are laid evenly over the fruit, this being kept in position throughout the rest of the season.

James Whittle.

Cheveney Gardens.

Nerines.—Every autumn the nerines assert themselves as among the finest of all greenhouse bulbs that flower at this season. Of them all, the first place must, I think be assigned to a good form of Nerine Fothergilli, as the heads of flowers are large and bold, and the colour a dazzling scarlet.—W. T.

Plumbago Larpentæ.—Handicapped now by the terrible name of Ceratostigma plumbaginoides this charming blue-flowered member of the Leadwort family seems everywhere to have flowered this year with unwonted freedom, probably the past summer called up recollections of its Chinese home.—W. T.

CULTURE OF FIGS IN POTS.

The culture of figs in pots is not a new idea by any means. I remember it to have been most successfully practised quite thirty years back. Then it was Brown Turkey that was chiefly grown under this system. Since that time, and during the latter part of the occupation of the Chiswick Gardens by the Royal Horticultural Society, a very fine collection of figs was got together. This was the means of bringing into more prominent notice varieties which have proved most valuable acquisitions for the dessert. In addition, the trade have been the means of disseminating several excellent figs, notably so in the case of Negro Largo, which, I believe, was distributed by Messrs. James Veitch and Sons, of Chelsea, who also introduced Violet Sepor and those two fine early kinds, St. John and Pingo de Mel. These latter two are so much alike that only one of the two need be grown.

Undoubtedly the fine collection of figs at Chiswick, now transferred to the Wisley Gardens, has been the means of fostering the pot culture of this valuable fruit to a great extent. There is, however, still room for yet more extended culture under this system. It does not appear to be recognised by many growers how this may be accomplished. Yet it is comparatively easy to have a good supply over an extended season. All growers who cultivate the fig under glass upon the planted-out system know what a dense shade is imparted. The growth, when the trees have the run of a border, is often over-luxuriant, and the return in fruits not always so commensurate as it should be with the space occupied. Under pot culture, however, many kinds are far more prolific, notable so in the case of Negro Largo, Bourjassotte Gris, and St. John. The restriction of the roots when in pots tends to fertility, to more sturdy growth, and with leaves of lesser dimensions.

It will be readily conceded that the individual fruits are finer, on the whole, from planted-out examples, but these fruits, if larger, rarely, if ever, surpass pot-grown examples in point of flavour. Given a well-ripened fruit of either Negro Largo or Bourjasotte Gris, it is most difficult to beat for flavour, the saccharine juices being so fully developed. The pot system is a most distinct gain, for economy in space can thus be carried out to advantage. At the very most pot plants need not occupy the space at command for more than six months. Thus with two sets of plants the same house may be advantageously worked, or for six months it can be occupied by other crops. As a case in point we give up one house to extra early forcing, starting on November 1, or thereabouts, picking our first fruits on or about the middle of March. After this crop is gathered thé growth is completed, and the trees hardened, so that early in May they can be stood in a cooler house, and then the space thus vacated can be given up to another set of figs that have been retarded, or to a crop of melons if this be deemed expedient. The early lot of trees, after a few weeks, are stood outside, and thus become thoroughly well ripened.

It may be asked, "Do the trees stand this kind of treatment?" To this my reply is: We have plenty of examples that have been thus cultivated for ten years past, and the largest are only in ten-inch pots, with very few exceptions. It is a good plan to add a few young plants to the stock every year. The fig is easily propagated from eyes, or from the points of the shoots, or by means of cuttings of the young wood, if occasion arise. This process should commence, with the two former methods, early in January, and with the latter later in the spring. This season, for example, we started propagation the first week in January, and we picked our first fruits about a month ago from these young plants, one of which is illustrated in the present issue. These will continue to yield a good supply for another month or six weeks.

The following are a good half-dozen figs for pot culture: St. John, for first early use; Brown Turkey, to follow; then White Ischia, a delicious little fig; Grosse Violette de Bordeaux, a free cropper; Bourjassotte Gris and Negro Largo bringing up the rear, both being of the finest flavour. As a very late addition, D'Agen is an acquisition.

Jas. Hudson, V.M.H.

AUTUMN SALADS.

The great value of vegetables eaten in a raw state has been fully demonstrated during the past few months. The demand has been so large, and the supply, unfortunately, has been so inadequate, mainly owing to the intense heat and continued drought, that fabulous prices have been realised in many of our large centres, especially for lettuces. With the exception of tomatoes and cucumbers, both of which the season has suited remarkably well, the various subjects, such as lettuce, endive, etc., have been most difficult to obtain.

From a dietetic point of view the value of salads can hardly be overestimated, and as a relish they form an exceedingly tempting dish. Again, when these are most in demand it is quite possible for those with only ordinary means at command to grow a selection of suitable kinds in an ordinary season. Later supplies, of course, are different, and in the majority of large households salads are now required almost daily; these cannot be provided without the use of artificial heat and the necessary pits or frames.

It will be quite unnecessary for me here to detail the cultivation of cucumbers, beetroot, lettuce, tomatoes, etc., but I will deal with each subject briefly from the point of view of their use as salads. Before doing so however, I would just like to mention the good work the Royal Horticultural Society, as well as other leading societies, is doing in offering prizes for, and thus furthering the interests in, salads, not only among the exhibitors, but also the general public. A well-arranged and finely-grown collection is an object of considerable beauty, and sure to find plenty of admirers.

Lettuces are unquestionably the most important of all vegetables cultivated for salad purposes, and strenuous means should be adopted in every garden of any pretensions to provide them in some form on any and every day in the year, and with the aid of cold frames this can easily be accomplished, due regard having been paid to the varieties best suited for the various seasons of the year, of which there are now ample. The secret of success, however is making frequent small sowings throughout the year. During spring, summer, and autumn seeds should be sown at interva's of ten days, both of cabbage and cos varieties. Generally speaking, the best white cos varieties are held in the highest esteem, though in some cases cabbage varieties are preferred, but it is well to be provided with both. Lettuces should be pricked out quite early, immediately the second leaf is made, on fairly rich ground, making them firm, and guarding against slugs and birds. Abundance of water should be given during dry weather, and most varieties re-

SWEET PEAS.

THE EXHIBITOR'S HOUSE FOR TRUE STOCKS OF ENGLISH GROWN SWEET PEA SEED.

AWARDED 90 GOLD MEDALS.

Raiser of the following well known varieties:—Clara Curtis, Mrs. Hardcastle Sykes, Mrs. Henry Bell, Queen of Norway, Tom Bolton, Red Chief, Charles Foster, Marchioness of Tweeddale, Bolton's Pink, and many more of the leading varieties.

My New Set of NOVELTIES for 1912 are all good and distinct, and must be included in all up-to-date collections.

AFTERGLOW.

Awarded SILVER MEDAL, Ulverston, for Best Novelty, 1911.

A most distinct flower, and quite a new distinct break in Sweet Peas, a very vigorous grower, nearly always four true Spencer blooms on a stem. The base of the standard is a bright violet blue shading to a glowing rosy amethyst, wings electric blue. "Afterglow" is a variety I can strongly recommend for growing under glass for exhibition and without doubt the most distinct and telling novelty seen in 1911. "Afterglow" caused more attraction at the N.S.P.S. Exhibition than any other variety. No collection will be complete without it. **Per packet, 10 seeds, 1s.**

DOROTHY.

A giant rosy lilac self, which will be in great demand for exhibition. The colour is quite distinct from anything seen in Sweet Peas, and greatly admired wherever exhibited, this is sure to be a very popular variety on account of its pleasing and taking colour, besides being such a vigorous grower, the flowers are of extraordinary size, and well frilled, of the true Spencer type, with a large percentage of four-flowered sprays. **Per packet, 10 seeds, 1s.**

R. F. FELTON.

AWARD OF MERIT, R.H.S., 1911.

I have no hesitation in saying that it is absolutely the finest and the strongest growing Lavender yet introduced for exhibition or garden decoration. Habit of growth very similar to Elsie Herbert; always plenty of fours of the true Spencer type. **Per packet, 6 seeds, 1s.**

FLORRIE.

A very delightful, well-shaped flower of the true Spencer type. The colour is a rosy crimson-lake, the back of the standard being overlaid with a pleasing red chocolate, the inside of the standard and wings being shaded with soft lilac. The plant is a strong grower, producing its flowers on long stout stems, grand for exhibition, requiring a little shading. **Per packet, 10 seeds, 1s.**

PRINCE GEORGE.

AWARD OF MERIT, R.A.S., 1911.

This is an extremely handsome and distinct flower, and has caused great excitement amongst lovers and admirers of the Sweet Pea. The standard is a warm lilac-rose, base of standard solferino red, wings violet-rose; it is a strong grower, and always abundance of four of bloom-sprays; a gem for exhibitors; very scarce. **Per packet, 6 seeds, 1s.**

The above are all Fixed Novelties.

Please send for Autumn List of all the Latest Varieties, post free.

ROBERT BOLTON, F.R.H.S.,

THE SWEET PEA SPECIALIST,

WARTON, CARNFORTH.

PLANTING SEASON.

By Appointment.

WM. PAUL & SON,
WALTHAM CROSS, Ltd.

Nurseries twelve miles from London; south entrance four minutes' walk from Waltham Cross Station (Great Eastern Railway); west entrance five minutes' walk from Tramway Terminus.

SPECIALITIES:

ROSES in all forms, from open ground and in pots. Roses in pots, both dwarfs and climbers, extra fine this season.
FRUIT TREES, for the Orchard Garden, and Forcing House.
HARDY TREES, for Street, Park, and General Planting.
SHRUBS, Evergreen and Deciduous, for General Planting.
HARDY CLIMBING PLANTS for all purposes.
RHODODENDRONS, CAMELLIAS, AND AZALEAS. Rhododendrons from loam, extra fine this season.
HERBACEOUS PLANTS in great variety.
BULBS AND SEEDS and all Garden Sundries.

PRICE LISTS ON APPLICATION.
Inspection Invited.

Upwards of 1,000 Gold Medals, First Prizes, and other Awards at Leading Exhibitions during the past 50 years.

Sole Postal Address—

PAULS' ROYAL NURSERIES,
Waltham Cross, Herts.

Premier Honours Great Show, Haarlem.

ESTABLISHED 1832.
No connection with any other Firm of a similar name.

ANT. ROOZEN & SON'S
GUINEA PACKAGE
(Delivered Entirely Free in London)
OF
CHOICE HARDY BULBS.
COLLECTION "F" FOR SPRING GARDENING

Contains **1,140** Bulbs.

48 Hyacinths, distinct colours.
50 Tulips, single early.
50 Tulips, double.
50 Tulips, single, late.
50 Narcissus, best mixed.
30 Narcissus incomparable
24 Narcissus poeticus.
24 Anemones, double.
50 Anemones, single.
50 Gladiolus nanus.
300 Crocus, in 4 distinct colours.
100 French Ranunculus.
50 Snowdrops, single.
100 Spanish Iris.
36 Scilla sibirica (2 colours)
4 Lilium umbellatum.
50 Eranthis hyemalis (Winter Aconite).
50 Ixias, best mixed.
24 Triteleia uniflora.

Half of the above for **11s.**

Our Bulbs are Perfect Bulbs direct from Holland—THE Great BULB LAND.

The above Package may be had from our Agents,

MERTENS & Co.,
3, Cross Lane, London, E.C.,
On Receipt of Cheque or Post Office Order.

Our **DESCRIPTIVE CATALOGUE** of SPLENDID BULBS (100 pages in English), containing FULL CULTURAL DIRECTIONS, will be sent post free on application to our Agents, as above, or ourselves direct at

OVERVEEN, HAARLEM, HOLLAND.

BUNYARD'S FRUIT . . TREES . .

EARLY ORDERS RECEIVE FIRST ATTENTION WHEN PLANTING SEASON ARRIVES.

WRITE FOR CATALOGUE.

Geo. Bunyard & Co., LTD.,
Royal Nurseries,
—MAIDSTONE.—

MERRYWEATHER'S ROSES.

All Strong and Home-grown Plants.

COLLECTION "H" of NEW ROSES.
WONDERFUL VALUE.
EVERY ONE A GENUINE NOVELTY.

This superb collection of the **BEST 18 NEW ROSES** in dwarf plants. The price of this wonderful collection is **27/6**, carriage and packing free for cash with order (with Acme Labels, **29/6**). The varieties are:

Arthur R. Goodwin, P.
Duchess of Wellington, H.T.
Entente Cordiale (Ducher), H.T.
George C. Ward, H.T.
Jessie, Dwarf Poly.
Lady Alice Stanley, H.T.
Lyon, H.T.
Margaret, H.T.
Margaret Molyneux, H.T.
Miss Cynthia Ford, H.T.
Mrs. Alfred Tate, H.T.
Mrs. A. Munt, H.T.
Mrs. E. J. Holland, H.T.
Mrs. W. Christie-Miller, H.T.
Marquis de Sinety, H.T.
Molly Sharman Crawford, H.T.
Souv. of Stella Gray, T,
White Killarney, H.T.

FRUIT TREES
OF ALL KINDS TO SELECT FROM.

A GRAND STOCK OF
SHRUBS & ORNAMENTAL TREES.

HERBACEOUS PLANTS in great variety.

Send for Catalogue No. 29, full of interesting information and cheap prices, post free on application to

MESSRS.
H. MERRYWEATHER & SONS, LTD.,
(Dept. 1A), **GARDEN SPECIALISTS,**
SOUTHWELL, NOTTS.

KING'S ACRE FRUIT TREES AND ROSES.

AWARDED . .
18 Gold Medals
AND
Coronation Cup
VALUE 25 GUINEAS.
Seasons 1909-10.

Illustrated Catalogue post free on application.

KING'S ACRE
NURSERIES LTD.,
HEREFORD.

FRUIT TREES.
Over 20 Acres.

ROSES
Including all Latest Varieties.

RHODODENDRONS
Grown in Loam.

Azaleas & Heaths
INCLUDING GOLDEN YEWS, CONIFERS, etc.

Ornamental Trees & Shrubs,
Flowering Trees & Shrubs.

Acres of Forest Trees of all Sizes and Varieties.

GRAPE VINES OUR SPECIALITY.
Climbing Plants in Variety.
Figs and Strawberries.

INSPECTION INVITED.

Gardens Laid Out and Planted by Skilled Men.
Catalogue Free on Application.

H. LANE & SON,
THE NURSERIES, BERKHAMSTED.
Established 1777.

Telephone:— Berkhamsted 18.
Telegrams:— "Lane, Berkhamsted."

quire a distance of a foot apart to do well. A capital place for growing summer and autumn lettuces is on the ridges between celery and leeks, but a small plantation should always be made during July and August on a north aspect.

Endive requires much the same kind of treatment as lettuce, except that the first sowing should not be made before July, and the last about the first week in September. Earlier sowings will invariably prematurely run to flower. Both Batavian and curled varieties should be cultivated, and the late sowings be lifted and planted in cold frames for late autumn and winter use.

Chicory is one of the most wholesome, and probably the most serviceable and useful of plants cultivated for autumn and winter salads. Seeds should be sown at intervals during the spring and summer on deeply tilled soil, and the plants be thinned to ten inches apart; when full grown they are lifted, and forced as required in a dark position in the mushroom house or cellar.

PEAR DUCHESSE DE BORDEAUX.

An excellent late dessert pear, the tree bears freely, and the medium sized fruits are richly flavoured.

The cultivation of celery is too well known to need discussion here. Suffice it to say the very best varieties only should be grown. Abundance of water must be supplied, both to the roots and overhead, and blanching should be done for all early batches by the use of strips of brown paper, added at intervals.

Medium-sized beetroots should be the aim of every cultivator, and I am glad to know that this is the aim much more than was the case a few years ago. Beet should not be sown too early, and the crop should be lifted immediately it is fit for table, and stored in a cool place, when it will be found to keep perfectly until the following spring. There are many excellent varieties both of the black and red types, and the Egyptian or turnip-rooted form is invaluable for very early supplies.

The contrast between well-grown radishes selected and used at the proper time and those generally seen on the market is most apparent. In quite the majority of cases radishes are allowed to become too old before they are eaten. Good light ground should be selected, and frequent sowings made. From four to six weeks, according to the season, will be found quite long enough for radishes to come into use. The French Breakfast is still the best for general purposes.

Mustard and cress are possibly the simplest of all things to cultivate; nevertheless there is a right and a wrong way to deal with them, and to maintain an unremitting supply is not always so easy as it appears. During summer and autumn they should be grown in a shady position, and kept constantly damped. The seeds should be pressed in firmly, but never covered.

Cucumbers, during the summer and autumn, can be successfully and easily cultivated in portable frames on a mild hotbed. Make choice of a well-known variety of a prolific character, and of medium length. The growths should be regulated, and kept fairly thinned out, the roots well supplied with water to prevent bitterness in the fruits, and no fruits should be left on the plant after once fit for use.

To ensure a regular supply of tomatoes it will be necessary to cultivate them under glass, but in a summer like the past, by putting out good strong plants at the end of May little difficulty will be found in providing large crops of excellent quality either in an open sunny position or against a south wall. The growths should be kept well thinned, and the roots supplied both with water and liquid manure after the fruits have set; the fruits should be removed immediately they show signs of colouring, and placed in a warm position. Sunrise is the best variety I am acquainted with.

Aldenham Gardens. E. **Beckett.**

SUCCESSIONAL PEACHES FOR OPEN WALLS.

Although peaches are successfully grown in many gardens upon open walls, this method of culture might be profitably extended, even in situations not altogether favourable, provided the necessary precautions are taken in order to counteract the existing evils.

With reference to this it may be said that at The Hendre some of the conditions are far from being ideal for outdoor peach culture, and yet, by taking extra pains in some of the details of management, satisfactory crops are invariably secured. Last year, nevertheless, though we had full crops of fruit, the flavour, owing to the state of the weather, was poor in quality, and we had rather light crops this year.

The chief of the unfavourable conditions that we have to surmount are a low situation, where spring frosts prevail, and a heavy, tenacious, cold soil. In dealing with these, in order to secure healthy root action and the formation of fruitful wood, it is essential to pay careful attention to the drainage of the borders, and otherwise improve them by adding suitablomaterials, and also to lift the trees periodically and prune the roots. It is also necessary to efficiently protect the blossoms and young fruits from frosts, and under all conditions, whether favourable cr unfavourable to peach culture, it is especially important to, as far as possible, keep the trees free from attacks of injurious insects and such fungi as promote leaf curl, mildew, etc. Further, the great benefits to be derived from thinning and training the young shoots without letting them become crowded must on no account be lost sight of. However, the fear that I am digressing somewhat from my subject for-tree is compact, and bears good crops in the majority of seasons. Kerry Pippin succeeds well with me; the tree fruits well, and when the crop is gathered at intervals the season is greatly prolonged. I consider the flavour of this apple excellent, and rank it among the very best of our early dessert sorts. Worcester Pearmain grows freely, and the fruit puts on good colour; the tree is neat, and crops with great freedom. Lady Sudeley and James Grieve are excellent apples, the latter being of special value as a dessert fruit, while the flavour leaves little to be desired. King of the Pippins and Cox's Orange Pippin crop heavily on the bush; Ribston Pippin is not quite so free, but one of the best, and should find room in every collection. Egremont Russet is a neat grower, and fruits well in most seasons. Scarlet Nonpareil, Duke of Devonshire, and Lord Hindlip are capital varieties for supplying late fruits, but the crop should be left on the trees till very late, otherwise it will not keep fresh and plump.

Of cooking apples some capital varieties will be found in the following selection: Grenadier, Ecklinville Seedling, Peasgood's Nonsuch, Golden Noble, Bismarck, Warner's King, Lane's Prince Albert, Chelmsford Wonder, Bramley's Seedling, Newton Wonder, Byford Wonder, and Sandringham.

Although there are numerous other excellent varieties, those I have mentioned will succeed, and give every satisfaction in almost any form—whether bush, pyramid, or standard. When planting young trees the soil in which they are to be grown should be well broken up, and if not suitable some good fertile loam should be obtained and mixed in with the staple. Manure, in cases of poor soil, should be added; but if the loam is good, very little manure will be needed until after the trees have made good headway, when some artificial feeding must be given to keep the growth in a healthy fruiting state. Another point in connection with young trees is to allow ample room for each tree to grow. I consider 12ft. to 14ft. apart for most varieties is about the right distance to plant, so that both light and air may reach the interior of the bushes, and better results will certainly follow.

H. Markham.

ONE OF THE SPAN-ROOF FIG HOUSES AT GUNNERSBURY HOUSE.
The trees on the left-hand side of the pathway are all about eight months old, and those on the right have been in bearing some years.

CULINARY PLUMS.

None of our hardy fruits, except, may be, the apple, are of more value than plums, for they are capable of being used in a variety of ways. But in order that their usefulness may extend over as long a period as possible in a fresh state, it will be necessary to grow several varieties ripening successively, as there are but very few that will keep for any length of time when fully ripe. The list of varieties to choose from is rather an extensive one, and those who have only a limited space at their disposal would do well to confine themselves to a few of the most prolific.

Some years ago I planted a collection of all the varieties I could procure with a view of testing their merits; some of them were a complete failure, others of but little value from a commercial point of view, while others seldom failed to give us fruit, more or less, according to the season.

Not only is it advisable to plant in variety, but it is well to plant in various positions if possible, such, for example, as planting some of the early kinds on a south wall and some of the late ones on a northern aspect in the more southern counties. As is generally known, plums thrive better in rather a dry soil than a deep heavy loam or stiff clay, for when grown in the latter they are apt to make too much coarse growth, and are therefore on that account less productive. Plums, as a rule, are hardy, though, flowering at an early period of the year, they are very very apt to suffer from late spring frosts when in bloom, especially when grown in low-lying places; on higher ground and in lighter soils they do not seem to suffer quite so much in this way, especially if shelter be afforded from the north and east.

When planting an orchard of plum trees due consideration should be given to the varieties, as some grow much stronger than others; therefore, the more robust kinds should be kept by themselves, and, if possible, the hardiest sorts, such as damsons, should be planted round the outsides to form shelter. Some recommend planting a belt of trees for this purpose, but unless these are a sufficient distance away they are apt to overshadow the fruit trees, preventing the wood from maturing properly, and therefore rendering them less fruitful. The distance the trees should be planted apart must, in a measure, be determined by whether it is intended to cultivate the land between them or not, but undoubtedly the most profitable mode is to plant about eighteen feet apart and grow another crop between the trees.

In making a selection for private use it is well to have a few trees of early, mid-season, and late kinds, rather than a lot of one sort, as they will then ripen in succession. Of those ripening in July there are not many, but we should certainly plant a tree of Reine Claud Violette, or Purple Gage, as it is sometimes called. If one of these occupies a position on a south wall the fruits will open early, but as the tree is perfectly hardy in most places it will succeed well as a standard, bush, or cordon. Early Rivers is also a good variety, is most prolific, and may be grown as a bush or standard. Then we have the Early Green Gage, and to succeed these there is a variety known by the name of Stint, which is very prolific. The fruit is small, of a reddish-purple colour, and very juicy. The tree is rather a slender grower, and therefore needs pruning rather hard when grown as a bush or standard, otherwise the branches have not sufficient strength to support themselves in an upright position.

Of plums ripening in August we have a greater variety to choose from, but it is not well to plant more than sufficient trees of each to keep up a supply, unless it is intended to market the fruit, and then bushes or standards are preferable to wall trees, as these latter should be of choicer kinds. Belle de Louvain is a large handsome variety that should find a place in all gardens. As a bush or standard it is most prolific, producing fruit when most other kinds fail. Czar is a large oval variety having a reddish-purple skin; it is a free bearer and of good flavour, and succeeds well either as a standard, bush, or cordon.

A POT SPECIMEN OF THE WHITE ISCHIA FIG.

As grown by Mr. J. Hudson, V.M.H. The tree when photographed was eight months old, four feet in diameter, and carrying a crop, some of the fruits being ripe.

Prince Englebert is a large dark purple variety, oval in shape, and of good flavour, in fact, it is one of the finest kinds that ripen at this period. Pershore is a variety largely grown in Worcestershire, especially round Pershore, where it originated. The fruit is rather above medium size, having a tough skin, which makes it so valuable as a market fruit.

There are a number of plums that ripen during September, including the various damsons, though in some places these will hang on the trees until well into October. For cooking, bottling, and preserving, no kind is more useful than the damson, which is hardy, and will grow almost anywhere, and on that account shou'd be planted in the hedge-rows for shelter. The Bush plum, or, as it is sometimes called, the Wellington, is a very free variety for culinary purposes, and, as the skin is tough, it is not so liable to be eaten by wasps as some others. Monarch is worthy of a place in all gardens, and whether grown as a bush, standard, cordon, or against a wall, it is alike useful. The fruit is large, of a roundish, oval shape, and the skin is covered with a thick bloom, which makes it attractive; it hangs well on the trees, not being so liable to rot as some kinds. Victoria is undoubtedly one of the most popular varieties in cultivation, and one that usually commands a good price in the market. Either as a wall tree, bush, standard, or cordon, it is alike valuable, for it rarely fails to produce a crop of fruit, even when others fail. Washington is a fine variety, but the fruit is apt to crack in wet seasons when grown on standards or bushes, but as a variety for a west wall it is excellent. When young the tree is rather a robust grower, therefore should not be planted in too rich soil. White Magnum Bonum is an old variety that still deserves a place, and when grown as a bush or standard will usually give a crop.

Of varieties that are in use during October and November there are not many, still there are some that do well, especially in the more southern counties. Archduke is one of these; the tree is hardy and most prolific, either as a bush, cordon, or standard; fruits large, hanging well on the trees. Grand Duke when grown against a west wall will produce fruit of extraordinary size. It is like the Magnum Bonum in shape, but the colour is a deep purple. It does well either as a pyramid or standard. President is a variety of more recent introduction. I planted some trees the first year that it was sent out, and was much pleased with it; the fruits are large, carrying a deep blue bloom, and hang well on the trees.

There are a few varieties that are not generally grown that hang well and retain their freshness after the leaves have fallen. Wyedale is one of these; the fruit somewhat resembles that of the Shropshire damson, but the skin is tough, the fruit retaining its briskness sometimes until the middle of November. Late Orange is also another good kind that hangs well, especially when grown against a wall. Late Black Orleans, when grown as a bush in a sheltered place, will also give fruits very late in the season.

In some parts of the country I have seen two varieties of the Bullace growing wild; they ripen their fruits late in October or early in November, when they are much appreciated for tarts. There has of late years been an improvement among these due to crossing them with late varieties of plums. One known as The Langley is a most profuse bearer, and it is a cross between the Farleigh damson and Late Black Orleans plum. This is a most useful kind, as it keeps well until late in the year, and those who require such fruits would do well to plant a few trees in the hedge-rows or put them in odd places where other varieties will not thrive, as it is a most ornamental plant when the fruits are ripe, these hanging in clusters along the slender stems, even after the leaves have fallen. H. C. Prinsep.

CRINUM POWELLI ALBA.

I recently saw a very fine batch of crinums growing and flowering freely in a garden near the sea on the coast of Hampshire. The soil is a deep loam, peaty and gravelly in places. But it does not lie much above the level of high tides, and even in a dry season there must be a great amount of moisture in the subsoil. Although all the crinums were flowering well, the one named above was the most attractive at the time of my visit, as it was so pure in colour.

The bulbs and stems were exceptionally strong, the leaves broad, long, deep green in colour, and numerous on every plant. They thrive best in a rich loam, medium as regards texture, and as they produce many offsets it is a very easy matter to increase the stock. Readers who may have some gently sloping and sheltered ground near a pond or stream, may deeply dig up and enrich such soil, and then make a colony of crinums there. The plants do very well in such moist places, and become strong in an incredibly short time. The position should be such a one as to enable the cultivator to supply the plants with abundance of water during the growing season. The flowering season is throughout July and August.

Geo. Garner.

APPLE CRIMSON BRAMLEY'S SEEDLING.

Messrs. H. Merryweather and Sons, of Southwell, Notts, did a great public service in introducing that splendid apple known as Bramley's Seedling. This free growing and abundant cropping variety is a great favourite, and its merits as a culinary apple have been often discussed in these pages, always to its advantage. Now, however, we are to have a new form of the old favourite, and Crimson Bramley's Seedling is an exact counterpart of the type in all except colour. It is a sport from Bramley's Seedling, and resembles the original in size, shape, and habit of growth, the only real difference being that the fruits are coloured almost all over with bright crimson, and thus a very attractive appearance is added to great usefulness. When the crop is approaching maturity a tree of Crimson Bramley's Seedling presents a very handsome picture. The newcomer seems quite likely to make as good a name for itself as its less showy progenitor has.

THE HARVEST OF THE ORCHARD.

By "orchard" I do not mean any of the comparatively modern enclosures under cultivation, in which standard trees are interspersed with pyramids and have small fruits between; where only a few selected varieties of commercial value are grown, and the whole thing is run on business lines; but to an orchard such as it is known in the West Country, where apples and pears were grown for centuries before the modern plantation was devised, and the like of which may be seen attached to scores of farmsteads in the western counties. From the point of view of the modern up-to-date commercial fruit grower who makes this his business, and has nothing to do with anything else, the farm orchard of the West Country is something to ridicule, a place where apples and pears are not cultivated, but just grow according to their own sweet will, and demonstrate what ought not to be rather than what ought to be done in the way of cultivation. As a matter of fact, the typical West Country orchard seems to have little in common with modern methods of commercial fruit culture, and it is, just what it always was, a kind of a side branch of farming, on which, in the majority of cases, very little money is spent in the way of cultivation.

Yet, in the West Country, the orchard, subjected to ridicule as it is, the happy hunting ground of writers on fruit culture, who have rarely a good word to say for it, is a valuable asset to both landlord and tenant in the counties where orcharding is part of the agricultural industry. As evidence in support of this statement, one has only to attend a property sale at which land is disposed of under the hammer. One lot is knocked down, perhaps, at forty pounds an acre, good pasture ground may be, but when the next, which is precisely the same kind of land only that it is described as orcharding, and is furnished with trees, is put up, the bidding becomes more brisk, and probably will run up to a hundred pounds an acre before the hammer falls. This is not fiction, mind you, but fact, and only recently a gentleman of my acquaintance bought a piece of grazing land at forty pounds an acre, and another piece, only divided by a hedge, at a hundred, the difference being that the latter was furnished with fruit trees and described as an orchard.

As with selling so with letting, the farm with a certain number of acres of good orcharding in the West Country is let at a much higher rental than another holding which might be equally good except for the orchards, and when selling out, on an average, double the amount is allowed for land furnished with established trees as for that which is not classed as orcharding. Yet to the eye of the fruit expert these orchards do not look much; they appear, in many cases, to be neglected, and display a want of attention and a marked absence of anything in the way of cultivation. In fact, one wonders what they would be worth if they were what we consider orchards ought to be, but that is part of another story.

Just so, but I am writing of the harvest of the typical West Country farm orchard, and it comes when the glow of autumn steals over the country, when the blackberries ripen on the thick surrounding hedges and present a means of bringing some acceptable grist to the mill of the cottage folk, who look to blackberry picking as a means by which the family income can be supplemented to some extent.

Let us, then, step into one of the scores of West Country orchards at harvest time, which is earlier this year than usual, as the result of the tropical summer. We enter the orchard by way of a gate through the stack yard, for the farmer, who in bygone times was responsible for the planting of the trees in the first place, exercised sensible judgment in establishing his orchard not far from the homestead and the cider mill. Probably he did this because the orchard is, strictly speaking, neither pasture nor meadow; though it does duty as both; but it is a handy enclosure, close to home, convenient for ewes and lambs in the early spring, where calves can be run and kept under notice, and pigs can forage about in search of food that never would be found by anything but a member of the swine family.

In autumn days, however, when the harvest of the orchard is being gathered, neither sheep, pigs, calves, or other stock are allowed access for reasons that are obvious, and the grass that grows luxuriantly underneath the trees is left to flourish until the last of the apples are gathered.

APPLE CRIMSON BRAMLEY'S SEEDLING.

A valuable culinary variety, possessing the merits of Bramley's Seedling, but differing from it in being bright crimson. Introduced by Messrs. H. Merryweather and Sons, Lim.

The first thing that strikes you on entering the orchard is the method, or rather lack of method, in arrangement. It would appear as if the trees had just been dropped in places where there was room for them, and in places, too, where there was not room, for many of the orchards are hopelessly overcrowded, and, though at the original planting there might have been some attempt at orderly arrangement, this has long since been broken up by sticking in trees here and there from time to time where there appeared to be a little vacant space.

As with the arrangement so with the trees. There are some stalwart specimens, with big, spreading limbs, almost like forest trees; others which look as if they had been dying for half a century and yet would not give up the struggle, and others again with trunks lying flat on the ground, evidence that at some time or other they had been blown over. Nobody had taken the trouble to pull these back into an upright position, so they have decided to grow just where they fell, and their want of perpendicular seems to have little effect on their cropping powers. There are trees of all ages, too, in the typical orchard, including old patriarchs with thick stems and massive limbs, but more or less decrepit; trees in the vigour of their prime; others that have been remade by grafting; and young trees that have been planted in recent years to fill up gaps. A heterogeneous collection they appear to be, old, middle-aged, and young all mixed up together with very little order or system in arrangement, and not much evidence of cultivation; but, in spite of all this, do not forget that their presence adds a matter of fifty pounds an acre to the selling value of the land.

As for the varieties, well, I should like to see a collection of apples from a West Country orchard placed before the Fruit Committee of the R.H.S. to be named! The experts round the table would have to give it up, and yet the farmer knows his apples just as he knows his cattle or his horses. There are several types of fruit in the orchard, including, may be, a few old Blenheims and other well-known varieties, the fruit from which is picked and sold by itself or kept for household purposes; and amongst the younger trees you see a fair representation of Bramley's Seedling, Warner's King, and other well-known apples of commercial fame, for it must be said of the farmer that in his planting during recent years he has selected varieties which experience has taught him fetch the best prices in the market

The modern varieties seem but few, however, and who, then, are the customers for the fruit of the orchard at harvest time? The known apples of recognised commercial value find their way to market, and doubtless they would fetch more if they were packed in a less rough and ready manner, and more discrimination was made between good, bad, and indifferent specimens; and then the jam maker has his toll of the orchard, offering, may be, his four pounds a ton for the fruit, and it is surprising in these days how many apples are used for preserving, though it is a rare thing to see apple jam offered for sale!

Finally, you come to the cider fruit, and underneath the trees you see big heaps of apples, some yellow, others green, and others again red and tempting, but appearances are deceiving, and the names are unfamiliar, for the farmer, as he walks from tree to tree will tell you that this is a Killboy, that an Ansell, the next a Slack-my-girdle, the next a Kingston Black, followed by another and another, but the names are all foreign to you, unless you are a native, because they are all varieties of local origin, raised mostly in the dead and gone past from pips thrown out from the cider mill. You may, perhaps, question the value of these cider apples, but the trees are big, the apples, though small, simply hang in wreaths, the crop of a full-developed specimen is enormous in a season when the particular variety "is in," and this year, with cider fruits ranging from three to four pounds a ton, the return is very considerable.

This season the harvest of the orchard is of more than usual importance, for, though at the moment of writing, the trade in table fruit is by no means brisk from the point of view of the seller, cider casks are empty, and the West Country farmer is realising that, after all, it is not only table fruits that pay. And those heaps of red-cheeked apples in the orchard at harvest time, what becomes of them? Some go into the mill to be ground up for replenishing the cider hogsheads for domestic purposes, and others are collected in sacks, and sold to the people who make cider for commercial purposes. This year, owing to the reasons explained, there is a keen demand for them, the possibilities of cider fruits are realised, and though from £3 to £4 a ton does not seem much, think of what a big tree will produce, and remember that a good orchard puts a matter of fifty pounds an acre on to the selling value of land in the West Country. H.

CARMICHAELIA AUSTRALIS.

The order Leguminosæ contains a number of out-of-the-way shrubs which are hardy in the warmer parts of the British Isles, and are well worth growing by people who form collections of rare and curious shrubs. The plant under notice is included amongst such, and though it has long been grown in botanical gardens, it is, comparatively speaking, unknown in gardens generally. A native of New Zealand, it grows into a bush two to three feet high, with slender, rush-like branches, which are but sparingly clothed with leaves. From buds on these branches, however, numerous pea-shaped lilac-coloured flowers appear in July, which are in such numbers as to almost hide the branches. It is rather difficult to manage, particularly if it has to be transplanted after it has attained a moderate size, therefore an effort must be made to plant it in a permanent position when quite small. Sandy loam, in which a little peat has been mixed, appears to suit it better than an all-loam rooting medium, whilst heavy cold soil is undesirable. Seedlings may be raised from home-saved seed, and it is also possible to raise a stock from cuttings, these to be inserted in sandy soil in a close case in July. D

Roses may be grown to perfection by following the instructions given in ROSES AND THEIR CULTIVATION, **by T. W. Sanders. A selection is given, with description** of all the best varieties, and full details for culture outdoor and under glass. Price 2s. 6d. net, by **post in box 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.**

CHERRIES.

Varieties of cherries have of late years become numerous, so there is a good selection to choose from for the various purposes to which the fruits are adapted. At one time the only two late varieties were Morello and Late Duke, which were only used for cooking, being too acid for dessert. The cherry was formerly considered purely a summer fruit, but since the days of cheap horticultural buildings, a more extended knowledge of cultivation, and a greater number of varieties, their season of usefulness in a fresh state has been considerably extended, and they may now be had from April to October in perfection. None of our hardy fruits are better adapted for culture under glass, whether early or late kinds, their size and flavour being very much enhanced by this method, provided a suitable selection is made for that purpose.

Some of the varieties do well in pots, while others succeed better as cordons or trained trees against the walls of houses, but whichever mode is adopted care must be taken not to overcrowd the growths. When grown in pots, either as cordons, bush, or gridiron trained, they usually give satisfaction, and where a constant supply of the luscious fruits is desired throughout the season, it is a good plan to have a house set apart for them. Grown in this manner, the fruits are not only larger and of better flavour, but, owing to immunity from early spring frosts when the trees are in bloom, and from the attacks of birds, a full crop may generally be gathered from a limited space. It is, however, not all varieties that are suitable for pot culture, several not fruiting well until the trees obtain some age.

Those who are desirous of having a fine, large, well-flavoured black variety would do well to secure a tree or two of Black Tartarian. This is rather tender, but when grown under glass, either trained against a wall, or in a pot, it will produce fruit most abundantly. The foliage being very large, the shoots should not be overcrowded. Elton is another fine old variety that succeeds well under glass. Frogmore Early Bigarreau, when thoroughly ripened, is an exceedingly showy variety of a pale yellow colour, mottled with red. Bigarreau is also a fine variety that succeeds well under glass, and so do Bigarreau Napoleon, Geant de Hedelfinger, Bigarreau de Schreken, Early Rivers, and Governor Wood. There are others, but these are among the best.

Not only is it desirable to grow some of the finest varieties under glass, but a place should be reserved for them on the various walls in the open. Some of the earliest kinds grown on a south wall will succeed those under glass, while the mid-season and late kinds, if planted against a north wall, will prolong the season considerably. Trees for a south wall should include Early Rivers, Bigarreau de Schreken, Bigarreau, Noir de Schmidt, Empress Eugenie, Guigne d'Annonay, Reine Hortense, and a new variety named The Noble. To prolong the season as much as possible, some of the later kinds should be planted against a north wall. We have had Florence in grand condition when trained on this aspect, as late as September, while Guigne de Winkler will hang well until October; the same may be said of Late Duke and Late Black Bigarreau, and in some seasons St. Margaret's is also very fine grown thus, and so are Aston and Belle Magnifique.

In many places cherries do well as standards, but birds have become so numerous that it is difficult to preserve the fruit from them until it is thoroughly ripe, but where the country is open, standards do well, especially of such varieties as May Duke, Black Eagle, Aston, Black Heart, White Heart, Morello, and Kentish.

Some nurserymen make a special feature of growing fruit trees in pots, and those who are contemplating an orchard house would not do wrong to purchase the trees already established, as a season would thus be gained. It is, however, not essential for them to do so, as those lifted from the open ground, if not too large for pots, may be grown for a season after potting in the open to get established. Cherries, as most people know, bloom early in the season, before the weather is very warm; the bloom buds develop gradually, therefore when grown under glass, it would be courting failure to try and push them on too rapidly at this stage. It does not take the early varieties long to ripen their fruits after stoning; therefore it is not difficult to calculate the time trees started at a certain date should have fruit ready to gather. It is by means of a regular temperature that the fruit is brought to the highest state of perfection, and this, together with constant attention to cultural requirements, will give the finest results. On no account should the trees be allowed to suffer for want of water at the roots. The foliage must also be kept clean by fumigating and syringing until the fruits begin to ripen, when an excess of moisture in the atmosphere would cause splitting. Some of the varieties of cherries produce very large foliage, and with such kinds it will be necessary to keep the shoots a sufficient distance apart to allow air and light to circulate freely among them. Some varieties, Early Rivers, for instance, that make long-jointed growths, must be pruned rather hard to cause them to make more fruit buds; others, like the Black Eagle, should be allowed to extend their shoots somewhat, and when carrying a full crop of fruit should be encouraged to make a proportionately extended growth to keep the trees in a flourishing condition. After the fruits are gathered the foliage should be kept clean to induce the formation of fruit buds more freely.

It is a common mistake to have trees on walls trained with a centre shoot. Where the cultivator cannot train a tree properly he should grow nothing but single cordons. There is quite as much pleasure in seeing a well-trained tree as in producing the finest fruit, yet comparatively few gardeners nowadays appear to know much about training. This is one of the lost arts in gardening. Not one in fifty of the present-day gardeners could train a peach, cherry, or plum tree as it should be trained, for the simple reason that they have never been taught how to commence the operation. They have not the faintest idea where a shoot should be cut back to, or on which side the leading bud should be to produce an evenly balanced specimen. True, a tree may neither produce finer fruit or a heavier crop because the shoots are nailed symmetrically to the wall, but the work not only gives great pleasure to the owner and the person in charge, but allows of a more even circulation of air amongst the shoots and branches, and consequently a more regular crop. Training is an art which does mend Nature, changes it rather, and those who are adepts at it would do well to teach the rising generation of gardeners how such work was done in their day and in the times before them. It is not enough to say that insect pests must be got rid of; means should be taken to prevent them making their appearance, and when the trees are dormant is the best season for doing this. We pay special attention to the cleansing of stove plants, look well after insects on the chrysanthemums and like subjects, never permit the mildew on carnations to make headway, yet we are at a loss to know how it is that there are small holes in the foliage of our fruit trees, or that they are attacked with silver leaf, gumming, or canker. To grow fruit of the finest quality the trees must be free of all these troubles; therefore the cultivator must make himself acquainted with their origin. What is silver-leaf? Well, it is a fungus that attacks fruit trees, plums, and cherries in particular. If the cultivator will take the trouble to examine the roots of such trees he will find them in a most unhealthy condition; they will not have those fine flourishing fibres that are to be found on healthy trees, but will be covered with small nodules a few inches apart. When trees are in this condition, it is a sign there is something wrong with the drainage, that the soil has become sour and requires attention. Small holes are often caused in the leaves by the shot-hole fungus, and canker often comes through poverty in the soil; in each and every case it is essential that the cultivator be in a position to cope with the evil ere it is too late.

P. H. C.

GUNNERAS.

The plant of Gunnera manicata, so finely figured in the Gardeners' Magazine of September 2, was placed in its present position in March, 1909. It was a side crown from one of the large specimens. There are numerous larger examples than the one illustrated, but it has leaves 8ft. across and a height of 10ft. The largest leaf we have grown was 10ft. across, and a dozen men could easily have found shelter from rain under it.

Gunneras do not in many cases receive as much attention as they require. They need a moist position, and, if possible, one near a stream or lake, but in the event of such positions not being available, a good-sized hole should be dug at the back of the plant and clayed up, so that it will hold water, and this should be kept full, so that a gentle and gradual supply of moisture will be provided for the roots. Good dressings of cow manure should be given, with an occasional dose of nitrate of soda during the spring. We have many large groups which are most imposing all the summer.

Gunnera scabra is smaller than G. manicata, and the leaf stalks are bright red. It likes plenty of moisture and looks extremely well in boggy borders and in damp valleys. G. magellanica is a small creeping species, which thrives in bog soil or peat; it is quite hardy and is a great contrast in size to the former, as it only measures two inches across the leaves. It spreads rapidly by prostrate rhizomes which cover the ground and form a fine green carpet. This species is found in the Falkland Islands and is sometimes called G. Falklandica.

Another and still smaller species is Gunnera monoica, found, I believe, in New Zealand. This requires a shady, moist position. Still a very scarce plant in this country, it is a very pretty one, and the foliage is less than one inch across. It must at all times be kept cool, but in sharp weather a little covering should be placed over its foliage, such as some dry bracken or heather; or a small thatched hurdle may be used, as, unlike the large-leaved species, this one is evergreen. We have plants growing with sarracenias, a position they seem to like well.

It may be noted that all the gunneras require a slight protection in the spring, as they are apt to be cut by sharp frosts. Our plan of protection is simple. When the foliage of the large types is cut down in early winter some dry bracken is placed over the crowns and one or more of the large leaves put over the bracken. This protection is not moved until March, when it is eased and gradually reduced until the weather permits entire removal.

W. A. Cook.

LIME.

Among the mineral constituents of plant food none is more valuable or more widely distributed than lime. It exists in chalk, limestone rocks, marble, marl, calcareous spar, bones, etc., either as carbonate of calcium or phosphate of calcium. In its natural condition it is slow in action, but when converted into quicklime, and either ground or slacked, it is much more readily available to growing crops. In this condition, too, its neutralising properties are most active, and when a sour soil is being dealt with or a crop languishing for want of this particular food is under consideration, no better form of lime could be employed.

As a more slowly acting form of lime is desirable for some purposes, chalk, air-slacked lime, finely-ground bones, and basic slag will best meet these requirements. In the formation of vine borders old plaster or mortar is preferable to any of the foregoing, as it is not only slow in action, but also contains a percentage of soluble potash and silicates, both of which are valuable to the vine. For general purposes chalk, quicklime, either air or water slacked, will be found admirable where the aim is simply to provide a supply of this ingredient of a fertile soil. Ground quicklime is the most active of all the forms, and on this account it should not be employed until there is growth in the crop on the land to which it is applied. In its caustic condition it quickly breaks up the nitrogenous organic compounds in the soil, converting the nitrogen into nitrate of lime, which is a readily soluble, and easily washed away compound. Spring is, therefore, the best season of the year to apply the more caustic forms of lime. Chalk, lime rubble, old plaster, bones, and all the slowly decomposing lime compounds should be applied in autumn, or early winter to afford time for their disintegration.

In some neighbourhoods a very dense clay receives the name of marl, and is much used for top-dressings of various kinds. The effects of such top-dressings are nil, but still they are given. There is yet room for the County Council's education in both agriculture and horticulture in order that a standard of intelligence may be reached to enable the interested to discriminate between the false and the true. Marl is only valuable for heavy soils lacking in lime, of which it contains 20 to 25 per cent. Being a mixture of clay and lime it is admirably adapted for improving the physical and chemical properties of all sandy formations. All our hardy fruit trees and bushes are lime lovers, particularly stone fruits, and, amongst these, especially apricots.

Again, when we scan the country with our mind's eye, and note the diversity of plant life on the various formations, we cannot help profiting by the result. On the limestone we find lily of the valley, daffodils, anemones, violets, campanulas, centranthus, wallflowers, clematis, cyclamen, helleborus, lupins, primroses, and many other useful flowers luxuriating. The scilla, too, is a limestone plant, and this, and those named should have a liberal quantity of lime mixed with the soil in which they are cultivated if there is any lack of this all-important soil disintegrator and plant food constituent.

Pedestrian.

A TASTEFULLY ARRANGED COLLECTION OF SALADING.

For which Mr. E. Beckett, V.M.H., was awarded the first prize at the exhibition of vegetables held by the Royal Horticultural Society, September 26.

Erica gracilis.—This is one of the most popular of market heaths, and also one of the easiest of cultivation. It has a dense twiggy growth, and the slender shoots are thickly studded with tiny rosy-purple blossoms. Of this heath perfect little specimens may be often seen in the florists' shops of London, and even on the costermongers' barrows. The white variety, nivalis, is more constant in colour than was at one time the case, and very pretty and distinct it is. It is sufficiently meritorious to admit of it being generally grown.—W. T.

WORK FOR THE WEEK.

◆

ORCHIDS.

SEEDLING ODONTOGLOSSUMS. — The hot weather of the past summer, although beneficial to many young orchids, has been most trying for odontoglossum seedlings. The seeds sown in many cases in the early spring were most promising, and every indication of a rapid germination was shown, but no doubt owing to a great extent to the dryness of the outside atmosphere, the plantlets, which in the early stages gave so much promise, have been practically at a standstill, and it is only since the recent rains that renewed vitality has been apparent. This has caused more irregularity in the seed beds than usual. The season has arrived for the consideration of such young stock, and with outside conditions favourable, any seedlings that are sufficiently forward to need removal may now be dealt with without delay. I have for many years urged that where there is room the best method is to transfer the young plants to pots of a suitable size to contain them properly, as in their early stages of development they can have their requirements more easily provided when treated separately than can possibly be the case where several are planted together in the same pot. There are scarcely two young plants in a batch of seedlings that have the same vigour; some grow much more rapidly than others, and the weakest plants often perish when all are treated together in the same pot.

HOUSE ROOM.—I am well aware of the difficulties to be met in regard to room after seedling raising has been in practice for a few years. The expense of extra houses and extra labour incurred is generally found a stumbling block, and thus raisers are often compelled to sacrifice a principle found most practical, so as to economise space. I often think of the time when orchid houses were being built extensively and filled with expensive imported plants. How things have changed. We are now able to provide for our requirements from hybridisation at the expense only of labour incurred.

POTTING.—The pots used for seedlings should be clean and filled to about half their depth with clean broken crocks. The compost should be of about equal portions of chopped peat, oak or beech leaves, and sphagnum moss; the latter should be well washed and finely chopped, or it will quickly outgrow and bury the young plants. The leaves should be sterilised to destroy any insects, worms, or fungoid pests before they are used. Add sufficient sand and finely-broken crocks to render the compost porous. The pots should be filled with this compost, and watered some hours previously to use, as this permits the water to drain away before potting the young plant.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

GLORIOSAS.—These will have nearly completed their season of flowering, and attention must be given to the ripening of the tubers. Gradually reduce root moisture, fully expose the foliage, and afford cooler surroundings. After the foliage has become thoroughly ripened off the tubers may be stored in dry sand throughout the winter months. A dry position in a warm greenhouse with a minimum temperature of 50 degrees will suffice for the resting period.

ACHIMENES.—These have ripened their foliage, and the tubers may be now stored underneath the greenhouse stage if a dry position is available, or, should the pots be required for immediate use, they may be successfully stored away in boxes filled with sand and placed in some dry position where frost is excluded.

CALADIUMS.—The latest batch of these ornamental foliage plants will soon be presenting a shabby appearance. As the foliage shows signs of decay less moisture will greatly assist the ripening process. Although a temperature of 55 degrees will generally suffice to winter caladium tubers, I find the more delicate or rare varieties are better stored in the stove where a temperature of 65 degrees is maintained throughout their resting season; C. argyrites and C. minus erubescens are liable to decay if stored in a temperature below 60 degrees. Wherever convenient they should be kept in their pots until the time arrives for starting the tubers into growth again.

EUCHARIS AMAZONICA.—In some gardens it is often particularly desirable to have an abundant supply of blooms for Christmas or thereabouts, and then such choice blooms as eucharis cannot fail to command admiration. Pots of eucharis bulbs that have been resting somewhat in the intermediate stove since they completed their summer growth will now be showing flower spikes, and the most forward plants may be selected and placed in a temperature of 70 degrees, and, where space is available, plunged up to the pot rim in tan bark or cocoanut-fibre refuse. Give a thorough watering with tepid water, and afford a moist atmosphere by occasionally spraying between the plants, and, on favourable opportunities, overhead. After flowering is over the plants will commence to grow freely, and as the foliage attains its full development the ripening off and resting process may be repeated. At no season should the plants be subjected to excessive dryness at their roots, and as they are gross feeders they ought to be always allowed ample pot room. Should, however, circumstances prevent repotting after flowering, and immediately before growth commences, the bulbs may be greatly assisted by frequent applications of farmyard liquid manure and soot water. Where repotting and regular feeding are neglected the deterioration of the stock will result. Mealy bug and scale are often most troublesome, and these pests must be kept in check by frequently sponging and syringing the foliage with some approved insecticide.

VENTILATION.—Very little ventilation will now be required, and as the season advances syringing overhead must be reduced. Artificial heating will now be more needed as the nights become colder, but excessive heating of the hot-water pipes must be guarded against. The temperature of the stove may now range between 65 and 70 degrees, with a few degrees lower on extremely cold nights.—John Donoghue, Bardon Hill Gardens.

THE FLOWER GARDEN.

BEGONIAS. — The tuberous-rooted begonias should be lifted before they are cut down by frosts. It is desirable to allow all growth and foliage to remain on the tubers when lifting, and to store them in a dry airy shed until this decays sufficiently to drop off of its own accord. When this takes place the tubers should be cleaned over, placed in trays, and stored in a cool, dry, airy, frost-proof room for the winter. Here they will remain in good condition until required for starting into growth again. An occasional examination will be necessary from time to time during the winter to prevent any decay or rot spreading, but if the tubers are perfectly dry when put away there will not be much loss. The fibrous-rooted varieties will require boxing when lifted and wintering in a cool greenhouse, where they will keep in good condition until required for division in the spring.

SALVIA PATENS.—Sand will be found an excellent material for storing the tubers in during the resting period, providing the stock is placed in a frost-proof shed. It is a beautiful plant, and every care should be taken to keep the stock sound after lifting. Cuttings, which were put in earlier, and have made small tubers, should be left undisturbed until the early part of the year.

CANNAS.—These are not very difficult to deal with, as they keep in good condition when laid out on the floor of a shed, free from frosts. If there is any doubt about their safety, a few leaves thrown over them will afford all the protection needed.

DAHLIAS may be safely wintered in boxes by shaking leaf-soil amongst the tubers after they are packed in, and placing the boxes where no frost can reach them. When the tubers are lifted the labels must be securely tied on the stems with strong twine, and in many cases it will be necessary to afford new labels before storing.

ROSES.—Old plants which have been in the same position a few years, and are looking somewhat worn out, will regain some of their lost vigour if lifted and replanted. The soil should be taken out of the beds and new soil provided, replacing the plants as quickly as possible. All decaying and dead wood should be cut out, and the roots trimmed a little with a sharp knife.

LAWNS.—Where these have become weedy attention should be afforded them as early as possible. Plantains may be removed with a two-pronged digger, and if large holes are caused by their removal these must be filled in with soil. An application of lawn sand will usually destroy the daisies, but it should be used when the weather is dry.—E. C. Pooley, Gnaton Gardens.

FRUITS UNDER GLASS.

EARLY VINERIES.—In many gardens chrysanthemums are temporarily housed in these structures, and in such cases the part of the border near the pipes must not suffer from lack of moisture. It is not necessary to keep the vine roots wet at this time of the year, but it is quite necessary to prevent them from getting dry, because many of the small or fibrous roots may become injured. See that all necessary root pruning is finished, and at the fall of the leaves all painting or alteration of hot-water pipes should be pushed forward. If the vines have been badly infested with any pest, and subsequently cleansed as directed in a former calender, a couple of coats of paint in the vinery will pretty effectually eradicate it.

SUCCESSIONAL HOUSES containing ripe fruit should now have a little warmth at night, with a current of air at all times; and if the grapes are far advanced towards maturity, they should be cut and placed in bottles of water in the grape room. The laterals should then be shortened to admit of thorough ripening, and the remaining foliage must have a thorough cleaning. At the same time, the roots may require a good watering to help plump up the buds for next season's crop.

LATE GRAPES. — Muscats and Lady Downes, Princess of Wales and Alicante have never been better than this year, but they should have careful treatment if the fruit is to keep well. They must be kept at a very even temperature with a little heat in the pipes when the weather is damp at night. Keep all the laterals from touching the glass, as the moisture from the glass collects on them, and is carried down the shoot into the bunch. Keep the roots just moist, and examine the bunches for decayed berries at least twice a week. Keep the temperature at about 55 to 60 degrees if the grapes are ripe, if not, a few more degrees must be given.

POT STRAWBERRIES.—If the autumn proves wet, means should be taken to prevent the strawberry plants from receiving too much moisture. Some lights should be put over them to keep the rain off.

LATE MELONS.—Give these a temperature of 70 degrees in order to ripen the fruits thoroughly, and keep them dry at the roots, as there should be sufficient moisture in the soil to ripen the crop.

PEACH HOUSES.—Early peaches and nectarines will now be shedding their leaves, and the fall should be assisted by means of a bundle of birch twigs brushed lightly over them. One good recommendation for pot trees is that they are turned out and their places can be filled with flowering plants for a month or two.—W. A. Cook, Leonardslee Gardens.

HARDY PLANT CHAT.

The Amellus Asters.

It is highly pleasing to all of us who have for many years admired the starworts of the type of Aster Amellus to observe the varieties which are now coming so freely to the front, and to witness the increasing popularity of these fine forms, which, in many ways, are so valuable in the garden. An opportunity of seeing a good collection of the newer ones leads one to think that the glorious effects which might be produced in the autumn by groups of these in the hardy plant border have not yet been realised. Some who advocate the formal system of planting could employ them with magnificent effect for bedding or for broad lines in the more artificial autumn effects. What we seem to want now is a very good white one, and it is just within the bounds of probability that we shall have this shortly among the many fine seedlings now being sent out and in the raisers' possession for increase. But we need not wait for this, as we have a great diversity of shade and colour. Beauté Parfait, with fine violet-coloured flowers, is very handsome; the reddish-violet Charles Davis is of a shade which will be useful; and the large-flowered Ultramarine needs only to be seen to be admired for its fine ultramarine violet blooms. Riverslea, no novelty, is yet able to hold its own with its deep violet flowers; and I still like Stella, although its flowers, of a soft slaty blue, are too light and too starry for great effect. Preciosa also maintains its position with its large violet-blue blooms; and the late flowering of Framfieldense makes its violet-blue flowers all the more welcome, seeing that they are about a fortnight after the others. Major, lavender-blue, is also excellent. Of the pink and rose shades, so useful, we have Perry's Favourite, a beautiful rose-coloured Amellus Aster, and Distinction, with fine masses of rose-lilac blooms. These are some of a good number I have seen in first-class condition this autumn.

Aconitum cæruleum.

I should much like to know if it is absolutely certain that this new monkshood is really, as has been said, a seedling of Aconitum Wilsoni. I am disposed to accept the statement that it is, until I have evidence to the contrary, although I am assured by a good hardy plantsman that it is the same as one sent out some time ago as A. septentrionale, which, by the way, I have not seen for a long time, so that I cannot compare the two. But Mr. G. Gibson, of Leeming Bar, who is sending the new one out would, I think, be well enough acquainted with A. septentrionale to know if his one was the same. The colouring is, so far as my recollection of A. septentrionale goes, much the same—a light violet-blue—but the habit of this new one is apparently the same as that of A. Wilsoni, of which it is said to be a seedling. There is no inherent impossibility in this, as the latter probably varies at home in shade of colour, and the sport from seed into a lighter colour under cultivation is quite a probable thing. I am told that some doubt A. cæruleum remaining true to colour, but there is no reason why divided plants should revert to the original colouring, and plants of this class are generally remarkably constant when raised, as this one has been, if propagated by division afterwards. A. Wilsoni is so useful for autumn bloom that the lighter-coloured counterpart is welcome.

Potentilla atrosanguinea Gibson's Scarlet.

The mention of Mr. Gibson reminds me of a potentilla, called Gibson's Scarlet, which attracted my notice a short time ago, when the plant began to find its way into gardens. It is undoubtedly a very fine flower, the colouring being the most brilliant of all the shades of scarlet we have among the potentillas. Vivid scarlet—the description given of the tint—is by no means an exaggeration of the colour, and we have few brighter things in its way. As it only grows about a foot high, it is a good thing for the border, but I think it shows its real value on the larger rockeries. Like many other potentillas, it objects to being in a place where it is burnt up for want of moisture, and a cool position gives it even greater brightness than when it is exposed to the full glare of the sun.

S. Arnott.

VARIEGATED HART'S-TONGUES.

It has often been doubted whether there are really any thoroughly constant variegated varieties of hart's-tongue, so many instances having occurred of reversion on the one hand, and, on the other, of induced and temporary variegation, due to unfavourable conditions of culture, or exposure to sunshine. Finds have been repeatedly recorded of well-marked variegation, but subsequently it has always been difficult to find surviving specimens in collections, and the opinion has therefore become fairly general that the phenomenon is only temporarily manifested, and is not a constant feature capable of being permanently maintained, and even transmitted through the spores.

Variegation in any case is a very rare occurrence in our native species, though in exotic ferns, such as Pteris cretica albo lineata, Pteris argyrea, and P. tricolor, we have really definite cases. In British ferns we have Polystichum angulare inequale variegatum of Padley, which has its fronds constantly pervaded with white pinnules, giving it a distinctly speckled appearance, the "inequale" feature, which is not marked enough to detract from its beauty, being due to the diminished size of the white pinnules, owing, presumably, to paucity of chlorophyll. This fern succeeded in imparting its form of variegation exactly to a polydactylous angulare with which it was crossed. Another, and more beautiful, constantly variegated fern is the rare aposporous P. angulare pulcherrimum of Moly, in which the large falcate pinnules are symmetrically coloured a bright golden-yellow on the lower half, and normal green above. This has yielded true offspring by apospory in Dr. F. W. Stansfield's hands, though the bulk of such offspring presented the usual ragged and imperfect forms, common, apparently, to all the progeny of the aposporous "angulares."

An athyrium, offspring, we believe of A. ff. percristatum Cousins, has its fronds mottled with very light green, almost white, and normal green in an erratic marbled fashion. This was noted by the writer in a garden at Kew, where numerous ferns from his own collection had found a home, hence the presumption of Cousinsi origin. In Mr. Cranfield's collection, largely increased by his acquisition of the remains of Mr. Moly's, there is an angulare, the history of which is not recorded, with fronds showing pure snow-white portions.

To return now to the question of the hart's-tongue, our object is to place on record a curious case of apparently contagious variegation of a probably permanent character, which has occurred recently under our own observation. A year or two ago, when fern hunting in Devonshire with Mr. Cranfield, we both found, on different sides of the same lane, specimens of otherwise normal hart's-tongues, all the fronds of which were irregularly striped with dark green on a yellowish ground, a feature which, both in his case and ours, has proved constant. In the same week the writer came across three other hart's-tongues of the purely normal green colour, but one bore muricate narrowed fronds, and the other two, though separately found, had their fronds contracted and deeply crenated for a short distance near the basal lobes. All four plants were installed in a nine-inch square pan, and placed near a well-lighted north window. As a result they thrived so well as to form good-sized plants, and fill the pan tightly with their intermingled roots.

Last spring, owing to their need of more root room, they were turned out en masse into the garden, and the square solid mass, undisturbed, was dropped, plants and all, into the soil, only the pan being removed. At that time the variegated specimen occupying the centre alone showed its striped character, the others being normally green, as found. To our intense surprise, however, when the new growth arose, which it vigorously did with all four plants, as it matured, all four presented the same distinct striped markings on a light yellow ground, precisely like the central one, and at the time of writing the four plants represent a clump of variegated hart's-tongues, though the three originally plain ones still show the characteristic variations above described, thus entirely precluding the assumption that they had perished, and that the entire variegated clump consisted of the originally variegated find alone.

In this connection we may mention that the late Mr. G. B. Wollaston, of Chiselhurst, one of our foremost pioneers of the British fern cult, had also a collection of many curiously variegated plants, ranging from common weeds to umbrageous trees, and he was quite confident that variegation was in many cases imparted from one plant to another if grown so that the roots became closely intermingled, a theory which we hardly felt inclined at that time to accept. The case, however, which we have cited goes very far to prove that, at any rate, there is something in it, since it will be noted that it is not merely a case of that tendency to produce yellow fronds due to exposure to hot sun which the hart's-tongue often shows, but one in which the distinctly striped character of the central plant is displayed clearly in the associated varietal ones, which were perfectly green when discovered, while other varieties close by, but beyond reach of the presumably infecting roots, are normally coloured.

We have thought it well to record this case in detail as it opens up a most interesting field for experiment. Mr. Wollaston was a very keen observer, but, unfortunately, did very little in the way of publishing records of systematic investigation for demonstrable proofs, but we retain a very vivid recollection of his pointing out to us numerous instances of variegation which he asserted had arisen by sowing seeds of other non-variegated plants, even of trees, in beds of variegated cress and similar small vegetation, such seeds eventually producing growths variegated on the same lines, though derived from plants of normally coloured foliage. Experiment on these lines is not difficult, but it is all-essential that they be made on definitely recorded lines to be of value.

C. T. Druery, V.M.H., F.L.S.

GREAT EXHIBITION OF BRITISH-GROWN FRUIT.

(Continued from page 754.)

kets of Newton Wonder, Rival, Wealthy, Peasgood's Nonsuch, Bramley's Seedling, and Ribston Pippin apples, and fine examples of Marguerite Marillat, Gross Calebasse, Doyenne du Comice, Directeur Alphand, Princess, Uvedale's St. Germain, Doyenne Boussoch, Beurre Clairgeau, Conference, Louise Bonne of Jersey, and Marie Louise d'Uccle pears. Mr. R. C. Notcutt, Woodbridge, was awarded a silver Knightian medal for a good collection, in which populaar apples were staged in large baskets.

For a display 12ft. by 6ft., Messrs. G. Cooling and Sons, Bath, gained the silver Knightian medal with a very nice collection, wherein a good basket of Pitmaston Duchess pears was a fine feature; Messrs. Daysh and Wright, Queen's Park, Alton, gained a silver Banksian medal; Messrs. Paul and Son, Cheshunt; Messrs. W. Spooner and Son, Hounslow; and Messrs. John Peed and Son, Norwood, were other exhibitors in this class.

There was but one entry of nine vines in pots, and this from Messrs. T. Rivers and Sons, Sawbridgeworth, amply demonstrated this excellent and useful method of culture. The vines carried a good crop, and the varieties were Alicante, Golden Queen, and Gros Colmar.

For orchard house fruit and trees Messrs. T. Rivers and Son, Sawbridgeworth, won the gold medal with a grand lot of trees, splendidly fruited; particularly good were the crops of Pitmaston Duchess, Durondeau, St. Edmund, and Conference pears, Gascoyne's Scarlet, The Houblon, Jas. Grieve, and King of Tompkin's County apples; and President plums. Among the picked fruits we noted large and superbly-coloured specimens of Emperor Alexander, Cox's Orange Pippin, Lady Henniker, Peasgood's Nonsuch, and Reinette Descardre, and Doyenne du Comice, Magnate, Marguerite Marillat, Duchesse d'Angoulême, and Souv. du Congrès pears; Salway peaches, and Coe's Golden Drop plums. The silver-gilt Hogg medal fell to the King's Acre Nurseries, Lim., Hereford, for a group of very heavily-cropped apples and pears; among the former were examples of Gloria Mundi, Allington Pippin, Twenty-ounce, and Cox's Orange Pippin apples; while of pears the trees of Glou Morceau, Beurre Diel, Le Lectier, and Marie Benoist were especially attractive. Along the front were dishes and baskets of picked and selected fruits of popular apples and pears, many of them very highly coloured.

MARKET GROWERS' CLASSES.

In this division the best score of baskets of cooking and dessert varieties shown by market growers came from Mr. R. A. Whiting, Faversham, who was awarded a gold medal for a magnificent set, in which we noted Warner's King, Peasgood's Nonsuch, Stone's, Lord Derby, Rival, Cox's Orange Pippin, Allington Pippin, Royal Jubilee, Houblon, Blenheim Pippin, Charles Ross, and King of the Pippins; Mr. H. T. Mason, Hampton Hill, Middlesex, was second, and gained a silver-gilt Hogg medal for a grand set that included magnificent baskets of Cox's Orange, and Allington Pippins, and Coronation; third prize fell to Mr. E. W. Caddick, Caradoc, Ross, for a good set; the silver-gilt Banksian medal was awarded.

The silver-gilt medal of the Fruiterers' Company for a dozen baskets of apples was won by Mr. A. E. Mason with a grand set of Peasgood's Nonsuch, King of the Pippins, Allington Pippin, Yellow Ingestre, The Queen, Newton Wonder, Cox's Orange Pippin, Lane's Prince Albert, Bismarck, Jas. Grieve, Beauty of Kent, and Ribston Pippin; the Horticultural College, Swanley, second, winning a silver Knightian medal. Mr. H. Lumley Webb, Sittingbourne, was third, and secured a silver Banksian medal.

SINGLE DISH CLASSES—DESSERT APPLES.

In the following sections the schedule gives a list of varieties to be shown. A single dish of six fruits is required, and two prizes, respectively 7s. and 5s., are offered. We give the name of the variety and of the first prizewinner, and also the number of dishes staged in competition:

Adams' Pearmain, Mr. T. H. Bolton, gardener to the Earl of Devon, Powderham Castle, Exeter; nine entries. Allington Pippin, Mr. J. C. Sutton, Chevening; twenty-three entries. American Mother, Mr. J. Bond, Wye; fifteen entries. Belle de Boskoop, Mr. A. Basile, Woburn Park Gardens, Weybridge; four entries. Ben's Red, Mr. E. King, gardener to R. Lamber, Esq., Aylesford, Kent; two entries. Blenheim Orange, Mr. C. O. Walters, Ickleton House, Wantage; twenty-eight entries. Charles Ross, Mr. F. King, gardener to Rev. H. A. Bull, Westgate; nine entries. Christmas Pearmain, Mr. B. J. Mercer, gardener to H. G. Kleinwort, Esq., Wierton Place, Maidstone; nine entries; Claygate Pearmain, Mr. H. C. Gardner, gardener to Lord Foley, Ruxley Lodge, Claygate; eleven entries. Coronation, Mr. J. Copp, Ferndale, Teignmouth; three entries. Cox's Orange Pippin, Rev. G. H. Engleheart, Denton, Hants; thirty-one entries. Duke of Devonshire, Mr. G. Davison, Westwick Gardens, Norwich; seven entries. Egremont Russet, Mr. J. Bond; nine entries. Houblon, Mr. J. E. Hathaway, Baldersley Park Gardens, Thirsk; two entries.

James Grieve, Mr. F. P. Norbury, Malvern; seven entries. King of Tompkin's County, Mr. F. Brock, Goodwood; seven entries. Lord Hindlip, Mr. R. M. Whiting, Credenhill, Hereford; three entries. Margil, Mr. C. O. Walters, Wantage; five entries. Ribston Pippin, Mr. Herbert Edgell, Hickling, Norfolk; fifteen entries. Rival, Mr. A. Basile, Weybridge; nine entries. Ross Nonpareil, Mr. E. King, Aylesford; one entry. St. Edmund Pippin, Mr. T. Turton, Sherborne Castle Gardens, Dorset; three entries. St. Everard, no entries. Wealthy, Mr. A. Basile, Weybridge; eight entries. William Crump, Mr. H. Brotherston, gardener to the Earl of Lytton, Knebworth, Herts; two entries. Any other early variety, Mr. T. Stevenson, gardener to E. G. Mocatta, Esq., Woburn Place, Addlestone, with fine King of the Pippins; twenty-four entries. Any other late variety, Mr. A. Andrews, Campsea Ash Gardens, Suffolk, with Fearn's Pippin, grandly coloured; thirty-two entries.

SINGLE DISH CLASSES—CULINARY APPLES.

Annie Elizabeth, Mr. B. J. Mercer; fifteen entries. Beauty of Kent, Mr. Collier, gardener to Sir Jeremiah Colman, Bart., Gatton Park, Reigate; seven entries. Bismarck, Mr. J. Vivian, Hayle, Cornwall; twelve entries. Bramley's Seedling, Mr. J. Vivian; twenty entries. Byford Wonder, Mr. J. Lee, Higher Bebington; four entries. Dumelow's Seedling, Mr. C. Page, Dropmore Gardens, Maidenhead; eleven entries. Ecklinville, Mr. J. Bond, seven entries. Edward VII., Mr. R. M. Whiting; three entries. Emneth Early, no entries. Emperor Alexander, Mr. J. Vivian; eight entries. Gascoyne's Scarlet, Mr. G. Davison; eight entries. Golden Noble, Mr. T. Turton; nine entries. Grenadier, Mr. J. Vivian; four entries. Hambling's Seedling, Mr. T. E. Tomalin, Piltown; five entries.

Lady Henniker, Mr. A. Basile; fourteen entries. Lane's Prince Albert, Mr. Thos. Stevenson, Addlestone; fourteen entries. Lord Derby, Mr. B. J. Mercer; eleven entries. Mère de Ménage, Mr. J. Vivian; eight entries. Newton Wonder, Mr. A. Andrews; seventeen entries. Norfolk Beauty, Mr. W. Allan, Gunton Park Gardens, Norwich; four entries. Peasgood's Nonsuch, Mr. A. Andrews; six entries. Pott's Seedling, Mrs. F. W. Platt, View Road, Highgate; three entries. Rev. W. Wilks, no entries. Royal Jubilee, Mr. J. Taylor, Hardwicke Gardens, Shrewsbury; ten entries. Scarlet Victoria, no entries. Stirling Castle, Mr. J. Copp; three entries. The Queen, Mr. J. Bond; eight entries. Tower of Glamis, Mr. T. E. Tomalin; seven entries. Warner's King, Mr. A. Andrews; ten entries. Any other variety, Mr. Gooding, gardener to W. B. M. Bird, Esq., Eartham, Chichester; with Clark's Seedling.

DESSERT PEARS—SINGLE DISHES.

Beurre Alexander Lucas, Mr. A. Basile; five entries. Beurre d'Amanlis, one entry, fruits unfit, no prize awarded. Beurre d'Anjou, Mr. A. Tidy, Cobham Park Gardens; two entries. Beurre d'Avalon, no entries. Beurre Bosc, Mr. A. Basile; five entries. Beurre de Naghan, no entries. Beurre Dumont, Mr. A. Basile; one entry. Beurre Hardy, Mr. A. Allan, Hillingdon Court Gardens, Uxbridge; four entries. Beurre Perran, no entries. Beurre Superfin, Mr. A. Basile; four entries. Blickling, Mr. A. Allan, one entry. Charles Ernest, Mr. A. Basile; four entries. Comte de Lamy, Mr. T. W. Herbert, gardener to J. T. Charlesworth, Esq., Nutfield Court, Surrey; four entries. Conference, Mr. G. Davison; seven entries. Directeur Hardy, Mr. W. Messenger; two entries. Doyenne du Comice, Mr. G. Davison; seven entries. Durondeau, Mr. G. Davison; nine entries. Emile d'Heyst, Mr. S. Barker, Clumber Gardens; eight entries. Fondante d'Automne, Mr. W. Allan; three entries.

Fondante de Thiriot, Mr. A. Allan; two entries. Glou Morceau, Mr. W. Allan; six entries. Josephine de Malines, Mr. G. Davison; ten entries. Le Brun, Mr. A. Basile; one entry. Le Lectier, Mr. Jas. Vert; six entries. Louise Bonne of Jersey, Mr. J. Bond; eight entries. Marie Benoist, Mr. W. Messenger; two entries. Marie Louise, Mr. W. Allan; six entries. Nouvelle Fulvie, Mr. Jas. Hill, Wimborne, Dorset; six entries. Olivier des Serres, Mr. A. Allan; eleven entries. Pitmaston Duchess, Mr. E. King; ten entries. President Barabe, Mr. W. Allan; four entries. Santa Claus, no entries. Souv. du Congrès, Mr. C. Page; six entries.

Thompson, Mr. C. Page; six entries. Triomphe de Vienne, Mr. J. Bond; three entries. Winter Nelis, Mr. H. C. Gardner; nine entries. Any other early variety, Mr. E. Colman, gardener to B. E. Richardson, Esq., Stanstead Abbotts, with Mdme. Treyve; nine entries. Any other late variety, Mr. A. Basile, Weybridge, with Roosevelt, a large, green, brown-speckled fruit of fine appearance; nine entries.

AFFILIATED SOCIETIES.

In the Affiliated Societies Class, the East Anglian Horticultural Club, secretary, Mr. W. L. Wallis, Royal Arcade, Norwich, won the first prize and silver cup, offered for a collection of six dishes each of dessert and culinary apples and pears; the club sent grand dishes of Warner's King, Peasgood's Nonsuch, Bramley's Seedling, Chas. Ross, Houblon, Allington Pippin, and Cox's Orange Pippin apples, and Pitmaston Duchess, Durondeau, Doyenne du Comice, and Hacon's Incomparable pears; the second prize, a silver cup and silver-gilt Knightian medal, fell to the Ipswich Gardeners' Association, secretary, Mr. F. W. Salmon, Brook Hall, Ipswich; the Colchester Gardeners' Association, secretary, Mr. Tanner, East Street, Colchester, gained a silver Knightian medal; six entries.

COLLECTION OF HARDY FRUITS.

Premier award for a collection of hardy fruits, arranged on a space 12ft. by 3ft., fell to Mr. J. Whittle, who added another silver Hogg medal to his collection. Apples and pears were splendidly shown, and there were peaches, blackberries, damsons, prunes, fine plums, nectarines, and quinces, all capitally arranged; Mr. W. H. Bacon gained second prize, and showed Morello cherries, figs, nectarines, plums, peaches, pears, and apples.

FRUIT GROWING.—Full instructions as to planting, pruning, and management of fruit trees are given in PROFITABLE FRUIT GROWING (Ninth Edition) —a gold medal essay by John Wright, V.M.H.—price 1s., or by post 1s. 3d. from GARDENERS' MAGAZINE Office, 148 and 149, Aldersgate Street, London.

BRIGHTON DOME AND CORN EXCHANGE.

29TH GRAND CHRYSANTHEMUM SHOW.
SPECIAL ATTRACTIONS.
ENTRIES CLOSE OCTOBER 25.
Mr. ALFRED GASTON,
Secretary.
Brighton and Sussex Horticultural Society,
Springfield Road, Brighton.

THE BOURNEMOUTH HORTICULTURAL SOCIETY

EXHIBITIONS.
AUTUMN SHOW, OCT. 31st and Nov. 1st, 1911.
SPRING SHOW, MARCH 26th and 27th, 1912.

For schedules and particulars apply to
C. W. BARRETT, Sec., "Lucerne,"
Fenton Road, West Southbourne, Bournemouth.

THE NATIONAL CHRYSANTHEMUM SOCIETY.
GREAT AUTUMN SHOW
will be held
at the CRYSTAL PALACE,
On NOVEMBER 1st, 2nd, and 3rd, 1911.
Entries close October 25th. Write at once for Schedule and full particulars to
RICHARD A. WITTY, 72, Savernake Road, Gospel Oak, London, N.W.

KENT COUNTY CHRYSANTHEMUM SOCIETY.
The 24th GRAND ANNUAL EXHIBITION will be held in the CONCERT HALL, BLACKHEATH, on TUESDAY and WEDNESDAY, October 24th and 25th, 1911.
Schedules and all particulars of the Hon. Sec., F. FOX, The Gardens, The Cedars, Lee, S.E.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

Royal Horticultural Society.

The committees sat on the morning of October 10, but they had very few subjects to deal with; the following awards were made:

FLORAL COMMITTEE.

Award of Merit. — To chrysanthemum Cranford Yellow, a splendid large early-flowering variety from Mr. W. Roots, Holly Cot, Uxbridge; and to decorative dahlia Brentwood Yellow, from Mr. J. T. West, Brentwood, Essex.

ORCHID COMMITTEE.

First-class Certificates.—To Cypripedium Lucifer, a handsome variety from Mr. Alexander, grower to Lieut.-Colonel Sir G. Holford, Westonbirt, Gloucester; to Cypripedium Royal George, one of the very largest and finest of modern hybrids, from Messrs. Armstrong and Brown, Tunbridge Wells; and to Odontioda Euterpe, from Messrs. Charlesworth and Co., Haywards Heath. We understand that Cypripedium Royal George has passed into the collection of Francis Wellesley, Esq., Westfield, Woking.

SCIENTIFIC COMMITTEE, September 26.

Present, Mr. E. A. Bowles, M.A., F.L.S. (in the chair), Dr. A. B. Rendle, F.R.S., Dr. A. J. Voelcker, M.A., F.I.C., Sir Everard im Thurn, K.C.B., J. T. Bennett-Poë, M.A., J. Fraser, F.L.S., J. W. Odell, J. O'Brien, V.M.H., E. M. Holmes, F.L.S., and F. J. Chittenden, F.L.S. (hon. secretary).

OXALIS ORTGIESI.—Mr. J. W. Odell showed a well-grown specimen of this Peruvian species from a cool house at Stanmore in a very floriferous condition. See "Gartenflora" (1875), t. 817.

GALLS ON WILLOW, ETC. — Mr. J. Fraser showed a number of galls on willows and roses and leaves of Ulmus major galled by Schizoneura ulmi, which produces large pouch-like growths on the leaves.

DISEASED PLANTS. — Dr. Voelcker showed specimens of celery attacked by the fungus Septoria petroselini var. Api. This disease appears to be becoming increasingly prevalent each year, and, as pointed out earlier in the year in the minutes of this committee, a considerable number of samples of "seed" of celery are attacked. Probably spraying with Bordeaux mixture or with potassium sulphide from early stages in the plant's growth onwards would keep the disease in check. He also showed cabbage leaves badly attacked by the fungus Phyllosticta brassicæ, causing spotting of the leaves so as to render the plants useless.

REMARKABLE FRUITING OF ÆGLE SEPIARA.—Mr. Bowles showed branches of Ægle sepiara fruiting remarkably abundantly. In most seasons in his garden the earliest flowers are staminate, followed a little later by some pistillate ones, some of which produce fruits, and the crop is a small one. This season, however, most of the flowers were hermaphrodite and practically all produced fruits.

WITCHES' BROOM ON SCOTS FIR.—A remarkable witches' broom on Scots pine was sent by G. W. Ricketts, Esq., of Foulis Court, Eastleigh. It was a dense growth about twelve inches in diameter. The growth was probably due in the first place to the attack on the tree of a species of Æcidium, and it had continued for several years, the leaves on the attacked portion being smaller in size than those on the normal shoots.

RUBUS INNOMINATUS (S. MOORE).—Some fruiting shoots of this newly-introduced rubus, from China, were shown by the Hon. Vicary Gibbs, under the name of Rubus Kuntzeanus. The fruits are insipid, small, and amber and black in colour. The two names are synonymous.

National Sweet Pea Society.

The following account of the proceedings of the N.S.P.S. Floral Committee for 1911 has been sent us for publication by the hon. secretary, Mr. Chas. H. Curtis:

AWARDS.

First-Class Certificates.—To Trial No. 119 (Thomas Stevenson, Dobbies', sent by Messrs. Dobbie and Co. The silver medal was awarded, provisionally, to this trial). Trial No. 111 (Barbara, sent by Mr. Robert Holmes, Tuckswood Farm, Norwich; raised by Mr. H. A. Perkin, Reigate).

Awards of Merit.—To Trial No. 33 (F. Seymour Davis, sent by Mr. F. Seymour Davis, Farnham). Trial No. 43 (Mauve Queen, sent by Messrs. Dobbie and Co., Edinburgh). Trial No. 138 (Red Star, sent by Mr. A. Malcolm, Duns, Berwick). Trial No. 211 (May Campbell, sent by Messrs. Dobbie and Co., Edinburgh). Trial No. 212 (Mrs. B. Gilbert, sent by Messrs. Gilbert and Son, Dyke, Bourne).

RECOMMENDATIONS.

The Floral Committee strongly recommends:

(1) That twenty seeds be sent for each individual trial in 1912, fifteen plants to be set out in a row twelve feet long.

(2) That raisers be notified if less than fifteen germinate, and a request made for more seeds.

(3) That failing seeds, seedlings about three inches high be accepted to make up the number of plants.

(4) That on the first visit to the trials in 1912, varieties be selected for voting upon at the subsequent visit; no voting to take place at the first visit.

(5) That a duplicate set of trials be conducted in 1912, on heavy soil, at least 100 miles north of London; and, in the event of this recommendation being adopted, the Floral Committee pay one visit only to each set, point each stock, and make its awards on the results thus arrived at. Under these conditions a scale of points would be prepared prior to the first visit and all stocks obtaining a certain aggregate of points would be voted upon.

(6) That the raiser's description be furnished in the case of varieties which gain awards, and that such description be included in the proceedings of the Floral Committee.

(The General Committee of the N.S.P.S. approves the foregoing recommendations, and will endeavour to give effect to them.)

Bournemouth Gardeners' Association.

There was a very fine exhibition of apples and gourds at the fortnightly meeting on Tuesday, October 3. Mr. Nippard, head gardener to J. J. Norton, Esq., Ashton Court, staged some beautiful dishes of apples. One perfect specimen of Peasgood's Nonsuch weighed one pound five and a-half ounces: it was of even shape and well coloured. He had also grand dishes of Cox's Orange Pippin, Gascoyne's Scarlet, Bismarck, and Warner's King. Mr. Charles Pearce, gardener to Mrs. Ormond, had very fine specimens of Cellini, and Mr. W. Reeves staged various gourds and cucumbers. The snake cucumber, red and yellow Turk's Cap, Hedgehog, Ostrich, yellow and green top pear and orange gourds, were all very pretty. The same exhibitor staged Emperor Alexander and Lord Derby apples.

The subject for discussion was "Seeds versus Cuttings." It was very ably opened by Mr. Nippard, who said that no doubt many kinds of plants were stronger, and in every way better, when raised from seed; but there were other kinds which could not very well be raised from seeds, and these must be propagated by cuttings. He referred to Mr. Crook's contention that Salvia patens would not do at all well after being propagated by cuttings for three years, and that it was advisable to raise fresh stock by seeds every third year, and, in turn, to propagate again by cuttings from it. Having instanced several other cases, and admitting that seedlings were more vigorous than cuttings, Mr. Nippard said that zonal pelargoniums, fuchsias, and several other kinds of plants had, of course, been propagated by cuttings for many years, and yet the stock retained its vigour. Chrysanthemums from cuttings, and rhubarb and seakale from thongs, deteriorated, and it was necessary to raise new stock from seeds occasionally. Potatoes also became diseased and worn-out, whereas crotons, dracænas, and Begonia Gloire de Lorraine, kept their vigour when propagated by cuttings and stem slips for a long time. A very good discussion then followed, in which Messrs. Pearce, Stevenson, Garner, King, Heath, Reeves, and others took part, and all felt that the subject was one that could not be exhausted at one, or even two, meetings, and that it needed to be thoughtfully dealt with. Hearty votes of thanks were accorded both Mr. Nippard and the chairman, Mr. Taylor.

Scottish Horticultural Association.

The October meeting of this association was held in the Goold Hall, 5, St. Andrew Square, Edinburgh, on the 3rd inst. Mr. Massie, the president, was in the chair, and there was an attendance of 105 members.

A conference and discussion on early-flowering chrysanthemums was the subject, and a fairly good representation of these was on the table, the contributors being Messrs. Dobbie and Co., Messrs. Todd and Co., Mr. John Downie, and Mr. James Bruce. Mr. Berry, of the Edinburgh and East of Scotland College of Agriculture, opened the discussion, and the other speakers were Messrs. Cuthbertson, Todd, D. W. Thomson, Bruce, Wood, Smale, Fraser, Proctor, Porter, Taylor and Miss Burton. There was difference of opinion regarding the merits of the single early flowering kinds, but all agreed that they were not so fine as the late flowering singles grown under glass. Mr. Todd thought early flowering chrysanthemums were a nuisance as early as June; the middle of September was soon enough for them; and both he and Mr. Cuthbertson drew attention to the earlier large flowering varieties, which were being so extensively cultivated by some growers near London for market use, Mr. Cuthbertson remarking that he had seen a break of a dozen acres of these so arranged in blocks that, by means of light framework, they could be covered with glass. As was to be expected, there was some difference of opinion as regards the time of taking the cuttings and putting out the plants, Mr.

Smale mentioning that he had seen a very fine lot this season which had been planted out in the beginning of June. The general opinion, however, seemed to be that the end of April or beginning of May was the best time to plant out.

In a communication from Mr. W. Wells, Merstham, he stated that early-flowering chrysanthemums were a total failure this season in the South of England, and he mentioned the interesting fact that the variety Leslie was the only one which had not been injured by the heat and drought. The speakers received a hearty vote of thanks on the motion of the Chairman, and a similar compliment was paid to the exhibitors. On the suggestion of Mr. Cuthbertson, the members and others were invited to send in to the secretary the names of what they considered the best twelve early-flowering chrysanthemums, and that these be tabulated and published. The other exhibits consisted of new collarette dahlias, and a new early flowering chrysanthemum named Cynthia, from Messrs. Dobbie and Co. The following awards were made by the Adjudicating Committee: First Class Certificate to collarette dahlias, Holyrood and Prince Charlie; and Certificates of Merit to collarette dahlias Diadem, Prince de Venosa, and Maurice Rivoire. At the meeting on November 7, Mr. W. Roadley, Comb Bank Nursery, Edinburgh, will read a paper on "Propagation." Six new members were elected.

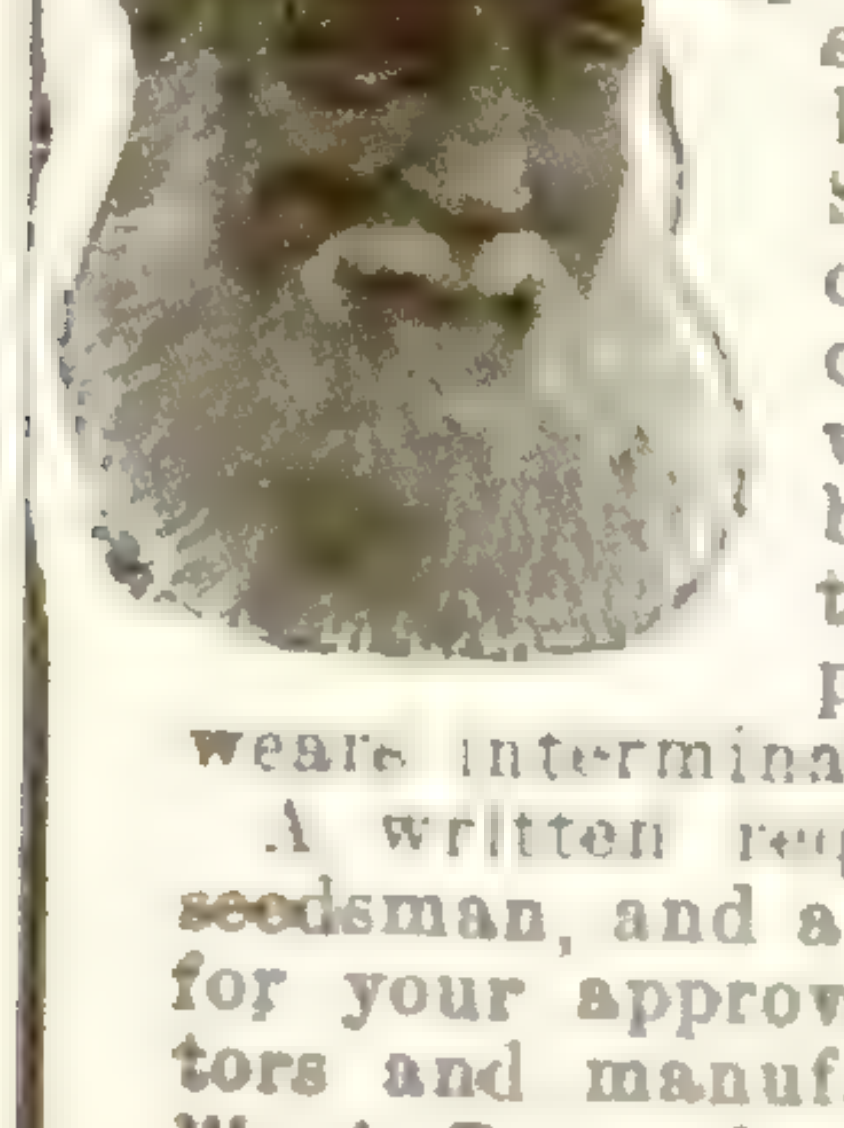
METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1911. October 1 to October 7.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Oct. 1—Sunday	8 42	46	42	53	39
,, 2—Monday	6 12	44	41	53	32
,, 3—Tuesday	4 48	45	44	54	37
,, 4—Wednesday	—	47	44	52	41
,, 5—Thursday	—	49	48	56	44
,, 6—Friday	2 48	46	46	57	45
,, 7—Saturday	—	47	47	52	38
Means	(total) 22 30	46	44	53	39

Date. 1911. October 1 to October 7.	Rain.	Temperature of the Soil at 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
Oct. 1—Sunday	—	53	56	59	31
,, 2—Monday	—	51	55	59	21
,, 3—Tuesday	—	51	55	58	19
,, 4—Wednesday	0·5	51	54	58	34
,, 5—Thursday	0·18	51	54	57	34
,, 6—Friday	—	52	54	57	39
,, 7—Saturday	0·11	51	53	57	31
Means	(total) 0·34	51	54	57	31



The only resemblance between a Pine Spray Syringe and others is in the shape of the barrel. The metal is more substantial. For the rest, the combination spraying head renders Spray, Rose, and Bend instantly obtainable without the addition or removal of a single fitment, while the adjustable leather bucket plunger gives perfect suction, never allows water to escape past it and up your sleeve, and wears interminably.

A written request from your ironmonger or seedsman, and a Syringe will be sent in 24 hours for your approval. Price **10/6.** Sole proprietors and manufacturers, **Robinson Bros., Ltd., West Bromwich.**

PINE SPRAY SYRINGE (patent).

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

SELF-SOWN CRYSANTHEMUMS.—R. C., Wokingham: Strong, sturdy seedlings from self-sown seeds will stand the winter quite well in most cases. If the position is suitable simply thin out the seedlings to a foot or eighteen inches apart, but if it is desirable that these annual chrysanthemums should flower in another spot, then transplant them at once, lifting each one with a trowel so as to retain as much soil as possible about the roots. Plant firmly and water in if the soil is at all dry.

EVERGREEN CLIMBER FOR CONSERVATORY WALL.—W. N. C., Colchester: There are many subjects suitable for the wall at the back of a lean-to conservatory, facing due south, but which would be best for the hot position suggested depends largely upon the size of the conservatory. Lonicera sempervirens, Clematis indivisa lobata, Cestrum aurantiacum, and C. Newelli are all excellent. We have a weakness for pelargoniums on such positions, because the narrow borders and the sunny aspect tend to prevent gross growth, and at the same time produce freedom of flowering. Many of the older zonal varieties may be trained to cover such a wall, and they will give blooms all the year round; ivy-leaved varieties may also be used, notably Galilee and Souv. de Chas. Turner. If a flowering plant is not essential, then the neat little Ficus repens will do very well, as in a few years it will clothe the wall with a close, dense mass of small green leaves, and only need an occasional clipping to keep it neat.

MARGUERITE CARNATIONS.—L. C., Rugeley: The plan of lifting, potting, and housing marguerite carnations after they have been flowering for a considerable period is not an altogether satisfactory one, because the lifting is a considerable check to plants that are usually full of growth in late autumn. This succulent growth is not likely to stand the confinement of a warm greenhouse, although we have seen such lifted plants producing a number of flowers in some places. A better plan is to sow some seeds late in the spring, pot the seedlings as necessary, eventually placing them in 48's or 32's, and plunging them out of doors. So treated, growth will not be excessive, and it will yield blossoms well into the winter if a warm greenhouse temperature is provided.

SECKLE PEAR.—E. B., Elstow: The free-bearing October dessert pear named Seckle is of American origin. The late Mr. Chas. Downing, a great American pot pomological authority, states that "The precise origin of the Seckle pear is unknown. The following morceau of its history may be relied on as authentic, it having been related by the late venerable Bishop White, whose tenacity of memory is well known: About 1765, when the Bishop was a lad, there was a well-known sportsman and cattle dealer in Philadelphia who was familiarly known as Dutch Jacob. Every season, early in the autumn, on returning from his shooting excursion, Dutch Jacob regaled his neighbours with pears of an unusually delicious flavour, the secret of whose place of growth, however, he would never satisfy their curiosity by divulging. At length, the Holland Land Company, owning a considerable tract south of the city, disposed of it in parcels, and Dutch Jacob then secured the ground on which his favourite pear tree stood—a strip of land near the Delaware. Not long afterwards it became the farm of Mr. Seckle, who introduced this remarkable fruit to public notice, and it received his name." The Seckle pear was sent to this country in 1819 by Dr. Hosack, of Philadelphia, along with several other fruits, to the garden of the Horticultural Society, then at Ealing.

BUSHEY PARK AVENUE.—L. A. G., Andoversford: Writing from memory, and at the moment of going to press, we believe the fine old avenue through Bushey Park consists of a double row of horse chestnuts on each side of the broad roadway, and a double line of lime trees on the outer side of each double row of chestnuts. We agree that an avenue of purple beeches would be novel, but we have some doubt as to its ultimate success, because, unless the position and surroundings are light and bright, such an avenue would be rather sombre. We should prefer an avenue of common beech, because of its grace and its fine autumn colouring.

BEST OUTDOOR PEACHES.—D. A. S., Epsom: In the present issue we publish an excellent article on outdoor peaches from the pen of Mr. Thomas Coomber, The Hendre Gardens, Monmouth. Mr. Coomber is an especially clever fruit grower, and he manages outdoor peaches uncommonly well in a garden where situation and soil are both against their culture, therefore his opinion of the merits of varieties is worthy of every consideration.

SALTWORT.—R. O., Guernsey: The low-growing, rigid herbaceous plant known as Saltwort is Salsola Kali. It is widely distributed along the sandy seashores of the British Isles, Channel Islands, the Mediterranean coasts, and even in India, South America, and Australia. It is a salt-loving plant, and rarely thrives away from the seaside. It has no value as a garden plant, but years ago it used to be collected in districts where found plentiful, and burnt to produce the ash known as Barilla, which, however, may also consist of the ash of seaweeds. Salsola soda, an annual species found in the Mediterranean region, is a source of carbonate of soda, and was a plant of some importance economically before the manufacture of soda from common salt. It is probably from the Arabic word "Kali," given to the ashes of soda or salt plants, that the general term of "alkali" has been derived.

SWEET PEAS.—F. C. C., Arundel: "Sweet Peas and Their Cultivation," by Mr. C. H. Curtis, and published at 1s. 2d., or 1s. 8d. post free, from the Gardeners' Magazine Office, 148 and 149, Aldersgate Street, E.C., is the most useful and interesting book on the subject. A new edition will be published shortly with many new illustrations, and an up-to-date selection of varieties.

NAMES OF PLANTS.

Under this heading we can only undertake to name species and well-marked varieties of plants, and not florists' flowers. Specimens should be packed in stout boxes with damp (not wet) moss, or some leaves, as packing material, to ensure their reaching us in a fresh state. It is essential that flowers must accompany specimens of flowering plants, that fern fronds be fertile, and that numbers be firmly attached to the specimens so that they can be seen without any untying. We cannot promise to name more than six specimens at one time from any one correspondent.

S. H., Cuckfield.—Luculia gratissima.

M. C. W., Reigate.—Trichosanthes anguina.

W. H. L. H., Leeds.—Apparently a piece of an Aloe leaf.

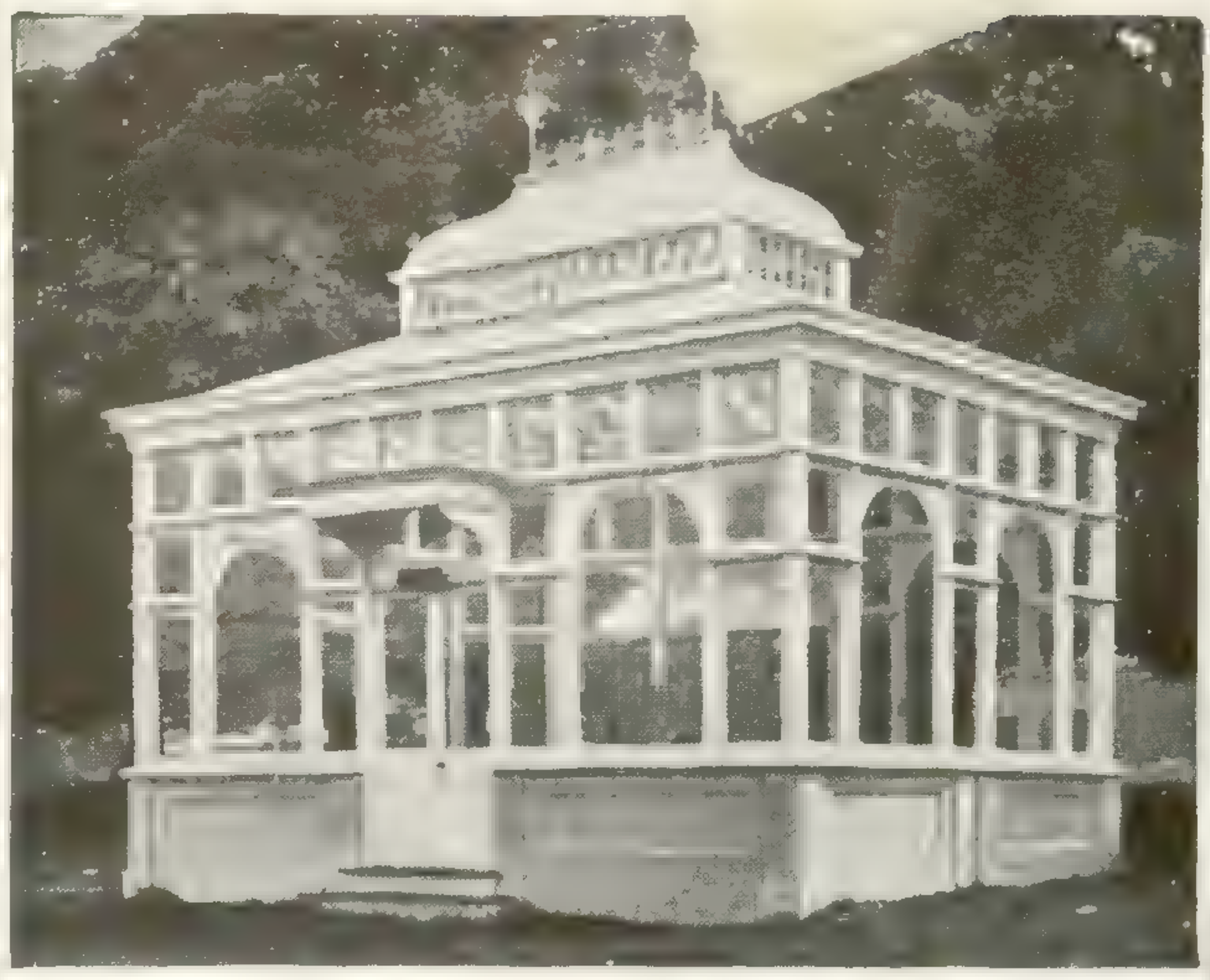
P. R., Amesbury.—1, Köelreuteria paniculata; 2, Rubus phœnicolasius.

W. F. R. C.—Very poor specimen; probably a small Solanum melongena.

S. C. J., Chester.—1, Hoya carnosa; 2, Cissus discolor; 3, Vitis labrusca; 4, Monstera deliciosa.

BOUL[illegible] & PAUL, LTD., HORTICULTURAL BUILDERS, Norwich.

ATTRACTIVE, PRACTIC[illegible]ES.

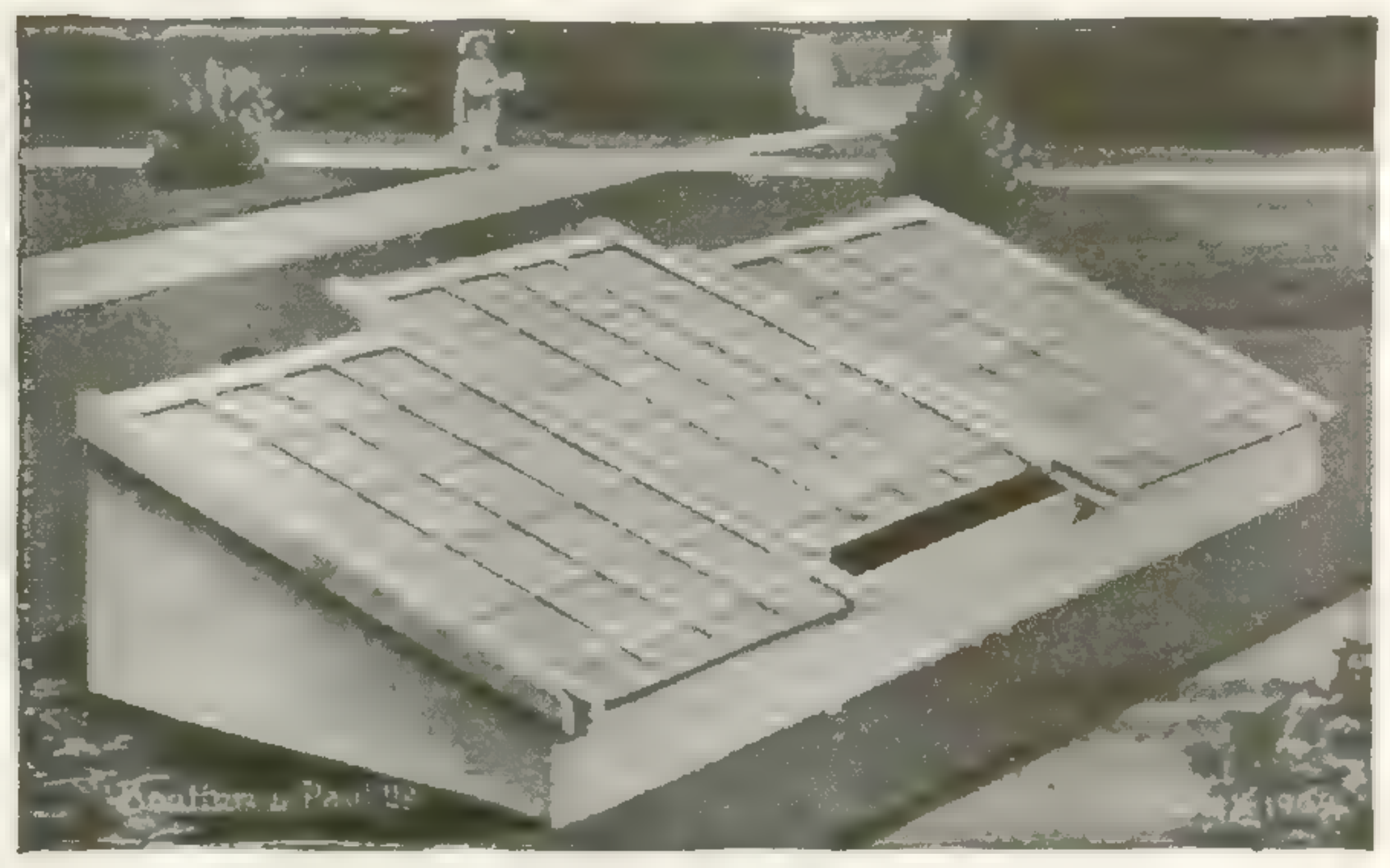


Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of **40**/- value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.

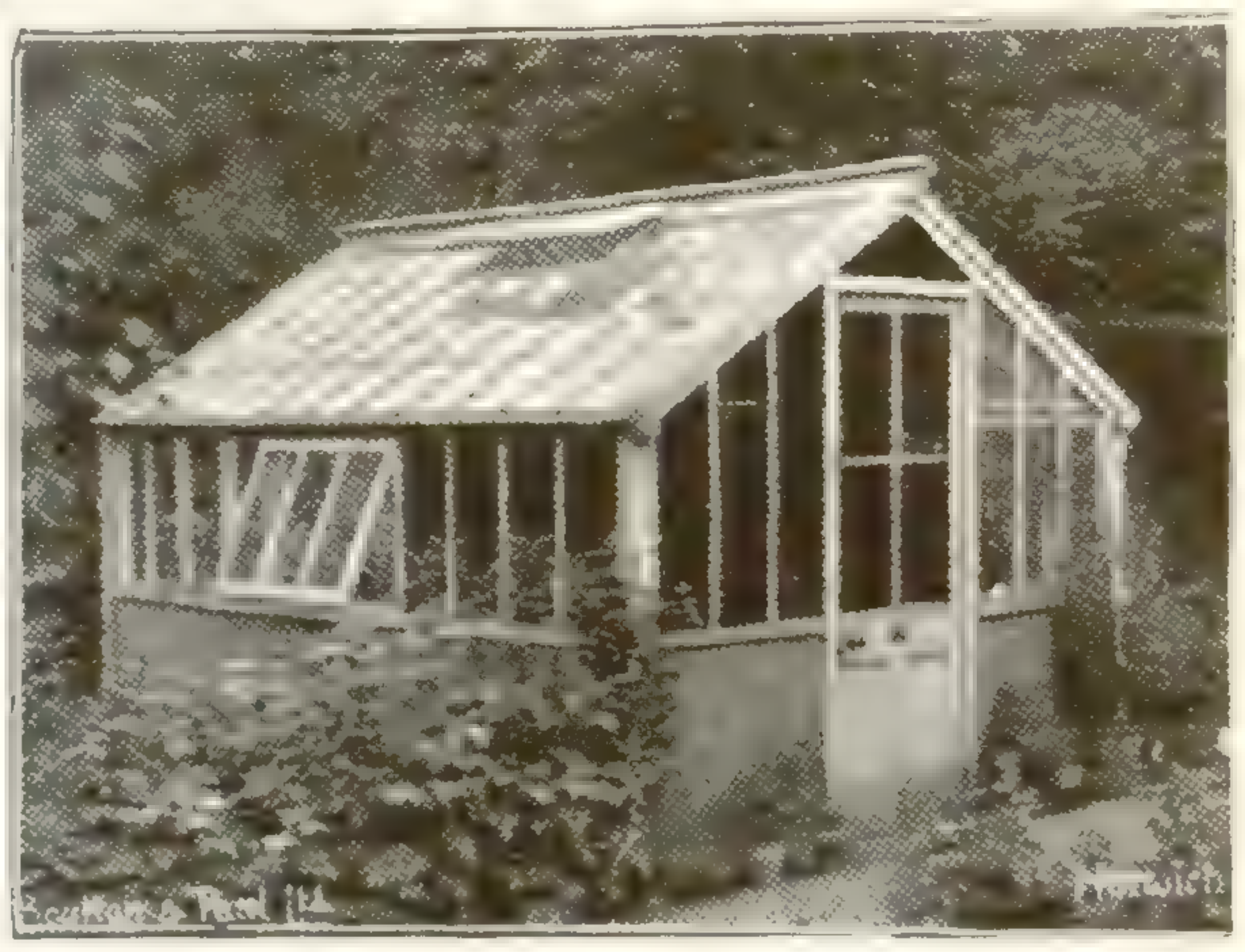


4ft. by 6ft. ... £2 0 0 | 8ft. by 6ft. ... 3 0 0
Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft. Similar to No. 75, with Two Lights... } **35**/-

SEND FOR ILLUSTRATED CATALOGUES.

Every part of these Houses is thoroughly well made, painted three coats, GLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.



No. 49A.—Span, 10ft. by 8ft. **£11 10 0**
No. 47A.—Lean-to, 10ft. by 7ft. **£9 10 0**

All parts are numbered ready for easy re-erection by any handy man.

"IT IS ONLY A LITTLE

CLAY'S

THEY WANT"

CLAY'S ✻ LONDON ✻ FERTILIZER
TRADE MARK.

SOLD EVERYWHERE IN TINS at **6d.** and **1/-**; and in Branded and SEALED BAGS, 7lbs. **2/6**; 14lbs. **4/6**; 28lbs. **7/6**; 56lbs. **12/6**; 112lbs. **20**/-. Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**). **Every Genuine Tin, Bag, and Seal bears Trade Mark, as at side.**

CLAY & SON,
Manure Manufacturers and Bone Crushers,
STRATFORD, LONDON, E.

MERRYWEATHER'S

614 PUMP

IS THE

Gardener's Friend.

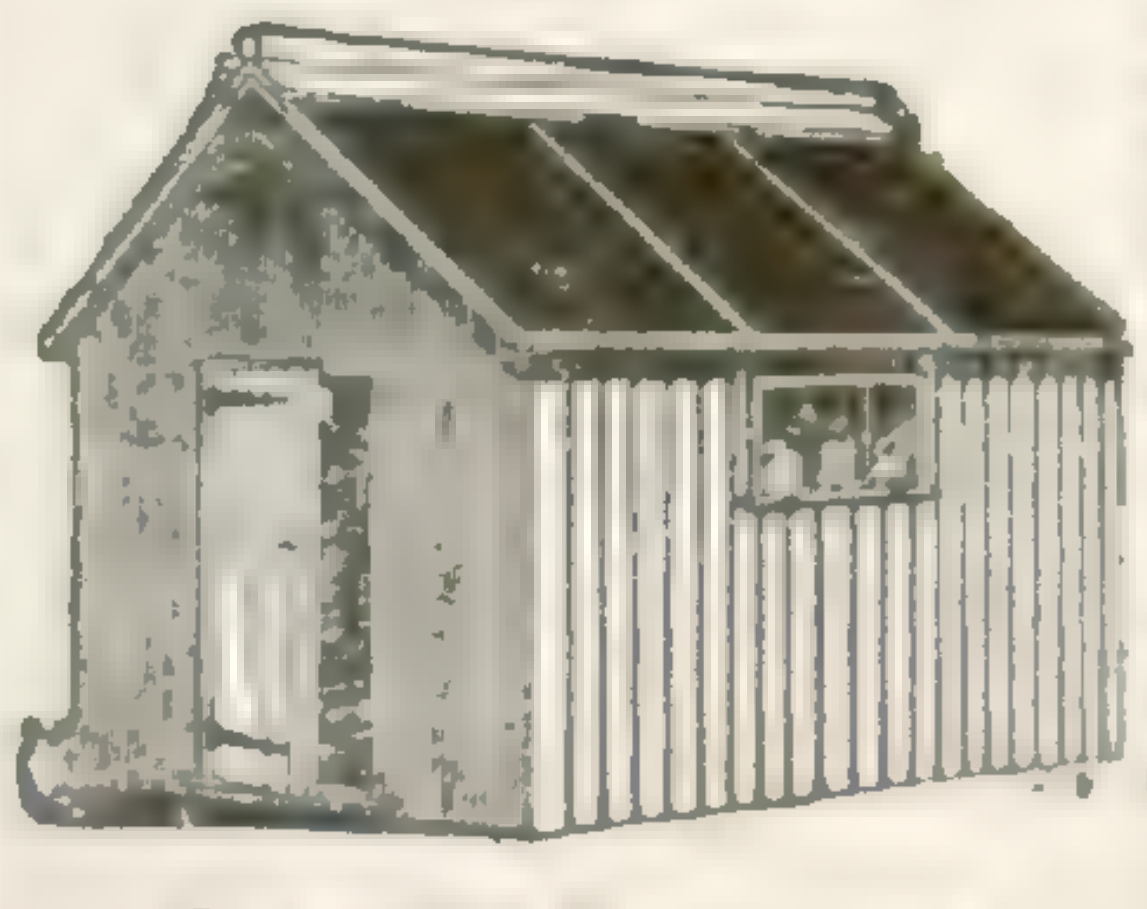
Easy to Work.
Simplicity Itself.

Write or Call—

63, Long Acre,
LONDON, W.C.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

PORTABLE BUILDINGS. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

Sizes.	Cash with Order.	Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	17/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	20/0

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
ESTABLISHED 70 YEARS. **BEDFORD.**
Works, 6 acres. Stock of Wood in Sheds, 10,000 *tons.*

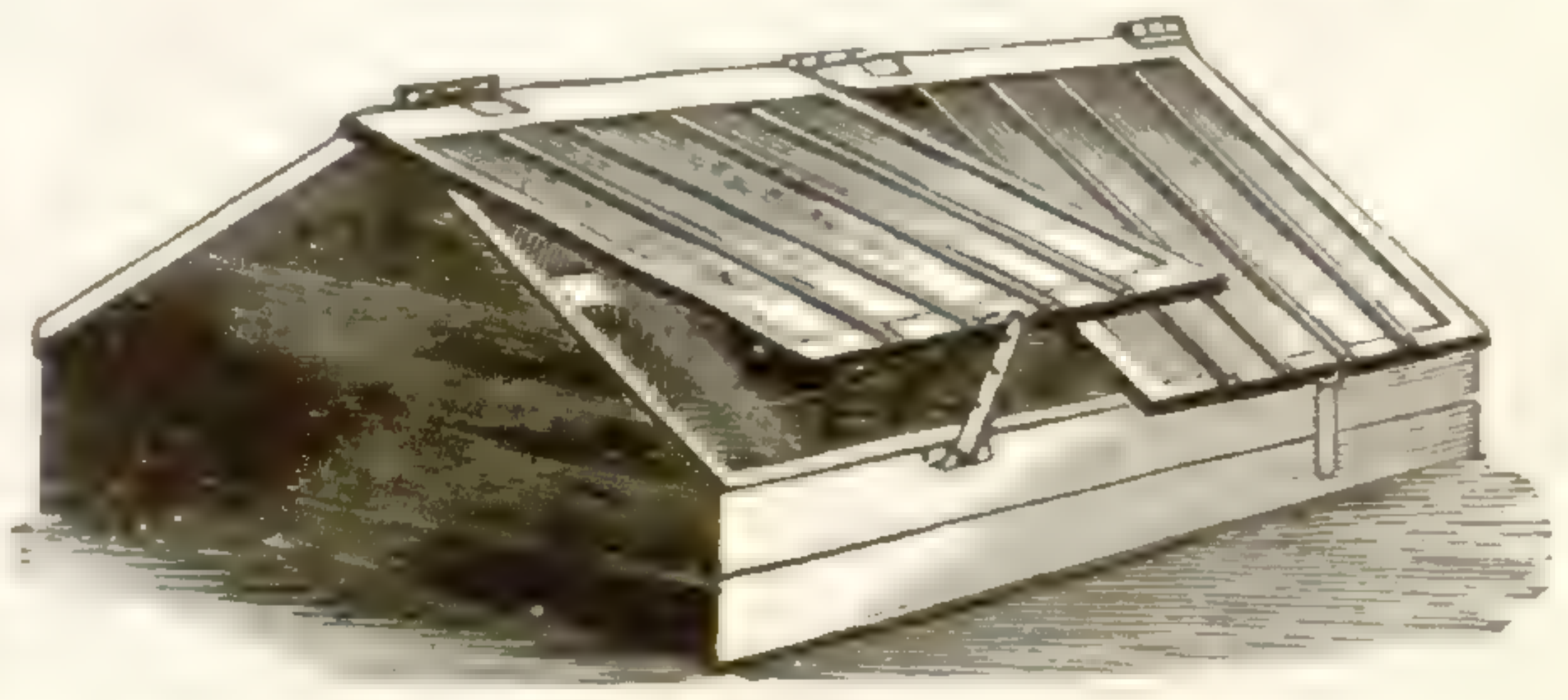
PUBLISHERS' ANNOUNCEMENTS.

THE GARDENERS' MAGAZINE may be obtained by order from all Newsagents, price Twopence, every Saturday. If any difficulty be found, a copy will be posted weekly direct from the Publisher, 148 and 149, Aldersgate Street, London, on the following terms: Twelve Months, 10s. 6d.; Six Months, 5s. 6d.

VOLUME LIII. bound in green cloth, containing the 52 weekly numbers, 1910. Price 12s. 6d.; by post, 13s. 4d.

PORTABLE PLANT FRAMES

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices. Glazed and Painted.		£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. ,, 4ft. ,,		2	5	0
6ft. ,, 5ft. ,,		2	15	0
12ft. ,, 4ft. ,,		4	0	0
12ft. ,, 5ft. ,,		4	15	0
12ft. ,, 6ft. ,,		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,

ROYAL HORTICULTURAL WORKS,
MIDDLETON, MANCHESTER.

EVERLASTING LAWN BROOMS are those made by Dunford, of Ilford. Flat, fan-shaped, and refilled in a trice. Only 1s. 4d. each, carr. paid on doz. Sole Maker DUNFORD, 11, Ley Street, Ilford, E.

NAMES OF FRUIT.

When sending fruits for naming, will our readers be good enough to send good specimens, as without these it is not possible to accurately determine the varieties. Pack firmly, using light tin or wood boxes, and send not more than six varieties at once. Label each specimen and enclose letter with the fruit, whether a separate notification is sent or not. Address the packages to the Editor, GARDENERS' MAGAZINE, as advised in the notice at the head of "Answers to Correspondents."

C. N., Buckden.—1, Golden Noble; 2, Worcester Pearmain.

F. E. S., Hertford.—1, Durondeau; 2, Warner's King.

C. F. M., Eltham.—1, Beauty of Kent; 2, Worcester Pearmain; 3, not recognised.

G. G. B., Basingstoke.—1, Warner's King; 2, Lane's Prince Albert; 3, King of the Pippins.

R. B., Worksop.—1, Gloria Mundi; 2, Cox's Orange Pippin; 3, Newton Wonder; 4, Dumelow's Seedling.

R. T., Newbury.—1 and 2, quite smashed up in the post; 3, Marie Louise; 4, Durondeau; 5, Beurre Clairgeau.

F. B. J., Bristol.—1, Cellini; 2, King of Tompkin's County; 3, Tyler's Kernel; 4, not recognised; 5, Tom Putt; 6, Fearn's Pippin.

MARKETS.

◆

COVENT GARDEN.

Flowers.

Business is fairly good, and there is an increasing demand for good indoor flowers because outdoor blooms are now rough, and supplies small.

		s.	d.		s.	d.
Adiantum cuneatum	per doz. bun.	3	0	to	4	0
Arums	per doz.	2	6		3	0
Asparagus plumosus	per doz. bun.	1	6		2	0
,, Sprengeri	per doz. bun.	8	0		10	0
Asters	per doz. bun.	3	0		8	0
Carnations	per doz.	1	0		3	0
	per doz. bun.	6	0		12	0
Cattleyas	per doz.	8	0		15	0
Chrysanthemums	per doz. bun.	4	0		8	0
,,	per doz. blooms	1	0		2	6
Coreopsis	per doz. bun.	1	6		2	6
Croton leaves	per bun.	1	0		1	6
French fern	per doz. bun.	2	6		4	0
Gardenias	per doz.	1	6		2	6
Gladioli	per doz. bun.	1	6		2	0
Lapageria	per doz.	2	0		3	0
Lilium auratum	per doz.	2	6		3	0
,, speciosum	per doz.	1	6		2	6
,, longiflorum	per doz.	2	6		3	6
Lily of the Valley	per doz. bun.	8	0		18	0
Marguerites	per doz. bun	1	6		2	0
Mignonette	per doz. bun.	2	6		3	0
Odontoglossums	per doz. blms.	3	0		4	6
Pelargoniums	per doz. bun.	5	0		9	0
Physalis	per doz. bun.	7	0		10	0
Roses	per doz.	1	0		3	6
Smilax	per doz. trails	2	0		3	6
Statice	per doz. bun.	3	0		4	0
Stocks, white	per doz. bun.	5	0		8	0
Tuberoses	per doz.	0	4		0	6
Viola, small blue	per doz. bun.	0	9		1	3
Violets	per doz. bun.	2	0		6	0

Fruits.

Apples and pears are plentifully supplied, and there is a good demand.

		s.	d.		s.	d.
Apples, English, dessert	per ½-sieve	3	6	to	6	6
,, Cooking	per ½-sieve	1	6		3	6
,, Nova Scotia	per barrel	9	0		14	0
Bananas	per bun.	4	0		8	6
Blackberries	per peck	1	6		3	0
Cob nuts	per doz. lb.	5	0		6	0
Cranberries	per case	12	0		13	6
Damsons	per ½-sieve	2	0		3	0
Figs	per doz.	1	6		3	0
Grapes, English	per lb.	0	8		4	0
,, Guernsey	per lb.	0	6		1	3
,, Almeria	per barrel	9	0		10	6
Lemons	per case	9	0		25	0
Melons	each	0	6		2	0
,, Valencia	per case	6	0		10	0
Oranges, Denia	per case	12	0		30	0
,, Jamaica	per case	10	0		14	0
Peaches	per doz.	3	0		18	0
Pears, English	per ½-bush.	2	6		8	0
French	per crate	3	0		14	0
American	per barrel	25	0		30	0
Pineapples	each	1	6		6	0
Plums	per ½-sieve	3	0		8	0

LONDON POTATO MARKETS.

There are considerable supplies, and prices are firm, owing to the demand.

		s.	d.		s.	d.
Blackland	per ton	70	0	to	80	0
British Queen	per ton	75	0		85	0
Eclipse	per ton	75	0		85	0
Epicure	per ton	70	0		75	0
Essex	per ton	70	0		75	0
Evergood	per ton	65	0		75	0
Kents	per ton	80	0		85	0
King Edward	per ton	75	0		80	0
Up-to-Date	per ton	70	0		90	0

GARDENING ENGAGEMENT.

Mr. David Airdrie has been appointed land steward at Shield Hall, the Lanarkshire estate of Sir Nathaniel Dunlop, where extensive improvements, including planting and hothouse construction, are in contemplation. Mr. Airdrie is well kown in Scottish horticultural circles, and while at Larbert House he was a frequent exhibitor of grapes at the Royal Caledonian Horticultural Society's shows.

CATALOGUES RECEIVED.

GEORGE BUNYARD AND CO., LIM., MAIDSTONE.—The new catalogue of fruit trees and roses for 1911-12-13 is as complete and up-to-date as its predecessors. It opens with a handsome plate of Baumann's Winter Reinette apple, reproduced from a photograph in colour.

BARR AND SONS, COVENT GARDEN, W.C.—Daffodils, from the cheapest sorts for woodland and lawn planting, up to the newest and most expensive for the fancier are listed in this new catalogue. On the front page is the important announcement that the firm's nurseries are now at Taplow, Bucks, instead of at Ditton.

AMOS PERRY, ENFIELD.—A selection of choice climbing plants and shrubs is given in connection with a comprehensive catalogue of bulbs and tubers. In a separate catalogue of a dozen pages delphiniums are described at length, and a coloured plate of five distinct varieties is inserted.

H. CANNELL AND SONS, SWANLEY.—Autumn catalogues are almost as numerous as autumn leaves, and they come in company with the later bulb lists. One, devoted to fruit trees, roses, trees, and shrubs, and hardy flowers, reaches us from Swanley, and it is an excellent guide to all these subjects.

WHITELEGGE AND PAGE, CHISLEHURST, KENT.—In this catalogue of French, Dutch, and Japanese bulbs a most rigid selection of varieties is shown, consequently the amateur is not puzzled as to which are the best in the various colour groups of tulips, hyacinths, etc.

FORTHCOMING ENGAGEMENTS.

WEDNESDAY, October 18.—North of England Horticultural Society, at the Town Hall, Leeds; Exhibition with Lecture by Mr. H. Somers Rivers on "Fruit Growing in Orchard Houses," the latter to commence at 3.30 p.m.

MONDAY, October 23.—National Chrysanthemum Society; Floral Committee at 3 o'clock at Essex Hall, Strand; General Committee at 7 o'clock at Carr's Restaurant, Strand.

CONTENTS.

PAGE
A Few Good Late Dessert Pears 756
Answers to Correspondents 768
Apple Crimson Bramley's Seedling 760
Autumn Salads 756
Bush Apple Trees 758
Carmichaelia australis 762
Cherries 762
Crinum Powelli alba 760
Culinary Plums 759
Culture of Figs in Pots 756
Exhibitions and Meetings 767
Great Exhibition of British-grown Fruit ... 753
Gunneras 763
Hardy Plant Chat 765
Lime 763
Notes of the Week 751
Some of the Newer Culinary Apples 755
Successional Peaches for Open Walls 757
The Harvest of the Orchard 761
Variegated Hart's-tongues 765
Work for the Week 764

ILLUSTRATIONS.

Portrait of Mr. W. Seabrook, 751; Apple Lord Suffield, 753; Apple Foster's Seedling, 754; Apple James Welsh, 755; Pear Duchesse de Bordeaux, 757; Pear Glou Morceau, 758; One of the Span-roof Fig Houses at Gunnersbury House, 759; A Pot Specimen of the White Ischia Fig, 760; Apple Crimson Bramley's Seedling, 761; A Tastefully-arranged Collection of Salading, 763.

FLOWER POTS.
SANKEY'S FAMOUS GARDEN POTS
The best and the cheapest.
Write for LISTS.
Quotations given for ANY Quantity, Carriage Free.
Appointed by Royal Warrant
Makers to His Majesty the late King.
Largest Manufacturers in the World.
Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

The Loughborough BOILER
31000 IN USE
LISTS ON APPLICATION
The pioneer of cheap, simple and effective heating for small greenhouses. Complete Apparatus from £3.19. 6. The immense sale of this boiler, and its numerous imitations are the best testimony of its undoubted success
MESSENGER & CO. LTD.
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH · LEICESTERSHIRE
London Office, 122 VICTORIA ST · S · W

THOMSON'S Celebrated MANURES
WM. THOMSON & SONS LIMITED
1868 1911
Still the best: In greater demand every year.
SAFE, SURE & LASTING.
The result of many years' **practical** experience.
VINE, PLANT, AND VEGETABLE MANURE.
1 cwt., **20/-**; ½ cwt., **10/-**; ¼ cwt., **6/-**; 14 lbs., **3/6**; 7 lbs., **2/6**; Tins, **2/6**, **1/-**, and **6d.** Carriage paid on 1 cwt. anywhere.
SPECIAL TOP-DRESSING MANURE.
½ cwt., **20/-**; ¼ cwt., **11/-**; 14 lbs., **6/-**; 7 lbs., **3/6**; Tins, **1/-**. Carriage paid on ½ cwt. anywhere.
Also Thomson's Book on the Vine. Thomson's Styptic.
SOLD BY NURSERYMEN & SEEDSMEN EVERYWHERE.
Write for Pamphlets, Price Lists, etc., to
SOLE MAKERS: WM. THOMSON & SONS, Ltd., Clovenfords, Scotland.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 31; married when suited; excellent references. Address, Closes Hall, Gisburn, Clitheroe.

GARDENER (Head or Single-handed); life experience, Flower, Fruit, and Vegetables; married, no family; age 27; good references; life abstainer. VINALL, Terry Villa, Knaphill, Woking.

GARDENER (Head Working).—Mr. WATSON can highly recommond C. WALLIS, where two or three are kept; been here six years as Second of five; age 31; married, two children. The Gardens, Bushey Down, Tooting Common.

GARDENER (Head of two or more) seeks RE-ENGAGEMENT; life experience, Inside and Out; 23 years Head in last place; good references. J. KIGHTLEY, Roade, Northamptonshire.

GARDENER (Head Working) seeks RE-ENGAGEMENT; thoroughly experienced all branches; 5 years as Head; energetic; highest references; age 32; married. WARNER, Road Manor Gardens, Bath.

HEAD GARDENER, where several are kept, seeks SITUATION; well up in Gardening in all its branches, and understands Stock; 9 years' excellent character and several good testimonials of previous places. F. J. ASHDOWN, Chiddingfold, Surrey.

GARDENER (Head Working) seeks SITUATION, with 2 or 3 under; life experience with Vines, Peaches, Melons, Flowers, and Vegetables; married, one child. J. PETTY, Marchwood, Southampton.

GARDENER (Head), life thorough experience, Fruits, Flowers, Vines, Peaches; Inside and Out; thoroughly understands Roses, Herbaceous Borders, Lawns, Trees, Flowering Shrubs; excellent character; 4 years Outside Foreman; 3 years Head Working Gardener; left through death; married; age 33; three children. HUDSON, Cupid Green, Hemel Hempstead.

GARDENER (Head, where several are kept); thoroughly experienced in all branches Inside and Out; Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coulston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working); 17 years' experience in all branches; 5 years Head; age 34; married, one child; good references. SELLER, 49, Carnot Street, Leeman Road, York.

GARDENER (Head Working).—CAPTAIN USHER highly recommends R. Appleby as above; life experience in all branches; thoroughly understands Planning and Laying Out; also Land and Stock; many years' excellent character. Address APPLEBY, c/o Mrs. Eggleton, Haslemere, Mill Down Road, Goring-on-Thames.

GARDENER (Head Working).—Mr. R. W. Williamson, of the Croft, Didsbury, near Manchester, strongly recommends his late gardener, HENRY ARNOLD, who has been with him for over 20 years, is well experienced in gardening in all its branches, and is specially trained in rockery construction and cultivation of alpines.

GARDENER (Head Working) requires SITUATION; thoroughly experienced all branches; married, no family, highly recommended; disengaged. W. H., 3, Gipsy Lane, Wokingham.

GARDENER (Head Working, where one or 2 kept); 16 years in present situation; 5 years as Second; age 31; single. Apply A. GIBBS, 8, Pope Road, Bromley, Kent.

GARDENER (Single-handed, or where help is given); 17 years' experience, Inside and Out; age 32; married, no family; good references. G. EUDEN, 11, Clifton Road, Spring Grove, Isleworth.

GARDENER (Single-handed, or where help is given); 12 years' practical experience; 4 years in last situation, good references; single; age 36; abstainer. J. CHAPMAN, Ferry Hill, Chatteris, Cambs.

GARDENER, 40; Single-handed preferred; thoroughly experienced; excellent character; active worker; Inside and Out, with early vegetables; abstainer, married. A. BISHOP, Windmill Hill, near Hailsham.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; aged 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (Second, Inside or Inside and Out), 16 years' good all-round experience; age 31, excellent references. W. PACKHAM, The Gardens, Moonhill Place, Cuckfield, Sussex.

JOURNEYMAN (Third), three years present situation, age 20. SYDNEY DRURY, Ivy Hatch, near Sevenoaks.

JOURNEYMAN seeks SITUATION, Inside and Outside, eight years' experience, good references; age 24. HALES, St. Dunstans Gardens, Regent's Park, N.W.

MR. H. EDWARDS, Norton Priory Gardens, Chichester, will be pleased to recommend CHARLES GUDDLE as Journeyman, Inside and Out; has been six years as Journeyman on Pleasure Grounds and in Kitchen Garden, strong, willing, and anxious to improve himself. Home Counties preferred; age 20.

D. SKINNER, Head Gardener Lord Barrymore's Estate, Cordangan Gardens, Tipperary, Ireland, strongly recommends M. Coffey to any Gardener requiring good Man for Pleasure Grounds and Kitchen Garden; age 24; married. Please address, COFFEY, 35, Bridgewater Street, Deansgate, Manchester.

MR. HARRIS, Serlby Gardens, Bawtry, wishes to recommend E. SPENCER, age 18, for Inside or Inside and Out; 2 years here; Bothy preferred.

IMPROVER (Inside or Inside and Out); age 19; five years' experience; three years present situation; good character; Bothy preferred. A. JONES, Great Barr, Birmingham.

MRS. WATSON-KENNEDY recommends IMPROVER (Inside or Inside and Out); age 18; four years' experience; can be well recommended by Head Gardener. B. GIBBS, Wiveton Hall Gardens, Cley, Norfolk.

YOUNG MAN seeks SITUATION to look after Electric Light and Garden; well up in all branches; nine years last situation. EDWARD VILLA, Street Cobham, Surrey.

YOUNG MAN (28) seeks SITUATION; help in garden; understands Horses, Cows; good references. E. TUGWELL, Friday Street, Holbrook, Horsham, Sussex.

YOUNG MAN, age 21, seeks SITUATION, Inside and Out; strong, willing; abstainer; 7 years general experience; 2½ years last place; disengaged. E. STOPPS, Stowe, Weedon, Northants.

YOUNG MAN (23) seeks SITUATION on lawns and garden, previous experience. R. F. REDDING, Tysoe, Kineton, Warwick.

REV. R. HOLDEN recommends for employment in Garden, YOUTH, 17; strong, willing; excellent character; been with him 3½ years. E. ROBERTS, Gate House, Nuttall, Nottingham.

Situations Vacant.

WANTED, YOUNG MAN, about 20, for Lawns and Pleasure Grounds; assist alternate Sunday duty. Churchman preferred. 15s. and Bothy. E. NEIGHBOUR, Orsett Hall Gardens, Grays, Essex.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For OCTOBER 21, 1911.

Please Repeat my Advertisement.

Name...

Address...

....

Date.........................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

W. RICHARDSON & CO., Darlington

MANUFACTURERS OF ALL KINDS OF

HORTICULTURAL BUILDINGS

— ALSO —

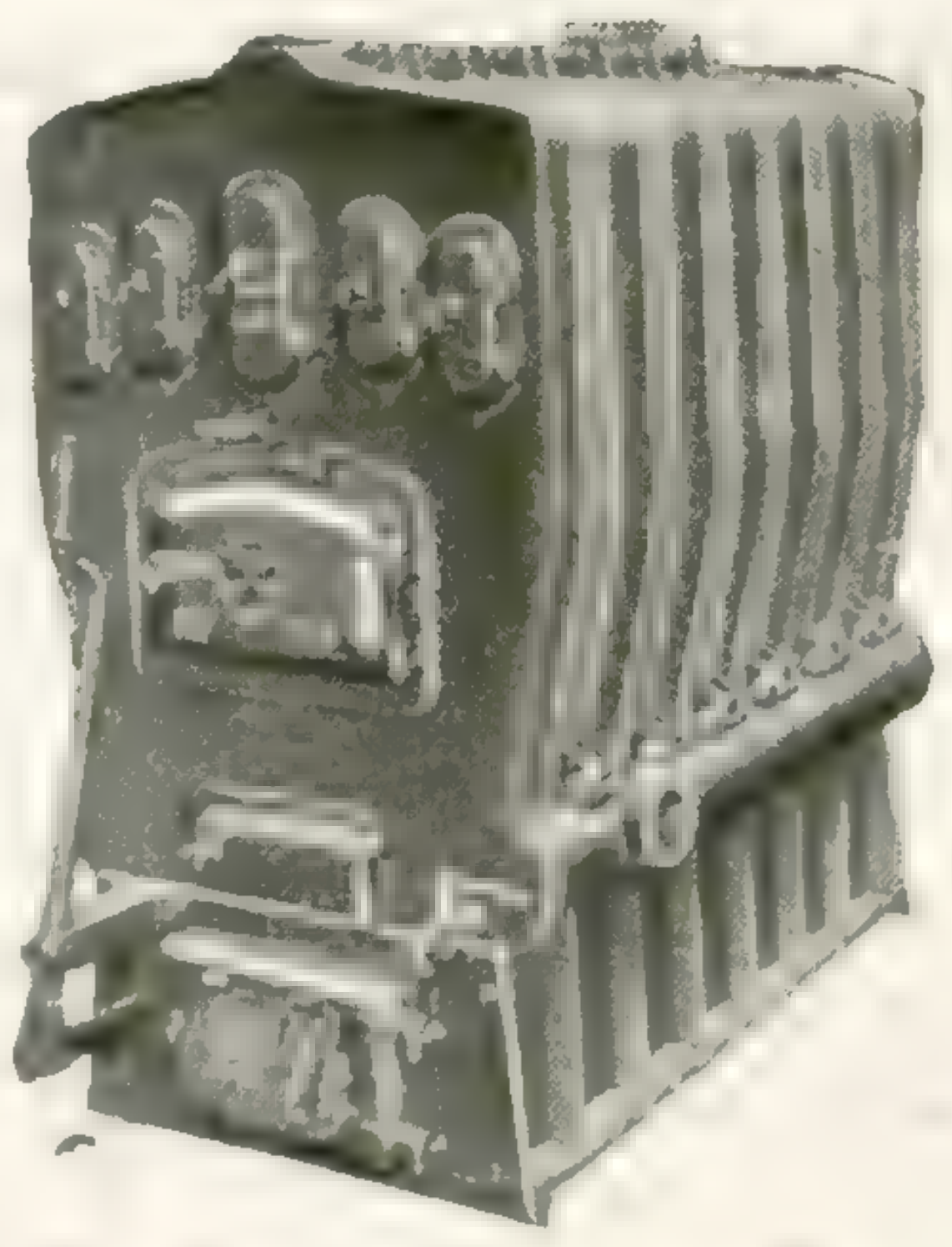
HEATING ENGINEERS

OUR BOOK OF DESIGNS,
Containing upwards of 200 photographic illustrations, sent free on application.

Plans and Estimates prepared free of cost.

Representatives sent to any part of the Kingdom to advise and take particulars.

London Office:
Belgravia Chambers, Victoria Street, S.W.



Kinnell's Boilers

THREE LEADING TYPES:—

The **"ANGLIAN," Sectional,** heats 800 to 8,000 ft. 4in. pipe.
The **"ROCHFORD," Tubular,** heats 600 to 8,000 ft. 4in. pipe.
The **"HORSE-SHOE"** for the small Greenhouse.

Saddle Boilers, Trentham Boilers, and all classes of Pipes, Fittings, etc., ready for immediate despatch.

Write for List No. 77, post free.

CHARLES P. KINNELL & Co., Ltd., 65, & 65a, Southwark St., London, S.E.

EVERY GARDENER SHOULD SEE OUR

Genuine Scotch Manufacture. **GLENSKOT TWEEDS.**
PATTERNS FREE. (REG.)

TROUSERS 7/6 Per Pair.

HIP POCKET. **SUIT 29/6**

Unsurpassed for Value.
Cut and Tailored by Experts.
Perfect Fit Guaranteed.
WRITE TO-DAY.

Patterns with our Easy Self-Measurement Form & Catalogue **Sent Post Free.**

Thousands of Testimonials

Money returned if not entirely satisfied.

SHAW & MONTGOMERY, The Scotch Tailors, EST. 1876.
628 & 632, ARGYLE ST., GLASGOW, W.

A New Work of the Greatest Value to Fruit Growers.

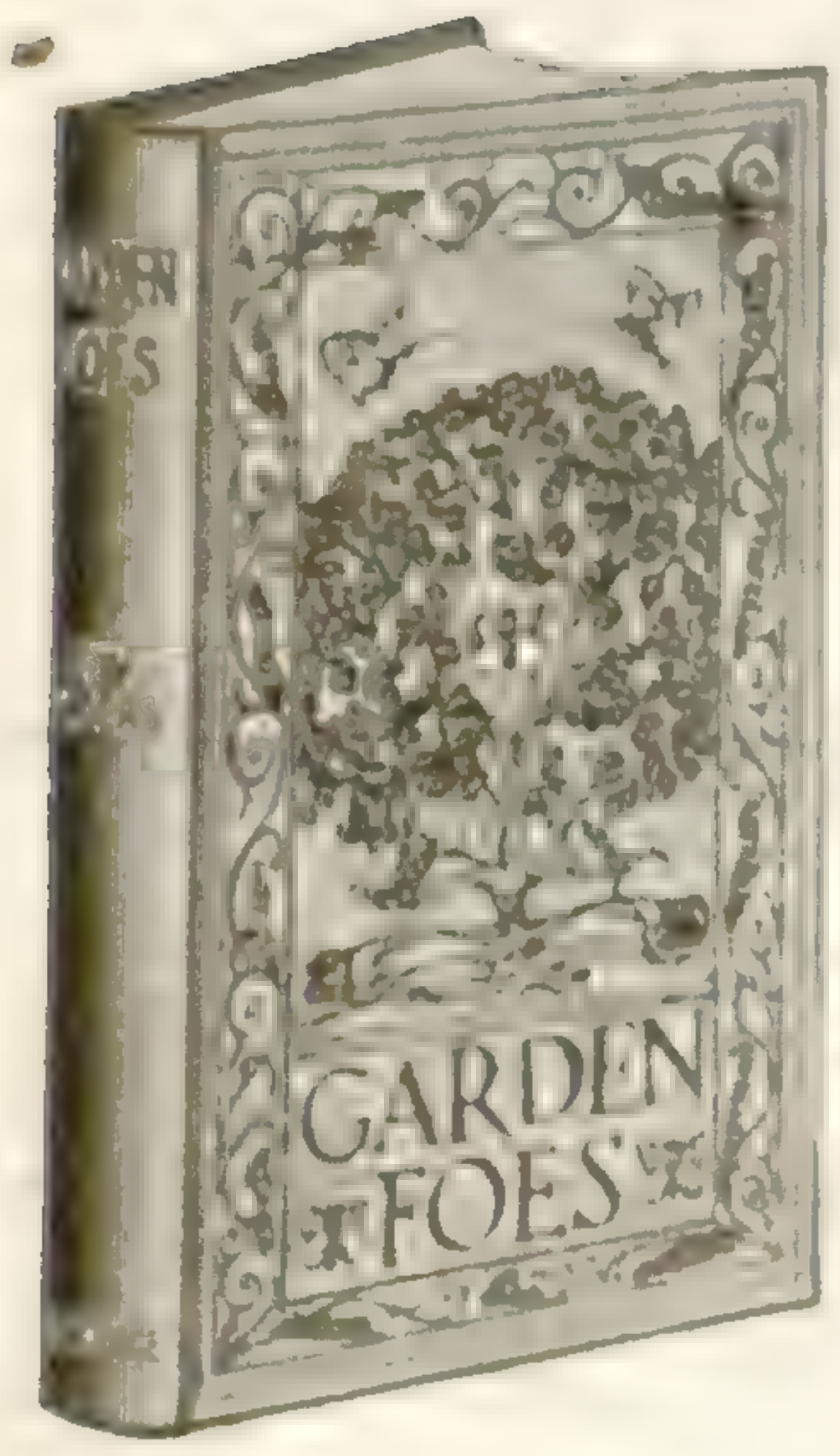
PRICE 2/6 net. By Post, 2/10.

GARDEN FOES

336 PAGES. 150 Illustrations

By T. W. SANDERS, F.L.S. (Editor of "Amateur Gardening.")

A description of Insect, Animal and Fungoid Pests injurious to Fruit and Vegetable Crops, Hardy Plants, Trees, Shrubs, and Greenhouse Plants, with all the latest Remedies for their Eradication, etc.



CONTENTS:

- Fruit Pests and Diseases.
- Vegetable Pests and Diseases.
- Flower Garden Pests and Diseases.
- Greenhouse Pests and Diseases.
- Forest Tree Pests and Diseases.
- Rose Pests and Diseases.
- Miscellaneous Pests, etc.
- Insecticides and Fungicides.
- Insecticide Formulas.
- Proprietary Insecticides and Fungicides
- Spraying Apparatus.
- Powder Distributors.
- How and When to Spray.
- Fumigating.
- Cyaniding, etc., etc.

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE,"
148 and 149, Aldersgate Street, London, E.C.

Please send me a copy of "**GARDEN FOES,**" by Post, for which I enclose remittance of 2/10.

Name ....

Address ....

Printed and Published by W. H. & L. COLLINGRIDGE, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls

ILLUSTRATED ROSE NUMBER.

THE GARDENERS' MAGAZINE.

No. 3,025. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, OCT. 21, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S Hyacinths, Tulips, Daffodils, etc., for pots and bedding, Finest quality, Moderate prices. Descriptive Catalogue free.
BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON

JAMES GRAY, Horticultural Builder, Chelsea, S.W., advises Gardeners to watch their Hot Water Heating Apparatus this month. If boilers show signs of wear, it would be wise to have them examined at once. Attention can be obtained by means of a postcard, telephone call (201 Western), letter, or wire, to Gray, Chelsea, London.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

CHRYSANTHEMUM TUBES for exhibiting; highly commended by N.C.S. Apply SPRINGTHORPE, F.R.H.S., St. Albans Road, Kingston-on-Thames.

GARDEN HOSE and FITTINGS, all sizes and lengths, best quality; list free.
HEATHMAN,
Hose Factory, Parson's Green, London, S.W.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue Free. J.E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

IRON and WIRE FENCING for GARDENS, Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free. BOULTON and PAUL, Ltd., Manufacturers, Norwich.

GREENHOUSES and CONSERVATORIES. Distinctive Designs and Finished Workmanship. Write now for ILLUSTRATED CATALOGUE. CARTER and HOWARD, Horticultural Builders, Kingston-on-Thames.

BECKETT'S NEW BOOK.—The most practical and Up-to-date Book on Vegetables. Price 5s.; post free, 5s. 6d. EDWIN BECKETT, Aldenham House Gardens, Elstree, Herts.

WELLS' Catalogue of
CHRYSANTHEMUMS,
PERPETUAL CARNATIONS,
HERBACEOUS PLANTS,
ALPINE AND ROCK PLANTS,
now ready. Post free on application. Wells' Book, "The Culture of the Chrysanthemum," post free, 1s. 6d. W. WELLS and CO., Merstham, Surrey.

THOMSON'S CELEBRATED MANURES.
(For full advertisement see page vii.)

RUSTIC SUMMER HOUSES, trellis-work, Fencing, Pergolas, Arches, Seats, Bridges, Log Cabins, Loggias, etc. Send for our new LOG CABIN and RUSTIC CATALOGUE (just published), sent post free. BOULTON and PAUL, Ltd., Norwich.

NARCISSUS.—Tulips, Hyacinths, etc. All the leading and best varieties, from 4s. 6d. per 100. Ask for illustrated price list, post free. Satisfaction guaranteed. C. F. A. VAN DER SLUYS, F.R.H.S., La Ramée, Guernsey.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

WEBBS' NAMED HYACINTHS
FOR POTS AND GLASSES.
12 Hyacinths, 12 good varieties, 5s.
24 Hyacinths, 12 good varieties, 10s. 6d.

WEBBS' EARLY SINGLE TULIPS FOR BEDDING AND POT CULTURE.
9d. per doz.; 4s. 6d. per 100; 40s. per 1,000.

WEBBS' MIXED DAFFODILS FOR MASSING IN THE MIXED BORDER, etc., 2s. 6d. per 100; 21s. per 1,000.
WEBB and SONS, The King's Seedsmen,
WORDSLEY, STOURBRIDGE.

BUNYARD'S CATALOGUES
Free on Application.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting

KENT STRAWBERRY PLANTS
NEW CATALOGUE READY.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

LAXTON STRAWBERRIES for immediate planting. Fine plants of all the leading varieties in little pots, 15s. 100. Open ground runners, 5s. 100. Catalogue with full particulars gratis
LAXTON BROTHERS, Bedford.

NATIONAL SWEET PEA SOCIETY'S
CLASSIFICATION LIST.

Home-grown Seeds of all the leading varieties for present sowing. Price Lists on application.
DOBBIE and CO.,
The Royal Seedsmen,
EDINBURGH.

CLAY'S MANURES. CRUSHED BONES
(See page v.)

CLAY'S FERTILISER IS UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

PERRY'S NEW CATALOGUES now ready.
BULB CATALOGUE.
PERENNIAL CATALOGUE.
DELPHINIUM CATALOGUE.
IRIS CATALOGUE.
FERN CATALOGUE.
} Free. on application.
PERRY'S HARDY PLANT FARM, Enfield, Middx.

SLUGS, SLUGS, SLUGS. — "SANITAS POWDER" will rid your garden of slugs. Mr. Walter P. Wright, of the "Garden Week by Week," says:—"The particular hint that I was going to offer about slugs was to scatter 'Sanitas Powder' on the soil amongst the plants—slugs simply loathe it." Mr. E. Poulter, of Mayfield, Sussex, writes:—"I have found 'Sanitas Powder' most efficacious in keeping off slugs." "SANITAS POWDER," 6d. and 1s. tins, and 12s. 6d. per cwt.

THE SANITAS CO., Ltd., Limehouse, London, E.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses. Portable buildings, etc. Catalogue gratis.

SUTTON'S NAMED HYACINTHS.
(For pots and glasses).
12 named Hyacinths, in 12 good varieties, 5s.
24 named Hyacinths, in 12 good varieties, 10s. 6d.

SUTTON'S DAFFODILS (mixed).
Suitable for effective masses in the border.
Per 100, 3s.; per 1,000, 27s. 6d.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

NOW IS THE TIME TO PLANT
Kelway's lovely Pæonies, Delphiniums, and their celebrated Artistic Hardy Borders; packed ready for planting.
KELWAY'S CHOICE named Pæonies, from 27s. per doz.
KELWAY'S CHOICE named Delphiniums, from 24s. doz.
For information about the Colour Borders send 6d. for "Gardens of Delight."
KELWAY AND SON,
The Royal Horticulturists,
LANGPORT, SOMERSET.
230 Grand Prizes. Gold Medals, etc.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
From Mrs. ——. Chepstow.
10th March. 1911.
"You supplied me with an 'Artistic Herbaceous Border' about eighteen months ago, and I am so very pleased with it; it looked so lovely last year, that I am thinking of having a similar border laid out by the side of the drive up to the house."

ALPINES.—100 in 50 good varieties, carriage paid, £2. Half and quarter quantities at same rate.
WHITELEGG and PAGE, Chislehurst.

CARNATIONS AND PICOTEES for Exhibition or Border, 12 lovely kinds for 5s., carriage paid for cash; 25s. to 35s. per 100. List free.
CHAS. WALL,
CARNATION GROWER, BATH.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-work, showing screens, wall panels, window surrounds, arches, arbors, etc., post free. BOULTON and PAUL, Ltd., Norwich.

FRENCH PEONES.—Strong Clumps, as lifted. W. J. LOBJOIT and SON, Heston Farm, near Hounslow.

RETARDED LILY OF VALLEY.—I. Qual., 5s. 6d. 100. Supply short: order early. Greenhouse Climbers, in 20 varieties, 7s. 6d. doz. Herbac. Calceolarias and Streptocarpus Kewensis 1s. 6d. doz., carr. paid KOERING, The Nursery, 110, Brockley Road, S.E.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.
XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.
XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, XL ALL WINTER WASH for Fruit Trees, RICHARDS' BANDING GREASE, etc. Don't forget to ask your N. S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

LAXTON'S
FRUIT TREES
IN ALL SHAPES
CATALOGUES GRATIS
LAXTON BROS
BEDFORD

PRIOR'S CHAMPION ROSES

Winners of 81 Prizes this Season, including FIVE CHALLENGE CUPS, and one of the Largest GOLD MEDALS ever competed for, at the FESTIVAL OF EMPIRE, CRYSTAL PALACE, also the "DAILY TELEGRAPH" CUP.

ENORMOUS STOCK OF OVER 250,000 STANDARDS, HALF STANDARDS, WEEPERS, CLIMBERS, AND DWARFS.

PRICES:

100 H.P.'s leading varieties to name. Our selection, for £2 10 0
25 H.P.'s ditto 13 6
12 H.T's, leading varieties for 9 6
12 Teas, leading varieties for 10 6
12 Roses, for climbing, from 8 0

CARRIAGE PAID FOR CASH. 50 CHARGED AT 100 RATE.

ILLUSTRATED CATALOGUE POST FREE.

D. PRIOR & SON, CHAMPION ROSE GROWERS, **COLCHESTER.**

NAT TEL.: 23 X.

CROLL'S FAMOUS ROSES

Upwards of 100,000 Plants grown annually.

These are recognised to be hardier, and to give better results than English-grown plants.

OUR SPECIAL EARLY OFFER.

The following 12 H.P. Roses for 8/-

A. K. Williams
Alfred Colomb
Charles Lefebvre
Comte Raimbaud
Fisher Holmes
Helen Kellor
Jeannie Dickson
Frau Karl Druschki
Hugh Dickson
Marchioness of Downshire
Marie Corelli
Tom Wood

The following 12 H.T. Roses for 12/-

Bessie Brown
Captain Christy
Countess of Caledon
C. J. Graham
Earl of Warwick
Gladys Harkness
J. B. Clarke
Liberty
Lyon Rose
Madame Ravary
Mrs. David McKee
Viscountess Folkestone

The following 6 Climbing and Rambler Roses for 6/6

Crimson Rambler
Dorothy Perkins
Hiawatha
Gloire de Dijon
Cheshunt Hybrid
W. A. Richardson

Or four Varieties from each group for 9/6.

All above are carriage paid for cash with order only. *Write for Illustrated Catalogue to*

D. & W. CROLL, Rose Growers, DUNDEE.

SWEET PEAS.

The Exhibitor's House for true stocks of English-grown Seeds.

Awarded 90 Gold Medals.

Novelties for 1912:

AFTERGLOW, PRINCE GEORGE, DOROTHY, R. F. FELTON, CORONATION, FLORRIE.

1/- per packet.

For other Novelties and all the latest varieties in cultivation, see Catalogue, post free.

ROBERT BOLTON, F.R.H.S.,
The Sweet Pea Specialist,
WARTON, CARNFORTH.

CARNATIONS.
AURICULAS. PINKS.

The NEW ILLUSTRATED CATALOGUE of above is now ready, and has been posted to all customers. The newest and best varieties are sold at the most reasonable prices.

Best **CARNATION** and **PICOTEE SEED** ready in October. 1/6 and 2/6 per packet.

AURICULA (Show and Alpine), PINK, and POLYANTHUS SEED now ready. 1/-, 1/6, to 2/6 per packet.

Send for Catalogue to

J. DOUGLAS,
Edenside, GREAT BOOKHAM.

ORCHIDS.

If you have a Greenhouse sufficiently heated to keep out the frost, write for our

Amateur's Guide,

giving treatment and all particulars. Illustrated.

MANSELL & HATCHER, LTD.,
RAWDON, via LEEDS.

BUSINESS CARDS.

BULBS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Narcissi Bulbs, Hyacinths, etc., Home-Grown.

CARNATIONS.

ALLWOOD BROS., Haywards Heath, Sussex.
Perpetual Flowering Carnation Specialists, Raisers and Growers.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since [illegible]

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London, N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 1st Prizes. 3 2nds, at N.R.S. Shows, 1910. Ctlg. Free.

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
1911 Awards: 81 Prizes. Illustrated Catalogue free.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

Sales by Auction.

SALES NEXT WEEK.

WEDNESDAY NEXT, Oct. 25th, at One o'clock.—An important consignment received direct of 863 cases Japanese Liliums, in all 214,100 Bulbs in variety; together with many thousands of Narcissus, Liliums, Roman Hyacinths, Aconites, Anemones, Snowdrops, Gladiolus, Iris, Crocus, Tulips, Callas, Chionodoxas, etc.

At Five o'clock: Ornamental and Decorative Palms and Plants, Azaleas, Rhododendrons, Camellias, Aspidistras, Standard Bays, etc., from Belgium.

THURSDAY and FRIDAY NEXT, Oct. 26 and 27, at One o'clock.—Important unreserved Sale of Choice and Rare Orchids from the "Harefield Hall" Collection, which is specially rich in Albinos and in scarce and valuable varieties, many of which are unique. By order of Elijah Ashworth, Esq.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view mornings of sale and catalogues had.

HOLLAMBY'S 37TH GREAT ANNUAL SALE OF FIRST-CLASS NURSERY STOCK.

Comprising large quantities of Hardy Evergreens and CONIFERÆ.

Laurels, Hardy Climbers, Roses, Rhododendrons, Azaleas, Ornamental and Forest Trees, Rhubarb, Seakale, and Fruit Trees of all kinds.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION at the Nurseries, Groombridge, near Tunbridge Wells, on THURSDAY and FRIDAY NEXT, October 26th and 27th, at Half-past Eleven o'clock. On view; catalogues had on the Premises; and of the Auctioneers, 67 and 68, Cheapside, London, E.C.

DUTCH BULBS
10,000 Lots Sold Weekly.

SALES EVERY DAY
(SATURDAYS EXCEPTED),
At 10.30 o'clock, at PROTHEROE and MORRIS' Central Sale Rooms,
67 & 68, CHEAPSIDE, LONDON, E.C
Catalogues Free.
COMMISSIONS EXECUTED.

DUTCH BULBS, PERENNIALS, ROSE TREES, SHRUBS.

MR. J. C. STEVENS begs to announce that his **Sales by Auction** are held every **MONDAY, WEDNESDAY** and **THURSDAY** at 12.30.

Catalogues post free.

Lots purchased, packed, and forwarded to all parts.

STEVENS' AUCTION ROOMS
(Established 150 years),
38, King Street, Covent Garden, London, W.C.

SALES DAILY (SAT. EXCP.) AT 12.30.
First Size Hyacinths, Tulips, Daffodils, Narcissi, Crocus, Snowdrops, etc.

BULB SALES BY AUCTION.
Lotted to suit all Buyers,
Catalogues of Auctioneers,
JOHNSON DYMOND & SON,
"City Auction Rooms" (est. 1793),
38 and 39, Gracechurch Street, LONDON, E.C.

A SPECIALITY FOR MORE THAN 50 YEARS.

POT VINES
Exceptionally Fine this Season.
Inspection Invited.

J. R. PEARSON & SONS, LOWDHAM, Notts.

OUR WORLD-FAMED GOLD MEDAL ROSES.

Please send for our Catalogue, which contains descriptive particulars and prices of all New and Old Roses worth growing, for any purpose. The largest growers in the world of Roses on the briar-cutting stock.

SAMUEL M'GREDY & SON,
ROYAL NURSERIES,
PORTADOWN, IRELAND.

KING'S ACRE FRUIT TREES AND ROSES.

AWARDED . .

18 Gold Medals AND Coronation Cup
VALUE 25 GUINEAS.
Seasons 1909-10.

Illustrated Catalogue post free on application.

KING'S ACRE
NURSERIES LTD.,
HEREFORD.

BY APPOINTMENT.

ROSES IN POTS

WM. PAUL & SON
WALTHAM CROSS, LTD.

Respectfully invite attention to their magnificent stock of the above, which they believe to be unrivalled in quality and extent.

Dwarfs or bushes, extra strong, in 8 in. pots, for forcing and greenhouse culture	30/- to 60/- per doz. £12 and upwards per 100.
Climbers and Ramblers in 8 in. pots, for forcing and out-door planting on pergolas, arches, etc., with shoots ...	6 to 12 ft. long, 30/- to 60/- per doz. 12 to 16 ft. long, 72/- to 90/- per doz. Price per 100 on application.
Dwarfs and Climbers, smaller plants, in 5 in. pots	10/6 to 18/- per doz. 75/- to £6 per 100.

Priced List Post Free on application.

Inspection of Stock Invited.

The Nurseries are twelve miles from London, four minutes' walk from Waltham Cross Station, G.E.R.

Sole Postal Address—

PAULS' ROYAL NURSERIES
AND SEED WAREHOUSE,
WALTHAM CROSS, HERTS.

W. SEABROOK & SONS
Offer a very fine stock of
FRUIT TREES and ROSES.
Full Illustrated Catalogue sent post free on application.
CHELMSFORD

DOBBIE'S SCOTCH-GROWN ROSES.

Our Roses this year are by far the finest and hardiest plants we have ever offered.

PRICES.
Our Selection. Carriage Paid.
H.P's, 7/- per dozen.
H. Teas, 10/- " "
Tea Scented, 12/6 per dozen.

Please mention this Paper.

CATALOGUE ON APPLICATION.

DOBBIE & Co.,
Royal Florists,
EDINBURGH.

ROSES. ROSES. ROSES.
Most Complete Collection of all the Best Up-to-Date Varieties.

FRUIT TREES.
EXCEEDINGLY WELL-GROWN DWARF TRAINED
CORDONS, PYRAMIDS, STANDARDS, ETC.

HERBACEOUS PLANTS
In all the Leading Varieties.

DELPHINIUMS !!!
STRIKING NOVELTIES. ——
—— *CATALOGUES FREE.*

ALFRED A. WALTERS & SON, Nurserymen and Rosegrowers,
—— BATH. ——

GLASS & PAINT.
NICHOLLS & CLARKE, LTD.,
15 oz. and 21 oz. Glass,
IN ALL THE USUAL SIZES.
Shoreditch, London.
When sending for list please cut out this advt.

Alex·Dickson & Sons Ld

"HAWLMARK"

Champion Irish Roses

are the result of scientific culture at our Irish Nursery, where acre after acre is devoted to raising the high quality rose by which we have obtained our world-wide reputation

We are again winners of the Champion Trophy of the National Rose Society. We have also been awarded the King's Cup, the Saltaire Challenge Trophy, as well as countless prizes at Shows throughout the country

Our New Catalogue containing coloured plates, together with very useful information for Rose Culture, will be gladly sent, post free, on request.

ALEX. DICKSON & SONS, Ltd.

Royal Irish Nurseries
NEWTOWNARDS, co. Down

Established 1836

BUNYARD'S
FRUIT . .
TREES . .

EARLY ORDERS RECEIVE FIRST ATTENTION WHEN PLANTING SEASON ARRIVES.

WRITE FOR CATALOGUE.

Geo. Bunyard & Co., LTD.,
Royal Nurseries,
MAIDSTONE.

Telegrams:
FRANK CANT,
COLCHESTER.

Telephone
No. 182.

CANTS'
CHAMPION
ROSES

THE FINEST STOCK IN THE KINGDOM.

Direct from

FRANK CANT & CO.,

Dept. B., BRAISWICK ROSE GARDENS, COLCHESTER.

Our Illustrated Catalogue post free on application.

VOL. LIV.—No. 3,025. SATURDAY, OCTOBER 21, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Reproduction.

The study of the many methods of reproduction which have been evolved since organic life was first originated upon the earth's surface is an absorbing one indeed. Originally, i.e., as exemplified in its presumably primal form of mere multiplication and separation of individual cells, it appears simple enough, though, in point of fact it is inconceivably complex.

The cell, the primary basis of all life, consists but of a mere sac or minute bladder filled with a somewhat viscous fluid, in which is suspended a microscopic body termed the nucleus, and it is really within that tiny body that all the vital energy of the organism is pent up. If we watch it we may see that tiny dot split up into two, the two portions will then separate, and between them a wall will be created, the divided cell then perfecting each division into a perfect cell, so that instead of one there are two. In some of the lowest organisms these separate, and in this way the simplest types are reproduced, or, rather, multiplied. In the more highly organised beings the cells do not thus separate, but are aggregated together to form the limbs, bones, and muscles, etc., of the animal kingdom, and the roots, branches, fruits, etc., of the vegetable kingdom, the cells, though multiplying in the same way, having the power of altering their character and secretions so as to suit the various structures they form or offices they fulfil. This sort of multiplication, however, cannot be termed reproductive, since it merely tends to perfect the individual organism but not to increase its numbers. At some early period in the great scheme of evolution the mere multiplication by fission or separation of the individual cell units was abandoned where the structures became complex and their functions distinct. The original simple cell, as we may see to this day in the Amœba, could perform all its vital functions of reaching, absorbing, and digesting food, and when it divided as described, both individuals possessed of a nucleus could do the same. The highly organised individual, however, provided with a special stomach, and means of locomotion, etc., would obviously, if divided, be incomplete, although it might, to some extent, be capable of self-repair, as we see in the Hydra, and even more highly organised creatures. Early, however, in evolutionary history, the great principle of reproduction by the conjunction of the separate potencies of two individuals came in as a mighty factor in the upward march of life. It was ordained that both in the plant and animal world, as a rule, there should be an alliance effected in such a way that the new generation should not practically be parts of the same individual, as is the case by mere fission or severance of parts, but an actual combination of two separate ones, and this led to the establishment in course of time of two different sexes. In this way differences, constitutional and other, induced by different environments, became commingled, and by such commingling of varied potencies an immense impulse was undoubtedly given to that variation in the offspring, which has led up to the wonderfully diverse forms of orders, genera, species, and varieties with which we are partly familiar in these days. In the plant world, with which we are more particularly concerned, we are blest with a far greater facility for reproduction than exists in the animal world, at least, in that part of it with which we are more immediately in touch (cattle, sheep, etc.), since plants still retain the power of yielding new individuals by fission of their parts (cuttings, buds, etc.), owing to their simpler structure. In a plant every twig is a potentially independent individual by possessing the power of generating roots at its base if severed and planted; and, in some cases, as in begonia leaves, or where the bark of a tree is wounded, it is clear that the formative cells at any point are capable of abjuring their usual local functions and adopting reproductive ones instead, in case of need. In the familiar animal world we have nothing akin to this; the lizard may regrow a snapped tail, but the snapped tail will never produce a new lizard. It is, however, in the direction of that sexual reproduction to which we have alluded that we are most indebted to plant evolution. Here we have the marvellous separation of the two potencies into those of the pollen grain and those of the ovary, and their eventual conjunction by a thousand and one different contrivances in the flowers themselves, and the ministrations of the moth, the bee, and many other insects, and also of wind, and even of water. By such conjunction it has been abundantly proved by Darwin and others that not only is the constitution of the offspring strengthened, but also the number, and every horticulturist nowadays recognises the fact that it is to the æsthetic or other tastes of the insect tribe, the Pucks and Cupids of the floral world, so to speak, that we owe the lustre and brilliancy of our flowers, and their diversity of form and arrangement. These were the cross-fertilisers of old, as man has become the cross-fertiliser par excellence of comparatively recent times, and by his better-considered efforts has enriched the world of floral beauty with a myraid gems which Nature unaided would certainly never have fashioned.

MR. JAMES DIXON.
Winner of the Scottish Challenge Trophy for Grapes, both in 1910 and 1911.

Mr. James Dixon, head gardener to Lord Rowallan, at Rowallan, Kilmaurs, in Ayrshire, is well known throughout the South of Scotland as an especially skilful cultivator, and he has achieved great success in late years as a grower and exhibitor of grapes. Before going to Rowallan Mr. Dixon served for several years in the vineries and fruit houses at Ardgowan, the fine

Renfrewshire seat of Sir Hugh Shaw Stewart, where Mr. Thomas Lunt, recently retired, was the extremely capable and highly respected head gardener for well over fifty years. Mr. Dixon has been six years at Rowallan, and in November next it will be five years ago since he planted the two vineries there, one with Muscat of Alexandria, and one with mixed varieties of the highest class. Two years after planting the vines Mr. Dixon commenced to exhibit, and won a first and two second prizes at Glasgow. The year following he secured the leading grape prizes at Glasgow, and in 1910 he began the season by winning five firsts at Dundee, following this with two firsts at Glasgow, and finally securing the Scottish Challenge Cup at Edinburgh, all with grapes from the two vineries. In the present year Mr. Dixon commenced to show grapes at Shrewsbury, and in the great class there he was second prize winner, only missing the chief award by one point, i.e., he was half a point behind the winner. At Dundee he won the Corporation Cup for six bunches of grapes, and a first prize for four bunches; at Glasgow he secured a silver cup and first prize for eight bunches, and, as previously announced in these columns, he again won the Scottish Challenge Cup at Edinburgh, being the first to win that trophy two years in succession. Judging from this catalogue of wins it might be taken for granted that Mr. J. Dixon was a grape specialist only, but this would be quite wrong, because his skill is seen in all departments of the beautiful garden of which he has charge.

Important to Secretaries of Horticultural Societies. — The edition of the "Gardening Year Book" for 1912 is in an advanced stage of preparation, and secretaries of botanical and horticultural societies and gardeners' associations are earnestly requested to return the notices properly corrected which they have received, with as little delay as possible, so that any changes which have been made in the names or addresses of the secretaries may be duly recorded in the list of Horticultural and Botanical Societies of the United Kingdom. We shall also be glad to receive from our readers notification of any such changes as have come under their notice.

Awards to New Roses.—Occasionally writers on floricultural matters, who might be expected to appreciate the importance of an adherence to the regulations made for the guidance of exhibitors of novelties, give expression to peculiar views with regard to methods of procedure. We have a proof of this in the criticism of the National Rose Society, because a new rose possessing unquestionable merit did not receive an award on the occasion of the society's autumn exhibition, held in September. The rules made by the society for governing the awards to new roses stipulate that not fewer than six trusses shall be staged, and that, in conjunction with the blooms, "a ground plant of the variety must also be shown." The requirements of the society are very clearly stated, and the object in requiring a ground plant is, of course, to enable those responsible for making the awards to form an opinion on the growth of the variety. As we understand the case, the exhibitors of the rose staged finely-developed blooms, and with them they showed, under a misapprehension, a plant that had been grown in a pot. In consequence of their failure to comply with the rules, the committee for making the awards to new roses were, much to their regret, unable to deal with the variety, which has unquestionably merit of a high order. It has been suggested that the National Rose Society, to be truly national, must take into consideration roses from under glass as well as those grown in the open. The nationality or otherwise of the society has nothing to do with the matter. The society has framed a set of rules that exhibitors have for some years observed, and it should be obvious that they cannot be altered except in a constitutional manner. The writer we have in view recognises this after indulging in a criticism of the National Rose Society, and endeavours to show how that body may rehabilitate itself in his estimation. He advises that the society should immediately convene a special meeting, and alter the rule "relating to gold medals," and that, as soon as the rule is altered, make amends to the raiser by awarding him the gold medal. It is impossible to take a writer seriously who makes such proposals; otherwise we should ask him, Which rule is the society to alter? We know something of the constitution of the National Rose Society, but we have no knowledge of a rule relating to gold medals. To suggest that the Council should call 5,000 members together for the purpose of altering a rule that does not exist, to enable them to confer a gold medal on a rose that has not been judged officially, is perhaps the most absurd proposal that has yet been made by a writer on floricultural matters.

Alterations in the Rock Garden at Kew.—About midway through the Kew Rock Garden and on the western side considerable alterations are in progress. From the portion that is being dealt with the old tree stumps that served as supports have been removed, and a high mound has been thrown up; on this, arranged so as to form the best possible homes for rock and alpine plants, a quantity of finely weathered stone, imported from Cheddar, is being placed. To the south of this mound a very deep bay has been cut out, and one side of this will provide a fine site for plants that thrive in the full sunshine, while the other side will provide a cool spot for such things as ramondias. Mr. Irving hopes to make a stone path between the two banks of saxifragas and sedums, and carry this across the central path and round the newly-formed bay or recess, so that visitors may, in single file, be able to closely inspect the plants. Very great improvements have been effected in the reconstruction of the Rock Garden during recent years, and the plants have shown their appreciation of the new sites. A good deal of renovation remains to be done, and it is hoped that the work will be carried on each autumn until the whole is finished.

Dundee Flower Show was a financial as well as a horticultural success this year, and enabled the treasurer to show a balance of £45 8s. 6d. on the right side at the close of the year's work. The total income was £1,016 10s., and the expenditure £971 1s. 6d. The takings at the show were £639 17s. 9d. Mr. W. S. Melville has been re-elected president for the ensuing year, and Mr. W. F. Hill, of Barrack Street, continues as secretary. The show dates for 1912 are September 5, 6, and 7, to coincide with the visit of the British Asociation; £300 will be offered in prizes.

The Fragrant Sweet Pea.—The popularity of sweet peas is beyond all question, and probably no book has done more to extend the culture of these lovely and fragrant flowers than "Sweet Peas and Their Cultivation." This was the first of the books dealing with the subject, and it has now reached its fourth edition. The new issue is as interesting and instructive as the previous ones; indeed, it is more so, as further cultural details have been added, the selections of varieties for various purposes have been brought quite up to date, a new chapter deals with the extension and methods of cultivation for the cut flower markets, while numerous new illustrations constitute a special attraction. To the raiser, exhibitor, or modest amateur cultivator, the book is a mine of information. Mr. Chas. H. Curtis, the author, cultivates sweet peas largely, and his position of hon. secretary to the National Sweet Pea Society is a guarantee of the correctness of the information he offers, and an indication of his wide experience in all matters pertaining to sweet peas.

September in the North.—The past month has been the driest September experienced in the North of Scotland (writes our Aberdeen correspondent) for the past forty years, with one exception, that of 1895, when the rainfall was just the same—about two inches. This is an inch and a half below the average for the month during the period under review, the largest fall being fully six inches, which fell in September, 1872. The month, therefore, has been decidedly a dry one, but has been rather cloudy and mild. Seldom, if ever, has so little water been seen in the streams and rivulets, and in some localities the scarcity of water has been much felt, for there has been a deficiency of rain in the North this year every month except May and June. In May, indeed, the excess was so small as to be barely measurable. As a rule June is our driest month, but this year, oddly enough, it has up till this period of the year been the month in which we have had the most rain, although the weather in it was seldom at all wet, for most of the rain fell on one day, the 24th. During the last week of the month just closed the barometer was considerably above its normal height, and rather unsteady. The temperature fell steadily during this period, and the last three days of the month were cold and squally. The sunshine in some districts exceeded the average by about ten hours. The cereal crops have been secured in capital order, and the quality is excellent. The field turnips, however, are suffering for want of rain, many of the leaves turning yellow; the crop is likely to be a light one, but may make up a good deal yet should the weather prove more favourable.

Chrysanthemum Culture was the subject of an instructive lecture given by Mr. F. Phillips, of Reigate, before the members of the Croydon Gardeners' Association on the occasion of the last fortnightly meeting. There was a large attendance of members, who listened with much interest to the advice given by Mr. Phillips, on the numerous details requiring attention in the various stages through which plants grown for the production of exhibition have to pass. The cultivation of bush plants for conservatory and greenhouse decoration was also referred to at some length by Mr. Phillips, who received a hearty vote of thanks at the close of his lecture.

Liebig and Soil Fertility.—At a recent meeting at Oxford, Sir W. A. Tilden, F.R.S., gave an address on Liebig and his influence on the progress of modern chemistry. In turning to the investigations of the problems of plant life and soil fertility with which Liebig's name should ever be associated, Sir W. A. Tilden said the questions the famous chemist set himself to answer were: Whence do plants get their carbon and nitrogen, which, together with hydrogen and oxygen and water, form the material of their tissues? What is the use of the mineral substances found in the ash left on burning vegetable matter? Why are different soils adapted to different crops, and what is it that gives fertility to a soil? The state of knowledge on such subjects is indicated roughly by the summary which had been provided by the lectures of Sir Humphry Davy in 1813. During the subsequent twenty-five years very little had been done in the way of experiment, but it would be only fair to mention the name of the great French agricultural chemist Boussingault as one of the pioneers a little in advance of Liebig in the study of such questions. Briefly, the position was somewhat as follows: it was known that plants decompose the carbonic acid of the air, using the carbon and letting the oxygen go free, but it was commonly supposed that the brown or black substance in the soil, which is usually called humus, and is the result of the decay of preceding vegetable growth, was the chief source of the carbon in growing vegetables. Liebig pointed out that this was impossible, because it failed to show from what source the original plants from the decay of which humus was formed derived their carbon. Liebig was the first to study carefully the mineral constituents of plants and to recognise the importance of certain substances, especially potash and phosphates. The services which Liebig rendered to the world in connection with plant physiology and cultural methods are, however, less to be recognised in the shape of positive contributions to knowledge than in the example set and in the influence of that example in stimulating systematic investigation.

Yorkshire Railway Station Gardens.—The offer of prizes for the best-kept station gardens on the Pickering and Seamer branch of the North-Eastern Railway, had an excellent effect, and the staff at each station enters heartily into the work of making its own charge as beautiful as possible. Thorntondale, Sawdon, and Snainton Stations all receive first prizes; Pickering and Ebberston gain second prizes; while Forge Valley and Wykeham Stations each obtain third prizes. Throughout the season the stations from Pickering to Forge Valley have been a continual delight to travellers, and a great credit to every stationmaster and staff.

Canadian Fruit Crop.—We are informed by Lord Strathcona, High Commissioner for Canada, that he has received the Fruit Crop Report for the current year from the Canadian Department of Agriculture. The drought has reduced the crop, the loss being in quantity in some districts and in quality in others. In Nova Scotia and Prince Edward Island the apples are below the average in size. A feature of the reports of the Department's correspondents has been the number of allusions to the beneficial effect of clean cultivation and spraying, and another frequent comment is that the codling moth is not prevalent except in unsprayed orchards. The conclusion drawn from the reports of the correspondents is that even in years like this of insufficient rainfall and "off-years" in the apple crop, at least a medium crop can be expected in all orchards that are properly sprayed and cultivated.

International Horticultural Exhibition, 1912.—A meeting was held at the Hotel Windsor, Victoria Street, on the 10th inst., for the purpose of electing a committee for the County of Surrey to help in promoting the interests of the exhibition. Those present included: Sir Trevor Lawrence, Bart., President of the Royal Horticultural Society; Sir Albert Rollit, a member of the Board of Directors charged with the management of the exhibition; Messrs. F. A. Wellesley, E. G. Mocatta, W. A. Bilney, A. Hartman, T. Want, Leopold Salomon, J. Cheal, J. Goatley, J. Collins, M. Mills, R. B. Leach, G. Carpenter, J. Summers, W. P. Bound, A. Smith, Thomas Stevenson (hon. secretary), and others. Sir Trevor Lawrence, who presided, was subsequently elected president of the committee; he made a very interesting speech on the work which was being done in all quarters on behalf of the exhibition, and moved a resolution pledging the committee to do its utmost to forward this work.

Melons and Their Cultivation.—At the fortnightly meeting of the Reading Gardeners' Association, Mr. H. Goodger, head gardener to Mrs. Collins, Stoneham House, Tilehurst, lectured on "Melons and Their Cultivation." That so successful a cultivator of these luscious fruits gave advice of much value on the various essentials to success goes without saying; but it may be mentioned that he stated with reference to varieties that he chiefly depended upon Sutton's Ringleader, Superlative, Hero of Lockinge, and Eastnor Castle in maintaining successional supplies extending over a long period.

Exportation of Potatoes to South Africa.—The Board of Agriculture and Fisheries desire to give publicity to the new regulations issued by the Government of the Union of South Africa, whereby potatoes will be admitted from any part of the British Isles, provided that each consignment is accompanied by a declaration from the consignor stating where the potatoes were grown, and also a certificate from the Board of Agriculture and Fisheries declaring that so far as they are aware no outbreak of wart disease (black scab) of potatoes has occurred within a radius of five miles from the locality where the potatoes were grown. Applicants for the Board's certificate must forward a declaration signed by the grower of the potatoes stating where the potatoes were grown, and giving the name of the parish and county in which the farm is situated. The grower must also declare that no case of wart disease has occurred on his premises.

Weight of Apples.—Miss E. G. Badcock, of Westhay Kingston, Taunton, writes, with reference to some fine apples she has gathered: "It may interest your readers to know that from two trees of A 1 and one of Lord Derby we picked one apple weighing 20oz., another 18oz., and two or three of 1lb. These trees had no special treatment, as we had no intention of showing." Miss Badcock's note would have been still more interesting had she stated whether the larger of the fruits had been gathered from the trees of A 1—a variety, by the way, that has no place in the lists of apples to which we have access—or from the tree of Lord Derby.

Production of Potatoes in Cellars.—We have been reading in several weekly journals that a new method of raising new potatoes in cellars is attracting much attention in France at the present time. The method referred to, as proved by the context, may be receiving attention on the other side of the Channel, but it is certainly not new. It has been practised at Park Place, Henley, for a long time past, and nearly twenty years ago Mr. George Stanton, who is now the agent of the Park Place estate, described in these pages his practice in the production of supplies of "new" potatoes from tubers of the previous year placed in caves. Mr. Stanton also kindly supplied us with photographs which were reproduced and used for the purpose of illustrating his article.

FEEDING PERPETUAL CARNATIONS IN AUTUMN.

The development of all human, animal, or plant life depends, to a very large extent, upon the food supply. The long past ages have proved this fact conclusively. Therefore, when we are studying a florist's flower, such as our modern perpetual carnation, we naturally wonder to what degree the food supply has influenced its development. Certainly all can appreciate to a greater or lesser degree the necessity of correct and careful artificial feeding by studying the importance placed upon it by our best raisers and growers.

In the first place, we must realise that there is no other plant just like the perpetual carnation, which lives the strenuous life, growing without rest for the twelve months of the year, so that if it is unduly forced or fed during any one season, this is only done at the expense of the succeeding season. This is particularly so in the case of the autumn, when the plants should be kept in perfect condition to withstand the most trying period of their life, viz., the winter.

It must be evident to all that any ordinary fertiliser will not do. It is not reasonable to expect that we can have one fertiliser for all plants in the way that patent medicine vendors have one remedy for all ills. A fertiliser may be excellent for vines, but it does not follow that it will suit ericas or perpetual carnations equally well, for in the case of the carnation it is most essential that all its parts should be developed slowly and evenly.

If, for instance, you use in the autumn a very highly concentrated nitrogenous manure, which would be very excellent for many subjects, you would, in the case of perpetual carnations, make the young growths very soft, and thus weaken the stem and calyx, whilst the root action would be forced for the time being. The flowers also would not last when cut, but, worst of all, there would be a reaction, which would take place at the dullest season of the year, thus rendering your plants almost useless.

It has been a hobby of mine for years, this study of fertilisers for perpetual carnations, and, while space will not allow me to go closely into the matter, I can say I have been perfectly convinced that the only suitable fertilisers for perpetual carnations are mainly composed of organic matter, and for that reason I have for years compounded my own carnation food.

The advantage of an inorganic fertiliser is that all the food is not immediately available to the plant, but is given off gradually while the slow decomposing process is going on. This has a wonderful invigorating action upon the roots, and hence upon the whole plant if the parts of the fertiliser are evenly balanced. In the case of the perpetual carnation nitrogen should not predominate over the other essential parts.

A good sample of steamed bone flour is the best source of phosphates, and is one of the best manures for autumn use. We prefer hardwood ashes as a source of potash, while dried sheep-manure or blood and soot are excellent sources of nitrogen. Of course, you could obtain these manurial parts from cheaper sources, but I am a strong believer in the best for carnations.

I am not an advocate of liquid natural or yard manures, simply because none of us really know their strength from day to day. They are also, as a rule, too rich in nitrogen for carnations. In fact, I greatly prefer top-dressing, particularly in the autumn.

The question will arise in the minds of some: Do I favour autumn feeding for perpetual carnations? My reply is: Yes; if plants are well established, and require additional food, and providing one has the right sort, in small quantities. For if you do not feed your plants they become hard and checked.

In short, perpetual carnations can be fed during any season of the year, providing small quantities are given, but the food must be a veritable diet, and not merely a stimulant. Montagu C. Allwood.

NATIONAL SWEET PEA SOCIETY.

Classification of Sweet Peas.

The Floral Committee presents the following as an up-to-date selection of varieties. The varieties in each colour class are placed in order of merit:

* Indicates a grandiflora variety; all others are waved.

Bicolor.
Mrs. Cuthbertson
Arthur Unwin
Mrs. Andrew Ireland
Colleen

Blue.
Flora Norton Spencer
Mrs. G. Charles
*Lord Nelson

Blush.
Mrs. Hardcastle Sykes
Princess Victoria

Carmine.
John Ingman

Cerise.
Cherry Ripe
Chrissie Unwin
*Coccinea

Cream, Buff, and Ivory.
Clara Curtis
Paradise Ivory
Isobel Malcolm

Cream-Pink (Pale).
Mrs. Routzahu
Mrs. Hugh Dickson
Gladys Burt

Cream-Pink (Deep).
Doris Usher
Mrs. R. Hallam
Constance Oliver

Crimson.
Sunproof Crimson
Maud Holmes
King Edward Spencer

Fancy.
Afterglow
Charles Foster
Prince George

Lavender.
Masterpiece
Asta Ohn
Florence Nightingale

Lilac or Pale Mauve
Mauve Queen
Winsome
Mrs. R. H. Carrad

Magenta.
Menie Christie

Marbled & Watered
May Campbell
*Helen Pierce

Maroon.
Nubian
Tom Bolton
Black Knight Spencer

Maroon-Purple.
Arthur Green
Mrs. J. M. Gerhold

Maroon-Red.
Red Chief.

Mauve.
Queen of Norway
Tennant Spencer
Wenvoe Castle
Helio-Paradise.

Orange-Pink.
Edrom Beauty
Helen Grosvenor
Helen Lewis

Orange-Scarlet.
Thomas Stevenson
Dazzler
Edna Unwin

Picotee Edged.
(Cream Ground.)
Mrs. C. W. Breadmore
Evelyn Hemus

Picotee Edged.
(White Ground.)
Elsie Herbert
Marchioness of Tweeddale
Mrs. Townsend

Pink.
Elfrida Pearson
Hercules
Countess Spencer

Rose.
Rosabelle
Marie Corelli
Marjorie Willis

Salmon Shades.
Stirling Stent
Barbara
Melba
Earl Spencer

Scarlet.
Red Star
Scarlet Emperor
George Stark

Striped and Flaked.
(Purple and Blue.)
Loyalty
Suffragette

Striped and Flaked.
(Chocolate on Grey Ground.)
W. R. Beaver
Senator Spencer

Striped and Flaked.
(Red and Rose.)
Mrs. W. J. Unwin
America Spencer
Aurora Spencer

White.
Etta Dyke
Nora Unwin
*Dorothy Eckford

Too-much-alike Varieties.

The following varieties have been bracketed as too-much-alike. "Not more than one of the bracketed varieties shall be shown on the same competitive stand at any exhibition of the National Sweet Pea Society." The names are placed in alphabetical order. For Order of Merit see "Classification of Sweet Peas":

Blue.
Anglian Blue
Flora Norton Spencer
Kathleen McGowan
Shawondasee
Zephyr

Blush.
Bobby K.
Countess of Northbrook
Florence Morse Spencer
Lady Evelyn Eyre
Mrs. Hardcastle Sykes
Princess Victoria

Blush Spencer
Lady Althorp
Mrs. T. G. Baker
Paradise Regained
Sankey Spencer

Carmine.
E. J. Castle
George Herbert
John Ingman
Mrs. W. King
Paradise Carmine
Spencer Carmine

Cream, Buff, & Ivory
(Grandiflora.)
Harold
James Grieve
Mrs. Collier
Mrs. A. Malcolm
Yellow Hammer

(Waved.)
Clara Curtis
Giant Cream Waved
Mrs. Miller
Paradise Cream
Primrose Paradise
Primrose Spencer
Primrose Waved
Princess Juliana
Waved Cream (Malcolm's)

Paradise Beauty
Paradise Ivory
Queenie
Sea Foam
Lady Knox.

Cream-Pink.
A. B. Bantock
Earl of Plymouth
Holdfast Belle
Juliet
Mrs. Alec Ware
Mrs. Henry Bell
Mrs. Hugh Dickson
Mrs. Routzahn
Mrs. S. S. Champion
Queen (Sutton's)
Queen Mary
Romani Rauni
Seashell
W. T. Hutchins

Cream-Pink (deep).
Anglian Pink
Doris Usher
Lancashire
Minnie Furnell
Miriam Beaver
Mrs. Gibbs Box
Mrs. R. Hallam
Syeira Lee

Constance Oliver
Nell Gwynne

Crimson.
Dodwell F. Browne
G. C. Waud
King Alfonso
King Edward Spencer
Maud Holmes
Northumbrian Crimson
Paradise Crimson
Rosie Gilbert
Sunproof Crimson
Sunproof King Alfonso
The King
The Squire

Lavender.
Asta Ohn
Frank Unwin
Maori Belle
Masterpiece
Mrs. Chas. Foster
Mrs. E. Noakes
R. F. Felton

Florence Nightingale
Freda Unwin
Gladys Cole
Lavender George Herbert
Lavender Paradise
Lavender Spencer

Lilac or Pale Mauve
Bertha Massey
Mrs. R. H. Carrad
Winsome

Magenta.
Menie Christie
Mrs. Chas. Mander

Maroon.
Anna Lumley
Black Knight Spencer
Douglas Unwin
Dusky Monarch
Maroon Paradise
May Gerhold
Nubian
Othello Spencer
Prince of Asturias
Silas Cole
Tom Bolton

Mauve.
Amethyst
Empress
Helio-Paradise
Ida Townsend
Mrs. Walter Wright Spencer
Queen of Norway
Tennant Spencer
The Marquis

Orange-Pink.
Anglian Orange.
Helen Grosvenor
Helen Lewis
Maggie Stark
Miss J. Brown

Orange-Scarlet.
Dazzler
Earl of Chester
Edna Unwin
Gordon Ankentell
Prince of Orange
Ruby (Aldersey)
St. George
Thos. Stevenson

Picotee Edged.
(Cream Ground.)
Evelyn Hemus
Mrs. C. W. Breadmore

Picotee Edged.
(White Ground.)
Dainty Spencer
Distinction
E. J. Deal
Elsie Herbert
Picotee
Winifred Deal

Eric Harvey
Marchioness of Tweeddale
Martha Washington
Paradise Apple Blossom

Pink.
Countess Spencer
Enchantress
Hercules
Overcomer
Paradise
Pink Pearl
Thora

Marjorie Linzee
Minnie Toogood
Olive Bolton

Salmon.
Barbara
Charlie Irving
Earl Spencer
Melba
Nancy Perkin
Stirling Stent

Flossie Jeffrey
Iris
Isabel

Scarlet.
George Stark
Premier
Queen Alexandra Spencer

Scarlet (Continued).
Red Star
Scarlet Emperor
Scarlet Empress
Scarlet Monarch
Vermilion Brilliant

Striped and Flaked.
(Chocolate.)
President
Senator Spencer
W. R. Beaver

Striped and Flaked.
(Red and Rose.)
America Spencer
Lizette Lumley
Mrs. Wilcox
Paradise Red Flake
Uncle Sam
Yankee

Magnificent
Mrs. W. J. Unwin

Ethel Roosevelt
Gipsy Queen
Mrs. Tigwell

Rose.
Albert Gilbert
Lady Farren
Marie Corelli
Marjorie Willis
Rosabelle

White.
Etta Dyke
Freda
Moneymaker
Nora Unwin
Paradise White
Purity
Snowflake
White Spencer
White Waved

Marie Louise Pears for Stewing.—I can quite understand many readers objecting to the use of this grand pear for stewing purposes. But where there are many specimens of the variety, and special stewing pears are required, there is not a single variety that excels it. A lady once remarked to me, "Why always use the poorer and more gritty pears for stewing, when Marie Louise makes the best stewing pear there is." I confess I had never tried the variety in this way, but did so at once. The lady was quite right; I, personally, never tasted stewed pears to equal them. Probably many readers have had experience of the use of good dessert varieties for stewing?—G. B.

Gesnera Orange King.—Two or three times during the present autumn good examples of this pretty gesnera have been shown at the meetings of the Royal Horticultural Society. The foliage is of that pretty reddish tint, with a velvety lustre. which prevails to a greater or lesser extent in many of the garden varieties of gesnera. The flowers, borne in a large pyramidal, terminal panicle, are, as indicated by the name. of a bright orange colour. This gesnera is well worthy of a note, not only for its own intrinsic merit, but for directing attention to the great value of many gesneriaceous plants for the embellishment of our glass structures during the autumn months.—W. T.

Retarded Bulbs of Lilium longiflorum giganteum.—Quite recently I saw two large batches of Lilium longiflorum giganteum and L. longiflorum respectively. Both were grown from retarded bulbs, but the latter were poor indeed compared with the former. Every bulb of giganteum had done well, and produced a strong spike of lovely large blooms. but only a few bulbs of longiflorum had grown fairly well, and were bearing one and two blooms each. The cultivator assured me that it was not an isolated case, and that L. longiflorum. with him, had always failed, whereas the retarded bulbs of L. l. giganteum had always succeeded under similar treatment.—G. B.

EXHIBITING ROSES IN BASKETS.

Within the past two or three years the National Rose Society has introduced the method of exhibiting roses in plain round baskets, and the success achieved in so doing has far surpassed expectations. So far this method of showing roses has been limited to perpetual-flowering decorative roses, with a view to bringing into greater predominance varieties that are more remarkable for continuity of flowering and effectiveness than for the size and form of individual blooms. The importance of such roses being constantly kept before rose lovers who grow them exclusively for beautifying their gardens is so great that we do not suggest there should be an alteration in the classes of roses that may be shown in this manner at the exhibitions of the National Rose Society; but there can be no doubt that the exhibition varieties would present an attractive appearnce arranged in round baskets. We therefore suggest that classes be provided for baskets of roses at local shows without reference to any particular class or section. This method of staging appears to be especially adapted to the requirements of large numbers of exhibitors of roses at such shows, and the provision of classes for them in the schedules of societies in provincial centres would, we have good reason to believe, prove, in the majority of cases, a distinct advantage. The baskets herewith illustrated were shown at the National Rose Society's Metropolitan exhibition in July last, in the nurserymen's class for five baskets, and both formed part of winning collections. Sea Bird, shown by Mr. Hugh Dickson, of Belfast, is a charming pure white hybrid tea, and the Lyon Rose, exhibited by Messrs. Spooner and Son, of Woking, was represented in such excellent condition as to show the bright and distinctive colouring characteristic of the variety at its best.

G.M.1848.
G.M.1848.

AN ATTRACTIVE BASKET OF THE LYON ROSE.
Exhibited by Messrs. W. Spooner and Son at the N.R.S. Metropolitan Show in July last. The colour bright orange-red.

ROSES FOR FORCING.

There is no flower grown in this country that is such a universal favourite as the rose, for not only is its delightful fragrance appreciated at all seasons of the year, but more especially so during the winter and early spring months, when flowers are scarce. The blooms are doubly valuable when well grown, and on stems of sufficient length and strength to carry them upright. To grow roses well in pots needs more than ordinary attention, for the plants are gross feeders; therefore, unless well looked after, will soon become a prey to all sorts of diseases, for their roots being so restricted cannot go in search of food. It is useless to attempt forcing roses unless the plants are well established, and when grown in pots, either for conservatory decorations or for providing cut blooms, they should have been potted at least one year previous to forcing, and if planted out they should have a season in which to recover themselves after being shifted.

Roses in Pots.

Those who are desirous of having early blooms, and have not hitherto made preparations would do well to purchase plants already established in pots, but in most private gardens of any pretensions there is usually a batch grown for this purpose. The present is a good time to examine them, repot, prune, and so prepare them in readiness for introduction to gentle heat. The soil used should be a good, sound, rich, turfy loam, to which may be added sufficient half-inch bones, broken charcoal, and lime rubble to make the whole porous, so that water may pass through freely. When potting, remove only the loose old soil, so as not to injure the roots, and give pots large enough to provide for sufficient food to carry the plants through the season, for, as before remarked, roses are gross feeders.

Pot rather firmly, especially if the soil is of a light nature. When potted stand them on a bed of ashes until they are placed in the forcing house. Those intended to bloom early should be pruned at once, while those not required to be housed until the new year may be left unpruned awhile. I have always found it a bad plan to hurry the plants much, for when forced excessively the petals are soft and the flowers of little use, either for cutting or conservatory decoration. Make up a gentle hotbed in the forcing-house, and at this season of the year there are usually ample leaves, which, if collected when dry, will retain heat for a considerable time. The temperature of the hotbed should not exceed 70 degrees at the base of the pots; if higher do not plunge the pots, but stand them on the surface until the temperature has somewhat declined. The beds should be examined daily in order to ascertain if the temperature is likely to rise too high, for as the roots of roses are tender, they will easily scald. When the temperature of the bed is safe, the pots may be plunged therein up to their rims.

Pruning is a simple operation, but as all cannot be pruned alike it requires a great deal of practice to know how each individual variety should be pruned, but it may be safe to say the strong-growing kinds ought not to be cut back so hard as the weakly ones. Remove all growths that are too thin to produce blooms, and encourage those that are well ripened, having good plump buds. It is quite impossible to lay down any hard and fast rules for pruning, but if a full crop of blooms is to be produced do not prune too heavily.

When the plants are first put into the forcing house, do not excite growth too quickly: a little air should be admitted night and day, whenever the weather is favourable, but should cold winds prevail great care must be exercised in this respect, as the young foliage, being very tender, is apt to get mildewed should there be cold draughts. Syringe in the afternoon to keep the foliage clean, and should green fly make its appearance fumigate at once, for this pest should by no means be allowed to increase. Mildew is a great trouble among forced roses, and should never be allowed to spread. On its first appearance syringe the plants with liver of sulphur in a very diluted form, half an ounce to a gallon of soft water.

As growth develops it will soon be seen which shoots are carrying bloom buds, and as soon as these buds are large enough, thin them out to one on each stem, so that they may become fully developed, for unless the flowers are of fair size they will be of but little use for decorative purposes. The best kinds of roses for forcing are those of distinct colour, as these may be used to the best advantage either for home decorations, bouquets, or the like. Choose those that are free bloomers and of good substance rather than those of exquisite form for exhibition. Some of the finest roses seen on the exhibition stands are of little use for general purposes. It is better to grow a few plants of each of the finest roses rather than a number of varieties, one or two plants only of each. For example, it is far better to grow a dozen plants of Richmond than half a dozen each of that and Liberty, as the colour is very similar, but the former is by far the best grower, and produces finer flowers. Again, for a white variety, there is no necessity to grow more than two or three sorts. What could be better than the White Maman Cochet? It is a grand rose, of good form, and an excellent grower. One may gather from this and come again another day. The old Niphetos, though it has been grown for far more than half a century, still holds its own for forcing, as it is so beautiful in the bud. Of pinks and salmon-pinks there are many, such as Caroline Testout, Dorothy, Mamam Cochet, Mdme. Lambard, and the like; they are all good and continuous bloomers. Those who prefer a flesh-coloured rose could not do better than grow Catherine Mermet, Bridesmaid, or Georges Nabonnand. As there is such a variety of shades in roses, and individuals have their particular fancies as to colour, it is necessary in some instances to grow a special variety.

But my object is to point the way to produce a quantity of bloom rather than to recommend certain varieties. At one time there was thought to be no red rose like General Jacqueminot for forcing, but others have now taken its place. As a white variety Frau Karl Druschki is perfect in form, and though it grows well in the open and blooms most profusely, it has not done so well when forced, being subject to mildew. The best kinds for producing a wealth of bloom are Teas and Hybrid Teas, and there is sufficient variety in these to please the most fastidious, both in colouring and shape. They are not so subject to mildew as the H.P.'s, and the foliage is far more pleasing, but most of them are strong growers, and therefore need feeding when in active growth, especially when the pots become filled with roots. Plunged in a bed of leaves the soil does not soon get dry, and as there is a gentle warmth therein the roots will soon find their way through the bottom of the pots and feed. It is astonishing how fast the plants will grow, and what a wealth of bloom they will produce if well attended to in the way of watering and keeping them clean, but if neglected they soon become a prey to red spider and other pests.

What is a good manure? Where it can be procured, that from the farmyard is undoubtedly the best, but as this cannot always be had, dried blood or guano may be used as substitutes. These are most powerful fertilisers, and should be used with caution: it is better to err on the side of giving too little than too much. Sulphate of ammonia is also a powerful stimulant, and if a little of this be dissolved in the water it is astonishing the colour it puts into the foliage: but this must not be over done. There are many concentrated manures sent out by different firms that are also highly beneficial, but care is needed in using them. Soot water is also very useful.

H. C. Prinsep.

PREPARATION OF ROSE BEDS.

It was at one time generally supposed that the only soil in which it was possible to grow roses to perfection was one of a stiff clayey nature. That idea has been exploded, for it has been proved by the magnificent blooms we see at the various summer and autumn shows that such soil is not essential to success. These flowers have come from different parts of the country, and have been produced by plants growing in practically every kind of soil except sand. I am well aware that a fairly good soil has had something to do with their production, as also have climatic conditions, but really the main factor has been the provision of properly prepared beds for the plants. The proper preparation of the beds in the first place is of far more importance than anything else, and no amount of manure or care expended on the plants afterwards can remedy the fault of a badly made bed.

To state the case briefly, a properly prepared rose bed is one so made as to ensure efficient drainage, a free root run that is warm and enriched, and with soil so treated as to conserve the moisture in such manner as to provide a supply during drought, though at the same time not interfering with the escape of superfluous water. I have long since come to the conclusion that one need not trouble much about the aspect when making rose beds. Provided they are not overshadowed by large trees, and are sheltered a little from the N. and N.E. winds, the roses planted in them are sure to thrive. The first thing we have to look to is drainage. If the ground is on a slope, it will only be necessary to cut a trench about 3ft. deep across the lower end, and lay in a row of 3in. drain pipes, covering them with old brick rubbish, coke, or clinkers. If it is not possible to carry the outlet into a ditch, a hole must be dug at the lower end to take the discharge. Where the ground is fairly level, and an outlet can be arranged, a row of pipes down the centre of the bed will be sufficient, but where no outlet can be provided the only way out of the difficulty is to raise the bed twelve to eighteen inches above the ground level.

The drainage having had provision made for it, the next step is the preparation of the soil by trenching to the depth of at least thirty inches, the object being to improve its moisture-retaining properties. If the subsoil is clay, begin the operation by digging out a section of the top spit three feet wide and fifteen inches deep, and wheel it away to the end of the piece of ground that is being worked. The lower spit should then be thoroughly broken up to the depth of another fifteen inches, and a layer, six inches in thickness, of well-decayed straw or peat moss stable manure incorporated with it. It is preferable to use stable manure instead of that from the farmyard on a clay soil, which is naturally wet and cold, as it enables us to enrich and lighten it without souring. A little basic slag, 3oz. to the square yard, should be added. We then proceed with the next breadth, and after we have placed about six inches of soil on top of the first trench, a thin layer more of manure may be added, together with any road-sweepings—not from tarred roads—decayed leaves, and burnt earth, so as to provide a free, warm root run that will induce the roots to spread out instead of running down. As the bed is being built up to the required height, add a third of a pint of $\frac{1}{4}$in. bones to the square yard. The first breadth being completed, the process may be repeated until the bed is of the required size.

Where the subsoil is gravel or chalk, and the ground naturally drained, the object will be to make the soil more retentive of moisture, and to enable us to do that we must use farmyard manure instead of that from the stable. If there is not sufficient depth of soil, do not be afraid to break up the chalk, only take care to work in planty of manure with it, and, if possible, use also some good stiff, clayey loam. For the middle layer, instead of using road sand, obtain some top spit from an old pasture, and work in with it decayed manure. Then bring the bed up to the required height with the natural soil.

Where it is intended to plant roses singly on lawns, the soil—if clay—should be removed to the depth of three or four feet, and a layer, nine or ten inches in thickness, of clinkers or brick rubbish put in before the bed is made up.

On no account let any manure come into contact with the top soil to a depth of at least six inches. Keep it as sweet as you can, so that when the trees are planted, the roots will be able to travel to the warm middle layer of the bed, and as they develop draw upon the nourishment therein provided.

Courtenay Page.

Enfield.

APPLE COX'S ORANGE PIPPIN.

Some cultivators are not very successful with this fine apple, and they tell others that they will also be disappointed in the variety. I have personally heard far more praise than condemnation of Cox's Orange Pippin, and as far as my own experience goes, have found it a free-fruiting variety, free in growth and free from canker.

I think that some growers fail through allowing the roots to get away so much into loose, rich soil. When this happens, the shoots made are very strong and do not well and satisfactorily ripen in an ordinary season; then there is loss of time and space, and some labour is entailed in the work of root-pruning.

Some years ago I planted a few dozen of apple trees in a row on the north side of four vegetable plots, so they had a good, sunny position. All did well, including Cox's Orange Pippin. The soil was good and the trees made satisfactory growth; indeed, the variety named would have grown too grossly only for the fact that the roots were specially cut back when the digging of the vegetable ground was done. Other trees, grown in very firm soil and in a fairly restricted area, also did well.

Geo. Garner.

CHRYSANTHEMUMS.—For full instructions on the Culture of Early-flowering Chrysanthemums in beds or borders for garden or greenhouse decoration, read the Second Edition of Chrysanthemums for Garden and Greenhouse, by D. B. Crane, price 2s. 6d. net; or by post 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

USE

CLAY'S

FOR ROSES

and all Flowers, Fruits, Vegetables and Foliage.

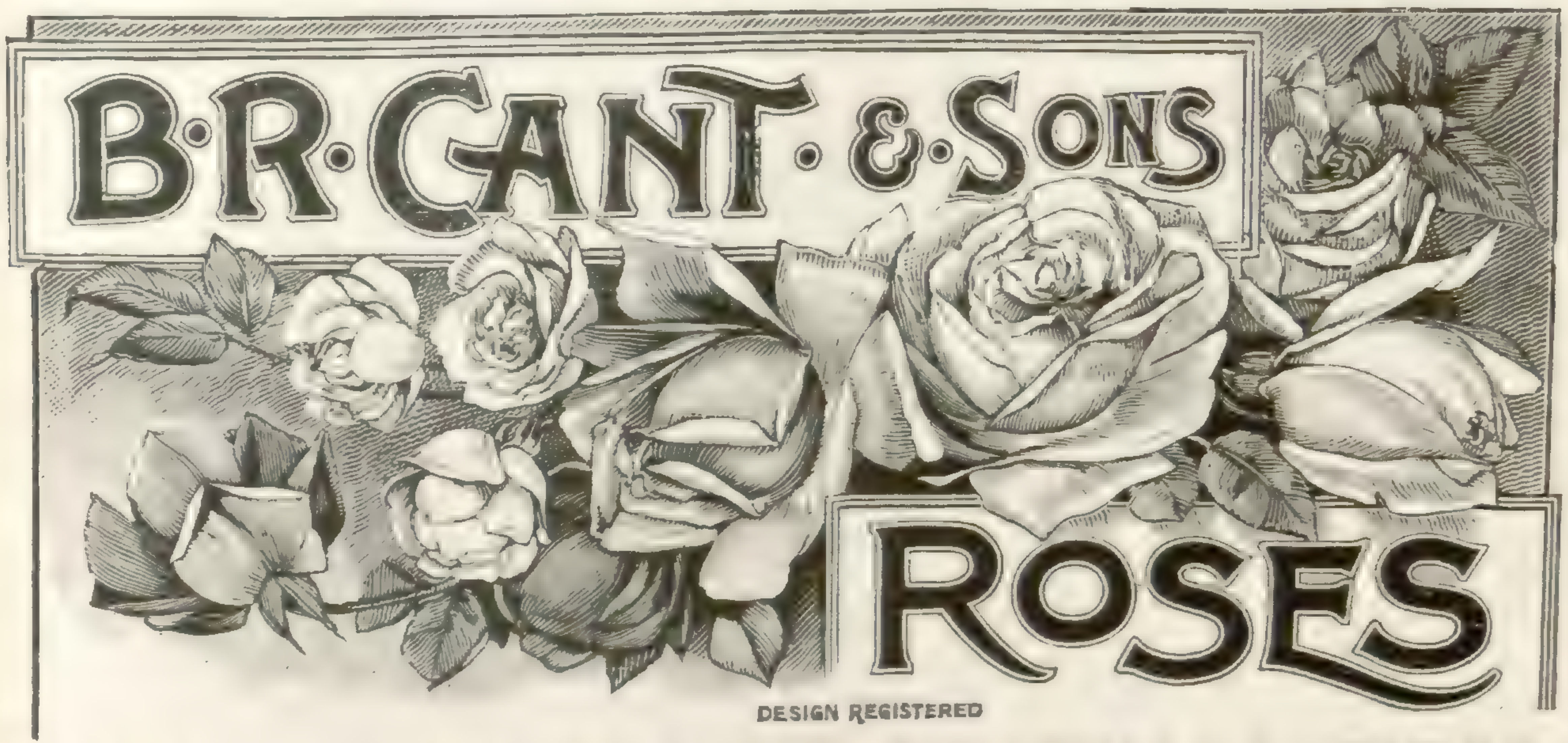
Sold Everywhere in **6d.** and **1/- Tins;** and in **Branded and Sealed Bags**: 7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs, **7/6**; 56 lbs., **12/6**; 112 lbs, **20/-**. Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

Every Genuine Tin, Bag, and Seal bears the Trade Mark, as at side.

CLAY'S LONDON FERTILIZER
TRADE MARK.

CLAY'S SUCCESSFUL GARDENING—An informing up-to-date Publication. Fourth Edition (Second Reprint), 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under—

CLAY & SON, Manure Manufacturers and Bone Crushers, **STRATFORD, LONDON, E.**



DIRECT FROM THE ORIGINAL FIRM.

Established 1765.

WE HAVE FOR DISPOSAL THIS SEASON

80,000 Standards and Half-Standards.

4,000 Standard Weeping Roses.

Magnificent Plants in the best known varieties. Also

300,000 Dwarfs and Climbers.

THE FINEST STOCK IN THE KINGDOM.

Illustrated Catalogue post free on application to

BENJAMIN R. CANT & SONS, The Old Rose Gardens, **COLCHESTER.**

FRUIT TREES.

Over 20 Acres.

ROSES

Including all Latest Varieties.

RHODODENDRONS

Grown in Loam.

Azaleas & Heaths

INCLUDING GOLDEN YEWS, CONIFERS, etc.

Ornamental Trees & Shrubs,
Flowering Trees & Shrubs.

Acres of Forest Trees of all Sizes and Varieties.

GRAPE VINES OUR SPECIALITY.

Climbing Plants in Variety.
Figs and Strawberries.

INSPECTION INVITED.

Gardens Laid Out and Planted by Skilled Men.

Catalogue Free on Application.

H. LANE & SON,
THE NURSERIES, BERKHAMSTED.
Established 1777.

Telephone:— BERKHAMSTED 18.
Telegrams:— "LANE, BERKHAMSTED."

ESTABLISHED 50 YEARS.

William Barron & Son, Ltd.

Landscape Gardeners and . . . Nurserymen, . . .

BORROWASH, nr. DERBY,

Inventors and Manufacturers of the Transplanting Machine.

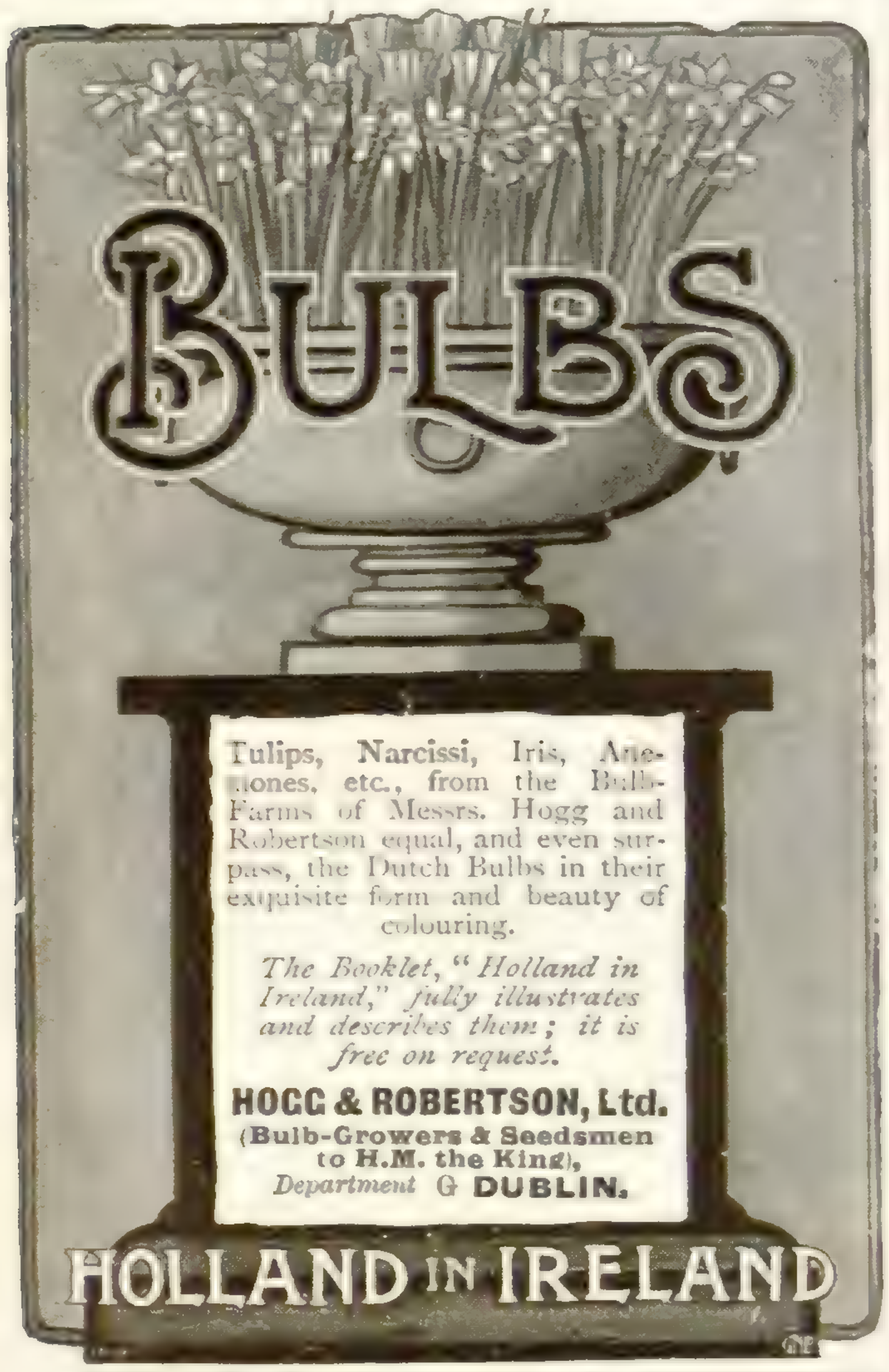
Keep a staff of experienced Foremen for carrying out the following work :—

- TENNIS LAWNS.
- BOWLING GREENS.
- CROQUET LAWNS.
- CRICKET GROUNDS.
- FOOTBALL GROUNDS.
- NEW ROADS.
- ORNAMENTAL WATERS.
- ROCK WORK.
- ROSE ARCHES.
- PERGOLAS.
- RUSTIC BRIDGES.
- PRUNING LARGE TREES.
- TRANSPLANTING LARGE TREES.
- Etc., Etc.

Send for Catalogues of

Ornamental Trees and Shrubs. Forest Trees. Covert Plants. Fruit Trees. Roses. Herbaceous Plants. Waterside Plants. Water Lilies, &c.

WRITE FOR TERMS.



Tulips, Narcissi, Iris, Anemones, etc., from the Bulb-Farms of Messrs. Hogg and Robertson equal, and even surpass, the Dutch Bulbs in their exquisite form and beauty of colouring.

The Booklet, "Holland in Ireland," fully illustrates and describes them; it is free on request.

HOGG & ROBERTSON, Ltd.
(Bulb-Growers & Seedsmen to H.M. the King),
Department G **DUBLIN.**

When answering Advertisements please mention "Gardeners' Magazine."

MERRYWEATHER'S ROSES.

All Strong and Home-grown Plants.

COLLECTION "H" of NEW ROSES.

WONDERFUL VALUE.

EVERY ONE A GENUINE NOVELTY.

This superb collection of the **BEST 18 NEW ROSES** in dwarf plants. The price of this wonderful collection is **27 6,** carriage and packing free for cash with order (with Acme Labels, **29,6**). The varieties are:

Arthur R. Goodwin, P.
Duchess of Wellington, H.T.
Entente Cordiale (Ducher), H.T.
George C. Ward, H.T.
Jessie, Dwarf Poly.
Lady Alice Stanley, H.T.
Lyon, H.T.
Margaret, H.T.
Margaret Molyneux, H.T.
Miss Cynthia Ford, H.T.
Mrs. Alfred Tate, H.T.
Mrs. A. Munt, H.T.
Mrs. E. J. Holland, H.T.
Mrs. W. Christie-Miller, H.T.
Marquis de Sinety, H.T.
Molly Sharman Crawford, H.T.
Souv. of Stella Gray, T,
White Killarney, H.T.

FRUIT TREES

OF ALL KINDS TO SELECT FROM.

A GRAND STOCK OF

SHRUBS & ORNAMENTAL TREES.

HERBACEOUS PLANTS in great variety.

Send for Catalogue No. 29, full of interesting information and cheap prices, post free on application to

MESSRS.
H. MERRYWEATHER & SONS, LTD.,
(Dept. 1A), **GARDEN SPECIALISTS,**
SOUTHWELL, NOTTS.

ESTABLISHED 1832.

No connection with any other Firm of a similar name.

ANT. ROOZEN & SON'S

SPLENDID

HYACINTHS, TULIPS,

AND OTHER

DUTCH, CAPE,

AND EXOTIC

BULBS AND PLANTS.

All of the Finest Quality.

Our Descriptive CATALOGUE *of the above, containing* FULL CULTURAL DIRECTIONS *and particulars as to* FREE DELIVERY, *will be sent post free on application to our offices, at OVERVEEN, HAARLEM, HOLLAND, or to our General Agents,*

MERTENS and CO.,
3, Cross Lane, LONDON, E.C.

BEES'
GUARANTEED
ROSES

NOTE BEES' PRICES

FOR THE

NATIONAL ROSE SOCIETY'S COLLECTIONS.

These collections are sent **CARRIAGE PAID when cash accompanies order.**

R2250 COLLECTION. 15s, Carriage Paid, C.W.O.
24 Good Roses for General Garden Cultivation.

Antoine Rivoire (HT)
Betty (HT)
Caroline Testout (HT)
Earl of Warwick (HP)
Frau Karl Druschki (HP)
G. Nabonnand (T)
Gruss an Teplitz (HT)
Gustave Grunerwald (HT)
Hugh Dickson (HP)
Kaiserin Augusta Victoria
La France (HT)
Lady Ashtown (HT)
Mme. A. Chatenay (HT)
Mme. Jules Grolez (HT)
Mme. Melanie Soupert (HT)
Mme. Ravary (HT)
Mrs. John Laing (HP)
Mrs. R. G. Sharman Crawford (HP)
Pharisaer (HP)
Prince de Bulgarie (HT)
Richmond (HT)
Ulrich Brunner (HP)
Viscountess Folkestone (HT)
White Killarney

R2255 COLLECTION. 15s., Carriage Paid, C.W.O.
24 Good Hybrid Perpetuals and Hybrid Teas for Exhibition.

A. K. Williams (HP)
Alfred Colomb (HP)
Bessie Brown (HT)
Caroline Testout (HT)
Dean Hole (HT)
Earl of Warwick (HT)
Florence Pemberton (HT)
Frau Karl Druschki (HP)
Horace Vernet (HP)
Hugh Dickson (HP)
J. B. Clark (HT)
Kaiserin Augusta Victoria
Killarney (HT)
Lady Ashtown (HT)
Lyon Rose (HT)
Mme. Melanie Soupert (HT)
Marquise Litta (HT)
Mildred Grant (HT)
Mrs. John Laing (HP)
Mrs. R. G. Sharman Crawford (HP)
Mrs. W. J. Grant (HT)
Susanne Marie Rodocanachi (HP)
Ulrich Brunner (HP)
Her Majesty (HP)

R2260 COLLECTION. 8s., Carriage Paid, C.W.O.
12 Good Teas for Exhibition.

Catherine Mermet
Jean Ducher
Mme. Constant Soupert
Mme. Jules Gravereaux
Maman Cochet
Marechal Niel (N)
Mme. Hoste
The Bride
Mrs. Edward Mawley
Mrs. Myles Kennedy
Souvenir de Pierre Notting
White Killarney

R2265 COLLECTION. 5s., Carriage Paid, C.W.O.
12 Sweetly-Scented Roses.

Alfred Colomb (HP)
Charles Lefebvre (HP)
Dupuy Jamain (HP)
Gen. Jacqueminot (HP)
Johanna Sebus (HT)
La France (HT)
Marie Baumann (HP)
Mme. Gabriel Luizet (HP)
Mrs. John Laing (HP)
Senateur Vaisse (HP)
Ulrich Brunner (HP)
Viscountess Folkestone (HT)

R2270 COLLECTION. 5s., Carriage Paid, C.W.O.
12 Good Roses for Towns.

Caroline Testout (HT)
Gustave Grunerwald (HT)
Hugh Dickson (HP)
La Tosca (HT)
Mme. A. Chatenay (HT)
Gloire de Dijon (T)
Mme. Gabriel Luizet (HP)
Mme. Ravary (HT)
Mrs. John Laing (HP)
Mrs. Paul (B)
Rugosa Alba (Rug)
Ulrich Brunner (HP)

R2275 COLLECTION. 6s., Carraige Paid, C.W.O.
12 Good Roses for Buttonholes.

Gustave Regis (HT)
Lady Roberts (T)
Liberty (T)
Isabella Sprunt (T)
Mme. Charles (T)
Mme. Chedane Guinnoisseau (T)
Mme. Falcot (T)
Safrano (T)
Souvenir de J B Guillot (T)
The Dandy (HT)
Niphetos (T)
W. A. Richardson (N)

All collections are sent carriage paid when cash accompanies order.

If you don't see here what you require, send a postcard for Bees' Catalogue. It offers "Tested" and "Guaranteed" Roses, including the élite of the Rose World, at astonishingly low prices, from **4d.** each.

BEES, LTD., 175E, LIVERPOOL.

A FEW OF THE NEWER ROSES.

After such an abnormal season through which we have just passed it is exceedingly difficult, not to say unfair, to offer any definite opinion on the qualities of the newer roses. We ought rather to "Wait and see." But one feels that when a particular variety has been more or less satisfactory throughout the year 1911, it cannot be an inferior one. Added to this there is another difficulty, one cannot deal with even half the number of new roses that during the last year or two have been put on the market. To do so is quite beyond my power, and would occupy more space in these columns than is at my disposal. Besides, what is the good of it? One has grown but few of them, and can only rely on the descriptions given in the trade catalogues. No, the task is too onerous. Let us, therefore, confine our attention to some few of the vast number, some that have been tested in our garden and done well during the past season. The first three in the following list come from Alex. Dickson and Sons, of Newtownards.

Dr. O'Donel Browne (H.T., 1908).—Carmine-rose, large massive flowers, full, well formed, very sweetly scented. Too strong for decorative purposes, but excellent for exhibition. Blooming continuously early and late.

George C. Waud (H.T., 1908).—An attractive colour, deep salmon-pink, with orange shading. Free flowering, spreading habit, suitable for bedding.

Countess of Ilchester (H.T., 1909).—Carmine-pink, spreading habit, very free flowering, good early and late. Good for bedding.

Of the firm of Hugh Dickson, Belfast, three good roses may be mentioned:

Leslie Holland (H.T., 1911).—A beautiful rose, deep scarlet, perfect in form, excellent for exhibition, and probably equally as good for bedding. Very sweetly scented. It is, if anything, too free flowering, and for all purposes must be well thinned. This is one of the best roses of the year.

Countess of Shaftesbury (H.T., 1911).—Here we have another free-flowering, sweet-scented rose. One would say it will take a leading position in the garden. It is perfect in shape; colour, carmine, shaded pink, distinct.

Cynthia Forde (H.T., 1909).—Colour, light rosy-pink. A capital bedding rose, and when more known will be popular in the garden. What General McArthur is amongst reds that will Cynthia Forde be amongst pinks.

S. McGredy and Son, of Portadown, have given us two valuable roses:

Mrs. Arthur Coxhead (H.T., 1910).—This is the sweetest scented rose sent out since the decline in the hybrid perpetuals, a true damask perfume. The flowers are large, handsome, and stand erect. The suspicion of purple in the shading of crimson is a defect. Nevertheless it is a grand rose both for exhibition and the garden; so free flowering, so impervious to wet, and giving as good flowers, if not better, now in mid-October, as in the height of the season. Despite its colour, I think one may confidently say it is the best new rose of the year.

Mrs. Alfred Tate (H.T., 1909).—A very good distinct decorative rose. Coppery-red, shaded fawn, elegant long pointed buds, semi-single, very free, continuous in flowering, good in autumn. One of the best.

From Messrs. Benjamin R. Cant comes:

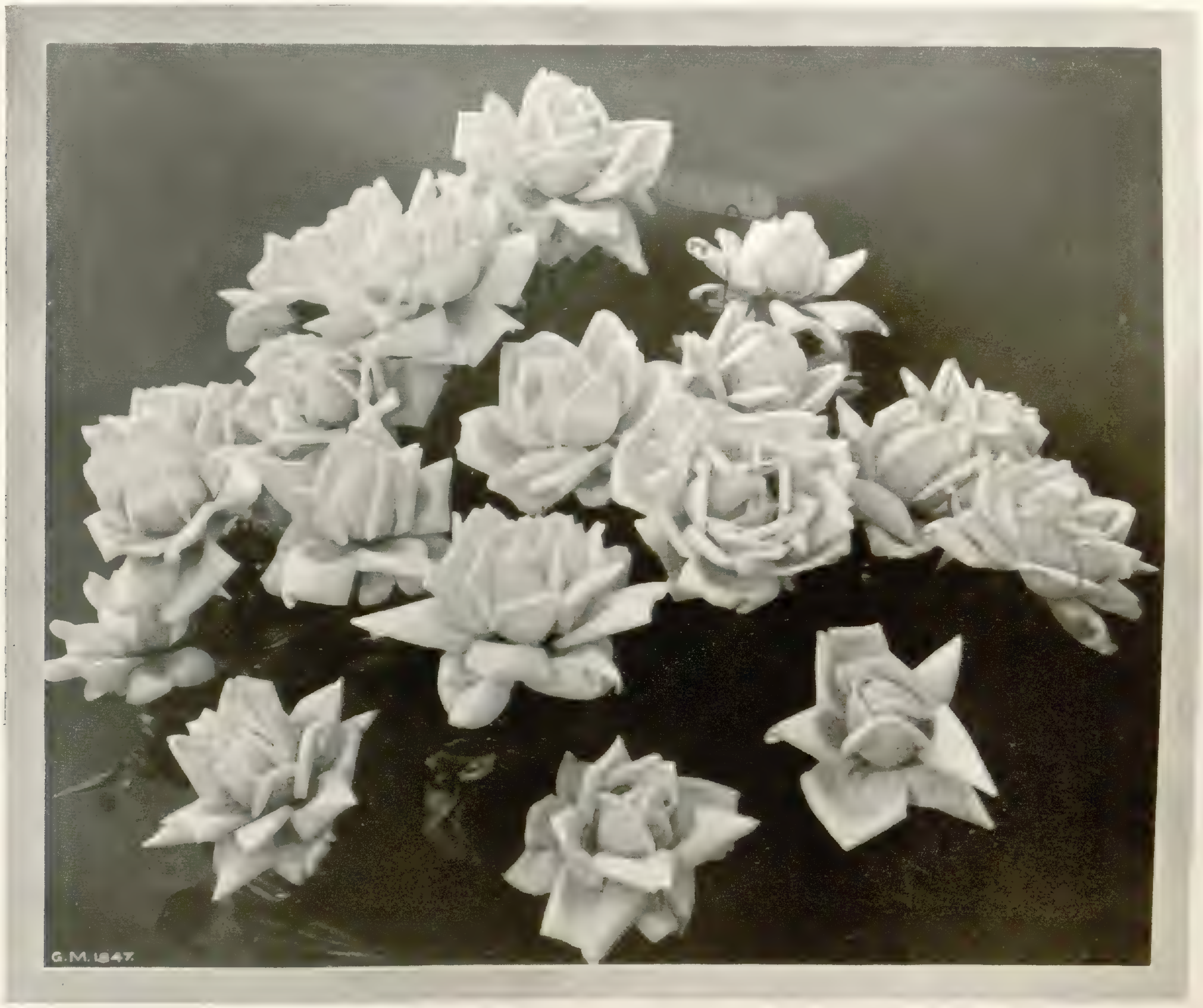
Claudius (H.T., 1910).—Colour, carmine-rose, globular pointed, very free flowering, blooming until late in autumn, sweet scented, suitable for exhibition and garden.

Of the Continental raisers the firm of Pernet-Ducher takes a leading position, and there are many new roses coming from this grower which will be attractive. Of such varieties as Viscountess Enfield, Beaute de Lyon, and Lieut. Chaure it is as yet too early to speak, but two deserve special notice here:

Rayon d'Or (Pernetiana, 1910).—This is too well known to need description. It is the deepest yellow rose we have, and all other yellows pale before it. Freedom in flowering will make it a desirable bedding variety, provided its constitution is good.

Chateau de Clos Vougeot (H.T., 1909).—Colour, deep scarlet. Probably the darkest hybrid tea we have. Growth branching. Very free flowering, sweet scented. In character more of a China than a hybrid tea. Can be highly recommended for massing.

Joseph H. Pemberton.



A BEAUTIFUL BASKET OF ROSE SEABIRD.

Exhibited by Mr. Hugh Dickson at the N.R.S. Metropolitan Show in July last. This variety belongs to the hybrid tea section, and has white flowers.

THE TWELVE BEST WICHURAIANA ROSES.

Everybody knows the story of the resourceful undergraduate who, on being asked to give the names of the major and minor prophets, answered: "Rather than draw invidious distinctions between these holy men I give a list of the Kings of Israel and Judah."

My apology for telling so old a story is that, having undertaken to write of the twelve best Wichuraiana roses, I find the task of selection very difficult, and when I see that in the "Rose Annual" for 1909 Dr. Williams writes of there being already "close on a hundred beautiful hybrids of Rosa Wichuraiana," I feel tempted to take refuge, to some extent, in the undergraduate's subterfuge, and "rather than draw invidious distinctions" to give a descriptive list of these roses, nearly all of which have some merit, leaving my readers to choose for themselves.

History does not tell us in what light the examiners treated our undergraduate's answer. I doubt whether he would come off with flying colours, and I feel quite sure my somewhat feeble imitation of his methods would not be appreciated.

In making the following selection of twelve Wichuraianas I have tried to choose those varieties which are really distinct (for instance, Lady Gay is omitted as being too much like Dorothy Perkins to be included with it in a small selection), to represent all the different colours, the early and late flowering sorts, and also to recommend in so small a collection only those with really excellent foliage.

To my mind the foliage of a climbing rose is quite as important as its flowers—perhaps more so—for the foliage drapes our pillars, arches, and pergolas for at least nine months of the year, while the blooming period of any one variety is seldom more than six or eight weeks. In their beautiful glossy foliage the best Wichuraianas excel all other varieties of hardy climbing roses; in some of them, such as Jersey Beauty and Edmond Proust, it is evergreen, and in most it is mildew-proof. The pink varieties are perhaps the most numerous, and certainly the most showy. I have chosen from among them Dorothy Perkins, with her pale sport Lady Godiva, the graceful Débutante, and the fragrant Gerbe Rose.

Dorothy Perkins is as well known throughout England as the old Glory of our younger days. Its wonderful bunches of brilliant pink flowers light up our cottage gardens, and add to the beauty of our villages in a way Reynolds Hole's old favourite could not do. It was one of the first of the hybrids introduced by Messrs. Jackson and Perkins in 1901, and is said to be a cross between Wichuraiana type and Madame Gabriel Luizet. It usually begins to flower about mid-July, though this year its first blossoms appeared in our garden on June 26; in an average summer it lasts well till the end of August, and often puts out some autumn flowers in October. It is best grown on a pergola or arch, rather than as a pillar rose, its branches hanging in festoons make a very beautiful rosy canopy, and its rampant growth has to be too severely restricted as a pillar. It is very effective trained fan-wise on a fence, and makes a splendid weeping standard. In fact, it has so many good qualities that if we were restricted to growing one Wichuraiana it would have to be "Dorothy." The catalogues describe it as sweet scented, but I can detect very little fragrance. Minnehaha has been omitted from the chosen twelve on account of its likeness to Dorothy Perkins, but the bunches of bloom are less closely packed, and have a more diaphanous and elegant effect. The colour is not so uniform—there are tints of a paler pink—and some, for this reason, might prefer it to the better-known Dorothy Perkins.

Lady Godiva.—This I first saw flowering in Messrs. Paul and Son's nurseries at Cheshunt, in October, 1909 (it had been introduced by them in 1907). Its delicate creamy-pink blossoms attracted me at once, and I ordered a plant for a new rose garden, where it has rapidly covered a tall pillar, and has been much admired. The flowers keep unusually well when cut. At the end of July, in this torrid summer, when I had almost given up cutting H.T.'s and teas for the house, so fleeting was their existence, I arranged a table with little bowls of Lady Godiva. At the end of four days I wanted a change, but the flowers were perfectly fresh, and lived for three days more in my drawing room.

Debutante, brought out by Walsh in 1905, comes into flower earlier than "Dorothy" and her sports, and does not last so long. The petals fall quickly when the flowers are fully expanded. It has a very graceful habit, throwing out from the main stems slender arching sprays of light green leaves, with ruddy-tipped stems, and light hanging cascades of pale pink sweetly scented flowers.

Gerbe Rose, introduced by Messrs. Fangue and Sons, in 1904, is said to be the offspring of R. Wichuraiana crossed with Baroness Rothschild. In the smooth thick stems, so unlike most of the sinuous hybrid Wichuraianas, we may trace its descent from Baroness Rothschild, but fortunately it takes after its other parent in the matter of fragrance, and is perhaps the sweetest scented of any in this class. The soft pink flowers appear early—the second week in June—and are almost exactly the shade of the old Bourbon Hermosa. They are large for a Wichuraiana, semi-double, and come singly. This variety has no great burst of bloom, nor is it rampant in growth, so would not be at all suitable for covering a pergola or arch; but its lovely wreath-like sprays of large light green leaves look well on a low pillar, or when grown as a bush, and its fragrant flowers appear at intervals all through the summer.

White Dorothy.—As far as I know there is only one good white Wichuraiana, and that is White Dorothy, a sport from Dorothy Perkins, which it resembles in every particular except the colour of its flowers. These are pure white, save that as the flowers age the anthers darken, giving a blackish appearance to the centre of the blooms; occasionally its parentage asserts itself, and some pink, or pink and white flowers make their appearance.

Of yellows there are enough and to spare. Three of the best are Jersey Beauty, Alberic Barbier, and Chain of Gold.

Jersey Beauty.—One of Mr. Manda's early introductions, was raised from a cross between Wichuraiana and Perle des Jardins. It is a rampant grower, with glossy evergreen foliage and large single pale yellow flowers. The blossoms appear about the middle of June, and keep up a succession for six weeks or so. It is not at all fastidious as to position, and will grow and flower well even near the shade of large trees.

Alberic Barbier (Barbier, 1900) is the result of a cross between Wichuraiana and Shirley Hibberd. It is the most continuous in flowering of any of the Wichuraianas I know, beginning the first week in June and blooming more or less right on to the end of August. Its soft pale yellow buds, opening almost white—some singly or in sprays of three or four blosoms—and are very beautiful. They last well in water, and have a decided tea fragrance. I have chosen this rose in preference to Gardenia, also a lovely variety with orange-yellow buds, splashed outside with crimson (in the way of Gustave Regis), on account of its more perpetual habit and the superiority of its foliage, which is very glossy.

Chain of Gold (Messrs. Paul and Son, 1910) comes from Jersey Beauty and Instituteur Sirdey. Its name alone should commend it, and, as far as I have been able to judge, it is worthy of its attractive title. The golden-yellow buds are a fine colour, and do not pale so quickly as most of the yellows, while the shining foliage, deepening to bronze, is very dense, and almost evergreen.

Among the Wichuraianas, as among the teas and hybrid teas, there are some shades very difficult to classify. In this connection I notice a good deal of indignation has been aroused by the Lyon Rose having been awarded prizes for the "best yellow rose."

Francois Juranville (Barbier, 1906) and Paul Transon (Barbier, 1902) are perhaps the most generally useful among these salmon-pink and copper shades. Paul Transon is a very strong grower even for its class. Its coppery-pink blooms appear about mid June, and last several weeks; it also flowers slightly in the autumn, and is decidedly fragrant.

Francois Juranville, with rather large loose flowers, is one of the most beautiful of this family. Its dark green foliage, changing to bronze, is very handsome, and harmonises most happily with the coppery-rose blossoms. At the Canterbury Rose Show this June I saw a lovely bowl arranged with Francois Juranville. It was as pleasing to the sight and smell as anything in the show. The fragrance to me is the exceedingly pleasant one of ripe apples. This is a midseason variety, and usually has a few autumn flowers.

Without entering into the controversy as to whether Hiawatha and Excelsa are true Wichuraianas, I have chosen them as the best crimsons because for garden purposes they should undoubtedly be classed with this family.

Hiawatha (Mr. M. H. Walsh, 1905) is almost as popular as Dorothy Perkins. The light crimson single flowers, with a white centre, are borne in large trusses, and make a brilliant effect in the garden, lasting in perfection for many weeks. Near London its usual time for flowering is late—the middle of July—so I was surprised, when stopping at Grasmere early in June, to see several weeping standards in full flower, while only last week—on October 2—I saw a plant of Hiawatha in flower on a bank in a Gloucestershire garden. The only fault of this variety is that it entirely lacks fragrance.

Excelsa (Mr. M. H. Walsh, 1909), with light crimson double flowers, is, in respect of perfume, more fortunate. I believe it is also a strong grower and free bloomer, but it has only been in my garden a few months, and, consequently, has not yet shown of what it is capable in the way of growth.

In conclusion I would advise all rose growers in search of hardy and quick-growing climbers, whether for pillar, arch, or pergola, to look for them among this comparatively new race of hybrid Wichuraianas. They surpass all other roses for weeping standards or for growing over banks and other rough places. There are now so many beautiful varieties my difficulty has been in limiting myself; it would be quite easy to select another dozen nearly as good.

WHITE LADY.

NEW PLANTS, ETC.

◆

CYPRIPEDIUM ROYAL GEORGE.

A marvellously fine hybrid that has the merits of large size, fine colouring, and good form. The parents are C. Harrisianum superbum Undertell variety, and C. Minos Youngi. The rounded and bold dorsal sepal has a breadth of about three inches, and is white tinted with rose, and beautifully veined all over the centre and base with rich dark rosy purple. The broad petals curve forward a little, and both in form and their greenish-yellow and purple-brown shading they remind one of the hybrid C. Beckmani. The wide lip is shining purplish-brown. The stock of this splendid new orchid has passed to Mr. Francis Wellesley's collection at Westfield, Woking. F.C.C., R.H.S., October 10. Messrs. Armstrong and Brown, Tunbridge Wells.

CYPRIPEDIUM LUCIFER.

A particularly shapely and attractive hybrid derived from C. Niobe Westonbirt variety crossed with C. Euryades. The rounded dorsal sepal is white with a medium dark band of rose-purple, and stains and veins of the same colour, but of lighter shade, over the centre and base. The broad petals are purplish-brown over greenish-yellow, and the lip is rich red-brown. F.C.C., R.H.S., October 10. Lieut.-Colonel Sir G. Holford (grower Mr. H. Alexander), Westonbirt, Gloucester.

ODONTIODA EUTERPE.

A new and showy hybrid between Cochlioda Noetzliana and Odontoglossum Uro-Skinneri. The flowers are orange-scarlet save for some rosy colouring on the lip. F.C.C., R.H.S., October 10. Messrs. Charlesworth and Co., Haywards Heath.

NYMPHÆA LISTERI.

A fine new seedling water lily, belonging to the stellata group, and therefore not hardy in this country. It has large, handsome flowers of a deep blue shade, with golden centre. The flowers are carried well above the water. A.M., R.H.S., September 26. Earl of Warwick (gardener, Mr. H. Lister), Easton Lodge, Dunmow.

DAHLIA BRENTWOOD YELLOW.

This splendid large-flowered decorative dahlia has been figured in these columns. It is a big, bold, and shapely golden-yellow variety of undoubted merit, as it carries its flowers clear of the foliage on stiff stout stems. It is free-flowering and grows 3ft. or 3ft. 6in. high. A.M., R.H.S., October 10. Mr. J. T. West, Brentwood.

CHRYSANTHEMUMS.

Cranford Yellow.—A large-flowering early variety of fine form and substance, excellent for market use. A.M., R.H.S., October 11. Mr. W. Roots, Holly Cot, Cranford.

Bronze Goacher's Crimson.—A bright reddish bronze form of the popular free-flowering Goacher's Crimson, and like it in all but colour. F.C.C., N.C.S., October 4. Messrs. W. Wells and Co., Merstham.

Virginia.—A splendid early decorative or market chrysanthemum of large size, and very free. The colour is white. F.C.C., N.C.S., October 4. Messrs. Lowe and Shawyer, Uxbridge.

Emperor.—Another large early decorative variety, with reflexing florets; crimson and gold. F.C.C., N.C.S., October 4. Messrs. Lowe and Shawyer, Uxbridge.

Miss E. Finch.—A single variety with large showy flowers of a rich terra-cotta colour. A plant shown demonstrated the good habit of the variety F.C.C., N.C.S., October 4. Mr. Frank Brazier, Caterham.

Eskimo.—A charming large early decorative or market variety, with well-formed creamy-white flowers, borne on long, stout stems. Commendation, N.C.S., October 4. Messrs. Lowe and Shawyer, Uxbridge.

Phœbe.—A large Japanese variety of soft silvery lilac-pink shade. Commendation, N.C.S., October 4. Mr. H. W. Thorpe, Worthing.

Roundabout.—A free-flowering border variety bearing an abundance of neat golden-bronze flowers. Commendation, N.C.S., October 4. Mr. H. W. Thorpe.

APPLE ELLISON ORANGE.

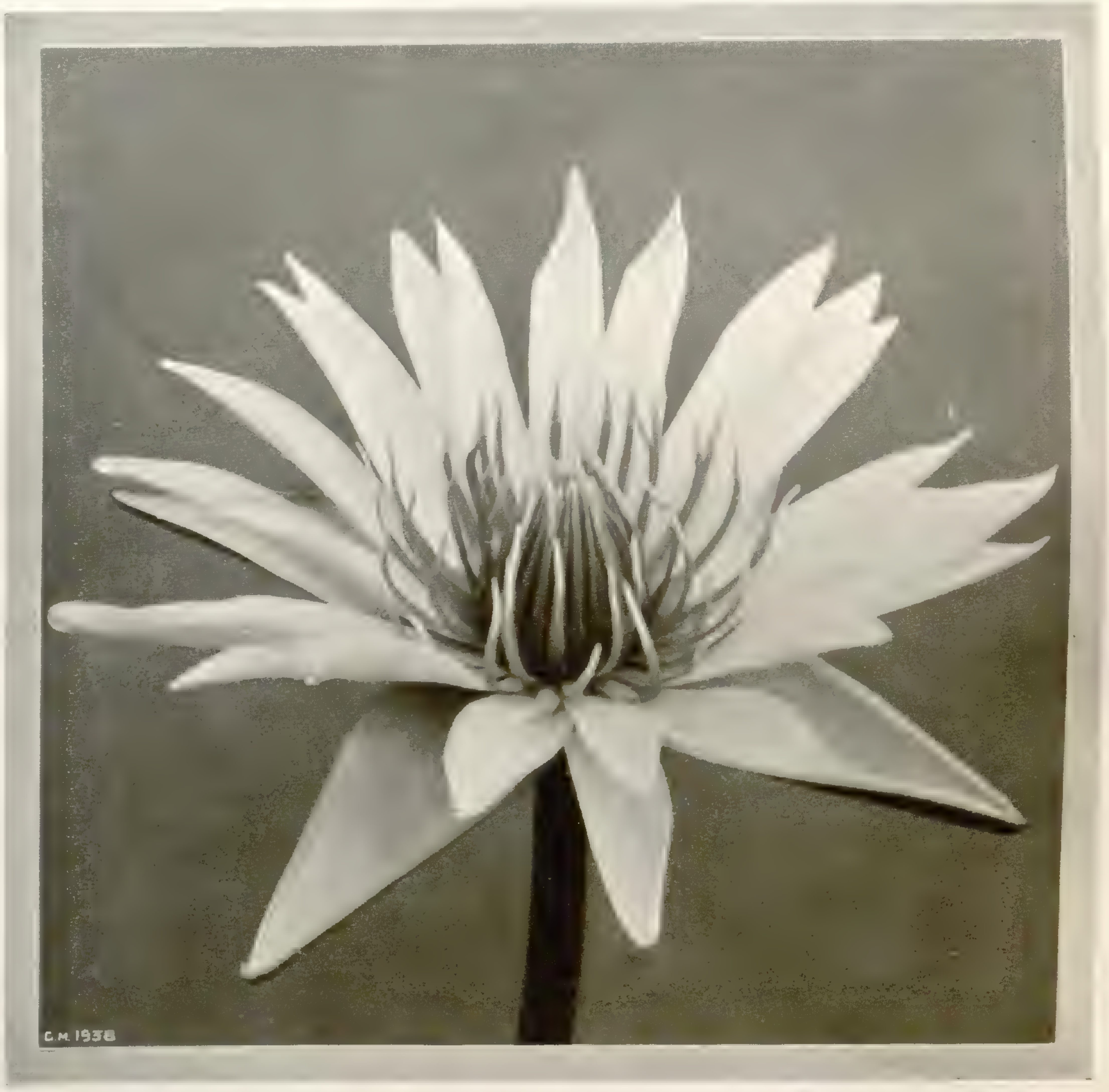
A finely-flavoured medium-sized dessert apple, in use during October. It was raised by the Rev. C. C. Ellison, Bracebridge, Lincoln, from Cox's Orange Pippin crossed with Calville Blanc. A.M., R.H.S., October 10. Mr. W. Crump, Madresfield Court Gardens, Malvern.

CUCUMIS METULIFERUS.

This handsome cucurbit hails from tropical Africa, and therefore needs a stove temperature when grown in this country. The fruits, from three to five inches long, are of a brilliant vermilion-scarlet hue when ripe, and the numerous thick fleshy spines add to their attractiveness. Bot. Mag., t. 8,385.

CYPRIPEDIUM SPECIOSUM.

It appears that the hardy orchid, so well known as Cypripedium macranthum, is generally C. speciosum, which, however, is closely allied to the first-named, and was regarded by Franchet and Savatier as a variety of it. So far as is at present known, the true C. macranthum does not occur in Japan, whereas C. speciosum is common in that country. The two species thrive under similar conditions. Bot. Mag., t. 8,386.



NYMPHÆA LISTERI.

A fine new nymphæa of the stellata section, with large deep blue, yellow-centred blooms. A.M., R.H.S., September 26. Earl of Warwick (gardener, Mr. H. Lister), Easton Lodge, Dunmow.

CLUSIA GRANDIFLORA.

A diœcious shrub, native of Guiana, this species is a member of a fairly large genus. At the Cambridge Botanic gardens it has flowered annually in a moderate stove heat, producing male flowers about five inches across, composed of six white rose-margined sepals, and eight wide rounded white petals. Each flower has about five hundred stamens grouped around a central gummy mass of yellow stamenodes. Bot. Mag., t. 8,387.

TORENIA ATROPURPUREA.

This pretty slender-growing species is from the Malay Peninsula. It makes a capital basket plant for a warm, moist greenhouse. In T. atropurpurea the tube of the dark purple flowers is narrowly funnel-shaped, more elongated than in well-known species, and tapering at the base. Bot. Mag., t. 8,388.

ACINETA MOOREI.

A rare South American orchid, allied to A. Heubyana. It first flowered at the Glasnevin Botanic Gardens in 1905, two years after its purchase as a distinct unnamed species. The pendulous flower scape carries about a dozen fleshy and rather globular flowers, pale greenish-yellow, freely spotted with brown; the lip is deeper yellow than the rest of the flower. Bot. Mag., t. 8,392.

MUTISIA CLEMATIS.

The mutisias are very interesting climbing composites, and many of them are good garden plants. M. Clematis is easily grown in a temperate house, though it never looks quite happy during the winter, and this may possibly be one reason why it is not more grown for conservatory decoration. It is evergreen, the leaflets being pubescent below, and slightly woolly above when young. The pendulous flower heads are about 2½in. long, and the attractive portion consists of nine or ten slightly recurved and brilliant red ray florets, each 1½in. long. M. Clematis is a native of the tropical Andes. Bot. Mag., t. 8,391.

MORMODES REVOLUTUM.

A quite handsome orchid introduced from Peru by Messrs. Sander and Sons, of St. Albans. It thrives in an intermediate house under the treatment found suitable for catasetums. Each spike carries many bright cinnabar-red, yellow-lipped flowers, these measuring from two to three inches across. Bot. Mag., t. 8,390.

CLEMATIS CHRYSOCOMA.

A low-growing Chinese shrub that has not proved quite hardy at Kew, this species has, nevertheless, much merit, and may be a useful subject for the south. The flowers are solitary, or there may be two or three together on very short leafy twigs, but the plant is very free-blooming, and the white, rosy-edged flowers are 1¼in. across. Bot. Mag., t. 8,396.

LANDOPHIA PETERSIANA.

Although this belongs to a rubber-producing family, its produce is of inferior quality. The species is a native of East Africa, and is a shrub that climbs by means of its inflorescence. The white, fragrant flowers have each five oblique, linear-oblong and ciliate lobes. Bot. Mag., t. 8,389.

VIBURNUM HENRYI.

Although this fine Chinese species, found by Mr. E. H. Wilson when collecting for Messrs J. Veitch and Sons, is effective when bearing its panicles of small pale greenish-yellow flowers in early summer, its period of greatest beauty is September, when the little fruits are brilliant coral-red, with here and there one turning black as it ripens. The plant is evergreen, and has proved hardy south of London. Bot. Mag., t. 8.393.

IMPATIENS HERZOGI.

This handsome species has flowers about two inches across and of a deep vermilion colour. At Glasnevin, where seeds were received from Dr. Schlechter, from German New Guinea, Sir F. W. Moore finds I. Herzogi amenable to cultivation in a remarkable degree; he has grown it in an odontoglossum house, in the dry atmosphere of a cactus house, and in a bright hot stove. In the stove it is seen at its best. Bot. Mag., t. 8,397.

ROSE BRITISH QUEEN.
A pure white hybrid tea, raised by Messrs. McGredy and Sons, Portadown

TRANSPLANTING PEACH TREES.

When cultivating peaches under glass it frequently happens that the trees need to be lifted and replanted from some cause or another. In the case of trees that have made growth too vigorously, it is preferable to lift and replant rather than to root prune, provided the specimens are not so large as to render the operation very difficult. The lifting can be successfully carried out at any time from now until growth commences, but the better plan is to lift and replant the trees before the foliage falls. By this means the roots are able to push into the soil before winter, provided the trees are regularly sprayed with clear water. During very bright weather a little shade will be an assistance to the trees after they have been transplanted. In the case of trees that have had their roots disturbed, a check to evaporation is important.

Experience teaches us that this early transplanting proves a material factor in the ripening of the wood, and I have known trees so treated to bear an abundant crop of fruits the following season, while others in the same house have failed to give satisfactory returns. Many experienced cultivators make a practice of lifting their peach trees every year as they find that only by so doing are they able to obtain satisfactory crops of fruit. While not advocating this plan, it is unquestionably in some cases the best means of bringing a previously barren tree to fruitfulness. When taking up the trees the branches should first of all be removed from the trellis and tied up loosely in several bundles with strong twine. The work of removing the soil must be done with great care, and a commencement should be made by opening a trench a fair distance from the tree to enable the soil about the roots to be forked into it. When all the roots are free, place the tree in its new position, and cut the larger roots cleanly with a sharp knife, so as to remove any damaged ends or undesirable portions.

When replanting good fresh loam should be used, with which has been incorporated half-inch bones and crushed charcoal. Make this moderately firm as planting proceeds, and lay cut the roots evenly through the soil, care being taken to avoid burying them too deeply.

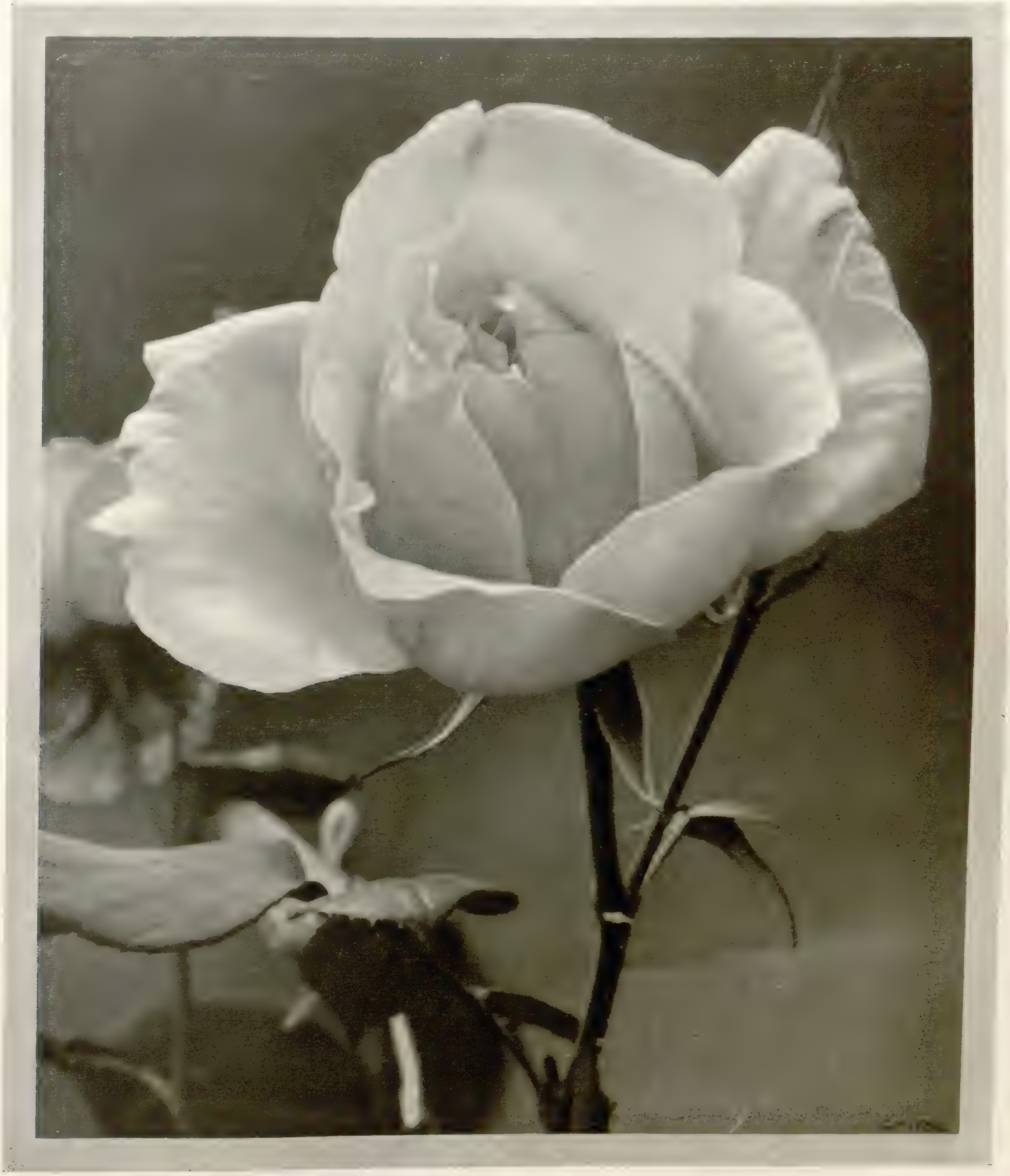
When the planting is completed and the soil made firm, give the border a good watering to thoroughly settle the soil about the roots. One of the mistakes in peach culture is to plant the trees in a very deep or large border, but if they have a fairly restricted root area much better growth will be produced, and more regular crops be obtained.

J. Gardner.

Batsford Park Gardens.

THREE NEW ROSES.

During the spring and summer of the current year we have figured a number of new roses that have been presented to public notice, and we now have the pleasure of giving illustrations of three others that have favourably impressed us with their distinction and beauty and their other good qualities. Taking them in alphabetical order, we have first,



ROSE MAGNOLIA.

A beautiful hybrid tea with soft white flowers, raised by Messrs. Paul and Son, Cheshunt.

British Queen.

A charming hybrid tea, raised by Messrs. McGredy and Sons, of Portadown, Ireland, and shown by them at the exhibition held by the National Rose Society in the Royal Botanic Society's Gardens on July 7. The blooms are of fine form, as so well shown in the accompanying illustration, large in size, of the purest whiteness, and remarkable for their depth and breadth of petal. It was awarded a Card of Commendation at the above exhibition, but in a more favourable season it is reasonable to assume that it will obtain a higher award.

Cinderella.

Some of the newer rambling roses of the Wichuraiana group are particularly dainty and pleasing, and seem especially adapted for cultivation in pots under glass for the purpose of providing elegant floral specimens during the spring-time. One such is Cinderella, here figured. Out of doors it is a late flowering rambler, and therefore it has special claims for attention from those who desire to maintain as continuous a supply of roses in the garden as possible. The variety is a robust grower, and its large light clusters of deep pink blossoms have a peculiar grace. The flowers are well doubled, and in many cases the ends of the petals are somewhat quilled. The shade of pink seen in Cinderella is deeper than that found in the popular Lady Gay, and when large specimens are freely flowered, like those so finely exhibited by Messrs. Wm. Paul and Son, of Waltham Cross, at the Temple Show in May last, they present a picture of the utmost beauty—not Cinderella in the kitchen, but Cinderella, exquisitely dressed, at the ball.

Magnolia.

The illustration herewith so admirably portrays this beautiful rose as to render more than the briefest description unnecessary. The variety belongs to the ever-increasing list of hybrid teas, and has the promise of proving a valuable addition to the finest of the varieties that are already in general cultivation. The blooms are of large size and fine form, and are especially remarkable for their depth and breadth of petal. The colour is soft white, and very pleasing, and its delightful perfume will give it a prominent place among the varieties that are especially valued for their fragrance. The raisers are Messrs. Paul and Son, of Cheshunt, who have enriched our gardens with many roses that are of special value for decorative purposes.

ROSES FOR HOUSE WALLS

With the exception of an odd plant or two, roses are not much grown upon the walls of the dwelling-house. Why, it is difficult to say, except that apparently walls are required for other plants of a climbing habit. There are many choice varieties of roses that would never be seen and enjoyed at all if it were not that they were grown against walls, for the reason that, owing to some constitutional defects, they will not succeed in the open. When planted at the foot of a suitable wall, and their branches trained over its surface, they are most attractive, and when so grown it is the only opportunity afforded of seeing such varieties in perfection. For covering high walls quickly it is difficult to suggest other plants more suitable, as growth is quickly made under favourable cultural conditions. In fact, so rapid is their development that I do not know any climbers that can be planted with greater advantage.

There is one reason, perhaps, why we do not see some roses growing against walls, and it is that the varieties usually planted are so unsuited for the purpose. For instance, a lovely rose though it is when seen in good condition, Gloire de Dijon is apt to become untidy, bare of growth, and later on sparse in blossoming. Then, when it is severely pruned and induced to push forth vigorous shoots, it again blooms freely and clothes the wall with healthy foliage. While this renovation is in progress the wall presents a bare and uninteresting appearance.

The newer type of roses, namely, the Wichuraiana section, provides abundant varieties most suitable for covering walls quickly, but I would hesitate to recommend these varieties for the simple reason that their inclusion amounts to almost a waste of wall space, because they succeed so gloriously in the open. Wall spaces should be reserved for roses that fail to grow and bloom satisfactorily in the open in the majority of instances. The yellow Banksian and Celine Forestier may be mentioned as examples. I would also suggest that where possible, varieties that are nearly evergreen should be employed with a view to rendering the wall a little more interesting during the winter months. Climbing Aimée Vibert may be mentioned as an example of the class of roses that is especially suitable for walls. Roses will succeed against walls of any aspect, but that with a southern exposure is naturally to be preferred as giving the greater warmth, tending to the successful growth of the most fickle varieties in an ordinary way. South walls, thirty to forty feet high afford abundant scope for really fine displays at various periods of the year, and under such conditions the culture of old favourites is rendered very interesting.

Soil Preparation.

A thorough preparation of the soil is even of more importance for wall culture than out in the open, because during hot and dry weather the roots are more likely to suffer from want of moisture, owing to the naturally warm position and also to the extraction of moisture from the soil by absorbent bricks. Too often at the base of a newly-built house, the material is largely composed of shavings, broken bricks, mortar, and such like; all this should be removed preparatory to planting, to the depth of at least three feet, and replaced with a compost of rather stiff soil or turf with a free admixture of half-rotted manure; if the latter is from the cow-house all the better. In the case of an old building where other kinds of plants have been growing in the border at the base of the wall, the soil should give place almost entirely to new compost. Where no plants have been growing manure freely added while trenching is being done will suffice. In all cases remember that luxuriant growth gives the best results, not only by quickly covering space, but in giving a full crop of flowers also.

The end of October or early in November is a good time to plant roses in such a site; dwarf, stocky plants are the most suitable, as they will, with proper pruning, furnish the space quite from the ground. Where the plants are growing in pots, March or even April is a good time for planting. It may indeed be done at any convenient opportunity at a later period than is here mentioned, but there will be an advantage in planting in the autumn.

Pruning.

Pruning the plants rather hard the first season is a wise method, to induce basal growths for the purpose of completely furnishing the walls at the bottom; without close pruning at planting time such growth cannot always be assured.

The subsequent cultural directions are but few. An abundance of moisture at the roots during the time the main growth is being made is all-important; copious supplies of liquid manure are of the utmost value also. Artificial supplies of water on a liberal scale will be necessary, for when roses are growing in borders at the foot of a wall, the roots receive a portion only of the rain that falls because of the shelter given by the wall. This point cannot be too strongly impressed upon those who have roses growing against walls, and especially when the eaves of the house extend some distance from the wall. Keeping the foliage tree from insect pests, such as greenfly, especially by a timely application of an approved insecticide, is an absolute necessity. In the same way should red spider be suppressed at the end of the summer, when this insidious pest is much too common in some seasons. Vigorous syringing of the leaves during spring and summer is highly beneficial, but it is frequently neglected by many. It also often happens that plants which have been growing several years receive little assistance from manurial matter, either solid or liquid, with the result that the soil becomes exhausted of its plant food, and the roses fail to make suitable growth or to produce a satisfactory crop of flowers. The grower of hybrid teas in a rose bed would not expect them to continue in a vigorous condition for years without aid of some sort, and why they should expect wall plants to differ in this respect is difficult to understand.

Pruning established plants needs much care; in the case of strong-growing varieties like Félicité Perpetué, the weaker growths should be removed directly flowering is over to admit air, light, and sunshine to the remaining growths; but when the wall space is covered with suitable branches a system of spur pruning should be adopted, the subsequent growths yielding satisfactory results. Early training of the shoots is also an important detail. When they are allowed to grow into a thick, tangled mass it is most difficult to separate the growths without injury to those remaining. They should be secured quite early, regulating them thinly over the allotted space.

Selection of Varieties.

One of the first varieties the inexperienced cultivator selects is Crimson Rambler, owing to its brilliancy of colour, but as regards utility it is quite the worst of all for a wall. I have not yet seen a respectable specimen of it trained to a wall, and this is explained by the fact that cooler conditions are required for this grand rose than a wall—especially one with a southern aspect affords—the trees refuse to grow, and are quickly covered with red spider.

For a South Wall.

Yellow Banksian is one of the most delightful of early free flowering roses in cultivation. With good treatment this rose will yield an abundance of flowers annually, and grow as much as fifty feet high, and will remain in good condition fifty years, or even more. The white form is not nearly so free flowering, but where it succeeds it is very attractive.

Rêve d'Or, sent out in 1869, is a noisette, not nearly so much grown as its merits deserve; the deep yellow blossoms are most freely produced, and harmonise delightfully with the coppery-tinted foliage. When the wall space is covered—which it quickly is, as the growth is luxuriant — the plant should be closely spur-pruned, as from the current season's growths the finest flowers are produced, and the most satisfactory foliage also. When the shoots of the previous year are retained the blooms resulting are small and pale in colour.

Lamarque, noisette, sent out by Marechal, 1830, is one of the most free-flowering of the varieties we have with large blooms. The warmth derived from a south wall seems to aid the ripening of the wood, and induces free blooming. Under glass this is a pure white rose bud, but in the open the colour is pale lemon or cream. Huge clusters of sweetly-scented flowers are produced, with ample leafage.

Celine Forestier is another noisette—sent out in 1858—that we can grow with the aid of a south wall, and much too charming a rose to neglect when such wall space becomes available. The pale yellow blooms are deliciously scented, and produced in clusters in conjunction with good foliage present a very pleasing appearance.

Fortune's Yellow is now seldom seen in the open, and not under glass as much as its merits deserve. The yellow semi-double flowers are heavily flaked with carmine and most fragrant. On a south wall it succeeds grandly.

Banksiæfolia belongs to the sempervirens class, a rose seldom seen, but for a wall it is charming. The growth is free, with excellent foliage, and the clusters of flowers, white with a buff centre, are freely and continually produced from July until November. It is a really perpetual-flowering rose, with a delightful perfume all its own.

Cloth of Gold.—The flowers of this variety are sulphur-yellow, with deeper centre, and they are large and double, but they are not very freely produced.

Sinica Anemone is a fine single-flowered rose, white flushed pink. The individual blooms are large and handsome.

Maréchal Niel is still the king of yellow roses; some of the finest blossoms I ever saw were growing on a south wall in Yorkshire. In the South it also succeeds. Liberal treatment is required. Plants budded on the common brier are preferred to those on their own roots, as they are more vigorous.

For a West Wall.

Reine Marie Henriette gives an early crop of deep cherry-red blossoms; commonly known as the red Gloire de Dijon.

Mdme. A. Carriere.—This is an early-flowering variety, and the production of blooms is free and continuous. The leafage is good, and the flowers are white, tinted blush.

Climbing Aimée Vibert.—This is a pure white noisette, producing its blooms in clusters, and flowering in the autumn. The effect produced by the flowers is much enhanced by the dense deep green foliage, which is greatly improved by liberal treatment.

William Allen Richardson seems to have fallen out of favour of late, mainly owing to the general pale colour of the flowers. On a west wall the colour, deep orange-yellow, is fully brought out by free growth.

Gloire de Dijon succeeds remarkably well on a west wall; the cooler conditions prevailing here suits this variety better than a southern exposure.

For an East Wall.

Ards Rover, crimson, shaded maroon, is one of the best of early-flowering roses, yielding its shapely buds in quantity. A close system of spur pruning when the allotted space is covered is an absolute necessity. Then it is not easy to say how long this variety will continue to thrive.

For a North Wall.

Against a north wall it is difficult to grow roses, except under the most careful treatment, and by maintaining thinness of the branches. Gloire de Dijon succeeds, but the best variety that I know is Félicité Perpetué, which has creamy-white flowers borne in huge clusters. It is most free in growth, and almost evergreen. I need hardly say that this rose succeeds better on a south wall.

The Wichuraianas, of which Dorothy Perkins is still the best, will succeed admirably on a northern aspect, making free growth, and as the foliage is practically evergreen they are most useful, covering the walls during the greater part of the winter. Réné André is another variety that succeeds; but, of course, no one will expect the same profusion of flower from that aspect as from another.

Varieties like Climbing Mrs. W. J. Grant, Captain Christy, and Caroline Testout, although classed as climbers, are most unsuitable for walls, as they quickly become devoid of flowering shoots and leaves, making gaunt specimens with a few struggling blooms at the apex. E. Molyneux.

Swanmore Park.

Æschynanthus Lobbianus. —The genus Æschynanthus is a fairly extensive one, nearly all its members being natives of South-Eastern Asia or the neighbouring islands. They are all of more or less shrubby character, and occur in a state of nature principally as epiphytes, and belong to the natural order Gesneriaceæ. The species above named is one of the best, forming as it does a loose-growing plant that may be grown supported by a stick in an upright manner, or in a suspended basket. The ovate leaves are small, and very dark green, while the rich scarlet flowers protrude each from a dark-coloured, thimble-shaped calyx. Nearly all the members of this genus flower during the autumn months, others now in bloom being Æ. grandiflorus, orange and crimson; Æ. pulcher, scarlet; and Æ. speciosus, orange-red with dark markings.—W. T.

HOW AND WHEN TO FEED ROSES.

There are very few subjects that give a better return for generous treatment than roses, but feeding should be done with more thought to the natural fertility of the soil than is usually the case. To add a large quantity of what is already present is often unnecessary and harmful.

That any special soil is absolutely essential is not borne out when we consider the vast range and variety of soils the superb blooms come from for the exhibitions of the National Rose Society. Nor is it compulsory they be grown in pure country air, as was once insisted upon, for do we not have classes for those grown within six miles of Charing Cross?

Granting, then, that roses can be grown in a variety of soils, it will be well to consider some of the best and most efficient ways of making these more suitable, and there could be no better time than when preparing for new plantations, because we can never get at the bottom soil when once the roses are planted.

Upon ordinary soils, thoroughly rotted stable manure is one of the safest and best additions. Perhaps the most powerful manures are pig dung and night soil. Neither are so pleasant to use as clean stable manure and some of the artificials, but they can be utilised with little offence if properly prepared. The ashes and burnt earth from the ordinary garden refuse fire may be run through a coarse riddle and the manure mixed with this, turning it over two or three times before use. The burnt earth and ashes are grand fertilisers for roses, and when mixed with these manures in about equal proportions make what I consider the best of all manures. They are not suitable for mulching because of their odour; nor am I at all in favour of much mulching among roses, the pleasure of walking among them being heavily discounted thereby.

RAMBLING ROSE CINDERELLA.
A Wichuraiana variety with deep pink flowers, that has been well exhibited by Messrs. Wm. Paul and Son, Waltham Cross.

Whatever the nature of the soil may be it should be dug deeply, and laid up to the air as long as possible before planting. Eighteen inches to two feet is not too much to move. If very stiff a little drainage may be necessary, but almost as much depends upon the class of manure to be used. Stiff and naturally retentive soils should have the help of lighter manures than pig dung or night soil. Stable manure, burnt refuse, and soot will be more suitable; also crushed bones, not the finest bonemeal, but half and quarter-inch bones. Place this among the soil in the bottom trench where it will help to drain and feed at the same time. The action of bone manures is steady and lasting, so they are of little use for hurrying growth along.

I have found blood manure much the best for use when the plants are in full growth, but it should either be used in a liquid state or hoed in during showery weather. It is not only offensive if left on the surface, but a great deal of its strength evaporates quickly.

A mixture of manures is very beneficial if we take care not to mix those of an antagonistic nature. Well-rotted leaves and clean weeds, vegetable refuse and old potting soil, may have horse, cow, pig, and fowl manure all mixed up and turned over with them a few times previous to use. There is scarcely any soil that this will not benefit greatly, while it is always safe. In spite of repeated warnings, far too many place strong manures in close proximity to the roots when planting. It is wise to let the roots grow freely and find their own food, and I am certain many have courted failure by placing manures directly upon the roots.

Mulching, according to my experience, is best done early in the spring, just when new roots are starting. Autumn and winter mulching is comparatively wasteful, so much of the fertilising properties being lost through percolation before the roots are active enough to make use of them. Nor do I like the presence of wet material around the plants in winter, feeling sure we protect better, in most instances, by keeping the base of the plant dry. Cow manure, when laid up and well rotted, makes a capital manure for light soils, but I do not care to use it very fresh. This applies to all natural manures, whereas those of artificial manufacture should be used as freshly as possible.

The chief point in connection with newly planted roses is to secure a sufficiently rich bottom soil to sustain the roots, rather than let them get into bad subsoil, which they would be sure to do, more or less, as time went on. There is nothing like a good start. I have great faith in surface feeding, especially while the plants are in active growth. Frequent applications of weak liquid manure are much better than a few strong doses.

Bone manure in various forms is the only safe artificial manure for newly-planted roses; others should be withheld until the plants are in active growth. Guano, blood manure, and most artificials are best sprinkled over the ground during wet seasons, and lightly hoed in as soon as the ground will permit. But they are of very little service when used dry during such a summer as that of 1911. Apply artificials in a liquid state, and do not fear to use them freely, of course, paying due attention to the directions given by the vendors. It is not safe to state quantities without knowing the strength or freshness of the manure. A number of manures are advertised in these pages, and all are good if used as advised; if not, the vendors would scarcely receive repeat orders, and an old and well-known patent manure recommends itself by that fact.

Under glass we need to study the soil just the same as in the open. Weak and frequent supplies of liquid manure are needed during growth—both while the plants are in flower, and when making the vigorous summer shoots that will supply the main crop of bloom in the coming spring. A surface-dressing of fertiliser, slightly covered with fresh soil, is very serviceable for pot plants. I am also much in favour of using the drainings from a cow stall, taking care this is not used very strong.

Finally, I think we may sum up by saying roses like almost any manure, but would rather have quantity than great strength. I have found pigeon and fowl droppings very rapid and powerful in action, but they should not be wetted until applied. I consider them best in a liquid form, because the ammonia escapes if they are exposed to the atmosphere when damp. Ashes, burnt soil, or even dry garden soil is much to be preferred in the chicken run to lime, as the latter releases almost all of the fertilising properties as soon as it comes into contact with the droppings.

Rosarian.

RAMPANT CLIMBING ROSES.

Among the many useful purposes for which the hardier and stronger-growing kinds of rambler roses may be employed is the covering of trunks and branches of trees, especially when bare or decrepit, either in the garden itself or in its outskirts, when the latter consist of woods and plantations. Given a proper amount of light and air for the encouragement of the growth and ripening of the wood, very pleasing results may be obtained by planting roses in such situations; in the case of tall trees a picturesque and artistic effect will be produced by the mingling of the rose branches with those of the tree itself, and by the ever-varying clustering and hanging forms they will assume, whilst shorter trees will very soon become entirely covered, and present a charming prospect of tender green in spring, with an almost unbroken mass of colour in the flowering season.

In order to secure the fullest measure of success in the employment of roses for this purpose, especial attention must be given to the provision of good soil for them to grow in, and of the requisite amount of moisture at the roots for the support of the plants. The importance of making these provisions becomes apparent when we consider that the roots of the tree itself, if living, are apt to absorb the greater part of the circumjacent nourishment and moisture in the soil; and even if the tree should be dead or moribund the action of the roots in the past will have tended to the impoverishment of the surrounding soil, to say nothing of the effect of the branches in keeping off the rain in their immediate vicinity. In planting climbing roses therefore in such positions liberal diet must be provided for them in the shape of stations two to three feet square, and as much deep, filled with fresh soil and manure, and yearly mulchings of the latter should be given after the first two years' growth. Moisture can, of course, be afforded artificially at any time during the growing season, according to the weather, and whilst stagnation of water in the soil is to be avoided, it must be borne in mind that the evaporation from the large leaf-surface of a climbing rose in full growth is considerable, whilst the enormous masses of flowers produced by a vigorous plant demand from the roots a plentiful supply of liquid nourishment for their proper development.

With a view to obtaining a good effect within reasonable time, it is well to plant more than one rose to each tree; three is a good number, placed at equal distances from each other round the stem, and at a distance of from two to three feet from the stem itself.

As regards the height to which climbing roses will ultimately attain in such positions, much will naturally depend upon the varieties employed, as well as upon the situation and the completeness with which their cultural requirements can be complied with; but under ordinary favourable conditions the most vigorous kinds may be expected to reach a height of from twenty-five to thirty feet, and sometimes more. To prevent the base of the roses becoming bare, as is liable to be the case, it is well to employ plants on their own roots, as these throw up a succession of shoots yearly from the roots, which serve to furnish the base of the plant as well as to take the place of any of the older branches that may die in the course of time.

Very beautiful objects in the garden can be produced by covering worn-out fruit trees with climbing roses; if the fruit trees have been of the bush or pyramidal shape a little shortening of the branches will serve to give a symmetrical form without too great a spread of surface; and by planting three roses to a tree, and tying in the shoots as they grow to its branches, the roses will quickly clothe the tree and rise to its summit, when the shoots will naturally fall over and present a gorgeous effect when in flower.

As absolutely hardy kinds of roses of great vigour of growth that are suitable for covering trees the old-fashioned white and blush-flowered varieties of the Ayrshire and Evergreen classes are still some of the best; Dundee Rambler, Félicité Perpetué, Flora, Leopoldine d'Orleans, Myrianthes Rénoncule, Thoresbyana, and Virginian Rambler are all excellent. The single-flowered type of Rosa multiflora (the bramble-flowered rose), and its hybrid variety, Grandiflora, are also excellent, and of the more recently introduced kinds of multiflora and Wichuraiana origin, some very suitable sorts are Aglaia, yellow; Alberic Barbier, pale yellow; Blush Rambler, pink; Crimson Rambler, Dawson, pink; Dorothy Perkins and Lady Gay; Excelsa, crimson; Gardenia, pale yellow; Helène, pale pink; Hiawatha, crimson; Jersey Beauty and Joseph Billiard, beautiful single-flowered kinds with pale yellow and bronzy-red flowers respectively; Leuchtstern, pale pink; René André, coppery rose; Rubin, deep red flowers and beautiful crimson-tipped shoots; Waltham Bride, snow white; and the type or species of Rosa Wichuraiana, which has pure white single flowers with yellow stamens. The summer-flowering hybrid, Carmine Pillar, is also very beautiful, although the flowers are somewhat short-lived, and the hybrid musk The Garland, pale buff, and Seagull, white, are both excellent. In sheltered positions some of the strong-growing hybrid teas may be planted, such as Climbing Captain Christy, Madame Berard, and Reine Olga de Wurtemburg.

Some other picturesque forms in which the strong-growing kinds of rambler roses may be advantageously used in the garden are in the clothing of tall posts or pillars, where these are in harmony with the surroundings, and also for covering large spaces on trellises. For these the foregoing cultural hints would also apply, and the varieties of roses above-mentioned would also be very suitable.

Waltham Cross. Arthur W. Paul.

Clematis integrifolia.—This is a very beautiful hardy border plant, flowering freely in June, July, and August. The flowers are blue and borne on plants about 20in. high. It is readily increased by division when growth commences in spring. An open, loamy soil suits it best, and, if fairly rich all the better. Poor soils can always be enriched at this season of the year by pointing in some well-rotted manure and better loam. In the early part of spring a light surface mulch will be beneficial, and also a small quantity of old lime rubble and sweet leaf-soil in cases where the soil is retentive or low-lying.—G. B.

FOR ALL PURPOSES. **ROSES** FOR ALL SITUATIONS.

STOCK OF OVER 250,000 STRONG PLANTS TO SELECT FROM.

SPECIAL OFFER No. 2. Collection of 25 Gold Medal Roses.

The following 25 varieties of Roses, which have all been awarded the GOLD MEDAL of the NATIONAL ROSE SOCIETY, will be sent Carriage Paid and Packing Free for 25/- nett.

AVOCA (HT)
BEN CANT (HP)
BESSIE BROWN (HT)
BETTY (HT)
COUNTESS OF GOSFORD (HT)
DEAN HOLE (HT)
DR. O'DONEL BROWNE (HT)
EDITH D'OMBRAIN (HT)
FLORENCE PEMBERTON (HT)
HARRY KIRK (T)
HELEN KELLER (HP)
HUGH DICKSON (HP)
J. B. CLARKE (HT)
LADY ROBERTS (T)
MRS. B. R. CANT (T)
MRS. EDWARD MAWLEY (T)
MRS. JOHN LAING (HP)
MRS. R. G. SHARMAN CRAWFORD (HP)
MRS. STEWART CLARK (HT)
MRS. MYLES KENNEDY (T)
MRS. W. J. GRANT (HT)
QUEEN OF SPAIN (HT)
SIR ROWLAND HILL (HP)
SOUV. DE PIERRE NOTTING (T)
WILLIAM SHEAN (HT)

ILLUSTRATED CATALOGUES GRATIS AND POST FREE.

EDWIN MURRELL, ROSE GROWER, *ESTABLISHED 1837.* SHREWSBURY.

THOMSON'S Celebrated MANURES

Still the best: In greater demand every year.

SAFE, SURE & LASTING.

The result of many years' **practical** experience.

VINE, PLANT, AND VEGETABLE MANURE.
1 cwt., **20/-**; ½ cwt., **10/-**; ¼ cwt., **6/-**; 14 lbs., **3/6**; 7 lbs., **2/6**
Tins, **2/6, 1/-**, and **6d.** Carriage paid on 1 cwt. anywhere.

SPECIAL TOP-DRESSING MANURE.
½ cwt., **20/-**; ¼ cwt., **11/-**; 14 lbs., **6/-**; 7 lbs., **3/6**; Tins, **1/-**.
Carriage paid on ½ cwt. anywhere.

Also Thomson's Book on the Vine. Thomson's Styptic.

SOLD BY NURSERYMEN & SEEDSMEN EVERYWHERE.

Write for Pamphlets, Price Lists, etc., to

1868

SOLE MAKERS: **WM. THOMSON & SONS, Ltd., Clovenfords, Scotland.**

CHEALS'

FOR FIRST-CLASS
ORNAMENTAL TREES, ROSES, FRUIT TREES,
AND
HARDY FLOWERS, etc.

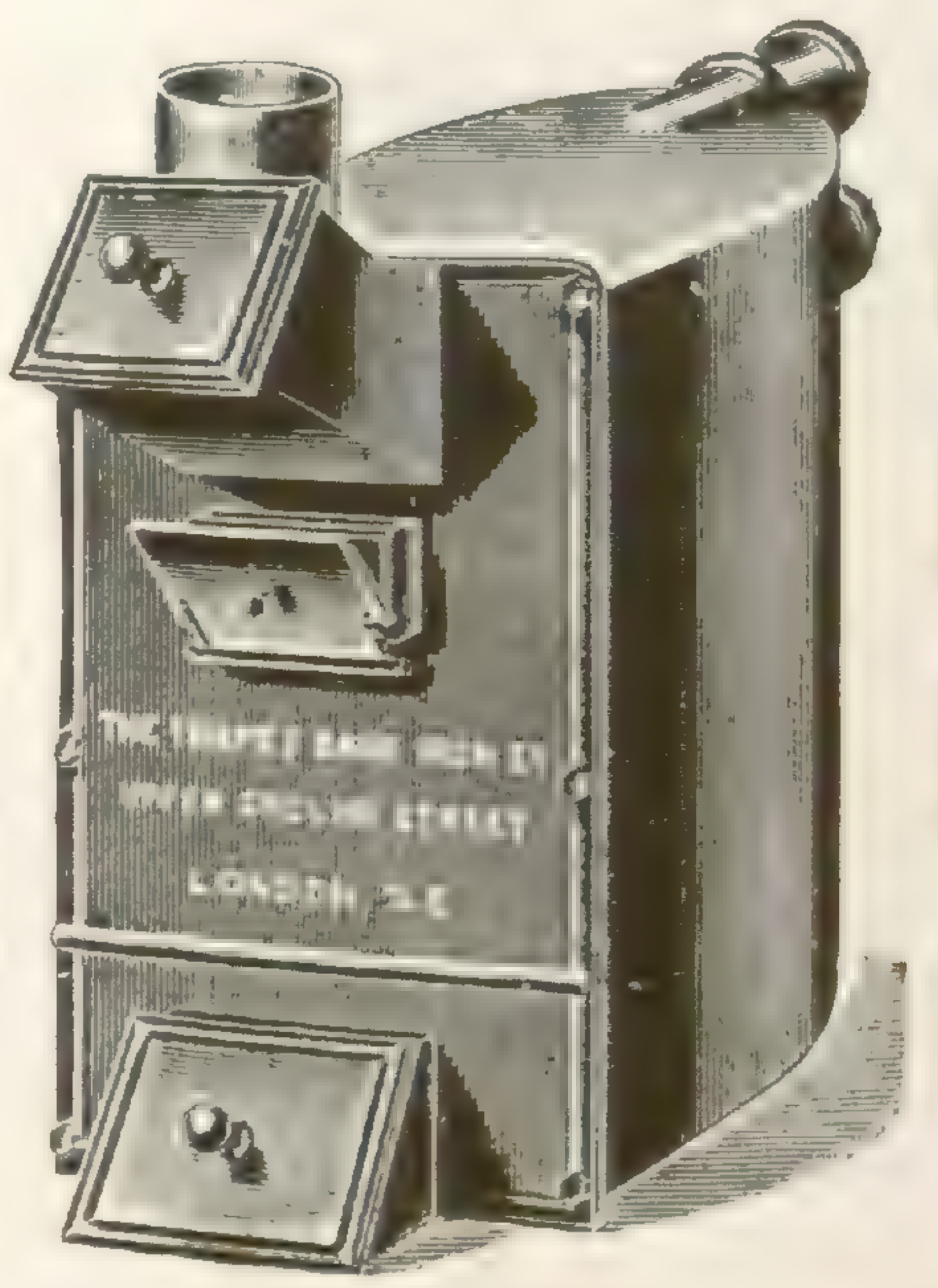
NURSERIES 113 ACRES.
CATALOGUES FREE.

J. CHEAL & SONS,
The Nurseries, CRAWLEY.

'Phone: Hop. 763.

When next a Small Boiler you require

TRY



THE HEEL

NONE TO BEAT IT.

THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.

4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

Bulbs: NARCISSUS, DAFFODILS, TULIPS, &c.

All Good Flowering Bulbs; Worth Double.

NARCISSUS

100	Emperor	3/0
100	Empress	3/0
100	Henry Irving	4/0
100	Golden Spur	4/0
100	Horsfieldii	3/0
100	Victoria	3/0
100	Obvallaris	3/0
100	Grandis	3/0
100	Sir Watkin	3/0
100	Stella	1/6
100	Princeps	2/6
100	Ornatus	2/6
100	Double Daffs	4/0
100	Dbl. White Narcis.	2/6
100	Pheasant Eyes	2/6
100	Frank Miles	1/6

TULIPS

100	La Reine	3/0
100	Cottage Maid	3/0
100	Chrysolora	3/0
100	D. de Parma	3/0
100	Keizerkroon	4/0
100	Golden Crown	3/0
100	Picotee	4/0
100	Bouton d'Or	3/0
100	Prince de Ligny	4/0
100	Duc Van Thol, sgl	4/0
100	,, ,, dbl	3/0
100	King of Yellows	4/0
100	Mixed Tulips	1/6
100	Mixed Darwins	4/0
100	Darwins to name	10/6
100	Parrot Tulips to colour	2/6

Special offer in Mixed Narcis. and Daffodils, also Tulips for planting in grass, shrubberies, hedge rows, etc.

HYACINTHS

per 100

12—1/9	to name in colours...... or	10/0
12—1/3	mxd in cols. or	9/0
12—1/9	Roman White or	12/0
100	Iris, Spanish, to name	1/6
12	Iris, German do.	6/0
12	Iris, English do.	1/6
100	Anemones, Scarlet	4/3
100	,, The Bride	1/9
100	,, St. Brigid	5/0
100	Scilla Siberica	3/0
100	Freesia	3/0
100	Summer Snowflakes	5/0
12	Lilium Candidum	2/6
12	,, Crown Imperial	2/0
12	,, Auratums	7/0
12	,, Croceums	4/0
12	,, Longiflorums	4/0
100	Snowdrops	1/6
100	Ixias, to cols.	2/6
100	Crocus, in cols.	1/3
100	Lily of Valley	2/6
100	Jonquils	4/6
100	Ranunculus	3/0
100	Montbretia	3/0
100	Aconites	3/0
100	Chionodoxa	2/6
100	Polyanthus Narcis	3/0
100	Alliums	3/0
12	Begonias, choice	1/6
12	Violets, in sorts	1/6
12	Xmas Roses	4/0

Narcissus and Daffodils, 5/-, 7/6, 10/0 per 1,000
Tulips ... ... 10/-, 15/-, 20/- per 1,000

Many other varieties to offer; also all kinds of Herbaceous plants. Any of the above, half quantities at half price.

FRUIT TREES.—Apples, Pears, and Plums, all fruiting trees, **9/-** per dozen. Gooseberries, Currants (black, red, white), **3/-** per dozen. Loganberries and Raspberry-Strawberry, **9d.** each. Raspberry canes, **3/-**, **4/-**, per 100. Strawberry Plants, **1/6** per 100.

All kinds of Flower and Garden Seeds, also POTATOES. Send for List,

J. W. CROSS, Old Grammar School, **WISBECH.**

By Appointment.

IRISH ROSES

ALL COLLECTIONS CARRIAGE PAID FOR CASH WITH ORDER.

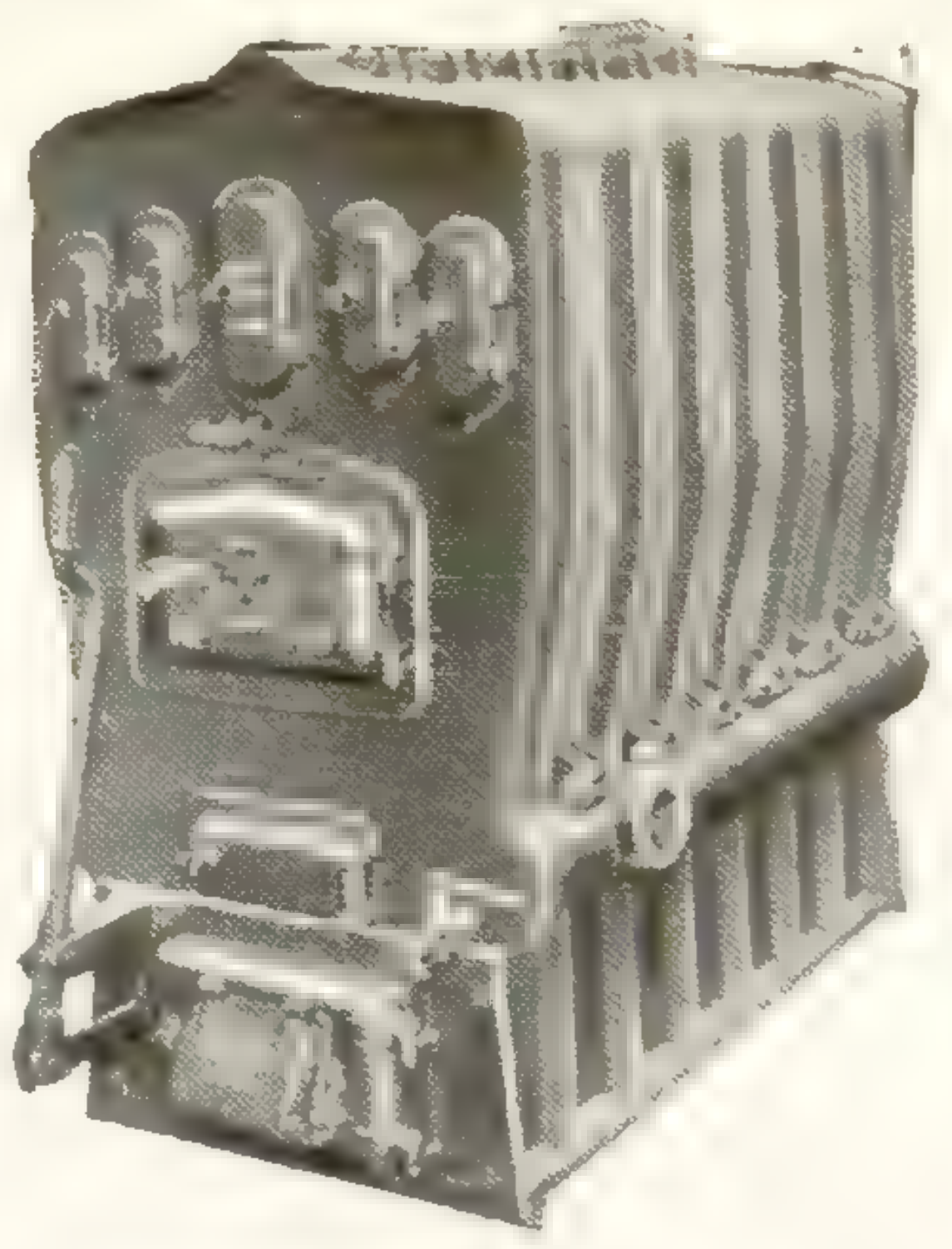
SPLENDID PLANTS

ESPECIALLY HARDY AND SUITED TO ANY LOCALITY.

Collection A—24 Hybrid Tea Roses selected from the finest varieties only, including many of the newer varieties - **20/-**
Collection B—24 H.P.'s as above - **15/-**
Collection C—12 Climbing Roses for Pillars or Pergolas **10/-**
,, D—12 Climbers for Walls **10/-**
,, E—12 Tea Roses - - **12/-**
,, F—100 Roses, H.P., H.T., and Tea, fine garden sorts - - **60/-**

Catalogue containing Coloured Plates of new Gold Medal Roses, Leslie Holland, and Countess of Shaftesbury, free on application to—

HUGH DICKSON,
ROYAL NURSERIES,
BELFAST.



Kinnell's Boilers

THREE LEADING TYPES:—

The **"ANGLIAN," Sectional,** heats 800 to 8,000 ft. 4in. pipe.
The **"ROCHFORD," Tubular,** heats 600 to 8,000 ft. 4in. pipe.
The **"HORSE-SHOE"** for the small Greenhouse.

Saddle Boilers, Trentham Boilers, and all classes of Pipes, Fittings, etc., ready for immediate despatch.

Write for List No. 77, post free.

CHAS. P. KINNELL & Co., Ltd., 65, & 65a, Southwark St., London, S.E.

THE APRON That has Come to Stay
WORN BY ALL THE LEADING GARDENERS
LOOK AT THE PRICE
1/9 in Dark Blue Ponicus Twills,
OR in Dark Blue Ponicus Serge 3/9
Postage 3d each extra
WRITE FOR ONE TO-DAY.
SHAW & MONTGOMERY,
628 ARGYLE St. GLASGOW
REGISTERED

MESSRS. PULHAM & SON have secured a fine lot of Old Stone Paving, which is eminently suitable for the Paving of Pergolas, Garden Paths, etc.

They will be happy to quote for any quantity, delivered at any railway station.

PULHAM & SON,

By Appointment. By Appointment.

71, Newman Street, London, W.
And BROXBOURNE.

SELECTED SEED POTATOES.

All varieties, grown on finest soil in Scotland and Lincolnshire.

Any weight supplied at low prices.

Prizes given for best results.

Before ordering elsewhere write for Catalogue.

A. J. SOLE, Seed Potato Grower,
PETERBOROUGH.

DAFFODILS AND NARCISSUS.

Sir Watkin, very free flowering, 3s. 100. Horsfieldii, handsome bloom, 2s. 6d. 100. Mrs. Langtry, very choice, 2s. 6d. 100. Gardenia, double white-flower, 1s. 100. Double Daffodil, 1s. 100. Crocus, all colours, 9d. 100. Snowdrops, 5s. to 7s. 6d. 1,000. Tulips, splendid colours, 2s. 100. Narcissus, large trumpet, 7s 6d. 1,000. Narcissus, mixed (10 sorts), 5s. 1,000. Spanish Iris, 7s. 6d. 1,000. Pheasant-eye, 5s. to 7s. 6d. 1,000.

Send for Lists before ordering elsewhere.

CROSS & SON, Daffodil Nurseries, WISBECH.

BENTLEY'S NICOTINE COMPOUND

This Vaporiser contains a higher percentage of Pure Nicotine than any other.

BENTLEY'S INSECTICIDE. An ideal non-poisonous Plant Cleanser for general use under glass.

BENTLEY'S CONCENTRATED ALKALI.

A perfect Winter Wash. Destroys mosses, lichens, fungi and their spores.

BENTLEY'S CARNATION MANURE.

Universally popular. All Carnation Specialists admit its excellence.

BENTLEY'S DAISY KILLER (LAWN SAND).

A most effective Weed Destroyer. Completely transforms lawns.

General Catalogue sent on application to the manufacturers:

JOSEPH BENTLEY LIMITED,
Chemical Works,
BARROW-ON-HUMBER, HULL.

RATS Exterminated by "LIVERPOOL" VIRUS without danger to other animals and without smell from dead bodies. In tins ready prepared with the bait. Virus for Rats, 2/6 and 6/-; for Mice, 1/6.

Of all Chemists. *Write for particulars to—*
EVANS SONS LESCHER & WEBB, Ltd.,
(Dept. G.M., 56, Hanover Street, LIVERPOOL.

THE BEST OF ALL GARDENING BOOKS.

THE ENCYCLOPÆDIA OF GARDENING.

Crown 8vo, 482 pages, bound in cloth.
NET 3/6; by Post, 3/10.

By T. W. SANDERS, F.L.S., F.R.H.S.
Editor of "Amateur Gardening."

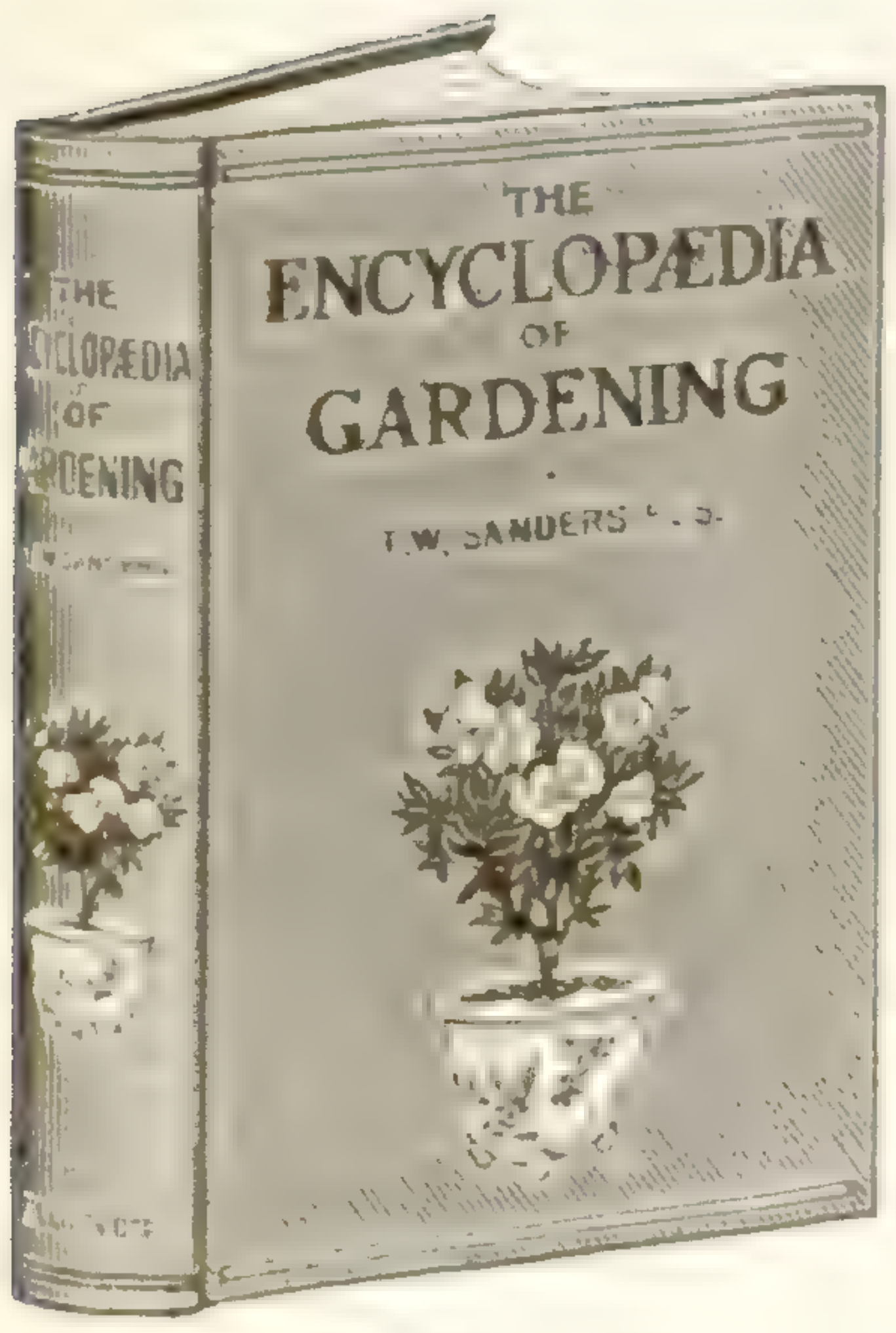
A COMPLETE GUIDE AND DICTIONARY to the Culture, Propagation and Description of Flowers, Fruit, Vegetables, Plants, Trees, Shrubs, etc.

. . . INCLUDING . . .

Time of Planting.
Position.
Soil.
Manures.
Temperatures.
Common or Popular Names.
Botanical Names.
Watering.
Natural Order.
Date of Introduction.
Species Cultivated.
Propagation.
Colour.
Height.
Time of Flowering.
Duration.
Forcing.
Potting. Pruning.
Cultural Details.

"Gardeners who want a really practical dictionary of their art will find all they need in this work."—*Sheffield Independent.*

Send Postcard for complete Catalogue of Books on all Garden Subjects.



FOURTEENTH — EDITION. —
Revised and Improved.

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE," 148 & 149, Aldersgate St., E.C.

Please send me a Copy of the New Edition of "THE ENCYCLOPÆDIA OF GARDENING," by post, for which I enclose remittance of 3/10.

Name ....

Address ....

NOTES ON GROUPING ROSES.

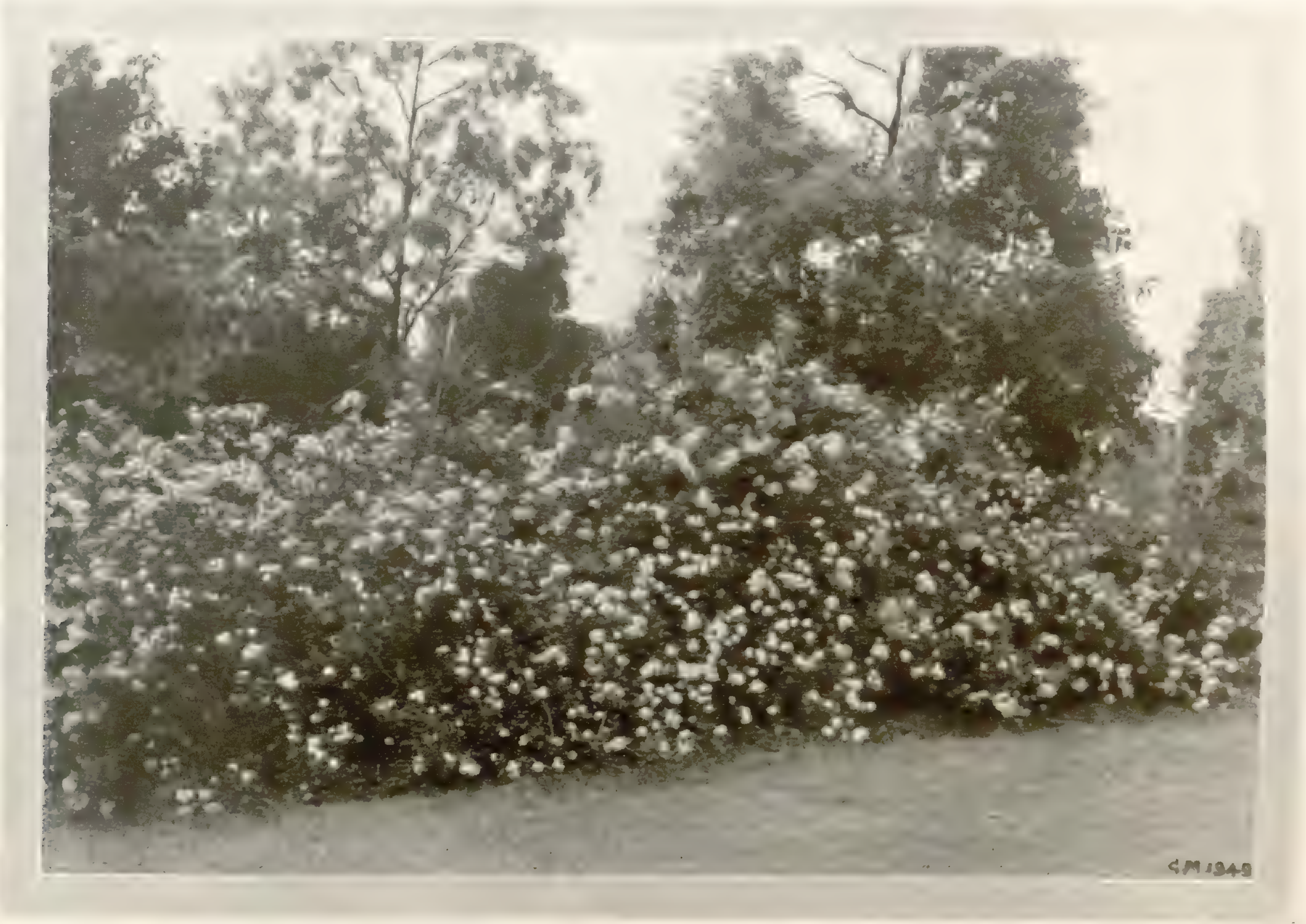
There are so many methods of grouping roses by which the most charming effects can be obtained that much space would be required were any considerable proportion of them described in detail. A detailed description will not, however, be attempted, as the chief object of these notes is to call attention to an excellent way of forming groups of the Wichuraiana varieties now so deservedly popular.

The simplest form of grouping roses is the arrangement of the dwarf-growing and free-blooming varieties belonging to the hybrid perpetuals, hybrid teas, and Chinas in masses, and these are so attractive over a long period that they should be more liberally employed than is the case at the present time. In the ordinary way these would not be spoken of as groups, but as beds, and the varieties utilised as bedding roses. There is no occasion to dwell upon this point, and so we may pass on to say that a more advanced method of grouping is to plant in association dwarfs and standards. If the latter are selected with due regard to vigour of growth and freedom of flowering, and arranged between three and four feet apart among the dwarfs, groups or beds of the most pleasing character will result. This method of grouping is especially adapted to the requirements of those who are unable to devote otherwise than a limited space to roses.

Distinct from the foregoing are arrangements, which are invariably described as groups, of the vigorous-growing varieties belonging to the several sections, and where the pleasure grounds are of considerable extent such groups may be formed in considerable numbers. In both large and small gardens they will form a distinct and pleasing feature, provided they are proportionate to the area available. For such groups the climbing varieties of several of the hybrid perpetuals and hybrid teas, and strong growers, as Madame Jules Gravereaux, Buttercup, Mrs. Anthony Waterer, Electra, Una, The Wallflower, Conrad F. Meyer, Gruss an Teplitz, and the rugosas are the most suitable. Each group may consist of one or several varieties, but the most satisfactory results are, in the opinion of the present writer, obtained by limiting each group to one variety. If the plants are arranged about two feet apart in beds five feet or so in diameter groups of the most effective character will be obtained in a surprisingly short space of time. These strong growers are very effective when arranged in groups of three or four plants each in shrubbery borders, provided the soil is not permeated with the roots of large trees that are not far distant. The rugosas are perhaps the best able to hold their own where the roots of trees are in strong competition with those of roses for the available food supplies.

In the formation of groups of Wichuraiana roses a somewhat different method has to be adopted. The plants are arranged between two feet and thirty inches apart, and the growths are supported with stout stakes of varying heights. The object is not to form groups of pillars of roses, but groups of roses, hence the necessity for having the stakes of different heights and the adoption of a free style of training. The illustration of an especially attractive group of Dorothy Perkins in the Royal Gardens, Kew, will serve to show the manner in which the growths are supported and trained. It will be seen that each set of shoots is not exclusively trained to a separate support, but that the growths are carried from one to the other of the supports, as was found necessary in the formation of a well-balanced group. Such arrangements are highly attractive in the season of flowering, either at the point of a broad border, as in this case, or on the lawn, and may, therefore, be formed in either position with the full assurance of success.

G.



A TASTEFULLY ARRANGED GROUP OF DOROTHY PERKINS ROSE AT KEW.

HARDY PLANT CHAT.

Solidago Golden Wings.

This golden rod was finely shown by Messrs. Cutbush and Sons this season, and one can see a use for such a flower, although I must confess that I have no special liking for the solidagos. But this tall species is graceful in its way, and for the wild garden it has a raison d'être: while in the very large autumn border a place may be found for it. It makes a handsome growth six or more feet high, and gracefully-habited sprays of yellow, rather fancifully giving it the name of "Golden Wings." Those who are best acquainted with the intricacies of the identification of these solidagos will forgive me for not entering into any consideration of the question as to which species it belongs. It is sufficient to say that, in a limited sphere, it will prove serviceable to many who have large places.

Thalictrum dipterocarpum.

This meadow rue is apparently becoming better known, and the favour with which it is being viewed when exhibited at shows is a token that it is probably destined to find its way into many good gardens. It has been rather well shown of late, and it is certainly a good subject for bloom in the border. Its height, 4ft. to 5ft., renders it excellent for the back row of a small garden border, or for that in front of the rear of a larger one; while the pretty rose-purple inflorescence is well contrasted by the citron-yellow anthers. All these meadow rues are graceful alike in flower and foliage, but they are rarely at their best when in dry soil.

S. Arnott.

WORK FOR THE WEEK.

ORCHIDS.

SEASONABLE NOTES.—The permanent shading on the roof and at the ends of the houses should now be removed so that the whole benefit of the available bright light may be afforded Excepting for odontoglossums and the winter-flowering cypripediums, the roof blinds may be dispensed with altogether. Where canvas blinds are removed from the roof, or where provision is made for their storage under cover on the roof ridge during winter, the first favourable opportunity should be taken to run the blinds down and get them thoroughly dried before storing. The excessive dry summer has not been advantageous to many orchids. With us our plants have made more progress since the rain in August than was the case for many weeks previously. The odontoglossum growths that were in a forward condition previous to June seem to have been retarded, and it is only recently that they have recommenced to grow. This has had the effect of bringing the plants into a more general condition of growth than has been the case for a number of years and the result will be that we shall have the plants flowering in larger quantities together in the spring than usual.

CYPRIPEDIUMS of the winter-flowering section are also backward for the season of the year, and, owing to the amount of shading that has been required, the plants show indications of sappiness, and they have a slightly drawn appearance. It is desirable that the plants should have every encouragment from light and discreet ventilation to assist them to mature their foliage and develop their flowers

AMONG THE MEXICAN LÆLIAS we find growth and flower scape development very irregular. This is particularly the case with plants that were repotted in the spring; some have their flower scapes well advanced, while others are only now developing from the unfolding leaves. It is well to give any backward plants a warmer position if possible, and if they are placed at the warmest end of a cattleya house and in a position within reasonable distance of the roof glass they will derive considerable benefit.

IN THE CATTLEYA HOUSE many of the early growing kinds completed their pseudobulbs rapidly, and it will not surprise me if many growers complain of the appearance of secondary growths. The second growth is not so detrimental when it appears early, but when it commences in September it is no advantage to the plants, as a rule, but very troublesome to the grower, and it is rarely that satisfactory flowers are procured under such circumstances in the early autumn. Careful observation and prompt measures will be necessary to prevent attacks of scale and black thrips; sponging is the best means of keeping both these pests in check; the houses should be fumigated frequently.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

PERPETUAL-FLOWERING CARNATIONS.—These are now in active growth, and must be given regular attention. The flower stems should be loosely tied to the central stake, and disbudded as soon as possible to allow all the strength to concentrate on the terminal bud. Applications of diluted liquid manure may be given at intervals, as well as top-dressings of some approved carnation manure. Ventilation must be given freely to maintain an airy buoyant atmosphere in the house. Even in foggy or frosty weather a little air may be admitted through the top ventilators at night, provided sufficient heat is afforded to maintain an even temperature of 50 degrees Now that dull and cold weather may be expected, the house must of necessity be kept rather drier, consequently red spider is apt to appear, therefore every precaution must be taken to keep it away. One good method at this time of the year, when dampness by syringing must be avoided, is to paint the pipes while warm with liquid sulphur.

CYCLAMEN.—The stock grown in frames will now be showing flowers, and should be removed to a rather higher temperature, but at the same time be afforded ample ventilation whenever possible. Judicious feeding at the present time will repay itself by the excellence of the blooms obtainable later on. Care must be taken to exclude fog from the house, as this is destructive to fully-expanded blooms. The plants require to be kept perfectly clean and free from insect pests. Remove all decaying flowers to encourage the succeeding ones. Seedlings obtained from the early autumn sowing should now be ready for potting off singly into thumb pots; take care not to bury the corm too deeply. A compost similar to the one used for sowing will suit the seedlings at this shift. Place the plants in a light position near the glass in a house where a temperature of 55 degrees may be maintained. Shade must be provided when required, and great benefit will be derived from frequent syringings.

HUMEA ELEGANS. — To cultivate humeas properly, they must be kept in constant growth, and a further shift should be given them now. Five-inch or six-inch pots are quite large enough for this potting, as this will allow for repotting into eight-inch or nine-inch pots in the spring. Through the winter considerable care must be exercised in watering, as humeas require very little at this period. A cool house, from which frost is excluded is a good place in which to grow them.

BLINDS AND SHADING may now be dispensed with, but take care that all are dry before being stored away for the winter.—A. Grubb, Porter's Park Gardens.

HARDY FRUITS.

TRANSPLANTING APPLES. — This may be taken in hand from now onward, and the earlier in the season the work can be performed the less the trees will suffer through the following summer. It is quite safe at the present time to lift apple trees, even if still carrying full leafage, providing reasonable care be taken. We have here repeatedly moved bush and pyramid trees anywhere up to 15 years of age, and possibly older, without a single loss to record. Trees this age have taken on new life after the first year, and produce at the present time the finest and cleanest fruit in the garden through being induced to form new fibres as a consequence of lifting and replanting. Large trees, of course, look formidable, but if the soil is worked carefully away from the roots the task is a fairly light one. Care must be taken to preserve all the fibrous roots possible, the large roots in the case of big trees being left as much as 4ft. in length. The holes for the reception of the trees should be much wider than that actually required, and when replanting use plenty of new loam, lime rubble, and, if possible, some bone-meal. The trees must not be allowed to carry fruit the following summer, and, the most essential point of all, the stem and main branches should be protected from the drying influence of sun and wind by some protecting material, such as bands of hay or straw, these being wound neatly and lightly around them.

CORDON PEARS ON WALLS.—These also may be moved if the borders are known to be in an unhealthy state; but pears generally will suffer or show the effects of lifting more than apples, and should be lifted with as much soil adhering to the roots as possible. This may be accomplished by removing a few trees at one end, and so lifting and removing all, in short shifts, and replanting as the work proceeds. By this mode of cultivation old trees are given new life, and are capable of producing excellent fruit.

PRUNING.—Many of our good varieties of apples cannot under ordinary conditions be induced to fruit to any extent more than once in two years. Belle Pontoise, Mère de Ménage, and many of the American varieties are unsatisfactory in this way. Two very vigorous trees of Mère de Ménage that had been noted for many years not to produce a single fruit in alternate seasons, have been brought into bearing by being winter pruned—that is, pruned with consideration as soon as the fruit is gathered, which is from the middle to the end of September. The two said trees are horizontally trained, with about fourteen leads. Enormous fruits have always been gathered since, and the trees make wonderful growth. Since the experiment has been tried, each year a good crop is obtained, single fruits a pound in weight and upwards having been produced. The experiment is to be followed up with other trees that fruit only in alternate years, with, I hope, the same good effect.—J. Whittle, Cheveney Gardens.

THE KITCHEN GARDEN.

JERUSALEM ARTICHOKES.—The tubers will be sufficiently formed and matured by this to allow of a quantity being lifted for use. The greater part of the crop may be left for a few weeks to continue to develop. When lifting, select the suitable tubers for use, and keep a quantity of medium sized sets for next season's planting.

BROCCOLI.—In many parts of the country the broccoli will not stand the severe frosts at times experienced. The upper portion of the stem of this plant is the first to suffer. By leaning them over to the north and covering their stems with soil well up to the bottom leaves, they do not thaw so rapidly, and a great reduction in the loss of plants will most probably be experienced as compared with those that are not protected.

BRUSSELS SPROUTS.—These are not throwing out their sprouts satisfactorily, but after the rain they will now be growing freely. Have the decayed and some of the coarse leaves removed from the lower part of the stems to permit light and air to reach the sprouts and assist in their development, or they will not harden as they should do. In high and windy situations it is advisable to stake some of the taller plants to keep them erect, so that the sprouts may swell evenly.

CELERY.—Push on the work of earthing-up this crop as far as practical, as severe frosts may now come at any time, and so damage the stems of the plants as to cause them to decay. In carrying out this final moulding-up, make the sides of the rows firm by patting the soil down with a bright spade when it is moist, to throw off the winter's rain.

RHUBARB.—Where a quantity of plants of an early variety have been grown on for the purpose of forcing, they will now be found most useful. The foliage will be well matured, and some crowns may be lifted for placing in the mushroom or other forcing house. Before placing the crowns in heat leave them in the open for exposure for a week or so, as they will then the more rapidly respond to the warmth and grow away freely.

EARLY BORDERS.—These situations will be the first required, and, owing to the weather, are often most difficult to bring into proper condition for early sowing of peas, etc. As soon as the crops of salading and other plants are removed, have these borders manured and dug, leaving the surface of the land rough so that the frost and wind may play upon it to ensure a good seed bed. On light soils a dressing of marl on the top, left to slaken down till the border is required, and then forked in, will be found of great benefit to next season's crop. For old and heavily manured soils I prefer a dressing of marl to one of manure occasionally.

FORCING GROUND.—When the staff is not occupied in important work on the land everything should be put in hand ready for forcing. Have a stock of sweetened manure got ready. Leaves are quite as valuable as manure, and may be collected and stored in sufficient quantities before becoming saturated and decayed. Have all lights and frames repaired in readiness for use.—Charles Flack, Cholmondely Castle Gardens.

BUXTON AND DISTRICT
CHRYSANTHEMUM SHOW.
WEDNESDAY, November 15th, 1911.
For Schedule and List of Prizes, address—
S. SHUFFLEBOTHAM,
Secretary, 12, Eagle Parade, Buxton.

SHEFFIELD CHRYSANTHEMUM
SOCIETY SHOW,
CORN EXCHANGE.

November 16th, 17th, and 18th.
£200 in Prizes.

Schedules, etc., from
C. COOK, City Road, Sheffield.

THE NATIONAL CHRYSANTHEMUM
SOCIETY.
GREAT AUTUMN SHOW
will be held
at the CRYSTAL PALACE,
On NOVEMBER 1st, 2nd, and 3rd, 1911.
Entries close October 25th. Write at once for Schedule and full particulars to
RICHARD A. WITTY, 72, Savernake Road, Gospel Oak, London, N.W.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

North of Scotland Horticultural and Arboricultural Association.

The first meeting of this newly-resuscitated association was held on Saturday evening, the 14th inst., in the Botany Classroom, Aberdeen University. There was a crowded attendance, and Mr. Alexander Robson, of Messrs. Smith and Sons, nurserymen, Aberdeen, was called upon to preside.

In the course of his address, the Chairman congratulated the association on the large attendance, and thought that a good augury for the success of the enterprise on which they had embarked. He referred to the fact that it was now seventeen years since the association ceased its operations, and many old members would recollect what a power the association had been in the horticultural world in Aberdeen and district, how many excellent papers had been read, and almost all published, and had been specially appreciated by those who could not be present at the meetings, and how capital discussions had taken place with regard to meritorious plants, flowers, and vegetables. They had a membership of between 200 and 300. Latterly, however, interesting subjects got rather scarce, and the discussions became confined to a limited number of outstanding members, so it was thought well to give the association a rest. He did not think those who came to that resolution ever contemplated a cessation for seventeen years, and probably if any active gardeners had moved in the matter the association might have been resuscitated years ago. The association had been resuscitated in a constitutional way by the old committee, or as many of the members as were now in this part of the country. It was found they could get as many as 150 members, and that there was the prospect of many others. At the present time there were as many as 165 who had signified their adhesion. They might, he thought, congratulate themselves on the encouragement they had got so far, and look for fresh accessions. It was also satisfactory that they had received promises from several professors and lecturers of Aberdeen University, and others who were in cordial sympathy with the movement. Professor Trail, for instance, in addition to giving the use of his classroom that evening, had promised to give an introductory lecture on "How to Obtain an Improved Race of Cultivated Plants."

The seventeen years since the association had become dormant had been years of activity in the horticultural world. Good garden cultivation had been greatly extended, and indeed it might be said there were now two gardens for every one then, and they had many new races of flowers, and new tastes had developed in connection with horticulture in various directions. There could be now no lack of subjects for the programmes of the association for many years to come. Besides, a new race of enthusiastic horticulturists had come to the front, and they might look forward with confidence to the association occupying the position of influence it held in former times.

Mr. William Reid, interim secretary, said there was every promise of an interesting winter's work, and he hoped the association would go on heartily. A tentative syllabus had been drawn up, including a lecture on How to Obtain an Improved Race of Cultivated Plants, by Dr. Trail, Professor of Botany in Aberdeen University; How to Maintain a Supply of Vegetables all the Year Round; Novelties of the Year in Plants, Fruits, and Vegetables; The Sweet Pea; Meteorological Notes on the Weather; Lessons from the Drought of 1911; The Carnation; Cottage Gardening; and Hardy Spring Flowers.

Mr. William Wyllie, the former treasurer, submitted a statement which showed that the sum at the credit of the association was £10 5s. 6½d.

On the motion of the Chairman, the Earl of Aberdeen was elected patron, while the following were elected hon. members: Dr. Trail, Mr. S. J. Gammell, of Drumtochty; Mr. G. A. Duff, of Hatton; Mr. Leith Hay, of Leith Hall; Mr. Thomas Ogilvie, of Kepplestone; Mr. James Murray, of Glenburnie Park; Mr. J. G. Burnett, of Powis; Mr. J. E. Crombie, of Parkhill; and Mr. Adam Maitland, Rubislaw Den House—the prospective Lord Provost for Aberdeen at the coming municipal election.

Mr. France, F.B.S., proposed the election of Mr. Mackinnon, gardener to the Earl of Aberdeen at Haddo House, as president, and the motion was heartily agreed to. Office-bearers were then appointed, which included the leading gardeners in and around Aberdeen. The Chairman, in answer to a question, stated that there was a library of over 200 volumes in connection with the association, and the committee would draw up a scheme to render the books available in the future.

The usual votes of thanks terminated one of the most delightful and harmonious meetings ever held in Aberdeen.

Horticultural Club.

On Tuesday, the 10th inst., this club opened its winter season by the usual monthly dinner at the Hotel Windsor, Mr. Harry J. Veitch taking the chair. Subsequently a most interesting paper was read by Mr. C. P. Raffill, of the Royal Gardens, Kew, on "Rhododendrons," which evinced at once a wide knowledge and extensive practical acquaintance with this wonderful genus.

The lecturer started with a description of the various sections of the genus and their wide geographical distribution and consequent requirements of different cultural conditions. About 270 species are recognised, of which the large majority are natives of the Himalayas and the extension of that mountain system into the South-West of China. In the earlier days the Himalayas were regarded as the chief home of the genus, but later researches to the North, by Delavay, Henry, and Wilson, have demonstrated, by a great number of new discoveries, that China is really so distinguished, some 144 species being found in the entire mountain range as against about 44 in the Himalayas proper. Curiously enough, despite the continuation of these two habitats, only two species are common to both. Subsequently, by means of a lantern slide of the world, Mr. Raffill showed how the genus was represented by species in North America, Northern Europe, Asia, Tibet, Burma, and India, and passing thence through Ceylon and New Guinea, eventually dwindled into a solitary species in the extreme North of Australia, Java, and the Malay Archipelago presenting many examples of the more tender class.

One species, R. lapponicum, curiously enough, stretched right round the globe on the north. Only two species are indigenous to Central Europe, and none in Africa or South America. The entire genus appears to be alpine; it is most at home in soils consisting of the debris of weatherworn granite wherein there is abundance of silica, mingled with peaty humus, and thoroughly drained by its porous character. Lime is poison to it. From these facts it is easy to deduce the nature of the soil required under cultivation, viz., peat with a liberal admixture of sand in the proportion of one to even three or four plus perfect drainage. Although theHimalayan species are rarely found below 4,000 feet, they are mostly rather tender, and those of Java and Malaya are all so, requiring warm houses. The most recent Chinese introductions are, however, as might be expected from their more northerly origin, hardier, and even quite hardy, and by judicious hybridisation, and even naturally, many of the Indian forms are able to thrive in the open in many places in our warm Western Coast in Cornwall and elsewhere, some magnificent specimens being shown on the screen as growing in the open in some noted Cornish gardens, while views of specimens in the Rhododendron Dell at Kew showed what could be done elsewhere by skilful arrangement of the environment with these and other species. The azalea, which is usually deciduous, and was at one time regarded as distinct from the evergreen rhododendron, owing to a supposed constant difference in the reproductive system, has been subsequently relegated to that genus, and many interesting details were given regarding the cultivation and propagation of the Ghent azaleas, only so called because Belgium has made their culture a speciality.

A just tribute was paid to Sir Joseph Hooker for his introduction by seed of many of the most magnificent forms of rhododendrons shown on the screen, and to Mr. Heal, who, under the auspices of Messrs. Veitch, has effected such wonders in the way of hybridisation among the species introduced by the various explorers. Finally, on the economic side the lecturer alluded to the medicinal properties ascribed in some countries to certain members of the genus in connection with rheumatic affections, and also to the poisonous nature of some species when eaten by cattle.

A very hearty vote of thanks to the lecturer concluded the meeting.

East Anglian Horticultural Club.

There was a large gathering of members at the October meeting of this flourishing club, held at the Boar's Head Hotel, Norwich. The preliminary talk was upon the success of the club in coming out first place at the R.H.S. Fruit Show for apples and pears open to societies in the British Isles, this being the second year in succession that such a distinction has been achieved.

In the special and monthly competitions a good display of flowers, fruits, and vegetables was made, special comment being due to Mr. W. Shoesmith, gardener to F. W. Harmer, Esq., Cringleford, and Mr. W. Laws, gardener to G. E. White, Esq., Eaton, for their meritorious collections of fruit. Mr. Williams, gardener to Louis J. Tillett, Esq., Catton, exhibited a fine cypripedium.

The essay for the evening was given by Mr. A. J. Oakley, grower to Messrs. Hobbies, Lim., Dereham, upon "The Cultivation of the Dahlia." Right ably did the essayist deal with his subject, touching upon all points of culture. The many types of the flower were dealt with, even down to the new collarette section, which has so recently sprung into public favour. At the finish of the paper discussion was invited and keenly taken up. Thanks were accorded to Messrs. Hobbies, Lim., for the splendid collection of dahlias sent to illustrate the subject. Many of these were quite new kinds of the firm's own raising.

Among the specialities of the evening were a dish of fine fresh raspberries from Mr. W. Shoesmith; splendid red currants from Mr. W. Laws; and an Up-to-date potato tuber from Mr. T. Notley, Catton Hall Gardens, which scaled 2lb. 15oz.

Reading Gardeners' Association.

The second fortnightly meeting of the present session of the Reading Gardeners' Association was held on Monday, the 2nd inst., in the Abbey Hall.

Mr. F. Townsend, who presided over a large gathering of members, announced that the arrangements for the forthcoming exhibition in the Corn Exchange on November 8 were being pushed forward, and that tickets were now ready for members, whom he urged to make special efforts to ensure another successful show.

The speaker for the evening was Mr. H. Goodger, head gardener to Mrs. Collins, Stoneham House, Tilehurst, and his subject was "Melon Cultivation." This was Mr. Goodger's maiden effort as a lecturer, and his success will encourage him to appear on the platform again. Mr. Goodger dealt with the cultivation of this luscious fruit in the most practical manner, and gave the fullest information respecting the style of house to be employed, temperature, seed sowing, transplanting, mounding, watering, stopping, fertilising, supporting and ripening the fruit. He also touched upon the somewhat debatable question of shading melons. The insect and fungoid pests to which the plants are subject were also fully dealt with and remedies recommended. The lecturer stated that he relied chiefly on four varieties, viz., Sutton's Ringleader, Superlative, Hero of Lockinge, and Eastnor Castle. At the close of his remarks Mr. Goodger received many congratulations on his lecture.

A number of exhibits were staged, and three certificates were awarded, viz., to Mr. F. Townsend, head gardener to the vice-president, for three fine bunches of grapes (Muscat of Alexandria), to Mr. H. Goodger (the lecturer) for a tray containing three dozen well-grown Ailsa Craig onions, and Mr. J. H. Shipley, head gardener to Mr. F. W. Nicholson, the Old Rectory, Shiplake, for what may be described as a unique exhibit of Leonitis Leonurus (Lion's tail). The latter which proved of great interest, is a highly ornamental greenhouse shrub, a native of South Africa, and is not often seen so well grown and flowered as in the specimens staged.

Mr. H. C. Loader, head gardener to Mr. M. H. F. Sutton, Erlegh Park, showed some beautiful late asters, mammoth shell-pink, which were much admired, and Mr. F. Toovey, The Gardens, Leighton Park, staged a dish of very large Blenheim Orange apples. The two latter exhibits were not entered for certificates.

Bristol Gardeners' Association.

A meeting of the above society was held on October 12, at St. John's Parish Rooms, Dr. Shingleton Smith presided over a large attendance. Mr. Drew, representative of the Reading Society, gave a lecture on "Prevention of Insect and Fungoid Pests of Fruit Trees."

The lecturer said it was generally recognised that pests and diseases were more troublesome now than formerly. He believed this had been brought about by errors of cultivation, viz., the indiscriminate use of the dwarfing stock. The remedy for this was the careful selection of healthy stocks, and in order to obtain a more uniform growth, buds and grafts should only be taken from young healthy trees. Another reason for this prevalence of pests, the lecturer said, was that large areas had been planted; disease was more prevalent where there was a large aggregation of trees. To mitigate this evil Mr. Drew advised the making of large air spaces in plantations. Digging and cropping beneath fruit trees the lecturer condemned, as aiding the spread of disease, also the want of recognition of the serious nature of pests. He advised applying remedial measures in time.

For a collection of vegetables Messrs. Binfield, Springham, and Young won in the order given.

For a cypripedium Mr. Woodward had four points, and Mr. Springham three points.

One new member was elected.

Parkstone Gardeners' Association.

On Thursday, October 12, an exhibition of apples and pears was held by the members at their fortnightly meeting. About one hundred dishes were staged, and represented some of the best varieties, in excellent condition. Cox's Orange Pippin was the principal dessert variety staged; it has done remarkably well in Dorsetshire, as in other counties, this year. Lane's Prince Albert, Gascoyne's Scarlet, and Warner's King were also well shown, and Doyenne du Comice and Pitmaston Duchess pear.

For two dishes of apples, one dessert and one kitchen, Mr. May was the winner with Kerry Pippin and Lane's Prince Albert, the last-named being exceptionally fine. Mr. Selway was second with Cox's Orange Pippin and Bramley's Seedling, and Mr. Cox, gardener to G. S. Duberley, Esq., third with Cox's Orange Pippin and Gascoyne's Scarlet. For one dish of dessert apples first honours went to Mr. House, gardener to J. J. Allen, Esq., who had a grand dish of Cox's Orange Pippin. Mr. Groves, gardener to General Poppin, was second with Beauty of Hants, and Mr. May third with Cox's Orange Pippin.

Mr. Gould, gardener to the president (Dr. Crallen) staged a magnificent dish of Pitmaston Duchess pears, and won first honours. With the same variety Mr. Cox was placed second, Mr. Pullman being third with a beautiful dish of Doyenne du Comice.

Mr. Cox staged twenty dishes of apples and pears not for competition, for which a first-class certificate was awarded.

The soil in the district is rather light and sandy, and it is quite remarkable that such fine fruits should have been grown in it this year. About fifty members were present at the exhibition and meeting.

Birmingham Gardeners' Association.

The opening meeting of the autumn session was attended by a good muster of the members, with Mr. C. H. Herbert (the vice-chairman) presiding. Several new members were enrolled. Much interest centred in the subject of the evening, viz., "Mendel and Mendelism," by Mr. Walter E. Collinge, M.Sc., F.L.S., F.E.S. After tendering an apology for introducing to his hearers the somewhat abstruse but absorbing subject "Mendelism" and in which there is a growing interest, also giving a lengthened review of the life of Gregor Johann Mendel, who was born in 1822, and died in 1884, Mr. Collinge drew attention to the strange fact that, although the results of his experiments were published in 1856, they passed unheeded until 1881, when they only received passing notice by Focke; and it was not until 1900 that they were made known to the scientific world.

Mr. Collinge gave an account of the task that Mendel set before him, viz., to obtain some clear conception of the manner in which the definite and fixed varieties known to occur within a species were related to one another. In the common pea (Pisum sativum) he found a normally self-fertilising plant, unlikely to be crossed by insects, and at the same time one that possessed definite fixed varieties breeding true to the type. After entering with some detail into the experiments and their results, which were exemplified by a series of diagrammatic demonstrations. Mr. Collinge reviewed the work that had been done since, especially that of Professor Bateson, Professor Punnett, Professor Biffen, Mr. Hurst, and others. The possibilities of science and its application to plant and animal breeding are scarcely realisable. What at the present moment seems most desirable is that the various results that have been obtained by the students of Mendelism should be put forth in such a style that they will excite the interest of the farmer, fruit grower, stock breeder, and horticulturist.

There is no doubt but that our agricultural colleges might do more in the way of practical demonstrations than they had yet attempted; such demonstrations would show the farmer and horticulturist that science and practice were going hand in hand, and at the same time would stimulate their interest in the advancement that is taking place. What the ultimate effect of Mendel's views will be upon animal and plant breeding it is difficult to say; there yet lies a vast field for research and experiment which, in the light of results already obtained, would seem to contain undreamt of possibilities. We have obtained some glimpses of the importance of these in Professor Biffen's work on cereals, but further work will only add to the importance of the possibilities and widen the outlook.

In the interesting discussion which followed, and in which Mr. C. H. Herbert submitted a few remarks on Primula sinensis, of which genus he is a well-known specialist; Mr. A. B. Burn adverted to the carnation; Mr. J. Palmer to the sweet pea; and Mr. J. Webb to the fugitive colouration in certain varieties of aubrietias. Mr. Collinge, in responding, remarked it afforded him much gratification that his tentative deductions had evoked so great an interest amongst his hearers.

The Beckenham Horticultural Society.

This society commenced its lectures for the session 1911-12 on Friday, the 13th inst., at the Church House, Councillor C. E. Baker, chairman of the Beckenham Urban District Council, presiding, when Mr. Montague Allwood, of Allwood Brothers, Haywards Heath, Sussex, discoursed on the "Perpetual Carnation." There was a crowded audience. To those about to procure stock it was recommended to buy good flowering plants instead of small plants, it being approximately cheaper and better to do so. Pure sand as a medium for propagating is superior to a mixture of soils. A temperature of 40 to 45 deg. with a bottom heat of 5 to 10 deg. above this, would be suitable. It was advised not to strike carnations in autumn, but at such a time that the recently struck plants had the advantage of increasing length of daylight. Varieties wear out, fifteen years would see the end of their usefulness from a commercial point of view. Young plants should be stopped at the fifth or sixth joint, not merely pulling out the incipient leaves at the top, but by removing one or two sets of full-grown leaves. All the shoots on any given plant should not be stopped simultaneously, but done at intervals, so that successional blooming may result. Stopping should be discontinued by the second week in July, a month earlier was advised for the English varieties, of which Britannia is one. Where desired, the young plants could be planted out at the end of April (if prepared for it) a foot apart, and lifted in early July. The plants should be housed in August and September. The change from outside to inside must be made as gradual as possible, and the houses should at no time be entirely shut up.

The lecturer has somewhat modified his practice as to potting, and does not now pot so firmly as in the past, not using a rammer, but still the soil must be firmly put into the pots. Sea sand was advised where procurable, but leaf-mould not admissable; some dry cow manure, or, failing that, horse manure, one part of manure to four parts loam.

For rust, etc., a dry application of equal parts sulphur and air-slaked lime blown over the plants the lecturer considered better than liquid preparations. Flowers should be cut when three parts developed and put in water for 24 hours. One ounce of salt to a gallon of water as an antidote for red spider, to be put on with force.

A very hearty vote of thanks was accorded Mr. Allwood for his splendid lecture. On behalf of Miss Bullivant, Eden Park, the chairman presented to the society the set of books by Mr. A. D. Hall, of Rothamstead, viz., "The Soil," "Fertilisers and Manures," and "The Feeding of Crops and Stock." These are much appreciated. Mr. Piper had on show a nice collection of fruit—apples, pears, and grapes—and a special certificate was awarded; and Mr. Fane secured a certificate for a good example of Vanda cærulea.

HORTICULTURE AND OYSTERS AT COLCHESTER.

Although there is no immediate association between horticulture and oysters, there was a large gathering of horticulturists at the Colchester Oyster Feast on the 12th inst. Their presence in such large numbers may be explained by the fact that Colchester has for its Mayor this year Mr. Frank Cant, who not only enjoys a high reputation as a rosarian, but is held in the highest esteem by horticulturists of all classes who have the pleasure of his acquaintance. Certainly none of the horticulturists had less pleasure in being present at this ancient civic function than had any of the four hundred or more guests who had assembled in the Moot Hall to do honour to Colchester's Mayor and justice to the succulent bivalves which, with roses, have contributed to the fame the town has so many years enjoyed.

For a long series of years the Colchester Oyster Feast has been remarkable for the number of distinguished men present, and this, by common consent, was the most brilliant of these feasts, both as regards the high distinction enjoyed by a large proportion of those present, and the success achieved by the Mayor as host. The Chinese Ambassador had accepted an invitation to be present, but at the eleventh hour was unable to fulfil his engagement; but the Lord Mayor and Sheriffs of London were present, with the distinguished scientist, Sir William Ramsay, and a whole host of celebrities in various walks of life. Among the horticulturists present we noticed Sir Jeremiah Colman, Bart, Sir Albert Rollit, Mr. H. B. May, V.M.H., Mr. J. Hudson, V.M.H., who, as is so well known, occupy prominent positions in the management of the Royal Horticultural Society and the Royal International Horticultural Exhibition, 1912; the Rev. J. H. Pemberton, president; Mr. E. Mawley, V.M.H., hon. secretary; Mr. G. W. Cook, treasurer; the Rev. Page Roberts, Mr. C. E. Shea, Mr. James Brown, Mr. O. G. Orpen, and Mr. George Gordon, V.M.H., vice-presidents; and Mr. H. S. Bartleet, Mr. G. Burch, Mr. R. F. Felton, Mr. G. A. Hammond, Mr. W. R. Hammond, Mr. L. Pawle, Mr. E. J. Holland, Mr. George Paul, V.M.H., Rev. R. Powley, Mr. W. D. Prior, Rev. J. B. Shackle, Mr. W. Tayler, Mr. A. Turner, Dr. A. H. Williams, and Mr. C. C. Williamson, members of the council, of the National Rose Society; Mr. W. Andrews, Mr. W. W. Bunting, Mr. T. Bunting, Mr. S. Cant, Dr. Pallett, and Mr. W. Messenger.

The Moot Hall, in which the function was held, was, as befitted the occasion, richly decorated with roses. The display of these fragrant flowers was, indeed, such as to suggest an autumn rose show rather than a gastronomic feast; and also to contribute materially to the enjoyment of the guests, and especially to the contingent of rosarians. To the right and left of the handsome mace which reclined on the upper table in front of the Mayor, were vases of Madame Melanie Soupert, the soft yellow hue of the blooms of this fine rose being in complete harmony with the bright colouring of the Mayor's insignia of office. The remainder of the table was decorated with vases of well-developed blooms of Madame Abel Chatenay and Molly Sharman Crawford, associated with the blooms of the former were sprays of the foliage of Rosa rubrifolia, and with those of the latter buds of Irish Elegance. From a floral point of view the vases of roses, extending the whole length of the hall, were highly effective, but it is an open question whether they were not rather too numerous. The cross tables were tastefully decorated with small vases containing some six or seven blooms each of one variety, and interspersed with these were a few large vases of blooms in mixed colours. Need it be said the roses were of Colchester growth: but it should be mentioned that their arrangement was carried out by Colchester ladies, who had the help of Mr. R. F. Felton. Associated with the roses on the Mayor's table were numerous silver challenge cups and other trophies for roses which were contributed by Mr. O. G. Orpen, Messrs. Frank Cant and Co., and Messrs. D. Prior and Sons. These were of interest as evidence of the diversity of taste shown by the various societies in the provision of rose trophies, and the success that has been achieved by the rosarians within the district of which Colchester is the centre in the winning of prizes offered for their favourite flowers.

Intellectually the feast was of a high order, and the various speeches that were made in connection with the toast list received close attention throughout the two hours and a half over which they extended. The popularity which the Mayor of Colchester enjoys in his native town was fully exemplified by the enthusiastic reception accorded him when he rose to propose the first of the loyal toasts, namely, that of "The King," and also when he submitted "The Chinese Minister" in a speech that proved one of the most important of the oratorical efforts of the gathering. "Horticulture and Science" had a place in the programme, and to this Sir Jeremiah Colman, Bart., and Sir William Ramsay responded in a manner that gave evident pleasure to their audience. The Mayor's health was proposed by the Lord Mayor, who testified in warm terms to the splendid services Mr. Frank Cant had rendered in the discharge of his duties during the year, and the expressions of approval of the Lord Mayor's remarks afforded ample evidence that he was voicing the opinions of those residents within the borough who had the good fortune to be present.

The comfort of the large number of guests who travelled from London was greatly increased by the forethought of the Great Eastern Railway Company in providing a special train, consisting of splendidly-fitted saloons, for their conveyance to and from Colchester.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1911. October 8 to October 14.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Oct. 8—Sunday	3 48	47	47	52	37
„ 9—Monday	2 18	49	46	54	41
„ 10—Tuesday......	5 42	42	39	55	35
„ 11—Wednesday..	8 6	53	50	59	42
„ 12—Thursday	6 18	41	41	67	37
„ 13—Friday........	—	46	46	57	41
„ 14—Saturday.....	0 30	53	53	61	47
Means ...	(total) 26 42	47	46	58	40

Date. 1911. October 8 to October 14.	Rain.	Temperature of the Soil at 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
Oct. 8—Sunday	—	50	53	56	28
„ 9—Monday	—	50	53	56	28
„ 10—Tuesday	—	48	52	56	25
„ 11—Wednesday..	—	50	52	55	32
„ 12—Thursday	—	49	52	55	29
„ 13—Friday	0·13	51	52	55	39
„ 14—Saturday	—	53	52	55	48
Means ...	(total) 0·13	50	52	55	32

The 29th annual grand chrysanthemum show of the Brighton and Sussex Horticultural Society will be held at the Dome and Corn Exchange on October 31 and November 1. Entries close October 25. The secretary is Mr. A. J. Gaston, 170, Springfield Road.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

ADDRESS.—J. B., Barcombe: We have forwarded the letter, adding the address, as requested.

POLYGONUM BALDSCHUANICUM. — S. P. R., Kensington: This fine climber does not need pruning. When first planted its growths should be carefully tied out over the object to be covered, and in subsequent years a little training and thinning, as necessary, are all that is needed. Once established and given plenty of room to ramble P. Baldschuanicum can take good care of itself, and will flower freely in all but the very worst of positions.

ORCHIDS.—D. B., Manchester: Very many thanks for your appreciative letter: we will do as you wish.

MACARTNEY ROSE.—G. L. L., Bexley: The Macartney rose (Rosa bracteata) is a beautiful Chinese species, practically evergreen, but it is rather tender, and therefore should be planted in a sunny position against a south fence or wall. It is summer flowering, and gives large white fragrant flowers. The best-known form is R. bracteata alba simplex, in which the white petals surround a very large and conspicuous cluster of bright yellow stamens.

CUT-LEAVED ALDER. — N. E. S., Newark: The cut-leaved alder (Alnus glutinosa laciniata), is a very graceful tree, and one we strongly recommend you to plant near the lake-side. It is very hardy, and a good grower, and, besides being an elegant subject, it may serve as a wind break for tender trees, though it looks best when planted so that each tree can develop its beauty without the too close attention of neighbours. There is a golden-leaved form of the type, and also a variegated form of the oak-leaved alder; the former is especially ornamental.

INTERNATIONAL HORTICULTURAL EXHIBITION SCHEDULE.—C. P., Truro: The schedule of prizes for the Royal International Horticultural Exhibition to be held at Chelsea from May 22 to May 30, 1912, inclusive, may be obtained on application to Mr. T. Geoffrey Henslow, 7, Victoria Street, Westminster, S.W.

POND WEEDS.—C. R., Devon: We do not know of any special method of clearing the ponds and lakes of such water weeds as the potamagetons. A regular system of cleaning would keep the weeds in check, but probably the water supply would continue to bring down weed seeds. If any of our readers can suggest special measures for keeping lakes and ponds clear of water weeds we shall be glad if they will write us on the subject.

CLEMATIS, ETC.—S. P. R., Kensington. Shorten the growth of the Jackmanni clematis to half its length, and next year train the strongest shoots over the fence. Subsequently keep the growths moderately thinned out, cutting the unnecessary stems right back, so as to induce basal growth. Clematis Henryi is a fine variety of the lanuginosa section, and it bears a profusion of large creamy-white flowers, it would succeed on a wall or fence with a south-west exposure. A passion-flower would not be a success in the shady corner, the selection for such a spot is limited, especially as you rule the ampelopsis and ivies out of order. Aristolochia sipho and Vitis striata would do if the position is a warm one, but we could advise you better if we had further information concerning the site.

SPOTTED APPLES.—L. V. B., Henbury: The apples show clear signs of attack from Bitter Rot or Bitter Pit, a fungus to which we referred in a quite recent issue. Spraying and good cultivation will secure clean fruits.

NAMES OF PLANTS.

Under this heading we can only undertake to name species and well-marked varieties of plants, and not florists' flowers. Specimens should be packed in stout boxes with damp (not wet) moss, or some leaves, as packing material, to ensure their reaching us in a fresh state. It is essential that flowers must accompany specimens of flowering plants, that fern fronds be fertile, and that numbers be firmly attached to the specimens so that they can be seen without any untying. We cannot promise to name more than six specimens at one time from any one correspondent.

M. L., Sidmouth.—Berberis Darwini.

D. N., Nuneaton.—Plumbago Larpentæ.

D. B. T., Dover.—A small late flower of Rudbeckia speciosa.

C. O., Gloucester. — Campanula latifolia and a variety of Eleagnus pungens.

W. F. R., Fife.—1 and 3, growth and fruit of Arauja sericofera; 2, Cassia lævigata.

C. R., Devon.—The water weeds are Potamagetons, possibly forms of P. pusillus, but very difficult to determine from small specimens.

C. F. M., Oswestry.—1, Callicarpa purpurea; 2, Calceolaria Burbidgei; 3, Pelargonium Clorinda; 4, Cypripedium insigne Sanderæ.

F. E. G., Harrogate.—1, Euonymus radicans; 2, Polypodium aureum; 3, Begonia fuchsioides; 4, Eucalyptus citriodora; 5, Cestrum elegans; 6, Dicksonia antarctica.

NAMES OF FRUIT.

When sending fruits for naming, will our readers be good enough to send good specimens, as without these it is not possible to accurately determine the varieties. Pack firmly, using light tin or wood boxes, and send not more than six varieties at once. Label each specimen and enclose letter with the fruit, whether a separate notification is sent or not. Address the packages to the Editor, Gardeners' Magazine, as advised in the notice at the head of "Answers to Correspondents."

J. F., Weston-super-Mare.—Warner's King.

W. W., Hexham.—1, Bramley's Seedling; 2, Newton Wonder.

F. T. K., Bedford.—Bismarck apple; the pear is Doyenne du Comice.

B. N. J., Harpenden.—1, Royal Jubilee; 2, Hoary Morning; 3, Lady Henniker.

P. S., Swindon.—1, Hollandbury; 2, Peasgood's Nonsuch; 3, Golden Noble; 4, Ecklinville.

F. B. C., Chertsey.—1, Louise Bonne of Jersey; 2, Beurre Bosc; 3, Durondeau; 4, Beurre Diel; not recognised.

CATALOGUES RECEIVED.

R. H. BATH, LIM., WISBECH.—The Wisbech firm grows bulbs extensively, and so their catalogue is specially interesting because the bulbs offered have been chiefly produced at the Floral Farm.

J. JEFFERIES AND SON, CIRENCESTER.—A good general list devoted entirely to bulbs, and including a wide range of kinds and varieties.

WM. BAYLOR HARTLAND AND SONS, PATRICK STREET, CORK.—The Ard Cairn daffodils and tulips are well known, and in the catalogue before us one is surprised to find how many varieties of these flowers have been raised by Mr. Hartland.

YOKOHAMA NURSERY COMPANY, LIM., YOKOHAMA, JAPAN.—This vastly interesting catalogue is fully illustrated, and contains some coloured plates. The leading subjects offered are liliums, dwarf trees, fern balls, Cycas revoluta, chrysanthemums, paeonies, bamboos, and ivies. The London office is Craven House, Kingsway.

WM. DEAL, BROOKLANDS KELVEDON.—This freely-illustrated list is chiefly devoted to sweet peas, and especial prominence is given to such home-raised varieties as Juliet, Scarlet Monarch, Bertrand Deal, Empress, and Colleen.

JAMES MURRAY AND SONS, DEPTFORD, S.E.—When planting beds or borders of bulbs it is very important to know what varieties are early, mid-season, or late flowering and which flower simultaneously. Such information is given in Messrs. Murray's catalogue in connection with hyacinths and tulips.

G. COOLING AND SONS, BATH.—As in previous years the Bath firm make a special feature of collections of bulbs.

MARKETS.

◆

COVENT GARDEN.

Flowers.

The demand is fairly good, and supplies are steady.

		s. d.		s. d.
Adiantum cuneatum	per doz. bun.	3 0	to	4 6
Arums	per doz.	3 0		5 0
Asparagus plumosus	per doz. bun.	8 0		15 0
,, Sprengeri	per doz. bun.	8 0		12 0
Asters	per doz. bun.	3 0		8 0
Carnations	per doz.	2 0		3 0
,,	per doz. bun.	5 0		12 0
Cattleyas	per doz.	8 0		15 0
Chrysanthemums	per doz. bun.	5 0		10 0
,,	per doz. blooms	1 3		6 0
Coreopsis	per doz. bun.	1 6		2 6
Croton leaves	per bun.	1 0		1 6
French fern	per doz. bun.	2 6		4 0
Gardenias	per doz.	1 6		2 6
Lapageria	per doz.	2 0		3 0
Lilium auratum	per doz.	2 6		3 6
,, speciosum	per doz.	1 6		2 6
,, longiflorum	per doz	4 0		6 0
Lily of the Valley	per doz. bun.	8 0		18 0
Marguerites	per doz. bun.	2 0		2 6
Mignonette	per doz. bun.	2 6		3 0
Odontoglossums	per doz. blms.	3 0		4 6
Pelargoniums	per doz. bun.	5 0		9 0
Physalis	per doz. bun.	7 0		10 0
Roses	per doz.	1 0		3 6
Smilax	per doz. trails	2 0		3 6
Statice	per doz. bun.	3 0		4 0
Stocks, white	per doz. bun.	5 0		8 0
Tuberoses	per doz.	0 5		0 9
Viola, small blue	per doz. bun.	0 9		1 3
Violets	per doz. bun.	2 0		6 0

Fruits.

Apples and grapes are very plentiful, and though there is a good demand prices are a little down.

		s. d.		s. d.
Apples, English, dessert	per ½-sieve	3 6	to	6 6
,, Cooking	per bush.	2 6		7 6
,, Nova Scotia	per barrel	10 0		18 0
Bananas	per bun.	4 0		10 6
Blackberries	per peck	1 6		3 0
Cob nuts	per doz. lb.	5 0		6 0
Cranberries	per case	12 0		13 6
Figs	per doz.	1 6		3 0
Grapes, English	per lb.	0 8		3 6
,, Guernsey	per lb.	0 4		1 3
,, Almeria	per barrel	9 0		16 0
Lemons	per case	9 0		25 0
Melons	each	0 6		2 6
Oranges, Denia	per case	12 0		30 0
,, Jamaica	per case	10 0		14 0
Pears, English	per ½-bush.	2 6		8 0
,, French	per crate	3 0		14 0
,, American	per barrel	25 0		30 0
Pineapples	each	1 6		4 0
Walnuts, English	per ½ bush.	2 0		6 0

Vegetables.

There is a marked improvement both in demand and supply.

		s. d.		s. d.
Artichokes, Globe	per doz.	2 0	to	3 0
,, Jerusalem	per bush.	2 0		3 0
Beans, runners	per bush.	5 0		8 0
Beet	per bush.	2 6		3 6
Cabbage	per tally	7 0		10 6
Carrots	per doz. bun.	1 0		1 6
Cauliflowers	per doz.	1 6		3 0
Celery	per doz. bun.	7 0		12 0
Cucumbers	per flat	4 0		7 0
Endive	per doz.	1 6		3 0
Horseradish	per doz. bun.	8 0		15 0
Leeks	per doz.	2 0		3 0
Lettuce	per doz.	1 0		2 0
Marrows	per tally	5 0		12 0
Mint	per doz. bun.	3 0		5 0
Mushrooms	per doz. lb.	9 0		12 0
Onions, Spanish	per case	7 0		8 0
Parsley	per ½-sieve	1 6		3 6
Parsnips	per bag	2 6		3 0
Radishes	per doz. bun.	0 9		1 3
Spinach	per bush.	4 0		6 0
Tomatoes	per doz. lb.	2 0		4 0
,, Guernsey	per doz. lb.	1 6		3 0
Turnips	per doz. bun.	1 6		2 6
Watercress	per doz. bun.	0 6		0 6½

LONDON POTATO MARKETS.

Liberal supplies continue to arrive, and there is a steady demand.

		s. d.		s. d.
Blackland	per ton	70 0	to	80 0
British Queen	per ton	75 0		90 0
Eclipse	per ton	75 0		85 0
Epicure	per ton	70 0		75 0
Essex	per ton	70 0		75 0
Evergood	per ton	65 0		75 0
Kents	per ton	80 0		85 0
King Edward	per ton	80 0		90 0
Up-to-Date	per ton	80 0		100 0

BULBS.—A practical treatise on the cultivation of hardy, hothouse and greenhouse bulbous and tuberous rooted plants is "Bulbs and their Cultivation," by T. W. Sanders, price 2s. 6d. net, or by post 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

FORTHCOMING ENGAGEMENTS.

MONDAY, October 23.—National Chrysanthemum Society; Floral Committee at 3 o'clock at Essex Hall, Strand; General Committee at 7 o'clock at Carr's Restaurant, Strand.

TUESDAY, October 24.—Royal Horticultural Society; Committees meet at 12 o'clock; Lecture at 3 p.m. on "Theory of the Origin of Species and Varieties by Mutation," by the Rev. Prof. G. Henslow, V.M.H.
Kent County Chrysanthemum Show, at Blackheath; two days.

WEDNESDAY, October 25.—Croydon Chrysanthemum Show; two days.
Hereford Fruit and Chrysanthemum Show; two days.
Irish Gardeners' Association.

TUESDAY, October 31.—Brighton Chrysanthemum Show; two days.
Bournemouth Chrysanthemum Show; two days.

WEDNESDAY, November 1.—National Chrysanthemum Society, Crystal Palace; three days.
Bath Chrysanthemum Society.
Faversham Chrysanthemum Show.

THURSDAY, November 2.—Torquay Chrysanthemum Show; two days.
Linnean Society Meets.
Manchester and North of England Orchid Society.

FRIDAY, November 3.—National Horticultural Society of France, Fruit Show, Paris; ten days.

SATURDAY, November 4.—French Horticultural Society of London.
Wood Green Chrysanthemum Show.

TUESDAY, November 7.—Royal Horticultural Society; committees meet at 12 o'clock; lecture at 3 p.m. on "The Cultivation of Figs in Pots," by Mr. James Hudson, V.M.H.; Scientific Committee at 4 o'clock.
Cardiff Chrysanthemum Show; two days.
Dorchester Chrysanthemum Show; two days.
Barry Chrysanthemum Show; two days.
Buxton Chrysanthemum Show.
Haslemere Chrysanthemum Show.

THURSDAY, November 9.—Forest Gate and Stratford Chrysanthemum Show; three days.
Exeter Chrysanthemum Society; two days.
Putney Chrysanthemum Show; two days.
Bedford Chrysanthemum Show.

FRIDAY, November 10.—Bradford Chrysanthemum Show; two days.
Leeds Paxton Society's Chrysanthemum Show; two days.
North Lonsdale Chrysanthemum Show.

MONDAY, November 13.—United Horticultural Benefit and Provident Society.

TUESDAY, November 14.—Ulster Horticultural Society; two days.
Plymouth Chrysanthemum Show; two days.
Chester Chrysanthemum Show; two days.
Saltaire Rose Society's Annual Meeting.

Wednesday, November 15.—Newcastle Chrysanthemum Show.
North of England Horticultural Society, at Newcastle

THURSDAY, November 16.—Scottish Horticultural Association's Chrysanthemum Show; three days.
Newport (Mon.) Chrysanthemum Show.
Aylesbury Chrysanthemum Show.
Manchester and North of England Orchid Society.
Linnean Society Meeting.

FRIDAY, November 17.—Bolton Chrysanthemum Show; two days.

MONDAY, November 20.—National Chrysanthemum Society; Floral Committee at Essex Hall, 3 p.m.; General Committee at Carr's Restaurant, 7 o'clock.

TUESDAY, November 21.—Royal Horticultural Society; committees meet at 12 o'clock; lecture at 3 p.m. on "The 1912 International Horticultural Exhibition," by Mr. Edward White; Scientific Committee at 4 o'clock.

FRIDAY, November 24.—Aberdeen Chrysanthemum Show; two days.

WEDNESDAY, November 29.—Irish Gardeners' Association.

THURSDAY, November 30.—Royal Horticultural Society's Colonial Fruit Show; three days.
Manchester and North of England Orchid Society.

The only resemblance between a Pine Spray Syringe and others is in the shape of the barrel. The metal is more substantial. For the rest, the combination spraying head renders Spray, Rose, and Bend instantly obtainable without the addition or removal of a single fitment, while the adjustable leather bucket plunger gives perfect suction, never allows water to escape past it and up your sleeve, and wears interminably.

A written request from your ironmonger or seedsman, and a Syringe will be sent in 24 hours for your approval. Price **10/6.** Sole proprietors and manufacturers, **Robinson Bros., Ltd., West Bromwich.**

PINE SPRAY SYRINGE (patent).

RIVERS'

Fruit Trees, Roses,
Vines, Figs, Oranges,
AND
Orchard House Trees.

A LARGE AND SELECT STOCK
ALWAYS ON VIEW.

ILLUSTRATED AND
DESCRIPTIVE CATALOGUE
POST FREE 3d.

THOMAS RIVERS & SON
Sawbridgeworth, Herts.
STATION: HARLOW, G.E.R.

CHARLESWORTH & CO.,
Hayward's Heath, Sussex,
ORCHID SPECIALISTS
IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

CORONATION CARNATIONS.

I am proud to inform my patrons and friends that the unique honour and privilege of supplying the Carnation blooms for the Coronation bouquets was entrusted to me in its entirety, a fact which speaks volumes for the unequalled excellence of my flowers, and places my culture on the topmost rung of the Carnation ladder.

Catalogue of the finest collection
ever offered, free on application to

CHARLES BLICK, Warren Nurseries, Hayes, Kent.

ORCHIDS. ORCHIDS.
Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.
STOVE AND GREENHOUSE PLANTS OF ALL KINDS
Please Write for List.
JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

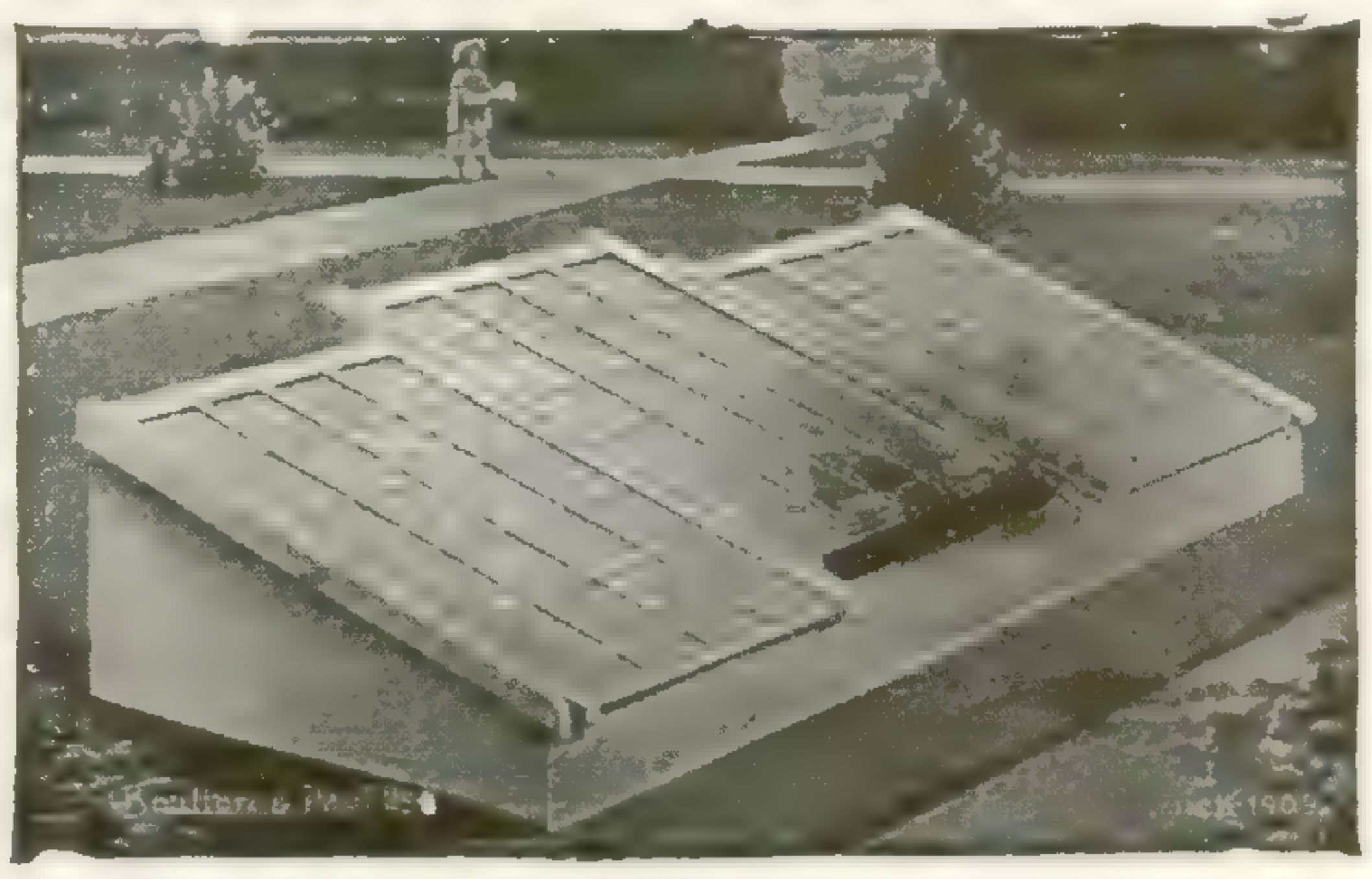
COCKERS'
FAMOUS HARDY
SCOTCH
GROWN
ROSES
HAVE
BEEN
THE
HARDIEST
ROSES IN
THE WORLD.

Awarded the CHAMPION PRIZE (Silver Cup) and the EIGHT GUINEA GOLD MEDAL for best Rose in Show at the Great Rose Show, Festival of Empire Imperial Exhibition Crystal Palace

Catalogues
Now Ready Post Free
J. Cocker & Sons
ABERDEEN.

PRESERVE YOUR PLANTS
during the Winter Months by using our well made

No. 75. MELON AND CUCUMBER FRAME.
Painted three coats, glazed 21 oz. glass.



4 ft. by 6 ft. ... £2 0 0 | 8 ft. by 6 ft. ... £3 0 0

Garden Frames
in every variety always in stock.
High-class Finish in the Very Best Materials.

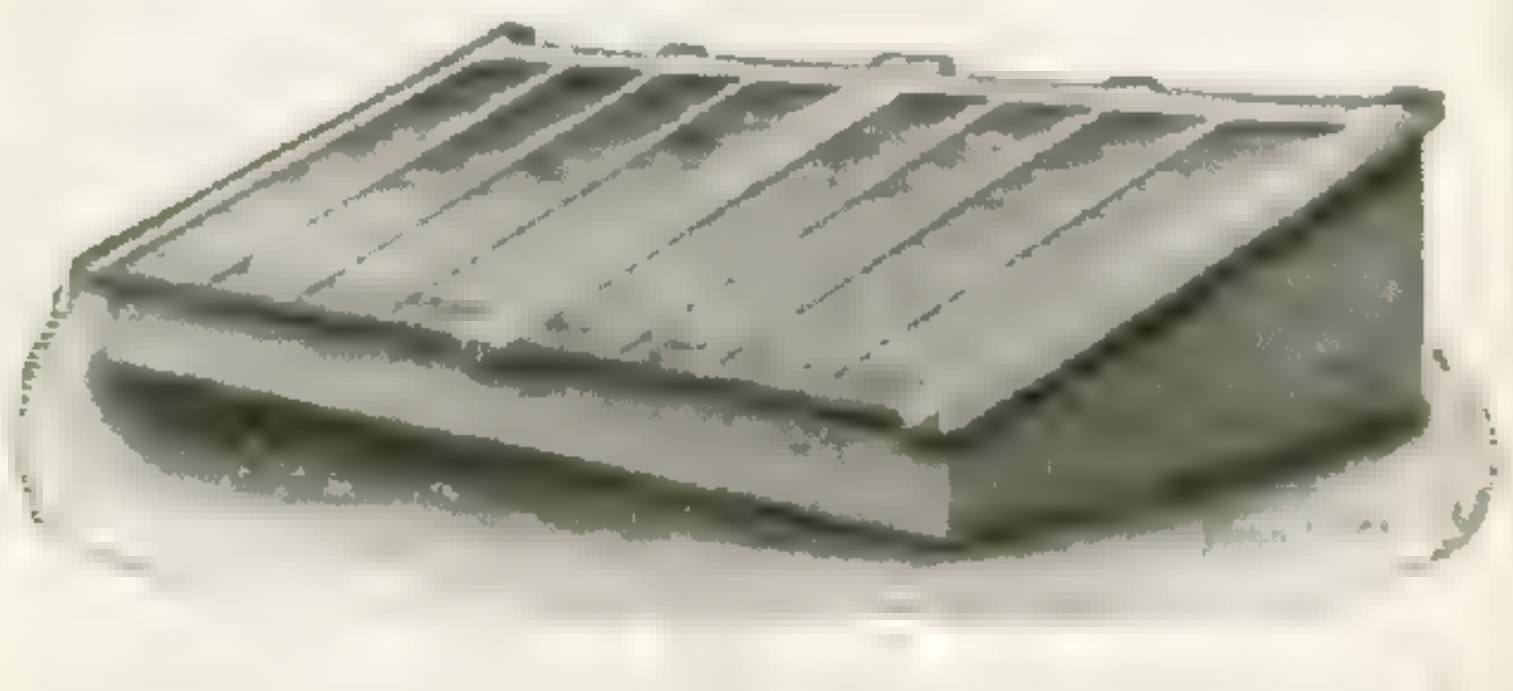
Pit Lights.
6 ft. 1½ in. by 4 ft. Painted and Glazed 14/- each
Unpainted and Unglazed ... ... 5/- ,,

Double Glazed Lights.
4 ft. 7 in. by 4 ft. 3 in. Painted and Glazed, 15/6 each

Improved Fruit Trays.
30 in. by 19 in., 18/- doz.; 24 in. by 15 in., 15/- doz.
Carriage Paid on one dozen Trays and over.

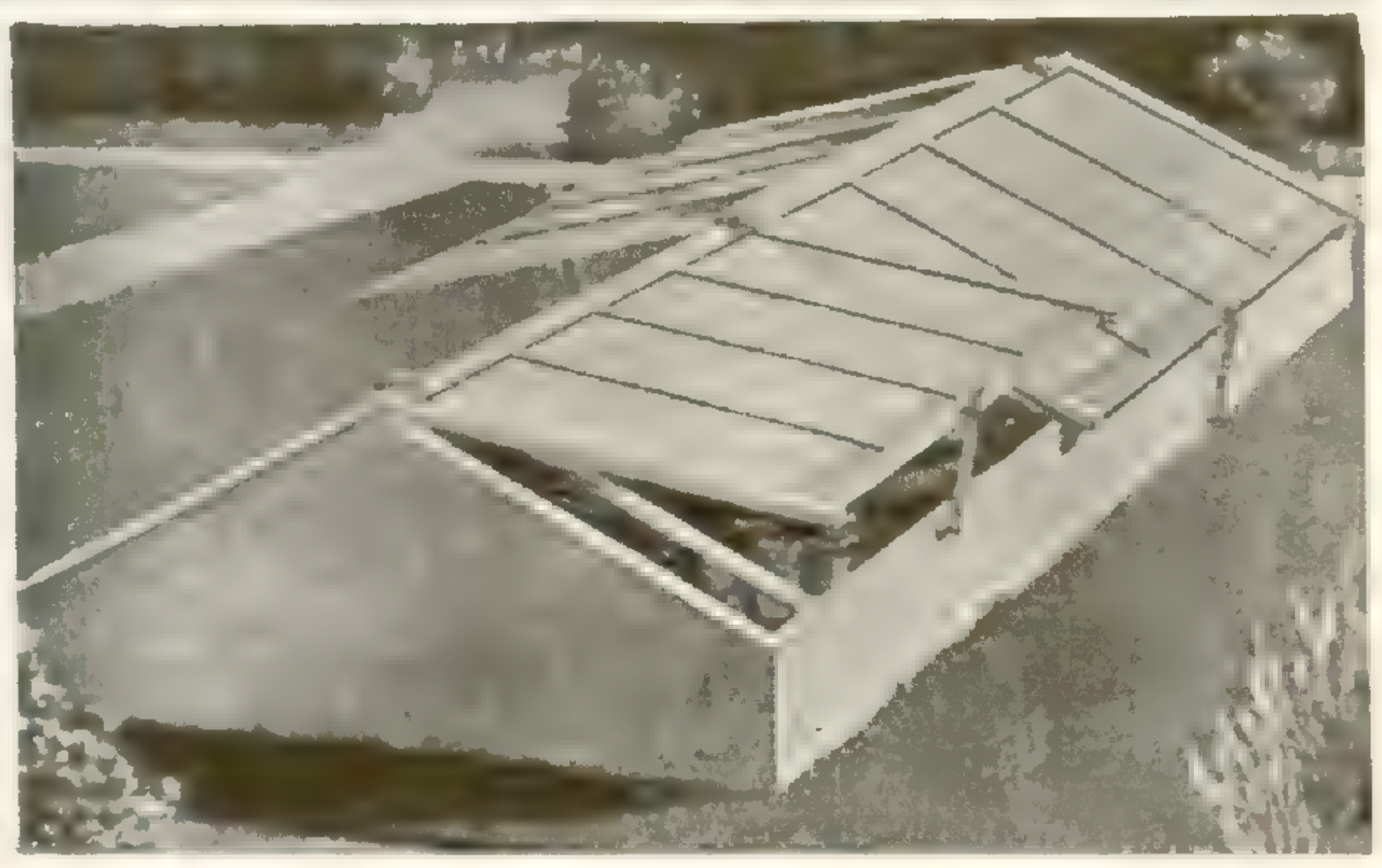
Reed Mats. 4 ft. 6 in. square, 20/- doz.

SEND FOR PRICE LISTS.



No. 77. VIOLET FRAME
(as illustrated).
6 ft. by 4 ft. £1 15 0
9 ft. by 4 ft. 2 7 6

No. 60.
PORTABLE
PLANT
PRESERVER
6 ft. by 3 ft., £1 14 0
6 ft. by 4 ft., £2 5 0
All Frames and lights Painted three coats. Glazed with 21 oz. glass.



Carriage Paid on Orders of 40/- value to most Goods Stations in England and Wales.
BOULTON & PAUL, LTD., NORWICH.

FORBES' 1911
By Appointment
ILLUSTRATED PLANT CATALOGUE
Nearly 200 pages.
GOLD MEDAL SPECIALITIES

Contains carefully revised **Descriptions, Colour, Height, Time of Flowering, British or Common Names, Prices,** etc., of the **Grandest Collections of ASTERS, CARNATIONS, DELPHINIUMS, PÆONIES, PENTSTEMONS, PHLOXES, PYRETHRUMS, HARDY BORDER PLANTS,** carefully prepared **PLAN** for arranging

HARDY PLANT BORDERS, etc.

Experts unanimously accord **FORBES' CATALOGUE** the unique distinction of being the **best** and most **reliable** up-to-date **Reference Book** extant.

Free for cost of postage, 2d.

JOHN FORBES (HAWICK) LIMITED,
(Dept. I), The King's Nurserymen,
HAWICK, SCOTLAND.

PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J. R. PEARSON & SONS
LOWDHAM, NOTTS.

PLANTING SEASON.
SEND FOR OUR
Descriptive Catalogue
OF
Ornamental Trees and Shrubs, Roses, Rhododendrons, Climbers, Fruit Trees, Forest Trees, Herbaceous and Alpine Plants.
Advice given on all matters appertaining to
LANDSCAPE GARDENING.

GEO. JACKMAN & SON,
Woking Nurseries, Surrey.
Established over a Century. (Nurseries 200 acres)

—ORCHIDS—
1,000 DUPLICATES, CYPRIPEDIUMS AND ODONTOGLOSSUMS, Very Cheap.
Some Valuable Exemplars amongst them.
Write for List to—
REV. J. CROMBLEHOLME, CLAYTON-LE-MOORS, ACCRINGTON.

TREE CARNATIONS
The Newest and Best Varieties.
Strong, healthy and well-rooted plants only supplied
Catalogues free.
E. J. WOOTTEN, Fairoak, EASTLEIGH.

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.
A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**
Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.
Telephone:—Enfield, No. 1 and 2.
STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

Orchids! Orchids!! Orchids!!!
The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application.—**J. C. FRAZER, Orchid Collector, KALEWA, BURMA.**

N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana, Vanda Cœrulea Lushai Hill variety, dark blue type; Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.

NOTES OF OBSERVATION.

Sternbergia lutea.—This is now most brilliant in the alpine garden, planted in a good depth of sandy soil, and near a large boulder which shelters it from the wind. It is quite at home here, and attracts attention at once, the golden-yellow flowers being both large and bright. Planted in clumps, the sternbergia is unusually effective at this season.—W. A. Cook.

Zonal Pelargonium Salmon Paul Crampel.—This comparatively new variety has gained many admirers this season, and is now widely distributed. Except in the colour of the blossoms it is a counterpart of the well-known Paul Crampel, and, like it, has done remarkably well during the season of 1911. In the wet weather of the preceding year the typical Paul Crampel was equally good.—W. T.

Helenium Riverton Gem.—This has with me proved itself to be one of the best of dry weather plants, while the blossoms have resisted the sun well. What is more, with the wealth of yellow-flowered composites in bloom at the same time the distinct colour of this helenium causes it to stand out markedly from its associates. Notwithstanding that my plant is in a sloping border facing due south, and consequently exposed to the burning sun day after day, it retained its foliage well. The last week in July the earliest blooms opened, and at a corresponding period in September it was still very beautiful. The warm terra-cotta hue of the blossoms was much admired, while a marked feature is the change that takes place afterwards, as they become more of an old-fashioned wallflower tint.—W. T.

Protecting Rock Plants.—There are many choice plants which have a dislike to the continued wet and dampness of late autumn and winter, therefore it is necessary to afford them some protection. This should be provided by placing sheets of glass overhead to prevent the rain from reaching them. There must be nothing in the shape of coddling, unless the subject is a tender one. The androsaces suffer greatly from excessive moisture, and if not protected, they frequently damp off. Onosma taurica is another plant which must be kept fairly dry at the collar. Eritrichium nanum is an exceedingly difficult subject to deal with, and will certainly rot if not kept dry during its resting period, which usually extends from October until February. Other plants requiring the same treatment are soldanellas, Saxifraga Boydi and S. Burseriana, and opuntias. Much depends on the locality, as some gardens suffer more from dampness than others, and while in dry atmospheres plants will survive the winter totally unprotected, yet, where dampness prevails, they die unless looked after.—E. C. Pooley, Gnaton Gardens.

CONTENTS.

PAGE
A Few of the Newer Roses 775
Answers to Correspondents 787
Apple Cox's Orange Pippin 774
Exhibitions and Meetings 785
Exhibiting Roses in Baskets 773
Feeding Perpetual Carnations in Autumn 771
Hardy Plant Chat 783
How and When to Feed Roses 781
National Sweet Pea Society 772
New Plants, etc. 777
Notes of the Week 769
Notes on Grouping Roses 783
Preparation of Rose Beds 774
Rampant Climbing Roses 782
Roses for Forcing 773
Roses for House Walls 780
The Twelve Best Wichuraiana Roses 776
Three New Roses 779
Transplanting Peach Trees 778
Work for Week 784

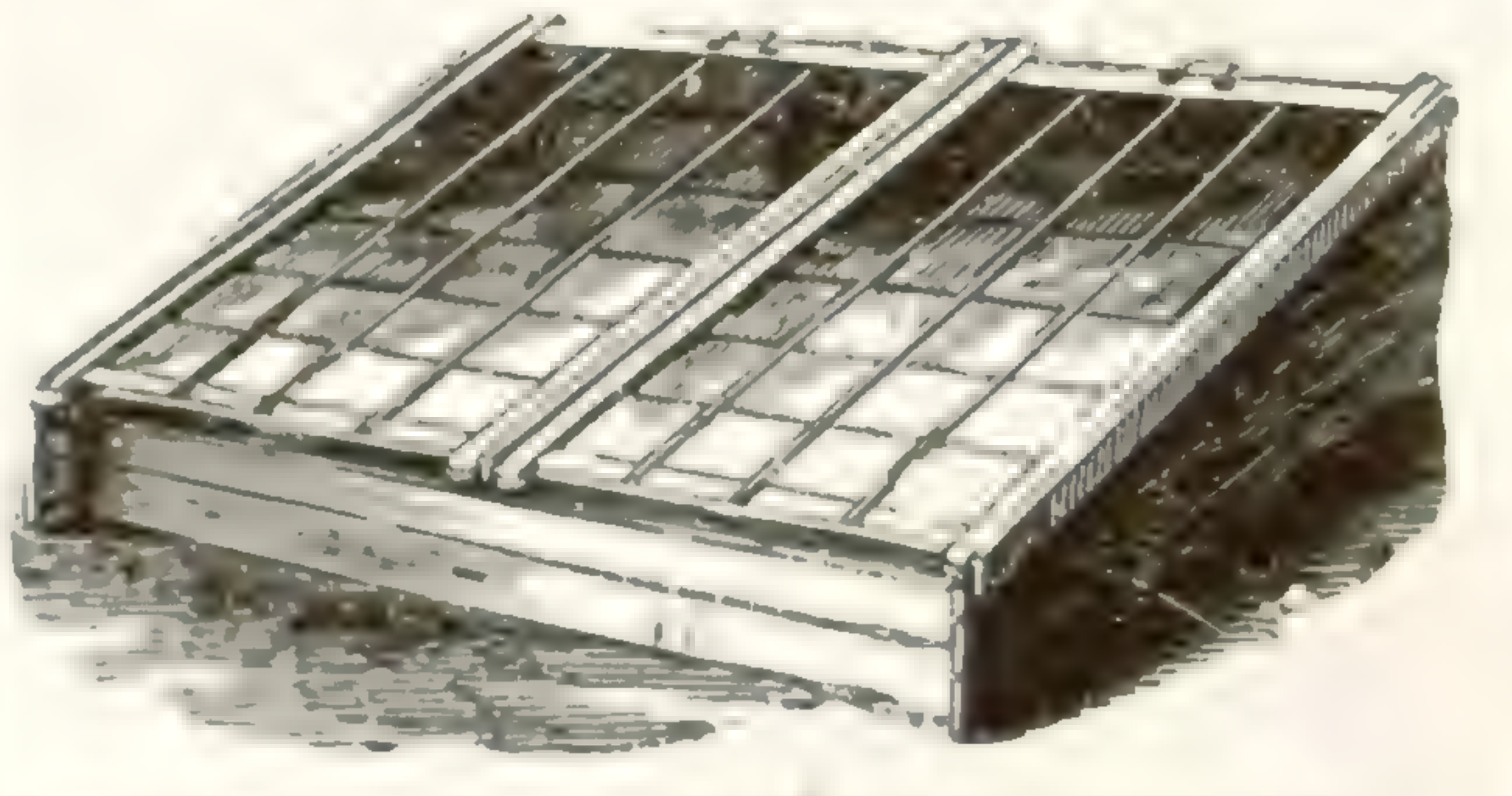
ILLUSTRATIONS.

Portrait of Mr. James Dixon, 769; An Attractive Basket of the Lyon Rose, 773; A Beautiful Basket of Rose Seabird, 775; Nymphæa Listeri 777; Rose British Queen, 778; Rose Magnolia 779; Rambling Rose Cinderella, 781; A Tastefully-arranged Group of Dorothy Perkins Rose at Kew, 783.

100,000 BORDER CARNATIONS
EVERY GOOD VARIETY IN COMMERCE.
Healthy Plants. Popular Prices.
Largest Growers and Most Successful Exhibitors in the United Kingdom.
ARTHUR R. BROWN, Ltd.,
Wychall Nurseries, Kings Norton.
Catalogue on Application.

CARNATION PLANTING SEASON.
NOW IS THE TIME TO PLANT CARNATIONS,
Either in Outdoor Beds or in Pots for Wintering.
We offer good, strong, well-rooted Layers in 12 Choice named varieties, either
SELFS, FANCIES, and YELLOW GROUND PICOTEES,
Or 4 of each sort for 5/- post free. 12 Newer varieties, 7/6
Splendid strong Clumps of Double Violets, in all best varieties, 4/- per doz. Comte de Brazza, 5/- per doz.
List of Named Sorts free on application.
BLACKMORE & LANGDON,
Twerton Hill Nursery, BATH.

PORTABLE
CUCUMBER FRAMES.
OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.		£	s.	d.
1-light 4 ft. by 6 ft.	CASH PRICES.	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.	CARRIAGE PAID.	5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.
R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON MANCHESTER.

WANTED, Viola Cuttings, Maggie Mott, Archie Grant, Mrs. Chichester, White Swan, Marchioness, Admiration, Hector McDonald, Miss Proctor, Stanley Saul, Lizzie Paul, King Cup, Kitty Bell, Isolde, Royal Sovereign, Sydney, Rufford Abbey, Bronze Kintore, Willie Farmer, White Empress, Goldfinch. Also Cuttings of Calceolaria Golden Gem. Cash or Exchange. Price and quantity to H. B. MAY and SONS, The Nurseries, Chingford.

WALLFLOWERS.—Plant now, Sutton's Giant Blood Red; also Sutton's Superb Mixed; very choice; large plants. 50, 10d.; 100, 1s. 6d.; free. ROGERS, Tennyson Rd., Hutton, Essex.

AMERICAN TREE CARNATIONS, fine bushy plants, for winter flowering, in 5-inch pots, best varieties, 10s. 6d. per dozen. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

WANTED, Calceolaria Cuttings, Golden Gem and Brown Sultan. WM. TYLER, Nurseryman, Montagu Road, Upper Edmonton, Middlesex.

FOR SALE, 18 Cattleyas, Trianæ and Mossiæ, six pans Cœlogyne cristata, two Strelitza regina, 10-inch pots, or exchange Tree Carnations. HARRIS, Serlby Gardens, Bawtry.

SASH BARS.—Special lines in certain lengths only, 1½ by 1, 2s. 6d. 100ft.; 3 by 1½, 5s. 9d. 100ft.; quotations for special lengths or for any kind of timber, garden lights, greenhouses, and woodwork. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

J. J. THOOLEN, The EXPORT Nurseries,
Heemstede, Haarlem, Holland,
Established 1884,
Has the honour to announce that his Illustrated Price List of Bulbs and Plants in English, Autumn, 1911, at lowest prices, will be sent post free on application. No Charge for Packing. Orders of 10/- and above entirely Free to Destinations in England, Scotland, and Ireland, etc. First Quality guaranteed.
Some sorts of Bulbs noted out of Price List.

	Per 100. s.	d.	Per 1,000 s.	d.
Hyacinths, in the finest mixture for bedding or forcing	7	8	72	4
Hyacinths, single, first size, named, in 25 leading sorts, red, white, and blue vars., equal quantities, my selection	15	0	—	
Tulips, single early, in the finest mixture	2	0	18	4
Tulips, Darwin, mixed	3	0	25	0
Tulips, double, in the finest mixture...	2	2	20	0
Anemones, single mixed	1	4	12	0
Anemone, The Bride, pure white ...	1	4	12	0
Crocus, 1st size, in the finest mixture	1	4	12	0
Crocus, 2nd size, in the finest mixture	0	9	7	0
Scilla campanulata, blue bells	2	0	—	
Scilla campanulata, white bells	2	0	—	
Scilla sibirica, rich blue	1	6	14	6
Iris, Spanish, mixed	0	7	5	0
Iris, English, mixed	2	0	16	8
Narcis., single, in the finest mixture...	1	4	12	6
Narcis., Trumpet, in the finest mixture	2	6	20	0
Narcis., double, fine mixture	2	6	20	0
Narcis-Polyanthus, finest mixed ...	3	6	30	0
Snowdrops, Elwesi, the Giant Snowdrop	1	6	13	6
Ranunculus, French, double mixed ...	0	9	7	0

250 Bulbs of the same kind will be charged at the 1,000 rate; 25 at the price per 100; 6 at the price per 12.
Ask for Illustrated Price List and see the Collections.

WATERPROOF BOOTS

made of the best Chrome, especially for Gardeners. With good hard-wearing soles and water-tight tongue.
PRICES—
10/- 12/6 13/6
Post Paid.
Nailed if required.
For light wear, our special made Box Calf, splendidly finished.
PRICES—
8/6 10/6 12/6
Satisfaction guaranteed or money returned.
Boots changed in case of misfit.
Sizes 5 to 11. Narrow, Medium, or Wide Toes.
B. CRISP & Co.,
132, Wood Street,
KETTERING

CHARGES FOR ADVERTISEMENTS IN THE GARDENERS' MAGAZINE.

	£	s.	d.
Five Lines and under	£0	2	6
Per Line beyond	0	0	6
„ Inch	0	6	0
„ Half Column	1	10	0
„ Column	8	0	0
„ Page	9	0	0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— & Co

Telephone Numbers:
Editorial and Printing Depts. .. ... 831 Holborn.
Advertising and Publishing Depts. ... 2140 Holborn.

Offices: 148 and 149, Aldersgate Street, London.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 31; married when suited; excellent references. Address, Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working); life experience Inside and Out; 9½ years' excellent reference as Head; age 33; married, no family. FAULKS, 53, Leigh Road, Eastleigh, Hants.

GARDENER (Head of two or more) seeks RE-ENGAGEMENT; life experience, Inside and Out; 23 years Head in last place; good references. J. KIGHTLEY, Roade, Northamptonshire.

HEAD GARDENER, where several are kept, seeks SITUATION; well up in Gardening in all its branches, and understands Stock; 9 years' excellent character and several good testimonials of previous places. F. J. ASHDOWN, Chiddingfold, Surrey.

GARDENER (Head Working) seeks SITUATION, with 2 or 3 under; life experience with Vines, Peaches, Melons, Flowers, and Vegetables; married, one child. J. PETTY, Marchwood, Southampton.

GARDENER (Head), life thorough experience, Fruits, Flowers, Vines, Peaches; Inside and Out; thoroughly understands Roses, Herbaceous Borders, Lawns, Trees, Flowering Shrubs; excellent character; 4 years Outside Foreman; 3 years Head Working Gardener; left through death; married; age 33; three children. HUDSON, Cupid Green, Hemel Hempstead.

GARDENER (Head) seeks RE-ENGAGEMENT with Lady or Gentleman requiring thorough practical Man in all branches; last place 5 years Head with 12 to 8 men under; highest references from all employers; age 34; married, no family; abstainer.—F. WESTRON, Sunnybrae, Cippenham, Slough, Bucks.

GARDENER (Head Working, where three or four are kept).—Mr. CHILCOTT, Ampton Hall Gardens, Bury St. Edmunds, highly recommends his Foreman; age 31; life experience in all branches; 5 years here; married when suited.

GARDENER (Head Working); life experience in all branches; highest references; understands Oil Engine; age 40; family, 3 boys. E. STEVENS, 13, Connaught Road, Newbury, Berks.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working).—Mr. R. W. Williamson, of the Croft, Didsbury, near Manchester, strongly recommends his late gardener, HENRY ARNOLD, who has been with him for over 20 years; is well experienced in gardening in all its branches, and is specially trained in rockery construction and cultivation of alpines.

GARDENER (Head Working, where one or 2 kept); 10 years in present situation; 5 years as second; age 31; single. Apply A. GIBBS, 68, Pope Road, Bromley, Kent.

GARDENER (Head Working). CAPTAIN USHER highly recommends R. Appleby as above; life experience in all branches; thoroughly understands Planning and Laying Out; also Land and Stock; many years' excellent character. Address APPLEBY, c/o Mrs. Eggleton, Haslemere, Mill Down Road, Goring-on-Thames.

GARDENER (Single-handed, or where help is given); 12 years' practical experience; 4 years in last situation; good references; single; age 36; abstainer. J. CHAPMAN, Ferry Hill, Chatteris, Cambs.

GARDENER, 40; Single-handed preferred; thoroughly experienced; excellent character; active worker; Inside and Out, with early vegetables; abstainer; married. A. BISHOP, Windmill Hill, near Hailsham.

GARDENER (good Single-handed or otherwise); life experience; good all-round Man in all branches; aged 45; married, one child; would take very moderate wage with cottage for a comfortable place. Excellent testimonials; willing to be useful. F. OSBORNE, 48, Bradshaw Road, Watford.

GARDENER (26), as Single-handed or Kitchen Garden and Pleasure Grounds; abstainer; Single; good references. G. SEAR, Adstock, Winslow, Bucks.

GARDENER (Single-handed, or with help). Mr. COLLEDGE, Gardener to Earl of Darnley, highly recommends H. WILLIAMS as above; 2 years here; single. The Ridgeway, Shorne, near Gravesend, Kent.

FOREMAN, Kitchen Garden; thorough knowledge of growing Vegetables, Fruit, etc.; 11 years' experience; 2 years with Madame Patti Cederstrom; age 25; abstainer. A. MORTIMORE, c/o Mr. Flitney, Chipstead, near Sevenoaks, Kent. Bothy preferred.

FOREMAN (General or good Second); life experience Inside and Out gained in good places; excellent references; age 28; over 2 years present place. T. SQUIRES, The Gardens, Aspley Hall, Notts.

FOREMAN (Inside); 11½ years' experience in Fruit and Plants, House and Table Decoration; excellent references; age 25. J. WHENHAM, Wootton Heath Cottages, New Milton, Hants.

MANAGER or FOREMAN'S Position required in general Nursery; experienced in Shop work, Floral Decorations, Tomatoes, Cucumbers, Bedding Plants, etc. Apply CHARLES A. PALMAR, Rose Villa, Eddington, Herne Bay, Kent.

GARDENER (Second, Inside or Inside and Out); 16 years' good all-round experience; age 31; excellent references. W. PACKHAM, The Gardens, Moonhill Place, Cuckfield, Sussex.

JOURNEYMAN seeks SITUATION, Inside and Outside; eight years' experience; good references; age 24. HALES, St. Dunstans Gardens, Regent's Park, N.W.

MR. H. EDWARDS, Norton Priory Gardens, Chichester, will be pleased to recommend CHARLES GUDDLE as Journeyman, Inside and Out; has been six years as Journeyman on Pleasure Grounds and in Kitchen Garden; strong, willing, and anxious to improve himself; Home Counties preferred; age 20.

VICAR recommends steady, capable MAN; Glass, Borders, Roses, Vegetables; married, eldest boy 12; good references. VICAR, Harbury, Leamington.

YOUNG Man (18), good worker, seeks SITUATION in Nursery; just completed apprenticeship with Grapes, Peaches, Tomatoes, and Chrysanthemums. Address DOUGLAS BISHOP, 38, Molyneux Park, Tunbridge Wells.

YOUNG MAN seeks SITUATION in Kitchen Garden and Pleasure Grounds; strong and willing; age 25; good references. Apply B. CROWHURST, Underriver, Sevenoaks, Kent.

YOUNG MAN, age 18, seeks SITUATION, Inside, or Inside and Out; 4 years' experience in general garden work. A. J. BATES, Rose Cottage, Souldern, Banbury, Oxon.

YOUNG MAN, in Market Nursery, or Private establishment; 3 years and 8 months' experience; age 19; good references. WM. TERNENT, 10, Oxford Terrace, Bishop Auckland.

MR. HARRIS, Serlby Gardens, Bawtry, wishes to recommend E. SPENCER, age 18, for Inside or Inside and Out; 2 years here; Bothy preferred.

IMPROVER (Inside or Inside and Out); age 19; five years' experience; three years present situation; good character; Bothy preferred. A. JONES, Great Barr, Birmingham.

MRS. WATSON-KENNEDY recommends IMPROVER (Inside or Inside and Out); age 18; four years' experience; can be well recommended by Head Gardener. B. GIBBS, Wiveton Hall Gardens, Cley, Norfolk.

YOUNG MAN seeks SITUATION to look after Electric Light and Garden; well up in all branches; nine years last situation. EDWARD VILLA, Street Cobham, Surrey.

YOUNG MAN (23) seeks SITUATION on lawns and garden, previous experience. R. F. REDDING, Tysoe, Kineton, Warwick.

HANDY MAN on Gentleman's Estate; thorough knowledge of Oil or Steam Engine, Electric Light Plant, Heating Apparatus; married. W. CLIFFORD, Severn Stoke, Worcester.

YOUTH, aged 17, seeks SITUATION in Garden; strong, willing; 3½ years in last place; highly recommended. E. ROBERTS, Gate House, Nuttall, Nottingham.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For OCTOBER 28, 1911.

Please Repeat my Advertisement.

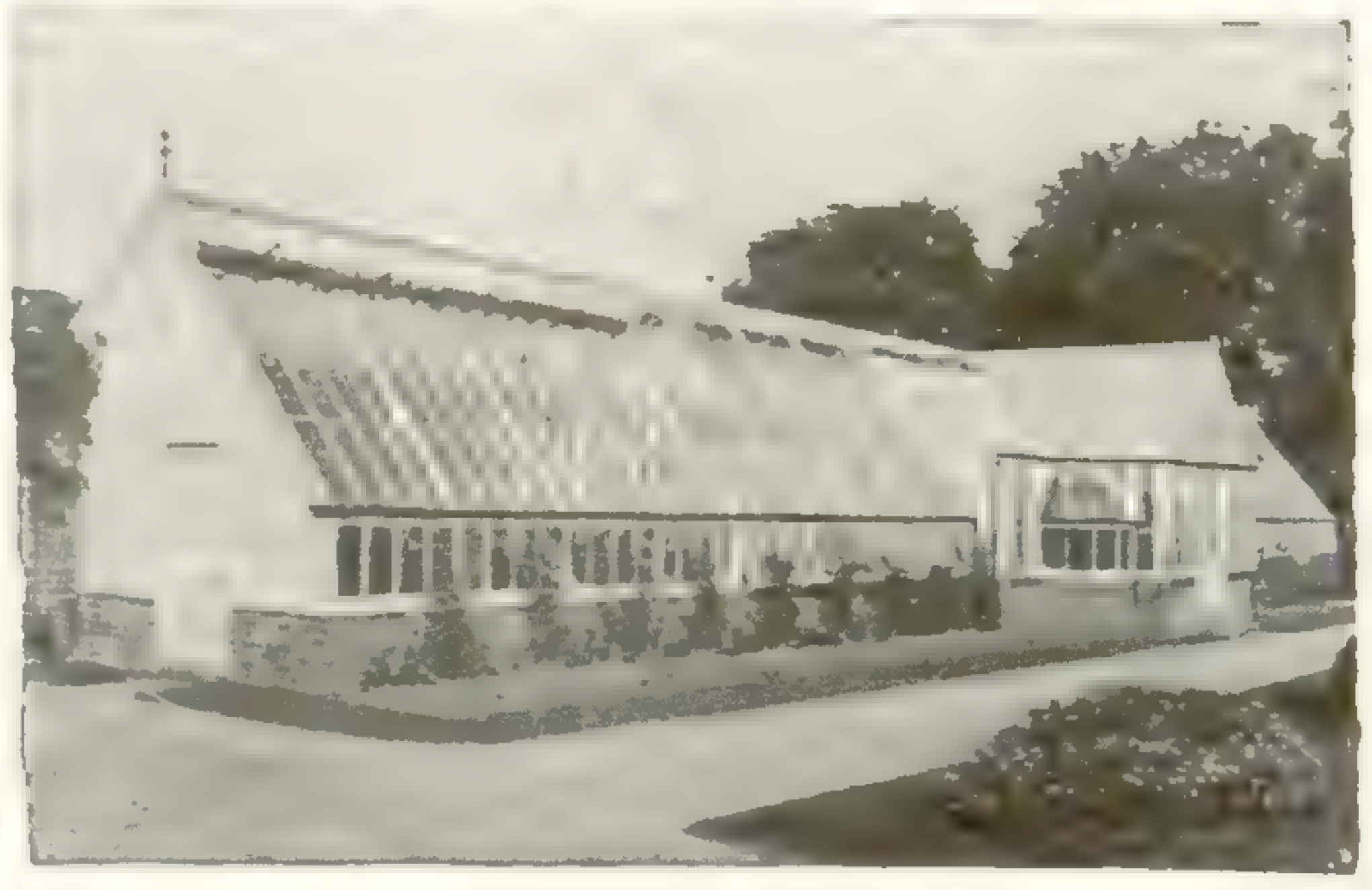
Name ....

Address ....

....

Date ....

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.



Catalogues and Estimates Free.

MESSENGER & Co. Ltd.
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office 122 VICTORIA St. S.W.

MODERN GLASSHOUSES

as supplied by MESSENGER and CO., Ltd., are made of the best materials, and only capable and reliable workmen are employed in the erection thereof.

The following letter was recently received by us on the completion of a contract for a well-known Member of Parliament.

February, 1911.

"I should not be doing my duty to your workmen if I did not at once tell you, on the completion of your work, how pleased I have been with each and all of them.

"They have been most obliging throughout the whole job, and have endeavoured to do everything in an efficient and thoroughly workmanlike manner, and I must congratulate you upon having such capable employees."

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant

Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

PUBLISHERS' ANNOUNCEMENTS.

THE GARDENERS' MAGAZINE may be obtained by order from all Newsagents, price Twopence, every Saturday. If any difficulty be found a copy will be posted weekly direct from the Publisher, 148 and 149, Aldersgate Street, London, on the following terms: Twelve Months, 10s. 6d.; Six Months, 5s. 6d.

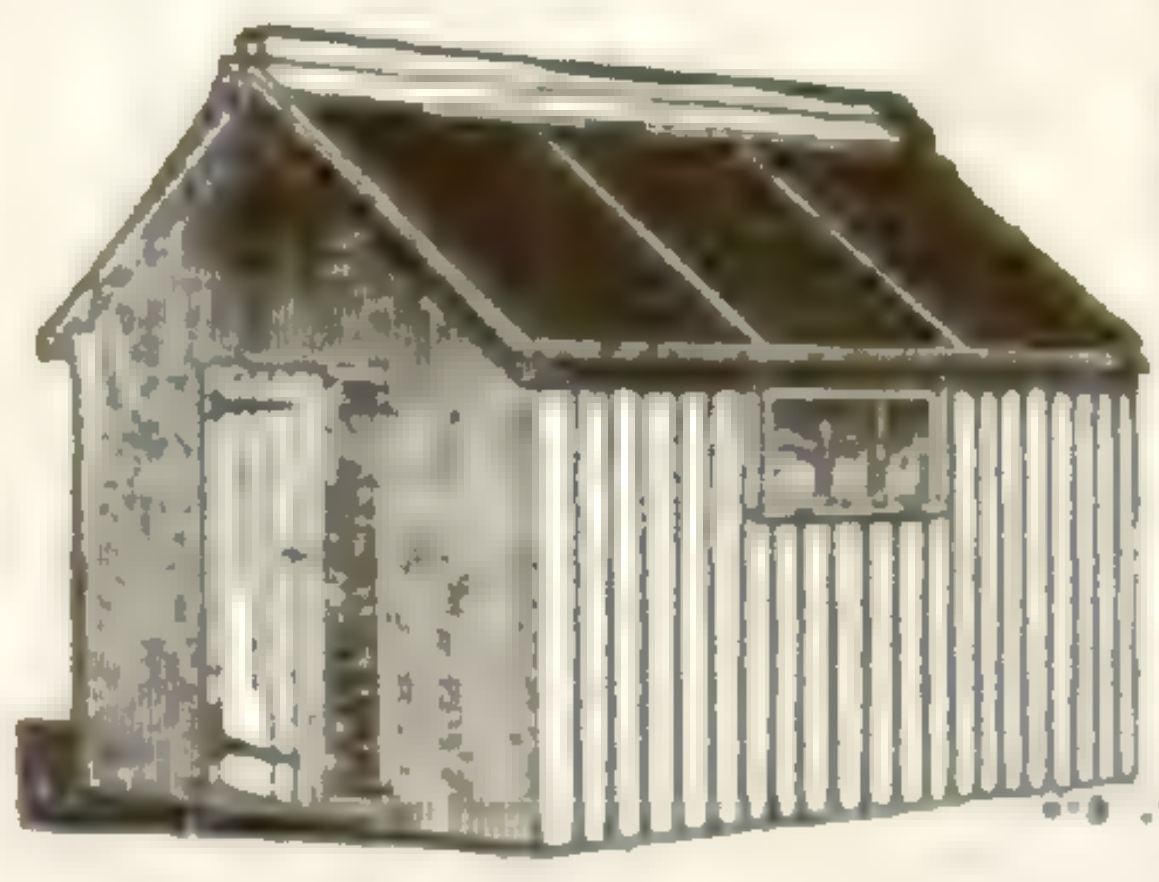
VOLUME LIII., bound in green cloth, containing the 52 weekly numbers, 1910. Price 12s. 6d.; by post, 13s. 4d.

BINDING CASES for binding the 12 months' numbers, green cloth, ornamented in gold, price 2s., post free.

INDEX and Title Page to Vol. LIII. (comprising the weekly numbers from January to December, 1910), price 2d., by post 2½d.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered,

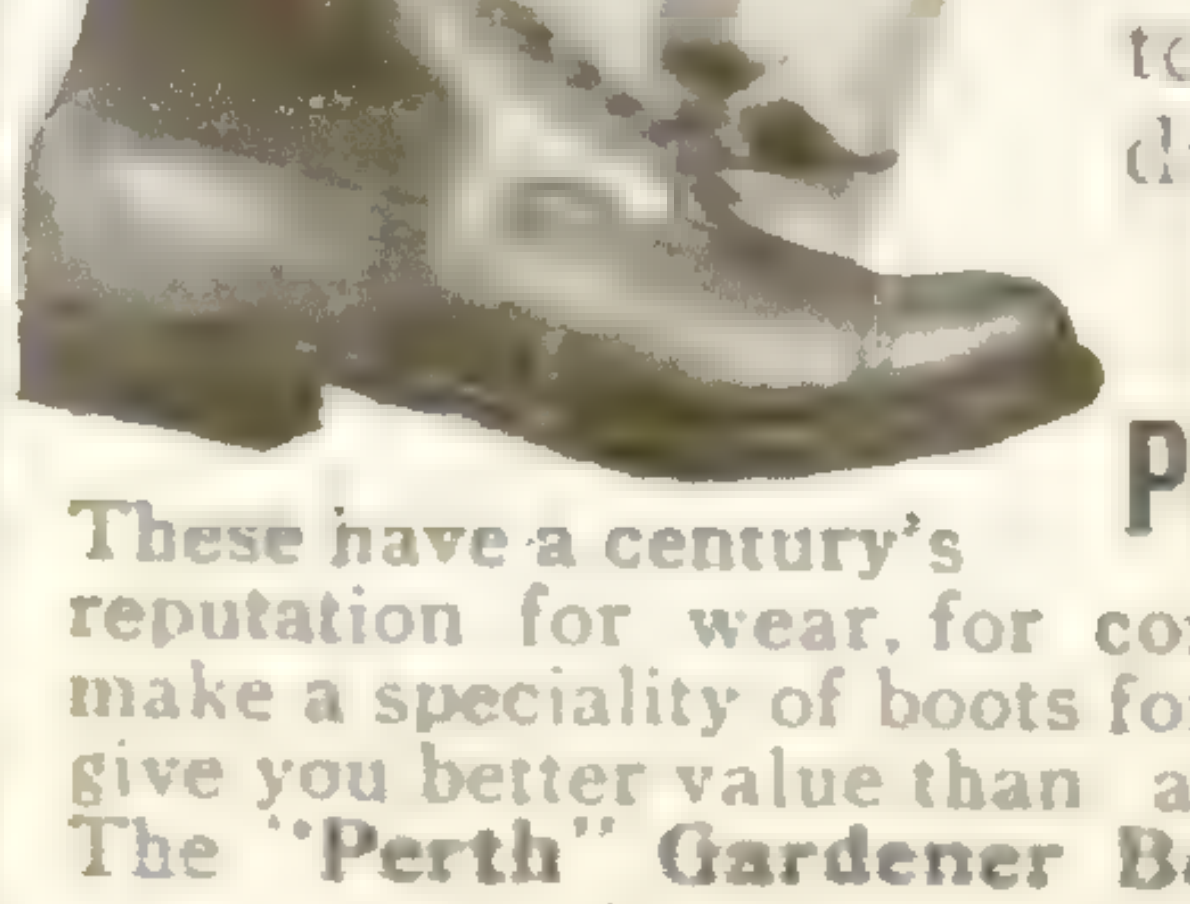
Portable Buildings. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

Sizes.	Cash with Order.	Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	17/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	20/0

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
Established 70 Years. BEDFORD.
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.



Trust the firm behind the boot.

To be comfortable: to keep your feet dry, wear

NORWELL'S PERTH BOOTS.

These have a century's reputation for wear, for comfort. Norwell's make a speciality of boots for gardeners and can give you better value than anyone.

The **"Perth" Gardener Boot** .... **10/9.**
For Strong Wear.
The **"Perth" Calf Skin Gardener Boot 11/9.**
For Greenhouse Wear.

Send to-day for illustrated price list.

C2 NORWELL'S PERTH, N.B.

MERRYWEATHER'S

614 PUMP

IS THE

Gardener's Friend.

Easy to Work. Simplicity Itself.

Write or Call—

63, Long Acre, LONDON, W.C.

Please mention
THE GARDENERS' MAGAZINE
when writing to Advertisers.

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls

THE GARDENERS' MAGAZINE.

No. 3,026.
Vol. LIV.
(Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.)
SATURDAY, OCT. 28, 1911.
(10/6 per Ann. Post Free. To Foreign Countries, 15/-.)
Twopence

BARR'S Hyacinths. Tulips, Daffodils, etc., for pots and bedding. Finest quality. Moderate prices. Descriptive Catalogue free.
BARR and SONS, 11, 12, and 13, King Street, Covent Garden. London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, Horticultural Builder, Chelsea, S.W., advises Gardeners to watch their Hot Water Heating Apparatus this month. If boilers show signs of wear, it would be wise to have them examined at once. Attention can be obtained by means of a postcard, telephone call (201 Western), letter, or wire, to Gray, Chelsea, London.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

CHRYSANTHEMUM TUBES for exhibiting; highly commended by N.C.S. Apply SPRINGTHORPE, F.R.H.S., St. Albans Road, Kingston-on-Thames.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue Free. J.E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

POTATOES, choice floury-cooking, 5s. per cwt.; English onions, 5s. per bushel; Giant Red Shallots, 20s. per cwt.; sample six pounds, post free, 2s.—BRINKWORTH and SONS. Southampton.

FORCING BULBS.—15 doz. in 30 varieties, for 10s. 6d., post free: 4 doz. Narcissus, 3 doz. Single Tulips, 2 doz. Double Tulips, 2 doz. Darwin Tulips, 1 doz. Hyacinths, 1 doz. Crocus, 2 doz. Spanish Iris.—VAN DER SLUYS, F.R.H.S., Ramee, Guernsey.

ORDER MATS NOW.—To prevent disappointment and loss by early frosts, order Norfolk Reed Mats now, 50 per cent. more protective than straw. Made to any size, 1d. per square foot.—BOULTON and PAUL, Lim., Norwich.

BECKETT'S NEW BOOK.—The most practical and Up-to-date Book on Vegetables. Price 5s.; post free, 5s. 6d. EDWIN BECKETT, Aldenham House Gardens, Elstree, Herts.

WELLS' Catalogue of
CHRYSANTHEMUMS,
PERPETUAL CARNATIONS,
HERBACEOUS PLANTS,
ALPINE AND ROCK PLANTS,
now ready. Post free on application. Wells' Book, "The Culture of the Chrysanthemum," post free, 1s. 6d. W. WELLS and CO., Merstham, Surrey.

THOMSON'S CELEBRATED MANURES.
(For full advertisement see page viii.)

CARNATIONS AND PICOTEES for Exhibition or Border, 12 lovely kinds for 5s., carriage paid for cash; 25s. to 35s. per 100. List free.
CHAS. WALL,
CARNATION GROWER, BATH.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 8s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

WEBBS' NAMED HYACINTHS
FOR POTS AND GLASSES.
12 Hyacinths, 12 good varieties, 5s.
24 Hyacinths, 12 good varieties, 10s. 6d.

WEBBS' EARLY SINGLE TULIPS FOR BEDDING AND POT CULTURE.
9d. per doz.; 4s. 6d. per 100; 40s. per 1,000.

WEBBS' MIXED DAFFODILS FOR MASSING IN THE MIXED BORDER, etc., 2s. 6d. per 100; 21s. per 1,000.
WEBB and SONS, The King's Seedsmen,
WORDSLEY, STOURBRIDGE.

BUNYARD'S CATALOGUES
Free on Application.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

KENT STRAWBERRY PLANTS
NEW CATALOGUE READY.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

LAXTON STRAWBERRIES for immediate planting. Fine plants of all the leading varieties in little pots, 15s. 100. Open ground runners, 5s. 100. Catalogue with full particulars gratis
LAXTON BROTHERS, Bedford.

CLAY'S MANURES, CRUSHED BONES
(See page vi.)
CLAY'S FERTILISER IS
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

PERPETUAL FRUITING STRAWBERRY.—St. Antoine de Padoue, strong rooted runners of this splendid variety, 4s. per 100, 35s. per 1,000; also Waterloo, finest late, 3s. 6d. per 100, 30s. per 1,000. Carriage paid on lots of 500.—S. GODDEN and SONS, Market Gardeners, Hythe, Kent.

CONSERVATORIES AND WINTER GARDENS, Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs, and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue, free.—BOULTON and PAUL, Lim., Norwich.

PINKS, MRS. SINKINS.—Plant now, to bloom well next year. Strong plants, 2s. a doz., carriage paid; cash with order.—T. REYNOLDS, Meadowcrofts, Wirksworth, Derby.

GREENHOUSES and CONSERVATORIES. Distinctive Designs and Finished Workmanship. Write now for ILLUSTRATED CATALOGUE. CARTER and HOWARD, Horticultural Builders, Kingston-on-Thames. Phone 1368 P.O. Kingston.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses. Portable buildings, etc. Catalogue gratis.

SUTTON'S BULBS.
The best of the year.
R. Lee Hogg, Esq., Spring Grove, writes: "Kindly repeat our order of last autumn for Bulbs. We are glad to say that they were most satisfactory."

SUTTON'S INIMITABLE HYACINTHS FOR BEDDING.
Special varieties in distinct shades of colour, and to flower simultaneously. Scarlet, Pink, Light Rose, Blue, Light Blue, Dark Blue, Pure White, Blush White, Mauve, and Primrose Yellow.
Each colour, per doz., 3s.; per 100, 22s.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

NOW IS THE TIME TO PLANT
Kelway's lovely Pæonies, Delphiniums, and their celebrated Artistic Hardy Borders; packed ready for planting.
KELWAY'S CHOICE named Pæonies, from 27s. per doz.
KELWAY'S CHOICE named Delphiniums, from 24s. doz.
For information about the Colour Borders send 6d. for "Gardens of Delight."
Londonderry.
October 11th, 1911.
"I take this opportunity of saying how very pleased I am with the plants supplied by you for my herbaceous border. After being established about two years the plants have attained the most wonderful and gratifying growth. During the last few weeks the borders have been an object of admiration to all those who have seen them."
KELWAY AND SON,
The Royal Horticulturists,
LANGPORT, SOMERSET.
230 Grand Prizes, Gold Medals, etc.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
From Messrs. ———.
Grahamstown,
Cape Colony.
"The 'Manual' is unique, and is an exceedingly attractive book, and a most interesting work on Horticulture, and we are very pleased to possess this copy."

ALPINES.—100 in 50 good varieties, carriage paid, £2. Half and quarter quantities at same rate.
WHITELEGG and PAGE, Chislehurst.

WEEKS'S DUPLEX UPRIGHT TUBULAR BOILERS, for full advertisement see page viii.

POULTRY and KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.
XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.
XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are
XL ALL WEED KILLER, XL ALL FERTILISER,
XL ALL WINTER WASH for Fruit Trees,
RICHARDS' BANDING GREASE, etc. Don't forget to ask your N. S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E

CARNATIONS.
AURICULAS. PINKS.

The NEW ILLUSTRATED CATALOGUE of above is now ready, and has been posted to all customers. The newest and best varieties are sold at the most reasonable prices.

Best **CARNATION** and **PICOTEE SEED** ready in October. 1/6 and 2/6 per packet.

AURICULA (Show and Alpine), PINK, and POLYANTHUS SEED now ready. 1/-, 1/6, to 2/6 per packet.

Send for Catalogue to

J. DOUGLAS,
Edenside, GREAT BOOKHAM.

ROSES. ROSES. ROSES.

Most Complete Collection of all the Best Up-to-Date Varieties.

FRUIT TREES.

EXCEEDINGLY WELL-GROWN DWARF TRAINED
CORDONS, PYRAMIDS, STANDARDS, ETC.

HERBACEOUS PLANTS
In all the Leading Varieties.

DELPHINIUMS !!!

STRIKING NOVELTIES.

CATALOGUES FREE.

ALFRED A. WALTERS & SON, Nurserymen and Rosegrowers.
BATH.

MESSRS. PULHAM & SON have secured a fine lot of Old Stone Paving, which is eminently suitable for the Paving of Pergolas, Garden Paths, etc.

They will be happy to quote for any quantity, delivered at any railway station.

PULHAM & SON,

By Appointment. By Appointment.

71, Newman Street, London, W.
And BROXBOURNE.

DAFFODILS AND NARCISSUS.

Sir Watkin, very free flowering, 3s. 100. Horsfieldii, handsome bloom, 2s. 6d. 100. Mrs. Langtry, very choice, 2s. 6d. 100. Gardenia, double white flower, 1s. 100. Double Daffodil, 1s. 100. Crocus, all colours, 9d. 100. Snowdrops, 5s. to 7s. 6d. 1,000. Tulips, splendid colours, 2s. 100. Narcissus, large trumpet, 7s 6d. 1,000. Narcissus, mixed (10 sorts), 5s. 1,000. Spanish Iris, 7s. 6d. 1,000. Pheasant-eye, 5s. to 7s. 6d. 1,000.

Send for Lists before ordering elsewhere.

CROSS & SON, Daffodil Nurseries, WISBECH.

ORCHIDS.

If you have a Greenhouse sufficiently heated to keep out the frost, write for our

Amateur's Guide,

giving treatment and all particulars. Illustrated.

MANSELL & HATCHER, LTD.,
RAWDON, via LEEDS.

SWEET PEAS.

The Exhibitor's House for true stocks of English-grown Seeds.

Awarded 90 Gold Medals.

Novelties for 1912:

AFTERGLOW, PRINCE GEORGE, DOROTHY, R. F. FELTON, CORONATION, FLORRIE.

1/- per packet.

For other Novelties and all the latest varieties in cultivation, see Catalogue, post free.

ROBERT BOLTON, F.R.H.S.,
The Sweet Pea Specialist,
WARTON, CARNFORTH.

100,000 BORDER CARNATIONS

EVERY GOOD VARIETY IN COMMERCE.

Healthy Plants. Popular Prices.

Largest Growers and Most Successful Exhibitors in the United Kingdom.

ARTHUR R. BROWN, Ltd.,
Wychall Nurseries, Kings Norton.
Catalogue on Application.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices. Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS.

Please Write for List.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

WALLFLOWERS.—Plant now, Sutton's Giant Blood Red; also Sutton's Superb Mixed; very choice; large plants. 50, 10d.; 100, 1s. 6d.; free. ROGERS, Tennyson Rd., Hutton, Essex.

LAXTON'S
FRUIT TREES
IN ALL SHAPES
CATALOGUES GRATIS
LAXTON BROS
BEDFORD

CARNATION PLANTING SEASON.

NOW IS THE TIME TO PLANT CARNATIONS.

Either in Outdoor Beds or in Pots for Wintering.

We offer good, strong, well-rooted Layers in 12 Choice named varieties, either

SELFS, FANCIES, and YELLOW-GROUND PICOTEES,

Or 4 of each sort for 5/- post free. 12 Newer varieties, 7/6 Splendid strong **Clumps of Double Violets**, in all best varieties, 4/- per doz. Comte de Brazza, 5/- per doz.

List of Named Sorts free on application.

BLACKMORE & LANGDON,
Twerton Hill Nursery, BATH.

PLANTING SEASON.

SEND FOR OUR

Descriptive Catalogue

OF

Ornamental Trees and Shrubs, Roses, Rhododendrons, Climbers, Fruit Trees, Forest Trees, Herbaceous and Alpine Plants.

Advice given on all matters appertaining to

LANDSCAPE GARDENING.

GEO. JACKMAN & SON,
Woking Nurseries, Surrey.
Established over a Century. (Nurseries 200 acres.)

TREE CARNATIONS

The Newest and Best Varieties.

Strong, healthy and well-rooted plants only supplied

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

BUSINESS CARDS.

BULBS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Narcissi Tulips, Hyacinths, etc., Home-Grown.

CARNATIONS.

ALLWOOD BROS., Haywards Heath, Sussex.
Perpetual Flowering Carnation Specialists, Raisers and Growers.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year, since 1905

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London, N. Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 1st Prizes. 3 2nds, at N.R.S. Shows, 1910. Ctlg. Free.

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
1911 Awards: 81 Prizes. Illustrated Catalogue free.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

Sales by Auction.

SALES NEXT WEEK.

WEDNESDAY NEXT, November 1, at 12.30 o'clock. ROSES.—Large consignments of English, French, and Dutch trees, comprising Standards, Dwarts, Climbers, T., H.T., and H.P. Lotted to suit all buyers, including collections for Exhibition purposes, suburban gardens, etc., at 5 o'clock. Ornamental and Decorative Palms and Plants, 300 Azaleas, Rhododendrons, Camellias, Aspidistras, Standard Bays, etc., from Belgium.

FRIDAY NEXT, November 3rd, at 12.45 o'clock.—Importations of 600 Phalænopsis Stuartiana, 1,250 Vandas Cœrulea, Amesiana, and Kimballiana. The remaining portion of 150 lots of established Orchids, from the Collection of H. Little, Esq. Choice Cypripediums, semi-established Cattleya Aurea and Lælia Tenebrosa. Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view mornings of sale and catalogues had.

DUTCH BULBS
10,000 Lots Sold Weekly.

SALES EVERY DAY
(SATURDAYS EXCEPTED),
At 10.30 o'clock, at
PROTHEROE and MORRIS'
Central Sale Rooms,
67 & 68, CHEAPSIDE, LONDON, E.C
Catalogues Free.
COMMISSIONS EXECUTED.

DUTCH BULBS, PERENNIALS, ROSE TREES, SHRUBS.

MR. J. C. STEVENS begs to announce that his **Sales by Auction** are held every **MONDAY, WEDNESDAY** and **THURSDAY** at **12.30.**

Catalogues post free.

Lots purchased, packed, and forwarded to all parts.

STEVENS' AUCTION ROOMS
(*Established 150 Years*),
38, King Street, Covent Garden, London, W.C.

ORCHIDS

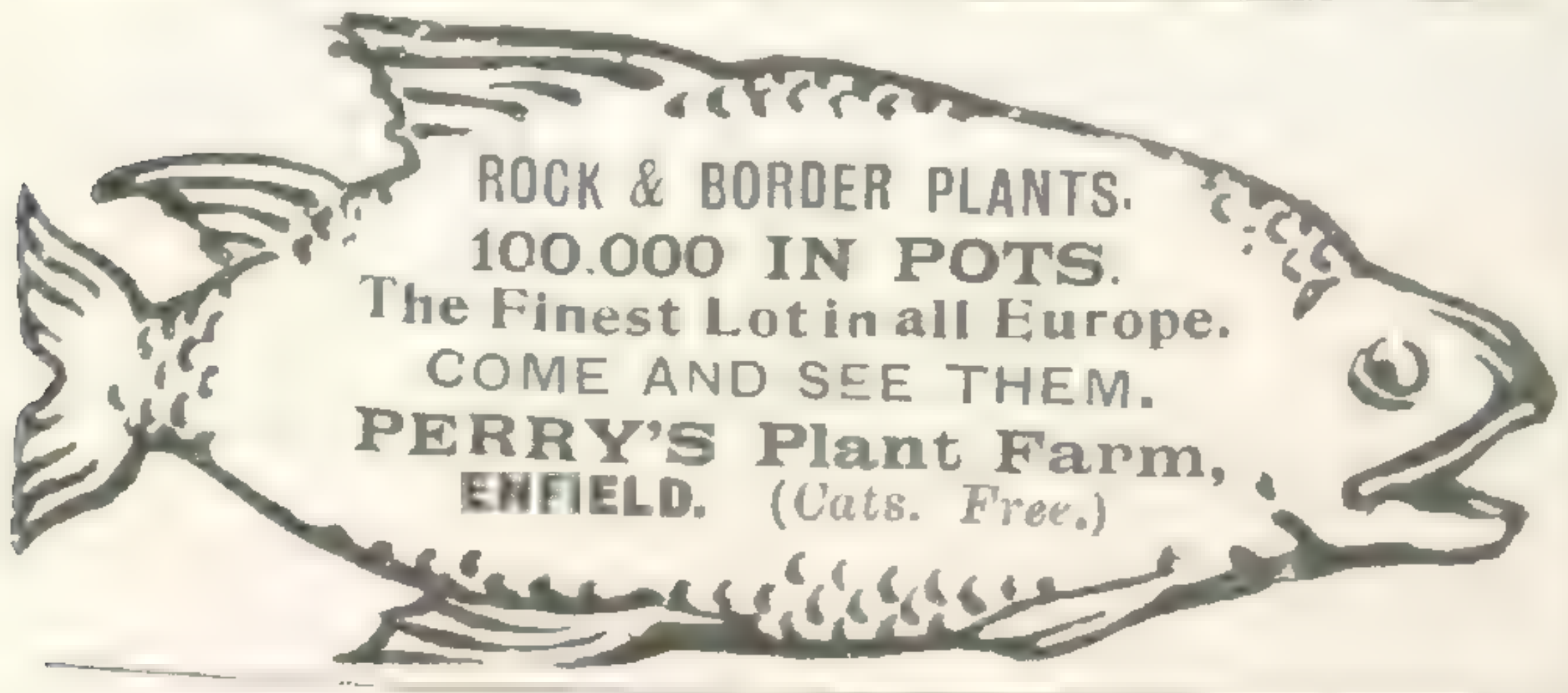
EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS**, and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone :—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.


ROCK & BORDER PLANTS.
100.000 IN POTS.
The Finest Lot in all Europe.
COME AND SEE THEM.
PERRY'S Plant Farm,
ENFIELD. (Cats. Free.)

FERN FAN.

Aspidium aculeatum, fresh and faultless fans, 30 to 60 cm. long. A postal parcel of 5 kgs., containing 600 to 800 of them, 5s. Any quantity can be promptly supplied. As it is not possible to collect money in England through the Post Office on delivery, the amount must be sent in advance, or first-class references given.

FERN EXPORT, Oberlaibach, AUSTRIA.
Established in 1894.

WANTED, Viola Cuttings, Maggie Mott, Archie Grant, Mrs. Chichester, White Swan, Marchioness, Admiration, Hector McDonald, Miss Proctor, Stanley Saul, Lizzie Paul, King Cup, Isolde, Sydney, Bronze Kintore, Willie Farmer, Goldfinch; also cuttings of Calceolaria Sultan; cash or exchange. Price and quantitiy to H. B. MAY AND SONS, The Nurseries, Chingford.

CHEALS'

FOR FIRST-CLASS
ORNAMENTAL TREES, ROSES, FRUIT TREES,
AND
HARDY FLOWERS, etc.

NURSERIES 113 ACRES.
CATALOGUES FREE.

J. CHEAL & SONS,
The Nurseries, CRAWLEY.

Orchids! Orchids!! Orchids!!!

The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application. — **J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana, Vanda Cœrulea Lushai Hill variety, dark blue type; Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.

KING'S ACRE

FRUIT TREES
AND
ROSES.

AWARDED . .

30 Gold Medals
AND
Coronation Cup
VALUE 25 GUINEAS.
Seasons 1909-10.

Illustrated Catalogue post free on application.

KING'S ACRE
NURSERIES LTD.,
HEREFORD.

AMERICAN TREE CARNATIONS, fine bushy plants, for winter flowering. in 5-inch pots, best varieties, 10s. 6d. per dozen. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J. R. PEARSON & SONS
LOWDHAM, NOTTS.

Bulbs: NARCISSUS, DAFFODILS, TULIPS, &c.

All Good Flowering Bulbs; Worth Double.

NARCISSUS

100	**Emperor**	3/0
100	**Empress**	3/0
100	**Henry Irving** ...	4/0
100	**Golden Spur** ...	4/0
100	**Horsfieldii**	3/0
100	**Victoria**	3/0
100	**Obvallaris**	3/0
100	**Grandis**	3/0
100	**Sir Watkin**	3/0
100	**Stella**	1/6
100	**Princeps**	2/6
100	**Ornatus**	2/6
100	**Double Daffs** ...	4/0
100	**Dbl. White Narcis.**	2/6
100	**Pheasant Eyes**	2/6
100	**Frank Miles** ...	1/6

TULIPS

100	**La Reine**	3/0
100	**Cottage Maid**...	3/0
100	**Chrysolora**	3/0
100	**D. de Parma** ...	3/0
100	**Keizerkroon** ...	4/0
100	**Golden Crown**...	3/0
100	**Picotee**	4/0
100	**Bouton d'Or** ...	3/0
100	**Prince de Ligny**	4/0
100	**Duc Van Thol,** sgl	4/0
100	,, ,, dbl	3/0
100	**King of Yellows**	4/0
100	**Mixed Tulips** ...	1/6
100	**Mixed Darwins**	4/0
100	**Darwins** to name	10/6
100	**Parrot Tulips** to colour	2/6

Special offer in Mixed Narcis. and Daffodils, also Tulips for planting in grass, shrubberies, hedge rows, etc.

HYACINTHS

		per 100
12—1/9	to name in colours...... or	**10/0**
12—1/3	mxd in cols. or	**9/0**
12—1/9	**Roman White** or	**12/0**
100	**Iris, Spanish,** to name	1/6
12	**Iris, German** do.	6/0
12	**Iris, English** do.	1/6
100	**Anemones, Scarlet**	4/6
100	,, **The Bride**	1/9
100	,, **St. Brigid**	5/0
100	**Scilla Siberica**...	3/0
100	**Freesia**	3/0
100	**Summer Snowflakes**	5/0
12	**Lilium Candidum**	2/6
12	,, **Crown Imperial** ...	2/0
12	,, **Auratums**	7/0
12	,, **Croceums**	4/0
12	,, **Longiflorums**	4/0
100	**Snowdrops**	1/6
100	**Ixias,** to cols.	2/6
100	**Crocus,** in cols.	1/3
100	**Lily of Valley** ...	2/6
100	**Jonquils**	4/6
100	**Ranunculus** ...	3/0
100	**Montbretia**	3/0
100	**Aconites**	3/0
100	**Chionodoxa** ...	2/6
100	**Polyanthus Narcis**	3/0
100	**Alliums**	3/0
12	**Begonias,** choice	1/6
12	**Violets,** in sorts	1/6
12	**Xmas Roses** ...	4/0

Narcissus and Daffodils,	5/-, 7/6, 10/0 per 1,000
Tulips	10/-, 15/-, 20/- per 1,000

Many other varieties to offer; also all kinds of Herbaceous plants. Any of the above, half quantities at half price.

FRUIT TREES.—Apples, Pears, and Plums, all fruiting trees, **9/-** per dozen. Gooseberries, Currants (black, red, white), **3/-** per dozen. Loganberries and Raspberry-Strawberry, **9d.** each Raspberry canes, **3/-**, **4/-**, per 100. Strawberry Plants, **1/6** per 100.

All kinds of Flower and Garden Seeds, also POTATOES. Send for List,

J. W. CROSS, Old Grammar School, **WISBECH.**

SELECTED SEED POTATOES.

All varieties, grown on finest soil in Scotland and Lincolnshire.

Any weight supplied at low prices.

Prizes given for best results.

Before ordering elsewhere write for Catalogue.

A. J. SOLE, Seed Potato Grower,
PETERBOROUGH.

WHEELBARROWS. — Navvy, for building, 11s. 9d. each; general purpose, for farm use, 14s. 9d. each. 6 sent together, carriage paid some stations. Also timber, woodwork, all descriptions. O. JENNINGS and CO., Timber Merchants, General Wood-workers, 916, Pennywell Road, Bristol.

WANTED, 200 Geraniums, old plants, King Edward VII.; state price. WRAGG, The Gardens, Todwick, Grange, near Sheffield.

CARNATION 'LADY ALINGTON'

(AWARD OF MERIT AND FIRST CLASS CERTIFICATE.)

The most perfect Carnation ever raised of salmon old rose colour. As large as Enchantress, more free flowering, and even a better grower than this variety. Good flowering plants, in 5in. pots, 6 for 18s. Young plants for later delivery, 18s. dozen. Everyone should see it growing with

STUART LOW & CO., Carnation Specialists, BUSH HILL PARK, MDDX.

PAINT & GLASS.

NICHOLLS & CLARKE, LTD.
SHOREDITCH, LONDON.
GLASS. When sending for Catalogue please cut out this advt.

BUNYARD'S
FRUIT . .
TREES . .

EARLY ORDERS RECEIVE FIRST ATTENTION WHEN PLANTING SEASON ARRIVES.

WRITE FOR CATALOGUE.

Geo. Bunyard & Co., LTD.,
Royal Nurseries,
—MAIDSTONE.—

Telegrams:
FRANK CANT,
COLCHESTER.

Telephone
No. 182.

CANTS'
CHAMPION
ROSES

THE FINEST STOCK
IN THE KINGDOM.

Direct from
FRANK CANT & CO.,
Dept. B., BRAISWICK ROSE GARDENS, COLCHESTER.

Our Illustrated Catalogue post free on application.

Premier Honours Great Show, Haarlem.

ESTABLISHED 1832.
No connection with any other Firm of a similar name.

ANT. ROOZEN & SON'S
GUINEA PACKAGE
(Delivered Entirely Free in London)
OF
CHOICE HARDY BULBS.
COLLECTION "F" FOR SPRING GARDENING
Contains **1,140** Bulbs.

48 Hyacinths, distinct colours.
60 Tulips, single early.
50 Tulips, double.
50 Tulips, single, late.
50 Narcissus, best mixed.
30 Narcissus incomparable
24 Narcissus poeticus.
24 Anemones, double.
50 Anemones, single.
50 Gladiolus nanus.
300 Crocus, in 4 distinct colours.
100 French Ranunculus.
50 Snowdrops, single.
100 Spanish Iris.
36 Scilla sibirica (2 colours)
4 Lilium umbellatum.
50 Eranthis hyemalis (Winter Aconite).
50 Ixias, best mixed.
24 Triteleia uniflora.

Half of the above for **11s.**

Our Bulbs are Perfect Bulbs direct from Holland—THE Great BULB LAND.

The above Package may be had from our Agents.

MERTENS & Co.,
3, Cross Lane, London, E.C.,
On Receipt of Cheque or Post Office Order.

Our **DESCRIPTIVE CATALOGUE** of SPLENDID BULBS (100 pages in English), containing FULL CULTURAL DIRECTIONS, will be sent post free on application to our Agents, as above, or ourselves direct at
OVERVEEN, HAARLEM, HOLLAND.

BEESTON
Gold Medal
ROSES

All Fine Healthy Plants, Hardy with good Fibrous Roots.

The following 12 Hardy and Free-blooming Hybrid Tea Roses, sent **Carriage Paid** for **10s.** Cash with order.

Augustine Guinoisseau
George Laing Paul
Gustave Regis
Kaiserin Augusta Victoria
La Tosca
Madame Abel Chatenay
Marquis Litta
Pharisaer
Papa Lambert
Souvenir de President Carnot
Viscountess Folkestone
LYON Rose

Collection of 24 BEST CARDEN ROSES for continuous blooming; grand bushes. Sent **carriage paid for 12s. Cash with order.**

Abel Carriere
Augustine Guinoisseau
Ben Cant
Bouquet d'Or
Comte D. Raimbaud
Charles Lefebvre
Clio
Duke of Edinburgh
Dupuy Jamain
Fisher Holmes
Frau Karl Druschki
General Jacqueminot
Grand Duc A. de Luxembourg
Hugh Dickson
His Majesty
Jean Cheripin
La France
Leonie Lamesch
Lady Moyra Beauclerc
Marie d'Orleans
Mrs. John Laing
Mrs. Sharman Crawford
Soleil d'Or
LYON Rose

My **ILLUSTRATED CATALOGUE** of **Roses, Fruit Trees, Ornamental Trees, Shrubs, Herbaceous Plants, etc., etc.,** sent post paid on receipt of postcard.

WILLIAM LOWE,
Rose Nurseries,
BEESTON, NOTTS.

PLANTING SEASON.

By Appointment.

**WM. PAUL & SON,
WALTHAM CROSS, Ltd.**

Nurseries twelve miles from London; south entrance four minutes' walk from Waltham Cross Station (Great Eastern Railway); west entrance five minutes' walk from Tramway Terminus.

SPECIALITIES:

ROSES in all forms, from open ground and in pots. Roses in pots, both dwarfs and climbers, extra fine this season.
FRUIT TREES, for the Orchard Garden, and Forcing House.
HARDY TREES, for Street, Park, and General Planting.
SHRUBS, Evergreen and Deciduous, for General Planting.
HARDY CLIMBING PLANTS for all purposes.
RHODODENDRONS, CAMELLIAS, AND AZALEAS. Rhododendrons from loam, extra fine this season.
HERBACEOUS PLANTS in great variety.
BULBS AND SEEDS and all Garden Sundries.

PRICE LISTS ON APPLICATION.
Inspection Invited.

Upwards of 1,000 Gold Medals, First Prizes, and other Awards at Leading Exhibitions during the past 50 years.

Sole Postal Address—
**PAULS' ROYAL NURSERIES,
Waltham Cross, Herts.**

VOL. LIV.—No. 3,026. SATURDAY, OCTOBER 28, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Floral Form.

In the process of evolution flowers have assumed an infinite variety of forms, tints, and modes of arrangement, all of which have for their object the eventual fertilisation of the associated seed to the best advantage. This advantage is gained in the great majority of cases by the increase of conspicuousness and consequent attraction of the insect world as conveyors of the pollen to the ovary or incipient seed. The flowers, as popularly recognised, are simply modified leaves, which, as a rule, are transformed into petals, which are so associated with the reproductive parts as to perform this attractive office, which done, they fade and wither, leaving the now fertilised seed to perfect itself by virtue of the conjunction effected, and to be scattered or wafted abroad by the thousand and one contrivances subsequently developed in connection with the seed vessel. Such plants as are wind fertilised, that is, such as are independent of insect aid, their pollen being borne from male flower to female flower by the friendly breeze, bear as a consequence comparatively inconspicuous flowers. To attain a conspicuous character, flowers have been evolved in many different ways, some have assumed a considerable size individually, and others have attained that object by massing together their blooms of smaller dimensions. Primarily, there is little doubt, flowers were green or greenish and small in size, but in time variation and insect selection brought about other tints, the brightness of which was sure to attract greater numbers of insects, and thus enjoy a better chance of reproduction, while their progeny under the principle of inheritance, plus that of successive variation, constantly progressed, until at length the world was filled, as it now is, with an inexhaustible wealth of floral beauty and diversity. When, however, man came in as an intelligent selective factor on other lines than purely natural ones, this progression advanced by leaps and bounds, and in a few generations changes can be effected which, unassisted by man, would take æons to produce, or, more probably still, especially where natural lines of selection are contravened, as in the case of double or sterile flowers, would never have come about at all. Man's floral selection, as a rule, cares little for the laws which govern Nature's plans for the survival of the race, the object is increase of what he considers to be beautiful and decorative, and he is perfectly satisfied if, by a fortunate "sport," or a successful cross, he obtains results to his taste which can only be propagated asexually by cuttings, budding, or grafting. The normal simplicity of form, however much it may appeal to him æsthetically, is not good enough, and in his endeavours to improve it, it often happens that he lays down hard and fast lines which determine what he terms "form," and ruthlesly destroys all seedlings which depart from his standard. There is no doubt that, thanks to this restriction, an infinite number of possibilities have been nipped in the bud, as an instance of which we may quote the well-known example of the cactus dahlia, which, had it not accidentally been imported from Mexico, instead of appearing as a seedling on this side, would have undoubtedly shared the fate of myriads of sportive seedlings of the old standard type. We have now a host of divergent types, of which the old dahlia growers never dreamt. The new "Collarette" section, to wit, attracts great attention just now, although as yet very imperfect, since breeders fully recognise its incipient beauty and well know that selection will eliminate its defects in time. To the expert judge of flowers, good "form" is one of the greatest essentials, and this must apply not merely to the flower but also to its habit, i.e., bearing on the plant itself. Many a well-formed flower fails to display itself to the best advantage by having a drooping habit or short stalk which tends to hide it beneath the foliage. It may also be handicapped by a slow development, so that, by the time all its petals are fully opened, the first ones may be fading. Some flowers, like many of the carnations, have been so fed and pampered and forced away from normal development, that the calyx bursts, and instead of a round, symmetrical, well-balanced flower, the proper "form" of the blossom, a confused mass of irregular petals offends the eye, and disqualifies the bloom. So it is with regard to colours, where good "form" involves purity and regularity of distribution. Here possibly it is with the "auricula" cult that the judges are more strict in this direction, so strict, indeed, that it is often difficult for the outsider to detect disqualifying defects or to properly appreciate the "advance" which the expert declares to have been made. Every flower of note, indeed, has its "form" or "forms" demanded by good judges, and on salutary lines; but, as we have indicated, it occasionally happens that departures from these standards of perfection, slight and merely indicative, perhaps, at first, have eventually proved of great value, and shown themselves to be the "sportive" progenitors of strains that are equally remarkable for their distinctness and beauty.

Mr. W. G. LOBJOIT.

Mr. William G. Lobjoit, whose portrait we have the pleasure of giving in this issue, is the head of a firm of market growers with headquarters at Heston, near Hounslow, and he has, through a long series of years, filled that position in such manner as to obtain the esteem of his neighbourhood, and the respect of those who at Covent Garden and elsewhere have business relations with him. Mr. Lobjoit has the good fortune to possess a keen intellect, and as one result thereof, he holds advanced views, both with regard to cultural matters and the importance of meeting market requirements in accordance with modern methods. That his firm, as the result of his enterprise, has achieved a high degree of success, goes without saying. But it may be mentioned as a matter of some interest, as evidence of the advanced views held by Mr. Lobjoit and of his remarkable enterprise, that he was one of the first of those engaged in commercial horticulture to adopt mechanical traction for carrying goods to market. This method of traction is still adhered to, and it must be a great advantage as compared with horse traction where, as in this case, enormous quantities of produce have to be marketed as expeditiously as possible. While taking the keenest interest in the exacting business in which he is engaged, Mr. Lobjoit does not allow it to absorb the whole of his attention, as evidenced by the number of positions he occupies with so much honour to himself and advantage to the several bodies. He is a J.P. for Middlesex, a honorary correspondent to the Board of Agriculture, vice-president of the Market Gardeners, Nurserymen, and Farmers' Association, and is chairman of the Heston-Isleworth Urban District Council. At the general election two years ago Mr. Lobjoit contested the seat for the Brentford Division of Middlesex in the Liberal interest, and, although he was unsuccessful, he was strongly supported, and, by reason of his commanding abilities, he won golden opinions from his friends, and excited the admiration from not a few of those who hold views differing from his own.

Important to Secretaries of Horticultural Societies. — The edition of the "Gardening Year Book" for 1912 is in an advanced stage of preparation, and secretaries of botanical and horticultural societies and gardeners' associations are earnestly requested to return the notices properly corrected which they have received, with as little delay as possible, so that any changes which have been made in the names or addresses of the secretaries may be duly recorded in the list of Horticultural and Botanical Societies of the United Kingdom We shall also be glad to receive from our readers notification of any such changes as have come under their notice.

Royal International Horticultural Exhibition, 1912.—We are informed by the Directors of the Royal International Horticultural Exhibition that, in consideration of numerous requests from representatives of the horticultural world, they have decided to provide special facilities for professional gardeners, and also to make reductions in the charges to the general public. The prices originally fixed for the eight days of the Exhibition are as follows: First day, two guineas; second day, one guinea; third day, 10s.; fourth day, 5s.; fifth day, 2s. 6d.; and on all subsequent days, 1s. The following charges for admission have now been arranged: Until 5 p.m. the charges will on the first four days be as originally fixed, but after that hour they will be as follows: First day, one guinea; second day, 10s.; third day, 5s.; fourth day, 2s. 6d.; on the fifth day, the charge throughout the day will be 2s. 6d.; and on all subsequent days the admission fee will be 1s. The special rates for professional gardeners throughout each day are: Second day, 5s.; third day, 2s. 6d.; fourth and all subsequent days, 1s. The Directors inform us that they have retained the original prices for admission during the greater part of each day, chiefly on account of the limited space at their disposal. The actual size of the ground is 21 acres, but at least seven acres are occupied by trees, shrubs, etc., which leaves only 14 acres for tents, exhibits, offices, etc., etc. Applications for space have naturally been very numerous, and ground has to be allotted for paths, promenades, and so forth. It must also, they observe, be remembered that, apart from the visitors themselves, there will be a large number—say three thousand—of officials and servants, including jurymen, exhibitors, attendants, etc. It is gratifying to be able to announce that in the floricultural section of the exhibition British growers have made a very ready response to the invitations addressed to them. Foreign floriculturists from most parts of the world are also applying for exhibition space, so that the international character of the show will be well maintained.

Carnation Lady Alington. — Having from the time this carnation was first introduced to public notice held a high opinion of its merits, we have watched with much interest its rapid progress in public favour. It has therefore given us much pleasure to receive from Messrs. Stuart Low and Co., of the Bush Hill Park Nurseries, Enfield, a gathering of finely developed blooms. Lady Alington belongs to the perpetual-flowering section, and has the merit of possessing a robust constitution and also of flowering freely. The flowers are large, full, and of superb form, and the colour is an exquisitely beautiful shade of rose-salmon. Not the least of its good qualities is its delightful fragrance, which as we write pervades our study.

Guides for Kew Gardens.—During the past few days there has been in "The Times" a discussion of the question of providing guides for the visitors to the museums in the Metropolis. In the course of the discussion, Lord Sudeley, in decribing what had been done in the matter at the British Museum and the Imperial Institute, suggested that a guide might with advantage be provided at the Royal Gardens, Kew. In support thereof, he observed: "Kew Gardens it is impossible to visit without longing for the power of obtaining guidance and special information, which for the ordinary visitor is tedious and tiresome to obtain by continual reference to a plan or guide-book printed in small type. With reference to this suggestion, "The Times" of Tuesday last states: "Our Richmond Correspondent had a conversation yesterday with Lieutenant-Colonel Prain, Director of Kew Gardens, on the subject of Lord Sudeley's letter in 'The Times' advocating the employment of guides in museums in continuation of the experiment at the British Museum, and the extension of the system to Kew Gardens. Lieutenant-Colonel Prain said he did not think there was any great necessity for such guides, for at the principal entrances to the gardens notices were posted indicating to visitors what were the sections most interesting and most worthy of a visit. The stranger who had only a limited time at his disposal could see at a glance what were the features of the gardens for the time being. All he had to do was to purchase a key plan, price twopence, and compare the letter and figure on the notice with the map. The Government would not agree to further grants from the Treasury for the purpose of paying guides. The expense would not be justified. Kew Gardens were entirely dependent on the weather for the number of visitors, and while for one or two months of the year there would be plenty for professional guides to do, for the greater period they would be practically idle."

Dahlia Brentwood Yellow.—Since this fine decorative dahlia was introduced to public notice, in the summer of 1910, it has steadily gained in popularity, and is now regarded by those who have had opportunities for seeing it in the garden during the past summer as the best of all the varieties in its class that produces yellow flowers. In the spring of the current year we gave an illustration of a bloom for the purpose of calling the attention of our readers to it, and at the first of the two meetings held by the Royal Horticultural Society during the current month an Award of Merit was made in its favour by the Royal Horticultural Society. Now we have before us a box of blooms kindly sent us by Mr. J. T. West, of Brentwood, by whom it was raised, for the purpose of showing us its freedom of flowering thus late in the year. The blooms are borne on stiff, erect stems, twelve inches or so in length, but those sent us by Mr. West have been cut with portions of the branches, which is an advantage, inasmuch as it shows the manner of flowering characteristic of the variety. The buds are mostly produced in triplets in various stages of development, and the partly-expanded flowers and the buds produce a delightful effect rising among the masses of large rich yellow blooms. Basing our opinion upon the plants growing in our own garden, we regard Brentwood Yellow as a capital companion to Kaiserin Augusta Victoria, which has proved an ideal bedding dahlia.

Future of the Crystal Palace.—On Monday a conference of public bodies was held at the Mansion House to consider the question of the acquisition of the Crystal Palace and grounds for the use of the public. There was a large attendance of delegates from the London municipal authorities and societies and associations. The Lord Mayor, who presided, submitted a resolution declaring that the Crystal Palace and its grounds should be acquired for the public, and appointing a committee to make arrangements for an appeal for funds from the Mansion House and to consider the most practical scheme for the future management and control of the Palace. He said it would be a species of high treason for the British nation to allow a great memorial to the beneficent philanthropic genius of the Prince Consort to be destroyed in the first years of the reign of his Royal grandson. They had already received promises of sums amounting to £7,000. Before the Lord Mayor could make a public appeal for funds he must be assured that the deposit had been forthcoming, and it was hoped to bring that £7,000 up to £20,000, which would be a suitable deposit. They would then be in a position to appeal to the various authorities represented at that meeting on the terms that they had already acquired the Palace for a definite sum of money, the sum of money involved being, say, £300,000, and those authorities would be urged to contribute so much towards that definite sum. Lord Plymouth seconded the resolution. Lord Tenterden, on behalf of the council of the King Edward National Memorial, said they were prepared to join forces with the Mansion House Fund and to contribute £5,000 towards the deposit. The resolution was carried unanimously.

Plant Mites.—An interesting paper on plant-inhabiting mites of a useful nature has, we learn from "Nature," been published by Prof. G. F. Scott-Elliot. The red spider and other inimical mites are well known, but the beneficial mites, although exceedingly common, have received less attention. Their homes, in the shape of small hollows behind hairs on the undersides of leaves on trees, are termed acarodomatia; they are not confined to dicotyledonous trees and shrubs, as was supposed, but are common on tall herbaceous plants, and the author has found them on the leaves of Solomon's Seal. With respect to their sphere of usefulness, it is asserted that they feed on scale insects, fungus spores, and other pests. The author suggests that with bacteria they help to prepare organic dust particles for the benefit of plants.

Royal International Horticultural Exhibition 1912.—Among the most recent donors of special prizes are Messrs. Clay and Son, who are offering for competition in the rose class a silver-gilt bowl, valued at eighty guineas. Horticultural sundries will, we are informed, exhibit a completeness that has not been previously seen in this country.

The Narcissus Fly.—It has for a long time been assumed that the Narcissus Fly (Merodon equestris) confines its attacks to narcissi, but, according to the contributions from the Wisley laboratory to the current issue of the Royal Horticultural Society's "Journal," the fly lays its eggs on other bulbous plants and the larvæ go through their various stages within their bulbs. Mr. F. J. Chittenden writes, with reference to this matter: "In November, 1910, a bulb of Habranthus pratensis, which had lain some time unplanted, was sent to us. The bulb had been imported from Holland. On examination it was found to be almost entirely eaten away inside, and had the usual tunnel opening below, while it contained a grub which we believed to be that of Merodon equestris almost full grown. The next post brought from another source a bulb of Vallota purpurea containing two precisely similar grubs. The latter was one of a number of vallota and eucharis bulbs which had been sent in May, 1909, from Sierra Leone. Most of them when potted up grew well, but some failed to develop but weakly. Examination showed the presence of one or more grubs in each, and the characteristic hollowing out of the bulb by the grub. The bulbs were potted up into separate pots, covered with muslin to prevent the escape of the fly when it should hatch, and kept in a greenhouse during the winter. The habranthus bulb was completely destroyed by the grub which pupated in the soil. At the end of March the fly hatched out, and examination showed it to be the narcissus fly, Merodon equestris, as had been suspected from an examination of the grub. The fly was sent to the British Museum (where it has been deposited), and Mr. E. E. Austen, who kindly examined it, confirmed the identification." The grubs with which the vallota bulb was infected became pupæ, but the flies did not develop properly. There is, however, according to Mr. Chittenden, no doubt as to the insect being Merodon equestris. It is further stated that it does not seem necessary to suppose that the vallota bulbs were infected when they were imported, for they were received in England and potted up at the time the fly would be on the wing in this country.

GARDEN RECONSTRUCTION.

The beautiful can always be made more beautiful in the case of a flower garden, so that the owner of a garden who is perfectly satisfied with his pleasure grounds as they are must obviously be in error. The more the gardener loves his craft the larger are the opportunities that he sees, and the greater his desire to make use of them.

Small alterations are sometimes not sufficient to meet the wants of the garden; if it has been laid out upon faulty lines nothing but entire reconstruction will be successful. This is not as difficult a business as may be feared, though undoubtedly a long one. Some gardeners always prefer to lift the plants in beds or borders before thoroughly forking and manuring the soil in autumn or early winter, and, though this practice is generally condemned by scientists, the fact remains that shrubs and perennials can quite safely be stored away ten days to a fortnight with their roots in moist compost in boxes kept in airy sheds.

A wrong design in a garden is a fault be it remembered that no merits of the flowers can hide. If the ground is crossed by awkward, ungainly paths, too narrow, set so as to leave large formal plots for beds, and the straightest of monotonous borders, then it should be replanned. Much of the gravel can be left untouched; new turns in walks, encroachments of border edges so as to form waves here and there, with corresponding semicircular additions to the paths, will soon take off the stiff ugliness. The allotment-like plots can be irregularly cut through by winding walks, or rockery banks thrown up in them here and there will provide hills and valleys, sunshine and shade alternately. A glade of hollyhocks or mulleins, delphiniums, or pillar roses, made through the centre of a plot becomes a lovely floral nook, and if the inner portion is turfed over, or sown with grass seed, the result will be yet more pleasing.

Alterations in the shape of lawns is best done in autumn, for if turves are laid down and well beaten frequently during winter there will be no unsightly patches to vex the eye the next spring.

Simply by adding a large semicircle of turf to the beginning or end of an oblong lawn the garden can be given those rounded outlines that are infinitely more pleasing than angular ones. To adorn the edge of the new portion small round beds can be cut out, a pillar rose and clematis planted in each alternately, on a carpet of pinks and violas. If height is not desired then a novel and charming effect results from cutting a twelve-inch border a foot from the edge of the turf and repeating its curve. This should be filled with hyacinths and crocuses, then with begonias and miniature sweet alyssum each year.

Setting a rustic summer-house on the end of a lawn, rather to one side of it, cutting out a meandering gravel path to it from the nearest existing walk, then making a clump of flowering evergreen shrubs on the other side, alters a too straightly-planned garden satisfactorily.

Excavations are not sufficiently popular. By digging out a semicircle in a plain plot of level ground to a depth of six feet, throwing the removed soil up to form a bank on one side of the hollow, placing rocks to hold up the sides of the small dell, and conducting a winding grass or gravel walk with a few stone or wood steps down to it, an interesting spot is quickly created. By the time Wichuraiana roses trail down the bank, with White Broom, a Philadelphus Lemoinei, two or three weigelas and cotoneasters, in association with them, and when the sunk-rockery blushes pink with monthly roses which will scarcely ever be flowerless in that shelter, or is blue with violas, snow-white with pinks, or orange, copper, and crimson with dwarf chrysanthemums, the value of the improvement will be keenly appreciated.

M. H.

DESSERT PLUM COE'S VIOLET.

A.M., R.H.S., October 24, Mr. J. Vert, Audley End.

NEW PLANTS, ETC.

CHRYSANTHEMUMS.

Mrs. W. Garner.—A beautiful large-flowering single variety that has sported from Bronze Pagram. It has bright bronze colouring, the petals tipped with gold, and their golden bases forming a zone round the disk. F.C.C., N.C.S., October 23. Messrs. Cragg, Harrison and Cragg, Heston, Hounslow.

Wonder.—A refined and graceful Japanese variety, with narrow florets, that twist prettily at the apex. The ground colour is rich old rose, but all the central florets have a rich terra-cotta shading. F.C.C., N.C.S., October 23. Mr. Martin Silsbury, Shanklin, Isle of Wight.

Gertrude Pears.—A bright and attractive Japanese variety with fairly broad reflexing florets of a rich and beautiful shade of ruby-crimson; a fine addition. F.C.C., N.C.S., October 23. Messrs. W. Wells and Co., Merstham.

Mrs. W. Hookey. — A very big Japanese variety with long, broad, drooping florets of a clear straw yellow all over the centre, but with rosy shading towards the tips of the lower florets. Commendation, N.C.S., October 23. Messrs. W. Wells and Co., Merstham.

Miss Venetian Hartman.—A very deep Japanese bloom, but not a very broad one. The narrow florets droop and curl prettily, and are a charming shade of lemon-yellow. Commendation, N.C.S., October 23. Mr. Walter Jinks, Newlands, Thames Ditton.

Surprise.—A showy and very free flowering border single variety; the blooms are a couple of inches across and the colour is bright terra-cotta. Commendation, N.C.S., October 23. Mr. H. J. Jones, Lewisham.

Yvetta Richardson.—A useful single border variety of good form, and very free flowering. The colour is an attractive shade of reddish rose—almost crushed strawberry. F.C.C., N.C.S., October 23. Mr. H. J. Jones, Lewisham.

Thorpe's Terra Cotta.—A large reflexed variety making up rounded solid flowers, borne on long stiff stems; the colour is rich bright bronze. Commendation, N.C.S., October 23. Mr. H. Thorpe, Worthing.

Madame Auguste Nonin.—An old market decorative variety that was sent under the name of Mrs. George Perry. The colour is a lovely shade of silvery-pink. Commendation, N.C.S., October 23. Mr. G. Perry, Hayes.

E. Cox.—A useful market variety. An incurved sport from the well-known Moneymaker, with solid creamy blooms, carried on long stems. Commendation, N.C.S., October 23. Messrs. Cragg, Harrison, and Cragg, Hounslow.

Walter Parsons.—A handsome and refined Japanese variety with reflexing and slightly twisting petals; the colour is rich chestnut, suffused with gold. F.C.C., N.C.S., October 23. Mr. H. W. Thorpe, Worthing.

Coronation.—A graceful Japanese variety with fairly broad drooping petals that twist a little at the ends. The colour is rich deep rose, with silvery reverse. F.C.C., N.C.S., October 23. Messrs. J. Stredwick and Son, St. Leonards.

SENECIO SAXIFRAGOIDES.

An evergreen perennial that it is hoped may prove hardy in this country. The foot-high hairy scapes are branched, and carry a number of bright yellow flower heads that are each about 1½in. across, and composed of from twenty to thirty ray florets around an orange-yellow disk. As a rock garden plant this would be a success if sufficiently hardy; it comes from New Zealand. Bot. Mag., t. 8,394.

Ampelopsis Lowi.—This pretty ampelopsis, with small, deeply-cut leaves, colours as freely in the autumn as the best forms of Ampelopsis Veitchi. It was distributed a couple of years ago, and I am surprised that we do not see it oftener, as it is of neat growth, and the laciniated foliage renders it very distinct.—W. T.

NEW BOOKS.

MANURES FOR FARM AND GARDEN CROPS.

By W. Dyke. (W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London, E.C.). Price 1s. paper boards, 1s. 6d. cloth; postage in each case 2d. additional.

A full recognition of the importance of deep digging and trenching, and a thorough breaking up of the soil in the process is a great aid to successful cultivation, whether it be of useful crops or ornamental plants; but it should not, as is frequently the case, be regarded as all-sufficient. It is certainly not less important to the cultivator that he should possess a knowledge of the chief constituents of the various classes of soil under cultivation, and an acquaintance with the different fertilisers in general use, so that he may be in a position to provide the plants with food that is exactly adapted to their requirements. It is essential to the full development of the plant, to whatever class it may belong, that the soil be so prepared as to enable the roots to extend freely on all sides, and to a depth sufficient to prevent any check to growth during short periods of drought. But it should not be forgotten that the roots not only require a soil so well broken up as to allow them to extend freely, but must have liberal supplies of plant food within their reach so that they can absorb not only water, but nutrient matter that can be readily assimilated and utilised in the building-up of the tissues of the plant, and perfecting the part or parts for which it is specially grown. It is possible for those whose knowledge is of merely an empirical character to provide most plants with a sufficiency of food, but there is the risk when the practice is in accordance with rule of thumb of applying some constituents in excess of requirements, and if this does not bring about a result different to that desired, it involves more or less waste.

With a full appreciation of the value of scientific manuring in garden practice, we turned to Mr. Dyke's book with considerable interest, because we have long known him as a successful cultivator, and have been acquainted with the attention he has devoted to the study of fertilisers in connection with various crops grown for market and home use. We not only opened the book with interest, but, knowing the author and his work, we indulged in the anticipation that it would contain exactly the information required by the general body of practical cultivators. Our anticipations have been fully realised, and we should fail in our duty to our readers were we not to advise all who are desirous of improving their knowledge of fertilisers to give instant attention to the large amount of information relating to them which the author has placed at their disposal.

The book is divided into three parts, and the chapters included in the first part contain a full and clear statement of the science and practice of manuring. The second part is devoted to classes of manures, and in the several chapters general, nitrogenous, phosphatic, and potassic fertilisers are described, and directions given for their use. In the third part formulæ are given for the different crops and plants that come under the gardener's care, and as these are accompanied by full information as to the means by which the best results can be obtained in their application, the value of the section is great.

APPLES AND PEARS.

By George Bunyard, V.M.H. (T. C. and E. C. Jack, 16, Henrietta Street, London, W.C.) Price 1s. net.

There is no dearth of books in which the selection and cultivation of apples and pears are dealt with, but there is not one, so far as we are aware, exactly like this, and we are not acquainted with any work that is obtainable at about the same price that can compare with it in the assistance that it is able to render the inexperienced cultivator in carrying out the various details that are essential to success. It would be superfluous to state that the author is a past master in all that relates to fruit cultivation, because this has been amply exemplified by the collections of fruit that have over a long series of years been presented by his firm to public notice. But it should be said that he possesses in a marked degree the ability to convey his wide knowledge to others in such manner as to enable them to readily understand it. We have had evidence of this faculty on many occasions, but at no time or place have we been more impressed by it than in the perusal of this the most recent of Mr. Bunyard's works on fruit culture.

The first chapter is devoted to historical notes, and the references to the works of Tusser, Leonard Marshall, Gerarde, Markham, William Lawson, Ralph Austen, John Lawrence, Switzer, and others of the old writers form very interesting reading. Following the introductory chapter are chapters on such subjects as the purchase of trees and choice of positions, varieties for different aspects, preparation of soil, and planting, pruning of branches, root-pruning, pot culture, shelter, insect pests, and a monthly calendar, and these while not lengthy contain ample information on the respective details.

The book is illustrated with eight coloured plates of apples and pears.

HOW TO COOK VEGETABLES.

By C. Herman Senn. (The Food and Cookery Publishing Agency, Westminster, S.W.) Price 2s.

It is not less important to the community that vegetables should be cooked properly than that they should be grown to a high degree of perfection, and therefore any aid that can be obtained in bringing about an improvement in the preparation of vegetables for the table should receive a warm welcome. The book before us should prove of much value as a work of reference on the cooking and serving of the various vegetables that find favour in this country, and also for the information it contains on the cooking of kinds that are as yet unknown in the majority of households. It has been written by an author who is fully conversant with his subject, and has therefore been in a position to wholly rely upon his own experience in his description of the five hundred different ways in which vegetables can be prepared for table.

Lilium tigrinum Fortunei.—Imported bulbs of this lily have, as usual, flowered finely with me this year, but instead of tall shafts 6 to 7ft. in height, as I have had in other years, they are little more than a yard in stature. This is, I take it, owing to the heat and drought, as they came away in the spring as vigorous as ever. —W. T.

Rose Cuttings.—To obtain a stock of home-grown roses on their own roots, cuttings should be put in now. Suitable material for propagating purposes will usually be found in this season's secondary growths, which break away from the first growth below the flowering point. It is important that the wood should be in a fairly firm condition, for, if soft or tender, it will rot. The growth selected for the making of the cutting must be removed from the older portion with a heel attached, that is the slightly swollen part, caused by the bud before it commenced to break. This can be accomplished with a sharp knife, cutting in an upward direction. The length of a strong cutting should be about nine inches, but some of the weaker ones must be shorter. If only a few are to be propagated, they should be inserted in pots filled with sandy soil, made very firm, and placed under a handlight. When a large number are required cold frames may be brought into use on a cool, shady border, and the cuttings planted in the soil, which must be quite firm.—E. C. Pooley

THE MERRYWEATHER DAMSON.

Not a few efforts have been made during late years to improve the common damson by mating it with some of the latest plums, but Nature seems to have taken the work into her own hands, and the result is the Merryweather damson. This fine addition to our hardy fruits is a chance seedling, with the habit of growth of a Victoria plum, fruits of plum size, and the flavour of a damson. It is introduced by Messrs. H. Merryweather and Sons, Lim., of Southwell, Notts, who have had the original tree under observation for a long while, and are thoroughly convinced that the variety has a great future before it. The young trees come into bearing at two or three years of age, and they continue to fruit regularly and freely. The flavour is excellent, and the fruits are good eating, as well as of great use for culinary purposes. Our illustration is from fruits brought up to the recent great fruit show at Westminster by Mr. Merryweather, jun.

Aubrietia Purple Robe.—There are now many very fine varieties of aubrietias, some of them so good that only new ones of exceptional merit will be given a place in spring-bedding arrangements. The variety named above is one of great value. When plants become established on a rockery, for instance, the flowers show up to great advantage. The shoots made are rather long, and depend gracefully from the edges of stones, and, being covered with the deep purple flowers, they look very charming. Large tufts of it also look well growing on flat shelves on the rockery. Aubrietias are equally suitable for edgings to spring flower beds.—G. B.

SCILLAS.

Scillas form a group of exceedingly beautiful hardy bulbous plants to which our gardens owe much of their beauty in spring and summer. With rare exception the genus is one that admits of freest representation in garden, orchard or woodland, and where the latter condition prevails the possibilities of pictorial gardening with bulbous plants like scillas, has scarcely any limit. It is under such conditions that Scilla nutans, the "English Blue-Bell," attains its maximum development and appeals to every taste, and is typical of what is best in English woodland scenery.

Scilla nutans is one of the easiest species to establish; it prefers a fairly deep soil, and where such obtains, it should be planted out at a depth of six inches from the surface. It may, however, be grown in most woods, including those of pure beech, where the surface soil is closely packed with roots; even there it is able to maintain a hold, although never attaining to that perfection seen under more favourable conditions. The type produces blue flowers on graceful arching spikes, while there are also white, flesh-pink and deep rose forms; the latter, as garden plants, become of great value when planted in quantity in shady borders or semi-wild spots, grouping them with native ferns or plants like Solomon's Seal.

Scilla hispanica (campanulata) may be used in common with our native species for beautifying less formal parts of the garden. It, also, is robust in growth, with erect spikes from 15 to 24 inches high, and open campanulate flowers; the colours embrace, blue in various shades, white, pink, and rose.

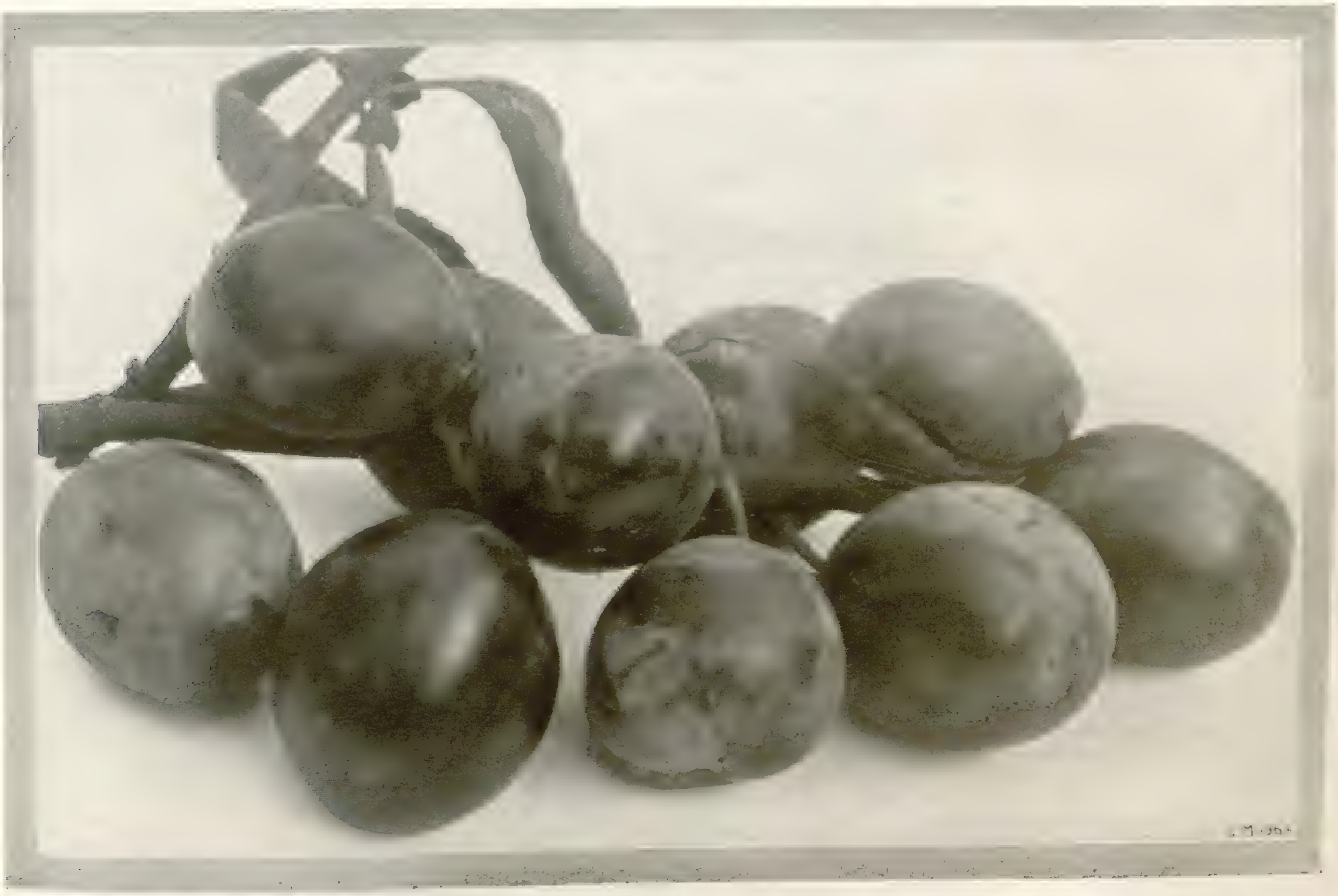
Scilla patula is the most robust and tall of the wood hyacinths, the variety Excelsior, with lavender-blue flowers, and Major, with flowers of lilac-blue are the two best.

One of the most charming members of the genus is Scilla bifolia, a dwarf species that flowers along with snowdrops in spring; the flowers are a bright blue, and are charming in contrast with the chaste purity of the snowdrop. Of this species there is a white and pale rose coloured form. Scilla siberica is another dwarf species, having very deep blue flowers that attain a height of four to six inches, the type flowers much later than S. bifolia, and is also a fortnight later than the variety S. taurica, which has flowers of a lighter blue; there is a white form of S. siberica that is excellent in combination when sparingly planted with the type. Scilla italica is a pretty dwarf subject with lavender-coloured flowers that open in May.

Scilla autumnalis grows to a height of six to nine inches, and produces purple-blue flowers in autumn. The variety japonica has rose-coloured flowers, while there is also a white form.

Scilla peruviana, also known as the Cuba Lily, produces huge corymbs of flowers of a rich blue shade, early in summer. It is not quite hardy, and must be planted in light, well-drained soil, in a sheltered spot with some protection to the plants in winter. Scillas succeed readily in any good soil of fair depth, their greatest beauty is displayed then in quantity, so that in planting with a view to natural effect, a few well-chosen varieties will most generally give the best results, being more effective than an exhaustive collection. Scarce or rare varieties are best accommodated in borders devoted to choice subjects, or planted on the rock garden, where their beauty is fully disclosed amidst appropriate surroundings.

Thomas Smith.



THE MERRYWEATHER DAMSON.

A valuable damson, remarkable for its productiveness and the large size and high quality of its fruits.

CULINARY PEAS IN 1911.

The summer of 1911 will long be remembered by gardeners as one of the most trying on record, especially for keeping up a supply of culinary peas or other choice vegetables. No sooner did peas come into bearing than they were quickly over, and one can sympathise with those who, under such trying conditions, were expected to keep up an almost daily supply of tender peas.

Most gardeners have their pet varieties of peas for the main crops, and this is partly due to these being most suitable for their particular soil—an excellent reason why they should grow such kinds in preference to others. But sometimes there is a strong conservatism abroad, and no desire to make changes; this is not such a good reason, because it is always wise to try some other varieties to see if the old kinds are being improved upon.

It is a well-known fact among experienced gardeners that several varieties of garden peas are quite first rate in some soils, while in others they are almost useless; it is therefore a matter of importance that there are many varieties to select from to meet the requirements of everyone. The past season has demonstrated very clearly the merits of some varieties.

In noting these one may include some of the earlier varieties as well as later ones, and one of the best, if not the best, for early crops, is Eight-weeks, sent out by the Holborn firm; those who have grown it speak very highly of it. A pea suitable to follow this is Little Marvel, a wrinkled marrow, 18 inches in height; this is so highly esteemed by gardeners that they grow successional crops through the season. The Pilot is another pea about 3ft. high that is excellent in every way as an early variety, especially if a re-selected stock is grown. Early Morn, although not of recent introduction, is one of the best 3ft. early marrow peas. It quickly develops, and should not be sown too early on heavy land. The variety Thomas Laxton was a good early variety of its time, but is now displaced by Edward VII., a variety which has gained an Award of Merit as an early marrow pea. A good description for Snowdrop is an early Ne Plus Ultra, which should be sufficient recommendation to growers who have not yet tried this pea. Laxtonian, which I grew when it was first sent out, is so altered and improved by re-selection that it is now scarcely recognisable. Duke of Albany and Alderman, if re-selected stocks are obtained, fully maintain their position as two of the most reliable peas which can be grown. A pea which has Duke of Albany for one parent is Carter's Harvestman. This variety has good cropping qualities, grows about 5ft. high, and promises well.

Among dwarf peas Commonwealth has been very satisfactory this season; it is about 2ft. in height, is a wonderful cropper, and has peas of a deep green colour. Autocrat, as usual, has been very satisfactory, and in those districts which were favoured with a few showers late sowings have proved very useful. Two varieties of late peas which have withstood the very trying conditions of the past summer are Dreadnought and Michaelmas; the last-named is fairly well known as a reliable kind for late cropping, while Dreadnought is very appropriately named, for a pea which withstands the drought of 1911, north and south, is one that may well fear nought, even in exceptional seasons. It appears to be equally at home on heavy and light soil, and good in every respect. Latest Giant is a marrowfat pea of robust habit, and, as the name suggests, is a late variety; it crops well, the pods are well filled, and Gladstone being one of its parents, it should commend itself favourably to all.

The past summer has demonstrated the beneficial effects of deep cultivation, and of maintaining a fine surface tilth; occasional thorough waterings, not sprinklings, and heavy mulchings, have repaid the extra labour entailed. The advocates of "dry farming" should be satisfied, for the summer of 1911 has shown how great is the value of the system. Paul T. More.

WHO SHALL RULE?

The question has been recently mooted as to whether the architect or the gardener shall be responsible for the planning of the gardens which must necessarily encompass any new or remodelled residence. The point of view is that the architect desires that the garden shall be dominated by and subsidiary to the residence, with its formality repeated in a like degree. On the other hand, the gardener is represented as making the garden a nursery of flowers, and that blossoms necessarily come before design in his thoughts and arrangements.

The making of a garden which shall not violently oppose the outline of the house, and which shall also be artistic and replete with beauty, is a very important undertaking. Differing styles of architecture will certainly require differing treatment, and the fullest attention must be paid to the conformation of the building, and to allow the garden to frame and soften this conformation in the best possible manner.

Now, to come rapidly to the crux of the matter, it may be asked, "whether the architect or the gardener are the better fitted for the task in hand?" The architect, with his inherent formalism; or the gardener, with his mind centred upon the culture of plants and trees? It must be admitted, with reference to capabilities, that much weakness exists on both sides. I, for one, would strongly combat the intrusion of the architect in what are essentially garden matters, just as strongly as they would refuse to hear the views of a gardener upon structural details. There is no "go-between" in this matter. The two professions have little in common, save that the taste of the gardener must be utilised to improve the surroundings of what the architect has seen fit to create. This, then, is my contention—the architect to his building, and the gardener to his garden.

To make a garden requires good taste, a knowledge of plants and shrubs, and a thorough love of the work in hand. The gardener, if he is worthy of the name, can see just the subjects necessary for the embellishment of a certain place as well as if they were already growing there. His natural love and knowledge of flowers enables him to decide the best positions, both for beauty and effectiveness, of any particular section of plants or trees.

He can assign a position for the rose garden, or a rock garden, or an ornate series of flower-beds, by his knowledge of the requirements of the plants desired, and their effect when in growth and blossom. The successful culture of plants depends largely upon the position being right, and the gardener must remember that not only must the position be right, but that the garden must be properly balanced, both with respect to its parts, and in its relationship to the residence it surrounds.

On the other hand, there are gardeners who have never really considered the question of "landscape" and "decorative" gardening. Their work has probably been confined to the care of existing gardens, and consequently they have not really felt the need of obtaining a knowledge of garden making, I would quietly urge upon my readers the thought that garden art must rank equally as important as good culture does to most growers. We must not be content to grow good plants, but we must place them in suitable positions. To gain telling effects; to secure harmony and due proportion; to interest and charm the mind and eyes of all; to avoid cut-and-dried formalities. These must form notable points in the gardener's working creed. He must remember (and it is not always easy) to let the artist which is in him have full play. Art and good culture, hand in hand, will suffice for any garden.

Therefore push forward your studies in this direction. Let it be possible for a good knowledge of designing to be acquired by every true gardener. I do not wish to make every gardener a draughtsman, but rather that he should come to realise the full values of plants, to know at a glance the type of subject or the most fitting design for each particular aspect.

It must ever be borne in mind that the architect is usually a poor gardener. He does not value plants or shrubs for their beauty, or for natural effects which they may create, but simply considers their usefulness in making a line here, a break there, or to darken or contrast with the outlines of his buildings. This, then, is sufficient warrant for the gardener to fill the gap between the two professions. Let him make it his own province to know the value of all that links the garden to the house. The formal path, the terraced walls, the steps from one altitude to another, the placing and design of pergolas and garden screens, and the many other incidentals, will afford him a good field for study, especially as it is so very necessary in these days.

In conclusion, may I say that garden-making has not yet reached its greatest heights. We travel from improvement to improvement feeling that the ideal which is set before us is not yet reached, though possibly it may be that we shall never attain to the perfect garden, for the more progress we make the higher we unconsciously raise our ideals.

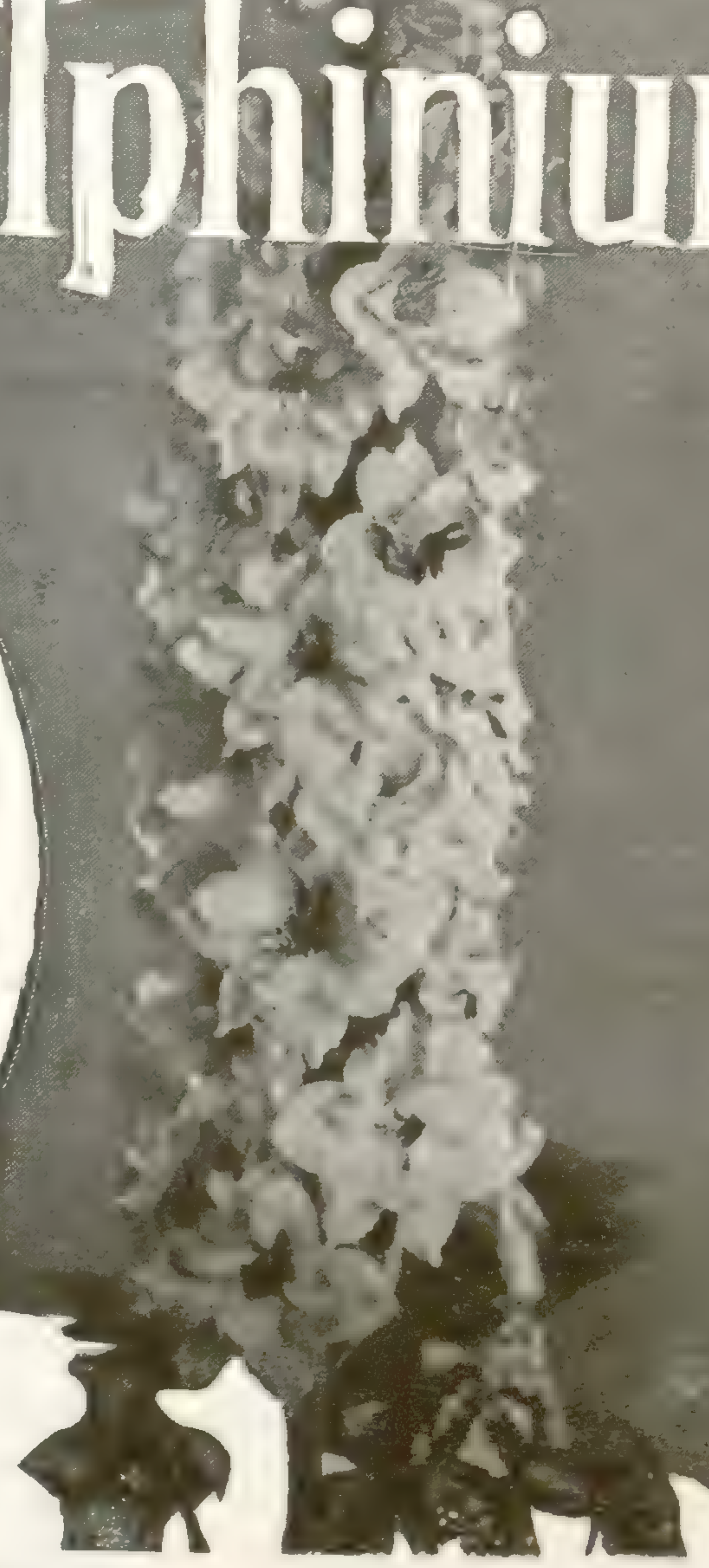
P. S. Hayward.

CALLICARPA PURPUREA.

It is usual to associate this plant with the indoor garden rather than with the shrubbery, for all who have had to keep a conservatory gay have been pleased to use it for the sake of its showy purplish berries, which appear in clusters from the leaf axils. Nevertheless, it may be grown out of doors, and, except in very severe winters, it escapes serious injury to the branches. Unfortunately it blooms too late in the year for its fruits to set, consequently we are unable to include it amongst the showy fruiting shrubs of our outdoor borders. At the present time, mid-October, plants are bearing a profusion of small purple blossoms, which are sufficiently showy to command attention from passers by.

The species is found in both China and Japan, and as it covers a wide area of country, it is possible that some forms are hardier than others; and were an effort made to introduce specimens from the more northerly districts in which it grows, plants capable of producing outdoor fruit might be obtained. As it is, one can hardly say that it is a suitable subject for general cultivation, although the late date at which the flowers appear might be counted as a point in its favour. For the small garden, however, there are many other shrubs which would more worthily occupy the ground.

W. D.



Kelway's Delphiniums

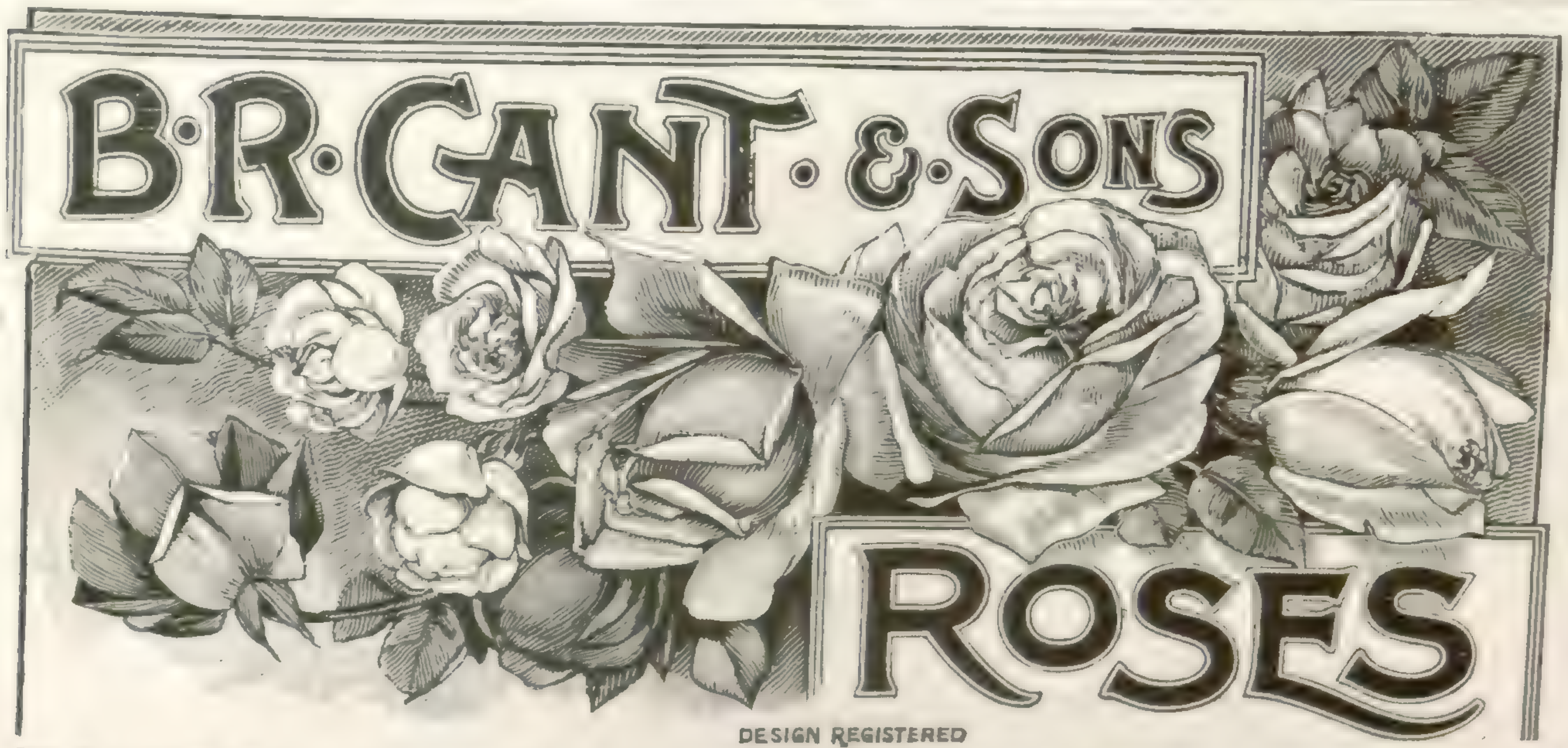
The
Bold Delphinium

BOLDNESS is the outstanding characteristic of the beautiful KELWAY DELPHINIUMS, which grow to a height of from four to eight or more feet and bear masses of fine shapely blooms in all shades of blues and purples. They thrive with a minimum of attention in almost any soil and situation. They show to the utmost advantage either massed or as a part of the celebrated Kelway Colour Border (Regd.).

Choice named collections of Kelway Delphiniums
24/- 34/- 56/- a dozen.
Kelway Colour Borders, 15/- to 25/- for 10 sq. yards.

The Kelway Booklet, "Gardens of Delight" (6d. post free), gives full details.

KELWAY & SON,
The Royal Horticulturists,
Langport, Somerset.



B·R·CANT·&·SONS
ROSES

DESIGN REGISTERED

DIRECT FROM THE ORIGINAL FIRM.

Established 1765.

WE HAVE FOR DISPOSAL THIS SEASON

80,000 Standards and Half-Standards.
4,000 Standard Weeping Roses.
Magnificent Plants in the best known varieties. Also
300,000 Dwarfs and Climbers.
THE FINEST STOCK IN THE KINGDOM.

Illustrated Catalogue post free on application to

BENJAMIN R. CANT & SONS, The Old Rose Gardens, **COLCHESTER.**

FRUIT TREES.
Over 20 Acres.
ROSES
Including all Latest Varieties.
RHODODENDRONS
Grown in Loam.
Azaleas & Heaths
INCLUDING GOLDEN YEWS, CONIFERS, etc.
Ornamental Trees & Shrubs,
Flowering Trees & Shrubs.
Acres of Forest Trees of all Sizes and Varieties.

GRAPE VINES OUR SPECIALITY.
Climbing Plants in Variety.
Figs and Strawberries.
INSPECTION INVITED.

Gardens Laid Out and Planted by Skilled Men.
Catalogue Free on Application.

H. LANE & SON,
THE NURSERIES, BERKHAMSTED.
Established 1777.
Telephone:— Berkhamsted 18. Telegrams:— "Lane, Berkhamsted."

FOR ALL PURPOSES. # ROSES **FOR ALL SITUATIONS.**

STOCK OF OVER 250,000 STRONG PLANTS TO SELECT FROM.

SPECIAL OFFER No. 2. Collection of 25 Gold Medal Roses.

The following 25 varieties of Roses, which have all been awarded the GOLD MEDAL of the NATIONAL ROSE SOCIETY, will be sent Carriage Paid and Packing Free for 25/- nett.

AVOCA (HT)
BEN CANT (HP)
BESSIE BROWN (HT)
BETTY (HT)
COUNTESS OF GOSFORD (HT)
DEAN HOLE (HT)
DR. O'DONEL BROWNE (HT)
EDITH D'OMBRAIN (HT)
FLORENCE PEMBERTON (HT)
HARRY KIRK (T)
HELEN KELLER (HP)
HUGH DICKSON (HP)
J. B. CLARKE (HT)
LADY ROBERTS (T)
MRS. B. R. CANT (T)
MRS. EDWARD MAWLEY (T)
MRS. JOHN LAING (HP)
MRS. R. G. SHARMAN CRAWFORD (HP)
MRS. STEWART CLARK (HT)
MRS. MYLES KENNEDY (T)
MRS. W. J. GRANT (HT)
QUEEN OF SPAIN (HT)
SIR ROWLAND HILL (HP)
SOUV. DE PIERRE NOTTING (T)
WILLIAM SHEAN (HT)

ILLUSTRATED CATALOGUES GRATIS AND POST FREE.

EDWIN MURRELL, ROSE GROWER, SHREWSBURY.
ESTABLISHED 1837.

"IT IS ONLY A LITTLE

CLAY'S

THEY WANT"

CLAY'S LONDON FERTILIZER
TRADE MARK.

SOLD EVERYWHERE IN TINS at **6d.** and **1/-**; and in Branded and SEALED BAGS, 7lbs. **2/6**; 14lbs. **4/6**; 28lbs. **7/6**; 56lbs. **12/6**; 112lbs. **20/-**. Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**). **Every Genuine Tin, Bag, and Seal bears Trade Mark, as at side.**

CLAY & SON,
Manure Manufacturers and Bone Crushers,
STRATFORD, LONDON, E.

J. J. THOOLEN, The EXPORT Nurseries,
Heemstede, Haarlem Holland,

Established 1884,

Has the honour to announce that his Illustrated Price List of Bulbs and Plants in English, Autumn, 1911, at lowest prices, will be sent post free on application. **No Charge for Packing. Orders of 10/- and above entirely Free to Destinations** in England, Scotland, and Ireland, etc. First Quality guaranteed.

Some sorts of Bulbs noted out of Price List.

	Per 100. s.	d.	Per 1,000 s.	d.
Hyacinths, in the finest mixture for bedding or forcing	7	8	72	4
Hyacinths, single, first size, named, in 25 leading sorts, red, white, and blue vars., equal quantities, my selection	15	0	—	
Tulips, single early, in the finest mixture	2	0	18	4
Tulips, Darwin, mixed	3	0	25	0
Tulips, double, in the finest mixture	2	2	20	0
Anemones, single mixed	1	4	12	0
Anemone, The Bride, pure white	1	4	12	0
Crocus, 1st size, in the finest mixture	1	4	12	0
Crocus, 2nd size, in the finest mixture	0	9	7	0
Scilla campanulata, blue bells	2	0	—	
Scilla campanulata, white bells	2	0	—	
Scilla sibirica, rich blue	1	6	14	6
Iris, Spanish, mixed	0	7	5	0
Iris, English, mixed	2	0	16	8
Narcis., single, in the finest mixture	1	4	12	6
Narcis., Trumpet, in the finest mixture	2	6	20	0
Narcis., double, fine mixture	2	6	20	0
Narcis-Polyanthus, finest mixed	3	6	30	0
Snowdrops, Elwesi, the Giant Snowdrop	1	6	13	6
Ranunculus, French, double mixed	0	0	7	0

250 Bulbs of the same kind will be charged at the 1,000 rate; 25 at the price per 100; 6 at the price per 12.

Ask for Illustrated Price List and see the Collections.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

RIVERS'

Fruit Trees, Roses, Vines, Figs, Oranges, AND Orchard House Trees.

A LARGE AND SELECT STOCK ALWAYS ON VIEW.

ILLUSTRATED AND DESCRIPTIVE CATALOGUE
POST FREE 3d.

THOMAS RIVERS & SON

Sawbridgeworth, Herts.
STATION: HARLOW, G.E.R.

CORONATION CARNATIONS.

I am proud to inform my patrons and friends that the unique honour and privilege of supplying the Carnation blooms for the Coronation bouquets was entrusted to me in its entirety, a fact which speaks volumes for the unequalled excellence of my flowers, and places my culture on the topmost rung of the Carnation ladder.

Catalogue of the finest collection ever offered, free on application to

CHARLES BLICK Warren Nurseries, Hayes, Kent.

By Appointment

FORBES' 1911

ILLUSTRATED PLANT CATALOGUE

Nearly 200 pages.

GOLD MEDAL SPECIALITIES

Contains carefully revised **Descriptions, Colour, Height, Time of Flowering, British or Common Names, Prices, etc.**, of the **Grandest Collections of ASTERS, CARNATIONS, DELPHINIUMS, PÆONIES, PENTSTEMONS, PHLOXES, PYRETHRUMS, HARDY BORDER PLANTS,** carefully prepared **PLAN** for arranging

HARDY PLANT BORDERS, etc.

Experts unanimously accord **FORBES' CATALOGUE** the unique distinction of being the **best** and most **reliable** up-to-date **Reference Book** extant.

Free for cost of postage, 2d.

JOHN FORBES (HAWICK) LIMITED,
(Dept. I), The King's Nurserymen,
HAWICK, SCOTLAND.

OUR WORLD-FAMED

GOLD MEDAL ROSES.

Please send for our Catalogue, which contains descriptive particulars and prices of all New and Old Roses worth growing, for any purpose. The largest growers in the world of Roses on the briar-cutting stock.

SAMUEL M'GREDY & SON,
ROYAL NURSERIES,
PORTADOWN, IRELAND.

A SPECIALITY FOR MORE THAN 50 YEARS.

POT VINES

Exceptionally Fine this Season.
Inspection Invited.

J. R. PEARSON & SONS, LOWDHAM, Notts.

SPRING BEDDING SUGGESTIONS.

The London parks and gardens serve as a very fine object-lesson in the matter of artistic floral decoration, and, happily, the "powers that be" afford every encouragement for a lavish display that is worthy of a great capital. Beautiful indeed is the display of spring-flowering bulbs and plants, and I propose to offer a few remarks as to effective combinations noted last spring.

A very large bed filled with Hyacinth King of the Blues, Narcissus Horsfieldi, and Tulip Ophir d'Or, with a dense mass of Aubrietia Leichtlini, acting as a carpet, was fine indeed, as was also an oblong bed containing about a thousand Proserpine and Snowball tulips arranged in alternate fashion, a wide belt of Myosotis Royal Blue doing much to enhance the beauty of the whole. A huge triangular bed held tulips in variety, mounds, irregular both in size and outline, being planted with Keiser's Kroon, Proserpine, Thomas Moore, Joost Van Vondel, Bacchus, Rembrandt, and Ophir d'Or, while between the mounds, and as a framework, White Joost Van Vondel figured.

Two feet high plants of Cerasus chinensis roseus fl. pl., literally smothered with blossoms, were associated with a glorious mass of polyanthuses, and presented a charming picture, and the same remark applies to dwarf plants of lemon-coloured cytisus, around which nestled fine masses of alpine auriculas. A great mass of Hyacinths Leonidas and La Grandesse, arranged in indiscriminate fashion, was very pleasing, and the single-flowered arabis supplied a first-rate carpet. A wide stretch of bronzy-golden wallflowers, with hyacinths in various shades of blue thinly interspersed among them, struck a rich note, while in another park the extreme brilliance of Tulip Imperator Rubrorum was toned down by rubbing shoulders with the double white arabis.

I was impressed with the effect created by bringing together Hyacinths Gigantea and Leonidas and Narcissus Stella, and yet another fine combination of Tulip Joost Van Vondel, Emperor narcissus, and Hyacinth Van Der Hoop. Mention should be made of a large bed carpeted with the new scarlet daisy of immense proportions, White Swan tulips rearing their heads above it. A splendid mass of Muscari botryoides alba associated with Hyacinth Priestley was fine. It was also a good idea to plant Wouverman and Van Der Neer tulips between golden-yellow wallflowers, and the bringing together of Keiser's Kroon tulips and chalice-cupped narcissus is to be recommended. A large stretch of border was planted with hyacinths, tulips, and narcissus in variety, and it was very clear that the bulbs had been mixed together in careless fashion and planted where they fell, and it may also be recorded that no more delightful or artistic feature could be found in that particular park. Walter H. Aggett.

Myrtle Jeanny Reitchenback.—There are several varieties of myrtle now in cultivation, and much as they are admired at all seasons, they are doubly attractive when in bloom. That named at the head of this note is one of the smallest growers, forming as it does a dense little bush, thickly clothed with its tiny dark green leaves. A notable feature is the great profusion in which the blossoms are borne, for when at their best the upper part of the plant is quite a mass of white, intensified in hue by contrast with the dark green foliage on the lower portion. This variety has been known for many years, but it is certainly not met with to the extent that its merits deserve.—W. T.

LADY HENNIKER AND ENCORE APPLES.

At this time of the year planting is commencing in almost every garden, and it is therefore well to bear in mind some of the newer introductions as well as the best of popular sorts when fruit trees are under consideration. A handsome culinary apple that merits attention is Encore, a fine variety raised by Mr. Charles Ross, who obtained it by crossing Warner's King with Northern Greening. A fairly strong grower, the variety is also free cropping, and its solid fruits are particularly valuable inasmuch as they keep well under good conditions until the following June. The large apples are of even outline, roundish, greenish-yellow, with a slight red flush on the sunny side. Encore has received an Award of Merit from the Royal Horticultural Society. Messrs. J. Cheal and Sons, Crawley, Sussex, are the distributors of this useful apple, and our illustration represents fruits exhibited by them at the recent great fruit show at Westminster.

APPLE LADY HENNIKER.

A first-rate culinary variety, raised more than sixty years ago. It was finely shown, as above, by Messrs. T. Rivers and Son, at the recent Great Fruit Show at Westminster.

Lady Henniker is a quite old apple, but it is still a first-rate kitchen variety, and by no means bad eating uncooked. It is in season from October to February. The fruits are large, yellow tinged with red and streaked with crimson, and in some seasons they are very handsome. On orchard house trees they are very effective, especially as grown and shown by Messrs. T. Rivers and Son, Sawbridgeworth; the accompanying illustration depicts a dish of fruit of this variety from Sawbridgeworth. Mr. John Perkins, who was gardener to Lord Henniker, at Thornham Hall, Eye, Suffolk, writing of this apple in 1873, states: "Between the years 1840 and 1850, the late Lord Henniker had great quantities of cider made to give away in the summer months. Several bushels of apple pips were sown in beds, from which the most promising seedlings were selected and planted; these were reduced every few years. The last thinning was about seven years ago, when thirty-three trees were cut out. The tree in question was always a favourite, and it has been carefully preserved. It is much used here when large and handsome dishes of mixed fruits are required for the dinner table. Its appearance by lamplight is most telling. The tree is healthy, and a great bearer."

A PLANTING NOTE.

The planting season is again with us, and no time should be lost by those who have to move either ornamental shrubs or fruit trees. All these move well, and readily adapt themselves to new conditions early in the season while the ground is warm. We usually move several thousands of shrubs and trees each autumn, and always begin the work when October comes round. Visitors who have been here this summer will testify that remarkably few plants die or even look sickly, and this speaks more expressively than any word from my pen of the value of early planting.

When renovating shrubberies the ground should be double dug, as this gives the roots a much better chance of permeating the soil, and also prevents damage from drought in hot summers. If a large bed or border has to be treated it had better be done thoroughly, even if this necessitates a little more time, and is therefore a trifle more costly; it is the better plan for both employer and gardener, to say nothing of the plants. Every care should be taken that, as the plants are taken up the roots are covered with litter or fine soil until the sites are ready for them.

Some good decomposed manure, cow manure for preference, as this is the most lasting, should be worked in with the soil, and the latter should be well broken up with a fork as the work proceeds. Many persons do not think of assisting shrubs with manure, but for most of them it is nearly as essential as for onions or cabbages. W. A. Cook.

Leonardslee Gardens.

POTENTILLAS.

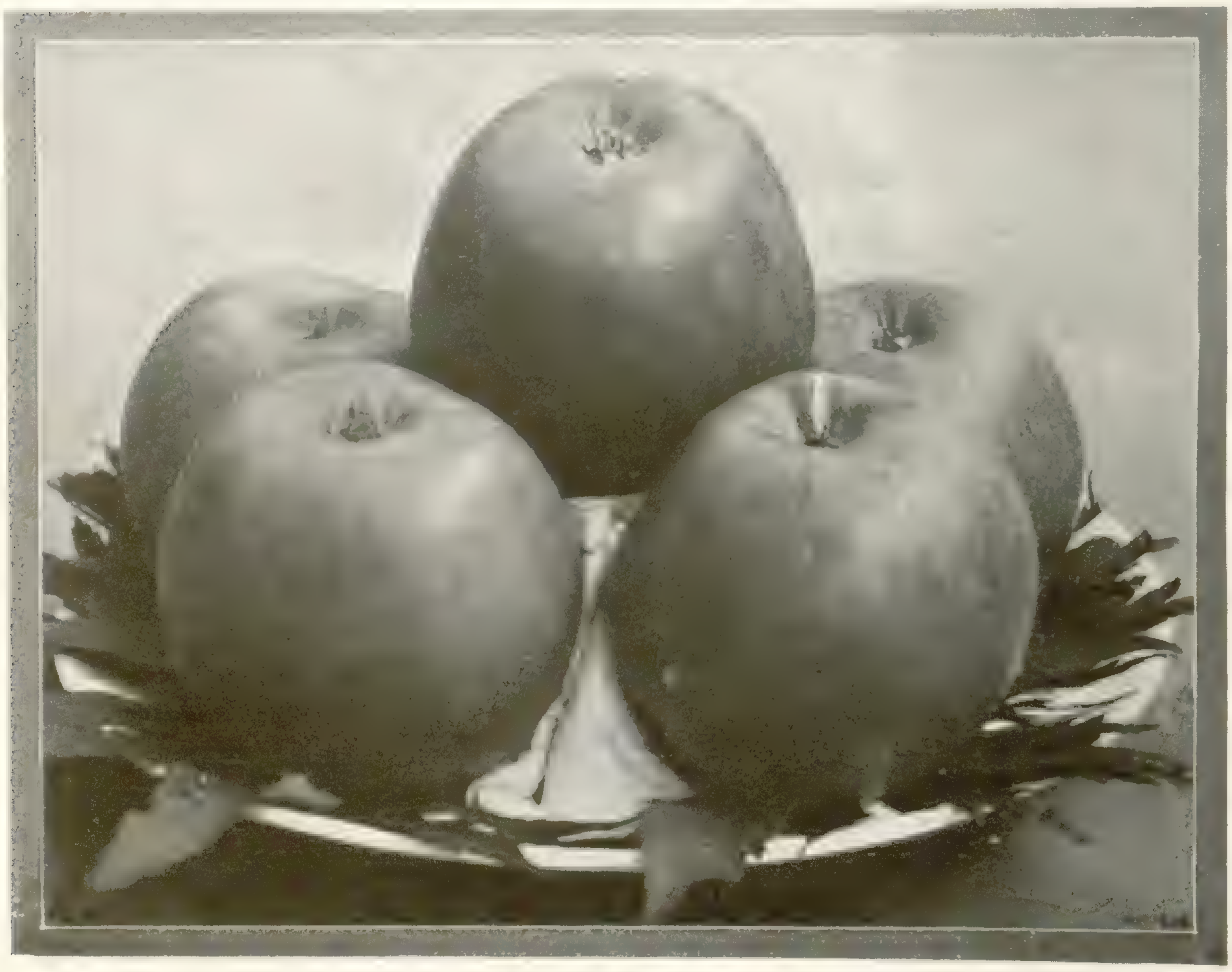
The name potentilla is derived from the Latin word potens, powerful, owing to the potent properties formerly supposed to reside in some of the species. The families to which many of our garden flowers belong are well represented in our British flora, and in this case we have the Silver Weed or Goosegrass (P. anseriva), Creeping Cinquetoil (P. reptans), and the Strawberry-leaved Cinquefoil (P. fragariastrum), which is so often mistaken for the wild strawberry. These are our most common potentillas, or cinquefoils, though we have several others, while botanists describe as many as 150 species the world over. Most of our named garden varieties have been obtained by hybridising two Himalayan species, P. insignis and P. atrosanguinea, neither of them at all unworthy of a place in the garden—the former having yellow flowers an inch in diameter with silver foliage, while those of the latter are deep velvety crimson. The result is seen in the named hybrids, nearly all of which have flowers of one or other of these colours, or, more often, of a combination of the two. The double varieties now almost exclusively mentioned in catalogues are much more showy than the single, and the flowers last longer.

Potentillas are seldom seen except in the gardens of true flower-lovers, which are kept in a state of high cultivation. They will grow in almost any kind of soil, and they like an open position, though they soon pass out of flower if too dry at the roots. For the production of large blooms a deep rich soil is necessary, with just enough shade to give them a respite from the midday heat; but they will grow fairly well on rockeries and sunny banks, and will make a good groundwork between tall herbaceous plants, if not too starved, or even among rose bushes, though rosarians will say this is heresy. It is recommended to water them before the soil becomes very dry, though the amount of drought they will stand is mainly a matter of having the plants deeply rooted, which means deep cultivation. They make very coarse roots which go down very deep, and if the soil conditions are favourable for deep rooting they will stand a good deal of drought. It follows from this that they are not good subjects for moving, and, though they may be increased by division to almost any extent, it is the second summer at least after being planted before they do much good. They increase in size fairly quickly, and if good-sized blossoms are wanted they should be divided and replanted in good rich soil after four or five years. Seed advertised as being saved from the best-named varieties may be obtained, but a good proportion of seedlings usually come single.

There are two different methods of treating the flowering plants. One is the natural or wild garden style, in which they spread over the ground as they will, and this method, or absence of method, is suitable for the rockery, or when they are used as a groundwork. Some recommend pegging them down after the manner of petunias, and a bed of them grown in this way really well, undoubtedly looks very beautiful, especially on a sunny day when the flowers open their widest. On the other hand, with the flowers so close to the ground, a heavy rain completely ruins all the blossoms which may be open at the time.

Many prefer giving them a little support, and this is easily done without unduly marring their natural grace, for, though the flowering stems often begin to fall to the ground before they are a foot high, the stems in themselves are fairly strong, and, if supported for a few inches above the ground, will stand up perfectly well in a way which appears quite natural, though it is not the way the plant grows in a state of nature. Short sticks standing less than a foot out of the ground may be used for the purpose, and three or four flowering stems loosely tied to each one before they begin to fall down, the result being that the growth almost entirely hides the sticks, while the stems grow in an upright position and branch out to some extent, thus producing the effect of a naturally grown plant, which is very handsome when the flowers are fully out in the sun, a large clump spreading out some two feet in diameter. For the production of fine specimen plants of this sort a mulch of manure as soon as the ground becomes dry in May is very helpful. For a bed, a more rough-and-ready way of affording support is to put short, twiggy sticks among the plants, which grow up and hide them while deriving some amount of support from them. The plants usually begin to flower before the middle of June, and last in perfection throughout July and sometimes more or less into August.

For cutting it must be admitted that potentillas are not always satisfactory, sometimes drooping unaccountably the first day. When they do stand, however, very beautiful arrangements may be made with them, using whole sprays, buds and all, as indeed, they can scarcely be cut otherwise. Alger Petts.



APPLE ENCORE.

A new culinary apple raised by Mr. Charles Ross from Warner's King and Northern Greening; exhibited and distributed by Messrs. J. Cheal and Sons, Crawley.

BORDER CARNATIONS NEAR THE SEA.

I was once talking to a nurseryman's traveller about border carnations. My plants rarely lived—if left undisturbed—more than three years in a satisfactory condition, with the exception of the variety Raby Castle; and consequently, I had to layer plants extensively every year. The gentleman in question said: "Border carnations will not do well for more than two or three years in a garden situated as yours is, low-lying and close to the marshy sea-coast, on account of excessive moisture."

For about twelve years previously I had grown carnations in gardens situated within a mile of the sea-coast, both in a northern county and also in a southern one, but the plants did remarkably well for many years undisturbed. These gardens, however, were about one hundred feet, or rather more, above the sea-level, and the foreshore consisted of gravel and sand. When I took charge of the gardens near the marshy ground I was told that my predecessor never relied upon carnation plants after they were two years old. I thought that his system of cultivation was at fault, but after trying my best for ten years, I had to admit that I was beaten. My predecessor had tried for fifteen years. Perhaps some readers of the Gardeners' Magazine have had similar experiences; and, if so, and success has followed any special system of cultivation, no doubt they will tell other readers all about it. G. B.

Clematises for the Greenhouse.—As is usually exemplified at one at least of the autumn meetings of the Royal Horticultural Society, the spring-propagated plants of clematis will flower freely towards the end of the season. At that time they are useful for various decorative purposes, and are at least quite distinct from most subjects commonly used.—W. T.

Cavendishia acuminata.—This is a South American evergreen shrub, which is well suited for clothing the pillars or back wall of the greenhouse. It is of loose free growth, the leaves pointed, oblong in shape, from two to three inches in length, and of a stout leathery texture. The flowers, which are borne in clusters, are tubular, waxlike, and yellowish in colour. They are in the bud state protected by large rose-coloured bracts, which remain for some little time after expansion. In its Andean home these bracts acquire a richness of colouring which we do not see here. Beside this the young leaves are of a pretty reddish hue. In addition to the generic name above mentioned it is also known as Proclesia and Thibaudia, the specific title remaining the same. —W. T.

THE GIANT COLCHICUMS.

Within the memory of most of those whose experience in horticulture extends back over at least a quarter of a century, there was a time when gardens were not beautified in the autumn as well as they are to-day. Ever since the tide turned in favour of hardy plants, and a desire to spend as much time as possible in the garden and the field, the desire to extend the season of floral beauty by the introduction of early spring flowers has steadily grown. A later development has been the extension of the autumn season, and recent years have seen wonderful developments among outdoor chrysanthemums, Michaelmas daisies, solidagos, etc., and there have been numerous introductions of species of flowers, as well as of trees and shrubs remarkable for their autumn glory of fruit or leaf.

The autumn flowering crocuses and colchicums have shared in this development, and both are more popular to-day than they ever were. The colchicums have especially appealed to lovers of hardy plants, and among them none occupy such a high position in popular favour as the giant-flowered Colchicum speciosum and its pure white form C. s. album. C. speciosum, with its cheery bright purple colouring, is a capital autumn bloomer, while the pure whiteness of its albino form makes them very attractive, even at a considerable distance, when a goodly group is cultivated. C. speciosum comes from the Caucasus, and has been with us many years; but the splendid white form has come into prominence within recent years, and no firm has done more to make this beautiful plant widely known than Messrs. James Backhouse and Son, Lim., of York. At a meeting of the Royal Horticultural Society held at Vincent Square on September 26 last, this firm presented a very large and beautiful group of C. speciosum, C. s. album, and other species, composed of many hundreds of fine blooms; the exhibit figured herewith was by far the finest of its kind we have seen. C.

A FINE EXHIBIT OF COLCHICUM SPECIOSUM AND C. S. ALBUM.
Staged at Westminster recently by Messrs. James Backhouse and Son, Lim., York.

POINTS ABOUT STANDARD FRUIT TREES.

In many a private establishment you find on the shelves in the fruit room selected specimens of apples intended for dessert, which are mostly grown, by the way, on dwarf trees in the kitchen garden, but it is as likely as not that somewhere else there is a big heap of apples, not quite as good, perhaps, so regular, or so easily recognised as regards the varieties, but they are invaluable, nevertheless, for the supply of the kitchen from the autumn onwards, and they represent the crop from the orchard, which is outside the precincts of the garden, and is composed of standard trees growing on grass. For the simple reason then that the orchard supplies the bulk of the apples for everyday use in many an establishment it has a value of its own, and even if in some cases it may not receive quite the same attention as the bush, pyramid, and wall trees in the garden, the orchard yields a good interest on the time and money spent on it.

The moment is opportune for discussing the subject because the time is at hand for planting new orchards and filling up others, and in this matter some useful lessons have been taught by the season. One is—plant before Christmas if you can. Why? Because in the first place, the early planter gets the pick of the nurseryman's stock, which is a point worth considering, and he runs less risk of losing his trees if the summer following the planting should happen to be dry. Hundreds of trees that were planted in the spring of this year have gone back, or have only been saved by means of copious waterings and heavy mulchings; whereas specimens planted in the fall of 1910 were settled down in the soil before the spell of drought set in. Get good trees is another golden rule, and by a good tree in the case of a standard I mean a specimen that has been grown quickly from the bud, has a straight, stout stem, with a well-balanced head at one end and a nice lot of fibrous roots at the other.

Much ink has been used over the matter of planting, which, after all, is a simple matter. If the orchard is a new one let the trees stand 30ft. apart in equilateral triangles, and in all cases begin by taking off the turf where the tree is to go in a circle 5ft. across. Place this on the side, remove the top spit of soil a foot deep, and break up the subsoil underneath. Cut up the turf that was removed from the surface, spread it over the subsoil with a little of the top soil that was taken out, tread it down, and drive in the stake. A good stake that will last as long as the tree needs support is desirable, and sawn deal stakes, 7ft. long, about 2½in. square, pointed at one end, and creosoted, answer the purpose well. If the above method is adopted there will be no fear of planting too deeply, and the soil should be mounded up a little above the level of the surrounding ground to allow for sinking. After time has been allowed for the trees to settle down they should be firmly fastened to the stakes, and if stock has access to the orchard some kind of fencing will be required. Guards of timber may be employed, but they are cumbersome and expensive, and in many ways not so good as one of the light, strong wire guards that are sold for the purpose.

One point I would emphasise—do not let the grass grow up to within 2ft. of the stem of the trees for the first few years, but keep the surface soil hoed from time to time. I have made experiments in respect of this point, and have trees planted three years ago, some with the turf buried and others where the turf was laid back over the roots. To-day the heads of the former are almost as big again as those of the latter, which fact supports the contention that turf over the roots is detrimental to the quick development of a newly-planted standard.

In the choice of varieties much, of course, depends on the requirements of the establishment, but for orchard work it is always well to consider the constitution and vigour of the tree. Above everything in the orchard you want trees that will grow, and varieties that have no capacity for making good heads are out of place in an orchard. In most establishments the high-class dessert apples of not very strong constitution can be accommodated in the garden, but the orchard is the place for the all-round utility apples like Bramley's Seedling, Newton's Wonder, Blenheim Pippin, Lord Derby, and others which can be depended upon to make fine trees. Knowledge of the growing habits of varieties is very desirable when planting in orchards, and, as a case in point, Lane's Prince Albert is one of the best culinary apples we have for growing in the garden as a bush, but it is unsuitable for an orchard standard because it does not make a good head. The same remark applies to Stirling Castle and several other varieties; and, further, I would say, have no varieties in the orchard which show a predisposition to canker. Would that some scientific expert could find a remedy for this evil, which is the bane of the apple grower, but it is not forthcoming, and the only thing is to discard any variety, no matter how good it may be, in orchard planting, if the tree has a reputation for being liable to canker.

A word about pruning, of course; but what shall I say? Everybody agrees that a young standard tree should be pruned after it is planted for the purpose of starting it into growth and forming a good head, but when should it be done? Should the leading shoots on the young tree be shortened back, say, in March or early April following the planting, or should the work be deferred till a year later? I know this is opening up an old wound of contention amongst gardeners, and whichever way I advise I know someone will disagree with me, therefore I will only say that, as the result of my experience, supported by experiments I have made to test the point, better growth and stouter heads are, as a rule, obtained on standard trees that are left for a year before being pruned than if the pruning is done the same season as the planting. I am aware, of course, that very much depends on the season, but we never know what kind of a season we are going to have in this country, and I know of several orchards now in which trees planted last winter were shortened back in the early spring, and they have not made an inch of new growth. Probably they would have done so had the season been better, but is the risk worth taking considering that if the trees are left for a year after planting they become established at the root, and good growth follows the pruning in the next season, no matter whether the weather is wet or dry. H.

Lobelia cardinalis.—As they have a strong dislike to the wet and damp of our winters, it is necessary in many gardens to lift the roots of herbaceous lobelias and store them in cold frames. They delight in a moist position during the summer and autumn, yet must be kept dry in the winter. Water settles in the space caused by the removal of the flower spike, and thus sets up a general decay; so as to prevent loss, it is safest to give the roots the required protection.—E. C. Pooley.

AMONG THE ALPINE FLOWERS.

As we look upon the garden now we think of the passing year as one of the most wonderful for lovers of flowers. It has been a strangely chequered one, despite its sunshine and brilliancy. To the gardener it has brought much tribulation amid all its glory, and drought has deprived him of many of his wonted pleasures and delights. Yet it has been a season of exceptional beauty, and now that October has more than dawned we are glad that we have seen a season such as this in the garden.

It gives us now many sights of wondrous glory, especially in the autumn tints of tree, shrub, and border and alpine flower. It is but seldom that we see these under such happy auspices, and the gold and the russet and the crimson of the dying leaves seem more brilliant than is their wont as we study them in the clear sunshine of the autumn. To these are added the flowers of the time and those of another season as well; for the plants of summer, and even of spring, have been enticed to bloom in the days of October, and help to give us pleasure in company with their sisters of the later months. Very beautiful are many of these now, and we can welcome their bloom and that of their allies of October.

Lady Larpent's Leadwort.

It must have been an admirer of alliteration who dowered this plant with its popular name, which assuredly appeals to us more than Plumbago Larpentæ, the botanical designation under which it is yet best known. Still happier does it seem to us when we compare it with that of Ceratostigma plumbaginoides, which, on the highest authority, is the correct scientific appellation we are to bestow upon it. But Lady Larpent's Leadwort it will remain to many, and those who wish to commend it to the amateur will do well to eschew the name of Ceratostigma plumbaginoides, with all its uncouthness and difficulty.

I have probably spoken of it before, but I cannot allow it to go unhonoured at the present time, as seldom, if ever, have I seen it with such lovely autumn colouring as now. It is yet in bloom, and the flowers, rather like those of the old Plumbago capensis, a charming greenhouse or conservatory plant, but darker, are exquisite on a sunny rockery, such as the plant loves. But the green leaves of a month ago have assumed the most lovely colouring of red or crimson—although red conveys too dull an impression to indicate the tint we mean it to convey. One loves to linger by the plant in passing, and to wish that such a time would last still longer, so that we might the more admire this charming leadwort. It likes a dry soil and a warm place, coming too late in many gardens to be worth growing away from the sun.

Geranium lancastriense.

One must also venture to speak once more of a flower which has had its praises uttered before now. This is Geranium lancastriense, but on this occasion it is brought forward because of its autumn colouring. Deeper in its red tints than the leadwort, it is very fine at present, and when, as there is on one or two plants, a pink flower heightens the charm of this little geranium, not six inches high, with its finely-divided leaves and its fine colouring, it gives us inexpressible pleasure indeed. I have a considerable number, and of these the finest coloured are those on the poorest, hardest, and stoniest soil in the rock garden. This it likes, and the preference is not to be wondered at, seeing that it is a sea-coast plant.

The Double Red Sun Rose.

Another old plant which is proving its high value in a season like this is the old double red sun rose, or helianthemum, known long ago as H. amabile or venustum fl. pl., but called by other names now, Mrs. C. W. Earle being among the most popular of these. I expect this is because it is the one that talented lady speaks of in her "Pot Pourri from a Surrey Garden," in which she says: "I have a double-flowered scarlet rock-rose, not figured in any of my books, and which I have rarely seen in gardens. It flowers persistently for many months." This little sun rose is a charming thing and is seldom out of bloom from the time it begins, about the end of May or beginning of June. A fine October seems to give it a new lease of beauty, and it is fuller of flower than I have ever seen it at this time of the year.

Crocus Boryi.

This seems to be flowering earlier than usual with me this year, although I regret that I cannot find any record of its previous blossoming period in my note-book. Its lateness renders it a species which should be sheltered from the weather we usually experience; but this season is favourable to these autumnal crocuses. This is a very charming little one, with white flowers, my form having a pencilling of lilac at the base of the exterior, this harmonising well with the white segments. The interior is altogether white, with white anthers and handsome fine scarlet stigmata. This is one of the gems of the genus and considered less hardy than some. Carpeted by a low mossy saxifrage it stand well here.

Other Flowers.

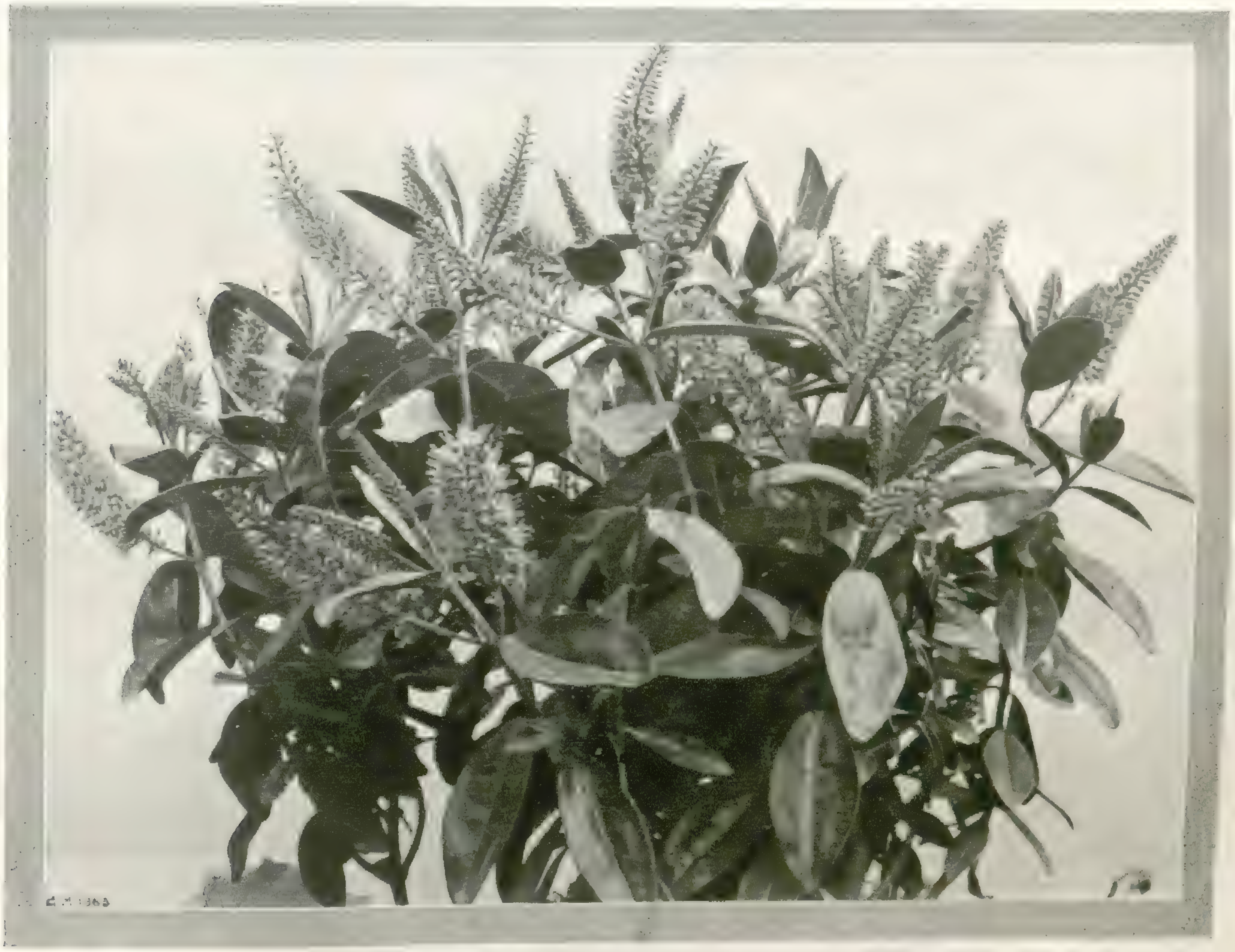
There are other crocus species—C. iridiflorus, C. pulchellus, and C. speciosus, with C. zonatus and C. asturicus, being among the most ornamental of these fine flowers. A few meadow saffrons there are also, but they look coarse compared with the delicate loveliness of the crocuses. A considerable number of erodiums also show their enjoyment of a dry season, and I have never really appreciated the worth of these plants for a sunny place in the poorest of soil until now. The little Origanum hybridum is yet in flower; there are several of the giant thrifts, such as Armeria plantaginea; a few hypericums, like H. fragile, H. coris, H. reptans, H. calycinum, and a few of the taller species. Oxalises valdiviana and corniculata yet give flowers; anthemises and achilleas adorn their allotted places with silvery leaves and white flowers; as do dwarf campanulas, such as C. garganica, C. hirsuta, some of the carpatica varieties, and forms of C. rotundifolia and others. Some of the alpine pinks have taken a fresh lease of beauty, and are giving us beautiful flowers. Even the rock madwort, Alyssum saxatile, gives us a sprinkling of gold, and A. sinuum accompanies it on the rockeries. Heaths of several kinds are yet in perfection; and, go where we may, we are always coming upon some little bit of beauty, such as we find under a bush of the Japanese rose, where a little colony of Cyclamen neapolitanum has sent up for many weeks its white or crimson flowers of the utmost beauty. Truly, we are happy in having these flowers to keep us from feeling that the winter is at hand, and to make us realise that our season of enjoyment is not bounded by the limits of a month or two, but extends over the greater part of the year.

S. Arnott.

VERONICA VEITCHI.

Within the past two decades our gardens have been enriched by a considerable number of shrubby veronicas belonging to the section represented by that fine hybrid known as V. Andersoni, and of much value from the decorative point of view. Unfortunately, they have not proved sufficiently hardy to pass through an English winter of moderate severity without receiving more or less injury, except in the more favoured districts. In the southern and western counties of England and the warmer parts of Ireland they grow vigorously, and, except in severe winters they do not suffer materially, with the result that, in many gardens, may be seen comparatively large specimens that throughout the summer and autumn months are objects of great beauty. Trained to the south side of a wall or planted in positions where the conditions are favourable to the ripening of the wood, and the plants receive some amount of shelter during the colder months, these veronicas survive winters that are not very severe, and attain a considerable size in gardens situated some distance to the north of London. They may have the more tender parts of the growths cut back by the frosts, but this is not a matter of so much consequence, for when pruned rather hard at the close of the winter they start freely into growth under the influence of the genial temperature and warm showers characteristic of the spring season. It is, indeed, surprising how quickly they recuperate and yield again of their attractive flowers. In severe winters they will be killed in many gardens, but a fresh stock can be readily raised from cuttings, and where they are employed for decorative purposes under glass some of the larger plants can be utilised in filling gaps caused by the frost.

The number of varieties belonging to this section is considerable, and many of them possess much merit, but we do not know one that is equal in value to the fine variety which Messrs. R. Veitch and Son, of Exeter, have submitted to public notice under the name of Veronica Veitchi. It has been shown at two of the meetings held by the Royal Horticultural Society since the close of the summer, and on both occasions it attracted much attention from the visitors who are interested in shrubs that are specially adapted to kind climates. The plant has ample glossy-green foliage, and is free branching, and soon grows into bushy specimens that bristle with spikes during the summer and autumn months. From the illustration given herewith a good idea will be obtained of the habit of the plant and profusion with which the rich blue flowers are produced, but to be able to form an idea of the effectiveness of V. Veitchi one had need to make the acquaintance of the fine specimens with a height of six or more feet, and a proportionate diameter, that may be seen growing in the open in Devonshire.



VERONICA VEITCHI.

A beautiful variety of shrubby habit, and bearing spikes of rich blue flowers, introduced by Messrs. R. Veitch and Son.

Cucumbers.—Keep the temperature of the cucumber house as nearly 70 degrees as possible; a few degrees higher, with sunshine, will do no harm, but do not let it run up too high with fire-heat or the growths will become weakly. Keep the temperature at 65 to 68 degrees at night, and well damp all dry places. Top dress with rich material frequently, and fumigate about every ten days. Cut all fruits as soon as of sufficient size, as nothing so taxes the plants as fruits allowed to become too large.—W. A. Cook, Leonardslee Gardens.

MESSRS. E. WEBB AND SONS SEED TRIAL GROUNDS.

Notwithstanding the frequent assertion that the climate of Great Britain is too fickle to enable us to grow our own supplies of garden seeds, we have many seed farms and trial grounds in the country, and the part they play in the advancement and extension of horticulture is of far-reaching importance. It may be claimed that nowhere has the work of improvement by selection and cross-fertilisation of vegetables and flowers been carried on with greater care or more marked success than in the trial and experimental grounds of the leading firms in our own land.

The firm of Messrs. E. Webb and Sons, Wordsley, has long held a foremost position among the largest and best seedsmen of Britain, and their extensive seed farms at Kinver not only constitute an important industry in the district, but exercise an influence on British horticulture that cannot be hastily measured or valued. Every gardener abroad, as well as at home, knows something of the work accomplished by Messrs. Webb and Sons in the raising and introduction to commerce of improved types and varieties of flowers and vegetables, but who shall estimate the amount of careful study and painstaking labour that has been involved to obtain the results we all appreciate?

A little insight into the labour expended and care exercised was afforded on the occasion of a visit to the Kinver Seed Farms during last summer, and most enjoyable and interesting the visit proved to be. Kinver is situated in most delightful country, amid natural scenery over which one might wax eloquent, but with so much to see we could only enjoy the scene for a brief spell as we drove toward the farm, and again cast lingering glances around as we left in the evening. The Kinver estate extends to some two thousand acres. The garden seed trials are conducted in well-arranged grounds many acres in extent, situated on an open hillside. Immediately on entering these grounds one comes upon long borders of herbaceous plants on either side a broad walk leading down to the office. Here were flowering profusely, despite the long-continued drought, great masses of delphiniums in every shade of blue and purple, gay gaillardias, golden coreopsis, phloxes, both white and coloured. The plants were all raised from the firm's own strains of seed, and their robust growth afforded a useful object-lesson on the advantage of seedlings over plants propagated by cuttings or division in a season of excessive heat and drought. A surprise awaited us in the great breadth of carnations which were growing with wonderful vigour, and flowering most profusely. They represented Webb's Imperial Strain, and there were yellow-ground and white-ground fancies and picotees, yellow selfs, and selfs of every other shade of colour, the quality over all being of a very high standard. Two or three bedding nasturtiums were very fine, Bedding Gem being one of the neatest and brightest scarlets we have seen. Meteor, crimson, was very rich, while Queen of Tom Thumbs was interesting on account of its prettily mottled foliage. Eschscholtzia Carmine King was of a lovely colour and good habit, other good varieties being Buttercup, small, but very free-flowering; Golden West, with orange centre and butter-yellow margin, this being a new and pleasing form; Mikado, deep mahogany; and Royal Rose completed a set of quite distinct and very beautiful annuals.

Dimorphotheca aurantiaca, the plant that has made such remarkable strides in popularity of late was in full bloom. Its chaste form and rich glowing orange gold colour make this one of the finest of all annuals, and it is small wonder that the demand for seed is rapidly increasing.

To mention all the charming flowers seen, and to furnish even brief descriptions of the particular merits of Messrs. Webb's strains would be to practically reproduce the firm's catalogue, for everything stocked is subjected to trial on the grounds, and it may be added that there was ample evidence that only varieties of the highest merit have a chance here. I must, however, pay tribute to the excellence of the pentstemons. The stock was derived from seed of Mr. E. Beckett's superb collection, and the doctrine of "Like produces like" has been well borne out here, for certainly the great breadths of seedling pentstemons in all colours were of handsome form and size, and for the ordinary mixed border nothing finer could be desired than a batch of this strain which, by the way, bears the name of Crown Jewel pentstemon. Almost as beautiful as the pentstemons were the antirrhinums, which embraced shades and combinations of colour in such variety as to baffle any attempt at description. In height they ranged from Tom Thumbs about eight or nine inches high, to giants with a stature exceeding three feet, all compact and erect in habit. For those who prefer separate colours, distinct varieties are available. The trials of stocks and asters were on an extensive scale, Admiration stock being wonderfully fine in rose, flesh, white, and crimson. Never have I seen a grander show of poppies than at Kinver. Shirleys in every conceivable shade of pink, rose, scarlet, and crimson; Magnet poppies of immense size and rich colours; Malmaison poppies, carrying double flowers, bearing close resemblance to Malmaison carnations, all full in bloom, the long beds being masses of shimmering loveliness.

The clarkias, godetias, larkspurs, especially the dwarf double forms, all deserve detailed description, but alas! my space is not unlimited, and I must, perforce, leave the purely decorative subjects to deal with the equally important, if less attractive, vegetables that are so well and largely grown in these extensive seed grounds.

Culinary peas are something more than a mere item in the trials at Kinver, and must, in fact, be accounted a leading feature. From dwarfest to tallest, earliest to latest, smooth, wrinkled, straight-podded and curved, peas to meet all requirements and satisfy everybody's demands were growing apace and bearing heavily. The collection was well worthy an afternoon's attention, and, indeed, it required some hours to closely inspect and compare the great number of varieties represented in the trials. Among the dwarf earlies, which, although past at the time of my visit, showed heavy crops of seed, the new Dwarf Gem was one that had rendered a good account of itself. It grows but a foot high, and bears fine large pods for a first early. Little Marvel is another of the same class, specially suitable for pot culture. Webb's New Pioneer is one of the earliest of the wrinkled marrowfats. Growing about a yard high, the sturdy plants bear an abundance of straight-podded peas of capital size and beautiful appearance. The variety has won high praise from gardeners up and down the country, and is certainly a pea of more than ordinary good quality. Among the peas that are particularly well adapted for exhibition purposes, Defiance Marrowfat, introduced last year, has proved to be an acquisition, the pods being long, broad, and of beautiful quality. A dish of Webb's New Model would be a strong point in any collection of vegetables. It as closely approaches perfection as one can well expect to see, and its flavour is as good as its appearance. Stourbridge Marrow has been a sufficient length of time in commerce now to have made a name for itself, and it will be a long while yet before its popularity wanes. The long rows on the trial grounds were highly attractive. Attaining a height of five feet or rather more, the haulm is strong and vigorous, and the pods, while fine enough for the show table, are borne with a freedom that is calculated to delight the heart of the market-grower.

Another remarkable cropper is Senator, the variety that realised the sensational price of £44 per acre at Kidderminster in July last. I have for a long period felt that it would pay our market men to take greater pains to obtain the best varieties of peas, and the record price obtained by Senator should show that this is a pea to grow for profit. Many another good pea was seen and taken note of as we passed up and down between the rows, and let it be added the large number of varieties are not merely peas under different names, but are all possessed of distinctive characteristics and points of merit that render them useful, any variety that falls short of these conditions being unhesitatingly discarded. Nor is it peas alone that are thus carefully handled and scientifically bred, but every class of vegetable that is grown by the British gardener receives close attention. Thus, did space permit, I could write at length of the high-class onions, the tempting tomatoes, solid-hearted cabbages, and all the other subjects that came under notice during my tour of inspection, but readers of the Gardeners' Magazine have from time to time seen illustrations, and read descriptions of the splendid specimens exhibited by the firm at the leading shows. It may, however, be added that the trial crops bore evidence that the whole of the stocks are wonderfully true to type and quality.

In one big field where the potato trials are conducted there were somewhere between seventy and eighty varieties, and although the summer's drought was very severe, many of them were doing remarkably well. It was interesting to see that Guardian, Goldfinder, Chieftain, and Colonist, which have rendered good accounts of themselves on the exhibition table, were growing well, and appeared to be absolutely free from any sign of disease. As generally known, Messrs. Webb and Sons grow farm seeds very extensively, and have been responsible for the introduction of some of the finest barleys, oats, and wheats in cultivation.

Small wonder that the head offices and store houses are huge buildings, and that a glance inside any one of the departments is to witness a scene of remarkable activity. The business of Messrs. Webb and Sons is, indeed, a large one, and, as mentioned at the commencement, has an important bearing on the welfare of the locality, and upon British horticulture.

Visitor.

LAVENDER GROWING.

The following interesting account of the lavender industry we reprint from the October issue of the "Journal" of the Board of Agriculture:

Lavender, which was introduced into England from the South of Europe in the sixteenth century, is grown commercially in a few districts in England where conditions have proved to be especially suitable to its cultivation. The principal lavender plantations are to be found in the neighbourhood of Mitcham, Carshalton, and Beddington, in Surrey, and at Hitchin and Canterbury. At each of these places the industry has been carried on for many years, and a local reputation for their lavender production has been established, which is no doubt a valuable asset. Recently its cultivation has been extended to Dorsetshire, where a somewhat large area at Broadstone has been devoted to it in conjunction with some other similar plants.

Although it is not improbable that there are many other districts where the crop could be grown with success, the difficulty of disposing of any large quantity of the produce in places where no still exists must be borne in mind. Distillers are often loth to take produce from a distance, owing to the fact that in order to get the best results distillation should take place immediately after harvesting. On the other hand, it may be pointed out that most large towns provide a fair market for bunches of lavender flowers.

The lavender plant is probably more dependent on climate than soil, though a light loam overlying chalk and a sunny sheltered position sloping to the south or south-west are perhaps most favourable. It is successfully grown at Hitchin on a light gravelly subsoil. Lavender is indigenous on the hills bordering on the Mediterranean, and conditions which closely reproduce those of its native habitat are necessary for its successful cultivation. As regards soil, good natural drainage, a light, fairly rich soil, and a warm position are essential, while a mild winter, with a low rainfall, followed by a warm, dry summer, favours a good crop, and, what is equally important, a high-quality oil.

A naturally sheltered position should be chosen if possible, as the plants may be injured by high winds in summer; but the artificial shelter of hedges or walls is not usually recommended. The plant is very liable to injury by frost.

The ground should be thoroughly cleaned before planting by being allowed to lie fallow, the weeds being collected and burnt, and the soil ploughed and cross-ploughed to produce a good tilth. A medium dressing of dung may be given at the same time.

Cuttings should be taken from established plants in the summer from June onwards, and struck in prepared beds, where they can be watered during dry weather. They should be put in 3in. or 4in. apart. The old custom of tearing off the woody branches of the plant and planting them thickly in trenches, though somewhat quicker in its results, is a bad one, as cuttings taken in this way are said to be more liable to attacks of fungus disease.

The young plants will be ready to plant out in their permanent positions in the following spring about May, when they should be dibbled in about 4ft. apart in rows and 6ft. between the rows. At this rate, 2,000 will be required per acre, and if they have to be purchased the cost may be 16s. per 100, or less. After the ground has been stocked, the grower would provide new plants by striking cuttings himself.

In the first year the plants should be cut back to prevent them flowering; in the third and fourth years they will be in their prime; and after the fifth year they should be dug up and burnt. Practice in this respect differs. At Hitchin they are taken up at the end of the third year. In making a new plantation, therefore, planting should be extended over several years, so that too large an area may not have to be grubbed up at once. After the lavender plants have been cleared out, some other crop, such as potatoes, should be grown for a year or two before the land is again planted with lavender.

The time of harvesting will depend on the character of the season, but it is usually early in August. Mr. F. Ransom, writing in the "Pharmaceutical Journal," states that the earliest season recorded by him was in 1868, when it commenced on July 17, while the latest was in 1894, when it was deferred till September 3.

The same writer estimates the average yield of oil at 12lb. per acre if the whole area under cultivation, including that devoted to cuttings and to the first year's growth, is taken into consideration. But from 15lb. up to as much as 30lb. of oil may be obtained in a favourable season when the plants are in their prime.

The value of the oil varies according to quality, demand, and other seasonal conditions. From 100s. per lb. thirty years ago it fell to 20s. to 30s. per lb., but during the present year the price has risen, and 40s. per lb. may be given as the current wholesale price.

Apart from growing for oil, which is not advisable unless a lavender distillery exists in the neighbourhood, the plant may be grown for its dried flowers. There is a limited sale for these at Covent Garden, while they may also be sold locally. It is in the latter direction that small holders may be able to dispose of the crop from a small area. Caution, however, is desirable, as the normal demand is not large.

The lavender plant is very subject to a fungus disease, which attacks the root and stem; indeed, the decline in cultivation which took place some years ago is said to be due to this cause, with the result that large quantities of foreign oil were imported, and to some extent supplanted the home product.

In view of the liability of the plant to this disease, it is very desirable (1) to root up and burn the old plants in order to destroy any fungus spores or mycelium that may be present, and (2) after sterilising the soil with quicklime to plant the ground with another crop for a year or two.

SEASONABLE NOTES ON CHRYSANTHEMUMS.

At some shows fairly liberal prizes and several classes are provided for incurved blooms, but at many others scanty encouragement is given them. Years ago the principal class for cut blooms was generally the one in which equal numbers of Japanese and incurved blooms were shown, and, as a rule, the keenest interest was taken in the latter—at least, by cultivators. Then a time came when the incurved section was given the cold shoulder as it were, and they were not grown as extensively. Undoubtedly, in those days the cultivator had to possess much ability in order to grow perfect blooms. Nearly all the varieties grown were very refined, but one cannot say as much of some of the blooms classed as incurved at the present time.

Groups of plants are popular at present-day shows, and I certainly think that a few well-grown incurved varieties associated with the Japanese enhances the beauty of such groups, both when arranged in competition and also in the conservatory at home. Buds of many varieties "taken" at the end of August and during the first ten days of September develop into very refined flowers, and I would urge the inexperienced cultivator to take all possible care of such buds. The wood on which buds show as late as this in the season is rarely too ripe, and so every advantage must be taken to get it ripe before the plants are put under glass at the end of September.

The early buds of Japanese varieties will now be swelling rapidly if the stems immediately below them have thickened well. If, however, the buds are rather hard, syringing on fine days, if not done very late in the afternoon, will assist the swelling.

Sparrows will peck out the centres of forward buds where these birds are numerous and woods are near. I have seen beautiful fat buds partially spoiled by them.

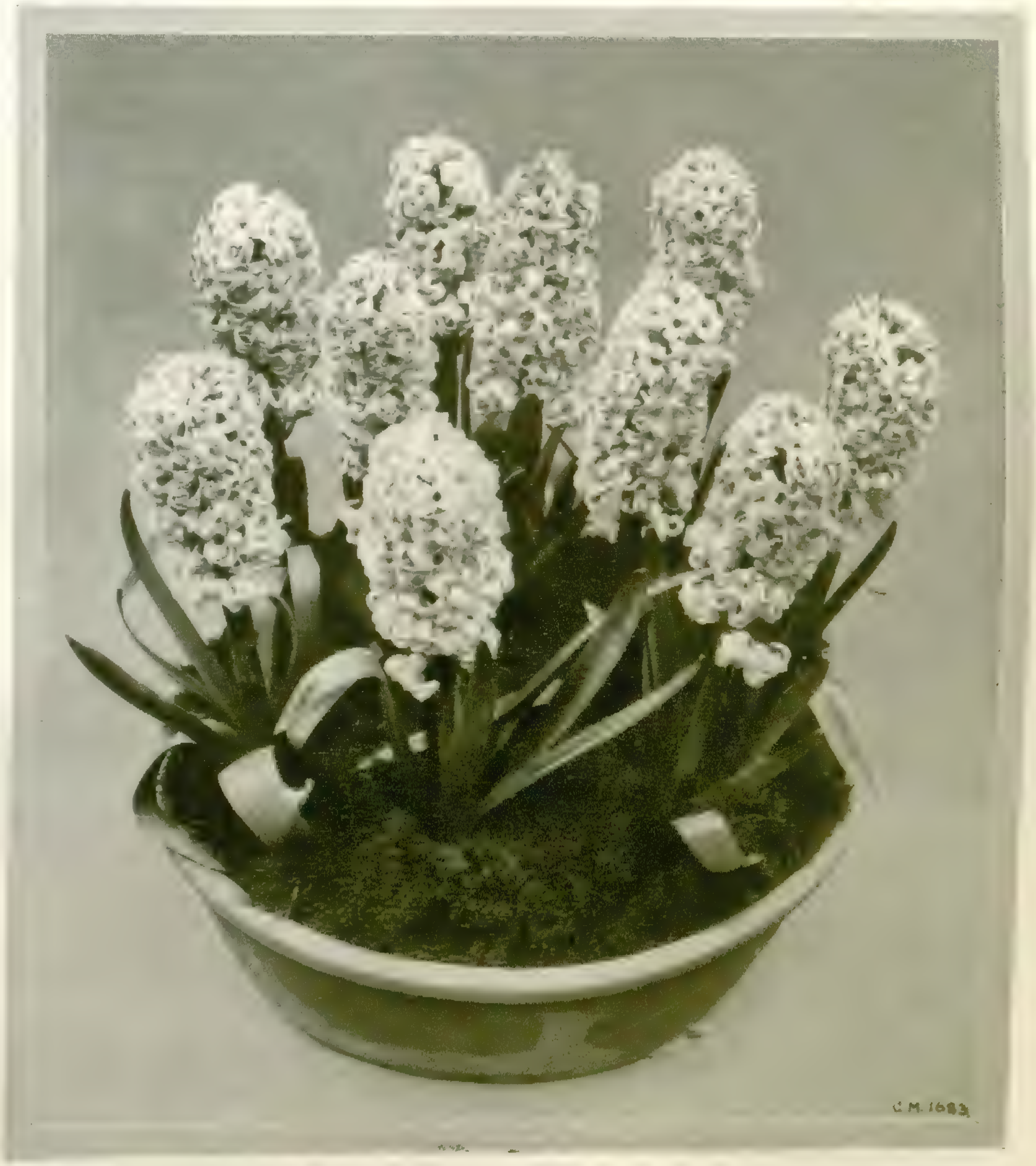
There is no doubt about the real popularity of the single-flowered varieties, and the lovely varieties recently introduced have compelled the admiration of growers and public alike. Like the blooms of the incurved varieties, those of the single are better, and in every way more refined, when the buds are "taken" rather late than very early. Full development soon follows the showing of colour of the petals. The plants grown for flowering at Christmas are often placed behind walls and fences in order to retard the opening of the blooms. Much better results follow when they are exposed to all the sunshine possible until the wood has matured and the buds formed. The plants are then in a healthy condition, and will not only withstand a little retarding in a very cool house later on, but be in a more fit state to be benefited by judicious feeding.

Geo. Garner.

FRUIT GROWING.—Full instructions as to planting, pruning, and management of fruit trees are given in PRACTICAL FRUIT GROWING (Ninth Edition) —a gold medal essay by John Wright, V.M.H.—price 1s., or by post 1s. 3d. from GARDENERS' MAGAZINE Office, 148 and 149, Aldersgate Street, London.

HYACINTH CITY OF HAARLEM.

Yellow hyacinths are by no means numerous, and in general cultivation in this country very few of them are known. The Dutch growers recognise about two dozen single-flowered yellow varieties, and these include some which are yellow only when one's imagination has been hard worked. King of the Yellows, Obélisque, MacMahon, Bird of Paradise, General Butler, Ida, and Vainqueur are among those with which home growers are more or less familiar, but yellow hyacinths are not popular, chiefly because they lack the robustness and vigour of the white and blue varieties, and the colouring is mostly a very long way behind the general conception of yellow. The best yellow hyacinth that has come under our notice either at home or in Holland is City of Haarlem, a variety that was grandly shown by Messrs. Ant. Roozen and Sons at the great bulb show held in Haarlem in March, 1905, and again at the Jubilee Show at Haarlem in 1910. The present illustration of the variety represents it as grown by Mr. Edwin Beckett, V.M.H., gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree, Herts, and the pan depicted was one of the six remarkably fine specimens with which Mr. Beckett won first prize at the Bulb Show held in March last by the Royal Horticultural Society, when hyacinths were staged in finer condition than for some years past.



HYACINTH CITY OF HAARLEM.

A beautiful variety, with pale yellow flowers, and properly regarded as the best in its colour group.

WORK FOR THE WEEK.

ORCHIDS.

SEASONABLE NOTES.—The conditions prevailing outside necessitates the practice of what is termed the winter treatment in the different divisions of the orchid houses. In the first place, the temperature in the various departments should be gradually reduced to the minimum degree. This can be explained by a general statement that the temperature of each division may be reduced by about five degrees. This is generally advised because of the fluctuations of the outside conditions, and owing to the subdued light very little advantage is derived by the plants from high temperature. To avoid fluctuations of temperature is a most desirable aim, but when excessive cold weather prevails, a fall of five degrees, or even more, from the normal, will produce no ill effect. We consider it is better to permit the temperature to fall, within a reasonable limit, than to resort to excessive artificial heat to maintain the thermometer at the usual level. But with a lower temperature care must be taken to reduce atmospheric moisture. Plants are rarely injured if dry conditions are provided during the prevalence of cold weather outside, and low readings of the thermometer inside. We make it a practice not to damp the floors, staging, etc., of our houses before the normal temperature is reached., and then only if the rise is sufficient to permit of the moisture becoming dispersed before the lower evening temperature is reached.

WATERING.—All plants that have matured, and, in the case of seedlings, those that have reached the flowering stage, will now require to be carefully attended to in respect to watering. The compost should be permitted to become dry about the roots of the plants between waterings. See that the water used is at least as warm as the atmosphere of the house. It will often be found that, after cold rains, and more frequently still with snow melting from the roof, the water in the tanks will be much colder than the atmosphere of the house. The use of such water cannot benefit the plants, and sufficient hot water should be added to raise it to the desired temperature before use.

VENTILATION.—I am afraid I am not an advocate of that free circulation of air about the plants at all times that some regard as necessary. I have a distinct recollection of a prominent horticulturist having some orchid houses erected where a penny piece was to divide the laps in the glass roof. There was no doubt about this affording free ventilation at all times; but the excessive fire heat required in winter destroyed all prospects of successful orchid culture. Ventilate whenever the outside conditions permit, and use the lower ventilators so that the air passing over the hot pipes may become warmed before reaching the plants.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

POINSETTIAS.—These valuable winter-flowering subjects are now freely developing their bracts, and will afford a cheerful display in the intermediate stove during the dull season of winter, when such brilliance is more than welcome. It should be remembered that poinsettias are practically dormant after the bracts have fully developed, so that extreme care in watering is most essential at this stage, excessive applications being liable to cause considerable loss of foliage, and reduce the value of the plants. The temperature of the house in which they are flowering may be reduced to 50 deg., and no serious damage is done if reduced to 45 deg., in which case, if the plants are required for house decoration, their lasting properties will be increased. In some cases poinsettias have to be used as cut flowers, and when this is so, immediately they are cut the wounded part must be sealed up by some such treatment as dipping the stems into hot water, plunging them into powdered charcoal, or searing the wound with a hot iron. Whichever operation is decided upon, it must be carried out before the stem loses any sap, or flagging will follow. As they finish flowering some attention must be given to ripening the wood preparatory to drying off and storing the stock in a dry position, where the temperature does not fall below 45 degrees.

GARDENIAS.—Where these plants are cultivated expressly for winter flowering, the growths will now be well set with flower buds; but from now until Christmas the flowers do not open so freely as they generally do in the early part of the New Year. I much prefer in this case to depend upon pot-grown plants, which have been liberally treated, and kept somewhat root-bound during the autumn. They should be staged at the warmest end of the stove when ready for flowering, and raised on inverted flower pots, as this encourages short-jointed lateral growths which provide successional displays of flowers. Mealy bug and brown scale are almost inseparable from gardenias, but where good results are expected one must make constant and diligent search almost daily to keep these troublesome pests at bay. An occasional fumigation and frequent syringing with an insecticide will save time in the long run.

PLUMBAGO ROSEA.—When treated as a winter flowering subject this is much appreciated. Its deep rose-pink colour is charming during daylight, and becomes even more pleasing under artificial light. The plants are now commencing to develop their flower spikes, and may be staged in a light and somewhat drier atmosphere than previously. Ventilation judiciously applied will improve the quality of the flowers by increasing the colour and enabling them to last much longer when cut. Plumbago flowers are admirably adapted for table decoration, and when tastefully associated with smilax or asparagus growths, they present a charming and elegant appearance.—John Donoghue, Bardon Hill Gardens.

THE FLOWER GARDEN.

MATERIAL FOR PROTECTION.—As the cold season approaches it is necessary to have plenty of protective material in readiness to prevent losses amongst the tender subjects which have to pass through the winter outdoors. Bracken is an excellent covering for many plants, such as the gunneras, roses, or other plants requiring some light protection from frosts. Wattle hurdles are useful for breaking the wind where shrubbery borders are exposed to rough weather, especially in gardens on the sea coast where the salt winds cut the hardiest subjects. When new borders and beds are planted in such gardens it is advisable to place the hurdles in position before the shrubs are planted. A little extra work is necessary when dealing with specimen shrubs that have attained a fair size and are too large for ordinary hurdles. For these an open lattice framework should be erected on the cold side, and spruce or similar branches woven in it. The hamper frames which are used by nurserymen when sending out shrubs will be found very handy for shrubs that are not too large for the frames to cover. These should be securely fixed in the ground over the subject, and mats may be thrown over them at night.

AMARYLLIS BELLADONNA.—The past season has been an exceptionally good one for this beautiful autumn-flowering bulbous plant. There has been a grand display of magnificent spikes of flowers, which are always highly appreciated for decorative purposes. Early planting is essential for successful cultivation, but one must not expect too much from them until the plants become thoroughly established. The bulbs should be purchased and planted without delay, as their resting period is a very short one, and the sooner they are in the ground the better. An ideal position to plant the bulbs in is at the base of a south wall, in a well-drained and rich soil, burying them about six inches deep. If the selected spot should be damp, then the soil must be taken out to the depth of eighteen inches or two feet, drainage placed in the bottom of the trench, and the soil put back again, enriching it, if necessary. After planting, the border should be covered with some light protective material, such as bracken or light litter, until the bulbs are established, when it may be dispensed with. During the growing season, every encouragement should be afforded the plants to ensure healthy and vigorous foliage. Old-established plants which have worked themselves close to the surface, should be top-dressed.

CRINUMS.—A similar position to the one advised for amaryllis will be found suitable for crinums, but the bulbs must be planted from twelve to eighteen inches deep in a rich mellow loam. The foliage is extremely handsome and ornamental during the summer, and in the autumn, when the flowers appear, a striking effect is produced. C. Powelli, and its variety album, are quite hardy, and in warm localities C. Moorei may be successfully grown.

EARLY FLOWERING GLADIOLI.—These commence to grow very early, and unless protected, the young shoots, which are now pushing through the surface, will be destroyed. Bracken lightly laid over the border is a good safeguard against damage by frost. In the warmer climate of the south and south-west they pass through the winter safely without protection, but it is necessary to cover them in colder districts.—E. C. Pooley, Gnaton Gardens.

FRUITS UNDER GLASS.

EARLY VINES IN POTS.—These may now be pruned, especially if intended for starting towards the end of November; the canes will be well ripened, having enjoyed a long season of sunshine, and in order to maintain that advantage, they will, if pruned now, have a month of absolute rest, as water should be withheld except in extreme cases. As long as they remain outside they will not take much harm, but if we have a period of rain they should be taken into a cool and airy house.

PERMANENT VINES.—These will be ready for pruning within the next fortnight, so that they may have a period of rest before being started in December. The shoots should be pruned back to one good bud, or two at the most, leaving it on the upper side of the shoot for preference, as this is generally the strongest. After pruning the vines should have another good washing, and every particle of glass and wood and iron work should have a thorough cleansing with strong insecticides or petroleum and soft soap, and if it can be painted afterward, so much the better. All the top soil should be removed in case any pests should be lurking therein.

PEACH HOUSES.—The trees in the early house will by this time have shed all their leaves, and if the house is vacant the final pruning should now be done; assuming that a previous pruning took place after the removal of the fruit there will not be much wood to cut away. Remove all the growth that is not necessary either for fruiting or for balancing the tree. In many cases peach trees are not thinned enough. The shoots should not be tied in closer than six or seven inches apart, leave all the young fruiting wood possible, and cut out the long useless shoots. After pruning tie up the branches in convenient bundles, clean the wires with soft soap and petroleum, and give the glass and woodwork a thorough cleansing. Leave the ventilators open both top and bottom so that the house is kept cool and healthy. As soon as cleaning is finished proceed to tie and train the trees. Tie in the main shoots or branches first with strong tar string, and then start tying at the bottom and regulate the branches upwards, distributing them equally all over the space. This done, the surface of the border must next be dealt with. All old mulching material must be raked off, and the old surface soil pricked over with a fork lightly, and removed, its place being taken by an inch or two of fresh loam and mortar rubble, with a little bone-meal added.

THE EARLIEST FIG HOUSE should be treated on similar lines as soon as opportunity permits. I am a firm believer in proceeding with such work quite early in the season, so that there is no undue rush a little later on.—W. A. Cook, Leonardslee Gardens.

BRADFORD CHRYSANTHEMUM EXHIBITION in ST. GEORGE'S HALL, on
FRIDAY and SATURDAY, November 10th and 11th.
£50 FOR BLOOMS ON BOARDS.
Besides other good classes for open competition.
Schedules, with entry forms, post free from
H. SPENCER,
Hony. Secy.
Horton Park.
Bradford.

BUXTON AND DISTRICT
CHRYSANTHEMUM SHOW.
WEDNESDAY, November 15th, 1911.
For Schedule and List of Prizes, address—
S. SHUFFLEBOTHAM,
Secretary, 12, Eagle Parade, Buxton.

SCOTTISH HORTICULTURAL
ASSOCIATION.

CHRYSANTHEMUM EXHIBITION.

The Association will hold its next
GREAT CHRYSANTHEMUM EXHIBITION,
in the
WAVERLEY MARKET, EDINBURGH,
on
November 16, 17, and 18, 1911.

Copies of the Prize List, which contains all particulars as to prizes, conditions of competition, etc., may be obtained on application to the Secretary,
A. D. RICHARDSON,
19, Waverley Market,
Edinburgh.
Entries close on November 8th.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C

EXHIBITIONS AND MEETINGS.

◆

Royal Horticultural Society.

An exhibition of considerable size was held at the Royal Horticultural Hall on Tuesday, October 24, and, though rain fell almost continuously all day, there was a good attendance of Fellows and visitors. Dahlias were present in great force, and lent splendid colouring to the general display. Trees and shrubs were brought in large numbers, but the efforts to show autumn colouring were not good, as so many of the really fine subjects were often only represented by a few small branches. Orchids were well shown, but there was only a moderate display of fruits and vegetables. Novelties were fairly numerous for the season.

FLORAL COMMITTEE.

A great exhibit of bamboos from Mr. L. R. Russell, Richmond, extended the whole length of the far side of the hall; on a bright hot day such an exhibit would have been appreciated, but as the day was a very dull one, the long stretch of bamboos did not help matters. Phyllostachys nigra, P. Castillonis, P. rubicunda, Thamnocalamus nepalense, T. Falconeri, T. gracilis, Bambusa palmata, and B. marmorea variegata were a few of the most graceful kinds in a large collection. Mr. Russell also contributed a group of berried shrubs.

Mr. Thomas Stevenson, gardener to E. G. Mocatta, Esq., Woburn Place, Addlestone, contributed a large group of purplish celosias, every plant a perfect pyramid of plumose florescence, capped with a cockscomb-like head.

A large and interesting exhibit, from Messrs. W. Cutbush and Son, Highgate, consisted chiefly of new hardy climbers from China; rubi and vitises were very much in evidence, but a number of the species presented were as yet unnamed, while others were apparently not fully determined. Some labelled as rubus appeared to have more relation to vitis. Clematis Armandi, Vitis heterophylla Delavayana, V. pentagona, Rubus mesogoeus, R. lasiostylus, and R. Geraldianus were conspicuous. Finely berried skimmias provided a foreground in which was set a basket of Veronica Silver Queen, a dense habited, silver-variegated form. In another group the Highgate firm put up a fine collection of Michaelmas daisies wherein such beautiful varieties as Climax, Novelty, Delight, Sirius, Ideal, and White Queen were excellent. In yet another group Messrs. W. Cutbush disposed a set of perpetual carnations, and here the outstanding variety was Goldfinch, a broad petalled rich apricot-coloured form of great distinction and beauty.

The charming little Cyclamen neapolitanum and its white form, with the tiny starry white Narcissus serotinus, autumn crocuses, kniphofias, and perennial asters came from Messrs. Barr and Son, Covent Garden.

A large exhibit of shrubs across the end of the hall, arranged by Messrs. James Veitch and Sons, Chelsea, was of great interest, as it included a number of very fine subjects, such as Lonicera nitida, a neat evergreen, with tiny shining foliage; Symphoricarpus occidentalis, covered with white berries; Berberis Thunbergi, Viburnum Awafuki, Vitis purpurea, Quercus coccinea, and Smilax caduca, all remarkable for their brilliant foliage. Gold and silver conifers, yuccas in variety, standard bays, ivies, and privets were all used in the group, while Ilex Pernyi, I. cornuta, Berberis Gagnepaini, Berberis Wilsonæ, and Ligustrum Henryi were among the newer things on view. In another group the Chelsea firm presented a bautiful batch of Nerine Fothergilli major, Begonia Mrs. Heal, and hybrid greenhouse rhododendrons in a great variety of colours.

A rare bank of brilliant colouring was provided by Messrs. T. S. Ware, Lim., Feltham. Their exhibit consisted of two parts, one of early chrysanthemums, put up in large sheaves, but a little too closely arranged; in the other half cactus and paeony-flowered dahlias were very extensively shown, and the flowers were of remarkable size and brilliance for such a late date.

Several new Michaelmas daisies from Mr. E. Beckett, gardener to the Hon. Vicary Gibbs, Elstree, attracted a good deal of attention; one large-flowered variety named Amethyst (A.M.) is quite bright blue; Silver Queen is very graceful and thickly studded with tiny whitish flowers; Comeliness, Approval, and Profusion (A.M.) were all distinct and grandly represented by large specimens.

New nerines were finely shown by Mr. Walters, gardener to H. J. Elwes, Esq., Colesbourne, Cheltenham. These represented colouring from almost pure white to deepest crimson and maroon, and a few that especially appealed to us were the deep orange, deep maroon, a very free rosy pink form, and some of the salmon shades. Mrs. F. R. S. Balfour, pink and red (A.M.); Hon. Miss Gibbs, soft maroon (A.M.); Snowflake, white (A.M.); Mrs. Mead-Waldo, orange (A.M.), were the pick of a fine set. Mr. Elwes has been working among nerines for many years, and has added many new colours, as well as improved the form, to a useful genus of greenhouse bulbous plants.

Autumn-tinted foliage of many kinds was staged by Messrs. J. Cheal and Sons, Crawley, who showed Rhus typhinus laciniata, oaks, berberis, viburnums, etc. Messrs. Paul and Son, Cheshunt, presented autumn foliage and a collection of rose hips and fruits.

The collarette dahlias were again well shown by Mr. J. B. Riding, of Chingford, and his stands of Crown Prince, Charlotte, Bajadere, Henri Farman, Ideal, Joseph Goujon, Madam Poirier, Orphée, Gallia, and the yellow Souv. de Charbanne were very attractive. Messrs. Allwood Bros., Haywards Heath, were exhibitors of perpetual carnations, and Messrs. S. Low and Co., Enfield, had a considerable exhibit of these popular flowers.

Pæony-flowered dahlias were finely shown by Messrs. Bakers, Wolverhampton, who filled a length of table with fine colour; Mrs. Ralph Heaton, J. S. Brunton, Sunset, Red Indian, King Leopold, Germania, and Faust were a few of the best varieties.

Mr. G. Reuthe sent a small collection of hardy plants, and Messrs. Carter Page and Co., London Wall, had a large and attractive group of dahlias.

The collection of adiantums staged by Messrs. H. B. May and Sons, Edmonton, included a hundred and twenty species and varieties of these graceful and popular ferns; this was a fine collection, and included the new Glory of Nordrecht, a form of A. tenerun Farleyense, A. Birkenheadi, A. trapeziforme, A. scutum, A. Veitchi, A. Lindeni, A. elegantissima, and A. cardiochlæna.

The very pretty Cosmos White Queen, C. Rose Queen, and C. Crimson King, three fine annuals, respectively deep rose, pink, and rosy crimson were exhibited by Messrs. Dobbie and Co., Edinburgh.

Messrs. W. Wells and Co., Merstham, had a large display of chrysanthemums and carnations, and among the former they had Bronze Goacher (A.M.), the handsome light crimon Japanese variety, Mrs. R. H. Witty, the big pale yellow Japanese form named Mrs. W. Hookey, and the single Dorothy Dann; this firm's group of Japanese, single, and decorative chrysanthemums, arranged with crotons and Michaelmas daisies, was a great attraction.

Mr. James Box, Lindfield, filled one corner of the hall with a delightful exhibit of perennial asters and early chrysanthemums; the arrangement was very fine, and the groupings of Le Pactole, Champagne, Savoiê, Normandie, Perle Chatillonaise, and Belle Mauve chrysanthemums were delightful. Phloxes, delphiniums, and kniphofias were also displayed.

Miss V. Jeffrey, Rozel, Gymal Road, Lee, brought up some splendidly-executed water-colour drawings of different flowers, so arranged as to be excellent botanical studies; the minuteness of detail was remarkable.

ORCHID COMMITTEE.

Acineta chrysantha, the handsome Cattleya Fabia, the bold Cypripedium Franconia, Spathoglottis Fortunei, and the very curious Bulbophyllum Medusæ were conspicuous in the group of orchids from Messrs. Sander and Sons, St. Albans.

A bright exhibit from Messrs. Armstrong and Brown, Tunbridge Wells, was notable for its numerous examples of Cattleya Fabia, C. Armstrongi—very freely flowered, C. Iris, Cypripedium Thalia var. Mrs. F. Wellesley, C. Germaine Opoix Westfield var., Brassocattleya Leemanæ, Dendrobium, Cœlogyne, etc.

Messrs. Hassall and Co., Southgate, made up a bold group of Cattleya labiata varieties, some of the light forms being very charming.

Messrs. Charlesworth and Co., Haywards Heath, put up a small group of orchids that contained fine forms of Cattleya labiata, C. Wendlandiana, C. Golden Oriole, the finely marked Odontoglossum Aireworth, and Miltonia Bleuiana nobilior.

A bright orchid group from Messrs. S. Low and Co., Bush Hill Park, Enfield, was rendered particularly effective by reason of its arching spikes of Oncidium varicosum, O. oblongatum, and O. oblongatum citrinum; dendrobium, phalænopsis, and numerous lælio-cattleyas added their meed of rich colours.

Messrs. J. Cypher and Sons, Cheltenham, contributed a bright group of cypripediums, Vanda cærulea, and lælio-cattleyas; Bulbophyllum grandiflorum, Cattleya Mrs. J. W. Whiteley, and Cypripedium Niobe were notable subjects.

Mr. Alexander, orchid grower to Lieut.-Colonel Sir G. Holford, Westonbirt, brought up Lælio-cattleya luminosa aurea with pale yellow sepals and petals and rich purple lip (F.C.C.). MM. Maron and Sons, Brunoy, France, submitted Cattleya Fabia var. Vigeriana with nine grand flowers; Brasso-cattleya Maronæ, and B.-c. Rhadames, with a rosy-edged lip.

Mr. Hopkins, gardener to F. Wellesley, Esq., showed a fine form of Brasso-lælia Veitchi, Cattleya labiata Lady Leese, and L.-c. Mrs. Phayre.

Mr. E. V. Low, Vale Bridge, Haywards Heath, presented Brasso-cattleya Queen Alexandra Vale Bridge var., with two splendid flowers; and a large specimen of Cattleya labiata, carrying forty-six blooms.

Messrs. Mansell and Hatcher, Rawdon, Leeds, gained an A.M. for the white Vanda Kimballiana alba. Mr. Barker, gardener to W. [illegible], Esq., Hessle, showed Cypri-

BRADFORD CHRYSANTHEMUM EXHIBITION in ST. GEORGE'S HALL, on
FRIDAY and SATURDAY, November 10th and 11th.
£50 FOR BLOOMS ON BOARDS.
Besides other good classes for open competition.
Schedules, with entry forms, post free from
H. SPENCER.
Hony. Secy.
Horton Park,
Bradford.

BUXTON AND DISTRICT
CHRYSANTHEMUM SHOW.
WEDNESDAY, November 15th, 1911.
For Schedule and List of Prizes, address—
S. SHUFFLEBOTHAM,
Secretary, 12, Eagle Parade, Buxton.

SCOTTISH HORTICULTURAL
ASSOCIATION.

CHRYSANTHEMUM EXHIBITION.

The Association will hold its next
GREAT CHRYSANTHEMUM EXHIBITION,
in the
WAVERLEY MARKET, EDINBURGH,
on
November 16, 17, and 18, 1911.

Copies of the Prize List, which contains all particulars as to prizes, conditions of competition, etc., may be obtained on application to the Secretary,
A. D. RICHARDSON,
19, Waverley Market,
Edinburgh.
Entries close on November 8th.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C

EXHIBITIONS AND MEETINGS.

◆

Royal Horticultural Society.

An exhibition of considerable size was held at the Royal Horticultural Hall on Tuesday, October 24, and, though rain fell almost continuously all day, there was a good attendance of Fellows and visitors. Dahlias were present in great force, and lent splendid colouring to the general display. Trees and shrubs were brought in large numbers, but the efforts to show autumn colouring were not good, as so many of the really fine subjects were often only represented by a few small branches. Orchids were well shown, but there was only a moderate display of fruits and vegetables. Novelties were fairly numerous for the season.

FLORAL COMMITTEE.

A great exhibit of bamboos from Mr. L. R. Russell, Richmond, extended the whole length of the far side of the hall; on a bright hot day such an exhibit would have been appreciated, but as the day was a very dull one, the long stretch of bamboos did not help matters. Phyllostachys nigra, P. Castillonis, P. rubicunda, Thamnocalamus nepalense, T. Falconeri, T. gracilis, Bambusa palmata, and B. marmorea variegata were a few of the most graceful kinds in a large collection. Mr. Russell also contributed a group of berried shrubs.

Mr. Thomas Stevenson, gardener to E. G. Mocatta, Esq., Woburn Place, Addlestone, contributed a large group of purplish celosias, every plant a perfect pyramid of plumose florescence, capped with a cockscomb-like head.

A large and interesting exhibit, from Messrs. W. Cutbush and Son, Highgate, consisted chiefly of new hardy climbers from China; rubi and vitises were very much in evidence, but a number of the species presented were as yet unnamed, while others were apparently not fully determined. Some labelled as rubus appeared to have more relation to vitis. Clematis Armandi, Vitis heterophylla Delavayana, V. pentagona, Rubus mesogoens, R. lasiostylus, and R. Geraldianus were conspicuous. Finely berried skimmias provided a foreground in which was set a basket of Veronica Silver Queen, a dense habited, silver-variegated form. In another group the Highgate firm put up a fine collection of Michaelmas daisies wherein such beautiful varieties as Climax, Novelty, Delight, Sirius, Ideal, and White Queen were excellent. In yet another group Messrs. W. Cutbush disposed a set of perpetual carnations, and here the outstanding variety was Goldfinch, a broad petalled rich apricot-coloured form of great distinction and beauty.

The charming little Cyclamen neapolitanum and its white form, with the tiny starry white Narcissus serotinus, autumn crocuses, kniphofias, and perennial asters came from Messrs. Barr and Son, Covent Garden.

A large exhibit of shrubs across the end of the hall, arranged by Messrs. James Veitch and Sons, Chelsea, was of great interest, as it included a number of very fine subjects, such as Lonicera nitida, a neat evergreen, with tiny shining foliage; Symphoricarpus occidentalis, covered with white berries; Berberis Thunbergi, Viburnum Awafuki, Vitis purpurea, Quercus coccinea, and Smilax caduca, all remarkable for their brilliant foliage. Gold and silver conifers, yuccas in variety, standard bays, ivies, and privets were all used in the group, while Ilex Pernyi, I. cornuta, Berberis Gagnepaini, Berberis Wilsonæ, and Ligustrum Henryi were among the newer things on view. In another group the Chelsea firm presented a bautiful batch of Nerine Fothergilli major, Begonia Mrs. Heal, and hybrid greenhouse rhododendrons in a great variety of colours.

A rare bank of brilliant colouring was provided by Messrs. T. S. Ware, Lim., Feltham. Their exhibit consisted of two parts, one of early chrysanthemums, put up in large sheaves, but a little too closely arranged; in the other half cactus and pæony-flowered dahlias were very extensively shown, and the flowers were of remarkable size and brilliance for such a late date.

Several new Michaelmas daisies from Mr. E. Beckett, gardener to the Hon. Vicary Gibbs, Elstree, attracted a good deal of attention; one large-flowered variety named Amethyst (A.M.) is quite bright blue; Silver Queen is very graceful and thickly studded with tiny whitish flowers; Comeliness, Approval, and Profusion (A.M.) were all distinct and grandly represented by large specimens.

New nerines were finely shown by Mr. Walters, gardener to H. J. Elwes, Esq., Colesbourne, Cheltenham. These represented colouring from almost pure white to deepest crimson and maroon, and a few that especially appealed to us were the deep orange, deep maroon, a very free rosy pink form, and some of the salmon shades. Mrs. F. R. S. Balfour, pink and red (A.M.); Hon. Miss Gibbs, soft maroon (A.M.); Snowflake, white (A.M.); Mrs. Mead-Waldo, orange (A.M.), were the pick of a fine set. Mr. Elwes has been working among nerines for many years, and has added many new colours, as well as improved the form, to a useful genus of greenhouse bulbous plants.

Autumn-tinted foliage of many kinds was staged by Messrs. J. Cheal and Sons, Crawley, who showed Rhus typhinus laciniata, oaks, berberis, viburnums, etc. Messrs. Paul and Son, Cheshunt, presented autumn foliage and a collection of rose hips and fruits.

The collarette dahlias were again well shown by Mr. J. B. Riding, of Chingford, and his stands of Crown Prince, Charlotte, Bajadere, Henri Farman, Ideal, Joseph Goujon, Madam Poirier, Orphée, Gallia, and the yellow Souv. de Charbanne were very attractive. Messrs. Allwood Bros., Haywards Heath, were exhibitors of perpetual carnations, and Messrs. S. Low and Co., Enfield, had a considerable exhibit of these popular flowers.

Pæony-flowered dahlias were finely shown by Messrs. Bakers, Wolverhampton, who filled a length of table with fine colour; Mrs. Ralph Heaton, J. S. Brunton, Sunset, Red Indian, King Leopold, Germania, and Faust were a few of the best varieties.

Mr. G. Reuthe sent a small collection of hardy plants, and Messrs. Carter Page and Co., London Wall, had a large and attractive group of dahlias.

The collection of adiantums staged by Messrs. H. B. May and Sons, Edmonton, included a hundred and twenty species and varieties of these graceful and popular ferns; this was a fine collection, and included the new Glory of Nordrecht, a form of A. tenerum Farleyense, A. Birkenheadi, A. trapeziforme, A. scutum, A. Veitchi, A. Lindeni, A. elegantissima, and A. cardiochlæna.

The very pretty Cosmos White Queen, C. Rose Queen, and C. Crimson King, three fine annuals, respectively deep rose, pink, and rosy crimson were exhibited by Messrs. Dobbie and Co., Edinburgh.

Messrs. W. Wells and Co., Merstham, had a large display of chrysanthemums and carnations, and among the former they had Bronze Goacher (A.M.), the handsome light crimon Japanese variety, Mrs. R. H. Witty, the big pale yellow Japanese form named Mrs. W. Hookey, and the single Dorothy Dann; this firm's group of Japanese, single, and decorative chrysanthemums, arranged with crotons and Michaelmas daisies, was a great attraction.

Mr. James Box, Lindfield, filled one corner of the hall with a delightful exhibit of perennial asters and early chrysanthemums; the arrangement was very fine, and the groupings of Le Pactole, Champagne, Savoiê, Normandie, Perle Chatillonaise, and Belle Mauve chrysanthemums were delightful. Phloxes, delphiniums, and kniphofias were also displayed.

Miss V. Jeffrey, Rozel, Gymal Road, Lee, brought up some splendidly-executed water-colour drawings of different flowers, so arranged as to be excellent botanical studies; the minuteness of detail was remarkable.

ORCHID COMMITTEE.

Acineta chrysantha, the handsome Cattleya Fabia, the bold Cypripedium Franconia, Spathoglottis Fortunei, and the very curious Bulbophyllum Medusæ were conspicuous in the group of orchids from Messrs. Sander and Sons, St. Albans.

A bright exhibit from Messrs. Armstrong and Brown, Tunbridge Wells, was notable for its numerous examples of Cattleya Fabia, C. Armstrongi—very freely flowered, C. Iris, Cypripedium Thalia var. Mrs. F. Wellesley, C. Germaine Opoix Westfield var., Brassocattleya Leemanæ, Dendrobium, Cœlogyne, etc.

Messrs. Hassall and Co., Southgate, made up a bold group of Cattleya labiata varieties, some of the light forms being very charming.

Messrs. Charlesworth and Co., Haywards Heath, put up a small group of orchids that contained fine forms of Cattleya labiata, C. Wendlandiana, C. Golden Oriole, the finely marked Odontoglossum Aireworth, and Miltonia Bleuiana nobilior.

A bright orchid group from Messrs. S. Low and Co., Bush Hill Park, Enfield, was rendered particularly effective by reason of its arching spikes of Oncidium varicosum, O. oblongatum, and O. oblongatum citrinum; dendrobium, phalænopsis, and numerous lælio-cattleyas added their meed of rich colours.

Messrs. J. Cypher and Sons, Cheltenham, contributed a bright group of cypripediums, Vanda cærulea, and lælio-cattleyas; Bulbophyllum grandiflorum, Cattleya Mrs. J. W. Whiteley, and Cypripedium Niobe were notable subjects.

Mr. Alexander, orchid grower to Lieut.-Colonel Sir G. Holford, Westonbirt, brought up Lælio-cattleya luminosa aurea with pale yellow sepals and petals and rich purple lip (F.C.C.), MM. Maron and Sons, Brunoy, France, submitted Cattleya Fabia var. Vigeriana with nine grand flowers; Brasso-cattleya Maronæ, and B.-c. Rhadames, with a rosy-edged lip.

Mr. Hopkins, gardener to F. Wellesley, Esq., showed a fine form of Brasso-lælia Veitchi, Cattleya labiata Lady Leese, and L.-c. Mrs. Phayne.

Mr. E. V. Low, Vale Bridge, Haywards Heath, presented Brasso-cattleya Queen Alexandra Vale Bridge var., with two splendid flowers, and a large specimen of Cattleya labiata, carrying forty-six blooms.

Messrs. Mansell and Hatcher, Rawdon, Leeds, gained an A.M. for the white Vanda Kimballiana alba. Mr. Barker, gardener to W. Burkinshaw, Esq., Hessle, showed Cypripedium Lord Ossulston with nine blooms, each with a very big white dorsal sepal.

Vanda cærulea, Cattleya gigas, and C. aurea were conspicuous in the small group of orchids staged by Messrs. J. and A. McBean, Cooksbridge. Particularly fine was Lælio-cattleya St. Gothard McBean's var. (F.C.C.), with a splendid violet-purple lip and golden throat. Odontioda Charlesworthi and Cypripedium insigne Harefield Hall were other good subjects included.

FRUIT AND VEGETABLE COMMITTEE.

A dish each of forty-seven stocks of carrots, from the R.H.S. gardens at Wisley, proved very interesting. Most of the varieties were red, but there were two white-rooted sorts. The intermediate forms were well represented, and so were the short-horn and the Model sections; but those that appeared to create most interest were the cylindrical varieties of the Nantes and Paris Market types.

Messrs. Ambrose Palmer and Co., Grosvenor Street, W., showed good dishes of popular kinds of apples and pears.

About 70 dishes and baskets of potatoes from Mr. W. E. Sands, Hillsborough, Ireland, represented almost as many varieties, and included a number of seedlings; The Colleen, Irish Queen, Irish Hero, President, Factor, Rent-Payer, Sharpe's Victor, King George V., and the old Skerries were varieties prominently good.

Mr. McDonnell, Shepherd's Bush, showed some bunches of Black Hamburgh grapes ripened out of doors.

CERTIFICATES AND AWARDS.

First-class Certificate.—To Lælio-cattleya Luminosa aurea, from Lieut.-Colonel Sir G. Holford (grower, Mr. H. Alexander), Westonbirt, Gloucester; to Lælio-cattleya St. Gothard, McBean's var., from Messrs. J. and A. McBean, Cooksbridge.

Award of Merit.—To Vanda Kimballiana alba, from Messrs. Mansell and Hatcher, Rawdon, Leeds; to Nerines Mrs. F. R. Balfour, Snowflake, Mrs. Meade Waldo, and Hon. Miss Gibbs, from H. J. Elwes, Esq., F.R.S. (gardener, Mr. Walters); to Clerodendron Fargesi, from the Director, Royal Gardens, Kew; to Asters Profusion and Amethyst, from Mr. E. Beckett, gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree; to Chrysanthemums Dorothy Dann and Bronze Goacher, from Messrs. W. Wells and Co., Merstham; to Berberis verruculosa and Lonicera nitida, from Messrs. Jas. Veitch and Sons, Chelsea; to decorative dahlia Delice, from Messrs. Carter Page and Co., London Wall; and to plum Coe's Violet, from Mr. J. Vert, gardener to Lord Howard de Walden, Saffron Walden.

MEDALS.

Silver-gilt Flora.—To Messrs. H. B. May and Sons, Edmonton, for ferns and begonias; to Messrs. Jas. Veitch and Sons, Chelsea, for trees and shrubs and greenhouse plants; to Mr. L. R. Russell, Richmond, for bamboos and berried shrubs.

Silver-gilt Banksian.—To Messrs. W. Cutbush and Son, Highgate, for climbers, asters, and carnations.

Silver Flora.—To Messrs. Bakers, Wolverhampton, for dahlias; to Mr. J. Box, Lindfield, for hardy autumn flowers; to Messrs. J. Cheal and Sons, Crawley, for autumn foliage; to Mr. H. J. Elwes, F.R.S., Colesbourne, for nerines; to Messrs. Thos. S. Ware, Lim., Feltham, for dahlias and chrysanthemums; to Messrs. Charlesworth and Co., Haywards Heath, for orchids; to Messrs. Sander and Sons, St. Albans, for orchids; to Messrs. S. Low and Co., Enfield, for orchids; to Messrs. J. Cypher and Sons, Cheltenham, for orchids; to Messrs. Armstrong and Brown, Tunbridge Wells, for orchids; to Messrs. Hassall and Co., Southgate, for orchids; and to Miss Jeffery, for botanical studies.

Silver Banksian.—To Messrs. J. and A. McBean, Cooksbridge, for orchids; to Messrs. Carter Page and Co., London Wall, for dahlias; to Messrs. W. Wells and Co., Merstham, for chrysanthemums; to Messrs. Ambrose and Co., Grosvenor Street, W., for fruits.

Silver Knightian.—To Mr. W. E. Sands, Hillsborough, Ireland, for potatoes.

Bronze Flora.—To Messrs. Paul and Son, Cheshunt, for rose hips and autumn foliage.

Bronze Banksian.—To Messrs. C. Maron and Sons, Brunoy, for orchids.

Bronze Knightian.—To Mr. W. B. McDonnell, Shepherd's Bush, for Black Hamburgh grapes; Messrs. Allwood Bros., for carnations.

SCIENTIFIC COMMITTEE, OCTOBER 10.

Present: Mr. J. T. Bennett Poë, M.A. (in the chair); Messrs. E. M. Holmes, F.L.S., A. Worsley, W. Hales, W. C. Worsdell, J. O'Brien and F. J. Chittenden (hon. sec.).

VARIATION IN ELM.—Mr. W. C. Worsdell drew attention to the variation which had occurred this year, both at Kew and Cambridge, in the foliage of Ulmus glabra, Miller. At the base of many leaf-blades, from one to three extra small leaflets had developed on the petiole. These, when on the side of the leaf in which the blade is usually less well developed, appeared to be complementary growths, but in several of the leaves the blade was symmetrical. A second variation, of considerable frequency, was seen in the forking of the midribs of the leaves, sometimes to the base, so as to produce apparently two leaves at a node, sometimes less deeply. In some few cases also some of the leaves formed ascidia.

RUDBECKIA TRILOBA MALFORMED.—Mr. Wordsell also showed an inflorescence of Rudbeckia triloba, with foliage leaves developing from the apex, through the centre of the capitulum.

MENTHOL PLANT.—Mr. Holmes showed a specimen of the true Menthol plant from his garden. The plant was derived from one growing in Berlin. It is a form of Mentha arvensis called piperascens, and is a native of Japan.

FASCIATION IN CHRYSANTHEMUM MAXIMUM.—Mr. J. R. Jackson sent an example of a fasciated stem and inflorescence in this plant from Lympstone. This species appears to be very subject to fasciation.

ONION BULB WITH LATERAL GROWTHS. — Mr. E. E. Turner sent from Coggeshall, Essex, an onion bulb having numerous greenish bulbils growing from around the base, so that the original bulb was surrounded at its base by numerous out-growths. It may possibly have arisen from a second growth being developed after a check imposed by drought.

CABBAGE WITH HAIRY LEAVES.—Mr. A. Simmonds sent from Mitcham, Surrey, a cabbage leaf having hairs upon both surfaces, especially upon the veins. The wild form is often hairy, but hairiness appears to be very rare in the cultivated varieties.

ROTTING OF NARCISSUS BULBS.—Rev. J. Jacob sent some narcissus bulbs which had been attacked by the fungus Fusarium bulbigenum. This was first described in "Grevillea," Vol. XVI., p. 49, but appears not to have been troublesome since.

APPLES DISEASED.—Mr. Rogers sent from Hexworthy some apples with peculiar greenish depression on the surface, showing a well-marked brown marginal line, which also limited the spots on the inner side, being there about ¼in. below the surface. The trouble had, apparently, developed in the store, and had occurred in a large number of varieties. Mr. Chittenden took them for further examination.

VOTE OF CONDOLENCE.—A vote of condolence was sent Mr. E. A. Bowles, on the death of his mother.

PACKING FRUIT, ETC.—The proper mode of packing fruit and vegetables for market is fully described and illustrated in the Gold Medal Essay of the Worshipful Company of Fruiterers, entitled Packing and Selling Fruit and Vegetables. Price 1s. from booksellers, or 1s. 3d. by post from Gardeners' Magazine Office, 148, Aldersgate Street, London.

Royal Horticultural Society of Ireland.

The winter fruit show of the Royal Horticultural Society of Ireland, assisted by the Department of Agriculture, was held in the buildings of the Royal Dublin Society, Ballsbridge, on the 18th and 19th inst. The weather on the first day was particularly favourable, and in the afternoon the attendance fairly good. A show so well organised, at so much expense, and made so attractive in every way, and with the view of encouraging an important industry for the country—that of fruit growing—should have attracted a larger number of the fashionable and wealthy class. In every other respect the show seemed a completely successful venture, being a record one in the entries in the numerous classes, and, on the whole, the quality and size of most of the fruit on exhibition have heretofore scarcely been equalled. The colours, in dessert apples—those from the Southern district especially—were perfection. In some of these classes the entries were large, Cox's Orange Pippin leading the number with 73 dishes. In Ireland this favourite dessert variety still easily leads in popularity. Mr. R. Dalton, of Pilltown, Kilkenny, took first with medium-sized, brilliantly coloured fruit; the second going to Mr. N. Coghlan, and the third to W. Coffey, Esq., of Newmarket-on-Fergus, in very close competition. The class for Allington Pippin was also a large one, and the first prize was awarded to Mr. Coghlan, also of Pilltown, with medium fruits of wonderful colour; the second prize going to Mr. R. Dalton, Pilltown. King of the Pippins was another good class, with Mr. Whiting, of Hereford, occupying the premier position with a really superb dish in size and colour, and Lady Fitzgerald second. For Ribston Pippin the first went to Mr. Steward for very big fruit, and second to Mr. Hannon.

The first prize for Worcester Pearmains was awarded to Mr. Dalton, of Pilltown, who had a very highly-coloured dish, and second to Mr. Wm. Coffey, Newmarket-on-Fergus. Mr. Bowers, of Silversprings, Kilkenny, gained first for Rival, as well as first for a collection of twelve dishes of cooking apples, with Mr. Coffey, of Newmarket-on-Fergus, second. Good fruits of Charles Ross were shown by Mr. R. J. Brown, who was successful by winning first prize. The premier award for James Grieve went to Mr. J. Cooney, Kells, but this early apple was rather past its best, and there were only seventeen dishes. Mr. J. Cooney also secured first in a collection of six dishes of cooking apples. For an excellent collection of six dishes of dessert apples Mr. J. B. Jameson, of Bray, gained the premier award, very handsome dishes of Rival and Allington being conspicuous. The chief award for a decorated table of eighteen dishes of apples went to Mr. J. Jameson, of Portmarnock. In the class for a collection of twelve dishes of eight cooking and four dessert apples, open to amateurs only who employ a gardener, premier honours were obtained by Lady Fitzgerald, who showed extra fine Cox's Pomona, Bramley's Seedling, and Warner's King; the second prize was awarded to Mr. J. Jameson, of Portmarnock. Some other first prize winners in other classes of dessert apples were Mr. G. Butler, for a well-finished dish of King of Tomkin's County, in a miscellaneous class of ripe fruit, not elsewhere classed.

In a competition of forty-eight dishes of late kinds not classed, Mr. S. Bowles won first with handsome high-coloured fruit of Barnack Beauty. For American Mother Mrs. Bowers won first prize. For russets Lady Annaly, and for Blenheim Orange Mr. C. S. Roynane obtained premier awards. Among the single dish classes for culinary apples Bramley's Seedling, comprising over seventy dishes, made an imposing display. Lord Derby, Blenheim Pippin, Lane's Prince Albert, Bismarck, Gascoyne's Scarlet, Newtown Wonder, Warner's King, Peasgood's, and The Queen formed other extensive classes. Lane's Prince Albert was mostly of very high colour, and Bramley's Seedling so in most cases, and Newton Wonder particularly rich in colour. The first prize winners in some of the many classes were, for Bramley, Lady Annaly, with perfectly uniform, full-sized fruit; for Blenheim Orange, Mr. K. F. Malcomson; for Bismarck, Mr. Wm. Coffey; for Gascoyne's Scarlet, Mr. Wm. Nulty, in very close competition with the second prize winner, who was Mr. J. O'Donnell. For Beauty of Kent, the Earl of Drogheda gained first; for Lord Derby, which was a very fine class, Mr. J. Kennedy was awarded first for a magnificent dish; for Lane's Prince Albert, another grand class, Mr. A. G. Bowers obtained first prize with a superb dish, both colour and form being ideal. Other firsts were for Newton Wonder, Mr. A. Claud Ellis; for Peasgood's, Mr. J. Nulty; and for The Queen, Mr. M. Kennedy, who was easily first with grand fruit. The Earl of Drogheda gained first prize in a class for any other early cooking kind not classed with fine fruit of Loddington Seedling. In this class appeared fine examples of Queen Caroline, of brightest yellow; Bess Pool, dark red; Waltham Abbey Seedling, very large. For any other variety, late cooking, not classed in a big competition, Mrs. Kennedy gained first for King Edward of fine form and size. Other markedly good kinds in competition in this class were Beauty of Stoke, Cobham, American Greening, and Emperor Alexander. In the class for Royal Jubilee, the dishes were uniformly good, for which Mr. James Kennedy was awarded first prize.

Pears were also well shown. For the collection of six dishes of dessert varieties, Lady Clara Fitzgerald, Newmarket-on-Fergus, was awarded first, and Mr. B. H. Barton, of Straffan House, second. For the collection of four dishes of dessert pears the first was won by Mr. J. R. Jameson, of Bray. Lady Kenure Park gained first for a dish of Doyenne du Comice. For Pitmaston Duchess Mr. Mapother, of Roscommon, was first. Some other winners in the various other single dish classes for pears were Lady Redmond, Earl of Drogheda, Alderman Bewley, Rathgar; and Mr. E. D'Olier, Knocklin.

The show of grapes was not a remarkable one, but the competitions for apple packing were keen. Vegetables were very well shown. In the collections the closeness of the competitions, the general good quality, and the neatness of the staging, made a most attractive display. The first prize for twelve kinds of vegetables went to Mrs. S. J. Brown, Naas. For six kinds, the first prize was won by Alderman Bewley, who was also awarded first for six very well-grown specimens of Salvia splendens.

The chrysanthemums were not so prominent a feature as in some years past, but the quality of the blooms shown was very good. The prize for the stand of twenty-four Japanese blooms was won by Mr. J. Jameson, Portmarnock, who also won first in several other classes, some of the most conspicuous of the blooms were Elsa Fulton, White Queen, Mrs. N Davis, Yellow Skanklin, and F. Joliffe. For the stand of twelve blooms the first prize was awarded to the Hon. C. F. Crichton, Mullaboden; second to Mr. W. Robertson, of Hermitage. The competition was close between the first and second prize winners. Noticeable winning blooms were Mrs. A. T. Millar, Mrs. W. Knox, and F. Joliffe. Mr. Robertson showed Formality and F. Penford. For a stand of six blooms Mr. Westby, Roebuck Castle, was first. The competition for six vases of carnations was won by Alderman Bewley, some markedly good varieties being Mrs. Burnett, White Lady Bountiful, very lovely; Britannia, and Mrs. T. W. Lawson. The nurserymen and traders' stands were numerous and elaborate, and added considerably to the general interest of the show. Messrs. Bakers, of Wolverhampton, were awarded a gold medal for a very showy and attractive display of named hybrid pæony-flowered dahlias. Sir James Mackey, of Sackville Street, was also awarded a gold medal for the best stand containing fruit, flowers, and vegetables. This stand was extensive and of varied order. In this were shown hybrid gerberas of vivid colours, which were very beautiful and attractive. Messrs. C. Ramsay, of Ballsbridge, were awarded a gold medal for the finest group of foliage and flowering plants. Messrs. Watson, of Clontarf, were awarded a gold medal for a fine stand of hardy fruits. Many other firms gained awards, and added interest to a very fine exhibition.

In connection with the fruit show, on the second day in the Industrial Hall the Fruit Conference was held. The attendance was large and representative, and comprised fruit growers from all parts of Ireland. Mr. T. W. Russell, M.P., Vice-President of the Department of Agriculture, presided.

Royal Scottish Arboricultural Society.

A meeting of the Aberdeen branch of this society was held in Aberdeen University Buildings on Saturday afternoon, 14th inst. There was a capital attendance of leading landed proprietors, foresters, nurserymen, etc., from the North-east of Scotland. Mr. Sydney J. Gammell, of Drumtochty and Countesswells, president of the branch, occupied the chair. After some preliminary business had been transacted, the Chairman called upon Mr. J. A. Duthie, Pinewood Park Nurseries, Aberdeen, to read his paper upon "The Trade Nursery and its Function in the Extension of Afforestation." Mr. Duthie said he wished to discuss whether our knowledge, our skill, our experience of plant culture would be required when afforestation came. He did not mean to go into a history of the nursery trade, but would lay stress on points of interest upon which no doubt there might be very much difference of opinion. There were few trade nurseries prior to 1750. No doubt the huge plantations made by the Duke of Atholl and other proprietors in the latter part of the 18th century created a demand for forest trees over and above what could be raised in their estate nurseries. There were still a few firms in Scotland who were established in the latter end of the 18th century, although not a few old firms succumbed during the '80's, when agricultural depression became so acute, and put a stop to estate planting operations generally. At the present moment he was doubtful if there was more than half the acreage under nursery crops that existed, say, between 1850 and 1870, when rents and prices of agricultural produce reached high-water mark. The last quarter of the 19th century were barren years for the nursery trade, a poor and irregular demand, and a steady increase in taxes and working expenses making the business far from profitable.

Mr. Duthie then proceeded to speak on the situation, soil, etc., of the nursery. Briefly, the situation should, if possible, be a natural well-drained soil with a gentle slope, not subject to late spring or early autumn frosts, possessing a kindly soil, more or less sheltered in spring and early summer from prevailing cutting winds, and last, but not least, land as far as possible free from weeds and stones. The lecturer then proceeded to deal with the most suitable manures and recommended bone-meal as the safest artificial. Proceeding to deal with the seeds used, he emphasised the point that the selection of good seeds from healthy sources was of the greatest importance. Instead of criticising nuserymen for growing seeds which were, in some cases, faulty, why should not landowners co-operate with them, and prevent the collection of seeds from badly grown or diseased trees? Nurserymen could not do so, and were powerless in the matter. Seeing the question was one of national importance, could not landowners take the business of seed collecting into their own hands? No one would welcome a solution of this matter more than bona fide nurserymen. He was perfectly satisfied that every Scottish nurseryman who valued his reputation, present and prospective, was anxious to secure the best possible seeds, irrespective of price. He could never quite understand why all the vices in creation should be attributed to home-grown larch, and all the virtues to Tyrolese. Had they any surety that the foreign article fulfilled all the conditions of what good seed should be? Perhaps it might be a case of "Where ignorance is bliss, 'tis folly to be wise." As to the respective merits of home and foreign larch, he did not wish to express an opinion, but there was no doubt that up to two or three years of age plants raised from home seed were much superior in growth and hardiness to those raised from foreign seed. As long as there was sufficient supply of native Scots fir available, he saw no necessity for introducing an inferior type to our woods. Manifestly, the whole business of seed collecting was not altogether in a satisfactory condition. The same difficulties had to be met with in the home nursery, but with this difference, that the prorpietor's whole capital was not at stake, nor was he confronted with one of the greatest initial difficulties—the irregular and intermittent demand. They sowed in faith and sometimes reaped—a bonfire.

There need not be any antagonism between trade and private nurseries, for both were, he believed, indispensable. Let the requirements be indicated, assure the nurseryman of a regular and constant demand, throw open for the collection of native seeds the best woods in the country—or, better still, failing Government centres, let landed proprietors take the business of seed collecting into their own hands, and supply the nurseryman with the genuine article.

When the Forestry Commissioners' report came out some years ago recommending that in Scotland something like nine million acres were suitable for afforestation, the first question that confronted practical foresters was where the requisite number of plants were to be procured if afforestation of such large areas should take place. That need not be a drawbock. Create the demand, and the nurserymen would provide the supply—a supply that in quantity, quality, and price would render it unnecessary to cross the German Ocean. The most regrettable feature in foreign competition was, he thought, the importation of foreign Scots fir. He had already mentioned that it was so liable to attack by leaf-shedding fungus as to make it scarcely worth growing. If home larch was inferior to Tyrolese, why plant Continental Scots fir, which everyone admitted was inferior to our native pine? What would the timber merchant's verdict be in the matter when the wood, if ever it came to a marketable size, reached maturity? To his mind there were three serious objections to the introduction of the foreign produce into this country—first, its liability to leaf-shedding fungus, which might become epidemic and be injurious to Scots pine plantations as larch canker was to larch; second, the timber produced would in all likelihood be inferior in every way to our finest indigenous pine; and, third, seed might be collected in the future from the foreign form, which might lead to the deterioration of the type. In fact, he would go so far as to advocate the prohibition of the importation of Continental Scots pine.

Several speakers having most favourably criticised the paper, including Mr. William Dawson, lecturer in forestry at Aberdeen University, and Mr. J. D. Crozier, forester on the Durris estates, near Aberdeen, a very hearty vote of thanks was accorded Mr. Duthie, on the motion of the chairman, for his very valuable and interesting contribution.

The usual votes of thanks terminated the meeting.

National Chrysanthemum Society.

The Floral Committee met at Essex Hall, Strand, in the afternoon of October 23, and had a goodly number of blooms to consider, these being sent by Messrs. W. Wells and Co., Mr. Jinks, Mr. Salsbury, Mr. H. J. Jones, Mr. Perry, Messrs. Cragg, Harrison, and Cragg, etc. Six First-class Certificates and six Commendations were granted; and the descriptions of the flowers so honoured will be found under "New Plants."

Votes of thanks were passed to Messrs. Low and Shawyer, of Uxbridge, and Messrs. Cragg, Harrison, and Cragg, of Heston, for their courtesy and hospitality on the occasion of the visits of the committee to their establishments, and such thanks were recorded on the minutes.

The committee regarded Golden Glory as identical with Cranford Yellow, already certificated by the N.C.S.; under these names Messrs. W. Wells and Co. submitted numerous blooms, and no one could distinguish any difference between the flowers.

At the general committee meeting held at Carr's Restaurant, there was a large attendance. The death of Mr. Reeve, of Barnet, a former cultivator of specimen chrysanthemums, was reported, and a silent vote of condolence passed to his relatives. A financial balance of £43 11s. 8d. was reported to date. Whether the use of electric lights in a table decoration was permissible was discussed at some length, but it was pointed out that the class specification did not prohibit the use of lights, and as lights were commonly used in table decorations they could not disqualify.

The Publications Sub-Committee reported the desirability of obtaining a descriptive account of the November show for publication in the schedule, as such accounts, if carried out annually, would be of great historic interest and value, as showing the development of certain classes of flowers and the decline of others. The recommendation was agreed to, and a sum not exceeding three guineas was granted for the preparation of such account.

The Chairman reported what had taken place at the Mansion House meeting that afternoon respecting the Crystal Palace and its purchase for the nation. As the Official Receiver has power to act up to October 31, 1912, it was agreed to proceed as far as possible in connection with dates for shows in that year.

Six new Fellows and sixteen new ordinary members were elected.

Some humour was imported into the proceedings by the very emphatic desire on the part of some members that the society's dinner on November 29 should be "a real English one."

Dundee Horticultural Association.

The first meeting of the session was held in the Technical College on the 19th inst., when the hon. president, W. S. Melville, Esq., presided. Mr. J. B. Corr gave an admirable and interesting lecture on "Some Curious Habits and Habitats of Plants." After contrasting tropical forests with the alpine flora, and pointing out the natural adaptation to environment in extreme cases, the lecturer held his audience spellbound while he talked of the humble flowers of the field and hedgerows, marsh plants, aquatics, climbers, lichens, mosses, ferns, and fungi, all of which he discussed admirably, and pointed out many of their peculiarities. His examples of pollination and perpetuation of species were exceedingly well chosen, and proved of much interest, while the extent of his information showed him to be an ardent student of nature, and one capable of imparting his information to others. A large Up-to-date potato weighing 2¾lb., exhibited by Mr. J. S. Ritchie, Monifieth, created much interest.

Broughty Ferry Horticultural Society.

At the ordinary monthly meeting on the 17th inst., Mr. Wm. MacDonald, head gardener at Mount Melville, was the lecturer, taking as his subject "Points for Gardeners, Young and Old." In weighty words the lecturer denounced the average young gardener for his lack of interest in his daily occupation. He was either given to sport, or of indolent, careless, and disrespectful habits, and fast losing his caste. This was accountable from the fact that young apprentices were drawn from a poor source, encouraged by the "keeping wage" advanced in no other trade. He deplored the fact that the best young men were emigrating where better remuneration was obtained, and he thought that something ought to be done to keep the best talent at home, and keep wastrels out of the gardening ranks; he suggested lower wages and longer services for apprentices, a higher standard of education, and some combined effort to hall mark the best, so that worth would be recognised.

In an animated discussion which took place the President, Messrs. Grant, Slater, Meston, Masson, Bell, Stewart, Christeson, and others took part, after which the lecturer was cordially thanked.

In a competition for three leeks, three heads of celery, and three onions, Mr. John Campbell, Forbes Court Gardens, was first, and Mr. James Bethel, The Grange Gardens, second.

Reading Gardeners' Association.

At the fortnightly meeting, held in the Abbey Hall (by kind permission of Messrs. Sutton and Sons), on Monday, there was again a very large attendance, the President (Mr. F. B. Parfitt) occupying the chair.

The speaker for the evening was one of the initiators of the association, Mr. G. Hinton, gardener to T. Allsopp, Esq., Downham Lodge, Caversham, and his subject was "Vegetables—Preparing for Winter." Mr. Hinton, who has been long known to his confrères as a clever vegetable grower, opened his lecture by stating that his remarks would be more particularly addressed to those who held what were known as single-handed places, and who had to think and act for themselves. An exceedingly interesting paper followed, Mr. Hinton giving practical information which had been culled from his long experience in the gardening world, instancing for example the method he had used in raising an abundance of cabbage plants during the past autumn, while many of his friends had altogether failed in the trying season.

A particularly animated and instructive debate followed, which was maintained to the close of the meeting, when a hearty vote of thanks to Mr. Hinton was carried with acclamation.

A certificate of cultural merit was awarded to Mr. G. Tovey, The Gardens, Leighton Park, for a group of zonal pelargoniums; and Mr. A. Abraham, gardener to Mrs. Bird, Shrublands, Earley, Reading, was highly commended for a collection of apples and pears. Mr. A. Giles, gardener to H. Dunlop, Esq., exhibited a bouquet of dahlias; and Mr. Shipley, head gardener to F. W. Nicholson, Esq., sent some wonderfully robust growth, seven feet in height, of Love-Lies-Bleeding.

Bournemouth Gardeners' Association.

On Tuesdays, October 17, a concert in aid of the Royal Gardeners' Orphan Fund was given in the Avenue Assembly Room, and proved a great success. Alderman J. Eames Beale, J.P., presided, supported by J. H. Ralph Smythe, Esq., J.P., the president of the association. Both the ladies and gentlemen who rendered the programme acquitted themselves very creditably indeed. During the interval Mr. Beale made a very eloquent appeal to the company—a large one—to swell the funds and so assist those who are in less favourable circumstances. He spoke of the great good such societies did, of the relief given to widows left lonely, and stated that he once conversed with a celebrated Japanese visitor to this country, and, during their conversation he asked the gentleman what struck him most in this country, and suggested that possibly it would be the Navy. "No," said the gentleman, "your magnificent hospitals, orphanages, and similar institutions impress me most, and the grand work carried on in connection with them."

Charges were not made for admission to the concert, but a collection was made, which on this occasion amounted to £4 7s. 5d., and was later made up to £4 14s.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

PALLID CUCUMBER LEAVES.—A., Carisbrooke: The leaf sent us carried a goodly number of red spiders, quite sufficient to account for the trouble. Some amount of dryness at the roots as well as in the atmosphere is the cause of the attack, as evidenced by the thin foliage. Spray or sponge the leaves with a solution of flowers of sulphur, and follow this up with frequent syringings as weather permits, taking care to wet both surfaces of each leaf as well as the immediate surroundings. Pay careful attention to watering, as cucumbers should on no account be allowed to get dry at the roots. Give small top-dressings of equal parts of loam and cow manure as soon as roots appear through the surface soil.

TUBEROUS BEGONIAS.—F. E., Derby: Lay the pots on their sides on the greenhouse staging for a few days, allowing the soil and stems to face the sun. Here the old stems will soon ripen and detach themselves from the tuber, and as this happens, remove the pots to a less conspicuous place where the soil and tubers will be kept dry and in a temperature of about 50 degrees. If the pots are needed, shake the tubers free from soil, and place them in little bags or baskets, with labels attached, in the seed cupboard or similar dry frost-proof place.

RUBBER SEEDS.—W. B. S., Southampton: The seeds are those of the Para Rubber tree, Hevea braziliensis, but quite half of those sent us were dead, although they appeared to be sound.

GLAZING HONEY SECTIONS.—F. E. J., Epping: For glazing sections, glass cut to the correct size may be purchased of any dealer in bee appliances, together with the strips of paper lace edging, which, when pasted round the angle formed by the glass and wood, serve to fix the glass on. The local glazier will gladly cut up waste glass to the small size (viz., 4 3-16in. by 4 3-16in.) required, while neatly printed bands of coloured paper, 19in. by 3in., can be used instead of the lace edging. These bands cost about 7s. per 1,000. They are more easily pasted on than the paper lace edging, and make much firmer and neater work, while they also give an opportunity of placing the names of the apiary and retailer on each section. Neat cardboard cases, plain

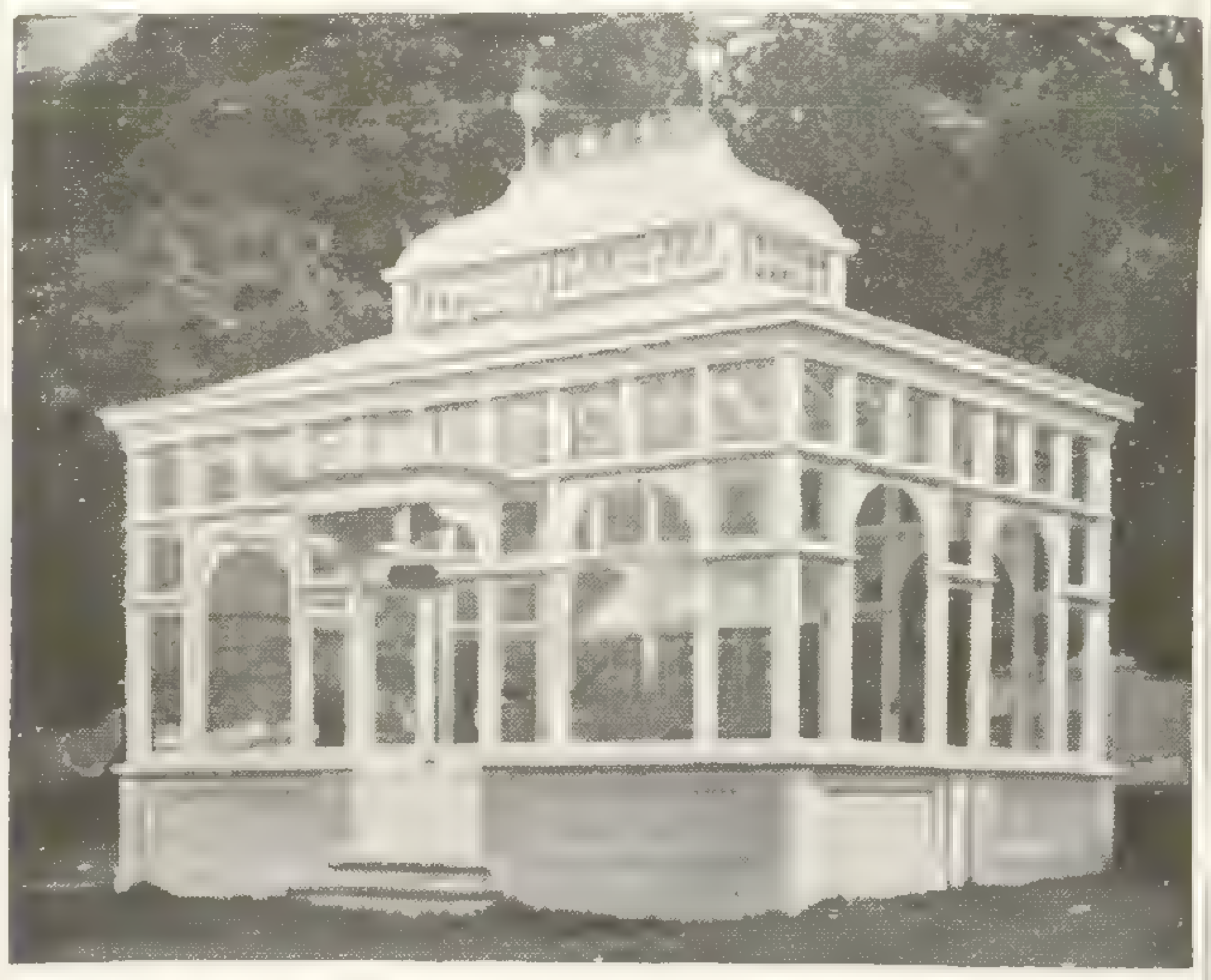
The only resemblance between a Pine Spray Syringe and others is in the shape of the barrel. The metal is more substantial. For the rest, the combination spraying head renders Spray, Rose, and Bend instantly obtainable without the addition or removal of a single fitment, while the adjustable leather bucket plunger gives perfect suction, never allows water to escape past it and up your sleeve, and wears interminably.

A written request from your ironmonger or seedsman, and a Syringe will be sent in 24 hours for your approval. Price 10/6. Sole proprietors and manufacturers, **Robinson Bros., Ltd., West Bromwich.**

PINE SPRAY SYRINGE (patent).

BOULTON & PAUL, LTD., HORTICULTURAL BUILDERS, Norwich.

ATTRACTIVE, PRACTICAL GLASSHOUSES.

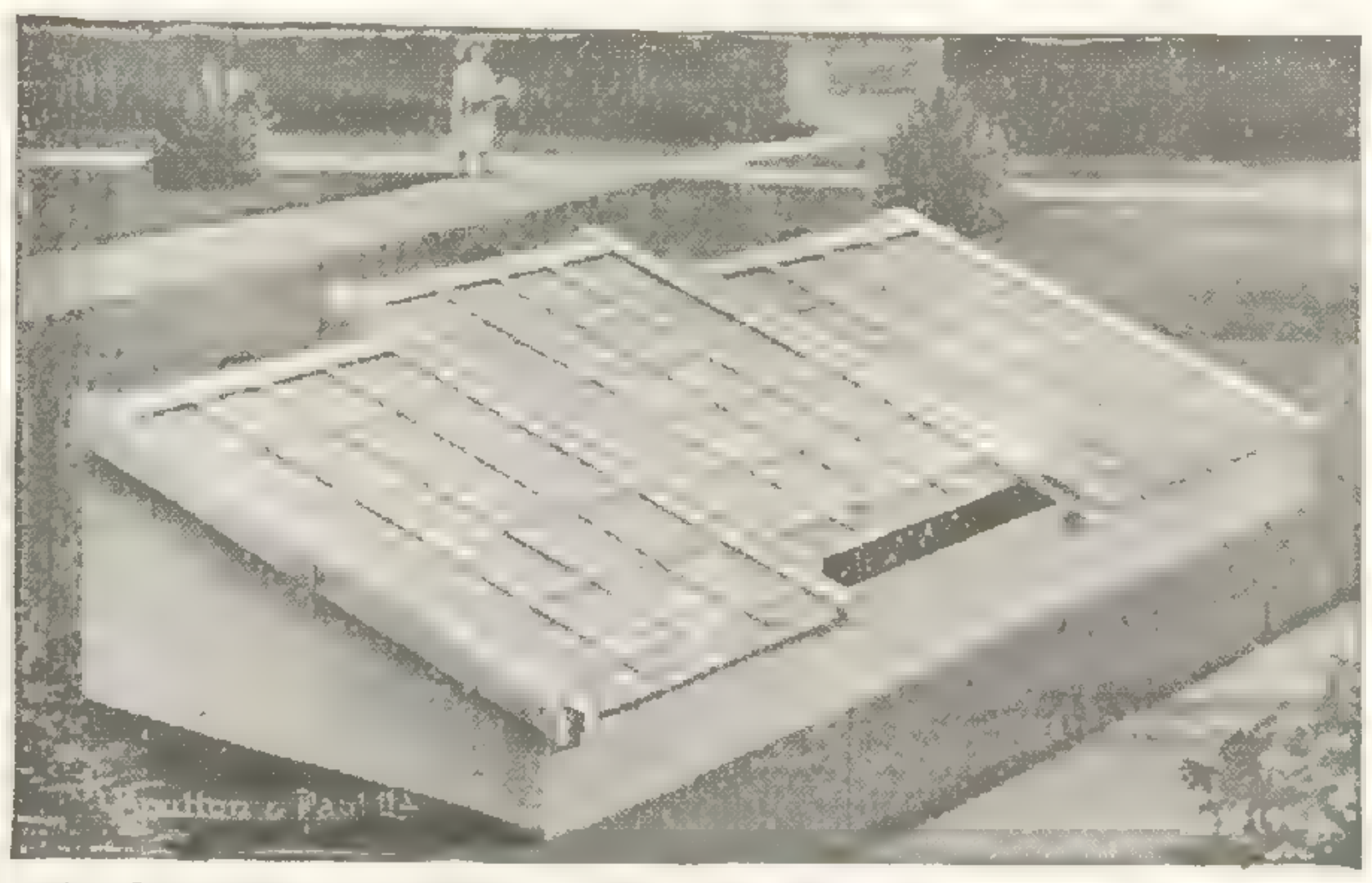


Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of **40**/- value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.

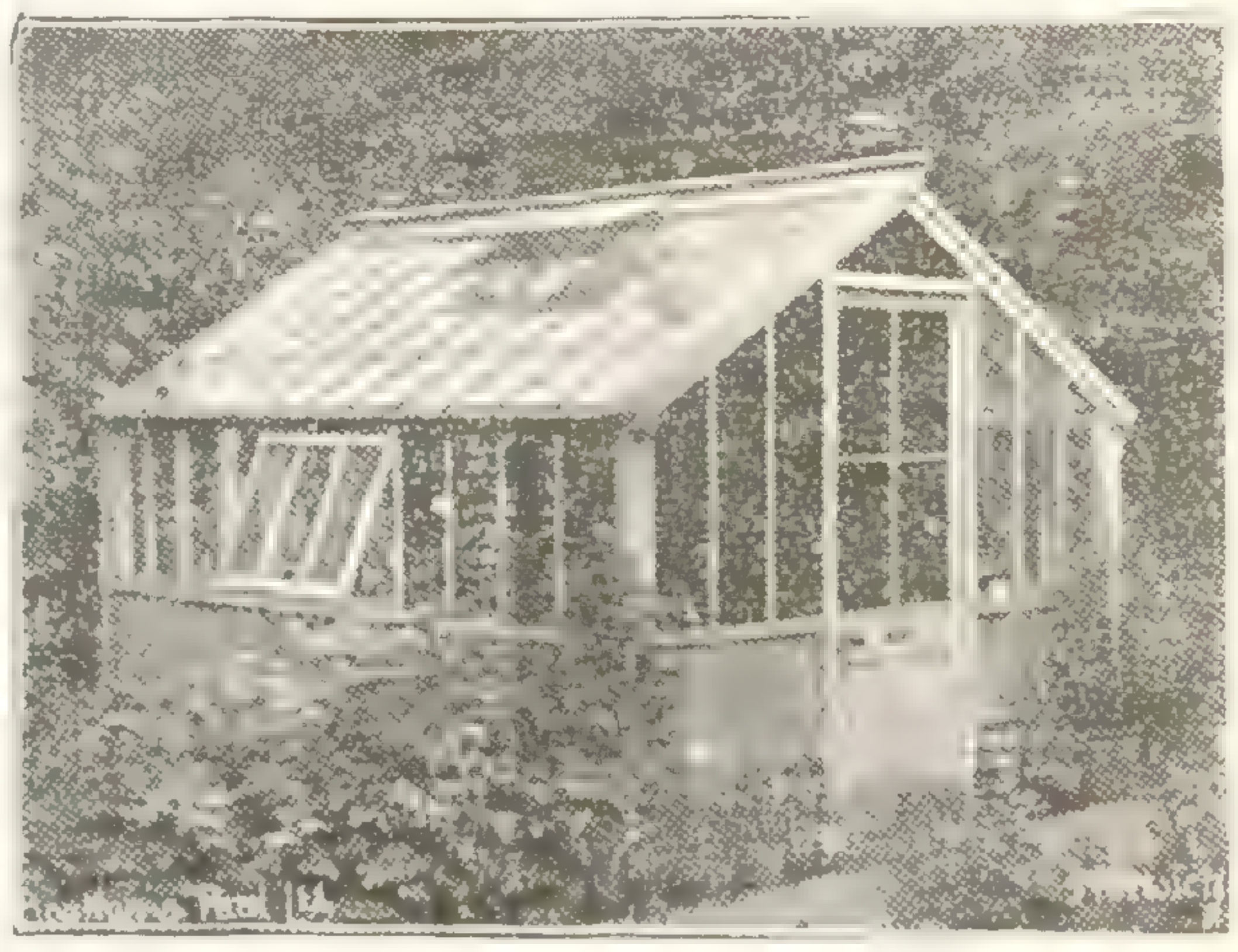


4ft. by 6ft. ... £2 0 0 | 8ft. by 6ft. ... 3 0 0
Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft. Similar to No. 75, with Two Lights... **35**/-

SEND FOR ILLUSTRATED CATALOGUES.

Every part of these Houses is thoroughly well made, painted three coats, GLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.



No. 49A.—Span, 10ft. by 8ft. £11 10 0
No. 47A.—Lean-to, 10ft. by 7ft. £9 10 0

All parts are numbered ready for easy re-erection by any handy man.

or glazed on one or both sides, and glazed tin boxes, are provided by appliance dealers for those who have but a small number of sections to deal with; where larger quantities are handled, the printed band holding on the two squares of glass will be found the best and most economical.

FARM WEEDS.—R. L. M., Ipswich: The Board of Agriculture and Fisheries has issued eight leaflets dealing with common farm weeds and their destruction. These are: "The Destruction of Charlock" (No. 63); "Weeds and Their Suppression" (No. 112); "Some Common Thistles" (No. 166); "Dodder" (No. 180); "Coltsfoot" (No. 194); "Meadow Saffron" (No. 222); "Broom Rape" (No. 226); and "Couch or Twitch" (No. 249). You may obtain all these leaflets, free of charge and post free, on application to the Secretary, Board of Agriculture, 4, Whitehall Place, London, S.W., and the letter of application so addressed need not be stamped. You could scarcely get the desired information cheaper!

HORTICULTURAL EXAMINATION PAPERS.—R. M. A., Godalming: The questions set by the Royal Horticultural Society at all the examinations held from 1893 to 1909 are now published in book form, and are of great value and interest to prospective candidates. The set can be obtained from the Secretary, Royal Horticultural Society, Vincent Square, Westminster, S. W., for 2s.

SWEET PEAS.—A. L., Beverley: Obtain "Sweet Peas and Their Cultivation" from the GARDENERS' MAGAZINE office, 148, 149, Aldersgate Street, London, E.C., post free for 1s. 2d., or 1s. 8d. (cloth binding).

NAMES OF PLANTS.

Under this heading we can only undertake to name species and well-marked varieties of plants, and not florists' flowers. Specimens should be packed in stout boxes with damp (not wet) moss, or some leaves, as packing material, to ensure their reaching us in a fresh state. It is essential that flowers must accompany specimens of flowering plants, that fern fronds be fertile, and that numbers be firmly attached to the specimens so that they can be seen without any untying. We cannot promise to name more than six specimens at one time from any one correspondent.

R. C., Oxford.—Polygonum Baldschuanicum.

G. B. J., Truro.—1, Stapelia gigantea; 2, Thymus serpyllum; 3, Plumbago Larpentæ.

B. G., Eye.—1, Ligustrum chinensis; 2, Eleagnus pungens; 3, Olearia Haasti; 4, Cotoneaster frigida.

C. W., Shrewsbury.—1, Callicarpa purpurea; 2, Cotoneaster horizontalis; 3, Aster Delight; 4, Solidago californica.

N. A. W., Torrington.—1, Tamarisk gallica; 2, Arbutus Unedo; 3, Diplopappus chrysophyllus; 4, Solanum capsicastrum; 5, Solanum jasminoides.

W. H. C., Monmouth.—1, Pelargonium crispum; 2, Strobilanthes Dyerianus; 3, Sedum Sieboldi.

V. P., Hertford.—1, Odontoglossum crispum, poor form; 2, Cattleya Harrisonæ; 3, Odontoglossum gloriosum; 4, Sibthorpea europæa; 5, Cypripedium Actæus.

NAMES OF FRUIT.

When sending fruits for naming, will our readers be good enough to send good specimens, as without these it is not possible to accurately determine the varieties. Pack firmly, using light tin or wood boxes, and send not more than six varieties at once. Label each specimen and enclose letter with the fruit, whether a separate notification is sent or not. Address the packages to the Editor, GARDENERS' MAGAZINE, as advised in the notice at the head of "Answers to Correspondents."

T. D. L., Whitby.—1, King of the Pippins; 2, Lane's Prince Albert.

L. M. S., Halstead.—1, Hambling's Seedling; 2, Ribston Pippin; 3, Mère de Ménage.

A. T. B., Bletchley.—1, Lane's Prince Albert; 2, Golden Noble; 3, Adam's Pearmain.

F. Y., Bideford.—1, Yorkshire Beauty; 2, American Mother; 3, Alfriston; 4, not in character.

G. S. D., Abergavenny.—1, Court Pendu Plat; 2, Beurre Bosc; 3, Beurre Diel; 4, Dumelow's Seedling; 5, Sturmer Pippin.

B. A. F., Newhaven.—1, Claygate Pearmain; 2, Beurre Clairgeau; 3, Pitmaston Duchess; 4, Marie Louise; 5, Cox's Orange Pippin; 6, Fearn's Pippin.

CATALOGUES RECEIVED.

C. KIEF AND SONS, LIMMEN, NEAR HAARLEM, HOLLAND.—The special features of this firm's English catalogue of bulbs are the extended descriptive lists of double and single hyacinths and tulips.

J. STORMONTH AND SON, KIRKBRIDE, CARLISLE.—This is a closely-printed descriptive catalogue of handy size, and one that includes a wide range of tuberous and fleshy-rooted plants as well as bulbs.

ALDERSEY AND MARSDEN JONES, TILSTON, MALPAS.—An interesting list of choice new sweet peas, raised at Aldersey Hall. These varieties are remarkable for their refinement of form and colour.

W. SEABROOK AND SONS, CHELMSFORD.—Although a well-illustrated and descriptive list of fruits occupies the larger part of the catalogue, roses are also included.

H. MERRYWEATHER AND SONS, LIM., SOUTHWELL, NOTTS.—A handy catalogue of fruits, roses, shrubs, etc. The new fruits offered include the Merryweather damson and Crimson Bramley's Seedling apple.

FRANK CANT AND CO., BRAISWICK NURSERIES, COLCHESTER.—A very complete catalogue of roses, freely illustrated. New varieties occupy a prominent place in the list.

JAS. VEITCH AND SONS, CHELSEA.—Four catalogues reach us from the Chelsea firm. The one devoted to fruit trees is capitally arranged and well illustrated. The rose catalogue is quite a work of art, and contains a very fine selection of varieties. Carnations and picotees furnish another list, but of special interest is the list of new hardy plants from Western China, introduced through Mr. E. H. Wilson.

FORTHCOMING ENGAGEMENTS.

TUESDAY, October 31.—Brighton Chrysanthemum Show; two days.
Bournemouth Chrysanthemum Show; two days.
WEDNESDAY, November 1.—National Chrysanthemum Society, Crystal Palace; three days.
Bath Chrysanthemum Society.
Faversham Chrysanthemum Show.
THURSDAY, November 2.—Torquay Chrysanthemum Show; two days.
Linnean Society Meets.
Manchester and North of England Orchid Society.
FRIDAY, November 3.—National Horticultural Society of France, Fruit Show, Paris; ten days.
SATURDAY, November 4.—French Horticultural Society of London.
Wood Green Chrysanthemum Show.
TUESDAY, November 7.—Royal Horticultural Society; committees meet at 12 o'clock; lecture at 3 p.m. on "The Cultivation of Figs in Pots," by Mr. James Hudson, V.M.H.; Scientific Committee at 4 o'clock.
Birmingham Chrysanthemum Show; three days.
Southampton Chrysanthemum Show; two days.
Oxford Chrysanthemum Show.
Scottish Horticultural Association.
WEDNESDAY, November 8.—Liverpool Chrysanthemum Show; two days.
Cardiff Chrysanthemum Show; two days.
Dorchester Chrysanthemum Show; two days.
Barry Chrysanthemum Show; two days.
Buxton Chrysanthemum Show.
Haslemere Chrysanthemum Show.
Reading Chrysanthemum Show.
THURSDAY, November 9.—Forest Gate and Stratford Chrysanthemum Show; three days.
Exeter Chrysanthemum Society; two days.
Putney Chrysanthemum Show; two days.
Bedford Chrysanthemum Show.
FRIDAY, November 10.—Bradford Chrysanthemum Show; two days.
Leeds Paxton Society's Chrysanthemum Show; two days.
Altrincham Chrysanthemum Show; two days.
Windsor Chrysanthemum Show.
North Lonsdale Chrysanthemum Show.
MONDAY, November 13.—United Horticultural Benefit and Provident Society.
TUESDAY, November 14.—Ulster Horticultural Society; two days.
Plymouth Chrysanthemum Show; two days.
Chester Chrysanthemum Show; two days.
Saltaire Rose Society's Annual Meeting.
WEDNESDAY, November 15.—Newcastle Chrysanthemum Show.
North of England Horticultural Society, at Newcastle
THURSDAY, November 16.—Scottish Horticultural Association's Chrysanthemum Show; three days.
Newport (Mon.) Chrysanthemum Show.
Aylesbury Chrysanthemum Show.
Manchester and North of England Orchid Society.
Linnean Society Meeting.
FRIDAY, November 17.—Bolton Chrysanthemum Show; two days.
MONDAY, November 20.—National Chrysanthemum Society; Floral Committee at Essex Hall, 3 p.m.; General Committee at Carr's Restaurant, 7 o'clock.
TUESDAY, November 21.—Royal Horticultural Society; committees meet at 12 o'clock; lecture at 3 p.m. on "The 1912 International Horticultural Exhibition," by Mr. Edward White; Scientific Committee at 4 o'clock.
FRIDAY, November 24.—Aberdeen Chrysanthemum Show; two days.
WEDNESDAY, November 29.—Irish Gardeners' Association.
National Chrysanthemum Society's Annual Dinner at the Holborn Restaurant.
THURSDAY, November 30.—Royal Horticultural Society's Colonial Fruit Show; three days.
Manchester and North of England Orchid Society.

MARKETS.

COVENT GARDEN.

Flowers.

Business is a little quiet again, and supplies are good.

		s.	d.		s.	d.
Adiantum cuneatum	per doz. bun.	3	0	to	4	6
Arums	per doz.	3	0		5	0
Asparagus plumosus	per doz. bun.	8	0		15	0
,, Sprengeri	per doz. bun.	8	0		12	0
Asters	per doz. bun.	8	0		12	0
Carnations	per doz.	1	9		3	0
,,	per doz. bun.	8	0		18	0
Chrysanthemums	per doz. bun.	4	0		8	0
,,	per doz. blooms	1	3		6	0
Coreopsis	per doz. bun.	1	6		3	0
Croton leaves	per bun.	1	0		1	6
French fern	per doz. bun.	2	6		4	0
Gardenias	per doz.	1	6		2	6
Lapageria	per doz.	2	0		3	0
Lilium auratum	per doz.	2	6		3	6
,, speciosum	per doz.	1	6		2	6
,, longiflorum	per doz.	2	6		3	6
Lily of the Valley	per doz. bun.	8	0		18	0
Marguerites	per doz. bun.	2	0		2	6
Mignonette	per doz. bun.	2	6		3	0
Odontoglossums	per doz. blms.	3	0		4	6
Pelargoniums	per doz. bun.	5	0		9	0
Physalis	per doz. bun.	7	0		10	0
Roses	per doz.	1	0		3	6
Smilax	per doz. trails	2	0		3	6
Statice	per doz. bun.	3	0		5	0
Tuberoses	per doz.	0	5		0	9
Viola, small blue	per doz. bun.	0	9		1	3
Violets	per doz. bun.	1	3		4	0

Fruits.

There is an excellent supply, and the demand is good; prices are moderate.

		s.	d.		s.	d.
Apples, English dessert	per ½-sieve	3	6	to	6	0
,, Cooking	per bush.	2	6		5	0
,, Nova Scotia	per barrel	10	0		17	0
Bananas	per bun.	4	0		10	6
Blackberries	per peck	2	0		3	0
Cob nuts	per doz. lb.	5	0		6	0
Cranberries	per case	10	0		13	6
Dates	per doz. boxes	7	0		8	0
Figs	per box	0	9		1	6
Grapes, English	per lb.	0	8		3	6
,, Guernsey	per lb.	0	4		1	3
,, Almeria	per barrel	10	0		15	0
,, Lisbon	per case	7	0		9	0
Lemons	per case	10	0		35	0
Melons	each	1	0		4	6
Oranges, Denia	per case	12	0		30	0
,, Jamaica	per case	10	0		12	0
Pears, English	per ½-bush.	2	6		7	0
,, French	per crate	3	0		12	0
,, Californian	per case	8	0		10	0
Pineapples	each	1	6		4	0
Quinces	per ½-bush	2	0		3	0
Walnuts, English	per ½ bush.	2	0		6	0

Vegetables.

Supplies are good, and there is a brisk demand all round.

		s.	d.		s.	d.
Artichokes, Globe	per doz.	2	0	to	3	0
,, Jerusalem	per bush.	1	6		3	0
Asparagus	per bun.	3	0		4	0
Beans, runners	per bush.	5	0		7	0
Beet	per bush.	2	6		3	6
Cabbage	per tally	7	0		10	6
Carrots	per doz. bun.	2	0		3	0
Cauliflowers	per doz.	1	6		3	0
Celery	per doz. bun.	7	0		12	0
Cucumbers	per flat	4	0		7	0
Endive	per doz.	1	6		2	6
Horseradish	per doz. bun.	10	0		18	0
Indian Corn	per doz.	0	9		1	0
Leeks	per doz.	2	0		3	0
Lettuce	per doz.	1	0		1	9
Marrows	per tally	5	0		12	0
Mint	per doz. bun.	3	0		5	0
Parsnips	per bag	4	0		6	0

CONTENTS.

PAGE
Among the Alpine Flowers 800
Answers to Correspondents 808
A Planting Note 797
Border Carnations near the Sea 798
Callicarpa purpurea 796
Culinary Peas in 1911 796
Exhibitions and Meetings 805
Garden Reconstruction 793
Hyacinth City of Haarlem 803
Lady Henniker and Encore Apples 797
Lavender Growing 802
Messrs. E. Webb and Sons' Seed Trial Grounds 801
New Books 794
New Plants 794
Notes of the Week 791
Points about Standard Fruit Trees 799
Potentillas 798
Scillas 795
Seasonable Notes on Chrysanthemums 803
Spring Bedding Suggestions 797
The Giant Colchicums 799
The Merryweather Damson 795
Veronica Veitchi 801
Who Shall Rule? 796
Work for the Week 804

ILLUSTRATIONS.

Portrait of Mr. W. G. [illegible], 791; The Merryweather Damson, 795; Apple Lady Henniker, 797; Apple Encore, 798; A Fine Exhibit of Colchicum speciosum and C. s. album 799; Veronica Veitchi, 801; Hyacinth City of Haarlem, 803.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1911. October 15 to October 21.	Sunshine.	Temperature of the Air.			
		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Oct. 15—Sunday	—	54	52	57	53
,, 16—Monday	—	53	51	55	52
,, 17—Tuesday	4 42	54	52	58	52
,, 18—Wednesday	1 42	46	46	59	43
,, 19—Thursday	0 48	53	53	63	46
,, 20—Friday	0 6	58	57	62	53
,, 21—Saturday	1 24	58	55	61	56
Means	(total) 8·42	54	52	59	50

Date. 1911. October 15 to October 21.	Rain.	Temperature of the Soil at 9 a.m.			Lowest Temperature on Grass.
		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
Oct. 15—Sunday	0·01	54	53	55	49
,, 16—Monday	—	54	53	55	50
,, 17—Tuesday	trace	54	54	55	49
,, 18—Wednesday	—	52	53	55	38
,, 19—Thursday	0·10	52	53	55	40
,, 20—Friday	0·06	54	54	55	46
,, 21—Saturday	0·45	55	54	55	49
Means	(total) 0·62	53	53	55	46

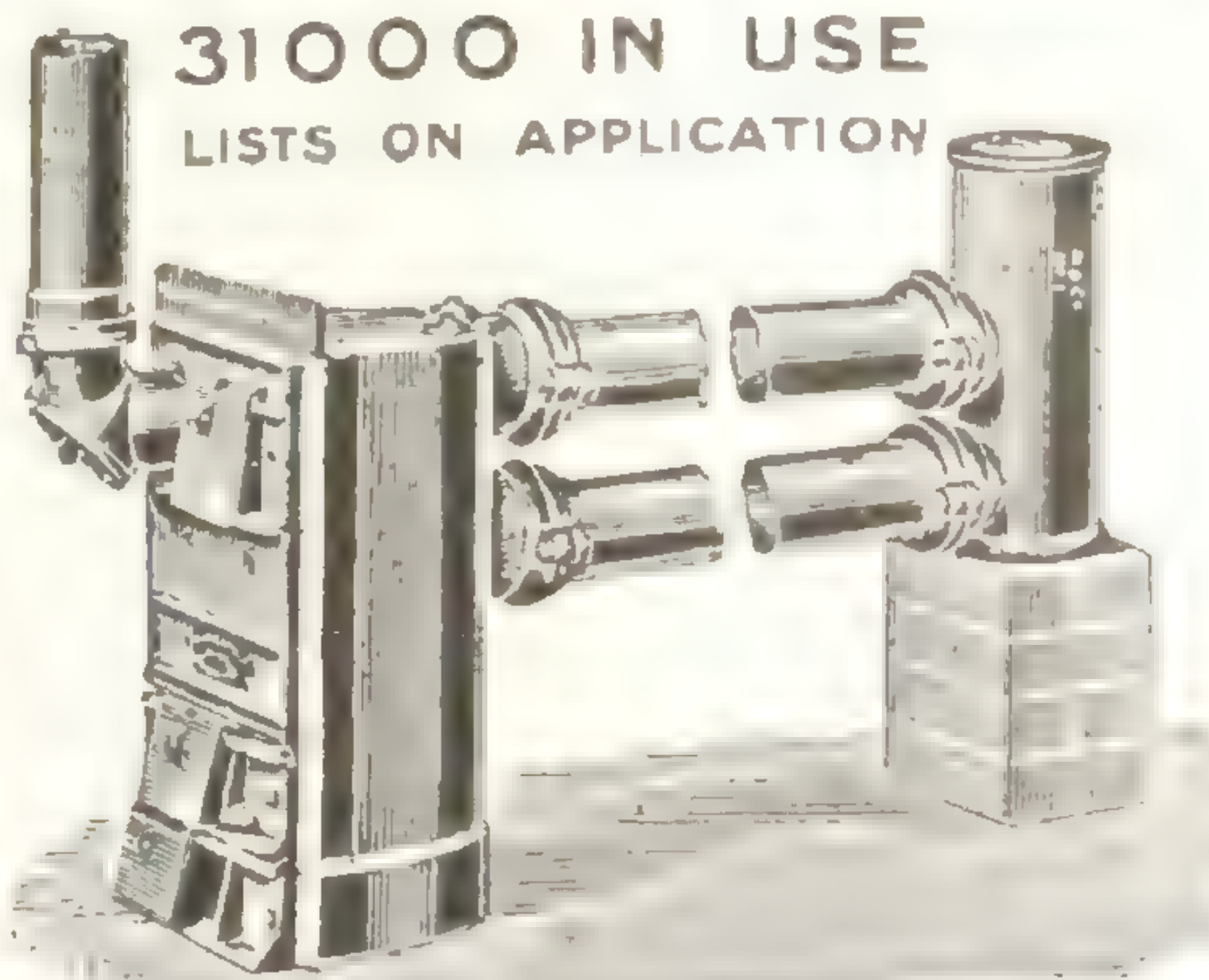
EVERY GARDENER
SHOULD SEE OUR
Genuine Scotch Manufacture. GLENSKOT TWEEDS.
PATTERNS FREE. (REG.)
TROUSERS 7/6 Per Pair.
HIP POCKET. SUIT 29/6
Unsurpassed for Value. Cut and Tailored by Experts.
Perfect Fit Guaranteed.
Patterns with our Easy Self-Measurement Form and Catalogue Sent Post Free.
WRITE TO-DAY. Thousands of Testimonials.
Money returned if not entirely satisfied.
SHAW & MONTGOMERY, The Scotch Tailors,
628 & 632, ARGYLE ST., GLASGOW, W. EST. 1876.

THE CHEAPEST IN ENGLAND.
NO. 60.
Copyright Registered.
PORTABLE BUILDINGS. Made in complete sections, best quality Red Deal (not inferior Foreign Match Boards as other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.
CASH WITH ORDER.

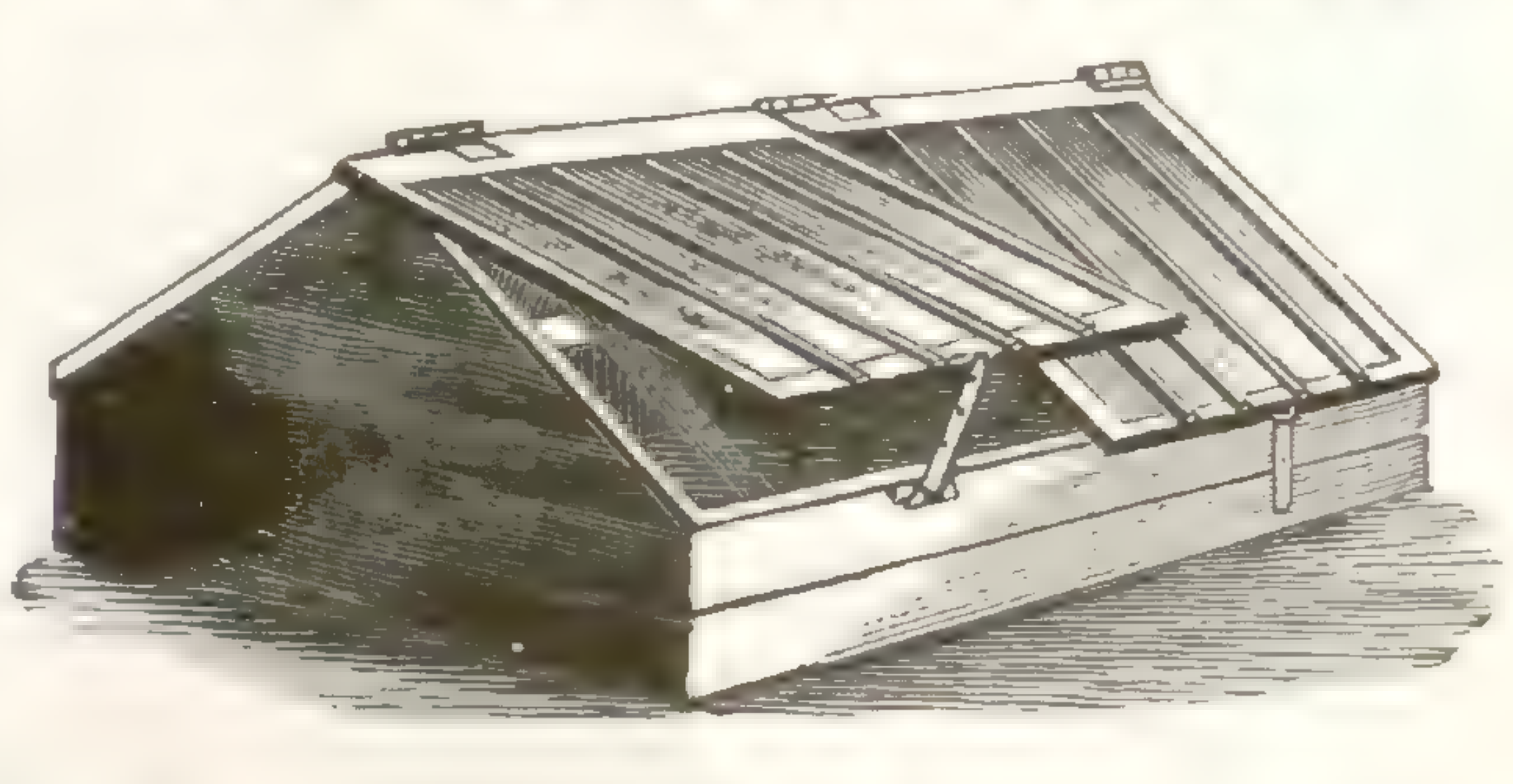
SIZES.		Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	17/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	20/0

Carriage Paid to any Station in England and Wales.
Catalogue, with Testimonials, Post Free.
J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
ESTABLISHED 70 YEARS. BEDFORD.
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

PLEASE MENTION
THE GARDENERS' MAGAZINE
when writing to Advertisers.



The Loughborough
BOILER
31000 IN USE
LISTS ON APPLICATION
The pioneer of cheap, simple and effective heating for small greenhouses. Complete Apparatus from £3.19. 6. The immense sale of this boiler, and its numerous imitations are the best testimony of its undoubted success
MESSENGER & CO. LTD.
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH · LEICESTERSHIRE
London Office, 122 VICTORIA ST · S · W



PORTABLE PLANT FRAMES
OUR WELL-KNOWN MAKE.
These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices. Glazed and Painted.		£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. ,, 4ft. ,,		2	5	0
6ft. ,, 5ft. ,,		2	15	0
12ft. ,, 4ft. ,,		4	0	0
12ft. ,, 5ft. ,,		4	15	0
12ft. ,, 6ft. ,,		5	12	6

Larger sizes at proportionate prices.
R. HALLIDAY & CO.,
ROYAL HORTICULTURAL WORKS,
MIDDLETON, MANCHESTER.

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.
The best and the cheapest.
Write for LISTS.
Quotations given for ANY Quantity, Carriage Free.
Appointed by Royal Warrant
Makers to His Majesty the late King.
Largest Manufacturers in the World.
Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 31; married when suited; excellent references. Address, Closes Hall, Gieburn, Clitheroe.

GARDENER (Head of two or more) seeks RE-ENGAGEMENT; life experience, Inside and Out; 23 years Head in last place; good references. J. KIGHTLEY, Roade, Northamptonshire.

HEAD GARDENER, where several are kept, seeks SITUATION; well up in Gardening in all its branches, and understands Stock; 9 years' excellent character and several good testimonials of previous places. F. J. ASHDOWN, Chiddingfold, Surrey.

GARDENER (Head), life thorough experience. Fruits, Flowers, Vines. Peaches; Inside and Out; thoroughly understands Roses. Herbaceous Borders, Lawns, Trees, Flowering Shrubs; excellent character; 4 years Outside Foreman; 3 years Head Working Gardener; left through death; married; age 33; three children. HUDSON, Cupid Green, Hemel Hempstead.

GARDENER (Head) seeks RE-ENGAGEMENT with Lady or Gentleman requiring thorough practical Man in all branches; last place 5 years Head with 12 to 8 men under; highest references from all employers; age 34; married, no family; abstainer. F. WESTRON, Sunnybrae, Cippenham, Slough, Bucks.

GARDENER (Head Working); life experience in all branches; highest references; understands Oil Engline; age 40; family, 3 boys. E. STEVENS, 13, Connaught Road, Newbury, Berks.

GARDENER (Head, where several are kept); thoroughly experienced in all branches, Inside and Out; Grapes, Peaches, Melons, Stove and Greenhouse Plants; 4½ and 11 years' excellent references as head; married, family out. E. STONE, 13, Coniston Road, Addiscombe, Croydon, Surrey.

GARDENER (Head Working).—Mr. R. W. Williamson, of the Croft, Didsbury, near Manchester, strongly recommends his late gardener, HENRY ARNOLD, who has been with him for over 20 years; is well experienced in gardening in all its branches, and is specially trained in rockery construction and cultivation of alpines.

GARDENER (Head Working, where one or 2 kept); 10 years in present situation; 5 years as Second; age 31; single Apply A. GIBBS, 68, Pope Road, Bromley, Kent.

WM. HOLLINS, Esq., Berry Hill Hall, Mansfield, Notts, and his Head Gardener, wish to recommend their General Foreman, A. POTTER, as Head Working Gardener, where three or more are kept, to any Lady or Gentleman requiring the services of an excellent all-round man; life experience in all branches.—Apply above address.

GARDENER (Single-handed, or where help is given); 12 years' practical experience; 4 years in last situation; good references; single; age 36; abstainer. J. CHAPMAN, Ferry Hill, Chatteris, Cambs.

GARDENER, 40; Single-handed preferred; thoroughly experienced; excellent character; active worker; Inside and Out, with early vegetables; abstainer; married. A. BISHOP, Windmill Hill, near Hailsham.

GARDENER (26), as Single-handed or Kitchen Garden and Pleasure Grounds; abstainer; Single; good references. G. SEAR, Adstock, Winslow, Bucks.

GARDENER (Single-handed, or with help). —Mr. COLLEDGE, Gardener to Earl of Darnley, highly recommends H. WILLIAMS as above; 2 years here; single. The Ridgeway, Shorne, near Gravesend, Kent.

FOREMAN, Kitchen Garden; thorough knowledge of growing Vegetables, Fruit, etc.; 11 years' experience; 2 years with Madame Patti Cederstrom; age 25; abstainer. A. MORTIMORE, c/o Mr. Flitney, Chipstead, near Sevenoaks, Kent. Bothy preferred.

FOREMAN (Inside); 11½ years' experience in Fruit and Plants, House and Table Decoration; excellent references; age 25. J. WHENHAM, Wootton Heath Cottages, New Milton, Hants.

MANAGER or FOREMAN'S Position required in general Nursery; experienced in Shop work, Floral Decorations, Tomatoes, Cucumbers, Bedding Plants, etc. Apply CHARLES A. PALMAR, Rose Villa, Eddington, Herne Bay, Kent.

GARDENER (Second, Inside or Inside and Out); 16 years' good all-round experience; age 31; excellent references. W. PACKHAM, The Gardens, Moonhill Place, Cuckfield, Sussex.

GARDENER (Head Working).—Mr. COLLEDGE, Gardener to the Earl of Darnley, highly recommends F. BISHOP, as above; 4½ years as Foreman here. Cobham Hall Gardens, Kent.

JOURNEYMAN, age 21, with six years' experience Inside and Out, seeks Situation Inside under Foreman; excellent testimonials; can be well recommended; height 5ft. 10in. Apply P. CLIFTON, The Mill House, Rickmansworth, Herts.

JOURNEYMAN for Inside or Inside and Out; age 21; four years' experience; good references. Apply Mr. JOLLAND, Eshton Hall Gardens, Gargrave, via Leeds.

JOURNEYMAN (Third) seeks SITUATION Inside or Inside and Out; six years' experience; age 20; abstainer; good references; bothy preferred. W. COWARD, 24, Southbroom, Devizes, Wilts.

D. SKINNER, Head Gardener Lord Barrymore's Estate, Cordangan Gardens, Tipperary, Ireland, strongly recommends M. Coffey to any gardener requiring good man for Pleasure Grounds and Kitchen Garden; age 24; married. Please address, COFFEY, 35, Bridgewater Street, Deansgate, Manchester.

VICAR recommends steady, capable MAN; Glass, Borders, Roses, Vegetables; married, eldest boy 12; good references. VICAR, Harbury, Leamington.

YOUNG MAN, age 18, seeks SITUATION, Inside, or Inside and Out; 4 years' experience in general garden work. A. J. BATES, Rose Cottage, Souldern, Banbury, Oxon.

MR. HARRIS, Serlby Gardens, Bawtry, wishes to recommend E. SPENCER, age 18, for Inside or Inside and Out; 2 years here; Bothy preferred.

IMPROVER (Inside or Inside and Out); age 19; five years' experience; three years present situation; good character; Bothy preferred. A. JONES, Great Barr, Birmingham.

MRS. WATSON-KENNEDY recommends IMPROVER (Inside or Inside and Out); age 18; four years' experience; can be well recommended by Head Gardener. B. GIBBS, Wiveton Hall Gardens, Cley, Norfolk.

YOUNG MAN (28) seeks SITUATION as GARDENER; steady and willing to make himself useful; good references. C. COOK, 29, Elsenham Street, Southfields, Wandsworth.

YOUNG MAN seeks SITUATION to look after Electric Light and Garden; well up in all branches; nine years last situation. EDWARD VILLA, Street Cobham, Surrey.

YOUNG MAN, age 20, seeks SITUATION Outside or Outside and In; five years' experience in general garden work; good reference; strong, willing, and abstainer; bothy preferred. Apply COX, Old Forge, Wolverley, near Kidderminster.

YOUNG MAN seeks SITUATION as Under Gardener; age 20; five years' reference. Apply MRS. EMERSON, Pershore House, Pershore.

YOUNG MAN (23) seeks SITUATION on lawns and garden, previous experience. R. F. REDDING, Tysoe, Kineton, Warwick.

HANDY MAN on Gentleman's Estate; thorough knowledge of Oil or Steam Engine, Electric Light Plant, Heating Apparatus; married. W. CLIFFORD, Severn Stoke, Worcester.

YOUTH, aged 17, seeks SITUATION in Garden; strong, willing; 3½ years in last place; highly recommended. E. ROBERTS, Gate House, Nuttall, Nottingham.

SITUATION COUPON

To the Advertisement Manager of "The Gardeners' Magazine,"
148 & 149, Aldersgate Street, London, E.C.

For NOVEMBER 4, 1911.

Please Repeat my Advertisement.

Name..

Address..

....

Date........................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

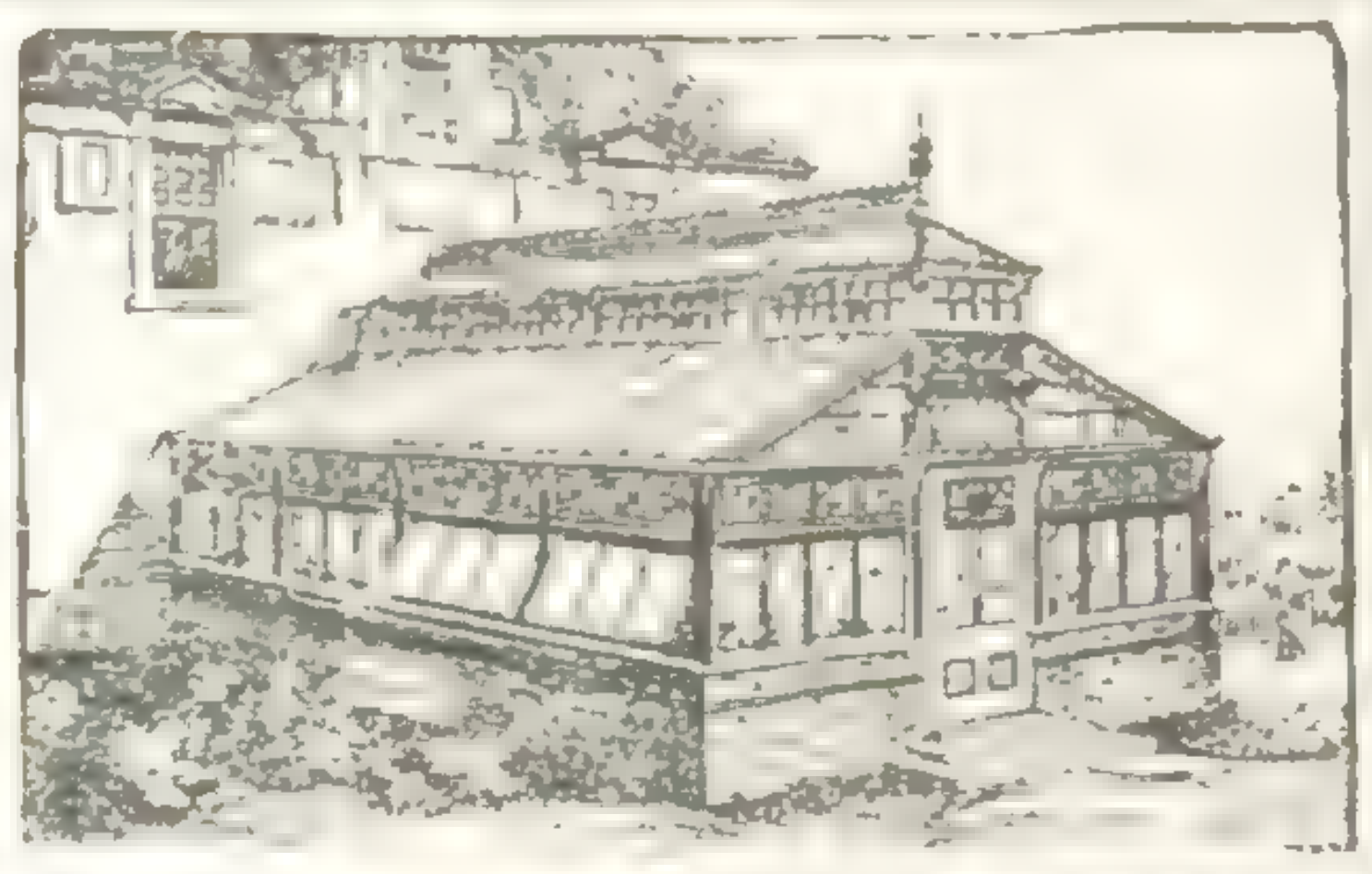
J. WEEKS & CO. (CHELSEA).

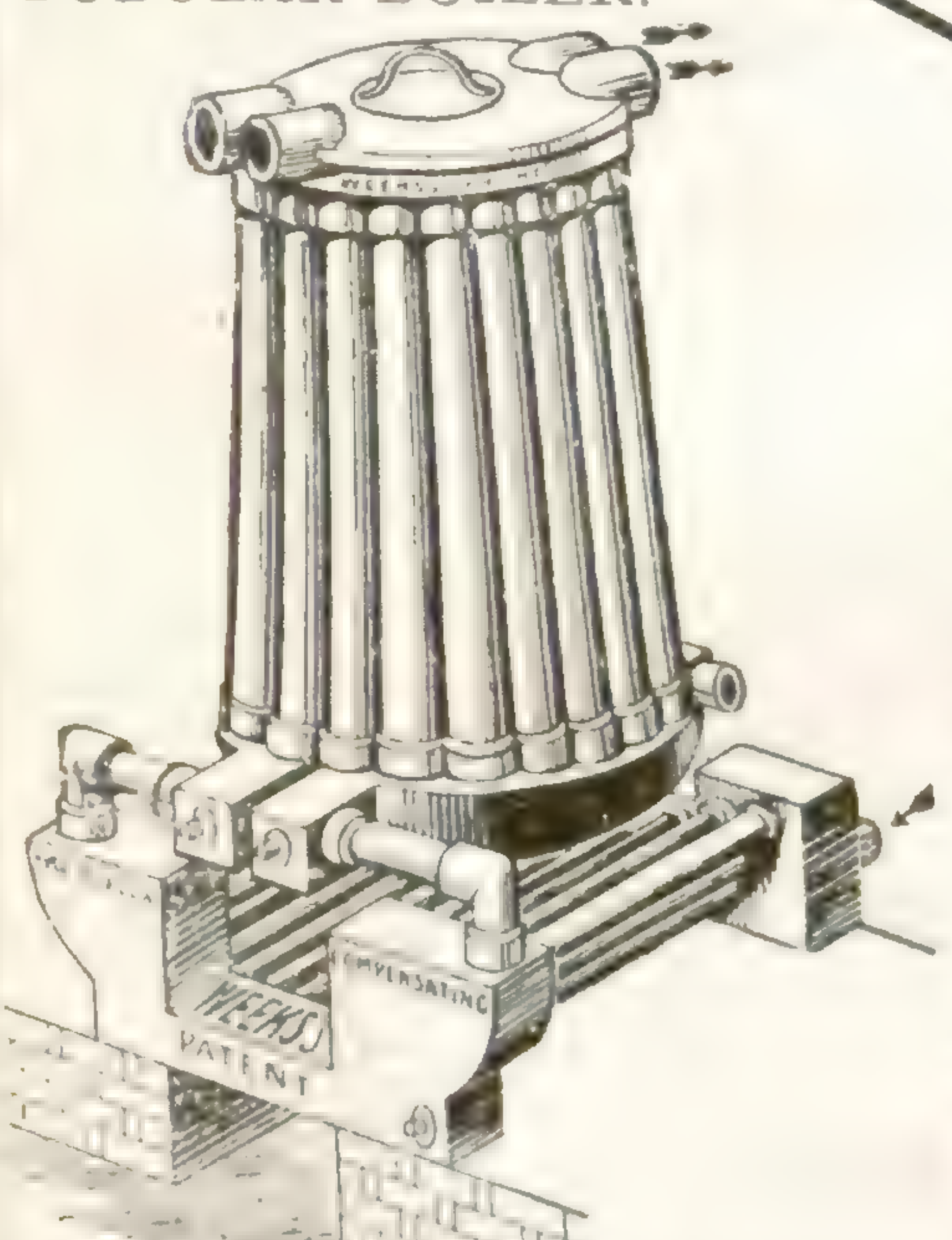
Established 1808.

Plans and Estimates prepared for
CONSERVATORIES, RANGES, GREENHOUSES, FRUIT, ORCHID, and CARNATION HOUSES.

Head Office: 72, VICTORIA STREET, S.W.

PATENT DUPLEX UPRIGHT TUBULAR BOILER.





THOUSANDS SUPPLIED DURING THE PAST 50 YEARS.

LET US OVERHAUL YOUR HEATING BEFORE THE COLD WEATHER ARRIVES.

ESTIMATES GIVEN FOR COMPLETE HEATING APPARATUS.

FOURTH EDITION. JUST PUBLISHED.

Boards, **1/-** net (by post 1/2); cloth, **1/6** net (by post, 1/9).
Or from all Booksellers.

SWEET PEAS
AND THEIR
CULTIVATION

By CHARLES H. CURTIS,
Hon. Secretary National Sweet Pea Society.

☛ *Includes List of New Varieties, and the Latest "Too-much-alike" Classifications as approved by the National Sweet Pea Society.*

Revised and brought right up-to-date, it offers the best possible assistance in the Selection of Varieties and their Cultivation for Home and Exhibition.

ORDER FORM.

To the Publishers, "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, LONDON.

Please send me "SWEET PEAS AND THEIR CULTIVATION," for which I enclose 1/2 (cloth, 1/9).

Name ....

Address ....

....

MERRYWEATHERS'

614 PUMP
IS THE
Gardener's Friend.

Easy to Work. Simplicity Itself.

Write or Call—
63, Long Acre, LONDON, W.C.

THOMSON'S Celebrated MANURES

Wm. THOMSON & SONS LIMITED 1868

Still the best: In greater demand every year.

SAFE, SURE & LASTING.

The result of many years' **practical** experience.

VINE, PLANT, AND VEGETABLE MANURE.
1 cwt., **20/-**; ½ cwt., **10/-**; ¼ cwt., **6/-**; 14 lbs., **3/6**; 7 lbs., **2/6**
Tins, **2/6, 1/-, and 6d.** Carriage paid on 1 cwt. anywhere.

SPECIAL TOP-DRESSING MANURE.
½ cwt., **20/-**; ¼ cwt., **11/-**; 14 lbs., **6/-**; 7 lbs., **3/6**; Tins, **1/-**.
Carriage paid on ½ cwt. anywhere.

Also Thomson's Book on the Vine. Thomson's Styptic.

SOLD BY NURSERYMEN & SEEDSMEN EVERYWHERE.

Write for Pamphlets, Price Lists, etc., to

SOLE MAKERS: **WM. THOMSON & SONS, Ltd., Clovenfords, Scotland.**

Kinnell's Boilers

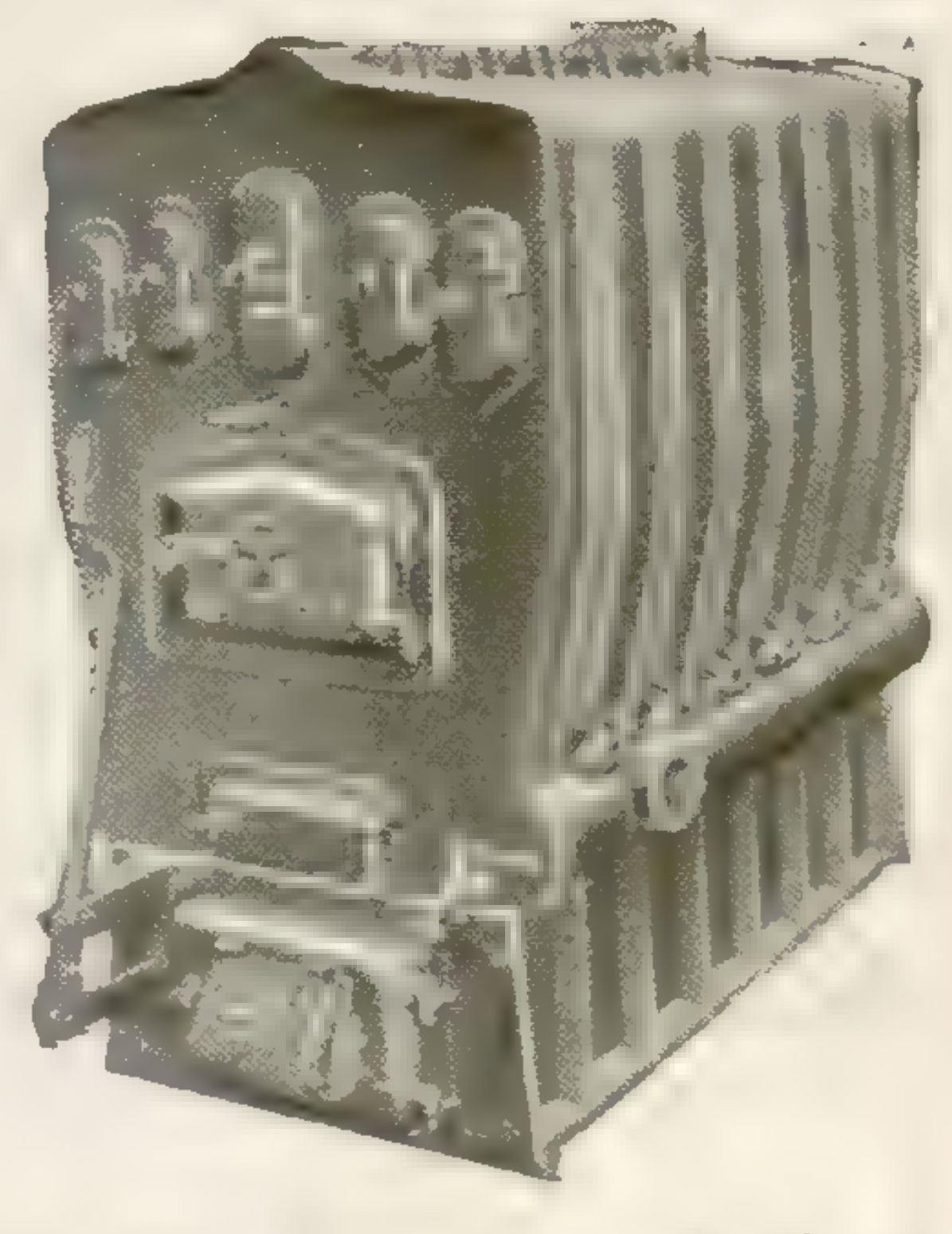
THREE LEADING TYPES:—

The **"ANGLIAN," Sectional,** heats 800 to 8,000 ft. 4in. pipe.
The **"ROCHFORD," Tubular,** heats 600 to 8,000 ft. 4in. pipe.
The **"HORSE-SHOE"** for the small Greenhouse.

Saddle Boilers, Trentham Boilers, and all classes of Pipes, Fittings, etc., ready for immediate despatch.

Write for List No. 77, post free.

CHAS. P. KINNELL & Co., Ltd., 65, & 65a, Southwark St., London, S.E.



When answering Advertisements please mention "Gardeners' Magazine."

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls

NATIONAL CHRYSANTHEMUM SHOW NUMBER.

THE GARDENERS' MAGAZINE.

No. 3,027. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, NOV. 4, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S Hyacinths, Tulips, Daffodils, etc., for pots and bedding. Finest quality. Moderate prices. Descriptive Catalogue free.
BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, Horticultural Builder, Chelsea, S.W., advises Gardeners to watch their Hot Water Heating Apparatus this month. If boilers show signs of wear, it would be wise to have them examined at once. Attention can be obtained by means of a postcard, telephone call (201 Western), letter, or wire, to Gray, Chelsea, London.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

CHRYSANTHEMUM TUBES for exhibiting; highly commended by N.C.S. Apply SPRINGTHORPE, F.R.H.S., St. Albans Road, Kingston-on-Thames.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue Free. J.E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

POTATOES, choice floury-cooking, 5s. per cwt.; English onions, 5s. per bushel; Giant Red Shallots, 20s. per cwt.; sample six pounds, post free, 2s.—BRINKWORTH and SONS, Southampton.

FORCING BULBS.—15 doz. in 30 varieties, for 10s. 6d., post free: 4 doz. Narcissus, 3 doz. Single Tulips, 2 doz. Double Tulips, 2 doz. Darwin Tulips, 1 doz. Hyacinths, 1 doz. Crocus, 2 doz. Spanish Iris.—VAN DER SLUYS, F.R.H.S., Ramee, Guernsey.

IRON and WIRE FENCING for Gardens, Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free.—BOULTON and PAUL, Ltd., Manufacturers, Norwich.

BECKETT'S NEW BOOK.—The most practical and Up-to-date Book on Vegetables. Price 5s.; post free, 5s. 6d. EDWIN BECKETT, Aldenham House Gardens, Elstree, Herts.

WELLS' Catalogue of
CHRYSANTHEMUMS,
PERPETUAL CARNATIONS,
HERBACEOUS PLANTS,
ALPINE AND ROCK PLANTS,
now ready. Post free on application. Wells' Book, "The Culture of the Chrysanthemum," post free, 1s. 6d. W. WELLS and CO., Merstham, Surrey.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

WEBBS' NAMED HYACINTHS
FOR POTS AND GLASSES.
12 Hyacinths, 12 good varieties, 5s.
24 Hyacinths, 12 good varieties, 10s. 6d.

WEBBS' EARLY SINGLE TULIPS FOR BEDDING AND POT CULTURE.
9d. per doz.; 4s. 6d. per 100; 40s. per 1,000.

WEBBS' MIXED DAFFODILS FOR MASSING IN THE MIXED BORDER, etc., 2s. 6d. per 100; 21s. per 1,000.
WEBB and SONS, The King's Seedsmen,
WORDSLEY, STOURBRIDGE.

BUNYARD'S CATALOGUES
Free on Application.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

KENT STRAWBERRY PLANTS
NEW CATALOGUE READY.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

LAXTON STRAWBERRIES for immediate planting. Fine plants of all the leading varieties in little pots, 15s. 100. Open ground runners, 5s. 100. Catalogue with full particulars gratis
LAXTON BROTHERS, Bedford.

CLAY'S MANURES, CRUSHED BONES
(See page vi.)
CLAY'S FERTILISER IS
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

PERPETUAL FRUITING STRAWBERRY.—St. Antoine de Padoue, strong rooted runners of this splendid variety, 4s. per 100, 35s. per 1,000; also Waterloo, finest late, 3s. 6d. per 100, 30s. per 1,000. Carriage paid on lots of 500.—S. GODDEN and SONS, Market Gardeners, Hythe, Kent.

HUTS FOR THE GARDEN. — Fruit Rooms, Potting Sheds, Workshops, Cycle Houses, Boot Rooms, Servants' Mess Rooms, Children's Playrooms, etc. Send for Illustrated Catalogue, free.—BOULTON and PAUL, Ltd., Norwich.

GREENHOUSES and CONSERVATORIES. Distinctive Designs and Finished Workmanship. Write now for ILLUSTRATED CATALOGUE. CARTER and HOWARD, Horticultural Builders, Kingston-on-Thames. Phone: 1308 P.O. Kingston.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses. Portable buildings, etc. Catalogue gratis.

SUTTON'S BULBS.
The best of the year.
R. Lee Hogg, Esq., Spring Grove, writes: "Kindly repeat our order of last autumn for Bulbs. We are glad to say that they were most satisfactory."

SUTTON'S INIMITABLE HYACINTHS FOR BEDDING.
Special varieties in distinct shades of colour, and to flower simultaneously. Scarlet, Pink, Light Rose, Blue, Light Blue, Dark Blue, Pure White, Blush White, Mauve, and Primrose Yellow.
Each colour, per doz., 3s.; per 100, 22s.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

NOW IS THE TIME TO PLANT
Kelway's lovely Paeonies, Delphiniums, and their celebrated Artistic Hardy Borders: packed ready for planting.
KELWAY'S CHOICE named Paeonies, from 27s. per doz.
KELWAY'S CHOICE named Delphiniums, from 24s. doz.
For information about the Colour Borders send 6d. for "Gardens of Delight."
Londonderry.
October 11th, 1911.
"I take this opportunity of saying how very pleased I am with the plants supplied by you for my herbaceous border. After being established about two years the plants have attained the most wonderful and gratifying growth. During the last few weeks the borders have been an object of admiration to all those who have seen them."
KELWAY AND SON,
The Royal Horticulturists,
LANGPORT, SOMERSET.
230 Grand Prizes, Gold Medals, etc.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
From ———, Esq.
Northwood,
Middlesex.
28 September, 1911.
"I find that I have never forwarded 2s. for your lovely Catalogue you sent me some weeks since. It would be cheap at five times the price, and I sincerely regret the oversight."

ALPINES.—100 in 50 good varieties, carriage paid, £2. Half and quarter quantities at same rate.
WHITELEGG and PAGE, Chislehurst.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-Work, showing screens, wall panels, window surrounds, arches, arbours, etc., post free.—BOULTON and PAUL, Ltd., Norwich.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.
XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.
XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, XL ALL WINTER WASH for Fruit Trees, RICHARDS' BANDING GREASE, etc. Don't forget to ask your N. S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E

PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY
CATALOGUE FROM J. R. PEARSON & SONS
LOWDHAM. NOTTS

CARNATIONS.
AURICULAS. PINKS.

The NEW ILLUSTRATED CATALOGUE of above is now ready, and has been posted to all customers. The newest and best varieties are sold at the most reasonable prices.

Best **CARNATION** and **PICOTEE SEED** ready in October. 1/6 and 2/6 per packet.

AURICULA (Show and Alpine), PINK, and POLYANTHUS SEED now ready. 1/-, 1/6, to 2/6 per packet.

Send for Catalogue to

J. DOUGLAS,
Edenside, GREAT BOOKHAM.

ROSES. ROSES. ROSES.

Most Complete Collection of all the Best Up-to-Date Varieties.

FRUIT TREES.
EXCEEDINGLY WELL-GROWN DWARF TRAINED
CORDONS, PYRAMIDS, STANDARDS, ETC.

HERBACEOUS PLANTS
In all the Leading Varieties.

DELPHINIUMS !!!
STRIKING NOVELTIES. — *CATALOGUES FREE.*

ALFRED A. WALTERS & SON, Nurserymen and Rosegrowers.
BATH.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices. Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS

Please Write for List.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

LOGANBERRY.

Delicious Fruit, requires the same treatment as the Raspberry. Strong fruiting Canes, 12s. per dozen; extra strong fruiting Canes, 18s. per dozen. PACKED FREE AND DELIVERED CARRIAGE PAID.

Illustrated Catalogue post free on application.

KING'S ACRE NURSERIES, Ltd., HEREFORD.

CARNATION PLANTING SEASON.

NOW IS THE TIME TO PLANT CARNATIONS,
Either in Outdoor Beds or in Pots for Wintering.

We offer good, strong, well-rooted Layers in 12 Choice named varieties, either

SELFS, FANCIES, and YELLOW-GROUND PICOTEES,

Or 4 of each sort for **5**/- post free. 12 Newer varieties, **7/6** Splendid strong **Clumps of Double Violets,** in all best varieties, **4**/- per doz. Comte de Brazza, **5**/- per doz.

List of Named Sorts free on application.

BLACKMORE & LANGDON,
Twerton Hill Nursery, BATH.

MESSRS. PULHAM & SON have secured a fine lot of Old Stone Paving, which is eminently suitable for the Paving of Pergolas, Garden Paths, etc.

They will be happy to quote for any quantity, delivered at any railway station.

PULHAM & SON,

By Appointment. By Appointment.

71, Newman Street, London, W.
And BROXBOURNE.

TREE CARNATIONS

The Newest and Best Varieties.

Strong Plants in small pots ready Middle of November.
BOOK NOW. ORDERS SENT OUT IN ROTATION.

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

SELECTED SEED POTATOES.

All varieties, grown on finest soil in Scotland and Lincolnshire.

Any weight supplied at low prices.

Prizes given for best results.

Before ordering elsewhere write for Catalogue.

A. J. SOLE, Seed Potato Grower,
PETERBOROUGH.

WALLFLOWERS.—Plant now, Sutton's Giant Blood Red; also Sutton's Superb Mixed; very choice; large plants. 50, 10d.; 100, 1s. 6d.; free. ROGERS, Tennyson Rd., Hutton, Essex.

LAXTON'S
FRUIT TREES
IN ALL SHAPES
CATALOGUES GRATIS
LAXTON BROS
BEDFORD

BENTLEY'S
NICOTINE COMPOUND

This Vaporiser contains a higher percentage of Pure Nicotine than any other.

BENTLEY'S
INSECTICIDE.

An ideal non-poisonous Plant Cleanser for general use under glass.

BENTLEY'S
CONCENTRATED ALKALI.

A perfect Winter Wash. Destroys mosses, lichens, fungi and their spores.

BENTLEY'S
CARNATION MANURE.

Universally popular. All Carnation Specialists admit its excellence.

BENTLEY'S
DAISY KILLER (LAWN SAND).

A most effective Weed Destroyer. Completely transforms lawns.

General Catalogue sent on application to the manufacturers:

JOSEPH BENTLEY LIMITED,
Chemical Works,
BARROW-ON-HUMBER, HULL.

AMERICAN TREE CARNATIONS, fine bushy plants, for winter flowering, in 5-inch pots, best varieties, 10s. 6d. per dozen. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

SEED BOXES.—12 x 9 x 2in. timber, 8s. 9d. gross, made, 10s. 3d.; 15 x 9 x 2in., 10s. 3d., made 11s. 9d.; also flower sticks, trellis, greenhouses, garden lights, or timber of all description. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

BUSINESS CARDS.

BULBS.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard varieties of Narcissi Tulips, Hyacinths, etc., Home-Grown.

CARNATIONS.

ALLWOOD BROS., Haywards Heath, Sussex.
Perpetual Flowering Carnation Specialists. Raisers and Growers.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 1st Prizes. 3 2nds, at N.R.S. Shows, 1910. Ctlg. Free.

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
1911 Awards: 81 Prizes. Illustrated Catalogue free.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

Sales by Auction.

WEDNESDAY and FRIDAY NEXT.

WEDNESDAY NEXT, Nov. 8th, at One o'clock.—1,935 cases Japanese Liliums in variety, received direct, together with many thousands of Spring-flowering Bulbs in large variety.

At Five o'clock.—Ornamental and Decorative Palms and Plants, Azaleas, Rhododendrons, Standard Bay, etc., from Belgium.

FRIDAY NEXT, Nov. 10th, at a Quarter to One o'clock.—A direct importation of 7,850 Dendrobium Phalænopsis Schrœderiana in fine condition, also a consignment of 320 Cattleya Mossiæ, 250 lots of choice established Orchids. Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view mornings of sale and catalogues had.

100 NURSERIES, MARKET GARDENS, FLORIST AND SEED BUSINESSES TO BE DISPOSED OF.

MESSRS. PROTHEROE and MORRIS'S HORTICULTURAL REGISTER contains full particulars of the above, and can be obtained gratis at 67 and 68, Cheapside, E.C.

DUTCH BULBS

10,000 Lots Sold Weekly.

SALES EVERY DAY
(SATURDAYS EXCEPTED),
At 10.30 o'clock, at
PROTHEROE and MORRIS'
Central Sale Rooms,
67 & 68, CHEAPSIDE, LONDON, E.C
Catalogues Free.
COMMISSIONS EXECUTED.

DUTCH BULBS, PERENNIALS, ROSE TREES, SHRUBS.

MR. J. C. STEVENS begs to announce that his **Sales by Auction** are held every **MONDAY, WEDNESDAY** and **THURSDAY** at **12.30.**

Catalogues post free.

Lots purchased, packed, and forwarded to all parts.

STEVENS' AUCTION ROOMS
(Established 150 Years),
38, King Street, Covent Garden, London, W.C.

ORCHIDS

EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone :—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

ROCK & BORDER PLANTS
100,000 IN POTS.
The Finest Lot in all Europe.
PERRY'S Plant Farm,
ENFIELD. (*Cats. Free.*)

Orchids! Orchids!! Orchids!!!

The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application.—**J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana Vanda Cœrulea Lushai Hill variety, dark blue types, Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.

ORCHIDS.

If you have a Greenhouse sufficiently heated to keep out the frost, write for our

Amateur's Guide,

giving treatment and all particulars. Illustrated.

MANSELL & HATCHER, LTD.,
RAWDON, via LEEDS.

CHEALS'

FOR FIRST-CLASS
ORNAMENTAL TREES, ROSES, FRUIT TREES,
AND
HARDY FLOWERS, etc.

NURSERIES 113 ACRES.
CATALOGUES FREE.

J. CHEAL & SONS,
The Nurseries, CRAWLEY.

SPECIAL LOW CASH OFFER.

HORNE'S FRUIT TREES.

STANDARD APPLES.—The following popular kinds are included: Cox's Orange Pippin, Worcester Pearmains, James Grieve, Ecklinville, Allington Pippins, Blenheim Orange, Devonshire Quarrenden, Lord Derby, Newton Wonder, and many others, 2s. each; 10s. half dozen; 20s. dozen.

Also a very fine lot of PYRAMID APPLES (2 and 3 years), on English Paradise, including Worcester Pearmains, Cox's Orange Pippins, James Grieve, Allington Pippins, Bramley Seedling, Warner's King, Houblon, Charles Ross, Peasgood Nonsuch, Blenheim Orange, and many others, 1s. each; 5s. half-dozen; 9s. 9d. dozen.

HALF-STANDARD APPLES on Crab Stock (2 and 3 years), Worcester Pearmains, Cox's Orange Pippins, Newton Wonder, Allington Pippins, Lord Derby, Blenheim Orange, James Grieve, 1s. each; 5s. half dozen; 9s. 9d. dozen.

Lee's Prolific BLACK CURRANT, 2 years, strong stuff, 3s. dozen; 12s. 6d. 100. Raby Castle and Dutch RED CURRANTS, 2 years, 2s. dozen; 12s. 6d. 100.

STRAWBERRY PLANTS.—Following kinds: Givon's Late Prolific, 1s. dozen; 4s. 100.

100,000 Drumhead CABBAGE PLANTS, 3s. 1,000.

LIST FREE.

W. HORNE & SONS,
Fruit Tree Growers,
CLIFFE, near ROCHESTER, KENT.

CABBAGE PLANTS (Prize Stock).
McEwan's Earlies and Early Yorks.
4s. per 1,000.
WOODS, Fruit Bazaar, Glasgow.

W. SEABROOK & SONS

Offer a very fine stock of

FRUIT TREES and ROSES.

Full Illustrated Catalogue sent post free on application.

CHELMSFORD

SWEET PEAS.

The Exhibitor's House for true stocks of English-grown Seeds.

Awarded 90 Gold Medals.

Novelties for 1912:

AFTERGLOW, PRINCE GEORGE, DOROTHY, R. F. FELTON, CORONATION, FLORRIE.

1/- per packet.

For other Novelties and all the latest varieties in cultivation, see Catalogue, post free.

ROBERT BOLTON, F.R.H.S.,
The Sweet Pea Specialist,
WARTON, CARNFORTH.

BEESTON

Gold Medal

ROSES

All Fine Healthy Plants, Hardy with good Fibrous Roots.

The following 12 Hardy and Free-blooming Hybrid Tea Roses, sent **Carriage Paid** for **10s.** Cash with order.

Augustine Guinoisseau
George Laing Paul
Gustave Regis
Kaiserin Augusta Victoria
La Tosca
Madame Abel Chatenay
Marquis Litta
Pharisaer
Papa Lambert
Souvenir de President Carnot
Viscountess Folkestone
LYON Rose

Collection of 24 BEST GARDEN ROSES for continuous blooming; grand bushes. Sent **carriage paid for 12s. Cash with order.**

Abel Carriere
Augustine Guinoisseau
Ben Cant
Bouquet d'Or
Comte D. Raimbaud
Charles Lefebvre
Clio
Duke of Edinburgh
Dupuy Jamain
Fisher Holmes
Frau Karl Druschki
General Jacqueminot
Grand Duc A. de Luxembourg
Hugh Dickson
His Majesty
Jean Cheripin
La France
Leonie Lamesch
Lady Moyra Beauclerc
Marie d'Orleans
Mrs. John Laing
Mrs. Sharman Crawford
Soleil d'Or
LYON Rose

My **ILLUSTRATED CATALOGUE** of **Roses, Fruit Trees, Ornamental Trees, Shrubs, Herbaceous Plants, etc., etc.,** sent post paid on receipt of postcard.

WILLIAM LOWE,
Rose Nurseries,
BEESTON, NOTTS.

GLASS. | GLASS. | GLASS.

NICHOLLS & CLARKE, LTD.,
Shoreditch, LONDON.

PAINT. Our List of PAINTS, COLOURS, VARNISHES, and BRUSHES on Application.

When sending please cut out this advt.

CARNATION 'LADY ALINGTON'

(AWARD OF MERIT AND FIRST CLASS CERTIFICATE.)

The most perfect Carnation ever raised of salmon old rose colour. As large as Enchantress, more free flowering, and even a better grower than this variety. Good flowering plants, in 5in. pots, 6 for 18s. Young plants for later delivery, 18s. dozen. Everyone should see it growing with

STUART LOW & CO., Carnation Specialists, BUSH HILL PARK, MDDX.

BUNYARD'S FRUIT TREES . . . .

ORDER AT ONCE FOR PRESENT PLANTING.

WRITE FOR CATALOGUE.

Geo. Bunyard & Co., LTD.,
Royal Nurseries,
MAIDSTONE.

Telegrams:
FRANK CANT,
COLCHESTER.

Telephone
No. 182.

CANTS' CHAMPION ROSES

THE FINEST STOCK IN THE KINGDOM.

Direct from

FRANK CANT & CO.,

Dept. B., BRAISWICK ROSE GARDENS, COLCHESTER.

Our Illustrated Catalogue post free on application.

Bulbs: NARCISSUS, DAFFODILS, TULIPS, &c.

All Good Flowering Bulbs; Worth Double.

NARCISSUS

100	Emperor	3/0
100	Empress	3/0
100	Henry Irving ...	4/0
100	Golden Spur ...	4/0
100	Horsfieldii	3/0
100	Victoria	3/0
100	Obvallaris	3/0
100	Grandis	3/0
100	Sir Watkin	3/0
100	Stella	1/6
100	Princeps	2/6
100	Ornatus	2/6
100	Double Daffs ...	4/0
100	Dbl. White Narcis.	2/6
100	Pheasant Eyes	2/6
100	Frank Miles ...	1/6

TULIPS

100	La Reine	3/0
100	Cottage Maid...	3/0
100	Chrysolora	3/0
100	D. de Parma ...	3/0
100	Keizerkroon ...	4/0
100	Golden Crown...	3/0
100	Picotee	4/0
100	Bouton d'Or ...	3/0
100	Prince de Ligny	4/0
100	Duc Van Thol, sgl	4/0
100	" " dbl	3/0
100	King of Yellows	4/0
100	Mixed Tulips ...	1/6
100	Mixed Darwins	4/0
100	Darwins to name	10/6
100	Parrot Tulips to colour	2/6

Special offer in Mixed Narcis. and Daffodils, also Tulips for planting in grass, shrubberies, hedge rows, etc.

HYACINTHS

		per 100
12—1/9	to name in colours......	or 10/0
12—1/3	mxd in cols.	or 9/0
12—1/9	Roman White	or 12/0
100	Iris, Spanish, to name	1/6
12	Iris, German do.	6/0
12	Iris, English do.	1/6
100	Anemones, Scarlet	4/5
100	" The Bride	1/9
100	" St. Brigid	5/0
100	Scilla Siberica...	3/0
100	Freesia	3/0
100	Summer Snowflakes	5/0
12	Lilium Candidum	2/6
12	" Crown Imperial ...	2/0
12	" Auratums	7/0
12	" Croceums	4/0
12	" Longiflorums	4/0
100	Snowdrops	1/6
100	Ixias, to cols.	2/6
100	Crocus, in cols.	1/3
100	Lily of Valley ...	2/6
100	Jonquils	4/6
100	Ranunculus ...	3/0
100	Montbretia	3/0
100	Aconites	3/0
100	Chionodoxa ...	2/6
100	Polyanthus Narcis	3/0
100	Alliums	3/0
12	Begonias, choice	1/6
12	Violets, in sorts	1/6
12	Xmas Roses ...	4/0

Narcissus and Daffodils,	5/-, 7/6, 10/0 per 1,000
Tulips	10/-, 15/-, 20/- per 1,000

Many other varieties to offer; also all kinds of Herbaceous plants. Any of the above, half quantities at half price.

FRUIT TREES.—Apples, Pears, and Plums, all fruiting trees, **9/-** per dozen. Gooseberries, Currants (black, red, white), **3/-** per dozen. Loganberries and Raspberry-Strawberry, **9d.** each Raspberry canes, **3/-**, **4/-**, per 100. Strawberry Plants, **1/6** per 100.

All kinds of Flower and Garden Seeds, also POTATOES. Send for List,

J. W. CROSS, Old Grammar School, **WISBECH.**

MERRYWEATHER'S ROSES.

All Strong and Home-grown Plants.

COLLECTION "H" of NEW ROSES.

WONDERFUL VALUE.

EVERY ONE A GENUINE NOVELTY.

This superb collection of the **BEST 18 NEW ROSES** in dwarf plants. The price of this wonderful collection is **27/6,** carriage and packing free for cash with order (with Acme Labels, **29/6**). The varieties are:

Arthur R. Goodwin, P.
Duchess of Wellington, H.T.
Entente Cordiale (Ducher), H.T.
George C. Ward, H.T.
Jessie, Dwarf Poly.
Lady Alice Stanley, H.T.
Lyon, H.T.
Margaret, H.T.
Margaret Molyneux, H.T.
Miss Cynthia Ford, H.T.
Mrs. Alfred Tate, H.T.
Mrs. A. Munt, H.T.
Mrs. E. J. Holland, H.T.
Mrs. W. Christie-Miller, H.T.
Marquis de Sinety, H.T.
Molly Sharman Crawford, H.T.
Souv. of Stella Grav, T,
White Killarney, H.T.

FRUIT TREES

OF ALL KINDS TO SELECT FROM.

A GRAND STOCK OF

SHRUBS & ORNAMENTAL TREES.

HERBACEOUS PLANTS in great variety.

Send for Catalogue No. 29, full of interesting information and cheap prices, post free on application to

MESSRS.

H. MERRYWEATHER & SONS, LTD.,

(Dept. 1A), GARDEN SPECIALISTS,

SOUTHWELL, NOTTS.

BY APPOINTMENT.

ROSES IN POTS

WM. PAUL & SON

WALTHAM CROSS, LTD.

Respectfully invite attention to their magnificent stock of the above, which they believe to be unrivalled in quality and extent.

Dwarfs or bushes, extra strong, in 8 in. pots, for forcing and greenhouse culture	30/- to 60/- per doz. £12 and upwards per 100.
Climbers and Ramblers in 8 in. pots, for forcing and out-door planting on pergolas, arches, etc., with shoots ...	6 to 12 ft. long, 30/- to 60/- per doz. 12 to 16 ft. long, 72/- to 90/- per doz. Price per 100 on application.
Dwarfs and Climbers, smaller plants, in 5 in. pots	10/6 to 18/- per doz. 75/- to £6 per 100.

Priced List Post Free on application.

Inspection of Stock Invited.

The Nurseries are twelve miles from London, four minutes' walk from Waltham Cross Station, G.E.R.

Sole Postal Address—

PAULS' ROYAL NURSERIES

AND SEED WAREHOUSE,

WALTHAM CROSS, HERTS.

VOL. LIV.—No. 3,027. SATURDAY, NOVEMBER 4, 1911.

THE GARDENERS' MAGAZINE.

The Season of the Golden Flower.

As will be seen by the reports that appear in another part of this issue, the exhibition season of the chrysanthemum has commenced, and it is satisfactory to have evidence at the shows that have been held that, notwithstanding the trying character of the weather experienced during the summer months, the blooms are likely, as a whole, to attain to a high state of development. Those who have taken a close interest in the exhibition aspects of the chrysanthemum and its cultivation, for a period, say, of thirty years, could hardly have failed to be much impressed by the quiet manner in which the present season has opened, as compared with the keen interest evinced in previous years in the possibilities of the competition in the leading classes at the great exhibitions, and in the chances of the more successful of the exhibitors of adding to the number of valuable challenge cups or to the balance at their bankers. There is still an interest in the chief competitions, but it is less pronounced, even in the case of those who fully appreciate the cultural skill displayed in the production of blooms in so high a state of development as to enable the grower to take a leading position in a keen contest. As regards the flower-loving community as a whole, there can be no question that chrysanthemum shows do not prove so attractive as was the case no farther back than ten years ago, and that the interest shown is of a decidedly local character. If this be so—and we have no doubt upon the point—there can be no question as to the large exhibition blooms, which have so long been the chief feature of chrysanthemum shows, being less highly esteemed by the general public. This is due in some degree to the practice which has so long obtained with many societies of giving undue encouragement to one class of chrysanthemums, instead of arranging the classes to ensure an adequate representation of the chief sections. The average visitor will undoubtedly make his way, on entering an exhibition, to the stands or vases of splendidly-developed blooms of Japanese varieties in competition for valuable prizes, and will linger long over them in admiring their graceful forms and attractive colourings. Having fully enjoyed their charms, he will turn to the other objects in the exhibition, and, we venture to suggest, derive but little pleasure from an inspection of the stands of blooms belonging to the same section, but of quite ordinary quality. Within the past few years some improvement has been effected in the allocation of prizes; and several other sections, notably the singles, have been staged in larger numbers and better condition. The falling off in the number of entries in some of the chrysanthemum classes is undoubtedly due to a considerable reduction in the numbers of these flowers grown under glass in the majority of gardens. For a comparatively long period after the introduction of the Japanese varieties there were but few flowers of their season that could properly be compared with them for decorative purposes; but there are now several classes that possess so high a degree of merit as to have proved formidable competitors. First in importance there are the perpetual-flowering carnations, which, it will be readily conceded, are of immense value for beautifying the plant house and the supply of flowers in a cut state for indoor decorations. Then there are the winter-flowering begonias which have been introduced within recent years, and are now sufficiently numerous to form a large group of much value for the production of bright colour effects in the warm conservatory during the dullest period of the year. In addition to these new and highly attractive classes of autumn and winter-flowering plants, the bulbs and hardy shrubs retarded in accordance with modern methods have to be reckoned with; for, owing to the facility with which they can now be had in bloom during the autumn, they enter into a strong competition with the chrysanthemum. In a consideration of the facts bearing on the decline in popularity of blooms of the type which for a number of years have so greatly predominated at exhibitions, we see no cause for despondency with regard to the future of the chrysanthemum. The various sections of the flower may be expected to undergo considerable changes in their relation to the public taste, precisely in the same way as they have done in the past; but there is full justification for the belief that the chrysanthemum will, taking it collectively, continue to occupy a prominent position in gardens. It should be remembered in connection with this point that while the big exhibition blooms have been steadily declining in favour, there has been a remarkable development in the early-flowering varieties, and a great increase in their popularity. As one result of the increase in the number of first-class varieties blooming before the opening days of November the cultivation of this section for market has become an industry of some importance. Another result has been their greatly extended culture in private gardens for the production of bright effects during September and October; and it is reasonable to assume that this extension will increase in rapidity as the merits of the finer varieties become fully recognised. If there is no cause for anxiety with regard to the chrysanthemum in relation to the garden, there is some cause for apprehension as to the future of a large proportion of the November exhibitions. There is not so much a danger of collapse as of their failing to receive sufficient support to admit of their being maintained in a high degree of efficiency, and thus afford those residents of the respective districts who are interested in gardening an opportunity of meeting once a year amid pleasant surroundings. There is no occasion to abolish the large exhibition

MR. JOHN E. DAVIS.

blooms, but in many instances the number of classes should be reduced with a view to giving more encouragement to other sections, and thus ensure a greater diversity of colour and form. Especially deserving of encouragement are the single and decorative varieties, which, tastefully arranged in vases of moderate size, prove highly attractive. We suggest also that classes should be provided, with comparatively liberal prizes, for the carnations referred to, of which there are now so many beautiful varieties, and also for begonias flowering in winter; and the classes for the latter should be so arranged as to secure an adequate representation of the several types. There are other plants that might be encouraged with advantage; and the object should be not so much to hold a show of chrysanthemums as a winter exhibition in which these flowers will be prominent, and other subjects, including fruits and vegetables, belonging to the season be adequately represented.

Mr. John E. Davis, who has charge of the beautiful gardens of Ballathie, the Perthshire seat of Colonel Richardson, takes high rank among the many able exponents of the gardening art who pursue their avocations in the district of which the fair city of Perth is the centre. Deservedly high as is Mr. Davis's reputation as a practical horticulturist, he disclaims any idea of being a specialist; and, writing with a personal knowledge of the Ballathie gardens, in which his generous employer takes so keen an interest, we have no hesitation in stating that we are in full agreement with him on this point, and should regard him rather as occupying a prominent position among those who are usually described as all-round gardeners. Mr. Davis is certainly equally at home in all departments of a great garden; for, whether in plant or fruit house, or flower or kitchen garden, there is ample evidence of judgment and cultural skill of a high order; and in many a keen contest at Edinburgh both ornamental plants and vegetables have brought honours to the Ballathie gardens. For some years Mr. Davis has been a most successful exhibitor of groups of plants arranged for effect, and of collections of vegetables at the Royal Caledonian Horticultural Society's autumn exhibitions. At the Scottish Horticultural Association's shows in November the Ballathie chrysanthemums have won numerous awards, including several gold and silver medals offered by the National Chrysanthemum Society, and the Centenary Cup. While giving increased attention to hardy fruits and vegetables, Mr. Davis has been especially successful in the cultivation of hardy and half-hardy annuals, and of the fine borders of these, relieved by columns of sweet peas, we have a very distinct recollection. Equally noteworthy are the great breadths in the ample borders of antirrhinums, violas, sweet williams, and nemesias, the last named being grown and flowered in a manner that is by no means usual, and form a feature that at once arrests the attention of visitors. Previous to taking charge of the gardens of Ballathie, Mr. Davis was head gardener for some eight years to J. E. Barker, Esq., K.C., at Brooklands, Derbyshire, and here also he gave ample evidence of his ability and knowledge of all that relates to the garden and its management.

Apples and Pears at R.H.S. Meetings. The Rev. W. Wilks writes: The Chairman of the Royal Horticultural Society's Fruit Committee wishes to call the attention of those sending apples and pears for awards to the fact that at least six fruits of each variety are required by the rules, and that all specimens should be in good usable condition either for cooking or dessert at the time of sending. Each variety should be accompanied with full particulars as to the position in which it is grown (wall culture or otherwise), and also the form of tree, and, if possible, its origin, with full notes as to cropping, keeping, and age of tree. Otherwise the examples cannot be dealt with. For instance, it is useless to send up apples which will not be at their best till March in October and November.

His Majesty King George V. has just communicated to the directors of the Royal International Horticultural Exhibition, through Colonel Sir George Holford, K.C.V.O., his intention to open the exhibition on May 22, 1912, at 12 noon.

Ghent Quinquennial, 1913.—The preparations for the International Horticultural Exhibition that will be held by the Société Royale d'Agriculture et de Botanique de Gand in 1913 are in an advanced state, and these suggest that it will be at least equal to the most important of the horticultural gatherings that have been held in Ghent since the foundation of the society. The exhibition will be held in the new Palais de l'Horticulture et des Fêtes, which, judging from the plans now before us, is admirably adapted to flower shows of the first class. This magnificent building will have a superficial area of 30,000 metres and cost 1,750,000 francs. It will contain a hall with a superficial area of 14,000 metres, for plants not requiring artificial heat at the time of exhibition, and a smaller hall with a superficial area of 6,000 metres that will be heated and otherwise fitted for the accommodation of plants from tropical regions. As at previous quinquennials, special encouragment will be given new plants, the schedule containing twenty-one classes. In addition to the ordinary prizes in the several classes, the jury will have at their disposition a special prize to be awarded to the plant or group of plants presenting the greatest merit. The section devoted to orchids is of special interest as evidence of the increased importance of orchids in Belgium. A quarter of a century ago less than a dozen classes were provided for orchids, and in the schedule of the exhibition to be held in 1913 they number eighty-four.

Horticultural Club.—The next house dinner of the club will take place on Tuesday, November 7, at the Hotel Windsor, Victoria Street, S.W., when Mr. Reginald A Malby will give a lecture on "A Miniature Alpine Garden," illustrated by lantern slides.

Heating the Waverley Market, Edinburgh.—At last the Edinburgh Corporation have adopted a scheme of heating for the Waverley Market, and Messrs. Mackenzie and Moncur, Ltd., are at present working day and night in order to accomplish the task of handing over the installation in working order before November 13. Competitors and exhibitors at the Chrysanthemum Show and other winter exhibitions will be glad to hear of this, and the general public will now have the satisfaction of knowing that in future they will be able to visit these exhibitions under much more comfortable conditions than they have hitherto done in severe weather. The system which has been adopted is what is known as the "Plenum," and in its essential features is the same as that in operation in the Houses of Parliament. The steam used for heating the air which will be driven into the building will be generated in a Babcock and Wilcox water-tube boiler, which is to be placed in an underground chamber outside the building. The heating chamber, to which the steam will be conveyed from the boiler by piping, will be placed immediately inside the market house. In this will be placed a series of 75 coils of $1\frac{1}{4}$in. piping, in flat sections resembling gridirons, placed parallel to each other, and over this battery of 8,000 feet of steam-heated piping the air will be driven into the building by a powerful fan worked by a 40-horse power electric motor. This fan will be capable of forcing 5,000,000 cubic feet of heated air into the building per hour, and it can be used in hot weather for driving in fresh air for ventilation of the building. From the heated chamber the air will be conveyed into the building by a large duct, placed at the level of the roof girders, and thence it will be carried in smaller ducts to all parts of the hall. The cost of the installation will be over £2,000.

Nomenclature of Cape Pelargoniums.—The council of the Royal Horticultural Society has been asked to endeavour to obtain an agreement on the nomenclature of what are commonly known as Cape pelargoniums. The only practical way known to the council is to invite all growers of these plants to at once send cuttings (rooted or otherwise), with the name known to the sender, by post to the Superintendent, R.H.S. Gardens, Wisley, Ripley, Surrey. They will be potted up, and next year be compared with each other and with Herbarium specimens and printed records. No zonals, or show, or French pelargoniums should be sent; only these known as "Cape." As the nomenclature of this interesting group of pelargoniums is much confused, we hope that growers will co-operate with the council of the Royal Horticultural Society in placing it on a satisfactory basis.

N.R.S. Catalogue of Roses.—The new official catalogue of roses published by the National Rose Society has been issued to the members, and, unless we are much mistaken, will be highly appreciated by them as a trustworthy guide to the distinguishing characteristics of the finest of the varieties in cultivation, and in making selections for various purposes.

National Sweet Pea Society.—This society will hold its annual meeting on Friday, December 8, at the Hotel Windsor, Victoria Street, Westminster, at two o'clock. Notices of new rules or alteration of rules should reach the hon. secretary, Mr. C. H. Curtis, on or before Friday. November 17. The annual meeting will be followed by a dinner at six o'clock, and this in turn will be followed by a sweet pea conference to commence at seven o'clock, and at which the following subjects will be dealt with: "Sweet Pea Diseases," by Mr. Fred Chittenden, F.L.S., Director of the Wisley Laboratory; "Packing Sweet Peas for Market," by Mr. Thomas Page, of Hampton; and "Packing Sweet Peas for Exhibition," by Mr. Thomas Stevenson, of Addlestone.

Important to Secretaries of Horticultural Societies. — The edition of the "Gardening Year Book" for 1912 is in an advanced stage of preparation, and secretaries of botanical and horticultural societies and gardeners' associations are earnestly requested to return the notices properly corrected which they have received, with as little delay as possible, so that any changes which have been made in the names or addresses of the secretaries may be duly recorded in the list of Horticultural and Botanical Societies of the United Kingdom. We shall also be glad to receive from our readers notification of any such changes as have come under their notice.

NATIONAL CHRYSANTHEMUM SOCIETY'S SHOW.

The premier chrysanthemum society held its exhibition at the Crystal Palace on November 1, 2, and 3, and the opening day was a delightful one. The show was of great extent and rather finer than that held in 1910. The competition of many of the classes was not over keen, but the blooms staged were of excellent quality. Table decorations were better than usual, and trade exhibits were exceptionally fine and numerous, making in themselves a wonderfully brilliant and interesting exhibition. It is a pity that in some of the "display" classes there is not a keener interest, as such exhibits are very attractive. The affiliated societies did well, and each exhibit in their special class was of high merit.

Mr. Norman Davis was awarded the gold medal offered by Messrs. Clay and Son, Stratford, for the best non-competitive display in the show; and Mr. Hunt, Ashstead Park Gardens, Ashstead, secured the Dean Memorial Gold Medal with his exhibit of three dozen incurved blooms.

DISPLAY OF CHRYSANTHEMUMS FROM THE DULWICH HORTICULTURAL SOCIETY.
This exhibit won the Trophy open to competition among societies affiliated with the National Chrysanthemum Society at the Crystal Palace, on November 1, 2, and 3.

HOLMES CUP CLASSES.

The Holmes Memorial Cup for three dozen incurved blooms, distinct, was won by Mr. G. Hunt, gardener to Pantia Ralli, Esq., Ashstead Park, Epsom, with a set that included some fine flowers, but also some weak ones; his best were of Duchess of Fife, Romance, Mrs. G. Judson, Clara Wells, Mrs. C. Crooks, Miss E. Holding, Embleme Poitevine, W. Biddle, Godfrey's Eclipse, C. H. Curtis, and Edwin Thorp; Mr. W. Mease, gardener to A. Tate, Esq., Downside, Leatherhead, came second, and Mr. T. J. Broom, gardener to Miss Langworthy, Gays House, Holyport, came third.

Only two competitors came forward to fight for the Holmes Memorial Cup for forty-eight Japanese blooms, distinct, and Mr. C. Moore, gardener to Mrs. W. Clash, Frensham Place, Farnham, won the famous cup. His flowers were fine, clean, and bright, and the very best were J. Lock, Mrs. C. H. Totty, Margaret Smith, Mr. Charles Beckett, Miss E. Green, Mrs. F. C. Stoop, Master David, A. S. Bott, D. B. Crane, J. W. Molyneux, Reg. Vallis, Francis Jolliffe, F. S. Vallis, Hon. Mrs. Lopes, and Duchess of Sutherland. Second prize fell to Mr. W. Mease, Downside Gardens, Leatherhead, who had capital blooms of King Edward VII., Reg. Vallis, Hon. Mrs. Lopes, Mrs. C. Penford, Rose Pockett, and Mrs. A. T. Miller.

LARGE VASE CLASSES.

Two exhibitors came forward in the class for a dozen vases of Japanese blooms, three flowers of one variety in each vase. First prize was won by Mr. A. Chandler, Colon House Gardens, Rugby, who led with large examples of Frances Joliffe, James Lock, George Hemmings, Master David, Mrs. H. Thornton, G. J. Bruyard, Master James, Mrs. F. C. Stoop, Eclipse, Evangeline, Algernon Davis, and Reginald Vallis; the second prize fell to Mr. W. Mease, Downside Gardens, Leatherhead.

Mr. G. Hunt scored for a dozen vases of incurved blooms distinct, three flowers of each, with big well-developed examples of Edwin Thorp, Buttercup, Mrs. G. Judson, C. H. Curtis, W. H. Thorp, Godfrey's Eclipse, Romance, Clara Wells, Duchess of Fife, Margaret Brown, Embleme Poitevine, and Miss Nellie Southam; the second prize was won by the veteran grower, Mr. W. Mease.

JAPANESE BLOOMS.

For twenty-four Japanese blooms distinct the premier award (President's Prize) fell to Mr. H. Lloyd, gardener to Captain C. Wiener, Ewell Castle, Ewell, for a good even set that included Reg. Vallis, Rose Ellis, Frances Jolliffe, Sir Albert Rollit, J. Lock, Superb, Bessie Godfrey, Mrs. F. C. Stoop, Mrs. A. T. Miller, and Melchet Beauty; second prize fell to Mr. W. Rigby, gardener to the Rev. Cooper Marsden, Borstaldine, Bickley, and third to Mr. A. Chandler, gardener to A. James, Esq., Coton House, Rugby. There were six competitors.

Mr. Mease had the best vase of six white Japanese blooms, and he scored with grand examples of the beautiful Mrs. A. T. Miller: for six blooms of a yellow Japanese variety, Mr. C. Moore, Frensham, led with very large specimens of the Hon. Mrs. Lopes, with Mr. H. J. Hedges, Kirkdale Nursery, Sydenham, second. For six blooms of any other colour, Mr. G. Mileham secured the chief award with James Lock, Mr. H. J. Hedges coming second with Mrs. George Mileham.

In the class for a dozen Japanese blooms distinct, arranged with suitable foliage on a space of 5ft. by 3ft., there were five competitors, and the class proved a very attractive one. First prize was well won by Mr. W. Mease, who had grand blooms of Hon. Mrs. Lopes, Reg. Vallis, Countess of Granard, J. Lock, White Queen, Mrs. A. T. Miller, Kara Dow, Duchess of Sutherland, Walter Jinks, Beatrice May, Rose Pockett, and Miss Annie Nicoll; Mr. A. Smith, The Convent Gardens, Roehampton, second, and Mr. Rigby, Bickley, third.

SINGLE AND POMPON VARIETIES, ETC.

Competition was poor in the class for a table of single chrysanthemums; first prize fell to Mr. F. G. Bealing, Bassett, Southampton, who had large vases of small and rather rough blooms of Mary Richardson, the Pagram varieties, etc. There was only one entry for a display of singles, and this was disqualified because it failed to meet the schedule specifications.

Mr. W. Howe, gardener to Lady Tate, Park Hill, Streatham, was the only exhibitor of a display of single and pompon varieties arranged on a ground space of 72 sq. ft. Mr. Howe used Mary Richardson, Ladysmith, and other sorts freely, with a few bush plants of yellow pompon varieties, banking these with crotons, bamboos, and ferns, and making up a bright exhibit.

One competitor came forward with six vases of pompons, and this was Mr. T. J. Broom, to whom a first prize was granted; he showed delightful little flowers of Golden Fleece, Rosinante, Mdlle. Elise Dordan, Sunset, President, and Katie Mannings. Apparently only one exhibitor staged four vases of large anemones, and to this set, from Mr. T. J. Broom, a second prize was awarded.

First prize for a dozen bunches of market chrysanthemums was capitally won by Messrs. Cragg, Harrison, and Cragg, Heston, with grand dozens of Mrs. Roots, Freda

Bedford, D. Ingamells, Phœbe, E. Cox, Heston Bronze, Crimson King, H. W. Thorp, Moneymaker, Embleme Poitdevine, Mary Thorp, and Bronze McNiece; Mr. F. Brazier, Caterham, second.

The best dozen incurved blooms came from Mr. W. Mease, with Mr. T. J. Broom, gardener to Miss Langworthy, Gays House, Holyport, second. For six incurved blooms, one variety, Mr. W. Mease was to the front with very large but somewhat rough flowers of Buttercup; Mr. G. Mileham, gardener to A. T. Miller, Esq., Emlyn House, Leatherhead, second, with Buttercup; and Mr. T. J. Broom third with Clara Wells.

AMATEURS.

In the amateurs' section, Mr. W. Rigby led for a dozen Japanese blooms from among six competitors, and he was followed in order by Mr. W. Trowell, gardener to D. Link, Esq., Fairlight, Beckenham; and Mr. J. W. Stevens, gardener to W. H. Stone, Esq., Donnington, Sydenham. Mr. J. King, East View, Hendon, scored for a dozen incurved blooms, with Mr. T. Sharpe, Railway Terrace, Greenhithe, second.

In another division, Mr. T. Sharpe gained a first prize with a capital set of twelve Japanese blooms, his Reg. Vallis, Mrs. G. Mileham, and Master David being very fine; Mr. B. E. Davies, White Lodge, Biddenden, second; and Mr. J. King third.

In the smaller amateurs' classes leading prizewinners were Mr. J. Vanstone, gardener to W. G. Richardson, Esq., Hollymead, Tulse Hill; Mr. W. Rigby; Mr. R. Gladwell, gardener to A. Goschen, Esq., Tennison Road, Norwood (who showed a fine half dozen of Reg. Vallis); Mr. C. H. Martin, gardener to Mrs. Langton, Roymead, Hendon; Mr. A. Dyer; Mr. J. Luscombe, St. Faith's Road, West Norwood; Mr. B. E. Davies; Mr. T. Sharpe, Stone, Greenhithe; Mr. J. King, East View, Hendon; and Mr. G. Moorman, Hampton Court Palace.

AFFILIATED SOCIETIES.

There were three entries in the National competition open to societies in affiliation with the N.C.S. This was for a display of chrysanthemum blooms, to represent not fewer than four sections of the flower, arranged with suitable plants and foliage on a table 16ft. by 6ft. The Challenge Trophy fell on this occasion to the Dulwich Horticultural and Chrysanthemum Society, which arranged its flowers boldly in stands, baskets, and vases, in association with fern fronds and autumn foliage. There were grand stands of big Japanese blooms, and smaller exhibits of incurved flowers, while the stands of singles and the baskets of decorative sorts were delightfully set up. The second prize was won by the Sevenoaks Gardeners' Chrysanthemum Society, with a very graceful and effective contribution that had less of chrysanthemums, but almost as much of elegance as the first prize collection. The Sydenham District Horticultural Society came third.

FLORAL DECORATIONS.

In the open class for dinner-table decorations of chrysanthemums, yellow and bronze-coloured flowers only to be used, the leading award was given to Mrs. A. Robinson, Norhyrst, Park Hill, Carshalton. The arrangement of moderate-sized flowers was very tasteful, tinted autumn foliage being skilfully used to set off the blooms. Mr. T. W. Stevens, gardener to W. H. Stone, Esq., Donnington, Laurie Park, Sydenham, was second with a more formal arrangement, Mr. A. W. Trossell, 12, The Parade, Beckenham, coming third. The class was a strong one of some sixteen entries, but there was a certain degree of monotony in the whole display.

In the other table class, admitting any other coloured chrysanthemums, Mr. T. W. Stevens scored well with a nice arrangement, in which the palest of pinks contrasted with lively crimson. Mrs. Robinson followed with mauve and white flowers, Mr. A. W. Trossell coming third.

Only one entry was staged in the class for two vases of pompon or anemone pompon varieties, Mr. L. Lawrence, Shoreham Cottage Gardens, Shoreham, near Sevenoaks, being awarded first prize. For one vase of singles, Mr. M. E. Mills, gardener to F. Lloyd, Esq., Coombe House, Croydon, scored with a great vase of well-grown flowers set off with withered bracken and asparagus. Mr. L. Lawrence was second with a much smaller vase, Mrs. W. Maslin, Ongar Hill Cottages, Addlestone, being third out of five entries. Autumn foliage and berries arranged in a basket made quite an attractive class, the winning exhibit, staged by Mrs. Brewster, 12, St. Peter's, Canterbury, being composed of open pods of Iris fœtidissima, Physalis Alkekengi, Clematis vitalba fruits, statice, Honesty, etc. Mr. L. Lawrence came second with a tastefully-arranged basket of berries and bracken, third prize going to Mrs. A. R. Bide, Highlands, Farnham.

A hand basket of chrysanthemums for table was required in a class confined to lady members only, the winner being Mrs. G. Davis, 10, Crystal Palace Station Road, Upper Norwood, who used the ever popular yellow and bronze colours to good purpose. Mrs. A. Robinson, Carshalton, was a capital second, and Mr. A. R. Bide third, with nice blooms of the popular Rayonante well poised in a gilded basket.

The amateurs' single vase class for five Japanese blooms found Mr. W. Passey, gardener to Captain C. D. Clark, Shortlands, at the head of the list, with a nice vase of Mrs. A. T. Miller; second went to Mr. A. Dyer, gardener to E. Wood, Esq., The Tyrol, Church Road, Upper Norwood, his variety being F. S. Vallis; five blooms of a seedling came third, the exhibitor being Mr. J. W. Harrison, gardener to R. Girvin, Esq., Ashbourne, Laurie Park, Sydenham. Mr. A. Dyer won a good first for one vase of decorative blooms, showing some capital incurves and elegant singles; Mr. G. Bowyer, gardener to P. Dawson, Esq., Sydenham, showed Rayonante and a good white for second place, third going to Mr. J. W. Harrison. Mr. A. Dyer again led the way for a vase of singles, showing disbudded flowers of capital quality; Mr. W. Trafford, 15, Brook Street, Leek, Staffs, was second; and Mr. J. W. Harrison third.

FRUIT.

Four entries were staged in the class for three bunches of white grapes, the winner being Mr. E. C. Wickens, gardener to C. Bayer, Esq., Tewkesbury Lodge, Forest Hill; second being awarded Mr. J. Shelton, gardener to Lord Hillingdon, Wildernesse, Sevenoaks; and third to Mr. W. Lintott, gardener to Sir Walpole Greenwell, Bart., Marden Park, Caterham. Mr. Wickens scored for three bunches of Gros Colmar; and Mr. W. Howe, gardener to Lady Tate, Park Hill, Streatham, led for three bunches of any other black variety with Alicante; second going to Mr. W. Lintott; and third to Mr. Shelton.

In the pear classes Mr. A. Basile, Woburn Park Gardens, Weybridge, led easily for six dishes, with Mr. W. Lintott second, and Mr. Paulley, Brigstock Road, Thornton Heath, third. For six dishes of apples Mr. Basile scored with grand dishes of Bismarck, Emperor Alexander, Lady Henniker, Mère de Ménage, Newton Wonder, and Bramley's Seedling; Mr. W. Lintott second; and Mr. C. Harris, The Grove, Watford, third..

NEW VARIETIES.

First-class Certificates were awarded: To Mrs. Percy Wiseman, a primrose incurved, from Mr. P. Wiseman, Woodham Walter; to Heston Bronze, a market variety, from Messrs. Cragg, Harrison, and Cragg, Heston; to Celia, a yellow single, from Messrs. Cragg, Harrison, and Cragg; to Mrs. John Peed, a bright yellow single, from Messrs. J. Peed and Son, West Norwood; to Caterham Bronze, a single, from Mr F. Brazier, Caterham; to R. G. Burge, a white single, from Mr. P. Ladds, Swanley Junction; to Mrs. Andrew Walker, a rich chestnut Japanese, from Messrs. W. Wells and Co., Merstham; to Miss Margaret Walker, a golden-bronze single, from Messrs. W. Wells and Co.; to Charles Dickens, a golden-yellow single, from Mr. Norman Davis.

NON-COMPETITIVE.

Several very fine exhibits, composed wholly, or almost wholly, of chrysanthemums, were staged, and these formed a grand feature of the exhibition. In the centre of the Palace Mr. Philip Ladds, Bexley, Kent, arranged a huge circular group, and in the middle he put up about a dozen enormous bouquets of fine blooms of prominent Japanese and reflexed market varieties, such as Crimson King, Freda Bedford, Miss L. Thorne, Mrs. A. T. Miller, Rayonnante, etc. Under these were palms and ferns, and dwarf pot chrysanthemums, while, forming a broad margin all around were low vases of blooms, associated with ericas, spiræas, and ferns, with here and there a tall vase of carnations, the whole edged with maidenhair ferns.

Mr. H. J. Jones, Lewisham, filled a large space in front of the orchestra with a magnificent exhibit of flowers arranged in stands of varying height, and in baskets and vases of various sizes. Palms, ferns, and autumn-tinted foliage were freely and ably used to set off the flowers to fullest advantage. There were about sixty stands, vases, and baskets filled with large blooms, and in nearly every case only one variety was used in each receptacle. In some of the stands there were as many as two dozen flowers. A few of the varieties that were conspicuous in this fine exhibit were Mrs. Williams, Mdme. Albert Hall (a new yellow incurved), Miss L. Thorne.

Another splendid contribution was that from Mr. Norman Davis, Framfield, Sussex, who put up large sheaves of fine flowers, arranged over dwarf-flowering plants and single varieties. Very fine were the bold masses of Countess of Grenard, Mrs. C. H. Totty, December Gold, White Queen, Norman Davis, and Lady Talbot, while the grand single white, named Mensa, was represented by two fine vases. Baskets of single varieties added grace to the whole, and the pretty outline of the group was greatly admired. It was interesting to notice that Mr. Davis showed a few flowers each of King of the Crimsons and Progne, both probably upwards of half a century old.

Messrs. Hobbies, Lim., Dereham, contributed a bright collection of collarette, pæony-flowered, and cactus dahlias, and a large group of weeping standard roses and late rose blooms. Plumose nephrolepises and a rare collection of adiantums came from Messrs. H. B. May and Sons, Edmonton, and were greatly admired. Ornamental trees and shrubs with variegated foliage were extensively displayed by Mr. David Russell, Brentwood.

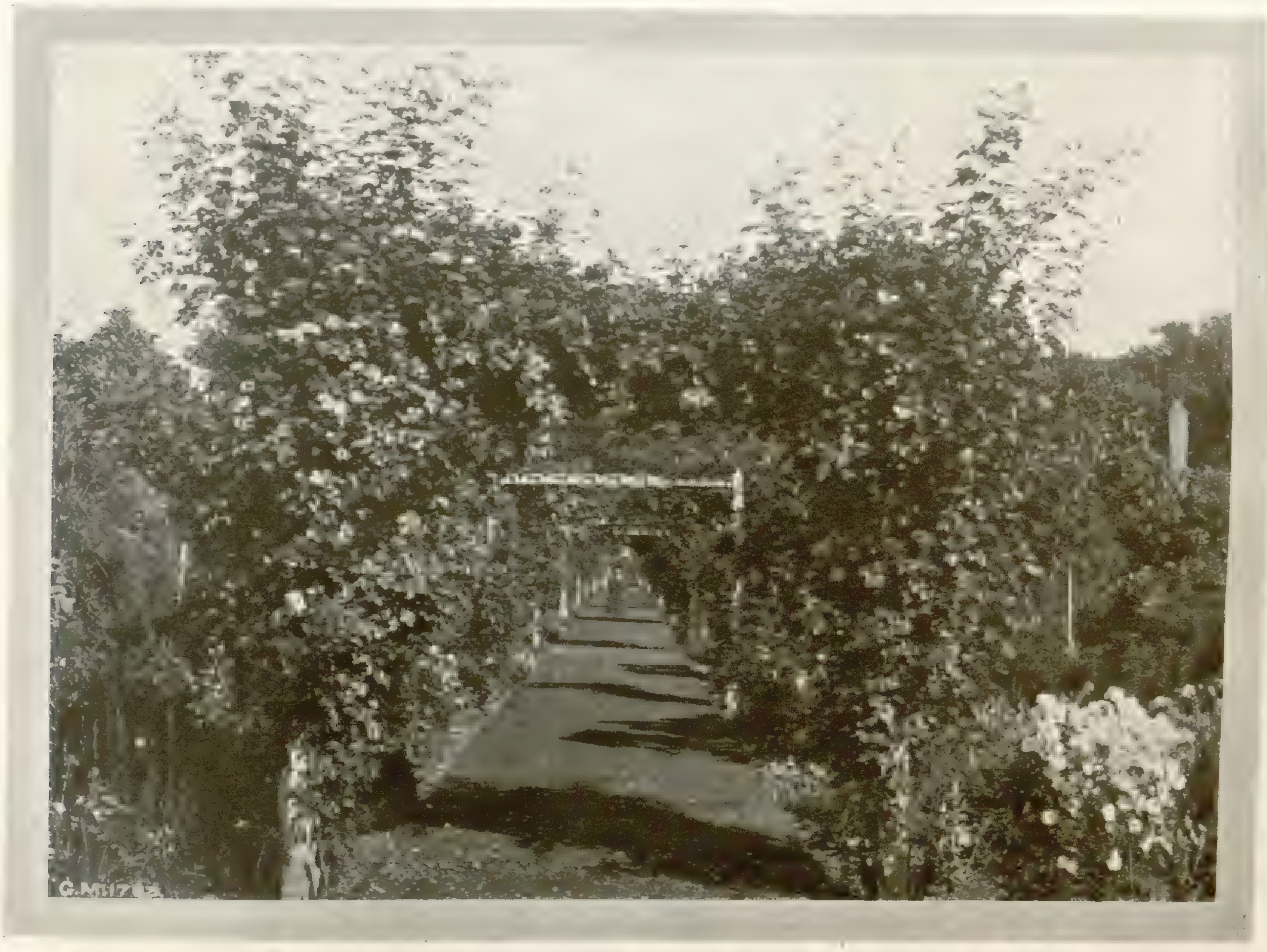
Messrs. J. Cheal and Son, Crawley, put up a very attractive exhibit of finely-coloured apples. Mr. D. Russell, Messrs. J. Peed and Son, Norwood, and Messrs. H. Cannell and Sons, Swanley, Kent, all showed apples and pears largely, the latter firm presenting a particularly attractive collection of bright and finely-grown fruits.

Messrs. W. Wells and Co., Merstham, put up a fine bank of chrysanthemums, a sort of ideal conservatory arrangement as in the great majority of cases the flowers were on the plants. Single, decorative, incurved, and Japanese varieties were almost equally represented, the latter occupying the post of honour. Along the background were big flowers of Mrs. F. C. Stoop, Miss Lilian Hall, White Queen, Mrs. W. Hookey, Mrs. R. H. Witty, David Ingamells, Marie Loomes, etc. Singles were finely grouped in the front centre, while small decorative sorts were used in flanking groups. Two especially fine examples of Phœnix Roebelini occupied points of vantage, and ferns formed an edging; the addition of some bright autumn-tinted foliage would have made this group practically perfect.

(Continued on page 826.)

ROSE PERGOLA AT PRESTON HALL.

The pergola as a means of displaying to the best advantage the distinctive charms of roses of rambling habit continues to enjoy a high degree of popularity, and in many gardens may be seen pergolas in course of construction, preparatory to an extension of the culture of Wichuraiana, polyantha, Ayrshire, and other roses that require support. Pergolas have many advantages as aids in the enhancement of the attractiveness and interest of the garden, and because of this it is satisfactory to know that they are regarded with much favour by those who appreciate the graceful growth and the beauty of flowers or foliage of climbing plants. One of their chief advantages is the facility with which they can be adapted to the area in which it is intended they should be a conspicuous feature, and to the amount available for erecting and furnishing them. It matters not whether pergolas be of large size and ornate in design, or of quite modest dimensions and characterised by simplicity, provided and this is an important point—they are more or less in agreement with their environment. Another advantage is they afford ample opportunity for the display of a considerable diversity of taste on the part of the owner, and as the result of this we see in visiting gardens a much greater difference in design than in the case of some other garden features. It matters not whether the supports be of brick or stone, of square cut timber or of roughly trimmed oak posts or larch poles, provided appropriateness has received due consideration in the preparation of the design.



A FINELY FURNISHED ROSE PERGOLA WITH GRASS WALK AT PRESTON HALL, DALKEITH.

Whether the pathway be of gravel, flagstones, or turf is very much a matter of individual taste, provided the structure and the pathway is in agreement. Pergolas with brick or stone pillars should, as a rule, have pathways of flagstones or gravel; but for those with a framework of wood the paths may be of grass or either of the two materials mentioned, provided the woodwork is not so constructed as to exclude, when covered with the growth of roses or other climbers, the light and air from the grass, and thus prevent it making a satisfactory growth. A springy, closely cropped turf makes the most pleasant of all paths during the summer months, but without a sufficiency of light and air, the grass will become thin and drawn, and anything but satisfactory. It should also be mentioned that grass walks are not suitable for pergolas through which there is much traffic irrespective of the weather. On the other hand, where the pergola is intended chiefly as a resort during the summer months when the roses are yielding of their wealth of bloom and the supports are a goodly distance apart, grass forms an ideal walk. We have conclusive evidence of this in the rose pergola that forms so attractive a feature of the kitchen garden at Preston Hall, Dalkeith, the residence of Mrs. Callender. This pergola, as so well shown, is of great length, and the uprights and cross far enough apart to allow the light and air essential to the health of the grass to reach the pathway.

This pergola has the further advantage of being of sufficient height and width to allow two or three persons to walk abreast without inconvenience to themselves or injury to their clothing. This is an important point, and one to which attention has been directed in these pages on several occasions. There is still room for improvement in this detail, and as an incentive to this being effected with as little delay as possible, we again direct attention to the fact that few things are more annoying when walking along a pergola than to have to dodge the growths of the roses, or in the case of ladies to have hats or other articles of apparel disarranged, or it may be damaged. As Mrs. Callender fully appreciates the beauty of climbing roses, all sections are well represented in the delightful gardens of Preston Hall, and the pergola is furnished with varieties that occupy a high position in the respective sections to which they belong. G.

AMELANCHIER CANADENSIS.

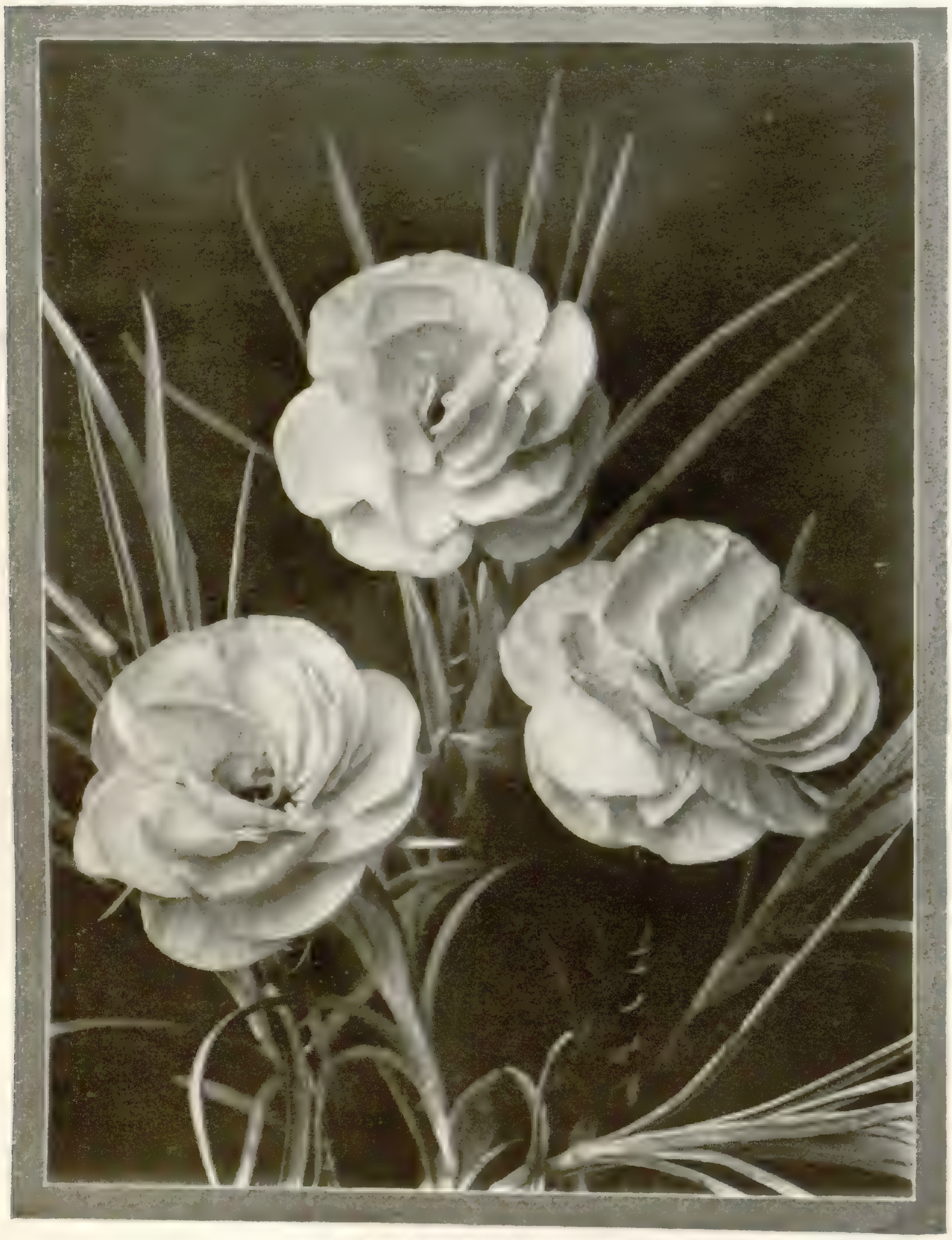
The virtues of this trees as a showy flowering subject in May have often been extolled, but less frequently has attention been directed to its decorative qualities in autumn, yet, if anything, its effectiveness is most pronounced at the later season, for at that time the leaves are bright red, or sometimes red and orange. Furthermore, the effect is more lasting in autumn, for the colour is maintained over a period of from two to four weeks, while in spring the white flowers are rather fugitive, and a heavy rainstorm soon after they expand may seriously injure the blossoms. A. canadensis has the advantage of being a good-natured and easily-grown tree, and there are few gardens where it will not succeed. Soil is not an important factor towards success, for it thrives alike in light, medium, and heavy loam. In the warmer kinds of soil, however, the leaf colour in autumn is most pronounced, while trees growing in open positions are usually more effective than those growing in shade. A great variation is noticed in habit, leafage, and flowers of this tree, and it is possible that too wide a system of grouping has been adopted. It would possibly have been better to include some of the forms as good varieties which are at present ranked as synonyms. W. D.

NEW CHINESE TREES AND SHRUBS.

The current issue of the Kew Bulletin contains several important contributions relating to trees and shrubs, and is therefore of much interest to those who appreciate their importance in the garden. We make the following extract from Mr. Bean's notes on new trees and shrubs that have been introduced from China.

Berberis verruculosa, Hemsley and Wilson.

Among the numerous species and forms of berberis which recent exploration in China has added to our collections, none is more distinct and in habit at least more pleasing than this. It is an evergreen bush of low, sturdy, very neat habit, probably never much more than two feet high. One of the most distinctive characters of the plant is the roughness of the young stems, due to a dense covering of small dark warty excrescences. Leaves densely arranged in fascicles along the branch, elliptic-oblong, ½ to 1½ inches long; spine-tipped and spiny-toothed, coriaceous, dark shining green above, glaucous beneath, margins revolute. Flowers golden-yellow, short-stalked, solitary or in few-flowered fascicles. Fruit black covered with a blue bloom. The species was discovered in Western China and introduced by Wilson in 1904. Four years later it flowered with Messrs. Veitch at Coombe Wood, and to them Kew is indebted for a healthy plant lately added to the collection.



CARNATION CAMBRIA.

A beautiful self carnation with canary-yellow flowers. Raised by the Rev. C. A. Gottwaltz, and introduced by Messrs. A. R. Brown, Lim.

Carpinus polyneura, Franchet.

This beautiful hornbeam is only represented in cultivation by a single tree at Kew, growing at the north entrance of the Rhododendron Dell, and now about 16 feet high. It was raised from seed sent by Mr. A. Henry, in 1889, from Central China. It is a small tree 30 feet high, with slender branches, pendulous at the ends, which give the tree a very elegant aspect. Leaves ovate, acute, slightly cordate at the base, 1 to 2½ inches long, ½ to 1 inch wide, sharply (occasionally doubly) dentate, dark shining green and glabrescent above, and with silky down on the midrib and veins beneath. The leaves differ from those of other hornbeams in cultivation in being flat and scarcely plicate. In its leafless state the tree is distinguished by the narrow, linear, silky stipules which persist through the winter and until the appearance of the new leaves. The tree at Kew flowers regularly, and has borne clusters of fruit, but the seed formed has hitherto been infertile.

Corylus Colurna var. chinensis, Burkill.

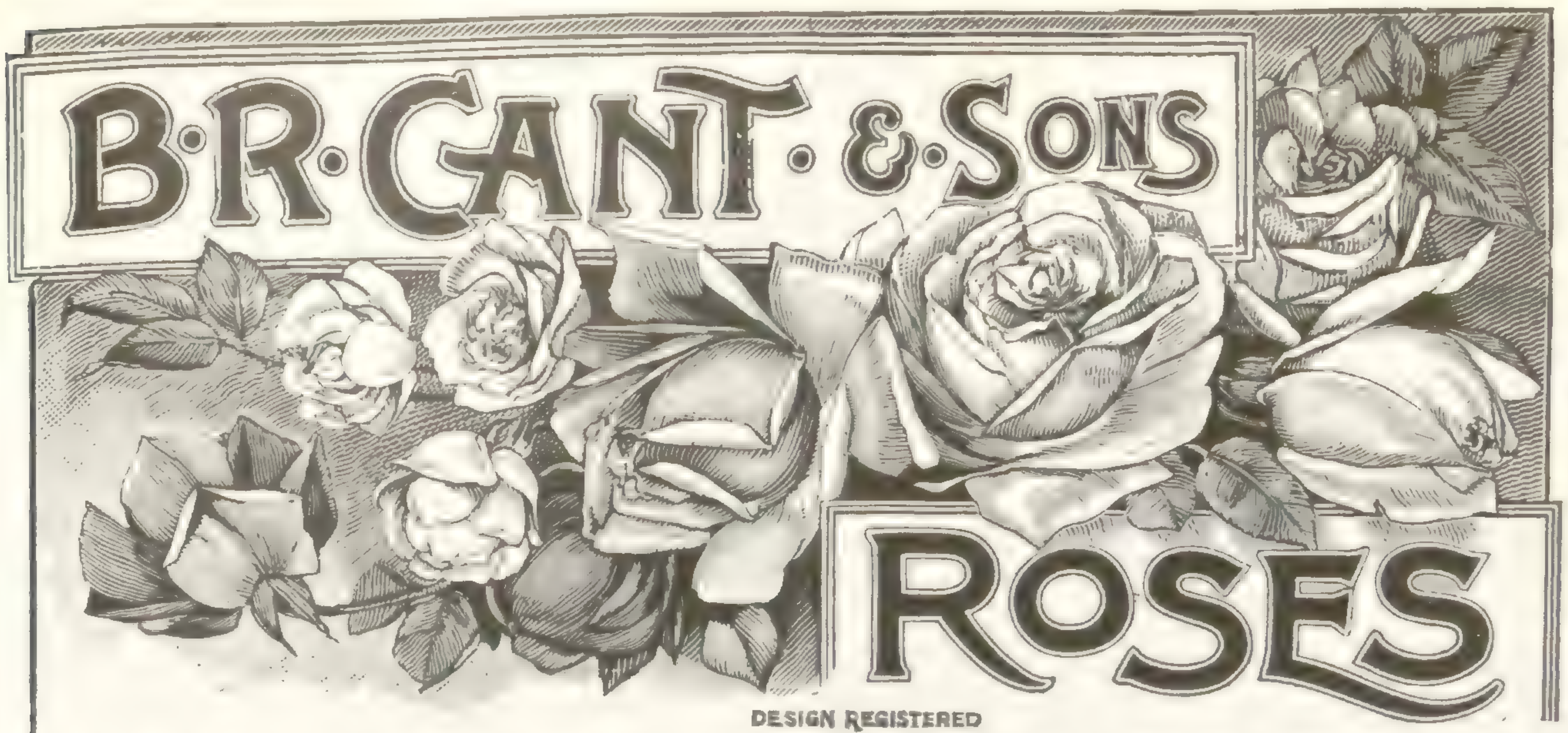
Few deciduous trees are more handsome in leaf and habit, or more interesting in fruit, than the "Constantinople Nut"—Corylus Colurna. It reaches 70 to 80 feet high in continental gardens, and is the only species of Corylus hitherto in cultivation which makes a genuine tree. A new arborescent variety, however, has recently been introduced from Central China, viz., the var. chinensis of Burkill. Originally discovered by Henry, in Szechuan, in 1888, nuts were first sent home by Wilson in 1901, from which a number of young trees were raised by Messrs. Veitch at Coombe Wood, and thence obtained for Kew. Mr. Wilson informs me that this tree is usually met with 50 to 60 feet high, but that he has seen it over 100 feet high—a magnificent size for one of the hazels. The leaves are ovate-oblong or obovate, as much as 6½ inches long by 4 inches wide, deeply and obliquely cordate at the base, acuminate, rather finely and unequally dentate; pilose on the midrib, and with scattered bristles above; glandular-pubescent on the midrib and veins beneath. The young branchlets and petioles are also glandular-pubescent. Our young plants have not borne flowers as yet, but they give promise of being quick growers and perfectly hardy.

Fokienia Hodginsi, Henry and Thomas.

Mr. H. Clinton Baker, of Bayfordbury, has recently presented to Kew a plant of this new and extremely rare conifer. It is one of a few living specimens sent to him in 1909 by his brother, Captain L. Clinton Baker, R.N., from the Fokien province of Eastern China. The species has been made the type of a new genus of coniferæ by Henry and Thomas. It is described by the authors as in many respects intermediate between Cupressus and Libocedrus, the cones being similar to those of the cypresses belonging to the Chamaecyparis group, the foliage resembling in many points that of Libocedrus macrolepis. It is described as a tree 40 feet high. On Mr. Clinton Baker's plant—a young one about four feet high—the flattened, sharply pointed leaves are ¼ to ⅓ inch long, deep lustrous green above, with conspicuous white bands of stomata beneath. The leaves are in flattened whorls of four, the outer pair twice as large as the inner pair. Mr. Clinton Baker thinks that it will not withstand our winters, but, in any case, it will make a handsome evergreen for conservatories and winter gardens, and may prove suitable for the south-western counties in the open.

SELF CARNATION CAMBRIA.

There is a peculiar fascination about a yellow self carnation, varieties of this colour being the more highly esteemed by carnation lovers by reason of the fact that good flowers are by no means plentiful. The variety Cambria, of which an illustration is given herewith, is a flower of beautiful form and colour, and is likely to become a great favourite, especially among exhibitors. It was raised by the Rev. C. A. Gottwaltz, of Droitwich, to whom growers are indebted for a considerable number of excellent and well-known carnations. Messrs. A. R. Brown, Lim., Kings Norton, hold the stock, and include it in their list of novelties for the season. Our illustration is a reproduction of a photograph of blooms that were exhibited by Messrs. Brown in one of their winning stands at the Midland Exhibition of the National Carnation Society, and it shows the fine breadth of petal and beautiful outline of the flower. It is therefore not necessary to say more than mention that the colour is a clear and pleasing shade of canary-yellow. When exhibited at Birmingham the enthusiasts commented very favourably on the merits of this fine variety, and we have every confidence in commending Cambria to the attention of those of our readers who cultivate carnations, whether for the border or exhibition.



DESIGN REGISTERED

DIRECT FROM THE ORIGINAL FIRM.

Established 1765.

WE HAVE FOR DISPOSAL THIS SEASON

80,000 Standards and Half-Standards.

4,000 Standard Weeping Roses.

Magnificent Plants in the best known varieties. Also

300,000 Dwarfs and Climbers.

THE FINEST STOCK IN THE KINGDOM.

Illustrated Catalogue post free on application to

BENJAMIN R. CANT & SONS, The Old Rose Gardens, **COLCHESTER.**

KING'S ACRE

FRUIT TREES
AND
ROSES.

AWARDED . .

30 Gold Medals
AND
Coronation Cup

VALUE 25 GUINEAS.

Seasons 1909-10.

Illustrated Catalogue post free on application.

KING'S ACRE
NURSERIES LTD.,
HEREFORD.

FRUIT TREES.

Over 20 Acres.

ROSES

Including all Latest Varieties.

RHODODENDRONS

Grown in Loam.

Azaleas & Heaths

INCLUDING GOLDEN YEWS, CONIFERS, etc.

Ornamental Trees & Shrubs,
Flowering Trees & Shrubs.

Acres of Forest Trees of all Sizes and Varieties.

GRAPE VINES OUR SPECIALITY.

Climbing Plants in Variety.
Figs and Strawberries.

INSPECTION INVITED.

Gardens Laid Out and Planted by Skilled Men.

Catalogue Free on Application.

H. LANE & SON,
THE NURSERIES, BERKHAMSTED.
Established 1777.

Telephone:— BERKHAMSTED 18.
Telegrams:— "LANE, BERKHAMSTED."

BEES'
GUARANTESTED
ROSES

NOTE BEES' PRICES

For Gold Medal Roses for 1911

and other Prize Roses of recent years.

Countess of Shaftesbury (H.T.), silvery carmine	7/6
Dorothy Ratcliffe (H.T.), coral red	5/-
Edward Mawley (H.T.), rich velvety crimson	5/-
Leslie Holland (H.T.), deep scarlet crimson	7/6
Mabel Drew (H.T.), deep cream or canary yellow	5/-
Mrs. Amy Hammond (H.T.), ivory, amber, and apricot	5/-
Mrs. Chas. E. Allen (H.T.), clear ochre yellow	5/-
Mrs. Cornwallis West (H.T.), delicate pink	5/-
Mrs. Frank Workman (H.T.), bright rose pink	5/-
Mrs. G. Shawyer (H.T.), brilliant rose self	3/6
Mrs. Joseph H. Welch (H.T.), rich rose pink	5/-
Rayon d'Or (Per. H.B.), orange cadmium and scarlet	3/6

The above Set of 12 Novelties of 1911 for 62s.

Claudius (H.T.), brilliant rosy carmine	2/-
Ethel Malcolm (H.T.), ivory white, shaded peach	2/-
Frau Karl Druschki, yellow, soft primrose	3/6
Juliet (H.B.), rich rosy red, old gold reverse	2/-
Juwel (H.T.), a much sought after medium between Frau K. Druschki and Kaiserin Augusta Victoria	2/6
Kaiser Wilhelm II. (H.T.), velvety black crimson	1/6
Mdme. Leon Simons (H.T.), deep rose and crimson	1/-
Miss Alice de Rothschild (T.), citron yellow	2/6
Mrs. A. E. Coxhead (H.T.), claret, shaded vermilion	2/-
Mrs. C. C. Harrison (H.T.), deep crimson pink	1/6
Mrs. Foley Hobbs (T)., ivory white, tinged pink	2/6
Mrs. Fred Straker (H.T.), orange crimson, pink reverse	2/-
Rhea Reid (H.T.), rich red "Liberty" rose	1/-
Shower of Gold (Wich.), the colour of W. A. Richardson	2/6
Soleil d'Angers (Per H.B.), ochre, edged vermilion	1/-
Viscount Carlow (H.T.), warm carmine pink	1/6
Viscountess Enfield (Per. H.B.), rose, shaded yellow	1/6

The above 17 1910 Novelties for 30s.

Betty (H.T.), coppery rose, shaded gold	9d.
Arthur R. Goodwin (H.T.), orange red and salmon pink	1/6
Dorothy Page Roberts (H.T.), pink, suffused yellow	9d.
Duchess of Wellington (H.T.), saffron, stained crimson	2/-
Dusseldorf (H.T.), yellow, orange and red	1/-
Entente Cordiale (H.T.), nasturtium red on gold	1/-
Frau Ernest Fischer (H.T.), yellow, shaded pink	1/6
George Arends (H.P.), delicate rose, deliciously scented	1/-
Harry Kirk (T.), deep sulphur yellow	1/-
His Majesty (H.T.), crimson, shaded vermilion	1/-
Hugo Roller (T.), lemon, suffused crimson	1/-
James Coey (H.T.), deep golden yellow	1/-
King Edward (Poly.), rich rosy carmine	1/6
Lady Hillingdon (T.), deep apricot	2/-
Laurent Carle (H.T.), deep velvety carmine	1/-
Lyon Rose (H.T.), yellow, pink, and salmon	1/-
Mdme. Segond Weber (H.T.), rosy salmon	1/-
Margaret Molyneaux (H.T.), yellow, shaded apricot	1/-
Mary Countess of Ilchester (H.T.), crimson	2/-
Miss Cynthia Forde (H.T.), brilliant rose pink	1/-
Mrs. David Jardine (H.T.), rosy salmon pink	1/-
Mrs. Ed. J. Holland (H.T.), deep salmon rose	1/-
Mrs. Herbert Stevens (T.), white, shaded peach	1/6
Miss Hubert Taylor (T.), shell pink and ivory	2/-
Miss Walter Eastlea (H.T.), glowing crimson	2/-
Walter Speed (H.T.), deep lemon yellow	1/-
White Killarney (H.T.), pure white	1/-
W. R. Smith (T.), white, tinged blush	9d.

The above Set of 28 recent Prize Roses for 33s.

The three sets total 57 strong plants, carriage paid, for **£6, cash with order.**

All Bees' Roses are tested and guaranteed true to name.

Write for fully descriptive and illustrated Catalogue post free,

BEES, LTD., 175E, LIVERPOOL.

"IT IS ONLY A LITTLE

CLAY'S

CLAY'S
LONDON
FERTILIZER
TRADE MARK.

SOLD EVERYWHERE IN TINS at **6d.** and **1/-**; and in Branded and SEALED BAGS, 7lbs. **2/6**; 14lbs. **4/6**; 28lbs. **7/6**; 56lbs. **12/6**; 112lbs. **20/-**. Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**). **Every Genuine Tin, Bag, and Seal bears Trade Mark, as at side.**

THEY WANT"

CLAY & SON,
Manure Manufacturers and Bone Crushers,
STRATFORD, LONDON, E.

J. J. THOOLEN, The EXPORT Nurseries,
Heemstede, Haarlem, Holland,

Established 1884,

Has the honour to announce that his Illustrated Price List of Bulbs and Plants in English, Autumn, 1911, at lowest prices, will be sent post free on application. **No Charge for Packing. Orders of 10/- and above entirely Free to Destinations** in England, Scotland, and Ireland, etc. First Quality guaranteed.

Some sorts of Bulbs noted out of Price List.

	Per 100. s.	d.	Per 1,000 s.	d.
Hyacinths, in the finest mixture for bedding or forcing	7	8	72	4
Hyacinths, single, first size, named, in 25 leading sorts, red, white, and blue vars., equal quantities, my selection	15	0	—	
Tulips, single early, in the finest mixture	2	0	18	4
Tulips, Darwin, mixed	3	0	25	0
Tulips, double, in the finest mixture	2	2	20	0
Anemones, single mixed	1	4	12	0
Anemone, The Bride, pure white	1	4	12	0
Crocus, 1st size, in the finest mixture	1	4	12	0
Crocus, 2nd size, in the finest mixture	0	9	7	0
Scilla campanulata, blue bells	2	0	—	
Scilla campanulata, white bells	2	0	—	
Scilla sibirica, rich blue	1	6	14	6
Iris, Spanish, mixed	0	7	5	0
Iris, English, mixed	2	0	16	8
Narcis., single, in the finest mixture	1	4	12	6
Narcis., Trumpet, in the finest mixture	2	6	20	0
Narcis., double, fine mixture	2	6	20	0
Narcis-Polyanthus, finest mixed	3	6	30	0
Snowdrops, Elwesi, the Giant Snowdrop	1	6	13	6
Ranunculus, French, double mixed	0	9	7	0

250 Bulbs of the same kind will be charged at the 1,000 rate; 25 at the price per 100; 6 at the price per 12.

Ask for Illustrated Price List and see the Collections.

FORBES' 1911

By Appointment

ILLUSTRATED PLANT CATALOGUE

Nearly 200 pages.

GOLD MEDAL SPECIALITIES

Contains carefully revised **Descriptions, Colour, Height, Time of Flowering, British or Common Names, Prices, etc.**, of the **Grandest Collections of ASTERS, CARNATIONS, DELPHINIUMS, PÆONIES, PENTSTEMONS, PHLOXES, PYRETHRUMS, HARDY BORDER PLANTS,** carefully prepared **PLAN** for arranging

HARDY PLANT BORDERS, etc.

Experts unanimously accord **FORBES' CATALOGUE** the unique distinction of being the **best** and most **reliable** up-to-date **Reference Book** extant.

Free for cost of postage, 2d.

JOHN FORBES (HAWICK) LIMITED,
(Dept. I), The King's Nurserymen,
HAWICK, SCOTLAND.

100,000 BORDER CARNATIONS

EVERY GOOD VARIETY IN COMMERCE.

Healthy Plants. Popular Prices.

Largest Growers and Most Successful Exhibitors in the United Kingdom.

ARTHUR R. BROWN, Ltd.,
Wychall Nurseries, Kings Norton.
Catalogue on Application.

RIVERS'

Fruit Trees, Roses, Vines, Figs, Oranges, AND Orchard House Trees.

A LARGE AND SELECT STOCK ALWAYS ON VIEW.

ILLUSTRATED AND DESCRIPTIVE CATALOGUE
POST FREE 3d.

THOMAS RIVERS & SON
Sawbridgeworth, Herts.
STATION: HARLOW, G.E.R.

CORONATION CARNATIONS.

I am proud to inform my patrons and friends that the unique honour and privilege of supplying the Carnation blooms for the Coronation bouquets was entrusted to me in its entirety, a fact which speaks volumes for the unequalled excellence of my flowers, and places my culture on the topmost rung of the Carnation ladder.

Catalogue of the finest collection ever offered, free on application to

CHARLES BLICK, Warren Nurseries, Hayes, Kent.

OUR WORLD-FAMED

GOLD MEDAL ROSES.

Please send for our Catalogue, which contains descriptive particulars and prices of all New and Old Roses worth growing, for any purpose. The largest growers in the world of Roses on the briar-cutting stock.

SAMUEL M'GREDY & SON,
ROYAL NURSERIES,
PORTADOWN, IRELAND.

A SPECIALITY FOR MORE THAN 50 YEARS.

POT VINES

Exceptionally Fine this Season.
Inspection Invited.

J. R. PEARSON & SONS, LOWDHAM, Notts.

GOOD PLANTS

	Each.
Calceolaria Golden Glory (seed per pkt., **1/-**)	**1/-, 1/6**
Clematis montana rubens	**1/6, 2/6**
Dracæna indivisa Vera	**3/6, 5/-**
Drimys Winterii	**3/6, 5/-**
Erica Veitchii	**1/6, 2/6, 5/-**
Eucryphia pinnatifolia	**3/6, 5/-, 7/6**
Eucalyptus Gunnii	**1/-**
Eucalyptus Viminalis	**1/-**
Feijoa Sellowiana	**3/6, 5/-, 7/6**
Magnolia grandiflora, Exmouth variety	**3/6** to **10/6**
Myosotidium nobile	**3/6, 5/-**
Notospartium Carmicheliæ	**2/6, 3/6**
Osteomeles anthyllidifolia	**2/6, 3/6**
Quercus suber (Cork Oak)	**2/6, 3/6, 5/-**
Rhododendron, Dr. Stocker	**10/6** to **21/-**
Robinia Kelseyii	**2/6, 3/6**
Romneya Coulterii	**1/6, 2/6, 3/6**
Sophora Vicifolia	**2/6, 3/6**
Tricuspidaria dependens	**3/6, 5/-, 7/6**
Tricuspidaria lanceolata	**3/6, 5/-, 7/6**
Veronica Veitchii, true blue	**3/6**
Viburnum Carlesii (on own root)	**5/-, 7/6, 10/6**
Viburnum rhytidophyllum	**3/6, 5/-**

A Grand Collection of Hardy Trees and Shrubs, clean Fruit Trees, and good Roses.

Catalogues free on application.

ROBERT VEITCH & SON,
EXETER.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

PLANTING SEASON.
SEND FOR OUR

Descriptive Catalogue

OF

Ornamental Trees and Shrubs, Roses, Rhododendrons, Climbers, Fruit Trees, Forest Trees, Herbaceous and Alpine Plants.

Advice given on all matters appertaining to **LANDSCAPE GARDENING.**

GEO. JACKMAN & SON,
Woking Nurseries, Surrey.
Established over a Century. (Nurseries 200 acres.)

GARDENING FOR HOUSE ADORNMENT.

The love of flowers in the garden leads infallibly to the desire for floral beauty in the house; there are persons who object to plucked blossoms, yet even they rejoice to see growing plants in the rooms and corridors, and especially upon the dinner table. The gardener, therefore, whether professional or amateur, is always confronted with the problem how best to bring his art to bear upon the adornment of the home.

Perhaps the simpler the plan the more gratifying the results. One exceedingly easy and novel scheme is the making of a primrose ball to hang in some window, or a series to suspend along a conservatory adjoining the drawing-room. The best foundation is a small piece of the fish netting that is used to protect fruit trees; this is heaped up a few inches with the most tussocky bits of turf-loam, with perhaps some cocoanut-fibre refuse also, and a third portion of old leaf soil, which so conduces to the welfare of the primrose; the corners of the netting are then gathered together and tied firmly, enclosing the soil materials. A rounded shape is to be aimed at. The next process is to plant young primroses, through the mesh of the netting, all over the ball, pressing leaf-mould firmly around their roots. After this is done more cocoanut-fibre refuse is bound on between the little plants, fine green wool being the right material to use. Finally, dried moss is similarly used to hide the cocoanut-fibre refuse. If the spherical shape has been kept the effect will already be good.

Spiræa japonica clumps can be taken up from the borders, the roots bound into a globe, and a mixture of equal portions of fibre and leaf-mould pressed solidly between all their inner spaces and added as a bound-on covering five or six inches deep, wool being used for the binding, and the coverings of cocoanut-fibre refuse and moss given as before. As the spiræa will only produce leaf and blossom from the top, however, a prettier effect is gained by inserting small roots of variegated arabis at intervals all over the base and sides.

The method of watering a ball of growing plants is to immerse it for a few moments in a pail of tepid water, hang it up to dry where the drip can do no harm, then return it to the position it adorns. Many other hardy plants can be used in this style: Creeping Jenny has a charming appearance, so has London pride, while miniature balls prove popular made of sedums or mossy saxifrages. It is generally wise to employ some jadoo, or else rely altogether upon the fertilised fibre sold for growing bulbs in. Large-rooting plants do not need the netting foundation.

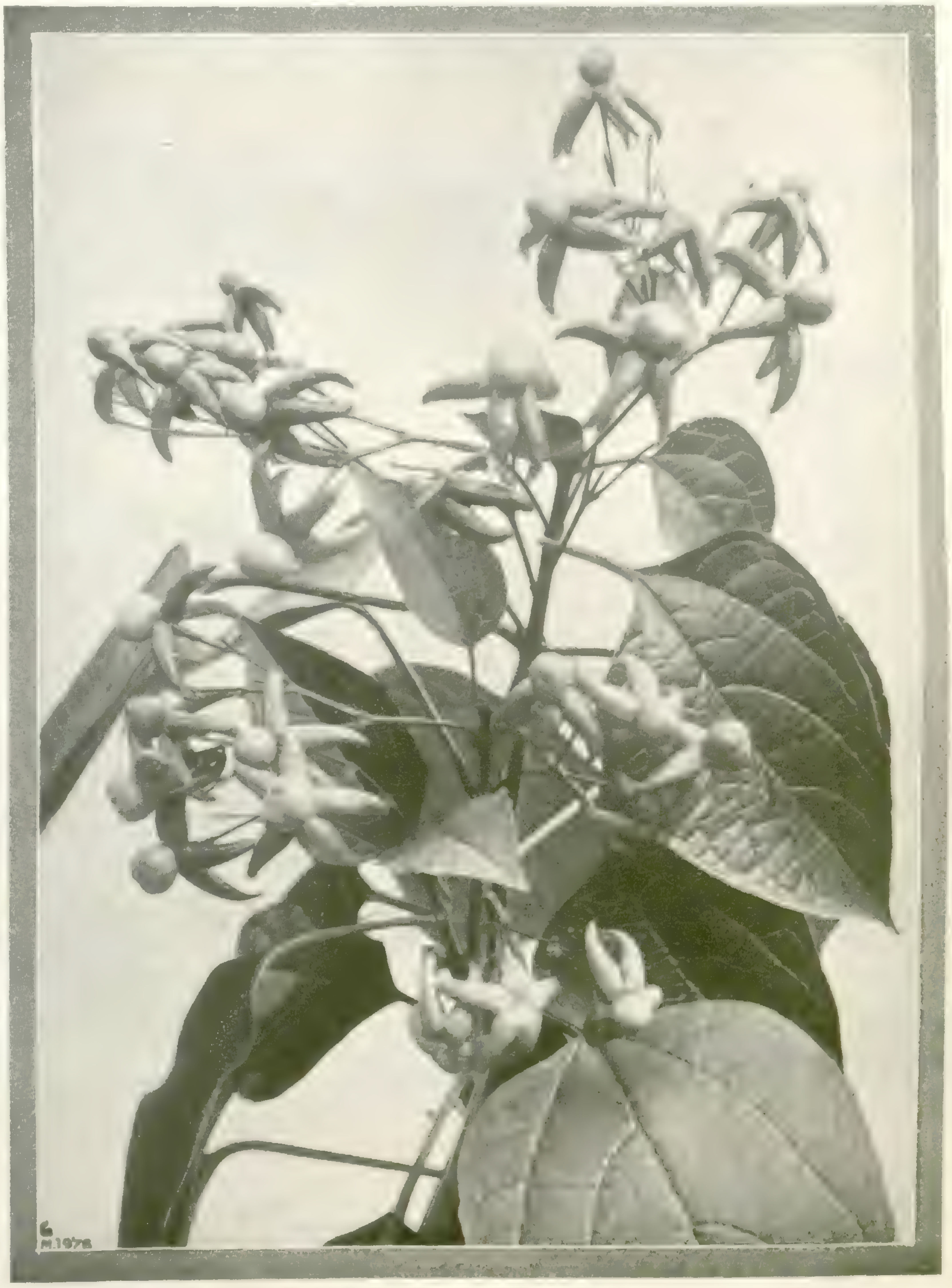
Flowering shrubs are a real joy indoors; they must be grown on in pots in cold frames or unheated greenhouses first, or else sunk in deep beds of ashes out of doors in a sheltered spot. Unless the pots are covered altogether, and a mulch of ashes or cocoanut-fibre refuse is thickly laid over the soil, the roots will be frozen. A beautiful early bloomer to choose is Daphne Mezereum; when it is opening its clustered rosy flowers all along the branches in February, it will be indeed welcome as a centrepiece for the dining table, or a pillar ornament in the hall, and every bud will come to perfection indoors, giving forth unrivalled perfume. There is also Daphne laureola, that is fragrant too, but has only greenish-yellow bloom.

Then the popular yellow winter jasmine is a plant of which the gardener should make many uses; it thrives in pots, will blossom indoors for weeks together without losing its healthy appearance, and can have variegated arabis, the silvery Sedum album, or yellow winter aconite bulbs planted above its roots.

Plant groups are often needed to beautify houses on festive occasions, such as dances, weddings, and dinner parties; the garden cannot supply these plants, but a moderately warmed greenhouse can always contain enough of them if suitable varieties and species are chosen. During the worst months of winter the many kinds of scented-leaved pelargoniums keep vivid green in a temperature of 50 degrees. Primula obconica, lilac, purple, and rose, should be in bloom, also Oxalis rosea and blue trailing lobelia. Seedling fuchsias can be kept from flowering by giving them increased pot room, until their blossom is trebly desirable in December, while freesias, Van Thol tulips, polyanthus narcissi, Roman and other hyacinths, Allium neapolitanum, and daffodils soon come into beauty.

A large collection of small palms, aspidistras, and the common hart's-tongue fern is of inestimable service in group forming. Several evergreen shrubs will thrive in the greenhouse, and serve to assist in house decoration, notably the gold and silver variegated euonymus, laurustinus, and myrtle.

Pots of single French anemones give bright bits of colour; these should be grown altogether in frames until buds are forming, when the greenhouse temperature will hasten them; Spanish iris are perfect room plants at a later season. Clumps of Dicentra spectabilis can be dug up and potted, even when new leaves are forming, and in a warmer temperature soon develop into beauty.



CLERODENDRON FARGESI.

An attractive hardy shrub that has whitish flowers in summer, followed by peacock-blue berries set in a purple calyx. A.M., R.H.S., October 24. The Director, Royal Gardens, Kew

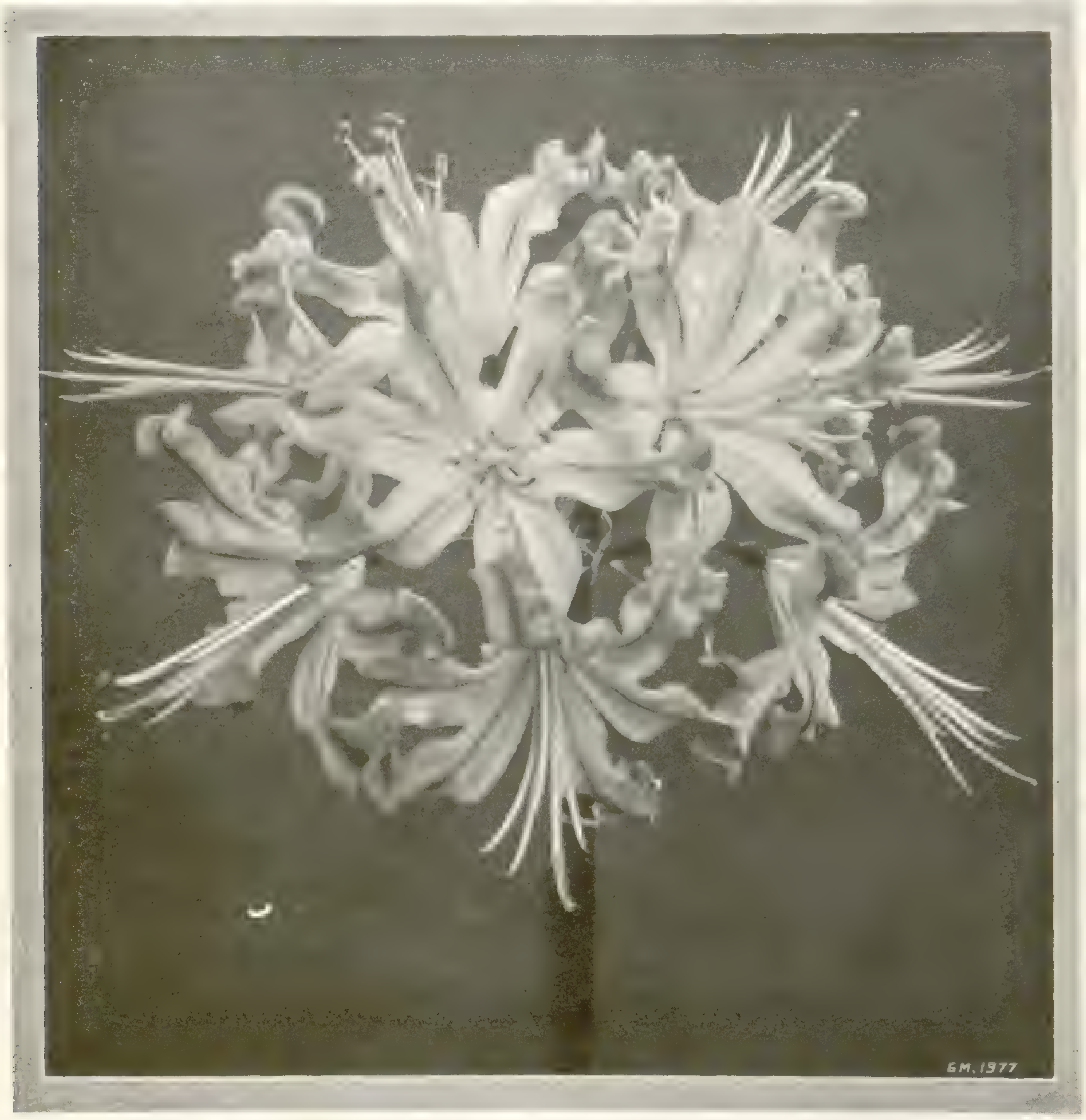
Wire hanging baskets, lined with moss, form receptacles for pot plants of small size, and when slung up in a hall add much to the charm of the home entrance.

M. H.

Carnation Scarlet Glow.—I like this carnation very much, the colour being so remarkably fine, and the shape perfect, added to which the stem is long and stout. It is, by your correspondent, Mr. Montague Allwood, regarded as the best scarlet, and I do not think that many will be found to differ from him.—W. T.

ROSE NOTES.

As I write we are having some heavy, but none the less welcome rains. It is just such weather as this which renders necessary some way of keeping superfluous wet from the roots of pot roses, and hence the advantage of a pit or frame. Recently I saw a simple and effective contrivance that answered the purpose admirably, and yet allowed of prolonged exposure to the benefits of the open air. Some sheets of galvanised iron roofing were laid upon a skeleton frame. They were easily put on or off, and were fixed against wind by some baulks of wood laid on top of them. Here we have just the thing wanted; full exposure without heavy rain and closeness, neither of which are wanted until later, when we can give the water as needed. This is a much better plan than laying the pots on their sides during excessive wet, and anyone can rig up such a shelter.



NERINE MRS. F. R. BALFOUR.

This fine new nerine has shapely, bright pink flowers, shaded with red at the tips of the segments. A.M., R.H.S., October 24. H. J. Elwes, Esq., F.R.S. (gardener, Mr. W. Walters), Colesbourne, Cheltenham.

Some dwarf roses that had to be lifted early were found to be growing nicely upon their own roots. We find those upon the manetti stock push out very freely when the soil is drawn around them, but this is not so frequent with the seedling and cutting brier, especially this season. That there is great help in this "own rooting," few would dispute, and I am much in favour of earthing up dwarfs with suitable compost to encourage those roots as well as those from the stock.

In most cases the ground is now in good condition for planting, and I would get this done as soon as possible, even to the sacrifice of a few tips of growth that are still very active on account of the mild weather and warm rains, feeling it would be better to have the roots in and settled under such ideal conditions. Trim off some of the leaves and soft growths before planting, as this will relieve the strain upon the roots, and prevent shrivelling. I cannot call to mind any year when we had more roses in bloom at the end of October. The flowers will last almost throughout November, if we escape any but slight frosts. With the more general use of a later growing stock in the brier, and also the increase of late-flowering teas and their hybrids, we obtain a much better autumn crop of flowers than was the case two or three decades ago. Then we had no later and better bloomers than Souvenir de la Malmaison, and a few of the tea-scented and noisette varieties in favourable positions.

The great advantage of putting in cuttings of either roses or stocks early in the autumn is already proved this season, for, on lifting two or three I found a promising ball of callus already formed, and in one instance even roots were in evidence. If a cutting will advance so favourably, does it not point all the more strongly to the advantage of early planting whenever the conditions will allow?

I would lose no time in making up cuttings of the brier and manetti, also of the Wichuraianas and other growers of sufficient freedom to be useful and able to support themselves without the aid of foster roots. Nor should we delay in the collection and planting of briers for standards. To get the ground well set about the roots of these is a great point towards successful rooting, and standard stocks are terribly punished by drying winds, in comparison with the dwarfs, which are almost completely buried, and thus quite free from the evils of drying.

It is encouraging to note how well the buds inserted during the past trying summer have "taken." We have very few misses, either upon standards or dwarfs; which is all the more gratifying because it was frequently necessary to water the stocks during the process of budding to obtain enough sap for the bark to lift easily. I think they are more promising than during rainy seasons when the bark has lifted exceptionally well. In the latter case, the stocks are apt to overgrow the rose bud.

May I say that the Editorial note (page 770) in the Gardeners' Magazine Rose Number upon "Awards to New Roses" expresses my idea upon that question absolutely. A. P.

NOTES FROM KEW.

Odontadenia speciosa.

The first time I saw this odontadenia in flower was, I believe, in the Botanic Gardens at Birmingham, but it has not come under my notice in such fine condition as it is now in the Victoria Regia house at Kew. This magnificent stove climber is rarely met with in gardens, though it is a stock plant in many nurseries, where it is frequently known as Dipladenia Harrisi. It is a vigorous growing climber, whose long, flexible shoots are clothed with pointed ovate leaves, about 6in. in length and disposed in pairs. The flowers, which are borne in terminal clusters, pendulous from their weight, are funnel-shaped, fully 3in. across the expanded mouth, and in colour apricot-buff, with the interior of the throat orange-red. In order to induce this odontadenia to flower in a satisfactory manner it needs to be trained to a lofty structure maintained at a stove temperature, conditions that just prevail at Kew. It is a native of Trinidad, and was introduced in 1854.

Thunbergia grandiflora.

Under similar conditions to the preceding, this well-known Indian climber is flowering freely, its large porcelain-blue flowers being borne for some distance along the pendulous shoots. It is a plant of easy culture, and quickly covers a considerable space, but to ensure a display of blossoms full exposure to sunshine is necessary.

Begonias.

The important part that begonias play in the embellishment of our glass structures at this season is well shown in the intermediate portion of the T range, where, irrespective of the hybrids of B. socotrana, which are so universally grown for autumn flowering, there are many others in bloom. Among these may be mentioned the Brazilian Begonia Haageana, with dense clusters of larger white flowers, which are studded with reddish hairs. This begonia will flower more or less continuously throughout the year. A variety, of which there are some good examples at Kew, is B. Haageana Drosti. This is characterised by larger clusters, while the individual flowers also much exceed those of the type. Other kinds, consisting of original species and garden hybrids are B. fuchsioides, red; B. Schmidti, white, dense compact growth; B. Weltoniensis, a very pretty hybrid, with pink flowers; B. Digswelliana, red; B. acuminata, white; B. carminata, deep pink; and B. President Carnot, with very large heads of rosy-pink flowers.

Dædalacanthus Watti.

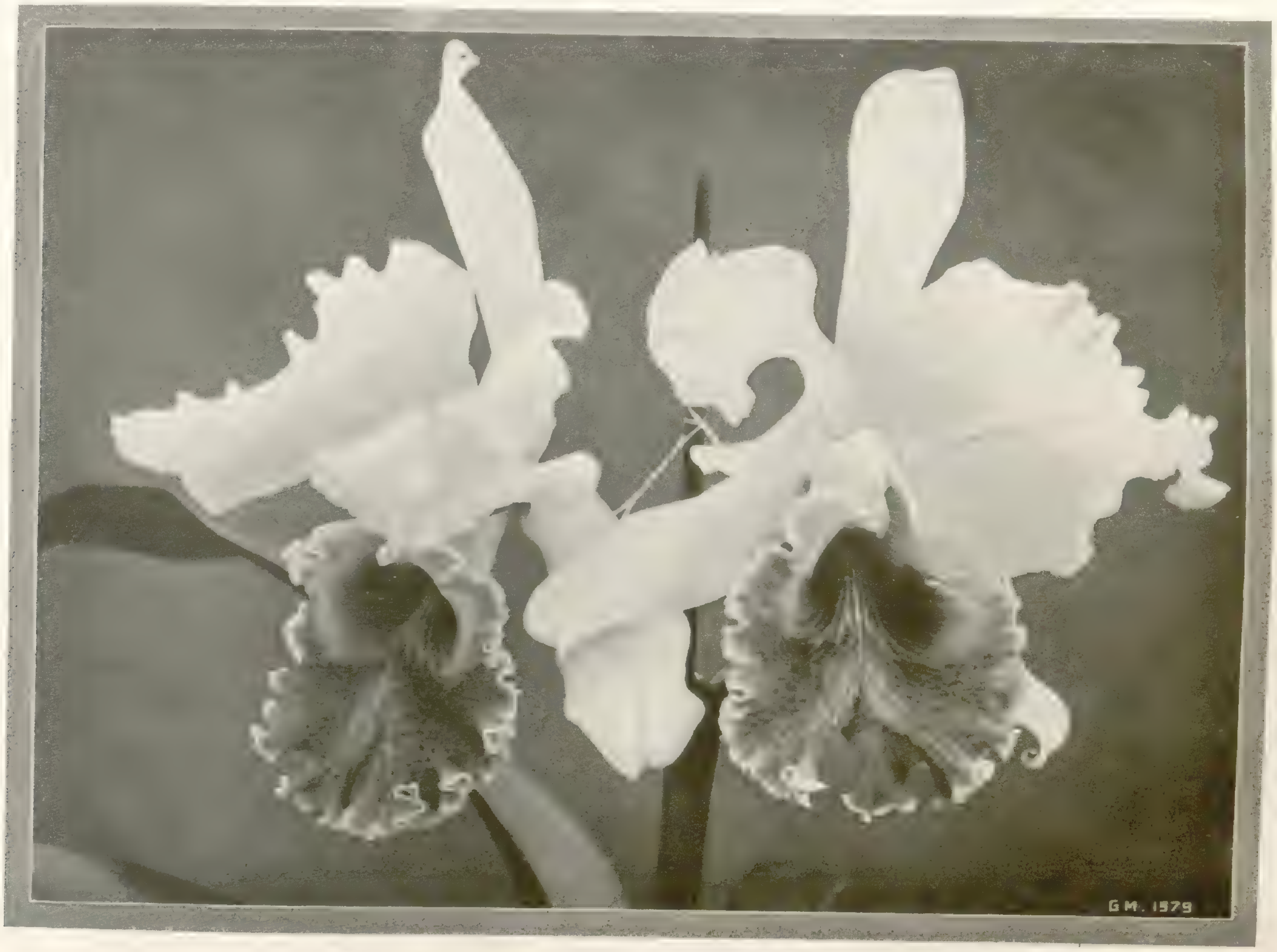
A well-known member of this genus is Dædalacanthus nervosus, whose steely-blue flowers are borne throughout the winter and well on in to the spring. D. Watti is nearly related to it, but differs therefrom in several well-marked features. In the first place, it blooms in the latter part of the summer and in autumn, while the blossoms are of an uncommon metallic purple tint. It is a native of Northern India, and was introduced about ten years ago. At first it was known as Dædalacanthus parvus, a decidedly inappropriate name, but which was changed to that of Watti. Its value for the decoration of the intermediate house at this season is well shown in the T range.

Aphelandra tetragona.

Many of the aphelandras will flower in a comparatively small state, but this, the oldest species of all, is seen at its best when from two to three feet in height. As in the other members of the genus the flowers are arranged in decussate terminal spikes, and are remarkably effective when at their best. It is of comparatvely easy culture, and is sometimes met with under the specific name of cristata. It is now in flower in the intermediate portion of the T range.

Achimenes coccinea.

Some suspended baskets of this little bright-flowered achimenes have for a long time been wonderfully effective in the cool portion of the T range. It is one of the oldest members of the genus, but is not so popular as many of those forms with larger blossoms. Why, it is difficult to say, for when at its best it is really charming. Like the other forms, it can be either grown in pots or in hanging baskets. K.



LÆLIO-CATTLEYA ST. GOTHARD McBEAN'S VARIETY.
A handsome hybrid with rosy-purple sepals and petals, and a rich crimson-purple lip, with yellow throat. F.C.C., R.H.S., October 24. Messrs. J. and A. McBean, Cooksbridge, Sussex.

NEW PLANTS, ETC.

◆

LÆLIO-CATTLEYA ST. GOTHARD, McBEAN'S VARIETY.

For fine size, excellent form and brilliant colouring, this splendid orchid would be difficult to beat. It suggests a magnificent Cattleya Hardyana, but with deeper purple colouring. The very broad and rounded lip is a striking feature, this being a rich and beautiful crimson-purple shade, with deep yellow throat. The parents are L.-c. Gottoiana and C. Hardyana. F.C.C., R.H.S., October 24. Messrs. J. and A. McBean, Cooksbridge, Sussex.

LÆLIO-CATTLEYA LUMINOSA AUREA.

In this handsome hybrid the yellow Walton Grange variety of Lælio tenebrosa was used as parent, in combination with Cattleya aurea. The flowers are large, and the light yellow sepals and petals droop a little, forming a fine background for the large deep velvety purple lip. F.C.C., R.H.S., October 24. Lieut.-Colonel Sir George Holford (grower, Mr. Alexander), Westonbirt, Tetbury, Gloucester.

VANDA KIMBALLIANA ALBA.

A charming albina form, the flowers being quite white save for a little light green-yellow shading on the lip. It is a distinct and beautiful acquisition. A.M., R.H.S., October 24. Messrs. Mansell and Hatcher, Rawdon, Leeds.

NERINES.

Mrs. F. R. Balfour.—A very distinct and particularly beautiful seedling, with a shapely truss, and rounded flowers with somewhat broadened segments. The latter are prettily waved at the margins, rich pink, with bright red shading at the tips. A.M., R.H.S., October 24. H. J. Elwes, Esq., F.R.S. (gardener, Mr. Walters), Colesbourne, Cheltenham.

Mrs. Meade-Waldo.—A fine strong growing variety, with bold flowers of a bright orange colour, tinted with scarlet. A.M., R.H.S., October 24. H. J. Elwes, Esq.

Snowflake.—Though not such a strong grower as some of the other seedlings submitted, this is very beautiful, being quite white, with broad, wavy segments. A.M., R.H.S., October 24. H. J. Elwes, Esq.

Hon. Miss Gibbs.—Another strong grower, bearing a large umbel of bright purplish-red flowers. A.M., R.H.S., October 24. H. J. Elwes, Esq.

LONICERA NITIDA.

At first sight this neat, shiny-leaved shrub seems to have a closer relationship to the cotoneasters than the honeysuckles. It is evergreen, and its small shining leaves are closely set on the twiggy branches. It is said to be quite hardy, and it should prove a capital shrub for the rock garden, and wherever small evergreens are needed. The greenish-white flowers are small and ineffective. A.M., R.H.S., October 24. Messrs. Jas. Veitch and Sons, Chelsea.

VERONICA SILVER QUEEN.

A dwarf, shrubby veronica, apparently of the Andersoni class, but with closely set leaves that are bright cream colour, with a medium green line. Should be useful for window boxes, and for edging groups of shrubs wherever it is found hardy. A.M., R.H.S., October 24. Messrs. Wm. Cutbush and Son, Highgate.

CLERODENDRON FARGESI.

Hitherto Clerodendron trichotomum and C. Bungei have been regarded as the only hardy members of a fairly popular genus, but to these must now be added C. Fargesi, a species that outranks the older sorts in beauty, though possibly not in stature. C. Fargesi forms a tall evergreen bush, and has an abundance of bright green oval leaves, each four or five inches long and about three inches broad. The flowers are terminal, whitish, and borne in summertime, and they are followed by attractive peacock-blue fruits, each set in a purplish fleshy calyx. A.M., R.H.S., October 24. The Director, Royal Gardens, Kew.

BERBERIS VERRUCULOSA.

A low-growing species from Western China. It is hardy, rising only about two feet high, and clothed with spiny evergreen shining green leaves. The yellow flowers are followed by purplish fruits. It is a dense growing shrub that may in time be useful for coverts as well as for ornamental planting. A.M., R.H.S., October 24. Messrs. Jas. Veitch and Sons, Chelsea.

CHRYSANTHEMUMS.

Bronze Goacher's Crimson.—A counterpart of the popular early-flowering Goacher's Crimson in every respect save colour, which is bright chestnut-bronze. A.M., R.H.S., October 24. Messrs. W. Wells and Co., Merstham.

Dorothy Dann.—A pretty single-flowering variety of bright bronzy terra-cotta hue. A.M., R.H.S., October 24. Messrs. W. Wells and Co., Merstham.

VERONICA SILVER QUEEN.

A shrubby veronica of dense habit, and with closely-set creamy leaves, each with a central green line. A.M., R.H.S., October 24. Messrs. W. Cutbush and Son, Highgate, N.

ASTERS.

Amethyst.—A large-flowering and late perennial aster of great elegance, with flowers as large as those of Climax, but scarcely of such good form. The colouring is bright lavender-blue, a livelier hue than seen in Climax. A.M., R.H.S., October 24. Hon. Vicary Gibbs (gardener, Mr. Edwin Beckett, V.M.H.). Aldenham House, Elstree.

Profusion.—A very free and graceful variety, the branching growths carrying numbers of long, slender branchlets, each crowded with small whitish flowers. A beautiful aster. A.M., R.H.S., October 24. Hon. Vicary Gibbs.

PLUM COE'S VIOLET.

A handsome late dessert plum, combining excellent flavour with striking appearance. The variety is said to be a sport from the famous Coe's Golden Drop that was raised by Jervaise Coe, a Suffolk market gardener, as far back as the end of the eighteenth century. The fruits are shaped like those of Coe's Golden Drop, and they are delicately suffused with soft purple over a greenish yellow ground, with a bright band of violet-blue down the suture. It is a good plum for a warm wall, and is a success under orchard house culture. A.M., R.H.S., October 24. Mr. J. Vert, gardener to Lord Howard de Walden, Audley End, Saffron Walden.

DAHLIA DELICE.

An extremely beautiful dahlia of the true decorative type, carrying shapely flowers on stout stems. The plant is, we understand, of excellent habit for garden decoration, while its charming pink shade will render it a favourite for home decoration. A.M., R.H.S., October 24. Messrs. Carter Page and Co., London Wall, E.C.

THE REMOVAL OF PLANTS.

The individuality displayed by plants in their attitude towards removal, manifested as it is by their resentment, indifference, or appreciation, is scarcely less marked than in different phases of their normal life-history, and it is only by patient observation and experiment that we can get to know how they like to be treated in regard to this often necessary operation, for plants not only differ in the time of the year they most readily submit to it, and in the way in which they like it done, but vary in their likes and dislikes according to the conditions under which they grow. In dry, sandy soils, for instance, many plants do better if moved in October or early November, so that they may quickly get hold of the soil, which, in such a case, has usually still a considerable amount of warmth at this season, while similar plants in a wet clay soil will sometimes stand a better chance if left undisturbed till the spring, such a soil retaining little warmth after October, while, when newly moved, it holds more water through the winter than it would do otherwise, and is a better harbourage for slugs, which so often seem to prey on newly moved plants in preference to others.

In the case of the light soil, the plants will be getting established in November, so that they will be better able to stand a dry spring; while, in the other case, where the soil is not very likely to get really dry before the middle of May, there are two sides to the question at least. Some plants, too, which are not perfectly hardy, such as pentstemons and antirrhinums, will often, in some soils, stand the winter if left where they have been growing during the previous month or two, or more; but if moved in the late autumn they generally succumb. This seems not to be due to the freezing of the roots, and so to the stoppage of the water supply during sharp frosty weather with drying east wind, as one might suppose, for it is often observed that the moving is just as unfavourable to their standing the winter when it is a very mild one. It may possibly be due to the diminished vitality owing to the moving, as the flowering of Coreopsis grandiflora and Iceland poppies, both doubtful perennials, lessens their chance of standing the winter, presumably by lessening their vigour of growth, as it undoubtedly does.

Another aspect of plant removal is the fact that, while many may be moved successfully at almost any time, even, in some cases, when they are in the full vigour of spring or summer growth, others either resent being moved during the resting season, or do better if moved when growth is active. An inexperienced man looking at a rose tree in full leaf at the end of October would say that it would be better to wait for the leaves to fall before lifting it, yet it is a fact that rose trees may not only be moved with impunity at this season, if replanting is not delayed by a journey, but appear scarcely to feel the move. On the other hand, German irises, which, having a certain amount of foliage to keep the roots active during the winter, one would think, might be moved at any time between autumn and spring; yet, with a view to next year's display, are better moved during the latter part of July or early in August, according to the dryness of the season, and kept watered till they have recovered. They begin to make their growth for next year soon after they have flowered, and if they get established in their new position during September they will generally flower well the following season.

Many plants, especially alpines, seem to go to rest from October to March, or even from September to April, which is doubtless the survival of their method of adapting themselves to being buried underneath the snow during this period in their native habitats. Some of them are better moved even in flower than in late autumn, as they can be mulched and taken care of during any dry weather that follows, when they will become well established for another season. Some of the campanulas, such as C. carpatica and C. turbinata, and perhaps the mountain species generally, resent being moved in the late autumn, sometimes hardly recovering after it, whereas they can be moved in April with impunity. If the rock garden generally is overhauled in the latter half of August, when such replanting becomes necessary, choosing damp weather for the operation, it will suit the majority of plants better than any other time, and they will have time to re-establish themselves before they go to rest. The long-spurred columbines, too, though they seem to move so well in the late autumn with a large ball of earth and fibrous roots, yet never really recover from the check which it gives them unless the conditions are very favourable afterwards. If they cannot be moved in August, or early September, they are best left till March or April.

Herbaceous plants which finish off their growth in July or August are best moved then, if at all. Chinese pæonies will feel the move a good deal, whenever it is done, but they will feel it less in August than a couple of months later. The same with

Dielytra spectabilis, delphiniums, and gypsophila all bad subjects to move. The Japanese anemone—equally bad—is best moved in early October, if it must be moved at all. With such plants as these it is a good plan to have a box of bonfire ashes handy to put round the roots, as the fine particles get in close contact with the few rootlets they have and help the plants to make a new start. Fortunately the majority of our spring-flowering plants are a contrast to these in this respect, as they can be moved at any time from September to April, though early October is doubtless best with most of them.

There is one point which is often neglected in moving plants, and that is, taking note how the roots grow in the soil, e.g., horizontally or vertically, or whether the plants have a tendency to get constantly deeper in the soil or further out of it, etc. The object should be to replant them so that the roots are arranged after moving as they were before, while if the plants tend to get nearer the surface, as, for instance, with white lilies, tall phloxes, and many surface-rooting perennials, they should be planted a little deeper than they were before, and vice versa. Want of observation of these peculiarities of plants doubtless accounts for many failures, for when plants have acquired a certain habit of rooting owing to the conditions under which they were developed, it is not to be supposed that this character can be altered all at once with impunity. This is especially noteworthy with alpines and rock plants of all sorts.

Closely allied to this subject is the keeping of bedding plants in pots until they are unduly root-bound. It is not very much trouble to give the plants a decidedly better start if, when bedding out has to be delayed with any particular plants, they are turned out of the pots and planted in shallow trenches in some part of the kitchen garden, when the roots, instead of going round and round the pots, will spread out in all directions, forming a sort of wig, and be just ready to go ahead when put in their flowering positions.

A word in conclusion on moving plants in dry weather. It should be avoided, if possible, as regards dryness of air, but it is not unusual to have the soil very dry during late August and September, which, as pointed out above, is a very favourable time for moving many plants. The first thing to do is to thoroughly soak the plants before lifting them, and to do this may need two or three waterings spread over as many days. No less important is it to pour water into the hole before putting the plant in its new place, a watering of the surface after the plant is put in rarely moistening the roots properly when the soil is dry. This applies, too, when bedding out in a dry soil in May and June. When any plants have to be taken up with very little earth on the roots, it is a good plan to dip the roots in water before planting. P. C.

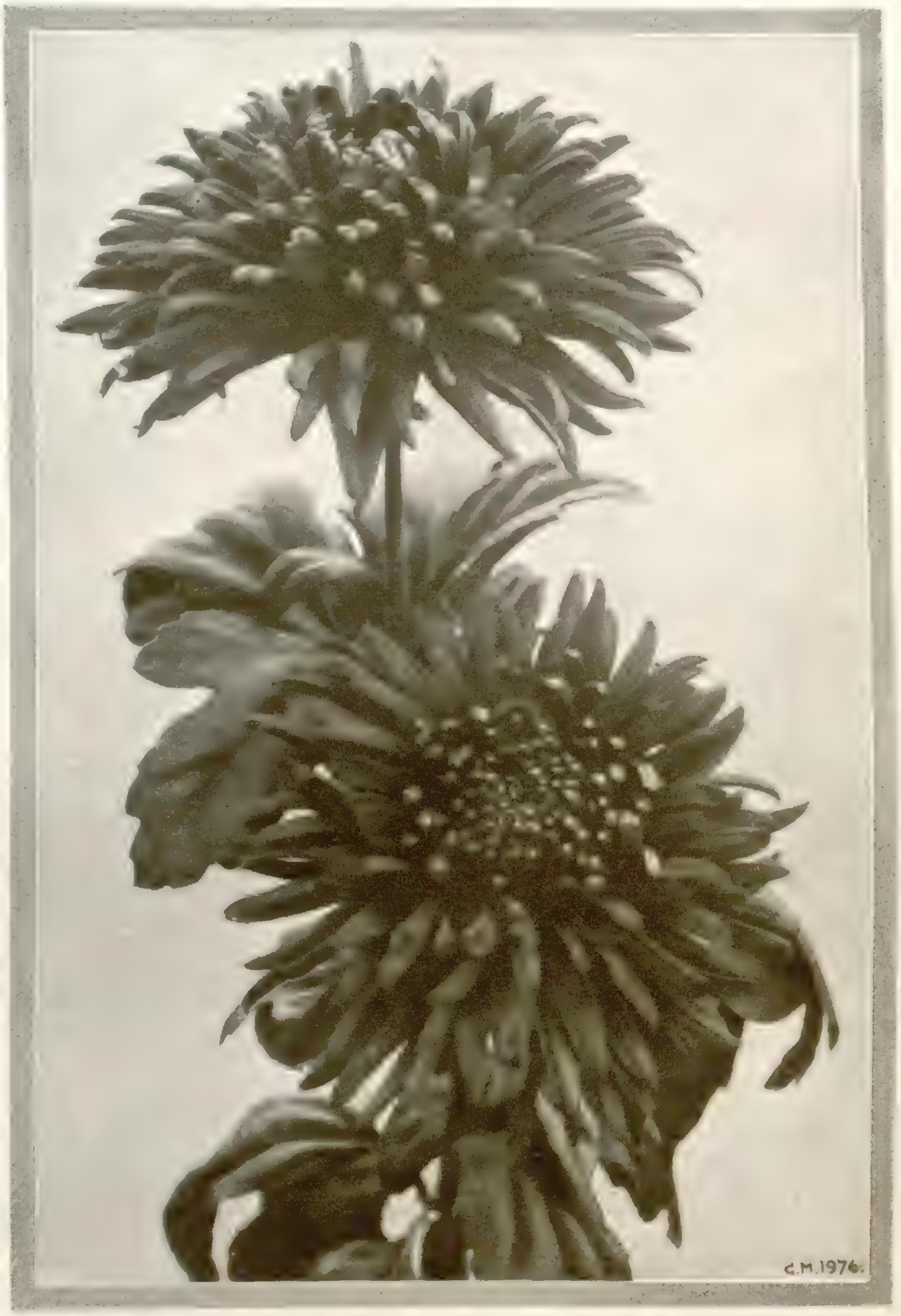
Apple Benoni.—If Mr. Markham has not grown this apple, I would strongly advise him to do so. Succeeding Worcester Pearmain, and ripening before King of the Pippins, or Blenheim Pippin are ready, it fills a gap, as we have no really good flavoured apple at that period. In this way Benoni is most valuable, and the flavour at the end of September and in October is quite first-rate, while in appearance it is handsome, being heavily striped and flushed with crimson on a yellow base. In shape and size it much resembles King of Pippins. In some seasons it is a shy bearer; the trees should be worked on the paradise stock, and grown as a bush, and the branches kept thin. It is of American origin, and was introduced here by Mr. Rivers.—E. M.

FRUIT FROM A NEW GARDEN.

From the point of view of the gardener, especially if he is fond of fruit, the great disadvantage of building oneself a house, or buying or hiring a newly-built house, is that one has to convert a field, or a piece of one, into a garden, and during the process one grows older, and is dependent in the meantime upon the greengrocer for one's supply of fruit. If one has been accustomed to growing fruit for oneself this is so extremely unsatisfactory as to induce one to take a house a few years old in preference, even if it is lacking in some of the modern conveniences. Growing our own fruit makes us very fastidious, especially in the matter of soft fruits, while with apples and pears it is scarcely less difficult to buy them of the quality we have been accustomed to, partly owing to the premature gathering to which they are usually subjected, and partly to the rough handling and indifferent storage which they have received. This is an effective answer to friends who would dissuade us from planting fruit trees by telling us we can buy the fruit more cheaply. The man to whom an apple is an apple and nothing more can doubtless do so, but not the man who has once grown apples for himself. Therefore let us consider the ways in which we may minimise the disadvantages in this respect of a new house.

Strawberries, Loganberries, and Raspberries.

The first fruit that will occur to everyone is the strawberry. Young plants bedded out at the end of the summer or early in autumn will yield fruit, sometimes of the finest quality, the following summer. If not planted till the spring little, if any, fruit must be expected the first season. The raspberry is only less quick in making a return. I have planted canes late in March which have made such good growth the following summer that they have produced an excellent crop the year after—that is, fifteen months from the time of planting. In this case, however, both summers were damp, and, generally speaking, they should be planted four or five months earlier to ensure the same result. This is assuming the canes are cut down to within a foot of the ground at the time of planting, or before growth begins, and kept mulched during the summer. The loganberry, which seems likely to grow in popularity, produces fruit equally quickly. The two last-named fruits will be in their prime the third summer after planting, producing



CHRYSANTHEMUM BRONZE GOACHER'S CRIMSON.
Sport from Goacher's Crimson, the flowers red-bronze, suffused orange. A.M., R.H.S., October 24. Messrs. W. Wells and Co., Merstham.

fruit in as great abundance as they ever will, while the quality may be even finer than at any later period, assuming, of course, that the seasons have not been abnormally dry; or, if so, that the canes have been well looked after.

Currants and Gooseberries.

Gooseberries may be had almost as quickly as raspberries. Ordinary bushes, it is true, are three or four years in coming into good bearing, but we may have a moderate crop very quickly in two ways. If three or four-year-old bushes are planted late in October they will bear a few berries the first year without injury if the young growth is well shortened at the time of planting, and they may be set about three feet apart, so that many trees can be put on a small space. Alternate trees can be taken up and planted elsewhere after three or four years, or thrown away, as they are very cheap. In this way a very fair crop of fruit may be obtained from even a small space eighteen months after planting. If the cost of the trees is urged as an objection it must be borne in mind that ripe gooseberries can never be bought in good condition, even if they can be bought at all, which is rarely the case, though gooseberries for sale are often ticketed as such. Another way in which fruit can be obtained even more quickly than in the way suggested above is by the planting of single cordons in rows nine inches to a foot apart in the row. If three or four-year-old trees are planted late in October in good soil a fair crop—say, from half a pound to a pound to the tree—may be expected the following summer, and the second year twice this amount. As twenty cordons take up little space—say forty square feet or less—this is not a bad return from the ground in a short time, while the cost of the trees may be put down at ten to fifteen shillings.

The other bush fruits—black, red, and white currants—are slower in coming into bearing, and are not of sufficient value as compared with shop fruits to make it worth while to adopt exceptional methods to obtain an early return.

Plums.

To come to the consideration of fruit trees proper, we cannot expect quite such quick results in fruiting, though here results are much quicker than our forefathers ever dreamed of. Let us deal with plums first. Everything depends upon the stocks on which they are budded and upon the choice of varieties. The Victoria, for instance, may be expected to yield some pounds of fruit, planted early in November against a wall or fence, the second summer. For speedy returns this is probably the best of all to plant, though as a dessert fruit it is only of very moderate quality unless very well ripened. As single cordons plums yield very good results in the minimum of time if the most prolific varieties are chosen, a small crop being often produced the first summer after planting, and a very fair crop the second summer. But no such results must be expected from the greengage, or, indeed, any of the gage section. These have to be waited for, and they are worth it. Such a variety, however, as Early Prolific (Rivers') is often literally clothed with fruit the second summer after planting in cordon form, as also the Czar, Belgian Purple, Monarch, and some others. These four varieties would keep up a succession of fruit for two months, August and September, and though generally classed as culinary varieties, they are all very fair eating when fully ripe. The only two dessert varieties which come near these for early fruiting are Jefferson and Denniston's Superb, which, if one happens to have very well-grown trees on the most favourable stock will sometimes do well the second year. If any of the trees—cordons or otherwise—show any tendency to rank growth the first season, they should be taken up and root-pruned just before the leaves have all fallen. Of course, protection from frost is assumed when speaking with such confidence of early fertility. The planting of cordons in this way should only be supplementary to other forms of tree, which will be in their prime when the cordons are getting worn out, if cropped very heavily year by year.

Pears.

Pears are less likely than any fruit to yield early returns, for though cordons of the most fertile varieties on the quince, will sometimes produce a few fruits the first season, and more the second season, we must not pay too much heed to what is written about cordon pear trees paying for themselves the first year. I have never had such an experience with any fruit tree. Cordon pears often take on too much growth, and consequently need root-pruning to get them into good bearing. By planting them obliquely against a wall or fence, or artificial support of any kind, two feet apart, a good many trees may be put in a line of twenty yards, and, taken together, some amount of fruit may be expected the second year. If the expense of planting is considerable, on the other hand, the fruit is of the highest quality. The following are almost sure bearers, as well as sorts that should not be left out of any collection, however small: Louise Bonne of Jersey and Marie Louise d'Uccle (October), Emile d'Heyst, and Durondeau (November), and in warm situations Beurré Superfin (September), Doyenné du Comice (November), and Winter Nélis (December). The last three are possibly the finest trio of pears that could be named.

Apples.

Lastly we must consider apples. Much quicker results can be obtained from culinary than from dessert varieties of these, though most of the former are, by real apple lovers, considered fine eating when well grown, carefully stored, and fully matured. Some may object to the trouble and expense of growing these when they can be bought so cheaply. Well, the trouble is a great pleasure to those who make a study of it, and a source of never-failing interest; the expense is not great, and is generally paid for in a very few years at the most; while as to quality, even for cooking, the bought apples, being usually picked before they are mature, often put straight into barrels before they have sweated, and generally roughly handled and badly stored, are not to be compared with those from one's own garden, even allowing for the partiality of the grower. There are two varieties which, planted in quantity as bushes, either on the paradise or on the free stock, will keep up a good supply of apples for the kitchen from August to April, and these are Stirling Castle and Lane's Prince Albert. They are wonderful bearers, and if planted in good soil as soon as the leaves fall—there is no fear of their growing too strongly—may be expected to produce a fair amount per tree the following season. Stirling Castle is often ready for use late in July, and continues in season till October, middle or end, according to the season. Lane's Prince Albert, when well matured, becomes very fair for eating in April. If a more particularly mid-season sort is wanted, Seaton House might be mentioned, which is at its best from October to December, and is very fertile. These three are small growers, and may be planted eight or nine feet apart as a permanency, or four or five feet temporarily, and alternate trees transplanted or done away with after four or five years. As for dessert varieties, as stated above, none give crops so speedily; but for fairly quick returns, for a small crop the second or third year—not often the first—the following might be planted: Worcester Pearmain (September), Fearn's Pippin (November to February, of moderate quality), and, in warm situations, King of the Pippins (October to December) and Cox's Orange Pippin (November and December). All these are suited to the cordon form, and on a given space more fruit would probably be obtained from trees of this form for the first five years than from bushes.

The recommendations in the above notes are made solely with the view of speedy returns from a newly-made garden, and the planting suggested should be quite independent of, and supplementary to, the planting of fruit trees for future results. The sorts named are not necessarily the best for all purposes, but commend themselves by reason of their great and early fertility. Where results are spoken of the first season after planting it is assumed the trees are planted late in October or early November, for if not put in till after Christmas nothing can be expected till the second season. It is better, however, to plant even early in April, supposing the trees to be looked after in a dry summer, than wait till the following autumn, as better results may be expected the next year.

Alger Petts.

CLEMATIS DAVIDIANA.

This is one of a number of kinds of clematis of sub-shrubby habit, which form a distinct group, characterised by large inflorescences of tubular blue flowers. It is of Chinese origin, and was named by Franchet in compliment to the great French missionary and plant collector, Abbé David, who spent many years of his life in the Chinese Empire; and with the aid of herbarium specimens brought to the notice of Western botanists many of the hitherto unknown floral treasures of the East. As a garden plant it is found between two and three feet in height, numerous stems rising from one common rootstock. The lower parts of the branches remain year after year, but the upper portions perish with the flowers. The compound leaves are larger than those of other clematises except those of one or two closely allied kinds, such as C. heraclesæfolia and C. stans, the terminal leaflet being nearly 6in. in length and 4in. wide.

About July buds are noticeable on the upper half of the current year's shoots, and as these develop, the end of each branch is transformed into a fine inflorescence, bearing large numbers of pale blue flowers, each one of which is about a-half to three-quarters of an inch long. To succeed with this species it is necessary to prune it back in February to within two or three buds of the base of the previous year's wood, and to keep the crowns well thinned out. Good loam, containing lime, will be found to form a good rooting medium.

W. Dallimore.

Apple Edward VII.—Instead of growing this apple, I would advise Mr. Day to grow Bramley's Seedling. While admitting that King Edward VII. is a good apple when you can get a crop, it is so much like Bramley's Seedling in many respects—appearance, quality, flavour, growth, and keeping qualities—that it is really not required, except by those who are fond of variety. This was the impression I formed of it when I saw it first at the autumn show at Birmingham some years ago, and that opinion has been emphasised by experience with it.—E. M.

WORK FOR THE WEEK.

◆

ORCHIDS.

DECIDUOUS CALANTHES.—These have their flower scapes well advanced, and, as the foliage will be decaying with their further development, some care is necessary in affording root moisture. It is desirable that these orchids should receive enough water to assist them to develop their spikes and expand their flowers. No hard and fast lines can be laid down as to the quantity of root moisture to be afforded. Calanthes are, perhaps, grown under more varied conditions than any other orchids, for if no others are cultivated in a private garden we generally find some deciduous calanthes, and in most cases we find them grown with a considerable amount of success. The aspect of the house makes a great deal of difference in the evaporation of moisture. We never permit our plants to remain in a dry state at the roots for any prolonged period until after the plants have passed out of flower, but care is observed not to allow the soil to become in any way stagnant. Calanthes should be placed in a position within a reasonable distance of the roof glass. It is not desirable that the flowers should be clustered closely together on the spike, or a great deal of the grace is lost; while, on the other hand, if allowed to become unduly drawn, the spaces between the flowers are too great. Plenty of light should be afforded.

CALANTHE SEEDLINGS.—As with many other kinds of orchids, the seeds of calanthes sown in the spring and early summer have been late in germinating, and consequently many of the seedlings are only just ready for transplanting. It is a difficult matter to deal with seedling calanthes if they are permitted to remain on the old seed bed during the winter, for the small bulbs which are produced in many cases the first year are difficult to find after the tiny foliage has gone, and there is a danger of their destruction on the dried-up compost necessary for the resting period of the older plant. We find it a good plan to transfer several seedlings together into small pots. The pots being filled with fibrous peat and chopped sphagnum, and surfaced with some finely-chopped sphagnum moss. If the seedlings are pricked off into store pots now they will root into the potting material, and can be afforded careful attention. There is also the advantage, if the store pots are placed on a shelf or near the glass in a warm house, that they commence to grow earlier in the year, and they may then be potted singly into small pots, and greater progress is obtained during the next growing season. — H. J. CHAPMAN, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

CHRYSANTHEMUMS. — These are now making a fine show, and a little heat will be found necessary on damp days to prevent the blooms from damping. This, if worked together with the ventilation, will maintain a suitable atmosphere. The latest flowering varieties should be removed indoors, and placed in a cool house, where they will require less attention in case of frost. Continue to disbud these late varieties, leaving only one terminal bud on each shoot. Manurial assistance should be given until the buds show colour, when the supply of liquid or other stimulants must cease.

BIENNIALS. — Campanula pyramidalis and Canterbury Bells, which are required to flower early next spring, should be taken up with a good ball of soil and potted. A 32-sized pot will be found large enough, and will allow for a shift later on. A cold frame is a suitable place in which to winter the plants. After they have recovered from the check occasioned by potting they will not require much water, as a more healthy state is maintained if they are kept rather dry during winter. Coreopsis grandiflora, if treated under similar conditions, will prove a very valuable addition to the early-flowering plants for conservatory decoration.

PRIMULAS.—During the flowering season the atmosphere of the house in which primulas are staged should be kept rather drier than in the growing season. Primula obconica and its two varieties, P. obconica alba and P. obconica rubra, require a rather higher temperature than that given to P. sinensis, to secure the best results. P. kewensis, being very nearly hardy, thrives best if placed in a house where fire-heat is given only during very severe weather. Occasional waterings with diluted soot water will greatly benefit the plants.

HARD-WOODED PLANTS. — If not already done, these plants should be housed immediately. The majority of plants coming under this heading are essentially what are known as cool greenhouse subjects, and, greatly resenting artificial heat, and being unable to withstand frost, their cultivation during the winter months requires careful attention. When artificial heat is found necessary, ventilation should also be afforded. Watering must be carefully carried out, never allowing them to become dry at the roots, and at the same time exercising care in the other direction. The genistas are especially averse to overwatering during the cold season, this causing the foliage to turn yellow.

CAMELLIAS are now swelling up their buds, and, if planted out, it will be necessary to examine the borders to make certain that they are in a proper state as regards moisture, as drought is one of the chief causes of buds falling. Disbudding may be done where buds are thickly set, doing the work gradually so as not to cause a check to the trees.—A. GRUBB, Porter's Park Gardens, Shenley, Herts.

HARDY FRUITS.

PEACHES AND NECTARINES.—The late heavy rains have so thoroughly soaked the ground that transplanting fruit trees may be at once commenced. Peaches and nectarines should be the first to receive attention, as, unlike many other fruits, if moved with care an abundant crop may be carried the following season. Stone fruits should always be provided with plenty of old lime rubble, not only because the trees require lime to form their fruits, but also as an aid to keeping the soil sweet and wholesome; no fruits being more impatient of sour or water-logged borders than peaches and nectarines, or so likely to suffer from an excess of moisture about the roots.

RASPBERRIES.—Plantations of raspberries are often allowed to occupy the same site for a number of years, and in many instances, with the aid of an annual top-dressing, this is found to suit their requirements, but where the strength of the plants annually deteriorates, it is obviously time to provide a new situation for them. This may be done at the present time. The soil should be thoroughly trenched, working in at the same time abundance of wood ashes or burnt earth from the refuse heap, and, if the soil be poor, well-rotted manure should be well mixed with the bottom spit. Strong healthy suckers with plenty of fibrous roots attached should be planted firmly in rows or clumps; if in rows, which is the most usual method, such rows should be at least 5ft. apart, allowing about 2ft. from plant to plant, or even more; nothing is to be gained by planting too thickly. The canes should be left until early spring, when it is most essential for the future wellbeing of the plantation that they should be cut to within two or three inches of the crown, thereby forfeiting a crop the first year after planting.

NUTS.—The Kentish cobs are not so generally cultivated outside of Kent and the adjoining counties as might be expected considering their value and usefulness as an adjunct to the dessert table. Who among the younger folk does not enjoy the big fat kernels of a cob nut? To grow these successfully the trees will need cultivating quite as highly as the more popular fruits. The plantation should be given the most open position, well cultivated, and kept as free from weeds as possible. Manurial dressings should also be given occasionally. When storing the nuts a cool, moist place should be afforded, where they will keep sound and plump for months. Care must be taken that rats or mice cannot reach them, or the whole store will disappear in an incredibly short time.

THE FRUIT ROOM.—Apples and Pears will need a little attention, and must be carefully looked over, removing all decayed fruits, or many others that come into contact with them will be affected. All specked fruits should be laid aside for immediate use. Continue to keep the floors moderately moist, and decrease the ventilation, keeping the room at as even a temperature as possible.—J. WHITTLE, Cheveney Gardens.

THE KITCHEN GARDEN.

SEAKALE.—The crowns will be matured by now, and fit to lift for forcing purposes. Have a batch of plants lifted, the larger roots reduced, and place them in the mushroom house. The early batches are often somewhat slow to commence growth, and we find a satisfactory plan is to plant them in boxes about ten inches deep and to hold from two to three dozen heads. These boxes can be placed in warm and convenient positions, watered with warm water, and otherwise treated better than if planted out in a bed. Syringe the crowns twice each day, and keep a continuously moist atmosphere by damping down the floors, etc., of the house.

ASPARAGUS.—Where this is in demand through the winter, and a supply of crowns has been prepared for forcing, a beginning may be made by lifting a quantity and placing them in heat. A heated brick pit is very suitable for forcing this vegetable, and a mild hotbed largely consisting of leaves made firm, with about nine inches of sandy soil as a planting medium, will afford a natural warmth for the roots, while the top water pipes will produce the requisite temperature of 55 to 60 deg. Water the plants copiously with tepid water and daily syringe the inside walls to produce a moist atmosphere. Failing such a pit, a hotbed made up with sweetened manure and leaves, with a wooden frame placed over it, will serve, but is not so convenient to work, especially during extreme cold weather.

SPRING CABBAGE. — Plants that were put out as advised will now be well established and growing freely. It will much benefit them if the soil is pointed over and then drawn up to their stems to steady them during windy weather, and to give protection when sharp frosts arrive. In places where the plants are not growing away as desired apply a dressing of nitrate of soda to the soil.

TURNIPS.—The late-sown crops will in many cases be of serviceable size,and the bulbs should be pulled and stored in sand for use. If the ground is not immediately required the smaller bulbs can be left to grow. The Orange Jelly variety, sown in early September for latest winter use, has, owing to the exceptional warm weather, grown to maturity earlier than usual, and should be similarly treated.

HERBS.—From now onward it will not be safe to trust to an outside supply of some herbs; pot up or box some plants of tarragon and mint. It is sometimes a good plan to sow a few boxes with chervil in cases where it is largely used for flavouring salads or other purposes. Do not force the plants very quickly, but grow them in a temperature of about 50 deg., or the growth will be thin and worthless.

GENERAL REMARKS.—Continue to remove all finished crops from the land, such as runner beans, the latest peas, vegetable marrows, etc.; and make a thorough clearance of weeds from the quarters and walks. Finish up the clipping of hedges and give everywhere, as far as possible, a neat appearance. This will give time for the pressing work of manuring and trenching the quarters as they fall ready to be dealt with later. —CHARLES FLACK, Cholmondely Castle Gardens.

EXHIBITIONS AND MEETINGS.

◆

Croydon.

One of the earliest of chrysanthemum shows is that held at Croydon—this year, on October 25 and 26—and as on several previous occasions, the Adult School Hall, Park Lane, was the place of exhibition. The show was not so extensive as usual, owing to the curious fact that, despite the hot season, large exhibition blooms are later than usual. The quality of the flowers shown was excellent, and the same remark applies to the vegetables and fruits.

There was but one entry in the class for thirty Japanese blooms, distinct, staged in six vases; this is unfortunate, indeed, the class is an unfortunate one, because, unless there are three competitors, the first prize does not carry with it the twenty-five guinea cup. Mr. Beeson, gardener to J. Newton Mappin, Esq., Headley Park, Epsom, was the exhibitor, and his best blooms were of Mrs. A. T. Miller, Miss Elsie Green, G. Mileham, W. Beadle, Lady Letchworth, Master David, Rose Pockett, and Walter Jinks.

For fifteen blooms in vases and in not fewer than three varieties, Mr. Beeson was a capital first with five grand flowers each of Lady C. Letchworth and Mrs. A. T. Miller, four of J. Lock, and one of Rose Pockett; Mr. J. T. Tubb, gardener to J. D. Alexander, Esq., Sevenoaks, came second, and Mr. Fleet, gardener to J. A. Allen Esq., Wynnstow, Limpsfield, was third.

The chief Borough of Croydon class was for fifteen Japanese blooms, in three or more varieties, and here the President's Cup is added to the first cash award; there were five competitors, and Mr. Howarth, gardener to Wickham Noakes, Esq., Selsdon Park, was a capital first, with fine examples of Reginald Vallis, Mrs. G. Mileham, Lady Talbot, J. Peed, Mrs. A. T. Miller, Pockett's Crimson, and Leslie Morrison. Mr. R. Gladwell, gardener to A. Gosheron, Esq., Tennison Road, second; and Mr. G. Edwards, Windmill Road, Shirley, third.

There was a capital competition in the class for six vases of decorative chrysanthemums grown in the open: Mr. F. Finch, gardener to G. H. Fisher, Esq., Godstone Road, Purley, was placed first with large sheaves of Normandie, Tapis Niege, Madame Lefort, Diana, Provence, and Roi des Blancs; Mr. G. Lawry, gardener to Mrs. Williams and Miss Blake, Duppas Hill, second; and Mr. E. Dyer, gardener to E. Wood, Esq., Church Road, Upper Norwood, third.

For the best set of ten blooms, in one or more varieties, Mr. L. Gooch, gardener to T. Wickham Jones, Esq., South Norwood, led with Mrs. G. Mileham, J. Peed, and Valerie Greenham; Mr. W. Paulley, gardener to Dr. Jackson, J.P., Thornton Heath, came second; and Mr. A. Dyer, gardener to E. Wood, Esq., Church Road, Upper Norwood, third. Mr. C. C. Hunt put up a capital three vases of single chrysanthemums, and won a first prize therewith.

In the smaller classes Mr. T. Finch scored for five incurved blooms, with large flowers of Buttercup. Mr. Godly, gardener to T. B. Vaughan, Esq., Beulah Hill, led for five Japanese blooms in one vase.

In the amateurs' division, the silver cup for ten Japanese blooms arranged in two vases, was won by Mr. L. White, 34, Braemar Avenue, Thornton Heath; Mr. C. Hunt, Stroud Road, Woodside, coming second.

Two competitors came forward in the class for a miscellaneous group, and chief honour fell to Mr. J. W. Colyer, gardener to A. R. Allen, Esq., Wandle Court, Beddington, who used chrysanthemums, odontoglossums, cypripediums, Begonia Gloire de Lorraine, and streptocarpuses, among crotons, ferns, and palms; Mr. D. Love, gardener to Mr. Alderman Allen, Coombe Cliffe, second, with a display lacking in arrangement. For three specimen plants, single varieties, Mr. T. Finch led with large examples of Mary Richardson, but not half the blooms were open, a failing noticed in other plant classes and due to the peculiar season. There was but one group of chrysanthemums, and for this Mr. A. Edgerton, gardener to W. Valder, Esq., Beechwood, Croham Park Avenue, was awarded a second prize.

Mr. J. W. Colyer, second, for a pair of bunches of grapes with Muscat of Alexandria, and Mr. Lintott was second with Gros Maroc. In the open class for nine dishes of apples Mr. Rawlings, gardener to H. Goschen, Esq., Heathfield, Addington, led with good specimens of Tower of Glammis, Gascoigne's Scarlet, Peasgood's Nonsuch, Lady Henniker, Bismarck, and Lord Derby; Dr. Jackson was second, and Mr. W. Lintott, gardener to Sir Walpole Greenwell, Bart., Marden Park, third; five entries.

Six dishes of pears was another good class, and here Mr. W. Lintott scored with Beurre Hardy, Marie Louise, Beurre Diel, Pitmaston Duchess, Doyenne du Comice, and Beurre Bosc; Dr. Jackson second, and Mr. B. J. Kingsley, Holmwood Park Gardens, Holmwood, third. Mr. Gledwell, Mr. Rawlings, Dr. Jackson, and Mr. Jeal, gardener to N. Waterall, Esq., Waddon, were all prominent winners in other fruit classes.

Mr. J. T. Tubb, gardener to J. W. Alexander, Esq., Sevenoaks, led in the open class for a collection of nine kinds of vegetables, winning with good onions, cauliflowers, carrots, runner beans, celery, potatoes, Brussels sprouts, beet, and parsnips; Mr. W. Lintott came second, and Mr. B. J. Kingsley, Holmwood, third. In the local class for six kinds of vegetables Mr. O. Jeal came to the front, followed in order by Mr. Finch and Mr. J. Johnson, gardener to Mrs. A. Crowley, Bramley Hill. Mr. H. E. Marden led in another class, and scored also for onions.

Mrs. S. H. Cole, Addiscombe Avenue, won first prize for a table decoration of yellow and soft bronze chrysanthemums; Miss Bashford, Barron Hedges Farm, Carshalton, second, with a very bright scarlet, and Mrs. Edwards, Warwick Terrace, Sydenham, third. For a centrepiece filled with chrysanthemums, Miss Bashford beat Mrs. Cole, and she used small coloured vine leaves and red oak leaves skilfully with her flowers. Miss Bashford was also successful for a basket of chrysanthemums.

There were several non-competing exhibits. Mr. Thomas Butcher, South Norwood, decorated the platform with chrysanthemums, palms, etc., and contributed a table of floral designs. Messrs. W. Wells and Co., Merstham, put up a very bold and bright exhibit of single and big Japanese chrysanthemums and perpetual carnations. Messrs. E. W. and S. Rogers, Croydon, contributed seed potatoes, etc., and Mr. Oxtoby, gardener to J. J. Reid, Esq., Coombe Lodge, exhibited two dozen bottles of bottled fruits.

Hereford Fruit and Chrysanthemum Society.

This society held its annual show on October 25 and 26 in the Shire Hall, Hereford. Hardy fruits, as is invariably the case at this show, were the leading feature, as may be gathered when it is remarked that upwards of fifty classes were provided for apples alone. Grapes were also creditably staged, and so were vegetables, and agricultural produce, in the way of roots, grain, hops, etc. Trade exhibits were not numerous, though those present did much towards making the show attractive and a success.

In the class for a collection of fruit, six dishes, three good sets were arranged, the chief one by Mr. Liddle, gardener to Sir J. Cotterell, Garnons, who had Lady Downes and Muscat of Alexandria grapes, Coe's Golden Drop plums, Emerald Gem melon, Cox's Orange Pippin apples, and Doyenne du Comice pears. The second place was deservedly taken by Mr. Sykes, gardener to Colonel Henry, of Haffield. Mr. Stevens, gardener to Captain P. A. Clive, Whitfield, was the only exhibitor of Gros Colmar grapes, and staged medium sized, well-finished bunches. For any other black grape, Mr. Dunn, gardener to Mrs. Woodhouse, Burghill, scored with large bunches of Alicante; second, Mr. Sykes, with nice bunches of Gros Maroc. Five exhibitors staged in a class for any white grape, Mr. Roberts, gardener to P. H. Foley, Esq., Stoke Edith, being placed first with creditable Muscat of Alexandria; and Mr. G. R. Currie second with the same variety.

For fifty dishes of culinary and dessert apples, two exhibitors staged collections, and Messrs. Pewtress Bros., Tillington, easily secured leading honours with an excellent lot of clean, highly coloured fruit, some of their leading varieties being Tyler's Kernel, New Hawthornden, Pillington Court, Lord Hindlip, Newton Wonder, Flanders' Pippin, Belle Pontoise, Byford Wonder, Blue Pearmain, King of the Pippins, James Grieve, Baxter's Pearmain, Forester, May Queen, Knight's Russett, Allington Pippin, and Cox's Orange Pippin. Mr. Roberts was second, and staged a good representative collection. Of thirty dishes there were two lots presented, the first prize going to Mr. Powell, Warham Farm, who staged good, clean fruits, and some of his best dishes were King Edward VII., Annie Elizabeth, Bismarck, Newton Wonder, Lord Derby, Lady Henniker, Golden Noble, Beauty of Kent, Winter Pearmain, Lane's Prince Albert, Rival, Cox's Orange Pippin, Court Pendu Plat, and Hormead Pearmain. Mr. Taylor, gardener to J. Ridley, Esq., Putley Court, was a close second with a very similar lot of fruit. There were five sets staged in a class for twelve dishes of culinary apples, the Sellack Fruit Farm, Co. Ross, taking the coveted place with a fine set of large and otherwise fine fruits, in which Newton Wonder, Bramley's Seedling, Gascoigne's Seedling, New Hawthornden, Lane's Prince Albert, and Bismarck were especially fine. With an almost equally fine set F. Boddington, Esq., Burghill, was placed second; and Mrs. Woodhouse, Burghill, third.

Seven exhibitors staged eight dishes of dessert apples, which made a splendid class, with but little difference in the quality of the fruit shown by the prize-takers; Messrs. Getting and Newton, Ross, secured the lead with Cox's Orange Pippin, King of the Pippins, American Mother, Rival, Wealthy, etc.; second, Mr. Currie, gardener to the Rev. G. H. Davenport, Foxley; third, F. Boddington, Esq. Eight culinary and four dessert varieties found Mr. Bott, of Brunton, taking the lead amongst three exhibitors with beautifully coloured specimens of Blenheim Pippin, Cox's Orange Pippin, King of the Pippins, Charles Ross, Wealthy, Peasgood's Nonsuch, Annie Elizabeth, Belle Pontoise, Lady Henniker, Lord Derby, Bramley's Seedling, and Golden Noble. Mr. Currie took second honours, and C. B. Lee Warner, Esq., third. A class for recently introduced varieties was especially interesting, and here Mr. Powell, Warham, scored with Lord Hindlip, Rival, Charles Ross, Coronation, King Edward VII., James Grieve, etc.; Mr. R. W. Whiting, Credenhill, was second with a good set, including Hector Macdonald and Encore. For eight culinary market varieties Mr. Powell again led, while Messrs. Getting and Newton led for eight market dessert varieties, and the Sellack Company scored for twelve culinary and six dessert market varieties.

Among the single dish classes, of which there were nineteen, many of the best fruits and the most spirited competition were to be found. No less than thirty-one dishes of Blenheim Pippin were staged in its class, twenty-five dishes of Cox's Orange Pippin, and twenty-four dishes of King of the Pippins. The coveted champion positions were taken by the Sellack Company for the best dish of dessert apples in the show with Cox's Orange Pippin, and by Mr. Boddington for culinary apples with Stirling Castle.

Pears, though not shown in large quantity, were staged in fine condition. Mr. Currie was placed first for twelve dishes, and had splendid examples of Beurre Bosc, Beurre Diel, Marie Louise, Doyenne du Comice, Emile d'Heyst, Pitmaston Duchess, Thompson's, Glou Morceau, Winter Nelis, Conference, Durondeau, and Easter Beurre; Mr.

Parrott, gardener to A. W. Foster, Esq., Brockhampton Court, was a good second. Mr. Liddle, gardener to Sir John Cotterell, Garnons, scored for eight dishes with Doyenne du Comice, Beurre Diel, Nouvelle Fulvie, Easter Beurre, Pitmaston Duchess, Durondeau, Beurre Bosc, and Conference; Mr. W. D. Thomeley, gardener to General Clive, Perryston Court, was a close second. In the single dish classes Mrs. Bashill was first for Pitmaston Duchess; Mrs. Woodhouse, for Marie Louise; Sir John Cotterell, for Doyenne du Comice; and the Hon. Mrs. Wilmot, first, with Catillac, for any culinary variety. The champion prize was awarded to Mr. Liddle for a fine dish of Doyenne du Comice.

There was only one entry for a decorative group of fruit, viz., from Messrs. Pewtress Bros., who had apples of first-rate quality and variety staged in market boxes.

Of the two groups of miscellaneous plants, staged in a space of 12ft. by 7ft., that from Mr. H. Tribe, gardener to F. W. G. Williams, Esq., secured the first position; Mr. A. Liddle was the other competitor. Both groups were well arranged, and composed of well-grown graceful subjects.

Chrysanthemums were not largely represented, there being only six classes provided for them, and these confined to blooms arranged in vases. Mr. H. Tribe, C. F. Halford, Esq., A. G. Burney, Esq., Dr. C. S. Morrison, and Captain Clive were leading prizewinners. Baskets of ornamental foliage from hardy plants were arranged with excellent taste by Mrs. M. Offler, Hereford; the Hon. Mrs. Wilmot, and Mrs. Spencer, who secured prizes in the order named. Dinner-table decorations, confined to chrysanthemums, and suitable foliage, were also tastefully arranged by five lady exhibitors, among which Miss Bott, of Brenton; Mrs. Hyde, Maidstone Court Gardens; and Miss E. Bull were successful prize-takers in the order named.

Among trade exhibits, the King's Acre Nursery Company arranged a large stand of wreaths, bouquets, and other floral devices, together with a collection of apples of exceptionally good quality, in upwards of 130 varieties, in baskets and dishes. Messrs. Young and Co. Hatherley, Cheltenham, contributed a large bank of choice tree carnations arranged in vases; and Mr. Wilson, Commercial Street, Hereford, set up a large stand of splendidly arranged floral devices and vases of cut flowers.

Brighton Chrysanthemum Show.

The Brighton and Sussex Society held its autumn exhibition in the Dome and Corn Exchange on October 31 and November 1. The show was an excellent one, but one missed the splendid groups of chrysanthemums that for years were such a fine feature, and there was not the array of flowers on boards that used to be on view. On this occasion several of the vase classes were especially good, and begonias and bush chrysanthemums were well shown, while fruits and vegetables were excellent, and non-competitive displays were of great merit and interest.

Mr. A. J. Gaston, the new secretary, has secured a goodly number of new members during 1911, and his energy and enthusiasm promise to be valuable assets to the society.

CUT FLOWERS.

There were no fewer than seven competitors in the class for thirty-six Japanese blooms, not less than twenty-four varieties. The premier award is a cash prize of 60s. and a silver bowl, presented by the President, Alderman Sir Jeremiah Colman. Leading honours fell to Mr. W. Evans, gardener to Mrs. Stewart Mackenzie, Lyndhurst, Haywards Heath, who staged fine, clean specimens of Hon. Mrs. Lopes, C. H. Totty, Bessie Godfrey, Reginald Vallis, Mrs. A. T. Miller, Sir Frank Crisp, F. S. Vallis, Master David, Eclipse, F. W. Lever, Lady Letchworth, Rose Pockett, Algernon Davis, Lester Morrison, Elsie Miller, Mr. R. H. B. Marsham, and J. Lock. Second prize was awarded to Mr. J. Harris, gardener to Colonel C. P. Henty, J.P., Avisford, Arundel, who had fine flowers not yet fully expanded in many cases; Mr. Chas. Hack, gardener to Mrs. L. C. Joad, Patching, Worthing, third; and Messrs. Jas. Stredwick and Son, Silverhill Park, St. Leonards, fourth.

Mr. C. Fox, an amateur, of Linden Gardens, Tunbridge Wells, gained the silver medal and first prize for twenty-five Japanese blooms, distinct, staged in five vases, each set on a separate table. He had handsome flowers of Reg. Vallis, Lady Crisp, Evangeline, Master David, Mrs. Trevor Williams, Henry Poulton, Shanklin Sunshine, Lady Letchworth, W. P. Walker, Beatrice May, etc.; Messrs. J. Stredwick and Son, second; and Mr. J. E. Hickson, gardener to the Rev. F. S. Sclater, Newick Park, Lewes, third.

The best dozen Japanese, distinct, were from Mr. F. Cordell, and his best blooms were Miss A. Nicoll, Lady Crisp, Rose Pockett, Pres. Viger, and Mrs. R. Linford; Mr. W. J. Finch, gardener to F. A. White, Esq., Oakleigh, East Grinstead, came second, and Mr. J. C. Reeves third. Six incurved blooms, one variety, found Mrs. J. Harris to the front with good examples of Embleme Poitdevine; Mr. A. Sayers, gardener to S. Copestake, Esq., Adelaide Crescent, Hove, second; and Mr. J. C. Reeves, third. Mr. J. C. Reeves led for six Japanese blooms, one variety, any colour, with Mrs. A. T. Miller; Mr. C. Hack second. For six Japanese, distinct, Mr. F. Cordell, gardener to A. F. Blades, Esq., Rookfields, Reigate, scored with Lady Crisp, Miss A. Nicoll, Mrs. R. Linford, Mrs. A. T. Miller, Master James, and Mrs. G. Mileham; Mr. J. Harris second.

Three vases of pompons made a pretty class, and honours fell in order of merit to Mr. G. H. Bennett, Mr. W. G. Pelley, Adavale, Chesswood Road, Worthing; and Mr. J. C. Reeves, gardener to Captain Acton Blake, Rusper. Singles, three vases, was an equally good class, the vases being well filled with fine flowers in great variety; Mr. H. Eastwood, gardener to Dr. Bryant, Tongdean, Dyke Road Avenue, Brighton, led with an exceptionally good set, and was followed by Mr. W. G. Pelley, and Mr. G. Chandler.

Mr. W. Hill, gardener to G. W. Ryder, Esq., Broadhill, Keymer, led for a table of chrysanthemum blooms, arranged artistically with plenty of foliage. He had the finest flowers, and arranged them skilfully, but Mr. Chandler, who was second, might possibly have been first had his pots been less in evidence; Messrs. G. Miles and Son third.

In the amateur classes for cut flowers, the principal prizewinners were Mr. C. Fox, Tunbridge Wells, who won most of the first prizes; and Mr. J. R. Burrows, Preston Park. Mr. G. Fennell, Mount Zion Place, Brighton, led for a group in the amateurs' division with a very creditable display; Mr. E. Farrell, Sandown Road, Brighton, second; and Mr. A. Franks, Roedale Road, Brighton, third.

Messrs. G. Miles and Son, Victoria Nurseries, secured the chief award for a mantelpiece decorated with chrysanthemums, and they used yellow, buff, and orange flowers, with crotons, ferns, and asparagus, and made a very pretty display. For a mantelpiece decorated with any kind of flowers, Mrs. H. J. Brill, Southdown Avenue, Preston Park, led with a design composed chiefly of scarlet carnations and Lilium speciosum. Mrs. Brill was also the leading competitor in the table decoration class with a charming design in golden and pale bronze chrysanthemums and asparagus sprays; Miss S. Cheesman, Islingwood Road, Brighton, second, with pink single flowers; and Mrs. Pelley third with bronze and red single varieties.

GROUPS AND PLANTS.

Only two groups were staged in the chief class for an arrangement staged on a circle 8ft. 6in. in diameter; Mr. G. Chandler, gardener to S. C. Witting, Esq., Hollingbury Copse, Patcham, Brighton, led with a high conical group of Japanese, decorative and single chrysanthemums, with a base of plumose nephrolepises; Mr. G. H. Bennett, gardener to P. H. Bayer, Esq., Hatch Beauchamp, Withdeane, Brighton, was second with a group that lacked something in finish around the base. In another group class, for chrysanthemums only, Mr. A. J. Jones, gardener to E. M. Marx, Esq., Hanover House, Hanover Crescent, Brighton, was the only exhibitor, and he was awarded the first prize. Many of his flowers were not yet at their best, but he had a fair representation, and plenty of bright colours.

In an open class for six bush plants Mr. G. Lambert won first place with dwarf, neat examples, carrying flowers of large size; Mr. Sayers was a very close second, and Mr. G. H. Bennett third. Mr. G. H. Bennett led for a dozen bush plants, pompon varieties, and he set up a useful lot of bushes carrying abundance of blossoms; Mr. G. Lambert second, and Mr. A. Sayers third; very few plants were labelled in this class —a great failing.

Mr. G. H. Bennett scored for six bush chrysanthemums, with large, freely-flowered plants of Mary Richardson, Miss Cressy, Kitty Bourne, Mrs. Willie Jordan, and Ladysmith; Mr. H. Eastwood second, and Mr. S. Watkins, Preston, third.

There were five entries in the class for a dozen dwarf bush plants, pots not to exceed 6in. in diameter. Mr. H. Lelliott, New Church Road Nurseries, Hove, was a good first, with very freely-flowered specimens, some carrying over five dozen flowers; Mr. G. Norman, The Garden House, Upper Drive, Hove, second; and Messrs. G. Miles and Son third.

One table of orchids was staged, and this, from Mr. W. Hill, Keymer, was awarded a first prize; calanthes, Odontoglossum grande, Cattleya labiata, pleiones, and Cypripedium Spicerianum were the chief subjects in the display. Mr. W. Humphery, gardener to F. W. Franks, Esq., Loampits, Tonbridge, was a capital first for nine begonias, and he staged B. Gloire de Lorraine in fine form; Mr. J. E. Hickson second. Primulas were very poorly shown.

FRUITS AND VEGETABLES.

For three bunches of white grapes the premier award fell to Mr. C. Earl, gardener to O. E. D'Avigdor Goldsmid, Esq., Somerhill, Tonbridge, for Muscat of Alexandria, well coloured; Mr. W. Lintott, gardener to Sir Walpole Greenwell, Bart., Marden Park, Caterham, second; and Miss Smith, Miramichi, Withdeane, third. For black grapes, three bunches, Mr. W. Monton, gardener to Mrs. Mashiter, The Grange, Hurstpierpoint, scored with Alicante, Miss Smith coming second, and Mr. C. Earl third; there were nine entries in this class, and five in the white grape class.

The best four dishes of dessert apples came from Mr. J. R. Allan, gardener to C. A. Morris Field, Esq., Ashurst Park, Tunbridge Wells, who showed big fruits of Mère de Ménage, Bramley's Seedling, Warner's King, and Hambling's Seedling; Mr. F. A. Sandalls, gardener to Messrs. Parker and Hind, Rottingdean School, second. Mr. A. G. Clarke, gardener to Dr. Rouse, Farncombe Road, Worthing, had the best single dish of culinary apples, winning with Warner's King. For dessert apples Mr. J. Muddell, gardener to Mrs. Henderson, Sedgwide Park, Horsham, led for four dishes, with Blenheim Pippin, Adam's Pearmain, Cox's Orange Pippin, and Ribston Pippin; Mr. Morton second, and Mr. A. Kemp, Horsham, third. Mr. W. J. Finch, gardener to F. A. White, Esq., Oakleigh, East Grinstead, was a capital first for four dishes of pears, with grand fruits of Durondeau, Beurre Fouqueray, Doyenne du Comice, and Beurre Diel; Mr. Hickson second, and Mr. J. McCulloch, gardener to Lord Cowdray, Paddockhurst, Crawley, third.

In the open class for vegetables, eight kinds, there were five entrants, and the silver medal and first prize fell to Mr. W. J. Finch, for a fine set of Sutton's Exhibition Brussels sprouts, Autumn Giant cauliflowers, Prizetaker leeks, Standard Bearer celery.

BRADFORD CHRYSANTHEMUM EXHIBITION in ST. GEORGE'S HALL. on FRIDAY and SATURDAY, November 10th and 11th.
£50 FOR BLOOMS ON BOARDS.
Besides other good classes for open competition.
Schedules, with entry forms, post free from
H. SPENCER,
Hony. Secy.
Horton Park,
Bradford.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

Ailsa Craig onions, Duchess of Cornwall potatoes, Pragnell's Exhibition beet, and New Red Intermediate carrots; Mr. W. Manton second, and Mr. W. Humphery third.

Mr. R. Moore, New Road, Lewes, and Mr. J. Geall, Lewes Road, were winners in other classes for collections of vegetables. Cauliflowers were finely shown, and so were long beets, onions, celery, and potatoes; Mr. Kemp, Coolhurst Gardens, Horsham, led for four dishes of the latter with a beautiful set of Dalhousie, Satisfaction, Kemp's Foundling, and Recorder, while for one dish of six onions Mr. W. J. Finch won first prize with a splendid set of Ailsa Craig.

NON-COMPETITIVE.

The non-competing exhibits added materially to the interest and extent of the show, and among the notable competitors in this department we may refer to Messrs. W. W. Balchin and Sons, Brighton, who had a delightful arrangement of brilliant crotons, choice ferns, and chrysanthemums. Mr. Neal, gardener to J. A. Nix, Esq., Tilgate, Crawley, presented a splendid collection of apples, pears, and grapes, all finely arranged with ampelopsis leaves and asparagus sprays. Messrs. G. Miles and Son, Victoria Nurseries, sent floral devices. Mr. Frank Woollard, Lewes Road, Brighton, showed roses and hardy fruits. Messrs. W. Wells and Co., Merstham, exhibited single and decorative chrysanthemums in big stands. Messrs. Toogood and Sons, Southampton, staged a very fine collection of vegetables in first-rate style over close cropped newly sown lawn grass. Messrs. Allwood Brothers, Haywards Heath, contributed perpetual carnations in pleasing fashion and in great variety. Mr. G. W. Piper, Uckfield, had an unusually fine exhibit of late-flowering roses, all from the open air; there were probably a hundred varieties represented in this fragrant and beautiful exhibit, an exhibit that was greatly appreciated at the end of October.

Mr. W. J. Burstow, Ravenswood, Worthing, set up a small group of British ferns, in which frilled and tasselled Hart's-tongues were prominent, but the feature of the exhibit was a fine specimen of Polypodium vulgare cambricum, fully a yard across. Messrs. J. Cheal and Sons, Crawley, filled a large table with a handsome collection of apples, the fruits being finely coloured and well arranged; from the Barnham Nurseries Company, Barnham, also came a collection of hardy fruits.

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, OCTOBER 24.

Present: Mr. E. A. Bowles, M.A., F.L.S. (in the chair); Dr. A. B. Rendle, F.R.S., Messrs. H. J. Elwes, F.R.S., A. Worsley, W. Hales, J. T. Bennett-Poë, M.A., V.M.H., J. Douglas, V.M.H., R. A. Rolfe, A.L.S., J. O'Brien, V.M.H., G. Wilson, C. H. Hooper, W. Fawcett, B.Sc., J. O'Dell, W. C. Worsdell, G. Gordon, V.M.H., R. Hooper Pearson, and F. J. Chittenden (hon. secretary).

NERINE PUDICA ALBA.—Mr. Worsley showed a white-flowered form of what he regarded as Nerine pudica, a seedling raised by him some time ago. He also showed ripe fruits of the variegated form of Vitis heterophylla.

VARIOUS PLANTS.—Mr. H. J. Elwes drew attention to a flower of Pæonia lutea from a plant (sent out by Messrs. Vilmorin) flowering for the second time this year, but now, unlike the first flowering, holding its flowers well above the foliage. Mr. Bowles remarked that he had a form which normally flowered in this way, also from Messrs. Vilmorin. Mr. Elwes also showed a plant of Statice fruticans (= arborea), a Canary Island species, raised from seed, and flowering well within a year of seed-sowing; Aristea corymbosa, a woody Iridaceous plant from South Africa; and Stapelia primulina.

PRIMULA SINENSIS STELLATA.—A remarkable instance of foliose development of the calyx in Primula sinensis stellata was shown by Mr. Odell, in which the calyx segments were many times as long as the petals, and were of distinct leafy form.

MALFORMATION IN VITIS SICYOIDES.—Mr. W. Patterson sent an interesting specimen of a malformed Vitis sicyoides from St. Vincent. The malformation is mentioned in Grisebach's "Flora of the British West India Islands," where it is said to be common, but this is the first specimen met with by Mr. Patterson. It was growing "just where the conditions prevailing might be expected to exert influence to encourage an inflorescence to grow into such a form, namely, moisture and very little light." The specimen sent, which was over 15in. in length and consisted of long, slender branches bearing numerous short, whorled branchlets was "part of one axillary growth found growing on the ground under dense shade." Mr. Patterson drew attention to dark streaks of fungus spores on the ultimate branches, and suggested that the malformation might be of pathological origin. The fungus present is Shrœteria Cissi (De Toni), a member of the Ustilagineæ, and no doubt the cause of the malformation. The form which it gives rise to has been described as a type of a new genus, Spondylantha aphylla, by Presl [see "Rel. Haenk.," ii., 35, t. 53 (1834)].

CATTLEYA SORORIA, RCHB. F.—Mr. R. A. Rolfe exhibited a flower which had been raised in the collection of W. Evans, Esq., of Leicester, from C. Harrisoniana crossed with the pollen of C. bicolor, and remarked that it was identical with the natural hybrid, C. sororia, Rchb. f., and thus confirmed its supposed parentage, which was originally in doubt. He also exhibited for comparison paintings from the "Dictionnaire des Orchidées" of the two parents, remarking incidentally that the one figured as C. Harrisoniana was wrongly labelled C. Loddigesi, and that, in fact, the names of the two species had been transposed, as was sometimes the case in gardens.

LÆLIO-CATTLEYA AMANDA, RCHB. F. AND L.-C. VERELI, ROLFE.—Mr. Rolfe also exhibited flowers of these two natural hybrids, remarking that they were originally confused under the former name. The first, however, was from Lælia Boothiana and Cattleya intermedia, the latter from L. Boothiana and C. Forbesi, as was evident from the strong red veining on the disc of the lip. All three species were known to grow together in the neighbourhood of Rio de Janeiro. The two hybrids were in flower at Kew, that of L.-c. amanda being from a batch raised by himself by crossing L. Boothiana and C. intermedia, with a view to proving the parentage. Paintings of some of the plants in question were also shown.

POLLINATION IN ORCHARDS.—Mr. C. H. Hooper gave an outline of his observations on pollination in orchards, which confirmed those of others that cross-pollination was necessary in the majority of cases in order that fruit should be produced. The results obtained have been published. Mr. Worsley said that a certain temperature was necessary for the shedding of pollen in many instances, and if this were not attained, infertility might result. Mr. Chittenden said that certain of the varieties Mr. Hooper had found not to set fruit without the aid of foreign pollen, he had found would do so, and suggested that in order to settle the cases, in which only negative evidence was available, it was necessary to repeat the experiment several times, for there was great difficulty in eliminating many other factors which contributed to unfruitfulness.

NATIONAL CHRYSANTHEMUM SOCIETY'S SHOW.

(Continued from page 814.)

From Exmouth Mr. W. J. Godfrey brought up Japanese and single varieties, and set these up well. Practically every variety staged was of his own raising, and they included Captivation, Exmouth Comet, Mrs. R. Ley, and Acquisition among Japanese, and Mrs. F. C. Hunter, Devonshire Cream, Charming, Climax, Miss Mary Pope, and Star of Devon among singles. An exceedingly fine lot of single varieties were set up by Messrs. Cragg, Harrison, and Cragg, of Heston, and their display was the sort of thing that needs encouragement; indeed, we believe the firm put up this group as an object-lesson to competitors; they presented two dozen vases, over ferns, and staged grand blooms of Mensa, Bronze Pagram, Celia, Merstham Jewel, Mrs. W. G. Patching, Roupell Beauty, Mary Richardson, F. King, Snowflake, and Edith Pagram—a charming exhibit of great educational interest.

Mr. H. W. Thorp, Darrington, Worthing, was a large exhibitor, and staged a lot of fine flowers, but the lack of suitable background and of groundwork material militated greatly against the effectiveness of the group. Mr. Frank Brazier, Caterham, presented a considerable group of early and decorative chrysanthemums, Michaelmas daisies, and floral designs. A brilliant bank composed of fine trusses and bunches of splendid zonal pelargoniums and equally attractive single chrysanthemums, arranged in large sprays, was set up by Messrs. H. Cannell and Sons, Swanley, and attracted a great deal of attention.

A table of finely-grown and well-flowered zonal pelargoniums was put up by Mr. W. H. Page, Tangley Nurseries, Hampton. The variety His Majesty, which has already been figured and described in the GARDENERS' MAGAZINE, was in fine form, plants in 48's being furnished with large trusses of brilliant flowers. Winter Cheer and Fiscal Reformer, the latter a clear pink, were also extremely good. Messrs. Wilton and Goddard, Claremont Nurseries, Durrington, near Worthing, arranged an effective group of large-flowered chrysanthemums, among which tall stands of J. Lock, Formality, Mrs. L. Thorn, and others were conspicuous.

A large group of dwarf plants of chrysanthemums, in 48-sized pots, each plant carrying about ten good blooms, was a most attractive exhibit, staged by Messrs. Butler Brothers, Bexley Heath, who are past-masters in the art of producing such plants for the market. Messrs. Stuart Low and Co., Enfield, were represented by a group of carnations and fruits.

Messrs. J. Peed and Son, West Norwood, contributed a large circular group of chrysanthemums, associating cut flowers and plants of chrysanthemums with palms and ferns.

MEDAL AWARDS TO NON-COMPETITIVE EXHIBITS.

Large Gold.—To Mr. H. J. Jones, Lewisham; Mr. Norman Davis, Framfield; Messrs. W. Wells and Co., Merstham; Messrs. Stuart Low and Co., Enfield; Messrs. H. Cannell and Sons, Swanley.

Gold.—Messrs. J. Peed and Son, West Norwood; Mr. P. Ladds, Swanley Junction.

Small Gold.—Messrs. Hobbies, Lim., Dereham; Messrs. H. B. May and Sons, Edmonton; Mr. D. Russell.

Silver-gilt.—Mr. H. W. Thorp, Worthing; Messrs. Butler Brothers, Bexley.

Large Silver Medal.—Messrs. J. Godfrey, Exmouth; Mr. G. H. Godard, Claremont Nursery, Durrington; Messrs. Cragg, Harrison, and Cragg, Heston; Mr. F. Brazier, Caterham; Messrs. W. A. Voss and Co., Millwall; Messrs. J. Cheal and Sons, Crawley.

Small Silver.—Mr. W. H. Page, Tangley Nurseries, Hampton; and Mr. J. Williams, Ealing.

ROYAL HORTICULTURAL INTERNATIONAL EXHIBITION.

We are informed by the Hon. Press Secretary that the Directors of the Royal International Exhibition have agreed:

(1) To give to all Fellows of the Royal Horticultural Society certain special privileges over the general public in regard to the purchase of tickets for the Exhibition; and

(2) To allow all such tickets purchased by Fellows of the Society to be transferable.

ADMISSION ARRANGEMENTS.

GENERAL PUBLIC.

The Directors of the International Horticultural Exhibition have decided on the following prices of admission:

	Before 5 p.m.	5 to 10 p.m.		All day.
May 22	... £2 2 0	£1 1 0	May 27	... 2 6
.. 23	... 1 1 0	10 0	,, 28	... 1 0
.. 24	... 10 0	5 0	,, 29	... 1 0
,, 25	... 5 0	2 6	,, 30	... 1 0

FELLOWS OF THE ROYAL HORTICULTURAL SOCIETY.

The special privileges accorded to Fellows of the R.H.S. are as follows:

Fellows of the R.H.S. paying an annual subscription of four guineas:

May 22.—Two tickets at half-price at either hour.
May 23.—Two tickets at half-price at either hour.
May 24, 25, 27.—Four tickets for any, but only one, of these days; with two additional tickets for the 5s. day—all at half-price.
May 28, 29, 30.—No reduction.

Fellows of the R.H.S. paying an annual subscription of two guineas:

May 22.—One ticket at half-price at either hour.
May 23.—One ticket at half-price at either hour.
May 24. 25, 27.—Two tickets for any, but only one, of these days; with one additional ticket for the 5s. day—all at half-price.
May 28, 29, 30.—No reduction.

Fellows of the R.H.S. paying an annual subscription of one guinea:

May 22.—One ticket at 30s.; or 10s. 6d. after 5 p.m.
May 23, 24, 25, 27.—One ticket at half-price for any, but only one, of these four days.
May 28, 29, 30.—No reduction.

Honorary and corresponding members enjoy the same privileges as two-guinea Fellows.

Associates: May 22, 23, 28, 29, 30, no reduction; one ticket on May 25 or 27 at half price.

One-guinea affiliated societies, May 22, 23, 28, 29, 30, no reduction; ten tickets on May 25 and sixteen tickets on May 27, all at half price. Two-guinea affiliated societies, double privileges.

All privileged tickets on the above scale must be purchased on or before May 12, and can only be obtained direct from the office of the Royal Horticultural Society, Vincent Square, Westminster, S.W.

All the above tickets will be transferable, but will each be available for one admission only. Fellows can, therefore, circulate among their friends such of the tickets as they do not personally require. Cheque or postal order, payable to the Royal Horticultural Society, must accompany each application for tickets, and tickets when once purchased cannot be exchanged for others of a different date.

CATALOGUES RECEIVED.

FREDERICK ROEMER, QUEDLINBURG, GERMANY.—This list of seed novelties for 1912 includes a number of asters that suggest improvements upon many old varieties.

A. F. UPSTONE, Rotherham.—This general autumn catalogue includes bulbs, plants for forcing, roses, fruit trees, shrubs, etc

W. WELLS AND CO., LIM., MERSTHAM, SURREY.—A descriptive list of chrysanthemums, arranged in their various sections, occupies the greater part of this handy catalogue, but perpetual carnations, phloxes, delphiniums, Michaelmas daisies, and herbaceous and alpine plants are also listed.

ARTHUR R. BROWN, LIM., KINGS NORTON.—The little list of border carnations contains descriptions of nine new varieties raised either at the Wychall Nurseries, or by the Rev. C. A. Gottwaltz, of Droitwich.

PHIPPS AND IRELAND, BARNHAM, SUSSEX.—An interesting, descriptive, and instructive little list of alpine and hardy perennial plants.

SEAWEED AS MANURE.

All around the coasts of the British Isles and of other countries in northern Europe seaweed has a high reputation as manure. There is, according to the leaflet issued by the Board of Agriculture, no record nor even any tradition to show when it was first used, or how its value was discovered, but it seems to be essentially a northern manure, and began to be mentioned as soon as descriptions were written of the husbandry of the coast districts.

Where Seaweed is Collected.

Scotland.—In Scotland, the right of gathering seaweed still sometimes forms part of the covenant with the landlord, and has even been the subject of litigation. It appears to be held in special favour on the south-west coast, where there is a good deal of light soil, and cartage presents no particular difficulties; indeed, it is perhaps the chief manure used for early potatoes on the Ayrshire coast, being applied at the rate of 25 to 30 tons per acre in autumn, and then ploughed in. What is gathered in summer is put on top of the "middens" till wanted. Further up the west coast, and also on some of the islands, seaweed is used by the crofters, but it does not appear to be held in so much favour on the east coast, excepting where it can very readily be obtained.

Cornwall and Devon.—Seaweed is still diligently collected in the west country; the amount available is, of course, very variable, and most comes into the bays facing south and south-west—the direction of the storms. In the market gardening regions of South Cornwall it is not, as a rule, used in the fresh condition, but is mixed with sand as of old, and allowed to rot. It is then applied along with guano and superphosphate for early potatoes and cauliflowers. Elsewhere it is put on to the root crops. The material usually collected appears to consist of Fucus serratus, F. vesiculosus, and, after stormy weather, Laminaria digitata. Near some estuaries Ulva lactuca is gathered.

On the North Devon coast seaweed is used for potatoes and roots; so much is it esteemed as a spring dressing that a certain amount is sent by barges to points inland for the use of farmers too far from the sea for cartage to be profitable.

Scilly Isles.—The light soils of the Isles of Scilly are very dependent on a supply of organic matter to retain moisture; as much as fifty tons of seaweed per acre is, therefore, applied for early potatoes, nearly as much for mangolds and other roots, but smaller dressings are put on for corn. A certain amount is also allowed to rot in piles, and is then used for bulb cultivation and general garden purposes. Fucus serratus is most popular, and has the highest reputation, whilst the thick fleshy strands of Laminaria are least esteemed: indeed, it is considered that the latter injure the soil if used too freely. The weed is generally gathered between September and March, and is by far the most important fertiliser in the islands.

Isle of Thanet.—In the Isle of Thanet it is used in several ways. The fresh weed is spread at the rate of ten to fifteen tons per acre over lucerne or sainfoin in the early autumn, and then raked off in spring just before the crop starts. It is also put on the land at the rate of ten to fifteen tons per acre before ploughing, and is found to be very beneficial to such market garden crops as cabbage, celery, asparagus, etc., as well as the ordinary farm crops. Some is also thrown into the dung mixen. It cannot, however, be said to be a very important manure at the present time, and is collected only when other work can be left, the reason probably being that cartage is heavy. A load weighs about a ton, and often requires two horses to get it from the shore; the enormous quantities thrown up by high tides when the wind is from the north or north-east—making a fringe along the high-water mark which may be three or four feet in thickness—sometimes prove more than the market gardeners and farmers on the coast can profitably utilise.

Jersey.—In Jersey not only is the "drift weed" cast up by the tides collected, but seaweed is also cut from the rocks. As much as forty-five tons of the fresh seaweed is applied per acre soon after the crop following early potatoes is out of the way, commonly about the middle of September. Later in the season recourse may be had to seaweed that has been collected, dried, and stacked, this being a regular summer occupation for some of the poorer people of the island. Little, if any, deterioration seems to set in, if the weed is quickly dried and not exposed to rain, while the saving in cartage is considerable. Digging-in takes place in December and January, and planting with early potatoes follows as soon as practicable. From two to four cwt. per acre of a complete artificial manure are usually given in addition.

Other Localities.—Seaweed is largely used on the Irish coast and on the French coast; at Mont St. Michel there is a considerable trade in seaweed as manure. It is also of great importance in some of the New England coast districts.

(To be continued.)

MR. MEASE'S FIRST PRIZE SET OF TWELVE JAPANESE BLOOMS.
This fine set of flowers, in a decorative class at the National Chrysanthemum Society's Exhibition, Crystal Palace, November 1, 2, and 3, was very greatly admired.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

AJUGA BROCKBANKI.—A. L., Hailsham: This by no means common plant is quite hardy, and is equally at home in the front of the border or in the rock garden. It has fairly long spikes of deep blue flowers in June and July. Ajuga genevensis Brockbanki, to give the plant its full title, is of semi-creeping habit, and, though not so aggressive as some hardy perennials, a watchful eye must be kept on it, especially if some small slow growing subject is close to it. There need be no fear as to selection of the right position or soil, as it is a very good-tempered plant, and, though a fair amount of moisture at the roots is appreciated, it does not strongly resent a dry position. Nine inches is its usual height.

JUDGING NEW ROSES.—E. S. M., Cork: The National Rose Society's rules for judging new seedling roses or sports are as follows: 1. The judges to be appointed, on the recommendation of the Exhibitions Committee, by the Council, and to be twelve in number. Five to form a quorum. No award to be made except there be at least a two-thirds majority of those present in favour of any variety. Any judge having an interest in an exhibit shall be asked to retire before the judging of that exhibit begins. 2. Voting to be by a show of hands. The Chairman to have no casting vote. 3. Full particulars of each variety entered to be sent to the Hon. Secretary at least two full days before the show. The points required to be as follows: (1) Name of rose. (2) The class to which it belongs. (3) The habit of growth. (4) The purpose or purposes for which most suitable, whether exhibition, garden, bedding, or otherwise. (5) Whether a seedling or sport. If a sport, the variety from which it came to be given. (6) Whether perpetual-flowering. (7) The raiser's name. (8) The exhibitor's name. (9) The exhibitor to be invited to state the stock on which the ground plant exhibited is worked. 4. That there be three grades of awards, viz., a Gold Medal, a Silver-gilt Medal, and a Card of Commendation. 5. The judging to be in a separate tent or room, and in private. Each exhibit shall be placed separately before the judges on a table provided for the purpose. (Not fewer than six trusses of any new seedling rose or distinct sport have to be shown, and a ground plant of the variety must also be shown.)

GRUBS IN SOIL.—D. G., Stockfield: The grubs in the soil are those of a weevil (Otiorhynchus), a pest quite common in many gardens, especially where leaf soil is abundant and is freely used for pot plants. The weevils are fond of leaf-mould, and often imported with it, hence the necessity in many cases for sterilising the material before use. The pest is sometimes a great trouble in vineries, and when this is the case white sheets should be laid under the vines, and then, after dark, the vines should be smartly tapped and a bright light suddenly flashed upon them. This will cause the little beetle-like weevils to fall, and on the sheets they are quickly detected and disposed of. Where the grubs are found in pot plants they may be killed or evicted by submerging the pots in tepid water for a dozen hours or more, and if the plants are well rooted this treatment will not hurt them. In the case of poorly-rooted or badly damaged plants, little can be done beyond washing the roots quite free from the infested soil, and potting in smaller pots and in light sterilised soil.

THE FINEST MALE FERN.—N. E. B., Salisbury: In all probability lovers of hardy ferns would agree that the finest of the Male ferns is Lastrea filix mas cristata. This is a splendid fern, with fronds four feet long and finely tasselled, and an old specimen will develop quite a trunk like a small tree fern. You cannot do wrong in purchasing several plants of this variety.

KAINIT FOR FRUIT TREES.—B. T., Harlow: Lack of colour and flavour in the fruits is probably due to the need of potash in the soil. To supply the deficiency dress the root area of the trees with kainit at the rate of two ounces per square yard, and lightly hoe it in; the dressing should be given at once.

TALLY OF CABBAGES.—T. D., Grantham: Five dozen cabbages usually go to a tally. A hand of radishes varies according to the season, from a dozen to thirty, and a score of lettuces means twenty-two heads.

TURBAN RANUNCULUSES.—S. T. E., Tunbridge Wells: These attractive flowers may be grown in pots or boxes, but as a rule they are not so great a success grown thus as in the open. Strong selected tubers should be used and placed, claws downwards, from four to six inches apart, and about an inch and a-half deep. Well-drained rich soil, composed of sandy loam, decayed manure, and leaf-soil should be used. Make soil and tubers quite firm. A cold frame will be the best place for the boxes for some time to come, but ventilation must be afforded freely on all favourable occasions. When roots have been freely formed the shelf of a cool greenhouse will provide a suitable position, and when growth is advancing, a warmer greenhouse will help to forward the flowers. Forcing, in the general sense of that expression, should be avoided, or disaster will follow.

LATE DESSERT APPLES.—W. B., Cork: The very best of the dessert apples are over before March, but there are several of passable quality that may be kept until March and April in a suitable fruit room. These include Allen's Everlasting, D'Arcy Spice, Cockle's Pippin, Cornish Gilliflower, Court Pendu Plat, Court of Wick, Duke of Devonshire, Golden Pippin, King of Tompkins County, Lord Burghley, Lord Hindlip, Margil, Northern Spy, Old Nonpareil, Sturmer Pippin. Cockle's Pippin, Duke of Devonshire, and Lord Hindlip make three good late sorts, while Lord Burghley, King of Tompkin's County, Court Pendu Plat, and Sturmer Pippin are all good for use in late winter or very early spring.

NAMES OF PLANTS.

S. S., Bedford.—Physalis Alkekengi.

X Y Z (Hants).—1, Escallonia macrantha; 2, a Cotoneaster, send in flower or fruit.

C. G. N., Teddington.—1, Adiantum peruvianum; 2, Pteris umbrosa; 3, probably Osmunda japonica.

S. G. W., Barrow.—1, Berberis Thunbergi; 2, Selaginella amœna; 3, S. Emileana; 4, Croton aveitense; 5, Pinus cembra.

A. H. P., Melton Mowbray.—1. Cypripedium Leeanum; 2, Odontoglossum ardentissimum; 3, not recognised; 4, Begonia fuchsioides.

A. P., Teignmouth.—1, Pittosporum Tobira; 2, Arundinaria Simoni; 3, Origanum hybridum; 4, Erica mediterranea; 5, Rodgersia podophylla; 6, Lycium barbarum.

NAMES OF FRUIT.

B. B., Bolney.—Evagil.

T. M., Llanelly.—Grenadier.

L. V. B., Henbury.—Blanders.

W. C., Sawmills.—Cornish Crab.

H. A. J., Swindon.—1, Bismarck; 2, Beurre Diel.

J. B., Kingston.—1, Newton Wonder; 2, Fearn's Pippin; 3, Alfriston.

R. D. H., Hitchin.—1, Dumelow's Seedling; 2, Braddick's Nonpareil.

H. W., Farnsfield.—1, Smart's Prince Arthur; 2, Adam's Pearmain; 3, Fearn's Pippin.

C. R., Burton.—1, Lane's Prince Albert; 2, Duchesse d'Angoulême; 3, Bramley's Seedling; 4, Blenheim Pippin.

N. S., Cheltenham.—1, Ecklinville; 2, Warner's King; 3, Golden Noble; 4, not in character; 5, Lady Henniker.

R. S., Littleham.—1, Calville Rouge d'Hiver; 2, Margil; 3, Reinette de Canada; 4, Mabbott's Pearmain; 5 and 6, not recognised.

S., Belvedere.—1, Herefordshire Beefing; 2, Adams' Pearmain; 4, Barcelona Pearmain; 5, Barchard's Seedling Court Pendu Plat; 6, Nonsuch.

F. F., Canterbury.—1, Hambling's Seedling; 2, King of the Pippins; 3, Bismarck; 4, Dutch Mignonne; 5, Doyenne du Comice; 6, Durondeau.

J. H. P. Chilworth.—1, Withington Fillbasket; 2, Hanwell Souring; 3, Herefordshire Pearmain; 4, Hollandbury; 5, Hormead Pearmain; 6, Gravenstein.

G. B., Dublin.—The fruits were not well packed, and as they had shifted in the box with every movement during the journey, a number of the specimens were damaged beyond recognition. Scoring the numbers on the fruits also tends to disfigure the fruits and set up decay. Those identified are: 5, Durondeau; 6 and 8, Beurre Bosc; 7, probably Beurre Hardy.

FORTHCOMING ENGAGEMENTS.

SATURDAY, November 4.—French Horticultural Society of London.
Wood Green Chrysanthemum Show.
TUESDAY, November 7.—Royal Horticultural Society; committees meet at 12 o'clock; lecture at 3 p.m. on "The Cultivation of Figs in Pots," by Mr. James Hudson, V.M.H.; Scientific Committee at 4 o'clock.
Birmingham Chrysanthemum Show; three days.
Southampton Chrysanthemum Show; two days.
Oxford Chrysanthemum Show.
Plymouth Chrysanthemum Show; two days.
Scottish Horticultural Association.
WEDNESDAY, November 8.—Liverpool Chrysanthemum Show; two days.
Cardiff Chrysanthemum Show; two days.
Dorchester Chrysanthemum Show; two days.
Barry Chrysanthemum Show; two days.
Weston-super-Mare Chrysanthemum Show; two days.
Finchley Chrysanthemum Show; two days.
Reading Chrysanthemum Show.
Wath Chrysanthemum Show; two days.
THURSDAY, November 9.—Forest Gate and Stratford Chrysanthemum Show; three days.
Exeter Chrysanthemum Society; two days.
Putney Chrysanthemum Show; two days.
Bedford Chrysanthemum Show.
Haslemere Chrysanthemum Show.
FRIDAY, November 10.—Bradford Chrysanthemum Show; two days.
Leeds Paxton Society's Chrysanthemum Show; two days.
Altrincham Chrysanthemum Show; two days.
Huddersfield Chrysanthemum Show; two days.
Windsor Chrysanthemum Show.
North Lonsdale Chrysanthemum Show.
MONDAY, November 13.—United Horticultural Benefit and Provident Society.
TUESDAY, November 14.—Ulster Horticultural Society; two days.
Chester Chrysanthemum Show; two days.
Winchester Chrysanthemum Show.
Saltaire Rose Society's Annual Meeting.
WEDNESDAY, November 15.—Newcastle Chrysanthemum Show.
North of England Horticultural Society, at Newcastle
York Chrysanthemum Show; three days.
Northern Fruit Congress at Newcastle.
Buxton Chrysanthemum Show.
Woolton Chrysanthemum Show.

The only resemblance between a Pine Spray Syringe and others is in the shape of the barrel. The metal is more substantial. For the rest, the combination spraying head renders Spray, Rose, and Bend instantly obtainable without the addition or removal of a single fitment, while the adjustable leather bucket plunger gives perfect suction, never allows water to escape past it and up your sleeve, and wears interminably.

A written request from your ironmonger or seedsman, and a Syringe will be sent in 24 hours for your approval. Price **10/6.** Sole proprietors and manufacturers, **Robinson Bros., Ltd., West Bromwich.**

PINE SPRAY SYRINGE (patent).

MARKETS.

◆

COVENT GARDEN.

Flowers.

There is a good demand for flowers, but supplies are abundant to meet it.

		s.	d.		s.	d.
Adiantum cuneatum	per doz. bun.	3	0	to	4	6
Arums	per doz.	3	0		4	6
Asparagus plumosus	per doz. bun.	8	0		15	0
,, Sprengeri	per doz. bun.	8	0		12	0
Azalea	per doz. bun.	4	0		6	0
Carnations	per doz.	1	6		3	0
,,	per doz. bun.	9	0		16	0
Chrysanthemums	per doz. bun.	4	0		8	0
,,	per doz. blooms	1	3		6	0
Croton leaves	per bun.	1	0		1	6
French fern	per doz. bun.	2	6		4	0
Gardenias	per doz.	2	0		3	0
Lapageria	per doz.	2	0		3	0
Lilium auratum	per doz.	2	6		3	6
,, speciosum	per doz.	1	6		2	6
,, longiflorum	per doz.	2	6		3	6
Lily of the Valley	per doz. bun.	6	0		15	0
Marguerites	per doz. bun.	2	0		2	6
Mignonette	per doz. bun.	2	6		3	0
Odontoglossums	per doz. blms.	3	0		4	6
Pelargoniums	per doz. bun.	5	0		6	0
Roses	per doz.	1	0		3	6
Smilax	per doz. trails	2	0		3	6
Tuberoses	per doz.	0	5		0	9
Violets	per doz. bun.	1	6		4	0

Vegetables.

Supplies are excellent, though Brussels sprouts are dear. The demand is steady.

		s.	d.		s.	d.
Artichokes, Globe	per doz.	2	0	to	3	0
,, Jerusalem	per bush.	1	6		3	0
Asparagus	per bun.	3	0		4	0
Beet	per bush.	2	6		3	6
Brussels Sprouts	per ½-bush.	2	0		2	6
Cabbage	per tally	3	0		6	0
Carrots	per doz. bun.	2	0		3	0
Cauliflowers	per doz.	1	6		4	0
Celery	per doz. bun.	7	0		12	0
Chicory	per lb.	0	3½		0	4½
Cucumbers	per flat	4	0		7	0
Endive	per doz.	1	6		2	6
Horseradish	per doz. bun.	10	0		18	0
Indian Corn	per doz.	0	9		1	0
Leeks	per doz.	2	0		3	0
Lettuce	per doz.	1	0		1	9
Mint	per doz. bun.	3	0		5	0
Mushrooms	per doz. lb.	8	0		10	0
,, Outdoor	per peck	1	0		1	6
Onions, Spanish	per case	7	0		8	6
Parsley	per ½-sieve	1	6		2	6
Parsnips	per bag	4	0		6	0
Radishes	per doz. bun.	0	9		1	3
Savoys	per tally	5	0		8	0
Spinach	per bush.	3	6		6	0
Tomatoes	per doz. lb.	2	0		4	0
,, Canary Isles	per crate	12	0		14	0
Turnips	per doz. bun.	2	6		4	0
Watercress	per doz. bun.	0	6		0	6½

LONDON POTATO MARKETS.

		s.	d.		s.	d.
Blackland	per ton	70	0	to	80	0
British Queen	per ton	75	0		90	0
Eclipse	per ton	75	0		85	0
Epicure	per ton	70	0		75	0
Essex	per ton	70	0		70	0
Evergood	per ton	65	0		70	0
Kents	per ton	80	0		85	0
King Edward	per ton	80	0		90	0
Up-to-Date	per ton	80	0		100	0

CONTENTS.

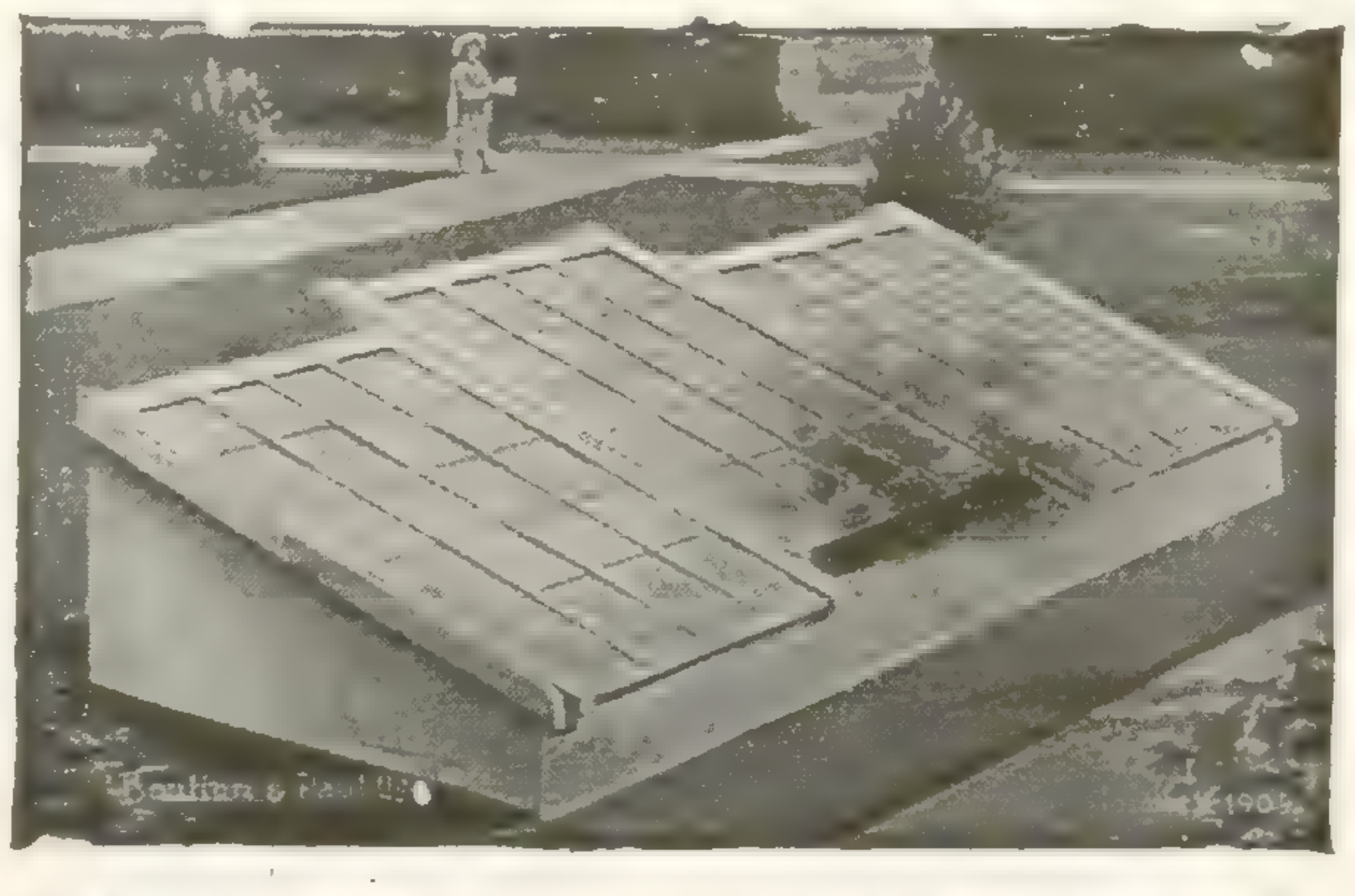
PAGE
Amelanchier canadensis ... 815
Answers to Correspondents ... 828
Clematis Davidiana ... 822
Exhibitions and Meetings ... 824
Fruit from a New Garden ... 821
Gardening for House Adornment ... 817
National Chrysanthemum Society's Show ... 813
New Chinese Trees and Shrubs ... 816
New Books ... 830
New Plants, etc. ... 819
Notes from Kew ... 818
Notes of the Week ... 811
Rose Notes ... 818
Rose Pergola at Preston Hall ... 815
Royal Horticultural International Exhibition 827
Seaweed as Manure ... 827
Seet Carnation Cambria ... 816
The Removal of Plants ... 820
Week for the Week ... 823

ILLUSTRATIONS.

Portrait of Mr. John E. Davis 811; Display of Chrysanthemums from the Dulwich Horticultural Society, 813; A Finely-furnished Rose Pergola with Grass Walk at Preston Hall, 815; Carnation Cambria, 816; Clerodendron Fargesi, 817; Nerine Mrs. F. R. Balfour, 818; Lælio-cattleya St. Gothard, McBean's variety, 819; Veronica Silver Queen, 824; Chrysanthemum Bronze Goucher's Crimson, 821; Mr. Mease's First Prize Set of Twelve Japanese Blooms, 827.

PRESERVE YOUR PLANTS
during the Winter Months by using our well made

No. 75. MELON AND CUCUMBER FRAME.
Painted three coats, glazed 21 oz. glass.



4 ft. by 6 ft. ... £2 0 0 | 8 ft. by 6 ft. ... £3 0 0

Garden Frames
in every variety always in stock.
High class Finish in the Very Best Materials.

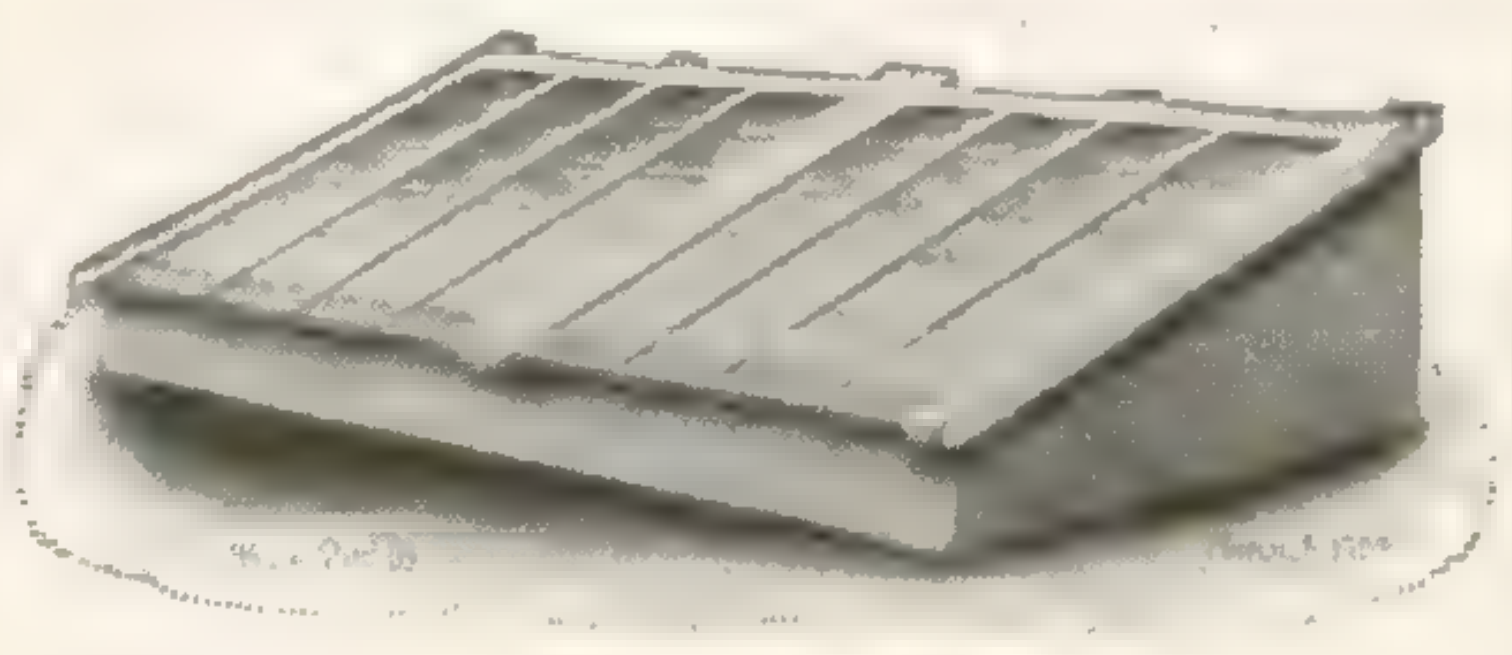
Pit Lights.
6 ft. 1½ in. by 4 ft. Painted and Glazed 14/- each
Unpainted and Unglazed ... ... 5/- ,,

Double Glazed Lights.
4 ft. 7in. by 4 ft. 3 in. Painted and Glazed, 15/6 each

Improved Fruit Trays.
30 in. by 19 in., 18/- doz.; 24 in. by 15 in., 15/- doz.
Carriage Paid on one dozen Trays and over.

Reed Mats. 4 ft. 6 in. square, 20/- doz.

SEND FOR PRICE LISTS.

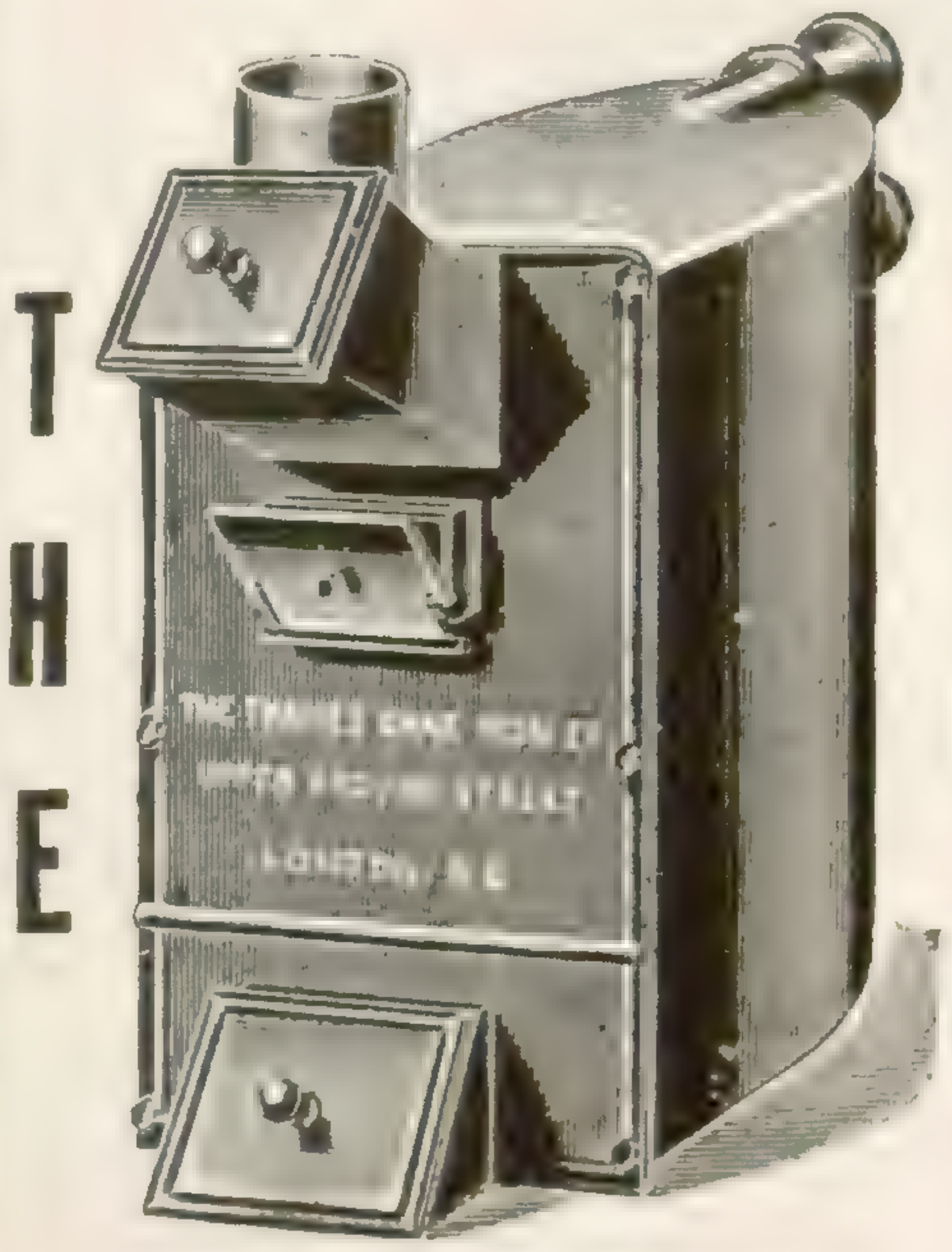


No. 77. VIOLET FRAME
(as illustrated).
6 ft. by 4 ft. £1 15 0
9 ft. by 4 ft. 2 7 6

No. 60.
PORTABLE PLANT PRESERVER
6 ft. by 3 ft., £1 14 0
6 ft. by 4 ft., £2 5 0
All Frames and lights Painted three coats. Glazed with 21 oz. glass.

Carriage Paid on Orders of 40/- value to most Goods Stations in England and Wales.
BOULTON & PAUL, LTD., NORWICH.

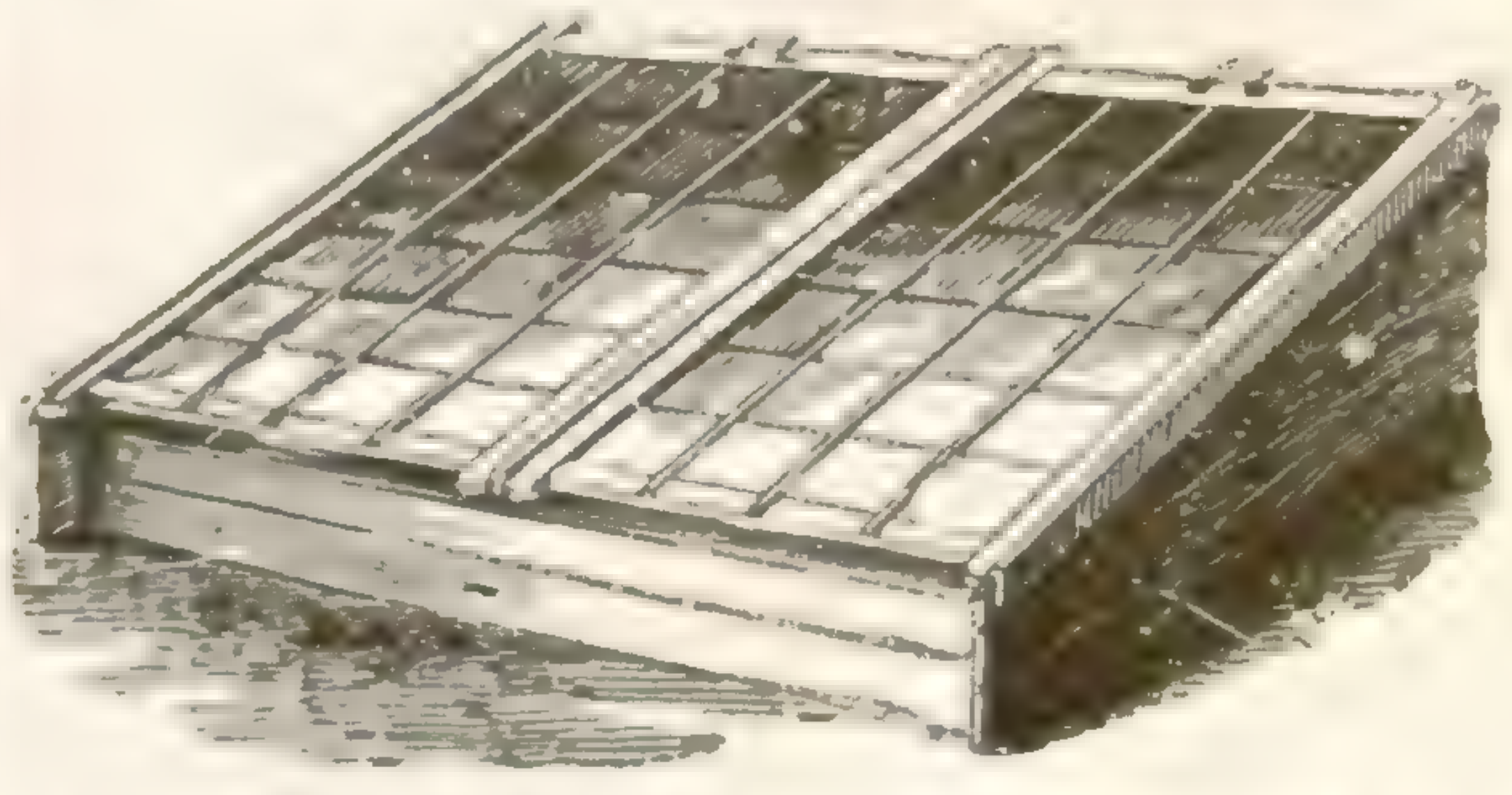
'Phone: Hop. 763.
When next a Small Boiler you require
TRY
THE HEEL


THE THAMES BANK IRON CO.
UPPER GROUND STREET
LONDON, S.E.

NONE TO BEAT IT.
THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.
4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

PLEASE MENTION
THE GARDENERS' MAGAZINE
when writing to Advertisers.

PORTABLE
CUCUMBER FRAMES.
OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.		£	s.	d.
1-light 4 ft. by 6 ft.	*CASH PRICES.*	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.	*CARRIAGE PAID.*	5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON MANCHESTER.

FLOWER POTS
SAUCERS, SEEDPANS, RHUBARB AND SEAKALE POTS, RUSTIC WARE, VASES, PEDESTALS, etc.
Our Pots are Low in Price and rich in Colour.
Amateurs should try our FAMOUS CRATES of POTS.
7s. 6d., 10s. 6d., 15s., and 21s.
ART CATALOGUE FREE. ORDERS SENT OFF SAME DAY.
Buy from the Makers—
HERBERTS PARK POTTERY CO., WOLVERHAMPTON.

RATS Exterminated by "LIVERPOOL" VIRUS
without danger to other animals and without smell from dead bodies. In tins ready prepared with the bait.
Virus for Rats, 2/6 and 6/-; for Mice, 1/6.
Of all Chemists. *Write for particulars to*—
EVANS SONS LESCHER & WEBB, Ltd.,
Dept. G.M., 56, Hanover Street, LIVERPOOL.

NEW BOOK.

REGENT'S PARK AND PRIMROSE HILL.

By A. D. Webster. (Greening and Co., Lim., 91, St. Martin's Lane, London, W.C.). Price 5s. net.

In the preparation of this admirably written book, Mr. A. D. Webster has rendered a service of much value to those who take an intelligent interest in the many fine open spaces to which the general public have access in London. The historical aspects and distinctive features of the numerous parks and gardens that are under the care of the London County Council are fully dealt with in the excellent work written by Lieut.-Colonel Sexby during the period in which he occupied the position of Chief Officer of the London County Council's parks and gardens. But until the present time the Royal Parks and Gardens within the metropolis that are open to the public have not had a work specially devoted to them. Much of their history may be found by diligent research, and some books that have been published will render help; but there is no book that is exclusively devoted to them in which their history and characteristic features are set forth with sufficient fulness of detail to satisfy those who are desirous of becoming well acquainted with their historical associations, and the trees, shrubs, plants, etc., with which they are so richly furnished. Hence the volume relating to Regent's Park and Primrose Hill from Mr. Webster's facile pen is especially welcome.

The author in his opening chapter takes us back to the time when the site of Regent's Park was a portion of an extensive tract of well-wooded pasture land called the Marylebone Park Fields. Marylebone Park dates from the time of Henry VIII., when the Manor House was built, and continued under the Crown until about the middle of the seventeenth century, when it was granted by King Charles to two of his adherents, as a security for a debt due to them for supplying arms and ammunition. After the death of Charles the park was sold by the order of the Parliament, and the price realised was £13,215 6s. 8d. Cromwell converted the park to other uses, the land being let on lease for various periods to different noblemen. The last of the leases to expire was that held by the Duke of Portland, who gave up the land in 1811, shortly after which the formation of the present park was commenced. The park has thus a history extending exactly over a hundred years, and the writing of it affords abundant scope for the display of literary ability of a high order. Mr. Webster has taken full advantage of his opportunity, and has shown that he has a thorough acquaintance with the historical associations of the park, and possesses the ability to present the multiplicity of facts to his readers in an extremely interesting manner.

It is interesting to read in the chapter devoted to the flower garden which occupies an enclosure at the south east corner, that this attractive area was laid out at the direct instigation of the Prince Consort. The flower beds were originally designed by Nesfield, and laid out in 1865; and the mounds on the eastern side of the flower garden, that were formed to relieve the flatness characteristic of this part of the park, were made with soil brought from the reservoir in Tolmer's Square. Reference is made to the handsome vases with which the flower garden is embellished, and it is stated that the Griffon vase, which stands near the fountain, requires about four hundred plants to furnish it properly.

It would be a pleasant task to refer at some length to the majority of the chapters into which the book is divided, but space will not permit. We must therefore be content with advising those of our readers who are interested in Regent's Park to buy the book and make themselves fully conversant with its contents, which are throughout varied, instructive, and entertaining. It is freely illustrated, and the illustrations include reproductions of old engravings that show certain of the features of bygone years, as well as reproductions of photographs showing the present aspect of this famous open space.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1911. October 22 to October 28.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Oct. 22—Sunday	3 0	54	53	59	50
„ 23—Monday	3 12	54	51	58	50
„ 24—Tuesday......	0 36	53	52	56	50
„ 25—Wednesday..	7 12	44	43	54	40
„ 26—Thursday....	1 36	46	45	56	34
„ 27—Friday........	—	42	41	49	38
„ 28—Saturday.....	6 6	41	39	50	35
Means ...	(total) 21 42	48	46	54	42

Date. 1911. October 22 to October 28.	Rain.	Temperature of the Soil at 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
Oct. 22—Sunday	0·03	54	54	55	42
„ 23—Monday	trace	53	54	55	41
„ 24—Tuesday......	1·30	52	53	55	43
„ 25—Wednesday..	0·02	51	53	55	32
„ 26—Thursday	0·13	48	52	55	24
„ 27—Friday	0·01	47	51	54	26
„ 28—Saturday	—	46	50	54	26
Means ..	(total) 1·49	50	52	54	34

Heavy hailstorm on 25th at 2 p.m.

GARDENERS
should write
the man behind this boot
for illustrated
catalogue of
reliable footwear.

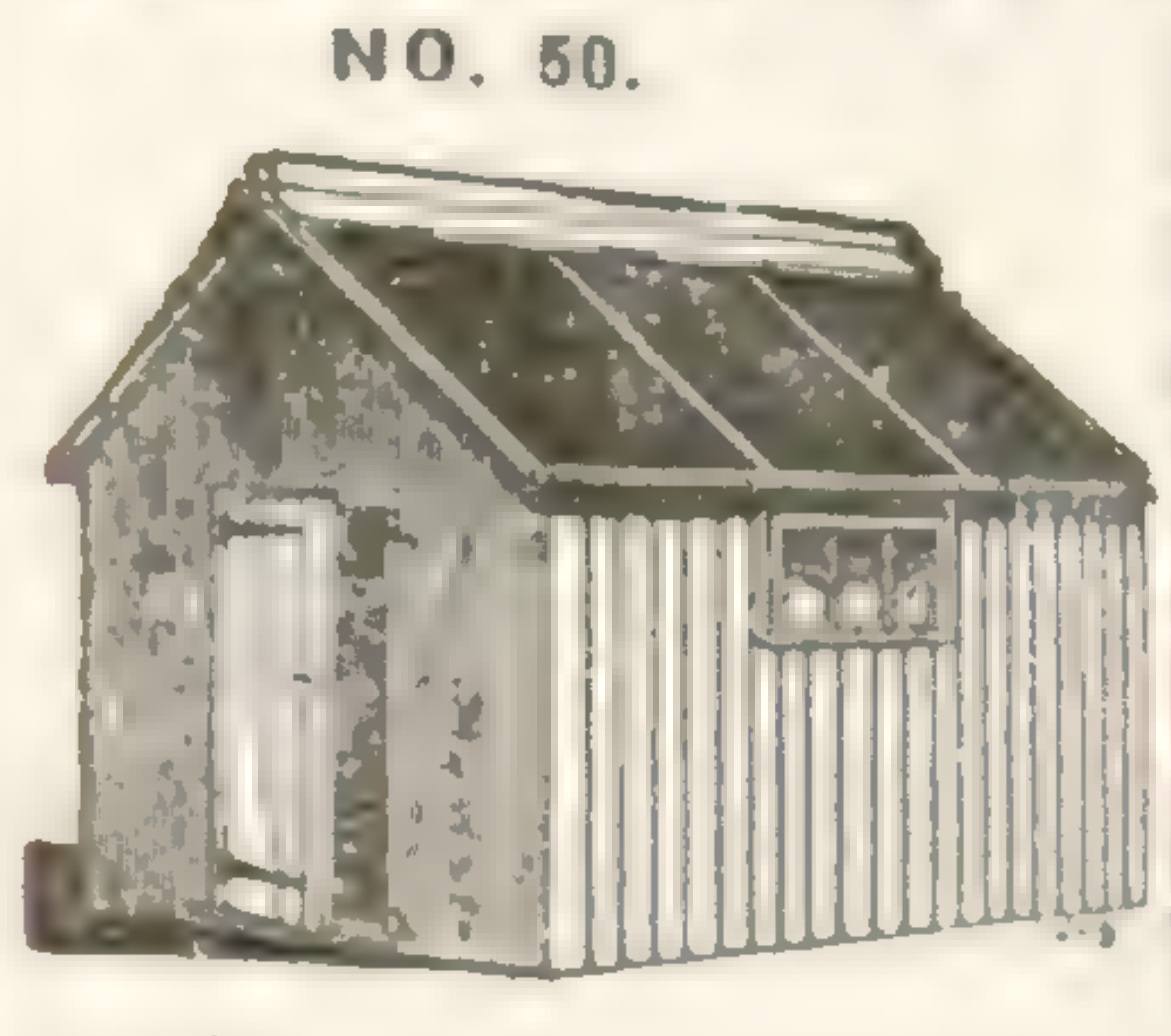
We make sound, Scotch durable boots for the whole family. A joy to the feet.

Our "**Gardener**" **Boots** at **10/9** are a revelation.

NORWELL'S. PERTH, SCOTLAND.
C1 Established over 100 years.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

Portable Buildings. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

Sizes.	Cash with Order.	Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	17/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	20/0

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
Established 70 Years. BEDFORD.
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

MERRYWEATHERS'

614 PUMP
IS THE
Gardener's Friend.

Easy to Work.
Simplicity Itself.

Write or Call—

63, Long Acre,
LONDON, W.C.

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant

Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

By Royal Warrants

To H.M. King George V.

To H.M. Queen Alexandra.

The Best Remedy
for
MILDEW, GREEN FLY,
and all INSECT BLIGHT, is

Jeyes'
Horticultural Wash

A PERFECT INSECTICIDE.

From all Chemists, Seedsmen and Florists.

Write for Pamphlet and Prices to
Jeyes' Sanitary Compounds Co., Ltd.
64, Cannon Street, London, E.C.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 31; married when suited; excellent references. Address, Closes Hall, Gisburn, Clitheroe.

GARDENER (Head of two or more) seeks RE-ENGAGEMENT; life experience, Inside and Out; 23 years Head in last place; good references. J. KIGHTLEY, Roade, Northamptonshire.

HEAD GARDENER, where several are kept, seeks SITUATION; well up in Gardening in all its branches, and understands Stock; 9 years' excellent character and several good testimonials of previous places. F. J. ASHDOWN, Chiddingfold, Surrey.

GARDENER (Head), life thorough experience, Fruits, Flowers, Vines, Peaches; Inside and Out; thoroughly understands Roses, Herbaceous Borders, Lawns, Trees, Flowering Shrubs; excellent character; 4 years Outside Foreman; 3 years Head Working Gardener; left through death; married; age 33; three children. HUDSON, Cupid Green, Hemel Hempstead.

GARDENER (Head) seeks RE-ENGAGEMENT with Lady or Gentleman requiring thorough practical Man in all branches; last place 5 years Head with 12 to 8 men under; highest references from all employers; age 34; married, no family; abstainer.—F. WESTRON, Sunnybrae, Cippenham, Slough, Bucks.

GARDENER (Head Working); life experience in all branches; highest references; understands Oil Engline; age 40; family, 3 boys. E. STEVENS, 13, Connaught Road, Newbury, Berks.

GARDENER (Head Working, where one or 2 kept); 10 years in present situation; 5 years as Second; age 31; single Apply A. GIBBS, 68, Pope Road, Bromley, Kent.

GARDENER (Head Working).—Mr. COLLEDGE, Gardener to the Earl of Darnley, highly recommends F. BISHOP, as above; 4½ years as Foreman here. Cobham Hall Gardens, Kent.

GARDENER (Head Working).—Mr. R. W. Williamson, of the Croft, Didsbury, near Manchester, strongly recommends his late gardener, HENRY ARNOLD, who has been with him for over 20 years; is well experienced in gardening in all its branches, and is specially trained in rockery construction and cultivation of alpines.

GARDENER (Head Working) seeks SITUATION, with 2 or 3 under; life experience with Vines, Peaches, Melons, Flowers, and Vegtables; married, one child. J. PETTY, Marchwood, Southampton.

GARDENER (Head).—Mrs. MURRY IND highly recommends practical all-round Man; would lay out new or re-model old Gardens. Roseries, Tennis Grounds, etc.; no family. Address G. ROBARTS, 13, Wades Grove, Winchmore Hill, N.

W. EDWARDS, Worth Hall Gardens, Crawley, Sussex, wishes to recommend F. REYNOLDS as GARDENER (Head of three or four); 14 years' thorough practical experience Inside and Out; excellent references; age 28.

GARDENER (Single-handed, or where help is given); 12 years' practical experience; 4 years in last situation; good references; single; age 36; abstainer. J. CHAPMAN, Ferry Hill, Chatteris, Cambs.

GARDENER, 40; Single-handed preferred; thoroughly experienced; excellent character; active worker; Inside and Out, with early vegetables; abstainer; married. A. BISHOP, Windmill Hill, near Hailsham.

GARDENER (26), as Single-handed or Kitchen Garden and Pleasure Grounds; abstainer; Single; good references. G. SEAR, Adstock, Winslow, Bucks.

GARDENER (Single-handed, or with help). —Mr. COLLEDGE, Gardener to Earl of Darnley, highly recommends H. WILLIAMS as above; 2 years here; single. The Ridgeway, Shorne, near Gravesend, Kent.

GARDENER (Single-handed, with Help, or Second); life experience all branches; excellent references; personal; left through death; age 27; married, one child. CREWE, Sandfield Cottages, Harleyford, Marlow.

GARDENER, Single, seeks SITUATION (Single-handed or where help is given); age 28; good references. H. HOGG, West Shrubbery, New Church Road, Hove, Sussex.

GARDENER, Single, seeks SITUATION (Single-handed or with help); life experienced Inside and Out; last place three years; good character; age 30. J. PULLINGER, The Lodge, Strood Park, Horsham.

FOREMAN, Kitchen Garden; thorough knowledge of growing Vegetables, Fruit, etc.; 11 years' experience; 2 years with Madame Patti Cederstrom; age 25; abstainer. A. MORTIMORE, c/o Mr. Flitney Chipstead, near Sevenoaks, Kent. Bothy preferred.

MANAGER or FOREMAN'S Position required in general Nursery; experienced in Shop work, Floral Decorations, Tomatoes, Cucumbers, Bedding Plants, etc. Apply CHARLES A. PALMAR, Rose Villa, Eddington, Herne Bay, Kent.

GARDENER, thoroughly experienced, seeks re-engagement with Lady or Gentleman requiring obliging and trustworthy man; age 30; married, one child, two years; abstainer; excellent references. D. MOORE, West End Cottages, West End, Pinner.

JOURNEYMAN, age 21, with six years' experience Inside and Out, seeks Situation Inside under Foreman; excellent testimonials; can be well recommended; height 5ft. 10in. Apply P. CLIFTON, The Mill House, Rickmansworth, Herts.

JOURNEYMAN (Third) seeks SITUATION Inside or Inside and Out; six years' experience; age 20; abstainer; good references; bothy preferred. W. COWARD, 24, Southbroom, Devizes, Wilts.

YOUNG MAN seeks SITUATION in Pleasure Grounds and Kitchen Garden; good references; Bothy preferred; two years in last place; age 19. J. METCALFE, Ludborough, Louth, Lincs.

YOUNG MAN, age 18, seeks SITUATION, Inside, or Inside and Out; 4 years' experience in general garden work. A. J. BATES, Rose Cottage, Souldern, Banbury, Oxon.

MRS. WATSON-KENNEDY recommends IMPROVER (Inside or Inside and Out); age 18; four years' experience; can be well recommended by Head Gardener. B. GIBBS, Wiveton Hall Gardens, Cley, Norfolk.

YOUNG MAN seeks SITUATION to look after Electric Light and Garden; well up in all branches; nine years last situation. EDWARD VILLA, Street Cobham, Surrey.

YOUNG MAN seeks SITUATION as Under Gardener; age 20; five years' reference. Apply MRS. EMERSON, Pershore House, Pershore.

ESTATE CARPENTER and HANDY MAN seeks re-engagement on Estate or otherwise; excellent references; lifelong experience; married. HAWKINS, The Lodge, The Hyde, near Luton, Beds.

YOUTH, aged 17, seeks SITUATION in Garden; strong, willing; 3½ years in last place; highly recommended. E. ROBERTS, Gate House, Nuttall, Nottingham.

BOY requires SITUATION; used to Garden and Housework; good references; live in. JOHN CAMPBELL, care of Miss Cook, Holmwood, Haddon Road, Chorley Wood, Herts.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For NOVEMBER 11, 1911.

Please Repeat my Advertisement.

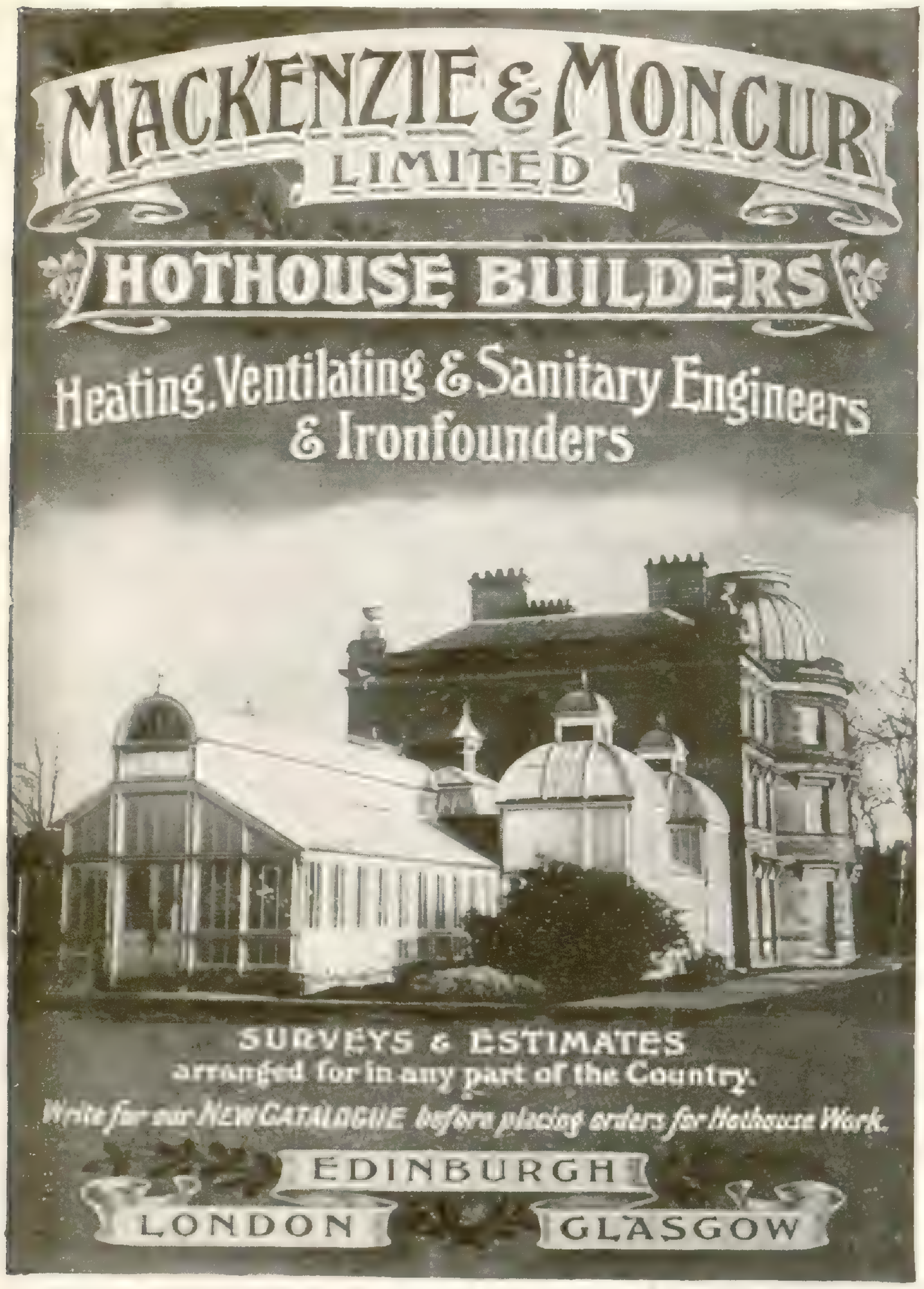
Name..

Address..

....

Date......................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.



MACKENZIE & MONCUR LIMITED

HOTHOUSE BUILDERS

Heating, Ventilating & Sanitary Engineers & Ironfounders

SURVEYS & ESTIMATES arranged for in any part of the Country.

Write for our NEW CATALOGUE before placing orders for Hothouse Work.

EDINBURGH

LONDON GLASGOW

BULBS

AND THEIR CULTIVATION.

Bulb cultivation is a fascinating phase of Indoor and Outdoor Gardening, and now is the time to plant. Many from long experience know how to grow Bulbs to perfection; thousands of others do not. Hence the utility of the volume by

T. W. SANDERS, F.R.H.S.

Author of the "Encyclopædia of Gardening," etc., etc.

A storehouse of practical information. To possess a copy is to gain knowledge and save money by avoiding errors in cultivation. The book is well illustrated, and the price is half-a-crown (post free **2/10**) from Publisher, 148-9, Aldersgate Street, London, E.C.

REGISTERED

THE APRON That has Come to Stay

WORN BY ALL THE LEADING GARDENERS

LOOK AT THE PRICE

1/9 in Dark Blue Ponicus Twills,

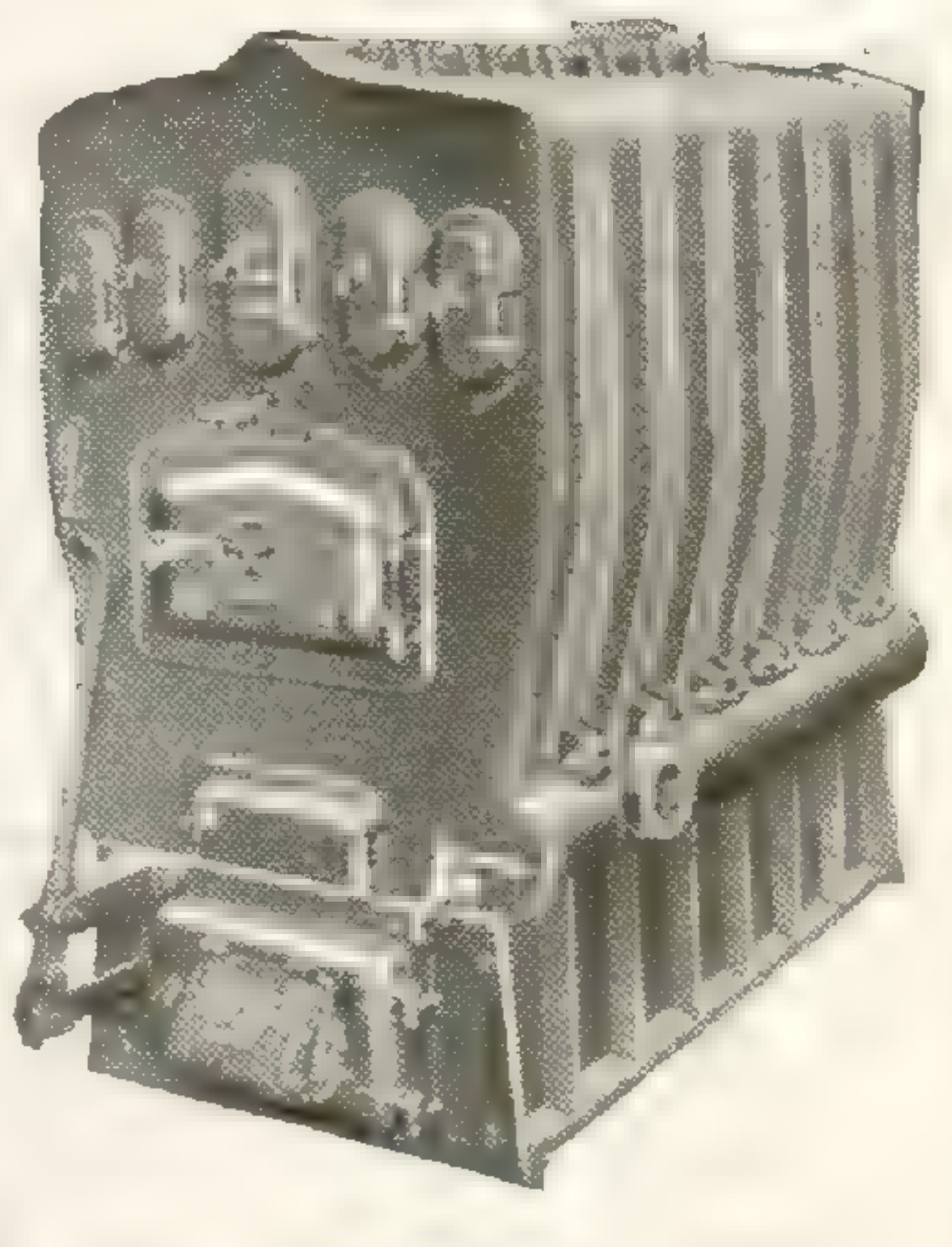
OR in Dark Blue Ponicus Serge

3/9 Postage 3d each extra

WRITE FOR ONE TO-DAY

SHAW & MONTGOMERY, 628 ARGYLE ST. GLASGOW

Kinnell's Boilers



THREE LEADING TYPES:—

The **"ANGLIAN," Sectional,** heats 800 to 8,000 ft. 4in. pipe.

The **"ROCHFORD," Tubular,** heats 600 to 8,000 ft. 4in. pipe.

The **"HORSE-SHOE"** for the small Greenhouse.

Saddle Boilers, Trentham Boilers, and all classes of Pipes, Fittings, etc., ready for immediate despatch.

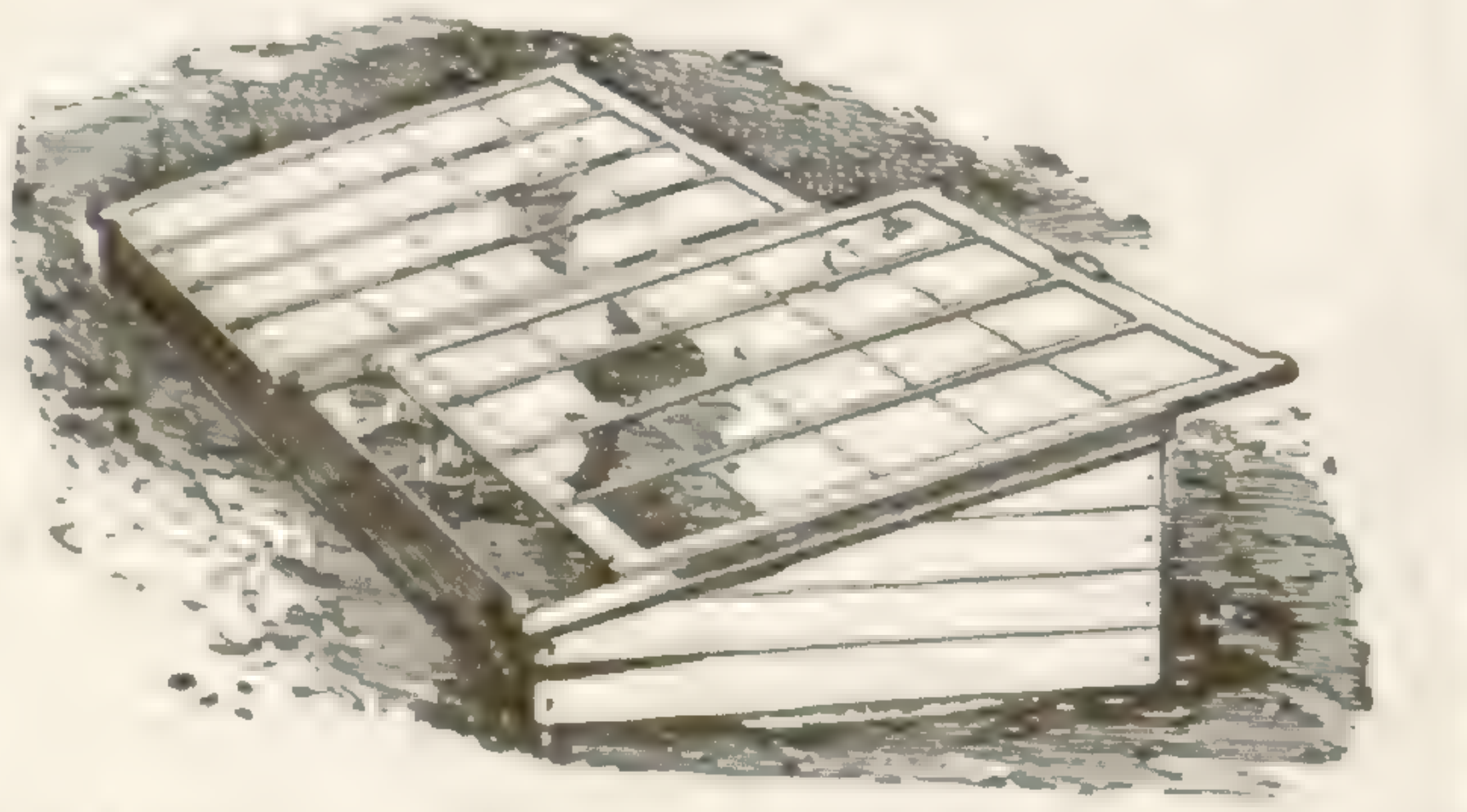
Write for List No. 77, post free.

CHAS. P. KINNELL & Co., Ltd., 65, & 65a, Southwark St., London, S.E.

W^M. DUNCAN TUCKER & SONS, L^TD.

MELON AND CUCUMBER FRAMES.

No. 38.



6 ft.×4 ft. ...	£1 14 0	12 ft.×6 ft. ...	£3 14 0
8 ft.×6 ft. ...	2 14 0	16 ft.×6 ft. ...	4 14 0

Carriage Paid on 40/- Orders to most Stations.

Erected at Berkhamstead.

Please mention this Paper.

27, CANNON STREET, LONDON, E.C. Works Tottenham.

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls

BIRMINGHAM CHRYSANTHEMUM SHOW—ILLUSTRATED REPORT.

THE GARDENERS' MAGAZINE.

No. 3,028. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, NOV. 11, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S Hyacinths, Tulips, Daffodils, etc., for pots and bedding. Finest quality. Moderate prices. Descriptive Catalogue free.
BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, Horticultural Builder, Chelsea, S.W., advises Gardeners to watch their Hot Water Heating Apparatus this month. If boilers show signs of wear, it would be wise to have them examined at once. Attention can be obtained by means of a postcard, telephone call (201 Western), letter, or wire, to Gray, Chelsea, London.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

CHRYSANTHEMUM TUBES for exhibiting; highly commended by N.C.S. Apply SPRINGTHORPE, F.R.H.S., St. Albans Road, Kingston-on-Thames.

FERNS, FERNS, FERNS, etc. Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue Free. J.E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

POTATOES, choice floury-cooking, 5s. per cwt.; English onions, 5s. per bushel; Giant Red Shallots, 20s. per cwt.; sample six pounds, post free, 2s.—BRINKWORTH and SONS, Southampton.

RICHARDSON'S for GLASSHOUSES and HEATING APPARATUS, for full advertisement see back page. Darlington.

"ROSES AND THEIR CULTIVATION."—A new edition of this Standard Book will be ready in a few days, and every Rose-grower should secure a copy. Cloth, many Illustrations, 2s. 10d., post free, from Publisher, 149, Aldersgate Street, London, E.C.

FORCING BULBS.—15 doz. in 30 varieties, for 10s. 6d., post free: 4 doz. Narcissus, 3 doz. Single Tulips, 2 doz. Double Tulips, 2 doz. Darwin Tulips, 1 doz. Hyacinths, 1 doz. Crocus, 2 doz. Spanish Iris.—VAN DER SLUYS, F.R.H.S., Rame, Guernsey.

ORDER MATS NOW.—To prevent disappointment and loss by early frosts, order Norfolk Reed Mats now, 50 per cent. more protective than straw. Made to any size, 1d. per square foot.—BOULTON and PAUL, Lim., Norwich.

BECKETT'S NEW BOOK.—The most practical and Up-to-date Book on Vegetables. Price 5s.; post free, 5s. 6d. EDWIN BECKETT, Aldenham House Gardens, Elstree, Herts.

WELLS' Catalogue of
CHRYSANTHEMUMS,
PERPETUAL CARNATIONS,
HERBACEOUS PLANTS,
ALPINE AND ROCK PLANTS,
now ready. Post free on application. Wells' Book, "The Culture of the Chrysanthemum," post free, 1s. 6d. W. WELLS and CO., Merstham, Surrey.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

WEBBS' COLLECTIONS OF NARCISSI FOR POTS AND OPEN GROUND.
25 Narcissi, in 5 choice varieties, 2/3.
50 ,, ,, 10 ,, ,, 4/6.
100 ,, ,, 10 ,, ,, 9/-.

WEBBS' CHOICE MIXED TULIPS (Single and Double) for Bedding, 9d. per doz., 4/6 per 100.

WEBBS' CROCUS FOR BEDS AND BORDERS.
Mixed colours, 1/6 per 100, 12/6 per 1,000.

WEBB and SONS, The King's Seedsmen, Wordsley, Stourbridge.

BUNYARD'S CATALOGUES
Free on Application.

FRUIT TREES, SHRUBS.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

LAXTON STRAWBERRIES for immediate planting. Fine plants of all the leading varieties in little pots, 15s. 100. Open ground runners, 5s. 100. Catalogue with full particulars gratis
LAXTON BROTHERS, Bedford.

CLAY'S MANURES, CRUSHED BONES
(See page vi.)

CLAY'S FERTILISER IS
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

CHRYSANTHEMUMS.

My Collection contains all the best up-to-date.
Catalogue of nearly 600 vars., now ready.
Cuttings from 1s. 6d. to 6s.; Rooted Plants in Feb., from 2s. to 9s. per dozen, purchaser's own selection.
H. WOOLMAN, F.N.C.S., Shirley, Birmingham.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

"ROCK GARDENS AND ALPINE PLANTS."—A complete Guide to the Formapage Plates and other Illustrations, 2s. 10d., post free, tion and Management of Rockeries. Cloth, 48 fullpage plates and other illustrations, 2s. 10d., post free, from Publisher, 149, Aldersgate Street, London, E.C.

THOMSON'S CELEBRATED MANURES.
(For full particulars see page vii.)

CONSERVATORIES AND WINTER GARDENS. Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs, and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue, free. BOULTON and PAUL, Lim., Norwich.

GREENHOUSES and CONSERVATORIES. Distinctive Designs and Finished Workmanship. Write now for ILLUSTRATED CATALOGUE. CARTER and HOWARD, Horticultural Builders, Kingston-on-Thames. Phone: 1308 P.O. Kingston.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses. Portable buildings, etc. Catalogue gratis.

SUTTON'S BULBS.
The best of the year.
R. Lee Hogg, Esq., Spring Grove, writes: "Kindly repeat our order of last autumn for Bulbs. We are glad to say that they were most satisfactory."

SUTTON'S INIMITABLE HYACINTHS FOR BEDDING.
Special varieties in distinct shades of colour, and to flower simultaneously. Scarlet, Pink, Light Rose, Blue, Light Blue, Dark Blue, Pure White, Blush White, Mauve, and Primrose Yellow.
Each colour, per doz., 3s.; per 100, 22s.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

NOW IS THE TIME TO PLANT
Kelway's lovely Pæonies, Delphiniums, and their celebrated Artistic Hardy Borders; packed ready for planting.
KELWAY'S CHOICE named Pæonies, from 27s. per doz.
KELWAY'S CHOICE named Delphiniums, from 24s. doz.
For information about the Colour Borders send 6d. for "Gardens of Delight."

Londonderry.
October 11th, 1911.

"I take this opportunity of saying how very pleased I am with the plants supplied by you for my herbaceous border. After being established about two years the plants have attained the most wonderful and gratifying growth. During the last few weeks the borders have been an object of admiration to all those who have seen them."

KELWAY AND SON,
The Royal Horticulturists,
LANGPORT, SOMERSET.
230 Grand Prizes, Gold Medals, etc.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
From an article in "The Field," August 12th, 1911, on The Best Gardening Books:
"I do not know of anything dealing with herbaceous borders more comprehensive than Kelway's Manual."

ALPINES.—100 in 50 good varieties, carriage paid, £2. Half and quarter quantities at same rate.
WHITELEGG and PAGE, Chislehurst.

POULTRY and KENNEL APPLIANCES of every description. Write for latest Catalogue free on application.—BOULTON and PAUL, Lim., Norwich.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.
XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.
XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B [illegible] Nicotine, best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, XL ALL WINTER WASH for Fruit Trees, RICHARDS' BANDING GREASE, etc. Don't forget to ask your N. S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY
CATALOGUE FROM J.R. PEARSON & SONS
LOWDHAM, NOTTS.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices. Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

A SPECIALITY FOR MORE THAN 50 YEARS.

POT VINES

Exceptionally Fine this Season.
Inspection Invited.

J. R. PEARSON & SONS, LOWDHAM, Notts.

Orchids! Orchids!! Orchids!!!

The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application. — **J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana, Vanda Cœrulea Lushai Hill variety, dark blue type; Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.

CHAMPAGNE RHUBARB ROOTS FOR SALE, suitable for forcing or for planting out.

H. WADDINGTON, 42, Cank Street, Leicester.

LOGANBERRY

DELICIOUS FRUIT, requires exactly the same treatment as the Raspberry. Strong Fruiting Canes, 12/- per dozen. Extra Strong Fruiting Canes, 18/- per dozen.

Packed Free and Delivered Carriage Paid.

Illustrated Catalogue post free on application.

KING'S ACRE NURSERIES, LTD., HEREFORD.

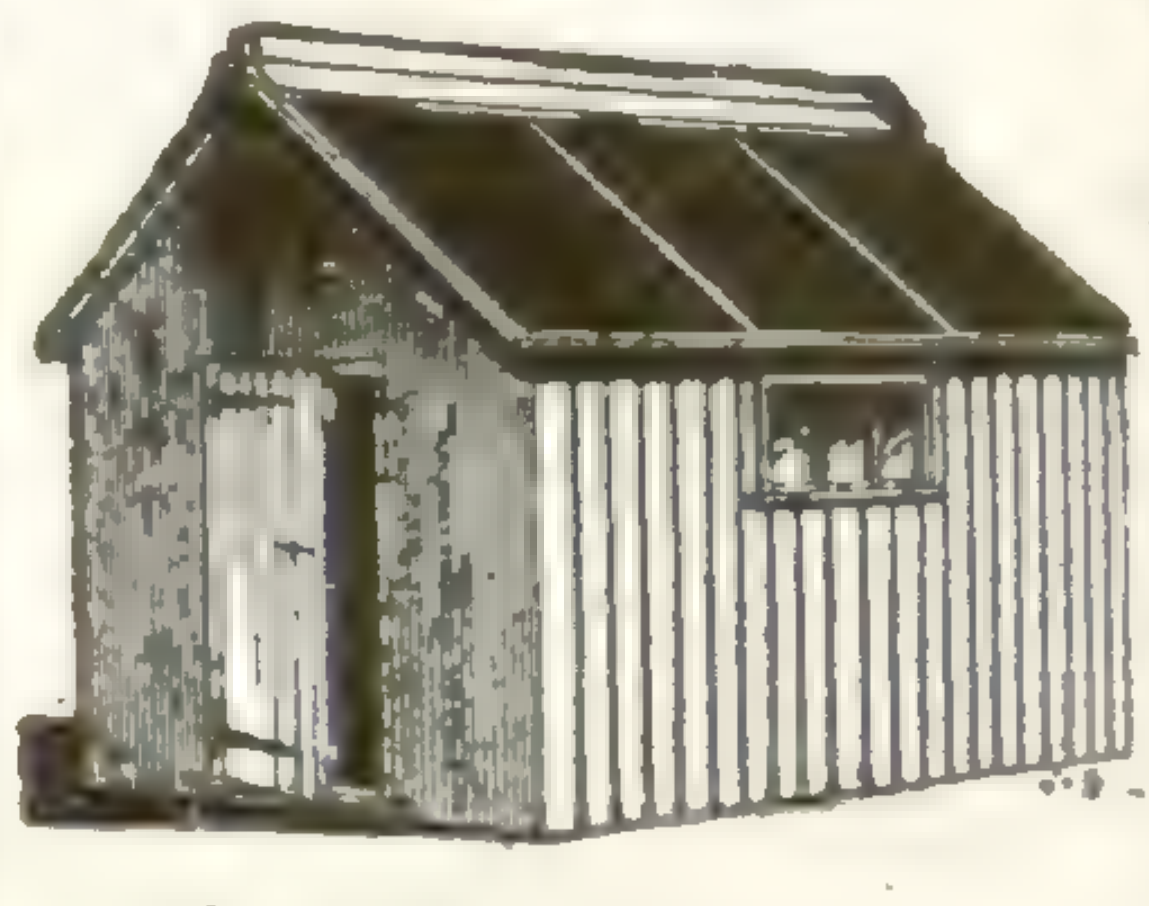
SELECTED SEED POTATOES.

All varieties, grown on finest soil in Scotland and Lincolnshire. Any weight supplied at low prices. Prizes given for best results. Before ordering elsewhere write for catalogue. Best Eating Potatoes also supplied in small or large quantities. See Stand No. 122, Smithfield Cattle Show, London.

A. J. SOLE, Seed Potato Grower,
PETERBOROUGH.

THE CHEAPEST IN ENGLAND.

NO. 50.



Copyright Registered.

PORTABLE BUILDINGS. Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Door fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

SIZES.		Strong Floor.
6ft. long, 4ft. wide, 7ft. high	£1 12 6	4/6
7ft. long, 5ft. wide, 7ft. 6in. high	£1 19 6	6/0
8ft. long, 6ft. wide, 8ft. high	£2 10 0	8/6
9ft. long, 7ft. wide, 8ft. high	£2 17 6	10/6
10ft. long, 8ft. wide, 8ft. 4in. high	£3 7 6	17/0
12ft. long, 8ft. wide, 8ft. 6in. high	£3 17 6	20/0

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
ESTABLISHED 70 YEARS. **BEDFORD.**
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

Please mention
THE GARDENERS' MAGAZINE
when writing to Advertisers.

LAXTON'S
FRUIT TREES
IN ALL SHAPES
CATALOGUES GRATIS
LAXTON BROS
BEDFORD

MESSRS. PULHAM & SON have secured a fine lot of Old Stone Paving, which is eminently suitable for the Paving of Pergolas, Garden Paths, etc.

They will be happy to quote for any quantity, delivered at any railway station.

PULHAM & SON,

BY APPOINTMENT. BY APPOINTMENT.

71, Newman Street, London, W.
And BROXBOURNE.

FLOWER POTS

SAUCERS, SEEDPANS, RHUBARB AND SEAKALE POTS, RUSTIC WARE, VASES, PEDESTALS, etc.

Our Pots are Low in Price and rich in Colour. Amateurs should try our FAMOUS CRATES of POTS. **7s. 6d., 10s. 6d., 15s.,** and **21s.**

ART CATALOGUE FREE. ORDERS SENT OFF SAME DAY.

Buy from the Makers—

RBERTS PARK POTTERY CO., WOLVERHAMPTON

AMERICAN TREE CARNATIONS, fine bushy plants, for winter flowering, in 5-inch pots, best varieties, 10s. 6d. per dozen. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

BUSINESS CARDS.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

CARNATIONS.

ALLWOOD BROS., Haywards Heath, Sussex.
Perpetual Flowering Carnation Specialists, Raisers and Growers.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., late Stanley & Co., Southgate, London, N. (Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

R. H. BATH, Ltd,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 1st Prizes. 3 2nds, at N.R.S. Shows, 1910. Ctlg. Free.

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
1911 Awards: 81 Prizes. Illustrated Catalogue free.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

Sales by Auction.

WEDNESDAY and FRIDAY NEXT.

WEDNESDAY NEXT, November 15th, at Half-past Twelve o'clock.—ROSES, large consignment of English, French, and Dutch Trees, comprising Standards, Dwarfs, Climbers, T., H.T., ad H.P., suitably lotted for all. Together with 200 lots of choice Herbaceous Plants in variety.

At Five o'clock—Ornamental and Decorative Palms and Plants, Azaleas, Rhododendrons, Camellias, Aspidistras, Standard Bays, etc., from Belgium.

FRIDAY NEXT, November 17th, at a Quarter to One o'clock.—The Ridgways Collection of Orchids, by order of S. Larkin, Esq., comprising choice cool, intermediate, and hothouse varieties. Also from another source, New and Rare Orchids from Uganda and the Western Border, all sound, semi-established plants. Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view mornings of sale and catalogues had.

DUTCH BULBS

10,000 Lots Sold Weekly.

SALES EVERY DAY
(SATURDAYS EXCEPTED),
At 10.30 o'clock, at
PROTHEROE and MORRIS'
Central Sale Rooms,
67 & 68, CHEAPSIDE, LONDON, E.C
Catalogues Free.
COMMISSIONS EXECUTED.

DUTCH BULBS, PERENNIALS, ROSE TREES, SHRUBS.

MR. J. C. STEVENS begs to announce that his **Sales by Auction** are held every **MONDAY, WEDNESDAY** and **THURSDAY** at **12.30.**

Catalogues post free.

Lots purchased, packed, and forwarded to all parts.

STEVENS' AUCTION ROOMS
(Established 150 Years),
38, King Street, Covent Garden, London, W.C.

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS, and an endless variety of Choice ORCHIDS.

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone :—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

ROCK & BORDER PLANTS
100,000 IN POTS.
The Finest Lot in all Europe.
PERRY'S Plant Farm,
ENFIELD. *(Cats. Free.)*

RHONDDA URBAN DISTRICT COUNCIL.

The above Council invite APPLICATIONS for two CARETAKERS, with experience in Horticulture, for their Parks at Penygraig and Gelli. Salary 32s. per week, rising by annual increments of 1s. per week, to a maximum of 35s. per week. Particulars of duties, together with Form of Application, may be obtained upon application to the undersigned,

W. J. JONES,
Engineer and Surveyor,
Council Offices,
Pentre, Rhondda.

6th November, 1911.

ORCHIDS.

If you have a Greenhouse sufficiently heated to keep out the frost, write for our

Amateur's Guide,

giving treatment and all particulars. Illustrated.

MANSELL & HATCHER, LTD.,
RAWDON, via LEEDS.

CHEALS'

FOR FIRST-CLASS
ORNAMENTAL TREES, ROSES, FRUIT TREES,
AND
HARDY FLOWERS, etc.

NURSERIES 113 ACRES.
CATALOGUES FREE.

J. CHEAL & SONS,
The Nurseries, CRAWLEY.

SPECIAL LOW CASH OFFER.

HORNE'S
FRUIT TREES.

STANDARD APPLES.—The following popular kinds are included: Cox's Orange Pippin, Worcester Pearmains, James Grieve, Ecklinville, Allington Pippins, Blenheim Orange, Devonshire Quarrenden, Lord Derby, Newton Wonder, and many others. 2s. each; 10s. half dozen; 20s. dozen.

Also a very fine lot of PYRAMID APPLES (2 and 3 years), on English Paradise, including Worcester Pearmains, Cox's Orange Pippins, James Grieve, Allington Pippins, Bramley Seedling, Warner's King, Houblon, Charles Ross, Peasgood Nonsuch, Blenheim Orange, and many others, 1s. each; 5s. half dozen; 9s. 9d. dozen.

HALF-STANDARD APPLES on Crab Stock (2 and 3 years), Worcester Pearmains, Cox's Orange Pippins, Newton Wonder, Allington Pippins, Lord Derby, Blenheim Orange, James Grieve, 1s. each; 5s. half dozen; 9s. 9d. dozen.

Lee's Prolific BLACK CURRANT, 2 years, strong stuff, 3s. dozen; 12s. 6d. 100. Raby Castle and Dutch RED CURRANTS, 2 years, 2s. dozen; 12s. 6d. 100.

STRAWBERRY PLANTS.—Following kinds: Givon's Late Prolific, 1s. dozen; 4s. 100.

100,000 Drumhead CABBAGE PLANTS, 3s. 1,000.

LIST FREE.

W. HORNE & SONS,
Fruit Tree Growers,
CLIFFE, near ROCHESTER, KENT.

WANTED, Large Kentia Palms up to 25ft. high; large, well-coloured Dracænas and Crotons, also Aspidistras.

ROBERT GREEN (1911), Ltd.,
28, Crawford Street, London, W.

PLANTING SEASON.
SEND FOR OUR

Descriptive Catalogue

OF

Ornamental Trees and Shrubs, Roses, Rhododendrons, Climbers, Fruit Trees, Forest Trees, Herbaceous and Alpine Plants,

Advice given on all matters appertaining to
LANDSCAPE GARDENING.

GEO. JACKMAN & SON,
Woking Nurseries, Surrey.
Established over a Century. (Nurseries 200 acres.)

SWEET PEAS.

The Exhibitor's House for true stocks of English-grown Seeds.

Awarded 90 Gold Medals.

Novelties for 1912:

AFTERGLOW, PRINCE GEORGE, DOROTHY, R. F. FELTON, CORONATION, FLORRIE.

1/- per packet.

For other Novelties and all the latest varieties in cultivation, see Catalogue, post free.

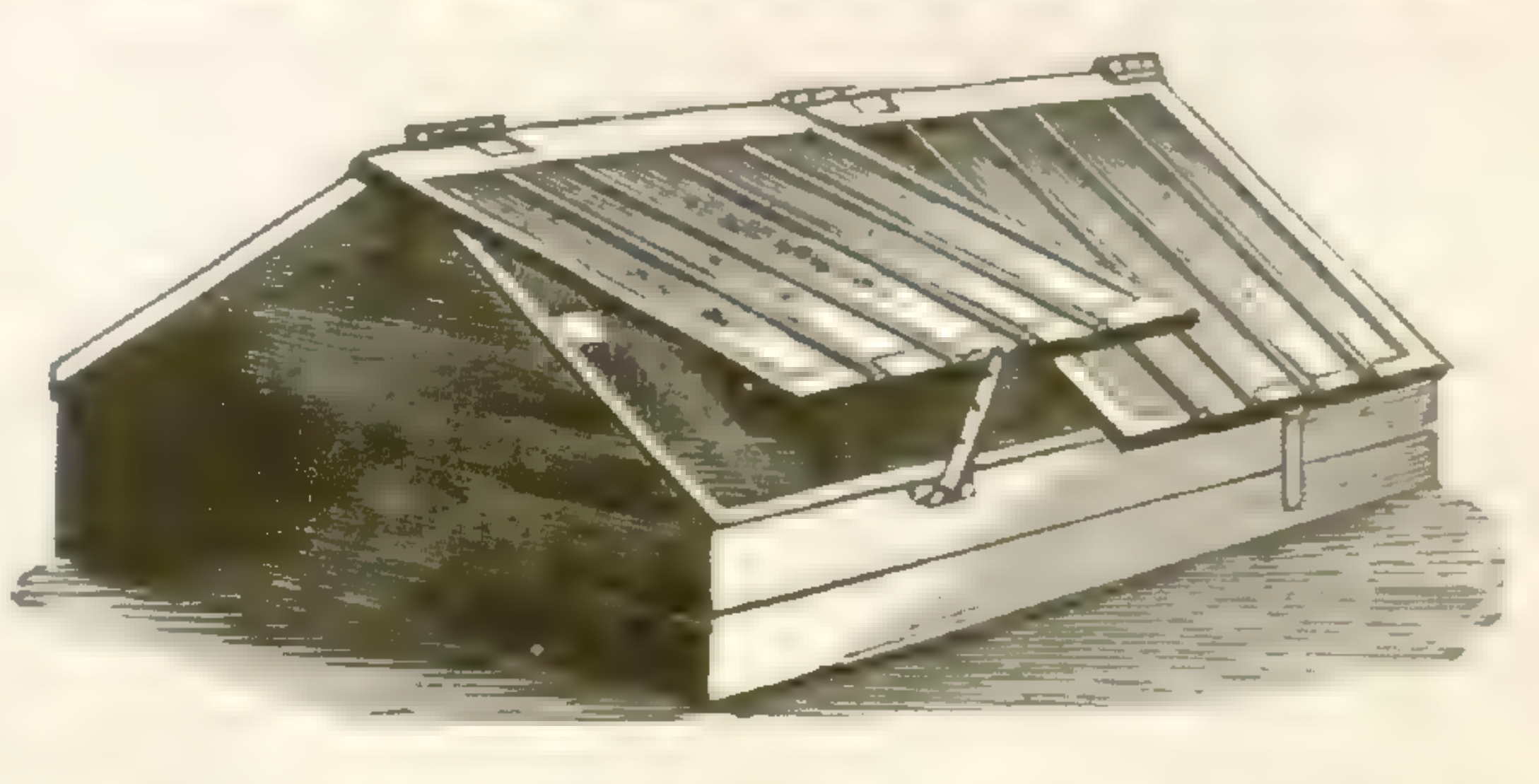
ROBERT BOLTON, F.R.H.S.,
The Sweet Pea Specialist,
WARTON, CARNFORTH.

CHARLESWORTH & CO.,
Hayward's Heath, Sussex,
ORCHID SPECIALISTS,
IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

PORTABLE PLANT FRAMES

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices.	Glazed and Painted.	£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. ,, 4ft. ,,		2	5	0
6ft. ,, 5ft. ,,		2	15	0
12ft. ,, 4ft. ,,		4	0	0
12ft. ,, 5ft. ,,		4	15	0
12ft. ,, 6ft. ,,		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
ROYAL HORTICULTURAL WORKS,
MIDDLETON, MANCHESTER.

CARNATION 'LADY ALINGTON'

(AWARD OF MERIT AND FIRST CLASS CERTIFICATE.)

The most perfect Carnation ever raised of salmon old rose colour. As large as Enchantress, more free flowering, and even a better grower than this variety. Good flowering plants, in 5in. pots, 6 for 18s. Young plants for later delivery, 18s. dozen. Everyone should see it growing with

STUART LOW & CO., Carnation Specialists, BUSH HILL PARK, MDDX.

GLASS & PAINT.

NICHOLLS & CLARKE, LTD.,
15 oz. and 21 oz. Glass,
IN ALL THE USUAL SIZES.
Shoreditch, London.
When sending for list please cut out this advt.

BUNYARD'S FRUIT . . TREES . .

ORDER AT ONCE FOR PRESENT PLANTING.

WRITE FOR CATALOGUE.

Geo. Bunyard & Co., LTD.,
Royal Nurseries,
MAIDSTONE.

Telegrams:
FRANK CANT,
COLCHESTER.

Telephone
No. 182.

CANTS' CHAMPION ROSES

THE FINEST STOCK IN THE KINGDOM.

Direct from

FRANK CANT & CO.,
Dept. B., BRAISWICK ROSE GARDENS, COLCHESTER.

Our Illustrated Catalogue post free on application.

Bulbs: NARCISSUS, DAFFODILS, TULIPS, &c.

All Good Flowering Bulbs; Worth Double.

NARCISSUS

100	Emperor	3/6
100	Empress	3/0
100	Henry Irving ...	4/0
100	Golden Spur ...	4/0
100	Horsfieldii	3/0
100	Victoria	3/0
100	Obvallaris	3/6
100	Grandis	3/0
100	Sir Watkin	3/0
100	Stella	1/6
100	Princeps	2/6
100	Ornatus	2/6
100	Double Daffs ...	4/0
100	Dbl. White Narcis.	2/6
100	Pheasant Eyes	2/6
100	Frank Miles ...	1/6

TULIPS

100	La Reine	3/6
100	Cottage Maid...	3/0
100	Chrysolora	3/0
100	D. de Parma ...	3/0
100	Keizerkroon ...	4/0
100	Golden Crown...	3/0
100	Picotee	4/0
100	Bouton d'Or ...	3/0
100	Prince de Ligny	4/0
100	Duc Van Thol, sgl	4/6
100	,, ,, dbl	3/0
100	King of Yellows	4/0
100	Mixed Tulips ...	1/6
100	Mixed Darwins	4/0
100	Darwins to name	10/6
100	Parrot Tulips to colour	2/6

Special offer in Mixed Narcis. and Daffodils, also Tulips for planting in grass, shrubberies, hedge rows, etc.

HYACINTHS

		per 100
12—1/9	to name in colours...... or	10/6
12—1/3	mxd in cols. or	9/0
12—1/9	Roman White or	12/6
100	Iris, Spanish, to name	1/6
12	Iris, German do.	6/0
12	Iris, English do.	1/6
100	Anemones, Scarlet	4/6
100	,, The Bride	1/9
100	,, St. Brigid	5/0
100	Scilla Siberica...	3/0
100	Freesia	3/0
100	Summer Snowflakes	5/0
12	Lilium Candidum	2/6
12	,, Crown Imperial ...	2/0
12	,, Auratums	7/0
12	,, Croceums	4/0
12	,, Longiflorums	4/0
100	Snowdrops	1/6
100	Ixias, to cols.	2/6
100	Crocus, in cols.	1/3
100	Lily of Valley ...	2/6
100	Jonquils	4/6
100	Ranunculus ...	3/0
100	Montbretia	3/6
100	Aconites	3/0
100	Chionodoxa ...	2/0
100	Polyanthus Narcis	3/0
100	Alliums	3/0
12	Begonias, choice	1/6
12	Violets, in sorts	1/6
12	Xmas Roses ...	4/6

Narcissus and Daffodils,	5/-, 7/6, 10/0 per 1,000
Tulips	10/-, 15/-, 20/- per 1,000

Many other varieties to offer; also all kinds of Herbaceous plants. Any of the above, half quantities at half price.

FRUIT TREES.—Apples, Pears, and Plums, all fruiting trees, 9/- per dozen. Gooseberries, Currants (black, red, white), 3/- per dozen Loganberries and Raspberry-Strawberry, 9d. each Raspberry canes, 3/-, 4/-, per 100. Strawberry Plants, 1/6 per 100.

All kinds of Flower and Garden Seeds, also POTATOES. Send for List,

J. W. CROSS, Old Grammar School, **WISBECH,**

RIVERS'

Fruit Trees, Roses,
Vines, Figs, Oranges,
AND
Orchard House Trees.

A LARGE AND SELECT STOCK ALWAYS ON VIEW.

ILLUSTRATED AND DESCRIPTIVE CATALOGUE
POST FREE 3d.

THOMAS RIVERS & SON
Sawbridgeworth, Herts.
STATION: HARLOW, G.E.R.

WOKING PRIZE ROSES.

SPECIALITIES:

Roses for Bedding and Garden Decoration, including 2,000 Lyon Rose, and extra strong climbing varieties for Arches, Pergolas, etc.

New Descriptive Catalogue post free on application.

WM. SPOONER & SON,
Arthur's Bridge Nursery,
Telephone: 138 Nat. WOKING.

PLANTING SEASON.

BY APPOINTMENT.

WM. PAUL & SON, WALTHAM CROSS, Ltd.

Nurseries twelve miles from London; south entrance four minutes' walk from Waltham Cross Station (Great Eastern Railway); west entrance five minutes' walk from Tramway Terminus.

SPECIALITIES:

ROSES in all forms, from open ground and in pots. Roses in pots, both dwarfs and climbers, extra fine this season.

FRUIT TREES, for the Orchard Garden, and Forcing House.

HARDY TREES, for Street, Park, and General Planting.

SHRUBS, Evergreen and Deciduous, for General Planting.

HARDY CLIMBING PLANTS for all purposes.

RHODODENDRONS, CAMELLIAS, AND AZALEAS. Rhododendrons from loam, extra fine this season.

HERBACEOUS PLANTS in great variety.

BULBS AND SEEDS and all Garden Sundries.

PRICE LISTS ON APPLICATION.
Inspection Invited.

Upwards of 1,000 Gold Medals, First Prizes, and other Awards at Leading Exhibitions during the past 50 years.

Sole Postal Address—

PAULS' ROYAL NURSERIES,
Waltham Cross, Herts.

VOL. LIV.—No. 3,028. SATURDAY, NOVEMBER 11, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Mendel's Law.

As Mendel's Law has become, so to speak, a household word in the horticultural world, a short description of its real nature, and the incalculable value which a knowledge of it involves to the practical plant and animal breeder, may not be out of place. Until this law was demonstrated all breeding, or cross-breeding, was effected, to a large extent, in the dark, was that the peculiarities of and although the general rule the parent might reasonably be expected to reappear in the progeny, what would happen if parents of different species or varieties were employed could only be guessed at beforehand, and what did result was often of an extraordinary character. One perplexing feature in particular was the fact that very often when crosses were attempted, although the greatest care was exercised, no apparently successful result was obtained, the progeny exactly resembling one parent only, thus being either rejected or mingled with the common herd again as ordinary seedlings or offspring. Abbé Gregor Mendel, in charge of a monastery in Brunn, conceived, however, the idea that, despite the incomprehensible and puzzling results of cross-breeding, they must be governed by some settled law, and, therefore, in the fifties of the last century he set himself to work to find it out. In order to do so he started his experiments on the simplest lines he could conceive, by selecting the various forms of the edible pea on the following grounds: Firstly, the flowers of these are so constructed that from the outset their anthers and stigmas are protected from outside pollen (which, of course, would produce unwished-for crosses) by being tightly enveloped in what is termed the keel or underpart of the flower, and by opening this keel before the flower was fully grown, he could extract his own unripe pollen-bearing anthers and insert instead the ripe pollen he desired to use, thus ensuring the desired cross. Secondly, these peas show very definite and distinct characters, such as differently coloured flowers, and very differently coloured and shaped peas, as well as pods. Finally, as they are annuals, he could get a fresh generation every year for the purpose of studying and tabulating results, and starting fresh experiments. From these experiments he speedily hit upon a very singular fact, viz., that the marked characters aforesaid were definite indissoluble "things," so to speak, and that these "things" fell into two distinct categories, some being peculiarly assertive, "dominant," and the others less so, "recessive." The next discovery was that in a cross involving a dominant character and a recessive one, all the offspring resembled the dominant one, so that, apparently, the recessive parent had failed altogether to act, even though it was the recessive parent which bore the seed, for the same result occurred whichever was the seed bearer. These first family "dominants" being self-fertilised, the next remarkable result transpired that from their seed arose two kinds of plants, viz., "dominant" and "recessive," like the grandparents, but always in the proportion of three dominants to one recessive when the average of a large number was taken. Here then was an obvious law, and a long series of crossings and intercrossings proved that the characters, "dominant" or "recessive," never intermingled absolutely, but only temporarily; so that when another period of reproduction occurred they were capable of dissociation or segregation, and, thus dissociated, of asserting their different potencies in the ratio named. It may, therefore, roughly be put that every dominant character possessed threefold power over the recessive by producing three times as many reproductive gemmules. The next important thing proved was that, in order to obtain permanently pure strains of either kind, it was only necessary to fertilise recessive with recessive or dominant with dominant, and the other character was so entirely eliminated that it bred thereafter perfectly true. This, for the plant breeder, was in itself an invaluable discovery, since without this knowledge it often took years to establish a really reliable strain, since the mere elimination of "rogues" only purified to a small extent, because some apparently true ones still retained the potencies of the other ancestor latent in their system. Unfortunately for the world, these results of the Abbé's researches, extending over eight years, and embracing an immense number of experiments, all of which proved the law to exist, were practically buried for five-and-thirty years among the records of a local natural history society in Brunn; and consequently only really saw the light in 1900, when Professor Hugo de Vries, who was independently pursuing the same line of research, came across the paper, and gave it to the world at large. Its importance being at once recognised, it formed the basis of experiment in innumerable hands, both botanical and zoological, and was found to be equally applicable to animals as to plants. The same ratios of "dominant" and "recessive" came out in all cases where sufficiently distinct characters presented themselves; and, above all, the same "dominant" prevalence in the first family was found to assert itself; so that the breeder, instead of rejecting its members as failures, now knows that in them he has probably precisely the cross he desires, and has only to cross them again to obtain it in the succeeding family, in the ratio of 3 to 1. Furthermore, as with the seedsman, he now knows exactly how to proceed in order to obtain a pure and constant strain on systematic lines. To those who may desire to pursue experiments on Mendelian lines, it is advisable to point out that it is only by doing so to a fairly large extent that

MR. F. JENNINGS.

this ratio becomes clear by averaging the results. The principle underlying the predominance of the dominant characters over the recessive in the results obtained has been compared to that shown by mixing up intimately a large number of black and white shots in a bowl, three black and one white, and employing a blind man to pick out four at a time; the law of chance will then determine that the groups of four will average out to three blacks to one white. The threefold pre-eminence of the dominants in the results of crossing is thus seen to be a mathematical necessity of their original threefold numerical power. The most curious feature in the discovery is therefore this definite triplication of one character over another with apparently no deviation either among plants or animals.

Mr. F. Jennings, whose portrait we have the pleasure of giving in this issue, may well be described as "a worthy son of worthy sire," for, possessing horticultural instincts of a high order, he has, by means of his remarkable energy, unremitting attention to the multifarious details of garden management, and great natural ability, attained to one of the highest positions to which the practical horticulturist can rise in this country. Mr. Jennings, who has had charge of the magnificent gardens of Chatsworth, the world-renowned seat of the Duke of Devonshire, during the past five years, is a son of Mr. Jennings, the chief of the gardens at Ascott, the seat of Lionel de Rothschild, Esq., who is properly recognised as one of the foremost gardeners of his day, and has evidently inherited much of his father's ability. Like many other able men in various walks of life, Mr. Jennings is somewhat reticent as to his work, and prefers that it should speak for itself. This it does in such manner as to convince those who have an opportunity of visiting the gardens of Chatsworth, and are in a position to appreciate the excellence of what is being done within their boundaries, that Mr. Jennings is proving in every way a worthy successor to such eminent horticulturists as Sir Joseph Paxton, Mr. Thomas Speed, and Mr. Owen Thomas, V.M.H. That Mr. Jennings received a thorough training in gardens of the first class previous to undertaking the responsible duties associated with the position he now occupies goes without saying, but it may be mentioned, as a point of some interest, that among the gardens in which he occupied a prominent position were those of Rangemore and West Dean Park.

Burton Flower Show, which was held in the course of the past summer, was remarkably successful from a horticultural point of view, but the financial results were far from satisfactory. At a meeting of the committee, held at the Burton Town Hall, Mr. A. Fox, the secretary, presented to the members of the committee a statement of payments and receipts which had been passed by the Finance Committee, but from lack of time had not been finally checked. This showed receipts amounting to £752 4s. 4d., and payments amounting to £751 1s. 9d., leaving a balance of £1 2s. 7d., as compared with one of £122 18s. 10d. last year. The falling off in the receipts was attributed to an alteration in the date, the Foresters' fête, a trotting match, the railway strike, and the Coronation. No blame appears to have been attached to the weather, which may have been bright and warm. It is possible that the great heat had a deterrent effect on visitors, as in the case of many other flower shows that were held during the past summer.

Forestry and Ornamental Trees.—For the purpose of meeting the ever-increasing demand for trustworthy information on the various aspects of forestry and on ornamental trees and shrubs, we shall devote our next issue (November 18) chiefly to forestry, hedge-row timber, and trees and shrubs specially adapted for the ornamentation of gardens. The principal contributions will include "Scottish and German Methods of Forestry," "Profitable Woodlands," "Hedgerow Timber," "Specimen Trees for Parks and Gardens," "Evergreen Hedges," "Trees for Small Gardens," "Flowering Shrubs as Lawn Specimens," "Shrubby Climbers," and "Grouping Trees and Shrubs." The whole of the articles are contributed by authorities of the highest eminence, and the majority will be freely illustrated. The issue will be of quite exceptional interest, and we strongly advise those of our readers who require additional copies to give their orders well in advance.

Mr. Thomas Stevenson's Successes in Paris.—Our readers will be interested to know that Mr. Thomas Stevenson was the only English exhibitor of chrysanthemums at the Paris Autumn Show, which opened on the 3rd inst. His group, which occupied the most prominent place in the show, just facing the chief entrance, was a splendid triumph of artistic arrangement and cultural skill. The French amateurs and gardeners were in ecstacies over the group, there being nothing like it in the show. Mr. Stevenson entered in five classes, and was awarded a Work of Art, three gold medals, and a large silver-gilt medal.

October in the North.—The weather during October, writes our Aberdeen correspondent, remained wonderfully good. There were thirteen days on which rain fell in measurable quantities, the whole fall amounting to about 2½ inches. The average rainfall in the north for this month during the past forty years, ending with and including 1910, is fully three inches (3.31), the largest quantity for an October being nearly seven inches (6.87) in 1895, and the smallest fully an inch (1.09), in October, 1899. October is here the month in which we have most rain, on an average, judging from the records of the past forty years, but it does not differ much from August, November, and December, which, along with July, seem to be our rainiest months. In the month under review, from the 5th to the 19th was wholly dry, and very little interference with work or play was experienced during the other fortnight. During the closing week of the month the barometer was low and unsteady, but rose rapidly upon the 27th. Till then the weather was very cold, even for the season, and nearly 11 degrees of frost were registered on the ground surface on the morning of the 28th. The open weather has allowed field work to be steadily prosecuted, and the husbandman has now matters pretty well in hand. The early harvest and the fine weather allowed the winding up of details and the lifting of the potato crop to be all comfortably finished, and matters made cosy for the winter. The only "fly in the ointment" is the unsatisfactory turnip crop, otherwise the outlook is very favourable indeed.

Fig Culture in Pots.—At the afternoon meeting held by the Royal Horticultural Society on Tuesday last Mr. James Hudson, V.M.H., gave a lecture at once interesting and instructive on the cultivation of figs in pots. It is so short a time since Mr. Hudson contributed to these pages an article describing the method by which he obtains such splendid results in the cultivation of these luscious fruits in pots, that there is no occasion to refer to the cultural details so ably set forth and highly appreciated by the audience. The lecture was illustrated by a large collection of trees, the majority consisting of bushes ranging from three to four feet in diameter, which were raised from cuttings that were rooted in January and February of the current year. They had been in bearing for some time past, and were carrying large numbers of fruits in various stages of development. Mr. Hudson exhibited ripe fruits of varieties that had been selected for the purpose of showing the finest of the figs for growing in pots, and also to show those that should be avoided. Among the latter were fruits of a variety which Mr. Hudson had found growing alongside the Appian Way when on a visit to Rome a few years since. The fruits are small, bright yellow, and utterly worthless for the table.

English Exhibitors Abroad.—It is not often we find our countrymen exhibiting in France. At the recent Paris Show, however, Messrs. Stuart Low and Co. staged carnations, a nice little batch in vases occupying a prominent position, and for which they received a well-deserved award. In the Orchid Room we also noticed a collection of Cypripedium labiata from Mr. Edward V. Low. We hope in our next issue to give a report of the Paris Show, pressure on our space preventing us from doing so this week.

A New School of Horticulture.—Under the ambitious title of "Imperial School of British Horticulture" a new school of gardening has been founded at West Hampstead for "the purpose of giving instruction and advice to ladies and gentlemen who are interested in gardening, either in their own private grounds, by practical work in classes, by lectures, demonstrations, or a correspondence course." A garden is ready to hand for the work, and a range of glass houses has been obtained, so that practical instruction both in indoor and outdoor gardening can be given to students. Mr. E. F. Hawes, for thirteen years in charge of the Royal Botanic Society's Gardens, Regent's Park, and instructor of the students there during that period, is the principal of the new venture, and his address is Ulysses, Fortune Green, N.W. Mr. Hawes was awarded the Royal Botanic Society's large gold medal, just previous to his recent retirement, in recognition of his services, and we believe this is the first time such an honour has ever been conferred upon an officer of the Society. We shall watch the new venture with considerable interest.

National Chrysanthemum Society.—This society will hold a conference at Carr's Restaurant (Dickens Room), 264, Strand, W.C., on Monday, December 4, 1911, commencing at 7 p.m. Sir Albert Rollit, D.C.L., LL.D., president of the society, will preside. The following papers will be read: (1), at 7 p.m., "The Culture of Disbudded and Spray Blooms," by Mr. F. W. Ladds, to be followed by a discussion; (2), at 8 p.m., "Soil Preparation, and the Use of Some Chemical Foods," by Mr. P. A. Cragg, to be followed by a discussion. All members of the society are cordially invited to attend and take part in the proceedings, and the Committee will also be particularly glad to welcome members of affiliated societies. Members of the public will be admitted on presentation of visiting cards. The conference is being held at Carr's Restaurant, and not at Essex Hall, as marked on the members' passes.

London Window Gardens.—At a meeting of the Metropolitan Public Gardens Association it was decided to continue the promotion of outside window garden competitions during 1912 for prizes presented by the Association, owing to the marked effect which such gardens have in brightening the aspect of poor and monotonous streets, and to include therein gardens composed of bulbs making a show in the spring.

Mr. J. Aplin, who for the past thirty-three years has been head gardener at Hasfield Court, Gloucester, is retiring, we regret to say, owing to ill-health, from the position he has worthily occupied for so long a period. Mr. Aplin, in the course of his activities, gave evidence of a thorough acquaintance with all departments of the garden, and especially distinguished himself as a cultivator and exhibitor of chrysanthemums. Mr. Aplin was for many years a frequent contributor to these pages.

The "Royal" Show at Doncaster.—At the monthly meeting of the Council of the Royal Agricultural Society, Sir Gilbert Greenall reported that certain classes would be added to the schedule of the horticultural exhibition for next year's show at Doncaster, and the exhibition would open on Wednesday, July 3, and close on Saturday, July 6. The society's gold medal would be awarded for a monograph or essay giving evidence of original research, and candidates must reside in Great Britain or Ireland, and must not be either over the age of twenty-seven years or of more than five years' standing from the time of taking their first agricultural qualification, being (a) a degree or diploma of a University or University College, or (b) the national diploma in agriculture.

Second Flowering of Trees, etc.—During October a number of letters were sent to the newspapers with reference to the production of a few blossoms by trees, etc., that usually flower during the spring. The writers appear to have been under the impression that this second flowering is a quite exceptional occurrence, whereas not a year passes without flowers being seen on some of the fruit trees in an orchard. The flowering of trees a second time is somewhat influenced by climatic conditions, and in autumns that follow a dry, hot summer, flower production is more abundant than in seasons of a quite normal character. In turning to the "Times" of October 24, 1811, we find that the second flowering of trees obtained attention one hundred years ago. We read that: "Owing to the unusual continuance of warm weather, many gardens are decorated with blossoms and new-formed flowers, as if it were May." We also read that: "The garden of Mr. Woodward, of Highland, near Uckfield, on Saturday produced a bouquet consisting of laburnum, pea, bean, apple, raspberry, and strawberry blossoms in the highest state of perfection."

Lyndhurst Gardeners' Association has just completed the first year of its activities, and as the result of the success achieved the committee were able to submit a satisfactory report to the members assembled at the annual meeting. There are now nine honorary members and forty-four ordinary members, and the average attendance at the meetings was thirty. The financial results were also satisfactory; with so excellent a report of the year, it is not surprising the officers and members of committee were re-elected.

ROYAL HORTICULTURAL SOCIETY.

On November 7 the Royal Horticultural Hall was by no means well filled with exhibits, but there was an abundance of good material on view, and a fairly good number of novelties. The chrysanthemums and orchids provided a handsome display of bright colouring, and formed the bulk of the show, and the groups of orchids, placed opposite each other down one of the pathways, made an avenue of great floral beauty. The floral studies on view added to the interest of an exhibition that was well attended.

BEGONIA EXQUISITE.

A beautiful new winter-flowering begonia, bearing a profusion of large pink flowers, exquisitely shaded with bright carmine. A.M., R.H.S., November 7. Messrs. Jas. Veitch and Sons, Chelsea.

FLORAL COMMITTEE.

A remarkably brilliant group of winter-flowering begonias, from Messrs. James Veitch and Sons, Chelsea, once more demonstrated the great value of these flowers for the late autumn and winter. The plants, chiefly in 32-sized pots, were smothered in flowers, and these of carmine colour, as in Mrs. Heal, shone grandly under the November sunshine. Some new seedlings of great promise, shown for the first time were Acquisition (A.M.), a large flowered flesh pink variety; Her Majesty (A.M.), the first of the series to show yellow colouring, this shade being suffused with pink so as to produce an apricot tint; and Exquisite (A.M.), a large pink variety, the flowers beautifully shaded with carmine towards the tips of the segments.

The largest, and in many respects the finest, exhibit on this occasion was a splendid one of dwarf, bush specimens of chrysanthemums, grown in 48-sized pots, from Messrs. James Veitch and Sons, Chelsea; there was but one plant in each pot, produced from cuttings struck in March, and pinched four or five times to induce a number of dwarf growths. Each stem, in the case of the decorative sorts, carried one good bloom, and every plant carried a total of from twenty to twenty-eight of these fine flowers. A finer exhibit of cultural skill, or of splendid, useful material suitable for any garden, greenhouse, or conservatory it is not possible to conceive. The varieties were represented by about a dozen specimens of each, and among double decorative sorts those of special merit were Caprice du Printemps, Yellow Cap (A.M.), White Cap, Red Cap, Purple Cap, Dazzler, Felton's Favourite, Greening's Caprice, and Kathleen Thompson; among singles the best, similarly grown, but not disbudded, were Ladysmith, Mary Richardson, Miss Mary Pope, Exmouth Yellow, Elsie Hill, Alice Crate, Countess of Egmont (beautiful golden-bronze), and Lillie Godfrey.

Carnations were extensively shown by Messrs. S. Low and Co., Enfield, and in a very interesting set a few of the best varieties were Lady Alington, Enchantress, Baroness de Brienen (A.M.), a lovely fringed pink; Beacon, Perfection, Gloriosa, and Scarlet Glow.

Single chrysanthemums in great variety, and a collection of nerines, from Mr. Frank Lilley, Guernsey, attracted a good deal of attention; among the latter we noticed N.

Manselli, N. Bowdeni, N. Fothergilli, N. flexuosa alba, and the little white N. pudica.

Messrs. Price and Fyfe, Grove Park Nursery, Lee, put up a group of chrysanthemums, setting up representatives of the various sections in vases, associated with asparagus and autumn foliage.

Mr. Vincent Slade, Taunton, contributed a small collection of cut pelargoniums, the blooms very bright and attractive; and Mr. G. Reuthe, Keston, showed nerines in variety. The old chrysanthemums, Source d'Or and Lizzie Adcock, were displayed in large vases by Mr. G. T. Tubb, New Eltham.

Mr. A. Kingsmill, The Holt, Harrow Weald, sent up great sprays of pernettyas, crowded with berries, and also long trails of Vitis heterophylla, bearing numerous clusters of bluish fruits.

Chrysanthemum Percy Arnold (A.M.), a shapely, decorative single variety, deep and bright rose, with white zone round the disc, came from Mr. J. Longwood, gardener to W. G. Ridger, Esq., Englefield Green.

Messrs. W. Wells and Co., Merstham, had many fine chrysanthemums on view, and their singles, named Merstham Gem, Leo, Polly Duncan, Mensa, Mrs. R. C. Pulling, and Ceddie Mason, were very beautiful. Yellow Cap (A.M.), a yellow decorative; Mrs. Andrew Walker (A.M.), a red bronze reflexed Japanese variety; and Golden King (A.M.), a big yellow incurved, were other good things in a large bright, and bold display.

Mr. P. Ladds, Swanley, displayed Snowflake (A.M.), a large white single chrysanthemum.

In the group from Messrs. W. Cutbush and Son, Highgate, the chief attractions were winter-flowering begonias, heaths, dracænas, and the dwarf polyantha roses, Jessie and Mrs. W. H. Cutbush.

Begonia Gloire de Lorraine, B. Agatha, B. Turnford Hall, and B. Mrs. L. de Rothschild were all well represented by Messrs. H. B. May and Sons, Edmonton; these flowering subjects were set among choice ferns.

A pretty corner group, well arranged by Mr. T. Heron, gardener to H. B. Brandt, Esq., Capenon, Nutfield, was composed of tall stands of big exhibition blooms of Japanese chrysanthemums, and smaller stands and vases of decorative and single varieties, grouped with brilliant crotons and large sprays of autumn-tinted sweet chestnut and beech foliage. It was a very handsome exhibit, and one that was greatly admired.

Another large and bright exhibit of chrysanthemums was the one arranged by Messrs. J. Peed and Sons, West Norwood, and here the stands of Altrincham Yellow, Mensa, George Mileham, Doreen, Mrs. W. Iggulden, Roupell Beauty, and Mrs. J. Peed were outstanding features.

Miss M. W. Anson, Broadway, Streatham, had several dozen paintings of seedling caladium leaves on view; these were remarkably fine, and each under its sheet of glass looked like the real thing. Mr. Frank Galsworthy, Chertsey, submitted floral studies, chiefly of rhododendrons and tulips.

ORCHID COMMITTEE.

Messrs. Cypher and Sons, Cheltenham, presented a very interesting collection of orchids in which cypripediums were very much in evidence, notably C. insigne Harefield Hall, C. Germaine Opoix, C. Niobe, and the fine C. Gaston Bulteel var. King Edward VII. The white form of Lycaste Skinneri and the albino of Oncidium ornithorhynchum were on view, with a specimen of the showy Phaiocymbidium.

Mr. H. J. Chapman, gardener to Mrs. Norman Cookson, Oakwood, Wylam-on-Tyne, sent some beautiful new orchids, and Calanthe Cooksoniæ, a fine white form from C. Harrisi crossed with C. vistita oculata gigantea (F.C.C.), C. Angela, rich ruby red; and Cypripedium Sibyl superbum—C. Francisca crossed with C. Fairrieanum—(A.M.) were among the best.

Messrs. Hassall and Co., Southgate, exhibited Cattleya Minucia, C. Fabia, C. labiata, white and coloured forms, Cypripedium Thalia var. Mrs. F. Wellesley, and Dendrobium Cœlogyne.

A remarkable plant was Odonto-cidium Fowlerianum, the first cross between an odontoglossum and an oncidium, the parents being O. cirrhosum and O. Forbesi respectively; this, shown by J. Gurney Fowler, Esq., Glebelands, South Woodford, has buff sepals and petals, barred and blotched with rich brown, and a yellow lip, marked with red-brown. A Certificate of Appreciation was deservedly awarded.

Messrs. Armstrong and Brown, Tunbridge Wells, showed Cypripedium insigne Gladys, C. Dreadnought, C. Elatior, C. Actæus Bianca, and a fine spike of Odontoglossum Harryano-crispum.

The little group from Mr. Edward V. Low, Vale Bridge, Haywards Heath, contained fine plants of Cattleya labiata W. R. Lee, and C. labiata G. G. Whitelegge, both white forms; Cypripedium Gaston Bulteel was also good in this set of orchids.

Mr. F. Jennings, gardener to the Duke of Devonshire, Chatsworth, exhibited the brilliant Renanthera coccinea, carrying a large, branching inflorescence. Mr. W. Miller, Wisbech; Sir Jeremiah Colman, Reigate; and Mr. C. J. Lucas, Horsham, all showed a few orchids.

Mr. A. Young, gardener to E. R. Ashton, Esq., Camden Road, Tunbridge Wells, put up a large and effective exhibit, wherein the leading subjects were Cattleya labiata, C. Fabia, C. Luegæ, Brasso-cattleya Leemanniæ, and B.-c. Maronæ.

Among the orchids staged effectively by Messrs. Stuart Low and Co., Enfield, we noticed Vanda cœrulea, V. Kimballiana, Cycnoches chlorochilon, Cattleya labiata, Miltonia Roezli alba, and Oncidium Lanceanum.

Mr. W. H. Page, gardener to G. F. Moore, Esq., Chardwar, Bourton-on-the-Water, contributed a charming display of orchids, that owed its elegance chiefly to the dozens of graceful spikes of Dendrobium Phalænopsis Schroderianum associated with sprays of golden oncidiums. Under these were Lælia pumila, Cypripedium Maudiæ, C. insigne varieties, etc., etc.—a very attractive exhibit.

From Messrs. Charlesworth and Co., Haywards Heath, came a small group of orchids, and here the prominent features were Cattleya Fabia, C. Phrygia, Vanda cœrulea in fine form, Odontioda Bohnhofiæ, cypripediums in variety, Zygopetalum Sanderianum, Stanhopea convoluta, and the graceful Liparis Grossi.

In the group from Messrs. J. and A. McBean, Cooksbridge, Cattleya suavior alba was very charming, and Cattleya Venus lutescens (A.M.) was very handsome with its yellow and crimson-purple colouring. Other good things were Cypripedium insigne Sanderæ, with fifteen beautiful blooms, Odontioda Charlesworthi, and Cattleya Fabia.

Messrs. Sander and Sons, St. Albans, were represented by Dendrobium Phalænopsis Schroderianum, D. formosum giganteum, Cypripedium insigne Sanderæ, Cattleya Fabia, C. Ashtoni alba (F.C.C.), a lovely white form with yellow-throated lip, the lovely Dendrobium Sanderæ, etc.

FRUIT COMMITTEE.

Messrs. S. Low and Co., Enfield, set up a small collection of apples.

SCIENTIFIC COMMITTEE.

OCTOMERIA SP. — A finely - flowered plant of Octomeria sp., shown under the name of Baueri, came from Sir Trevor Lawrence. It was taken by Dr. Rendle for examination.

VEGETABLE MARROW FASCIATED.—A well-marked example of this common malformation was sent by Mr. W. A. Voss, particularly remarkable on account of the flowers being produced in pairs along the stem, each pair consisting of either two staminate or two pistillate flowers, and the fruits also growing in pairs.

BITTER-PIT IN APPLES.—Among the numerous diseased plants sent for examination were several specimens of apples attacked by "bitter-pit." This disease is particularly prevalent, even among hard-fleshed apples, this season. It is characterised by numerous brown spots in the flesh at varying depths below the surface, and having, as a rule, no connection with surface injury in any way. No fungi or bacteria have been found connected with it, and it appears to be a disease of physiological origin rather than due to any parasite. The dead, brown cells contain starch, whereas in the rest of the flesh the starch has been converted into sugar. It would, therefore, appear that the death of the cells probably took place before the ripening process had proceeded so far as the conversion of starch into sugar, and may possibly be due to an accumulation of a poisonous substance in the cells through interference with the water supply.

CERTIFICATES AND AWARDS.

First-class Certificate.—To Calanthe Cooksonæ, from Mrs. Norman Cookson (gardener, Mr. H. J. Chapman), Oakwood, Wylam-on-Tyne; to Cattleya Ashtoni alba, from Messrs. Sander and Sons, St. Albans.

Certificate of Appreciation.—To Odontocidium Fowlerianum, from J. Gurney Fowler, Esq. (gardener, Mr. J. Davis), Glebelands, South Woodford.

Award of Merit.—To Cypripedium Sybil superbum, from Mrs. Norman Cookson; to Cattleya Venus lutescens, from Messrs. J. and A. McBean, Cooksbridge; to Chrysanthemums Mrs. Andrew Walker and Golden King, from Messrs. W. Wells and Co., Merstham; to decorative Chrysanthemum Yellow Cap, from Messrs. W. Wells and Co., and Messrs. J. Veitch and Sons, Chelsea; to single Chrysanthemum Percy Arnold, from Mr. W. G. Rigden, Englefield Green; to single Chrysanthemum Snowflake, from Mr. P. Ladds, Swanley; to Perpetual Carnation Baroness de Brienen, from Messrs. Stuart Low and Co., Enfield; and to winter-flowering Begonias Acquisition, Exquisite, and Her Majesty, from Messrs. J. Veitch and Sons, Chelsea.

MEDALS.

Gold.—To Messrs. J. Veitch and Sons, Chelsea, for begonias and chrysanthemums.

Silver Flora.—To Mr. Heron, gardener to H. B. Brandt, Esq., Nutfield, for chrysanthemums; to Messrs. Stuart Low and Co., Enfield, for chrysanthemums; to Messrs. H. B. May and Sons, Edmonton, for begonias and ferns; to Messrs. W. Wells and Co., Merstham, for chrysanthemums; to Messrs. Cypher and Sons, Cheltenham, for orchids; to Messrs. Sander and Sons, St. Albans, for orchids; to Messrs. Charlesworth and Co., St. Albans, for orchids; to Mr. A. Young, gardener to E. R. Ashton, Esq., Tunbridge Wells, for orchids.

Silver Banksian.—To Messrs. J. and A. McBean, Cooksbridge, for orchids; to Messrs. Stuart Low and Co., Enfield, for orchids; to Mr. Page, gardener to G. F. Moore, Esq., Chardwar, Bourton-on-the-Water, for orchids; to Messrs. Hassell and Co., Southgate, for orchids; to Messrs. Carter Page and Co., London Wall, for chrysanthemums; to Messrs. W. Cutbush and Son, Highgate, for chrysanthemums; to Messrs. J. Peed and Son, West Norwood, for chrysanthemums; and to Miss W. Anson, Streatham, for paintings.

Bronze Flora.—To Mr. L. R. Russell, Richmond, for berried shrubs.

Important to Secretaries of Horticultural Societies. — The edition of the "Gardening Year Book" for 1912 is in an advanced stage of preparation, and secretaries of botanical and horticultural societies and gardeners' associations are earnestly requested to return the notices properly corrected which they have received, with as little delay as possible, so that any changes which have been made in the names or addresses of the secretaries may be duly recorded in the list of Horticultural and Botanical Societies of the United Kingdom. We shall also be glad to receive from our readers notification of any such changes as have come under their notice.

A FINE VASE OF CHRYSANTHEMUMS.

The decorative value of the chrysanthemum must always stand before mere exhibition value, though the line between the two is a very fine one. At the leading autumn shows a larger place is now given to the display of flowers than was formerly the case, and this is all so much to the good, especially where the classes and prizes are so planned that high cultivation, as well as skill in arrangement, are duly rewarded. In a class for a large vase of decorative chrysanthemums at the National Chrysanthemum Society's Show at the Crystal Palace, on November 1, 2, and 3, Mr. A. Dyer, gardener to E. Wood, Esq., The Tyrol, Church Road, Upper Norwood, staged a splendid vase of blooms, and he did not confine his attention to the medium-sized varieties and flowers so generally classed as "decorative," but used excellent white incurved blooms of large size, some Japanese varieties, and a good set of well-developed blooms of single varieties. A little more length of stem in the case of the incurved blooms would have been an advantage, otherwise the exhibit could not be adversely criticised. More bold exhibits of this character, and also on the lines of the great vase of single flowers, so well displayed by Mr. Mills, gardener to F. Lloyd, Esq., Coombe House, Croydon, would add greatly to the beauty and interest of any autumn exhibition.

CARNATIONS BY THE SEA.

In the Gardeners' Magazine of October 28, "G. B." remarks upon the impossibility of growing carnations for more than two or three years without layering, in a certain sea-side garden. Why anyone should desire to retain plants of this age I cannot understand, as I have always had the most satisfactory results from stocks layered each season. It is always more difficult to keep old carnations in health than young selected plants from layers, and, furthermore, one obtains more uniform results and finer blossoms by giving due attention to layering and selection.

For a sea-side garden, especially one so low-lying, this yearly practice of layering should be rigidly adhered to. And, furthermore, one should keep a close watch for all traces of disease, and select for planting the most robust and stout layers. Every means should be used to keep the soil sweet and aerated, and manures or stimulants should be chosen carefully, as upon these and a few other points depends the success or failure of the cultures. I do not claim to have marshy land for carnation culture, but would just like to note a few points of recent notice. Our carnations are, roughly speaking, grown at a distance of one hundred yards from the sea, with a cold easterly exposure. Soil is heavy loam, resting upon a dead retentive clay-bed, which naturally has a deterrent effect upon plant growth. The method of procedure is to break up the soil to the clay bed, also the surface of the clay, taking care not to bring it to the surface. Plenty of sand, wood ashes, and, if possible, mortar rubble, are worked into the soil, also a light dressing of decayed manure, and the whole thoroughly worked into condition.

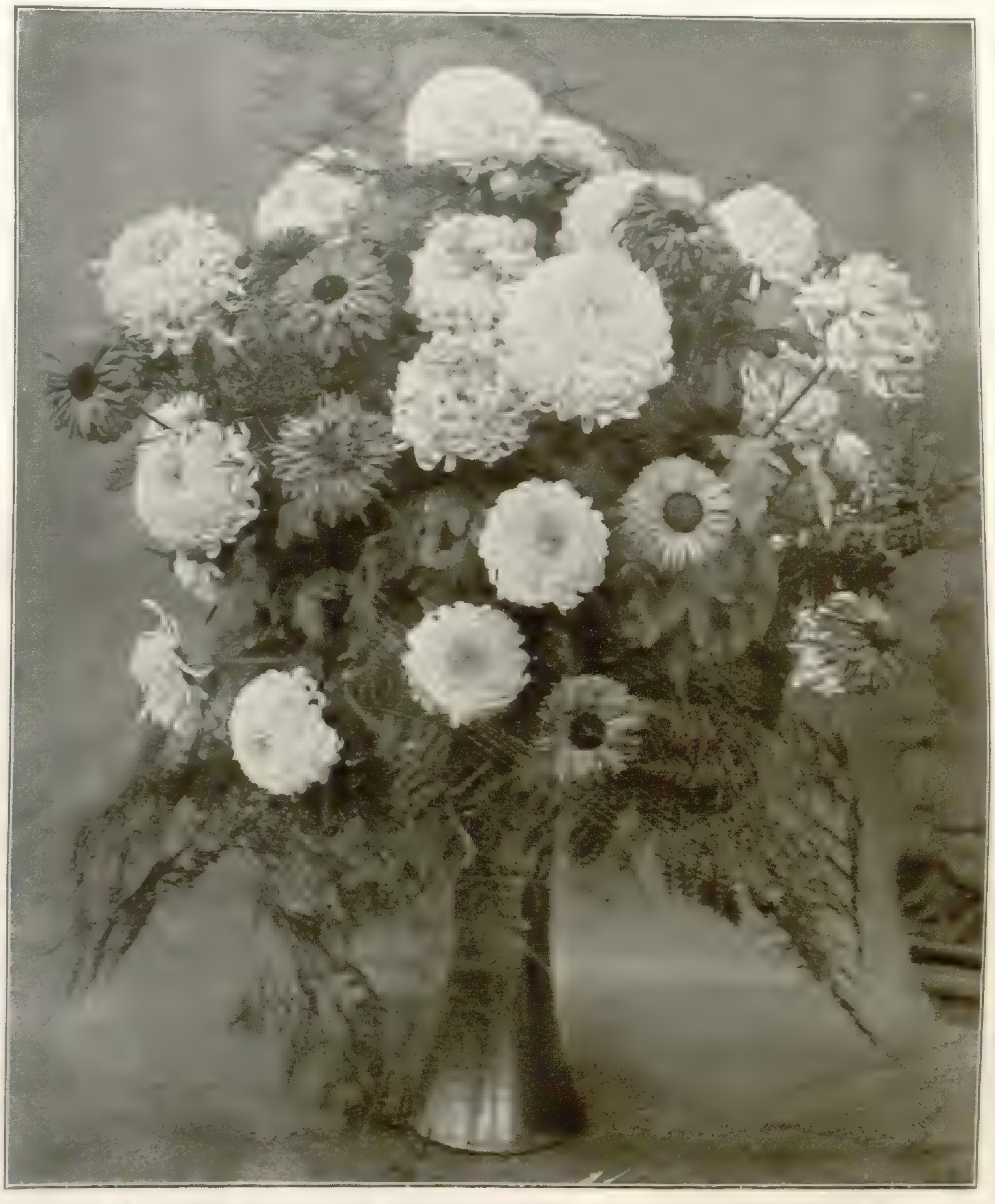
The layers are planted early in the autumn, the soil being made firm round the collar of each plant. At all seasons, after they are established, the hoe is kept going between them, not merely for the sake of keeping down weeds, but to aerate the soil and to prevent "greening" of the surface, to which this soil has a decided tendency. If undue moisture in the soil can be successfully combated, I regard a sea-side garden as being ideal for carnations. Much, of course, depends upon soils, but a great deal also depends upon the bracing air and salt-laden breezes, which act as a tonic to carnations.

In other gardens it has been my practice to treat carnations with salt spray by syringing, but now it is unnecessary, save for the indoor perpetual varieties, which are benefited by occasional sprayings. To grow carnations well demands continual attention. They are subject to many diseases, and varieties differ from each other in habit, constitution, and nature of blossoming very considerably, and growers must note as far as possible these particular vagaries of varieties under their charge.

On the other hand, one can by judicious treatment build a carnation up into health that has lost its vigour. Lady Hermione, Wanderer, Francis Samuelson, and others came into my hands in rather an undersized, weakly condition. Two years of soil improvement, of layering and selection from the strongest growths, has resulted in larger plants, which will necessarily give a finer and freer display of flowers. Carnations are not really subjects for mixed borders. If carnations must be seen in conjunction with herbaceous plants or annuals, I would prefer the continuous flowering annual carnations which are known as the early-flowering perpetuals, and can be raised in February, and will flower throughout the same summer.

With carnations all is progress. The fine varieties of recent years produced by Mr. James Douglas, the late Mr. Martin Smith, and others, have uplifted the whole race of carnations. We have not reached the climax yet. I am one who believes that there are finer varieties to come, but what I am concerned in is the fear that we are losing the fragrance of the old-world carnation in many of these new varieties. We must retain the clove-like fragrance as well as the robust growth, stiff stems, and finely formed and coloured blossoms, in order to retain the affection of the great British public for our old-world favourites.

P. S. Hayward.



A FINE VASE OF DECORATIVE CHRYSANTHEMUMS.
This vase, from Mr. A. Dyer, gardener to E. Wood, Esq., The Tyrol, Norwood, gained first prize at the Crystal Palace, on November 1, 2, and 3.

Zinnias.—Probably owing to the fact that the summer was very suggestive of their Mexican home, the zinnias did remarkably well. They withstood the drought better than most subjects, and the intense heat did not affect them in any way. It seems to me that for some reason or other we scarcely recognise the value of the zinnias for the summer embellishment of our gardens. They are readily raised from seed sown under glass in the spring, are not particular as to soil, and provided a sunny spot is given them, they will flower throughout the entire summer.—W. T.

VARIETIES OF APPLES.

The exhibition of British-grown fruit held recently by the Royal Horticultural Society tended to show what large numbers of varieties of apples there are at the present time in cultivation. Apart from bringing into prominence the large number of varieties that one might employ in forming a collection, it also indicated what a waste of space and time such a large number of sorts would entail.

Naturally, there is much interest in the introduction and distribution of a new apple, especially if it apparently includes such good points as freedom of growth, abundant production, and good cooking or dessert quality, as the case may be, a good keeper, and fruit of handsome appearance. If such an apple has all these qualifications, and, above all, is in season when other varieties of a similar character are scarce, it deserves to be popular and to receive encouragement from all interested in apple culture.

Certainly, this has been a season to really test many varieties, and perhaps more severely than I can remember. Here, where two hundred varieties under cultivation have been in the past, many have given crops this year which have not done so before to an appreciable extent. This emphasises the desirability of not including so many in a plantation. The more experienced of those who cultivate apples for market hold very strong opinions about the large numbers of sorts in commerce, and the majority of these growers set their face against new apples in quantity. Many grow a single tree of a newer kind on its introduction for experience in their own locality, but the tree soon finds a place on the rubbish heap if evidence is not forthcoming that the variety is not distinctly meritorious. In conversation not long since with a grower of several hundred acres of fruit trees, he expressed the opinion that three apples were quite enough for him, or, at the most, four, viz., Grenadier, Lane's Prince Albert, Bramley's Seedling, and Newton Wonder. This selection is exceedingly short, and, in my opinion, might be usefully extended, but we may assume that this grower understands his own business best.

What I wish to do is to point out the uselessness of certain apples in comparison with others of the same type, my object being to assist those about to make a collection. In this I shall be met with the remark, "All sorts you name will not succeed in my neighbourhood." This, too, I wish to allow for by naming varieties that are generally admitted to succeed everywhere.

Taking the kitchen apples first: We have a large number of varieties of the Codlin type. The best of these is Grenadier, which comes into use early, is robust in growth, bears freely, and is less affected with canker than any of its class. If we need another for small gardens Early Victoria is the one to plant. With this curtailing of sorts we dispose of Lord Suffield, Lord Grosvenor, Keswick Codlin, Golden Spire, and Marks Codlin. I have not a word to say against one of these except that they are not required. The next group of early varieties is composed of Ecklinville, Stirling Castle, Frogmore Prolific, Domino, Pott's Seedling, and Yorkshire Beauty. Grenadier will provide fruit in the place of any one of this batch, but for the sake of variety I would retain Stirling Castle. I shall be told by some that this apple is liable to canker, and does not grow freely enough owing to its heavy cropping propensities. Manure it well, giving liberal cultivation, and there will be no need to despise this dwarf-growing variety.

Now we come to a large section, comprising what is known as October apples. Cellini, Cox's Pomona, Emperor Alexander, Jolly Beggar, Queen Caroline, Warner's King, Wealthy, and Norfolk Beauty. I would adhere to the last-named, dispensing with the remainder as taking up too much space, not only in the garden, but in the fruit room also. The next group is a most useful one, consisting as it does of apples that give desirable fruit in November, December, and January. Here we can afford a little more latitude. Beauty of Kent, Bismarck, Blenheim Pippin, Gloria Mundi, Golden Noble, Hollandbury, Kentish Fillbasket, Lady Henniker, Lord Derby, Mère de Ménage, Peasgood's Nonsuch, Rymer, Small's Admirable, Stone's or Loddington Seedling, The Queen, Tom Putt, Tower of Glamis, Tyler's Kernel, and Gascoyne's Scarlet. Blenheim Pippin, Lord Derby, and Tower of Glamis are quite sufficient from this group.

Of the latest we have Lane's Prince Albert, Newton Wonder, Bramley's Seedling, Dumelow's Seedling, Alfriston, Annie Elizabeth, Beauty of Stoke, Betty Geeson, Hambledon deux Ans, Northern Greening, Sandringham, Striped Beaufin, Allen's Everlasting, Byford Wonder, Edward VII., and Reinette du Canada. The first three named in this group will give us some good fruit until May, and that is late enough for most purposes; and what quality could be superior to Newton Wonder or Bramley's Seedling for the latest supply, and as they are certain croppers, what need is there for so many? From a sentimental point of view, I ought, perhaps, to name Dumelow's Seedling (Wellington), which is really a good apple, but does not succeed everywhere like Bramley's, and certainly does not keep so long as that sterling variety.

In the dessert section there is also a wide range to select from. The earliest to ripen is the red and white Juneating, Mr. Gladstone, Beauty of Bath, Devonshire Quarrenden, Irish Peach, Duchess of Oldenburgh, Early Harvest, and Red Astrachan. Of these Beauty of Bath and Mr. Gladstone are preferable, and really these early apples are more in the name of an apple than aught else. The next group that I will term September apples, is also a large one. Williams' Favourite, Lady Sudeley, Pure Apple Russet, Summer Golden Pippin, Yellow Ingestrie, Worcester Pearmain, Ben's Red, St. Edmund's Russet, and Miller's Seedling. Lady Sudeley and Worcester Pearmain are here preferred.

Of October varieties Benoni heads the list with James Grieve, Rival, and Charles Ross in close attendance; American Mother, King Pippin, Scarlet Pearmain, and Egremont Russet. The first three are preferred. In the next division—those for November and December—we find most desirable varieties with less rigid selection. Cox's Orange Pippin stands quite at the head of all others, and with care it can be grown almost anywhere. Ribston Pippin comes next, closely followed by Blenheim Pippin. These three are quite sufficient, although we have King of the Pippins, Allington Pippin, Margil, Winter Ribston, Christmas Pearmain, Claygate Pearmain, Colonel Vaughan, Fearn's Pippin, Mabbott's Pearmain, and Winter Quarrenden. The first three are quite sufficient to provide fruit of the highest quality; in fact, I have no hesitation in saying that where Cox's Orange Pippin succeeds no other need be grown, as the fruit of this, properly stored, will keep until March; but there is so much sentiment about Ribston Pippin or I would otherwise gladly leave it out.

For the latest supply I name the following sorts, but I have not much faith in their quality. I contend that when Cox's Orange Pippin is exhausted we have not an English apple that can compare with many of the British Columbian and Tasmanian varieties, like Grime's Golden Pippin, etc. Of the varieties in cultivation there are King of Tompkin's County, Cockle Pippin, D'Arcy Spice, Duke of Devonshire, Lord Burghley, Lord Hindlip, Mannington's Pearmain, Northern Spy, Ross Nonpareil, Wyken Pippin, Sturmer Pippin, and King's Acre Pippin. Of the batch I prefer the first-named D'Arcy Spice and Wyken Pippin.

Practical Fruit Grower.

FRUIT GROWING.—Full instructions as to planting, pruning, and management of fruit trees are given in Profitable Fruit Growing (Ninth Edition) —a gold medal essay by John Wright, V.M.H.—price 1s., or by post 1s. 3d. from Gardeners' Magazine Office, 148 and 149, Aldersgate Street, London.

SALADING IN WINTER.

It is comparatively easy to produce and maintain an unbroken supply of salading during the summer months, but from now until the month of April some amount of forethought and attention to details will be needed to supply a continuous demand. The wholesomeness of salads is well known, and the more variety one can provide the better. In most large establishments salads are required almost every day in the year.

The worst enemy to guard against with most salad plants during the dull days is damping, following after frosty and snowy weather. This is far more fatal to the plants than actual frost. Means should be taken to grow them under well-glazed lights, and these must be placed in position when excessive rain or snow falls, but must be removed when the weather is fine, as coddling must be assiduously avoided.

The mainstay for the salad bowl is lettuce and endive, and, assuming that strong plants are available in the open quarters, they should now be lifted with a good ball of soil and planted in prepared frames, or the smaller ones may be boxed, and the boxes accommodated on shelves in fruit houses. Avoid crowding or damping will result. Each plant should stand quite clear of its neighbour. The cos varieties will need a tie in order to blanch them, and this operation must be performed when the foliage is quite dry. The cabbage lettuces need no attention in this respect. Both the curled and Batavian endive must also be duly tied as required, for the same reason. A fortnight will be required to blanch them well.

I find All-the-Year-Round cabbage lettuce a suitable variety. Let the soil be fairly rich and porous, and keep the plants near the roof glass, say, six inches below it. In gardens where the glass becomes coated with soot, it should be frequently washed to admit the maximum amount of light. Later on, when the lifted plants are nearly finished, recourse must be had to seedlings raised well beforehand. These must be pricked out in shallow boxes, and grown freely in a genial temperature, but always near the glass, or they will become drawn, and will consequently not go far when cut up. At the same time these should be grown quickly to ensure tenderness.

To maintain the supply of mustard and cress is an easy matter. Sow weekly, and apply water before sowing; if this is done it is but seldom that any more will be required before it is cut. Cress should be sown two days before mustard, as it is longer germinating.

I invariably grow a few pans of watercress for picking in winter. All that is required is to insert a handful of cuttings occasionally, and when rooted pinch out the heads for use. They will quickly branch out, and produce an abundance of tender shoots. This process is not necessary where watercress is grown naturally.

Tomatoes are indispensable to the salad bowl, and in most establishments a few may be obtained during the winter, if strong plants have been raised in autumn.

Chicory is easily grown in open quarters during the summer, and if not already done, the roots should be lifted carefully and plunged in dry sand for forcing as required. This is a useful salad plant, but large quantities are not required at one time, therefore half a dozen roots may be placed in a large pot in the mushroom house, with an empty pot of the same size placed over it, and this operation may be performed at intervals according to the demand.

H. T. Martin.

Now is the time
to plant
Kelway Paeonies

With their gorgeous profusion of varied tints, Kelway's lovely New Paeonies make splendid decorations for the house. They present a glorious spectacle when growing, either in massed groups or arranged with other herbaceous plants in the Kelway "Artistic" Border. Many varieties have the added attraction of a most delicate and delightful perfume. They will thrive in almost any position and need no protection whatever.

Choice named Collections of Kelway Paeonies: 27/-, 36/-, 54/-, 70/- a dozen
KELWAY & SON, The Royal Horticulturists, LANGPORT, SOMERSET

B·R·CANT·&·SONS
ROSES
DESIGN REGISTERED

DIRECT FROM THE ORIGINAL FIRM.
Established 1765.

WE HAVE FOR DISPOSAL THIS SEASON
80,000 Standards and Half-Standards.
4,000 Standard Weeping Roses.
Magnificent Plants in the best known varieties. Also
300,000 Dwarfs and Climbers.
THE FINEST STOCK IN THE KINGDOM.

Illustrated Catalogue post free on application to
BENJAMIN R. CANT & SONS, The Old Rose Gardens, COLCHESTER.

FRUIT TREES.
Over 20 Acres.
ROSES
Including all Latest Varieties.
RHODODENDRONS
Grown in Loam.
Azaleas & Heaths
INCLUDING GOLDEN YEWS, CONIFERS, etc.
Ornamental Trees & Shrubs,
Flowering Trees & Shrubs.
Acres of Forest Trees of all Sizes and Varieties.

GRAPE VINES OUR SPECIALITY.
Climbing Plants in Variety.
Figs and Strawberries.
INSPECTION INVITED.

Gardens Laid Out and Planted by Skilled Men.
Catalogue Free on Application.

H. LANE & SON,
THE NURSERIES, BERKHAMSTED.
Established 1777.
Telephone:— BERKHAMSTED 18. Telegrams:— "LANE, BERKHAMSTED."

CHRYSANTHEMUMS

GROWN WITH

CLAY'S

CATCH THE JUDGE'S EYE.

CLAY'S FERTILIZER produces Flowers, Fruits, Vegetables and Foliage in the Highest Perfection and in Abundance.

It is used in the Royal Gardens, by Government and Local Authorities, and by Professional and Amateur Gardeners throughout the World.

Sold Everywhere in **6d.** and **1/- Tins;** and in **Branded and Sealed Bags**: 7 lbs., **2/6**; 14 lbs., **4/6**; 28 lbs, **7/6**; 56 lbs., **12/6**; 112 lbs, **20/-**. Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**).

Every Genuine Tin, Bag, and Seal bears the Trade Mark, as at side.

CLAY'S LONDON FERTILIZER
TRADE MARK.

CLAY'S SUCCESSFUL GARDENING.—An informing and up-to-date Publication. Fourth Edition (Second Reprint), 276 pages, illustrated, bound in cloth. To be obtained of Seedsmen, etc., NINEPENCE NET, or Free by Post for this amount direct from the Publishers as under—

CLAY & SON, Manure Manufacturers and Bone Crushers, **STRATFORD, LONDON, E.**

KING'S ACRE

FRUIT TREES
AND
ROSES.

AWARDED . .

30 Gold Medals
AND
Coronation Cup
VALUE 25 GUINEAS.
Seasons 1909-10.

Illustrated Catalogue post free on application.

KING'S ACRE
NURSERIES LTD.,
HEREFORD.

CARNATIONS.
AURICULAS. PINKS.

The NEW ILLUSTRATED CATALOGUE of above is now ready, and has been posted to all customers. The newest and best varieties are sold at the most reasonable prices.

Best **CARNATION** and **PICOTEE SEED** ready in October. 1/6 and 2/6 per packet.

AURICULA (Show and Alpine), PINK, and POLYANTHUS SEED now ready. 1/-, 1/6, to 2/6 per packet.

Send for Catalogue to

J. DOUGLAS,
Edenside, GREAT BOOKHAM.

ROSES. ROSES. ROSES.

Most Complete Collection of all the Best Up-to-Date Varieties.

FRUIT TREES.

EXCEEDINGLY WELL-GROWN DWARF TRAINED CORDONS, PYRAMIDS, STANDARDS, ETC.

HERBACEOUS PLANTS
In all the Leading Varieties.

DELPHINIUMS !!!

STRIKING NOVELTIES. —— *CATALOGUES FREE.*

ALFRED A. WALTERS & SON, Nurserymen and Rosegrowers.
BATH.

TREE CARNATIONS

The Newest and Best Varieties.

Strong Plants in small pots ready Middle of November. BOOK NOW. ORDERS SENT OUT IN ROTATION.

Catalogues free.

E. J. WOOTTEN, Fairoak, EASTLEIGH.

J. J. THOOLEN, The EXPORT Nurseries,
Heemstede, Haarlem, Holland,

Established 1884,

Has the honour to announce that his Illustrated Price List of Bulbs and Plants in English, Autumn, 1911, at lowest prices, will be sent post free on application. **No Charge for Packing. Orders of 10/- and above entirely Free to Destinations** in England, Scotland, and Ireland, etc. First Quality guaranteed

Some sorts of Bulbs noted out of Price List.

	Per 100.		Per 1,000	
	s.	d.	s.	d.
Hyacinths, in the finest mixture for bedding or forcing	7	8	72	4
Hyacinths, single, first size, named, in 25 leading sorts, red, white, and blue vars., equal quantities, my selection	15	0	—	
Tulips, single early, in the finest mixture	2	0	18	4
Tulips, Darwin, mixed	3	0	25	0
Tulips, double, in the finest mixture...	2	2	20	0
Anemones, single mixed	1	4	12	0
Anemone, The Bride, pure white ...	1	4	12	0
Crocus, 1st size, in the finest mixture	1	4	12	0
Crocus, 2nd size, in the finest mixture	0	9	7	0
Scilla campanulata, blue bells	2	0	—	
Scilla campanulata, white bells	2	0	—	
Scilla sibirica, rich blue	1	6	14	6
Iris, Spanish, mixed	0	7	5	0
Iris, English, mixed	2	0	16	8
Narcis., single, in the finest mixture...	1	4	12	6
Narcis., Trumpet, in the finest mixture	2	6	20	0
Narcis., double, fine mixture	2	6	20	0
Narcis-Polyanthus, finest mixed ...	3	6	30	0
Snowdrops, Elwesi, the Giant Snowdrop	1	6	13	6
Ranunculus, French, double mixed ...	0	9	7	0

250 Bulbs of the same kind will be charged at the 1,000 rate; 25 at the price per 100; 6 at the price per 12.

Ask for Illustrated Price List and see the Collections.

100,000 BORDER CARNATIONS

EVERY GOOD VARIETY IN COMMERCE.

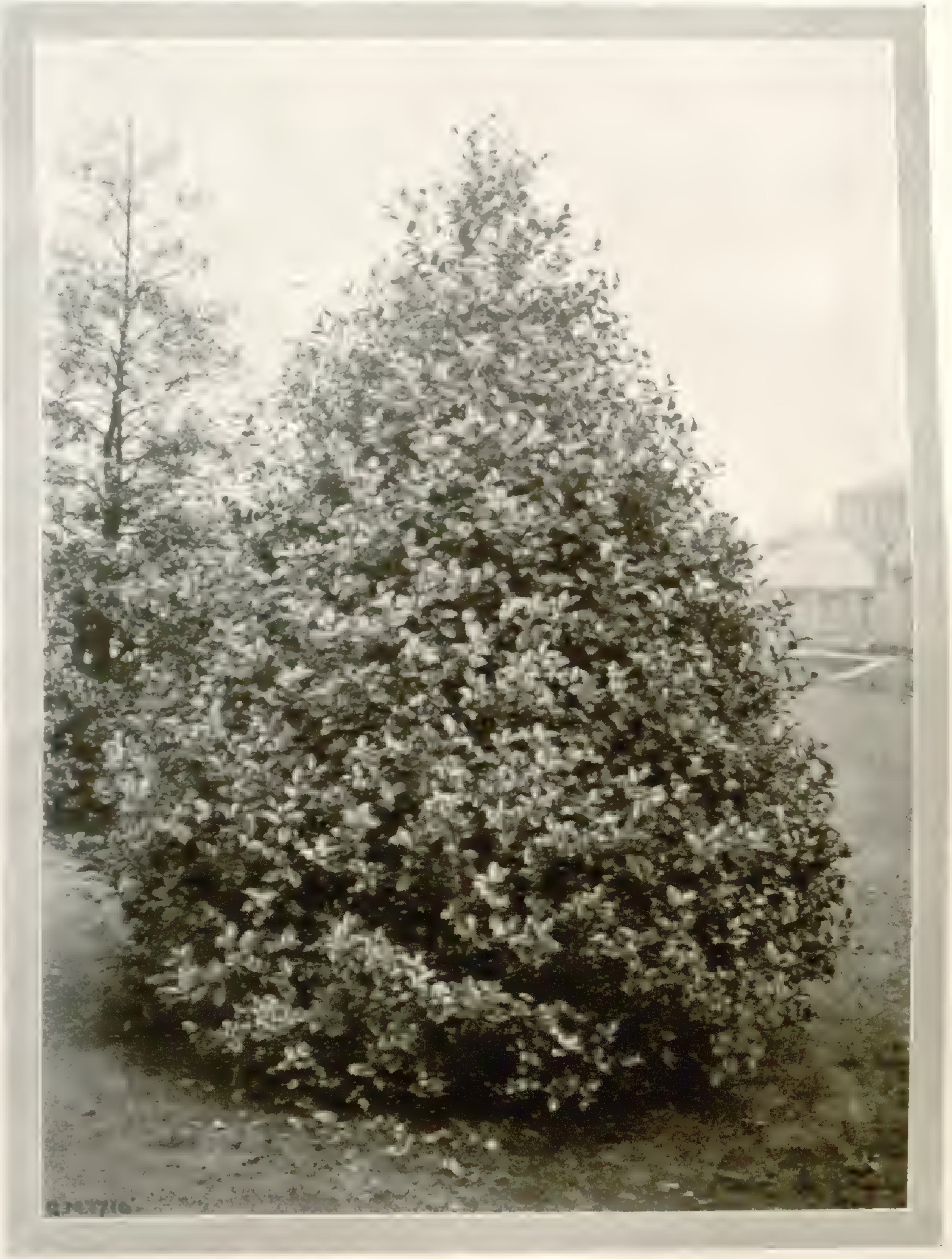
Healthy Plants. Popular Prices.

Largest Growers and Most Successful Exhibitors in the United Kingdom.

ARTHUR R. BROWN, Ltd.,
Wychall Nurseries, Kings Norton.
Catalogue on Application.

AN EFFECTIVE GOLDEN HOLLY.

The number of hollies with golden variegation is considerable, and although a small proportion only will be required in any one garden, they possess, with but few exceptions, much merit for giving a bright touch of colour to the shrubbery border and for planting as single specimens in prominent positions on the lawn. The leaves of the majority of the golden hollies have a well-defined marginal band of gold, and their effectiveness depends in a large degree upon its breadth and brightness. The most noteworthy of the hollies of this class is the variety known as Golden Queen, and equally remarkable for its broad leaf-margin and the intensity of the colour of its variegation. There is another class of golden hollies, in which the variegation is not confined to the leaf-margin, but spreads over the leaf in a more or less irregular manner, and to this the distinct and handsome variety known as Madame Briot belongs. It is a form of Ilex aquifolium, and has a vigorous free-branching habit, and has full-sized leaves, of which a considerable proportion, as indicated in the accompanying illustration, are of a bright golden hue. It is one of the most effective of the many handsome hollies that are now at the command of the planter, and it has special claims for consideration, inasmuch as it is quite distinct from the other varieties in gardens. Madame Briot is not new, but it is not as yet generally known, and is consequently seldom seen in gardens. The specimen herewith illustrated has a place in the Kew collection of hollies, and is between seven and eight feet in height. In the beautiful gardens of Hillingdon Court, the Middlesex seat of Lord Hillington, there is a finely-proportioned specimen, about two feet higher than that at Kew, and, enjoying highly favourable atmospheric conditions, it is especially remarkable for its rich colouring. G.



ILEX AQUIFOLIUM MADAME BRIOT.
A free-growing and effective holly, with golden variegation.

PARROTIA PERSICA.

There are two periods of the year when this Persian tree is attractive. Firstly, in March, when the leafless branches are thickly studded with small, but conspicuous red blossoms, and, secondly, in autumn, when the leaves have taken on their gorgeous colour previous to falling. At the latter time it is easily one of the showiest trees of the garden, for the leaves, which are not wholly scarlet, are a mixture of scarlet, red, orange, and green. The size of the leaves is in their favour, for the larger ones are nearly six inches long and three inches wide, thus giving a boldness which is less noticeable in smaller-leaved plants, which are also remarkable for their autumn colouring. Parrotia persica is allied to the hamamelis, but it appears to be less well known than those showy shrubs, though it has been in cultivation for a longer period than the Asiatic species of the genus.

The genus Parrotia has but one other hardy species, so far as is known, that being P. Jacquemontiana, from the Western Himalaya. That is a very different plant, for its flowers are borne in summer, and they are only redeemed from insignificance by their attendant white bracts. The leaves, moreover, have nothing to recommend them in autumn, for although many of them turn yellow, the plant is never really effective. Nevertheless, it is a very distinct and interesting plant, and well worthy of inclusion amongst choice small-growing trees. W. D.

OCTOBER NOTES.

We are experiencing a real "Indian summer," and the garden is quite a pleasurable place at this time, October 12. The few rains have freshened everything immensely, and now, with blue skies and warm sunshine, blossoms are much more plentiful than is usual at this season.

The new lease of life is apparent in many plants. Groupings of Michaelmas daisies grace the banks and slopes of the informal parts of the garden, and the diversity of hues, forms, and habits makes this group of plants wonderfully attractive. The collection is just now at its very best, and the shades of purple, blue, lavender, pink, rose, and white, in continuous yet informal groupings upon the sloping banks, give an effect that is pleasing and if interest. It is worthy of remark that no one need forego the pleasure of a good collection of Michaelmas daisies. So many sterling varieties have been put into commerce during the past few years that we have ample from which to make a good selection. Furthermore, the raising of seedlings is interesting, and usualy yields some pretty varieties, if one can give the space and time for careful selection. Single chrysanthemums, both the seedlings and those propagated from cuttings, are giving a good display pust now, and are among the most valued of garden plants for autumn display. Utilised in groups upon rising ground, with the varied colours blending artistically together, the single chrysanthemum is of first-rate merit. Freedom, wide colour range, and long season of flowering, are all in favour of these plants. The double forms are just as attractive, albeit just a trifle heavy in comparison, and the splendid series of varieties considerably enhances their interest to the garden-lover.

Erigeron speciosum Quakeress, with its pretty daisy-shaped blossoms of a soft lavender hue, is very noticeable just now, and is a very useful subject for garden decoration or for cutting. Gauras are just as delightful as ever, the wealth of slender, waving stems being laden with the snowy "butterfly" blossoms. Gaillardias continue to throw many blossoms, and Mimulus cardinalis, Chrysanthemum maximum in variety, and the statices still continue to blossom. The delphiniums have at last spent their energies, but Aconitum Fischeri gives of its deep blue colour. Vernonia arkansana is gay with its purple-hued heads of blossom, and is worthy a place in every garden of hardy plants. Pentstemons still linger with us, but the spikes are very inferior to what they have been.

It is curious to note how some plants of Caltha palustris are giving us golden blossoms at this season. C. polypetala has shown no signs of this springlike activity, but its humbler companion is quite bright. Several of the ericas are in blossom, and one must remark upon the value of the hardy heaths. The E. vagans varieties are among the best of those flowering,and many varieties of Erica vulgaris are in blossom. The pretty Tamarisk hispidus æstivalis is charming still in growth and blossom. For many weeks the pink feathery plumes have been produced most profusely, and a group of these shrubs is decidedly a fine attraction.

Verbenas upon the slopes are still gay with colour. The value of these old favourites is often noted, and Mr. Molyneux in a recent issue of the Gardeners' Magazine, notes with evident pleasure the collection of verbenas at Aldenham, which has evidently been carefully selected by Mr. Beckett. These plants seem to be coming into full favour again, and we ourselves have this season many which are decidedly in advance of previous cultures. Many of our own varieties may be replicas of Mr. Beckett's, and of other growers, but this does not lessen the value of the verbena. In connection with these notes I may mention a verbena species from South America, which was given me for trial by Mr. R. W. Wallace, and has given us a wealth of the most intense scarlet blossoms since early in the summer, and is a mass of beauty. It is of light growth, and the trailing stems are woody in character; it is especially valuable for rock gardens. Colchicums have passed out of blossom except C. cilicicum, which is just now at its best. It is with pleasure that we still note blossoms of the nymphæas, several still showing during the sunny days. Zauschnerias and Plumbago Larpentæ are still bright, and many of the rock garden violas have taken on a new lease of life.

DESSERT PLUM, COE'S GOLDEN DROP.

The fine dish of this richly-flavoured variety shown by Mr. W. Messenger, Woolverstone Park, at the R.H.S. exhibition of British-grown fruit.

Planting out in the wild garden and on the sloping banks and hillocks is still proceeding. It is our aim to extend the season of blossom as far as possible, and all classes of bulbous plants, and large numbers of Iceland poppies, myosotis, campanulas, foxgloves, cowslops, primulas, violas, etc., are planted up among the plant and shrub groupings already in existence. Arabis, aubrietias, and alyssum also enter into our plans, and largely and freely contribute to a glowing spring display. Helianthus and Pyrethrum uliginosum give masses of blossom in the background, and are useful if not allowed to encroach upon other subjects. All rank-growing herbaceous plants should be lifted, if possible, each season after flowering, as this tends to keep them in better health, and assists in maintaining good-habited specimens.

Herbaceous borders should be overhauled, if not previously done, and all ground where herbaceous plants are cultivated should be worked as freely and deeply as possible. Manure should not be denied these plants wherever it may be needed, as the majority have the power of assimilating large quantities of available plant food.

And, in conclusion, may I urge the fullest attention to selection? This, we regard as one of the most necessary phases of all garden work, as all plants are capable of improvement, and the constant watching of plant life, the careful noting of all points of interest, and the gradual weeding out of inferior forms, is a well-rewarded task, and is, moreover, replete with interest.

P.

Amphicome Emodi.—The date of the introduction of this amphicome is given as 1852, but it is only within the last few years that general attention has been directed to its merits. It belongs to the order Bignoniaceæ, is of a herbaceous character, and when in flower suggests a close affinity to Incarvillea Delavayi. The blooms, which are freely borne in clusters on stalks well above the pretty pinnate foliage, are rose-pink, with an orange throat. It is a native of high altitudes in the Himalayas, and is hardy in favoured parts of the country. Even where not hardy it is a valuable decorative plant for the greenhouse in late summer and early autumn. It may be readily increased by seeds, and is not at all difficult to grow.—W. T.

CHOICE DESSERT PLUMS.

Where the private grower has to meet a constant demand for choice dessert fruits, the plum forms one of the most valuable and highly prized of the kinds available. Where the convenience exists for keeping up a regular and uninterrupted supply from early in August to the middle of November, the number of first-class varieties to select from is ample for the purpose.

Taking everything into consideration, trees trained on walls are the most satisfactory, and if various aspects can be utilised the number of varieties need not be extensive, as by planting the same variety on a south or south-east, and also on a west wall, a succession can be obtained over a considerable period. This is a matter of some importance where particular varieties are held in high estimation. Grown as bushes or standards, the difficulties in securing a regular crop are so gerat that "the game is hardly worth the candle." In many districts the birds are decidedly troublesome, striping out the buds wholesale; if, purchance, a few blossom buds are saved by persistent spraying, there is the later difficulty of protecting the fruits from further attack.

By erecting wire-netting protectors it is possible to outwit the bird and thereby secure a crop. This is, however, a somewhat expensive business, and if wall space is available, it is undoubtedly the most suitable for the purpose. The trees during the flowering period can be adequately protected from frost. Birds can be effectually excluded from taking the buds, and later from sampling the fruits. If wasps are very much in evidence, the fruits can be placed in muslin bags. In giving a selection of varieties in their order of ripening, I would give first place to Early Transparent Gage, a handsome, richly-flavoured fruit, ripening about mid-August. Denniston's Superb, a medium-sized, pale yellowish-green fruit, ripens about the same time as the Early Transparent, and is a good comparison to that esteemed variety. Following on the heels of the above varieties comes the old Green Gage, still one of the most delicious plums grown. Jefferson's—a grand variety in every way when thoroughly well grown and finished—is one of the finest varieties we have. It makes a telling dish on the dinner table and the exhibition stage. Kirke's, a large, roundish oval fruit, carrying a beautiful bloom, is usually considered to be a shy bearer. I have two large trees on a S.S.E. aspect, which have never failed to produce a crop for the past eighteen years, and I consider it to be one of our most valuable plums for late August and early September use. The fruit travels well, the flesh being firm, and it keeps in good condition for some time. Decaisne, a large oval, yellow plum, resembling Coe's Golden Drop in appearance, and ripening in the early part of September, should be included in every collection of importance. Washington, which ripens about the early part of September, is a fine large fruit, but I do not consider it to be so good as the above-named varieties, and I have discarded it in favour of varieties of more value.

The good qualities of the Gage family are so well known that further praise is unnecessary. Early Tranparent Gage I have previously noted. Bryanstone Gage and Comte d'Althan's Gage ripen about the same time, namely, the middle of September, and are both valuable plums of first-rate quality. Transparent Gage is slightly earlier in ripening than the last-mentioned varieties, and is without doubt one of the most delicious plums grown; this is a variety which should be planted on various aspects to extend its season as long as possible. The tree is a somewhat awkward grower, and if the spurs are pruned back too closely it occasionally fails to produce blossom buds; therefore, it is advisable to prune moderately.

Late Transparent Gage is of value in extending the Gage season, and being a robust, healthy grower,there is no difficulty in building up shapely trees. Golden Transparent, a variety of more recent introduction, has come rapidly to the front and is now largely grown, and deservedly so, the fruits being large and handsome and of rich flavour, coming into use so late in the season makes it all the more valuable.

An old favourite, and one of the best, is Coe's Golden Drop. This is a grand variety; its large oval-shaped yellow fruits, dotted with a number of dark red spots, make an attractive dish for table or exhibition. The flavour is superb, and it has the additional advantage of keeping firm and sound for a considerable period if carefully gathered and stored in a cool, dry room. Coe's Violet is unique in its way; the thin stripe of violet running down one side of the fruit stands out clear and distinct on a groundwork of reddish-purple on the sunny side, yellow on the shady side. Size and flavour are identical with Coe's Golden Drop. So far as I am aware, this variety is but little known; it is, however, worthy of inclusion as a first-class late variety, if only for its distinctive beauty.

Another fine late variety is Reine Claude de Bavay. Ranking as one of the best, its large round fruits are perhaps not quite so attractive to the eye as many of the more highly-coloured fruits. The flavour, however, is very rich and sweet; in fact, if allowed to hang on the trees until slightly shrivelled, it is more like a sweetmeat, and is then delicious. If stored in the same manner as Coe's Golden Drop it will keep in good condition for some weeks.

The latest variety I am acquainted with is Late Rivers, a dark purple plum of excellent flavour, certainly a most useful variety, sustaining the supply well into November; a variety not so well known as its merits deserve.

There is one more variety that I must mention, namely, Cullin's Golden Gage, a handsome golden fruit, usually carrying a crop in adverse seasons. The flavour, however, I consider quite second-rate, and the fruits grown here are used for cooking purposes, for which it is excellent.

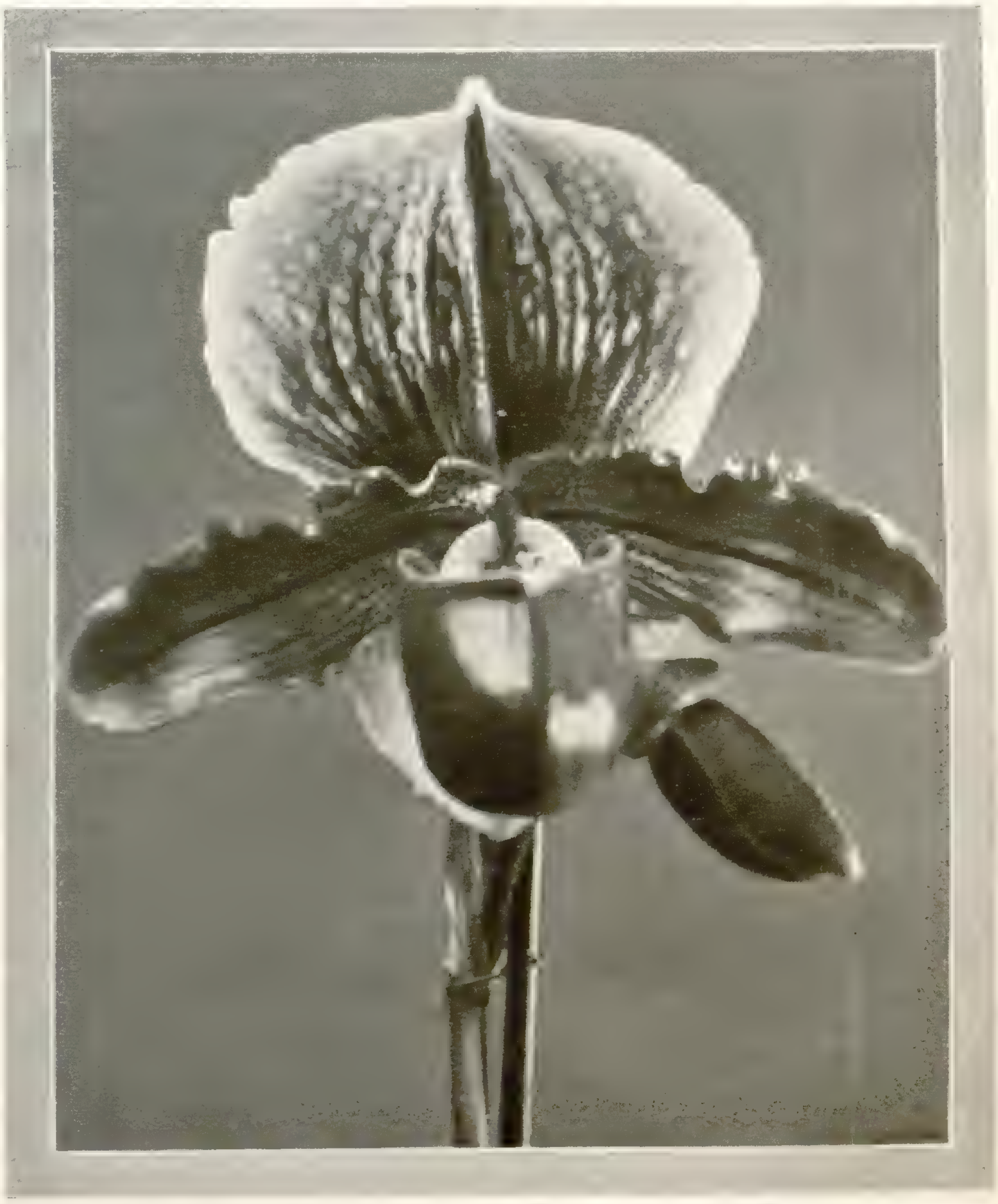
The general culture and management of the plum has been most ably set forth by previous writers, that further details are unnecessary. I would, however, press home the necessity of early thinning of the fruits when it is certain the trees have set a heavy crop. To produce fruits of the highest excellence the tree must not be overburdened, and a thought should be given to the welfare of the tree and the prospect of a crop the following season.

W. Messenger.

Amellus Asters.—Mr. Arnott does well to draw attention to these perennial asters, as they really do not find sufficient encouragement in the garden, where their decorative value is undoubted. I lately saw at Aldenham a big batch of seedlings, and among them were many forms and colours of pink and rose shades. These two latter are most desirable, as they give variety to the class, among which, generally speaking, these shades are in the minority. In a cut state, too, these pink shades are most valuable, as they light up under artificial light so beautifully. Mr. Beckett has great hopes of a clear yellow, which would be a novelty in asters.—E. M.

CYPRIPEDIUM LUCIFER.

Nowadays a cypripedium has to be of outstanding merit, or the possessor of great distinction in form of colour, to obtain a First Class Certificate from the Orchid Committee of the Royal Horticultural Society. There are already so many fine cypripediums in general cultivation that the standard required in a novelty is now extremely high, and any hybrid that reaches that standard is worthy of more than passing notice. On the occasion of the Royal Horticultural Society's Fruit Show, when comparatively few people were present to give attention to orchids, Cypripedium Lucifer was displayed in an upper room by Mr. H. G. Alexander, orchid grower to Lieut.-Col. Sir G. Holford, Westonbirt, Tetbury, and it attracted the attention of all who saw it by reason of its shapeliness and fine colouring. This hybrid, illustrated in the present issue, was obtained by crossing the very neat and pretty C. Niobe, Westonbirt variety, with a fine form of C. Hera Euryades, a bold, large, and handsome variety. In C. Lucifer the rounded dorsal sepal is white, with a central deep rose-purple band, and shading and veining of a paler shade of purple over the base and centre of this showy portion of the flower. The greenish-yellow petals are broad, heavily shaded with purplish-brown, and the lip is bright and rich red-brown. This, and Cypripedium Royal George, shown on the same occasion by Mr. Francis Wellesley, form a splendid pair of new and distinct hybrid Lady's Slipper orchids.



CYPRIPEDIUM LUCIFER.

Flowers white, purple, purple-brown, and red-brown. F.C.C., R.H.S., October 10. Lieut.-Col. Sir G. Holford (grower, Mr. H. G. Alexander), Westonbirt, Tetbury.

PERIPLOCA GRAECA.

This strong-growing climber is a native of South-eastern Europe and the Orient, but it is hardy enough for culture in the open ground in many parts of this country. Quite recently several vigorous examples were noted in the South of Scotland which in July were in full flower. P. græca shares with other members of the Asclepiad family the peculiarity of producing thick milky juice in stems, roots, and leaves, which is emitted on any slight incision being made. The purple star-shaped flowers are borne in moderately large heads; their colour is, however, too dark for them to be really conspicuous. Planted in loamy soil it grows rapidly, and quickly attains a height of twelve or fifteen feet. Though often planted against walls, it answers even better when allowed to wander at will over a large bush or low tree, for in such a case there is no necessity for cutting the branches back periodically to keep them within bounds, as is usually the case with wall-grown examples.

D.

Vitis heterophylla humulifolia.—This Japanese vine would appear to be fruiting with unwonted freedom this season under the influence, probably, of the hot summer. If the fruit is not of value from an edible point of view, it is decidedly ornamental, the berries when ripe being of a pleasing shade of purplish blue. The vine is of easy propagation and free growth, but needs to be given a warm sunny spot to ensure the production of berries.—W. T.

FLORISTS' FUCHSIAS OUTDOORS.

The fuchsia is a plant which is admirably adapted for growing both under glass and in the open, though some varieties are better suited for one purpose than the other by reason of their varying habits of growth. It is said to be a great lover of the night air, probably on account of its dampness, and when grown under glass it never seems to have that vigour of growth, darkness of foliage, and substance of blossom which we are accustomed to see in well-grown outdoor specimens. In favoured parts of the country, such as the south and west, especially near the sea, there are few more beautiful things in the garden than the great masses of hardy species of fuchsia, which stand the winter and become shrubs, escaping mutilation by frost for several years together. Even in less favoured districts, where they may be cut down to the ground two years out of three, these hardy kinds are worth growing, becoming, as they do, even under the worst conditions, herbaceous plants.

The kinds, however, of which I wish more particularly to speak are the stronger-growing florists' varieties, which make fine specimens for the garden, either for growing in tubs or pots, or putting out in the open ground for the summer months. The blossom of the fuchsia being of a drooping character, it is advisable that the plants should be so grown, or so disposed, that the flowers are some height above the ground. In the greenhouse or conservatory this can be done by putting those varieties of small growth and pendent habit on the staging, but in the open we must have erect and strong-growing varieties, unless they are to be given elevated positions, as on terraces, window balconies, etc. Though some varieties refuse to conform to it, the pyramidal form is the one to be aimed at, either with a clear stem, when they become standards, or branching down to the level of the soil.

The propagation of the fuchsia is of the simplest, pieces of healthy young growth, an inch or an inch and a-half long, with a heel of the old wood attached if possible, striking at any time of the year in heat, or in a cold frame in the spring and summer. Assuming that strong, upright-growing sorts have been chosen, they should be trained to a single stem by keeping the side shoots pinched in sufficiently to ensure the predominance of the leader. If the cuttings are taken early in the year, and kept in gentle heat till the summer, nice plants one to two feet high may be obtained the first year, but anything like forcing is a mistake for plants which it is intended to grow in the open air. It is better to sacrifice early display, and, after they are well rooted, grow the plants in a cold house or frost-proof frame till June is well in, and then put them out in the open for the summer. For the first winter, as they will have little or no ripened wood, they should be kept in a cool house from which frost is excluded, and after that never subjected to heat again. Afterwards they may be wintered in a cellar or outhouse of any sort where they will not be exposed to any serious degree of frost.

The great secret of getting sturdy and vigorous plants is to let them make the whole of their growth in the open. We have all seen plants brought out of their winter quarters in March, and put in a warm house, where they have started into luxuriant growth, subsequent exposure to sun and wind browning their leaves and checking their growth the rest of the season. They should be kept back in the spring as far as possible, and the less growth they make before May the better.

Young fuchsias respond more quickly than most plants to repotting when their roots are not disturbed, although when they become of large size this is often impossible. A good compost to use is one consisting of two parts turfy loam, one of leaf-mould, and one of old hotbed manure, with a liberal addition of coarse sand or finely-broken potsherds to keep the soil open. When they get large, so that repotting is only done once in a couple of years, lasting plant food, such as basic slag or bonemeal, should be added to the compost at the rate of a pound to the bushel of soil.

It is difficult to repot large fuchsias without disturbing the roots a good deal, as these are brittle, and do not form such a fibrous mass as those of some plants. If they are to be put in fresh pots of the same size—always clean ones—and they have been turned out of the old pots whole, or nearly so, it is a good plan to work out some of the earth from the roots with a hand fork. The soil should always be nicely moist before a shift, and, assuming this is the case, no water is necessary afterwards until the soil, both new and old, has become fairly dry, this drying out of the moisture and the taking of its place by air giving the plants a good start in the new pots, for if the new soil is soaked when there are no roots in it to absorb the moisture there is a danger of it becoming sour, and this is fatal.

The same principle applies to all old plants in large pots or tubs, the soil in the lower part of which may not get dry the whole summer. If such are allowed to get thoroughly dry once in a while, even to the flagging point, the soil will be sweetened, and the plants will be the better for it. For feeding I have found nothing better than good guano and dissolved bones, once a week with each. Old plants in large pots stand much stronger applications than young ones, and it is doubtful if the former should ever be watered with plain water except in very hot weather, and in the resting season, always remembering, however, that when the soil is very dry, it should be thoroughly moistened with clear water as a preliminary to the liquid manure.

It is scarcely worth while enumerating varieties for outdoor purposes. As a rule, single varieties are stronger in growth than the double, but there is one exception at least which should be mentioned, as it is one of the best I know for our purpose, and that is that grand variety Madame Jules Chrétien, with scarlet sepals and semi-double white corolla veined red. I have had plants of this four feet high, and as much in diameter, covered with blossom during the late summer and autumn. Its one drawback is that it is usually late coming into flower—mid August or later—as it makes vigorous, though slow, growth all through the earlier part of the summer. Florists' varieties of the fuchsia are endless, many of them differing in little but name.

ALGER PETTS.

Phlox Comtesse de Jarnac.—This phlox is remarkable for the manner in which the leaves are clearly and freely variegated with white. As a flowering plant it does not rank with many of the green-leaved varieties, but its variegation is very constant. It is decidedly a weak grower, and one that cannot be depended upon to hold its own in a mixed collection of herbaceous plants. At Hampton Court it formed during the summer a very pretty bed. The surface of the bed was planted with bright red Begonia Comte Zeppelin, carpeted with Koniga maritima, while as dot plants this phlox was used.—W. T.

MIXED BORDERS.

For providing a display of bloom during spring, summer, and autumn, there is nothing better than a well-furnished mixed border, the term mixed meaning a border which may be utilised for the cultivation of plants of perennial, biennial, and annual duration. Such a border, when carefully planted, is highly appreciated, but it must in no way be confused with the herbaceous border proper.

The difference between the two classes of borders is clearly marked, for whilst the herbaceous must remain undisturbed until the usual replanting and renovation, the mixed border has to be replenished from time to time during the season. Of course, the maintenance of the mixed border in good condition entails a certain amount of additional work, for which one is amply repaid. Various annuals and biennials have to be raised from seeds, and demand attention from the time of sowing until they finish flowering.

The foundation must be herbaceous plants, for one cannot dispense with Michaelmas daisies, helianthuses, delphiniums, phloxes, etc., for the back rows, and various others suitable for the centre and front. The width of such borders depends a great deal on the space at one's disposal. Usually they are too narrow to allow proper planting, and a somewhat cramped appearance is the result. To create a good effect a width of from ten to fifteen feet is required, which will provide ample scope for the exercise of taste in the arrangement. The formation of the front should be of irregular design, with an approach of a wide turf belt or lawn. If the background is to be formed with shrubs, gross feeding kinds should be avoided, otherwise the borders will be robbed of much of the food they contain. Apart from shrubs, an effective background may be provided by using rustic poles, connecting them with a double row of chains to accommodate climbers. The arrangements should be carefully thought out beforehand, and a rough plan or sketch will be found extremely useful in carrying out the work. The back groups may consist of delphiniums, foxgloves, helianthuses, heleniums, the tallest Michaelmas daisies, verbascums, and others of similar habit of growth. Clumps of Anchusa intalica, Opal or Dropmore varieties, are very effective, but they must be removed from the delphiniums. To take the place of the foxgloves or verbascums when their flowering season is over, we have sweet peas and dahlias, also hollyhocks. The sweet peas should be grown on in pots expressly for this purpose. There are usually some plants left over from the main planting, and if shifted into nine-inch pots they will make fine specimens for filling up the gaps.

For the centre of the border there are numbers of plants suitable, such as the dwarfer-growing Michaelmas daisies, and the pæonies, doronicums, phloxes, Dicentra spectabilis, Campanula persicifolia, Canterbury Bells, aquilegias, Chrysanthemum maximum Mrs. Lothian Bell, Oriental poppies, Lobelia cardinalis, pentstemons, Coreopsis grandiflora, and many others. Early-flowering chrysanthemums provide splendid material for refilling the space caused by the removal of the Canterbury bells, also Salvia patens and S. splendens var. Pride of Zurich or Fireball answer for the same purpose. The pyrethrums lift readily and safely immediately after flowering, when the gap is made good with other plants, such as coreopsis, salpiglossus, scabious mallows, etc. Gladioli can be planted between the aquilegias, thus providing a display when the latter are finished.

The antirrhinums are excellent for the summer effect, the tall varieties are suitable for the centre groups, and the intermediate and dwarf types should be planted nearer the front, according to their respective heights. For associating with the antirrhinums we have Sweet Williams, of which some of the improved varieties provide a brilliant show of bloom. Wallflowers should be extensively used for the early spring display, and when their flowering season is over they are cleared off, and the ground planted with either of the two mentioned above. Coming to the edge of the border, and the various plants which will give the best results for the whole season, we have myosotis, polyanthuses, pansies, silenes, arabis, alyssum, and violas. All these should be planted in irregular patches or drifts. Between these may be grown pinks, Campanula turbinata, and C. carpatica, Œnothera taraxacifolia, Œ. macrocarpa, Dactylis glomerata elegantissima, Aster alpinus and its varieties, Iceland poppies, Phlox canadensis, and Thalictrum adiantifolium. Annuals must be grown on for refilling the spaces caused by the removal of the early-flowering spring plants, and here may be mentioned as suitable Dimorphotheca aurantiaca, phloxes, asters, nasturtiums, verbenas, ten-week stocks, French marigolds, leptosiphons, and others of similar habit.

There are many bulbous plants that can be used to advantage, such as English and Spanish iris, various liliums, narcissus, tulips, early flowering as well as late, gladioli, and many others in large variety. The plants mentioned in this note in no way exhaust the list of suitable subjects for the mixed border scheme.

E. C. Pooley.

ANEMONE ST. BRIGID.

Both for the supply of cut flowers, and also for the embellishment of the flower borders, these anemones are becoming more and more appreciated every year. The roots may be planted from the middle of October to the corresponding period of the month following.

An ordinary garden soil will be good enough to grow plants and flowers of ordinary merit. But if the soil be well enriched with rotted manure, and well prepared, the plants and flowers will be of larger size. For a number of years I have grown these anemones rather extensively, and am quite convinced that they are worth all the trouble that the cultivator can give them in the way of good culture.

When they are grown in rows in large beds the cultivator has a good opportunity to thoroughly prepare the ground for the roots. The soil should be of a medium to light nature and well drained, then almost any aspect will do, but I find that the colours of the blooms are richest on plants grown in borders facing the west. Dig the soil to a depth of quite 20 inches, and mix the rotted manure with it, so as to leave the top 4in. of soil free from manure. This is done so as to prevent the roots coming into direct contact with the later before fairly active growth commences in the spring. Having duly prepared the beds draw out drills 3in. deep and 15in. apart. Plant the roots at least 6in. asunder in the rows, and bury them 2in. deep. Do not tread on the beds after planting is finished. In well-drained soil few roots fail, and the leaves grow larger and of good form. Where planted in clumps in borders the soil should be deeply dug and manured, as in the case of large beds.

Geo. Garner.

PEAR DOYNNE DU COMICE.

A great deal has been said and written concerning the merits of Doyenne du Comice pear, but however much praise has been bestowed upon the variety, it has been well merited, for practically every cultivator of hardy fruits is ready to affirm that Doyenne du Comice holds a position among pears, such as Cox's Orange Pippin holds among dessert apples. In each instance, however, the merits of the fruits were not quickly recognised. During the year now drawing to a close very many dishes of splendid fruits of Doyenne du Comice have been staged at the leading exhibitions, and though everyone admires the skill that can produce such wonderful specimens, the huge fruits do suggest the possible need of standard of limitations such as exist in the case of dessert apples.

The accompanying illustration represents one of several fine examples of this delicious pear staged at the great Fruit Show in London a few weeks ago by the King's Acre Nursery Company, Hereford. The flavour if Doyenne du Comice is not only delicious, but unique among pears. November is the month during which this pear is at its best, but fruits often ripen earlier and some keep good later, according to site and season.

Doyenne du Comice is a free-bearing variety, and of excellent constitution, thriving as a pyramid or cordon. It was raised in the garden of the Comice Horticole, at Angers, and the original tree first fruited in 1849. The late Mr. R. D. Blackmore, the novelist, who grew a large collection of pears at Teddington, and gave not a few of the varieties a bad character that has been redeemed by more extensive and skilful cultivation, said of Doyenne du Comice, "This is, to my mind, the best of all pears; very healthy, a certain cropper, of beautiful growth, and surpassing flavour. I have grown it to the weight of 14oz., on heavily-cropped trees. But on a wall it is far inferior." The last sentence is difficult to understand, because experience proves that the variety is an excellent one under every form of good cultivation, and it deserves even wider popularity than it has already attained.

PEAR DOYENNE DU COMICE.

One of several fine fruits recently exhibited by the King's Acre Nursery Company, Hereford.

Packing Fruit, etc.—The proper mode of packing fruit and vegetables for market is fully described and illustrated in the Gold Medal Essay of the Worshipful Company of Fruiterers, entitled Packing and Selling Fruit and Vegetables. Price 1s. from booksellers, or 1s. 3d. by post from Gardeners' Magazine Office, 148, Aldersgate Street, London.

WORK FOR THE WEEK.

ORCHIDS.

CYMBIDIUMS.—Such species as C. Traceyanum and C. Lowianum are exceedingly useful for decorative purposes. The former produces its flowers during the winter and early spring, and it lasts in perfection for several weeks; so that well-flowered specimens make an attractive display, and where the plants are grown under cool conditions, they take no harm if removed to the dwelling house for a little while, providing no gas is used, and they are out of reach of frosts. The flowers last a long time when cut. This cymbidium does not often flower freely as large specimens, and especially is this the case where the plants are grown too warm; the temperature of the odontoglossum house meets the requirements of C. Traceyanum best. The flower scapes will now be advancing from the base of the pseudo-bulbs, and may frequently be mistaken for growths. When they are seen they must have every encouragement, but care should be observed not to overwater during the winter. Saturation at the roots during low temperatures is the forerunner of black spot.

CYMBIDIUM LOWIANUM flowers later in the spring than C. Traceyanum, and where grown under favourable conditions there is no orchid more useful or that gives a more satisfactory return of flowers. Well-grown plants of this species in its different varieties are prominent subjects in our spring and early summer exhibitions. The flowers last for months in perfection if placed in a cool house, while when cut there are no flowers that I am acquainted with that have so great durability. The flower scapes in some cases make their appearance about the present season, but where the plants are grown with the odontoglossums, the remarks given in connection with C. Traceyanum will apply. If the plants are not overwatered they will grow far more satisfactorily under cool conditions than when grown in the intermediate house.

HYBRIDS.—The numerous hybrids that are now procurable for a modest outlay have added interest to the culture of cymbidiums. C. Lowio-eburneum is perhaps one of the most variable and desirable among them. It does best when grown with the above-named species, producing flowers during the spring months. C. Wiganeanum, C. Winnianum, C. Low-grinum, C. I'Ansoni, C. Holfordi, the secondary hybrid C. Colmanæ, and others, are all worthy of cultivation, and they may all be grown under cool conditions. Where a house can be devoted to cymbidiums there is little difficulty in keeping the plants clean and free from red spider by syringing the foliage whenever the outside conditions permit; but where grown under warm conditions, with other plants, they need constant observation to keep this pest in check during the winter months. Sponging with a weak solution of soft soap is the best remedy. Potting should not be too frequently done, but, when needed, good lasting material and ample drainage should be used.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

BOUGAINVILLEAS. — Specimens that have been subjected to a thorough ripening of their wood may now be transferred to a cool position, and the cooler their surroundings, so long as they do not suffer from frost, the better will be the resting period the plants will enjoy. This is important, as plants start better next season thoroughly rested, and will then produce abundance of strong, healthy shoots.

GLOXINIAS.—Extreme care must now be exercised with autumn-raised seedlings, and they should be afforded a light position near the glass in order to ensure that sturdy foliage, which is so essential for future success. A minimum temperature of 65 degrees will suffice to secure a steady growth throughout the winter. Unless the position and locality are most favourable, potting should be deferred until the New Year. A selection of the earliest ripened corms may now be made for the earliest of next season's stock. I prefer to allow the old corms to remain undisturbed in their flowering pots; being placed on a shelf in the stove, very little attention is necessary until growth appears to be making progress, when watering with diluted farmyard liquid and clear soot water is allowed. Excessive applications may soon cause serious damage during winter months.

ALOCASIAS.—A. Sanderiana succeeds best when kept steadily growing throughout the winter, and ought not to be ripened off so severely as some other of these valuable and extremely useful fine foliage plants. The general stock have now completed their growth, and are ready for resting; gradually reduce the supply of water at the roots until the foliage has completely died away, and then keep them dry at the roots and store in a dry position in the stove.

GENERAL REMARKS.—Now that the winter season is almost with us, nearly all potting operations must be stopped for the remainder of the year. Attention, however, must be directed towards renewing the annual supply of potting material. Some best quality fibrous loam must be secured and stocked with the grass side downwards. A sprinkling of lime and soot between each layer destroys insects and discourages wireworms and similar pests. Securing leaves for a supply of leaf-mould as an item easily overlooked, and the consequence is leaf-mould of an inferior grade. Clean leaves of beech and oak should be selected, but they must be kept free from insect life, grass, and other matter. As a general rule, leaves do not become decomposed sufficiently for potting until they have been stacked up for a year or so and turned over once or twice. All old flower pots not in use should be washed, placed in their sizes, and stored away safely until they are wanted in the busy season; broken pots intended for drainage may also be similarly treated, and this work, if carried out as circumstances permit, will save time and confusion during the busier season. —John Donoghue, Bardon Hill Gardens.

FRUITS UNDER GLASS.

EARLY GRAPES.—Preparation for forcing should now be set about in earnest if ripe grapes are expected by the end of next April or early in May. The vines may now be pruned back to two eyes. In the case of pot vines, scrub the pots, and see that the drainage is secure, then they will be ready for the forcing pit. A lean-to structure facing south will be the best position, and a pit which is half underground and can be kept warm during the dull days will be found to answer the purpose admirably. Place the pots about 2ft. from the glass, and see that the base of each pot is on a firm footing, the space around being filled with dry tree leaves which will give a little bottom heat to start the roots, and be better for the vines than fire heat. Tie the rods down to secure an equal break, and close the house, keeping the temperature at about 50 to 55 degrees for the first three weeks. Much care will be required in watering, as it must be remembered that very little water will be needed until growth commences; on the other hand, the soil must not become dry. On fine days spray with tepid water the rods and pots. The best varieties to force in this way are Black Hamburgh and Foster's Seedling, these two setting well in dull weather. Early vines in permanent borders will need treatment very similar to that recommended for pot vines, and if made ready to start by the beginning of December, will make a good succession. It is assumed that the rods have had a good washing, so that they are absolutely clean and free from pests.

FIG HOUSE.—As soon as all the leaves have fallen, the trees should be pruned. These need pruning hard, as the branches must not be too thickly placed or there will not be room for the foliage to develop properly. Take out as much wood as possible from the base, even at some sacrifice for one year, and encourage young, short-jointed growths, as it is from these we have the best results; then proceed to tie up the branches in bundles for convenience of cleaning wires, glass, and walls. Clean every part of the house with soft soap and a strong insecticide, and finally wash the walls with hot lime, to which add petroleum and sulphur. If the figs are at all dirty, clean them, and finally tie into position again. All the strongest shoots should be tied with tarred string. Then clean the borders and staging, rake off all old top-dressings, and, if necessary, top-dress with some fresh loam and lime rubble, making this firm with wooden rammers.

CHERRY HOUSE.—Proceed to clean the trees and structure as in the case of the fig house. Most of the pruning should have been done, as cherry trees are not fond of the knife. All old, worn-out growth must be carefully cut away, and the trees thoroughly cleansed.

TOMATOES.—Keep the house airy, with a little fire heat. Tomatoes are now growing splendidly. Successional batches should be potted and placed on a shelf where they can obtain the benefit of all possible light in order to keep them sturdy. Gather the fruits from the fruiting plants as soon as ready.

STRAWBERRIES IN POTS.—Place these under cover in cold frames, or they will become too wet. Select the best crowns for forcing next month. — W. A. Cook, Leonardslee Gardens.

THE FLOWER GARDEN.

PLANTING.—The work of planting should proceed at every available opportunity, bearing in mind the fact that autumn planting is considerably more conducive to the future welfare of the shrubs than spring planting, especially when dealing with deciduous subjects. It is important that the soil should be made firm, and therefore it is necessary it should be in really good working condition, that is, it must not be too wet and sticky otherwise it cannot be made firm. Any subject likely to be shaken about by the winds should be securely staked and tied. The style of planting rests entirely with individual tastes; some prefer grouping, while others are in favour of dotting plants about singly. Undoubtedly many shrubs are seen to best advantage when grouped, notably many flowering and foliage plants, such as berberis, cytisus, prunus, gorse, golden elder, variegated dogwood, and others. Space here does not allow a long list of trees and shrubs, yet mention may be made of a few which should not be overlooked. The tulip tree (Liriodendron tulipifera) does not appear to be as popular as it should be, and not nearly so extensively planted as it deserves. It is a beautiful object when in flower, and in the autumn, with its changing tints of green and yellow, is very conspicuous. It should be treated as a specimen, and planted in close proximity to the liquid amber, which has a grand colour in autumn. Parrotia persica is by no means common, yet its foliage is decidedly attractive late in the season. The deciduous cypress (Taxodium distichum) thrives remarkably in damp places, the banks of a lake or pond suiting it wonderfully well. There are some splendid varieties among the oaks, such as Q. coccinea (scarlet oak), Q. Mirbecki, Q. coccifera, Q. nigra, Q. Damie, Q. conferta, Q. rubra, and others.

LILY OF THE VALLEY.—The beds should be top-dressed with well-decayed leaves as soon as the foliage has ripened. The plants derive great benefit from this material, and make excellent growth when this plan is carried out annually. Lily of the valley should be lifted every three or four years, otherwise the beds become overcrowded, and small, inferior spikes of bloom result. Where necessary, this work should be attended to at once, replanting the crowns singly. The best results are obtained by planting in a deep, rich material, which has a good quantity of leaf-soil thoroughly incorporated with it, top-dressing with the latter material when planting is completed.—E. C. Pooley.

EXHIBITIONS AND MEETINGS.

◆

Bournemouth.

OCTOBER 31 and NOVEMBER 1.

The twenty-fifth annual exhibition of autumn flowers, fruit, and vegetables was held in the spacious Winter Gardens on the above dates, and proved to be a great success. Never before has the competition been so keen, or the quality of the exhibits equalled. The committee and officers are to be highly congratulated on having arranged such a splendid exhibition. Some exhibitors came as far away as from the north midlands. Cut chrysanthemums, groups, orchids, grapes, apples, carnations, and displays of vegetables were the principal features. Sir Trevor Lawrence, Bart., K.C.V.O., opened the exhibition, and made many very favourable comments on its excellence.

GROUPS.

In the class for a group of miscellaneous plants and cut flowers, Mr. Usher, gardener to Sir Randolph Baker, Bart., won chief honours, having very fine chrysanthemums and well-coloured crotons; The Parks Nurseries, Lim. (Mr. F. W. Welch), Bournemouth, came a very close second; and Mr. W. Evans, gardener to G. J. Fenwick, Esq., a creditable third. For a group of decorative and single chrysanthemums, Mr. Evans won first position; Mr. C. Pearce, gardener to Mrs. Ormond, was second with a charming group; Mr. Usher being third. The silver cup presented by the Dowager Lady Miller for a group of chrysanthemums was won by Mr. Cox, gardener to G. F. Duberly, Esq.

CUT BLOOMS, ETC.

There were five entries in the class for twenty-four blooms, distinct, on boards, and Mr. Woolman, Shirley, Birmingham, led with fine specimens, the following being noteworthy, namely, Dreadnought, Beecham Keeling, Mary Farnworth, S. F. Richardson, Rose Pockett, Mrs. David Syme, Thomas Figg, Mrs. L. Thorn, Mrs. A. T. Miller, Mrs. Lopes, Master David, Kara Dow, Francis Joliffe, Eclipse, and Evangeline; Mr. J. R. Tooley, gardener to Hugh Andrews, Esq., Winchcombe, was a close second, Eclipse, Pockett's Crimson, Edith Jameson, Purity, and W. Beadle being the best blooms; third honours went to Mr. Usher. In the class for nine vases of Japanese blooms, three blooms of each, distinct varieties, Mr. Woolman was first, followed by Messrs. J. R. Tooley and Mr. Usher for second and third honours respectively. The best blooms in the show were staged in this class, and the variety, Francis Joliffe, stood out well ahead of all others. Lady Talbot and the Hon. Mrs. Lopes were also exceptionally good. The stands of Japanese incurved varieties were excellent. Mr. Usher again led with Miss A. Nicolls (2), Lady Edward Letchworth, F. Penford (2), W. Rawlings, George Mileham '08, F. W. Lever, W. Jinks, Mdm. G. Rivol, and Lilian Hall; Mr. J. R. Tooley, and Mr. G. Barge, gardener to Rev. C. H. Burrows, Bournemouth, were second and third respectively. Mr. Cox won the silver cup presented by Mrs. Caroline Pelfer for two vases of Japanese chrysanthemums, two distinct varieties, nine blooms in each vase; Mr. Tompkins, gardener to the Dowager Lady Miller, second.

Bush plants were well shown, Mr. C. Barrett, gardener to C. Howard May, Esq., was a prominent prizewinner. Mr. Usher won the cup offered for a group of cut blooms of carnations on a base of fern; Mr. Fay, Southampton, came second. In the class for six vases of carnations, these two competitors won in the reverse order.

FRUITS AND VEGETABLES.

Nearly sixty bunches of grapes were staged. The quality was good, and competition keen. Mr. Carter, gardener to R. Neville Grenville, Esq., Butleigh Court, was first in the class for three bunches, distinct varieties; Messrs. J. R. Tooley and George Garner being second and third respectively. Mr. Garner was first in the open class for two bunches of black grapes; Mr. Hill, gardener to Mrs. Banks, Kingston Lacey, second; and Mr. C. Barrett third. Mr. Pope, gardener to G. R. Pike, Esq., had the best two bunches of white grapes in the open class, and also in the local one. Mr. Tooley came second, and Mr. Foskett third. Mr. Garner was second in the local class for two bunches of white, and Mr. Foskett third. Mr. C. Barrett was first in the corresponding class for two bunches of black grapes; Messrs. Garner and Steptoe second and third respectively.

Apples made a grand show. Mr. Cape, Wimborne, had the best four dishes of kitchen apples; Mr. Hill was first with four lovely lots of dessert apples; Mr. Douche had the best two dishes of dessert; and Mr. Gould the best two dishes of kitchen apples.

Vegetables were clean and good, and well represented. Mr. Usher won the principal prize for collections.

NON-COMPETITIVE EXHIBITS.

Gold medals were awarded to Messrs. D. Stewart, Wimborne, for apples and pears; Messrs. Sutton and Sons, for vegetables; Messrs. Charlesworth and Co., for orchids; and to Messrs. Mansell and Hatcher, for orchids.

Silver medals were granted to Mr. T. K. Ingram, for miscellaneous plants; to Messrs. Jessie Kent and R. Chamberlain, for floral designs; to Hummerford Nurseries, Lim., for cut flowers and floral designs; to Messrs. Toogood and Sons, for vegetables; to Mr. Ed. V. Low, for orchids.

Mr. Slade was highly commended for zonal pelargoniums.

Torquay Gardeners' Association.

The annual show of the above association was held on November 3 in the large hall of the Bath Saloons, Torquay, and proved a very successful exhibition. More entries were received than at any of the former shows, and the plants and flowers staged were of exceptional merit, while the competition was so close that in many cases the judges found it very difficult to select the winner. The competition for the groups of single chrysanthemums was very keen, the first prize and the National Chrysanthemum Society's Certificate of Merit being awarded to Mrs. Lyon for a magnificent group. The first prize for a group of large-flowered chrysanthemums was won by Mrs. Richardson with a splendid collection of flowers, many of which would not have been out of place on the show board. A silver cup was given to artizans and cottagers for six cut chrysanthemum blooms of any variety, and was won by Mr. T. Guest, who also beat all comers in the open classes by carrying off the National Chrysanthemum Society's silver medal for the best bloom in the show, a magnificent specimen of the pure white Mrs. A. T. Miller, this victory reflecting the greatest credit on an artizan. The specimen plants were enormous.

The leading prize-winners were as follows: For twenty-four Japanese cut blooms, Dr. T. G. Skardon; for twelve Japanese cut blooms, Dr. T. G. Skardon; for a collection of vegetables, Mr. P. P. Alexander; for a collection of apples, Mr. P. P. Alexander; for a collection of pears, Mr. P. P. Alexander; for a dinner-table decoration, Mr. F. Perrett; for an epergne of cut chrysanthemums, Mr. W. H. Samerell; for a group of chrysanthemums in form of a semi-circle, Mrs. Richardson; for a group of single chrysanthemums, Mrs. Lyon; for three trained chrysanthemums, singles, Mrs. Lyon; for three trained chrysanthemums, doubles, Mrs. Lyon; for six table plants, flowering, Colonel Cary; for six table plants, foliage, Dr. Quick; for three table plants, flowering, Mrs. Tottenham; for three table plants, foliage, Mrs. Tottenham; for six ferns, Colonel Cary; for winter-flowering begonias, Captain Phillpotts; and for three solanums, Dr. Quick.

There were several classes confined to residents in the borough, and all but one of the first prizes for cut blooms were won by Mrs. Lyon. The solitary other first prize-winner being Mrs. Tottenham. Mr. W. H. Prowse led for a basket of berried plants. In the classes for vegetables open to amateurs the majority of the first prizes were won by Colonel Cary, and in the fruit classes Colonel Cary was also most successful. In the special prizes for vegetables Mr. P. P. Alexander was to the fore.

The nurserymen's exhibits aided considerably to the beautifying of the show. The Devon Rosery Company, Torquay, staged a fine collection of plants, including Eupatorium micranthum (Weinmannianum), Acalypha hispida, Lilium longiflorum grandiflorum, Nerine Bowdeni, Cyclamen persicum, Bouvardias scarlet, white, and pink, Solanum capsicastrum, Erica hyemalis, etc., Pandanus Veitchi, a fine collection of chrysanthemums, some handsome palms arranged at the back, and maidenhair and other ferns. The same firm made a splendid display of fruit, the apples and pears being of the highest quality and nearly a hundred dishes being staged. Many of the fruits were far more highly coloured than usual, Bramley's Seedling, of which some enormous fruits were shown, being especially noticeable in this respect. Bismarck was also very fine and large, as was Peasgood's Nonsuch, and Cox's Orange Pippin were extraordinarily large and highly coloured, while of the many varieties of pears exhibited the peerless Doyenne du Comice proved a great attraction.

Messrs. Robert Veitch and Son, Exeter, contributed a most interesting stand, containing a large number of winter-flowering carnations in full bloom. A few of the varieties were Rose Doré, May Day, Mikado, White Perfection, Lady Audley Neeld, Scarlet Glow, Imperial, Winsor, Carola, Rival, Lady Dainty, White House, Colossus, J. W. Riley, Rex, Mrs. C. F. Raphael, Lady Alington, J. W. Riley, and Sarah A. Hill. Among the other plants shown were Acacia Baileyana, Metrosideros floribunda, which is the nurseryman's name for Callistemon salignus, Rhus copallina with deep crimson leaves, Berberis Thunbergi, scarlet foliage; Aster grandiflorus, the largest flowered of all the Michaelmas daisies, but too late for any not living in the south-west; long crimson fruits of the rare climber Thladiantha dubia, said to be found in India and China, Pancratium macrostephana, Nerine Fothergilli major, Quercus coccinea, Correa cardinalis, and C. magnifica.

Others who contributed attractive stands were Mr. W. B. Smale, Torquay, who showed the variegated variety of Phormium tenax, zonal pelargoniums, and many other plants; Mr. H. Mayne, Torquay; and Messrs. Burridge and Sons, Torquay.

Lee and Blackheath Horticultural Society.

On Friday, October 27, at the Church Street Schools, Lee, Mr. T. W. Sanders gave a lecture on "Up-to-date Gardening." This was the first of a series of lectures for the winter session organised by this society.

One of the things necessary to obtain the best results from the garden, the lecturer said, was a thorough knowledge of the soil dealt with, while the constituents of the manures used should be understood in order that they might be intelligently applied. Chemical manures were at the present day an absolute essential factor in successful gardening owing to the scarcity of farmyard manures, and also to the fact that the ground is impoverished by continual cropping.

Winter spraying of fruit trees was dealt with pretty fully by the lecturer, and he described the best washes for the different purposes, the time to use them, and the most up-to-date methods of distributing them on the trees.

Portsmouth. NOVEMBER 1, 2, and 3.

The annual exhibition was held in the Town Hall—an excellent site—and was quite a success. Groups of chrysanthemums were a strong feature, being both numerous and good. Cut blooms were not plentiful, but in point of quality quite up to the average. Fruit was a strong feature, apples especially. The management was of the best under the careful guidance of Mr. W. E. Gill, hon. secretary, and a strong committee.

CUT BLOOMS.

There were five open classes, the principal one being for thirty-six Japanese in not less than eighteen varieties, not more than two of any one variety. A silver challenge cup, value £20, with a cash prize of £5, were offered as the premier award. Mr. Baxter, gardener to Captain Dalgety, Lockerley Hall, Romsey, occupied the post of honour with a set of high-quality blooms, well staged. The following were the most noteworthy: The Hon. Mrs. Dalgety, an improved Master James, Frances Joliffe, Mrs. E. Herring, Lady Talbot, Master Joiffe, Bessie Godfrey, Madame P. Radaelli, Hon. Mrs. Lopes, Eclipse, Mrs. K. Stoop, J. H. Silsbury, R. Vallis, D. B. Crane, Mrs. A. T. Miller, and W. Mease. Mr. Hunt, gardener to P. Ralli, Esq., Ashtead Park, Epsom, was a good second with an uneven set; Lady Letchworth (extremely fine), Alice Lewis, Mrs. A. T. Miller, Evangeline, and Miss A. Nicoll were the best.

The prizes for two dozen Japanese, in not less than twelve varieties, and not more than two of any one variety, produced keen competition. Mr. A. Herbert, gardener to Sir F. Fitzwygram, Leigh Park, Havant, secured the leading award with an even lot of blooms. Especially good were Duchess of Sutherland, Countess of Granard, W. Biddle, and Mrs. A. T. Miller. W. E. Gill, Esq., Osborne Road, Southsea, was a capital second, with a well-balanced set, lacking size only. Mr. T. West, gardener to R. W. Foster, Esq., Stubbington, Fareham, third.

Incurved blooms were remarkably good considering the early date. Mr. Hunt occupied the premier position for twenty-four in not less than twelve varieties, with really fine examples of Buttercup, Romance, W. Biddle, H. W. Thorp, Edwin Thorp, Clara Wells, Duchess of Fife, John Wainwright, and Embleme Poitevine, all, neatly staged Mr. Gill was second.

Single-flowered varieties have for many years being remarkably well shown here, and there was no exception this season. Mr. H. Snook, 5, Fitzroy Street, Portsmouth, won for twelve sprays, three blooms of each variety, with a handsome collection, including such varieties as Malta, Ideal, Wm. Rogers, Draco, Sylvia Slade, and Caledonia. Mr. C. Johnson, 10, Garnier Street, Portsmouth, second. Pompone varieties are here usually well shown in bunches of three. Mr. Snook again won first place with typical blooms of W. Westlake, W. Sabey, and Rosinante. Mr. J. Vance, 98, Hampshire Street, Portsmouth, second.

In the classes in which the competition was limited to Portsea Island, Mr. Gill won for incurved and Japanese, also with commendable blooms. An interesting class was that for one dozen incurved and as many Japanese, confined to a radius of twelve miles. Mr. D. Edwards, gardener to W. Garton, Esq., Salisbury Court, was easily first with some of the finest blooms of popular varieties in the show; Mr. Gill second.

PLANTS.

Six competed in the class for a group of chrysanthemums in pots, on a space of 60 square feet. Mr. W. E. Gill was first with dwarf plants, well clothed with healthy leaves and carrying really good blooms, neatly arranged. Mr. Herbert second. Miscellaneous plants, arranged for effect, in combination with quality, were not numerous, but added to the interest of the show. Mr. W. Rooke, gardener to Sir J. Brickwood, Esplanade Hotel, was first; Mr. Papworth, gardener to the Parks Committee, Portsmouth, second. Mr. Lambert, Chichester, had the best twelve specimen chrysanthemums, and also the finest eight plants, staging well-grown varieties.

FRUIT AND VEGETABLES.

These were excellent. Mr. Ellwood, gardener to W. H. Myers, Esq., Swanmore Park, Bishop's Waltham, was first for two bunches of black grapes and for six dishes of apples, and also first for collections of vegetables, in classes where the prizes were provided by Messrs. Sutton, Webb, and Toogood. Mr. Baxter won for white grapes, and Mr. C. H. House, Privett, Gosport, for a collection of pears.

A gold medal was awarded to the Barnham Nursery Company for a collection of apples of exceptional colour, Golden Noble, Newton Wonder, Gascoigne's Seedling, Bramley's Barnack Beauty, Bowhill Pippin, King's Acre Pippin, and Allington Pippin were the leading dishes. A silver medal was awarded to Messrs. W. Wells and Co., Merstham, for a collection of new chrysanthemums; Gertrude Peers, Mrs. W. Hookey, Mrs. W. Gilbert Drabble, and Mrs. P. A. Witty were noteworthy here as new Japanese varieties. Dorothy Dan, a very pretty bronze-amber, medium-sized single chrysanthemums, was also worthy of note.

Chrysanthemum Show and Conference at Biarritz.

On the occasion of the sixteenth annual congress of the French Chrysanthemum Society an international show of chrysanthemums, fruit, etc., was held in the Casino at Biarritz. It was opened on the 26th ult. and closed on the 29th. In conjunction with the Golf Society of Gascony and the Bayonne Horticultural Society a most attractive show was organised. The beautifully decorated rooms of the Casino formed a splendid setting for the show, the walls and ceilings being richly decorated, as many of our readers may know. The weather, unfortunately, was not "King's weather," but the show was well attended. There were forty classes in the schedule, chrysanthemums predominating.

The international jury was presided over by M. H. Martinet and M. Blot, both of Paris. Vice-presidents were Mr. Harman Payne and Senor de la Pena. The secretary of the jury was M. Ph. Rivoiré. The Casino is approached through an iron railing, inside which is an attractive garden planted with carpet bedding and ornamental shrubs in tubs. The visitor then passes into the vestibule, and from the top of the handsome flight of stone steps a fine view of the show is obtained so far as the central corridor is concerned. Then right and left are various halls filled with the products of the various exhibitors; a wonderful contrast to anything we have seen at our own provincial shows. Perfect taste prevails, but of course in a general way the individual exhibits would not reach the high standard observable "chez nous." M. Rodrigues, the devoted and genial president of the Golf Society, and a most enthusiastic chrysanthemumist, warmly welcomed us, and indeed during the whole of the festivities we were deeply indebted to him for the great enjoyment provided.

The grand prix d'honneur goes to Messrs. Vilmorin, of Paris, for a room full of chrysanthemums staged in their well-known style. There were two large groups, mostly bush and trained standards, enclosed in a border edging of dwarf plants of Gerbe d'Or and Purpurine, a fine display, of which much more might be said. The next prix d'honneur was carried off by Messrs. Gelos, the Biarritz florists, assisted by Mme. Bégue. In one large, handsomely-decorated saloon, covered with carpet, they staged floral decorations. In the middle was a table set out for a wedding breakfast in rich style, white roses being the chief "motif." Around this were thirteen other little circular tables, lamp shades, table covers, etc., being all of the same shade as the flowers employed for the decorations; a truly delicate series of floral compositions.

M. Rodrigues staged a handsome group of chrysanthemums in pots, for which he well deserved the third prix d'honneur.

There was special provision made for new seedlings, and a good number of entries. Prizes of honour were awarded to Messrs. Calvat and Chantrieu. Medals and diplomas to Messrs. Dolbois, Lacroix, Heraud, and others. Trained plants in infinite variety, as is now the custom in France, were staged. Groups of plants and cut blooms were well shown by Messrs. Roumagnac, Calros-Géraud, pieuchot, Loublié, Lassus, Bonnet, and others.

Without particularising we may say that the best flowers in the show appeared to be Ant. Marmontel, Australie, Lieut.-Colonel Ducroisèt, Bryant's Beauty, Ma. Provence, Alphonso XIII., Mrs. C. H. Totty, Sapho, Miss Dalton, Mr. R. F. Felton, Lady Hopetoun, Ferd. de Bièvre, Paul Randet, and a few others mainly of French origin, and not known on this side of the Channel.

Throughout the show there were a great many exhibits in the section for floral art. These all came from Messrs. Gelos Frères.

Dahlias were numerous, and rather better done than we have seen before. M. Rodrigues had a large collection, at the end of which was also a display of cut roses. Dahlias were also shown by Messrs. Lavasse, by M. Loublié, etc.

Miscellaneous exhibits were not numerous. A nice bank of ferns, Nephrolepsis in variety, was set up by M. Roumagnac, who was a very prominent exhibitor in other sections. M. Lassus showed a decorative group of Begonia Rex, and M. Lassus also sent a nice lot of Begonia pictavensis. Messrs. Labaste had a good collection of carnations, neatly decorated with pots of maidenhair ferns.

Fruit and vegetables were provided for by the schedule, but the entries were limited. We should, however, mention, as exhibitors, Mme. Julien, Cte. de Bearn, and the Prorieté Tourneau.

The sixteenth congress of the French Chrysanthemum Society was held in conjunction with the show at Biarritz, and a most enjoyable function it was throughout.

On the first day (October 26), the jury met at the show, and proceeded to make the awards, after which they were entertained to lunch at the Grand Hotel by the organising societies. M. Martinet, as president of the society, presided. The show was officially opened at 2.30, when the band played, out of compliment to the visitors the English and Spanish National Anthems, and the Marseillaise. At 4 p.m. there was a reception by the Mayor of Biarritz of the members of the congress, champagne and light refreshments being handed round.

On the second day, at 9 a.m., M. Viger presided at the first meeting of the congress, being supported by all the officials on the platform.

The first paper to be read was one by M. Blot, which discussed very fully the necessity for the society, publishing a pocket edition of the Repertoire des Couleurs. His plan is a good one, for it must be evident to everyone that in its present form the work is only useful in the office or library, and cannot be carried about in the garden and greenhouse for use. M. Blot proposes a new arrangement of the colours, and that they be printed on grey paper instead of white. Messrs. Oberthur and Clement expressed approval. It was resolved that the same be carried out. The other questions were of less interest to our readers. M. Decault read a paper on "The Taking of the Bud." Dr. Chifflot discussed "Insects and Diseases." M. A. Crepin called atention to the large number of plants that were non-productive of buds this year. Nearly all his grown in the open suffered.

Mr. Harman Payne stated that, although the chrysanthemum was a hardy plant, yet in America it was grown for show under glass and on benches, mainly because of the different climatic conditions. He thought that this system in hot summers might be useful to French growers. Dr. Chifflot, Mr. Charvet, and others contributed to the discussion. Other papers followed on "Manures," etc. The usual awards were made to the readers of papers, and a proposition was made to hold next year's congress at Nantes.

In the evening a grand banquet was held, when a large company was present. M. Viger presided. Among the speakers were Messrs. Martinet, Rodrigues, the Mayor of Biarritz, Rivoire, Harman Payne, etc.

Saturday, October 28, was a full day. A visit to Hendaye, a newly-laid-out seaside resort, was made, where, at the Hotel Esknalduna. M. Martinet entertained between 70 and 80 guests. The river was crossed in boats, and a visit paid to the old Spanish town of Fuenterrabbia, then a return was made to Hendaye, and the party left by rail for San Sebastian. Among the sights the party visited was the King of Spain's Palace of Miramar. Altogether this was one of the most interesting and enjoyable gatherings the French Chrysanthemum Society has yet organised.

Reading Gardeners' Association.

At the monthly meeting held in the Abbey Hall on Tuesday (by kind permission of Messrs. Sutton and Sons), Mr. Alderman Parfitt presided over the largest attendance of the session. In opening the meeting the President urged the members to do their utmost to make the exhibition to be held under the auspices of the Association an even greater success than in former years.

The lecturer for the evening was Mr. F. Townsend, head gardener to Leonard Sutton, Esq., Hillside, Reading, and his subject was "Hardy Annuals, including Asters and Stocks." Mr. Townsend, as is well known, has no superior in the cultivation of annuals, and the gardens at Hillside always bear witness to his skill as a grower of these charming flowers, which go so far to make our gardens glorious in summer. The lecture was illustrated by a very fine collection of lantern slides, many of them beautifully coloured, and the display of these splendid pictures greatly added to the enjoyment of the large audience. As each picture appeared on the screen Mr. Townsend gave a description of the subject it illustrated, naming the best varieties to grow, and stating, for the benefit of his audience, his method of treatment, which had brought him so much success as a grower of annuals. In the discussion following the paper the lecturer's wide experience was greatly in evidence, the many questions asked being answered promptly.

Certificates for cultural skill were awarded to Mr. H. Wilson, head gardener to Mrs. Bland-Garland, for an exhibit of fruit consisting of a collection of apples and three bunches of grapes; and to Mr. G. Durrant, gardener to Miss Cripps, for chrysanthemums in pots. Mr. W. J. Townsend, head gardener at Sandhurst Lodge, staged some beautifully grown cabbage, Sutton's "Little Gem."

Birmingham Chrysanthemum and Fruit Show.

The fifty-first show held by this society was a grand one from a horticultural standpoint, and, we trust, will prove to be more successful, financially than has been the case in recent years. Tuesday November 7, the opening day, was, unfortunately, rather stormy, but during the afternoon and evening a good crowd of visitors passed the turnstiles. There was a slight falling off in the number of competitive exhibits, especially in the big plant classes, but the trade came forward in goodly numbers. The management, in the same capable hands as for some years past, was excellent in every way, the reputation held by the society for the best-managed chrysanthemum show in the provinces being well maintained.

FIRST-PRIZE EXHIBIT OF EIGHTEEN JAPANESE CHRYSANTHEMUMS.
Staged at Birmingham Chrysanthemum Show by Mr. W. Iggulden, Lock's Hill Nursery, Frome.

PLANTS.

There was a sad falling off in the entries for specimen plants, the half-dozen classes in the schedule finding Mr. Alfred Cryer, gardener to J. Arthur Kenrick, Esq., Barrow Court, Edgbaston, the only exhibitor. His plants throughout were of fine quality, and worthily received first prize in each case. The classes were for six, three, and one plant, Japanese; six and one other large-flowering variety, and three singles. Mr. Cryer again secured chief honours for the large group, arranged on a ground space 16ft. by 10ft., the display being excellent both in point of quality of flowers and tasteful arrangement. Small ferns, crotons, and selaginellas were used in the foreground, and a fine specimen palm occupied the central position. Second prize in this class was taken by Mr. C. Corbett, gardener to Hume C. Pinsent, Esq., Harborne. For a smaller group, occupying 14ft. by 10ft., Mr. Raynor Bullock, gardener to T. W. Piggott, Esq., Lions Park Hill, Moseley, led. His group was light and elegant, with a preponderance of white, mauve, and yellow, just relieved by individual plants of bronze and crimson shades. Silver-leaved centaureas were interspersed between the flowers with good effect. Second prize went to Mr. L. Fewkes, gardener to H. Greene, Esq., Gravely Hill. Mr. C. H. Herbert, Acocks Green, led for a group of decorative varieties putting up an extremely fine group, among which singles and the lighter, feathery varieties were well used Mr. A. Cryer was a good second. Each of the group classes had two entries only.

CUT FLOWERS.

These opened with a class for six vases of Japanese, each containing three blooms, all distinct varieties. Among four entries Mr. W. Iggulden, Locks Hill Nursery, Frome, led with some splendid flowers shown in good condition. D. B. Crane, Master David, Francis Jolliffe, and F. S. Vallis were particularly fine. Mr. Hugh Andrews, Toddington Manor, Winchcombe, was placed second, his set including Master James, R. Vallis, E. Jameson, and Mr. W. Mease, among others. Mr. H. Woolman, Shirley, was third, a grand bloom of Alice Lemon and a good Lady Crisp being noticeable among a nice lot. Fourth prize went to Mr. H. Chandler, gardener to Countess Craven, Ccombe Abbey, Coventry.

Four vases of triplets formed another class of four entries, the winner being Mr. W. H. Westbury, gardener to J. H. Wheatley, Esq., Berkswell Hall, Coventry. His varieties were Mrs. Charles Penfold, Reginald Vallis, Mrs. E. Parson, and Francis Jolliffe. Mr. W. Iggulden came second, again showing remarkably fresh blooms of rare quality. Mr. Hugh Andrews was third, his flowers of Hon. Mrs. Lopes and Lady Talbot being fine. Mr. H. Chandler was fourth.

Single vase classes were provided for three blooms of one variety, in pink, crimson, white, and yellow varieties. Mr. H. Woolman scored for pink with Alice Lemon in splendid form, Mr. W. Iggulden being second with Reginald Vallis; third was taken by Mr. H. Chandler with the same variety; and fourth by Mr. Hugh Andrews with Edith Jameson. Mr. Hugh Andrews led in the class for a crimson variety with a nice three of Pockett's Crimson. Mr. Chandler coming second with Master David; Mr. Iggulden was third with the same variety; and Mr. Jas Shuter, Small Heath, fourth.

The best vase of whites was Mrs. A. T. Miller, shown by Mr. W. H. Westbury; Lieut.-Colonel Beech, Brandon Hall, Coventry, second, with Pockett's White Australia; Mr. Hugh Andrews third with R. H. Marsham; and Mr. W. Iggulden fourth with Annie Hamilton. Lieut.-Colonel Beech had the best yellows, showing F. S. Vallis of rare size, second prize being taken by Mr. W. H. Westbury, third by Mr. Iggulden, and fourth by Mr. Hugh Andrews.

Single chrysanthemums in four vases mustered three entries, the leading prize-winner being Mr. H. Tribe, gardener to F. W. G. Williams, Esq., Bredenbury Court, Bromyard. His flowers were not over-large, but were of good, true single character, not running to three and four rows of petals, as so many present-day varieties do. Second place was taken by Mr. H. Woolman, who showed big bunches of free-flowering kinds, Mr. W. Newton, gardener to Major Everett, J.P., Knowle Hall, obtaining third prize.

Only one entry turned up for four vases containing twelve distinct varieties of incurves, first prize being awarded to Mr. T. W. Davis, gardener to H. F. Keep, Esq., The Grange, Edgbaston. In a similar class, in which competition was limited to Birmingham growers, there were three entries. Mr. Raynor Bullock, gardener to T. W. Piggott, Esq., Moseley, received premier award, his blooms of Romance, Madame Firlat, and Frank Thurston being finely built flowers. Mr. T. W. Davis, gardener to H. F. Keep, Esq., Edgbaston, the second prize-winner, had C. H. Curtis, W. G. Denyers, Mrs. Judson, and others among a well-grown but not quite even set. Mr. A. Cryer was awarded third prize. Half a dozen entries of two vases, each containing three blooms of two distinct varieties, formed another local class, and it was a very good class. Mr. Raynor Bullock led the way, showing Godfrey's Eclipse and Buttercup. The other prizes were secured by Mr. T. W. Davis and Mr. G. Corbett. The local men had a class reserved to themselves for twelve Japanese varieties, distinct, staged in four vases. Three entries found Mr. A. W. Young, gardener to Mrs. R. Peyton, Edgbaston, at the head of the list. He had very good flowers of Lady Talbot, Beecham Keeling, Sir Frank Crisp, and Mrs. A. T. Miller on his stand. Mr. Mark Chatfield, gardener to J. Archdale, Esq., Harborne, won second prize; and Mr. Raynor Bullock was third. A strong class was that for two vases, in two distinct varieties, three blooms of each, there being seven competitors. Mr. Raynor Bullock again topped the list with some well-built flowers of Master James and Reginald Vallis; second was claimed by Mr. Mark Chatfield, with Reginald Vallis and Montigny, third going to Mr. Alfred Cryer.

Two entries for twelve Japanese blooms, distinct varieties, set up in single vases, with foliage plants or cut foliage as a setting, were a rather poor display after last year's class, which was remarkably fine. Mr. Hugh Andrews was given first prize, his flowers certainly being fine and clean, but the decorative effect of the exhibit would have been improved by the addition of a black velvet or other dark background. Mr. A. W. Young, Edgbaston, was second, using small crotons and maidenhair ferns for decoration. This class should be a popular one.

A novices' class for two vases of incurved, three blooms in each, in two varieties, was provided for growers who have not previously won a first prize. Mr. E. Wright, Bearwood, was the winner, showing shapely flowers of C. H. Curtis and Mrs. J. P. Bryce; second prize went to Mr. Charles Judge, Small Heath, whose flowers were too open. In a class with similar restrictions, for Japanese, Mr. E. Wright again led; Mr. G. Palmer, gardener to P. J. Worsley, Esq., Edgbaston, being second prize winner.

Amateurs who do not employ a gardener were provided for, three entries being staged in the incurved class for three blooms in each of two vases, each vase to contain one distinct variety. The winner was Mr. J. Wakefield, Harborne; Mr. E. Clift, Blackheath, and Mr. E. Darby, Aldridge, following. In the Japanese class the same exhibitors accounted for the prizes in the same order.

There was an open class for a collection of cut single chrysanthemums arranged on a table space 8ft. by 4ft., foliage plants, etc., being allowed. It made a very good class, the winner, Mr. H. Tribe, putting up a fine lot of well-grown flowers in good varieties, the staging being artistic and effective. Mr. W. Newton, The Garden, Knowle Hall, came a good second, his flowers showing careful cultivation, although too severely disbudded for singles. Mr. Raynor Bullock was third, his flowers being staged on the flat staging instead of on tiers.

Table decorations of chrysanthemums filled a large amount of space, and were very much admired. There was naturally a considerable amount of repetition or sameness in a series of over twenty tables, furnished almost entirely with single and small-flowered chrysanthemums, but the exhibits demonstrated admirably the value of the flower for decorative purposes. First honours were secured in this keen competition by Mr. H. Greaves, Wormington Broadway, Worcester; Mr. E. Deakin, Hay Mills, being his runner-up.

MISCELLANEOUS PLANTS.

These are not shown here to anything like the extent of former years. Nevertheless, there were some good exhibits. Twelve cyclamen made a class of three entries. Mr. A. Shambrook, gardener to the Rev. H. Buckston, Sutton Hall, Derby, leading with beautiful plants carrying good flowers over well-developed foliage. Mr. G. Corbett took second prize, also having nice plants, but the flowers were smaller and shorter in stem; third, Mr. G. L. Blackburn. Begonia Gloire de Lorraine, as usual, made a big, brave display, the plants being examples of expert culture. Mr. J. Freeman, gardener to Colonel Walker, Acocks Green, scored easily, his plants standing out conspicuously among the whole table of entries. Mr. A. Cryer and Mr. G. Corbett followed, the last-named showing a darker and richer-coloured type than the rest. For six plants the lead was taken by Mr. A. W. Young.

FRUIT.

It was the general comment that the fruit was better than ever, and it must be remembered that good fruit has many a time been seen at Birmingham Show. There were four splendid entries in the class for a table of fruit (British grown), including grapes, 10ft. by 5ft., and competition was extremely keen. Mr. J. H. Goodacre, gardener to the Earl of Haddington, Elvaston Castle, Derby, stood first, and it was a hard-won victory. There were fourteen bunches of splendidly-grown grapes; dishes of such apples as Emperor Alexander, Gascoigne's Scarlet, King of the Pippins, Washington, and many more; as well as melons, pears, peaches, oranges, etc., the arrangement of all, and especially the use of trails of ampelopsis and selaginella, being in the best of taste. Mr. G. Mullins, gardener to Lady Henry Somerset, Eastnor Castle, Ledbury, came second with a superb lot of fruit, his Charles Ross, Claygate Pearmain, Baumann's, and Annie Elizabeth apples carrying wonderful colour, and his grapes being beautifully finished. Mr. Hugh Andrews, Wynchcombe, secured third prize, showing some grand pears and apples, but he was weak in grapes. Mr. W. E. Hyde, Ledbury, was fourth.

Another class of importance and interest was that for a collection of hardy British-grown fruit, for which a first prize of £5 cash and a silver-gilt medal was offered. The winning exhibit was a remarkable table of superb apples put up by Mr. C. W. Powell, Warham, Hereford. King Edward, Cox's and King of Pippins, Lady Henniker, Lord Derby, Peasgood's, and many other of the favourite dessert and culinary apples were the talk of the show, and there were also nice examples of pears, medlars, nuts, etc.

Grapes were very good, Mr. Goodacre staging wonderfully finished Muscats and Appley Towers, winning in both black and white classes. Mr. Ganderton, gardener to A. G. Buller, Esq., King's Heath, was also a winner of first for white grapes grown in the Birmingham district, Mr. Smallman, gardener to H. S. Batson, Esq., Handsworth Wood, winning for black grapes in the local class. In both the eight-dish and four-dish classes for pears Mr. G. Mullins scored highest honours with splendid fruit, and again in the six dishes of dessert and six dishes of culinary apples.

VEGETABLES.

These made a capital display, in spite of all that has been said and written of our much-discussed and abused summer. The great seed firms again provided classes in which competition was very keen. There were half-a-dozen entries for a collection of eight kinds, prizes provided by Messrs. Webb and Sons, and first position was taken by Mr. Fred Bennett, Overton; Mr. Hudson, of Leicester, being second, and Mr. A. T. Rainbow, Northfield, third.

Messrs. Sutton's class brought eight entries, the champion exhibitor, Mr. Edwin Beckett, adding still further to his laurels by scoring an undoubted win. His follower was Mr. Fred Barrett, Overton; Mr. Hudson coming third, and Mr. Hugh Andrews fourth. Messrs. Sydenham, Lim., drew five entries in their open collection, Mr. Tom Jones, Ruabon, leading, second prize going to Mr. W. Foulkes, Ampthill; Mr. James White, Bampton, third; Mr. E. Haytree, Solihull, fourth. Capital stuff was shown in the single-dish classes, which were very numerous.

NON-COMPETITIVE.

The season may be bad, and competition in the amateurs' section may fall off under adverse circumstances, but the trade always appear to surmount all difficulties, and make a brave show. It certainly was so on this occasion, when the non-competitive exhibits were more numerous, and also more varied in character than last year. It has always been characteristic of Birmingham Show that, in addition to chrysanthemums, fruit, and vegetables, a goodly display of other subjects come before the public, and undoubtedly the inclusion of fine groups of conifers, hollies, and other ornamental trees and shrubs, and also exhibits of ferns, pelargoniums, carnations, etc., add immensely to the attractiveness and interest of a winter show. Mr. W. J. Godfrey, Exmouth, a regular exhibitor at Birmingham, confined his attention this time to a fine display of single and decorative chrysanthemums and a bright bank of zonal pelargoniums. Among the single chrysanthemums Primrose Girl, a clean yellow, with broad, straight florets; Mrs. F. G. Hunter, deep golden, highly spoken of by many growers present; and Barbara, a long-petalled bronze, were attractive and distinct.

Messrs. Young and Co., Hatherley, Cheltenham, showed perpetual carnations in good form. Cheltonia, a particularly bright red; the crimson Duchess of Devonshire; and Queen, a pleasing yellow-ground fancy, were among other good and popular sorts. One of the best exhibits of large Japanese chrysanthemums was that staged by Mr. H. Woolman, Shirley, Birmingham. His stands of Maritana, Hon. Mrs. Lopes, Sir Albert Rollit, D. B. Crane, and others contained well-developed flowers, set up with decoratives as a groundwork. Mr. H. N. Ellison, West Bromwich, showed greenhouse ferns in many choice varieties. He also had a fine stand of the Adnet strain of hybrid gerberas.

Chrysanthemums on regulation show boards, in tall pyramidal stands, and in single vases, were shown in great variety by Messrs. W. Wells and Co., Lim., Merstham. The beauty of the flowers was shown to great advantage by the use of cyrtomiums, Asparagus Sprengeri, and bronze oak foliage. Messrs. Wells also showed some of the finest singles we have seen this season, and a further feature were some very fine perpetual carnations. It was a grand exhibit. Mr. A. W. Thorpe, Lichfield, showed early-flowering chrysanthemums cut from the open. Such varieties as Vesuve, Vesta—a new white of merit—Golden Glow, and others were particularly fine for so late in the season.

Standard hollies of beautiful symmetry were an outstanding feature of a fine exhibit of trees and shrubs put up by Messrs. John Waterer and Sons, Lim., Bagshot. Tall pyramidal specimens of Cupressus Lawsoniana aurea, and Taxus fastigiata Standishi, and such good things as Abies lasiocarpa, Cedrus atlantica glauca, etc., all helped to make a very interesting exhibit. A big group of conifers came from Messrs. Hewitt and Co., Solihull. Abies pungens glauca, golden retinosporas, shapely cupressus, etc., were set up with a few good hollies and other useful subjects. Messrs. Bakers, Wolverhampton, also had a good exhibit of shrubs, some highly-coloured Cryptomeria elegans, and beautifully berried cotoneasters adding brightness to the display. Small shrubs, conifers, and veronicas were staged by Messrs. T. B. Grove and Son, Sutton Coldfield. Veronica selaginoides, V. Hectori, and V. epacridea were well represented.

King's Acre Nurseries, Lim., Hereford, put up a very extensive collection of beautifully-finished apples and pears. Admiration, a new apple, was well shown, and was favourably commented upon. British Queen, another of the firm's new apples, was also good, but the whole display was a credit to the firm. A big table of apples, packed in boxes as for market, came from Messrs. Pewtress Bros., Tillington, Hereford. The fruits were of popular varieties, excellent quality, and well graded. Messrs. H. Cannell and Sons, Eynsford, Kent, were large exhibitors of fruit; while Messrs. Geo. Massey and Sons, Spalding, put up gourds in remarkable variety, together with other well-grown vegetables. Other fine exhibits of fruit were a collection staged by Mr. J. Taylor, gardener to Frank Bibby, Esq., Hardwicke Grange, Shrewsbury; a fine lot of apples from Mr. J. H. White, Worcester; and a display by the Hereford Fruit Growers' Association.

A large table was furnished in quite an ornate style with vegetables by Messrs. Clibrans, Altrincham. Celery, leeks, and seakale beet were fixed perpendicularly, while golden tomatoes, brilliant capsicums, many-coloured gourds, and black potatoes, arranged in dishes and baskets, produced colour effects rarely seen in vegetable exhibits. Messrs. E. Webb and Sons, Wordsley, had their temple-like device, which they decorated with single chrysanthemums and foliage. The table-base was filled with well-grown vegetables, the central mound being furnished with celosias, begonias, and ferns. Vegetables were also largely shown by Messrs. Thomson and Co., Birmingham, and Messrs. Toogood and Sons, Southampton. A collection of capsicums in pots, gourds in variety, and miscellaneous vegetables was tastefully arranged by Messrs. W. H. Simpson and Sons, Birmingham.

Mr. E. V. Low, Haywards Heath, had a nice lot of orchids, chiefly comprised of hybrid cattleyas.

SUNDRIES.

Messrs. Sankey and Sons, Lim., Bulwell, Notts, made quite an attractive show of garden pottery, the designs being ornamental, but still suitable to the proper treatment of plants.

Four Oaks spraying machines and undentable syringes were exhibited by the well-known manufacturers, of Four Oaks, Sutton Coldfield.

Garden requisites of every description were staged by Mr. G. H. Richards, Borough High Street, London. The XL All specialities were supplemented by samples of peat, osmunda fibre, tools, and chemicals of varied uses.

MEDAL AWARDS.

Large Gold.—Messrs. Webb and Sons, Stourbridge; Messrs. John Waterer and Sons, Bagshot; Messrs. Clibrans, Altrincham; Messrs. Pewtress Bros., Hereford; King's Acre Nurseries, Lim, Hereford; Messrs. Geo. Massey and Son; Messrs. Toogood and Sons, Southampton; Messrs. Rd. Sankey and Son, Lim., Nottingham.

Small Gold.—Mr. W. H. Simpson, Birmingham; Messrs. Thomson and Co., Birmingham; Messrs. Hewitt and Co., Birmingham; Messrs. Godfrey and Son, Exmouth; Messrs. Young and Co., Cheltenham; Mr. H. Woolmans, Shirley; Messrs. Wells and Co., Merstham, Surrey; Messrs. H. Cannell and Sons, Swanley; and Frank Bibby, Esq.

Silver-gilt Medals.—Mr. E. V. Low

Silver Medals.—Mr. H. N. Ellison, West Bromwich; Miss Thompson; Messrs. J. H. White and Son, Worcester; Messrs. Bakers, Wolverhampton; and Mr. Thorpe, Lichfield.

Bronze Medals.—Messrs. Thomas B. Grove and Son, Sutton Coldfield; Councillor E. Wilson, Edgbaston; and Mrs. Bissell.

Aberdeen Horticultural Society.

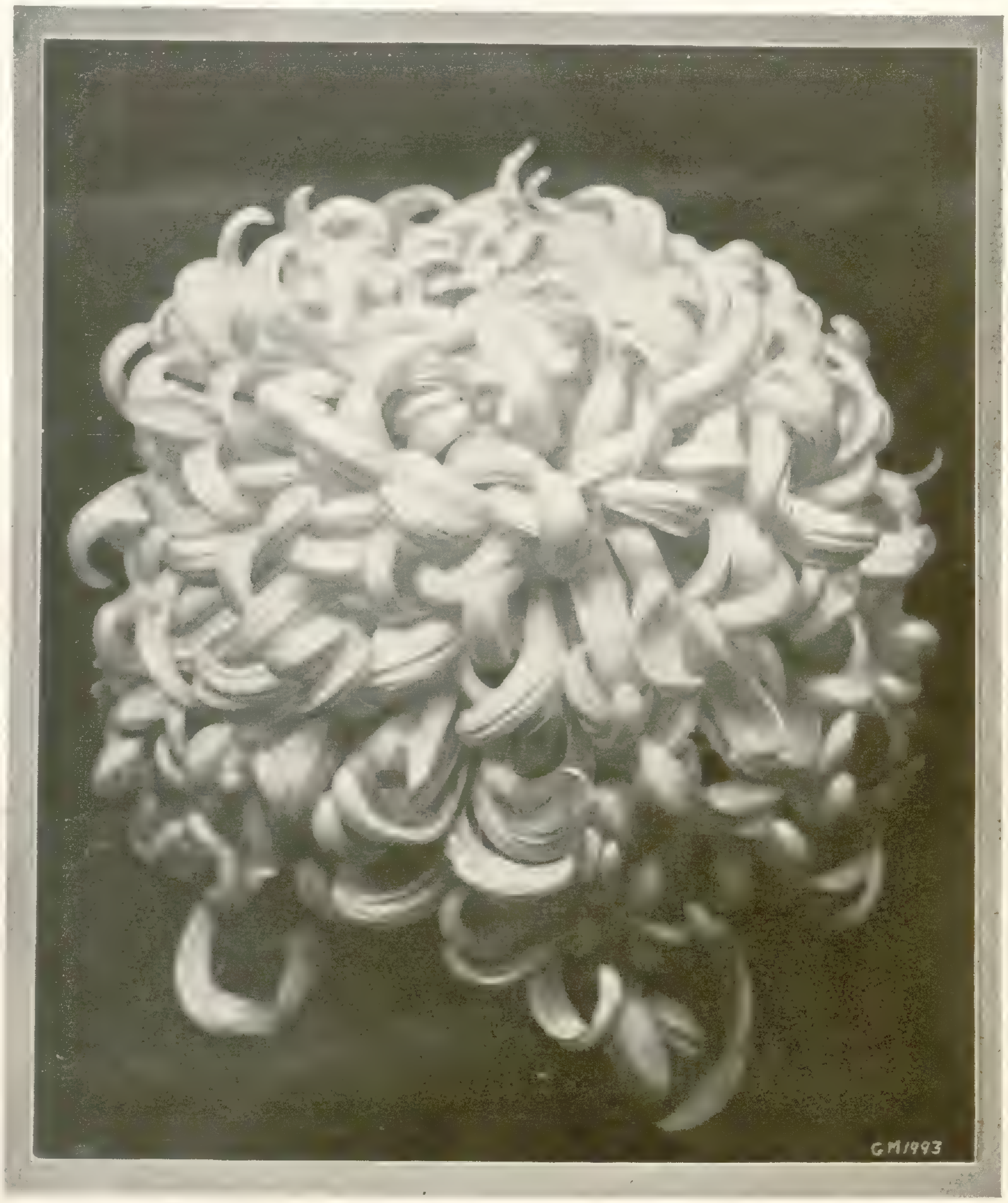
Despite the exceedingly inclement weather prevailing, a very large number of members attended the annual general meeting of this society in the Music Hall Buildings, Aberdeen, on Saturday evening, 4th inst. The chair was occupied by Ex-Baillie Milne, vice-chairman of the society.

The annual report showed that the society's exhibition, held in the Duthie Park, Aberdeen, in August last, was, from a horticultural point of view, both in number and in quality of exhibits, one of the most successful ever held under the auspices of the society. The financial results were also exceedingly satisfactory. The income for the year amounted to £497 15s. 7d., and the expenditure was £471 15s. 8d., leaving a surplus of £25 19s. 11d., which, with the credit balance of £1 7s. 11d. at the beginning of the financial year, left a balance of £27 7s. 10d. to be carried forward to next year. The Chairman described the report as very satisfactory, and said the society ought to be very grateful to their secretary and treasurer, Mr. J. B. Rennett, for his valuable assistance during the exhibition. Mr. George Alexander seconded the motion, and it was carried unanimously.

The hon. president, vice-president, and directors were re-elected. Colonel W. S. Gill was again cordially re-elected chairman of acting directors, and Ex-Baillie Milne as vice-chairman. Messrs. W. Reid and W. Wyllie were again appointed auditors, and Mr. J. B. Rennett was unanimously re-elected to the post he so worthily fills of secretary and treasurer.

The following leading gardeners, nurserymen, florists, etc., were elected as acting directors: Messrs. W. Anderson, W. Adam, W. Cumming, A. Douglas, A. Brebner, A. M. Cocker, J. Macdonald, A. Giles, W. Slora, J. Coutts, Parish Councillor Simpson, W. Walker, A. Duncan, A. Burns, jun., J. George, J. Marr, J. Duncan, W. Lockhart, G. Macdonald, and D. Ritchie.

The usual votes of thanks concluded a very pleasant and harmonious meeting.



CHRYSANTHEMUM MRS. GILBERT DRABBLE.

A fine white Japanese variety exhibited at Birmingham Chrysanthemum Show by Messrs. W. Wells and Co., Merstham.

Bristol Gardeners' Association.

The usual fortnightly meeting was held at St. John's Parish Rooms, Mr. A. Perry in the chair. A thoroughly interesting paper on "The Rose; with Cultural Hints," was given by Mr. J. F. Merchant, of Bath. The lecturer chiefly confined his remarks to the history and origin of the different races, and mentioned that South America and Australia are the only countries where the rose has no representative. He said a greasy loam was the most suitable soil, and if not of this nature manure from the cow stall should be added, as well as bone-meal. He advised pruning ramblers in the autumn and other varieties in March and April, and if of moderate growth to cut back to three or four plump eyes, but if vigorous to leave eighteen inches.

For a dish of pears Mr. Scott was first; Mr. Spry second. Two new members were elected.—H. W.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

RUST ON CARNATIONS.—J. W. L., Taunton: The leaves and shoots sent give ample evidence of a very bad attack of the carnation rust, known as Heterosporium echinulatum. Try a slightly stronger solution of potassium sulphide, pick off and burn diseased leaves, so as to reduce the possibility of infection to a minimum. Apart from the spraying keep the foliage and atmosphere as free from moisture as possible by using fire heat, together with ample ventilation. Newly-purchased plants should be quite isolated from the general collection for some time after receipt, so that should disease develop it may be promptly dealt with.

EXAMINATION IN HORTICULTURE.—H. W., Shotley: At the time of writing the date of the next examination in horticulture to be held by the Royal Horticultural Society has not been made known. Write to the secretary of the society, Vincent Square, Westminster, London, S.W.

ZEPHYRANTHES CANDIDA.—D. B. S., Colbrook: This charming little autumn-flowering bulbous plant deserves to be much more generally planted than it is, but it is of little value if only a few isolated specimens are grown. Colonies in the rock garden, good breadths in the foreground of warm borders, or long marginal bands, should be planted, as it is in the mass that Zephryanthes candida makes such a beautiful display. Deep, well-drained and fairly rich soil is essential to success, and if the position is a warm one, such as a border running along the sunny side of plant or fruit houses, or close to a warm south wall, no difficulty will be found in securing a fine display of bloom in September. The best time to plant the zephyranthes is in July.

NEED FOR LIME IN SOIL.—A. R., Notts: If the sample of soil sent fairly represents the whole of the area to be dealt with, then the addition of lime will prove most beneficial. The lime sent is not of the best, but it will serve very well if broken down finely before distribution. Use it at the rate of two tons per acre, or, say, half a pound or so per square yard. Harrow, hoe, or lightly fork the lime into the soil as soon as it has been spread.

DRESSING FOR LAWN.—C. R., Hampstead: A good dressing for such a lawn would consist of good garden soil or old potting soil, mixed with old mushroom-bed manure and wood ashes, using two parts of the former to one each of the latter; pass the whole through a quarter-inch mesh sieve while fairly dry, and then to each cubic yard of this material add half a hundredweight of bone-meal. Thoroughly mix all together, and while it is still dry spread it as evenly as possible at the rate of a garden barrow load to every eight square yards of lawn surface. An ounce of sulphate of ammonia per square yard in April next will also prove very beneficial. The top-dressing recommended above should be applied during the present month, spread evenly with the back of a rake, and then lightly swept with a birch broom to work the material well into the grass. An interesting and useful book on this subject is "Lawns and Greens," post free 1s. 2d., from the GARDENERS' MAGAZINE Office, 148, 149, Aldersgate Street, E.C.

DISEASED LARCH BRANCH.—F. E. M., Oxford: Wherever larch is planted on low and damp ground, its usually vigorous constitution suffers, and it becomes liable to disease. The branch shows that the Larch Canker fungus (Dasyscypha calycina) is at work. Cut the branch back well behind the affected part, and immediately dress the wound with a strong solution of sulphate of iron, following this by painting the cut surfaee with tar. Carefully search for further evidences of the disease, and if any are found on a main stem, cut out the infected portion, and treat the cut surface at once with the sulphate of iron and tar dressings. All diseased portions should be burnt directly they are removed from the tree.

CLIMBING HYDRANGEA.—E. Y., Bideford: There are two plants, of somewhat similar appearance, known in gardens under the title of Climbing Hydrangea. One is Hydrangea petiolaris and the other Schizophragma hydrangeoides. The plant commonly found in gardens as Schizophragma hydrangeoides is identical with Hydrangea petiolaris, but S. hydrangeoides, Sib. and Zucc., is a distinct plant from the one which so often bears that name, and different from the H. petiolaris figured in the "Botanical Magazine," t. 6,788. Hydrangea petiolaris is a tall climbing Japanese shrub which needs the shelter of a wall in many parts of the country; it produces flattened corymbs of white flowers in June.

NAMES OF PLANTS

Under this heading we can only undertake to name species and well-marked varieties of plants, and not florists' flowers. Specimens should be packed in stout boxes with damp (not wet) moss, or some leaves, as packing material, to ensure their reaching us in a fresh state. It is essential that flowers must accompany specimens of flowering plants, that fern fronds be fertile, and that numbers be firmly attached to the specimens so that they can be seen without any untying. We cannot promise to name more than six specimens at one time from any one correspondent.

T. W., Berkhampstead.—Iris fœtidissima.

C. R., Amesbury.—1, Cratægus pyracantha Lelandi; 2, Veronica Andersoni.

A. R. B., Lincoln.—1, Pteris semi-pinnata; 2, Nephrodium molle; 3, Adiantum Birkenheadi.

M. M. C., Reigate.—1, Juniperus chinensis; 2, Schinus molle; 3, Hippophæ rhamnoides; 4, Skimmia japonica.

B. P., Canterbury. 1, Ruscus racemosus; 2, Caryopteris mastacanthus; 3, Eupatorium Wienmannianum; 4, Nerine Fothergilli major.

E. G. G., Hemsworth.—1, One of the newer hybrids from Fuchsia triphylla; 2, not recognised, send when in flower; 3, Nerium Oleander; 4, Hibiscus rosa-sinensis semiplenus.

NAMES OF FRUITS.

When sending fruits for naming, will our readers be good enough to send good specimens, as without these it is not possible to accurately determine the varieties. Pack firmly, using light tin or wood boxes, and send not more than six varieties at once. Label each specimen and enclose letter with the fruit, whether a separate notification is sent or not. Address the packages to the Editor, GARDENERS' MAGAZINE, as advised in the notice at the head of "Answers to Correspondents."

B. W., Torquay.—1, Golden Noble; 2, London Pippin; 3, Alfriston.

F. C., Chelmsford.—1, Durondeau; 2, Warner's King; Mère de Ménage.

H. M. L., Altrincham.—1, Court Pendu Plat; 2, Fearn's Pippin; 3, Newton Wonder.

R. R. W., Hull.—1, badly damaged, not recognised; 2, King of the Pippins; 3, Bramley's Seedling; 4, Cox's Pomona.

L. D. J., Ross.—1, Alfriston; 2, not recognised; 3, Annie Elizabeth; 4, New Hawthornden; 5, Baumann's Red Reinette; 6, Minchull Crab.

E. W., Kidderminster.—1, Beauty of Kent; 2, Beurre Clairgeau; 3, Beurre Diel; 4, Peasgood's Nonsuch; 5, Lord Derby; 6, Lady Henniker.

APPLE KING EDWARD VII.

It is very seldom we find "E. M.'s" writings (see page 822), so far from the facts, as they undoubtedly are, when he states that King Edward is similar in "appearance, quality, flavour, growth, and keeping qualities, to Bramley's Seedling." Our experience is the very opposite, and this dates back from long before King Edward received an A.M. from the Royal Horticultural Society. King Edward is reputed to have been raised from a cross between Blenheim Pippin and Golden Noble; the latter parent it closely resembles in appearance, which cannot be said of Bramley's. In quality it is A1, does not go "down" in cooking, and is the densest and heaviest apple known. In flavour, it is crisp and juicy; quite a useful dessert variety after March. In growth it is peculiarly short-jointed and sturdy, rather small wood, with very small leaves, much like Waltham Abbey Seedling. Its keeping qualities leave nothing to be desired, for the raiser invariably boasted that he always had a tart of King Edward apple in July. It will thus be seen these two excellent apples are very dissimilar, hence my contradiction of "E. M.'s" statements. There is room for both varieties in any medium-sized collection, they are worthy of extension, in fact; there are large quantities already planted in Worcestershire orchards, cropping well, and in every way satisfactory. It may be mentioned that the green shining skin of King Edward becomes a beautiful rich golden colour in the spring. W. CRUMP.

Madresfield.

The Lyon Rose.—Before another rose season it is to be hoped that an understanding will be come to regarding the colour of this beautiful rose, for it seems absolutely out of place to award it a prize as the best white or yellow rose, as has been done during the past season. I am surprised that exhibitors have not raised a voice of protest in the matter, for it seems ridiculous to call it a yellow flower, beautiful though it be.—W.

Lasiandra macrantha.—There is a widespread idea that this Brazilian shrub, which botanists now tell us should be known as Tibouchina semi-decandra, requires more heat for its successful culture than it really does. As a matter of fact, it readily conforms to greenhouse treatment, not, it is true, in a structure from which frost is barely excluded, but where a buoyant atmosphere and a temperature between 50 and 60 deg. is maintained during the winter; in fact, just such a structure as is essential to maintain plants in flower at that season. During summer this lasiandra needs exposure to air and sunshine, whether it be grown in bush form or trained up the end of the greenhouse. This exposure is necessary to the production of blossoms, and under such treatment the large salver-shaped tyrian blue flowers are borne in great profusion throughout the autumn months. It was a favourite subject for growing into specimen plants when these were more popular than they are now.—W.

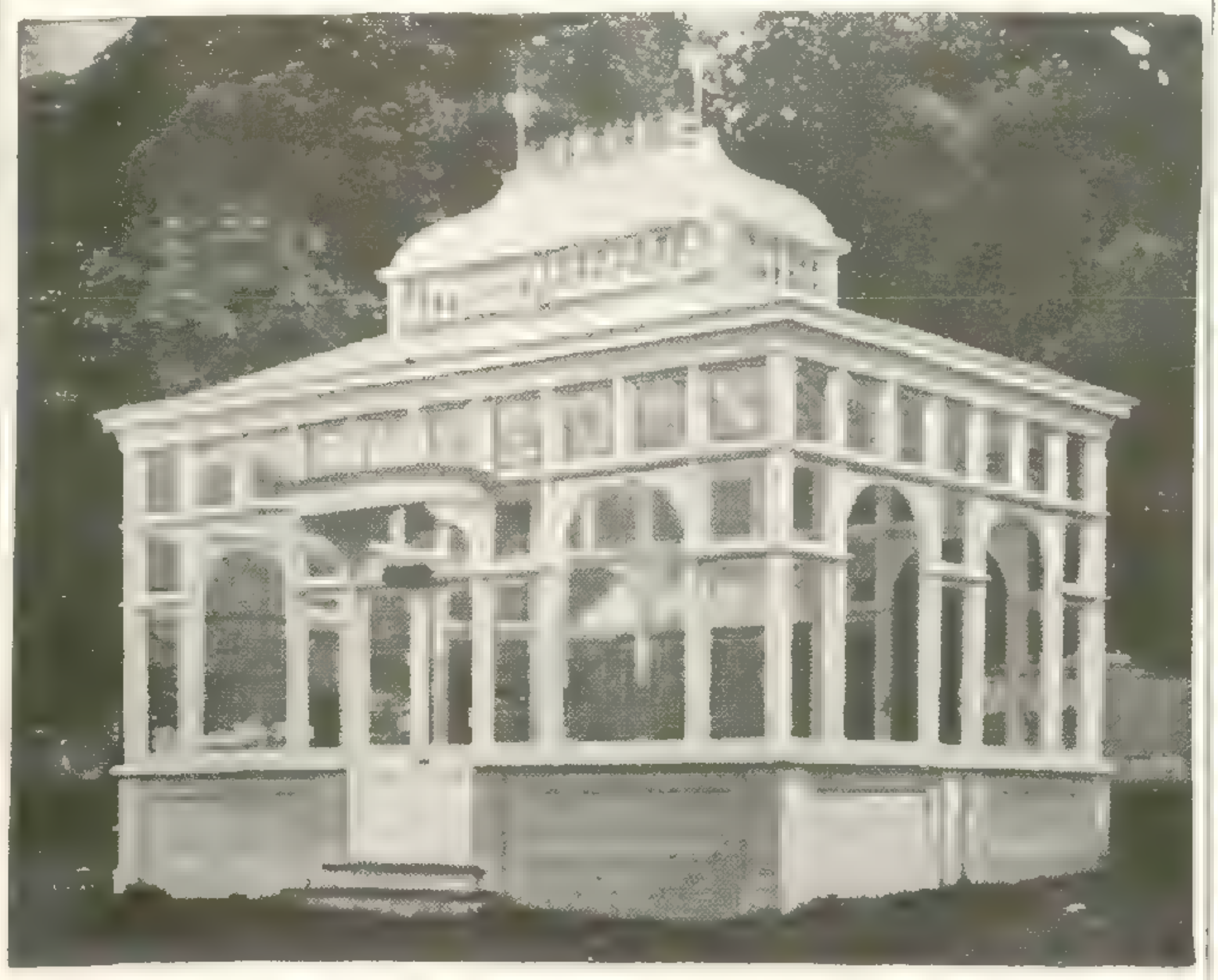
The only resemblance between a Pine Spray Syringe and others is in the shape of the barrel. The metal is more substantial. For the rest, the combination spraying head renders Spray, Rose, and Bend instantly obtainable without the addition or removal of a single fitment, while the adjustable leather bucket plunger gives perfect suction, never allows water to escape past it and up your sleeve, and wears interminably.

A written request from your ironmonger or seedsman, and a Syringe will be sent in 24 hours for your approval. Price **10/6.** Sole proprietors and manufacturers, **Robinson Bros., Ltd., West Bromwich.**

PINE SPRAY SYRINGE (patent).

BOULTON & PAUL, LTD., HORTICULTURAL BUILDERS, Norwich.

ATTRACTIVE, PRACTICAL GLASSHOUSES.

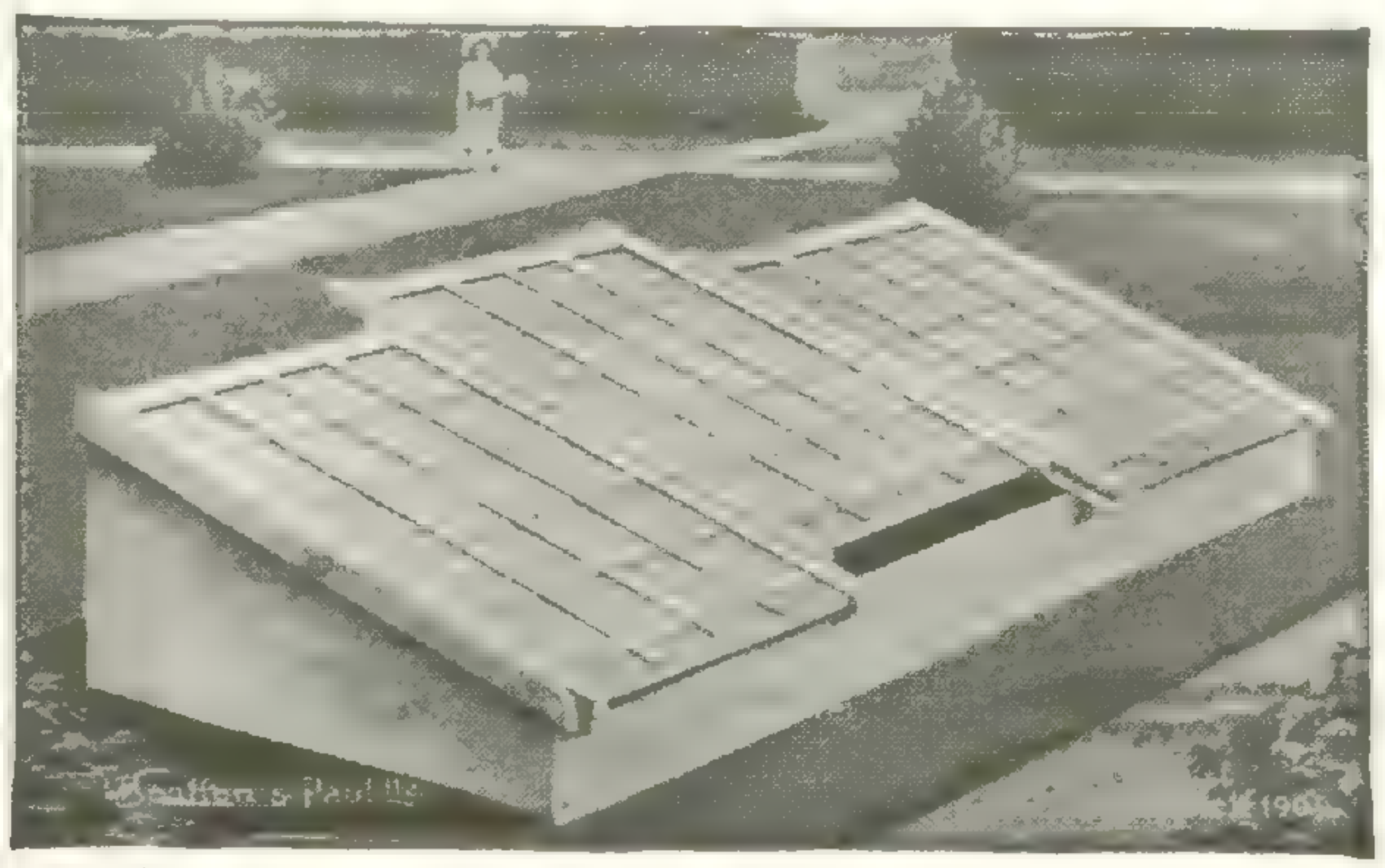


Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of 40/- value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.

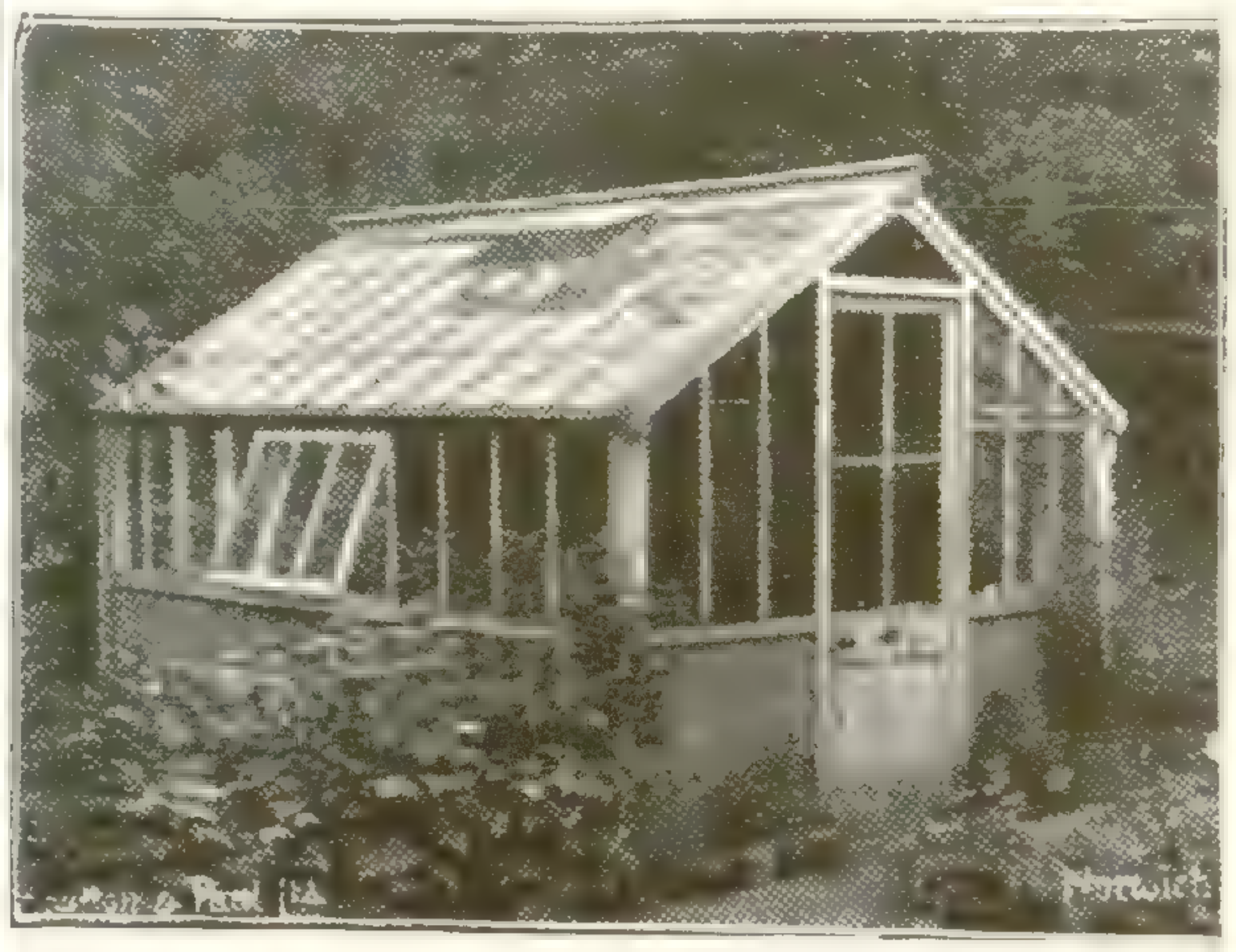


4ft. by 6ft. ... £2 0 0 | 8ft. by 6ft. ... 3 0 0
Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft. Similar to No. 75, with Two Lights... 35/-

SEND FOR ILLUSTRATED CATALOGUES.

Every part of these Houses is thoroughly well made, painted three coats, GLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.



No. 49A.—Span, 10ft. by 8ft. £11 10 0
No. 47A.—Lean-to, 10ft. by 7ft. £9 10 0

All parts are numbered ready for easy re-erection by any handy man.

MARKETS.

COVENT GARDEN.

Flowers.

The demand continues good for the season, but supplies are fairly large.

		s.	d.		s.	d.
Adiantum cuneatum	per doz. bun.	3	0	to	4	6
Arums	per doz.	3	0		4	6
Asparagus plumosus	per doz. bun.	8	0		15	0
,, Sprengeri	per doz. bun.	8	0		12	0
Azalea	per doz. bun.	4	0		6	0
Carnations	per doz.	2	0		3	0
,,	per doz. bun.	12	0		18	0
Cattleyas	per doz.	6	0		12	0
Chrysanthemums	per doz. bun.	3	0		7	6
,,	per doz. blooms	1	0		6	0
Croton leaves	per bun.	1	0		1	6
French fern	per doz. bun.	2	6		4	0
Gardenias	per doz.	2	0		3	0
Lapageria	per doz.	2	6		3	0
Lilium auratum	per doz.	2	6		3	6
,, speciosum	per doz.	1	9		2	6
,, longiflorum	per doz.	3	0		4	0
Lily of the Valley	per doz. bun.	6	0		15	0
Marguerites	per doz. bun.	2	0		2	6
Mignonette	per doz. bun.	2	6		3	0
Odontoglossums	per doz. blms.	3	0		4	6
Pelargoniums	per doz. bun.	5	0		6	0
Roses	per doz.	1	0		3	6
Smilax	per doz. trails	2	0		3	6
Tuberoses	per doz.	0	5		0	9
Violets	per doz. bun.	1	6		4	0

Fruits.

Considerable supplies meet a steadily brisk demand.

		s.	d.		s.	d.
Appdes, English, dessert	per ½-sieve	3	6	to	7	0
,, Cooking	per bush.	2	6		5	0
,, Nova Scotia	per barrel	8	0		16	0
,, Californian	per case	6	0		7	0
Bananas	per bun.	3	6		10	6
Cob nuts	per doz. lb.	5	0		6	0
Cranberries	per case	8	0		10	6
Dates	per doz. boxes	7	0		8	0
Figs	per box	0	9		1	6
Grapes, English	per lb.	0	8		3	6
,, Guernsey	per lb.	0	4		1	0
,, Belgian	per lb.	0	8		1	0
,, Almeria	per barrel	8	6		16	0
,, Lisbon	per case	7	0		9	0
Lemons	per case	10	0		35	0
Medlars	per ½-bush.	3	0		4	0
Melons	each	1	6		4	0
Oranges, Denia	per case	10	0		15	0
,, Jamaica	per case	10	0		12	0
Pears, English	per ½-bush.	2	6		7	0
,, French	per crate.	6	0		10	6
,, Californian	per case	9	0		18	0
Pineapples	each	2	0		4	6
Plums, Californian	per case	9	0		12	0
Quinces	per ⅕-bush	2	0		3	0
Walnuts, English	per ½ bush.	2	0		6	0

LONDON POTATO MARKETS.

Supplies are large, and more than meet the demand.

		s.	d.		s.	d.
Blackland	per ton	70	0	to	80	0
British Queen	per ton	75	0		90	0
Eclipse	per ton	75	0		85	0
Epicure	per ton	70	0		75	0
Essex	per ton	70	0		70	0
Evergood	per ton	70	0		70	0
Kents	per ton	65	0		70	0
King Edward	per ton	80	0		85	0
Up-to-Date	per ton	75			100	0

Vegetables.

Supplies show a distinct improvement, and business is brisk.

		s.	d.		s.	d.
Artichokes, Globe	per doz.	2	0	to	3	0
,, Jerusalem	per bush.	1	6		3	0
Asparagus	per bun.	3	0		4	0
Beet	per bush.	3	0		3	6
Brussels sprouts	per ½-bush	2	0		2	6
Cabbage	per tally	3	0		6	0
Carrots	per doz. bun.	2	0		3	0
Cauliflowers	per doz.	1	6		4	0
Celery	per doz. bun.	7	0		10	0
Chicory	per lb.	0	3½		0	4½
Cucumbers	per flat	4	0		7	0
Endive	per doz.	1	6		2	6
Horseradish	per doz, bun.	12	0		18	0
Indian Corn	per doz.	0	9		1	0
Leeks	per doz.	2	0		3	0
Lettuce	per doz.	1	0		1	9
Mint	per doz. bun.	3	0		5	0
Mushrooms	per doz. lb.	8	0		10	0
,, Outdoor,	per peck	1	0		1	6
Onions, Spanish	per case	7	0		8	6
Parsley	per ½-sieve	1	0		2	6
Parsnips	per bag	4	0		6	0
Radishes	per doz. bun.	0	9		1	3
Savoys	per tally	5	0		8	0
Spinach	per bush.	3	6		6	0
Tomatoes	per doz. lb.	2	0		4	0
,, Canary Isles	per crate	12	0		14	0
Turnips	per doz. bun.	2	6		4	0
Watercress	per doz. bun.	0	6		0	6½

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.
Height above Sea-level, 150 feet.

DATE. 1911. OCTOBER 29 TO NOVEMBER 4.	SUNSHINE.	TEMPERATURE OF THE AIR.			
		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Oct. 29—Sunday	3 54	34	32	56	27
,, 30—Monday	—	56	53	58	34
,, 31—Tuesday	7 30	44	41	54	38
Nov. 1—Wednesday	8 0	44	41	54	39
,, 2—Thursday	—	49	46	54	44
,, 3—Friday	3 12	47	45	54	41
,, 4—Saturday	2 6	51	49	58	47
Means	(total) 24 42	46	44	55	38

DATE. 1911. OCTOBER 29 TO NOVEMBER 4.	RAIN.	TEMPERATURE OF THE SOIL AT 9 A.M.			LOWEST TEMPERATURE ON GRASS.
		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
Oct. 29—Sunday	0·17	44	49	53	19
,, 30—Monday	0·18	48	48	53	42
,, 31—Tuesday	1·03	46	49	53	28
Nov. 1—Wednesday	—	46	48	52	30
,, 2—Thursday	0·22	46	48	52	32
,, 3—Friday	0·06	46	48	52	30
,, 4—Saturday	0·19	49	49	52	43
Means	(total) 0·85	46	48	52	32

FORTHCOMING ENGAGEMENTS.

MONDAY, November 13.—United Horticultural Benefit and Provident Society.

TUESDAY, November 14.—Ulster Horticultural Society; two days.
Chester Chrysanthemum Show; two days.
Winchester Chrysanthemum Show.
Saltaire Rose Society's Annual Meeting.

WEDNESDAY, November 15.—Newcastle Chrysanthemum Show.
North of England Horticultural Society, at Newcastle
York Chrysanthemum Show; three days.
Northern Fruit Congress at Newcastle.
Buxton Chrysanthemum Show.
Woolton Chrysanthemum Show.

THURSDAY, November 16.—Scottish Horticultural Association's Chrysanthemum Show; three days.
Sheffield Chrysanthemum Show; three days.
Newport (Mon.) Chrysanthemum Show.
Aylesbury Chrysanthemum Show.
Manchester and North of England Orchid Society
Linnean Society Meeting.

FRIDAY, November 17.—Bolton Chrysanthemum Show; two days.

MONDAY, November 20.—National Chrysanthemum Society; Floral Committee at Essex Hall, 3 p.m.; General Committee at Carr's Restaurant, 7 o'clock.

TUESDAY, November 21.—Royal Horticultural Society; committees meet at 12 o'clock; lecture at 3 p.m. on "The 1912 International Horticultural Exhibition," by Mr. Edward White; Scientific Committee at 4 o'clock.

FRIDAY, November 24.—Aberdeen Chrysanthemum Show; two days.
Hawick Chrysanthemum Show; two days.

WEDNESDAY, November 29.—Irish Gardeners' Association.
National Chrysanthemum Society's Annual Dinner at the Holborn Restaurant.

THURSDAY, November 30.—Royal Horticultural Society's Colonial Fruit Show; three days.
Manchester and North of England Orchid Society.

CONTENTS.

PAGE
A Fine Vase of Chrysanthemums 835
Anemone St. Brigid 841
An Effective Golden Holly 837
Answers to Correspondents 848
Birmingham Chrysanthemum and Fruit Show 845
Carnations by the Sea 835
Choice Dessert Plums 838
Cypripedium Lucifer 839
Exhibitions and Meetings 843
Florists' Fuchsias Outdoors 840
Mixed Borders 840
Notes of the Week 831
October Notes 837
Parrotia Persica 837
Periploca Graeca 839
Royal Horticultural Society 833
Salading in Winter 836
Varieties of Apples 836
Work for the Week 842

ILLUSTRATIONS.

Portrait of Mr. F. Jennings, 831; Begonia Exquisite, 833; A Fine Vase of Decorative Chrysanthemums, 835; Ilex Aquifolium Madame Briot, 837; Dessert Plum, Coe's Golden Drop, 838; Cypripedium Lucifer, 839; Pear Doyenne du Comice, 841; First Prize Exhibit of Eighteen Japanese Chrysanthemums, 845; Chrysanthemum Mrs. Gilbert Drabble, 847.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 31; married when suited; excellent references. Address, Closes Hall, Gisburn, Clitheroe.

HEAD GARDENER, where several are kept, seeks SITUATION; well up in Gardening in all its branches, and understands Stock; 9 years' excellent character and several good testimonials of previous places. F. J. ASHDOWN, Chiddingfold, Surrey.

GARDENER (Head), life thorough experience, Fruits, Flowers, Vines, Peaches; Inside and Out; thoroughly understands Roses, Herbaceous Borders, Lawns, Trees, Flowering Shrubs; excellent character; 4 years Outside Foreman; 3 years Head Working Gardener; left through death; married; age 33; three children. HUDSON, Cupid Green, Hemel Hempstead.

GARDENER (Head Working, where one or 2 kept); 10 years in present situation; 5 years as Second; age 31; single Apply A. GIBBS, 68, Pope Road, Bromley, Kent.

GARDENER (Head Working).—Mr. COLLEDGE, Gardener to the Earl of Darnley, highly recommends F. BISHOP, as above; 4½ years as Foreman here. Cobham Hall Gardens, Kent.

GARDENER (Head Working) seeks SITUATION, with 2 or 3 under; life experience with Vines, Peaches, Melons, Flowers and Vegtables; married, one child. J. PETTY, Marchwood, Southampton.

GARDENER (Head).—Mrs. MURRY IND highly recommends practical all-round Man; would lay out new or re-model old Gardens, Roseries Tennis Grounds, etc.; no family. Address G. ROBARTS, 13, Wades Grove, Winchmore Hill, N.

W. EDWARDS, Worth Hall Gardens, Crawley, Sussex, wishes to recommend F. REYNOLDS as GARDENER (Head of three or four); 14 years' thorough practical experience Inside and Out; excellent references; age 28.

GARDENER (Single-handed, or where help is given); 12 years' practical experience; 4 years in last situation; good references; single; age 36; abstainer. J. CHAPMAN, Ferry Hill, Chatteris, Cambs.

GARDENER, 40; Single-handed preferred; thoroughly experienced; excellent character; active worker; Inside and Out, with early vegetables; abstainer; married. A. BISHOP, Windmill Hill, near Hailsham.

GARDENER (26), as Single-handed or Kitchen Garden and Pleasure Grounds; abstainer; Single; good references. G. SEAR, Adstock, Winslow, Bucks.

GARDENER (Single-handed, with Help, or Second); life experience all branches; excellent references; personal; left through death; age 27; married, one child. CREWE, Sandfield Cottages, Harleyford, Marlow.

GARDENER, Single, seeks SITUATION (Single-handed or where help is given); age 28; good references. H. HOGG, West Shrubbery, New Church Road, Hove, Sussex.

GARDENER, Single, seeks SITUATION (Single-handed or with help); life experienced Inside and Out; last place three years; good character; age 30. J. PULLINGER, The Lodge, Strood Park, Horsham.

FOREMAN, Kitchen Garden; thorough knowledge of growing Vegetables, Fruit, etc.; 11 years' experience; 2 years with Madame Patti Cederstrom; age 25; abstainer. A. MORTIMORE, c/o Mr. Flitney Chipstead, near Sevenoaks, Kent. Bothy preferred.

WM. HOLLINS, Esq., Berry Hill Hall, Mansfield, Notts, and his Head Gardener. wish to recommend their General Foreman, A. POTTER, as Head Working Gardener, where three or more are kept, to any Lady or Gentleman requiring the services of an excellent all-round man; life experience in all branches. Apply above address.

JOURNEYMAN, age 21, with six years' experience Inside and Out, seeks Situation Inside under Foreman; excellent testimonials; can be well recommended; height 5ft. 10in. Apply P. CLIFTON, The Mill House, Rickmansworth, Herts.

JOURNEYMAN (Third) seeks SITUATION Inside or Inside and Out; six years' experience; age 20; abstainer; good references; bothy preferred. W. COWARD, 24, Southbroom, Devizes, Wilts.

MRS. WATSON-KENNEDY recommends IMPROVER (Inside or Inside and Out); age 18; four years' experience; can be well recommended by Head Gardener. B. GIBBS, Wiveton Hall Gardens, Cley, Norfolk.

SITUATION Required by YOUNG MAN, age 25; 7½ years' Nursery experience, Inside and Out; good references; abstainer. Apply C. NICHOLLS, 32, Orme Doad, Worthing, Sussex.

YOUNG Man seeks SITUATION as indoor Servant; willing to make himself useful; age 19; single. J. TIMMS, 20, Nottingham Road, Isleworth, Middlesex. No circulars.

YOUNG MAN seeks SITUATION to look after Electric Light and Garden; well up in all branches; nine years last situation. EDWARD VILLA, Street Cobham, Surrey.

YOUNG MAN (17), French, seeks SITUATION in market nursery or private establishment; three years' experience; good references. CAPGRASS, 98, Percy Road, Hampton, S.W.

YOUTH, aged 17, seeks SITUATION in Garden; strong, willing; 3½ years in last place; highly recommended. E. ROBERTS, Gate House, Nuttall, Nottingham.

LAD, age 17, seeks SITUATION in Garden; some experience; wish to improve; good character; Bothy preferred. S. RAYNER, Chart Road, Sutton Valence, Maidstone.

Situations Vacant.

COUNTERHAND.—Wanted at once a smart, experienced Young Man, with good references, for Vegetable and Flower Seed Department. Apply stating age, experience, when disengaged and salary required, by letter only, to COUNTERHAND, c/o Webb and Sons, Royal Seedsmen, Wordsley, Stourbridge.

SITUATION COUPON

For NOVEMBER 18, 1911.

To the Advertisement Manager of "The Gardeners' Magazine,"
148 & 149, Aldersgate Street, London, E.C.

Please Repeat my Advertisement.

Name..

Address..

....

Date..........................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

MERRYWEATHERS'

614 PUMP

IS THE

Gardener's Friend.

Easy to Work.
Simplicity Itself.

Write or Call—

63, Long Acre,
LONDON, W.C.

FLOWER POTS.

SANKEY'S FAMOUS GARDEN POTS

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant

Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

CHARGES FOR ADVERTISEMENTS IN THE GARDENERS' MAGAZINE.

	£	s.	d.
Five Lines and under	£0	2	6
Per Line beyond	0	0	6
" Inch	0	6	0
" Half Column	1	10	0
" Column	3	0	0
" Page	9	0	0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

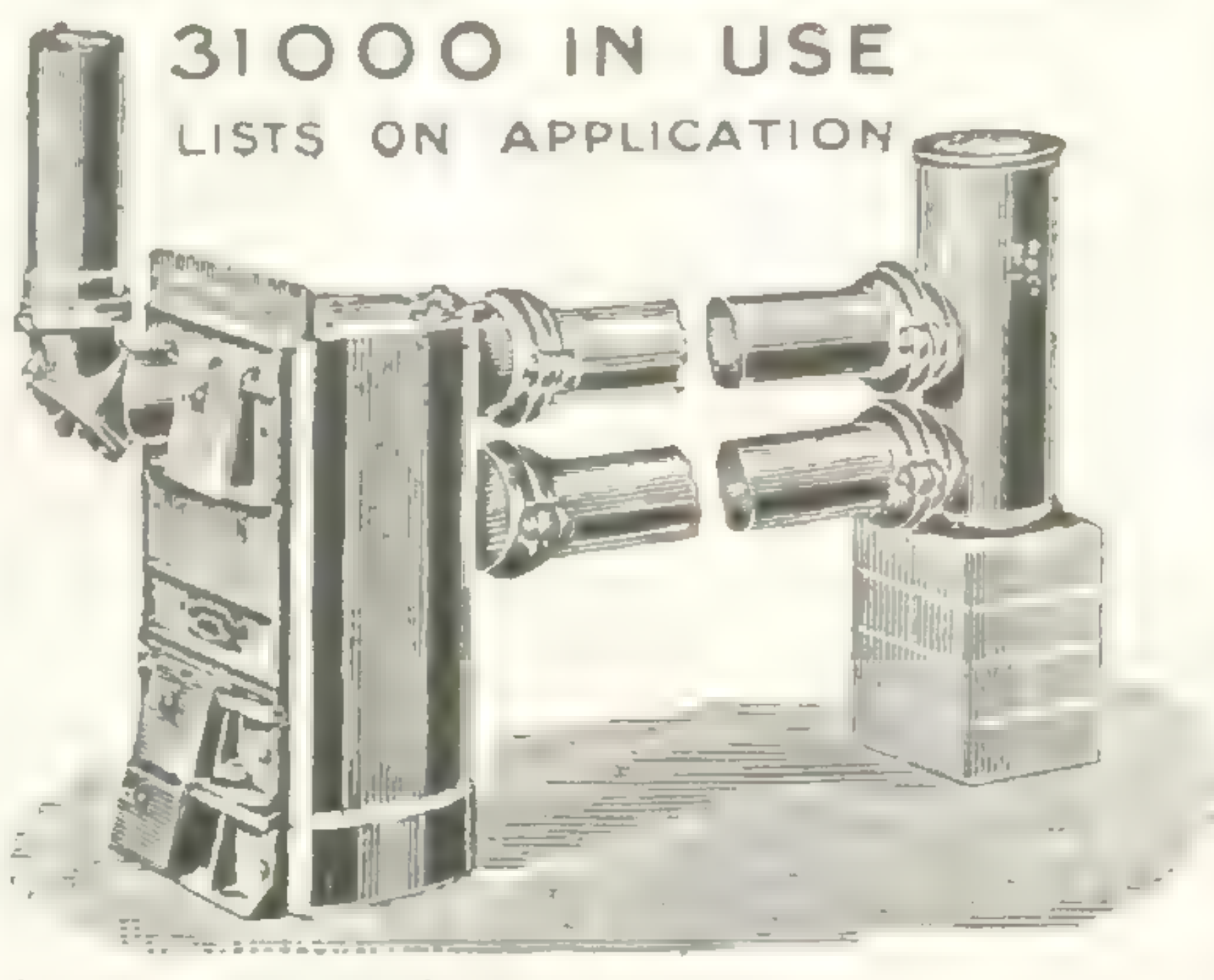
Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— & Co.

Telephone Numbers:
Editorial and Printing Depts. .. ... 831 Holborn.
Advertising and Publishing Depts. ... 2140 Holborn.

Offices: 148 and 149, Aldersgate Street, London.

The Loughborough BOILER

31000 IN USE
LISTS ON APPLICATION



The pioneer of cheap, simple and *effective* heating for small greenhouses. Complete Apparatus from £3. 19. 6. The immense sale of this boiler and its numerous imitations are the best testimony of its undoubted success

MESSENGER & CO. LTD.
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH · LEICESTERSHIRE
London Office, 122 VICTORIA ST · S · W

Dr. J. COLLIS BROWNE'S
ORIGINAL AND ONLY GENUINE
Chlorodyne

Universally acknowledged to be the Most Valuable Medicine known, and one which should be in every home.

Acts like a Charm in DIARRHŒA and DYSENTERY.

Cuts short all attacks of Spasms, Hysteria, and Palpitation.

The only Palliative in Neuralgia, Toothache, Gout, Rheumatism.

The Best Remedy known for

COUGHS, COLDS,
ASTHMA, BRONCHITIS.

Refuse imitations and insist on having **Dr. J. COLLIS BROWNE'S** Chlorodyne.
Convincing Medical Testimony with each bottle.
Of all Chemists, **1/1½, 2/9, 4/6.**

THOMSON'S Celebrated MANURES

Still the best: In greater demand every year.

SAFE, SURE & LASTING.

The result of many years' **practical** experience.

WM. THOMSON & SONS LIMITED 1868

VINE, PLANT, AND VEGETABLE MANURE.
1 cwt., **20/-**; ½ cwt., **10/-**; ¼ cwt., **6/-**; 14 lbs., **3/6**; 7 lbs., **2/6**
Tins, **2/6, 1/-,** and **6d.** Carriage paid on 1 cwt. anywhere.

SPECIAL TOP-DRESSING MANURE.
½ cwt., **20/-**; ¼ cwt., **11/-**; 14 lbs., **6/-**; 7 lbs., **3/6**; Tins, **1/-**.
Carriage paid on ½ cwt. anywhere.

Also Thomson's Book on the Vine. Thomson's Styptic.

SOLD BY NURSERYMEN & SEEDSMEN EVERYWHERE.

Write for Pamphlets, Price Lists, etc., to

SOLE MAKERS: **WM. THOMSON & SONS, Ltd., Clovenfords, Scotland.**

SUBSCRIBER'S ORDER FORM

Every Saturday THE GARDENERS' MAGAZINE. Twopence

To W. H. and L. Collingridge,
148 and 149, Aldersgate Street, London, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose ________ for ________ months in advance.

Name ____________________

Address ____________________

Date ____________________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

* * If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.

W. RICHARDSON & CO., Darlington

MANUFACTURERS OF ALL KINDS OF

HORTICULTURAL BUILDINGS

— ALSO —

HEATING ENGINEERS

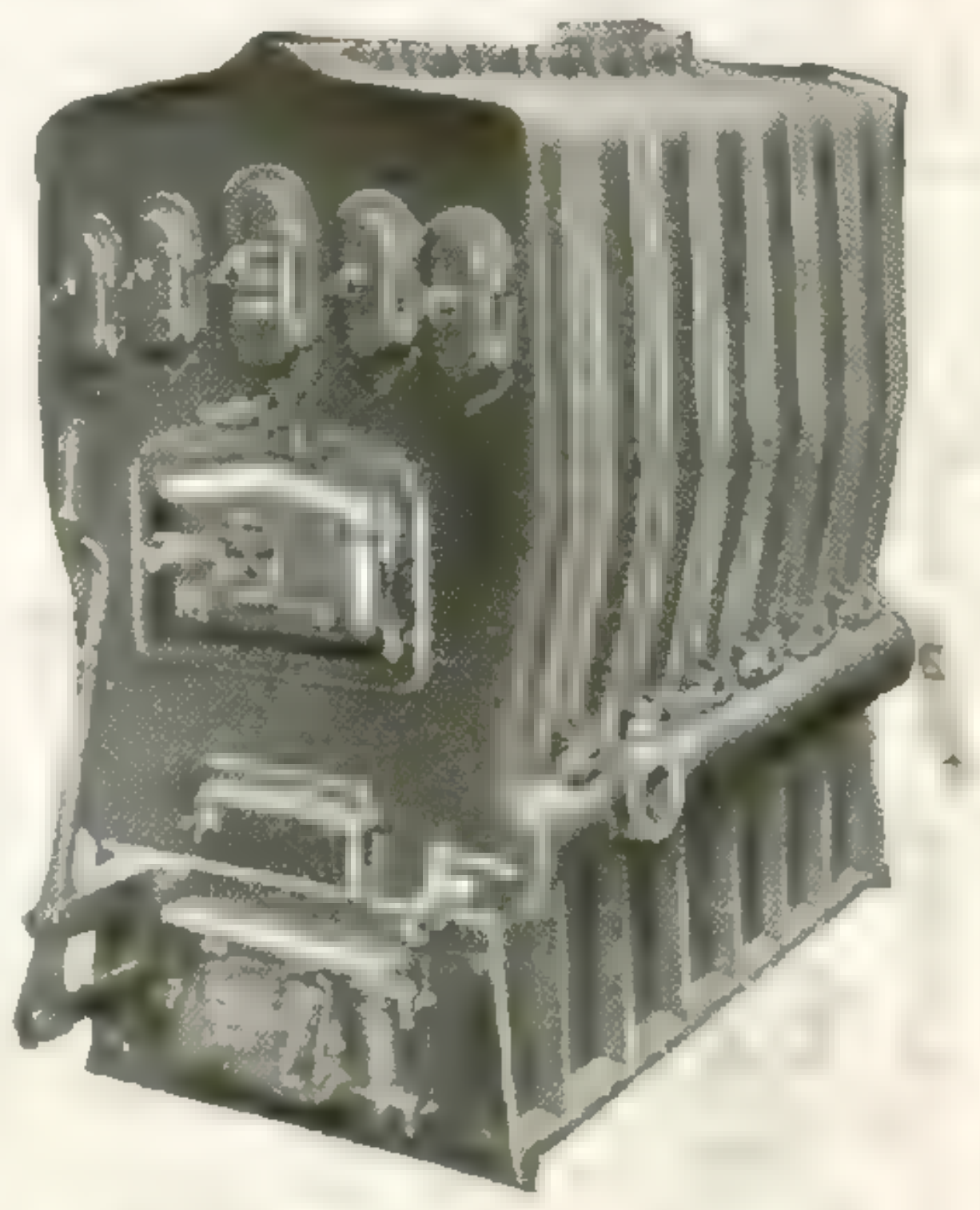
OUR BOOK OF DESIGNS,

Containing upwards of 200 photographic illustrations, sent free on application.

Plans and Estimates prepared free of cost.

Representatives sent to any part of the Kingdom to advise and take particulars.

London Office:
Belgravia Chambers, Victoria Street, S.W.



Kinnell's Boilers

THREE LEADING TYPES:—

The **"ANGLIAN," Sectional,** heats 800 to 8,000 ft. 4in. pipe.
The **"ROCHFORD," Tubular,** heats 600 to 8,000 ft. 4in. pipe.
The **"HORSE-SHOE"** for the small Greenhouse.

Saddle Boilers, Trentham Boilers, and all classes of Pipes, Fittings, etc., ready for immediate despatch.

Write for List No. 77, post free.

CHAS. P. KINNELL & Co., Ltd., 65, & 65a, Southwark St., London, S.E.

EVERY GARDENER
SHOULD SEE OUR
Genuine Scotch Manufacture. GLENSKOT TWEEDS.
PATTERNS FREE. (REG.)

TROUSERS 7/6 Per Pair.
HIP POCKET. **SUIT 29/6**

Unsurpassed for Value. Cut and Tailored by Experts.
Perfect Fit Guaranteed.
Patterns with our Easy Self-Measurement Form and Catalogue **Sent Post Free.**
WRITE TO-DAY. Thousands of Testimonials.
Money returned if not entirely satisfied.

SHAW & MONTGOMERY, The Scotch Tailors,
628 & 632, ARGYLE ST., GLASGOW, W. EST. 1876.

Catalogues and Estimates Free.

MESSENGER & Cº Lᵀᴰ
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office 122 VICTORIA Sᵀ S.W.

MODERN GLASSHOUSES

as supplied by MESSENGER and CO., Ltd., are made of the best materials, and only capable and reliable workmen are employed in the erection thereof.

The following letter was recently received by us on the completion of a contract for a well-known Member of Parliament.

February, 1911.

"I should not be doing my duty to your workmen if I did not at once tell you, on the completion of your work, how pleased I have been with each and all of them.

"They have been most obliging throughout the whole job, and have endeavoured to do everything in an efficient and thoroughly workmanlike manner, and I must congratulate you upon having such capable employees."

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

FOREST AND ORNAMENTAL TREES.

THE GARDENERS' MAGAZINE.

No. 3,029. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, NOV. 18, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S Hyacinths, Tulips, Daffodils, etc., for pots and bedding. Finest quality. Moderate prices. Descriptive Catalogue free.
BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, Horticultural Builder, Chelsea, S.W., has some excellent Pit Lights and Frames of various sizes and descriptions. Any Gardener requiring anything of the kind is invited to send for Price Lists, by means of Postcard, Telephone Call (201 Western), letter, or wire, to Gray, Chelsea, London.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

PERPETUAL-FLOWERING or American Tree Carnations, strong, healthy, Guernsey plants, in small pots, from 4s. per doz., carriage paid. Ask for Cat. 75 var. Full directions how to grow them. VAN DER SLUYS, F.R.H.S., Ramee, Guernsey, C.I.

WALLFLOWERS.—Sutton's Giant Blood Red; also Sutton's Superb Mixed. 100, 1s. 3d.; 500, 5s. 6d., all free; to clear; good plants. ROGERS, Tennyson Road, Hutton, Essex.

PERPETUAL TREE CARNATIONS, best varieties, strong young plants, out of small pots, 20s. per 100; good flowering plants, in 5-inch pots, 10s. 6d. doz.—G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-Work, showing screens, wall panels, window surrounds, arches, arbours, etc., post free.—BOULTON and PAUL, Ltd., Norwich.

BECKETT'S NEW BOOK.—The most practical and Up-to-date Book on Vegetables. Price 5s.; post free, 5s. 6d. EDWIN BECKETT, Aldenham House Gardens, Elstree, Herts.

WELLS' Catalogue of
CHRYSANTHEMUMS,
PERPETUAL CARNATIONS,
HERBACEOUS PLANTS,
ALPINE AND ROCK PLANTS,
now ready. Post free on application. Wells' Book, "The Culture of the Chrysanthemum," post free, 1s. 6d. W. WELLS and CO., Merstham, Surrey.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country.

WEBBS' COLLECTIONS OF NARCISSI FOR POTS AND OPEN GROUND.
25 Narcissi, in 5 choice varieties, 2/3.
50 „ „ 10 „ „ 4/6.
100 „ „ 10 „ „ 9/-.

WEBBS' CHOICE MIXED TULIPS (Single and Double) for Bedding, 9d. per doz., 4/6 per 100.

WEBBS' CROCUS FOR BEDS AND BORDERS.
Mixed colours, 1/6 per 100, 12/6 per 1,000.

WEBB and SONS, The King's Seedsmen,
Wordsley, Stourbridge.

BUNYARD'S CATALOGUES
Free on Application.

FRUIT TREES, SHRUBS.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

CLAY'S MANURES, CRUSHED BONES
See page vi.)

CLAY'S FERTILISER IS
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

CHRYSANTHEMUMS.

My Collection contains all the best up-to-date.
Catalogue of nearly 600 vars., now ready.
Cuttings from 1s. 6d. to 6s.; Rooted Plants in Feb., from 2s. to 9s. per dozen, purchaser's own selection.
H. WOOLMAN, F.N.C.S., Shirley, Birmingham.

ORCHIDS FOR AMATEURS.—A practical guide to the Cultivation of Cool and Warm-house Orchids, adapted for Small Mixed Greenhouses. The author is C. Alwyn Harrison, F.R.H.S., and the book can be obtained, by post, for 2s. 10d., from Publisher, 149, Aldersgate Street, London.

LAVENDER, Old English, 10s. per 100 (50 at 100 rate), packed on rail. Sample doz., 2s. 6d., post free. Other varieties of Lavender, price on application. CHILVERS and SON, Heacham, Norfolk.

ROCK GARDENS and ALPINE PLANTS.—A new work and a complete guide to the Formation and Management of Rockeries, by E. H. Jenkins, F.R.H.S. Many Illustrations. Cloth, 2s. 10d., post free from Publisher, 148 Aldersgate Street, London.

HUTS FOR THE GARDEN.—Fruit Rooms, Potting Sheds, Workshops, Cycle Houses, Boat Rooms, Servants' Mess Rooms, Children's Playrooms, etc. Send for Illustrated Catalogue, free.—BOULTON and PAUL, Ltd., Norwich.

GREENHOUSES and CONSERVATORIES. Distinctive Designs and Finished Workmanship. Write now for ILLUSTRATED CATALOGUE. CARTER and HOWARD, Horticultural Builders, Kingston-on-Thames. Phone 1308 P.O. Kingston.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1875, 1881, 1895. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Ltd., 27 Cannon Street, London, E.C. Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable buildings, etc. Catalogue gratis.

SUTTON'S BULBS.
The best of the year.
Mr. H. Kenten, Gardener to L. B. Beauchamp, Esq., writes:—"The Bulbs supplied by you have again turned out excellently. I think they are the best lot I have ever had."

SUTTON'S SINGLE BORDER HYACINTHS.
Mixed Colours. Per doz., 2/-; per 100, 14/-.

SUTTON'S SINGLE EARLY TULIPS,
For the open ground.
Finest Mixed. Per doz., 9d.; per 100, 4/6; per 1,000, 40/-.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

NOW IS THE TIME TO PLANT
Kelway's lovely Pæonies, Delphiniums, and their celebrated Artistic Hardy Borders; packed ready for planting.
KELWAY'S CHOICE named Pæonies, from 27s. per doz.
KELWAY'S CHOICE named Delphiniums, from 24s. doz.
For information about the Colour Borders send 6d. for "Gardens of Delight."

Londonderry.
October 11th, 1911.

"I take this opportunity of saying how very pleased I am with the plants supplied by you for my herbaceous border. After being established about two years the plants have attained the most wonderful and gratifying growth. During the last few weeks the borders have been an object of admiration to all those who have seen them."

KELWAY AND SON,
The Royal Horticulturists,
LANGPORT, SOMERSET.
230 Grand Prizes, Gold Medals, etc.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s., post free, from KELWAY and SON, LANGPORT, SOMERSET.

From Messrs. ———,
Grahamstown,
Cape Colony.

"The 'Manual' is unique, and is an exceedingly attractive book, and a most interesting work on Horticulture, and we are very pleased to possess this copy."

IRON and WIRE FENCING for Gardens, Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free.—BOULTON and PAUL, Ltd., Manufacturers, Norwich.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.

XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.

XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, XL ALL WINTER WASH for Fruit Trees, RICHARDS' BANDING GREASE, etc. Don't forget to ask your N. S. or Florist for Richards' small pink list.

G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS**, and an endless variety of Choice **ORCHIDS**.

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone :—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

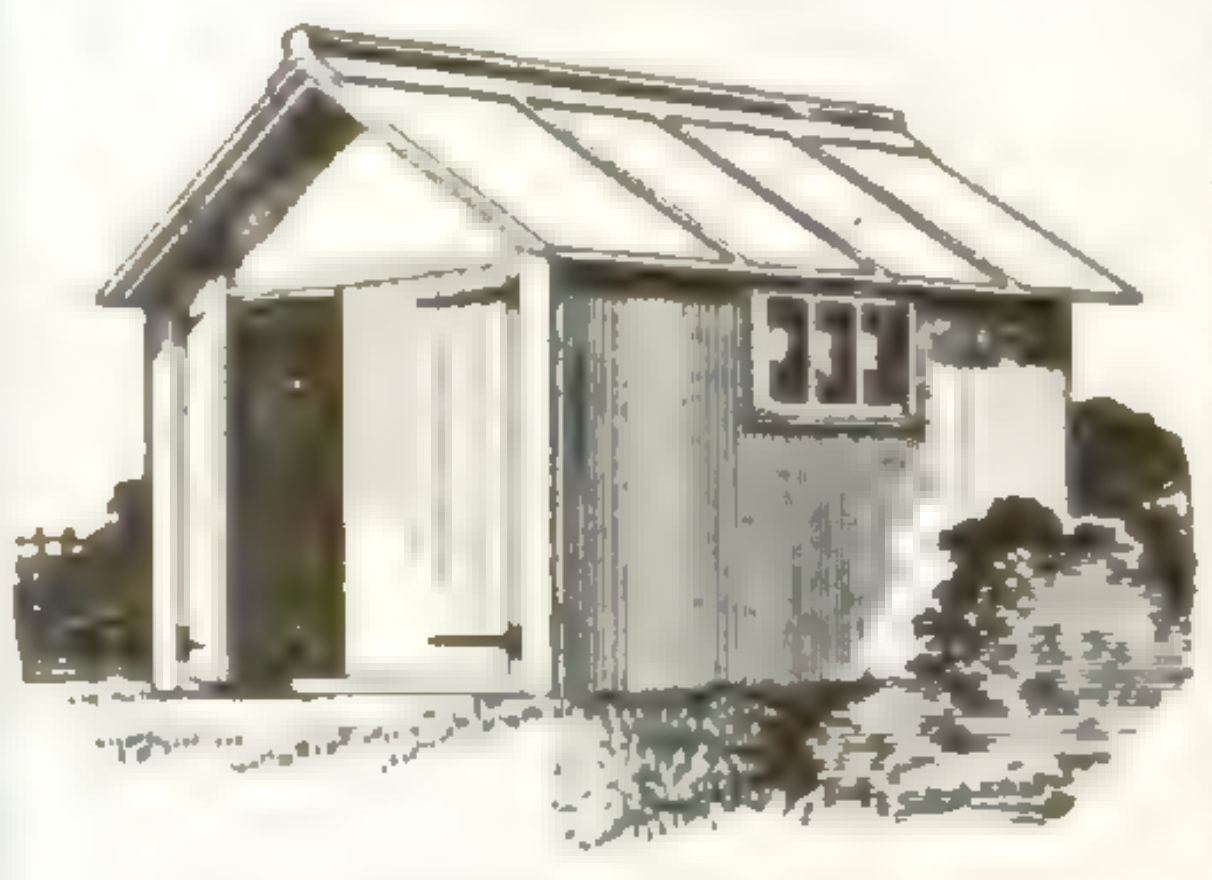
IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

RASPBERRY CANES.—Perfection, Beehive, 2s. 6d. 100. Superlative, 4s. 100. Strawberry plants, Paxtons' Sovereigns, 1s. 100. Bulbs, Tulipe, Narcissus, splendid, mixed. Planting size, 6d. 100; 4s. 1,000.—J. LONGBOTTOM, Gardener, Wisbech.

PORTABLE BUILDING WITH DOUBLE DOORS.

No. 55.



Copyright Registered.

Made in complete sections, **best quality Red Deal** (not interior Foreign Match Boards as other makers), planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Doors fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

SIZES.				STRONG FLOOR.
7ft. long, 5ft. wide, 7ft. 6in. high	£2	3	6	6/9
8ft. long, 6ft. wide, 8ft. high	2	14	0	8/9
9ft. long, 7ft. wide, 8ft. high	3	2	6	11/6
10ft. long, 8ft. wide, 8ft. 4in. high	3	12	6	19/0

Suitable for Workshops, Motor Cycle, Bath Chair, & Store Houses, Potting & Tool Sheds, etc.

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.

Largest Makers of Portable Buildings,

ESTABLISHED 70 YEARS *BEDFORD.*

Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

LAXTON'S
FRUIT TREES
IN ALL SHAPES
CATALOGUES GRATIS
LAXTON BROS
BEDFORD

HOLLY, Holly, Evergreens, Laurel, Ivy, Box, etc. Moss—decoration, wreath, packing, sphagnum, etc. Welsh Mountain Fern Roots, assorted. Prices right; quality right. Write now for list. Entire satisfaction guaranteed. Estab. 14 years. Bankers, Bank of England. HAWKINS, Dolgelley, N. Wales.

BUSINESS CARDS.

CARNATIONS.

ALLWOOD BROS., Haywards Heath, Sussex.
Perpetual Flowering Carnation Specialists, Raisers and Growers.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1005

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., Southgate, London, N.
(Tel.: 59, Palmers Green.)
Hybrids in flower, in great variety.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

R. H. BATH, Ltd,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 *1st Prizes.*
3 *2nds, at N.R.S. Shows,* 1910. *Ctlg. Free.*

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
1911 *Awards:* 81 *Prizes. Illustrated Catalogue free.*

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free

A NEW EDITION. JUST PUBLISHED.

ONE SHILLING NET, By Post, 1/2
In Cloth, 1/6 Net; By Post, 1/9

SWEET PEAS AND THEIR CULTIVATION

By CHARLES H. CURTIS, Hon. Sec. of the NATIONAL SWEET PEA SOCIETY.

A work full of practical information in regard to the culture of the Popular Flower, well illustrated, and in every respect thoroughly up-to-date, including:

THE NEW VARIETIES FOR 1912, AND THE "TOO-MUCH-ALIKE" CLASSIFICATION, AS APPROVED BY THE NATIONAL SWEET PEA SOCIETY

INDISPENSABLE TO THE EXHIBITOR AND AMATEUR ALIKE.

ORDER FORM.

To the Publishers,
148 & 149, Aldersgate Street, London, E.C.

Please send me, by post, **"SWEET PEAS AND THEIR CULTIVATION,"** *for which I enclose 1/2, (Cloth, 1/9).*

Name..

Address..

Sales by Auction.

TUESDAY, WEDNESDAY, and FRIDAY NEXT.

TUESDAY NEXT, Nov. 21st, at Half-past Twelve o'clock.—ROSES large consignments of English, French, and Dutch, comprising Standards, Dwarfs, Climbers, T., H.T., and H.P., lotted to suit all buyers, together with 200 lots of choice Herbaceous Plants in variety.

WEDNESDAY NEXT, Nov. 22nd, at Five o'clock.—Ornamental and Decorative Palms and Plants: Azaleas, Rhododendrons, Camellias, Aspidistras, Standard Bays, etc., from Belgium.

FRIDAY NEXT, Nov. 24th, at a Quarter to One o'clock.—The whole of the "Underfell" Collecton of Orchids, by order of G. Shorland Ball, Esq., who is giving up their cultivation; Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view mornings of sale and catalogues had.

DUTCH BULBS

10,000 Lots Sold Weekly.

SALES EVERY DAY

(Saturdays Excepted),
At 10.30 o'clock, at
PROTHEROE and MORRIS'
Central Sale Rooms,
67 & 68, CHEAPSIDE, LONDON, E.C
Catalogues Free.
Commissions Executed.

DUTCH BULBS, PERENNIALS, ROSE TREES, SHRUBS.

MR. J. C. STEVENS begs to announce that his **Sales by Auction** are held every **MONDAY, WEDNESDAY** and **THURSDAY** at **12.30.**

Catalogues post free.

Lots purchased, packed, and forwarded to all parts.

STEVENS' AUCTION ROOMS
(Established 150 Years),
38, King Street, Covent Garden, London, W.C.

Trust the firm behind the boot.

To be comfortable: to keep your feet dry, wear

NORWELL'S PERTH BOOTS.

These have a century's reputation for wear, for comfort. Norwell's make a speciality of boots for gardeners and can give you better value than anyone.

The **"Perth" Gardener Boot**..............**10/9.**
For Strong Wear.
The **"Perth" Calf Skin Gardener Boot 11/9.**
For Greenhouse Wear.
Send to-day for illustrated price list.
C2 NORWELL'S PERTH, N.B.

RATS

Exterminated by "LIVERPOOL" VIRUS

without danger to other animals and without smell from dead bodies. In tins ready prepared with the bait. Virus for Rats, **2/6** and **6/-**; for Mice, **1/6.**

Of all Chemists. ***Write for particulars to—***
EVANS SONS LESCHER & WEBB, Ltd.,
Dept. G.M., 56, Hanover Street, LIVERPOOL.

RHONDDA URBAN DISTRICT COUNCIL.

The above Council invite applications for a GARDENER, etc., with a thorough knowledge of Trees, Shrubs, and Flowers, for their Trealaw Cemetery. Salary 26s. per week, with House and water free.

Particulars of Duties, together with Form of Application, may be obtained upon application to the undersigned.

Applications endorsed "Gardener, etc., for Trealaw Cemetery," accompanied by two testimonials, must be received not later than first post on Wednesday, 29th November, 1911.

W. J. JONES,
Engineer and Surveyor.

Council Offices,
Pentre, Rhondda, Glam.,
14th November, 1911.

ORCHIDS.

If you have a Greenhouse sufficiently heated to keep out the frost, write for our

Amateur's Guide,

giving treatment and all particulars. Illustrated.

MANSELL & HATCHER, LTD.,
RAWDON, via LEEDS.

For BEST VALUES

— IN —

Forest and Ornamental Trees,
Evergreen and Flowering Shrubs,
Rhododendrons, Covert Plants,
Hedge Plants, Fruit Trees,
Roses, Bulbs, Seeds, etc.,

— TRY —

WM. FELL & CO., Ltd.,
Royal Seed and Nursery Establishment, **HEXHAM.**

CARNATIONS. AURICULAS. PINKS.

The NEW ILLUSTRATED CATALOGUE of above is now ready, and has been posted to all customers. The newest and best varieties are sold at the most reasonable prices.

Best **CARNATION** and **PICOTEE SEED** ready in October. **1/6** and **2/6** per packet.

AURICULA (Show and Alpine), PINK, and **POLYANTHUS SEED** now ready. **1/-, 1/6,** to **2/6** per packet.

Send for Catalogue to

J. DOUGLAS,
Edenside, GREAT BOOKHAM.

W. SEABROOK & SONS

Offer a very fine stock of

FRUIT TREES and ROSES.

Full Illustrated Catalogue sent post free on application.

CHELMSFORD

TREE CARNATIONS.

E. J. WOOTTEN, Fairoak, EASTLEIGH,

Has all varieties, including

Lady Alington, Felton, Mrs. Ward, Bonfire, White Wonder, La Mode, Marmion, etc.

Strong Plants in Small Pots Now Ready.

Orchids! Orchids!! Orchids!!

The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application.—**J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana, Vanda Cœrulea Lushai Hill variety, dark blue type; Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.

ROCK & BORDER PLANTS
100,000 IN POTS.
The Finest Lot in all Europe.
PERRY'S Plant Farm,
ENFIELD. *(Cats. Free.)*

PLANTING SEASON.—Over 1,000,000 Oval-leaved Privet, 20,000 Roses, large stock of Ornamental Trees and Shrubs, Fruit Trees, etc., for Sale at low prices; inspection invited. Catalogues, post free, from COWAN'S LTD., Gateacre Nurseries, Gateacre, near Liverpool.

CHAMPAGNE RHUBARB ROOTS FOR SALE, suitable for forcing or for planting out.

H. WADDINGTON, 42, Cank Street, Leicester.

SUBSCRIBER'S ORDER FORM

Every Saturday THE GARDENERS' MAGAZINE. **Twopence**

To W. H. and L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose________ for________ months in advance.

Name____________________

Address____________________

Date____________

1 Year, **10/6** post free; 6 months, **5/6** post free; 3 months, **3/-** post free; to Foreign Countries, **15/-** per annum.

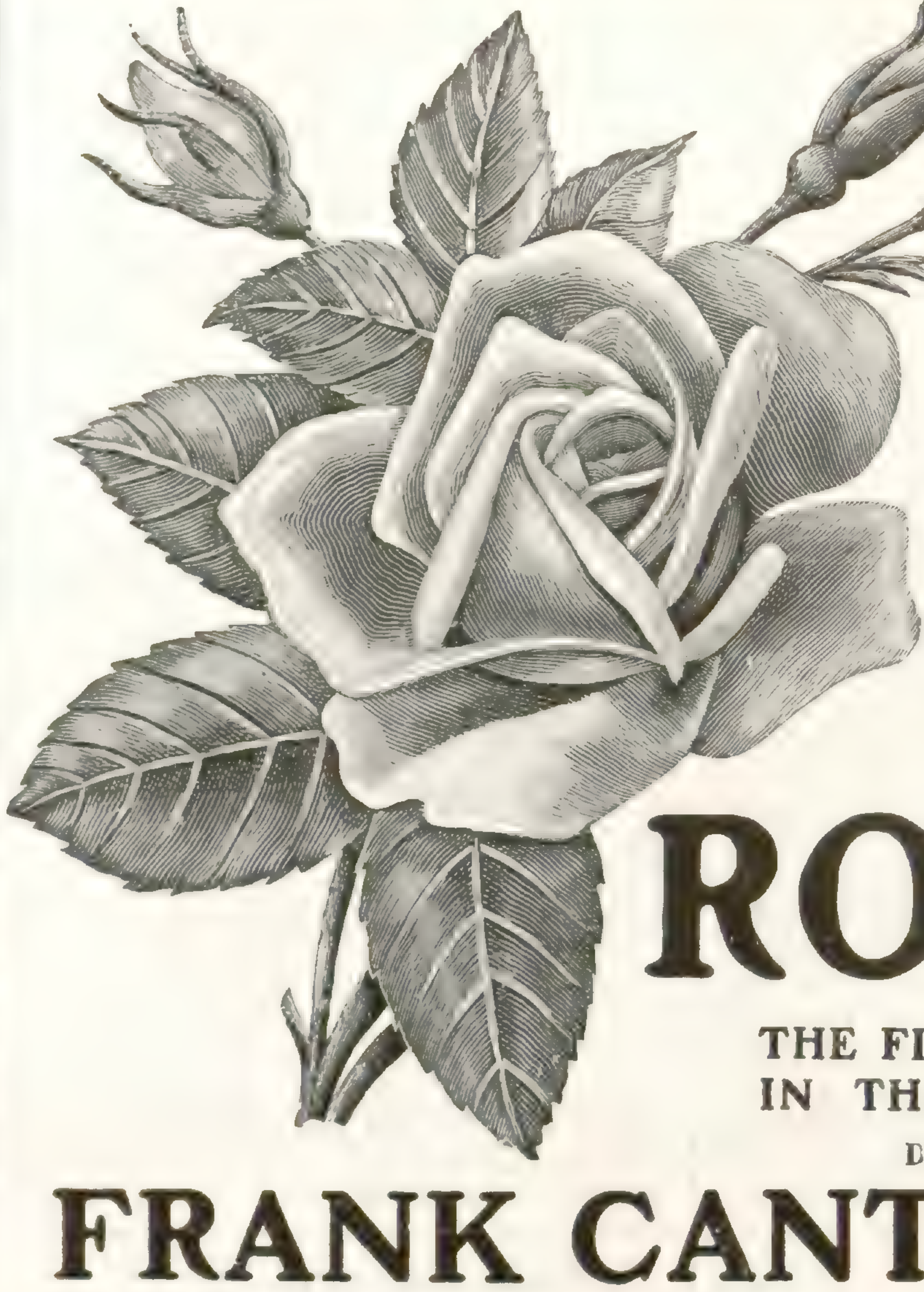
* * If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.

BUNYARD'S FRUIT . . TREES . .

ORDER AT ONCE FOR PRESENT PLANTING.

WRITE FOR CATALOGUE.

Geo. Bunyard & Co., LTD.,
Royal Nurseries,
MAIDSTONE.



Telegrams:
FRANK CANT,
COLCHESTER.

Telephone
No. 182.

CANTS' CHAMPION ROSES

THE FINEST STOCK
IN THE KINGDOM.

Direct from

FRANK CANT & CO.,

Dept. B., BRAISWICK ROSE GARDENS, COLCHESTER.

Our Illustrated Catalogue post free on application.

BY APPOINTMENT.

ROSES IN POTS

WM. PAUL & SON

WALTHAM CROSS, LTD.

Respectfully invite attention to their magnificent stock of the above, which they believe to be unrivalled in quality and extent.

Dwarfs or bushes, extra strong, in 8 in. pots, for forcing and greenhouse culture	30/- to 60/- per doz. £12 and upwards per 100.
Climbers and Ramblers in 8 in. pots, for forcing and out-door planting on pergolas, arches, etc., with shoots ...	6 to 12 ft. long, 30/- to 60/- per doz. 12 to 16 ft. long, 72/- to 90/- per doz. Price per 100 on application.
Dwarfs and Climbers, smaller plants, in 5 in. pots	10 6 to 18/- per doz. 75/- to £6 per 100.

Priced List Post Free on application.

Inspection of Stock Invited.

The Nurseries are twelve miles from London, four minutes' walk from Waltham Cross Station, G.E.R.

Sole Postal Address

PAULS' ROYAL NURSERIES
AND SEED WAREHOUSE,
WALTHAM CROSS, HERTS.

RIVERS'

Fruit Trees, Roses,
Vines, Figs, Oranges,
AND
Orchard House Trees.

A LARGE AND SELECT STOCK
ALWAYS ON VIEW.

ILLUSTRATED AND
DESCRIPTIVE CATALOGUE
POST FREE 3d.

THOMAS RIVERS & SON
Sawbridgeworth, Herts.
STATION: HARLOW, G.E.R.

FOREST TREES.

Grown on Cumberland Mountains.
Immense Stocks. The Hardiest in Britain.

CONTRACT PLANTING,
Expert Advice and Estimates Free.
HEDGE PLANTS. COVER PLANTS.
PARK TREES. FRUIT TREES.
Catalogues Free.
Special Quotations for Large Quantities.

HERD BROS., NURSERYMEN, **PENRITH.**

JAMES BACKHOUSE and SON, Ltd.,

The Nurseries,
YORK,

have pleasure in offering from their large stocks of Ornamental, Evergreen, and Deciduous Trees, at special low rates, many thousands of well-grown and extra-transplanted trees, which are most suitable for Avenue, Parks, and Ornamental Grounds.

The Horse Chestnuts are grown in single line, and are beautiful specimens.

This is a special opportunity for those now planting, which should not be missed

Golden Elder, 3—4ft., **21s.** per 100.
Azalea Mollis seedlings, 1—1½ft., **1s.** each.
Horse Chestnut, 12—14ft., **2s.** to **2s. 6d.** each.
Horse Chestnut, 14—16ft., **3s.** to **4s.** each.
English Oak, 2½—3½ft., **50s.** per 1,000.
Broom White, 3—3½ft., **40s.** per 100.
Ivy Dentata, pots, 4—5ft., **1s. 3d.** each.
Genista Andreana seedlings, 3—3½ft., **8s.** per dozen; **40s.** per 100.
Broom, Spanish, pots, 3ft., **4s.** per dozen, **25s.** per 100.
Ribes sanguinea, 2½—3ft., **21s** per 100.
Deutzia, 21s. per 100.
Honeysuckle, 21s. per 100.
Lilac vulgaris and vulgaris alba, 4—5ft., **50s.** per 100.
Lilac vulgaris and vulgaris alba, 3—4ft., **45s.** per 100.
Spiræa, 1—1½ft., **21s.** per 100.
Roses, Climbing, extra fine, **70s.** per 100.
Roses, Hybrid Perpetual, 45s. per 100.

VOL. LIV.—No. 3,029. SATURDAY, NOVEMBER 18, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

British Woodlands.

In view of the increasing interest that is being taken in the woodlands of the United Kingdom as a source of profit and a means of supplying in greatly increased quantities well-grown timber, we have devoted considerable space in this issue to arboricultural matters of importance. The limitation of space imposed by the necessity for dealing at the present time with ornamental trees and shrubs for the garden has prevented our entering so fully into questions relating to forestry as we could have wished. But we have been fortunate in securing the aid of some of the leading foresters in the country, and, as they happily possess an acquaintance with the scientific aspects of forestry, as well as a full knowledge of practical work, their contributions possess much value, and deserve something more than a superficial glance. They really cover a wide range, and to those who are anxious to extend their knowledge of woodlands, and all who are engaged in practical horticulture should be, they can hardly fail to be both interesting and instructive, and therefore deserving of careful perusal. To be in a position to fully appreciate the necessity for giving increased attention to forest and woodland areas in the United Kingdom, it is necessary to remember that for a long series of years arboriculture was at an extremely low ebb, and that but little attention was given to woodlands as a source of profit. It was felt by many owners of large estates that, with the displacement of ships of wood by vessels of iron, and some other changes in industrial conditions, the need for oak and other hardwood timber had gone. The idea was also entertained that, with the great forests of Northern Europe to draw upon, the growth, except on a small scale, of such timbers as larch and spruce was unnecessary within the British Isles. These mistakes were great, but still greater was the belief so generally held that woodland areas could be properly managed by those who had no special knowledge of the cultural requirements of trees or the commercial value of their timber. The importance of placing the management of the gardens on an estate under the management of a gardener who had undergone a thorough training was fully recognised. In like manner it was regarded as essential that the charge of the home farm should be entrusted to a fully qualified bailiff; but in the case of the woods many owners acted upon the assumption that if the woods were not able to take care of themselves, almost anyone was able to take charge of them. As the result of these mistaken views, which were held over a long period, the woods and forests of this country passed into a neglected and very unsatisfactory condition. They became consequently unprofitable, and it has not been an uncommon occurrence to hear speakers at meetings at which reforms in the management of woodlands were being advocated contend that such reforms were impracticable because of the impossibility of obtaining a profit from the growth of timber, and quoting from the balance-sheet of their estates in support of their contention. Forestry may not be of great economic importance on estates of moderate area where the whole of the land is suitable for pastures, or the cultivation of crops that are usually grown on properly managed farms; but on all estates of any considerable size there should be woods and plantations, and these should be so dealt with as to contribute to the amenities of the respective districts, and to the financial returns from the estates. On the other hand, in those parts of the kingdom, where large tracts of land are quite unsuitable for pasturage and the production of cereal and root crops, the development of woods and forests becomes a matter of serious import, both to their owners and to a considerable proportion of those who are engaged in rural industries. In the interest of these two important classes of the community it is highly gratifying to know that this fact is being recognised, and that well-devised efforts are being made to bring about an amelioration of the unsatisfactory state of things that have so long obtained. It has on more than one occasion been said at meetings at which we have been present that the area of the United Kingdom is far too small to admit of any considerable portion being devoted to forests, but such contention indicates a very imperfect knowledge of the subject. What should be done is not devoting rich meadow and arable land to woods and forests, but the utilisation of such land as is not suitable for ordinary crops in the growth of timber, and this view is now generally accepted by those who have given full consideration to the matter. Much has already been accomplished in bringing about an improved state of things, but not a little has yet to be done in various directions before the state of forestry can be regarded as thoroughly satisfactory. As will be readily understood, it is not possible to bring about changes in woodlands at a very rapid rate, but they are being made, and we may anticipate that with a steady increase in the number of skilled foresters, the rate will be considerably accelerated. In an early issue the question of forestry as a profession will be dealt

MR. H. PRIME.

with, and in the meantime we would suggest that, as the management of woods and plantations is frequently entrusted to the gardener, all who are engaged in garden management should take advantage of such opportunities as may be within their reach for becoming acquainted with trees that are valuable for their timber, as well as those grown simply for ornament.

Mr. H. Prime, who has for some years past been in charge of the extensive gardens of Hatfield House, the historic seat of the Marquess of Salisbury, has, by means of the excellent work he has done, fully maintained their traditions, and obtained for himself a prominent place among the many good gardeners that carry on their avocations within the County of Hertford, which is remarkable for the number of its horticultural establishments. Mr. Prime has certainly made good use of his opportunities since he commenced his gardening career at Stoneleigh Abbey, under Mr. Beddard, for the gardens at Hatfield House testify in no uncertain manner to his thorough acquaintance with all that tends to success in the management of the several departments. During the period that intervened between Mr. Prime leaving Stoneleigh Abbey and being appointed to the high position he now occupies, he filled positions of importance in several great gardens. He was the foreman two years in the gardens of Hatfield House, under the late Mr. George Norman, V.M.H., and, on the death of his chief, he was appointed his successor. Mr. Prime has afforded evidence of his cultural skill by his contributions to the meetings of the Royal Horticultural Society, especially noteworthy being the exceptionally fine groups of Begonia Gloire de Sceaux and Euphorbia fulgens, of which illustrations were given in these pages. Mr. Prime also exhibited lachenalias at Westminster that possessed much value as an object-lesson in the cultivation of these flowers for decorative purposes.

A Ship's Model in Flowers.—On the departure of the King and Queen for India, their Majesties gave a farewell luncheon on board the "Medina." The principal table was decorated with a model of the ship, in white heather and pink carnations, made by Messrs. Garrard.

Fruit Show and Congress at Newcastle.—On November 15 and 16 the Newcastle Horticultural Society held a splendid chrysanthemum show in the Town Hall and Corn Exchange, and, in conjunction with this exhibition the North of England Horticultural Society held a fruit show and conference, the latter dealing chiefly with fruit culture in the Northern Counties. It was unfortunate that the conference was held in the Mining Institute, some little distance from the Town Hall. Mr. W. Alexander, of Hexham, was the leading prizewinner in the fruit section, and Mr. Musk, of Wiseton Gardens, Notts, the chief winner with flowers. The exhibition was opened by Lady Grey, the opening ceremony being well attended, and presided over by the Lord Mayor of Newcastle. At the afternoon conference, Captain Cuthbert presided over an attendance of about three dozen persons. Mr. Chisholm and Mr. W. B. Little discussed fruit cultivation, with special reference to dessert apples for the north. Later, a further session was held under the presidency of Dr. W. H. Hadow, Principal of Armstrong College, when "Horticultural Education" was the matter dealt with, Mr. F. J. Chittenden, of Wisley, and Mr. P. P. Walker, of Armstrong College, being the lecturers. This proved a most interesting subject, and one that was ably discussed by Mr. G. P. Berry, Horticultural Instructor to the Edinburgh Agricultural College, and Mr. Hosking, Horticultural Instructor to the Glasgow Agricultural College. Unfortunately, the attendance was again very small. We were glad to learn that in the evening of the first day the Treasurer was able to report a good advance in the takings at the gate, as compared with the first day last year.

Change of Colour in Primula farinosa.—At the meeting of the Scientific Committee of the Royal Horticultural Society on the 7th inst., Mr. George Gordon, V.M.H., mentioned that, when investigating early in June last, the flowers growing on the northern slopes of the Eiger, in the Grindelwald Valley, he found a plant of Primula farinosa, with flowers having a distinct white centre. The plant was growing at a height of about 5,000 feet, and had several crowns, and was bearing five or six trusses of bloom; the flowers were rather above the normal in size, and the centre was pure white and as sharply defined as the paste of a show auricula. The plant was lifted, and carefully put in a small wicker receptacle, and did not show any signs of having suffered from the change. It was given a rather shady position on the balcony of the hotel, and carefully tended, but in the flowers that first expanded after the plant had been lifted the margin of the white centre was less sharply defined, and in the subsequent blooms the colour gradually spread over the centre, and the flowers assumed their normal colour. Flowers that have been developed at Kew have been wholly of the normal colour.

Royal International Horticultural Exhibition.—On Tuesday next, the 21st inst., Mr. Edward White will lecture at the general meeting of the Royal Horticultural Society on the Royal International Horticultural Exhibition, 1912, of which he is the hon. director. The lecture should be of much interest, and the discussion at its close will afford an excellent opportunity for those who are dissatisfied with the revised scale of charges for admission—and they are many—to express their views with regard thereto.

Messrs. Kelway and Son's Successes.—As evidence of the enterprise and skill of Messrs. Kelway and Son, of Langport, who have done such splendid work in the improvement of the various classes of hardy flowers, and in bringing them into prominence, it may be mentioned that the firm has achieved a high degree of success at the exhibitions held this year. The awards made to them for their specialities in flowers, etc., included five gold medals, these being given at the White City Coronation Exhibition, Southampton, Taunton, Cardiff, and Regent's Park (Royal Botanic Society); and four silver-gilt medals and eight silver medals, at the Royal Horticultural Society's shows.

National Vegetable Society.—Owing to the poor attendance of visitors at the two shows held by the above society in London, during 1910 and 1911 respectively, the committee have arranged to hold their exhibition next year in the Clarendon Hall, Watford, Hertfordshire, on Wednesday, October 2. By doing so they hope to bring the work of the society before a more rural population. Watford is noted as a large vegetable-growing centre, and considerable interest is taken in all phases of horticulture by the residents. It is situated on the London and North-Western main line, and is easily reached from most parts of the country. The Clarendon Hall is situated in the centre of the town, and offers every facility for the holding of a large and interesting exhibition. The committee hope that all who are interested in the cultivation of vegetables will join the society and assist them in their good work. The hon. secretary, Mr. E. G. Quick, will be pleased to receive offers of prizes to be competed for at the above exhibition, and also to furnish particulars concerning the work of the society. His address is Kelmscott, Harrow View, Wealdstone, Harrow. The annual general meeting of the members of the society will be held at the Horticultural Hall, Westminster, on Tuesday, November 21, at 2.30 p.m.

Packing Fruits and Vegetables for Market.—The half-yearly conference of the National Federated Association of Fruiterers and Florists was held at Sheffield on Tuesday, and, in the course of the proceedings, the president, Mr. W. E. Boyes, of Leicester, referred to the efforts that the federation is making to induce the Board of Education and the Board of Agriculture to take steps to bring about an improvement in the methods of packing fruits and vegetables for market. Mr. Boyes stated that he had written to the Board of Education asking for the appointment of expert lecturers and practical demonstrators in the fruit-growing districts of England, men with a practical knowledge of the wholesale and retail trade. There was, he said, a great future for English vegetables and fruit if the growers really knew what the public wanted. At present the English produce was badly packed, and the growers had not a practical knowledge of the requirements of the market. Foreign fruit was selling, not because it was of better quality, but because it was put up in better style. Both Departments had promised to consider the question, but had done nothing yet.

The Gardeners' Company.—At the meeting of the Court of Aldermen, held at the Guildhall on Tuesday, a petition was presented by the Gardeners' Company, applying for an increase to their number of Liverymen. The Master (Sir Horace Marshall), the Wardens (Mr. G. R. Blades and Mr. G. Shead), and the Clerk (Mr. E. A. Ebblewhite) attended in support of the petition, and stated that the increase suggested was from 60 to 150, that the last increase was granted twenty years ago, and that the Duke of Teck and other eligible Freemen were anxious to take up their Livery in the Guild. The petition was referred to the General Purposes Committee for consideration.

Hybridisation of Orchids.—At the fortnightly meeting of the Northumberland Coast Club, held on the 7th inst., Mr. H. J. Chapman, of the Oakwood Gardens, Wylam-on-Tyne, gave an instructive lecture on "Orchids," which was illustrated by a series of coloured slides. In the course of his lecture, Mr. Chapman stated that a great industry had been created in the raising of orchids since the publication of Darwin's views on the fertilisation of orchids about the year 1850. It was in 1852 that Dr. Harris, a surgeon, of Exeter, suggested to the late John Dominy that he should experiment on the lines laid down by Darwin. The result was that the first seedling was raised artificially in 1856. Until within a quite recent date, we had to depend almost entirely upon the expensive process of importation for the supplies of orchids, but so rapidly had hybridisation developed that the home supplies of seedlings has practically done away with foreign trade, the price of the plants being so greatly reduced that all orchids worthy of culture are now within reach of the amateur.

SCOTTISH AND GERMAN METHODS OF FORESTRY.

The above title is not of the writer's choosing, but, as he has been allowed a free hand in dealing with the matter, it may do as well as another, and, after all, "a rose by any other name would smell as sweet," though readers of the Gardeners' Magazine hardly require to be reminded that not every rose is fragrant.

Method, in the dictionary sense of orderly arrangement, is very much wanting in Scottish forestry, in a national sense, compared with German forestry. This must not be considered as a slur on Scottish foresters, or proprietors either; what it is desired to point out is the want of uniformity, and lack of system, in matters pertaining to forestry.

The writer has been repeatedly asked, "Is there as much difference between German forestry and our own, as we are led to believe?" The answer has invariably been in the affirmative, of course, with a qualification. Taking first things first, Scottish foresters have probably little to learn about the raising of seedlings in the nursery, as, besides the many excellent public nurseries throughout the country, most estates have a nursery of greater or lesser extent, where experience can be gained. It is when dealing with transplanting, with a view to the production of timber, that the Germans show the way. While the Scottish forester is transplanting in the home nursery, with a view to raising plants that will have an effect when planted out, and have some chance of surviving the attacks of ground game, the German forester is planting direct into the forest. He generally raises his seedlings *in situ*, in temporary nurseries, and is thus able to stock his area very cheaply.

Unskilled labour is probably a little cheaper in the German forest area than in Scotland, and a little more care is taken in lifting and planting than is usually taken in Scotland. They grow the seedlings fairly thinly on the ground, and when lifted a fair proportion of the soil is allowed to remain on the roots, and within a comparatively short time the plants are in their new position. They are not "notched" in, as, alas! is the case on only too many properties in Scotland, but properly planted in well-prepared pits, with prepared soil added in some cases. Close planting has been synonymous with German forestry, popularly, but this is not altogether correct. The German forester knows that the struggle for existence does not begin so soon in an artificial plantation as it does in a natural one, and that even of what he plants only a small proportion take part in the final struggle, and form the ultimate crop.

Natural reproduction, as a means of stocking certain areas favourably situated, is made use of, but probably not to the same extent as formerly. The German forester is so systematic that he will not run the risk of a bad seed year or two upsetting his rotation. In Scotland some very fine examples of natural regeneration exist, but, with a few exceptions, they are more the result of chance than of good guidance. The mixtures that have found favour in the past in Scotland are, with few exceptions, not tolerated in Germany, and undoubtedly the growing of the different species and varieties in groups, masses, or pure forest, becoming more prevalent in Scotland, is a step in the right direction. The tending of the growing crop is very much simplified where the system of planting in groups or masses is adopted and early thinning is a simple operation, demanding only the removal of dead, and, probably dying, trees, instead of an intricate business of trying to suit the varying requirements of Scottish mixtures, as to space, light, air, etc. The writer is well aware of such points as differences in soil, altitude, aspect, etc., which occur within a small compass sometimes, and of the danger from fungoid diseases, insect attacks, windfalls, etc., in pure forests, but these drawbacks disappear, to a large extent, where something after the German system is adopted. There is a danger in allowing a crop to thin itself, as in some cases the individual stems become so attenuated as to be unable to support themselves. Nature demands that a certain balance be maintained between stem and leaf surface, varying according to the several species. While upholding the German system, no one would despise the British oak produced under a different system, in days gone by, to meet certain requirements, and it is further admitted that for certain purposes hardwood grown with a large amount of light and air is infinitely superior to that grown in close canopy, but, speaking generally, the German method produces cylindrical stems of high commercial value, the Scottish tapering stems being of low value.

Pruning is a thing almost unheard of, and unnecessary, in Germany, and it follows that it means a greatly reduced outlay on the crop, and ultimately a finer quality of timber. By the Scottish method of early thinning pruning has been rendered a necessary evil, and knotty timber of poor quality the product.

The maintaining of proper canopy during the rotation has been given much thought in Germany, and as the preservation of the soil depends so much on the density of the canopy, it well repays whatever outlay may be found necessary to maintain it. The value of soil preservation is not very well recognised in Scotland, where there is usually an abundance of moisture, but moisture is not everything, and undoubtedly the soil deteriorates quickly under a thin crop. Underplanting, particularly oak, has been proved to be of great value in some of the German forests, and on what had been naturally poor soils, the rotation period has been lengthened considerably by the adoption of this practice, in many instances. In Scotland thin crops are mostly the rule, and in trying to lengthen out the rotation period most of the hardwoods are allowed to stand too long. Thousands of what might have been useful timber trees, under proper treatment, are to-day dying, their end being hastened by the help of numerous fungi. This does not refer to arboreal specimens and ornamental plantations only, but to many of the woodlands that are certainly of some value, but nothing approaching the value they would have been had they been grown under anything like the German system.

Probably a great advance has been made during the last twenty-five years or so in the way of educating the Scottish forester, but there is a lack of uniformity of ideas as the result of that education, which every individual has been allowed to obtain as best he was able. The German forester has been in a vastly superior position for generations back, having every facility for education and research placed at his disposal by a beneficent and paternal government. The German nation, as a whole, seems to be aware of the value of its timber, as a national asset, not merely in a financial sense, but as a means of helping an industrious race at home. It is to be hoped that the educating of the British nation, that has been going on for some time, through the medium of the Press, will be continued with increased vigour, if possible.

The output per acre per annum has increased considerably during the last few decades by reason of the systematic management and control exercised in Germany, even over private forests, and even if State afforestation is not within measurable distance, there is an area under wood in Scotland sufficient to warrant a certain amount of State assistance and control. Placing regular quantities of timber upon the market has done a great deal to raise German forestry to the place it now holds in the nation's well-being. This it could not do for long without systematic control, for, unlike countries with vast natural forests, Germany must look to the creation of forests as well as to their exploitation. The spasmodic attempts that are made to market Scottish timber does a great deal to foster foreign competition, and delays the day of better things for forestry at home.

In comparing Scottish and German forestry the writer has endeavoured to point out some of the things that appear to him to be of most outstanding importance, but it must not be considered that he is pro-German, for, while he has shown something that might be emulated, he would not advocate a wholesale adoption of German methods. He is patriotic enough to admit that there is good forestry to be seen in Scotland, and sanguine enough to believe that it will go on improving. The Scottish forester has done his part, by travel and otherwise, to widen his view, and now the time has surely come for the nation to do its part in bringing order out of chaos.

Sylva.

HEDGEROW TIMBER.

Nothing adds so much to the charm of English scenery as the hedgerow timber, and in passing through the country, even the casual observer can hardly fail to note that the characteristic charm of rural England is largely due to the stately elms, majestic oaks, and other trees, as a rule, plentifully sprinkled along the hedgerows, clustering around the village church, or sheltering some old manor or farm house.

Many parts of the country, if cleared of its field timber, would have a bare, and often rather bleak, appearance, and, unfortunately, there is a tendency in some places to over thin, or even completely clear it. On the other hand, too much timber should not be tolerated in the hedges, and where, for various reasons, it has been allowed to accumulate to too great an extent, it is desirable, in the interests of good management, to have heavy fellings, so as to reduce it to within reasonable limits. There is sometimes good reason for the hostility of many farmers to hedgerow trees. Unsuitable species, such as those with far-reaching surface roots, or neglected, rough, and low-spreading trees, pertaining more to the gooseberry habit of growth than to that of a tree, suppressing hedges and farm crops alike, are very much out of place on the highly-cultivated land they often occupy.

These, often practically beyond pruning, should be cleared away, and their places taken, where desirable, by young, well-grown trees. A tall, well-shaped tree, with a fair length of clean bole, is not only more ornamental and more in keeping with its surroundings on well-farmed land, where it does the minimum of harm, but also worth a great deal more when felled than the short, badly-grown specimen.

Æsthetic effect, and shelter, combined with the production of the most profitable class of timber, and the chief purposes for which hedgerow timber is grown, and to satisfactorily attain these objects without unduly interfering with the productivity of the soil for agricultural purposes, the necessary good management must begin with the planting of the trees.

In selecting trees for hedgerow planting only those of an upright habit of growth, and more or less deep rooting, should be chosen, avoiding at the same time the heavy shade-bearing species. A little more latitude is, however, permissible on pasture than on tillage land. Among the most suitable species are the Cornish Elm (Ulmus cornubiense), which has an erect, compact habit, requiring practically no pruning, to confine it to a close upright shape. It is also very effective as an ornamental tree, and deserves to be far more extensively planted than it is at present. The common English Elm (Ulmus campestris), also makes an excellent hedgerow tree. Like the Cornish variety, it is very upright in habit, though in a much less degree. It is one of the most valuable and common trees found in the hedges, especially in the south and west Midlands. In Worcestershire and parts of the adjoining counties it abounds in almost every fence on the deep sandy and clayey loams, where it grows naturally from root shoots or "suckers." The finest trees, with timber of first-rate quality, are raised in this way. When planting the hedges it is only necessary to leave a number of the young shoots, produced in the above manner, to fill the gaps caused by felling operations. It is impossible to purchase seedlings of the true English elm, as its seed never ripens in this country, and trees can thus only be obtained by grafting, or by transplanting the suckers from the hedgerows.

The English Oak (Quercus robur) is well known as one of the most ornamental and best all-round trees for hedgerow planting on deep loamy and clayey soils. It stands pruning well, and is easily kept in good shape, while as a timber tree it needs no recommendation.

Black Italian and Old English Poplar (Populus monilifera and P. nigra), on wet and clayey soils, with their long stems, usually free of branches for a great height, are not only very effective, but also valuable timber trees, owing chiefly to their very rapid growth. The black Italian poplar grows faster, and to a much greater size, than the old English variety, and is the better timber tree of the two.

The Lombardy Poplar (P. fastigiata), with its conspicuous fastigiate growth, is not the least harmful to crops, and stands out prominently in the landscape. Planted judiciously it produces a pleasing effect. It is, however, quite valueless as a timber producer. The graceful Birch (Betula alba), one of the most accommodating of trees, growing almost equally well on wet clayey or on light, poor sandy soils, is another useful tree for hedgerow planting, its light foliage hardly affecting fences or field crops while there are few situations in which it is out of place.

The Crack Willow (Salix fragilis) can often be advantageously used by the margins of streams or water-courses. The Maple and Sycamore (Acer platanoides and Acer pseudo platanus) are both important hedgerow trees, but are rather inclined to a more spreading habit than any of the foregoing species, requiring more attention in the way of pruning in the early stages. The sycamore is the best of all hardwoods for planting on exposed situations, and on pasture land affords excellent shelter for farm stock. Coniferous trees generally are not at all suitable for field planting, the only exceptions being the larch and Scots pine, which, in some situations, such as high-lying, more or less exposed, grazing land, are both ornamental and useful shelter trees.

The foregoing list, while giving a sufficient variety both of form and colour of foliage, provides for the requirements of most soils and situations. It is most important, if the work is to be successful, that the right trees are planted on the right soils. No amount of care in the way of pruning will produce long clean oak or elm on light shallow land. Unsuitability of soils is the chief cause of a great deal of the badly-grown, short, bushy trees, of no value, so frequently met with.

For hedgerow planting well-rooted trees about six to eight feet high will be found most suitable, as their heads will be beyond the reach of most farm stock, while, if too large, they are more difficult to establish, and have a tendency to a spreading and deformed growth. Early and repeated pruning is also necessary to produce the right class of hedgerow trees. The top shoot must always be kept clear, and no side branches allowed to encroach on its lead, while the lower branches must be fore-shortened to prevent them spreading too far. As the tree gains in height the lowest branches will be removed from time to time, and thus the head of the tree will be gradually raised, until a clean length of stem of at least fifteen to twenty feet is obtained. Hedgerow trees should not be pollarded, a practice very common, evidently, in past times.

Instead of being a source of annoyance to the farmer, well-managed hedgerow timber will usually be of considerable benefit to him by providing shelter to his stock from the cold winds of winter and the hot suns of summer.

J. Braid.

PROFITABLE WOODLANDS.

One of the questions a proprietor of an estate very probably will put to his agent or forester, when planning planting operations, is, "Will it pay me to undertake this work?" Now, this is a very difficult question to answer, as so much depends on the suitability of the soil and climatic conditions to meet the needs of the variety of trees that are to be planted, and, not only that, but to have a chance of making any commercial profit out of a plantation the after-management, which is often at fault, must be of the best.

In a great many of our maturing woodlands at the present day we often find that they are carrying only half the volume of timber they ought to have, perhaps owing to the old-fashioned idea of severe thinnings which was customary in my younger days; sometimes a sporting landowner will try to improve the undergrowth for forming game cover; possibly a demand has arisen locally for a certain class of thinnings, and the growing trees have been cut indiscriminately.

A case of the latter came under my notice only a few days ago, when I visited some plantations on an estate in Lincolnshire. The age of the trees was about twenty-eight years, and there were alternate rows of larch and Scots pine, and I found that a few years ago nearly every tree in the larch rows had been cut out merely because a demand for larch thinnings had arisen locally, and the result now is that what would, ten years ago, with judicious management, have made a profitable wood, will now be a financial failure, from a forester's standpoint.

In forming hardwood plantations my experience is that, with suitable soil, oak and ash are the best commercial trees to plant, and in forming a hardwood plantation one should not mix many conifers amongst them, as there is more chance of rearing a decent hardwood plantation by planting three hardwoods to one conifer than the reverse, which is so often done in this country, so that we find the hardwoods eventually dominated by the so-called nurses. The most suitable soil for the Common Oak (Quercus pedunculata) is deep fresh clayey loam, while if the soil should be of a drier and sandy nature the Sessile Oak is the most suitable. I often wonder that the nurserymen do not make a distinction and grow Quercus sessiflora more than they do. On the Hereford portion of this estate, where the soil is a marly clay on the limestone, nearly all the oak woods and coppices are of this oak, and, though at an altitude of 600 to 800 feet, it not only grows straighter, but makes far quicker growth, and, commercially, we get quite as good demand and prices for its timber as for the other, although growing in an inconvenient district for removal. This exceptional year a large crop of acorns of grand quality has been produced, and should be taken advantage of by all who wish to raise strong seedlings.

Ash is a profitable timber if grown on deep, light, loamy soil, which should not be waterlogged; in its younger stages the thinnings of ash are in very good demand. I have found that for forming ash plantations about 75 per cent. of ash should be mixed with about 25 per cent. of spruce and larch; this is a very good mixture, using strong stout ash plants four to five feet high, and firs, say, two to two and a-half feet high. At the age of thirty years the firs may be removed altogether if the crop of ash is close enough. If ash is planted on wet, low-lying land of a boggy nature, which is too often the case, it will eventually, in its later stages (if it survives the disease, Nectria ditisimma), be found to open black-hearted, and be very little use for commercial purposes. There is no foreign ash imported that can compare to our home-grown wood for toughness and durability, and I believe ash will be one of the best commercial timbers of the future, and good sound trees will command higher prices in the near future, for ash is getting to be one of the most scarce of our hardwoods, and should be planted more largely than it has been in recent years.

While on the subject of hardwoods I should like to make a few remarks on coppice woods. It is a well-known fact that on many estates this class of forestry is far from a profitable one. No doubt many thousands of acres of coppice woods are being worked at very little, or no profit, owing to the very poor demand for oak underwood. I have for the past twelve years, where falls have come in on this estate, cut only the very oldest standard oak, and left all straight, clean-growing poles, varying from 120 to 200 per acre, the latter number chiefly in the sessile oak woods. I believe, in the Midlands, we have a better chance of forming these highwoods, as there always seems far more strong stools and maiden oaks than are found in the southern and eastern counties, where one will often find only a few large-headed oaks per acre, and none, or few, growing poles coming on to take their place. It is advisable, in the case of plantations similar to the latter, to clear, fell, and replant with whatever tree is suitable, and likely to be profitable.

Malvern. Alex. Slater.

(To be continued.)

SPECIMEN TREES FOR PARKS AND GARDENS.

With such a wealth of material at hand it is difficult to understand why use is not made of more exotic trees for the adornment of our parks and pleasure grounds. We meet with the elm, oak, beech, and lime on every hand so frequently that, while admitting they make splendid specimen trees, their too liberal use is apt to become monotonous. Even if we do not go so far as this, it will be readily admitted that were a wider selection of subjects planted parks and gardens would be infinitely more interesting. At the same time, the addition of variety to a park, assuming it is planted with taste, must add considerably to its beauty. In years gone by a few trees, other than those commonly met with, have been planted up and down the country, but these are, as it were, only a leaf in the forest. But what of the places where these trees have been planted? How interesting they are. Take Syon House, for example. How very attractive the grounds are with their unique specimens of Cladrastis tinctoria, Corylus colurna, Celtis occidentalis, Juglans nigra, Liquidambar styraciflua, Liriodendron tulipifera, and Zelkova crenata.

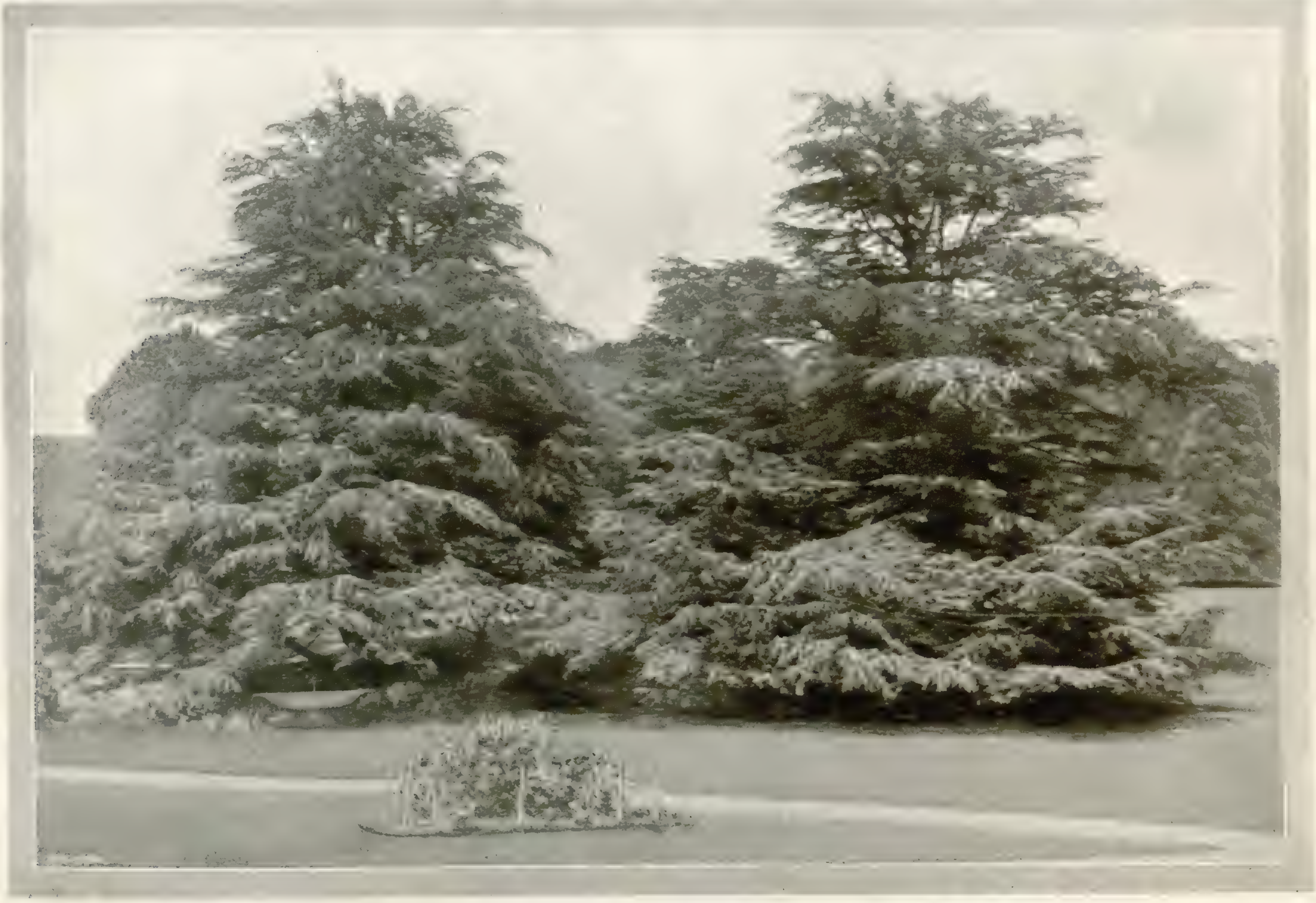


Photo: J. Gregory.]

THE CEDAR OF LEBANON (CEDRUS LIBANI).

Two splendidly-developed specimens at Addington Park, long the Surrey residence of the Archbishops of Canterbury.

Chestnuts and Oaks.

The common Horse Chestnut (Æsculus hippocastanum) is well known as our best flowering timber tree. Those in charge of public parks find the fruits a serious drawback to this tree in autumn, and for the same reason its use as a street tree is not desirable. There is an easy remedy however, and that is to plant the double variety, which is equally floriferous, but does not mature fruits to tempt the schoolboys. The Red Horse Chestnut (Æ. carnea) is a free-flowering, round-headed tree, of moderate height. A little-known hybrid between these two chestnuts is Æ. Plantierensis. This has delicate pink flowers, and, being vigorous in growth, is recommended for extensive planting in public parks, as no fruits are produced. The Indian Horse Chestnut (Æ. indica) is of considerable value, as it blossoms in July, a season when there are comparatively few trees and shrubs in flower. The rich green leaves are a feature of the tree, and remain in good condition until most of the other chestnuts are bare. At a distance, when in flower, the tree resembles the common chestnut, but closer inspection shows a longer raceme, and the individual flowers of a similar colour, but less closely packed.

Several oaks are worthy of attention in large parks, while the Holm, or Evergreen Oak (Quercus ilex) is the best large evergreen tree we possess, excluding conifers, for planting in the south. As a rule, the trees grow to a moderate height, with a wide spread of branches. In Wales a tree is recorded with a diameter of 98 feet. On the other hand, there is a tree at Syon House 90 feet in height. Quercus rubra is the freest growing of the American oaks. It has large leaves, which turn reddish-brown in autumn. For autumn colour Q. coccinea is far superior, but this tree is not so bold and vigorous in growth. Waterer's Scarlet Oak (Q. coccinea var. splendens) has deeper and richer-coloured leaves than the type in autumn. Other oaks worthy of attention are Q. cerris, Q. conferta, and the Lucombe Oak, Q. lucombeana.

Conifers.

For effect, especially in winter, it is necessary to have a few conifers dotted among the deciduous trees. Almost every park or garden of any size possesses a few specimens, the most popular being the three Cedars, C. Atlantica, C. Deodara, and C. Libari, the Scotch Pine (Pinus sylvestris), Cupressus Lawsoniana, the common spruce, the Douglas fir, and Sequoia (Wellingtonia) gigantea. To these may worthily be added the Umbrella Pine (Sciadopitys verticillata), a remarkably distinct and interesting Japanese conifer; Picea Bungeana, the Silver-laced Bark Tree of North China; Picea Omorica, a Servian species, and Pinus Peuke, from Bulgaria.

Limes and Maples.

The common lime has been freely planted in the past, but it is very liable to the attack of aphis. In public parks seats under the trees are objectionable owing to the filth from these insects. Tilia dasystyla, a Caucasian species, is, for some unaccountable reason, avoided by aphis. It forms a large, handsome tree, with deep green leaves and fragrant yellow blossoms, which open several weeks later than most of the common limes. In some catalogues this is listed as T. euchlora. Here and there a few good specimens of the Tulip Tree (Liriodendron tulipifera) are to be met with, but it is far from being common. Tall and noble in appearance, the tulip tree grows to a height of 80 to 100 feet. The flowers are borne freely on large trees during the summer, but are not very conspicuous, being more or less hidden by the leaves. Their colour is yellow and green, tinted with orange, and the shape is not unlike a small tulip bloom, which gives the tree its popular name. In North America the tree is called the saddle tree, the shape of the leaf resembling a saddle. In autumn the tulip tree is very striking when the leaves change to a glowing golden-yellow tint. A second species, L. chinense, is of recent introduction from China. The leaves of young trees are very ornamental, but, as with other trees, the leaves are much smaller on mature specimens. When collecting for the Messrs. James Veitch and Sons, in China, Mr. Wilson met with a specimen of this species fully 60 feet high.

Many of the Acers are very ornamental, and the larger-growing kinds are notably fast in growth. The Norway Maple (Acer platanoides) is fairly common, forming a large tree 60 feet or more in height. Two varieties are deserving of attention from planters: A. p. Schwedleri, the young leaves of which colour a beautiful red in spring; and A. p. Reitenbachi, which has foliage that for some time previous to falling in autumn is rich red. The Red Maple of the United States (Acer rubrum) forms a large handsome tree, 50 to 70 feet in height. This is first noticeable in early spring, when loaded with small red flowers, the character from which it gets its name; in some parts of the country the leaves colour well in autumn. A. macrophyllum is a Californian tree, and one of the handsomest of the family. The five-lobed leaves often measure ten inches to a foot across. In May the tree is bright with yellow racemes of flowers, which are succeeded by numerous fruits, that attain to a large size as autumn approaches. The average height is from 60 to 80 feet. The variegated Acer negundo is a common plant in this country. The same cannot, however, be said of the species Acer negundo, which is a distinctly handsome tree, with pinnate leaves. In habit it is a wide-spreading tree, 30 to 40 feet of more high. A. dasycarpum forms a tree of fair size, the twiggy branches of which have a distinctly pendulous habit. It is appropriately named the silver maple, because of the colour of the undersurface of the leaves, the beauty of which is best seen when the twigs are gently swaying to and fro in a breeze.
A. Osborne.

(To be continued.)

THE SCARLET OAK (QUERCUS COCCINEA).
A handsome species, with finely-cut leaves, which assume a bright red colour in autumn.

Gloriosa virescens grandiflora.—Since the introduction of the gorgeous Gloriosa Rothschildiana, a greater amount of interest than formerly existed has been shown in the different members of the genus. Gloriosa virescens, which used to be known as Gloriosa Planti, has much broader flower segments than those of the better-known Gloriosa superba, and the flowers are reddish, while those of grandiflora are yellow.—W. T.

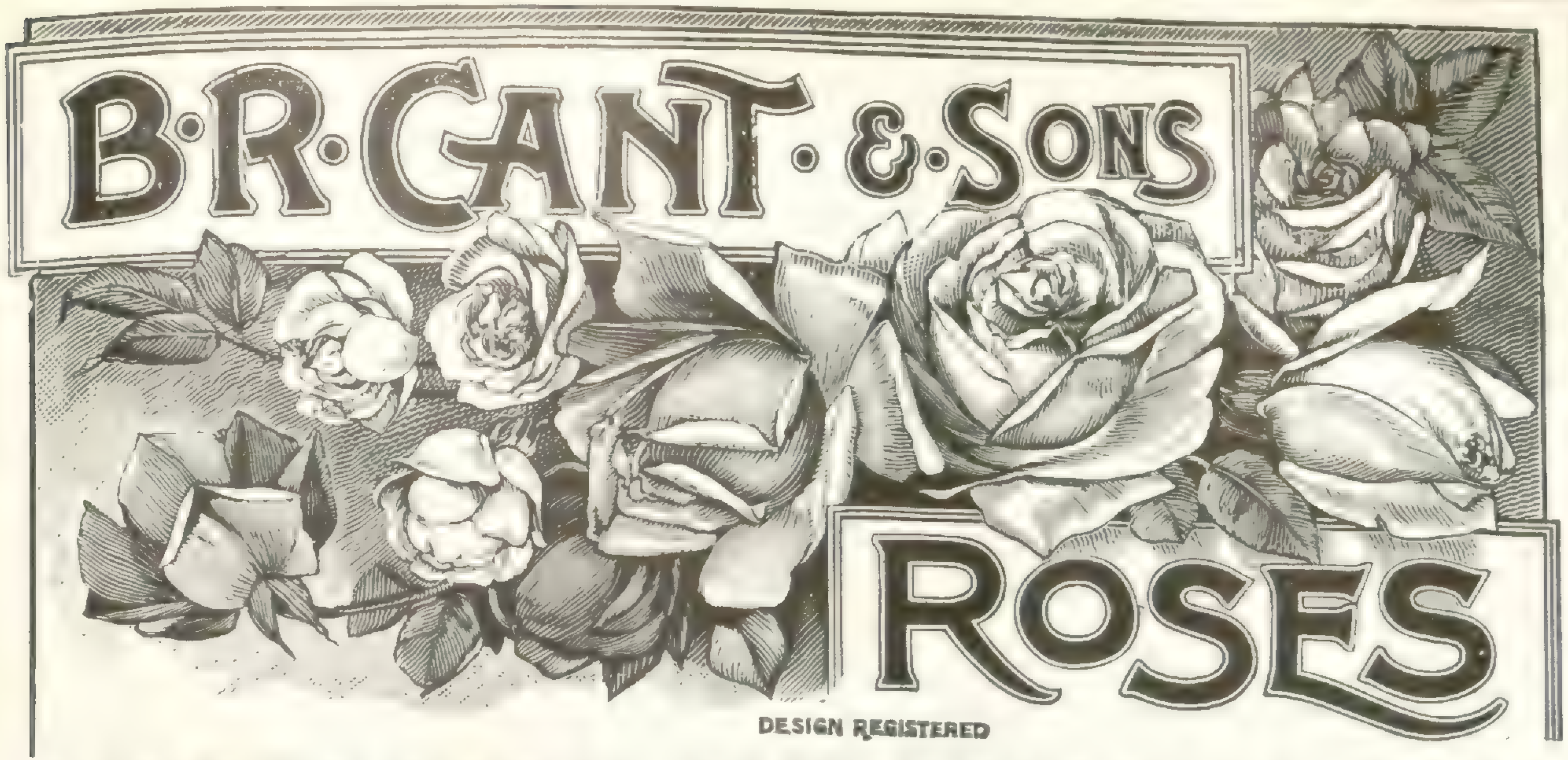
PLANTATIONS FOR LANDSCAPE EFFECT.

Although when trees are to be grown for profit the principal consideration has to be the best method to adopt for obtaining the greatest amount of revenue from a given area in a certain time, and matters of more or less æsthetic interest have to give place to the prosaic one of pounds, shillings, and pence, a great deal can be done towards beautifying the countryside, without interfering with the economic side of forestry, by the thoughtful disposition of plantations and a due regard to their general outline. As an instance of what is meant, attention may be directed to the many round, square, or rectangular plantations, which may be seen throughout the country dotting the crowns or slopes of hills, and they are to be contrasted with other woods where the planting has been done in such a manner that it follows the contour of the land. Instead of gaunt blocks which might have been turned out of moulds, we have natural-looking plantations, with undulating margins, ranging from varying heights at the lower elevations to the summit of the hill; agricultural and forest land uniting without any hard line. By such a method of planting it is also possible to take better advantage of the shelter provided by plantations than when the planting has been confined to formal blocks, for here and there a glade may be allowed to run for some considerable distance into a wood, thus providing a pasture sheltered on three sides, whilst even small marginal undulations are always taken advantage of by stock in cold weather.

Fencing operations are, perhaps, made easier when formal blocks are planted, for in the case of wire fencing, straining is more easily accomplished in the case of long, straight lines than when an irregular outline occurs. In the event of very large plantations being formed, however, this difficulty need not be seriously considered, for arrangements could easily be made to avoid any extra expense, whilst in the case of small woods the difference in expense between a straight and undulated fence would not be a very serious matter.

It is also possible to do a good deal towards making the country beautiful by the careful selection of the kinds of trees planted, for, although it is only natural that the kind of tree which is likely to give the largest margin of profit should be the one selected for general planting, opportunities may occur through a local difference of soil or exposure for the introduction of other species. In such instances the different kinds of trees should be allowed to meet without any hard and fast line, as though a gradual change had taken place from one kind being the dominant feature to the other. Then, again, the inclusion of various low-growing trees or large shrubs about the outskirts of plantations gives an air of interest to what would otherwise be unbroken lines of one, or perhaps two, kinds of trees, while at the same time additional shelter is provided. Thus the common Spindle-tree (Euonymus europæus), Wayfaring-tree (Viburnum Lantana), Guelder Rose (V. opulus), Blackthorn (Prunus spinosa), Holly (Ilex aquifolium), and Buckthorn (Rhamnus cathartica) are all useful and suitable subjects. In the Chilterns one frequently sees the common cherry growing amongst beech timber. During the flowering period the cherry is most effective, while from a financial aspect the wood does not suffer, for good cherry is as valuable as good beech.

It is, however, in parks and woods in the immediate vicinity of a mansion that per-



DIRECT FROM THE ORIGINAL FIRM.

Established 1765.

WE HAVE FOR DISPOSAL THIS SEASON

80,000 Standards and Half-Standards.

4,000 Standard Weeping Roses.

Magnificent Plants in the best known varieties. Also

300,000 Dwarfs and Climbers.

THE FINEST STOCK IN THE KINGDOM.

Illustrated Catalogue post free on application to

BENJAMIN R. CANT & SONS, The Old Rose Gardens, **COLCHESTER.**

FRUIT TREES.

Over 20 Acres.

ROSES

Including all Latest Varieties.

RHODODENDRONS

Grown in Loam.

Azaleas & Heaths

INCLUDING GOLDEN YEWS, CONIFERS, etc.

Ornamental Trees & Shrubs,
Flowering Trees & Shrubs.

Acres of Forest Trees of all Sizes and Varieties.

GRAPE VINES OUR SPECIALITY.

Climbing Plants in Variety.
Figs and Strawberries.

INSPECTION INVITED.

Gardens Laid Out and Planted by Skilled Men.

Catalogue Free on Application.

H. LANE & SON,
THE NURSERIES, BERKHAMSTED.
Established 1777.

Telephone:— Berkhamsted 18.
Telegrams:— "Lane, Berkhamsted."

KING'S ACRE

FRUIT TREES

AND

ROSES.

AWARDED . .

30 Gold Medals

AND

Coronation Cup

VALUE 25 GUINEAS.

Seasons 1909-10.

Illustrated Catalogue post free on application.

KING'S ACRE
NURSERIES LTD.,
HEREFORD.

Bulbs: NARCISSUS, DAFFODILS, TULIPS, &c.

All Good Flowering Bulbs; Worth Double.

NARCISSUS

100	**Emperor**	3/0
100	**Empress**	3/0
100	**Henry Irving** ...	4/0
100	**Golden Spur** ...	4/0
100	**Horsfieldii**	3/0
100	**Victoria**	3/0
100	**Obvallaris**	3/0
100	**Grandis**	3/0
100	**Sir Watkin**	3/0
100	**Stella**	1/6
100	**Princeps**	2/6
100	**Ornatus**	2/6
100	**Double Daffs** ...	4/0
100	**Dbl. White Narcis.**	2/6
100	**Pheasant Eyes**	2/6
100	**Frank Miles** ...	1/6

TULIPS

100	**La Reine**	3/0
100	**Cottage Maid**...	3/0
100	**Chrysolora**	3/0
100	**D. de Parma** ...	3/0
100	**Keizerkroon** ...	4/0
100	**Golden Crown**...	3/0
100	**Picotee**	4/0
100	**Bouton d'Or** ...	3/0
100	**Prince de Ligny**	4/0
100	**Duc Van Thol,** sgl	4/0
100	,, ,, dbl	3/0
100	**King of Yellows**	4/0
100	**Mixed Tulips** ...	1/6
100	**Mixed Darwins**	4/0
100	**Darwins** to name	10/6
100	**Parrot Tulips** to colour	2/6

Special offer in Mixed Narcis. and Daffodils, also Tulips for planting in grass, shrubberies, hedge rows, etc.

HYACINTHS

		per 100
12—**1/9**	to name in colours...... or	**10/0**
12—**1/3**	mxd in cols. or	**9/0**
12—**1/9**	**Roman White** or	**12/0**
100	**Iris, Spanish,** to name	1/6
12	**Iris, German** do.	6/0
12	**Iris, English** do.	1/6
100	**Anemones, Scarlet**	4/6
100	,, **The Bride**	1/9
100	,, **St. Brigid**	5/0
100	**Scilla Siberica**...	3/0
100	**Freesia**	3/0
100	**Summer Snowflakes**	5/0
12	**Lilium Candidum**	2/6
12	,, **Crown Imperial** ...	2/0
12	,, **Auratums**	7/0
12	,, **Croceums**	4/0
12	,, **Longiflorums**	4/0
100	**Snowdrops**	1/6
100	**Ixias,** to cols.	2/6
100	**Crocus,** in cols.	1/3
100	**Lily of Valley** ...	2/6
100	**Jonquils**	4/6
100	**Ranunculus** ...	3/0
100	**Montbretia**	3/0
100	**Aconites**	3/0
100	**Chionodoxa** ...	2/6
100	**Polyanthus Narcis**	3/0
100	**Alliums**	3/0
12	**Begonias,** choice	1/6
12	**Violets,** in sorts	1/6
12	**Xmas Roses** ...	4/0

Narcissus and Daffodils,	5/-, 7/6, 10/0 per 1,000
Tulips	10/-, 15/-, 20/- per 1,000

Many other varieties to offer; also all kinds of Herbaceous plants. Any of the above, half quantities at half price.

FRUIT TREES.—Apples, Pears, and Plums, all fruiting trees, **8/-** per dozen. Gooseberries, Currants (black, red, white), **3/-** per dozen. Loganberries and Raspberry-Strawberry, **9d.** each Raspberry canes, **3/-, 4/-,** per 100. Strawberry Plants, **1/6** per 100.

All kinds of Flower and Garden Seeds, also POTATOES. Send for List,

J. W. CROSS, Old Grammar School, **WISBECH.**

MERRYWEATHER'S ROSES.

All Strong and Home-grown Plants.

COLLECTION "H" of NEW ROSES.

WONDERFUL VALUE.

EVERY ONE A GENUINE NOVELTY.

This superb collection of the **BEST 18 NEW ROSES** in dwarf plants. The price of this wonderful collection is **27/6,** carriage and packing free for cash with order (with Acme Labels, **29/6**). The varieties are:

Arthur R. Goodwin, P.
Duchess of Wellington, H.T.
Entente Cordiale (Ducher), H.T.
George G. Ward H.T.
Jessie, Dwarf Poly.
Lady Alice Stanley, H.T.
Lyon, H.T.
Margaret, H.T.
Margaret Molyneux, H.T.
Miss Cynthia Ford, H.T.
Mrs. Alfred Tate, H.T.
Mrs. A. Munt, H.T.
Mrs. E. J. Holland, H.T.
Mrs. W. Christie-Miller, H.T.
Marquis de Sinety, H.T.
Molly Sharman Crawford, H.T.
Souv. of Stella Gray, T.
White Killarney, H.T.

FRUIT TREES

OF ALL KINDS TO SELECT FROM.

A GRAND STOCK OF
SHRUBS & ORNAMENTAL TREES.

HERBACEOUS PLANTS in great variety.

Send for Catalogue No. 29, full of interesting information and cheap prices, post free on application to

MESSRS.
H. MERRYWEATHER & SONS, LTD.,
(Dept. 1A), **GARDEN SPECIALISTS,**
SOUTHWELL NOTTS.

"IT IS ONLY A LITTLE

CLAY'S

FOR ROSES."

CLAY'S LONDON FERTILIZER
TRADE MARK

SOLD EVERYWHERE IN TINS at **6d.** and **1/-**; and in Branded and SEALED BAGS, 7lbs. **2 6**; 14lbs. **4/6**; 28lbs. **7/6**; 56lbs. **12/6**; 112lbs. **20/-**. Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**). **Every Genuine Tin, Bag, and Seal bears Trade Mark, as at side.**

CLAY & SON,
Manure Manufacturers and Bone Crushers,
STRATFORD, LONDON, E.

CHEALS'

FOR FIRST-CLASS
ORNAMENTAL TREES,
ROSES, FRUIT TREES,
AND
HARDY FLOWERS, etc.

NURSERIES 113 ACRES.
CATALOGUES FREE.

J. CHEAL & SONS.
The Nurseries, CRAWLEY.

BENTLEY'S
NICOTINE COMPOUND
This Vaporiser contains a higher percentage of Pure Nicotine than any other.

BENTLEY'S
INSECTICIDE. An ideal non-poisonous Plant Cleanser for general use under glass.

BENTLEY'S
CONCENTRATED ALKALI.
A perfect Winter Wash. Destroys mosses, lichens, fungi and their spores.

BENTLEY'S
CARNATION MANURE.
Universally popular. All Carnation Specialists admit its excellence.

BENTLEY'S
DAISY KILLER (LAWN SAND).
A most effective Weed Destroyer. Completely transforms lawns.

General Catalogue sent on application to the manufacturers:

JOSEPH BENTLEY LIMITED,
Chemical Works,
BARROW-ON-HUMBER, HULL.

ORCHIDS, ORCHIDS,
Clean, healthy, well-grown Plants at reasonable prices. Many large specimens and rare varieties.
STOVE AND GREENHOUSE PLANTS OF ALL KINDS
PLEASE WRITE FOR LIST.
JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

LOGANBERRY

DELICIOUS FRUIT, requires exactly the same treatment as the Raspberry. Fruiting Canes, 9/- per dozen. Extra Strong Fruiting Canes, 12/- per dozen.

Packed Free and Delivered Carriage Paid.
Illustrated Catalogue post free on application.
KING'S ACRE NURSERIES, LTD., HEREFORD.

SELECTED SEED POTATOES.

All varieties, grown on finest soil in Scotland and Lincolnshire. Any weight supplied at low prices. Prizes given for best results. Before ordering elsewhere write for catalogue. Best Eating Potatoes also supplied in small or large quantities. See Stand No. 122, Smithfield Cattle Show, London.

A. J. SOLE, Seed Potato Grower,
PETERBOROUGH.

SPECIAL LOW
CASH OFFER.

HORNE'S
FRUIT TREES.

STANDARD APPLES.—The following popular kinds are included: Cox's Orange Pippin, Worcester Pearmains, James Grieve, Ecklinville, Allington Pippins, Blenheim Orange, Devonshire Quarrenden, Lord Derby, Newton Wonder, and many others, 2s. each; 10s. half dozen; 20s. dozen.

Also a very fine lot of PYRAMID APPLES (2 and 3 years), on English Paradise, including Worcester Pearmains, Cox's Orange Pippins, James Grieve, Allington Pippins, Bramley Seedling, Warner's King, Houblon, Charles Ross, Peasgood Nonsuch, Blenheim Orange, and many others, 1s. each; 5s. half-dozen; 9s. 9d. dozen.

HALF-STANDARD APPLES on Crab Stock (2 and 3 years), Worcester Pearmains, Cox's Orange Pippins, Newton Wonder, Allington Pippins, Lord Derby, Blenheim Orange, James Grieve, 1s. each; 5s. half dozen; 9s. 9d. dozen.

Lee's Prolific BLACK CURRANT, 2 years, strong stuff, 3s. dozen; 12s. 6d. 100. Raby Castle and Dutch RED CURRANTS, 2 years, 2s. dozen; 12s. 6d. 100.

STRAWBERRY PLANTS.—Following kinds: Givon's Late Prolific, 1s. dozen; 4s. 100.

100,000 Drumhead CABBAGE PLANTS, 3s. 1,000.
LIST FREE.

W. HORNE & SONS,
Fruit Tree Growers,
CLIFFE, near ROCHESTER, KENT.

100,000 BORDER CARNATIONS
EVERY GOOD VARIETY IN COMMERCE.
Healthy Plants. Popular Prices.
Largest Growers and Most Successful Exhibitors in the United Kingdom.
ARTHUR R. BROWN, Ltd.,
Wychall Nurseries, Kings Norton.
Catalogue on Application.

PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J.R.PEARSON & SONS
LOWDHAM, NOTTS.

PLANTING SEASON.
SEND FOR OUR
Descriptive Catalogue
OF
Ornamental Trees and Shrubs, Roses, Rhododendrons, Climbers, Fruit Trees, Forest Trees, Herbaceous and Alpine Plants.

Advice given on all matters appertaining to
LANDSCAPE GARDENING.

GEO. JACKMAN & SON,
Woking Nurseries, Surrey.
Established over a Century. (Nurseries 200 acres.)

SWEET PEAS.

The Exhibitor's House for true stocks of English-grown Seeds.
Awarded 90 Gold Medals.
Novelties for 1912:
AFTERGLOW, PRINCE GEORGE, DOROTHY, R. F. FELTON, CORONATION, FLORRIE.
1/- per packet.
For other Novelties and all the latest varieties in cultivation, see Catalogue, post free.

ROBERT BOLTON, F.R.H.S.,
The Sweet Pea Specialist,
WARTON, CARNFORTH.

A SPECIALITY FOR MORE THAN 50 YEARS.

POT VINES

Exceptionally Fine this Season.
Inspection Invited.

J. R. PEARSON & SONS, LOWDHAM, Notts.

haps the greatest care has to be exercised in the selection and disposition of trees, especially if spinneys or plantations are to be formed with a view to their yielding profitable timber at some future time. For this purpose a general mixture of trees such as sometimes obtains is not to be encouraged. Such a mixture has the appearance of the sweepings of a nursery and is rarely effective. When a great many different kinds of trees are grown together, people naturally want to get amongst them to examine them ; therefore it is desirable that they should be given every facility for developing into perfect trees, both as regards heads and trunks, whereas for sylvicultural purposes the trunks are allowed to develop at the expense of the heads, and on account of this, the heads are often of a nondescript character. Two or three kinds of trees may, however, be used to form a plantation, but they should be trees which blend with each other ; for instance, it would be unwise to form a mixture of green and variegated foliage trees or of copper beech and common oak. If these coloured leaved trees are to be used, use them alone. Again, such things as Araucaria imbricata and Sequoia gigantea are hardly the subjects to mix with British trees, though there are other exotic conifers which would not look at all out of place.

The judicious planting of the outskirts of park plantations with showy flowering or fruiting trees is commendable, providing trees of a garden nature are not included. Such things as Pyrus aucuparia, P. aria, P. malus, P. communis, Cratægus species, Robinia pseudacacia, Prunus avium, Ilex aquifolium, and the common laburnum are suitable subjects. Where colour effects are desired, plantations of golden poplar, copper beech, white poplar, or golden or silver elms may be introduced, but they must be very carefully placed in order that they will not strike a discordant note among trees of a more typical character. Colour of natural foliage demands attention in ornamental planting, for the leaves of some trees have a very sombre look ; therefore, without something to relieve them, their effect is depressing. The yew and Austrian and Corsican pines are cases in point. It is, however, possible to brighten up what would otherwise be a dismal wood by the introduction of clumps of trees with more cheerful foliage, and by planting the outskirts of groups of trees with species having brighter coloured leaves. The outskirts of decorative clumps of trees are not supposed to provide good timber trees, that is left for the inner parts of the wood ; therefore, advantage can be taken for the introduction of subjects which are more profitable for shelter and ornament than for timber.

In addition to large clumps of trees, it is often necessary to plant small clumps in a park. These, as a rule, ought to be formed of one kind of tree each, so that all may grow together to form a well-balanced group, or that all may be removed save one, after they have done their duty as nurses and drawn that one up, for many of our best proportioned trees have been obtained by leaving those which have been drawn up in a clump or wood with plenty of room for branch development after they have attained a considerable height among other trees. For the kinds of parks usually attached to large domains it is, as a rule, inadvisable to introduce trees of a garden character, the best results being obtained by a judicious blending of clumps and isolated native trees or exotics, such as Douglas fir, larch, chestnut, silver fir, or others of a similar character. Formal shaped clumps must be avoided, and the whole system of planting made to look as natural as possible.

Many very happy results of park planting are apparent throughout the country, but in some places there appears to be a tendency towards a too formal style. A very natural-looking park is to be seen around a mansion in the vicinity of Flodden. The trees are in irregular-sized groups, with considerable areas of open grass land intervening. It is said that the groups of trees were planted originally to represent the disposition of the troops at the battle of Waterloo. Whatever the original idea was, the result presents a delightful landscape effect.

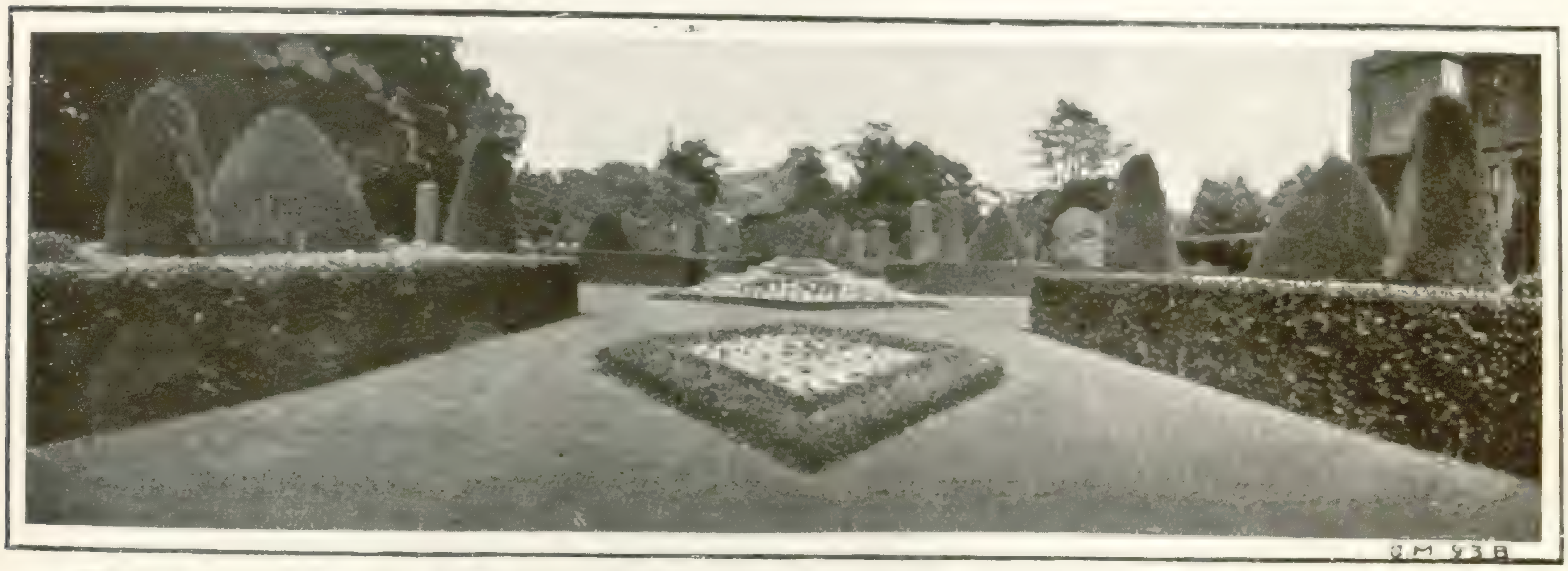
Although in many cases it is inadvisable to form too great a mixture of trees for landscape effect, there are cases where it may be advisable to introduce clumps of many kinds of trees for experimental purposes. Then groups of such kinds as the Tulip-tree (Liriodendron tulipifera), Maidenhair-tree (Ginkgo biloba), Black Walnut (Juglans nigra), caryas in variety ; Atlas Cedar (Cedrus Atlantica), Tree of Heaven (Ailanthus glandulosa), Red Gum (Liquidambar styraciflua), Japanese Cedar (Cryptomeria japonica), deciduous cypress (Taxodium distichum), Lawson's cypress (Cupressus Lawsoniana), etc., might well be planted.

Where the production of timber is not the first question in view, very effective plantations may be formed by planting some special kind of tree, any of the above, for instance, wide apart, with nurses in between, so that the nurses can be taken out eventually, leaving the special trees with ample room to develop to their full size, so that each tree will stand clear of its neighbour. Such groups have a very ornamental effect, for the nurse trees ensure height, then comes a good development of branches, and each tree is a perfect specimen, though, of course, the wood is less clean than that which has been grown under purely sylvicultural conditions.

Kew. W. Dallimore.

EVERGREEN HEDGES.—I.

Much of the charm and attractiveness of a country landscape lies in the apparently haphazard manner in which a large area of land is divided into separate plots or enclosures, for the greater convenience of sport, pleasure, or cultivation. Such boundary and intersecting lines, or divisions, must, of necessity, to fulfil their purpose, be very prominent, as well as useful, objects. Wood, stone, iron, and living plants are all requisitioned for the purpose, according as each, or any, may be most adaptable or easily procurable in the immediate neighbourhood. Other things being equal, living plants are by far the most ornamental, and, with skill and care expended upon their cultivation, may easily be made the most satisfactory, as to effectiveness and length of service.



FINELY-FORMED AND ADMIRABLY-KEPT YEW HEDGES AT CONDOVER HALL, SHREWSBURY.

It is occasionally remarked that the proper treatment of living fences—hedges—is, to a great extent, a lost art. There may be a grain of truth in the assertion, but I think the cause is more likely to be found in the greater demands that are now made upon the supervisor and his staff of workmen in other departments of the garden, notably plant and flower culture, both under glass and in the open air, and the necessary trimming and tending of hedges is neglected, or the work, if done, is deferred far beyond the time most suitable for its accomplishment in a thorough manner, and the greatest benefit to the health and longevity of the plants.

Evergreen hedges, as may readily be surmised, are most in favour near the mansion ; not absolutely so because of their well-furnished and pleasing appearance at all seasons, but owing nearly as much to the shelter, comfort, and sense of security they afford in the most inclement and cheerless period of the year. Evergreen species of plants suitable for the purpose are now more numerous than was the case when many of the existing hedges which adorn the environment of many a stately home were planted. These, more often than not, are of the yew tree, than which there is no species more lasting or suitable for forming an almost impenetrable wall of greenery, that will withstand storm and strees, and prove an object of grace and beauty for several centuries.

The Yew.

This is of slow growth, a point which, in some respects, constitutes its chief merit, for, as already stated, a hedge once formed, of sufficient height and breadth for its purpose, can, by the means of an annual trimming, be kept to a regulation shape and size for a very long period. When preparing a site for planting a trench fully three feet in width and two feet or more in depth, breaking up the lower strata deeply before returning the excavated soil is required. If poor in quality dung or leaf-soil may be mixed throughout to a moderate extent, and, what is still more important, a fair amount of lime to soils deficient in this commodity must be added. The yew will thrive in most soils and positions, and withstands shade from overhanging trees or contiguous buildings better than any other evergreen. The plants, at the time of insertion, should be about two feet in height, and have been transplanted yearly to encourage the formation of small fibrous roots. Pruning, with the exception of the removal of a rampant shoot here and there, will not be required for at least two years from time of planting. It is best done in the spring months, and watering should be well attended to for the season thereafter. Before pruning proper is set about consideration should be given to the situation, and a decision arrived at as to the contour of the future hedge. To harmonise with an ancient mansion or its appurtenances straight perpendicular sides, with flat top, is probably the best. As a first step towards this, with sharp shears clip both sides evenly, and reduce the top growth in moderation, the standard of size being set by the weakest part, if such there be. Where two clippings can be given each year the latter parts of June and August are most fitting, but, if only one, the latter period is preferable, the growths then being matured.

VIBURNUM RHYTIDOPHYLLUM.

A distinct evergreen shrub, with handsome foliage, and bearing, at the points of the growths, corymbs of yellow-white flowers, which are succeeded by deep red berries.

The Holly.

This is an excellent plant for hedges, more especially where such are wanted for ornament and shelter, rather than utility. The spinous foliage is, in this respect, of some assistance in resisting the onsets of cattle or other would-be intruders, but several years must necessarily elapse after planting ere the branches attain sufficient rigidity to be thoroughly effective in this way, while anyone having had much experience with holly knows the difficulty that ensues when a gap becomes a reality. The some preparation of site as detailed for the yew holds good, but if the soil is not fairly rich, liberal additions of manure or good loam should be added, and any depression of surface in the line, whereby water might accumulate to the detriment of the plants must be drained. A rich, warm, and moderately dry soil is most suitable. As an aid to this, upon shallow soils or very moist situations, the digging of a small trench or ditch alongside the prospective line of fence, laying the soil thus excavated in such a way that a bank, from one to two feet in height, is formed, into which, when well consolidated, the roots of the plants may be inserted, is of great assistance. An oval-shaped hedge is preferable for the holly, and severe pruning should be deferred for a considerable time to enable the roots to obtain a good grip of the soil. James Day.

ORNAMENTAL FRUITING TREES AND SHRUBS.

Now that the planting season is near at hand, the value of ornamental fruiting trees and shrubs must not be overlooked. A tree or shrub may be beautiful when in flower or again in the autumn, with its changing tints of foliage, yet the brilliant fruits and berries are, in many cases, not taken into consideration. In many instances, aucubas are planted for their foliage alone, yet if a few male plants are mixed with them, a glorious crop of berries will result. The same method must be adopted with the sea buckthorn, i.e., a few male plants must be planted to provide pollen.

The Mountain Ash (Pyrus aucuparia) is familiar to everyone, with its large bunches of scarlet berries, and the various hollies are too well known to need mention here. The common Dog rose (Rosa canina) makes a bright picture in the hedgerow, and some corner in the wild garden should be found to accommodate it on account of its fruits. R. rugosa has fine hips, and it is an excellent species for grouping in the shrubbery. The cotoneasters should be largely planted, on account of their free berry bearing propensities; C. frigida is the tallest growing, and deserves to be more popular than it is at present. It carries large, flat heads of bright scarlet berries, and is a striking object in the autumn. Others worthy of mention are C. horizontalis, C. rugosa Henryi, C. microphylla, C. Simonsi, C. pannosa, and C. applanata. Viburnum rhytidophyllum is highly attractive, with its foliage and berries, the latter being borne in flat bunches at the extremities of the shoots. V. Henryi and V. phlebotrichum are also good. The peculiar racemes of fruit of Leycesteria formosa makes it an interesting shrub.

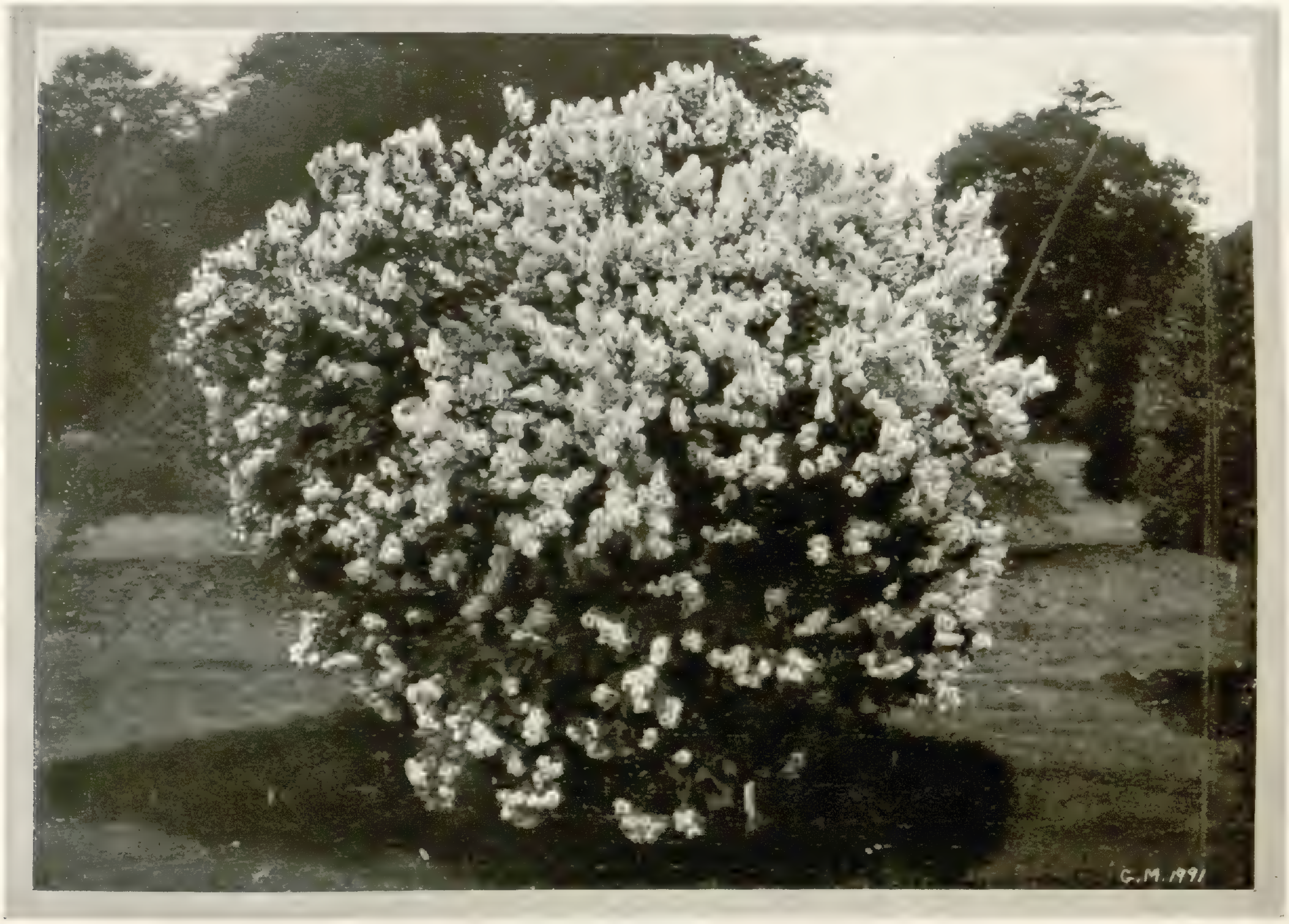
Cratægus pyracantha and C. p. Lelandi are two useful wall shrubs, the latter creating a brilliant picture when in fruit. Among the crabs we have the Siberian, with round, delicately-tinted fruits, and John Downie, with elongated fruits. Berberis Thunbergi has oval coral-red berries borne on the undersides of the shoots; B. vulgaris and B. Wilsonæ are also very showy. Benthamia fragifera (or Cornus capitata) requires the warm climate of the south and south-western counties, for its successful cultivation. The fruits are round and bright red, from whence the tree takes its name of the Strawberry tree. Arbutus Unedo is also sometimes called the Strawberry tree, for it bears bright red fruits in the autumn.

Pernettyas and skimmias are useful dwarf shrubs bearing an abundance of berries. The Snowberry (Symphoricarpus racemosus) is a well-known shrub, with white berries. Euonymus europæus bears an abundance of coral-red berries, which are great favourites with the birds. Cydonia japonica and C. Maulei adapt themselves to the covering of walls, the fruit of the former being round and green, covered with small white spots, and those of the latter are yellow.

E. C. Pooley.

FLOWERING SHRUBS AS LAWN SPECIMENS.

In dealing with a subject of this kind it is necessary to take several things into consideration to ensure success, for not only has the soil to be made suitable for the various subjects, but the situation must also be taken into account. It is no uncommon thing to find tender plants occupying exposed situations, open to the winds from all quarters, and we are then told that "they fail to thrive in this part of the country," whereas, if due attention is paid to shelter, even only a short distance away, the same kind of tree or shrub will often grow luxuriantly. One often meets with surprises when travelling about the country; some rare plant is found in an unlooked-for place, and where one might expect to find a collection of choice subjects nothing is seen but the commonest shrubs.



SYRINGA RUBRA DE MARLEY.

A handsome specimen of this old, but beautiful, lilac at Kew. It is equally remarkable for its good habit and freedom of blooming, the colour of the flowers being bright rose-lilac.

One of the chief considerations, next to suitable soil, is the selection of suitable situations, and in most gardens of any dimensions these can be made by judicious planting. It is not the number of trees that one can plant in a certain amount of space, but their disposition, that gives effect. One good specimen is far more pleasing than half a dozen ill-grown plants; this being so, it is well not to overcrowd in the first instance.

Where shrubs are planted for shelter they should be a sufficient distance away so as not to interfere with the growth of those they are intended to protect. Often a shrub that is hardy when grown in an open place will suffer considerably during a severe winter if it has been grown under the shade of other trees. What should be aimed at is shelter from rough winds without overshadowing. When preparing stations for specimen shrubs and trees, two things are essential: see that the sites are well drained and that a suitable compost is provided. Some like a dry, sunny position, others need shade and shelter: some species thrive best in a peaty soil, while others need soil of a more retentive nature. Many prefer soil free from lime, while others fail to grow satisfactorily unless there is a sufficient quantity of lime. Though some kinds are supposed to grow only in peat I have seen them grow most luxuriantly when planted in a heavy loam bordering on clay that has been free from lime; most of the hardy ericas will grow in such soil, and many of the stronger kinds seem to prefer this to peat, but they do not make good specimens as their growths are liable to split off by snow.

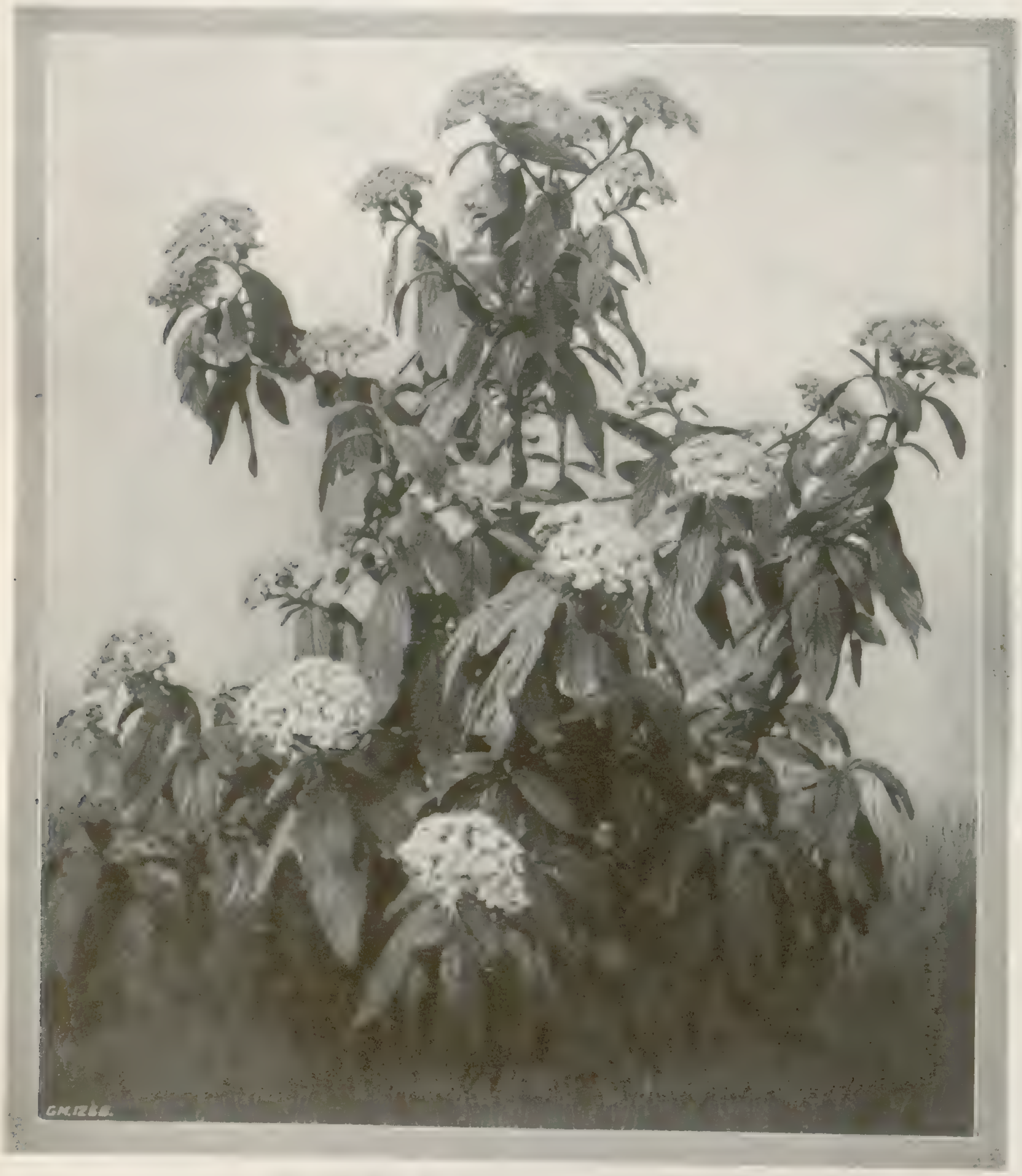
Andromeda japonica and A. japonica variegata make handsome specimens for small gardens, as they are of compact growth and flower most profusely in early spring, and when not in bloom their neat foliage renders them most attractive. A. arborea, too, is a most interesting and charming shrub. Those who have not seen a fine specimen of Enkianthus campanulata in full bloom have a treat in store. This is deciduous, and flowers quite early in spring, having andromeda-like blossoms, but of a dark red colour. It requires the same treatment as the andromedas, and should be grown in the full sunshine. Daphniphyllum glaucescens is an evergreen shrub of compact habit, having large green foliage. It makes a beautiful specimen for the lawn or shrubbery border, especially when it has attained a fair size. Of the many shrubs recently introduced none are more interesting than Viburnum rhytidophyllum. The leaves are from eight to nine inches long, and about two inches broad. The flowers are produced on the points of the shoots during summer, and these are succeeded by dark red berries during the autumn. Of all the virburnums that have been introduced this is without doubt the most interesting, as it retains its foliage and ornamental appearance through the winter. It should be grown in the full sunshine for the fruits to ripen.

Most people know Garrya elliptica as a plant for covering a wall; few, however, have any idea of its beauty when grown as a specimen on the lawn; yet it is only thus that its true character can be seen, as the long catkins then hang down most profusely all round the branches. It requires a deep rich soil and an open situation to ripen the wood, for unless this is properly matured it will not bloom freely. At the same time the plant must not be exposed to cold east or north-east winds. Many of the magnolias make grand specimens for lawns, but these must be planted in sheltered positions, though away from the shade of trees. They thrive best in a light rich loam, but must on no account be allowed to become waterlogged at the roots, or they will suffer severely. Of pittosporums, none, in my opinion, make such neat specimens as P. Mayanum. When allowed plenty of room it makes a fine natural pyramid, flowering on the points of the growths.

Most people are acquainted with Ruscus aculeatus (Butchers' Broom), yet how few know R. racemosus or Alexandrian Laurel. When this is planted in an exposed situation in light rich soil it makes one of the neatest specimens it is possible to imagine. Its long slender shoots are clothed with pale green glossy leaves, at the axils of which are produced small racemes of white flowers; these are succeeded in the autumn by clusters of red berries, which render the plant most attractive throughout the winter. Not only is this plant useful as a specimen for a bold place on the rock garden, but its shoots are well adapted for cutting, as they retain their freshness for suitable for forming an almost impenetrable wall of greenery, that will withstand storm and strees, and prove an object of grace and beauty for several centuries.

The Yew.

This is of slow growth, a point which, in some respects, constitutes its chief merit, for, as already stated, a hedge once formed, of sufficient height and breadth for its purpose, can, by the means of an annual trimming, be kept to a regulation shape and size for a very long period. When preparing a site for planting a trench fully three feet in width and two feet or more in depth, breaking up the lower strata deeply before returning the excavated soil is required. If poor in quality dung or leaf-soil may be mixed throughout to a moderate extent, and, what is still more important, a fair amount of lime to soils deficient in this commodity must be added. The yew will thrive in most soils and positions, and withstands shade from overhanging trees or contiguous buildings better than any other evergreen. The plants, at the time of insertion, should be about two feet in height, and have been transplanted yearly to encourage the formation of small fibrous roots. Pruning, with the exception of the removal of a rampant shoot here and there, will not be required for at least two years from time of planting. It is best done in the spring months, and watering should be well attended to for the season thereafter. Before pruning proper is set about consideration should be given to the situation, and a decision arrived at as to the contour of the future hedge. To harmonise with an ancient mansion or its appurtenances straight perpendicular sides, with flat top, is probably the best. As a first step towards this, with sharp shears clip both sides evenly, and reduce the top growth in moderation, the standard of size being set by the weakest part, if such there be. Where two clippings can be given each year the latter parts of June and August are most fitting, but, if only one, the latter period is preferable, the growths then being matured.



VIBURNUM RHYTIDOPHYLLUM.

A distinct evergreen shrub, with handsome foliage, and bearing, at the points of the growths, corymbs of yellow-white flowers, which are succeeded by deep red berries.

The Holly.

This is an excellent plant for hedges, more especially where such are wanted for ornament and shelter, rather than utility. The spinous foliage is, in this respect, of some assistance in resisting the onsets of cattle or other would-be intruders, but several years must necessarily elapse after planting ere the branches attain sufficient rigidity to be thoroughly effective in this way, while anyone having had much experience with holly knows the difficulty that ensues when a gap becomes a reality. The some preparation of site as detailed for the yew holds good, but if the soil is not fairly rich, liberal additions of manure or good loam should be added, and any depression of surface in the line, whereby water might accumulate to the detriment of the plants must be drained. A rich, warm, and moderately dry soil is most suitable. As an aid to this, upon shallow soils or very moist situations, the digging of a small trench or ditch alongside the prospective line of fence, laying the soil thus excavated in such a way that a bank, from one to two feet in height, is formed, into which, when well consolidated, the roots of the plants may be inserted, is of great assistance. An oval-shaped hedge is preferable for the holly, and severe pruning should be deferred for a considerable time to enable the roots to obtain a good grip of the soil.

JAMES DAY.

ORNAMENTAL FRUITING TREES AND SHRUBS.

Now that the planting season is near at hand, the value of ornamental fruiting trees and shrubs must not be overlooked. A tree or shrub may be beautiful when in flower or again in the autumn, with its changing tints of foliage, yet the brilliant fruits and berries are, in many cases, not taken into consideration. In many instances, aucubas are planted for their foliage alone, yet if a few male plants are mixed with them, a glorious crop of berries will result. The same method must be adopted with the sea buckthorn, i.e., a few male plants must be planted to provide pollen.

The Mountain Ash (Pyrus aucuparia) is familiar to everyone, with its large bunches of scarlet berries, and the various hollies are too well known to need mention here. The common Dog rose (Rosa canina) makes a bright picture in the hedgerow, and some corner in the wild garden should be found to accommodate it on account of its fruits. R. rugosa has fine hips, and it is an excellent species for grouping in the shrubbery. The cotoneasters should be largely planted, on account of their free berry bearing propensities; C. frigida is the tallest growing, and deserves to be more popular than it is at present. It carries large, flat heads of bright scarlet berries, and is a striking object in the autumn. Others worthy of mention are C. horizontalis, C. rugosa Henryi, C. microphylla, C. Simonsi, C. pannosa, and C. applanata. Viburnum rhytidophyllum is highly attractive, with its foliage and berries, the latter being borne in flat bunches at the extremities of the shoots. V. Henryi and V. phlebotrichum are also good. The peculiar racemes of fruit of Leycesteria formosa makes it an interesting shrub.

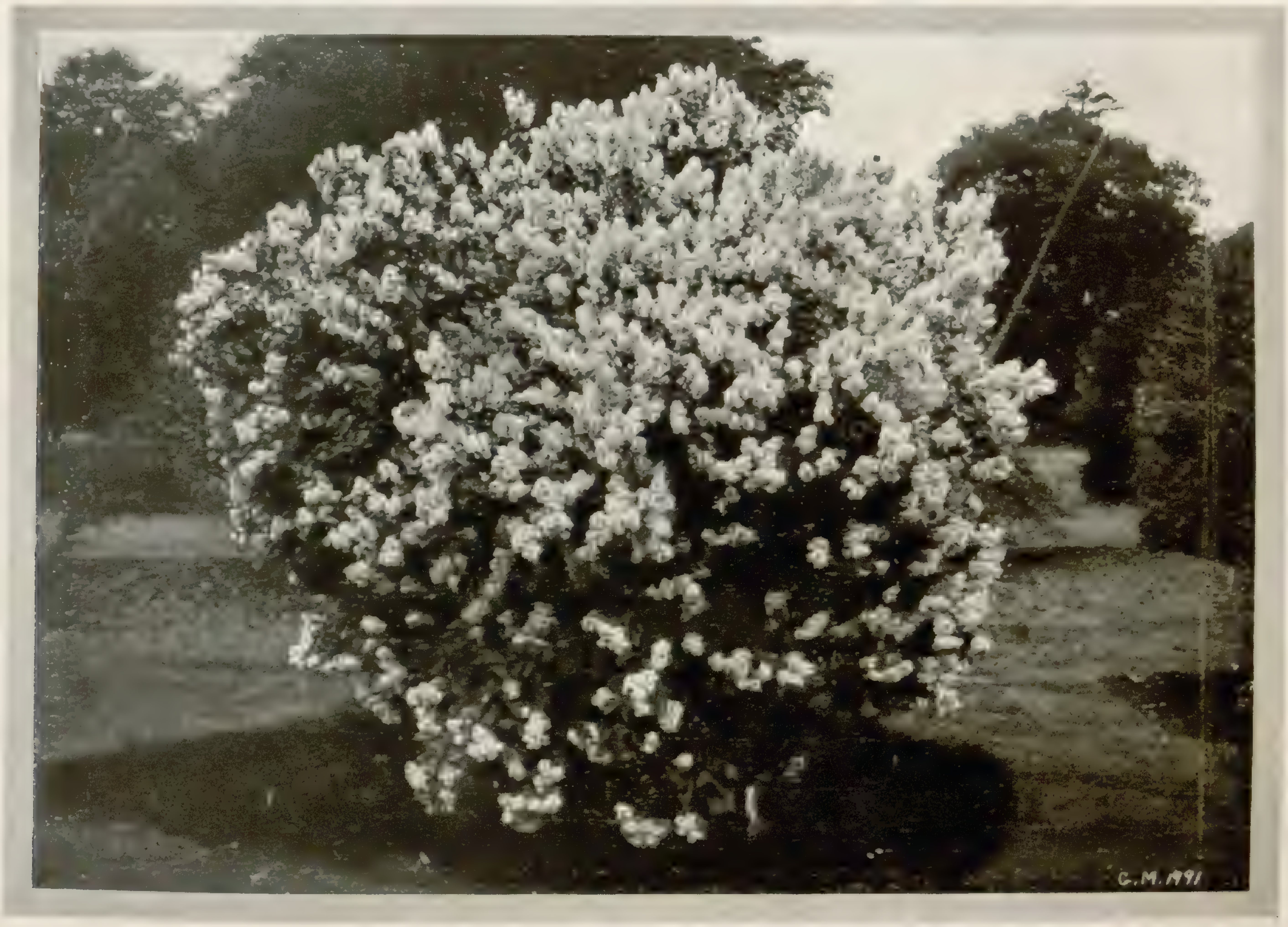
Cratægus pyracantha and C. p. Lelandi are two useful wall shrubs, the latter creating a brilliant picture when in fruit. Among the crabs we have the Siberian, with round, delicately-tinted fruits, and John Downie, with elongated fruits. Berberis Thunbergi has oval coral-red berries borne on the undersides of the shoots; B. vulgaris and B. Wilsonæ are also very showy. Benthamia fragifera (or Cornus capitata) requires the warm climate of the south and south-western counties, for its successful cultivation. The fruits are round and bright red, from whence the tree takes its name of the Strawberry tree. Arbutus Unedo is also sometimes called the Strawberry tree, for it bears bright red fruits in the autumn.

Pernettyas and skimmias are useful dwarf shrubs bearing an abundance of berries. The Snowberry (Symphoricarpus racemosus) is a well-known shrub, with white berries. Euonymus europæus bears an abundance of coral-red berries, which are great favourites with the birds. Cydonia japonica and C. Maulei adapt themselves to the covering of walls, the fruit of the former being round and green, covered with small white spots, and those of the latter are yellow.

E. C. POOLEY.

FLOWERING SHRUBS AS LAWN SPECIMENS.

In dealing with a subject of this kind it is necessary to take several things into consideration to ensure success, for not only has the soil to be made suitable for the various subjects, but the situation must also be taken into account. It is no uncommon thing to find tender plants occupying exposed situations, open to the winds from all quarters, and we are then told that "they fail to thrive in this part of the country," whereas, if due attention is paid to shelter, even only a short distance away, the same kind of tree or shrub will often grow luxuriantly. One often meets with surprises when travelling about the country; some rare plant is found in an unlooked-for place, and where one might expect to find a collection of choice subjects nothing is seen but the commonest shrubs.



SYRINGA RUBRA DE MARLEY.
A handsome specimen of this old, but beautiful, lilac at Kew. It is equally remarkable for its good habit and freedom of blooming, the colour of the flowers being bright rose-lilac.

One of the chief considerations, next to suitable soil, is the selection of suitable situations, and in most gardens of any dimensions these can be made by judicious planting. It is not the number of trees that one can plant in a certain amount of space, but their disposition, that gives effect. One good specimen is far more pleasing than half a dozen ill-grown plants; this being so, it is well not to overcrowd in the first instance.

Where shrubs are planted for shelter they should be a sufficient distance away so as not to interfere with the growth of those they are intended to protect. Often a shrub that is hardy when grown in an open place will suffer considerably during a severe winter if it has been grown under the shade of other trees. What should be aimed at is shelter from rough winds without overshadowing. When preparing stations for specimen shrubs and trees, two things are essential: see that the sites are well drained and that a suitable compost is provided. Some like a dry, sunny position, others need shade and shelter; some species thrive best in a peaty soil, while others need soil of a more retentive nature. Many prefer soil free from lime, while others fail to grow satisfactorily unless there is a sufficient quantity of lime. Though some kinds are supposed to grow only in peat I have seen them grow most luxuriantly when planted in a heavy loam bordering on clay that has been free from lime; most of the hardy ericas will grow in such soil, and many of the stronger kinds seem to prefer this to peat, but they do not make good specimens as their growths are liable to split off by snow.

Andromeda japonica and A. japonica variegata make handsome specimens for small gardens, as they are of compact growth and flower most profusely in early spring, and when not in bloom their neat foliage renders them most attractive. A. arborea, too, is a most interesting and charming shrub. Those who have not seen a fine specimen of Enkianthus campanulata in full bloom have a treat in store. This is deciduous, and flowers quite early in spring, having andromeda-like blossoms, but of a dark red colour. It requires the same treatment as the andromedas, and should be grown in the full sunshine. Daphniphyllum glaucescens is an evergreen shrub of compact habit, having large green foliage. It makes a beautiful specimen for the lawn or shrubbery border, especially when it has attained a fair size. Of the many shrubs recently introduced none are more interesting than Viburnum rhytidophyllum. The leaves are from eight to nine inches long, and about two inches broad. The flowers are produced on the points of the shoots during summer, and these are succeeded by dark red berries during the autumn. Of all the virburnums that have been introduced this is without doubt the most interesting, as it retains its foliage and ornamental appearance through the winter. It should be grown in the full sunshine for the fruits to ripen.

Most people know Garrya elliptica as a plant for covering a wall; few, however, have any idea of its beauty when grown as a specimen on the lawn; yet it is only thus that its true character can be seen, as the long catkins then hang down most profusely all round the branches. It requires a deep rich soil and an open situation to ripen the wood, for unless this is properly matured it will not bloom freely. At the same time the plant must not be exposed to cold east or north-east winds. Many of the magnolias make grand specimens for lawns, but these must be planted in sheltered positions, though away from the shade of trees. They thrive best in a light rich loam, but must on no account be allowed to become waterlogged at the roots, or they will suffer severely. Of pittosporums, none, in my opinion, make such neat specimens as P. Mayanum. When allowed plenty of room it makes a fine natural pyramid, flowering on the points of the growths.

Most people are acquainted with Ruscus aculeatus (Butchers' Broom), yet how few know R. racemosus or Alexandrian Laurel. When this is planted in an exposed situation in light rich soil it makes one of the neatest specimens it is possible to imagine. Its long slender shoots are clothed with pale green glossy leaves, at the axils of which are produced small racemes of white flowers; these are succeeded in the autumn by clusters of red berries, which render the plant most attractive throughout the winter. Not only is this plant useful as a specimen for a bold place on the rock garden, but its shoots are well adapted for cutting, as they retain their freshness for a considerable time in water. Skimmias, too, are very beautiful, not only on account of their glossy foliage, which they retain through the winter, but for their freedom in flowering and the brightness of their berries through the dull season. They form neat specimens, and, if planted in a mixture of peat, leaf-soil, and loam, will grow freely.

There are many other evergreen shrubs that are most beautiful, but space forbids mention of others here. Turning to those of a deciduous nature, there are many that are not generally found in our gardens, and it would be well if more interest were taken in planting them. I planted a specimen Cæsalpinia japonica some years ago. In appearance it somewhat resembles the old thorny acacia, but does not grow to such a large size. The flowers are of a bright canary yellow, borne on long racemes. The tree when grown on a stem makes a grand specimen for a lawn. Eucryphia pinnatifolia is a most interesting shrub, with foliage somewhat like that of the rose, and flowers, which are pure white, from two to three inches in diameter, and very like those of a hypericum. This is one of the few shrubs that flower at the end of the summer, and on that account it is valuable. It should be planted in an open situation, but, given shelter from the north and north-east winds. Styrax japonicum is of recent introduction, of very pleasing habit, blooms most profusely in the early summer months, when its fragrant, white flowers render it most attractive. I have never seen a large plant of this, as those I planted have not yet attained full growth, but from what I have seen of its character, I should say it would make a most interesting specimen.

There are many of the crabs that make grand specimens for the lawn, shrubbery, or woodland, but none is more pleasing when in bloom than Pyrus floribundus atrosanguinea, its long slender shoots being clothed with brightly-coloured flowers in early spring, these lasting for a considerable time in perfection should the weather be favourable. To be seen at their best the flowering crabs should be planted singly, and be grafted on stems from eight to ten feet high, when their long slender shoots will hang gracefully down, forming garlands of delicate flowers. When in bud, before the flowers expand, the above-named is most attractive. When planting such trees care should be taken not to have three or four bearing somewhat similarly coloured flowers and blooming at the same time in close proximity to each other, otherwise one will spoil the effect of the other. Many of the lilacs make fine lawn specimens under good cultivation, as shown by the specimen of Rubra de Marley illustrated herewith.

H. C. Prinsep.

THE MANNA OR FLOWERING ASH (FRAXINUS ORNUS).
A good specimen of this handsome tree in the Royal Gardens, Kew.

ORNAMENTAL TREES FOR SMALL GARDENS.

The selection of trees for beautifying gardens, whatever may be their area, requires considerable care; but in no case is this so essential as when they are intended for gardens of comparatively small size. In the planting of gardens with widely extending pleasure grounds it is possible to select from a wide range of subjects, because the dimensions to which the larger-growing trees attain when fully developed are not a matter of prime importance. If the planter is wise he will not use otherwise than sparingly trees that properly belong to the park and woodland in the creation of the arborescent features of gardens of large size. But for gardens of moderate area trees that assume large proportions, such as the common horse chestnut, the elms, and the planes, are quite unsuitable, and the planter has accordingly a limitation placed upon the exercise of his taste.

There is no dearth of beautiful trees of moderate growth, and the object of these brief notes is to direct attention to a few that are especially deserving the attention of the owners of gardens with somewhat limited dimensions.

Acers.

The acers include a considerable number of trees of much value for the purpose in view, prominent among them being those of Japanese origin. Grown as round-headed standards, on stems five or six feet in height, Acer palmatum and its varieties are very attractive, whether planted in prominent positions on the lawn or in the shrubbery border. The specific form has elegant green leaves; A. palmatum palmatifidum has leaves that are finely cut; A. palmatum purpureum is remarkable for its deep bronze-purple leaves; A. palmatum flavescens has leaves of a yellow-green hue, and is useful as a contrast to the dark-leaved forms.

The varieties of A. negundo claim attention for their distinctive colouring, and the facility with which they can be kept to a quite small size should it be necessary. A. negundo californica aurea is rich in colour, and one of the most effective of the golden-leaved trees of small growth. A negundo aurea elegantisima is vigorous in growth, and the leaves have a bright yellow margin, and A. negundo albo marginatum is the most effective of hardy deciduous trees with silvery variegation.

Æsculus.

While the horse chestnut, notwithstanding its nobility of aspect and attractiveness during its season of flowering, should be excluded from the garden of moderate size, the Red-flowered Chestnut (Æ. carnea) should have a place therein, provided a sunny position can be given it, for it is compact in growth, of handsome contour, and attractive when in bloom. The variety known as Brioti has flowers of a deeper colour, and is most desirable. Æ. flava and Æ. macrostachya, also known as Pavias, are handsome small trees that produce handsome spikes of yellow flowers in summer.

Birches.

The birches are extremely beautiful when they have room for their full development, but they are now referred to for the purpose of directing attention to the elegant weeping form of Betula alba known as Youngi. This is one of the most graceful of all the weeping trees, and as comparatively little space is required for a specimen, it may be described as the best weeping deciduous tree for the small garden.

Cherries.

The ornamental cherries include several double forms of great beauty, and as they are all of moderate stature they can be strongly recommended. The following are of exceptional value: Cerasus avium fl. pl., a charming tree, producing a profusion of large double pure white flowers; rather too large for the smallest gardens. C. Rhexi fl. pl., a small-growing round-headed tree, bearing large double white flowers, is very attractive, and suitable for quite small gardens. The two varieties of C. pseudo-cerasus, known as Watereri and J. H. Veitch are of great beauty, and should have a place in all gardens. They have large double flowers, those of the last-named being the largest, and the colour is pale pink and rich pink respectively. J. H. Veitch is the best of the two, and if they bloomed simultaneously it should alone be grown, but as it is a fortnight later in flowering they are both required. C. Mahaleb pendula is a charming tree, delightful in spring, when enwreathed in its snowy blossoms, and so elegant in habit as to be attractive throughout the season of growth.

Cratægus, or Thorns.

The thorns, of which there are many beautiful species and varieties, deservedly occupy a high position among small trees remarkable for the beauty of their flowers, and should be included in the smallest selection for gardens of moderate size. The varieties of Cratægus oxycantha, known as Paul's Double Scarlet, Double Pink, and Double White, form an invaluable trio. The weeping thorn, which has single white flowers, is remarkable for its elegance; and C. Carrieri and C. tanacetifolia are two handsome white-flowered species that bloom a week or ten days after the varieties of C. oxycantha have flowered, and desirable where space can be found for them.

Fraxinus.

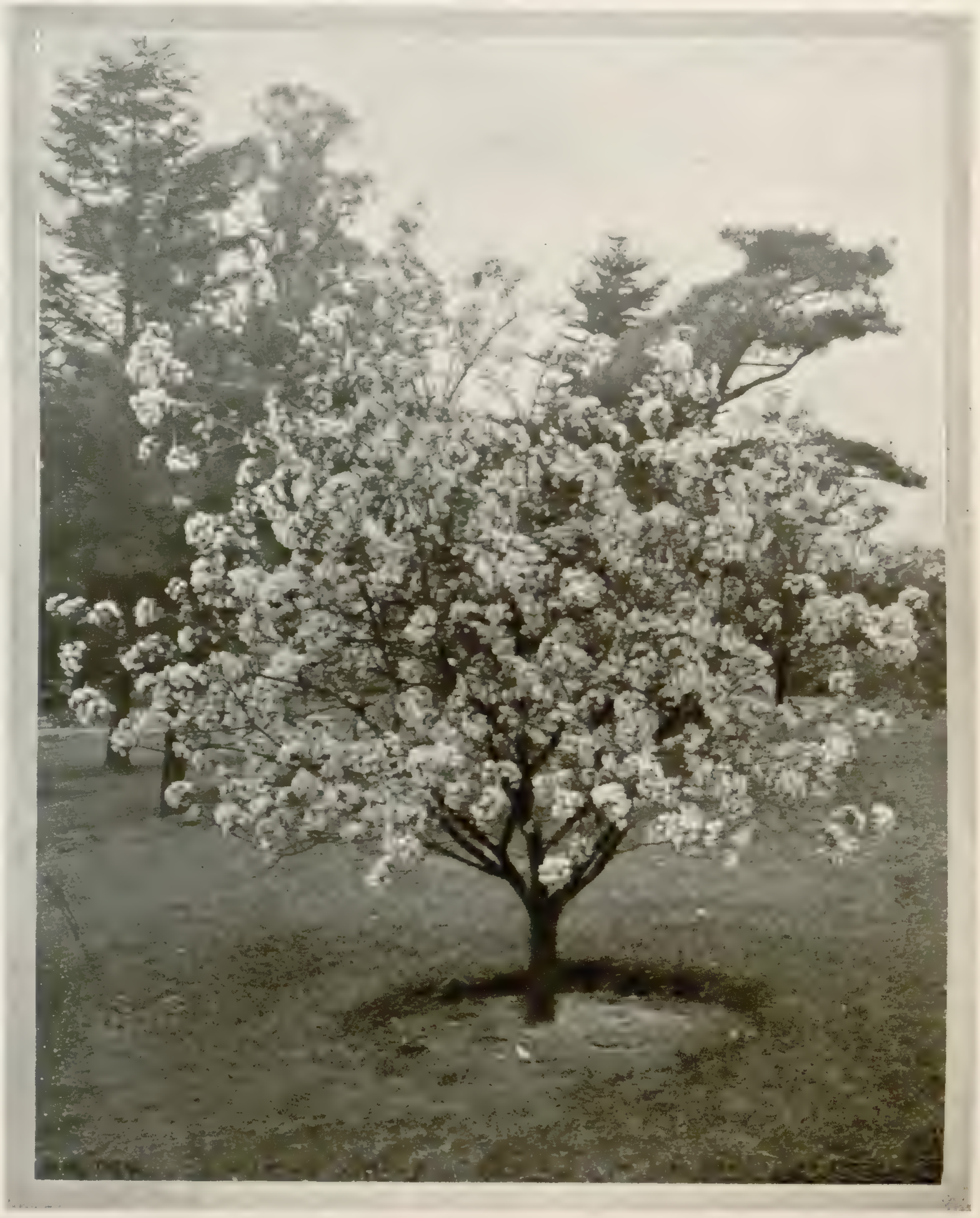
There are a number of varieties of the Common Ash (Fraxinus excelsior) that are distinctly handsome, but they are too large in growth for the present purpose, and they, or, rather, the stock on which they are worked, have long shallow roots, which spread considerable distances from the stem, and rapidly exhaust the soil through which they pass of the food constituents it contains. The Manna, or Flowering Ash (F. ornus) is, on the other hand, of rather moderate stature, and less exhaustive of the soil. The illustration herewith admirably shows the habit of the tree. It has elegant pinnate leaves, which are retained without change of colour until quite the end of October, and bears a profusion of greenish-white flowers in June.

Magnolias.

These comprise some of the most noteworthy of the deciduous trees, and as the most beautiful kinds are of small growth they are especially suited for small gardens. The Yulan (M. conspicua) and M. Soulangeana, are both of the highest value, and should be included in the smallest selection. Alexandrina and nigra are two handsome varieties of the last-named, with relatively large flowers, which are respectively pale pink and deep purple respectively. These magnolias should be given an open position, preferably where they will be sheltered from easterly winds, and be planted in a bed of soil consisting of turfy loam, to which a liberal addition of leaf-mould has been made.

Pyrus.

The ornamental crabs that are chiefly valued for the beauty of their flowers include some of the finest of garden trees, and a small selection should include Pyrus coronaria fl. pl., a distinct form, with large double pink flowers, that are sweetly scented; P. floribunda atrosanguinea, a beautiful variety, with richly-coloured flowers; P. Scheideckeri, a fine hybrid, erect in growth, and free in blooming, the flowers large and blush-pink; and M. spectabilis fl. pl., a handsome tree bearing a profusion of bright pink flowers. G.



A BUSH TREE OF PYRUS SCHEIDECKERI.

A handsome hybrid, bearing large blush-pink flowers.

JACOBINIA CHRYSOSTHEPHANA.

This is one of the most handsome of winter-flowering stove plants, and for decorative purposes in the conservatory or dwelling-house it is especially useful. The bright orange-yellow flowers are freely produced at the apex of the shoots in dense heads, and they will remain perfectly fresh for several weeks, rendering the plants especially valuable. This Jacobinia is not so frequently grown in private gardens as it deserves, but if its merits were more widely known, I feel sure that there would be few gardens of any pretensions where it would not be regularly cultivated, and in many instances it would become a rival to the ever-popular poinsettia.

A stock is readily raised from cuttings during April ; they are inserted singly in thumb pots, and plunged in a propagating case until rooted. They are then put into 60's, and grown on in an intermediate temperature. from these they may be shifted into 32's, in which they are allowed to flower. For the final shift, a compost consisting of two-thirds good fibrous loam and one-third leaf soil, with the addition of a little crushed charcoal and silver sand, suits them admirably. Pot moderately firmly, and grow on in the same structure until the roots are pushing freely into the new soil, when the plants should be removed to a sunny frame, in which they can remain until the end of August.

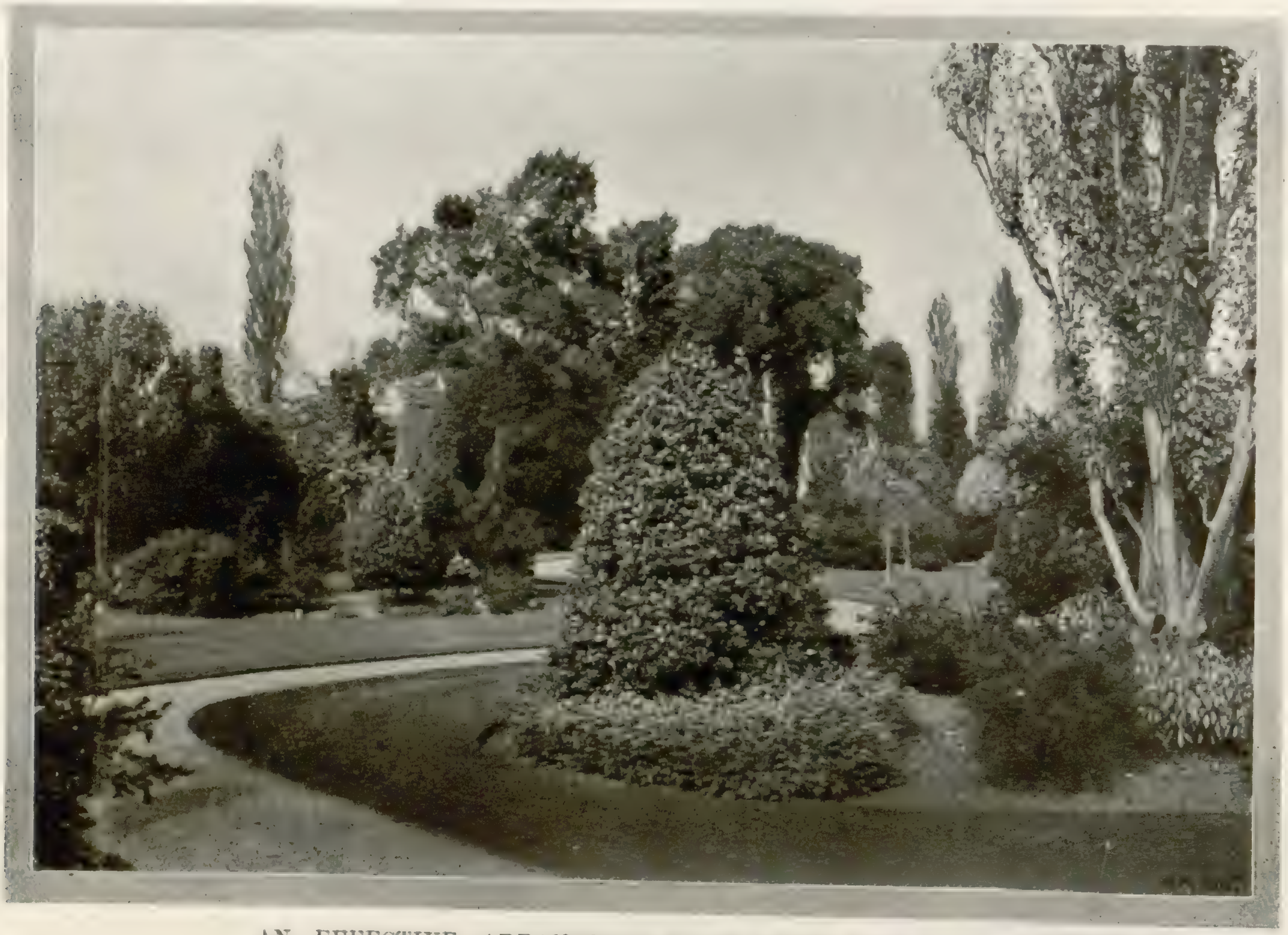
Syringe them regularly during fine weather, and shade lightly from bright sunshine. The points of the shoots should be pinched out after they have formed three pairs of leaves, to induce them to form side growths. When they are housed in the autumn a light house with a temperature of 60 degrees is the most suitable, and during that period they should be exposed to the full influence of the sun to thoroughly mature their growth. Weak soot water is helpful during the growing period, and, as the flower-heads commence to develop, occasional light top-dressings of some approved fertiliser are an assistance. The plants can be cut back and grown on a second year, shifting them into 8in. pots, when they invariably form bushy specimens.

J. Gardner.

BULBS.—A practical treatise on the cultivation of hardy, hothouse and greenhouse bulbous and tuberous rooted plants is "Bulbs and their Cultivation," by T. W. Sanders, price 2s. 6d. net, or by post 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

GROUPING HARDY TREES AND SHRUBS.

Notwithstanding the prodigal number of free-flowering shrubs at present available for garden adornment, and having in mind their comparative inexpensiveness that renders them in a sense accessible to all, one cannot but regret the neglect to which they are so often subjected, and, in some districts, their very existence might almost be questioned, in so far as their presence receives any practical expression. Other instances might be cited where tolerably good collections are formed, and not infrequently well grown; but the final result, which, after all, is the crucial test of good planting, is an effort that yields nothing decisive. A vast amount of expense has been incurred, much valuable time and labour expended, and in the end one looks in vain for the expression of a definite idea, such as a well thought-out composition ought to reveal. A selection of trees and shrubs is a far more desirable element in a garden than any collection, however comprehensively formed, grouping them so that they may have scope for individual development when the character is strong enough to assert itself, and alternately, massing the weak elements together, from whence will ultimately issue strength. On the whole, it is this latter element that wants emphasising at the present time, as massed shrubs are a source of perennial delight in gardens, however small. Where the grounds are extensive their presence raises the entire surroundings, so that nothing else can approach them in attractiveness. Simple groups afford the most solid displays, when the subjects composing them are in flower, of which familiar instances readily occur in rhododendrons (deciduous and evergreen), spiræas, philadelphus, syringas, berberis, deutzias, and many others. Groups of these in threes, fives, or larger quantities never fail to reveal the distinctive character of the particular kind, nor can we gainsay the sumptuousness of the floral feast produced, as the effect is one we readily appreciate and often eagerly anticipate in future years. Simple groups lend themselves to greatest effect on steep or undulating ground, or along the margins of woodland, where the forest subjects, by their presence, lend assistance in affording the necessary height to redeem this form of planting from the charge of being too flat.



AN EFFECTIVE ARRANGEMENT OF TREES AND SHRUBS
In the gardens of Aldenham House, the residence of the Hon. Vicary Gibbs.

Under other circumstances, composite planting is to be commended, as, by this means we may reproduce perfect landscapes in the smallest space, or form them on any extended scale. In this system of grouping the commonest shrubs have an interest and beauty not readily attained elsewhere. Berberis Thunbergi intergrouped with Cornus elegantissima, and a few of Corylus avellana purpurea or Berberis vulgaris purpurea planted through them presents a harmonious colour group, becoming radiant in autumn, when Thunbergi foliage takes on the ripening colours in the leaves; in a similar way bushes or even standards of Prunus pissardi give a rich effect when intergrouped with Cornus Spathii aurea in the proportion of three cornus to one of prunus. Spiræa arguta, or any similar dwarf white-flowered shrub, gains in effect when seen under tall pink or scarlet thorns. Forsythia viridissima mixed with Ribes atrosanguineum gives a happy result, and for choice of an evergreen work Berberis Darwini among and in front of them. Masses of Berberis aquifolium are readily improved by having this ribes and Forsythia suspensa in free groups through it, and plenty of Pinus montana behind. Pyrus floribunda, atrosanguinea, and spectabilis are good alone in grass, or when carpeted by dwarf ericas, while interplanted in beds with Hydrangea paniculata grandiflora ensures a due complement of flower in autumn as well as spring.

The coloured forms of amygdalus, cerasus, and prunus are also suitable for massing by themselves in grass as bushes; while in standard form they can be used to advantage among broad masses of rhododendrons, broken by spiræas, philadelphus, and similar shrubs; while the effect is helped out by having copper beech in the near vicinity. Under certain conditions, tall trees of cerasus, crabs, amygdalus, and allied subjects can often be placed to singular advantage as foreground studies in the open. In broad glades of woods they appear to immense advantage, but then it is desirable to have some evergreen background, such as pinus afford. This contrasting element of the pinus is never more happily expressed than where the graceful outlines and sparkling silver bark of silver birch comes against them in sharpest relief, and if azaleas are added to the foreground and rhododendrons introduced in the immediate distance the result is a picture of infinite beauty.

Crabs, like John Downie, Dartmouth, Montreal Beauty, or tall trees of Acer negundo variegata, are also suitable for intergrouping with rhododendrons; while the evergreen section of the last-named, even when out of flower, should be given emphasis, as, by employing them as background for Japanese maples, magnolias, and tree ericas, the season of colouring from leaf and flower is greatly prolonged. From their commanding height, Genista cinerea, virgata, and Cytisus albus are excellent when rising above olearias, berberis, and similar shrubs, or with rugosa roses and Pinus montana on rough ground; while in beds Spiræa Thunbergi, Philadelphus purpurea maculatus, Deutzia carminea, and Olearia stellulata would be effective foreground shrubs to employ. Genista hispanica and Cytisus præcox are excellent on sharp ridges of ground with Berberis stenophylla towards the crown, while the foreground might readily be filled in with the various forms of cistus. Pyrus aucuparia would be a suitable tree to plant with them, or alternately some of tree forms of acacia. The perfect grace of brooms appeal with singular charm when overlooking a water scene. Simple arrangements consist of groups of Genista Andreana with rose Wichuraiana clambering through it, and Spiræa Antony Waterer running up deep from a narrow point with Spiræa ariæfolia massed behind; or Cytisus præcox and Firefly intergrouped with a deep mass of Spiræa arguta and an irregular point filled in with Cotoneaster congesta, having a group of Aralia spinosa standing away from the water edge and behind the spiræa. Tamarix are all good shrubs beside water in ground that is well drained, and appear to advantage when grouped with Electra rose or Cytisus Kewense to ramp through them; or, on raised points with Cotoneaster horizontalis in front, and escallonias behind, having some tall plants of amelanchier and a good group of exochorda with Juniperus tamariscifolia again leading towards the water. In such a position Ulmus Dampieri aurea would be most effective; the golden colour of the leaves attain their brightest development where the tree is given a damp situation. Unlike many of its class, the foliage does not burn under the hottest sun. In large areas the fastigiate growth of libocedrus, taxodium, and Lombardy poplar could readily be introduced, and so help to emphasise the more spreading character of other trees; so likewise trees of a weeping character, if sparingly used and always in positions of prominence; of the latter, Salix Babylonica and Caprea pendula are both good and distinct, and suitable for positions that are very damp.

A BEAUTIFUL ARRANGEMENT OF FINE CHRYSANTHEMUMS

That was staged by Mr. Norman Davies at the Crystal Palace on November 1, and secured the National Chrysanthemum Society's large Gold Medal, and also the handsome Gold Medal offered by Messrs. Clay and Son for the best non-competitive exhibit in the show.

Grouping trees and shrubs affords unlimited scope for the expression of individual taste; a subject so comprehensive cannot, however, be adequately treated in these short notes, which must only be accepted as suggestive of greater possibilities.

L. O. V.

ANTHURIUMS.

This genus contains some 150 species and varieties, nearly all requiring stove treatment. Apart from the extreme beauty of the spathes of many of them, and their usefulness for decorative purposes, a few are worthy of a place in warm houses on account of their richly-marked foliage, which attains noble proportions. Warmth is essential to their successful cultivation, and during the growing season the temperature should range from 70 to 80 degrees, and an atmosphere highly charged with humidity be maintained. For the early winter months, when the plants are partially resting, a lower temperature will suffice, and the atmospheric moisture be considerably lessened, but at no time must the plants be dried off or kept in a low temperature.

When in full growth, anthuriums should receive copious supplies of water, both at the roots and overhead. Rain water should be used for syringing, and it should be of the same temperature as the structure in which they are growing, and the paths and stages should be damped at frequent intervals throughout the day.

The best time of the year for repotting is early in February, when the new growth is commencing. Rather deep pans are preferable to pots, as nearly all the roots keep near the surface of the soil. These should be quite clean, and be filled to within four inches of the rim with large pieces of crock, placing over these some nodules of charcoal, then a good layer of moss to prevent the compost mixing with the drainage. The compost should be used in a lumpy condition, and consist of equal parts fibrous peat and loam, with a liberal addition of chopped sphagnum, broken charcoal, and coarse sand. Take the old ball of soil and carefully remove with a pointed stick a portion of the old soil; then spread the roots in the new material, pressing firmly as the work proceeds, and round off the surface, keeping the base of the plant several inches above the rim of the pan or pot. Plants not requiring an extension of root room may be top-dressed with fresh soil after seeing that the drainage is in an efficient condition.

The best of the anthuriums I have grown for their spathes are A. Scherzerianum, in its many forms, notably Maximum, Wardi, Williamsi, and Rothschildianum, and A. Andreanum, A. Ferrierense, A. Lindenianum, A. ornatum, and A. floribundum. Of varieties grown for the beauty of their foliage alone I recommend A. Veitchi, A. Warocqueanum, A. crystallinum, and A. splendidum.

H. T. MARTIN.

Ripe Grapes.—Those still hanging in late houses must be kept at as even a temperature as possible, more especially now we have had a heavy downpour of rain, which has reduced the outside temperature to the normal for the time of year. Outside borders should be protected. Many have to keep grapes hanging to the New Year, and I have not found this any detriment to successful cropping, especially with that sterling variety Lady Downes, which improves with hanging until that time; but softer-skinned grapes should all be used before then. Muscat of Alexandria I have had to keep until the middle of March, though by that time they had begun to shrivel. A little ventilation, and just a little fire heat, to keep a temperature of 50 to 55 degrees, will keep the fruit. Empty the water tanks, as all moisture should be carefully avoided in a ripe house of grapes. When a good grape room is provided cut all bunches from mid-season houses, place one end of the growth in the neck of the bottle, which should be filled with clear, soft water. By this method grapes can be kept for a considerable time. Keep the room at amout 50 to 55 degrees.—W. A. COOK.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

CŒLOGYNE CRISTATA.—Most of the varieties of C. cristata will now have completed their growth, and some of the early-flowering kinds will be advancing their flower scapes. Where plants are cultivated under favourable conditions, there is little difficulty experienced in the satisfactory development of the flowers. During the winter and early spring of last year, flower scapes were sent me from different sources asking why these had turned black, and become, in some cases, a black pulpy mass; at the same time it was stated that the plants appeared to be in perfect health. Most of my correspondents were amateurs, growing their plants in the neighbourhood of London and other large towns. Having had several years' experience in the London atmosphere, there was little difficulty in tracing the cause, as their experience in most respects corresponded with my own, and notes on this matter may be found in my earlier contributions to the Gardeners' Magazine. It is rarely, indeed, that C. cristata can be induced to produce its flowers satisfactorily the plants are grown to produce blooms in December, January, or the early part of February. I found that the only means of producing satisfactory results was by placing the plants in the odontoglossum house as soon as the pseudo-bulbs had matured, and permitting them to remain until there was the least possibility of their being affected by the influences of fog, thus retarding the flowering until more favourable conditions prevailed. This proved the only satisfactory way out of the difficulty. Such varieties as C. c. alba, which are naturally late in growth and flowers, are not subject to these unfavourable influences, and bloom without difficulty. Do not over-water the plants during the time they remain in the cool house. It will be found that there is almost sufficient moisture in the atmosphere to keep the pseudo-bulbs plump. See that all the plants are clean and free from scale now that they have reached maturity.

CATTLEYA LABIATA and other late autumn and winter-flowering kinds should be top-dressed or repotted as necessary, as soon as they pass out of flower. The root in many cases will have become well advanced, but with care repotting may be done, while there will remain sufficient active roots to enable the plants to become re-established. Careful watering is required for all plants that are subjected to repotting during the winter months, as only sufficient is necessary to keep the leaves and pseudo-bulbs plump, and encourage root action. Lightly spraying the plants overhead is a good practice when the conditions are favourable to rapid evaporation of moisture. Syringe between the pots daily and keep a reasonably humid atmosphere around fresh potted plants, as this will greatly reduce the necessity of root watering. — H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

PLUMBAGO ROSEA. — Although this species of plumbago is often grown in the stove, it can be grown equally as well in a temperature of 50 to 55 deg., and allowing for a few degrees rise in the day time. Now that they are coming into flower, a nice light position close to the glass should be afforded them to enable the flowers to receive all possible aid to develop that beautiful delicate colour of which they are capable of producing. If the atmosphere of the house is kept rather dry the flowers will last much longer. A very pleasing effect may be obtained in dinner-table decoration by associating the cut flower of Plumbago rosea with lily of the valley and trails of smilax or Asparagus Sprengeri.

RICHARDIA.—The arum lily is by nature an aquatic plant, and the plants being now in full growth they will require a liberal quantity to satisfy them. Frequent waterings of weak farmyard manure will be found very beneficial. Greenfly is apt to be troublesome, but an occasional fumigation will effectually check the pest.

HYDRANGEAS. — The exceptional hot summer just experienced has had a very good effect on hydrangeas by ripening the wood especially well, so that the growths look promising for another season. The larger specimens may be wintered in a cold peach case, and the small plants in frames, but in both cases protection during severe frost must be provided. Very little water is necessary during this period of rest, only sufficient to prevent the soil becoming dust dry, as excessive moisture will cause the buds to decay.

BULBS, FORCING PLANTS, ETC.—Bulbs still under cover must be regularly examined and removed when in a fit state. A full circulation of air must be allowed, to assist them in making strong growth, which is necessary to secure the best results in flowering. The earlier batches of freesias, Roman hyacinths, narcissus, and tulips have now made considerable root progress, and may be brought into gentle heat. Quick forcing is to be condemned, as this only tends to the production of poor flowers, and, especially in the case of narcissi, the flower spikes are apt to become blind. A little forethought exercised will make quick forcing unnecessary. The amount of heat may be increased when the flower spikes begin to show themselves. A few of the different flowering shrubs may be brought into a moderate heat to supply material for Christmas decoration when so much is required. Lilacs in variety are always acceptable at this season, also the earlier varieties of Azalea indica, such as Deutche Perle, Fielder's White. All these forced plants will continue in bloom much longer if gradually hardened off before the flowers are fully expanded.—A. Grubb, Porter's Park Gardens.

HARDY FRUITS.

PRUNING APPLE TREES.—Much has been written on the art of pruning fruit trees, and many beginners have attempted to follow out instructions so minutely given, but in many cases are disappointed with the result, as there are so many difficult varieties of apples, and these so diverse in habit of growth and mode of fruiting. It may safely be said that, with bush and trained trees, pruning in the majority of cases is carried to excess. In the case of vigorous growing varieties the mistake is often made of cutting all strong growth hard back to two eyes, or what not, only to make the trees throw out still more vigorous growth the following season. If, instead of this close cutting, an even distribution of young growths were left, say, six or eight inches in length, for one season, numerous fruit spurs will be formed, and the trees by this treatment alone would, in many cases, be brought into bearing.

YOUNG TREES.—A word of warning may also be given as regards the management of young apple trees. After these are once formed, that is to say, after a dozen even leads or so have developed, according to the form desired, if the trees are healthy these leads will make upwards of two feet of growth each season. Now, this natural desire to become a full-grown tree should be fostered as much as possible by leaving the leads quite two-thirds their length. This will prove beneficial all round; the trees will come into bearing soon, and a greater quantity of fruit can naturally be expected from a large tree than from a small tree; the over-abundant side growth will also be much less than that found in young trees that are annually hard pruned.

PLUM TREES ON WALLS.—These often get out of bounds, and fruitless, through making too much gross growth. In such cases, if the trees are not too old, the best remedy is to lift the trees entirely, cutting all the strong or injured roots with a sharp knife three or four feet from the stem, according to their size. When replanting, keep the roots as near the surface as possible, using lime, and grit in some form, to keep the soil sweet and open. The branches should be lightly secured to the walls so that the ties will allow the trees to settle down with the soil, and at all times the soil should be worked well among the roots and made quite firm.

YOUNG STANDARD FRUIT TREES.—Attention should be given to young standards in the way of new stakes, and ties, so that they may be secure from damage by the winter gales. Protection in many cases will also be needed against the ravages of hares and rabbits during hard weather. This may be procured by using wire netting, or, more simple still, birch or other twigs may be bound round the base of the trunks to keep them from gnawing the bark.—J. Whittle, Cheveney Gardens.

THE KITCHEN GARDEN.

FRENCH BEANS.—In order to keep up a successional supply of this valuable vegetable make another sowing in pots to succeed those sown late in September or October. A heavy yield cannot be expected from this planting, as it will be subjected to short, cold, and often sunless days. To mitigate this trouble to some extent, where means are at hand, grow the crop in a low, light house, where a genial atmosphere of 65 to 70 deg. can be maintained without having to resort to excessive artificial heat. Use smaller pots than usual, seven-inch are large enough; have them thoroughly drained, and secure a light open friable soil. Carefully water it at all times. A judicious syringing of the plants on warm days will greatly aid successful growth.

PARSNIPS.—These will have practically finished their growth, and it is generally admitted that exposure to frost improves their eating qualities. But as the weather from now cannot be relied upon, it is advisable to take advantage of a favourable opportunity to lift at least a portion of the crop. If stored in sand in the root house they will be at command for present use. Should part of the crop be left in the ground it will not harm, but possibly improve.

CHICORY.—This will in most establishments be largely used for salad purposes during the winter and spring months. It is the custom with many to have an early and a later batch of plants. The earlier ones now will have formed large and plump crowns, which, if placed in the mushroom house, in boxes, or planted out, will yield good and succulent leaves. It is well also to have a stock of crowns lifted, and stored in ashes or sand in a sheltered position outside.

CUCUMBERS.—Plants that were put out as advised will now be fruiting, and need careful attention to keep them in a healthy vigorous condition. Frequent light applications of rich loam, accompanied by a mild artificial manure, such as Clay's, will much assist them. Avoid taxing the strength of the plants by over-cropping, and keep the atmosphere of the house balanced with moisture according to the weather. On sunny days syringe freely to remove all insect pests.

MUSHROOM BEDS.—If the demand is continuous, collect material for beds to be made, one for each month. This must be frequently turned until thoroughly sweetened. Make the bed firm by treading, and allow the heat to decline until the temperature is down to about 85 deg., when it will be ready for spawning. Any beds that are failing prematurely may be strengthened by watering them with warm water, to which salt is added; liquid stable manure, diluted with warm water, will also serve to advance the crop.

GENERAL REMARKS.—Sharp frosts may be very damaging from now onwards. The protection of all sadalling, etc., should be completed; make frequent sowings of mustard and cress in boxes, and place these in a temperature of about 60 deg. during the early stages; afterwards they may be placed in cooler quarters until required for use.—Charles Flack, Cholmondeley Castle Gardens.

EXHIBITIONS AND MEETINGS.

◆

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, November 7.

Present: Mr. E. A. Bowles, M.A., F.L.S., F.E.S. (in the chair); Dr. A. Voelcker, Sir Everard im Thurn, Messrs. W. E. Ledger, J. Fraser, G. Wilson, J. W. Odell, G. Gordon, V.M.H., J. T Bennett-Poë, V.M.H., W. C. Worsdell, E. M. Holmes, W. Hales, W. Fawcett, J. O'Brien, A. W. Sutton, V.M.H., R. Hooper Pearson, A. Worsley, R. A. Rolfe, and F. J. Chittenden (hon. secretary).

OCTOMERIA SP. — Dr. Rendle reported that the octomeria referred to him at the last meeting, and shown under the name Octomeria Baueri, did not agree with the figure given by Bauer. Mr. Rolfe recognised it as O. crassifolia, a Brazilian species, described by Lindley, with whose type specimen in the Kew Herbarium it agrees well.

CROSSES WITH PEAS.—Mr. A. W. Sutton gave an interesting account of his experiments in crossing a pea, which he found in Palestine in 1904, with forms of our cultivated peas. The plant found was a weak-stemmed plant, about 3ft. in height, and bearing very small, blunt pods. It had no purple colour in the leaf axils, and was, therefore, supposed to be white-flowered (the plants being past flowering), and seed was collected. The seed was olive-green, heavily mottled with brown, varying to a dark brown. The seedlings raised in England had serrated leaflets, self (not bi-) coloured magenta flowers, but no colour in the leaf axils; the pods were small and obtuse, and curious in containing a white, woolly substance, similar to that contained in the pods of beans. It appeared to resemble, in some measure, Pisum quadratum, which he had obtained from Kew; but in that the flowers are bicoloured, the leaflets entire, the seeds rounder, and not so dark in colour. In addition to these two, the only pea with bi-coloured flowers and no colour in the leaf axils known to Mr. Sutton is one obtained from Svalof, under the name of Solvart. With the idea of discovering whether this wild form could be the ancestor of our white-flowered culinary pea (Pisum sativum) or the bi-coloured field pea (P. arvensis), which some consider varieties of one species, Mr. Sutton made about 40 crosses with various forms, but in only four cases was it possible to grow the hybrids to F_2, or further, in two of which one of the parents was a variety of P. sativum, and in two varieties of P. arvense. In all the others sterility manifested itself, and the varieties were lost; but in the four crosses mentioned more or less perfect fertility seems to have been achieved. The crosses were made with the sole idea of discovering the relationship the Palestine Pea had to commercial peas. Five crosses were made with round-seeded, white-flowering varieties (P. sativum), and sterility preprevented them being grown to F_2, similar results attending eight crosses made with wrinkled-seeded, white-flowered peas. Six crosses with round-seeded, white-flowered, umbellate peas (P. sativum umbellatum) gave only one that has continued fertile. Five crosses made with the degenerate types which constantly occur among cultivated varieties of P. sativum, gave only one which has continued fertile. Sixteen crosses with bi-colour-flowered types (P. sativum) resulted in only two which have continued fertile. The F hybrids were, as a rule, taller than the Palestine pea, and had leaflets more or less serrated; the flowers were bicoloured. In F_2 plants, with white flowers and entire leaflets occurred, but none were found resembling the Palestine pea, but with white flowers. It would thus appear that the pea occurring wild in Palestine is not the plant from which our cultivated forms have been derived. Mr. Sutton exhibited seeds of the wild form and of the cultivated ones with which it was crossed. It was unanimously resolved, on the motion of Mr. Holmes, seconded by Mr. Bennett Poë, to recommend the award of a Certificate of Appreciation to Mr. Sutton for his work in connection with these peas.

INTERESTING ORCHIDS.—Mr. J. O'Brien showed some interesting orchids on behalf of the Rev. Mr. Fletcher, including Bulbophyllum Medusæ, Catasetum Gnomus of Reichenbach, and a species of epidendrum, which Mr. Rolfe later identified as E. Harrisoniæ, Hook (Bot. Mag., t. 8,392), a native of Brazil, and a somewhat variable plant.

MALFORMATION OF CATTLEYA LABIATA.—Mr. G. Wilson showed flowers of Cattleya labiata showing false peloria, produced on a plant which each year produces malformed flowers, though not always malformed in the same fashion as in the present case.

CEROPEGIAS.—Mr. Ledger exhibited a flowering spray of Ceropegia Rothii x Gürke, new hybrid. Raised by Dr. Paul Roth, of Bernburg, from seed obtained in 1908 by crossing C. Sandersoni, Hook, with pollen of C. radicans, Schleet, two South African species. A twining succulent, with fleshy leaves, intermediate between both parents. The flowers resemble those of the seed parent in colour, but the umbrella-like apex in that species is here modified to erect, replicate lobes, cohering at the top, somewhat as in C. hybrida, N. E. Br. (in "Gardeners' Chronicle," December 8, 1906), a flower of which was also shown. Mr. Ledger stated that, in describing the last-named plant, Mr. N. E. Brown drew attention to the peculiar structure of the asclepiads, unique among dicotyledons in having the pollen agglutinated into a waxy mass, and so placed that fertilisation would seem to be only possible through insect agency, and that to do so artificially would, if at all possible, prove a very delicate and difficult operation. Dr. Roth has, however, successfully accomplished, in this instance, the first artificial hybridisation to record in the genus Ceropegia. The plant is described in "Monatsschrift für Kakteenkunde," for January, 1911, pages 8-9. Mr. Dedger also showed a flowering spray of C. Rendallii, N. E. Br., a slender-growing, tuberous-rooted species. The corolla lobes of the delicate and beautiful flowers are united into an umbrella-like canopy, of a bright-green colour, supported in five short stalks over the mouth of the tube, which is white in the upper part and grey-green in the inflated base. This species belongs to the section which includes Sandersoni, Montiroæ, and the not-yet-introduced fimbriata. C. Rendalli was first sent to Kew, early in the year 1894, by the late Dr. P. Rendall, of Barberton, after whom it was named. ("Kew Bulletin," No. 87, March, 1894, 100.) Long lost to cultivation, a tuber (without name) was sent in 1908 by Mr. George Thorncroft, of Barberton, to the late Mr. W. E. Gumbleton, who presented it to Mr. Ledger, and from which all the plants at present grown are derived. Mr. Ledger has raised a hybrid from C. Barklyi, Hook, f., fertilised, in 1909, by pollen of this species.

National Hardy Plant Society.

The first annual meeting was held at Birmingham on November 7, Mr. A. J. Macself in the chair, and a good attendance. The annual report of the Council was submitted.

The death of two vice-presidents, the Earl of Onslow, G.C.M.G., and William Edward Gumbleton, Esq., J.P., F.R.H.S., was recorded with regret. During the year the society had sent deputations, awarded certificates of merit and medals to the following shows: York Gala, Hanley Floral Fête, Leamington and County Show, Cardiff, Abbey Park, Leicester, and Harrogate. A conference was held at Shrewsbury, where interesting papers were read. The Council had decided to hold a show at the Royal Horticultural Hall, Vincent Square, on June 19, 1912, and had received a considerable number of promises of exhibits and donations to the expenses. An invitation to send a deputation to the Dublin Spring Show in 1912 had been accepted. The honorary solicitor had given advice to a number of members on various points of law relating to horticulture.

The thanks of the society were due to the officers and members who attended the various deputations, to Sir Frank Crisp for entertaining the society at Friar Park, and to the Gardeners' Magazine, Mr. R. Pinches, and Dr. MacWatt for gift of medals, also to the chairman, honorary secretary, Mr. W. H. Paine, and other members who had lectured to sister societies on hardy flowers. A model schedule had been prepared by the chairman and adopted by the Council, which was ordered to be printed and forwarded to all the leading horticultural societies. On the proposition of Mr. Hawes, seconded by Mr. Hosier, the annual report was adopted, and ordered to be printed.

The Treasurer submitted a balance-sheet, showing receipts of £56 4s. 6d. and expenditure £53 3s. 10d., leaving a balance in hand of £3 0s. 8d. The balance-sheet was adopted. The following officers were elected unanimously: Chairman, Mr. A. J. Macself; vice-chairmen, Mr. R. Pinches, Dr. MacWatt, and Mr. W. H. Paine; hon. secretary and Solicitor, Mr. Frank Bouskell. A Council was also elected.

A vote of thanks was accorded the officers and Council for their work during the past year, and to Mr. Leopold Ray for his loan of room for meetings. It was decided to print 500 copies of the annual, which was ready to put in the printers' hands. This concluded the business of public interest.

Cambridge Horticultural Society.

CUT BLOOMS.

The annual autumn exhibition of this society was held in the Corn Exchange on the 8th inst., and proved highly successful. There was an exceptionally fine display of hardy fruits, and chrysanthemum blooms were of superb beauty.

The numerous classes for cut blooms were hardly so well filled as at some of the previous exhibitions held at Cambridge, but the quality was exceedingly high throughout, and not a few of the blooms in the winning stands were so splendidly developed that they are not likely to be surpassed this season. In the great open class for twenty-four blooms of Japanese varieties, Mr. G. Barker, gardener to Miss Gibson, occupied the place of honour with magnificent blooms of Evangeline, Reginald Wallis, Lady Talbot, Miss Ettie Green, Duchess of Sutherland, Master James, Frances Joliffe, Edith Jameson, Rose Pockett, Miss A. Lunt, Rose Ellis, Mrs. F. C. Stoop, Gladys Blackburn, Lady E. Letchworth, Henry Poulton, Mrs. A. T. Miller, Frank Payne, Valerie Greenham, C. H. Totty, Madame G. Rivol, Hon. Mrs. Lopes, F. W. Lever, and Miss Trevor Williams, the distinctive colouring of the last-named being especially well developed; Mr. R. Smith, gardener to G. R. C. Foster, second, with an attractive board of blooms. In competition for the prizes for eighteen varieties of Japanese, Mr. Barker was again first, staging large, richly-coloured and finely-finished blooms; Mr. R. Smith was again second.

There was a spirited contest in the class for twelve blooms of Japanese varieties, and at the head of the several competitors was Mr. E. Dyson, gardener to W. R. Neal, Esq., who staged blooms equally remarkable for their large size and excellent finish; Mr. Kemp, gardener to Professor Waldstein, followed closely for second place; and Mr. R. Smith, who was third, had an excellent set of blooms. Mr. A. Dyson occupied the first place in the class for six blooms of Japanese varieties, closely followed by Mr. W. Hall and Mr. R. Smith, who were second and third respectively. Mr. W. Hall had the best three blooms of Japanese, and Mr. A. Dyson was second.

It is a rare occurrence to see such splendidly developed blooms of incurved varieties as those with which Mr. G. Barker obtained premier honours in the class for eighteen blooms, and the exhibitor may be heartily congratulated on the success he achieved. The varieties represented comprised Nellie Threlfall, Godfrey's Reliance, Marjorie Shield, Buttercup, Mrs. C. Crooks, Clara Wells, Miss

C. Stoop, Mrs. B. Hankey, Edwin Thorp, Godfrey's Eclipse, Mrs. J. Wynn, Laura Giles, Mrs. G. Denyer, W. Biddle, H. W. Thorp, Embleme Poitevine, Lady Isabel, and Romance; Mr. T. Todd, gardener to W. A. Briscoe, Esq., with medium sized blooms of excellent quality, was second. Mr. Barker was first also for twelve incurved with superb blooms, and Mr. T. Todd followed closely for second place. Mr. A. Dyson was first for six and for three incurved with neat, well-finished blooms.

A considerable number of classes were provided for blooms in vases, and as the entries were numerous in each, the blooms staged in vases formed an important and highly attractive feature. In the class for six vases of Japanese, three blooms in each, Mr. G. Barker was first with magnificent specimens, those of the Hon. Mrs. Lopes and G. J. Hamand being of quite exceptional excellence, those of the first-named having a depth of about twelve inches; Mr. R. Smith second. The same exhibitors occupied similar positions in the class for six incurved, both staging well, but the blooms in the first prize vases were fully equal in size and finish to those Mr. Barker had in his winning collection of twenty-four. The varieties were Mrs. P. Denyer, Mrs. J. Wynn, Miss Stoop, Nellie Thretfall, Embleme Poitevine, and Duchess of Fife; Mr. T. Todd second.

The contributions to the classes for decorative varieties, to be shown in vases, produced a tasteful and attractive display. The contest was spirited in the class for six vases of decorative varieties grown without having been disbudded, and at the head of the several exhibitors was Mr. A. Lelliott, who had well-developed and remarkably fresh blooms of well-known varieties; Mr. A. Pepper, gardener to A. Kurrell, Esq., was a close second with good vases, although somewhat unequal; Mr. Edwards followed very closely for third place. The single varieties shown in vases produced a bright display, and in the class for six varieties Mr. W. Dobbs occupied the post of honour with blooms of rare excellence; Mr. W. Hall was a capital second, and Mr. T. Todd third.

PLANTS.

Specimen chrysanthemums were shown in finer condition than we have previously seen them at Cambridge, and constituted an attractive feature. For six Japanese varieties, Mr. George Willers, Trumpington Road, was first with large, freely-flowered bushes, and the same exhibitor was also first in the class for three specimens of Japanese varieties with remarkably fine examples. In the single specimen classes Mr. Willers was first for Japanese for pompon and for reflexed. For a specimen of a single variety Mr. Dyson obtained premier honours, Mr. Willers following him closely for second place.

In the classes for miscellaneous plants Mr. R. Smith scored for six specimens of Begonia Gloire de Lorraine, and Mr. Dyson for three salvias, which made a brilliant display of colour.

FRUIT AND VEGETABLES.

Fruit was shown in immense quantities and in splendid condition, the apples being especially noteworthy for their brilliant colouring. In the whole of the thirty odd classes the competition was very spirited, and especially was this the case in the class for twelve dishes of apples to comprise an equal number of dessert and cooking varieties. Mr. A. Lelliott was first in this class with superb fruit of Allington Pippin, Peasgood's Nonsuch, Blenheim Pippin, Bismarck, Emperor Alexander, Cox's Pomona, Mabbott's Pearmain, King of the Pippins, Gascoyne's Scarlet, James Grieve, and Cox's Orange Pippin. Mr. J. H. Ridgwell, Histon, was a close second, with remarkably fine fruit, and Mr. T. Todd was third. For six dishes, three each of cooking and dessert varieties, Mr. R. Stephenson scored with large, brilliantly coloured fruits. Mr. N. Neaves, gardener to W. R. Hollis, was second, and Mr. T. Todd third. For three dishes of dessert apples Mr. R. Stephenson scored with Cox's Orange Pippin, Blenheim Pippin, and King of the Pippins at their best; Mr. Neaves second. For three dishes of cooking apples Mr. R. Stephenson was first with large richly-coloured fruit of Lane's Prince Albert, Bramley's Seedling, and Bismarck. Mr. T. Todd second.

Pears were splendidly shown, both as regards numbers and quality. Mr. T. Todd obtained premier honours in the class for six dishes with fine fruit of Beurre Diel, Doyenne du Comice, Durondeau, Beurre Bose, Beurre Bachelier, and Duchesse d'Angouleme. Mr. Todd was a capital first in the class for three dishes.

The classes for baskets of cooking and dessert apples, containing 20lb. each, were well filled, and the contributions formed an attractive feature. In the class for cooking apples, Mr. Neaves was first with Newton Wonder in superb condition, and Mr. R. Stephenson was second with finely-coloured Bramley's Seedling. In the corresponding class for dessert varieties, the exhibitors last named was first with Cox's Orange Pippin, and Mesrs. Jones and Son were a very close second with the same variety.

Grapes were of average merit, and Mr. W. Hall was first for Muscat of Alexandria, Mr. R. Smith first for Alicante, and the Hon. Mrs. Knowles Thornton first for any other black with Gros Colmar.

Vegetables were plentiful and good, and the contributions to the classes for collections were sufficient to make an interesting exhibition. The Hon. Mrs. Knowles Thornton occupied the premier place in the class for ten kinds, and Mr. A. Howell was a close second. The exhibitor last named was first in Messrs. E. Webb and Sons' class for six kinds, and Mr. R. L. Hudson was second, both staging produce of great excellence. In Messrs. Sutton and Sons' class for six kinds Mr. Murrell and the Hon. Mrs. Knowles Thornton were first and second, both staging collections possessing much merit. Potatoes were largely and well shown, and Mr. W. Todd was first for twelve and six dishes with exceptionally fine tubers.

Liverpool Horticultural Association.

NOVEMBER 8 AND 9.

The thirty-second autumn exhibition was held in the Corn Exchange, Liverpool, under favourable climatic conditions, the exhibits showing to great advantage in the well-lighted hall. The entries were fully up to the average, both in quantity and quality. The cut flower section caused considerable surprise, the flowers being the best yet staged, notwithstanding the general report that blooms were distinctly below the average.

CUT FLOWERS.

The chief prize for thirty-six blooms, eighteen Japanese and eighteen incurved, brought five competitors, the position of honour being gained by Mr. C. Groves, gardener to Sir Gilbert Greenall, Bart., Warrington, for a very fine stand, his finest flowers being Eclipse, Frances Joliffe, Mrs. A. T. Miller, Hon. Mrs. Lopes, Mrs. A. S. Bott, Buttercup, Embleme Poitevine, W. Biddle, Pantia Ralli, and Clara Wells. Mr. R. Nisbet, gardener to Sir W. Bass, Bart., Burton-on-Trent, second, with a splendid even stand of Japanese; this exhibitor secured the special awards for the best blooms in the show with Mrs. W. B. Marsham (Japanese) and Godfrey's Eclipse (incurved). Mr. G. Haigh, gardener to Sir W. H. Tate, Bart., Woolton, and Mr. H. Osborne, gardener to R. R. Heap, Esq., took the remaining awards.

For eighteen incurved blooms, Mr. J. George, gardener to T. Henshaw, Esq., led with a good even stand. For twelve blooms Mr. J. Clarke, gardener to Mrs. Clark, Allerton Hall, proved the victor, and for similar classes of Japanese blooms, Mr. C. Goves and Mr. J. Copple, gardener to H. Belk, Esq., Theyton, proved the leaders.

PLANTS.

For three large-flowered trained chrysanthemums Mr. T. Hitchman, gardener to A. Earle, Esq., Childwall, led with excellent examples, Miss Lilian Early being noteworthy. For one trained specimen the same exhibitor excelled with a fine Mrs. Acland. For three singles, trained, Mr. F. Atkin, gardener to T. W. Wright, Esq., won with charming models, and the same exhibitor also led for one pompone trained. For six singles, staked, Mr. E. R. Finch, gardener to W. J. Lockett, Esq., won. Mr. Hitchman scored with three large-flowered, and one staked plants, and for the group Mr. F. Atkin scored with good single flowers, arranged rather formally.

Miscellaneous plants were staged in considerable numbers, but only the chief classes are here noted. For one orchid Mr. T. E. Elsworthy, gardener to W. L. Gladstone, Esq., won with a well-bloomed Cattleya labiata; for three orchids, Mr. P. Jakeman, gardener to Sir W. B. Forwood, Bart., took leading honours, having Cymbidium Traceyanum with five good spikes. For two palms Mr. F. Atkin led with excellent specimens, and for one fern Mr. G. Eaton, gardener to W. Tod, Esq., led with Davallia figensis plumosus, nine feet in diameter.

FRUIT.

For six dishes of dessert fruits Mr. R. Jones, gardener to J. Amplett, Esq., led, his set including highly-coloured bunches of Muscat of Alexandria grapes. For four bunches of grapes Mr. Elsworthy was to the fore. Two buches Black Alicante grapes found Mr. J. Barker, gardener to J. W. Raynes, ahead with good clusters of finely coloured berries. Mrs. Kendall led with Barbarossa for any other black grape. For two bunches of Muscats, Mr. Thomas Barclay, gardener to Mrs. Cook, won with long, richly-coloured bunches, and for two bunches of any other white grape, Mr. T. Elsworthy was first with Golden Queen.

NON-COMPETITIVE.

As usual many excellent non-competitive exhibits were staged.

Gold Medal. — Messrs. Mansell and Hatcher, for orchids; Mr. J. Lee, for a large exhibit of apples of good quality.

Silver Medal.—Messrs. R. P. Ker and Sons, for cyclamen, palms, begonias, etc.; Messrs. Fishlock Bros., for cut flowers; Messrs. Wells and Co., for chrysanthemums; Liverpool Orchid Company, for orchids.

Paris Autumn Show.

The annual autumn exhibition of chrysanthemums, fruit, etc., held by the National Horticultural Society of France, in the Cour-la Reine, Paris, was opened by President Fallieres on the 2nd inst., and closed on the 12th. As usual, the show was a very large and comprehensive one, and there were many entries in the various classes. The visitors were numerous, and, although the society has now to provide a temporary structure in which to house the exhibits, the work is carried out in the most satisfactory manner, and a fine show provided. The Floral Committee met the day preceding the opening, when the new seedlings were submitted and many Certificates awarded. The following raisers were the most successful, viz., Calvat, Chaubrier, Vilmorin, Nonin, Marquis de Piris, etc. Altogether about forty-five awards of Certificates were made.

The jury met on the morning of the opening day, and, after making the awards provided for by the schedule, were entertained at lunch at Ledoyen's Restaurant, Champ-Elysées. M. Viger took the chair, being supported by the officers of the society, and a company of about 200 guests. The usual complimentary speeches were made by the representative of the Minister of Agriculture, the President of the Paris Municipal Council, M. Lepinè, the Chief of Police, M. Viger, M. Deloncle, the Deputy for the Seine, and Mr. Harman Payne.

Returning to the show, the visitors proceeded along the promenade leading from the entrance to the exhibition building. Here there were many groups of trained fruit trees and ornamental shrubs, such as is cutomary at the Paris Show, and were in the main exhibited by Messrs. Barbier, Martin-Lecointe, Paul Lecolier, Boucher, Croux, Moser, Kieffer, Nomblot-Bruneau, Monnier, and others.

We no sooner set foot inside the show than we were attracted by the exhibit of M. Opoix, of the Luxembourg Gardens, whose fine collection of fruit filled the ante-room, and was placed in huge semi-circular piles on tables all round the room. Apples and pears predominate, some for variety being shown in pretty baskets tied up with coloured ribbon. Going still further we see many more very large exhibits of this kind. Specially meritorious from the point of view of size and quality were those sent by M. Lequeen, an enormous run of pears in boxes from M. Nomblot-Bruneau, M. Masle, M. Deschamps, the Ecole Horticol de Plessis-Piquet, M. L. Gronas, Duclos, Carnet, and others.

Other choice fruits, such as grapes, peaches, and the like, were mostly put up in plate-glass cases. The variation and artistic taste displayed in these exhibits was characteristic of the French. As we passed into the great exhibition hall we had to go through a kind of pergola formed of vine branches by Messrs. Salomon, of Thommery. Right and left were long cases filled with bunches of many different varieties of grapes for which the firm is noted. Dupont-Barbier set up a run of 60ft. of these cases filled with beautiful-looking fruit. Messrs. Cordonn ireet Fils had an equally fine exhibit, consisting chiefly of white and black grapes.

Chrysanthemums, of course, were the chief floral adornment of this great show, and there were most of the big growers present. The real centre of interest, however, was in Mr. Thomas Stevenson's (gardener to E. Mocatta, Esq.) accumulated group, which faced the main entrance to the inner hall. He entered in five classes, the whole being placed together, and a grand group it made. In each class he obtained the highest award. The finely-developed blooms of Japanese mingled with singles, and set off with Asparagus Sprengeri, and another greenery, delighted the visitors, who, it may be safely affirmed, had never seen anything like them before. Other exhibitors of cut blooms were M. Paul Labbe, M. C. Gervaiz, Henri Crépin, a nicely arranged lot in an oblong bed set off with musa, etc. M. Zimmermann won the Crepin challenge cup for a neatly-staged collection of cut blooms.

Plants in pots are always numerous, and generally of medium quality. The exception, however, was in the exhibits of trained specimens, which of late years have shown great ingenuity, the forms adopted being much more varied and quaint than ever we saw in this country when trained plants were more fashionable than now. A magnificent exhibit came from Messrs. Vilmorin. It was in two portions, each edged with a double row of dwarf plants of Dr. Geo. Barrie and Gerbe d'Or. Between the huge trained plants of square-shaped pyramids in the Japanese style and other forms, were placed small pots of lycopodium; Japanese and single varieties were mainly used.

Many curious forms were staged by M. Pinon, a specialist in this art. He had chrysanthemums trained in the form of Chinese pagodas, round tables, baskets, vases, stars, etc. Some good standards were shown by the Ecole Horticole of Plessis-Piquet. M. Montigny showed a group of 1911 novelties in great variety. From M. A. Nonin came two nicely arranged decorative groups, arranged on each side of the middle of the show. Among newer things we noted Marocain, a fine decorative Japanese, bright crimson-red with golden reverse. Bordeaux, a rich shade of purple amaranth shaded carmine, a well-built decorative Japanese, close and compact. In singles there were some neatly-built flowers of Oiseau bleu, Fontarabie, and Hendaye. Among new show Japanese, Chrysanthemiste Jondelier, a sulphur-yellow sport from President Loubet, received a First-class Certificate.

Considering the large number of other exhibitors, we cannot in the limited space at our command be expected to do justice to their exhibits. It must suffice to say that Messrs. Feron, Crepin, Mascaux, Ferard, Lazard, Morin, Merigeon, Combon, Legeard, and others all staged groups of more or less merit.

Other flowers, of course, were in evidence. The orchid room contained a small display, for us, from M. Reginer, a collection of Habenarias Regmeri with H. Militaris, a well-grown little lot. M. Beranek staged stove plants and exotic palms, a few good specimens of Cattleya labiata. In Messrs. Maron's group were Cattleya Ligury, and C. Fabia alba; also Lælio-cattleya Bright Star. Mr. Edward V. Low, of Haywards Heath, sent Cypripedium Germaine Opoix, Odontoglossum grande aureum Pitt's var., etc.

The entries in floral art make us regret that in our own International Show in May, 1912, there is no provision for such a display. The well-known houses of Lachaume and Debrie sent most decorative exhibits in their accustomed style, but which we are precluded from describing. M. H. Pillon had several pretty designs, one a bamboo arbour covered with chrysanthemums in flower.

Vegetables always occupy an important place at Paris. The size and variety of the exhibits are astonishing to those who are used to English shows only. The firm of Vilmorin, Andrieux and Co. made an immense display, including everything in season.

Manchester and North of England Orchid Society.

At the meeting held on Thursday, November 2, Z. A. Ward, Esq., Northenden (gardener, Mr. Weatherby), exhibited a fine group of over 150 plants, to which a Silver-gilt Medal was awarded, a special feature being a mass of 50 plants of Cyp. insigne Sanderæ; also a collection of Insigne vars., including Dorothy, Mollie Dow, Harefield Hall, Perfection "Ward's" var. (A.M.), Chantini, Lindeni, with C. Actæus "Ward's" var. (A.M.); and amongst the cattleyas were noticed C. Armstrongæ "Ward's" var., C. Armstrongæ var. Mrs. Ward (A.M.), and C. Williamsi (A.M., W. R. Lee, Esq., Heywood (gardener, Mr. Woodhouse), was also successful in obtaining a Silver-gilt Medal for a group, consisting of cattleyas and their hybrids, cypripediums in variety, and a nice batch of Dendrobium Phalænopsis Schroderianum. Cattleya Labiata W. R. Lee (F.C.C.), a fine white variety, C. Helène (A.M.), C. Mantini, and Lælia Bella (A.M.), were especially meritorious.

O. O. Wrigley, Esq., Bury (gardener, Mr. Rogers), was awarded a special vote of thanks for a very nice lot of Dendrobium Phalænopsis Schroderianum, including the var. Album, with two fine spikes, and a magnificent plant of Odontoglossum crispum, with a spike almost four feet long, carrying twenty-eight large flowers. J. McCartney, Esq., Bolton (gardener, Mr. Holmes), was awarded a Silver Medal for a group of Cattleya Fabia var. Prince John (A.M.), C. Dowiana aurea, Brasso-Cattleya Maroniæ, Cypripediums insigne Laura Kimball, etc. Colonel J. Rutherford, M.P., Blackburn (gardener, Mr. Lupton), was awarded a Bronze Medal for a group consisting of cattleyas and cypripediums. Rev. J. Crombleholme, Clayton-le-Moors (gardener, Mr. Marshall), was also awarded a Bronze Medal for a group of cypripediums.

Wm. Thompson, Esq., Stone (gardener, Mr. Stevens), showed Cypripedium Pyrrha Thompson's var. (A.M.), C. Baron Schroder Armstrong's var., C. Grittleton (Stevensi x Thompsoni Exquisitum, A.M.), and an unnamed variety of Spicerianum x Thompsoni (A.M.), along with a fine form of Odontoglossum crispum hololeuca Walton Grange var. J. J. Holden, Esq., Southport (gardener, Mr. Johnson), staged very fine examples of Cattleya Harrisoniæ alba, carrying two flower spikes; Cypripedium Gaston Bultee Holden's var., and C. Germain Opoix. G. H. Peace, Esq., Monton Grange (gardener, Mr. Mace), exhibited a fine plant of Oncidium ornithorynchum album, carrying several good spikes.

J. H. Craven, Esq., Keighley (gardener, Mr. Corney), staged very fine examples of Cypripedium eboriacum, C. Germain Opoix, C. Gaston Bulteel, etc. Messrs. J. Cypher and Sons, Cheltenham, were awarded a Silver Medal for a group of Cattleya Fabia, Oncidium Forbesi, Vanda cœrulea, and the interesting Dendrochilum Cobbianum, with cypripediums. Messrs. A. J. Keeling and Sons, Bradford, showed Cypripedium Mellone, etc. Messrs. Charlesworth and Co., Hayward's Heath, had Cattleya Lord Rothschild alba and C. Bola. Messrs. Stuart Low and Co., Bush Hill Park, staged four fine plants of Cattleya Fabia. Messrs. Hassall and Co., Southgate, had a pretty exhibit of hybrid cattleyas.

First Class Certificates were awarded to Cattleya labiata alba, var. Richard Le Doux, from R. Le Doux, Esq.—a very fine variety and large flower; to Oncidium ornithorynchum album, from G. H. Peace, Esq.; to Cattleya labiata, var. W. R. Lee, from W. R. Lee, Esq.

Award of Merit to Cattleya labiata, var Helène, and Lælia bella, from W. R. Lee, Esq.; to Cattleya Armstrongæ, Ward's var.; and C. Armstrongæ var. Mrs. Ward; C. Williamsi (Gaskelliana alba x Harrisonæ); Cypripedium Perfection, Ward's var.; and C. Actæus, Ward's var., all from Z. A. Ward, Esq.; to Cattleya Fabia, var Prince John, from J. McCartney, Esq.; to Cypripedium Pyrrha, Thompson's var.; C. Grittleton (Stevensi x Curtisi Exquisitum), C. Spicerianum x Thompsoni (unnamed), with Odontoglossum crispum hololeuca, Walton Grange var., from Wm. Thompson, Esq.

Windsor.

The annual autumn show, held in the Albert Institute on November 10, was a distinct improvement upon the displays held during the past few years. Although this society is a comparatively small one, it encourages features which we do not find so good at much larger shows. For instance, the groups of single-flowered chrysanthemums are a magnificent feature, thoroughly displaying these charming flowers to the fullest extent. Prizes are here offered, too, for a dozen large Japanese blooms in one vase or basket with any cut foliage, which produces a fine effect, and thus gives these large blooms an opportunity of showing to advantage as decorative flowers.

For a group of decorative chrysanthemums, not disbudded, arranged for effect, with an edging of ferns allowed, there were three competitors. Mr. G. West, gardener to F. Picardo, Esq., Old Windsor, was distinctly ahead with a group composed almost entirely of single-flowered varieties, the freely-grown plants carrying grand sprays of fully developed flowers of Gracie Lambert, Reginald Godfrey, Mary Richardson, Mrs. R. C. Pulling, and Sylvia Slade. Mr. W. Cole, gardener to Mrs. E. B. Foster, Clewer Manor, Windsor, was a good second with slightly inferior flowers. Mr. G. J. Hill, gardener to A. L. Wigan, Esq., third.

The leading cut bloom class was for eight varieties, three blooms of each in a vase, the coveted prize being the King's challenge cup with a cash award. Five entered, and Mr. C. Page, gardener to J. B. Fortescue, Esq., Dropmore, Maidenhead, was distinctly ahead with finely-developed specimens of Evangeline, Miss A. Nicoll, J. Lock, Bessie Godfrey, Mrs. G. Mileham, Mrs. C. H. Lotty, Frances Jeliffe, and the Hon. Mrs. Lopes. Mr. H. Bowyer, gardener to Sir R. Harvey, Bart., Langley Park, Slough, was second with heavy flowers a little past their best. Mr. W. Holder, gardener to Mrs. Adair, Englefield Green, third. An interesting class was that for eighteen Japanese blooms, distinct, arranged in a space five feet by three feet, with foliage plants or cut foliage. Mr. H. Hearn, gardener to Mrs. Gerald Goodlake, Denham, led with capital specimens of Evangeline, Reginald Vallis, Mrs. A. T. Miller, Kara Dow, F. S. Vallis, G. J. Bruzzard, and the Hon. Mrs. Lopes, but with a little faulty arrangement. Instead of placing the blossoms in triplets they should have been more widely displayed. Mr. A. R. Allan, gardener to Lord Hillingdon, Hillingdon Court, Uxbridge, second, with a neat arrangement of smaller blooms. Mr. Holder was third. Mr. C. Page secured the leading award for twelve Japanese, distinct, with handsome specimens of popular varieties; Mr. H. Bowyer a good second.

Incurved varieties were well displayed by Mr. Page in the class for twelve, distinct; Mr. R. Brown, gardener to Lady Tress Barry, second. Mr. West won for six incurved, any one variety, with quite shapely specimens; Mr. Page second.

For a basket or vase of twelve blooms arranged with any natural foliage, there was a strong entry, and Mr. Hearn, with exceedingly fine specimens of such sorts as Reginald Vallis, F. S. Vallis, and Mrs. A. T. Millar, arranged lightly with highly-coloured autumn foliage, scored; Mr. C. Page second with flowers not quite so fine, but effectively arranged with berberis and spiræa sprays; Mr. R. Brown third. Single-flowered varieties in sprays are here a strong feature. For six varieties, not disbudded, five sprays of each, ten entered, and Mr. G. West was the most successful with finely-developed blooms of Sylvia Slade, Ceddie Mason, Reginald Godfrey, Mrs. Hazelhurst, and Mrs. R. C. Pulling; Mr. W. Cole second.

Gloire de Lorraine begonias were grandly staged. Mr. W. Laurance, gardener to E. Clifton-Brown, Esq., was first with profusely-coloured specimens. Carnations in vases were attractive, and Mr. G. West had the best set of three varieties, closely followed by Mr. A. Allan.

Amateurs staged good blooms in the various classes set apart for them. Mr. Stuard Smith was the most successful, securing the N.C.S. Certificate for premier bloom with a richly-coloured Pockett's Crimson, a like honour falling to Mr. Page in the open section for a grandly-developed Evangeline.

Bristol Gardeners' Association.

The fortnightly meeting held at St. John's Parish Rooms, November 9, was presided over by Mr. A. Perry. Mr. J. Ayres gave an interesting as well as instructive paper on "Apple Culture for Profit." He strongly advised preparing the ground well and making the holes large enough so as to be able to spread the roots out at planting time. Mr. Ayres spoke strongly against hard pruning, and did not believe in it because it only encouraged strong growth and brought no fruitful returns. He advocated pruning at first so as to form the foundation of the tree, but after the tree was well established he believed in leaving it alone, except for thinning out branches if crowded. He mentioned a few well-known varieties, such as Allington Pippin, Bramley's Seedling, Ecklinville, James Grieve, Warner's King, and Stirling Castle, and said these were all free croppers. A good discussion followed, and this brought out Mr. Ayres at his best.

For two orchids in bloom (prize given by Messrs. Keeling and Sons), Messrs. Scott and Curtis won in the order given.

Scottish Horticultural.

The November meeting of this association was held in the Goold Hall, 5, St. Andrew Square, Edinburgh, on the 7th inst. Mr. Massie, the president, was in the chair, and there was an attendance of 125 members.

The paper for the evening was by Mr. Wm. Roadley, Comely Bank Nursery, Edinburgh, who took for his subject "Propagation." He first dealt with the propagation of plants by seeds, which was Nature's method, and then took up in detail the various vegetative modes, cutting, buds, grafts, etc. The paper was a most instructive one, and, on the motion of Mr. King, the author received a very cordial vote of thanks.

There were some interesting chrysanthemum exhibits, including some of the newer kinds. Messrs. Dobbie and Co., exhibited Betty Spark, Cranford Yellow, and Miss Collier (decorative) and the single yellows Mrs. T. Gilbey (a yellow Pagram), and Charles Kingsley, for the former of which they received a Certificate of Merit. Various kinds were also shown by Mr. W. Williamson, Edinburgh, and Mr. I. Bruce Davidson's Mains.

As the result of the suggestion made by Mr. Cuthbertson at the conference in October that the members should send in the names of what they considered the best twelve early-flowering chrysanthemums, the following were found to be the favourites: Goacher's Crimson, White Massé, Lillie, Polly, Nina Blick, Abercorn Beauty, Leslie, Elstob Yellow, Hector, Carrie, Diana, and Horace Martin.

Twenty-four new members were elected. At the meeting on December 5, Mr. Thomas Anderson, M.A., B.Sc., Edinburgh and East of Scotland College of Agriculture, will deliver a lecture on "Insects and Flower Pollination" (with lantern illustrations).

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1911. November 5 to November 11.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Nov. 5—Sunday	6 48	53	49	56	42
,, 6—Monday	7 6	42	39	50	37
,, 7—Tuesday	4 36	45	42	54	38
,, 8—Wednesday	—	46	43	49	45
,, 9—Thursday	6 12	39	39	49	38
,, 10—Friday	0 18	40	39	42	39
,, 11—Saturday	1 18	36	35	55	31
Means	(total) 26 18	43	41	50	38

Date. 1911. November 5 to November 11.	Rain.	Temperature of the Soil at 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
Nov. 5—Sunday	0·06	50	49	52	41
,, 6—Monday	—	47	49	52	32
,, 7—Tuesday	0·34	45	48	52	30
,, 8—Wednesday	0·11	47	48	51	39
,, 9—Thursday	—	45	48	51	26
,, 10—Friday	0·02	44	47	51	28
,, 11—Saturday	0·69	42	46	51	20
Means	(total) 1·22	45	48	51	31

FORTHCOMING ENGAGEMENTS.

MONDAY, November 20.—National Chrysanthemum Society; Floral Committee at Essex Hall, 3 p.m.; General Committee at Carr's Restaurant, 7 o'clock.

TUESDAY, November 21.—Royal Horticultural Society; committees meet at 12 o'clock; lecture at 3 p.m. on "The 1912 International Horticultural Exhibition," by Mr. Edward White; Scientific Committee at 4 o'clock.

National Vegetable Society; Annual Meeting at the Horticultural Hall, Westminster, 2.30 p.m.

FRIDAY, November 24.—Aberdeen Chrysanthemum Show; two days.

Hawick Chrysanthemum Show; two days.

WEDNESDAY, November 29.—Irish Gardeners' Association.

National Chrysanthemum Society's Annual Dinner at the Holborn Restaurant.

THURSDAY, November 30.—Royal Horticultural Society's Colonial Fruit Show; three days.

Manchester and North of England Orchid Society.

Erica melanthera.—This is not one of the showiest of greenhouse heaths, but it has made considerable headway in popular favour within the last few years. It is one of the easiest to cultivate, and the peculiar mauve-coloured flowers are borne in great profusion over a lengthened period.—W. T.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

SEEDLING APPLE.—W. A. H., Knowle: The apple sent is very pleasantly flavoured, and would probably have been at its best a month ago, as at present it lacks briskness. In form and colour it is particularly attractive, and there should be a fair demand for the variety in its season. However, it is too much to expect great things from seedling apples nowadays unless they are raised from well-known varieties of the highest class, and thoroughly proved before being placed in commerce. Propagate a few plants by grafting, next spring, and try these in various positions, so as to determine the character of the apple and its suitability for various positions and forms of culture. The apple belongs to the Pippin class, and, hazarding a guess at its parentage, we should suggest its descent from Fearn's Pippin and Worcester Pearmain.

PRIDE OF TENERIFFE. — R. M. K., Bridgwater: Without specimens it is not possible to fully identify the plant, whch you say is known as the Pride of Teneriffe. The photographs do not help us very much as the individual flowers are not clearly portrayed. Judging from the general appearance of the plant, as seen in the photograph, we believe it to be an Echuim, and possibly Echium fastuosum, a perennial evergreen species, with deep blue flowers. We feel pretty sure it is an echium, but are not certain as to the species. Perhaps you can send us a few flowers and a leaf or two of the plant's flower in the coming spring. If you have a few seeds to spare send some to the Director, Royal Gardens, Kew, as a bold greenhouse plant of the character of your plant would not be unwelcome.

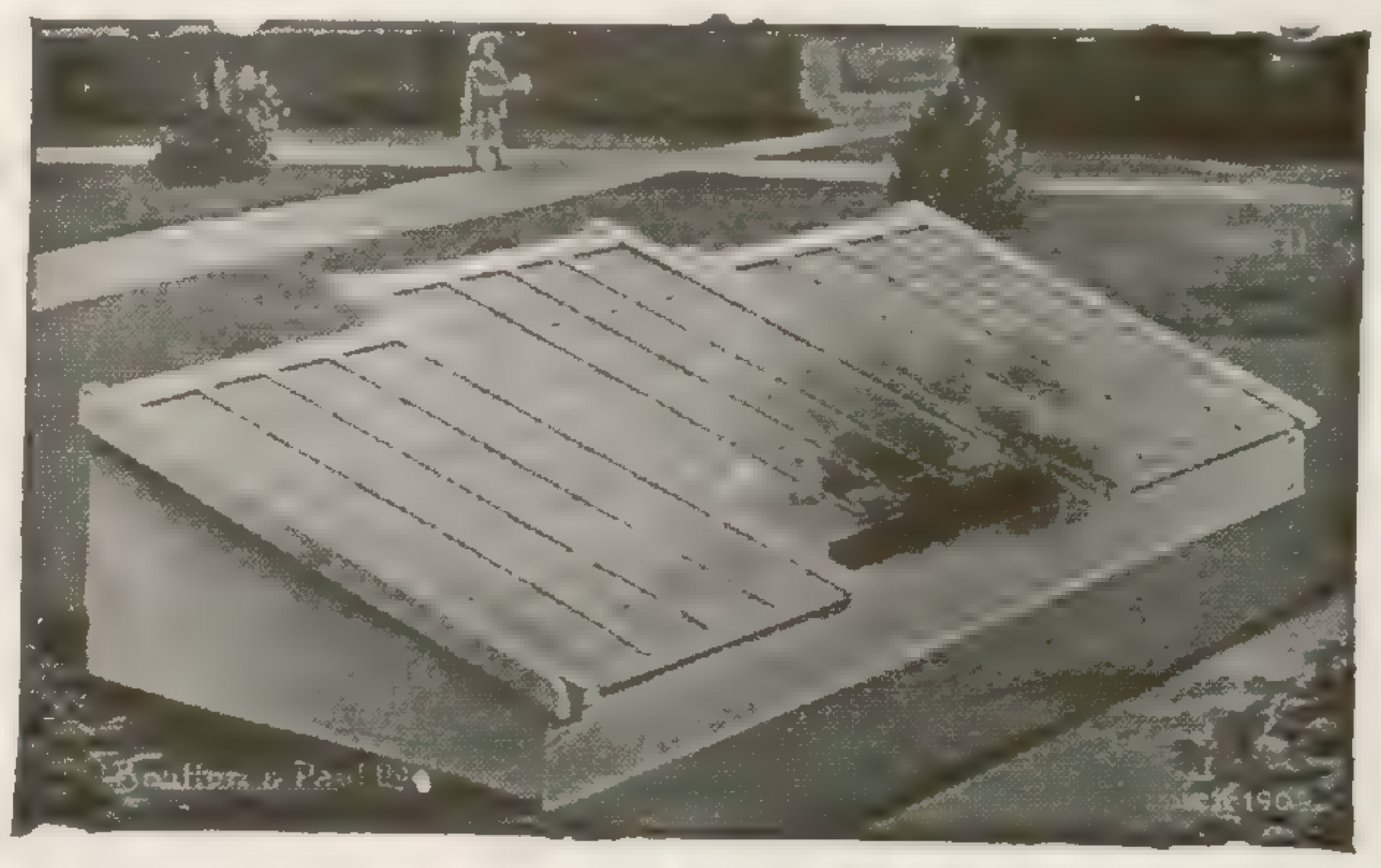
PURCHASE OF FERTILISERS.—C. B., Keswick: According to the Fertilisers and Feeding Stuffs Act of 1906, the seller must give the purchaser of a fertiliser an invoice of the article, and state on it the description under which the fertiliser is sold, but also must set forth the minimum percentages of the fertilising constituents of the article sold. We may add that raw bones, bone-meal, or bone-dust should be guaranteed pure, and to contain not less than 45 per cent. of phosphate of lime, and not less than 4 per cent. of ammonia. Boiled bones to be guaranteed pure, and to contain not less than 55 per cent. of phosphate of lime, and not less than 1 per cent. of ammonia. Mine-

The only resemblance between a Pine Spray Syringe and others is in the shape of the barrel. The metal is more substantial. For the rest, the combination spraying head renders Spray, Rose, and Bend instantly obtainable without the addition or removal of a single fitment, while the adjustable leather bucket plunger gives perfect suction, never allows water to escape past it and up your sleeve, and wears interminably.

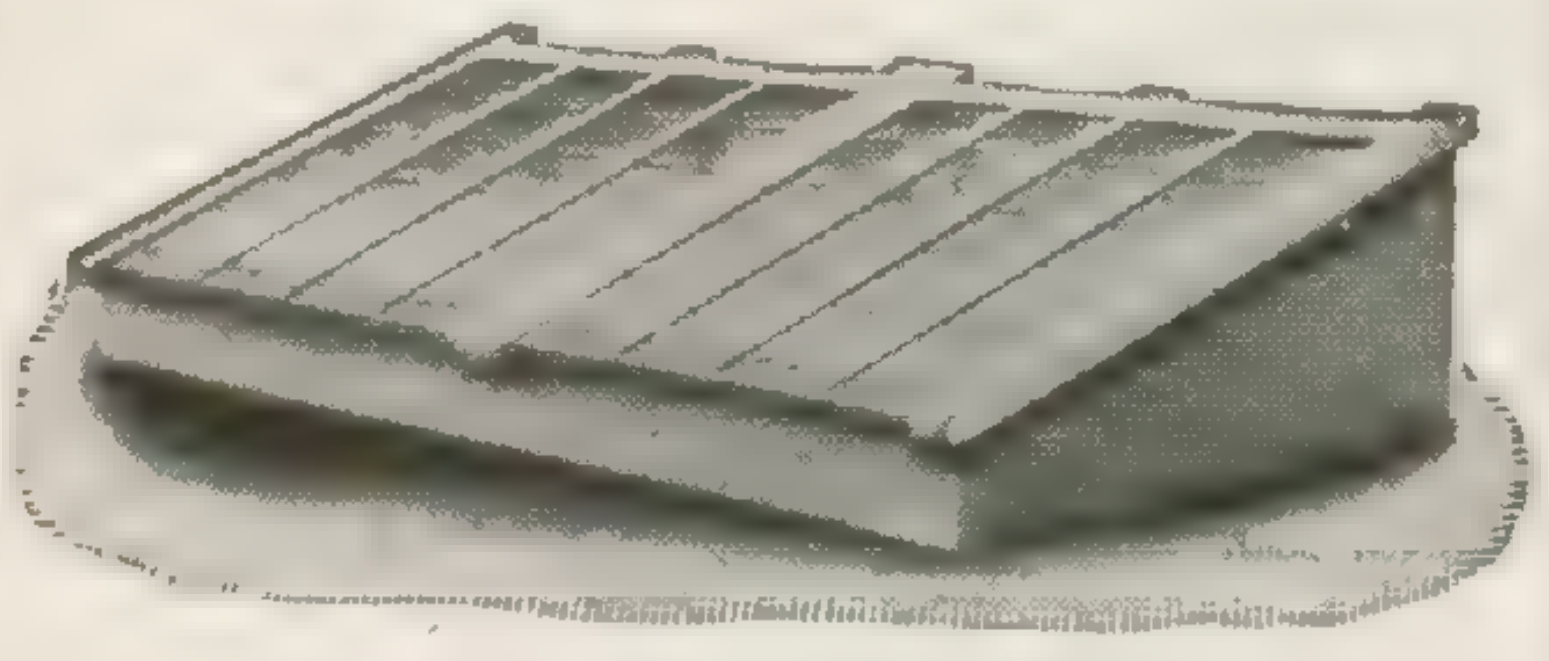
A written request from your ironmonger or seedsman, and a Syringe will be sent in 24 hours for your approval. Price 10/6. Sole proprietors and manufacturers, Robinson Bros., Ltd., West Bromwich.

PINE SPRAY SYRINGE (patent).

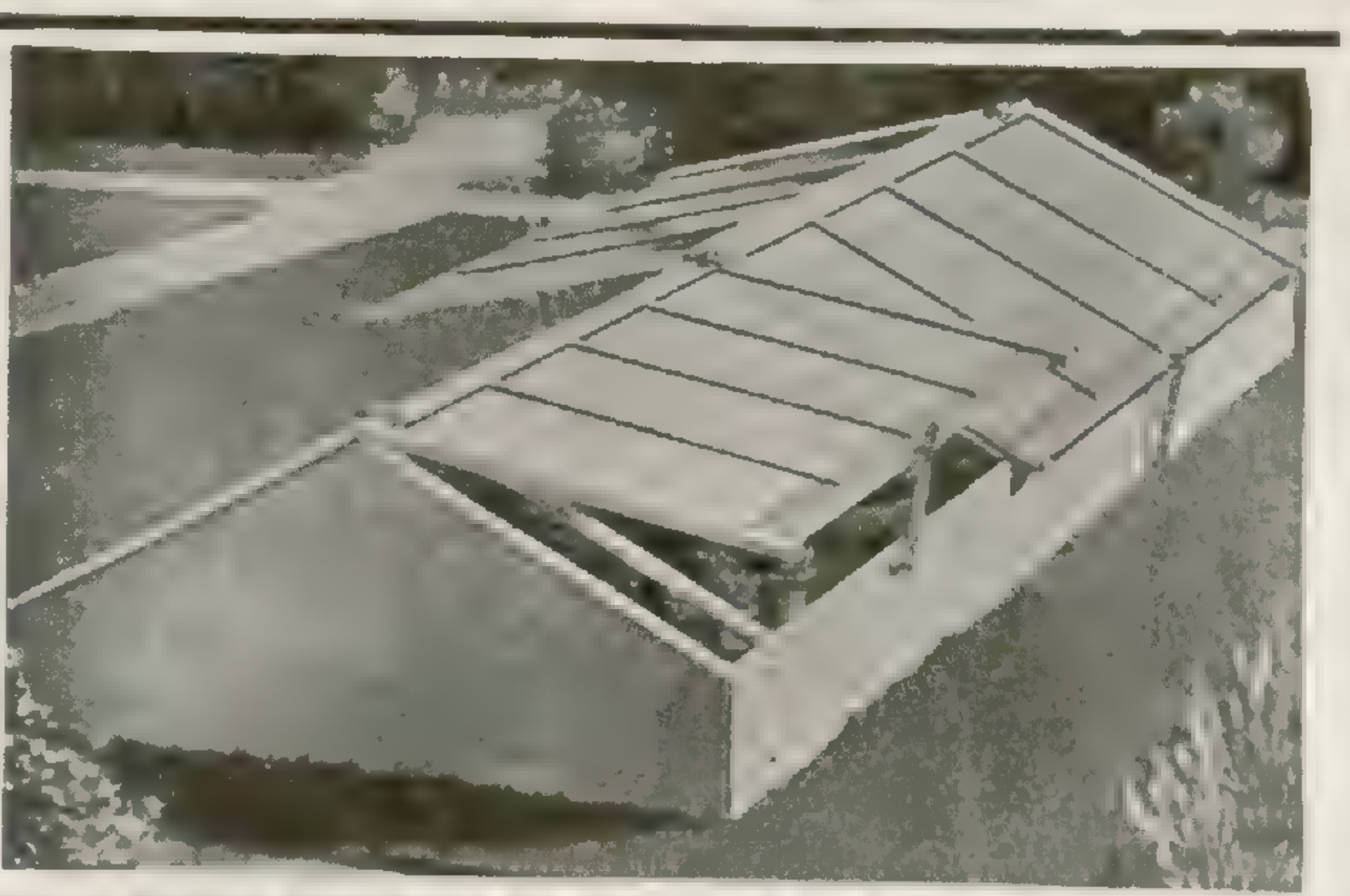
PRESERVE YOUR PLANTS
during the Winter Months by using our well made
No. 75. MELON AND CUCUMBER FRAME.
Painted three coats, glazed 21 oz. glass.



4 ft. by 6 ft. ... £2 0 0 8 ft. by 6 ft. .. £3 0
Garden Frames
in every variety always in stock.
High-class Finish in the Very Best Materials.
Pit Lights.
6 ft. 1½ in. by 4 ft. Painted and Glazed 14/- each
Unpainted and Unglazed ... ... 5/- „
Double Glazed Lights.
4 ft. 7in. by 4 ft. 3 in. Painted and Glazed, 15/6 each
Improved Fruit Trays.
30 in. by 19 in., 18/- doz.; 24 in. by 15 in., 15/- doz.
Carriage Paid on one dozen Trays and over.
Reed Mats. 4 ft. 6 in. square, 20/- doz.
SEND FOR PRICE LISTS.



No. 77. VIOLET FRAME
(as illustrated).
6 ft. by 4 ft. £1 15 0
9 ft. by 4 ft. 2 7 6
No. 60.
PORTABLE PLANT PRESERVER
6 ft. by 3 ft., £1 14 0
6 ft. by 4 ft., £2 5 0
All Frames and lights Painted three coats. Glazed with 21 oz. glass.



Carriage Paid on Orders of 40/- value to most Goods Stations in England and Wales.
BOULTON & PAUL, LTD., NORWICH.

Dr. J. COLLIS BROWNE'S
ORIGINAL AND ONLY GENUINE
Chlorodyne
Universally acknowledged to be the Most Valuable Medicine known, and one which should be in every home.
Acts like a Charm in DIARRHŒA and DYSENTERY.
Cuts short all attacks of SPASMS, HYSTERIA, and PALPITATION.
The only Palliative in NEURALGIA, TOOTHACHE, GOUT, RHEUMATISM.
The Best Remedy known for
COUGHS, COLDS,
ASTHMA, BRONCHITIS.
Refuse imitations and insist on having Dr. J. COLLIS BROWNE'S Chlorodyne.
Convincing Medical Testimony with each bottle.
Of all Chemists, 1/1½, 2/9, 4/6.

ral superphosphate of lime to be guaranteed to contain a certain percentage of soluble phosphate. (From 25 to 28 per cent. of soluble phosphate, is an ordinarily good quality.) Dissolved bones to be guaranteed to be "made from raw bone and acid only," and to be sold as containing stated minimum percentages of soluble phosphate, insoluble phosphates, and ammonia.

DESTRUCTION OF STINGING NETTLES.—M. E. M., Kettering: Where the common stinging nettle (Urtica dioica) is a plague, and cannot be dealt with by the ordinary garden method of digging and forking it out, followed by close cropping and good cultivation, it may be overcome by regular cutting from the time the shoots appear in the spring, cutting taking place each time the fresh shoots attain 6in. to 1ft. in height. This plan, thoroughly and regularly carried out, exhausts the reserves of food material stored up in the root-stocks, and eventually kills the weed. The eradication will be materially hastened by a dressing of salt (at the rate of 5½lb. per rod, or 6 or 7 cwt. per acre) when the nettles are first cut in spring. Experiments conducted in Germany in 1909 with a view of destroying nettles on large areas, showed that the young shoots were destroyed in spring by spraying with a 15 per cent. solution of kainit, applied with an ordinary charlock sprayer. The shoots became black and died off, and the grasses won the mastery, so that at the time of hay harvest the area seemed quite free from the pest. Careful examination showed that the fresh delicate shoots from the root-stock appeared sickly and but little grown, while the root-stocks themselves were black and had begun to die. (As about 35 per cent. of kainit consists of common salt, it is probable that the effect of spraying with the solution of kainit is largely due to the salt contained therein.)

BILBERRIES AND HUCKLEBERRIES.—C. S. W., Launceston: The Rose order contains a large number of "berries," notably the raspberry, strawberry, blackberry, and loganberry, with the newer additions, but probably the genus Vaccineum includes more "berry" plants than any other. Vaccinium arboreum, is the fackleberry; V. macrocarpon (more correctly Oxycoccus macrocarpus), is the American cranberry, and V. Oxycoccus (Oxycoccus palustris) is the common cranberry; V. myrtillus, the bilberry or common whortleberry; V. stamineum, the deerberry or huckleberry; and V. vitis-idaea, the cowberry. All these plants love moist, peaty soil, such as a bog so often affords.

FORESTRY.—W. J. M., Cardiff: A handy and useful book on the subject is "Webster's Practical Forestry" (W. Rider and Son, Bartholomew's Close, London, E.C.)

CATTLEYA CITRINA.—W. S. O., Lydd: This fragrant species is usually best managed when grown upon a wood block, head downwards, with a moderate mound of peat or osmunda fibre and sphagnum fixed about its roots. It thrives in a cooler atmosphere than is desirable for most cattleyas, hence the coolest end of the cattleya house, or the warmest end of the odontoglossum house will suit it. We have seen C. citrina grown in pots and pans, and its flowers staked rigidly upright, but they look very unhappy under these conditions, as the flowers are pendulous and not meant to stand erect. We are glad you find so much help and guidance in the Orchid Notes under "Work for the Week."

PROPAGATION OF PHYSALIS. — R. B. B., Twyford: Both Physalis Alkekeagi and P. Franchetti are easily propagated from seeds sown in cold frames as soon as ripe, in the autumn or early winter. Seeds may also be sown and plants raised out of doors in spring. Another common method of propagation is by division of the roots in late autumn. The tops of the young growths removed in early summer, and inserted as cuttings, will root readily in sandy soil in a cool and shaded position.

NAMES OF PLANTS

Under this heading we can only undertake to name species and well-marked varieties of plants, and not florists' flowers. Specimens should be packed in stout boxes with damp (not wet) moss, or some leaves, as packing material, to ensure their reaching us in a fresh state. It is essential that flowers must accompany specimens of flowering plants, that fern fronds be fertile, and that numbers be firmly attached to the specimens so that they can be seen without any untying. We cannot promise to name more than six specimens at one time from any one correspondent.

B. F., Erith.—1, Vitis heterophylla; 2, Arbutus Unedo; 3, Nephrolepsis Duffi; 4, Viburnum tinus.

H. G. L., Wolverhampton.—1, Calanthe vestita oculata; 2, Adiantum capillus veneris Mariesi; 3, Acrostichum crinitum.

C. R.—1, A garden form of Nephrolepis exaltata; 2, Asplenium bulbiflorum; 3, Episcia chontalensis; 4, Maranta Veitchi.

E. T. J., Wrexham.—1, Brassia verrucosa; 2, Epidendrum variegatum; 3, Cypripedium Arthurianum; 4, Odontoglossum Wilckeanum.

R. H. A., Slough.—1, Physalis Franchetti; 2, a leaf of a Heuchera, probably H. sanguinea; 3, Cattleya labiata; 4, a good form of Cypripedium insigne.

B. G. R., Hants.—1, Escallonia macrantha; 2, probably Azara microphylla; 3, Cotoneaster frigida; 4, Pernettya mucronata.

N. G., Effingham.—Clerodendron trichotomum.

NAMES OF FRUITS.

When sending fruits for naming, will our readers be good enough to send good specimens, as without these it is not possible to accurately determine the varieties. Pack firmly, using light tin or wood boxes, and send not more than six varieties at once. Label each specimen and enclose letter with the fruit, whether a separate notification is sent or not. Address the packages to the Editor, GARDENERS' MAGAZINE, as advised in the notice at the head of "Answers to Correspondents."

G. S. W., Burton.—1, Bramley's Seedling; 2, Yorkshire Beauty; 3, Golden Spire.

A. S., Jersey.—1, Lane's Prince Albert; 2, Ferne's Pippin; 3, Uvedale's St. Germain.

H. A., Taunton.—1, Court of Wick; 2, not recognised; 2, Mère de Ménage; 3, Hollandbury; 4, New Hawthornden.

F. P. V., Worksop.—1, King of the Pippins; 2, Golden Noble; 3, Blenheim Pippin; 4, Dutch Mignonne; 5, probably Gravenstein.

A. S. C., St. Neots.—1, Claygate Pearmain; 2, Dumelow's Seedling; 3, Grenadier; 4, Lady Henniker; 5, Bismarck; 6, Waltham Abbey Seedling.

CONTENTS.

PAGE
Note of the Week 851
Scottish and German Methods of Forestry ... 853
Hedgerow Timber 853
Profitable Woodlands 854
Specimen Trees for Parks and Gardens ... 855
Plantations for Landscape Effect 856
Evergreen Hedges 857
Ornamental Fruiting Trees and Shrubs ... 858
Flowering Shrubs as Lawn Specimens 859
Ornamental Trees for Small Gardens 860
Jacobinia chrysosthephana 861
Grouping Hardy Trees and Shrubs 862
Anthuriums 863
Work for the Week 864
Exhibitions and Meetings 865
Answers to Correspondents 868

ILLUSTRATIONS.

Portrait of Mr. H. Prime, 851; The Cedar of Lebanon (Cedrus Libani), 855; The Scarlet Oak (Quercus coccinea), 856; Yew Hedges at Condover Hall, Shrewsbury, 857; Viburnum rhylidophyllum, 858; Syringa Rubra de Marley, 859; The Manna, or Flowering Ash (Fraxinus ornus), 860; A Bush Tree of Pyrus Scheideckeri, 861; An Effective Arrangement of Trees and Shrubs, 862; A Beautiful Arrangement of Fine Chrysanthemums, 863.

212 pages, 31 Page Plates and 30 Illustrations,
Bound in cloth.

BULBS AND THEIR CULTIVATION.

BY T. W. SANDERS, F.L.S.,
Editor of "Amateur Gardening."

A Practical Guide to the Cultivation and Propagation of Bulbs, Tubers, &c., in the Open Air and in the Greenhouse.

Price 2/6 net.
(By Post 2/10.)

CONTENTS.

BULBS, CORMS, AND TUBERS.
SOILS AND MANURES.
BULBS IN BEDS, BORDERS, ROCKERIES, FIBRE, WATER, FRAME AND GREENHOUSE.
LIFTING AND STORING. FORCING.
PESTS AND DISEASES. PROPAGATION.
TABULAR LISTS OF HARDY AND HALF HARDY BULBS AND TUBERS. VARIETIES WORTH GROWING, ETC., ETC.

ORDER FORM.

To the Publishers of "GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

Please send me a copy of "BULBS AND THEIR CULTIVATION," for which I enclose remittance of 2/10

Name____________________

Address____________________

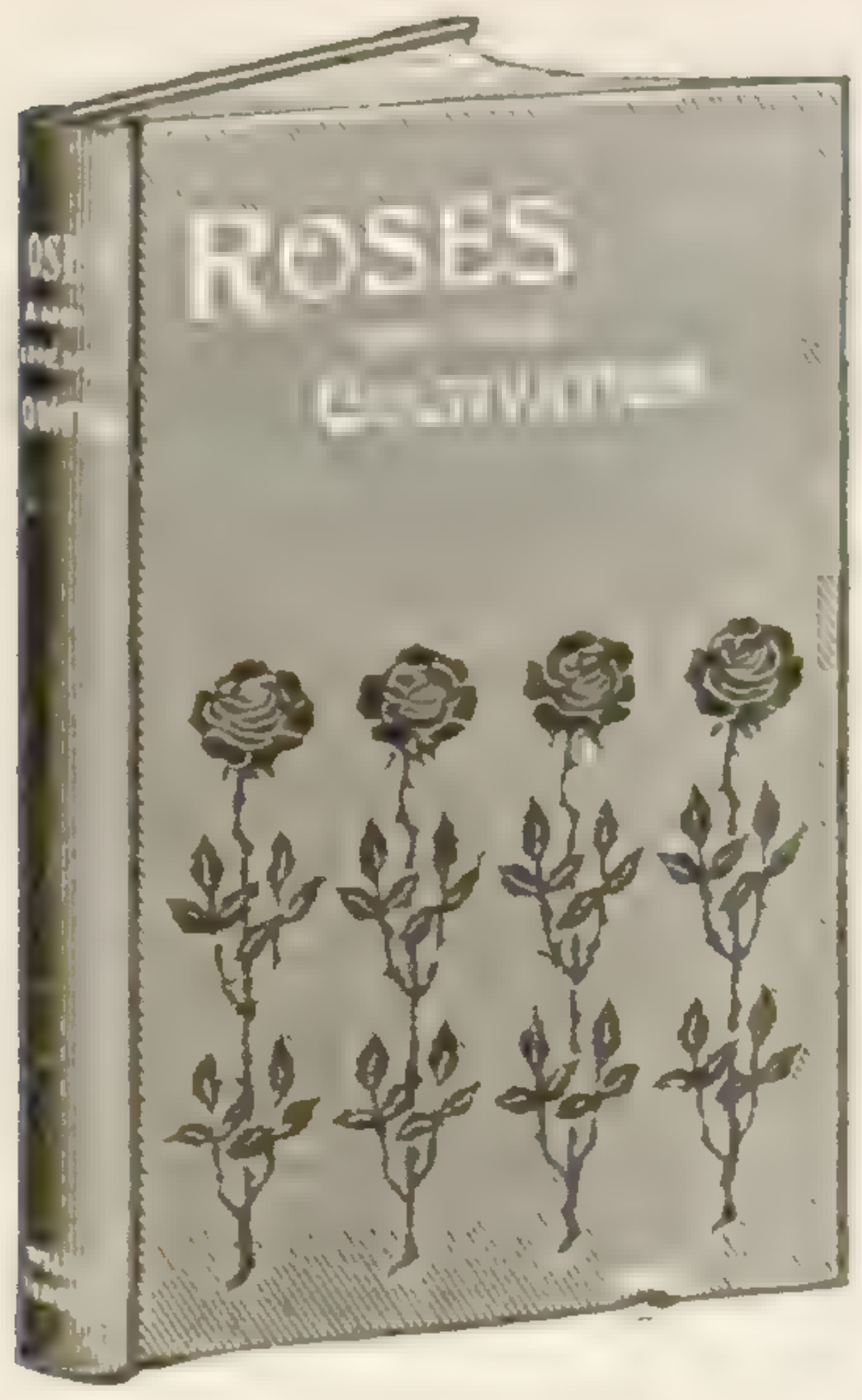
JUST PUBLISHED. *1912 EDITION.*

67 Illustrations, 17 Plates and Frontispiece. 200 Pages. 2/6 net; by post 2/10.

ROSES AND THEIR CULTIVATION.

EIGHTH EDITION.

By T. W. SANDERS, F.L.S.



How and When to Plant Roses.
Propagation of Roses—Ways to Grow Them.
How to Prune, Bud, and Graft Roses.
Erection of Pergolas and Arches.
How to Show Roses.
Insect Pests and Fungoid Diseases—Remedies.
Types of Roses, full description, Culture, etc.
Soil and Manures for Roses.
The Rose Grower's Calendar; showing what to do each month.

LIST OF OVER 1,700 CULTIVATED ROSES:

Showing Variety, Section or Class, Date Introduced, Colour, Habit of Growth, How Best Grown, Mode and Time of Pruning, Description of Flower.

ORDER FORM.

To the Publishers of "GARDENERS' MAGAZINE," 148 & 149, Aldersgate St., London, E.C.

Please send me a copy of "ROSES AND THEIR CULTIVATION," by Post, for which I enclose remittance of 2/10.

Name ....

Address ....

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 31; married when suited; excellent references. Address, Closes Hall, Gisburn, Clitheroe.

GARDENER (Head), life thorough experience, Fruits, Flowers, Vines, Peaches; Inside and Out; thoroughly understands Roses, Herbaceous Borders, Lawns, Trees, Flowering Shrubs; excellent character; 4 years Outside Foreman; 3 years Head Working Gardener; left through death; married, age 33; three children. HUDSON, Cupid Green, Hemel Hempstead.

GARDENER (Head Working, where one or 2 kept); 10 years in present situation; 5 years as Second; age 31; single. Apply A. GIBBS, 68, Pope Road, Bromley, Kent.

GARDENER (Head Working) seeks SITUATION, with 2 or 3 under; life experience with Vines, Peaches, Melons, Flowers and Vegtables; married, one child. J. PETTY, Marchwood, Southampton.

GARDENER (Head Working).—Mr. COLLEDGE, Gardener to the Earl of Darnley, highly recommends F. BISHOP, as above; 4½ years as Foreman here. Cobham Hall Gardens, Gravesend, Kent.

GARDENER (Head Working); life experience in all branches; highest references; understands Oil Engine; age 40; family, 3 boys. E. STEVENS, 13, Connaught Road, Newbury, Berks.

GARDENER (Head) seeks SITUATION where three or more are kept; practical experience in all branches; excellent references; age [illegible]. Address, S. DOUGHTY, Overstone Park Gardens, Northants.

GARDENER (Head Working) (Scotch) requires SITUATION where 2 or 3 are kept; 20 years' experience in all branches of gardening; 5 years present situation; married; age 36; 2 children; excellent testimonials. H. McCARTNEY, [illegible] Place, Sandy, Beds.

GARDENER (Head Working or Single-handed); abstainer; age 36; one boy, 14½ years; life experience Inside and Out; excellent references; five years present place; knowledge of Oil Engine and Electric Light, Bees; wife help house if required. J. OSMOND, Runfold, Farnham, Surrey.

GARDENER (Head Working), thoroughly experienced in all branches; excellent references; married; disengaged through establishment being given up. G. HALL, Hermitage Cottage, Minchinhampton, Glos.

GARDENER (Head Working).—Mr. R. W. WILLIAMSON, of the Croft, Didsbury, near Manchester, strongly recommends his late Gardener, HENRY ARNOLD, who has been with him for over 20 years, is well experienced in gardening in all its branches, and is specially trained in rockery construction and cultivation of alpines.

GARDENER (Single-handed, or where help is given); 12 years' practical experience; 4 years in last situation; good references; single; age 36; abstainer. J. CHAPMAN, Ferry Hill, Chatteris, Cambs.

GARDENER (Single-handed, or where help is given); life experience in all branches; highest references; thoroughly understands Oil Engine; age 40; strong and active; married; 3 in family, youngest 12½. E. STEVENS, 13, Connaught Road, Newbury, Berks.

A GENTLEMAN, on giving up his country house, will be pleased to recommend his GARDENER as a reliable Head Man, with good knowledge of his profession; life experience at Sandon Hall, Cassiobury Park, Champneys, Tring, and London Parks; age 39, married, three children.—F. W. PURNELL, Ridge, Capel, Surrey.

GARDENER, thoroughly experienced, seeks re-engagement with Lady or Gentleman requiring obliging and trustworthy man; age 30; married, one child, two years; abstainer, excellent references. D. MOORE, West End Cottages, West End, Pinner.

GARDENER, 40; Single-handed preferred; thoroughly experienced; excellent character; active worker; Inside and Out, with early vegetables; abstainer; married. A. BISHOP, Windmill Hill, near Hailsham.

GARDENER, Single, seeks SITUATION (single-handed or where help is given); age 28; good references. H. HOGG, West Shrubbery, New Church Road, Hove, Sussex.

GARDENER seeks SITUATION in the Pleasure Grounds, Kitchen Garden; age 25; single; good experience Inside and Out; good references. E. PARSONS, 47, Furze Road, Thornton Heath, Surrey.

FOREMAN, Kitchen Garden; thorough knowledge of growing Vegetables, Fruit, etc.; 11 years' experience; 2 years with Madame Patti Cederstrom; age 25; abstainer. A. MORTIMORE, c/o Mr. Flitney, Chipstead, near Sevenoaks, Kent. Bothy preferred.

JOURNEYMAN, age 21, with six years' experience Inside and Out, seeks Situation Inside under Foreman, excellent testimonials; can be well recommended; height 5ft. 10in. Apply P. CLIFTON, The Mill House, Rickmansworth, Herts.

JOURNEYMAN (Inside and Out).—W. DAVIES, The Gardens, Shenton Hall, Nuneaton, wishes to highly recommend CHARLES CRAMPHORN; age 19, five years' experience; Bothy preferred.

JOURNEYMAN (Inside and Out); age 20.—A. MADDOCK, The Gardens, Hawthornden Manor, Uttoxeter, will be pleased to recommend F. WILLIAMSON as above; very willing and obliging; Bothy preferred. Apply F. WILLIAMSON, 43, Cheadle Road, Uttoxeter.

JOURNEYMAN seeks SITUATION (Inside under Foreman); 7½ years' good general experience Inside and Out, age 22; excellent references, strong and obliging; Bothy preferred.—O. NICHOLAS, Kilmersdon, near Bath.

JOURNEYMAN (Third) seeks SITUATION Inside or Inside and Out, six years' experience; age 20, abstainer, good references; bothy preferred. W. COWARD, 24, Southbroom, Devizes, Wilts.

SITUATION required; at present Eames Floral Nurseries, Frome, 4 years; well up Herbaceous, Rock Plants, and general nursery work; private or trade; references if required, age 21. F. WATTS, Cams, Frome, Somerset.

IMPROVER (Inside or Inside and Out), 4 years' experience; age 19 years; not afraid of work, good reference. F. SKILTON, The Gardens, Mount Pleasant, Bishop Auckland, Durham.

THOS. PARRY, Birlingham House Gardens, Pershore, can with confidence recommend Young Man, 25, for Kitchen Garden or Pleasure Grounds; good with Scythe and Machines; disengaged. Address, W. JONES, [illegible], Llantilio Crossenny, near Abergavenny.

YOUNG MAN (20), French, 6 years' experience, strong, willing, seeks SITUATION in Market Nursery or Private; Inside or Out; abstainer. M. LEGRAND, 12, Gillingham Street, S.W.

YOUNG MAN seeks SITUATION in Pleasure Grounds and Kitchen Garden; good references, Bothy preferred; two years in last place; age 19. J. METCALFE, Ludborough, Louth, Lincs.

YOUNG MAN, age 18, seeks SITUATION, Inside, or Inside and Out; 4 years experience in general garden work. A. J. BATES, Rose Cottage, Souldern, Banbury, Oxon.

YOUNG Man seeks SITUATION as indoor servant, willing to make himself useful; age 19; single. J. TIMMS, 20, Nottingham Road, Isleworth, Middlesex. No circulars.

YOUNG MAN seeks SITUATION to look after Electric Light and Garden; well up in all branches; nine years last situation. EDWARD VILLA, Street Cobham, Surrey.

YOUNG MAN (17), French, seeks SITUATION in market nursery or private establishment; three years' experience; good references. CAPGRASS, 98, Percy Road, Hampton, S.W.

YOUTH, aged 17, seeks SITUATION in Garden; strong, willing; 3½ years in last place; highly recommended. E. ROBERTS, Gate House, Nuttall, Nottingham.

LAD, age 17, seeks SITUATION in Garden; some experience; wish to improve; good character; Bothy preferred. S. RAYNER, Chart Road, Sutton Valence, Maidstone.

LADY, having good knowledge of Garden Designing, would give services in return for practical instruction with Garden Architect or Nurseryman near London. M. BARRON, 2d, Oxford and Cambridge Mansions, W.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For NOVEMBER 25, 1911.

Please Repeat my Advertisement.

Name..

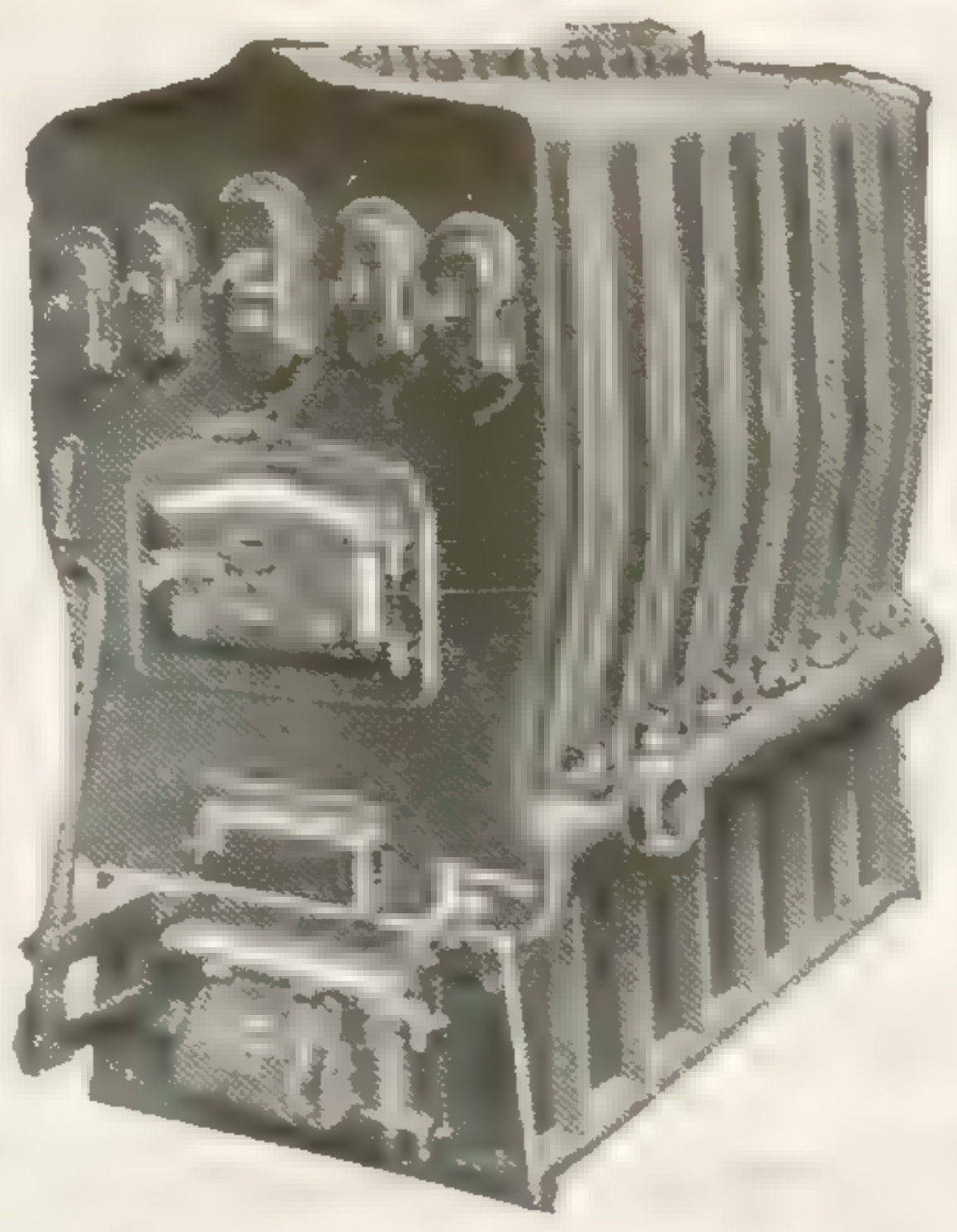
Address..

....

Date.......................................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

Kinnell's Boilers



THREE LEADING TYPES:—

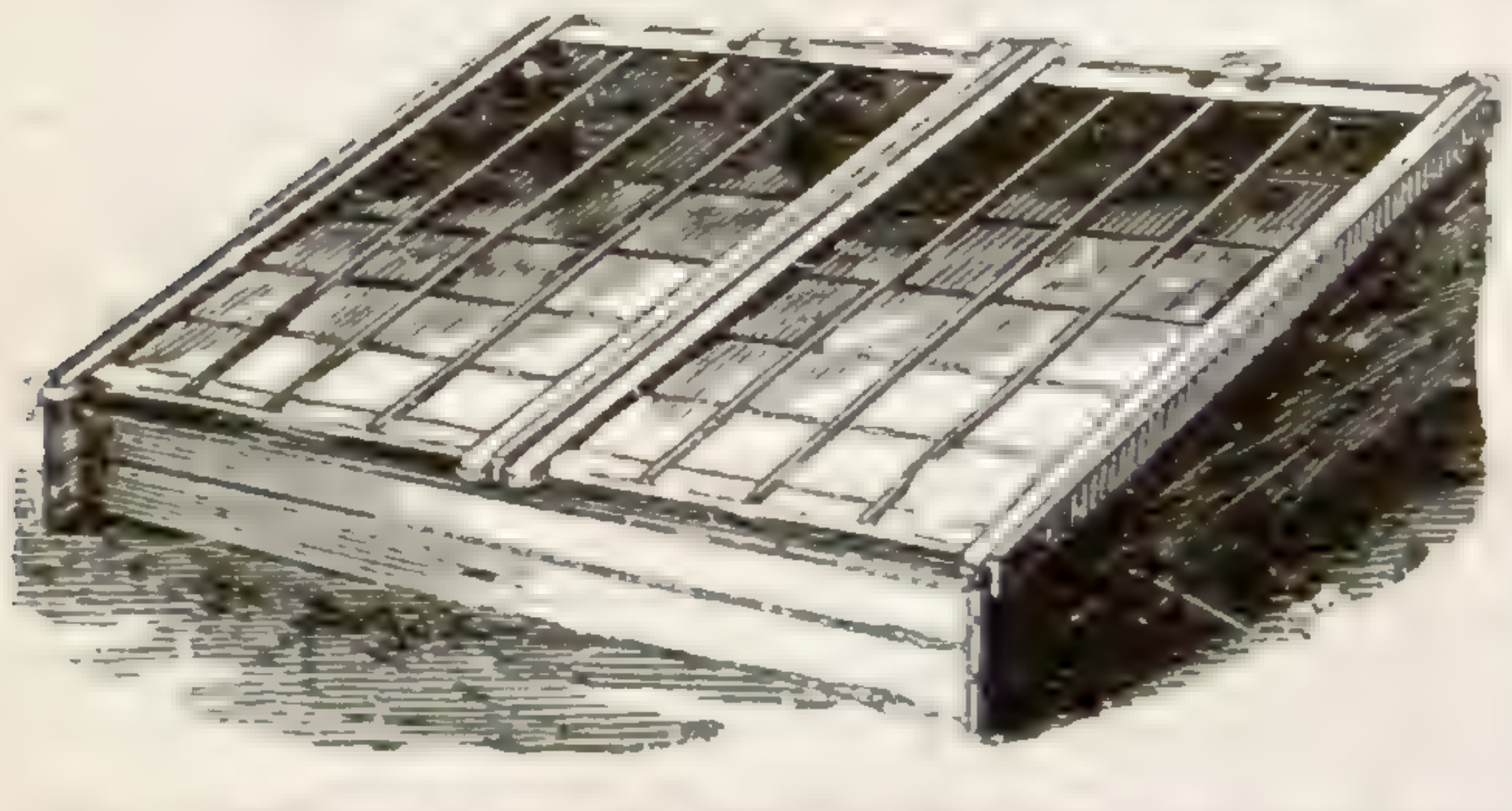
The **"ANGLIAN," Sectional,** heats 800 to 8,000 ft. 4in. pipe.
The **"ROCHFORD," Tubular,** heats 600 to 8,000 ft. 4in. pipe.
The **"HORSE-SHOE"** for the small Greenhouse.

Saddle Boilers, Trentham Boilers, and all classes of Pipes, Fittings, etc., ready for immediate despatch.

Write for List No. 77, post free.

CHAS. P. KINNELL & Co., Ltd., 65, & 65a, Southwark St., London, S.E.

PORTABLE
CUCUMBER FRAMES.
OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.		£	s.	d.
1-light 4 ft. by 6 ft.	CASH PRICES.	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.	CARRIAGE PAID.	5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

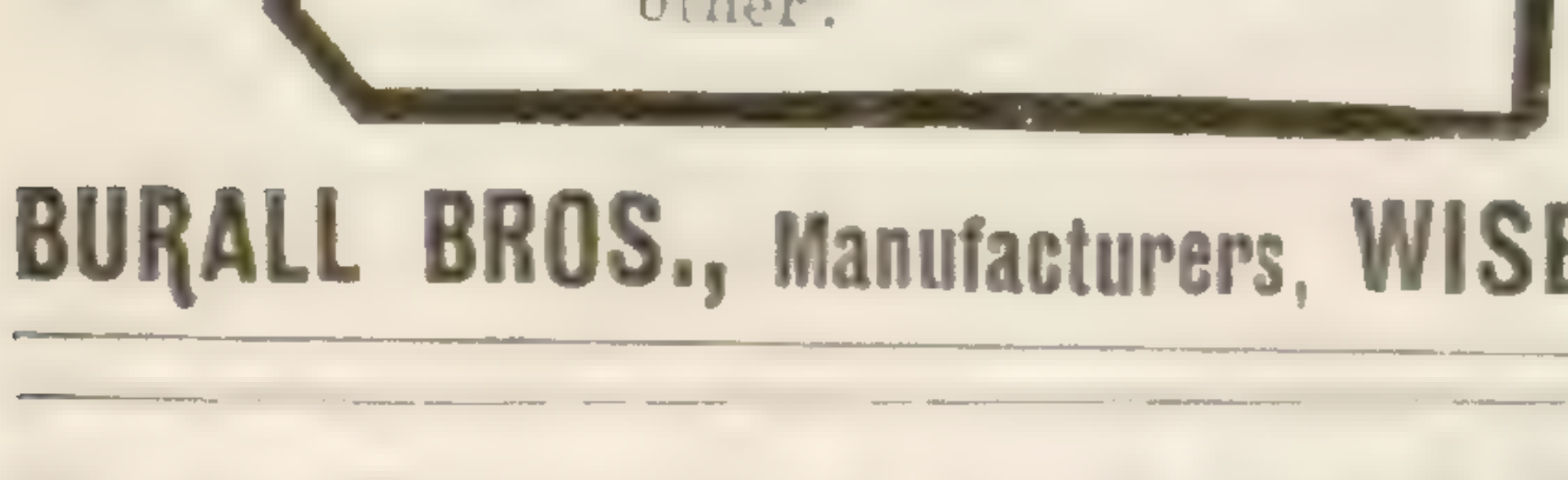
R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON MANCHESTER.

MESSRS. PULHAM & SON have secured a fine lot of Old Stone Paving, which is eminently suitable for the Paving of Pergolas, Garden Paths, etc.

They will be happy to quote for any quantity, delivered at any railway station.

PULHAM & SON,
By Appointment. By Appointment.
71, Newman Street, London, W.
And BROXBOURNE.

Time & Temper Savers!



A FLORIST writes:— "Please repeat our order for these Address Labels, we can use no other!"

Samples Free.

BURALL BROS., Manufacturers, WISBECH.

FLOWER POTS
SAUCERS, SEEDPANS, RHUBARB AND SEAKALE POTS, RUSTIC WARE, VASES, PEDESTALS, etc.

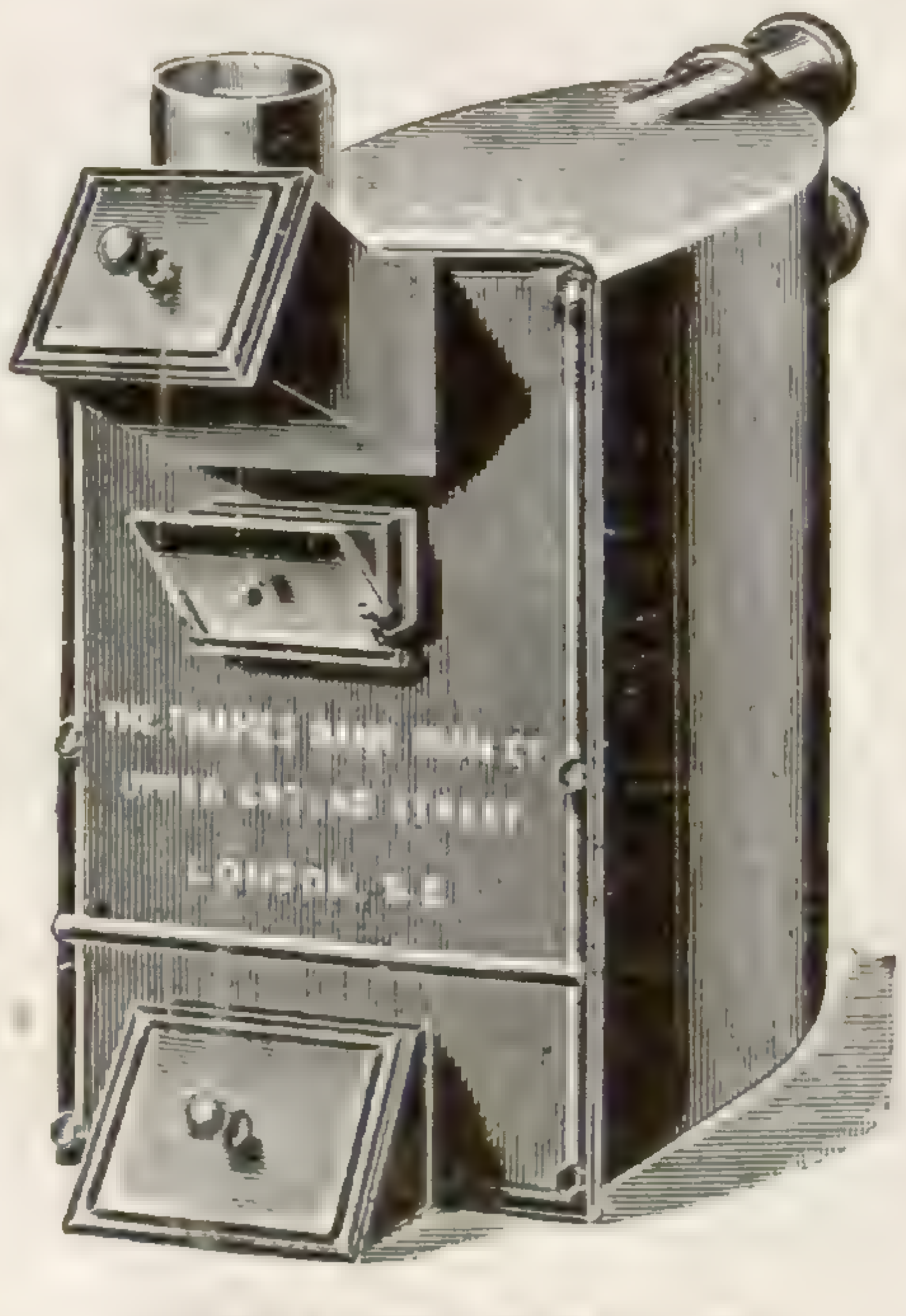
Our Pots are Low in Price and rich in Colour. Amateurs should try our FAMOUS CRATES of POTS.
7s. 6d., 10s. 6d., 15s., and 21s.
ART CATALOGUE FREE. ORDERS SENT OFF SAME DAY.
Buy from the Makers—
HERBERTS PARK POTTERY CO., WOLVERHAMPTON.

'Phone: Hop. 763.

When next a Small Boiler you require

TRY

THE HEEL

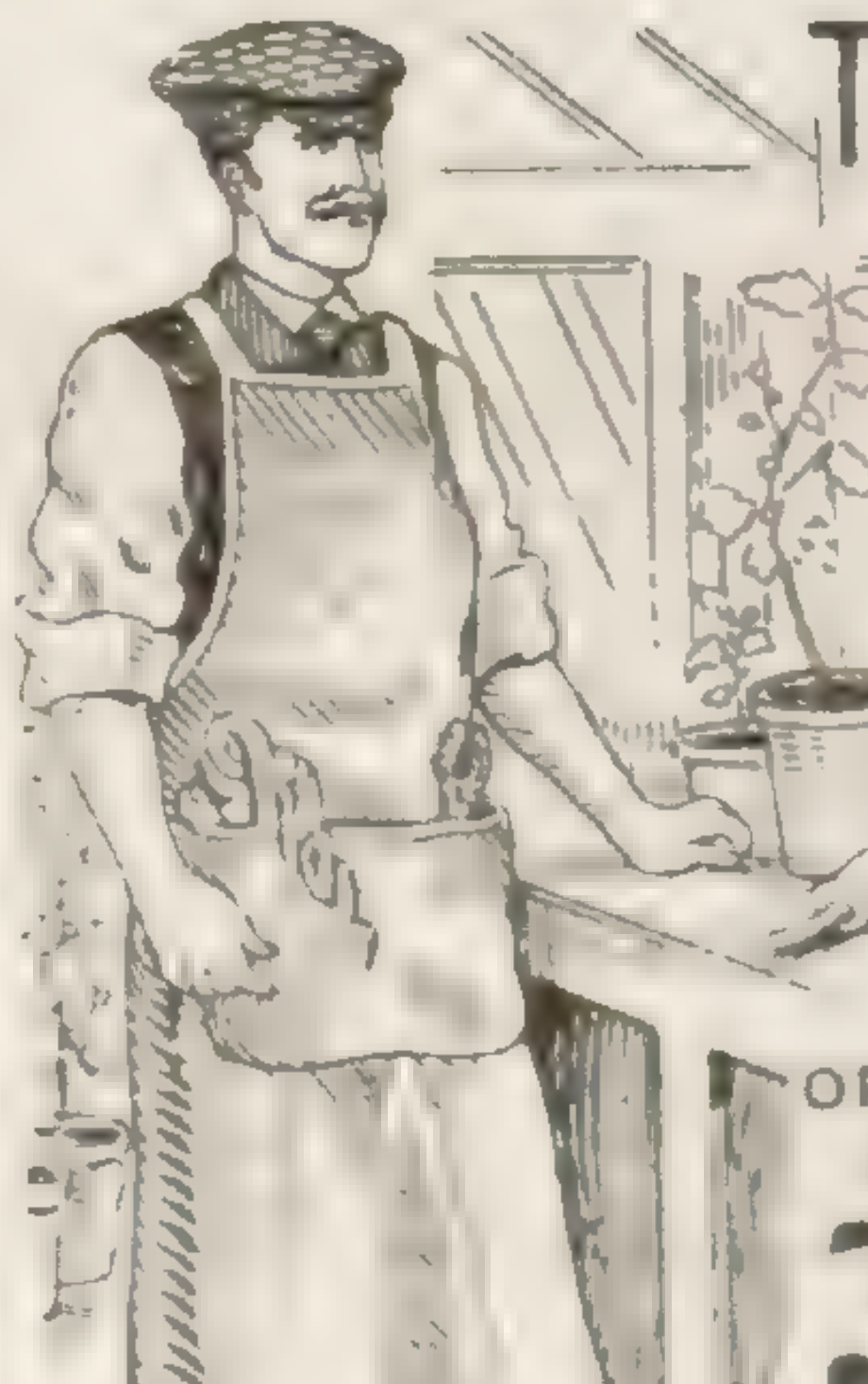


THE THAMES BANK IRON CO.
UPPER GROUND STREET
LONDON, S.E.

NONE TO BEAT IT.

THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.

4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.



REGISTERED

THE APRON
That has Come to Stay

WORN BY ALL THE LEADING GARDENERS LOOK AT THE PRICE
1/9 in Dark Blue Ponicus Twills,
or in Dark Blue Ponicus Serge **3/9** Postage 3d each extra WRITE FOR ONE TO-DAY.

SHAW & MONTGOMERY,
628 ARGYLE St. GLASGOW

Please mention
THE GARDENERS' MAGAZINE
when writing to Advertisers.

MERRYWEATHERS'
614 PUMP
IS THE
Gardener's Friend.

Easy to Work. Simplicity Itself.

Write or Call—
63, Long Acre, LONDON, W.C.

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant
Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

CHARGES FOR ADVERTISEMENTS IN THE GARDENERS' MAGAZINE.

	£	s.	d.
Five Lines and under	£0	2	6
Per Line beyond	0	0	6
" Inch	0	6	0
" Half Column	1	10	0
" Column	3	0	0
" Page	9	0	0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— & Co.

Telephone Numbers:
Editorial and Printing Depts. .. ... 831 Holborn.
Advertising and Publishing Depts. ... 2140 Holborn.

Offices: 148 and 149, Aldersgate Street, London.

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 3,030. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, NOV. 25, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S REMOVAL SALE OF HARDY PLANTS.
Clearance List of Surplus Plants at greatly reduced prices (prior to removal of nurseries from Surbiton to Taplow) sent post free on application.
BARR and SONS, 12 and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, Horticultural Builder, Chelsea, S.W., has some excellent Pit Lights and Frames of various sizes and descriptions. Any Gardener requiring anything of the kind is invited to send for Price Lists, by means of Postcard, Telephone Call (201 Western), letter, or wire, to Gray, Chelsea, London.

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
3 Hatherley, Cheltenham.

CHOICE NEW CHRYSANTHEMUMS.—Our New Catalogue of 800 finest varieties in all sections is now ready, most up-to-date yet issued. Contains Splendid Novelties for 1912. Post free. J. W. COLE and SON, Chrysanthemum Specialists, Peterboro.

"ROSES AND THEIR CULTIVATION." A new edition of this Standard Book will be ready in a few days, and every Rose-grower should secure a copy. Cloth, many Illustrations, 2s. 10d., post free, from Publisher, 149, Aldersgate Street, London, E.C.

ORDER MATS NOW.—To prevent disappointment and loss by early frosts, order Norfolk Reed Mats now, 50 per cent. more protective than straw. Made to any size, 1d. per square foot.—BOULTON and PAUL, Lim., Norwich.

PERPETUAL-FLOWERING of American Tree Carnations, strong, healthy, Guernsey plants (from small pots), from 4s. per doz., carr. pd. Ask for Cat. 75 var. Full directions how to grow them. VAN DER SLUYS, F.R.H.S., Ramee, Guernsey, C.I.

BECKETT'S NEW BOOK.—The most practical and Up-to-date Book on Vegetables. Price 5s.; post free 5s. 6d. EDWIN BECKETT, Aldenham [illegible] Gardens, Elstree, Herts.

PERPETUAL TREE CARNATIONS, best varieties, strong young plants, out of small pots, 20s. per 100; good flowering plants, in 5-inch pots, 10s. 6d. doz. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

WELLS' Catalogue of
CHRYSANTHEMUMS,
PERPETUAL CARNATIONS,
HERBACEOUS PLANTS,
ALPINE AND ROCK PLANTS,
now ready. Post free on application. Wells' Book, "The Culture of the Chrysanthemum," post free, 1s. 6d. W. WELLS and CO., Merstham, Surrey.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, [illegible] per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country

WEBBS' COLLECTIONS OF NARCISSI FOR POTS AND OPEN GROUND.
25 Narcissi, in 5 choice varieties, 2/3.
50 ,, ,, 10 ,, ,, 4/6.
100 ,, ,, 10 ,, ,, 9/-.

WEBBS' CHOICE MIXED TULIPS (Single and Double) for Bedding, 9d. per doz., 4/6 per 100.

WEBBS' CROCUS FOR BEDS AND BORDERS.
Mixed colours, 1/6 per 100, 12/6 per 1,000.

WEBB and SONS, The King's Seedsmen, Wordsley, Stourbridge.

BUNYARD'S CATALOGUES
Free on Application.

FRUIT TREES. SHRUBS.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

CLAY'S MANURES, CRUSHED BONES
See page vi.)

CLAY'S FERTILISER IS
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

CHRYSANTHEMUMS.

My Collection contains all the best up-to-date.
Catalogue of nearly 600 vars., now ready.
Cuttings from 1s. 6d. to 6s.; Rooted Plants in Feb., from 2s. to 9s. per dozen, purchaser's own selection.
H. WOOLMAN, F.N.C.S., Shirley, Birmingham.

ORCHIDS FOR AMATEURS.—A practical guide to the Cultivation of Cool and Warm-house Orchids, adapted for Small Mixed Greenhouses. The author is C. Alwyn Harrison, F.R.H.S., and the book can be obtained, by post, for 2s. 10d., from Publisher, 149, Aldersgate Street, London.

LAVENDER, Old English, 10s. per 100 (50 at 100 rate); packed on rail. Sample doz., 2s. 6d., post free. Other varieties of Lavender, price on application. CHILVERS and SON, Heacham, Norfolk.

DAWES' CHALLENGE RHUBARB has gained nine Medals and Awards, also A.M., R.H.S., London. Strong roots ready. Price list free. DAWES' NURSERIES, Syderstone, Norfolk.

THOMSON'S CELEBRATED MANURES.
(For full particulars see page viii.)

HOLLY, Holly, Evergreens, Laurel, Ivy, Box, etc. Moss—decoration, wreath, packing, sphagnum, etc. Welsh Mountain Fern Roots, assorted. Prices right; quality right. Write now for list. Entire satisfaction guaranteed. Estab. 14 years. Bankers, Bank of England. HAWKINS, Dolgelley, N. Wales.

CONSERVATORIES AND WINTER GARDENS, Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs, and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue, free.—BOULTON and PAUL, Lim., Norwich.

GREENHOUSES and CONSERVATORIES. Distinctive Designs and Finished Workmanship. Write now for ILLUSTRATED CATALOGUE. CARTER and HOWARD, Horticultural Builders, Kingston-on-Thames. Phone: 1308 P.O. Kingston.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable buildings, etc. Catalogue gratis.

SUTTON'S BULBS.
The best of the year.
Mr. H. Kenten, Gardener to L. B. Beauchamp, Esq., writes:—"The Bulbs supplied by you have again turned out excellently. I think they are the best lot I have ever had."

SUTTON'S SINGLE BORDER HYACINTHS.
Mixed Colours. Per doz., 2/-; per 100, 14/-.

SUTTON'S SINGLE EARLY TULIPS,
For the open ground.
Finest Mixed. Per doz., 9d.; per 100, 4/6; per 1,000, 40/-.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

NOW IS THE TIME TO PLANT
Kelway's lovely Pæonies, Delphiniums, and their celebrated Artistic Hardy Borders; packed ready for planting.
KELWAY'S CHOICE named Pæonies, from 27s. per doz.
KELWAY'S CHOICE named Delphiniums, from 24s. doz.
For information about the Colour Borders send 6d. for "Gardens of Delight."

Londonderry.
October 11th, 1911.

"I take this opportunity of saying how very pleased I am with the plants supplied by you for my herbaceous border. After being established about two years the plants have attained the most wonderful and gratifying growth. During the last few weeks the borders have been an object of admiration to all those who have seen them."

KELWAY AND SON,
The Royal Horticulturists,
LANGPORT, SOMERSET.
230 Grand Prizes, Gold Medals, etc.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
From ———. Esq.
Northwood,
Middlesex.
28 September, 1911.
"I find that I have never forwarded 2s. for your lovely Catalogue you sent me some weeks since. It would be cheap at five times the price, and I sincerely regret the oversight."

CHAMPAGNE RHUBARB ROOTS FOR SALE, suitable for forcing or for planting out.

H. WADDINGTON, 42, Cank Street, Leicester.

ROCK GARDENS and ALPINE PLANTS.—A new work and a complete guide to the Formation and Management of Rockeries, by E. H. Jenkins, F.R.H.S. Many Illustrations. Cloth, 2s. 10d., post free, from Publisher, 148, Aldersgate Street, London.

POULTRY and KENNEL APPLIANCES of every description. Write for latest Catalogue, free on application.—BOULTON and PAUL, Lim., Norwich.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.
XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.
XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, XL ALL WINTER WASH for Fruit Trees, RICHARDS' BANDING GREASE, etc. Don't forget to ask your N. S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

ALLWOOD BROS., Haywards Heath, Sussex.
Perpetual Flowering Carnation Specialists, Raisers and Growers.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

A. R. BROWN, Ltd., Wychall Nurseries, King's Norton.
The Champion Carnation Exhibitors.
The Largest Prize Winners every year since 1905

HORTICULTURAL LIBRARY.

W. H. & L. COLLINGRIDGE,
148 and 149, Aldersgate Street, London.
Catalogue of Gardening Books, Post Free.

ORCHIDS.

JAMES CYPHER & SONS,
Exotic Nurseries, Cheltenham.
Many Large Specimens and Rare Varieties.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., Southgate, London, N.
(Tel.: 59, Palmers Green.)
Catalogues post free on Application.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

R. H. BATH, Ltd,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

FRANK CANT & CO.,
Braiswick Rose Gardens, Colchester.
The World-famed Champion Rose Growers.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 *1st Prizes.* 3 *2nds, at N.R.S. Shows,* 1910. *Ctlg. Free.*

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
1911 *Awards:* 81 *Prizes. Illustrated Catalogue free.*

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

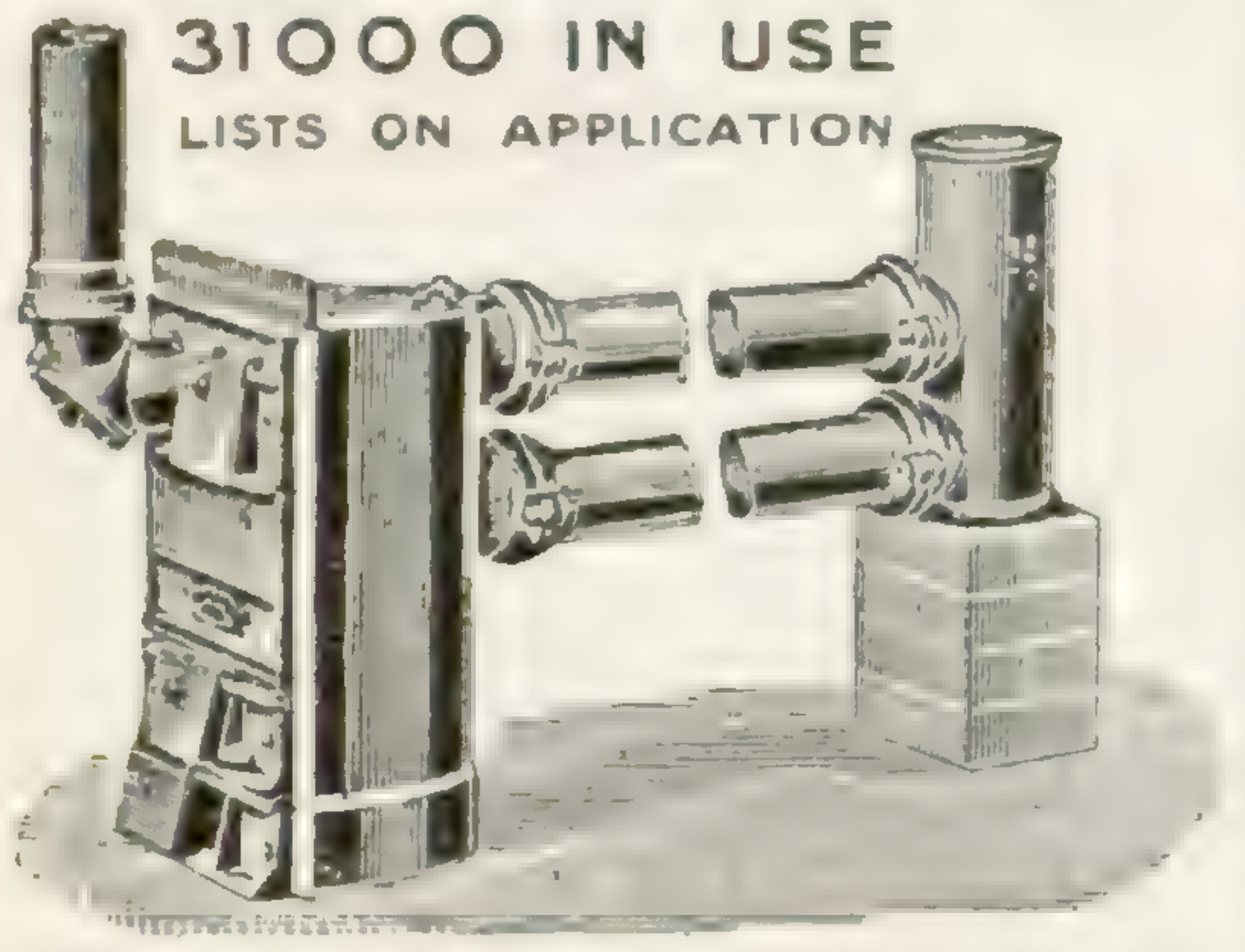
Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

The Loughborough

BOILER

31000 IN USE

LISTS ON APPLICATION



The pioneer of cheap, simple and effective heating for small greenhouses. Complete Apparatus from £3. 19. 6. The immense sale of this boiler, and its numerous imitations are the best testimony of its undoubted success

MESSENGER & CO. LTD
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH · LEICESTERSHIRE
London Office, 122 VICTORIA ST · S · W

EVERY GARDENER
SHOULD SEE OUR
Genuine Scotch Manufacture. **GLENSKOT TWEEDS.**
PATTERNS FREE. (REG.)
TROUSERS 7/6 Per Pair.
HIP POCKET. **SUIT 29/6**

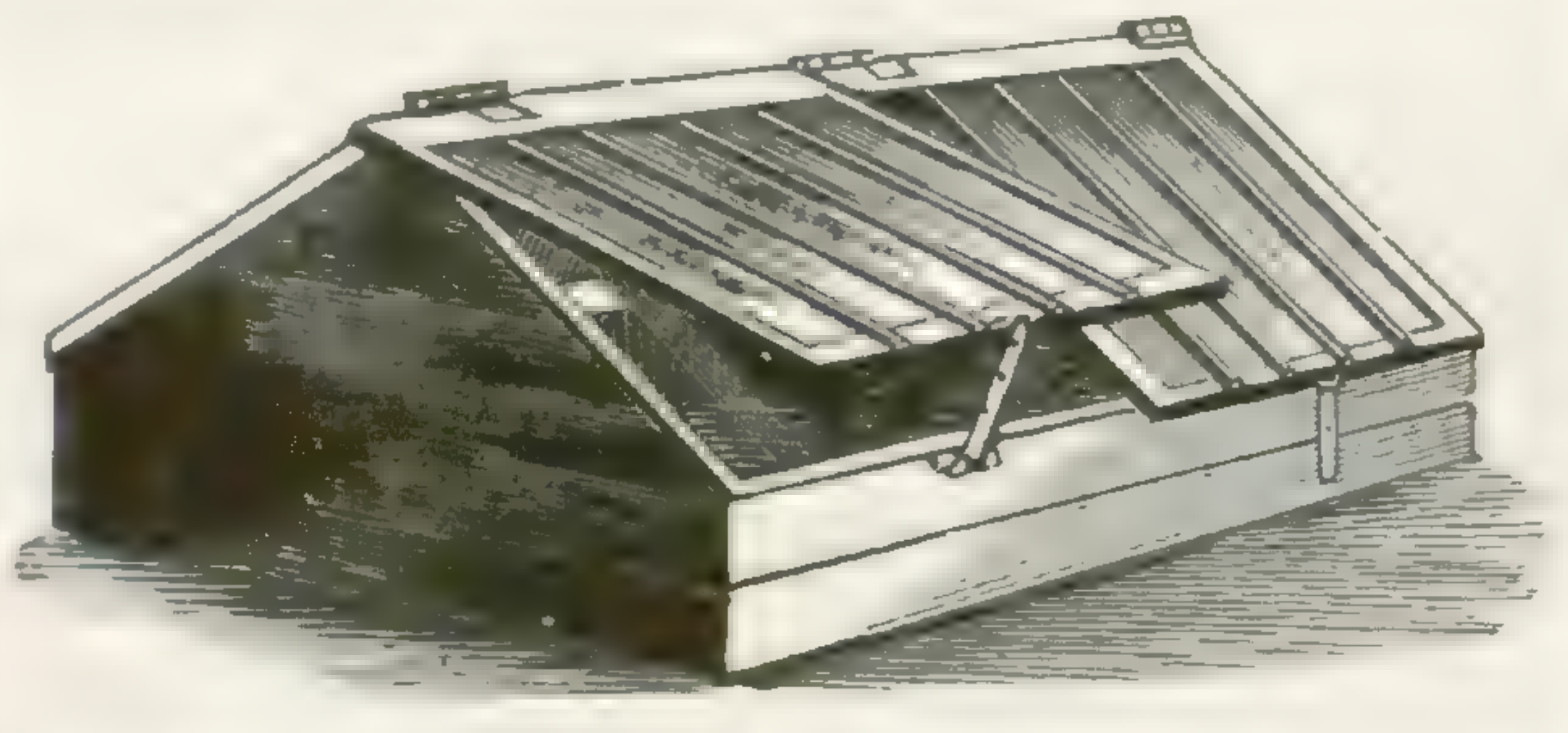
Unsurpassed for Value. Cut and Tailored by Experts.
Perfect Fit Guaranteed.
Patterns with our Easy Self-Measurement Form and Catalogue **Sent Post Free.**
WRITE TO-DAY. Thousands of Testimonials.
Money returned if not entirely satisfied.
SHAW & MONTGOMERY, The Scotch Tailors,
628 & 632, ARGYLE ST., GLASGOW, W. EST. 1876.

OILSKIN COATS, as worn in H.M. torpedo Boats, 46 to 54 inches long, 7s. 6d. to 13s. 6d. each. Mackintoshes from 12s. 6d. each. Officers' A1 Mess Plate. Price Lists on application. BAKER and CO., Queen Street, Portsmouth.

BORDER CARNATIONS and PICOTEES. —Latest and best varieties for Exhibition and Border. To advertise the quality of my stock, an assorted dozen for 3s. 9d., carr. paid. Buyer's selection. Send for Catalogue. ST. JOHN PAYNE, Carnation Grower, Beeches, Rudgwick, Sussex.

PORTABLE PLANT FRAMES

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices.	Glazed and Painted.	£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. ,, 4ft. ,,		2	5	0
6ft. ,, 5ft. ,,		2	15	0
12ft. ,, 4ft. ,,		4	0	0
12ft. ,, 5ft. ,,		4	15	0
12ft. ,, 6ft. ,,		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
ROYAL HORTICULTURAL WORKS,
MIDDLETON, MANCHESTER.

PUBLISHERS' ANNOUNCEMENTS.

THE GARDENERS' MAGAZINE may be obtained by order from all Newsagents, price Twopence, every Saturday. If any difficulty be found, a copy will be posted weekly direct from the Publisher, 148 and 149, Aldersgate Street, London, on the following terms: Twelve Months, 10s. 6d.; Six Months, 5s. 6d.

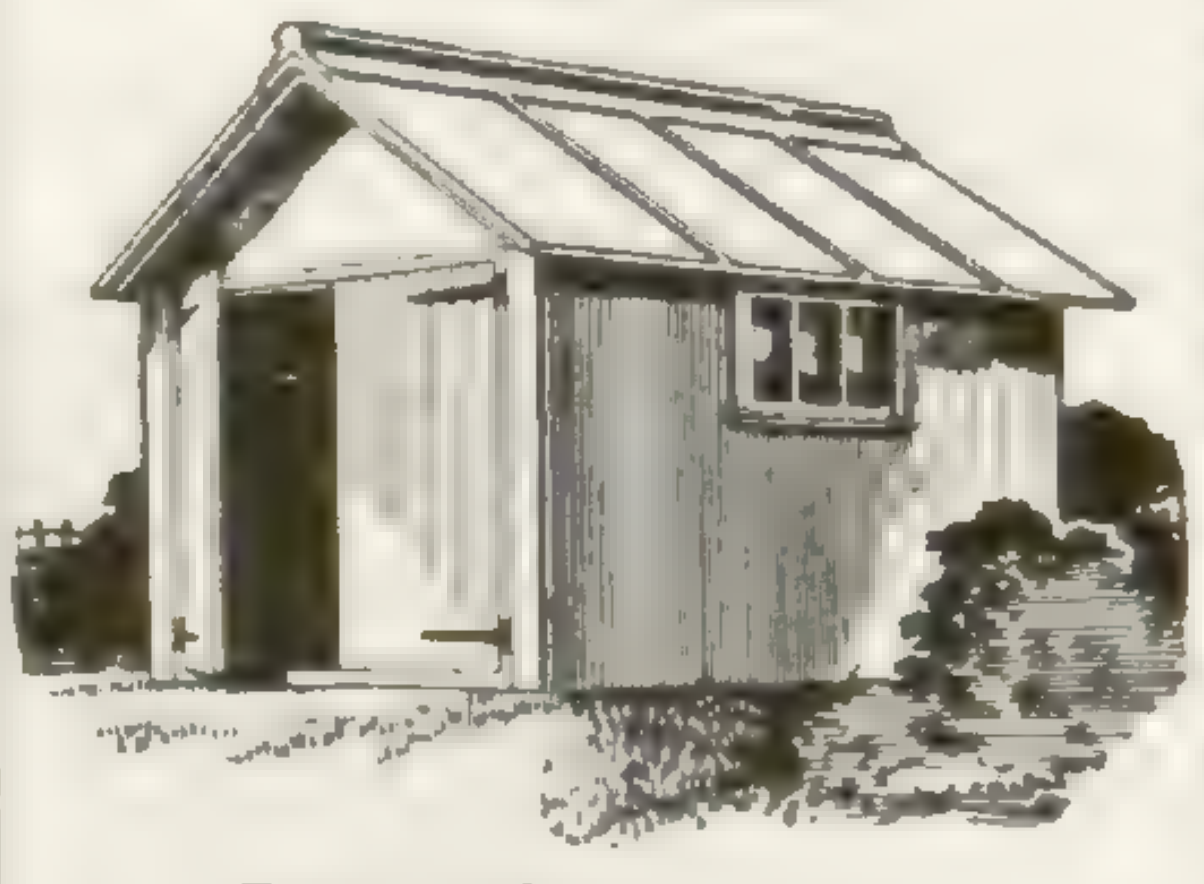
VOLUME LIII., bound in green cloth, containing the 52 weekly numbers, 1910. Price 12s. 6d.; by post, 13s. 4d.

Please mention
THE GARDENERS' MAGAZINE
when writing to Advertisers.

CORRESPONDENCE COACHING for R.H.S. Exams. and Botanical Exams.; success assured; terms moderate. HORTULANUS, Gatcombe Court, Flax Bourton, Bristol.

PORTABLE BUILDING
WITH DOUBLE DOORS.

No. 55.



Copyright Registered.

Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Doors fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

Sizes.	£	s.	d.	Strong Floor.
7ft. long, 5ft. wide, 7ft. 6in. high	£2	3	6	6/9
8ft. long, 6ft. wide, 8ft. high	2	14	0	8/9
9ft. long, 7ft. wide, 8ft. high	3	2	6	11/6
10ft. long, 8ft. wide, 8ft. 4in. high	3	12	6	19/0

Suitable for Workshops, Motor Cycle, Bath Chair, & Store Houses, Potting & Tool Sheds, etc.

Carriage Paid to any Station in England and Wales.
Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
ESTABLISHED 70 YEARS. *BEDFORD.*
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

FLOWER POTS.

SANKEY'S
FAMOUS
GARDEN
POTS

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant **Makers to His Majesty the late King.**

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

Sales by Auction.

WEDNESDAY and FRIDAY NEXT.

WEDNESDAY NEXT, Nov. 29, at Half-past Twelve o'clock.—Roses—large consignments of English, French, and Dutch, comprising Standards, Dwarfs, Climbers, T., H.T., and H.P., lotted to suit all buyers. Together with 250 lots of choice Herbaceous Plants in variety.

At Five o'clock.—100 lots of Ornamental Palms and Plants, Azaleas, Rhododendrons, Aspidistras, Standard Bays, etc., from Belgium.

FRIDAY NEXT, Dec. 1st, at a Quarter to One o'clock. —160 lots of choice Established Orchids, from the "Oakwood" Collection, also 150 lots and rare Orchids from the "Chessington" Collection. Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view mornings of sale, and catalogues had.

DUTCH BULBS, PERENNIALS, ROSE TREES, SHRUBS.

MR. J. C. STEVENS begs to announce that his **Sales by Auction** are held every **MONDAY, WEDNESDAY** and **THURSDAY** at **12.30.**

Catalogues post free.

Lots purchased, packed, and forwarded to all parts.

STEVENS' AUCTION ROOMS
(Established 150 Years),
38, King Street, Covent Garden, London, W.C.

SUNNY WORTHING.

COMPACT FREEHOLD NURSERY FOR SALE. Two acres ground with ample frontage to main road, with private side road 20ft. wide; 10 houses, about 1,600ft. run, all fully heated; seven under vines in full bearing; land tax redeemed; brick packing shed and office; water laid on all through the ground. Particulars from CASSELS, 6, Belsize Road, Worthing.

CHEALS'

FOR FIRST-CLASS
ORNAMENTAL TREES,
ROSES, FRUIT TREES,
AND
HARDY FLOWERS, etc.

NURSERIES 113 ACRES.
CATALOGUES FREE.

J. CHEAL & SONS,
The Nurseries, CRAWLEY.

ORCHIDS, ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

ROYAL GARDENERS' ORPHAN FUND.

Notice is hereby Given that an ELECTION of CANDIDATES to receive the benefits of this Fund will take place at SIMPSON'S, 100, STRAND, London, W.C., on FRIDAY, February 9th, 1912. Nomination forms can be obtained from the Secretary, and must be returned to him not later than December 18th next, on which date the lists will be closed.

By order,
B. WYNNE, Secretary.
19, Bedford Chambers, Covent Garden, London, W.C.

LAXTON'S
FRUIT TREES
IN ALL SHAPES
CATALOGUES GRATIS
LAXTON BROS
BEDFORD

ORCHIDS.

If you have a Greenhouse sufficiently heated to keep out the frost, write for our

Amateur's Guide,

giving treatment and all particulars. Illustrated.

MANSELL & HATCHER, LTD.,
RAWDON, via LEEDS.

LOGANBERRY

DELICIOUS FRUIT, requires exactly the same treatment as the Raspberry. Fruiting Canes, 9/- per dozen. Extra Strong Fruiting Canes, 12/- per dozen.

Packed Free and Delivered Carriage Paid.
Illustrated Catalogue post free on application.
KING'S ACRE NURSERIES, LTD., HEREFORD.

SELECTED SEED POTATOES.

All varieties, grown on finest soil in Scotland and Lincolnshire. Any weight supplied at low prices. Prizes given for best results. Before ordering elsewhere write for catalogue. Best Eating Potatoes also supplied in small or large quantities. See Stand No. 122, Smithfield Cattle Show, London.

A. J. SOLE, Seed Potato Grower,
PETERBOROUGH.

CHARGES FOR ADVERTISEMENTS IN

THE GARDENERS' MAGAZINE.

Five Lines and under	£0 2 6
Per Line beyond	0 0 6
" Inch	0 6 0
" Half Column	1 10 0
" Column	8 0 0
" Page	9 0 0

A reduction from above is made when a series is taken.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— & Co.

Telephone Numbers:
Editorial and Printing Depts. .. ... 831 Holborn.
Advertising and Publishing Depts. ... 2140 Holborn.

Offices: 148 and 149, Aldersgate Street, London.

Dr. J. COLLIS BROWNE'S
ORIGINAL AND ONLY GENUINE
Chlorodyne

Universally acknowledged to be the Most Valuable Medicine known, and one which should be in every home.

Acts like a Charm in DIARRHŒA and DYSENTERY.

Cuts short all attacks of SPASMS, HYSTERIA, and PALPITATION.	The only Palliative in NEURALGIA, TOOTHACHE, GOUT, RHEUMATISM.

The Best Remedy known for
COUGHS, COLDS,
ASTHMA, BRONCHITIS.

Refuse imitations and insist on having **Dr. J. COLLIS BROWNE'S** Chlorodyne.
Convincing Medical Testimony with each bottle.
Of all Chemists, 1/1½, 2/9, 4/6.

TREE CARNATIONS.

E. J. WOOTTEN, Fairoak, EASTLEIGH,
Has all varieties, including
Lady Alington, Felton, Mrs. Ward, Bonfire, White Wonder, La Mode, Marmion, etc.
Strong Plants in Small Pots Now Ready.

Orchids! Orchids!! Orchids!!

The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application.—**J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana, Vanda Cœrulea Lushai Hill variety, dark blue type; Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

ROCK & BORDER PLANTS
100,000 IN POTS.
The Finest Lot in all Europe.
PERRY'S Plant Farm,
ENFIELD. *(Cats. Free.)*

A SPECIALITY FOR MORE THAN 50 YEARS

POT VINES

Exceptionally Fine this Season.
Inspection Invited.

J. R. PEARSON & SONS, LOWDHAM, Notts.

SPECIALITIES. (Carriage Paid).

Shrubs for

Under Trees	Wild Gardens
Rock Gardens	Natural Gardens
Water Gardens	Bamboo Gardens
Woodland Gardens	Azalea Gardens

Catalogue with 450 Illustrations, Post Free.

CAUNTLETT'S Ltd., Chiddingfold, SURREY

AMARYLLIS — HIPPEASTRUMS — unrivalled New Hybrids. Highest Awards at Home and Abroad, including 37 Gold Medals. Splendid Bulbs, thoroughly ripened. Catalogues and all particulars free on application. The trade supplied. ROBT. P. KER and SONS, Aigburth Nursery, Liverpool.

BUNYARD'S
FRUIT . .
TREES . .

ORDER AT ONCE FOR PRESENT PLANTING.

WRITE FOR CATALOGUE.

Geo. Bunyard & Co.,
LTD.,
Royal Nurseries,
MAIDSTONE.

Telegrams:
FRANK CANT,
COLCHESTER.

Telephone
No. 182.

CANTS'
CHAMPION
ROSES

THE FINEST STOCK
IN THE KINGDOM.

Direct from
FRANK CANT & CO.,
Dept. B., BRAISWICK ROSE GARDENS, COLCHESTER.

Our Illustrated Catalogue post free on application.

SYDNEY SMITH,
Hardy Plant Grower,
Tansley Old Nurseries,
Near Matlock.

Forest Tree Seedlings, Larch Japanese, 1 yr.; Ash common, 2 yrs.; Scotch Fir, true native, 1 yr. and 2 yr.; Pines in sorts, 1 yr. and 2 yr.; Spruce, Norway, 2 yr.; Larch, native, 1 yr. and 2 yr.; Spruce, White American, 6 to 9in.; Hazel, 2 yr.; Oak, English, 2 yr.; Douglas Fir, 2 yr.; Beech, 2 yr.; Transplanted in sizes from 1 to 3ft. of the above. Gaultheria Shallon, Hypericum calycinum, Irish Ivies, Philadelphus in variety, Hypericum Moserianum, Berberis, aquifolia, Ribes sanguineum, Hollies, 1 to 4ft.; Pernettyas in sorts, Laurels, 1 to 4ft.; Spiræas in variety, Tamarisk in variety, Yew, English, 1 to 4ft., etc.; hardy Ericas, 40 varieties, very healthy, vigorous stock. Lowest prices quoted for all kinds of Nursery Stock.

Special Quotations for large Quantities.

A Special Line can be quoted in Rhododendrons for covert planting.

STALKER'S
FOREST TREES, FRUIT TREES,
—ROSES, BULBS, and SEEDS—
Are known all over the world, and cannot be surpassed for hardiness and quality.
Famous for QUALITY and CLEANLINESS.
D. STALKER & SON,
Government Contractors, NAIRN, N.B.
Catalogues free.

CHARLESWORTH & CO.,
Hayward's Heath, Sussex,
ORCHID SPECIALISTS
IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

RIVERS'
Fruit Trees, Roses,
Vines, Figs, Oranges,
AND
Orchard House Trees.

A LARGE AND SELECT STOCK
ALWAYS ON VIEW.

ILLUSTRATED AND
DESCRIPTIVE CATALOGUE
POST FREE 3d.

THOMAS RIVERS & SON
Sawbridgeworth, Herts.
STATION: HARLOW, G.E.R.

CHEAP AND GENUINE.
THE HOLLAND PLANT CO., Boskoop, HOLLAND
(Postal Address: Head Office, GOUDA).
offer very fine sorts of

Rhododendrons, with buds, in very fine colours, **1/6, 2/-, 3/-, 4/-, 5/-** each. **Polyanth. Roses,** Mrs. Taft, new 1909, blood red; **Orleans Rose,** new 1909, brilliant red; **Phyllis,** new, fine red; **Maman Levavasseur,** new 1907, **50/-** per 100. **New Sorts, 1911:**—Climbing Rose, Eisenach, **2/-** each; Dad Sterling, **4/-** each. Climbing Rose, Wartburg, **2/-** each; Climbing Rose, Flower of Fairfield, synonym Crimson semper florens, **50/-** per 100. Climbing Roses in different good sorts, as Crimson Rambler, Dorothy Perkins, Tausendschon, etc., **40/-** per 100. Acer negundo, fol. var., **2/-** each. Japan Maples in fine sorts, **2/-** each. Carriage free England.

PLANTING SEASON.

By Appointment.

WM. PAUL & SON,
WALTHAM CROSS, Ltd.

Nurseries twelve miles from London; south entrance four minutes' walk from Waltham Cross Station (Great Eastern Railway); west entrance five minutes' walk from Tramway Terminus.

SPECIALITIES:

ROSES in all forms, from open ground and in pots. Roses in pots, both dwarfs and climbers, extra fine this season.
FRUIT TREES, for the Orchard Garden, and Forcing House.
HARDY TREES, for Street, Park, and General Planting.
SHRUBS, Evergreen and Deciduous, for General Planting.
HARDY CLIMBING PLANTS for all purposes.
RHODODENDRONS, CAMELLIAS, AND AZALEAS. Rhododendrons from loam, extra fine this season.
HERBACEOUS PLANTS in great variety.
BULBS AND SEEDS and all Garden Sundries.

PRICE LISTS ON APPLICATION.
Inspection Invited.

Upwards of 1,000 Gold Medals, First Prizes, and other Awards at Leading Exhibitions during the past 50 years.

Sole Postal Address—
PAULS' ROYAL NURSERIES,
Waltham Cross, Herts.

VOL. LIV.—No. 3,030. SATURDAY, NOVEMBER 25, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

◆

The Life of a Leaf.

When we look at a large tree, say one of those wide-spreading deciduous oaks, such as we see in spacious parks where the individual tree is entirely free from competition with its fellows, and extends its huge dome-like crown and wide-spreading branches upwards and outwards in untrammelled beauty, we are always inclined to regard its leaves as mere appendages of secondary importance which derive their support from the great root system underground, instead of being, as they are, the all-essential builders of the entire fabric. We may, indeed, liken these leaves to the individuals of a great community, each one with a life of its own and duties to perform, which consist, as with those of human individuals, in gathering material from their environment, and working this up, not only for their own support, but also as a contributor to the construction, maintenance, and extension of a great ramifying system of thoroughfares and channels akin in function to those of a great city. Each leaf we may consider as having been born within a bud, which represents the offspring of its progenitor, the leaf of the previous season, since it is the province of the leaf in the late summer to devote part of the material at its command to fashion at its base, where its stalk is attached to the sustaining twig, the bud in question, so that when its individual life ceases, it may leave a successor, ready when the growing season recurs, and the warm sun and genial showers of April exercise their revivifying influence, to wake up, or rather to be born, like its parental leaf, for another career on like lines. Not only, however, has this parent leaf provided thus for its immediate offspring, but during all its career it has been busily absorbing, from the air around it, the carbonic acid gas therein present in a very small proportion. By its own vigorous cell-growth it has also set up a drain upon the root system far below by absorbing water from cell to cell as they grow and multiply, and thus, through a continuous chain of other cells in twig, branch, and trunk, transmitting this absorptive pressure right down to the roots. This done, by transpiring what they do not need into the air, there is thus induced a constant upward stream of sap which is the life-blood of the community. The roots, however, are by no means the source of the perfected life-blood or sap, but only collectors and contributors of part of its materials, viz., the all-esential water and such earthy salts as may be soluble therein, and thus transmitted in solution to the leaves above. It is the living leaf, which, utilising this solution and uniting it in innumerable combinations with the carbon extracted from the aerial gas, while completing its own marvellous structure of supporting veins and cellular growth, digest, as it were, this mixture, and by a sort of reflex current returns it as perfected sap or life-blood proper, to build up, not only its own particular twig and associated leaves in the immediate vicinity, but also to send its contribution to strengthening the general fabric by enveloping the trunk and secondary branches and twigs with the annual ring of new wood. It also provides for an independent generation of the tree itself by contributing to the formation, first of the flowers and then of the precious seed, which are entirely dependent upon leaf industry exercised under the beneficent influence and stimulus of the sunbeam. By the autumn all this wonderful work is completed, and the leaf, having finished its task, and prepared, as we have described, for its successor, has but one more duty to perform. We have chosen a deciduous example rather than an evergreen as better typical of the majority, though evergreens in the long run pass through similar phases. In the leaf-shedding tree, then, we see the leaf, its duty done, begin to prepare for a sacrifice. The winter is a period of storm and stress, and also it may be of intolerable burdens of snow, or even of ice, and to retain its panoply of leaves would, to many trees, lead to terrible damage by breakage, even if not to the utter destruction by overthrow. Bare and leafless branches minimise this risk to the utmost, and therefore the last office of the dying leaf is to sever its connection spontaneously by disjunction of its connecting cells at a point near the bud. If we pick up a shed leaf at this period of fall we may see clearly that the stalk terminates in a clean surface, and not a ragged or broken one, such as would be shown earlier in the season if it were broken off. The marvel of marvels in the living leaf has yet to be indicated, and that is the chlorophyll, the green colouring matter, which pervades its tissues in the form of tiny grains. It is these grains alone, of all thing in the world, which are gifted with the power of absorbing the vital energy of the sunbeam and responding to its stimulus in such a way as to seize upon the inorganic materials, the earthy salts, and aerial gas, and work them up into these forms of vegetable nutrition upon which all animal life depends, including, of course, our own, while at the same time building up the great bulk of other materials which form the basis of all progress, commercial or otherwise, in one way or another. Without chlorophyll, the sun would shine upon a

MR. A. GAUT.

barren desert; but with it enshrined in the wondrous fabric of the leaf, no words can even faintly picture the beauty and multiformity of its direct and indirect creations and the marvels they embrace.

Mr. Alfred Gaut, whose portrait we have the pleasure of giving herewith, has specially distinguished himself in the furtherance of an extended knowledge of horticultural matters in Yorkshire, and is held in high estimation by all classes of the community in the county who are interested in gardening. Mr. Gaut, who occupies an important position in connection with the Leeds University, has achieved a high degree of success as a county lecturer on horticultural matters, and this success is due to his thorough practical knowledge of all that relates to gardening, and his marked ability in conveying his knowledge to others. Mr. Gaut had the advantage of being trained in such gardens as those of Elvedon Hall, Suffolk; Sherborne Park, Gloucestershire; and two of the leading nurseries in London. Also of having occupied the position of head gardener at Riddlesworth Hall, Norfolk, and Berwick House, Shropshire; and of being head gardener and bailiff at Porter's Park, Shenley. Thus equipped, Mr. Gaut entered on his duties of lecturer in horticulture to the Shropshire County Council, and did excellent work during the two years over which his occupancy of the post extended. He was then appointed to the more important position at the Leeds University, which he has filled with so much success for a period of nearly eleven years. Mr. Gaut's work is chiefly in connection with the county lectures, which are very successful, whether given to artisans and colliers or to the members of the community engaged in agricultural work. Allotments have increased enormously in many parts of Yorkshire during the past ten years, and this increase is attributed by those well qualified to express an opinion upon the subject to the efforts of the three County Councils to provide efficient teaching by means of lectures and demonstrations, and the appreciation of these efforts by the people at large. Mr. Gaut has from the first taken a keen interest in the activities of horticulturists in and around Leeds, whether for the advancement of gardening or the improvement of the position of gardeners. He has written a book on seaside planting, which was published by Messrs. Newnes a few years since, and was described in these pages as the best book on the subject that had been published; and the opinion then expressed holds good at the present time.

Illness of Mr. E. Mawley, V.M.H.—The friends of the genial and exceptionally able hon. secretary of the National Rose Society will deeply regret to learn that his health has been such as to render it necessary that he should undergo a somewhat serious operation. They will, however, be glad to know that the operation has proved successful, and that the progress in his recovery is proceeding so satisfactorily as to fully justify the anticipation that he will in a very short period be completely restored to health.

Royal International Horticultural Exhibition, 1912.—With reference to the regulations for exhibitors at this great gathering, the directors desire to draw the attention of exhibitors to the fact that they have decided not to enforce the condition printed at the foot of the entry forms already distributed in the schedules, to the effect that specimens (plants, etc.) must have been cultivated by the exhibitor for at least two months prior to the date of the show. Regulation 20 in the revised schedule is the only stipulation of the kind that will be retained—namely, that the "exhibits must be the property of the exhibitor, or of the employer in whose name they are shown." The directors also announce that they will provide all necessary plates and vases; the plates will be of cardboard or papier machê. At the afternoon meeting of the Royal Horticultural Society on Tuesday last. Mr. E. White, the hon. director, read a highly-interesting paper on the forthcoming exhibition, to which we shall take an early opportunity of referring. It was gratifying to hear from Mr. White that there is every prospect of the gathering proving in all its details an unqualified success.

Protection for Wild Plants.—At their meeting held on the 15th inst. the Kent County Council adopted a bye-law prohibiting the uprooting or destruction of any ferns or other wild plants growing in any road, lane, roadside waste, wayside bank, hedge, common, or other public place in such quantities as to cause damage or disfigurement. This bye-law has not been adopted any too soon in Kent, and we trust that it will be rigidly enforced.

Jubilee of the Southampton Horticultural Society.—A special meeting was held on the 7th inst. to consider the question of celebrating this society's jubilee next year. In the unavoidable absence of the president, Lord Swaythling, Mr. A. J. Day, J.P., the senior vice-president, took the chair, and Mrs. Day, daughter of the late General Lacy, the founder of the society, was also present. Mr. E. K. Toogood, chairman of the council, submitted the programme suggested by the council—viz., a rose show on June 26 under the auspices of the National Rose Society, which had accepted an invitation to hold a special early provincial show at Southampton, the desire of the promoters being to make this the best exhibition of early roses ever held in the South of England. It is also proposed to hold a grand jubilee show and gala during the third week in July, probably the 16th or 17th, comprising the usual Carnation and Sweet Pea Show, together with fruit, miscellaneous plants, flowers, vegetables, etc. The Autumn Show to be held as usual on November 5 and 6. Mr. Toogood pointed out that to conduct these shows on a scale worthy of the society's traditions a considerable sum would be necessary beyond the usual subscriptions, so it was proposed to open a special prize subscription list, which he hoped would receive a ready response. Promises of special prizes and donations, including a 15-guinea challenge trophy for a display of roses, from the Hon. Mrs. York; and five guineas from the President, were handed in, the total amount being £40.

Culinary and Dessert Apples for Cider.—In the report issued by the National Fruit and Cider Institute it is pointed out that culinary and dessert varieties of apples are usually considered of little value for cider making, but it is suggested more attention should be given to their use, as a means of utilising small fruit. A number of market varieties grown in the institute plantations have been analysed, and small-scale tests made to ascertain the type of cider produced. From the results it is seen that with very few exceptions the juice is poor in sugar and tannin, while the acidity is high. In the report it is stated that it is clear that the use of market fruit alone for cider making in the usual way can only be extremely limited as regards the type of cider produced. The kind of beverage produced by ordinary methods will be a thin, dry cider, lacking in body and of marked acidity, probably possessing poor keeping qualities. This has proved to be the case in the few instances where tests on a practical scale have been made at the institute in past seasons. These tests have, however, shown that it is practicable by suitable treatment to produce a palatable and marketable beverage, even although it may not bear comparison with a cider made from true vintage fruit. There has been nothing in the flavour of these ciders to constitute any serious drawback, and, indeed, in one instance, it was so good that a really delicate dry cider was produced by suitable blending. There appears to be two directions in which satisfactory results may be expected. The first consists in the utilisation of a moderate quantity of true vintage fruit of the sweet and bitter-sweet types to blend with the market sorts. The other course of procedure is to increase the original amount of saccharine matter in the juice by the addition of sugar in such quantity that when completely fermented the liquor will contain sufficient alcohol to restrain acetification.

Edinburgh Chrysanthemum Show, of which a full report appears in another part of this issue was, we are pleased to learn, more largely attended than for several years past, notwithstanding the somewhat unpleasant climatic conditions that obtained during a part of the period over which the exhibition extended. On the opening day there were 4,638 visitors, against 3,855 on the corresponding day of last year, and on the second day the visitors numbered 6,097.

The Northern Fruit Congress.—Owing to the great pressure upon our space this week, we are holding over our report of the Congress on Fruit Culture and Educational Matters, held at Newcastle last week, until our next issue. We do this because we should have had to severely curtail our reports of exhibitions and meetings, and of the Congress itself, to get them into the present issue, and thereby reduce their interest and usefulness.

Manuring of Meadow Land.—For some years past experiments in the manuring of meadow land have been carried out by Mr. E. Parke and Dr. Bernard Dyer upon the farm belonging to the former at Kineton, Warwickshire, and highly instructive results have been obtained. The report on the experiments during the past spring and summer have been published, and contains much to interest those who have charge of grass land. The effect of the manurial dressings in mitigating the influences of the drought is especially interesting. Fertilisers applied in dry weather are retarded in their action, and may be rendered ineffective for the current season, but the dressings at Kineton were distributed before the dry weather set in, and it is instructive to learn from the report that they were more than usually instrumental in promoting the growth of grass. The average yields from the unmanured plots in the two fields were only 7 cwt. and 8 cwt. of hay per acre respectively. The report states that these quantities were more than doubled by 3 cwt. superphosphate per acre in one field and by 5 cwt. basic slag in the other. A dressing of 1½ cwt. nitrate of soda per acre in addition trebled the yield. The difference in the composition of the herbage is equally pronounced. Whereas the unmanured land is full of weeds and undesirable grasses, there is a rich turf on all the manured plots, with clovers abounding where the mineral manures were applied. The plots receiving both phosphates and nitrate, which yield 50 per cent. more increase than when either of the fertilisers is used singly, are also rich in clovers as well as in true grasses.

Elliottia racemosa.—A note on this interesting and extremely rare shrub appeared in the "Kew Bulletin," 1906 (p. 226). At that time it was not possible to say anything as to its beauty from direct evidence, as the two plants at Kew (which are believed to be the only ones in Europe) had neither of them flowered. The larger plant of the two, now about seven feet high, has, according to a note in the current issue of this publication, borne during the past summer 21 racemes, the first flowers opening on July 24. It proves to be a shrub of great beauty as well as interest and rarity. The racemes are terminal, quite erect, 6 to 9 inches high, 2 to 2½ inches in diameter, the flowers mostly solitary, occasionally in pairs or in threes on the peduncle. The flowers are pure white, fragrant, and from three-quarters to one inch across. The flower-bud is at first erect on the peduncle; as the flowering time approaches it becomes inverted and nodding; but just before the expansion of the petals it rises again and stands out horizontally; and in that position the flower remains. A raceme six inches long bears about 40 flowers. Elliottia is a monotypic genus, and flowering as it does towards the end of July, it would make a delightful addition to flowering shrubs could it become common in gardens. But it is almost or quite extinct in its native localities in Georgia, and no successful method of propagating it has yet been devised. Cuttings of the branchlets have several times been tried at Kew without success. The only plants raised have been two from root cuttings, but both ultimately died. The fruit of Elliottia is not known, and it is unfortunate that, although artificial fertilisation has been resorted to no fruit has been obtained. Bees have also visited the flowers in great numbers.

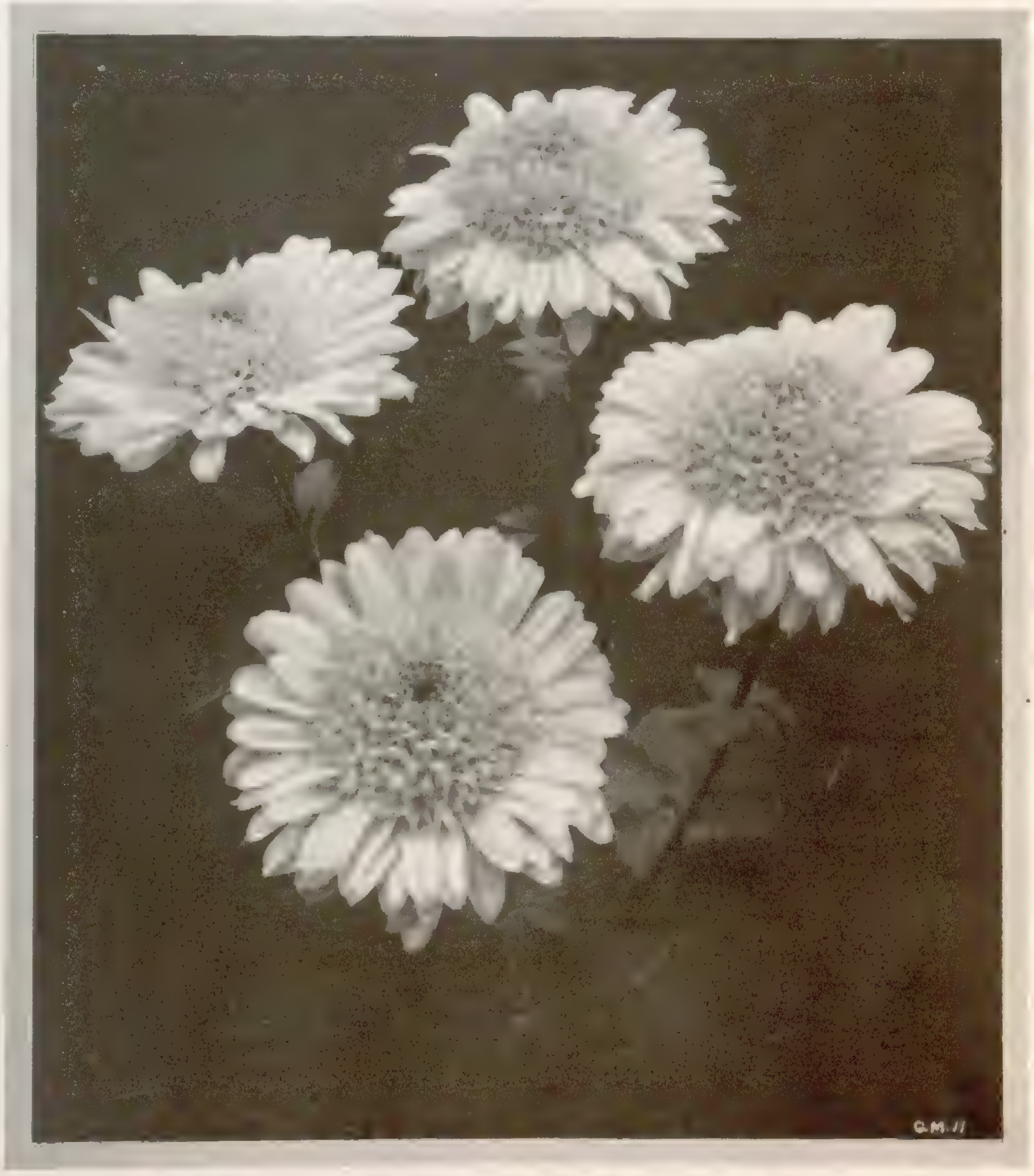
The Ancient Society of York Florists may be congratulated on the highly successful show that was held in the Exhibition Buildings on the 14th and 15th inst. The show was considered one of the best the society has held, and the attendance was above the average. Mr. F. Styan, York, obtained premier honours in the class for a pillar group with an effective arrangement. Mr. Spencer, of Harrogate, was first for a group of miscellaneous plants; and Mr. W. Hields, Acomb, first for a group of chrysanthemums. Cut blooms were especially good, and the more successful of the winning collections came from the gardens of Duncombe Park, Londesborough Park, and Sand Hutton. The question of holding the North of England Fruit Congress at York next year, in conjunction with the Chrysanthemum Show, is under consideration; and, as the proposal has been favourably received, it is anticipated that arrangements will be made for holding this important gathering in the city in 1912.

Women's Agricultural and Horticultural International Union.—The annual meeting of the women horticulturists was held on the 15th inst. in the famous Indian Museum at the residence of the Earl and Countess Brassey, in Park Lane, W. There was a large attendance at the meeting, which was presided over by Lady Willingdon, who spoke in a most complimentary manner of the work carried out by the Union. The report of the year's work was read by the secretary and treasurer, and the first three diplomas in practical horticulture were presented. An interesting address on "Hybridisation" was given by Professor Bottomley, of King's College. Two important changes were announced for next year—the removal of the offices to Westminster in January, and the transference of the summer show from Regent's Park to the Royal Horticultural Hall, the date being October 23.

Award to Messrs. G. Bunyard and Co.—To the exhibition of the Coventry Chrysanthemum Society Messrs. George Bunyard and Co., of Maidstone, contributed a collection of one hundred dishes of hardy fruits, representing as many distinct varieties. The whole of the fruit was remarkable for its high quality, and the collection was admirably staged. The exhibit, indeed, was of so high a degree of excellence that it was highly attractive, and the committee awarded the firm a large gold medal.

Sandgate Arbor Day.—At a meeting of the Sandgate Society held at Enbrook, by invitation of Lady Chichester, Mr. Mark H. Judge in the chair, it was decided that the first celebration of Arbor Day in Sandgate should take place on Saturday, December 2. Arrangements were made for a lecture on "The Origin and Use of Arbor Day," by Mr. E. D. Till, of Eynsford, and this was given on Wednesday, November 22.

Proposed Research Institution for Fruit Growing.—A meeting of the Governors of the South-Eastern Agricultural College, Wye, was held at Caxton Hall on Monday, November 6, Lord Ashcombe presiding. The principal, Mr. M. J. R. Dunstan, reported that the entry of new students, 56, the number attending the college, 141, and the number from the contributing counties, 70, were the highest yet recorded. It was decided to approach the Board of Agriculture and the Development Commissioners with regard to the foundation of a Research Institution for Fruit Growing, including the practical treatment of plant diseases, in the county of Kent; and also to apply for a grant in aid of the proposed extension of the college buildings. The following resolution was proposed by the chairman of the Surrey County Council, Mr. A. W. Chapman, and seconded by the chairman of the Kent County Council, Mr. F. S. W. Cornwallis: "That, in view of the discussions that have recently taken place in connection with the management of Wye College, the Governors think it desirable to place on record the fact that nothing whatever has occurred to induce them to withdraw the complete confidence they have always reposed in Mr. Dunstan, the principal of the college, to whose energy and ability the continued progress of the college is largely due."



CHRYSANTHEMUM GODFREY'S PERFECTION.
A pure white anemone-flowered variety. A.M., R.H.S., November 21.
Mr. J. W. Godfrey, Exmouth.

Early-flowering Chrysanthemums.—An instructive lecture, illustrated by lantern slides, was given by Mr. J. Steer at the monthly meeting of the Brighton Horticultural Society, held on the 16th inst. In the course of the discussion at the close of the lecture Mr. J. Gaston stated that 107 new members had joined the society during the year, and it need hardly be said this statement evoked considerable applause.

CHOICE OF THE BEST VARIETIES OF APPLES.

On page 836 of your issue of November 11 "Practical Fruit Grower" has done all fruit growers a good turn, and I, for one, desire to thank him. Many nurserymen would only be too glad to limit the varieties of apples, but the public generally, and often so-called experts, have not yet been taught that for ordinary utilitarian purposes there must be an end to the happy-go-lucky indiscriminate planting of all sorts of apples.

There are three distinct views of apple culture. 1. There is the exhibitor's. Like his brother poultry exhibitor, he does a great deal of harm to the utilitarian man, for what looks well on the exhibition table, e.g., a Cox's Pomona, a Peasgood's Nonsuch or an Emperor Alexander, is just what the ordinary person with an ordinary garden should not grow. I would bar Peasgood—except for wall culture only.

2. Then there is another class—the big amateur. Naturally, his gardener has to provide supplies all the apple season through, and he also has a proper storeroom to keep his apples in. The cook has to be appeased; showy fruit is required for the table, and dessert apples all the season through are asked for by Master George and Miss Marjery!

3. But when we come to the mass of apple growers—the market grower, the cottager, and the smaller amateur—then it is that we see the reason to be grateful to "Practical Fruit Grower" for his article on the best apples in their season, and according to class.

Taking the apples named one by one, I would like to say a few words, as far as the matter concerns the North of England, with which I have now a fair acquaintance. Early Victoria, Grenadier, Lane's Prince Albert, Bramley's Seedling, and Newton Wonder. I agree word for word with the remarks on all the above five apples, with this one difference, that I would plant Bramley alone on both stocks—the broad-leaved paradise and the crab—the paradise stock to give me the fruits, the crab for my children. As far as my knowledge and experience goes, Bramley is the one safe apple to plant as a standard in the North, for, apart from other considerations, it "hangs" well, and withstands our western gales successfully.

Stirling Castle is certainly above all others "the poor man's apple," and, as stated, only requires food and attention to remain healthy. But why is it that this elementary fact is so often overlooked? We feed our potatoes and our cabbages, but, as for our fruit trees, we "howk a hole, shove them in, and stamp on them." All fruit trees need feeding and attention, and especially do bush apple trees on the Paradise stock require feeding regularly, but carefully, when the fruit is set. As regards Norfolk Beauty it is little grown up here yet, Warner's King reigning supreme. I would certainly recommend Bismarck before Blenheim Pippin, and dispense with Lord Derby or Tower of Glamis as bush trees.

As regards the dessert section, I would simply say that of those recommended I can heartily agree with Mr. Gladstone, Beauty of Bath (when it commences to bear), Lady Sudeley, Worcester Pearmain, James Grieve, and Cox's Orange (when planted near some strong pollen bearer, such as Bramley's, or the hybrid crabs).

I would lift Allington Pippin out of obscurity, rejecting Ribston. Wyken Pippin certainly does well in several places in the North. To my knowledge, there are some grand standards of the variety bearing prolific crops year after year. Sturmer Pippin bears well, but seldom ripens properly. In conclusion, I may say that a market grower friend of mine would go one better than the grower mentioned, and limit his varieties to two—Lord Grosvenor and Lane's Prince Albert.

I think, however, that when he has given Early Victoria a trial, Lord Grosvenor will have to give place to this free-bearing healthy variety, less wasteful, too, in cooking.

J. Bernard Hall.

THOUGHTS ABOUT THINGS.

"But what a wonderful season it has been!" This is the frank admission of everybody just now, when the experiences of the year are under discussion, and it generally winds up a conversation in which one gardener has been recounting to another some of the difficulties with which he has had to contend. The sands are quickly running out; in a few weeks' time the wonderful year of 1911 will be gathered to its fathers, but, speaking climatically, it has made history. We need talk no more about old-fashioned summers, when the very latest has beaten all known records for heat and sunshine, and, probably, when the men who are now young have grown old they will rake up experiences of that Coronation year, and its wonderful summer, with all that display of pride which veterans assume when recounting the happenings of the past.

Could it be possible for such a year to come and go without teaching its lessons and without bringing with it experiences of a unique character? I think not, and we have before us, fresh in the memory, 1910—dull, wet, gloomy, and sunless, followed by 1911—hot, bright, sunny, and dry. Both, of course, have had their drawbacks, but which, from the gardener's point of view, would you prefer, supposing you had the ordering of the seasons, and had only the two examples to select from? Different people might give different answers to this question, but I put it to a market gardener the other day, who cultivates deeply, and does not think fifty tons of dung to the acre a too heavy dressing for some of his crops. "We haven't had as much stuff as usual," was his reply, "but we've been able to sell it, and mustn't grumble." There you have it, for it is the good cultivator who has come out on the top this year, just as he always does in a trying season, because his liberally manured land has yielded its increase, and he has reaped the benefit of the good prices which have prevailed.

1911 will be remembered as the year in which Nature provided us with a good apple crop, and painted such colours on the cheeks of the fruit, the like of which few of us have seen before; but are the apples going to keep well? There is a general impression that they will not, and, if not, why not? This is one of the various problems of the year, and one would have thought, after such a summer of warmth and sunshine, that apples would have kept perfectly. Such, however, does not appear to be the case, and it would be interesting if we could get some scientific opinion as to the reason why. The matter-of-fact practical man expresses the view that the fruit ripened too quickly, and, whether he is right or wrong, the fact remains that many growers are pushing their late apples into the market, not so much as a matter of choice, but because of fears that the fruit will not keep. This is the reason why, at the moment of writing, apples are plentiful, and growers are complaining about low prices; but, in all probability, history will repeat itself, and, despite good crops, home-grown apples will be scarce enough a month or two hence.

Speaking of apples, there never was a season when all varieties cropped alike, and it is quite as well that this should be so, but 1911 will be remembered as a year in which certain apples bore remarkably well. As a case in point, let us take Cox's Orange Pippin, which, in a general way, is not the most certain of croppers, but few people have any complaints to make about it this time, and samples generally are good. Indeed, I have seen specimens of this popular variety so fine at shows this year that some people expressed the doubt as to whether they were Cox's at all. Newton Wonder is another apple that has triumphed this year, and it has put itself quite in the front rank of long-keeping varieties. During recent years thousands of trees of this variety have been planted for commercial purposes, though some have described it as a shy bearer, but its behaviour this year has contradicted any such assertions, and Newton Wonder is amongst the leading apples of the season. How well, too, has our old friend Lane's Prince Albert done, and, the other day, I saw a specimen which turned the scale at twenty ounces!

H.

PINUS BUNGEANA.

The lace-bark pine of China is one of the most remarkable and attractive of its kind. It is still amongst the rarest of pines in gardens, but is represented at Kew by a number of well-grown examples. These have produced cones in recent years, and the species has been figured in the "Botanical Magazine" t. 8240. No cultivated specimen appears yet to have developed the white bark which is the most remarkable characteristic of this pine, and which is well illustrated in the plate in "Kew Bulletin" of trees growing in the environs of Peking. The Kew trees shed their bark freely after the fashion of a plane, but the newer bark revealed is dark brown and not white. The accompanying extract from an interesting letter of Sir Edward Satow's would seem to show that this is probably due to the comparative juvenility of our trees:—

"Here is a photograph of three specimens of Pinus Bungeana standing about three miles west of Peking. The structure on the left of the centre tree is an old tomb, and the height of the masonry as far as my recollection goes is about 8 feet, which affords a standard for measuring the height of the trunk up to the point where the branches begin. The tomb is quite old, and neglected, so that possibly it is more than a century old. There are a great many of these trees in and near Peking, either in the grounds of palaces or planted in private graveyards of wealthy families. I never saw one that seemed self-sown. I find a note made in 1904 that sometimes the trunk divides a few feet from the ground, and the stems grow up straight side by side. In other cases it reaches a height of at least 20 feet without dividing, and then branches out, forming almost a spherical head. The younger trees have a greenish reddish bark, which in older specimens looks quite white when seen from a distance. The peasants scratch the bark with a knife in order to procure the resin.

"When I planted one in the grounds of the Legation I was told by the Chinese florist from whom I bought it, that these trees do not exhibit a white bark till they are about fifty years ago."—"Kew Bulletin."

PLANTAIN LILIES.

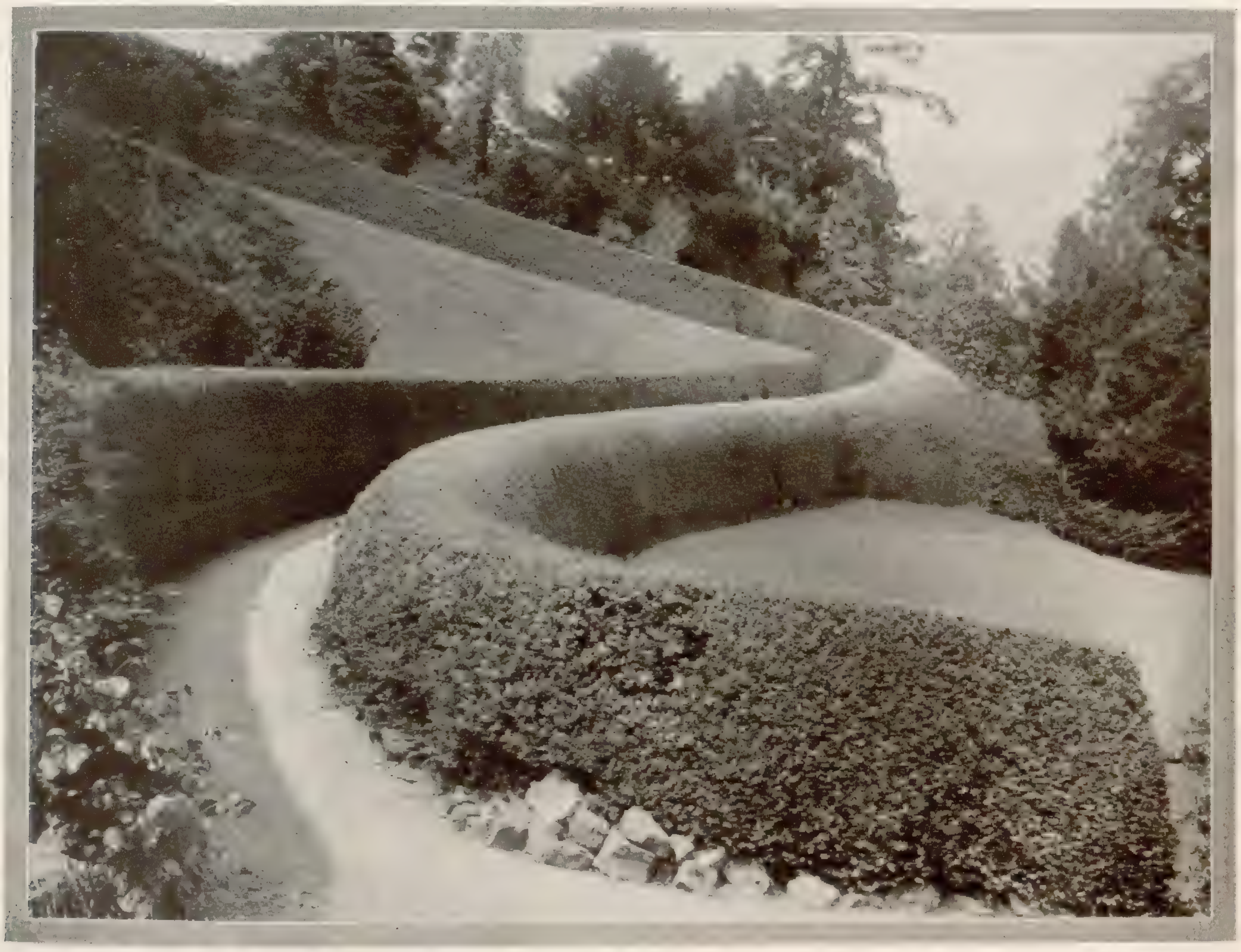
Shady beds and borders are generally rather difficult to render attractive in the summer time, for though spring-flowering plants will do as well in such positions as anywhere, e.g., doronicums, dielytra, myosotis, Solomon's seal, scillas, the primrose family, etc., the number of summer-flowering plants that will thrive where they get little or no sun is decidedly limited. Funkias form one of the few groups that prefer much shade, doing well even where in June they only get the sun in the early morning or evening, their foliage sometimes developing to a great size under such conditions, if there is sufficient moisture, whereas if grown in full sun their flowering spikes are often dried up during the first two or three hot days in June. Their main requirement is a deep, well-cultivated soil, inclined to dampness, and though some of the larger-leaved sorts are suitable for growing in groups by the waterside, most of them will not do well where there is stagnant moisture. They develop their handsome foliage early in the spring, and keep green till the autumn, throwing up their spikes of bell-shaped flowers, usually of a lilac hue, from June onwards. They are fine plants for the partially-shaded flower border, or for open spaces among shrubs if not too dry, and are excellent for edgings to large beds and borders.

As to varieties, there is one kind, however, which needs different conditions from most of the others, and that is F. subcordata grandiflora, sometimes known as the Corfu lily. While funkias generally are grown principally for their foliage, this is valued for its flowers, which come later in the summer than the others, generally not before August, and, instead of being a shade-loving plant, it needs a sunny spot in a well-drained soil if it is to do well in this country. It throws up its spikes of large white sweet-scented flowers in August and September, when most of the other kinds have finished. It is better grown in groups than as an edging. Its young foliage is liable to be preyed upon by slugs and snails, which need to be guarded against, as a leaf which is mutilated at this season is spoilt for the summer, and the plant disfigured.

The best kind of funkia to be grown chiefly for its foliage is F. Sieboldiana major, which has large glaucous leaves, sometimes a foot across, while its pale lilac racemes of flowers rise to a height of three feet. It is best grown in large, bold groups, and if well placed, so that other plants show up its bluish-green leaves, very fine effects may be produced with it. There is a variety of it with yellow-margined foliage, but many consider it no improvement. For the formation of a border to a large bed of sub-tropical plants these two varieties stand apart from the others. F. ovata has large deep green leaves of a glaucous hue, and there are varieties of it with leaves margined white and variegated gold. F. undulata has the leaves waved at the edges, and this, too, has a variegated kind, silver and green.

Alger Petts.

Plumbago rosea.—Now that the popular Plumbago capensis is over, or nearly so, its pretty relative Plumbago rosea is in a warm greenhouse unfolding its earliest blossoms. With reasonable care these will continue to develop throughout the winter, at which season flowers of all kinds are very valuable.—W. T.



THE REMARKABLE YEW HEDGE AT POWIS CASTLE.
The Seat of the Earl of Powis.

EVERGREEN HEDGES.—II.

The Box.

For a neat and handsome hedge, moderate in size, and easily kept in order, the box is well adapted. In some soils and situations the plant does not thrive, or the occasional severity of the climate may be against it, but in general it does well; and, at a distance from town smoke, and its usual accompaniments, is long lived. Soil of ordinary fertility, fairly well drained, and free from noxious weeds, is the principal requirement as a rooting medium. It is of slow growth, and continuous; very compact if clipping is well attended to yearly. This is best done in April, when the immediately succeeding growth quickly obliterates any unsightly traces of cutting. B. sempervirens closely resembles B. balearica, but shows, more or less, according to the season, some traces of variegation, otherwise there is nothing to choose between them, as both will reach a height of eight or ten feet, if so desired, but unless it be for some special object less than this is better, for the maintenance over a long period of a well and densely-furnished base. In passing, it may be mentioned that the three genera so far referred to lend themselves very readily to training into diverse shapes, as of birds, animals, garden seats, arbours, and castellated towers, a fashion certainly not much in favour at present, but, with a slight change of opinion and taste in the matter, might possibly be again in vogue long before the present century has run its course.

Coniferous Plants.

Thuia occidentalis (arborvitæ), T. Lobbi, Cupressus Lawsoniana, Juniperus chinensis, J. virginiana, and Retinospora obtusa, as well as several species in close affinity to these, are quick growing, and very ornamental subjects for forming divisional and shelter lines, or as screens for hiding from view unpleasing objects. The first-named is probably the favourite for this purpose. It succeeds in most places, and bears with impunity close clipping to keep it within reasonable bounds. The plants luxuriate in moist positions, and are not fastidious as to soil providing this is well pulverised before planting is done. Raised from seeds, transplanting should take place two years afterwards, in early spring, and this should be practised yearly until the plants are from two to three feet in height, when they may be transplanted to their respective permanent positions, and placed so that the foliage of one meets the other throughout the line. Pruning or clipping must follow in due course, and is best done in April, or before new growth is in evidence, to obviate the loss of sap, and consequent weakening of the plants. As to dimensions, this must rest entirely with the operator, and the special purposes of the hedge, but if eight feet in height is sufficient, a width of two feet at the base may be allowed, or even a trifle less if space is limited, and such will withstand snow and wind storms very satisfactorily. This treatment, as recommended for the arborvitæ, applies equally to the others, though, it may be stated, that the junipers and retinospora are of slower growth than it and the cupressus family.

MR. J. HONEYMAN'S FIRST PRIZE EIGHT VASES OF CHRYSANTHEMUMS AT EDINBURGH. THIS EXHIBIT WON THE SCOTTISH CHALLENGE CUP.

Privet.

This well-known plant can hardly be recommended for forming a substantial hedge, unless it be mixed with some other subject having a greater power of resistance, but for rapid growth, and quickness in forming an effective screen, it is excelled by no other. On the other hand, used in divisional lines about cultivated ground, and closely cut at intervals, it answers the purposes admirably, and maintains a very neat appearance.

Cotoneasters.

Two species of this genus at least are well adapted for hedges, namely, C. microphylla and C. Simonsi, the former being a low, dense grower, while the latter possesses the last-named qualification, and may be trained by pruning alone to reach any reasonable or requisite height. These are quite hardy, and succeed well in any fairly good soil, and may be closely trimmed at any season, while the dark, glossy foliage and the numerous scarlet berries borne upon the spur-like growths, renders a hedge of this kind very conspicuous in the winter season.

Butcher's Broom.

A plant that will endure shade is often an acquisition upon an estate, and the one in question is the most accommodating in this respect that I am acquainted with. As a hedge plant proper its diminutive stature is against it, as it seldom exceeds two feet, but as there are positions, such as raised mounds or banks, where a sturdy line of evergreens adds very considerably to the amenities of the situation, it is mentioned here. As stated, shade from trees has little or no ill effect upon it, and scarcely any care is required in its cultivation. Stock may be raised from seeds or by division of the plants, and the latter course is generally resorted to, as berries, which are freely produced in warm seasons, are apt to be taken by birds as they become ripe.

Its near prototype, Ruscus racemosus (the Alexandrian laurel), is equally suitable for the purpose, and is, moreover, a trifle taller in growth.

The several kinds of berberis, the common and the Portugal laurel, as well as Rhododendron ponticum, may all be pressed into service as hedge plants, and often prove useful near woodland walks and the more outlying portions of estates, where their somewhat rough, informal habit of growth is a welcome change to the excessive trimness prevailing in more central positions.

James Day.

Galloway House, Garlieston.

Cantua dependens.—This plant has become somewhat rare of late years, although possessing much beauty and in other respects desirable. It is of much value for training up pillars and over roof trellises, and also for house decoration. When flowering during the spring it has a fascinating appearance, and is easily propagated and readily grown. Yet it is not frequently seen in gardens.—W. A. Cook.

NOTES FROM KEW.

Greenhouse Flowers.

After being closed for painting, and other necessary repairs, the greenhouse No. 4 is once again gay with flowers. As might be expected at this season, chrysanthemums predominate, the various sections of this charming autumn flower being well represented. Decorative plants, rather than the production of large blooms, is the object aimed at, but, still the lovers of these last-named will find much to admire. There is a widespread idea that the choice of flowering subjects, other than chrysanthemums, is at this season an extremely limited one, but, as is well shown at Kew, a great many others are available for the purpose. Hard-wooded plants are represented by Crowea saligna, with its pretty rose-coloured blossoms; the Tasmanian Bauera rubioides, with salver-shaped flowers of a pleasing pink shade; and various heaths, notably four forms of the popular Erica gracilis, namely, the typical rosy-purple kind, the pure white nivalis, a pretty pink-flowered variety, and that known as vernalis, which is of a more upright habit than the others, and is only just unfolding its earliest blossoms. Erica hyemalis and Erica melanthera are also very effective.

Salvias and Begonias.

A particularly bold-growing form of Salvia splendens, under the varietal name of pyramidalis, supplies a brilliant scarlet colour, and a collection of bouvardias is also noteworthy. Chief among them are President Cleveland, scarlet; Vreelandi, white; Priory Beauty, pink; Mrs. Green, salmon-pink; King of Scarlets, scarlet, white tube; Maiden's Blush, pink; Alfred Neuner, white; President Garfield, pink; and Hogarth flore plena, red, these last three being double-flowered varieties.

Begonias of the Gloire de Lorraine section are bright and effective. Turnford Hall is still the best of the light-coloured varieties, and of the bright-tinted forms Rochfordi is particularly good. Other begonias in flower are Dregei, Weltoniensis, semperflorens gigantea rosea, Luzerna, and the continuous-blooming Corbeille de Feu.

Veronicas, etc.

Different flowering subjects worthy of special mention are veronicas, represented by several varieties; carnations, of sorts; Calceolaria Burbidgei, as valuable in the winter as it is out of doors in the summer; marguerites, particularly good for this time of the year; Impatiens Oliveri, rarely without its large mauve-coloured blossoms; Plumbago rosea, bright and cheerful; Nerines of sorts; Lasiandra macrantha, now past its best, but the few flowers remaining are still bright and effective; and Jacobinia chrysostephana, whose golden-orange crowns of blossoms are very distinct from anything else in bloom.

Although they cannot be regarded as flowering plants, yet a group of the different varieties of capsicum, laden with their curious fruits, form a bright and pleasing feature.

Costus igneus.

This member of the Ginger Wort family is a very showy stove plant, whose brilliant orange-coloured flowers stand out in a markedly conspicuous manner during the dull weather so often experienced at this season. From a thickened rootstock it pushes up leafy stems of a fleshy nature to a height of eighteen inches to two feet. The flowers, which are produced from a terminal head, are individually about three inches across. They are thin in texture, and do not last long, but a suc-

B·R·CANT·&·SONS
ROSES

DESIGN REGISTERED

DIRECT FROM THE ORIGINAL FIRM.

Established 1765.

WE HAVE FOR DISPOSAL THIS SEASON

80,000 Standards and Half-Standards.

4,000 Standard Weeping Roses.

Magnificent Plants in the best known varieties. Also

300,000 Dwarfs and Climbers.

THE FINEST STOCK IN THE KINGDOM.

Illustrated Catalogue post free on application to

BENJAMIN R. CANT & SONS, The Old Rose Gardens, **COLCHESTER.**

Bulbs: NARCISSUS, DAFFODILS, TULIPS, &c.

All Good Flowering Bulbs; Worth Double.

NARCISSUS

100	Emperor	3/0
100	Empress	3/0
100	Henry Irving ...	4/0
100	Golden Spur ...	4/0
100	Horsfieldii	3/0
100	Victoria	3/0
100	Obvallaris	3/0
100	Grandis	3/0
100	Sir Watkin	3/0
100	Stella	1/6
100	Princeps	2/6
100	Ornatus	2/6
100	Double Daffs ...	4/0
100	Dbl. White Narcis.	2/6
100	Pheasant Eyes	2/6
100	Frank Miles ...	1/6

TULIPS

100	La Reine	3/0
100	Cottage Maid...	3/0
100	Chrysolora	3/0
100	D. de Parma ...	3/0
100	Keizerkroon ...	4/0
100	Golden Crown...	3/0
100	Picotee	4/0
100	Bouton d'Or ...	3/0
100	Prince de Ligny	4/0
100	Duc Van Thol, sgl	4/0
100	,, ,, dbl	3/0
100	King of Yellows	4/0
100	Mixed Tulips ...	1/6
100	Mixed Darwins	4/0
100	Darwins to name	10/6
100	Parrot Tulips to colour	2/6

Special offer in Mixed Narcis. and Daffodils, also Tulips for planting in grass, shrubberies, hedge rows, etc.

HYACINTHS

	..	per 100
12—1/9	to name in colours...... or	10/0
12—1/3	mxd in cols. or	9/0
12—1/9	Roman White or	12/0
100	Iris, Spanish, to name	1/6
12	Iris, German do.	6/0
12	Iris, English do.	1/6
100	Anemones, Scarlet	4/6
100	,, The Bride	1/9
100	,, St. Brigid	5/0
100	Scilla Siberica...	3/0
100	Freesia	3/0
100	Summer Snowflakes	5/0
12	Lilium Candidum	2/6
12	,, Crown imperial ...	2/0
12	,, Auratums	7/0
12	,, Croceums	4/0
12	,, Longiflorums	4/0
100	Snowdrops	1/6
100	Ixias, to cols.	2/6
100	Crocus, in cols.	1/3
100	Lily of Valley ...	2/6
100	Jonquils	4/6
100	Ranunculus ...	3/0
100	Montbretia	3/0
100	Aconites	3/0
100	Chionodoxa ...	2/6
100	Polyanthus Narcis	3/0
100	Alliums	3/0
12	Begonias, choice	1/6
12	Violets, in sorts	1/6
12	Xmas Roses ...	4/0

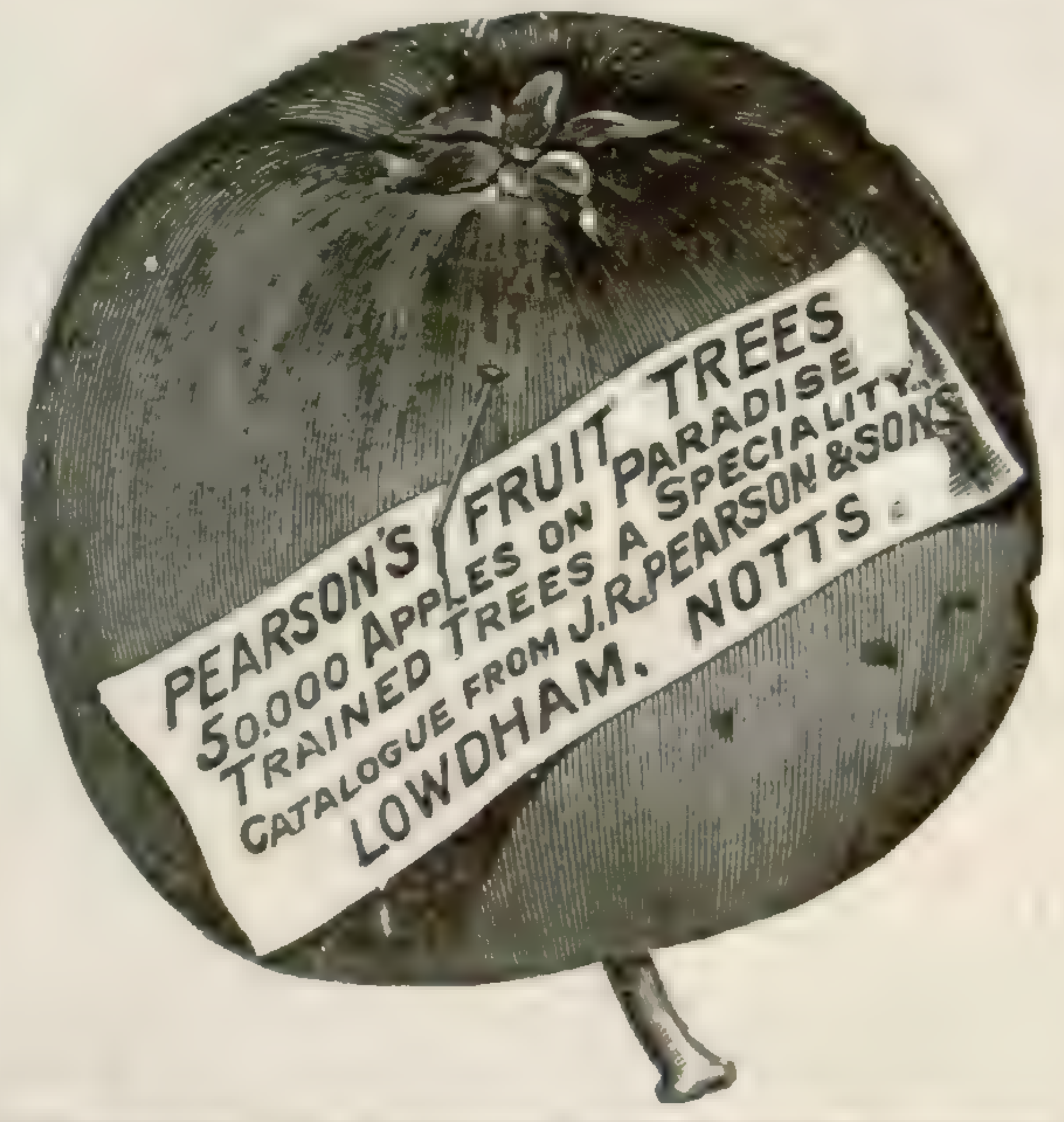
Narcissus and Daffodils,	5/-, 7/6, 10/0 per 1,000
Tulips	10/-, 15/-, 20/- per 1,000

Many other varieties to offer; also all kinds of Herbaceous plants. Any of the above, half quantities at half price.

FRUIT TREES.—Apples, Pears, and Plums, all fruiting trees, **9/-** per dozen. Gooseberries, Currants (black, red, white), **3/-** per dozen. Loganberries and Raspberry-Strawberry, **9d.** each Raspberry canes, **3/-**, **4/-**, per 100. Strawberry Plants, **1/6** per 100.

All kinds of Flower and Garden Seeds, also POTATOES. Send for List,

J. W. CROSS, Old Grammar School, **WISBECH.**


PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY
CATALOGUE FROM J.R. PEARSON & SONS
LOWDHAM. NOTTS

PLANTING SEASON.

SEND FOR OUR

Descriptive Catalogue

OF

Ornamental Trees and Shrubs, Roses, Rhododendrons, Climbers, Fruit Trees, Forest Trees, Herbaceous and Alpine Plants.

Advice given on all matters appertaining to

LANDSCAPE GARDENING.

GEO. JACKMAN & SON,

Woking Nurseries, Surrey.

Established over a Century. (Nurseries 200 acres.)

PLEASE MENTION
THE GARDENERS' MAGAZINE
when writing to Advertisers.

KING'S ACRE

FRUIT TREES

AND

ROSES.

AWARDED ..

30 Gold Medals
AND
Coronation Cup

VALUE 25 GUINEAS.

Seasons 1909-10.

Illustrated Catalogue post free on application.

KING'S ACRE
NURSERIES LTD.,
HEREFORD.

MESSRS. PULHAM & SON have secured a fine lot of Old Stone Paving, which is eminently suitable for the Paving of Pergolas, Garden Paths, etc.

They will be happy to quote for any quantity, delivered at any railway station.

PULHAM & SON,

By Appointment. By Appointment.

71, Newman Street, London, W.
And BROXBOURNE.

Time & Temper Savers!

A FLORIST writes:—
"Please repeat our order for these Address Labels, we can use no other!

Samples Free.

BURALL BROS., Manufacturers, WISBECH.

CARNATIONS.
AURICULAS. PINKS.

The NEW ILLUSTRATED CATALOGUE of above is now ready, and has been posted to all customers. The newest and best varieties are sold at the most reasonable prices.

Best **CARNATION** and **PICOTEE SEED** ready in October, 1/6 and 2/6 per packet.

AURICULA (Show and Alpine), **PINK**, and **POLYANTHUS SEED** now ready. 1/-, 1/6, to 2/6 per packet.

Send for Catalogue to

J. DOUGLAS,
Edenside, GREAT BOOKHAM.

"IT IS ONLY A LITTLE

CLAY'S

FOR ROSES."

CLAY'S
LONDON
FERTILIZER
TRADE MARK.

SOLD EVERYWHERE IN TINS at **6d.** and **1/-**; and in Branded and SEALED BAGS, 7lbs. **2/6**; 14lbs. **4/6**; 28lbs. **7/6**; 56lbs. **12/6**; 112lbs. **20/-**. Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**). **Every Genuine Tin, Bag, and Seal bears Trade Mark, as at side.**

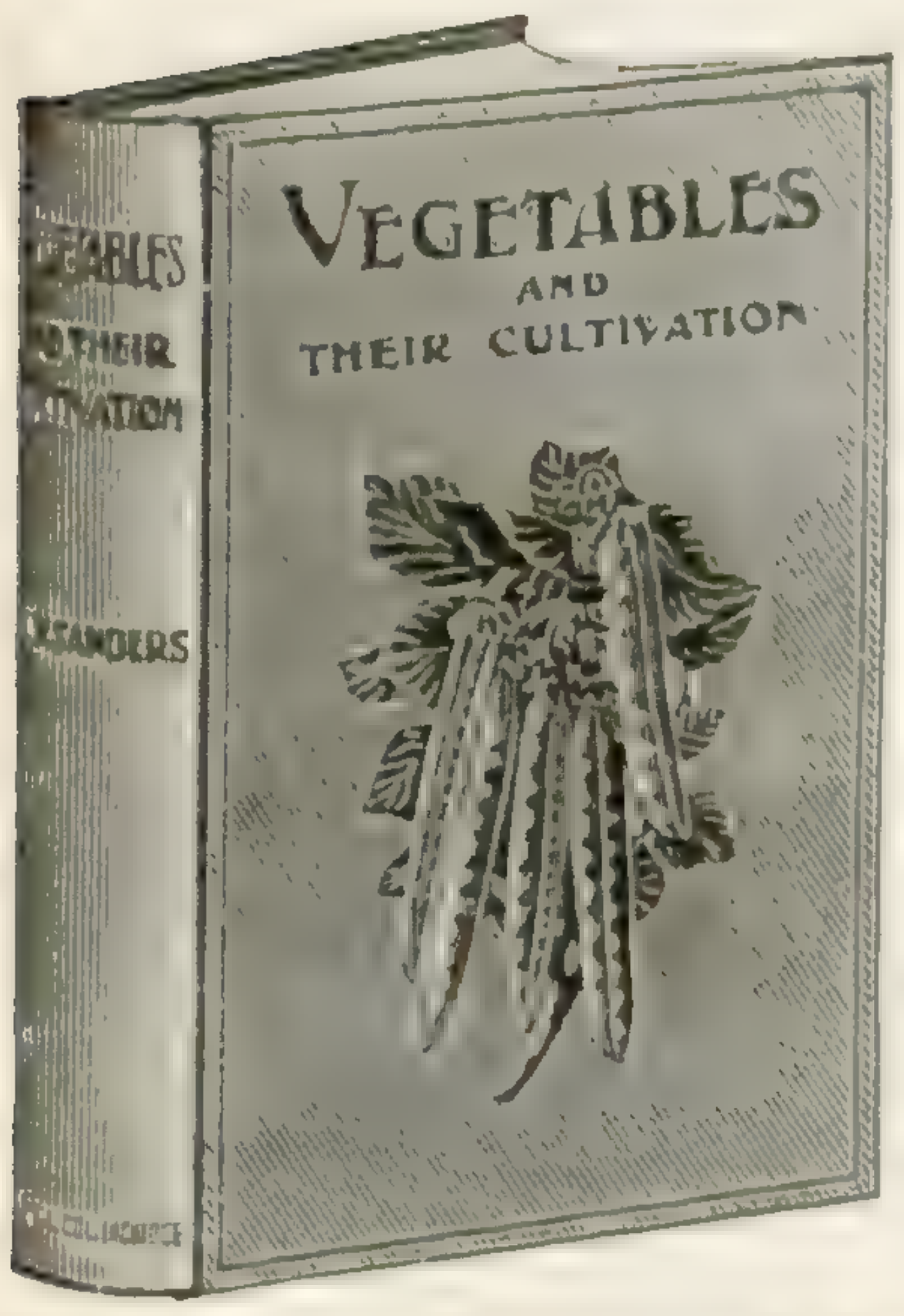
CLAY & SON,
Manure Manufacturers and Bone Crushers,
STRATFORD, LONDON, E.

THE PERFECT GUIDE TO PERFECT CULTURE.

Crown 8vo.; Cloth; 498 Pages. **150 ILLUSTRATIONS; 8 PHOTO PLATES and 5 COLOURED PLATES.**

Price **5/-** net; by post, packed in box, **5/6**

VEGETABLES
AND THEIR
CULTIVATION.



By T. W. SANDERS, F.L.S., Editor of "Amateur Gardening," etc., etc.

- **Formation of the Vegetable Garden.**
- **Soils and Their Treatment.**
- **Manures and Their Uses.**
- **Crops and Their Rotation.**
- **Calendar of Garden Work.**
- **Cultural Details for Each Vegetable.**
- **Planting, Forcing, etc.**
- **Selection of Best Varieties.**
- **Exhibiting—Packing.**
- **French Gardening.**

Etc., Etc.

ORDER FORM.

To the Publishers of "**THE GARDENERS' MAGAZINE,**" 148 & 149, Aldersgate St., London, E.C.
Please send me a copy of ....
by post, for which I enclose remittance of ....
Name ....
Address ....

Cloth, 208 pages, 47 Illustrations and Frontispiece.

PRICE 2/6; by Post, 2/10

CHRYSANTHEMUMS
FOR
GARDEN AND GREENHOUSE.

By D. B. Crane, F.R.H.S.

A practical treatise on the Culture of early Flowering and Decorative Chrysanthemums—How and when to Plant—Management for the whole year—List of Varieties, with Description, Colour, Habit, Time of Flowering, etc.

Sixth edition. 110 pages. Fully Illustrated.

PRICE 1/-; by Post, 1/2 (Bound in Cloth, 1/6; by Post, 1/8).

CHRYSANTHEMUMS
AND HOW TO GROW THEM
FOR EXHIBITION.

By J. B. Wroe.

A Complete Guide to Growing for Exhibition—Propagation—Potting—Feeding—Timing and Stopping for Northern, Southern, and Midland Growers, etc., etc.

The two Books post free for 3s. 10d.

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.
Please send me by Post, ...
for which I enclose remittance of ....
Name ....
Address ....

cession is kept up from one head for a considerable time. Now in flower, in the stove portion of the T range. This costus was introduced from Bahia in 1882, and considering its attractive flowers and easy culture, it is somewhat surprising that it is so rarely met with.

Browallia viscosa.

Of the browalias the comparatively large-flowered B. speciosa major has become a general favourite, but B. viscosa does not appear to be much known. The flowers are smaller than those of B. speciosa major, but richer in colour, while a conspicuous white eye adds to their effectiveness. It is easily grown, and, as shown by a group in the intermediate portion of the T range, is decidedly ornamental.

Nerine crispa.

Compared with several other species of nerine, and the many garden hybrids raised therefrom, this cannot by any means be regarded as showy. Still, as represented by a group of flowering examples in the cool portion of the T range, it is decidedly pleasing. This species is slender in all its parts, the segments of the flowers being very narrow, much undulated, and of a pale pink colour. It is also known by the rule, one of the latest to bloom.

MR. THOS. LUNT'S FIRST PRIZE FIFTEEN VASES OF CHRYSANTHEMUMS AT EDINBURGH. THIS EXHIBIT WON THE CITY OF EDINBURGH CHALLENGE CUP.

Adhatoda cydoniæfolia.

One does not often come across this Brazilian acanthad, yet it is an exceedingly pretty climber for furnishing the rafters in a small or medium-sized stove. Flowering, as it is, in the T range at this season, it is additionally welcome. The blossoms, which are borne in clusters at the points of the shoots, have a white tube and upper lip, this last being tinged with purple, while the large lower lip is wholly purple, with the exception of a white stripe down the centre. This adhatoda was introduced from Brazil as long ago as 1855, but it is very seldom met with in gardens.

Begonia Froebeli.

This begonia, which was introduced from Ecuador, is, although a member of the tuberous-rooted section, quite distinct from the others. The tuber is much less solid than in the ordinary kinds, consisting frequently, as it does, of little more than a dense mass of fibres. Both the leaves and flowers spring direct from the rootstock, as this species does not form a stem after the manner of the commonly cultivated tuberous-rooted kinds. Another distinctive feature is that the leaves are thickly clothed with hairs. The flowers are usually bright crimson or scarlet, there being a certain amount of individual variation in colour. Begonia Froebeli flowers during the autumn months, and is now in bloom in the T range. In its early days this begonia was considered likely to be of great value to the hybridist, but I am not aware that it was ever successfully crossed with the ordinary tuberous kinds. Between it and B. polypetala Messrs. eitch obtained a hybrid, which, under the name of B. incomparabilis, was given an Award of Merit in November, 1905.

Heliophila scandens.

Interesting as being one of the very few climbing members of the Crucifer family, and valuable from the fact that its pure white blossoms are borne in great freedom during the present season, this heliophila, now in full bloom in the succulent house, merits a passing notice. It is a climber of moderate vigour, whose wiry stems are clothed with lanceolate leaves from one to two inches in length, and rather thick in texture. The flowers, which are borne in loose racemes, are of the characteristic shape common to crucifers in general. This plant was introduced from Natal in 1885. Outside of a botanic garden it is, however, but little known.

Camellia sasanque.

Although Professor Sargent, in the "Forest Flora of Japan," says this camellia is perhaps more commonly met with in Japanese gardens than C. japonica itself, it is, in this country at least, much less grown. Compared with C. japonica it is of slender growth, while the shoots and minor branches are far more numerous, and the leaves much smaller. A notable feature is the fact that it blooms during the late autumn and early winter months. The flowers of the typical kind are single, from three to four inches in diameter, and of a lilac-rose colour. A large cluster of yellow stamens in the centre of the flower stand out in a conspicuous manner. There is a variety with white flowers. Both this and the type are now in bloom in the cool portion of the Temperate House.

K.

FORESTRY DEGREE AT ABERDEEN UNIVERSITY.

Among the business which was disposed of at the meeting of the Aberdeen University Court on Tuesday, the 14th inst., was a question of much interest to foresters. Principal George Adam Smith presided, and a memorandum was submitted by the senatus, of the University representing that, in view of possible developments in forestry in Scotland, and the suitableness of Aberdeen as a centre of education in forestry, the time had come for the institution at the University of a degree of Bachelor of Science in Forestry. After discussion, the Principal moved, and Sir John Fleming seconded, a resolution approving generally of the institution of such a degree.

It may be interesting to note that this decision involves the creation of a forestry course in the Faculty of Science qualifying for such a degree. The course will consist of two sections, the first examination including the general scientific subjects of botany, zoology, natural philosophy, and chemistry, while the final examination, and the major part of the course, will consist of the subject of forestry in its various departments. A three-years' course is projected; and during this course it is intended that students shall keep in close touch with practical work in the forests. Thus, before commencing his studies of sylviculture a student will be expected to have acquired a certain amount of practical knowledge by a period of residence of at least six months in a forest. In the two last years of his course, moreover, he will have to spend some weeks in the woods under practical tuition.

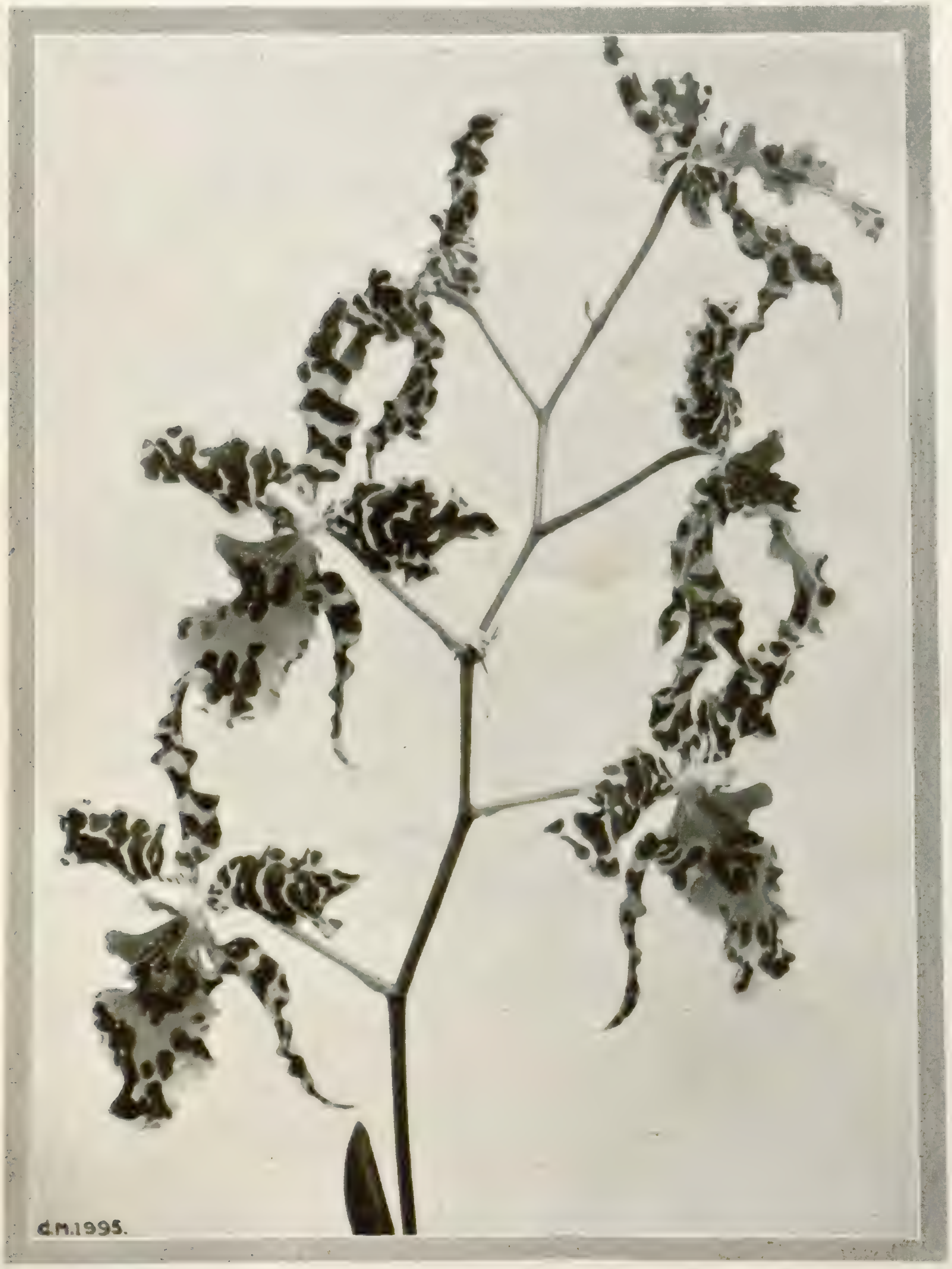
The subjects of class study for the new degree will be, so far as the first B.Sc. examination is concerned, the subjects as mentioned above in the ordinary degree classes at present held in the University. For the final examination a number of new courses will require to be instituted, and these will comprise: Forest botany, embracing the study of trees and shrubs, classification, etc., as well as of the diseases of trees; forest zoology, embracing the study of insects and other animals of importance in forestry; forest law and forest policy; outlines of forestry, a general subject; sylviculture, including the study of forest growth, planting, etc.; management and valuation; protection of woodlands; and utilisation of forest products. Along with these courses will go the study of subjects such as land surveying, geology, and economics, which are more or less covered by existing courses in the University.

NEW PLANTS, ETC.

CHRYSANTHEMUMS.

Golden Cap. — A splendid decorative variety, also known as Yellow Cap. It is probably a sport from Caprice du Printemps, as it favours the latter in form and habit, but its blooms are of a rich golden yellow hue. A.M., R.H.S., November 7. Messrs. W. Wells and Co., Merstham; and Messrs. James Veitch and Sons, Chelsea.

Golden King.—A very big incurved variety that, under good culture and careful dressing, should become a popular exhibition sort. The colour is deep golden yellow. A.M., R.H.S., November 7. Messrs. W. Wells and Co., Merstham.



ODONTOCIDIUM FOWLERIANUM.
Flowers buff, red-brown, and yellow. Certificate of Appreciation, R.H.S., November 7. J. Gurney Fowler, Esq., The Glebelands, South Woodford.

Mrs. Andrew Walker.—A handsome and free-flowering sport, from the popular Freda Bedford, a capital decorative variety; the newcomer has deep reddish-bronze flowers. A.M., R.H.S., November 7. Messrs. W. Wells and Co. F.C.C., N.C.S., November 1.

Percy Arnold.—A particularly handsome single variety, of good size, and with stiff erect stems. The graceful flowers are rich deep pink, with a zone of white round the disc. A.M., R.H.S., November 7. Mr. W. G. Rigden, Englefield Green.

Snowflake.—A large single variety, with very broad pure white florets. A.M., R.H.S., November 7. Mr. P. Ladds, Swanley.

Celia.—A finely formed single variety of great beauty; clear shining yellow. F.C.C., N.C.S., November 1. Messrs. Cragg, Harrison, and Cragg, Hounslow.

Mrs. Percy Wiseman.—An incurved variety of excellent form and soft primrose-yellow colour. F.C.C., N.C.S., November 1. Mr. P. Wiseman, Woodham Walter.

Caterham Bronze.—A single variety of rich ruddy bronze hue; very attractive. F.C.C., N.C.S., November 1. Mr. Frank Brazier, Caterham.

Charles Dickens.—This is another splendid golden-yellow single variety, of excellent form and substance. F.C.C., N.C.S., November 1. Mr. Norman Davis, Framfield.

Heston Bronze.—A decorative variety of good size and habit; the flowers are very graceful, and a soft, light, bronzy shade of colour. F.C.C., N.C.S., November 1. Messrs. Cragg, Harrison, and Cragg, Heston, Hounslow.

Miss Margaret Walker.—A beautiful single variety, the colour being rich golden-bronze. F.C.C., N.C.S., November 1. Messrs. W. Wells and Co., Merstham.

Mrs. John Peed.—A large single variety of graceful form; bright yellow. F.C.C., N.C.S., November 1. Messrs. J. Peed and Son, West Norwood.

Dorothy Dan.—A deep terra-cotta coloured single variety, shaded with bronze. Commended, N.C.S., November 1. Messrs. W. Wells and Co., Merstham.

Shoreham Oldfold.—A medium-sized single variety; rich old-gold colour. Commended N.C.S., November 1. Mr. Lawrence.

R. B. Burge.—A single white variety of good form and size. Commended, N.C.S., November 1. Mr. P. Ladds, Swanley.

White Beauty.—Another white single variety of fine form, purity, and substance. Commended, N.C.S., November 1. Mr. W. Higgs, Fetcham Park Gardens, Leatherhead.

WINTER-FLOWERING BEGONIAS.

Exquisite.—This is a splendid addition to the winter-flowering race, as it produces quite large single blooms of great beauty; these are of a pretty pink shade, heavily flushed towards the tips of the segments with rosy carmine. A.M., R.H.S., November 7. Messrs. James Veitch and Sons, Chelsea.

Acquisition.—In this fine variety the habit of growth is excellent, and the flowers of good size; the colour is pale pink, a very pretty shade. A.M., R.H.S., November 7. Messrs. James Veitch and Sons.

Her Majesty.—One of the three new varieties, this gives the most distinct colouring, its large flowers being yellow, with rosy suffusion, and giving an apricot effect of great beauty. A.M., R.H.S., November 7. Messrs. James Veitch and Sons.

CARNATION BARONESS DE BRIENEN

The bright pink shade of this fine perpetual carnation is peculiarly attractive, owing to the deep tint at the base of each petal, which produces a glow that is distinctly pretty. The flowers are of good size, and the petals are elegantly fringed. A.M., R.H.S., November 7. Messrs. Stuart Low and Co., Enfield.

CALANTHE COOKSONÆ.

Hitherto the beautiful Calanthe Harrisi has been regarded as the finest pure white member of the genus, but pride of place must now be given to C. Cooksonæ, which has flowers of large size, and great purity. C. Harrisi was one parent. F.C.C., R.H.S., November 7. Mrs. Norman Cookson (gardener, Mr. H. J. Chapman), Oakwood, Wylam-on-Tyne.

CATTLEYA ASHTONI ALBA.

This is a very beautiful cattleya, the flowers being quite white, save for a little yellow shading on the throat of the labellum. The parents are C. Harrisoniana and C. Warscewiczi, presumably a white form of each. F.C.C., R.H.S., November 7. Messrs. Sander and Sons, St. Albans.

ODONTICIDIUM FOWLERIANUM.

A most interesting hybrid obtained by crossing Odontoglossum cirrhosum with Oncidium Forbesi. The erect spike on the small plant shown carried numerous flowers of medium size; sepals and petals buff, barred and blotched with deep red-brown; lip bright yellow, with spots of bright red-brown. Certificate of appreciation, R.H.S., November 7. J. Gurney Fowler, Esq. (gardener, Mr. J. Davis), Glebelands, South Woodford.

CATTLEYA VENUS LUTESCENS.

A handsome variety of the hybrid between C. Ives and C. Dowiana aurea. It has soft yellow sepals and petals and a large, rich rose-purple lip, veined with yellow at the base. A.M., R.H.S., November 1. Messrs. J. and A. McBean, Cooksbridge, Sussex.

CYPRIPEDIUM SYBIL SUPERBUM.

A handsome orchid with large, bold flowers. The white dorsal sepal is finely lined, and striped with purple, and shaded with green at the base. The deflected petals show the influence of C. Fairrieanum, and are greenish, heavily spotted, and shaded with dark purple. The lip is green and purple. The parents are C. Franciscæ and C. Fairrieanum. A.M., R.H.S., November 7. Mrs. Norman Cookson, Oakwood, Wylam-on-Tyne.

PROFITABLE WOODLANDS.

(Continued from page 854.)

Amongst other hardwoods on soils which may not be suitable to the growth of oak and ash, say, on the limestone and chalky soils, and at higher elevations, beech will prove one of the most profitable timbers. I believe I am correct in saying that in the large chair-making districts in Bucks only 10 per cent. of the beech used in that industry is home-grown, the reason being that the supply of beech timber grown in the neighbourhood is so scarce, although it has been stated by a very responsible authority that beech woods on the Chiltern Hills have showed an annual income of 30s. per acre per annum, and adjoining agricultural land was letting as low as 5s. per acre. No doubt it is the long period that must elapse ere beech woods can be expected to yield a profit that prevents landowners investing their capital in planting large areas of this timber. I should be glad to see the day come when all plantations up to the age of fifteen years are exempt from all taxes and tithes; it would cause landowners to take more interest in afforestation.

In low-lying, but fairly well-drained, land black Italian poplar is a tree that will pay for cultivation, and there is, especially in the Midlands and the north, a very good demand for this quick-growing timber.

Among the conifer timbers larch is considered one of the quickest growing, and also the most profitable, and I am afraid that, chiefly on these grounds, it has been planted indiscriminately, for on many estates we find it planted in soil and situation quite unsuitable for its growth, and never likely to make a profitable return. The most suitable land, in my experience, to plant larch is in light sandy loam, or even pure strong sand. Personally, for commercial purposes, I prefer planting larch woods pure, except where exposed to the south and west winds, when it is advisable to plant a border, say, of Austrian pine, as a shelter. On the Gloucester portion of Earl Beauchamp's estates the main portion of woodlands planted during the past forty years consists of 95 per cent. larch; the soil is a deep fresh sand, overlying the old red sandstone rock, and one of the best of the woodlands there is one of twenty-four acres, twenty-one years planted, and it contains 99 per cent. of larch. I have seen very little disease among the trees, and if it is noticed my foreman removes the trees in autumn. I had this plantation thinned first at ten years, again at fifteen years, and it is examined now every autumn for the removal of unhealthy or suppressed trees. There are slightly over 1,000 trees to the acre, averaging 2¼ cut feet each. This is the plantation that was awarded first prize (for best conifers) in the Plantation Competition in connection with the Royal Agricultural Society's Show at Gloucester, 1909.

This plantation is, I think, a living example to show that on proper soil and situation larch is the most profitable crop to grow. Although larch thinnings suitable for hop poles are not now so much in demand, there is quite a ready sale for them for rustic work, and the larger sizes are in demand for pitwood and fencing. The agricultural rent of this land, before planting, was about 6s. per acre, being on the east slope of very hilly ground, and only fit for a sheep run.

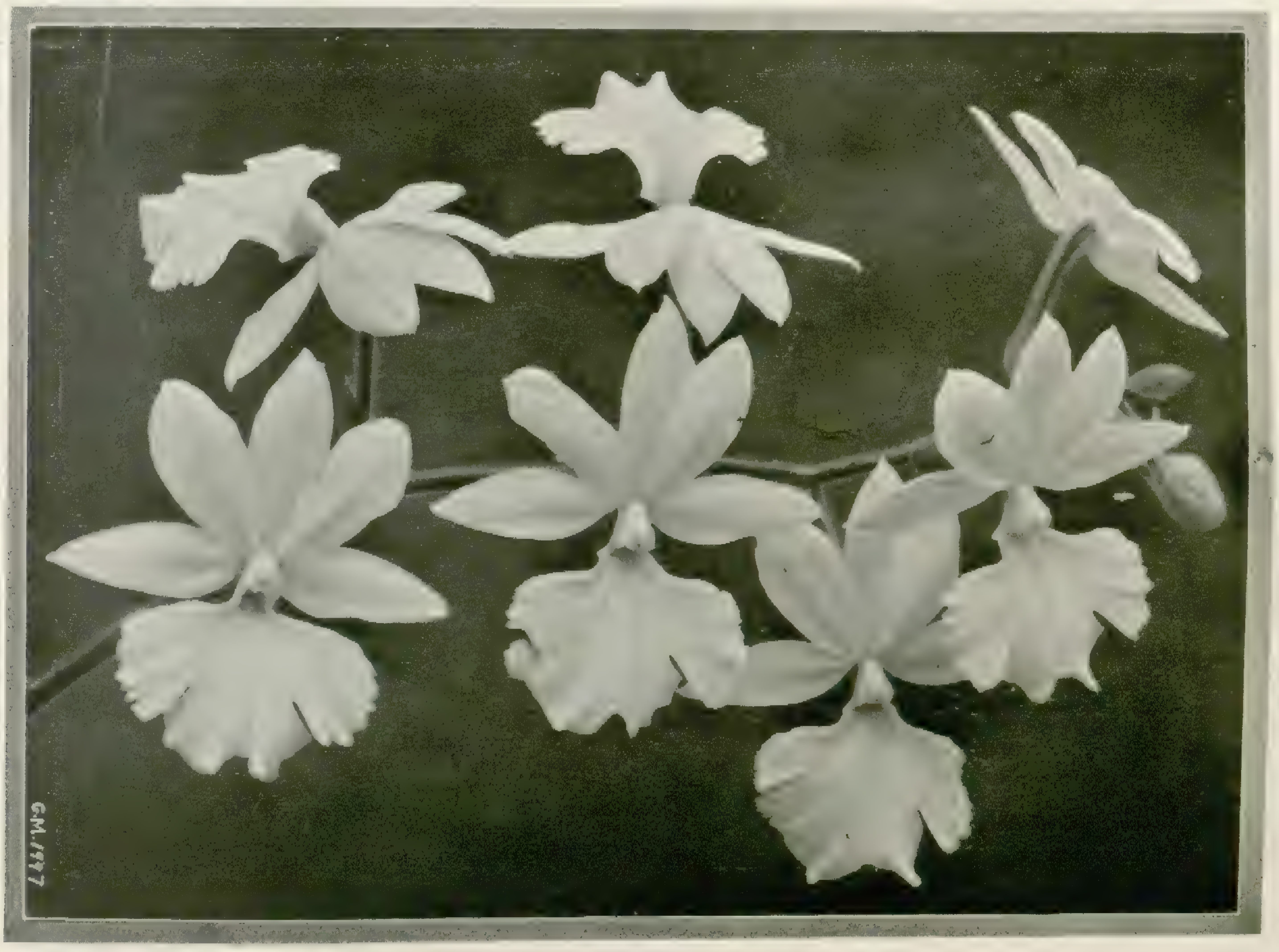
For planting in this country I would as soon use the Tyrolese as the native larch. I believe it is hardier, and grows quicker after the first few years; but I prefer either sort reared in the seed beds in this country—rather than reared abroad. Japanese larch (owing greatly to the scarcity of seed) had been too expensive to plant, from a commercial point of view, although I have found it freer from disease where the other varieties have suffered, and and it is not liable to injury in lower-lying ground, where frosts are apt to take hold of its compatriots.

Where the soil is light and sandy, and the site not too exposed, Douglas fir is a very profitable tree to grow, as it can now be bought from the nurserymen at a very moderate price for two-year seedlings, and if planted (in lines) in the home nursery for two years it will be quite large enough for planting out. To grow good, straight, saleable timber, plant pine not more than four feet apart.

On the poorer and barren soils Scots pine and Corsican pine may be grown, and in many cases they have proved a good investment to the planter. One of the heaviest items on many estates where new plantations are formed is the expense of wire netting to exclude the forester's foe—the rabbit. It adds, according to area planted, from 20s. to 40s. per acre to the first cost of a new plantation. No doubt many of our woodlands would be more remunerative if rabbits were all enclosed in proper rabbit warrens, which is the proper place for them. In conclusion, the larger area that is taken to form a new plantation the less per acre is the cost of fencing and enclosing, and the larger woods are more economically worked, and more likely to prove a profitable success than woodlands of two or three acres.

ALEX. SLATER.

Malvern.



CALANTHE COOKSONÆ.

Flowers pure white. F.C.C., R.H.S., November 7. Mrs. Norman Cookson, Oakwood, Wylam-on-Tyne.

BEST PLANTS FOR GREENHOUSE.—Nearly 300 pages are devoted to the description, propagation, and culture of the best flowers and plants for the greenhouse in THE AMATEUR'S GREENHOUSE, by T. W Sanders, price 5s. net, or by post 5s. 6d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

HARDY SHRUBS FOR FORCING.

Among the great changes that have taken place in horticultural matters within the last two decades or so, a prominent one is the increased number of hardy shrubs that are now forced prematurely into bloom for the embellishment of the greenhouse or conservatory during the early months of the year. For a very long period a few subjects have been so treated, but the list of those which have proved available for the purpose has been largely added to within recent years. The great decorative value of the various hardy shrubs when forced into bloom is each season well illustrated at the early spring meetings of the Royal Horticultural Society, where the display they produce is fully equal to that of any tender subject.

From the fact that the different hardy shrubs intended for forcing do not all require the same treatment, no hard and fast line can be laid down in this respect, though for the production of flower buds full exposure to air and sunshine is, during the summer months, absolutely necessary. A few may, with careful treatment, be forced year after year, but in many cases two batches are grown, to be forced in alternate years.

A very essential point in connection with these shrubs after flowering is that they be protected until the cold snaps of weather are over, otherwise the tender foliage will be so injured that the plants take a very long time to recover. In making any selection of shrubs available for forcing it must be borne in mind that nearly all early-flowering subjects will submit to this mode of treatment, but the best are those given below.

An enormous number of seedling bushes of Azalea mollis, each bristling with flower buds, are sent to this country every year from Holland, and disposed of at a cheap rate. As they are raised from seeds the flowers vary from pale yellow to reddish-orange. The named kinds, of which there is now a considerable choice, are much superior to the seedlings, and possess a wider range of colour. A great favourite is Anthony Koster, with blossom of a rich golden-orange tint. The different Ghent azaleas are also of great value for forcing, being, from their looser habit and smaller flowers, less lumpy than the others.

All the above are by botanists included in the genus Rhododendron, of which the early-flowering evergreen kinds are of great value in the greenhouse, but they must not be forced as hard as Azalea mollis and its forms. Of the earliest to bloom, Cunningham's White and Prince Camille de Rohan are noteworthy examples. A prominent characteristic of these azaleas and rhododendrons is their dense mass of fibrous roots, owing to which they can be lifted and potted with scarcely any check. This feature is shared by the other members of the Heath family, among which Erica lusitanica and Erica Veitchi, Kalmia latifolia, Pieris floribunda, and Pieris japonica are suitable for forcing.

Lilacs are also general favourites, and their fragrant blossoms are much appreciated. The most popular of all for forcing is the pure white Marie Legraye, but all the forms, single as well as double, will readily conform to this mode of treatment. The members of the Rose order (Rosaceæ) contribute largely towards the brightness of our gardens in spring, and a great many may be readily forced. Among them may be noted Amelanchier canadensis, with white blossoms; Kerria japonica flore plena, with golden rose-like blossoms; and the different kinds of prunus, under which head is now included the cherries, plums, almonds, and peaches. Of the cherries, the variety J. H. Veitch is particularly noteworthy, and of the plums, the most select for this purpose are Prunus japonica, P. triloba, and P. Pissardi. The rich-coloured varieties of the peach, such as magnifica, are most effective. Several pyruses, too, are very pretty, though they do not last long. In addition to these there are the thorns, both single and double, and some of the spiræas, among the best being being S. arguta, S. confusa, S. Van Houttei, S. Thunbergi, and S. prunifolia flore plena.

Brooms of different sorts, either as dwarfs or standards, form a very pleasing feature in a collection of forced shrubs, while clematises are more year by year grown for this purpose. Deutzias have long been popular, but whereas at one time D. gracilis was the only representative, several of the pretty hybrid kinds are now available. Forsythia suspensa is, when grown as a loose bush, very effective for grouping purposes, the long drooping shoots being laden with pretty yellow blossoms.

The blossoms of some of the magnolias stamp them as unique among forced shrubs, while the pretty little Magnolia stellata readily forces, and the blooms remain fresh a considerable time. Laburnums, with their pendulous racemes of golden blossoms, are always admired; and though they are not often seen, yet those two flowering currants, Ribes aureum and Ribes sanguineum, are very pleasing when treated in this way. Wistaria sinensis is one of those subjects that has only been generally employed for forcing within recent years; now it is largely grown for the purpose. In standard form the long drooping racemes of pea-shaped blossoms are seen to great advantage, in colour they stand out distinct from all their associates.

The Guelder rose and its Japanese representative, Viburnum plicatum, must on no account be passed over, and the weigelas are also amenable to forcing, the most generally grown for this purpose being the crimson Eva Rathke. A well known forcing shrub is Staphylea colchica, with drooping clusters of fragrant white blossoms. Other subjects might be named, but the above form a good selection. W. T.

[Photo: Framk, Gateshead.

MR. J. COCKER'S FIRST PRIZE COLLECTION OF TWELVE DISHES OF HARDY FRUITS AT NEWCASTLE.

Lasiandra macrantha.—I was much interested in the reference that was made on page 848 to this delightful late summer and autumn-flowering shrub. Your able correspondent directs special attention to its adaptability to culture in cool houses, and with what he has written I am in full agreement. We have several plants at Leonardslee that are growing in a structure which is devoted chiefly to rhododendrons, and is not heated except when necessary to exclude frost. In this they have flowered, and are still flowering well; and in a greenhouse with a temperature ranging from 50 to 55 deg. we have plants that have been in bloom since August. During the summer this lasiandra thrives in the open. It is interesting to know that when cut every bud on the sprays will attain full development, and a friend of ours had a branch in a bedroom which retained its freshness for three weeks, and each bud developed into a flower of full size.—W. A. Cook.

FORCING FRENCH BEANS.

French beans are esteemed at any time of the year, but especially are they appreciated during the winter and early spring months, when supplies can only be obtained from glass-grown plants. Like a few other vegetables, French beans are, when well grown, almost, if not quite, as delicate in flavour, grown under glass as when produced in the open. No great skill is required to ensure an unbroken supply, but assiduous attention to details is essential.

A good batch of plants in full bearing at this date will prove of immense value to the gardener who is expected to supply during the winter and spring choice vegetables that require artificial heat, and the shelter of glass, in their production. High-class vegetables will undoubtedly be doubly appreciated during the coming winter, for the drought experienced in the past summer has greatly diminished the supplies of some kinds that are usually available from the open quarters.

I prefer to raise the first batch of French beans for forcing on a half-spent hotbed, sowing the seed in lines, and thinning the plants to about twelve inches apart. They are grown cool, and as soon as they are well out of the seed-leaf stage are lifted carefully with a good ball of soil, and placed two or three together in ten-inch pots. The compost used consists of three-fifths loam, broken with the hand, one of flaky leaf-soil, and one of fairly dry decomposed cow manure, or the manure from a spent mushroom bed. The materials are well mixed, and used lumpy. A sprinkling of soot and powdered charcoal is also of benefit. Any stagnation about the roots is fatal, therefore an open soil and ample drainage are important. A humid atmosphere should be maintained, except when flowering, and the plants fully exposed to the light. Red spider can only be kept in check by maintaining a liberal degree of atmospheric humidity, and extra attention must be given to this detail if the plants are near the hot-water pipes.

As soon as the plants forming the first batch are established in the pots, a second sowing should be made in 60-sized pots filled with rich loam. Put five seeds in each pot, and plunge the pots in the propagating bed to ensure quick and regular germination. When the seedlings are three or four inches high place them on a shelf near the roof glass, in a structure in which a temperature of about 70 degrees is maintained. Shift into the fruiting pots, which should be six inches in diameter, for this and subsequent sowings. This is the best size until the days begin to lengthen, when ten-inch pots are the best.

The best results are achieved where a small, low, span house can be specially devoted to French beans, as the plants are then under full control. H. T. Martin.

[Photo: Frank, Gateshead.

MR. ALEXANDER'S FIRST PRIZE COLLECTION OF TWELVE DISHES OF APPLES AT NEWCASTLE.

CALANTHES.

These beautiful orchids rank high among winter-flowering plants, and in gardens where there is a brisk demand for choice cut flowers during the dull months of the year they are worthy of extensive cultivation. The tall, arching flower spikes, when perfectly developed, are most graceful, and render well-grown plants very striking objects. Whether used for the embellishment of the conservatory, the adornment of the dwelling-house, or the decoration of the dinner table, they are invariably admired. For the latter purpose probably no flower surpasses them in grace and beauty, and when used in association with a few fronds of Nephrolepsis Piersoni they are seen to excellent advantage.

March is the best time to begin their cultivation, for at that period the pseudo bulbs commence new growth. Several bulbs may be placed in a fair-sized pan, or they can be grown separately in 32-sized pots. Either method gives good results, and it is simply a matter of the kind of specimens required when in bloom. Those in pans form striking objects for use in an uncut state. The pots, or pans, must be perfectly clean, and well crocked. Various composts are recommended for the successful cultivation of calanthes, and no doubt all give good results. I have found a mixture consisting of equal parts of good fibrous loam and dried cow manure suits them admirably. This should be carefully pulled to pieces by hand, and have a little crushed charcoal and silver sand mixed with it. In this calanthes thrive, and produce strong pseudo-bulbs, and stout handsome flower spikes.

In potting make the bulbs quite firm, and leave a space of about half an inch at the top of the pots. During the early stages of growth moisture at the root must be given with care, as a saturated rooting medium will often result in the dreaded leaf spot disease. Spray them overhead twice daily when fine, also damp the vacant spaces of the house betweentimes, shade lightly from bright sunshine, and maintain a minimum temperature of 70 degrees until September, when five degrees less will be more suitable. When the pots are full of roots liquid manure and soot water will be beneficial, and these may be mixed or given at alternate waterings. This I find is more helpful than applying a top-dressing of a prepared compost.

Should any scale or other insect pests put in an appearance they should be destroyed by the application of some approved insecticide. During the autumn gradually expose the plants to more sun by removing the shading early in the afternoon. From then onward give water more sparingly, but continue to feed while the flower spikes are developing. Do not withhold water entirely, however, until about January, when it will be necessary to give the bulbs a rest.

Calanthes are the most attractive when the flower spikes are in contrast with their own foliage, and when the leaves can be kept fresh, while they are in flower, it will be an advantage; if water is not withheld too soon it is possible to keep the leaves in a fresh state for some considerable time. Rather than retain dingy foliage, however, cut off leaves that are not in a fresh state, and fill in the base with adiantums, associate small palms as foliage with the flowers. When they are in bloom a temperature of about 60 degrees is the most suitable, and the atmosphere must be kept fairly dry, or the flowers will quickly damp. There are several meritorious varieties, but C. Veitchi, a beautiful rich pink, with an almost white throat, is probably the most charming and effective for general purposes. C. Bella, C. vestita rubro-oculata, and C. vestita lutea oculata are all attractive, and worthy of cultivation.

J. Gardner.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

EAST INDIAN HOUSE.—The various species of Aerides, Succolabium, Rhynchostylis, Vanda tricolor, and its allies, will now have completed their growths, and, as root action ceases, the green tips of the roots will become sealed over. When this is apparent careful watering will be necessary; in fact, only sufficient water will be required during the next few weeks to keep the leaves in a normally plump state. It is a good plan to syringe freely between the plants on all favourable occasions, but care should now be observed to see that all damping is done sufficiently early in the day to enable any excess of moisture drying before the cool evening temperatures are reached.

ANGRÆCUM SESQUIPIDALE, of which there are two varieties, one that flowers late in the autumn, and the other which blooms during the summer. I have always found that both these plants require warm treatment all the year round, and a reasonably humid atmosphere should be retained about them at all seasons. Where they are grown under warm conditions through the winter they must not remain long in a dry state at the roots. But where grown entirely in sphagnum moss, with free drainage, the evaporation proceeds so rapidly that there is little danger of over-watering. Where grown in a mixture of peat or osmunda fibre, some care is needed to avoid the compost becoming dry between the waterings, because of the risk of the foliage being affected by black spot,

ANGRÆCUMS belonging to the smaller-flowering section, which bloom during the winter and early in the spring, are best cultivated under the same conditions as that generally found suitable for Phalænopsis. The miniature growing kinds should have a position within reasonable distance of the roof glass. If grown in baskets or shallow pans, they are easily suspended from the roof. Careful watering is necessary at all times, and a close observation must be kept for thrips, scale, and other insect pests to which the plants are subjected.

RENANTHERAS.—There are several different species in cultivation, but the only one that is of service for exhibition and decorative purposes generally is R. Imschootiana. Until the last few years this species was very scarce, but now it is annually imported in large quantities, and plants are procurable for a modest sum. The brilliant scarlet flowers, produced on graceful racemes, are exceedingly useful, and, as the flowers last a long time in perfection, they are worthy of every consideration. A good amount of strong light is required during the winter and spring months. When growing, a highly humid hot atmosphere is necessary; but as the growing season is practically through the summer months, these conditions are easily provided. After the growth is completed, cooler conditions with less root moisture is desirable.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

EUCHARIS AMAZONICA.—Strong plants are now pushing up a good supply of flowering spikes, which will require very careful attention because of the preference black beetles and crickets have for the tender points. French beetle paste occasionally put down will clear the pests if persevered with for a few consecutive days. Copious supplies of diluted liquid manure from the farmyard and clear soot water may be used alternately with water. This will impart colour to the foliage, and generally improve the condition of the bulbs.

BEGONIA GLOIRE DE LORRAINE and its varieties are now producing an excellent floral display in the intermediate house. In order to prolong the season of blooming feeding should be continued. Light top-dressings of some good artificial fertiliser, and occasional waterings with well diluted liquid manure will be highly beneficial,

BEGONIA GLOIRE DE SCEAUX.—This excellent begonia presents a pleasing contrast to those of the Gloire de Lorraine type. The plants should by this date be set with flower buds, and the fact must not be overlooked that this begonia is an exceptionally gross feeder. The plants should have liquid manure occasionally, and be liberally supplied with water. Where these details are neglected the results will be disappointing.

EUPHORBIA FULGENS.—The plants of this elegant species are now developing their flowers and, as before stated, the flowering shoots are best kept as near the glass as possible without coming into contact with it until the blooms are fully expanded, after which they may with advantage be allowed to hang loosely for decorative purposes. Extreme care in watering is absolutely essential.—John Donoghue, Bardon Hill Gardens, Leeds.

FRUITS UNDER CLASS.

STRAWBERRIES IN POTS.—The first batch may be placed in a house in which a suitable temperature is maintained. See that the soil is free from worms and the foliage from red spider. If the presence of worms is indicated, turn the plants out of the pots, and remove them; should there be the slightest evidence of red spider, sponge the foliage with strong soft soap and sulphur. Then the surface soil should be loosened with the point of a stick and shaken away, and replaced with sweet fresh soil, containing a little soot. Strawberries must not be subjected to a high temperature at the commencement, Therefore, the forcing of these must be proceeded with quite slowly. A house or pit that is kept closed will be sufficient for the first fortnight, Royal Sovereign responds to early forcing very readily, and is deservedly popular. Other good varieties are Keen's Seedling and Vicomtesse Hericart de Thurry. The fruit of these are, however, small, but extremely sweet, and produced so freely as to require to be well thinned. Very little water will be required if the plants are syringed on fine days.

RIPE GRAPES.—Examine the bunches frequently and cut out the decayed berries, but, in doing so, be careful to avoid rubbing the bloom off. The long laterals of all vines may now be shortened still further, more especially those that come in contact with the glass. Use a little fire heat in dull weather, especially in the Gros Colmar, especially if the berries are not well coloured. This grape takes a rather long time to become well finished. In many private places I expect the Prince of Wales will supersede that variety. It is a handsome grape, and keeps well.

EARLY PEACHES.—The forcing of these must now be set about in earnest, and, assuming the trees have been pruned and properly trained, the house may now be closed, and no fire heat should be used during the first fortnight, except what may be necessary to keep the temperature up to 45 deg. The wood will be thoroughly ripened, and the trees, having had a good rest since cleaning should respond to a little additional warmth. Some growers prefer pot trees for the production of the very earliest supplies, and if these have to be secured from the nursery, only early and well approved varieties should be chosen. I have found Hale's Early one of the best, as the fruits set well, are large, handsome and well flavoured. Another favourite is Grosse Mignonne, which ripens about a fortnight later, and has handsome fruit of excellent flavour. Dymond succeeds this, and is one of the best, and a tree should be planted in each house.

LATE PEACHES.—The pruning and cleaning and training of these should be persevered with as circumstances permit. Old trees, as well as young, should be carefully pruned. An indifferent tree can often be made to present a smart appearance by skilful pruning and training. Proceed with the cleaning of the glass and woodwork as recently advised, for the early house, and if any pest such as scale or mealy bug exists on the trees, they must have a thorough washing with an approved insecticide.—W. A. Cook, Leonardslee Gardens

THE FLOWER GARDEN.

SUMMER-FLOWERING CHRYSANTHEMUMS.—A sufficient number of roots should now be lifted to provide a supply of cuttings for next season's stock of plants. The easiest plan is to place the roots in seed boxes, filling in with soil, and wintering them in an unheated frame. It is rather risky to allow the roots to remain in the open ground and rely on them for cuttings, for slugs play great havoc amongst the young shoots when under the surface of the soil. Those who do not possess a frame, will find an outhouse window a suitable place for a few boxes during the winter. The roots may be placed in the frames without boxes, but, at the same time, there is a greater advantage in boxing, for if cuttings are required early in February the roots can be readily placed where they will have a little warmth to accelerate the growth.

BORDER CARNATIONS. — The early planted layers will be quite established, and derive much benefit from having the surface of the soil stirred occasionally with the hoe. This operation should be carried out during dry weather, at the same time examining the plants, and if any are found to be loose they must be made firm again, In damp, low-lying districts, disease is often very prevalent at this season of the year, and affected plants should be given a dusting of air-slacked lime, which usually proves effective. A close guard must be maintained against the depredations of birds, rabbits, and hares. The lime will prevent the trouble caused by the birds, but for the other enemies wire netting must be fixed in position high enough to keep them off the beds,

SPRING BEDDING.—Wallflowers, shrubs, etc., which have recently been planted in the beds, and not yet become established, are often loosened by the rough autumn winds. Therefore it is necessary to examine them occasionally, and if found to be loose, the soil must be made firm about them. Violas, polyanthus and aubrietias, will require pressing down again after the first few frosts, which invariably lifts them a little. The leaves that accumulate about them should be removed to prevent any decay, and also to promote a tidy appearance. Give plants in vases in exposed positions a stake to afford them the necessary support. Lightly stir with a hoe when dry the surface of beds that are vacant.

LAWNS.—Give lawns a top-dressing of rich material, especially those on which the grass has become poor and mossy. A suitable top-dressing is composed of loam, well-decayed manure, and burnt garden refuse in equal parts. To this add a good proportion of soot, and mix the whole thoroughly and pass it through a sieve with a half-inch mesh.

ROCK GARDEN.—It is important that decaying foliage or fallen leaves be not allowed to remain about or over the plants. It is a point often overlooked in this department, and there is hardly anything likely to do more harm. The shelters which have been placed over various subjects should be examined, to see that the protection is efficient. Mice are usually troublesome, and must be looked after and destroyed as quickly as possible. Where the soil has been washed away from plants, it must be replaced at once.—E. C. Pooley, Gnaton Gardens, Plymouth.

Aster Climax.—It is now four years since this aster was given an Award of Merit by the Royal Horticultural Society, and time has proved that the honour was well deserved, for every year it gains many admirers. The flowers are large, of a pleasing shade of mauve, and disposed in long sprays, which are effective on the plants, and ideal for cutting purposes.—W. T.

EXHIBITIONS AND MEETINGS.

◆

Edinburgh Chrysanthemum Show.

The Scottish Horticultural Association held its annual exhibition in the Waverley Market, Edinburgh, on Thursday, Friday, and Saturday, November 16, 17, and 18. The exhibition was scarcely so extensive as usual, and the Scottish traders were not represented so widely as is the general rule. It was probably owing to this little lack of trade exhibits that one had the feeling that the show was not quite so good as usual; and, though this might hold good in the matter of extent, it did not in the matter of quality. Rarely have so many first-class exhibition blooms been seen together as on this occasion, and the long table that held the exhibits in the Edinburgh cup and Scottish cup classes was an exhibition in itself. Fruits were very well presented, the Scottish grapes and apples being excellent. Plants were fairly well displayed. The bush and specimen chrysanthemums being particularly good. Vegetables were good, and so, on the whole, were the floral decorations. But, alas! the weather was execrable. On the opening day a blizzard raged over the city, bringing with it sleet and cold rain; on the second day the rain fell in a quite determined manner all the time, and so we imagine the takings will have suffered. The arrangement of the competitive classes was very good, but the trade displays had to be set up in positions where the light was extremely bad. Mr. A. D. Richardson continues to act as secretary to the association, and we commend to the notice of other secretaries the beautiful legible writing upon the class cards and the painstaking repetition of full name and address in the case of competitors making numerous entries.

CUT FLOWERS.

The City of Edinburgh cup and £12 offered as first prize for fifteen varieties of Japanese chrysanthemums, three blooms of each, in vases, was won by Mr. T. Lunt, gardener to Captain A. Sterling, Keir, Dunblane, with a wonderfully fine clean set of flowers. The varieties and their points (12 as a maximum for three blooms) were: Hon. Mrs. Lopes, 10½; E. Jamieson, 10; Mrs. L. Thorn, 10½; Mrs. Pearson, 10; F. S. Vallis, 10½; Reg. Vallis, 10; Mrs. A. T. Miller, 11; D. B. Crane, 10½; G. Hemming, 10; Purity, 11; Lady Letchworth, 10; White Venosta, 9½; Mrs. F. W. Vallis, 10½; Bessie Godfrey, 10½; and White Queen, 11½; a total of 156 out of a possible 180. There were six competitors, and second prize fell to Mr. Jas. McKellar, gardener to J. Jameson, Esq., J.P., St. Marnocks, Co. Dublin, who totalled 140½ points out of a possible 180; Mr. G. Stewart, gardener to Sir James Sevewright, Tulliallan Castle, Kincardine, third with 139 points; Mr. L. McLean, gardener to David Thomson, Esq., Greenfield, Alloa, fourth with 132½ points, his White Queen gaining 11 points.

The Scottish challenge cup competition, open only to Scottish gardeners and amateurs, brought out seven competitors, and the famous cup, with its cash award, was finely won by Mr. Robt. Honeyman, gardener to Wm. Ramsay, Esq., Bowland, Stow, with as superb a set of eight vases as has been staged for a good while. In depth, width, form, and colour, there was little lacking, and if the judges had pointed higher than they did scarcely anyone would have found fault. The varieties and points were as follows: Lady Talbot, 11½; Mrs. A. T. Miller, 11½; Hon. Mrs. Lopes, 11; Mary Poulton, 11 (one bloom in this vase was regarded as the best in the show); Mrs. F. W. Vallis, 11; Mrs. L. Thorn, 11½; Algernon Davis, 10; and Purity, 11½; total, 89 out of a possible 96. Second prize was won by Mr. J. Small, gardener to J. Graeme Thomson, Esq., Norwood, Alloa, with a total of 78 points; Mr. R. Mackenzie, gardener to Jas. G. B. Baillie, Esq., Dochfour Gardens, Inverness, third, with 77½ points; and Mr. Jas. Finnie, gardener to A. R. Brown, Esq., Summerhill, Shandon, fourth, with 74½ points.

The competition in the class for six vases of Japanese varieties was very keen, seven entering. The first prize was won by Mr. R. Honeyman with beautiful examples of Mrs. A. T. Miller, Mdme. P. Radaelli, Lady Talbot, Hon. Mrs. Lopes, and Edith Jamieson; Mr. J. Small came second, and Mr. H. MacSkimming, gardener to W. T. MacLellan, Esq., Auchenraith, Helensburgh, third. For two vases of one variety, Japanese, Mr. Jas. McKellar led with five specimens of Frances Jolliffe.

For a dozen Japanese blooms on boards, Mr. Thos. Lunt was to the front again with a very even set of fresh flowers, practically all of the gracefully reflexing and semi-drooping habit. The varieties were Mrs. C. G. Kelly, Purity, Melchett Beauty, Hon. Mrs. Lopes, E. J. Brooks, F. S. Vallis, Mrs. F. W. Vallis, Bessie Godfrey, White Venosta, D. B. Crane, T. Chandler, and White Queen. Mr. Jas. Small, Alloa, won second prize, and Mr. R. Mackenzie third.

Mr. J. Waldie, gardener to W. H. Dobie, Esq., Dollarbey, Dublin; Mr. J. Loan, gardener to J. H. Younger, Esq., Bughtrigg, Coldstream; Mr. A. Gauld gardener to Mrs. Robert Procter, Claremont, Alloa, Mr. Lunt, and Mr. Mackenzie, were leading prizewinners in other vase classes for Japanese chrysanthemums. For a new Wells-Pockett novelty of 1911, Mr. R. Mackenzie won the prize with William Turner; Mr. R. Whannell second with the same variety; and Mr. J. E. Davis third. The best new chrysanthemum, was Pockett's White Australia, exhibited by Messrs. W. Wells and Co., Merstham, Surrey, a graceful white flower, and secured the silver medal.

A gold medal and cash were offered as the first prize for half a dozen vases of single chrysanthemums, twelve sprays in a vase, and this attraction secured four entries. The leading prize was won by Mr. W. G. Pirie, gardener to C. W. Cowan, Esq., Dalhousie Castle, Bonnyrigg, with fine disbudded blooms of Sylvia Slade, Willie Smith, Purity, Altrincham Yellow, Mary Richardson, and Edith Pagram; Mr. W. Galloway, gardener to the Earl of Wemyss, Gosford, Longniddoy, came second; and Mr. Adam Knight, gardener to Sir Wilfrid Lawson, Bart., Brayton, Carlisle, third. For three vases of single varieties, Mr. R. Honeyman triumphed with Altrincham Yellow, Purity, and Willie Smith in grand condition; Mr. Alex. McMillan, gardener to the Earl of Home, Douglas Castle, Lanark, second; and Mr. R. Whannell, gardener to Colonel More Nesbett, The Drum, Gilmeston, third. In another three-vase class Mr. W. G. Pirie scored, followed by Mr. Galloway and Mr. McMillan. Mr. A. Brydon, Tweedbank, Inverleithen, had the best vase of single chrysanthemums, winning with a fine vase of Sylvia Slade.

So far as we could gather there was but one exhibitor of six vases of chrysanthemums as grown for market; this was Mr. James Bruce, Springfield Nursery, Davidson's Mains, whose leading varieties were Felton's Favourite, Edith Pagram, Mary Richardson, and Bronze Soleil d October. Mr. Davidson led for a vase of decorative chrysanthemums with Parson's White; Mr. R. Jenner, Stirling, second.

Perpetual carnations were grandly shown by a few amateurs in a class for two vases of blooms. Mr. A. Williams, Tidley, was first; Mr. A. McKinven, Carlebank, Lanark, second; and Mr. J. Wilson, Montague Gardens, Leven, Fife, third.

FLORAL DECORATIONS.

These were a prominent and attractive feature. Miss Newlands, Bridge Street, Leith, won first prize for one bride's and two bridesmaids' bouquets, the latter composed of pink roses and lily of the valley, the former of odontoglossums, white carnations, and lily of the valley. Mr. A. Knight led for a bouquet of carnations, and Mrs. W. L. Boase, Binrock, Dundee, had the best orchid bouquet, composed of cattleyas and odontoglossums; Mr. A. Knight, second. Mr. J. Hood, Dalmore, Helensburgh, had the best bouquet of chrysanthemums, an arrangement of dull yellow and bronze flowers, with croton leaves and berberis foliage. Miss Burton, New Langton Hall, Polton, was to the front for a basket of chrysanthemums, with Mr. G. Scott, Seathwood Gardens, Dundee, a close second with big Japanese flowers pleasingly associated with those of single varieties. For a basket of flowers, any kinds, Mr. A. Knight scored in a poor competition with oncidium sprays and lily of the valley. Mrs. Boase had the only wreath, and was awarded first prize.

The best basket of hardy foliage and berries was adjudged to be the large one arranged by Mr. J. Hood, gardener to T. G. Bishop, Esq., Dalmore, Helensbrugh, who used sprays of golden privet, variegated hollies, and euonymus, with rose hips, oak apples, holly, and privet and pernettya berries; Mr. D. Kidd, gardener to Lord Elphinstone, Carberry Towers, Musselburgh, second, and Mr. F. Cowe, Carris Eskan, Musselburgh, third; eight entries.

Five baskets of orchids and suitable foliage were staged, and the chief prize was won by Mr. D. Halliday, gardener to W. Mackay, Esq., Ascog, Bute, with a fine display of Cattleya labiata, C. Trianæ, calanthes, cypripediums, oncidiums, and cymbidiums; second prize fell to Mr. J. Clark, gardener to F. S. Roberts, Esq., Bannerfield, Felkirk, for a rather heavy arrangement of odontoglossum sprays over cattleyas—the flowers were by no means made the most of; Mr. Duncan Mackay, gardener to C. Dickson, Esq., Viewbank, Lasswade, was third with cattleyas, odontoglossums, and dendrobiums.

In the class for a large vase of chrysanthemums arranged with suitable foliage, three huge arrangements were staged, and the best was from Mr. D. Kidd, who had about thirty large Japanese blooms, associated with sprays of scarlet oak crotons and larch; Mr. A. McMillan came second, and Mr. G. Scott, Seathwood, Dundee, third. Three vases of chrysanthemums and suitable foliage found Mr. W. Galloway to the front with Felton's Favourite, La Triomphante, and Bronze La Triomphante; Mr. J. Beates, gardener to Mrs. Boase, Dundee, second, and Mr. A. Osydon, third; there were eight entries in this class.

FRUITS.

Fruits were capitally shown, and the competition appeared to be fairly keen throughout the numerous classes.

Three collections were staged in the class for eight kinds, and here Mr. D. Kidd was to the front with Lady Downes and Gros Maroc grapes and splendid dishes of Peasgood's Nonsuch, Baumann's Red Reinette, and Emperor Alexander apples, and Beurre Diel, Doyenne du Comice, and Pitmaston Duchess pears; Mr. W. Galloway, Gosford, was second, showing fine Appley Tower grapes, and Emperor Alexander apples. Mr. G. Pirie annexed the first prize for four bunches of grapes with neat well-finished clusters of Gros Colmar, Alicante, Muscat of Alexandria, and Cooper's Black; Mr. W. Kidd second, and Mr. D. Halliday third.

For two bunches, one each of a black and a white variety, Mr. W. Campbell, gardener to Colonel Stewart Mackenzie, Braham Castle, Cononbridge, was a capital first with Muscat of Alexandria and Black Morocco; Mr. W. Galloway second, and Mr. W. E. Pirie third. Mr. Pirie scored for a pair of bunches of white grapes; Mr. D. Halliday led for two bunches of Alicante with big bunches of deeply coloured berries; eleven entries. For Gros Colmar Mr. Jas. McNeill, gardener to Major Thorburn, Craigerne, Peebles, was first, with big plum-like fruits; six entries. A little humour entered into this competition, because one, evidently hurried, competitor had attached a card for "three stalks of Brussels sprouts" to his grapes. Mr D. Kidd had the best bunches of Lady Downes grapes. Mr. J. McNeill scored for a bunch of Lady Hutt, Mr. J. Law, Dirleton, for one bunch of Apply Towers; Mr. J. McNeill led for "any other grapes."

Mr. Galloway came to the front for six dishes of pears, Scottish grown, Glou Morceau, Hacon's Incomparable, and Duchess d'Angoulesse being his best dishes; Mr. R. Sinclair, Congalton Gerdens, Drem, second, and Mr. R. Pow, Saltoun Hall Gardens, Pencailtond, third. In the open class for six dishes of pears, Mr. R. Currie, Foxley Hall, Hereford, was to the front, and he showed Beurre Diel and Doyenne du Comice well; Mr. W. Galloway second, and Mr. G. Mackinlay, Wrest Park Gardens, Ampthill, Bedford, third.

A grand lot of fruit, shown by Mr. James Duff, gardener to Colonel Gordon, Threave House, Castle Douglas, won first prize for eighteen varieties; a few of the best dishes were Cox's Pomona, Allington Pippin, Cellini, Bramley's Seedling, Lady Henniker and Peasgood's Nonsuch; Mr. G. Mackinlay was a good second, and Mr. R. G. Sinclair, Drem, third.

In the Scottish class for eighteen dishes of apples, Mr. Duff was again chief prize winner, and here again he showed fine fruits of King of the Pippins, Bismarck, Allington Pippin, Cox's Pomona, Alfriston, Castle Major, Newton Wonder, The Queen, and Peasgood's Nonsuch; Mr. R. G. Sinclair second, and Mr. A. Dickson, Glenormiston, Innesleithen, third; seven competitors. Mr. Duff was also to the fore in the open class for six dishes of culinary apples, followed in order by Mr. R. Currie and Mr. C. Webster, gardener to the Duke of Richmond and Gordon, Gordon Castle, Fochabers. Mr. Chisholm, gardener to the Marquis of Lansdown, Meikleour House, Meikleour, had the best set of six dishes of dessert apples, winning with Gascoyne's Scarlet, Jas. Grieve, Worcester Pearmain, American Mother, Wealthy, and Allington Pippin; Mr. R. Currie second, and Mr. G. Mackinlay third.

Mr. J. Harris, Silsoe, Bedford, scored for three baskets of dessert apples, ready for market, with good samples of King of the Pippins, Fearn's Pippin, and Blenheim Pippin; Mr. J. McKenzie, Lochend Gardens, Dunbar, led for three baskets of culinary apples.

PLANTS.

There was a quite good array of large specimen bush-grown chrysanthemums. Mr. W. Pullman, gardener to D. R. Hine, Esq., Colinton Road, Edinburgh, had a fine set of six plants in seven-inch pots, his Souv. d'Un Petite Ami being especially good; he secured first prize in close competition. Mr. W. Michie, gardener to Lady Steel, Boroughfield, Edinburgh, had the best specimen of a large-flowered variety—Souv. d'Un Petite Ami, with about three dozen blooms. For two specimens Mr. Michie was first, and he also scored for four specimens with a fine set, and was here followed by Mr. Pullman and Mr. J. Fraser. In the class for six specimens, Mr. W. Pulman led with very fine examples of Mrs. Greenfield, Cheltoni, Nellie Pockett, Wm. Duckham, Mrs. W. Reid, and Swanley Giant; Mr. Michie was second with good but somewhat smaller specimens. Mr. A. McMillan had the best three pans of lily of the valley, and also the best four nerines. Mr. J. Alexander, of Craigmillar, scored for scarlet salvias, and Mr. J. Templeton, Richmond House, Glasgow, showed the best foliage plants.

Mr. C. Shaw, gardener to S. Mitchell, Esq., Boquhan, Kippen, led for four begonias with big spreading bushes of Gloire de Lorraine varieties; Mr. D. McLean, Raith, Kircaldy, second; and Mr. A. Williams, gardener to Lord Stratheden and Campbell, Jedburgh, third; eight entries.

VEGETABLES.

Leeks were wonderfully good, but not thick enough for those champion growers, the Tyneside colliers; there were a dozen sets of eight, and Mr. Adam Brydon had the best set. Out of twenty-five entries Mr. J. J. Staward, gardener to R. M. Pilkington, Esq., St. Fort House, Fife, led with fine produce. Mr. J. Paterson, Rutherford, Roxburgh, was ahead for six heads of celery; and Mr. W. Douglas, Easter Duddingstone, Portobello, was to the front for a dozen bunches of market-grown leeks. Mr. J. J. Staward scored for six cauliflowers with neat close heads, from sixteen competitors. Curled kale, savoys, and cabbages were all finely shown, and beets were good. Parsnips were wonderfully clean and long for the season, and Mr. D. Pett, Kelso, was first prize winner. Mr. C. Shaw scored for onions, and Mr. Davidson for carrots, each in a strong competition. Mr. W. P. Bell, Bothwell Castle Gardens, was ahead for potatoes.

Three competitors came forward in the class for nine kinds of vegetables, and each showed fine produce in capital style. Mr. Robert Steward, gardener to Lord Lauderdale, Thirlestone Castle, Louder, was first prizeman; Mr. F. Urquhart, gardener to H. Mungall, Esq., Gattonside House, Melrose, second; and Mr. W. P. Bell, Bothwell Castle Gardens, third.

NON-COMPETITIVE.

Messrs. W. Wells and Co., Merstham, gained a gold medal for their attractive exhibit of chrysanthemums, mostly new varieties, and carnations. A few of the new sorts were Mrs. Gilbert Drabble (31 inches in circumference in one instance), represented by six grand flowers; Josephine, a yellow single; Miss L. Hall, a pink Japanese; and the brightly-coloured Mrs. R. H. Witty. The group also included a selection of up-to-date single and decorative varieties, the whole producing a brilliant effect. Messrs. Storrie and Storrie, Glencarse, filled two tables with an interesting collection of apples, arranged under pyramidal specimens of celosias (gold medal).

Carnations from Messrs. W. Cutbush and Son, Highgate, made up a goodly group, The President, Scarlet Glow, and Rose Dore being especially attractive. Dr. McWatt, Morelands, Duns, displayed a very interesting collection of primulas, and had a flower P. obconica in variety, P. floribunda, P. f. Isabellina, P. molacoides, P. Kewensis, P. Forbesi, P. f. rubra, P. capitata, P. denticulata, P. megasæfolia, P. decora alba, P. Palinuri, P. frondosa, P. Poissoni, P. chenessis, and primroses and polyanthuses—a very interesting group.

Messrs. Young and Co., Cheltenham, had a very charming exhibit of perpetual carnations, including Duchess of Devonshire and Lady Audley Neild in fine condition. Messrs. Sutton and Son, Reading, showed a splendid collection of vegetables, and, as usual, set up excellent produce in a most attractive manner; leeks, onions, carrots, tomatoes, cucumbers, cauliflowers, artichokes, and Hero of Lockinge melons (fruits, by the way), were very fine (gold medal).

Messrs. John Forbes, Lim., Hawick, were represented by perpetual carnations, Michaelmas daisies, bamboos, etc. Messrs. Dobbie and Co., Edinburgh, had a circular table of decorative and single chrysanthemums. The largest exhibit was from Messrs. Dicksons, Waterloo Place, and consisted of a big bank of single chrysanthemums, in masses of popular varieties like Narcissus, Mary Anderson, Mary Richardson, Kitty Bourne, Altrincham Yellow, Elsie Hill, Metta, Mensa, and Florrie Stevens, etc. (silver gilt medal).

Newcastle Show and Northern Fruit Congress.

The North of England Horticultural Society joined forces with the Newcastle Chrysanthemum Society on November 15 and 16, and a splendid show was held in the Town Hall and Corn Exchange, while the Conference part of the proceedings was held at the Mining Institute on the first day, and at the Town Hall on the second day.

The chrysanthemum show was a great success, flowers and plants being alike excellent, but all suffered somewhat from lack of space. Mr. Musk's cut blooms were superb, while the bush plants were a revelation. The fruit show section was arranged in the upper hall, and this, too, was a great success, the fruit staged being of a very high quality and showing a good deal of colour; the competition was first rate.

The conference proceedings were not very well attended, but we do not attach too much importance to numbers in such a case as this, for provided the matters dealt with are of importance and put forward interestingly, a vastly larger public than that hearing the lectures is sure to be appealed to and reached. In our judgment the programme was too extensive, and the sessions followed on each other too closely. There were three sessions and five lectures each afternoon.

There were numerous delegates from the North of England Horticultural Society present, and representatives from the County Councils in the South of Scotland, while Mr. F. J. Chittenden and Mr. J. Hudson, V.M.H., represented the Royal Horticultural Society. The arrangement of affairs fell chiefly in the able hands of Mr. W. Marrison and Mr. F. Fox, the secretary and chairman of the Newcastle, and the Rev. Bernard Hall, secretary of the N.E.H.S.

On Wednesday, November 15, the proceedings were opened by Lady Grey in the presence of a large attendance of the nobility and gentry of the district, under the presidency of the Lord Mayor, Sir W. H. Stephenson. The attendance at the exhibition was very good, and we understand that the takings at the gate were in excess of last year.

CUT FLOWERS.

These were particularly fine, and, staged in vases, they produced a capital effect.

There were six competitors in the open class for not less than a dozen Japanese varieties, three blooms a vase, the chief award being Mr. Henderson's silver cup and £5. The leading honours fell to Mr. G. W. Musk, gardener to Captain J. F. Laycock, Wiseton, Notts, for large, beautifully fresh flowers of Mrs. R. H. B. Marsham, Mrs. F. C. Stoop, Master David, Rose Pockett, F. S. Vallis, Marquis of Northampton, G. F. Bruzzard, Reg. Vallis, Leslie Morrison, Master James, Mrs. A. T. Miller, Mrs. W. Knox, Eclipse, Sir F. Crisp, and J. Lock. Second prize was won by Mr. R. Addison, gardener to the Countess of Ravensworth, Creswell Hall, Morpeth, and third by Mr. H. Smith, gardener to R. D. Marshall, Esq., Castlerigg Manor, Keswick.

There were five good entries of six Japanese varieties, three blooms of each, in vases, and here Mr. G. W. Musk was again first with flowers of very fine form and quality; Mr. A. W. Appleton, gardener to C. Lacy Thompson, Esq., Farlam Hall, Brampton, second, and Mr. H. Smith, Keswick, third.

Mr. G. W. Musk scored for four vases, three blooms in each, of Japanese varieties, and he was followed in order by Mr. H. Smith and Mr. A. W. Appleton, in a keen competition. Mr. Musk was to the front for three white Japanese blooms, with grand specimens of Mrs. R. T. Miller, and he led for three flowers of a yellow variety with F. S. Vallis. For four vases and for two vases respectively of incurved varieties, Mr. Musk was all alone, and he showed large solid flowers. Mr. Musk continued his conquering way in the class for six vases of single varieties with beautiful bunches of Altrincham Yellow, Bronze Pagrom, Mary Anderson, etc.; Mr. T. Swan, gardener to H. A. Murton, Esq., Bertley Hall, Durham, second, and Mr. T. Percy, gardener to J. Readhead, Esq., Westoe Hall, South Shields, third. For decorative blooms six vases and as many varieties, Mr. O. Brown led the way, with Mr. Musk a very close second.

Other leading prize winners for cut flowers were Mr. Thomas Bell; Mr. J. Hall, gardener to Mrs. Hunter, The Grange, Whickham; Mr. J. Kew, gardener to Dr. Simpson, Bradley Hall, Wylam; Mr. J. Arken, gardener to the Right Hon. W. Runciman, Esq., M.P., Doxford; and Mr. R. Addison, Cresswell Hall Gardens, Morpeth.

PLANTS AND GROUPS.

Bush plants were largely shown, and were so fine that they constituted a feature of unusual interest. For four specimens in not fewer than two varieties Mr. W. Thompson, 39, Aston Street, South Shields, won first prize with wonderful specimens of Viviand Morel (2), J. B. Bryce, and Nellie Pockett. Second prize fell to Mr. Thomas Reay, Westoe Hall Gardens, South Shields, for Viviand Morel, Charles Davies, etc.

Mr. Thompson scored for three bush plants of Japanese varieties; Mr. J. Cooper, Westoe Parade, South Shields, was second, with Viviand Morel in good form, and Mr. C. Prince, Mortimer Road, South Shields, came third. The bushes of single varieties were also fine, and Mr. Frost, Gordon Street, won first prize. Mr. Thompson led for two pompon specimens, with huge examples, but all the entries in this class were crowded owing to lack of room; Mr. C. Prince second, and Mr. R. Frost third.

Premier award for a large miscellaneous group was won by Mr. Thomas Bell, gardener to A. E. Bambridge, Esq., Lynwood, Jesmond, with a pretty display, consisting of single and decorative chrysanthemums, palms, crotons, begonias, cattleyas, Cypripedium insigne Sanderæ, marantas, etc.; second prize fell to Mr. J. Hetherington, gardener to C. T. Kendall, Esq., Preston Hall, South Shields, whose begonias and chrysanthemums were the chief flowering plants.

FRUIT SHOW.

The fruit show section of the show was under the auspices of the North of England Horticultural Society, and the Rev. Bernard Hall, the secretary, lent his valuable aid here, and also, we believe, engineered the conference on educational matters and fruit culture. The competition was almost entirely confined to growers in the four northern counties, and in the class for a dozen dishes of hardy fruits the leading prize was a challenge cup presented by Mr. J. H. Straker, Howden Dene, Corbridge, and 20s. This was won by Mr. J. Cocker, Chester, with excellent dishes of Beurre Bosc, Beurre Diel (two dishes of wall fruits) pears, and Charles Ross, Peasgood's Nonsuch (two dishes), Blenheim Pippin, Lane's Prince Albert (two dishes), Emperor Alexander, Lord Derby, and King of Tomkin's County apples. Mr. H. E. Lloyd, St. Wilfred's Road, Hexham, came second, and his best dishes were of Warner's King, Allington Pippin, and Cox's Orange Pippin apples; third prize fell to Mr. J. M. Robson, gardener to C. A. Harrison, Esq., Beacon Grange, Hexham.

The Noss Cup for nine dishes of culinary apples and three dishes of dessert varieties brought out four competitors, the premier position being taken by W. Alexander, Esq., J.P., Long Close, Hexham, with good examples of Alfriston (two dishes), Royal Jubilee, Warner's King, Bismarck, Lord Derby, Newton Wonder, King of the Pippins, Worcester Pearmain, Lane's Prince Albert, Bramley's Seedling, and Cox's Orange Pippin; Mr. E. Tindale, gardener to Lord Ravensworth, Gateshead, was a capital second, and Mr. J. T. Stewart, gardener to Colonel Salfield, Holm Hill, Dalstone, third.

For six cooking and three dessert varieties of apples, the premier award was the Alexander cup, and this fell to W. Alexander, Esq., J.P., for capital dishes of Lord Derby, Ecklinville, Warner's King, Bismarck, Newton Wonder, Bramley's Seedling, Cox's Orange Pippin, King of the Pippins, and Worcester Pearmain; Mr. W. Lovett, gardener to A. B. Collingwood, Esq., Lilbrim Towers, Alnwick, a capital second; and Mr. H. Lambert, gardener to Earl Grey, Howick, Lesbsbury, third, with smaller, brightly coloured fruits; seven entries.

The unusual and magnificent prize of five guineas was offered for the best six dishes of culinary apples by Mr. N. Naylor; the second prize was 15s., and the third 10s. There were fourteen entries, and the big prize was won by W. Alexander, Esq., Long Close, Hexham, with fine specimens of Lord Derby, Warner's King, Bramley's Seedling, Alfriston, Bismarck, and Newton Wonder; Mr. G. Pattison came second, and Mr. Millican, Scotby Lane, Scotby, Carlisle, third.

In the single dish classes Mr. W. Alexander scored for Newton Wonder; Mr. H. Lloyd for Lane's Prince Albert; Mr. T. Simpson, Hepscott, for Peasgood's Nonsuch; Mr. J. T. Stewart for a locally-raised culinary apple with an unnamed dish. Mr. Alexander also scored for three dishes of culinary apples (first prize three guineas), with Lord Derby, Bramley's Seedling, and Warner's King; Mr. F. J. Sage, gardener to W. J. Sanderson, Esq., East Field Hall, Wartsworth, second; and Mr. J. Henderson, gardener to the Right Hon. Sir E. Grey, Falloden Hall, Northumberland, third; nineteen entries.

For dessert apples, three dishes, there were twenty entries, and Mr. W. Gentles, gardener to Sir H. D. Blackett, Bart., Malfen Hall, Corbridge, scored with Allington Pippin, Lamb Abbey Pearmain, and Cox's Orange Pippin; Mr. D. Millican, Scotby, second; and Mr. Alexander had to be content with third place. First prize for a dish of Bramley's Seedling was secured by Mr. T. Simpson, with a capital dish, from eleven competitors. Mr. J. T. Stewart had the best dish of King of the Pippins. Mr. E. Tindale led for two dishes of pears, wth Doyenne du Comice and Catillac; Mr. W. Smith second, and Mr. J. Snell, Close House, Wylam, third. Mr. W. Smith had the best dish of pears—Beurre Diel—and Mr. Simpson was second.

First prize for white grapes fell to Mr. Thos. Bell, gardener to A. E. Bainbridge, Esq., Lynwood, Jesmond, who had very finely coloured Muscat of Alexandria; Mr. W. Smith, gardener to the Earl of Durham, Lambton Castle, second with the same variety; and Mr. W. H. Stabler, gardener to E. Joicey, Esq., Whinney House, Low Fell, third with Golden Queen. Out of ten entries of black grapes, two bunches, Mr. W. Smith scored with Gros Colmar in first-rate condition; Mr. J. Hetherington, gardener to C. T. Kendall, Esq., Preston Hall, North Shields, second, with Alicante; and Mr. O. Brown, gardener to Mrs. N. J. Robinson, Preston Towers, North Shields, third.

A capital bunch of bananas (Musa Cavendishi) was exhibited by Mr. Edward Keith, gardener to Sir G. O. Trevelyan, Bart., Wallington, Morpeth; it was a grandly-grown bunch, and, shown with its stem and leaves, it made a very attractive item.

NON-COMPETITIVE.

No show of any pretensions is complete nowadays without its complement of non-competitive exhibits. At Newcastle the trade showed well, although limits of space necessarily rather cramped their efforts.

Mr. W. Lawenson, Yarm-on-Tees, contributed an attractive exhibit of chrysanthemums, heaths, bouvardias, begonias, cyclamens, etc., attractively disposed with ferns and palms. Messrs. Michie and Co., Alnwick, had a most interesting collection of apples collected from various parts of Northumberland, Durham, and Yorkshire, and the dishes of Newton Wonder, Bramley's Seedling, Gloira Mundi, Mere de Menage, Catshead, Lady Henniker, Warner's King, King of the Pippins, and Peasgood's Nonsuch were splendid, and gave evidence of what the northern counties can do.

Messrs. Dicksons, Chester, contributed a bank of chrysanthemums, and the single yellow Mrs. Henry Perkins, largely shown, was the chief attractiont. A particularly fine exhibit from Messrs. Kent and Brydon, Darlington, included grand sheaves of Lilium longiflorum, L. speciosum, and L. auratum alternating with stands of decorative chrysanthemums, and with a foreground of perpetual carnations, lily of the valley, and apples. Messrs. Clibran, Altrincham, presented an attractive exhibit of finely-grown vegetables.

Wm. Fell and Co., Hexham, made up a very interesting exhibit of northern-grown apples, together with choice ferns, and a selection of perpetual carnations. Messrs. Joseph Robson and Son, Hexham, presented dwarf evergreen shrubs, and a collection of apples. Messrs. Stuart and Mein (now incorporated with Messrs. Laing and Mather), Kelso, showed a goodly set of apples and seed potatoes.

From the experimental grounds, Northumberland, came a considerable collection of apples, the fruits bright and clean but somewhat small. Spraying machines and syringes from the Four Oaks Company, Birmingham, attracted a great deal of attention, as also did the Jeyes' insecticides. Other exhibitors who contributed to the interest or attractiveness of the show were Messrs. W. J. Watson, Lim., Newcastle; Messrs. Finney, Newcastle; Mr. J. H. Evans, Newcastle; Mr. W. R. Armstrong, Newcastle; Messrs. W. F. Bamshaw and Co., Sunderland, etc.

MEDALS.

Gold.—To Messrs. Clibrans, Altrincham; and Messrs. Kent and Brydon, Darlington.

Large Silver-gilt.—Messrs. W. Finney and Co., Newcastle; Mr. W. Laweasen, Yarm-on-Tees; Messrs. Laing and Mather, Kelso.

Silver Gilt.—To Messrs. Miche and Co., Alnwick; and Mr. Musk, gardener to Captain G. F. Laycock, Wiseton, Bawtry, Notts.

Large Silver.—To Mr. H. Evans, Newcastle; Messrs. W. Fell and Co., Hexham; Messrs. Mack and Miln, Darlington.

Silver.—The Four Oaks Company, Sutton Coldfield; Messrs. Ramshaw and Co., Sunderland; Messrs. J. Robson and Son, Hexham; Messrs. W. J. Watson, Lim., Newcastle; Mr. Chisholme, for the Northumberland Experimental Farm.

Large Bronze.—To Mr. W. R. Armstrong, Newcastle; Messrs. Dicksons, Lim., Chester; Messrs. H. Walker and Son, Newcastle.

Bronze.—Messrs. Porteous and Thomson, Hexham.

Highly Commended.—Messrs. W. Cooper and Nephew, Berkamsted; Jeyes' Sanitary Compound Company, London; Messrs. A. McLauchlin and Co., Stranraer; Messrs. W. Voss and Co., Millwall, London.

The foregoing awards were all granted by the North of England Horticultural Society.

VEGETABLES.

Some marvellous leeks were shown, chiefly by the Tyneside colliers, and their carrots, parsnips, and celery. For a collection of vegetables Mr. R. Shield, Waterside Cottage, Swalwell, was first with fine produce a trifle on the long side.

Bournemouth Gardeners' Association.

A very interesting lecture was given by Mr. Harris, of Osborne House, Bournemouth, before the members of the above association at the last fortnightly meeting. His subject was: "Will the French Intensive Culture System become Popular in England?" From the first the lecturer took the negative view, but at the same time he very ably and fairly reviewed the system as followed in France, and said that cultivators there had got used to it, as son had followed father for generations. We, in this country had plenty of coal, and so made use of heating apparatus to a large extent, while in France coal was scarce, but straw being cheap and plentiful, there was ample material for making hotbeds. Straw in England was not plentiful, and consequently it was dear and not obtainable in large quantities for hotbeds. In France cultivators relied chiefly upon cloches and hotbeds, whereas we used hothouses and hotwater apparatuses and grew grapes and more expensive kinds of fruits and fewer vegetables and salads in a forced condition than did our neighbours across the channel.

At the close of the lecture a very good discussion took place amongst the members, and Mr. Harris replied to some questions. It was generally felt by the members that, in this country, the French system would only be followed as a supplement to our spring forcing by hot water in private gardens, and that such a system had been practised for generations. When first boomed a few years ago, many inexperienced persons took it up, and, in nearly all cases, with disastrous results.

Mr. C. Nippard, gardener to J. J. Norton, Esq., staged some lovely dessert apples, and a fine Begonia Turnford Hall. Mr. C. Pearce had a nice display of cut chrysanthemums. Both the lecturer and Mr. E. G. Cox, the chairman, received hearty votes of thanks.

THE GREAT WINTER SHOW
will be held in
THE ROYAL BOTANIC GARDENS.
on
DECEMBER 5 and 6, 1911.
Admission 1s.
Schedules and particulars from
E. F. HAWES,
Imperial School of British Horticulture, West Hampstead, N.W.

Royal Horticultural Society.

Not only was there a large and brilliant display of plants and flowers at the Royal Horticultural Hall, on Tuesday, November 21, but practically every inch of available space was occupied. The attendance was large during the afternoon. Chrysanthemus, orchids, and winter-flowering begonias, ferns, carnations, and apples were the chief features of the meeting. The Orchid Committed granted no fewer than five First Class Certificates and three Awards of Merit, while the Floral Committee granted eleven Awards of Merit, and the Fruit Committee one Award of Merit.

FLORAL COMMITTEE.

Mr. H. J. Jones, Ryecroft Nursery, Lewisham, filled the end of the hall with a splendid exhibit of chrysanthemums set up in big stands or large vases of a variety. It was a great effort, and carried out with that artistic skill one associates with the Ryecroft displays. Autumn-coloured foliage, crotons, palms, and ferns were all freely used with and among the flowers. Notable Japanese varieties staged were Frances Joliffe, Mrs. F. S. Vallis, Ada Hutchingham, Glaucus, Ernest G. Mocatta, Mrs. R. H. B. Marsham, Mary Hollert, Mrs. A. E. Roope, and Mdme. Magne. Decorative, single and incurved varieties were also freely staged.

A large and interesting display of single chrysanthemums, from Mr. Edwin Beckett, gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree, was a great attraction; there were about seventy large bunches, well set up on a long table, and these represented about seventy varieties. A few of special attractiveness were Mary Richardson, R. C. Pulling, Charles Kingsley, Acme, Mary Anderson, Scarlet Gem, Mensa, Metta, Miss Mary Pope, Wordsworth, Mrs. R. M. Parkinson, and Canopas.

A whole table was filled by Messrs. H. B. May and Sons, Edmonton, with a grand collection of over eighty species and varieties of davallias. There were several dozen huge specimen plants of these fine ferns, besides a large number of small plants. Prominent among the sorts displayed we noticed D. figiensis plumosus, D. tennifolia Veitchi, D. elegans, D. dissecta, D. polyantha, D. Mooreana, D. pentaphylla, etc. The plants were all beautifully grown, and well merited the high award granted.

The chrysanthemums from Mr. W. J. Godfrey, Exmouth, included a very useful anemone-flowered variety named Godfrey's Perfection; this is white, very free flowering, long keeping, and altogether an excellent decorative sort; Godfrey's Crimson, and Sir Frederick, a ruby-crimson single, were other prominent varieties from Exmouth. Mr. Vincent Slade, Taunton, made a bright show with single and semi-double zonal pelargoniums. Mrs. V. Slade and the double Paul Crampel were notably good.

A good exhibit of chrysanthemums, finely set up by Messrs. W. Wells and Co., Merstham, commanded attention and admiration. Great masses of big blooms were grouped in stands, and beautiful singles and decorative sorts were arranged tastefully in vases. In the centre there were several dozen flowers of the splendid white Japanese variety Mrs. Gilbert Drabble, with the beautiful Wm. Turner in close association; baskets and stands of Mrs. W. Higgs, Mensa, Metta, Ceddie White, Josephine, and Ceddie Mason, all good singles, made good flanking parties, while Mrs. W. H. Reid, Miss A. Brooker, Jack, Chas. Dickens, Caledonia, R. F. Felton, and Lady Carmichael were other specially fine varieties. Palms, ferns, crotons, etc., were pleasingly associated with the fine flowers to produce a splendid effect.

Mr. Jas. Box, Lindfield, contributed a group of single chrysanthemums, and Messrs. Jas. Veitch and Sons, Chelsea, presented a large bank of these useful flowers, together with a few decorative and big show blooms.

A large table of winter-flowering begonias from Mr. A. Allan, gardener to Lord Hillingdon, Hillingdon Court, Uxbridge, demonstrated the usefulness of this section. Mr. Allan showed fully a hundred very large finely-flowered examples of such fine varieties as Ensign, Julius, Mrs. Heal, Gloire de Lorraine, Mrs. L. de Rothschild, Turnford Hall.

Mr. W. H. Page, Tangley Nursery, Hampton, showed a beautiful mauve-pink decorative chrysanthemum named Thomas Page (A.M.), a splendid ruby-crimson single variety named Mrs. Walter Hemus (A.M.), and the fine zonal pelargoniums Winter Cheer, His Majesty, and Fiscal Reformer.

Messrs. H. Cannell and Sons, Swanley, presented a sloping bank of brilliant zonal pelargoniums, and a big collection of cut single chrysanthemums; among the latter Merstham Jewel, Cannell's King, Leo, Yellow King, Mensa, Sylvia Slade, and Mrs. J. Rowley were outstanding varieties. From the Manor House Nurseries, Cardiff, came a selection of single chrysanthemums that included most of the popular sorts.

The large contribution from Messrs. Wm. Cutbush and Son, Highgate, included a fine selection of handsome perpetual carnations, greenhouse heaths, winter-flowering begonias, skimmias, and polyantha roses in pots.

Seedling chrysanthemums, all single varieties, or nearly so, made up an interesting group from Messrs. Sutton and Sons, Reading; these were of great interest because of their decorative value and the fact that all had been raised from seeds sown in February of the present year.

Messrs. Whitelegg and Page, Chislehurst, and Mr. J. Clayton, Newham Road, Addlestone, each showed a good selection of single chrysanthemums. Messrs. J. Peed and Son, Norwood, were also large exhibitors of single and decorative chrysanthemums, and Mr. A. R. Russell, Richmond, displayed begonias and the showy new Gesnera Orange King.

Golden Spray, a rich yellow form of the well-known Source d'Or chrysanthemum, was displayed in large bunches by Mr. G. I. Tubbs, New Eltham, Kent.

The carnations exhibited by Mr. Burnett, Guernsey, were specially fine, particularly the vases of Britannia, White Enchantress, Mikado, May Day, Marmion, and the beautiful pink Mrs. H. Burnett.

Messrs. Allwood Brothers, Hayward's Heath, contributed a small group of carnations, wherein May Day, Fortuna, White Wonder, and Marmion were very good.

Messrs. Jas. Veitch and Sons' exhibit of winter-flowering begonias and bouvardias was a very pretty one, and the numerous varieties of the latter were interesting and instructive, as well as beautiful. Of the begonias the new orange-buff Fascination (A.M.), Rose Queen, deep rose-pink, and the older varieties Julius, Success, Mrs. Heal, and Ensign were extremely beautiful, the large plants being literally smothered with flowers.

Perpetual carnations were extensively displayed by Messrs. S. Low and Co., Enfield, who showed a rare lot of blooms of Lady Alington, Enchantress, White Enchantress, Rose Pink Enchantress, and other good varieties.

ORCHID COMMITTEE.

A very interesting group of cypripediums from Messrs. Cypher and Sons, Cheltenham, included such good things as C. insigne Harefield Hall, C. Milo, C. Germaine Opoix, C. Felicity, C. Sir Redvers Buller (very fine), C. insigne Sanderæ, C. Mdme. Jules Hye, etc.

Mr. W. R. Lee, Plumpton Hall, Heywood, sent a large-flowered, heavily blotched odontoglossum named O. Thais (F.C.C.), and also a beautiful hybrid named Trione (F.C.C.).

Mr. Alexander, orchid grower to Lieut.-Colonel Sir G. Holford, Westonbirt, brought up Cypripedium Chapmani Westonbirt var. (F.C.C.), Cattleya Harrisoniana alba Stanley's var., Lælio-cattleya Prince of Orange (F.C.C.), beautifully coloured gold and crimson, and Brasso-cattleya Digbyano-Mossiæ Holford's var. (F.C.C.), a magnificent form.

Mr. Hopkins, gardener to Francis Wellesley, Esq., Westfield, Woking, brought Lælio-cattleya Dengani (A.M.), a handsome hybrid between C. Dowiana and L.-c. Coppei, and Cattleya labiata Her Majesty the Queen.

Messrs. Mansell and Hatcher, Rawdon, contributed a specimen of Angræcum Wotschyi, with two long spikes of white, long-spurred flowers.

Messrs. Sander and Sons, St. Albans, put up a handsome bank of orchids, and here the leading features were Cattleya Fabia, a fine autumn bloomer, Lælio-cattleya Sapphirata, a C. maxima hybrid, L.-c. Stotteviana, the old and sweet-scented Maxillaria peta, Cypripedium Baron Schroder, C. triumphans Hye's var., C. Alabaster, and C. Thalia splendens.

The exhibit from Messrs. Charlesworth and Co., Hayward's Heath, was especially attractive by reason of its big batch of the brilliant Epidendrum vitellinum majus, Vanda cærulea, V. Sanderiana, and a few hybrid odontoglossums and odontiodas.

Messrs. W. B. Hartland and Sons, Ardcairn, Cork, presented quite a batch of the big Cypripedium insigne Harefield Hall, showing about a dozen and a-half flowers; with these were C. Thalia, Mrs. Wellesley, C. Maudiæ, C. insigne Sanderæ, etc.

Mr. Day, gardener to H. S. Goodson, Esq., West Hill, Putney, put up an interesting lot of orchids, and in the group the charming Cypripedium insigne Sanderæ was very largely represented, nearly a hundred blooms being presented. Other good things were C. Maudiæ, Lælio-cattleya Decia, L.-c. Felicia Goodson's var., Odontioda Devoniana, and Odontoglossum Wilckeanum, Goodson's var.

A large and beautiful exhibit of orchids came from Mr. G. Hunter, gardener to the Duke of Marlborough, Blenheim Palace, Woodstock. It consisted very largely of Vanda cœrulea and Cypripedium insigne Sanderæ, grouped in masses with ferns and green moss. One specimen of C. insigne Sanderæ carried about three dozen flowers.

Some fine odontoglossums from Messrs. J. and A. McBean, Cooksbridge, were associated with fine forms of Cattleya Fabia, Brasso-cattleya leucophæa (A.M.), Cypripedium Thalia var. Mrs. Wellesley, C. triumphans Bank House var., etc.

Cattleya Clarkiæ was prominently shown by Messrs. Hassall and Co., Southgate; Bulbophyllum sicybulbon was a notably interesting species on view.

Mr. E. V. Low, Vale Bridge, Haywards Heath, had Cypripedium Thalia gigantea, C. Germaine Opoix, C. Thalia Mrs. Wellesley, Cattleya Hardyana, and Odontoglossum grande aureum, etc.

From Sir Trevor Lawrence's collection at Burford Lodge, Dorking, came large plants of Maxillaria picta, M. phœnieantha, and Trichosma suavis, for which Cultural Commendations were awarded to Mr. W. H. White, the grower.

Calanthe Harrisi, pure white, was represented by about fifteen plants and thirty spikes, from Messrs. Jas. Veitch and Sons, Chelsea.

The orchids from Messrs. S. Low and Co., Enfield, again included a number of oncidiums, together with Dendrobium Phalænopsis Schroderianum, D. formosum giganteum, and numerous bright cattleyas and lælio-cattleyas.

A beautiful but light variety of Lælio-cattleya Henry Greenwood was exhibited by Mr. Musk, gardener to Captain Laycock, Wiseton, Bawtry.

FRUIT COMMITTEE.

Mr. W. Pope, Welford Park Gardens, Newbury, showed a collection of seedling apples, all varieties raised by Mr. Chas. Ross. Some very promising varieties were those named Excelsior, Redwing, Ella, Guelph, and Chas. Eyre, with such well-known sorts as Paroquet, Chas. Ross, Rival, and Encore.

Mr. E. Beckett brought up a goodly set of apples from Aldenham House, Elstree, and set up the fruits in good style. Varieties of special prominence among the seventy or more varieties were Mere de Menage, Peasgood's Nonsuch, Beauty of Kent, Tower of Glamis, Bismarck, Hambledon Deux Ans, King of the Pippins, Bramley's Seedling, Lane's Prince Albert, and The Queen. Most of the varieties were very highly coloured.

Mr. Tyser, Oakfield, Mortimer, showed some dishes of highly-coloured apples, and Mr. A. Allan, gardener to Lord Hillingdon, Uxbridge, contributed a few dishes of well-developed pears.

A most interesting exhibit of fruits and vegetables, bottled in glass-stoppered bottles, was made by Mrs. Banks, 102, Park Lane, W. There were 124 varieties of fruits on view, and every sample was beautifully bright and clear. The vegetables, too, were unusually well done, especially the butter beans, celery, asparagus, peas, and broad beans. It was a splendid exhibit of what an amateur may do.

CERTIFICATES AND AWARDS.

First-Class Certificate.—To Lælio-cattleya Prince of Orange; to Brasso-cattleya Digbyano-Mossiæ Holford's var.; and to Cypripedium Chapmani Westonbirt var., all from Lieut.-Colonel Sir George Holford (grower, Mr. H. Alexander), Westonbirt, Tetbury; to Odontoglossum Thais, and O. Trione, from Mr. W. R. Lee, Plumpton Hall, Heywood.

Award of Merit.—To Lælio-cattleya Dengani, from Francis Wellesley, Esq. (gardener, Mr. W. Hopkins), Westfield, Woking; to Cypripedium Elatior Shrubbery var., from F. M. Ogilvie, Esq., The Shrubbery, Oxford; to Lælio-cattleya W. J Biggs, from Mr. W. J. Biggs, Browning Road, Enfield; to Cæsalpinia pulcherrima, from G. Evans, Esq., Baldock; to Begonia Fascination, from Messrs. Jas. Veitch and Sons, Chelsea; to Chrysanthemum Mrs. Walter Hemus and Thos. Page, from Mr. W. H. Page, Tangley Nurseries, Hampton; to Chrysanthemums Josephine and Marjorie Lloyd, from Messrs. W. Wells and Co., Merstham; to Chrysanthemum Primrose Girl, from Messrs. Jas. Veitch and Sons, Chelsea; to Chrysanthemum Norbury Yellow, from Mr. G. Kent, Norbury Park, Dorking; to Chrysanthemum Perfection, from Mr. W. J. Godfrey, Exmouth; and to Chrysanthemums Miss Margaret Gray and Miss Phyllis Bryant, from Mr. P. Ladds, Swanley.

MEDALS.

Gold.—To the Duke of Marlborough (gardener, Mr. Hunter), Blenheim, for orchids.

Silver-Gilt Knightian.—To Mr. E. Beckett, V.M.H., gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree, for apples, etc.

Silver-Gilt Flora.—To Messrs. H. B. May and Sons, Edmonton, for davallias; to Messrs. H. J. Jones, Lewisham, for chrysanthemums; to Messrs. W. Wells and Co., Merstham, for chrysanthemums.

Silver-Gilt Banksian.—To Mr. A. Allan, gardener to Lord Hillingdon, Uxbridge, for winter-flowering begonias.

Silver Knightian. — To Mrs. Banks, 102, Park Lane, W., for bottled fruits and vegetables.

Silver Flora.—To Messrs. J. Peed and Son, West Norwood, for chrysanthemums; to Messrs. J. Veitch and Sons, Chelsea, for chrysanthemums, etc.; to Mr. Day, gardener to H. S. Goodson, Esq., Putney, for orchids; to Messrs. Sander and Sons, St. Albans, for orchids; to Messrs. Charlesworth and Co., Haywards Heath, for orchids; to Messrs. J. Cypher and Sons, Cheltenham, for cypripediums.

Silver Banksian.—To Mr. Jas. Box, Lindfield, for chrysanthemums; to Mr. H. Burnett, Guernsey, for carnations; to Messrs. S. Low and Co., Enfield, one for carnations and one for orchids; to Mr. P. Ladds, Swanley Junction, for chrysanthemums; to Mr. E. V. Low, Haywards Heath, for orchids; to Messrs. W. B. Hartland and Co., Cork, for orchids.

Bronze Flora.—To Mr. L. R. Russell, Richmond, for begonias and gesneras; to Messrs. H. Cannell and Sons, Swanley, for chrysanthemums and pelargoniums; and to Messrs. Hassall and Co., Southgate, for orchids.

West of England Chrysanthemum Society.

This society has now held exhibitions at Plymouth for a period of twenty years, and this season opened its annual show in the Guildhall on November 7. The display was a meritorious one, the exhibits being of high class, and the competition very keen. Mrs. Astor, the wife of the senior member of Parliament for Plymouth, opened the show.

The cut blooms, though not so numerous as in former years, were of high quality, and the specimen plants were excellently grown. The display of fruit was by far the largest ever staged in the hall, the quality was first-rate, and the colouring superb. Greenhouse plants were also well shown. One of the most attractive features of the exhibition was a beautiful table of salading, with which Mrs. Bainbridge won first prize. This exhibit was most artistically arranged; at the back two tall columns held a wealth of huge scarlet and yellow capsicums which made a brilliant show, while in the centre stood pyramids of mustard and cress. In all about forty varieties of salading were staged, these including chicory, asparagus chicory, variegated chicory, Batavian and moss-curled endive, chilis, large and small yellow currant tomatoes, English corn salad, Italian corn salad, radishes in many varieties, cucumbers, beetroots, dandelion, Japanese cabbage, cos lettuce, ceriac, Australian cress, American cress, celery, tarragon, watercress, and coriander.

A good group of miscellaneous stove and greenhouse plants won first prize for Messrs. J. Webber and Sons, the stand containing orchids of many kinds, Lilium longiflorum, carnations, crotons, palms, ericas, Begonia Gloire de Lorraine, cyclamen, and chrysanthemums. The first prize for a collection of twenty-four dishes of fruit, won by Mr. F. R. Rodd, was well deserved, excellent specimens of Canon Hall, Muscat of Alexandria, Appley Towers, and Gros Maroc grapes being staged, besides ten dishes of apples, seven dishes of pears, quinces, tomatoes, meddlars, and Melon Ringleader. A curiosity which attracted considerable attention consisted of ripe raspberries, shown by Messrs. Mears and Sons. Raspberries have in some districts been fruiting more or less continuously since the spring. Colonel the Hon. H. F. Trefusis, of Porthgwidden, Cornwall, received an Award of Merit for a collection of nine vases of violets in seven varieties, grown in the open.

The following is a list of first prize awards: Twenty-four Japanese blooms, the Rev. T. Sheepshanks. His stand contained fine specimens of Beecham Keeling, J. W. Molyneux (maroon-red), Madame G. Rivol (yellow), J. H. Silsbury, Frances Joliffe, Master David, F. S. Vallis, and Shanklin. Twelve Japanese blooms, the Rev. T. Sheepshanks; eighteen Japanese blooms in vases, the Rev. T. Sheepshanks; twelve vases of single varieties, Messrs. J. Webber and Sons; three vases of singles, whites, the Rev. T. Sheepshanks; three vases of singles, yellow, the Rev. T. Sheepshanks; three vases of singles, not white or yellow, Rev. T. Sheepshanks; miscellaneous group of stove and greenhouse plants, Messrs. J. Webber and Sons; four epecimen Japanese plants, Mr. E. Hannaford; one specimen, white, Mr. W. T. Ellis; one specimen, not white, Mr. C. Hannaford; six primulas, Mr. C. Bewes; six zonal pelargoniums, Sir John Jackson; six begonias, Gloire de Lorraine, Sir R. Pole-Carew; six table plants, Mrs. Bainbridge. In the local class for cut blooms the three chief prizes were won by Lady Buller. There were also classes for cottagers and artizans, but nothing of any special merit was shown. There were about thirty classes for fruit, in which the majority of first prizes were won by Mr. F. R. Rodd and Mr. H. St. Maur. Vegetables were very finely shown, Colonel Gore winning most of the first prizes.

The attractions of the show were much enhanced by the exhibits of nurserymen. Messrs. Robert Veitch and Son, Exeter, showed a pretty collection of new single chrysanthemums, amongst which were Mrs. T. Lawrence, Exonia, Jean Edwards, Florrie Stevens, Miss Lilian Bullivant, W. Jarman, Snowflake, Ceddie Mason, Manor House Beauty. A fine collection of winter-flowering carnations was also shown, and among other plants were Gerbera Jamesoni, Physalis Franchetti, Acacia Baileyana, Veronica Veitchi, Clerodendron trichotomum (in fruit), Cotoneaster augustifolia, Liquidambar styraciflua, and Crytomeria elegans. A silver medal was awarded this stand. The King's Acre Nurseries, Hereford, staged nearly two hundred varieties of apples, and were awarded a gold medal. The fruit, though not large, was well coloured. The Devon Rosery, Torquay, showed a splendid selection of fruit, the apples especially large, and received a silver medal. Messrs. Webber and Sons, Plymouth, showed a very large stand of perpetual-flowering carnations, for which they were awarded the society's Certificate of Merit.

Norfolk and Norwich Chrysanthemum Show.

This annual fixture, held under the auspices of the Norfolk and Norwich Horticultural Society—one of the oldest in the kingdom—was held at the St. Andrew's Hall, Norwich, on November 16, 17, and 18. This year the show could be summed up as a great success in all departments. The classes for Japanese blooms have not for many years had so many entries, nor such fine flowers. And the fruit classes were striking evidence of the past exceptional year for apples and pears. The secretarial duties are again in the able hands of Mr. C. E. Pilling.

The challenge cup for the best circular group was secured by E. Gurney Buxton, Esq. (gardener, Mr. T. Notley), who had not used any large, heavy blooms, but had used a graceful combination of singles, mostly with artistic effect. Sir Carl Meyer, Newport, Essex, was the winner of the first prize for forty-eight Japanese, and also for twelve incurved, and he had the distinction of winning both medals for best Japanese and for best incurved. Sir R. P. Beauchamp, Bart., Langley Park, scored top place in a strong class for thirty-six Japanese blooms. The first for twenty-four blooms was won by Mr. J. W. Brooke, Lowestoft. There were several smaller classes, the prizes being won by prominent local chrysanthemum growers. The best half-dozen of one white Japanese variety came from S. Newmann, Esq., who had Mrs. R. H. B. Marsham; and the best of any other colour was from Sir Saville Crossley, Bart. (gardener, Mr. F. Hanson), who staged six grand Mr. F. S. Vallis. The best six incurves were shown by Colonel Rous Worstead (gardener, Mr. W. Chettleburgh, who had Miss Cora Stoop.

Single and naturally grown decorative varieties are gaining great favour, and were the source of keen competition, G. E. White, Esq., Eaton, Norwich (gardener, Mr. W. Laws), taking first place in both classes. Baskets and hall vases appealed to the lady visitors for their artistic arrangement. Chrysanthemums in pots were not a great success. In the miscellaneous cut flower class, first honours went to Robt. Fellowes, Esq., Shotesham Park (gardener, Mr. Lewis Smith), for a dozen fine bunches of exotics, wherein orchids predominated. A class for a group of cut carnations upon a six foot run of tabling brought out three good entries. The Hon. C. Harbord, Gunton Park (gardener, Mr. W. Allan), was placed first; his blooms were very choice, and the arrangement good. Mr. W. Laws, gardener to G. E. White, Esq., had the newest varieties, and very bold flowers, but his arrangement was too heavy.

In the pot plant section, begonias of the Gloire de Lorraine type were the primary feature; extra good plants were staged by Edmund Reeve, Esq., The Grange, Catton (gardener, Mr. E. F. Greeve), who was placed first for pinks; and he very closely ran Dr. Osburne, who was first for white varieties. Miss Violet Fellowes, Shotesham Park, had it all her own way with orchids, and one was sorry that such was so, for these plants would have held their own, we think, in any local orchid competition. J. H. Gurney, Esq., Keswick Hall (gardener, Mr. F. J. Endersly), was winner for cyclamens with well-grown plants, carrying a profusion of flowers.

In the fruit section the judges had a tedious task, dozens of dishes of apples being entered in each class. Sir Saville Crossley, Bart., had the best nine dishes of dessert apples, and Colonel B. J. Petre, Westwick House (gardener, Mr. G. Davison), the best six. Mr. W. Allan's dish of Cox's Orange Pippin was placed first out of a dozen competitors. Pears were not so numerous, but of exceptional quality, the chief winner in all the classes being Colonel B. J. Petre, Mr. Geo. Davison, the gardener, being unbeatable in pear culture. Grapes were better than they have been for several years. The best three bunches of black came from Lord de Ramsey, Haverland (gardener, Mr. A. Coombe). The variety was Alicante, and of such a fine colour and shape of bunch, that they appealed to every visitor. The best single bunch was Gros Colmar, from the Marquis of Lothian, Blickling (gardener, Mr. H. G. Oclés); they were exceptionally well finished and coloured for this variety. White grapes brought out a strong fight between A. B. H. Goldschmidt, Esq., and Mr. W. Allan, the former winning for three bunches, and Mr. Allan for a single bunch. The best collection of fruit for a challenge bowl was won by Sir F. Adair, Bart., Flixton Hall (gardener, Mr. W. Hilson); his pears and grapes were beautiful, but he rather overdid the arrangement. The Earl of Stradbroke, Henham Hall (gardener, Mr. Simpson), had the best lot of kitchen apples, very fine fruits indeed, and he was also a notable winner in the potato classes.

All kinds of seasonable vegetables were shown in plenty, and when one considers the past dry season, and mostly light soils locally, it is a matter of much congratulation to the local growers.

The trade made a bold display. Messrs. Daniels Bros., Lim., Norwich, made a great feature of apples and pears, and also pot plants for decorative uses. Messrs. Hobbies, Lim., Dereham, made a feature of single chrysanthemums, staged in undulating banks of bold masses; nor did they forget that roses were still in bloom. Mr. G. W. Miller, Wisbech, had a nice lot of orchids. A new large culinary apple, named Norfolk Hero, was shown by Messrs. J. Rutter and Son, Outwell, Wisbech, who claim it to be a good keeping sort. There were a few other smaller exhibits from sundriesmen, etc., each helping to make a success of the show. We are pleased to be able to report that public interest was awakened, and that the "gate" showed an increase over last year.

National Vegetable Society.

There was a quite small attendance at the annual general meeting of this society, held at the Royal Horticultural Hall, Westminster, during the afternoon of Tuesday, November 21. Mr. Alex. Dean, V.M.H., presided.

The balance-sheet for the past year shows a turnover of £292 18s. 11d., and a balance in hand of £24 6s. 5d.

In the annual report, "the committee desire to express their great satisfaction with the annual exhibition, held in the Horticultural Hall, Westminster, on August 30 last. In spite of an unusually hot dry season, which was very detrimental to vegetables, the exhibits, though less in quantity than were those of the previous season, were of excellent quality, and showed how admirably the British grower can surmount adverse conditions.

"Whilst giving all praise to the numerous exhibitors, too hearty thanks cannot be given to all those noblemen, gentlemen, and seedsmen, who offered such valuable prizes, and thus attracted competitors from all parts of the kingdom.

"During the year extensive trials of early peas, carrots, Globe and long beets, and cauliflowers were conducted at the Times Experimental Station, Sutton Green, Surrey, under the care of Mr. H. Foster, son of the lamented Mr. Chas. Foster, the previous superintendent, whose loss to the society, and to horticulture generally, the committee cannot too sincerely deplore. Generally, and in spite of great heat and drought, the trials of peas, carrots, and beets were very satisfactory, whilst those of cauliflowers unfortunately failed, because of the great drought. For the privilege of holding the trials at Sutton Green, the committee tender to Lord Northcliffe very grateful thanks. A further and smaller trials of beets was conducted on Middlesex loam, at Marsh Farm, Twickenham, through the kindness of Mr. W. Poupart.

"The committee have great pleasure in reporting that within a few weeks of the holding of the National Exhibition, all prizes awarded were paid by cheque, and all accounts were settled, this leaving in hand a satisfactory balance.

"The committee desire to commend to the members the great and efficient services rendered to the society by the hon. secretary, Mr. E. G. Quick, whose labours have been of the highest value, and therefore strongly recommend that he be awarded an honorarium of ten guineas from the balance in hand. The committee would at the same time tender to their hon. treasurer, Mr. G. Wythes, V.M.H., their hearty thanks, not only for his very valued services as such, but also for his labours in securing from so many seedsmen seeds for trials, and sending them, under numbers only, to the respective trial grounds. So far as trials for the coming year are concerned, already extensive ones of lettuces and winter onions have been sown, both at Sutton Green, and at Twickenham the replies received from the numerous seedsmen sending such seeds showing not only great willingness, but also a degree of confidence in the honour, integrity, and practical capacity of the committee, which cannot be too highly appreciated, and merits warmest thanks. Not only are special thanks due to Mr. H. Foster, and to Mr. W. Poupart, but also to Mrs. Foster and Mrs. Poupart for their most welcome, abundant, and generous hospitality.

"The committee, having been urged to change the place of the exhibition from London to some more rural locality each year, have had before them a proposal to hold it during the autumn of the year 1912 at the very important and populous Herefordshire town of Watford. It is but a few miles from Euston, has a very capacious hall, which would afford ample room for a great exhibition, has a public-spirited population, and is not least a great gardening as well as an agricultural centre, hence it seems to present many advantages which merited full consideration. The committee have therefore decided to hold the next annual exhibition in the Clarendon Hall, Watford, on Wednesday, October 2, 1912.

"The need for largely increasing the membership of the society is great, and as vegetable culture is now so widespread, there should be every effort made by present members to bring in new ones. When mere flower societies can count members by thousands, the wide culture of such important food products as vegetables should bring equal members into the ranks of the National Vegetable Society."

The report and balance-sheet were adopted on the motion of the Chairman. The Duke of Portland was re-elected president; Mr. H. J. Wright becomes treasurer, in place of Mr. G. Wythes, who retired from the position; Mr. E. G. Quick continues as secretary, with Mr. A. Dean and Mr. Owen Thomas again chairman and vice-chairman respectively. To fill vacancies arising on the committee, Messrs. W. Gager, C. Burgess, Waterton, and G. Wythes were elected. Messrs. R. Pinches and W. R. Wilson were re-elected auditors.

On the motion of Mr. C. H. Curtis, seconded by Mr. Metcalf, a vote of thanks was accorded all the officers and committee of the society for their services during the year just ended, and this concluded the proceedings.

Cardiff.

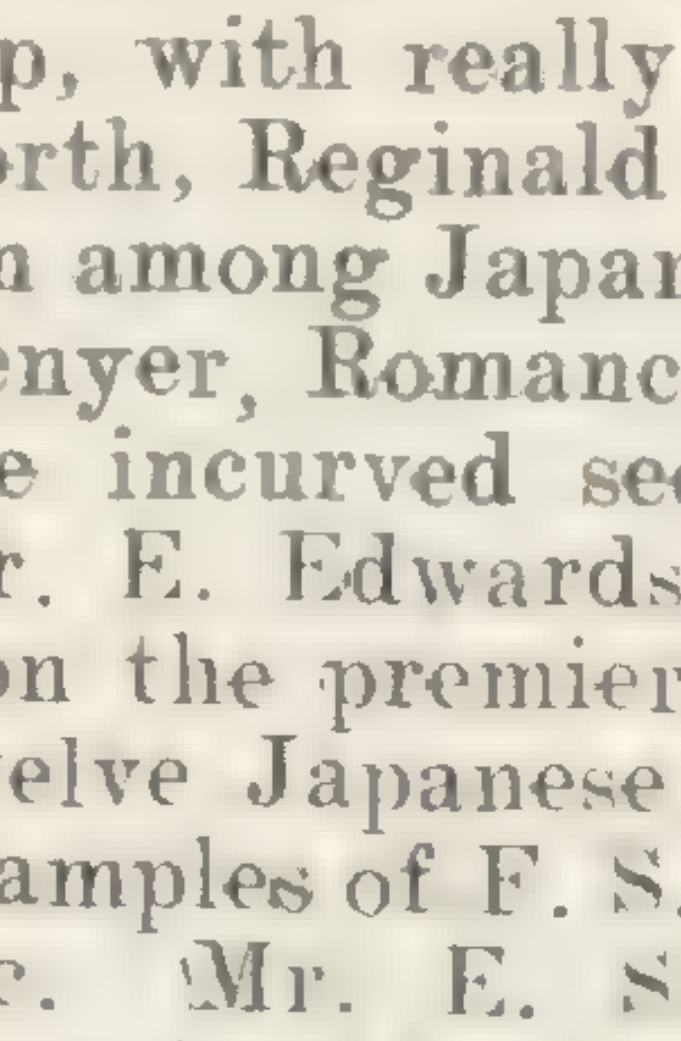
In the Park Hall—a capital site—the annual autumn show was held on November 8. The entries were not quite so numerous as usual in some of the cut bloom classes, but the quality left little to be desired; the absence of Mr. W. G. Drake, who has for so many years now exhibited so strongly and well at this and other shows, was very noticeable. Groups of chrysanthemums and floral designs were thoroughly well represented. Cottagers here show chrysanthemums remarkably well, and this year was no exception. The secretary, Mr. Mountney, worked hard, as usual, to make the show one of the finest in the West.

CUT BLOOMS.

The leading cut flower class was for eight varieties, Japanese, three blooms of each, arranged in vases, and a challenge cup with a cash prize was the chief inducement. Three competed, the best set coming from Mr. J. Duff, gardener to F. S. Williams, Esq., Bryn Glas, Newport, who was an easy first with excellent blooms of Mrs. A. T. Miller, Hon. Mrs. Lopes, Master David, President Viger, Mrs. W. Knox, Reginald Vallis, and Bessie Godfrey. Mr. H. F. Farmer, gardener to the Marquis of Bute, Cardiff Castle, second, with fresh blooms a trifle smaller. Messrs. Joy, Courtrallis Gardens, third. For twelve Japanese distinct, four competed, the best set, an even lot of good blooms coming from Mr. J. E. Davies, gardener to W. Godfrey Clark, Esq., Lalygaru; Mr. Farmer followed closely.

Incurved varieties were well staged, and Mr. J. Evans, gardener to Sir C. E. J. Phillips, Picton Castle, Haverfordwest, won for twenty-four, with large specimens, a trifle rough; Embleme Poitevine, Mrs. J. Wynne, Duchess of Fife, Fanny Lemon, Romance, G. Eclipse, and G. W. Matthews were the most noteworthy varieties. For twelve Japanese and the same number of incurved, Mr. J. Evans secured the challenge cup, with really fine blooms of Lady Letchworth, Reginald Vallis, and W. A. Etherington among Japanese, with Edwin Thorp, Mrs. Denyer, Romance, and Embleme Poitevine in the incurved section; Mr. Farmer, second. Mr. E. Edwards, 141, Severn Road, Cardiff, won the premier place in a strong entry for twelve Japanese, as an amateur, with fresh examples of F. S. Vallis and Hon. Mrs. Lopes, etc. Mr. E. Skarey, 40, Redlands Road, second. Mr. Farmer won the Courtis challenge cup for twenty-four Japanese in not less than eighteen varieties, with a desirable set, including Countess of Granard, F. S. Vallis, Rose Pockett, Bessie Godfrey, Mrs. E. Pearson, and Master David as the leading specimens. Mr. T. E. Stephens, gardener to A. F. Hill, Esq., The Garth, Lisrave, second, with smaller flowers; four competed.

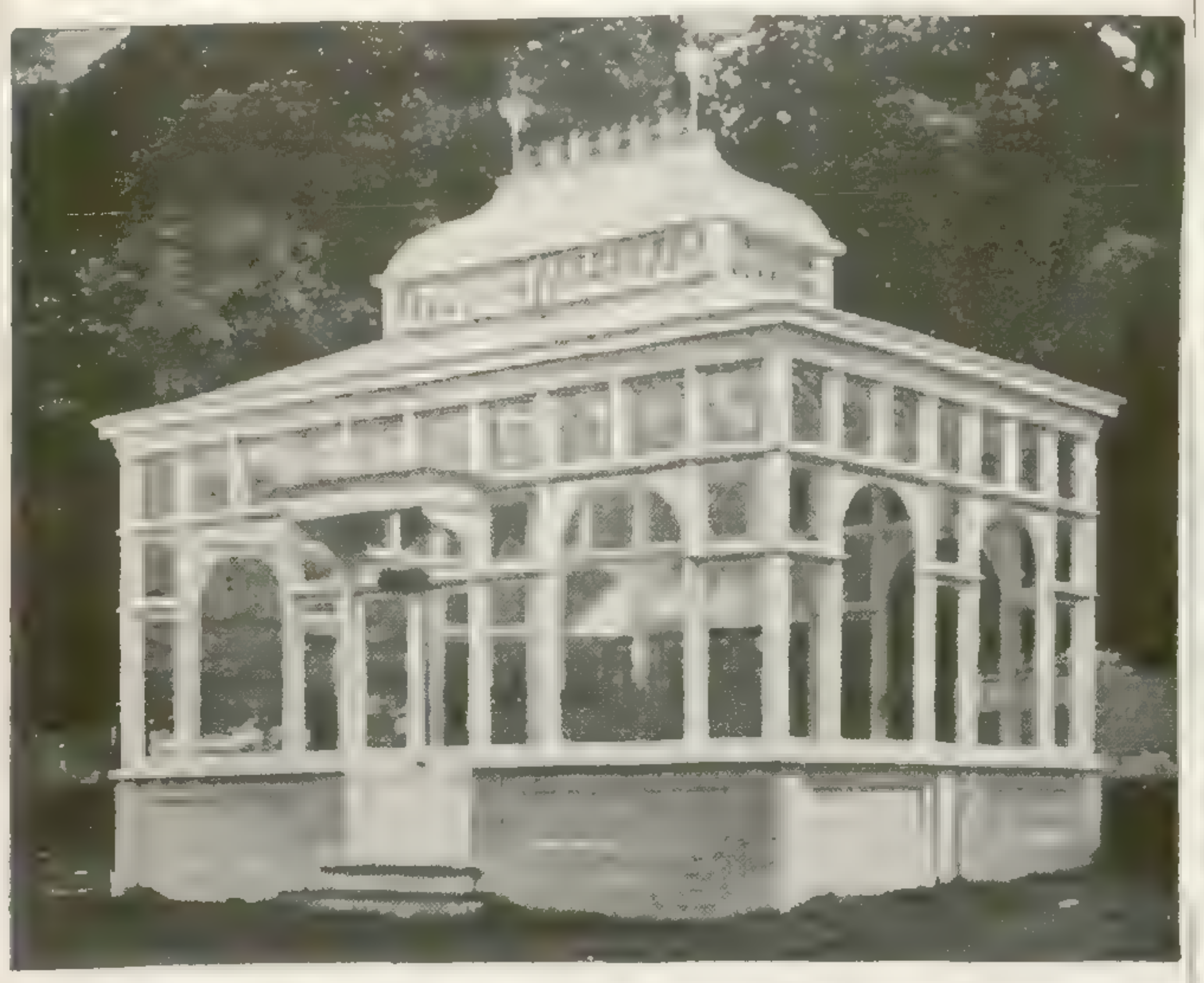
Single-flowered varieties have long received much encouragement here, and on this occasion they were well represented. For six vases, three sprays in each, Mr. T. Bindon, gardener to S. Wallace, Esq., Newport Road, Cardiff, was easily first with grandly developed blooms of Metta, Mrs. E. Roberts, Altrincham Yellow, Manor Beauty, Eureka, and George Williams; Mr. G. H. Screen, 10,

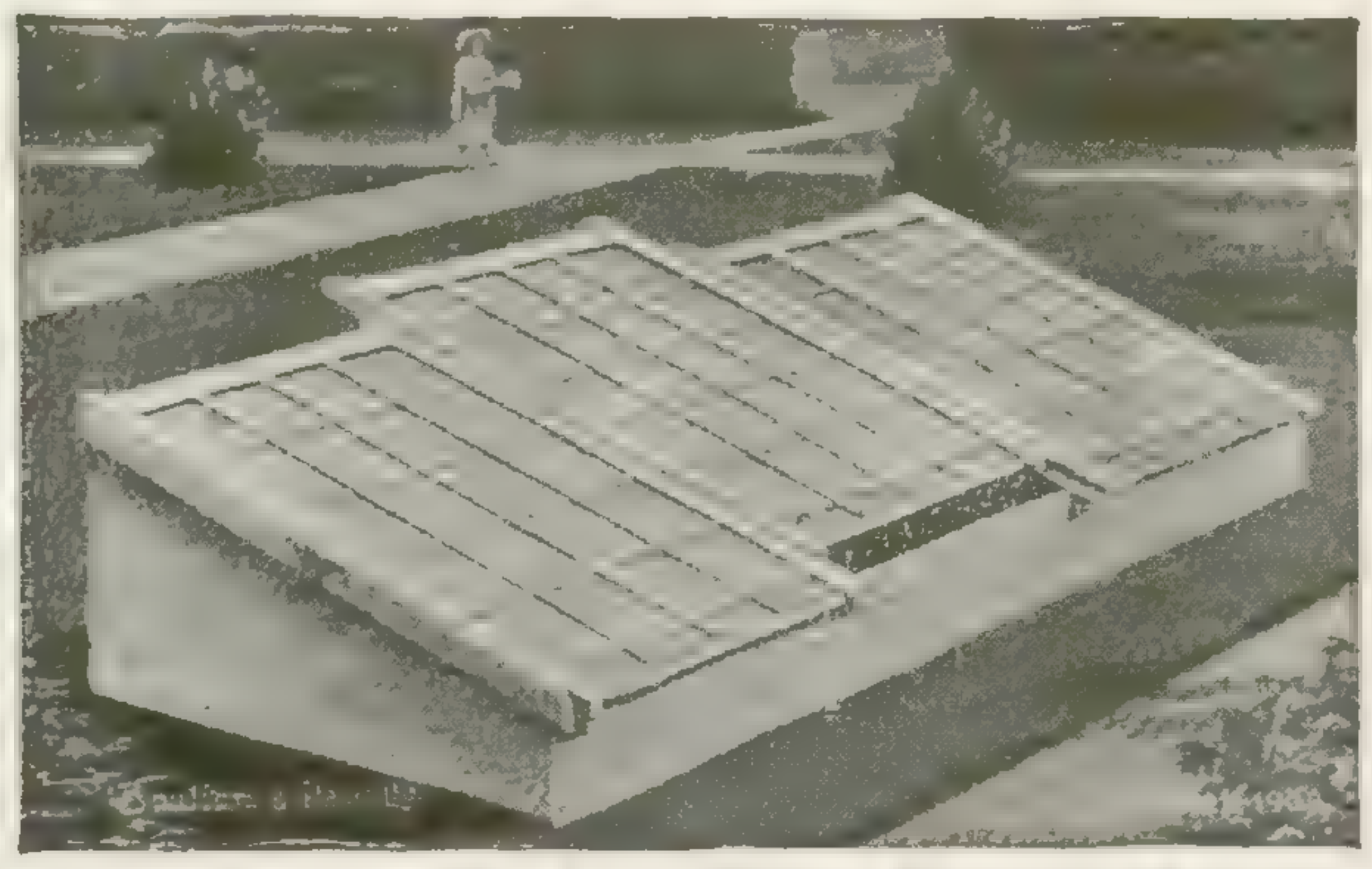


The only resemblance between a Pine Spray Syringe and others is in the shape of the barrel. The metal is more substantial. For the rest, the combination spraying head renders Spray, Rose, and Bend instantly obtainable without the addition or removal of a single fitment, while the adjustable leather bucket plunger gives perfect suction, never allows water to escape past it and up your sleeve, and wears interminably.

A written request from your ironmonger or seedsman, and a Syringe will be sent in 24 hours for your approval. Price 10/6. Sole proprietors and manufacturers, **Robinson Bros., Ltd., West Bromwich.**

PINE SPRAY SYRINGE (patent).





BOULTON & PAUL, LTD., HORTICULTURAL BUILDERS, Norwich.

ATTRACTIVE, PRACTICAL GLASSHOUSES.

Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of 40/- value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.

4ft. by 6ft. ... £2 0 0 | 8ft. by 6ft. ... 3 0 0
Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft. Similar to No. 75, with Two Lights... 35/-

SEND FOR ILLUSTRATED CATALOGUES.

Every part of these Houses is thoroughly well made, painted three coats, CLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.

No. 49A.—Span, 10ft. by 8ft. £11 10 0
No. 47A.—Lean-to, 10ft. by 7ft. £9 10 0

All parts are numbered ready for easy re-erection by any handy man.

Plassay Street, Penarth, was a good second. Nine took part in a class for the best-arranged vase of singles, and Mrs. G. H. Screen won with an effective display of well-grown flowers, Mr. Bindon following with better blossoms, but in too many colours.

Groups of chrysanthemums were numerous, and in the open class Mr. W. Treseder, Cardiff, led with very finely flowered Japanese and single varieties, making a bold and effective display with these and crotons, ferns, etc. The "Thomas Andrews" challenge cup, with a cash prize, offered for a group of chrysanthemums only, which was secured by Mr. A. Brown, gardener to the executors of the late J. Howell, Esq., Grove House, Cardiff, with dwarf plants, carrying handsome blooms effectively staged; Mr. Hatherdale, 53, Shakespeare Street, Cardiff, second. The best-arranged group of miscellaneous plants, in 40 sq. ft., was contributed by Mr. Mackintyre, gardener to Lady Hill, Rookwood, Llandaff. Mr. Treseder won the premier place for the best hand and bridal bouquet with charming exhibits.

Trade exhibits added much to the interest of the show. Messrs. Stuart Low and Co., Bush Hill Park Nurseries, Enfield, had orchids in quantity and carnations (gold medal). Messrs. Mansell and Hatcher, Rawdon, Leeds, staged orchids of an interesting character (gold medal). Messrs. Basham and Sons, The Nurseries, Bassaleg, Monmouth, had a fine display of apples of the leading varieties in splendid condition (gold medal). Messrs. G. Williams and Son, Manor Road Nurseries, Cardiff, had chrysanthemums in quantity (silver medal).

Southampton.

NOVEMBER 7 and 8.

The annual autumn show was held in the Victoria Hall, and was quite a good display. Especially fine were the incurved blooms for so early in the season, and the decorative sections, which are here made a feature of, were remarkably fine. Groups and plants were commendable. Baskets of autumn foliage were quite gorgeous in their colouring. Fruit and vegetables were highly meritorious. The management was, as usual, of the best under the careful guidance of Mr. C. S. Furdge, who has held the post of secretary here for the last forty years.

PLANTS.

For a group of decorative chrysanthemums, arranged with palms, ferns, etc., there were but two entries. Mr. F. G. Bealing, Bassett Nurseries, Southampton, won the premier award with an imposing array of well-grown plants of incurved, Japanese, and single varieties, arranged in a series of mounds, each surmounted by a specimen palm, the whole being edged with ferns. Mr. T. Hall, gardener to Ellen, Lady Swaythling, South Stoneham House, Southampton, was second.

Single-flowered varieties were well shown by Mr. Bealing in the class for six plants; Mr. C. Hosey, gardener to J. C. D'Esterre, Esq., Glenfield Hill, Southampton, second. Mr. Hosey led for four bush plants, staging specimens fully 4ft. in diameter, freely-flowered, and not too stiffly trained.

CUT BLOOMS.

The leading vase class was for eight Japanese varieties, distinct, three blooms of each. Of the four competing, Mr. W. Mease, gardener to A. Tate, Esq., Downside, Leatherhead, was the most successful, winning with an even set of fine flowers well staged. The following were conspicuously good: Duchess of Sutherland, Master James, Vera Dow, Mrs. W. Knox, Mrs. A. T. Miller, Mrs. R. H. B. Marsham, and F. S. Vallis. The second place was occupied by Mr. W. Baxter, gardener to Captain Dalgety, Lockerley Hall, Romsey, with very fine blooms, but a trifle irregular. White-flowered Japanese, in two varieties, three of each, made an interesting class. Mr. W. Hall, gardener to Major Chichester, Embley Park, Romsey, was first with W. F. Lever and Mrs. A. T. Miller. The latter was judged to be the premier Japanese bloom in the show. Mr. C. Hosey, gardener to J. C. D'Esterre, Esq., Elmfield Hill, Southampton, with Miss A. Niccoll and Purity in good order, was second. For the same number of blooms, any other than white, six entered, and Mr. W. Hall, with typical examples of Rose Pockett and Bessie Godfrey, led. Mr. Baxter depended upon F. S. Vallis and J. H. Silsbury. Mr. Baxter led for four varieties of Japanese blooms suitable for decoration, six of each, with Mdme. P. Radaelli, Master James, Frank Payne, and Lady Talbot; Mr. C. Hosey coming next with a good exhibit.

A class for decorative varieties, excluding Japanese and singles, brought six entrants. Mr. F. Bealing led with a remarkable exhibit of high-class blooms of Romance, Embleme, Poitevine, and the anemones Delaware and Mdme. Herewege; Mr. A. J. Marsh, gardener to M. Hodgson, Esq., Kingsworthy, Winchester, second. Single-flowered varieties, disbudded, in six vases, distinct, an unlimited number of blooms allowed, produced a highly interesting display. Mr. A. J. Marsh, with grandly-developed blossoms of Mrs. R. C. Pulling, Keston Gem, Altrincham Yellow, Mensa, Sylvia Slade, and Mrs. E. Roberts led, and Mr. Bealing was second with a handsome set. Five contributed undisbudded singles in six varieties, Mr. Marsh again winning with freely-flowered sorts; Mr. C. Dymett, Freemantle Nurseries, second.

For twenty-four Japanese blooms arranged on boards, in not less than sixteen varieties, there were five entrants, these making a good display, Mr. Baxter winning easily with a full, solid, fresh example, mainly of the semi-drooping section: Mrs. G. Hemming, Eclipse, Lady Talbot, Master James, Frances Joliffe, W. Mease, D. B. Crane, and The Hon. Mrs. Lopes were notably good; Mr. Marsh second. Mr. W. Hall won for twelve Japanese, distinct, followed by Mr. F. Chandler, 75, Shirley Road, Southampton.

Incurved varieties were remarkably well shown. For eighteen blooms, in not less than twelve varieties, three competed. Mr. Marsh, with an extremely fine display, won with ease. The blooms were large both in diameter and depth, fresh, well-finished, and capitally staged. Especially fine were Embleme Poitevine, Mrs. Denyer, Romance, H. W. Thorp, W. J. Higgs, Clara Wells, and Godfrey's Eclipse. Mr. Mease followed with a less even set, yet containing many high-class flowers.

Amateurs staged numerously and well. Mr. E. J. Tofield, Chandler's Ford, won for twelve Japanese with a praiseworthy exhibit; Mr. A. S. Hill, London Road, Southampton, second.

FRUIT AND VEGETABLES.

Fruit was excellent. For two bunches of black grapes, Mr. G. Ellwood, gardener to W. H. Myers, Esq., Swanmore Park, Bishop's Waltham, Hants, won with Alnwick Seedling; Mr. W. Hall second with Appley Towers. Alicante was well shown in the class for two bunches of that variety by Mr. W. Hall. The latter also had the finest white grapes, showing exceedingly fine Muscat of Alexandria. He was also first in the class for one white bunch, and for one of any black variety with Mrs. Price in fair condition. Apples were a strong feature. Twelve staged four dishes of dessert sorts, and Mr. W. West, gardener to Mrs. M. Knox, Holt Hatch, Alton, won with remarkable examples of Cox's Orange, Blenheim, Allington, and Ribston Pippins. For a similar number of kitchen varieties, Mr. W. Sims, Stonehead, Seals, Wilts, won with Peasgood's Nonsuch and Bramley's Seedling especially fine. Fourteen staged a single dish of dessert apples, other than Cox's Orange Pippin, and Mr. Ellwood won with Blenheim Orange of exceptional colour.

Vegetables were a remarkable display, as they always are here. Messrs. Toogood and Sons offered six prizes for six dishes, producing eight entries. Mr. Ellwood was invincible here, as also in the class provided by Messrs. Sutton and Sons for six dishes.

Trade displays were numerous, adding much to the interest of the show. Messrs. Toogood and Sons, Southampton, arranged a remarkable collection of vegetables, for which they were awarded a gold medal. Messrs. B. Ladhams and Co., Shirley, Southampton, had an effective rock garden, for which they received a silver medal. Messrs. E. Hillier and Sons, Winchester, with a collection of superb apples, also received a silver medal, Messrs. W. H. Rogers and Son, Southampton, receiving a similar award for apples. For three dozen dishes of highly-coloured apples, effectively arranged, Mr. Myers received a silver-gilt medal.

Reading Gardeners' Association.

With the object of assisting the Gardeners' Royal Benevolent Institution and the Royal Gardeners' Orphan Fund, the members of the Reading and District Gardeners' Mutual Improvement Association held a charming exhibition of flowers and fruit in the Reading Corn Exchange, on Wednesday, November 8. Similar exhibitions have been held for several years past, and a sum of about £20, after the payment of all expenses, has usually been realised.

Chrysanthemums predominated, but there were groups of zonal pelargoniums, Gloire de Lorraine begonias, roses, primula, crotons, dracænas, etc. Opposite the entrance Sir Rufus Isaacs, M.P., showed a group of zonal pelargoniums and bright scarlet salvias, backed with white chrysanthemums. The growing of chrysanthemums from seed is an interesting pursuit, and in this department Messrs. Sutton and Sons were conspicuous with a large group of single seedlings. It was a delightful collection, presenting great decorative possibilities, and a wide range of colouring. Flanking the platform were similar groups belonging to Mr. Leonard Sutton and Mr. M. H. Foquet Sutton. Close to Messrs. Sutton and Sons' seedlings, Mrs. Bland Garland had a group of fine chrysanthemums mingled with salvias, pelargoniums, and coleus. Winter-flowering begonias were a beautiful display of pink and white blossom. A large group came from Mr. C. Griffith, and the excellent specimens which adorned the whole length of the fruit stage were the property of Mr. S. B. Joel. Great admiration was expressed for three groups of zonal pelargoniums from Mr. S. Wheeler, Captain D. M. Miller (Blandford Lodge), and Mr. C. T. Evans. Captain Miller's specimens were all singles, but without exception the clusters were large, and the florets of good shape and substance. Mr. W. Howard Palmer (gardener, Mr. W. C. Moles) sent a fine group of foliage plants.

Mr. J. Hicks, of Twyford, exhibited roses, and Mr. Stanton showed many vases and baskets of dried flowers and grasses, having remarkably decorative properties.

The fruit shown deserves high praise. It was carefully staged, and, besides being a constant source of interest to visitors, constituted an educational exhibit of great value. Sir Charles Henry, M.P., and Mrs. Noble, of Park Place, sent particularly large collections of apples; but for their rich colouring the specimens forwarded by Mr. A. C. Fraser, Mongewell Park, Wallingford, were very remarkable. Fine specimens, both in colour and shape, were sent by Alderman F. B. Parfitt, the president of the association, and Mr. G. Drew took the opportunity, in preparing the University College exhibit, of showing how to market choice fruit and flowers. Mrs. Noble's exhibit, it may be added, included excellently bottled fruits, home-grown citrons, fruits of the medlar quince, Japanese dates (Diospyros Kaki), almost resembling a peach in colour and a tomato in shape. A curiosity was a box of Up-to-date potatoes indicating how new tubers may be secured at almost any time of the year.

In addition to those named above, should be mentioned Mr. F. W. Nicholson (Shiplake), Mrs. Collins (Stoneham House), Mr. T. R. Harman (Sindlesham House), Miss Cripps (Preston), Mr. H. Collins (Leopold House), Mr. T. Allsop, Mrs. Bird (Shrublands), Mr. E. C. Powell (Caversham), Mrs. Austen (Whitley Lodge), Mrs. C. Smith (Ravenswood), Mr. L. R. Erskine (Binfield Manor), Mr. H. R. Beeton (Hammond's End), Mr. H. Dunlop, Mr. E. Parker, Mr. G. Bryant, Mr. A. Webb, etc.

FORTHCOMING ENGAGEMENTS.

WEDNESDAY, November 29.—Irish Gardeners' Association.

National Chrysanthemum Society's Annual Dinner at the Holborn Restaurant.

THURSDAY, November 30.—Royal Horticultural Society's Colonial Fruit Show; three days.

Manchester and North of England Orchid Society.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

RED GRUBS IN CHRYSANTHEMUM STEMS.—W. B.: We cannot find any reference to the grub of a small fly feeding in the stems of chrysanthemums, but two flies are said to feed in chrysanthemum blooms, i.e., Cecidomyia cyngenesiæ and C. chrysanthemi. Possibly the tiny grubs may be one of these. We shall be glad, should you make any further discoveries in this direction, if you will kindly communicate with us.

APPLE AND PEAR TREES.—S. H. G., South Devon: Farmyard manure and lime should not be used at one and the same time, as lime acts chemically upon the manure, and quickly sets free the nitrogen, in the form of ammonia. If the trees seem to need assistance, give a moderate dressing of decayed farmyard manure, lightly forking this in. Pruning may be done at once, and the clearing up and manuring may follow. If the pears have made strong growth, do not manure them unless such growth is well set with fruit spurs and buds. Root-pruning should not be performed unless you are quite satisfied that the growth made is excessive and unfruitful, and then it should only be done in the case of one half of the roots this year, leaving the other half for the following winter. Instead of taking out a trench all round the tree, only do so round one-half; such a trench should be about 3ft. or 4ft. from the trunk, according to the extent of the roots, and the grossness of the growth.

CYMBIDIUM INSIGNE.—We commend to the attention of our readers who are expert in orchid culture the following letter from a Wellingborough correspondent (D. B. W.).: I am very interested in orchids, and read with great delight and profit the weekly notes on these plants under the heading of "Work for the Week," and literally devour any special articles on orchids or orchid culture. But I have a plant of Cymbidium insigne Sanderæ, which I am not successful with, and I should very much like some assistance in this matter from your able correspondents. Two plants were potted up at the same time, and they have been together in an intermediate house; one has grown well, and is now throwing up a flowering spike already 2ft. high, and the foliage is clean and healthy. The other plant has never made such strong growth, and on nearly every leaf and growth there are black spots. I wish to express my thanks for your kindly assistance on previous occasions, and to ask how I can cure the cymbidium of black spot, and bring it into a healthy condition like that of its neighbour.

SWEET PEA SHOW OF 1912.—J. E. S., Brentwood: As already announced in these columns, the exhibition of the National Sweet Pea Society will be held at the Royal Horticultural Hall, Westminster, on Tuesday and Wednesday, July 9 and 10, 1912.

SPORTIVE CHRYSANTHEMUM.—D. R., Cromarty: It is not an uncommon thing at all for a chrysanthemum to produce stem sports of the character of those sent. There is always a difficulty in propogating from a branch sport of this kind, but if the stem is placed in a warm moist place it may possibly produce growth.

NAMES OF PLANTS.

W. J., Baldock.—1, Gesnera exoniensis; 2, Selaginella cæsia.

S. E. C., Everton.—1, Skimmia japonica; 2, Begonia Rex; 3, Tillandsia Lindeni.

M. W., Cheltenham. — 1, Odontoglossum ardentissimum; 2, a very pretty form of Dendrobium Phalænopsis; 3, D. bigibbum; 4, Maxillaria picta.

T. D. A., Limpsfield.—1, Abies Douglasi; 2, Cupressus Lawsoniana erectaviridis; 3, Hedera dentata; 4, Olearia Haasti; 5, Eleagnus pungens.

E. C. K., Gosport.—1, Cypripedium Memoria Mœnsi; 2, C. Leeanum magnificum; 3, C. insigne Ernesti; 4, Dracæna Goldieana; 5, Panax Victoriæ.

NAMES OF FRUITS.

N. W. W., Cardiff.—Bramley's Seedling.

L. A. M., Ulverston.—1, King of the Pippins; 2, Cornish Aromatic; 3, Domino.

F. S., Upminster.—1, Roundway Magnum Bonum; 2, Bismarck; 3, Court Pendu Plat.

J. L. F., Lincoln.—1, Rosemary Russet; 2, Lane's Prince Albert; 3, Baumann's Red Reinette; 4, Alfriston.

C. H. E., Chelmsford.—1, Worcester Pearmain; 2, Norfolk Beaufin; 3, Cox's Orange Pippin; 4, not recognised; 5, Beurre Rance; 6, Beurre Bosc.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1911. NOVEMBER 12 TO NOVEMBER 18.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Nov. 12—Sunday	2 0	54	52	56	35
„ 13—Monday	—	44	42	50	44
„ 14—Tuesday......	1 36	49	47	54	40
„ 15—Wednesday..	0 48	48	45	54	47
„ 16—Thursday....	0 12	54	52	57	48
„ 17—Friday........	2 0	51	50	53	47
„ 18—Saturday.....	—	44	44	45	44
Means	(total) 6 36	49	47	53	43

DATE. 1911. NOVEMBER 12 TO NOVEMBER 18.	RAIN.	TEMPERATURE OF THE SOIL AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg.
Nov. 12—Sunday	0·18	46	46	50	28
„ 13—Monday	—	45	46	50	37
„ 14—Tuesday......	—	44	46	50	26
„ 15—Wednesday..	0·03	45	47	50	38
„ 16—Thursday	0·38	47	47	50	42
„ 17—Friday	0·32	48	47	50	45
„ 18—Saturday	0·51	47	48	50	39
Means ...	(total) 1·42	46	46	50	36

CONTENTS.

PAGE
Note of the Week 871
Choice of the Best Varieties of Apples 874
Evergreen Hedges, II. 875
Notes from Kew 876
Forestry Degree at Aberdeen University ... 877
New Plants, etc. 878
Profitable Woodlands 879
Hardy Shrubs for Forcing 880
Forcing French Beans 881
Work for the Week 882
Exhibitions and Meetings 883
Answers to Correspondents ... ... 890.

ILLUSTRATIONS.

Portrait of Mr. A. Gaut, 871; Chrysanthemum Godfrey's Perfection, 873; The Remarkable Yew Hedge at Powis Castle (the Seat of the Earl of Powis), 875; Mr. J. Honeyman's First Prize Eight Vases of Chrysanthemums at Edinburgh, 876; Mr. Thomas Lunt's First Prize Fifteen Vases of Chrysanthemums at Edinburgh, 877; Odontocidium Fowlerianum, 878; Calanthe Cooksonae, 879; Mr. J. Cocker's First Prize Collection of Twelve Dishes of Hardy Fruits at Newcastle, 880; Mr. Alexander's First Prize Collection of Twelve Dishes of Apples at Newcastle, 881.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head Working).—H. ESSAM can with confidence recommend his Foreman, where several are kept; life experience in all branches; age 31; married when suited; excellent references. Address, Closes Hall, Gisburn, Clitheroe.

GARDENER (Head Working, where one or 2 kept); 10 years in present situation; 5 years as second; age 31; single Apply A. GIBBS, 68, Pope Road, Bromley, Kent.

GARDENER (Head Working).—Mr. COLLEDGE, Gardener to the Earl of Darnley, highly recommends F. BISHOP, as above; 4½ years as Foreman here. Cobham Hall Gardens, Gravesend, Kent.

GARDENER (Head) seeks SITUATION where three or more are kept; practical experience in all branches; excellent references; age 31. Address, S. DOUGHTY, Overstone Park Gardens, Northants.

GARDENER (Head Working or Single-handed); abstainer; age 36; one boy, 14½ years; life experience Inside and Out; excellent references; five years present place; knowledge of Oil Engine and Electric Light, Bees; wife help house if required. J. OSMOND, Runfold, Farnham, Surrey.

GARDENER (Head Working), thoroughly experienced in all branches; excellent references; married; disengaged through establishment being given up. G. HALL Hermitage Cottage, Minchinhampton, Glos.

GARDENER (Head Working).—Mr. R. W. WILLIAMSON, of the Croft, Didsbury, near Manchester, strongly recommends his late Gardener, HENRY ARNOLD, who has been with him for over 20 years; is well experienced in gardening in all its branches, and is specially trained in rockery construction and cultivation of alpines.

GARDENER (Head of three or more); thoroughly experienced; 20 years' experience in large establishments; well up in Growing for Market, Table, Exhibition; nine years Head in present situation; age 34; one child. C. ROWLAND, Mickleton, Gloucestershire.

GARDENER (Head Working) (Scotch) requires SITUATION where 2 or 3 are kept; 20 years' experience in all branches of gardening; 5 years present situation; married; age 36; 2 children; excellent testimonials. H. McCARTNEY, Sandye Place, Sandy, Beds.

GARDENER (Single-handed, or where help is given); 12 years' practical experience; 4 years in last situation; good references; single; age 36; abstainer. J. CHAPMAN, Ferry Hill, Chatteris, Cambs.

GARDENER (Single-handed, or where help is given); life experience in all branches; highest references; thoroughly understands Oil Engine; age 40; strong and active; married; 3 in family, youngest 12½. E. STEVENS, 13, Connaught Road, Newbury, Berks.

A GENTLEMAN, on giving up his country house, will be pleased to recommend his GARDENER as a reliable Head Man, with good knowledge of his profession; life experience at Sandon Hall, Cassiobury Park, Champneys, Tring, and London Parks; age 39; married, three children. — F. W. PURNELL, Ridge, Capel, Surrey.

MAJOR ANNE, Burgwallis Hall, Doncaster, wishes to very highly recommend his GARDENER; life experience in all branches, gained in good establishments; excellent references; age 36; married when suited. Address J. MURDOCK, Burgwallis Hall, Doncaster.

MR. CHARLES STEVENS very highly recommends his GARDENER (Head Working where three or more are kept); 4 years' present place, previous 10 years in first-class places where thorough experience gained in all branches. Leaving through no fault; age 33; married, one child. F. DOBSON, Southfield, Uxbridge.

GARDENER, 40; Single-handed preferred; thoroughly experienced; excellent character; active worker; Inside and Out, with early vegetables; abstainer; married. A. BISHOP, Windmill Hill, near Hailsham.

FOREMAN, Kitchen Garden; thorough knowledge of growing Vegetables, Fruit, etc.; 11 years' experience; 2 years with Madame Patti Cederstrom; age 25; abstainer. A. MORTIMORE, c/o Mr. Flitney Chipstead, near Sevenoaks, Kent. Bothy preferred.

JOURNEYMAN (Inside and Out); age 20. —A. MADDOCK, The Gardens, Hawthornden Manor, Uttoxeter, will be pleased to recommend F. WILLIAMSON as above; very willing and obliging; Bothy preferred. Apply F. WILLIAMSON, 43, Cheadle Road, Uttoxeter.

JOURNEYMAN seeks SITUATION (Inside under Foreman); 7½ years' good general experience Inside and Out; age 22; excellent references; strong and obliging; Bothy preferred. — O. NICHOLAS, Kilmersdon, near Bath.

JOURNEYMAN (Third) seeks SITUATION Inside or Inside and Out; six years' experience; age 20; abstainer; good references; bothy preferred. W. COWARD, North Row, Mere, Wilts.

IMPROVER (Inside and Inside and Out), 4 years' experience; age 19 years; not afraid of work; good references. F. SKELTON, The Gardens, Mount Pleasant, Bishop Auckland, Durham.

THOS. PARRY, Birlingham House Gardens, Pershore, can with confidence recommend Young Man, 25, for Kitchen Garden or Pleasure Grounds; good with Scythe and Machines; disengaged. Address, W. JONES, Treadam, Llantilio Crossenny, near Abergavenny.

YOUNG MAN (20), French, 6 years' experience, strong, willing, seeks SITUATION in Market Nursery or Private; Inside or Out; abstainer. M. LEGRAND, 12, Gillingham Street, S.W.

YOUNG Man seeks SITUATION as indoor Servant; willing to make himself useful; age 19; single. J. TIMMS, 20, Nottingham Road, Isleworth, Middlesex. No circulars.

YOUNG MAN (17), French, seeks SITUATION in market nursery or private establishment; three years' experience; good references. CAPGRASS, 98, Percy Road, Hampton, S.W.

YOUTH, aged 17, seeks SITUATION in Garden; strong, willing; 3½ years in last place; highly recommended. E. ROBERTS, Gate House, Nuttall, Nottingham.

YOUNG MAN seeks SITUATION in a good Garden where experience can be gained; age 22; six years' experience; strong, active and willing; Bothy preferred. T. L[illegible], Silver Street, Ely, Cambs.

LAD, strong, age 14, ex-seventh standard, good character, highly recommended by Kensington Apprenticeship and Skilled Employment Association, desires situation under a Gardener in a gentleman's establishment; boy is determined to become a gardener. Apply to above Association, 140, Church Street, Kensington.

LAD, age 17, seeks SITUATION in Garden; some experience; wish to improve; good character; Bothy preferred. S. RAYNER, Chart Road, Sutton Valence, Maidstone.

Situations Vacant.

WANTED, a smart, active YOUNG MAN as Second; age about 24; knowledge of Vines, Stove, and Greenhouse Plants. Wages, 18s. per week, bothy, etc., Abstainer preferred. W. LOCKYER, The Lodge, Greenhill Park, New Barnet.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For DECEMBER 2, 1911.

Please Repeat my Advertisement.

Name..

Address..

....

Date..........................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

J. WEEKS & CO. (CHELSEA).

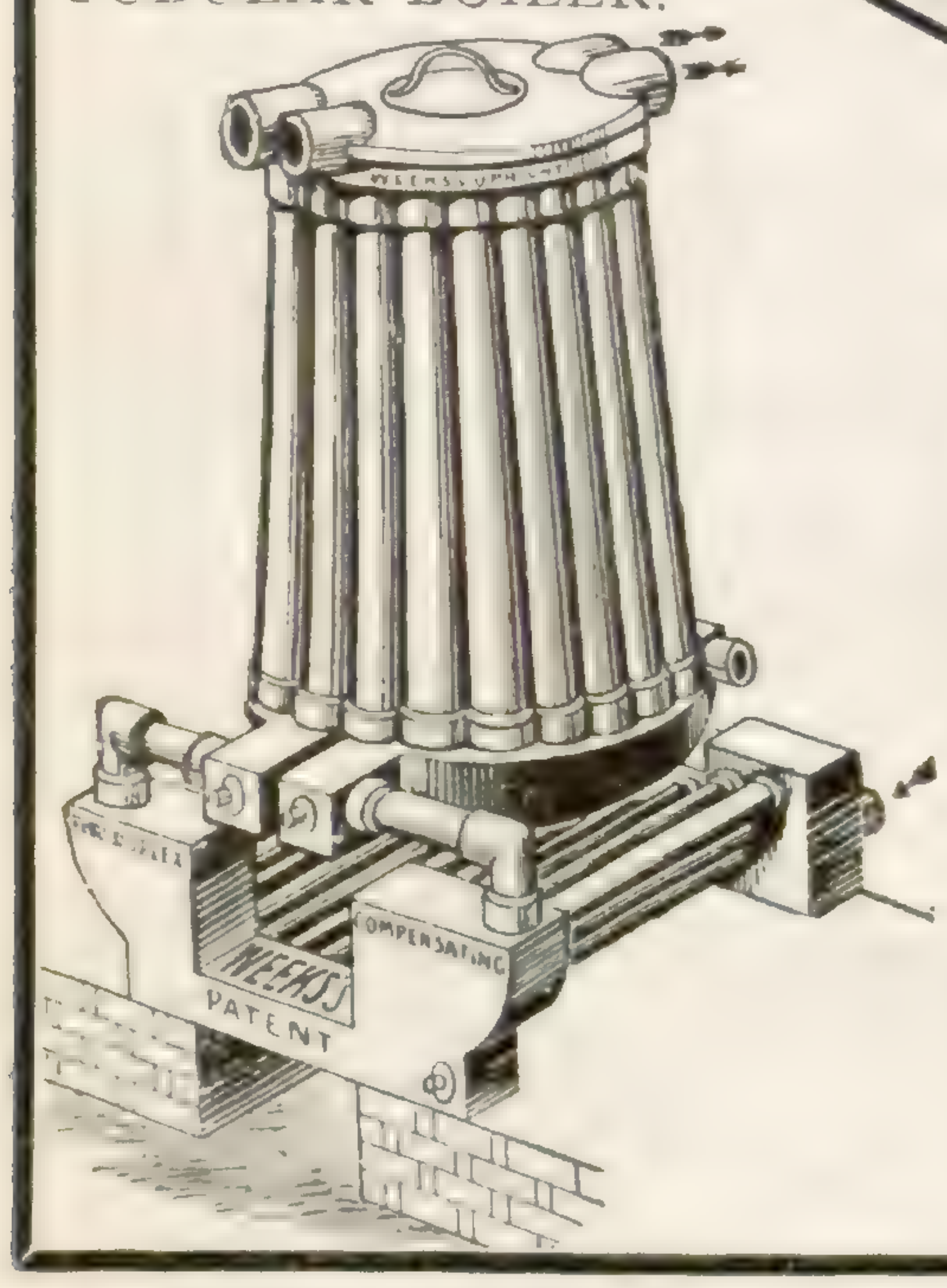
Established 1808.

Plans and Estimates prepared for

CONSERVATORIES, RANGES, GREENHOUSES, FRUIT, ORCHID, and CARNATION HOUSES.

Head Office: 72, VICTORIA STREET, S. W

PATENT DUPLEX UPRIGHT TUBULAR BOILER.



THOUSANDS SUPPLIED DURING THE PAST 50 YEARS.

LET US OVERHAUL YOUR HEATING BEFORE THE COLD WEATHER ARRIVES.

ESTIMATES GIVEN FOR COMPLETE HEATING APPARATUS.

1912 EDITION READY SHORTLY.

Eighth Edition, Including New Features and Illustrations, and Revised List of 1,700 Different Roses.

ROSES AND THEIR CULTIVATION

200 Pages.
16 Plates.
Frontispiece and
67 Illustrations.

2/6 Net ; By post, 2/10.

By T. W. SANDERS, F.L.S.

A Complete Guide to the Selection and Culture of

- STANDARD ROSES.
- PILLAR ROSES.
- GREENHOUSE CLIMBERS.
- RAMBLING ROSES.
- ROSES FOR TRELLISES.
- CLIMBERS FOR PERGOLAS.
- POT ROSES.
- DWARF ROSES.
- ROSES FOR EXHIBITION.
- &c., &c.

LIST OF OVER 1,700 CULTIVATED ROSES: Showing Variety, Section or Class, Date Introduced, Colour, Habit of Growth, How Best Grown, Mode and Time of Pruning, Description of Flower.

◆ ◆ ◆

ORDER FORM.

To the Publishers of "The Gardeners' Magazine,"
148 & 149, ALDERSGATE STREET, LONDON, E.C.

Please send me a copy of **"ROSES AND THEIR CULTIVATION"** by post, for which I enclose remittance of **2/10.**)

Name..

Address...

MERRYWEATHERS'

614 PUMP

IS THE

Gardener's Friend.

Easy to Work.
Simplicity Itself.

Write or Call—

63, Long Acre, LONDON, W.C.

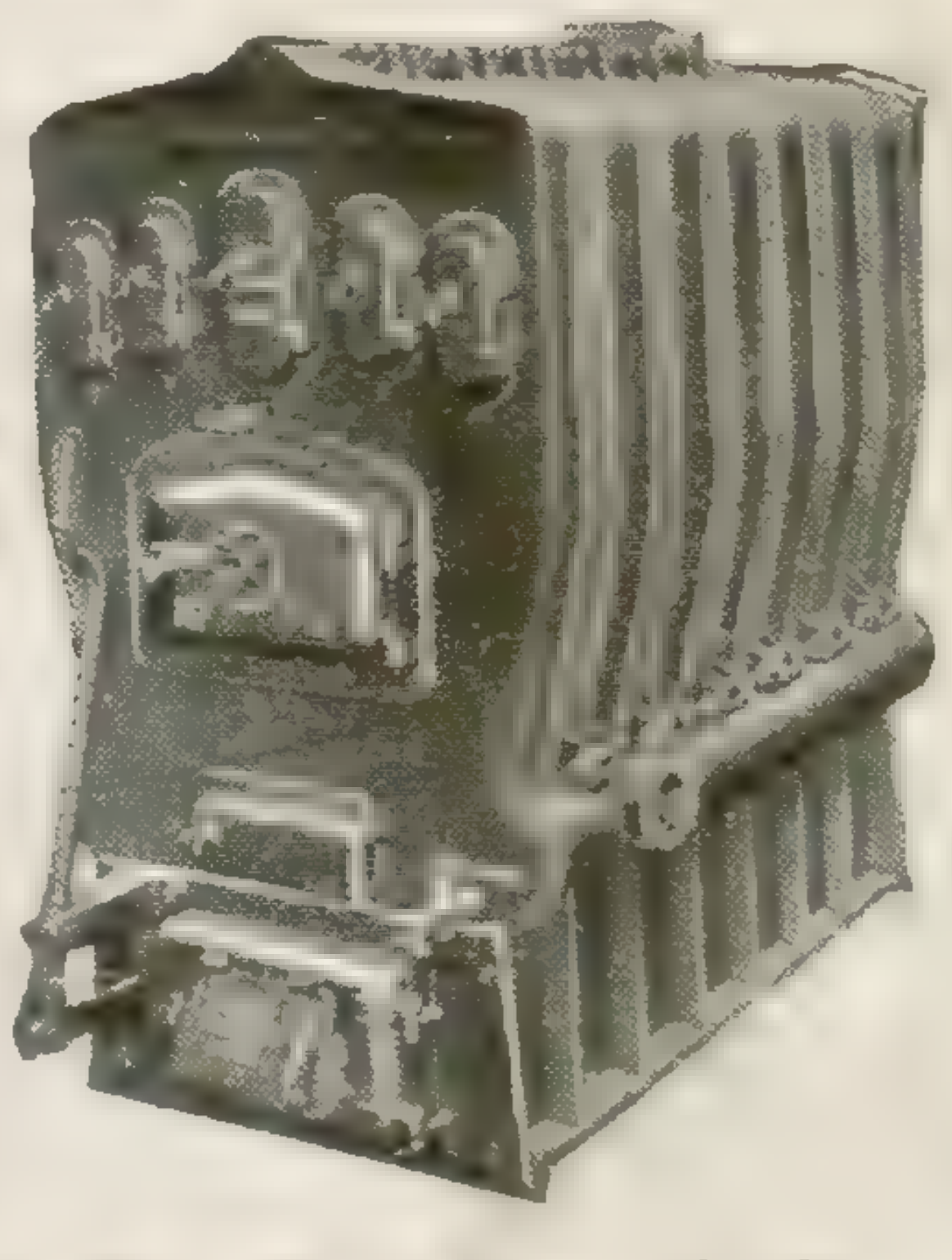
Kinnell's Boilers

THREE LEADING TYPES:—

The **"ANGLIAN," Sectional**, heats 800 to 8,000 ft. 4in. pipe.
The **"ROCHFORD," Tubular**, heats 600 to 8,000 ft. 4in. pipe.
The **"HORSE-SHOE"** for the small Greenhouse.

Saddle Boilers, Trentham Boilers, and all classes of Pipes, Fittings, etc., ready for immediate despatch.

Write for List No. 77, post free.



CHAS. P. KINNELL & Co., Ltd., 65, & 65a, Southwark St., London, S.E.

THOMSON'S Celebrated MANURES

Wm THOMSON & SONS LIMITED

1868

Still the best: In greater demand every year.

SAFE, SURE & LASTING.

The result of many years' **practical** experience.

VINE, PLANT, AND VEGETABLE MANURE.
1 cwt., **20/-** ; ½ cwt., **10/-** ; ¼ cwt., **6/-** ; 14 lbs., **3/6** ; 7 lbs., **2/6**
Tins, **2/6, 1/-,** and **6d.** Carriage paid on 1 cwt. anywhere.

SPECIAL TOP-DRESSING MANURE.
½ cwt., **20/-** ; ¼ cwt., **11/-** ; 14 lbs., **6/-** ; 7 lbs., **3/6** ; Tins, **1/-**
Carriage paid on ½ cwt. anywhere.

Also Thomson's Book on the Vine. Thomson's Styptic.

SOLE MAKERS:

SOLD BY NURSERYMEN & SEEDSMEN EVERYWHERE.

Write for Pamphlets, Price Lists, etc., to

WM. THOMSON & SONS, Ltd., Clovenfords, Scotland.

FLOWER POTS

SAUCERS, SEEDPANS, RHUBARB AND SEAKALE POTS, RUSTIC WARE, VASES, PEDESTALS, etc.

Our Pots are Low in Price and rich in Colour.
Amateurs should try our FAMOUS CRATES of POTS.
7s. 6d., 10s. 6d., 15s., and **21s.**

ART CATALOGUE FREE. ORDERS SENT OFF SAME DAY.
Buy from the Makers—

HERBERTS PARK POTTERY CO., WOLVERHAMPTON.

Printed and Published by W. H. & L. COLLINGRIDGE, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 3,031. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, DEC. 2, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S REMOVAL SALE OF HARDY PLANTS.
Clearance List of Surplus Plants at greatly reduced prices (prior to removal of nurseries from Surbiton to Taplow) sent post free on application.
BARR and SONS, 12 and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, Horticultural Builder, Chelsea, is this winter keeping a large staff of hot-water men in the shops, in order that they may attend immediately to any breakdown of boilers or hot-water piping in any part of the country. In case of emergencies, please telephone 201 Western, or wire, "Gray, Chelsea, London."

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

CHOICE NEW CHRYSANTHEMUMS.—Our New Catalogue of 800 finest varieties in all sections is now ready, most up-to-date yet issued. Contains Splendid Novelties for 1912. Post free. J. W. COLE and SON, Chrysanthemum Specialists, Peterboro.

PERPETUAL-FLOWERING or American Tree Carnations, strong, healthy Guernsey plants, pots, 4s. per doz., carr. paid; 20s. per 100, carr. forw. Ask for catalogue, 75 vars., with full directions. VAN DER SLUYS, F.R.H.S., Ramee, Guernsey, C.I.

BECKETT'S NEW BOOK.—The most practical and Up-to-date Book on Vegetables. Price 5s.; post free, 5s. 6d. EDWIN BECKETT, Aldenham House Gardens, Elstree, Herts.

ROCK GARDENS and ALPINE PLANTS. —A new work and a complete guide to the Formation and Management of Rockeries, by E. H. Jenkins, F.R.H.S. Many Illustrations. Cloth, 2s. 10d., post free, from Publisher, 148, Aldersgate Street, London.

PERPETUAL TREE CARNATIONS, best varieties, strong young plants, out of small pots, 20s. per 100; good flowering plants, in 5-inch pots, 10s. 6d. doz. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

HUTS FOR THE GARDEN. — Fruit Rooms, Potting Sheds, Workshops, Cycle Houses, Boot Rooms, Servants' Mess Rooms, Children's Playrooms, etc. Send for Illustrated Catalogue, free.—BOULTON and PAUL, Ltd., Norwich.

WELLS' Catalogue of
CHRYSANTHEMUMS,
PERPETUAL CARNATIONS,
HERBACEOUS PLANTS,
ALPINE AND ROCK PLANTS,
now ready. Post free on application. Wells' Book, "The Culture of the Chrysanthemum," post free, 1s. 6d. W. WELLS and CO., Merstham, Surrey.

GREENHOUSE PAINTING and GLAZING. "Vitrolite," superior to White Lead Paint, per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country

WEBBS' COLLECTIONS OF NARCISSI FOR POTS AND OPEN GROUND.
25 Narcissi, in 5 choice varieties, 2/3.
50 ,, ,, 10 ,, ,, 4/6.
100 ,, ,, 10 ,, ,, 9/-.

WEBBS' CHOICE MIXED TULIPS (Single and Double) for Bedding, 9d. per doz., 4/6 per 100.

WEBBS' CROCUS FOR BEDS AND BORDERS.
Mixed colours, 1/6 per 100, 12/6 per 1,000.

WEBB and SONS, The King's Seedsmen, Wordsley, Stourbridge.

BUNYARD'S CATALOGUES
Free on Application.

FRUIT TREES. SHRUBS.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

CLAY'S MANURES, CRUSHED BONES
(See page v.)

CLAY'S FERTILISER IS
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

CHRYSANTHEMUMS.

My Collection contains all the best up-to-date.
Catalogue of nearly 600 vars., now ready.
Cuttings from 1s. 6d. to 6s.; Rooted Plants in Feb., from 2s. to 9s. per dozen, purchaser's own selection.
H. WOOLMAN, F.N.C.S., Shirley, Birmingham.

LAVENDER, Old English, 10s. per 100 (50 at 100 rate); packed on rail. Sample doz., 2s. 6d., post free. Other varieties of Lavender, price on application. CHILVERS and SON, Heacham, Norfolk.

DAWES' CHALLENGE RHUBARB has gained nine Medals and Awards, also A.M., R.H.S., London. Strong roots ready. Price list free. DAWES' NURSERIES, Syderstone, Norfolk.

HOLLY, Holly, Evergreens, Laurel, Ivy, Box, etc. Moss—decoration, wreath, packing, sphagnum, etc. Welsh Mountain Fern Roots, assorted. Prices right; quality right. Write now for list. Entire satisfaction guaranteed. Estab. 14 years. Bankers, N.P. Bank of England.—HAWKINS, Dolgelley, N. Wales.

ORCHIDS FOR AMATEURS.—A practical guide to the Cultivation of Cool and Warm-house Orchids, adapted for Small Mixed Greenhouses. The author is C. Alwyn Harrison, F.R.H.S., and the book can be obtained, by post, for 2s. 10d., from Publisher, 149, Aldersgate Street, London.

SWEET PEAS! SWEET PEAS!! — The Newest and Best Varieties at the most reasonable prices; prize-winning stock.

F. APPLETON, Molescroft, Beverley, Yorks.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-Work, showing screens, wall panels, window surrounds, arches, arbours, etc., post free.—BOULTON and PAUL, Ltd., Norwich.

GREENHOUSES and CONSERVATORIES. Distinctive Designs and Finished Workmanship. Write now for ILLUSTRATED CATALOGUE. CARTER and HOWARD, Horticultural Builders, Kingston-on-Thames. Phone: 1308 P.O. Kingston.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim. 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable buildings, etc. Catalogue gratis.

SUTTON'S BULBS.
The best of the year.
Mr. H. Kenten, Gardener to L. B. Beauchamp, Esq., writes:—"The Bulbs supplied by you have again turned out excellently. I think they are the best lot I have ever had."

SUTTON'S SINGLE BORDER HYACINTHS.
Mixed Colonrs. Per doz., 2/-; per 100, 14/-.

SUTTON'S SINGLE EARLY TULIPS,
For the open ground.
Finest Mixed. Per doz., 9d.; per 100, 4/6; per 1,000, 40/-.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

NOW IS THE TIME TO PLANT
Kelway's lovely Pæonies, Delphiniums, and their celebrated Artistic Hardy Borders; packed ready for planting.
KELWAY'S CHOICE named Pæonies, from 27s. per doz.
KELWAY'S CHOICE named Delphiniums, from 24s. doz.
For information about the Colour Borders send 6d. for "Gardens of Delight."
From Mrs. ———, Chepstow.
10th March, 1911.
"You supplied me with an 'Artistic Herbaceous Border' about eighteen months ago, and I am so very pleased with it; it looked so lovely last year, that I am thinking of having a similar border laid out by the side of the drive up to the house."
KELWAY AND SON,
The Royal Horticulturists,
LANGPORT, SOMERSET.
230 Grand Prizes, Gold Medals, etc.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
From an article in "The Field," August 12th, 1911, on The Best Gardening Books:
"I do not know of anything dealing with herbaceous borders more comprehensive than Kelway's Manual."

"ROSES AND THEIR CULTIVATION."—A new edition of this Standard Book will be ready in a few days, and every Rose-grower should secure a copy. Cloth, many Illustrations, 2s. 10d., post free, from Publisher, 149, Aldersgate Street, London, E.C.

IRON and WIRE FENCING for Gardens, Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free.—BOULTON and PAUL, Ltd., Manufacturers, Norwich.

CHAMPAGNE RHUBARB ROOTS FOR SALE, suitable for forcing or for planting out.

H. WADDINGTON, 42, Cank Street, Leicester.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.
XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.
XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, XL ALL WINTER WASH for Fruit Trees, RICHARDS' BANDING GREASE, etc. Don't forget to ask your N. S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

ALLWOOD BROS., Haywards Heath, Sussex.
Perpetual Flowering Carnation Specialists, Raisers and Growers.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

ORCHIDS.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., Southgate, London, N.
(Tel.: 59, Palmers Green.)
Catalogues post free on Application.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

R. H. BATH, Ltd.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

FRANK CANT & CO.,
Braiswick Rose Garden, Colchester.
The World-famed Champion Rose Growers.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 1st Prizes. 3 2nds, at N.R.S. Shows, 1910. Ctlg. Free.

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
1911 *Awards: 81 Prizes. Illustrated Catalogue free.*

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

By Royal Warrants

To H.M. King George V. To H.M. Queen Alexandra.

Why wait until your garden is in danger of destruction?

Prevent Mildew, Green Fly, and all forms of Insect Blight by using

Jeyes'
Horticultural Wash

An efficient safeguard against all garden pests.

From all Chemists, Seedsmen and Florists.

Write for Pamphlet and Prices to

Jeyes' Sanitary Compounds Co., Ltd.
64, Cannon Street, London, E.C.

MERRYWEATHERS'

614 PUMP

IS THE

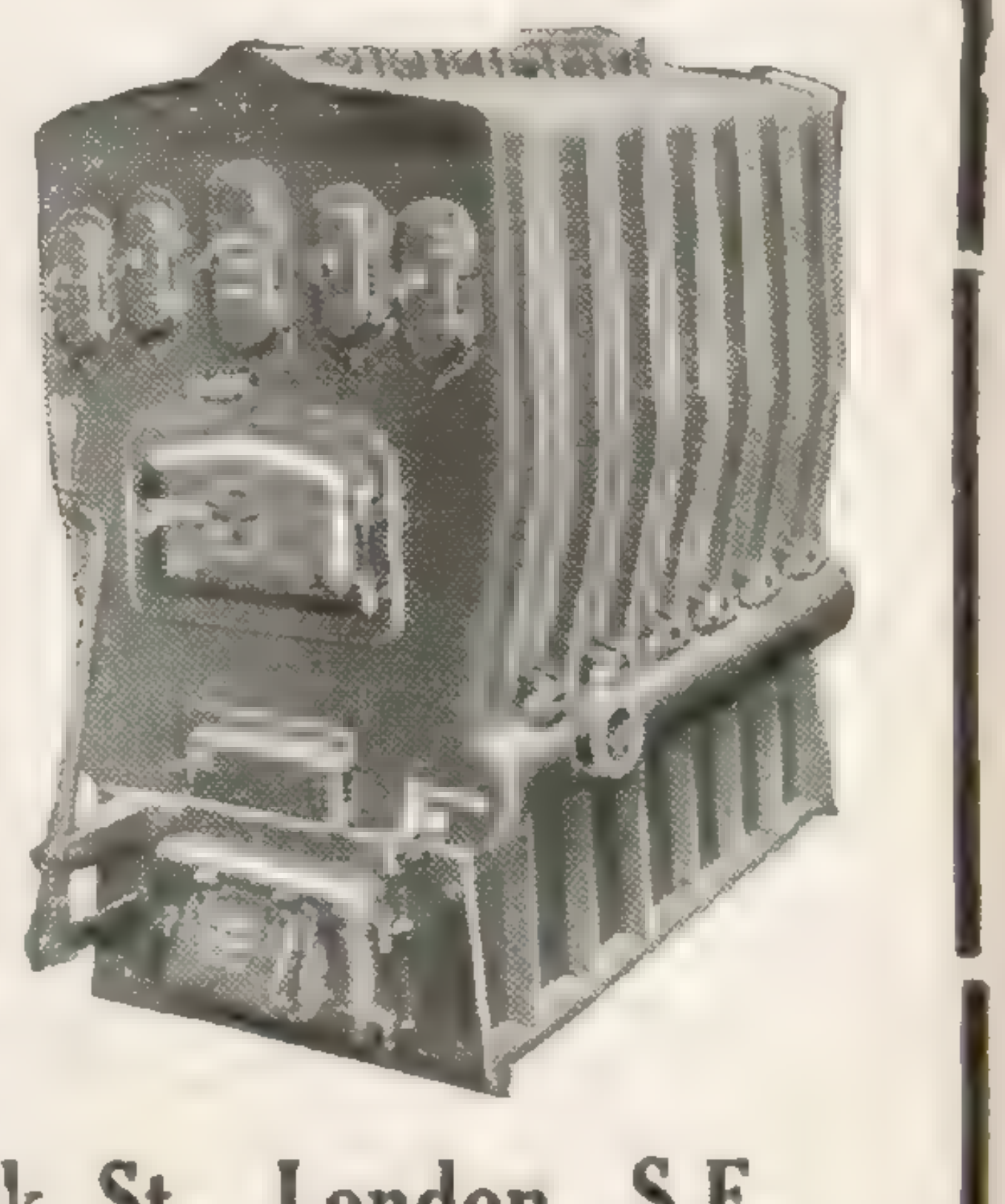
Gardener's Friend.

Easy to Work.
Simplicity Itself.

Write or Call—

63, Long Acre,
LONDON, W.C.

Kinnell's Boilers



THREE LEADING TYPES:—

The **"ANGLIAN," Sectional,** heats 800 to 8,000 ft. 4in. pipe.
The **"ROCHFORD," Tubular,** heats 600 to 8,000 ft. 4in. pipe.
The **"HORSE-SHOE"** for the small Greenhouse.

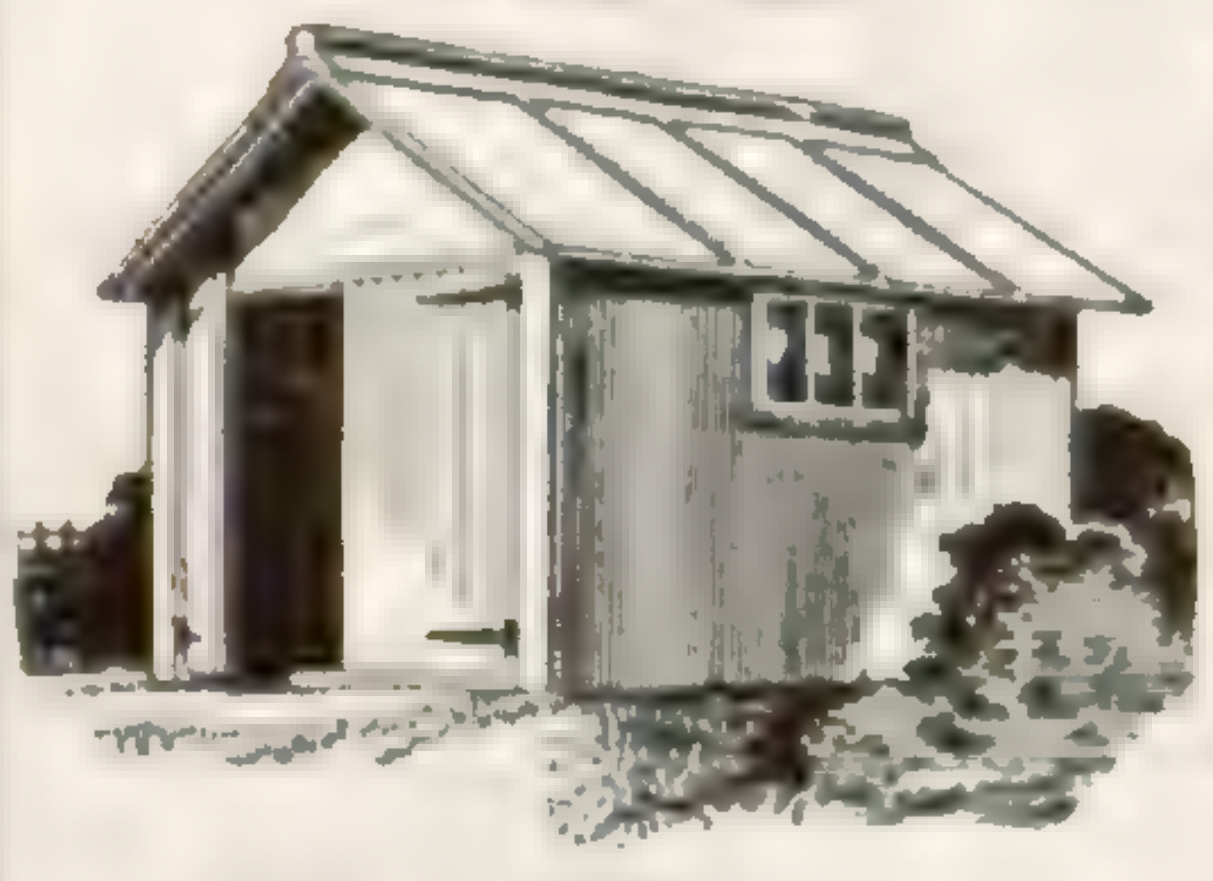
Saddle Boilers, Trentham Boilers, and all classes of Pipes, Fittings, etc., ready for immediate despatch.

Write for List No. 77, post free.

CHAS. P. KINNELL & Co., Ltd., 65, & 65a, Southwark St., London, S.E.

PORTABLE BUILDING
WITH DOUBLE DOORS.

No. 55.



Copyright Registered.

Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Doors fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

Sizes.				Strong Floor.
7ft. long, 5ft. wide, 7ft. 6in. high	£2	3	6	6/9
8ft. long, 6ft. wide, 8ft. high	2	14	0	8/9
9ft. long, 7ft. wide, 8ft. high	3	2	6	11/6
10ft. long, 8ft. wide, 8ft. 4in. high	3	12	6	19/0

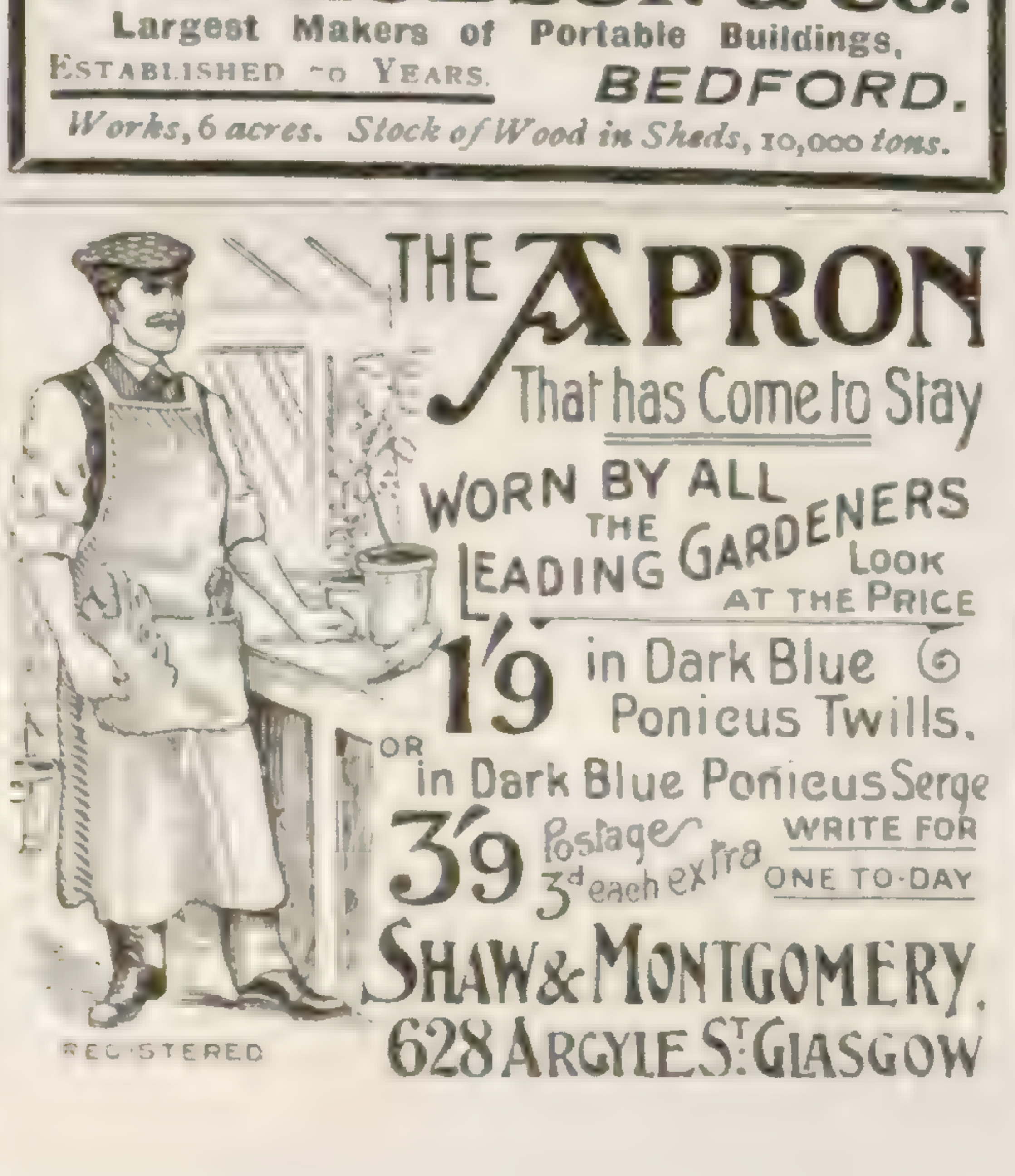
Suitable for Workshops, Motor Cycle, Bath Chair, & Store Houses, Potting & Tool Sheds, etc.

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
ESTABLISHED 70 YEARS. *BEDFORD.*

Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.


THE APRON
That has Come to Stay
WORN BY ALL THE LEADING GARDENERS
LOOK AT THE PRICE
1/9 in Dark Blue Ponicus Twills.
OR in Dark Blue Ponicus Serge
3/9 Postage 3d each extra
WRITE FOR ONE TO-DAY
SHAW & MONTGOMERY,
628 ARGYLE ST. GLASGOW
REGISTERED

BENTLEY'S
NICOTINE COMPOUND

This Vaporiser contains a higher percentage of Pure Nicotine than any other.

BENTLEY'S
INSECTICIDE.

An ideal non-poisonous Plant Cleanser for general use under glass.

BENTLEY'S
CONCENTRATED ALKALI.

A perfect Winter Wash. Destroys mosses, lichens, fungi and their spores.

BENTLEY'S
CARNATION MANURE.

Universally popular. All Carnation Specialists admit its excellence.

BENTLEY'S
DAISY KILLER (LAWN SAND).

A most effective Weed Destroyer. Completely transforms lawns.

General Catalogue sent on application to the manufacturers:

JOSEPH BENTLEY LIMITED,
Chemical Works,
BARROW-ON-HUMBER, HULL.

PUBLISHERS' ANNOUNCEMENTS.

THE GARDENERS' MAGAZINE may be obtained by order from all Newsagents, price Twopence, every Saturday. If any difficulty be found, a copy will be posted weekly direct from the Publisher, 14 and 149, Aldersgate Street, London, on the following terms: Twelve Months, 10s. 6d.; Six Months, 5s. 6d.

VOLUME LIII., bound in green cloth, containing the 52 weekly numbers, 1910. Price 12s. 6d.; by post, 13s. 4d.

Sales by Auction.

Sales Next Week.

DUTCH BULBS.

Sales every day next week at Eleven o'clock (excepting Tuesday and Saturday) of Hyacinths, Tulips, Crocus, Narcissus, and others direct from Holland.

ROSES. ROSES. ROSES.

WEDNESDAY NEXT, Dec. 6th, at One o'clock.—Large consignments of English, French, and Dutch, comprising Standards, Dwarfs, Climbers, T., H.T., and H.P. Together with 200 lots of choice Herbaceous Plants in large variety.

4,330 CASES JAPANESE LILIUMS received direct.—Wednesday next, Dec. 6th, at Half-past Two o'clock, preceded at Twelve o'clock by Thousands of Miscellaneous Bulbs, Roots, and Tubers in large variety.

Palms, Plants, Azaleas, Rhododendrons, Aspidistras, Standard Bays, etc., Wednesday next, Dec. 6th, at Five o'clock.

IMPORTED and ESTABLISHED ORCHIDS, in variety, FRIDAY NEXT, Dec. 8th, at a Quarter to One o'clock.

MESSRS. PROTHEROE AND MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view mornings of sale, and catalogues had.

---

100 NURSERIES, MARKET GARDENS, FLORIST AND SEED BUSINESSES TO BE DISPOSED OF.

MESSRS. PROTHEROE and MORRIS'S HORTICULTURAL REGISTER contains full particulars of the above, and can be obtained gratis at 67 and 68, Cheapside, E.C.

DUTCH BULBS, PERENNIALS, ROSE TREES, SHRUBS.

MR. J. C. STEVENS begs to announce that his **Sales by Auction** are held every **MONDAY, WEDNESDAY** and **THURSDAY** at **12.30.**

Catalogues post free.

Lots purchased, packed, and forwarded to all parts.

STEVENS' AUCTION ROOMS

(Established 150 Years),

38, King Street, Covent Garden, London, W.C.

FREEHOLD FOR SALE. — Convenient House, with large garden; also large piece of land with same, with two large greenhouses and frames, all fitted up with the most up-to-date heating system; only 17 miles out, with good train service; good local demand for all produce; suit practical man for intensive culture. To be sold cheap.

T. E., 1346, c.o. "Gardeners' Magazine," Aldersgate Street, E.C.

MIDDLESBROUGH EDUCATION COMMITTEE.

LINTHORPE CERTIFIED INDUSTRIAL SCHOOL.

Wanted, a Single Young Man as GARDENER for the above Institution; one accustomed to market gardening will be preferred.

The person appointed will be required to reside in the school, and to take his turn on supervision duty with the other officers.

Applications, stating age, present occupation, experience, and salary required (exclusive of board, lodgings, and washing), together with copies of recent testimonials, to be forwarded to Mr. A. Robertson, Superintendent, Industrial Schools, Middlesbrough, as early as possible.

J. S. CALVERT, Secretary.

Education Offices, Middlesbrough,
November 27, 1911.

CHARGES FOR ADVERTISEMENTS IN THE GARDENERS' MAGAZINE.

	£	s.	d.
Five Lines and under	£0	2	6
Per Line beyond	0	0	6
" Inch	0	6	0
" Half Column	1	10	0
" Column	3	0	0
" Page	9	0	0

A reduction from above is made when a series is taken.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— & Co.

Offices: 148 and 149, Aldersgate Street, London.

LAXTON'S
FRUIT TREES
IN ALL SHAPES
CATALOGUES GRATIS
LAXTON BROS
BEDFORD

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

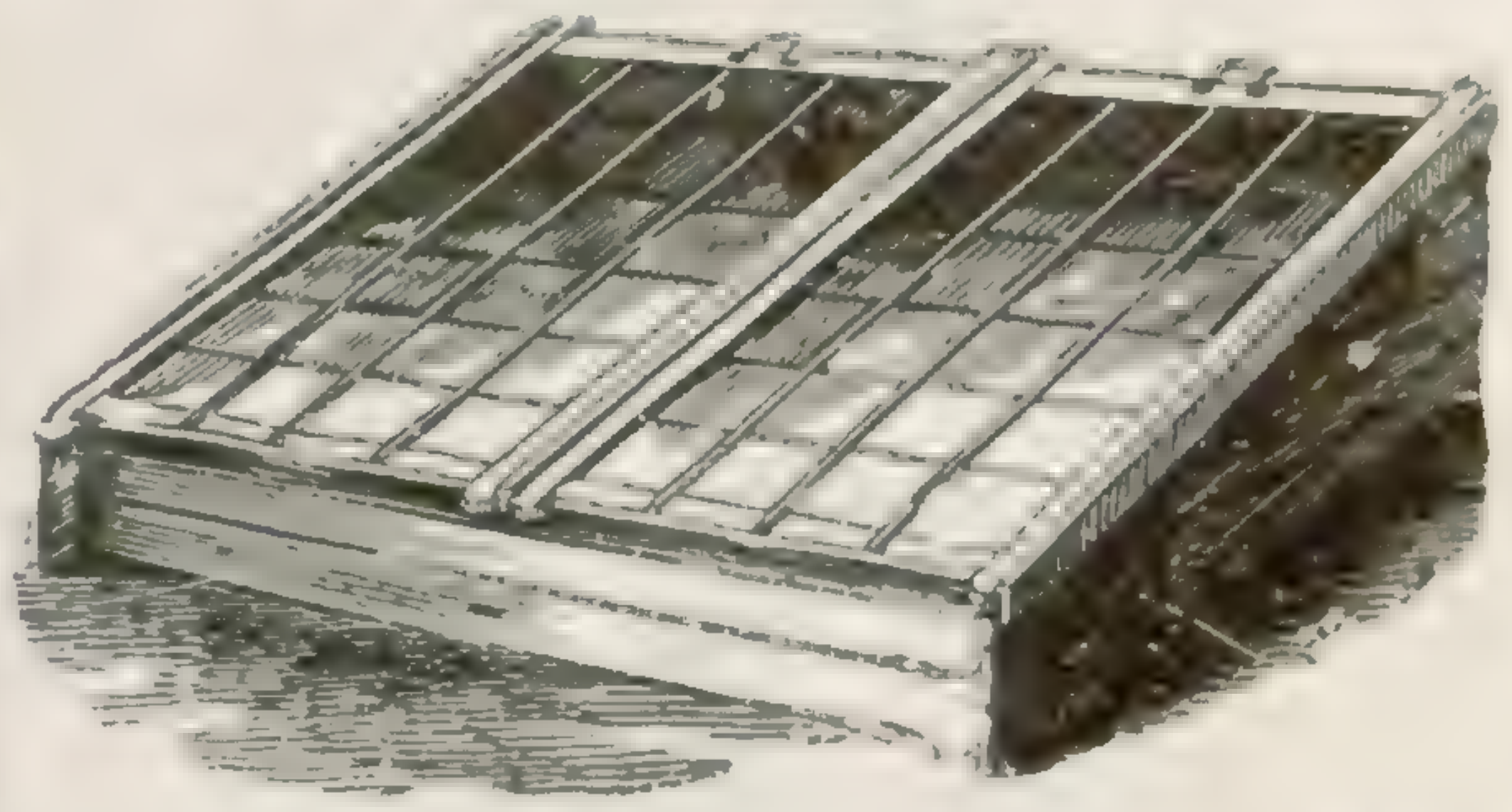
ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

PORTABLE CUCUMBER FRAMES.

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.		£	s.	d
1-light 4 ft. by 6 ft.	*CASH PRICES.*	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.	*CARRIAGE PAID.*	5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,

Royal Horticultural Works,

MIDDLETON MANCHESTER.

GARDENERS should write the man behind this boot for illustrated catalogue of reliable footwear.

We make sound, Scotch durable boots for the whole family. A joy to the feet.

Our "**Gardener**" Boots at **10/9** are a revelation.

NORWELL'S. PERTH, SCOTLAND.

C1 Established over 100 years.

AMARYLLIS — HIPPEASTRUMS — unrivalled New Hybrids. Highest Awards at Home and Abroad, including 37 Gold Medals. Splendid Bulbs, thoroughly ripened. Catalogues and all particulars free on application. The trade supplied. ROBT. P. KER and SONS, Aigburth Nursery, Liverpool.

W. SEABROOK & SONS

Offer a very fine stock of

FRUIT TREES

and ROSES.

Full Illustrated Catalogue sent post free on application.

CHELMSFORD

CHEAP AND GENUINE.

THE HOLLAND PLANT CO., Boskoop, HOLLAND

(Postal Address: Head Office, GOUDA).

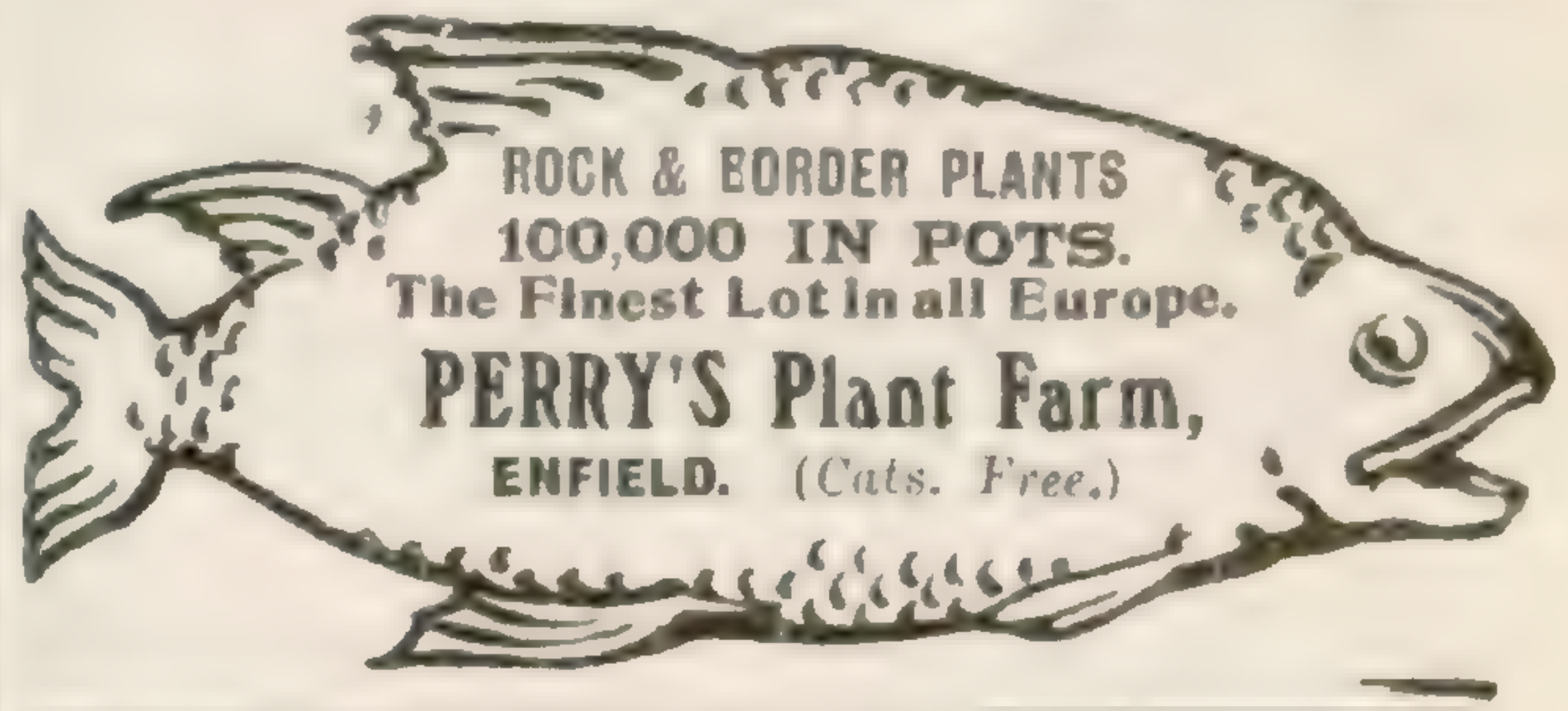
offer very fine sorts of

Rhododendrons, with buds, in very fine colours, **1/6, 2/-, 3/-, 4/-, 5/-** each. **Polyanth. Roses,** Mrs. Taft, new 1909, blood red; **Orleans Rose,** new 1909, brilliant red; **Phyllis,** new, fine red; **Maman Levavasseur,** new 1907, **50/-** per 100. **New Sorts, 1911:**—Climbing Rose, Eisenach, **2/-** each; Dad Sterling, **4/-** each. Climbing Rose, Wartburg, **2/-** each; Climbing Rose, Flower of Fairfield, synonym Crimson semper florens, **50/-** per 100. Climbing Roses in different good sorts, as Crimson Rambler, Dorothy Perkins, Tausendschon, etc., **40/-** per 100. Acer negundo, fol. var., **2/-** each. Japan Maples in fine sorts, **2/-** each. Carriage free England.

Orchids! Orchids!! Orchids!!

The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application.—**J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana, Vanda Cœrulea Lushai Hill variety, dark blue type; Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.



ROCK & BORDER PLANTS
100,000 IN POTS.
The Finest Lot in all Europe.
PERRY'S Plant Farm,
ENFIELD. *(Cats. Free.)*

SPECIALITIES. (Carriage Paid).

Shrubs for

Under Trees	Wild Gardens
Rock Gardens	Natural Gardens
Water Gardens	Bamboo Gardens
Woodland Gardens	Azalea Gardens

Catalogue with **450** Illustrations, Post Free.

CAUNTLETT'S Ltd., Chiddingfold, SURREY

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant

Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:

RICHARD SANKEY & SON, LD.,

Bulwell Potteries,

NOTTINGHAM.

BUSINESS CARDS.

CARNATIONS.

ALLWOOD BROS., Haywards Heath, Sussex.
Perpetual Flowering Carnation Specialists, Raisers and Growers.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free

ORCHIDS.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., Southgate, London, N.
(Tel.: 59, Palmers Green.)
Catalogues post free on Application.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

R. H. BATH, Ld.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

FRANK CANT & CO.,
Braiswick Rose Garden, Colchester.
The World-famed Champion Rose Growers.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 1st Prizes, 3 2nds, at N.R.S. Shows, 1910. Ctlg. Free.

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
1911 Awards: 81 Prizes. Illustrated Catalogue free.

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

By Royal Warrants

To H.M. King George V. To H.M. Queen Alexandra.

Why wait until your garden is in danger of destruction?

Prevent Mildew, Green Fly, and all forms of Insect Blight by using

Jeyes' Horticultural Wash

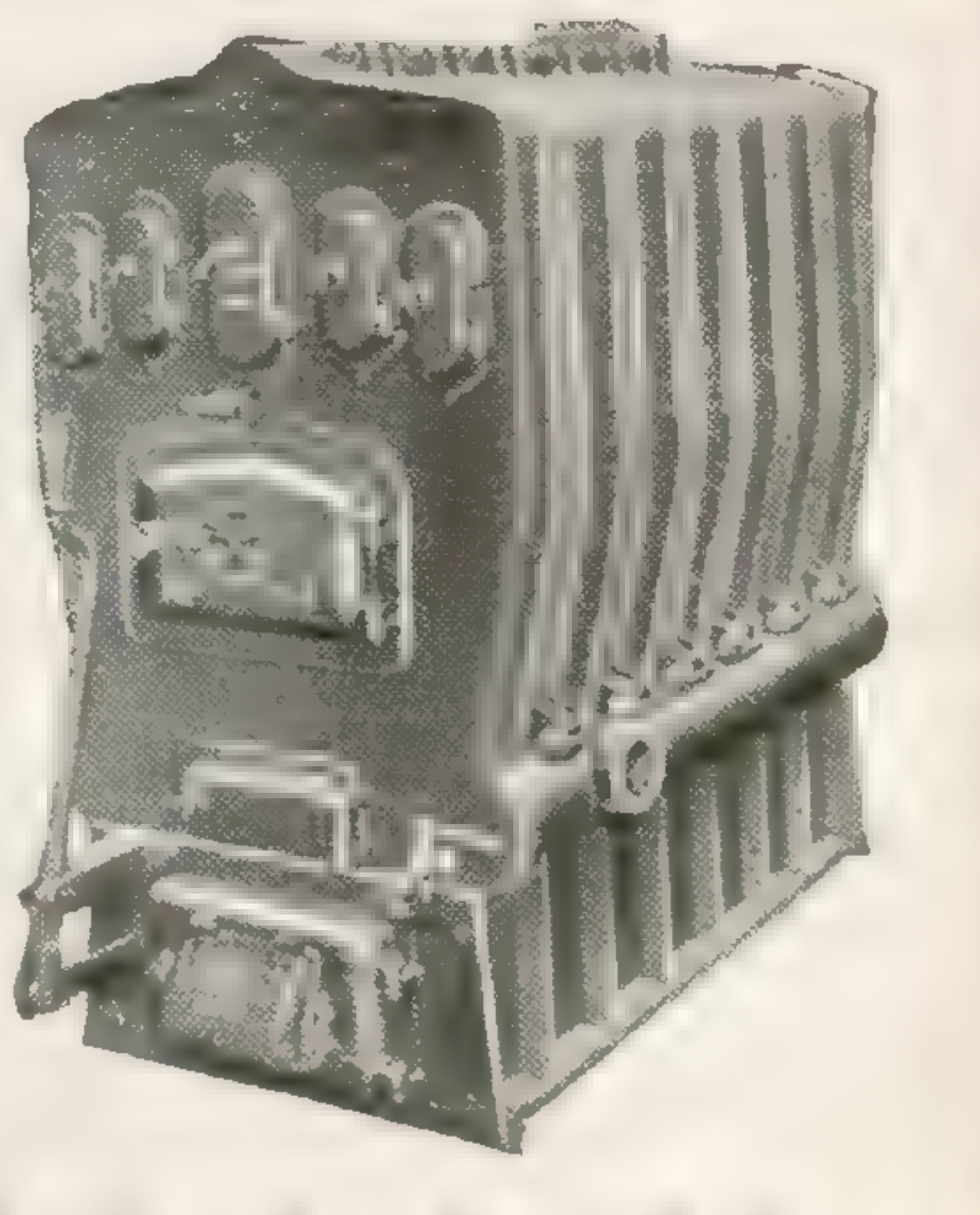
An efficient safeguard against all garden pests.

From all Chemists, Seedsmen and Florists.

Write for Pamphlet and Prices to

Jeyes' Sanitary Compounds Co., Ltd.
64, Cannon Street, London, E.C.

Kinnell's Boilers



THREE LEADING TYPES:—

The **"ANGLIAN," Sectional,** heats 800 to 8,000 ft. 4in. pipe.

The **"ROCHFORD," Tubular,** heats 600 to 8,000 ft. 4in. pipe.

The **"HORSE-SHOE"** for the small Greenhouse.

Saddle Boilers, Trentham Boilers, and all classes of Pipes, Fittings, etc., ready for immediate despatch.

Write for List No. 77, post free.

CHAS. P. KINNELL & Co., Ltd., 65, & 65a, Southwark St., London, S.E.

MERRYWEATHERS'

614 PUMP

IS THE

Gardener's Friend.

Easy to Work.
Simplicity Itself.

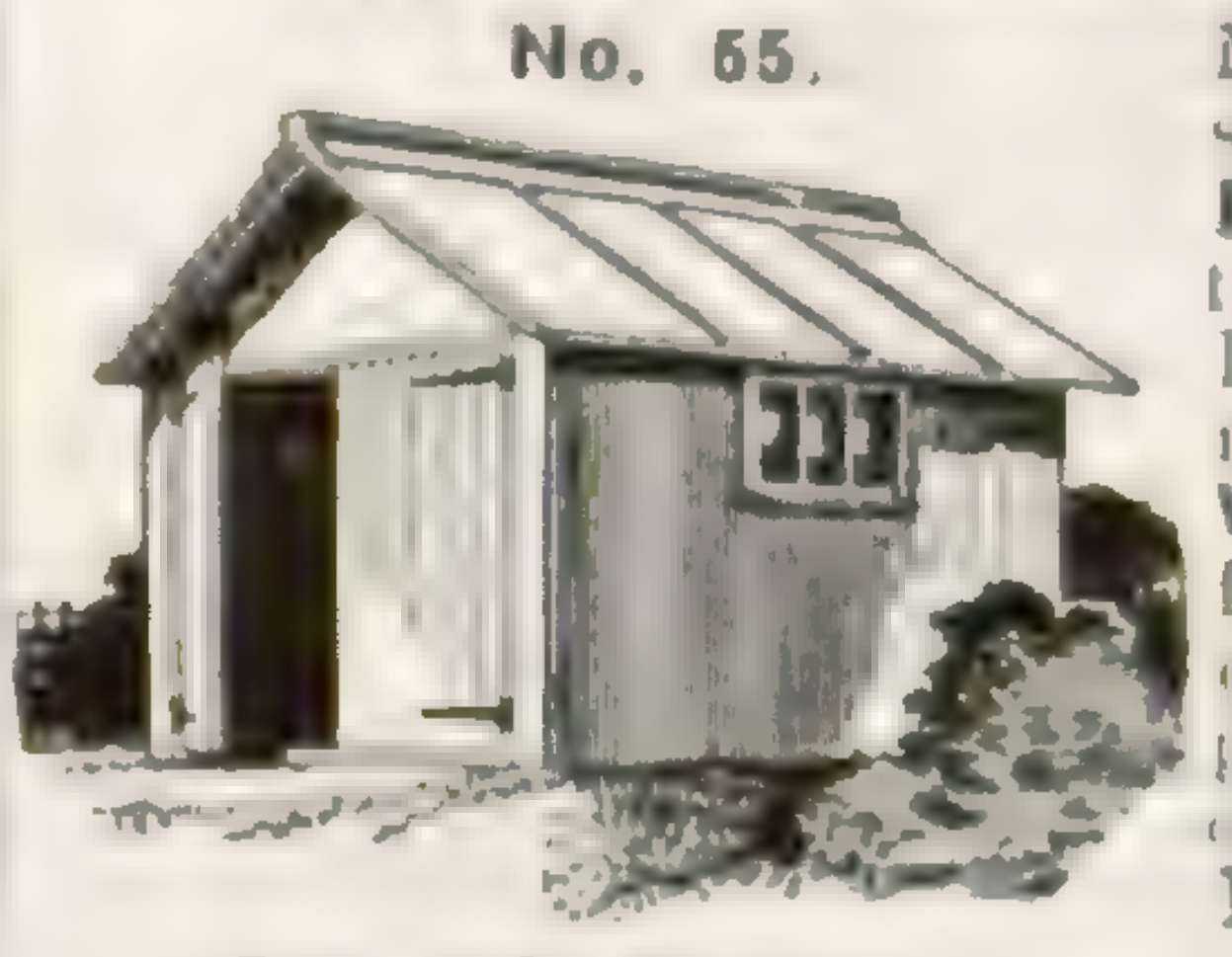
Write or Call—

63, Long Acre,
LONDON, W.C.

PORTABLE BUILDING

WITH DOUBLE DOORS.

No. 55.



Copyright Registered.

Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V jointed on strong framing.** Roof covered with compressed Asphalte over tongued boards. Doors fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

Sizes.				Strong Floor.
7ft. long, 5ft. wide, 7ft. 6in. high	£2	3	6	6/9
8ft. long, 6ft. wide, 8ft. high	2	14	0	8/9
9ft. long, 7ft. wide, 8ft. high	3	2	6	11/6
10ft. long, 8ft. wide, 8ft. 4in. high	3	12	6	19/0

Suitable for Workshops, Motor Cycle, Bath Chair, & Store Houses, Potting & Tool Sheds, etc.

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
Established 70 Years. BEDFORD.

Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

REGISTERED

THE APRON

That has Come to Stay

WORN BY ALL THE LEADING GARDENERS

LOOK AT THE PRICE

1/9 in Dark Blue Ponicus Twills,

OR in Dark Blue Ponicus Serge 3/9

Postage 3d each extra

WRITE FOR ONE TO-DAY

SHAW & MONTGOMERY,
628 ARGYLE ST GLASGOW

BENTLEY'S NICOTINE COMPOUND

This Vaporiser contains a higher percentage of Pure Nicotine than any other.

BENTLEY'S INSECTICIDE.

An ideal non-poisonous Plant Cleanser for general use under glass.

BENTLEY'S CONCENTRATED ALKALI.

A perfect Winter Wash. Destroys mosses, lichens, fungi and their spores.

BENTLEY'S CARNATION MANURE.

Universally popular. All Carnation Specialists admit its excellence.

BENTLEY'S DAISY KILLER (LAWN SAND).

A most effective Weed Destroyer. Completely transforms lawns.

General Catalogue sent on application to the manufacturers:

JOSEPH BENTLEY LIMITED,
Chemical Works,
BARROW-ON-HUMBER, HULL.

PUBLISHERS' ANNOUNCEMENTS.

THE GARDENERS' MAGAZINE may be obtained by order from all Newsagents, price Twopence, every Saturday. If any difficulty be found, a copy will be posted weekly direct from the Publisher, 148 and 149, Aldersgate Street, London, on the following terms: Twelve Months, 10s. 6d.; Six Months, 5s. 6d.

VOLUME LIII., bound in green cloth, containing the 52 weekly numbers, 1910. Price 12s. 6d.; by post, 13s. 4d.

Sales by Auction.

Sales Next Week.
DUTCH BULBS.

Sales every day next week at Eleven o'clock (excepting Tuesday and Saturday) of Hyacinths, Tulips, Crocus, Narcissus, and others direct from Holland.

ROSES. ROSES. ROSES.

WEDNESDAY NEXT, Dec. 6th, at One o'clock.—Large consignments of English, French, and Dutch, comprising Standards, Dwarfs, Climbers, T., H.T., and H.P. Together with 200 lots of choice Herbaceous Plants in large variety.

4,330 CASES JAPANESE LILIUMS received direct.—Wednesday next, Dec. 6th, at Half-past Two o'clock, preceded at Twelve o'clock by Thousands of Miscellaneous Bulbs, Roots, and Tubers in large variety.

Palms, Plants, Azaleas, Rhododendrons, Aspidistras, Standard Bays, etc., Wednesday next, Dec. 6th, at Five o'clock.

IMPORTED and ESTABLISHED ORCHIDS, in variety, FRIDAY NEXT, Dec. 8th, at a Quarter to One o'clock.

MESSRS. PROTHEROE AND MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view mornings of sale, and catalogues had.

---

100 NURSERIES, MARKET GARDENS, FLORIST AND SEED BUSINESSES TO BE DISPOSED OF.

MESSRS. PROTHEROE and MORRIS'S HORTICULTURAL REGISTER contains full particulars of the above, and can be obtained gratis at 67 and 68, Cheapside, E.C.

DUTCH BULBS, PERENNIALS, ROSE TREES, SHRUBS.

MR. J. C. STEVENS begs to announce that his **Sales by Auction** are held every **MONDAY, WEDNESDAY** and **THURSDAY** at **12.30.**

Catalogues post free.

Lots purchased, packed, and forwarded to all parts.

STEVENS' AUCTION ROOMS
(Established 150 Years),
38, King Street, Covent Garden, London, W.C.

FREEHOLD FOR SALE. — Convenient House, with large garden; also large piece of land with same, with two large greenhouses and frames, all fitted up with the most up-to-date heating system; only 17 miles out, with good train service; good local demand for all produce; suit practical man for intensive culture. To be sold cheap.

T. E., 4346, c.o. "Gardeners' Magazine," Aldersgate Street, E.C.

MIDDLESBROUGH EDUCATION COMMITTEE.

LINTHORPE CERTIFIED INDUSTRIAL SCHOOL.

Wanted, a Single Young Man as GARDENER for the above Institution; one accustomed to market gardening will be preferred.

The person appointed will be required to reside in the school, and to take his turn on supervision duty with the other officers.

Applications, stating age, present occupation, experience, and salary required (exclusive of board, lodgings, and washing), together with copies of recent testimonials, to be forwarded to Mr. A. Robertson, Superintendent, Industrial Schools, Middlesbrough, as early as possible.

J. S. CALVERT, Secretary.
Education Offices, Middlesbrough,
November 27, 1911.

CHARGES FOR ADVERTISEMENTS IN THE GARDENERS' MAGAZINE.

	£	s.	d.
Five Lines and under	£0	2	6
Per Line beyond	0	0	6
" Inch	0	6	0
" Half Column	1	10	0
" Column	3	0	0
" Page	9	0	0

A reduction from above is made when a series is taken.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— & Co.

Offices: 148 and 149, Aldersgate Street, London.

LAXTON'S
FRUIT TREES
IN ALL SHAPES
CATALOGUES GRATIS
LAXTON BROS
BEDFORD

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

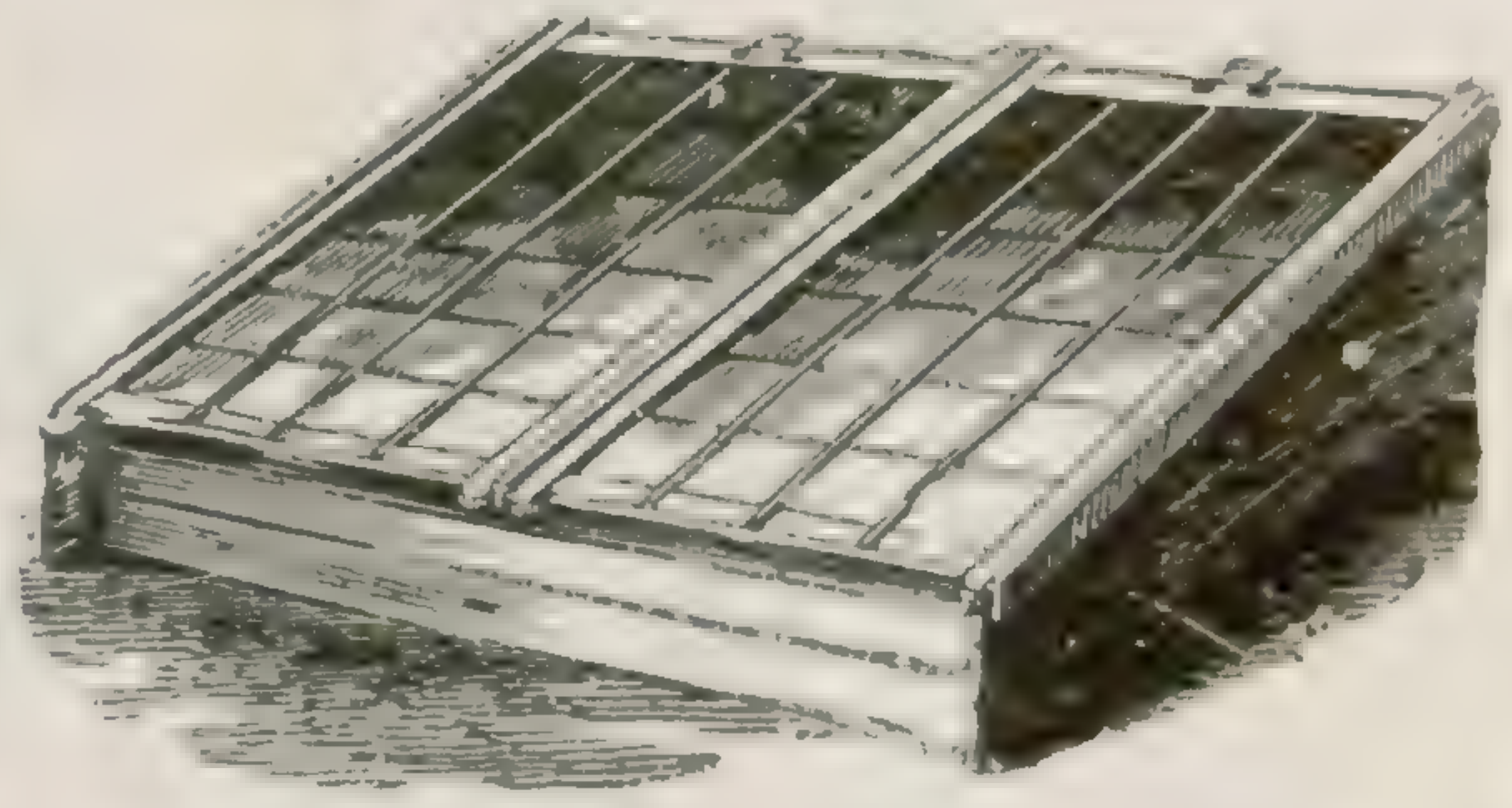
ORCHID SPECIALISTS,

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

PORTABLE CUCUMBER FRAMES.

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.		£	s.	d
1-light 4 ft. by 6 ft.	CASH PRICES. CARRIAGE PAID.	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.		5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON MANCHESTER.

GARDENERS should write the man behind this boot for illustrated catalogue of reliable footwear.

We make sound, Scotch durable boots for the whole family. A joy to the feet. Our "Gardener" Boots at **10/9** are a revelation.

NORWELL'S, PERTH, SCOTLAND.
C1. Established over 100 years.

AMARYLLIS — HIPPEASTRUMS — unrivalled New Hybrids. Highest Awards at Home and Abroad, including 37 Gold Medals. Splendid Bulbs, thoroughly ripened. Catalogues and all particulars free on application. The trade supplied. ROBT. P. KER and SONS, Aigburth Nursery, Liverpool.

W. SEABROOK & SONS

Offer a very fine stock of

FRUIT TREES and ROSES.

Full Illustrated Catalogue sent post free on application.

CHELMSFORD

CHEAP AND GENUINE.

THE HOLLAND PLANT CO., Boskoop, HOLLAND
(Postal Address: Head Office, GOUDA),
offer very fine sorts of

Rhododendrons, with buds, in very fine colours, **1/6, 2/-, 3/-, 4/-, 5/-** each. **Polyanth. Roses,** Mrs. Taft, new 1909, blood red; **Orleans Rose,** new 1909, brilliant red; **Phyllis,** new, fine red; **Maman Levavasseur,** new 1907, **50/-** per 100. **New Sorts, 1911:**—Climbing Rose, Eisenach, **2/-** each; Dad Sterling, **4/-** each. Climbing Rose, Wartburg, **2/-** each; Climbing Rose, Flower of Fairfield, synonym Crimson semper florens, **50/-** per 100. Climbing Roses in different good sorts, as Crimson Rambler, Dorothy Perkins, Tausendschon, etc., **40/-** per 100. Acer negundo, fol. var., **2/-** each. Japan Maples in fine sorts, **2/-** each. Carriage free England.

Orchids! Orchids!! Orchids!!

The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application. — **J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana, Vanda Cœrulea Lushai Hill variety, dark blue type; Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.

ROCK & BORDER PLANTS
100,000 IN POTS.
The Finest Lot in all Europe.
PERRY'S Plant Farm,
ENFIELD. (Cats. Free.)

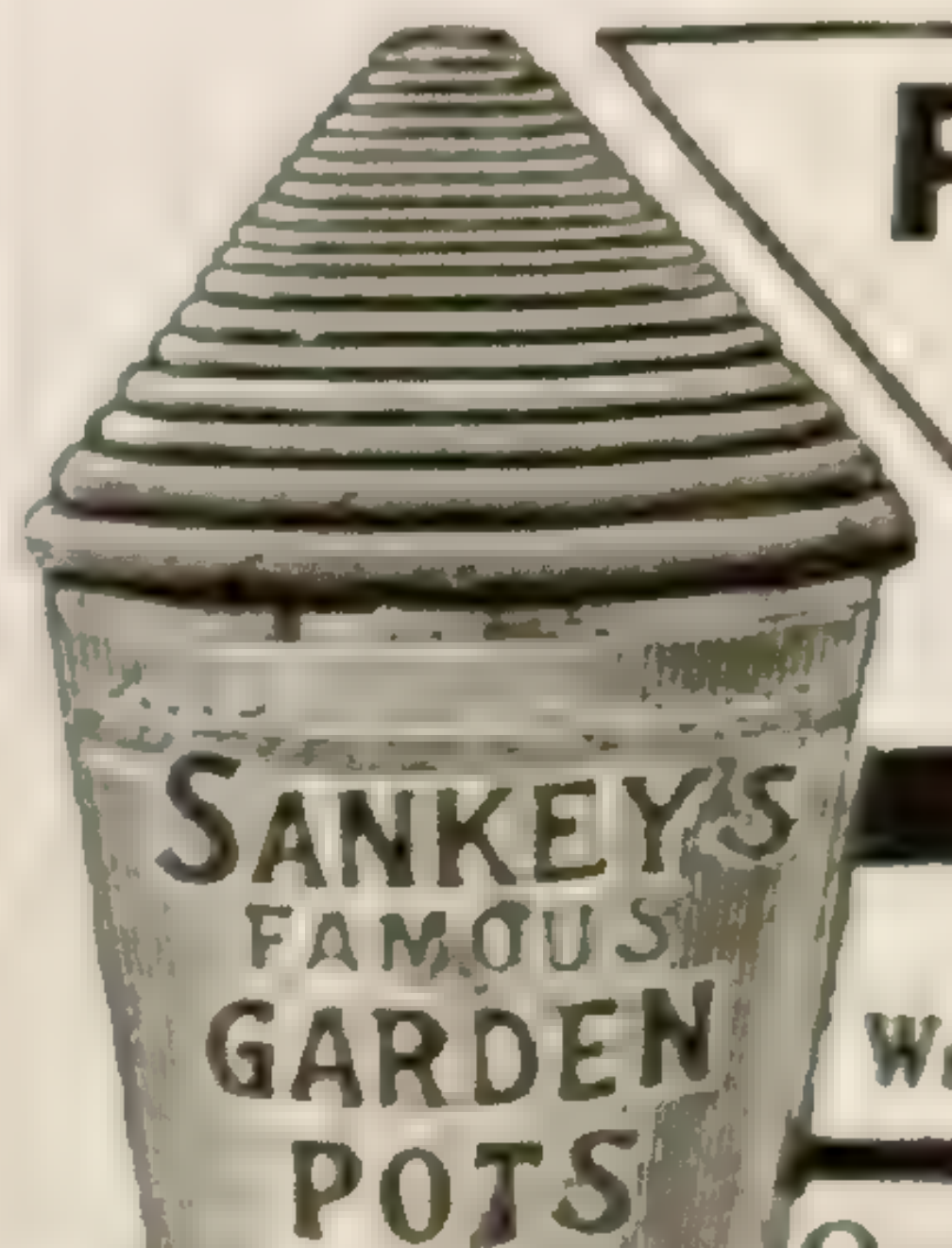
SPECIALITIES. (Carriage Paid).

Shrubs for

Under Trees	Wild Gardens
Rock Gardens	Natural Gardens
Water Gardens	Bamboo Gardens
Woodland Gardens	Azalea Gardens

Catalogue with 450 Illustrations, Post Free.

CAUNTLETT'S Ltd., Chiddingfold, SURREY



FLOWER POTS.

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant — Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

TRIPLE CORDON GOOSEBERRY

PYRAMID APPLE.

BY SPECIAL APPOINTMENT TO HIS MAJESTY THE KING.

JAMES VEITCH & SONS
LTD.
ROYAL EXOTIC NURSERY
CHELSEA

Request an inspection of their very fine stock of Fruit Trees at their Langley and Feltham Nurseries.

GOLD MEDALS

have been awarded to us

for POT FRUIT TREES
for COLLECTIONS of APPLES
for COLLECTIONS of PEARS
for COLLECTIONS of GOOSEBERRIES.

BUNYARD'S FRUIT . . TREES . .

ORDER AT ONCE FOR PRESENT PLANTING.

WRITE FOR CATALOGUE.

Geo. Bunyard & Co.,
LTD.,
Royal Nurseries,
MAIDSTONE.

Telegrams :
FRANK CANT,
COLCHESTER.

Telephone
No. 182.

CANTS' CHAMPION ROSES

THE FINEST STOCK IN THE KINGDOM.

Direct from

FRANK CANT & CO.,

Dept. B., BRAISWICK ROSE GARDENS, COLCHESTER.

Our Illustrated Catalogue post free on application.

VOL. LIV.—No. 3,031. SATURDAY, DECEMBER 2, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Interpretations of Experimental Results.

MR. GEORGE BARKER.

So many factors have to be taken into consideration in conducting experiments in field and garden, and interpretating the results obtained, that it is extremely difficult to avoid errors of more or less importance. This fact has been fully recognised for some time past by those who have had experience in scientific investigations, and it has been felt that as experimental results are more or less misleading to practical men unless correctly interpreted, an effort should be made to secure the highest possible degree of accuracy. With this object in view, several papers were contributed to the meeting of the British Association for the Advancement of Science, held at Sheffield last year, in which the several aspects of experimental error were fully dealt with. As the papers were contributed by authorities of the highest eminence in their respective branches of scientific enquiry, and in view of the importance of the subject, the British Association suggested that the Board of Agriculture should undertake their publication for the purpose of obtaining for them a much wider circulation than they would have if issued merely as part of the British Association's report. The suggestion has been acted upon, and the papers have been issued as a supplement to the current issue of the "Journal" of the Board, and may be obtained at a small cost. There are four papers, all of much value, but those of more immediate interest to horticulturists are: Mr. Spencer Pickering's paper on experimental error in horticultural work, and the paper in which Mr. A. D. Hall and Dr. E. J. Russell deal with the interpretation of the results of field trials. In the second of these two papers it is pointed out that the value of an experiment depends upon the degree of confidence that can be attached to the result, i.e., on the probability that a similar result will be obtained when the trial is repeated; and also that all which can be reasonably demanded from a set of field experiments is a workaday measure of certainty, or, in other words, a probability of attaining a specified result that to spend money on the expectation becomes a reasonable speculation. An experiment is defined as a question put to Nature, but in field experiments one of the chief difficulties lies in putting the question in such manner that the answer will really bear upon the point it is desired to test. It has to be recognised that the materials with which the experiments are being made—crops, for example—are living organisms, and, as such, are very complex, the outcome of a number of factors. The chief function of a manure is to supply nutrient matter to the plants, and manurial trials are usually carried out on the assumption that a comparison is being made between the effects of certain plant foods only. But, as the authors of the paper so clearly state, some manures exert physical actions upon certain soils, which, by affecting their water content, may obscure the effects of the manure as plant food. It is therefore advised that in arranging a set of field experiments to keep the question very clearly in view, and to be careful to avoid as far as possible all secondary factors, which may exert a disturbing influence. Experimentalists are warned that, however careful their design, they must not expect a "correct" answer, as it is at once seen from the divergence in the answer returned when the question is repeated in different places or at different times. The problem is to construct the most probable result from the different answers, and to that end certain principles must, it is suggested, be observed. The principles to be kept in view are, the authors state: (1) At the outset the issue to be tested must be defined, and the experiment kept simple by confining it to a single, or at most, to a very few issues; (2) the result must be examined to ascertain how far they belong to a single series comparable inter se, or how far they have been irregularly affected by some unanticipated factor; (3) in any series admitting comparisons, the magnitude of the experimental error must be determined. Special attention is directed to the fact that lack of uniformity in the soil leads materially to corresponding variation in the crop results, and that over a field that is apparently uniform, there are to be found differences due to natural causes or to past treatment. It may be differences in the water content, which can only be determined with a proper degree of accuracy by the weighing machine, or a difference in the plant food in the soil due to previous dressings. Mr. Spencer Pickering's paper is confined to experimental work in connection with the various kinds of hardy fruits, and it need hardly be said that the author writes with an experience that is quite unique. At the outset, Mr. Spencer Pickering states that experiments in horticulture wherein the behaviour or trees or bushes under varying condition are being studied exhibit errors from sources which do not generally affect experiments in agriculture. These, he states, are due (1) to the relatively small number of plants which it is possible to include in each experiment; (2) to the necessity for branch treatment; (3) to the large number of varieties of each kind; and (4) to the fact that the life of the tree, or even of small fruit-bearing plants is of much greater duration than that of farm crops. It is suggested that in the case of apples and pears, the trees should be planted at least twenty feet apart, which allows a hundred trees to the acre. To have relatively large plots of each variety when a considerable number of varieties have to be tested is therefore out of the question, and such plots Mr. Spencer Pickering does not consider necessary, or even desirable, because of the lack of uniformity in the land of England. The most satisfactory results are, he considers, obtained by planting small plots in situations where the conditions appear to be uniform, and duplicating experiments in other situations where similar uniformity exists. The importance of uniformity in the land on which experiments are conducted cannot be overestimated, and we are glad to find the authors of both papers directing special attention to it. As regards the minimum number of trees, etc., each plot should contain, Mr. Spencer Pickering states that, judging from the results obtained at Woburn, the number may be placed at six to twelve for fruit trees, twenty to fifty for bush fruits, and 100 to 200 for strawberries. Stated thus briefly, the latitude indicated by the figures given appears to be too great, but in the paper it is pointed out such an estimate requires many qualifications, and several are given. In referring to the experimental errors in connection with the experimental culture of hardy fruits, special mention is made of those arising from the number of varieties, method of pruning, length of life of the trees, and the measurement of results, and much valuable information given on the best method of avoiding them. The two papers to which we have specially referred are equally deserving of the careful attention of both the experimentalist and the practical cultivator, for while assisting the one in the conduct of his experiments, they will show the other how necessary it is not to readily accept results of experiments unless they are known to have been obtained under conditions favourable to the elimination of error.

Mr. George Barker, whose portrait we give herewith, is one of the many cultivators of chrysanthemums who, by the success they achieve in the production and exhibition of specimen blooms, assist in a marked manner in maintaining the traditional standard of these flowers at the provincial shows. Mr. Barker is equally at home in all departments of the garden, as evidenced by the high keeping that characterises the gardens of Hill House, Saffron Walden, the residence of Miss Gibson; but he has given special attention to chrysanthemums, and, as the result of his success in their cultivation, is a formidable competitor at the exhibitions at which he takes part. For some years he has exhibited both Japanese and incurved varieties with such remarkable success that in the several open classes, it is seldom that he occupies other than the first place in any one of them. This year he surpassed himself, and at the Cambridge Chrysanthemum Society's Show staged blooms of Japanese varieties that have certainly not been surpassed, if, indeed, they have been equalled, in this or any other year. We were specially interested in the incurved blooms that Mr. Barker staged both on boards and in vases, for while of large size, they were so perfect in every respect as to remind us of the superbly finished incurved blooms that were staged by the late Mr. E. Sanderson, so long the president of the National Chrysanthemum Society, and Mr. E. Molyneux in the days when the distinguishing characteristics of the incurved blooms were properly recognised.

Honour to Mr. J. Hudson, V.M.H.—At the meeting of the Council of the Royal Horticultural Society, held on November 21, the secretary drew attention to the marvellous exhibit of fig trees made by Mr. J. Hudson, V.M.H., in the lecture room on November 14, for the purpose of illustrating his lecture on the cultivation of figs in pots. The views expressed by the secretary were confirmed by the president and several members of the Council, and it was proposed by the president and seconded by Sir Albert Rollit, D.L., and carried unanimously that a Lindley Medal for cultivation be awarded to Mr. Hudson. The honour thus conferred upon Mr. Hudson was well deserved, for no such remarkable examples of the culture of figs in pots has yet been presented to public notice. Mr. Hudson contributed to the Gardeners' Magazine of October 7 an article in which he described the method by which he has obtained such splendid results in this phase of fruit culture, and the article was accompanied by an illustration of one of the span-roof houses that are devoted to fig trees in pots in the gardens of Gunnersbury House and of a tree of White Ischia. This tree is remarkable from the fact that, although it had been raised from a cutting only eight months previous to the photograph being taken, it was four feet in diameter, and carrying a full crop, some of the fruits being ripe.

Horticultural Club.—The next house dinner of the Horticultural Club will take place on Tuesday next, the 5th inst., at Hotel Windsor, Victoria Street, when Mr. Arthur W. Sutton, J.P., V.M.H., will give a lecture entitled "Four Hundred Miles on Horseback East and West of the Jordan." The lecture will be illustrated by one hundred painted views of Lebanon, Gilead, Basham, Moab, and Southern Palestine.

The Perpetual-flowering Carnation Society. — Next week, so generally known as "Smithfield Show Week," will afford an opportunity for many to visit London at a lessened cost by means of the extra trains that have been arranged at reduced fares, and those who are interested in horticulture will be able to visit two flower shows. One of these will be the exhibition of the Perpetual-flowering Carnation Society at the gardens of the Royal Botanic Society, Regents Park, on Tuesday and Wednesday, the 5th and 6th inst., and the other the Royal Horticultural Society's show at Vincent Square on the 5th inst. The new section D in the schedule of the carnation show is unique, as amateurs residing 50 miles and upwards from London may send their blooms to the place of exhibition, and have them staged by the society.

A Fine Cattleya labiata.—A finely-flowered example of this old species was exhibited at York recently by Mr. Taylor, gardener to Sir J. Ramsden, Byram Hall, Pontefract. The plant carried thirty-one blooms, the whole of which were expanded, except three. It was evidence of the skill exercised by Mr. Taylor in the management of this orchid, and the judges showed their appreciation by awarding a special cultural commendation.

Export of Fruit from Ireland.—It is interesting to read that, while five years ago the value of the fruit sent from Ireland to Great Britain did not exceed £30,000, it was £130,000 last year. This statement reminds us of the period—and that not so far distant—when fruit of Irish growth was practically unknown in England or Scotland, and the production of really good crops of the hardy kinds in Ireland was generally regarded as practically impossible. When, some twenty-two years ago, Mr. Lewis Castle and Mr. George Gordon, V.M.H., paid a visit to Ireland as a deputation from the British Fruit Growers' Association, for the purpose of enquiring into the condition of fruit-growing in that country, and suggesting the adoption of improved methods of procedure, the Irish markets were largely dependent upon Scotland for their supplies of gooseberries. In those days the climate and soil were regarded as quite unsuitable for the production of crops of apples and other hardy fruits of high quality, except by a few horticulturists resident in the country; and the views expressed by the members of the deputation in the course of their tour with reference to the possibilities of fruit culture in Ireland were regarded with a considerable amount of scepticism. The same feeling obtained on this side of the Irish Channel; for, when Mr. Gordon presented a report on the investigations to a conference of fruit growers held at the Crystal Palace, the conclusions were by no means accepted with unanimity. Moreover a considerable proportion of the one hundred and eighty newspapers that devoted leaders to the questions raised in the report described the conclusions as far too optimistic. As the results have proved, the case in favour of Ireland as a fruit-producing country was really understated. Within a few years of the visit of the deputation the Agricultural Department of the Irish Government gave serious attention to the educational side of fruit culture, and all concerned entered so heartily into the carrying out of the scheme that an enormous improvement has been effected in all parts of the country.

Glasnevin Botanic Gardens, as in the case of so many other parks and gardens in various parts of the United Kingdom that are open to the public, have had their exhibition of chrysanthemums. The plants are arranged in a spacious glass structure near the entrance, and the large number of finely-developed blooms have proved highly attractive to the large number of citizens of Dublin, by whom the exhibition has been visited since it was opened. Sir F. Moore, V.M.H., and his staff may be heartily congratulated on the high quality of the flowers and the taste evinced in the arrangements.

Roses at the Durbar Camp.—The wonderful White City at Delhi, composed of about 150,000 tents, and covering about 25 square miles, will be itself one of the great features of the Durbar, at which the King is to be crownedEmperor of India. Needless to say, green lawns and gay gardens have been arranged, and round the King's Camp great beds of roses have been planted near the Queen's tents, and it is reported that about £1,000 have been spent on this particular feature.

A Daffodil Show for London in 1912.—We have received a copy of the schedule of prizes to be offered on April 16 and 17 next, at the Royal Horticultural Society's Daffodil Show. The classes, 45 in all, are grouped into four divisions, two of which are open to all, and two for amateurs. The division for seedling and new daffodils appears to be specially well arranged, and should result in an excellent and interesting competition. With the schedule is sent a letter, which reads: "In the spring of 1911, as so many daffodil lovers expressed a wish that a two-days' exhibition of daffodils might be held in London in mid-April, the Royal Horticultural Society's Narcissus Committee approached the Council of the society upon the matter. The Council favoured the movement, and the committee then appointed Mr. E. A. Bowles, Mr. P. R. Barr, Mr. W. B. Cranfield, Rev. G. H. Engleheart, Mr. Robert Sydenham, Mr Walter T. Ware, and Mr. C. H. Curtis to prepare a schedule for the exhibition, and consider ways and means. A schedule has been prepared and approved, and a copy is sent herewith. The Council of the Royal Horticultural Society have promised to give the cups and medals offered as prizes, but the cash prizes must be provided by daffodil lovers. We have made ourselves responsible to the Council for these cash awards, and now confidently appeal to all interested in daffodil culture for generous support." This is signed on behalf of the Narcissus Committee by E. A. Bowles (chairman), Myddelton House, Waltham Cross; C. H. Curtis, (hon. secretary), Adelaide Road, Brentford; and Walter T. Ware (treasurer), Inglescombe Nurseries, Bath; and there is a footnote asking that all donations to the prize fund be sent direct to the treasurer, Mr. Walter T. Ware.

School Gardening.—The President of the Board of Education recently stated in the House of Commons that, so far as the Board of Education had figures on the subject, the number of school gardens had increased from 379 in 1902-3 to 1,880 in 1909-10. The number of scholars in respect of whom the special grant for gardening was paid was 5,501 in 1902-3 and 27.679 in 1909-10. Full returns for the years just elapsed were not yet available, but it was believed that the number of schools giving practical instruction in gardening must have been upwards of 2,000.

Sir Thomas Fowell Buxton, who was presented on Tuesday last with a testimonial in recognition of his long service as chairman of the magistracy for the Epping Division, has been Verderer of Epping Forest since 1878, and during this long period has rendered a service of much value in connection with this fine open space.

Mr. W. Rigby, gardener to the Rev. A. C. Cooper-Marsdin, Birkley, specially distinguished himself at the remarkably fine exhibition recently held by the Bromley Chrysanthemum Society. He was successful in winning the challenge cup for six vases of Japanese varieties, and seven other first prizes. Mr. Rigby's success is of special interest from the fact that in the management of the garden of which he has charge, he is single-handed.

An Old English Rose Garden for Battersea Park.—At a recent meeting of the Parks and Open Spaces Committee of the London County Council, it was decided to convert the Botanical Garden at Battersea Park into an Old English Garden at a cost not exceeding £265. This alteration is an outcome of the great success and appreciation of similar Old English gardens made in other parks under the care of the London County Council.

Reversion of Rose.—In a communication to the Paris Academy of Sciences, M. J. Violle states that a plant of Gloire de Dijon rose, which during the past twelve years had borne large numbers of the usual double flowers suddenly, in September, produced on all its branches single blooms. Eight days later these were followed by double roses. The production of a crop of single blooms is attributed to the effects of the hot and dry weather that was experienced in France during the past summer.

Perthshire Sweet Pea Society.—We are pleased to learn that the operations of this society during the past year was attended with a full measure of success. At the annual meeting of the society, Mr. R. S. Halley, the secretary, in submitting the report, stated that the enthusiasm of the members was unabated. At the end of last year the number of members was one hundred and forty-four and now the members number two hundred and one. Mr. A. M. Mechie, the treasurer, reported that the financial results had been such as to enable the executive to meet the whole of the expenditure for the past year, and to reduce the debit balance at the close of 1910 by £6 13s. The Rev. Harold Mayall, president; Mr. R. S. Halley, secretary; and Mr. F. M. Mechie, were reelected. At the conclusion of the business meeting Mr. J. Griqor, Forres, gave a lecture on the cultivation of sweet peas.

Cider Sickness, which is sufficiently prevalent in the cider-producing counties of England to inflict considerable losses upon the makers of this beverage, has been investigated by Messrs. B. T. P. Barker and V. F. Hill, and the results of their investigations were embodied in a paper read at a meeting of the Agricultural Sub-Section of the British Association. This "sickness" makes its appearance in ciders early in the summer, and the first symptoms of the attack are a characteristic frothing of the liquor and a sudden and violent evolution of gas. It was found that the pleasant fruity character of the cider disappeared, and a peculiar and disagreeable odour and taste were produced. After a short time the cider generally became tainted, and suffered a loss of colour, and in some cases the turbidity increased until the liquor attained a thick milky condition, while in other instances the cider itself remained comparatively clear, but a considerable deposit was precipitated. The specific gravity of the cider fell rapidly during sickness, owing to the destruction of the sugar, and the percentage of alcohol was also increased. Ciders most liable to sickness are those containing relatively large amounts of unfermented sugar, and generally those of best quality. Perry is also liable to the same trouble. It has been found possible to effect the isolation of a bacterium which could produce all the symptoms of sickness in sterilised ciders and perry infected with pure cultures of it. The most promising measures for combating the disorder were found to be the sterilisation of all vessels and appliances which had been contaminated with sick cider, storage at a low temperature, and suitable blending of ciders to raise the acidity above 0.5 per cent. malic acid, and to give a moderately rapid normal rate of fermentation. It had also been observed that ciders liable to the disorder would escape if bottled very early in the season, whereas if bottled at the usual period they quickly turn sick.

Mr. S. Mangham, formerly Frank Smart student in botany at Cambridge, has been appointed lecturer in botany at Armstrong College (University of Durham).

"**Jardinage.**"—A new monthly periodical devoted to gardening, and printed in French, under the editorial management of our old friend and colleague, M. Georges Truffaut, of Versailles, has just reached us. The style and get-up of the work generally is of a high order of merit, for the printing is clear and well executed, the illustrations are excellent work in photographic reproduction, the cover is done in colour, and altogether the new monthly promises to be artistic, practical, and interesting. The authors who contribute to the first number comprise Messrs. Georges Truffaut, Jules Vacherot, Ph. de Vilmorin, and Georges Bellair. The subscription outside France is six francs per annum, and the office of our new confrère, to whom we wish success is 90 bis, Avenue de Paris, Versailles.

Chrysanthemums at Harrogate.—Chrysanthemums are grown with much success in the gardens of Belvedere, Harrogate, the residence of Lord Faber, who, a few days since, opened the houses in which they were arranged to the public. Many of the residents and visitors availed themselves of Lord Faber's generosity, and fully enjoyed the display of finely-developed blooms.

APHELANDRAS.

The aphelandras are, taken altogether, an exceedingly floriferous genus of acanthaceous plants that require the temperature of a stove, or, at all events, that of an intermediate house. They are principally natives of the southern portion of Mexico on to Brazil, and all have flowers of some shade of yellow or scarlet.

These blossoms are borne in a decussate spike-like head, each flower being, in most cases, subtended by a large bract, which, in some instances, is almost, if not quite, as showy as the flower itself. The individual blooms do not remain long, but a succession is kept up from one head for a considerable time. Added to this, the foliage of some of them is remarkably handsome, the course of the midrib and principal veins being boldly marked in white or yellow.

Like many other acanthads, such as jacobinias and eranthemums, the aphelandras are of a soft shrubby nature, and are readily struck from cuttings of the young shoots. Half a dozen species or so may be met with in general cultivation, but there are many more than this.

The showiest and best known kinds which can generally be obtained from nurseries are:

Aphelandra aurantiaca.—A very free-flowering species, introduced from Mexico in 1844. The leaves are dark green, ovate, and wavy at the margins, while the flowers are comparatively large and of a dazzling orange-scarlet colour. Examples little more than a foot high will often bloom. Of this height one-half, or nearly so, will consist of the erect spike. There is a variety, Roezli, which differs from the type in the leaves being shaded with white.

A. Blanchetiana.—A stout, erect-growing species, which will in time become almost woody in character. The leaves, which are comparatively narrow, have the midrib and principal veins marked in silvery-grey. The bracts are reddish, while the flowers are yellow. This species is more liable than aphelandras in general to become bare at the base. It is also known as A. amœna, under which name it was first distributed twenty-one years ago.

A. Chamissoniana.—Like the preceding this was sent out under a different name to that which it now bears, for when put into commerce in 1881 it was as Aphelandra punctata. The sturdy, erect stem of this species is clothed with leaves from four to six inches long, elliptic in shape, with the course of the midrib and principal veins marked with a broad white band, breaking off at the edges into dots or freckles of that hue. The ground colour of the leaf being deep green, these light-coloured markings stand out conspicuously. The large bracts which go to form a cone-like head are deeply serrated at the edges, and in colour are a deep chrome-yellow, shaded with green towards the base. The individual flowers are of a curved tubular shape, about one and a-half inches long, and of a rather lighter shade of yellow than the bracts. These last retain their colouring long after the flowers have faded.

A. Fascinator.—The ovate acuminate leaves of this species are of a bright olive-green, marked with stripes of clear silvery-white, while the undersides are of a purplish-violet tint. The flowers are of a brilliant scarlet tint. A native of Colombia, Aphelandra Fascinator was first introduced in 1874.

A. Margaritæ.—A notable feature of this species is the pubescent character of the leaves, which are about six inches long and a couple of inches in width, olive-green above and purplish underneath. The main veins are marked out in white, and the orange-coloured flowers are very conspicuous. It was introduced from Brazil about a quarter of a century ago.

A. nitens.—The specific name of this is derived from the exceedingly glossy, almost varnished, surface of the leaves, which are of a deep bronzy-green on the upper side and purple beneath. They are oblong, about six inches long and three inches broad, and are leathery in texture. The flowers, borne in a narrower spike than some of the others, are large, and of a bright scarlet colour When at its best, in the depth of winter, as often happens, this aphelandra is particularly effective. It was found and introduced by Richard Pearce, when travelling in South America, and first flowered at Chelsea in 1868.

A. pumila.—This well merits the specific name of pumila, as the plant is of a decidedly humble stature, the entire specimen, stem, flower spike, and all, being often considerably less than a foot in height. The oblong-shaped leaves, cordate at the base, are comparatively large, while the curved orange-scarlet coloured flowers extend considerably beyond the dull-tinted bracts.

A. squarrosa.—In vigorous examples the elliptic-shaped leaves of this species are nearly a foot in length, and the flowers and bracts are deep yellow. There is a variety, Leopoldi, whose leaves have the principal veins clearly marked with ivory-white. In this the flowers are yellow, but the bracts are often tinged with red. This variety has been grown in our gardens for over fifty years, but in 1887 it was again sent out under the name of Aphelandra chrysops.

A. tetragona.—The oldest, and certainly one of the finest, of the entire genus. It is of rather tall growth, and is seen at its best in pots from six inches to eight inches in diameter. Under such conditions it will reach a height of three feet to four feet, the stout, erect stem being clothed with large broadly ovate leaves, and terminated by a head of scarlet blossoms. Most aphelandras have the flowers disposed in a simple terminal spike, but this species has, in addition, four supplementary spikes at the base of the principal one, thus giving to this species a very distinct appearance, and suggesting the specific name of cristata, by which it was formerly known. It is at different periods of the year very effective in the T range at Kew. Most authorities, including Colonel Beddome, give Aphelandra tetragona as a native of the West Indies, but in the "Kew Hand List" it is stated to be from Colombia. It was introduced as long ago as 1733.

The propagation of aphelandras is not at all a difficult matter, as cuttings of the young shoots root readily at any time during the growing season, that is if put into pots of sandy soil, and placed in a close propagating case in the stove; if with gentle bottom heat so much the better. If possible, stout, or fairly stout shoots should be chosen for the cuttings, as the weak ones do not produce as fine heads of blossoms. For this reason it is not desirable to stop the growing plants, and cause them to break out into two or more shoots, as the display is not equal to that furnished by one good head. Effective plants of the smaller growers may be produced in pots four inches to four and a-half inches in diameter, and if a good show is required from three to five of these flowering plants may be grouped in a large deep pan. Aphelandra aurantiaca, Aphelandra nitens and Aphelandra pumila are particularly amenable to this mode of treatment. W. T.

CIDER APPLES.

Your recent note on the report issued by the National Fruit and Cider Institute is interesting. I have often wondered why the small apples of ordinary varieties could not be utilised; now I see why many cannot be profitably employed. When at the Brewery Exhibition, recently held in the Agricultural Hall, I saw the judges at work examining the various exhibits in the cider classes, and noted the many points to be taken into consideration in arriving at a just decision. I could not but come to the conclusion that there is much more art required in producing good cider than is generally thought. The right kind of apple plays an important part in the production of the finest type of cider. At the Brewers' Exhibition prizes were offered for collections of cider apples, of which a goodly number were staged; their attractive appearance prompted me to jot down the names of the most prominent looking varieties. Many of them were richly coloured. Dr. Hogg, in his "Fruit Manual," mentions over fifty varieties of cider apples, but I cannot find any other authority dealing with them at all; few nurserymen include them in their apple lists; therefore one is forced to the conclusion that cider apple trees are not much in demand, and, judging from the appearance of many orchards, there does not appear to have been much planting done in recent years, although it was said at the show much planting is now being done.

The following varieties I noted in the class for thirty-six varieties: Sweet Harcourt, White Close, Jartigten Mill, Royal Jersey, George James, Port Wine, Cup and Liberty, Cider Quarrendon, Cadbury, Cider Spice, Pomroy, Hobb's Jersey, White Jersey, Hay Masters, Dan's Favourite, Kingston Black, Law's Crab, Comane Red, New and Old Foxwhelp, Cherry Pearmain, and Handsome Hereford. E. Molyneux.

NEWCASTLE FLOWER SHOW.

As a member of the society which is responsible for the Newcastle Flower Show, I desire to bring forward a matter which concerns not only the society itself, but also the public at large. The actual name of the society is the Northumberland, Durham, and Newcastle-upon-Tyne Botanical and Horticultural Society. It is not the oldest society in the North of England, but it is certainly one of the oldest. Now does it live up to its name? What does it do to justify such a title? Nothing at present, except a flower show once a year. And the serious aspect of the matter is that the society is £400 in debt, and cannot evidently get out of debt. What is to be done for we cannot stand by and see this old society go down? I suggest:

1. That a public meeting be called as soon as possible. That all horticultural societies in the two North-Eastern Counties be asked to send delegates.

2. That new blood be infused into the committee. There is no lack of keen horticulturists in the district.

3. That the society co-operate with the North of England Horticultural Society. This latter society has been brought into existence with the goodwill and support of the Royal Horticultural Society and cooperates with them in the North of England.

4. That it be clearly understood that the society live up to its name, and lead the two North-Eastern Counties in all that appertains to horticulture (educational, scientific, commercial, and general).

5. Personally I would suggest that as soon as the deficit is cleared off, a large spring show be held each May in Newcastle, and that all the profits be given to the hospitals. Speaking for the N.E.H.S. we will gladly do all we can to restore this old society to its former position and back it up in its work.

J. Bernard Hall.

ROYAL HORTICULTURAL SOCIETY.

SCIENTIFIC COMMITTEE, November 21.

Present: Mr. E. A. Bowles, M.A., F.L.S., F.E.S. (in the chair), and Dr. J. A. Voelcker, Rev. Canon Fowler, Messrs. J. O'Brien, A. Worsley, W. Hales, J. T. Bennett-Pöe, W. C. Worsdell, E. M. Holmes, W. Cuthbertson, and F. J. Chittenden (hon. secretary).

RASPBERRY BEETLES. — The Rev. Canon Fowler showed specimens of the raspberry beetle, Bytums tomentosus, which feeds in the flowers of raspberry, blackberry, loganberry, and strawberry, and remarked that in all probability the pest pupates in the soil, not so much in old stems, etc. He considered that if some measure of reaching the pest in the soil could be devised it would prove very beneficial, but after some discussion the committee thought that none of the methods at present economically available would be entirely suitable in the present instance. It was remarked that some success had been attained in dealing with this pest by shaking the canes over tarred boards and by spraying with lead arsenate during the time the plants were in bloom.

UNCOMMON FRUITS. — A. Bayldon Esq., sent from Dawlish, Devon, a bunch of about sixteen fruits (on one branch) of Mandevilla suaveolens, and a pair which measured twenty inches in length; a bunch of seed pods of Wistaria japonica from a standard on its own roots which bore several dozen fruits (W. multijuga was also fruiting in the same garden, and had produced racemes 30 inches to 36 inches in length); a spray of many fruits of Cornus capitata (Benthamia fragifera) from a very old tree 26 feet in height. The seeds of the last are picked from the fallen fruit by the blackbirds and dropped about the grounds. R. Shafto Adair, Esq., of Clauville, Minehead, Somerset, sent two excellent fruits of the common pomegranate, perfectly ripe, and open to show the seeds, picked from a plant growing on a south wall.

Mr. A. S. Horne, B.Sc., of the Wisley Laboratory, exhibited specimens in illustration of the following notes:

STREAK DISEASE IN POTATO. — In 1910 a sample of seed potatoes of the Duke of York variety was obtained from a dealer in the North of England. When the tubers were examined, about 20 per cent. of them were found to be affected with streak disease. Several diseased tubers, however, were not included in the estimate. These were rotten in the middle, and the flesh was more or less excavated, the cavity or cavities being enclosed by diseased tissue. It was supposed at the time that this condition was due to some other cause. During November, 1911, however, a complete series of stages has been obtained between streaked and rotten tubers of the same variety of potato. The following stages in the development of streak disease in the Duke of York variety are sent for inspection:

1. Potatoes marked internally with streaks as described in the "Journal of Agricultural Science," iii., September, 1910.

2. Potatoes with internal brown rot. Upon closely inspecting the flesh the rotten area is seen to be made up of a number of concentric curved brown lines; the rotten appearance is due to the fact that the lines are very numerous, and almost in contact with one another. The lines show up well when a slice of the potato is soaked in potash.

3. Potatoes with cavities in the flesh which are bounded by a brown zone of diseased tissue.

4. Potatoes similarly diseased, but having external injuries.

The diseased potatoes were raised in Scotland with the co-operation of Mr. W. G. McGowan in connection with pototo investigations, of which an account has not yet been published. The seed potatoes of the Duke of York variety were obtained from a locality in which streak disease is at present unknown, and were free from disease when planted.

SPECIMEN TREES FOR PARKS AND GARDENS.

(Continued from page 856.)

Nyssa, Catalpa, etc.

In the South of England Nyssa sylvatica is unsurpassed for colour in autumn. The tree is one of the first to assume its autumn garb, quite early in September, the rich scarlet leaves, remaining in good condition for a month, or even longer. This is a North American species of medium height, 40 feet to 50 feet is given as the average, but, so far as I am aware, the few trees there are in this country are nothing near this height at present. Magnolia acuminata (the Cucumber Tree) forms a large specimen, with conspicuous leaves eight to ten inches in length. The flowers are green, tinged with yellow, but these are not nearly so striking as those of the Yulan (M. conspicua and M. Soulangeana), which in the south and west are unrivalled as spring-flowering trees for the pleasure grounds. The first-named has pure white fragrant blossoms, and M. Soulangeana rosy-purple flowers. Both form shapely round-headed specimens, attaining, with age, to a height of 20 feet or more. There is a specimen of the cucumber tree at Syon House, Middlesex, 51 feet in height. The same garden also possesses a very fine specimen of the Sweet Gum (Liquidamber styraciflua). This tree exceeds 90 feet in height, and is reputed to be the largest specimen in the country. Small trees are listed at half-a-crown by nurserymen, which serves to show that it is easy to obtain. The foliage in autumn turns a pleasing mixture of green and red, with sometimes a splash of yellow.

A REMARKABLE SPECIMEN OF THE HOLM OAK (QUERCUS ILEX) AT KEW.

When in full flower, in August, the Indian Bean (Catalpa bignonioides) is a magnificent spectacle, which, at a distance, might be mistaken by the ordinary individual for a horse chestnut. The leaves are large, cordate; the flowers white, with yellow and purple blotches in the throat; in autumn the trees are laden, that is assuming they have flowered freely, with long bean-like fruits. The variety aurea has rich yellow leaves, and forms a very suitable specimen for use among large trees planted for colour effects. Corylus colurna, the Constantinople Hazel, is a very fine ornamental tree. Several specimens in this country exceed 80 feet in height. The most ornamental walnut we possess is Juglans nigra, the black walnut of North America. This tree, 80 feet to 100 feet or more in height, far surpasses in beauty the common Walnut (J. regia). J. Sieboldiana is promising as a young tree. The Flowering or Manna Ash (Fraxinus ornus) is generally met with as a well-furnished round-headed tree of moderate size. It is very ornamental when in flower, and also interesting in autumn when loaded with clusters of seed pods.

Maidenhair Tree and Golden Larch.

The reason why the Maidenhair Tree (Ginkgo (Salisburia) biloba) is not more generally planted is difficult to understand. During recent years notes concerning it have from time to time appeared in the horticultural Press, but it is only occasionally that one sees young trees that have been recently planted. We have no other tree like it, and as a specimen the maidenhair tree is unsurpassed. Tall and graceful in outline, there is a charm surrounding it which cannot fittingly be described on paper. The rich green fern-like leaves change in autumn to a pleasing yellow tint. During winter, when devoid of leaves, the tall, erect branches, and smaller horizontal growths, are the distinguishing features of this tree. The maidenhair tree is represented at Frogmore and Kew by magnificent specimens, both of which exceed 60 feet in height. There is only one fault to find with this tree, and that is its rather slow growth. Particular interest is attached to the ginkgo botanically, as it is one of the few deciduous genera of Coniferæ, and the male and female flowers are borne on different trees.

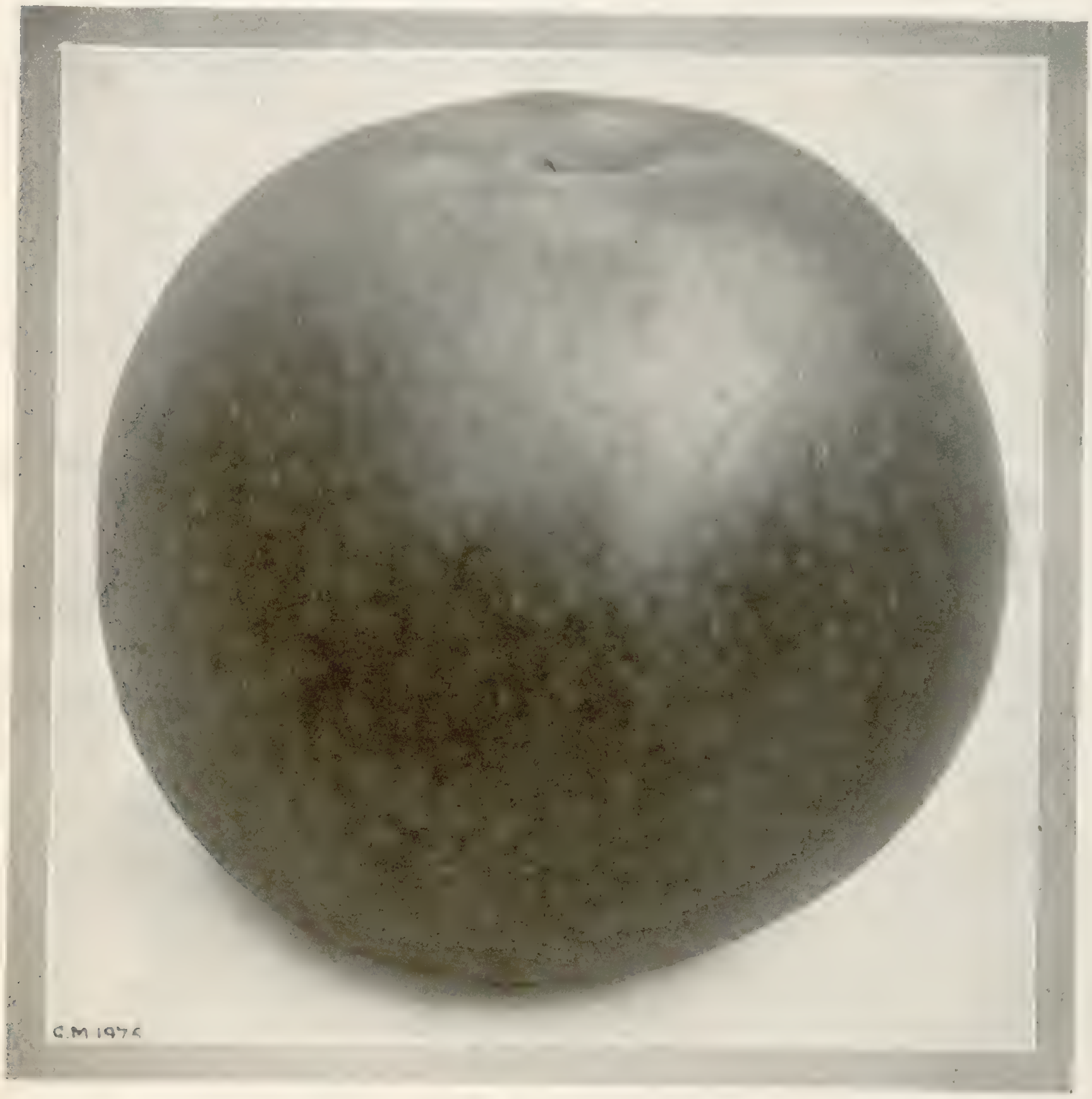
A second deciduous conifer which promises well is Pseudalarix Fortunei (Kæmpferi), the Golden Larch of China, so named on account of the foliage, which turns a rich golden-yellow in autumn. In general appearance the tree resembles a sturdy specimen of larch. Specimens exist in China over 100 feet in height. A tree 18 feet high, at Kew, bears cones freely. For planting in damp positions, and along the margins of water, the Deciduous Cypress (Taxodium distichum) is most useful, and it colours an attractive shade of brown in autumn.

Sophoras and Ailanthus.

Sophora japonica is especially worthy of attention, as, so far as I am aware, it is the latest large tree to flower in August and September, being later than the catalpa. This year the acacia-like leaves were hidden by myriads of creamy-white flowers, and when these were falling it was possible to rake them up under the trees like so much chaff. Now, on the last day of October, when most of the trees have shed, or are fast shedding their leaves, the sophora trees are as green as they were at midsummer. The Tree of Heaven (Ailanthus glandulosa) is a fast-growing tree in a young state, with large pinnate leaves; 50 feet to 70 feet is a common height for this tree. The bunches of orange-tinted fruits, dotted freely over the trees, are conspicuous in autumn, although in summer the flowers are so small that unless closely looked for they would escape notice.

Pendulous, or Weeping Trees.

Trees with pendulous branches form a pleasing change from those of normal growth. Their free use, however, is not desirable; one here and there among other trees, by way of contrast, should be used. Select open positions for them, or, in the case of the weeping willow, plant by the lakeside or stream. In most private places the use of pendulous trees is restricted to the enclosed pleasure grounds, as cattle usually graze in the park. A fence could be put round them, but this would, to a great extent, mar their beauty, certainly more so than does a fence erected round trees of a normal habit of growth.



APPLE CORONATION.
A handsome dessert apple, raised by Mr. H.C. Prinsep, from Cox's Orange Pippin, and put into commerce by Messrs. J. Cheal and Sons, Crawley.

An important item in the care of weeping trees is to keep a branch tied up near the centre to form a leader, to increase their height. In old trees this is, of course, not of such great importance, as it is in young specimens. Another matter requiring attention is the lower branches. These should be kept just free from the grass, as the constant swaying of the branches would in time kill the grass, leaving a patch of bare earth exposed. Ten of the best weeping trees are the pendulous varieties of Betula alba, Prunus (Cerasus) Mahaleb, Crataegus oxyacantha, Fagus sylvatica and the variety purpurea; Fraxinus excelsior, Populus tremula, Salix babylonica (the type of this is weeping), Ulmus montana, and Ilex aquifolium, the last-named being the best of the weeping evergreens.

A. Osborne.

Kew.

SOME SPRING CROCUS SPECIES.

The species of crocus, as distinguished from the handsome named Dutch varieties and other forms derived mainly from C. vernus, are growing in popularity, and a few notes upon some of the best of those which bloom in spring may not be unacceptable, as they can still be planted.

They all require practically the same treatment, and will flourish in the soil, planted about two inches deep, either in the grass, in a border, or on rockwork, choosing a sunny situation and, as far as possible, shelter from strong winds and the driving rains of spring.

A pretty spring crocus is C. alatavicus, the Altai one, which has good-sized flowers of white when open, the outside being blue tinged with brown. Then one which is very early and should, possibly, have been planted ere now, is C. ancryensis, which is of a bright orange-yellow, and is more tender than others we have to our command. We may, therefore, substitute for it some of the forms of C. aureus, and the type, of a good yellow, is excellent and larger than C. ancryensis. There are several varieties of C. aureus, such as sulphureus pallidus, which is of a sulphur-yellow, with others which may be omitted until the beginner acquires a larger collection.

A bright and beautiful little yellow crocus, however, is C. Balansæ, which is a small-flowered variety with glowing orange flowers, daintily feathered with black.

A large and handsome crocus, not always obtainable true to name, a form of vernus sometimes being supplied for it, is C. banaticus, from the Banat, and having attractive flowers of purple, prettily edged with a kind of blackish purple.

In Crocus biflorus we have a species which gives us a lovely set of crocuses. The type is white, feathered with lilac, but there are also varieties of a soft lilac in the interior, and others which are coloured with buff outside. C. b. Pestallozoe is an exquisite thing with blooms of the daintiest size nestling among the grassy leaves. They are white. C. b. pusillus is white with an orange throat, and in the variety called Weldeni we have one with different shades and markings of soft blue. This, the Scotch crocus, is a fine and valuable species indeed, and much frequented by the bees. Crocus candidus is a handsome white species, and its variety sub-flavus has pale-yellow blooms.

The charming C. chrysanthus, which has yellow flowers, is one of the most variable of all. Two little forms, fusco-tinctus and fusco-lineatus, bloom very early, and give bonny little flowers of yellow, tinged and striped, as the case may be, with brown. The variety albidus is white, with a blue base; Canary Bird and superbus are lovely forms higher in price. The pretty C. etruscus is a most desirable little crocus also, with its white flowers lined with purple.

C. Fleischeri is not often seen, and has neat white, faintly-striped flowers among narrow grass-like leaves. Its fault is a lack of substance, but it is a dainty thing indeed.

Crocus Imperati must not be overlooked with its lovely lilac-purple flowers of good size, and buff feathered with purple outside, or pure buff on the exterior. It should be in every garden. C. Korolkowi is often attacked by slugs, but is charming with its orange flowers, decorated with deep brown outside. C. Olivieri is another yellow one; and C. reticulatus is a pretty species with white flowers striped with lilac. Crocus Sieberi, of a fine blue, is a charming little early crocus, now very cheap; stellaris is an old one with starry yellow flowers, striped with brown outside; and the old-time favourite, the Cloth of Gold one, C. susianus, is pretty when it opens its golden flowers.

Crocus Tommasinianus is a charming little species, varying in shade of lavender—almost into purple, and one of the easiest of all to grow; while the old Cloth of Silver one, C. versicolor, is cheap and useful to those who wish a variety with its lavender or purple flowers. Finally we have the very early one called Crocus vitellinus the Yolk-of-Egg crocus, whose popular name well indicates the colour of the pretty little blooms.

Besides these there are other species and varieties beloved of the enthusiast, who is ever on the search for new beauties to add to his garden among these exquisite crocuses, which do so much to give delight.

S. Arnott.

APPLE CORONATION.

An apple of great merit as a dessert variety for private gardens is Coronation, one that was raised by Mr. H. C. Prinsep when in charge of the Buxted Park Gardens. It is a seedling from Cox's Orange Pippin, and bears a good deal of likeness to its well-known parent. The fruits are rather above medium size, greenish-yellow, and heavily flushed with crimson on the sunny side, consequently it has a very attractive appearance. In flavour it is very crisp and pleasant, and very suggestive of Cox's Orange Pippin. The variety grows freely, and yet possesses a very compact habit, hence it is especially suitable for small gardens and also for orchard house culture in pots. Coronation received an Award of Merit from the Royal Horticultural Society on October 21, 1902, and it was distributed by Messrs. J. Cheal and Sons, Crawley.

Veronica Silver Queen. — We have long been familiar with the clearly variegated Veronica Andersoni variegata, from which the variety Silver Queen is a decided break. It has a free branching habit of growth, and the leaves are very plentifully variegated with cream-white. It appears likely to be of value for furnishing window boxes and similar purposes.—W. T.

"IT IS ONLY A LITTLE

CLAY'S

THEY WANT."

CLAY'S LONDON FERTILIZER
TRADE MARK

SOLD EVERYWHERE IN TINS at **6d.** and **1/-**; and in Branded and SEALED BAGS, 7lbs. **2/6**; 14lbs. **4/6**; 28lbs. **7/6**; 56lbs. **12/6**; 112lbs. **20/-**. Or direct from the Works. Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**). **Every Genuine Tin Bag, and Seal bears Trade Mark, as at side.**

CLAY & SON,
Manure Manufacturers and Bone Crushers,
STRATFORD, LONDON, E.

MERRYWEATHER'S ROSES.

All Strong and Home-grown Plants

COLLECTION "H" of NEW ROSES.

WONDERFUL VALUE.

EVERY ONE A GENUINE NOVELTY.

This superb collection of the **BEST 18 NEW ROSES** in dwarf plants. The price of this wonderful collection is **27/6**, carriage and packing free for cash with order (with Acme Labels, **29/6**). The varieties are:

Arthur R. Goodwin, P.
Duchess of Wellington, H.T.
Entente Cordiale (Ducher), H.T.
George C. Ward, H.T.
Jessie, Dwarf Poly.
Lady Alice Stanley, H.T.
Lyon, H.T.
Margaret, H.T.
Margaret Molyneux, H.T.
Miss Cynthia Ford, H.T.
Mrs. Alfred Tate, H.T.
Mrs. A. Munt, H.T.
Mrs. E. J. Holland, H.T.
Mrs. W. Christie-Miller, H.T.
Marquis de Sinety, H.T.
Molly Sharman Crawford, H.T.
Souv. of Stella Gray, T.
White Killarney, H.T.

FRUIT TREES

OF ALL KINDS TO SELECT FROM.

A GRAND STOCK OF
SHRUBS & ORNAMENTAL TREES.

HERBACEOUS PLANTS in great variety.

Send for Catalogue No. 29, full of interesting information and cheap prices, post free on application to

MESSRS.
H. MERRYWEATHER & SONS, LTD.,
(Dept. 1A), **GARDEN SPECIALISTS,**
SOUTHWELL, NOTTS.

BY APPOINTMENT.

ROSES IN POTS

WM. PAUL & SON

WALTHAM CROSS, LTD.

Respectfully invite attention to their magnificent stock of the above, which they believe to be unrivalled in quality and extent.

Dwarfs or bushes, extra strong, in 8 in. pots, for forcing and greenhouse culture	30/- to 60/- per doz. £12 and upwards per 100.
Climbers and Ramblers in 8 in. pots, for forcing and out-door planting on pergolas, arches, etc., with shoots ...	6 to 12 ft. long, 30/- to 60/- per doz. 12 to 16 ft. long, 72/- to 90/- per doz. Price per 100 on application.
Dwarfs and Climbers, smaller plants, in 5 in. pots	10/6 to 18/- per doz. 75/- to £6 per 100.

Priced List Post Free on application.

Inspection of Stock Invited.

The Nurseries are twelve miles from London, four minutes' walk from Waltham Cross Station, G.E.R.

Sole Postal Address—

PAULS' ROYAL NURSERIES
AND SEED WAREHOUSE,
WALTHAM CROSS, HERTS.

KING'S ACRE

FRUIT TREES AND ROSES.

AWARDED . .

30 Gold Medals
AND
Coronation Cup

VALUE 25 GUINEAS.

Seasons 1909-10.

Illustrated Catalogue post free on application.

KING'S ACRE
NURSERIES LTD.,
HEREFORD.

ORCHIDS.

If you have a Greenhouse sufficiently heated to keep out the frost, write for our

Amateur's Guide,

giving treatment and all particulars. Illustrated.

MANSELL & HATCHER, LTD.,
RAWDON, via LEEDS.

PLANTING SEASON.

SEND FOR OUR

Descriptive Catalogue

OF

Ornamental Trees and Shrubs, Roses, Rhododendrons, Climbers, Fruit Trees, Forest Trees, Herbaceous and Alpine Plants.

Advice given on all matters appertaining to
LANDSCAPE GARDENING.

GEO. JACKMAN & SON,
Woking Nurseries, Surrey.
Established over a Century. (Nurseries 200 acres.)

MESSRS. PULHAM & SON have secured a fine lot of Old Stone Paving, which is eminently suitable for the Paving of Pergolas, Garden Paths, etc.

They will be happy to quote for any quantity, delivered at any railway station.

PULHAM & SON,

BY APPOINTMENT. BY APPOINTMENT.

71, Newman Street, London, W.
And BROXBOURNE.

CHEALS'

FOR FIRST-CLASS

ORNAMENTAL TREES,
ROSES, FRUIT TREES,
AND
HARDY FLOWERS, etc.

NURSERIES 113 ACRES.
CATALOGUES FREE.

J. CHEAL & SONS,
The Nurseries, CRAWLEY.

SYDNEY SMITH,

Hardy Plant Grower,

Tansley Old Nurseries,
Near Matlock.

Forest Tree Seedlings, Larch Japanese, 1 yr.; Ash, common, 2 yrs.; Scotch Fir, true native, 1 yr. and 2 yr.; Pines in sorts, 1 yr. and 2 yr.; Spruce, Norway, 2 yr.; Larch, native, 1 yr. and 2 yr.; Spruce, White American, 6 to 9in.; Hazel, 2 yr.; Oak, English, 2 yr.; Douglas Fir, 2 yr.; Beech, 2 yr.; Transplanted in sizes from 1 to 3ft. of the above. Gaultheria Shallon, Hypericum calycinum, Irish Ivies, Philadelphus in variety, Hypericum Moserianum, Berberis, aquifolia, Ribes sanguineum, Hollies, 1 to 4ft.; Pernettyas in sorts, Laurels, 1 to 4ft.; Spiræas in variety, Tamarisk in variety, Yew, English, 1 to 4ft., etc.; hardy Ericas, 40 varieties, very healthy, vigorous stock. Lowest prices quoted for all kinds of Nursery Stock.

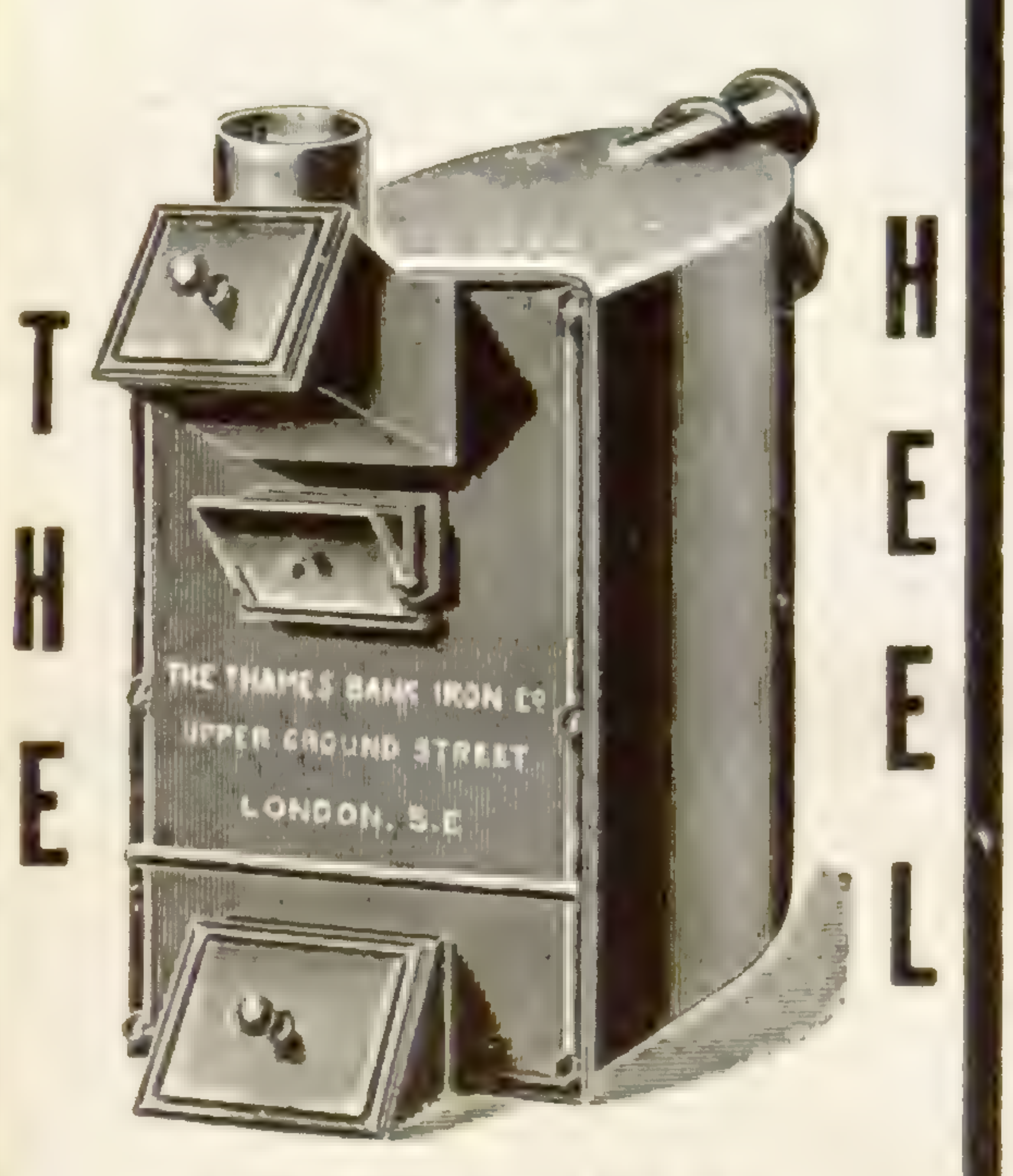
Special Quotations for large Quantities.

A Special Line can be quoted in Rhododendrons for covert planting.

'Phone: Hop. 763.

When next a Small Boiler you require

TRY



NONE TO BEAT IT.

THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.

4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J.R.PEARSON & SONS
LOWDHAM, NOTTS.

TREE CARNATIONS.

E. J. WOOTTEN, Fairoak, EASTLEIGH,

Has all varieties, including

Lady Alington, Felton, Mrs. Ward, Bonfire, White Wonder, La Mode, Marmion, etc.

Strong Plants in Small Pots Now Ready.

ORCHIDS

EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS**, and an endless variety of Choice **ORCHIDS**.

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

LOGANBERRY

DELICIOUS FRUIT, requires exactly the same treatment as the Raspberry. Fruiting Canes, 9/- per dozen. Extra Strong Fruiting Canes, 12/- per dozen.

Packed Free and Delivered Carriage Paid.

Illustrated Catalogue post free on application.

KING'S ACRE NURSERIES, LTD., HEREFORD.

SELECTED SEED POTATOES.

All varieties, grown on finest soil in Scotland and Lincolnshire. Any weight supplied at low prices. Prizes given for best results. Before ordering elsewhere write for catalogue. Best Eating Potatoes also supplied in small or large quantities. See Stand No. 122, Smithfield Cattle Show, London.

A. J. SOLE, Seed Potato Grower,
PETERBOROUGH.

RIVERS'

Fruit Trees, Roses,
Vines, Figs, Oranges,
AND
Orchard House Trees.

A LARGE AND SELECT STOCK ALWAYS ON VIEW.

ILLUSTRATED AND DESCRIPTIVE CATALOGUE
POST FREE 3d.

THOMAS RIVERS & SON
Sawbridgeworth, Herts.
STATION: HARLOW, G.E.R.

Bulbs: NARCISSUS, DAFFODILS, TULIPS, &c.

All Good Flowering Bulbs; Worth Double.

NARCISSUS

100	Emperor	3/0
100	Empress	3/0
100	Henry Irving	4/0
100	Golden Spur	4/0
100	Horsfieldii	3/0
100	Victoria	3/0
100	Obvallaris	3/0
100	Grandis	3/0
100	Sir Watkin	3/0
100	Stella	1/6
100	Princeps	2/6
100	Ornatus	2/6
100	Double Daffs	4/0
100	Dbl. White Narcis.	2/6
100	Pheasant Eyes	2/6
100	Frank Miles	1/6

TULIPS

100	La Reine	3/0
100	Cottage Maid	3/0
100	Chrysolora	3/0
100	D. de Parma	3/0
100	Keizerkroon	4/0
100	Golden Crown	3/0
100	Picotee	4/0
100	Bouton d'Or	3/0
100	Prince de Ligny	4/0
100	Duc Van Thol, sgl	4/0
100	„ „ dbl	3/0
100	King of Yellows	4/0
100	Mixed Tulips	1/6
100	Mixed Darwins	4/0
100	Darwins to name	10/6
100	Parrot Tulips to colour	2/6

Special offer in Mixed Narcis. and Daffodils, also Tulips for planting in grass, shrubberies, hedge rows, etc.

HYACINTHS

		per 100
12—1/9	to name in colours...... or	10/0
12—1/3	mxd in cols. or	9/0
12—1/9	Roman White or	12/0
100	Iris, Spanish, to name	1/6
12	Iris, German do.	6/0
12	Iris, English do.	1/6
100	Anemones, Scarlet	4/[illegible]
100	„ The Bride	1/9
100	„ St. Brigid	5/0
100	Scilla Siberica	3/0
100	Freesia	3/0
100	Summer Snowflakes	5/0
12	Lilium Candidum	2/6
12	„ Crown Imperial	2/0
12	„ Auratums	7/0
12	„ Croceums	4/0
12	„ Longiflorums	4/0
100	Snowdrops	1/6
100	Ixias, to cols.	2/6
100	Crocus, in cols.	1/3
100	Lily of Valley	2/6
100	Jonquils	4/6
100	Ranunculus	3/0
100	Montbretia	3/0
100	Aconites	3/0
100	Chionodoxa	2/6
100	Polyanthus Narcis	3/0
100	Alliums	3/0
12	Begonias, choice	1/6
12	Violets, in sorts	1/6
12	Xmas Roses	4/0

Narcissus and Daffodils,	5/-, 7/6, 10/0 per 1,000
Tulips	10/-, 15/-, 20/- per 1,000

Many other varieties to offer; also all kinds of Herbaceous plants. Any of the above, half quantities at half price.

FRUIT TREES.—Apples, Pears, and Plums, all fruiting trees, **9/-** per dozen. Gooseberries, Currants (black, red, white), **3/-** per dozen. Loganberries and Raspberry-Strawberry, **9d.** each Raspberry canes, **3/-, 4/-**, per 100. Strawberry Plants, **1/6** per 100.

All kinds of Flower and Garden Seeds, also POTATOES. Send for List,

J. W. CROSS, Old Grammar School, **WISBECH.**

CHRYSANTHEMUMS.

THE BEST 12 JAPANESE EXHIBITION NOVELTIES OF 1911.

Countess Granard, Mrs. G. Drabble, Mrs. A. Herbert, H. E. Converse, D. B. Crane, Mrs. G. C. Kelly, Queenie Chandler, F. T. Mew, F. C. Chandler, Marie Loomes, Mr. Turner, Harry Wood.

Strong plants of the above—or purchaser's option of other 1911 varieties—**1/-** each, **10/-** the dozen; 3 of each for **25s.**; delivered early spring. Unrooted cuttings also supplied as per catalogue.

THE BEST 6 NEW EXHIBITION SINGLES OF 1911.

Charles Dickens, Charles Kingsley, Miss May Thorne, Snowflake, Mrs. W. Higgs, Mrs. Trenham Gilbey.

Plants in early spring, **1/-** ea.; the 6 for **5/-**; or 3 of each, **12/6.** Cuttings one-third less.

NOVELTIES FOR 1912.

JAPANESE: His Majesty, magnificent crimson; **Gorgeous,** rich deep yellow; **Mrs. J. H. Cocken,** beautiful bright yellow; **Miss Beatrice Hoar,** distinct crimson; **Mrs. T. Brooke Edwards,** salmon-buff; **Miss Gladys Herbert,** beautiful mauve; **Amber Queen,** rich amber and terra-cotta. All being distributed from these Nurseries. For further particulars, also for New Incurveds and Singles, see Novelty List, now ready.

NORMAN DAVIS,
Chrysanthemum Nurseries,
FRAMFIELD, UCKFIELD, SUSSEX.

ORCHIDS, ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices. Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

A SPECIALITY FOR MORE THAN 50 YEARS

POT VINES

Exceptionally Fine this Season.
Inspection Invited.

J. R. PEARSON & SONS, LOWDHAM, Notts.

SHRUBBY DECIDUOUS CLIMBERS.

With the wealth of beauty we now have in climbing plants of a shrubby character there is not much excuse for having bare walls, fences, or screens, especially when any of these are of an objectionable character. Most climbing plants of this class are not fastidious, in a cultural sense; they grow freely with ordinary attention and a suitable site. Even if there are no walls or screens to cover, a fine effect is assured by growing many of these plants on poles in the shrubberies, on lawns, or trailing them over pergolas or chains.

Pole specimens of a suitable character give a bold effect in a shrubbery harmonising so well with the regular occupants if judiciously chosen to contrast favourably with the subjects about their base. Trained up suitable poles, at least twelve feet high, many subjects can be cultivated that otherwise could not be entertained where wall space is unavailable. If the soil is of an ordinary character the preparation of the site is simple; deeply digging and adding half-decayed manure at planting time is all that is necessary. What we usually find at the base of new walls are shavings, broken bricks, and chunks of wood; all these should be removed two feet deep, and as many feet wide, putting in their place a compost of good garden soil (fresh loam is preferred), enriched with stable manure. In the case of clay soil some drainage is an advantage as stagnation about the roots is objectionable; an addition of leaf-mould, road grit, decayed vegetable matter, will render the soil more porous, and promote a rapid growth.

The early and regular training of the shoots will ensure a regularity of covering whether it be on a wall, screen, or pole; when the shoots are allowed to become crowded through want of attention they are most difficult to disentangle without injury. An abundant supply of moisture at the roots, and copious syringings overhead in evenings, after hot dry days, will do much to accelerate growth.

The following are suitable deciduous subjects, and not at all difficult to manage. The finest of all the vines is Vitis Thunbergi, this growing more vigorously than any other sort. In the autumn the leaves change to yellow, red, and, at times, crimson. V. Coignetiæ grows freely, giving, during the summer, huge deep green leaves with an underside of pale buff yellow. In soil of a light character this assumes brilliant colouring of yellow and crimson in the autumn, but here, in stiff soil, it does not change to these pleasing tints. V. flexuosa Wilsoni is a distinct form, of much ornamental value, and the small leaves assume a deep bronzy hue, while the undersurface is a bright purple. V. armata Veitchi has medium-sized leaves, and a neat habit of growth, and in the autumn is a rich crimson. V. vinifera purpurea, known as the purple-leaved vine, is still one of the most beautiful. This season it is especially richly coloured.

Actinidia arguta is a rapid-growing climber that makes a capital pole plant, entwining around its support quite easily; during summer the leaves are deep green, and in the autumn a rich golden-yellow. Akebia quinata is most interesting, especially against a high east wall, where it grows freely and flowers abundantly in April and May. The peculiarly-shaped clared-coloured flowers are richly perfumed. When once this plant has covered its allotted space, and not too thickly, spurs should be encouraged to form on the main branches by pinching the growths several times during the summer. From these spurs an abundant flower crop will be annually obtained.

Ampelopsis Veitchi is too well known to need more than mention, but A. Henryi is not so well known. In growth it resembles the Virginian creeper, though it is less vigorous. The leaves have down the centre of each part a band of silver, which, in the autumn, assumes a purple hue, the whole changing to bright red later on. Aristolochia sipho cannot be omitted, as its handsome deep green leaves are appreciated during the summer. It grows well in any site—wall, pergola, pole, or elsewhere. The leaves change to deep gold in the autumn. Jasminium primulinum is a great advance on J. nudiflorum, producing bright yellow flowers if grown against a wall in a sheltered site; unfortunately, it is not quite hardy, but, being such a pleasing subject, it is worth taking a little pains to shelter it from severe frost.

CHRYSANTHEMUM YELLOW CAP.

A yellow variety of Caprice du Printemps, as grown and exhibited by Messrs. Jas. Veitch and Sons, Chelsea.

Much difficulty is sometimes experienced in obtaining suitable flowering plants for a north wall. Kerria japonica flore plena is a capital subject for such a wall, twenty feet high, if required. Treat the plant liberally, using manure freely in the soil at planting time, and encouraging it to grow freely; secure the shoots to the wall when growth is fully made, and a close covering will thus be obtained, and a full flower crop will result each year. Polygonum Baldschuanicum is one of the finest of summer-flowering plants we have; it is of quick growth, and fine for poles, pergola, or a wall, and it is especially suitable where its long, graceful shoots show to advantage.

The Rubus family provides many ornamental species. R. biflorus has green leaves, the stems being covered with silver bark, which, in the autumn, when the leaves have fallen, is attractive. R. bambusarum has small, drooping, green leaves with glaucous stems. Bignonia grandiflora and B. radicans are most desirable, particularly where a south wall can be given them; here they flower so much more freely than in the open, although at times they blossom abundantly on the pergola. Cotoneaster Simonsi is not nearly enough planted against walls; here its brilliant red berries are much more freely produced in the open.

Clematis of the various sections cannot be omitted from any list of shrubby climbers; C. montana is the first to flower, either on a wall or pergola, and C. flammula the latest; both are highly perfumed, and usually flower in great profusion. Amongst garden hybrids there are abundant sorts to select from, and C. Jackmani and its white form are still desirable. For a great variety of positions none can equal the purple colour of the former, no matter where planted. Among double-flowered varieties, Belle of Woking, silver grey; Duchess of Edinburgh, white; and Enchantress, white, flushed with rose, are good. Single-flowered varieties are well represented by Duchess of Teck, pure white, mauve bar; Elsa Spathe, dark purple-violet; Fairy Queen, pale flesh, pink bar; Henryi, creamy-white; Marcel Moser, pale violet, red bar; Madame Van Houtte, white, suffused with mauve; Lord Neville, bright blue; languinosa, pale lavender; Sir Garnet Wolseley, blue, plum, red bar; and Nelly Moser, light mauve, with red bar.

For a south wall there is no more free-flowering subject than Solanum jasminoides, and its pure white clusters of flowers nestling among the deep green leaves, are most charming. Loniceras have much to recommend them for poles, especially L. brachypoda, sweetly perfumed, with white and red flowers; R. flava, yellow; and L. tragophylla, rich yellow.

E. Molyneux.

CHRYSANTHEMUMS.—For full instructions on the Culture of Early-flowering Chrysanthemums in beds or borders for garden or greenhouse decoration, read the Second Edition of CHRYSANTHEMUMS FOR GARDEN AND GREENHOUSE, by D. B. Crane, price 2s. 6d. net, or by post 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

THE NATURAL IDEAL IN GARDENING.

It is ever the fashion of many writers to criticise the garden maker and his work, oft-times one meets with a criticism which borders on condemnation. The gardening community are not faultless, and many glaring mistakes have doubtless been committed by zealous enthusiasts, though frequently these same mistakes have provided the very means and knowledge to enable the gardener to rise above them.

CHRYSANTHEMUM JOSEPHINE.
A beautiful new yellow single variety. A.M., R.H.S., November 21. Messrs. W. Wells and Co., Merstham.

We are pursued by the relentless critics into many byways of horticulture, and, after various scathing indictments of garden policy, they pleasantly take us by the hand to show us how things should be done. A writer in a daily paper lays it down that the wild garden is, practically speaking, an unredeemed part of the wilderness, where exotic plants and the creations of the florist have no place. I would that my readers should ponder this carefully. Also that "the wild garden should be limited to the shrubbery belts and the woodlands adjoining the garden proper." That is, the wild, or natural, garden must bear no evidence of cultivation, or harbour any plants but natural wildings. Here let me join issue with such contentions. I am no dreamer, though my thoughts may at times range wider than the limit of the eye, but such straight-laced sentiments of garden art must militate against garden progress, unless proved to be entirely wrong.

It has been demonstrated amply that exotic subjects can be grown with English plants and trees in a perfectly natural way, in perfect harmony with an English landscape. I could name a hundred, nay, a thousand, subjects which can be harmonised with the varying features of an English landscape, which are of entirely foreign origin. The great thing for the garden maker is in the successful choice of subjects, and in this it is necessary to exercise good taste, and a thorough knowledge of plants and trees.

May I point out that delphiniums, campanulas of all types, irises, etc., are just as satisfactory in the dell as our native foxgloves. That exotic barberries, rhododendrons, and cytisus make as delightful undergrowth as English shrubs. That osmundas, onocleas, and other "foreign" ferns combine with our own athyriums, lastreas, etc., in a pleasing manner. Why, even the majority of rock gardens must be hopelessly at fault, by reason of their complement of plants from all quarters of the globe. But this is not so. Siberian plants may rub shoulders with subjects from California, New Zealanders may associate with Swiss or Pyrenean gems, Himalayan and Chinese alpines may rove among colonies of English natives, and yet not strike a jarring note or unpleasant interposition of form or colour to mar the beauty of the scene.

The whole question revolves on the suitability of the subjects used. The natural garden is to me a place where rigid lines, formal plantings, and colour designs do not exist. Where growth is only curtailed when it oppresses neighbouring subjects, and then only in as natural a manner as possible. Furthermore, the subjects must be adapted to the position and formation of the ground to be planted. I would not hesitate to plant up slopes as semi-moorlands, using Continental heaths with those indigenous to this country, Spanish brooms with mountan rhododendrons, and if need be, enlivening the scene with andromedas and pernettyas, and similar subjects, to give variety to the landscape.

Or, on the other hand, the snowy grace of philadelphuses and deutzias, the wealth of shrubby spiræas, of single and double-flowered cherries, and the beauty of pyrus and prunus, would help me fill in a background for great natural groupings of delphiniums, campanulas, foxgloves, solidagos, asters, Chrysanthemum maximum, and other plants.

It is possible to run two, or even more, styles of garden art concurrently within the confines of a single garden, if care is taken to let the lines fall naturally into each other, and to plant up adjoining ground judiciously and well. Thus the rock garden may well afford a background to the waterways, the sloping banks of the wild garden may fall naturally into a well-planted stream garden, and so on.

Again, it is also permissible to bring English wild plants into the garden proper. Campanula nobilis in variety, Lythrum roseum and its brighter forms, Linaria vulgaris, Isatis glauca, and other plants of like nature, are in keeping with the perennials of the borders, or may be used with delphiniums, starworts, senecios, moon daisies, Scabiosa caucasica, gaillardias, etc., in wild garden or shrubbery plantings, without detriment to themselves or the plants they are grouped with.

In as many ways as possible it should be the aim to be natural in planting the garden. Harmonies in forms and colourings are far better than violent contrasts. A sweep of graceful outlines, where the colour falls peacefully from shade to shade, is ever pleasing.

Contrasts are, however, of value when subtly arranged. Massive gunneras are not out of character when contrasted with tall irises or waving fronds of osmundas at the waterside. Such contrasts are ofttimes invaluable. But place an erect cypress by the side of your gunneras, or a mass of zonal pelargoniums among your irises, and the contrast is then fatal. It is just the exercise of good taste which tells. Mistakes may be remedied. But perpetually recurring mistakes of arrangement can only occur through ignorance or lack of taste, and few would accuse the present-day horticulturists of either of these faults. Garden appreciation and knowledge of plants is improving every day, and this alone will make for better and more interesting gardens.

P. S. Hayward.

EARLY-FLOWERING SUBJECTS FOR HERBACEOUS BORDER.

When planting new herbaceous borders it is desirable to include as many early-flowering subjects as may be consistent with the subsequent appearance of the arrangement, and where space is at disposal it is well to devote a border entirely to plants suitable for an early display. A border of this description should be situated in a sunny and sheltered position for preference, so as to accentuate the early flowering propensities of the plants used. Bulbs will of necessity play a prominent part in such a border, but they will be more easily planted after the other subjects are set out. Doronicum austriacum is especially showy and bright, its rich yellow blooms being freely produced, while D. caucasicum, rather shorter in growth, is equally desirable. The Globe Flowers are very effective, and succeed best in a rather moist soil; Trollius asiaticus, rich yellow; T. Fortunei fl. pl., rich gold: T. europæus, clear yellow; and T. Orange Globe, are some of the more handsome forms. The Prophet Flower, Arnebia echioides, has bright yellow flowers with brown spots, and is a gem for a border of this description. Several of the primulas are especially suitable, and should be planted in sufficient numbers to be effective, as, indeed, should all the other subjects employed. P. denticulata, bluish-lilac; P. Cashmeriana, light purple; P. japonica rosea, and P. megaseæfolia, a lovely rose coloured species, which flower early, are especially desirable.

Caltha palustris and its double form are very showy, and do well in a damp position, but are really more at home by the stream side. Some of the anemones are particularly charming, and A. apennina, with lovely sky-blue flowers, is especially so. A. pulsatilla, rich purple; A. sylvestris, pure white; and A. fulgens, brilliant scarlet, are all delightful. Double daisies are most attractive and much admired, and they can be had in various colours, including pink, white, and crimson. The gentians must not be omitted, and for this style of border Gentiana acaulis is the most suitable, as it forms handsome vigorous clumps that freely produce rich dark blue flowers. The Lenten roses deserve a place, and there are some pleasing forms of Helleborus orientalis that may be chosen, like guttatus, white, with crimson spots; lutea viridissima, greenish-yellow; and F. C. Heinmann, light purple, with dark spots. The hepaticas are attractive, early-flowering subjects, and prefer a slightly shaded position. H. angulosa has beautiful sky-blue flowers; H. triloba alba and H. triloba rubra are especially charming. Polyanthuses are very showy for early-flowering, and seedlings from a selected strain yield some very rich and varied colours. Some of the better sweet williams are worthy of inclusion, and among these Pink Beauty, Sutton's Scarlet, and Rich Crimson are highly attractive.

Violas render additional colour, and of the numerous showy varieties Councillor Waters, dark violet purple; Maggie Mott, mauve; cornuta, pale blue; gracilis, intense violet-blue, and Bullion, deep golden yellow, might be chosen. Such subjects as myosotis, double white arabis, and alyssum can be included at the discretion of the planter. Muscari conicum and its varieties alba and Heavenly Blue will be pleasing additions, the latter being especially charming. Daffodils, narcissi, tulips, hyacinths, crocuses, chionodoxas, and snowdrops will all add beauty to the arrangement. A bank of flowering shrubs would provide a glorious background for a spring border of this description, and the whole would form an object of unusual beauty.

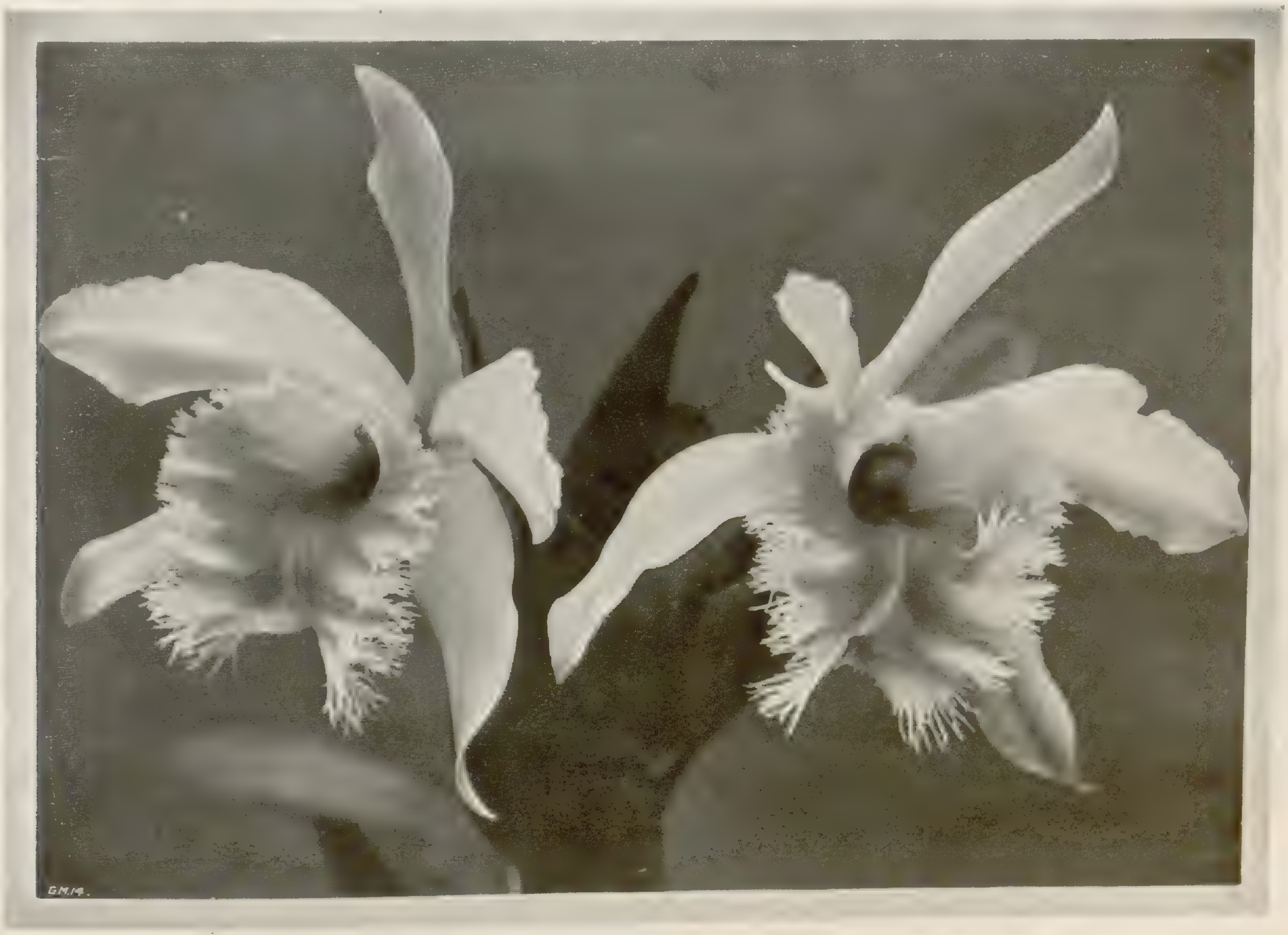
J. Gardner.

Batsford Park Gardens.

NEW PLANTS, ETC.

BRASSO-CATTLEYA DIGBYANO-MOSSIÆ HOLFORD'S VAR.

Brasso-cattleya Digbyano-Mossiæ was the first of the crosses between Brassavola and Cattleya, and it flowered at the Chelsea Nursery nearly twenty-five years ago. The hybrid is frequently known under the much better title of B.-c. Veitchi. Holford's variety is remarkable for the large size of its flowers, its white sepals and petals, and the pale greenish-yellow area at the base of the pink-tinged and beautifully-fringed lip. This variety was obtained by using the Reineckiana variety of Cattleya Mossiæ as one parent. F.C.C., R.H.S., November 21. Lieut.-Colonel Sir G. Holford, Westonbirt.



BRASSO-CATTLEYA DIGBYANO-MOSSIÆ HOLFORD'S VAR.
Flowers white, with a greenish-yellow throat to the pink-tinged lip. F.C.C., R.H.S., November 21. Lieut.-Colonel Sir G. Holford (grower, Mr. H. Alexander), Westonbirt, Gloucester.

CYPRIPEDIUM CHAPMANI WESTONBIRT VAR.

This variety has very large flowers, and is probably the darkest and deepest-coloured form of the hybrid between C. bellatulum and C. Curtisi. The flower is heavily shaded with deep red-purple over a creamy ground. F.C.C., R.H.S., November 21. Lieut.-Colonel Sir G. Holford.

LÆLIO-CATTLEYA PRINCE OF ORANGE.

This is a further addition to the group of brightly-hued orchids that flower in autumn and winter, and for which thanks are due to the owner and grower of the Westonbirt collection. The parents of L.-c. Prince of Orange are L.-c. Hippolyta and C. Dowiana aurea. The plant is a strong grower, and, as shown, carried an erect spike of seven handsome flowers, these latter having deep and bright yellow sepals and petals, with a wavy, brilliant ruby-crimson apex to the yellow lip. F.C.C., R.H.S., November 21. Lieut.-Colonel Sir George Holford (grower, Mr. H. Alexander) ,Westonbirt, Tetbury.

LÆLIO-CATTLEYA DENGANI.

A very showy hybrid from L.-c. Cappei and Cattleya Dowiana. The yellow sepals and petals are suffused with copper colour, while the large lip is vivid crimson. A.M., R.H.S., November 21. Francis Wellesley, Esq. (gardener, Mr. Hopkins), Westfield, Woking.

ODONTOGLOSSUM THAIS.

A large-flowered, strong-growing hybrid of unknown parentage. It bore a long, arching spike of broad blush-coloured flowers, heavily spotted with light rosy-purple. F.C.C., R.H.S., November 21. W. R. Lee, Esq. (gardener, Mr. Woodhouse), Plumpton Hall, Manchester.

ODONTOGLOSSUM CHIONE.

A very interesting and handsome hybrid of unknown parentage, but probably belonging to the eximium or illustre groups. It has flowers of moderate size, closely set on the spike. The sepals and petals are deep brownish-purple, with white tip and base. The spreading lip is white, with purple and gold markings, and show evidence of the plant's descent from O. Harryanum. F.C.C., R.H.S., November 21. W. R. Lee, Esq., Plumpton Hall.

CYPRIPEDIUM ELATIOR SHRUBBERY VAR.

A neat and pretty form of the hybrid between C. Leeanum and C. Baron Schröder. The white, flattish dorsal sepal is brightly marked with purple, while petals and lip are bright brown and purple. A.M., R.H.S., November 21. F. M. Ogilvie, Esq. (gardener, Mr. Balmforth), The Shrubbery, Oxford.

BRASSO-CATTLEYA LEUCOTHŒA.

A small but pretty hybrid from Brassavola nodosa and Cattleya Schröderæ. The flowers are of medium size and pure white, save for a yellow mark in the throat. A.M., R.H.S., November 21. Messrs. J. and A. McBean, Cooksbridge, Sussex.

LÆLIO-CATTLEYA W. J. BIGGS.

An attractive hybrid of unknown parentage; the sepal and petals are tawny-yellow, and the lip dark purple. A.M., R.H.S., November 21. Mr. W. J. Biggs, Browning Road, Enfield.

CÆSALPINIA PULCHERRIMA.

An old but rarely-seen plant, and one that needs considerable space in a stove house. The large pinnate leaves are elegant, and the big clusters of bright orange-red flowers are very attractive. C. pulcherrima, also known as Poinciana pulcherrima, is a native of the West Indies. A.M., R.H.S., November 21. Mr. G. Evans, Baldock.

CÆSALPINIA PULCHERRIMA.

Godfrey's Perfection.—A beautiful free-flowering anemone variety that opens creamy white, but quickly becomes pure white. This is a particularly fine decorative chrysanthemum either disbudded or grown to produce sprays. A.M., R.H.S., November 21. Mr. W. J. Godfrey, Exmouth.

Mrs. Walter Hemus.—A large and graceful single variety, ruby-crimson, with a yellow disc. A.M., R.H.S., November 21. Mr. W. H. Page, Tangley Nursery, Hampton.

Thomas Page. — A reflexing Japanese variety of decorative size and value; it has bright mauve-pink florets, and is very attractive. A.M., R.H.S., November 21. Mr. W. H. Page, Hampton.

Josephine.—A very fine single variety with more than one row of florets; these latter are broad, and neatly arranged to form a showy substantial bloom. The colour is clear yellow. A.M., R.H.S., November 21. Messrs. W. Wells and Co., Merstham.

Marjorie Lloyd.—A pretty single variety, the colour being soft apricot-orange. A.M., R.H.S., November 21. Messrs. W. Wells and Co., Merstham.

Merstham Gem.—An orange-coloured single variety with a yellow zone round the disc. A.M., R.H.S., November 21. Messrs. W. Wells and Co., Merstham.

Miss Margaret Gray.—A big single variety, bright tawny yellow, with a pretty flushing of rosy-pink. A.M., R.H.S., November 21. Mr. P. Ladds, Swanley.

Miss Phyllis Bryant.—Another large single variety that might well be called a Japanese single, seeing that the florets droop gracefully at the tips. The colour is soft yellow. A.M. R.H.S., November 21. Mr. P. Ladds, Swanley.

Primrose Girl. A useful decorative single variety, producing large elegant flowers of a very attractive shade of bright yellow. A.M., R.H.S., November 21. Messrs. James Veitch and Sons, Chelsea.

Norbury Yellow.—A medium-sized decorative variety of very rich bright yellow colour. A.M., R.H.S., November 21. Mr. George Kent, Norbury.

Yellow Cap.—This fine yellow form of the old Caprice du Printemps was described in our issue of November 25, p. 878; and reference to the splendidly decorative bush plants of this variety, grown and exhibited by Messrs. James Veitch and Sons, Chelsea, was made in our issue of November 11, p. 833. We now have pleasure in illustrating a fine specimen of this variety as grown and exhibited by the Chelsea firm.

BEGONIA FASCINATOR.

Next to B. Mrs. Heal, this new comer must be accounted the finest of the series of winter-flowering begonias raised at Chelsea. It is a most attractive variety, flowering freely and bearing large orange-buff, or salmon-orange coloured flowers. The colouring is quite distinct in this section of begonias, and should materially help to popularise these winter bloomers. A.M., R.H.S., November 21. Messrs. James Veitch and Sons, Chelsea.

PLUM PRESIDENT.

A large late culinary variety; deep purple with a blue bloom on the fruits. The fruits illustrated were grown by Mr. W. Messenger, Woolverstone Park Gardens, Ipswich.

PLUM PRESIDENT.

Plums are so numerous and the majority are so useful that to emphasise the good qualities of any one would seem to imply that it was quite superior to all others. But this is not necessarily the case, because plums ripen over a fairly long period, and are by no means the short season crop that the market or the greengrocer's shop often suggests. In the case of culinary plums, that is, those which are not useful at any time for dessert purposes, there are some ready for use in July, like Early Rivers, while others are at their best in October. These quite late plums are most valuable in private gardens, where a regular supply over a long period is needed, and one of the best is President, raised by Messrs. T. Rivers and Son, of Sawbridgeworth. This variety has large oval fruits of deep purple colour, thickly overlaid with blue bloom; it is a free stone variety, rich and sweet in flavour, and it is a very free bearer. The dish of fruits illustrated represents one exhibited at Westminster at the Royal Horticultural Society's Fruit Show, a few weeks ago, by Mr. W. Messenger, gardener to C. H. Berners, Esq., Woolverstone Park, Ipswich. Readers of the Gardeners' Magazine will remember that Mr. Messenger, and Mr J. Vert, of Audley End Gardens, Saffron Walden, are two of the most successful growers and exhibitors of plums nowadays.

Roses.—It is rather early to refer to the planting of roses, but it is advisable to suggest that the time has arrived for preparing the soil, so that all will be in readiness when the time arrives. The preparation of the beds is an important point in the successful cultivation of roses, and there should be no hesitation in carrying out the work in a thorough manner. Undoubtedly a good stiff loam is the most suitable, but almost any soil may be worked into such a condition that will adapt it to the requirements of roses. For instance, if the natural soil is light and poor, a liberal quantity of heavy loam should be thoroughly worked in with it when trenching. If the bottom spit is stony remove it altogether. Add also a small quantity of well-decayed cow manure. Where the soil is a strong wet clay, remove it, and place drainage in the bottom of the bed to prevent it becoming sour through stagnant moisture. Heavy soils will be improved by adding a liberal quantity of sharp road grit and a little wood ashes.—E. C. Pooley.

ROYAL INTERNATIONAL HORTICULTURAL EXHIBITION, 1912.

The following is the text of the paper read at the meeting of the Royal Horticultural Society, on November 21, by Mr. Edward White, hon. managing director:

The council of this society has courteously placed the lecture hall this afternoon at the disposition of the directors of the Royal International Horticultural Exhibition, and so enabled them to call attention to the great event of next year. Perhaps one may go so far as to call it the great horticultural event of this generation.

Many of the flower shows held throughout the country have developed into important affairs, but not one has approached, in the British Isles, the great International Horticultural Exhibition of 1866. Although at first sight it seems surprising that no attempt has been made to repeat the great success of that show, those who have taken a part, however modest, in the organisation of such an event can appreciate tolerably well the reason for such a long interval,

International Horticultural Exhibitions Abroad.

There have, moreover, been some special international displays during recent years at Paris, Ghent, Berlin, Haarlem, Florence, Lyons, Turin, and elsewhere, and one will also take place in Russia in 1913.

Naturally each of these important affairs has presented some separate and valuable lessons in horticulture, and English visitors have quitted them with a persistent feeling that the time has arrived for British gardeners once more to assert their supremacy, and show the world the utmost of which they are capable.

The Flemish town of Ghent claims an important place in the history of horticultural exhibitions. It is there that the Royal Society of Agriculture and Botany holds every five years great shows, which date back intermittently for some 300 years. Visitors to the last show, held in 1908, will remember particularly the magnificent display of azaleas, camellias, and orchids, and the charmingly artistic effect of the arrangement of the exhibition with roomy walks and panoramic backgrounds. It may be claimed that English exhibitions scored a great triumph in the orchid class by the marvellous display made by Sir George Holford.

The relations between leading French and English horticulturists are of a very happy nature, and many of the latter make a point of attending the periodical shows at Paris, which always add to one's admiration for the artistic and decorative ability of our neighbours.

The completeness of the Berlin Exhibition in 1909, which was held as early as April, was a revelation to English visitors. The show of fruit for such a time of the year was surprisingly good.

A wonderful show of tulips was seen at last year's Jubilee Exhibition at Haarlem, where the great bulb gardens, for which the town is famous, were to be seen in masses, displaying a galaxy of beauty in form and colour.

The Chief Characteristic of the International.

The chief characteristic of our own exhibition of 1912, at the end of May, will probably be the all-round quality of the exhibits rather than the supremacy of any one class, except perhaps orchids. Some few objections, by the way, may be raised to the date of the show, but these would be possible whatever season was fixed, and the days decided upon after the most careful consideration by the directors are undoubtedly the most convenient generally, and offer the best all-round opportunities for the display of British horticulture in all its branches. It has also been proved by experience on many occasions that the public are more eager to attend spring shows than those held later in the summer.

The dear old phrase, "horticulture in all its branches," falls very easily from one's lips. This is not to be wondered at, considering the amount of oratory for which it has been responsible since the days of Gerard and Parkinson. It would be useful sometimes to consider what it really means, instead of using it in the automatic fashion to which we have become accustomed. As the exhibition is designed to serve horticulture in all its branches, it will be legitimate to give a moment's consideration to some of the branches, and see how broadly they spread.

Many of us are too busy clinging to our own particular limb to realise of what a giant tree it forms part, and the great economic importance of that tree in our country.

Economic Importance of Horticulture.

We ought to be in an exceptional position to appreciate these facts when we have before us the statistics of the census of production with regard to the horticultural industry which will very shortly be published, and should be well worth the study of all who are interested in the progress of the art.

Taking first that branch of chief interest to the members of this society, we should look for particulars of the great nursery, florist, bulb, and seed trades; incidentally we might hope to learn the extent of the acreage of the most highly or intensively-cultivated land to be found in the country, and we might estimate roughly therefrom the number of employés occupied and maintained in the handling of these great industries.

Well organised though they may be, thanks in a great measure to the Royal Horticultural Society, these trades represent in volume, however, but a small proportion of the horticultural industry in full, or even of that part concerned with the management of gardens.

To realise this, we need only picture the comparatively few gardens we know personally, and think of the quantity and value of the other materials used in their construction and maintenance, the architectural features and adornments in conservatories, horticultural buildings, garden ornaments, fencing and gates, the varied machinery, implements, tools, manures, fertilisers, and all other details which represent some branch or other of the craft.

Among other points of information we might glean some idea of the number of owners of private gardens of a considerable area and how many million acres of land in this country are devoted altogether to gardens and parks, both public and private, or the area of glass-covered land now existing in the country with that of fruit and market gardens.

In these days of small holdings, innumerable market gardens, and fruit farms, it is difficult to say exactly where horticulture begins and agriculture ends, and it is not unlikely that the latter industry will be credited in the census returns with a large share of these, the most extended branches of the tree of horticulture. This point will be noted by those anxious to assert on behalf of the art all the importance that rightly belongs to it.

The Place of Exhibition and General Arrangements.

One of the greatest assets that horticulture possesses is the uncreasing sympathy shown by the Royal Family in its welfare. This sympathy is reciprocal, and the pleasure with which the directors received King George's gracious promise to open the exhibition on May 22 next, at twelve o'clock, will be shared by all who are interested in the success of the exhibition.

The considerable difficulty in securing a suitable site was eventually overcome by an arrangement to occupy twenty-one acres of the grounds of the Royal Hospital at Chelsea, which include the Ranelagh Gardens. The position is ideal in many respects, among its advantages being two ample entrances from Queen's Road and the Chelsea Embankment respectively, within a few minutes' walk from Sloane Square station. There is open space for tents covering nearly five acres, and there are, in addition, several broad, shaded avenues, and the sheltered and mature gardens, which offer a good sample of Middle Victorian landscape gardening, and will make a perfect background for outdoor exhibits and the rock and water gardens, which are expected to be of particular interest.

It is proposed to illuminate the grounds and engage the best military bands available, so that, given fine weather, a series of delightful floral fêtes will be feasible. A provisional plan of arrangement has been issued, and it is the determination of the directors that there shall be no avoidable cause of complaint in the matter of ventilation and space in the gangways. In this respect I may mention that the largest tent, which will cover nearly three and a-half acres, is divided into five spans, 45ft. in height, with special ventilation for the whole length of each ridge, the total length of the tent being about 220 yards. The gangways are from 15 ft. to 20ft. wide. The show space in this tent amounts to nearly 75,000 square feet, and will provide, if necessary, table run of nearly half a mile.

It is necessary to state that the tenancy of the premises will be too short to enable the production of an artistic scheme to compete on equal terms with the permanent sites of some Continental exhibitions, but at salient points striking effects will be produced from views of the great expanse of flowers, and the general arrangements will be much less complicated than are usually found at such exhibitions. It may be mentioned that the 1866 exhibition was held on the site now occupied by the Natural History Museum at South Kensington, adjoining the then existing premises of the Royal Horticultural Society.

Financial Aspects.

Experience has proved — fortunately in realms other than of horticulture—the folly of entering upon such an enterprise without ample financial guarantees. We are happy to state that the support already accorded, both in the matter of guarantees and subscriptions, has been more than encouraging, so that with a continuation of existing experiences the anxiety of the directors with regard to finances should be reduced to vanishing point. This is not to say that guarantees and subscriptions are no longer earnestly invited. They are still wanted, and may be confidently expected in view of the substantial privileges which are offered in return. A subscriber is in effect the prudent person who buys a ticket or tickets beforehand at a cheap rate, and at the same time is entitled to the happy feeling that he is becoming the patron of a most worthy cause. This would, of course, be an ungracious way of describing the liberality of many donations, among which may be mentioned that of your own great society to the amount of £1,000, with a further guarantee of £4,000. From all appearances there is little need to worry about the guarantee.

It is worth noting that £1,000 represents the contribution of a trifle over 1s. for each guinea member of the society. In return for this the reductions of the charges to Fellows are about 25 per cent. on the first day, which may be looked upon partly as a subscriber's day, and of 50 per cent. on all days other than the 1s. days; so that the Fellows may congratulate their council on having achieved another of those strokes of business which do so much to popularise their Society.

The published lists respectively of guarantees and subscriptions are £4,000 and £16,000.

The directors have recognised the desirability of encouraging the attendance of professional gardeners, and have therefore reduced the charges of entry very considerably to this class of visitor.

The directors have been assisted immensely in all of their work of organisation by the systematically kept records of the 1866 exhibition, and the balance-sheet has also been a continual source of reference. We find that the expenses of this exhibition amounted to something over £12,000, the final profit being about £3,500. This substantial sum was exhausted in making a donation to the Gardeners' Royal Benevolent Institution and in the purchase of the valuable Lindley library, which is such a cherished possession of the Royal Horticultural Society. Needless to say, the expenses of 1912 must be considerably greater. Putting aside other considerations, this would be easily understood in examining the respective schedules for 1866 and 1912.

Schedule of Prizes.

In order that I might have an authoritative statement on this subject, I asked Mr. Harry J. Veitch (who, as is well known, is the only surviving member of the committee of the 1866 exhibition) to be so kind as to supply me with a few notes in his capacity of chairman of the Schedule Committee for 1912. Mr. Veitch says it is not easy to compare the two schedules. There were 220 classes in 1866, as against 428 in 1912. Exhibitions in groups as such were practically unknown in 1866, all classes specified the number of plants to be staged.

For 1912 the applications for spaces for groups already number no less than 100.

In 1866 the largest class for stove and greenhouse plants comprised 16 plants. This is in striking contrast to the requirements for next year.

The orchid classes have grown from nine in 1866, the largest class being 50 plants, to 29 classes, with two groups of 500 square feet.

The prizes offered for roses tell the tale of the development of that favourite flower, for besides the novelty classes, there are 26 classes, as against 8 in 1866. In the last exhibition the largest class was for 20 roses in pots 8in. across. In 1912 prizes are offered for groups not exceeding 500 square feet. We have nine classes of cut roses, against one class in 1866; and so on throughout the schedule.

These figures tell in tabloid form of the development of horticulture since 1866, and of the advance particularly in the specialisation, which is such a great feature to-day.

It may be noted that rock and water gardens were not seen in 1866, nor many of the handsome florists' flowers as we know them to-day.

While on this subject we may mention that applications for space for collective exhibits have come in from several foreign countries, as well as from individual counties in Great Britain, and that the entries already exceed 400, irrespective of the exhibition of horticultural sundries. This section promises to be the most complete and interesting that has as yet been seen.

It is not incumbent upon me to give particulars of the exhibits entered, but I am at liberty to mention for one thing that a commission has been given by an American gentleman for a very remarkable piece of garden statuary on the express condition that it is shown at the exhibition.

It may be mentioned that no special prizes were offered in 1866, whereas already no less than 38 very fine cups and awards have been promised, in addition to the special cups given by many counties. It will not be invidious to inform Fellows of your Society that, in addition to the cup graciously promised by the King, and the one offered by the president of the exhibition, the Duke of Portland, others are being given by Sir Trevor Lawrence, Sir George Holford, Sir Jeremiah Colman, and Mr. Gurney Fowler, the last-named gentlemen being respectively the treasurer and chairman of the exhibition. The total prize list will probably exceed £4,000.

Horticultural Education and Science.

There are many more matters of interest to which there is no time to refer, but the work of the Science and Education Committee should be mentioned, because it is hoped that this will be one of the most efficient and permanently valuable features of the exhibition. It is only necessary to point out that the president of the committee is the Right Hon. A. H. Dyke-Acland, P.C., who is throwing the greatest energy into the work, and that the secretary is Mr. F. J. Chittenden. A glance through the list of distinguished men forming the committee will complete the feeling of assurance upon the question of the efficient work to be expected.

Their labours are divided into two parts, one dealing with horticultural education and the other with the scientific side of horticulture.

There will be no exhibits in connection with education, but a special building has been allotted to the scientific exhibts, and will contain some highly interesting specimens under the following sections:—

(1) Vegetable physiology.
(2) Genetics.
(3) Economic entomology.
(4) Economic mycology.

Several very valuable and interesting exhibits have been promised by gentlemen, to whom horticulturists have every reason to be grateful. It may be added that many of the leading investigators on the Continent and in America have also promised their assistance.

All scientific exhibits will have a bearing on practical horticulture, so that this department of the exhibition will be of popular interest, and not merely a happy hunting-ground for the scientic student or a place of refuge for those who are seeking a quiet part of the exhibition.

The conference, which will be held in the fine recreation hall at the hospital, will be devoted to two subjects only, since it has been determined by the committee, wisely, it will probably be agreed, that it is much better to thoroughly thrash out two subjects only than to rush frantically through hosts of lectures, which no one has time to listen to, much more criticise.

I may mention that there were something like forty or fifty papers presented at the congress of 1866 dealing with subjects, many trivial and uninteresting.

The first subject for consideration will be the broad question of horticultural education. In preparation for this discussion, the committee is making thorough inquiry into the system of education in horticulture in this country and the public and private facilities which are open to students.

It is hoped that an exhaustive report will be completed and ready for placing in the hands of those who attend the conference to serve as a basis for discussion. Many prominent educationists from the Continent and America have undertaken to assist in the discussion or to read papers dealing with special points on horticultural education in their own countries.

The second part of the conference will deal generally with legislation in connection with plant diseases. Information on this important subject is being obtained both in this country and abroad, and will serve as a basis for a report to be presented to the conference on lines similar to those proposed in connection with education. Many prominent people in this country and from abroad have undertaken to participate; and the Board of Agriculture have promised maps, showing the progress and distribution of certain plant diseases and pests which it has been deemed advisable to legislate against.

Social Functions.

One of the most pleasant, and at the same time the most onerous, duties in connection with the exhibition will be the entertainment of the many distinguished foreign guests who will undoubtedly visit this country next May. The reception committee is under the chairmanship of Sir Albert Rollit, and a programme is being drawn up for the entertainment of our visitors, which is being simplified by the hospitality already promised from private and other sources. The president of the exhibition, the Duke of Portland, has generously offered to hold a reception at his town house. Permission has been graciously given for a visit to the Royal Gardens at Windsor. The distinguished president of your society in his private capacity and Mr. Leopold de Rothschild, The Royal Horticultural Society and others have also intimated their hospitable intentions. If the history of 1866 were to repeat itself, there would be a great banquet at the Guildhall. There should be little fear that the British gardeners who have visited foreign exhibitions and enjoyed the hospitality offered them will feel any shame at the way their former hosts are treated on their arrival in this country.

Continental Opinions.

I cannot do better than conclude my remarks by quoting, by permission, some opinions with which I have been favoured by one or two foreign gentlemen intimately connected with the management of their own international horticultural exhibition.

Herr Siegfried Braun, the secretary of the Berlin Exhibition in 1909, writes:—

> Much could be said in a general way on this subject, but if you wish to know what tangible advantages for the horticultural industry of my country resulted from the International Horticultural Exhibition of 1909, I personally believe that one cannot value them too highly.
>
> An exhibition, such as the one which took place in Berlin, affords to the experts in their many-sided interests lasting inducements to further efforts. It shows clearly what has already been achieved, and what there is still to learn. This knowledge is in itself a powerful lever to progress in any profession. Besides, such an exhibition stirs up the gardening enthusiasm of both professionals and amateurs, and induces them to spend more money on plants and flowers, thus conferring an added blessing on the industry
>
> It is as instructive as it is interesting to follow up how far these results sometimes reach in isolated cases.
>
> I trust that your proposed exhibition for the year 1912 may be the means of bringing tangible profits to your country.

Monsieur Abel Chatenay, the capable general secretary of the French Agricultural and Horticultural Committee, says:—

> I have had the opportunity of noting personally how far International Exhibitions have had influence in business relations between the countries taking part. The small number of your English colleagues who have taken part in our exhibitions could testify sufficiently as to the results obtained by the growers of sweet peas and carnations and a few other specialities, by virtue of the excellence of their product, and through their exhibits, have obtained numerous orders from the Parisian public.
>
> I consider from another point of view that it is beneficial for horticulturists of various countries to be able to get into touch with their colleagues. It is impossible for questions of general interest to be limited by geographical frontiers, and professionals from the various countries should be able to exchange their views from time to time. It is only in a large exhibition where they can meet and know one another, either as jurors or as exhibitors. The interchange of ideas is of great interest to all.
>
> From this point of view Belgian horticulturists, who are excellent exporters, have realised fully the utility of such manifestations, of which their quinquennial show at Gand is a good example.

The present secretary of the Ghent Society, to which I have so frequently referred, is Monsieur Albert Ceuterick, and he has favoured me with the following views:—

> One cannot fully define the immediate effects of our exhibition on the horticulture of Belgium, but our society, which for a century has not relaxed its efforts to develop and improve these demonstrations of the horticulture industry, is convinced that the result is incalculable profit to the producers.
>
> With this view our society and our horticulturists impose heavy sacrifices upon themselves to make them succeed.
>
> Horticulture is a subject specially appropriate for exhibitions, but these exhibitions by their importance and their fame attract to Ghent the chief botanists, the amateur and professional gardeners of Europe. Some come as judges, others to satisfy their curiosity, and to follow the progress of horticulture.
>
> Existing commercial relations are confirmed, and new connections are created. Firms which exhibit make the acquaintance of numerous foreigners and widen their outlook.
>
> In one word, it is an advertisement of extraordinary importance, and it is not necessary nowadays, to insist upon the value and advantage of advertisements, although its effects are not immediately apparent. Nevertheless, it is our profound conviction that the development and prosperity of our horticulture are intimately bound up with our quinquennial exhibitions.
>
> You are good enough to suggest that my efforts had something to do with the success of the exhibition in 1908. May I say that the success of all of our exhibitions of which our society is very proud is to be attributed not to the individual efforts of one member or another, but in the perfect union which has existed from time immemorial, first between all the members of the committee, and then between the committee and all the horticulturists in our country.

These last words of Monsieur Ceuterick deserves letters of gold, and present an ideal worthy of emulation by everyone connected with the Royal International Horticultural Exhibition.

It would be premature to boast, but there is every reason to believe that when the history of the great enterprise of 1912 is recorded, an epitaph equally creditable to British horticulture may be inscribed.

WORK FOR THE WEEK.

◆

THE ORCHID HOUSES.

THE COOL HOUSE.—Many plants will now be found with their flower scapes in different stages of development, and the bulk are just completing the growth of the new pseudo-bulb. It is just at this latter stage that the flower scapes make their appearance, and careful observation is necessary to protect the spike in its early development against the attacks of slugs and shell snails. A piece of cotton-wool carefully wrapped around the base of the leaves, with the woolly side outwards, provides a barrier over which these pests have a difficulty in passing. Some pieces of lettuce leaves placed on the surface of the potting compost, and about the stages, or some bran or brewer's grains put on pieces of crocks, will provide traps, and, with the aid of a light during the evenings and early morning, the slugs will be found feeding, and are easily caught and destroyed. The protection of the flower scapes is by no means a light matter, for when we consider that the labour and care of a whole year's work may be destroyed in a single night by either of these pests, the time occupied in protection must be given.

RESTING.—If there is any period when the odontoglossums may be given a little rest it is just at that period when the growths are completed. Care should be observed not to overwater. See that the potting compost becomes dry between waterings. No hard and fast rule can be laid down as to how often plants require to be watered; the situations and conditions under which cool house orchids are cultivated are so exceedingly variable, that the quantity of water the plants may require, both at the roots and in the atmosphere, must be entirely governed by these conditions. In the treatment of the cool house orchids, one cannot avoid contrasting the successful treatment given now with the conditions that were considered necessary some twenty years ago. It was no uncommon thing to advocate a temperature of 40 to 45 degrees as suitable in the winter for odontoglossums and other cool house orchids. The result was that the plants presented a stunted appearance, and there was little, if any, advance in the size of the pseudo-bulbs from one year to another. There are few successful odontoglossum growers to-day who do not advocate ten degrees higher temperature for the winter than those mentioned above. After all, this is only reasonable, when we take into consideration that the most active season of growth for the bulk of the plants, and the strain of flowering, is from the month of September until the end of April. It is right, therefore, that we should afford the plants grown under artificial conditions that which Nature always provides at the time when every encouragement is necessary to meet their requirements. Where this is realised, and I believe it is generally so now, very little difficulty is experienced in growing the plants; or, where hybridisation is practiced, in successfully raising and developing the seedlings.—H. J. CHAPMAN, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

CHRYSANTHEMUMS.—Particular notice should be taken of the different varieties while they are in flower, so that none but the best shall be grown another season. Discarded varieties should be thrown out as soon as the flowering period is over, and those to be retained should be encouraged to make strong, sturdy cuttings by placing them in a position near the glass, where they will receive plenty of light and air. Thin out any weakly cuttings which have already shown themselves, to enable the remainder to become strong. Any varieties that are shy in producing cuttings will be the better for a top-dressing of fresh material to encourage new root action. A few cuttings may now be inserted to make large specimen plants.

PELARGONIUMS.—The zonal varieties are now making a fine show, and careful watering is necessary, especially in dull weather. Fog is very destructive to the beauty of the flowers, and must be excluded from the house in which they are growing. When cut, the flowers will last much longer if a little florists' gum is dropped into the centre of each bloom. The show varieties, which were cut back some time ago, are making good growth, and will require potting. The potting compost calls for care in its preparation. Too often the grower errs in adding a quantity of manure, which only tends to the production of long, sappy growth, which is practically useless for flowering purposes. Good turfy loam, with a little leaf-soil and sharp sand, forms an excellent material for pelargoniums, and, if potted firmly, strong, short-jointed growth will result. About a fortnight after potting, the points of the growths may be pinched out to make the plants branch.

CINERARIAS AND CALCEOLARIAS.—The plants still in frames must be encouraged by supplying an abundance of ventilation whenever the weather permits. Keep them close to the glass by standing them on inverted pots. An application of manure at intervals will greatly benefit them, diluted cow manure suiting each kind admirably; but care must be taken that it does not touch the foliage. It is necessary to fumigate periodically to keep greenfly in check. Take the precaution of having plenty of material handy for protection from frost.

SCHIZANTHUSES.—The several batches of schizanthuses must be kept continually growing; if they are allowed to become root-bound, premature flowering will be the result, and this renders the plants practically useless. Artificial heat is only necessary in very severe weather. Overwatering and excessive heat account for more failures with these useful plants than any other causes.

BULBS.—Relays of bulbs, etc., should be brought into gentle heat at regular intervals to maintain the supply of flowers for decoration.—A. GRUBB, Porters Park Gardens.

HARDY FRUITS.

PEARS.—The free-flowering habit of some pears in certain seasons must of necessity absorb a great deal of vitality, and no doubt if the latter could be preserved the trees would be more capable of setting and ripening a crop of fruit than would otherwise be the case. There is such an abundant show of blossom buds on pears this year that the present favourable occasion should be taken advantage of to put all old trees in order. This may be done by shortening each spur growth to two or three fruit buds, and other growths that have been regularly stopped throughout the summer may be shortened with a view of producing fruit spurs for the following season. When pruning pears it will be found necessary to give more freedom to some varieties to get them to fruit successfully than is necessary with others. Beurre Giffard, Jargonelle, and Durondeau, for instance, will produce most of their fruits on wood of the previous year's growth that is several inches long.

YOUNG PEAR TREES.—Young cordon trees should need but little winter pruning if the summer stopping has been fully carried out. Encourage the trees to furnish their allotted space as soon as possible. If they are healthy and strong, they may have the leads cut back to two or three eyes to ensure a stronger lead next year; those that are stunted through overcropping may also be severely pruned to encourage new growth. Horizontally-trained trees will need to have their leaders shortened back to where the next pair of branches is wanted, taking care that the buds are pointing in the direction required; the regulation of these trees is best carried out during the summer, by stopping, the aim being to keep all leads of equal strength.

PLUMS ON WALLS.—Provision should be made during the summer for laying in young growth for refurnishing plum trees that may be getting old. By this means trees may be renovated and brought to a more fruitful state. This young wood, being an outlet for the energy of the trees, will usually bear more and finer fruit than the older spur growth, and should thus be encouraged where possible. Allow plenty of space when nailing, so that all light possible may penetrate to thoroughly ripen the wood.

FIG TREES.—Fig trees, in all except the most favourable positions, will now need some protection to ward off severe frost, because, in very hard weather, the embryo fruits are likel yto be damaged, and next year's crop cnsequently lost. If the trees are tied loosely in bundles and enveloped in archangel mats, this will usually be found sufficient protection during the most severe winter.—J. WHITTLE, Cheveney Gardens.

THE KITCHEN GARDEN.

EARLY CARROTS.—Young roots are always in demand in large private establishments; to secure the first crop a beginning should be made by making up a hotbed with sweetened manure and leaves, making the whole thoroughly firm by treading. A heated pit is very handy for the first sowing or two, as during severe weather the frost can be kept out and the crop more easily managed. Failing this the ordinary wooden frame with good waterproof lights will meet the case, but much time is often taken up with necessary coverings as well as lining the hotbed, to keep up the required heat. Use sweet rich, sandy soil, about nine inches in depth, and when the young plants are up admit air to them whenever the weather will allow, avoiding cold cutting winds. A variety of French Short Horn is the most suitable for the sowing.

TOMATOES.—If a sowing of seed is made early this month it will supply plants to come into bearing after the winter ones have completed their crop. Sow the seeds in small pots filled with sweet open soil. Grow the plants near the roof glass in a temperature of about 60 degrees. As they develop put them into slightly larger pots. I find Sunrise is a reliable and satisfactory variety in every way for early fruiting, especially for pot culture.

LETTUCE.—Where there is a shortage of lettuce plants, owing to the seed not germinating properly, make a sowing now in boxes or pans. Grow the plants sturdily in a light position in a greenhouse until large enough for pricking off. If planted out over a mild hotbed in wooden frames, at about six inches apart, and liberally attended to, they will soon grow into useful material. All the Year Round is one of the varieties that readily yield to this mode of culture.

RHUBARB.—A successional and larger quantity of crowns should be lifted now, and exposed for a week or so; afterwards, if planted in the mushroom house or a warm situation in a hot-house, they will give produce in quantity when apples are getting scarcer. Water the crowns with warm water, and keep a moist atmosphere by syringing their surroundings. In small gardens, where proper appliances do not exist for forcing this vegetable, old crates or tubs may be placed over the crowns and warm manure and leaves mixed can be arranged round them to give off a mild heat. Produce from this kind of forcing is often tainted in flavour. Therefore it is necessary to allow a little air to reach the young growths when the weather is suitable, to permit of the escape of ammonia.

GENERAL REMARKS.—Owing to the clearance of autumn cauliflowers and some other crops from the larger quarters of the garden, manuring, trenching, and digging should be actively carried on. Select some strong tubers of early potatoes and place them in boxes, in a light position in preparation for the first plantation in pots or pits. Remove all growths but two of the strongest on each set. Frequently examine and pick over the stock of endive and lettuce that are planted in frames, to prevent damping and decay from spreading as much as possible.—C. FLACK, Cholmondely Castle Gardens.

EXHIBITIONS AND MEETINGS.

Northern Fruit Congress.

A lengthy programme was arranged in connection with the Newcastle Flower and Fruit Show, on Wednesday and Thursday, November 15 and 16, by the North of England Horticultural Society, and those who were associated with the Rev. Bernard Hall, at the Hexham Congress in 1910.

On the first day the meetings were held in the Mining Institute, Newcastle, a short distance from the Town Hall where the show was held, and the meetings suffered as a consequence. Although one might have expected the Congress to deal only with fruit culture and relative subjects, the lectures extended from these to horticultural education, soil bacteria, and soil sterilisation, and even to early-flowering chrysanthemums.

On the second day the attendance was so small on the occasion of Mr. Chisholm's demonstration and lecture on fruit bottling, an effort was made to secure a room at the Town Hall for Mr. Little's demonstration on pruning. This was successful, and the rather small room secured was crowded out. The last session, held Thursday evening, was for the best in point of comfort and attendance, as it was held in the splendid Council Chamber at the Town Hall.

FRUIT CULTURE IN THE NORTH.

The first session was presided over by Captain Cuthbert, D.S.O. It was held in the Mining Institute, some little distance from the Town Hall, and, including Press men, there were thirty-seven persons present.

Mr. J. S. Chisholm, Horticultural Instructor to the Northumberland County Council, in his opening remarks, referred to the importation of 3,242,582 cwts. of apples in 1910, to the value of £2,189,309, while the imports of fresh fruits of all kinds reached the total value of £10,606,906. This, he said, suggested a big standing order for fresh fruits, and opened up the questions of fruit culture, available land, and facilities for marketing. There was a movement in the right direction, but even now Herefordshire had only 6 per cent. of her land under fruit culture, and Kent a little more, while in Northumberland there were only 284 acres of orchards and 268 acres of small fruits; Durham had 227 and 301 acres respectively; and Westmoreland 407 and 52 acres.

This restriction of area was due chiefly to climate, but also to limited markets and difficulty of securing good land for fruit culture. It has been proved, however, in spite of difficulties, that good crops of fine hardy fruit can be grown in the four northern counties, and he believed the business could be made an increasing and a profitable one. At present in many orchards there were too many varieties, and the fruits of inferior quality, consequently it was not surprising that such fruits did not find a ready market. Mr. Chisholm advocated the selection of suitable varieties, dwarf trees, the right stocks, and early fruiting varieties. He objected to young, frequently transplanted trees, covered with fruit spurs, for planting purposes, and advocated young trees in full vigorous growth.

The markets, he said, must determine the varieties to grow. A market orchard must produce good fruits in abundance, and those of fine colour, shape, size, and flavour. Planting a large number of varieties was not the best method, unless a merely local trade was catered for. Low-headed trees were the best, he said, because of their convenience for all matters of cultivation—pruning, spraying, picking, etc. The English Paradise stock was advocated for apples and the quince stock for pears, as these encouraged early fruiting. Deep planting was to be avoided.

Varieties of apples advocated were early sorts to be sold straight from the trees, and good late sorts to be stored for late use. A fruit room should, the lecturer considered, be part of the equipment of a market garden orchard. He said that certain varieties liked certain soils, and were failures even in a limited area, if soil conditions were unsuitable.

In most fertile soils he had found that good sorts for the Northern counties were Beauty of Bath, Mr. Gladstone, Ben's Red, Summer Golden Pippin, Irish Peach, and Worcester Pearmain, for early use; James Grieve, Devonshire Quarrenden, Allington Pippin, and King of the Pippins were suggested for later use.

For early culinary apples he advised Early Victoria, Grenadier, Domino, Lord Grosvenor, and Golden Spire; with Bismarck, Lane's Prince Albert, Newton Wonder, Northern Dumpling, and Bramley's Seedling, for late use.

Good pears were William's Bon Chretien, Doyenne du Comice, and Durondeau.

For compact growing apples Mr. Chisholm advocated planting 8ft. apart in rows 10ft. apart. Young trees being built up needed more nitrogen than trees in full-bearing condition, with reduced quantities of phosphoric acid and potash, the reverse holding good in the case of older and bearing trees. The use of lime was advocated to contract the acidity of most freely-manured market soils; this making the use of manures at a later date possible.

Mr. W. B. Little, Horticultural Instructor to Cumberland and Westmoreland, who followed, covered very much the same ground as Mr. Chisholm. He believed there was room for a great expansion of fruit culture, especially apple culture. At present, judging from the retail prices asked, someone got a good profit, although the grower frequently said he was losing money. Mr. Little said anyone entering on fruit culture for profit should have had experience. The site selected should be well drained; the soil well prepared by ploughing and sub-soil ploughing, or bastard trenching, and he said planting after a corn crop was usually successful. He urged planting Lane's Prince Albert on the crab stock to secure free growth, as the variety always formed fruit spurs abundantly. In a general way, however, he advocated the paradise stock for general use, and emphasised the need of firm planting. Canker was a trouble in Cumberland and Westmoreland, though American Blight was not so, therefore varieties not addicted to canker should be selected.

Early dessert varieties he advocated were Beauty of Bath, Mr. Gladstone for the north, with Worcester Pearmain; James Grieve he was not so satisfied with. Early Victoria, Domino, and Golden Spire were his selection for early culinary varieties. Lord Grosvenor was good on light soils. He thought the small experimental plots under the County Councils did not provide sufficiently exhaustive trials, and so he was careful not to condemn certain varieties. Allington Pippin and Fearn's Pippin he advocated for late dessert use, with King of the Pippins on light soils. Cox's Orange Pippin he did not speak highly of for general planting in the north, except as single cordons. Bramley's Seedling, Newton Wonder, and Lane's Prince Albert were Mr. Little's choice for late culinary varieties.

Mr. Little advocated the intermingling of trees, instead of planting in blocks, so as to secure cross pollination, so many apples, etc., being unfertile to their own pollen. If young trees were planted in October they might be pruned back the following February or March; if planted later pruning should be deferred for a year. Mr. Little followed with advice on spraying, and the need of keen investigation into insect pests and fungus diseases. Pears, he said, were hardly worth cultivation in the north for market purposes, but he strongly advocated the extended cultivation of damsons and plums in the northern counties. Black currants and gooseberries he thought should be more grown, especially in connection with fruit bottling.

Mr. W. Lawrensen, who opened the discussion, spoke of the fine quality of the hardy fruits cultivated along the Tyneside district. There was great need for shelter, and he strongly advocated beech hedges for this purpose. He also referred to the use of the Siberian Crab as a parent for varieties of apples suitable for the north, and said how finely coloured were fruits from seedlings of this crab, resulting from pollination by garden sorts,

Mr. J. Robson referred to the fact that there came into Newcastle each year at least 62,185 cwts. of apples, so that there was a ready demand for good fruits. He had grown many varieties, but considered only fifteen or eighteen were really suitable, commercially, for the northern counties. He emphasised Mr. Lawrensen's remarks as to the ability of Tyneside to grow apples, but added that sites chosen for planting should be 200ft. above sea-level, and then, with some shelter from the north and east, fine samples could be grown, and the business be a remunerative one.

HORTICULTURAL EDUCATION.

At the second afternoon session, commencing at 5.30 on Wednesday, November 15, the subject for consideration was "Horticultural Education," with special reference to certificates, diplomas, and degrees. Dr. W. H. Hadow, Principal of Armstrong College, presided.

Mr. F. J. Chittenden, Director of the Laboratory, Royal Horticultural Society's Gardens, Wisley, opened the proceedings, and said that horticultural education was now exciting a great deal of interest, and this was evidenced by the work done under the County Councils, and at the instance of various colleges. It was a matter discussed at meetings of gardening societies, and was exercising the minds of those conducting the British Gardeners' Association and the North of England Horticultural Society. At Wisley, Kew, Glasnevin, and Edinburgh young men were being trained for the horticultural profession. The North of England Horticultural Society was taking a very keen interest in the matter, as evidenced by the present conference. He found that horticulture was often swamped by her sister, Agriculture, but horticulture was now the greatest of the minor industries. The term "Gardener" should include all those who gained their livelihood from horticulture and its practice, and not merely one employed in a private garden. An agriculturist had, he said, about a dozen kinds of plants, and half a dozen kinds of animals, but a gardener had enormous numbers of plants, fruits, and vegetables to deal with. A sound elementary education must be the foundation. A young man must be skilled in mind and hand. Mere technical skill would make a good practical man, and he would work well under regular conditions, but yet be something of a machine, and would often fail when new conditions obtained. The scientific training gives this "something more," and ensures to the skilled technical man a greater success in his profession. If technical skill alone was likely to result in failure, a scientifically skilled man would be even more likely to fail, if he possessed that skill alone. Most clever gardeners possessed both scientific training and technical skill, but often disclaim the former unwittingly.

A young man should have an early training at a nursery, to understand that hard work is necessary, and here he would be well grounded in practical work. Next should come a two-years' course at an establishment where he could be scientifically trained, and also be trained in technical work, at the same time; the two kinds of training must run concurrently.

In place of a college course a good deal could be done by attendance at evening classes, where scientific matters relating to horticulture were taught by skilled teachers.

With relation to certificates of proficiency Mr. Chittenden felt unable to speak authoritatively. At present about the only certificate granted was the one issued by the Royal Horticultural Society to those who passed its examinations. A national diploma would be a grand advance, and this seemed to be in view. It would mean the formation of an Institute by a limited number of skilled horticulturists, and the entrance by means of examinations open only to those who had spent a given number of years in practical work and scientific training.

Mr. P. P. Walker, lecturer in agriculture at the Armstrong College, said a college course of training should not be such as to place a man above his work. No amount of education in sciences would do away with the necessity of hard practical work. If all agriculturists could be raised to the level of the most successful farmer then the nation would gain materially. All successful men were men of education (in the broadest sense), though they often disclaimed educational advantages. Such a successful man was one who concentrated attention upon effect of season, soil, etc., a keen observer, and a man always well ahead with his work.

A careful study of, and training in, the scientific rules underlying the practice of horticulture and agriculture was necessary if a man was to become highly successful, but to show that a college course of study was a great advantage it was necessary to show that a man so trained could produce greater returns on the farm or in the garden on his return to the business of life. The college course should be the means to an end; not an end in itself. College education should also shorten the time needed to gain the highest practical experience. In the case of gardening, he said, wages depended upon efficiency, and in private gardening there was no need for capital other than brains He urged that young gardeners should attend gardening associations and combine to obtain educational facilities from the constituted authorities. The experimental farm or garden was not, however, in his opinion, the best place for gaining technical education.

At present most instructors in horticulture were successful head gardeners, and they did excellent work, but they needed a sounder basis of scientific instruction. A man knowing nothing of chemistry could not properly appreciate the value of chemical fertilisers. An instructor should not disregard proper educational methods. He considered the first duty of gardening societies or other interested bodies to see that their instructors obtained diplomas, and these could only be obtained as a result of a college course, and be of value when the examining body was composed of specially trained men. He believed that if courses of training could be arranged and diplomas or degrees granted, that the successful men would be able to command a far better wage than at present.

Mr. G. P. Berry, Horticultural Instructor to the Edinburgh Agricultural College, outlined the courses of instruction laid down in Scotland for the education of gardeners, and we understood him to say that already eight head gardeners had entered for a two-years' college course. They hoped very soon to secure a garden wherein all practical work could be done in conjunction with the teaching in the class-room. But Mr. Berry pleaded strongly for Governmental assistance, so that selected men might, by means of examinations and scholarships, be able to take a two-years' college course, for, as he rightly pointed out, at present it was only the son of a very successful private gardener, nurseryman, or market grower who could afford to take advantage of such skilled training.

Mr. Hosking, Horticultural Instructor to the Glasgow Agricultural College, said that what was needed was that gardeners should be educated, not that educationalists should be turned into quasi-gardeners. He had hoped Mr. Chittenden would have placed before them a plan whereby a gardener could be properly trained so as to secure a certificate or diploma that would be a mark of his ability; he was disappointed, and yet he thought the Royal Horticultural Society or the Board of Education might find a way out of the difficulty. At present he thought the Institute of Gardeners, as suggested, seemed to be the best method of hall-marking the capable men.

EARLY CHRYSANTHEMUMS.

Mr. W. R. Armstrong presided at the evening session on the opening day, and there was a moderate attendance to hear a lecture on "Early-Flowering Chrysanthemums" by Mr. J. Smith, Horticultural Instructor to the Durham County Council, who took this subject in the unavoidable absence of Mr. J. F. Donoghue, of Leeds.

FRUIT BOTTLING.

During the afternoon of November 16, at three o'clock, or thereabouts, Dr. Stewart presided, and, in a brief, interesting, and humorous little address, commending fruit bottling and the increased consumption of fruits, introduced Mr. Chisholm, who gave a very lucid lecture on "Fruit Bottling," which we hope shortly to publish in extenso. Mr. Chisholm had a cooker and bottles present, and showed how these were used.

SOIL BACTERIA AND SOIL STERILISATION.

Professor Gilchrist, of Armstrong College, presided over a capital meeting held in the Council Chamber at the Town Hall, at five o'clock on November 16. This was a very successful session.

The subject of "Soil Bacteria" was taken by Mr. F. J. Chittenden, of Wisley, who pointed out that soil was not only a combination "of stones and dirt," but material densely populated with living things, many of them, the bacteria especially, being present in enormous numbers, and among the smallest of living things. Bacteria were chiefly present a few inches below the surface, and individuals measured about the twenty-thousandth of an inch across. In a gramme of soil there would be upwards of fifteen millions of bacteria; the larger the amount of decayed animal and vegetable matter in the soil, the greater the numbers of bacteria. Bacteria were not all harmful—that was a common fallacy. The rate of bacterial increase was wonderful, and it took place by division, and two would be formed from one in a half-hour, and each new bacterium could again increase at a like rate. A little arithmetic would serve to show the enormous multiplication from one bacterium in twelve hours.

Organic matter in the soil, and a temperature of 75 degrees were conducive to rapid multiplication. Some kinds of bacteria would grow without air, and these were not useful in soils, but those needing air were useful from the cultivator's point of view. Over-multiplication of bacteria tended to check a great excess, because of the waste products and their consequent reaction upon bacterial life.

Bacteria were able to break down the complex materials in the soil. We live, he said, at the bottom of an ocean of nitrogen (four-fifths of the air is nitrogen), and yet are unable to use it directly. Plants can only take in nitrogen by means of nitrates and compounds of ammonia. In the soil one set of bacteria might be called "ammonifiers" as they produce ammonia. Nitrification, or the formation of nitrates, takes place by means of the "ammonifiers" first producing ammonia; another set of bacteria will produce nitrites from this ammonia; while yet a third set of bacteria takes the nitrites and converts them into nitrates, for the benefit of the plants growing in the soil.

The soil must contain nitrifiable matter, such as farmyard manure, and green manures; it must also be sufficiently moist and contain an abundant supply of air or the useful bacteria could not work: the temperature must be from 75 to 80 degrees; there must also be a base, such as lime, to work on. The better a soil is worked, said Mr. Chittenden, the more fertile it usually is, and this was due to aeration, and the consequent increase of useful bacteria. In well-worked soil useful bacteria were seventy times more numerous than in unmoved soil. In waterlogged soils a set of harmful bacteria lived practically without air, but these could not live in freely-worked aerated soil.

The nodules on roots of leguminous plants are, he pointed out, the homes of bacteria that are in partnership with the green plant and pass on to it the nitrogen they extract from the air, in a condition in which the plant can use it. It is due to this fact that leguminous crops always leave a soil richer in nitrogen than it was previously.

STERILISATION OF SOILS.

This subject was dealt with by Mr. S. H. Collins, M.Sc., of Armstrong College. He briefly referred to bacterial multiplication, and showed that "sterile" as referred to soils meant a soil incapable of reproducing its bacterial content. It was well nigh impossible, however, to absolutely sterilise a soil. Excess of water, and also lack of water both tended to soil sterility, and therefore to poor, or absence of, plant crops. Lime, he said, was necessary to bacterial production, and to the reduction of certain objectionable substances in the soil. Gaslime would destroy many harmful bacteria as well as other larger and harmful living bodies. He referred to soil amoebæ, which, he said, ate up bacteria, good or bad, but if the former were destroyed then also many useful bacteria would be destroyed at the same time, but the useful bacteria could multiply quicker and so get ahead of the few remaining amoebæ.

Steam heating of soils encouraged crop fertility because it destroyed a vast number of the minute soil inhabitants, and gave those strong and helpful bacteria that remained a fine chance, as so many amoebæ (their natural enemies) were destroyed in the process.

Mr. Collins said: Frost has something of the same action as considerable heat, but it was more severe upon the larger forms of minute life, the amoebæ, for instance, than on the useful bacteria. There was, he said, nothing better than heat to produce great chemical changes, and the effect of heating soils by steam was to set free soluble plant foods. "Sick" soils, if steam-heated, may often be made fruitful, because of the destruction of amoebæ, and toxic substances. Mr. Collins said he hoped the theoretical knowledge already obtained in connection with soil bacteria and sterilisation might be used with practical effect, so that "sick" soils, such as occur in commercial horticulture all too frequently, might be made clean and fruitful for a succeeding crop.

AMERICAN BLIGHT AND BIG BUD MITE.

Mr. R. A. H. Gray, M.A., of the Armstrong College, had a subject, or subjects, of great economic importance in the fruit-growing industry to deal with, and we hope to reproduce his notes on these pests in an early issue.

In the discussion that followed, Mr. H. Britten, of Penrith, showed the great need of special care and some oversight in efforts made to check woolly aphis, because of the presence of the pest on innumerable crab apple trees in the hedgerows in many parts of the country. He said that the woolly aphis found on lettuce roots was not American blight, and not harmful to apples.

Mr. Harris wanted a cure for eelworm; he had little faith in the talk about sterilisation, the steam heating of soils, and the like, as the few methods at various times suggested were all too expensive. Mr. Harris evidently wanted someone to wave a magic wand over his eelworm-infested soil and make it clean. He said he had had but half a crop of tomatoes owing to "sick" soil—it would surely pay him to sterilise his soil by heating, rather than continue to obtain half crops or import new soil. Mr. Harris had evidently little faith in "science," and left the room, apparently a very disappointed man.

Soil fumigants and insecticides were referred to by several speakers. One gentleman said that a certain grower who obtained the best prices in Newcastle Market for black currants, kept big bud at bay by very hard pruning and good feeding, so that he continually obtained new strong growth right from the base of the plants, and so reduced infestation to a minimum, and secured splendid fruits.

Mr. Chittenden said he regretted Mr. Harris had left, because he could have told him that heating the soil to boiling point would kill all the eelworms. Mr. Chittenden was emphatic in his belief that legislation was of no real use in dealing with insect pests: education and proof that certain measures meant increased crop production were the only proper means.

THE GREAT WINTER SHOW
will be held in
THE ROYAL BOTANIC GARDENS,
on
DECEMBER 5 and 6, 1911.
Admission 1s.
Schedules and particulars from
E. F. HAWES,
Imperial School of British Horticulture, West Hampstead, N.W.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C

Mr. Collins replied to one or two points raised, and Mr. Gray expressed his belief in legislative measures for the suppression of insect pests, and to protection against the importation of insect and fungoid pests by means of imported plants.

Professor Gilchrist brought the proceedings to a close by moving a vote of thanks to the lecturers, and observing that it was not possible to properly deal with any pest until its life history was known. He expressed the pleasure it gave him to be present, and he hoped that other congresses of similar character would be held in the near future.

Mr. H. J. Chapman referred to the forthcoming International Horticultural Exhibition, and said he hoped the local committee would, at the close of that great exhibition, combine to form a horticultural society of real worth in the Newcastle district.

National Dahlia Society.

At the annual general meeting of this society, held at the Hotel Windsor, Victoria Street, Westminster, on November 28, there was not a large attendance, but the officers and committee were strongly represented.

Mr. George Gordon, V.M.H., was voted to the chair. The formal business having been disposed of, a letter was read from Mr. Edward Mawley, V.M.H., who, because of illness, withdrew from nomination for the presidency of the society. The Chairman, in a few appropriate words, moved that a record of appreciation of Mr. Mawley's great services to the society, over many years, be entered on the minutes, and that a suitable letter be sent to Mr. Mawley.

The Chairman then moved the adoption of the report and financial statement, and, in doing so, reviewed the year's work, and said that under all the peculiar circumstances of the year, the members had every reason to congratulate themselves upon the position of the society. He pointed out that the society should not exist for the advancement of any one section of dahlias, but it should cater for all sections, both for exhibition and for garden decoration, and so secure the interest of the great flower-loving community, and thereby add to the membership of the society, and place it in a higher position among floriculture societies devoted to a special flower. He hoped the time would soon come when these would again be held with suitable prizes.

REPORT OF THE COMMITTEE FOR 1911.

Your committee have pleasure in submitting their annual report of the work of the society for the year 1911.

Following the precedent of last year, a Conference was held at Carr's Restaurant, Strand, London, W.C., on Friday, March 17, 1911, when Mr. Edward Mawley, V.M.H., president of the society, occupied the chair. Two excellent papers were read on "Single Dahlias: Their Cultivation and Use," by Mr. Joseph Cheal, and "Decorative Dahlias, with Special Reference to Their Early and Abundant Production of Bloom," by Mr. George Gordon, V.M.H. The papers were followed by a brisk discussion, and subsequently published in the horticultural Press, and the year book of the society.

Your committee arranged for two exhibitions to be held during the year, at the Crystal Palace, on September 7 and 8, and at the Royal Botanic Gardens, on September 20 and 21. The dry season had considerable influence upon the early production of bloom, and under these circumstances the exhibitors were not so numerous as in the preceding year, but the quality of the blooms shown was of a high order.

An extensive series of trials was carried out by Messrs. H. Cannell and Sons, at the Home Nurseries, Swanley, and on the committee's visit, which was postponed until October, the flowers were in excellent condition. The trials brought into prominence the best varieties for garden decoration, and the report thereon by the Committee of Inspection will be published in due course.

After the luncheon, which was held in the Fellows' Rooms, at the Royal Botanic Gardens, on September 20, the medals and cups which had previously been won at the Crystal Palace, were presented by the President, Mr. Edward Mawley, V.M.H., who occupied the chair; this function proved a most enjoyable one.

In order to assist the society in its work, members of the trade most generously decided to forego their prizes in the nurserymen's classes for the present year. By this means the society has been able to carry out its work during the year, and now has a balance on the credit side.

Over twenty new members joined the society during the year, and the majority took part in the exhibitions. Many still regard the society in a purely exhibition sense, and only become members in order to exhibit. Your committee would again urge the importance of securing new members, who will continue as annual subscribers, whether exhibiting or not, as such members form the real strength of a society.

Your committee, fully recognising the quality and importance of all types of the dahlia, still continue to give attention to the decorative aspect of the flower, and several certificates have been awarded to decorative dahlias during the year.

Your committee have offered a gold, a silver-gilt, and a silver medal to be awarded to dahlias at the Royal International Horticultural Exhibition of 1912. Your committee recommend that only one exhibition shall be held during the coming year.

The hearty thanks of the society are accorded to all those who have so ably and readily assisted the committee, either as donors of special prizes, by reading papers at the conference, judging at the exhibitions, to the Crystal Palace Company, the Royal Botanic Society, Messrs, H. Cannell and Sons for conducting the trials, and to the Horticultural Press for their kind and willing assistance on all occasions.

The financial statement showed an income of £128 14s. 3d., including £73 1s. 4d. from subscriptions. The cash balance remaining was £8 6s. 6d. The balance-sheet showed a balance of £18 1s. 7d. in favour of assets.

The motion was seconded by Mr. S. Mortimer, and adopted unanimously.

A slight alteration of the rule relating to the Annual Meeting was made, permitting the committee to fix the date on any day that seems desirable in November. A vote of thanks to all retiring officers was then carried. On the motion of Mr. S. Mortimer, seconded by Mr. J. Cheal, Mr. George Gordon, V.M.H., was unanimously elected president for the ensuing year. Mr. E. Mawley was added to the list of vice-presidents, and all other holders of such office were reelected. Mr. John Green was again elected treasurer, and Mr. E. F. Hawes was again appointed hon. secretary, and he was voted an honorarium of £8 as a small appreciation of services rendered. Mr. W. Stephens was re-elected auditor, and the committee was also largely re-elected.

Mr. Joseph Cheal was unanimously elected chairman of committee for the ensuing year, and a vote of thanks to Mr. Gordon for presiding concluded the proceedings.

Winchester.

NOVEMBER 14 and 15.

The twenty-ninth annual autumn display was held in the Guildhall—a capital site—and if not quite so extensive as in some past seasons, it was quite equal in point of quality. No finer cut blooms of chrysanthemums have been seen anywhere this season, especially the incurved. Plants are here a feature, especially those grown for conservatory decoration, which were remarkable for the high quality of their blooms rather than the number. Fruit and vegetables were noteworthy features of the show.

PLANTS.

For a collection of chrysanthemums, arranged in a space eight feet by seven feet, with an edging of foliage plants, there were but two contestants. Mr. A. J. Marsh, gardener to M. Hodgson, Esq., Martyn Worthy, Winchester, was distinctly first with rather tall plants carrying excellent blooms, effectively arranged. Mr. W. Pearce, gardener to H. Johnson, Esq., Northgate Place, Winchester, second, with dwarf plants, more freely flowered than the premier exhibit. For nine specimens, each to carry not less than five blossoms, there were four contestants, producing quite a fine display. Mr. E. Cousens, gardener to J. A. Fort, Esq., The College, Winchester, was first with dwarf examples, carrying really fine blooms, of F. S. Vallis, W. Mease, Mdme. R. Oberthur, Mrs. Judson, and Bessie Godfrey; Mr. G. Adams, gardener to Colonel Dickins, Edge Hill, Winchester, second. In a class for nine plants of any white or yellow variety, Mr. Cousens again led with capital examples of Embleme Poitevine, Mrs. Judson, F. S. Vallis, and Mdme. Orberthur being the most noteworthy; Mr. C. White, gardener to Captain Clayton Mitchell, West Highlands, Winchester, second. Mr. A. J. Marsh had the best six decorative plants, any colour, showing Caprice du Printemps, Kathleen Thompson, and Mdme. R. Orberthur as the best. Mr. F. W. Stone, gardener to the Rev. A. G. Bather, Sunnyside, Winchester, second.

Amateurs showed well in several classes. Mr. A. E. Taylor, Hillside Terrace, Winchester, won for three decorative plants with freely-flowered specimens. The best group of miscellaneous subjects, arranged for effect, came from Mr. J. Hayes, gardener to Mrs. Arbuthnot, St. Phillip's, Sleepers Hill, Winchester.

CUT BLOOMS.

The leading class was for twenty-four Japanese, in not less than eighteen varieties. Mr. C. Moore, gardener to Mrs. G. Clarke, Frensham Place, won with full, solid, highly-coloured, fresh specimens of well-known varieties. Five competed for a dozen Japanese, and Mr. C. Moore again secured the premier award; Mr. F. Neville, gardener to Admiral the Hon. W. G. Stopford, Ashe House, Overton, a close second. For six Japanese, three blooms of each, in vases, Mr. A. J. Marsh won easily with huge specimens; Mr. Moore second. The best five blooms, any white variety, came from Mr. A. J. Marsh, amongst six competitors, handsome examples of Evangeline; Mr. F. Rowe, gardener to J. Ridley Shield, Esq., Carden, Alresford, second.

Incurved were, as usual, of fine quality, the late date suiting this section. For twenty-four, in not less than eighteen varieties, Mr. Marsh was distinctly ahead with bold, handsome blooms; Mr. C. Moore second with blooms a trifle smaller. Mr. Marsh won the premier place for twelve with a set of clean, smart flowers; Mr. D. Edwards, gardener to W. Garton, Esq., Salisbury Court, Southampton, second.

Single-flowered varieties, undisbudded, formed a delightful feature. For six, distinct, Mr. A. J. Marsh had the best of six sets; Mr. G. Grant, gardener to G. H. Kitchin, Esq., Compton, Winchester, second. For the same number of any undisbudded decorative variety, except singles, Mr. A. E. Taylor was easily first with handsome bunches; Mr. G. Barnes, gardener to T. C. Wilson, Esq., The Thickets, Bishop's Waltham, second, with good blooms very poorly arranged.

FRUIT.

For two bunches black grapes, Mr. Ellwood, gardener to W. H. Myers, Esq., Swanmore Park, Bishop's Waltham, was first with Alnwick Seedling, good in bunch, berry, and colour. In a similar class for any white grape, Mr. T. Hall, gardener to Ellen Lady Swaythling, South Stoneham House, Southampton, was first with Mrs. Pearson in good order.

Dessert apples in four dishes were a grand display, fourteen taking part. Mr. W. West, gardener to Mrs. Knox, Holt Hatch, Alton, was first with remarkable specimens of Cox's Orange Pippin, Ribston Pippin, Blenheim Pippin, and Allington Pippin; Mr. Barnes second. Mr. Learmouth, gardener to J. Liddell, Esq., Sherfield Manor, Basingstoke, won the coveted award for the same number of dishes, kitchen varieties, with huge Peasgood's Nonsuch, Bramley's Seedling, Newton Wonder, and Annie Elizabeth.

Mr. Ellwood easily won the leading position in the three trade classes for vegetables in six dishes with exceptionally fine leeks, onions, celery, tomatoes, cauliflowers, and potatoes; Mr. Barnes was second, in a stiff competition.

Blackburn.

The annual exhibition of this society was held in the Town Hall, Blackburn, and the entries were good. As usual, orchids were the most important section of the show, the classes being well filled with beautiful and interesting forms.

In the class for a table of orchids and foliage plants, covering a space about 10ft. by 6ft., two collections were staged, very similar in outline, and about ten feet in height; the premier lot was set up by Mr. H. H. Tindall, gardener to W. Duckworth, Esq., and included many fine cattleyas, cypripediums, odontoglossums, etc., these being surrounded by a bold group of Oncidium varicosum Rogersi, its spreading sprays of golden blooms producing a beautiful picture. Mr. J. Lupton, gardener to Colonel J. Rutherford, M.P., Blackburn, was second, the fine spikes of his odontoglossums showing good cultural skill. Mr. Charles Parker, Preston, staged a table of cypripediums, using small plants of good varieties, and these gave him the leading position ;Mr. J. Walmsley was second with a highly creditable selection.

For three cypripediums, Mr. J. Pimlott, gardener to T. Mitchell Eccles, Esq., J.P., led the way, having good examples of C. insigne Harefield Hall, and C. i. Sanderæ. For three hybrid orchids, Mr. S. Hardy, gardener to Harry Bell, Esq., J.P., was first; and Mr. J. Pimlott excelled with four plants. Mr. C. Parker had the best single specimen cypripedium, and Mr. H. H. Tindall for the best orchid with Cypripedium Spicerianum.

Mr. H. Shutt was successful for his table of flowering begonias, and Mr. H. Bradburn, gardener to J. Wilcock, Esq., J.P., scored for six table plants in a large entry; Mr. K. McCullock, gardener to Mrs. Astley, led for six primulas with good plants of P. obconica. Mr. H. Bradburn occupied a fine position with his group of chrysanthemums arranged for effect, which included a number of fine Japanese varieties. The arrangement was large and effective. On either side of this exhibit was a group of singles, and here Mr. C. Samways, gardener to J. Thompson, Esq., the silver champion vase which he so well deserved; Mr. J. Pimlott was a worthy second; and for the group of miscellaneous plants he succeeded in taking the first prize.

In the classes for chrysanthemums in pots, Mr. H. Bradburn came out in strong form, winning for six singles, four large-flowering, and one Japanese, showing moderate plants throughout. Mr. Pimlott had the best incurved, and Mr. Samways the leading single variety. Mr. J. Bartlett, gardener to H. Smith, Esq., contributed a fine half-dozen well-berried solanums; Mr. H. Bradburn led for four bouvardias; and Mr. Samways scored with six cyclamen and four amaryllis.

Vegetables were well represented, Mr. I. Parker, gardener to Mrs. Stones, staging the winning collection of eight kinds.

Cut blooms were generally moderate in size, but fresh, and good in colour. Mr. H. Bradburn won in the premier class for twenty-four Japanese blooms; Mr. J. Mundell, gardener to H. Smalley, Esq.; and Mr. H. Boyd, gardener to Captain Fielden, coming second and third. For twenty-four blooms, twelve Japanese and twelve incurved, the prizemen were Messrs. H. Boyd, J. Pimlott, and H. Jones. Mr. J. Pimoltt scored for the best dozen Japanese, and Mr. Jones for a like number of incurved varieties; this exhibitor also secured the two N.C.S. Certificates for the best Japanese bloom with Frances Jolliffe, and the best incurved bloom with Buttercup.

The ladies' section was well filled, Mrs.Pimlott having the best basket of chrysanthemums, and the best basket of autumnal foliage, berries, etc. Mrs. Arthur was successful for a centrepiece suitable for a dinner table.

Fruit was not very extensively shown, but of good quality, Mr. C. Samways having the two best black bunches of grapes, with good Alicante; and Mr. J. Wright, gardener to E. Lord, Esq., the two best white bunches, with Muscat of Alexandria. Tomatoes were fine for the season, Mr. Thomas Smith being the foremost competitor.

Bedford.

The eighth annual chrysanthemum show held in the town of Bedford took place in the Corn Exchange. The building is a excellent one for a show, being capitally lighted and well designed. The exhibition was not a very big one, but it was very pretty and of great interest. Cut flowers were fairly good, the singles, in vases, being especially fine; groups and plants added to the effectiveness of the display, while splendid apples in large numbers and a capital lot of vegetables were fine features. Messrs. Laxton Brothers contributed a collection of splendid apples; Mr. Garner showed a number of new chrysanthemums, and Messrs. Cooper and Sons put up an excellent collection of vegetables; so the local nurserymen did their share in providing a display.

GROUPS AND PLANTS.

In the leading class for a group of chrysanthemums displayed on 50 sq. ft., the premier award went to Mr. R. Day, gardener to T. E. Hurst Hodgson, Esq., St. Mary's Abbey, who displayed Japanese and incurved varieties in the orthodox style, and finished off his group neatly. The second prize was awarded to Mr. W. Wilsher, gardener to W. L. Fitzpatrick, Esq., J.P., for a charming exhibit, composed entirely of single varieties, and his group could not have been far behind the premier award.

Mr. Wilsher scored for a specimen plant with a huge example of Caprice du Printemps; Mr. R. Day coming second with a big Mary Richardson. Mr. R. Day led for six specimens, with large well-flowered bushes of single and decorative varieties, and he was followed by Mr. W. Wilsher, who had several plants not then at their best. In the cottagers' section Mr. Allen led for one specimen with a big bush of Edith Pagram.

In the amateur's division Mr. P. Wilsher, gardener to J. W. Wright, Esq., Burnaby Road, was the only exhibitor of a group of chrysanthemums, and he was worthily awarded the first prize for a very well-arranged set of well-grown Japanese varieties. Mr. W. Wilsher was the only exhibitor in the class for six specimens of Begonia Gloire de Lorraine; he was awarded the first prize for splendid plants.

CUT BLOOMS.

The best dozen Japanese blooms were from Mr. Thomas Tiddesley, Goldington, and his leading examples were Miss F. C. Stoop, Mrs. Charles Penford, Mrs. A. T. Miller, and Master David; Mr. F. Taylor, gardener to R. W. Allen, Esq., J.P., Blunham Grange, came second. Mr. W. Wilsher led for a dozen incurved blooms, and showed Clara Wells, Romance, Buttercup, and Embleme Poitevine in good style; Mr. P. Wilsher second. Mr. Thomas Tildesley was easily first in the amateurs', and single-handed gardeners' section for a dozen Japanese blooms, and here he had Miss F. C. Stoop, Master David, J. H. Silsbury, and Bessie Godfrey, in good form; Mr. P. Wilsher came second, and Mr. R. Mason, gardener to H. G. Hipwell, Esq., third.

The best half dozen Japanese blooms were from Mr. Thomas Tildesley, who also scored for three vases of Japanese blooms distinct, three blooms in each, his varieties being Master David, Bessie Godfrey, and Master James. Mr. C. Allen and Mr. C. Myers scored in the cottagers' classes for single flower vases, while in the open class for five vases of singles, six sprays in each, Mr. R. Day led with a splendid lot of Metta, Mary Anderson, Altrincham Yellow, Sylvia Slade, and Fair Rosamond; Mr. W. Wilsher came second, and Mr. J. Bates third.

The open class for three vases of Japanese blooms found Mr. F. Taylor to the front, with Mr. R. Day second. For one vase of five white Japanese blooms, Mr. H. Blakeney, gardener to W. H. Allen, Esq., J.P., Bromham House, won the chief honours with a superb set of glorious examples of Mrs. A. T. Miller, Mr. Taylor following for second place, and Mr. P. Wilsher coming third. Mr. Taylor and Mr. P. Wilsher were first and second respectively for a vase of five flowers of a yellow Japanese variety.

A class for a vase of five Japanese blooms and ten sprays of singles, arranged with appropriate foliage, was scarcely so attractive as it might have been, as sufficient care was not shown in the disposition of the flowers; Mr. T. E. Sinfield, gardener to Reginald Carter, Esq., was first, Mr. W. Wilsher second, and Mr. F. Taylor third. In a special class for a large vase of single varieties, Mr. W. Wilsher just managed to beat Mr. Day; both showed well, and a good competition in such a class would prove a great attraction at any show.

FRUITS AND VEGETABLES

There was a good competition in the grape classes, Mr. W. Wilsher coming first and Mr. P. Wilsher second for white varieties, two bunches, with Muscat of Alexandria. Out of five competitors for black grapes, two bunches, Mr. R. Day led with Alicante, nicely coloured; Mr. C. Cousins, gardener to G. D. Newton, Esq., Croxted Park, St. Neots, second, and Mr. W. Wilsher third with very big clusters of Lady Downes.

Apples were splendidly shown, and the premier set of four dishes of culinary varieties, from Mr. Cousins were beautiful examples of Peasgood's Nonsuch, Bismarck, Warner's King, and Gascoigne's Scarlet; Major Carpenter, J.P., Bidenham Close, second, and Mr. R. Day third. For dessert apples Mr. R. Day led with King of the Pippins, Mother, Ribston Pippin, and Cox's Orange Pippin; Mr. Cousins second, and Mr. R. Mason third. Mr. P. Wilsher, Mr. R. Day, and Major Carpenter secured the leading awards for pears.

Vegetables were finely shown and staged in large numbers. For Messrs. Sutton and Sons' prize Mr. F. Taylor was first, and Mr. C. Cousins second. Mr. R. Gardener, Mr. R. Day, and Mr. J. B. Robinson scored as placed in the society's class for six kinds of vegetables, while for nine kinds Mr. F. Taylor had matters all his own way. For Messrs. Laxton Brothers' prizes the winners in order were Mr. F. Taylor and Mr. R. Day, while for Messrs. Webb and Sons' prizes the awards fell to Mr. J. B. Robinson and Mr. R. Mason. Altogether in the several classes there were about two dozen collections of vegetables staged.

Single dish classes for vegetables were numerous, and parsnips, potatoes, beet, cauliflowers, leeks, onions, and celery were famously shown, but carrots were below the usual mark.

GRAPE CULTURE.—An illustrated guide to the culture and management of vines in greenhouses and in the open air is published at Gardeners' Magazine Office, 148, Aldersgate Street, London, price 1s. net (by post 1s. 2d.), or bound in cloth 1s. 6d. (by post 1s. 8d.). Full particulars are also given as to renovating old vines, and the best varieties to grow.

OBITUARY.

MR. JAMES DOUGLAS, V.M.H.

It is with the deepest regret that we have to record the death, at the age of 74, of Mr. James Douglas, V.M.H., which occurred at St. Nicholas' Hill, Leatherhead, on the 26th ult., after his having undergone an operation.

Mr. Douglas was throughout his long and active life so steadfast in his devotion to floricultural and horticultural pursuits, and, moreover, did such splendid work as to obtain for himself a commanding position in the world of horticulture and the esteem of all, and they are many, who have had the pleasure of his acquaintance. Hence it is that the announcement of his death will be received with profound regret by a large section of the flower-loving community. Mr. Douglas had of late years become best known as a florist, but it should be remembered that, although he has been chiefly concerned with florists' flowers during the past twenty years or so, he achieved in the course of his career success of a high order in every department of gardening. Mr. Douglas especially distinguished himself in the cultivation of fruits under glass, and many are the awards that were made at the leading exhibitions to the products of his skill. He especially excelled as a grape-grower, and was successful in the cultivation of pine apples, and it may be mentioned that the first prize he won was for a pineapple shown at Regent's Park in 1866. Mr. Douglas also took a keen interest in orchids, and achieved much success with them, both as a cultivator and exhibitor, during the long period he had charge of the gardens of Great Gearies, the residence of F. Whitbourn, Esq.

For upwards of forty years he was one of the leading cultivators of auriculas, and won prizes well nigh innumerable with them, and he was highly successful in the raising of new varieties, a considerable proportion of these occupying a high position in their respective classes. Mr. Douglas was not less successful in the raising, cultivation, and exhibition of carnations and picotees, and contributed largely to bringing the yellow-ground flowers to the high position they have attained within recent years.

While devoting close attention to the cultivation and improvement of his favourite flowers, Mr. Douglas found time to render valuable services in the cause of horticulture and to assist in the management of the gardening charities. In 1888 Mr. Douglas was appointed a member of the Council of the Royal Horticultural Society, and during the nine years that he retained his seat on that body he had the satisfaction of seeing the society reinstated in public favour, and entering on prosperous times. Mr. Douglas served for long periods on the Fruit, Floral, and Scientific Committees of the Royal Horticultural Society, and was a member of the two last-named committees at the time of his death.

THE LATE MR. JAMES DOUGLAS, V.M.H.

Mr. Douglas also served as a member of the Committee of the Royal Gardeners' Orphan Fund, and of the Gardeners' Royal Benevolent Institution. In recognition of the services Mr. Douglas had rendered to horticulture, he was awarded the Victoria Medal of Honour in Horticulture on its foundation in 1897. Those of our many readers who knew Mr. Douglas and his work will, we feel sure, join with us in offering our sympathy to Mrs. Douglas and family in their great loss.

TRADE NOTE.

Messrs. Richard Sankey and Son, Lim., Buiwell, Nottingham, have been appointed manufacturers of horticultural pottery to his Majesty King George. This long-established firm supplied Windsor gardens under Queen Victoria, and held the sole Warrant of Appointment to H.M. the late King Edward. We understand this is the only appointment of garden pottery manufacturers to King George.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

HEATER FOR PROPAGATING FRAME. A. F., Northumberland: Your suggestion is a very good one, and should be successful if you enclose the tank so that the heat is not wasted, but goes directly to warm the frame. There must be an escape pipe for steam to act as a safety valve, and over the tank a good layer of cocoanut fibre refuse must be placed on or in which the pots of seeds and cuttings will be placed. The great point will be to adjust your lamp so as to secure a steady and continuous heating, therefore everything should be ready some time before you commence propagating, so that, by means of a thermometer, you may discover the capacity of your heating apparatus, and know how to regulate the temperature.

DISQUALIFICATION AT WINNIPEG.—J. C., Winnipeg: We should have had the schedule before us before passing judgment, but, to save time, we give our opinion of the matter as set forth in your letter. A spruce fir may not be the sort of plant generally used in a class for "A group of foliage and other decorative plants," but the spruce is a foliage plant, and it is decorative in the garden, though scarcely handsome when grown for timber in forests. Moreover, who, among English-speaking peoples, ever questioned the decorative value of the spruce as a Christmas tree? We think you were wrong in disqualifying the exhibit that contained a spruce as centrepiece, and especially does it seem a pity you did so when you concede that the group containing it was the best in the show. The exhibitor must have been a clever man to be able to use such a plant successfully.

INFECTION IN TOMATO SEEDS.—S. A. S., Leeds: Bacteriosis in tomatoes and in potatoes is due to the work of an organism named Bacillus solanacearum. The disease is much more common in America than in the United Kingdom, but every effort should be made to keep it under. Not only are tomato stems infected by the disease, but bacteria have occurred abundantly in the substance of partly ripe tomatoes; hence, owing to the difficulty experienced in thoroughly removing the glairy coating from the seed, it is highly probable that bacteria would become locked up in this substance as it dried round the seed, and on being released during germination would endanger the crop. Seed obtained from fruit grown in an infected area should therefore not be used.

WORKMEN'S COMPENSATION ACT.—A. G. R., Monmouth: We cannot enter into the whole question involved, and we, therefore, urge you to obtain a copy of the Act and also Leaflet No. 255, issued by the Board of Agriculture, post free on application, to 4, Whitehall Place, London, S.W. But we may state briefly that the object of the

The only resemblance between a Pine Spray Syringe and others is in the shape of the barrel. The metal is more substantial. For the rest, the combination spraying head renders Spray, Rose, and Bend instantly obtainable without the addition or removal of a single fitment, while the adjustable leather bucket plunger gives perfect suction, never allows water to escape past it and up your sleeve and wears interminably.

A written request from your ironmonger or seedsman, and a Syringe will be sent in 24 hours for your approval. Price 10/6. Sole proprietors and manufacturers Robinson Bros., Ltd. West Bromwich.

PINE SPRAY SYRINGE patent

Workmen's Compensation Act, 1906, is to make some provision for employees who, through accidents arising out of and in the course of their employment, are disabled from earning their ordinary wages, or if the accident results in death, for any persons who are dependent upon the deceased. To effect this object, the Act makes the employer liable to pay compensation for such accidents. If the accident causes permanent or temporary disablement, the compensation will be in the form of weekly payments to the injured person while the disablement lasts; if the accident results in death, the compensation will be a lump sum to be applied for the benefit of such members of the family of the deceased as were dependent upon his earnings at the time of his death. The Act does not require employers to insure against these liabilities, but it is advisable that any employer who would find it difficult to meet the heavy charge which might be entailed upon him by a serious accident, should protect himself by insurance with a sound insurance company. There are two classes of injury for which compensation is payable under the Act: (1) Injury by accident; (2) injury to health from industrial disease. As regards injuries by accident the Act lays down the following conditions: (a) The accident must arise out of the employment, i.e., it must be directly due to the injured person's employment, and it must also happen in the course of the employment. (b) The injury must disable the injured person for a period of at least one week from earning full wages at the work at which he was employed. (c) If the injury is proved to be due to serious and wilful misconduct on his part, no claim to compensation is to be allowed unless the injury results in death or serious and permanent disablement. The word "accident" has been interpreted by the Courts in a wide sense, the House of Lords defining it in a case under the Act of 1897 as "an unlooked-for mishap or untoward event which is not expected or designed" (Fenton v. Thorley, 1903, A.C. 443).

INSECTS ON CYPRIPEDIUM LEAVES.—T. S. P., Bolton: The spotting on the undersides of the leaves is due to the presence of yellow thrips, and several of these pests were found in a very lively condition. You should lose no time in cleaning the plants thoroughly, because once thrips become numerous in a plant house they are not easily exterminated. Sponge the leaves with warm soapy water, to which some approved insecticide has been added. Fumigate the house by means of a vaporiser, and do this once a week until thrips cease from troubling. We may add that the presence of thrips suggests a rather dry atmosphere, as the pests flourish more in a dry atmosphere than in a moist one.

NAMES OF PLANTS.

F. E. G., Weymouth.—Arbutus Menziesi.

O. S., Shrewsbury.—1, Cattleya Fabia; 2, Odontoglossum ardentissimum.

E. J., Exeter.—1, Selaginella Mertensi; 2, S. apoda; 3, S. cæsia; 4, S. Kraussiana aurea; 5, S. Emileana; 6, probably S. hæmatodes.

L. B. C., Corbridge.—1, not recognised, send when in flower; 2, Calceolaria Burbidgei; 3, Hepenthes Morganiæ; 4, Euphorbia splendens.

M. W., Salisbury.—1, Pernettya mucronata; 2, Leycesteria formosa; 3, Solanum melongena; 4, Plumbago rosea; 5, Cypripedium Leeanum; 6, C. Arthurianum.

NAMES OF FRUITS.

P., Wimbledon.—Worcester Pearmain.

F. B. R., Royston.—Yorkshire Beauty.

R. T., Rhoden.—Lady Henniker. Name and address should always be sent as evidence of good faith, but not necessarily for publication.

J. T., Chilworth.—1, Claygate Pearmain; 2, Fearn's Pippin; 3, not recognised; 4, Margil; 5, not recognised; 6, Lemon Pippin; 7, Lord Grosvenor.

T. L., Byfleet.—1, Adam's Pearmain; 2, not recognised; 3, Kentish Fillbasket; 4, Damelow's Seedling; 5, Fearn's Pippin; 6, probably French Crab; 7, Beurre Rance.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1911. NOVEMBER 19 TO NOVEMBER 25.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Nov. 19—Sunday	0 6	39	36	45	37
,, 20—Monday	0 42	41	40	47	40
,, 21—Tuesday......	2 42	37	35	40	36
,, 22—Wednesday..	0 42	32	31	41	27
,, 23—Thursday....	—	41	38	42	30
,, 24—Friday........	0 54	40	37	43	39
,, 25—Saturday.....	0 6	40	38	42	40
Means	(total) 5 12	38	36	43	35

DATE. 1911. NOVEMBER 19 TO NOVEMBER 25.	RAIN.	TEMPERATURE OF THE SOIL AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg.
Nov. 19—Sunday	0·10	45	47	50	32
,, 20—Monday	—	45	46	50	31
,, 21—Tuesday......	trace	44	46	49	32
,, 22—Wednesday..	—	41	45	49	18
,, 23—Thursday....	0·03	40	44	49	19
,, 24—Friday........	—	41	43	48	36
,, 25—Saturday....	—	42	43	48	34
Means	(total) 0·13	42	45	49	29

CATALOGUES RECEIVED.

T. H. DIPNALL, HADLEIGH, SUFFOLK.—Mr. Dipnall issues a neat and handy list of sweet peas, together with classification and cultural notes, and list of too-much-alike varieties.

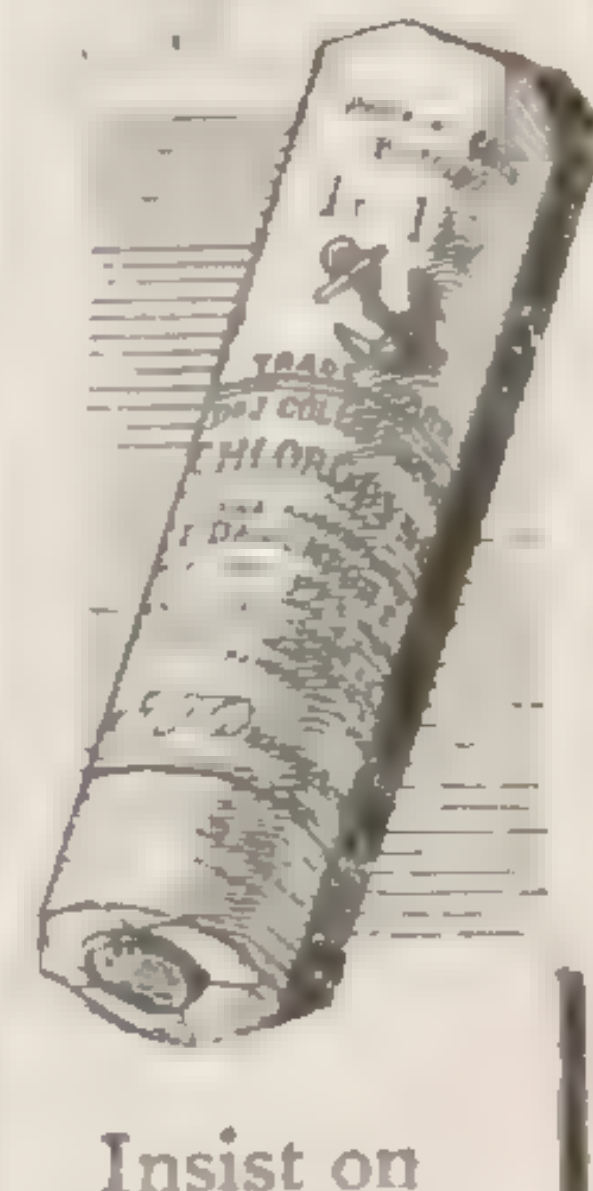
WILLIAM FELL AND CO., HEXHAM.—A very useful and comprehensive catalogue of forest trees, covert plants, avenue and specimen trees, flowering trees and shrubs, fruit trees, and roses.

H. HEMUS, HOLDFAST, UPTON-ON-SEVERN.—Miss Hemus's catalogue of sweet peas includes coloured illustrations of Orange Paradise, Paradise Celestial, Marjory Hemus, and Lavender Paradise. The catalogue is specially interesting because of the careful descriptions of varieties, and because of the offer of several stocks of a number of varieties raised at Holdfast Hall.

C. F. A. VAN DER SLUYS, RAMEE, GUERNSEY.—A concise and freely illustrated catalogue of select varieties of perpetual carnations. Many useful cultural hints are included.

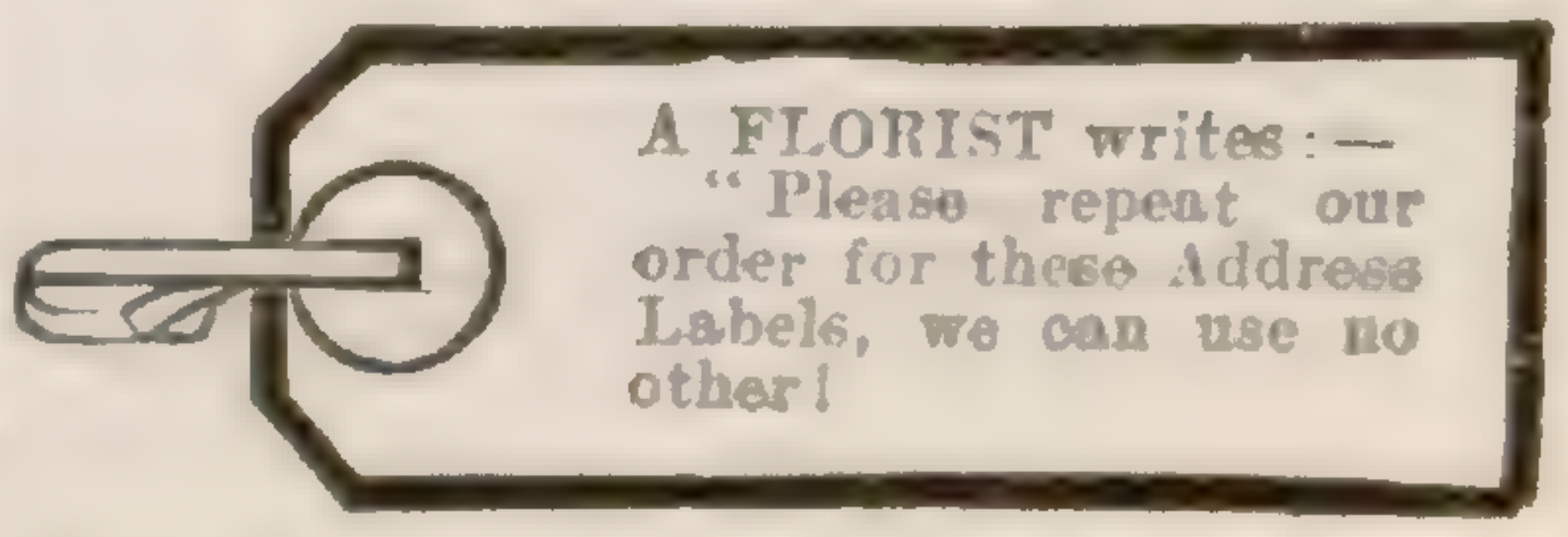
FORTHCOMING ENGAGEMENTS.

MONDAY, December 4.—National Chrysanthemum
Society's Floral Committee at Essex Hall,
Strand; Chrysanthemum Conference at Carr's
Restaurant, Strand, W.C., at 7 p.m.
TUESDAY, December 5.—Royal Horticultural So-
ciety; committees meet at 12 o'clock; lecture at
3 p.m. on "Climbing Plants as a Biological
Study," by Professor J. B. Farmer, F.R.S
Scientific Committee at 4 p.m.
Horticultural Club House Dinner at Hotel Windsor,
Victoria Street, at [illegible], followed by a lecture
by Mr. Arthur W. Sutton, J.P., V.M.H., entitled
"Four Hundred Miles on Horseback East and
West of the Jordan.
Perpetual Carnation Society; exhibition at Royal
Botanic Society's Gardens, Regents' Park (two
days).
Scottish Horticultural Association meeting.
THURSDAY, December 7.—Linnean Society.
FRIDAY, December 8.—National Sweet Pea Society
annual meeting at Hotel Windsor, Victoria
Street, Westminster, at 2 p.m.; dinner at 6
o'clock; Sweet Pea Conference at 7 o'clock.
MONDAY, December 11.—United Horticultural Bene
fit and Provident Society, committee meeting.
WEDNESDAY, December 13.—North of England Hor-
ticultural Society, meeting at Leeds.
National Rose Society, annual meeting at the West-
minster Palace Hotel, Westminster, at 3 o'clock;
conversazione at 4.30.
MONDAY, December 18.—National Chrysanthemum
Society, committee meeting at Essex Hall,
Strand, at 7 p.m.
TUESDAY, December 19.—Royal Horticultural So-
ciety; there will be no exhibition on this date,
but the committees will meet to consider novelties
at 12 o'clock.
WEDNESDAY, December 20.—Royal Meteorological
Society.
THURSDAY, December 21.—Linnean Society.
MONDAY, December 25.—Christmas Day.
TUESDAY, December 26.—Bank Holiday.
THURSDAY, December 28.—National Horticultural
Society of France.
Manchester and North of England Orchid Society.



Dr. J. Collis Browne's
Chlorodyne
Universally acknowledged to be the Most Valuable Medicine known, and one which should be in every home.
THE BEST REMEDY FOR
COUGHS, COLDS, ASTHMA, BRONCHITIS.
Cuts short all attacks of SPASMS, HYSTERIA, and PALPITATION.
The only Palliative in NEURALGIA, TOOTHACHE, GOUT, RHEUMATISM.
Acts like a Charm in DIARRHŒA and DYSENTERY.
Insist on having Dr. J. COLLIS BROWNE'S Chlorodyne, *The Original and Only Genuine.*
Convincing Medical Testimony with each bottle.
Of all Chemists, 1/1½, 2/9, 4/6.

DON'T FAIL TO GET A PAIR. The wet, cold weather is now on. Ladies and Gentlemen ought to wear our Celebrated "G" Brand Clogs. Ideal for Garden Wear. All cosily lined with white warm felt.
Only 4/6 postage paid.
All sizes, suitable for Ladies or Gentlemen, Youths or Girls, ready for going. Children's Fine Laced Clogs (as illustration), 3/6. Sizes 7, 8, 9, 10, 11, 12, 13, 1, 2, cosily felt lined.
THE WELLINGTON MANUFACTURING Coy., (Dept. 33), 4, Wellington Street, Glasgow.



Time & Temper Savers!
A FLORIST writes:—
"Please repeat our order for these Address Labels, we can use no other!
Samples Free.
BURALL BROS., Manufacturers, WISBECH.

PLEASE MENTION
THE GARDENERS' MAGAZINE
when writing to Advertisers.

CONTENTS.

PAGE
Note of the Week ... 891
Aphelandras ... 893
Royal Horticultural Society ... 894
Specimen Trees for Parks and Gardens ... 895
Some Spring Crocus Species ... 896
Apple Coronation ... 896
Shrubby Deciduous Climbers ... 897
The Natural Ideal in Gardening ... 898
New Plants, etc. ... 899
Plum President ... 900
Royal International Horticultural Exhibition, 1912 ... 901
Work for the Week ... 903
Exhibitions and Meetings ... 904
Obituary ... 908
Answers to Correspondents ... 908

ILLUSTRATIONS.

Portrait of Mr. George Barker, 891; A Remarkable Specimen of the Holm Oak (Quercus Ilex) at Kew, 895; Apple Coronation, 896; Chrysanthemum Yellow Cap, 897; Chrysanthemum Josephine, 898; Brasso-cattleya Digbyano Mossiæ Holford's Var., 899; Plum President, 900; The Late Mr. James Douglas, V.M.H., 908.

If you require a Book on any other Gardening subject, send for our complete Catalogue.

If you require a Book on any other Gardening subject, send for our complete Catalogue.

SEASONABLE GIFTS.

It were difficult indeed to think of a more welcome gift to a lover of the Garden or Greenhouse than a practical work dealing with some phase of that delightful hobby—the care of a Garden. There are no better books on garden matters than these; they are well written by practical men, and well produced.

"THE IDEAL BOOK FOR A PRESENT."

The FLOWER : : GARDEN.

By T. W. SANDERS, F.L.S.

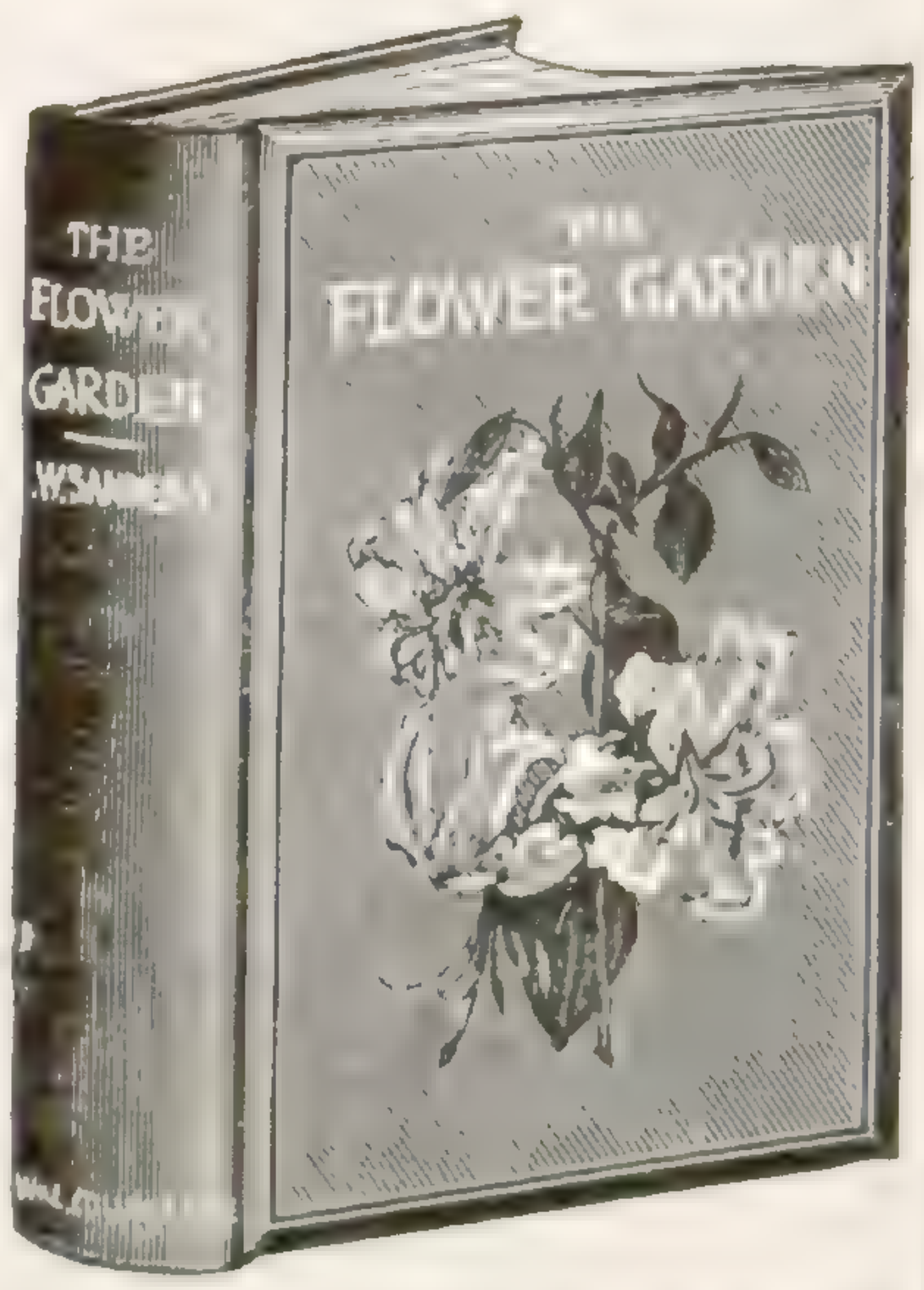
Bound in cloth, bevelled edges 480 pages.

7/6 net;

By post, packed in box, 8/-

SIXTY-FOUR PLATES
Beautiful Garden Scenes, Plants and Flowers, and
FORTY EXPLANATORY DIAGRAMS.

A comprehensive work on the Formation, Planting, and Management of the Flower Garden, and the Cultivation of Flowers, Plants, &c., adapted for Outdoor Culture.



"Of great assistance to those who have greenhouses or intend to build one."—The Field.

THE AMATEUR'S . . . GREENHOUSE.

By T. W. SANDERS, F.L.S.

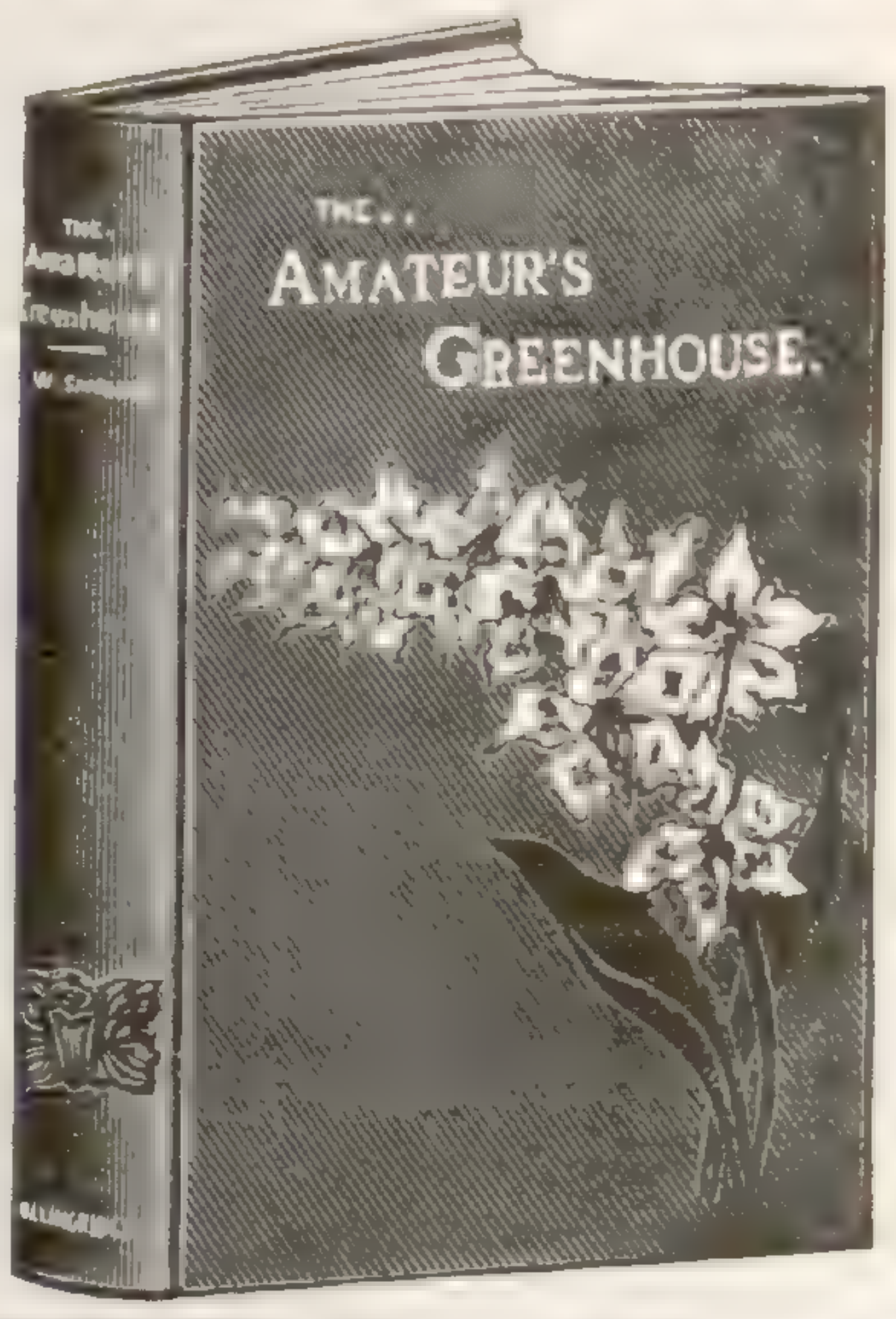
Bound in cloth, 416 pages.
154 illustrations.

5/- net;

By post, packed in box, 5/6

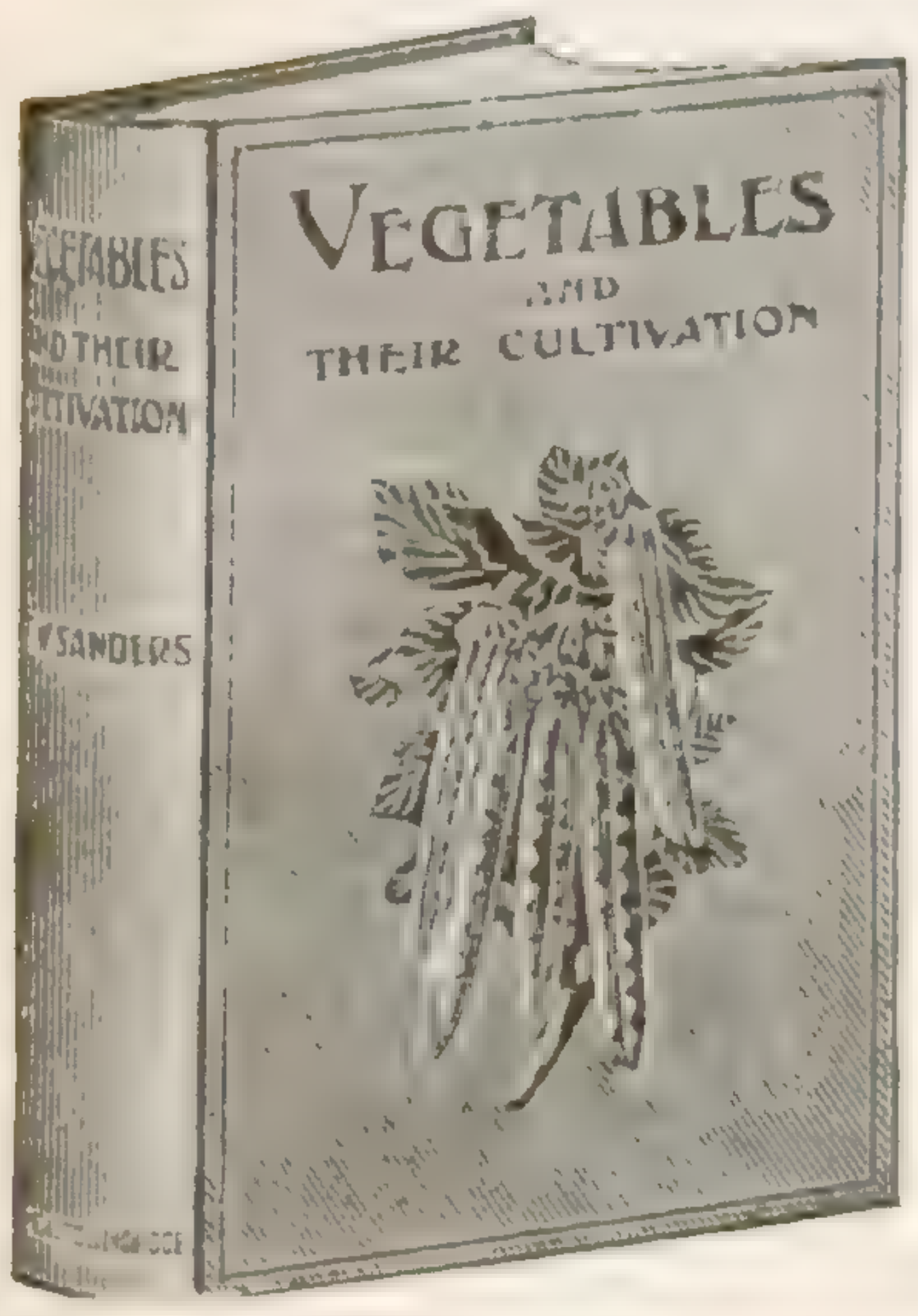
SEVENTEEN PHOTO PLATES and
— TWO COLOURED PLATES. —

A Complete Guide to the Construction, Heating and Management of the Greenhouse, and the Cultivation of Greenhouse Plants.


THE AMATEUR'S GREENHOUSE.

"A most excellent five-shillingsworth."—The Ladies' Field.

VEGETABLES and their CULTIVATION.



By T. W. SANDERS, F.L.S.

Bound in cloth, 464 pages,
140 illustrations.

5/- net;

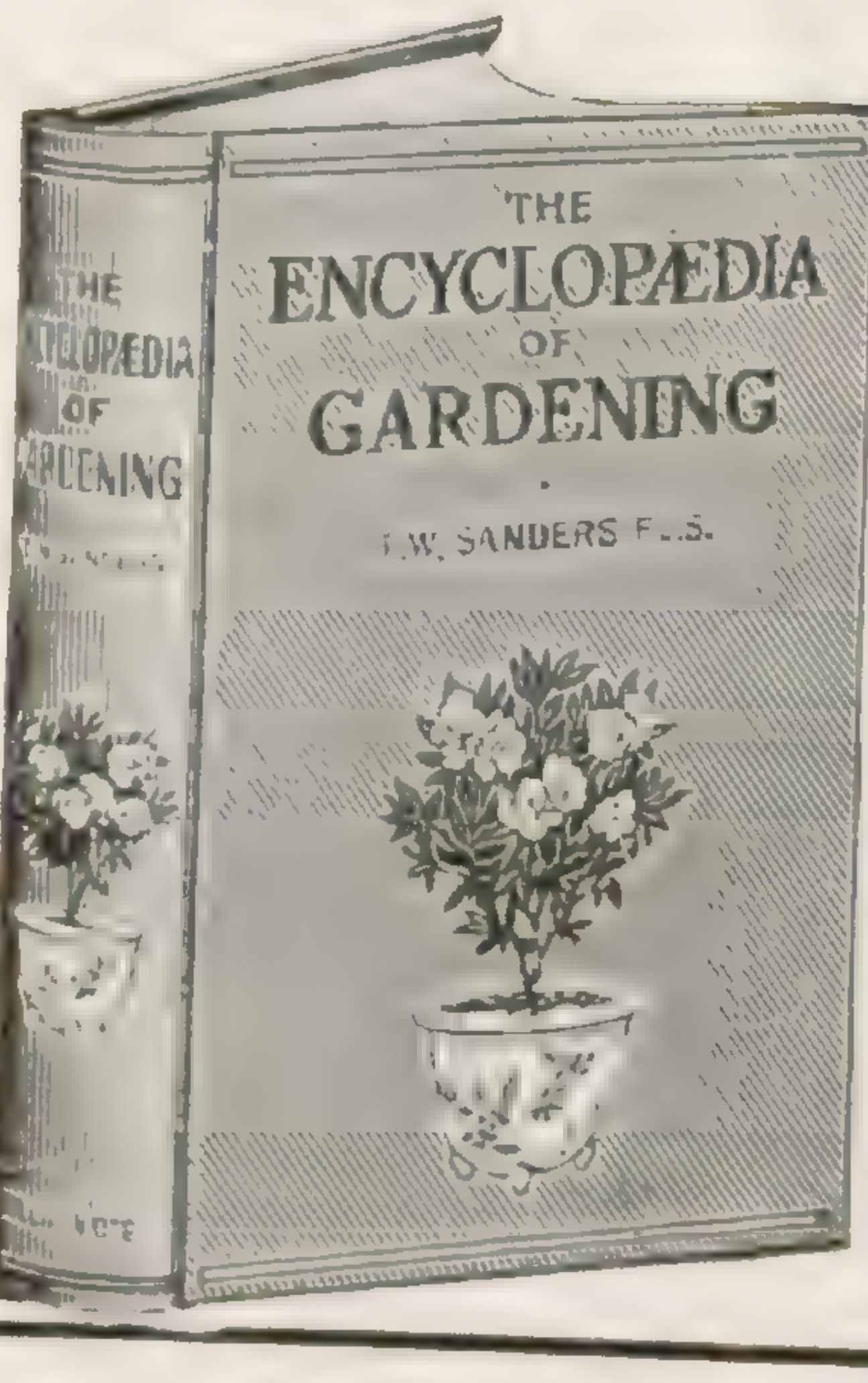
By post, packed in box, 5/6

EIGHT PHOTO PLATES and
FIVE COLOURED PLATES.

An up-to-date Practical Guide to the Formation and Management of the Kitchen Garden: Soils, Manures, and Culture of Vegetables for Home Use.

FOURTEENTH EDITION—REVISED—ENLARGED—IMPROVED.

ENCYCLOPÆDIA OF GARDENING.



By T. W. SANDERS, F.L.S.

Bound in cloth, 482 pages.

3/6 net;

By post, packed in box, 3/10

A complete Dictionary, giving at a glance the Cultivation and Description of every Flower, Fruit, Vegetable, Plant, Tree, or Shrub; Popular and Technical Names, Time of Planting, Colour of Flowers; Name of every Species, Suitable Soil, &c., &c.

A Popular Garden Guide.

"Of great value, apart from its artistic charms, for the minute particulars of culture."—Yorkshire Post.

EASILY GROWN HARDY PERENNIALS

By GEORGE H. VOS, B.A.

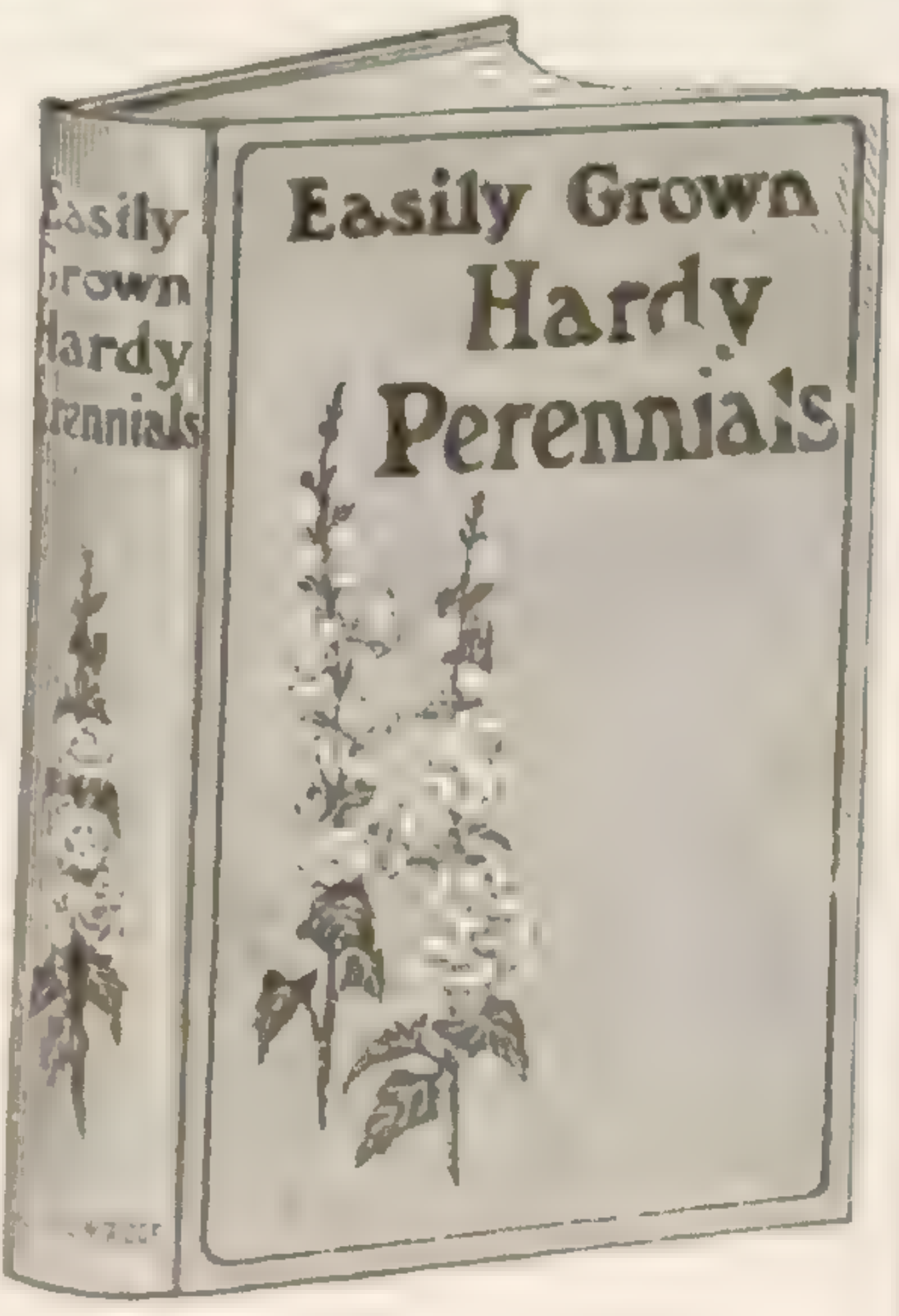
Bound in cloth, 476 pages.

5/- net;

By post, packed in box, 5/6

Illustrated by
255 REPRODUCTIONS OF
PHOTOGRAPHS FROM NATURE.

A Guide to the Culture of Hardy Flowers, including Bulbs and Tubers, Habits and Uses, English Names, &c.



ROSES and their CULTIVATION.

By T. W. SANDERS, F.L.S.

Bound in cloth, 200 pages.
17 full page plates, and many other illustrations.

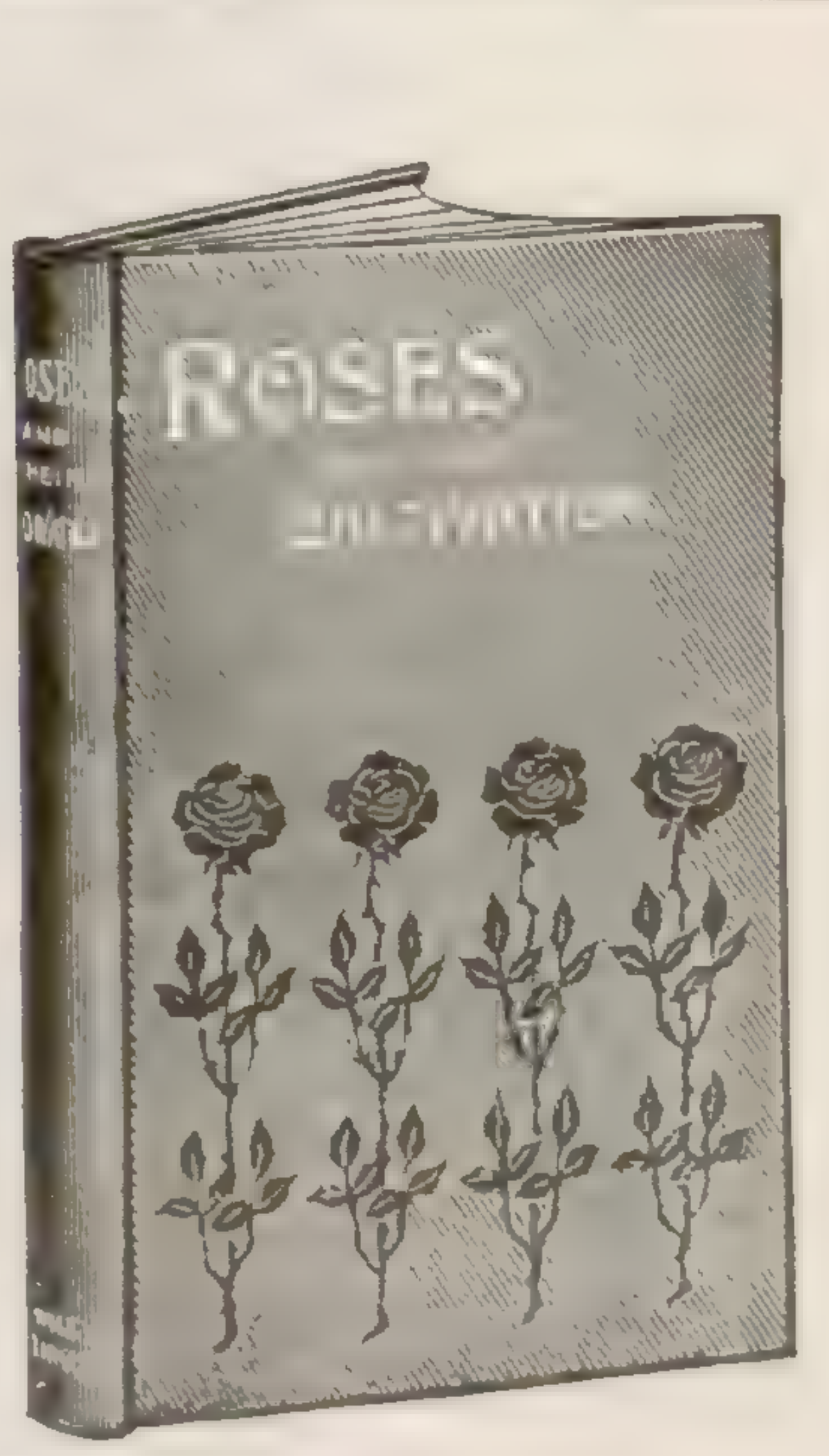
EIGHTH EDITION.

2/6 net;

By post, packed in box, 2/10

SEVENTEEN PHOTO PLATES
and FRONTISPIECE.

A Practical Guide as to Growing Roses Outdoors and Under Glass: When to Plant; How to Prune, Bud, and Graft; Full list of over 1,700 Cultivated Roses with description.



To the Publishers of AMATEUR GARDENING, 148 and 149, Aldersgate Street, London.

ORDER FORM.

Please send by post..

for which I enclose remittance of..

Name..

Address..

....

Fill in this Order Form and the books will be sent by return of post.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head Working, where one or 2 kept); 10 years in present situation; 5 years as Second; age 31; single Apply A. GIBBS, 68, Pope Road, Bromley, Kent.

GARDENER (Head Working).—Mr. COLLEDGE, Gardener to the Earl of Darnley, highly recommends F. BISHOP, as above; 4½ years as Foreman here. Cobham Hall Gardens, Gravesend, Kent.

GARDENER (Head Working), thoroughly experienced in all branches; excellent references; married; disengaged through establishment being given up. G. HALL Hermitage Cottage, Minchinhampton, Glos.

GARDENER (Head Working).—Mr. R. W. WILLIAMSON, of the Croft, Didsbury, near Manchester, strongly recommends his late Gardener, HENRY ARNOLD, who has been with him for over 20 years; is well experienced in gardening in all its branches, and is specially trained in rockery construction and cultivation of alpines.

GARDENER (Head Working) (Scotch) requires SITUATION where 2 or 3 are kept; 20 years' experience in all branches of gardening; 5 years present situation; married; age 36; 2 children; excellent testimonials. H. McCARTNEY, Sandye Place, Sandy, Beds.

GARDENER (Head Working or Single-handed); disengaged; abstainer; age 36; one boy, 14½ years; life experience Inside and Out; excellent references; 5 years present place; knowledge of Oil Engine and Electric Light, Bees; wife help house if required. J. OSMOND, Runfold, Farnham, Surrey.

GARDENER (Head Working) seeks SITUATION, with 2 or 3 under; life experience with Vines, Peaches, Melons, Flowers, and Vegetables; married, one child. J. PETTY, Marchwood, Southampton.

GARDENER (Single-handed, or where help is given); 12 years' practical experience; 4 years in last situation; good references; single; age 36; abstainer. J. CHAPMAN, Ferry Hill, Chatteris, Cambs.

GARDENER (Single-handed, or where help is given); life experience in all branches; highest references; thoroughly understands Oil Engine; age 40; strong and active; married; 3 in family, youngest 12½. E. STEVENS, 13, Connaught Road, Newbury, Berks.

GARDENER.—Young Man as IMPROVER (Inside, or Inside and Out); highest references; 2½ years last place; Bothy preferred. A. STEVENS, 21, Arnold Road, Woking.

THE HON. MRS. GOLDMAN highly recommends LADY GARDENER for charge of Private Garden. Three years in her employ. Miss E. PATCH, 64, Church Road, St. Leonards-on-Sea.

A GENTLEMAN, on giving up his country house, will be pleased to recommend his GARDENER as a reliable Head Man, with good knowledge of his profession; life experience at Sandon Hall, Cassiobury Park, Champneys, Tring, and London Parks; age 39, married, three children. — F. W. PURNELL, Ridge, Capel, Surrey.

MAJOR ANNE, Burgwallis Hall, Doncaster, wishes to very highly recommend his GARDENER; life experience in all branches, gained in good establishments; excellent references; age [illegible], married when suited. Address J. MURDOCK, Burgwallis Hall, Doncaster.

JOURNEYMAN (Inside and Out); age 20. —A. MADDOCK, The Gardens, Hawthornden Manor, Uttoxeter, will be pleased to recommend F. WILLIAMSON as above; very willing and obliging; Bothy preferred. Apply F. WILLIAMSON, 43, Cheadle Road, Uttoxeter.

JOURNEYMAN (Inside and Out). — W. DAVIES, The Gardens, Shenton Hall, Nuneaton, wishes to highly recommend CHARLES CRAMPHORN; age 19; 5 years' experience; Bothy preferred.

GARDENER-IMPROVER, 19 years of age, with testimonials from Naas, several places, wants Place in English Garden. Reply to UNITED, c/o Bazargatan 8, Gothenburg, Sweden.

YOUNG MAN (20) seeks SITUATION as GARDENER (Under, Inside and Out); 6 years' good reference; disengaged. C. GENT, Burnham Sutton, King's Lynn, Norfolk.

YOUNG MAN single) seeks SITUATION Inside and Out; three years previous, four years present; good character; height 5ft. 11in. A. METCALF, Lower Lake, Battle.

A YOUNG MAN, age 22, seeks a SITUATION as ODDMAN; strong and willing; good references. Address F. MATTIN, Burgwallis Hall, Doncaster.

YOUNG MAN (Inside and Out); tall, strong and active; used to general routine of garden work; well recommended. WALTER COLEMAN, The Warren, Penshurst, Kent.

YOUNG MAN seeks SITUATION (First, Inside); 9 years' experience; excellent references from present and previous situations. J. BROOKER, Hunton Court Gardens, Hunton, Kent.

YOUTH, aged 17, seeks SITUATION in Garden; strong, willing; 3½ years in last place; highly recommended. E. ROBERTS, Gate House, Nuttall, Nottingham.

YOUNG MAN seeks SITUATION in a good Garden where experience can be gained; age 22, six years' experience, strong, active and willing; Bothy preferred. T. LEE, Silver Street, Ely, Cambs.

LAD, age 17, seeks SITUATION in Garden; some experience; wish to improve; good character; Bothy preferred. S. RAYNER, Chart Road, Sutton Valence, Maidstone.

GARDEN BOY.—Situation wanted on Staff under good Gardener (Head); age 16; very willing and anxious to learn; two years with Rev. H. W. Hitchcock, Willoughby Hall, Grantham, to whom apply.

Situations Vacant.

VACANCY.—Wanted, young man as OUTSIDE FOREMAN, with four as unders. Well able to look after young men; must understand Herbaceous Rose and Woody Plants, also Fruit. Bothy. Apply, stating wages required, to HEAD GARDENER, Pyrford Court, Woking.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For DECEMBER 9, 1911.

Please Repeat my Advertisement.

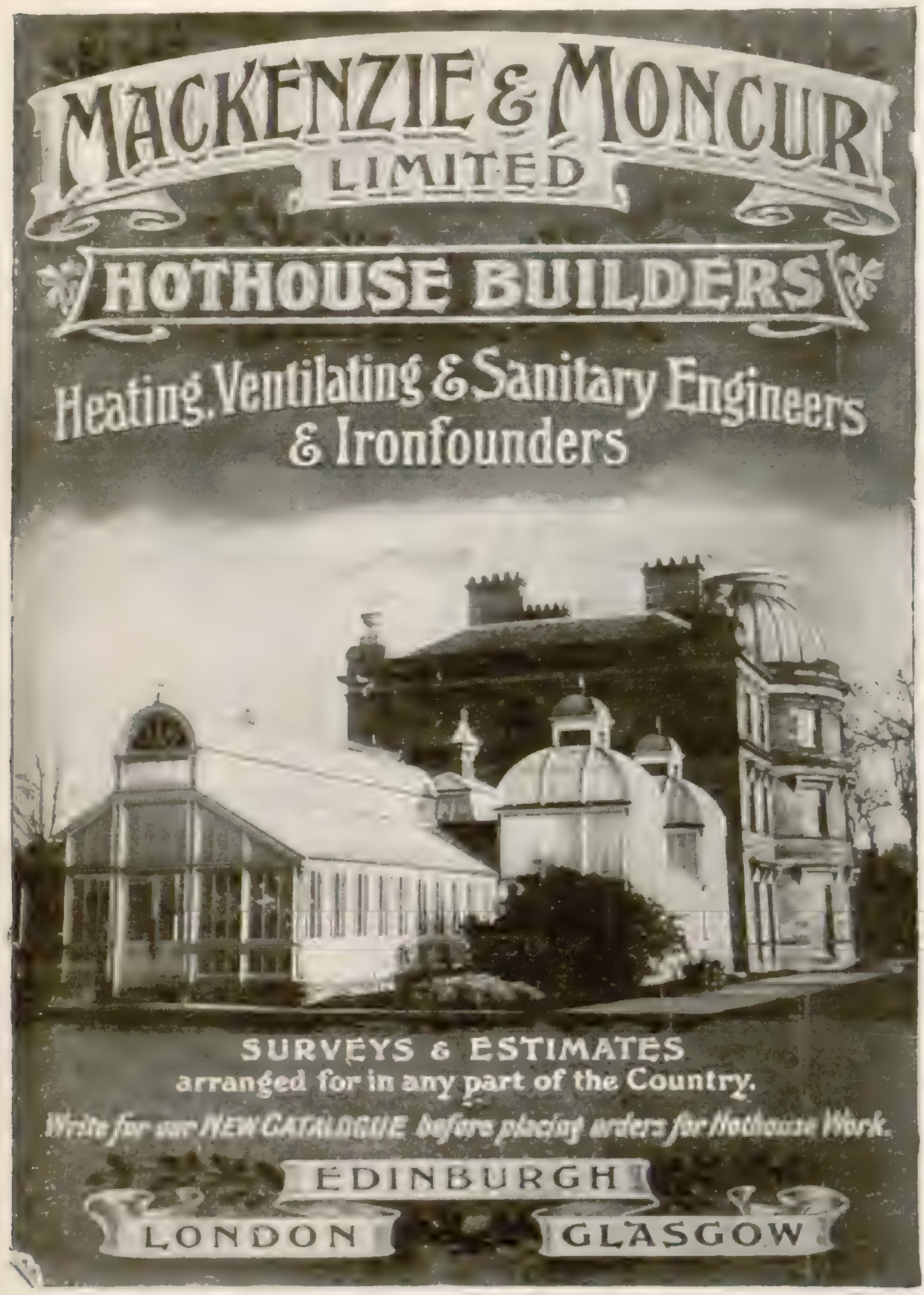
Name...

Address...

....

Date..............................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.



MACKENZIE & MONCUR
LIMITED
HOTHOUSE BUILDERS
Heating, Ventilating & Sanitary Engineers
& Ironfounders

SURVEYS & ESTIMATES
arranged for in any part of the Country.
Write for our NEW CATALOGUE before placing orders for Hothouse Work.
EDINBURGH
LONDON GLASGOW

BULBS
AND THEIR
CULTIVATION.

Bulb cultivation is a fascinating phase of Indoor and Outdoor Gardening, and now is the time to plant. Many from long experience know how to grow Bulbs to perfection; thousands of others do not. Hence the utility of the volume by

T. W. SANDERS, F.R.H.S.
Author of the "Encyclopædia of Gardening," etc., etc.

A storehouse of practical information. To possess a copy is to gain knowledge and save money by avoiding errors in cultivation. The book is well illustrated, and the price is half-a-crown (post free 2/10) from Publisher, 148-9, Aldersgate Street, London, E.C.

Catalogues and Estimates Free.

MESSENGER & Co. Ltd.
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office 122 VICTORIA St. S.W.

MODERN GLASSHOUSES

as supplied by MESSENGER and CO., Ltd., are made of the best materials, and only capable and reliable workmen are employed in the erection thereof.

The following letter was recently received by us on the completion of a contract for a well-known Member of Parliament.

February, 1911.

"I should not be doing my duty to your workmen if I did not at once tell you, on the completion of your work, how pleased I have been with each and all of them.

"They have been most obliging throughout the whole job, and have endeavoured to do everything in an efficient and thoroughly workmanlike manner, and I must congratulate you upon having such capable employees."

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 3,032. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, DEC. 9, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) **Twopence**

BARR'S REMOVAL SALE OF HARDY PLANTS.
Clearance List of Surplus Plants at greatly reduced prices (prior to removal of nurseries from Surbiton to Taplow) sent post free on application.
BARR and SONS, 12 and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, Horticultural Builder, Chelsea, is this winter keeping a large staff of hot-water men in the shops, in order that they may attend immediately to any breakdown of boilers or hot-water piping in any part of the country. In case of emergencies, please telephone 201 Western, or wire, "Gray, Chelsea, London."

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

CHOICE NEW CHRYSANTHEMUMS.—Our New Catalogue of 800 finest varieties in all sections is now ready, most up-to-date yet issued. Contains Splendid Novelties for 1912. Post free. J. W. COLE and SON, Chrysanthemum Specialists, [illegible].

PERPETUAL-FLOWERING or American Tree Carnations, strong, healthy Guernsey plants, from pots, 4s. per doz., carr. paid; 20s. per 100, carr. forw. Ask for catalogue, 75 vars., with full directions. VAN DER SLUYS, F.R.H.S., Ramee, Guernsey, C.I.

NEW MICHAELMAS DAISIES. — FOR SALE, a few offsets and clumps of superb and entirely new varieties, at low prices. Raiser of "Beauty of Colwall." Apply, "RAISER," Old Court, Colwall, near Malvern.

APPLES.—Thousands on Crab and Paradise stock, leading kinds, well-grown. Apples, [illegible]s. doz., 20s. 100, also Pears, Plums, Roses. Catalogue free. Rolf Mullers, Nurseries, Carterton, Clanfield, Oxon.

POULTRY and KENNEL APPLIANCES of every description. Write for latest Catalogue free on application.—BOULTON and PAUL, Lim., Norwich.

ROCK GARDENS and ALPINE PLANTS.—A new work and a complete guide to the Formation and Management of Rockeries, by E. H. Jenkins, F.R.H.S. Many Illustrations. Cloth, 2s. 10d., post free, from Publisher, 148, Aldersgate Street, London.

WELLS' Catalogue of
CHRYSANTHEMUMS,
PERPETUAL CARNATIONS,
HERBACEOUS PLANTS,
ALPINE AND ROCK PLANTS,
now ready. Post free on application. Wells' Book, "The Culture of the Chrysanthemum," post free, 1s. 6d. W. WELLS and CO., Merstham, Surrey.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, [illegible] per gall. "Plastine" supersedes Putty, 16s. per [illegible] Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country

WEBBS' COLLECTIONS OF NARCISSI FOR POTS AND OPEN GROUND.
25 Narcissi, in 5 choice varieties, 2/3.
50 ,, ,, 10 ,, ,, 4/6.
100 ,, ,, 10 ,, ,, 9/-.

WEBBS' CHOICE MIXED TULIPS (Single and Double) for Bedding, 9d. per doz., 4/6 per 100.

WEBBS' CROCUS FOR BEDS AND BORDERS.
Mixed colours, 1/6 per 100, 12/6 per 1,000.

WEBB and SONS, The King's Seedsmen, Wordsley, Stourbridge.

BUNYARD'S CATALOGUES
Free on Application.

FRUIT TREES, SHRUBS.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

CLAY'S MANURES, CRUSHED BONES
(See page 927.)

CLAY'S FERTILIZER IS
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

CHRYSANTHEMUMS.

My Collection contains all the best up-to-date.
Catalogue of nearly 600 vars., now ready.
Cuttings from 1s. 6d. to 6s.; Rooted Plants in Feb., from 2s. to 9s. per dozen, purchaser's own selection.
H. WOOLMAN, F.N.C.S., Shirley, Birmingham.

LAVENDER, Old English, 10s. per 100 (50 at 100 rate); packed on rail. Sample doz., 2s. 6d., post free. Other varieties of Lavender, price on application. CHILVERS and SON, Heacham, Norfolk.

DAWES' CHALLENGE RHUBARB has gained nine Medals and Awards, also A.M., R.H.S., London. Strong roots ready. Price list free. DAWES' NURSERIES, Syderstone, Norfolk.

PERPETUAL TREE CARNATIONS, best varieties, strong young plants, out of small pots, 20s. per 100; good flowering plants, in 5-inch pots, 10s. 6d. doz. G. S. EVANS, F.H.R.S., Carnation Specialist, Bexley Heath.

RICHARDSON'S for GLASSHOUSES and HEATING APPARATUS, for full advertisement see back page. Darlington.

ORDER MATS NOW.—To prevent disappointment and loss by early frosts, order Norfolk Reed Mats now, 50 per cent. more protective than straw. Made to any size, 1d. per square foot.—BOULTON and PAUL, Lim., Norwich.

THOMSON'S CELEBRATED MANURES.
(For full particulars see page vi.)

ORCHIDS FOR AMATEURS.—A practical guide to the Cultivation of Cool and Warmhouse Orchids, adapted for Small Mixed Greenhouses. The author is C. Alwyn Harrison, F.R.H.S., and the book can be obtained, by post, for 2s. 10d., from Publisher, 149, Aldersgate Street, London.

GREENHOUSES and CONSERVATORIES. Distinctive Designs and Finished Workmanship. Write now for ILLUSTRATED CATALOGUE. CARTER and HOWARD, Horticultural Builders, Kingston-on-Thames. Phone: 1308 P.O. Kingston.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable buildings, etc. Catalogue gratis.

SUTTON'S GUIDE AND CATALOGUE of Vegetables and Flower Seeds, Potatoes, etc., for 1912, will be published shortly.

SUTTON'S GUIDE AND CATALOGUE of Vegetables and Flower Seeds, Potatoes, etc., for 1912.
All lovers of their Garden should secure a copy. Containing over 260 beautiful illustrations of the best varieties of Flowers and Vegetables.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

NOW IS THE TIME TO PLANT
Kelway's lovely Pæonies, Delphiniums, and their celebrated Artistic Hardy Borders; packed ready for planting.
KELWAY'S CHOICE named Pæonies, from 27s. per doz.
KELWAY'S CHOICE named Delphiniums, from 24s. doz.
For information about the Colour Borders send 6d. for "Gardens of Delight."
From Mrs. ———, Chepstow.
10th March, 1911.
"You supplied me with an 'Artistic Herbaceous Border' about eighteen months ago, and I am so very pleased with it; it looked so lovely last year, that I am thinking of having a similar border laid out by the side of the drive up to the house."
KELWAY AND SON,
The Royal Horticulturists,
LANGPORT, SOMERSET.
230 Grand Prizes, Gold Medals, etc.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s., post free, from KELWAY and SON, LANGPORT, SOMERSET.
From Messrs. ———,
Grahamstown,
Cape Colony.
"The 'Manual' is unique, and is an exceedingly attractive book, and a most interesting work on Horticulture, and we are very pleased to possess this copy."

"ROSES AND THEIR CULTIVATION."—A new edition of this Standard Book will be ready in a few days, and every Rose-grower should secure a copy. Cloth, many Illustrations, 2s. 10d., post free, from Publisher, 149, Aldersgate Street, London, E.C.

CONSERVATORIES AND WINTER GARDENS, Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs, and Porches, Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue, free.—BOULTON and PAUL, Lim., Norwich.

CHAMPAGNE RHUBARB ROOTS FOR SALE, suitable for forcing or for planting out.
H. WADDINGTON, 42, Cank Street, Leicester.

BECKETT'S NEW BOOK.—The most practical and Up-to-date Book on Vegetables. Price 5s.; post free, 5s. 6d. EDWIN BECKETT, Aldenham House Gardens, Elstree, Herts.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.
XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.
XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, XL ALL WINTER WASH for Fruit Trees, RICHARDS' BANDING GREASE, etc. Don't forget to ask your N. S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

ALLWOOD BROS., Haywards Heath, Sussex.
Perpetual Flowering Carnation Specialists, Raisers and Growers.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free

ORCHIDS.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., Southgate, London N.
(Tel.: 59, Palmers Green.)
Catalogues post free on Application.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

R. H. BATH, Ltd.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

FRANK CANT & CO.,
Braiswick Rose Garden, Colchester.
The World-famed Champion Rose Growers.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 *1st Prizes.* 3 *2nds, at N.R.S. Shows,* 1910. *Ctlg. Free.*

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
1911 *Awards:* 81 *Prizes. Illustrated Catalogue free.*

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

CHEALS'

FOR FIRST-CLASS
ORNAMENTAL TREES, ROSES, FRUIT TREES,
AND
HARDY FLOWERS, etc.

NURSERIES 113 ACRES.
CATALOGUES FREE.

J. CHEAL & SONS,
The Nurseries, CRAWLEY.

NEW PHLOXES,

Finest in Commerce.

Six strong plants, **4/-**,
including **Baron Von Dedem**, a coloured plate of which appeared in "Amateur Gardening," Nov. 25. **See it.**
Carriage Free for Cash.

E. F. FAIRBAIRN & SONS,
EDENTOWN, CARLISLE.
List Free. ESTABLISHED 1852.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.

STOVE AND GREENHOUSE PLANTS OF ALL KINDS

PLEASE WRITE FOR LIST.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

Orchids! Orchids!! Orchids!!

The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application.—**J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana, Vanda Cœrulea Lushai Hill variety, dark blue type; Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.

SPECIALITIES. (Carriage Paid).

Shrubs for

Under Trees	**Wild Gardens**
Rock Gardens	**Natural Gardens**
Water Gardens	**Bamboo Gardens**
Woodland Gardens	**Azalea Gardens**

Catalogue with **450** Illustrations, Post Free.

CAUNTLETT'S Ltd., Chiddingfold, SURREY

PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J. R. PEARSON & SONS
LOWDHAM, NOTTS.

TREE CARNATIONS.

E. J. WOOTTEN, Fairoak, EASTLEIGH,

Has all varieties, including
Lady Alington, Felton, Mrs. Ward, Bonfire, White Wonder, La Mode, Marmion, etc.
Strong Plants in Small Pots Now Ready.

ORCHIDS

EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS**, and an endless variety of Choice **ORCHIDS.**

Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

LOGANBERRY

DELICIOUS FRUIT, requires exactly the same treatment as the Raspberry. Fruiting Canes, 9/- per dozen. Extra Strong Fruiting Canes, 12/- per dozen.

Packed Free and Delivered Carriage Paid.
Illustrated Catalogue post free on application.

KING'S ACRE NURSERIES, LTD., HEREFORD.

SELECTED SEED POTATOES.

All varieties, grown on finest soil in Scotland and Lincolnshire. Any weight supplied at low prices. Prizes given for best results. Before ordering elsewhere write for catalogue. Best Eating Potatoes also supplied in small or large quantities.

A. J. SOLE, Seed Potato Grower,
PETERBOROUGH.

WANTED, Large Kentia Palms up to 25ft. high; large, well-coloured Dracænas and Crotons, also Aspidistras.
ROBERT GREEN (1911), Ltd.,
28, Crawford Street, London, W.

SYDNEY SMITH,

Hardy Plant Grower,
Tansley Old Nurseries,
Near Matlock.

Forest Tree Seedlings, Larch Japanese, 1 yr.; Ash, common, 2 yrs.; Scotch Fir, true native, 1 yr. and 2 yr.; Pines in sorts, 1 yr. and 2 yr.; Spruce, Norway, 2 yr.; Larch, native, 1 yr. and 2 yr.; Spruce, White American, 6 to 9in.; Hazel, 2 yr.; Oak, English, 2 yr.; Douglas Fir, 2 yr.; Beech, 2 yr.; Transplanted in sizes from 1 to 3ft. of the above. Gaultheria Shallon, Hypericum calycinum, Irish Ivies, Philadelphus in variety, Hypericum Moserianum, Berberis, aquifolia, Ribes sanguineum, Hollies, 1 to 4ft.; Pernettyas in sorts, Laurels, 1 to 4ft.; Spiræas in variety, Tamarisk in variety, Yew, English, 1 to 4ft., etc.; hardy Ericas, 40 varieties, very healthy, vigorous stock. Lowest prices quoted for all kinds of Nursery stock.

Special Quotations for large Quantities.

A Special Line can be quoted in Rhododendrons for covert planting.

Time & Temper Savers!

A FLORIST writes:—
"Please repeat our order for these Address Labels, we can use no other!

Samples Free.

BURALL BROS., Manufacturers, WISBECH.

SANKEY'S
FAMOUS
GARDEN
POTS

FLOWER POTS.

The best and the cheapest.

Write for **LISTS.**

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant **Makers to His Majesty the late King.**

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

Sales by Auction.

SALES NEXT WEEK.

MONDAY NEXT, December 11th, at Eleven o'clock.—Dutch Bulbs received from Holland in large variety, Consignments of Roses—English, French, and Dutch, Standards, Dwarfs, and Climbers, Choice Herbaceous and Border Plants, and other miscellaneous Plants and Bulbs.

WEDNESDAY NEXT, December 13th, at Eleven o'clock.—Dutch Bulbs in great variety, also New and Rare Perennials and Herbaceous Plants.

At One o'clock.—Roses, consignments of English, French, and Dutch, Standard, Dwarf, Climbing, T., H.T., and H.P., in large assortment.

At Five o'clock.—100 lots of Ornamental Palms and Plants, Azaleas, Rhododendrons, Aspidistras, Standard Bays, etc., direct from Belgium.

FRIDAY NEXT, December 15th, at a Quarter to One o'clock.—Choice Odontoglossums, consignments of Dendrobiums, Cattleyas, etc., also choice Established Orchids in variety.

MESSRS. PROTHEROE AND MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C. On view morning of sale, and catalogues had.

DUTCH BULBS, PERENNIALS, ROSE TREES, SHRUBS.

MR. J. C. STEVENS begs to announce that his **Sales by Auction** are held every **MONDAY** and **WEDNESDAY** at **12.30.**

Catalogues post free.

Lots purchased, packed, and forwarded to all parts.

STEVENS' AUCTION ROOMS
(Established 150 Years),
38, King Street, Covent Garden, London, W.C.

PLANTING SEASON.
SEND FOR OUR

Descriptive Catalogue

OF

Ornamental Trees and Shrubs, Roses, Rhododendrons, Climbers, Fruit Trees, Forest Trees, Herbaceous and Alpine Plants.

Advice given on all matters appertaining to **LANDSCAPE GARDENING.**

GEO. JACKMAN & SON,
Woking Nurseries, Surrey.
Established over a Century. (Nurseries 200 acres.

ORCHIDS.

If you have a Greenhouse sufficiently heated to keep out the frost, write for our

Amateur's Guide,

giving treatment and all particulars. Illustrated.

MANSELL & HATCHER, LTD.,
RAWDON, via LEEDS.

A SPECIALITY FOR MORE THAN 50 YEARS

POT VINES

Exceptionally Fine this Season.
Inspection Invited.

J. R. PEARSON & SONS, LOWDHAM, Notts.

NURSERY BUSINESS, in excellent market centre, close to prosperous Midland town. [illegible] 126ft. by 14ft., up[illegible] heating [illegible] Potting Sheds, Office, etc., [illegible] acres; fine connection; low price for quick sale. WARRINGTON BENNETT, Warwick Road, Kenilworth.

LAXTON'S
FRUIT TREES
IN ALL SHAPES
CATALOGUES GRATIS
LAXTON BROS
BEDFORD

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS

IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

RIVERS'

Fruit Trees, Roses,
Vines, Figs, Oranges,
AND
Orchard House Trees.

A LARGE AND SELECT STOCK ALWAYS ON VIEW.

ILLUSTRATED AND DESCRIPTIVE CATALOGUE
POST FREE 3d.

THOMAS RIVERS & SON

Sawbridgeworth, Herts.
STATION: HARLOW, G.E.R.

Dr. J. Collis Browne's

Chlorodyne

Insist on having **Dr. J. COLLIS BROWNE'S** Chlorodyne, *The Original and Only Genuine.*

Universally acknowledged to be the Most Valuable Medicine known, and one which should be in every home.

THE BEST REMEDY FOR

COUGHS, COLDS,

ASTHMA, BRONCHITIS.

Cuts short all attacks of Spasms, Hysteria, and Palpitation.

The only Palliative in Neuralgia, Toothache, Gout, Rheumatism.

Acts like a Charm in DIARRHŒA and DYSENTERY.

Convincing Medical Testimony with each bottle.
Of all Chemists, **1/1½, 2/9, 4/6.**

CHRYSANTHEMUMS.

THE BEST 12 JAPANESE EXHIBITION NOVELTIES OF 1911.

Countess Granard, Mrs. G. Drabble, Mrs. A. Herbert, H. E. Converse, D. B. Crane, Mrs. G. C. Kelly, Queenie Chandler, F. T. Mew, F. C. Chandler, Marie Loomes, Mr. Turner, Harry Wood.

Strong plants of the above—or purchaser's option of other 1911 varieties—**1/-** each, **10/-** the dozen, 3 of each for **25s.**; delivered early spring. Unrooted cuttings also supplied as per catalogue.

THE BEST 6 NEW EXHIBITION SINGLES OF 1911.

Charles Dickens, Charles Kingsley, Miss May Thorne, Snowflake, Mrs. W. Higgs, Mrs. Trenham Gibbey.

Plants in early spring, **1/-** ea.; the 6 for **5/-**; or 3 of each, **12/6.** Cuttings one-third less.

NOVELTIES FOR 1912.

JAPANESE: His Majesty, magnificent crimson; **Gorgeous,** rich deep yellow; **Mrs. J. H. Cocken,** beautiful bright yellow; **Miss Beatrice Hoar,** distinct crimson; **Mrs. T. Brooke Edwards,** salmon buff; **Miss Gladys Herbert,** beautiful mauve; **Amber Queen,** rich amber and terra-cotta. All being distributed from these Nurseries. For further particulars, also for New Incurveds and Singles, see Novelty List, now ready.

NORMAN DAVIS,
Chrysanthemum Nurseries,
FRAMFIELD, UCKFIELD, SUSSEX.

20,000 LILIES.
'Magnificent Collection'
New Catalogue Free.
PERRY'S HARDY PLANT FARM,
ENFIELD, MIDDX.

G. BECKWITH & SON

Have their usual quantity of Ripe Indoor Pot Grown

ROSE WOOD
FOR SALE

For this Season's Grafting.

Most of the New Varieties and the best of all the Older Sorts, including—

Lady Hillingdon
Mrs Aaron Ward
Madame Segond Weber
etc.

Lady Pirrie
White Killarney
Duchess of Wellington
etc.

Marquis de Sinety
Mrs. A. R. Waddell
Mrs. David Jardine
Mrs Alfred Tate
etc.

Miss Alice de Rothschild
Souvenir de Louis Perrier
etc.

THE WOOD IS AVAILABLE FROM NOW UNTIL THE END OF THE YEAR.

For full list of Varieties and Prices apply to—

G. BECKWITH & SON, The Nurseries, **Ware Rd., Hoddesdon, Herts.**

BUNYARD'S FRUIT . . TREES . .

ORDER AT ONCE FOR PRESENT PLANTING.

WRITE FOR CATALOGUE.

Geo. Bunyard & Co.,
LTD.,
Royal Nurseries,
MAIDSTONE.

KING'S ACRE
FRUIT TREES
AND
ROSES.

AWARDED . .

30 Gold Medals
AND
Coronation Cup
VALUE 25 GUINEAS.
Seasons 1909-10.

Illustrated Catalogue post free on application.

KING'S ACRE
NURSERIES LTD.,
HEREFORD.

Telegrams:
FRANK CANT,
COLCHESTER.

Telephone
No. 182.

CANTS' CHAMPION ROSES

THE FINEST STOCK IN THE KINGDOM.

Direct from

FRANK CANT & CO.,

Dept. B., **BRAISWICK ROSE GARDENS, COLCHESTER.**

Our Illustrated Catalogue post free on application.

PLANTING SEASON.

By Appointment.

WM. PAUL & SON, WALTHAM CROSS, Ltd.

Nurseries twelve miles from London; south entrance four minutes' walk from Waltham Cross Station (Great Eastern Railway); west entrance five minutes' walk from Tramway Terminus.

SPECIALITIES:

ROSES in all forms, from open ground and in pots. Roses in pots, both dwarfs and climbers, extra fine this season.

FRUIT TREES, for the Orchard Garden, and Forcing House.

HARDY TREES, for Street, Park, and General Planting.

SHRUBS, Evergreen and Deciduous, for General Planting.

HARDY CLIMBING PLANTS for all purposes.

RHODODENDRONS, CAMELLIAS, AND AZALEAS. Rhododendrons from loam, extra fine this season.

HERBACEOUS PLANTS in great variety.

BULBS AND SEEDS and all Garden Sundries.

PRICE LISTS ON APPLICATION.
Inspection Invited.

Upwards of 1,000 Gold Medals, First Prizes, and other Awards at Leading Exhibitions during the past 50 years.

Sole Postal Address

PAULS' ROYAL NURSERIES,
Waltham Cross, Herts.

PERPETUAL CARNATIONS.
NOVELTIES.

WIVELSFIELD WONDER, white, flaked pink.

FAIRMOUNT, an improved Mikado.

LA RAYANNANTE, a yellow Enchantress.

Young plants in spring, **2/6** each **24/-** per doz.

WHITE WONDER, A.M., R.H.S., the best white in the world.

Large flowering plants, **5/-** each.

Full description of all the best varieties gratis with pleasure.

ALLWOOD BROS.,
Carnation Specialists,
HAYWARD'S HEATH.

CHEAP AND GENUINE.
THE HOLLAND PLANT CO., Boskoop, HOLLAND
(Postal Address: Head Office, GOUDA),
offer very fine sorts of

Rhododendrons, with buds, in very fine colours, **1/6, 2/-, 3/-, 4/-, 5/-** each. **Polyanth. Roses,** Mrs. Taft, new 1909, blood red; **Orleans Rose,** new 1909, brilliant red; **Phyllis,** new, fine red; **Maman Levavasseur,** new 1907, **50/-** per 100. **New Sorts, 1911:**—Climbing Rose, Eisenach, **2/-** each; Dad Sterling, **4/-** each. Climbing Rose, Wartburg, **2/-** each; Climbing Rose, Flower of Fairfield, synonym Crimson semper florens, **50/-** per 100. Climbing Roses in different good sorts, as Crimson Rambler, Dorothy Perkins, Tausendschon, etc., **40/-** per 100. Acer negundo, fol. var., **2/-** each. Japan Maples in fine sorts, **2/-** each. Carriage free England.

VOL. LIV.—No. 3,032. SATURDAY, DECEMBER 9, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Morphology.

The study of morphology, dealing as it does with the changes in organic life which have led up to adaptation to an infinite variety of environmental conditions, is of intense interest both to students of vegetable and animal life. In the plant world, complex as it is, there is a much greater simplicity than in the animal one, its method of growth, assimilation of nutrition, and general conditions of existence being on very different lines. Primarily it is beyond all doubt that the organisms of both kinds, animal and vegetable, were extremely simple in form—single cells or cell aggregations on simple lines—but in these simple organisms there was implanted a power to vary and become more and more complex in structure, until in process of time we arrive at the marvellous diversity which now occupies, and almost pervades, the earth's surface to a comparatively shallow depth, while doing the same in the ocean to a far greater one. These changes it is the province of the morphologist to follow up or retrace, and it is by virtue of such research that we have discovered that practically all organic life consists of one vast network of ramifying system, starting, in all probability, from a single vital stem, which originated, we know not how, in an inconceivably distant past. This stem we must assume to have been vegetative, and not animal, since it is the vegetable alone which is capable of assimilating inorganic matter, and of thus providing a starting point. Naturally, in tracing evolution backwards, the morphologist is immensely handicapped by having to deal with the very fragmentary and imperfect material which in the various strata of the earth's crust have been accidentally preserved. Such remains, however, scanty as they are, have afforded much evidence of gradual changes, and revealed innumerable links and gradations between the organic forms of one period and another, so that with many animals and some plants we have been able to trace back their ancestry to, at first sight, most unlikely sources. Thus the soled-hoofed horse has been proved to have descended from five-toed progenitors by an unbroken series of linking types showing the gradual disappearance of the separate toes as such. The morphologist, however, goes deeper than the mere outside. The term embraces many scientific branches, and the anatomist or osteologist among them who, analysing, as it were, the present horse's hoof and leg, will find rudiments still left of the suppressed toes. It is, however, another allied branch of science—that of the embryologist, or student of the first stages of reproduction—who has discovered, perhaps, the most striking morphological fact—viz., that all the higher animals, including man himself, passes through all the prior evolutional grades, and assumes seriatim the successive phases until at birth the immediate parental type is reached. In the plant, of course, few such successive phases can be noted; but here and there, as in the spiny gorse, where the pea relationship is disguised in the foliage by transformation of leaves into spines, though obvious enough in the flower, the first leaves produced by the seed show the relationship clearly; and the botanist can tell us of many other cases. No one ignorant of botany, and the morphological evidence it embraces, could credit that, despite the utter dissimilarity in most plants between the foliage and the flower, yet the latter is built up of modified leaves in all cases. Teratology is the term applied to that branch of morphology dealing with this phase of plant evolution, particularly in relation to reversions and other abnormalities, which often give the evolutional clue. In green roses and similar cases we see reversion to the floral type; and still more so in the many cases which crop up of leafy forms of stamens and stigmas, and transformations of very irregular forms of flowers, such as the antirrhinum and foxglove, into symmetrical corollas of what may be termed the standard type. Here it is beyond doubt that the extraordinary forms of flowers have been gradually evolved by response to some elective faculties on the part of the insect world, since the more attractive the flower the more convenient the access to the nectaries or pollen, the more likely was the plant so constituted to benefit by insectorial visits, and in this way constant progress resulted. Coincidently the insects themselves became modified, since those best able to obtain nutrition from the flowers possessed an advantage over less gifted ones; and so the law of survival of the fittest worked on both sides towards greater and greater morphological changes.

MR. HERBERT TATE.

Mr. Herbert Tate, whose portrait we have the pleasure of giving herewith, has done such excellent work as chief of the parks and open spaces of Halifax as to have greatly enhanced the rural amenities of this populous centre, and to have afforded conclusive evidence of his remarkable taste and judgment. Mr. Tate was appointed superintendent of the Halifax parks, recreation grounds, and cemetery in 1899, and was the first superintendent who had been appointed by the Parks Committee. At that time there were eight parks and recreation grounds, and one cemetery, and now there are twenty open spaces, these and the cemetery costing less than did the nine open spaces in 1899. The Halifax parks are practically flower gardens, and in the People's Park, which has an area of thirteen acres, 100,000 bedding plants are annually employed in beautifying the park during the summer months; and 20,000 bulbs, mostly tulips, are planted for the production of the spring display. In Scroggs Park, with an area of twenty-four acres, is embellished with 50,000 bedding plants during the summer months; and in Akroyd Park, of which the area is ten acres, some 40,000 plants are annually bedded out. Other parks are freely embellished with summer flowers, but these figures will suffice to show how large is the stock of plants annually raised for the production of summer displays of flowers and foliage. Halifax, as so well known, is a manufacturing town, and the smoke from the array of long chimneys has so destructive an effect on shrubs that it is not possible to keep evergreens, such as rhododendrons, aucubas, and hollies, in good condition for more than one season. To enable him to raise stocks of bedding plants under favourable conditions, and to grow on stocks of trees and shrubs for filling up blanks in the parks, Mr. Tate has established a nursery of two acres five miles distant from the town, and beyond the influence of the smoke, which, it need hardly be said, has proved a valuable adjunct. Mr. Tate has done good service in afforestation ; and four years since, when the Corporation found it necessary to provide work for the unemployed, he planted eighty acres of land on the moors with suitable trees, which are now making good progress.

Amateur Gardening Christmas Number. The issue of "Amateur Gardening" that is specially associated with the Christmas season is, as in previous years bright, interesting, and entertaining. A special feature of the 1911 issue is a fine art supplement, in which are numerous illustrations of flowers photographed in their natural colours, and reproduced by the three-colour process. These illustrations include borders of hardy flowers, bowers of rambling roses, rockeries, a pool of water-lilies, and beds of zonal pelargoniums and scarlet salvias, all remarkable for their interest and charm and as examples of high-class colour printing. There are also numerous illustrations in black and white. The contents are varied, interesting, and useful, and will be much appreciated by amateur gardeners.

National Rose Society.—The National Rose Society will hold its annual meeting at the Westminster Palace Hotel, Victoria Street, S.W., on Thursday next, at 3 p.m. The election of officers and members will proceed on somewhat different lines to those which have been followed in previous years. At the annual meeting in 1910 it was suggested by several of the members present that a change should be made in the method of procedure for the purpose of facilitating the addition of new members to the Council each year, and a promise was made that the matter should have attention. In accordance with this promise a special meeting of the members was held in the course of the summer, and new rules governing the election unanimously passed. Under these rules, all nominations to the various offices and membership of Council had to reach the hon. secretary not later than November 1, and all the names so received be entered on a list, and the list be sent out to the members and used by them as a balloting paper. It was further enacted that there should be two classes of vice-presidents—one, the honorary vice-presidents, to include those who had rendered good service in the cause of the rose, but for various reasons are unable to attend the Council meetings ; and the other the acting vice-presidents, to include those who are able to take part in the management of the society. We are pleased to observe that Mr .H. R. Darlington, Mr. E. J. Holland, and Dr. A. H. Williams are nominated as acting vice-presidents, for they have done such splendid service to the society as to fully deserve that honour. As the nominations are not in excess of the vacancies, it may be assumed that the members have not taken advantage of the greater opportunities they now have for effecting changes in the executive. The annual meeting will be followed at 4.30 p.m. by a conversazione, at which the Rev. J. H. Pemberton, president of the society, will give a short address, and there will be music.

The Gardeners' Company.—A short time since the Gardeners' Company presented a petition to the Court of Aldermen of the City of London in favour of an increase of forty in the number of Liverymen, and the latter body have agreed to the desired increase.

Wart Disease in Potatoes. A large number of cases of wart disease, or black scab, have been reported to the Board of Agriculture during the past season. In nearly every instance the outbreaks have occurred in districts in which the disease has been present for years, and the majority of cases are on allotments and in small gardens. Several places in which disease was recorded in previous years have been ascertained to be free from disease this year. The high temperature of the past summer does not appear to have had much, if any, effect in checking the disease, but it has in numerous instances appeared in a different form. The warty outgrowths which are characteristic of the attack have appeared in the stem and leaves, as well as on the tubers, and cases have been reported where the whole of the disease has appeared on the parts of the plants above the ground, while the tubers remained free. An illustration of a portion of the haulm affected by the fungus is given in the current issue of the "Journal" of the Board, and this has much the appearance of a leaf of a good type of Scotch kale.

Mutation in Œnothera.—To a recent meeting of the Linnean Society Dr. R. R. Gates contributed a paper in which he dealt with certain aspects of the mutation problem in Œnothera. At the outset he directed attention to the fact that work with the œnotheras has developed in several directions, and that a concerted attack upon the behaviour of the œnotheras in heredity and variation from several points of view gives a broader basis for the interpretation of the evolutionary significance of these phenomena than has hitherto been possible in most other genera. The cytological evidence has shown that in most of the mutants from Œnothera Lamarckiana the chromosome number is unchanged, but in the mutant Œ. gigas it is doubled. Hence mutants originate in various ways, and evidence goes to show that the chromosome doubling in Œ. gigas probably occurred either in the fertilised egg or in a megaspore mother-cell, which afterwards developed apogamously. On the other hand, in certain cases the mutational change probably occurred during the reduction divisions. Thus Œ. rubricalyx is a mutant from Œ. rubrinervis, which produces an extreme amount of pigment ; and when crossed with the parent type the new character behaves as a Mendelian dominant, and in such a way as to show that the original mutant individual was heterozygous, and probably originated from a cross between a germ-cell in which the new dominant character appeared, and one in which it was lacking. From this and much other evidence mutation in Œnothera appears to Dr. Gates to be due to a general condition of germinal instability, which in turn is probably connected with crossing in the ancestry. This, however, by no means deprives it of evolutionary significance, for all open-pollinated species of plants are hybrids in the sense that various races have participated in their immediate ancestry.

Staffs of Botanical Establishments.—A list of the staffs of the Royal Botanic Gardens, Kew, and of Botanical Departments, Establishments and Officers at home and in India and the Colonies in correspondence with Kew, has been issued as an appendix to the "Kew Bulletin." The list will be found useful to those who are desirous of corresponding with the botanical establishments in various departments of the British Empire, and also of much interest to those who make a point of keeping themselves informed as to the constitution of the several staffs.

Education of Small Holders.—In presenting prizes at the Cambridge County School, Mr. Rider Haggard referred to the importance of small holders being fully acquainted with the management of their holdings, and suggested that in Cambridgeshire there should be established an institution for the education of small holders, as nearly as possible on the model of that at Ringstead. In such an institution no one, male or female, should be admitted until they were at least sixteen years of age; personally he should prefer eighteen. There should be a summer and winter course of five or six months. The pupils should be asked to pay some sum in return for the great advantages which they would receive, but there should be no examination, a discretionary power being given to those in charge to ask any who were idle or worthless to retire. Small holders lacked knowledge, and he asked that they should be given the opportunity of acquiring knowledge, not by means of examinations, from which most of them would flee, but by means of the practical instruction of practical teachers, freely offered to those who wish to avail themselves thereof.

Mr. C. O. Farquharson, B.Sc., of the University of Aberdeen, has been appointed by the Secretary of State for the Colonies, on the recommendation of Kew, mycologist in Southern Nigeria.

Indian Species of Impatiens.—In the current issue of the "Kew Bulletin," Sir Joseph Hooker describes six Indian species of Impatiens, that were found by Mr. Meebold in the course of his visit to the Nilgiri Hills, Cochin, and Travancore. The specimens submitted to Sir Joseph Hooker consisted of twenty-one species under forty-four numbers, and of these six were quite new. Their names are Impatiens herbicola, I. rivulicoli, I. pallidiflora, I. macrocarpa, I. cochinica, and I. verecunda. The first three species, all from Travancore, differ from the widely distributed I. chinensis, chiefly in the remarkably small flowers, capsules, and seeds.

CHRYSANTHEMUM CONFERENCE.

The Chrysanthemum Conference arranged by the National Chrysanthemum Society was held at Carr's Restaurant at 7 o'clock on Monday evening, December 4. Sir Albert Rollit being unable to be present owing to indisposition, the chair was taken by Mr. Thos. Bevan.

The attendance was excellent, over a hundred chrysanthemum growers, amateur and professional, being present. The room was capitally decorated by large vases of fine chrysanthemum flowers brought by Mr. Cragg to illustrate his lecture.

In our present issue we give the lecture delivered by Mr. Percy Cragg, of Heston, Hounslow, on "Soil Preparation," reserving Mr. Ladds' lecture for our next issue.

Soil Preparation for Chrysanthemums in Pots.

In placing before you this evening the conclusions arrived at as results of our experiments and observations in soil preparation as applied to chrysanthemums grown in pots, I am not claiming that my firm has originated entirely fresh ideas on the subject, but rather that an attempt has been made to replace the rule of thumb method by one more up-to-date and scientific, and on a larger scale than has perhaps hitherto been attempted.

During one wet season we found that our chrysanthemums had been considerably overfed with compound manures; an error very easily committed through carelessness or bad judgment, when 30,000-40,000 pots are grown. That meant a loss on the quality of the bloom, loss of the manure given, and the cost of the labour for applying it. To prevent a recurrence of this loss, which might easily be serious, we decided to try other methods of feeding. An obvious alternative was to enrich the soil. We therefore consulted a horticultural chemist, and, acting on his advice, decided to mix with the soil the greater portion of our chemical manures, and so put them into the soil in such forms as would give us a regular succession of foods suitable for the plants during the period of their growth.

Our first difficulty after this decision was arrived at was to know exactly how rich the compost should be. Ultimately we decided on the following analysis, or, rather, part analysis, for our working basis. It is the analysis of a good rich soil, which shows the following percentage of the four chief necessaries for plant life: Phosphoric acid .5, potash .25, nitrogen .45, lime .2. We did not think it necessary to worry about any other ingredients, as most of them are present in the majority of soils in sufficient quantities. Magnesia may have to be taken into account with some soils, but our soil contains plenty; and further, our water is magnesia hard.

Having settled on what seemed most adapted for our purpose, we proceeded to carry theory into practice. The portion of a field selected for the next season's crop was stripped, and to it was added one part of mushroom manure to six of soil. The whole was thoroughly mixed, and samples were then drawn from different parts of the heap; these were again mixed, and then a portion was sent to the analyst. His report showed the soil to be considerably poorer than we desired it to be. Sufficient potash was present, but the quantity of phosphoric acid, nitrogen, and lime was undoubtedly insufficient. The manures we decided to use eventually were as follows: Basic slag, containing lime and phosphates; bone-meal, containing nitrogen and phosphates; ground hoof, for nitrogen only; and ordinary gray burnt lime. The basic slag was the 38 per cent. brand passing through a sieve 10,000 meshes to the inch; the bone-meal showed 4.5 nitrogen and 45 phosphates, and was of ⅛in. grist; the hoof was also of ⅛in. grist, and showed 15 of nitrogen; while the lime was ordinary builder's gray lime, and showed 77 per cent. purity. We obtained by these manures nitrogen and phosphates of various degrees of solubility. As the nitrogen of the soil and mushroom manure were exhausted, that from the bone-meal would be available, and finally the hoof would give up its portion. For phosphates the order of solubility would be, first the soil and mushroom manure, then the bone-meal, and lastly the basic slag.

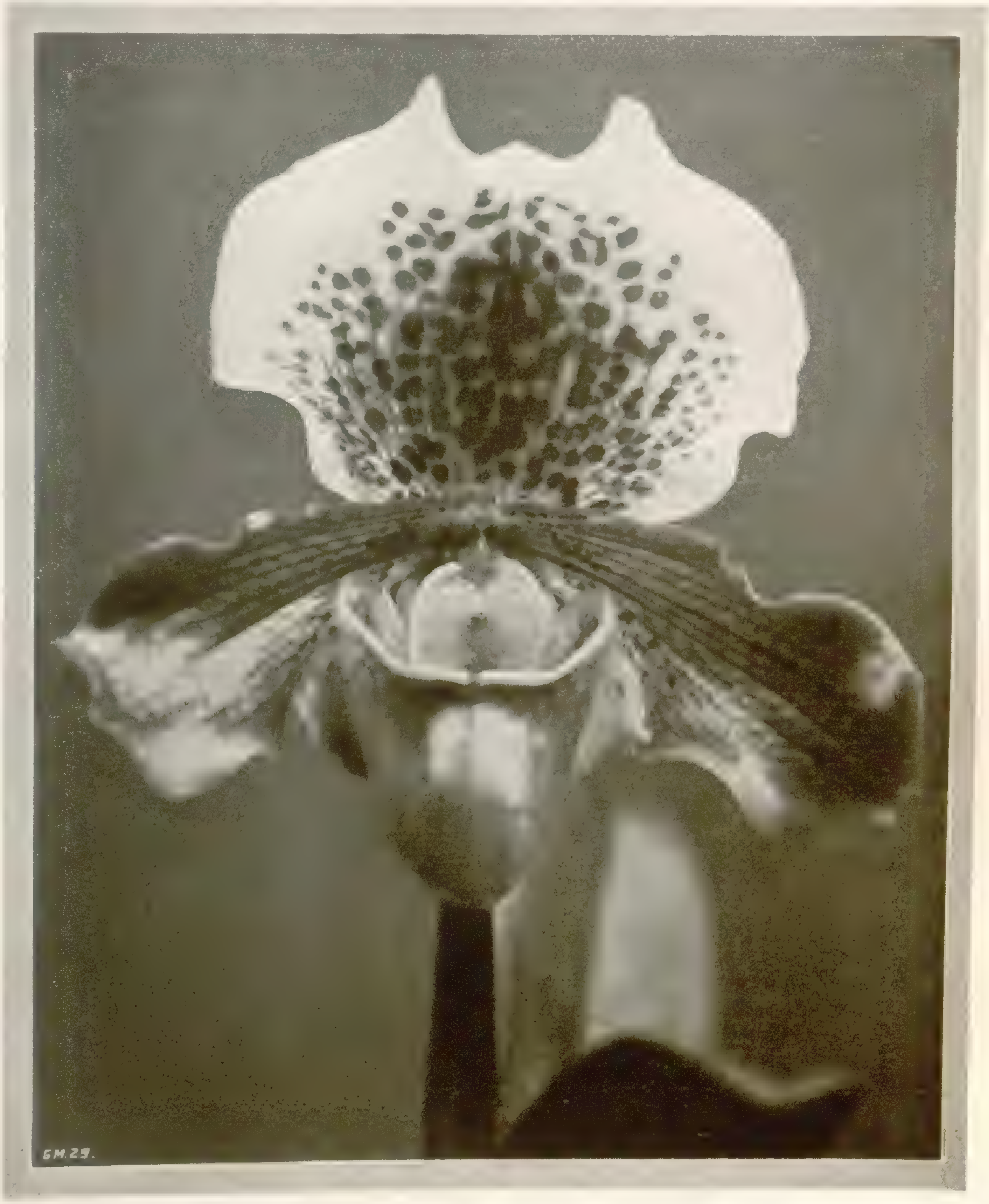
Our soil is alluvial, and is like most soils of that nature, deficient in lime. The majority of our analyses showed less than 1.0 of lime. We have been content to raise this to about 2., using 1½ tons of lime 77 per cent. purity to 100 tons of soil. To use more at a time would probably cause heating, and a portion of the nitrogen contained in the chemicals would be lost. Lime is very easily added during the growing season if required, by merely dusting the surface of the pots with it.

I have mentioned that we did not take potash into account, as we thought that the analysis showed it to be present in sufficient quantity. Further experience has caused us to reconsider this decision. Having constantly to battle against fungoid diseases, we came to the conclusion that something was lacking in our treatment. We found that where we used extra potash for tomatoes, we had less mildew, the deduction being that although potash was present in fair quantity, it could not be readily available. For our next year's crop, therefore, we shall add potash manures, and shall try to raise the percentage to .35. Kainit, and all the ashes from wood and refuse fires, will be applied to the field as a surface dressing, and sulphate of potash will be mixed with the soil at the final turning.

Mr. A. D. Hall, of Rothamstead, says there is abundant proof to show that potash makes plants more resistant to fungoid diseases. That is a hint worth following by those growers who suffer from rust. Potash also appears to delay maturity—another useful hint for a dry season. Last season we added soot to our compost, ten bags being mixed with 100 yards of soil. The result has proved beneficial both in colour and foliage. For the coming season we shall increase the soot to fifteen bags per hundred yards of soil.

The following are the particulars of the ingredients mixed with the soil for the 1911 crop: To each 100 cubic yards of soil (we take 1 yard to be equivalent to 1 ton as the soil is stacked), we added 1½ tons of lime (77 per cent. purity), ½ ton of basic slag (38 per cent.), ¾ ton bone-meal (4.5 N., 45.0 P.), 12 cwt. ground hoof (15.0 N.), and 10 bags of soot. This added to our original analysis gave the following percentages: Lime 2, nitrogen .417, phosphate .615, potash .32. The approximate cost per 100 yards was £15 for the manures and soot, excluding mushroom manure.

Such is, roughly outlined, the system we work upon, and since adopting it we have found an all-round improvement in the size.



CYPRIPEDIUM DRACO.

A very large and handsome hybrid, with white, green, and brownish colouring, and purple spots. The illustration shows the flower slightly reduced. A.M., R.H.S., December 5. Lieut.-Colonel Sir George Holford (grower, Mr. H. Alexander), Westonbirt, Gloucester.

lasting qualities, and the colour of our blooms. All soils will not respond to the same treatment, but the root idea will be found to be the same, viz., to raise the percentages of the different elements necessary to plant life until a well-balanced compost is obtained; and, further, to have them present in such forms that a constant succession of complete food is available.

Soils that have already present a fair proportion of lime, would probably take superphosphate better than basic slag. For those that are rich in nitrogen steamed bone flour would be more economical than bonemeal. I would advise that hoof be used if possible because of its lasting qualities. The size of the grist of the bonemeal and hoof is a factor of great importance when the rate of solubility is considered. Now that hoof is so dear and is difficult to obtain a larger grist of bonemeal might be made to take its place, using, perhaps, ⅛in. and ⅜in. grist together. Ground chalk would probably be more beneficial on light dry soils, or with those that already have a fair percentage of lime. On our rather heavy soil the amount of chalk that would be necessary would have a bad mechanical effect. These are, of course, questions that would have to be discussed with a competent horticultural chemist by those who have not the necessary knowledge of horticultural chemistry.

Before leaving this part of my paper, I would emphasise the necessity for great care in the mixing, if manures in quantity are used. Lime in all cases ought to be put on the ground in the autumn, and allowed to lie for a month or two in order to become well slaked by the atmosphere. The soil should be stacked for three months, mixing in the chemicals just before the compost is required. Two or three turns are required to ensure equal distribution. It is preferable to have the soil in small heaps, rather than in one large one, to allow the air to circulate through the heaps, and to minimise the risk of heating.

In ordinary seasons we have found weak feeds of stable liquid and of soot water, with an occasional feed of compound manure mixed with a large bulk of soil, quite sufficient to carry the blooms to perfection. A season like 1911, however, upsets calculations considerably, owing to the enormous quantities of water required by the plants, and consequent loss by drainage from the soil.

The method I have outlined in reality denotes only the one stage commencement for those who wish to work on scientific and economical lines. As the soil is the starting point of all our work, the pasture should be taken in hand some years before it is required. Nitrogen is the dearest food we have to buy, but it can be obtained at a trifling cost from the atmosphere by the aid of leguminous plants. Our mode of procedure is as follows. We have a field of about four acres of turf, which we hope to make last for the next 25 years. It is stripped in sections to a depth of about 6in. The stripped portion is then dug about 2ft. deep, plenty of mushroom manure worked in, rolled down firmly, and sown with a mixture of seeds containing a fair proportion of deep-rooting grasses and of clover. Lime, basic slag, and, perhaps, potash are to be applied in yearly dressings.

We hope to have formed a turf richer in all essentials than the original in from five to six years. Then the process will be repeated as turf is wanted. Having a light brick earth to work on we estimate to lower in time the original level by 2ft., and still leave a decent turf.

The work of seeding is expensive, but the increased crops of hay or green feed will often repay the cost. We obtained in 1910 five cuts of grass from a piece sown that year, and three even in a dry season like the past.

Light sowings of clover, together with dressings of a complete manure, will improve a poor pasture out of recognition. A. D. Hall makes a point of the increase of clovers and other leguminous plants as the result of dressings of manures containing potash. He gives an instance where leguminous plants increased from 20 per cent. to 50 per cent. as the result of complete feeding. Before I close there are one or two manures we use, in addition to those already mentioned, that I should like to speak about.

I have said that lime may be sprinkled on the tops of the pots during the growing season. Its effect is often magical. Its action is to render the insoluble forms of food available. On one occasion we used plain soil and a sprinkling of lime as a top-dressing, and the plants shot up at such a rate that they had to be checked by a stiff dose of superphosphate. Superphosphate we use largely in quantities of ¼ to ½oz. per 10-inch pot, mixed with three times its bulk of soil. Its action is to stiffen the stems, check the growth of the foliage, and improve the colour of the blooms. Nitrate of potash and phosphate of potash are expensive manures to buy, but prove fairly cheap to use. Mixed together in equal quantities, and used at the rate of ½oz. to 1oz. per gallon of water, they form a complete food. By altering the mixture either nitrogen or phosphate may be increased or decreased.

The last item I have to talk about is sulphate of iron. We find chrysanthemums, especially some varieties, in cold, wet seasons, are apt to turn a bit yellow, the uncongenial conditions upset them; they, in fact, suffer from what may be termed anæmia, and require iron. A dose of sulphate of iron, ½oz. to the gallon, will quickly restore a healthy colour to the foliage. It should be mixed in wooden vessels, and be applied from well-painted cans.

I think I have laid before you the main principles we apply in our nurseries, and I hope I have been successful in presenting them clearly. My aim has been to put before you concisely what little knowledge we have acquired of a difficult subject. I would advise those who wish to adopt the same methods to go into the matter thoroughly and carefully under competent advice. The methods outlined are, of course, as useful for other crops as they are for chrysanthemums. I have necessarily only been able to touch my subject very slightly in the time at my disposal; it really requires hours to do it justice. If I have not made myself clear, I offer you my apologies, and can only say that I shall be only too pleased to answer any questions as far as I am able.

Mr. Norman Davis spoke very highly of Mr. Cragg's lecture, and again emphasised the great value of sulphate of potash in correcting many evils to which plant life is prone. He urged that lime should be used with great care, and said that it would force flowers into usefulness quickly, but such flowers would not have great lasting properties. Sulphate of iron had the effect, he said, of quickly liberating plant foods in the soil, and its use should be followed by liberal feeding. Mr. Godber, Bedford, said he found sulphate of potash more useful than kainit, and he preferred chalk to free lime in mixing compost for chrysanthemums. Mr. Cragg said that well-slaked lime should be used, and not fresh lime, which was caustic; lime was itself of no use to plants, but was the key to unlock the nitrogen, potash and phosphates in the compost.

Mr. Godfrey pointed out that sulphate of ammonia, formerly used so largely in chrysanthemum growing, was now seldom used, and nitrate of soda was used in the production of dwarf plants in small pots, given twice a year. Several speakers said that sulphate of ammonia was far too forcing a manure for chrysanthemums.

In conclusion, Mr. Cragg strongly emphasised the need of analysis to begin with, adding manures under competent advice, and then progressing as experience was gained, but on scientific principles.

Very hearty votes of thanks were accorded to Mr. Ladds and Mr. Cragg, moved by the Chairman, and ably seconded by Mr. W. J. Godfrey, and supported by Mr. D. B. Crane. The lecturers suitably responded, and the meeting closed about nine o'clock with votes of thanks to the chairman and secretary. Altogether this was a capital conference, and should lead to others.

NEW PLANTS, ETC.

CHRYSANTHEMUMS.

Edith Mileham. — A very showy single variety of fine form and substance. The colour is very deep and rich rosy pink, with a well-defined narrow white zone around the disk. Commendation, N.C.S., December 4. Mr. G. Mileham, Emlyn Park Gardens, Leatherhead.

Isabel Gray.—A single variety of great distinctness, and of fair size and good substance. The colour is very difficult to describe, but pale crushed strawberry, shaded with buff about fits it. F.C.C., N.C.S., December 4. Mr. Phillip Ladds, Swanley Gardens.

Golden Cullingfordi.—A charming decorative variety of rich golden-yellow, capital for sprays, and quite elegant. It is a counterpart of the old crimson Cullingfordi in all save colour. Commendation, N.C.S., December 4. Mr. G. Prickett, Enfield Highway.

Mrs. David Symes.—A very fine Japanese decorative variety, of charming form, and extremely graceful. It is of the purest possible white, and quite glistening. F.C.C., N.C.S., December 4. Messrs. W. Wells and Co., Merstham.

Mrs. Harry Turner.—This handsome decorative Japanese variety gives large blooms of excellent substance, and on long stout stems. The colour is vividly rich velvety crimson, grand under artificial light. F.C.C., N.C.S., December 4. Messrs. W. Wells and Co., Merstham.

Ada Brooker. — A handsome decorative variety of loosely incurving form; the flowers are of good size, deep chestnut-red with bronze reverse. Commendation, N.C.S., December 4. Messrs. W. Wells and Co., Merstham.

Ruby Beauty.—A grand variety with splendid colour. It is a big Japanese single of brilliant rich ruby-red colouring, with dark yellow centre. Commendation, N.C.S., December 4. Messrs. W. Wells and Co., Merstham.

Pentas carnea.—It is just about 70 years since this pretty, free-flowering subject was introduced from tropical Africa, and a generation ago it was, I think, more popular than it is to-day. It is of rather soft growth, being, in fact, what is usually referred to as a sub-shrub, while the leaves and stems are hairy. The blossoms, which are borne in neat rounded clusters, are of a pretty pink tint, and freely borne over a lengthened period. As it is of easy culture, this pentas might well have more consideration paid it as it is very pretty. A deeper coloured species, Pentas kermesina, is rather less vigorous than the other, and is not so frequently met with.—W. T.

Hibiscus rosea sinensis.—This tropical shrub represented in our gardens by many varieties would appear to have found the last summer to its liking, for indoors and out it bloomed with unwonted freedom. In sub-tropical gardening large specimens are often used, disposed, either in some of the mixed beds, or sunk singly in the turf. In this way the typical crimson, single-flowered form is as good as any, but still there is a wide range of colour both amongst single and double varieties. As a rule, Hibiscus rosea sinensis does not bloom freely in a small state, but some forms have been more than once seen blooming most profusely in the shape of small, bushy specimens. One in particular, Hibiscus sub-violaceus, with double flowers of a deep violet-rose colour, was unusually showy. Being of free growth, many of the varieties are seen to considerable advantage when trained to the sides or end of a lofty greenhouse or conservatory. Apart from this, they may be grown as bushes in large pots or tubs, and stood outside during the summer months. These hibiscuses are readily propagated by cuttings, and the young plants quickly attain an effective size.—W.

AN AMATEUR'S VINERY.

As an amateur I have grown Black Hamburgh grapes for quite twenty years, but did not exhibit until 1905, when I won a modest third prize at Norwich. My next venture in the show room was in 1908, and I then obtained a first prize, in 1909 and also in 1910 I secured second prize, but this year was once more successful in securing the premier award for three bunches of Black Hamburghs. I enclose a photograph of the interior of my vinery, and though this represents the crop in 1905, it gives an excellent idea of the general appearance of my little vinery every fruiting season. The house is 22ft. by 11ft., and the crop is usually about 150 bunches. Large, strong, healthy leaves have always been a feature, some of them measuring a foot across.

The vinery is an entirely cold one, and after a fairly early date in December it is left open as fully as possible until the time comes round for restarting the vines—about Lady Day. Doubtless you will not be surprised to hear that I have read the Gardeners' Magazine regularly for many years, and have gathered much valuable information concerning grape culture from its pages.

J. M. Fitzpatrick.

Dereham Road, Norwich.

A FINE CROP OF BLACK HAMBURGH GRAPES.

This illustration represents an entirely unheated vinery, wherein Mr. J. M. Fitzpatrick, Norwich, annually produces about 150 bunches, some of which secured high honours in keen competition at the Norwich Autumn Show.

AMERICAN PERPETUAL CARNATION NOVELTIES.

It is still too early in the present season to definitely decide upon the merits and shortcomings of the perpetual carnation novelties. Yet the season is sufficiently advanced for a really good variety to have proved its merits, and a really bad one to have exhibited its failings.

Taking the new varieties disseminated by the American raisers last season, it is safe to say that White Wonder is head and shoulders over all others. This I predicted in the Gardeners' Magazine last spring. That, however, was hardly a prophecy, because at the time of writing my brother had some plants, which he had received in advance for trial, flowering at Haywards Heath, and we could see then that White Wonder was the finest white perpetual carnation in the world. Pure in colour, rich in perfume, its large shapely flower is carried in a stately manner on long and erect stems of a free vigorous growth. This variety has yet to develop a fault.

Gloriosa comes second, in point of merit. In this we have that delightful shade of true pink, devoid of any magenta shade, which was found in that grand old variety Floriana. For that charm alone Floriana lived on with many far beyond its allotted span, and after all other varieties had surpassed it in productiveness. Not until the advent of Gloriosa did a pink variety replace Floriana in colour. The habit of growth is rather thin, but very quick. Every growth produces a flower. The stem and calyx are always strong and reliable. The flower itself is large, with good outer petals, and heavily fringed. Gloriosa will undoubtedly become very popular, and, from a grower's point of view, should have been recognised by the R.H.S., but this may come later.

Washington was boomed in America as a Lawson-coloured sport of Enchantress, but the man who described it as such had certainly his share of imaginative power, or perhaps he wished it to be what he said it was. However, Washington is quite good over here, and we must make allowances for difference of climate. It is in the way of Rose Pink Enchantress (or Dorothy Gordon, which is practically synonymous) in colour, but it has a cerise shade when the flower is young. The flower is also deeper in colour, and it will, I believe, supplant, Rose Pink Enchantress.

White House we all have seen and heard much about. Its large massive flowers and healthy foliage are attractive, but its slowness of growth, which compels you to wait rather long for the flowers, is its weakness.

Bright Spot, a cerise pink of the old Aristocrat shade, is prone to disease. It is undersized, and inferior to many varieties of a similar colour which have preceded it. Bonfire is certainly bright, but not superior to Scarlet Glow in this respect. Princess Charming was supposed by its raisers to be superior to Enchantress, but unless the Princess proves to be more charming we shall certainly continue to be enchanted with Enchantress.

Montagu C. Allwood.

Everyone interested in a garden should obtain a copy of the Alphabet of Gardening by T. W. Sanders. Thoroughly practical information is given as to soils, manures, seed sowing, planting, potting, budding, pruning, grafting, forcing, hybridising, etc., with explanatory diagrams. Price, bound in cloth, 1s. 6d. net, post 1s. 9d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

ORNAMENTAL GRASSES.

To the three good ornamental grasses mentioned by one of your correspondents in the issue for September 2, may be added several which are worthy of more general cultivation.

Sorghum halepense, although a native of sub-tropical regions, is perfectly hardy, and forms a fine clump in a year or two if planted in good garden soil. The leaves are long and an inch broad, with a silvery white midrib. It grows anything from four feet to eight feet in height (according to the quality of the soil), the plumose flower heads being of a reddish-purple colour, and in strong plants, over a foot in length. Spartina polystachya var. aurea-marginata is a very graceful subject, either for the herbaceous border or the waterside. This, when well established, grows to a height of four or five feet, producing long, narrow, gracefully arched leaves which are lined with yellow.

AIRA CÆSPITOSA.

A graceful and highly ornamental grass; perfectly hardy, and well suited for culture in the border or by the water side.

The miscanthus (eulalia) are all very ornamental, especially the variety of M. japonicus, known as zebrinus, with its transverse bands of yellow, an inch or two wide. Aira cæspitosa (Deschampsia) is one of our prettiest native grasses; it delights in a damp situation, but is quite a success in an ordinary border, where, in a year or two, it forms a huge tuft of very narrow deep green leaves, which, with the silvery-grey plumes rising to four feet, forms a very pleasing object, the flower heads being very useful for cutting.

Erianthus Ravennæ is another desirable grass, forming a stately clump from three to six feet high, terminated by spreading panicles of reddish-tinted flower heads. The stipas are fairly ornamental, the two which appeal to me most being S. gigantea, which grows three feet high, and the fairly well known Feather Grass (S. pennata), which grows to about two feet, with its long, whitish, bearded plumes, which are said by Gerarde to have been used by ladies as feathers. Phalaris arundinacea, with its variegated form known as Ribbon Grass, so much favoured by cottagers, may be put to good account, along with those plants which are more generally used as edgings, etc., to flower beds, rather than as isolated specimens.

If one includes the annual and biennial grasses which are useful, the list becomes a long one, a select half dozen might include Bromus brizæformis, Panicum capillare, Lagurus ovatus, Holcus mollis, and Aira caryophyllea. With the forms of Pampas grass and the bamboos these grasses are of great value from an ornamental standpoint. One of our native sedges is well worth mention here, namely, Carex pendula. It is one of the largest, but is not liable to spread beyond reasonable limits, being more tufted than most species. The flower spikes reach a height of three feet or more, and then gracefully arch over owing to the weight of the long catkinlike flower heads.

Merton, Surrey. E. J. Allard.

SANDY SOILS.

The advantages of a sandy soil in a wet season such as 1909 are known to everyone with any experience in working them, and in the normal spring they are equally to be desired as it enables one to sow seeds and put out plants earlier, while, owing to the lessened water contact, the soil is warmer than a heavy one, and things come on more quickly. The drawbacks of such a soil in a dry summer like 1911 are fresh enough in the minds of those who had to deal with them. The aim of a gardener should be to make a light soil heavier and a heavy one lighter, or, to speak more correctly, the one more retentive of moisture and the other more porous, as well as less tenacious.

Vegetable matter in various stages of decomposition is a great absorbent of water, and it is the relative lack of this in sandy soils, as much as their coarseness of texture, which causes them to have so little water-holding power. Humus can absorb two or three times its weight of water, while sand can only hold about a quarter. This same porosity of soil which lets water run through so quickly also lets air into it very easily, and so hastens the breaking down of vegetable and animal matter into humus. This—the intermediate stage in the reduction of organic matter into its simple elements of water, carbonic acid, ammonia, and ash—is, in its pure form, a rather greasy or waxy substance, which coats the fine particles of soil, and so assists the retention of moisture, and in clay soils, it remains in this condition a long time instead of being rapidly oxidized as in those of a sandy character.

The principal thing to do, then, is to accumulate as much organic matter in the soil as possible. Liberal and persistent additions of animal manure constitute the usual method of bringing this about, but it is so expensive by itself that it is well to supplement it when we can. The garden bonfire should not be made the opportunity of waste it so often is, and, as a general rule, nothing should be burned that will decay within a moderate time, unless diseased in any way. When a piece of ground is trenched in the autumn, as much garden rubbish should be buried in the trench as can be conveniently disposed of in this way, bearing in mind the crop which is to follow. A good deal more can be disposed of by burying it in the annual heap of leaves, when, if the whole heap is turned in the winter or early in spring, most of it will be reduced to a crumbling mass by the autumn following. For the kitchen refuse a hole should be dug in some convenient spot into which it can be thrown, a little earth being sprinkled over it occasionally to keep it from becoming offensive. This may be dug out after a year, when it will have become excellent material for enriching the soil and increasing its water-holding capacity.

With the same object in view green-manuring should be practised whenever possible—that is, catch crops should be grown solely for the purpose of being dug in to improve the condition of the soil. No piece of ground should be left vacant in August and September, but, if nothing else can be done with it, something should be sown upon it, say, mustard, cress, or vetches, and the growth turned in during the winter or early in spring, when it will add to the store of humus in the soil, while its nitrogenous content has been obtained from nitrates which would in all probability have been washed out of the soil by the winter rains, and, in the case of leguminous plants, from the nitrogen of the air as well.

Very light soils are often poor in lime in a state of nature, and, even when not so, tend to become rapidly so under the high manuring practice of gardeners owing to the rapid oxidation of organic material, the acids of which dissolve out the chalk so that it is lost in the drainage water. When this is the case, chalk, not lime, should be applied, chalk making soil sticky, and therefore less porous, this being the very opposite to the effect of lime upon clay. Everyone must have observed the stickiness of a chalky road or footpath in wet weather. It should be spread on the soil in as fine condition as possible, and dug in straight away before all the fine particles are dissolved by the rain and washed away. The finer the condition in which the chalk is applied the better, forty pounds to forty square yards being a fair dressing. Wood ashes have a similar effect upon the physical condition of the soil.

Lastly, the method of cultivation of the soil has a great deal to do with its water-holding capacity. If it is dug in the autumn, and then simply raked over and sown in the spring, the water channels formed during the winter will let the maximum amount of the spring rains run through into the subsoil; but if it is dry in the spring the broken-up channels impede the drainage, with the result that the soil stores up more water for the summer. The hoeing of the surface should go on all through the dry months, or at least after every rain, to lessen the loss from the surface by conduction from below.

Alger Petts.

POINSETTIAS.

These effective winter subjects are not loosing their popularity, but are still probably the most showy plants we have for winter decorations. When kept in an intermediate temperature they remain quite fresh for a number of weeks, and for associating with chrysanthemums or other white flowers in the conservatory they are very telling. Used in a cut state, unfortunately, they do not remain fresh for such a long period, but if their stems are inserted in quite hot water for a few minutes when first cut it has the effect of preventing their flagging for some time. Poinsettias are very appropriate when used for the decoration of the dinner table at Christmas time, and holly placed on the cloth beneath them helps to complete a very seasonable arrangement.

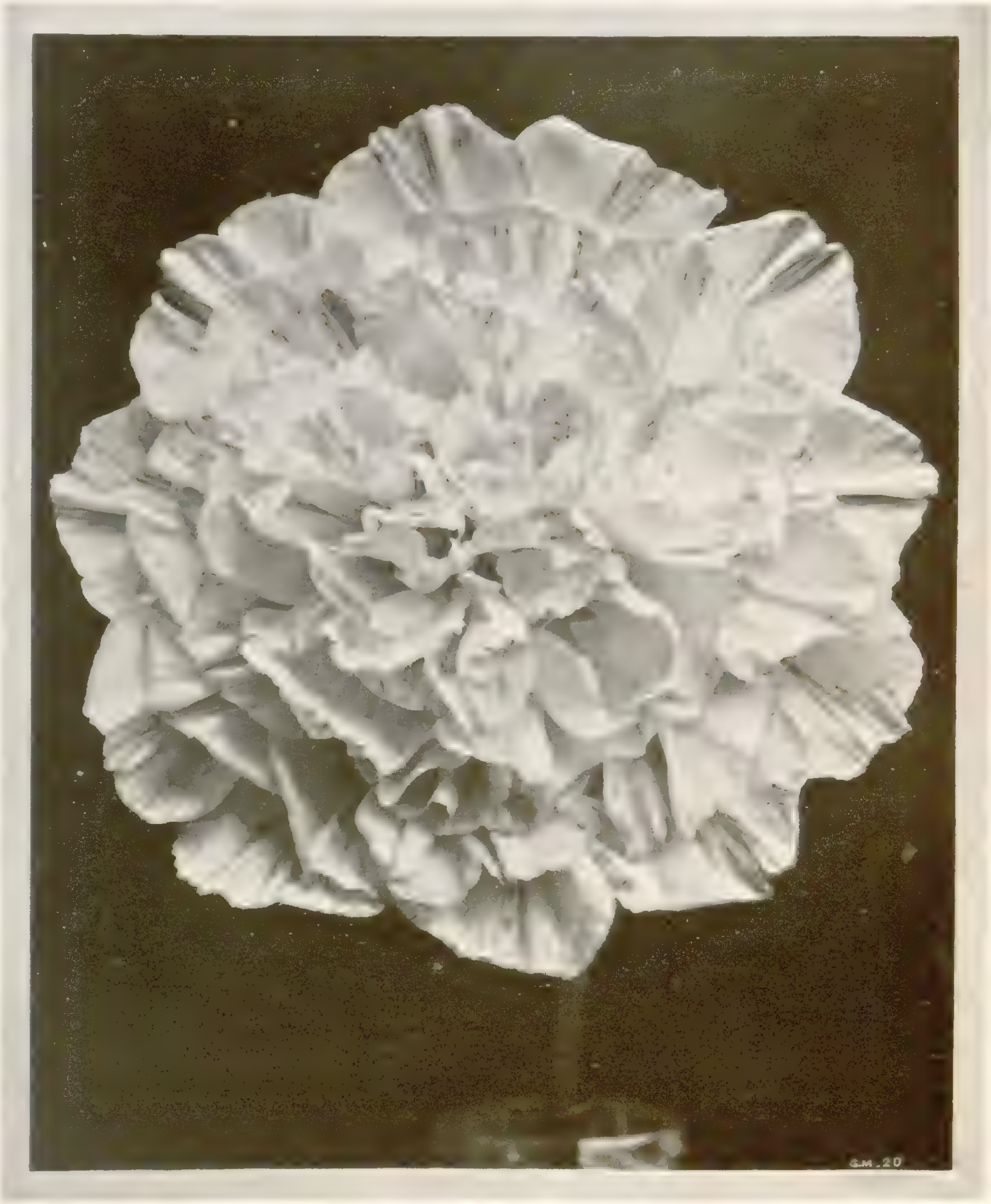
The cultivation of poinsettias presents few difficulties, but there are several points that it is important to pay attention to if one is to obtain the best results. Raised from cuttings inserted in spring, singly, in small pots, they should be grown in a house with a temperature of not less than 65 degrees, until established in six-inch pots, when they must be gradually accustomed to cooler conditions, finally placing them in a brick pit or frame for the summer months, and keeping them as near the glass as possible to prevent their becoming drawn. Give light shade from bright sunshine, but as the season advances gradually innure them to more sun, and remove them to a house with a temperature of 60 degrees early in September.

During the growing season regular applications of soot water are desirable, and when the pots are full of roots a little of some approved fertiliser can be given with advantage. I have found that Bentley's Carnation Manure suits poinsettias admirably, and develops that rich green foliage gardeners so love to see. As the bracts develop water must be given with especial care, and feeding be gradually discontinued. Carelessness in this direction soon results in loss of foliage, and a consequent diminution of the value of the plants.

J. Gardner.

A NEW BREAK IN WINTER-FLOWERING BEGONIAS.

The introduction of B. socotrana in the eighties of last century was taken advantage of by the hybridist, and numerous varieties have since then been raised therefrom. Of hybrids between Begonia socotrana and the tuberous-rooted section the first was John Heal, which flowered in 1883. According to "Hortus Veitchi" only a single plant of this particular cross was obtained, and from that all those now in cultivation were derived. This variety was distributed in 1885. After the advent of John Heal a number of other varieties were raised, some with single, and others with semi-double blossoms, many of which are now exceedingly popular. Practically all of these have flowers of a carmine, scarlet, or rosy-carmine tint. It was, therefore, somewhat of a surprise, at the meeting of the Royal Horticultural Society, on November 7, to see three distinct varieties shown by Messrs. J. Veitch and Son. These varieties were obtained by the intercrossing of B. socotrana with a yellow-flowered variety of the tuberous-rooted class. This latter colour was present to a greater or lesser extent in the flowers of each of those shown, while in addition the plants differed from the socotrana hybrids already in cultivation by their branching, sturdy habit, and particularly in the large size of the flowers. In this respect they were the equal of a good tuberous-rooted kind. The general appearance of the plants is well shown in the Gardeners' Magazine for November 11, where, on page 833, the variety Exquisite is depicted. The three varieties shown were Acquisition, pink, with an orange suffusion; Exquisite, deep pink, shaded with carmine towards the edges of the petals, and the centre of the flower lit up with orange; Her Majesty, warm orange, with a reddish tinge, especially at the edges. Such subtle tints are difficult to describe, and it is rare to find two who see eye to eye in such matters. There can, however, be no difference of opinion that these distinct and beautiful varieties are a decided acquisition for winter decorations.

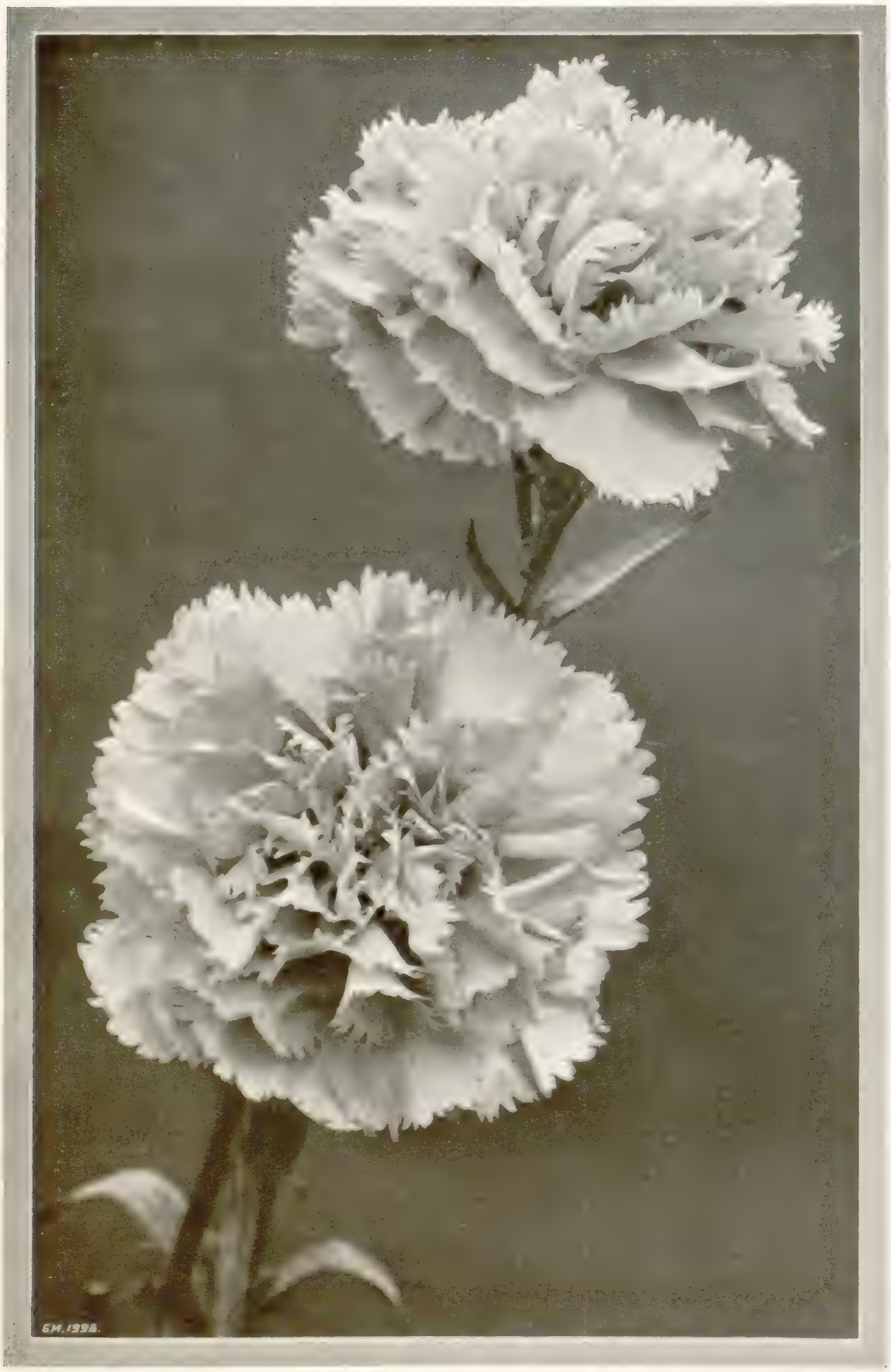


CARNATION WIVELSFIELD WONDER.

A new perpetual variety, white, with rose-pink flaking, introduced by Messrs. Allwood Brothers, Wivelsfield, Hayward's Heath.

TWO GOOD NEW CARNATIONS.

Among florists' flowers the perpetual carnations now figure largely, and, as in the case of all popular subjects, the number of new varieties that make a bid for favour is considerable. Two that have come under our notice of late we figure in the present issue.



CARNATION BARONESS DE BRIENEN.
A beautiful pink perpetual variety, introduced by Messrs. Stuart Low and Co., Enfield.

The variety Baroness de Brienen is one of Messrs. Stuart Low and Co.'s introductions, and is a lovely pink shade, the flowers are large, carried well on long stems, and have prettily fringed petals. The Enfield firm have exhibited this variety very freely during the present year, and, we understand, it bears the name of a Dutch lady who is a great horticulturist, and particularly fond of carnations.

Wivelsfield Wonder is being sent out by Messrs. Allwood Brothers, Wivelsfield, Hayward's Heath, and was well shown by them at the Carnation Show held at the Royal Botanic Gardens during the present week. This is a very large flower, with excellent calyx and stem, and it has very broad petals. The white ground colour is flaked over with a soft shade of rose-pink. Wivelsfield Wonder is a dainty carnation, and its habit of growth and freedom of flowering leave nothing to be desired. This newcomer is a seedling from that fine old American variety, "Bradt," which was one of the parents of Enchantress, as indeed, it has been of many other modern varieties.

"CARNATIONS, PICOTEES, AND PINKS" will tell you plainly how to propagate and grow these favourite flowers to perfection. The work is freely illustrated with plates of leading varieties, and explanatory diagrams as to layering, taking cuttings, fertilising blooms, etc. Price 2s. 6d. net, by post, in box, 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

CAMPANULA HENDERSONI.

A neat campanula that well deserves wider cultivation, and one that promises to obtain a larger measure of popular favour in the near future, is C. Hendersoni. It is generally understood that this foot-high plant is a hybrid between C. albiariæfolia and C. carpatica, and its heart-shaped leaves and pyramidal, racemose method of flowering suggest a combination of the two species indicated. The flowers are very attractive and of a rich mauve rather than a deep blue shade of colour. These are very freely produced over a long period, established plants commencing to bloom in July and continuing well into September. Either for the rock garden or the border, this campanula is a very useful subject, and it is particularly effective when grown in a colony rather than as a single specimen.

TILLANDSIA LINDEN.

Though the order Bromeliaceæ, to which this tillandsia belongs, is a very extensive one, and the blossoms of many of them are particularly showy, yet for some reason or other they are by no means popular in gardens. The species at the head of this note is, except the pineapple, which is cultivated for the sake of its fruit, grown perhaps to a greater extent than any other. It is certainly very attractive, as even when out of bloom it is decidedly pretty, the narrow, gracefully recurved leaves being so regularly disposed as to form a very symmetrical specimen, six inches or a little more in height.

From the centre of this crown of leaves the flower stem is pushed up. It is quite erect, and usually reaches a height of eight inches to one foot, or occasionally more, as individuals vary somewhat in this respect. This spike is on the upper portion for about half its length clothed with two opposite closely imbricated rows of bracts, which when fresh are of a rich bright pink colour, which tint they retain for a considerable time. The flowers do not last long, but a succession is kept up from one spike. They are of a beautiful rich purple colour. As a rule, this tillandsia flowers in late autumn and winter, at which time its bright-coloured blossoms are very welcome. It is a native of the Andes of Peru, and does best in the temperature of an intermediate house. A mixture of fibrous peat, sphagnum moss, and sand suits it well. It needs a liberal supply of water, especially during the growing season. W.T.

Prunus Pissardi.—I was much struck, while visiting a neighbour's garden not long since, with the beauty of this tree grown to form a screen in summer time. Usually, one sees green-leaved trees such as those of poplars planted for the same purpose. But as the screen in question is the only one I have as yet seen, it occurs to me that possibly these deciduous trees are not generally used in the way described. Behind the trees I am now referring to there was a background—at a little distance—of evergreen trees, and the latter served to enhance the beauty of the prunus. The deep crimson-purple leaves are very effective. The flowers are white and develop during March and April. A new form, Prunus Meseri flore pleno is an acquisition; the flowers are large, pink, and double, the leaves being a very bright purple. The last-named is very effective as dot plants in a shrubbery. A deep, loamy soil of a calcareous nature suits the trees very well, although those referred to were growing in a light, sandy medium with a gravelly sub-soil, and they appeared to be thriving extremely well in it.—G. B.

DAHLIAS IN AMERICA.

The dahlia appears to be by far the most popular autumn flower in the United States, if one can judge from the prominence given to it in the horticultural Press in that country. One large trade paper devoted practically the whole of two issues last month to the flower, and its growers. The writers were drawn from all parts of the States, thus showing the interest to be widespread. The reports of their exhibitions were pretty breezy, the cactus type being left almost entirely in the hands of amateur growers, while the trade seemed to devote their attention chiefly to the large decorative sorts, that are more or less neglected in this country. The pæony-flowered section, too, seem highly in favour, while the pompons and singles appear to be quite neglected; in fact, the whole sorts are more highly esteemed. The whole of the trend of the various correspondents clearly implies that the American nation require something large for decorative purposes and while the dahlia cannot be styled a popular flower in this country for this purpose, it is evident our cousins regard it otherwise.

One grower alone mentions growing two hundred and fifty thousand plants, surely a fine dahlia farm, while it is recorded that on October 14 one New York wholesaler handled sixty thousand flowers, two others fifty thousand each, and several ten thousand each. If these are the figures at one market, what must be the sales for the whole of the large markets? The prices, too, are rather astonishing to us, for they range from 75 cents. to three dollars per 100. There is surely money in the dahlia cut flower trade in the States. The best grades of flowers are packed just in the same way as we pack our chrysanthemums, in "bunches" for market; needless to add these are chiefly of the decorative type, because they pack better and keep fresh longer than the cactus forms.

One authority denounces the modern cactus varieties in no unmeasured terms. He is of opinion that the only way to judge the merits of any dahlia is to do so on the plant, and certainly not on the show boards, and that the stem and floriferousness of the plant should be taken into consideration as well as the actual flower. A statement that I think will be heartily endorsed by many on this side of the Atlantic. Our American cousins do not fear to criticise any variety that does not come up to their standard. For instance, a grower from Los Angelos cannot understand why the cactus variety Dreadnought ever saw the daylight; he describes it as a dull chestnut, quickly bleaching to a red, "yet more dull, and about as pleasing, as the colour of my old cow at shedding time." Evidently Dreadnought does not behave so well there as in the land of its birth. Again, he describes J. B. Riding as another candidate for the "junk pile" and oblivion. Well, as far as we are concerned, nobody in this country ever thought it would be a cut flower variety. Still, these breezy descriptions are interesting reading. Mr. G. H. Walker, of North Dighton, records the fact that hundreds of roots in his district did not flower at all owing to the drought, while they were disfigured by frost on September 13, and killed outright on the 28th inst. Another curious incident is recorded by a grower in Indiana, who mentions that they lift all their plants while still in flower to make sure the stock is true to name. Thank goodness we do not have to resort to such drastic measures here to keep our stocks true.

A peculiar planting freak, if I dare so describe it, is mentioned by a writer from Massachusetts, who started planting the first week in May, with, presumably, ground roots, putting out fifteen hundred weekly, the final planting of four thousand cactus varieties taking place the first week in August. Talk about "chancing your luck," what should we think of a dahlia grower planting four thousand dahlias in August? We should think him a candidate either for the nearest workhouse or county asylum. However, we have it that this grower's best results were obtained from the plantings made the last two weeks in June verb sap.

It is very pleasant to read the remarks of Mr. G. W. Kerr, at one time with Messrs. Dobbie and Co., and later with Messrs. Bakers, and a gentleman well known to all the London show habitues. He quotes his experiences with a very large collection in all sections, and mentions the fact that many really good varieties in Great Britain are useless to him in America. He gives lists of the best sorts which one notes are quite up-to-date, as far as European varieties are concerned, and also adds a note that he is raising new varieties in the pæony-flowered section that are superior to existing forms.

Mr. Maurice Field, an authority on the subject, gives the following as some of the best decorative dahlias: Perle de Lyon, Delice, Yellow Colosse, Jack Rose, Jeannie Charmet, Kaiserin Augusta Victoria, and Madame Van den Dael, while the best pæony-flowered are Codsall Gem, Mrs. A. McKellar, Mrs. W. E. Whineray, Mrs. T. G. Baker, Mrs. J. B. Riding, The Geisha, Paul Kruger, and Liberty. Our American cousins are very keen on raising seedlings, one writer remarking that it is quite time they could do without the annual importations from Europe, but I am afraid this is a question that will not trouble us in this country for some time, for they cannot afford to ignore our dahlia novelties any more than they can our roses or sweet peas. In conclusion, one can only marvel at the rapid development of the dahlia in America.

J. B. Riding.

Chingford.

CAMPANULA HENDERSONI.

This plant grows about a foot high, and bears deep mauve flowers.

THE SPECIES OF ARBUTUS.

Although the genus arbutus is not a very extensive one, it contains a number of species which are of considerable worth for decorative gardening, for not only are they handsome evergreens, but they are good flowering trees also, and in some instances the fruits are of a showy character. Unfortunately, they are not adapted for very cold districts, though one species, A. Unedo, may be grown successfully from the Midlands to the South of England, and in favoured places further north. Other kinds which are natives of warmer regions thrive satisfactorily in many parts of the country, while a few sorts may only be expected to succeed in places which are favoured by a particularly mild climate.

The arbutus, as a rule, are increased by means of seeds, though layering may be resorted to, and certain of the rarer kinds are sometimes grafted on to stocks of the commoner ones. They are more tender in a young state than in after life, therefore it is advisable to place young plants where they will receive some protection in the event of severe weather or bitter winds being experienced. This is particularly the case with the S. European, A. Andrachne and the Californian A. Menziesi. It is also necessary to place the plants in permanent quarters when quite small, for they transplant badly, and the removal of large specimens which have grown rapidly is attended with considerable risk. Supposing that lime is not prevalent in the soil to any great extent, there are few kinds of soil in which an arbutus will not thrive, while one or two kinds are known to grow in ground overlying limestone. Soil of a peaty character is well suited for the arbutus, and they revel in the disintegrated granite which is so prevalent in various parts of Cornwall. The common arbutus thrives in the neighbourhood of the sea, and in certain parts of the south and west counties grows to a large size when a wind screen occurs between them and the sea.

They are usually known by the common name of Strawberry Trees, on account of the ripe fruits of one or two kinds being thought to bear some resemblance to a ripe strawberry, but the likeness is more fancied than real. In the following notes attention is only directed to those kinds which are obtainable and are likely to grow out of doors in this country; there are, however, other species, some of which have been introduced and lost, and others which have probably never found their way into our gardens.

A. Andrachne is a native of the region about the Levant, where it is found as a large bush or small tree. Under favourable circumstances it attains a height of 40ft., with a trunk of moderate size. It has been grown in this country since 1724, at which date it was introduced from Smyrna. The leaves are oval or oblong, three to four inches, or sometimes up to six inches long, and a couple of inches wide, deep green above, pale below. The margins are entire, by which means the species is easily distinguished from others. The yellowish-white flowers are borne in erect panicles in spring, and they are succeeded by small fruits, about one-third of an inch in diameter, which, when ripe, are orange coloured, or orange suffused with red. It is said to grow well in soil containing lime. A fine tree is to be seen in the Botanic Gardens at Bath. A peculiarity of the species is noticed in the way the old bark is shed. Towards the middle of summer the bark becomes detached in long shreds or sometimes in patches, and continues to be cast during autumn and winter.

A. furiens is a very different plant from the last-mentioned species. A native of Chili, it grows into a somewhat loose-habited bush with coriaceous ovate leaves, the largest of which are not more than two inches long and an inch wide. The upper surface is deep green, and the under sides glaucous, thinly covered with dark brown hairs. The margins are slightly toothed, and the apex is terminated in a short, sharp point. White flowers appear in short, rather dense inflorescences from the leaf soils during late spring or early summer. At its best it forms a showy shrub, but it is only suitable for outdoor culture in the warmest parts of the country.

A. canariensis may only be grown successfully out-of doors in places like the south-west of Cornwall. It is distinguished by large leaves, which may be eight or nine inches long and two and a-half inches wide on vigorous plants. The inflorescences of yellowish-white flowers are produced in large terminal upright panicles. It is a native of the Canary Islands.

A. hybrida is of garden origin, though it has also, it is said, been found in a wild state in Greece. It is a hybrid between A. Andrachne and A. Unedo and is common in this country. Plants differ somewhat in character as they approach most closely one or other of the parents. The influence of A. Andrachne is usually seen by the way in which the old bark is shed, while the leaf margins are usually serrated as in A. Unedo, though it sometimes happens that the serration is confined to the upper half of the leaf. It blossoms in spring, and is showy when in bloom. An fine tree 39ft. high and 5ft. 10in. in girth at 5ft., and 7ft. 4in. at 3ft. above the ground is figured in Vol. III. of "The Trees of Great Britain and Ireland." This tree is growing at Sedbury Park near Chepstow, and it is said to be the finest known specimen.

A. Menziesi is the Madrona of California, and perhaps the largest-growing species in the genus. Examples are found up to 100ft. in height with a girth of 20ft. It occurs along the Pacific coast of North America, from southern Columbia through Washington and Oregon to California. Though introduced so long ago as 1827, good trees are rare: the few that exist are, however, widely scattered, for they are reported from places so wide apart as Castle Menzies in Scotland, Southampton, Kew, and Tortworth. Its oval leaves measure four to five inches in length, and two and a-half inches in width, though they may be larger on young vigorous plants. The yellowish flowers are borne in upright panicles in spring. During summer and early autumn practically the whole of the bark is cast off in small plates as is usual with the plane tree. Throughout this period the tree creates a most curious effect. In America the wood is used for furniture and for charcoal. For the latter purpose it is said to be specially valuable.

A. Unedo is the common Strawberry Tree, and is more frequently met with in our gardens than any other species. A native of Southern Europe, it is also found wild in some parts of Ireland, notably in the vicinity of Killarney. Fine bushes and small trees may be found in many places, particularly in the south-west counties of England, South Wales, and Ireland. Its dark green serrate leaves are familiar to most people, whilst its terminal heads of yellowish-white or sometimes reddish flowers are as well known as its pendulous, globular, rough fruits, which, when ripe, are bright scarlet or orange-scarlet in colour. A number of varieties are known which differ from the type, either in the colour of the flowers, habit, or in shape or size of leaves. Thus rubra, or Croomi, as it is sometimes called, has reddish flowers; quercifolia has somewhat lobed leaves; microphylla, very small foliage; compacta is of dwarf compact habit; and integerrima has rounded leaves, often with entire margins, and so on.

This completes the species which may be most easily obtained, and a collection of those mentioned would be well worth including in gardens where the more tender kinds would be likely to thrive.

W. Dallimore.

REHMANNIAS AND CELSIAS.

These are both very useful plants for spring flowering in the greenhouse, and they will succeed admirably under similar treatment. Rehmannia angulata is a native of Central China; its flowers are frequently three inches in diameter, they are of a rose-purple colour, and freely produced on tall, erect stems, very similar to a foxglove. The variety known as Pink Perfection is of a lovely clear pink shade, and quite an acquisition.

Of the celsias, C. cretica is the most handsome plant; it has rich yellow flowers closely set on a tall erect stem which frequently attains a height of fully five feet. C. arcturus is dwarfer in habit and less vigorous in growth, only attaining a height of about two and a-half feet. Its flowers are also yellow, and it looks well placed round the base of groups of more imposing subjects.

Seeds of these two classes of plants should be sown in the autumn in a cold frame to obtain specimens for spring flowering. Transfer the young plants from the seed pans to three-inch pots when large enough, and grow them on in a cold frame for the winter, taking care that they are not subject to frost at any time. When nicely rooted shift them into 32-sized pots,in which they will flower. Use a light open compost for the purpose, and make it moderately firm. Celsia Arcturus does not require more root room than a 48 pot affords, and charming specimens are frequently grown in 60 sized pots. Grow them in a cool house, and stake and tie as required. When the flower spikes develop weak liquid manure is a great assistance, and an occasional top-dressing of a fertiliser is very helpful. Water needs to be given sparingly during the winter, especially in the case of the rehmannias. When the blooms commence to expand remove the plants to the show house or conservatory, where they are usually much admired. J. G.

Gaillardias.—The continuous flowering qualities of the gaillardia claim for it at least a passing recognition. As a border plant its merits rank high, for even now, at the end of October, there are many fully expanded blossoms. The stout, firm stems stand it in good stead when the flowers are used in a cut state for indoor decoration.—W. T.

Apple Newtown Pippin.—In the southern counties bushes that are so pruned that the centre is kept open, and grown in a warm sheltered corner, will bear fruit satisfactorily. But in the northern counties the trees do best when grown so that the branches can be trained to a wall with a south aspect. I well remember a fine wall specimen in a sheltered corner near some vineries in a Lancashire garden not more than a mile distant from the sea. This tree was always early in blossom, and, being protected from frosts, the flowers set well, and the fruits were very large and highly flavoured. They kept good until the end of April.—G. B.

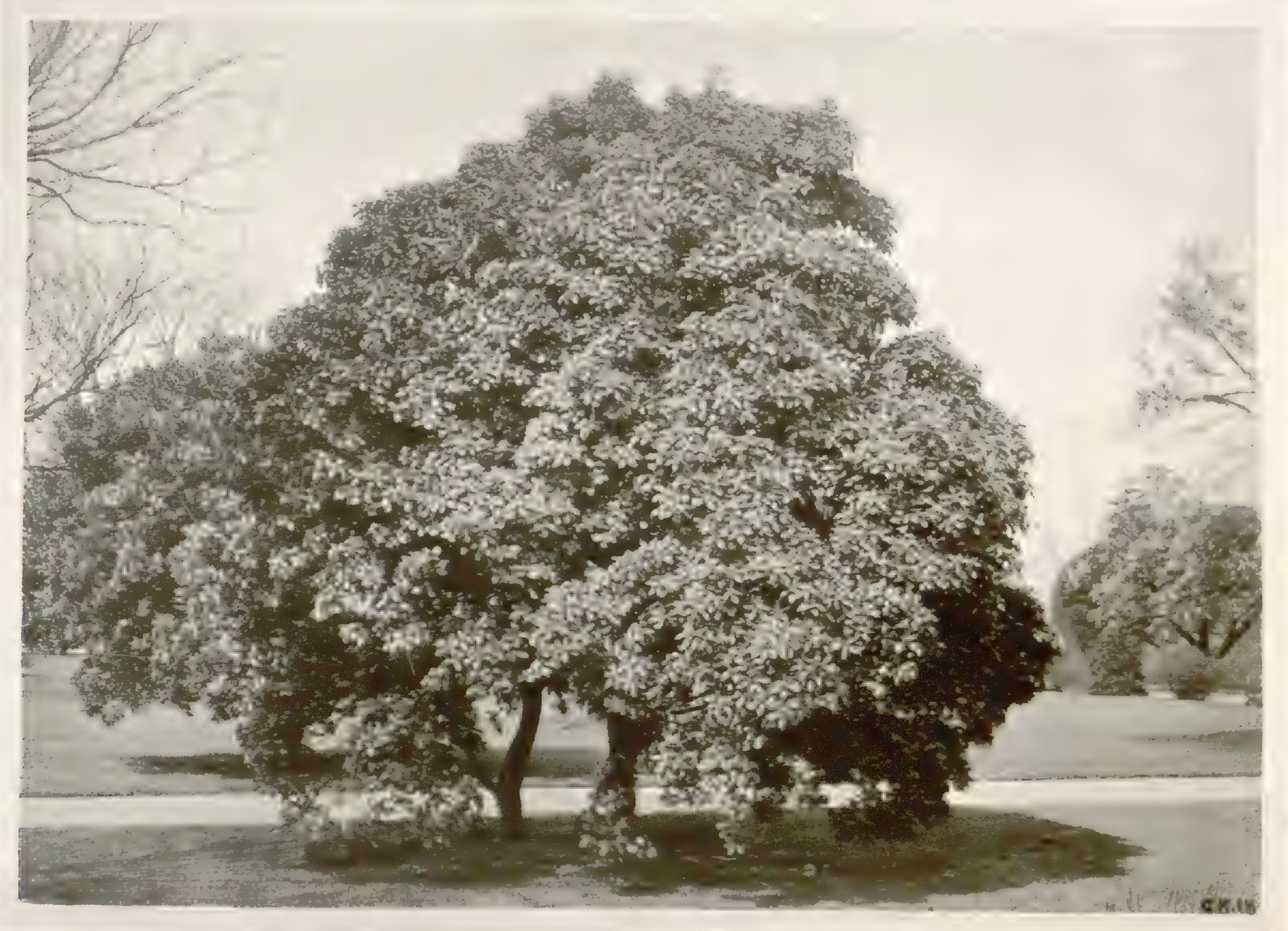
AUTUMN AND WINTER-FLOWERING EVERGREEN SHRUBS.

When the autumn tints have faded, and the leaves of the deciduous trees and shrubs have fallen, it is then we turn our attention to the evergreen species, and though the flowers of these, in many instances, are small and insignificant in themselves, they more than compensate for this lack of beauty by the delicate perfume they impart.

If we take Osmanthus ilicifolius as an example, we find the flowers are small, somewhat resembling those of the holly, clustering round the slender growths, and so inconspicuous that one would not notice them were it not for their delicious fragrance. Osmanthus ilicifolius is not unlike an holly in appearance, and many who are not familiar with shrubs would undoubtedly take the green form, when a small bush, for one, but as the plant grows larger it has a less rigid appearance, and, instead of flowering in the spring, produces its delicate little flowers in November. In addition to the green form, there are several variegated varieties, one having silver variegated foliage, and another golden. A third variety has purple leaves, but all flower alike. O. myrtifolius is another species that is well worthy of consideration. It is upright in habit, the shoots being much stronger than in O. ilicifolius; the leaves, being not quite so large and farther apart, enables one to see the flowers to better advantage. This species makes a neat specimen for the shrubbery border or rockgarden, but should not be grown under the shade of trees. O. rotundifolia is of like character, and should find a place in all gardens. These shrubs thrive best in a light rich turfy loam and decayed leaf-soil. They should be planted in an open situation, where they can be sheltered from the cold east and north-east winds. Though they usually bloom freely at this season of the year, I have never seen them so full of bloom as at the present time. Doubtless this is owing to the beautiful weather we experienced during the summer.

Those who have never seen a fine specimen of Desfontainia spinosa in bloom have no idea of its beauty. This somewhat resembles holly, but on closer inspection it will be found quite distinct. The long tubular flowers, which are produced in abundance all over the plant, are scarlet and yellow in colour, resembling those of a large trumpet honeysuckle. It thrives best in a rich fibrous peat and loam, and it should be given an open situation, sheltered from cold bleak winds. When grown to a height of from five to six feet, and covered with its attractive flowers, it is a fine sight.

I have not seen Elæagnus glabra variegata bloom so profusely as it has done this season. Though the flowers are small in themselves, they are produced in abundance, and, being sweet-scented, are sure to attract passers by. When not in bloom this makes a splendid bush for the shrubbery, its attractive foliage, which at all times of the year looks fresh, being very conspicuous. The plant thrives best in a mixture of light rich sandy loam and fibrous peat.



A TYPICAL SPECIMEN OF THE STRAWBERRY TREE (ARBUTUS UNEDO) AT KEW.

How seldom is it that we see the arbutus doing well, yet there is no reason, provided a suitable position is found, why it should not thrive. In some places, where one would least expect to find it flourishing there we see it in perfection. If there is one thing this shrub dislikes more than another it is the shade of overhanging trees. Grown in an open spot, where it can be sheltered from the cold north and east winds, it will grow and thrive most luxuriantly. It is fibrous-rooting, and on that account the soil used should be made firm when planting. Choose a sheltered position on a dry sunny bank, use light rich soil, well drained, and one will be well rewarded with an abundance of bloom, and clusters of bright red strawberry-like fruits throughout the winter months. The reason so many fail with this shrub is because they place it in a shady place, and plant in a stiff, cold soil. I was looking at some large specimens a day or two ago that are a picture of health, being loaded with clusters of both fruit and flowers. I have seen trees planted out in the open which have not failed to produce a crop of fruit for the last forty years. It is a peculiarity of this species that the flowers of one winter produce ripe fruit the next.

Though the usual time of flowering for the choisya is the summer, in some seasons it will bloom for the greater portion of the year, and this season it appears to be trying to see if it cannot outdo the summer crop of flowers. In sheltered spots it is now in full bloom, and the flowers are very attractive, standing well up above the shining foliage.

The cænothuses also seem to be flowering this season more profusely than I have ever seen them before. The walls are covered with their elegant spikes of pale blue flowers, and some of the kinds, Gloire de Versailles in particular, is quite as gay at the present time, November 8, as during any part of the summer.

There can be no doubt that, with judicious planting and a proper selection of kinds, most gardens may be made interesting during the whole year with these choice flowering shrubs. It is a pity that they are not more extensively planted in the place of the more common kinds, such as the laurel and rhododendron

H. C. Prinsep.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

SEED SOWING.—Some of the winter-flowering cypripediums and late-flowering cattleyas mature their seed pods about the present time and during the coming few weeks. In the case of cypripediums, the seeds are usually matured at the time of the ripening of the seed vessel, and such seeds may be sown immediately; indeed, I consider that the sooner cypripedium seeds are sown the better it germinates. It may be that, owing to the smaller amount of water the plants require in the winter, the seeds do better, for there can be no doubt about satisfactory germination at this season, and the seedlings grow more rapidly than is the case with us when a portion of the seed crop has been saved for sowing at a later date.

CATTLEYAS AND LÆLIAS, which are now most generally sown on artificially-prepared beds, light is one of the most essential requirements for rapid and successful germination, combined, of course, with warm, humid conditions. The seed pods of most of these orchids burst open while still very green and sappy, and they require careful watching to see that they are kept free from moisture. It is a good plan to cut off the seed vessel with a portion of the flower stalk, and place them in a paper bag with the top left sufficiently open to permit of moisture escaping. Hang these in a dry, light position to assist the ripening of the seeds. I would recommend that the seed sowing of any of these should be delayed until after the turn of the days. There is so little aid to germination until after the middle of January that very little, if any, benefits are obtained by sowing before that time.

SUMMER AND AUTUMN-SOWN SEEDS have not been as satisfactory as is usually the case. In the first place, the hot, dry weather prevented germination, and since the rains we have had so much dull weather that little headway is being made by the seedlings. We find it a good plan to raise the plants that are used as seed beds up to within a reasonable distance of the roof glass; this gives some encouragement from the light, and also minimises the possibility of the potting compost becoming stagnant.

CALANTHE SEEDLINGS, if permitted to remain in the seed beds after the old plants have shed their leaves and require the usual resting conditions, are liable to suffer, and if they lose their leaves also, it is difficult to locate them. We find it best to transfer the seedlings to store pots, where they can be afforded the necessary encouragement to keep them active as long as they show signs of development. They will vary; some will make up a minute bulb about the present time, others will keep on growing, and with the necessary encouragement they may make a pseudo-bulb sufficiently large to enable them to produce flowers in the following autumn and winter.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

PLUMBAGO ROSEA, cultivated expressly as a winter-flowering subject, will be found of much value where cut flowers are in great demand, especially as a subject for dinner-table decoration associated with smilax or Asparagus deflexus. Where two colours are not objected to, I find that if good spikes of lily of the valley are associated with the pink plumbago the colour of the latter is brought out to advantage. After the first batch of blooms have been used up the plants may receive a few light top-dressings alternately with weak farmyard liquid, which will encourage new flower spikes, and a useful successional batch will be provided early in the New Year.

REX BEGONIAS.—These are useful at this season for house decoration. I find ferns are not always available now, whereas foliage begonias are almost at their best, and make a fine groundwork for taller flowering subjects. The winter months offer a suitable opportunity for the propagation of such subjects as Rex begonias. A few of the best ripened leaves are selected and the leaf-stalk placed in the gravel or ashes at convenient places between the plants on the stages; here they are usually kept moist enough by the drainage from the plants, and the occasional damping between the pots, and so good sized plants are produced, and are available much earlier than if propagation is left until the New year.

BOUVARDIAS.—Plants that have been producing a plentiful supply of bloom during the autumn, will by this date be nearly exhausted; the old flowering shoots may be shortened back somewhat, and the plants cleaned. Place the plants into genial growing quarters, use the syringe on all favourable occasions, and apply top-dressings of some approved chemical fertilisers. So treated, and given a light position on the stage, and as near the glass as circumstances will permit, the young shoots will develop strong and robust flowering growths for a successional display.

GENERAL REMARKS.—As the days are each week becoming shorter, and the light is almost at its worst, due regard must be paid to the treatment of stove plants. The conditions not being at all favourable to growth or root action, every effort must be taken to avoid undue excitement by fluctuations of temperature. Extreme care and a great deal of forethought must be exercised in the manipulation of the boiler, and hot-water pipes; overheating will cause serious damage. The temperature of the stove should be brought gradually to its lowest at the end of the year, but it is never safe or advisable to allow a minimum of less than 60 degrees, except in very severe weather, when a few degrees lower will cause no anxiety.—John Donoghue, Bardon Hill Gardens.

FRUITS UNDER GLASS.

EARLY VINES.—Vines started by simply shutting up the house will now be plumping up the buds previous to bursting. Therefore a little heat may be turned on to keep the temperature up to 50 degs. If the vines are in pots, plunged as advised, see that that they are well supplied with moisture. It is a good plan to water twice to make sure that the whole ball of earth and roots is moistened, but never water unless water is required; I prefer to use water a little warmer than the temperature of the house. Syringe the rods freely on all fine days; it makes a lot of difference if there is a tank of water in the house, as in that case there is always a fair amount of moisture in the air. Continue to syringe until the shoots are five or six inches long.

LATE GRAPES.—Cut all bunches and place them in the grape-room, so that the vines may have a necessary rest. Any room, that can be kept dry and at a temperature 45 to 50 deg., will do very well. When the grapes are cut the border can receive attention in the matter of watering, etc. Mid-season vines must be dealt with as circumstances will permit. When pruning, if any eyes are likely to be wanted, take care of the best prunings and tie them in bundles, and label and plunge in ashes in a cool house until wanted.

EARLY FIGS.—Figs in pots, started at the same time as the early vines, must now have another 5 deg. of heat by day and night, allowing the temperature to rise to 60 deg. by day in fine weather. Great care is required in watering and in the avoidance of extremes in temperatures. Permanent trees in borders should now be pruned, cleaned, and made ready for closing. Wash the roof, walls, and trees, and take away as much of the old soil as possible, adding new compost, which should consist of loam and lime rubble with a sprinkling of bone meal.

ORCHARD HOUSE.—Push forward the pruning, and if any trees require root pruning badly dig around them, and heel them right over; if this is done carefully and skilfully it should not interfere with the tree bearing a fair crop next season. Peaches and nectarines, cherries, pears, and plums all respond to this treatment. Black aphis are the worst enemies in cool houses, but sometimes scale will make its appearance, in which case a strong and half-worn paint brush is about the best thing to use to move the insects with, and a strong solution of insecticide. When pruning and cleaning are finished rake away all rubbish and surface soil, and give a light top-dressing of good loam and lime rubble; if the latter is not obtainable give a good sprinkling of lime or gypsum, as this supplies the necessary material for stone formation.

TOMATOES.—Maintain a dry, healthy temperature of 55 to 65 deg.; feed the plants once every week, and keep the soil in a free, healthy growing, condition, with just enough moisture for the wellbeing of the crop, and no more. The plants are fruiting well now. Remove the fruits as soon as ripe, whether required for use or not, as they will keep well for a considerable time if laid in boxes of wood wool.

CUCUMBERS must be kept warm and a moist temperature must of necessity be provided, or the plants quickly fall a prey to thrip and red spider. Spray the foliage lightly as it is tender at this season. Stop the shoots at one joint above the fruit, and cut fruits as soon as ready. Keep the temperature at 65 to 70 deg., and damp the floors occasionally with soot water.—W. A. Cook, Leonardslee Gardens.

THE FLOWER GARDEN.

TREES AND SHRUBS.—The operation of lifting, moving, and replanting large specimens must be carefully carried out. It is necessary that a good ball of earth should remain with the roots, and the latter preserved as much as possible. Of course, when dealing with very large trees or shrubs, a tree-lifting machine and skilled labour should be requisitioned; but a trolly on low wheels or rollers will suffice for medium sized specimens. A trench must be taken out round the plant, of sufficient dimensions to allow proper working facilities, and the size of the ball of earth inside this trench must be governed by the size of the tree. When the trench has been opened deep enough, the ball of soil and roots should be made secure by binding it up with short planks, making them fast with chains or stout ropes. When this part is accomplished the undermining part of the business can be attended to, working the soil from the sides first, and shoring them up before the centre is touched. After the sides are securely blocked up the soil in the centre should be removed, when the whole weight will rest on the side planks. A gangway must be cut down to the bottom level to allow the trolly to pass down, and to be pushed under the ball, when the whole is to be lowered gradually until it rests on the trolley.

MULCHING.—Too much importance cannot be attached to this, for an annual mulching goes a long way towards ensuring the welfare of all shrubs and trees, especially those which have been planted recently. When dealing with young shrubberies the dressing must not be forked in where the roots are very near the surface, but where no roots are found near the tops of the ground, then it may be lightly covered. Old shrubberies should be cleaned through and the dead and decaying wood removed.

PROPAGATION. — Cuttings of various shrubs should be prepared and inserted in nursery beds. Making the cuttings provides employment for rainy days, and if they are heeled in they will be quite safe until the weather is favourable for planting. Laurels, privet, escallonias, wiegelias, Forsythias, aucubas, dogwoods, willows, ribes, are amongst those which may be propagated now. A sandy loam, with a good proportion of leaf-soil mixed with it, is the most suitable for rooting the cuttings, and it should be made very firm by treading.

GENERAL REMARKS.—On wet days cloth shreds may be cut, new stakes painted, old ones sorted and tied up in their various sizes; sheds and outhouses put in order so that a general appearance of tidiness may prevail.—E. C. Pooley, Gnaton Gardens.

BIRMINGHAM CHRYSANTHEMUM SHOW
will be held at BINGLEY HALL,
November 5th, 6th, and 7th, 1912.
ALFRED NOAKES, Secretary, 148, Bristol Street, Birmingham.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

Royal Horticultural Society.

The last exhibition of the year was held on Tuesday, December 5, at Vincent Square, and though it was not so extensive as some recent displays, it was effective and interesting, and there was a quite considerable number of exhibitors. Chrysanthemums, winter-flowering begonias, and orchids—cypripediums particularly, were, with carnations and apples, the chief subjects on view. There was a comparative dearth of novelties.

FLORAL COMMITTEE.

Mr. W. Parrot, Barton Court, Kirtbury, submitted groups of a greenish-yellow, narrow-petalled Japanese decorative chrysanthemum named Mrs. Annie Howard Parrott. Messrs. W. Wells and Co., Merstham, had a quite big group, consisting very largely of single varieties, among which the big sheaves of such fine varieties as Leo, Aurora Borealis, Cannell's White, Ruby Beauty, Mensa, Merstham Jewel, Miss May Thorne, Peter Barnes, and the decorative white variety Mrs. David Syme (A.M.), were very fine.

Across one end of the hall Mr. Davis, gardener to J. Gurney Fowler, Esq., staged 135 freely-flowered plants of Begonia Gloire de Lorraine and its varieties, all grown in 48-sized pots. Mr. G. Lange, Hampton, showed well-grown plants of Begonia Gloire de Lorraine, and made up a considerable group of them; the bright-flowered variety named Glory of Cincinnati gained an A.M., and was much admired. Bouvardias, chrysanthemums, and winter-flowering begonias made up a very attractive exhibit from Messrs. Jas. Veitch and Sons, Chelsea.

A bank of very dwarf poinsettias, from W. D. James, Esq., Chichester, looked particularly fine late in the afternoon, when, under artificial light, the brilliant bracts made a rare show of colour. Messrs. Clibrans', Altrincham, had on view a new winter-flowering begonia named Lady Cooper (A.M.); this has bright cerise pink flowers of great beauty. Bath's Premier (A.M.), a distinct and new soft yellow perpetual carnation, was from Messrs. R. H. Bath, Lim., Wisbech; this is a fine variety, and perhaps its only fault is that it lacks fragrance. We understand it is of Lawson parentage.

The pretty and graceful Primula malacoides was capitally shown by Mr. Gooding, gardener to W. B. M. Bird, Esq., Eartham House, Chichester. Mr. W. J. Godfrey, Exmouth, again showed his fine white anemone-flowered decorative chrysanthemum named Godfrey's Perfection.

Very brilliant were the zonal pelargoniums His Majesty, Winter Cheer, and Fiscal Reformer from Mr. W. H. Page, Hampton, all finely flowered. Mr. Reuthe, Keston, sent a number of nerines; Messrs. Whitelegge and Page, Chislehurst, showed some decorative chrysanthemums, and Messrs. J. Peed and Son, West Norwood, contributed a group of Begonia Gloire de Lorraine.

Cyclamen from the Rev. H. Buckston (gardener, Mr. Shambrook), Sutton Hall, Etwall, were finely grown, and represented a pure white strain. Mr. H. Burnett, Guernsey, had a beautiful exhibit of carnations, and showed Mrs. H. Burnett, R. F. Felton, and Rose Doré very well indeed.

Messrs. W. Cutbush and Son, Highgate, presented carnations attractively, their Goldfinch, Fortuna, Beacon, and May Day being especially good. Spiræas, begonias, heaths, and liliums were also shown by the Highgate firm. Messrs. H. Cannell and Sons, Swanley, put up a very fine lot of zonal pelargoniums, showing these in excellent style; with these were numerous decorative and single chrysanthemums in great variety.

Mr. Vincent Slade, Taunton, was an exhibitor of zonal pelargoniums, and Messrs. J. Bruckhaus, Twickenham, filled one corner of the hall with finely-grown plants of varieties of Begonia Gloire de Lorraine, one named Glory of Cincinnati being noticeable for its brightness and the flatness of its blooms.

A choice collection of ferns, chiefly adiantums, nephrolepis, and platyceriums was displayed by Messrs. H. B. May and Sons, Edmonton. The beautiful Zephyranthes aurea, with lovely golden flowers, was very well shown by Mr. Bain, gardener to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking, and was granted a F.C.C.

Mr. P. Ladds, Swanley Junction, showed some beautiful single chrysanthemums, and we were specially struck with Isabel Gray (A.M.), Merstham Jewel, Cannell's Crimson, Mensa, and Mrs. Higgs. Hardy berried shrubs, particularly aucubas, were largely shown by Mr. L. R. Russell.

ORCHID COMMITTEE.

Mr. Davis, gardener to G. Gurney Fowler, Esq., Glebelands, South Woodford, presented a fine bank of cypripediums in which were set the rare and handsome Odontoglossum Smithi, and Cypripedium Leeanum J. Gurney Fowler. Mr. Hopkins, gardener to F. Wellesley, Esq.; and Mr. Cook, gardener to H. Davidson, Esq., Borlases, Twyford, showed new seedling orchids of considerable beauty.

Mr. Alexander, gardener to Lieut.-Colonel Sir G. Holford, Westonbirt, secured an A.M. for Cypripedium Draco—a giant flower, descended from C. insigne Harefield Hall. Messrs. Hassell and Co., Southgate, had a few pretty orchids on view. Messrs. J. and A. McBean, Cooksbridge, sent forward odontoglossums, cypripediums, and cattleyas, C. Luegæ and C. Fabia were especially good.

Cypripediums were very largely shown by Messrs. Cypher and Sons, Cheltenham, and C. Tityus superba, C. Bingleyense, C. Mdme. Jules Hye, and C. Priam magnificum were conspicuously good. Messrs. Jas. Veitch and Sons, Chelsea, had a pretty exhibit of orchids, wherein Masdevallia Tovarensis, Cypripedium insigne Sanderæ, C. Thalia, C. Maudiæ, C. Milo superbum, and the striking Odontoglossum Aurora (Lambeauianum x Rossi rubescens) were notably good.

Messrs. Armstrong and Brown, Tunbridge Wells, presented a fairly large exhibit of orchids, and we noticed such good things as Cypripedium Thalia gigantea, C. Gaston Bulteel, C. Thalia New Hall Hey var., C. Sir Redver's Buller, etc., etc.

Messrs. Charlesworth and Co., Haywards Heath, showed Vanda cœrulea finely, and also displayed Sophro-cattleya Lotte Müller (F.C.C.), the good old Epidendrum vitellinum majus, Vanda Amesiana, Odontioda Cassiope, and Sophro-cattleya Pandora, the new Trichopilia Gouldi (A.M.), a pretty pink, yellow-throated hybrid from T. fragrans and T. suavis.

In the group from Messrs. Sander and Sons, St. Albans, cypripediums were prominent, and especially good were C. Alabaster ampliatum, C. Hydra, C. Euryades, C. Leeanum, Cymbidium giganteum, Cattleya Dowiana Rosita, etc. Messrs. W. B. Hartland and Co., Cork, brought over Cypripedium insigne Sanderæ and C. i. Harefield Hall, and showed a number of plants of each.

A few cypripediums from Messrs. Mansell and Hatcher, Rawdon, Leeds, included C. Thalia Mrs. Francis Wellesley, C. Leeanum Clinkaberryanum, and C. Œdippe. Messrs. Stuart Low and Co., Enfield, had Oncidium varicosum Rogersi in fine form, Cattleya labiata, Vanda cœrulea, and various cypripediums.

Miss Walters Anson, Broadway, Streatham, showed a fine set of paintings of cattleyas, cypripediums, and odontoglossums.

Mr. E. V. Low, Hayward's Heath, had some fine examples of varieties of Cypripedium Leeanum, and a C. Baron Schroder with nine flowers.

Mr. Chapman, gardener to Mrs. Norman Cookson, Oakwood, Wylam-on-Tyne, sent up the deep rosy Calanthe Chapmani roseus and Odontoglossum crispum Chapmani, finely blotched.

From the Gatton Park collection, Mr. J. Collier, gardener to Sir Jeremiah Colman, Bart., brought the beautiful Cœlogyne Moorei, the large Cypripedium insigne Gatton Park var., and Odontoglossum Goodsoni.

FRUIT AND VEGETABLE COMMITTEE.

Messrs. H. Cannell and Sons contributed a very handsome lot of apples, the fruits large, bright, clean, and well arranged. Mr. J. C. Sutton, gardener to Earl Stanhope, Cheveney Park, Sevenoaks, had also a goodly collection of apples, and arranged popular varieties in dishes and large baskets.

CERTIFICATES AND AWARDS.

First Class Certificate.—To Zephyranthes aurea, from Sir Trevor Lawrence, Bart. (gardener, Mr. W. Bain), Burford Lodge, Dorking; to Sophro-cattleya Lotte Müller, from Messrs. Charlesworth and Co., Hayward's Heath.

Award of Merit.—To Begonia Altrincham Pink, from Messrs. Clibrans, Altrincham; to Begonia Glory of Cincinatti, from Mr. Lange, Hampton; to Chrysanthemum Mrs. David Syme, from Messrs. W. Wells and Co., Merstham; to Chrysanthemum Isabel Gray, from Mr. P. Ladds, Swanley Junction; to Perpetual Carnation Bath's Premier, from Messrs. R. H. Bath, Lim., Wisbech; to Cypripedium Draco, from Lieut.-Colonel Sir George Holford (grower, Mr. H. Alexander), Westonbirt, Gloucester; and to Trichopilia Gouldi, from Messrs. Charlesworth and Co., Hayward's Heath.

MEDALS.

Silver-gilt Banksian.—To Messrs. Cutbush and Son, Highgate, for carnations, etc.; to Messrs. H. B. May and Sons, Edmonton, for ferns; to Messrs. James Veitch and Sons, Chelsea, for begonias, etc.; to Messrs. H. Cannell and Sons, Swanley, for apples; and to Mr. J. C. Sutton, gardener to Earl Stanhope, Cheveney Park, Sevenoaks, for apples.

Silver Flora.—To Mr. J. Bruckhaus, Twickenham, for begonias; to Mr. H. Burnett, Guernsey, for carnations; to Mr. L. R. Russell, Richmond, for shrubs; to Rev. H. Buckstone, Etwall, for cyclamens; to Messrs. W. Wells and Co., Merstham, for chrysanthemums; to Messrs. Charlesworth and Co., Hayward's Heath, for orchids; to Messrs. Sander and Sons, St. Albans, for orchids; to Messrs. J. Cypher and Sons, Cheltenham, for orchids; to Messrs. James Veitch and Sons, Chelsea, for orchids; to Messrs. J. and A. McBean, Cooksbridge, for orchids; to Messrs. Armstrong and Brown, Tunbridge Wells, for orchids; and to J. Gurney Fowler, Esq. (gardener, Mr. J. Davis), South Woodford, for orchids.

Silver Banksian.—To Messrs. W. B. Hartland and Co., Cork, for orchids; to Messrs. Stuart Low and Co., Enfield, for orchids; Messrs. H. Cannell and Sons, Swanley, for pelargoniums, etc.; to J. Gurney Fowler, Esq., South Woodford, for begonias; to W. D. James, Esq., Chichester, for poinsettias; to Mr. G. Lange, Hampton, for begonias; and to Mr. P. Ladds, Swanley, for chrysanthemums.

Bronze Banksian.—To Mr. W. H. Page, Hampton, for pelargoniums; to Messrs. Whitelegge and Page, Chislehurst, for chrysanthemums; to Messrs. Mansell and Hatched, Rawdon, Leeds, for orchids; and to Mr. E. V. Low, Hayward's Heath, for orchids.

Aberdeen.

The annual show of the Aberdeen Chrysanthemum Society was held in the Music Hall Buildings, Aberdeen, and Lady Sempill, Fintray House, Aberdeenshire, performed the opening ceremony amid a large and representative assembly. As is his wont Mr. M. H. Sinclair, the secretary, made admirable arrangements, leaving nothing undone to make the show what it was—a splendid success. The remarkably fine summer we had was reflected in every section of the show—pot plants, cut flowers, fruit, and vegetables.

PLANTS.

For best group of chrysanthemums and other plants, arranged in semi-circular form on a space 10ft. by 5ft., to be judged for quality and effect, the entries were few but good. The silver cup went to Mr. Begg, gardener to Mr. A. R. Gray, Garthdee, his group comprising some capitally grown flowers, large, dense, and well formed, while the decorative varieties were greatly admired for their variety and depth of colour. A fine Kentia and two well-grown examples of Cocos Wedelliana surmounted the group, while round the base were a good show of adiantums and pterises and aspidistras. Second place went to Mr. John Mathieson, gardener to Mr. A. Smith, Craigielea, Aberdeen. The arrangement here was exceedingly good, and had there been quality similar to the first-prize group, the prize tickets would probably have been differently placed. Mr. William Dick, gardener to Mr. A. Ledingham, S.S.C., Queen's Road, Aberdeen, took the third place with a very meritorious group. The decorative varieties in it were well grown and much admired.

The display of chrysanthemums in pots was unquestionably one of the finest ever seen at Aberdeen, the size and singular beauty of the flowers being the main features. For six chrysanthemums, at least four varieties, Mr. Begg again scored in fine fashion, taking first and second places with finely grown specimens. In fact, Mr. Begg had matters pretty much his own way, having, apart from his silver cup for best group, nine first and second prizes in this section—no mean record. Mr. A. Murray, Ashley House, Aberdeen, had also some very fine entries. Ferns were not large in numbers, but were well grown, Mr. James Jamieson, Tillycorthie, Udny, Aberdeenshire, and Mr. A. Duncan, Rubislaw Den House, Aberdeen, dividing the principal honours. Chinese primulas, single varieties, were well shown by Mr. Begg. There were splendid exhibits of orchids, and Mr. Andrew Reid, gardener to Mr. Baird, of Durris, Aberdeenshire, won finely, with specimens of Cypripedium Leeanum and Cattleya labiata; Mr. A. Duncan, gardener to Lord Provost Maitland, Rubislaw Den House, Aberdeen, made a very good second.

CUT FLOWERS.

These made an exceedingly rich display. Mr. J. Jenkins, 419, Clifton Road, Aberdeen, led finely here, taking first place for eighteen blooms, with a capital exhibit. Mr. J. W. Robertson, gardener to Mrs. Redmond McGrath, Leetham Grange, Arbroath, led finely for twelve blooms, his entry comprising some choice examples of Francis Joliffe, Mrs. H. Barnes, Bessie Godfrey, Reginald Vallis, F. S. Vallis, Mrs. R. Davis, Lady Talbot, Victoria and Albert, and J. H. Silsbury. The class for eighteen varieties of decorative chrysanthemums in vases brought out a strong competition, and Mr. John Grigor, gardener to Mrs. Dunbar Dunbar, of Seapark, Forres, made a capital first. Premier honours for best nine vases of decorative chrysanthemums went to the last-named gardener's father—Mr. A. Grigor, Duff House, Banffshire. In the class for twelve vases of single chrysanthemums first honours went to Mr. Robertson, Leetham Grange, for a very fine entry. For the best six vases, single varieties, the chief prizes went to Mr. John Elder, gardener, Norwood, Aberdeenshire.

The Christmas roses forward proved one of the outstanding features of the show. Mr. John Mathieson, Craigielea, Aberdeen, occupied the premier place, closely followed, however, by Mr. William Milne, Corsindae House, Sauchen, Aberdeenshire. For the best six stove or greenhouse flowers (orchids excluded), Mr. Andrew Reid, Durris House, had a fine win with exquisite specimens of Clerodendron Balfouri, Lasiandra macrantha, Anthurium Andreanum album, and Eucharis grandiflora. Mr. Reid also took chief honours for orchids, with exquisite blooms, comprising Cypripedium Lecanum giganteum, Odontoglossum crispum, Cattleya labiata, and C. Callistogeossa, the last a finely grown hybrid.

Table centres formed a very strong section, and some very fine work was shown. An outstanding feature, and one that proved very popular, was the magnificent work done in wreaths, bouquets, crosses, and other designs. Here the Burns family, a name prominent in the florist trade in Aberdeen for generations, had matters pretty much their own way. Mr. A. Burns, jun., New Market, Aberdeen, and his daughter, Miss Alice Burns, Victoria Road, Torry (a suburb of Aberdeen), gained no fewer than fourteen prizes.

FRUIT.

For some years past the British Colombian Government were wont to send a fine display of apples grown in that province, but this year they had none forward. Nevertheless, the display of fruit, especially apples, was a really capital one, and in going the rounds of this section one felt that there was no need to go to British Colombia for apples and pears when quite as good, if not better, were shown from the homeland. The Allington Pippins forwarded by Mr. W. B. Reid, gardener to Lord Lovat, Beaufort Castle, was a revelation of what can be done even so far north as Beaufort Castle. Mr. Charles A. Cumming, Pitgaveney House, Elgin, led in kitchen apples, four varieties, four of each, with exquisitely grown specimens. For dessert apples, Mr. W. B. Reid, Beaufort Castle, had a fine win. Mr. C. Stuart, Raemoir, Aberdeenshire, took premier honours for baking apples. Pears made a capital display, and the honours here were divided between Mr. J. W. Robertson, Leetham Grange, Mr. Charles Cumming, Pitgaveney Gardens, Elgin; Mr. Andrew Reid, Durris House; and Mr. John A. Grigor, Seapark, Forres. Grapes were poorly shown.

VEGETABLES.

The display in this section was not so large as has been seen at this show in former years, but what was lacking in numbers was amply made up for in quality. For the best collection of vegetables the entries were few, but Mr. John Garden Broomend, Inverurie, had a collection that would have compelled attention in any show. It was composed of Up-to-Date potatoes, Ailsa Craig onions, Veitch's Self-protecting broccoli, Solidity Brussels sprouts, St. Valery carrots, and Clark's Empress celery. Mr. William Scorgie, Spinghill House, Aberdeen, made a capital second. Potatoes, as is usual at Aberdeen, made a very grand display, and Mr. A. Gardiner, Drumduan, led finely and followed by Mr. J. Ferguson, Linton House.

AMATEUR SECTIONS.

The amateurs put up a very good display in many of the classes, and some very fine material was shown by Mr. John Davidson, Hardgate; Mr. John L. Milne, Hardgate, Aberdeen; Mr. James Coutts, Sunnybank Place, Aberdeen; and Mr. Alexander Cumming, 83, Cairnfield Place, Aberdeen. The last-named gentleman, who is a printer to trade, won handsomely, for the third year in succession, the first place for six vases of decorative chrysanthemums.

MISCELLANEOUS DISPLAYS.

These were remarkably good, the leading place being taken by Mr. Sinclair, the worthy secretary, with an exceedingly chaste and fine display of plants and flowers. The flowers were the more interesting because of their being, for the most part, uncommon. A number of nerines, of beautiful colour and quaint form, attracted considerable attention. Conspicuous also were some very fine poinsettias. Gerberas, or Transvaal daisies, also of rich colouring, were very pleasing, as were also some fine specimen chrysanthemums in white, bronze, etc. The new varieties of Lorraine begonias were very attractive. Graceful ferns and palms, and a quantity of richly-berried plants, completed a display interesting alike for its quality and the chasteness of its arrangement.

Others who had exhibits were Messrs. Thomas Rivers and Sons, Sawbridgeworth, Herts, and Messrs. George Bunyard and Co., Maidstone, who had remarkably fine displays of apples.

National Chrysanthemum Society.

Amid exquisitely beautiful surroundings, chrysanthemums of all kinds abounding on the tables and in the window spaces, the annual dinner of the National Chrysanthemums Society was held on Wednesday evening, November 29, in the Venetian Chamber, Holborn Restaurant. Sir Albert Rollit, the President, occupied the chair, and was supported by a very large number of folks famous in the world of horticulture and particularly in chrysanthemum circles. The company was a fairly large one, and included a number of ladies.

After the loyal toasts had been honoured, the President presented the numerous cups and medals to their respective winners, adding a few words of compliment and congratulation. Mr. Howe, Mr. Davis, and Mr. Hunt especially came in for very hearty applause.

The chief toast of the evening, "Success to the National Chrysanthemum Society," was proposed by the President, who said the society stood in membership, resources, and reputation higher than ever before. The exhibitions at the Crystal Palace were referred to, and the Palace spoken of as the finest possible place for such great shows. He thought the last November show reached the high-water mark of such displays, and he congratulated the exhibitors on their great accomplishments. The dwarf chrysanthemums and the single varieties appealed to him strongly as well as to the public. The President further congratulated the growers who had so freely given flowers for the decoration of the tables that evening, and Mr. Felton on his successful arrangement of the blooms. The President spoke of the educational value of exhibitions and of the great advance in scientific research in the world of horticulture. Correct knowledge—science—he said, was business and power. The work of the Floral Committee was eulogised by the President, who pointed out that, curiously, at one of its meetings, there were no flowers to consider, and at its latest meeting there were over a hundred varieties to adjudicate upon. The conferences, and the publication of lectures given thereat, the President considered excellent work done by the society. In conclusion, the President had a few words to say with reference to the International Horticultural Exhibition of 1912, and urged that all members of the society should do their best to make that wonderful and unique occasion a huge success, and through the peaceful influence of flowers make also for the peace of the world. To this toast Mr. Thomas Bevan, chairman of committee, responded.

The other toasts given were: "The Donors of Special Prizes," given by Mr. W. Howe, and responded to by Mr. J. R. Jackson (of Messrs. Clay and Son); "The Exhibitors and Affiliated Societies," given by Mr. E. F. Hawes, was replied to by Mr. Norman Davis, the double gold medal winner of November last; "The Chairman," ably proposed by Mr. J. McKercher, met with a suitable response and musical honours; "The Ladies and Visitors" was in the hands of Mr. J. H. Withy, and J. A. Botham, Esq., ably responded. Mr. J. W. Mooman gave "The Press," and this was acknowledged by Mr. J. Harrison Dick, of "The Journal of Horticulture."

Just before Sir Albert's response to the toast of his health, Mr. Bevan interposed to read a resolution passed by the Executive Committee on November 20, placing on record the valuable services rendered to the society by Sir Albert during his several years of presidency. This resolution, suitably inscribed and beautifully bound, was handed to Sir Albert by Mr. Bevan. Sir Albert's very humorous reply was one of the gems of the evening.

Manchester and North of England Orchid Society.

At the November meeting the members present were: Rev. J. Crombleholme (in the chair), Messrs. R. Ashworth, J. Bamber, W. R. Lee, C. Parker, H. Thorp, Z. A. Ward, J. C. Cowan, J. Cypher, J. Evans, W. Holmes, A. J. Keeling, and H. Arthur (secretary).

W. R. Lee, Esq., Heywood (gardener, Mr. Woodhouse), exhibited a group of plants to which a silver-gilt medal was awarded. Amongst the odontoglossums special mention must be made of O. Chione (F.C.C.), O. Antiope (A.M.), and O. Hermione (A.M.) The cattleyas included C. labiata Virgo purissima (F.C.C.). C. Portia var. Imperator (A.M.). C. labiata, var. Genevieve (A.M.), C. Myrrha, Lee's var. (A.M.), C. Iris, var. Corisanda (A.M.), and L.-c. Clive, Plumpton Hall var. (A.M.); the above, with cypripediums and Dendrobium Phalænopsis Schroderianum, made a very good display.

Z. A. Ward, Esq. (gardener, Mr. Weatherby), also exhibited a splendid group, and was awarded a silver-gilt medal, an especial feature being the numerous varieties of the Cypripedium insigne section. C. actæus, Cringlewood var. (A.M.), C. Thalia, var. Mrs. F. Wellisley, and C. Corneyanum were good.

O. O. Wrigley, Esq., Bury (gardener, Mr. Rogers), again staged a magnificent exhibit of over 250 plants, the cypripediums, comprising all the yellow varieties known in cultivation. In the Leeanum section were fine examples of C. L. Clinkaberryanum, C. L. magnificum, C. L. giganteum, and others.

J. McCartney, Esq., Bolton (gardener, Mr. Holmes), was awarded a silver medal for a group, including Cattleya labiata Mrs. J. McCartney, C. Luegæ, C. Mrs. W. H. Whiteley, C. Bowringiana, and others, with plants of Oncidium flexuosum and O. Rogersi.

Rev. J. Crombleholme, Clayton-le-Moors (gardener, Mr. Marshall), staged a very pretty group of cypripediums, including some well-grown plants of C. insigne Harefield Hall, C. Sanderæ, C. Actæus magnificum, C. Mancunium (A.M.), etc., all tastefully arranged with small ferns and palms, a silver medal being awarded.

Colonel J. Rutherford, M.P., Blackburn (gardener, Mr. Lupton), was awarded a bronze medal for a group of cypripediums; and G. H. Peace, Esq., Monton Grange (gardener, Mr. C. Mace) was also awarded a bronze medal for a group of cypripediums.

J. J. Holden, Esq., Southport (gardener, Mr. Johnson), staged a wonderful specimen of Odontoglossum ardentissimum, var. Johnsoni, carrying two spikes of flowers (F.C.C.),, as well as Cattleya Aurora Borealis (A.M.), C. labiata, Holden's var. (A.M.), C. Princess Mary (Warneri alba x Dowiana alba), A.M., and C. Holdeni (Schroderæ alba x Warneri alba), A.M. Messrs. J. Cypher and Sons, Cheltenham, were awarded a silver medal for a group, principally cypripediums. Messrs. Stuart Low and Co., Bush Hill Park, staged a miscellaneous group, to which a silver medal was awarded, cattleyas and cypripediums being well represented. Messrs. Hassall and Co., Southgate, were awarded a silver medal for a meritorious group of cattleyas and hybrids of the iris section, with a few choice cypripediums.

CERTIFICATES AND AWARDS.

First-class Certificates.—To Cattleya Fabia, var. Imperator, a fine flower with aurea lines in lip very distinct; to Cattleya labiata, var. Virgo purissima, a large white flower with pale-yellow markings in the throat; to Odontoglossum Chione, a wonderful flower, solid chocolate colour with segments tipped with white, the lip broad and flat, all from W. R. Lee, Esq.; to Odontoglossum ardentissimum, var. Johnsoni, from J. J. Holden, Esq.; to Cypripedium Overtoni, from R. L. Overton, Esq. (Fulshawense x Leeanum corona).

Award of Merit.—To Cattleya Portia, var. Imperator, large round flower, four inches across, good even colour; to Lælio-cattleya Clive Plumpton Hall var.; to Catleya labiata Genevieve, a white flower with faint markings in lip; to Cattleya Iris, var. Corianda, a very fine variety; to Cattleya Myrrha, Lee's var., a very large flower; to Odontoglossum Antiope; to O. Hermoine, very distinct, and of good form; to Cypripedium Arthurianum var. Sanderæ; to C. Charlesianum, var. Prometheus, very fine; all from W. R. Lee, Esq; to Cypripedium Pearl Beauty (Milo x nitens Charlesworthi), from R. Le Doux, Esq.; to Cattleya labiata alba Holden's var., distinct, but rather small; to Cattleya Holdeniæ (Schrodera alba x Warneri alba), lip tipped with pink, yellow throat; to C. Princess Mary (Warneri alba x Dowiana alba), good variety, showing the Dowiana markings on lip, but rather light in colour; all from J. J. Holden, Esq.; to Cypripedium mancunium (Harrisianum superbum Leeanum), from Rev. J. Crombleholme; to C. Actæus, Cringlewood var., from Z. A. Ward, Esq.; to Cattleya Fabia var. gigantea, from Messrs. Stuart Low and Co., magnificent shape and good even colour; and to Cattleya labiata, from Messrs. Hassall and C., a seedling of good form and colour.

Dundee Chrysanthemum Society.

At the exhibition held on November 24 and 25, the average quality of exhibits was up to, if it did not surpass, that seen at former shows.

In the open section Mr. James Rae, head gardener to Lord Northesk, was the winner of the Corporation Cup, and a substantial prize given for twelve vases of Japanese chrysanthemums, three blooms in each; he had finely-finished blooms, admirably displayed. Mr. A. Duncan, Corbet Castle Gardens, Perthshire, was third. Mr. A. Duncan was the winner for eight vases of Japanese blooms, showing good flowers of Mrs. C. Penford, Buchim Keeling, White Queen, etc.; Mr. David Kiellor was second; Mr. John E. Davis was third. For six vases of Japanese blooms, six varieties, three flowers of each, Mr. R. McNaughton, Battleby Gardens, Perth, was the winner of the Smieton Memorial Medal and £1. Mr. George Mallison, Tarrit Gardens, Cupar, Fife, was second. Mr. Duncan again led with four vases of Japanese incurved varieties, Mr. John E. Davis being second; and Mr. John Fraser, Dryburgh Gardens, Lochie, third.

Mr. Thomas C. Brown, Balcawis Gardens, was first with four vases Japanese blooms, four varieties, winning the Croll Gold Medal and money prize; his varieties, Hon. Mrs. Lopes, A. T. Miller, Mrs. M. B. Marsham, and J. H. Salisbury were shown with splendid finish. Mr. George Scott, Seathwood Gardens, was second; and Mr. David Eggo, Dunalistair Gardens, Broughty Ferry, was third. For two vases, containing six blooms in three varieties, Mr. James Rae was again to the front, followed in order by Mr. James Staward, St. Fort Gardens, Fifeshire, and Mr. George Mollison. For three vases of undisbudded blooms, eighteen sprays in each vase, Mr. George Scott was first, showing Market Red, Le Pactole, and Source d'Or; Mr. James Beats being second, his varieties being Market Red, Redbraes Yellow, and Parson's White. For three vases of single varieties, Mr. James Beats and Mr. A. Duncan were the winners in order named. Mr. David Kiellor was first with one vase of incurved blooms. Messrs. Beats, Rae, and Duncan scored in this order for one vase of twelve sprays of partly-disbudded flowers. Mr. James Bethel, The Grange Gardens, Monifieth, was the winner with two ladies' dress sprays, and two buttonhole bouquets. Messrs. Beats, Scott, and Cook won as named for a shower bouquet, and Messrs. Beats, Bethel, and Scott, in the same order, for a basket of chrysanthemum flowers and foliage.

Dinner-table decorations were good, and Mr. James Beats was the winner with an effective arrangement, composed of single chrysanthemums, Mary Richardson and Kitty Bourne, and tinted trails of Selaginella cæsia. Mr. George Scott was second with similar flowers, while Mr. James Bethel employed chrysanthemum Mary Richardson along with beautifully-tinted trails of Selaginella Cæsia arbora.

In the class for a dozen chrysanthemum plants, not less than six varieties, grown in six-inch pots, Mr. George Scott was first, Mr. James Beats second, and Mr. John Fraser third; Messrs. Beats and Fraser were winners for primulas. Messrs. James Beats and George Scott were the only competitors with three pots of single chrysanthemums. Messrs. Alex. Duncan and Wm. Grieve scored as named for four Lorraine begonias.

The vegetable and fruit section was not a large one, vegetables being confined to a collection of eight kinds, Mr. James Bethel, The Grange Gardens, being the first prize winner; Mr. John E. Davis, Ballathie Gardens, second; and Mr. John Hepburn, Huntingtower, Perth, third. For one dish of kitchen apples, Mr. J. Reid, Rankeillour Gardens, Cupar, Fife, was first; Mr. Wm. Goodall, Errol, second; and Mr. James Staward third. The last-named competitor was the winner for six dessert apples, and Mr. John E. Davis was first for six pears.

The amateurs' section was up to the usual standard of excellence, and Mr. John Oenholm, 292, Blackness Road, practically cleared the boards of first prizes for cut flowers. In the plant section Mr. James Clark, Mr. John Denholm, Mr. A. Hutcheon, and Mr. Wm. Robertson were the first prize winners, Mr. Denholm having the honour of showing the best plant at the show.

The non-competitive exhibits from three local firms did honour to the exhibitors, and proved attractive features to visitors. Messrs. W. P. Laird and Sinclair showed very pleasing and attractive designs in floral work;

Messrs. D. and W. Croll also showed wreathes, bouquets, etc., set out amongst cyclamen, begonias, and cut carnations; Messrs. Harley and Sons also showed bouquets, wreaths, harps, etc.

Bolton.

The twenty-fifth annual exhibition was held in the Albert Hall, and fully sustained the society's reputation for holding one of the smartest and best shows in the district.

For a circular group of miscellaneous plants there were four entries, all worthy of high commendation. These were staged on moss in the centre of the hall, each exhibit was of similar formation with a pyramidal centre surmounted by a palm with dot plants round, and the margin filled in with a variety of foliage and flowering plants. Mr. W. Burgess, gardener to John Harwood, Esq., secured the chief position with crotons, palms, sonerillas, and oncidiums. Mr. H. Thorn, gardener to J. W. Makant, Esq., was a good second, his orchids adding rare colour to the arrangement. Mr. J. Wainwright, gardener to E. T. Crook, Esq., also staged well, whilst Mr. J. Lord, gardener to Alderman Knowles Edge, had excellent examples. The classes for a group of chrysanthemums, undisbudded, brought three entries, all highly creditable, the principal difference being that of colour. The prizemen were Mr. B. Hardy, gardener to G. S. Peck, Esq.; Mr. W. Burgess, and Mr. D. Wilson, gardener to Miss A. N. Philips, Prestwick, who scored as placed. For a group of large-flowered chrysanthemums, Mr. D. Wilson had it all to himself, putting up an effective group with many good blooms. The best table of orchids was from Mr. W. Holmes, gardener to J. McCartney, Esq., who had a charming array, in which cattleyas, oncidiums, and cypripediums were utilised to great advantage.

Roman hyacinths loom large at Bolton, no fewer than three open classes being provided, as well as special prizes. Mr. D. Wilson secured two firsts, and Mr. B. Hardy one first prize. Mr. M. Taylor, gardener to W. Edge, Esq., had the best eight primulas; Mr. James Entwistle led for a vase of carnations; Mr. A. Adshead had the best ball-room bouquet;

and Mr. John Nixon, gardener to O. Robinson, Esq., the best bridal bouquet.

Cut blooms were fine, and Mr. C. Groves, gardener to Sir Gilbert Greenall, Bart., Walton Hall, Warrington, added to his long list of successes by the addition of another silver challenge vase, his success being mainly due to his superior incurved varieties and their form and finish. His best examples were Doris Rayner, Mad. Ferlat, Edwin Short, Clara Wells, Calypso, Charles H. Curtis, Yellow Hygate, Frances Joliffe, Mrs. W. Mease, Kara Dow, and F. S. Vallis. Mr. J. Wainwright second, and Mr. G. A. Chandler, gardener to A. James, Esq., Rugby, third. For thirty-six Japanese blooms, Mr. Chandler took the lead with a very fine set, his leading blooms being F. S. Vallis, Frances Jolliffe, Master James, Valerie Greenham, Eclipse, Willie Rawlings, E. C. Converse, and Reg. Vallis; Mr. C. Dunwell gardener to Chas. Jones, Esq., Abergele, was second. For six vases of singles and six vases of decorative varieties, Mr. A. Adshead took the lead.

For two bunches of black grapes, Mr. R. Jones, gardener to J. Amphlett, Esq., Colwyn Bay, won with good bunches of Alicante; and for two white bunches, Mr. J. Wright, gardener to E. Lord, Esq., Rawtenstall, led with well-coloured Muscat of Alexandria.

A few non-competitive exhibits were staged. Messrs. Sutton and Sons, Reading, set up seventy dishes of potatoes in a most artistic manner, backed by palms and greenery, and with cut lily of the valley between the dishes, the whole making a most effective display, which was worthily awarded a gold medal. Messrs. Stuart Low and Co., Enfield, contributed a pleasing collection of cut carnations, and a table of choice orchids, and this also gained a gold medal. Mr. R. Smith, of Bolton Training College, received a Cultural Certificate for a number of cotton plants well furnished with pods. The Liverpool Orchid Company received an Award of Merit for a small collection of orchids.

East Anglian Horticultural Club.

There was a most interesting assembly of gardeners at the November meeting of this club, held at the Boar's Head Hotel, Norwich. Mr. Lewis Smith, Shotesham Hall Gardens, and Mr. Geo. Davison, Westwick House Gardens, gave their impressions of "The British Fruit Show," and on Norfolk-grown fruit in particular, in a very lucid manner. Mr. John Willis sent his weather report for the past month, which showed how, with a fall of the temperature, we had had an abundance of rain and some severe gales.

The exhibits placed upon the tables, both competitive and non-competitive, were at once attractive and educational. One or two subjects of importance were a Pitmaston Duchess pear scaling 2lb. 6oz., which Messrs. Daniels Bros., Lim., staged, and was grown by Mr. G. W. Musk, Wiseton. A twin apple brought up by Mr. Frank Neave, Lingwood, and a fine cattleya from Mr. W. Shoesmith, gardener to F. W. Harmer, Esq.

Subsequently, Mr. E. Peake gave a lantern lecture upon "The Fertilisation of Plants." He started with the lowest forms of vegetation, and by the aid of beautiful microscopic slides, showed their means of propagation. From these he dealt with mosses and their bi-sexual character, and then led on through the cryptogamous plants to those where organs of fertility are very pronounced. Some pictures were afterwards shown of some of the local hybridists in their gardens, and the lecture concluded with a description of a ramble through Denmark, where Mr. Peake spent a holiday, observing the horticultural and agricultural industries of the country. Thanks were accorded to the lecturer for his services.

The only resemblance between a Pine Spray Syringe and others is in the shape of the barrel. The metal is more substantial. For the rest, the combination spraying head renders Spray, Rose, and Bend instantly obtainable without the addition or removal of a single fitment, while the adjustable leather bucket plunger gives perfect suction, never allows water to escape past it and up your sleeve, and wears interminably.

A written request from your ironmonger or seedsman, and a Syringe will be sent in 24 hours for your approval. Price 10/6. Sole proprietors and manufacturers, **Robinson Bros., Ltd., West Bromwich.**

PINE SPRAY SYRINGE (patent).

Smithfield Show.

The great Stock Breeders' and Farmers' Show, which opened on Monday, December 4, and continued until Friday, was a grand success in every respect, and one of which British agriculturists might well be proud. To the gardener, the splendid exhibits arranged in the galleries by the leading seedsmen were of particular interest. The examples of vegetables and produce exhibited here are always of what may be termed sound utility type, and the show is of importance to the grower for profit, or the gardener who has a large household to cater for. A word of praise is due to the growers of the really handsome swedes, mangolds, and other roots, which, in view of the severity of the past summer's drought, were especially noteworthy.

On Messrs. Sutton and Sons' splendidly arranged stand we found Prizewinner mangold, Up-to-Date swede, and a number of other excellent varieties, represented by specimens about as near perfection as we are at present able to interpret the term.

There were also on view excellent onions, tomatoes, potatoes, and other vegetables of which the quality was superb.

Messrs. J. Carter and Co., High Holborn and Raynes Park, had a great display of their Goldfinder mangold, and a number of capital swedes, etc. Potatoes, carrots, onions, and beetroots also played their part in a stand of great attractiveness and merit. On Messrs. J. K. King and Sons' stand from Coggeshall we noticed particularly some excellent bulbs of an onion called Reading Exhibition Globe. It is a really good onion, fine in skin, and of capital shape This, although a special feature, was but one among many good things this firm staged.

Messrs. E. Webb and Sons, Wordsley, had their usual stand, which was well decked with mangolds and swedes of rare quality. The front of the stand was furnished with King Edward VII., New Majestic, New Industry, and other potatoes of good quality, together with beautifully shaped carrots, onions, etc.

Messrs. Fidler and Sons, Reading, were large exhibitors of potatoes. To mention but a few of the first-rate varieties staged, we may name Dreadnought, Invincible, Eclipse, and Epicure.

As is customary, Messrs. Harrison and Sons, Leicester, brought a capital lot of onions, among which their Excelsior showed up well. Harrison's selected Banbury Cross is a good type, and so indeed is every onion shown by this firm. Of course, there were carrots, beetroot, potatoes, and other vegetables, as well as farm roots, shown on the Leicestershire firm's stand.

Apples were well shown by the King's Acre Nurseries, Lim., who had a big collection of the best dessert and culinary varieties. Messrs. Horne and Sons, Cliffe, Rochester, also showed apples in good style. Messrs. W. and J. Brown, Stamford, showed young trees, as well as the fruit.

Jacobinia chrysostephana.—This showy member of the acanthus family recently referred to in the GARDENERS' MAGAZINE, furnishes a good illustration of the fact that a plant may be known in this country for years before its merits are properly recognised. This Jacobinia was introduced from Mexico, and distributed by the late Mr. William Bull, of Chelsea, in 1871, yet it was about 20 years after that it became generally grown.—W. T.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

BACTERIOSIS OF THE TOMATO. — S. A. S., Leeds: In reply to your second question, we may state that the symptoms indicating the presence of bacteriosis in tomatoes are well marked. Infection usually takes place at or near the tip of the stem, the disease gradually working downwards, passing into the leaves and flowering shoots as it does so, until the root is reached. Shortly after infection the uppermost leaves commence to wilt, curl up, and turn yellow. The leaves become marked with many rather small, scattered, blackish-brown blotches, and long dark-brown streaks appear on the surface of the stem. If the stem be cut across, the vascular bundles or woody portions present a brown appearance, and on microscopic examination the vessels are found to be teeming wtih bacteria. The fruit also becomes more or less covered with dark-coloured blotches, which at first are quite superficial, but gradually increase in size and assume a watery consistence, finally collapsing and forming irregular pits on the surface of the fruit. After the spots on the fruit, which are at first crowded with bacteria, have collapsed, various kinds of fungi and bacteria gain an entrance through the broken fruit, which is speedily reduced to pulp. Diseased plants gradually droop and die from the top downwards.

BLACK HAMBURGH GRAPE IN A COLD HOUSE.—J. E. S., Kessingland: If by a cold house you mean an unheated vinery, and we gather that is what you mean, we would say at once that excellent Black Hamburgh grapes can be and are grown in such structures, though, of course, the grapes ripen much later than in a heated house. We have seen and tasted capital grapes of this variety grown in unheated houses, and, as far apart as North Devon and East Anglia, and in our present issue we illustrate a vinery at Norwich, where this fine grape is grown exceedingly well without the aid of artificial heat.

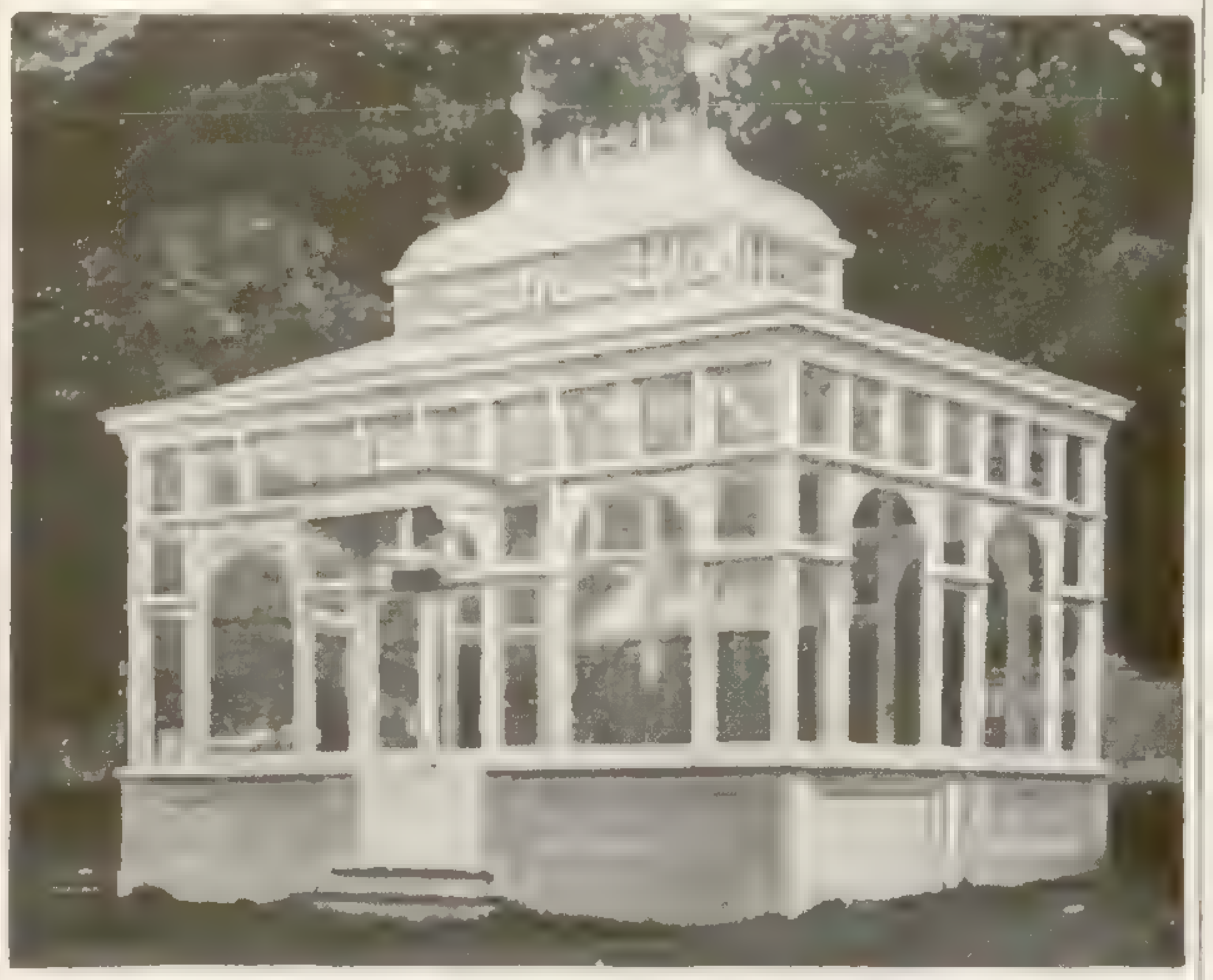
PLANTING BULBS.—S. R. T., Nuneaton: The results may not be quite so good as from October planting; nevertheless do not hesitate to plant bulbs at once. Thoroughly dig the ground, adding a good dressing of the old leaf-soil, and a couple of ounces of bone-meal to every square yard of surface. Make firm by treading, and plant the bulbs.

GARDEN DIRECTORY. — F. M., St. Albans: There are two directories of gardens and gardeners, and each contains further information of a horticultural character. The "Horticultural Directory" (1s.) is published at 11, Mitre Court Chambers, Fleet Street, London, E.C. The "Garden Annual and Address Book" (1s., or 1s. 6d. in cloth), is published at 17, Furnival Street, London, E.C. A distinct directory, giving the names and addresses of all the horticultural societies in the United Kingdom, and including a list of the public parks and gardens, with their area and superintendents, is the "Gardening Year Book," post free 1s. 2d., from the GARDENERS' MAGAZINE office, 148-149, Aldersgate Street, E.C.

ODONTOGLOSSUM ARDENTISSIMUM. —E. H., Shipley: It is a by no means uncommon thing to find the strong-growing

BOULTON & PAUL, LTD., HORTICULTURAL BUILDERS, Norwich.

ATTRACTIVE, PRACTICAL GLASSHOUSES.

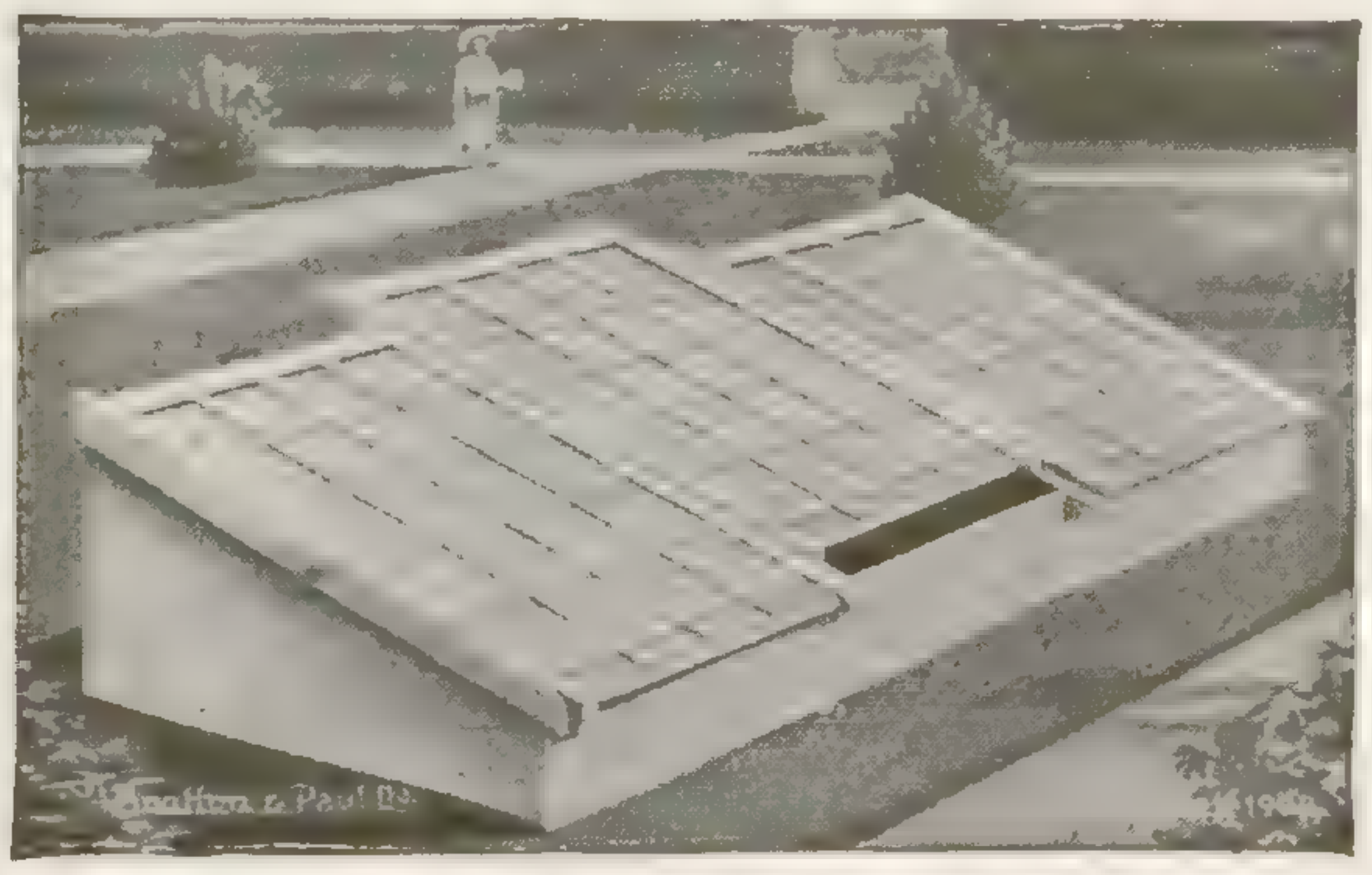


Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of **40**/- value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.

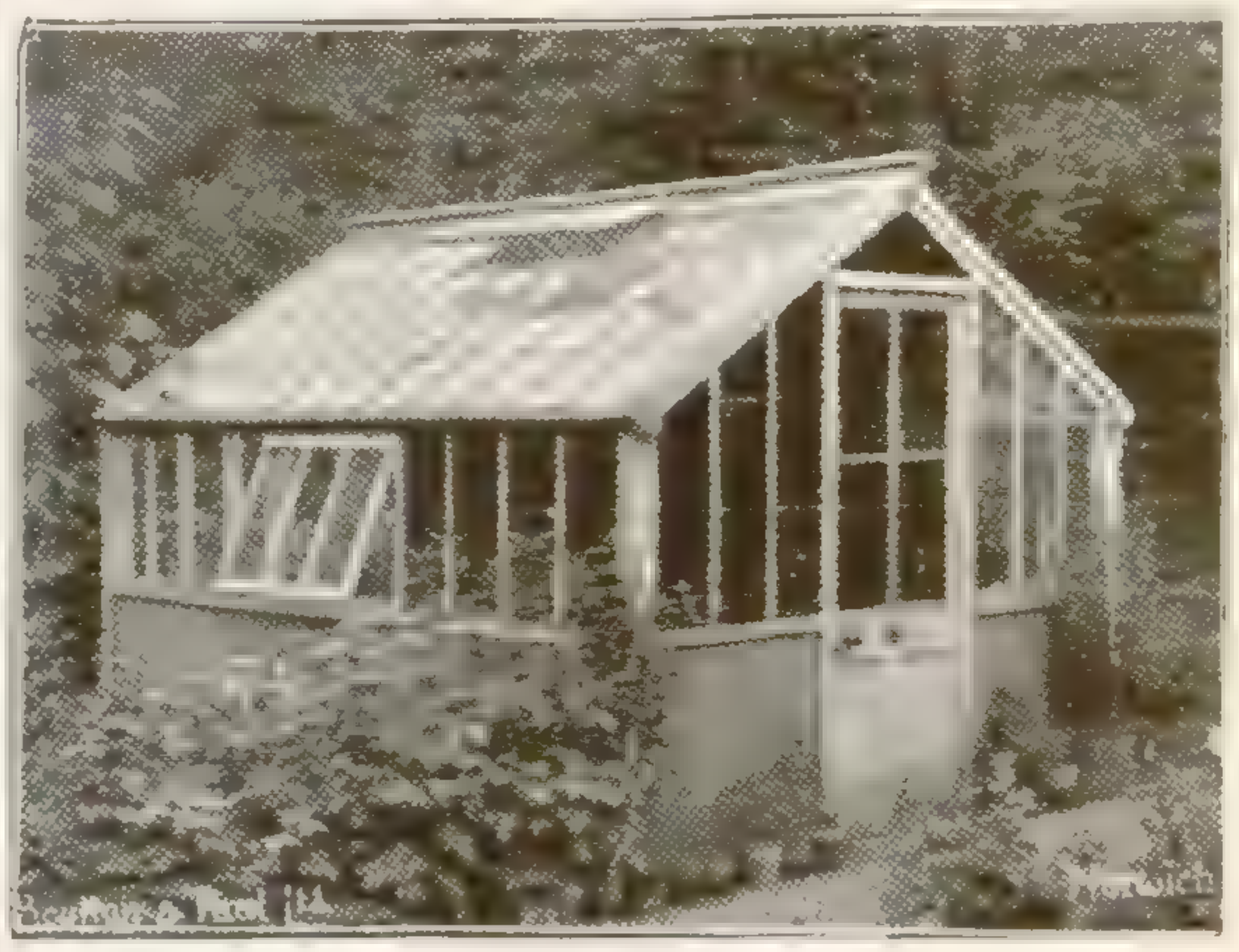


4ft. by 6ft. ... £2 0 0 | 8ft. by 6ft. ... 3 0 0
Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft. Similar to No. 75, with Two Lights... **35/-**

SEND FOR ILLUSTRATED CATALOGUES.

Every part of these Houses is thoroughly well made, painted three coats, GLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.



No. 49A.—Span, 10ft. by 8ft.	£11 10 0
No. 47A.—Lean-to, 10ft. by 7ft.	£9 10 0

All parts are numbered ready for easy re-erection by any handy man.

"IT IS ONLY A LITTLE CLAYS THEY WANT."

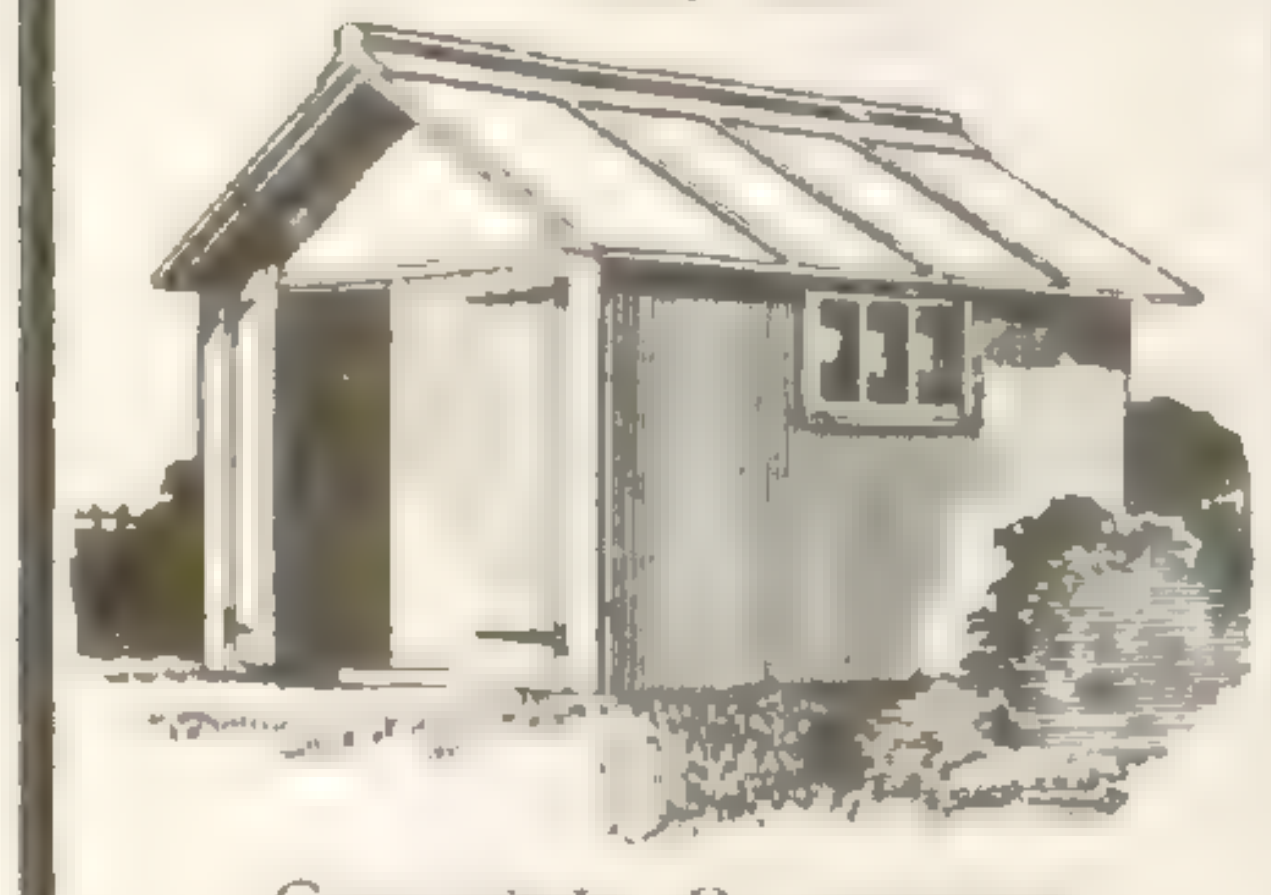
CLAY'S LONDON FERTILIZER
TRADE MARK

SOLD EVERYWHERE IN TINS at **6d.** and **1/-**; and in Branded and SEALED BAGS, 7lbs. **2/6**; 14lbs. **4/6**; 28lbs. **7/6**; 56lbs. **12/6**; 112lbs. **20/-**. Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**). **Every Genuine Tin, Bag, and Seal bears Trade Mark, as at side.**

CLAY & SON,
Manure Manufacturers and Bone Crushers,
STRATFORD, LONDON, E.

PORTABLE BUILDING WITH DOUBLE DOORS.

No. 55.



Copyright Registered.

Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Doors fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

SIZES.		STRONG FLOOR.
7ft. long, 5ft. wide, 7ft. 6in. high	£2 3 6	6/9
8ft. long, 6ft. wide, 8ft. high	2 14 0	8/9
9ft. long, 7ft. wide, 8ft. high	3 2 6	11/6
10ft. long, 8ft. wide, 8ft. 4in. high	3 12 6	19/0

Suitable for Workshops, Motor Cycle, Bath Chair, & Store Houses, Potting & Tool Sheds, etc.

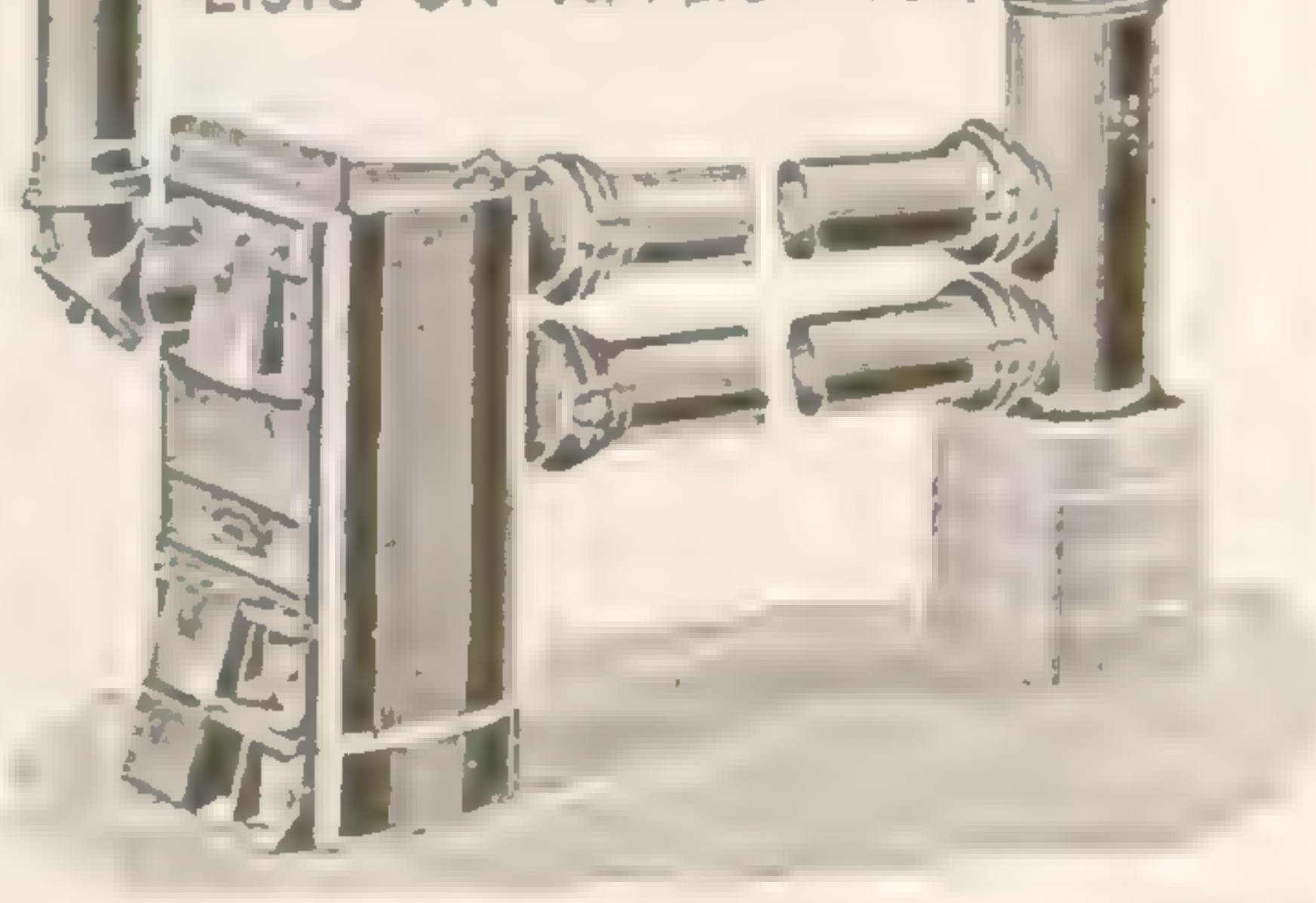
Carriage Paid to any Station in England and Wales

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
ESTABLISHED — YEARS **BEDFORD.**
Works, 6 acres. Stock of Wood in Sheds, 10,000 *tons.*

The Loughborough BOILER

31000 IN USE
LISTS ON APPLICATION



The pioneer of cheap, simple and effective heating for small greenhouses. Complete Apparatus from £3. 19. 6. The immense sale of this boiler, and its numerous imitations are the best testimony of its undoubted success

MESSENGER & CO. LTD.
LOUGHBOROUGH · LEICESTERSHIRE
London Office, 122 VICTORIA ST · S · W

CHARGES FOR ADVERTISEMENTS IN THE GARDENERS' MAGAZINE.

Five Lines and under	£0 2 6
Per Line beyond	0 0 6
" Inch	0 6 0
" Half Column	1 10 0
" Column	3 0 0
" Page	9 0 0

A reduction from above is made when a series is taken.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— & Co.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

Telephone Numbers:
Editorial and Printing Depts. .. ... 831 Holborn.
Advertising and Publishing Depts. ... 2140 Holborn.

Offices: 148 and 149, Aldersgate Street, London

AMARYLLIS — HIPPEASTRUMS — unrivalled New Hybrids. Highest Awards at Home and Abroad, including 37 Gold Medals. Splen-id Bulbs, thoroughly ripened. Catalogues and all particulars free on application. The trade supplied. ROBT. P. KER and SONS, Aigburth Nursery, Liverpool.

HARTLEY and SUGDEN'S, nearly new. WHITE ROSE Patent Sectional BOILER, six sections; will heat 750ft. 4in. pipes; cost £18. Price £7. WILSON, 102, Wardour Street, W.

When answering Advertisements please mention "Gardeners' Magazine."

hybrid odontoglossums making two new growths, and also producing a flower spike. If the new growths are only just pushing, and the spike is well advanced with the buds soon to expand, you need have no fear, as it will not be necessary to pot the plant for some little time to come. Do not leave the spike on the plant after the buds have all expanded, but cut and use it so as to allow the reserve force in the pseudo-bulb to concentrate on the new growths. Early in the new year when new roots are being formed potting may be done. Use osmunda or polypodium fibre, with sphagnum and a few broken oak or beech leaves as compost.

ALICANTE GRAPE. — M. E. W., St. Leonards: According to Hogg and Barron, the correct name of the very popular late grape is Alicante, and not Black Alicante. Dr. Hogg stated: "It is the Alicante of Speechly; it is also the true Black St. Peter's (not West's St. Peter's), and in my investigations of the vineyards of the South of France I have found it under the name of Espagnin Noir. The name of Alicante is given to several varieties of grapes in the South of France, and in the Peninsula, but it is not applicable to any variety in particular. In the department of Gard it is applied to Gromier du Cantal; in Andalusia to the Tintillo and Tinto, in Provence to Mourvéde; and in the Eastern Pyrenees to Matara. Then the Alicante of Bouches-des-Rhone vineyards is the Granaxa of Arragon, and Granache of the Eastern Pyrenees; while in the neighbourhood of Alicante, the name is given to two or three different sorts. In Great Britain Black Prince is sometimes, but erroneously, called Alicante; and the variety which is the second edition of 'The Fruit Manual,' was called Kempsey's Alicante, I have discovered to be nothing else than the Morocco." The late Mr. A. F. Barron, referring to the Alicante grape, wrote: "It is no doubt the same as Speechley's Alicante, but it is to Mr. Meredith, late of Garston Vineyard, that the credit for the popularity of this grape is due. His excellent and extensive cultivation of it led to its being called Meredith's Alicante, in order to distinguish it from Kempsey Alicante, at that time much praised and recommended, but which ultimately proved to be Black Morocco."

DIVIDING HARDY GERANIUMS. — C. P., Ruabon: It is too late in the year to divide and replant geraniums, especially the choicer sorts. The work should have been done in September or October. In the spring when the weather becomes warmer and new growth commences, the plants should be divided. Hardy geraniums are not fond of disturbance.

NAMES OF PLANTS.

G. A., Poole.—A fruit of Akebia quinata.

L. C., Winchester.—Pieris floribunda, better known as Andromeda floribunda.

N. S. P., Windsor.—1, Erica hyemalis; 2, Aralia elegantissima; 3, Daphne Cneorum.

T. W., Jersey.—1, Benthamia fragifera; 2, Escallonia macrantha; 3, Trachelospermum jasminoides.

A. B. J., Chesterfield.—1, Sparmannia africana; 2, Masdevallia Tovarensis; 3, Exacum affine; 4, Jacobinia chrysestophana.

NAMES OF FRUITS.

When sending fruits for naming, will our readers be good enough to send good specimens, as without these it is not possible to accurately determine the varieties. Pack firmly, using light tin or wood boxes, and send not more than six varieties at once. Label each specimen and enclose letter with the fruit, whether a separate notification is sent or not. Address the packages to the Editor, Gardeners' Magazine, as advised in the notice at the head of "Answers to Correspondents."

W. H. W., Romford.—1, Golden Spire; 2, Blenheim Pippin.

A. M., Marlow.—1, Mère de Ménage; 2, Margil; 3, Gravenstein; 4, Warner's King; 5, Golden Noble.

A. L. J., Haywards Heath. — 1, Court Pendu Plat; 2, Ribston Pippin; 3, not recognised; 4, Bramley's Seedling.

H. R. T., Folkestone.—1, King of the Pippins; 2, Baumann's Red Reinette; 3, Bramley's Seedling; 4, Beurre Clairgeau.

OBITUARY.

MRS. T. COOMBER.

We regret to learn of the loss our friend and coadjutor, Mr. Thomas Coomber, of The Hendre Gardens, Monmouth, has sustained in the death of his wife. Mrs. Coomber passed away peacefully on the morning of Tuesday, December 5, after a long and painful illness. To Mr. Coomber and his three sons and daughter we tender our deepest sympathy.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1911. November 26 to December 2.	Sunshine.	Temperature of the Air.			
		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Nov. 26—Sunday ……	2 12	32	31	39	31
,, 27—Monday ……	0 12	31	31	41	31
,, 28—Tuesday……	—	40	39	49	29
,, 29—Wednesday..	6 42	40	40	51	40
,, 30—Thursday….	0 6	37	35	46	27
Dec. 1—Friday……..	—	44	42	47	36
,, 2—Saturday…..	—	46	45	52	41
Means	(total) 9 12	38	37	46	34

Date. 1911. November 26 to December 2.	Rain.	Temperature of the Soil at 9 a.m.			Lowest Temperature on Grass.
		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
Nov. 26—Sunday ……	trace	40	43	48	19
,, 27—Monday ……	trace	39	42	48	23
,, 28—Tuesday……	0·02	39	42	47	19
,, 29—Wednesday..	—	41	42	47	27
,, 30—Thursday ….	—	39	42	47	20
Dec. 1—Friday ……..	—	42	42	47	35
,, 2—Saturday ….	0·07	43	43	47	39
Means ..	(total) 0·09	40	42	47	26

FORTHCOMING ENGAGEMENTS.

MONDAY, December 11.—United Horticultural Benefit and Provident Society, committee meeting.

WEDNESDAY, December 13.—North of England Horticultural Society, meeting at Leeds.

National Rose Society, annual meeting at the Westminster Palace Hotel, Westminster, at 3 o'clock; conversazione at 4.30.

MONDAY, December 18.—National Chrysanthemum Society, committee meeting at Essex Hall, Strand, at 7 p.m.

TUESDAY, December 19.—Royal Horticultural Society; there will be no exhibition on this date, but the committees will meet to consider novelties at 12 o'clock.

WEDNESDAY, December 20.—Royal Meteorological Society.

THURSDAY, December 21.—Linnean Society.

MONDAY, December 25.—Christmas Day.

TUESDAY, December 26.—Bank Holiday.

CONTENTS.

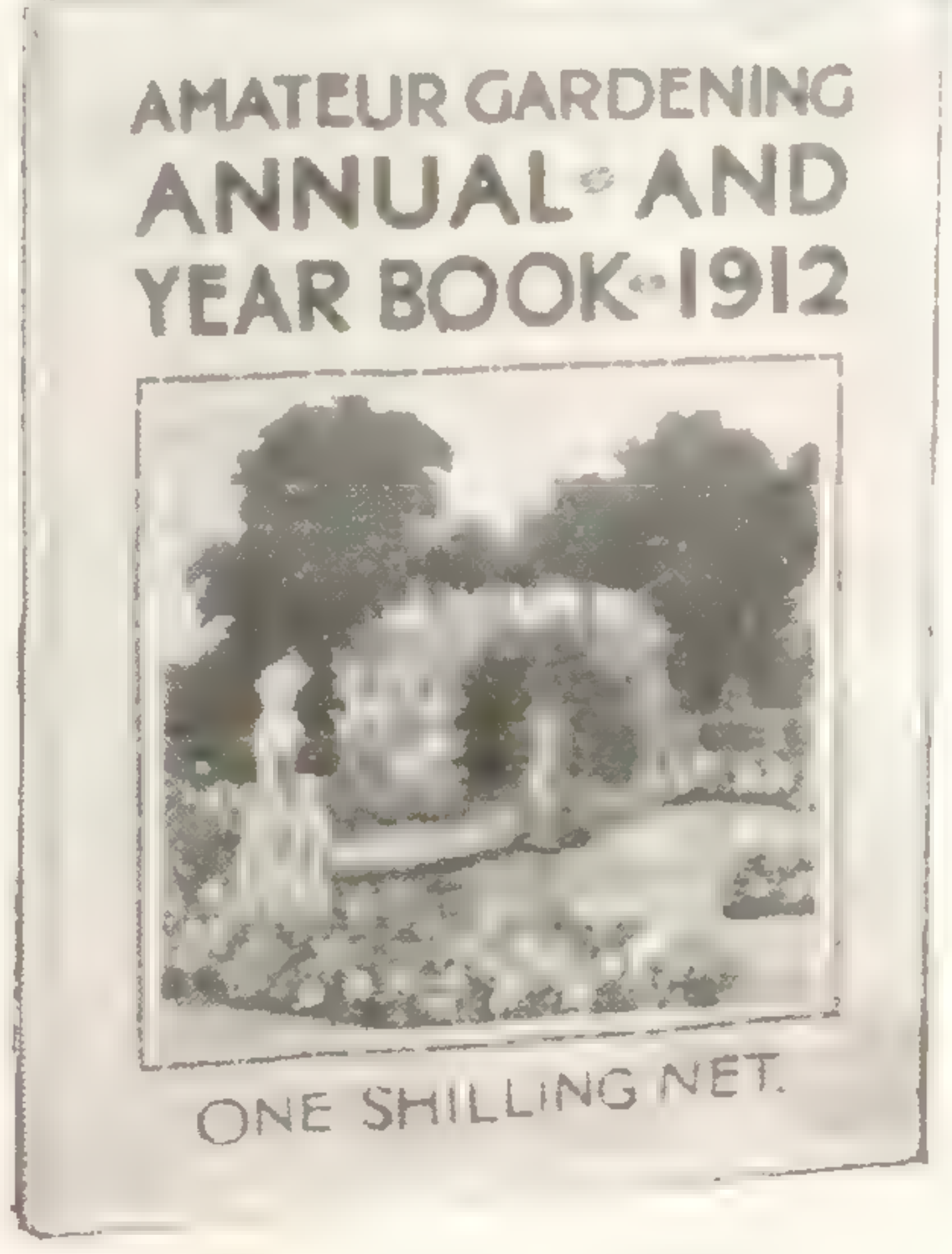
PAGE
American Perpetual Carnation Novelties … 915
A New Break in Winter-flowering Begonias… 917
An Amateur's Vinery … … … … … … 915
Answers to Correspondents … … … … 926
Campanula Hendersoni … … … … … … 918
Chrysanthemum Conference … … … … 913
Dahlias in America … … … … … … 919
Exhibitions and Meetings … … … … … 923
New Plants, etc. … … … … … … … 914
Note of the Week … … … … … … … 911
Ornamental Grasses … … … … … … 916
Rehmannias and Celsias … … … … … 920
The Species of Arbutus … … … … … … 920
Tillandsia Linden … … … … … … … 918
Two Good New Carnations … … … … … 918
Work for the Week … … … … … … … 922

ILLUSTRATIONS.

Portrait of Mr. Herbert Tate, 911; Cypripedium Draco, 913; A Fine Crop of Black Hamburgh Grapes, 915; Aira cæspitosa Ornamental Grass, 916; Carnation Wivelsfield Wonder, 917; Carnation Baroness de Brienen, New Perpetual, 918; Campanula Hendersoni, 919; A Typical Specimen of the Strawberry Tree (Arbutus Unedo) at Kew, 921.

One Shilling Net.

AMATEUR GARDENING ANNUAL AND YEAR BOOK 1912.



184 DEMY 4to PAGES, 116 ILLUSTRATIONS, PRINTED ON ART PAPER, BOUND IN ART COVER.

SOME OF THE CONTENTS: Work for the Month in Flower Garden, Greenhouse, Orchard, Kitchen Garden, &c.—Sweet Peas—Hardy Annuals—Carnations—Bulbs—Water Gardens—Begonias—Rockeries—Gladioli—Violas—Roses—Pergolas—Delphiniums—Orchids—Dahlias—Tulips—Chrysanthemums—Phloxes—Hyacinths—Fruit—Lawns—Vegetables—Spraying—Manures—Insects—Indoor Garden—Select Perennials, Biennials, and Annuals—Sowing and Planting Tables—Etc., Etc.

A FEW EARLY APPRECIATIONS

"It is a wonderful Shillingsworth and should be immensely popular."

"It is a very fine book indeed, and should command a good sale. The advertisements equally with the reading matter are very well set up and attractive."

"I may say that on perusing the "A. G. A," I consider it a very pretty and useful edition and especially instructive. Trusting you will have a good demand for same."

"We are much taken with the issue and feel confident it will be carefully and studiously used by your many admirers and readers. It has not been our experience heretofore to have so much information—good sound and practical information—packed into such compass. The Annual is full of interesting articles from beginning to end. The shot you have fired will certainly strike the Amateur."

"I think it is a most useful and charming book and it should have a large sale."

ONE SHILLING NET OF ALL BOOKSELLERS, NEWSAGENTS AND BOOKSTALLS.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head Working, where one or 2 kept); 10 years in present situation; 5 years as second; age 31; single. Apply A. GIBBS, 68, Pope Road, Bromley, Kent.

GARDENER (Head Working).—Mr. COLLEDGE, Gardener to the Earl of Darnley, highly recommends F. BISHOP, as above; 4½ years as Foreman here. Cobham Hall Gardens, Gravesend, Kent.

GARDENER (Head Working), thoroughly experienced in all branches; excellent references; married; disengaged through establishment being given up. G. HALL Hermitage Cottage, Minchinhampton, Glos.

GARDENER (Head Working).—Mr. R. W. WILLIAMSON, of the Croft, Didsbury, near Manchester, strongly recommends his late Gardener, HENRY ARNOLD, who has been with him for over 20 years; is well experienced in gardening in all its branches, and is specially trained in rockery construction and cultivation of alpines.

GARDENER (Head Working) (Scotch) requires SITUATION where 2 or 3 are kept; 20 years' experience in all branches of gardening; 5 years present situation; married; age 36; 2 children; excellent testimonials. H. McCARTNEY, Sandye Place, Sandy, Beds.

GARDENER (Head Working) seeks SITUATION, with 2 or 3 under; life experience with Vines, Peaches, Melons, Flowers, and Vegetables; married, one child. J. PETTY, Marchwood, Southampton.

GARDENER (Single-handed, or where help is given); 12 years' practical experience; 4 years in last situation; good references; single; age [illegible]; abstainer. J. CHAPMAN, Ferry Hill, Chatteris, Cambs.

GARDENER (Head) seeks SITUATION where three or more are kept; practical experience in all branches; excellent references; age 31. Address, S. DOUGHTY, Overstone Park Gardens, Northants.

GARDENER (Head of three or more); thoroughly experienced; 20 years' experience in large establishments; well up in Growing for Market, Table, Exhibition; nine years Head in present situation; age 34; one child. C. ROWLAND, Mickleton, Gloucestershire.

GARDENER (Head Working).—H. ESSAM can confidently recommend his Foreman to Lady or Gentleman requiring the services of a thoroughly practical and reliable Head Gardener; age 31; married when suited; excellent references. Closes Hall, Gisburn, Clitheroe, Lancs. No circulars.

GARDENER (Single-handed, or where help is given; life experience, Inside and Out; good references, and can be well recommended; age 31; married, no family. W. WEST, The Lodge. Pyrford Court, Woking.

GARDENER (Single-handed or good Second); 4 years' good character; age 23; single; abstainer. Apply A. F. ROOKE, Houndean, Lewes, Sussex.

GARDENER (Single-handed or Under); life experience in all branches; good references from present and past situations; leaving when suited; age 29; single. W. MILLER, Ditcham Park, Petersfield, Hants.

GARDENER (Single-handed, or where help is given); life experience in all branches; highest references; thoroughly understands Oil Engine; age 40; strong and active; married; 3 in family, youngest 12½. E. STEVENS. 13, Connaught Road, Newbury, Berks.

YOUNG MAN, age 25, seeks SITUATION on Pleasure Grounds, or Inside and Out; 6½ years' experience; excellent references; height 6ft.; bothy preferred; disengaged. F. WINNETT, Salford, Chipping Norton, Oxon.

GARDENER.—Young Man as IMPROVER (Inside, or Inside and Out); highest references; 2½ years last place; Bothy preferred. A. STEVENS, 21, Arnold Road, Woking.

THE HON. MRS. GOLDMAN highly recommends LADY GARDENER for charge of Private Garden. Three years in her employ. Miss E. PATCH, 64, Church Road, St. Leonards-on-Sea.

MAJOR ANNE, Burgwallis Hall, Doncaster, wishes to very highly recommend his GARDENER; life experience in all branches, gained in good establishments; excellent references; age 30; married when suited. Address J. MURDOCK, Burgwallis Hall, Doncaster.

MR. C. HART, Caldecote Towers, Bushey Heath, Herts, can highly recommend C. STACY, age 24, for Pleasure Grounds, Herbaceous Borders, Lawns duty, or good Single-handed.

IMPROVER (Inside and Inside and Out), 4 years' experience; age 19 years; not afraid of work; good reference. F. SKELTON, The Gardens, Mount Pleasant, Bishop Auckland, Durham.

YOUNG MAN (20) seeks SITUATION as GARDENER (Under), Inside and Out); 3½ years' good reference; disengaged. S. GENT, Burnham Sutton, King's Lynn, Norfolk.

YOUTH, aged 17, seeks SITUATION in Garden; strong, willing; 3½ years in last place; highly recommended. E. ROBERTS, Gate House, Nuttall, Nottingham.

LAD, age 17, seeks SITUATION in Garden; some experience; wish to improve; good character; Bothy preferred. S. RAYNER, Chart Road, Sutton Valence, Maidstone.

Situations Vacant.

GARDENER (Head), required at Highgate Cemetery; must be capable of superintending several under him. Age not under 35 years. Apply by letter in first instance to Mr. H. M. Dodd, 29, New Bridge Street, Ludgate Circus, London, E.C.

WANTED, a Working Head GARDENER (Two under) in Bedfordshire. Address, F. G., 809, "Gardeners' Magazine," 148, Aldersgate Street, London.

WANTED, thoroughly experienced LEADING HAND for KITCHEN GARDEN; young man, not under 24; Bothy, etc. Apply to J. R. ALLAN, The Gardens, Ashurst Park, Tunbridge Wells

CANADA.—Wanted, strong, active GARDENERS for large Nurseries; steady work; good wages; sail March. UNION TRANSIT CO., 381, Argyle Street, Glasgow.

VACANCY.—Wanted, young man as OUTSIDE FOREMAN, with four as unders. Well able to look after young men; must understand Herbaceous Roses and Woody Plants, also Fruit. Bothy. Apply, stating wages required, to HEAD GARDENER, Pyrford Court, Woking.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For DECEMBER 16, 1911.

Please Repeat my Advertisement.

Name ....

Address ....

....

Date ....

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

W. RICHARDSON & CO., Darlington

MANUFACTURERS OF ALL KINDS OF

HORTICULTURAL BUILDINGS

— ALSO —

HEATING ENGINEERS

OUR BOOK OF DESIGNS,

Containing upwards of 200 photographic illustrations, sent free on application.

Plans and Estimates prepared free of cost.

Representatives sent to any part of the Kingdom to advise and take particulars.

London Office:

Belgravia Chambers, Victoria Street, S.W.

THOMSON'S Celebrated MANURES

Still the best: In greater demand every year.

SAFE, SURE & LASTING.

The result of many years' **practical** experience.

VINE, PLANT, AND VEGETABLE MANURE.

1 cwt., **20/-**; ½ cwt., **10/-**; ¼ cwt., **6/-**; 14 lbs., **3/6**; 7 lbs., **2/6**
Tins, **2/6, 1/-,** and **6d.** Carriage paid on 1 cwt. anywhere.

SPECIAL TOP-DRESSING MANURE.

½ cwt., **20/-**; ¼ cwt., **11/-**; 14 lbs., **6/-**; 7 lbs., **3/6**; Tins, **1/-**.
Carriage paid on ½ cwt. anywhere.

Also Thomson's Book on the Vine. Thomson's Styptic.

SOLD BY NURSERYMEN & SEEDSMEN EVERYWHERE.

Write for Pamphlets, Price Lists, etc., to

WM. THOMSON & SONS LIMITED 1868

SOLE MAKERS: **WM. THOMSON & SONS, Ltd., Clovenfords, Scotland.**

MERRYWEATHERS'

614 PUMP

IS THE

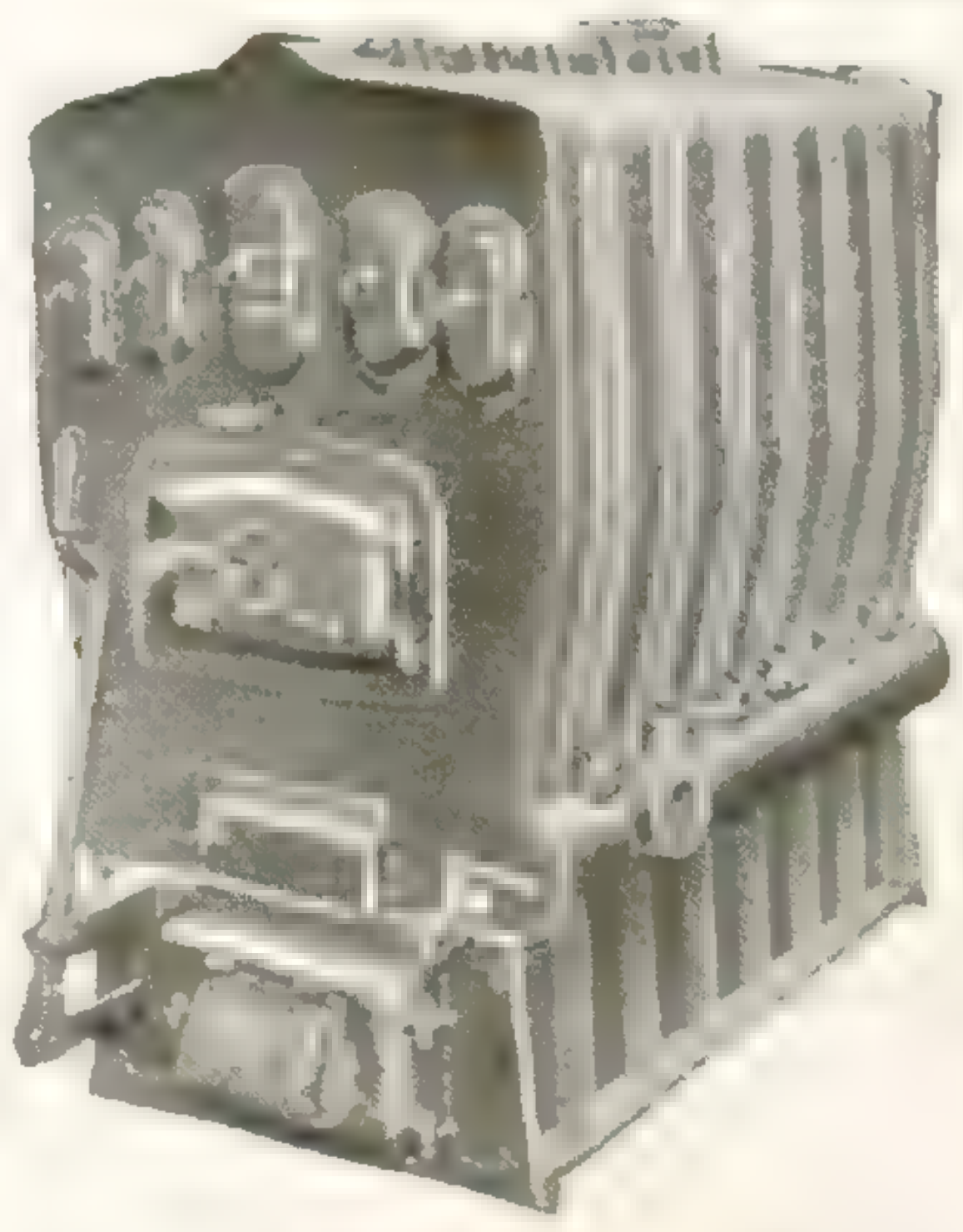
Gardener's Friend.

Easy to Work.
Simplicity Itself.

Write or Call—

63, Long Acre,
LONDON, W.C.

Kinnell's Boilers



THREE LEADING TYPES:—

The **"ANGLIAN," Sectional,** heats 800 to 8,000 ft. 4in. pipe.
The **"ROCHFORD," Tubular,** heats 600 to 8,000 ft. 4in. pipe.
The **"HORSE-SHOE"** for the small Greenhouse.

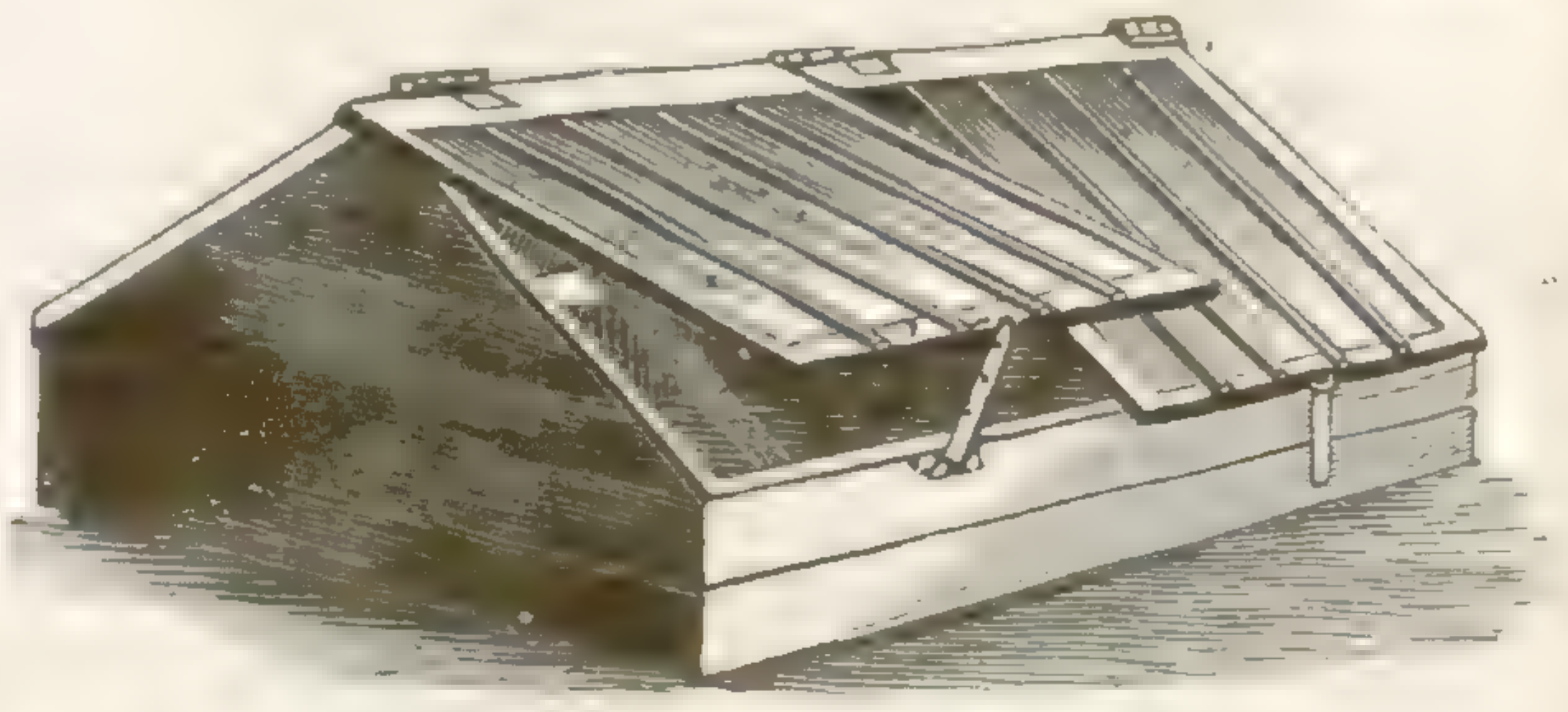
Saddle Boilers, Trentham Boilers, and all classes of Pipes, Fittings, etc., ready for immediate despatch.

Write for List No. 77, post free.

CHAS. P. KINNELL & Co., Ltd., 65, & 65a, Southwark St., London, S.E.

PORTABLE PLANT FRAMES

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices. Glazed and Painted.		£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. ,, 4ft. ,,		2	5	0
6ft. ,, 5ft. ,,		2	15	0
12ft. ,, 4ft. ,,		4	0	0
12ft. ,, 5ft. ,,		4	15	0
12ft. ,, 6ft. ,,		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,

ROYAL HORTICULTURAL WORKS,

MIDDLETON MANCHESTER.

MESSRS. PULHAM & SON have secured a fine lot of Old Stone Paving, which is eminently suitable for the Paving of Pergolas, Garden Paths, etc.

They will be happy to quote for any quantity, delivered at any railway station.

PULHAM & SON,

By Appointment. By Appointment.

71, Newman Street, London, W.

And BROXBOURNE.

THE WORLD FAMED "Glenskot" REGD TWEEDS

TROUSERS 7/6 PER PAIR POST FREE

With HIP POCKET. STRONG MADE and PERFECT FITTING TROUSERS, to stand the WEAR and TEAR of every day work. Made from the GENUINE SCOTCH MANUFACTURED "GLENSKOT" TWEEDS.

UNEQUALLED for STYLE and DURABILITY.

THOUSANDS OF TESTIMONIALS

WELL WORTH DOUBLE THE PRICE.

Write to-day for PATTERNS and Easy Self Measurement Form & Tape SENT POST FREE

Satisfaction Guaranteed or Money Refunded.

NOTE ADDRESS SHAW & MONTGOMERY, THE PRACTICAL SCOTCH TAILORS,

628 & 632 ARGYLE ST., GLASGOW, W.

ESTABLISHED 35 YEARS

PIGSTYE TIMBER, 1½in., 6in., 1½d. square foot, also 1in. cheap rough shedding boards 1d. square foot. Portable houses of all kinds. JENNINGS and CO., Timber Merchants, General Woodworkers, 91c, Pennywell Road, Bristol.

PLEASE MENTION
THE GARDENERS' MAGAZINE
when writing to Advertisers.

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents and at all Railway Bookstalls.

THE GARDENERS' MAGAZINE.

No. 3,033. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, DEC. 16, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) Twopence

BARR'S CASH CLEARANCE SALE OF Spring-flowering Bulbs.—Daffodils, Hyacinths, Tulips, Polyanthus Narcissi, Irises, etc., all in best quality, at greatly reduced prices. Clearance lists on application.—BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, Horticultural Builder, Chelsea, is this winter keeping a large staff of hot-water men in the shops, in order that they may attend immediately to any breakdown of boilers or hot-water piping in any part of the country. In case of emergencies, please telephone 201 Western, or wire, "Gray, Chelsea, London."

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

CHOICE NEW CHRYSANTHEMUMS.—Our New Catalogue of 800 finest varieties in all sections is now ready, most up to-date yet issued. Contains Splendid Novelties for 1912. Post free. J. W. COLE and SON, Chrysanthemum Specialists, Peterboro.

PERPETUAL-FLOWERING or American Tree Carnations, strong, healthy Guernsey plants, from pots, 4s. per doz., carr. paid; 20s. per 100, carr. forw. Ask for catalogue, 75 vars., with full directions. VAN DER SLUYS, F.R.H.S., Ramee, Guernsey, C.I.

LAXTON FRUIT TREES.—An immense stock, the finest trees we have ever offered, splendid well-ripened wood and fine roots. Absolutely none better obtainable. Trained in all forms. Fully illustrated Catalogue gratis.—LAXTON BROS., Bedford.

APPLES.—Thousands on Crab and Paradise stock, leading kinds, well-grown. Apples from 3s. doz., 20s. 100, also Pears, Plums, Roses. Catalogue free. Rolf Mullers, Nurseries, Carterton, Clanfield, Oxon.

IRON and WIRE FENCING for Gardens, Tree Guards, Gates, Arches, Espaliers, Rose [illegible] and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free.—BOULTON and PAUL, Ltd., Manufacturers, Norwich.

ROCK GARDENS and ALPINE PLANTS.—A new work and a complete guide to the Formation and Management of Rockeries, by E. H. Jenkins, F.R.H.S. Many Illustrations. Cloth, 2s. 10d., post free, from Publisher, 148, Aldersgate Street, London.

WELLS' Catalogue of
CHRYSANTHEMUMS,
PERPETUAL CARNATIONS,
HERBACEOUS PLANTS,
ALPINE AND ROCK PLANTS,
[illegible] Post free on application. Wells' Book: "The Culture of the Chrysanthemum," post free, 1s. 6d. W. WELLS and CO., Mersham, Surrey.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 8s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country

---

WEBBS' SPRING CATALOGUE and List of Garden Seeds for 1912 will be published shortly. Beautifuly illustrated, and contains particulars of the newest and best varieties of Vegetables, Flowers, Potatoes, etc., for 1912. If you have a garden send your name and address, so that a copy can be forwarded when ready.

WEBBS' VEGETABLES and FLOWERS have been awarded 42 Gold Medals and Silver Cups in three years.—WEBB and SONS, The King's Seedsmen, Wordsley, Stourbridge.

BUNYARD'S CATALOGUES
Free on Application.

FRUIT TREES, SHRUBS.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

CLAY'S MANURES, CRUSHED BONES
(See page vi.)

CLAY'S FERTILIZER IS
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

CHRYSANTHEMUMS.

My Collection contains all the best up-to-date.
Catalogue of nearly 600 vars., now ready.
Cuttings from 1s. 6d. to 6s.; Rooted Plants in Feb., from 2s. to 9s. per dozen, purchaser's own selection.
H. WOOLMAN, F.N.C.S., Shirley, Birmingham.

LAVENDER, Old English, 10s. per 100 (50 at 100 rate); packed on rail. Sample doz., 2s. 6d., post free. Other varieties of Lavender, price on application. CHILVERS and SON, Heacham, Norfolk.

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-Work, showing screens, wall panels, window surrounds, arches, arbours, etc., post free.—BOULTON and PAUL, Ltd., Norwich.

DAWES' CHALLENGE RHUBARB has gained nine Medals and Awards, also A.M., R.H.S., London. Strong roots ready. Price list free. DAWES' NURSERIES, Syderstone, Norfolk.

CHRYSANTHEMUMS. — Strong, healthy Cuttings and Stools; low prices to clear large surplus; choice varieties. ALFRED DAVEY, F.R.H.S., Leigh, Essex.

TROPŒOLUM SPECIOSUM FOR SALE,
2s. 10d. per lb., carriage free.

Miss H. ROTHWELL
Rockfield, Kells, co. Meath.

CHAMPAGNE RHUBARB ROOTS FOR SALE, suitable for forcing or for planting out.

H. WADDINGTON, 42, Cank Street, Leicester.

ORCHIDS FOR AMATEURS.—A practical guide to the Cultivation of Cool and Warmhouse Orchids, adapted for Small Mixed Greenhouses. The author is C. Alwyn Harrison, F.R.H.S., and the book can be obtained, by post, for 2s. 10d., from Publisher, 149, Aldersgate Street, London.

GREENHOUSES and CONSERVATORIES. Distinctive Designs and Finished Workmanship. Write now for ILLUSTRATED CATALOGUE. CARTER and HOWARD, Horticultural Builders, Kingston-on-Thames. Phone: 1308 P.O. Kingston.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim. 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable buildings, etc. Catalogue gratis.

NOW READY
SUTTON'S GUIDE AND CATALOGUE
of Vegetable and Flower Seeds, Potatoes, etc., for 1912.

SUTTON'S GUIDE AND CATALOGUE
of Vegetable and Flower Seeds, Potatoes, etc., for 1912.

All lovers of their garden should secure a copy. Containing over 260 beautiful illustrations of the best varieties of Flowers and Vegetables.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

NOW IS THE TIME TO PLANT
Kelway's lovely Pæonies, Delphiniums, and their celebrated Artistic Hardy Borders: packed ready for planting.
KELWAY'S CHOICE named Pæonies, from 27s. per doz.
KELWAY'S CHOICE named Delphiniums, from 24s. doz.
For information about the Colour Borders send 6d. for "Gardens of Delight."
From Mrs. ———, Chepstow.
10th March, 1911.
"You supplied me with an 'Artistic Herbaceous Border' about eighteen months ago, and I am so very pleased with it; it looked so lovely last year, that I am thinking of having a similar border laid out by the side of the drive up to the house."
KELWAY AND SON.
The Royal Horticulturists,
LANGPORT, SOMERSET.
230 Grand Prizes, Gold Medals, etc.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
From ———, Esq.
Northwood,
Middlesex.
28 September, 1911.
"I find that I have never forwarded 2s. for your lovely Catalogue you sent me some weeks since. It would be cheap at five times the price, and I sincerely regret the oversight."

"ROSES AND THEIR CULTIVATION."—A new edition of this Standard Book is now ready, and every Rose Grower should secure a copy. Cloth, many Illustrations, 2s. 10d., post free, from Publisher, 149, Aldersgate Street, London, E.C.

HUTS FOR THE GARDEN. — Fruit Rooms, Potting Sheds, Workshops, Cycle Houses, Boot Rooms, Servants' Mess Rooms, Children's Playrooms, etc. Send for Illustrated Catalogue free.—BOULTON and PAUL, Ltd., Norwich.

WHY BUY FOREIGN DOORS?—We make all kinds of woodwork to compete against foreign. Timber, portable houses, woodwork supplied for United Kingdom or export. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

BECKETT'S NEW BOOK.—The most practical and Up-to-date Book on Vegetables. Price 5s.; post free, 5s. 6d. EDWIN BECKETT, Aldenham House Gardens, Elstree, Herts.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.

XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.

XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.

XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, XL ALL WINTER WASH for Fruit Trees, RICHARDS' BANDING GREASE, etc. Don't forget to ask your N. S. or Florist for Richards' small pink list.

G. H. RICHARDS, Manufacturer.
234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

ALLWOOD BROS., Haywards Heath, Sussex.
Perpetual Flowering Carnation Specialists, Raisers and Growers.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free.

ORCHIDS.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., Southgate, London. N.
(Tel.: 59, Palmers Green.)
Catalogues post free on Application.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

R. H. BATH, Ltd,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

FRANK CANT & CO.,
Braiswick Rose Garden, Colchester.
The World-famed Champion Rose Growers.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 *1st Prizes.* 3 *2nds, at N.R.S. Shows,* 1910. *Ctlg. Free.*

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
1911 *Awards:* 81 *Prizes. Illustrated Catalogue free.*

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

1912.

GERMAN UNIVERSAL DIRECTORY OF GARDENERS,

with detailed information as to the different methods of cultivations, compiled from original data supplied by gardeners; register of suppliers, garden products, requisites, and appendix.

INDEX ANNEXED.

One Volume elegantly bound (Encyclopædia form).

Special Offer: Price, 4s. 11d., available only 8 days after publication of this advertisement.

Advertisements cannot be accepted after January 5, 1912 and may be sent direct—

. . THE . .

German Universal Directory of Gardeners,

To be published in January, 1912, will save you

TIME and MONEY,

and give you

SATISFACTION.

This is the Trade Mark of the

BEST GERMAN DIRECTORY of GARDENERS

Subscription, **4/11.**
Eight days after publication of this advertisement, **5/11.**

1912.

GERMAN UNIVERSAL DIRECTORY OF GARDENERS.

Part I.

Detailed Directory of Nurserymen, Gardeners, and Firms registered in the Trade Register (in alphabetical order), with special information as to Cultivation, Specialities, Novelties, Catalogues in Foreign Languages, etc. Appendix: Municipal Park and Garden Administrations.

Part II.

Trade Index of all the Gardeners in Germany, compiled according to their special branches (Rose Tree Cultivations, Gardening Architects, Market Gardeners, Seed Merchants, etc.), in alphabetical and geographical order.

Part III.

Index of suppliers, in alphabetical order from A to Z, according to nature of article. Contains everything from Flower Sticks to Palm Houses, all Garden Products, Machines, Appliances, Tools, Implements, Fertilisers, and other Garden and Flower Trade Requisites.

Part IV.

Sundry practical articles on Gardening.

Editors— H. SCHRAN & CO. BERLIN W. 57.

ORCHIDS.

If you have a Greenhouse sufficiently heated to keep out the frost, write for our

Amateur's Guide,

giving treatment and all particulars. Illustrated.

MANSELL & HATCHER, LTD.,
RAWDON, via LEEDS.

A SPECIALITY FOR MORE THAN 50 YEARS

POT VINES

Exceptionally Fine this Season.
Inspection Invited.

J. R. PEARSON & SONS, LOWDHAM, Notts.

MESSRS. PULHAM & SON have secured a fine lot of Old Stone Paving, which is eminently suitable for the Paving of Pergolas, Garden Paths, etc.

They will be happy to quote for any quantity, delivered at any railway station.

PULHAM & SON,

By Appointment. By Appointment.

71, Newman Street, London, W.
And BROXBOURNE.

SELECTED SEED POTATOES.

All varieties, grown on finest soil in Scotland and Lincolnshire. Any weight supplied at low prices. Prizes given for best results. Before ordering elsewhere write for catalogue. Best Eating Potatoes also supplied in small or large quantities.

A. J. SOLE, Seed Potato Grower,
PETERBOROUGH.

CHRYSANTHEMUMS.

THE BEST 12 JAPANESE EXHIBITION NOVELTIES OF 1911.

Countess Granard, Mrs. G. Drabble, Mrs. A. Herbert, H. E. Converse, D. B. Crane, Mrs. G. C. Kelly, Queenie Chandler, F. T. Mew, F. C. Chandler, Marie Loomes, Mr. Turner, Harry Wood.

Strong plants of the above—or purchaser's option of other 1911 varieties—**1/-** each, **10/-** the dozen; 3 of each for **25s.**; delivered early spring. Unrooted cuttings also supplied as per catalogue.

THE BEST 6 NEW EXHIBITION SINGLES OF 1911.

Charles Dickens, Charles Kingsley, Miss May Thorne, Snowflake, Mrs. W. Higgs, Mrs. Trenham Gilbey.

Plants in early spring, **1/-** ea.; the 6 for **5/-**; or 3 of each, **12/6.** Cuttings one-third less.

NOVELTIES FOR 1912.

JAPANESE: His Majesty, magnificent crimson; **Gorgeous,** rich deep yellow; **Mrs. J. H. Cocken,** beautiful bright yellow; **Miss Beatrice Hoar,** distinct crimson; **Mrs. T. Brooke Edwards,** salmon-buff; **Miss Gladys Herbert,** beautiful mauve; **Amber Queen,** rich amber and terra-cotta. All being distributed from these Nurseries. For further particulars, also for New Incurveds and Singles, see Novelty List, now ready.

NORMAN DAVIS,
Chrysanthemum Nurseries,
FRAMFIELD, UCKFIELD, SUSSEX.

Sales by Auction.

WEDNESDAY Next, Dec. 20th, at Eleven o'clock. DUTCH BULBS received direct from Holland, in large variety, New and Rare Perennials, and Herbaceous Plants.

At One o'clock.—ROSES, large consignments of English, French, and Dutch Standards, Dwarfs, Climbers, T., H.T., and H.P.; lotted to suit all buyers.

At Half-past Two o'clock.—A splendid consignment of 2,664 cases Japanese LILIUMS, received direct preceded at Twelve o'clock by thousands of miscellaneous Bulbs and Roots.

At Five o'clock.—100 lots of Ornamental and Decorative PALMS and PLANTS, Azaleas, Rhododendrons, Aspidistras, Standard Bays, etc.

MESSRS. PROTHEROE AND MORRIS will SELL the above BY AUCTION, at their central Sale Rooms, 67 and 68, Cheapside, E.C. On view morning of sale, and catalogues had.

DUTCH BULBS, PERENNIALS, ROSE TREES, SHRUBS.

MR. J. C. STEVENS begs to announce that his **Sales by Auction** are held every **MONDAY** and **WEDNESDAY** at **12.30.**

Catalogues post free.

Lots purchased, packed, and forwarded to all parts.

STEVENS' AUCTION ROOMS
(Established 150 Years),
38, King Street, Covent Garden, London, W.C.

RIVERS'

Fruit Trees, Roses, Vines, Figs, Oranges, AND Orchard House Trees.

A LARGE AND SELECT STOCK ALWAYS ON VIEW.

ILLUSTRATED AND DESCRIPTIVE CATALOGUE
POST FREE 3d.

THOMAS RIVERS & SON
Sawbridgeworth, Herts.
STATION: HARLOW, G.E.R.

CHEAP AND GENUINE.

THE HOLLAND PLANT CO., Boskoop, HOLLAND
(Postal Address: Head Office, GOUDA),
offer very fine sorts of

Rhododendrons, with buds, in very fine colours, **1/6, 2/-, 3/-, 4/-, 5/-** each. **Polyanth. Roses,** Mrs. Taft, new 1909, blood red; **Orleans Rose,** new 1909, brilliant red; **Phyllis,** new, fine red; **Maman Levavasseur,** new 1907, **50/-** per 100. **New Sorts, 1911:**—Climbing Rose, Eisenach, **2/-** each; Dad Sterling, **4/-** each. Climbing Rose, Wartburg, **2/-** each; Climbing Rose, Flower of Fairfield, synonym Crimson semper florens, **50/-** per 100. Climbing Roses in different good sorts, as Crimson Rambler, Dorothy Perkins, Tausendschon, etc., **40/-** per 100. Acer negundo, fol. var., **2/-** each. Japan Maples in fine sorts, **2/-** each. Carriage free England.

20,000 LILIES.
'Magnificent Collection'
New Catalogue Free.
PERRY'S HARDY PLANT FARM,
ENFIELD, MIDDX.

TO LET, SMALL NURSERY, with gardening connection, within one hour of London; fast-growing residential neighbourhood. Ingoings about £200. Particulars, c/o Box 866, Office of this Paper.

BY APPOINTMENT.

ROSES IN POTS

WM. PAUL & SON

WALTHAM CROSS, LTD.

Respectfully invite attention to their magnificent stock of the above, which they believe to be unrivalled in quality and extent.

Dwarfs or bushes, extra strong, in 8 in. pots, for forcing and greenhouse culture	30/- to 60/- per doz. £12 and upwards per 100.
Climbers and Ramblers in 8 in. pots, for forcing and out-door planting on pergolas, arches, etc., with shoots ...	6 to 12 ft. long, 30/- to 60/- per doz. 12 to 16 ft. long, 72/- to 90/- per doz. Price per 100 on application.
Dwarfs and Climbers, smaller plants, in 5 in. pots	10/6 to 18/- per doz. 75/- to £6 per 100.

Priced List Post Free on application.

Inspection of Stock Invited.

The Nurseries are twelve miles from London, four minutes' walk from Waltham Cross Station, G.E.R.

Sole Postal Address—

PAULS' ROYAL NURSERIES
AND SEED WAREHOUSE,
WALTHAM CROSS, HERTS.

KING'S ACRE

FRUIT TREES AND ROSES.

AWARDED ..

30 Gold Medals
AND
Coronation Cup
VALUE 25 GUINEAS.
Seasons 1909-10.

Illustrated Catalogue post free on application.

KING'S ACRE
NURSERIES LTD.,
HEREFORD.

W. SEABROOK & SONS

Offer a very fine stock of

FRUIT TREES and ROSES.

Full Illustrated Catalogue sent post free on application.

CHELMSFORD

PLANTING SEASON.

SEND FOR OUR

Descriptive Catalogue

OF

Ornamental Trees and Shrubs, Roses, Rhododendrons, Climbers, Fruit Trees, Forest Trees, Herbaceous and Alpine Plants.

Advice given on all matters appertaining to
LANDSCAPE GARDENING.

GEO. JACKMAN & SON,
Woking Nurseries, Surrey.
Established over a Century. (Nurseries 200 acres.)

MERRYWEATHER'S ROSES.

All Strong and Home-grown Plants.

COLLECTION "H" of NEW ROSES.

WONDERFUL VALUE.

EVERY ONE A GENUINE NOVELTY.

This superb collection of the **BEST 18 NEW ROSES** in dwarf plants. The price of this wonderful collection is **27/6,** carriage and packing free for cash with order (with Acme Labels, **29/6**). The varieties are:

Arthur R. Goodwin, P.
Duchess of Wellington, H.T.
Entente Cordiale (Ducher), H.T.
George C. Ward, H.T.
Jessie, Dwarf Poly.
Lady Alice Stanley, H.T.
Lyon, H.T.
Margaret, H T.
Margaret Molyneux, H.T.
Miss Cynthia Ford, H.T.
Mrs. Alfred Tate, H.T.
Mrs. A. Munt, H.T.
Mrs. E. J. Holland, H.T.
Mrs. W. Christie-Miller, H.T.
Marquis de Sinety, H.T.
Molly Sharman Crawford, H.T.
Souv. of Stella Gray, T,
White Killarney, H.T.

FRUIT TREES

OF ALL KINDS TO SELECT FROM.

A GRAND STOCK OF
SHRUBS & ORNAMENTAL TREES.

HERBACEOUS PLANTS in great variety

Send for Catalogue No. 29, full of interesting information and cheap prices, post free on application to
MESSRS.
H. MERRYWEATHER & SONS, LTD.,
(Dept. 1A), **GARDEN SPECIALISTS,**
SOUTHWELL, NOTTS.

AMARYLLIS — HIPPEASTRUMS — unrivalled New Hybrids. Highest Awards at Home and Abroad, including 37 Gold Medals. Splendid Bulbs, thoroughly ripened. Catalogues and all particulars free on application. The trade supplied. ROBT. P. KER and SONS, Aigburth Nursery, Liverpool.

By Special Appointment to His Majesty the King.

Veitch's Seed Catalogue for 1912.

JAMES VEITCH & SONS, Ltd.,
beg to announce that this
has now been posted to all their Customers, and request to be informed if the same has not been received, when a copy shall be at once forwarded.

Royal Exotic Nursery, CHELSEA, LONDON, S.W.

BUNYARD'S
FRUIT . .
TREES . .

ORDER AT ONCE FOR PRESENT PLANTING.

WRITE FOR CATALOGUE.

Geo. Bunyard & Co., LTD.,
Royal Nurseries,
MAIDSTONE.

Telegrams:
FRANK CANT,
COLCHESTER.

Telephone
No. 182.

CANTS' CHAMPION ROSES

THE FINEST STOCK IN THE KINGDOM.

Direct from

FRANK CANT & CO.,

Dept. B., **BRAISWICK ROSE GARDENS, COLCHESTER.**

Our Illustrated Catalogue post free on application.

CHEALS'

FOR FIRST-CLASS
**ORNAMENTAL TREES,
ROSES, FRUIT TREES,**
AND
HARDY FLOWERS, etc.

NURSERIES 113 ACRES.
CATALOGUES FREE.

J. CHEAL & SONS,
The Nurseries, CRAWLEY.

TREE CARNATIONS.
E. J. WOOTTEN, Fairoak, EASTLEIGH,
Has all varieties, including
Lady Alington, Felton, Mrs. Ward, Bonfire, White Wonder, La Mode, Marmion, etc.
Strong Plants in Small Pots Now Ready.

SPECIALITIES. (Carriage Paid).

Shrubs for

Under Trees
Rock Gardens
Water Gardens
Woodland Gardens
Wild Gardens
Natural Gardens
Bamboo Gardens
Azalea Gardens

Catalogue with 450 Illustrations Post Free.

GAUNTLETT'S Ltd., Chiddingfold, SURREY

When answering Advertisements please mention "Gardeners' Magazine."

ORCHIDS EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS**, and an endless variety of Choice **ORCHIDS.**
Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.
Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.

CHARLESWORTH & CO.,
Hayward's Heath, Sussex,
ORCHID SPECIALISTS,
IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

VOL. LIV.—No. 3,033. SATURDAY, DECEMBER 16, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Cult of the Sweet Pea.

MR. F. W. LADDS.

The large and representative gathering of cultivators, raisers, and others specially interested in the sweet pea at the annual meeting of the National Sweet Pea Society on the 8th inst. proved to demonstration that the interest in this exquisitely beautiful and delightfully fragrant flower is in no way abated. There were sweet pea enthusiasts from all parts of the United Kingdom, and, as evidence of their devotion to the flower, it may be mentioned that, with few exceptions, they took part in the several meetings, and evinced the keenest interest in the proceedings, which, with a short interval for dinner, extended over nearly eight hours. The committee were able, as will be seen on reference to our report which appears on another page of this issue, to present to the members a highly gratifying report. There was a large accession of new members during the year; and, although there was a decrease of about one-third in the receipts for admission on the occasion of the exhibition in July last, and a grant of £25 was made to the funds of the Royal International Horticultural Exhibition to be held in London next year, the year's work was brought to a close with a good balance in favour of the society. This was regarded as highly satisfactory to the general body of members, as evidenced by the manner in which they brushed away the proposal for the appointment of a sub-committee to investigate the finances of the society with a view to greater economy in expenditure. The society had expended £15 more on printing and stationery than in 1910; and, notwithstanding the fact that the drafting and confirming of a set of rules for governing the constitution and duties of the Floral Committee, and a large increase in membership, necessarily involved additional expenditure, the appointment of a sub-committee was proposed, to enquire into the finances. This point would have been wanting in general interest, and we should not have referred to it, were it not for the fact that the appointment was moved and seconded by two members of committee, who, by virtue of their position, should have been fully informed on all financial matters. The committee presented for adoption by the members a new set of rules, with which were incorporated those relating to the Floral Committee. The majority of the proposed alterations were in every way desirable, while a few—and these not the least important—were otherwise; and the members, very wisely, did not accept the alterations. The committee proposed an addition to the rule governing the constitution of the Floral Committee that would have excluded from that body all who were directly or indirectly interested in any of the varieties under trial. As a considerable number of the leading authorities on sweet peas are raisers of new varieties, or commercially interested in them, this addition would have had the effect of excluding a very considerable proportion of those who have the fullest knowledge of varieties. It is, of course, essential that raisers should not vote for their own varieties when inspecting the trials, but this is effectually guarded against by a rule relating to the method of conducting the trials. All the varieties are grown under numbers, and the vote of each member of the Floral Committee is entered on a card, which is handed to the secretary at the close of the inspection. When the votes are counted, any that may have been given by a member in favour of a flower in which he is interested is disallowed. This rule effectually prevents a member judging his own flowers, should he desire, which we do not regard as at all probable, to do so. The Floral Committee now and again comes in for a share of criticism, and this is not at all surprising when we consider how many beautiful sweet peas, owing to their being too much like other varieties not less beautiful, or from some other cause, fail to obtain recognition. There is also a possibility of some failing owing to the plants not making so robust a growth in the trial grounds as in the raiser's garden; and, when this happens, there is necessarily some amount of disappointment. We sympathise with those who suffer disappointment, and at the same time fully appreciate the splendid services the society has rendered cultivators by its trials, both in bringing novelties of merit into prominence, and in dealing with questions of nomenclature. With a second set of trials conducted under different conditions of climate and soil, this branch of the society's operations should be of still greater value. Whether the preliminary arrangement for conducting the latter at Hinckley will be carried out, has yet to be determined by the executive; but it will be matter for regret if it should fall through. The soil of the proposed trial ground was described by one of the leading growers as all that could be desired, and the trials would be under the charge of a scientist with much experience in experimental work. A strong plea was made for holding the northern trials near Ulverston; and, if the results thereof depended wholly upon the zeal of the sweet pea enthusiasts in the district of which that favoured town is the centre, they would be highly satisfactory. To obtain trustworthy results from the trials of sweet peas, as of other classes of flowers, and also of vegetable crops, they must be under the direction of someone who has had experience in such work, and is therefore in a position to fully appreciate the importance of uniformity in the soil, and of the details being carried out in the most exact manner, and is also fully conversant with the difficulty of avoiding error.

Mr. F. W. Ladds, of Swanley Junction, is a famous grower for market, and now the most prominent member of the firm of Phillip Ladds. Mr. F. W. Ladds is a great believer in new methods, and quick to see the good that may lie under a passing suggestion of some observer or grower. Having satisfied himself that any new idea is valuable from a market grower's point of view, he puts it into practice with a vigour that is refreshing, and at the same time astonishing, to older and conservative growers. Mr. Ladds is a great believer in the decorative value of single chrysanthemums, but flowers with one row of petals only do not appeal to him, because they lack substance. He is an extensive grower of chrysanthemums, and has latterly taken up the work of raising new varieties; and already he has obtained many successes with single and decorative sorts. He is very emphatic in his belief that every chrysanthemum valuable to a market grower is a variety of first-rate usefulness for the private grower. His judgment is excellent, and in later years he has become a very prominent member of the National Chrysanthemum Society's Floral Committee. He freely dispenses any knowledge gained, and does not lock the gate of his nursery against either trade or private growers. At the recent Chrysanthemum Conference he gave an admirable account of his methods of producing cut flowers for market, and this we have the pleasure of publishing in the present issue.

Proposed National Diploma in Horticulture.—We are informed by the Rev. W. Wilks that the Council of the Royal Horticultural Society have requested the following gentlemen to act as a Committee to enquire into the desirability of establishing a National Diploma in Horticulture, and if it is thought desirable, to recommend what steps should be taken for the purpose: The Right Hon. A. H. Dyke Acland, Mr. W. Bateson, M.A., F.R.S., Mr. E. A. Bowles, M.A., Mr. F. J. Chittenden, E.L.S., Professor J. B. Farmer, D.Sc., F.R.S., Mr. C. R .Fielder, V.M.H., Mr. W. Hales, Mr. J. Hudson, V.M.H., Professor Keeble, M.A., D.Sc., Sir Daniel Morris, K.C.M.G., V.M.H., Lieut.-Colonel D. Prain, M.A., F.R.S., Mr. H. J. Veitch, V.M.H., Mr. Walter P. Wright.

Proposed British Gardeners' Dinner.—A desire is being felt in horticultural circles that a gardeners' dinner should be arranged in conjunction with the Royal International Horticultural Exhibition, to be held in London in May next, and steps are being taken to ascertain the views of the general body of gardeners with reference to the desirability of such function. Mr. Alex. Dean, V.M.H., who is taking a leading part in what is being done, writes: "Kindly grant me a space in your columns on behalf of the members of the Gardeners' Dinner Committee of 1903, to inform your readers that, assuming a favourable response be made, it is proposed to organise in connection with the Royal International Horticultural Exhibition of May next a similar reception and dinner to that held in 1903, which resulted in a very remarkable success. The members of the above-named committee have recently met for consultation, and have, with a view to obtaining, if possible, some expression of opinion from the gardeners of the kingdom, requested me, on their behalf, to communicate with you and thus inform your readers of what is proposed. I need hardly say that only in the case of a favourable response from gardeners would arrangements for the dinner be proceeded with. Whilst it is known that great receptions, conferences, and banquets will be arranged by the Exhibition Executive, the Council of the Royal Horticultural Society, and other distinguished bodies, these functions will be chiefly provided in the interests of visitors from all parts of the world. The Gardeners' Dinner Committee therefore hold that the British gardener should not be overlooked, and hence have put forward the dinner proposal for May next, as mentioned. If the date for such dinner be fixed for the first week of the Exhibition, it must be as late as Saturday, May 25, seeing that preceding days are fully occupied with important functions. Admission to the exhibition will that day be 1s. for gardeners, and 2s. 6d. for their wives. On the previous day it is 2s. 6d. for the gardener and 5s. for the wife, thus making the visit, especially to gardeners coming from distant parts of the country, very expensive. During the ensuing week the charge for admission all round is 1s., but it is feared few gardeners would care to come far to see the Exhibition at so late a period. The proposal of the Dinner Committee is that dinner tickets shall not exceed 5s. each, and that gardeners' wives would be welcomed. Will all gardeners who favour the proposed dinner kindly send along to me a postcard to that effect at an early date. The committee will then have authority on which to act." Mr. Dean's address is 62, Richmond Road, Kingston-on-Thames.

Princes' Street Flower Garden, Edinburgh.—At a recent meeting of the Parks Committee of the Edinburgh Corporation the question of making an alteration in the arrangement of the flower beds in East Princes' Street Gardens was considered. Mr. J. F. McHattie stated in his report on the flower garden that, owing to the growth of the lime trees on either side of the terrace garden alongside Princes Street, the flower beds are much shaded, and also that they are overcrowded. As a consequence thereof, the effect produced is not commensurate with the labour involved in the management of the flower garden. Mr. McHattie suggested that fourteen beds, of large size and informal in design, be substituted for the fifty-four beds that now have a place on the plateau. He also suggested that the lawn near the railway be converted into a flower garden; and that the 10ft. border alongside the railway be increased in width to 30ft. Mr. McHattie submitted an alternative plan for the arrangement of the flower garden alongside Princes Street. By the adoption of this plan the boundary railing would be removed, and the present garden be divided into four sections, each with a set of flower beds. After some discussion further discussion of the plans was adjourned.

Fruit Conference at Ashford.—On Monday last a conference of fruit growers was held at Ashford, Kent, in conjunction with an exhibition of hardy fruit. The exhibition of fruits was held in association with the Ashford Cattle Show, and was under the direction of the authorities of Wye College. There were two meetings during the day, and at both Lord Northbourne presided. At the first meeting Mr. E. S. Salmon, of Wye College, gave an address on the control of Apple Scab (Fusicladium dendriticum) by the use of Bordeaux mixture and lime-sulphur wash. At the second of the two meetings Mr. Smith, also of Wye College, gave an address on grading and packing, followed by a practical demonstration.

Sale of Poisonous Insecticides by Nurserymen.—A new Order-in-Council, which comes into force on January 12, 1912, has reference to the Poisons and Pharmacy Act of 1908, and amplifies the provisions of the Act in a manner that will benefit all who are engaged in the sale of poisonous compounds for agricultural or horticultural purposes. Hitherto the actual licence-holder must be the seller; in future licences will be granted to the traders' assistants, at a charge not exceeding 5s. The following are the regulations that apply to this new state of affairs: 2.—(1) Where the applicant for a licence under Section 2 of the Poisons and Pharmacy Act, 1908, is a person in the employment of a person who has obtained a licence under that section, the application shall be made in the second form set out in Schedule A to these Regulations, and the forms of licences, applications for the renewal of licences, and renewals of licences, shall be those set out in Schedules B, C, and D, to these Regulations, and the maximum fee charged for the grant of a licence shall be 5s. instead of the maximum fee specified in the principal Regulations, and so much of the principal Regulations as requires an applicant to publish notice of his intention to apply for a licence in two newspapers shall not apply. (2) A licence granted to such an applicant as aforesaid shall not continue in force after the licence of the person in whose employment he is is revoked, or whilst it is suspended. 3.—The following regulations shall be substituted in place of No. 14 of the principal Regulations: A poisonous substance shall not be sold except in an enclosed vessel or receptacle, as received from the manufacturer, distinctly labelled with the name of the substance and the word "Poison," and with the name and address of the seller, as provided by Section 17 of the Pharmacy Act, 1868, and also with a notice of the special purpose for which it has been prepared. For the purposes of this Regulation the person on whose behalf any sale is made shall be deemed to be the seller.

Paris Chrysanthemum Committee.—This committee, formed by the National Horticultural Society of France, is composed of the leading French chrysanthemum growers, together with a few foreign ones, and issues regularly an Annual Bulletin for the use of its members. The current number is just to hand, and contains 170 pages of text, with some illustrations of last year's Paris Show. The contents may be briefly summarised as follows: List of Officers, Floral Committee, Schedule, Report for 1910, Revised List of Varieties recommended for various purposes, List of Prize Winners at last year's Show, Report of the International Show and Congress held in Paris last autumn, together with the text of the papers read, reports of various local shows, and, finally, a list of members of the committee. This latter alone occupies twelve pages, or something approaching 400 members; some people would almost consider the committee a society in itself.

Electro-chemical Culture of Plants.—At the gardens of the Royal Botanic Society on Saturday, the 9th inst., Mr. Emile Lowitz gave a demonstration of Dr. Franz Muller's invention for the utilisation of electricity in the cultivation of various kinds of plants. In describing the apparatus, Mr. Lowitz stated that with its aid it was possible to invigorate trees or plants, and to pump food into them for the purpose of promoting their growth, and to induct insecticides and fungicides for the purpose of exterminating parasitic enemies. He also claimed that the invention was of value for the acceleration of the germination of seeds, the regeneration and the revitalisation of plant life, the extermination of parasites, and the treatment of soil. It was claimed that not only did the apparatus accelerate the germination of seeds, but in the case of old seeds a much higher percentage is obtained when they are assisted with electricity. In the course of the demonstration wheat showed signs of germination within fifteen minutes of being sown and subjected to a strong electrical current.

Certificated Gardeners.—The North of England Horticultural Society have under consideration the question of preparing a scheme for awarding certificates to gardeners, the awards made to be based on the manner in which the gardens are kept. It has been proposed that at the request of the owner of the garden, the society shall send a deputation to consider the granting of a certificate to the head gardener, the time of the visit not to be notified to the latter. Under the scheme there are to be three grades of certificates, and the grade awarded will be determined by the number of marks given by the deputation. The maximum number of marks suggested is 100, and these are to be given, in equal proportions, for cleanliness and tidiness, cultivation of useful crops, glass culture and method, management, experimental work, and possession of Royal Horticultural Society and other certificates. Market gardeners, amateurs, schoolmasters, and others may also ask to be certificated on the same lines. The scheme shows considerable ingenuity on the part of those responsible for its preparation, but we fear that it will fail to satisfy the desires of those who are anxious to obtain a diploma, or some other proof of their skill and of the position they should occupy as practical horticulturists. There is, of course, no better test of the skill and administrative ability of a gardener than the garden: but in many cases gardeners are severely handicapped by the unfavourable position of the garden, the unsuitability of the glass structures, or the amount available for the upkeep being insufficient for the requirements. The question is an extremely difficult one, and merits the fullest discussion; and, if we are unable to accept this scheme as being exactly what is wanted, we regard it as deserving of the fullest consideration from those who are interested in improving the status of gardeners generally.

Presentation to a Scottish Gardener.—The other evening a number of the friends of Mr. James Henderson, gardener at Elmbank, Dumfries, the residence of J. Wyllie, Esq., assembled in the Globe Hotel, Maxwelltown, Dumfries, for the purpose of wishing happiness to Mr. Henderson in his approaching marriage, and to present him with an arm chair as a token of their esteem. Mr. Robert Little acted as chairman, and Mr. David Kerr made the presentation, which he did in an apt manner, eulogising Mr. Henderson's personal qualities, and his ability as a gardener, and wishing Mr. and Mrs. Henderson every happiness.

A Veteran Gardener's Retirement.—There has just retired, after 60 years' service, Mr. Alexander Davidson, gardener, Cairngall, Aberdeenshire. For this long period he acted as head gardener to three generations of the Hutchison family. Born at Summerfield, Aberdeen, over 80 years ago, Mr. Davidson served his apprenticeship at Lockhead, Aberdeen, afterwards working as journeyman for short periods at several places in and around that city. He then received an appointment as under gardener at Ellon Castle, Aberdeenshire, where he remained two years, when he was appointed head gardener at Cairngall. There he has remained until a few days ago, a most faithful, capable, and honoured servant. On Mr. Davidson taking up duty at Cairngall, the estate was under the supervision of the late Mr. Robert Hutchison, who, as the eldest son of the previous proprietor, Colonel Hutchison, acted as managing trustee of the family. After Mr. Robert's death, in 1861, the estate was purchased by Mr. William Hutchison (a grandson of the Colonel's), who had then returned from China, after a very successful career as a tea planter there. He died in 1881, and was succeeded by his son, Mr. W. E. Hutchison, the present popular and highly-respected proprietor of Cairngall. By all these proprietors Mr. Davidson was held in high esteem, both as a competent and skilled gardener, as well as one of the most trustworthy of men. With the residents of the village adjoining the mansion, and his fellow-servants, his kindly manner and obliging disposition endeared him to all. As a judge at many local and other flower shows, Mr. Davidson's services were ever in great request and most ungrudgingly given, his wide and accurate knowledge in matters horticultural, giving weight and satisfaction to his awards. He was also a most enthusiastic Volunteer, joining the corps then known as the "Buchan Rifles." Rising from private, he in 1895 retired with the rank of quartermaster-sergeant, after 34 years' service. For over 50 years Mr. Davidson has also acted most acceptably as parish librarian, while, in the palmy days of the Mutual Improvement Associations, he took a very prominent part.

THE LATE SIR JOSEPH DALTON HOOKER.

Full of years and of honour, one of the most wonderful men of modern times passed to his rest on Sunday last. Sir Joseph Dalton Hooker, O.M., C.B., G.C.S.I., K.C.S.I., F.R.S., etc., etc., had reached the advanced age of ninety-four years with all his faculties unimpaired, save for a little difficulty in hearing.

Born at Haleworth, Suffolk, on June 20, 1817, Joseph Dalton Hooker went early in life to Glasgow, where his father, Sir W. J. Hooker, held the post of Regius Professor of Botany to the University. Here he was educated and took his M.D. degree in 1839, thus, like many other famous botanists, commencing the business of life with the study of medicine. He did not settle down to the ordinary life of a doctor, but immediately began to travel. It is not too much to say that Sir Joseph Hooker will be as much remembered for his travels and his keen observations of all that he saw, as for his botanical work. At any rate, the public will continue to appreciate his "Himalayan Journals," a delightful book of travel, long after it has forgotten the "Genera Plantarum" or the "Flora Antarctica."

THE LATE SIR JOSEPH HOOKER.

Just after taking his degree, when twenty-two years of age, Hooker obtained the position of assistant surgeon and botanist to the Antarctic Expedition then about to start under the direction of Sir James Clark Ross. He joined the "Erebus," and during three years in Antarctic regions, he accumulated valuable botanical and geographical information, meanwhile enduring many hardships and learning many lessons that were to stand him in good stead later on. Returning home, he was for a short period assistant botanist at Edinburgh University, but in 1845 he became botanist to the Geographical Survey of Great Britain. This task was not altogether to his liking, as the roving spirit had taken hold of him, and so, in 1847, he visited the unexplored region of the Sikkim Himalaya to study the flora and collect specimens. He undertook this mission under the persuasion of Dr. Falconer, then superintendent of the Calcutta Botanic Gardens, and because he wished to add to his own knowledge of plants. Of the manner in which this expedition was initiated he wrote: "On hearing of the kind interest taken by Baron Humboldt in my proposed travels, and at the request of my father (Sir William Hooker), the Earl of Carlisle (then Chief Commissioner of Woods and Forests) undertook to represent to Her Majesty's Government the expediency of securing my collections for the Royal Gardens at Kew; and, owing to the generous exertions of that nobleman, and of the late Earl of Auckland (then First Lord of the Admiralty), my journey assumed the character of a Government Mission, £400 per annum being granted by the Treasury for two years." For three years he explored the Himalayas, and for a greater part of the time had only natives with him, though Dr. Campbell joined him later, and the two were held prisoners for some time by the Sikkim Rajah. Dr. Hooker, as he then was, revealed to us the wonder and beauty of the Himalayan flora, especially its rhododendrons, collected thousands of herbarium specimens, and added very materially to the geographical knowledge of what was then an almost unknown region. The "Rhododendrons of the Sikkim Himalayas," the "Flora Indica," and the "Flora of British India," all very largely from the pen of Dr. Hooker, were the outcome of this expedition, while the "Himalayan Journals" give a very graphic account of the scenery, flora, and people of Sikkim, and of the hardships endured and difficulties surmounted during the three years.

In the world of horticulture Sir Joseph Hooker was as well known as among botanists. In 1841, when Kew became a public institution, Sir William Hooker was appointed the first Director, and in 1855, his son became Assistant Director, succeeding to the directorate in 1865, on his father's retirement. Sir Joseph was Director of the Royal Gardens, Kew, until 1885, when he was succeeded by Sir William Thiselton Dyer. His work at Kew can be seen to-day, as the general plan of the famous gardens is due largely to his efforts, and he practically founded the museums there. This position, however, did not entirely overcome his desire for travel, and so in 1860 he visited Palestine, and in 1871, with Mr. J. Ball and Mr. G. Maw, he went on a botanical expedition to Morocco, and these three were the first Europeans to climb to the top of Jebel Tezah, a height of 11,972ft. In 1877 he visited America, and, together with Professor Asa Gray, took up the study of the Rocky Mountains flora.

It was Sir Joseph Hooker and Sir C. Lyell who induced Charles Darwin to place before the Linnean Society, in 1858, jointly with Dr. A. Russell Wallace, the first exposition of the "Origin of Species," the papers being presented under the title of "On the Tendency of Species to form Varieties; and on the Perpetuation of Varieties and Species by Natural Means of Selection." Sir Joseph was a friend of, and in sympathy with, Darwin, and stood by him when the views then expressed did not meet with general acceptance. In 1868 Sir Joseph Hooker was elected President of the British Association, and his presidential address on that occasion was a remarkable defence of Darwin's views, and, by the light it threw upon the subject, went far to settle the great battle that raged over Natural Selection. In 1873 Sir Joseph was elected President of the Royal Society—the highest honour to which a scientist can attain—and this position he held until 1878. Few men have deserved, and few received, so many honours as he. The Royal Society awarded him its Royal medal, the Copley medal, and the Darwin medal; the Society of Arts, the Royal Geographical Society, and the Linnean Society each awarded him highest honours, and the Universities of Oxford, Cambridge, Edinburgh, Dublin, and Glasgow conferred honorary degrees. He was appointed a C.B. in 1869; made K.C.S.I. in 1877, and G.C.S.I. in 1897; and on his ninetieth birthday, in 1907, he received the Order of Merit.

In every sense of the word Sir Joseph Hooker was a great worker; as explorer, scientist, and organiser his name will be honoured for all time, while his voluminous writings provide an enduring monument. In addition to works already mentioned it is worthy of note that he edited the "Botanical Magazine" for thirteen years; his "Students' Flora of the British Isles" is still a standard work; with Mr. Bentham he published the "Genera Plantarum," the "Icones Plantarum" is largely his work, and the issue now in the press shows that right up to the last he retained a firm grip of the science of which he is a lasting ornament. He was a prodigous worker, and his extraordinary wealth of knowledge included many other sciences besides that of botany and medicine. He believed that a botanist should travel and see for himself how and where plants grow, and not be content alone with herbarium specimens; and, because of his breadth of view that resulted from travel, his kindliness as a man, and his passion for work, Sir Joseph Hooker exercised a remarkable influence in the scientific world and won the love and honour of all who knew him.

As was fitting, the Dean of Westminster offered the family permission to inter the cremated remains of Sir Joseph Hooker, in Westminster Abbey, among the nation's honoured dead. This offer the family felt obliged to decline as it was Sir Joseph's special wish that he should be buried by the side of his father at Kew, and the funeral was arranged to take place at Kew Parish Church on Friday (December 15) at 2 o'clock.

THREE BITTER HERBS.

The poet Cowley, who lived in an age when herbs were in great domestic favour, wrote:

> "What savour is better, if physic be true,
> In places infected, than Wormwood and Rue?"

thereby mentioning two of the bitterest herbs known.

In olden days Wormwood was, observes "The Globe," held in great importance, and the Mexicans, when keeping the festival of the Goddess of Salt, began with a dance of women who danced all night wearing garlands of the plant. Wormwood was once noted as an antidote to the poison of toadstools, hemlock, and the biting of the shrew-mouse or sea-dragon, whereas in modern times it is chiefly used in the making of absinthe.

In bygone days it was laid among furs as a preventive of moth, most people thought owing to the bitterness; but the herbalist Culpeper says: "I was once in the Tower, and viewed the wardrobe, and there was a great many fine cloaths (I can give them no other title, for I was never either linen or woolen draper); yet as brave as they looked, my opinion was that the moths might consume them. Moths are under the dominion of Mars; this herb Wormwood (also an herb of Mars), being laid among cloaths will make a moth scorn to meddle with the cloaths, as much as a lion scorns to meddle with a mouse, or an eagle with a fly." So we learn that moths are martial creatures in spite of their dull, homely looks.

Wormwood was one of the herbs that was antagonistic to witches, who disliked all yellow flowers, and the reason may have been that, as these were often dedicated to the sun, they were naturally at war with anything mysterious and gloomy. Wormwood, indeed, has so much power against evil spirits that in some places it is known as the "girdle of St. John." In more modern days it is often called "old woman" by provincial people, which shows how much more humble its station has become; however, it bears also the names of "wermuth" or "keep courage," because it is supposed to act as a good nerve tonic and restorative. The Romans gave Wormwood as a prize to charioteers. Pliny thought the plant so useful that they could have wanted nothing better; and it has been supposed that the idea of giving it to them was to counteract any giddiness they might feel. "You can cure yourself of dizziness," says Strabo, "with the bitter leaf of Wormwood."

Mugwort, which grows in hedges, and is first cousin to Wormwood, but lacking its volatile oil, was used instead of tea sixty or seventy years ago by the working classes of Cornwall, and is said to make a good savoury stuffing to goose. Its principal interest lies in the old stories and superstitions connected with it. In olden days young girls used to hunt for "a coal under its roots" to put beneath their pillows, as it was supposed to make them dream of their future husbands; and it was said that if a coal should be found at its roots on Midsummer Eve, whomsoever carried it about with him would be safe from plague, lightning, and the ague. Later writers suggest that these supposed "coals" were only dead roots, and Gerard, the herbalist, very severely remarked: "Many other fantastical devices invented by poets are to be seen in the works of ancient writers. I do of purpose omit them as things unworthy of my recording or your receiving."

Apart from the coal, Mugwort itself was supposed to preserve travellers from fatigue, sunstroke, wild beasts, the evil eye, and evil spirits; and it must have been useful to know that if laid in the soles of the boots, it "will keep a man from weariness though he walk forty miles." Mugwort had also many medical uses, and in modern times the Japanese make Mox-a from it, which they use for cauterising.

Rue has the name for being a great digestive and help for the appetite; and the Romans thought it prevented drunkenness; the plant has a coarse, harsh smell, and a very bitter taste. There was an old belief that Rue grew best if stolen from someone's garden; it was in great request at one time, as eating the leaves was said to preserve the eyesight, and the juice of it used for the eyes cured "watery humours therein." Rue was often strewn in the dock at the Old Bailey Sessions, perhaps because it had always been thought to be very purifying. Country people use it now as medicine, sometimes eating it chopped up between pieces of bread and butter; its grows best on the sea coast, and it is quite common on the cliffs of Norfolk.

Rue was supposed to be a great antidote to witchcraft, and was used in spells, and at one time young girls made a wreath of Rue, Willow, and Crane's bill, which, while walking backwards to a tree they threw over their heads until it caught in the branches and was held there—each throw of the wreath that failed to catch in the tree meant another year of single life. According to an old "Book of Notable Things" (1575), "Rew hath a marvellous strength against wild Beasts," and one is advised "That Pigeons be not hunted nor killed of Cats; at the windows, or at every passage, and at every Pigeon's hole, hang or put little Branches of Rew."

Wormwood, Mugwort, and Rue have fallen a great deal into disuse, but perhaps this is not to be wondered at. We in England no longer live in deadly fear of wild beasts, the evil eye, and witchcraft, and, therefore, have no want of these homely yet powerful defences.

Centropogon Lucyanus.—Given the temperature of an intermediate house, or, failing that, the warm end of the greenhouse, this centropogon will flower throughout the winter and well on into the spring. It may be grown in pots with the loosely disposed branches secured to a stake, while it is also seen to particular advantage in a suspended pot or basket, as the somewhat weighty clusters of blossoms are brought immediately under notice from the fact that they cause the shoots to droop. The flowers are of a curved tubular shape, about a couple of inches long, and rich rosy carmine in colour. It is regarded as of garden origin, and is said to have been raised in 1856, but its parentage seems to be obscure. At all events, it is a most desirable subject where a display of flowers has to be kept up through the winter. Cuttings of the young shoots strike root readily in the spring and grow away freely afterwards. A liberal amount of leaf-mould in the potting compost is very beneficial to this centropogon.—W. T.

TWELVE GOOD CLIMBING ROSES.

A few weeks ago, in writing a short article for this magazine on the "Twelve Best Wichuraiana Roses," I found it very difficult to make up my mind which of the numerous beautiful Wichuraianas could justly claim thus to rank above their fellows. Probably no two people would agree on the subject. But at least the Wichuraianas, with perhaps the one exception of Gerbe Rose, are all suitable for the same purpose, they are rampant growers, perfectly hardy and can quickly cover any pergola, arch, or tall pillar to which they are trained. With the climbers, which are also autumnal flowering roses, this is not the case. Some, like Aimée Vibert, are as hardy and rampant as the Wichuraianas, others, in order to be seen in perfection, need the protection of a wall, while some again, though perfectly hardy, by reason of their more moderate growth, are not suitable for planting when large areas have to be quickly covered. In the following notes I have included some of each of these classes.

Climbing Aimee Vibert.

The hardiest and most rampant autumn-flowering climbing rose I know is the Noisette, Climbing Aimée Vibert. This is quite a veteran, having been brought out by Curtis in 1841, sometimes called the Seven Sisters' Rose. Everybody knows it, and how it will quickly cover a large space with its abundant green foliage, and produce both in summer and autumn its huge bunches of pure white flowers with which the pinkish buds are prettily intermingled. We have it growing on a tall wooden screen which separates a small rose garden from the croquet lawn; its neighbours are Aglaia and Crimson Rambler; it has done its work of covering the space allotted to it more quickly than either of these, strong growers as they are. It usually flowers about the beginning of July, lasting in bloom throughout that month, and flowering again in September. The most remarkable point about this climber, to my mind, is it magnificent foliage, so dense and beautifully arranged on the stem, and so nearly evergreen. I have a note made on November 22 last year to this effect: "After several nights of severe frost, the foliage of Aimée Vibert is as green and abundant as it was at mid-summer, in this respect surpassing almost all the climbers in the garden." The flowers, though effective on the plant, are, I think, a little disappointing when cut, the bunches are rather lumpy and the petals fall quickly.

Madame Alfred Carriere.

In this respect the hybrid Noisette Madame Alfred Carriere (Schwartz, 1879) is much better. The creamy-white flowers, tinted in the centre with flesh are produced throughout the summer and autumn, and, coming as they do, singly, or in loose bunches of two or three on erect, smooth stems, they lend themselves admirably to house decoration, their sweet fragrance adding to their charm for this purpose. Altogether, this rose appeals to me as a very lovable and gentle flower, never showy, but always refined and artistic. It makes a splendid standard, and, though not so rampant as Aimée Vibert, quickly grows up a tall pillar, and is fairly hardy. As I write on December 1, I can still find a few of its pale blossoms on a plant in the open. With so many good qualities it well deserves the description given of it in the N.R.S. catalogue as "the best hardy white climber."

ROSE MADAME ALFRED CARRIERE.

A finely developed specimen of this beautiful climbing rose at East Burnham Park.

Marechal Niel.

If Maréchal Niel were hardy, and able to produce in the open those glorious deep golden blooms it gives us under glass, there would be little difficulty in naming the best yellow climber. As it is, I think most rose growers would give the palm to the Noisette William Allen Richardson (Veuve Ducher, 1878), a rose too well known to need description.

The flowers lack form, and are variable in colour, but at their best they are a deeper and purer orange than can be found in any other rose; they are freely produced from June to October, and in a mild autumn much later. This variety grows well on pillar or wall, but not making strong basal shoots it requires some care in training to build up a good plant.

Reve d'Or.

Rêve d'Or (Noisette Ducher, 1869) is a rampant grower, which in many parts of England grows better and flowers more freely on a wall than in the open. In a genial climate it grows with extraordinary rapidity and luxuriance. A plant I saw this autumn in a Gloucestershire garden had in two years covered a big arch, and was thrusting forth its beautiful long sprays in every direction, evidently quite prepared to cover two or three more if allowed to do so. Here we grow Rêve d'Or on a south wall, and it would be a very cold inclement spring that would prevent it giving us a few of its golden blossoms on Derby Day. It flowers with marvellous freedom in this position, but has not made very strong growth; this may be on account of dryness at the roots. It does not flower as continuously as William Allen Richardson, but has a second crop in September.

Alister Stella Gray.

The third yellow rose that I would recommend is Alister Stella Gray, also a Noisette (Paul and Son, 1894). This rose is specially useful for its hardiness and for its freedom in early autumn, when so many climbers are not at their best; for, though it begins flowering in the early part of June, it reserves its best display for August and September. It has good foliage and a neat bush-like habit, which makes it particularly useful as a pillar; the flowers have a pleasant musklike fragrance, and are small but well shaped, pale buff in colour. At the top of a bank sloping to the south, on a naturally light soil, it has grown rather strong, but I have seen it make rapid growth in a garden in Leicestershire where the ordinary H.T.'s and Teas do not flourish as they do on our lighter, warmer soil. Some might think that Gloire de Dijon, or the best of its descendants, Madame Berard, should rank above Aliste Stella Gray. As regards the indeciduous flowers no doubt they would do so, but neither are such generally useful roses. They are apt to become very lank and leggy if grown on pillar or pergola, and if used for this purpose, need to be clothed at the bottom with some dwarfer variety.

Reine Olga de Wurtemburg.

So far the Noisettes have provided us with all our examples of good climbing roses. For reds and pinks we turn to the Hybrid Perpetuals and Hybrid Teas. The two best red, climbing autumnals for general use are, in my opinion, Reine Olga de Wurtemburg (Nabonnand, 1881) and Ards River, H.P. (A. Dickson and Sons, 1894). Reine Olga, with its bright rose-crimson flowers, makes a brilliant effect in early June, especially if grown on a wall. A plant of this variety I have in my mind has gone right to the top of an old-fashioned house, where it is very beautiful when in full bloom, making a fine background to a border of mixed flowers. It blooms again in September, and is almost evergreen.

Ards Rover.

The individual flowers of Ards Rover (A. Dickson and Sons, 1894) are much finer than those of Reine Olga, but they are not so numerous nor so brilliant. They are dark crimson, and are full and somewhat globular in form. It is a vigorous climber, and does well on arch, pillar, and even on a north wall. We had a plant growing on the north side of a thatched fruit shed, and the deep red flowers showed up very well on the pale straw-coloured thatched roof. If we include another red in our best dozen, it must be Francois Craisse, H.T. (Guillot, 1900). At its best it is a bright scarlet-crimson, and is one of the earliest of the H.T.'s to flower. It is surprising how seldom this rose is seen, the reason may be that flowering so early, its first bloom is over before any of the shows are held, and at its second flowering in September it is apt to lose its brilliancy of colour, when its chief merit has gone.

Climbing Papa Gontier.

One of the most beautiful climbing roses is Climbing Papa Gontier (Cherrier, 1904). Its rosy-pink flowers with large shell-like petals and its bright crimson buds never fail to catch the attention of the lover of roses. It makes very long rod-like shoots, and these should be trained well down, as it is likely to become very leggy. It does best on a south wall, where the warmth helps to ripen the wood. On a pillar it has a tendency to rush up very quickly and become bare at the base, and seems to lose its freedom of flowering.

The same may be said of that other fine Hybrid Tea Climbing Mrs. W. J. Grant (The E. S. Hill Co., 1899). Both this and Climbing Papa Gontier produce very much finer flowers with us than do their dwarf progenitors. In this garden one of the first joys of the rose year is to find a big bloom of Climbing Mrs. Grant on a south wall and this usually happens before May has passed into June.

Climbing Caroline Testout.

The next two pink climbers I would recommend are Climbing Caroline Testout (Pernet fils-Ducher , 1890) and Papillon (Nabonnand, 1882). These are excellent for forming pillars, though no doubt Papillon, being a Tea, would appreciate a wall where space can be given it. It is sufficient to say of Climbing Caroline that it grows with great vigour, and is able to produce as fine or even finer flowers than the popular dwarf variety of that name.

Papillon is an excellent climber, and unquestionably an ideal rose for a tall pillar; for though it goes up quickly it does not forget in its desire to reach the top that the most important thing for a pillar rose, as for any other kind of pillar, is a good broad base, and so it produces plenty of shoots on its upward way.

Papillon.

The past hot summer suited Papillon admirably. It was conspicuous in many of the decorative exhibits at the N.R.S. Autumn Rose Show, and a tall vase filled with long sprays of its coppery-pink flowers at the Crystal Palace in late September was one of the most effective exhibits of the show. My number is now complete, but, in addition to many beautiful roses, such as Lady Waterlow, Gruss an Teplitz, Gustave Regis, etc., which, though usually grown as bushes are very effective as climbers on low walls or as dwarf pillars.

White Lady.

SOME INTERESTING VIBURNUMS.

The last ten or twelve years has added a considerable number of showy and interesting viburnums to the list of shrubs suitable for outdoor culture, for although some of them had been known of, from herbarium specimens, at an earlier date, they had not previously been seen in cultivation in British gardens. Though they are of such recent introduction, however, several have already found for themselves a prominent place, which says a great deal in their favour, for several of our best garden shrubs are found amongst the older viburnums. As is the case with the majority of the well-known viburnums, the newer kinds thrive satisfactorily in almost any good garden soil, that of a loamy character being suitable to most, whilst a little peat added to sandy soil suits the remainder. It most cases cuttings of half-ripe wood, inserted in pots of sandy soil indoors, in July or August, form a good means of increase, but it is also possible to propagate many sorts from seeds, which are matured most years.

V. buddleifolia is a Chinese shrub, six feet or so high, which was sent to Messrs. Veitch from Mr. E. H. Wilson when collecting in Hupeh. He reports it as being found at altitudes varying from 3,000 to 5,000 feet. Its leaves, as the name implies, bear a striking resemblance to those of some of the buddleias, and are not unlike those of B. variabilis, although smaller. They are lance-shaped, and up to six inches in length, and one to one and a-half inches wide, the margins being toothed. The undersurface of the leaves and the young wood are covered with a dense grey pubescence, whilst the upper sides of the leaves are also grey and hairy. The white flowers are borne in dense terminal heads.

V. Carlesi.—It is about nine years since this charming species was introduced, and some three or four years later the earliest flowers were produced in this country. Collected in Corea by Mr. W. R. Carles, about 1885, it was named in his honour, and prior to its introduction to this country it was cultivated in Japan. When first introduced to England it came with the reputation of being a tender shrub, but after nine years' experience of it in an open border, it has proved to be as hardy as other new kinds, though it appreciates a little shelter from cold winds. Of rather slow growth, it forms a compact little bush one and a-half to two and a-half feet high, with rounded, greyish, dentate leaves, two inches or so across. Flower buds are formed during one summer for the next year's flowers, and they commence to expand late in April or early in May. In the bud stage they are pink, but on expanding they are white, their opening being accompanied by a delicious perfume. Fully expanded inflorescences may be from two to three inches across. This species thrives best in light soil, into which a little peat has been dug.

V. Davidi.—This species appears to have been first brought to notice by Father David, who collected it in Mupin in April, 1869. It was named by Franchet, with many more of David's plants, in Pl. David, ii., p. 69. Many years later Wilson collected it and sent home seeds. The latter traveller found it as a shrub, one or two feet high, on mountains at an altitude of 8,400 feet. It differs from many of the viburnums by having almost glabrous leaves. These are four to six inches long, and one and three-quarters to two and a-half inches wide, with serrate margins and acuminate apices. They are distinct by reason of three well-defined veins, the two outer ones forming an ellipse about a quarter of an inch from the margins. The small white flowers are borne in dense terminal heads, and they are succeeded by purplish fruit.

V. Henryi.—This appears to be very variable, for travellers have recorded it as a trailing plant, and again as a bush or small tree, from ten to twenty feet high. The slender branches have greyish bark when young, and purplish when older, and they are clothed with yellowish-green, oblong, evergreen leaves, which have serrate margins. Small white or yellowish flowers are borne in terminal panicles, which may be up to four or five inches long. It has been recorded from Hupeh, Szechuan, S. Washau, and other districts.

V. rhytidophyllum.—Much has been written about this wonderful evergreen species of late years, and it is certainly one of the most remarkable of the many Chinese introductions. Growing naturally to a height of ten feet, it is conspicuous by reason of its large oblong leaves, which may be anything up to nine inches long, and two and a-half inches or more wide. The upper surface is yellowish-green, and curiously wrinkled, the undersurface and the young wood being thickly covered with brownish-yellow, star-shaped hairs. The cream-coloured flowers appear in large flattened heads, sometimes as much as nine inches in diameter, and they are succeeded by red and black berries.

V. utile.—This is another handsome Chinese species, which forms a bush up to five feet in height. The oval leaves are from one to three inches long, silvery, and tomentose below, and dark green above. White flowers are borne freely in rounded heads two to three inches in diameter, during early summer. It is easily one of the most decorative kinds, and one which ought to be widely grown in the near future.

W. D.

"CARNATIONS, PICOTEES, AND PINKS" will tell you plainly how to propagate and grow these favourite flowers to perfection. The work is freely illustrated with plates of leading varieties, and explanatory diagrams as to layering, taking cuttings, fertilising blooms, etc. Price 2s. 6d. net. by post, in box, 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

A VALUABLE LATE WHITE GRAPE.

When gardener to Lady Hutt at Appley Towers, Mr. Miles devoted some part of his attention to raising new grapes, and was so far successful in this part of his activities as to obtain two varieties of so high an order of merit that first-class certificates were conferred upon them by the Royal Horticultural Society. One of these was named Appley Towers, after the place of its origin, and the other was dedicated to Lady Hutt, and both varieties, if not grown so largely as their merits would warrant, have maintained their places in gardens in which grapes are grown somewhat largely under glass.

The first of these two varieties to be submitted to public notice was Appley Towers, of which three excellent clusters were shown by Mr. Miles at one of the several meetings held by the Royal Horticultural Society in the autumn of 1899. This variety belongs to the black section, and has medium-sized bunches and berries, and the latter have a thick skin with fine bloom and the flesh is firm and richly flavoured. It has the merit of setting freely, and the fruit remains in excellent condition until quite late in the year. It is described as having been raised from a cross effected between Gros Colmar and Alicante, the first-named being the seed-bearing parent.

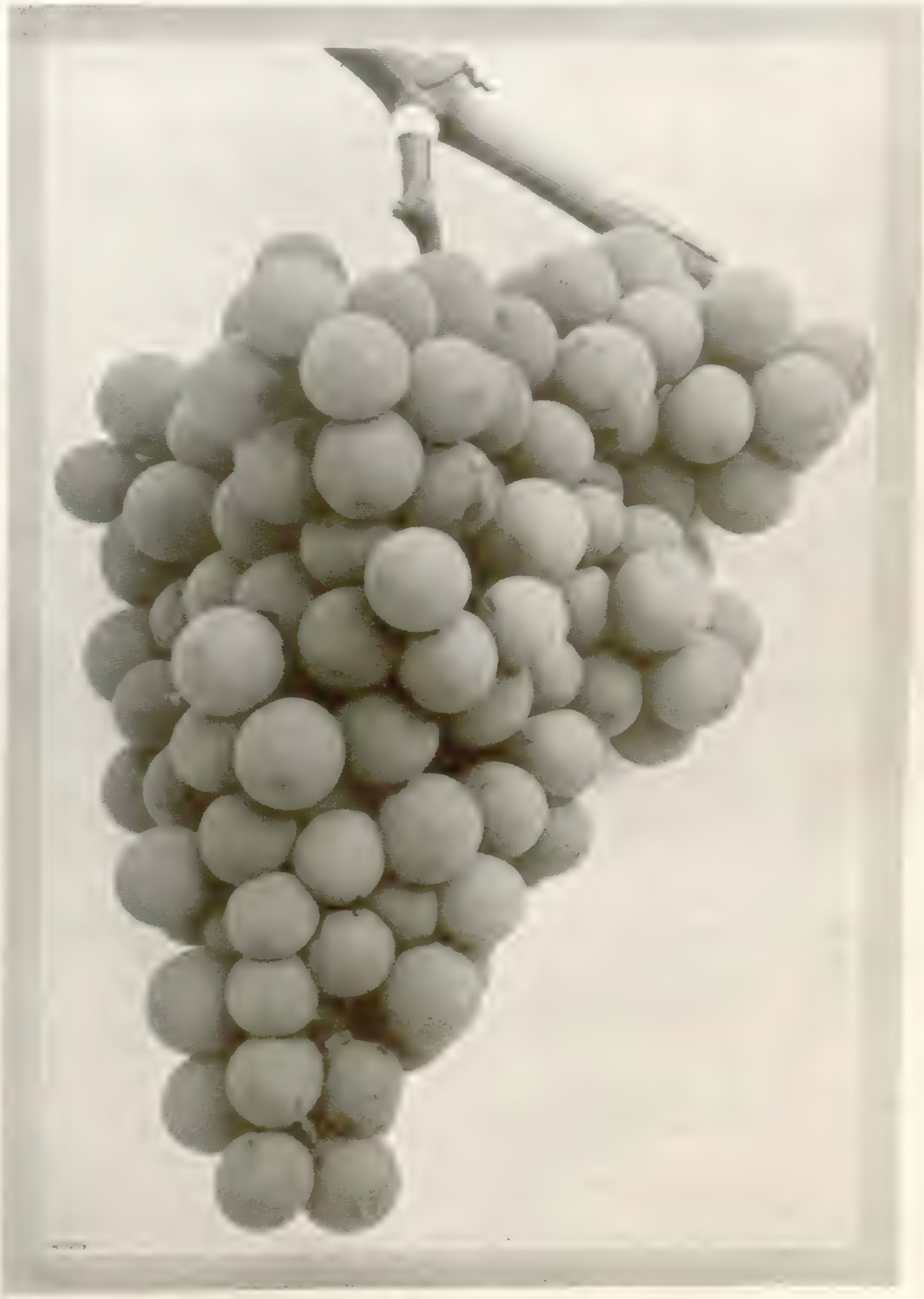
The origin of the foregoing variety is of special interest from the fact that Lady Hutt, which was shown at a meeting of the Royal Horticultural Society in the autumn of the following year, has the same parentage. Whether they were raised from seeds taken from the same berry, or, indeed, from the same bunch is not recorded. All the readily accessible information relating to the parentage is to the effect that they were raised from Gros Colmar, the flowers of which had been fertilised with pollen of Alicante. Lady Hutt belongs to the white section, and in appearance the bunches have a resemblance to the sweetwaters, with which the late Mr. Barron classified it. The bunches are of medium size, shapely, and decidedly attractive. The berries also are of medium size, and of a bright golden hue, and the flesh is firm and rich in flavour. It is described in "Vines and Their Culture" as a midseason grape, but, as the fruit remains in perfection until the end of the year, its proper place is among the late varieties. The fruit is available for the table early in the autumn, but keeps well until the end of December, and may be described as the best white grape, excepting Muscat of Alexandria, of its season.

Lady Hutt has no peculiarities that render it specially difficult to produce full crops of high quality, and should be in gardens from which supplies of late grapes are required. If Muscat of Alexandria is grown Lady Hutt will make an agreeable change occasionally, and if there are no provisions for the cultivation of Muscats Lady Hutt will be a very good substitute. At Somerleyton Hall the last-named is most successfully grown in the same structure as Lady Downes, and Mr. Hanson, the head gardener, regards it with much favour, and anyone who has seen the fine crop we had the opportunity of seeing a few days ago will not be surprised that he should do so. In his practice, Mr .Hanson allows a rather greater extension of the laterals than is deemed necessary in the case of the other grapes generally grown, and he somewhat restricts the space provided for the roots. With reference to these two points, it may be suggested that those who have failed to obtain a full measure of success in the cultivation of this fine grape will be well advised in adopting the practice which has given such good results in the Somerleyton Gardens.

BERRY-BEARING SHRUBS FOR XMAS DECORATIONS.

There is usually a charm about shrubs that carry their fruit through the winter, whether the berries are black, white, red, or yellow, though those with red berries are most attractive. Unfortunately, we have not many species that grow sufficiently large to make bold specimens for the lawns, though there are ample of smaller dimensions, useful as pot plants, or for grouping.

Undoubtedly the best of all shrubs for large specimens is the holly, of which we have many varieties of the Ilex aquifolium, all of which are more or less beautiful, but for these to fruit profusely they must be given an open situation, and be allowed to grow naturally, as it is on the previous year's shoots that the fruit are borne. Where the trees are grown in an open sunny position they do not assume so dense a habit, and as the shoots are farther apart the light and air are able to penetrate among the branches, the young wood is better ripened and the crop of fruit is improved. In addition to the varieties with green or variegated foliage and red fruit, we have others carrying yellow berries, and, though less attractive, they are very beautiful when laden with their golden fruits. In addition to these there are several kinds of ilex that are, as a rule, but little known to gardeners, and one of the most attractive that I am acquainted with is I. latifolia. Though introduced into this country as far back as 1840, it is seldom met with. Yet it is perfectly hardy. When the tree has attained a large size, it assumes a loose, upright habit, making shoots each season from a foot to fifteen inches in length. The flower stems are very short, so that the berries cling close to the shoots. The foliage is very large, resembling that of a laurel except for the spines on the points of the leaves.



GRAPE LADY HUTT.

A late white variety of great excellence.

Most people are well acquainted with the aucubas, but not everyone has seen the shoots covered with clusters of large red berries; the reason is that there are male and female plants, and unless some of each are grown in close proximity to one another, so that the pollen may be scattered by the wind there will be no fruits. Birds, as a rule, do not touch the berries, and this being the case, the bushes are attractive until the spring, when the fruit falls off. There are several varieties, some having green and others spotted foliage. Small plants grown in pots are very attractive for indoor decorations during winter.

Skimmias, when grown in pots, make very neat, showy plants for either the cool conservatory or indoors, as they fruit so freely even when quite small. They are quite hardy, but when grown for indoor decoration should have the protection of a cold frame, so that they may be lifted when required. S. oblata has large green leaves, while the foliage of S. japonica is small and very neat. A peaty soil suits them best. Pernettyas make neat little plants for indoor decorations, fruiting most profusely even in a small state. Though these will grow to fair-sized bushes if allowed to ramble, yet when its roots are confined in poor soil it makes rather slow growth. The fruits vary considerably in colour on different plants.

We are accustomed to see Euonymus radicans grown as an edging plant to small beds, but those who have not tried it for covering walls or pillars, have no idea of its beauty, and they would be astonished at its growth. The foliage, when the shoots are allowed to ramble at will, attain about three times the dimensions of those on small, low plants, and when once the roots have taken good hold of the soil, growth is most luxuriant, being two or three feet in length in one season, and in the axils of the leaves, on the previous year's growths, there will be produced clusters of triangular red berries. In some seasons these are in such abundance that they look like a lot of coral beads among the large silvery foliage. The deciduous Euonymus europæus, which is often found growing in the hedge-rows, produces its clusters of berries in this manner. The common privet is so well known that it requires no description; its terminal spikes of black berries are very attractive, and are often used with effect at Christmas. But it is to the Chinese and Japanese species that we most look for special effect, as some of these are most attractive, especially when grown as standards. P. sinensis floribundum, P. ovalifolium elegantissimum, P. Quihoni, and others make excellent subjects for this purpose, and when grown on stems from four to six feet high, are very useful for grouping with other plants.

There are many other deciduous shrubs that produce berries that do not ripen until late in the season or are not palatable to the tastes of birds; among these we may mention the Snowberry (Symphoricarpus racemosus), S. vulgaris variegatus, and some of the viburnums and berberries. The latter produce their fruit in pendant clusters. There are yet others, but space forbids me mentioning more than the tree ivies and the evergreen thorns, many of which are very attractive.

H. C. PRINSEP.

THE BEST WICHURAIANA ROSES.

Your correspondent "White Lady" alludes at page 776 to Excelsa, a remark I can confirm as to its being a stronger grower and a free bloomer. With me it made growth 12ft. high direct from the base and flowered profusely. It was one of the best varieties I had, with flowers of a bright colour, to withstand the extraordinary sun heat we experienced last summer. I look upon this rose as one of the best of the Wichuraiana class. Minnehaha with me is quite distinct from Dorothy Perkins, and it has the merit of displaying its blossoms in an open panicle which is at once graceful and imposing. For pillars it is one of the finest. Gardenia cannot be omitted from even the smallest selection. It is the first rose of its class to produce its blooms, and it is the latest in flowering, its yellow buds are most charming, as also are its flowers, which are white when fully expanded. These, coupled with the dark-green foliage and vigorous growth, renders it one of the finest pillar plants we have, far outclassing Jersey Beauty, which, although pleasing when in flower, is altogether too fleeting.

Madame Alice Garnier has small pink flowers on a yellowish ground in clusters not too thickly studded. The foliage is especially dark green, emphasising the blossoms above. This is a Wichuraiana climber. I can strongly recommend Paul Transon, rosy-pink, free, and opening its flowers early

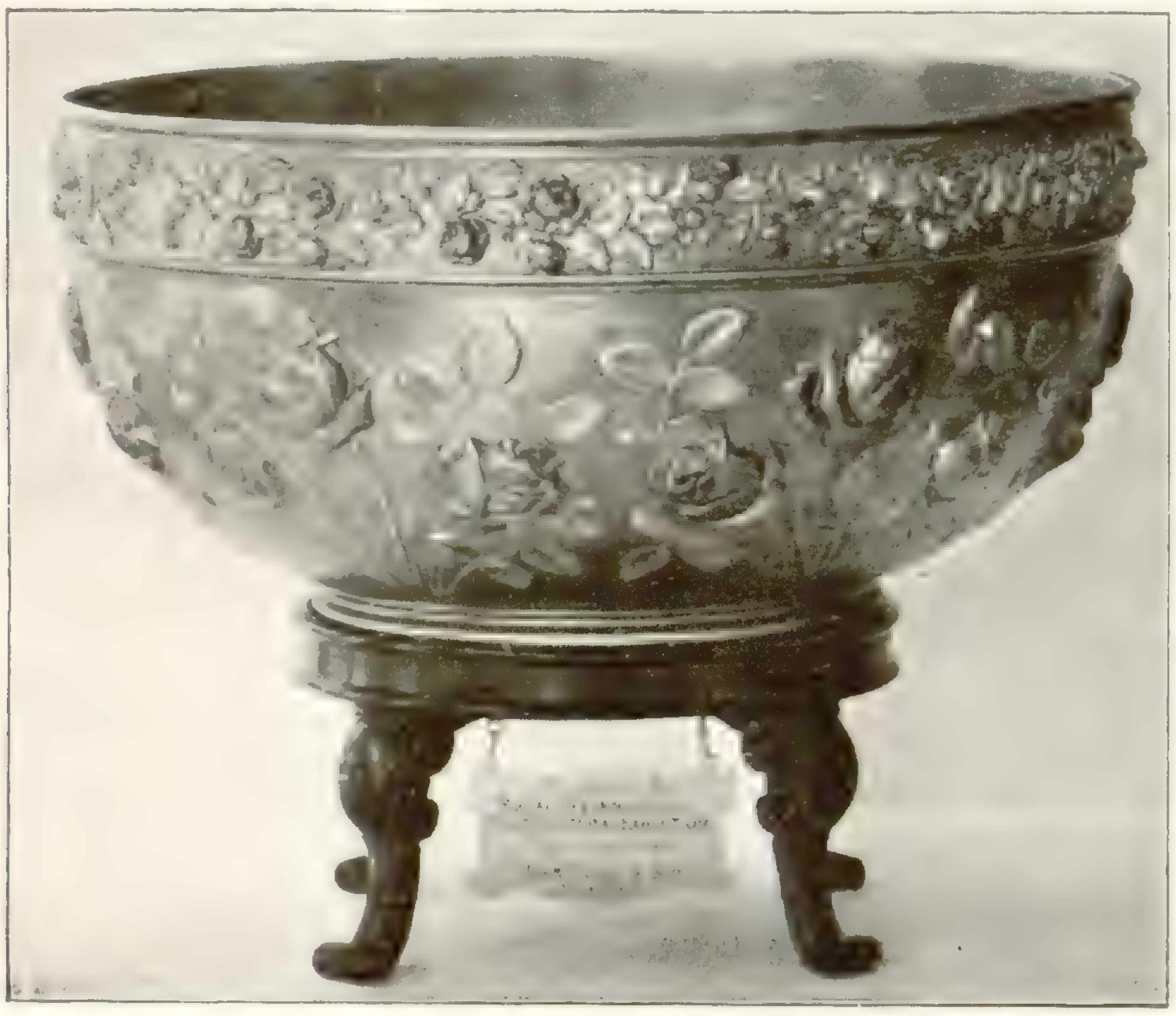
E. M.

THE CLAY ROSE-BOWL.

The magnificent silver-gilt rose-bowl which we herewith illustrate has been presented to the Royal International Horticultural Exhibition, 1912, by Messrs. Clay and Son. It will be awarded to the best exhibit of roses at the exhibition in May next.

The following description is supplied by the manufacturers, Messrs. Elkington and Co., Lim., 22, Regent Street, London, S.W. The bowl is silver-gilt, with roses and a floral band chased repoussé, in high relief, and gilt in natural colours. The bowl weighs 80oz., measures 13in. across; its height, without pedestal, is 6½in., with pedestal 10in.

The inscription, which is engraved upon a silver-gilt plate attached to the pedestal, reads: "Presented to the Royal International Horticultural Exhibition, May 22 to 30, 1912, by Messrs. Clay and Son, Stratford, London, E." It is also proposed to have a detailed inscription engraved within the bowl itself.



THE "CLAY" ROSE BOWL.

To be awarded for the best exhibit of roses at the Royal International Horticultural Exhibition of 1912; presented by Messrs. Clay and Son, Stratford.

ROCK GARDEN JOTTINGS.

MOSSY SAXIFRAGES IN WINTER.

The mossy saxifrages may be said to have two seasons of special beauty. In spring they are exquisite with their sheets of white or pink flowers, and in late autumn and winter they are lovely with their mounds of green of various shades. Some of them are like mounds of moss, and show how aptly they have been named "mossy saxifrages."

Variegated-leaved Arabises.

This is shared by the variegated-leaved arabises, especially by those of the class of Arabis albida and A. alpina. In the first we have the golden and silver variegated forms, which are very lovely just now, and which give good patches of brightness to the rockeries. In the case of the second there is now a fine variegated-leaved variety of the well-known double arabis. This appears to be a little less hardy than the green-leaved one. Then there is Arabis lucida variegata, poor in flower, but in a cool soil giving fine rosettes of variegated leaves. A. procurrens variegata is not of so much account as a garden plant.

Silvery-leaved Plants.

Quite a good appearance is also made by some of the plants with silvery or white leaves, which we appreciate now even more than at other times, when white flowers are plentiful. At present blossoms of any kind are few and far between, and we enjoy a little colour of any kind. In winter some of the cerastiums, such as C. biebersteiniana and C. tomentosum, are fine with sheets of white. Santolina incana is also very nice, and gives a mass of silvery leaves. But I am not writing this to give a list of white and silver-leaved plants, but to bring before the notice of the reader the value of such plants at this season.

Erica carnea.

Quite pretty, also, at the present time, are the bushes of Erica carnea, even though they are not fully in flower. They are pretty little bushes of perfect greenery, all thick-set with flower buds. I think the white variety, E. carnea alba, is the prettier just now, as its white buds are spangled all over the plants almost as thickly as the stars in the Milky Way. I expect to have these heaths, the flesh-coloured and the white, in bloom before the snowdrops this season.

Yuccas.

Yuccas also please us greatly in winter. Though not in bloom, of course, they are effective, as they stand with their handsome growths and fine leaves. I have a goodly number here, and it is hard to say which is the finest. Gloriosa is grand, so is recurva; and I like some of the newer ones, such as Vomerense and Saundersi, Italian hybrids. Albella is also a pretty one for winter, but there is none so good for general garden purposes as that known in gardens as Y. filamentosa, which has hair-like filaments along the margins of the leaves. It is more free-flowering than any one I know, and is thus a good winter and summer plant. Such subjects as this give a character to the large rockery which it requires.

New Zealand Veronicas.

It is rather pleasant to see how these are growing in favour. For rockeries they are capital subjects, as a whole, although some are rather too tall for the small place. Pinguifolia is very nice; Bidwilli is a gem for the rockery; Lindsayi makes a bold bush with pink flowers; and such as cupressoides and Hectori are quite valuable subjects in every way. They are, in general, good winter subjects.

The Soldanellas.

These are now obtaining the shelter of sheets of glass for the winter months. This is not because they are injured in their foliage by the winter frost, snow, or rain, but because they bloom more freely if so sheltered and kept dry overhead. I have always a lingering impression that a special place might be made for the soldanellas, where they might receive plenty of water from the time they come into flower until, say, September, when they might be kept dry, or nearly so, for the rest of the time. But the sheet of glass is a good substitute for more natural conditions. It is interesting to think that these plants flower through the snow, as we would hardly expect such dainty and delicate-looking bells to stand such experiences.

Cobweb Houseleeks.

Practically all of these want the same consideration shown them in the way of winter protection from rain. On a wall planted in such a way that the rain cannot fall on the cobwebby tops, they will do very well as a rule; but in some places they also require this sheet of glass protection. They do not generally run into big clumps, and are all the easier covered with a piece of glass. A piece such as is used for a half-plate camera plate will do for a fair sized plant, and even a quarter-plate one will be big enough for a plant bought from the nurseries this year. Sempervivum arachnoideum is a long time of making a big piece, and S. Laggeri is much more rapid-growing with its bigger rosettes.

S. Arnott.

Dumfries.

APPLE NORFOLK BEAUTY.

I was glad to see Mr. Day speak so favourably of this apple on page 755. Since its introduction I have been a strong advocate in its favour, and hold the opinion that it will oust Warner's King from its present position, as this apple has so much deteriorated during recent years. Its constitution appears to have degenerated of late years, and this failing has been noticed in Kent as elsewhere. Mr. Day describes Norfolk Beauty as in season from September to Christmas. Here, in the South, it is purely an October apple. It seems strange that its keeping qualities have so altered, for when I first saw it the fruit kept soundly until the end of January.

The tree is of free growth, and to get good crops early an extensive system of pruning should be practised; close cutting back induces vigorous growth. A good way to obtain a full crop of fruits early is to put several grafts on rather a tall tree, and after the first pruning allow the shoots to extend, thus forming a weeping head of great beauty and usefulness.

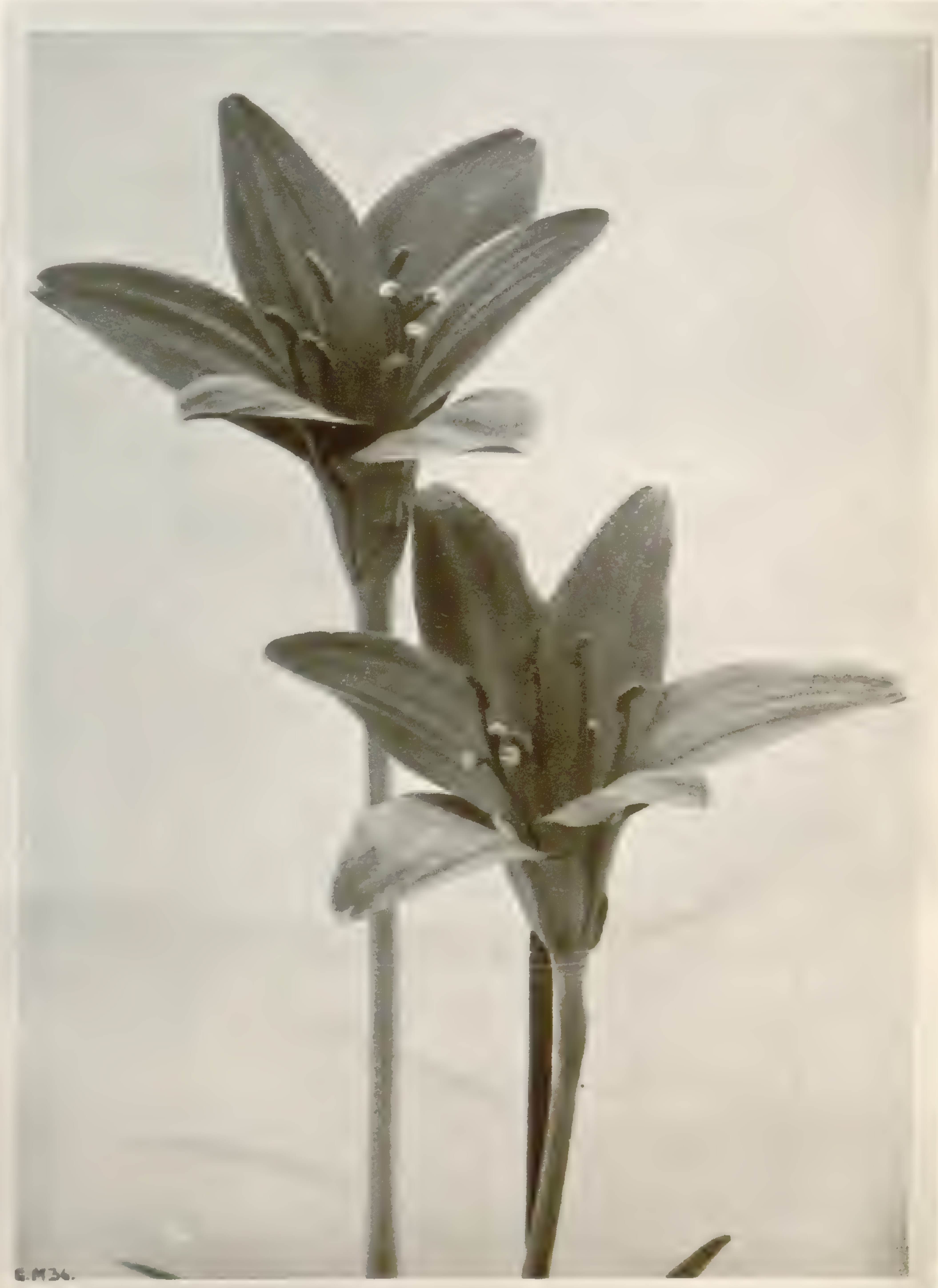
E. Molyneux.

NEW PLANTS, ETC.

◆

CYPRIPEDIUM DRACO WESTONBIRT VAR.

This fine form of a large and bold hybrid between C. insigne Harefield Hall and C. Euryades was figured on p. 913 of our issue of December 9. The dorsal sepal is white and green, freely and heavily spotted with bright purple; the petals are green shaded with brown, and the lip is of similar colour, but paler shade. A.M., R.H.S., December 5. Lieut.-Colonel Sir George Halford (grower, Mr. H. Alexander), Westonbirt, Tetbury, Gloucester.



ZEPHYRANTHES AUREA.

A beautiful golden yellow. Peruvian bulbous plant. F.C.C., R.H.S., December 5. Sir Trevor Lawrence, Bart. (gardener, Mr. W. Bain), Burford Lodge, Dorking.

ZEPHYRANTHES AUREA.

This is by no means a new bulbous plant, but, on the other hand, it is by no means common in gardens, and doubtless the fine condition in which it was shown at Westminster recently was due not a little to the brilliant and hot weather of the past summer. Z. aurea is a Peruvian species, and bears flowers of the size and shape of a valotta, but of a rich golden-yellow colouring. F.C.C., R.H.S., December 5. Sir Trevor Lawrence, Bart., Burford Lodge, Dorking. (Gardener, Mr. W. Bain.)

SOPHRO-CATTLEYA LOTTE MULLER.

A very bright and pretty hybrid with flowers of good size and substance. The sepals and petals are rosy-purple, freely flushed with crimson-purple, while the lip is velvety-crimson with a fine gold-veined throat. The parents are Cattleya Petersi and Sophro-cattleya Nydia. F.C.C., R.H.S., December 5. Messrs. Charlesworth and Co., Haywards Heath.

TRICHOPILIA GOULDI.

A very interesting and pretty hybrid obtained by crossing T. suavis with T. fragrans. The large lip is whitish, freely spotted with pink, and with a yellow throat; the sepals and petals are white and pink. A.M., R.H.S., December 5. Messrs. Charlesworth and Co., Haywards Heath.

CARNATION BATH'S PREMIER.

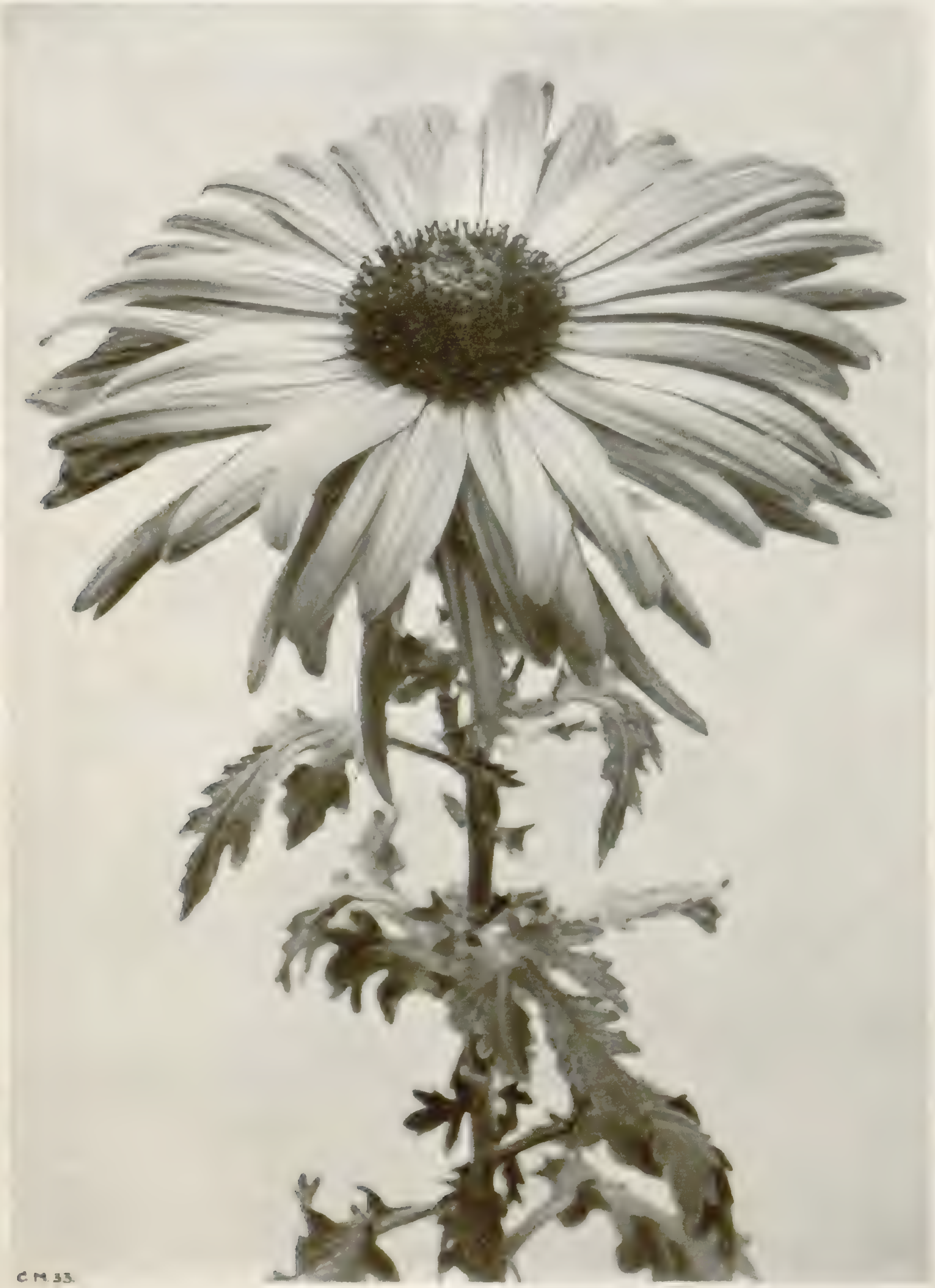
This excellent pale yellow perpetual carnation is descended from the famous "Lawson" variety, and is of similar habit and style of flowering. The blooms are of good size and substance. A.M., R.H.S., December 5. Messrs. R. H. Bath, Lim., Wisbech.

BEGONIA GLORY OF CINCINATTI.

Of the B. Gloire de Lorraine type, this newcomer is of American origin, and it surpasses the type form in producing larger, flatter flowers, and rounder leaves. There is little difference in colour, but possibly Glory of Cincinnati is a trifle brighter than Gloire de Lorraine. A.M., R.H.S., December 5. Mr. G. Lange, Hampton.

BEGONIA ALTRINCHAM PINK.

A very desirable new winter-flowering begonia of semi-tuberous habit. The plant is of excellent habit, and blooms with great freedom, producing pretty double flowers of a pleasing soft shade of carmine-rose. This addition is a very promising one, and was well shown. A.M., R.H.S., December 5. Messrs. Clibrans, Altrincham.



CHRYSANTHEMUM ISABEL GRAY.

A handsome single variety; crushed strawberry and buff are the colours associated in it. F.C.C., N.C.S., December 4; A.M., R.H.S., December 5. Mr. Phillip Ladds, Swanley Junction.

CHRYSANTHEMUMS.

Isabel Gray.—A fine single variety of large size and much grace; the colour is soft or pale crushed strawberry, overlaying or shaded with buff. F.C.C., N.C.S., December 4. Mr. Philip Ladds, Swanley Junction.

Bertie.—A very distinct single variety, best described as golden buff; very striking. Commendation, N.C.S., November 20. Mr. H. Lawrence, Shoreham.

Excelsior.—A good single variety, bright terra cotta, best as a disbudded flower. Commendation, N.C.S., November 20. Mr. H. Lawrence.

Brightness.—A striking flower of single form bright crimson, with a large yellow zone, petals rather pointed. Commendation, N.C.S., November 20. Messrs. G. Williams and Son, Cardiff.

Dr. C. L. B. Stares.—A decorative Japanese variety, with long quill-like florets, mauve-pink in colour. Should be popular for decorative work. Commendation N.C.S., November 20. Mr. P. Ladds, Swanley.

Miss Mabel Cooper.—A decorative single variety, rich deep rose with several rows of petals. Commendation N.C.S., November 20. Mr. P. Ladds.

Miss Margaret Gray.—A single variety, rich golden bronze, with perfect stems; a most popular colour. F.C.C., N.C.S., November 20. Mr. P. Ladds.

Miss Phyllis Bryant.—A splendid single, rich yellow, grand as a disbudded flower. F.C.C., N.C.S., November 20. Mr. P. Ladds.

Mrs. Whitehorne.—Another single variety, rich bronze, of excellent form and substance. Commendation, N.C.S., November 20. Mr. P. Ladds.

Mrs. Rees James.—A large single variety, blush, of a pleasing shade; best as a disbudded flower. Commendation N.C.S., November 20. The Millhill Vineries, Lim., Millhill.

Turvey Drop.—A good single variety, best described as a rich rosy-red, good in form. Commendation N.C.S., November 20. Mr. P. Ladds.

William Buckingham.—A charming single form, old gold in colour, the petals being somewhat freely arranged. Commendation, N.C.S., November 20. Mr. W. Buckingham.

Rhoda.—A decorative single variety, rich rosy red. Commendation N.C.S., November 20. Mr. G. Mileham, Leatherhead.

Rene Ellis.—A single variety of the Mary Richardson type, but richer in colour, which may be described as bright terra cotta. Commendation N.C.S., November 20. Mr. W. Higgs, Fetcham Park Gardens, Leatherhead.

Percy Arnold.—A single form, bright pink, good in the spray. Commendation N.C.S., November 20. Mr. W. Lingwood.

Millhill Beauty.—A large single form, pure white, of the Marsa type, and very fine as a disbudded flower. Commendation, N.C.S., November 20. Millhill Vineries, Lim.

Miss Elizabeth Stevenson.—A good single form, pale pink, light and graceful. Commendation, N.C.S., November 20. Mr. H. Redden.

Miss Elsie Davis. — A Japanese variety, rich rosy pink, large and solid, with fine reflexing florets. Commendation, N.C.S., November 20. Mr. G. Mileham, Leatherhead.

Miss F. M. Bird.—A fine exhibition single variety, blush-white, good litter in the spray or disbudded. Commendation, N.C.S., November 20. Mr. H. Redden.

Golden King.—A fine deep incurved variety, rich yellow in colour, and of capital substance. and build. F.C.C., N.C.S., November 20. Messrs. W. Wells and Co., Merstham.

F. Surrey.—A very handsome Japanese variety, rich crimson with broad strap-like florets; should make a fine exhibition flower. F.C.C., N.C.S., November 20. Mr. G. Mileham.

F. J. Mew.—A large exhibition Japanese variety, rich crimson with a gold reverse; a fine promising variety. F.C.C., N.C.S., November 20. Mr. Martin Silsbury, Shanklin, Isle of Wight.

Addie White.—A fine single variety of good form, reddish-bronze in colour, very distinct. Commendation, N.C.S., November 20. Messrs. W. Wells and Co., Merstham.

Polly Duncan.—A capital single form, perfect in outline, buff with a yellow shading. Commendation, N.C.S., November 20. Messrs. W. Wells and Co., Merstham.

W. A. Read.—A decorative Japanese variety of medium size, rich crimson, with good stems and foliage. F.C.C., N.C.S., November 20. Messrs. W. Wells and Co., Merstham.

Marjorie Lloyd.—Another charming single variety, rich golden apricot in colour, and of a perfect form. F.C.C., N.C.S., November 20. Messrs. W. Wells and Co., Merstham.

Browning.—A really good single, pure buff in colour with good substance, stems, and form. Commendation, N.C.S., November 20. Mr. Norman Davis, Framfield.

Market Buff.—A decorative single form of attractive appearance, and plenty of substance; rich buff in colour. Commendation, N.C.S., November 20. Mr. Norman Davis, Framfield.

Mrs. T. Brooke Edwards.—A Japanese decorative variety, of medium size, salmon-buff in colour, with narrow, refined florets. Commendation, N.C.S., November 20. Mr. Norman Davis.

Sir Walter Scott.—Another single variety, bright yellow, of fine form and with plenty of substance. F.C.C., N.C.S., November 20. Mr. Norman Davis.

Josephine.—A beautiful single variety, pure yellow, of the finest type; should make an ideal flower for exhibition. F.C.C., N.C.S., November 20. Messrs. W. Wells and Co.

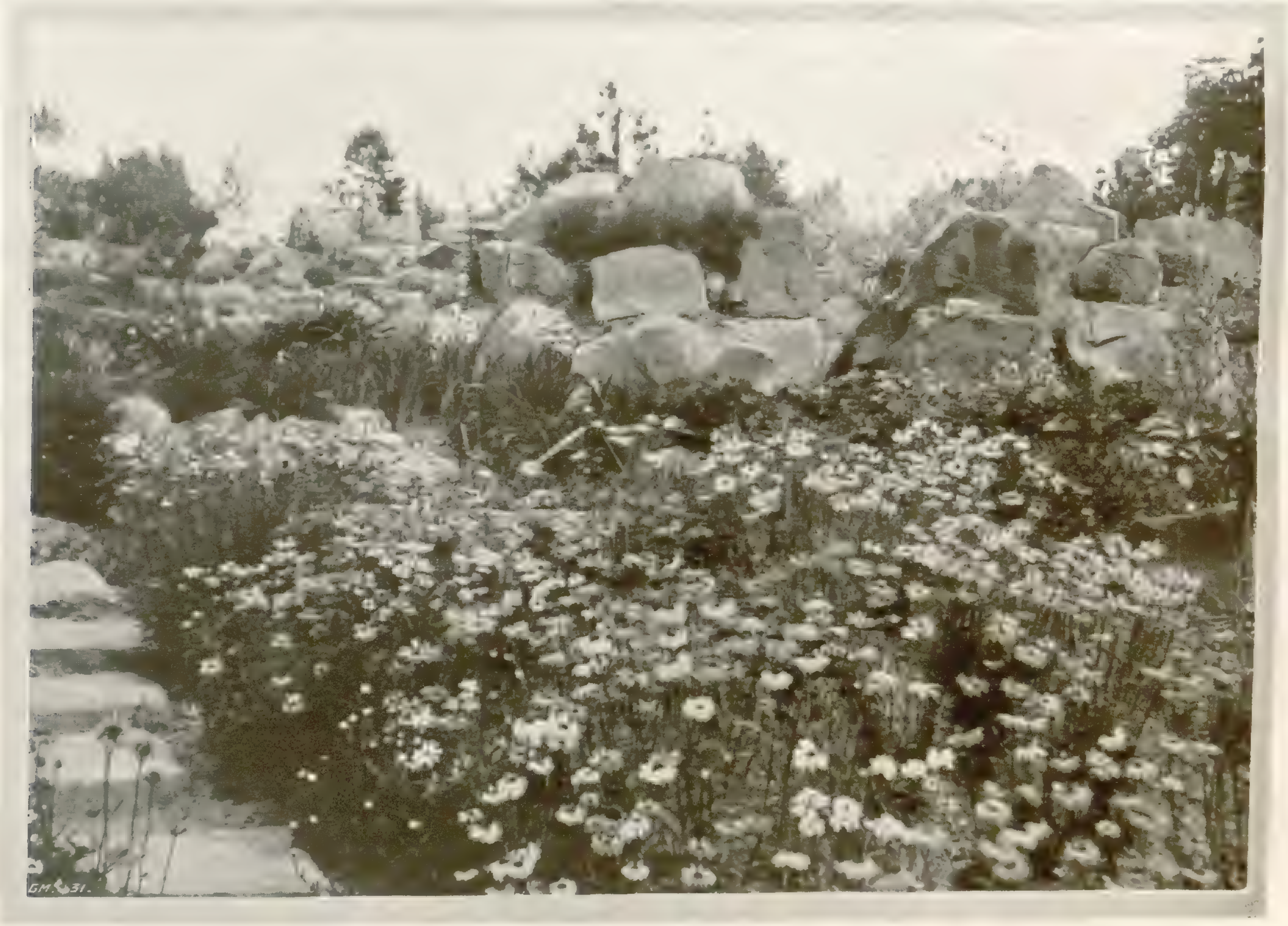
CHRYSANTHEMUMS.—For full instructions on the Culture of Early-flowering Chrysanthemums in beds or borders for garden or greenhouse decoration, read the Second Edition of Chrysanthemums for Garden and Greenhouse, by D. B. Crane, price 2s. 6d. net; or by post 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

DAISIES IN GARDEN DECORATION.

In discussing the merits of daisies for garden decoration may I at once say that under this heading I purpose to include the leading subjects of the Daisy, or Composite order.

The valuable effects to be created by the use of daisy-like blossoms, both in the garden, and as cut flowers for the house, will be apparent to all who are interested in floriculture and decorative gardening. So many new varieties are being constantly introduced in the main families comprising the Compositæ, that one can choose from among them a series of plants that will yield a wealth of blossom the season through.

The colourings among them are invariably good, and the natural grace and dainty formation of the blossoms renders them fitting companions for a host of other and differing plants. With the idea of attaining a high standard of beauty, I would urge a comparative survey of the composites by all who have the care of gardens and pleasure grounds. They are essentially plants to group freely, bold sweeps of this, long drifts of that, and arranged, if possible, so that the eye is able to range from one plant to the other through the whole planting.



AN EFFECTIVE ARRANGEMENT OF PYRETHRUMS.
In the gardens of Holland House, Southcliff.

As a simple illustration of my meaning, may I refer readers to the accompanying view of a portion of the plantings of hybrid pyrethrums at Holland House, Southcliff. As will be noted, the pyrethrums are grown upon sloping ground, with causeways of stepping-stones between the groupings, thus showing the blossoms to the best advantage, and avoiding the flatness which might accrue from planting up a level site. Previous to the burst of pyrethrum blossom, these same slopes are aglow with the gold of daffodils, and later, after the pyrethrums are over, gladioli of the Childsi and Gandavensis sections take up the tale.

Other composites largely used include the gaillardias, which give a continuous display of colour from June until the frosts. Chrysanthemum maximum of the best varieties give practically the same period of duration, with ordinary care in soil attention and in keeping the plants from seeding. Mrs. Lowthian Bell furnishes our largest plantings, but a good range of seedlings give practically as pleasing results, with more diversity in height and habit. Of the latter, St. George, a handsome five-inch diameter flower, is being freely propagated. These forms of C. maximum are grand for blending with soft blue campanulas of the grandis and persicifolia types, with delphiniums of the Belladonna group, with the Caucasian scabious, or as foreground groupings to Auchusa italica Dropmore var.

Erigerons are valuable for their drifts of lavender-shaded blossoms, which are so profusely produced. E. speciosus is fine, but E. splendens and E. Quakeress are exceptionally attractive. Coreopsis, again, are of great utility, C. grandiflora and C. lanceolata being among the best known. Of the latter species the variety oculata, with its crimson blotch on the petal bases, is also of value.

Of Michaelmas daisies or starworts, and the host of late summer and autumn-flowering chrysanthemums I need not speak. It is sufficient to note the splendid effects which one can create by freely using them. The selection of good forms is of great service, and helps the planter immensely, the matter of colour and habit of growth being of the utmost importance to the success of both groups.

Further, one has only to note the value of helianthus and heleniums, heliopsis and vernonicas, doronicums and inulas, rudbeckias and anthemis, to mention just a few groups, to perceive that one is justified in claiming a fuller need of public appreciation of the composites. And note, too, the ease of arrangement of a few single chrysanthemums or pyrethrums in vases. The dainty form is there, only needing the simplest light arrangement, while the lasting properties of the majority of the composites is well known.

Tall flowers of the nature of digitalis, the campanulas, delphiniums, linarias, etc., are exquisite when rising from a grouping of composites, giving just that grace which is necessary. In the matter of propagation, the composites are especially easy subjects, responding readily to division, and also to reproduction from seeds and cuttings. There is no difficulty about either method, and the best young plants are those subjected to cool treatment. Young plants are far better than old-established clumps, and it is the rule here to lift and propagate the major portion of the stock each season. Chrysanthemums, Michaelmas daisies, Moon Daisies, etc., are all lifted, and carefully gone through. Good seedlings of note are perpetuated, and varieties which do not come up to the standard are discarded. It is only by weeding out (the process of constant selection) that one can bring a series of really first-rate subjects into existence. Furthermore, this annual lifting gives one the opportunity of keeping the soil in good working order, which is of the greatest importance in plant culture.

Lastly, I may add, in reference to young stock, that they are less likely to grow unwieldy and get out of hand, as is the case where perennials are left standing for long periods. Staking is simplified, and in many cases the young vigorous bushy growth is capable of maintaining a good habit, without the use of stakes and tying material surely a point worth noting

P. S. Hayward.

BEGONIA MRS. HEAL.

Although the popularity of Begonia Gloire de Lorraine as a market plant continues, probably not a few who own private gardens are beginning to tire of this useful plant, and are turning their attention to the cultivation of that winter-flowering race produced by crossing B. Socorana with the tuberous begonias. Mr. Allan, gardener to Lord Hillingdon, Uxbridge, and other growers, have from time to time shown varieties of this section in remarkably fine condition during the dull season of the year, and thereby demonstrated the value of the plants for decoration, as well as the fact that their culture offers no serious difficulties.

At Burnham Grove, Burnham, Bucks, Mr. W. Lawrence, gardener to E. Clifton Brown, Esq., grows these newer varieties extremely well, and has the variety Mrs. Heal, with bright carmine flowers, very fine indeed, and the specimen figured was 1ft. 9in. high; 2ft. 4in. wide, and carried 184 fully-expanded blooms at the time the photograph was taken. Mr. J. Heal, Messrs. J. Veitch and Sons' raiser and hybridist, confesses that the plants at Burnham Grove are the finest he has ever seen.

The following information concerning the production of such handsome plants is kindly given by Mr. Lawrence, as follows: "The plants were raised from cuttings struck in April, 1911, placed in a temperature of 60 to 65 deg., with a little bottom heat. When nicely rooted they were potted and kept in the same temperature until well established, when they were placed in a slightly lower temperature, and potted as soon as acclimatised. When the outside temperature became considerably higher the plants were placed in a close pit, and when well rooted in their new pots the batch was placed for two months (July and August), in a cool pit, and shaded through the middle of the day. In September, when the nights grew cool, a little artificial heat was given just sufficient to warm the pipes. When frosts were imminent, the begonias were moved to an intermediate house, and potted again, using a mixture of two-thirds peat and fibrous loam, and a third of sand. The good results achieved are, I think, due to the maintenance of as even a temperature as possible, and freedom from draughts. Great care must be exercised to avoid over-watering, and at all times the plants must be kept quite free from insect pests."

Anthurium splendidum.—In the Gardeners' Magazine of November 18 (page 863) there is a most interesting article on anthuriums by Mr. H. T. Martin. Your correspondent, I see, recommends among the foliage kinds, Anthurium splendidum, which I was under the impression had now dropped out of cultivation, and I would like to ask him if, to his knowledge, it is still grown? A native of South America, this species was introduced in 1882, and distributed as a new plant by the late Mr. William Bull, of Chelsea, in the following year. It is a very distinct species, the leaves being heart-shaped, and the surface regularly puckered. The evenly disposed veins have their course marked by a band of deep green, while the intervening spaces are pale green. This species was always difficult to cultivate, the leaves, unlike those of most anthuriums, being of a soft texture, and therefore very susceptible to injury. It used to succeed best in the close moisture of a propagating case. Owing to its exacting requirements A. splendidum never became a favourite, and I was under the impression it was now lost, hence my troubling you with this query.—W. T

CHRYSANTHEMUMS FOR MARKET.

The following is the text of the paper read by Mr. Ladds on this important subject at the conference held by the National Chrysanthemum Society on the 4th inst.:

For convenience, said Mr. Ladds, I have divided the paper into the following sections: Stock, Treatment of Stock, Taking the Cuttings, Potting, Stopping, Staking, Disbudding, Housing and Ventilation, Feeding, Insects and Mildew, Packing, Lifting, and Treatment of Lifted Chrysanthemums.

STOCK.

My first remarks therefore will be regarding the selection of stock. Great care should be exercised in the selection of plants which are to be saved for stock stools. Very often, wholesale growers collect a quantity of last year's stools indiscriminately, pack them tightly in a box, and take cuttings from them in due course.

Much the better plan is to select those from which you have cut the best blooms in the flowering season. They can be marked at the time of cutting the bloom, and all those that have shown inferior blooms, bad foliage, or any defects that a chrysanthemum is subject to, can be discarded. Among the defects of the chrysanthemum I would at present only enumerate one, viz., the leaf disease, which has made itself so prominent during the last two or three years. Plants with this defect should never on any account be used for stock stools.

My next point is regarding the treatment of stock. Having selected the best stools, and after having removed most of the soil, stand them upon a hard-based border and just cover them with some good fine loam. Great care should be taken in the watering, as an abundant supply will lead to failure, some varieties wanting scarcely any water until the cuttings have begun to show through the soil.

If the stools are left in the pots, a top-dressing would be advisable in place of the old top inch of soil, which is generally over strong from last autumn's manuring.

TAKING THE CUTTINGS.

It is difficult to fix any date as the best for taking cuttings, but, generally speaking, my experience has taught me that the later the variety the earlier the cuttings should be put in. To enumerate a few: M. Panckouke, Framfield Pink (and family), and the Thompsons, are all the better for early striking.

For striking a large quantity of cuttings, I have found the following methods to be cheapest and most successful: In an ordinary 12ft. greenhouse, with a centre path, pat the border down rather hard. Place a piece of 1in. by 3in. batten on edge at the back and front of the border, held in position by 9in. stumps driven into the ground on either side of the battens. In this bed place 2in. of good loam, containing no manure, but to which has been added about two shovelfulls of coarse sand to a barrow-load. Pat down firmly, and dibble the cuttings in, about 100 to a square foot.

The length of the cuttings should be about three inches. I might say here, that, when taking the cuttings, be sure to have an eye left on the old stool to break again later on, in case of a failure with the first batch. When dibbling them into the bed prepared as above they should be put in firmly, about one inch deep, and great care should be taken not to leave a hollow below the base of the cutting, as it is practically an impossibility to strike a chrysanthemum cutting that has any air under it. The cuttings should be taken off, made, and dibbled, within, say, two hours, so that no sign of flagging is visible. Cuttings, while striking, do not require much water, only just sufficient to keep the soil moist, with several sprinklings to prevent the foliage from flagging much, as the less they flag the sooner they strike. Tissue paper or newspaper can be used for shading if it is found necessary.

POTTING.

And now comes the important work of potting, more important, perhaps, in late varieties than in early ones. If the potting is done as soon as the cuttings have roots about 1in. long, they can easily be taken from the beds, and hardly any roots be broken in the process. Thus they only receive the slightest check. Regarding the size of the pots, a great deal depends on how the plants are to be treated later on. With some varieties, it is as well to pot into 3in. (60's), then forward into 48's, and finally into 24's or 16's. To these latter I will refer again. Other kinds can be potted directly into 48's, two, three, or four in a pot. In the first system, the plants should be potted into 48's as soon as the 60's are fairly well rooted.

At the first potting, frames are decidedly the best places to put the plants in, as the lights can be removed to give them the benefits of sun, air, and rain. If the plants are kept in an ordinary greenhouse they are apt to grow weak and soft, which is detrimental to success. While mentioning this matter, I should like to point out that it is a bad policy to neglect chrysanthemums as some growers do until they have time to attend to them. This means June, when the market bedding-plant season is over. Chrysanthemums, to be a financial success, must have every attention from the beginning.

Now as to 24's and 16's. For the final potting into these sizes, the best time generally advised is from May 7 onwards, every endeavour being made to get all finished by the end of June. I think it preferable to use 24's; as in the case of 16's, the pot is so large that, should the late autumn be wet and cold, the plants do not dry as much as necessary, and the soil is apt to become sour.

There are exceptions to this, of course, and one example of when 16's are preferable to 24's occurs to me, viz.: Tuxedo, with four plants in a pot.

Not the least important item in obtaining good results is the soil. I find that for the first potting a good loam is essential, with one part of decayed horse manure to fifteen parts of good loam. For the second and final potting; that is, from the 48's to 24's or 16's (it is really impossible to devote more time and money to potting when growing in a wholesale way for market), use a good loam, not too heavy, with the following additions: In November turn the loam, and in layers, add 8 per cent. of decayed horse manure, and in alternate layers add 1 per cent. of bone-meal. As regards the bone-meal, ground bone is the best. The several bone compounds now on the market may be as good, but personally I prefer ground bones, ground into a fine flour. When turning the soil again in May ready for using, 1 per cent. of soot, and ½ per cent. to 1 per cent. of Peruvian guano should be added. By preparing the soil in this way, very little artificial manure will be necessary during the midsummer months. The soot seems beneficial in several ways, chiefly by keeping away worms, the maggot fly and slugs.

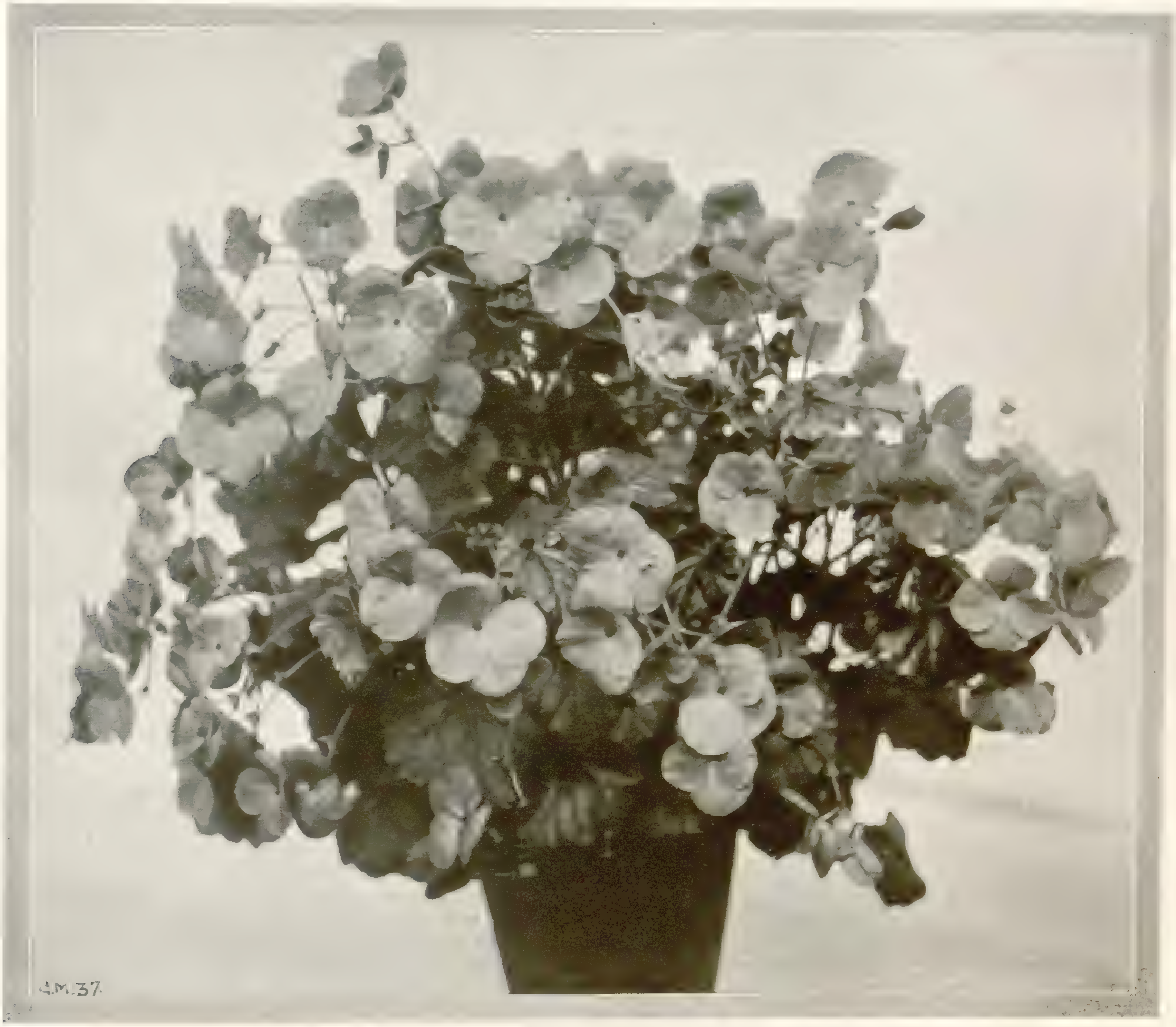
When this final potting is being done every care should be taken to have it done well, as there is nothing more important, and therefore every attention should be given to it. It should be seen that the pots are well crocked to ensure good drainage. A quantity of soil should be first placed in the bottom and rammed down. The ball of the plant should then be placed in the middle of the pot, more soil added, and rammed down regularly, so that the soil is of the same degree of firmness throughout. Sufficient space should be left to hold enough water to quite wet the whole of the soil at one watering.

Sometimes piecework is necessary in potting, but it is not advisable, as the work is so apt to be done in a careless, slipshod manner. No doubt it is the cheaper method at the time, but is it cheaper when the following autumn arrives? As an instance, suppose piecework potting costs 15s. per 1,000, and day work 20s. per 1,000. The difference is only 5s. per 1,000, or 6d. per 100, or ¼d. for four plants. Double this difference if you like, and it is an item that would be saved on watering alone, if nothing else. I strongly object to piecework potting, although I must admit that I have had potting done by piecework sometimes.

STOPPING.

I now come to stopping chrysanthemums but I am afraid that I cannot say much of a definite nature. It is impossible to stop a certain variety at any specified time, say, for instance, April 2, or May 2, as so much depends on the growth of the plant. It will be sufficient, perhaps, to give the various ways of stopping:

1. Stop once in late May, when in the flowering pot, and allow as many breaks to grow as will make a crop. The plant will probably finish six to eight growths; take next bud.



BEGONIA MRS. HEAL.

A fine specimen of this carmine-flowered winter-flowering begonia, grown by Mr. W. Lawrence, gardener to S. Clifton Brown, Esq., Burnham Grove, Burnham. It carried 184 expanded flowers, and was 1ft. 9in. high and 2ft. 9in. wide.

2. Stop once in the 48's, and once in the flowering pot, and take next bud.

3. Stop once in the 48's, and allow them to break naturally in the flowering pot. Dis-shoot them down to the number of shoots you think the plant capable of bearing, and take the next bud.

4. Stop in 48's, allow natural break in the flowering pot, then dis-shoot them to one break on a stem. Some varieties are better taken this way for disbudded blooms than stopping once and taking next bud.

These methods must be experimented with by the grower to find, first, which method, and also which date suits the variety.

To conclude these remarks on stopping I will mention a few varieties with method and date:

M. Panckouke.—Four in a 24, stop in 48's, in April; allow natural break and dis-shoot; take next bud. Wind the shoots round three sticks.

Framfield Pink.—Four in a 24, stop in 48's from March to May; take next bud.

Tuxedo.—Four in a 16, stop twice, April and early July, and take next bud; or, stop once, natural break, and allow all shoots to come for sprays.

Mrs. J. Thompson.—Two in a 24, stop twice, and take next bud.

W. J. Crossley.—One in a 24, stop in May in the flowering pot, and take next bud.

Valat.—Three in a 24, stop twice, early May and mid-June.

Cannell's Prolific.—Two in a 24, do not stop at all.

Mrs. D. Syme.—One in a 24, stop once only about the third week in May.

Allman's Yellow.—Three in a 24, stop twice, May and June.

Baldock's Crimson.—Two in a 24, stop once only, about third week in May.

I could continue mentioning varieties, but I do not think any more are necessary for the purposes of this paper. I do not suggest these rules and dates are the best: they are simply the ones I have made use of myself.

One more item is worth mentioning, viz., by stopping a large batch of one variety on one day, the blooms will probably have to be cut for market in one week; but by dividing the batch into three parts, and stopping on three different days with a range of a fortnight, the crop may extend to three weeks instead of one.

STAKING AND DISBUDDING.

This should be done early to prevent the wind blowing the shoots off the plants. Always remember that every shoot is worth money, and that it belongs to you, and not to the wind.

There are three methods of staking, as follows: (1) To string each shoot separately. Each shoot should be done quite independently, so that when cutting a bloom it can be removed without allowing the other blooms to fall over the pot. (2) One stick, with a band of raffia round the shoot, and fastened to the stick. (3) With three sticks. These should be placed close to the rim of the pot and raffia strung round the outside of them to form a similar arrangement to the patent carnation support.

The tops of the sticks should be tied to wires which have been stretched from end to end of the setting-out ground. This prevents the wind blowing the plants over.

Disbudding should be done as soon as the buds are large enough to handle. In some instances it is advisable to leave the top shoot next to the bud for two days longer. Should the bud not swell there is still a shoot left to grow on. As soon as the bud shows signs of swelling this top shoot can be removed. This refers to buds other than terminal buds.

HOUSING AND VENTILATING.

The best houses for chrysanthemums are those which have side ventilation and a good heating apparatus. Not because either or both of these are always necessary, but because a little of both is sometimes of great advantage. As chrysanthemums usually have to follow cucumbers and tomatoes in the houses, a general clear up should be given, not forgetting the glass inside and out, before the chrysanthemums are moved in.

Avoid placing the plants too thickly, or they will draw and grow weak; on the other hand, do not place them too far apart, or they will not pay for the room. Ventilation is a very important item, and should not be neglected. Plenty of ventilation is very necessary. An old grower's motto is "That fresh air is as good as a feed." Always bear this in mind. A little heat is generally necessary to prevent the flowers from damping, and also to allow them to develop properly. Always keep the atmosphere fresh and on the move by allowing a little ventilation. It is dryness as a rule that is required, and not a high temperature.

FEEDING.

Very little feed is necessary during the midsummer months if the potting soil is good. In fact, it can almost be made a rule not to feed until the disbudding is finished. Then feed a little at a time and often, up to within fourteen days from cutting the blooms. If the plants require a slight feed before the bud is formed, a weak solution of Peruvian guano can be applied by means of the water can, or preferably, add a little soot water with the guano.

When top-dressing with artificials, care must be taken not to burn the roots. The easiest way to ensure safety is to mix the manure with about twice the quantity of fine soil.

There are several kinds of chrysanthemum manures, all of which are good when once the grower has learnt the best way and times to apply them. Personally, I use a good deal of Peruvian guano, also Bull's food for plants. I have a great deal of faith in this last.

INSECTS AND MILDEW.

Chrysanthemums are attacked by many insect pests, these causing a great deal of trouble and becoming an expensive item. Prevention is much better than cure, and much cheaper. The chief pests (I do not know their titles from the insect peerage) are Greenfly, Blackfly, and Maggot. A weak solution of tobacco water sprayed on the plants at frequent intervals during the summer will be found a very good preventive, and will also eradicate any fly that is on the plants at the time of spraying. In place of tobacco water, a weak solution of nicotine will be found very effective.

The cheapest method of making tobacco water is to buy cheap tobacco paper or cloth, or, if possible, the rope that is taken from the bales of imported tobacco. Soak it in water, and dilute according to the strength thought necessary. This, I may mention, is a certain preventive for maggot.

When the plants are indoors, and the buds are beginning to burst, spraying is out of the question, and fumigating with a safe article must be resorted to. Nicotine compound, cones, and tobacco shreds can be used safely if used carefully. There are also other good articles on the market.

Another great trouble with chrysanthemums is mildew. Sulphur is a good preventive, especially green sulphur applied with a bellows or similar distributing contrivance. Liver of sulphur is also very good. Take a piece about as large as a cob nut and dissolve it in one gallon of water. Spray the leaves all over, taking care to wet the underneath part of the leaf as well as the top.

Regarding other diseases, a great deal might be written about prevention and cure, but I find that if a variety has a tendency to be diseased, it is as well to discard it instead of wasting time and money trying to cure it. There is also the possibility of infecting all the other varieties in the proximity in the meantime. In these times, market growers have not much time to spend on growing troublesome varieties, especially when there are many good varieties to devote one's time to.

CUTTING AND PACKING.

This is the most pleasant task in chrysanthemum culture, but, at the same time, it is one that requires skill. First of all, grading is absolutely necessary, whether the blooms are to be packed loose in a box, or to be bunched twelve in a bunch. The blooms in a box should be of uniform size. In packing, the chief thing to bear in mind is that the blooms should be as good when unpacked as before. Don't hurry over it. The same argument applies here as in the potting. It must be carefully done. Why spend nine or ten months in growing a good bloom, and then take 50 per cent. off its value in two minutes by careless packing?

Each bloom should stand in water, up to its neck if possible, at least two hours before packing. It will then look fresh, and when unpacked either in the market or at its destination, it will look the same. Cut as long a stem as possible, and never take off any green leaves.

LIFTED CHRYSANTHEMUMS.

I will now give you a slight idea of how our lifted chrysanthemums are treated. The cuttings are struck in February and March, and I usually put 200 in an egg case 4in. deep. When rooted, they are put in a cold house or frame. The stopping takes place when they are 6in. high, and in April they are put outside, having canvas handy to cover them up if the weather is frosty. The ground is prepared for planting, marking both ways so that the rows are 21in. apart one way and 18in. the other.

Planting takes place on the first suitable showery day in May, in just the same manner that the market gardener plants his cabbages. Weeding the fields is necessary during the summer. The plants should be stopped about the first week in July, or when they have made sufficient growth.

Lifting must be done before the frost arrives. We generally start about October 1, reckoning to finish by October 18. This is, of course, the most important detail of the crop. Some people say that it is essential to lift a large ball of soil with each plant. Well, it may be essential, but not possible when lifting ten acres or so. Dig the plants up from the field. Place as many as possible, without breaking any, in an egg case, tie round with a string, load eight cases on a horse trolley, and cart them to the greenhouse. Plunge the plants at once. Start by digging a spit across the house, then with the fork rake part of the fresh-turned ground towards you, so as to leave a straight walled trench. Place the plants firmly in this trench, incidentally sizing them so as to have the short plants at the back and tall in the front, or vice versa. Having done this dig another spit across the house, throwing the soil on to the roots of the plants. Tread down both sides of the plants if possible and continue.

Water should be applied as soon as convenient, thoroughly wetting the roots, and the plants as well. Most probably the plants will flag if the sun shines, but a sprinkling through a rose can will assist them to pull round. Leave full ventilation on at night. During the day shut the houses up and sprinkle lightly, should the flagging continue. As soon as the plants have made fresh roots, give them as much ventilation as necessary.

A few remarks will not be out of place on the points which go to constitute a market chrysanthemum. For a pattern let us take Framfield Pink. This is undoubtedly the finest chrysanthemum from the market growers' point of view. The only exceptions that can be taken to it are, that in some districts, being a late variety, it will not flower; also it is not a safe lifter.

Other than these faults, it is an ideal chrysanthemum. It has good foliage, and good stems, which are stiff enough to hold its flowers erect, and yet not so hard as to prevent the blooms from drawing water. The neck, between the top leaf and the flower, is not unsightly through being too long, nor is it too short so that the leaves are intermingled with the florets of the bloom. The petals or florets are of good form and substance. They are stiff or springy enough to maintain their proper position in the flower, even though the side of the flower may have become flattened after a long journey, by road or rail, by reason of close packing in a box. Again, it seldom shatters, even if carelessly handled, and will stand a great deal of rough usage, such as being carried about by hawkers loose in their arms. It is good alike for sprays and for disbudding. The sprays are real sprays, not a conglomeration of small blooms compressed together on the extreme end of a stalk. The habit is good, and it can be described as a free-flowering "'mum," allowing for the exceptions.

So much for Framfield Pink. Now, if a grower wishes to assure himself that a new variety, or a variety that he has not already grown, is of any use to him commercially, let him compare that variety with Framfield Pink on the several points that I have enumerated. If it passes the examination and is equal to, better than, or even nearly as good as Framfield Pink, that grower can congratulate himself on having found a good thing.

There is one little detail that I have not mentioned up to the present, and that is colour. This is a consideration in a market chrysanthemum, and I do not feel capable of laying down any hard and fast rule regarding colour. The foremost thing to bear in mind is that it is always best to grow those shades of colour that are most fashionable.

Mr. Ladds pointed out that his chrysanthemums being set out in summer near a railway embankment, they were very often well fumigated by the smoke from the locomotives passing, and he thoroughly believed that the absence of rust among his plants was due to this factor. He said he had noticed that plants under similar conditions in other places, and also plants in or close to towns, were practically always free from rust. He suggested that chemists might take this matter into consideration, and possibly find a substitute for engine smoke wherewith to combat rust.

Anemone Flowered Chrysanthemums.—The engraving of Godfrey's Perfection on p. 873 of the Gardeners' Magazine reminds one how seldom we see this type of chrysanthemum now at shows, much less in private gardens. A few years since it was thought necessary to cultivate at lease a dozen large anemone-flowered varieties besides as many anemone pompons. How fashion changes! At the recent Southampton Chrysanthemum Show a class was provided for decorative flowers in vases, one competitor staged about a dozen fully-developed blooms, each of Madame Herewege and Delaware, the latter creamy white; these along with a similar number of the incurved Romance, made a bold and effective display, and fully proved the value of these sections for decoration.—E.M.

Berried Plants under Glass.—For the embellishment of the greenhouse, and for various decorative purposes indoors, many berried plants are extremely serviceable. The choice is not limited to tender kinds, for some of our smaller-growing hardy shrubs are also useful. Of tender plants, one of the oldest and most popular is Solanum capsicastrum, which has long been extensively grown for market, and is equally appreciated in private establishments. The many quaint forms of capsicum, also form a very attractive feature in the greenhouse during the autumn months. That pleasing little shrub Ardisia crenulata will also at this season be laden with its bright red, sealing-wax like berries, which remain fresh and bright for a considerable time. The white-fruited variety is much less ornamental than the type. The drooping racemes of Rivina humilis, whose berries are bright red when ripe, are disposed in a very graceful manner. This Rivina needs a little more heat than the different subjects previously alluded to. Of hardy shrubs, which are much used for the same purpose, are the dwarfer aucubas, skimmias, and pernettyas, the berries of this last varying in colour from white to deep purple. One great advantage of the hardy shrubs is they can be used in cold and draughty spots, where the others would quickly suffer.—W.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

PLEIONES.—This genus is included botanically under the cœlogynes, but it presents so many differences from a garden point of view, that it seems preferable to keep it separate. Pleiones are distinguished from cœlogynes by the pseudo-bulbs, which are of annual duration only. The leaves are deciduous, falling after the growths have reached maturity. The flowers are produced with the new growths, immediately after the resting period, and as the different species flower at different seasons, though mostly the winter months, they are most acceptable and useful. They are in practically all cases tractable subjects, and can be accommodated in an ordinary intermediate house. Some of them commence their growth in October, and are usually in flower during the months of November and December. In all cases a general rule may be applied that the plants should be repotted immediately they have finished plants will be readily separated as the old when the plants have flowered.

POTTING.—I do not wish to imply that plants of these species require annual repotting, for if there is plenty of rooting space, and the potting compost is in a good condition, the plants do not require to be disturbed. Carefully remove all dead and decaying matter about the base of the plants and top-dress. Where potting is desirable, carefully remove the plants from the pot, if the compost is reasonably dry the individual plants will be readily separated as the old compost is removed; before repotting examine the base of last year's pseudo-bulb, to see that no scale or other insect pests are lurking there. We find the plants do best grown several together in baskets or pans, so that they may be suspended from the roof. These receptacles should be thoroughly clean and filled to about half their depth with broken crocks. The compost should consist of about two parts turfy loam to one part of peat and chopped sphagnum moss, with sufficient sand and finely broken lime rubble to render the compost porous. Plant the pseudo-bulbs at equal distances apart, and make the compost reasonably firm. A covering of finely chopped sphagnum moss on the surface adds to the good appearance of the plants when growing. Water with tepid rain water as soon as potting is completed, and be careful not to over-water; as soon as the pots are well filled with roots more liberal treatment may be given. A temperature of 55 degrees is ample during the winter months.

SPECIES.—The spring-flowering kinds, P. Hookeriana and P. Reichenbachiana are not plentiful, but they are most interesting plants, rarely seen outside botanical collections. Their cultural requirements are practically the same as that recommended above for P. maculata, P. lagenairia, and P. præcox, but being later in starting they need a little more attention in autumn when completing their growth.—H. J. CHAPMAN, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

CHRISTMAS DECORATIONS.—At this season of the year, when the country establishments are preparing for the reception of the usual Christmastide visitors, the gardener finds his time fully employed in making the place as bright and attractive as possible. The conservatory calls for special attention, particularly if it be attached to the mansion. This should be thoroughly overhauled and cleaned, and the plants rearranged. The colour effect of the arrangement must be well studied, avoiding all clashing of colours. Bold masses of colour are much more effective than dotting or mixing up the various plants employed. The material now at hand for decoration is plentiful, including as it does chrysanthemums, Lilium speciosum album, L. longiflorum, arums, poinsettias, Begonia Gloire de Lorraine, and the white variety Turnford Hall, cyclamen, salvias, and the different varieties of bulbs and forced plants. These, if judiciously arranged with the various forms of asparagus and ferns, will make a pleasing display. The temperature will need to be increased to suit some of the plants, and more especially so if the conservatory has to be used as a retiring room during balls and parties.

CHRYSANTHEMUMS.—No time should be lost in propagation, where large blooms are required. A start should be made with those varieties which flower on the second crown, and those which open late in the season. Select strong, healthy cuttings, and insert them singly in thumb pots, using a light compost consisting of equal quantities of loam, leaf-soil, and sand. They may be stood in a cool house, in a close frame, or plunged outside in a cold frame. The latter method is perhaps the best, but it requires careful attention in regard to ventilation, shading, and frost. The frames should be surrounded by a good layer of long manure, and an ample supply of covering material must be kept handy. Perhaps it is advisable, and certainly causes less anxiety, if the frames are matted up every night, whether it be frosty or not.

HIPPEASTRUMS.—If these are required to flower early a start should be made, selecting the strongest and best bulbs for the purpose. Remove a portion of the old soil without injuring the roots, and rectify the drainage. Fibrous loam and charcoal or lime-rubble forms a suitable compost for repotting. A mean temperature of 60 degrees is required to start the bulbs into growth. After the first watering in, little more water is required for a time, but frequent syringings should be applied to maintain a moist atmosphere.

POTTING MATERIAL.—Owing to the exceptional dry summer lately experienced, the cutting of turf has been delayed; but this work may be pushed forward now, and the loam stacked in a cool place. Should this be found poor or light, the addition of some short manure will greatly improve it. A quantity of last year's loam and leaf-soil should be brought into the potting shed, so that it may be handy when required.—A. GRUBB, Porters Park Gardens.

HARDY FRUITS.

PRUNING OLD ORCHARD TREES.—As the pressure of other work in the fruit garden becomes easier, the older standard or orchard trees will require attention. Many of these would be improved both in cropping capabilities and quality of fruit, if a judicious thinning of the branches could be carried out at intervals of a few years. One occasionally comes across instances of old trees that have been mutilated, branches four to six inches in diameter being sawn clean away with the idea of thinning; this is a very crude method, and one likely to upset the ideal aimed at, which should be the general health and well-being of the trees. The guiding principle should be to so thin out the wood, by removing interlacing branches, as to allow the sun and air to play on all parts, and also, as far as possible, to secure an even balance of branches throughout.

PRUNING YOUNG STANDARD APPLES.—It requires more care and knowledge to produce good standards than perhaps any other form of fruit tree. It will depend on the way these are pruned for the first few years after planting, as to whether the orchard will be a success in every sense or not. So much depends on the habit of growth and the way different varieties are treated. As an instance, Bramley's Seedling may, after the first four or five years, be allowed a free run, the side growths only being shortened; this variety should not have the centres kept open, as is the custom with trees of a more upright habit of growth, otherwise, when they become loaded with fruit, the whole of the branches will droop to the ground. On the other hand, Worcester Pearmain should have all leads shortened for a number of years, or it will take a backward course early in life. With other varieties much is gained by shortening the leaders every second year. Encourage the trees by every possible means to form good, well-balanced heads, expecting but little fruit for a few years, for, if one can afford to wait, the standard is no doubt the most prolific type of tree to grow in the long run.

BIRDS.—At the first signs of hard weather gooseberries, red currants, plum trees, etc., should be protected from the destructive sparrows, bullfinches, and other birds. Soot and lime freely dusted about the bushes when the twigs are quite damp will make the buds distasteful, and also have an excellent fertilising effect. There are also little contrivances known as "webbers," by means of which bush fruit may be webbed over with black cotton. Every means available should be used to keep the birds at bay. Sparrows migrate from the towns in thousands each year at harvest time, and, in spite of sparrow clubs, enormous damage is done to both buds and flowers by the cunning little adventurers.—J. WHITTLE, Cheveney Gardens.

THE KITCHEN GARDEN.

EARLY POTATOES.—The first important planting of early potatoes may now be taken in hand. Form hotbeds, perferably in pits, for their reception, and if sweetened manure and a good stock of leaves are on hand, it will facilitate matters for this crop. When making up these beds see that a good proportion of leaves is used, and the whole made firm by constant treading as the material is placed in position. Finish off the beds so that the crop will be tilted towards the sun and reasonably near the glass lights. Use open, sweet, rich soil to a depth of about ten inches. Plant the tubers from twelve to fifteen inches apart as soon as the fermentation of the bed has made the soil comfortably warm. Where proper pits or frames are not at command, or required for other purposes, a beginning may be made by filling a number of eight-inch pots with good soil and placing one strong tuber in each. These can be grown in a newly started fruit house with a temperature of from fifty to fifty-five degrees. The short topped kidney potatoes are very suitable for forcing; Sharp's Express and Duke of York are also favourites with many.

CUCUMBERS.—Make a sowing to produce plants to succeed those that are providing the winter supply, which, by March will have nearly exhausted themselves. If these early-raised plants are grown strongly in a light, close house, they may reasonably be expected to commence cropping by the end of March. Sow the seeds singly into thumb pots, and shift the young plants into larger ones as they make progress, until they have produced two or three rough leaves, when they may be planted out in beds of soil over hotbeds.

EARLY PEAS.—If accommodation is at hand, and a few early dishes of peas are appreciated, a sowing may be made in eight-inch pots, placing about nine seeds in each. The chief points to consider in their cultivation are: thorough drainage, a light, open, but rich soil, and keeping the plants near the roof glass in not too high a temperature, about fifty or fifty-five degrees being ample during their early growth. When the plants are firmly established give a plentiful supply of water, with intermittent applications of liquid manure.

RADISHES.—These are valuable additions to the salad, and may now be grown quite satisfactory over hotbeds, in wooden frames. A mild heat only is required for this crop, with as much air as can be given without cold cutting winds reaching the plants. If unduly forced the top growth becomes elongated and the roots comparatively worthless. Do not sow the seeds too thickly. "French Breakfast" forces well, has a very pleasing appearance, and is in every way a good radish.

GENERAL REMARKS.—The present is a suitable time to secure the stock of pea and bean sticks for next season. Bad weather is probable during the next month or two, and the staff can be profitably employed in open sheds when work is impossible outside, in getting them ready for use. Labels and brooms can also be made at these times. The rubbish, too, may be dealt with by turning it over, burning such parts that require it, and running portions through a sieve.—CHARLES FLACK, Cholmondely Castle Gardens.

EXHIBITIONS AND MEETINGS.

◆

National Sweet Pea Society.

The annual meeting of this vigorous society was held at the Hotel Windsor, Westminster, on Friday, December 8, at 2 p.m. Mr. G. W. Leak presided, and there were about a hundred members present, including a large number of people well known in sweet pea circles.

After disposing of the formal business, the Chairman moved the adoption of the report of the committee, as printed and placed in the hands of the members present. We give a few extracts:

REPORT OF THE COMMITTEE FOR THE YEAR 1911.

Quite early in the year difficulties arose in connection with the formation and election of the Floral Committee, due chiefly to the fact that there were no rules governing these matters, or for the guidance of the committee when elected. Eventually rules were adopted by a special general meeting, and under these rules the Floral Committee for the year was elected.

The society has sustained a great loss by the death of its trials superintendent, Mr. Charles Foster, who passed away in February last. Mr. Foster had conducted the society's trials of sweet peas since their inception, first at University College, Reading, and latterly at the Times Experimental Station, Sutton Green, Guildford. He occupied a high position in the world of horticulture, was one of the first authorities on sweet peas, and was held in the very highest respect by all who knew him. A number of the officers and committee of the society attended the funeral, and two large wreaths were sent as slight tokens of the esteem in which the members of the society held Mr. Foster.

During the winter of 1910, a great deal of the work of preparing for sweet pea trials of 1911 fell upon the shoulders of Mr. Harry Foster, owing to his father's ill-health. The work he thus begun fell wholly upon him on the death of his father, and the committee wishes to express its entire satisfaction with the manner in which Mr. Harry Foster carried out the trials in 1911, and to offer its congratulations to him upon his recent appointment as successor to his father at the Times Experimental Station. A record for the accession of new members has been established, no fewer than 303 having joined during the year. The membership shows a considerable increase, over 1,200 now standing on the books, notwithstanding losses from various causes amounting to 140. It may be necessary in the near future to safeguard the interests of the society by withholding the "Annual," and tickets of admission to the exhibition, until the annual subscription has been paid. Societies in affiliation now number 125, an increase of 16 for the year.

The society is in a sound financial position, having £150 on deposit, and a cash balance is again carried forward. The profit balance on the year's work is not so large as last year, and this is due chiefly to the increased expenditure in connection with the work of the Floral Committee, extra printing and postage incurred by several special meetings, and the grant of £25 to the International Horticultural Exhibition of 1912.

Brilliant weather was experienced during July 11 and 12, when the eleventh annual exhibition was held at the Royal Horticultural Hall, Vincent Square. Owing to the many festivities in connection with the Coronation of their Majesties King George V. and Queen Mary, attendance at the show was not so large as usual, and the receipts at the gate amounted to £41, as compared with £65 8s. 6d. in 1910. The exhibition for 1912 will be held at the Royal Horticultural Hall on Tuesday and Wednesday, July 9 and 10.

A large number of members visited the Times Experimental Station, Sutton Green, Guildford, on July 13, to inspect the society's trials. Our president, Lady Northcliffe, entertained the members with generous hospitality, presided at the luncheon, pointed out the many fine features of the historic old mansion of Sutton Place, and threw open once more the beautiful and famous gardens in which she takes such a personal interest. The following day a visit was paid to Messrs. R. H. Bath's floral farms at Wisbech, at the invitation of Mr. G. W. Leak, the chairman of committee, and a managing director of this great enterprise in Cambridgeshire. Here several miles of sweet peas, grown on wire netting, were inspected, as well as many other wonderful floral displays. Once again generous hospitality was provided.

The popularity of "The Annual" steadily increases, and the editors hope to provide as interesting an issue for the year 1912 as any that have preceded it. During 1912 the "List of Sweet Pea Names" will be issued as a separate booklet, and will be presented to new members, but charged 6d. post free to others.

The forthcoming schedule of prizes will be distinct from its predecessors in several ways. Classes for specified varieties have been entirely omitted, and novelties provided for in liberal fashion. The district classes are a quite new feature, as also are the classes for new seedlings and for flowers with double standards. General donations to the prize fund have been promised by many prominent trade and private growers, and it is hoped that many more friends of the society will come forward with financial help in this direction.

During the year 1912 the great horticultural event will be the International Horticultural Exhibition to be held in the grounds of the Royal Hospital, Chelsea, from May 22 to May 30 inclusive. Our society has contributed £25 towards the expenses, will present one gold and two silver medals, and has guaranteed a further £25 in the event of financial loss. There are several classes for sweet peas, and as several of our members have made arrangements for competing therein, it is hoped that they will secure the awards. Mr. N. N. Sherwood has promised a fine silver cup for sweet peas. Messrs. Walter P. Wright and Chas. H. Curtis are the society's representatives on the General Exhibition Committee, and other sweet pea celebrities who are either on the executive or general committee include Messrs. N. N. Sherwood, V.M.H., W. Cuthbertson, J. Green, R. H. Pearson, A. W. Sutton, V.M.H., G. Gordon, V.M.H., Robt. Sydenham, Horace J. Wright, J. S. Brunton, E. Molyneux, V.M.H., E. Laxton, F. W. Harvey, and E. F. Hawes.

The report concluded with thanks to the president and all who had contributed to the success of the society.

The financial statement, duly audited, showed a turnover of £932 15s. 4d. On the income side, the subscriptions amounted to £361 17s. 7d.; fees from affiliated societies, £66 3s.; advertisements in "Annual" and schedule, £44 5s.; takings at London show, £41; prizes presented, £112 17s.; and trials charges, £30 7s. 6d. On the expenditure side the chief items are: Printing and stationery, £213 4s.; trials expenses, £57 4s. 6d.; honorarium to secretary, £63; postage and carriage, £52 16s. 9d.; medals, £66 4s. 3d.; prizes, £99 0s. 6d.; placed on deposit, £50; contribution to International Horticultural Exhibition, £25. The final result is that the society has now £150 on deposit at its bankers, and, in addition, carries forward a balance of £98 7s. 10d.

The motion was seconded. Two amendments to the effect that members should not receive the "Annual" or tickets until subscriptions were paid, were defeated, as also was a motion to appoint a sub-committee to consider the desirability of reducing expenditure on printing and stationery. It was pointed out that these items were very little above the corresponding ones of 1910, and that matters were quite safe in the hands of the committee. The motion for the adoption of the report was then put, and carried unanimously.

Votes of thanks were accorded Lady Northcliffe, the retiring president; Mr. E. Sherwood, the treasurer; the committees, and to Mr. G. W. Leak, the retiring chairman, to whom a suitably engraved medal was presented by Mr. C. W. Breadmore, on behalf of the Society. Mr. Robert Sydenham was elected president, and Mr. Thomas Stevenson chairman for the ensuing year. Mr. Edward Sherwood was re-elected treasurer; Mr. R. Gluyas as auditor, and Mr. C. H. Curtis as hon. secretary, the latter being voted a handsome honorarium for his services during the year. The election of the General Committee, taken a little later, could not be declared until dinner-time, owing to the heavy voting, but the result was a magnificent vote of confidence in the committee, the only alterations being the return of Mr. G. W. Leak in place of Mr. Stevenson, elevated to the chair; and the addition of Mr. Vernon Hill, in the place rendered vacant by the death of Mr. Charles Foster. Mr. F. J. Harrison, of Ulverston, was added to the list of honorary corresponding members of committee.

The proposed alterations of rules were then taken, and we may say at once that the discussions on these matters were on a very much higher plane than those of the special meetings early in the year, to the very great advantage of business procedure. There were, of course, numerous amendments, and a number of these were not seconded. The General Committee's proposals were adopted until Rules 8 and 9 came up for consideration; these relate to the election and constitution of the Floral Committee. Rule 9: "The Floral Committee of the National Sweet Pea Society shall consist of nine members of the Society, irrespective of whether they be amateurs or traders," was taken before Rule 9. The committee's proposal to add words rendering anyone ineligible for a seat on the Floral Committee who had an interest in any variety on trial, was strongly condemned by Mr. George Gordon and defeated by a very large majority, notwithstanding the support of Mr. W. P. Wright and others; an amendment to the effect that members of the Floral Committee should retire when a variety they were interested in came under consideration was lost also, in view of the method of voting already established, which discounts the vote of any interested member. In the end, the old rule as quoted above was adopted by fifty votes to six.

Rule 8 came next, and it refers to the method of electing the Floral Committee; this hitherto has been in the hands of the General Committee, but the latter proposed that election should be by ballot of the members present at the annual general meeting. The Rev. J. Jacobs proposed a postal ballot from a list submitted by the General Committee, and Mr. Lumley wished to place at least two lady members on the Floral Committee, but at the last moment he somewhat ungallantly withdrew his proposal. The General Committee's proposal was adopted by forty-two to two votes, with the addition of the following words, as proposed by Mr. W. Cuthbertson, seconded by Mr. Sydenham, "One-third of the Floral Committee (those members receiving fewest votes) shall not be eligible for election the ensuing year." This addition was unanimously adopted.

Regarding the inspection of trials it was agreed that each set be visited at least once in the season. At this point Mr. F. J. Harrison, of Ulverston, called the committee over the coals respecting a Northern Trial; he felt that Hinckley, where it was proposed to hold this trial, was not sufficiently far north, and he said he had a good site in view, and at small cost, two hundred miles north of London. He believed this would be more in the interests of the northern members, whereas Hinckley, in the Midlands, would practically place all the good work of the society at the doors of the Southerners. Mr. Harrison spoke with some force and conviction. The Chairman pointed out, however, that the committee had been in communication with authorities in the Northern Counties, in Yorkshire, Cumberland, and Northumberland, but without success in this matter, and Hinckley was the only suitable place in view. It was agreed to hold over the final decision regarding the Northern Trial pending the consideration of a communication which Mr. Harrison promised to make to the committee. Rule 20, regarding the bracketing of "identical varieties," was deleted, and a new one added, i.e., "No award of any kind shall be made to a variety that, at the Trials, contains a rogue or rogues." These alterations have the effect of placing the three best sweet peas of each colour class, in alphabetical order, instead of in order of merit; and of bringing the annual general meeting into the month of October, instead of December, as heretofore.

The scrutineers, Messrs. A. Hallam, R. Pinches, E. F. Hawes, and W. Quick, had an unenviable task, and as they had not finished their task when the vote of thanks was cordialy passed to the chairman for his admirable services, they did not receive the formal thanks which we are sure everyone agreed they deserved.

And so ended one more busy, vigorous, pleasant, and historical meeting.

DINNER.

The new President, Mr. R. Sydenham, presided over about three dozen members, and with his usual generosity provided wine, and, subsequently coffee, cigars, and cigarettes also. The dinner was capitally served, and excellent good humour prevailed; indeed this function was a splendid foil to the sterner business of the annual meeting, which lasted from 2 p.m. to 6.30 p.m., and was excellent preparation to the conference that followed.

The loyal toasts were duly honoured, and the Chairman gave "Success to the National Sweet Pea Society," and in doing so foretold a prosperous year for the Society and for sweet peas and sweet pea lovers, and promised to do his very best to advance the interests of the Society, and so justify the honour that had been conferred upon him. Mr. F. J. Harrison responded in breezy fashion, making a capital speech and referring to the growing enthusiasm for sweet peas all over the country, and, of course, especially the Ulverston district. A vote of thanks to the President concluded this part of the day's programme.

CONFERENCE.

The Conference, commencing about twenty minutes past seven p.m., and presided over by Mr. G. W. Leak, was well attended, nearly seventy members being present. Mr. Leak welcomed the members to the third sweet pea conference, and expressed the belief that this would be as interesting as the previous ones. He then introduced Mr. F. J. Chittenden, Director of the Laboratory, R.H.S. Gardens, Wisley, and asked him to give his lecture, which we have now the pleasure of publishing.

DISEASES OF SWEET PEAS.

Growers of sweet peas are fortunate so far as diseases of their favourites are concerned. When we compare the numbers of pests which roses, chrysanthemums, carnations, and similarly widely cultivated plants have to contend with, and the large literature that has grown up around the subject of pests of these plants, sweet pea lovers may reckon themselves indeed fortunate, for it is easy to count the serious troubles to which sweet peas are prone on the fingers of one hand.

In the animal kingdom aphides and thrips are occasionally a trouble, but these may be kept in check by spraying with a nicotine wash or with quassia and soft soap, and so long as the operation, when necessary, is thoroughly and timely done, they need cause no anxiety. Besides these, if we except the ravages of mice and birds among unprotected seeds and seedlings, slugs and snails are the only menace, and methods of keeping these in check are so well known that they need not detain us.

So far as fungi are concerned, only two need concern us long—one attacks the leaf, the other the root.

Thanks to the kindness of your sub-committee, I was enabled to examine in 1910 a considerable number of specimens of diseased plants from your members, and these were supplemented by large numbers of others sent to the Wisley Laboratory from other sources.

Practically all of these plants were attacked by fungi, and it has become clear from experience in the laboratory and in examination of many collections of sweet peas in various parts of the country, that there are two troubles of outstanding importance due to fungi, viz., the disease called "Streak," and the "Mildew."

The mildew found in certain circumstances on sweet peas is apparently a very common one on a large number of plants, and seems to be identical with one which attacks the culinary pea. Only now and then does it appear to any serious extent upon sweet peas, and then usually when they are either overcrowded or have received a check possibly through drought, or some similar cause. The fungus in this case is, with the exception of some sucker-like organs which it sends into the leaf, entirely superficial, and can be kept in check with comparative ease; dusting with flowers of sulphur or spraying with potassium sulphide (liver of sulphur), using 1oz. to 3 gallons of water, at intervals, being an effective mode of dealing with the pest.

Far and away the greatest number of diseased plants sent to us have, however, been affected by the mysterious disease known as "streak." In its most typical form the symptoms of this disease are brown or dark brown streaks in parts of the stem, yellowing of the shoots near the ends of the growth, crippling of the flowers (those formed often being flimsy), the dropping of buds, brown spotting of the leaves, and finally collapse and death. Not all these symptoms are always present, sometimes even the brown steaking of the stem is absent.

The first specimens of plants attacked by this disease I had to examine had no root attached, and I searched in the leaf spots and brown stripes for fungus mycelium, for bacteria, or evidence of insect attack. All alike were absent. True, the cell contents were brown and coagulated; the protoplasm of the cells in the affected areas, which passed more or less deeply into the stems, was disorganised; but that is only what one might expect if the protoplasm had died. Even uncongenial weather conditions may bring about some such result in plant cells. Who has not seen black spots on orchid leaves?—often the direct outcome of careless, unintelligent use of the syringe. The protoplasm in these cells is wholly disorganised, and their contents assume a brown or very dark colour.

Now and then, on some of the spots or stripes, a fungus has developed on keeping, but never under such circumstances as to suggest that it had been the cause of the spotting or striping in the first place. Recently, Mr. Dyke, of St. Margaret's, has informed me that he has found a species of macrosporium develop from these brown spots on the foliage and the stripes on the stem, and that he considers it highly probable that this fungus has been the cause of the trouble. If he is right, then probably spraying will keep it in check, but many seem to have tried spraying and failed to ward off the disease. The last fact does not, however, negative Mr. Dyke's view, but we have some positive evidence which does not altogether fall in line with it. I hope, however, Mr. Dyke will follow up his investigation and try inoculation experiments and so on.

Later on, I had the opportunity of examining more complete plants, roots and all, and wherever the material was carefully lifted and packed we noticed very dark areas on the root. I had already come to the conclusion that the symptoms typical of the disease might be produced by something wrong at the roots; some of them were evidently the result of a check to the water supply, but others looked much as though some poisonous substance were circulating through the plant.

Careful microscopic examination of the brown patches—and one must insist on the need for care; hasty examination may fail to reveal anything—showed that they were attacked by a fungus which turned out to be Thielavia basicola. The same fungus was present in practically every case, sometimes abundantly fruiting, sometimes with only a few spores. When the disease was far advanced the brown areas involved large parts of the roots, and many of the latter would be found to be quite dead. Thus we had now a definite suggestion to work upon. The finding of the same fungus on practically every diseased plant showing approximately constant symptoms, does not constitute proof that it is the cause of the disease. We must show that if the living plant is infected with the fungus the same symptoms will be produced in it, and the fungus will fruit again so as to prove its identity. We therefore started some sweet peas in pots of sterilised soil, inoculating some of the pots with the fungus and leaving an equal number not inoculated. While they are developing we may leave them for a time.

A student of plant disease always finds it profitable to make himself acquainted with the history of the fungus which he suspects of causing disease, and an examination into the history of this one proved both interesting and profitable. We find it first referred to under the name of Torula basicola in the "Annals and Magazine of Natural History" in 1850, where the veteran mycologist, the Rev. M. J. Berkeley, whom we might almost call the father of the study of plant diseases, describes it as having been found on the roots of nemophila and the culinary pea. The plants on which he found it were dead, but he evidently regarded it as a suspicious organism, for he says: "It is either destructive of the plant on which it grows, or is developed on it in consequence of previous disease."

We need not now follow the references to it in literature in detail, but we may note that it has subsequently turned up in many different countries (it is well known in Germany, Italy, France, and the United States), and on a large number of plants belonging to many different families. When we remember that violets, begonias, cyclamen, lupines, French beans, culinary peas, tobacco and nemophila, members of six different families not at all nearly related to one another, have had the fungus on their roots, that again is enough to cast suspicion upon the fungus as the actual cause of the trouble, for most parasitic fungi are restricted either to one species of host or to a small group of allied host plants. Cases are, however, known where the same fungus is able to live on a large number of different hosts.

During the sixty years that have elapsed since its first discovery, the fungus has received several names, but it was found by one investigator that it produced several forms of fruit, and the name by which we now know it is Thielavia basicola, the name given to the highest form of fruit produced. Many of those who have examined the fungus from time to time have had serious doubts as to whether the disease shown by the plants on which it was found was actually occasioned by the fungus or not, but they have in most cases come to the conclusion that they were actually dealing with the parasite that caused the disease. Thus Thaxter attributes a serious disease of violet in America to it; Aderhold a like attack on French beans; Massee and others a disease of the culinary peas; and many vegetable pathologists in Italy and the United States attribute the most serious disease of tobacco to the same cause.

To return—the plants grew and flourished, alike those in the soil I had inoculated and those in the soil that was not inoculated. The experiment failed to demonstrate any connection with the fungus at all. I repeated it, using this time soils containing acid manures like superphosphate, and others well limed, but again the plants all flourished. My experience would thus lead me to suppose the fungus could not produce the disease, although it was always found with it; but I reviewed what I knew of the conditions under which it occurred. Unfortunately, the replies sent to the questions sent out on the schedules by your sub-committee did not help to elucidate the matter. The disease had occurred on all sorts of soils; it was associated with a number of different varieties; some varieties seemed more susceptible than others in one garden, but the same varieties were apparently immune in another; the seeds of the attacked plants had come from a variety of sources, and the seeds from one particular source did not always, or usually produce diseased plants.

I had never had more than a stray diseased plant in my own garden, although I had grown sweet peas in Chelmsford on a stiff clay soil, in Broomfield on an ideal loam overlying gravel, and in Cobham on one of the lightest sands it could ever distress the heart of a gardener to deal with, and among them were, of course, some of the supposed delicate varieties. But then I did not grow for exhibition; I was content with plenty of sweet-scented flowers with beautiful colours and lasting substance. I did not hanker after spikes with eight flowers or even five, nor standards three inches across. Could it be that the desire for "exhibition" blooms had led to over-manuring, to over-stimulation, and resulting after weakness.

The fact that the disease was apparently a new one, having attacked sweet peas only since the cultivation had spread so widely—and possibly due to the Sweet Pea Society—seemed to lend colour to this view. But I found that Aderhold had had in Germany similar difficulty in causing the fungus to grow on French beans, although they had been carried off wholesale by a disease associated with the fungus. He succeeded with some inoculations, however, after repeated trials. So I took heart of grace, and tried again.

I had noticed that very often, in fact, nearly always in 1910, less frequently in 1911, eelworms were round about the roots, and places which had apparently been "nibbled" by them were frequent on the roots. It seemed possible that the fungus might attack the root only after it had received some injury, and this time the plants, both in soil inoculated and that not inoculated, were badly treated by over-watering. Neither lots flourished as they should have done, but those in the soil not inoculated struggled on and flowered themselves to death. Of those in the inoculated soil, however, 75 per cent. died, showing the yellowing of the foliage, etc., typical of the disease, and on examination the fungus Thielavia basicola was found upon their roots, while those of the healthy plants were free from it. It seems, therefore, to be clear that under certain circumstances, and especially after injury or check to the root, the fungus Thielavia basicola may become a parasite, and my experience coincides exactly with that of other observers.

We thus see that we have other facts of great importance in the chain of evidence—we can inoculate plants of low vitality with the fungus, and it will produce in its host the symptoms associated with the "streak" disease, and will produce its spores upon the diseased tissues. These spores are thick-walled and resistant, and will live for a considerable time in the soil ready, no doubt, to infect fresh plants when the conditions suitable for their growth recur.

Now, from what has been said it seems evident that there are two things to which attention may be paid in attempting to deal with the disease.

The first and most certain would be to kill the spores of the fungus which are present in the soil. This can readily be done in soil in small bulk by steaming it or otherwise raising its temperature to about 180 deg Fahr. or over. The process outdoors is, however, much more difficult, and practically the only thing that could be done would be to thoroughly soak the material which it is desired to grow the plants in about three weeks before the seeds are sown or the plants transplanted, with a solution of formalin; carbolic acid, or lysol, might possibly be similarly effective. The application of steam for purposes of sterilisation, though not impossible, would be difficult outside. It does not seem practicable to use any fungicide in the soil during the growth of the crops, and certainly spraying the tops of the plants would be entirely useless, so far as this fungus is concerned.

It would appear, though one does not like to speak too positively, that a most important means of dealing with the fungus lies in maintaining the vigour of the plant at its highest pitch. That does not by any means indicate that it is desirable to grow the plants as large and sappy as possible. Indeed, it may well be that too heavy manuring will lead to trouble by making the plants less resistant than they would otherwise be to fungus diseases. It would seem very desirable, too, to see that the drainage is thoroughly efficient always, for nothing so quickly lowers the vitality of earth-dwelling plants as stagnant water about their roots. Another thing to guard against, and I fear a very common practice, is to put thick layers of dung at intervals, with earth between, in a kind of multilaminate sandwich. The manure ought, when used, to be mixed very thoroughly throughout the soil, and not to be put in layers, for its decomposition may lead to the formation of substances that are poisonous to crops and damage to any roots that come in contact with the substances produced.

DISCUSSION.

Mr. Chittenden was listened to with great interest and close attention, and a fairly brisk discussion followed his remarks, though this took the form of short references to success or failure with sweet peas. The most curious fact was that under apparently similar conditions, one member had great success while another had complete failure. Mr. H. A. Perkins' failures even after sterilisation could not be explained on any grounds. Mr. T. Stevenson stated that he had no disease in the sweet peas he had grown for exhibition, whereas Mr. Voss said he lost all the plants he grew well. Mr. Sydenham expressed a firm belief in new sites for sweet peas, and immediately Mr. H. J. Wright related how a certain Surrey enthusiast had been very successful, and had had no disease after seventeen years' continuous cultivation of sweet peas on the same site, and on sandy soil. Mr. Usher also said he could grow sweet peas very well on the same site year after year, but when he broke up new land for them the plants succumbed wholesale from streak and other diseases. Mr. Weeks, of Bromley, and Mr. Leech, of Dulwich, both spoke of the evils of watering, especially watering with tap water in the evenings. Mr. Malcolm expressed a strong belief in drainage and soil aeration; Mr. Weston thought firm soil one of the secrets of success, and Mr. W. Cuthbertson's suggestion that lime was often needed to help the nodule-forming bacteria met with very general approval. Mr. Vernon Hill, Mr. A. Bunyard, Mr. F. J. Harrison, Mr. Aley, Mr. Davidson, the chairman, and others all joined in the discussion.

Mr. Chittenden, in replying, said that the use of sterilised soil for the seed bed was a most valuable aid to strong plants and freedom from disease; he advocated the use of lime on clay soils and Chalk on sandy soils. He did not know how long the dormant spores of streak disease might lay dormant, but he pointed out that as long as the plants were healthy and unchecked the disease would not attack them. The aim therefore should be to secure steady, sturdy growth, and avoid checks to root or stem.

Mr. Chittenden was cordially thanked for his paper.

Two other papers were read, one on "Packing Sweet Peas for Exhibition," by Mr. T. Stevenson, and the other on "Packing Sweet Peas for Market," by Mr. Thomas Page, and the text of these we propose to give in our next issue.

A vote of thanks to the readers of papers was heartily accorded on the motion of Mr. George Gordon, V.M.H., and Mr. Leech, while a similar hearty vote to the chairman was given on the motion of Mr. W. Weeks and Mr. Alsen. This brought a busy day to a close, as not a few of the officers and committee had been on duty since twelve noon, and it was now about half-past ten p.m. Who says the enthusiasm in sweet peas is declining?

An edition of "SWEET PEAS AND THEIR CULTIVATION," by C. H. Curtis, has just been issued for 1912, and consequently this is the most up-to-date work on the subject. The price, by post, is 1s. 2d. (cloth, 1s. 9d.) from the Publishers, 148-9, Aldersgate Street, London, E.C.

Perpetual Carnation Society.

The society that devotes its attention to the encouragement and improvement of the perpetual-flowering carnation held its winter exhibition at the Royal Botanic Society's Gardens, Regent's Park, on Tuesday and Wednesday, December 5 and 6. The carnations were finely shown, and the whole exhibition was a success, speaking horticulturally, but there were very few visitors, the folks present being chiefly exhibitors and nurserymen who specialise in carnations. Moreover, the corridor and conservatory, especially the former, were uncomfortably cold for the greater part of the time covered by the show.

OPEN CLASSES.

In the open class for a group of cut carnations arranged on a space 10ft. by 3ft. there were three competitors, and the first prize, a gold medal, was won by Mr. W. E. Wallace, Eaton Bray, with a beautiful exhibit consisting of thirteen fine bunches of lovely flowers, associated with asparagus fronds, and set over a groundwork of ferns. Such varieties as Carola, Rose Pink Enchantress, May Day, Winsor, and Gloriosa well represented. Messrs. Allwood Brothers, Wivelsfield, Haywards Heath, were awarded second prize for a display that needed a few more bright-hued flowers to make it first-rate. Third prize fell to Messrs. Young and Co., Hatherley, Cheltenham, who had a very effective exhibit, and a well-arranged one.

Mr. Brunton's challenge cup for the best three vases of British novelties was secured by Mr. Bertie E. Bell, Guernsey, with Coronation, Judith, and Constance. For American novelties, three bunches, the American Carnation Society's cup was won by Mr. W. E. Wallace with beautiful blooms of Gloriosa, May Day, and the brilliant Scarlet Glow; Mr. Bertie Bell came second, and Messrs. W. Wells and Co., third. The Covent Garden Challenge Cup for one vase and one packed vase, each of flowers of two varieties, was won by Mr. W. E. Wallace, Eaton Bray, with exquisite examples of Dorothy Gordon and White Wonder; second prize fell to Mr. D. M. Collins, Heathfield Nursery, Swanley, and third to Mr. Phillip Ladds, Swanley.

In the series of classes for one bunch of twenty-five blooms there was a fair competition. For a vase of pink flowers, Enchantress style, Mr. W. E. Wallace scored with Enchantress in superb condition of size and colour, and to this vase was awarded the special prize as the best vase of flowers in the show. For pink flowers of the Mrs. Burnett style Mr. Wallace scored with May Day; while for rose-pink varieties Mr. Wallace was again first with Rose-pink Enchantress. In the Lawson class Mr. Bertie Bell scored with handsome flowers of Mrs. C. W. Ward; while in the white class Mr. D. M. Collins came to the front with beautiful flowers of Perfection. First prize for scarlet flowers was won by Mr. W. E. Wallace with Scarlet Glow.

The best self in other colours than those named was Mikado from Mr. A. F. Dutton, Iver; while for a vase of a fancy variety Mr. H. Burnett, Guernsey secured the premier award with effective flowers of the yellow-ground Mandarin.

For a registered variety not in commerce Mr. Wallace led with Una, a bright cerise variety that also secured an Award of Merit.

AMATEURS.

Mr. Usher, gardener to Sir Randolf Baker, Bart., M.P., Ranston, Blandford, secured the medal and first prize for a display of carnations arranged on a space 6ft. by 3ft.; he put up vases and stands of fine flowers, Enchantress, Britannia, Winsor, and White Perfection being especially good.

Mr. J. Bruce, gardener to Mrs. Bischoffsheim, won first prize for a group of carnations, and therewith secured the handsome cup presented by Lord Howard de Walden. Second prize was won by Mr. R. Barnett, gardener to Lord Furness, Grantley Hall, Ripon. Mr. Usher was first, and Mr. J. H. Bruce second for six pots of carnations.

For a case of Messrs. Stuart Low and Co.'s novelties, Mr. Usher scored, showing Lady Dainty, Lady Alington, Royal Purple, Rival, etc.; Mr. F. Norman, Much Hadham, Herts, second. Mr. Usher won the chief award for Mr. Burnett's novelties, and showed R. F. Felton, Mikado, and Pluto finely; in another class for Mr. Burnett's varieties Mr. Usher was equally successful. Mr. Usher scored for a case of twelve blooms, not less than six varieties, and here he had Carola, White House, Scarlet Glow, and Rose Doré in good form; Mr. A. R. Allan, gardener to Lord Hillingdon, Uxbridge, second.

In the small growers' section classes were provided for a vase of blooms of certain colours. Mr. Usher scored in the Enchantress class, but was beaten by Mr. A. R. Allan and Mr. Plowright in the Mrs. Burnett class, the first-named winning with Mrs. H. Burnett. In the rose class Mr. Usher scored with Rose Pink Enchantress; led in the white class with White Wonder; was first in the scarlet class with Britannia; was first in crimsons with Carola, and first for any other self colour with Rose Doré. Mr. Allan, Mr. Bruce, and Mr. Johnson, gardener to Lord Burnham, Hall Barn, Beaconsfield, won most of the other awards.

In the small growers' section some very charming flowers were displayed; three flowers of a variety were here required. Mr. G. H. Lawrence, Stratton, Godstone; Mr. J. Mackenzie, Plumstead; Mr. T. H. Plowright, Trinity Place, Windsor; and Mr. Kenyon Fuller, Sonning, were the leading prize winners in a brisk competition.

DECORATIVE CLASSES.

Mr. Wallace scored for a vase of three dozen blooms artistically arranged, and he showed May Day; Mr. H. J. Dudney, Erith, came second with Scarlet Glow, and Mr. Bell third with May Day. Messrs. R. F. Felton and Sons, Hanover Square, had the best bouquet of carnations, and were also easily first for a basket of carnations. Messrs. Felton and Sons were also winners of first prizes for three ladies' sprays and six button-hole bouquets, all composed of carnations.

First prize for table decoration of carnations fell to Mr. Usher, who used the variety May Day; Miss Muscutt, Wolverton, came second, and Mrs. A. R. Bide, Guildford Road, Farnham, third. In the open class for a table decoration Mrs. A. R. Bide won first prize with a capital arrangement of May Day; Mr. F. G. Bealing, Bassett, Southampton, second; and Messrs. Clarke and Cook, Castlethorpe, Bucks, third.

NON-COMPETITIVE.

Messrs. Stuart Low and Co., Bush Hill Park, Enfield, contributed a very fine display of carnations, and set up fine stands of May Day, Baroness de Brienen, Lady Alington, etc. (Gold Medal). Messrs. W. Wells and Co., Merstham, showed a few carnations and single chrysanthemums, and Mr. E. Guile, Newport, Essex, exhibited a new pink carnation named Lady Meyer, of very pleasing shade. Messrs. G. Fairbairn and Sons, Carlisle, gained an A.M. for Geisha, a large heavily fringed variety of deep heliotrope hue. Mr. Engelmann (Saffron Walden) and Mr. Clarke, March, conjointly showed a new crimson variety named Triumph, which secured a First Class Certificate.

Mr. G. Lange, Hampton, set up about a score of bunches of popular varieties of carnations (Silver-gilt Medal). Mr. G. Engelmann, Saffron Walden, had a very pretty display, wherein Carola, May Day, Harlequin (very bright yellow and scarlet fancy), White Wonder, Lady Northcliffe, Sunstar (yellow), Triumph, and Scarlet Glow were notably fine varieties (Gold Medal).

ANNUAL MEETING.

The annual meeting preceded by a dinner was held at Anderton's Hotel, Mr. J. S. Bruton presiding. The minutes of the previous annual general meeting being confirmed, the committee's report for the past year's work was read by the Hon. Secretary, Mr. E. F. Hawes. The Chairman, on moving its adoption, spoke of the important work in which the society was engaged, and hoped that much greater developments would take place during the coming year. After being duly seconded, the motion was carried unanimously. Mr. L. J. Cook, hon. treasurer, read the financial statement, which was also approved and adopted.

The following are the more important items in the report of the committee: Classes have been instituted for the encouragement of members resident over fifty miles from London, the committee agreeing to stage flowers sent to the exhibition. The Society's Year Book has been a great success. Sixty-three new members joined during the year, and thirty-four lapsed or resigned, the membership now standing at 301. The steps taken to ensure that no varieties raised in the British Isles would be considered for certificate or award unless registered, have proved most successful; the total number of British-raised varieties to date is 84. A working arrangement has been made with the American Carnation Society to prevent the duplication of names of varieties and its consequent confusion.

The financial statement showed a turnover of £201 3s. 4d. Subscriptions amounted to £111 2s. 6d., special prizes £22 4s., gate money £17 14s. 9d., sales of Year Book £9 7s. 6d. On the expenditure side prominent items were, £98 19s. 6d. for prizes and medals, £35 1s. 6d. for printing and stationery, and £18 9s. 3d. for postages. The society has now £25 on deposit, and carries forward a cash balance of £3 0s. 5d.

A hearty vote of thanks was accorded the retiring officers and committee for their valuable services during the year, and an altera-
A letter was read from Mr. H. Mathias
tion of rule, increasing the number of committee from 18 to 20 members, was adopted.
regretting his inability to attend owing to severe illness, which also necessitated his resignation as hon. secretary, a position he has held since the formation of the society, and, jointly with Mr. Hawes, for the past two years. As a mark of appreciation of the able services rendered by Mr. Mathias, the committee unanimously elected him a vice-president of the society, and instructed Mr. Hawes to write on their behalf expressing a hope that Mr. Mathias would have a speedy and complete recovery to health.

The following officers were elected for the coming year: Lord Howard de Walden, president; the whole of vice-presidents, with the addition of Messrs. Mathias and F. C. Harwood; Mr. J. S. Brunton, chairman of committee; Mr. W. E. Wallace, vice-chairman; Mr. L. J. Cook, hon. treasurer; Mr. E. F. Hawes, hon. secretary and show superintendent; and Mr. Richard Pinches, auditor. The following gentlemen were elected to serve on the committee: Messrs. W. H. Page, H. F. Mason, H Matthias, G. H. Lawrence, M. C. Allwood, Mairbairn, S. Mortimer, A. R. Allan, Usher, T. Weston, W. Wells, jun., Shaw, Metcalfe, Jordan, Sherwood, Lawrenson, Zaudevin, and Kirkwood.

A vote of thanks to the chairman concluded the proceedings.

Royal Horticultural Society.

SCIENTIFIC COMMITTEE.—December 5.

Present: Mr. E. A. Bowles, M.A., F.L.S. (in the chair); Dr. A. B. Rendle, F.R.S., Messrs. G. Gordon, V.M.H., A. Worsley, W. Fawcett, G. Wilson, J. O'Brien, V.M.H., W. C. Worsdell, and F. J. Chittenden (hon. secretary).

THE LATE MR. JAMES DOUGLAS.—It was unanimously resolved to convey a vote of condolence to Mrs. Douglas on the death of Mr. James Douglas, who had for many years been a member of the Scientific Committee.

DOUBLE ODONTOGLOSSUM CRISPUM.—Mr. Gurney Wilson, on behalf of Mr. Jensen, showed a double flower of Odontoglossum crispum. The two outer whorls were normal, but the stamens had apparently developed and become petaloid. The plant showed the same peculiarity each year.

GALLS ON RIBES ALPINUM. — Dr. Rendle exhibited a branch of Ribes alpinum from near Grantham, in Lincolnshire, having large numbers of black galls upon it about three-eighths of an inch to one inch long so numerous that the whole bore a superficial resemblance to a small branch of larch bearing numerous small cones. The cause of the production of these galls was unknown.

UNCOMMON FRUIT.—Mr. George Gordon exhibited a ripe fruit of Holboellia latifolia (Stauntonia latifolia) from a wall at Somerleyton Hall, where it had not been known to fruit before.

ABERRATIONS OF SAXIFRAGA LIGULATA.—Mr. W. C. Worsdell showed specimens of leaves from a plant of Saxifraga ligulata at Kew which, season after season in the autumn, produces leaves of ascidia form and developed in different degrees. Many of the leaves showed cresting as well.

VIOLETS WITH BRANCHED PEDUNCLES. — He also exhibited violets with branched peduncles from Mr. Williams. The specimens were sometimes branched low down and sometimes so near the flower, that two double flowers were developed almost touching one another.

Horticultural Club.

On Tuesday, the 5th instant, the usual monthly dinner of this club was held at the Hotel Windsor, under the chairmanship of Mr. Harry J. Veitch, a considerable number of members and guests (including ladies under the new regulations) attending. After the dinner, as is customary, a lecture was delivered, this time by Mr. Arthur W. Sutton, J.P., V.M.H., entitled, "Four Hundred Miles on Horseback East and West of the Jordon." The lecture was illustrated by means of 100 beautifully coloured views of the Lebanon, Gilead, Basham, Moab, and Southern Palestine, and was intensely interesting, as most of the views had been taken by Mr. Sutton himself, who described them seriatim, adding the experiences, difficulties, and adventures which accompanied their taking, together with the habits and customs and industries of the Arab Jews and other inhabitants of the district traversed by him and his party under the care of Messrs. Cook and Sons. As Palestine is only about 150 miles from north to south, the first slide was a map of that country upon which he indicated the tortuous route which the 400 miles involved, embracing, of course, the many points of salient interest which the plan included. As the scene of innumerable scriptural references, Mr. Sutton increased the interest of most of the slides by briefly alluding to these, indicating now and then how a visit to the actual localities dissipated critical doubts which had been raised, by confirming instead of confuting. The many magnificent ruins of ancient temples of Roman, Greek, and still older periods, which indicate the presence of large populations where now lies a practical desert, were shown on the screen to great advantage, and among these, undoubtedly, the most curious and interesting were those of Derea. Here there are at least four cities superposed the one above the other. The present Arab buildings are founded upon a Græco-Roman city, which, in its turn, stands on the remains of a still older one in which bevelled stones are used; while below these three there is a treglodyte city entirely excavated in the native rock, the subterranean residence of King Og, to whom the Scriptures refer in many places. This subterranean city consists of a labyrinth of streets with shops and houses, and a market place, but is hardly safely accessible to foreigners. A reference to the Dead Sea, which, however, only appeared in the distance in one of the views, related to the curious fact that it is no less than 1,300 feet below the level of the Mediterranean, and forms the lowest lying body of water on the earth's surface. It was computed that about six million tons of water pour into it daily, the whole of which is evaporated, as there is obviously no outlet; its excessive saltness is therefore the outcome of accumulation from the Jordon of the minute quantity of salt in its waters. From the Dead Sea to Jerusalem there is a rise of nearly 4,000 feet, as that city is about 2,500 feet above sea level. The Jerusalem of Christ's time lies about 100 feet below the level of the present city, and in this connection and others the lecturer alluded to, and showed some slides of, the valuable work effected by the "Palentine Exploration Fund," which has been busy for forty-five years in bringing to light the many buried treasures of Palestine. After the lecture, Sir Charles Watson, chairman of the fund in question, who has long devoted himself to these operations, and Mr. Harry J. Veitch, spoke in high terms of the lecture, and a very hearty vote of thanks concluded the meeting.

National Chrysanthemum Society.

At the meeting of the Executive Committee held recently at Carr's Restaurant, Strand, Mr. Thos. Bevan presided. After reading the minutes and various correspondence, the Secretary was authorised to sign the contract with the Crystal Palace for the N.C.S. Show of 1912. The Rochford and District Society applied to be admitted in affiliation, and the same was agreed to. After considering a question of interpretation from the Alsayer Society, the financial statement to date was read, showing a satisfactory working balance.

It is pleasant to be able to record that cheques for all prize money awarded at the November show were sent off to the winners two days after the show was held.

The Chairman of the Floral Committee referred to the meeting held on November 20, which, he thought, constituted a record; 106 novelties were staged; of these fourteen were awarded F.C.C., sixteen were commended, and four were asked to be seen again. There was one award for colour. The committee passed a special vote of thanks for the generous way in which the trade had supported the society at the October and November shows.

New members were elected, ten at a guinea, three at half a guinea, and twenty at 5s. Mr. Harman Payne was asked for a report on his recent visit to the French chrysanthemum shows.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1911. DECEMBER 3 TO DECEMBER 9.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Dec. 3—Sunday	2 18	51	51	53	46
„ 4—Monday	4 30	41	40	48	41
„ 5—Tuesday	2 12	45	45	49	37
„ 6—Wednesday..	5 30	33	32	47	29
„ 7—Thursday	—	42	41	44	32
„ 8—Friday	1 18	35	33	44	29
„ 9—Saturday.....	5 24	39	37	47	34
Means	(total) 21 12	41	39	47	35

DATE. 1911. DECEMBER 3 TO DECEMBER 9.	RAIN.	TEMPERATURE OF THE SOIL AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg.
Dec. 3—Sunday	0·07	44	44	46	41
„ 4—Monday	0·35	43	44	47	26
„ 5—Tuesday	0·04	43	44	47	25
„ 6—Wednesday..	0·53	41	44	47	19
„ 7—Thursday	0·18	41	42	47	24
„ 8—Friday	0·36	39	42	46	17
„ 9—Saturday	0·15	39	41	46	24
Means ...	(total) 1·68	41	43	46	25

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

BEGONIA GLOIRE DE LORRAINE.—W. F., Chippenham: This famous begonia was raised by Mons. Lemoine, of Nancy, France, and its parents are Begonia socotrana and B. Dregei. The "rust" that sometimes appears on this and other begonias is due to the presence of a tiny mite. The mites eat into the leaf substance, usually on the under-surface or close to the leaf-stalk, and so produce the rusted appearance. Dusting with tobacco powder is a good remedy, while dipping in a nicotine solution and regular fumigation are preventives.

BACTERIA ON PLANT ROOTS.—F. R. C., Epsom: Leguminous or food-bearing plants have the power, with the aid of certain bacteria, of obtaining free nitrogen from the air for use in the upbuilding of their structure and the perfecting of their seeds. The nodules on the roots of leguminous plants are the homes of these useful bacteria. The cycas and some few other plants have also the same power and assistance, and a few years ago it was thought palms should be added to the list of plants which carry colonies of domesticated nitrogen-collecting bacteria. Symbiotic relations also exist between these nitrifying organisms and podocarpus and alnus.

PERMANENT WHITEWASH.—S. C., Rawtenstall: There are now so many good permanent washes on the market, white, or in colour, that it is probably not worth while to mix one's own material. However, we give you an American recipe, and one that has appeared before in these pages. Take a half-bushel of freshly burnt lime, slake with boiling water, and cover during the process; strain through a fine sieve or cloth, and add seven pounds of salt previously dissolved in warm water, three pounds of rice flour boiled to a thin paste, and stirred in boiling hot, half a pound of powdered Spanish whiting, and one pound of glue previously dissolved in the usual way. Add five gallons of hot water and stir well; then let the mixture stand, carefully covered, for a few days, when, after re-stirring it and making it quite hot, it will be ready for application. It is important that the lime be fresh and slaked with boiling water.

KALANCHOE FLAMMEA.—J. M. W., Lincoln: Kalanchoe flammea is a native of Somaliland, and seeds of it were received at Kew in 1895, the resulting plants flowering at the Royal Gardens for the first time in 1897. Not only is the species a valuable conservatory plant, but it is largely grown for market.

FAILURE WITH BEGONIAS AND CYCLAMEN.—H. B. A., Kent: The knotted roots are caused by eelworms, and if the comparative failure of the plants in previous years has been brought about by similar conditions, you had better sterilise the soil for future batches. This means raising the temperature of the soil to boiling point by placing it on sheet iron over a fire, or in a brisk oven. Where there is any possibility of trouble of this kind the soil should always be sterilised before use; the plants will not grow quite so vigorously at first in sterilised as in non-sterilised soil, but they soon make up for lost time, and will, ere long, get ahead.

INJURED VIOLETS.—V., Sunningdale: The soil and roots of the violets sent give us no clue to the cause of the trouble; the former is good, and the roots show that they like it. We believe that some injury was done to the crowns at the time of planting; there may have been a bruise such as would be caused by an unskilful handling of the trowel, or from letting the collar of the pant lay on the sharp edge of a box during conveyance from bed to frame. Such weakness would only show when the plants commenced to flower, and to be subjected to the trying conditions of frame culture. That only a few plants have suffered at once suggests some such cause as this; when fungoid diseases attack violas in frames, practically every plant is affected more or less.

NAMES OF PLANTS.

Under this heading we can only undertake to name species and well-marked varieties of plants, and not florists' flowers. Specimens should be packed in stout boxes with damp (not wet) moss, or some leaves, as packing material, to ensure their reaching us in a fresh state. It is essential that flowers must accompany specimens of flowering plants, that fern fronds be fertile, and that numbers be firmly attached to the specimens so that they can be seen without any untying. We cannot promise to name more than six specimens at one time from any one correspondent.

X. Y. Z., Barnet.—1, Maxillaria picta; 2, Oncidium flexuosum; 3, Selaginella Emileana; 4, an Asplenium, send fertile frond; 5, seedlings of Cyrtonium falcatum; 6, Gasteria verrucosa.

C. B., Saffron Walden.—

NAMES OF FRUITS.

When sending fruits for naming, will our readers be good enough to send good specimens, as without those it is not possible to accurately determine the varieties. Pack firmly, using light tin or wood boxes, and send not more than six varieties at once. Label each specimen and enclose letter with the fruit, whether a separate notification is sent or not. Address the packages to the Editor, GARDENERS' MAGAZINE, as advised in the notice at the head of "Answers to Correspondents."

E. J. P., Southampton.—Gravenstein.

L. H. A., Gloucester.—Sturmer Pippin.

J. T. A., Bethersden.—Probably Dutch Mignonne.

G. P. J., Blandford.—Not a good specimen; probably Hubbard's Pearmain.

H. H., Harrow.—1, King of the Pippins; 2, Emperor Alexander; 3, Herefordshire Beefing.

E. C. H., Hastings.—1, Vicar of Winkfield; 2, Josephine de Malines; 3, New Hawthornden.

A. C. W., Broxbourne.—1, Pitmaston Duchess; 2, not recognised; 3, probably Margil.

W. P., Canterbury.—Pears: 1 and 2, Beurre d'Aremberg; 3, not recognised; Apples: 1, not recognised; 2, Cox's Orange Pippin.

FORTHCOMING ENGAGEMENTS.

MONDAY, December 18.—National Chrysanthemum Society, committee meeting at Essex Hall, Strand, at 7 p.m.
TUESDAY, December 19.—Royal Horticultural Society; there will be no exhibition on this date, but the committees will meet to consider novelties at 12 o'clock.
WEDNESDAY, December 20.—Royal Meteorological Society.
THURSDAY, December 21.—Linnean Society.
MONDAY, December 25.—Christmas Day.
TUESDAY, December 26.—Bank Holiday.
THURSDAY, December 28.—National Horticultural Society of France.
Manchester and North of England Orchid Society.

Cytisus filipes.—This greenhouse broom, which is a native of Teneriffe, flowers more or less during the winter and early spring. It is widely removed from the popular Cytisus racemosus, which forms a dense growing bushy plant, while in Cytisus filipes the shoots are long and slender, and practically devoid of foliage. In the case of a tall specimen they hang down for a considerable distance, and form a very graceful feature. The absence of leaves is not so apparent as the bark of the shoots is green. The flower are white.—W. T.

MARKETS.

◆

COVENT GARDEN.

Flowers.

Trade is fairly good, and supplies are excellent, carnations and chrysanthemums being especially good.

		s.	d.		s.	d.
Adiantum cuneatum	per doz. bun.	3	0	to	4	0
Arums	per doz.	3	0		5	0
Asparagus plumosus	per doz. bun.	8	0		15	0
,, Sprengeri	per doz. bun.	8	0		12	0
Azalea	per doz. bun.	4	0		5	0
Cattleyas	per doz.	8	0		12	0
Carnations	per doz.	2	0		4	0
,,	per doz. bun.	15	0		21	0
Camellias	per box	1	6		2	0
Chrysanthemums	per doz bun.	4	0		8	0
,,	per doz. blooms	1	0		4	0
Croton leaves	per bun.	1	0		1	6
Eucharis	per doz.	3	0		4	0
French fern	per doz. bun.	2	6		4	0
Gardenias	per doz.	2	0		4	0
Hyacinths, Roman	per doz. bun.	8	0		10	0
Lilium auratum	per doz.	2	6		5	0
,, speciosum	per doz.	1	6		2	6
,, longiflorum	per doz.	3	0		4	0
Lily of the Valley	per doz. bun.	8	0		18	0
Marguerites	per doz. bun.	2	0		2	6
Mignonette	per doz. bun.	2	6		3	0
Narcissus, French	per doz. bun.	2	6		3	0
Odontoglossums	per doz. blms.	3	0		4	6
Pelargoniums	per doz. bun.	5	0		9	0
Poinsettias	per doz.	10	0		12	0
Roses	per doz.	1	6		5	0
Smilax	per doz. trails	2	0		3	6
Tuberoses	per doz.	0	5		0	9
Violets	per doz. bun.	3	0		5	0

Fruits.

Supplies are good, and already the demand is greatly improving in view of Christmas festivities.

		s.	d.		s.	d.
Apples, English dessert	per bush.	3	6	to	6	6
,, Nova Scotia	per barrel	10	0		20	0
,, Canadian	per barrel	10	0		20	0
,, American	per barrel	12	0		30	0
,, Californian	per case	7	6		10	6
Bananas	per bun.	4	0		10	6
Cob Nuts	per doz lb.	5	0		6	0
Cranberries	per case	7	0		10	6
Dates	per doz. boxes	4	6		6	0
Figs	per box	0	9		1	6
Grapes, English	per lb.	0	8		4	0
,, Belgian	per lb.	0	8		1	3
,, Almeria	per barrel	10	0		20	0
Lemons	per case	10	0		40	0
Melons	each	1	9		4	6
Oranges, Denia	per case	12	0		24	0
,, Jamaica	per case	10	0		13	0
,, Mandarins	per box	1	0		6	0
Pears, American	per barrel	25	0		26	0
,, French	per crate	7	0		12	0
,, Californian	per case	10	0		16	0
Pineapples	each	2	0		5	0
Walnuts	per bag	6	0		7	0

Vegetables.

There is a good all-round demand for vegetables of all kinds.

		s.	d.		s.	d.
Artichokes, Globe	per doz.	2	0	to	4	0
,, Jerusalem	per bush.	2	0		3	0
Asparagus	per bun.	3	0		6	0
Beet	per bush.	2	6		3	6
Brussels Sprouts	per ½ bush.	1	3		2	0
Cabbage	per tally	4	0		8	0
Carrots	per doz. bun.	2	0		4	0
Cauliflowers	per doz.	2	0		4	0
Celery	per doz, bun.	6	0		14	0
Cucumbers	per doz.	6	0		10	0
Endive	per doz.	1	6		2	6
Horseradish	per doz. bun.	10	0		18	0
Leeks	per doz.	2	0		3	0
Lettuce	per doz.	1	6		2	0
Mushrooms	per doz. lb.	10	0		13	0
Mint	per doz. bun.	3	0		5	0
Onions	per case	8	0		9	0
Parsnips	per bag	4	0		6	0
Tomatoes	per 12 lbs.	2	0		5	0
Turnips	per doz, bun.	2	0		2	6
Watercress	per doz. bun.	0	6		0	6½

CONTENTS.

PAGE
Answers to Correspondents 948
Apple Norfolk Beauty 937
A Valuable Late White Grape 935
Begonia Mrs. Heal 940
Berry-bearing Shrubs for Christmas Decoration 935
Chrysanthemums for Market 940
Daisies in Garden Decoration 939
Exhibitions and Meetings 944
New Plants, etc. 937
Note of the Week 929
Rock Garden Jottings 936
Some Interesting Viburnums 934
The Best Wichuraiana Roses 936
The "Clay" Rose Bowl 936
The Late Sir Joseph Dalton Hooker 931
Twelve Good Climbing Roses 933
Work for the Week 943

ILLUSTRATIONS.

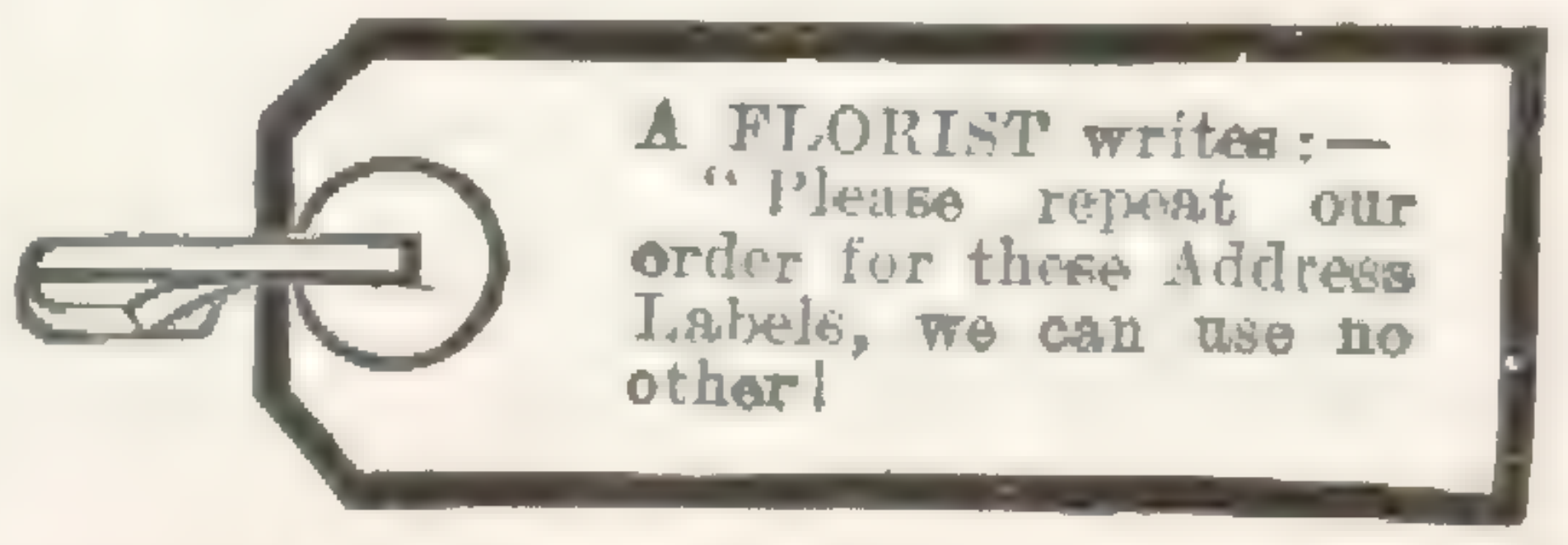
Portrait, Mr. F. W. Ladds, 929; Portrait, the Late Sir Joseph Hooker, 931; Rose Madame Alfred Carriere, 933; Grape Lady Hutt, 935; The "Clay" Rose Bowl, 936; Zephyranthes aurea, 937; Chrysanthemum Isabel Gray, 938; An Effective Arrangement of Pyrethrums, 939; Begonia Mrs. Heal, 941.

PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J. R. PEARSON & SONS
LOWDHAM. NOTTS.

NEW PHLOXES,
Finest in Commerce.
Six strong plants, 4/-,
including **Baron Von Dedem**, a coloured plate of which appeared in "Amateur Gardening," Nov. 25. **See it.**
Carriage Free for Cash.
E. F. FAIRBAIRN & SONS,
EDENTOWN, CARLISLE.
List Free. ESTABLISHED 1852.

ORCHIDS. ORCHIDS.
Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.
STOVE AND GREENHOUSE PLANTS OF ALL KINDS
PLEASE WRITE FOR LIST.
JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

Orchids! Orchids!! Orchids!!
The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application. — **J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**
N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana, Vanda Cœrulea Lushai Hill variety, dark blue type; Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.

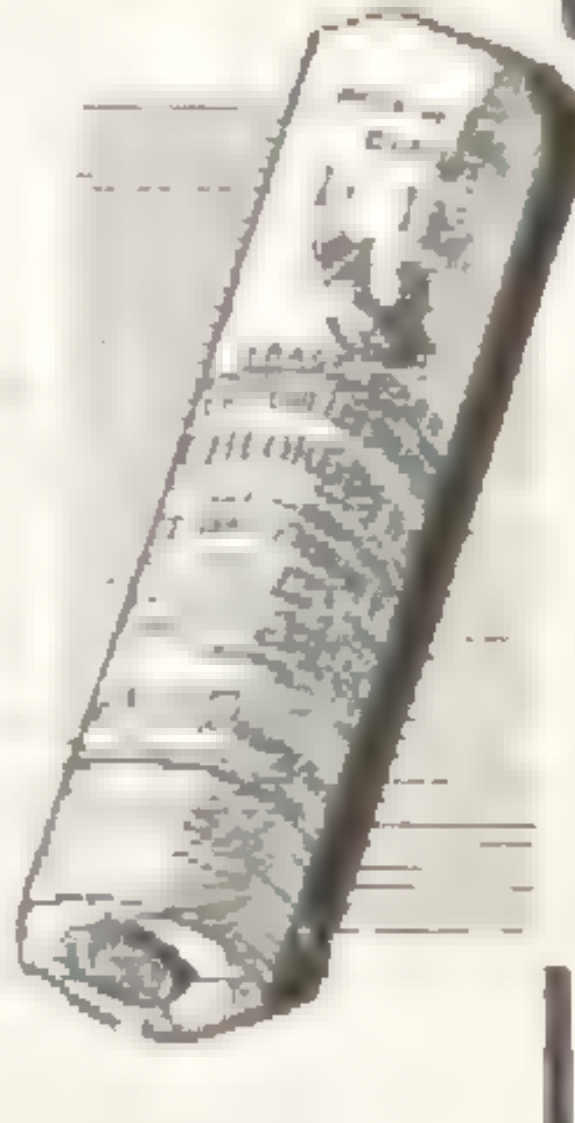
Time & Temper Savers!

A FLORIST writes:—
"Please repeat our order for these Address Labels, we can use no other!"
Samples Free.
BURALL BROS., Manufacturers, WISBECH.

PORTABLE BUILDING
WITH DOUBLE DOORS.
No. 55.

Copyright Registered.
Made in complete sections **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Doors fitted with strong hinges, lock and key, bolts, etc.
CASH WITH ORDER.

SIZES.				STRONG FLOOR.
7ft. long, 5ft. wide, 7ft. 6in. high	£2	3	6	6/9
8ft. long, 6ft. wide, 8ft. high	2	14	0	8/9
9ft. long, 7ft. wide, 8ft. high	3	2	6	11/6
10ft. long, 8ft. wide, 8ft. 4in. high	3	12	6	19/0

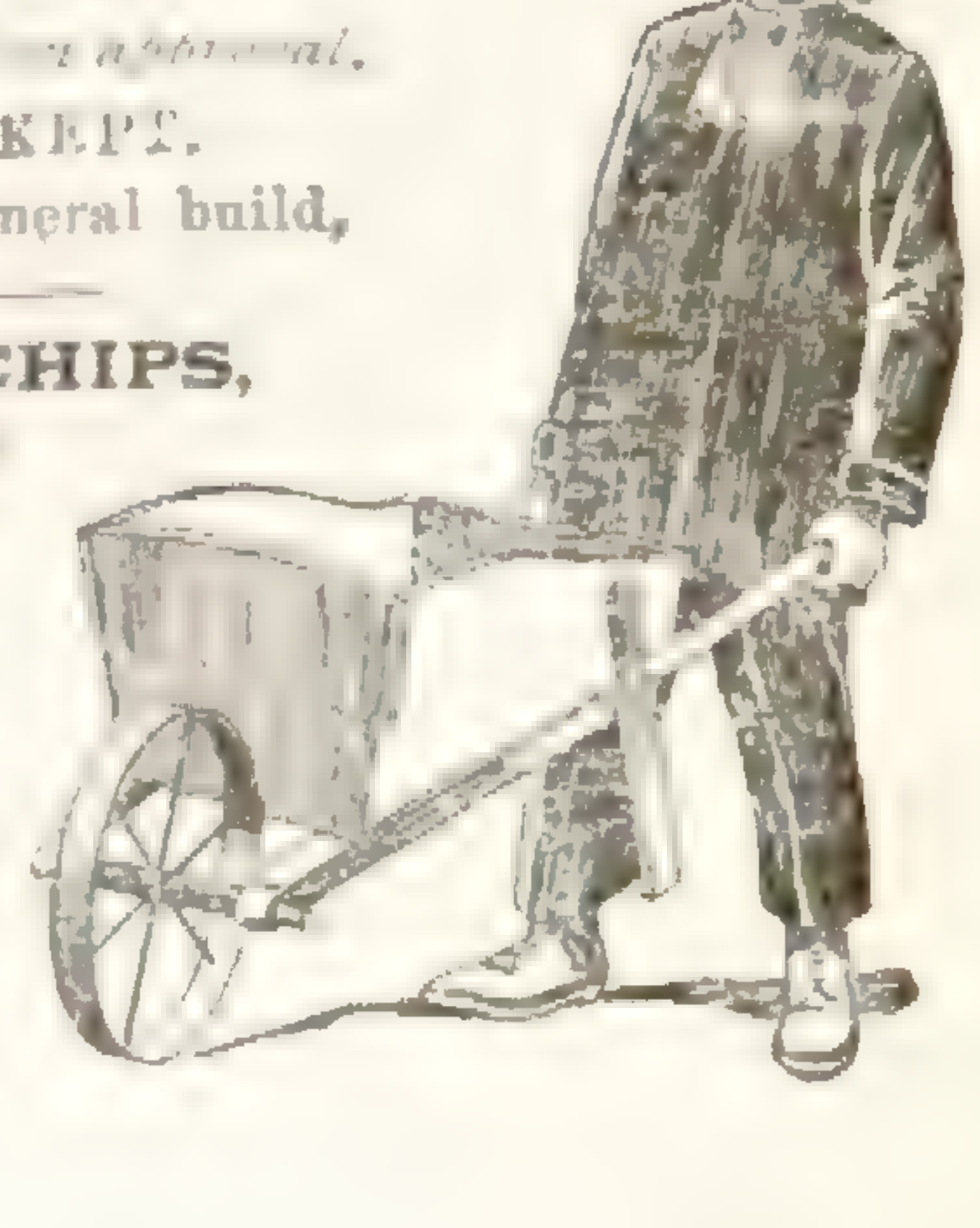
Suitable for Workshops, Motor Cycle, Bath Chair, & Store Houses, Potting & Tool Sheds, etc.
Carriage Paid to any Station in England and Wales
Catalogue, with Testimonials, Post Free.
J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
ESTABLISHED 70 YEARS BEDFORD.
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

Dr. J. Collis Browne's
Chlorodyne

Universally acknowledged to be the Most Valuable Medicine known, and one which should be in every home.
THE BEST REMEDY FOR
COUGHS,
COLDS,
ASTHMA,
BRONCHITIS.
Cuts short all attacks of SPASMS, HYSTERIA, and PALPITATION.
The only Palliative in NEURALGIA, TOOTHACHE, GOUT, RHEUMATISM.
Acts like a Charm in DIARRHŒA and DYSENTERY.
Insist on having
Dr. J. COLLIS BROWNE'S
Chlorodyne,
The Original and Only Genuine.
Convincing Medical Testimony with each bottle.
Of all Chemists, **1/1½, 2/9, 4/6.**

REGISTERED
THE APRON
That has Come to Stay
WORN BY ALL THE LEADING GARDENERS
LOOK AT THE PRICE
1/9 in Dark Blue Ponicus Twills,
OR in Dark Blue Ponicus Serge
3/9 Postage 3d each extra
WRITE FOR ONE TO-DAY.
SHAW & MONTGOMERY,
628 ARGYLE ST. GLASGOW

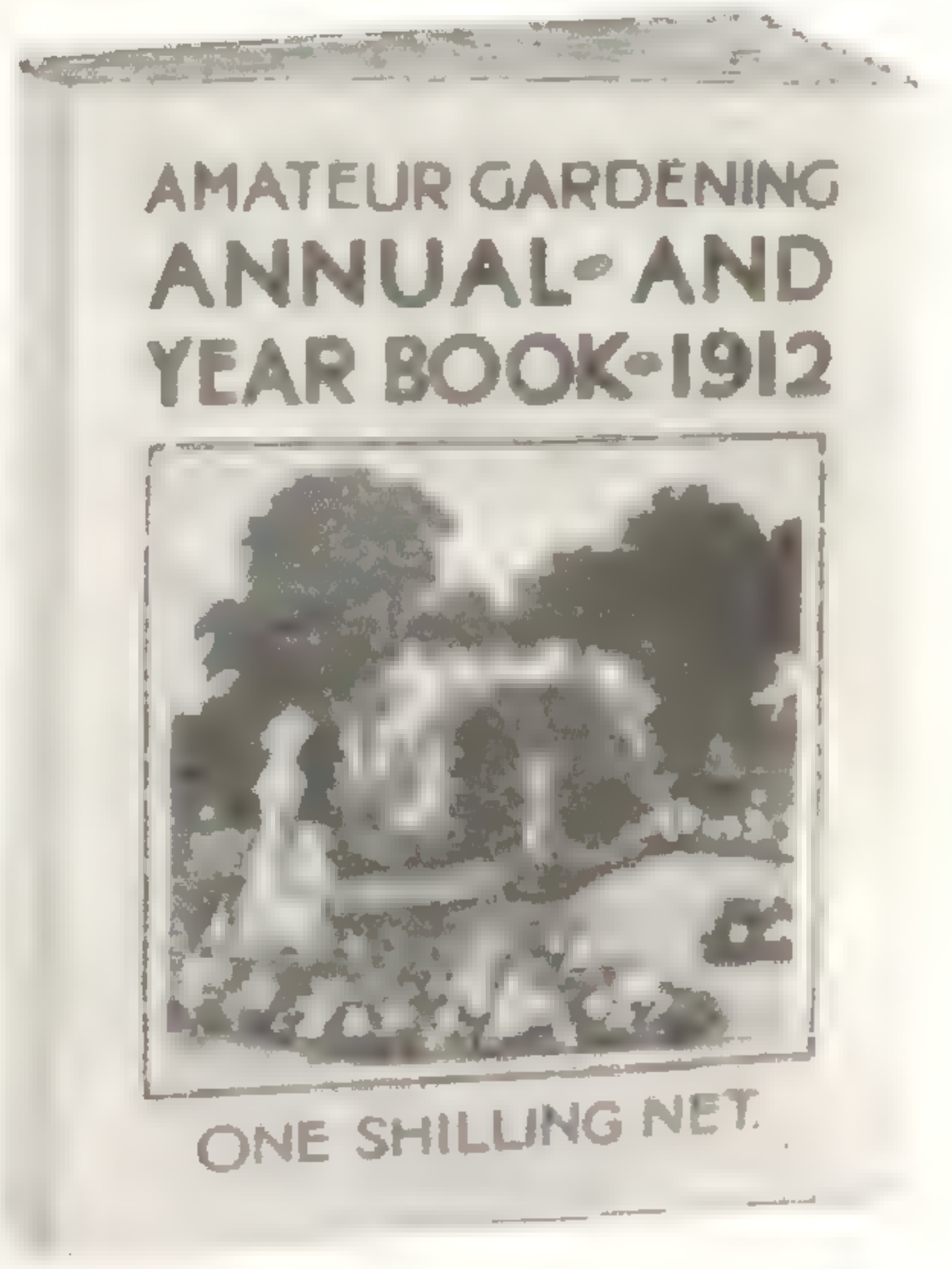
DON'T FAIL TO GET A PAIR. The wet, cold weather is now on. Ladies and Gentlemen ought to wear our Celebrated **"G" Brand Clogs.** Ideal for Garden Wear. All cosily lined with white warm felt.
Only **4/6** postage paid.

All sizes, suitable for Ladies or Gentlemen, Youths or Girls, ready for going. Children's Fine Laced Clogs (as illustration), **3/6.** Sizes 7, 8, 9, 10, 11, 12, 13, 1, 2, cosily felt lined.
THE WELLINGTON MANUFACTURING Coy.,
(Dept. 33), **4, Wellington Street, Glasgow.**

Sou'westers, 1/6 each.
Oilskin Jackets, 5/6 each.
Overalls, 2/6 pair.
Felt-lined Clogs, 3/6 pair.
Any of the above sent on approval.
ALL SIZES KEPT.
State height and general build,

QUASSIA CHIPS,
FOR FRUIT & FLOWER SPRAYING,
in 28 lb. bags, **5/6.**
All Goods Carr. Paid
YOUNG & CO.,
Maltby Street,
BERMONDSEY, S.E.

Just Published.

AMATEUR GARDENING ANNUAL AND YEAR BOOK 1912



Compiled by T. W. SANDERS, F.L.S., F.R.H.S., Editor of "Amateur Gardening."

A NEW WORK. Some of the Contents:—The Garden Month by Month—Sweet Peas—Hardy Annuals—Carnations—Bulbs—Water Gardens—Begonias—Rockeries—Gladioli—Violas—Roses—Pergolas—Delphiniums—Orchids—Dahlias—Chrysanthemums—Tulips—Hyacinths—Phloxes—Fruits—Vegetables—Manures—Salads—Insects—How to Plan a Garden—Lawn Making—Heating Greenhouses—Indoor Gardening—Spraying—Mulching—Perennials from Seed—Select Perennials, Biennials and Annuals—Sowing and Planting Tables—Etc., Etc.

THE VOLUME IS A GARDEN GUIDE FOR ALL THE YEAR ROUND.

ASK YOUR NEWSAGENT OR BOOKSELLER TO SHOW YOU A COPY,
Or send 1/4 to
"AMATEUR GARDENING," Aldersgate St., LONDON, E.C.

184 DEMY 4to PAGES.

PRINTED ON ART PAPER.

116 SPLENDID . . ILLUSTRATIONS.

BOUND IN ART WRAPPER WITH COLOUR PLATE ON COVER. . .

ONE SHILLING NET.

A NEW EDITION. JUST PUBLISHED.

ONE SHILLING NET, By Post, 1/2
In Cloth, 1/6 Net; By Post, 1/9

SWEET PEAS AND THEIR CULTIVATION

By CHARLES H. CURTIS, Hon. Sec. of the NATIONAL SWEET PEA SOCIETY.

A work full of practical information in regard to the culture of the Popular Flower, well illustrated, and in every respect thoroughly up-to-date, including:

THE NEW VARIETIES FOR 1912, AND THE "TOO-MUCH-ALIKE" CLASSIFICATION, AS APPROVED BY THE NATIONAL SWEET PEA SOCIETY

INDISPENSABLE TO THE EXHIBITOR AND AMATEUR ALIKE.

ORDER FORM.

To the Publishers,
148 & 149, Aldersgate Street, London, E.C.

Please send me, by post, "SWEET PEAS AND THEIR CULTIVATION," *for which I enclose* 1/2, *(Cloth, 1/9).*

Name ....

Address ....

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head Working).—Mr. COLLEDGE, Gardener to the Earl of Darnley, highly recommends F. BISHOP, as above; 4½ years as Foreman here. Cobham Hall Gardens, Gravesend, Kent.

GARDENER (Head Working), thoroughly experienced in all branches; excellent references; married; disengaged through establishment being given up. G. HALL Hermitage Cottage, Minchinhampton, Glos.

GARDENER (Head Working).—Mr. R. W. WILLIAMSON, of the Croft, Didsbury, near Manchester, strongly recommends his late Gardener, HENRY ARNOLD, who has been with him for over 20 years; is well experienced in gardening in all its branches, and is specially trained in rockery construction and cultivation of alpines.

GARDENER (Head Working) (Scotch) requires SITUATION where 2 or 3 are kept; 20 years' experience in all branches of gardening; years present situation; married; age 36; 2 children; excellent testimonials. H. McCARTNEY, andye Place, Sandy, Beds.

GARDENER (Single-handed, or where help is given); 12 years' practical experience; 4 years in last situation; good references; single; age 6; abstainer. J. CHAPMAN, Ferry Hill, Chatteris, Cambs.

GARDENER (Head Working, where one or two kept); 10 years in present situation; 5 years as second; age 31; married when suited. A. GIBBS, The Gardens, Farrants, Bickley, Kent.

GARDENER (Head Working). — Mr. H. HEMSLEY, Rock Expert, Crawley, Sussex, [illegible] pleased to highly recommend a thorough competent man in all branches of the profession; highest references; age 36; married. Address as above.

HEAD WORKING, or Single-handed, abstainer; disengaged; age 36; one boy, 14½ [illegible] life experience Inside and Out; excellent refs.; [illegible] years last place; knowledge oil engine, electric [illegible] and bees; wife assist in house if required. J. [illegible]MOND, Hickleys Cottages, Badshot Lea, Farnham, Surrey.

GARDENER (Head Working).—H. ESSAM can confidently recommend his Foreman to Lady or Gentleman requiring the services of a thoroughly practical and reliable Head Gardener; age 31; married when suited; excellent references. Coates Hall, Gisburn, Clitheroe, Lancs. No circulars.

GARDENER (Single-handed, or where help is given; life experience, Inside and Out; good references, and can be well recommended; age 31; married, no family. W. WEST, The Lodge, Pyrford Court, Woking.

GARDENER (Single-handed or good Second); 4 years' good character; age 23; single; abstainer. Apply A. F. ROOKE, Houndean, Lewes, Sussex.

GARDENER (Single-handed or Under); life experience in all branches; good references from present and past situations; leaving when suited; age 29; single. W. MILLER, Ditcham Park, Petersfield, Hants.

GARDENER (Single-handed, or where help is given); life experience in all branches; highest references; thoroughly understands Oil Engine; age 40; strong and active; married; 3 in family, youngest 12½. E. STEVENS, 13, Connaught Road, Newbury, Berks.

GARDENER.—Young Man as IMPROVER (Inside, or Inside and Out); highest references; 2½ years last place; Bothy preferred. A. STEVENS, 21, Arnold Road, Woking.

GARDENER. Second (where several are kept); 13 years' experience Inside and Out; good references; and can be well recommended; age 27; married, no family. W. HILL, Westbrook Cottage, Worplesdon, near Guildford.

UNDER GARDENER, age 19, three years in present place, with excellent character, seeks SITUATION where experience can be gained in greenhouse and garden; total abstainer. Apply P. SAULT, Station Road, Kegworth, Derby.

JOURNEYMAN (Inside and Out); age 20. —A. MADDOCK, The Gardens, Hawthornden Manor, Uttoxeter, will be pleased to recommend F. WILLIAMSON as above; very willing and obliging. Bothy preferred. Apply F. WILLIAMSON, 43, Cheadle Road, Uttoxeter.

MR. C. HART, Caldecote Towers, Bushey Heath, Herts, can highly recommend C. STACY, age 24, for Pleasure Grounds, Herbaceous Borders, Lawns duty, or good Single-handed.

IMPROVER (Inside and Inside and Out), 4 years' experience; age 19 years; not afraid of work; good reference. F. SKELTON, The Gardens, Mount Pleasant, Bishop Auckland, Durham.

YOUNG MAN (20) seeks SITUATION as GARDENER (Under), Inside and Out); 3½ years' good reference; disengaged. S. GENT, Burnham Sutton, King's Lynn, Norfolk.

YOUNG MAN (22), seeks SITUATION (Inside, or Inside and Out; 7 years' experience; 4 years' last place; Bothy preferred; disengaged; references. W. ALLENBY, Whiston Cross, Allrighton, Wolverhampton.

YOUNG MAN, age 25, seeks SITUATION on Pleasure Grounds, or Inside and Out; 6½ years' experience; excellent references; height 6ft.; bothy preferred; disengaged. F. WINNETT, Salford, Chipping Norton, Oxon.

YOUTH, aged 17, seeks SITUATION in Garden; strong, willing; 3½ years in last place; highly recommended. E. ROBERTS, Gate House, Nuttall, Nottingham.

LAD, age 17, seeks SITUATION in Garden; some experience; wish to improve; good character; Bothy preferred. S. RAYNER, Chart Road, Sutton Valence, Maidstone.

Situations Vacant.

WANTED, thoroughly experienced LEADING HAND for KITCHEN GARDEN; young man, not under 24; Bothy, etc. Apply to J. R. ALLAN, The Gardens, Ashurst Park, Tunbridge Wells.

CANADA.—Wanted, strong, active GARDENERS for large Nurseries; steady work; good wages; sail March. UNION TRANSIT CO., 381, Argyle Street, Glasgow.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For DECEMBER 23, 1911.

Please Repeat my Advertisement.

Name..

Address..

....

Date..........................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

"IT IS ONLY A LITTLE CLAY'S THEY WANT."

CLAY'S LONDON FERTILIZER
TRADE MARK.

SOLD EVERYWHERE IN TINS at **6d.** and **1/-**; and in Branded and SEALED BAGS, 7lbs. **2/6**; 14lbs. **4/6**; 28lbs. **7/6**; 56lbs. **12/6**; 112lbs. **20/-**. Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**). **Every Genuine Tin, Bag, and Seal bears Trade Mark, as at side.**

CLAY & SON,
Manure Manufacturers and Bone Crushers,
STRATFORD, LONDON, E.

'Phone: Hop. 763.

When next a Small Boiler you require

TRY

THE THAMES BANK IRON Co
UPPER GROUND STREET
LONDON S.E

THE HEEL

NONE TO BEAT IT.

THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.

4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

MERRYWEATHERS'

614 PUMP

IS THE

Gardener's Friend.

Easy to Work. Simplicity Itself.

Write or Call—

63, Long Acre,
LONDON, W.C.

FLOWER POTS

SAUCERS, SEEDPANS, RHUBARB AND SEAKALE POTS, RUSTIC WARE, VASES, PEDESTALS, etc.

Our Pots are Low in Price and rich in Colour. Amateurs should try our FAMOUS CRATES of POTS.

7s. 6d., 10s. 6d., 15s., and **21s.**

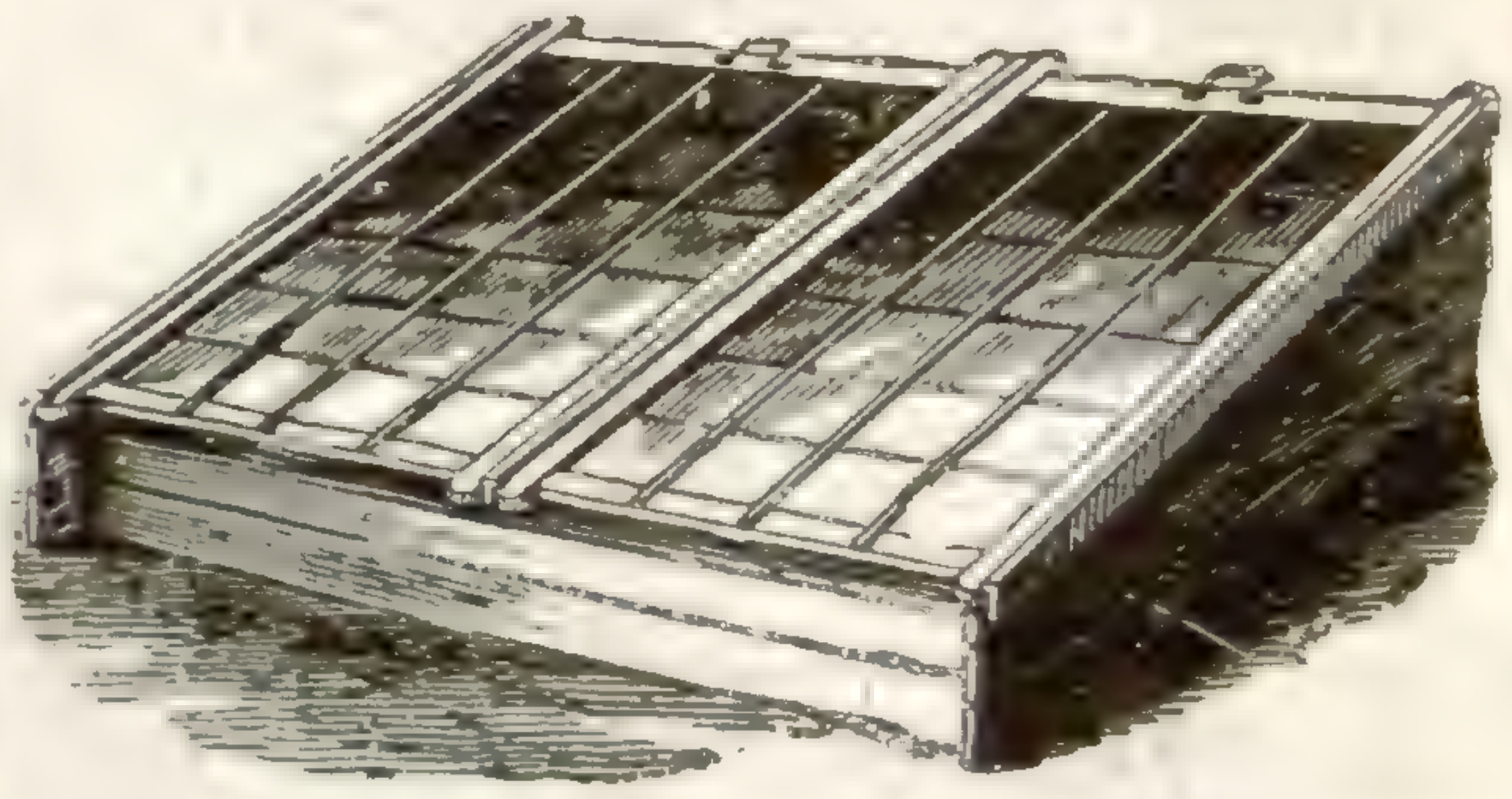
ART CATALOGUE FREE. ORDERS SENT OFF SAME DAY.

Buy from the Makers—
HERBERTS PARK POTTERY CO., WOLVERHAMPTON.

PORTABLE

CUCUMBER FRAMES.

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.		£	s.	d.
1-light 4 ft. by 6 ft.	CASH PRICES.	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.	CARRIAGE PAID.	5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON MANCHESTER.

FLOWER POTS.

SANKEY'S
FAMOUS
GARDEN
POTS

The best and the cheapest.

Write for LISTS.

Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant — Makers to His Majesty the late King.

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

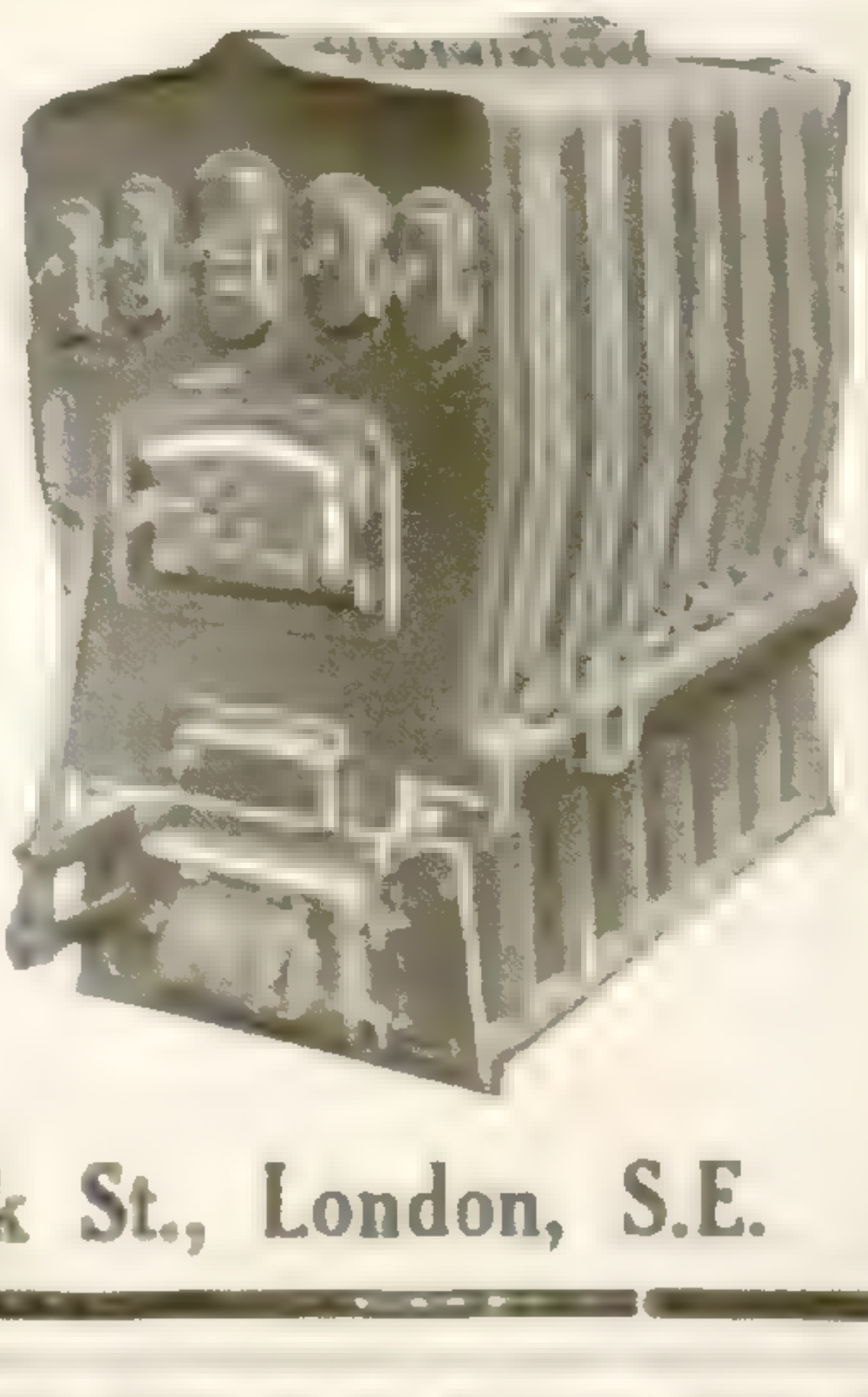
Kinnell's Boilers

THREE LEADING TYPES:—

The **"ANGLIAN," Sectional,** heats 800 to 8,000 ft. 4in. pipe.
The **"ROCHFORD," Tubular,** heats 600 to 8,000 ft. 4in. pipe.
The **"HORSE-SHOE"** for the small Greenhouse.

Saddle Boilers, Trentham Boilers, and all classes of Pipes, Fittings, etc., ready for immediate despatch.

Write for List No. 77, post free.



CHAS. P. KINNELL & Co., Ltd., 65, & 65a, Southwark St., London, S.E.

PLEASE MENTION
THE GARDENERS' MAGAZINE
when writing to Advertisers.

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls

THE GARDENERS' MAGAZINE.

No. 3,034. Vol. LIV. (Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post.) SATURDAY, DEC. 23, 1911. (10/6 per Ann. Post Free. To Foreign Countries, 15/-.) Twopence

BARR'S CASH CLEARANCE SALE OF Spring-flowering Bulbs.—Daffodils, Hyacinths, Tulips, Polyanthus Narcissi, Irises, etc., all in best quality, at greatly reduced prices. Clearance lists on application.—BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, Horticultural Builder, Chelsea, is this winter keeping a large staff of hot-water men in the shops, in order that they may attend immediately to any breakdown of boilers or hot-water piping in any part of the country. In case of emergencies, please telephone 201 Western, or wire, "Gray, Chelsea, London."

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

CHOICE NEW CHRYSANTHEMUMS.—Our New Catalogue of 800 finest varieties in all sections is now ready, most up to-date yet issued. Contains Splendid Novelties for 1912. Post free. J. W. COLE and SON, Chrysanthemum Specialists, Peterboro.

VALUE FOR MONEY.—Best Eating Potatoes, Beetroot, Table Carrots, and Turnips, 112lb., 4s.; 56lb., 2s. 3d.; 28lb., 1s. 3d., bags free; free on rail. Sent to any address on receipt of postal order. Send for my Seed Potato List. Cash prizes given for best results. HORACE TAYLOR, 9, High Street, Chatteris, Cambs.

LAXTON FRUIT TREES.—An immense stock, the finest trees we have ever offered, splendid well-ripened wood and fine roots. Absolutely none better obtainable. Trained in all forms. Fully illustrated Catalogue gratis.—LAXTON BROS., Bedford.

CONSERVATORIES AND WINTER GARDENS, Greenhouses, Plant Houses, Vineries, Peach and Orchard Houses, Verandahs, and [illegible] Garden Frames, Greenhouse Fittings, etc.; Boilers, Pipes, and Heating Apparatus of every description. Send for Illustrated Catalogue, free.—BOULTON and PAUL, Lim., Norwich.

ROCK GARDENS and ALPINE PLANTS.—A new work and a complete guide to the Formation and Management of Rockeries, by E. H. Jenkins, F.R.H.S. Many Illustrations. Cloth, 2s. 10d., post free, from Publisher, 148, Aldersgate Street, London.

WELLS' Catalogue of
CHRYSANTHEMUMS,
PERPETUAL CARNATIONS
HERBACEOUS PLANTS,
ALPINE AND ROCK PLANTS,
now ready. Post free on application. Wells' Book, "The Culture of the Chrysanthemum," post free, 1s. 6d. W. WELLS and CO., Merstham, Surrey.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" supersedes Putty, 16s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country

WEBBS' CATALOGUE and LIST of GARDEN SEEDS for 1912 is now ready. Beautifully illustrated, and contains particulars of the Newest and Best varieties of Vegetables, Flowers, Potatoes, etc., for 1912. All interested in gardening should obtain a copy.

WEBBS' VEGETABLES and FLOWERS have been awarded 42 Gold Medals and Silver Cups at the principal Exhibitions in three years.
WEBB AND SONS, The King's Seedsmen,
Wordsley, Stourbridge.

BUNYARD'S CATALOGUES
Free on Application.

FRUIT TREES, SHRUBS.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

CLAY'S MANURES, CRUSHED BONES
(See page iv.)

CLAY'S FERTILIZER IS
UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

LAVENDER, Old English, 10s. per 100 (50 at 100 rate); packed on rail. Sample doz., 2s. 6d., post free. Other varieties of Lavender, price on application. CHILVERS and SON, Heacham, Norfolk.

DAWES' CHALLENGE RHUBARB has gained nine Medals and Awards, also A.M., R.H.S., London. Strong roots ready. Price list free. DAWES' NURSERIES, Syderstone, Norfolk.

SASH BARS.—Special lines in certain lengths only, 1½ by 1, 2s. 6d. 100ft.; 3 by 1½, 5s. 9d. 100ft.; quotations for special lengths or for any kind of timber, garden lights, greenhouses, and woodwork. C. JENNINGS and CO., Timber Merchants, General Woodworkers, 916, Pennywell Road, Bristol.

BRACKEN ROOTS for Naturalising.—These quick-growing underground stems, 1s. per lb. Bluebells, 1s. 6d. 100. Eight kinds hardy Ferns, 10s. 100.—CRUMP, Wray, Mortonhampstead, Devon.

PERPETUAL-FLOWERING or American Tree Carnations, strong, healthy Guernsey plants, from pots, 4s. per doz., carr. paid; 20s. per 100, carr. forw. Ask for catalogue, 75 vars., with full directions. VAN DER SLUYS, F.R.H.S., Ramee, Guernsey, C.I.

ORDER MATS NOW.—To prevent disappointment and loss by early frosts, order Norfolk Reed Mats now, 50 per cent. more protective than straw. Made to any size, 1d. per square foot.—BOULTON and PAUL, Lim., Norwich.

ORCHIDS FOR AMATEURS.—A practical guide to the Cultivation of Cool and Warm-house Orchids, adapted for Small Mixed Greenhouses. The author is C. Alwyn Harrison, F.R.H.S., and the book can be obtained, by post, for 2s. 10d., from Publisher, 149, Aldersgate Street, London.

GREENHOUSES and CONSERVATORIES. Distinctive Designs and Finished Workmanship. Write now for ILLUSTRATED CATALOGUE. CARTER and HOWARD, Horticultural Builders, Kingston-on-Thames. Phone: 1308 P.O. Kingston.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable buildings, etc. Catalogue gratis.

NOW READY
SUTTON'S GUIDE AND CATALOGUE of Vegetable and Flower Seeds, Potatoes, etc., for 1912.

SUTTON'S GUIDE AND CATALOGUE of Vegetable and Flower Seeds, Potatoes, etc., for 1912.
All lovers of their garden should secure a copy. Containing over 260 beautiful illustrations of the best varieties of Flowers and Vegetables.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

NOW IS THE TIME TO PLANT
Kelway's lovely Pæonies, Delphiniums, and their celebrated Artistic Hardy Borders; packed ready for planting.
KELWAY'S CHOICE named Pæonies, from 27s. per doz.
KELWAY'S CHOICE named Delphiniums, from 24s. doz.
For information about the Colour Borders send 6d. for "Gardens of Delight."
From Mrs. ———, Chepstow.
10th March, 1911.
"You supplied me with an 'Artistic Herbaceous Border' about eighteen months ago, and I am so very pleased with it; it looked so lovely last year, that I am thinking of having a similar border laid out by the side of the drive up to the house."
KELWAY AND SON,
The Royal Horticulturists,
LANGPORT, SOMERSET.
230 Grand Prizes, Gold Medals, etc.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s. post free, from KELWAY and SON, LANGPORT, SOMERSET.
From an article in "The Field," August 12th, 1911, on The Best Gardening Books:
"I do not know of anything dealing with herbaceous borders more comprehensive than Kelway's Manual."

"ROSES AND THEIR CULTIVATION."—A new edition of this Standard Book is now ready, and every Rose Grower should secure a copy. Cloth, many Illustrations, 2s. 10d., post free, from Publisher, 149, Aldersgate Street, London, E.C.

PERPETUAL TREE CARNATIONS, best varieties, strong young plants, out of small pots, 20s. per 100; good flowering plants, in 5-inch pots, 10s. 6d. doz. G. S. EVANS, F.R.H.S., Carnation Specialist, Bexley Heath.

THOMSON'S CELEBRATED MANURES.
(For full particulars see page ii.)

POULTRY and KENNEL APPLIANCES of every description. Write for latest Catalogue free on application.—BOULTON and PAUL, Lim., Norwich.

BECKETT'S NEW BOOK.—The most practical and Up-to-date Book on Vegetables. Price 5s.; post free, 5s. 6d. EDWIN BECKETT, Aldenham House Gardens, Elstree, Herts.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.
XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.
XL ALL NICOTINE INSECTICIDE WASH for syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, XL ALL WINTER WASH for Fruit Trees, RICHARDS' BANDING GREASE, etc. Don't forget to ask your N. S. or Florist for Richards' small pack tin.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

ALLWOOD BROS., Haywards Heath, Sussex.
Perpetual Flowering Carnation Specialists, Raisers and Growers.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Warton, Carnforth,
Catalogues post free

ORCHIDS.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., Southgate, London N
(Tel.: 59, Palmers Green.)
Catalogues post free on Application.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

R. H. BATH, Ltd.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

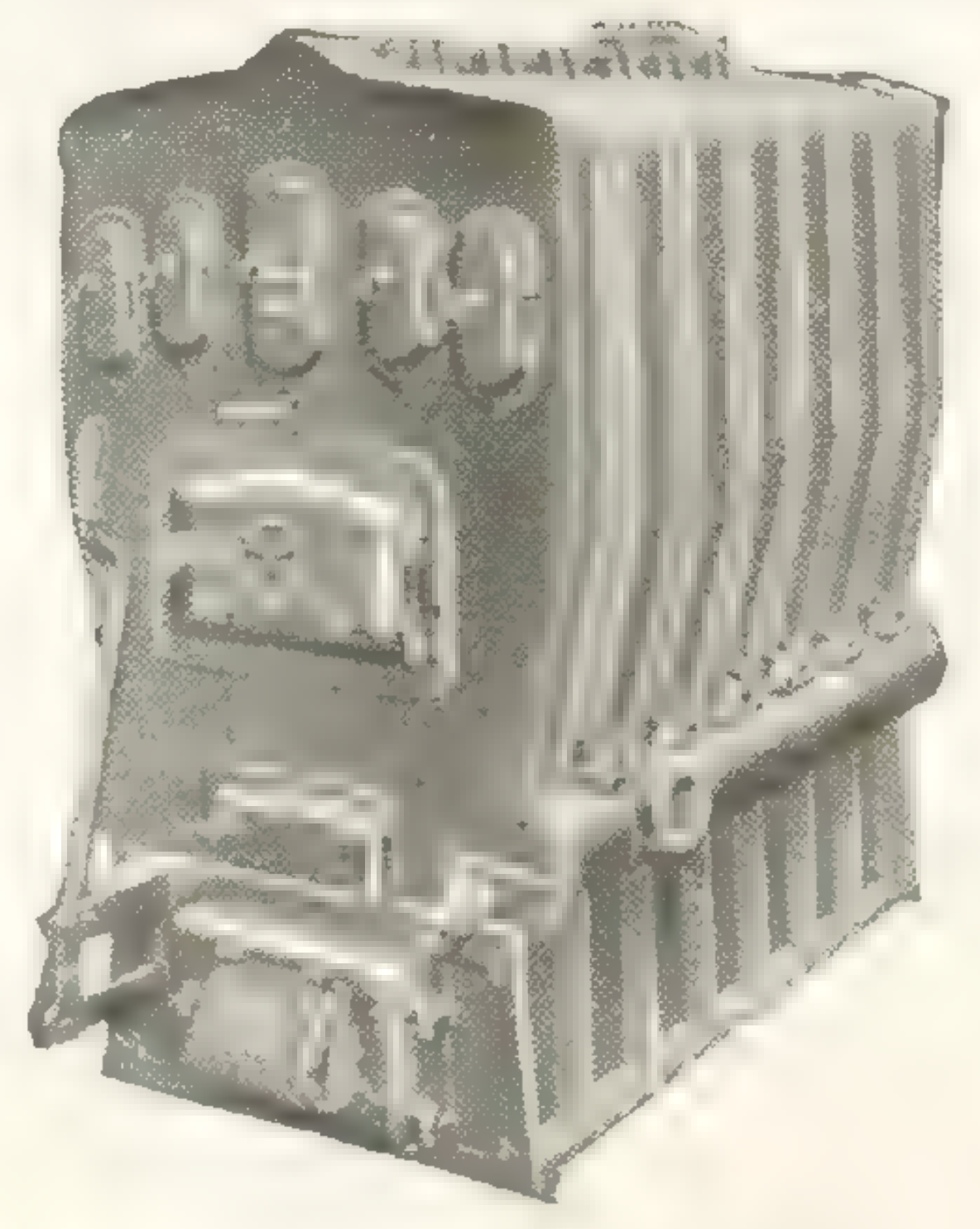
FRANK CANT & CO.,
Braiswick Rose Garden, Colchester.
The World-famed Champion Rose Growers.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 1st Prizes. 3 2nds, at N.R.S. Shows, 1910. Ctlg. Free.

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
1911 *Awards:* 81 *Prizes. Illustrated Catalogue free.*

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

Kinnell's Boilers



THREE LEADING TYPES:—

The **"ANGLIAN," Sectional,** heats 800 to 8,000 ft. 4in. pipe.
The **"ROCHFORD," Tubular,** heats 600 to 8,000 ft. 4in. pipe.
The **"HORSE-SHOE"** for the small Greenhouse.

Saddle Boilers, Trentham Boilers, and all classes of Pipes, Fittings, etc., ready for immediate despatch.

Write for List No. 77, post free.

CHAS. P. KINNELL & Co., Ltd., 65, & 65a, Southwark St., London, S.E.

MERRYWEATHERS'

614 PUMP

IS THE

Gardener's Friend.

Easy to Work.
Simplicity Itself.

Write or Call—

63, Long Acre,
LONDON, W.C.

THOMSON'S Celebrated MANURES

WM THOMSON & SONS LIMITED
1868

Still the best: In greater demand every year.

SAFE, SURE & LASTING.

The result of many years' **practical** experience.

VINE, PLANT, AND VEGETABLE MANURE.
1 cwt., **20/-**; ½ cwt., **10/-**; ¼ cwt., **6/-**; 14 lbs., **3/6**; 7 lbs., **2/6**
Tins, **2/6, 1/-**, and **6d.** Carriage paid on 1 cwt. anywhere.

SPECIAL TOP-DRESSING MANURE.
½ cwt., **20/-**; ¼ cwt., **11/-**; 14 lbs., **6/-**; 7 lbs., **3/6**; Tins, **1/-**.
Carriage paid on ½ cwt. anywhere.

Also Thomson's Book on the Vine. Thomson's Styptic.

SOLD BY NURSERYMEN & SEEDSMEN EVERYWHERE.

Write for Pamphlets, Price Lists, etc., to

SOLE MAKERS: **WM. THOMSON & SONS, Ltd., Clovenfords, Scotland.**

FLOWER POTS.

SANKEY'S
FAMOUS
GARDEN
POTS

The best and the cheapest.

Write for LISTS.

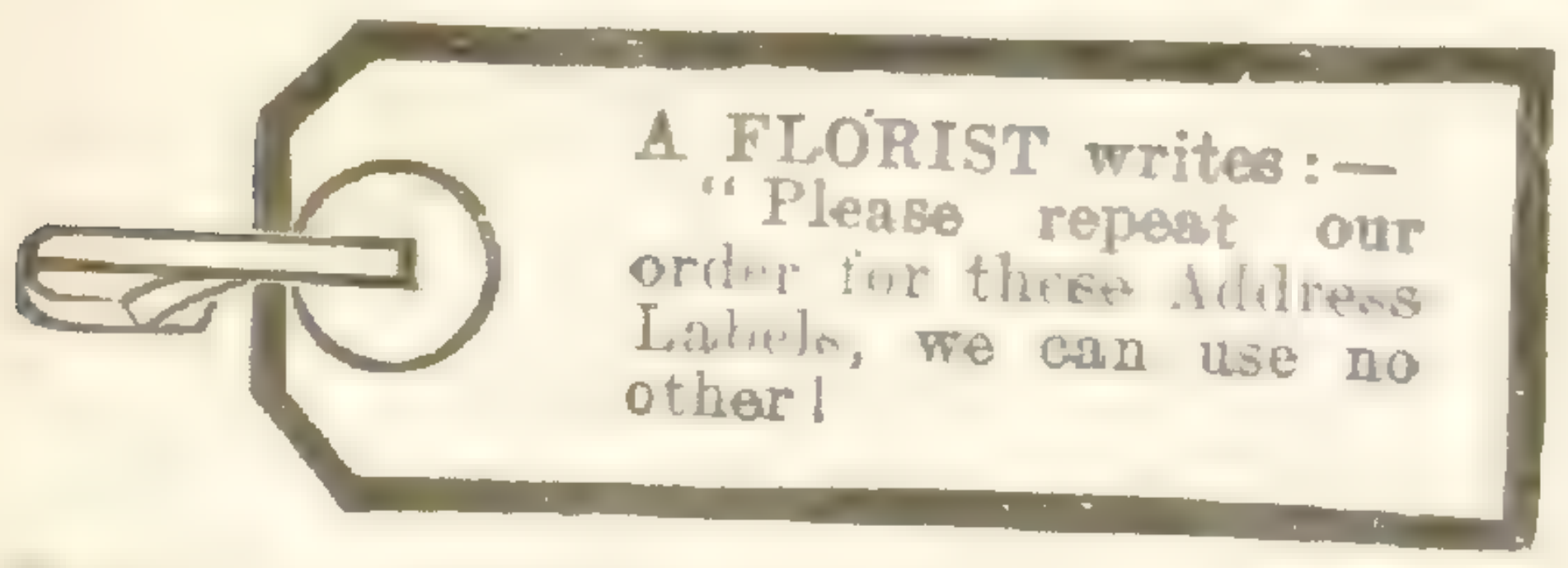
Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant | **Makers to His Majesty the late King.**

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

Time & Temper Savers!



A FLORIST writes:—
"Please repeat our order for these Address Labels, we can use no other!

Samples Free.

BURALL BROS., Manufacturers, WISBECH.

FLOWER POTS

SAUCERS, SEEDPANS, RHUBARB AND SEAKALE POTS, RUSTIC WARE, VASES, PEDESTALS, etc.

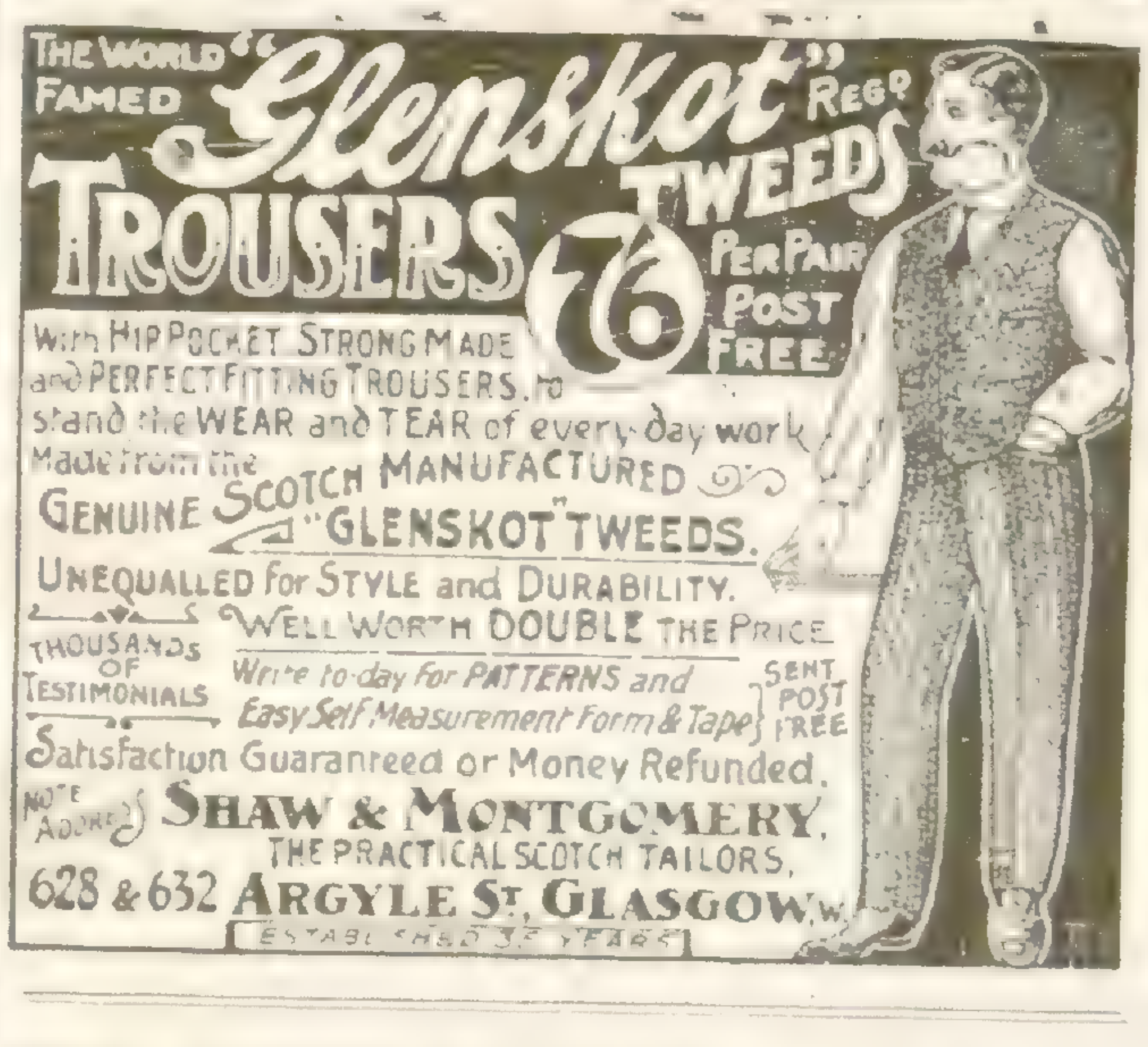
Our Pots are Low in Price and rich in Colour.
Amateurs should try our FAMOUS CRATES of POTS.

7s. 6d., 10s. 6d., 15s., and **21s,**

ART CATALOGUE FREE. ORDERS SENT OFF SAME DAY.

Buy from the Makers—

HERBERTS PARK POTTERY CO., WOLVERHAMPTON.



THE WORLD FAMED "Glenskot" REGD TWEEDS
TROUSERS 7/6 PER PAIR POST FREE

With HIP POCKET STRONG MADE and PERFECT FITTING TROUSERS, to stand the WEAR and TEAR of every-day work
Made from the SCOTCH MANUFACTURED
GENUINE "GLENSKOT" TWEEDS.
UNEQUALLED for STYLE and DURABILITY.
WELL WORTH DOUBLE THE PRICE.
THOUSANDS OF TESTIMONIALS
Write to-day for PATTERNS and Easy Self Measurement Form & Tape } SENT POST FREE
Satisfaction Guaranteed or Money Refunded.
NOTE ADDRESS SHAW & MONTGOMERY,
THE PRACTICAL SCOTCH TAILORS,
628 & 632 ARGYLE ST, GLASGOW, W.
ESTABLISHED 35 YEARS

When answering Advertisements please mention "Gardeners' Magazine."

ORCHIDS.

If you have a Greenhouse sufficiently heated to keep out the frost, write for our

Amateur's Guide,

giving treatment and all particulars. Illustrated.

MANSELL & HATCHER, LTD.,
RAWDON, via LEEDS.

TREE CARNATIONS.

E. J. WOOTTEN, Fairoak, EASTLEIGH,

Has all varieties, including

Lady Alington, Felton, Mrs. Ward, Bonfire, White Wonder, La Mode, Marmion, etc.

Strong Plants in Small Pots Now Ready.

CHEAP AND GENUINE.

THE HOLLAND PLANT CO., Boskoop, HOLLAND
(Postal Address: Head Office, GOUDA),
offer very fine sorts of

Rhododendrons, with buds, in very fine colours, **1/6, 2/-, 3/-, 4/-, 5/-** each. **Polyanth. Roses,** Mrs. Taft, new 1000, blood red; **Orleans Rose,** new 1000, brilliant red; **Phylis,** new, fine red; **Maman Levavasseur,** new 1907, **50/-** per 100. **New Sorts, 1911:**—Climbing Rose, Eisenach, **2/-** each; Dad Sterling, **4/-** each; Climbing Rose, Wartburg, **2/-** each; Climbing Rose, Flower of Fairfield, synonym Crimson semper florens, **50/-** per 100. Climbing Roses in different good sorts, as Crimson Rambler, Dorothy Perkins, Tausendschön, etc., **40/-** per 100. Acer negundo, fol. var., **2/-** each. Japan Maples in fine sorts, **2/-** each. Carriage free England.

Orchids! Orchids!! Orchids!!

The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application.—**J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana, Vanda Cœrulea Lushai Hill variety, dark blue type; Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,

ORCHID SPECIALISTS,

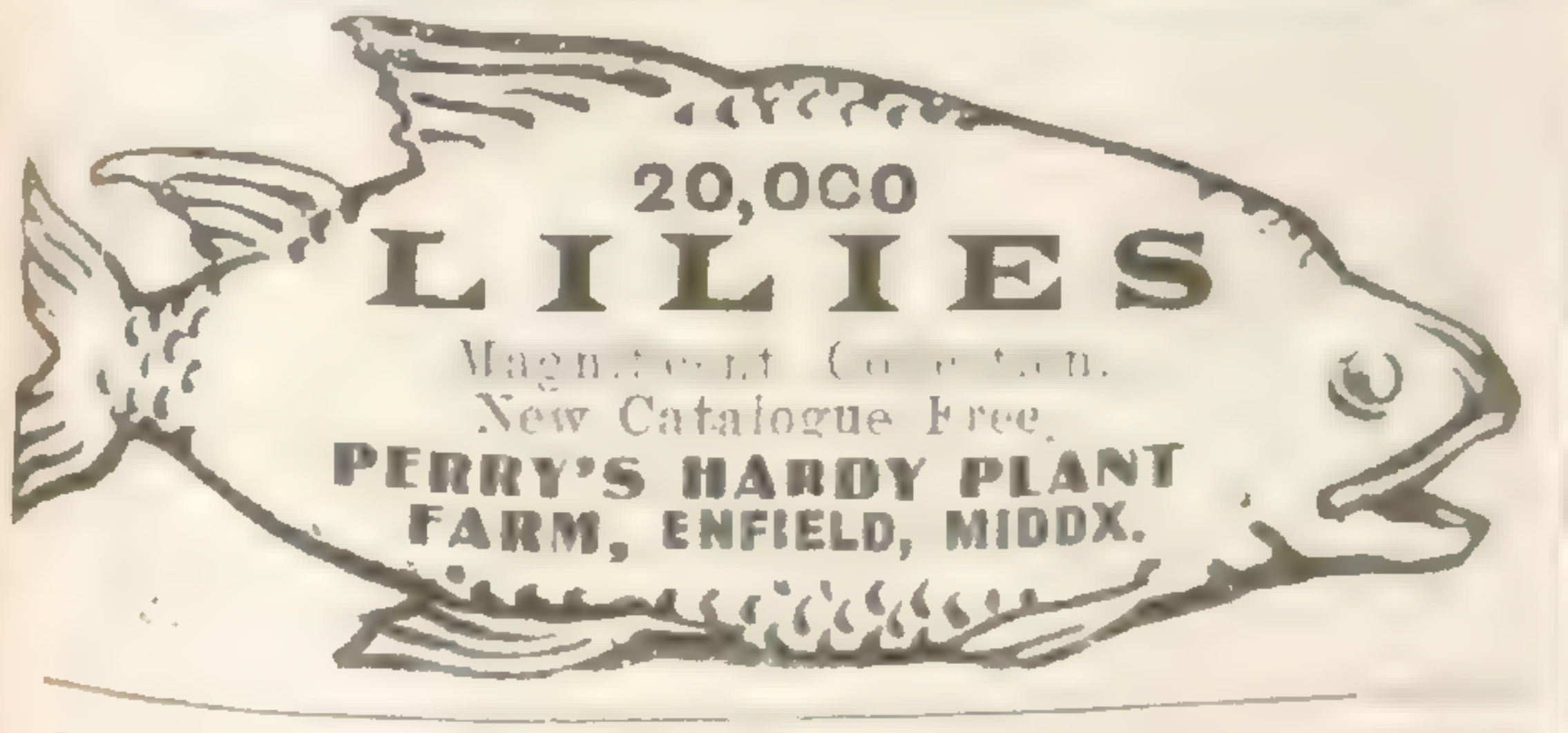
IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

SELECTED SEED POTATOES.

All varieties, grown on finest soil in Scotland and Lincolnshire. Any weight supplied at low prices. Prizes given for best results. Before ordering elsewhere write for catalogue. Best Eating Potatoes also supplied in small or large quantities.

A. J. SOLE, Seed Potato Grower,
PETERBOROUGH.



20,000

LILIES

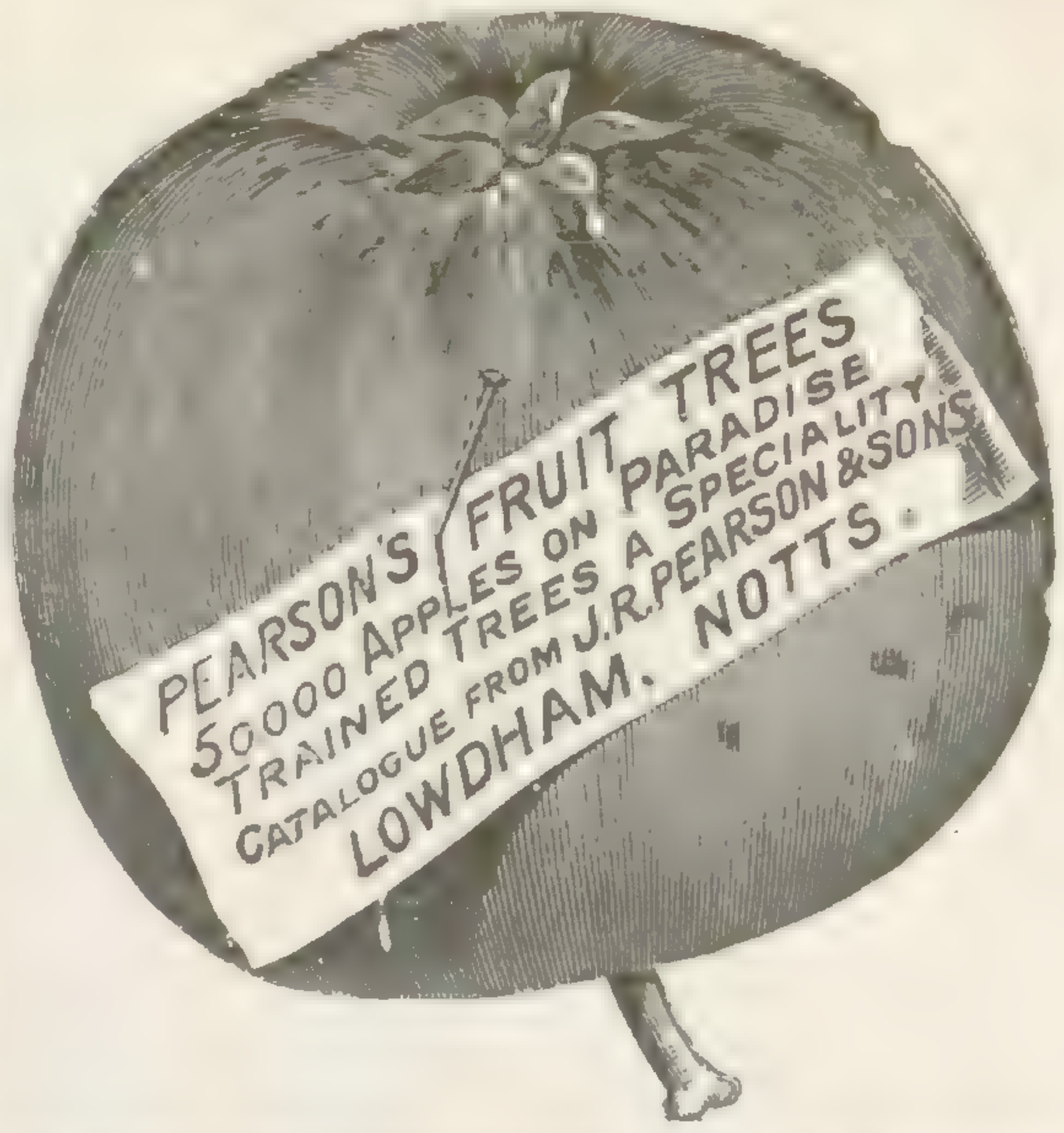
Magnificent Collection.
New Catalogue Free.
PERRY'S HARDY PLANT FARM, ENFIELD, MIDDX.

A SPECIALITY FOR MORE THAN 50 YEARS

POT VINES

Exceptionally Fine this Season.
Inspection Invited.

J. R. PEARSON & SONS, LOWDHAM, Notts.


PEARSON'S FRUIT TREES
50000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY
CATALOGUE FROM J.R. PEARSON & SONS
LOWDHAM, NOTTS.

MESSRS. PULHAM & SON have secured a fine lot of Old Stone Paving, which is eminently suitable for the Paving of Pergolas, Garden Paths, etc.

They will be happy to quote for any quantity, delivered at any railway station.

PULHAM & SON,

By Appointment. By Appointment.

71, Newman Street, London, W.
And BROXBOURNE.

NEW PHLOXES,

Finest in Commerce.

Six strong plants, 4/-, including **Baron Von Dedem,** a coloured plate of which appeared in "Amateur Gardening," Nov. 25. **See it.**

Carriage Free for Cash.

E. F. FAIRBAIRN & SONS,
EDENTOWN, CARLISLE.
List Free. Established 1852.

ORCHIDS. ORCHIDS.

Clean, healthy, well-grown Plants at reasonable prices. Many large specimens and rare varieties.

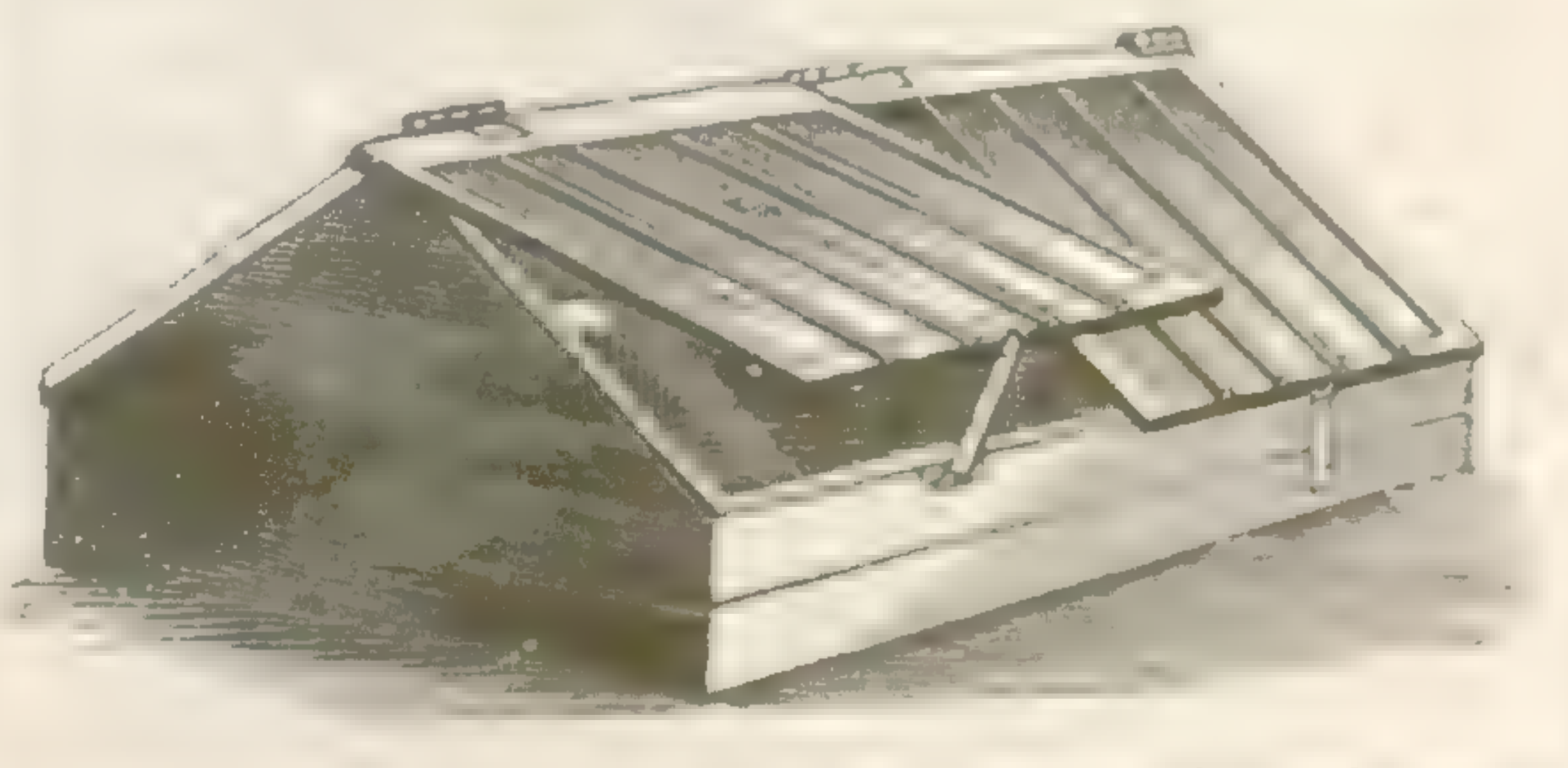
STOVE AND GREENHOUSE PLANTS OF ALL KINDS

Please Write for List.

JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

PORTABLE PLANT FRAMES

OUR WELL-KNOWN MAKE.



These Frames are made of the best materials and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices. Glazed and Painted.

Size		£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. ,, 4ft. ,,		2	5	0
6ft. ,, 5ft. ,,		2	15	0
12ft. ,, 4ft. ,,		4	0	0
12ft. ,, 5ft. ,,		4	15	0
12ft. ,, 6ft. ,,		5	12	6

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,

ROYAL HORTICULTURAL WORKS,

MIDDLETON MANCHESTER.

Dr. J. Collis Browne's

Chlorodyne

Universally acknowledged to be the Most Valuable Medicine known, and one which should be in every home.

THE BEST REMEDY FOR

COUGHS, COLDS,

ASTHMA, BRONCHITIS.

Cuts short all attacks of Spasms, Hysteria, and Palpitation.

The only Palliative in Neuralgia, Toothache, Gout, Rheumatism.

Acts like a Charm in DIARRHŒA and DYSENTERY.

Insist on having **Dr J. COLLIS BROWNE'S** Chlorodyne, *The Original and Only Genuine.*

Convincing Medical Testimony with each bottle.
Of all Chemists, **1/1½, 2/9, 4/6.**

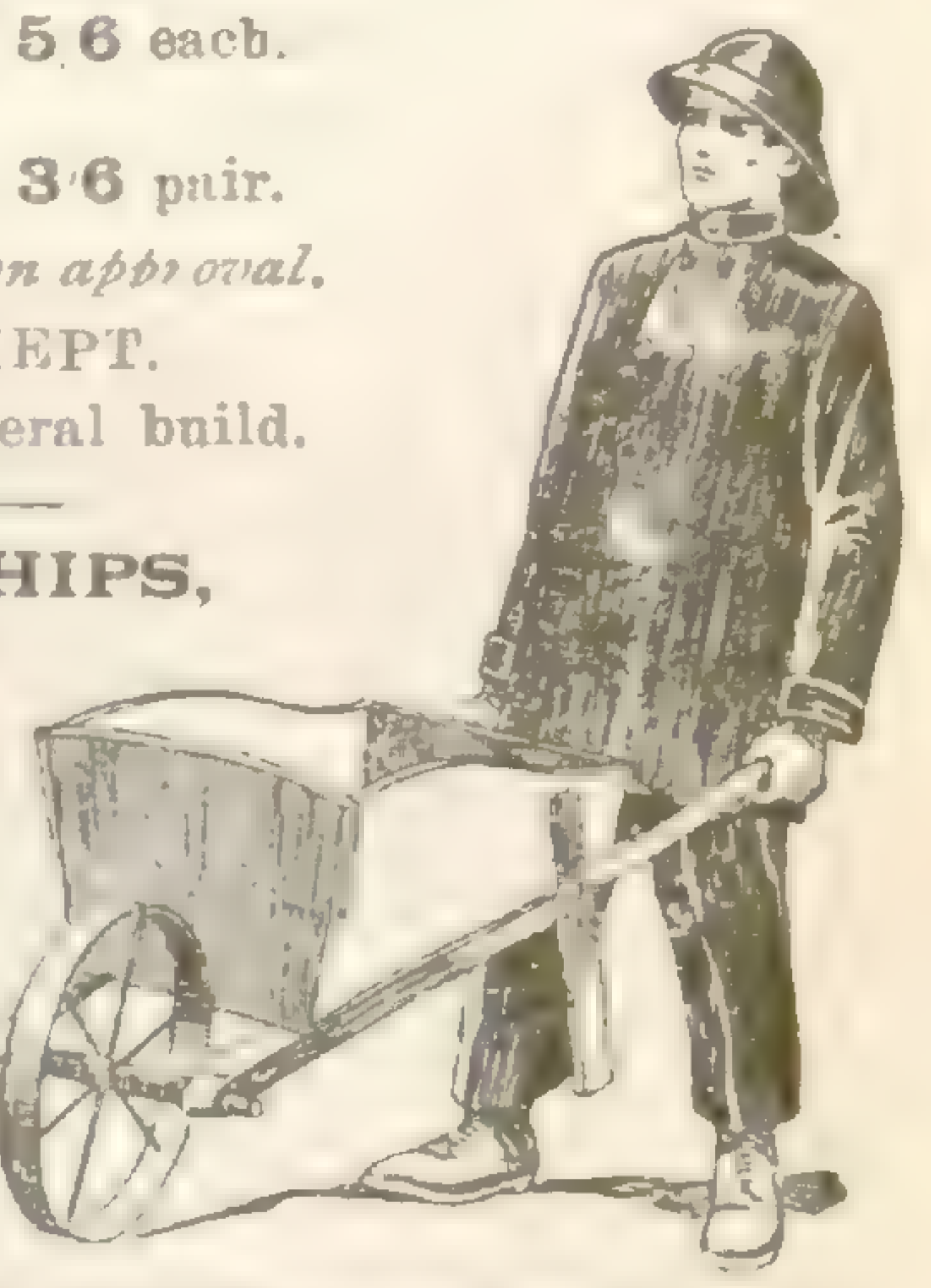
ORCHIDS

EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.** Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

STUART LOW & CO., Royal Nurseries, BUSH HILL PARK, MIDDX.



Sou'westers, 1/6 each.
Oilskin Jackets, 5/6 each.
Overalls, 2/6 pair.
Felt-lined Clogs, 3/6 pair.

Any of the above sent on approval.

ALL SIZES KEPT.

State height and general build.

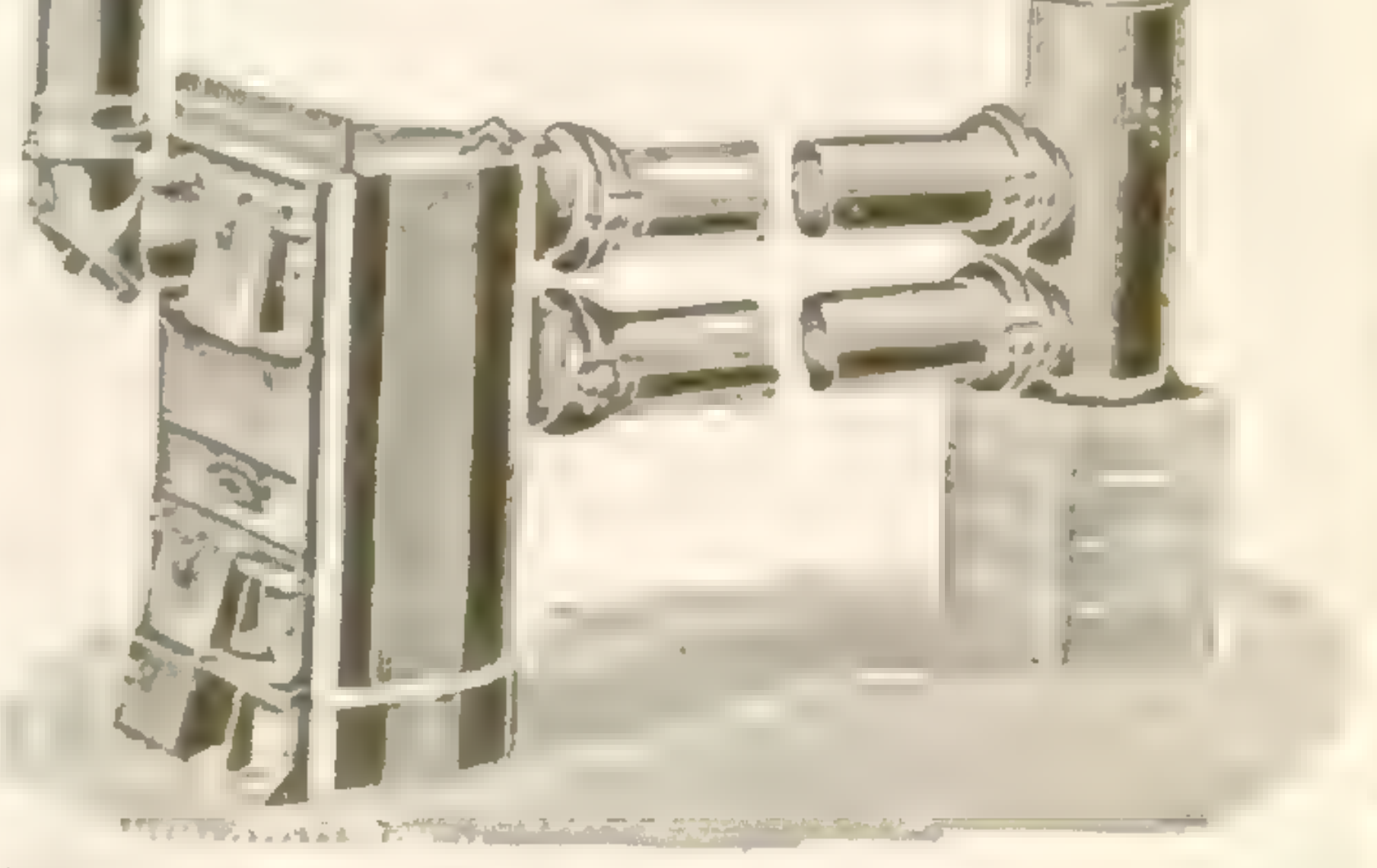
QUASSIA CHIPS,
FOR FRUIT & FLOWER SPRAYING,
in 28 lb. bags, **5/6.**
All Goods Carr. Paid

YOUNG & CO.,
Maltby Street,
BERMONDSEY, S.E.

The Loughborough BOILER

31000 IN USE

LISTS ON APPLICATION



The pioneer of cheap simple and effective heating for small greenhouses. Complete Apparatus from £3. 19. 6. The immense sale of this boiler and its numerous imitations are the best testimony of its undoubted success.

MESSENGER & CO. LTD.
LOUGHBOROUGH · LEICESTERSHIRE
London Office, 122 VICTORIA ST · S · W

AMARYLLIS — HIPPEASTRUMS — unrivalled New Hybrids. Highest Awards at Home and Abroad, including 37 Gold Medals. Splendid Bulbs, thoroughly ripened. Catalogues and all particulars free on application. The trade supplied. ROBT. P. KER and SONS, Aigburth Nursery, Liverpool.

"IT IS ONLY A LITTLE

CLAY'S

THEY WANT."

CLAY'S LONDON FERTILIZER
TRADE MARK

SOLD EVERYWHERE IN TINS at **6d.** and **1/-**; and in Branded and SEALED BAGS, 7lbs. **2/6**; 14lbs. **4/6**; 28lbs. **7/6**; 56lbs. **12/6**; 112lbs. **20/-**. Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d. Tins**). **Every Genuine Tin, Bag, and Seal bears Trade Mark, as at side.**

CLAY & SON,
Manure Manufacturers and Bone Crushers,
STRATFORD, LONDON, E.

RIVERS'

Fruit Trees, Roses,
Vines, Figs, Oranges,
AND
Orchard House Trees.

A LARGE AND SELECT STOCK
ALWAYS ON VIEW.

ILLUSTRATED AND
DESCRIPTIVE CATALOGUE
POST FREE 3d.

THOMAS RIVERS & SON
Sawbridgeworth, Herts.
STATION: HARLOW, G.E.R.

CHRYSANTHEMUMS.

THE BEST 12 JAPANESE EXHIBITION NOVELTIES OF 1911.

Countess Granard, Mrs. G. Drabble, Mrs. A. Herbert, H. E. Converse, D. B. Crane, Mrs. G. C. Kelly, Queenie Chandler, F. T. Mew, F. C. Chandler, Marie Loomes, Mr. Turner, Harry Wood.

Strong plants of the above—or purchaser's option of other 1911 varieties—**1/-** each, **10/-** the dozen; 3 of each for **25s.**; delivered early spring. Unrooted cuttings also supplied as per catalogue.

THE BEST 6 NEW EXHIBITION SINGLES OF 1911.

Charles Dickens, Charles Kingsley, Miss May Thorne, Snowflake, Mrs. W. Higgs, Mrs. Trenham Gilbey.

Plants in early spring, **1/-** ea.; the 6 for **5/-**; or 3 of each, **12/6.** Cuttings one-third less.

NOVELTIES FOR 1912.

JAPANESE: His Majesty, magnificent crimson; **Gorgeous,** rich deep yellow; **Mrs. J. H. Cocken,** beautiful bright yellow; **Miss Beatrice Hoar,** distinct crimson; **Mrs. T. Brooke Edwards,** salmon-buff; **Miss Gladys Herbert,** beautiful mauve; **Amber Queen,** rich amber and terra-cotta. All being distributed from these Nurseries. For further particulars, also for New Incurveds and Singles, see Novelty List, now ready.

NORMAN DAVIS,
Chrysanthemum Nurseries,
FRAMFIELD, UCKFIELD, SUSSEX.

SPECIALITIES. (Carriage Paid).

Shrubs for
Under Trees
Rock Gardens
Water Gardens
Woodland Gardens
Wild Gardens
Natural Gardens
Bamboo Gardens
Azalea Gardens

Catalogue with 450 Illustrations, Post Free.

CAUNTLETT'S Ltd., Chiddingfold, SURREY

KING'S ACRE
FRUIT TREES
AND
ROSES.

AWARDED . .

30 Gold Medals
AND
Coronation Cup
VALUE 25 GUINEAS.
Seasons 1909-10.

Illustrated Catalogue post free on application.

KING'S ACRE
NURSERIES LTD.,
HEREFORD.

CHEALS'

FOR FIRST-CLASS
ORNAMENTAL TREES,
ROSES, FRUIT TREES,
AND
HARDY FLOWERS, etc.

NURSERIES 113 ACRES.
CATALOGUES FREE.

J. CHEAL & SONS,
The Nurseries, CRAWLEY.

BUNYARD'S
FRUIT . .
TREES . .

ORDER AT ONCE FOR PRESENT PLANTING.

WRITE FOR CATALOGUE.

Geo. Bunyard & Co.,
LTD.,
Royal Nurseries,
MAIDSTONE.

PLANTING SEASON.
SEND FOR OUR
Descriptive Catalogue
OF
Ornamental Trees and Shrubs, Roses, Rhododendrons, Climbers, Fruit Trees, Forest Trees, Herbaceous and Alpine Plants,

Advice given on all matters appertaining to
LANDSCAPE GARDENING.

GEO. JACKMAN & SON,
Woking Nurseries, Surrey.
Established over a Century. (Nurseries 200 acres.)

When answering Advertisements please mention "Gardeners' Magazine."

VOL. LIV.—No. 3,034. SATURDAY, DECEMBER 23, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

Seedless Fruits.

The very term, seedless fruits, from the scientific point of view, involves a contradiction in terms, since, properly speaking, the seed itself is the true fruit, and what is popularly known as the "fruit" is a mere adjunct thereto, evolved to assist that seed in one way or another in its dissemination. To this end we see the seeds associated in innumerable ways with fleshy pulps of many kinds and many flavours sweet or acid, as with oranges, lemons, apples, pears, and in short all the succulent dessert fruits with which we are blest in these days, and in which connection, from the dessert point of view, the seeds are regarded as things to be avoided rather than appreciated. This being so, the selective cultivator has devoted all his attention to the improvement of the pulp alone, and, as is ever the case when plants are induced to grow abnormally strongly in one direction, it is at the expense of growth in another, the result has been that in some directions, such as seedless oranges, bananas, grapes, cucumbers, etc., the seed has entirely, or almost entirely, been suppressed, while in many other fruits the number of seeds has been greatly reduced, and their vitality impaired. Thus the few pips we shall find in choice apples and pears can by no means be compared with the number present in wild fruits. The curious point in this connection is that Nature should so far lend herself, as it were, to such a frustration of her own primary object, i.e., the creation of seed for reproductive purposes, as to enable man, through the fertilising pollen, to start the development of the seed plus its quite secondary attractive pulp, and then, to honour him sufficiently, to drop the primary object entirely, or almost so. This she does by limiting herself to the production of what has been rendered objectless, so far as she is concerned, since the pulp by itself is absolute waste from the reproductive point of view. Once indeed a plant has lost its seed-bearing capacity its doom is sealed so far as Nature is concerned, since its individual existence terminated it can leave no successors. It is, indeed, in the direction of cultivated fruit that we see some of the most remarkable results of diverted energy, since therein we see an immense increase in bulk and attractiveness of the luscious pulps and sweet flesh destined by the cultivator for human enjoyment alone, which involves the minimum of chance of its fulfilling its primary object as an assistance to seed dissemination, and it may be germination when it reaches the soil, while at the same time, the energies of the fruit-bearing plants are so largely taken up in this direction that the seeds are much reduced in number, or even suppressed entirely. On parallel unnatural lines we may advert to the beautiful double-flowering plums and cherries which nowadays embellish our parks and gardens in the spring. Here we see plants, robust and healthy, which, from the point of view of Nature, have gone altogether wrong in another direction by devoting all their seed-producing energies to the production of bunches of useless rosy petals, which in their primary simple form of single flowers were designed to attract the insect world for fertilising purposes connected with the all-important seed which has now been absorbed in favour of barren flowers. In all these cases man has contributed by his selection on unnatural lines to absolute inversion of natural selective laws, which Nature would very speedily set about revenging, were these artificial products turned adrift and left to her untender mercy. Man, however, might well retort that Nature has set him the example, since every now and again she spontaneously produces "imitations" or "sports" of an unfertile character, but which by their imperfection can never become elevated to specific rank, since they belong to the unfit, and have therefore but a transient career in the evolutional scheme. In this particular connection, claiming the seed to be the fruit proper, we may legitimately advert to the sugar cane, which was cultivated on an enormous scale for a very long period as a presumed barren or seedless plant, until careful search, instituted by Sir Daniel Morris, led to the discovery that seed was occasionally sparsely produced. This discovery, permitting as it did of seminal reproduction for the first time, led in its turn to selective cultivation, which promises to lead to such great improvements, both quantitative and qualitative as to entirely revive the moribund sugar industry of the West Indies, by virtue of the redemption of the sugar cane from the stigma of a seedless plant.

MR. MONTAGU C. ALLWOOD.

Mr. Montagu C. Allwood.—Though young in years, Mr. M. C. Allwood is old in experience so far as the perpetual-flowering carnation is concerned, and he is recognised as holding a foremost position among the raisers and growers of this very popular class of flowers. Quite recently Mr. M. C. Allwood has joined forces with his brother in the arrangement of a nursery devoted entirely to carnations, at

Wivelsfield, Haywards Heath, Sussex. In his earlier years Mr. Allwood spent some time with the Messrs. Illman, at Lincoln, and then, coming South, entered the service of Myatt's Horticultural Company, Swanley, presently passing on to Mr. Philip Ladds' place at Swanley Junction. From Swanley he went to Edmonton, and was employed at Messrs. H. B. May and Sons' establishment. His next move was to Messrs. Clibran's, at Altrincham, and then he came South again, to Enfield, where, first with Messrs. Hugh Low and Co. and then with Messrs. Stuart Low and Co., he spent seven years. Mr. Allwood has written a book on "Perpetual Carnations," has invented a carnation support, and contributed carnation notes to these pages. He has an extremely optimistic temperament, and unbounded faith in the future of the flower with which his life work has been chiefly concerned.

The Gardeners' Magazine Almanack.—Conjointly with the first issue (January 6) of the Gardeners' Magazine for the New Year, we shall publish our Almanack for 1912, which, as in previous years, will be supplied with each copy free of cost. The Almanack will be of double-sheet size, be attractively printed in colours, and will contain the dates of all the important exhibitions and meetings arranged for the year. The contents of the issue will be of special interest, and, as a large additional demand is expected, we advise those of our readers who require extra copies to give their orders early, and thus avoid the risk of disappointment.

Funeral of Sir Joseph Dalton Hooker. — The funeral of Sir Joseph Hooker took place at Kew on Friday, December 15, his remains being interred in the family vault, where his father was buried. The service was conducted in Kew Church by the Rev. W. H. Bliss, Mus. Bac., Hon. Chaplain to the King, Rev. A. Ogilvy, and the Rev. A. G. Musgrave, Rector of Wndlesham. The church was well filled with mourners, and those who had come to pay respect to the memory of a great scientist, and, in addition to Lady Hooker, Dr. Chas. Hooker, Sir William Thiselton Dyer, and other members of the family, there were present members of many learned societies, while those representing botany and horticulture included Professor Bayley Balfour, Dr. D. H. Scott, Sir Daniel Morris, Professor W. W. Watts, Dr. Daydon Jackson, Mr. Harry J. Veitch, Professor Bower, Lieut.-Colonel Prain, Mr. E. G. Baker, Lieut.-Colonel Strachey, Professor Sir G. Darwin, Dr. Francis Darwin, Professor S. H. Vines, Professor Frank W. Oliver, Dr. A. Henry, Dr. A. Gunther, Dr. Boulger, Dr. D. Oliver, Mr. George Gordon, Mr. R. Hooper Pearson, Dr. Stapf, Mr. W. Watson, Mr. W. Goldring, Mr. A. R. Rolfe, Mr. A. E. Brown, Mr. Hill, Mr. C. H. Curtis, Mr. Harvey, Mr. W. Irving, Mr. Coutts, and Mr. Osborne. Though not actually shut during the time of the funeral, the gates of the Royal Gardens, Kew, were closed as a sign of respect for a past Director, but, though closed, they were at once opened to anyone presenting themselves for admission.

Market Gardeners Compensation.—The text of the Market Gardeners' Compensation Bill, presented by Mr. Eyres-Monsell, and supported by Mr. Courthope, Mr. Pollock, Sir Luke White, Mr. Charles Bathurst, Sir Ivor Herbert, Sir John Rolleston, and Sir Courtenay Warner, has been issued. A memorandum accompanying the Bill states that the recent decision of the Court of Appeal in Kedwell v. Flint has deprived a large number of market gardeners of their right to compensation, and consequent security for capital, which the Market Gardeners' Compensation Act, 1895, was intended to secure, and up to the present time has actually secured, for them. The object of the Bill is to restore to market gardeners the right to compensation, and the security which they have enjoyed for sixteen years, and have now lost. The Bill is supported by the Central Associated Chambers of Agriculture, the National Federation of Fruit Growers, and the Market Gardeners' Association.

Bushey Park.—A Royal warrant has been issued authorising the appropriation of part of Bushey Park for allotments for the benefit of the parish of Hampton. The land is being divided into plots of ten rods each, and the applications already received are more than sufficient for the area available. The provision of a new entrance to Bushey Park at Hampton Hill has been sanctioned by the Board of Works.

The Gardening Year Book for 1912, is now published, and may be obtained direct from the Publishers of the Gardeners' Magazine, 148 and 149, Aldersgate Street, 1s. 3d., post free, or through any bookseller or newsagent. We shall take advantage of an early opportunity for referring to its contents, but for the present it must suffice to say that the high standard which has placed it in a unique position among annual publications associated with horticulture is fully maintained.

New Park for Shadwell. — At the meeting of the London County Council on Tuesday a joint report was received from the Parks and Open Spaces and Improvements Committee, recommending the Council to co-operate with the King Edward Memorial Committee in acquiring the Shadwell Market site and converting it into an open space. The City Corporation are the freeholders of the site, and are willing to transfer their interest for about £70,000, provided that the site is acquired for the purposes of a memorial. The London County Council holds from the Corporation a lease of a part of the property, at a rent of £710 a year, which has fifty-five years to run. The Memorial Commitee suggested that the London County Council should, as its contribution, capitalise its liability under this lease and agree to the property being incorporated in the proposed open space. The Corporation is prepared to accept the sum of £14,000 as the capitalised value, and the joint report recommend the Council to approve the expenditure, and offer to undertake the maintenance of the park for the use of the public. The report was adopted unanimously.

Preservation of Cut Flowers.—The advice which Mr. T. Stevenson gives on the cutting of the flowers of sweet peas is of so high a degree of value, not only in relation to the flowers with which he is dealing, but to cut flowers generally, as to fully justify special attention being directed to it. Mr. Stevenson advised that when the sweet peas are cut the flower stems should at once be put in water and remain therein for one or more hours, and stated that flowers so dealt with would retain their freshness for twenty hours or so after being removed from the water and packed in basket or box, and then conveyed several hundred miles by train. Many of our readers might say that there is nothing new in placing the stalks of flowers in water immediately they are cut, and allowing them to remain there for some time, for it has long been practised by market growers, and we have recommended the practice on numerous occasions, but these facts do not in the slightest degree detract from the importance of the advice given by Mr. Stevenson. The practice has not, however, become general, and we trust the simple method of procedure advised by this skilful cultivator and exhibitor will receive the attention it merits and be generally adopted.

Certificating Gardeners. — At the meeting of the North of England Horticultural Society, held at Leeds on the 13th inst., a motion, proposed by Mr. F. C. Puddle, seconded by Mr. P. Clapham, and supported by Mr. W. Cuthbertson, that "At the request of the gardener, and by permission of the owner of the garden, the N.E.H.S. send a deputation to consider the granting of a certificate to the head gardener, who has been responsible for the work of the garden for at least three years," was lost, an amendment, proposed by Mr. J. F. Donoghue, and seconded by Mr. J. P. Leadbetter, that, "the matter be indefinitely postponed," being carried by a small vote. A considerable number of the members had left for home when the vote was taken.

Hardy Shrubs Flowering in Winter.—The hardy shrubs that produce their flowers during the winter months are more numerous than is generally considered to be the case, a fact of which we are reminded by a gathering of flowers received from Mr. W. A. Cook, head gardener at Leonardslee. Among the specimens are sprays of Jasminum nudiflorum; the flowers of exceptional size and colour; Colletia Bictonense, a distinct and interesting evergreen shrub; Choisya ternata, rather out of season, perhaps, but the fragrant white flowers are nevertheless most acceptable; Erica lusitanica, a distinct and beautiful species producing a profusion of pure white flowers; E. carnea, also free in blooming and most attractive; Azara integrifolia, a handsome evergreen shrub, bearing with great freedom clusters of small greenish flowers; Chimonanthus fragrans grandiflora, so well known for the fragrance of its blossoms. A short time since we received from the Wych Cross gardens sprays of several of the species of Osmanthus which are of interest for their flowers as well as their other attractions. Especially noteworthy for flower production are O. ilicifolius, which has foliage resembling that of the common holly, and O. myrtifolius, which, as indicated by its specific name, has myrtle-like leaves. Both species, when they have attained some age, produce large numbers of small white flowers along the growths, these flowers being delightfully fragrant.

Honour for M. Victor Lemoine.—The trustees of the Massachusetts Horticultural Society have awarded the George Robert White medal of honour for the current year to M. Victor Lemoine, of Nancy, France. This medal is awarded annually to the person who has done the most during the year, or in recent years, to advance the interest in horticulture in its broadest sense. The award for the year 1911 is eminently appropriate as a recognition of the accomplishments of M. Lemoine in the production of so many varieties of flowering plants and shrubs which have become of permanent value to the horticultural interests of the United States, as well as of Europe. If he had done nothing more than to give to the world Begonia Gloire de Lorraine, he would have merited the award; and, in addition, his numerous other introductions have made the name of Lemoine a familiar one to all horticulturists. This is the third award of the George Robert White medal. It was founded by Mr. White in the year 1909, when the first award was made to Professor Charles Sprague Sargent, director of the

Arnold Arboretum, of Boston. The award for 1910 was given to Jackson Thornton Dawson, also of Boston, and well known throughout the United States as a skilful plant man. The medal now crosses the ocean to convey America's appreciation of what France has done in the interest of horticulture.

Action for Payment of Prizes. In Huntley Small Debt Court, Sheriff Dudley Stuart heard a case in which an exhibitor sued the Strathbogie Horticultural Society for delivery of certain prizes, alleged to have been won by him at the society's summer show. The solicitor who appeared for the plaintiff said that he was a competitor, and was awarded certain prizes by the judges. The committee, however, having received a protest against the plaintiff's exhibits disqualified him, and the action was the result. The solicitor for the society read the rules to show that the committee had acted in accordance with them. On the other side, it was contended that the rules did not give the committee the power to disqualify a competitor after the judges had given their decision. The Sheriff held that the rules of the society gave the committee the powers they claimed in this case, and decided in their favour, with costs.

National Chrysanthemum Society. The following are the dates of the shows and meetings of this society in 1912: Early Autumn Show, October 2 and 3, and Autumn Exhibition, October 29, 30, and 31, both at the Crystal Palace. Meetings of Executive Committee, at Carr's Restaurant, Strand, at seven p.m., excepting the February meeting, which will commence at six p.m.; January 15, February 19, September 23, October 21, November 18, and December 16. Meetings of Floral Committee, September 9, seven p.m., Carr's Restaurant; September 23, three p.m., Essex Hall, Essex Street, W.C.; October 2, one p.m., Crystal Palace; October 21, three p.m., at Essex Hall; October 29, one p.m., Crystal Palace; November 11, three p.m., Essex Hall; November 20, three p.m., Essex Hall; December 2, three p.m., Essex Hall. An Exhibition and Conference will also be held at Essex Hall, Wednesday, November 20. The annual meeting will be held February 5 at Carr's Restaurant, seven p.m.

Wages of the Edinburgh Botanic Gardens Employees.—The members of the Edinburgh Royal Botanic Gardens Employees' Union have sent a memorial to the Right Hon. the Earl of Beauchamp, First Commissioner, H.M. Office of Works, drawing attention to the difference in the wages paid to the staff and those paid in London parks and gardens. It states that in spite of the increased cost of living, which is as expensive as it is in London, the wages have not increased in proportion. The young men in the gardeners' and foresters' department, for instance, receive 21s. weekly, and pay from 14s. to 15s. for their lodgings, exclusive of extras. The skilled labourers receive 24s. weekly, and the unskilled labourers 21s. After three years' service the latter are supposed to be skilled labourers, but the memorial states that there are several men in the gardens who have this qualification, but have not received an increase. Attention is also drawn to the wages of the park keepers, who receive 22s. to 25s. weekly.

Conference on Dahlias. In accordance with the practice which has obtained during the past two years, the National Dahlia Society will, we understand, hold a conference early in the spring of 1912. The date has yet to be fixed, and the programme to be settled.

ROSE GROUPING FOR COLOUR.

Colour makes the character of a garden. No matter how fair the formation the whole effect will not please unless the mysterious harmonies and contrasts of which hues are capable have been well balanced and exhibited. A cold, sad garden is one in which there are few warm tints, but a preponderance of white, lavender, pale blue, and silver, or grey foliage, and the presence of white or gray walls can so add to this error as to make the spot positively depressing. Sunshine is golden, true, whether it falls on a melancholy scene or a cheering one, but it loses half its glory unless there are ruddy masses of blossom in the pleasure grounds, and up the brickwork that is the shell for a home.

When considering how to use roses for their colour value only we come face to face with many truths to put in practice. No varieties should be chosen for their size of bloom alone, nor yet for their excellence for cutting. Whether the shape is globular or pointed, the petals numerous or few, the centre visible or veiled, is of little consequence. The merits to be looked for are freedom and long continuance in the output of vivid or delicate flowers, and these must be well revealed. A rose that droops on thin stems, as though trying to hide its beautiful heart, should be passed by; so, too, should those which bury their blossoms among the too luxuriant foliage sprays, or which change in hue with every hour of life. As a rule, roses of composite colour are much less effective than those in which one tint is spread over all the petals; an exception is the Lyon rose, for in this the chrome yellow base so shades into the shrimp and sherry-red that the whole appearance is a deep salmon, unique, it seems, in the rose family. A bed of this, on a verdant velvet lawn, is surely one of the unsurpassed beautiful features of any garden.

Self beds of roses can always be advised, but then we are confronted by the necessity for well grouping the beds. It is not enough to keep varieties distinct, for the effect of a lawn, or gravel square, in which several beds are set, has to be estimated altogether. A gardener who has mastered only the elements of colour art will separate pink from salmon, and carmine from scarlet, yet allow these discordant hues to occupy positions from which they can see one another.

Vermilion is one of the most difficult colours to group, but also one of the most lovely. There are some shades of salmon that tone into it, as though an artist had simply mingled white with the vermilion pigment, and so obtained a diluted form of it. Two of the most opposed roses possible to name are L'Ideal and Cheshunt Scarlet, yet many catalogues describe them simply as "red." Either may be admirably placed near buff roses, of the type of Gloire de Dijon and Madame Bérard.

Deep pink roses can be set off best by snow-white ones. If cream are introduced near, all the bluish or lavender shadings in the pink are so intensified by contrast as to give the blossoms a dull, heavy look that they need never wear. Cream should be kept to accompany apricot, of which they are really but a paler shade. Another secret is that salmon roses, such as Madame Abel Chatenay, Lady Waterlow, and Countess of Gosford, the last having a yellow base, are seen to perfection in juxtaposition to lemon varieties, which may be exampled by Madame Hoste, Céline Forestier, Aglaia, the yellow Rambler, and Isabella Sprunt, to mention old varieties known to all rose-lovers.

One possibility too seldom realised is the planting of lawn beds only with the darkest crimson and maroon roses. This unique arrangement attracts great admiration, and nowhere but on turf are these hues sufficiently shown up by the green they need. The leaves of varieties of deepest crimson do not give the grass-green that brightens their ruby petal shadings by contrast.

There are numbers of coppery roses now, but very few that can be safely mingled in bed or border. These should be carpeted beneath by pinks, or other plants with silvery foliage.

M. H.

CLIMBING ROSES.

White Lady will, I hope, not object to a few additional notes on the interesting selection of climbing varieties (see p. 933). Madame Alfred Carriere is quite one of the best of roses, grown here amongst many, for a pergola or a pole; it is the earliest to open its freely-expanding blossoms, and its delicate pink-tinted blooms are always admired either on the plant or in a cut state. It is a variety specially immune from mildew and aphis attacks, and in growth it is free, sending up stout sucker-like shoots, which are quite the best suited for freedom of flower. In a selection of climbing roses this variety can safely be given premier position, and what more can anyone say in favour of any rose?

Ards Rover for a south wall, either low or high, is particularly well suited, as it is amenable to both forms of treatment, bearing quite restricted pruning, when once the allotted wall space is covered. A close method of spur-pruning may annually be practised with great success. This is one of the earliest roses to open its flowers, and in the bud and half-open state no variety can excel it, especially for its perfume. The foliage, too, is robust, dark green in colour, and forms a fine contrast with the brilliantly-coloured flowers.

Climbing Caroline Testout is a good rose, but it should not be allowed to ramble too high without occasionally cutting back to induce vigour, as, without this, the plants are liable to become weak and leggy. I have in mind a dozen plants growing in a nursery for the sake of flowers and stock buds. These are cut each year to within 7ft. of the ground, and very well do they succeed. If another pink of a similar character is required, Climbing La France can safely be planted, as the blossoms are freely produced, and are more shapely than those of Caroline Testout.

Climbing Aimée Vibert is so excellent in growth, flower, and perfume that it seems almost a pity to say one word against its inclusion; but the fact of its holding its dead blossoms so long in the forks of the huge trusses gives it an unsightly appearance. To the list I would like to add Tausendschon (Schwartz, 1906), which is not grown out of doors nearly so much as its merits deserve. Last summer, during the extreme hot weather, the blooms on this variety lasted longer in a fresh condition than those of any other rose in the garden; indeed, the bright sun seemed to emphasise the colour. Individually the flowers remind one of the pink oleander in shape and colour.

E. Molyneux.

Thunbergia fragrans.—As a rafter plant for a small or medium-sized structure kept at an intermediate temperature this has much to commend it, for its pure white blossoms are borne from the summer often on into the winter. I do not know why it bears the specific name of fragrans, as the blossoms are practically scentless.—W. T.

RED BERRIES AT CHRISTMAS.

Growers who have not the room to grow large holly trees, and yet want some colour in their gardens at Christmas, should grow skimmias. These are ornamental at all seasons. They are compact growing shrubs, and take up but little room, and the beautiful scarlet berries brighten up the shrubbery for several months; indeed, they bloom again while the berries are still on them as the birds rarely trouble them. They are very impartial as to position or soil, and will grow and flourish in any ordinary compost, providing they have depth, which means that the soil should be trenched—or a good-sized hole made, and if the soil is very poor, it would be a pity not to add a little manure, so that the plant may be encouraged to grow away strongly. The skimmias commence to bear berries when in a quite small state. They may also be planted close to the edge of a walk. The best are Skimmia japonica, S. Formanni, S. oblata, and S. ovata; care, however, should be taken that male and female varieties be procured, in which case the berries set with great freedom. Skimmias require but little attention when once well established, and a little mulch of manure in the summer will only be necessary to keep them growing well.

Leonardslee Gardens. W. A. COOK.

PACKING SWEET PEAS FOR EXHIBITION.

The two following papers were read at the Conference arranged by the National Sweet Pea Society on December 8, at the Hotel Windsor, Victoria Street, Westminster:—

Packing Sweet Peas for Exhibition,

(By Mr. THOMAS STEVENSON, of Addlestone.)

The cutting and packing of sweet peas for exhibition is certainly a matter well worth discussing, and an exhibitor would be well advised if he gives it really serious consideration. It is of little use to be able to grow good flowers and not be able to put them up at the exhibition in the best possible condition. Many and varied are the means employed for carrying the flowers to the shows, and one must at least give the exhibitors credit for some pains, especially when we see them using a box that would well hold a good-sized shrub for conveying a dozen bunches of sweet peas in water.

It may be taken for granted that well-grown flowers (by this I mean flowers that have been disbudded and grown liberally) require more care than do their less highly cultivated neighbours; they are rather more easily bruised in packing, and, having more sap in them, are certainly more liable to spot, and all this must be given due consideration, especially when the flowers have to be conveyed a long distance. But if proper precautions are taken as to feeding the plants beforehand, the time of cutting, etc., etc., a few hours' railway journey should have no terrors for the sweet pea exhibitor. I think we should have invited our friend Mr. Cowdy, from Armagh, Ireland, to give his experiences on this matter in place of my own, for anyone who saw his flowers at our exhibition of 1911 must have agreed that they were the acme of perfection, both in freshness and colour, and these should at all times be strong points in favour of any collection. It is not giving away a secret when I tell you that Mr. Cowdy wrote asking me what he should put in the water to preserve the colour of his flowers during transit and I wired back to him, "Use clean, soft water only." Whether he followed my advice I do not know, but certainly he gave us an ocular demonstration of really good colour in sweet peas that had come from a long distance.

When exhibiting near home there should be no question as to when to cut the flowers, because if this can be done on the morning of the show so much the better, and many of the colours will be all the better for it; especially is this the case with the orange, crimson and scarlet varieties, and even some of the pink sorts, for several of these are very apt to take on a touch of magenta after a few hours in water, and there is nothing so depreciating to the pink colour as this tint.

When flowers have to be conveyed some distance then the trouble begins; and yet, if the weather is fine, there is not much to worry about, but if the weather is damp and stormy the problem is fairly difficult, though if a suitable place can be found in which to dry the blooms before packing them, there is still ground for hope that they may emerge from the boxes in a fairly good condition. At all times the flowers should be as dry as possible when they are cut, so I would advise that they be cut either just after the dew has gone off in the morning or left until about four o'clock in the afternoon, when the temperature is generally a little lower. Unfortunately we cannot always choose the exact time to cut, as the length of the railway journey may necessitate cutting in the middle of the day sometimes, or even before they are dry in the morning, and when this latter is the case then the flowers must be treated as though they were cut during rain.

Under any circumstances, if the flowers have to travel some distance they should be cut at least a couple of hours before they need be packed. Immediately they are cut I prefer to place them loosely in water in a fairly light room or shed, where a current of air can pass between them; here, if at all damp, they will soon dry, and, if kept from sunshine, this current of air will not harm them, even if they are dry, but will tend to keep them cool. In a position such as this it is astonishing how much the flowers will grow.

If the weather is wet at the time of cutting some further provision should be made for drying the flowers, such as placing them in a house where a current of air can pass over the hot-water pipes and then among the flowers, or placing them in a dwelling-room where all the windows are open and a good fire is burning. In either case the flowers must be very lightly disposed in vases or jars, but if a little trouble is taken it is surprising how quickly the flowers will dry in this way. I have proved how well this answers, as the flowers have come out fresh and bright after being packed from twelve to fifteen hours.

The age at which flowers should be cut is a debatable point, but if good strong stems and good substance are desired then the flowers must be fairly well matured at the time of cutting, and the top flower must be at least half expanded, though under exceptional conditions, such as a very long rail journey, they may be cut a little younger, but this is not an advantage except, perhaps, from the point of freshness; size, colour, and substance one cannot get in flowers partly opened in water. Here I should like to emphasise the need of a good light place wherein to place the flowers after cutting; if put in a dark room or shed, some of the varieties may partially close up, and if this happens the probability is that they will not expand properly again. After they have been in water for an hour or two in a light room, afterwards packed in dark boxes, there is not that tendency in them to close up.

As mentioned before, the crimson, scarlet, and orange varieties should be left on the plants as late as possible, but some of the pale blue and lavender flowers may improve a little if given an extra hour or two in water, but this must not be overdone or the colour will be fading by the time the judges go round.

The systems of packing are varied, and when visiting the shows one finds many different kinds of boxes and baskets used. In some instances it may be an advantage to carry the flowers in water, but I certainly do not think it necessary, for if the flowers are treated as already advised and given at least two hours in water before packing, they will travel quite well, even if left out of the water for from eight to twelve hours, and I have had them out of water for twenty hours and then they have come up quite fresh after an hour or two in water. But if the flowers are very young and the stems "soft," they certainly will not rise to the occasion, hence my advice to cut rather older flowers, the stems of which are harder.

For packing I use flat hampers in preference to boxes, as they are very light to handle, and the flowers are not liable to sweat and spot in them. I use baskets to hold one dozen fairly good bunches, packed, of course, in one layer only. In really hot weather I use waxed paper for lining the baskets as this prevents too rapid evaporation; if the flowers are in the least damp I prefer very soft tissue paper, and this, I think, absorbs the moisture, which is an advantage.

When packing, especially if the blooms are being sent, instead of being taken, they must be packed tightly enough to prevent any movement in the baskets or boxes, or bruised flowers will be the result.

If the few precautions that I have outlined are followed, the flowers ought certainly to arrive at the exhibition in fair condition, and it only remains for them to be put in water as quickly as possible after arrival and set out temporarily in the various positions allotted to the classes, first cutting any ties that may be around them. Here they will freshen up and grow, and the work of arranging the flowers may be carried out in a leisurely manner without any need for worry lest some are spoiling while the others are being arranged.

Packing Sweet Peas for Market.

(By THOMAS PAGE, of Hampton.)

There is not much to be said concerning methods of packing sweet peas for market. To insure that the blooms arrive at their destination in a good and sound condition the most important detail is that they must be of the first quality culturally, and not at all moist when being packed. It is also most essential that directly the flowers are cut the bunches should be placed, not too thickly, in water, taking care not to wet any of the blooms, otherwise they may possibly heat in transit, the stems alone being in the water.

I find that 24-sized pots, with the hole cemented up, serve very well for holding the newly-cut flowers; in each pot we put ten or twelve bunches, according to size. If the weather be hot and moist it is as well to take the bunches out of the water and place them in empty pots for about half an hour, to allow them to drain, previous to packing.

The mode of packing I consider the best adapted for the conveyance of sweet peas to market is as follows, viz., a flat box about 5in. deep, 20in. long, and 12in. wide, line with blue or tissue paper, and pack in each box 30 to 36 bunches, placing a piece of tissue paper between each row of bunches. Packed in boxes of this character the contents have not room enough to move about and consequently damage is prevented. If, however, I have to send sweet peas any considerable distance, and the weather be hot and dry, I find it a good plan to put a small piece of wet cotton wool round the base of the stems just before packing. The varieties I consider most suitable for packing and travelling are Mrs. Hugh Dickson, Mrs. Routzahn Spencer, Countess Spencer, Nora Unwin, King Edward Spencer, Sunproof Crimson, Asta Ohn, and Florence Nightingale. These are all good market varieties.

Tecoma Smithi.—It is only when plants of this tecoma are well baked in the summer's sun that they flower in a satisfactory manner in a small state. In this condition it forms a bright and attractive winter feature in the greenhouse. The flowers, which are broadly tubular in shape, are borne in clusters. They are of a rich yellow colour, tinged outside with deep orange.—W. T.

RED BERRIES AT CHRISTMAS.

Growers who have not the room to grow large holly trees, and yet want some colour in their gardens at Christmas, should grow skimmias. These are ornamental at all seasons. They are compact growing shrubs, and take up but little room, and the beautiful scarlet berries brighten up the shrubbery for several months; indeed, they bloom again while the berries are still on them as the birds rarely trouble them. They are very impartial as to position or soil, and will grow and flourish in any ordinary compost, providing they have depth, which means that the soil should be trenched—or a good-sized hole made, and if the soil is very poor, it would be a pity not to add a little manure, so that the plant may be encouraged to grow away strongly. The skimmias commence to bear berries when in a quite small state. They may also be planted close to the edge of a walk. The best are Skimmia japonica, S. Formanni, S. oblata, and S. ovata; care, however, should be taken that male and female varieties be procured, in which case the berries set with great freedom. Skimmias require but little attention when once well established, and a little mulch of manure in the summer will only be necessary to keep them growing well.

Leonardslee Gardens. W. A. Cook.

PACKING SWEET PEAS FOR EXHIBITION.

The two following papers were read at the Conference arranged by the National Sweet Pea Society on December 8, at the Hotel Windsor, Victoria Street, Westminster:—

Packing Sweet Peas for Exhibition,

(By Mr. THOMAS STEVENSON, of Addlestone.)

The cutting and packing of sweet peas for exhibition is certainly a matter well worth discussing, and an exhibitor would be well advised if he gives it really serious consideration. It is of little use to be able to grow good flowers and not be able to put them up at the exhibition in the best possible condition. Many and varied are the means employed for carrying the flowers to the shows, and one must at least give the exhibitors credit for some pains, especially when we see them using a box that would well hold a good-sized shrub for conveying a dozen bunches of sweet peas in water.

It may be taken for granted that well-grown flowers (by this I mean flowers that have been disbudded and grown liberally) require more care than do their less highly cultivated neighbours; they are rather more easily bruised in packing, and, having more sap in them, are certainly more liable to spot, and all this must be given due consideration, especially when the flowers have to be conveyed a long distance. But if proper precautions are taken as to feeding the plants beforehand, the time of cutting, etc., etc., a few hours' railway journey should have no terrors for the sweet pea exhibitor. I think we should have invited our friend Mr. Cowdy, from Armagh, Ireland, to give his experiences on this matter in place of my own, for anyone who saw his flowers at our exhibition of 1911 must have agreed that they were the acme of perfection, both in freshness and colour, and these should at all times be strong points in favour of any collection. It is not giving away a secret when I tell you that Mr. Cowdy wrote asking me what he should put in the water to preserve the colour of his flowers during transit, and I wired back to him, "Use clean, soft water only." Whether he followed my advice I do not know, but certainly he gave us an ocular demonstration of really good colour in sweet peas that had come from a long distance.

When exhibiting near home there should be no question as to when to cut the flowers, because if this can be done on the morning of the show so much the better, and many of the colours will be all the better for it; especially is this the case with the orange, crimson and scarlet varieties, and even some of the pink sorts, for several of these are very apt to take on a touch of magenta after a few hours in water, and there is nothing so depreciating to the pink colour as this tint.

When flowers have to be conveyed some distance then the trouble begins; and yet, if the weather is fine, there is not much to worry about, but if the weather is damp and stormy the problem is fairly difficult, though if a suitable place can be found in which to dry the blooms before packing them, there is still ground for hope that they may emerge from the boxes in a fairly good condition. At all times the flowers should be as dry as possible when they are cut, so I would advise that they be cut either just after the dew has gone off in the morning or left until about four o'clock in the afternoon, when the temperature is generally a little lower. Unfortunately we cannot always choose the exact time to cut, as the length of the railway journey may necessitate cutting in the middle of the day sometimes, or even before they are dry in the morning, and when this latter is the case then the flowers must be treated as though they were cut during rain.

Under any circumstances, if the flowers have to travel some distance they should be cut at least a couple of hours before they need be packed. Immediately they are cut I prefer to place them loosely in water in a fairly light room or shed, where a current of air can pass between them; here, if at all damp, they will soon dry, and, if kept from sunshine, this current of air will not harm them, even if they are dry, but will tend to keep them cool. In a position such as this it is astonishing how much the flowers will grow.

If the weather is wet at the time of cutting some further provision should be made for drying the flowers, such as placing them in a house where a current of air can pass over the hot-water pipes and then among the flowers, or placing them in a dwelling-room where all the windows are open and a good fire is burning. In either case the flowers must be very lightly disposed in vases or jars, but if a little trouble is taken it is surprising how quickly the flowers will dry in this way. I have proved how well this answers, as the flowers have come out fresh and bright after being packed from twelve to fifteen hours.

The age at which flowers should be cut is a debatable point, but if good strong stems and good substance are desired then the flowers must be fairly well matured at the time of cutting, and the top flower must be at least half expanded, though under exceptional conditions, such as a very long rail journey, they may be cut a little younger, but this is not an advantage except, perhaps, from the point of freshness; size, colour, and substance one cannot get in flowers partly opened in water. Here I should like to emphasise the need of a good light place wherein to place the flowers after cutting; if put in a dark room or shed, some of the varieties may partially close up, and if this happens the probability is that they will not expand properly again. After they have been in water for an hour or two in a light room, afterwards packed in dark boxes, there is not that tendency in them to close up.

As mentioned before, the crimson, scarlet, and orange varieties should be left on the plants as late as possible, but some of the pale blue and lavender flowers may improve a little if given an extra hour or two in water, but this must not be overdone or the colour will be fading by the time the judges go round.

The systems of packing are varied, and when visiting the shows one finds many different kinds of boxes and baskets used. In some instances it may be an advantage to carry the flowers in water, but I certainly do not think it necessary, for if the flowers are treated as already advised and given at least two hours in water before packing, they will travel quite well, even if left out of the water for from eight to twelve hours, and I have had them out of water for twenty hours and then they have come up quite fresh after an hour or two in water. But if the flowers are very young and the stems "soft," they certainly will not rise to the occasion, hence my advice to cut rather older flowers, the stems of which are harder.

For packing I use flat hampers in preference to boxes, as they are very light to handle, and the flowers are not liable to sweat and spot in them. I use baskets to hold one dozen fairly good bunches, packed, of course, in one layer only. In really hot weather I use waxed paper for lining the baskets as this prevents too rapid evaporation; if the flowers are in the least damp I prefer very soft tissue paper, and this, I think, absorbs the moisture, which is an advantage.

When packing, especially if the blooms are being sent, instead of being taken, they must be packed tightly enough to prevent any movement in the baskets or boxes, or bruised flowers will be the result.

If the few precautions that I have outlined are followed, the flowers ought certainly to arrive at the exhibition in fair condition, and it only remains for them to be put in water as quickly as possible after arrival and set out temporarily in the various positions allotted to the classes, first cutting any ties that may be around them. Here they will freshen up and grow, and the work of arranging the flowers may be carried out in a leisurely manner without any need for worry lest some are spoiling while the others are being arranged.

Packing Sweet Peas for Market.

(By THOMAS PAGE, of Hampton.)

There is not much to be said concerning methods of packing sweet peas for market. To insure that the blooms arrive at their destination in a good and sound condition the most important detail is that they must be of the first quality culturally, and not at all moist when being packed. It is also most essential that directly the flowers are cut the bunches should be placed, not too thickly, in water, taking care not to wet any of the blooms, otherwise they may possibly heat in transit, the stems alone being in the water.

I find that 24-sized pots, with the hole cemented up, serve very well for holding the newly-cut flowers; in each pot we put ten or twelve bunches, according to size. If the weather be hot and moist it is as well to take the bunches out of the water and place them in empty pots for about half an hour, to allow them to drain, previous to packing.

The mode of packing I consider the best adapted for the conveyance of sweet peas to market is as follows, viz., a flat box about 5in. deep, 20in. long, and 12in. wide, line with blue or tissue paper, and pack in each box 30 to 36 bunches, placing a piece of tissue paper between each row of bunches. Packed in boxes of this character the contents have not room enough to move about and consequently damage is prevented. If, however, I have to send sweet peas any considerable distance, and the weather be hot and dry, I find it a good plan to put a small piece of wet cotton wool round the base of the stems just before packing. The varieties I consider most suitable for packing and travelling are Mrs. Hugh Dickson, Mrs. Routzahn Spencer, Countess Spencer, Nora Unwin, King Edward Spencer, Sunproof Crimson, Asta Ohn, and Florence Nightingale. These are all good market varieties.

Tecoma Smithi.—It is only when plants of this tecoma are well baked in the summer's sun that they flower in a satisfactory manner in a small state. In this condition it forms a bright and attractive winter feature in the greenhouse. The flowers, which are broadly tubular in shape, are borne in clusters. They are of a rich yellow colour, tinged outside with deep orange.—W. T.

NATURALLY GROWN CHRYSANTHEMUMS.

The cultivation of bush or decorative chrysanthemums is a subject with which everyone is more or less well acquainted, and many systems are adopted to ensure success, but it is very doubtful if even a small percentage of growers allow the plants absolute freedom throughout the whole period of growth. In my early days of chrysanthemum growing it was quite the practice for cut flower purposes to stop the plants as often as possible up to about the middle of June, this being about the time of shifting into the pots in which they were flowered. The plants at this stage would be about nine to fifteen inches high, and immediately after potting the pots were plunged to about three or four parts of their depth in ashes. Needless to say, they soon began to grow away freely, and the shoots being crowded, they soon attained a good height, and, if anything, remained rather on the soft side. If I remember rightly they required much attention in respect to tying, staking, etc. With the exception, perhaps, of plunging the pots, this is the most general method adopted to-day for the cultivation of the decorative and single chrysanthemums, and in most instances it probably answers very well.

Some seasons ago I was not at all satisfied with the results obtained in this way, and decided to try something different. I tried a few varieties grown quite naturally, and the results being far and away better than from the stopped plants I at once adopted this method for growing all my decorative and single varieties.

Where stopping is practised with a definite object in view, say to induce the plants to bloom at a certain time, or to keep certain varieties very dwarf, then I have nothing to say against it; but when it is only done for the purpose of obtaining a multiplicity of half-ripened shoots, then I submit that it is not desirable. It is certainly not conducive to the production of either better or more bushy plants or higher quality in the bloom. For market purposes where the plants are restricted to six or eight shoots, and are required to produce what might be termed half specimen blooms, then I believe it is an advantage to take out the point of the shoot just before it makes first natural break; in this way fewer shoots are made, and they are somewhat stronger and possibly a little more regular. Where, however, a big crop of moderate-sized flowers, with stiff stems is required, the following system of culture will, I am sure, give satisfactory results. In very few instances will the plants be taller than those grown on what may be termed a stopping system.

Cuttings may be rooted any time between January and the middle of March either in thumbs, small or large sixties, or in boxes, and if large quantities are required pricked out on the stages or bed in a cool house. Cuttings of late varieties ought to be rooted fairly early to ensure a good season's growth, as it is generally acknowledged that these require a little more care to produce a really good crop than do some of the earlier varieties. The usual procedure of potting off into large sixties must be carried out before the young plants are in a way drawn, transferring them to a cold frame at once. Here, as soon as rooting commences, they must be kept just as hard as possible without letting them sustain a check by being frozen or cut about by cold northerly or easterly winds.

Before they become pot-bound they should be shifted into forty-eights, potting firmly and giving them plenty of room to ensure stout short growths. As soon as rooted nicely in the last-mentioned size of pot, if favourable weather conditions prevail, they may be transferred to the open from the frames. If they have been treated as suggested, one or two degrees of frost will not do them any harm. If plenty of frame-room is at liberty they might with advantage be left there till the first week in May. It is not necessary, and I frequently, through lack of frame room, put mine out quite by the middle of April.

The final potting should be done as soon as the plants have filled their pots with roots, which probably will be about the middle of May, using 9in. pots and a fairly holding compost, with just a small amount of well-rotted manure added, and a little bone-meal and soot. Other manures are not necessary for some time, the whole object being to keep the plant growing sturdily, and if they can be kept in this condition they will produce from twelve to thirty shoots, or even more, at the first natural break. After potting stand them two or three feet apart on a bed of ashes or a hard surface, and secure the stakes to a horizontal wire to prevent their being blown about by the wind.

The plants are not staked till they are put in their permanent positions, and then only one is used to each, giving the growths perhaps a couple of ties at the time of staking. After this they are left to themselves till well on in August when the shoots are from a foot to eighteen inches in length, and in some instances more. Each shoot is slung to the central stake and in many instances they are not tied again after this, although all the plants receive attention a week or two previous to housing and tied when necessary.

Watering is carefully done throughout the season, and I seldom find it necessary to use much manure before August, when the plants are given a top-dressing of soil, and of course a watering once or twice a week with liquid manure.

If spray bloom is required they are allowed to flower in an absolutely natural manner, but if single flowers are required then one bud is retained to each shoot, and the rest rubbed out, and if this is done the flowers are about the right size to exhibit as decorative chrysanthemums. If they are singles the flowers come large enough for any purpose, and according to the variety vary from four to seven inches in diameter, and the plants are certainly more shapely and the flowers better disposed on them than is usually the case with bush plants that have been stopped.

CHRYSANTHEMUM MRS. HUBERT WILLIAMS.
A beautiful single variety, the blooms bright pink.

From the time the bud appears they are

systematically fed with a little artificial fertiliser every week or ten days, and the very late varieties are not neglected after the feeding of the early and mid-season varieties are discontinued. In fact, they are fed liberally, and at the time of writing (December 13),such varieties as J. W. Crossby, Winter Cheer, Thompson, and one or two others are having weekly feeding; the first-named is showing colour, while Winter Cheer and Thompson will be at their best about the first week in January. Varieties that are very fine now under this treatment are A. J. Balfour, Maud Jefferies, White and Yellow Victoria, Kathleen May, True Gold, December Gold (this latter just going over), Brightness (single), Mrs. Hubert Williams (single; this latter having been good since early in November), Jack (single), Allman's Yellow, and Hetty Wells. By this it will be seen that when grown quite naturally they flower at just about the same dates, and it is quite easy by making a judicious selection of varieties, to maintain a succession of bloom without any difficulty from early in October to the end of January, and this is what I endeavour to do. I have had J. W. Crossby and Winter Cheer quite good until the first week in March in some seasons. The style of the plants will be readily seen from the two illustrations given herewith.

Thomas Stevenson.

CHRYSANTHEMUM MERSTHAM JEWEL.

An effective single variety; the blooms terra-cotta red, with golden disc and yellow points to the florets.

TREES AND SHRUBS WITH ORNAMENTAL FRUITS.

With an abnormal summer such as we passed through this year, Nature expresses her redundance in a variety of ways, and in no direction more so than in the quantity and colour of the fruits produced by various trees and shrubs. Even the most casual observer cannot have failed to notice the rich colour of fruit produced in orchard and fruit garden, and also of the fruits of many of the occupants of the pleasure ground.

Nowhere in the garden has the abundance of fruit been more apparent than among trees and shrubs of an ornamental character. Consequently, where a representative collection is grown, the fullness of the year attained a high degree of beauty, and the fruits, in conjunction with the autumn tints of the leaves, imparted to the garden a series of most delightful colour effects.

It is not generally the custom to regard in planting trees and shrubs from the standpoint of the ornamental aspects of their fruits in the autumn. Probably one of the shrubs that has for the longest period been employed for this purpose, and now one of the commonest, is Cratægus pyracantha, of which the form Lelandi is the best. This fine old shrub is one of the most reliable, and the specimens, as seen at present, on cottage walls and elsewhere, loaded with bright orange fruits, give to it a first place among the best of fruiting shrubs. The thorns are conspicuous in autumn as, for example, Cratægus Crus-Galli, Carrieri, orientalis, and tanacetifolia are all large fruiting kinds, and of the two latter, we have here mature trees that are loaded with high-coloured cherry-like fruits, the latter standing out prominently from the grey-green of the foliage.

The symphoricarpuses or Snowberries yield fruits of most distinct appearance, S. racemosus and S. occidentalis being reliable kinds in this respect. They are best massed in quantity, then it is that one fully realises their great beauty when in fruit, the snow-white fruits, like huge pearl-drops, convey at some distance the same effect as earlier in the year is produced by the dwarf Philadelphus when in flower.

Of older fruiting shrubs in full bearing now, are Arbutus Unedo, with pendulous, ball-like fruits in clusters, that later change to a reddish hue and present a charming picture at the same season as the flowers expand. Citrus trifoliata (the hardy orange) is worthy of mention for its curious growth and orange-like fruits, so also is Celastrus scandens, a plant producing orange fruits and that succeeds equally well as a wall shrub or ascending another tree.

The majority of berberis are free fruiting shrubs, although not always conspicuous; in this respect Berberis Wilsonæ, in itself a pretty, densely branched, spiny shrub of recent introduction, is a notable addition, the fruits being a bright and attractive shade of coral red. Pernettyas and skimmias are best in masses, the latter, on account of the sexes, ensures fertilisation and subsequent fruit production; while the former admits of the full play of contrast with the diverse colours of the fruits. The beauty of rose-hips as decorative elements is of a high order in the autumn. Rosa rugosa is a well-known type, and a notable addition to this family is found in Rosa Moyesi, the hips resemble in shape an oriental water-bottle, and are coloured glowing orange-red.

Cotoneaster applanata, recently introduced, bears an abundant crop of bright scarlet berries that contrast admirably with the dark-green foliage, while the fruits are retained into the winter season.

Two new shrubs of merit in this respect are Rubus innominatus and Viburnum rhytidophyllum, the former a member of the raspberry or bramble family, producing its fruits in compound heads and of a vivid orange hue, the viburnum having elongated fruits, which are carried in dense clusters, and are a rich shade of crimson.

No selection of decorative fruiting shrubs would be complete unless it includes the various forms of crab, of which the variety John Downie is the most brilliant in colour; so, too, recognition should be given the species and varieties of Ilex (holly), as they are among the most beautiful of fruiting evergreens, Ilex flavescens, with yellow berries, being a striking object when in fruit. Of ornamental vines, Vitis vinifera purpurea has carried excellent fruit this season in the open, and in Vitis heterophylla humulifolia we have a colour almost unique in fruits; in this plant the berries are an enchanting shade of turquoise blue.

Thomas Smith.

Coombe Court Gardens.

An edition of "SWEET PEAS AND THEIR CULTIVATION," by C. H. Curtis, has just been issued for 1912, and consequently this is the most up-to-date work on the subject. The price, by post, is 1s. 2d. (cloth, 1s. 9d.) from the Publishers, 148-9, Aldersgate Street, London, E.C.

TREE IVIES.

The peculiarity of the ivy in altering its character from a trailer or climber to a shrub of bushy habit on attaining maturity has been put to good use by horticulturists, for by propagating from the mature growths a very useful group of evergreen shrubs has been obtained. Not only do the commoner kinds, which alter their habit when the flowering age arrives, but the many varieties which differ from the type in the colour, size, or shape of the foliage do so also; therefore the range of bush varieties is almost as large, if not larger, than that of the trailing kinds. Quite as much difference may be noticed in the shape of leaf between the juvenile and mature form as in the habit, and the percentage of some bush forms would be difficult to give with any degree of accuracy.

It is not possible to raise bush forms from seeds, for seeds sown from any of the varieties produce trailing forms. Bush varieties, though usually retaining the stiff, shrubby habit, sometimes revert to the trailing types, though this may be checked by the removal of shoots which develop the tendency. It is not difficult to raise bush forms from some trailing kinds, for if a trailing kind is planted against a support which it can quickly cover, it straightway commences to form flowering branches. Thus, a trailing variety planted against a pillar or over an old tree-butt, may, in the course of a few years, entirely alter its habit, and it is no uncommon thing to find two entirely different kinds of growth from the same plant, that about the lower parts corresponding with the juvenile form with leaves typical of that stage, and the higher shoots agreeing in habit and foliage with some tree variety. The juvenile habit may, however, be prolonged indefinitely by keeping its growth restricted. This may be seen in the case of common Irish ivy growing on walls where it is hard clipped each year. In such cases no bushy branches are to be seen, but where clipping has been neglected for two or three years flowering branches are soon formed.

By repeatedly propagating from trailing kinds it is possible to keep them true to type for many generations. Increase of the tree forms is usually by cuttings, or by grafting on to stocks of the trailing Irish ivy. The latter is the quicker method of producing serviceable plants, for those raised from cuttings grow very slowly for several years.

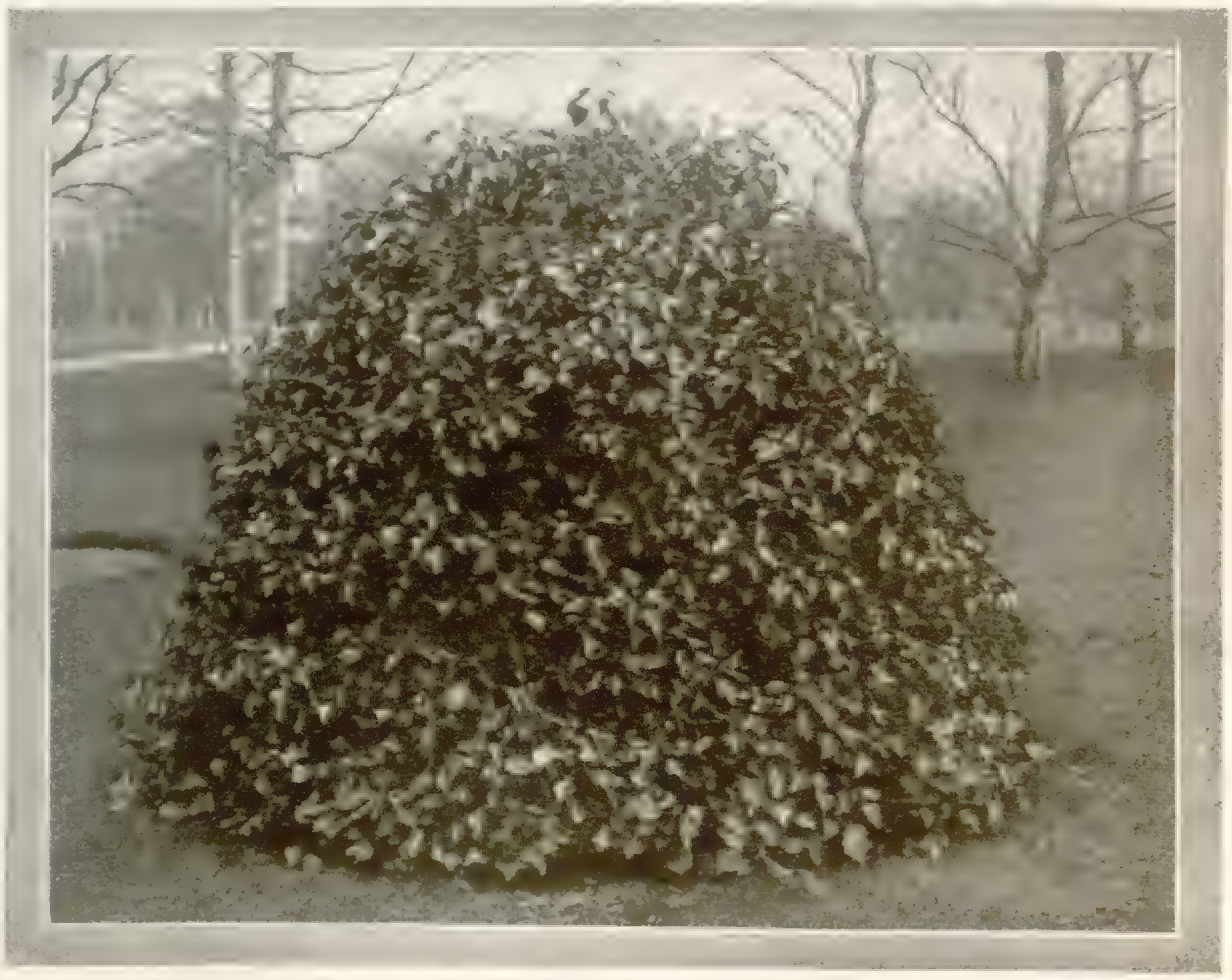
The decorative value of the various kinds of tree ivies has been demonstrated on several occasions at the Horticultural Hall, and in this way their value for the decoration of large halls in winter may be estimated; they are, however, even better suited for outdoor use, and in some gardens series of beds are planted with gold, silver, and green kinds for the sake of colour effects. For grouping in beds, the weaker growers are better adapted than for growing as isolated plants, though, as specimen bushes, the larger and stronger kinds are admirably suited.

The accompanying illustration of a bush of the tree form of Irish ivy (Hedera Helix var. canariensis), growing in the Royal Gardens, Kew, is evidence of the ornamental character of this variety, although the beauty of the glossy leaves cannot be reproduced. Similar plants may be grown of a number of kinds, such as the mature forms of the large-leaved H. dentata, H. algeriensis, H. macrodonta, H. maderiensis, H. gigantea, and H. amurensis. Several of these fruit freely and are additionally attractive when covered with deep purple, black, or yellow fruits as the case may be.

Among smaller-growing kinds we have the numerous golden-leaved varieties, such as H. arborescens folius aureis, H. aurea, H. Golden Cloud, H. palmata aurea, H. spectabilis, and H. flavescens. Silver sorts are represented by H. Silver Queen, H. maderiensis variegata, H. arborescens folius argenteis variegatis, H. Crippsi arborescens, and H. La Reine. Varieties with green or bronze leaves are H. dentata, H. Emerald Green, H. purpurea, H. rhomboidea, and H. minima. Several of these varieties form compact bushes 3 to 4ft. high, and some grow even taller.

Any ordinary garden soil suits the ivies and they give little trouble beyond an occasional cutting over. This is best done in spring, for at that time the remains of the inflorescences can be removed and new growth quickly appears to cover up the cut ends of the branches.

Kew. W. Dallimore.



A SPECIMEN OF THE TREE FORM OF THE IRISH IVY AT KEW.
(Hedera Helix canariensis arborescens.)

CIDER APPLES.

I can assure my friend, Mr. E. Molyneux, who contributed a short article under the above heading in the issue for December 2, that he is right in the conclusion he has arrived at, i.e., that there is much more art required in producing good cider than is generally thought. I would further add that, not only does the right kind of apple play an important part in the production of the best cider, but there are comparatively few varieties that are suitable for making cider by themselves, and therefore one of the secrets of cider making is to know how to blend your apples which possess different characteristics in order to produce a wholesome and palatable beverage.

In the varieties which Mr. Molyneux noted at the Brewery Exhibition, he appears to have got a little astray, probably owing to careless or illigible labelling, as regards the names. "Sweet Harcourt" should, I think, be "Sweet Harcombe"; "Jarligton Mill" should read "Yarlington Mill, which is a well-known Somerset apple; "Cup and Liberty" should be Cap of Liberty; "Hay Masters" is Harry Masters; and "Comane Red" should read Cowarne Red, this being a favourite old cider apple with makers in Gloucestershire.

Many of the cider apples are of local origin, and were raised in the first place from pips thrown out with the pulp from the cider mill after it had gone through the press. Many of the quaint names given to cider apples are of local origin, the varieties either being named after the persons who introduced them or the places where they were raised. In the orchards of the West Country there are hundreds of local varieties of cider apples, some of which are quite unknown outside the districts where they are grown, while others, such as Kingston Black and Foxwhelp, are known more or less throughout the western counties.

If Mr. Molyneux would like further information about cider apples, he should apply to the Director of the National Fruit and Cider Institute, at Long Ashton, Bristol, as this institution has done a great deal during the past few years in collecting, classifying, and testing local cider apples.

Mr. Molyneux is forced to the conclusion that cider apple trees are not much in demand, and that there does not appear to have been much planting done in recent years. This, unfortunately, is true; and cider apples have doubtless been neglected for the sake of table varieties; but a change is now taking place, and within the past three years hundreds of trees propagated at the National Fruit and Cider Institute have been distributed and planted in orchards in the counties that contribute to the upkeep of the establishment. As a matter of fact, people in the West of England are realising the necessity of planting more cider apples. Unless this is done the present promising outlook for the cider industry must end in disappointment in the future if the fruit for grinding purposes is not forthcoming.

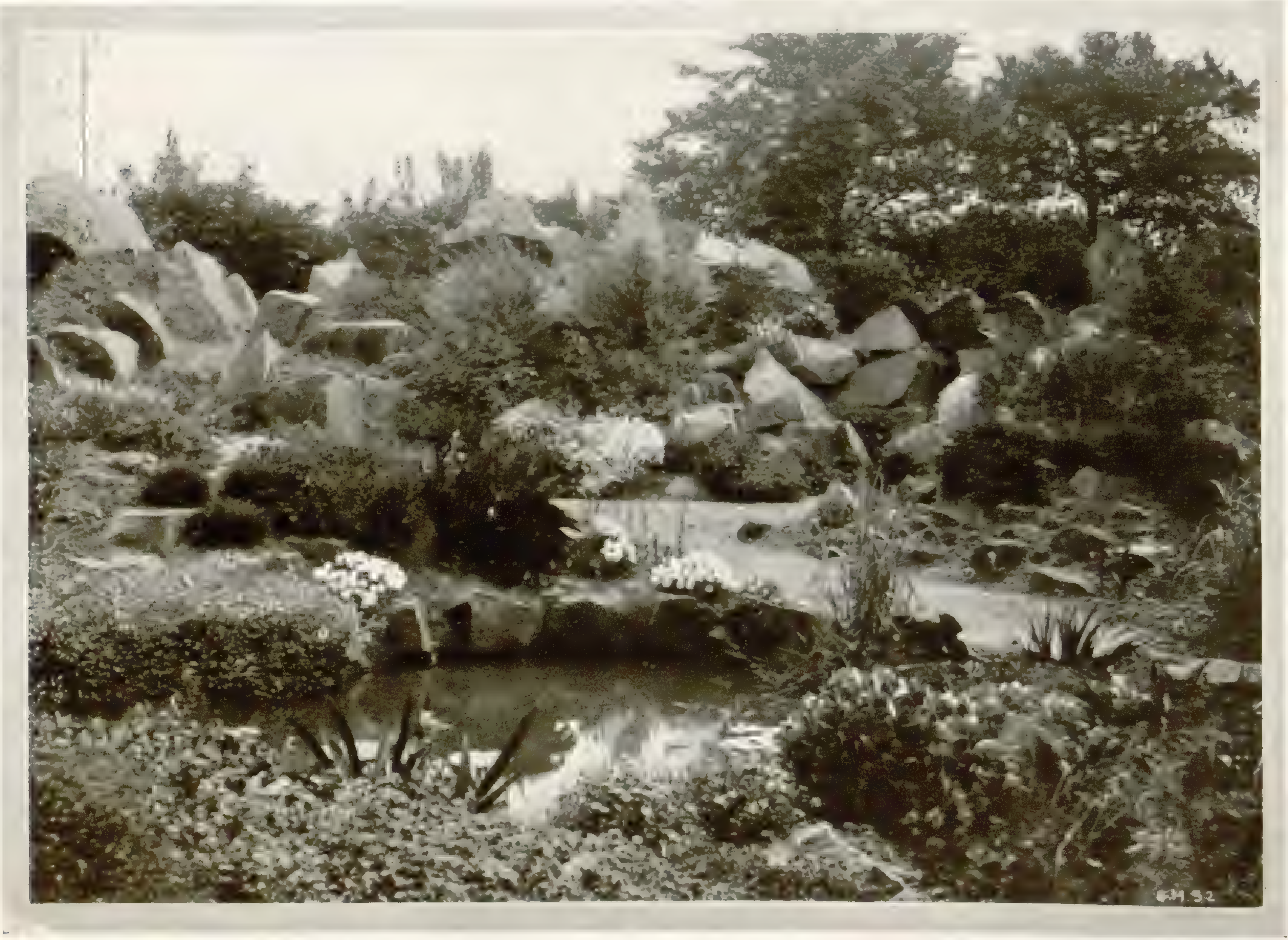
Throughout this year there has been a great demand for cider; prices have been good, and makers are now busy filling up their empty hogsheads. Only the other day a large cider maker informed me that he never remembered paying so much for apples for grinding, and the fruit of several choice cider varieties has this year fetched more money than table apples. These facts appear to support the contention that the shortage of good cider apples is beginning to be felt, owing to the death of old trees, and lack of new ones to take their places; and it is hoped that the present generation will realise its responsibility in respect of cider fruit, and not only fill up old orchards, but continue to plant new ones.

G. H. Hollingworth.

WHERE ROCK AND WATER MEET.

The history of horticulture is one of changing ideas. In all its changes it is the "novel" idea that attracts. The way of progress lies through new ideas and rising art, and progress uses present successes as stepping stones to the something better beyond.

Garden life and garden art are so full of possibilities that one can only write with certainty of past and present things, as the future is ever-widening to a greater conception of the garden beautiful, and though the forward spirits of the present generation are helping to mould the future ideals, yet the ultimate result is beyond our ken.



A CHARMING VIEW IN AN EAST ANGLIAN ROCK GARDEN.

But to return to the present-day garden —for this is the mark by which the present-day garden lovers are judged; it is well for us that the natural ideal in gardening has had such full play, and that we have brought the countryside into the garden, and have given to so many subjects that unrestrained freedom which is at once the grace and charm of the floral world.

The subject of these opening-out thoughts is connected with the value of rocks and water in the making of garden scenes. The use of rock has given to us the whole range of mountain flora. Thousands of small plants, many of them of supreme beauty, and all of them of entrancing interest, have thus been brought within the confines of our English gardens. This in itself has been of two-fold benefit, i.e., by the formation of gardens practically suited for the culture of these plants and for scenic effect, and the increased knowledge gained by the study of the numerous flower groups and their varieties.

Then there is the great development of water gardening, with its attendant host of aquatic, sub-aquatic, and moisture-loving plants. From the lake to the lily pool, from the streamlet to the bog, we gain not only the never-failing charm of water scenery, but the full beauty of the wealth of plants which are inseparably associated with pools and water margins. In the accompanying illustration of a portion of the rock garden at Holland House, Southcliff, we obtain just a small idea of the value of water in conjunction with rocks, and this where space is somewhat restricted. The idea of utilising rock and water for decorative effect is not new. So many English gardens can now glory in this ideal combination, and the Japanese artists of the distant past worked with the same combination.

Provided the work is not over-elaborated or, on the other hand, made paltry for the want of material, or want of discretion on the part of the designer, the rock and water scenery will provide the most charming aspects of garden beauty. The prime necessity is to work for undulating ground, and allow the waterways to fall naturally through the lower levels. Water may be in the form of a large lake suitably outlined and planted; it may be a series of winding pools, alive with beauty at the margins; or possibly a well-planted streamlet. The main thing, the water, is secured in any case, and once this is done one can work to that, creating and shaping mounds, slopes, banks, foregrounds, and backgrounds, with the one dominant idea of making a happy combination which shall breathe interest, charm, and artistic effort at every point.

The placing of rocks, and their conformation will be a matter of individual study and individual requirements. Bold bluffs, and cliff-like formations, are only desirable where one has space enough to emphasise the bold character pictured, and water enough to take off the hardness delineated by the free use of massive rocks. In this case, assuming that a perpetual water supply is assured, the rocks should, at places, rise sheer out of the water itself, thus losing the lower lines of the stone, and gaining some fine spaces between the individual rocks for the naturalisation of dwarf plants, and, furthermore, ensuring those exquisite "reflections" which are obtainable only by the mirroring of flower and foliage in clear water.

On the other hand, for a small garden some very pretty effects can be obtained by a restricted use of stone, and in the utilisation of gently sloping banks, and low mounds, which can be planted with trees, shrubs, as well as with a multitude of other plants. The free use of these subjects will result in the formation of undulating scenery in which the pools or stream will form the key of the picture. In this case the rocks that are used will be shown as outcrops from the soil banks, and this will almost entirely free the water margins for the planting of waterside subjects. The wonderful foliage masses formed by waterside plants will effectually hide any bare outlines, and give almost a tropical luxuriance of vegetation. Gunneras, Rodgersias, irises, astilbes, spiræas, juncas, scirpus, eulalias, glyceris, lobelias, lythrums, and a host of other strong growing waterside subjects, are really glorious during the whole of summer, giving their varying colourings, heights, and beauty to the waterside garden.

While not wishing to dwell too much upon the subject, I desire to promote a further enthusiasm for the many diverse pictures of garden beauty that may be created by varying arrangements of rock and water. The broad flagged pathway which winds by the tall waterside irises; the stepping stones placed in shallow waters, where calthas, mimulus, myosotis, villarsias, and many other subjects grow in gay profusion; the ridges of rock placed so as to catch the movement of the wind-stirred rippling waters, or the grim boulder rising out of the deep pools, are all charming combination of rock and water.

Or, going further still, consider a garden in the Japanese style, where every stone, every conformation of the landscape, every phase of water scenery has its own intense interest and meaning, and where stone is used freely as the highest essential of Japanese garden art. Study the outline of those quaint stone bridges or those granite slabs, which carry the visitor on an informal pathway across the water. Study those quaint stone well heads, and those more quaint stone lanterns. Note these things, and consider if we have yet reached the zenith of horticultural art. There is more in garden art than we have yet considered; more in the use of rocks and running water, in the draping of crags, and in the embellishment of pools than we have ever dreamed.

At the meeting of rock and water we now stand, and the way is open for the landscape gardener to make a fuller and freer use of these agents than he has done in the past. P. S. Hayward.

Erlangea tomentosa.—It is not many years since this erlangea was introduced from Central Africa, but it has already become generally distributed. This is, to a great extent, owing to its ready propagation and easy culture, for cuttings may, in the spring, be struck without any trouble, and the plants so obtained will make good flowering examples by the autumn. It cannot be regarded as showy; indeed, it bears a general resemblance to a eupatorium, but the undersides of the leaves and the young shoots are clothed with a whitish tomentum. The ageratumlike blossoms are of a lavender shade with a lighter centre.—W. T.

SPECIMEN HYDRANGEAS.
Arranged in the Portico of the Mansion, Buxted Park.

HYDRANGEAS.

Some years ago large specimens of these shrubs were usually seen at most of our summer and autumn shows, amongst collections of stove and greenhouse plants, but in time they became so common that judges passed them over in favour of specimens of more choice and rare subjects, hence the reason they lost favour. Small plants carrying one truss of bloom are grown by the thousands for market, and usually meet with a ready sale at a few pence each. No plant is more easily grown than the hydrangea, and few will put up with such rough treatment.

To produce plants having a truss of bloom on a single stem, prepare a bed in a cold frame about the middle of August, the soil must be of a rich, light, sandy nature, about four inches deep. Choose cuttings of the young shoots having plump terminal buds. If dwarf plants are desired, the cuttings should not be more than four or five inches long. Remove the lower pair of leaves, but take care not to injure the buds at their base, as the shoots from these will help to form large specimens later on if desired. The cuttings should be inserted up to the first pair of leaves, allowing a distance of about three inches each way between them, taking care to make each cutting firm in the soil; about three hundred and fifty cuttings may be inserted in a one-light frame six feet by four. When all the cuttings have been inserted, put on the light and shade from the sun, sprinkle with water every evening until rooted, when the light should be removed to harden the young plants. By November they will have shed their leaves, and should be well rooted, having stems from three to four inches long, with a plump bud on the top.

Potting should now be resorted to, the strongest and best rooted should be put straight away into 48's, the smaller ones into large 60's. When potted they should be returned to the frame and protected from rains by having the lights put over them, and in frosty weather afforded a protection to prevent their being frozen. Early in February a batch of the most forward may be taken into a structure in which a moderate temperature is maintained, but growth must not be unduly excited, or the plants will fail to bloom satisfactorily. I have had plants in full bloom as early as the first week in March, from twelve to fifteen inches in height, with heads as far through grown in 48's from cuttings inserted in a cold frame in August. Where a quantity of these have to be provided this is the most simple and economical way of producing them that I am acquainted with.

If young plants of this description are well attended to in the way of watering when in bloom they will make a couple of small shoots at each pair of leaves, in addition to a couple from the eyes beneath the surface of the soil. When the flowers have faded, the trusses should be removed, and these young shoots encouraged to grow. If shifted into nine-inch pots by the autumn they will make fair-sized plants, and if half a dozen or more are arranged in a large pot or tub you have a specimen the second year. In three years from the time the cuttings are taken specimens may be had from four to five feet through them and as many high.

To induce these large specimens to bloom freely the points of the young shoots ought not to be allowed to suffer from the early autumn frosts. If they are removed to an open shed where the leaves can be kept free from damp, they will gradually ripen and fall off while in this position. The plants need but little water at the roots, only just enough to keep the buds plump being sufficient. We have often wintered large specimens by just turning the pots on their sides in sheltered places, covering them with litter, but we prefer a dry shed or outhouse where the buds can be exposed during favourable weather, as they are not then so liable to damp off.

In some parts of the country where the winters are mild hydrangeas may be allowed to remain out without protection, but such do not often bloom so freely as those whose buds have not been injured by the damp and frost. Large specimens when planted out should always have some protection unless in a favourably situated place. There are not many species of hydrangeas sufficiently hardy to withstand the rigour of our winters with impunity, but I have never known H. paniculata grandiflora suffer in the least from the most intense cold of our winters, but this belongs to a class quite different to that which includes the Japanese kinds. The flowers of the latter are produced on the terminals of the preceding year's shoots, whereas those of paniculata are found on those of the current year. The three kinds usually found growing in our gardens, and regarded with the most favour by the market growers are Hortensis, Otaksa, and Thomas Hogg. There are several others, such as quercifolia stellata, japonica, and japonica variegata, but the three first-named are those most commonly met with. Hortensis and Otakso can both have the colour of their flowers changed to blue by adding sulphate of iron to the water. In some places where this abounds in the soil there is no need to add the same.

APPLE ANNIE ELIZABETH.

A large and handsome culinary variety of excellent quality; the fruits illustrated were grown by Mr. J. Whittle, gardener to Colonel Borton, Cheveney, Kent.

We have known plants having blue flowers sold by hawkers as new species, but which have proved to be nothing more than the common forms treated with these chemicals. There are no blue hydrangeas naturally, and some species fail to respond to the treatment suggested. I have not known Thomas Hogg turn blue, but have seen the flowers a dull pink. To grow this kind to perfection it should have a very rich light soil; its habit is very slender, therefore should be grown in an open sunny position. I have planted this in tubs with hortensis, and while the latter has turned a most beautiful blue, Thomas Hogg has not altered its colour in the slightest degree. Quercifolia is most attractive when well grown, its foliage differing from the other kinds, while the trusses of stellata have a light graceful appearance. Two kinds of recent introduction are Narcissi and Veitchi, both of which promise to become popular, but as yet they are but little known to the general body of growers.

H. C. Prinsep.

GREENHOUSE JASMINES.

The various species of jasminum are characterised by the refined and delicious fragrance of their flowers, and it may be said that the common and hardy form, known as J. officinalis, is unsurpassed, and perhaps unequalled in this respect. In addition to the hardy species there are a number which require either stove or greenhouse treatment, and several of these are well worth cultivating.

From India we have J. grandiflorum, which bears in profusion large white flowers, and, further, is found to luxuriate in the cool greenhouse. The same applies to J. heterophyllum from Nepaul, and J. odoratissimum, which hails from lovely Madeira. Borneo supplies us with J. gracillimum, whose fine white flowers are produced in uninterrupted succession over many months in the year; together with a double-flowered species in J. Sambac flore pleno, and the fine J. Duchesse d'Orleans, it requires a warm house in order to bring out its full capabilities and to do it justice. J. gracilis, too, is usually treated as a stove plant, but experiments have gone to prove that it succeeds admirably in an ordinary greenhouse. It is of slender growth, and care must be taken not to overpot it in the early stages of its growth.

Each and all of the jasmines thrive in loamy soil, enriched with short manure, and rendered porous with sand, while their propagation is of a very simple order, being effected by means of cuttings inserted in pots at any season of the year. Kept close in a propagating case they form independent plants in a very short time, and it may be suggested that where accommodation exists, they be planted out and utilised to furnish the roof, pillars, or ends of both stove and greenhouse.

Walter H. Aggett.

APPLE ANNIE ELIZABETH.

This is a grand old apple, and one that holds its own in good competition, and finds a fitting place in many gardens. It is a culinary variety of great merit, and its large, roundish, ribbed fruits are very fine either for baking or other culinary purposes, while late in the season they are not bad eating in a raw state. There is a briskness and sprightliness about the flower of Annie Elizabeth that commend it to many tastes. The skin is yellow with crimson spots and streaks, and the flesh is firm and white. It may not be generally known that Annie Elizabeth was raised by Messrs. Harrison and Sons, of Leicester, and was granted a First Class Certificate by the Royal Horticultural Society in 1868—well on towards half a century ago. The dish of fruits illustrated in the present issue was one of the splendid set exhibited at the Great Fruit Show this autumn by Mr. J. Whittle, gardener to Colonel Bourton, Cheveney, Hunton, Maidstone.

BLECHNUM SPICANT.

The very pretty and thoroughly evergreen Hard Fern, although of easy culture, hardly figures in collections so widely as it should. To some extent, this may be due to the fact that it resents the presence of lime either in the soil or in the water supply, and hence, if this fact be ignored and hard water be used, it dwindles and dies for no very obvious reason. If, however, a good compost of leaf-mould and good loam, the latter predominating, be given, it does well, either in pots or in the open, provided only rain water be used. Using these precautions we have still a vigorous plant of Blechnum spicant polydactylum which we found 30 years ago, and in "The Book of British Ferns" there is illustrated a magnificent specimen of Airey's plumosum, which created quite a sensation when exhibited in 1891.

The species is a solitary member of the genus in this country, and is characterised by producing two sets of fronds, barren and fertile. The former are of a long, lanceolate form, consisting of a midrib, flanked on both sides by bluntly pointed pinnæ, set closely together like a double comb. They are of a dark lucent green and very tough texture, whence the common name. These form a lax rosette, from the centre of which rise a number of erect, longer fronds, with very narrow pinnæ, only wide enough to carry two lines of fructificution, one on each side of the secondary midrib.

The linear sori or spore heaps are protected by a thin skin-like cover or indusium, which rises within the margin, and it is this independent indusium which distinguishes Blechnum from Lomaria, with which it is erroneously associated even by the Kew authorities, though in Lomaria it is the margin itself which is turned back as a protection, as in Pteris aquilina. The distinction is perfectly clear, and had been as clearly defined by the very botanists who now misname it, and, despite repeated representations, tacitly refuse to make a correction. The reality of the distinction is demonstrated by the fact that in B. s. anomalum, by no means a rare form, the fertile pinnæ are as wide as the barren ones, and the sori lie next the secondary midribs and far from the margin, a form Lomaria cannot possibly assume. Blechnum spicant is found in abundance in many parts of the country, forming extensive colonies in damp woods and on hedgebanks and similar positions, but always where rather humid conditions prevail. As a rule, the fronds run from six inches or so to a foot, but under very favourable conditions. We have waded through plants almost waist high, the roots then being in almost bog-like soil. Thoroughly established pot plants which have filled their pots with roots are therefore benefited by standing in saucers of water, rain water, of course.

Some pretty "sports" have been discovered. One of the prettiest of all, B. s. concinnum Druery, we have a particular affection for, as it constituted our first "find," and infected us with the fern fever, from which we have never recovered, and which eventually we have every reason to believe, had proved contagious to a large number of friends who have been incautious enough to approach us and the dangerous plant itself. The best varieties, with few exceptions, are all wild finds, very little having been done in the way of selective improvements. The exceptions are Airey's plumosum and Hartley's pretty little "crispissimum," the latter raised from an unpromising "strictum," which had yielded successive batches of the little gem named. There is also a serrata ramo-cristata form raised by crossing by Stansfield. The wild ones are B. s. ramo-cristatum Kinahan found in Ireland, and of which a counterpart was found in Strathblane, N.B., but has unfortunately perished. Our own "concimum," already mentioned, has long, narrow fronds, about half an inch wide, built up of two even rows of rounded, hollowed serrate pinnæ like little scallop shells. Barnes' lineare is equally narrow, but the pinnæ are rounded and smooth-edged, and, as a rule, so joined together that the frond is simply strap-shaped like a narrow, leathery Hart's-tongue. Forster's "plumosum," of rather mysterious origin, has wide imbricate fronds, with somewhat confluent pinnæ. Crested and polydactylous forms are represented by a find of our own "polydactylum," one by Miss Barraud—cristatum Barraudæ—and a fine form found long ago by Mr. S. B. Wollaston.

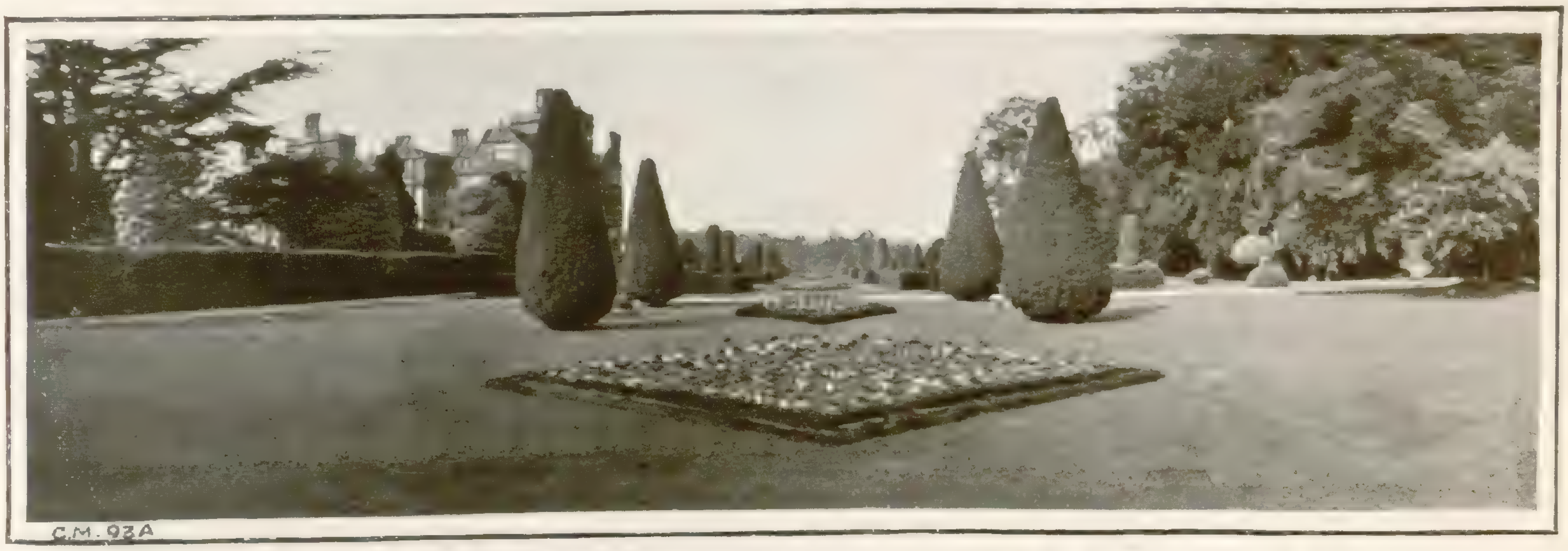
A number of strictum subconfluens forms exist. Maunderi is a dense, dwarf ramose cristata form, raised from a larger one found by Mr. Maunder.

As we have said, the species is thoroughly evergreen, and therefore retains its verdure well into the following season, the fertile fronds, however, die when the spores have ripened, and scattered; this, however, distracts but little from its merits as regards winter decoration, since they need only to be cut off when withered, leaving the attractive rosettee growth intact until a fresh batch rises in the spring.

C. T. Druery, V.M.H., F.L.S.

CLIPPED TREES AT CONDOVER HALL.

In connection with a recent article on "Hedges" we gave an illustration representing a view in the gardens at Condover Hall, near Shrewsbury. Clipped trees and hedges of yew are a great feature of these gardens, but in the clipping of the trees there has not been any severe striving after wondrously fantastic forms. Cones, pillars, and pyramids abound, and all are kept in excellent condition. We give another view in this garden, to further emphasise the value of dense well-kept hedges, and also to illustrate the utilisation of formally-clipped specimen yews in conjunction with brilliant summer bedding.



CLIPPED SPECIMENS AND HEDGES OF YEW AT CONDOVER HALL, SHREWSBURY.

SOIL STERILISATION.

In your esteemed paper (December 2) my name is mentioned in connection with a discussion on the "Sterilisation of Soils," and your correspondent at the Northern Fruit Congress states that I evidently wanted someone to wave the magic wand over my eelworm-infested soil and make it clean, and that I evidently had little faith in science, and left the room a disappointed man. With your permission, I will throw a little light on the subject, especially as to the statements I made, and my opinion respecting steam heating to sterilise soils.

It does not need much scientific knowledge to understand that if you can get eelworms within the reach of steam it must be death to them. This reminds me of the humour of a clown long since, who said, "There are always as good fish in the sea as ever yet were caught," but the retort came, "You may lose all your bait in trying to catch them." It seems to me that this subject of steam for sterilisation of soils to destroy eelworms is thrashed over much, because of the uncertainty of catching all the eelworms.

As a practical man, I have to face the problem in all its bearings. Fancy anyone who may be obliged to deal with hundreds of tons of soil by this method, and consider, after careful operation, that all had been destroyed that came within reach of steam, which we grant as probable. Now then, I am advised to steam rather than import new soil; but here we come face to face with the practical difficulty. In many large market nurseries thousands of plants are annually lifted and planted inside, carrying with them new colonies of eelworms to reinfest the soil, and yet we cannot think of steaming all the outside soil as well as that inside. I fill several large houses with chrysanthemums lifted from outside and planted inside, and we have reasons for thinking that our countryside is altogether infested with eelworm.

Your correspondent knows quite well that I appealed to scientific men to assist us in solving this problem of destroying the eelworm with chemicals. I have yet to learn that any serious investigations have been instituted to carry out experiments by either Government authority or any disinterested body of men. As the Board of Agriculture has money for experimental purposes, we look to receive some practicable scheme evolved by that department for the assistance of horticulturists.

We have many advertised remedies, but I have not found a cure among them hitherto. We have used gas lime with much benefit to cucumbers and tomatoes, and new soil is used for the former annually, but the eelworm destroys the roots of cucumbers by July and August, and the crop becomes very light, so that we may lose nearly half or a third of the crop. We have also saturated all our houses with a patent fungicide, but have not succeeded as we desire.

Am I unreasonable in my hope that eelworms may yet be destroyed by chemicals, either by fumes or direct application? I am not forgetful that since 1885 Bordeaux mixture has done much in the destruction of fungoid diseases on plants, and, later, that sulphide of potassium has come as a cure for mildew and rust. The County Council lecturer for Durham is now commending ground limestone, unburnt, as a preventive of finger-and-toe in swede turnips, and also as a cure for scab in potatoes.

I am a firm believer in the science that produces satisfactory results, but I am not to be set aside by science that will scarcely touch the subject with the finger-tips. At Newcastle I called for the attention of a man who had both the will and the faculty to assist us in this difficulty, and on the spur of the moment there came to my mind the name of Mons. Pasteur, and I said, "Oh, if we had one Pasteur to assist us out of our difficulty." That great scientist was once met in a street in Paris, and embraced by a friend, who said to him, "You must come out to my district and help my poor people, who are in danger of losing their industry through disease in silkworms." Pasteur went and found a remedy. That is the class of man that I am calling for. But I only got the answer of "the magic wand" in response.

Private gardeners know little generally about the destructive influence of eelworms. During more than 40 years' connection with private gardeners, I do not remember the subject cropping up in private conversation, but, according to trade papers, eelworms are found to infest many kinds of soils and plants in large districts. We growers may be ignorant of a remedy, even though this may be near at hand, but we freely confess that ignorance, if, by making it known, we can learn from any source of a practical remedy, cheaper, and more certain than sterilisation by steam, and even this idea, if my memory serves me rightly, we got from the United States.

George Harris.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

GENERAL REMARKS.—The work in the houses will now be confined principally to clearing operations. While we have so many of the different species and hybrids in the various divisions in a more or less dormant state, the opportunity is afforded for a careful examination of the plants, as scale and other insect pests may have become secreted about pseudo-bulbs and foliage. One is often asked to recommend some safe insecticide for sponging purposes. There are several on the market quite up to all that is claimed for them by the manufacturers, but the unfortunate part is, that users do not always comply with the instructions, consequently one hears complaints of injury. We have found that spraying is generally effective for thrips and greenfly, but where black thrips have been on the plants, they are not destroyed altogether by spraying, especially where the eggs are laid on the under sides of the leaves, and other protected portions of the plants. Sponging, therefore, becomes necessary, and there is nothing safer than warm water with a little soft soap added—not sufficient to colour the water. This will not only remove the pests, but dust and other settlement from the leaves. At this season all necessary washing and cleansing of the houses should be attended to, for as soon as we come to the turn of the days, there are so many calls on one's resources of labour that it is advisable to have all work of this kind as forward as possible while work is not so pressing.

DECIDUOUS DENDROBIUMS.—Many of the early-flowering dendrobiums have their flower buds prominent on the pseudo-bulbs. Where it is desirable to have plants in flower early in the New Year, the most forward should be transferred from their resting quarters to positions in the warmer divisions, where they may obtain the conditions necessary to encourage the development of the flower buds. When endeavouring to get plants into flower thus early, there is generally a tendency among them to produce side growths, instead of flower buds. There are two causes for this; the chief one is want of proper ripening in the early autumn. The other is too liberal treatment. Plants are often taken from their resting conditions and placed in the hottest position obtainable, where the atmosphere is at the point of saturation at all times; here, even without any root moisture whatever, the conditions are sufficient to keep the plants in a normal state; but in cases where water is given the root growth is often obtained instead of flowers. It is never safe to be liberal to dendrobiums until the flower buds are seen to be separating from each other.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

GLOXINIAS for early flowering may be produced by a selection of the earliest ripened corms. These may be left undisturbed in the pots in which they flowered, but the surface soil should be removed and a top-dressing of good fibrous loam, peat, and well-decayed sheep manure in equal parts be given. Place the plants in a light position, and as near the glass as circumstances permit. A shelf in the stove may often be found an ideal position for early gloxinias. As soon as the roots are active and growth is progressing, light feeding may with advantage be afforded, and given more frequently as the foliage develops and the flower buds appear. An early display of gloxinias is always appreciated, and the flowers are of great value when cut and tastefully arranged with asparagus growths or trails of smilax, for dinner-table decoration.

SEEDLING GLOXINIAS cultivated expressly for winter-flowering are now developing their best blooms; the plants will need extreme care at this season, for excess of watering will end in disaster. After flowering the corms must be subjected to a thorough ripening process by exposure to the sunshine, and a gradual reduction of water to the roots.

HIPPEASTRUMS.—Seedlings raised early last season may be kept nearly in a state of rest until early in the year, and they will then commence growth with renewed vigour and make rapid progress during the early spring months. For producing an early supply of flowers of these bulbous plants, the old bulbs will need to be specially treated. A careful selection should be made of the strongest bulbs for forcing into bloom from Christmas onwards, until the seasonable time for the general flowering of the main stock. Experience and long observation have proved that for early forcing the best results are obtained by a selection of thoroughly ripened and established bulbs, which have not been repotted the previous year. After flowering it will be found advisable to repot those that may require such treatment at this stage, and any new roots formed must be carefully preserved; but only the loose soil removed. If bulbs are liberally treated by regular feeding, every third year is generally sufficed for repotting, and an excellent plan is to divide the stock into three batches, each separately labelled, the newly-potted batch each year being kept for late flowering. The early bulbs now selected will not require water until the flower stem is visible. If the bulbs are now thoroughly overhauled and cleansed, much after labour will be saved.

GENERAL REMARKS.—The present season affords an excellent opportunity for a thorough washing and cleansing of the houses. I have found nothing more satisfactory than hot-water and soluble paraffin soap for scrubbing down woodwork, stages, floors, etc. The glass, both outside and indoors, is all the better for a good wash down. After the work is satisfactorily concluded, attention must be given to lime-washing the walls, and the renovation of permanent borders where creepers are growing. All pruning and thinning out of weak or undesirable wood should be carried out without delay. Then the occupants of the plant stoves should be sponged with weak insecticide, the pots washed, new shingle put upon the stages, and a general rearrangement of plants tastefully carried out.—John Donoghue, Bardon Hill Gardens.

FRUITS UNDER GLASS.

EARLY VINES.—The weather has been very wet and dull, and rather against early forcing, but still at this early stage it does not matter so much as when the young growths are pushing, for it is then sunshine is so necessary to make our efforts successful. In the last calendar I advised an increase of 5 deg. of heat, and now another 10 deg. must be added, making the temperature up to 60 deg. This will be sufficient until the growths are further advanced. Maintain the atmosphere sweet by occasionally giving ventilation. Keep the soil from getting dry near the hot-water pipes, and spray the rods gently in genial weather. As soon as an even break has been obtained the rods should be tied up to the vines, using fine tarred twine for the purpose. In houses built for vines the wires should be 2ft. from the glass, as at that distance the temperature is fairly even.

LATE HOUSES AND MUSCATS.—Wherever practicable it is a good plan to cut all grapes as soon after this date as possible, or at least as soon as the new year comes in, and the vines should then be pruned and dressed, as advised for the early house. Sometimes on the back walls of lean-to houses plants are grown, and these also should be detached and thoroughly cleaned, and the wall should be given a good coat of hot lime to which some petroleum and sulphur has been added. This mixture should be well brushed in, and if done twice over all the better, as a better colour will be obtained, and the result be more permanent.

PEACH HOUSES.—The early peach-house should have some additional heat, now that the buds will soon be bursting, and 50 to 55 deg. will be a good temperature to maintain while the trees are in bloom, admitting a little air on all favourable occasions. Keep the air rather drier during the flowering period, and brush over the flowers at regular intervals with a hare's tail.

EARLY STRAWBERRIES.—These should have a little more heat as soon as the flower spike is showing; a temperature of 55 deg. will be sufficient for the present, as forcing must be proceeded with cautiously. Syringe gently on fine days, especially under the foliage.

GRAPE ROOM.—Look over the bunches frequently, and cut out all bad berries. Keep the temperature as even as possible, about 50 deg. is quite enough. — W. A. Cook. Leonardslee Gardens.

THE FLOWER GARDEN.

VIOLETS IN FRAMES.—Much difficulty is experienced in some gardens at this season of the year in maintaining a supply of violets, especially where heavy fogs are frequent. In such places the foliage is attacked by disease and damp, and strict attention is necessary to keep the plants in a healthy condition. To accomplish this, free ventilation must be afforded at every available opportunity, removing the lights from the frames on bright days, and only closing them when the weather is foggy or frosty. If leaf spot occurs, it must be attended to immediately it is noticed, and before it does serious damage; spray with a solution of sulphide of potassium, half an ounce dissolved in a gallon and a-half of water. The soil should be frequently stirred with a hand fork to prevent it becoming green and sour. When water is required, it should be given in the morning, to allow the foliage to dry before night comes with its lower temperature. A little stimulant in the way of artificial manure is beneficial, and should be lightly worked in with a hand fork before watering.

PERGOLAS.—An examination of all woodwork used in the construction of pergolas, arches, etc., should be made now, and all decaying timber replaced with new. Oak and elm are the most suitable materials, and, if possible, should be well seasoned before use.

THE BOG GARDEN.—Slugs are very troublesome among many of the dormant plants, and a close watch must be maintained to prevent any losses from the activity of these pests. The resting crowns of the cypripediums are often destroyed by slugs, and consequently the flowers which are looked for next season never appear. A careful application of one of the approved preparations for the destruction of evil pests usually proves effective. Encircling the roots with strips of tin is sometimes advised, but in many instances the slugs are too close down amongst the roots for this to be of much service. Occasional top-dressings are beneficial, and a few pieces of charcoal should be mixed with it, to keep it sweet. Primula rosea has a tendency to work out of the soil, and the roots become bare if not top-dressed. P. sikkimensis is extremely difficult to keep after flowering for one or two seasons, therefore one should always have a reserve stock of pot plants for putting out in the spring to fill up vacancies. Saxifraga peltata has a habit of encroaching, and its thick rhizomes creeping about will in time destroy some of the choicer plants, if not checked.

SNOW.—When a heavy fall of snow occurs no time must be lost in removing it from the shrubs, to avoid the risk of their being broken down by the weight. This can be accomplished with the aid of a long bamboo pole, slightly shaking the branches with it, but dealing with them in as gentle manner as possible to avoid bruising the bark or breaking the shoots.

DRAINS.—All faulty drains should be examined and broken pipes replaced. Where choked it is often necessary to break into them and push the cleaning rods through, making good the breaks when the pipes are clear.—E. C. Pooley, Gnaton Gardens.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at sixpence per line, the minimum charge being two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

Royal Horticultural Society.

There was no general exhibition at Vincent Square on December 19, but the various committees met, the members signed the attendance book, wished each other the compliments of the season, and discussed the few novelties placed before them. The Fruit Committee had two dishes of apples to consider; the Floral Committee had half a dozen subjects before them, while the Orchid Committee, which met in the Lecture Hall, had to adjudicate upon a goodly number of plants, and there was a quite bright display around them.

FLORAL COMMITTEE.

Messrs. James Veitch and Sons, Chelsea, exhibited a new Buddleia named B. officinalis (A.M.): this was collected by Mr. E. H. Wilson, and should prove a useful conservatory plant, as its clusters of pink flower are sweetly honey-scented. It is in the way of B. asiatica, and has sage-green leaves, with white under-surface.

A number of chrysanthemums were staged, including a mauve anemone-centred variety from Mr. Cresswell, gardener to P. Bullivant, Esq., Holmwood, Eden Park, Beckenham; Fred Rose, Patty, and H. Douche, red-pink, and yellow decorative varieties respectively from Messrs. W. Wells and Co., Merstham; and Christmas Bronze, a loosely incurving variety from Mr. W. Iggulden, Lock's Hill Nursery, Frome.

ORCHID COMMITTEE.

There was a capital little display of orchids in the Lecture Hall. Mr. Hopkins, gardener to F. A. Wellesley, Esq., Westfield, Woking, showed Brasso-cattleya Veitchi (the F.C.C. variety), carrying a pair of very big brilliant flowers, each with an enormous lip; and Lælio-cattleya Rubens, Westfield var., a charming form of the hybrid between Cattleya Hardyanum and Lælio pumila.

Mr. Edward V. Low, Vale Bridge, Haywards Heath, brought up some very bold cypripediums, such as C. Samuel Gratrix, C. The Gaekwar, C. Maharajah, and C. Beryle, West Point var., and C. The Nizam, the last-named resulting from a cross between C. Helen II. and C. insigne Harefield Hall.

Messrs. Charlesworth and Co., Hayward's Heath, contributed Oncidium anthrocrene, an old strong-growing species, with brown and yellow flowers of moderate size; Odontioda Cooksoni venustum, a brilliant crimson form with a very attractive white apex to the lip; Cypripedium Actæus Durbar (A.M.), of great width and substance, but a trifle dumpy; and Lælio-cattleya Myrrha flavescens, pale yellow-buff and purple.

From Messrs. James Veitch and Sons, Chelsea, came the handsome Lælio-cattleya Nella (F.C.C.), a fine purple hybrid; Cypripedium Snowdon, a yellow and white hybrid in the way of C. insigne Sanderæ; and C. Clionia, a useful hybrid between C. Actæus and C. insigne Harefield Hall.

Mr. H. Alexander, orchid grower to Lieut.-Colonel Sir George Holford, Westonbirt, Tetbury, Gloucester, brought up Cypripedium Lord Wolmer Westonbirt var. (A.M.), an attractive cross between C. Leeanum and C. Euryades leonardianus; this has bright purple spots on the white dorsal sepal; the ventral sepal is especially broad, two inches across, white and green, with purple spots.

Mr. Collier, gardener to Sir Jeremiah Colman, Bart., Gatton Park, Reigate, submitted the big, bold Cypripedium insigne Gatton Park var. (A.M.), which, we understand, is the result of crossing C. insigne montanum magnificum with C. insigne Harefield Hall; it has a big, heavily spotted dorsal sepal, and Odontioda Diana Gatton Park var., very bright clear red, the odontoglossum parent in this case is O. amabile.

From Messrs Sander and Sons, St. Albans, came some bold cypripediums, the best of which was C. Royal Sovereign (F.C.C.), a handsome hybrid between C. Hera robustum and C. Martin Cahuzac; it has a huge blush white dorsal sepal, freely spotted with bright purple.

Very fine was Odontoglossum crispum Alcyone (A.M.), carrying a grand spike of fourteen large and beautiful blooms, white and blush, with a few red-brown spots on the sepals, and a cluster of red-purple dots on each petal. This was from J. Gurney Fowler, Esq., Glebelands, South Woodford.

FRUIT AND VEGETABLE COMMITTEE.

Mr. Lee Hubble, Faversham, Kent, showed a bright Pearmain-shaped apple named King George V.; and Mr. A. Hussey, Crowthorne, Berks, showed a very heavy, solid seedling apple, unnamed, that seems to possess no small merit.

National Rose Society.

The annual general meeting of this society, held at the Westminster Palace Hotel, at 3 p.m. on Thursday, December 14, was presided over by the President, the Rev. J. H. Pemberton.

There was a good attendance, and the room was well filled with well-known rosarians, which included Rev. F. Page Roberts, Rev. J. B. Shackle, Messrs. C. E. Shea, E. J. Holland, G. W. Cook, J. Collingridge, G. Gordon, V.M.H., O. G. Orpen, A. H. Darlington, A. Tate, H. Mount, J. Mattock, C. Cant, J. Jefferies, J. T. Strange, F. Cant, G. Prince, G. Paul, V.M.H., G. Prior, A. H. Brown, J. T. West, G. D. Pawle, W. Tayler, R. Pinches, and G. Burch, and Dr. Williams.

Before the report was placed before the meeting the President read a letter from Mr. E. Mawley, V.M.H., who was prevented from attendance owing to illness, as follows:

"Dear Mr. President,—I cannot tell you how disappointed I am not to be able to be with you to-day. For after attending 34 of these annual meetings of the society it has become a pleasant habit with me to look forward to the next one, as each year's end comes round. I had quite hoped and expected to have joined you this afternoon, but it has been decreed otherwise. I feel sure you will all be pleased with the society's present position, in that we have now over 5,000 members, and knowing all that that means in the interests of the rose. I well remember the time, and our President will no doubt do so as well, when for years we felt we should be perfectly happy if our membership could be only advanced to 500. I trust this meeting may be a good one, and that you will all enjoy the conversazione, which promises to be the best attended we have yet had. Do not omit to see the coloured photograph of the basket of roses sent to H.M. the Queen. Wishing you all a happy Christmas and a better rose season next year than in 1911, I am, yours sincerely, Edward Mawley."

REPORT FOR THE YEAR 1911.

We give a few extracts from the report:

The Council congratulate the members upon the continued satisfactory position of the society. For the first time in the history of the society the number of members exceeds 5,000. The membership has doubled in the last four years, and is still increasing rapidly.

The Metropolitan Exhibition was again held in the Royal Botanic Gardens in Regent's Park. It took place this year on July 7, and proved one of the largest the society has yet held. The most noteworthy feature in regard to this exhibition was that it occupied a canvas structure, with a level-boarded floor, which had originally been erected for the purposes of a large ball, so that for the first time a view of nearly the whole of the exhibition could be seen by members and other visitors to the show. This arrangement also had the great advantage of permitting a free circulation of the visitors to the show, and a close inspection of all the exhibits.

The provincial show took place at Ulverston on July 19. Unfortunately, owing to the excessively hot and dry character of the weather from the beginning of July, this exhibition proved much less extensive than usual. The arrangements were admirably carried out by a large staff of stewards, under the able direction of Mr. F. J. Harrison, hon. secretary of the North Lonsdale Rose Society.

The autumn exhibition, the eighth of the series, again took place in the Royal Horticultural Hall, Vincent Square, Westminster, and, when is borne in mind the trying character of the season for roses throughout the country, it must be regarded as having been a surprisingly good one.

On the occasion of the Coronation of His Majesty King George V., the society had the honour of presenting a basket of choice rose blooms to Her Majesty the Queen, and also to Her Majesty Queen Alexandra, which were most graciously acknowledged by their Majesties.

At a special general meeting of the society held on April 25, a number of alterations and amendments were made in the rules and bye-laws of the society, with a view to ensure a more satisfactory method of electing the officers and Council at the annual general meeting. On the same day a rose conference was held which proved an undoubted success. The President delivered an address on "Roses for the Garden," which was followed by a discussion.

During the course of the past year the following publications have been issued to the members. In March, the "Rose Annual for 1911"; in October, the 1912 edition of the "Official Catalogue of Roses"; and in November last the 1912 edition of the "Handbook on Pruning Roses." The Council again feel that they cannot too warmly express their thanks to the Publications Committee for their labours during the year.

At the last annual general meeting the Dean Hole Memorial Medal was presented to the hon. secretary of the society, Mr. Edward Mawley, for his invaluable services as hon. secretary of the National Rose Society extending over a period of thirty-three years, and for his efforts on behalf of the rose.

The Council announce with regret the death in April last of one of the society's vice-presidents, Mr. R. N. G. Baker, of Heavitree, Exeter. The Rev. Alan Cheales, another veteran and respected rose grower, has passed away from among us during the year.

During the past twelve months 886 new members joined the society. Allowing for the losses by death and resignation, the total number of members is now 5,125.

On the occasion of the jubilee of the Southampton Royal Horticultural Society, it has been decided to hold a rose show in conjunction with that society on June 26, 1912. The Metropolitan Exhibition will take place in the Royal Botanic Gardens, Regent's Park, on Tuesday, July 9. The provincial show will be held at Belfast, in connection with the Irish Rose and Floral Society, on Friday, July 19. The autumn exhibition will be held in the Royal Horticultural Hall, Vincent Square, Westminster, on Thursday, September 12.

The receipts from all sources during the past year, including a balance from the previous year of £364 12s. 10d., amounted to £3,516 13s. 6d., and the expenditure to £3,027 17s. 8d., leaving a balance at the bankers of £488 15s. 10d. after £250 had been placed to the reserve fund. The reserve fund now stands at £1,250.

Mr. G. W. Cook, the treasurer, made a few comments upon the balance-sheet, which he read, showing the differences between the 1910 and the 1911 accounts; he said the income from show receipts was considerably less than usual, due largely to the great increase of membership. Publications had not cost so much, but postages and telegrams had become a heavier item. The exhibitions cost about £1,400, or nearly half the total expenditure, and yet comparatively few members competed for or won prizes—though these latter amounted to about £800.

The President then moved the adoption of the report and financial statement, and said the society was not merely an exhibition society, but, unlike other societies dealing with a special flower, the non-exhibiting members were catered for by means of publications. He pointed out that in the coming year the society proposed to hold an extra show at Southampton, another rose conference, and to entertain the foreign rosarians who would be coming over for the great International Exhibition in May. He hoped the society would continue to progress as rapidly as in recent years. Mr. J. Jefferies seconded the motion, and said that when he joined the society there were only about 200 members.

Mr. E. J. Holland expressed the regret all felt at Mr. Mawley's absence and its cause, and suggested that a message of sympathy should be sent him. Mr. Holland pointed out that in the last six years the increase of membership was very considerable, but in 1911, though it was great, it was not so large as in 1910, but he thought this need not give rise to any doubts as to future progress. The gate money had decreased, and he thought this was due somewhat to the fact that the rose show was held too closely to the great three days' show of the R.H.S. He thought exhibitions should be the great feature of the society's work, and should be maintained in every possible way, though at the same time he did not wish the publications to suffer. Mr. Darlington thought the society did not give sufficient privileges to guinea members, such as to induce others to raise their subscriptions to that point, and he hoped something might be suggested to alter this state of affairs. He made a kindly reference to the decorative roses at the society's autumn show, and suggested these should be increased, but so arranged as to encourage all classes of members. The motion was then put and carried.

Mr. George Paul moved that an honorarium of £100 be granted to Mr. Mawley for his services during 1911; this was seconded by Mr. Cook, and carried unanimously. It was stated that the Council had granted £105 to Mr. Mawley as a token of love and respect, to meet heavy expenses incurred by the severe operation he had recently undergone. Mr. Cook said that he believed in the earlier years of the society's work Mr. Mawley could not have spent less than £1,500 in cash from his own pocket to further the interests of the society. The meeting signified thorough approval of the Council's action, and considered they were only in some measure repaying the debt owing to Mr. Mawley.

NEW BYE-LAW.

Mr. C. E. Shea briefly proposed the following bye-law which, he said, was based on the experience of the council and of those who had formed the International schedule: "By the word Nurseryman is understood a person who maintains a garden, or other horticultural establishment, for the purpose of gaining a livelihood, and who intends it to return him an annual profit. By the word Amateur is understood a person who maintains a garden with a view to his own use and enjoyment, and not for the purpose of gaining a livelihood. The fact of his occasionally disposing of surplus produce, or new varieties, for money, does not change him into a nurseryman, unless the whole maintenance of the garden is intended to return him an annual profit; but no person shall be allowed to compete as an amateur who sells rose plants (except when giving up possession of the place where they grow, and in the case of new seedlings or sports), rose blooms or buds for budding. No lady may exhibit as a lady amateur who is either engaged in the floral or horticultural trade or as a paid gardener herself, or is a resident member of the family of one engaged in such trade or employment. To exhibit in the ladies' artistic classes a lady must either be a subscriber to the society, or else a member of the family, and of the household, of a subscriber. Any objection raised as to the rightful qualification of an exhibitor shall be referred to the council for arbitration, and their decision shall be final and binding on all parties."

Mr. Darlington seconded the motion, and said the new bye-law was for the purpose of more strictly defining the amateur member.

The President added a few explanatory words, and Mr. Christy asked whether, in the case of a club possessing a club garden, and selling blooms to its members, would such members be ineligible to compete as amateurs, because, virtually, they were sellers, through the club manager. The President thought they would be eligible, but said such a matter needed consideration in committee. Mr. Shackle suggested that the second and third sentences allowed an amateur a very large amount of latitude, and were thus not sufficiently safeguarding the nurserymen. The President pointed out that the whole by-law applied only to people who competed or exhibited and did not otherwise define an amateur. After a few other remarks the motion was put, and carried.

Mr. Colin Romaine moved thanks to officers and council in a few appropriate remarks, and this was unanimously accorded. The President said the house list of officers and council was elected, and requested that Mr. C. W. Edwards' name, inadvertently omitted, should be added, and this was allowed without dissent.

The meeting then unanimously forwarded the following telegram to Mr. Mawley: "Members National Rose Society greatly regret your first absence from annual meeting for thirty-five years, and send hearty greetings and best wishes for your early and complete restoration to health.—President."

The Rev. F. Page Roberts humorously moved a vote of thanks to the president, which was heartily accorded, and briefly responded to, and the meeting then closed.

CONVERSAZIONE.

At the conclusion of the annual meeting the members took part in the conversazione, which is now a recognised part of proceedings. The function was again a success, and most enjoyable.

North of England Horticultural Society.

DECEMBER 13.

At a well-attended meeting of the above society, Major J. W. Dent (chairman of the Yorks Agricultural Committee and chairman of the N.E.H.S.) in the chair, papers were read on "Compensation for the Destruction of Diseased Plant Stock" by Dr. Burtt, York (British Botanical Association); Mr. W. F. Emptage, and Mr. J. Smith, F.L.S., Durham.

The first speaker was Dr. Burtt, who submitted to the Conference the following resolution:

"That this Conference views with concern the persistent increase in this country of the pests American blight of Woolly Aphis (Schizoneura lanigera) and Currant Big Bud Mite, or Black Currant Gall Mite (Eriophyes [Phytoptus] ribis), both causing dangerous and contagious diseases of plants, and urgently requests the Board of Agriculture and Fisheries to place them on the schedule under the Destructive Insects and Pests Acts 1877 and 1907."

During the past nine months he said they had all caught up much of the enthusiasm of the secretary and had already studied the text of Professor R. A. Harper Gray's instructive lecture on these pests. It was not therefore necessary to take up their time with an account of the life-histories of woolly aphis and currant big bud mite, or even to dwell upon their present wide distribution. Sufficient to know that in adopting the resolution they were at least making an endeavour to set the machinery in motion which is designed for the purpose of eradicating these dangerous insects from our country.

This should be the result, at any rate, in theory; but how about the practical results, assuming that the request is complied with?

We have our Destructive Insects Act of 1877 (the first recorded instance of legislation against specific plant diseases). We have the supplementary Act of 1907. We have orders and regulations from time to time of the Board of Agriculture and Fisheries, and yet we have with us still to a varying extent such old enemies as: The large larch sawfly (Cumberland, 1904) (not given as a scheduled pest in Board of Agriculture Leaflet 155), black scab, or potato canker (Synchytrium endobioticum), tomato leaf-spot, American gooseberry mildew, and others.

It may not be out of place to consider for a moment what are the causes which tend to prevent the successful combating of plant diseases.

A word in regard to the question of compensation is necessary. This, you may perhaps be aware, formed the subject of a letter to the secretary some months ago, and it may be that to some extent the idea of the present Conference was suggested by that letter.

Turning to the legislation on the question, Dr. Burtt said it would be found in Article 3 of the Destructive Insects Act, 1877, that where the Privy Council may by order direct or authorise the removal or destruction of any crop, they may direct or authorise the payment by the local authority of compensation, and the local authority shall pay the same, subject to certain provisions as to amount, etc. This article is endorsed in the Destructive Insects and Pests Act, 1907, with the proviso, that the Board of Agriculture and Fisheries shall not make an order for compensation unless the local authority consent to make the payment.

These may be tabulated as follows:

I.—Ineffectual legislation.

II.—Want of accurate knowledge of plant pathology.

III.—Indifference.

In the first category may be mentioned:

(a) The absence of statutory ports of entry for imported plants, etc., with compulsory inspection and fumigating stations connected therewith.

(b) The delegation of duties under the Acts above mentioned to local authorities under the Diseases of Animals Act, 1894.

(c) An uncertain scheme of compensation—the question of compensation being at the discretion of the local authority.

(d) Absence of compulsory and periodic inspection of growing stocks by expert officials.

Dr. Burtt described at some length what is being done in Canada and the United States in combating plant diseases and injurious insects, and suggested that in this country the delegation of duties under the Destructive Insects and Pests Acts, 1877 and 1907, to local authorities acting under the Diseases of Animals Act, 1894, might with advantage be altered to the extent of appointing a staff of horticultural inspectors with powers similar to those obtaining in Canada.

After instituting a number of inquiries in various parts of the country, we had not, he stated, been able to discover from the replies so far sent in either that an order has yet been made for compulsory destruction—(with one exception where destruction by order of the local authority resulted in "quite unimportant" loss), or that compensation had yet been granted.

On the other hand he had met with an instance (previous to the issue of the American Gooseberry Mildew Order of September, 1911) where, after inspection by an officer of the Board of Agriculture, followed by the voluntary destruction of stock to the value of over £150, no compensation could be claimed, the Board declining responsibility.

He suggested that the eradication of some of the most dangerous and destructive insect and fungus pests, some of which have long resisted the individual efforts made against them, would be hastened if compulsory destruction, accompanied by a fair and certain compensation, were more generally adopted.

In making this suggestion he did not wish to underestimate the value of the efforts which many nursery firms and private growers are making to combat disease. He could, however, endorse the opinion which obtains, he believed, in the trade, that legislation against disease is not needed. Experience tends to show that individual efforts, stimulated as they doubtless are by the thought of maintaining a great and well-deserved reputation, are frequently rendered of no avail, and that the only certain cure lies in the direction of effective legislation.

Mr. Emptage stated the commercial aspect of the case. He pointed out that in our Colonies and elsewhere, the fumigation of general nursery stock was compulsory, also the destruction of affected fruit. Generally speaking, wholsale compulsory destruction could not be practically carried out—spraying should, however, be made compulsory, and would prevent, check, and limit the spread of disease.

Mr. J. Smith advocated the inspection of markets. Packing materials, greengrocers' refuse, cork dust, and refuse from docks should be burnt, and not allowed to go on to manure heaps, etc., and spread disease up and down the country. The Ipswich Natural History Museum has a rich collection of insect life, collected from such sources. Much good could undoubtedly be done in instructing the public in good cultural methods, thereby lessening the spread of disease.

Mr. W. Cuthbertson, of Messrs. Dobbie and Co., Edinburgh, stated that the export of potatoes to Australia was at present an impossibility owing to the refusal of the Board of Agriculture to grant clean bills of health to exporters. Any compensation should come from Imperial sources. He recommended the self-denying ordinance of the Government of South Africa in placing the work of the agricultural authorities outside party politics for three pears. In England a similar resolution would enable much practical progress to be made. He advocated the establishment of a research station in the North of England—conditions of climate, etc., demanded such a station.

Professor Seton (Leeds University) pointed out the need for inspection at our entry ports of both stocks for fruit trees and also fruits.

After further discussion Major Dent laid stress on the necessity for only destroying diseased stock, and that compensation for diseased stock alone should be given and paid for out of the Imperial Exchequer. In agriculture the principle adopted was to compensate a man for stock apparently healthy but infected by accident or misfortune by contact with diseased stock.

The Chairman then put the following resolution, which was carried unanimously: "That this Conference urges upon the Board of Agriculture and Fisheries the urgent necessity (1) of a staff of trained horticulturists as inspectors to carry out the provisions of the injurious insects and pests orders; (2) of more stringent precautions against the entry of diseased plants, fruits, and vegetables, and packing materials used for same, at our ports; (3) of the establishment of a station for horticultural research in the North of England and other parts of the country."

Scottish Horticultural Association.

The December meeting of this association was held in the Goold Hall, 5, St. Andrew Square, Edinburgh, on the 5th inst. Mr. Massie, the president, was in the chair, and there was an attendance of 120 members.

Mr. Thos. Anderson, M.A., B.Sc., Edinburgh and East of Scotland College of Agriculture, delivered a lecture, illustrated by lantern slides, on "Insects and Flower Pollination." It proved of great interest, and on the motion of the Chairman, the lecturer received a very cordial vote of thanks.

The exhibits included new single chrysanthemums Miss Callander, a creamy white (awarded First-class Certificate), Mrs. G. F. Eyre and Miss E. L. Cowan (awarded Certificates of Merit), and Mrs. R. C. Cowan, from Mr. W. G. Pirie, Dalhousie Castle, Midlothian; new single chrysanthemums Lady Helen and unnamed seedling, from Mr. D. McLean, Raith, Kirkcaldy; Chrysanthemum Felton's Favourite, from Mr. James Bruce, Davidson's Mains, Midlothian; chrysanthemums and Christmas roses from Mr. Chas. Comfort, Broomfield, Davidson's Mains; and collection of chrysanthemums from City of Edinburgh Distress Committee's farm at Murieston, Mid-Calder, per Mr. Cairns.

Captain Stirling of Keir, Dunblane, was nominated as honorary president for 1912, in succession to Sir John Gilmour, Bart.; and Mr. Massie was nominated for re-election as president. Messrs. J. Phillips and D. W. Thomson were nominated for the two vacancies in the vice-presidencies, and there were eleven nominations for the seven vacancies in the council. The annual business meeting will be held on January 16 next, when the office-bearers will be elected, and the revised constitution and bye-laws will be submitted for adoption.

Mr. King, the Convener of the Finance Committee, stated that there was a balance of income over expenditure of approximately £25 on the chrysanthemum show, notwithstanding the very bad weather which was experienced on the first and second days. It was agreed to hold a three days' show in 1912, the dates to be November 14, 15, and 16.

On the invitation of the Honorary President-elect, it was agreed that the annual excursion in 1912 be to Keir, and Captain Stirling was very cordially thanked for his kind invitation.

Royal Scottish Arboricultural Society.

FORECAST OF SCOTTISH FORESTRY COMMITTEE'S RECOMMENDATIONS.

The annual general meeting of the Aberdeen Branch of this Society was held in the Botany Classroom, Aberdeen University, with Mr. Sydney J. Gammell, of Drumtochty and Countesswells, in the chair.

In moving the adoption of the treasurer's report, the Chairman said the branch could congratulate itself on its satisfactory financial position. They started the year with a credit balance of £20 11s., and finished with a balance of £13 10s. 10d. They had to consider that, not only had the ordinary expenses been met, but that also a grant of £10 had been made to the branch library. The report, duly seconded by Mr. C. S. France, Aberdeen, was unanimously adopted.

The meeting then proceeded to elect office-bearers for the coming year. The Chairman asked the meeting to allow him to retire from the position he had occupied for the past three years. He felt that the honours should go round, but if he had a chance of occupying the chair again at some future time he would be only too pleased to do so. He begged to propose as his successor Mr. Alexander Forbes Irvine, of Drum. This was seconded, and heartily agreed to. Mr. Irvine, who is a very popular landed proprietor in Aberdeenshire, then took the chair, and thanked the meeting for the honour conferred on him. Sir John Fleming, of Dalmuinzie; Mr. John Michie, M.V.O., factor to the King on the Balmoral Estates; Dr. James W. H. Trail, professor of botany in Aberdeen University; and Mr. Gammell, the retiring president, were appointed vice-presidents of the branch. Thereafter a large and representative committee, comprising landed proprietors, factors, and foresters, was appointed. Mr. G. D. Massie, solicitor, 147, Union Street, Aberdeen, was cordially re-elected secretary and treasurer.

Sir John Fleming, in proposing a vote of thanks to Mr. Gammell for his services as president of the branch during the past three years, remarked that during the long time he had been a member of the society he had come into contact with all sorts of forestry experts, but he found Mr. Gammell had a greater knowledge of forestry than almost any other man he had come across. His estate was a model, as he happened to know, being one of the Forestry Commission that had been lately tramping throughout Scotland in this connection. Sir John's remarks were heartily endorsed by the meeting.

SCOTTISH FORESTRY.

This part of the proceedings over, the meeting settled down to hear an address by the Right Hon. Robert Farquharson, of Finzean, Aberdeenshire, on "The Past, Present, and Future of Forestry." The genial Doctor opened his address by saying that it was quite evident forestry was at this moment much in view. There had been a great deal of attention directed to it lately. There had been debates in Parliament, and debates before their own association. They had got a lectureship in this subject in Aberdeen University now, and it was hoped that in the not very distant future they might see a chair of forestry established in Aberdeen University. This would enable the whole subject of forestry to be brought definitely to the front by the establishment of a definite professional chair. A deputation that waited upon the Chancellor of the Exchequer not very long ago had made a very strong impression on the mind of the Chancellor, and that gentleman had shown by his sympathetic attitude that he was quite aware of the great importance of the subject of forestry. The Chancellor had pointed out that there was a very general agreement that some steps should be taken in afforesting the waste lands of the country. They were behind every civilised country in the world, and, declared Dr. Farquharson, he felt sure all there would agree with him when he said that this country of ours could grow better trees than could be grown abroad. The Chancellor had announced what he called a Development Grant. It began with the comparatively small sum of £200,000 annually for purposes of agricultural education, the development of forestry, and a large number of really important matters connected with agriculture. He thought it was quite evident from what the Chancellor had said, that the time had come when something had to be done. Our best authorities tell us that the outlook is serious, and that in twenty-five years we will be face to face with a timber famine. They imported £30,000,000 worth of timber per annum, and he thought it was really time they should try to produce some of that wood at home. They knew perfectly well that when they planted wood they had to wait 80 or 100 years for their return. Landlords had been accused of being niggardly in not planting woods enough in the past. He was not defending his own class from that accusation, but there were extenuating circumstances. The most extenuating circumstance of all was the chronic impecuniosity of the landlord class.

After all, they must remember that wood to be profitable now would require to have been planted 70 or 80 years ago. He pretty well remembered the conditions of 50 years ago. The landlord would not plant simply because there was no market then, and foreign wood was coming in in overwhelming cataracts. He remembered, too, the larch disease. Nobody ventured to plant larch 30 years ago. It was simply considered waste of time and money, so deadly was the disease. They planted wood, and what was the return? Three per cent.; and they had to wait eighty years for that! Was that good enough? Any landlord who planted at that time under all these drawbacks and difficulties ought to have his name enshrined in imperishable memory by the State.

Dr. Farquharson then proceeded to deal with the many pests which had to be contended with in growing trees. He remembered forty years ago there was not a single squirrel in Aberdeenshire. Things have greatly altered since, and he would have the squirrel exterminated altogether. Rabbits, too, were one of the greatest curses the forester had. Then came black game, roe deer, and, in the winter time, red deer. They had, also, parasitic disease to contend with.

FORESTRY AND UNEMPLOYMENT.

There had been a good deal of talk about the great advantage of forestry in the relief of unemployment. He was no great believer in getting the tag-rag and bobtail to help in forestry. It needed skilled labour, and he would have the small holders and crofters given employment in their slack seasons. That was the real way in which he thought forestry might be of service to the rural community. What about the State and forestry? He was not much of a believer in State interference. He thought private endeavour would be much better than attempts by the State. State aid meant State control, and fussy interference. The State might help in cases where the landed proprietor could not, or would not, have anything to do with it. The lecturer then proceeded to point out some of the drawbacks of the landed proprietors. Their system of rating was very much against planting, and he would have forestry relieved from local taxation.

An animated discussion followed Dr. Farquharson's address, in which Sir John Fleming, who is a member of the Departmental Committee on the Afforestation of Scotland, joined. Sir John said that, no doubt afforestation was in the air. When a question came to be a public question, as this had, they might be very certain that it was only a matter of a very short time until something practical resulted. Referring to the pending report of the Departmental Committee, he said it was a pity it had not been placed before the public ere now. In this report they had touched upon most of the matters discussed at that meeting, and they had made suggestions which he hoped would lead to a very great amelioration in regard to forestry. The report would shortly be out, and he was sure they would all be pleased with it. Dr. Farquharson seemed to think that the State should not tackle the subject of afforestation. That was very much what the report would say. They had recommended that all sorts of encouragements should be given to the private owner to go in for afforestation. At the same time, he thought there was a misconception abroad. It was not the case that forests were specially taxed. They were only taxed at the price of pasture land. The report made recommendations that would make it even easier than in the past in matters of that kind. Dr. Farquharson must be aware that, although State forestry might not be feasible here, it prevailed very largely in other countries. In Russia a very large proportion of the forests were under the State. They were treated on a proper system, put up by auction at upset price in blocks every year, and were well conserved and looked after.

Very cordial votes of thanks to all who had contributed closed a very instructive meeting.

Bristol Gardeners' Association.

A largely-attended monthly meeting was held at St. John's Parish Rooms, presided over by Dr. Shingleton Smith. The society having suffered a severe loss by the death of Mr. Francis Tagart, F.L.S., a vote of condolence and sympathy was passed to his family. The loss of Mr. Tagart is keenly felt, as he was a real friend to Bristol gardeners; he died in his 94th year.

Mr. Horne, of Cardiff, read a paper on "Winter-flowering Begonias," and gave a full description of the best varieties and the best way to grow them. The lecturer specially recommended the new hybrids, and said these would take the place of the Lorraine group before long. The best and easiest way of propagation is by leaf cuttings, which give the strongest and most bushy plants. Mr. Horne brought flowers of about twenty varieties, chiefly of the new hybrids.

For two dishes of apples Messrs. Scott, Springham, and T. Clarke won in the order given. Messrs. Springham and Jennings were awarded five points each in the point competition.

FORTHCOMING ENGAGEMENTS.

MONDAY, December 25.—Christmas Day.
TUESDAY, December 26.—Bank Holiday.
THURSDAY, December 28. — National Horticultural Society of France.
Manchester and North of England Orchid Society.

If in doubt as to Christmas and New Year gifts, send a postcard to Publisher, 148-9, Aldersgate Street, London, for the new complete Catalogue of Gardening Books. There is no more acceptable gift than a good book on some phase of Horticulture.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

CYPRIPEDIUM SAUNDERSIANUM. — L. G. W., Manchester: This hybrid is rarely found in cultivation, and it belongs to the group, or genus, known now as Phragmopedilum. It was raised at Enfield by Mr. Marshall, and appeared in 1886. If we remember rightly, the hybrid was distributed by Mr. Wm. Bull, of Chelsea. The parents are C. caudatum and C. Schlimi, the former being the seed-bearer. Doubtless it would do well under the same conditions as C. Sedeni, C. Schröderæ, C. conchiferum, and C. cardinale.

LAYERING ANDROSACE SARMENTOSA. —E. F. C., Newbury: A good plan is to place some gritty soil around the parent plant when the runner-like growths are being produced, and instead of pegging these latter down, place a stone on each stem.

CERTIFICATED CHRYSANTHEMUMS.— B. B., Newark: The three chrysanthemums you mention—Mrs. H. Weeks, Major Bonaffon, and Mons. Chenon de Léche—all received official recognition from the National Chrysanthemum Society's Floral Committee at a meeting held at the Royal Aquarium, Westminster, on Monday, November 11, 1895—sixteen years ago. The exhibitors were, respectively, Mr. H. Weeks, Thrumpton Hall, Derby; Mr. W. Mease, Downside, Leatherhead; and Mr. W. Wells, now of Merstham. The varieties are now seldom seen on the show board.

DIE-BACK IN GOOSEBERRIES.—S. H., Bath: "Die-back" is caused by a fungus that can hibernate in the host in the form of mycelium, or on the surface by means of sclerotia. The best means of getting rid of the disease are the prompt removal and burning of all dead bushes or dead branches in a plantation. As soon as the leaves of bushes show whitened margins, the bushes in the plantation generally should be examined, and any bush found with the main stem diseased should be grubbed up and burned. The prompt removal and burning of all dead (or dying) bushes, carried out for a few seasons, has proved more efficacious against this disease than spraying. It must not be forgotten that this fungus is capable of developing vigorously on dead parts of the bush. In nearly all cases—except in the comparatively rare ones where a plantation has been planted up with Botrytis-infested young bushes—the disease appears first either on single bushes scattered here and there through the plantation, or on all the bushes over a small patch of ground in the plantation, while the surrounding bushes are healthy. If the disease on its first appearance is dealt with summarily by the burning of all dead bushes and dead branches, there is no need to spray or to take any other remedial measure, since the disease soon completely disappears. Where the disease has been allowed to become severe and widespread, or where it is not in the power of the grower to remove entirely the source of the disease, spraying must be resorted to—in addition, of course, to the prompt burning of all dead bushes. A heavy spraying with a solution of copper sulphate (4lb. dissolved in 100 gallons of water) should be given just before the buds burst, with the object of destroying the tufts of Botrytis, care being taken to spray heavily the main stems of the bushes. The infection or premature falling off of the leaves may be prevented by spraying, directly the fruit is set, with Bordeaux mixture composed of 8lb. copper sulphate, 8lb. quicklime, and 100 gallons of water. In this spraying it is essential that the under-surface of the leaves should be sprayed as much as possible. No injury follows the application of Bordeaux mixture of this strength, and if the spraying be done at the time indicated, no spotting of the berries occurs. It may be noted finally, that any treatment which induces the bushes to make vigorous growth tends to stop the attacks of the fungus.

WINTER CUCUMBERS. — J. D. A., Epsom: The minimum night temperature should be 60 degrees, and there ought not to be any difficulty in maintaining this if the heating apparatus is ample, without producing that stuffiness in the atmosphere that results from few hot-water pipes and excessive forcing. Top-dressings should be given sparingly during the winter, as it is far better to allow a few roots to show through the soil than overload the border with rich material that cannot be readily assimilated at this season of the year. Liquid manure should also be given sparingly; it should be the colour of pale ale or weak tea, and be strained through a cloth before use, as then it will not clog the surface soil.

HYBRID GLADIOLI.—N. S., Chippenham: The strong likeness that exists between the Childsi and Nanceianus groups of gladioli is easily accounted for. M. Lemoine secured a race by crossing G. Saundersi with robust varieties of G. Lemoinei, and distributed it under the name of G. Nanceianus. Herr Max Leichtlin crossed G. Saundersi with a variety of G. Gandavensis at an even earlier date, and the resulting seedlings, after coming into the hands of a French firm, passed on to Messrs. Hallock, of New York, and from them, by purchase, to Mr. Childs. During this period a great deal of improvement had been obtained by selection, but none of the varieties had been distributed, consequently Mr. Childs put this race on the market as G. Childsi.

YELLOW-STEMMED WILLOW.—M. E., Chichester: The yellow-stemmed or yellow-barked willow (Salix vitellina), is a fine subject for the margin of a lake, stream, or island, and is of especial value for the colour effect it produces during winter. It must have abundance of moisture, and a mulching with manure or pond mud will materially assist it. To obtain the best colour effects, it is desirable to prune the plants hard back, quite near the ground, each early spring. The result is the production of strong, tall wands with clean, bright bark, that, after the fall of the leaf, shines brightly in the winter sunlight. If space permits, a good colony should be planted, as then the colour effect is the more striking.

RIHA'S CORELESS PEAR.—A correspondent (M. W., Huntingdon) writes asking whether any of our readers have ever grown Riha's Coreless Pear: and, if so, with what results. He also asks for information concerning its parentage. We cannot at the moment lay our hands upon information concerning the origin of this coreless pear, but if memory serves us rightly, it was distri-

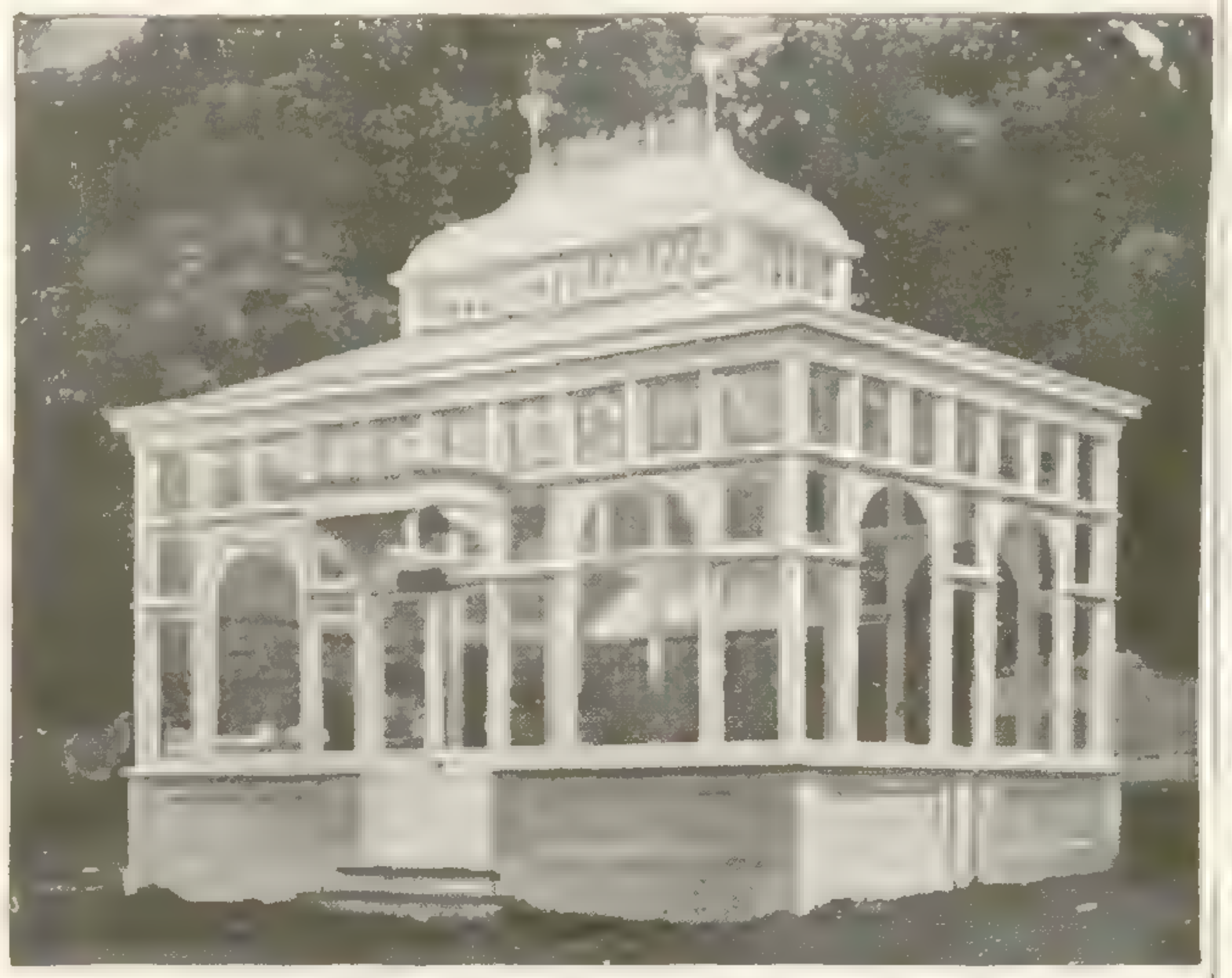
The only resemblance between a Pine Spray Syringe and others is in the shape of the barrel. The metal is more substantial. For the rest, the combination spraying head renders Spray, Rose, and Bend instantly obtainable without the addition or removal of a single fitment, while the adjustable leather bucket plunger gives perfect suction, never allows water to escape past it and up your sleeve, and wears interminably.

A written request from your ironmonger or seedsman, and a Syringe will be sent in 24 hours for your approval. Price 10/6. Sole proprietors and manufacturers, Robinson Bros., Ltd., West Bromwich.

PINE SPRAY SYRINGE (patent).

BOULTON & PAUL, LTD., HORTICULTURAL BUILDERS, Norwich.

ATTRACTIVE, PRACTICAL GLASSHOUSES.

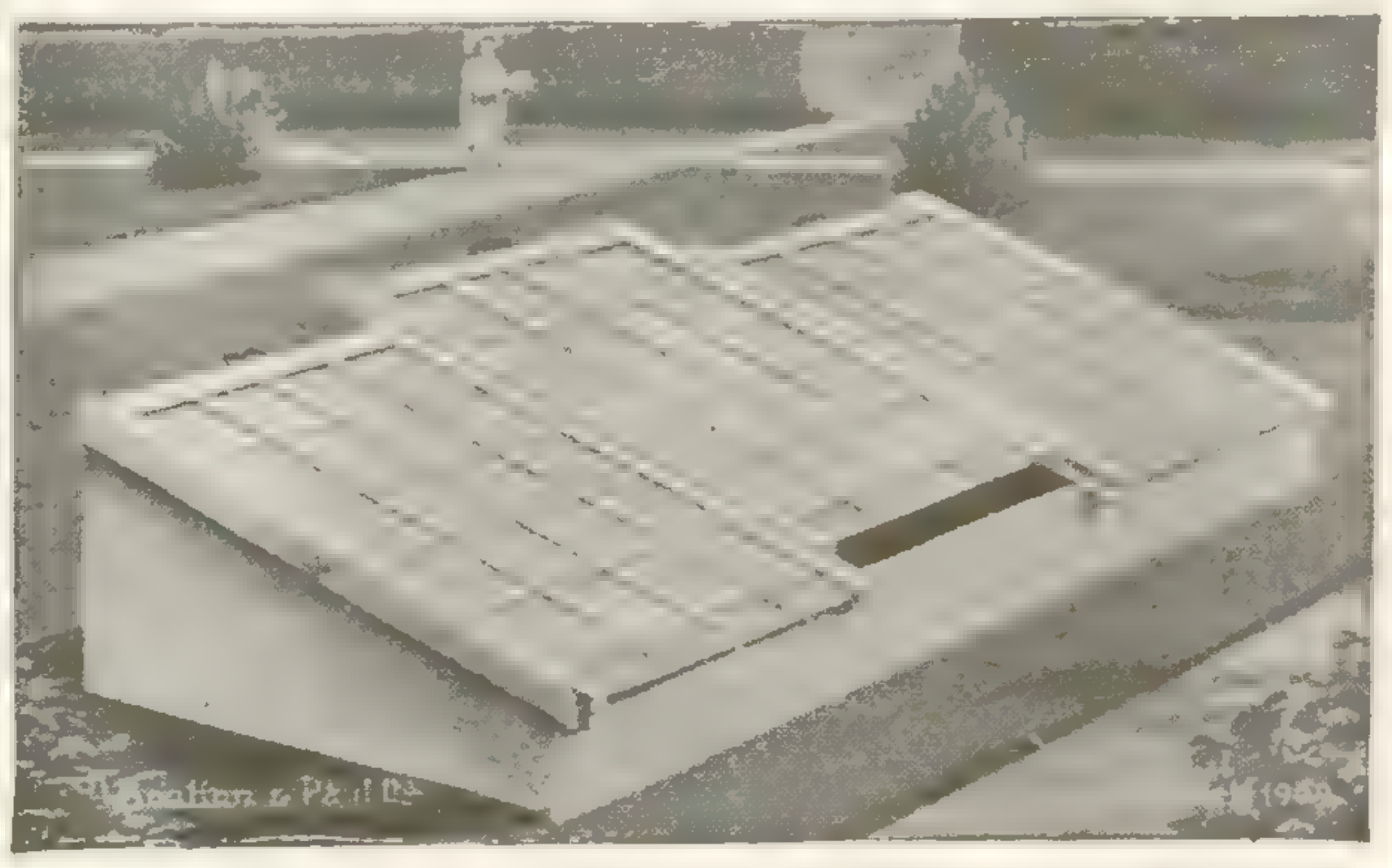


Ladies and Gentlemen waited upon by appointment.

CARRIAGE PAID on orders of **40/-** value to most Goods Stations in England.

HEATING APPARATUS installed in COUNTRY HOUSES, HORTICULTURAL & PUBLIC BUILDINGS.

No. 75.—MELON and CUCUMBER FRAME.

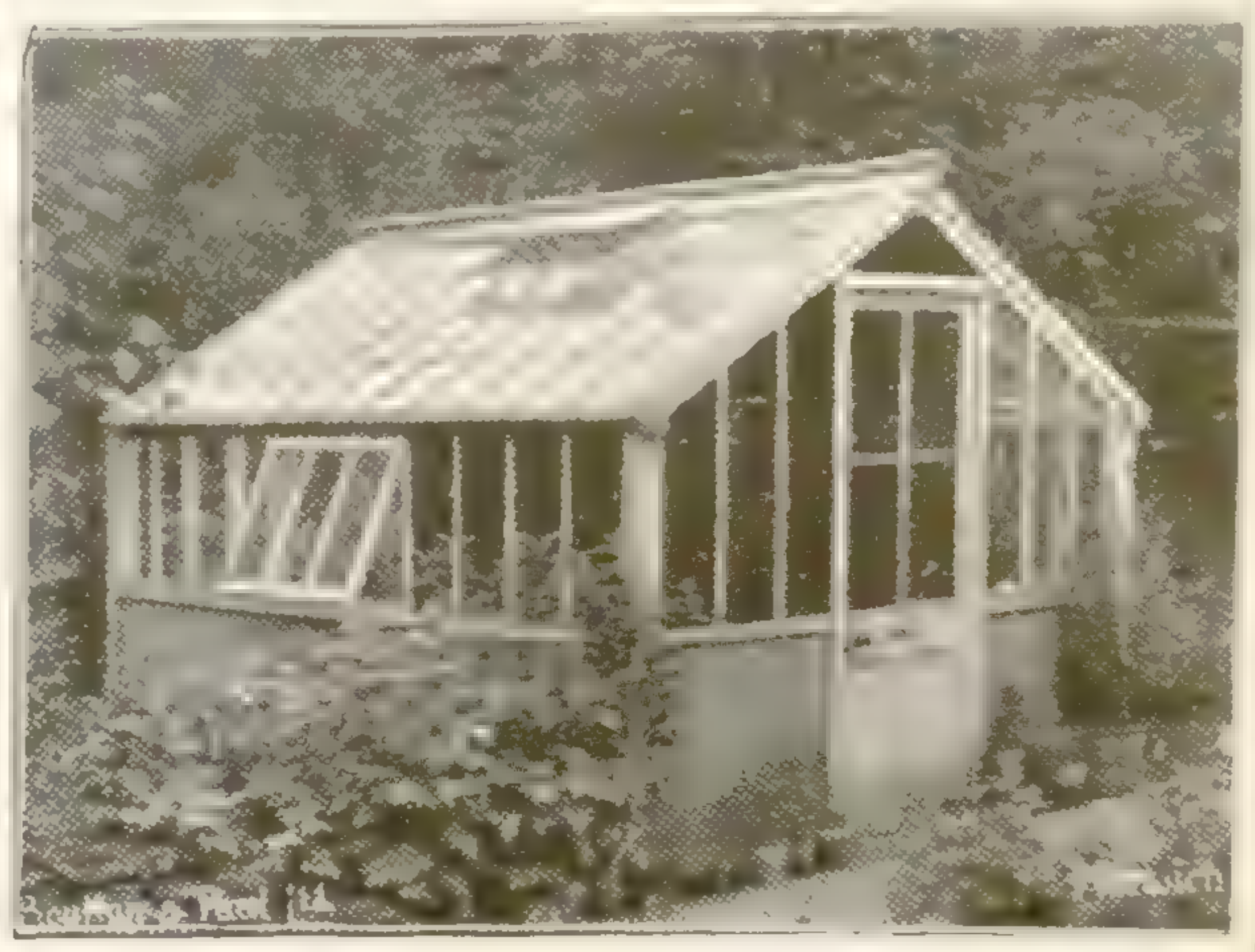


4ft. by 6ft. .. £2 0 0 | 8ft. by 6ft. ... 3 0 0
Painted three coats. Glazed with 21oz. glass.

No. 77.—VIOLET FRAME, 6ft. by 4ft. Similar to No. 75, with Two Lights... **35/-**

SEND FOR ILLUSTRATED CATALOGUES.

Every part of these Houses is thoroughly well made, painted three coats. GLAZED AT OUR WORKS WITH 21oz. GLASS and CARRIAGE PAID.



No. 49A.—Span, 10ft. by 7ft. £11 10 0
No. 47A.—Lean-to, 10ft. by 7ft. £9 10 0

All parts are numbered ready for easy re-erection by any handy man.

buted about fifteen years ago, and we fancy Herr Leon Spathe was concerned in its distribution. Perhaps some of our readers can help us in this matter.

NAMES OF PLANTS.

Under this heading we can only undertake to name species and well-marked varieties of plants, and not florists' flowers. Specimens should be packed in stout boxes with damp (not wet) moss, or some leaves, as packing material, to ensure their reaching us in a fresh state. It is essential that flowers must accompany specimens of flowering plants, that fern fronds be fertile, and that numbers be firmly attached to the specimens so that they can be seen without any untying. We cannot promise to name more than six specimens at one time from any one correspondent.

N. W., Bristol.—Ipomœa Horsfalliæ.

T. A. L., Ripon.—Masdevallia Tovarensis.

M. E., Chichester.—The Yellow-barked Willow, Salix vitellina.

F. E. G., Worcester.—1, Chimonanthus fragrans; 2, Callicarpa purpurea.

C. N. F., Esher.—1, Cypripedium Hera Euryades; 2, C. Actæus; 3, Oncidium varicosum Rogersi.

P. P., Chelmsford.—1, Juniperus Sabina; 2, Cupressus macrocarpa; 3, C. torulosa; 4. C. Lawsoniana albo-spica.

NAMES OF FRUITS.

When sending fruits for naming, will our readers be good enough to send good specimens, as without these it is not possible to accurately determine the varieties. Pack firmly, using light tin or wood boxes, and send not more than six varieties at once. Label each specimen and enclose letter with the fruit, whether a separate letter is sent or not. Address the packages to the Editor, GARDENERS' MAGAZINE, as advised in the notice at the head of "Answers to Correspondents."

D. V. B., Grantham.—1, Golden Noble; 2. New Hawthornden.

S. J., Hereford.—1, Vicar of Winkfield; 2. Catillac; 3, Warner's King.

C. L., Isle of Wight.—1, Newton Wonder; 2, Dumelow's Seedling; 3, Golden Russet; 4, not recognised; 5, Glou Morceau.

F. L. G., Cheltenham.—Probably Baumann's Red Winter Reinette, but the specimen was not a good one for identification.

OBITUARY.

◆

MRS. STEPHEN WALKER.

We learn with regret of the death, a few days ago, of Mrs. Stephen Walker, widow of the late Mr. Stephen Walker, of the firm of John Walker, Thame, Oxon. Mrs. S. Walker was in her 68th year.

BULBS.—A practical treatise on the cultivation of hardy, hothouse and greenhouse bulbous and tuberous rooted plants is "BULBS AND THEIR CULTIVATION," by T. W. Sanders, price 2s. 6d. net, or by post 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1911. DECEMBER 10 TO DECEMBER 16.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Dec. 10—Sunday	—	46	45	49	37
,, 11—Monday	4 54	42	39	46	43
,, 12—Tuesday......	2 54	42	41	50	36
,, 13—Wednesday..	0 18	45	42	49	42
,, 14—Thursday....	4 42	41	41	50	41
,, 15—Friday........	0 6	48	47	49	44
,, 16—Saturday.....	—	43	42	53	40
Means	(total) 12 54	44	42	49	40

DATE. 1911. DECEMBER 10 TO DECEMBER 16.	RAIN.	TEMPERATURE OF THE SOIL AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg
Dec. 10—Sunday	0·72	40	41	46	27
,, 11—Monday	0·01	42	42	46	36
,, 12—Tuesday......	trace	40	42	46	27
,, 13—Wednesday..	0·52	41	42	45	28
,, 14—Thursday....	0·52	42	42	45	32
,, 15—Friday........	0·02	43	43	45	34
,, 16—Saturday....	0·02	41	43	45	27
Means	(total) 1·81	41	42	45	30

CONTENTS.

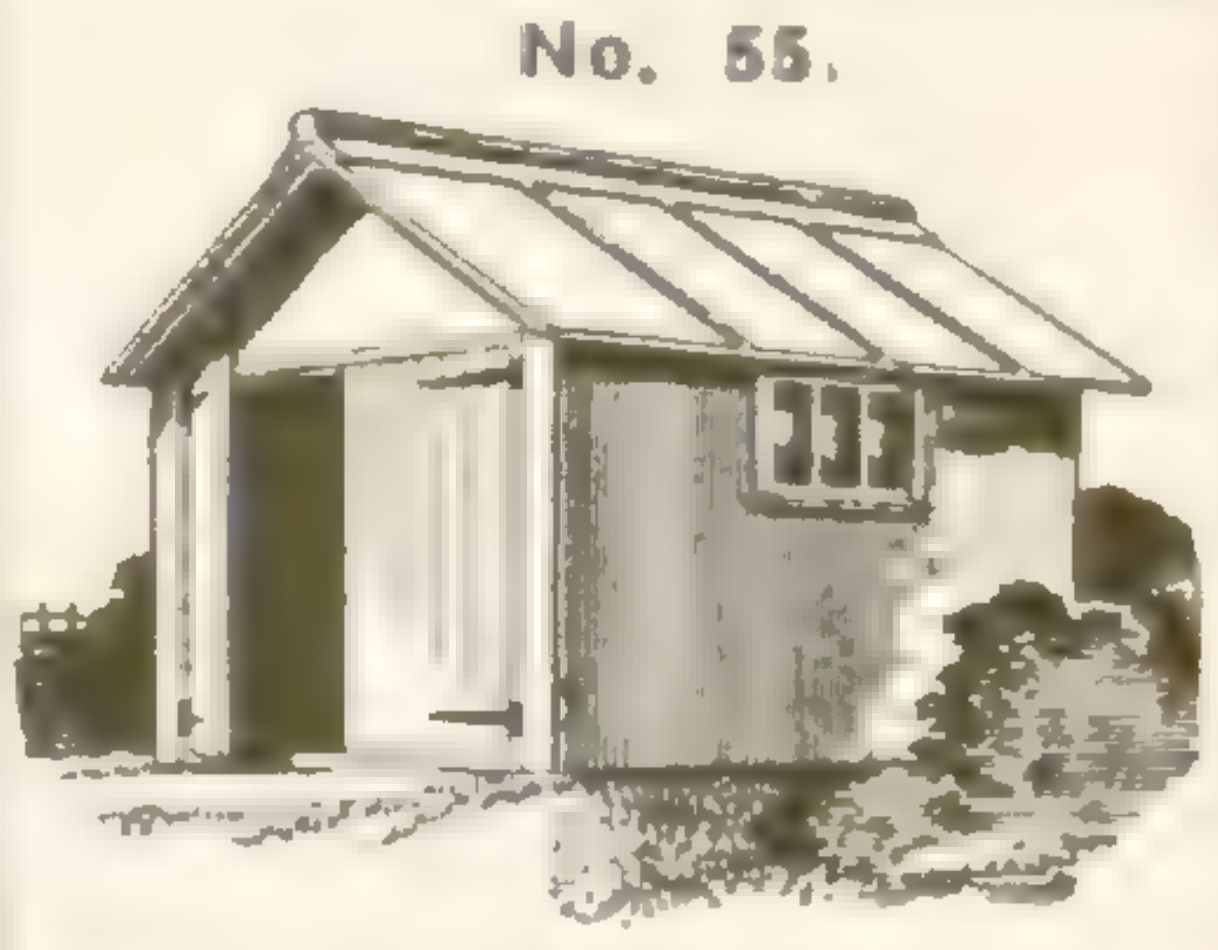
PAGE
Answers to Correspondents 966
Apple Annie Elizabeth 960
Blechnum Spicant 960
Climbing Roses 953
Clipped Trees at Condover Hall 961
Exhibitions and Meetings 963
Greenhouse Jasmines 960
Hydrangeas 959
Naturally-grown Chrysanthemums 955
Note of the Week 951
Packing Sweet Peas for Exhibition 954
Red Berries at Christmas 954
Rose Grouping for Colour 953
Soil Sterilisation 961
Trees and Shrubs with Ornamental Fruits ... 956
Tree Ivies 957
Where Rock and Water Meet 958
Work for the Week 962

ILLUSTRATIONS.

Portrait, Mr. Montagu C. Allwood, 951; Chrysanthemum Mrs. Hubert Williams, 955; Chrysanthemum Merstham Jewel, 956; A Specimen of the Tree Form of the Irish Ivy at Kew, 957; A Charming View in an East Anglian Rock Garden, 958; Specimen Hydrangeas, 959; Apple Annie Elizabeth, 960; Clipped Specimens and Hedges of Yew at Condover Hall, Shrewsbury, 961

PORTABLE BUILDING WITH DOUBLE DOORS.

No. 55.



Copyright Registered.

Made in complete sections, **best quality Red Deal** (not inferior Foreign Match Boards as other makers), planed and **V** jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Doors fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

SIZES.		STRONG FLOOR.
7ft. long, 5ft. wide, 7ft. 6in. high	£2 3 6	6/9
8ft. long, 6ft. wide, 8ft. high	2 14 0	8/9
9ft. long, 7ft. wide, 8ft. high	3 2 6	11/6
10ft. long, 8ft. wide, 8ft. 4in. high	3 12 6	19/0

Suitable for Workshops, Motor Cycle, Bath Chair, & Store Houses, Potting & Tool Sheds, etc.

Carriage Paid to any Station in England and Wales.

Catalogue, with Testimonials, Post Free.

J. T. HOBSON & Co.

Largest Makers of Portable Buildings,

ESTABLISHED [illegible] YEARS **BEDFORD.**

Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

CHARGES FOR ADVERTISEMENTS IN THE GARDENERS' MAGAZINE.

Five Lines and under	£0 2 6
Per Line beyond	0 0 6
,, Inch	0 6 0
,, Half Column	1 10 0
,, Column	8 0 0
,, Page	9 0 0

A reduction from above is made when a series is taken.

Cheques and Postal Orders to be made payable to W. H. and L. Collingridge, and crossed— & Co.

SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

Telephone Numbers:

Editorial and Printing Depts. .. ... 831 Holborn.
Advertising and Publishing Depts. ... 2140 Holborn.

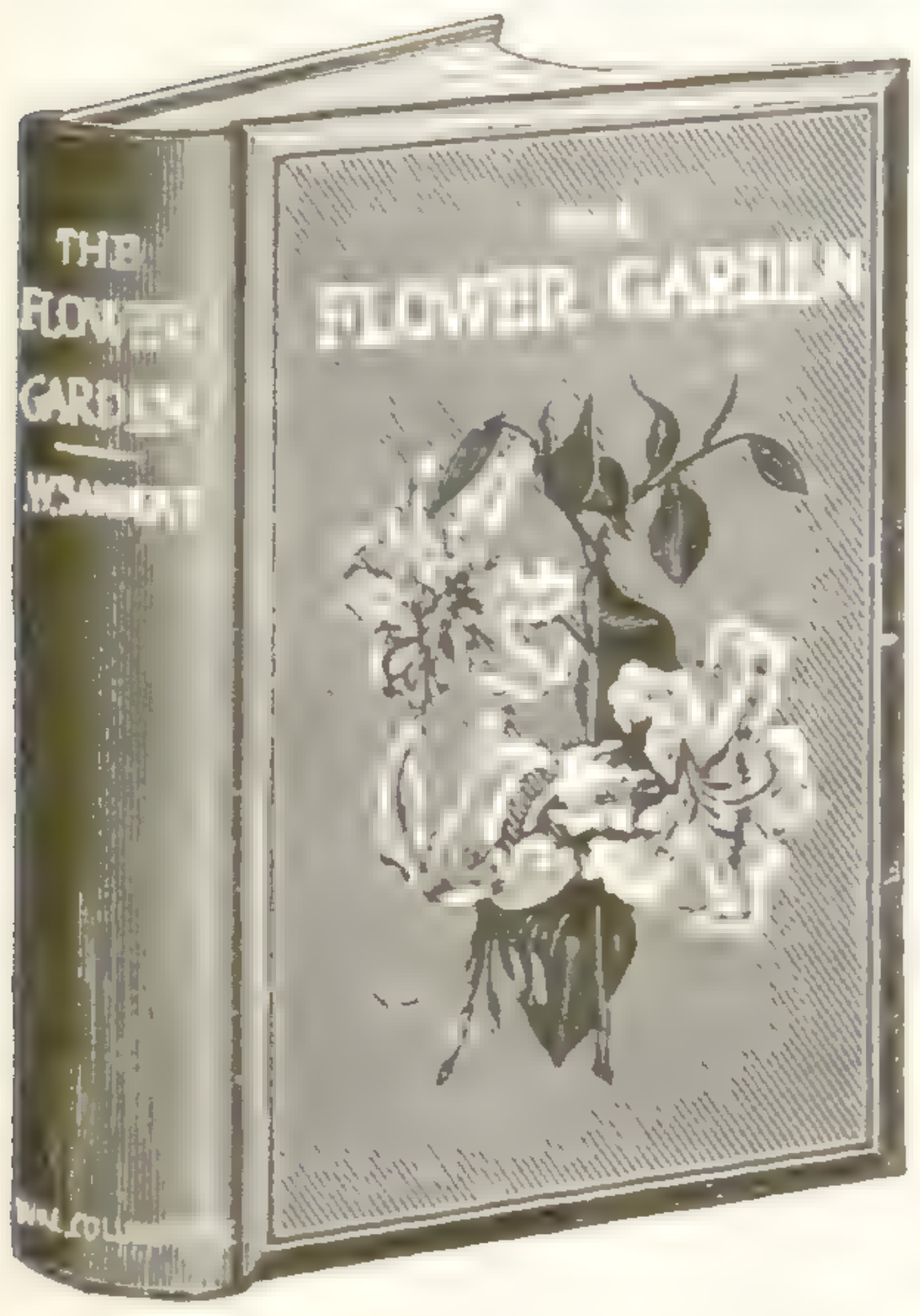
Offices: 148 and 149, Aldersgate Street, London.

PLEASE MENTION
THE GARDENERS' MAGAZINE
when writing to Advertisers.

The Ideal Book for a Christmas Gift.

THE FLOWER GARDEN,

By T. W. SANDERS, F.L.S., Editor of "Amateur Gardening."



A Complete Guide to Planting and Management of the Flower Garden and the Cultivation of Flowers, Plants, Trees, &c., adapted for Outdoor Culture.

THE CONTENTS INCLUDE—

- Fashioning the Garden.
- Beds and Borders.
- Walks and Paths.
- Lawns and Tennis Courts.
- Rockeries and Ferneries.
- Arbours, Summerhouses, Arches, and Pergolas.
- Edgings.
- Walls and Fences.
- Garden Practice.
- Propagation.
- Colour Arrangement.
- Bedding.
- Annuals and Biennials.
- Bulbs.
- Hardy and Tender Border Plants and Flowers.
- Climbing Plants.
- Trees and Shrubs.
- Pests and Diseases.

480 PAGES, ILLUSTRATED BY 64 PLATES OF BEAUTIFUL GARDEN SCENES, PLANTS AND FLOWERS, AND MANY EXPLANATORY DIAGRAMS.

Price **7/6** net; by post, packed in box, **8/-**

ORDER FORM.

To the Publishers of "GARDENERS' MAGAZINE," 148 & 149, Aldersgate St., London, E.C.

Please send me a copy of "THE FLOWER GARDEN," by Post, for which I enclose remittance of 8/0.

Name ....

Address ....

LEADING FEATURES:

The Year's Work.
Daily Reminders.
New Flowers,
New Plants,
New Fruits, &c.
Hardy Flowers for Beds and Borders.
Garden Roses.
Delphiniums.
Salads.
Vegetables for Home Supply.
Sweet Peas for Home and Exhibition.
Ornamental Garden Trees.
Insect and Fungoid Pests.
Useful Recipes,
Etc., Etc.

DIRECTORIES OF .

Horticultural Societies with Secretaries' Names and Addresses, and of Public Parks and Gardens in the United Kingdom, with Superintendents' Names, Etc.

ON SALE AT BOOKSTALLS AND NEWSAGENTS.

It abounds in useful information for Gardeners of all degrees, and none will regret the shilling expended on its purchase. . .

THE ...

Gardening Year Book,

& Interleaved Diary, 1912.

The 54th Annual Issue.

A special feature—the Ruled Pages for Garden Notes, which will form a valuable record for future reference.

ONE SHILLING NET.

By Post, 1/3.

APPRECIATIONS.

"It is in fact a Cyclopædia of Gardening, whose size and value are in no wise rated to its cost."—*North British Agriculturist.*

"Forms a most valuable vade mecum."—*Scottish Field.*

"One of the best shilling's worths ever published."—*Fruitgrower.*

"As handy an annual for Gardeners as can be had for the money."—*Manchester Courier.*

"A veritable storehouse of information on all that relates to the garden."—*Gloucester Journal.*

"A book that cannot fail to be appreciated by every practical gardener."—*Irish Farming World.*

"In short, the book abounds in information."—*Kentish Mercury.*

"Handy and crammed with straightforward information."—*Evening Standard.*

"No book on gardening is more welcome on its annual re-appearance."—*Pall Mall Gazette.*

ORDER FORM.

To the Publisher, "GARDENERS' MAGAZINE," 148 & 149, Aldersgate Street, London, E.C.

Please send me by Post **"THE GARDENING YEAR BOOK, 1912,"** *for which I enclose* **1/3**.

Name ....

Address ....

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head Working).—Mr. COLLEDGE, Gardener to the Earl of Darnley, highly recommends F. BISHOP, as above; 4½ years as Foreman here. Cobham Hall Gardens, Gravesend, Kent.

GARDENER (Head Working), thoroughly experienced in all branches; excellent references; married; disengaged through establishment being given up. G. HALL, Hermitage Cottage, Minchinhampton, Glos.

GARDENER (Head Working) (Scotch) requires SITUATION where 2 or 3 are kept; 20 years' experience in all branches of gardening; 5 years present situation; married; age 36; 2 children; excellent testimonials. H. McCARTNEY, Sandye Place, Sandy, Beds.

GARDENER (Single-handed, or where help is given); 12 years' practical experience; 4 years in last situation; good references; single; age 36; abstainer. J. CHAPMAN, Ferry Hill, Chatteris, Cambs.

GARDENER (Head Working, where one or two kept); 10 years in present situation; 5 years as second; age 31; married when suited. A. GIBBS, The Gardens, Farrants, Bickley, Kent.

GARDENER (Head Working). — Mr. H. HEMSLEY, Rock Expert, Crawley, Sussex, would be pleased to highly recommend a thorough competent man in all branches of the profession: highest references; age [illegible]; married. Address as above.

HEAD WORKING, or Single-handed, abstainer; disengaged; age 36; one boy, 14½ years; life experience Inside and Out; excellent refs.; over 5 years last place; knowledge oil engine, electric light, and bees, will assist in house if required. J. OSMOND, Hickleys Cottage, Badshot Lea, Farnham, Surrey.

GARDENER (Head Working).—H. ESSAM can confidently recommend his Foreman to Lady or Gentleman requiring the services of a thoroughly practical and reliable Head Gardener; age 31; married when suited; excellent references. oses Hall, Gisburn, Clitheroe, Lancs. No circulars.

GARDENER (Head) seeks SITUATION where three or more are kept; practical experience in all branches; excellent references; age 31. Address, S. DOUGHTY, Overstone Park Gardens, Northants.

GARDENER (Single-handed, or where help is given; life experience, Inside and Out; good references, and can be well recommended; age 31; married, no family. W. WEST, The Lodge, Pyrford Court, Woking.

GARDENER (Single-handed or otherwise); 14 years' experience Inside and Out; good reference; age 32; married, two children; Midlands preferred. J. WORLOCK, Newtown, Buckland St. Mary, Chard, Somerset.

GARDENER (Single-handed or good second); 4 years' good character; age 23; single; abstainer. Apply A. F. ROOKE, Houndean, Lewes, Sussex.

GARDENER (Single-handed, or where help is given); life experience in all branches; highest references; thoroughly understands Oil Engine; age 40; strong and active; married; 3 in family, youngest 12½. E. STEVENS, 13, Connaught Road, Newbury, Berks.

GARDENER (Single-handed or Under); life experience in all branches; good references from present and past situations; leaving when suited; age 29; single. W. MILLER, Ditcham Park, Petersfield, Hants.

GARDENER.—Young Man as IMPROVER (Inside, or Inside and Out); highest references; 2½ years last place; Bothy preferred. A. STEVENS, 21, Arnold Road, Woking.

GARDENER, Second (where several are kept); [illegible] years' experience Inside and Out; good references; and can be well recommended; age 27; married, no family. W. HILL, Westbrook Cottage, Worplesdon, near Guildford.

JOURNEYMAN (Inside and Out); age 20. A. MADDOCK, The Gardens, Hawthornden Manor, Uttoxeter, will be pleased to recommend F. WILLIAMSON as above, very willing and obliging. Bothy preferred. Apply F. WILLIAMSON, 43, Cheadle Road, Uttoxeter.

MR. H. BLAKE, Head Gardener to Earl of Onslow, Clandon Park, Guildford, would be pleased to recommend strong, active Young Man, Inside and Out; age 19; can take duty.

GARDENER (good Single-handed), Vines, Greenhouse, Flower and Kitchen Garden; age 45; boy, age 14, willing to be useful; 4 years' character. GARDENER, Harcourt, Leighton Buzzard.

GARDENER (Single-handed or with help); married, no family; 7 years present place; 10 years previous; left through death. C. LAWRENCE, The Highlands, Gipsy Hill, Upper Norwood, S.E.

UNDER GARDENER, age 19, three years in present place, with excellent character, seeks SITUATION where experience can be gained in greenhouse and garden; total abstainer. Apply P. SAULT, Station Road, Kegworth, Derby.

YOUNG MAN (20) seeks SITUATION as GARDENER (Under), Inside and Out); 3½ years' good reference; disengaged. S. GENT, Burnham Sutton, King's Lynn, Norfolk.

YOUNG MAN, age 25, seeks SITUATION on Pleasure Grounds, or Inside and Out; 6½ years' experience; excellent references; height 6ft.; bothy preferred; disengaged. F. WINNETT, Salford, Chipping Norton, Oxon.

YOUTH, aged 17, seeks SITUATION in Garden; strong, willing; 3½ years in last place; highly recommended. E. ROBERTS, Gate House, Nuttall, Nottingham.

LAD, age 17, seeks SITUATION in Garden; some experience; wish to improve; good character; Bothy preferred. S. RAYNER, Chart Road, Sutton Valence, Maidstone.

Situations Vacant.

CANADA.—Wanted, strong, active GARDENERS for large Nurseries; steady work; good wages; sail March. UNION TRANSIT CO., 381, Argyle Street, Glasgow.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For DECEMBER 30, 1911.

Please Repeat my Advertisement.

Name..

Address..

....

Date..............................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

NOW IS THE TIME TO
TAKE CUTTINGS
FOR EXHIBITION.

READ
CHRYSANTHEMUMS
And How to Grow Them
FOR EXHIBITION.
By J. B. WROE.

CONTENTS.

Propagation.
Second Potting.
Third Potting.
Final Potting.
Proportions for Soil.
Summer Quarters.
Watering.
Feeding.
Housing the Plants.
Damping.
Timing the Blooms.
Dressing.
Staging.
Selection of Varieties for the North.
Selection of Varieties for the South.
Timing and Stopping.
Taking the Buds.
Specimen Plants.
Chrysanthemum Enemies and Friends.

ILLUSTRATED.

Price ONE SHILLING NET. By Post 1s. 2d.
Bound in Cloth 1s. 6d., by post 1s. 8d.

W. H. and L. COLLINGRIDGE, 148 and 149, Aldersgate Street, London.

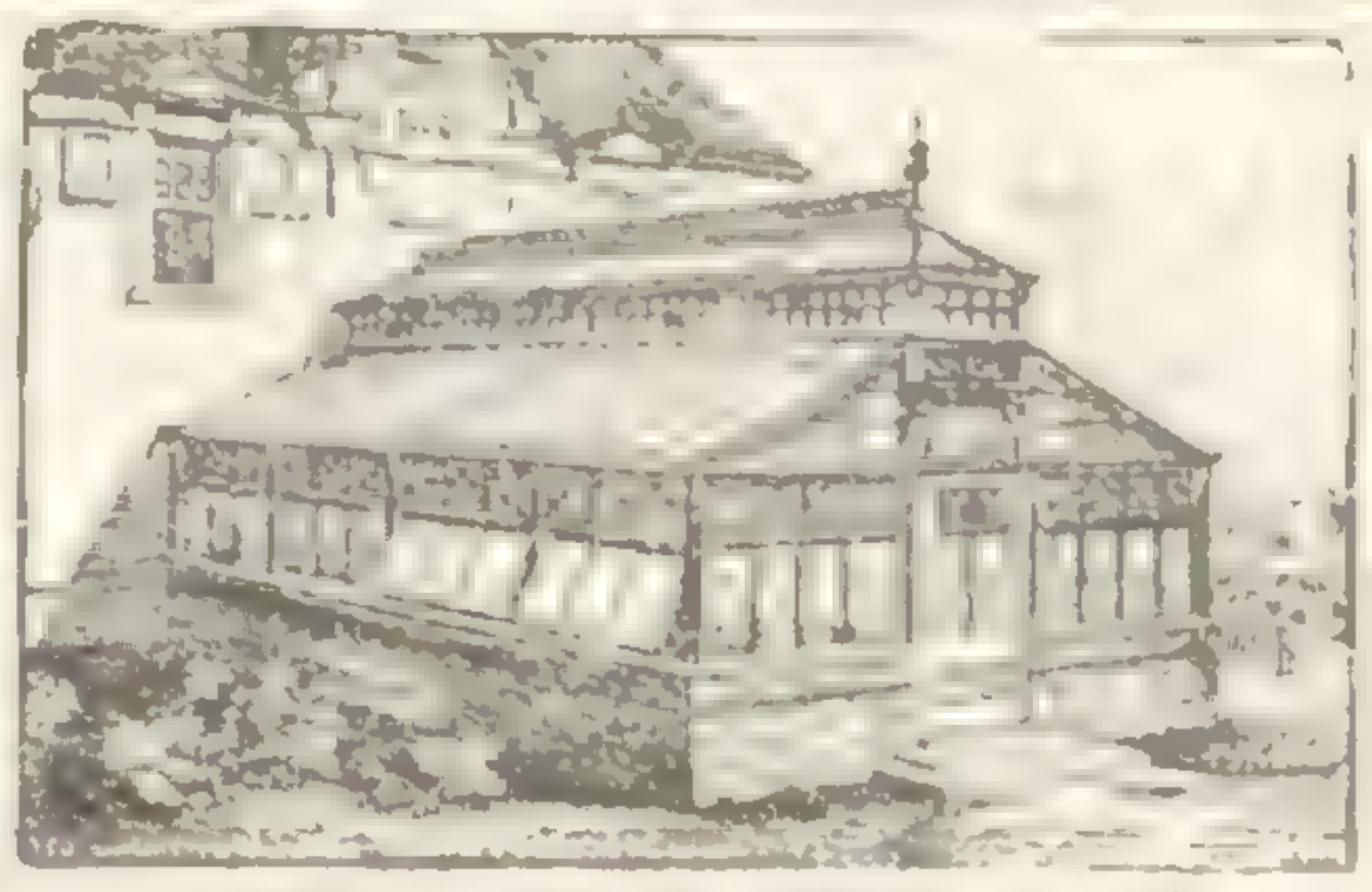
J. WEEKS & CO. (CHELSEA).

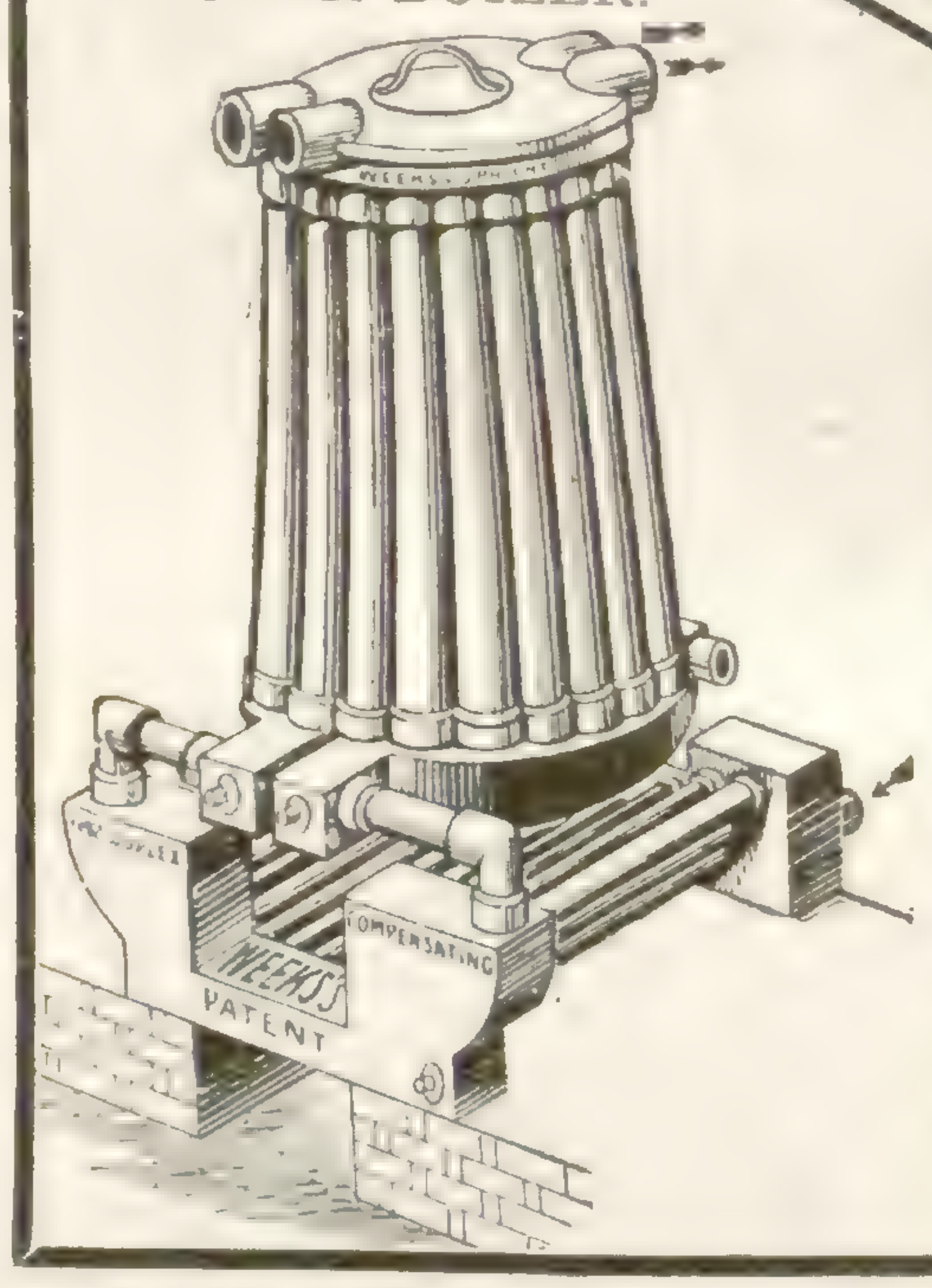
Established 1808.

Plans and Estimates prepared for
CONSERVATORIES, RANGES, GREENHOUSES, FRUIT, ORCHID, and CARNATION HOUSES.

Head Office: 72, VICTORIA STREET, S.W.

PATENT
DUPLEX
UPRIGHT
TUBULAR BOILER.





THOUSANDS SUPPLIED DURING THE PAST 50 YEARS.

WE CAN QUOTE YOU FOR ANY KIND OF SECTIONAL BOILER.

ESTIMATES GIVEN FOR COMPLETE HEATING APPARATUS.

Catalogues and Estimates Free.

MESSENGER & Co. Ltd.
HORTICULTURAL BUILDERS & HEATING ENGINEERS
LOUGHBOROUGH LEICESTERSHIRE
London Office 122 VICTORIA St S.W.

MODERN GLASSHOUSES

as supplied by MESSENGER and CO., Ltd., are made of the best materials, and only capable and reliable workmen are employed in the erection thereof.

The following letter was recently received by us on the completion of a contract for a well-known Member of Parliament.

February, 1911.

"I should not be doing my duty to your workmen if I did not at once tell you, on the completion of your work, how pleased I have been with each and all of them.

"They have been most obliging throughout the whole job, and have endeavoured to do everything in an efficient and thoroughly workmanlike manner, and I must congratulate you upon having such capable employees."

Printed and Published by W. H. & L. COLLINGRIDGE, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls

THE GARDENERS' MAGAZINE.

No. 3,035.
Vol. LIV.
(Reg. at the G.P.O. as a Newspaper, and for Canadian Magazine Post).
SATURDAY, DEC. 30, 1911.
(10/6 per Ann. Post Free. To Foreign Countries, 15/-.)
Twopence

BARR'S CASH CLEARANCE SALE OF Spring-flowering Bulbs.—Daffodils. Hyacinths, Tulips. Polyanthus Narcissi, Irises, etc., all in best quality, at greatly reduced prices. Clearance lists on application.—BARR and SONS, 11, 12, and 13, King Street, Covent Garden, London.

GISHURST COMPOUND is harmless in use; its soluble Sulphur, etc., has for 40 years cured blight and fungus on plants, and is good for washing unhealthy dogs. Gishurstine keeps boots dry in all weathers; they will polish. Good for harness. Wholesale from
PRICE'S PATENT CANDLE CO., LIM., LONDON.

JAMES GRAY, Horticultural Builder, Chelsea, is this winter keeping a large staff of hot-water men in the shops, in order that they may attend immediately to any breakdown of boilers or hot-water piping in any part of the country. In case of emergencies, please telephone 201 Western, or wire, "Gray, Chelsea, London."

OSMUNDA FOR ORCHIDS.
CONSIGNMENTS ARRIVE FORTNIGHTLY.
2s. 6d. per bushel; per bag, 8s. 6d.
SANDER AND SONS, ST. ALBANS.

FERNS, FERNS, FERNS, etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. 100,000 large garden Ferns, 20s. 100. 5,000 cases sent off yearly. Amateur Catalogue free. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

PERPETUAL CARNATIONS.
Our 1911 Illustrated Catalogue free.
Read our "Cultural Treatise," 1s.
YOUNG and CO., Carnation Specialists,
Hatherley, Cheltenham.

CHOICE NEW CHRYSANTHEMUMS.—Our New Catalogue of 500 finest varieties in all sections is now ready, most up to date yet issued. Contains Splendid Novelties for 1912. Post free. J. W. COLE and SON, Chrysanthemum Specialists, Peterboro.

LAXTON FRUIT TREES.—An immense stock, the finest trees we have ever offered, splendid well-ripened wood and fine roots. Absolutely none better obtainable. Trained in all forms. Fully illustrated Catalogue gratis.—LAXTON BROS., Bedford.

IRON and WIRE FENCING for Gardens. Tree Guards, Gates, Arches, Espaliers, Rose Stakes, and Ornamental Garden Iron and Wire Work of every description. Send for Illustrated Catalogue, free.—BOULTON and PAUL. Ltd., Manufacturers, Norwich.

AMARYLLIS — HIPPEASTRUMS — unrivalled New Hybrids. Highest Awards at Home and Abroad, including 37 Gold Medals. Splendid Bulbs, thoroughly ripened. Catalogues and all particulars free on application. The trade supplied. ROBT. P. KER and SONS, Aigburth Nursery, Liverpool.

ROCK GARDENS and ALPINE PLANTS.—A new work and a complete guide to the Formation and Management of Rockeries, by E. H. Jenkins, F.R.H.S. Many Illustrations. Cloth, 2s. 10d., post free, from Publisher, 148, Aldersgate Street, London.

WELLS' Catalogue of
CHRYSANTHEMUMS,
PERPETUAL CARNATIONS.
HERBACEOUS PLANTS,
ALPINE AND ROCK PLANTS,
now ready. Post free on application. Wells' Book. "The Culture of the Chrysanthemum." post free, 1s. 6d. W. WELLS and CO., Mersham, Surrey.

GREENHOUSE PAINTING and GLAZING "Vitrolite," superior to White Lead Paint, 9s. per gall. "Plastine" superior to Putty, 1s. per cwt. Particulars from W. CARSON and SONS, Grove Works, Battersea. Agents throughout the country

FORCING NOVELTIES FOR SOWING NOW.
WEBBS' EARLY FAVOURITE PEA.
2s. per pint; 3s. 6d. per quart.

WEBBS' SELECTED AILSA CRAIG ONION, 1s. and 2s. 6d. per packet.

WEBBS' PEERLESS MELON.
2s. 6d. per packet.

WEBBS' WONDERFUL CARROT.
1s. 3d. per ounce.

WEBBS' SPRING CATALOGUE for 1912.
Beautifully illustrated. Now ready.

WEBB AND SONS, THE KING'S Seedsmen, Wordsley, Stourbridge.

BUNYARD'S CATALOGUES
Free on Application.

FRUIT TREES, SHRUBS.

ROSES AND OTHER CLIMBERS IN POTS.

HERBACEOUS AND AQUATIC PLANTS.
For Autumn Planting.

GEORGE BUNYARD AND CO., LTD.,
Royal Nurseries, MAIDSTONE.
Established 1796.

CLAY'S MANURES, CRUSHED BONES
(See page 981.)

CLAY'S FERTILIZER IS UNSURPASSED for all Horticultural Purposes.
CLAY and SON, Stratford, E.

DAWES' CHALLENGE RHUBARB has gained nine Medals and Awards, also A.M., R.H.S., London. Strong roots ready. Price list free. DAWES' NURSERIES, Syderstone, Norfolk.

BRACKEN ROOTS for Naturalising.—These quick-growing underground stems, 1s. per lb. Bluebells, 1s. 6d. 100. Eight kinds hardy Ferns, 10s. 100.—CRUMP, Wray, Mortonhampstead, Devon.

HUTS FOR THE GARDEN. — Fruit Rooms, Potting Sheds, Workshops, Cycle Houses, Boot Rooms, Servants' Mess Rooms, Children's Playrooms, etc. Send for Illustrated Catalogue, free.—BOULTON and PAUL, Ltd., Norwich.

IRISH-GROWN SEED POTATOES.—Write for Catalogue of leading varieties, post free. Prizes offered at English Exhibition. WM. E. SANDS, F.R.H.S., Potato Specialist (Dept. M), Hillsborough, Co. Down.

PERPETUAL-FLOWERING or American Tree Carnations, strong, healthy Guernsey plants, from pots, 4s. per doz., carr. paid; 20s. per 100, carr. forw. Ask for catalogue, 75 vars., with full directions. VAN DER SLUYS, F.R.H.S., Ramee, Guernsey, C.I.

ORCHIDS FOR AMATEURS.—A practical guide to the Cultivation of Cool and Warmhouse Orchids, adapted for Small Mixed Greenhouses. The author is C. Alwyn Harrison, F.R.H.S., and the book can be obtained, by post, for 2s. 10d., from Publisher, 149, Aldersgate Street, London.

GREENHOUSES and CONSERVATORIES. Distinctive Designs and Finished Workmanship. Write now for ILLUSTRATED CATALOGUE. CARTER and HOWARD, Horticultural Builders, Kingston-on-Thames. Phone: 1308 P.O. Kingston.

HEATING APPARATUS for GREENHOUSES. Write for special prices. Give length and width of greenhouse. Catalogue free. Medals awarded 1865, 1881, 1895. J. ATTWOOD, Stourbridge.

WM. DUNCAN TUCKER and SONS, Lim., 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, Portable buildings, etc. Catalogue gratis.

NOW READY.
SUTTON'S GUIDE AND CATALOGUE of Vegetable and Flower Seeds, Potatoes, etc., for 1912.

SUTTON'S GUIDE AND CATALOGUE of Vegetable and Flower Seeds, Potatoes, etc., for 1912.
All lovers of their garden should secure a copy. Containing over 200 beautiful illustrations of the best varieties of Flowers and Vegetables.

SUTTON AND SONS, THE KING'S SEEDSMEN, READING.

NOW IS THE TIME TO PLANT
Kelway's lovely Pæonies, Delphiniums, and their celebrated Artistic Hardy Borders; packed ready for planting.
KELWAY'S CHOICE named Pæonies, from 27s. per doz.
KELWAY'S CHOICE named Delphiniums, from 24s. doz.
For information about the Colour Borders send 6d. for "Gardens of Delight."
From Mrs. ———, Chepstow.
10th March, 1911.
"You supplied me with an 'Artistic Herbaceous Border' about eighteen months ago, and I am so very pleased with it; it looked so lovely last year, that I am thinking of having a similar border laid out by the side of the drive up to the house."
KELWAY AND SON,
The Royal Horticulturists,
LANGPORT, SOMERSET.
230 Grand Prizes, Gold Medals, etc.

KELWAY'S MANUAL OF HORTICULTURE is the best of all Garden Books. 2s., post free, from KELWAY and SON, LANGPORT, SOMERSET.
From Messrs. ———.
Grahamstown,
Cape Colony.
"The 'Manual' is unique, and is an exceedingly attractive book, and a most interesting work on Horticulture, and we are very pleased to possess this copy."

ORDER TRELLIS-WORK NOW.—Get our Book on Trellis-Work, showing screens, wall panels, window surrounds, arches, arbours, etc., post free.—BOULTON and PAUL, Ltd., Norwich.

PERPETUAL TREE CARNATIONS, best vars., strong plants, from pots, 4s. doz., carr. paid, 20s. 100, carr, pd.; good flowering plants, in 5in. pots, 10s. 6d. doz. G. S. EVANS, Bexley Heath.

"ROSES AND THEIR CULTIVATION."—A new edition of this Standard Book is now ready, and every Rose Grower should secure a copy. Cloth, many Illustrations, 2s. 10d., post free, from Publisher, 149, Aldersgate Street, London, E.C.

BECKETT'S NEW BOOK.—The most practical and Up-to-date Book on Vegetables. Price 5s.; post free, 5s. 6d. EDWIN BECKETT, Aldenham House Gardens, Elstree, Herts.

THE POPULARITY OF XL ALL SPECIALITIES increases every year. All gardeners proclaim that nothing equals these celebrated preparations.
XL ALL NICOTINE VAPORISING COMPOUND, the gardener's favourite Fumigant, both Liquid and Cake.
XL ALL NICOTINE INSECTICIDE WASH for Syringing, Dipping, and Dressing Fruit Trees and Plants. Mealy Bug, Scale, etc., cannot exist where this is used.
XL ALL INSECTICIDE WASH B (sine Nicotine), best non-poisonous Wash on the Market. No licence required to sell this. Other preparations of great renown, both poisonous and non-poisonous, are XL ALL WEED KILLER, XL ALL FERTILISER, XL ALL WINTER WASH for Fruit Trees, RICHARDS' BANDING GREASE, etc. Don't forget to ask your N. S. or Florist for Richards' small pink list.
G. H. RICHARDS, Manufacturer,
234, Borough High Street, London, S.E.

BUSINESS CARDS.

CARNATIONS.

ALLWOOD BROS., Haywards Heath, Sussex.
Perpetual Flowering Carnation Specialists, Raisers and Growers.

R. H. BATH, Ltd., The Floral Farms, Wisbech.
The best New and Standard Varieties of Border, Malmaison, and Tree Carnations.

C. ENGELMANN, Saffron Walden, Essex,
Perpetual Flowering Carnations.
Largest grower in the Kingdom.

SWEET PEAS.

ROBERT BOLTON, The Sweet Pea Specialist,
Werton, Carnforth,
Catalogues post free.

ORCHIDS.

EDWARD V. LOW, Vale Bridge, Haywards Heath.
"White" Cattleyas and Choice Cypripediums are leading features. Inspection solicited.

HASSALL & CO., Southgate, London, N.
(Tel.: .59, Palmers Green.)
Catalogues post free on Application.

PHLOXES.

GUNN & SONS, Specialists,
Olton, Warwickshire.
New and Standard varieties. Lists Free.

ROSES.

R. H. BATH, Ltd.,
The Floral Farms, Wisbech.
The best New and Standard varieties of Roses.

FRANK CANT & CO.,
Braiswick Rose Garden, Colchester.
The World-famed Champion Rose Growers.

JOHN MATTOCK, Headington, Oxford.
Winner Gold Medal President's Cup. 11 *1st Prizes.* 3 *2nds, at N.R.S. Shows,* 1910. *Ctlg. Free.*

D. PRIOR & SON, The Nurseries, Colchester.
World-renowned Champion Rose Growers.
1911 *Awards:* 81 *Prizes. Illustrated Catalogue free.*

Terms for the insertion of these Business Card Advertisements may be obtained on application to W. H. & L. COLLINGRIDGE, 148 & 149, Aldersgate St., London, E.C.

CHRYSANTHEMUMS.

THE BEST 12 JAPANESE EXHIBITION NOVELTIES OF 1911.

Countess Granard, Mrs. G. Drabble, Mrs. A. Herbert, H. E. Converse, D. B. Crane, Mrs. G. C. Kelly, Queenie Chandler, F. T. Mew, F. C. Chandler, Marie Loomes, Mr. Turner, Harry Wood.

Strong plants of the above—or purchaser's option of other 1911 varieties—**1/-** each, **10/-** the dozen; 3 of each for **25s.**; delivered early spring. Unrooted cuttings also supplied as per catalogue.

THE BEST 6 NEW EXHIBITION SINGLES OF 1911.

Charles Dickens, Charles Kingsley, Miss May Thorne, Snowflake, Mrs. W. Higgs, Mrs. Trenham Gilbey.

Plants in early spring, **1/-** ea.; the 6 for **5/-**; or 3 of each, **12/6.** Cuttings one-third less.

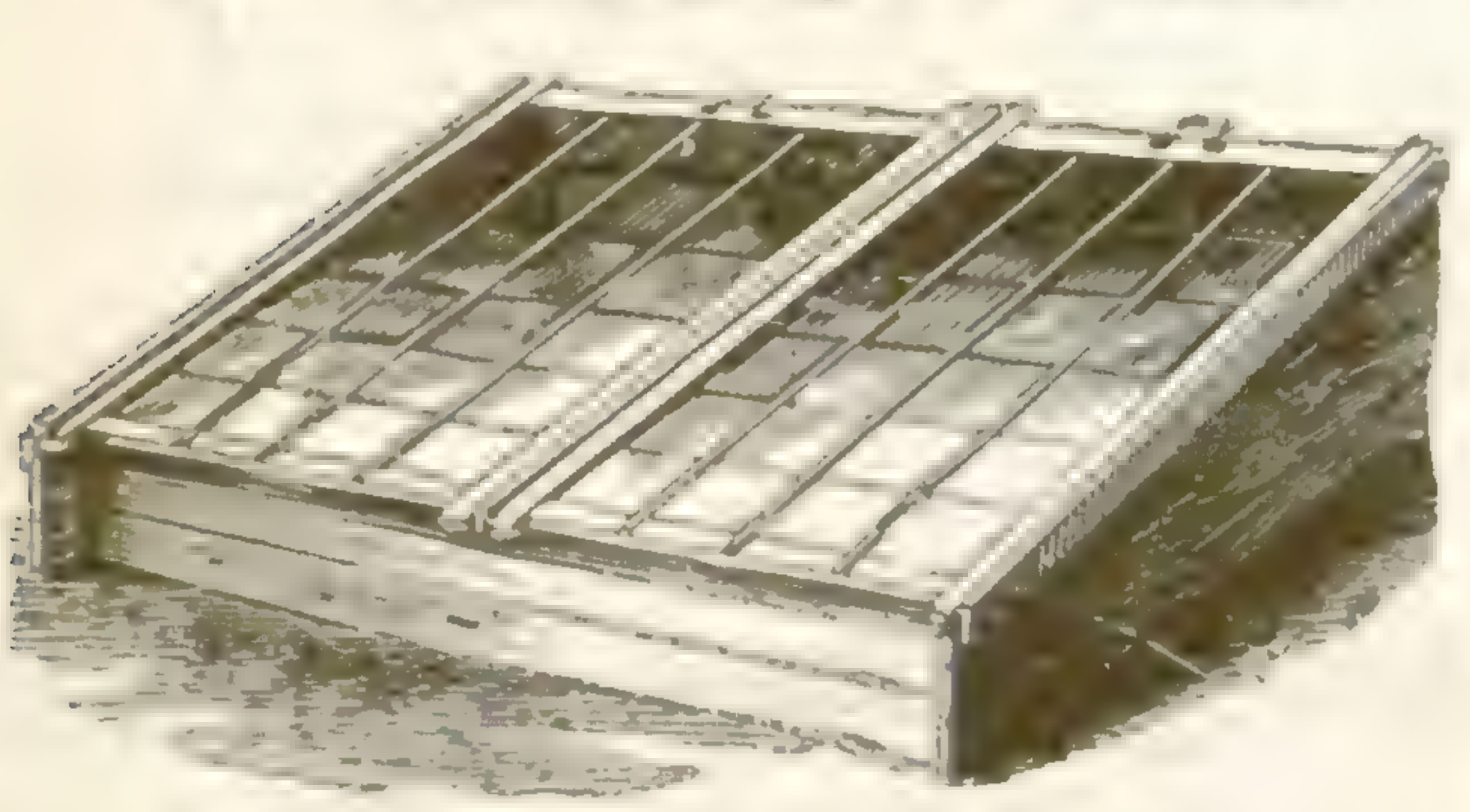
NOVELTIES FOR 1912.

JAPANESE: His Majesty, magnificent crimson; **Gorgeous,** rich deep yellow; **Mrs. J. H. Cooken,** beautiful bright yellow; **Miss Beatrice Hoar,** distinct crimson; **Mrs. T. Brooke Edwards,** salmon-buff; **Miss Gladys Herbert,** beautiful mauve; **Amber Queen,** rich amber and terra-cotta. All being distributed from these Nurseries. For further particulars, also for New Incurveds and Singles, see Novelty List, now ready.

NORMAN DAVIS,
Chrysanthemum Nurseries,
FRAMFIELD, UCKFIELD, SUSSEX.

PORTABLE CUCUMBER FRAMES.

OUR WELL-KNOWN MAKE.



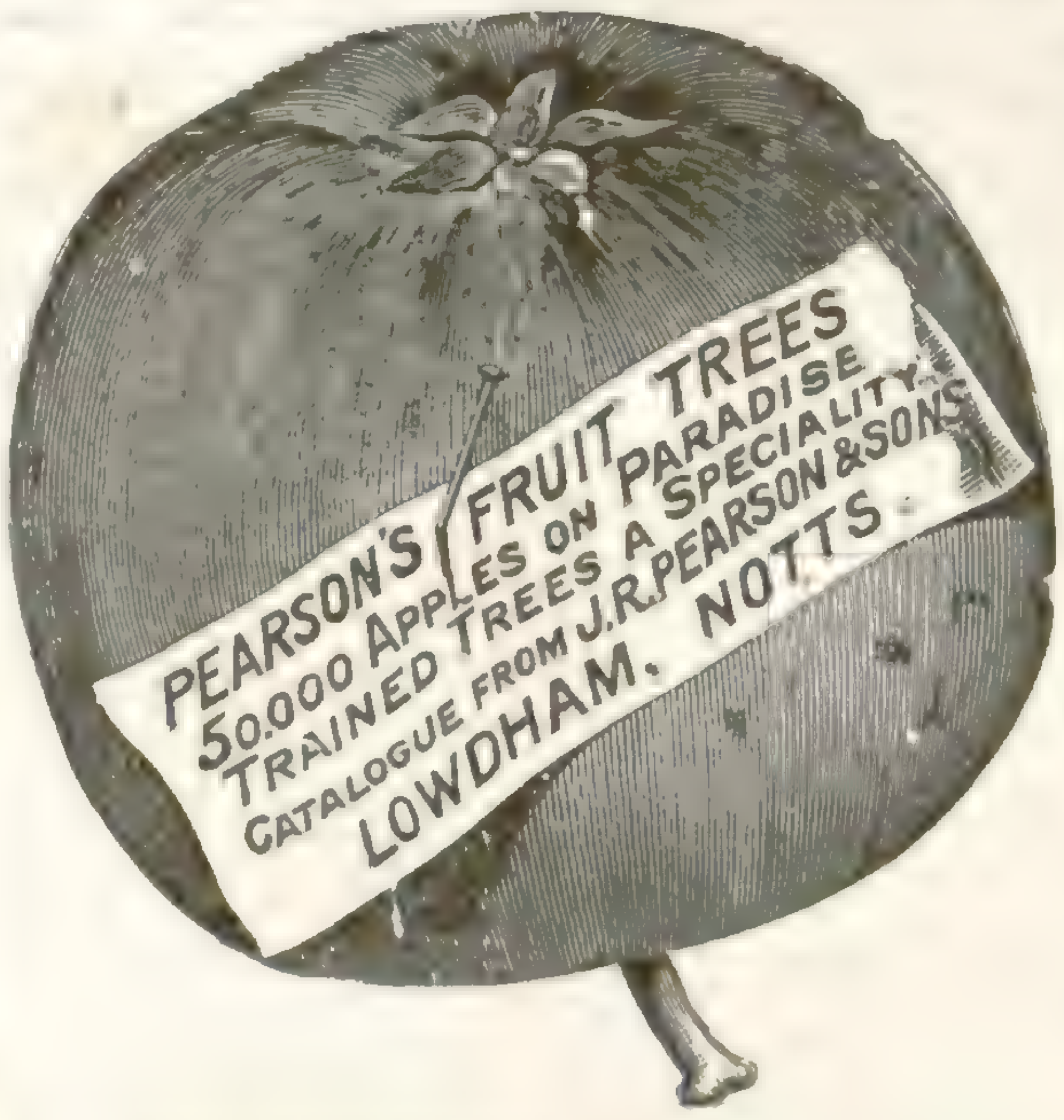
These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

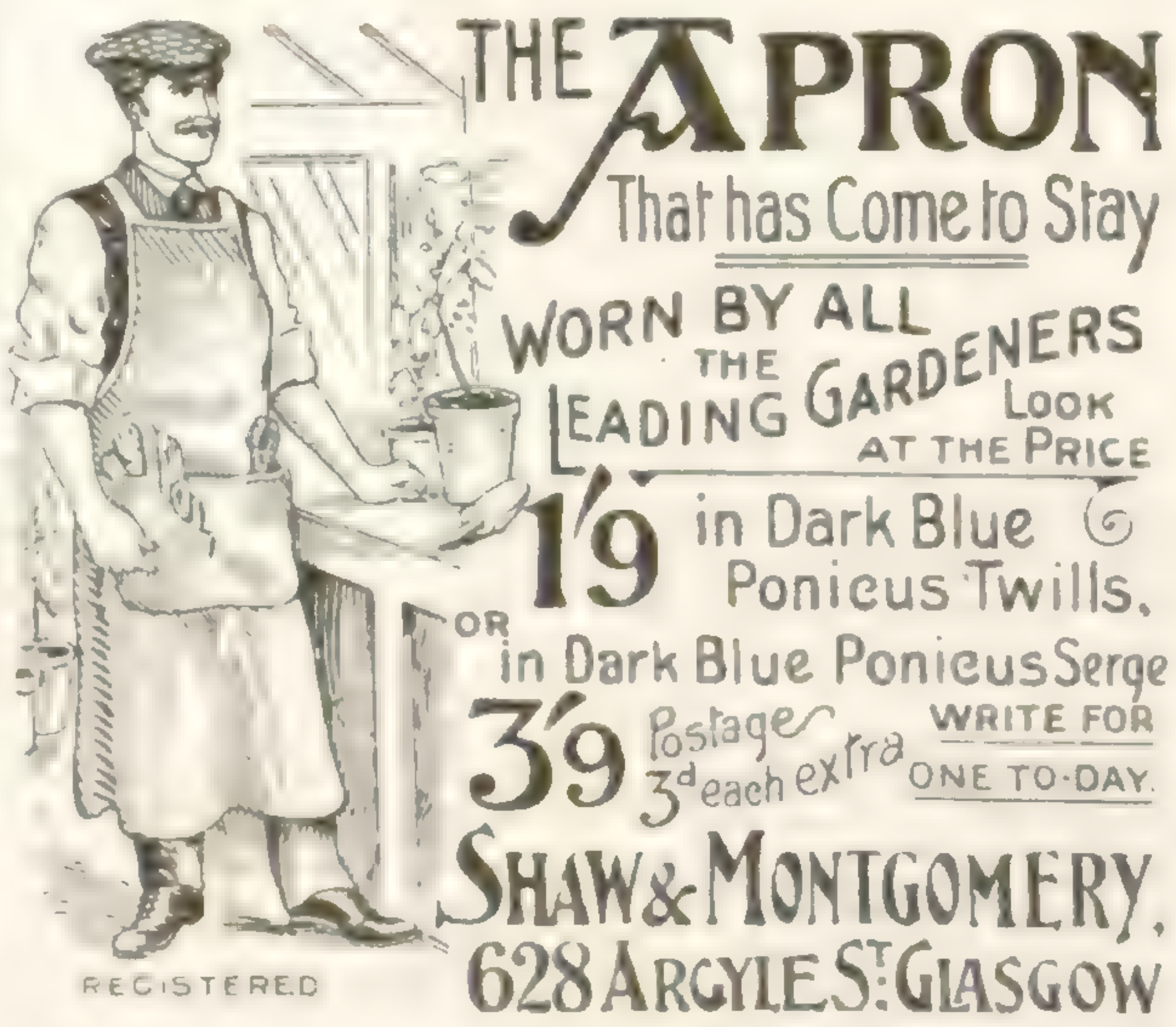
Sizes and Prices, Glazed and Painted.		£	s.	d.
1-light 4 ft. by 6 ft.	CASH PRICES.	2	0	0
2-light 8 ft. by 6 ft.		3	0	0
3-light 12 ft. by 6 ft.		4	2	6
4-light 16 ft. by 6 ft.	CARRIAGE PAID.	5	5	0
5-light 20 ft. by 6 ft.		6	7	6
6-light 24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

R. HALLIDAY & CO.,
Royal Horticultural Works,
MIDDLETON MANCHESTER.

WHEELBARROWS. — Navvy, for building, 11s. 9d. each; general purpose, for farm use, 14s. 9d. each. 6 sent together, carriage paid some stations. Also timber, woodwork, all descriptions. O. JENNINGS and CO., Timber Merchants, General Wood-workers, 9.6, Pennywell Road, Bristol.


PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J. R. PEARSON & SONS
LOWDHAM. NOTTS.


THE APRON
That has Come to Stay
WORN BY ALL THE LEADING GARDENERS
LOOK AT THE PRICE
1/9 in Dark Blue Ponicus Twills,
OR in Dark Blue Ponicus Serge
3/9 Postage 3d each extra
WRITE FOR ONE TO-DAY.
SHAW & MONTGOMERY,
628 ARGYLE ST. GLASGOW
REGISTERED

PLEASE MENTION
THE GARDENERS' MAGAZINE
when writing to Advertisers.

CHEAP AND GENUINE.

THE HOLLAND PLANT CO., Boskoop, HOLLAND
(Postal Address: Head Office, GOUDA),
offer very fine sorts of

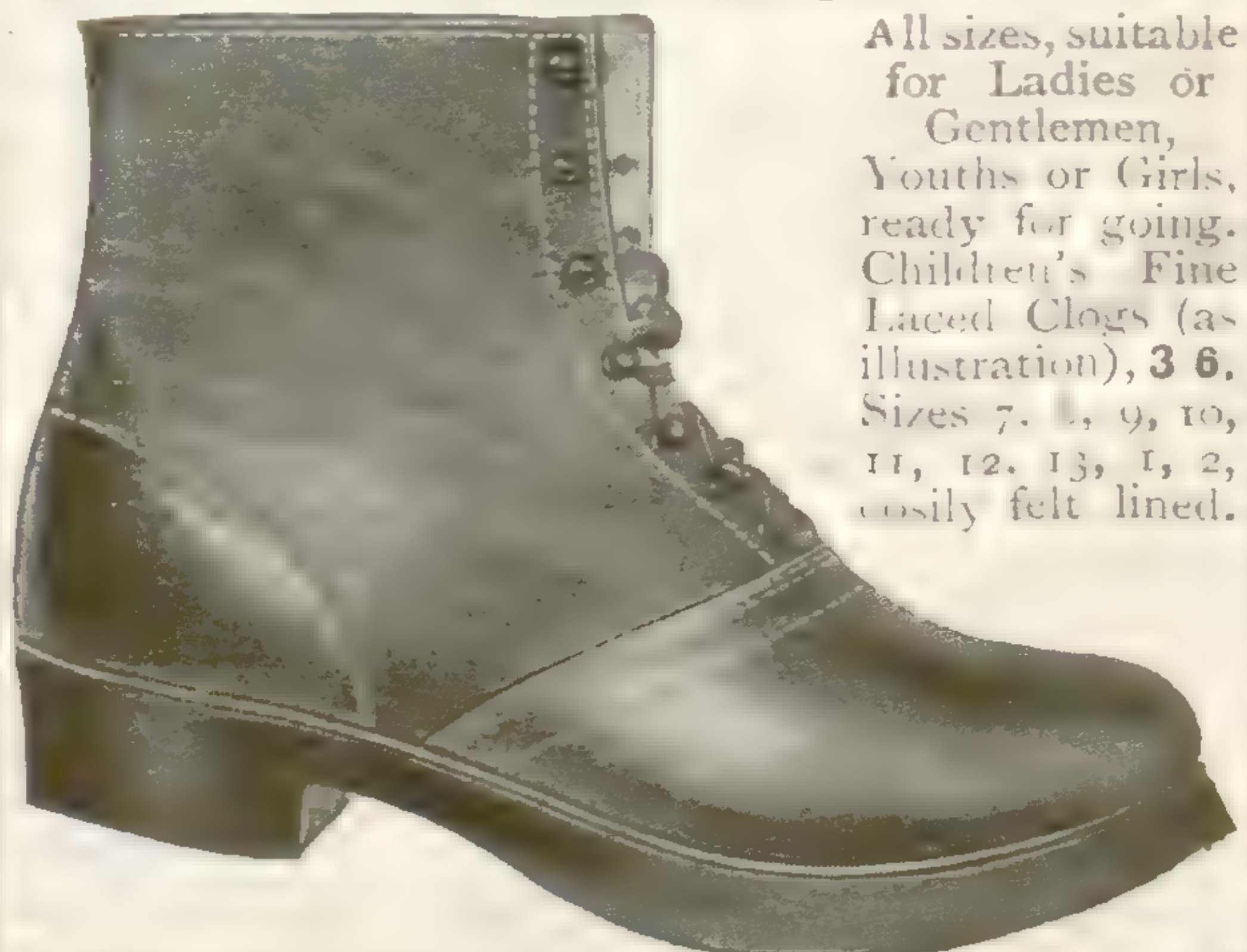
Rhododendrons, with buds, in very fine colours, **1/6, 2/-, 3/-, 4/-, 5/-** each. **Polyanth. Roses,** Mrs. Taft, new 1909, blood red; **Orleans Rose,** new 1909, brilliant red; **Phyllis,** new, fine red; **Maman Levavasseur,** new 1907, **50/-** per 100. **New Sorts, 1911:**—Climbing Rose, Eisenach, **2/-** each; Dad Sterling, **4/-** each. Climbing Rose, Wartburg, **2/-** each; Climbing Rose, Flower of Fairfield, synonym Crimson semper florens, **50/-** per 100. Climbing Roses in different good sorts, as Crimson Rambler, Dorothy Perkins, Tausendschon, etc., **40/-** per 100. Acer negundo, fol. var., **2/-** each. Japan Maples in fine sorts, **2/-** each. Carriage free England.

Orchids! Orchids!! Orchids!!

The undersigned begs to announce to the Public that he is in a position to supply, wholesale or retail, **Burma Orchids** of 50 varieties at a moderate price. Further particulars on application. — **J. C. PRAZER, Orchid Collector, KALEWA, BURMA.**

N.B.—Please register orders early for Dendrobium Nobile, thick-bulbed variety; Dendrobium Jamesianum, Dendrobium Bensoni, Renanthera imschootiana, Vanda Cœrulea Lushai Hill variety, dark blue type; Cypripedium spicerianums of five and six growths, as these are scarce and expensive collecting.

DON'T FAIL TO GET A PAIR. The wet, cold weather is now on. Ladies and Gentlemen ought to wear our Celebrated **"G" Brand Clogs.** Ideal for Garden Wear. All cosily lined with white warm felt.
Only **4/6** postage paid.



All sizes, suitable for Ladies or Gentlemen, Youths or Girls, ready for going. Children's Fine Laced Clogs (as illustration), **3/6.** Sizes 7, 8, 9, 10, 11, 12, 13, 1, 2, cosily felt lined.

THE WELLINGTON MANUFACTURING Coy.,
(Dept. 33), **4, Wellington Street, Glasgow.**

Kinnell's Boilers

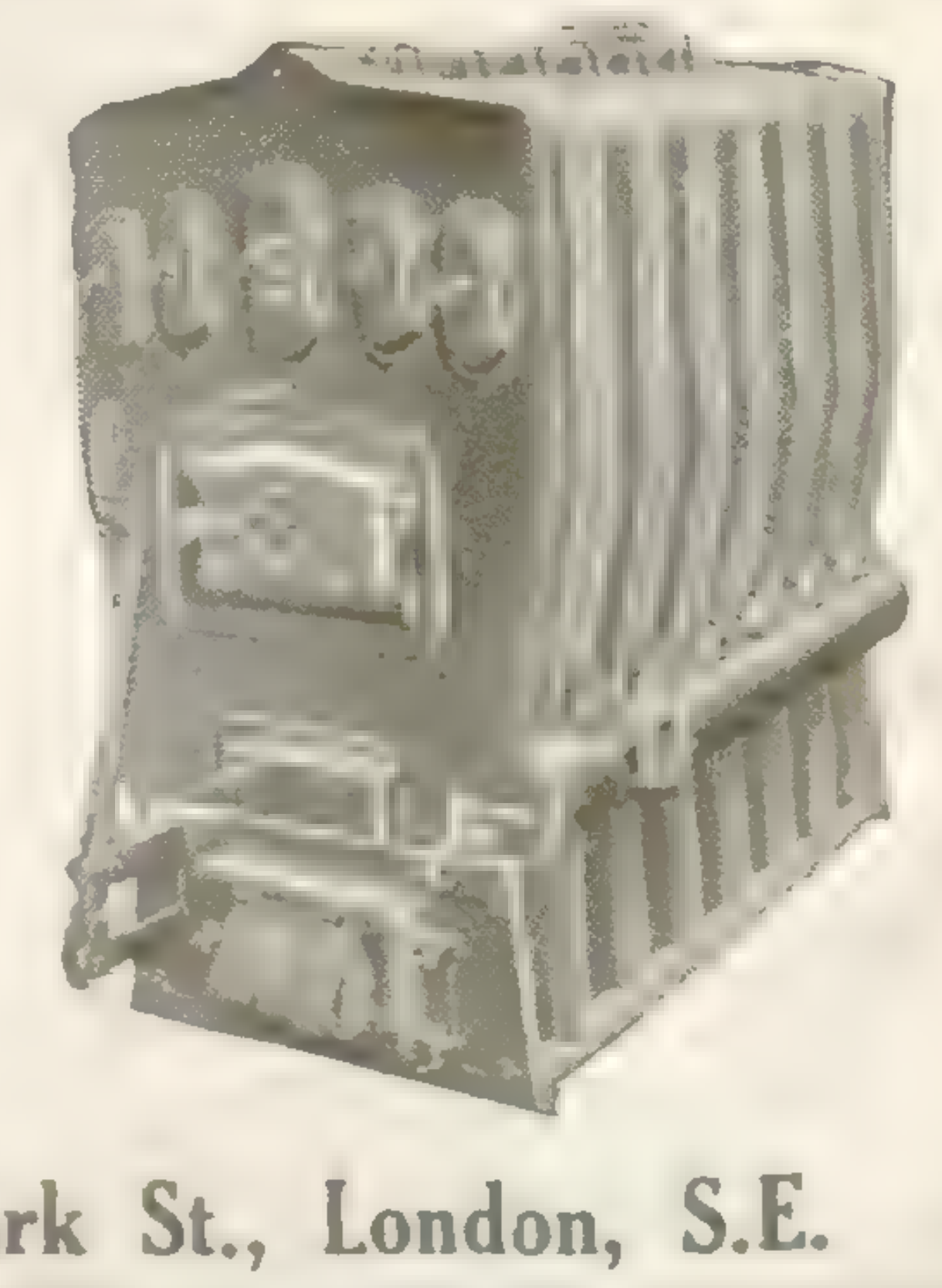
THREE LEADING TYPES:—

The **"ANGLIAN," Sectional,** heats 800 to 8,000 ft. 4in. pipe.
The **"ROCHFORD," Tubular,** heats 600 to 8,000 ft. 4in. pipe.
The **"HORSE-SHOE"** for the small Greenhouse.

Saddle Boilers, Trentham Boilers, and all classes of Pipes, Fittings, etc., ready for immediate despatch.

Write for List No. 77, post free.

CHAS. P. KINNELL & Co., Ltd., 65, & 65a, Southwark St., London, S.E.



Sales by Auction.

ROSES, LILIES, AZALEAS, AND PALMS, HARDY BULBS & PLANTS in Great Variety.

AUCTION SALES
Every Monday, Wednesday, and Friday by . . . .
PROTHEROE & MORRIS
at their Central Sale Rooms.
67 & 68, CHEAPSIDE, LONDON, E.C.
Catalogues sent on Application.
Established 1836.

DUTCH BULBS, PERENNIALS, ROSE TREES, SHRUBS.

MR. J. C. STEVENS begs to announce that his **Sales by Auction** are held every **MONDAY** and **WEDNESDAY** at **12.30.**

Catalogues post free.

Lots purchased, packed, and forwarded to all parts.

STEVENS' AUCTION ROOMS
(Established 150 Years),
38, King Street, Covent Garden, London, W.C.

MESSRS. PULHAM & SON have secured a fine lot of Old Stone Paving, which is eminently suitable for the Paving of Pergolas, Garden Paths, etc.

They will be happy to quote for any quantity, delivered at any railway station.

PULHAM & SON,

By Appointment. By Appointment.

71, Newman Street, London, W.
And BROXBOURNE.

20,000
LILIES
Magnificent Collection.
New Catalogue Free.
PERRY'S HARDY PLANT FARM, ENFIELD, MIDDX.

TREE CARNATIONS.

E. J. WOOTTEN, Fairoak, EASTLEIGH,
Has all varieties, including
Lady Alington, Felton, Mrs. Ward, Bonfire, White Wonder, La Mode, Marmion, etc.
Strong Plants in Small Pots Now Ready.

A SPECIALITY FOR MORE THAN 50 YEARS

POT VINES

Exceptionally Fine this Season.
Inspection Invited.

J. R. PEARSON & SONS, LOWDHAM, Notts.

SPECIALITIES. (Carriage Paid).

Shrubs for

- Under Trees
- Rock Gardens
- Water Gardens
- Woodland Gardens
- Wild Gardens
- Natural Gardens
- Bamboo Gardens
- Azalea Gardens

Catalogue with **450** Illustrations, Post Free.

CAUNTLETT'S Ltd., Chiddingfold, SURREY

FOR SALE as a going concern, a rapidly-increasing and profitable BUSINESS of a Horticultural Commission Agent, Nurseryman, Auctioneer, and Valuer. Nett profits over £500 per annum. All at £1,500, including valuable stock. An opportunity rarely met with.

Fullest particulars

PIMM and CO.,
1, Queen Anne Buildings, Bristol.

105,000 FREE COPIES
OF
Dobbie's
NEW CATALOGUE

And Guide to Horticulture.
208 Pages. 200 Illustrations.

Contains Lists of
Newest and Best SWEET PEAS.

Mention "Gardeners' Magazine."

DOBBIE & CO.,
The Royal Seedsmen, **EDINBURGH**

CHARLESWORTH & CO.,

Hayward's Heath, Sussex,
ORCHID SPECIALISTS
IMPORTERS, EXPORTERS, RAISERS & GROWERS.

PRICED ILLUSTRATED CATALOGUE FREE.

SELECTED SEED POTATOES.

All varieties, grown on finest soil in Scotland and Lincolnshire. Any weight supplied at low prices. Prizes given for best results. Before ordering elsewhere write for catalogue. Best Eating Potatoes also supplied in small or large quantities.

A. J. SOLE, Seed Potato Grower,
PETERBOROUGH.

ORCHIDS

EIGHT MILES BY ROAD FROM THE CITY.

A visit of Inspection invited of our well grown stock of Thousands of **CATTLEYAS, DENDROBIUMS, ODONTOGLOSSUMS,** and an endless variety of Choice **ORCHIDS.** Nurseries easily reached by Rail to BUSH HILL PARK Station, or by Road.

Telephone:—Enfield, No. 1 and 2.

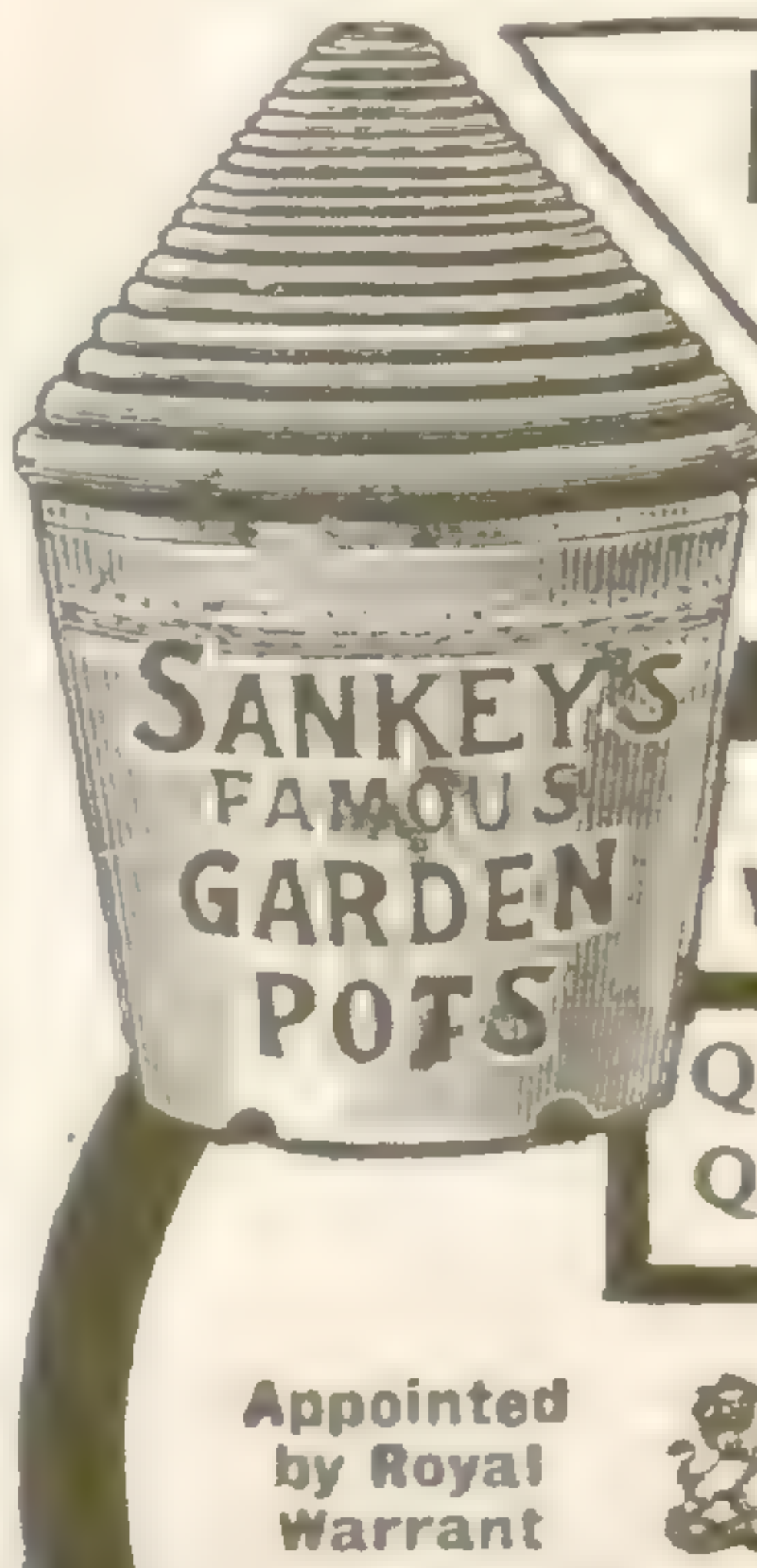
STUART LOW & CO., **Royal Nurseries, BUSH HILL PARK, MIDDX.**

PERPETUAL FLOWERING CARNATIONS.

My Novelties for 1912 are Lady Northcliffe, Triumph, Rosa, Elektra, Salome, and Sunstar. Also 80 other varieties grown. My stock is the largest in Europe. Inspection invited.

CATALOGUE FREE.

C. ENGELMANN, SAFFRON WALDEN



FLOWER POTS.

The best and the cheapest.

Write for LISTS.

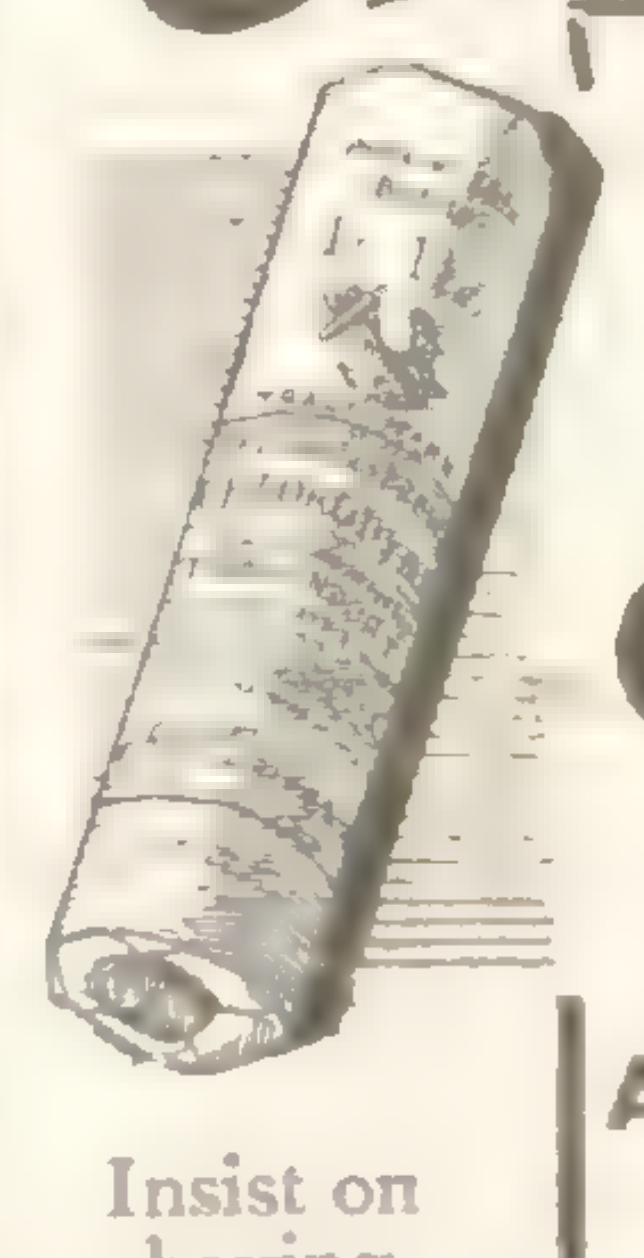
Quotations given for ANY Quantity, Carriage Free.

Appointed by Royal Warrant **Makers to His Majesty the late King.**

Largest Manufacturers in the World.

Only Address:
RICHARD SANKEY & SON, LD.,
Bulwell Potteries,
NOTTINGHAM.

Dr. J. Collis Browne's
Chlorodyne



Universally acknowledged to be the Most Valuable Medicine known, and one which should be in every home.

THE BEST REMEDY FOR
COUGHS, COLDS,
ASTHMA, BRONCHITIS.

Cuts short all attacks of Spasms, Hysteria, and Palpitation.

The only Palliative in Neuralgia, Toothache, Gout, Rheumatism.

Acts like a Charm in DIARRHŒA and DYSENTERY.

Insist on having **Dr. J. COLLIS BROWNE'S** Chlorodyne, *The Original and Only Genuine.*

Convincing Medical Testimony with each bottle.
Of all Chemists, **1/1½, 2/9, 4/6.**

W. SEABROOK & SONS

Offer a very fine stock of
FRUIT TREES
and ROSES.

Full Illustrated Catalogue sent post free on application.

CHELMSFORD

BLACKMORE & LANGDON'S
BEGONIAS

AWARDED 27 GOLD MEDALS.
. . CATALOGUE FREE. . .

Begonia Seed should be sown in the early months of the year, to enable the seedlings to give a glorious display of flowers in outdoor beds during the late Summer and Autumn.

Extracts from recent Unsolicited Testimonials:—"Seeds last year were superb." "I must say your seed is excellent; results extraordinary." "My show of Begonias, all raised from your seed, are every year the admiration and envy of all who see them."

Double Seed, **2s. 6d.** and **5s.** per pkt.; Single Seed, plain, frilled, or crested, **1s., 2s. 6d.,** and **5s.**

Our Illustrated Catalogue of **Begonias, Carnations, Cannas, Cyclamen, Blue Primroses, Delphiniums, Lily of the Valley, Polyanthus,** and **Violets,** sent post free, on application to—

BLACKMORE & LANGDON,
TIVERTON HILL NURSERY, BATH.

ORCHIDS.

If you have a Greenhouse sufficiently heated to keep out the frost, write for our

Amateur's Guide,

giving treatment and all particulars. Illustrated.

MANSELL & HATCHER, LTD.,
RAWDON, via LEEDS.

Seedsmen
By Special Appointment
to
His Majesty
King George V.

SUTTON'S
SEEDS

Complete lists and full particulars of all the finest varieties of VEGETABLE SEEDS, FLOWER SEEDS, SEED POTATOES, etc., will be found in

SUTTON'S AMATEUR'S . . GUIDE IN HORTICULTURE AND GARDEN SEED CATALOGUE for 1912.

Write at once for a Copy of this Wonderful Publication.

SUTTON & SONS

THE KING'S SEEDSMEN, READING.

THE BEST,
THE PUREST
AND THE MOST
PRODUCTIVE.

Awarded more
than 500
GOLD, etc.,
MEDALS,
AT THE LEADING
EXHIBITIONS THROUGHOUT
THE COUNTRY.

VOL. LIV.—No. 3,035. SATURDAY, DECEMBER 30, 1911.

THE GARDENERS' MAGAZINE.

NOTE OF THE WEEK.

The Past Year.

The year that is now rapidly drawing to a close has been an eventful one, both in relation to the community at large and to those who are engaged in horticultural pursuits; and, as is usually the case when events of outstanding importance follow each other in rapid succession, not all were such as to afford unqualified satisfaction. Fortunately, the least satisfactory of the events were not specially connected with horticulture, and therefore do not come within our purview in a retrospect of the past twelve months. The first event of importance, and, indeed, the greatest of the year, was the Coronation of the King and Queen in June, and the unbounded loyalty to which expression was given on this auspicious occasion in all parts of the British Empire, and the complete success of the various functions associated therewith, while affording immense satisfaction, gave a promise of what is hoped may prove a long and prosperous reign. It is of interest to recall the fact, because of the indication it gave of the trend of public opinion in relation to flowers, that this great event gave rise to a considerable discussion on the relative merits of several flowers as the national floral emblem. The discussion, we may assume, interested those who took part in it, but as it left matters precisely where they had been for several centuries it may now be allowed to pass with the expression of the opinion that there is no prospect of the Rose being disposed from the high position it has, in its relation to the State, so long occupied. In referring to the garden in its varied aspects, it must be said that it involved much additional work in its management, and gave rise to increased anxiety and some disappointments. There were compensating advantages, but the year was one through which but few of those who are immediately concerned with the garden would willingly go again. In many gardens there was a shortage of bush fruits owing to the damage done by spring frosts. The strawberry season was appreciably shortened owing to the intense heat and the drought, and in not a few instances that came under our notice the raspberry crop was practically a failure from the two last-named causes. Apples and plums, which may be described as the most important of the hardy fruits, were abundant, and pears and cherries were more plentiful than for some years past, but they were not satisfactory crops. Apples attained a higher degree of development than for a long period, and as Scotland shared to the full in the great heat that was experienced in other parts of the United Kingdom, these fruits attained a size and colour that was quite exceptional across the Border to the advantage of the autumn exhibitions, and the fruit store. It is a matter of common knowledge that no such complete failure of summer vegetables has occurred within the memory of the present generation of horticulturists. There have been long-continued droughts and reduced supplies, but there has not been a year in which for many weeks the market supplies of home-grown kinds have been practically limited to potatoes, vegetable marrows, and New Zealand spinach. The last-named was less affected by excessive heat and long-continued drought than any other vegetable grown for its leaves, and proved of much value. Having regard to the difficulties experienced in establishing breadths of Brussels sprouts and other winter vegetables, it is surprising the supplies are so good at the present time as is generally the case. On the other hand, we have had this year one of the finest crops of potatoes that has yet been lifted in this country, both yield and quality being quite exceptional. In the flower garden there have been some disappointments, and the most strenuous endeavours were necessary to maintain the majority of the subjects in a progressive state. In many gardens herbaceous plants failed to attain their full development, or to continue in bloom for so long a period as usual; roses failed to blossom so freely as in the majority of seasons, and sweet peas, which are now so largely grown for the supply of cut flowers for the adornment of the home were far below the average in bloom production, and in gardens where the plants had not been provided with a deep root run they collapsed at an early period, and rendered but small service either in contributing to the attraction of the garden or supplying cut flowers. Deep cultivation is always advantageous both to ornamental plants and useful crops, but in a dry summer such as that of the present year, its value cannot be over-estimated. The exhibitions held during the summer were more variable than usual; some were less extensive and attractive than in previous years, and not a few suffered financially from the high temperature that was experienced on the dates on which they were held. This point is of interest because of the prevalence of the belief that the weather cannot be too fine for a flower show, but this is a mistaken belief, as proved in so many instances that have come under our notice. It is essential to success that the weather be dry, and provided this be the case the number of visitors will be much larger with the thermometer at 70 degrees than at 80 degrees. It is gratifying to be able to record the fact that the exhibitions and meetings of the Royal Horticultural Society were, as a whole, highly successful. At the Temple Show there was a glorious display of the various plants and flowers available for exhibition in May, and the summer show at the Olympia was a great success horticulturally, but the financial results were hardly equal to expectations. The weather was intensely hot at the time, and the general public failed to take advantage of the opportunity they had for visiting the exhibition in the evening at a cheap rate. The show of British-grown fruit held in October was the most successful gathering of its kind held within recent years, the dis-

MR. W. B. GINGELL.

play of fruit being exceptionally good and the attendance of Fellows and other visitors much above the average. The high level of the fortnightly meetings was well maintained, and the crowded state of the Horticultural Hall on the occasion of the majority of them was a sufficient proof of their continued popularity. The special societies have, on the whole, had a successful year. The National Rose Society continued on its upward course, and completed its year's work with a larger balance to its credit and an increased membership. The National Sweet Pea Society also achieved much success, although the season was far from favourable to sweet peas. Of the National Chrysanthemum Society, Perpetual Carnation Society, National Dahlia Society, Midland Daffodil Society, Midland Carnation Society, and some other of the special societies, it may be said that they did excellent work in their several spheres of usefulness. The activities of those engaged in the improvement of the several classes of plants that contributes to the attractions and usefulness of the garden were in no way less pronounced than in past years. For an unquestionable proof of this we have only to turn to the lists of novelties that received awards in the course of the twelve months which form an important feature of the "Gardening Year Book" for 1912, which has just been published. Therein we find that some three hundred new introductions received awards, and that new garden flowers total 159, new orchids 106, and new plants other than orchids 73. The number of new orchids is of much interest as indicating the popularity enjoyed by these fascinating plants and the energy that is being brought to bear upon the development of new forms. In point of numbers chrysanthemums rank first among new garden flowers, roses come next, and carna- order. In counting up our gains and re- tions and dahlias follow closely in relative calling to mind the splendid work that has been accomplished during the year, we are reminded that we have lost several distinguished botanists and horticulturists who, in the course of their lives, did much for the advancement of botanical science and horticultural practice. Chief among the botanists whose deaths we have had to record were Colonel Beddome, who is best known for the work he accomplished as head of the Indian Forestry Department, and Sir Joseph Hooker who will be remembered as the most distinguished botanist of his day. The amateurs included Mr. W. E. Gumbleton and Mr. R. N. G. Baker, the first known for the active interest he evinced in rare plants, and the second famous as a grower and exhibitor of roses. Prominent among the names of the practical horticulturists who have passed away is that of Mr. James Douglas, who will long be remembered, not alone by florists, with whom he was closely associated, for his ability and integrity, and for the immense amount of good work he accomplished in the advancement of horticulture. The year which has passed, while containing much upon which we can look back with a strong sense of satisfaction, was beset with difficulties, and we trust in the interest of all concerned, with the garden and its management, that in the coming year the climatic conditions may be of a more normal character.

Mr. W. B. Gingell, the superintendent of the London County Council's very beautiful park at Dulwich, is a clever, but withal a modest, man, and it has not been easy to secure his portrait for publication. Mr. Gingell commenced his gardening career under his father, who was head gardener to General Hall, in Sussex, and he has very keen remembrances of his initiation into the art of gardening in 1868, as that year was a hot and dry one; the water supply gave out, and he had to assist in carting water nearly a mile, day after day, to keep the glass department and the flower and kitchen gardens supplied. In 1874 Mr. Gingell went to Cyfarthfa Castle, in South Wales, then a famous place, and where pineapples were grown by the thousand and grapes by the ton, the latter in eleven vineries, some of which were over 100ft. long. Subsequently he held various appointments at Shoreham Place, Wadhurst Park, Arle Court, Furze Down, Mentmore, and Blenheim Palace, and then became head gardener to the Earl of Harrowby, at Sandon Hall, Staffs. In 1890 he was appointed superintendent of Ravenscourt Park, Hammersmith, and this position he held with very great credit for twenty years, only giving it up on his transfer to the more important position he now occupies at Dulwich. This is a very bare record, but it is so because Mr. Gingell would not wish it to be otherwise.

Our First Issue in the New Year will be of special interest to our readers. It will contain articles devoted to such widely differing subjects as the Horticultural Education Movement, the Rose Season of 1912, New Orchids of 1911, A Famous Suffolk Garden, Revolution in Vegetable Culture, New Trees and Shrubs of 1911, Sweet Pea Progress, the Great International Horticultural Exhibition of 1912, and Forestry as a Profession. These will be contributed by well-known writers. The illustrations will be numerous and quite up to that high standard of reproduction with which our readers are familiar, and of which we are pardonably proud. With the issue of January 6 we shall publish the Gardeners' Magazine Almanack for 1912, attractively printed in colours, and giving the dates of the principal horticultural exhibitions for 1912. The Almanack will be of double-page size, and is published free of charge, therefore we urge our readers to see that they receive a copy with the first issue of the New Year.

A First Prize Railway Garden.—In the competition during the past year for the prizes offered by the Midland Railway Company for platform gardens, the premier award was made to the garden at Five Ways Station, Birmingham. The display of flowers was highly meritorious throughout the summer months, and the success achieved is all the more remarkable from the fact that the garden is near the mouth of a tunnel from which sulphurous fumes are constantly being emitted.

A Beauty Spot for Shoreditch.—We have on a previous occasion told the story of how Sir Robert Geffery, a wealthy member of the Ironmongers' Company, who died early in the fifteenth century, left a sum of money for the provision of almshouses in or near London. The charity was left in the management of the Company, and eventually a site was selected in Shoreditch and here, to the designs of Sir Christopher Wren, a quadrangular building, one-storied, accommodating about fifty pensioners, was built. This building, known as Ironmongers' Almshouses, will be familiar to all who have passed down Kingsland Road, because of the simple dignity of the building, and also because of the trees, grass plots, and flower beds in front. A few years ago the Ironmongers' Company wished to sell the site to the Peabody Trustees, and build almshouses out in the suburbs; several public bodies opposed the sale, as also did the Charity Commissioners, but by means of an old dormant Chancery suit the Company presently obtained permission to sell. The loss of the almshouses and garden seemed certain, but as a result of heroic efforts to secure the site for the public good, the Peabody Trustees offered to surrender their purchase, the London County Council offered £16,000, and the Shoreditch Borough Council £6,000, towards the £24,000 needed to place Sir R. Geffery's charity on a safe settlement. A local committee, after eighteen months' hard work, secured the remaining amount, the London County Council promised to take charge of the garden, and so now the old-world beauty spot will be preserved to Shoreditch, and the Metropolis will keep in its midst a bit of Wren's London.

Potato Crop, 1911. — The crop of potatoes harvested in the course of the year now drawing to a close is somewhat larger than in 1910. The area under potatoes in Great Britain was 571,808 acres, and the estimated yield 3,830,218 tons, these figures representing an increase in the area of upwards of 30,000 acres, and in the crop of about 350,000 tons, as compared with last year. The average estimated yield per acre was 6.70 tons, as compared with 6.44 tons in 1910 and 6.08 tons the average of the ten years 1901-10. The quality of the potatoes, as so well known, is exceptionally high this year.

Colley Hill, Reigate.—With reference to the effort that is being made to obtain the necessary funds to purchase Colley Hill, Reigate, and to preserve it for public use, Mr. G. H. Hamer, secretary to the National Trust, writes: "May I call the attention of your readers to the actual state of affairs? The sum required to complete the purchase is £7,700, and of this amount some £2,000 has been actually given or promised. It is, therefore, clear that a great effort must be made if Colley Hill is to be saved, for the option of purchase expires in February next. A Shilling Fund has recently been instituted in Redhill and Reigate, and the widespread response to this appeal shows that the inhabitants of the locality are keenly interested in the preservation of this open space. The National Trust, while it warmly welcomes the support of subscribers of small sums, sincerely hopes that larger amounts will be forthcoming in the near future. Subscriptions may be sent to me at 25, Victoria Street, S.W., or paid direct into the Reigate branch of the London County and Westminster Bank."

Soil Sterilisation Lecture.—With reference to Mr. G. Harris's communication on this subject, which appeared in our issue of the 23rd inst., the Rev. J. Bernard Hall, secretary of the North of England Horticultural Society, writes: Will Mr. George Harris allow me to draw his attention to an omission on his part? At the Northern Fruit Congress at Newcastle he lay low like a torpedo-boat and then in the discussion fired off a torpedo at the battleship opposed to him. As a matter of fact, the torpedo had no explosive head, and, although it hit the battleship, yet he quickly drew off and steamed away before any of the lecturers had received the command to fire. I reckon that if he had only stayed to receive the fire of the 12in. guns, he would have been blown to pieces. It's all very well getting in your shot, but is it the game, is it sporting, to clear off and then write to the papers? If science is "organised common sense," or, as was suggested at a Leeds meeting some time ago, "distilled common sense," surely such exponents of science (and, if I may add, in Mr. Chittenden's case, applied and practical science) were worth listening to, when they got up to answer the questions put to them. Mr. George Harris has our sympathy, and the lectures were arranged to solve his troubles, but in future he must not "run away to fight another day." Intensive culture is bringing its own special troubles, but we have good men and true to give advice that is both truly scientific and thoroughly practical, if you'll wait and listen to their answers.

The Gardening Year Book for 1912, which has just been published, possesses so high a degree of value as a work of reference on gardening that all who are more or less concerned with the garden and its management should at once obtain a copy and place it where it can be readily consulted. Therein they will find an ample diary, with a code of garden management for the year conveniently arranged under the several months. Then follow lists of the new plants, orchids, garden flowers, fruits and vegetables that obtained recognition during the past year. Of special importance are the sections wherein concise notes on the cultivation of annuals and biennials, hardy perennials, conservatory and greenhouse plants, hardy and other bulbs, hardy fruits, and vegetables, are given, and the finest varieties in the several classes pointed out. In addition to other cultural matters, and chapters on insect and fungoid enemies, there are directories of the public parks and gardens, and the botanical and horticultural societies of the United Kingdom. The work is fully illustrated and is a practical guide for the whole year. It is a splendid shilling's worth. It may be obtained from all booksellers, or post free, price 1s. 3d., from the publishers, 148 and 149, Aldersgate Street, London, E.C.

Gardening for Soldiers.—By a special decree of the Austrian War Office fruit and vegetable gardens are to be formed on waste ground around barracks, drill yards, rifle ranges, etc. The soldiers will be encouraged to cultivate these in their spare time, and any profits derived from them will be divided among the men. It is hoped that the plan will not only provide the soldiers with a profitable and interesting occupation in their spare time, but will enable them to learn much that will be an advantage to them on their return to civil life. A similar plan has proved most successful in Germany.

Variation in Foxgloves.—Mr. N. C. Macnamara gives some interesting particulars of the variation in the plants raised from a packet of seeds of the foxglove (Digitalis purpurea). The seed was sown in 1906, and in June of the following year fifty-four plants raised from the sowing were planted in a shrubbery of fir trees with an undergrowth of laurels. Of these fifty-one were normal, but the three remaining plants were sports. In the first of the sports the flowers of the lower half of the stem possessed only a bifid upper petal and seven stamens united at their bases. The flowers of the upper part of the spike were normal. In the second, which was well grown, and attained a height of fifty-four inches, the flowers had throughout the whole length of the spike a bifid upper petal, seven stamens, and style. The upper part of this spike was isolated: it produced abundant self-fertilised seed. The third sport had a spike which reached a height of sixty inches, and from base to apex the flowers consisted of nine stamens and a style, with no vestige of petals. In Mr. Macnamara's opinion, a certain number of the foxglove seeds sown in the year 1906 contained elements in a condition such as that described by de Vries as being "impressed by an impulsive mutability," for some of the flowers produced by these seeds were sports. Seeds from these sports produced their like in 1909; and, further, these latter plants produced some terminal flowers totally differing in character from the parent sport from which they were derived. Seeds from these terminal flowers produced their like in the year 1911; so that there are now two different strains of foxglove plants produced from the seeds sown in 1906, and these strains have been produced from self-fertilised flowers, that is, from flowers carefully protected from insects or other means of cross-fertilisation.

Trials of New Roses at Bagatelle.—We are informed by M. J. Forestier, the Conservator of Promenades of Paris, that a trial of new roses will take place in the Bagatelle rosery, during 1912 and 1913, as in previous years. These new roses are contributed by the raisers, and we are requested to state for the information of raisers who have not previously sent roses for trial, that as far as possible the plants should have been grown in pots, that at least five plants of each variety must be sent to reach the rosery before April 15, 1912, and that if special treatment is desired, an intimation thereof must be sent with the roses. These, we are informed, will be planted in the beds in the rosery soon after their arrival, and remain therein until the month of October of the second year, to give the members of the jury an opportunity of having them under observation during two seasons, and thus be in a position to determine their relative merits both as regards flower production and habit of growth. The parcels containing the roses should be addressed to "Monsieur de Conservateur des Promenades de Paris (Roseraie de Bagatelle, au Bois de Boulogne, à Paris) en gare de Neuilly-Port-Maillot-Paris."

The British Gardeners' Association. A meeting of this association will be held on Friday, January 5, 1912, at 7.30 p.m. in the Technical Institute, Altrincham, Cheshire, when an address on the "Advantages of Joining the B.G.A." will be given by Mr. J. Weathers, general secretary. All gardeners in Altrincham and district are invited to attend.

Gardeners' Social Meeting at Kew.—The fifteenth annual social meeting of the gardeners in the Royal Gardens will be held at the Boat House, Kew, on Friday, January 12, 1912, commencing at 7 p.m. All past Kewites are cordially invited to attend, and it is hoped that past Kewites who are in or around London on that date will make an effort to be present if possible. We are asked to state that it will greatly facilitate the arrangements if those who intend being present will notify their intention not later than January 4 to the Hon. Secretary, Mr. G. W. Butcher, 34, Alexandra Road, Richmond, Surrey.

Sweet Peas for Garden Decoration.—In view of the near approach of the season for purchasing seeds it is interesting to notice that the Royal Horticultural Society's Floral Committee have Highly Commended the following sweet peas for garden decoration, after the consideration of about seventy varieties grown at Wisley in 1911: Aurora Spencer, Princess Victoria, Ivanhoe, Elsie Herbert, Dorothy Eckford, Gladys Unwin, Isobel Malcolm, Mrs. Collier, Lady Althorp, Asta Ohn, Etta Dyke, Elfrida Pearson, Apple Blossom Spencer, Tennant Spencer, Dobbies' Sunproof Crimson, and Countess Spencer.

NEW WAYS OF GROWING PERENNIALS.

The ubiquitous herbaceous border involves frequent work, thinning out being necessary as the vigorous plants develop. In a small garden a better effect can be gained from herbaceous beds, which are replanted every second year. A circle of six feet in diameter may contain a good combination of perennials, a group of three vesse and carmine phloxes in the middle, a ring of Madonna lilies, or giant white single columbines, then a row of mingled crimson, pink, and white hybrid pyrethrums, with a double edging of pansies and pinks. Another suitable combination would consist of white phlox, Oriental poppies, Lychnis Haageana, lemon carnations, and gold and white violas.

A giant square or oblong bed, on a lawn, looks well filled by irregular groups of perennials, just as the herbaceous border is usually arranged; this enables a great number of dwarf subjects to constitute the marginal row, which aids both in the attainment of companion-colour shows and of a succession of blossom. The tallest plants must occupy the middle space, medium growers coming next, then plants of about a foot in height, finally the low ones, such as aubrietias, alyssums, saxifrages, Geranium cinereum, Bellis perennis, Arabis variegata, violas of best habit, pinks, polyanthuses, primroses, and Viola cornuta.

An original scheme that involves some initial labour is to create a raised bed, in tiers, for the cultivation of the best species of perennials. Several barrow-loads of loam, mixed with manure, leaf-mould, vegetable ash, and brick rubble, with road-sand if the ground is by nature wet and heavy, must be thrown on to the square or oblong plot. The next proceeding must be to level two or more feet as an edging, then insert strips of wood at the back of this, forming a support for another levelled portion several inches higher than the first. This work can be repeated until the centre of the bed is almost reached, the result being a series of tiers. If the space is large, the middle height will be considerable; in a smaller space the depth of the wooden bars may be greater, so as to obtain a better height. When perennials are skilfully arranged in such a bed the effect is very beautiful, the plants being shown off to perfect advantage. Chrysanthemums, Japanese anemones, the modern phloxes of dwarf habit and giant trusses, Coreopsis grandiflora, hybrid pyrethrums, Campanula latifolia, Campanula persicifolia, chelones, heucheras, Lychnis chalcedonica, Lychnis Haageana, Oriental poppies, pæonies, pentstemons, the lesser Michaelmas daisies, achilleas, columbines, centaureas, clove carnations, sweet williams of giant varieties, the splendidly brilliant Scotch striped antirrhinums, large-blooming pinks, double arabis, mossy saxifrages are especially suitable.

A sufficiently large round or oval bed will give an admirable display thus constructed and filled, a high mound of blossom being the result, but the work of filling the wooden strip supports is, naturally, more difficult; probably a narrow strip of very fine-meshed wire netting would suffice to hold the soil in, however, and could be easily bent into shape.

Perennials in tubs and large pots are not sufficiently cultivated. They make handsome effects when placed at summer-house entrances, outside porches, or on paved walks. A really excellent scheme is to grow them for ranging outside the walls of the spanroof greenhouse, where a border bed is seldom desirable. To safeguard pot plants of hardy species during the worst winters they can be sunk in cinder-beds to the rims, and a mulch of spent manure laid over. These cinder-beds can be made upon gravel, stone, or any waste land. Pots of cut-down perennials can also occupy frames or pits may be dug out in the open to receive them, and sacks or cocoanut-fibre refuse, bracken, dried heather, or gorse boughs, will sufficiently protect the plants then. Delphinium formosum is very attractive as a pot specimen. Madonna lilies, pink Japanese anemones, Chrysanthemum maximum, Britannia, or King Edward, the Plume poppy, Bocconia cordata, phloxes, large-flowering Michaelmas daisies, Scabiosa caucasica alba, prove charming.

For shady portions of gardens a supply of suitable tub-grown perennials can be specially recommended, as offering floral beauty where none could otherwise be. As soon as the florescence fails, or the plants begin to suffer for want of light and warmth, they should be removed to a sunny place. Then there are shade-enduring subjects of considerable beauty, notably white foxgloves, herbaceous phloxes, day lilies, golden rods, shrubby hypericums, and the tall Pyrethrum uliginosum. These will not fail to bloom freely. M. H.

APPLE COX'S ORANGE PIPPIN.

My experience with this apple does not coincide with that of Mr. Garner. While obtaining nice crops of fair fruit, I have much trouble with canker in the branches, and there is a general check to that freedom of growth we like to see in apple trees. Cox's Orange Pippin is an easy apple to grow in soil that is not heavy, wet, cold, and retentive of moisture; a well-drained loam is what this apple revels in, and this we all have not. Here the soil is heavy, closely approaching clay, but not actually clay. The subsoil is a hard pan of stiff material, much mixed with huge flints, quite an undrained base, and in this the roots do not find a congenial rooting medium. I may be told the roots have no business there. That may be so. In such a soil it is difficult to keep the roots in the right place.

This has been an exceptionally good season for this apple in an uncongenial soil; the trees have made quite good growth, with clean shoots, showing not the slightest sign of canker in the current growth, whereas in a bad season the young shoots decay in the autumn so much as to necessitate pruning them entirely away. This is caused by an excess of moisture at the roots, rendering the subsoil so cold as to cause a check to the proper maturation of growth. Under such conditions the growing of Cox's Orange Pippin apple is not worth the trouble, eventually ending in waste of space and a loss of time in establishing trees of a more desirable character. E. M.

Rhododendron Shilsoni.—It was recently advised in THE GARDENERS' MAGAZINE, page 286, to plant this rhododendron in bold groups of a dozen or more, but to many the cost would prove to be an important obstacle. The lowest catalogue price that I can find for this beautiful rhododendron is seven shillings and sixpence each. Plants at this price would, of course be small ones, and it is questionable if specimens, to be quickly effective, could be obtained at less than a guinea each. Furthermore, the stock, except small plants, is in most cases so limited that few groups such as that referred to would be possible. The propagation and growth during their earlier stages of these rhododendrons is by no means rapid, hence they always realise good prices.—W. T.

CLEMATIS INDIVISA.

I am rather surprised that this handsome greenhouse trailer is not more extensively grown than it is—at least, to my knowledge. I believe more plants are cultivated in northern than southern gardens. In one garden on the north-west coast I had charge of some houses in which this variety was very successfully grown. The position was certainly not an ideal one, as the greenhouse had been excluded from much sunshine through a more recently-erected building, but the branches were covered with the creamy-white flowers in spring time and looked very handsome trained on wires immediately above the pathway; the extreme ends of the shoots were allowed to depend gracefully from the wires.

In small houses, and where there is not much space to spare for making up borders, the plants will do very well in large flower pots, if top-dressed annually and fed judiciously. Light, fibrous loam two parts, leaf-soil one part, and peat and sand one part, form a very good compost for the plants. Too often such climbers are planted in sour soil under the stage, and then cultivators wonder why they fail. It is best to keep both pots and main stems exposed to the full light. G. B.

DWARF ŒNOTHERAS.

The dwarf and trailing species of the evening primroses provide a welcome addition to the list of plants suitable for rock garden cultivation. They are easily grown, providing a fairly rich soil is afforded them, and the species with trailing habit should be planted where the growth can hang over a ledge of rock. In the cool of the evening the large blossoms are highly appreciated, as some of them are deliciously scented.

Œ. marginata (or eximia) is undoubtedly one of the best; it has large white blossoms, measuring from four to five inches across. Its growths usually die back in the winter and shoots appears in spring, which flower continually during the summer. Œ. macrocarpa, like the preceding, has a trailing habit, but with large yellow flowers, and requires a warm position. It is a beautiful species, well deserving a prominent place. Œ. speciosa rosea has rose-coloured blossoms, and when planted where its slender growths can hang over a stone, is very effective.

Œ. taraxacifolia has flowers that are white when first they open, but assume a pinkish tinge with age. When planted in cold damp soils, the plants often die off during the winter, but when given a warm position in light soils, they will pass through the winter safely. Œ. pumila is the smallest species, growing only about four inches high, and bearing tiny yellow flowers. Œ. Youngi, Œ. Fraseri, and Œ. Pilgrimi are of upright growth, reaching the height of about twelve or fifteen inches, and all bear yellow flowers.

Regarding their propagation, the three last-named species are increased by root division, either in early autumn or spring. They should be carefully lifted, and divided by splitting the woody part in the centre of the clump, otherwise the side shoots will break off without any roots. Œ. macrocarpa, Œ. marginata, and Œ. speciosa rosea should be propagated by cuttings, which will root freely if taken in the early part of the autumn, inserted in sandy soil, and kept close in a cold frame.

In dealing with Œ. taraxacifolia the simplest method to adopt is to raise a stock from seed which should be sown in April or May, in pots or pans, filled with light sandy soil, and placed in a cold frame. When the seedlings are large enough to handle, they should be transplanted into seed boxes, eventually potting them up. Plants treated in this manner will usually flower during the following year.

Gnaton Gardens. E. C. POOLEY.

CLEARING UP FLOWER BORDERS.

Herbaceous borders will now require cleaning and putting straight for the winter. If there is no necessity for lifting and dividing the plants, the border should be given a top-dressing of decayed manure. Old hotbed material answers very well for this purpose, providing it is sufficiently rotted to prevent it blowing about. In dealing with borders, where the plants have become overcrowded, the work of thinning should be taken in hand as early as possible. This operation requires skilful handling, otherwise there will be great confusion, and only those subjects which actually are in need of lifting and dividing should be touched. It is quite a mistake to dig up every plant the border contains (and this is frequently done), for there are many plants which have a strong dislike to being disturbed. Among these may be mentioned Lilium candidum, eremurus, incarvillea, and heuchera, all which should be allowed to remain untouched, unless it is absolutely necessary to move them. It is quite safe to handle such plants as Michaelmas daisies, phloxes, helianthuses, heleniums, aconitums, solidagos, etc., and these can be lifted, divided, and replanted to advantage if anyway overcrowded. It is rather late in the season to attempt to disturb delphiniums or pæonies, but if this is necessary, it must be carefully carried out. If the border is a large one, rearranging should be carried out in sections, dividing it into suitable lengths, so that the plants may not remain out of the ground long. Each subject should be carefully placed on one side by itself and covered with mats to protect the roots from any ill effects which might be caused by the weather. When preparing the ground for replanting it should be deeply dug and enriched with decayed manure, bearing in mind the fact that the plants are to remain where planted for two or three seasons, and that many are gross feeders. When splitting up the old clumps, the outside portions should be selected for replanting, and the centres thrown away. The growths are much stronger on the outside than in the middle, and produce vigorous plants in a short time. When planting is completed, the surface of the border should be top-dressed, as advised, where the plants are not disturbed.

E. C. POOLEY.

Anthurium splendidum.—With reference to the note by "W. T." in the GARDENERS' MAGAZINE of December 16 (page 940), on this handsome species, I am afraid I cannot enlighten him as to whether it is still in cultivation. I myself have not seen it for some years. When penning my article, I had in mind several fine healthy plants of the species that were under my care nearly two decades ago, when I had charge of what was then considered one of the best representative private collections of stove plants in the country. I well remember the plants were purchased from Mr. William Bull, at Chelsea, and that we grew them well in one of the stoves among other choice tropical plants requiring similar treatment. All the anthuriums were particularly well grown, and some of the specimens remarkable for their foliage alone were in tubs 3ft. in diameter. A high temperature and humid atmosphere were kept up, and the noble proportions of the anthusiums indicated that they were perfectly at home.—H. T. MARTIN.

THE DECLINE OF THE BIG CHRYSANTHEMUM.

Another season's experience emphasises the feeling created last year that the interest in large chrysanthemum blooms is gradually diminishing. The enthusiasm felt in the shows themselves, even by interested cultivators, is nothing as compared to that of a decade ago. To many others, as well as myself, this is regrettable; even the most enthusiastic person is forced to admit that chrysanthemum shows do not create the interest they did some time ago. No doubt there are many reasons for this lack of interest and enthusiasm, but whether we shall all agree as to the true cause and the need for or creation of a revival is another matter.

Visiting many shows and reading the reports of others, even the most ardent supporter of the flower, whether he be financially interested or merely an admirer, cannot but realise the truth of the assertion. Naturally our thoughts turn to the so-called parent society—the National Chrysanthemum Society—to see how the November display was affected. Taking the leading class for Japanese blooms, forty-eight distinct, there were but two competitors! Writing from memory, as many as a dozen have taken part in the same competition a few seasons ago. Even for twenty-four blooms, there were but six entrants, and I have assisted in judging this class when there were twenty-six. One more example, what is known as the great vase class, for twelve varieties, three blooms of each, this produced but two exhibitors. When we find such a poor response to the schedule invitation of the leading society one is forced to the conclusion that there is a considerable lack of enthusiasm. On the other hand, we find that trade exhibits are finer and more numerous than ever, with the one exception, perhaps, that they do not contain such a wealth of new varieties in the many sections they used to do.

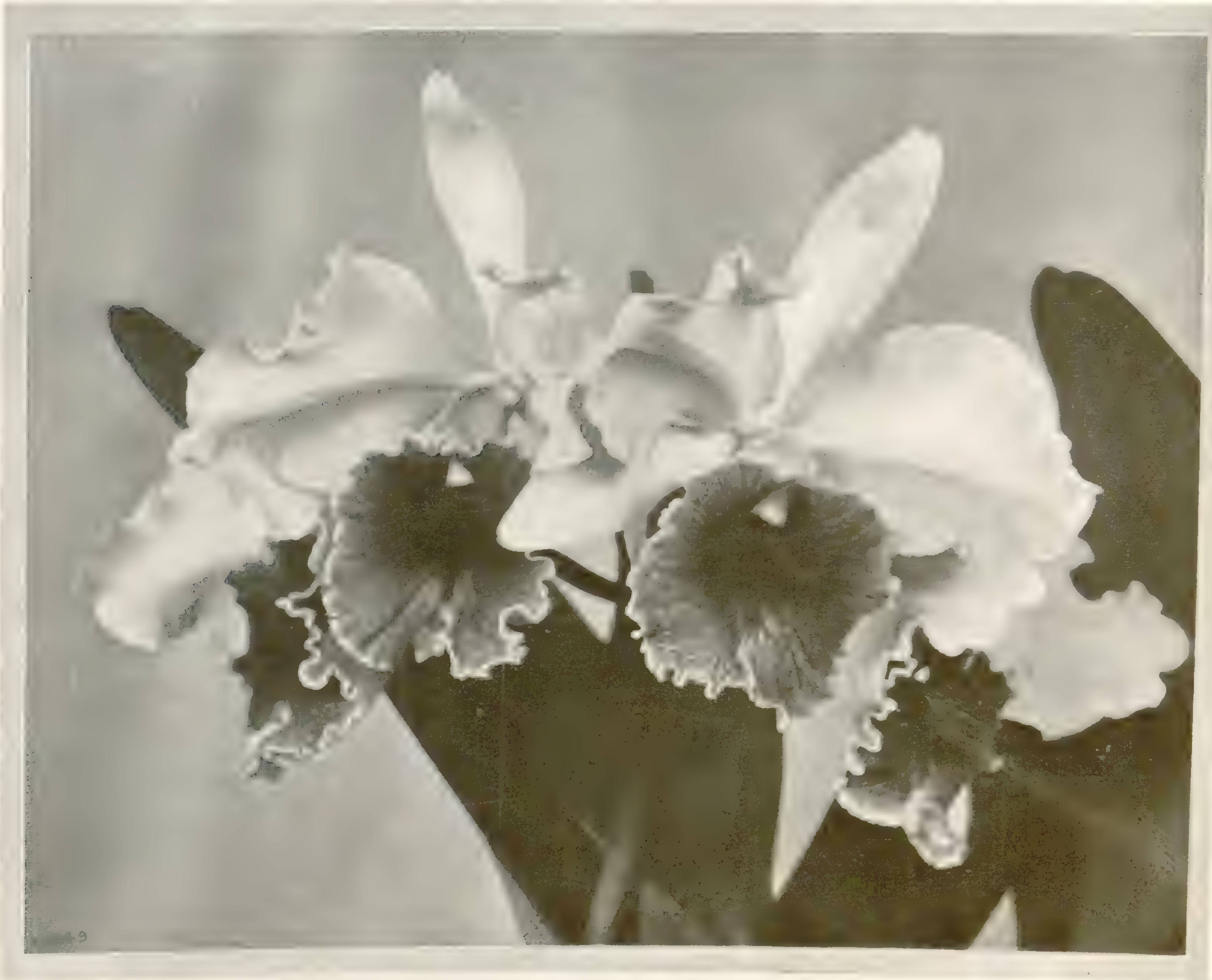
One is forced to the conclusion that some of the meetings are held too early in the season to admit of many of the varieties being fully developed, and especially does this apply to the incurved, anemone-flowered, and reflexed types of flower. We must not forget, too, how the shows must suffer from the absence of such exhibitors as Messrs. Vallis, Bible, Hall, Nicoll, Higgs, and Jefferies. This year we missed, especially, Messrs. Drake, Leck, and Stevenson from our English meetings, the latter only temporarily, though, we hope, and now comes the announcement that Mr. Mease has at last given up, although loth to do so, and I am sure no exhibitor will be more missed with regret.

Autumn shows sadly miss such an army of exhibitors, and there may be more. Unfortunately, too, for the flower, these tried exponents are not easily replaced; we do not see their gaps filled by new men.

Now what are the causes of the decline in big blooms at the shows? That is the point I am anxious to elucidate. In the first place, there are not nearly so many large blooms produced, either for competition or private use; ladies have tired of the monotony of even the Japanese section, brilliant though they are in so many ways. The cost of cultivation has much to do with the reason in many gardens. The increasing cost of the general upkeep of gardens weighs heavily on some shoulders, and as large blooms of chrysanthemums are purely a luxury, they are one of the first things to be cut out. The increase in, the utility of, and the general admiration for winter-flowering carnations has also had its effect on large chrysanthemums, and the latter have had to make room for the former in no uncertain manner. Single-flowered chrysanthemums have leaped quickly into public favour, and their merits as decorative flowers have become so widely appreciated now that the colours are very varied. Moreover, considering the ease with which the flowers can be grown, and the quantity of blossom obtainable in a minimum of space, the section deservedly occupies a commanding position.

The great range, too, now obtainable in early out-of-door chrysanthemums, coupled with the open favourable early autumn weather, so prolongs the flowering season that indoor chrysanthemums are not so eagerly sought after as they were when the Desgrange family was the only type of out-door-flowering varieties. Under glass, too, we have such a plethora of varieties grown purely for decoration, of such types as Soliel d'Octobre, Niveus, and the later sorts, that less space is now given up to the large Japanese blooms; varieties are now grown that produce from twenty to thirty fair-sized blooms on each plant, as compared with the three huge blossoms and sometimes but two, on one plant.

I cannot but think that the reduction of

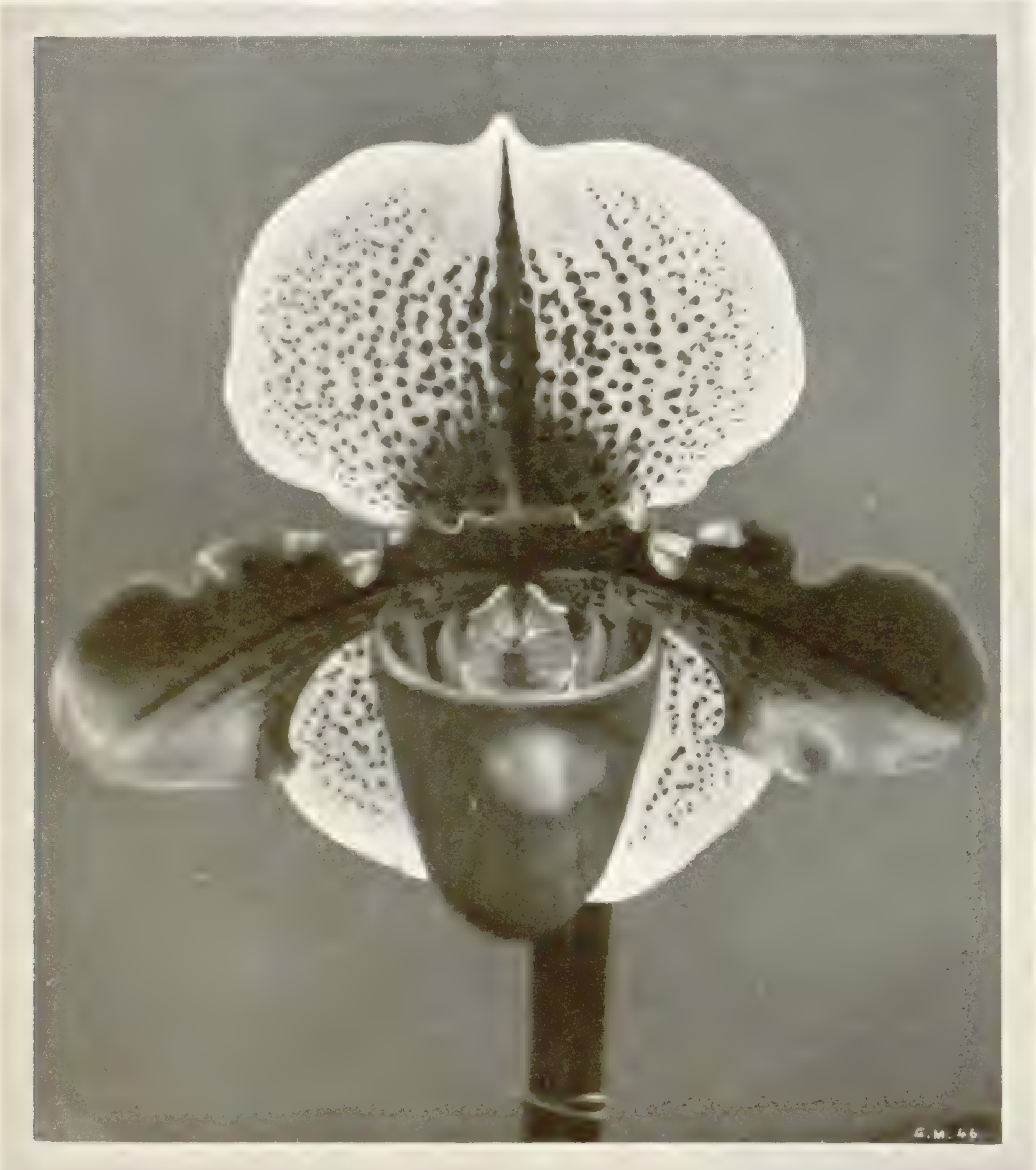


LÆLIO-CATTLEYA NELLA.

A handsome free-flowering hybrid, flowers very deep, dark rosy-purple, with old gold markings in the throat. F.C.C., R.H.S., December 19. Messrs. Jas. Veitch and Sons, Chelsea.

the prizes offered at the leading classes at many shows has had much to do with a lack of competition and enthusiasm; on the part of executive bodies I consider this is an error of judgment. I shall be met with the observation that, as the public do not support them, the committee must, therefore, reduce prizes. To this I say "No." You can reduce the number of classes (there are several in all prize schedules that would not be missed), for if you deprive the public of their chief attraction, naturally their support is lost.

The lack of new and highly desirable varieties as an improvement upon older sorts is an unmistakeable fact. It is safe to say we have no variety now in any one colour that stands out in the same manner that Mdme. Carnot did as a white, and F. S .Vallis as a yellow; and, going back further, it is doubtful if we have aught as good as Boule d'Armas in 1882, or even Mdme. Clemence Audiguier three years earlier. There is no denying the fact that we are badly in want of a pure white outstanding variety now that Mrs. A. T. Miller is on the wane, and in the same way there is an opening for a desirable yellow.



CYPRIPEDIUM LORD WOLMER, WESTONBIRT VAR.

Flowers large, white, with purple spotting, green and brown. A.M., R.H.S., December 19. Lieut.-Colonel Sir George Holford, Westonbirt, Tetbury, Gloucester.

One of our best authorities as a raiser, whose opinion I value most highly, tells me the downfall of the Japanese varieties is entirely owing to the folly of taking them off the boards, and, he adds, perhaps also to the absence of good money prizes. I do not think it will be denied that the introduction of vase classes has done much to check the introduction of new varieties of Japanese blooms. At the most, as at Edinburgh, only fifteen varieties are required in any one class, and that is quite a small number to obtain; when the best prizes were offered for four dozen blooms, distinct, so many more varieties were required to be grown, but if there are no purchasers, vendors are not to blame, because it is a costly matter to grow so many new varieties.

In England the bulk of vase classes do not extend beyond eight varieties, and in those cases the prizes are not adequate to the cost of transit, and this latter item has done much to limit competition. At Northern shows a vase class of any pretension is almost unknown; certainly it is not a popular item in the schedule. When first introduced the method of arranging the blooms in vases appealed to some critics, but experience has shown that the change has not been for lasting good.

I fear there is still another reason why large blooms have become unpopular in private gardens. Too much space, time, and expense have been devoted to their production, mainly for exhibition, and too little regard paid to the smaller or more decorative varieties, consequently some slight friction has been caused, ending, as was sure to be the case, and properly, too, in the complete cessation of exhibiting in that department. The sensible gardener who puts his employer's interest first is bound to score in the long run, but, unfortunately, that is not the universal rule. I might say more, but fear I have already trespassed too far on valuable space, and must, perforce, leave the remedies for future occasion.

E. Molyneux.

NEW PLANTS, ETC.

BUDDLEIA OFFICINALIS.

This species bears a general resemblance to B. asiaticus, and, like it, is a greenhouse subject. B. officinalis was collected by Mr. E. H. Wilson, in China. It has green leaves, with whitened undersides, and downy stems. The spikes of bloom are six or eight inches long, and composed of small clusters of pink flowers, each little flower having a yellowish throat. A few plants in pots would prove useful in a conservatory or winter garden during the winter, because of the sweet honied fragrance emitted. A.M., R.H.S., December 19. Messrs. J. Veitch and Sons, Chelsea.

CYPRIPEDIUM ROYAL SOVEREIGN.

A striking cypripedium, with large flowers and a particularly broad oval dorsal sepal. This organ is blush white, with a green base, and is freely spotted with bright purple. The brownish petals have dark spots. F.C.C., R.H.S., December 19. Messrs. Sander and Sons, St. Albans.

LÆLIO-CATTLEYA NELLA.

A very handsome, rather dwarf, and very free-flowering hybrid, that should prove very useful, especially if it flowers regularly during the winter. The large flowers are of a deep dark rose-purple hue, the lip being very large and well formed, with old gold veinings in the throat. F.C.C., R.H.S., December 19. Messrs. Jas. Veitch and Sons, Chelsea.

CYPRIPEDIUM LORD WOLMER, WESTONBIRT VAR.

This is a very attractive hybrid, and one in which a very fine form of C. Hera was used as one parent. In the new variety the central sepal shows a remarkable development, and is as large and almost as attractive as the dorsal sepal. The latter is broad and rounded, white with a greenish base, and prettily spotted with purple. The outspread petals are bright green and brown, and the lip is light yellowish-green. A.M., R.H.S., December 19. Lieut.-Colonel Sir G. Holford (grower, Mr. H. Alexander), Westonbirt, Gloucester.

ODONTOGLOSSUM CRISPUM ALCYONE.

A charming variety that carried a graceful spike of fourteen large and beautiful flowers. The petals are rose-tinted, and have a few large spots of bright red-brown; while towards the centre of each white petal there is a cluster of tiny red-purple dots. A.M., R.H.S., December 19. J. Gurney Fowler, Esq. (gardener, Mr. J. Davis), Glebelands, South Woodford.

CYPRIPEDIUM ACTÆUS DURBAR.

The massive and somewhat chubby flowers of this variety of C. actæus were not yet fully expanded, but they showed a remarkable development of breadth and roundness in all the parts. The dorsal sepal is very round, large, and the petals have great breadth for their length, while the short pouch has a wide mouth. Green, white, brown and purple are the colours represented, the latter in the form of spottings on the dorsal sepal. A.M., R.H.S., December 19. Messrs. Charlesworth and Co., Haywards Heath.

CYPRIPEDIUM INSIGNE GATTON PARK VAR.

This variety shows what may be done to improve an old favourite orchid by cross-breeding the finer varieties. The Gatton Park form is derived from C. i. montanum magnificum and C. i. Harefield Hall. The flowers are bold, large, and carried on tall stems. The upper half of the dorsal sepal is white, and the lower part green, but over a greater part of the sepal there are fairly large, bright purple spots. Petals and lip are green, shaded with brown. A.M., R.H.S., December 19. Sir Jeremiah Colman, Bart. (gardener, Mr. J. Collier), Gatton Park, Reigate.

CONTROL OF PLANT GROWTH.

One of the strongest arguments for the use of artificial manures in the garden is the control they give us over the growth of plants, so that we can influence the development of leaf, flower, or fruit, in the matter of size, quality, or colour, at our will. We may take the tomato as a familiar instance. We know that one of the main functions in securing a good set of fruit is a plentiful supply of phosphates, while a too liberal supply of nitrogen causes the growth to become so gross that little fruit will be formed, though when the plant becomes laden with fruit this same supply of nitrogen will have the most beneficial results on the size of the fruits. Therefore we can manure with phosphate at the time of planting and with nitrogen, and perhaps potash, when we want to develop the fruit.

In the case of fruit trees, if we study their growth as a doctor studies a patient, we can give them just what they need to give their growth the desired character and withhold that which will have the opposite effect. When a bush apple tree is making shoots two feet or more in length and few fruit buds, we know it is having too much nitrogen, and though it is not advisable to cut off this superfluity without doing some root pruning as well, we can, by a judicious application of phosphates, encourage the formation of fruit spurs, and at the same time hasten the maturity of the growth in the early autumn, so that it will be favourable to the production of fruit buds the following season. Conversely, when the tree is weak, or exhausted, through overcropping, so that its growth during a season consists of thin shoots a few inches long, it is nitrogen which can restore the vigour of the tree, though potash may be necessary as well if the soil is a light one. We have all seen fruit trees making long, slender shoots with thin light green leaves, and this usually shows the want of potash, the application of which will darken the colour of the leaves, and give them much more substance, as well as heighten the colour of any fruit the tree may be carrying, while the fruit buds for the following season will noticeably increase in fatness.

When we apply farmyard manure to fruit trees we are not giving them a well-balanced plant food, for it contains too little phosphate in proportion to the nitrogen for plant life in general, and this deficiency is accentuated in the case of most kinds of fruit trees, where phosphate plays such an important part in the ripening of the young growth and the early maturity of the fruit. Consequently, when we feed late varieties of apples and pears with a thick mulch of farmyard manure we may increase and prolong the vigour of the growth, not only of the wood but of the fruit; in other words, delay maturity in both, and this will mean that in an unfavourable season the fruit will not have time to finish—that is, it will be lacking in colour and will shrivel if kept till its proper season.

Careful observation alone will enable us to prescribe for the feeding of plants generally to the best advantage, and with the least possible waste of expensive plant foods. Many plants in pots, for instance, are given too much liquid manure, made sick, in fact, but if we discontinue the application for a little while, when we notice the colour of the leaves becoming unusually dark, we shall reduce the risk of this to a minimum.

These notes may serve as illustrations to show not only the value of artificial manures in skilled hands, but the harm that may be done with them otherwise.

Alger Petts.

A VIEW IN THE CHARMING GARDENS OF HOME PLACE, LIMPSFIELD.

A COSY GARDEN.

A cosy garden, like a cosy room, is one wherein everything appears to be rightly placed, and where the whole breathes of comfort to the occupants and the occupier. Some gardens are striking, so much so that a certain scene, or scenes, announce themselves in blatant fashion; some are brilliant, and the recollection of them makes one feel hot even on a cold day; some are so formal as to be frigidly rigid, and we do not care to remember them; others, without possessing any startling or imposing features, present a picture, large or small, of the happy association of plant and tree and flower, and provide a place wherein one would like to live this latter, especially if not over-large, gives a sense of cosiness and comfort, and peace. Just such a garden is the one at Home Place, Limpsfield, and a glimpse at the illustration shows that shelter and beauty—cosiness—are combined in a marked degree. Flowers abound, and they do not exclude tree and shrub, hedge and grass plot, from their rightful positions. There is, perhaps, in these days, a tendency to strive after great effects, and startling innovations, in gardens, and so we must have a care lest we lose the quiet peacefulness that adds such a charm to the surroundings of the home. Home Place is rightly named.

Chrysanthemums.—For full instructions on the Culture of Early-flowering Chrysanthemums in beds or borders for garden or greenhouse decoration, read the Second Edition of Chrysanthemums for Garden and Greenhouse, by D. B. Crane, price 2s. 6d. net; or by post 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

NEW SCHEMES FOR WINTER PLANTING.

The original is not always best, for gardeners of the past have invented many of the fairest plans, colour-combinations, plant associations, and floral ornaments, but novelty is bound to arrest the eye, and so win appreciation for the items of which it is composed. Take the stately delphinium as an example: this is beautiful wherever it appears, but can there be any comparison between the value of a double line of dark and light varieties repeated in the borders flanking a broad grass walk, or that of an equal number of plants dotted over several borders and beds?

This is a glorious feature to create. If there is no grass walk a gravel, or paved one, may be similarly avenued. If there are not dual borders the line of delphiniums can occupy but one side, though that is to destroy the original excellence of the scheme. Where space is great a triple row of the tall plants can be grown: indigo at the back, Royal or cornflower-blue next, then azure, or Cambridge blue. To perfectly carpet such borders several methods can be adopted. The striking contrast of yellow violas may be preferred, the chaste relief of cream-white violas such as Sylvia, the grey-green, ever-attractive foliage of pinks with that of carnations behind—carnations of pale pink, lemon, and white only—the rich harmony of maroon-crimson dianthuses or the pale pink of Bellis perennis roseum. When a taller plant than these dwarfs can be grouped against the delphiniums, nothing can excel heucheras, in the pink and red-flushed white species only.

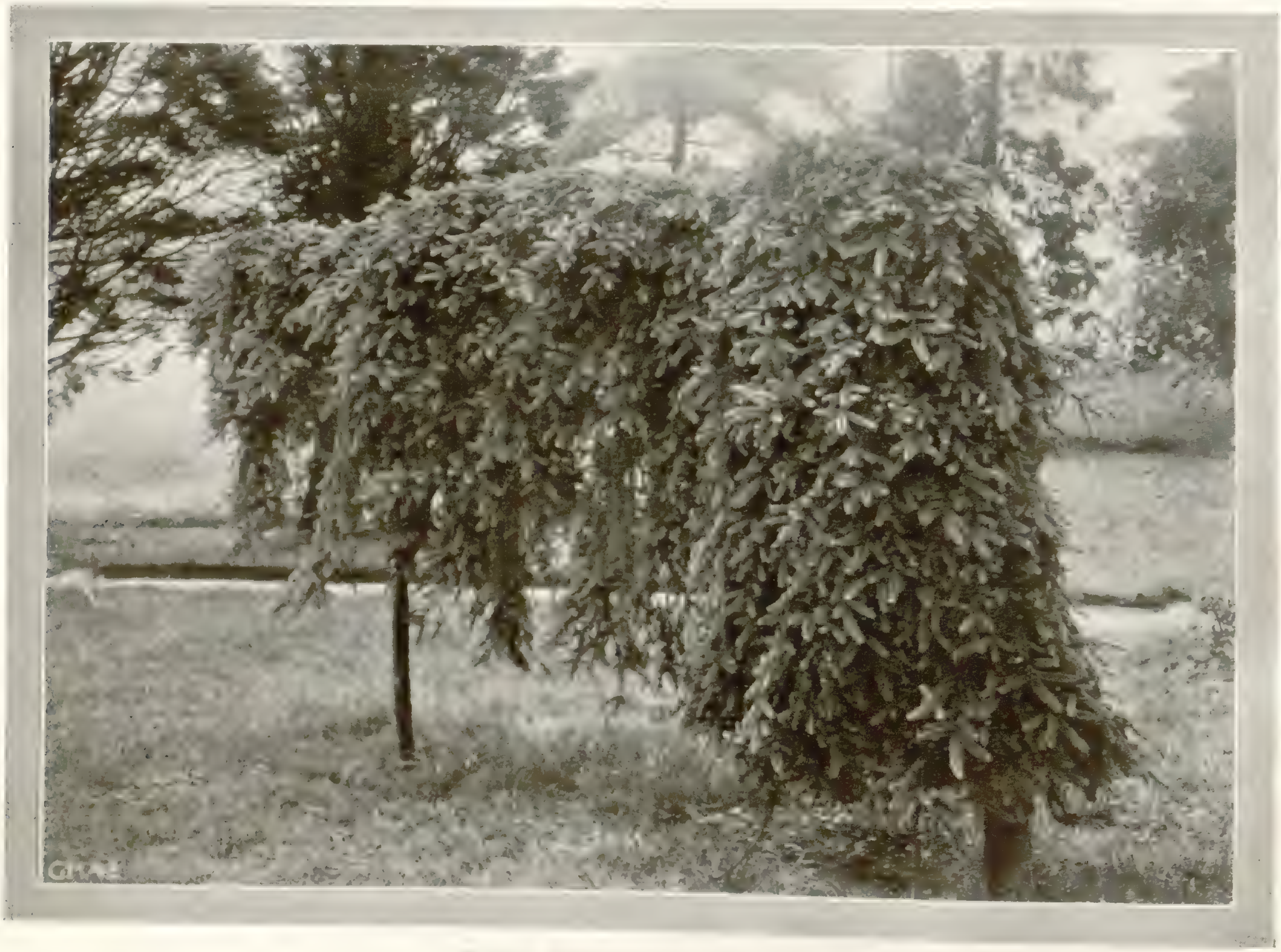
A bed of heucheras ought to be included in every large garden. The merits of the plant are many. The close clustering habit of the foliage makes an admirable covering for all the soil, and is extra beautiful when autumn touches the leaves with bronze and copper. The flower-spikes rise from one to two and a-half feet, to wave gracefully, a mass of fairy-like blooms, above this carpet. Few gardeners grow all the sorts, but a selection, at least, of the following should be massed in a bed, leaving just space for the introduction of a Gladiolus Lemoinei bulb between each two; Heuchera brizoides, brown-purple; H. brizoides gracillima, rose; H. sanguinea, crimson-scarlet; H. s. alba, white; H. Zabelliana, rosy-carmine; H. sanguinea Rosamunda, coral; H. erubescens, white, variegated; H. Edge Hall, pale pink; H. micrantha, white, rose-flushed; H. pubescens, bright rose.

A wonderfully bright feature in a garden consists of a tall bank crowned by gold flowers, carpeted by orange, and covered up the sides by scarlet. This is easily carried out if dwarf sunflowers, gaillardias, yellow chrysanthemums, and yellow Spanish irises for June glory, are used, the space beneath being sown in March with Tom Thumb, Orange nasturtiums, and the scarlet permanent plants chosen are potentillas. Between these potentillas scarlet begonias can be added each June. A wilderness of tall perennials is a singularly exquisite filling for a shrubbery clearing, or any wide border or unoccupied plot of ground. There should be no attempt at sloping the blossom height towards the edge of the space thus adorned. The bold plants should stand two feet apart, and then, if wished, there can be a carpet of some such hardy evergreen as London pride. Delphiniums, Golden Rods, Michaelmas daisies, Chrysanthemum maximum, giant gypsophila, the Plume poppy, or Bocconia cordata, tritomas, phloxes, Campanula pyramidalis, Scabiosa caucasica, rudbeckias, sunflowers, chrysanthemums, Pyrethrum uliginosum, Centaurea macrocephala, Astilbe rivularis, and Achillea eupatorium are but a few of the suitable hardy subjects.

The value of deep crimson or maroon blossom in a garden scene has seldom been properly shown; dark masses of this hue have a wonderful powerfulness, giving contrast for the light-suggesting groups of pale gold, or white. Chrysanthemums, single hollyhocks, antirrhinums, sweet williams, carnations, phloxes, wallflowers, dahlias, and bedding pansies all offer it.

A narrow border surrounding a fine lawn, except for exits and entrances, is always an advantage. The effect is best when the lawn has an undulating edge, or rounded shape, that the border must, of course, follow. To see the feature at its finest, however, the border must be planted with an evergreen carpet, whether of grey, gold, or actual green, and the flowers, a mingling of tender and hardy subjects, should be all of one colour, whether white, crimson, rose, gold, mauve, or scarlet.

M. H.



PICEA EXCELSA MONSTROSA

A well-developed specimen of this singular conifer in the pinetum at Brickendon Grange, Hertford, the residence of J. Trotter, Esq.

The Cockspur Thorn.—This fairly common North American species is, as represented by its large-leaved forms, such as prunifolia and splendens, remarkable for the brilliant tints of its autumn leafage. As a rule there is no mass of one uniform colour, but various tints of red, bronze, yellow, and scarlet are to be found at the same time on one individual specimen. It is not for the sake of its autumn tints alone that this thorn deserves recognition, for its bright red berries are freely borne, while in spring its flowers make it very attractive. Added to this it forms a shapely tree, distinguished throughout the summer by its bright glossy leafage. There are some distinct varieties, with long narrow leaves, and a peculiar spreading habit of growth, but they are less ornamental than the larger forms.—W. T.

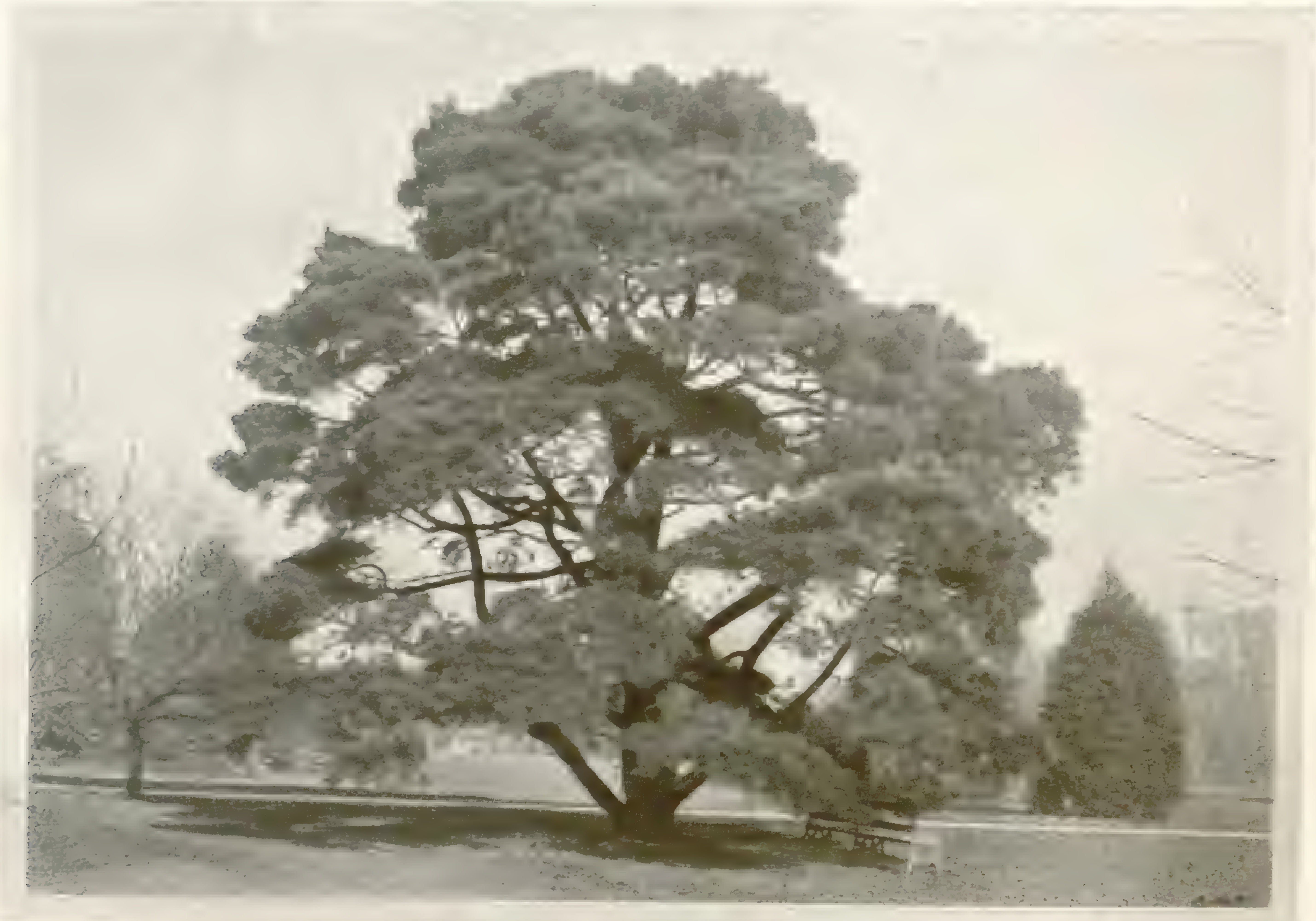
PICTURESQUE CONIFERS.

Coniferous trees are of many kinds, and afford a remarkable diversity in form and colour. There are pigmies that in stature do not exceed two feet, and there are giants that pierce the sky at a height of upwards of one hundred and fifty feet. There are trees that in process of growth form the most perfect pyramids, and there are also trees that assume an irregular outline and attract attention by reason of their rugged appearance. There are also trees remarkable for their rigid growth, and there are others that are characterised by their graceful habit. In the matter of colour there are kinds so sombre in hue as to render it almost dangerous to plant them near water because of the depressing effect they produce under certain atmospheric conditions; and there are others so resplendent in silver and gold as to make the landscape laugh under the influence of the midday sun.

These trees are so distinct in character and varied in colour as to provide an abundance of material with which to produce the most diverse and charming effects in the creation of both garden and park scenery. Planters have not been wanting in appreciation of the claims of coniferous trees, and many are the gardens in which they have been utilised with excellent results; and in not a few they form features that are at once of much interest and highly attractive. Whether they have invariably been used to the fullest advantage is another matter, and with reference to this point it has long appeared to me that too limited a view is taken of the aid they are able to render in contributing to the attractions of pleasure grounds and parks. It appears to have been rather too much the practice to estimate their value from the effect they produce while in a comparatively small state. This may be advisable in the case of gardens that are not of sufficient size to admit of the full development of trees that assume large proportions; but when the planting of spacious pleasure grounds and parks is under consideration, the characteristic features of the trees when they have attained their full size should be taken into account. Some of the species that are remarkable for their grace and beauty when in the earlier stages of their development lose much of their charm as garden ornaments when of mature age, while others do not afford full evidence of their effectiveness until they have reached their full development. For example, not until the tree has reached a considerable age, and formed its low and characteristic round head, does the English Stone Pine (Pinus pinea) show how picturesque an object it is; whereas a specimen of the Deodar (Cedrus Deodara) or of the Spanish fir (Abies Pinsapo) rapidly decrease in beauty after it has commenced to shed its lower branches.

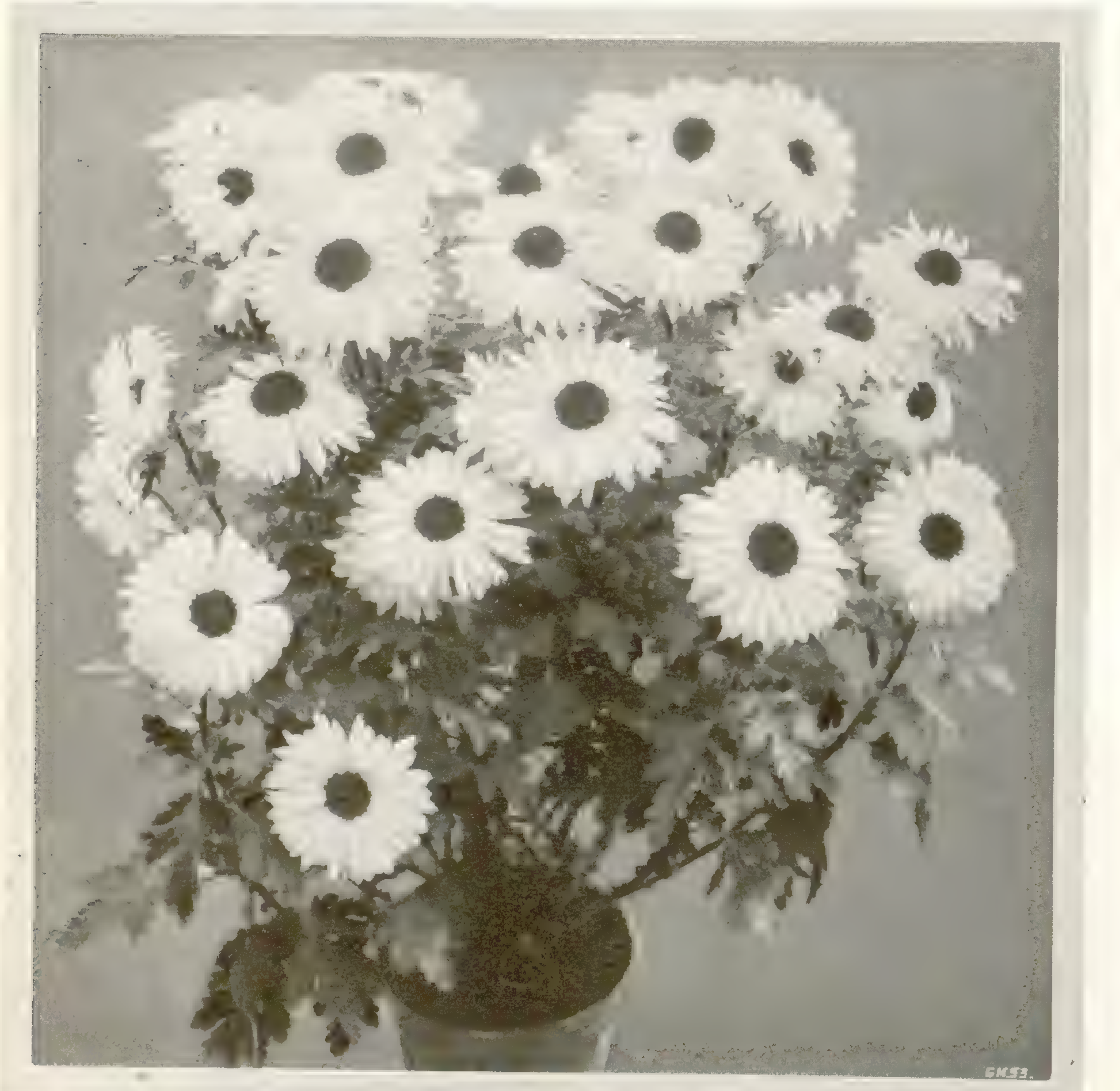
In suggesting that coniferous trees which become more or less picturesque with advancing years should have more consideration from planters than is usually given them, it must not be assumed that there is a desire to exalt them at the expense of those remarkable for their graceful habit or formality of growth; so far from this being the case, the desire is simply to suggest their being planted, where room is available, as supplementary to such kinds, and thus ensure the variety essential to the full enjoyment of the garden. There are many positions in the park, and, indeed, in spacious pleasure grounds, where trees of a picturesque character would be more appropriate than such kinds as Abies Nordmanniana, A. Pinsapo, Cedrus Deodara, Picea Engelmanni, Tsuga Albertiana and other choice kinds that might be mentioned. Judiciously associated with such species as the foregoing, they contribute materially to the general effect by the striking contrast they afford

The picturesque conifers of special value for beautifying the park and pleasure grounds are chiefly found among the species of Pinus, and of these the Stone Pine (Pinus pinea) is one of the most noteworthy. In Great Britain the tree attains a height of about twenty-five feet; it commences to branch freely at a short distance from the ground, and forms a dense flattened head. There is a characteristic specimen on the north-west side of the Royal Gardens, Kew, and those who are interested in coniferous trees and have an opportunity of doing so, should make a point of seeing it. The species has from the distant past been freely planted in Italian gardens, where it attains a greater height than in this country, and many are the fine specimens that may be met with, especially in the vicinity of Rome. Different in character, but not less desirable for the garden, is the Bishop's Pine (P. muricata), of which an illustration is given herewith. This species is rather taller than the Stone Pine, and when the conditions are favourable, it rises to a height of about forty-five feet. As in the case of the last-named, stout branches are produced from within a short distance of the ground, but they do not compete so successfully with the main stem, which maintains the lead until it attains a considerable height, when it branches, and the several stems grow at about the same rate. The masses of foliage are so arranged as to produce a distinct and pleasing effect. It has been described as of but little value for the garden, and in the earlier stages of growth it may not be equal to some other species, but when fully developed, as in the case of the specimen illustrated, it is a noble object. Pinus parviflora is a small-growing tree, rising to a height in this country of about twenty-five feet, and is one of the best for planting in


THE BISHOP'S PINE (Pinus muricata).
A characteristic specimen of this picturesque pine in the Royal Gardens, Kew.

small gardens. The head is somewhat pyramidal when fully developed, and if the tree is less picturesque than the foregoing, it is deserving of a place in gardens where coniferous trees are well represented.

The foregoing pines will suffice for the majority of gardens, but where the grounds are extensive or plantings have to be made in the park, the following may be added: The Corsican Pine (P. Larico), a handsome tall-growing tree, with deeply furrowed bark and a picturesque head when fully developed, and useful for its timber, has much to recommend it. The best of its varieties for ornamental planting is Pallasiana, which has a broad head. The Cluster Pine (P. Pinaster) is a stately tree, and valuable for park planting, growing to a great height, and retaining its branches until a late period in life. The Weymouth Pine (P. Strobus) is also useful for the same purpose as the immediately preceding species, and the Scots Pine (P. sylvestris) is sufficiently picturesque to justify it being planted in the park and on the hillside for landscape effect.



SINGLE CHRYSANTHEMUM SWINBURNE.

A white, yellow-centred variety, grown in a 48-sized pot by Messrs. Jas. Veitch and Sons, Chelsea.

One of the most picturesque of all the coniferous trees when it has reached a mature age is the Cedar of Lebanon (Cedrus Libani), but it requires so long a period to reach the picturesque stage that no one can plant it with the hope of seeing it otherwise than during the graceful period of its development. There are some conifers of a weeping habit of growth that are more less picturesque when seen in contrast with the normal forms, and there are a few of the dwarf forms that are highly effective when utilised in furnishing high rocky banks. One of the most distinct of the weeping conifers is Picea excelsa monstrosa, but it can hardly be described as one of the most beautiful. Possibly it may not appeal to any considerable number of tree lovers; but browsing, as it were, among the large number of finely developed conifers in the extensive pinetum at Brickendon range, Hertford, the residence of J. Trotter, Esq., the specimen is of much interest. To give such trees a prominent position, on the lawn, would hardly be desirable, but when a few abnormal forms are associated with a large number of the ordinary forms of the finer species, as at Brickendon Grange, they are of value as illustrating the variability that may be found among the conifers. G.

CHRYSANTHEMUM SWINBURNE.

Messrs. James Veitch and Sons have, during the autumns of 1910 and 1911, shown how splendidly very many varieties of chrysanthemums may be grown into beautiful specimens in quite small pots. The skilful market grower can often give the gardener many helpful hints, but it is not often the nurseryman sets out to show us a new method of cultivating an old subject. We do not say this method (and we have previously described it) is altogether new, but, at any rate, it is not common, though the display of bushy plants in 48-sized pots, each carrying from two dozen to three dozen good flowers, is certain to be copied by very many of our clever readers. Hitherto we have figured decorative varieties so grown, but now we illustrate a single variety similarly managed. This is Swinburne, pure white, with yellow disc, and entirely beautiful. In our issue of December 23 Mr. T. Stevenson told us how to grow single varieties without stopping them at all, and his seven-footers are marvellously beautiful, and very useful for large conservatories. But where such plants cannot be accommodated the late-struck and freely-stopped plants, like that illustrated, offer a fine alternative method; indeed, where space permits, the two methods should be adopted.

ROSA ALBERTI.

Many of the wild roses are distinctly beautiful both when in flower and fruit, and a selection might well be included in those gardens where species are not already represented. The picturesque effect made by some of our British species in hedges in many parts of the country will be brought to mind, while many people are familiar with the large showy hips of the Japanese Rosa rugosa. There are, however, amongst exotic species many which are quite as beautiful as any of these, and some of them more so, for the habit and foliage of the various kinds is more attractive. Rosa Alberti may be accepted as one of this number, for its graceful branches are clothed with dainty, glaucous hued foliage which in itself is effective, but when seen in unison with the bright coral-red fruits, a very charming picture is made. The club-shaped fruits are fully an inch long without reckoning the long calyx lobes, which add almost half an inch more to the length. At the widest part they are about half an inch in diameter, but they narrow rapidly towards the apex. The unusually bright-coloured fruit is very conspicuous, and it lasts in good condition for a considerable period. R. Alberti is a native of Turkestan.

W. D.

HELIANTHEMUMS.

The value of the sun roses for creating a summer display in the rock garden cannot be overestimated. For dry, sunny positions, where the plants can hang over a ledge of rock, they are invaluable, and, although the blossoms of the single varieties are but short lived, some only lasting one day, yet they are produced in such abundance that an excellent colour effect is maintained for a considerable period. The double varieties last longer, but are not so effective as the singles, nor are they produced so freely, and the growth of the plants is not so rapid. It is not advisable to plant them close to any choice dwarf subject, as there is the danger of the latter being overgrown and smothered.

Regarding soil, a good sandy loam will be found most suitable, but helianthemums are not by any means fastidious, and will thrive in almost any ordinary garden soil, providing it is not too heavy. Propagation is easily effected both by means of seeds and cuttings. The seeds should be gathered and sown as soon as ripe, either in pots or boxes, which have been filled with a mixture of loam, leaf-soil, and sand. When sown, the pots or boxes should be placed in a cold frame, and shaded until the seedlings appear, after which time the shading must be dispensed with. When large enough to handle, the young plants should be put into small pots, and kept growing in the frame. Repotting will be necessary when the plants have become well-rooted, and good stock will thus be obtained. Cuttings root freely if taken in August, and dibbled into a bed of sand in a close, cold frame. When sufficiently rooted, they should be potted into small pots in which they should pass the winter, affording them frame protection until the following spring, when repotting will be necessary. The young stock must not be allowed to suffer from excess of moisture during the winter months; it is much safer to keep them rather dry than to overwater them.

After being planted out for four or five years the growths become weak and thin, and the plants lose much of their vigour, therefore it is advisable to maintain a young stock in readiness for vacancies.

No rock garden is complete without a good collection of these attractive plants. Among the singles there are H. macranthum, with large creamy-white blossoms; The Bride, pure white; Miss Lake, a splendid yellow; Cecillia, pale yellow; H. tomentosum, bright yellow, with whitish foliage; H. venustum, scarlet; Mrs. Sydney Smith, red; and H. rhodanthum, rose with a yellow eye. The doubles include Jubilee, said to be a yellow sport from the well-known Mrs. Earle; H. alba plena, white; Bronze Queen, a very fine bronze; H. roseum multiplex; Mrs. Earle, crimson; H. tigrinum plenum, salmon; and H. serpyllum plenum, yellow.

Gnaton Gardens. E. C. Pooley.

BONE MEAL.

This is one of the most useful of all artificial manures, if artificial it can be called, and if only one such manure is used, it is pretty safe to say this should be the one. It is prepared by boiling the raw bones under sufficient steam pressure to remove the fat, after which they are ground into a somewhat gritty meal which contains from 4 to 5 per cent. of nitrogen and 45 to 48 per cent. of phosphate. Though the fat has been removed, the cartilage remains, and this has the effect of retarding the breaking up of the particles after the meal has been applied to the soil, so that agriculturally, it is considered a very slow-acting manure. As, however, used on garden soils, which are usually of an acid character, or as an ingredient of potting compost, where the roots are brought into very intimate contact with it, the action is much quicker, though even then the results of its use the second year after application should be little less than the first year. Where, however, the soil is sandy or poor in humus it would be better to use what is known as steamed bone flour, the difference between this and bone-meal being that the boiling of the raw bones is conducted under such a high pressure of steam, some fifty pounds to the square inch, that not only is the fat removed, but the whole of the cartilaginous matter as well, with the result that the bones can be ground into a finer meal which acts much more readily in the soil, but it is at the expense of a considerable portion of the nitrogen, the analysis being only 1 to 1½ per cent. of nitrogen, though as much as 60 per cent. or more of phosphate. Neither bone meal nor flour is recommended for soils rich in lime—a rare condition in gardens—by reason of the extreme slowness of the action in such a case.

Of the three most important plant foods—nitrogen, potash, and phosphorus—the last-named is the element which is usually considered to be most concerned in the production of floriferousness and fruitfulness, and if we use bone meal for fruit trees we may expect to see very good results. As it is only slowly soluble it should be applied in the autumn, or early in winter, at the rate of two to three ounces to the square yard and lightly hoed in. If the trees should fruit the following season—and of course the blossom is all formed long before this—it will hasten the ripening of the fruit—especially desirable with late varieties of apples and pears in dull seasons—and if the trees do not fruit that year the bone meal will prove valuable in encouraging the development of fruit buds for the year after, while the soluble, or readily available, nitrogen is not sufficient to cause any undue luxuriance of growth. It should be applied at the same rate and in the same manner to all established plantings where little or no digging in of animal manures can be done, as, for instance, those of asparagus, rhubarb, raspberries, and bush fruits generally, herbaceous borders, and roses. The deep colour of roses after the buds have been dressed with bone meal is often a subject of remark, as it is, too, in the case of chrysanthemums where it has been a constituent of the potting compost. For this latter purpose it is indispensable, the rate of use being about a pound to the bushel of soil. As it is of a lasting nature, and becomes gradually available, it is especially good for plants which will be a year, or perhaps two or more years, in the same pots, while the lime which is set free as the phosphoric acid is absorbed, keeps the soil from becoming sour—a common condition of the soil in pots when the plants are not given a frequent shift. For lawns it should be applied late in the autumn at the rate of five pounds to forty square yards, thereby improving the quality and colour of the herbage without undue encouragement of the clovers, which is such a feature of the use of basic slag, and sometimes a disadvantage on tennis lawns, and without strengthening that baneful horizontal growth of the cock's-foot grass which is often a result of the application of a purely nitrogenous manure.

For sowing bone meal in the open ground still weather should always be chosen, for otherwise that part of it which is in the finest state of division, and therefore the most valuable, will be blown away and lost. The same applies with even greater force to steamed bone flour. As both can be stored in the dry for a good length of time there is no need to pay the high prices usually charged for small quantities. Bone flour, being almost entirely deprived of animal matter, may be stored for years without undergoing any change, but bone meal, unless kept in a very dry place, may not remain in such clean condition after a year or two.

Alger Petts.

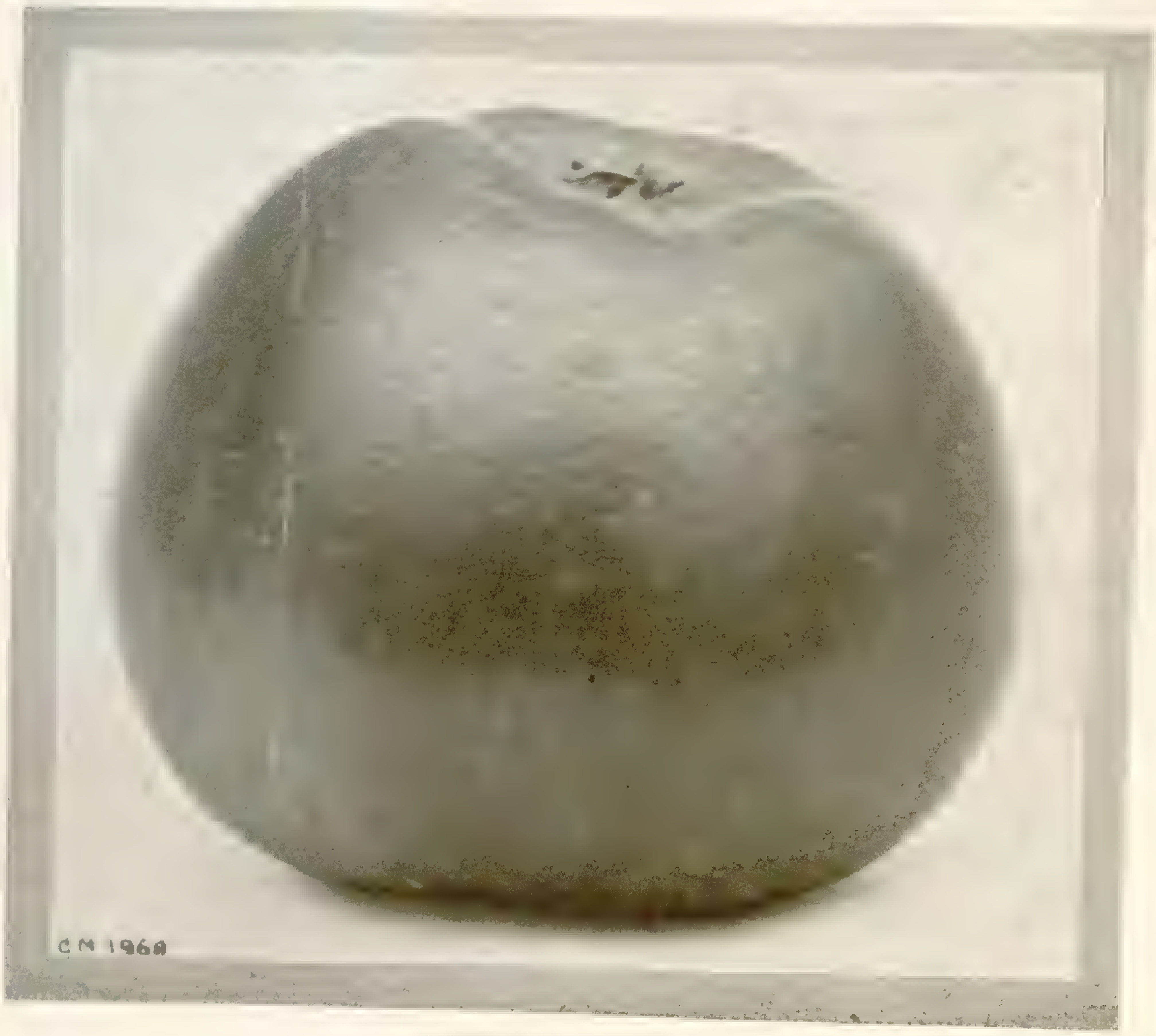
DESSERT APPLE PAROQUET.

Of the several excellent varieties of apples that have in quite recent years been introduced to cultivation, the one here referred to will, in all probability, when its merits are better known, be held in very high esteem as a dessert fruit. The general character of the trees indicates a sparseness of growth, and it is therefore well adapted for wall culture, more particularly for filling up vacant spaces between more robust varieties, where quite small plants prove very productive, and in autumn the numerous well formed and highly coloured fruits render such trees very attractive and interesting when viewed from a near standpoint.

The individual fruits resemble in size and contour those of the well-known King of the Pippins, while the deep crimson colouring, which gradually spreads over the whole outer surface, is very pronounced, and pleasing in appearance. Catalogues give the season of Paroquet as December and January, but several years' trial here afford convincing proof that it may be kept far beyond the last-named month, with no other special means than that of a cool, airy room. Thus circumstanced, its season of usefulness may be extended until April, with the fruits as plump and inviting in appearance as at midwinter.

As already stated, the tree is very productive, especially so when worked upon the paradise stock, hence thinning the crop should have timely attention to prevent undue exhaustion from this cause, as well as to aid in the full development of the fruits, which at any time are not large, but remarkably handsome and well coloured. Paroquet was raised by Mr. Charles Ross, and received an Award of Merit from the Royal Horticultural Society in October, 1899. Probably Worcester Pearmain was one parent of the variety.

Galloway House Gardens. James Day.



APPLE PAROQUET.

A distinct and handsome dessert variety of high quality, raised by Mr. Charles Ross.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

DECIDUOUS CALANTHES.—As the different members of this section pass out of flower, the plants should be placed under strict resting conditions, either on a shelf near the light or in a light, dry position on the stage. It is usually the case that room is fully occupied with other plants, and the calanthes have to make shift during the late winter and early spring months, and where space has to be curtailed in this way it is a good plan to turn the plants out of their pots and place the pseudo-bulbs, carefully labelled, close together in shallow boxes; cover the bottom of the box with a thin layer of chopped sphagnum, mixed with sand, and as the roots are laid in, carefully pack (sufficiently firm to secure the plants in an upright position) with the same material. No root moisture will be required until the pseudo-bulbs produce new growths in early spring. As soon as root action commences the plants are easily separated and potted. It is not advisable to place the plants where there is any great fluctuation of temperature; about 55 degrees will be ample until the new growths make their appearance, when warmer conditions, with more moisture in the atmosphere, will be desirable.

LATE-FLOWERING CALANTHES, such as C. Sanderiana, C. Williamsi, C. Regnieri, and the hybrids of this section should be kept where they may receive every encouagement to develop their flower scapes during the next two or three weeks; it is surprising how rapidly they expand their flowers as soon as the turn of the days is reached.

PHAIO-CALANTHES. — These semi-deciduous bi-generic hybrids are not always the easiest subjects to deal with; as soon as they pass out of flower it is advisable to place them in a warm, but rather dry position, with only sufficient root moisture to keep them plump. Excess of moisture either in the atmosphere or about the roots invariably encourages the development of black spotting which causes considerable trouble, frequently eating into the base of the pseudo-bulbs before giving any warning of its existence. Dry conditions appears to be the best means of checking its ravages.

PHAIUS.—The early-flowering hybrids of the P. simulans section will now be producing their flower scapes from the base of the last made growth. If it is desirable to have the plants in flower early in the season, they must be now placed under conditions where they may have the necessary encouragement. If for flowering in April and May, the more the plants are retarded the better. If kept cool the plants must be in a reasonably dry atmosphere until the end of January, when more liberal conditions may be afforded. The foliage should be carefully examined and sponged with warm, soft water.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

PERPETUAL - FLOWERING CARNATIONS.—Success in carnation cultivation is only achieved by laying a sound foundation. To this end it is most necessary to commence propagation as early as possible within reason, to allow the plants abundance of time in which to grow and become matured. Again, the selection of cuttings plays a most important part. These should be taken from strong, healthy plants only, which are true to character. The thin, weak cuttings produced at the top of a flowering growth are useless, but those produced about mid-way up the growth are the best and most likely to maintain the standard of the particular variety. Two methods of propagation are used in general, viz., that of "heel cuttings" and that of "pipings." The latter method is the one I employ, as I find it gives a larger percentage of rooted cuttings than the former. By this method the cutting is taken between the thumb and finger, and, with a sharp upward jerk, is severed from the parent plant. No knife is necessary, except to shorten the lower leaves.

FOR STRIKING THE CUTTINGS a small propagating case should be placed on the stage in a house with an even temperature of 50 degrees, and where a little bottom-heat can be obtained. Fill in to a depth of three inches with sharp silver sand, and insert the cuttings about two inches apart. Well water them in and cover with glass. This method far supersedes the old-fashioned one of using pots, it being more economical both in labour and material. Too much artificial heat must be avoided, as this only excites the cuttings, and makes them long and weak. Do not allow the sand to become dry, but, on the other hand, excess of moisture must be guarded against, as dampness is one of the chief causes of the dreaded carnation disease. If the glass is removed in the evening, and left off all night, it will reduce the amount of moisture which would be caused by condensation. Do not permit any cold draughts to reach the cuttings, but gradually harden them off, so that by the time they are rooted they can be fully exposed to all light and air. The cuttings should never be allowed to grow in the propagating case, but be potted off into small thumb pots as soon as they are nicely rooted. Careful attention to all details will ultimately bring its own reward in a profusion of blooms. The question of the best and most profitable varieties is one to be carefully studied, and I hope in an early issue of the Gardeners' Magazine to give my opinion on this subject.—H. Grubb, Porter's Park Gardens.

HARDY FRUITS.

PRUNING BUSH FRUITS.—This may be done as soon as opportunity permits, and the quarters may then be well manured, lightly forked over, and set tidy for the winter. Many prefer to leave gooseberry pruning until spring, with the idea that less damage will be caused by birds, but this is doubtful, as one may often notice very dense trees practically denuded of all fruit buds if nothing is done to prevent the attack. Gooseberries should be thoroughly thinned, cutting away the weakest and all interlacing growths, so that the hand can pass freely into the tree at fruit gathering time. The upper growth may be left at full length at the tops of the bushes, shortening the lower wood somewhat, or much dirty fruit will result as the trees become loaded. A few cuttings should be rooted each year, selecting medium wood of the best varieties, and cutting this into foot lengths; all the lower buds must be picked out to provide about six inches of clean stem above the ground. These will root readily if planted firmly in well cultivated ground.

CURRANTS.—Red and white currants once trained are but little trouble at pruning time. Summer pruning should always be carried out if possible, and little will then remain to be done, except to shorten all lateral growth to a couple of eyes or so during the winter. If trained as cordons or gridirons, on walls, the trees are easily protected, and the fruits will hang fit for use until the end of September. Cuttings may be treated in the same manner as for gooseberries.

BLACK CURRANTS will need to have their branches well thinned, cutting a few clean away each year, to induce strong growth from the base. The only way to keep clean, healthy trees is to cut rather hard, and at the same time work in abundance of good manure during the winter.

GRAFTING.—Preparations may be made for grafting, and trees to be operated on should be headed off a few inches above the point where it is intended to graft. The wood should be carried away or burned as soon as possible. When grafting, avoid putting on many varieties, as this is sure to cause disappointment in future years; select one or two reliable kinds that are known to do well in the district, leaving many of the newer kinds to be still further tested. Some effort should certainly be made to limit the number of varieties of apples; at the outside fifty varieties should be ample for any private garden and a greater bulk of serviceable fruit would be obtained from half that number.

AFTER-MANAGEMENT.—Standard trees that have already been grafted should be shortened back the first and second year to encourage strong growth, after which they may be allowed to grow away if making good growth, thinning the side shoots only to allow the sun and air free play through the trees.—J. Whittle, Cheveney Gardens.

THE KITCHEN GARDEN.

SEAKALE.—If the stock of roots has not been lifted, the matter should be at once dealt with to allow the ground they occupy to be manured, and prepared for next season's crop. The side roots can be cut away, and the crowns stored in sand or ashes outdoors ready to be forced as required. Thongs for next season's planting should be selected and cut into lengths of about six inches, and also similarly plunged in ashes or sand until the spring. Continue to place quantities of crowns in the forcing-house to meet the demand.

EARLY PEAS.—Where a suitable south border has been prepared for this crop, and wind has made the surface dry enough to work easily, seize the opportunity to make the first sowing outside. There are several varieties of the early dwarf class that are very prolific and suitable for narrow borders, such as Chelsea Gem, Little Marvel, etc. These kinds can be sown in rows two feet six inches apart. Varieties such as William the First should be from five to six feet apart, such positions being necessarily protected for the peas by means of sticks, etc., they give excellent sites for early salading plants. At about this time a sowing of early peas may also be made in pots or in boxes made for the purpose. These, if grown on sturdily in cold frames and planted out at the end of March or beginning of April, will afford some dishes a week or ten days previous to those sown on the outside border.

BROCCOLI.—During the last few months the weather has suited the winter broccoli, and they have turned into head unusually well. Where any quantity are showing their flower heads, it will be a safeguard against loss from sharp frosts if they are lifted and transplanted in pits or frames, so that sufficient protection can be given them. Give air on every favourable occasion.

LETTUCE.—The plants that were put out in sheltered borders for early spring cutting are now firmly rooted; apply a dressing of soot to the surface soil, and run the Dutch hoe between the plants during a fine day. Those that are more fully grown, and are planted in frames for blanching in the mushroom house will need special care during the next few weeks, guarding them against damp and sharp frosts.

JERUSALEM ARTICHOKES.—No purpose will be served by allowing this crop to remain longer in the ground. At the first convenient time lift the tubers and store them in sand in the root house for use as required. At the same time select the medium size tubers, and place these by themselves to be in readiness for next season's planting.

ASPARAGUS BEDS.—If the permanent beds of asparagus are not in a satisfactory condition , or part have been lifted for forcing, now is a good time to prepare the site for new beds. This should be trenched and richly manured. If the soil is of a cold clayey nature, care will be necessary when making the beds to see that they are rendered porous by adding plenty of sand on light soil and keeping them above the surrounding level. Avoid the chief cause of failure, i.e., decay of the crowns, during the winter months. — Charles Flack, Cholmondeley Castle Gardens.

BUNYARD'S
FRUIT . .
TREES . .

ORDER AT ONCE FOR PRESENT PLANTING.

WRITE FOR CATALOGUE.

Geo. Bunyard & Co., LTD.,
Royal Nurseries,
MAIDSTONE.

KING'S ACRE
FRUIT TREES
AND
ROSES.

AWARDED . .
30 Gold Medals
AND
Coronation Cup
VALUE 25 GUINEAS.
Seasons 1909-10.

Illustrated Catalogue post free on application.

KING'S ACRE
NURSERIES LTD.,
HEREFORD.

Through the long years that come and go,
'Mid all their transient life below,
There is a friend the Flowers well know
By name

CLAY'S FERTILIZER

Sold everywhere in **6d.** and **1/-** TINS; and in BRANDED and SEALED BAGS, 7lbs., **2/6**; 14lbs., **4/6**; 28lbs., **7/6**; 56lbs., **12/6**; 112lbs., **20/-**. Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d.** Tins).

Every Genuine Tin, Bag, and Seal bears the Trade Mark, as at side.

CLAY'S LONDON FERTILIZER
TRADE MARK.

CLAY'S SUCCESSFUL GARDENING.—Fourth Edition (Second Reprint). A thoroughly comprehensive, informing, up-to-date publication, 276 pages, Illustrated, bound in cloth. To be obtained of Seedsmen, etc. **NINEPENCE NET,** or Free by Post for this amount direct from the Publishers, as under

CLAY & SON, Stratford, London, E.

MERRYWEATHER'S
ROSES.

All Strong and Home-grown Plants

COLLECTION "H" of NEW ROSES.
WONDERFUL VALUE.
EVERY ONE A GENUINE NOVELTY.

This superb collection of the **BEST 18 NEW ROSES** in dwarf plants. The price of this wonderful collection is **27/6,** carriage and packing free for cash with order (with Acme Labels, **29/6**). The varieties are:

Arthur R. Goodwin, P.
Duchess of Wellington, H.T.
Entente Cordiale (Ducher), H.T.
George C. Ward, H.T.
Jessie, Dwarf Poly.
Lady Alice Stanley, H.T.
Lyon, H.T.
Margaret, H T.
Margaret Molyneux, H.T.
Miss Cynthia Ford, H.T.
Mrs. Alfred Tate, H.T.
Mrs. A. Munt, H.T.
Mrs. E. J. Holland, H.T.
Mrs. W. Christie-Miller, H.T.
Marquis de Sinety, H.T.
Molly Sharman Crawford, H.T.
Souv. of Stella Gray, T,
White Killarney, H.T.

FRUIT TREES
OF ALL KINDS TO SELECT FROM.

A GRAND STOCK OF
SHRUBS & ORNAMENTAL TREES

HERBACEOUS PLANTS in great variety

Send for Catalogue No. 29, full of interesting information and cheap prices, post free on application to
MESSRS.
H. MERRYWEATHER & SONS, LTD.
(Dept. 1A), GARDEN SPECIALISTS,
SOUTHWELL, NOTTS.

ORCHIDS. ORCHIDS.
Clean, healthy, well-grown Plants at reasonable prices.
Many large specimens and rare varieties.
STOVE AND GREENHOUSE PLANTS OF ALL KINDS
PLEASE WRITE FOR LIST.
JAMES CYPHER & SONS,
Exotic Nursery, Cheltenham.

RIVERS'
Fruit Trees, Roses,
Vines, Figs, Oranges,
AND
Orchard House Trees.

A LARGE AND SELECT STOCK ALWAYS ON VIEW.

ILLUSTRATED AND DESCRIPTIVE CATALOGUE
POST FREE 3d.

THOMAS RIVERS & SON
Sawbridgeworth, Herts.
STATION: HARLOW, G.E.R.

PLANTING SEASON.
SEND FOR OUR
Descriptive Catalogue
OF
Ornamental Trees and Shrubs, Roses, Rhododendrons, Climbers, Fruit Trees, Forest Trees, Herbaceous and Alpine Plants.
Advice given on all matters appertaining to
LANDSCAPE GARDENING.

GEO. JACKMAN & SON,
Woking Nurseries, Surrey.
Established over a Century. (Nurseries 200 acres.)

FLATNER PAVING.—FOR SALE about 300 yards super of Old Purbeck Paving, suitable for terrace or garden paths. Apply SURVEYOR, Urban District Council, Fareham.

AMERICAN BLIGHT AND BIG BUD MITE.

The following is the text of a lecture delivered by Mr. R. A. Harper Gray, M.A., M.Sc., of Armstrong College, Newcastle, at the Northern Fruit Congress, in November:

In dealing with the life-histories of the creatures that are the cause of American blight and big bud, my object is to emphasise the fact that these two infestations have been increasing so persistently during the past few years in this country, that I think the time has fully come when it is the duty of growers to take more active measures in order to check the increase of these pests that cause so much loss and deterioration in our orchards and plantations.

American Blight.

American blight is an example of a very common condition of our apple trees, caused by the presence of a species of the many aphides or "greenfly" that are so abundant in our gardens. The familiar wool-like "growth," which is really a product of the woolly aphis (Schizoneura lanigera), causes the disease to be easily detected in our orchards. The woolly aphis is downy when immature, and is then of a pinkish colour, but becomes some shade of brown when full grown. It possesses a head with two antennæ, three pairs of legs, two pairs of transparent wings, and piercing and sucking mouth parts.

The life-history of this pest is exceedingly interesting. In spring the "mother-queens" which have been hibernating in crevices in the tree, produce, not eggs, but living young, which feed, grow, and moult under the "wool" which they produce. Soon these become mature, and also produce living young aphides, and we may here point out that there may be several such generations during a single summer. It is said that some of these larvæ change into a pupal form or "nymph," from which winged females appear; these may fly to other parts of the tree, or even to other trees, where they start a new colony by producing young like the wingless forms. As the cold weather approaches, a few males and egg-laying females have been observed to make their appearance in the colony, and the female, after laying a single egg in a crevice of the tree, dies—her dead body forming a protecting covering to the egg during winter. Then, when spring comes round, the little larva appears, which soon becomes the adult "mother-queen," ready to start the first of the generations that are to be produced during summer.

Such is a brief account of the life-history of the Woolly Aphis, and, when we consider the number of aphides that may appear on a single tree, each aphis being provided with a piercing and sucking mouth, we are better able to realise the extent of the damage that can be done by such comparatively small individuals.

They are, of course, particularly injurious to young stock, into the tender bark of which they can so easily insert their tubular mouths in order to suck out the sap. The result of the many small punctures that are thus made is that the cells of the tissue are damaged, wet may get in, and the twig becomes rough and deformed owing to the abnormal canker-like growth that is set up in the soft tissues. Indeed, this swollen and deformed condition is often mistaken for canker, and it would appear that Canker very often follows an attack of Woolly Aphis. This does not mean, of course, that the presence of the Woolly Aphis is essential to the spread of Canker, for I have known of cases where American Blight has been present without any sign of Canker fungus. Still, one must admit that the wounds formed by the Woolly Aphis may, and do, aid the Canker fungus in getting a foothold on the trees.

So far we have been referring to Woolly Aphis as if it confined its attention to the parts of the tree above ground, and it is because nurserymen have in past years confined their own attention to the pest only as it has appeared on the branches and twigs that there have been so many failures in the treatment of the infestations. It is extremely important, therefore, that it should be more widely known that the Woolly Aphis also attacks the roots, as well as the parts above ground. It is due to ignorance of this fact that the pest has been introduced so often in past years with new stock. No matter how carefully nurserymen may go over their nurseries, they may still send out infected stock, simply because they are unaware of the fact that the roots are also attacked by the Woolly Aphis. The forms found on the parts of the tree below the ground appear to be the same as those living about it. They reproduce and develop in the same way, and suck the sap from the roots, thereby producing swellings and cracks. Migration takes place from the trunk and branches to the roots, and vice versa; but it has been noticed that the migrants from above show a preference for the trunk below the ground surface, and that on the approach of spring these return to join the aërial colonies.

The fact that this root form is evidently establishing itself successfully on the roots of apple trees in Britain is worthy of the most serious consideration on the part of our nurserymen, as failures in treatment may be due to overlooking the presence of migrating individuals.

Prevention and Treatment.

From what has been said, it will be seen that the treatment of American Blight will be satisfactory only when we get rid of the subterranean forms of the pest as well as the aërial forms. There are many washes which, if properly applied, will destroy the aërial forms, but space will not permit of the composition of these washes being set down. It should be pointed out, however, that, to be successful, the washes should be sprayed on the trees with considerable force, and that where there is much "wool" present, as much as possible should be removed to allow the wash to reach the insect.

Mr. Theobald, in his recent book on "Insect Pests of Fruits," recommends for winter use, the old caustic wash or the improved Woburn wash; while for summer, either soft soap and quassia, or a weak paraffin emulsion. Whatever wash is used, it must be applied thoroughly.

With regard to the root form in the older trees, the injection of carbon bisulphide into the ground is the only remedy as yet known—two to four ounces for each tree being the quantity used. A special form of injector is used, so that the depth of the injection is about six inches—four or more injections being made at distances of some two feet from the trunk of the tree. These injections should be carried out in dry weather before April.

Young stock should be fumigated for 45 minutes with hydrocyanic acid gas before being planted—1oz. of sodium cyanide, 1oz. of sulphuric acid, and 4oz. of water being used for every 100 cubic feet of space. We may here note that sodium cyanide is now being used instead of potassium cyanide, owing to its greater strength as compared with potassium cyanide, which often contains many impurities.

Big Bud.

Big bud in the black currant is caused by the Black Currant Gall Mite. This pest has been known to exist in this country for sixty or seventy years, and the disease caused by it has been persistently spreading during the past few years. During 1907 it was recorded as having attacked white currants, and also red currants, so that it is well worth the particular attention of horticulturists. All cultivated varieties of the black currant are liable to the disease caused by this strange-looking mite.

The mite is all but invisible to the naked eye, being scarcely a hundredth of an inch long. Its body is divided into two regions—a broad anterior part protected by a shield, in front of which protrudes a snout-like head bearing the piercing and sucking mouth parts, and an elongated abdominal part with transverse rings bearing rows of projections. At the end of the abdomen there are two rounded flaps, which can be brought together so as to form a muscular sucker, by which the mite can raise and support itself. At the front end there are four legs, five-jointed, and each bearing bristles and a claw; while on the body there are five pairs of bristles. The creature is whitish or pale green in colour, and is semi-transparent.

The life-history of the mite has not been entirely worked out, but we know the main points. A large number of the mites are found sheltering and feeding in the buds during winter. Some of these buds may contain comparatively few, and may open out in March. The mites are thus exposed, leave their hiding place, and probably perish. The important or vulnerable period in their career is when they migrate from badly infected buds which do not expand, and from partially infected buds which may open late, i.e., from about the middle of April onwards, according to the nature of the season, to the middle of June. This is the period for treatment, for then they may be found on the leaf-stalks, shoots, flower-stalks, and flowers, and even round the new buds that are to be the future homes of the migrants.

It is interesting to observe their method of migrating. They crawl along, or assume an upright position as if waiting to be carried away by insects, etc. If they fail to get lodgement on a passing animal, they drop from their "waiting" position, and may land on a bud or on the ground.

These, be in noted, are the adults, and when the females enter the buds they are ready to proceed with egg-laying. The eggs hatch out in due course, and the swollen buds crowded with new individuals may be seen at the end of August and into September.

It will thus be seen that the disease may easily be spread by the wind, on the clothes of men, by insects such as ladybirds and bees, etc., or by the propagation of diseased cuttings from infested stock.

Prevention and Cure.

Methods of prevention and treatment are always difficult when a pest takes up its abode in the substance of a plant or tree, and this is the difficulty we find in dealing with the Big Bud Mite. Some suggestions, however, may be helpful.

To begin with, only clean stock should be used for propagation. According to Theobald, the French varieties are free from this mite, though growers have told me that the French varieties are as bad as others. Mr. Theobald, however, also admits that "in one or two places I have seen the French as bad as any other variety, but such is very ususual." Fortunately, cuttings are, according to Pickering, easily freed of the pest by being immersed for ten minutes in water at a temperature of 115 degrees Fahr. before planting.

Hand-picking in plantations is, of course, an excellent check to Big Bud, as also is the free use of the knife on diseased twigs. The hand picking should be done two or three times a year, and it is a good plan to pick off any buds that are in close proximity to the diseased ones.

In connection with the treatment of Big Bud, I must mention that Mr. A. H. Pearson, of Nottingham, in answer to an enquiry, has kindly supplied me with the following information: "I have proved that soft soap and quassia will cure the worst attack of gall mite, if one sticks to it, but the spraying should be every ten days from the time the mites emerge in March, to early June. If the weather prevents spraying for any lengthened period, the cure will be retarded, and it may take two years instead of one to clear the plantation; in the case of a bad attack there will generally be a few big buds the second season."

Conclusions.

I think I have said enough to show that these infestations are proving menaces to be reckoned with in fruit growing, and that therefore it behoves our nurserymen to wake up to the fact that strong measures must be adopted to check the evil. There seems to be a likelihood that, in the near future, compulsory inspection of nurseries will be the rule, but I consider that something more should be done—that attention should not be confined to our nurseries, but extended to all gardens and plantations. This, I think, will be clear after what we have said about the means by which American Blight and Big Bud may be spread.

It seems to me, therefore, that advice should be available from research and educational centres, and that leaflets, such as those issued by the Board of Agriculture, should be judiciously distributed by our horticultural societies. At the present time full advantage is not taken of the free distribution of leaflets by the Board of Agriculture. Further, County Councils should have increased power to enforce protective measures.

If a disease breaks out in a certain county mere advice as to what should be done is not enough, for there may be some gardens—private gardens they may be—which may still be harbouring the pest, through lack of interest on the part of the owner, so that when the neighbouring nurserymen have taken the trouble to eradicate the disease from their nurseries, the pest may be soon spread again from one or two private gardens by the wind, birds, insects, etc. I have often been struck by this danger when I have seen small gardens—some not very well cared for—adjoining the plantations of nurserymen. Such cases are examples of the futility of individual efforts, and the position of horticulture compares rather unfavourably with that of agriculture in this respect, when we consider the measures that are taken to prevent the spread of anthrax, swine fever, etc.

But, further, granting that such measures were to be adopted, what a blind and incomplete—we might even say, insular—policy it would be, if compulsory inspection were the rule at home, while all the time infected stock were being imported from the Continent and elsewhere. Our colonies, America, France, etc., have adopted a wise policy of protection in so far as the horticulturist is concerned, for, in some, certificates are demanded, while in other countries the stocks are treated with fumigation immediately on landing.

I think, therefore, that what I have said with regard to the life-histories of the two pests that are the cause of American Blight and Big Bud, ought to open our eyes to the stupidity of adopting half measures in endeavouring to eradicate or check these and other such diseases.

Chrysanthemum Caprice du Printemps. — Old chrysanthemum growers will remember the various sports that emanated from the at one time popular incurved variety Princess of Wales, while, coming down to more recent times, that popular outdoor kind, Madame Marie Massé, has been prolific in this respect. None of them, however, surpass, even if they equal, the record of Caprice du Printemps, which has sported into various colours, all of which are exceedingly valuable for decorative purposes. A particularly interesting collection of these sports was on view at the Horticultural Hall on November 7. Beside Caprice du Printemps itself, with purplish-rose flowers, there were Kathleen Thompson, crimson and gold; Greening's Caprice, lilac; Red Cap, ruby red, yellowish centre; Purple Cap, White Cap, and Yellow Cap, whose colours are indicated by their respective names. The last mentioned was given an Award of Merit. All these varieties possess the good habit of their parent, and they are now established favourites for market culture, as good specimens can be grown in five-inch pots.—W. T.

SEAWEED AS MANURE.

The Composition of Seaweed.

The composition of seaweed is largely dependent on that of the sea water by which it is surrounded. When it is first thrown up seaweed holds mechanically a considerable amount of water, part of which will drain away and part evaporate. Wet weed may contain as much as 80 per cent. of water, and even 85 per cent. is recorded; well-drained material contains about 60 per cent., while weed dried by exposure to air in a shed contains 10 per cent., or even less. Seaweed carted by the farmer would probably contain about 75 per cent. of water on an average.

The following table shows Russell's analyses of several seaweeds and of materials commonly gathered at the same time. The samples of fucus from Jersey and from Croyde were cut from the rock; the Thanet sample of fucus was thrown up by the tide. The materials gathered with the weeds, but quite different from them, included Zostera marina, or eel grass, which has green grass-like leaves, and grows in shallow bays in many districts. It is not a true grass, but is more nearly allied to pond weed (potamogeton). Salicornia is a chenopod, and glyceria is a true grass. Sea mat is the tough brown flat structure commonly found with seaweed; in the sea it consists of a colony of zoophytes, but when cast up on the shore and dried the organisms perish. The organic matter present contains about 9 per cent. of nitrogen, a high figure characteristic of animal residues, but much in excess of anything found in plants. The small shells and debris contained no less than 21.8 per cent. of calcium carbonate.

Percentage Composition of Dry Matter of Various Seaweeds.

	Fucus ceranoides. Croyde.	Fucus serratus. Thanet.	Fucus. Jersey.
Organic matter	69.80	75.16	73.86
Nitrogen	1.25	2.33	2.25
Total ash	30.20	24.84	26.14
Sand	5.15	3.73	1.24
Pure ash	25.05	21.11	24.90
Phosphoric acid	0.03	0.05	0.66
Potash	3.80	3.70	5.88

Composition of other Substances Collected with Seaweed.

	Zostera marina. Jersey.	Mixed growth. Thanet.	Sea mat. Thanet.
Organic matter	76.32	61.50	25.80
Nitrogen	0.68	2.15	2.37
Ash	23.68	38.50	74.20
Sand	3.62	16.68	25.80
Pure Ash	20.06	21.82	48.40
Phosphoric acid	0.70	0.04	0.04
Potash	0.69	1.28	1.30

An inspection of the table shows that the nitrogen in the dry matter ranges from 1.25 to 2.7 per cent., being lowest in the Croyde samples taken in summer, and highest in the Thanet samples collected in winter. The total ash is usually 25 to 35 per cent., 1 to 5 parts of which are silica arising partly from silicates and partly from sand entangled with the weed. Very little phosphoric acid is present, sometimes less than 0.1 per cent., and never much more than 0.5 per cent.; the potash, on the other hand, varies between 2 and 6 per cent. Soda is present in about the same amount as potash, and there are smaller quantities of lime and magnesia.

The composition of seaweed shows some variation with the time of cutting. Toms' analyses of Jersey seaweeds, made at different times of the year, indicate that weed cut in October is poorer than that cut in March or May.

These analyses further show that laminaria drifting in from deep water is usually richer, especially in potash, than fucus cut from the rocks. The kelp-burners also recognised its superiority as a source of iodine. Hendrick's analyses of Scotch seaweeds bring out the same facts, but the samples were not all taken from the same place.

Barlow's analyses of three species of fucus collected at Padstow (N. Cornwall) in March, 1905, showed the following percentage composition, calculated on the dry matter:—

	Fucus nodosus.	Fucus serratus.	Fucus vesiculosus.
Organic matter	73.99	76.97	71.35
Ash	26.01	23.03	28.65
Nitrogen	1.78	2.88	2.29
Potash	4.47	5.00	6.29
Phosphoric acid	0.29	0.55	0.45

In many respects the results are similar to those obtained by Russell and Hendrick for Thanet, Jersey, and Scotch seaweeds. In the case of F. serratus the phosphoric acid was considerably higher than that found in the Thanet specimen referred to above.

The total alkalies in these three varieties were found to be nearly uniform. Calculated upon the ash, they were as follows (lime was not estimated):—

	Soda (Na2O).	Potash (K2O).	Total Alkalies.
F. nodosus	23.19	17.19	40.38
F. serratus	17.76	21.69	39.45
F. versiculosus	18.72	21.94	40.66

Seaweed is characterised by containing more ash, and less phosphoric acid, but about twice as much potash as ordinary farm crops, excepting such specially rich crops as mangolds, buckwheat, and mustard.

Value as Manure.

The material gathered by the farmer is rather mixed, though one or two species usually predominate, especially if, as sometimes happens, the seaweed is cut from the rocks. Analysis of the Thanet sample which was thrown up by the tide showed the following constituents:—

Fucus serratus	59.7	per cent.
Glyceria maritima and Salicornia herbacea	4.3	,,
Laminaria	2.5	,,
Ulva	1.4	,,
Fucus vesiculosus	0.6	,,
Sea mat	1.2	,,
Miscellaneous debris	30.3	,,

The British results may be summarised as follows:—

	Wet weed as gathered. Per Cent.	Average. Per Cent.
Water	70 to 80	75
Organic matter	13 to 20	18
Nitrogen	0.3 to 0.8	0.5
Potash	0.8 to 1.5	1.2
Phosphoric acid	0.02 to 0.17	0.09

A considerable amount of water is lost on drying in the air, and, if the weed has not been washed by rain in the meantime, its content of nitrogen, potash, and phosphoric acid is increased four, five, or even six fold.

It is difficult to form an estimate of the money value of seaweed to the farmer. The fertilising materials present in one ton of seaweed possessing the average composition would cost 8s. to 10s. if purchased from a dealer in the form of a merchantable manure in a finely divided state ready for putting on to the land. This value is arrived at by allowing 12s. for each per cent. of nitrogen, 4s. for each per cent. of potash, and 3s. for each per cent. of phosphoric acid. No account is taken of the sodium, calcium, and magnesium salts, which on most soils, but especially light soils, would be distinctly beneficial; nor is any allowance made for a possible stimulating effect of the iodides present. It does not, however, follow that seaweed is worth 8s. to 10s. a ton on every farm near the sea coast. The question of availability of its constituents—i.e., of its decomposition under various conditions—would have to be ascertained by careful trials before even a tentative estimate of its money value could be made.

In farm practice seaweed more or less takes the place of dung, but there are several important differences. Seaweed contains no fibre, and, consequently, does not produce the black structureless material characteristic of the dung heap; in decomposing it forms soluble substances which easily wash away. For the same reason it decomposes more completely than dung. It is even said to facilitate the decomposition of dung on light soils and in dry districts, but there is no definite proof of this. A ton of dung and seaweed would break down in the soil more quickly than a ton of dung alone, and would grow an indifferent variety as it does for one of proved excellence.

A good series of slides shown by the society's electric lantern were extremely interesting and the specimens of vegetables making up each picture called forth the highest admiration from his audience. Special treatment for the different kinds of vegetables shown was given by the lecturer, and his instructions were keenly followed by the members. The discussion created lively interchange of questions and answers between audience and lecturer, and many useful details resulted from these inquiries. Owing to a long journey home, Mr. Beckett had to leave early, but before his departure his audience expressed to him their fullest appreciation of his visit and accorded him round upon round of applause, with the firm hope that in the near future he would pay a return visit.

A good number of exhibits were made by the members, and included a group of Begonias Gloire d'Lorraine; also six heads of celery by Mr. O. Jeal. Mr. W. Paulley's eight dishes of dessert apples were keenly scrutinised. An allotment holder, Mr. H. Bridge, staged a fine collection of vegetables. Four pots of chrysanthemums were brought by Mr. A. Edwards, and three dishes of vegetables by Mr. R. Cleveland.

The United Horticultural Benefit and Provident Society.

At the usual monthly meeting of the above society, held at the Royal Horticultural Hall, Vincent Square, S.W., on Monday evening last, with Mr. Thomas Winter in the chair, three new members were elected, making a total of 48 for the year. A long discussion took place on the State Insurance Bill, and it was agreed that a circular letter relative to the above Bill be sent to all members within a few days. The amount of sick pay for the past month was £38 9s.

Bournemouth Gardeners.

At the last meeting of the year 1911 Mr. George Garner gave a lecture on "The Advance of Horticulture in the Twentieth Century." The lecturer did not deal with the subject exhaustively on account of its wide scope, but in summary form, touching upon the most salient features. Mr. Lancely presided, and at the close of the lecture an animated discussion took place.

Mr. Garner referred to the work of our forefathers, and briefly traced the advance made up to the twentieth century, and more especially during the twentieth century. He instanced the prominent improvements made in certain flowers, fruits, and vegetables, especially in sweet peas, carnations, perennials, annuals, and chrysanthemums, but he could not claim that a marked advance had been made in ordinary orchard fruits or the methods of cultivation. He further remarked on the general advance made in scientific knowledge; the important part taken of late by the horticultural press in relation to the improvement of matters pertaining to horticulture in instructing the minds of those engaged in it, especially young gardeners and amateurs.

Mr. Nippard, the assistant secretary, thought that the most astonishing improvement of late years had been made in that useful class of plants, the begonias. Mr. J. B. Stevenson referred to old-time practices and to literature of bygone days. Mr. Reeves remarked on the improvement in photography, colour printing, and painting. Mr. Heath spoke of the greater variety of colour in flowers, and other members continued the discussion, which was keen and instructive throughout.

Hearty votes of thanks were accorded the chairman and lecturer.

NEW BOOK.

◆

ROCK GARDENS AND ALPINE PLANTS.

By E. H. Jenkins, F.R.H.S. (W. H. and L. Collingridge, 148, Aldersgate Street, London, E.C.) Price 2s. 6d. net.

One of the most remarkable features of horticultural progress within recent years has been the development of the taste for plants from alpine regions, and such other hardy subjects that can be successfully cultivated in association with them. They have for several years past contributed in no small degree to the interest of the principal exhibitions, and as the exhibitors have endeavoured to present them to public notice in a more or less natural manner, they have proved immensely attractive to the visitors. Concurrently with the increase in the number of alpine plants at the horticultural exhibitions there has been a large extension in their cultivation in gardens of all classes.

With this increase in the interest taken in the denizens of the alps there has arisen a strong demand for information on their selection and cultural requirements, and the publication of the book now before us is most opportune, and cultivators have full justification for congratulating themselves on having so trustworthy a guide placed at their disposal. The author has long been known as one of the leading authorities on the denizens of the Alps and other of the hardy flowers suitable for cultivation in British gardens, and this position he attained by a close study of them under cultivation. Mr. Jenkins has also written much on their selection and culture, and there can be no doubt that by his writings he has materially contributed to the high degree of popularity they now enjoy.

In the course of his work, Mr. Jenkins affords ample evidence that he is not only fully acquainted with the finest of the various kinds and the conditions under which they can be successfully cultivated, but that he fully appreciates the importance of giving full consideration to the possibilities of both large and small gardens. Rock gardens, large in area and elaborate in design, are dealt with in accordance with their importance, and those who have the necessary space, and also the desire for the cultivation of a representative collection under conditions that closely approach a state of Nature, are placed in possession of all the information necessary to their giving practical effect to their desires. With reference to these, Mr. Jenkins is careful to keep constantly before his readers the fact that the object should not be to build an elaborate rockery, but make ample provisions for successful cultivation of a representative collection of alpines.

Rock gardens of moderate area are fully dealt with, and the reader is shown in the most conclusive manner that the choicest of alpines may be grown with much success in gardens that have a limited area and that the rockery may be made to form a delightful feature at a moderate cost. He also shows that in gardens where, for some all-sufficient reason, it is not considered advisable to construct a rock garden, a goodly number of beautiful alpines may be grown to a high degree of perfection with no more cost than is involved in the formation of a few raised beds. Indeed, every aspect of rock gardening is dealt with, due regard to its importance, and the book is admirably balanced, as well as teeming with information which is not only trustworthy, but is stated with such clearness, that on no point is the reader left in doubt as to the author's measuring.

The book is admirably illustrated, and in all other respects so satisfactory that we strongly advise all who are in any way interested in rock gardening to at once add it to the shelf on which are placed the works on horticulture.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

CYPRIPEDIUM CAUDATUM.—L. G. W., Manchester: The two parents of Cypripedium Saundersianum, C. caudatum, and C. Schlimi, are both species. Perhaps you are thinking of C. grande, which is a hybrid between C. caudatum and C. longifolium, and appeared in 1881.

HYBRID FROM ADA AURANTIACA.—E. C. P., Brighton: We believe that so far only one hybrid orchid has been raised from the showy Ada aurantiaca. This is Adioda St. Fuscien, raised by Mons. N. Gracie, of Amiens, the second parent being Cochlioda Noezliana. The hybrid showed only the slightest evidence of the influence of Ada aurantiaca.

LIME AND CORKY SCAB IN POTATOES.—A. E. P., Romford: It has been definitely proved that the application of lime prevents the disease known as club root or finger-and-toe in turnips and other cruciferous plants, and as the organism causing corky scab in potatoes is closely allied to the club root parasite, it was thought lime might prove a check to this disease also. Experiments, however, have tended to show that lime seems to favour the development of scab. It is certain that the parasite remains in a diseased tuber in a passive state when conditions are unfavourable for active vegetative growth. Diseased tubers, therefore, should not be used for "sets," as the commencement of activity on the part of the parasite is regulated by the commencement of growth on the part of the potato, and a scabbed crop will probably result, in addition to the risk of infecting previously clean land, if diseased sets be employed. The parasite located in the superficial cells of the potato is killed by soaking diseased potatoes for two hours in a solution of half-a-pint of formalin in 15 gallons of water. It is very doubtful, however, whether a plasmodium lying somewhat deep in the tissue of the potato would be affected by this treatment. Under any circumstances it is a very risky and unwise practice to plant diseased "sets." It is probable that clean potatoes that have been in contact with diseased ones, may give rise to an infected crop by means of loose spore-balls adhering to their surface. Not only, therefore, should sound tubers be used for planting, but care should be taken that they do not come into contact with diseased ones.

EXAMINATION IN HORTICULTURE.—N. G. C., Hertford: The Royal Horticultural Society will hold its annual examination in the principles anl practices of horticulture on March 27, 1912. The examination has two divisions, viz., (a) for candidates of eighteen years of age and over, and (b) for juniors under eighteen years. Particulars for 1912 may be obtained by sending a stamped and directed envelope to the Society's offices, and copies of the questions set from 1893 to 1910 (price 2s. post free) may also be obtained from the office, Vincent Square, Westminster. The Society is willing to hold an examination wherever a magistrate, clergyman, schoolmaster, or other responsible person accustomed to examinations will consent to supervise one on the Society's behalf. In connection with this examination a scholarship of

---

Roses may be grown to perfection by following the instructions given in Roses and their Cultivation, by T. W. Sanders. A selection is given, with description of all the best varieties, and full details for culture outdoor and under glass. Price 2s. 6d. net, by post in box 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

£25 a year for two years is offered by the Worshipful Company of Gardeners, to be awarded after the 1912 examination to the student who shall pass highest, if he is willing to accept the conditions attaching thereto. The main outline of these conditions is that the holder must be of the male sex, and between the ages of 18 and 22 years, and that he should study gardening for one year at least at the Society's Gardens at Wisley, conforming to the general rules laid down there for students. In the second year of the scholarship he may, if he like, continue his studies at some other place at home or abroad, which is approved by the Council of the Society. In case of two or more eligible students being adjudged equal, the council reserve to themselves the right to decide which of them shall be presented to the scholarship.

BEST CIDER APPLES.—F. B., Tavistock: A year or two ago the Board of Agriculture issued a list of excellent cider apples; all of the varieties listed had been tested at the National Fruit and Cider Institute, and were regarded as decidedly above the average in quality. The varieties recommended for propagation were: Sharp varieties—Backwell Red, Cap of Liberty, Dufflin, Foxwhelp, Frederick, Kingston Black, Lambrook Pippin, Red Soldier, and Yellow Styre. Sweet varieties—Belle Norman, Horners, White Jersey, Sweet Alford, Woodbine, and Bell. Bitter-sweet varieties — Cherry Norman, Major, Knotted Kernel, Masters Jersey, Strawberry Norman, Chisel Jersey, Dabinet, and Royal Jersey. You will find the subject dealt with at some length in the issues of the GARDENERS' MAGAZINE for November 21 and November 28, 1908.

EXHIBITING CARNATIONS.—W. F. B., Berks, Writes: I am an amateur, and take a special interest in perpetual-flowering carnations; I have, indeed, been so successful in the cultivation of these attractive flowers that I intended exhibiting at the show held by the Perpetual-flowering Carnation Society on the 5th and 6th inst., for the purpose of seeing how my flowers compared with those of other amateur exhibitors. I obtained a copy of the society's schedule, and, on examining it, I found the following as a footnote to each of the pages devoted to the classes: Special attention is directed to Rule 5 as follows:—All flowers exhibited for prizes must have been in the possession of and grown by the exhibitor at least four months previously to their being shown. Classes 16 to 20 inclusive and 23 are exempt from this rule. This footnote greatly perplexed me, and I turned to Rule 5 with the hope of finding something that would enlighten me on a point that is of considerable importance to exhibitors, but found that it deals with the appointment of the society's Floral Committee. Being unable to solve the problem, I did not exhibit, and am writing to ask whether you can suggest a solution."

[You interpreted the conditions too literally; but as you are not experienced in exhibiting, there is ample excuse. What the committee required was, not flowers that had been in the possession of exhibitors not less than four months, but flowers from plants that had been in their possession during that period, as was assumed by the exhibitors at the show in question. It is unfortunate that in the compilation of schedules the importance of exactitude of statement is so frequently overlooked. The footnote refers to regulation 5 which is found on page 15 of the schedule.—ED.]

VARIOUS.—Anxious Reader: It is not advisable to allow the apples to become frozen, but if you can keep the loft quite close there will not be much risk of this unless the weather is severe. Should this be the case a six-inch layer of clean wheat straw will keep them safe. Musty straw or hay must not be used or the apples will be spoilt. Probably you did not commence spraying the liver of sulphur solution until the disease had made considerable progress. The proper course is to watch closely for the appearance of the disease, and immediately it makes its appearance, to remove the few infected leaves and burn them, and commence spraying the plants with liver of sulphur mixture. We cannot advise on the diseased celery without having examined a specimen. It is necessary we should have a plant with the leaves, but one of comparatively small size will suffice.

NAMES OF PLANTS.

G. C., Monmouth.—Ceanothus rigidus.

G. W. D., Leatherhead.—A very poor form of Cypripedium Boxalli.

F. W., Gloucester.—1, Linum trigynum; 2, Exacum affine; 3, Cypripedium Leeanum.

N. G. S., Dover.—1, Cratægus pyracantha Lelandi; 2, Cineraria maritima.

D. J., Cirencester.—1, Begonia Gloire de Sceaux; 2, Primula floribunda; 3, Ruscus aculeatus; 4, Nepenthes Morganæ; 5, Calanthe Veitchi; 6. Aglaonema costata.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1911. DECEMBER 17 TO DECEMBER 23.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Dec. 17—Sunday	—	52	50	53	43
„ 18—Monday	—	50	47	51	49
„ 19—Tuesday	2 6	50	50	53	47
„ 20—Wednesday..	—	49	49	50	47
„ 21—Thursday....	—	44	44	45	42
„ 22—Friday........	—	40	38	47	39
„ 23—Saturday.....	2 40	36	35	52	35
Means	(total) 4 46	46	45	50	43

DATE. 1911. DECEMBER 17 TO DECEMBER 23.	RAIN.	TEMPERATURE OF THE SOIL AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg.
Dec. 17—Sunday	0·21	43	43	46	36
„ 18—Monday	0·32	45	44	46	44
„ 19—Tuesday	0·15	46	44	46	44
„ 20—Wednesday ..	0·59	46	45	46	35
„ 21—Thursday	0·17	44	45	46	32
„ 22—Friday	0·43	42	44	46	30
„ 23—Saturday	0·09	42	43	46	26
Means ...	(total) 1·49	44	44	46	35

FORTHCOMING ENGAGEMENTS.

TUESDAY, JANUARY 2.—National Rose Society, Meeting of Council, Westminster Palace Hotel, 3 p.m.

FRIDAY, JANUARY 5.—British Gardeners' Association. Meeting at the Technical Institute, Altrincham, 7.30 p.m.

MONDAY, JANUARY 8.—Royal Horticultural Society. Examination of Employees in Public Parks and Gardens, 10 a.m.

CONTENTS.

PAGE
A Cosy Garden 975
American Blight and Big Bud Mite 982
Apple Cox's Orange Pippin 972
Bonemeal 978
Chrysanthemum Swinburne 978
Clematis indivisa 972
Control of Plant Growth 975
Dessert Apple Paroquet 979
Dwarf Œnotheras 972
Helianthemums 978
New Books 985
New Plants, etc. 974
New Ways of Growing Perennials 971
New Schemes for Winter Planting 976
Note of the Week 969
Obituary 986
Picturesque Conifers 977
Seaweed as Manure 983
The Decline of the Big Chrysanthemum ... 973
Work for the Week 980

ILLUSTRATIONS.

Portrait of Mr. W. B. Gingell, 969; Læliocattleya, 973; Cypripedium Lord Wolmer, Westonbirt var., 974; A View in the Charming Gardens of Home Place, Limpsfield, 975; Picea excelsa monstrosa, 976; The Bishop's Pine (Pinus muricata), 977; Single Chrysanthemum Swinburne, 978; Apple Paroquet, 979.

OBITUARY.

MR. G. R. M. MURRAY, F.R.S.

Immediately following the loss of that distinguished scientist, Sir J. D. Hooker, we have to chronicle the death of his friend, Mr. George R. M. Murray, F.R.S., who passed away in Stonehaven at the comparatively early age of 53. He will be best remembered as a notable botanist and successful student of "Sea Flora" and "Plankton Organisms." Educated at the High School of his native town, Arbroath, Mr. Murray afterwards studied at Edinburgh University. Turning his attention entirely to botany at Strasburg University, he returned to London a qualified lecturer in that science. In this capacity he held an appointment at St. George's Hospital Medical School, and at the Royal Veterinary College. Subsequently he acted as naturalist to the Solar Eclipse Expedition to the West Indies, and as Scientific Director to the National Antarctic Expedition. For the past ten years he acted as Keeper of the Botanical Department in the British Museum, and was an intimate friend of Curruthers, Huxley, Bush, Hooker, and other kindred spirits.

He was a delightful companion, and had many friends, among the chief being Professor McKendrick, his earliest teacher in Edinburgh. It is worthy of note that the district of Scotland from which Mr. Murray came has given many of her sons to science, notably Professor Sharpey, Charles S. Roy, and Lieut.-Colonel Prain, the present Director of Kew Gardens.

M. VICTOR LEMOINE.

Last week we announced that the Massachusetts Horticultural Society had awarded the George Robert White Medal to M. Victor Lemoine, of Nancy, but hardly had the award been made known ere M. Lemoine passed away. He died on December 12, and his decease will be widely and deeply regretted. M. Lemoine was a skilful hybridiser, and the results of his work are to be seen in myriads of gardens all over the world. We are indebted to him for Begonia Gloire de Loraine, for the Lemoine and Nanceianus groups of hybrid gladioli, for new and beautiful deutzias and philadelphuses, and many other plants that beautify our gardens or greenhouses. To M. Lemoine fell many honours, and during his long life of ninety years he saw horticulture revolutionised. In his native town he held a high position as a citizen, and France honoured herself by making him an officer of the Legion of Honour. To the eldest son, M. Emile Lemoine, and to the other members of the family, we tender our deepest sympathy, and desire to express our great admiration of the work accomplished by the great departed.

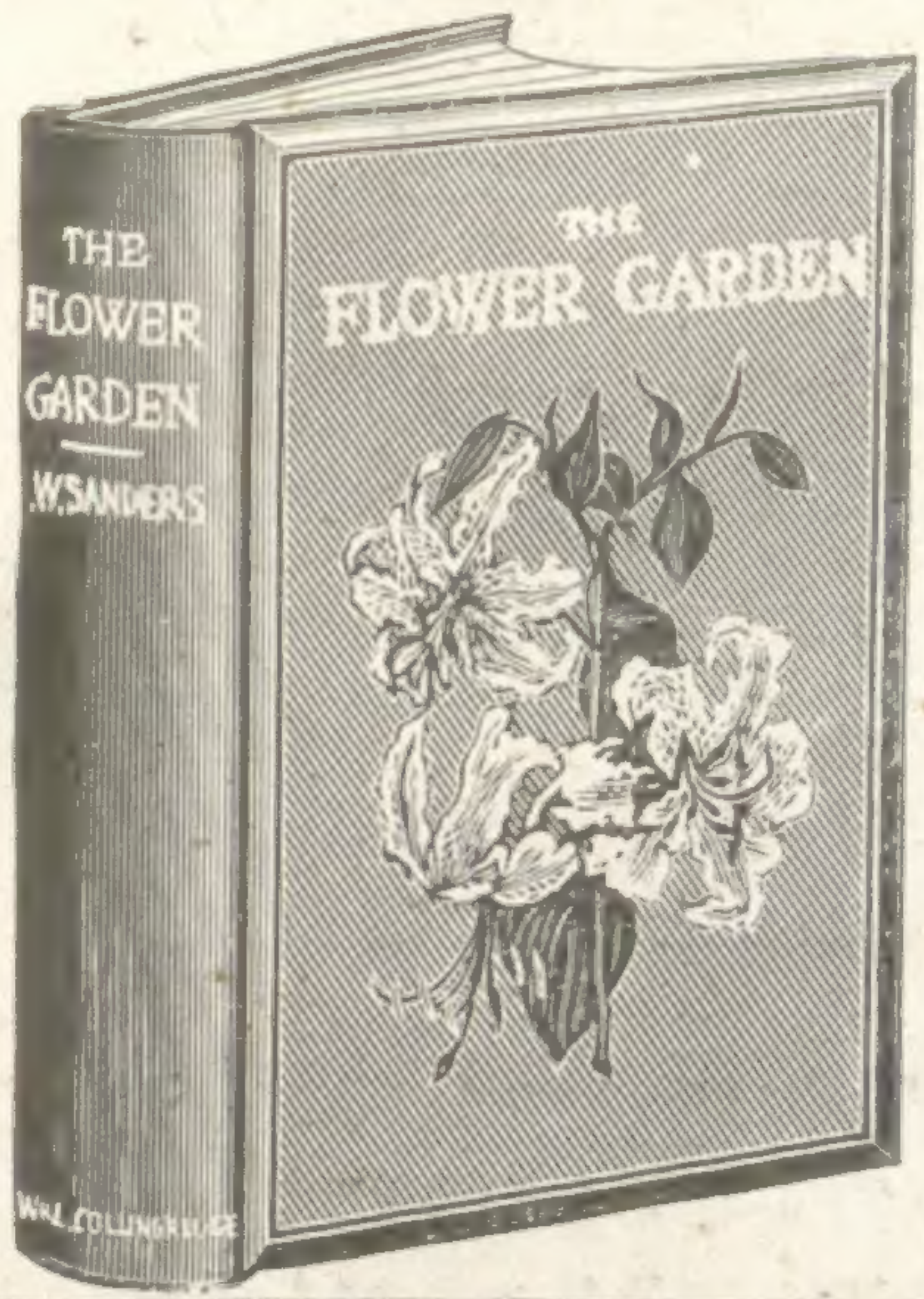
Moschosma riparia.—The peculiar greyish tone of the inflorescence forms a notable feature of this Central African Labiate, which is valuable from its winter-flowering qualities. It is of free growth, and bears its spikes of whitish flowers in great profusion. The greyish appearance results from the dark-coloured anthers.—W. T.

The only resemblance between a Pine Spray Syringe and others is in the shape of the barrel. The metal is more substantial. For the rest, the combination spraying head renders Spray, Rose, and Bend instantly obtainable without the addition or removal of a single fitment, while the adjustable leather bucket plunger gives perfect suction, never allows water to escape past it and up your sleeve, and wears interminably.

A written request from your ironmonger or seedsman, and a Syringe will be sent in 24 hours for your approval. Price 10/6. Sole proprietors and manufacturers, **Robinson Bros., Ltd., West Bromwich.**

PINE SPRAY SYRINGE (patent).

YOUR GARDEN WILL BE A GRAND SUCCESS IF YOU STUDY THIS STANDARD WORK.



THE FLOWER GARDEN.

By T. W. SANDERS, F.L.S., Editor of "Amateur Gardening."

A Complete Guide to Planting and Management of the Flower Garden and the Cultivation of Flowers, Plants, and Trees, for Outdoor Culture.

THE CONTENTS INCLUDE—

Fashioning the Garden.
Beds and Borders.
Walks and Paths.
Lawns and Tennis Court.
Rockeries and Ferneries.
Arbours, Summerhouss.
Arches, and Pergolas.
Edgings.
Walls and Fences.
Garden Practice.
Propagation.
Colour Arrangement.
Bedding.
Annuals and Biennials.
Bulbs.
Hardy and Tender Border Plants and Flowers.
Climbing Plants.
Trees and Shrubs.
Pests and Diseases.

480 PAGES, ILLUSTRATED BY 64 PLATES OF BEAUTIFUL GARDEN SCENES PLANTS AND FLOWERS, AND MANY EXPLANATORY DIAGRAMS.

7/6 net ; by post, packed in box, 8/-

ORDER FORM.

To the Publishers of "THE GARDENERS' MAGAZINE," 148 & 149, Aldersgate St., London, E.C.

Please send me a copy of **"THE FLOWER GARDEN,"** *by Post, for which I enclose remittance of* **8/-.**

Name...

Address...

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head Working), thoroughly experienced in all branches; excellent references; married; disengaged through establishment being given up. G. HALL Hermitage Cottage, Minchinhampton, Glos.

GARDENER (Head Working) (Scotch) requires SITUATION where 2 or 3 are kept; 20 years' experience in all branches of gardening; 5 years present situation; married; age 36; 2 children; excellent testimonials. H. McCARTNEY, Sandye Place, Sandy, Beds.

GARDENER (Head Working). — Mr. H. HEMSLEY, Rock Expert, Crawley, Sussex, would be pleased to highly recommend a thorough competent man in all branches of the profession; highest references; age 36; married. Address as above.

GARDENER (Single-handed, or where help is given; life experience, Inside and Out; good references, and can be well recommended; age 31; married, no family. W. WEST, The Lodge, Pyrford Court, Woking.

HEAD WORKING, or Single-handed, abstainer; disengaged; age 36; one boy, 14½ years; life experience Inside and Out; excellent refs.; over 5 years last place; knowledge oil engine, electric light, and bees; wife assist in house if required. J. OSMOND, Hickleys Cottages, Badshot Lea, Farnham, Surrey.

GARDENER (Head Working).—H. ESSAM can confidently recommend his Foreman to Lady or Gentleman requiring the services of a thoroughly practical and reliable Head Gardener; age 31; married when suited; excellent references. Closes Hall, Gisburn, Clitheroe, Lancs. No circulars.

GARDENER (Single-handed, or where help is given); 12 years' practical experience; 4 years in last situation; good references; single; age 36; abstainer. J. CHAPMAN, Ferry Hill, Chatteris, Cambs.

GARDENER (Single-handed or otherwise); 14 years' experience Inside and Out; good reference; age 32; married, two children; Midlands preferred. J. WORLOCK, Newtown, Buckland St. Mary, Chard, Somerset.

GARDENER (Single-handed or good Second); 4 years' good character; age 23; single; abstainer. Apply A. F. ROOKE, Houndean, Lewes, Sussex.

GARDENER (Single-handed, or where help is given); life experience in all branches; highest references; thoroughly understands Oil Engine; age 40; strong and active; married; 3 in family, youngest 12½. E. STEVENS, 13, Connaught Road, Newbury, Berks.

UNDER GARDENER, age 19, three years in present place, with excellent character, seeks SITUATION where experience can be gained in greenhouse and garden; total abstainer. Apply P. SAULT, Station Road, Kegworth, Derby.

YOUNG MAN (20) seeks SITUATION as GARDENER (Under), Inside and Out); 3½ years' good reference; disengaged. S. GENT, Burnham Sutton, King's Lynn, Norfolk.

LAD, age 17, seeks SITUATION in Garden; some experience; wish to improve; good character; Bothy preferred. S. RAYNER, Chart Road, Sutton Valence, Maidstone.

Situations Vacant.

CANADA.—Wanted, strong, active GARDENERS for large Nurseries; steady work; good wages; sail March. UNION TRANSIT CO., 381, Argyle Street, Glasgow.

SITUATION COUPON

For JANUARY 6, 1912.

To the Advertisement Manager of "THE GARDENERS' MAGAZINE," *148 & 149, Aldersgate Street, London, E.C.*

Please Repeat my Advertisement.

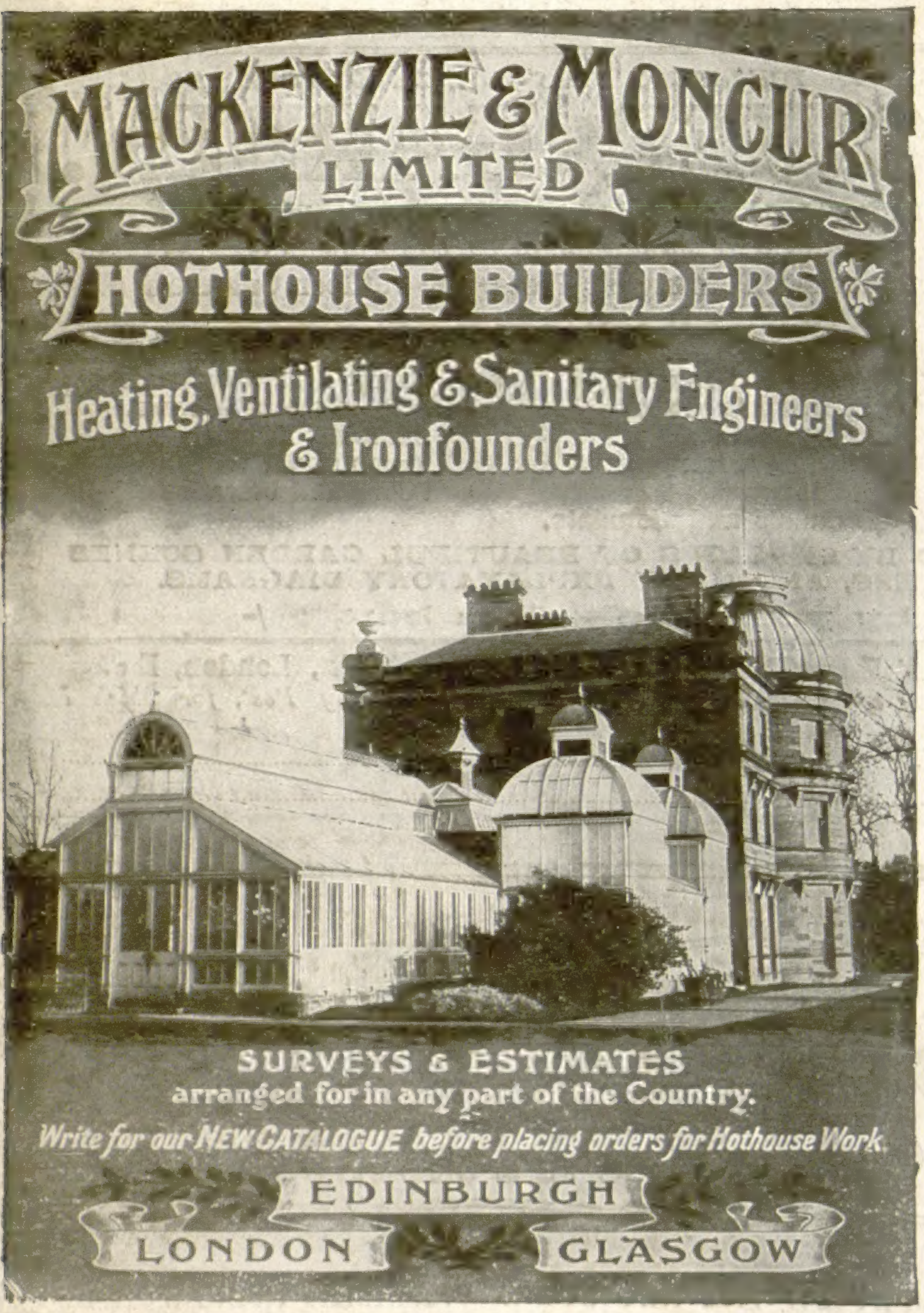
Name..

Address..

....

Date...................................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.


MACKENZIE & MONCUR
LIMITED
HOTHOUSE BUILDERS
Heating, Ventilating & Sanitary Engineers
& Ironfounders

SURVEYS & ESTIMATES
arranged for in any part of the Country.
Write for our NEW CATALOGUE before placing orders for Hothouse Work.
EDINBURGH
LONDON GLASGOW

NOW IS THE TIME TO
TAKE CUTTINGS
FOR EXHIBITION.

READ
CHRYSANTHEMUMS
And How to Grow Them
FOR EXHIBITION.
By J. B. WROE.

CONTENTS.

Propagation.
Second Potting.
Third Potting.
Final Potting.
Proportions for Soil.
Summer Quarters.
Watering.
Feeding.
Housing the Plants.
Damping.
Timing the Blooms.
Dressing.
Staging.
Selection of Varieties for the North.
Selection of Varieties for the South.
Timing and Stopping.
Taking the Buds.
Specimen Plants.
Chrysanthemum Enemies and Friends.

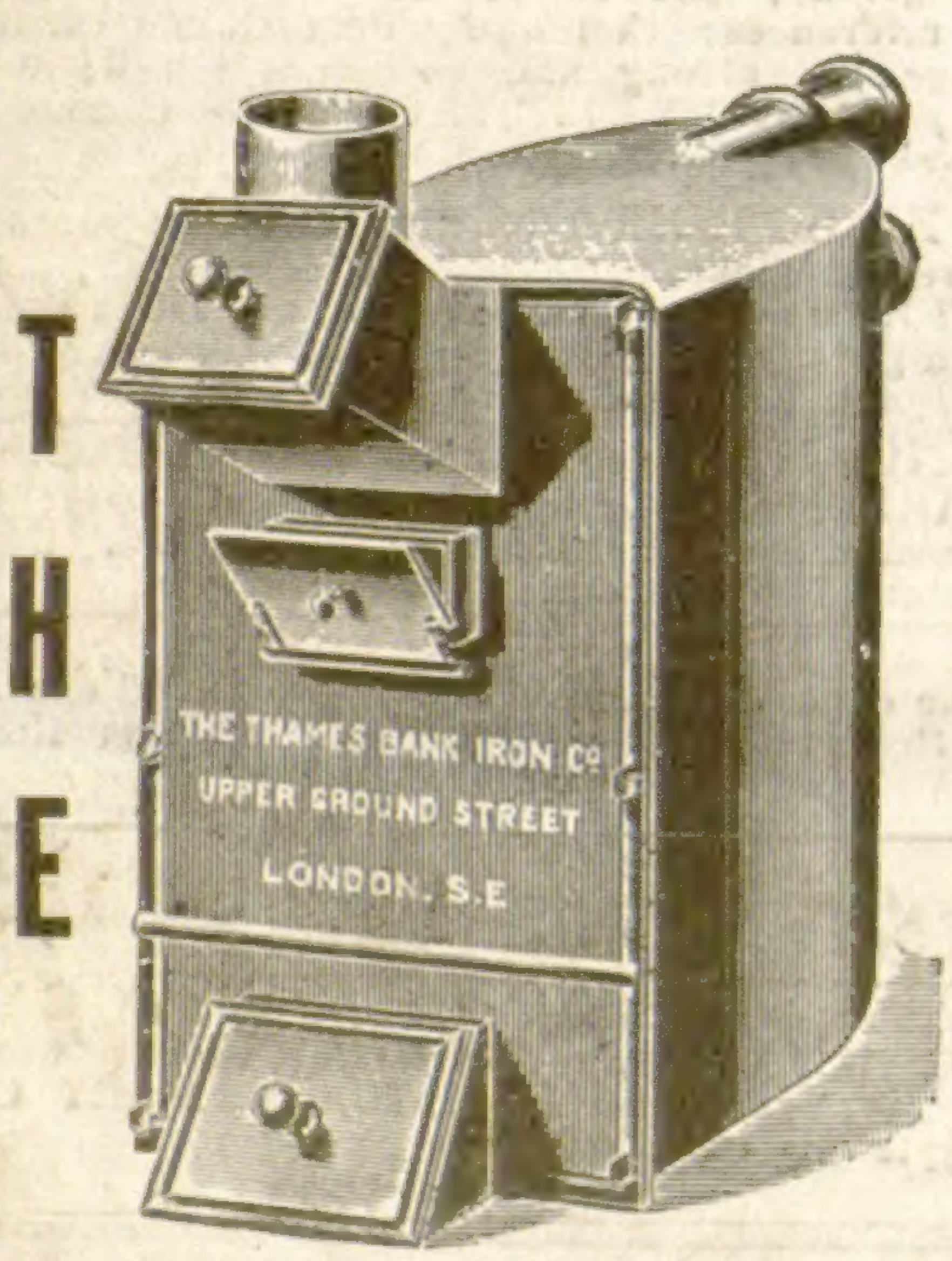
ILLUSTRATED.

Price ONE SHILLING NET. By Post 1s. 2d.
Bound in Cloth 1s. 6d., by post 1s. 8d.

W. H. and L. COLLINGRIDGE, 148 and 149, Aldersgate Street, London.

'Phone: Hop. 763.

When next a Small Boiler you require
TRY
THE HEEL



NONE TO BEAT IT.

THE THAMES BANK IRON CO.,
Upper Ground Street,
LONDON, S.E.

4 SIZES.
Heating Powers, 80 to 250 ft. of 4 in. pipe.

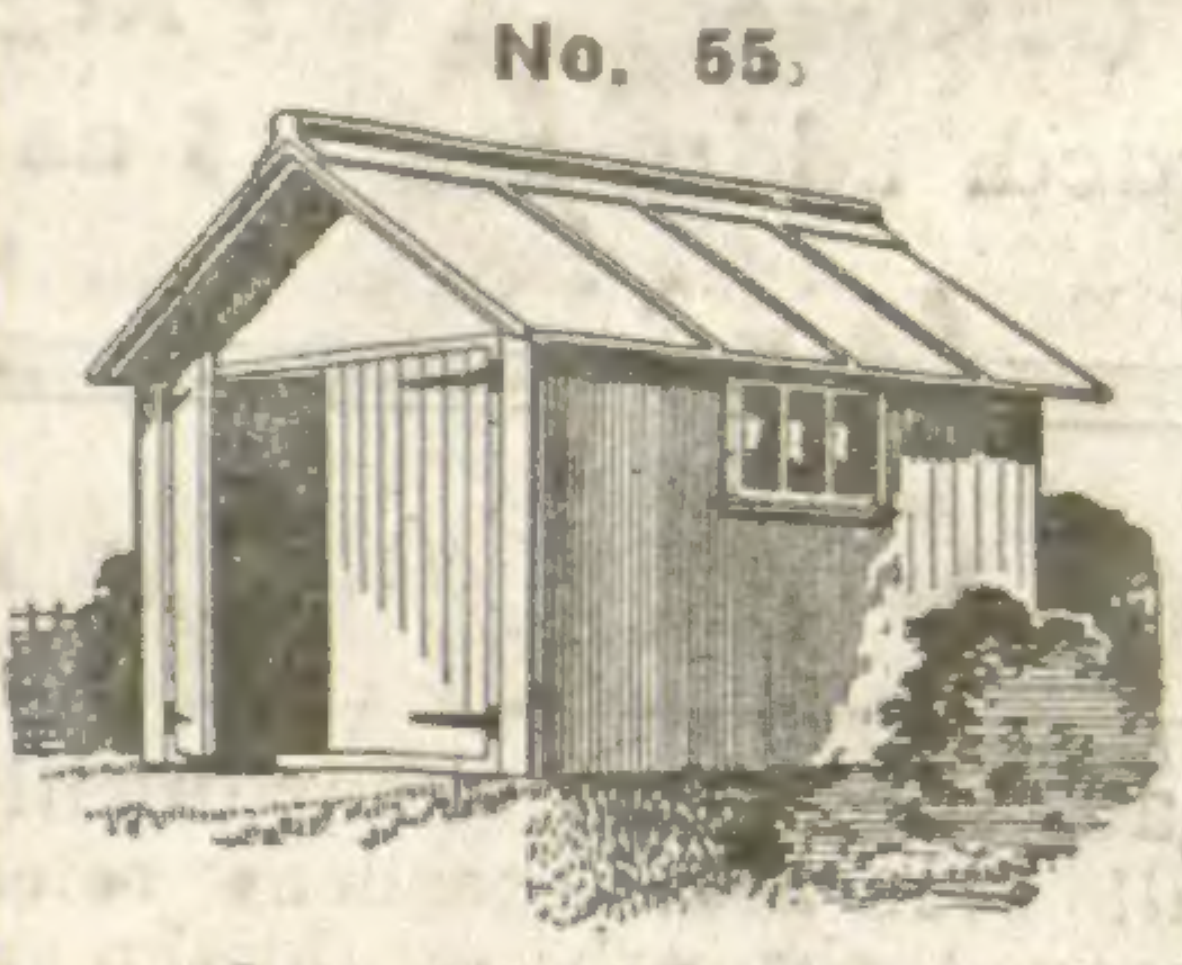
MERRYWEATHERS'
614 PUMP
IS THE
Gardener's Friend.

Easy to Work.
Simplicity Itself.

Write or Call—
63, Long Acre,
LONDON, W.C.

FLOWER POTS
SAUCERS, SEEDPANS, RHUBARB AND SEAKALE POTS, RUSTIC WARE, VASES, PEDESTALS, etc.
Our Pots are Low in Price and rich in Colour.
Amateurs should try our FAMOUS CRATES of POTS.
7s. 6d., 10s. 6d., 15s., and 21s.
ART CATALOGUE FREE. ORDERS SENT OFF SAME DAY.
Buy from the Makers—
HERBERTS PARK POTTERY CO., WOLVERHAMPTON.

PORTABLE BUILDING
WITH DOUBLE DOORS.
No. 55.


Copyright Registered.

Made in complete sections, **best quality Red Deal** (not interior Foreign Match Boards as other makers), planed and V jointed on strong framing. Roof covered with compressed Asphalte over tongued boards. Doors fitted with strong hinges, lock and key, bolts, etc.

CASH WITH ORDER.

Sizes.		Strong Floor.
7ft. long, 5ft. wide, 7ft. 6in. high	£2 3 6	6/9
8ft. long, 6ft. wide, 8ft. high	2 14 0	8/9
9ft. long, 7ft. wide, 8ft. high	3 2 6	11/6
10ft. long, 8ft. wide, 8ft. 4in. high	3 12 6	19/0

Suitable for Workshops, Motor Cycle, Bath Chair, & Store Houses, Potting & Tool Sheds, etc.
Carriage Paid to any Station in England and Wales.
Catalogue, with Testimonials, Post Free.
J. T. HOBSON & Co.
Largest Makers of Portable Buildings,
Established 50 Years. BEDFORD.
Works, 6 acres. Stock of Wood in Sheds, 10,000 tons.

Sou'westers, 1/6 each.
Oilskin Jackets, 5/6 each.
Overalls, 2/6 pair.
Felt-lined Clogs, 3/6 pair.
Any of the above sent on approval.
ALL SIZES KEPT.
State height and general build.

QUASSIA CHIPS,
FOR FRUIT & FLOWER SPRAYING,
in 28 lb. bags, 5/6.
All Goods Carr. Paid

YOUNG & CO.,
Maltby Street,
BERMONDSEY, S.E.

Printed and Published by W. H. & L. Collingridge, City Press, 148 & 149, Aldersgate St., London, E.C., and sold by all Newsagents, and at all Railway Bookstalls